

## **FOREWORD**

This manual has been prepared for use when performing terminal repairs, wire repairs, or connector repairs on vehicles.

A step-by-step section on connector repair and terminal repair is included.

There is a section of charts with terminal and connector illustrations, part numbers, and notes on terminal removal.

By using this guide, a satisfactory repair of the wiring harness and connectors in Toyota vehicles will be easy to achieve.

All information in this manual is based on the latest product information at the time of publication. However, specifications and procedures are subject to change without notice.

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# INTRODUCTION

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**A**

A

## INTRODUCTION-GENERAL INFORMATION

### GENERAL INFORMATION

This manual provides instruction in the following repairs:

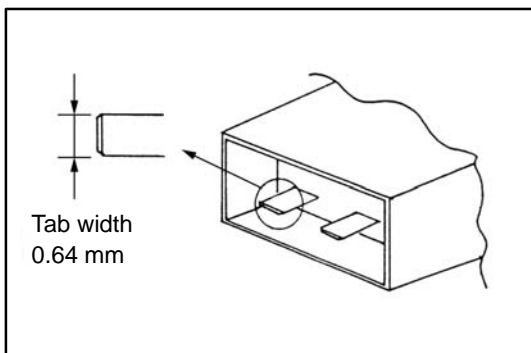
- How to Inspect for System Inspection
- Circuit Protection
- Terminal and Connector Repair Procedure

#### NOTICE:

When inspecting or repairing the SRS AIRBAG, be sure to carefully read the precautionary instructions and procedure in the Repair Manual for the applicable model.

After any electrical repair is made, always test the circuit by operating the devices in the circuit. This confirms not only that the repair is correct, but also that the cause of the complaint was correctly identified.

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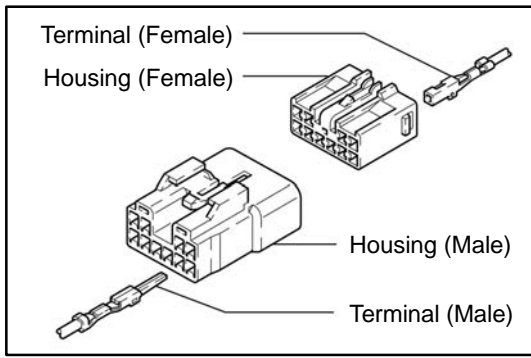
#### Terminal type number name

The terminal type number naming system has changed: the metric system will be used in place of the inch system. To be more specific, male tab width "in millimeters" will be used as terminal type number from now on — in place of male tab width in inches which has been in use so far.

Below is a table of comparison:

Old terminal type No. (inch)		New terminal type No. (mm)
025	→	0.64
040 (II, III, IV)	→	1.0 (II, III, IV)
050	→	1.3
060	→	1.5
070 (II)	→	1.8 (II)
090 (II)	→	2.3 (II)
110	→	2.8
187	→	4.8
250 (II)	→	6.3 (II)
305	→	7.7
312	→	8.0
375	→	9.5

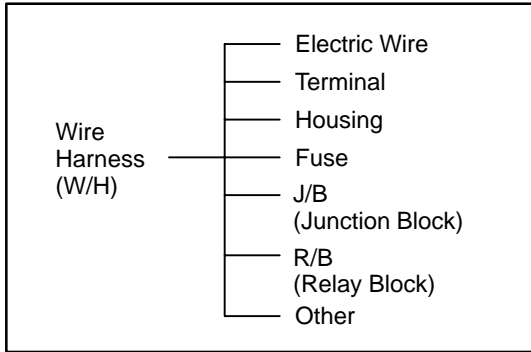
For those connectors which are not shown above, the terminal type numbers remain unchanged.



**What is Wire Harness?**

The wire harness (W/H) is systems of electric wires for automobiles to connect all the electronics parts in automobile electrically and work them. As more electronics parts are introduced in automobiles recently, the electric wires used for the wire harness are increasing in number and the structure is becoming more complicated. As a result of that, there are hundreds of connectors, which is the parts which connects wires mechanically and electrically, in one vehicle. Therefore, numbers of the connector terminal (Terminal) or the connector housing (Housing) are designed to meet many kinds of uses of circuits. Various components have been improved to ensure the product reliability or realize a wider space in the vehicles.

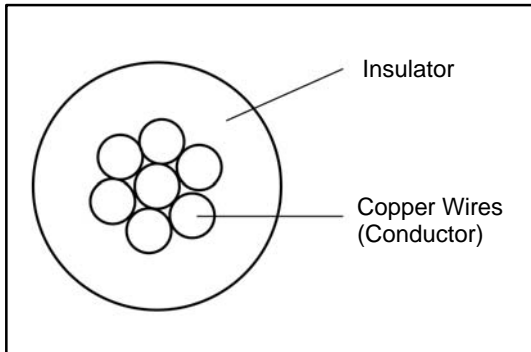
**A**



**Wire Harness Components**

Wire harness mainly consists of wires, terminals, or housings.

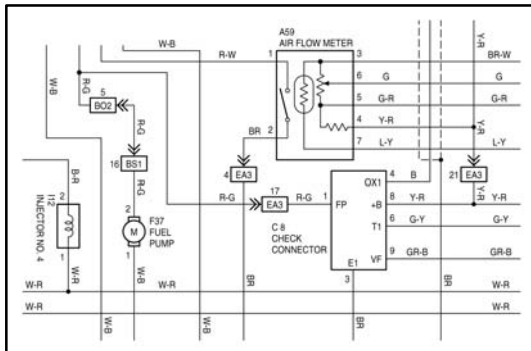
There are various components are designed for many parts of vehicles, such as one with high heat-resistance, water-resistance, or bending ability, ones have different current capacities, or ones are hardly influenced by electromagnetic noise.



**Electric Wire**

The electric wires used for the wire harness consists of the conductor made from numbers of twisted mild copper wire with a diameter of less than 0.5 mm and the insulator surrounding the conductor.

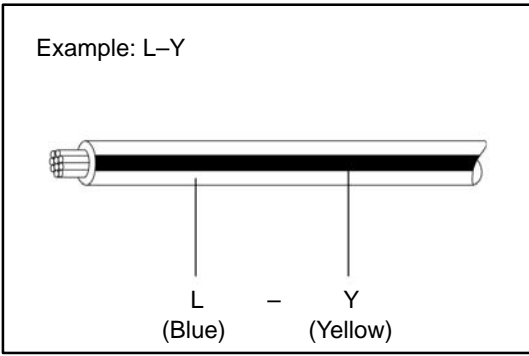
The insulator is generally made from vinyl chloride and covers the conductor with even thickness. The insulators are color-coded in order to distinguish each wire. The base colors or the stripe patterns is used to make difference between insulators. Each color of wires is indicated by the abbreviation in the repair manual and the electrical wiring diagram.



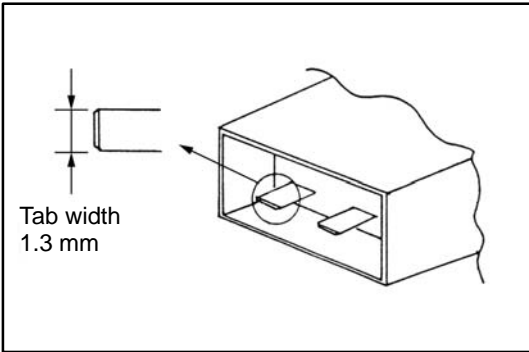
B = Black	W = White
L = Blue	BR = Brown
V = Violet	SB = Sky Blue
R = Red	G = Green
P = Pink	LG = Light Green
Y = Yellow	GR = Gray
O = Orange	



INTRODUCTION-GENERAL INFORMATION



The first letter indicates the basic wire color and the second letter indicates the color of the stripe.



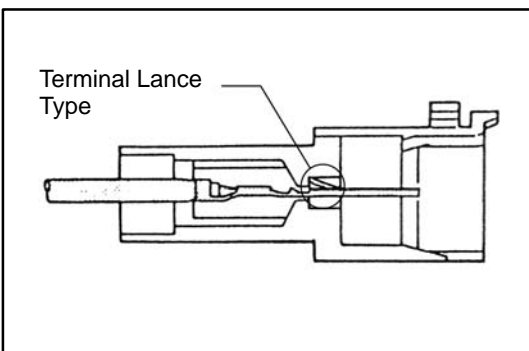
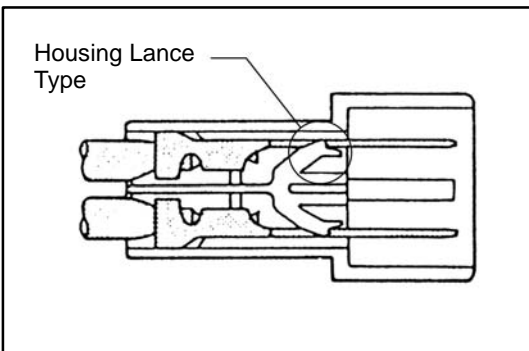
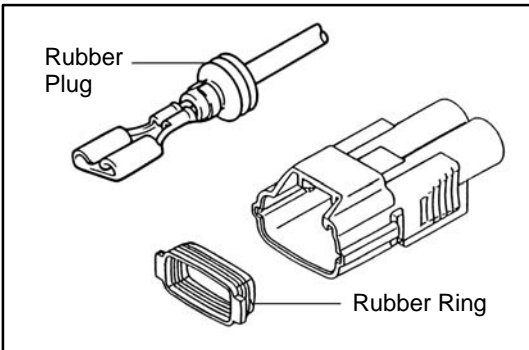
Terminal and housing

Terminal connects wires and housing insulates connecting parts.

There are the male terminal and the female terminal. The types of terminals are decided by tab width of male terminal. And the terminal with the rubber plug or the rubber ring is used in the part, such as the engine compartment, which become wet. For the circuit with slight current at EFI system or ABS system, the gold-plated terminal is introduced for ensuring reliabilities.

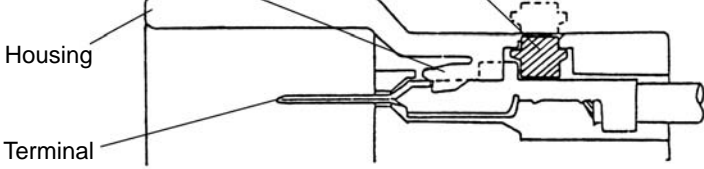
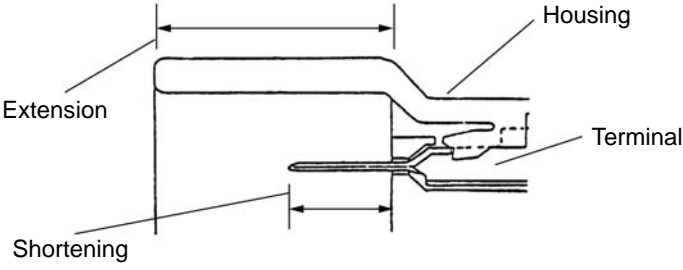
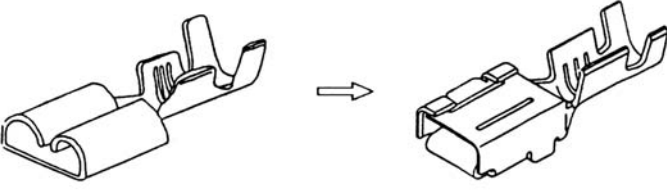
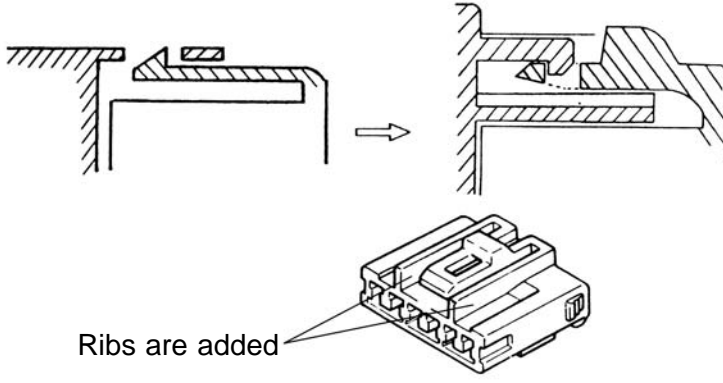
As the number of the circuit is increasing recently, there are new types of parts introduced. For example, there is the hybrid type housing, which is a combination of terminals with different tab width, such as the power source terminal or the signal terminal. Also, new type of connector such as the double lock housing, which is designed with the retainer in addition to the lance to prevent terminal from slipping off, is available. The new type of connectors are produced to realize higher product reliabilities and utilized widely recently. The major characteristics of these new connectors are shown in the table 1.

There are two types of lances: housing lance, which is inside the housing and terminal lance, which is inside the terminal.



A

**Table 1 : Characteristics of the new types of connector (Improvement)**

Characteristics (Improvement)	Note
<p>1. Double Lock</p> <p>Lance (Primary Lock)      Retainer (Double Lock)</p> 	<p>If terminal is not inserted to housing correctly, the retainer does not fit.</p>
<p>2. Extension of Housing</p> 	<p>This is to prevent deformation of the terminal when it is inserted diagonally.</p>
<p>3. Change of Contact Structure and Introduction of Box-Shaped Structure</p> 	<p>Expansion of contact section Stabilization of contact pressure</p>
<p>4. Change of Locking Shape</p> 	<p>This improves the close fit of locking and you can hear the click sound and feel that the connector is completely installed.</p>

A

## INTRODUCTION—HOW TO PERFORM FOR SYSTEM INSPECTION

### HOW TO PERFORM FOR SYSTEM INSPECTION

This inspection procedure is a simple troubleshooting which should be carried out on the vehicle during system operation and is based on the assumption of system component trouble

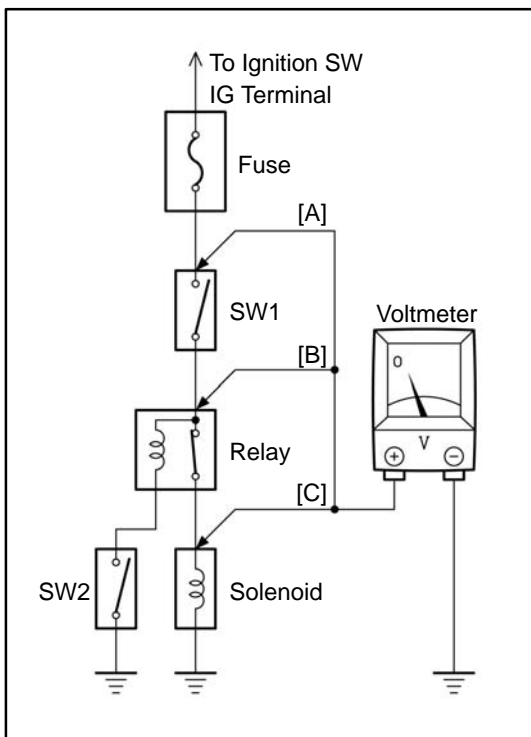
Always inspect the trouble taking the following items into consideration:

- Ground point fault
- Open or short circuit of the wire harness
- Connector or terminal connection fault
- Fuse or fusible link fault

#### NOTICE:

- **This is an on-vehicle inspection during system operation. Therefore, inspect the trouble with due regard for safety.**
- **If connecting the battery directly, be careful not to cause a short circuit, and select the applicable voltage.**

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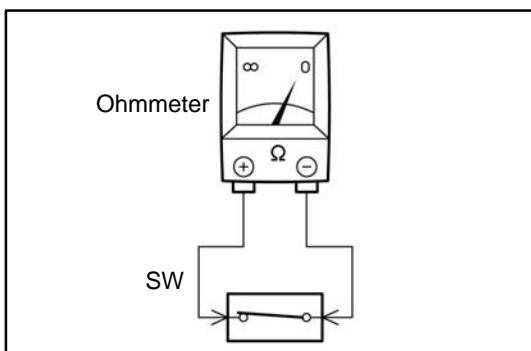
#### 1. Voltage Check

- Establish conditions in which voltage is present at the check point.

Example:

- [A] – Ignition SW on
- [B] – Ignition SW and SW 1 on
- [C] – Ignition SW, SW 1 and Relay on (SW 2 off)

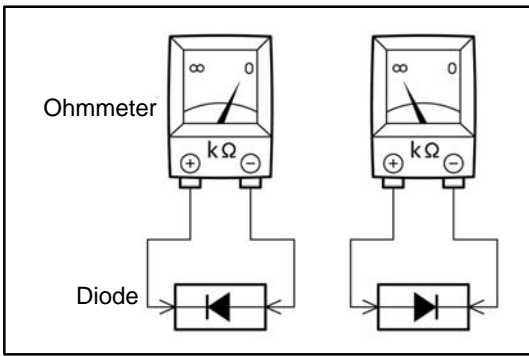
- Using a voltmeter, connect the negative (–) lead to a good ground point or negative (–) battery terminal and the positive (+) lead to the connector or component terminal. This check can be done with a test bulb instead of a voltmeter.



#### 2. Continuity and Resistance Check

- Disconnect the battery terminal or wire so there is no voltage between the check points.
- Contact the two leads of an ohmmeter to each of the check points.

## INTRODUCTION—HOW TO PERFORM FOR SYSTEM INSPECTION

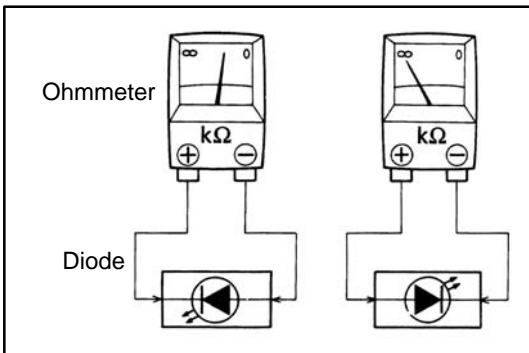


If the circuit has diodes, reverse the two leads and check again.

When touching the negative (–) lead to the diode positive (+) side and the positive (+) lead to the negative (–) side, there should be continuity. When touching the two leads in reverse, there should be no continuity.

**HINT:** Specifications may vary depending on the type of tester, so refer to the tester's instruction manual before performing the inspection.

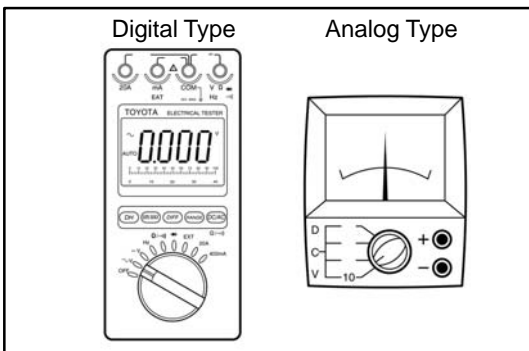
A



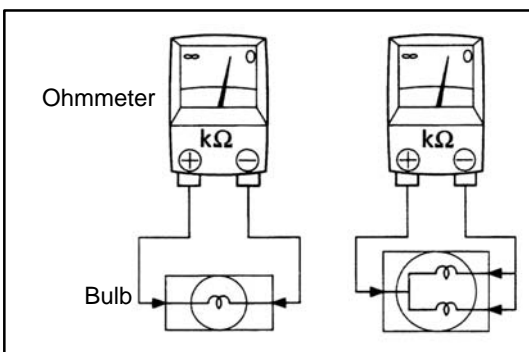
Check LED (Light Emitting Diode) in the same manner as that for diodes.

**HINT:**

- Use a tester with a power source of 3V or greater to overcome the circuit resistance.
- If a suitable tester is not available, apply battery voltage and check that the LED lights up.



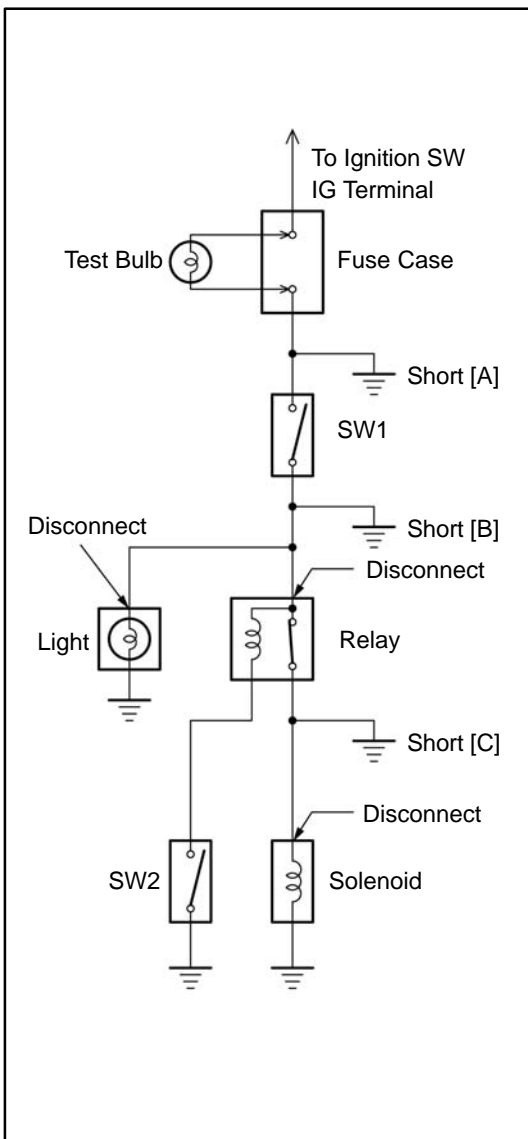
- (c) Use a volt/ohmmeter with high impedance (10k $\Omega$ /V minimum) for troubleshooting of the electrical circuit.



### 3. Bulb Check

- Remove the bulb.
- There should be continuity between the respective terminals of the bulb together with a certain amount of resistance.
- Apply the two leads of the ohmmeter to each of the terminals.
- Apply battery voltage and check that the bulb light up.

## INTRODUCTION—HOW TO PERFORM FOR SYSTEM INSPECTION



## 4. Finding a Short Circuit

- (a) Remove the blown fuse and eliminate all loads from the fuse.
- (b) Connect a test bulb in place of the fuse.
- (c) Establish conditions in which the test bulb comes on.

Example:

[A] – Ignition SW on

[B] – Ignition SW and SW 1 on

[C] – Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or disconnect SW 2)

- (d) Disconnect and reconnect the connectors while watching the test bulb. The short lies between the connector where the test bulb stays lit and the connector where the bulb goes out.
- (e) Find the exact location of the short by lightly shaking the problem wire along the body.

**CAUTION:**

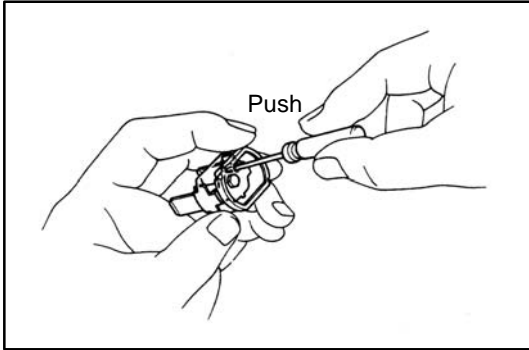
- (a) Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)
- (b) When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).

A

## CIRCUIT PROTECTION

All electrical circuits are protected against excessive loads which might occur because of shorts or overloads in the wiring system. Such protection is provided by a fuse, circuit breaker, or fusible link. A short circuit may cause a fuse to blow or a circuit breaker to open.

A



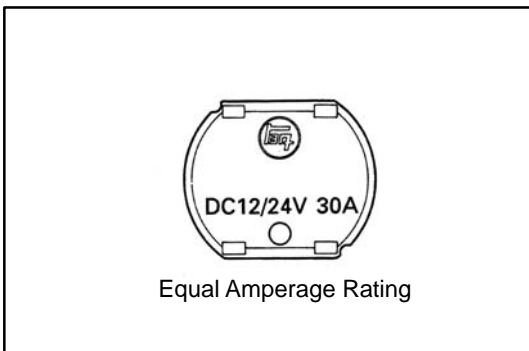
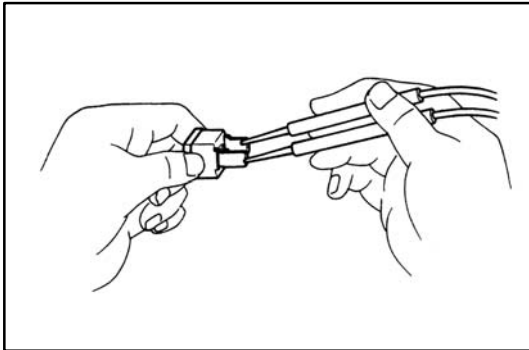
### RESET CIRCUIT BREAKER

#### 1. Remove Circuit Breaker

- (a) Disconnect the negative (–) cable from the battery.
- (b) Remove the circuit breaker.

#### 2. Reset Circuit Breaker

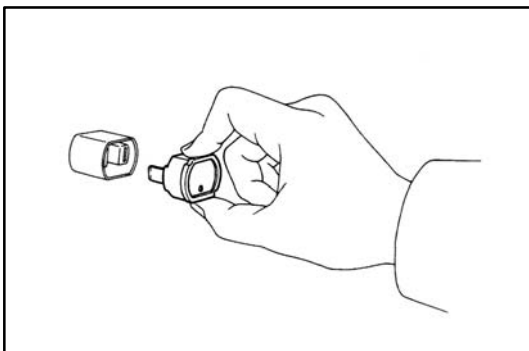
- (a) Insert the needle into the reset hole and push it.
- (b) Using an ohmmeter, check that there is continuity between both terminals of the circuit breaker. If continuity is not as specified, replace the circuit breaker.



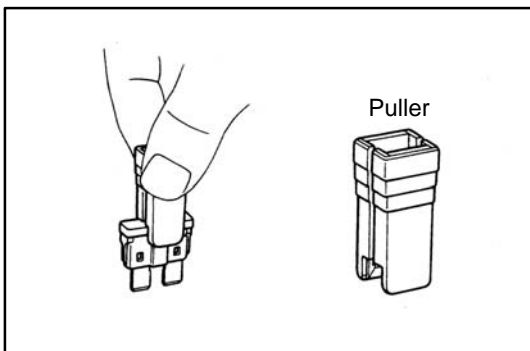
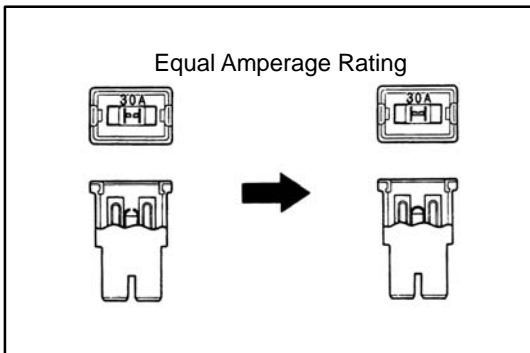
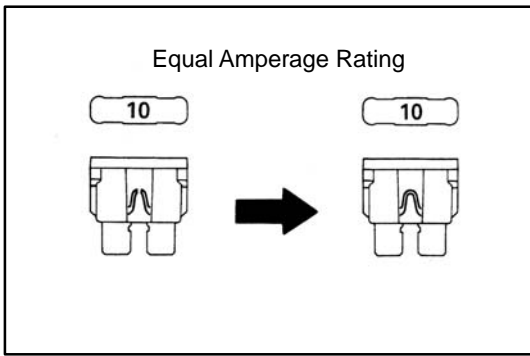
**HINT:** If replacing the circuit breaker, be sure to replace it with a breaker with an equal amperage rating.

#### 3. Install Circuit Breaker

- (a) Install the circuit breaker.
  - (b) Connect the negative (–) cable to the battery.
- HINT:** If a circuit breaker continues to cut out, a short circuit is indicated. Have the system checked by a qualified technician.



## INTRODUCTION-CIRCUIT PROTECTION



## REPLACEMENT OF FUSE AND FUSIBLE LINK

**HINT:** If replacing the fuse or fusible link, be sure to replace it with a fuse or fusible link with an equal amperage rating.

A

**NOTICE:**

1. Turn off all electrical components and the ignition switch before replacing a fuse or fusible link. Do not exceed the fuse or fusible link amperage rating.
2. Always use a fuse puller for removing and inserting a fuse. Remove and insert straight in and out without twisting. Twisting could force open the terminals too much, resulting in a bad connection.

If a fuse or fusible link continues to blow, a short circuit is indicated. The system must be checked by a qualified technician.

**HINT:** The puller is located at Junction Block No.2.

A



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# TERMINAL AND CONNECTOR REPAIR

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CONNECTOR REPAIR .....	B-2
TERMINAL REPLACEMENT .....	B-3
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**B**

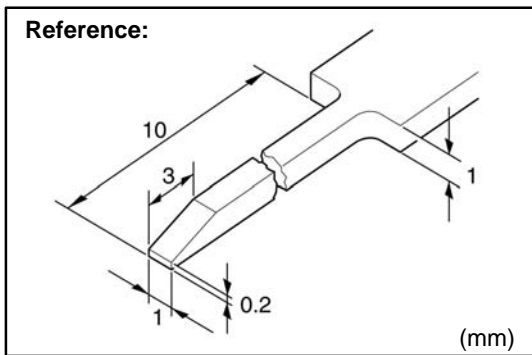
**B**

TERMINAL AND CONNECTOR REPAIR-PREPARATORY ITEMS

PREPARATORY ITEMS

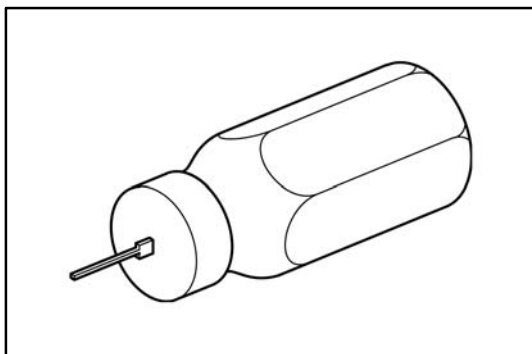
Tool	Crimping tool	AMP Part No. 169060	For caulking press sleeves
	Special tool	Refer to the following illustration	To remove the terminal
	SST	09991-00500	To remove the 0.64 connector terminal
	SST	09992-01030	To remove the 0.64 II connector terminal
Gauge	Caliper	0-150 mm	To measure the diameter of the core
Others	Press sleeve	82999-12010 (Red) 82999-12020 (Blue) 82999-12030 (Yellow)	To connect wires
	Silicon tape	08231-00045	To waterproof the connected section

**B**



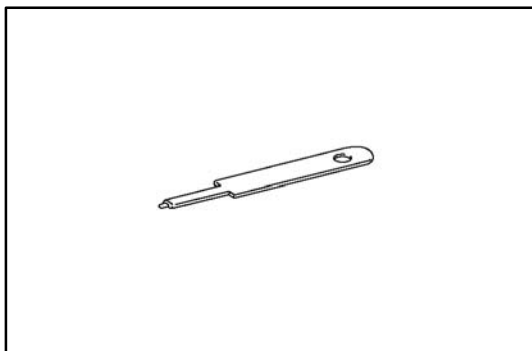
**Special Tool**

HINT: To remove the terminal from the connector, please construct and use the special tool or like object shown on the left.



Preparation of the SST to release the 0.64 connector terminal.  
SST 09991-00500

HINT:  
This is a SST for releasing terminals from 0.64 connectors.



Preparation of the SST to release the 0.64 II connector terminal.  
SST 09992-01030

HINT:  
This is a SST for releasing terminals from 0.64 II connectors.

## CONNECTOR REPAIR

The repair parts now in supply are limited to those connectors having common shapes and terminal cavity numbers. Therefore, when there is no available replacement connector of the same shape or terminal cavity number, please use one of the alternative methods described below. Make sure that the terminals are placed in the original order in the connector cavities, if possible, to aid in future diagnosis.

1. When a connector with a different number of terminals than the original part is used, select a connector having more terminal cavities than required, and replace both the male and female connector parts.

EXAMPLE: You need a connector with six terminals, but the only replacement available is a connector with eight terminal cavities. Replace both the male and female connector parts with the eight terminal part, transferring the terminals from the old connectors to the new connectors.

2. When several different type terminals are used in one connector, select an appropriate male and female connector part for each terminal type used, and replace both male and female connector parts.

EXAMPLE: You need to replace a connector that has two different types of terminals in one connector. Replace the original connector with two new connectors, one connector for one type of terminal, another connector for the other type of terminal.

3. When a different shape of connector is used, first select from available parts a connector with the appropriate number of terminal cavities, and one that uses terminals of the same size as, or larger than, the terminal size in the vehicle. The wire lead on the replacement terminal must also be the same size as, or larger than, the nominal size of the wire in the vehicle. ("Nominal" size may be found by looking at the illustrations in the section F or by direct measurement across the diameter of the insulation). Replace all existing terminals with the new terminals, then insert the terminals into the new connector.

EXAMPLE: You need to replace a connector that is round and has six terminal cavities. The only round replacement connector has three terminal cavities. You would select a replacement connector that has six or more terminal cavities and is not round, then select terminals that will fit the new connector. Replace the existing terminals, then insert them into the new connector and join the connector together.

**B**

**TERMINAL REPLACEMENT**

These steps **must** be followed when replacing a terminal.

**Step 1. Identify the connector and the terminal type.**



**Step 2. Disconnect the terminal from the connector.**



**Step 3. Replace the terminal.**



**Step 4. Install the terminal into the connector.**

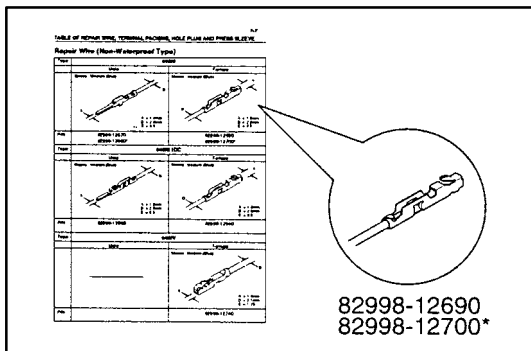
**B**

**Step 1. Identify the connector and the terminal type.**

Confirm whether the connector you require is the non-waterproof, waterproof or combined terminal type connector from the pictures provided in the following charts.

Connector	Description
Non-Waterproof Type	Those connectors which are not of the waterproof or combined terminal type.
Waterproof Type	Waterproof material (hole plug or terminal packing) is provided on the terminal/connector body.
Combined Terminal Type	Terminals of different shape/size are located in one connector.

**B**



**1. Terminal with Wire**

Identify the part number of the terminal with wire by picking out the corresponding illustration from the pictures provided on the following charts.

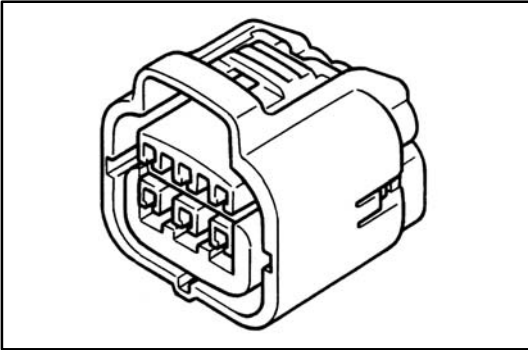
**HINT:** In some of the illustrations, there are two part numbers for the same illustration of terminal with wire, because although the shapes of the terminals are completely the same, there is a difference in with /without gold-plating (gilded).

**Remark:** The length of the wire connected to the terminal is approximately 150 mm.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

### NOTICE:

- When the terminal used is gold plated, be sure to replace it with a gold plated terminal when marking repairs.
- Do not use male and female terminals which are made of different materials from each other.



### 2. Connector Body

- Identify the part number of the corresponding terminal with wire according to the above-mentioned 1.
- Identify the part number of the connector body by picking out the correct one from the illustrations according to the number of terminals and the shape.

**B**

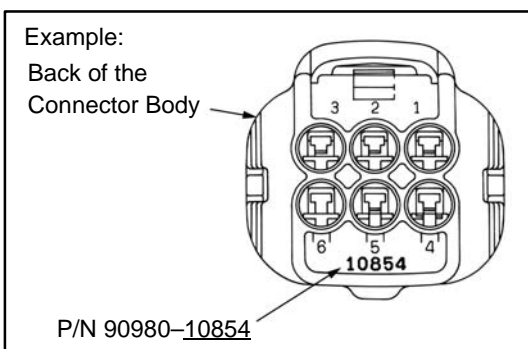
### HINT:

- If you can find no connector which matches the type you require, pick out male and female connector bodies as a set which have more terminals than you require.

For the combined terminal type connector body, pick out an appropriate connector body for each terminal being used.

### Example:

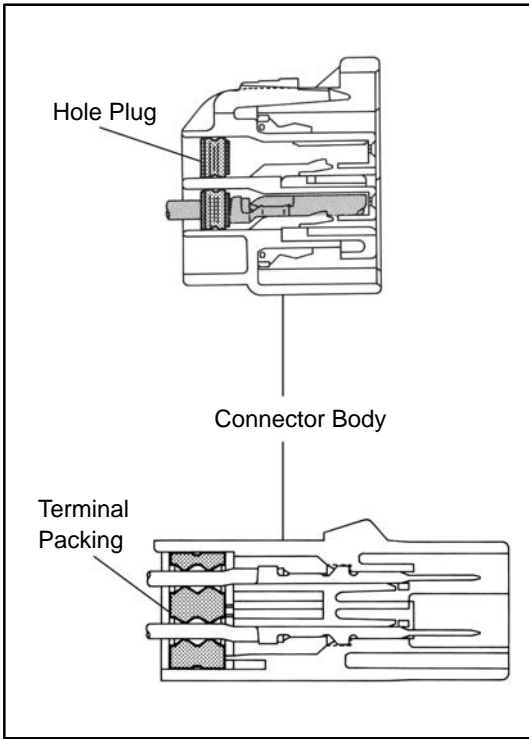
When two types of terminal are used in one connector body, pick out a male and female for two different connector bodies.



- The part number has been stamped on the back of the connector body. (This will continue to be done to new types of connector.)

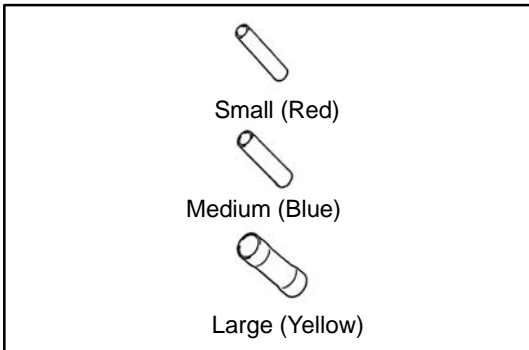
**TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT**

**B**



**3. Hole Plug/Terminal Packing**

- (a) Identify the part number of the appropriate terminal with wire/connector body from the illustrations of waterproof type connector according to the above-mentioned 1 and 2.
- (b) Identify the part number of the hole plug/terminal packing from the corresponding illustration.

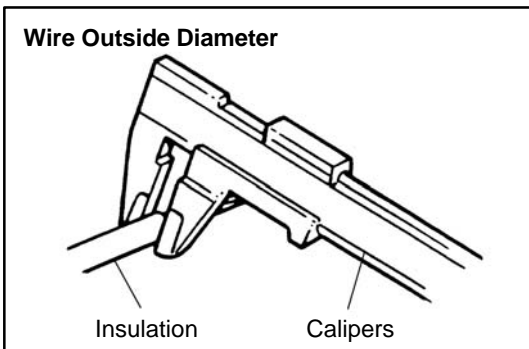


**4. Sleeve**

When connecting two wires using a sleeve, select the sleeve according to the following table.

Wire Outside Diameter	Sleeve Size (Color)
0.2–1.0 mm	Small (Red)
1.0–2.0 mm	Medium (Blue)
3.0–5.0 mm	Large (Yellow)

- (a) When size is based on the outside diameter of the wire.





**TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT**

* \ *	0.13	0.22	0.3	0.5	0.85	1.25	2	3	5
0.13	-	-	-	S	-	-	-	-	-
0.22	-	-	-	S	-	-	-	-	-
0.3	-	-	S	M	M	M	M	L	L
0.5	S	S	M	M	M	M	M	L	L
0.85	-	-	M	M	M	M	L	L	L
1.25	-	-	M	M	M	M	L	L	L
2	-	-	M	M	L	L	L	L	-
3	-	-	L	L	L	L	L	L	-
5	-	-	L	L	L	L	-	-	-

(b) When size is based on the nominal size of the wire.

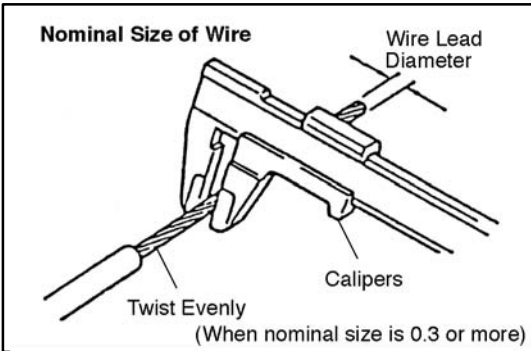
Sleeve size

S : Small (Red)

M : Medium (Blue)

L : Large (Yellow)

\* Nominal size of the wire

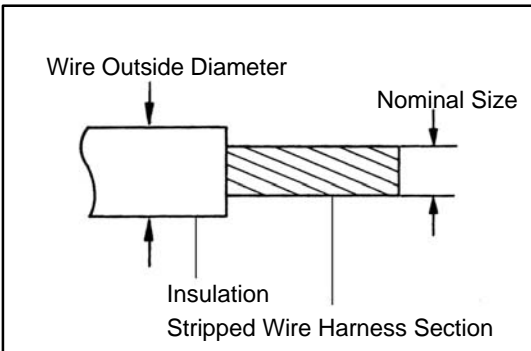


HINT: To calculate the "Nominal Size" of the wire.

Nominal size =

$$\frac{3.14 \times (\text{Diameter of stripped wire harness})^2}{4}$$

**B**

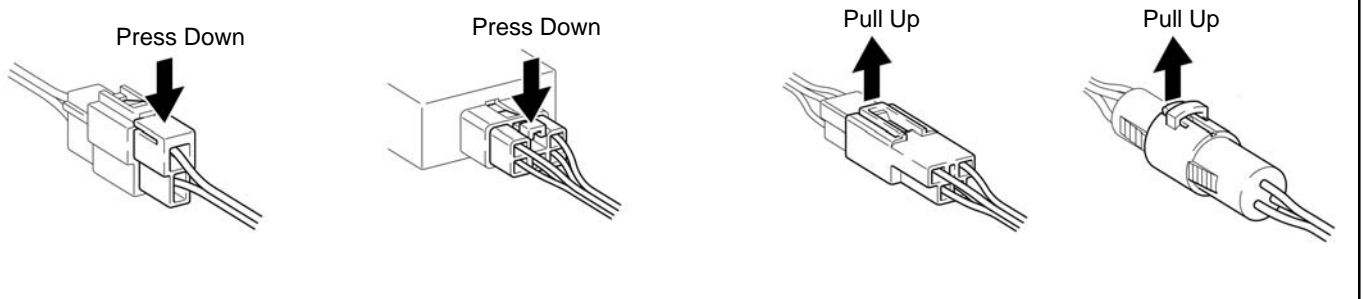
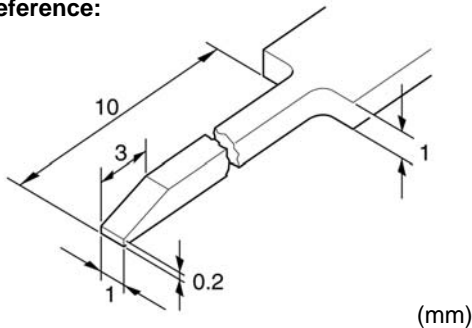


HINT: Outside Diameter and Nominal Size

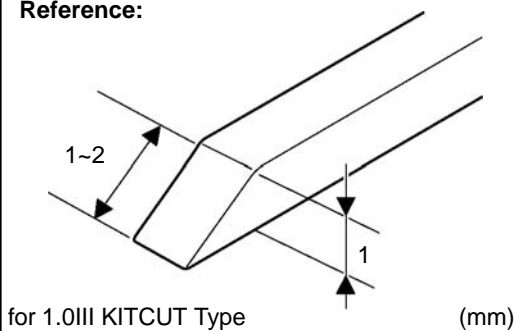
**Step 2. Disconnect the Terminal from the Connector.****1. Disconnect Connector**

To pull apart the connectors, pull on the connector itself, not the wire harness.

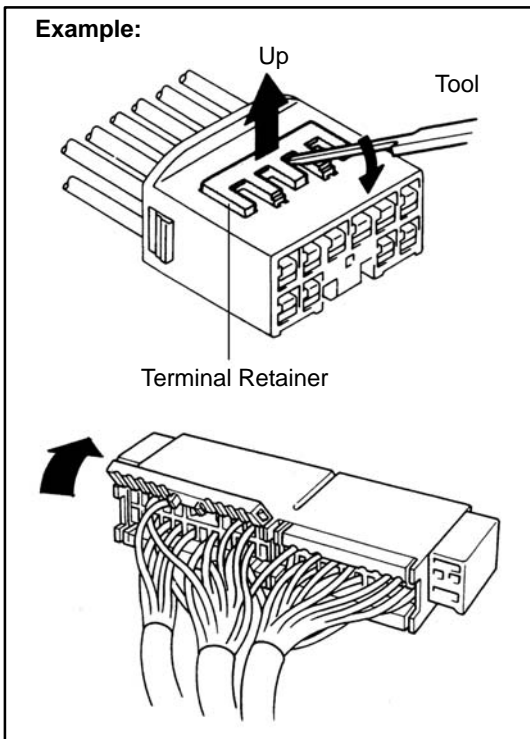
HINT: Check to see what kind of connector you are disconnecting before pulling apart. Press down type is mainly used.

**Example:****Reference:****2. Prepare the Special Tool**

HINT: To remove the terminal from the connector, please construct and use the special tool or like object shown on the left.

**Reference:**

## TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT



### 3. Disengage the double locking device or terminal retainer.

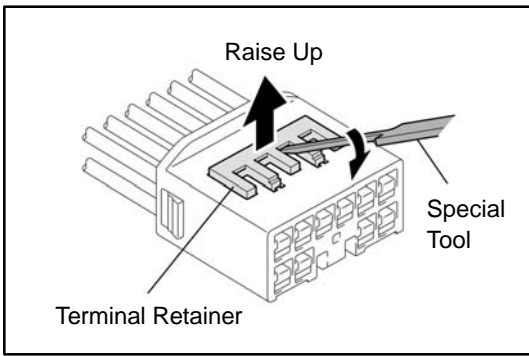
- (a) Locking device must be disengaged before the terminal locking clip can be released and the terminal removed from the connector.
- (b) Use a special tool or the terminal pick to unlock the double locking device.

**NOTICE:**

**Do not remove the terminal retainer from connector body.**

**B**

**TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT**

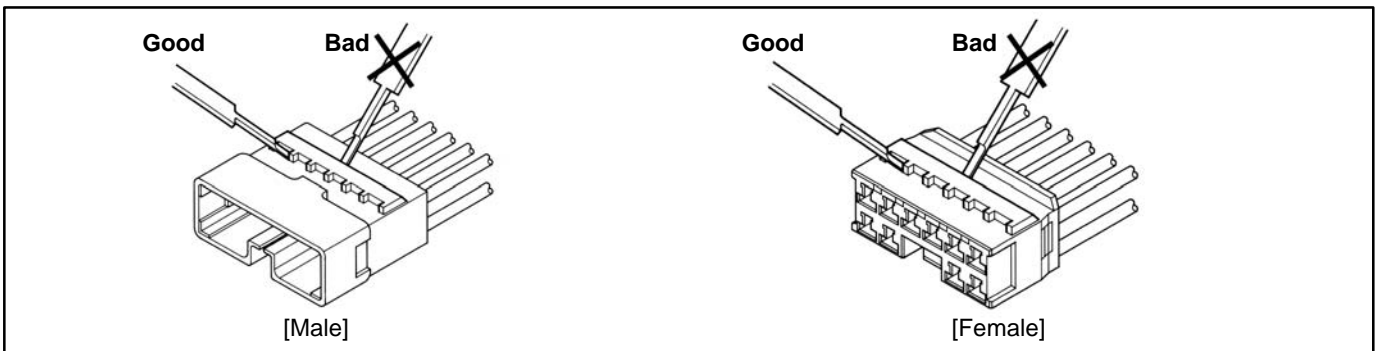
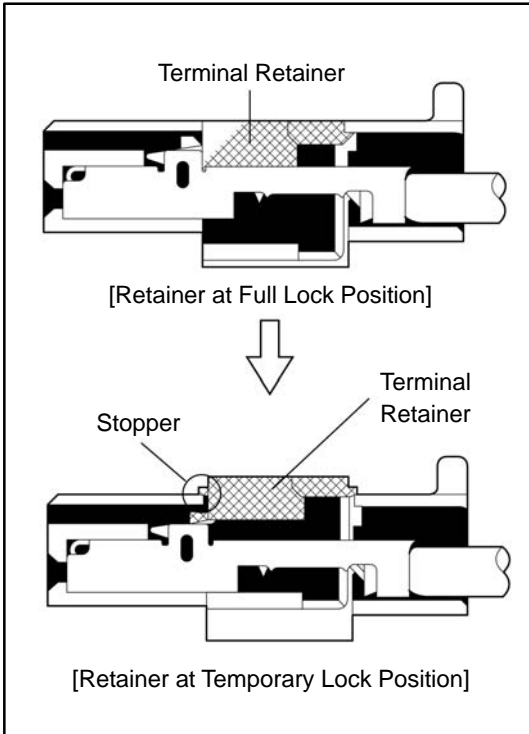


Type A (For 0.64II, 0.64III, 1.0II, 1.8, 2.3II, 4.8 and 8.0 of Non-Waterproof Type Connector)

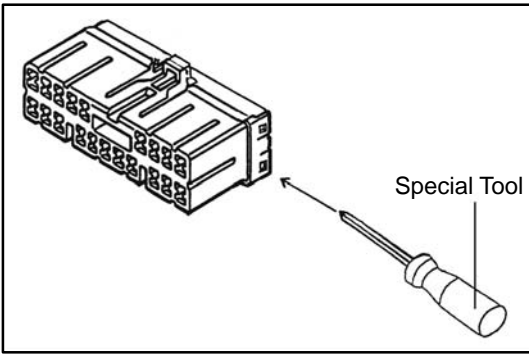
- (1) Using the special tool, raise the retainer up to the temporary lock position.

HINT: The needle insertion position varies according to the connector's shape (number of terminals, etc.), so check the position before inserting it.

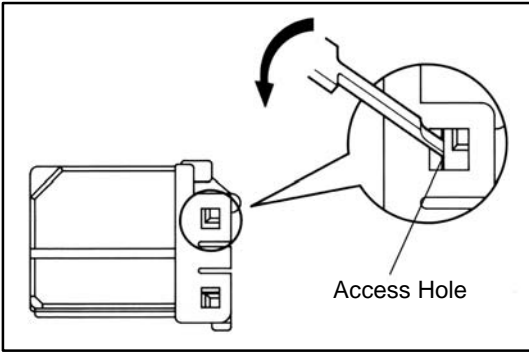
**B**



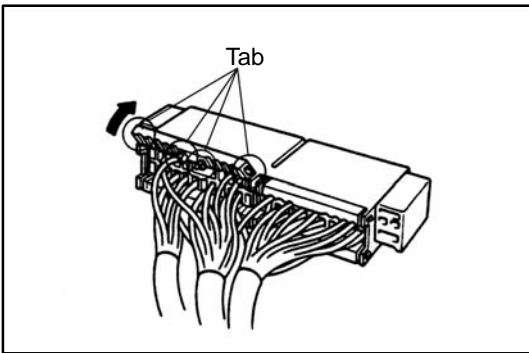
TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT



Type B (For 1.8, 1.0 and TLC of Non-Waterproof Type Connector)

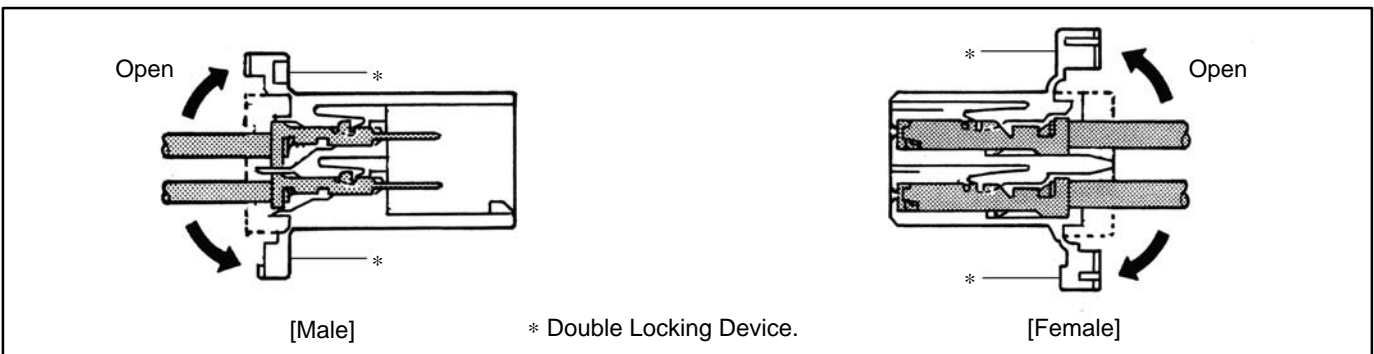


- (1) Press the special tool at a 45° angle into the locking lug access hole as shown.  
Raise the double locking device up as far as possible.

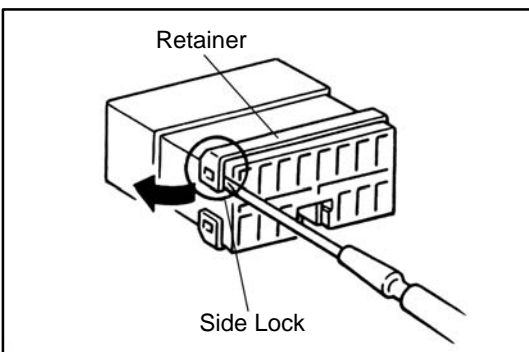


- (2) Remove the special tool and open the double locking device

**NOTICE:**  
TLC housing is not be reusable. Please replace it with the new one after replacement of the terminal.



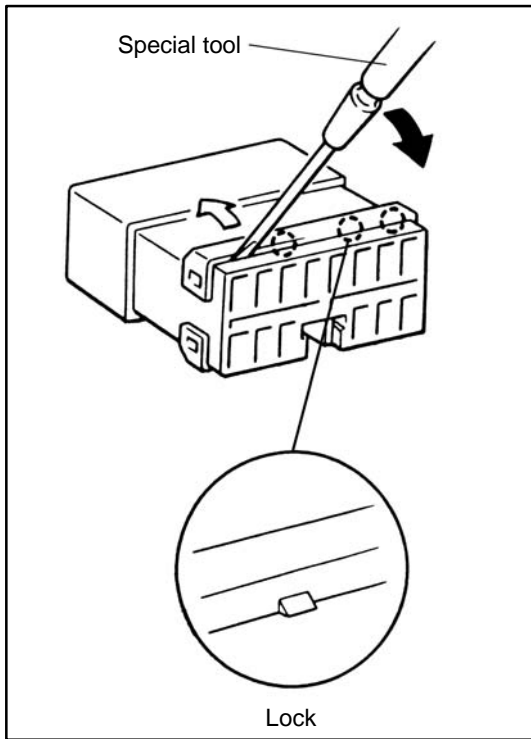
\* Double Locking Device.



Type C (For TNS, FTC Type Connector)

- (1) Widen the side lock part of the retainer from side to side using the special tool.

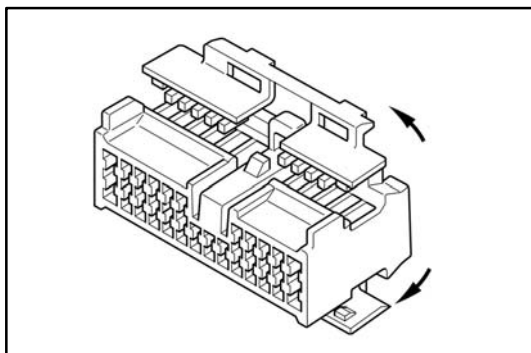
TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



- (2) Inset the special tool into the chink between the retainer and the terminal itself. Then pry it to the direction of the arrow shown in the illustration and push the retainer up to release the lock.

**NOTICE:**

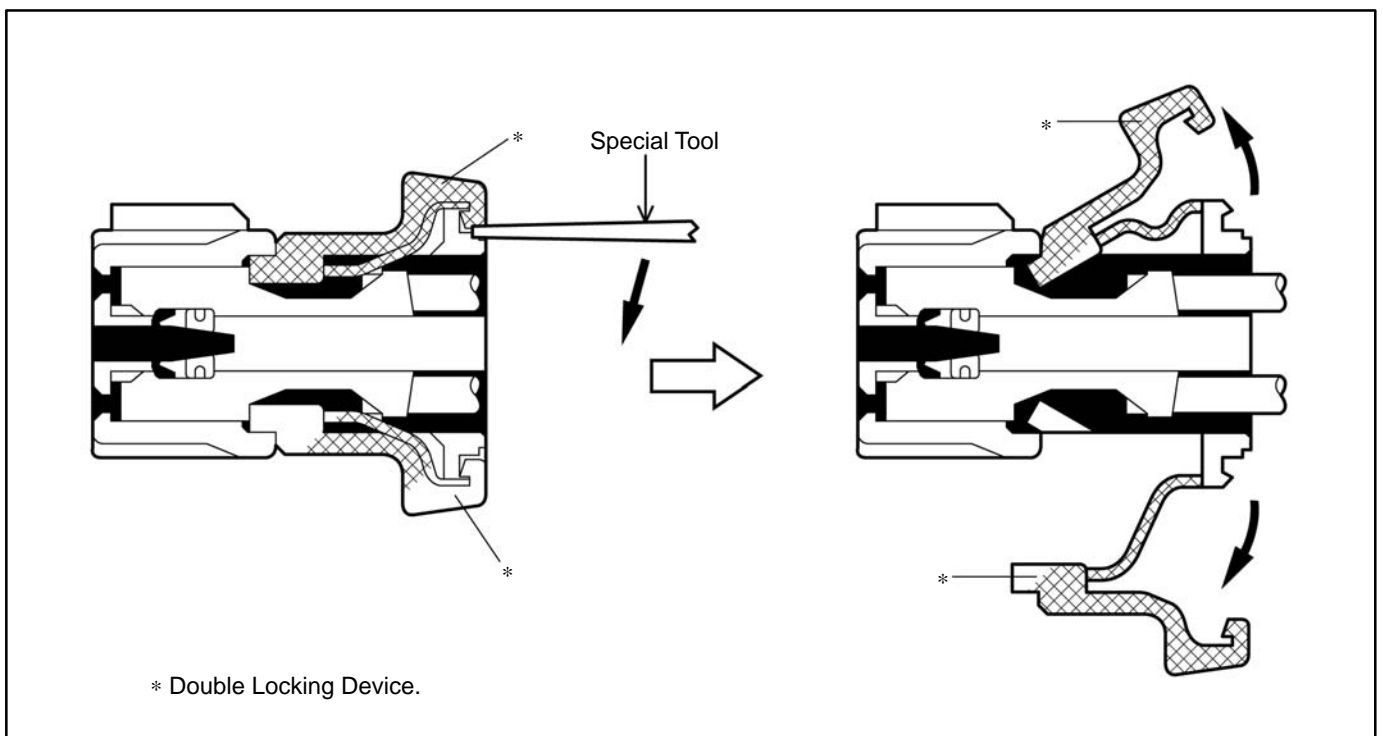
- Do not insert the special tool too much. It may cause damage on the fit section of the terminal and the wire harness.
- TNS housing is not reusable. Please replace it with the new one after replacement of the terminal.



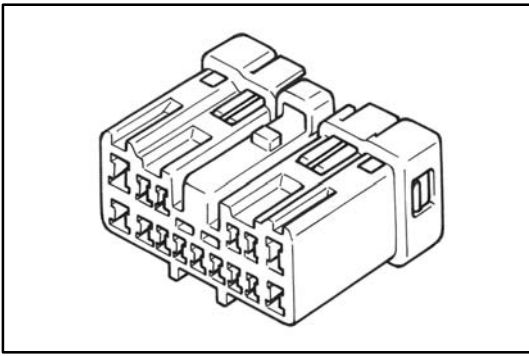
Type D (For 1.3 of Non-Waterproof Type Connector)

[Case 1]

- (1) Use the special tool to unlock the double locking device.

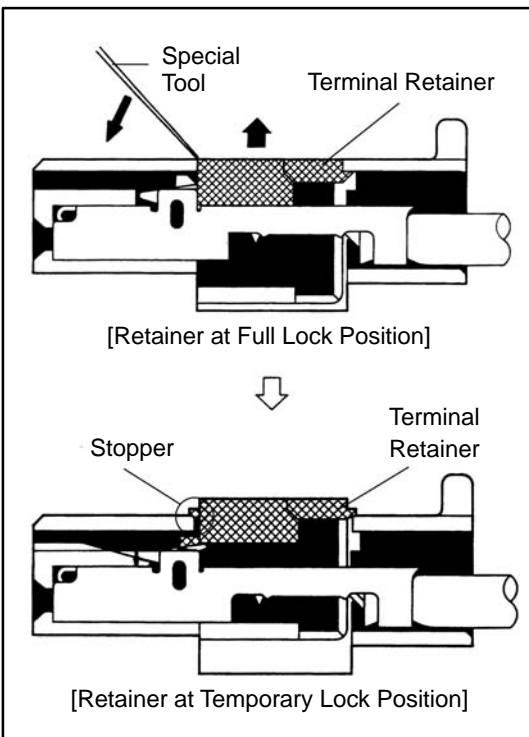
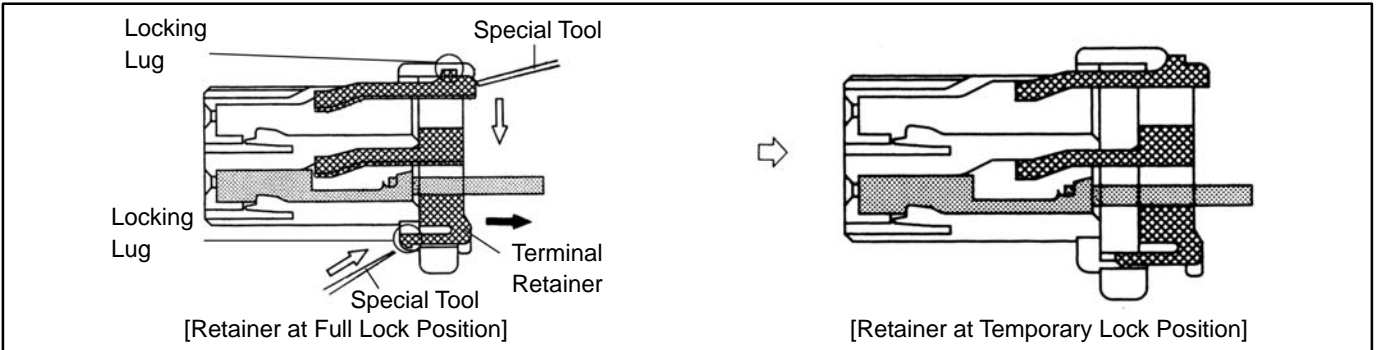


TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT



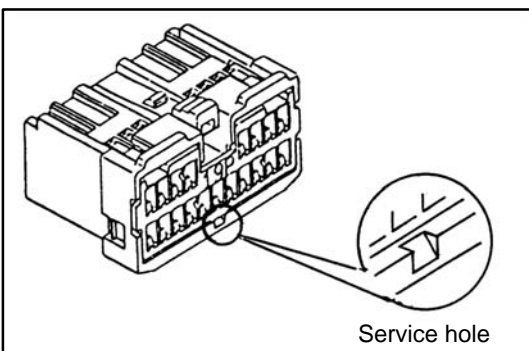
[Case 2]

- (1) Using the special tool, push the terminal retainer locking lug (clip) and pull the terminal retainer up to the temporary lock position.



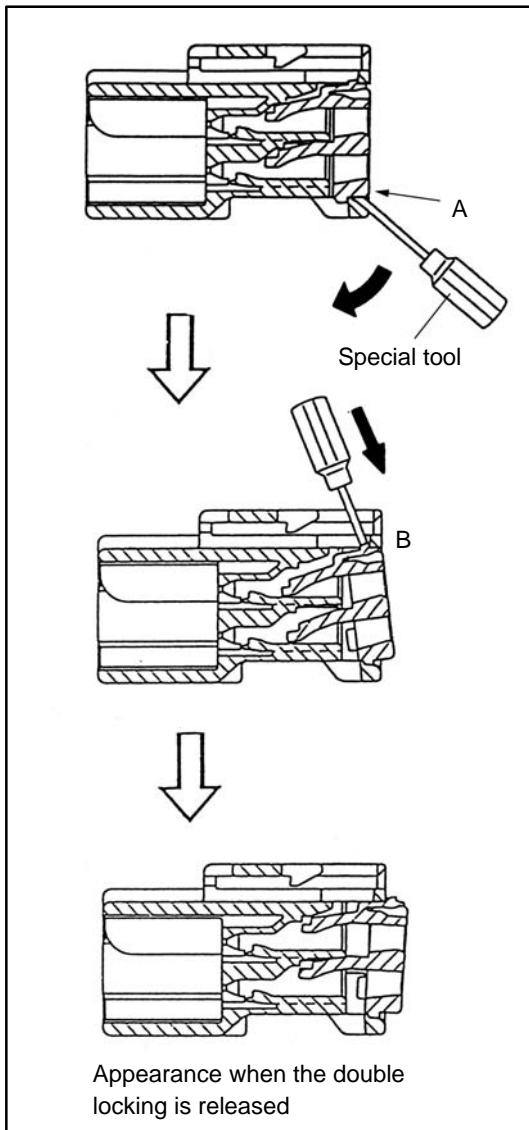
[Case 3]

- (1) Using the special tool, raise the retainer up to the temporary lock position.



[Case 4]

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



(1) Insert the special tool into the service hole and move it to the direction of the arrow to release the lock on the side A.

(2) Push the lock on the side B up by the special tool and release the lock. Then pull the retainer forward.



**TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT**

Type E (For 0.64 1.8, 2.3, 2.3II, 4.8, 6.3 and 8.0 of Waterproof Type Connector)

HINT: Terminal retainer color is different according to connector body.

Example:

Terminal Retainer : Connector body

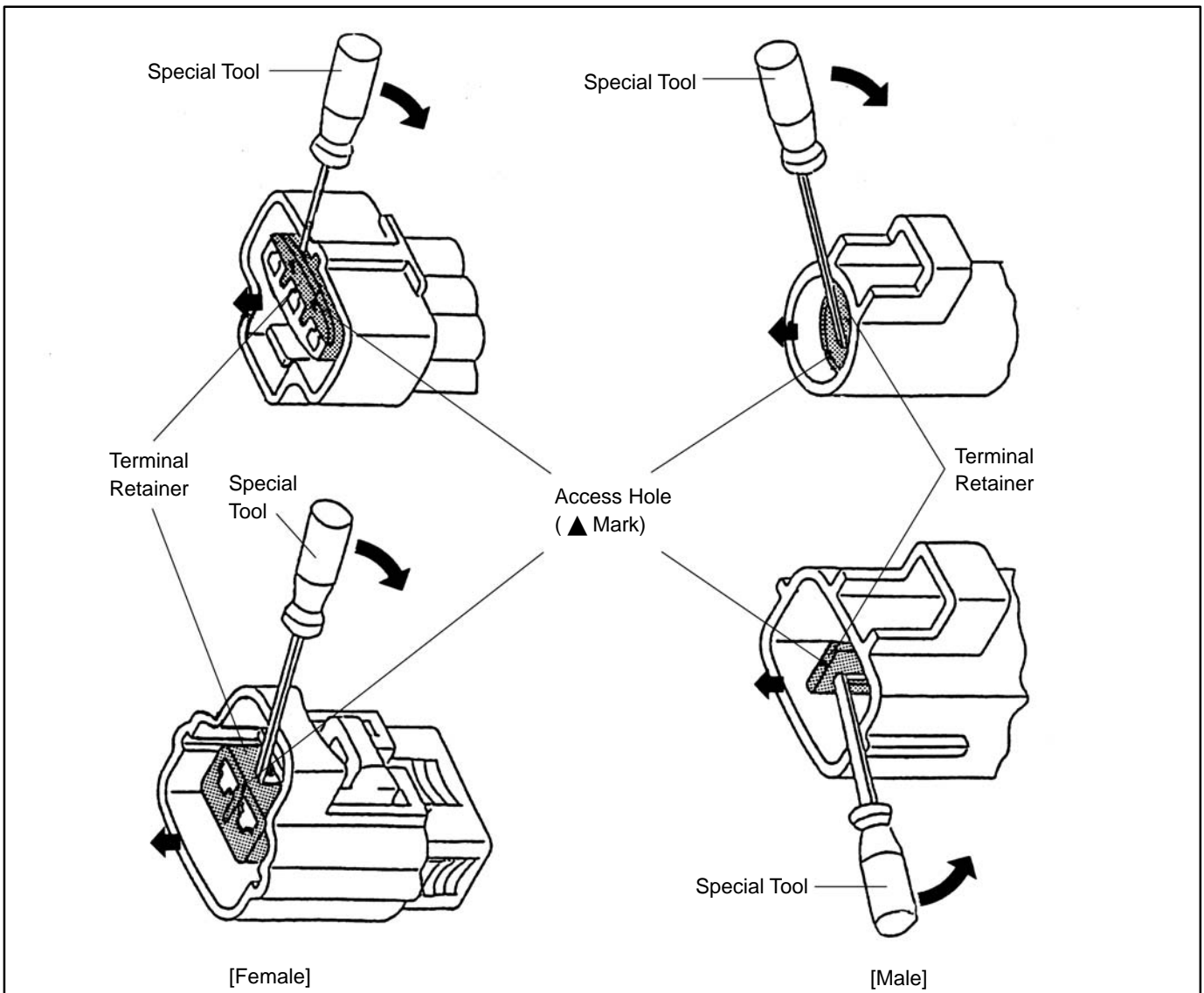
Black or White : Gray

Black or White : Dark Gray

Gray or White : Black

[Case 1]

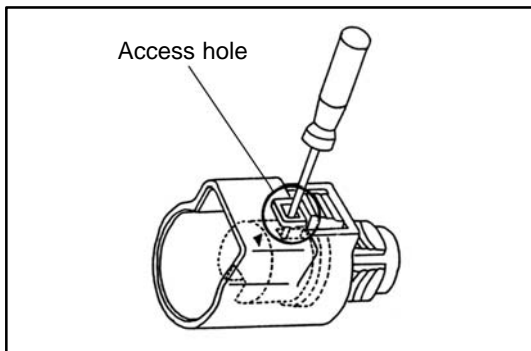
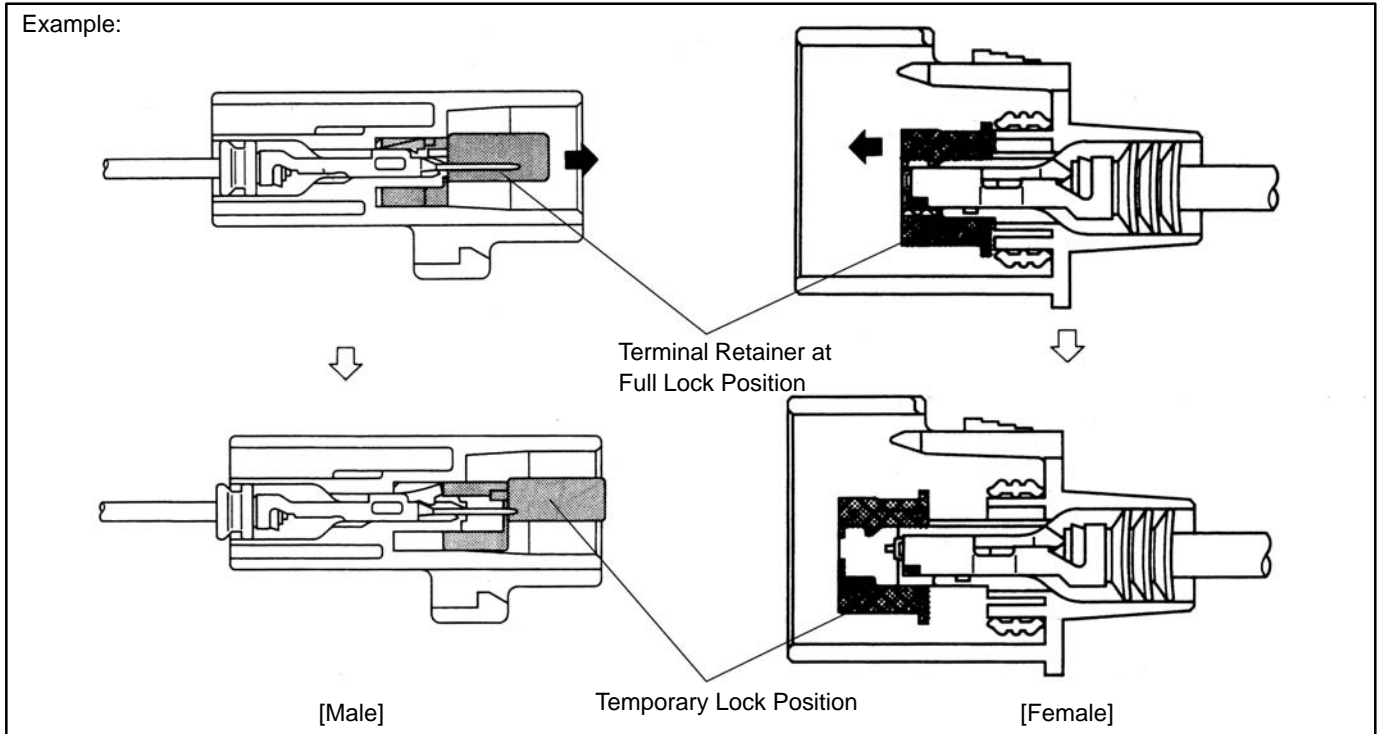
Type where terminal retainer is pulled up to the temporary lock position (Pull Type).



TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT

- (1) Insert the special tool into the terminal retainer access hole (▲ Mark) and pull the terminal retainer up to the temporary lock position.

HINT: The needle insertion position varies according to the connector's shape (Number of terminals etc.), so check the position before inserting it.



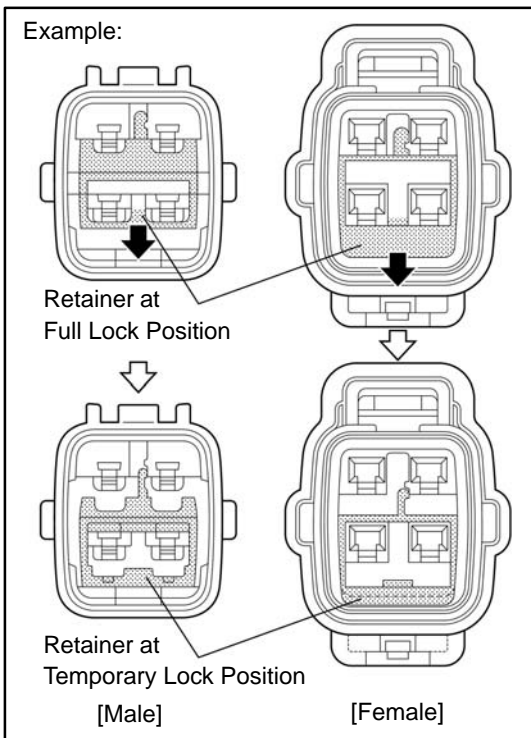
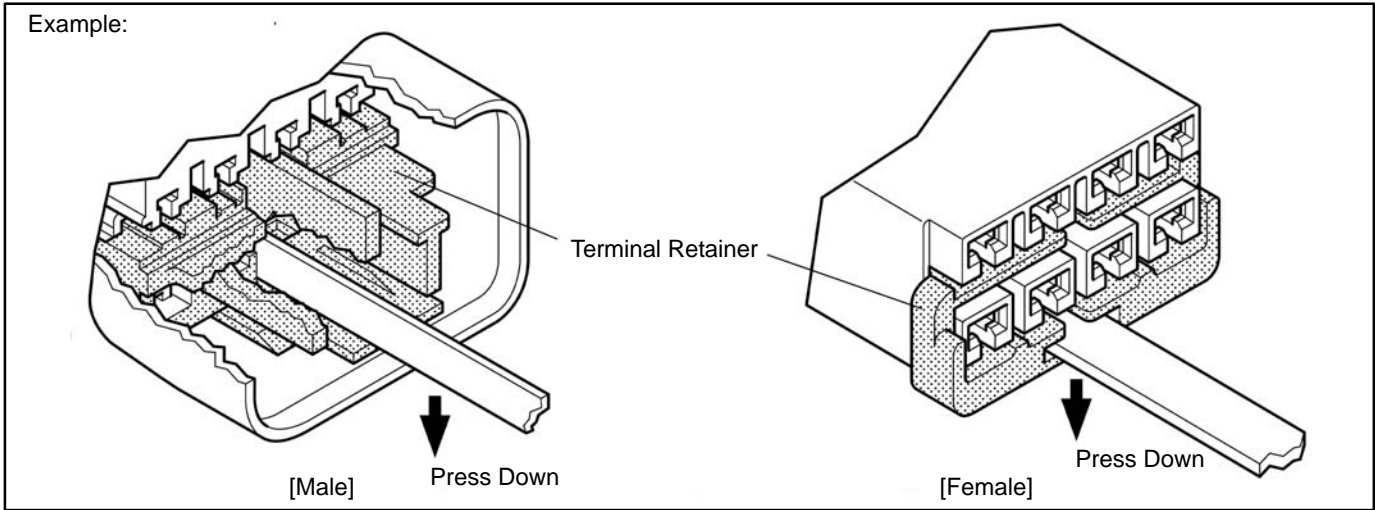
HINT: In some cases insert the special tool from the access hole on the flank of the housing.

TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT

[Case 2]

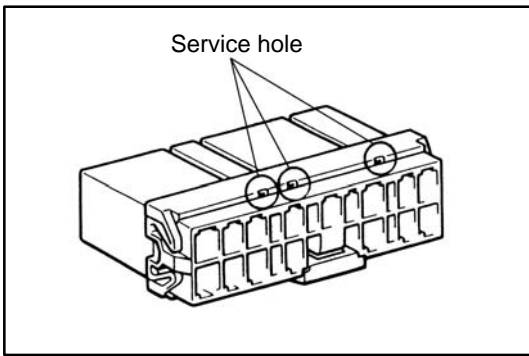
Type which cannot be pulled as far as Power Lock

HINT: There are few cases of this type of connector



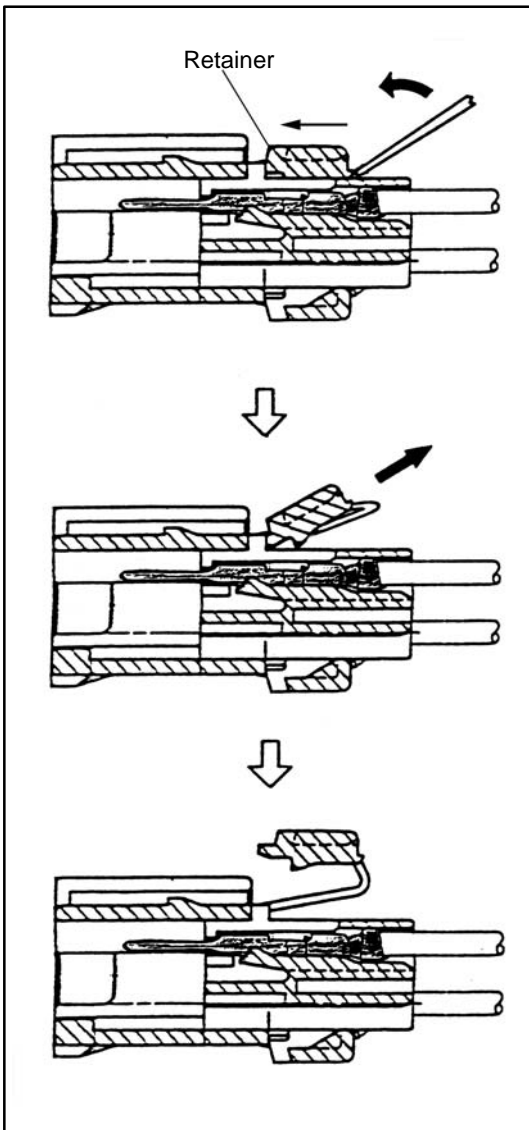
- (1) Insert the tool straight into the access hole of terminal retainer as shown.  
Push the terminal retainer down to the temporary lock position.

TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



Type F (For C-Type Connector)

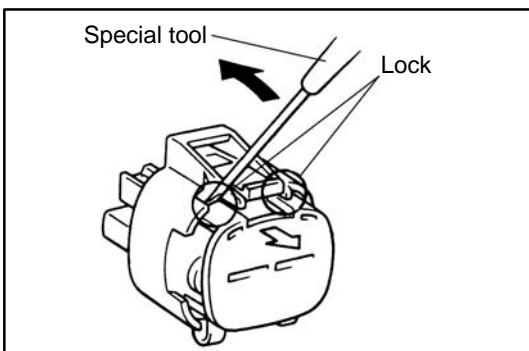
- (1) Insert the special tool into the service hole.



- (2) Move the special tool to the direction of the arrow and release the lock.

HINT: Lift the retainer up after moving it to the direction of the thin arrow shown in the illustration.

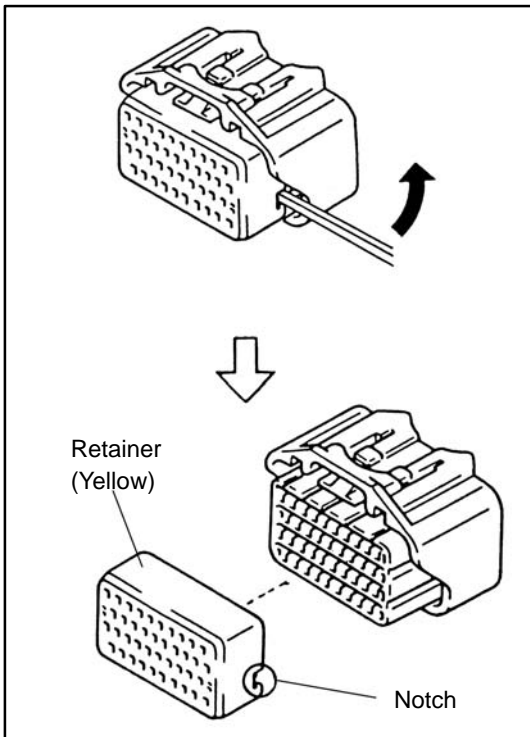
- (3) Pull the retainer forward by hand and remove the retainer from the housing.



Type G

- Insert the special tool into the position shown in the illustration. Pry it to the direction of the arrow and push the lock up to release it.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



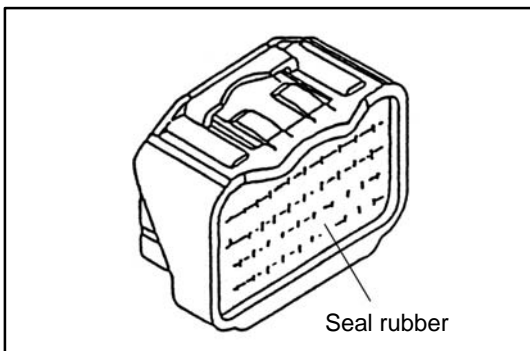
Type H (For 1.0II Type Connector)

- (1) Move the special tool into the notch of the retainer to the direction of the arrow with the edge of the housing as the fulcrum. Then pull the retainer out.

**NOTICE:**

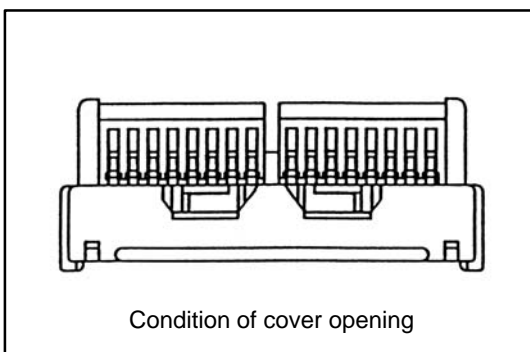
Do not insert the special tool into areas except notches. (This may damage the seal ring that is attached behind the retainer.)

- (2) As same as the procedure (1), pull the retainer straight out using hand after releasing the lock on the other side.



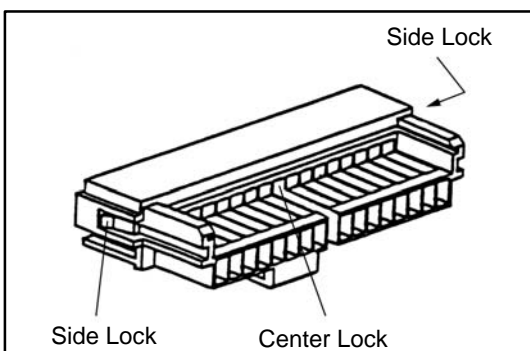
**NOTICE:**

- Do not remove the seal rubber when pulling the terminal out.
- If the seal rubber is peeled off when pulling the terminal out, press it down to stick it to the original condition.
- Be sure and not fit the connector when the retainer is not installed.



Type I (For SFPC Type Connector)

- (1) Open the cover (white)

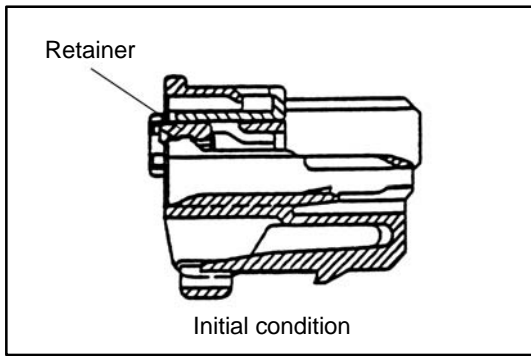


- (2) Remove the side lock of the retainer. (One side)
- (3) Remove the center lock of the housing.
- (4) Remove the side lock of the retainer. (The other side)

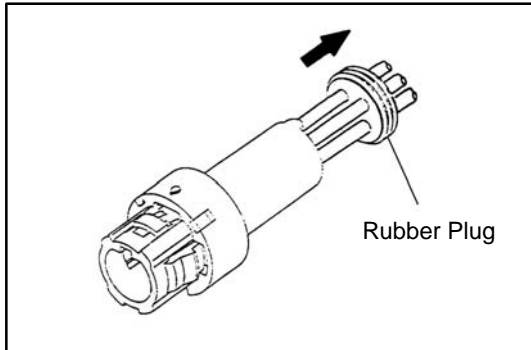
**NOTICE:**

- Following the above order is not required.
- No center lock on the housing with ten poles.

TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT

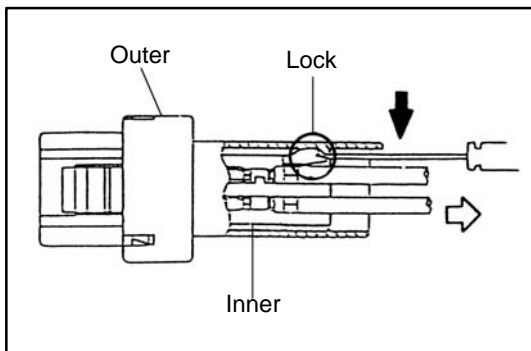


- (5) Move the retainer until it becomes the initial condition.

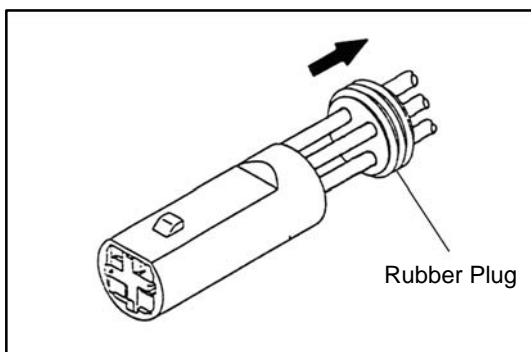


Type J  
[Male]

- (1) Remove the rubber plug.

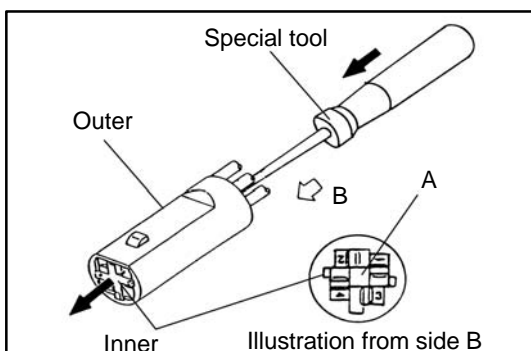


- (2) Push the lock of the inner using the special tool.
- (3) Pull the wire to the direction of the arrow pushing the lock up and remove the inner from the outer.



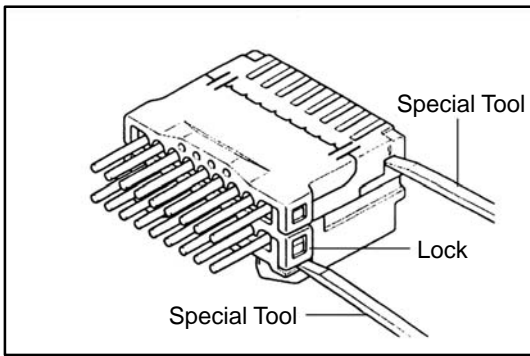
[Female]

- (1) Remove the rubber plug.



- (2) Insert the special tool into the outer shown in the illustration. Then push the area A of the inner and remove the inner from the outer.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



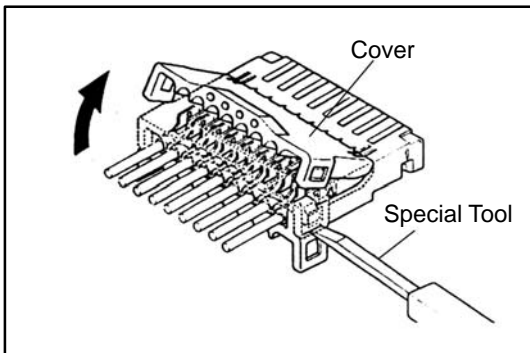
Type K (For Insulation Displacement Connector)

(1) Separate Connector

Using a special tool, release the lock and separate the connector into 2.

**NOTICE:**

**Do not apply too much force to the lock arm.**

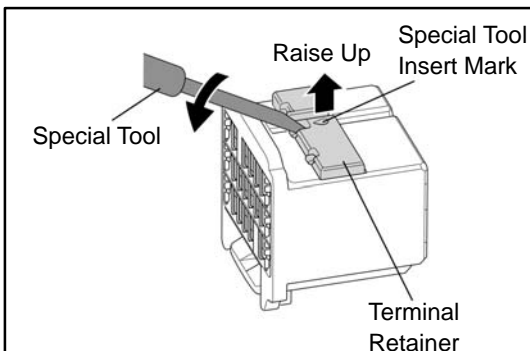


(2) w/ Cover : Open Connector Cover

Using a special tool, release the lock and open the cover.

**NOTICE:**

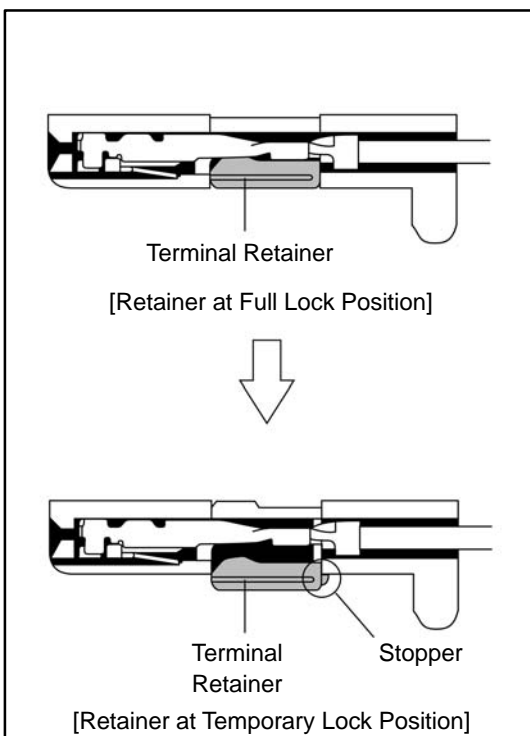
**Do not apply too much force to the lock arm.**



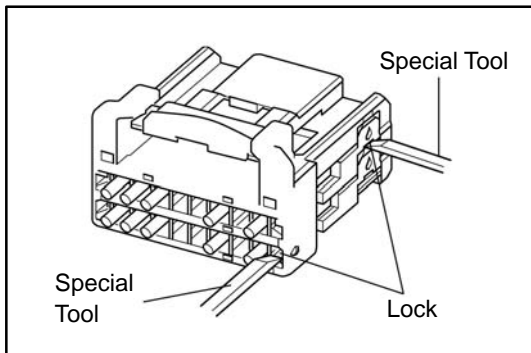
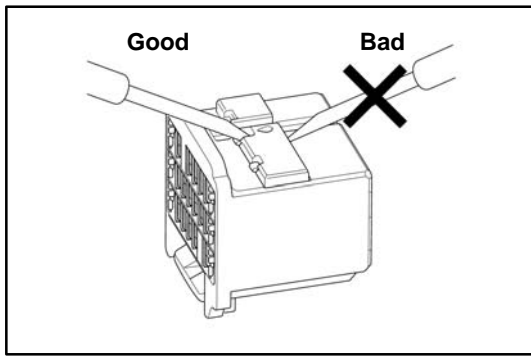
Type L (For 0.64 Type Connector)

(1) Using the special tool, raise the retainer up to the temporary lock position.

**HINT:** The needle insertion position varies according to the connector's shape (number of terminals, etc.), so check the position before inserting it.



## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



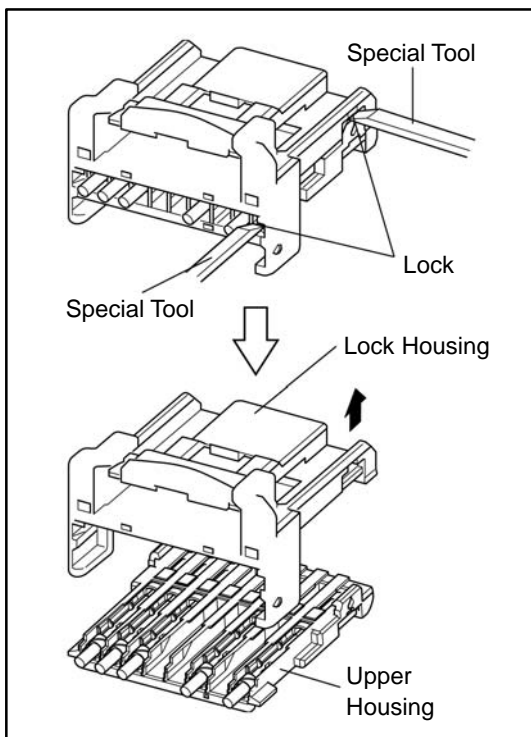
Type M (For 0.64 of Insulation Displacement Connector (IDC) Type)

(1) Remove the Lower Housing

Using a special tool, release the lock and remove the lower housing.

**NOTICE:**

- Do not apply too much force to the lock arm.
- Mark the upper housing and lower housing to prevent mistakes when putting them together.



(2) Remove the Upper Housing

Using a special tool, release the lock and remove the upper housing from the lock housing.

**NOTICE:**

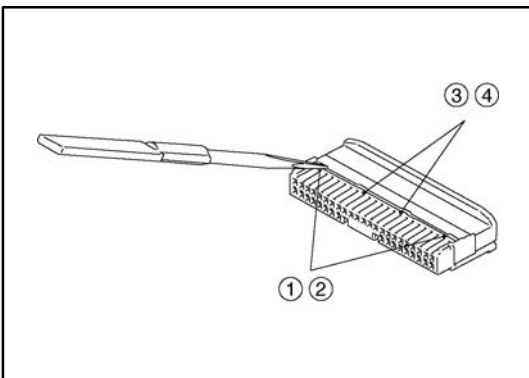
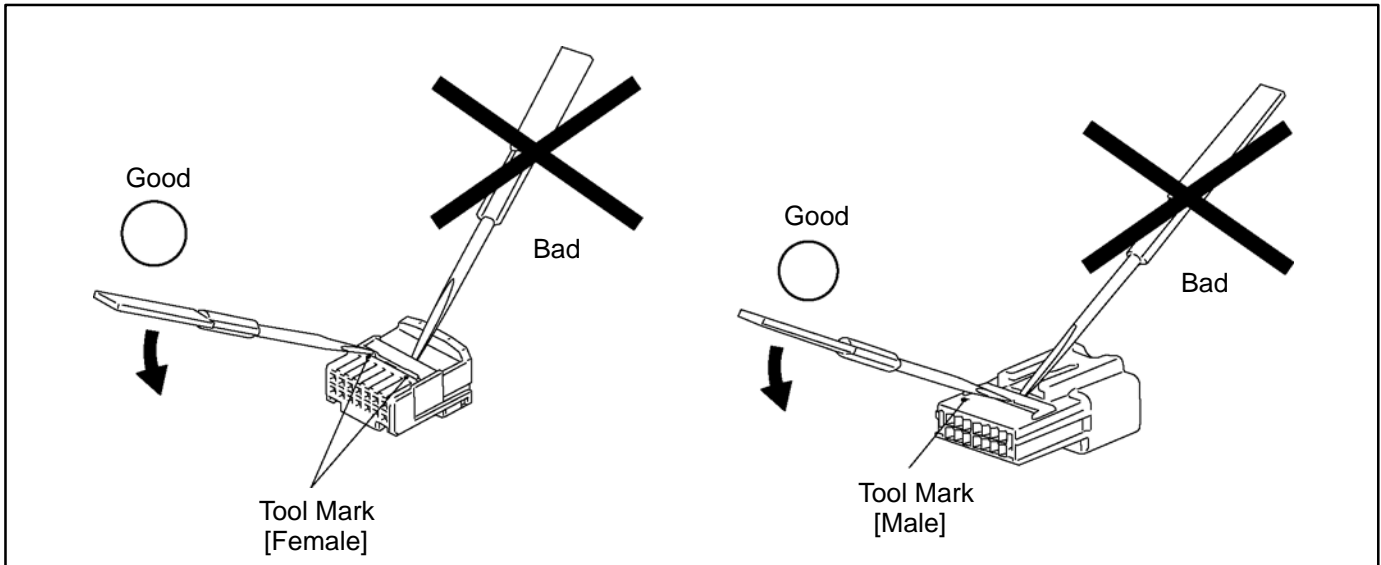
- Do not apply too much force to the lock arm.
- Mark the upper housing and lower housing to prevent mistakes when putting them together.



## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

Type N (For 0.64II Type Connector)

- (1) Insert the tool into the insertion position near the tool mark and raise the terminal retainer up to the temporary lock position using the tool.

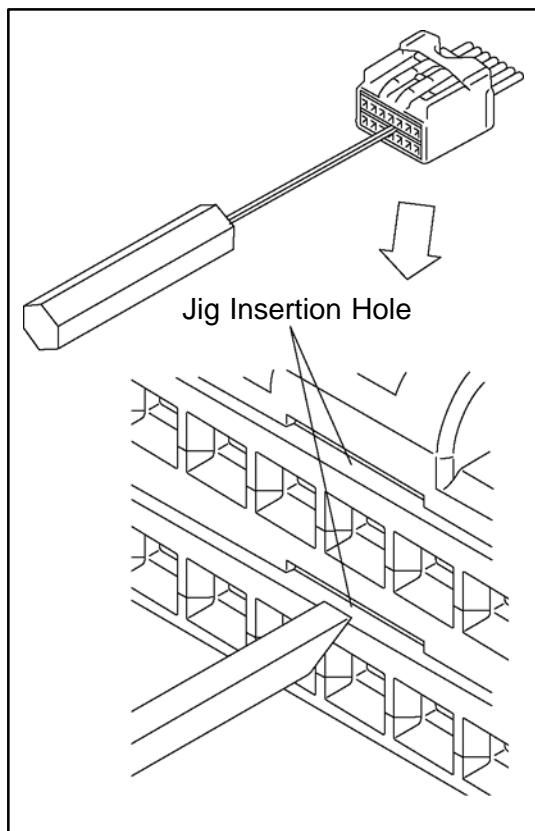


Disengagement order

### NOTICE:

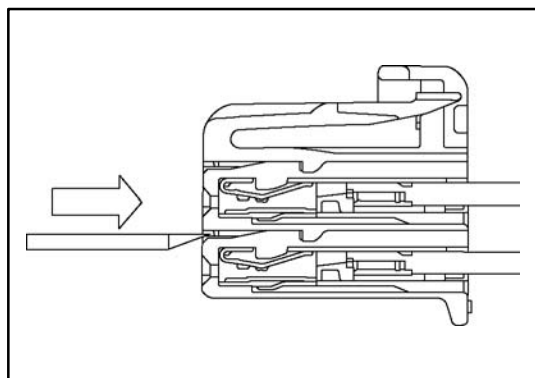
- Use a precision screwdriver (1.2mm) or special tool when disengaging the terminal retainer.
- Do not insert the tool into any position other than the tool insertion positions. After disengaging the terminal retainer, be sure to check that the terminal retainer has not been deformed. If it has been deformed, replace it with a new one.
- Some connectors have 2 or more tool insertion positions. When disengaging the terminal retainer from these types of connectors, follow the disengagement order shown in the illustration on the left.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



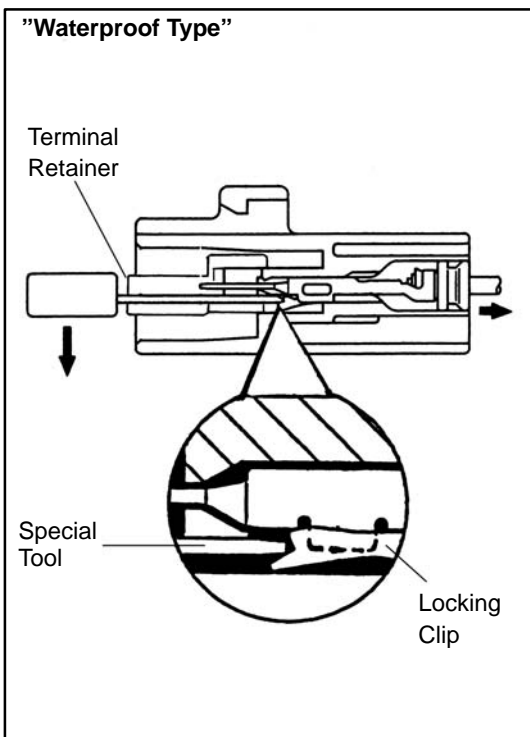
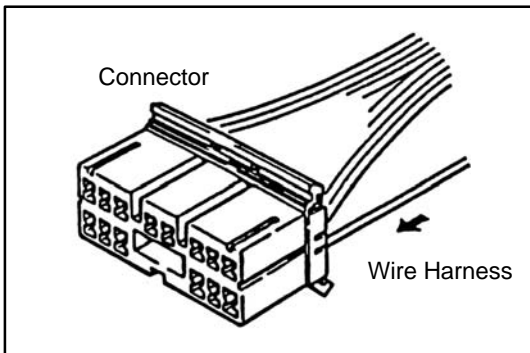
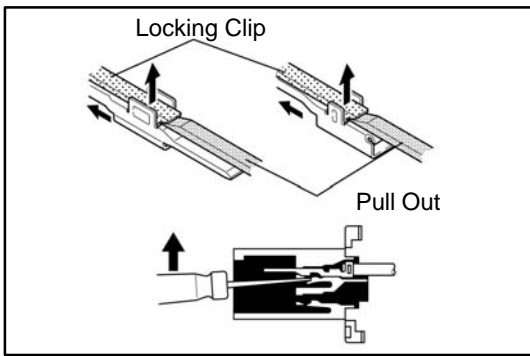
Type O (For 1.0III of KITCUT Type Connector)

- (1) Insert a jig horizontally into the jig insertion hole.
- (2) Push the jig in until it stops.



- (3) Pull out the wire in the direction indicated by the arrow and remove the housing.

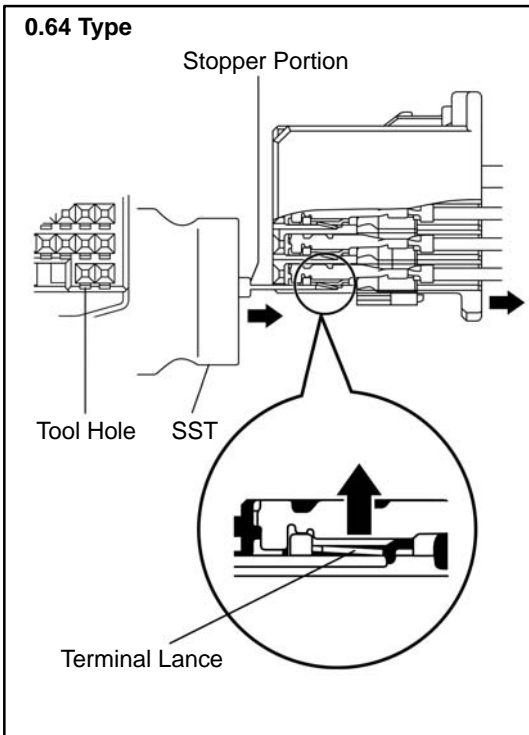
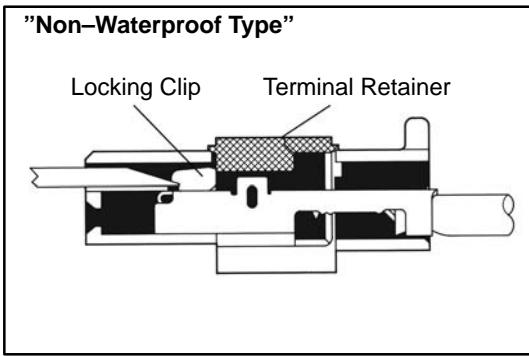
## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



### 4. Disconnect Terminal from Connector

- (a) Determine the primary locking system from the charts.
1. Lock Located on terminal
  2. Lock Located on connector
  3. Method of entry and operation
- (b) Push the terminal gently into the connector and hold it in this position.
- (c) Insert the special tool into the connector in the direction shown in the chart.
- (d) Move the locking clip to the unlock position and hold it there.
- NOTE: Do not apply excessive force to the terminal. Do not pry on the terminal with the special tool.
- (e) Carefully withdraw the terminal from the connector by pulling the lead toward the rear of the connector.
- NOTE: Do not use too much force. If the terminal does not come out easily, repeat steps (a) through (e).

TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT



- (f) Insert the SST into the connector in the direction shown in the chart.
- (g) Insert the SST fully to the tool hole, and push the terminal lance.

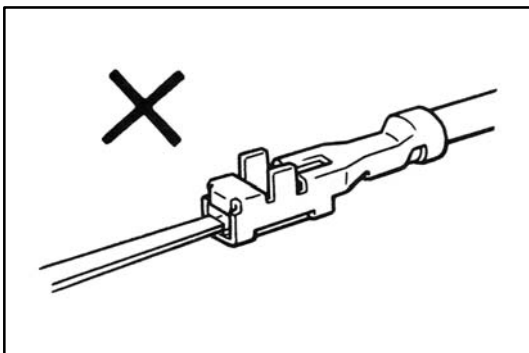
**NOTICE:**

- The terminal has a lance shape, therefore, the housing may be damaged and the terminal may get stuck if forcibly pried by wires etc.
- Insert the SST so that the stopper portion surface is facing up.

- (h) Carefully withdraw the terminal from the connector by pulling the lead toward the rear of the connector.

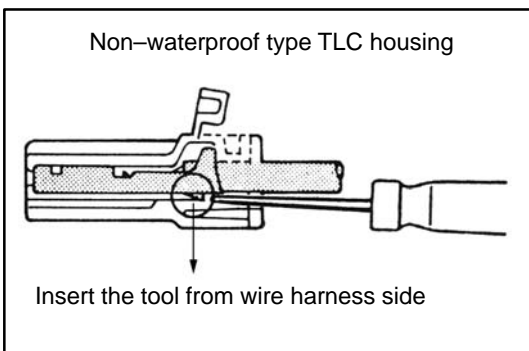
**NOTICE:**

Removal of the terminal from housing cavity will cause damage to the wire seal section, deteriorating waterproofing performance. Replace the connector with a new one.



**NOTICE:**

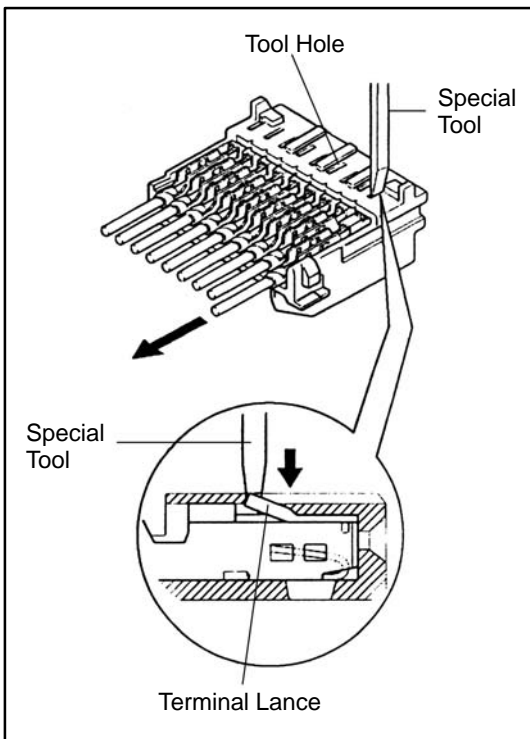
Do not insert the special tool into the female terminal box. If you do so, replace the terminal with the new one whether the terminal is broken or not.



**NOTICE:**

As for Non-waterproof type TLC housing, insert the special tool into the housing from wire harness side.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

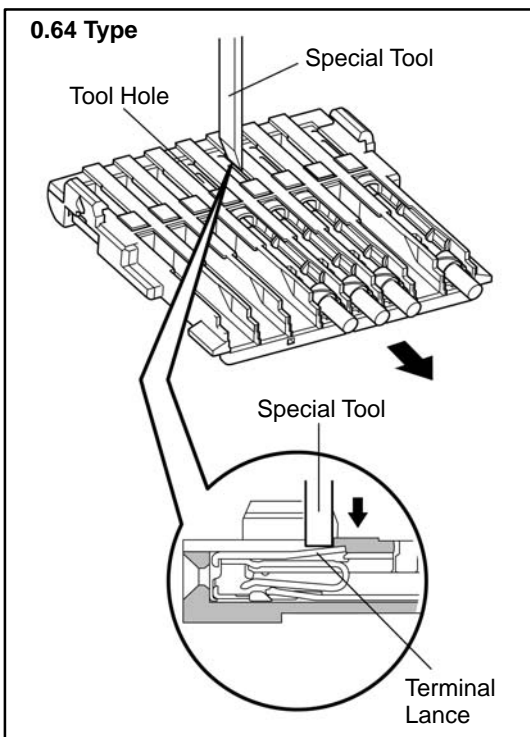


### Insulation Displacement Connector Type

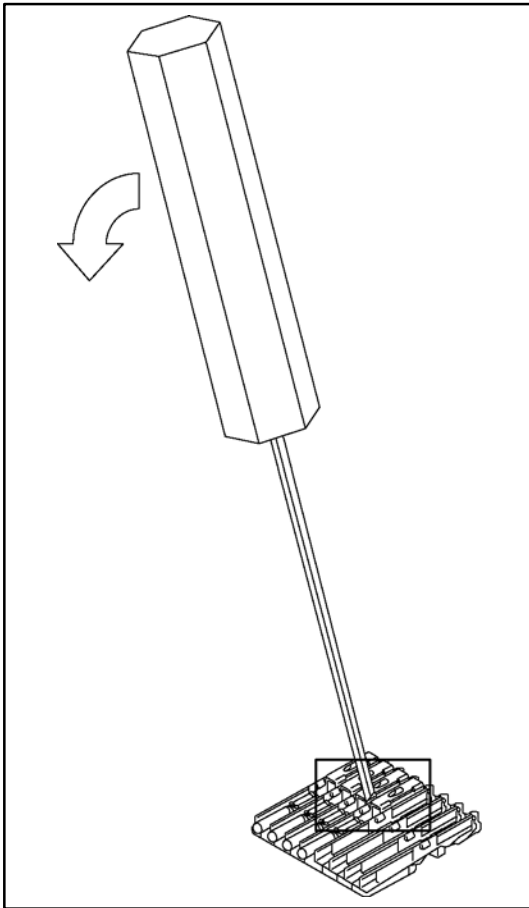
- (a) Using a special tool, push the terminal lance from the tool hole.
- (b) Carefully withdraw the terminal from the connector by pulling the lead toward the rear of the connector.

#### NOTICE:

- Do not use too much force. If the terminal does not come out easily, repeat step (a).
- Always change the wire with the repair wire, in accordance with step3.

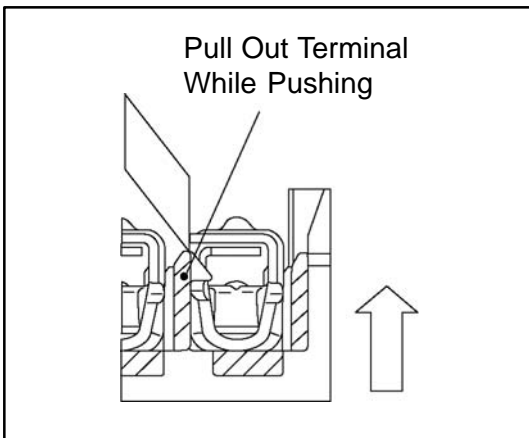
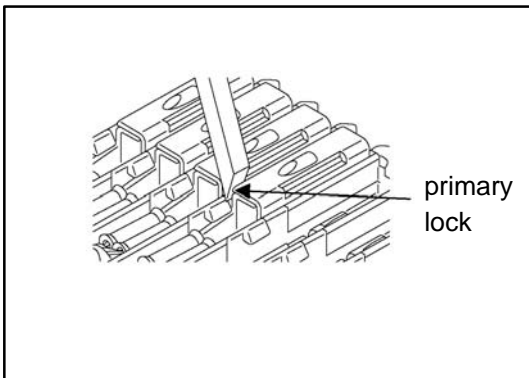


## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



### 1.0III of KITCUT Type Connector

- (a) Remove Female Terminal
- (1) Insert the jig tip at an angle, as shown in the illustration on the left.
  - (2) Move the jig in the direction indicated by the arrow to push and release the primary lock.



- (3) Pull out the terminal in the direction indicated by the arrow and detach it.

#### NOTICE:

- Do not remove and reinstall the same terminal more than 3 times.
- If the terminal is deformed at all, dispose of it.
- Do not apply too much force when releasing the primary lock.
- Do not apply too much force when pulling out the terminal. If the terminal does not come out easily, repeat steps (1) to (3).

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

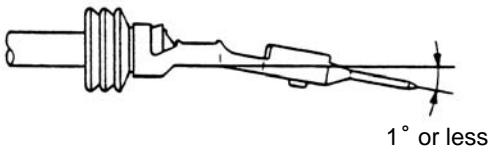
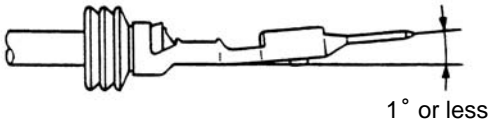
(b) Remove the insulation displacement female terminal

**NOTICE:**

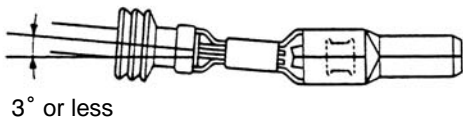
- Do not repair the insulation displacement female terminal.
- Always replace the part with a new one if any terminals are removed.

### Terminal Deformation

(1) Terminal Bending in Vertical Direction



(2) Terminal Bending in Horizontal Direction



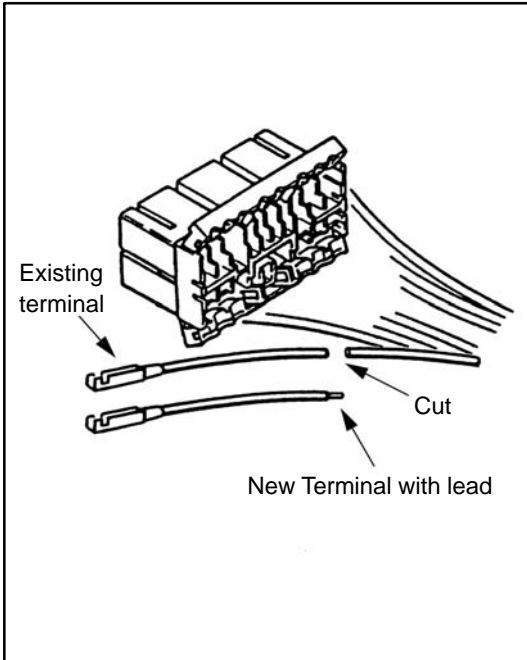
### 5. Inspect the terminal and the connector for damage.

**NOTE:**

- The locking clip is easily damaged.
- Do not reuse the damaged part.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

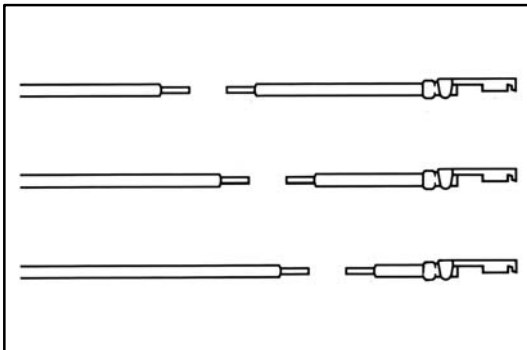
### Step 3. Replace the terminal.



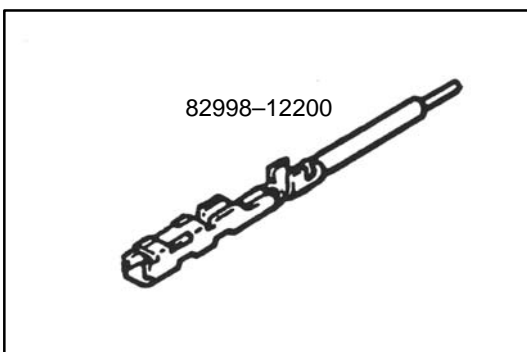
### 1. Cut the Old Terminal from the Harness.

- (a) Use the new wire lead as a guide for proper length.  
**NOTE:** If the length of wire removed is not approximately the same length as the new piece, the following problems may develop:

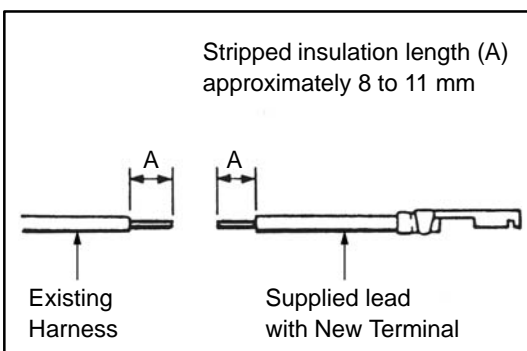
- Too short — tension on the terminal, splice, or the connector, causing an open circuit.
- Too long — excessive wire near the connector, may get pinched or abraded, causing a short circuit.



**HINT:** When connecting a wire harness at three or more spots to the same connector, cut the wire harness as shown on the left.



### 2. Select the correct replacement terminal with lead, from the supply parts.



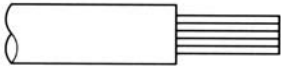
### 3. Strip insulation from wire on the harness and replacement terminal lead.

Start stripping at least 8 mm (0.31 in.) to 11 mm (0.43 in.) away from the end of the existing harness at vehicle side and also from the end of the repair wire.



## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

### Good Example:



### Bad Example:



(Wire insulation is Stripped at a Slant)



(Wire Lead is Cut)



(Insulation Remains on the Lead)

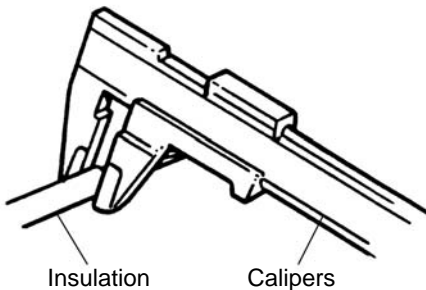
### NOTICE:

Take care not to damage the wire when stripping the wire harness lead. After finishing the operation, visually inspect the wire. If there is any damage, perform the operation again.

### HINT:

If the wire size is not known, start with largest stripper hole and work down until a clean strip of the insulation is removed without nicking or cutting the wire lead.

### Wire Harness Outside Diameter



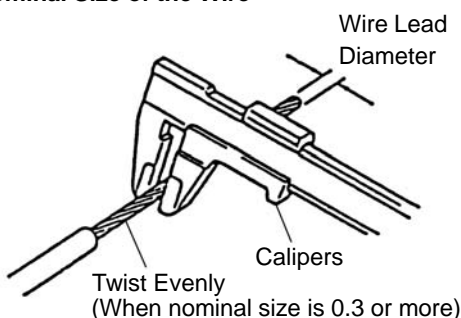
## 4. Select Correct Size of Sleeve from the Supply Parts.

(a) Measure the diameter of wire by using the measuring device as following:

- When size is based on the outside diameter of the wire harness

Measure the outside diameter of the wire harness by placing a measuring device, such as a micrometer or Vernier Caliper, across the diameter of the insulation on the lead and taking a reading.

### Nominal Size of the Wire



- When size is based on the nominal size of the wire lead.

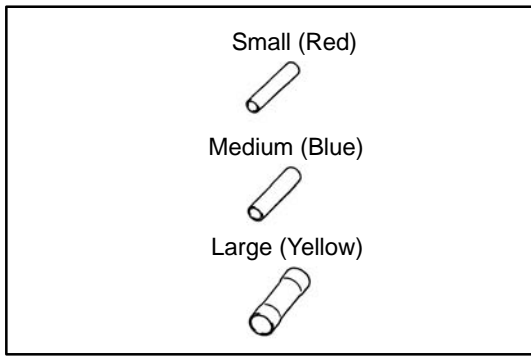
Measure the diameter of the wire lead by placing a measuring device, such as a micrometer or Vernier Caliper, across the diameter of the wire lead and taking a reading.

### HINT:

To calculate the "nominal size" of wire

$$\text{Nominal size} = \frac{3.14 \times (\text{Diameter of wire lead})^2}{4}$$

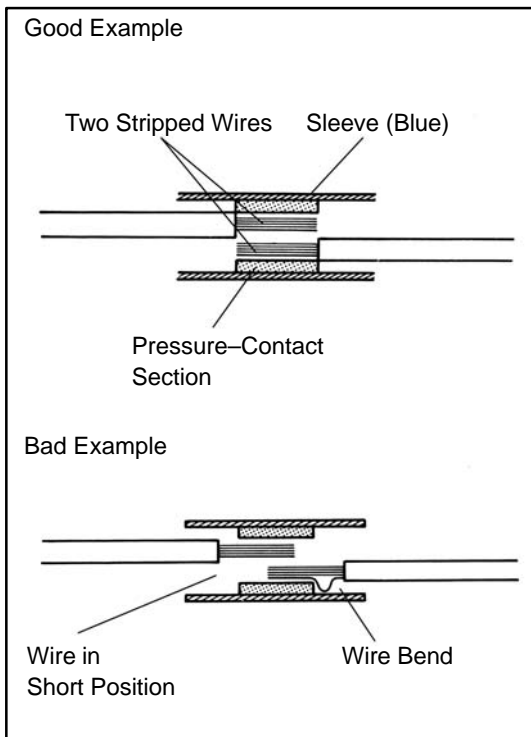
**TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT**



(b) Use the table to determine proper sleeve size

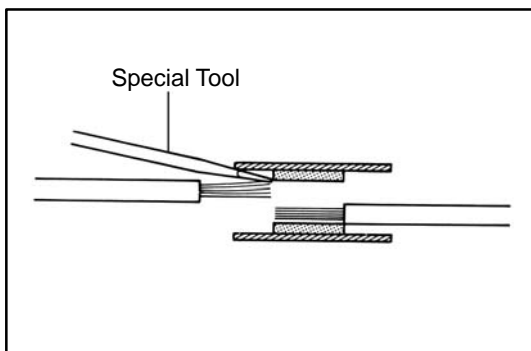
	Part Number	Nominal size of wire (Outside Diameter of wire)
Small	82999-12010	0.3 or less (1.0 – 0.2 mm)
Medium	82999-12020	0.5 – 1.25 (2.0 – 1.0 mm)
Large	82999-12030	2 or more (5.0 – 3.0 mm)

NOTE: For details, refer to sleeve size table on item 4 of STEP 1



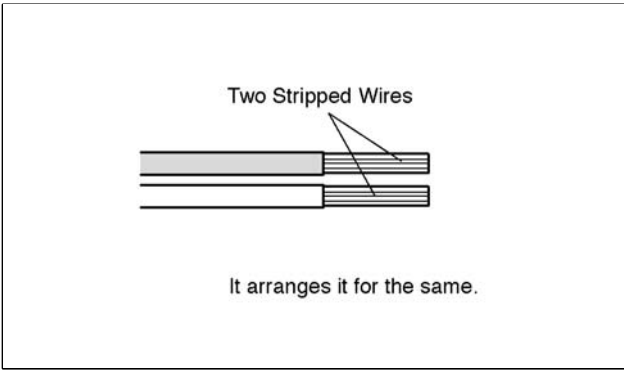
**5. Crimp the Replacement Terminal Lead to the Harness Lead.**

(a-1) When nominal size is 0.3 or more  
Overlap the two stripped wire ends inside the sleeve as illustrated on the left.

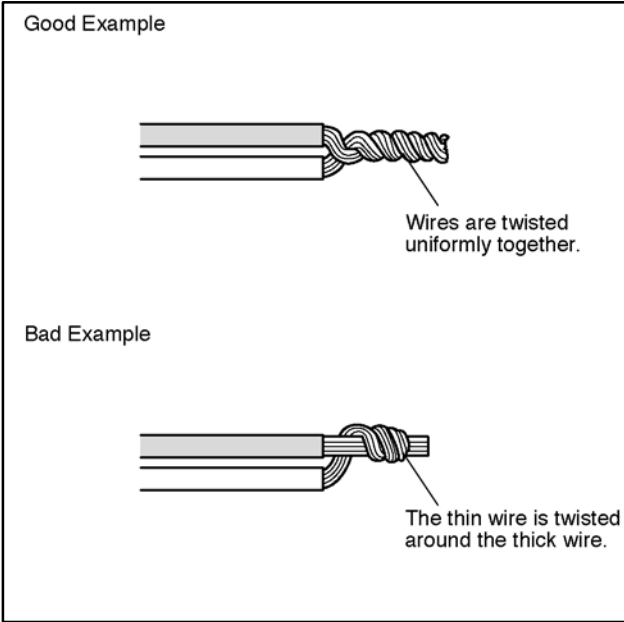


HINT: You might find it easier if you use a miniature special tool as a guide as you insert wires into the sleeve.

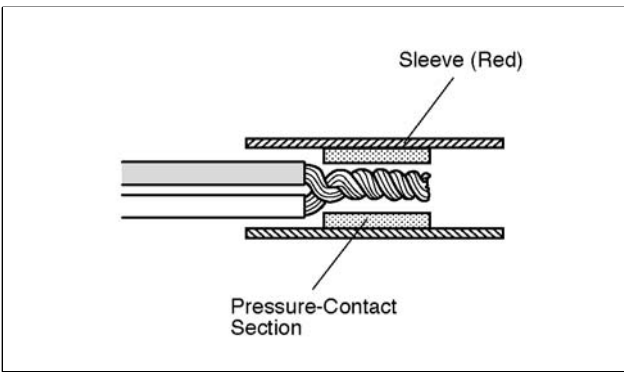
TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT



- (a-2) When nominal size is less than 0.3.
- Two stripped wire ends are arranged for the same as illustrated on the left.

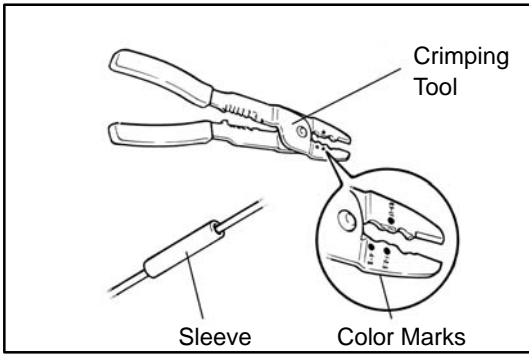


- Twist the two stripped wire ends together.



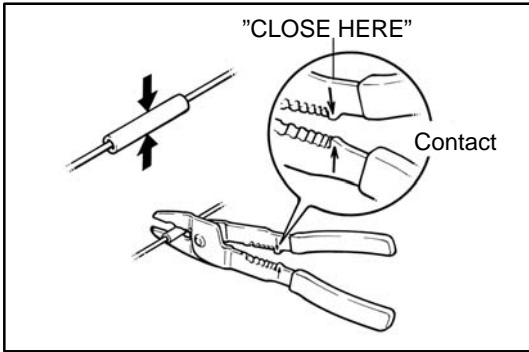
- Insert the twisted wire ends into the sleeve.

**TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT**



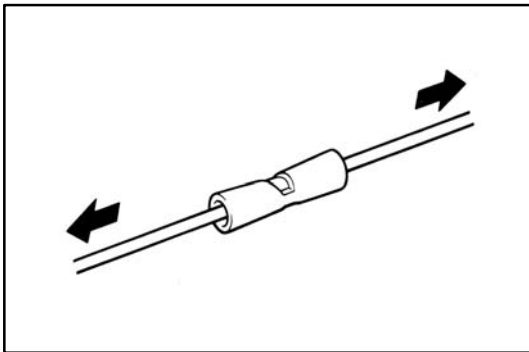
(c) The crimping tool (AMP Part No. 169060) has color marks on it. Place the sleeve in the correct section of the tool according to the color of the sleeve itself.

HINT: For the crimping tool, AMP "Part No. 169060" is convenient to use.



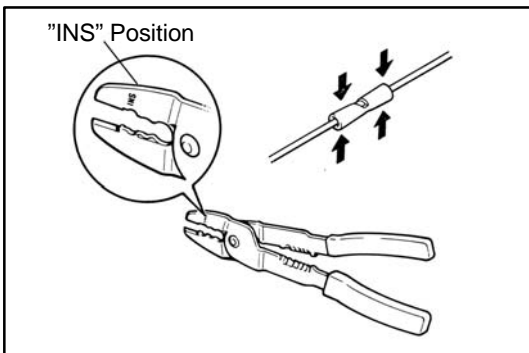
(d) With the center of the sleeve correctly placed between the crimping jaws, squeeze the crimping tool until either end comes into contact at the section marked by "CLOSE HERE".

HINT: Check to see that the sleeve and wires are still in the correct position before closing the crimping tool ends with steady pressure.



(e) Pull the joined wires to either end. Make sure that they are joined firmly by the sleeve.

**NOTICE:**  
If the joined wires come loose the splice is defective, so replace the sleeve and repeat the procedure.

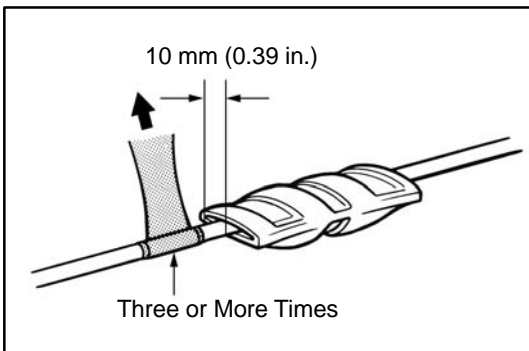


(f) Crimp both ends of the sleeve with the crimping tool at the "INS" position.

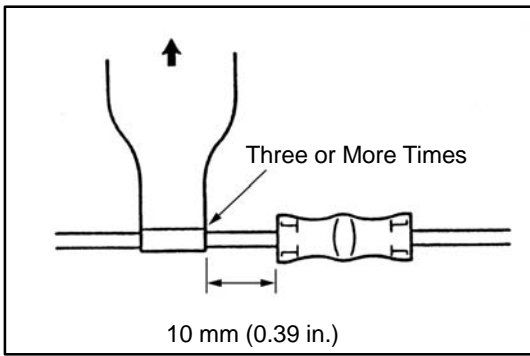
**6. Protect Joined Section**

Wrap silicon tape around the joins to protect them from moisture.

NOTE: This job is required in repairs of the engine compartment, under the floor and other moisture entry positions.

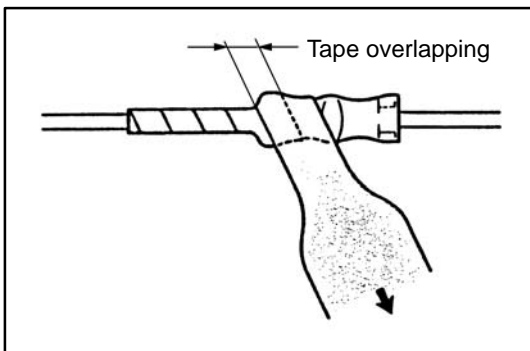


## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

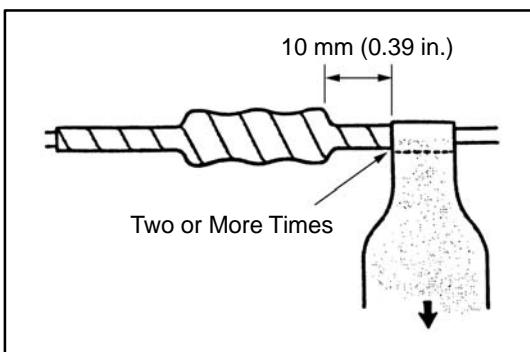


### HINT:

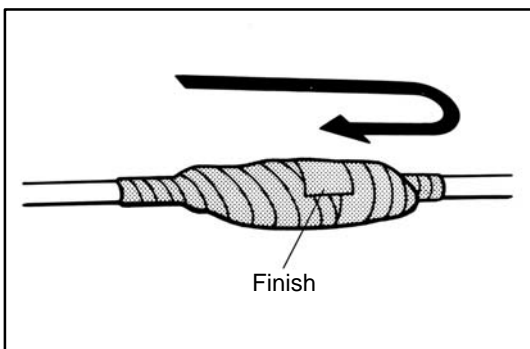
- Before starting the operation, thoroughly wipe dirt and grease off the sections to be joined.
  - If the adhesive surfaces of two tapes come in contact they will stick together and will not come apart, so do not remove the backing film except when using the tape.
  - Do not let oil and dust, etc. get on the tape surface.
- (a) Ready about 100 mm (3.94 in.) of silicon tape (Part No. 08231-00045) and peel off the film.
  - (b) Stretch the silicon tape until its width is reduced by half.
  - (c) About 10 mm (0.39 in.) from the end of the sleeve, wrap the silicon tape around the sleeve three or more times while stretching the tape.



- (d) Wrap the remaining part of the sleeve with half of the tape overlapping at each turn.

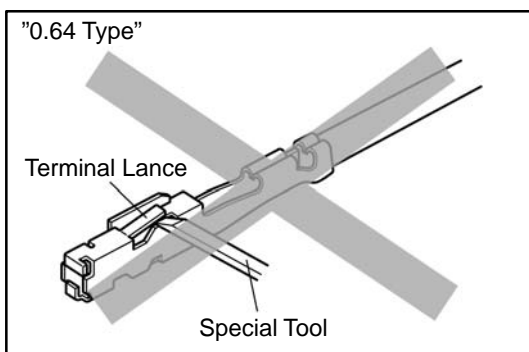
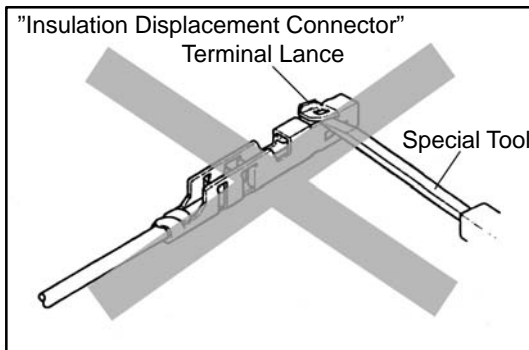
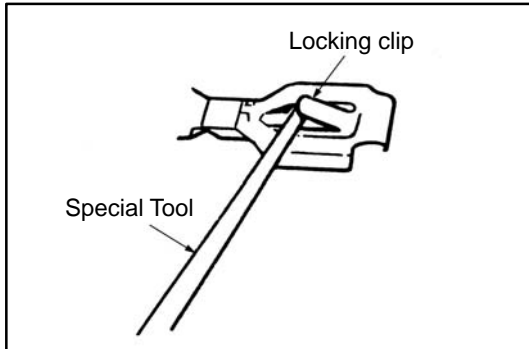
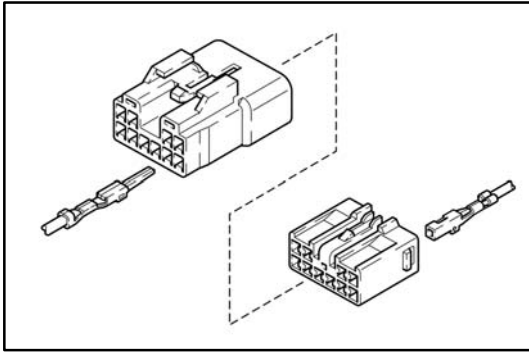


- (e) Firmly wrap the tape two times or more about 10 mm (0.39 in.) from the other end of the sleeve, then wrap the tape back towards the start again and firmly finish winding the tape around the center of the sleeve.



## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

### Step 4. Install the terminal into the connector.



#### HINT:

- (a) Make sure the terminal is positioned correctly.
- (b) Insert the terminal until the locking clip locks firmly.
- (c) Insert the terminal with terminal retainer in the temporary lock position, if equipped.

**NOTE:** If reusing a terminal, check that the locking clip is still in good condition and in the proper position.

- (a) If it is on the terminal and not in the proper position, use the special tool to gently bend the locking clip back to the original shape.
- (b) Check that the other parts of the terminal are in their original shape.

#### NOTICE:

**Do not readjust or reuse the terminal lance of the insulation displacement connector type terminal. Always change the wire with the repair wire.**

#### NOTICE:

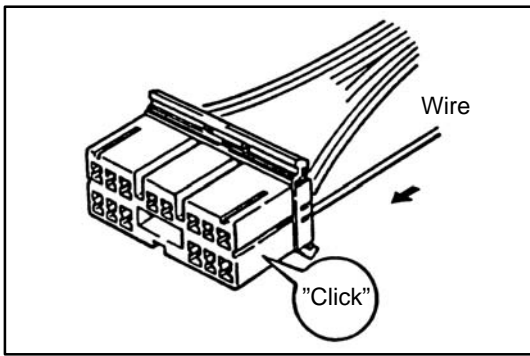
**As for 0.64 type terminal, do not adjust the terminal lance with the special tool.**

### Splash Proof Type Connector

#### NOTICE:

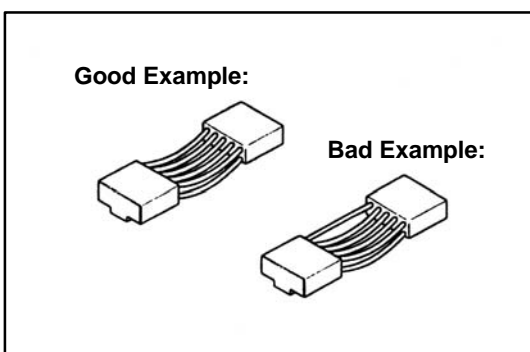
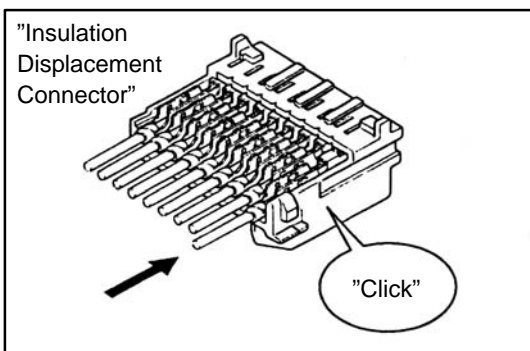
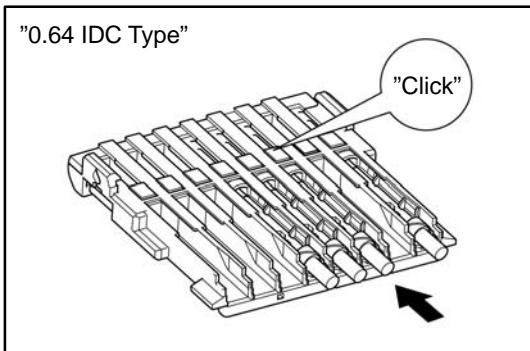
- Removal of the terminal from housing cavity will cause damage to rubber plug material (the wire seal), deteriorating waterproofing performance. Be sure to replace the housing with a new one.
- Check the withdrawn terminal for the following if trying to use it again.
  - It is free of deformation and damage
  - It is free of adherents such as rubber plug material (wire seal)
  - Replace any deformed terminal.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



1. Push the Terminal into the Connector until you hear a "click".

NOTE: Not all terminals will give an audible "click".



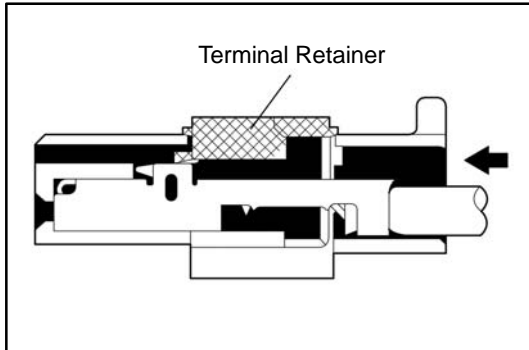
### NOTICE:

- After repairing, never let only one harness stretch.
- In case that it becomes short, do over again using the repair wire.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

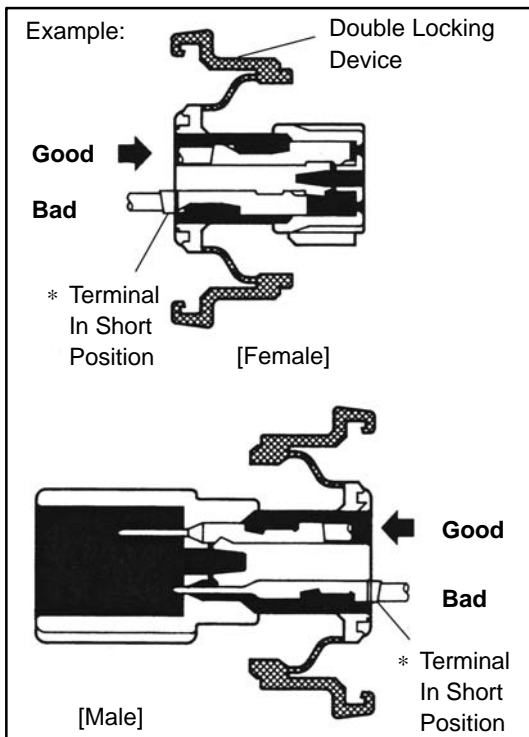
### 2. Double Locking Type Connector (with terminal retainer or double locking device)

The connector is fitted with a terminal retainer, or a double locking device, it is in the temporary lock position at insert the terminal.



Type A (For 0.64III, 1.0, 1.0II, 1.3, 1.8, 2.3II 4.8 and 8.0 of Non-Waterproof Type Connector)

(a) Insert the terminal.



HINT:

1. Make sure the terminal is positioned correctly.
2. Insert the terminal with terminal retainer in the temporary lock position.

(b) Insert the terminal until the locking clip locks firmly.

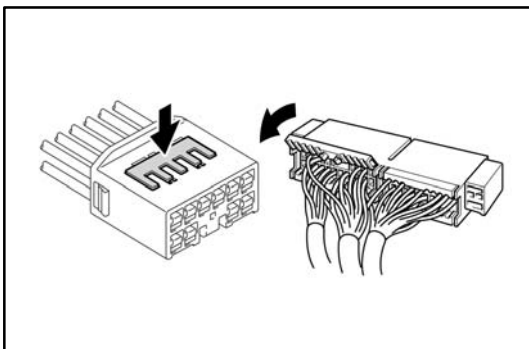
HINT:

1. Pull the terminal back gently to check whether it is locked correctly.
2. If it cannot be inserted easily, check the terminal and the connector for damage.

NOTE: If the terminal to locking clip does not lock firmly, the double locking device cannot lock or terminal retainer does not lock at full lock position so the terminal backs out from connector.

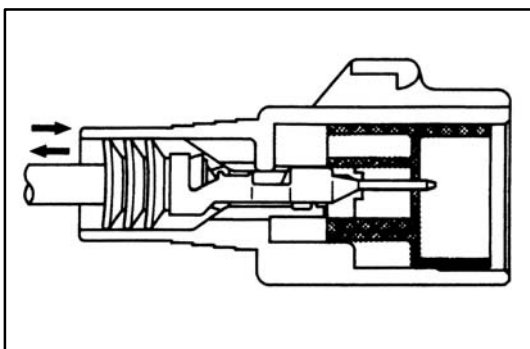
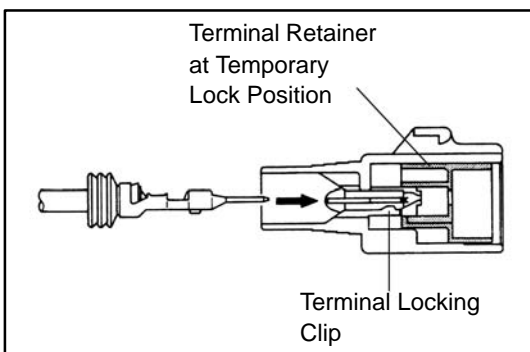
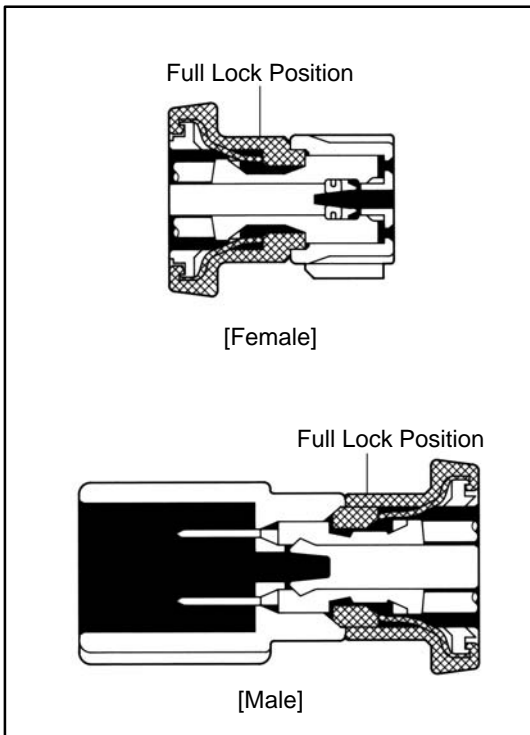
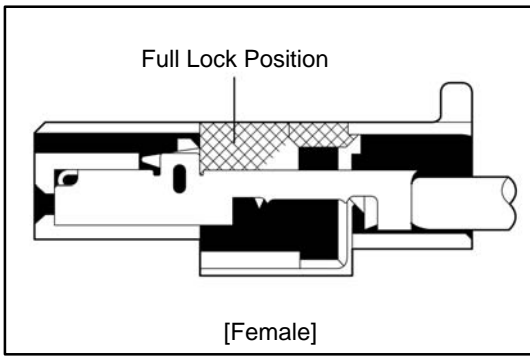
(c) Close terminal retainer or double locking device.

The connector is fitted with a terminal retainer, or a double locking device, return it to the full lock position.





## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



Type B (For 0.64, 1.8, 2.3, 2.3II, 4.8, 6.3 and 8.0 of Waterproof Type)  
**(For Male Connector)**

(a) Insert the terminal.

HINT:

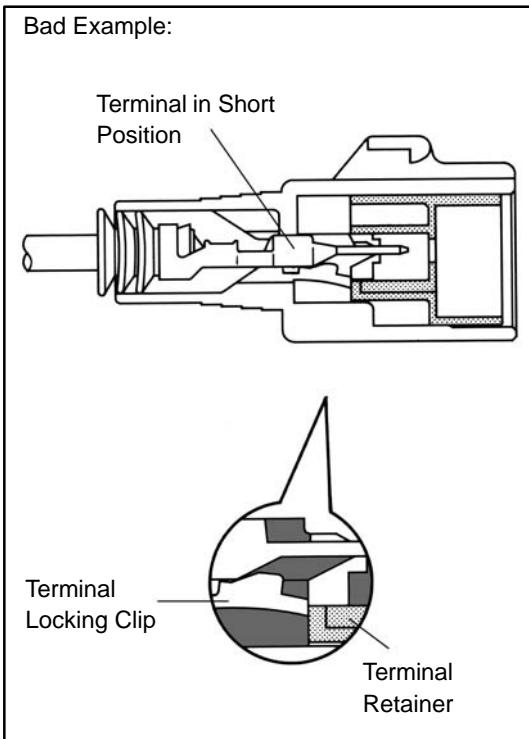
1. Make sure the terminal is positioned correctly.
2. Insert the terminal with terminal retainer in the temporary lock position.

(b) Insert the terminal until the locking clip locks firmly.

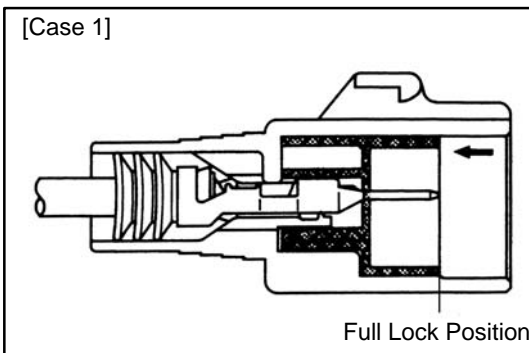
HINT:

1. Pull the terminal back gently to check whether it is locked correctly.
2. If it cannot be inserted easily, check the terminal and the connector for damage.

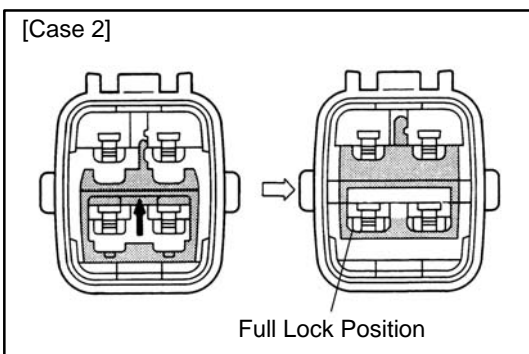
**TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT**



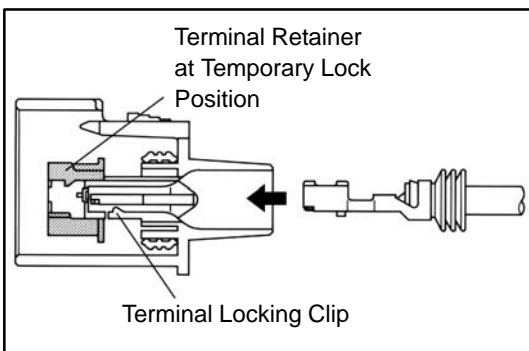
NOTE: If the terminal to locking clip does not lock firmly, terminal retainer can not lock at full lock position so the terminal backs out from connector.



- (c) "For Case 1"  
Push the terminal retainer in to the full lock position.



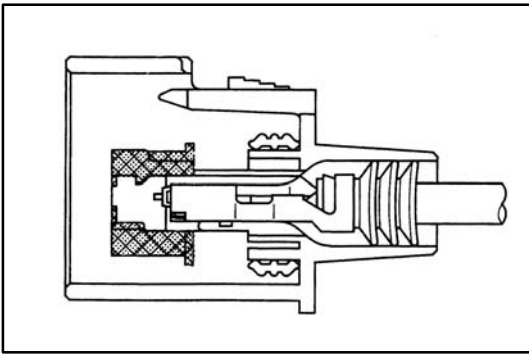
- "For Case 2"  
Raise the terminal retainer up to the full lock position.



**(For Female Connector)**

- (a) Insert the terminal.
- HINT:
1. Make sure the terminal is positioned correctly.
  2. Insert the terminal with terminal retainer in the temporary lock position.

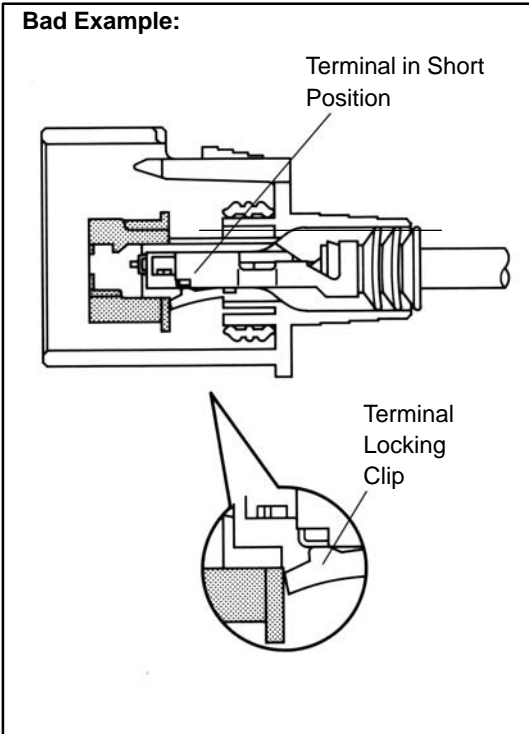
**TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT**



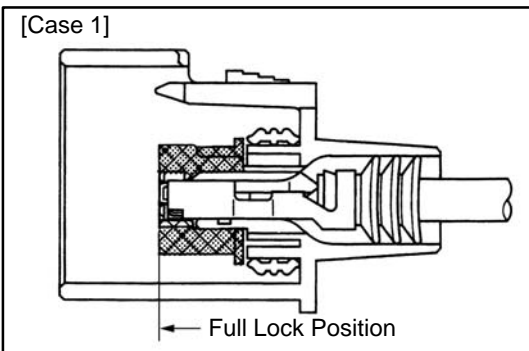
(b) Insert the terminal until the locking clip locks firmly.

HINT:

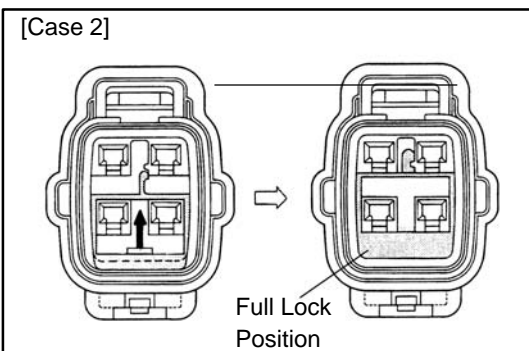
1. Pull the terminal back gently to check whether it is locked correctly.
2. If it cannot be inserted easily, check the terminal and the connector for damage.



NOTE: If the terminal to locking clip does not lock firmly, terminal retainer can not lock at full lock position so the terminal backs out from connector.

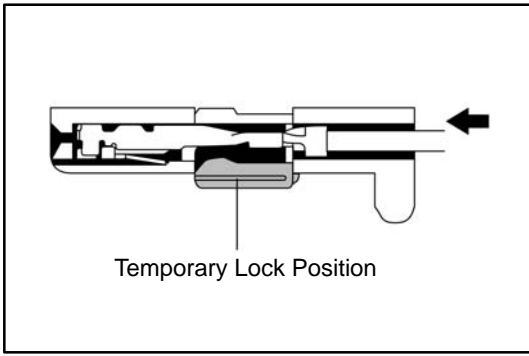


(c) "For Case 1"  
Push the terminal retainer in to the full lock position.



"For Case 2"  
Raise the terminal retainer up to the full lock position.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



Type C (For 0.64 Type Connector)

(a) Insert the terminal.

HINT:

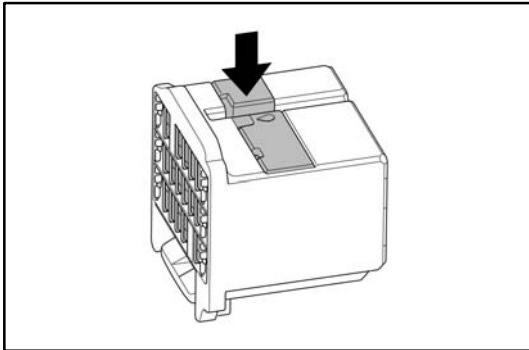
1. Make sure the terminal is positioned correctly.
2. Insert the terminal with terminal retainer in the temporary lock position.

(b) Insert the terminal until the terminal lance locks firmly.

HINT:

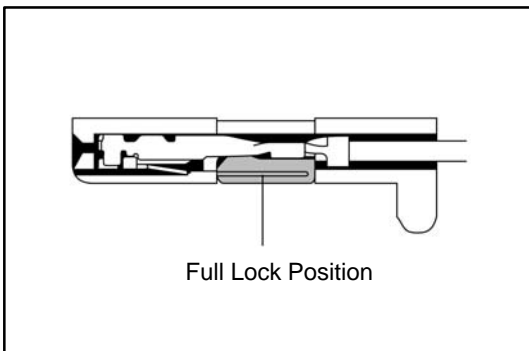
1. Pull the terminal back gently to check whether it is locked correctly.
2. If it cannot be inserted easily, check the terminal and the connector for damage.

NOTE: If the terminal to terminal lance does not lock firmly, the double locking device cannot lock or terminal retainer does not lock at full lock position so the terminal backs out from connector.



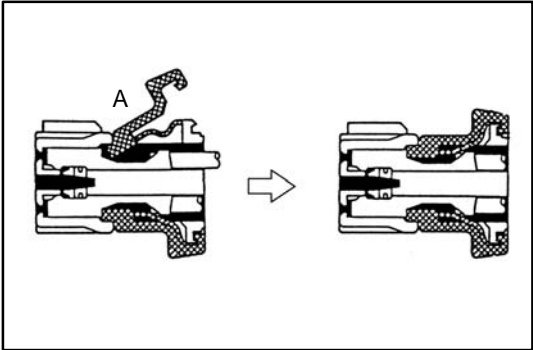
(c) Close terminal retainer.

The connector is fitted with a terminal retainer, return it to the full lock position.

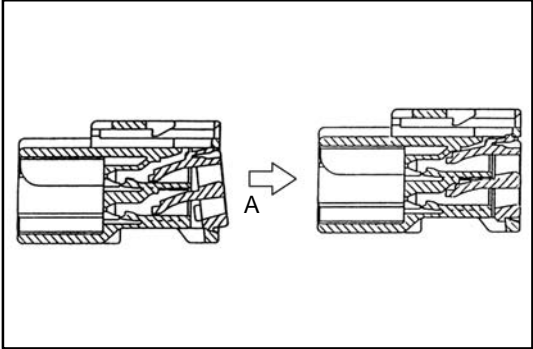


TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT

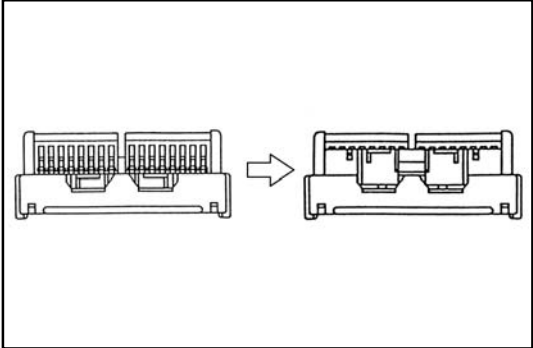
SPECIAL EXAMPLE



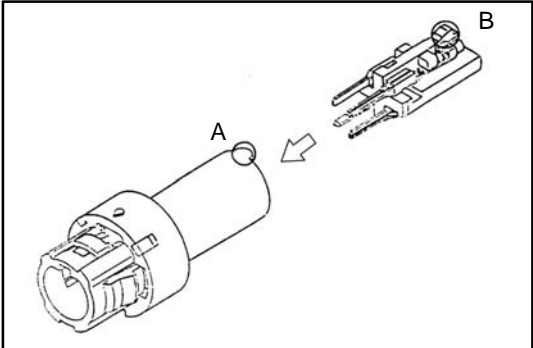
- First fit the section A.



- Install the lock of the section A first.

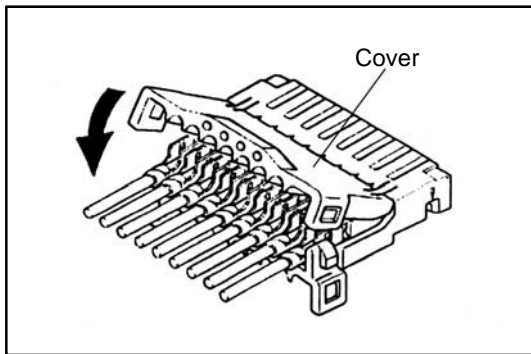


- Install the lock of the retainer and pull the white cover until you hear a click sound.



- Install the convex part (A) of the outer part correctly to the section B of the inner part.

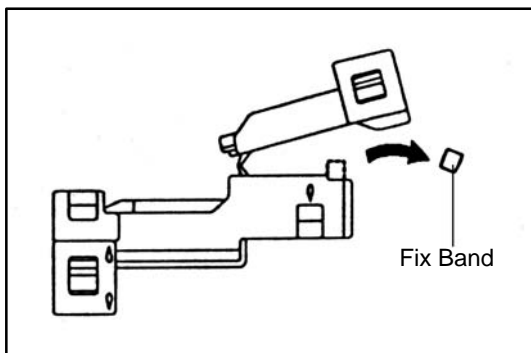
## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



### Insulation Displacement Connector

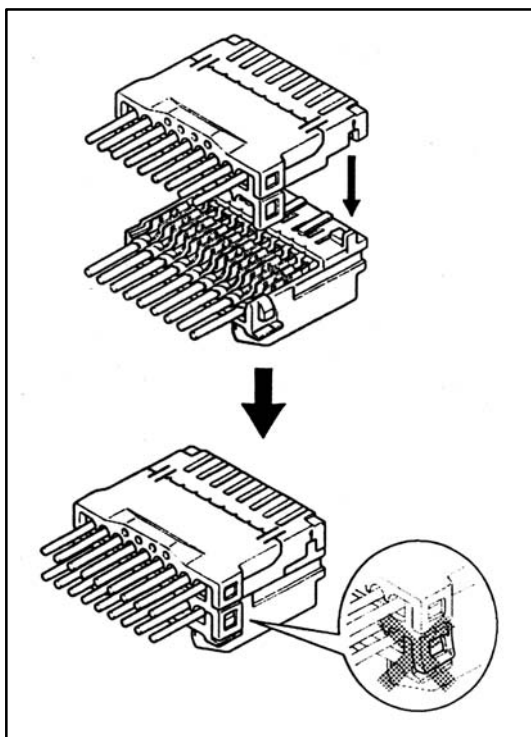
w/ Cover : **CLOSE COVER**

**NOTICE:**  
Securely lock it



### HINT:

When replacing it to a new connector, cut off the fixing band without leaving it.



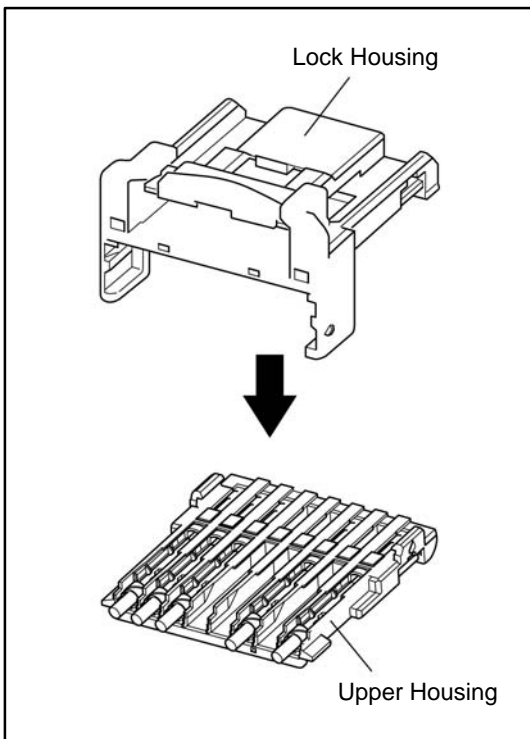
### UNITE CONNECTOR

Make the projection of the front lock of the upper housing meet the ditch of the front lock of the lower housing and fix the rear lock.

### NOTICE:

- After uniting, securely lock it for not leaving the rear lock arm deformed.
- Make sure that the terminals will not become loose by pulling the wires lightly.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

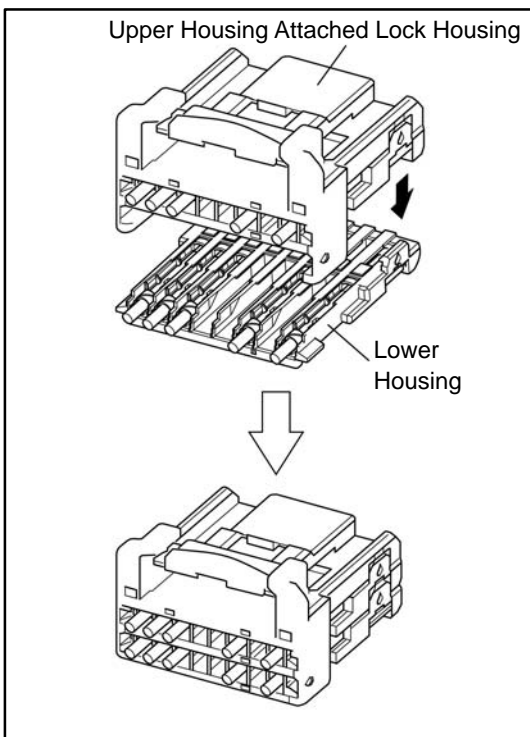


### Insulation Displacement Connector (0.64 Type)

(a) Install the upper housing to the lock housing.

**NOTICE:**

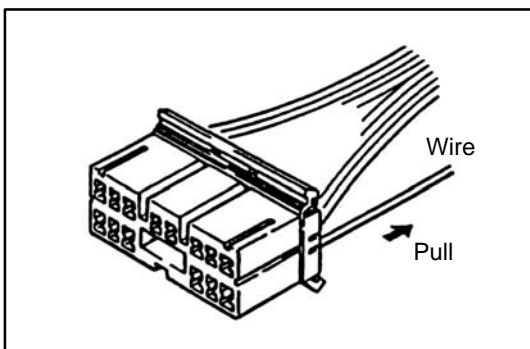
- **Securely Lock it.**
- **Be careful not to mistake the upper housing and lower housing when putting together.**



(b) Make the projection of the front lock of the upper housing attached lock housing meet the ditch of the front lock of the lower housing and fix the rear lock.

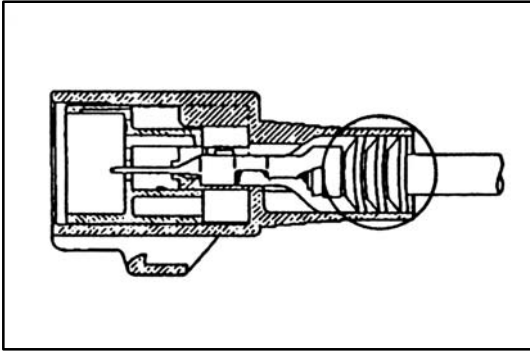
**NOTICE:**

- **After uniting, securely lock it for not leaving the rear lock arm deformed.**
- **Make sure that the terminals will not become loose by pulling the wires lightly.**
- **Be careful not to mistake the upper housing and lower housing when putting together.**



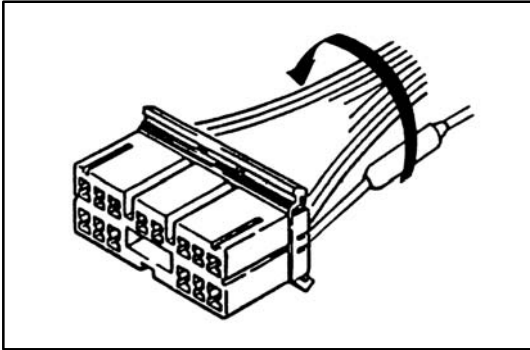
3. When properly installed, pulling gently on the wire lead will prove the terminal is locked in the connector.

## TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



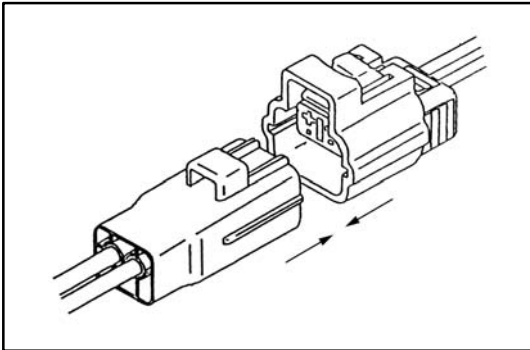
**NOTICE:**

If you working on the waterproof type, make sure that a rubber plug or a terminal gasket is inserted into the housing securely.



**4. Secure the Repaired Wire to the Harness**

If the wire is not in the conduit, or secured by other means, wrap vinyl tape around the bundle to keep it together with the other wires.



**5. Connect Connector**

- Fit the male connector to the female terminal.

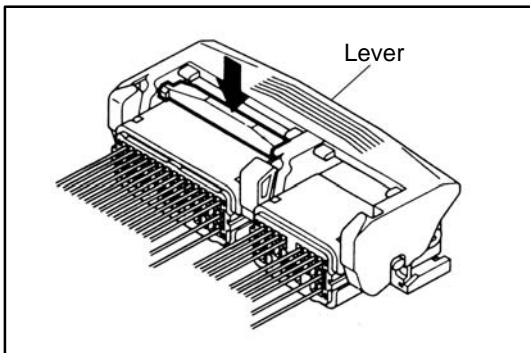
**NOTICE:**

- Do not twist the connector when fitting.
- Insert it until fully locked.



## HOW TO INSTALL AND REMOVE SPECIAL CONNECTORS

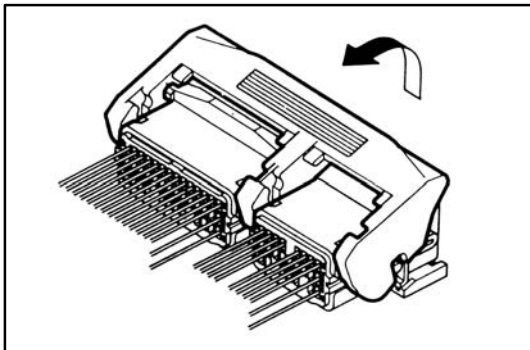
## Low Fit and Lever Type Connector



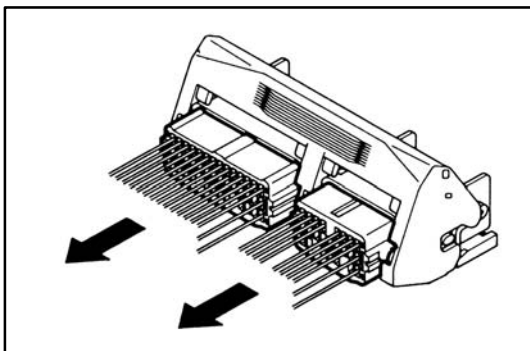
[Case 1]

## 1. Cut the connection of the connector

- (1) Push the place indicated by the arrow.
- (2) The lock is released and lever is lifted up.



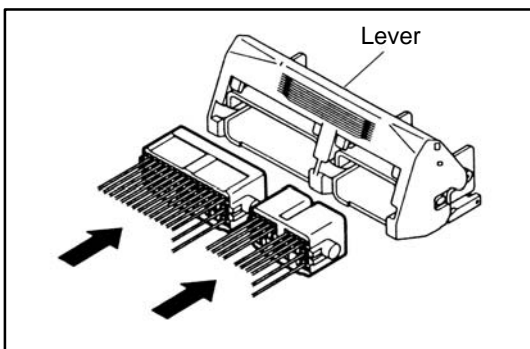
- (3) Lift the lever up until it stops.



- (4) Cut the connection of the connector.

**NOTICE:**

Do not hold the wire harness to pull it.

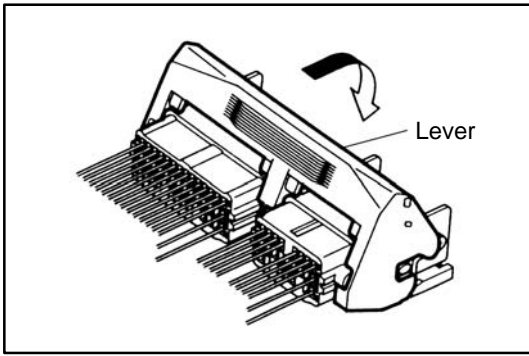


## 2. Connect the connector

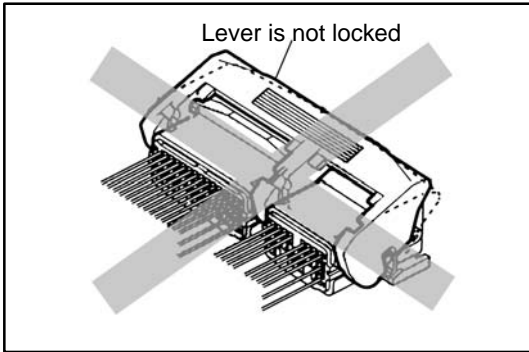
- (1) Connect the connector in the condition that the lever is fully lifted up.

HINT: If the lever is locked at the lower position, follow the procedure [Case 1]. (1) to (3) and lift the lever up fully.

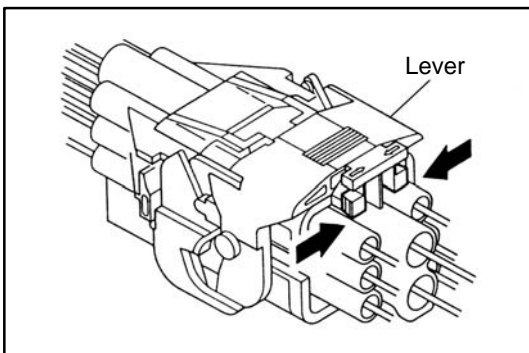
**TERMINAL AND CONNECTOR REPAIR—HOW TO INSTALL AND REMOVE SPECIAL CONNECTORS**



- (2) Hold the connector to prevent it from slip off and push it down until you hear a click to lock it.



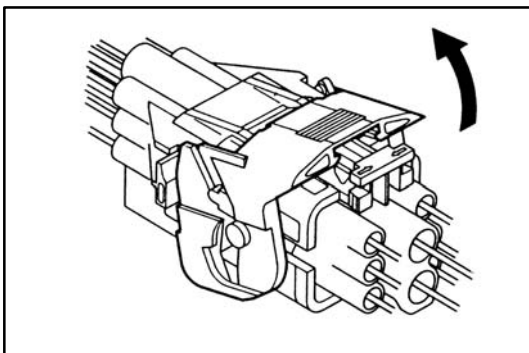
- (3) Confirm that the lever is securely locked.



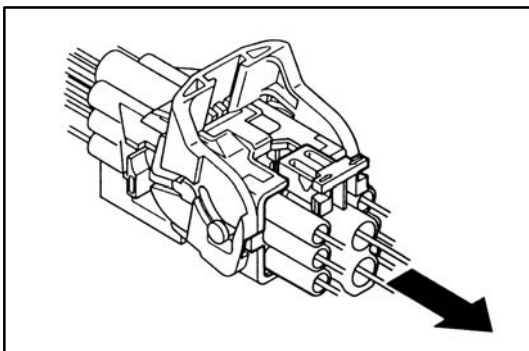
[Case 2]

**1. Cut the connection of the connector**

- (1) Hold the area indicated by the arrow in the illustration
- (2) The lock is released and the lever is lifted up.



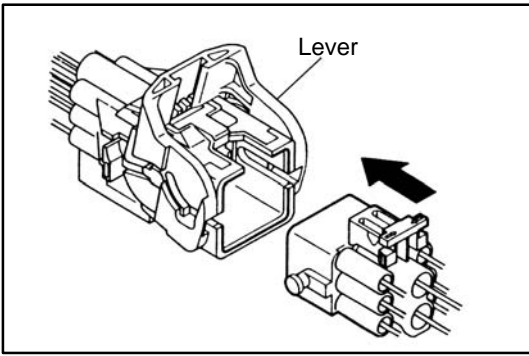
- (3) Lift the lever up fully.



- (4) Cut the connection of the connector.

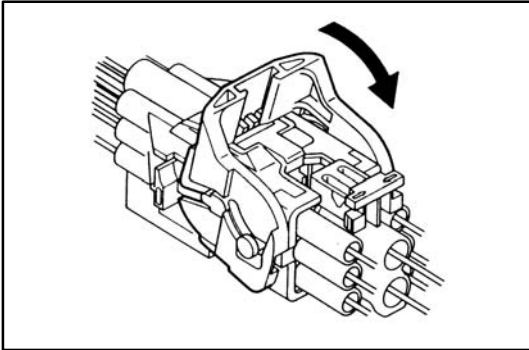
**NOTICE:**  
Do not hold the wire harness to pull it.

**TERMINAL AND CONNECTOR REPAIR—HOW TO INSTALL AND REMOVE SPECIAL CONNECTORS**

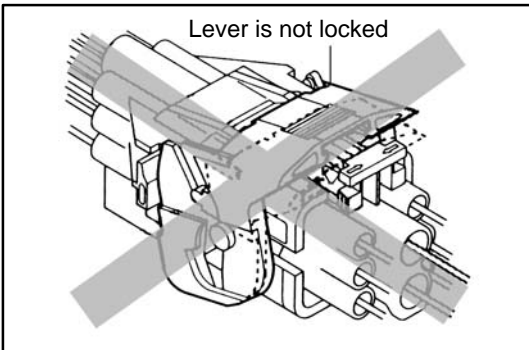


**2. Connect the connector**

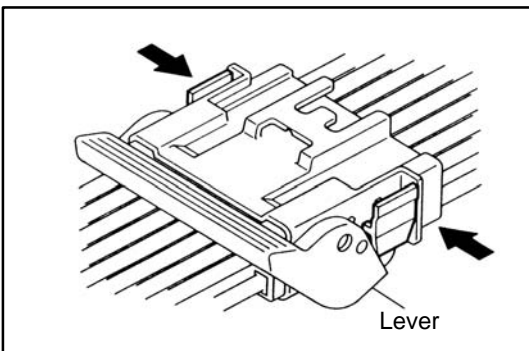
- (1) Connect the connector in the condition that the lever is fully lifted up.



- (2) Hold the connector to prevent it from slip off and push it down until you hear a click to lock it.



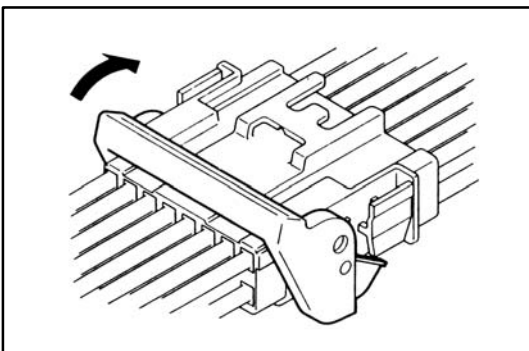
- (3) Confirm that the lever is securely locked.



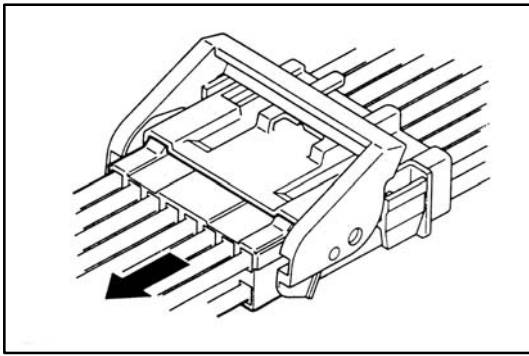
[Case 3]

**1. Cut the connection of the connector**

- (1) Pick the part indicated in the illustration by fingers.
- (2) The lock is released and the lever is lifted up.



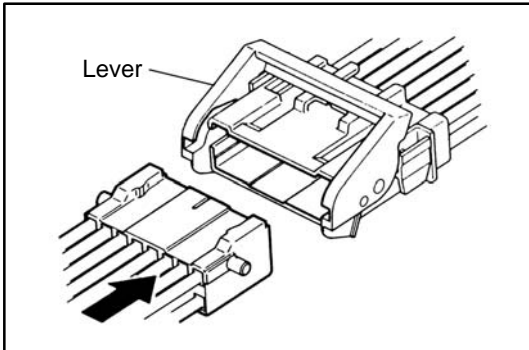
- (3) Lift the lever up fully.

**TERMINAL AND CONNECTOR REPAIR—HOW TO INSTALL AND REMOVE SPECIAL CONNECTORS**

(4) Cut the connection of the connector.

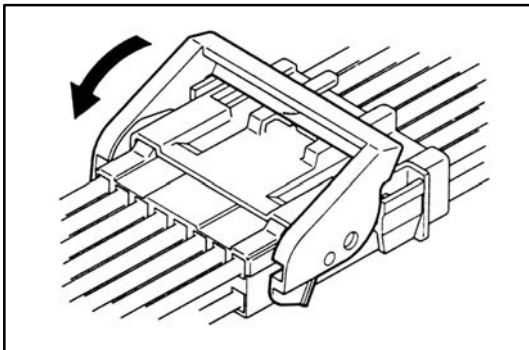
**NOTICE:**

**Do not hold the wire harness to pull it.**

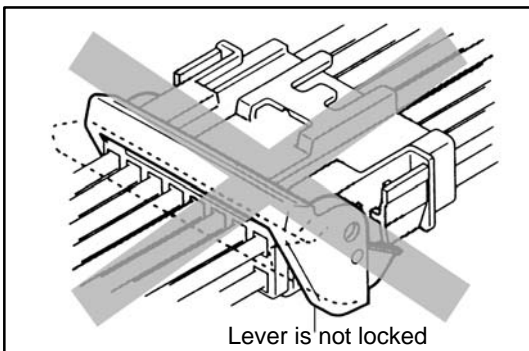
**2. Connect the connector**

(1) Connect the connector in the condition that the lever is fully lifted up.

**HINT:** If the lever is locked at the lower position, follow the procedure [Case 3]. (1) to (3) and lift the lever up fully.

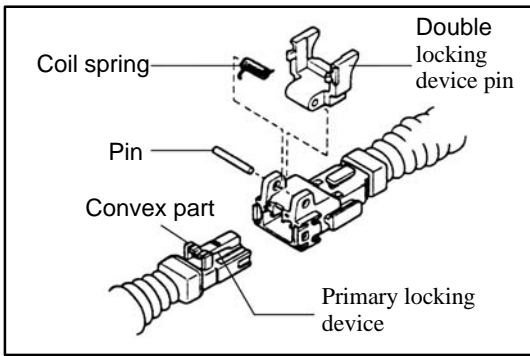


(2) Hold the connector to prevent it from slip off and push it down until you hear a click to lock it.



(3) Confirm that the lever is securely fitted

## TERMINAL AND CONNECTOR REPAIR—HOW TO INSTALL AND REMOVE SPECIAL CONNECTORS



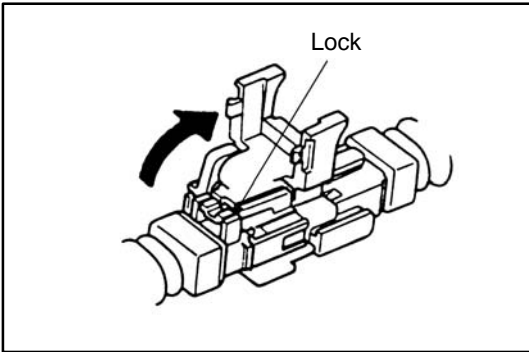
### The connector with secondary locking device

#### 1. Area used

- Wire harness for SRS airbag deployment

#### 2. Cut the connection of the connector.

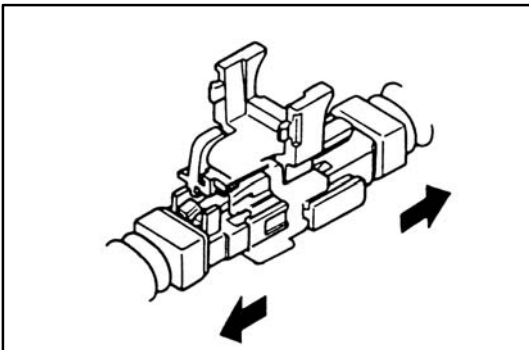
- (1) Release the double locking.



- (2) Release the primary locking and separate the connector.

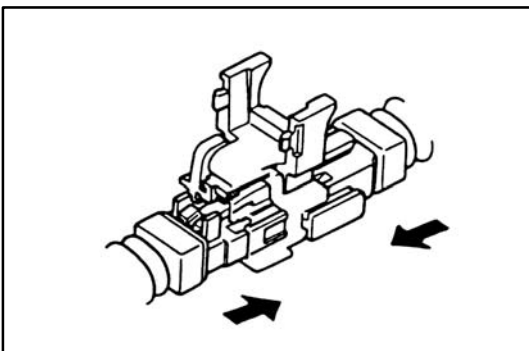
**NOTICE:**

Do not hold the wire harness to pull it.



#### 3. Connect the connector

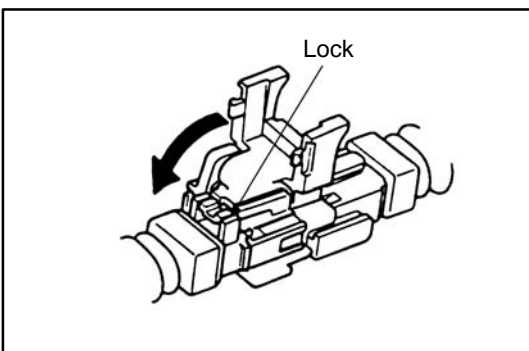
- (1) Install the primary locking device and connect the connector.



- (2) Install the double locking device.

**NOTICE:**

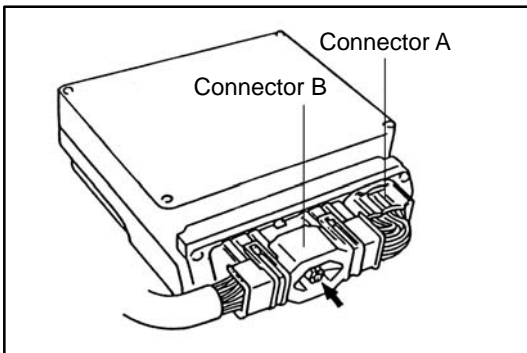
The double locking device can not be installed unless the primary locking device is installed.



## Connector fixed by bolts

### 1. Area used

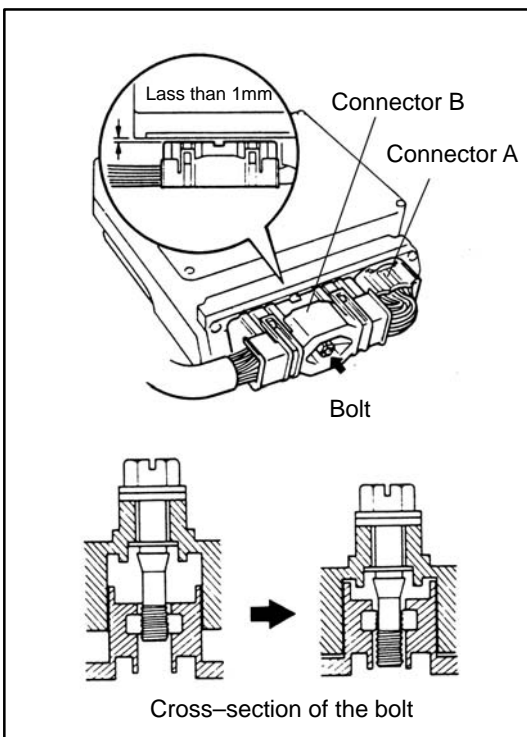
- Engine control computer harness



### 2. Cut the connection of the connector.

- (1) Remove the connector A.
- (2) Loosen the bolt using a tool like driver until the connector B can be removed by hand and separate the connector.

**HINT:** If the bolt can not be removed, roll it while pulling forward.



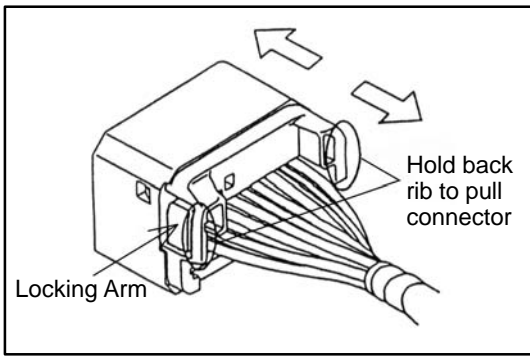
### 3. Connection of the connector

- (1) Temporarily fit the connector B.
- (2) Tighten the bolt by using tool like driver and fit the connector B completely.

#### **NOTICE:**

- Tighten the bolt until feeling it lighter. Then confirm that the width of chink of the connector B is less than 1mm.
- The bolt can be rolled after it is fitted.
- If the impact wrench is used, do not let it rolling more than three seconds. (The housing may be deformed by generated heat)
- Be sure and connect the connector B straight. Do not incline it while connecting.

- (3) Connect the connector A.

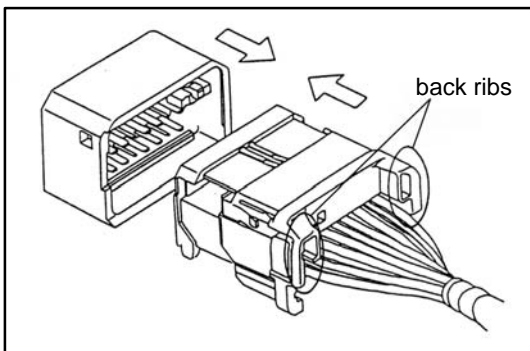
**TERMINAL AND CONNECTOR REPAIR—HOW TO INSTALL AND REMOVE SPECIAL CONNECTORS****1. Cut the connection of the connector**

- (1) Push down on locking arm to unlock. Then hold the back ribs of connector to remove connector.

- (2) Cut the Connection of the connector.

**NOTICE:**

**Do not hold the wire harness to pull it.**

**2. Connect the Connector**

- (1) Align the direction of locking feature in same direction and mate the connector holding the back ribs in straight direction.
- (2) Insert it until a lock securely locks, and pull the connector lightly after the insertion, and confirm that a lock is enabled.





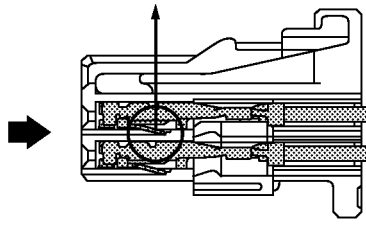
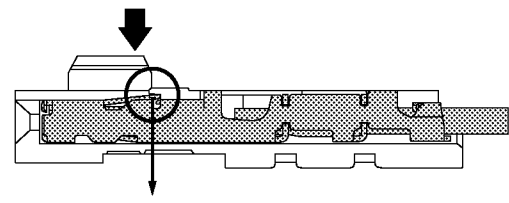
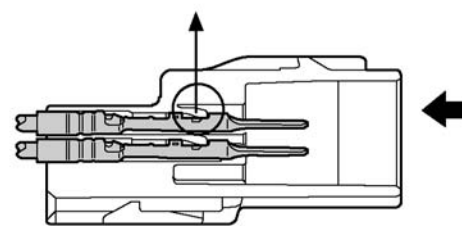
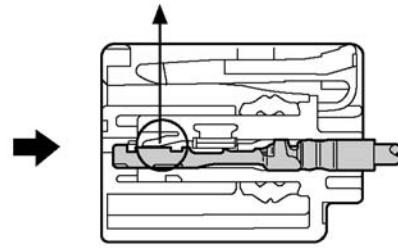
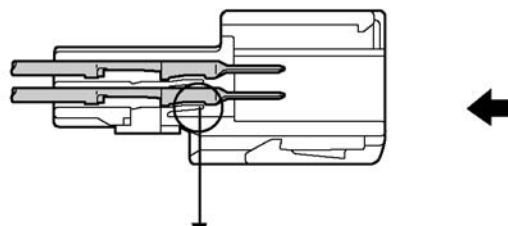
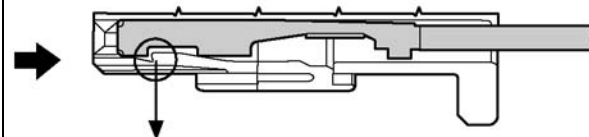
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# TABLE OF HOUSING CROSS SECTION

C

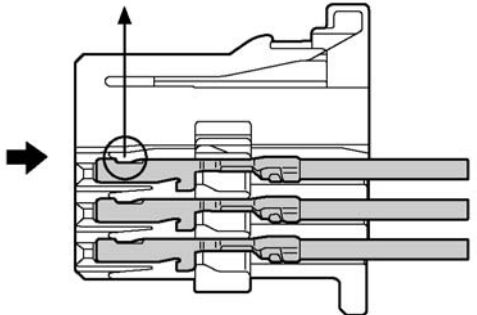
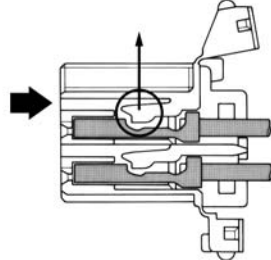
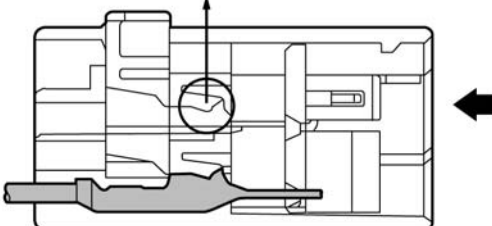
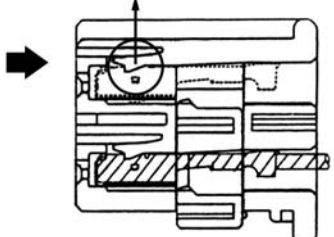
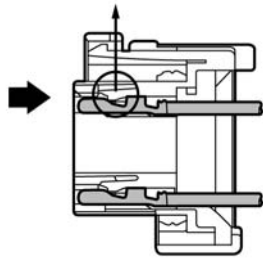


TABLE OF HOUSING CROSS SECTION

Type	<p>○ : Position of the lance                      ↑ : Direction of lock released                      ↑ : Direction of the special tool inserted</p>	
	Male	Female
0.64 Non-waterproof Type	_____	 <p>(Double Lock Type) [Terminal Lance]</p>
0.64 IDC	_____	 <p>[Terminal Lance]</p>
0.64 Waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
0.64II	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>

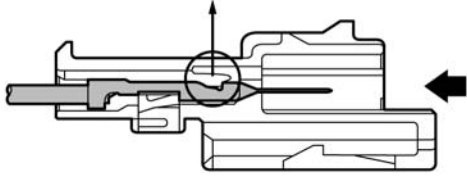
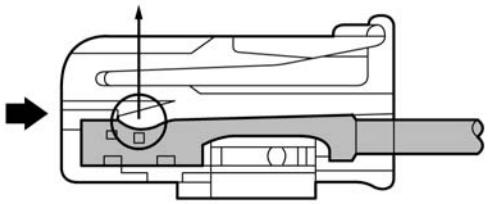
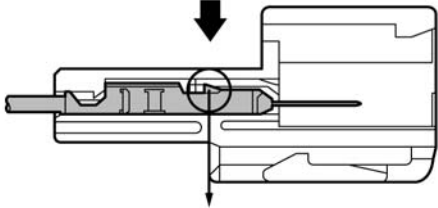
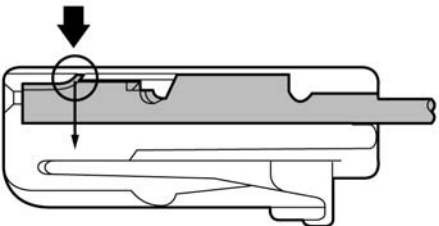
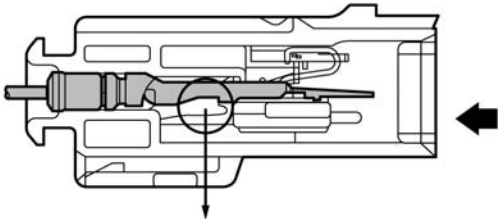
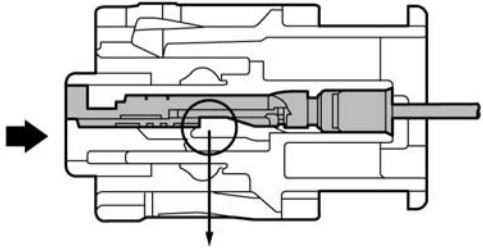
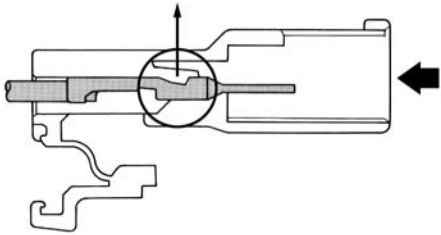
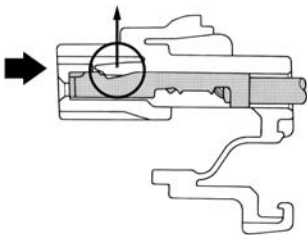
C

TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ↗ : Direction of the special tool inserted	
	Male	Female
0.64III	_____	 <p>(Double Lock Type) [Housing Lance]</p>
1.0	_____	 <p>(Double Lock Type) [Housing Lance]</p>
1.0II Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
1.0II Waterproof Type	_____	 <p>[Housing Lance]</p>

C

TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ▲ : Direction of the special tool inserted	
	Male	Female
1.0III 1.0IV Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
1.0III IDC	 <p>[Terminal Lance]</p>	 <p>[Terminal Lance]</p>
1.0III Waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
1.3 Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>

C

TABLE OF HOUSING CROSS SECTION

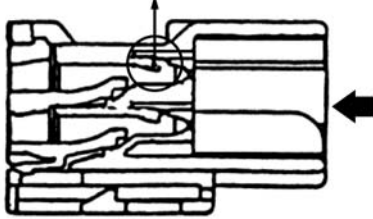
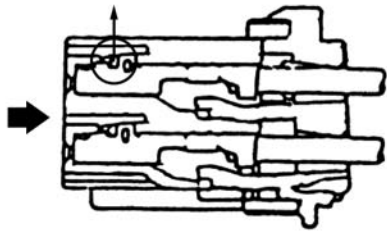

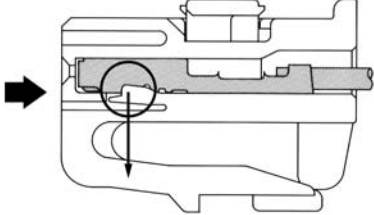
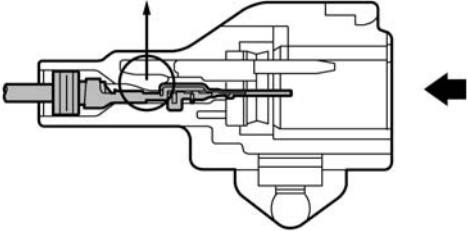
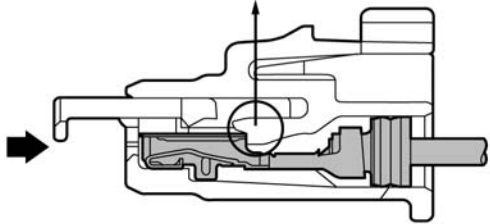
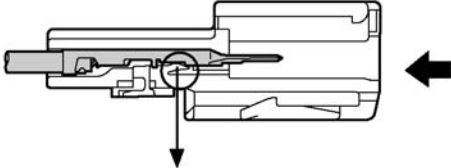
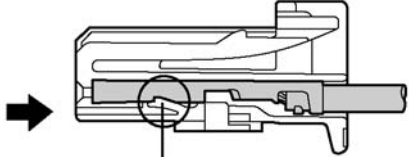
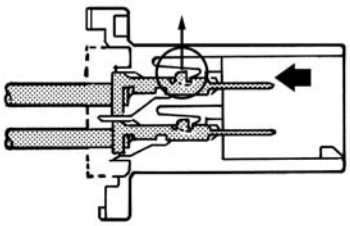
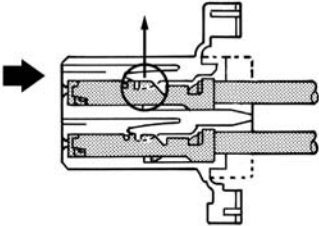

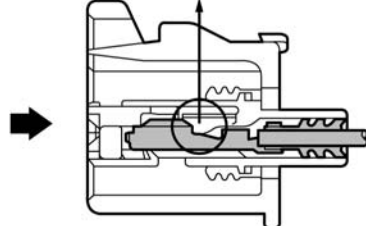
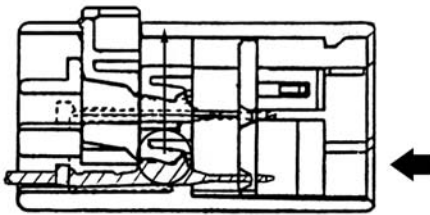
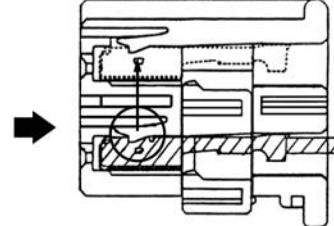
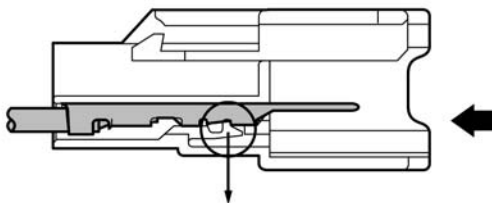
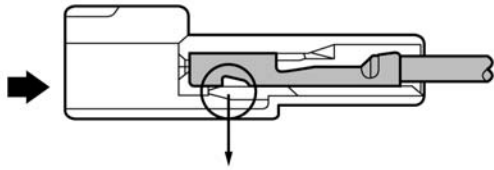
Type	○ : Position of the lance ↑ : Direction of lock released ↗ : Direction of the special tool inserted	
	Male	Female
1.3 Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
1.3 Non-waterproof Type		 <p>(Double Lock Type) [Housing Lance]</p>
1.3 Waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
1.5	 <p>[Housing Lance]</p>	 <p>[Housing Lance]</p>

TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ⬆ : Direction of the special tool inserted	
	Male	Female
1.8 Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
1.8 Waterproof Type		 <p>(Double Lock Type) [Housing Lance]</p>
1.8II	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
2.3 Non-waterproof Type	 <p>[Housing Lance]</p>	 <p>[Housing Lance]</p>

C

TABLE OF HOUSING CROSS SECTION

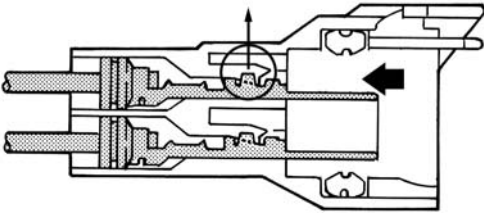
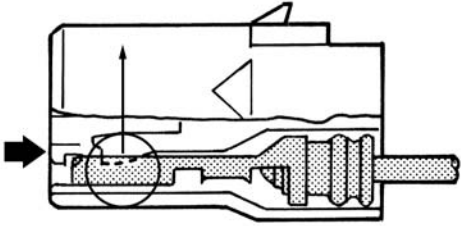
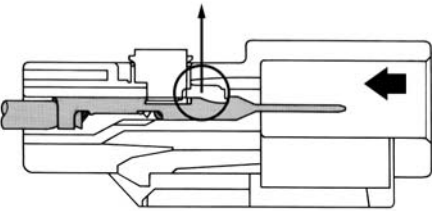
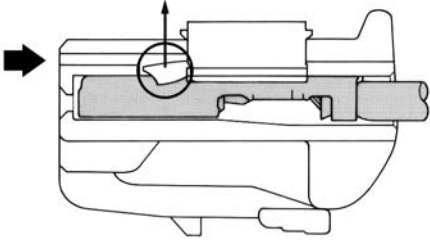
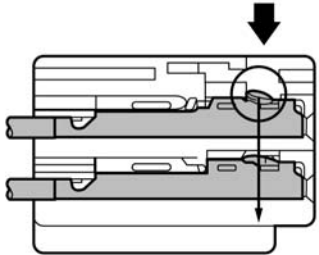
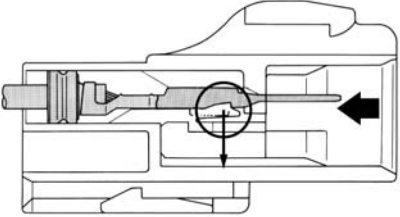
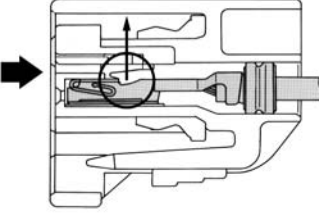
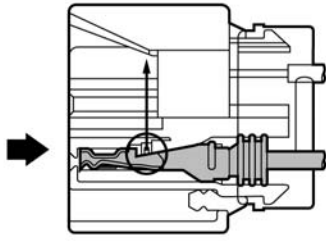
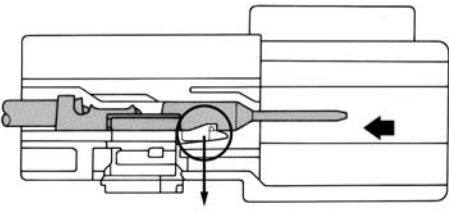
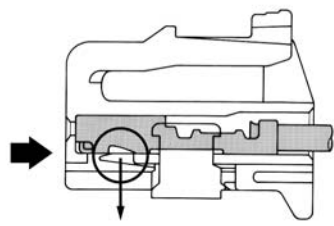
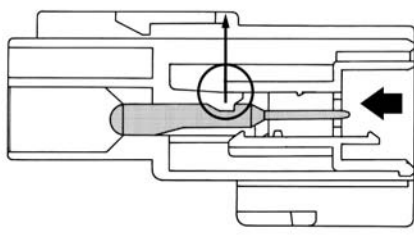
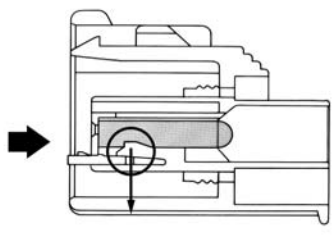
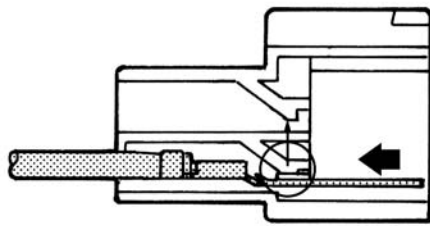
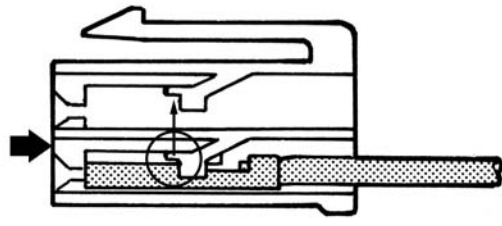
Type	<p>○ : Position of the lance                      ↑ : Direction of lock released                      ↗ : Direction of the special tool inserted</p>	
	Male	Female
2.3 Waterproof Type	 <p>[Housing Lance]</p>	 <p>[Housing Lance]</p>
2.3II Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
2.3II IDC	<p>_____</p>	 <p>[Terminal Lance]</p>
2.3II Waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>



TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ▲ : Direction of the special tool inserted	
	Male	Female
2.8 (HB3, HB4)	_____	 <p>[Housing Lance]</p>
4.8 Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
4.8 Waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
6.3 Non-waterproof Type	 <p>[Housing Lance]</p>	 <p>[Housing Lance]</p>

C

TABLE OF HOUSING CROSS SECTION

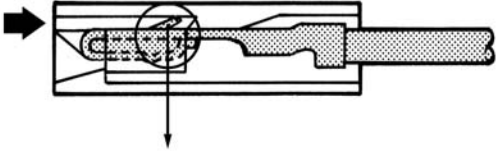
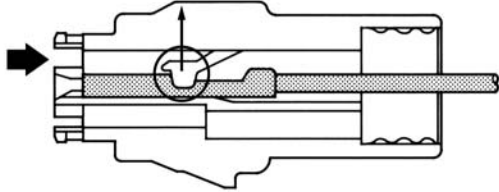
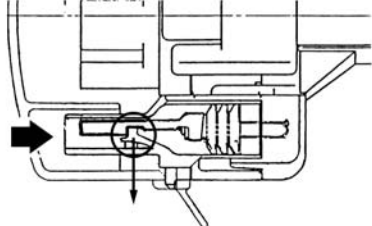
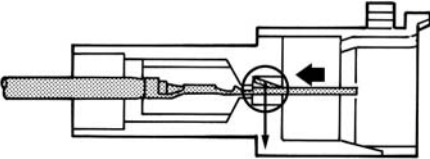
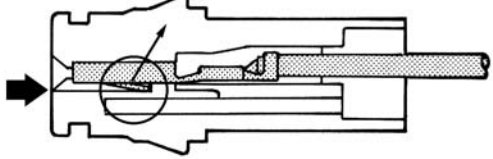
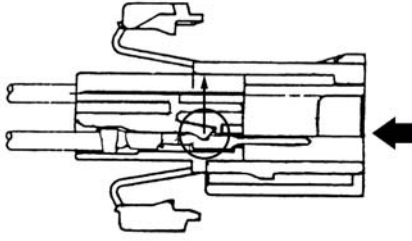
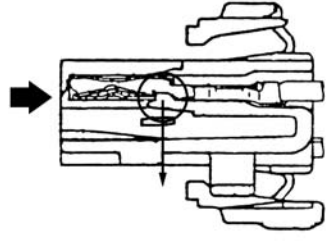
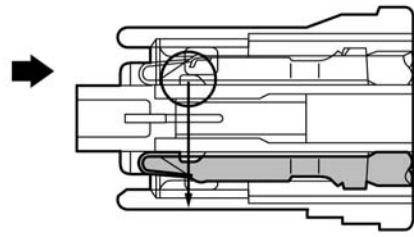
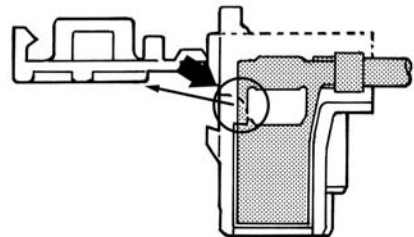
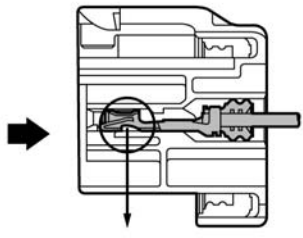
Type	<p>○ : Position of the lance                  ↑ : Direction of lock released                  ▲ : Direction of the special tool inserted</p>	
	Male	Female
6.3 Single Terminal	_____	 <p>[Terminal Lance]</p>
6.3 Waterproof Type	_____	 <p>[Housing Lance]</p>
6.3 Waterproof Type	_____	 <p>[Housing Lance]</p>
7.7	 <p>[Terminal Lance]</p>	 <p>[Terminal Lance]</p>

TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ▲ : Direction of the special tool inserted	
	Male	Female
7.7	<p>[Housing Lance]</p>	<p>[Housing Lance]</p>
8.0 Non-waterproof Type	<p>(Double Lock Type) [Housing Lance]</p>	<p>(Double Lock Type) [Housing Lance]</p>
8.0 Waterproof Type	<p>(Double Lock Type) [Housing Lance]</p>	<p>(Double Lock Type) [Housing Lance]</p>
BLADE FUSE		<p>[Housing Lance]</p>

C

TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ▲ : Direction of the special tool inserted	
	Male	Female
C-Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
FOG-LP	<p>_____</p>	 <p>(Double Lock Type) [Housing Lance]</p>
FTC	<p>_____</p>	 <p>(Double Lock Type) [Housing Lance]</p>
HEAD LAMP Waterproof Type	<p>_____</p>	 <p>[Housing Lance]</p>

C

TABLE OF HOUSING CROSS SECTION

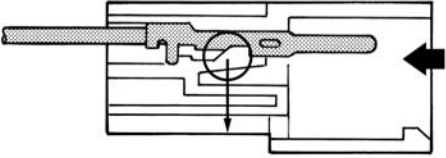
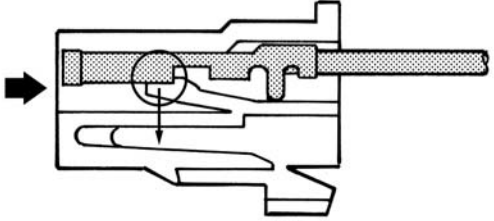
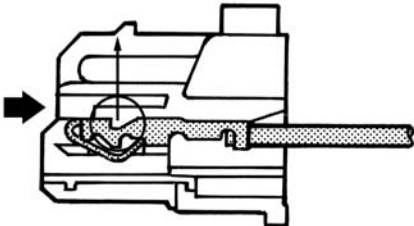
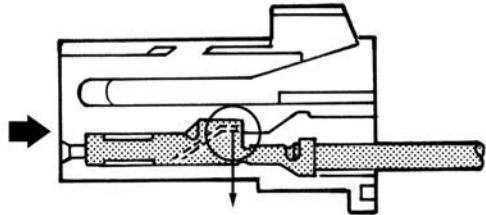
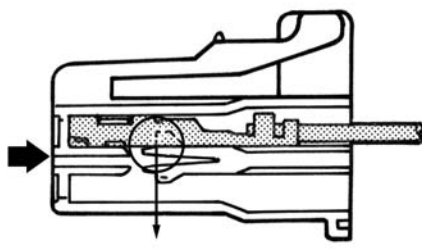
Type	<p>○ : Position of the lance                      ↑ : Direction of lock released                      ▲ : Direction of the special tool inserted</p>	
	Male	Female
LAC	 <p>[Housing Lance]</p>	 <p>[Housing Lance]</p>
MFPC	<p>_____</p>	 <p>[Housing Lance]</p>
MIC	<p>_____</p>	 <p>[Terminal Lance]</p>
PULSE LOCK	<p>_____</p>	 <p>[Housing Lance]</p>

TABLE OF HOUSING CROSS SECTION

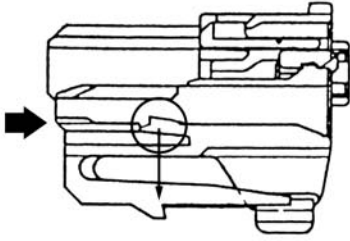
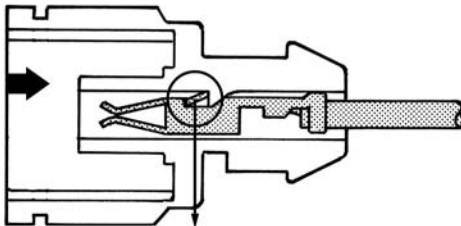
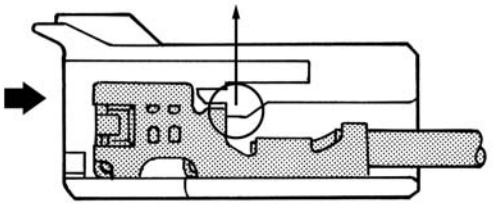
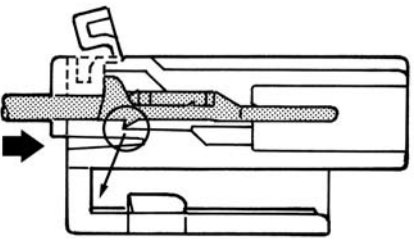
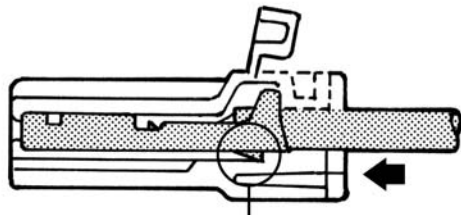
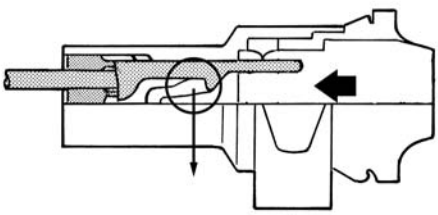
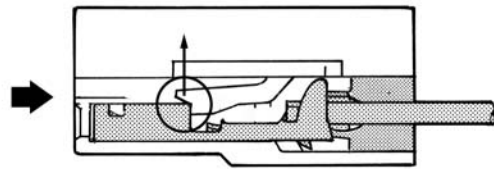
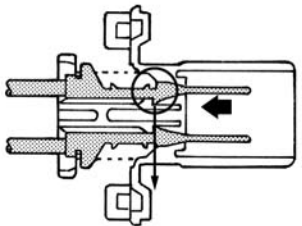
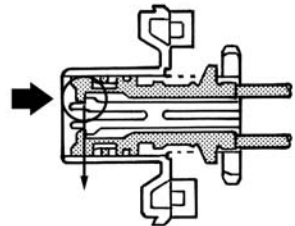
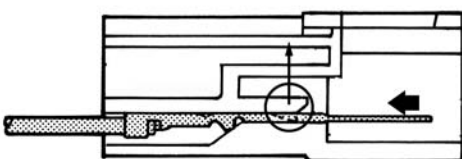
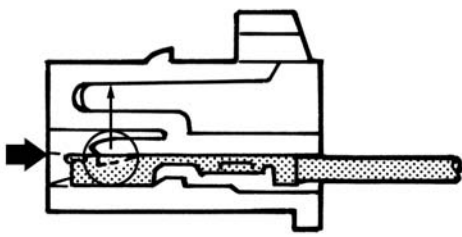
Type	<p>○ : Position of the lance                      ↑ : Direction of lock released                      ↗ : Direction of the special tool inserted</p>	
	Male	Female
SFPC	_____	 <p>[Housing Lance]</p>
SL	_____	 <p>[Terminal Lance]</p>
SP	_____	 <p>[Housing Lance]</p>
TLC Non-waterproof Type	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>

TABLE OF HOUSING CROSS SECTION

Type	○ : Position of the lance ↑ : Direction of lock released ▲ : Direction of the special tool inserted	
	Male	Female
TLC Waterproof Type	 <p>[Housing Lance]</p>	 <p>[Housing Lance]</p>
TNS	 <p>(Double Lock Type) [Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>
TODC	 <p>[Housing Lance]</p>	 <p>(Double Lock Type) [Housing Lance]</p>





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# TABLE OF HOUSING SHAPE

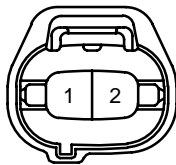
## FEMALE

WATERPROOF TYPE .....	D-1
NON-WATERPROOF TYPE .....	D-42

## MALE

WATERPROOF TYPE .....	D-157
NON-WATERPROOF TYPE .....	D-179

The front view of the housing



90980-11156  
(90980-12634)

### NOTICE:

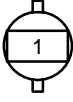







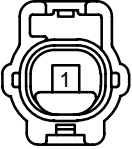











- Part numbers in brackets are for multiple-manufacturer produced parts or HLC connectors. When multiple-manufacturer produced parts of HLC connectors are used, it is better to replace them with the original parts when fixing.
- Refer to the HOUSING PART NUMBER LIST for the availability of the supply parts.

D

D

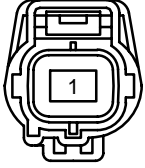
TABLE OF HOUSING SHAPE

<FEMALE> 1P Waterproof Type

 <p>90980-10115 (Splash Proof)</p>	 <p>90980-10125 (Splash Proof)</p>	 <p>90980-10197 (Splash Proof)</p>	 <p>90980-10201 (Splash Proof)</p>
 <p>90980-10247 (Splash Proof)</p>	 <p>90980-10439</p>	 <p>90980-10705 (Splash Proof)</p>	 <p>90980-10837</p>
 <p>90980-10893</p>	 <p>90980-10983</p>	 <p>90980-11007</p>	 <p>90980-11166</p>
 <p>90980-11184</p>	 <p>90980-11243</p>	 <p>90980-11252</p>	 <p>90980-11271</p>
 <p>90980-11282</p>	 <p>90980-11363</p>	 <p>90980-11400</p>	 <p>90980-11428</p>

D

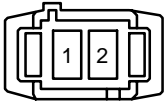

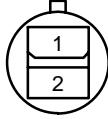
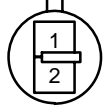



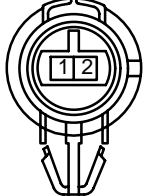

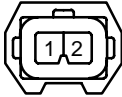










<FEMALE> 1P Waterproof Type

 90980-11963			

D

TABLE OF HOUSING SHAPE

<FEMALE> 2P Waterproof Type

 <p>90980-10092 (Splash Proof)</p>	 <p>90980-10116 (Splash Proof)</p>	 <p>90980-10123 (Splash Proof)</p>	 <p>90980-10157 (Splash Proof)</p>
 <p>90980-10184 (Splash Proof)</p>	 <p>90980-10193 (Splash Proof)</p>	 <p>90980-10243 (Splash Proof)</p>	 <p>90980-10352 (Splash Proof)</p>
 <p>90980-10423</p>	 <p>90980-10426</p>	 <p>90980-10474</p>	 <p>90980-10491</p>
 <p>90980-10496</p>	 <p>90980-10498</p>	 <p>90980-10511</p>	 <p>90980-10512</p>
 <p>90980-10532</p>	 <p>90980-10534</p>	 <p>90980-10556</p>	 <p>90980-10567</p>

D

## TABLE OF HOUSING SHAPE

## &lt;FEMALE&gt; 2P Waterproof Type






















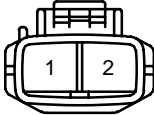



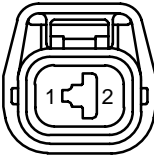



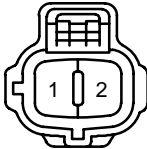
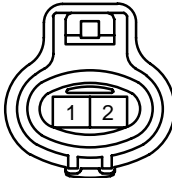






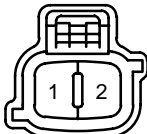


			
90980-10572	90980-10576	90980-10578	90980-10581
			
90980-10583	90980-10593	90980-10595	90980-10598
			
90980-10609	90980-10617	90980-10622	90980-10623
			
90980-10626	90980-10702	90980-10706	90980-10720
			
90980-10734	90980-10735	90980-10736	90980-10737

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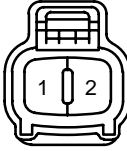









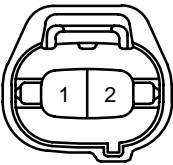


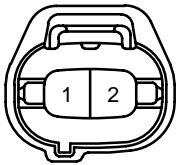



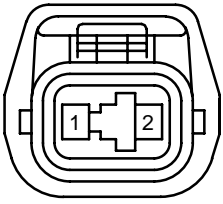
<FEMALE> 2P Waterproof Type

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 <p>90980-10847</p>	 <p>90980-10853</p>	 <p>90980-10887</p>	 <p>90980-10899</p>
 <p>90980-10901</p>	 <p>90980-10923</p>	 <p>90980-10928</p>	 <p>90980-10947</p>
 <p>90980-10949</p>	 <p>90980-10974</p>	 <p>90980-11003</p>	 <p>90980-11005</p>
 <p>90980-11009</p>	 <p>90980-11019</p>	 <p>90980-11025</p>	 <p>90980-11030</p>

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TABLE OF HOUSING SHAPE

<FEMALE> 2P Waterproof Type





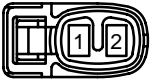
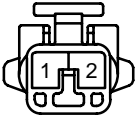






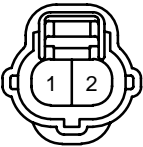




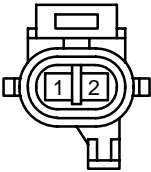
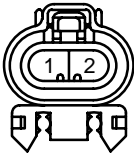
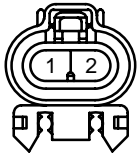
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 <p>90980-11095</p>	 <p>90980-11096</p>	 <p>90980-11140</p>	 <p>90980-11142</p>
 <p>90980-11149</p>	 <p>90980-11153</p>	 <p>90980-11154</p>	 <p>90980-11156 (90980-12634)</p>
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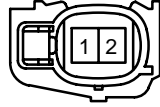

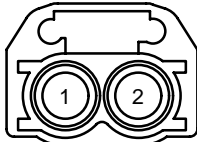
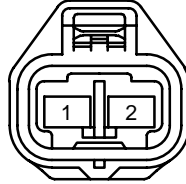


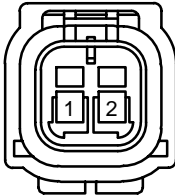

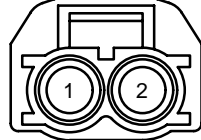
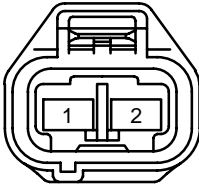

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<FEMALE> 2P Waterproof Type

			
90980-11189	90980-11207	90980-11235	90980-11237
			
90980-11246	90980-11248	90980-11250	90980-11255
			
90980-11273	90980-11284	90980-11285	90980-11286
			
90980-11401	90980-11410	90980-11448	90980-11467
			
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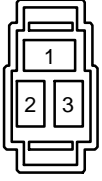
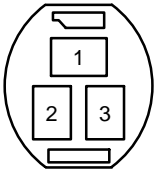


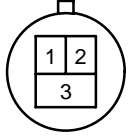

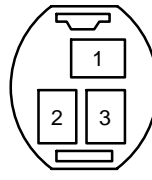

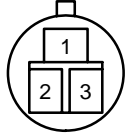

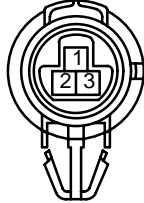









<FEMALE> 2P Waterproof Type

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 <p>90980-11900</p>	 <p>90980-12028</p>	 <p>90980-12068</p>	 <p>90980-12117</p>
 <p>90980-12188</p>	 <p>90980-12195</p>	 <p>90980-12416</p>	 <p>90980-12611</p>
 <p>90980-12669</p>	 <p>90980-12728</p>		

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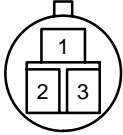

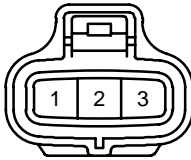




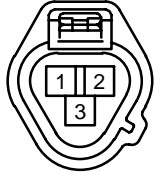


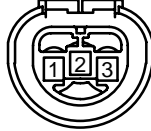









<FEMALE> 3P Waterproof Type

 <p>90980-10088 (Splash Proof)</p>	 <p>90980-10110 (Splash Proof)</p>	 <p>90980-10168 (Splash Proof)</p>	 <p>90980-10191 (Splash Proof)</p>
 <p>90980-10199 (Splash Proof)</p>	 <p>90980-10236 (Splash Proof)</p>	 <p>90980-10239 (Splash Proof)</p>	 <p>90980-10245 (Splash Proof)</p>
 <p>90980-10249 (Splash Proof)</p>	 <p>90980-10341 (Splash Proof)</p>	 <p>90980-10353 (Splash Proof)</p>	 <p>90980-10395</p>
 <p>90980-10494</p>	 <p>90980-10501</p>	 <p>90980-10554</p>	 <p>90980-10574</p>
 <p>90980-10579</p>	 <p>90980-10629</p>	 <p>90980-10690</p>	 <p>90980-10695</p>

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<FEMALE> 3P Waterproof Type

 <p>90980-10708 (Splash Proof)</p>	 <p>90980-10834</p>	 <p>90980-10841</p>	 <p>90980-10845 (90980-12636)</p>
 <p>90980-10902</p>	 <p>90980-10919</p>	 <p>90980-10981</p>	 <p>90980-11016</p>
 <p>90980-11020</p>	 <p>90980-11045</p>	 <p>90980-11108</p>	 <p>90980-11132</p>
 <p>90980-11143</p>	 <p>90980-11145</p>	 <p>90980-11157</p>	 <p>90980-11161</p>
 <p>90980-11170</p>	 <p>90980-11245</p>	 <p>90980-11261</p>	 <p>90980-11294</p>

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<FEMALE> 3P Waterproof Type

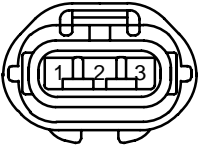
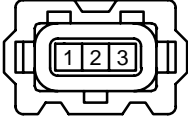
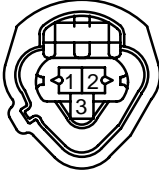

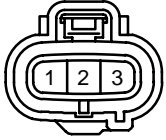

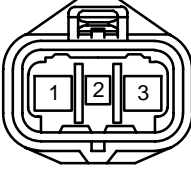
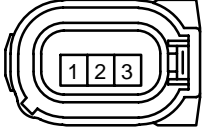
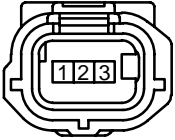
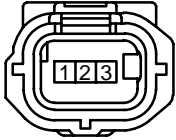
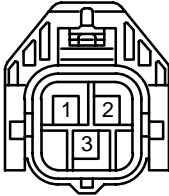
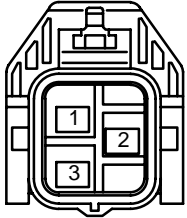
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 <p>90980-11860</p>	 <p>90980-11907</p>	 <p>90980-12058</p>	 <p>90980-12168</p>
 <p>90980-12353</p>	 <p>90980-12354</p>	 <p>90980-12496</p>	 <p>90980-12648</p>

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<FEMALE> 4P Waterproof Type

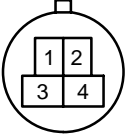
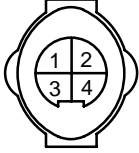

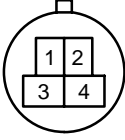
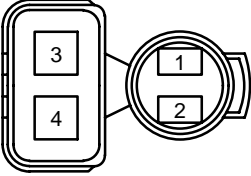
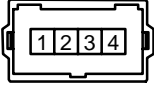

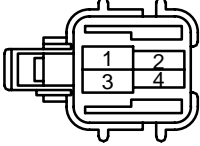












 <p>90980-10140 (Splash Proof)</p>	 <p>90980-10203 (Splash Proof)</p>	 <p>90980-10218 (Splash Proof)</p>	 <p>90980-10220 (Splash Proof)</p>
 <p>90980-10373 (Splash Proof)</p>	 <p>90980-10378</p>	 <p>90980-10476</p>	 <p>90980-10549</p>
 <p>90980-10551 (90980-10616)</p>	 <p>90980-10591</p>	 <p>90980-10649</p>	 <p>90980-10685</p>
 <p>90980-10701</p>	 <p>90980-10711</p>	 <p>90980-10831</p>	 <p>90980-10844</p>
 <p>90980-10869</p>	 <p>90980-10929</p>	 <p>90980-10940</p>	 <p>90980-10942</p>

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<FEMALE> 4P Waterproof Type

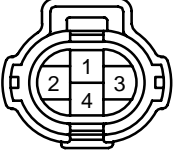

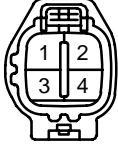

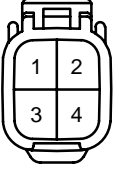









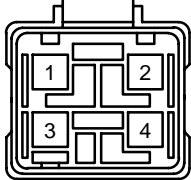

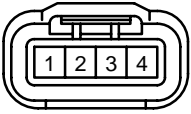
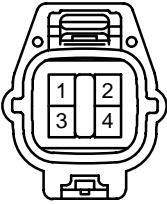


 <p>90980-10943</p>	 <p>90980-10990</p>	 <p>90980-11028</p>	 <p>90980-11036</p>
 <p>90980-11037</p>	 <p>90980-11139</p>	 <p>90980-11150 (90980-12057)</p>	 <p>90980-11152</p>
 <p>90980-11178</p>	 <p>90980-11269</p>	 <p>90980-11283</p>	 <p>90980-11288</p>
 <p>90980-11292</p>	 <p>90980-11304</p>	 <p>90980-11522</p>	 <p>90980-11569</p>
 <p>90980-11885 (90980-12176)</p>	 <p>90980-11930</p>	 <p>90980-11964</p>	 <p>90980-12005</p>

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<FEMALE> 4P Waterproof Type

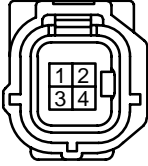
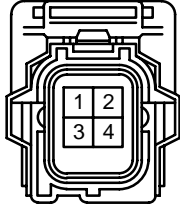
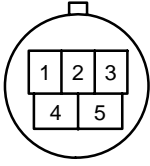
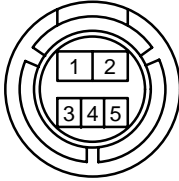
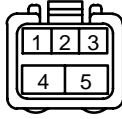
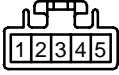




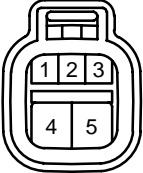



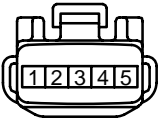


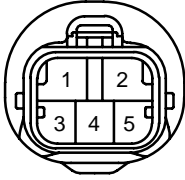

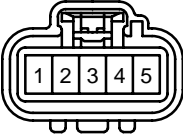
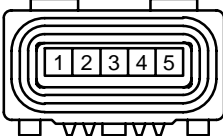

 <p>90980-12294</p>	 <p>90980-12495</p>	 <p>90980-12654</p>	 <p>90980-12704</p>



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<FEMALE> 5P Waterproof Type

 <p>90980-10162 (Splash Proof)</p>	 <p>90980-10393 (Splash Proof)</p>	 <p>90980-10550</p>	 <p>90980-10558</p>
 <p>90980-10624</p>	 <p>90980-10710</p>	 <p>90980-10712</p>	 <p>90980-10946</p>
 <p>90980-11022</p>	 <p>90980-11024</p>	 <p>90980-11049</p>	 <p>90980-11077</p>
 <p>90980-11182</p>	 <p>90980-11232</p>	 <p>90980-11317</p>	 <p>90980-11413</p>
 <p>90980-11599</p>	 <p>90980-11904</p>	 <p>90980-11908</p>	 <p>90980-11960</p>

<FEMALE> 5P Waterproof Type


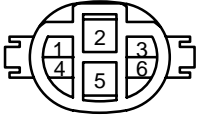

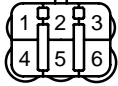
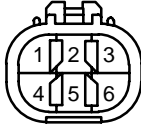

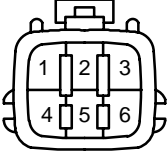

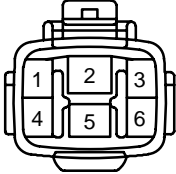






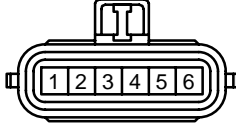

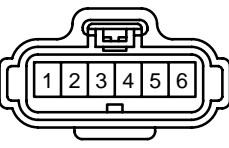
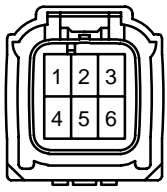
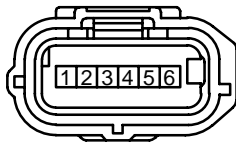
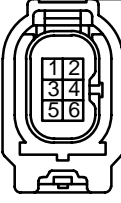
 <p>90980-12292</p>			

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<FEMALE> 6P Waterproof Type

 <p>90980-10097 (Splash Proof)</p>	 <p>90980-10195 (Splash Proof)</p>	 <p>90980-10478</p>	 <p>90980-10597</p>
 <p>90980-10643</p>	 <p>90980-10651</p>	 <p>90980-10854</p>	 <p>90980-10939</p>
 <p>90980-10988</p>	 <p>90980-11034</p>	 <p>90980-11144</p>	 <p>90980-11194 (90980-12635)</p>
 <p>90980-11197</p>	 <p>90980-11290</p>	 <p>90980-11517</p>	 <p>90980-11663</p>
 <p>90980-11858</p>	 <p>90980-12257</p>	 <p>90980-12303</p>	 <p>90980-12382</p>

<FEMALE> 6P Waterproof Type

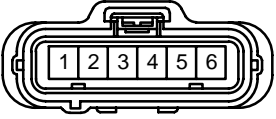
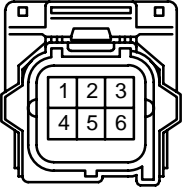
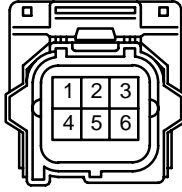
 <p>90980-12651</p>	 <p>90980-12655</p>	 <p>90980-12656</p>	

TABLE OF HOUSING SHAPE

<FEMALE> 7P Waterproof Type

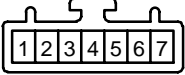
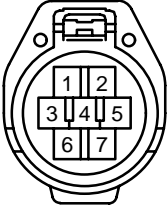

 <p>90980-10628</p>	 <p>90980-10931</p>	 <p>90980-11172</p>	

TABLE OF HOUSING SHAPE

<FEMALE> 8P Waterproof Type

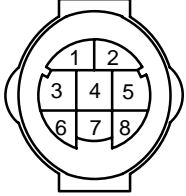

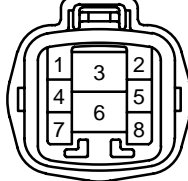
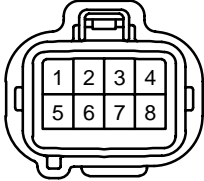

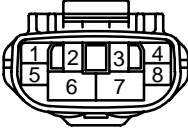
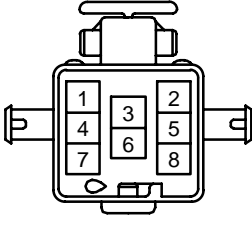
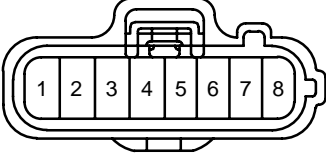
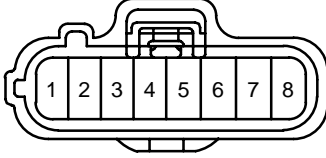
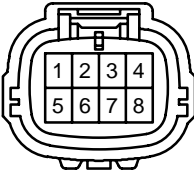
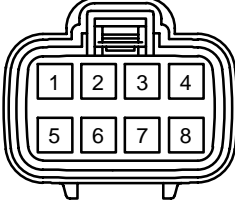
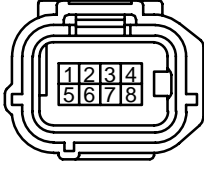
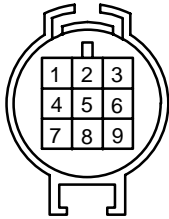
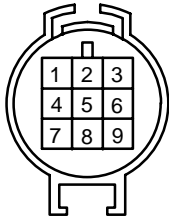
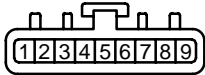


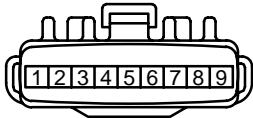
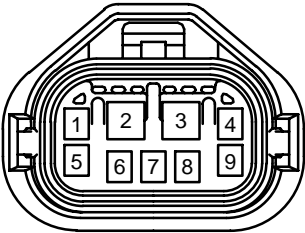
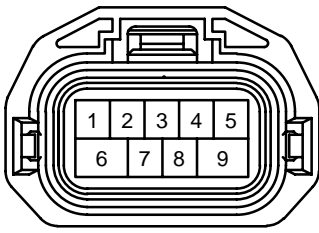
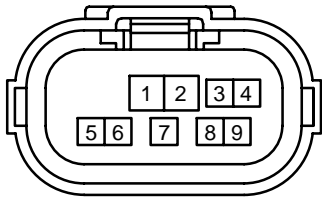
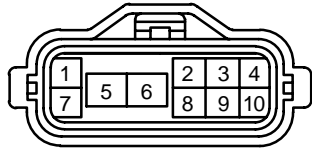
 <p>90980-10205 (Splash Proof)</p>	 <p>90980-10891</p>	 <p>90980-10895</p>	 <p>90980-10897</p>
 <p>90980-11190</p>	 <p>90980-11242</p>	 <p>90980-11461</p>	 <p>90980-11592</p>
 <p>90980-11593</p>	 <p>90980-12080</p>	 <p>90980-12164</p>	 <p>90980-12520</p>

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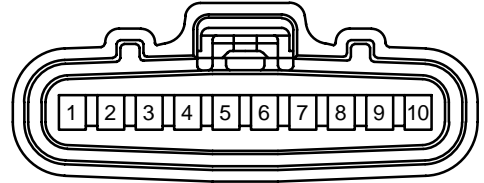
<FEMALE> 9P Waterproof Type

 <p>90980-10380 (Splash Proof)</p>	 <p>90980-10381 (Splash Proof)</p>	 <p>90980-10678</p>
 <p>90980-10686</p>	 <p>90980-10776 (Splash Proof)</p>	 <p>90980-11192</p>
 <p>90980-11643</p>	 <p>90980-11784</p>	 <p>90980-12362</p>

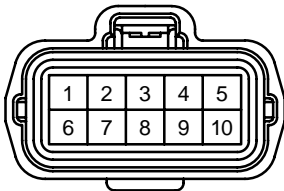
<FEMALE> 10P Waterproof Type



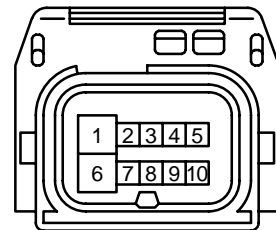
90980-11332



90980-11653



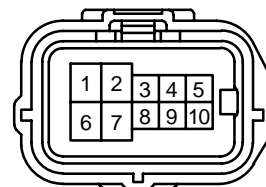
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90980-12295



90980-12380

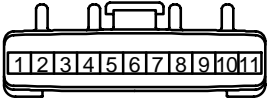


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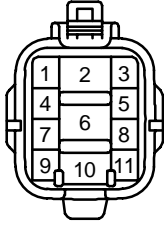


TABLE OF HOUSING SHAPE

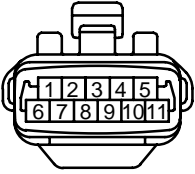
<FEMALE> 11P Waterproof Type



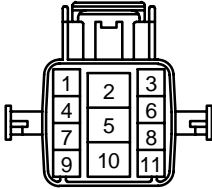
90980-11174



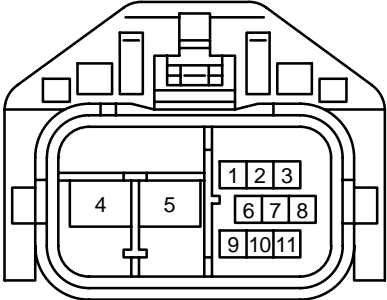
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90980-11257

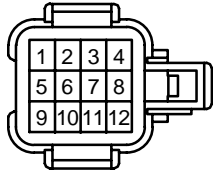


90980-11612

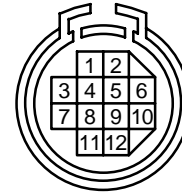


90980-12483

<FEMALE> 12P Waterproof Type



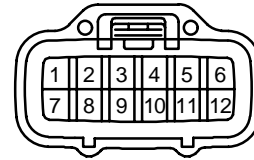
90980-10548



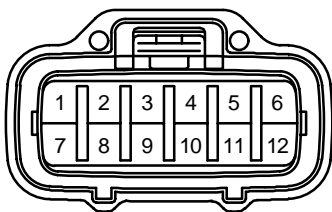
90980-10569  
(Splash Proof)



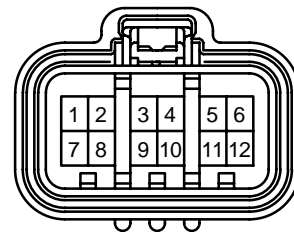
90980-11087



90980-11151





90980-11664



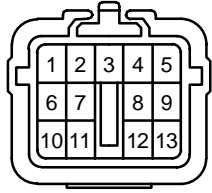
90980-11698

TABLE OF HOUSING SHAPE

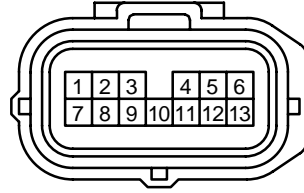
<FEMALE> 12P Waterproof Type

 <p>90980-12356</p>	 <p>90980-12357</p>

<FEMALE> 13P Waterproof Type



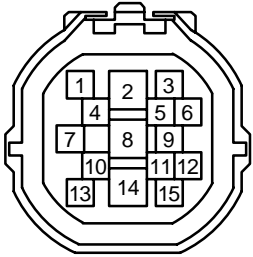
90980-10654



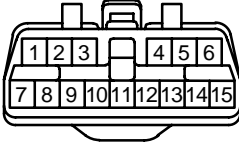
90980-12326

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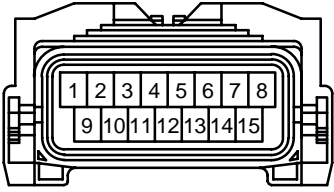
<FEMALE> 15P Waterproof Type



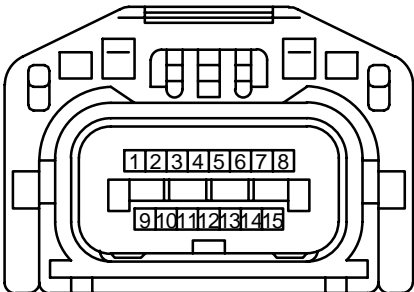
90980-10443



90980-11089

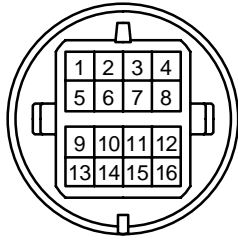


90980-11677

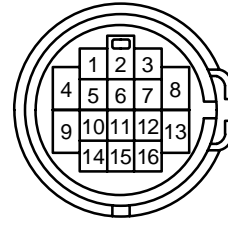


90980-12293

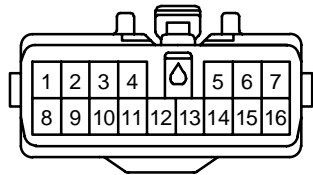
<FEMALE> 16P Waterproof Type



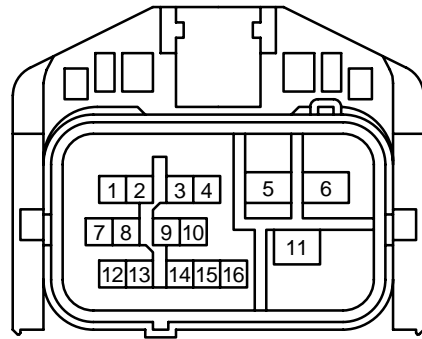
90980-10101  
(Splash Proof)



90980-10288  
(Splash Proof)



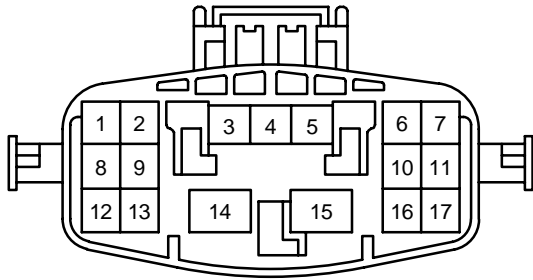
90980-11463



90980-12518

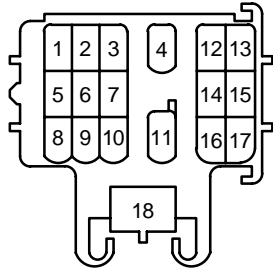
TABLE OF HOUSING SHAPE

<FEMALE> 17P Waterproof Type



90980-11601

**<FEMALE> 18P Waterproof Type**

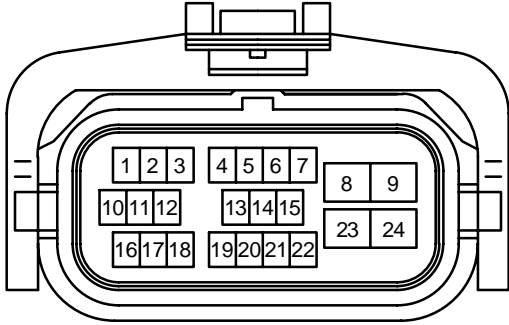


90980-10778

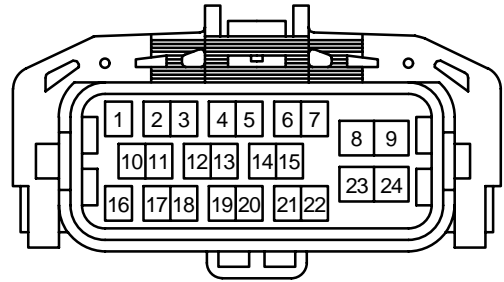


TABLE OF HOUSING SHAPE

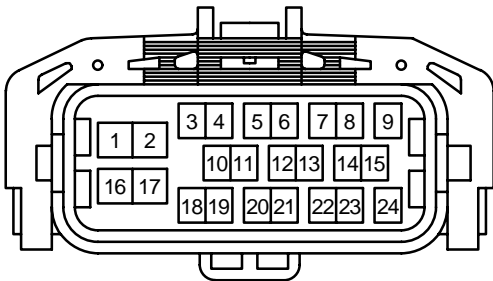
<FEMALE> 24P Waterproof Type



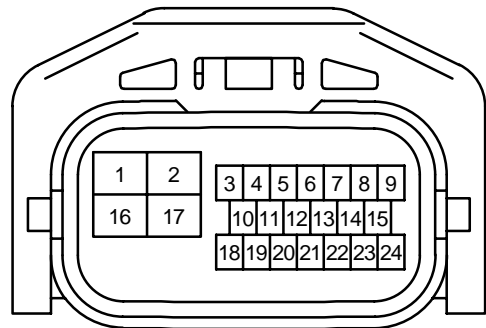
90980-11851



90980-11882

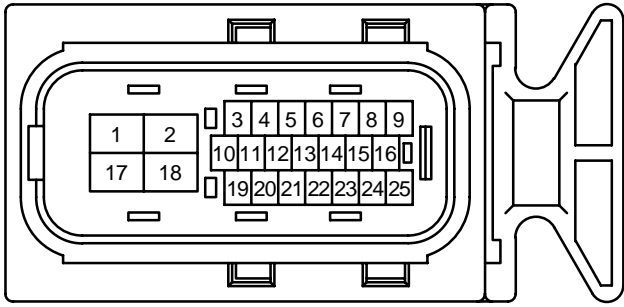


90980-11893



90980-12116

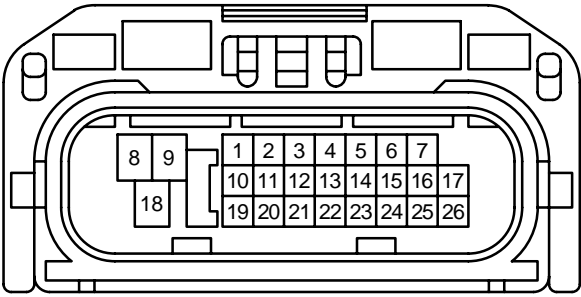
**<FEMALE> 25P Waterproof Type**



90980-11861

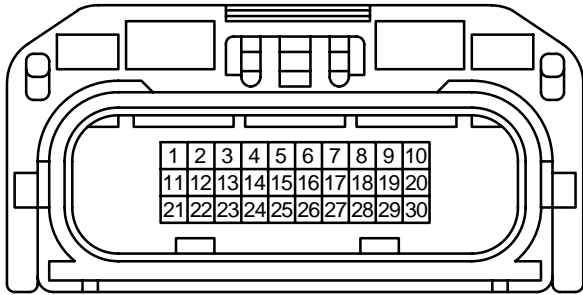
TABLE OF HOUSING SHAPE

<FEMALE> 26P Waterproof Type



90980-12649

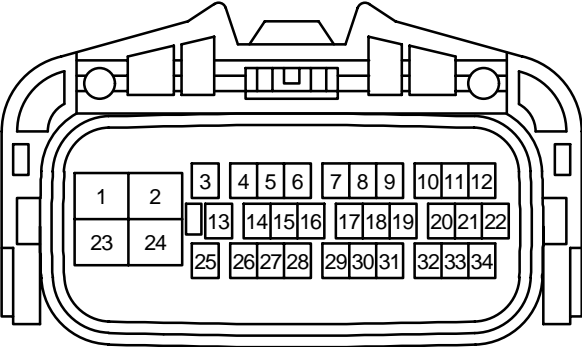
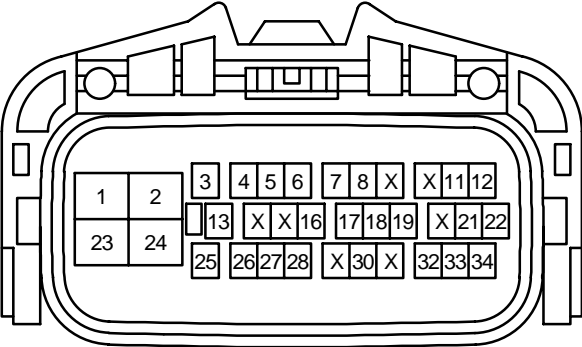
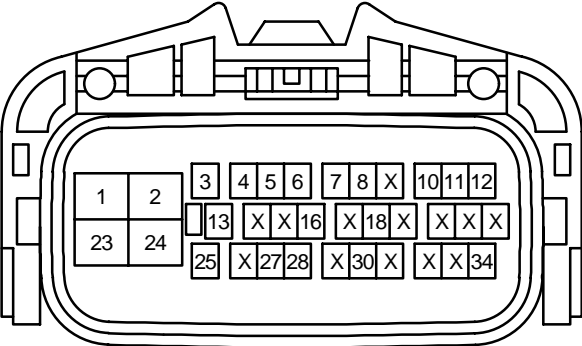
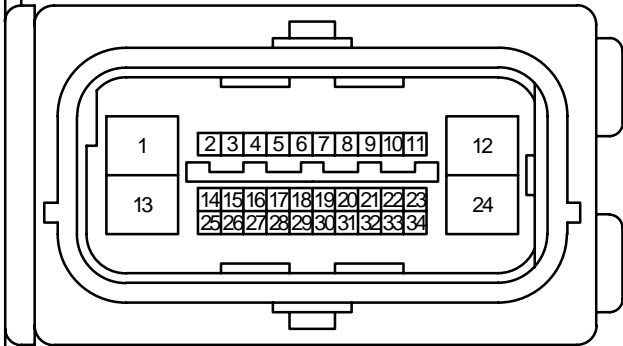
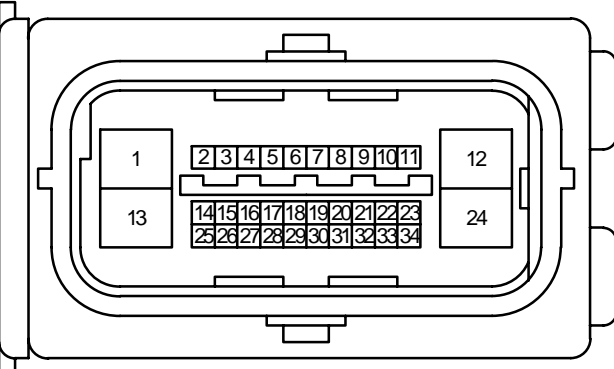
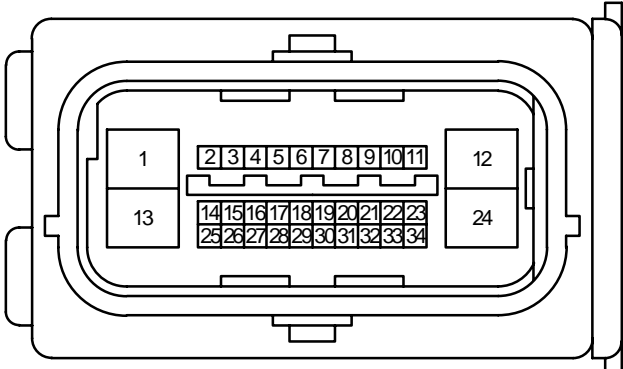
**<FEMALE> 30P Waterproof Type**



90980-12712

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<FEMALE> 34P Waterproof Type

 <p>90980-12020</p>	 <p>90980-12021</p>
 <p>90980-12022</p>	 <p>90980-12658</p>
 <p>90980-12659</p>	 <p>90980-12686</p>

### <FEMALE> 34P Waterproof Type

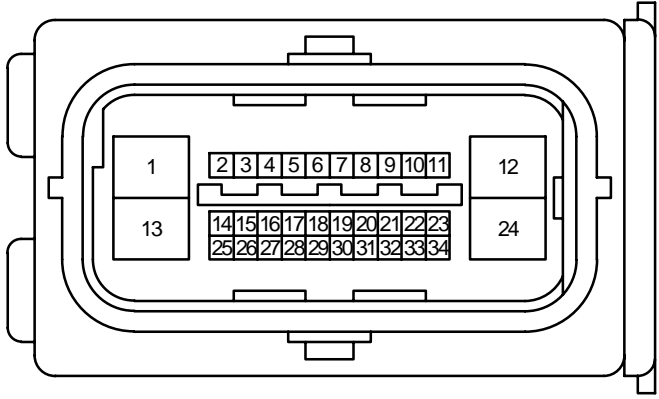
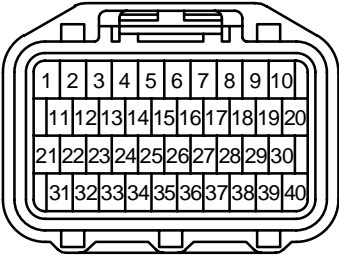
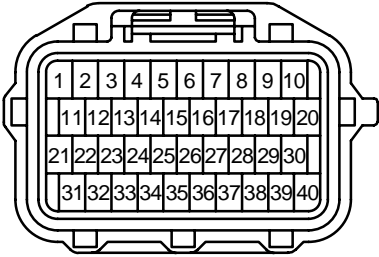
 <p>90980-12687</p>	

TABLE OF HOUSING SHAPE

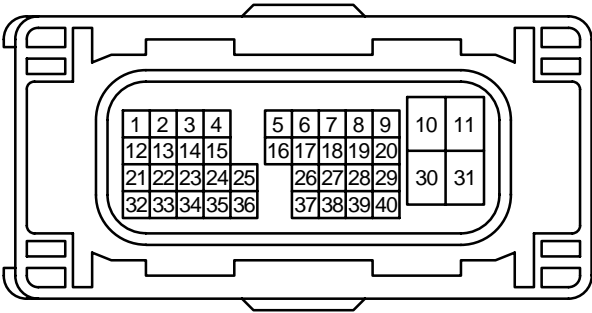
<FEMALE> 40P Waterproof Type



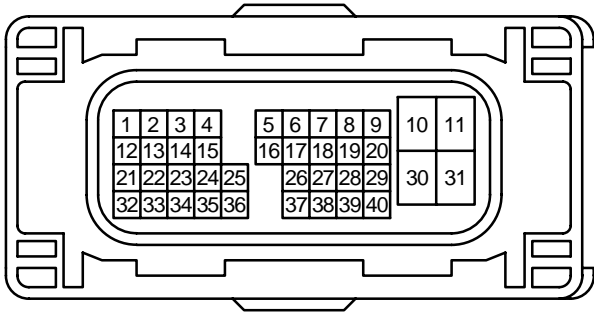
90980-11215



90980-11566



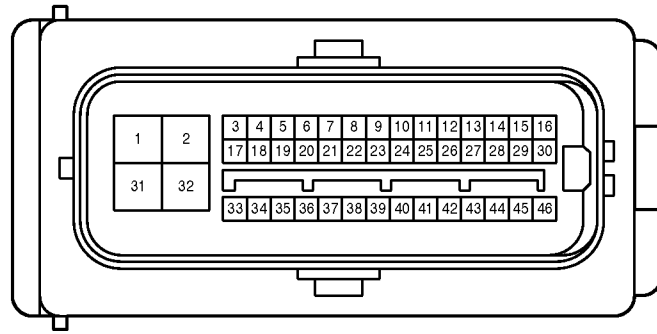
90980-12630



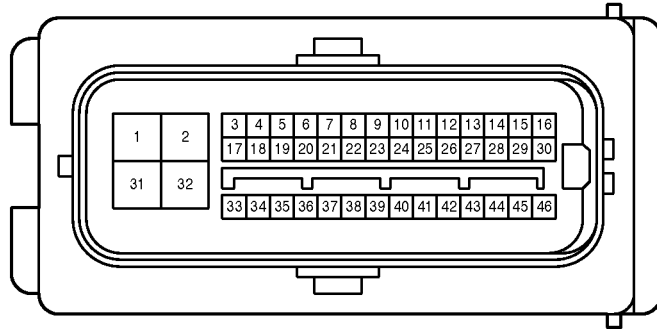
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TABLE OF HOUSING SHAPE

<FEMALE> 46P Waterproof Type



90980-12297

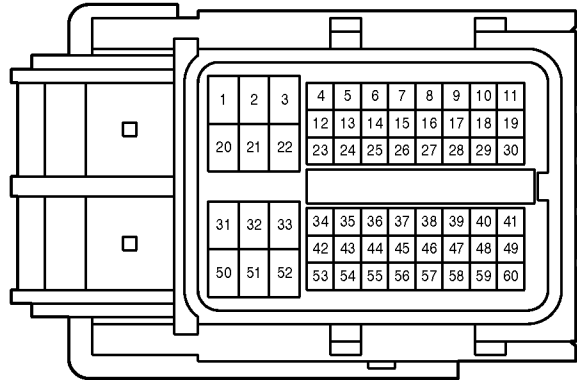


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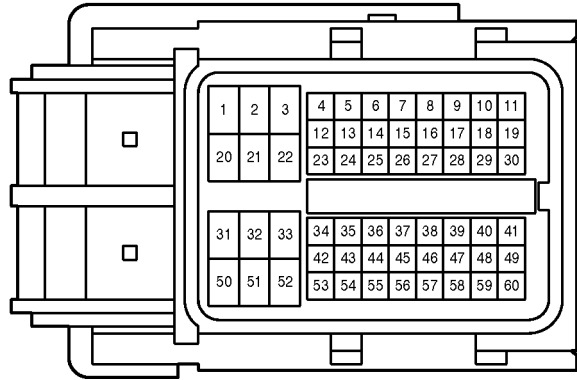


TABLE OF HOUSING SHAPE

<FEMALE> 60P Waterproof Type



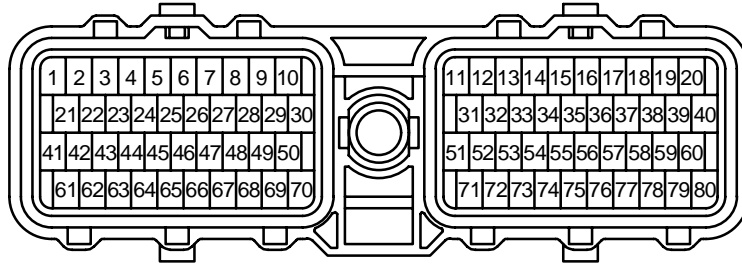
90980-12461



90980-12462

TABLE OF HOUSING SHAPE

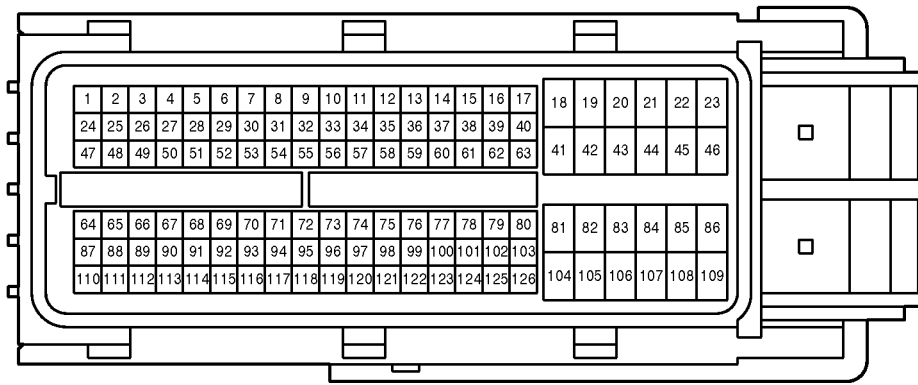
<FEMALE> 80P Waterproof Type



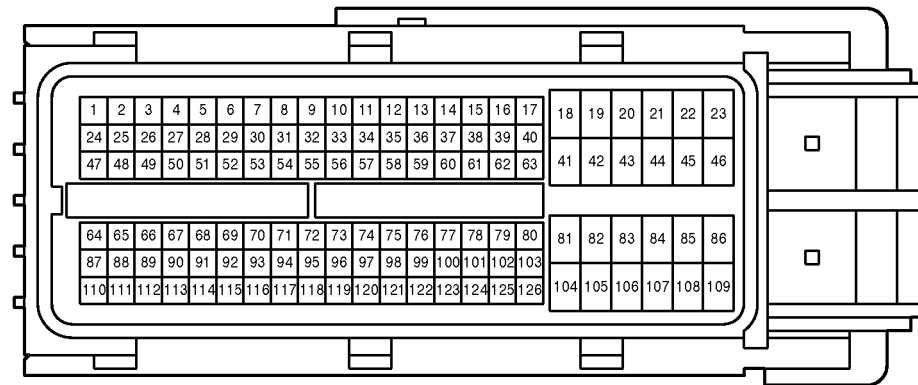
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TABLE OF HOUSING SHAPE

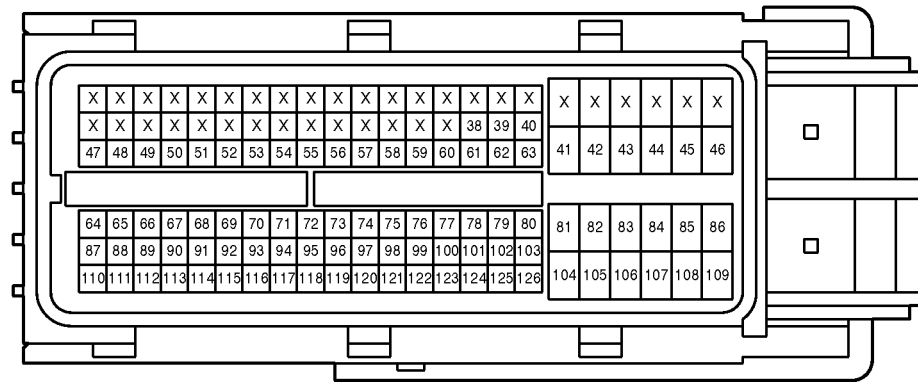
<FEMALE> 126P Waterproof Type



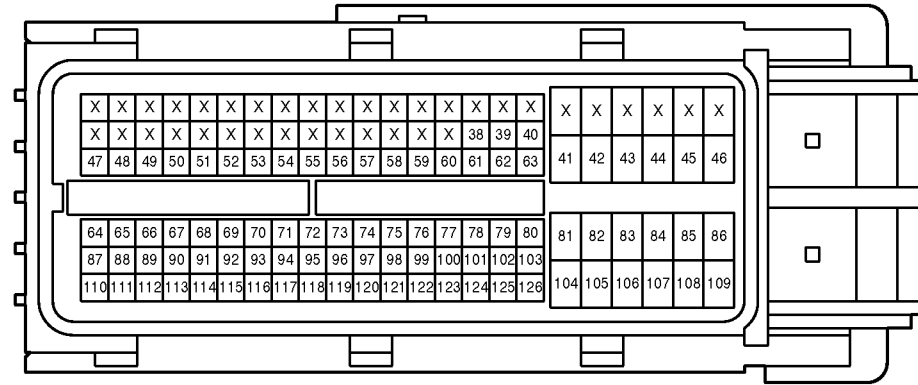
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90980-12397



90980-12398



90980-12399

<FEMALE> 1P Non-waterproof Type




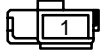











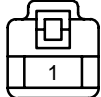




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 <p>90980-10250</p>	 <p>90980-10252</p>	 <p>90980-10254</p>	 <p>90980-10332</p>
 <p>90980-10343</p>	 <p>90980-10359</p>	 <p>90980-10363</p>	 <p>90980-10398</p>
 <p>90980-10435</p>	 <p>90980-10619</p>	 <p>90980-10652</p>	 <p>90980-10688</p>
 <p>90980-10703</p>	 <p>90980-10782</p>	 <p>90980-10786</p>	 <p>90980-10792</p>

TABLE OF HOUSING SHAPE

<FEMALE> 1P Non-waterproof Type










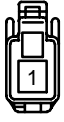
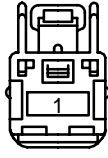

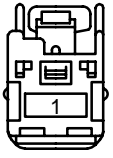
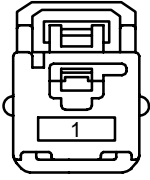

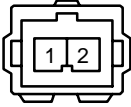
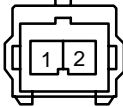
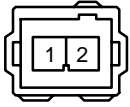

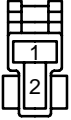
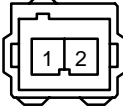
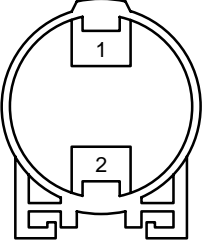


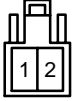




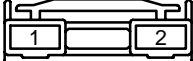


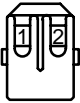
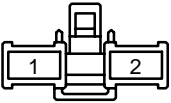
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 <p>90980-10914</p>	 <p>90980-10995</p>	 <p>90980-11147</p>	 <p>90980-11259 (90980-12487)</p>
 <p>90980-11315</p>	 <p>90980-11738</p>	 <p>90980-11775 (90980-12489)</p>	 <p>90980-11853</p>
 <p>90980-11881</p>	 <p>90980-12756</p>		

TABLE OF HOUSING SHAPE

<FEMALE> 2P Non-waterproof Type

 <p>90980-10039</p>	 <p>90980-10069</p>	 <p>90980-10108</p>	 <p>90980-10109</p>
 <p>90980-10121</p>	 <p>90980-10124</p>	 <p>90980-10141</p>	 <p>90980-10185</p>
 <p>90980-10214 (90980-11804)</p>	 <p>90980-10238</p>	 <p>90980-10256</p>	 <p>90980-10298</p>
 <p>90980-10320</p>	 <p>90980-10333</p>	 <p>90980-10345</p>	 <p>90980-10348</p>
 <p>90980-10355</p>	 <p>90980-10357</p>	 <p>90980-10362</p>	 <p>90980-10385</p>

## TABLE OF HOUSING SHAPE

## &lt;FEMALE&gt; 2P Non-waterproof Type

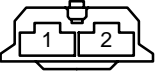









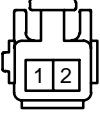
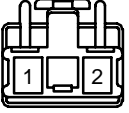
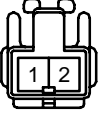

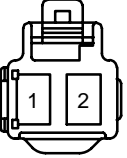
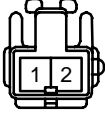




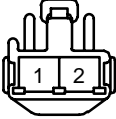

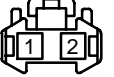

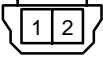



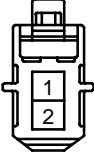
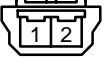

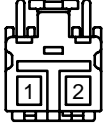
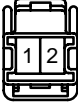
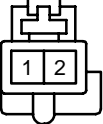
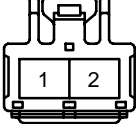

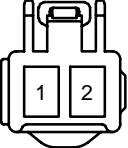
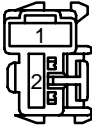


			
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90980-10559	90980-10621	90980-10637	90980-10679
			
90980-10760	90980-10783	90980-10825 (90980-12014) (90980-12341) (90980-12471)	90980-10850 (90980-11839)
			
90980-10855	90980-10860 (90980-11769) (90980-12342) (90980-12472)	90980-10903	90980-10906 (90980-11736)
			
90980-10916 (90980-12488) (90980-12530)	90980-10935 (90980-11723) (90980-12343) (90980-12347)	90980-10962	90980-11080

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<FEMALE> 2P Non-waterproof Type

 <p>90980-11094</p>	 <p>90980-11098 (90980-11807)</p>	 <p>90980-11148 (90980-11717)</p>	 <p>90980-11212</p>
 <p>90980-11227</p>	 <p>90980-11278</p>	 <p>90980-11306</p>	 <p>90980-11369</p>
 <p>90980-11386</p>	 <p>90980-11388</p>	 <p>90980-11396</p>	 <p>90980-11429</p>
 <p>90980-11436</p>	 <p>90980-11512</p>	 <p>90980-11579 (90980-11824)</p>	 <p>90980-11608</p>
 <p>90980-11684</p>	 <p>90980-11687</p>	 <p>90980-11770</p>	 <p>90980-11840</p>



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## &lt;FEMALE&gt; 2P Non-waterproof Type

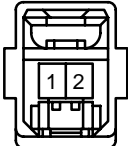
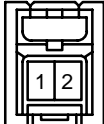
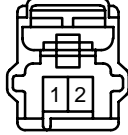

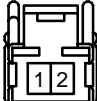

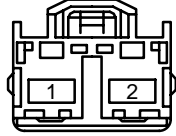
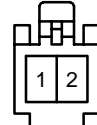

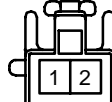
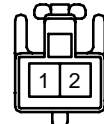
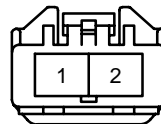

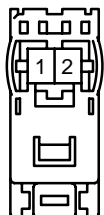
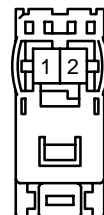
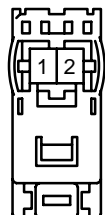
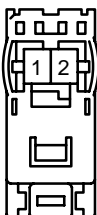
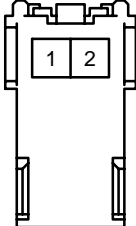
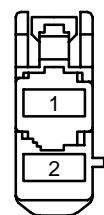

			
90980-11884	90980-11886	90980-11890	90980-11918
			
90980-11919	90980-11977	90980-11996	90980-12039
			
90980-12063	90980-12088	90980-12089	90980-12120
			
90980-12128	90980-12219	90980-12224	90980-12242
			
90980-12243	90980-12253	90980-12299	90980-12300 (90980-12653)

TABLE OF HOUSING SHAPE

<FEMALE> 2P Non-waterproof Type

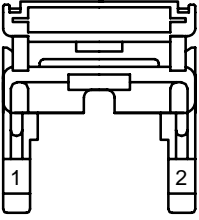
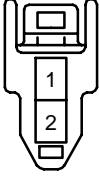
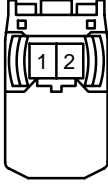
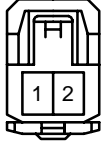
 <p>90980-12323</p>	 <p>90980-12355</p>	 <p>90980-12452</p>	 <p>90980-12498</p>

TABLE OF HOUSING SHAPE

<FEMALE> 3P Non-waterproof Type


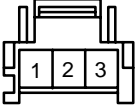

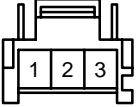
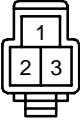
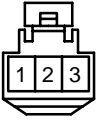

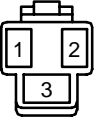
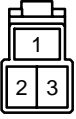



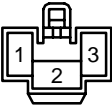

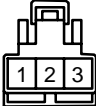
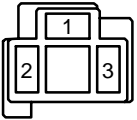
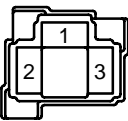


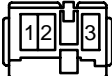
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 <p>90980-10216</p>	 <p>90980-10222</p>	 <p>90980-10228</p>	 <p>90980-10232</p>
 <p>90980-10258</p>	 <p>90980-10365</p>	 <p>90980-10420</p>	 <p>90980-10428</p>
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TABLE OF HOUSING SHAPE

<FEMALE> 3P Non-waterproof Type

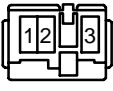
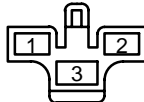

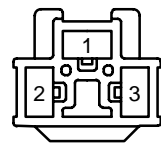
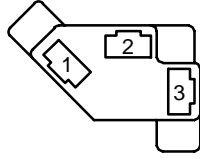
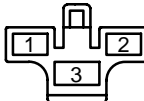
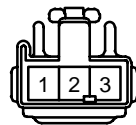
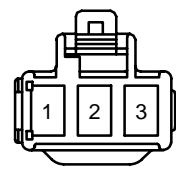
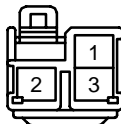


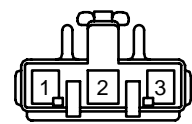
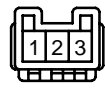

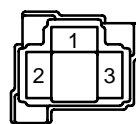
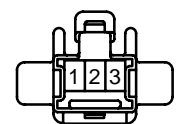


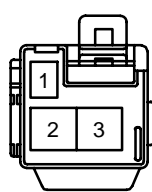
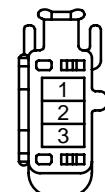
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 <p>90980-10980</p>	 <p>90980-11053</p>	 <p>90980-11071</p>	 <p>90980-11079</p>
 <p>90980-11251</p>	 <p>90980-11296</p>	 <p>90980-11314 (90980-11731)</p>	 <p>90980-11336</p>
 <p>90980-11387</p>	 <p>90980-11471 (90980-11777)</p>	 <p>90980-11485</p>	 <p>90980-11490</p>

TABLE OF HOUSING SHAPE

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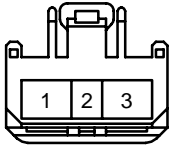
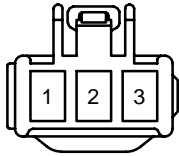
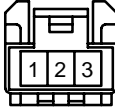

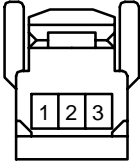
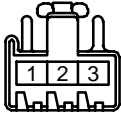
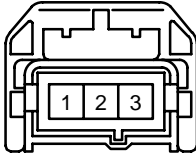
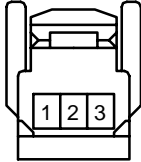
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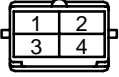

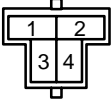
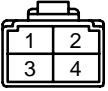
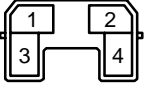
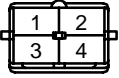
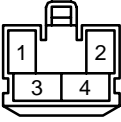

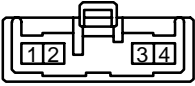

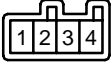


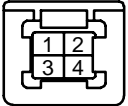


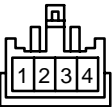


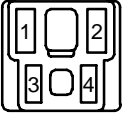
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 <p>90980-10692</p>	 <p>90980-10716</p>	 <p>90980-10717</p>	 <p>90980-10759</p>

TABLE OF HOUSING SHAPE

<FEMALE> 4P Non-waterproof Type

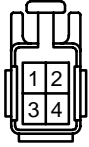
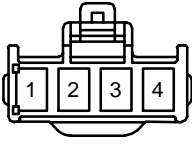

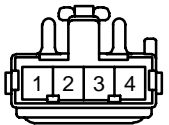
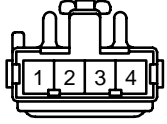
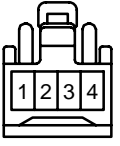
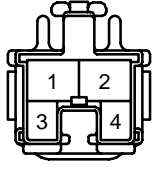
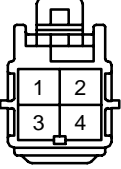
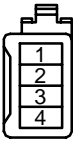
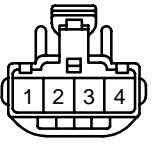
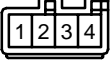
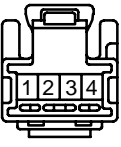
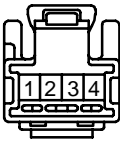
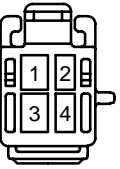
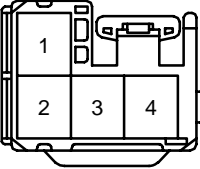
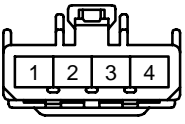
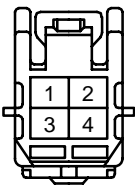
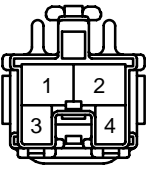
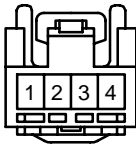
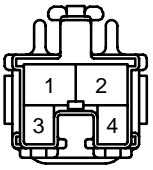
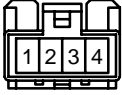

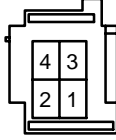
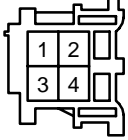
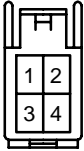
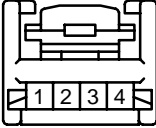
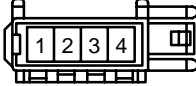
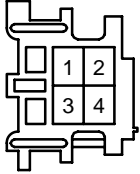
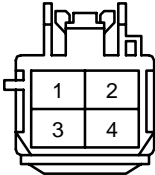
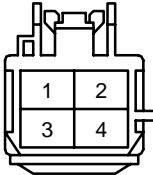
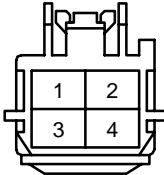
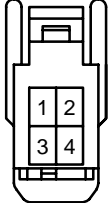
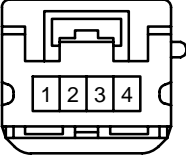
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 <p>90980-11187</p>	 <p>90980-11313</p>	 <p>90980-11398</p>	 <p>90980-11494</p>
 <p>90980-11495</p>	 <p>90980-11606</p>	 <p>90980-11662</p>	 <p>90980-11676</p>
 <p>90980-11742 (90980-11799)</p>	 <p>90980-11771</p>	 <p>90980-11792</p>	 <p>90980-11835</p>

TABLE OF HOUSING SHAPE

<FEMALE> 4P Non-waterproof Type

 <p>90980-11950</p>	 <p>90980-11988 (90980-12019)</p>	 <p>90980-12075</p>	 <p>90980-12103</p>
 <p>90980-12211</p>	 <p>90980-12263</p>	 <p>90980-12304</p>	 <p>90980-12316</p>
 <p>90980-12331</p>	 <p>90980-12332</p>	 <p>90980-12333</p>	 <p>90980-12360</p>
 <p>90980-12733</p>			



## TABLE OF HOUSING SHAPE

## &lt;FEMALE&gt; 5P Non-waterproof Type

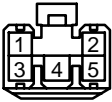
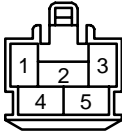
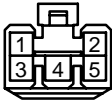
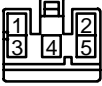
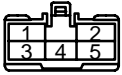
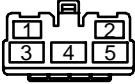
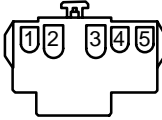
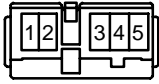
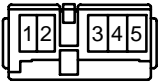
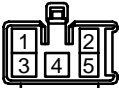

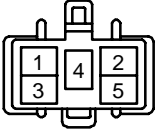


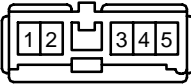
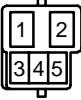
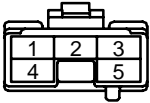
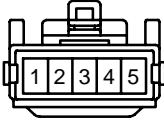
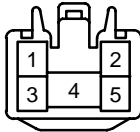
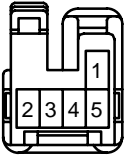
			
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90980-10339	90980-10340	90980-10376	90980-10487
			
90980-10488	90980-10509	90980-10520	90980-10610
			
90980-10631	90980-10644	90980-10659	90980-10713
	 90980-10789 (90980-11772) (90980-11797) (90980-12348)		
90980-10718		90980-10986	90980-11319

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<FEMALE> 5P Non-waterproof Type

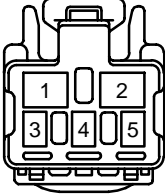
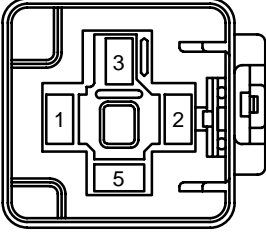
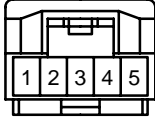
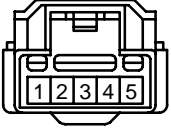
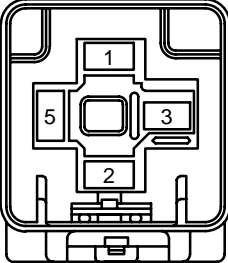
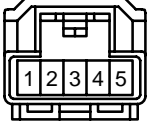
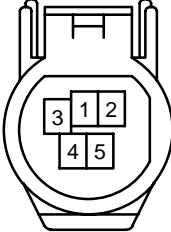
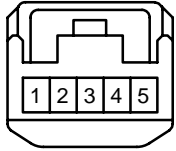
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 <p>90980-11975</p>	 <p>90980-12158</p>	 <p>90980-12190</p>	 <p>90980-12366 (90980-12541)</p>

TABLE OF HOUSING SHAPE

<FEMALE> 6P Non-waterproof Type

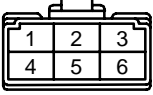
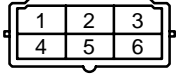
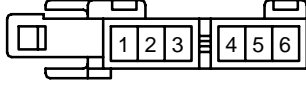
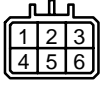
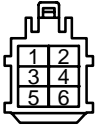
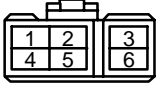

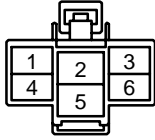
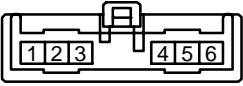
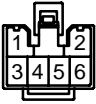
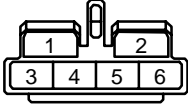
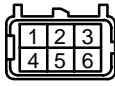


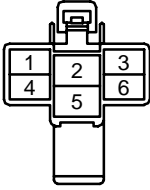
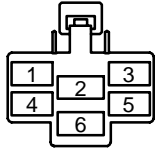

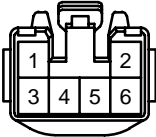
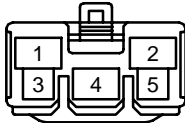
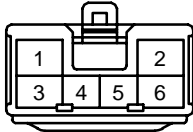
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 <p>90980-10334</p>	 <p>90980-10335</p>	 <p>90980-10367</p>	 <p>90980-10382</p>
 <p>90980-10402</p>	 <p>90980-10414</p>	 <p>90980-10447</p>	 <p>90980-10604</p>
 <p>90980-10605</p>	 <p>90980-10672</p>	 <p>90980-10673</p>	 <p>90980-10766</p>
 <p>90980-10785</p>	 <p>90980-10797            (90980-12180)            (90980-12344)            (90980-12349)</p>	 <p>90980-10888</p>	 <p>90980-10889</p>

TABLE OF HOUSING SHAPE

<FEMALE> 6P Non-waterproof Type

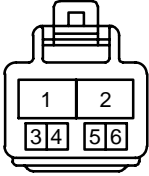
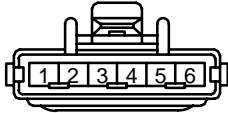
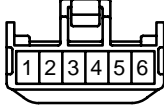
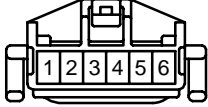
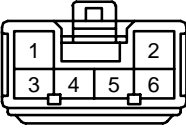
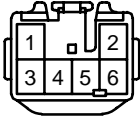
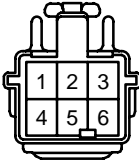
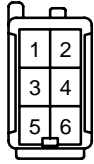
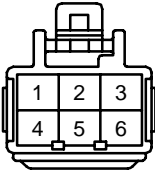
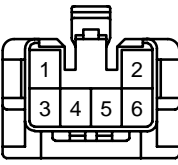
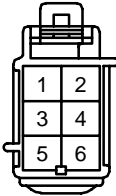

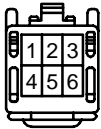
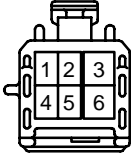
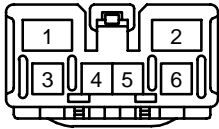
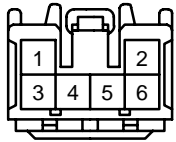
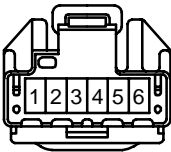
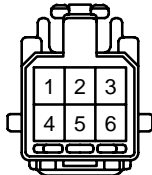
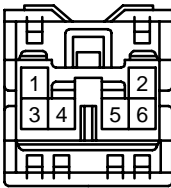
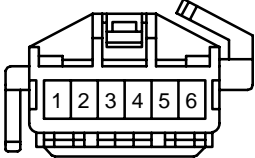
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 <p>90980-10976</p>	 <p>90980-10996 (90980-11728) (90980-11780) (90980-12539) (90980-12690)</p>	 <p>90980-11001 (90980-11707)</p>	 <p>90980-11011 (90980-11730)</p>
 <p>90980-11091</p>	 <p>90980-11280 (90980-11808)</p>	 <p>90980-11297 (90980-11758)</p>	 <p>90980-11326</p>
 <p>90980-11488</p>	 <p>90980-11493</p>	 <p>90980-11552</p>	 <p>90980-11583 (90980-11879)</p>
 <p>90980-11616</p>	 <p>90980-11617</p>	 <p>90980-11697</p>	 <p>90980-11732</p>

TABLE OF HOUSING SHAPE

<FEMALE> 6P Non-waterproof Type

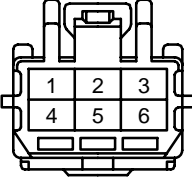
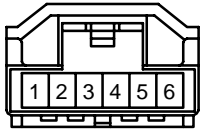
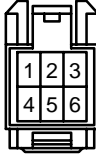
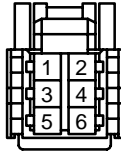
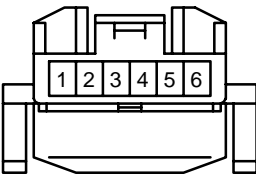
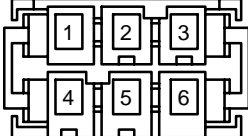
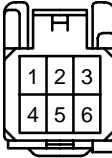
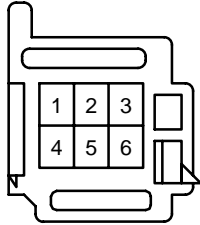
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90980-12067	90980-12199	90980-12209	90980-12512

TABLE OF HOUSING SHAPE

<FEMALE> 7P Non-waterproof Type

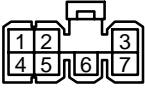
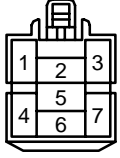
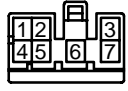

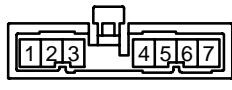
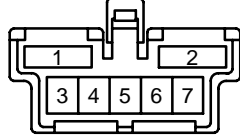
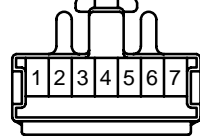
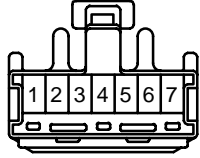
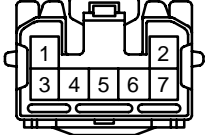
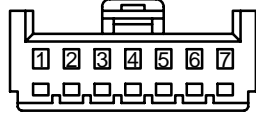
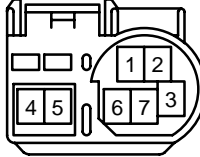
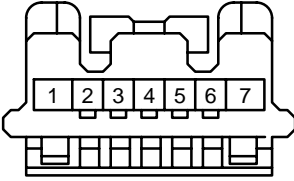
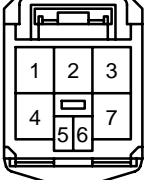
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 <p>90980-11529 (90980-11740) (90980-12336)</p>	 <p>90980-11794</p>	 <p>90980-12060</p>	 <p>90980-12092</p>
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TABLE OF HOUSING SHAPE

<FEMALE> 8P Non-waterproof Type

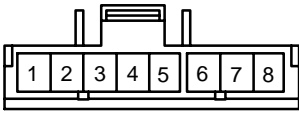
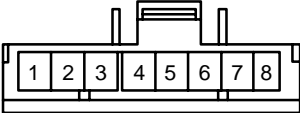
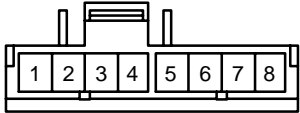
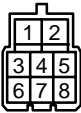
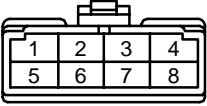
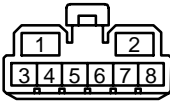
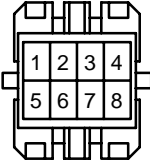
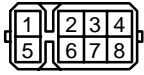
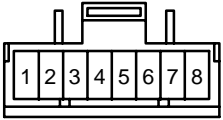
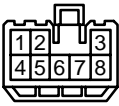
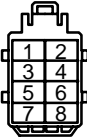
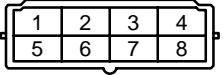
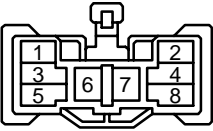
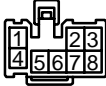
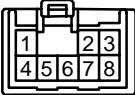
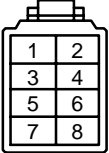
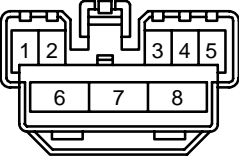
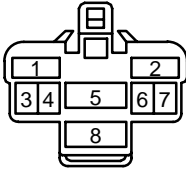
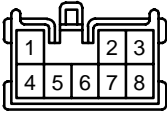
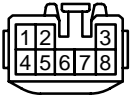
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 <p>90980-10175</p>	 <p>90980-10209</p>	 <p>90980-10273</p>	 <p>90980-10280</p>
 <p>90980-10301</p>	 <p>90980-10321</p>	 <p>90980-10336</p>	 <p>90980-10358</p>
 <p>90980-10404</p>	 <p>90980-10419</p>	 <p>90980-10431</p>	 <p>90980-10449</p>
 <p>90980-10463</p>	 <p>90980-10517</p>	 <p>90980-10523</p>	 <p>90980-10799            (90980-12181)            (90980-12475)            (90980-12532)</p>

TABLE OF HOUSING SHAPE

<FEMALE> 8P Non-waterproof Type

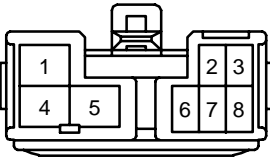
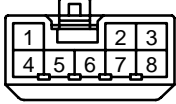
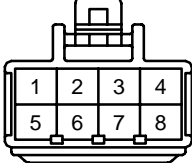
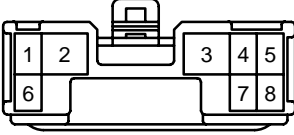
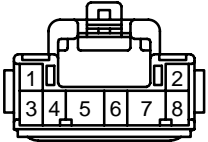
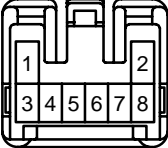
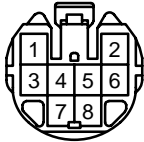
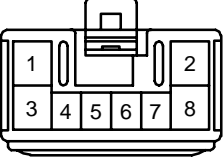

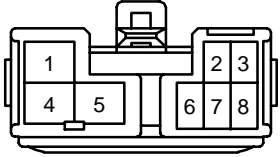
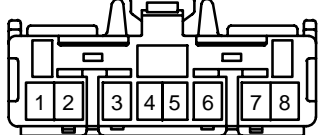
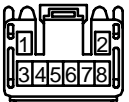
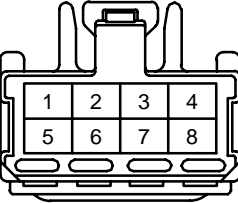
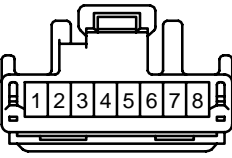
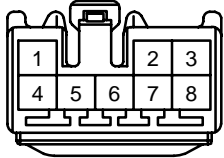
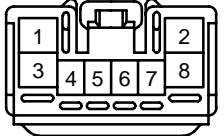
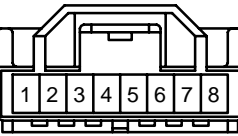
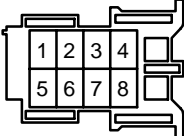
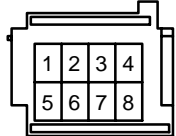
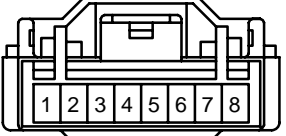
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 <p>90980-11989</p>	 <p>90980-12074</p>	 <p>90980-12078</p>	 <p>90980-12091</p>



TABLE OF HOUSING SHAPE

<FEMALE> 8P Non-waterproof Type

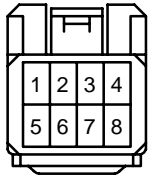
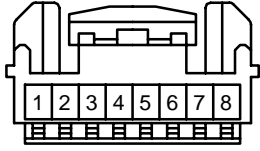
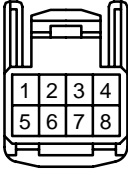
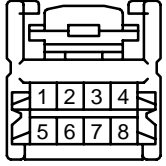
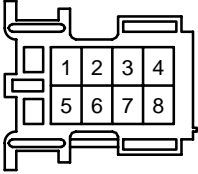
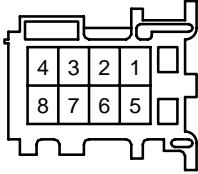
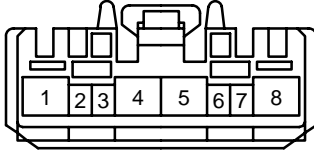
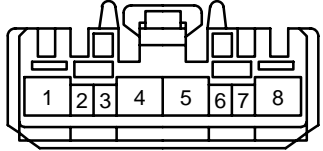
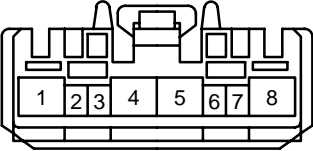
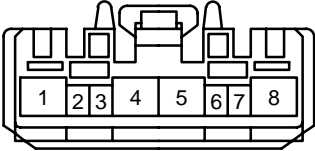
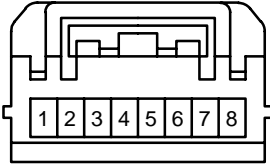
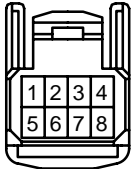
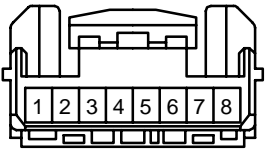
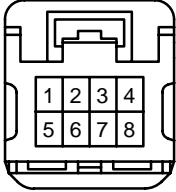
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 <p>90980-12485</p>	 <p>90980-12486</p>	 <p>90980-12550</p>	 <p>90980-12551</p>
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TABLE OF HOUSING SHAPE

<FEMALE> 9P Non-waterproof Type

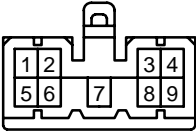
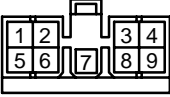
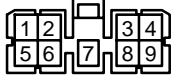
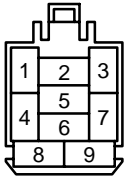
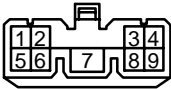
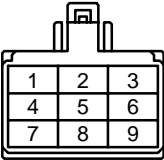
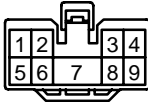

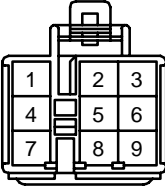
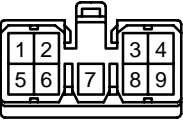
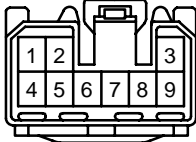
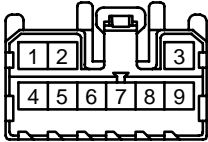
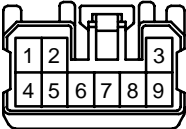
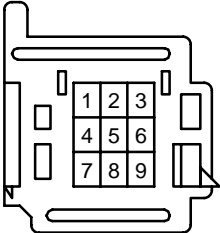
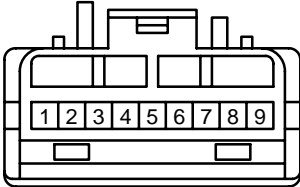
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 <p>90980-11302</p>	 <p>90980-11479</p>	 <p>90980-11535 (90980-11710)</p>	 <p>90980-12026</p>
 <p>90980-12337</p>	 <p>90980-12510</p>	 <p>90980-12517</p>	

TABLE OF HOUSING SHAPE

<FEMALE> 10P Non-waterproof Type

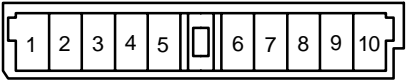
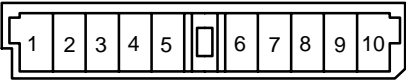
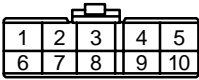
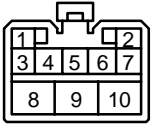
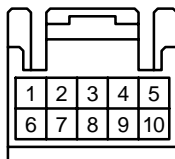
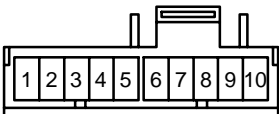
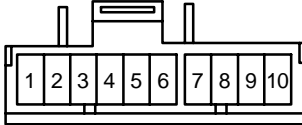
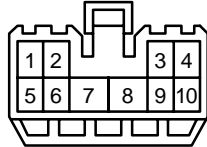
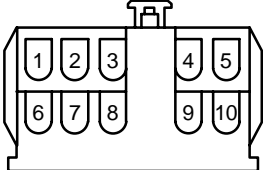
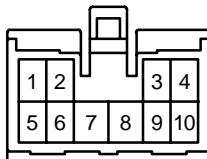
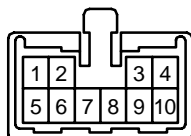
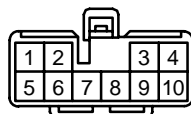
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 <p>90980-10304</p>	 <p>90980-10322</p>	 <p>90980-10377</p>
 <p>90980-10469</p>	 <p>90980-10528</p>	 <p>90980-10669</p>

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<FEMALE> 10P Non-waterproof Type

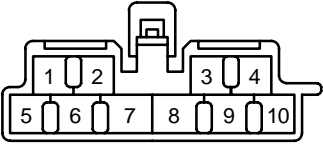
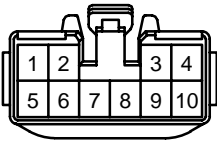
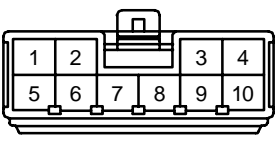
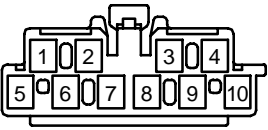
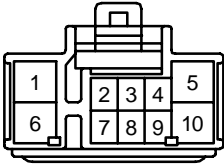
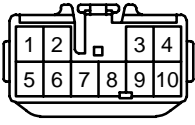
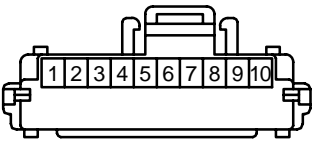
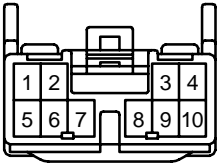
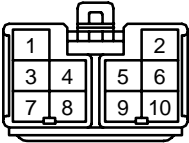
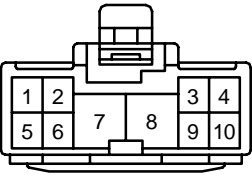
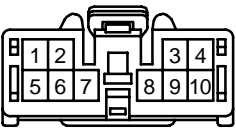
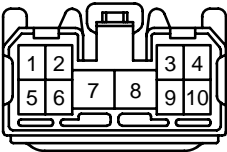
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 <p>90980-11116</p>	 <p>90980-11231</p>	 <p>90980-11276</p>
 <p>90980-11366</p>	 <p>90980-11450 (90980-11776)</p>	 <p>90980-11527 (90980-11850)</p>

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<FEMALE> 10P Non-waterproof Type

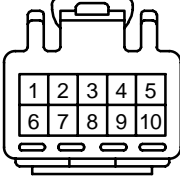
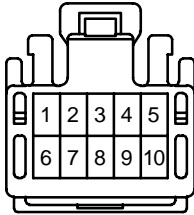
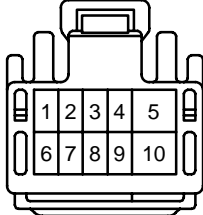
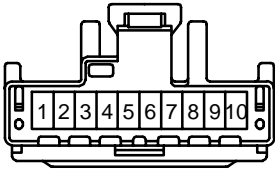
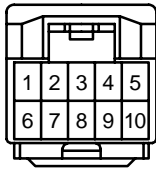
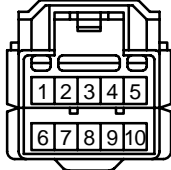
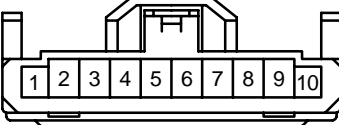
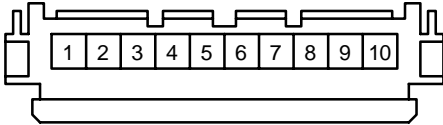
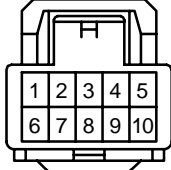
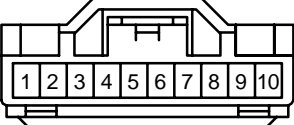
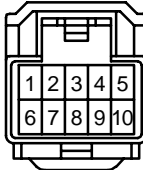
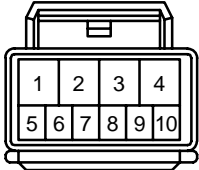
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 <p>90980-11657</p>	 <p>90980-11923</p>	 <p>90980-11924 (90980-11948)</p>
 <p>90980-12008</p>	 <p>90980-12085</p>	 <p>90980-12135</p>
 <p>90980-12162</p>	 <p>90980-12172</p>	 <p>90980-12226</p>

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<FEMALE> 10P Non-waterproof Type

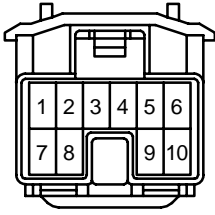
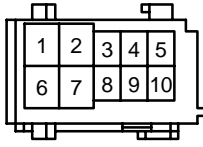
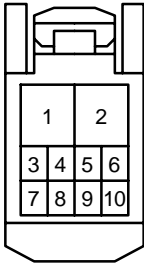
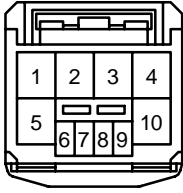
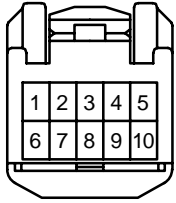

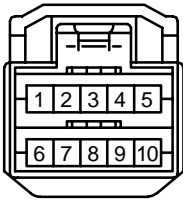
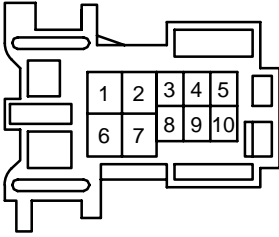
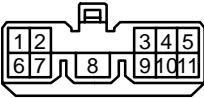

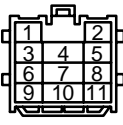
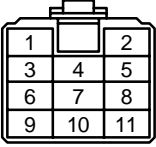
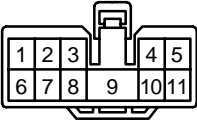
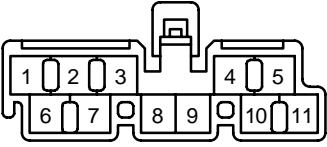

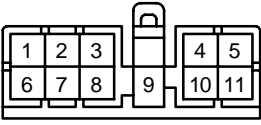
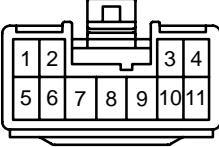
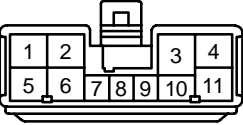
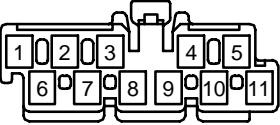
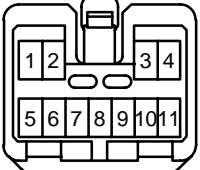
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 <p>90980-12359</p>	 <p>90980-12361</p>	 <p>90980-12368 (90980-12543)</p>
 <p>90980-12463</p>	 <p>90980-12511</p>	

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<FEMALE> 11P Non-waterproof Type

 <p>90980-10319</p>	 <p>90980-10337</p>	 <p>90980-10338</p>
 <p>90980-10450</p>	 <p>90980-10537</p>	 <p>90980-10723</p>
 <p>90980-10727</p>	 <p>90980-10781</p>	 <p>90980-10830</p>
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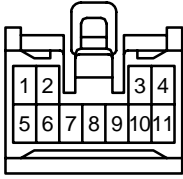
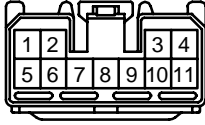
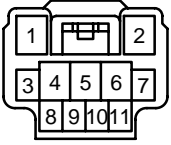
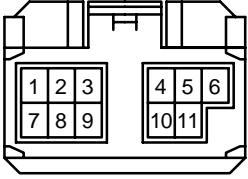
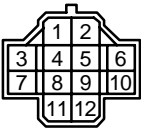
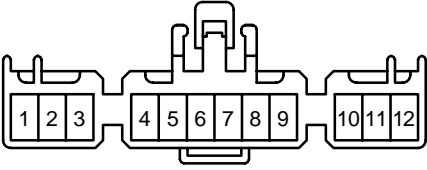
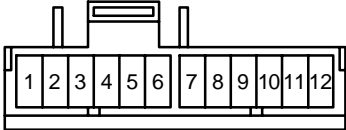
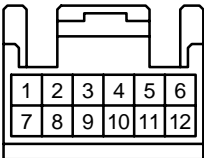
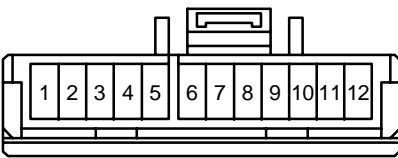
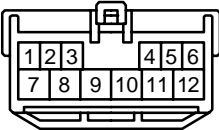
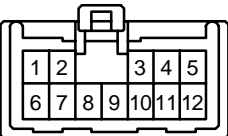
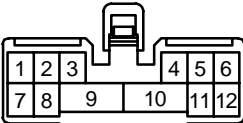
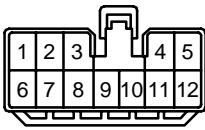
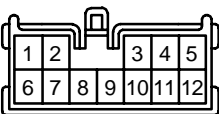
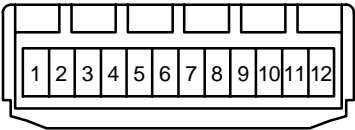
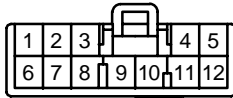
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 <p>90980-12251</p>		



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<FEMALE> 12P Non-waterproof Type

 <p>90980-10150</p>	 <p>90980-10153</p>	 <p>90980-10303</p>
 <p>90980-10351</p>	 <p>90980-10372</p>	 <p>90980-10406</p>
 <p>90980-10408</p>	 <p>90980-10421</p>	 <p>90980-10432</p>
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<FEMALE> 12P Non-waterproof Type

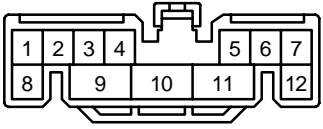
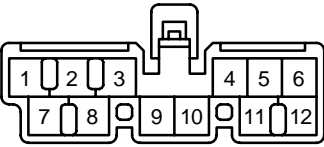
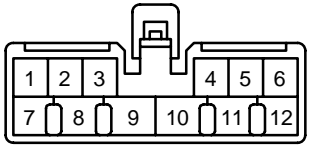
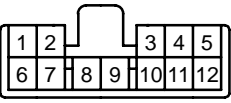
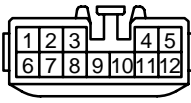
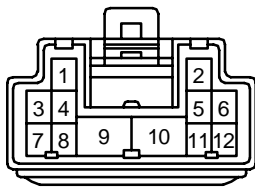
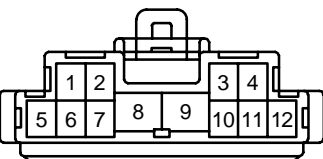
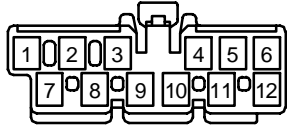
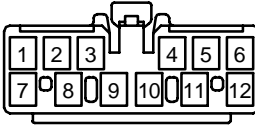
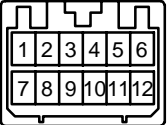
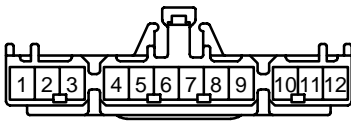

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 <p>90980-10932</p>	 <p>90980-10967</p>	 <p>90980-10968</p>
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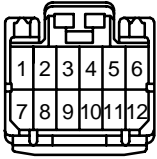
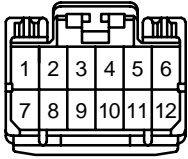
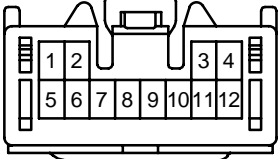
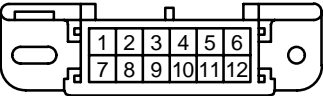
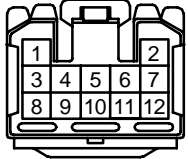
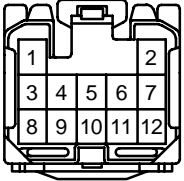
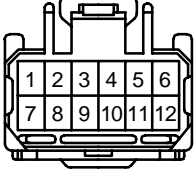
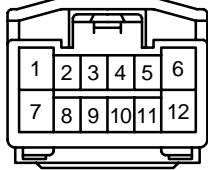
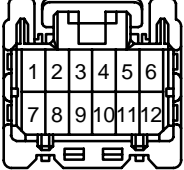
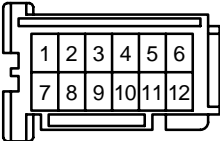
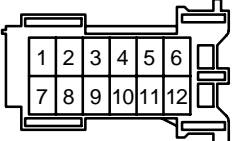
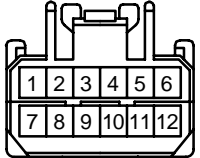
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 <p>90980-11661 (90980-11847) (90980-12339) (90980-12478)</p>	 <p>90980-11947</p>	 <p>90980-12032</p>
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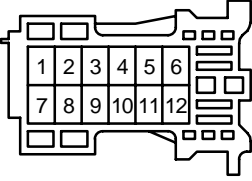
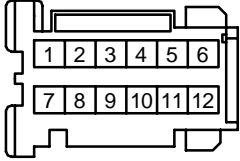
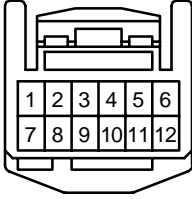
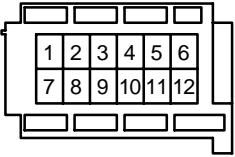
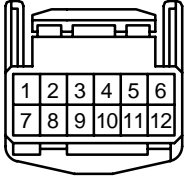
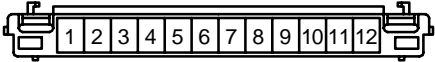
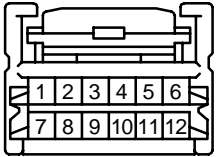
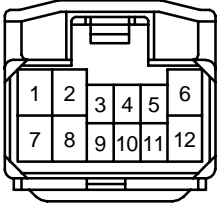
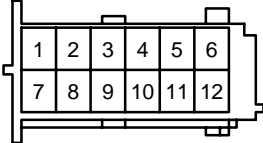
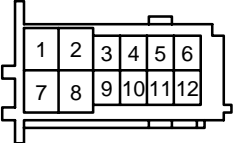
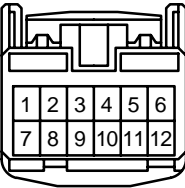
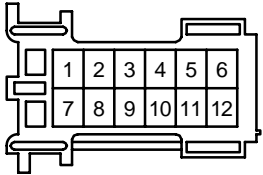
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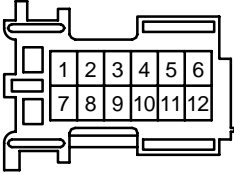
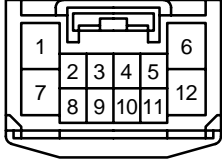
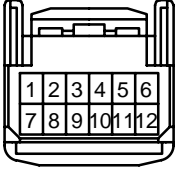
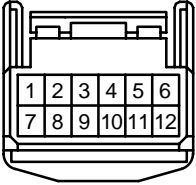
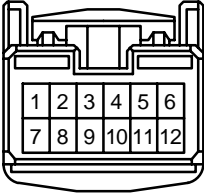
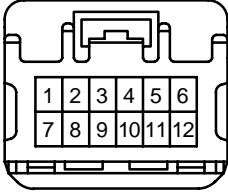
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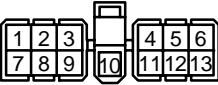
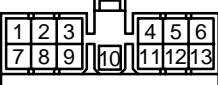
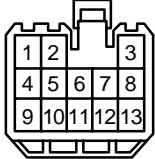
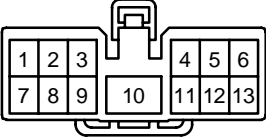
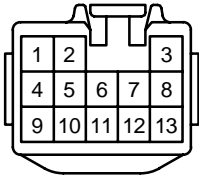
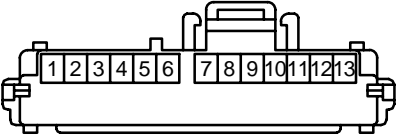
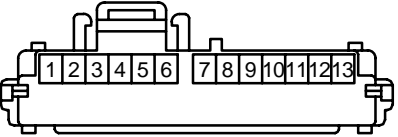
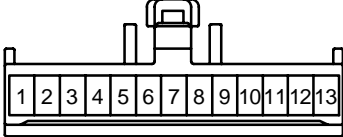
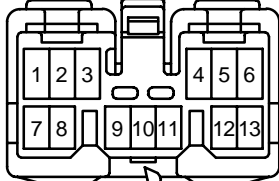
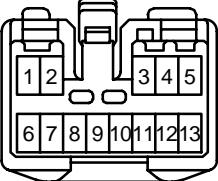
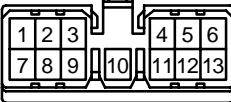
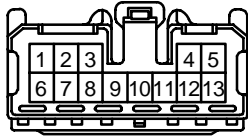
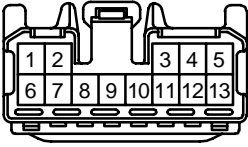
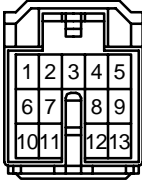
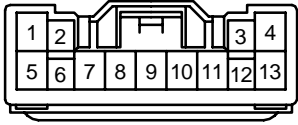
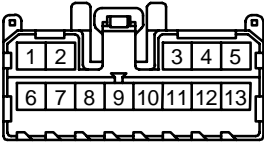
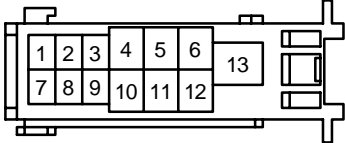
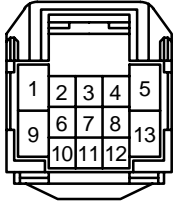
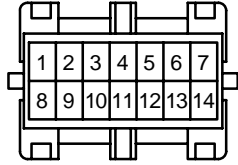
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 <p>90980-11115</p>	 <p>90980-11199</p>	 <p>90980-11350</p>
 <p>90980-11394</p>	 <p>90980-11478</p>	 <p>90980-11542 90980-11695 90980-11714 90980-12346 90980-12479</p>

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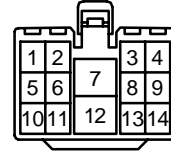
<FEMALE> 13P Non-waterproof Type

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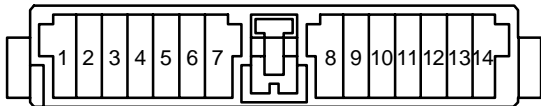
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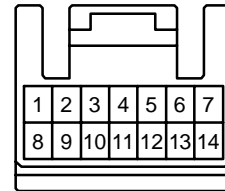
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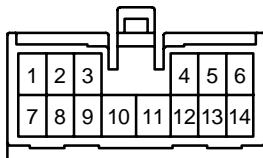
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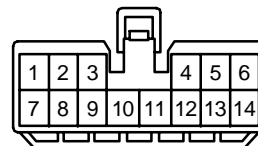
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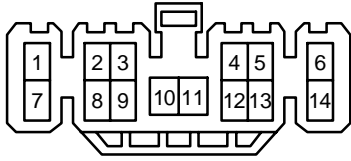


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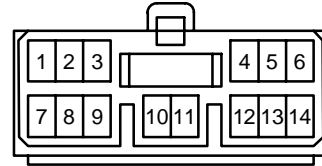


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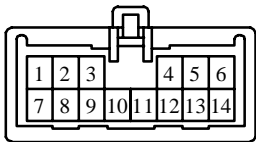
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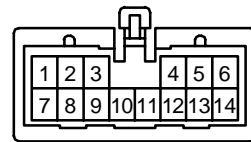
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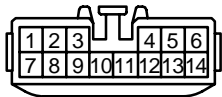
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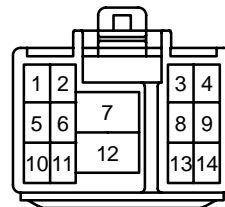
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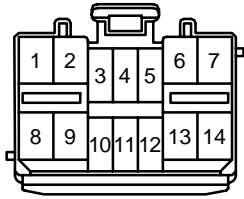


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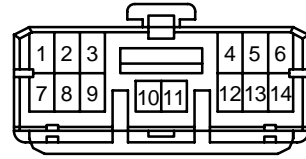


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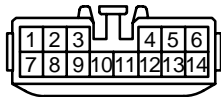
<FEMALE> 14P Non-waterproof Type



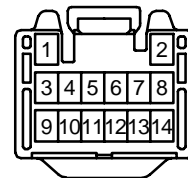
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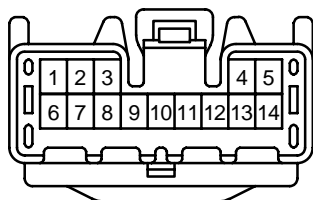
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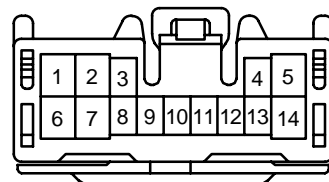
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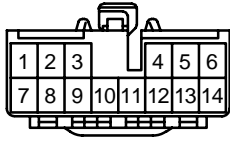
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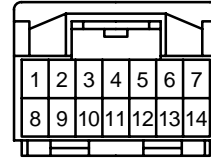
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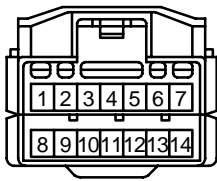
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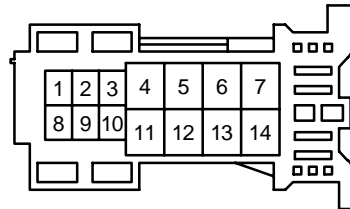
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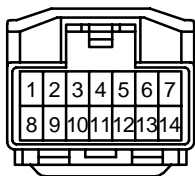
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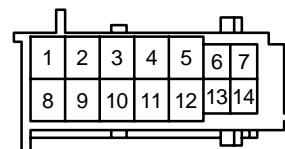
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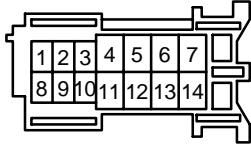


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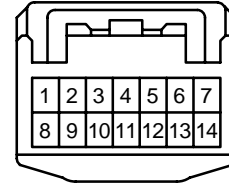


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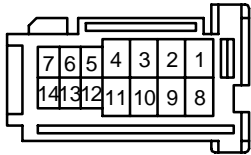
<FEMALE> 14P Non-waterproof Type



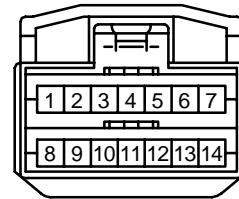
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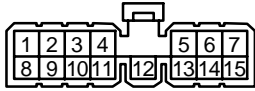
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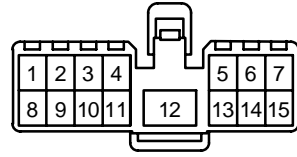
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TABLE OF HOUSING SHAPE

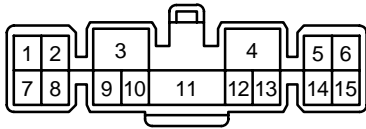
<FEMALE> 15P Non-waterproof Type



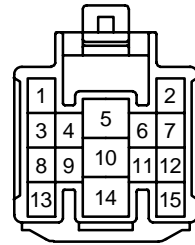
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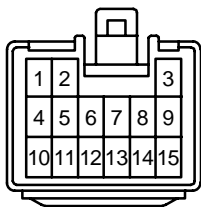
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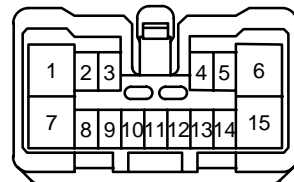
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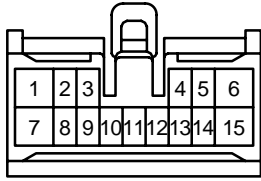


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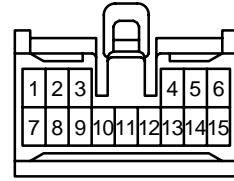


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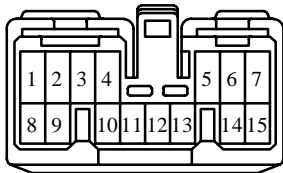
<FEMALE> 15P Non-waterproof Type



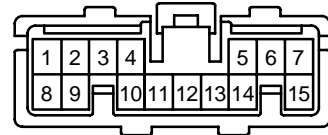
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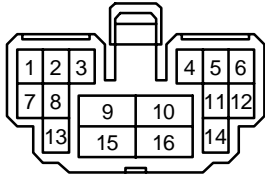
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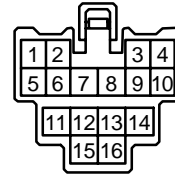
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TABLE OF HOUSING SHAPE

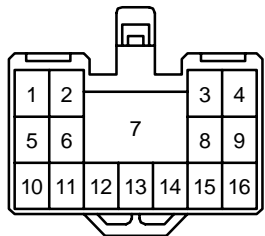
<FEMALE> 16P Non-waterproof Type



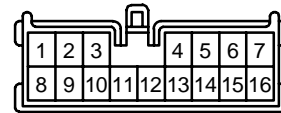
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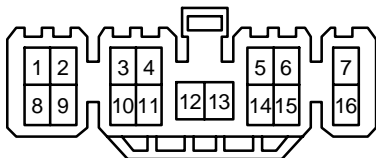
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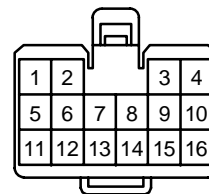
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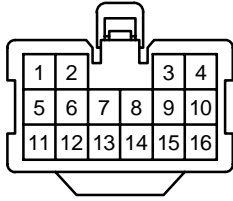


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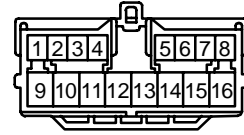


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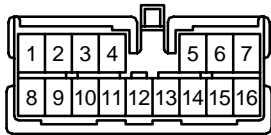
<FEMALE> 16P Non-waterproof Type



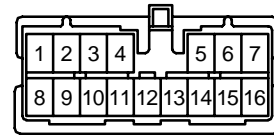
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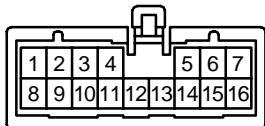
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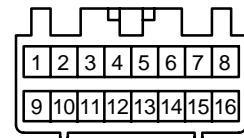
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90980-10614



90980-10636

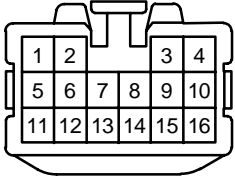


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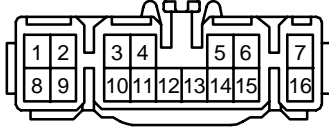


TABLE OF HOUSING SHAPE

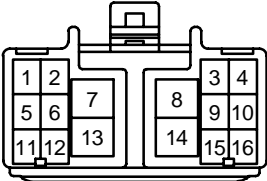
<FEMALE> 16P Non-waterproof Type



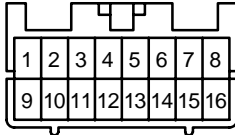
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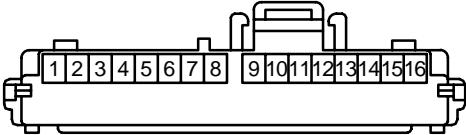
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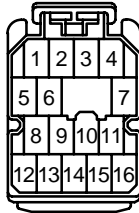
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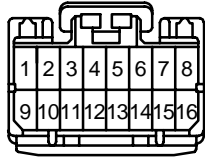


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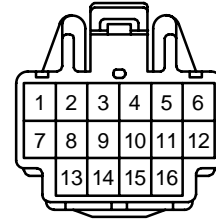


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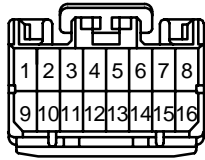
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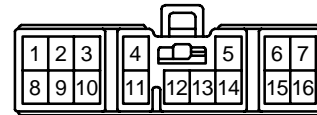
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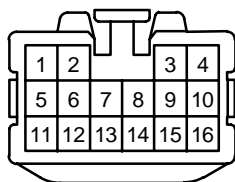
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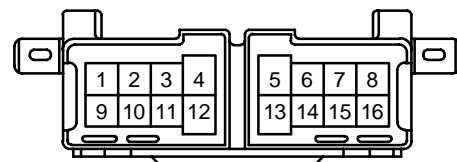
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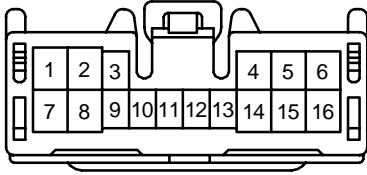
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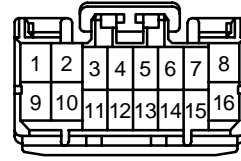
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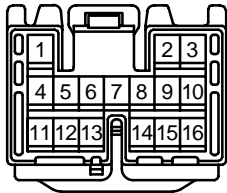
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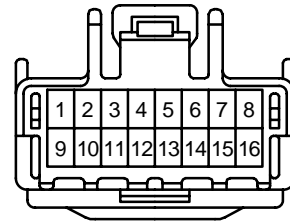
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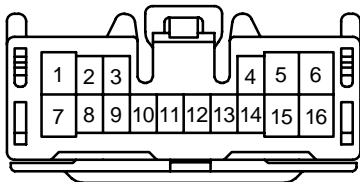
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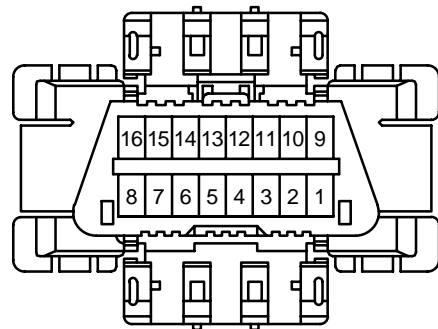
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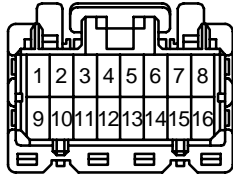


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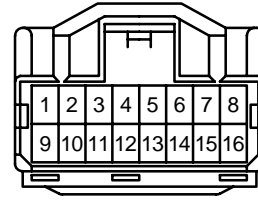


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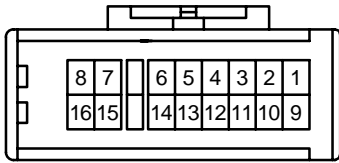
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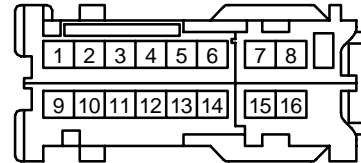
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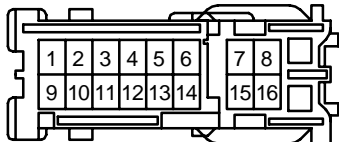
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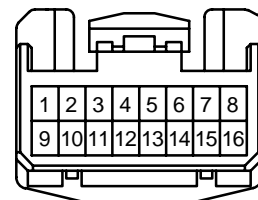
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90980-12101



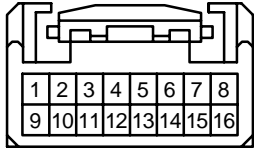
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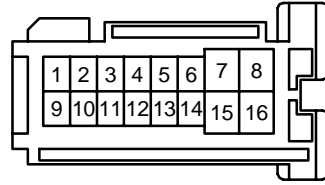
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TABLE OF HOUSING SHAPE

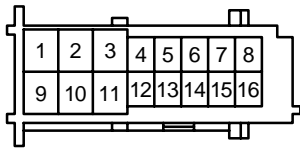
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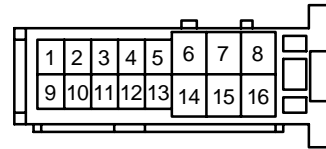
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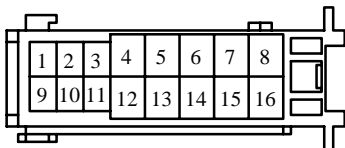
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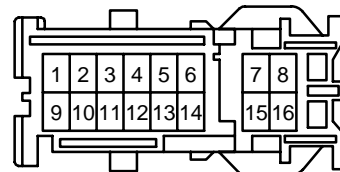
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90980-12286

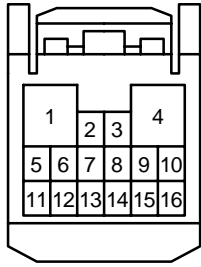


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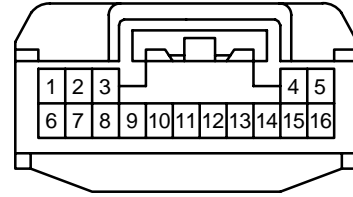


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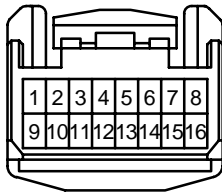
<FEMALE> 16P Non-waterproof Type



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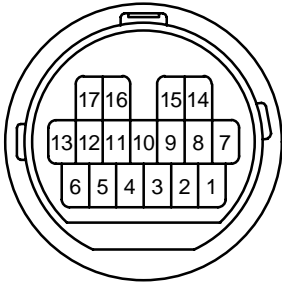
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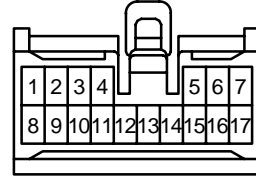
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TABLE OF HOUSING SHAPE

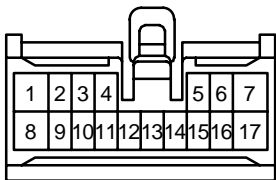
<FEMALE> 17P Non-waterproof Type



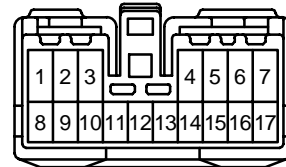
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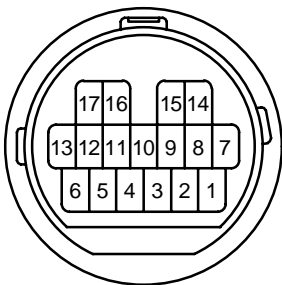
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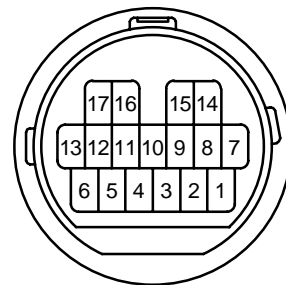
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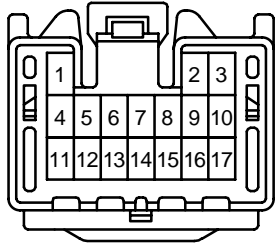


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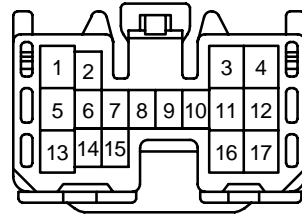


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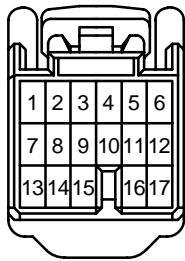
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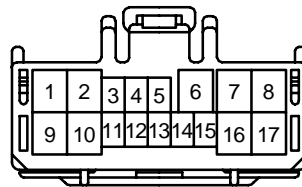
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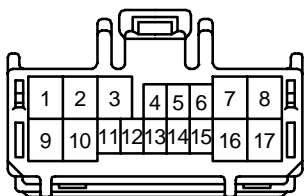
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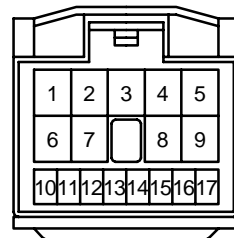
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90980-11671



90980-11672

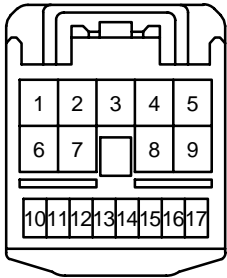


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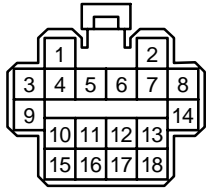
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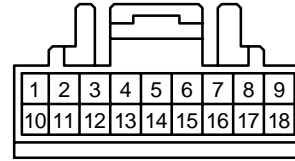
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TABLE OF HOUSING SHAPE

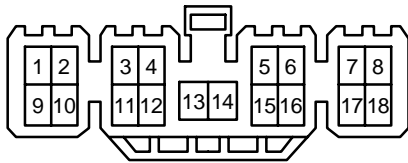
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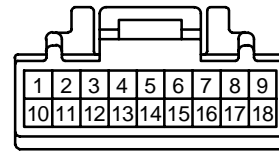
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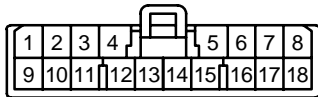
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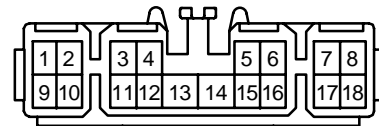
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90980-10350



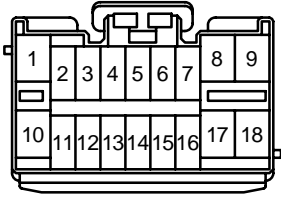
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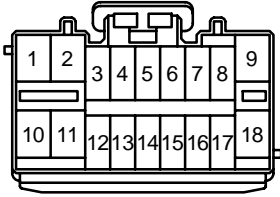
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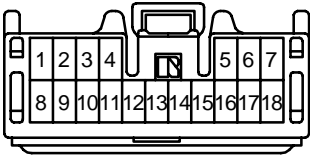
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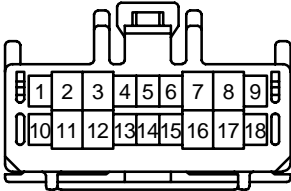
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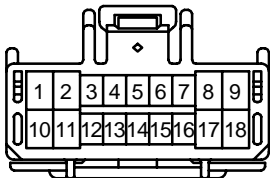
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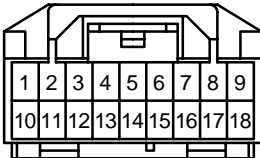
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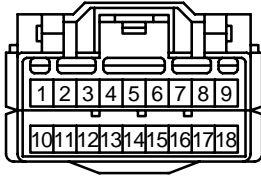


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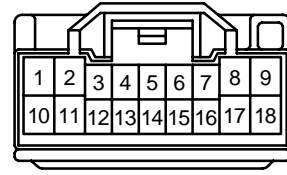


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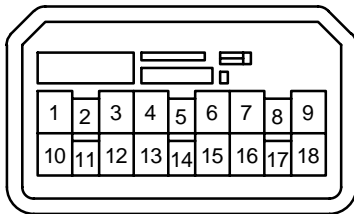
<FEMALE> 18P Non-waterproof Type



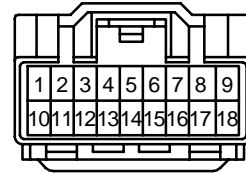
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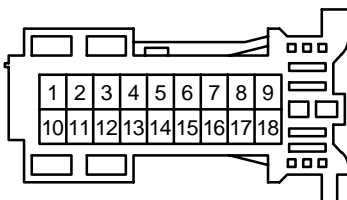
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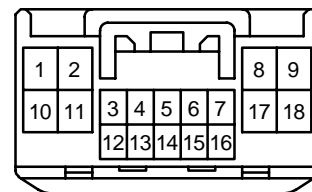
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90980-12174



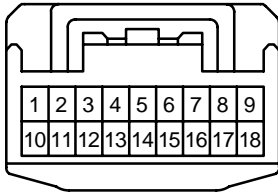
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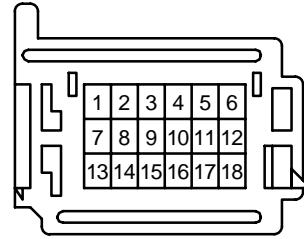
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TABLE OF HOUSING SHAPE

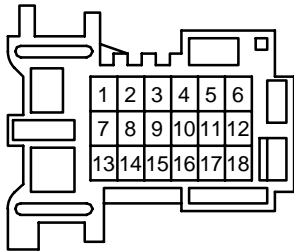
<FEMALE> 18P Non-waterproof Type



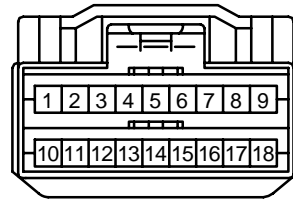
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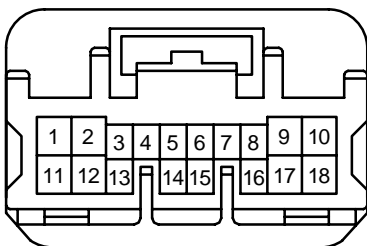
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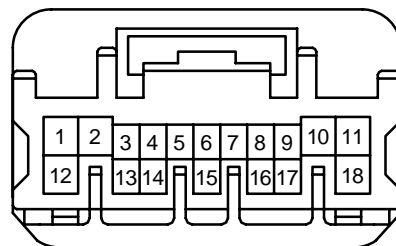
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90980-12570

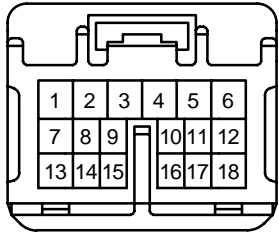


90980-12739



90980-12743

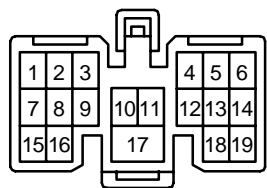
**<FEMALE> 18P Non-waterproof Type**



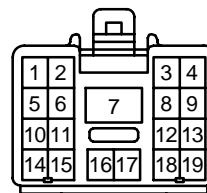
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TABLE OF HOUSING SHAPE

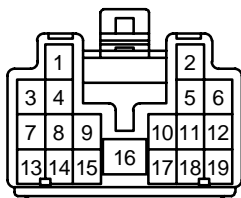
<FEMALE> 19P Non-waterproof Type



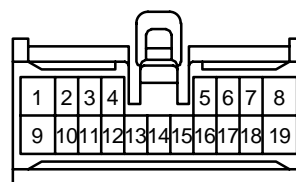
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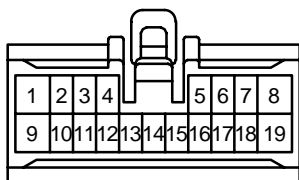
90980-10857  
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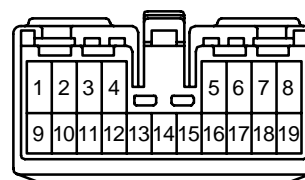
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90980-11205

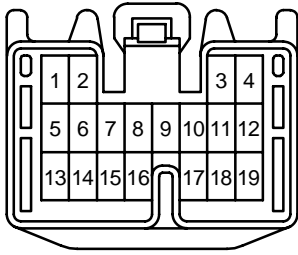


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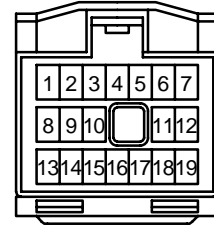


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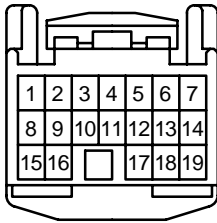
<FEMALE> 19P Non-waterproof Type



90980-11571



90980-11955

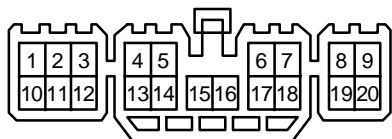


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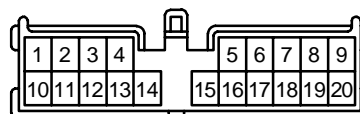


TABLE OF HOUSING SHAPE

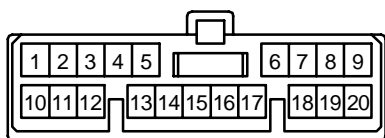
<FEMALE> 20P Non-waterproof Type



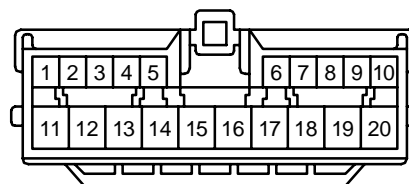
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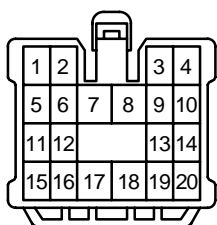
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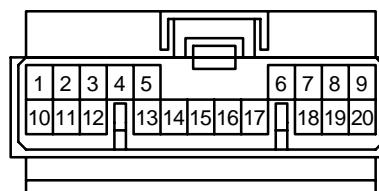
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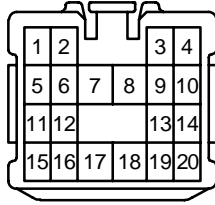


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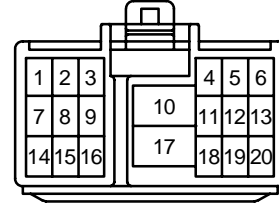


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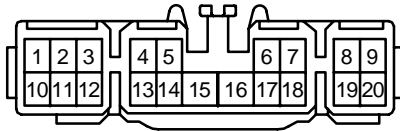
<FEMALE> 20P Non-waterproof Type



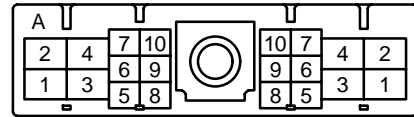
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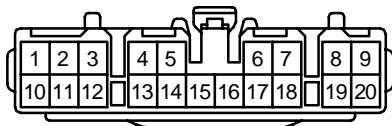
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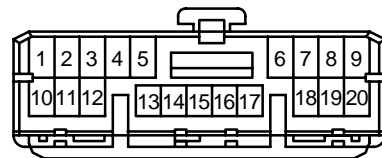
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90980-10952



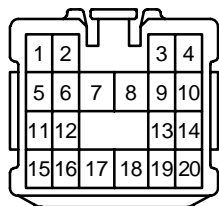
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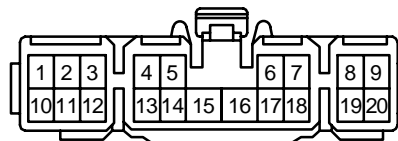
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TABLE OF HOUSING SHAPE

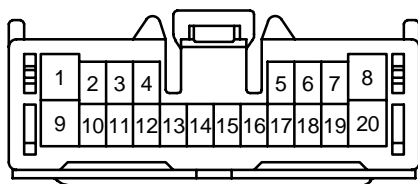
<FEMALE> 20P Non-waterproof Type



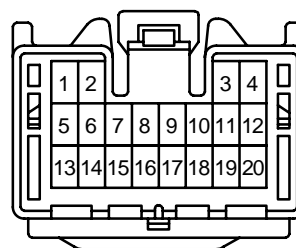
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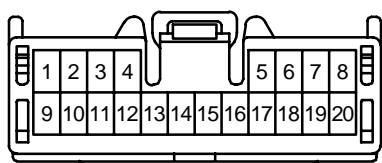
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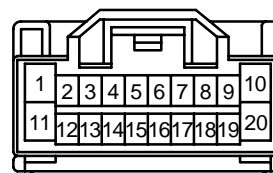
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90980-11499

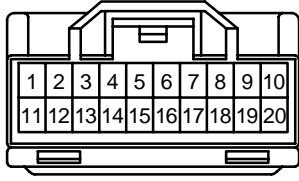


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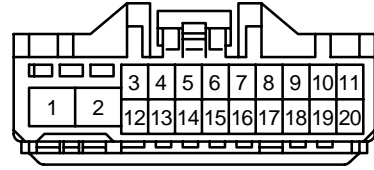


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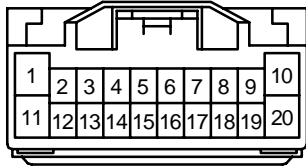
<FEMALE> 20P Non-waterproof Type



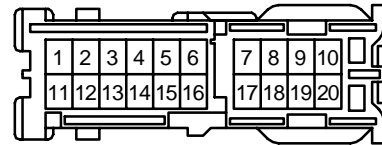
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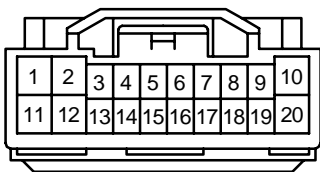
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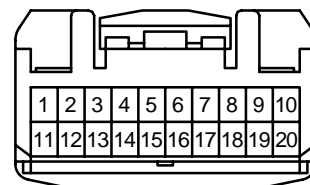
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90980-12106



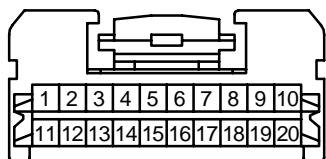
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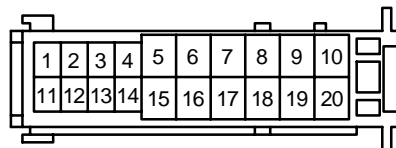
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TABLE OF HOUSING SHAPE

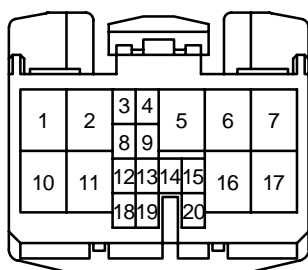
<FEMALE> 20P Non-waterproof Type



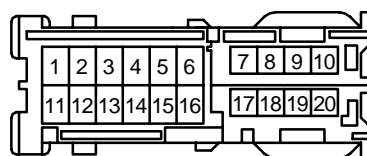
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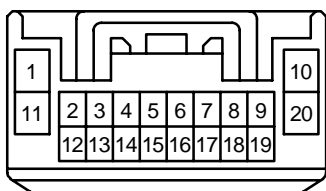
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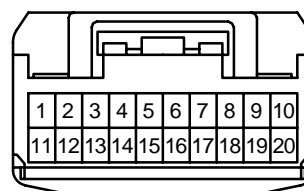
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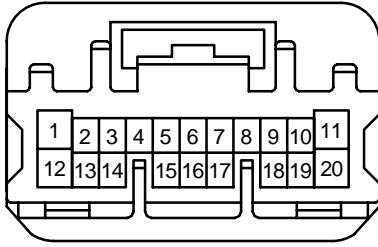


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90980-12460

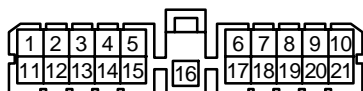
**<FEMALE> 20P Non-waterproof Type**



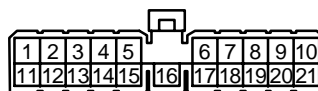
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TABLE OF HOUSING SHAPE

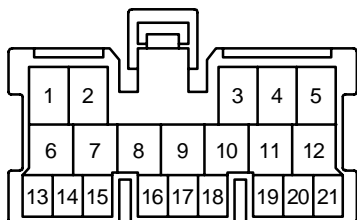
<FEMALE> 21P Non-waterproof Type



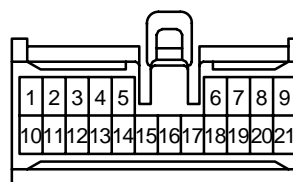
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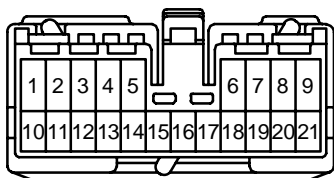
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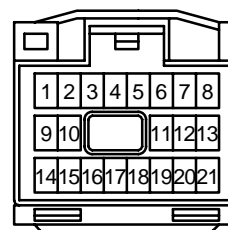
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90980-11125

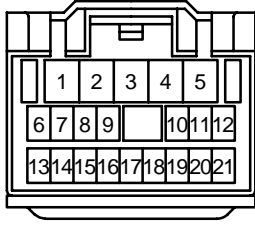


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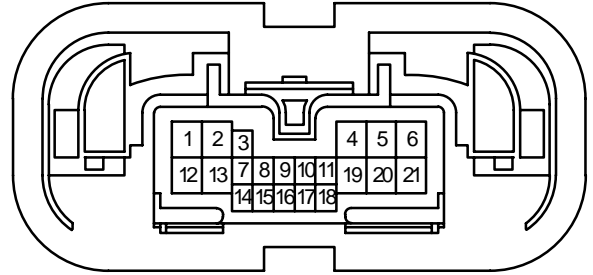


90980-11956

<FEMALE> 21P Non-waterproof Type



90980-11957

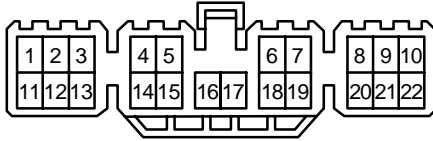


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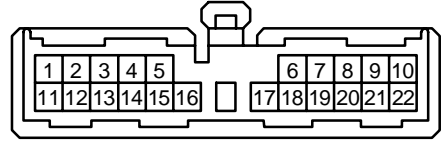


TABLE OF HOUSING SHAPE

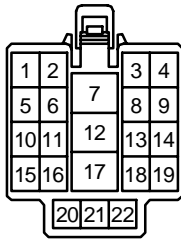
<FEMALE> 22P Non-waterproof Type



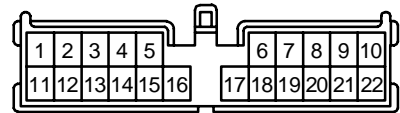
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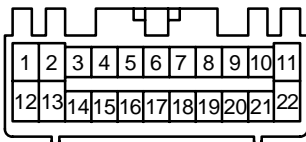
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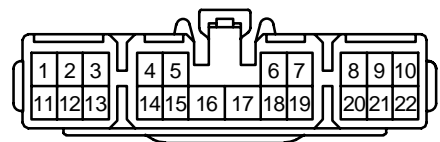
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90980-10526

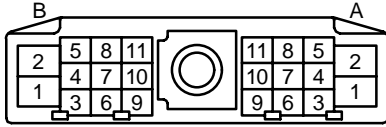


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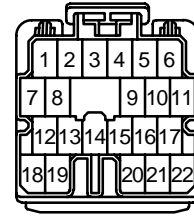


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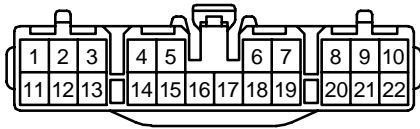
<FEMALE> 22P Non-waterproof Type



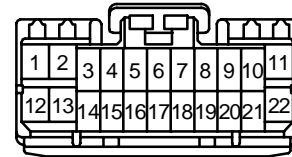
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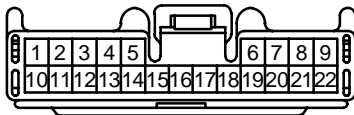
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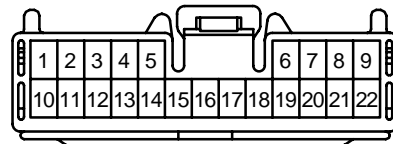
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(90980-11760)



90980-11392



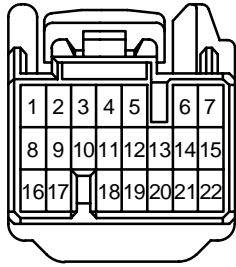
90980-11502  
(90980-11708)



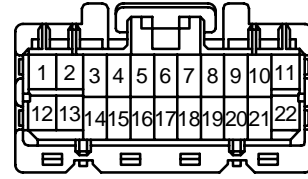
90980-11628

## TABLE OF HOUSING SHAPE

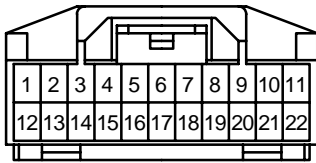
## &lt;FEMALE&gt; 22P Non-waterproof Type



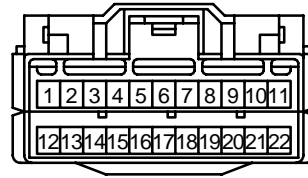
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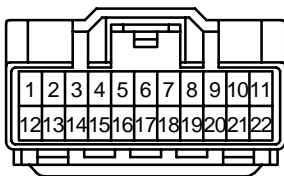
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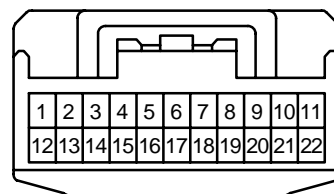
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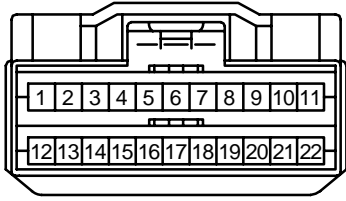
90980-11927



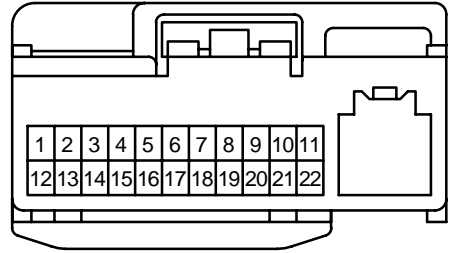
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90980-12372  
(90980-12545)

<FEMALE> 22P Non-waterproof Type



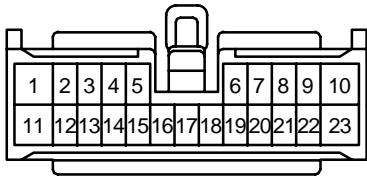
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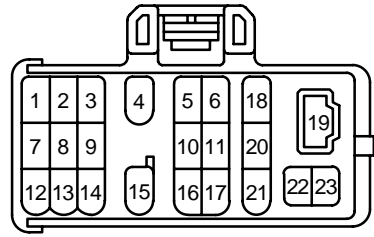
90980-12721

TABLE OF HOUSING SHAPE

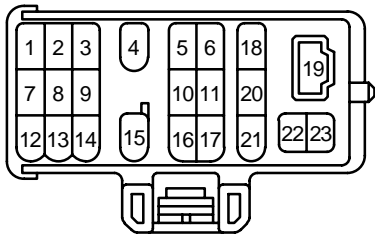
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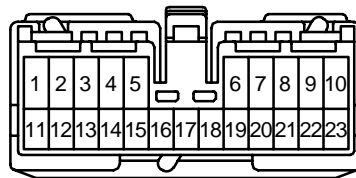
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90980-11195  
(90980-11802)

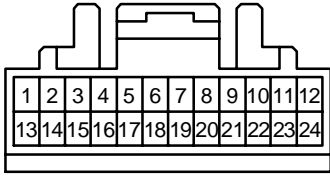


90980-11323

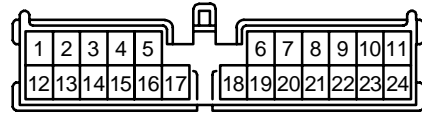


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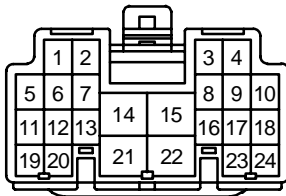
<FEMALE> 24P Non-waterproof Type



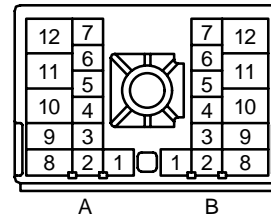
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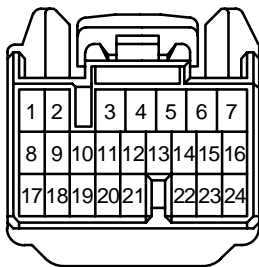
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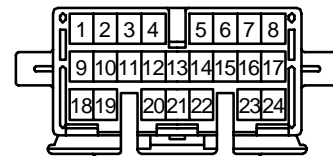
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90980-10955



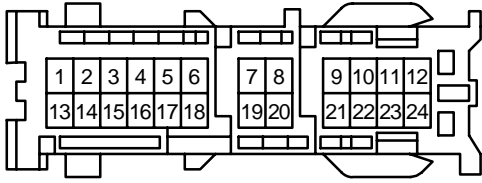
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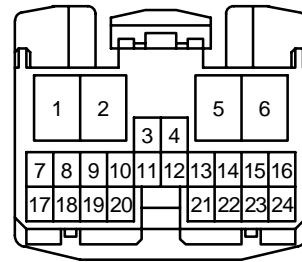
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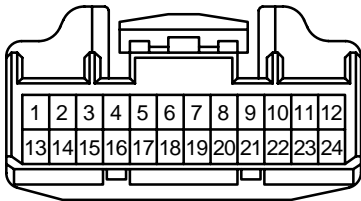
<FEMALE> 24P Non-waterproof Type



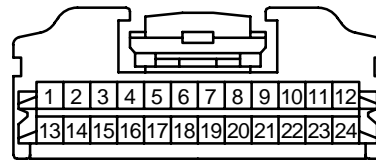
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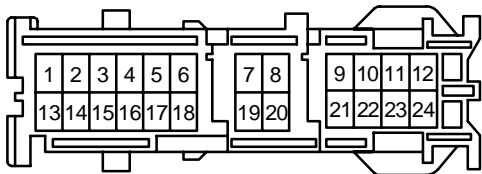
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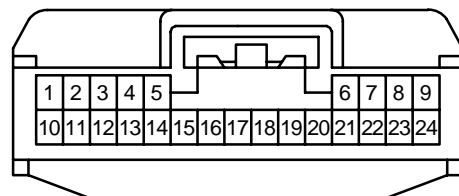
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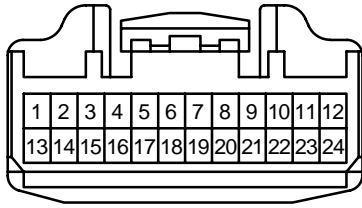


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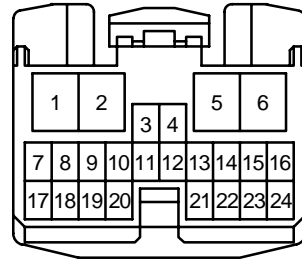


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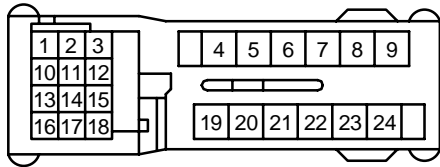
<FEMALE> 24P Non-waterproof Type



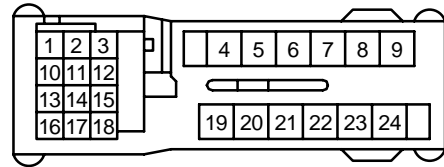
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90980-12560



90980-12673

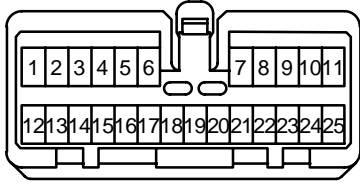


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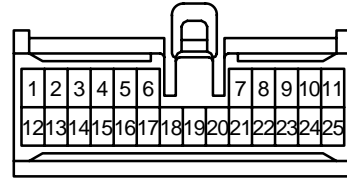


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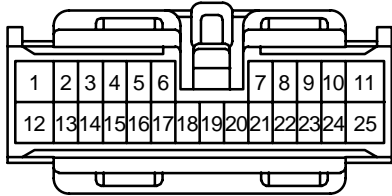
<FEMALE> 25P Non-waterproof Type



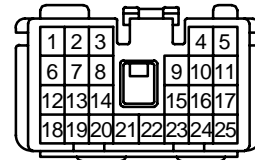
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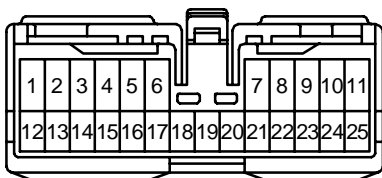
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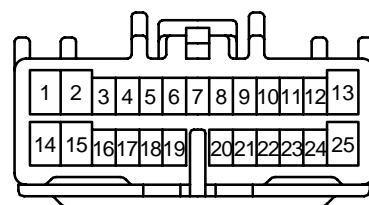
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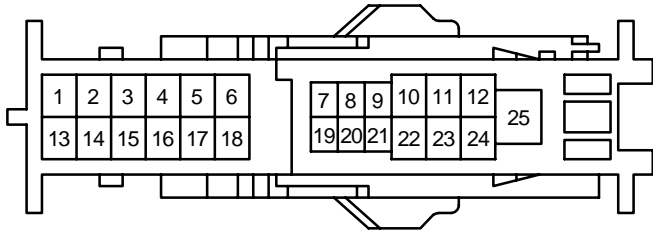


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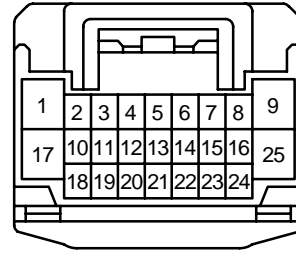


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<FEMALE> 25P Non-waterproof Type



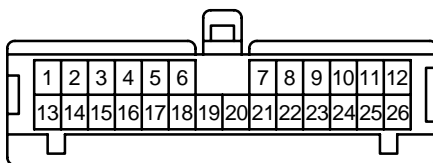
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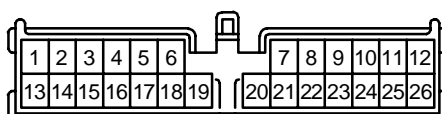
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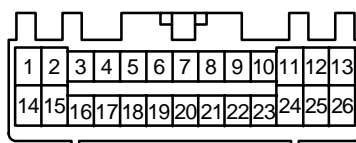
## &lt;FEMALE&gt; 26P Non-waterproof Type



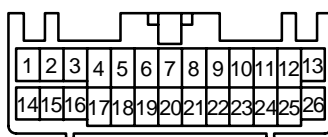
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90980-10587

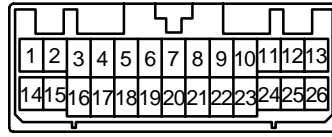


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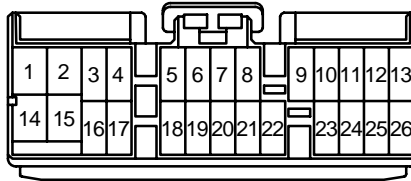


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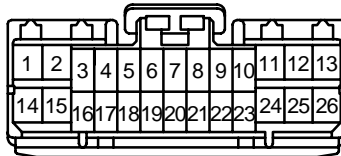
# <FEMALE> 26P Non-waterproof Type



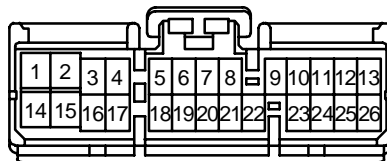
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90980-11234



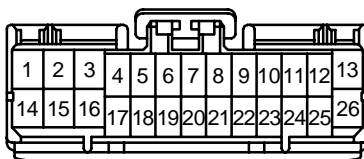
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(90980-11786)



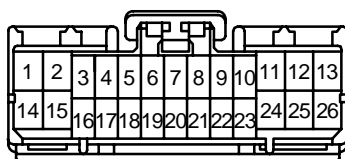
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TABLE OF HOUSING SHAPE

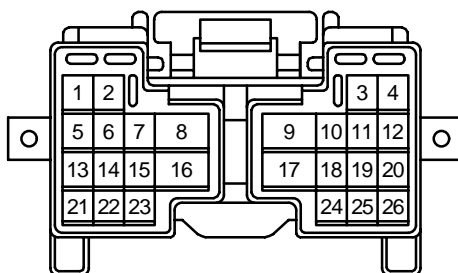
<FEMALE> 26P Non-waterproof Type



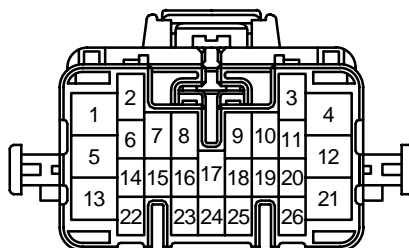
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90980-11423



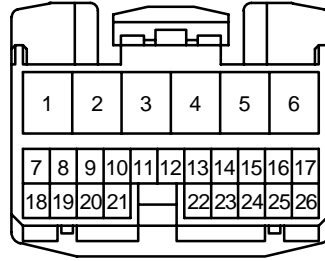
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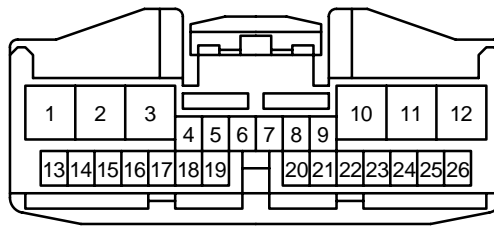
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TABLE OF HOUSING SHAPE

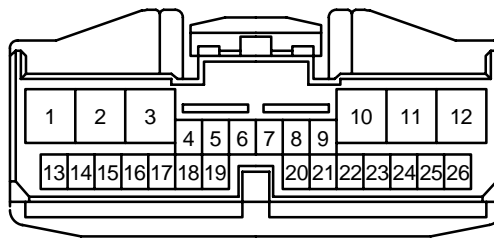
<FEMALE> 26P Non-waterproof Type



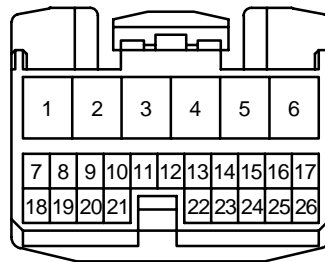
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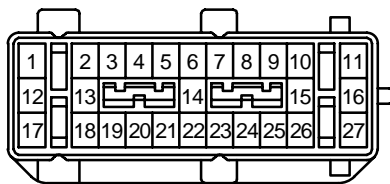


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90980-12561

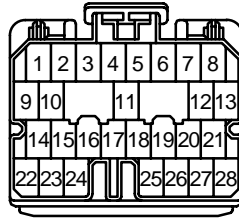
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**<FEMALE> 27P Non-waterproof Type**

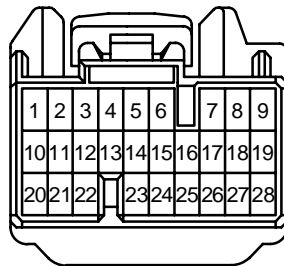
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TABLE OF HOUSING SHAPE

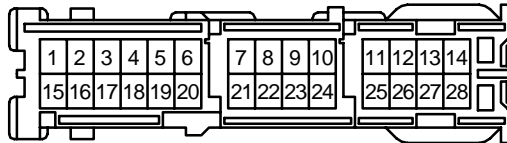
<FEMALE> 28P Non-waterproof Type



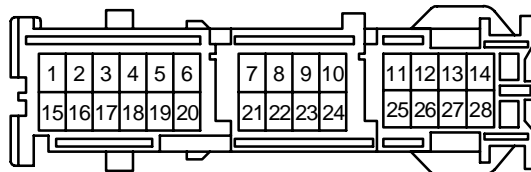
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90980-11637



90980-12102

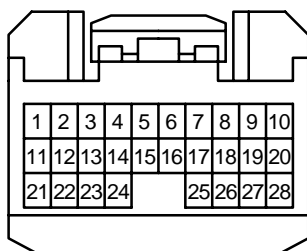


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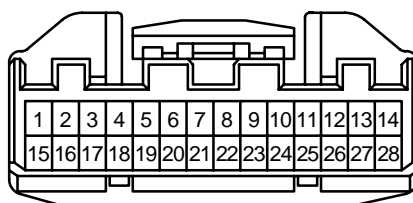


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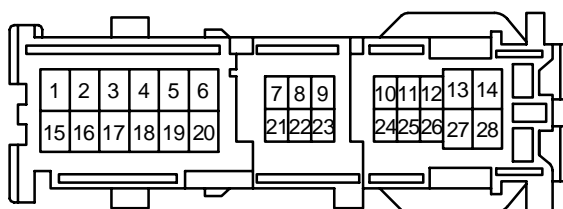
## &lt;FEMALE&gt; 28P Non-waterproof Type



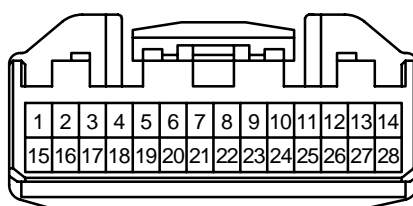
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90980-12410

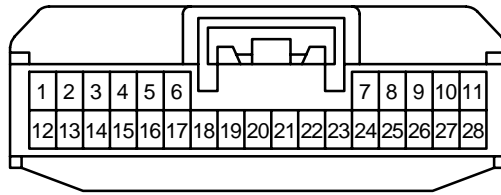


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90980-12555

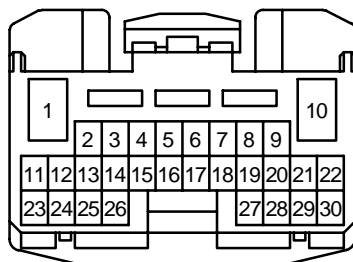
**<FEMALE> 28P Non-waterproof Type**



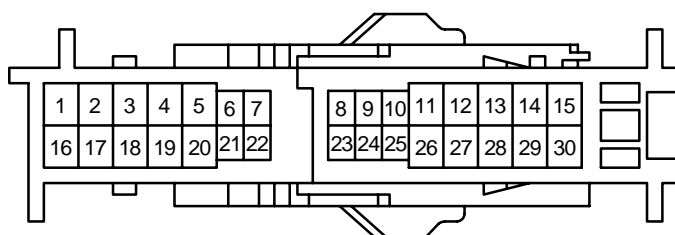
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TABLE OF HOUSING SHAPE

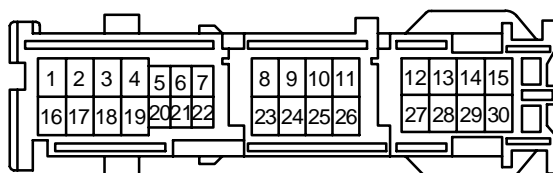
<FEMALE> 30P Non-waterproof Type



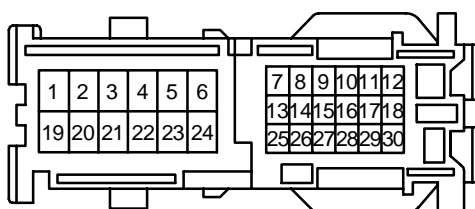
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90980-12277



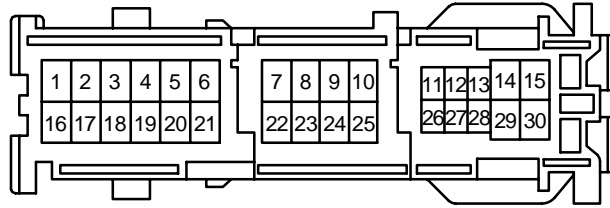
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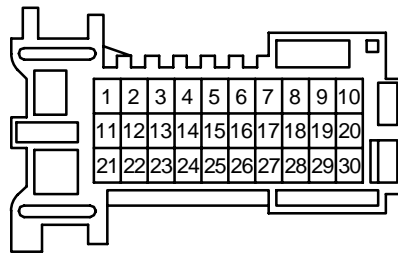
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TABLE OF HOUSING SHAPE

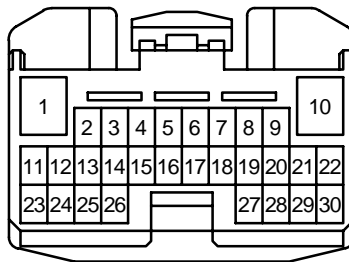
<FEMALE> 30P Non-waterproof Type



90980-12504



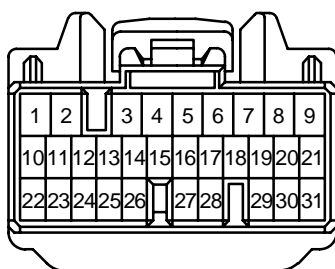
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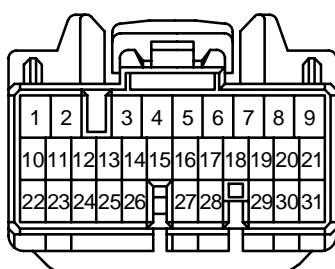
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## TABLE OF HOUSING SHAPE

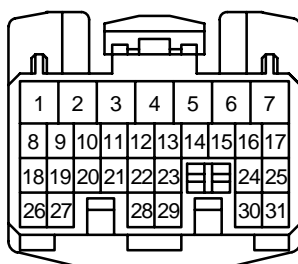
## &lt;FEMALE&gt; 31P Non-waterproof Type



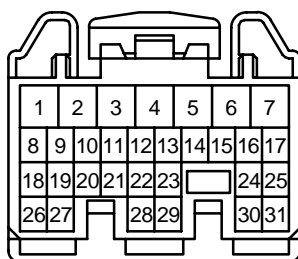
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90980-11935

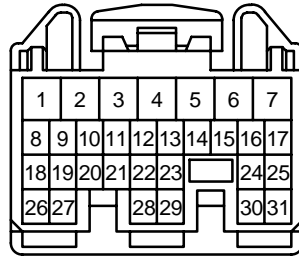


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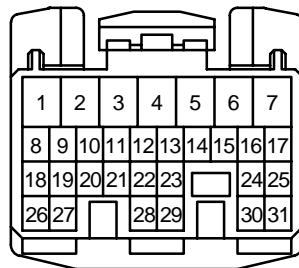


90980-12431

<FEMALE> 31P Non-waterproof Type



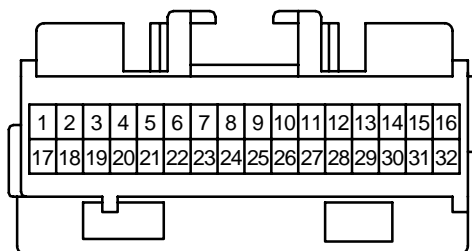
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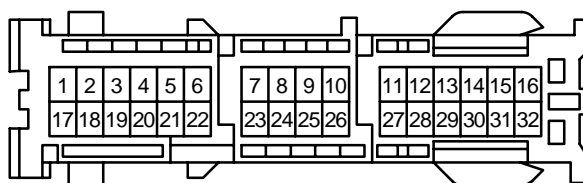
90980-12525

TABLE OF HOUSING SHAPE

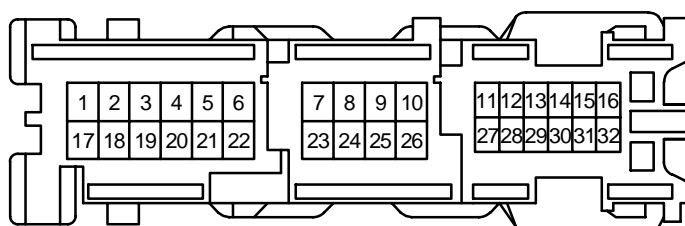
<FEMALE> 32P Non-waterproof Type



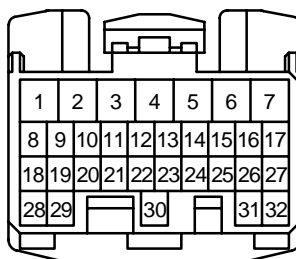
90980-11514



90980-12071



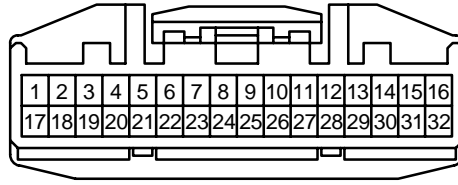
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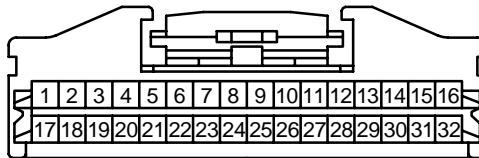
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TABLE OF HOUSING SHAPE

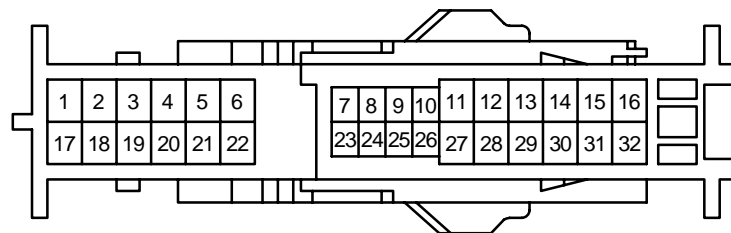
<FEMALE> 32P Non-waterproof Type



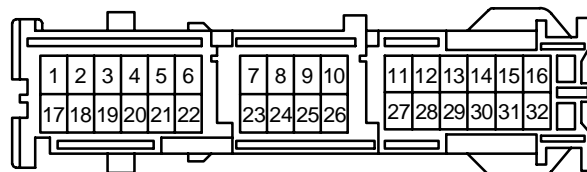
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90980-12268



90980-12275

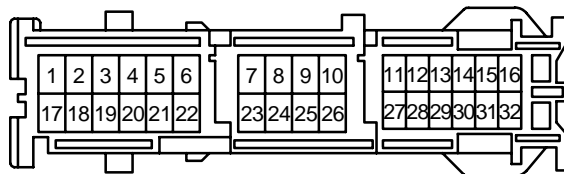


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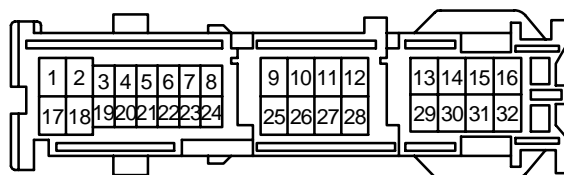


TABLE OF HOUSING SHAPE

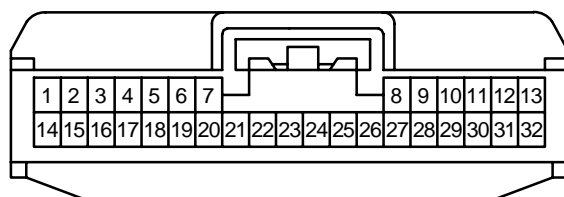
<FEMALE> 32P Non-waterproof Type



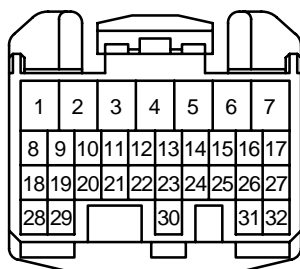
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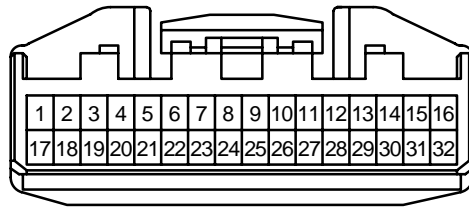
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90980-12422

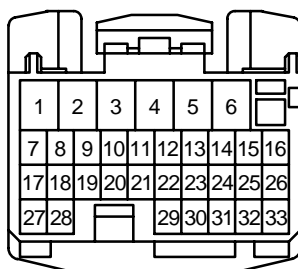


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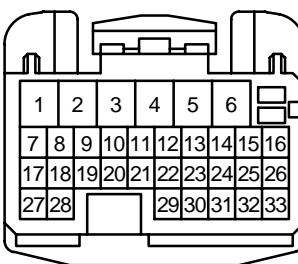
**<FEMALE> 32P Non-waterproof Type**

90980-12556

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**<FEMALE> 33P Non-waterproof Type**

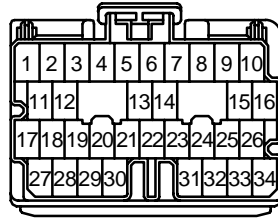
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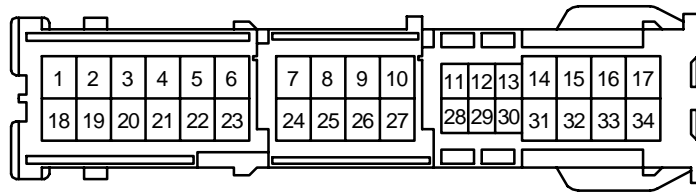
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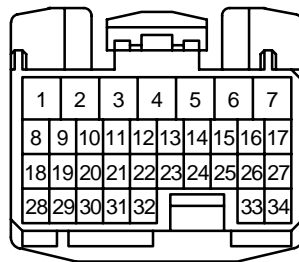
<FEMALE> 34P Non-waterproof Type



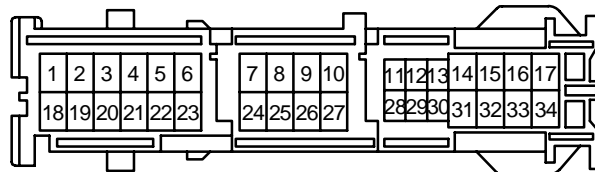
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90980-12114



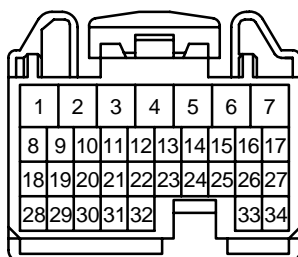
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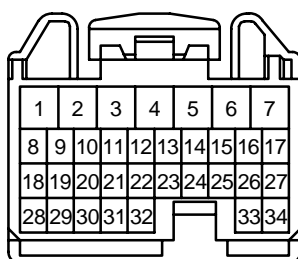
90980-12320

TABLE OF HOUSING SHAPE

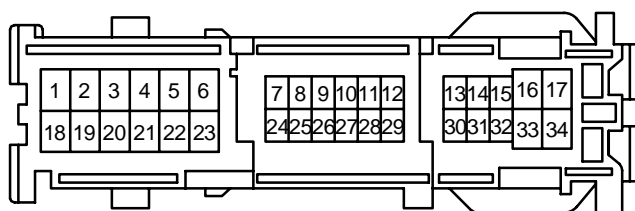
<FEMALE> 34P Non-waterproof Type



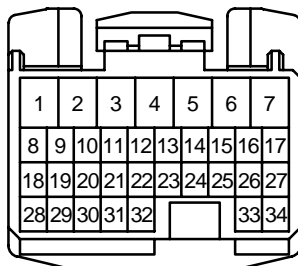
90980-12430



90980-12456

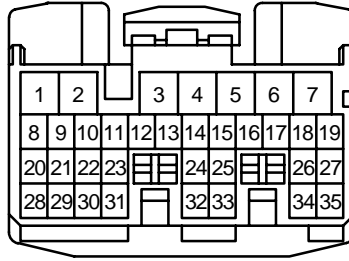


90980-12506

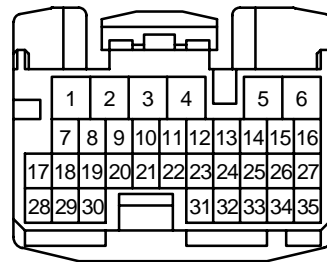


90980-12527

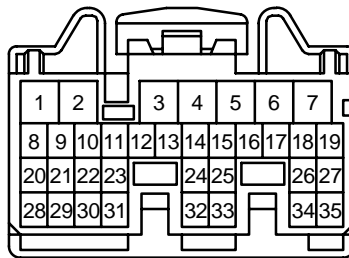
<FEMALE> 35P Non-waterproof Type



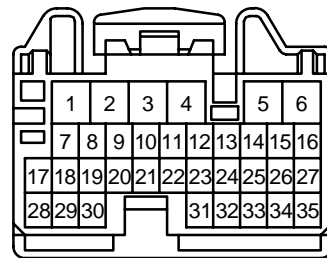
90980-12145



90980-12146



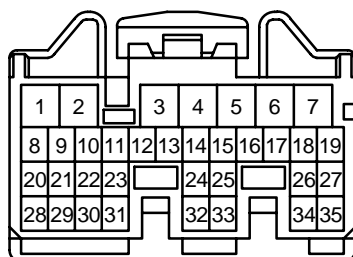
90980-12428



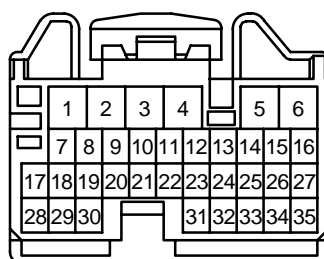
90980-12429

## TABLE OF HOUSING SHAPE

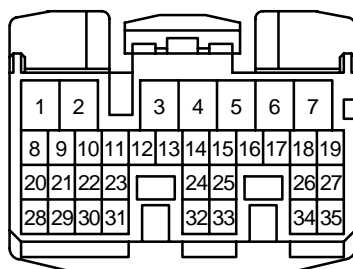
## &lt;FEMALE&gt; 35P Non-waterproof Type



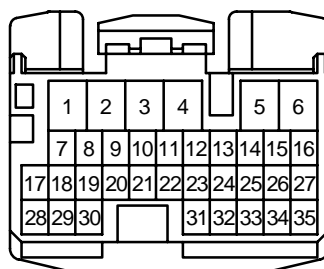
90980-12454



90980-12455



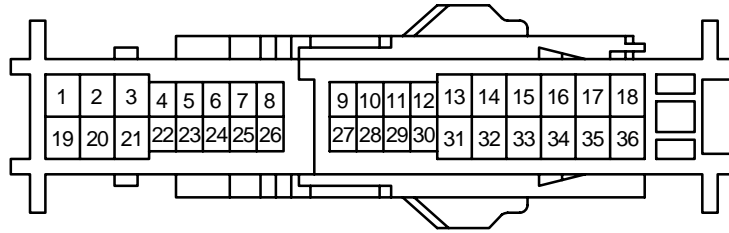
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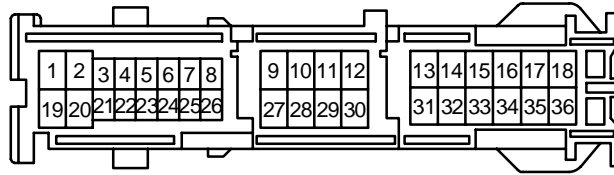
90980-12529

TABLE OF HOUSING SHAPE

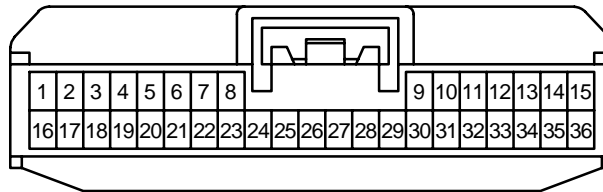
<FEMALE> 36P Non-waterproof Type



90980-12274



90980-12383

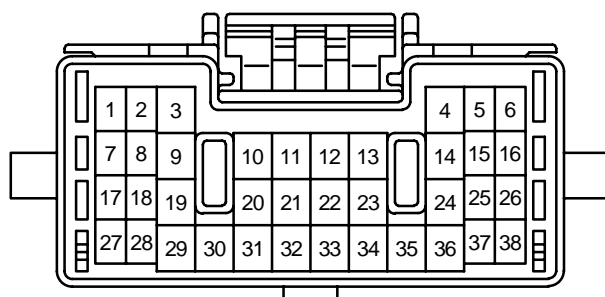


90980-12564

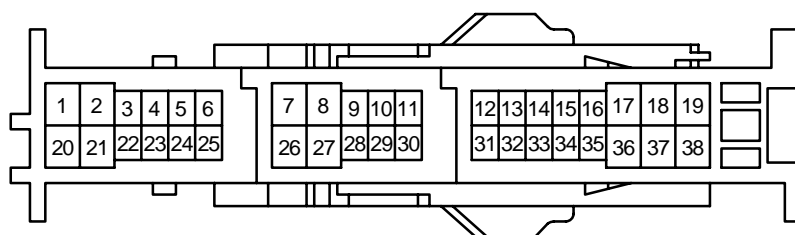


## TABLE OF HOUSING SHAPE

## &lt;FEMALE&gt; 38P Non-waterproof Type

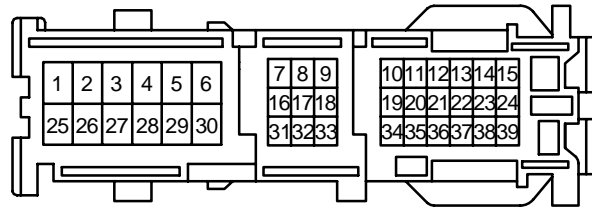


90980-11555



90980-12276

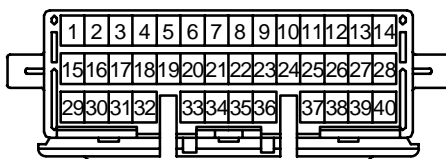
<FEMALE> 39P Non-waterproof Type



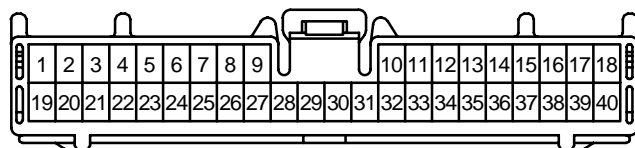
90980-12502

TABLE OF HOUSING SHAPE

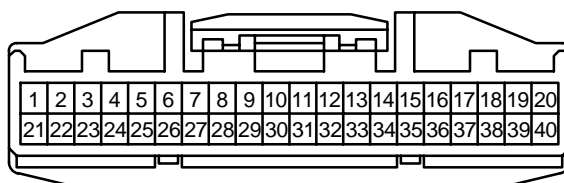
<FEMALE> 40P Non-waterproof Type



90980-11508



90980-11618

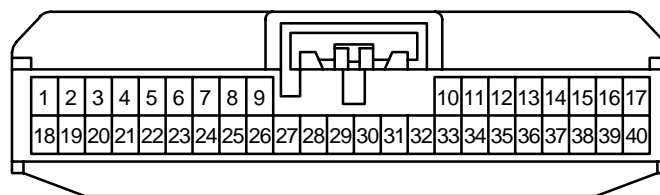


90980-12169

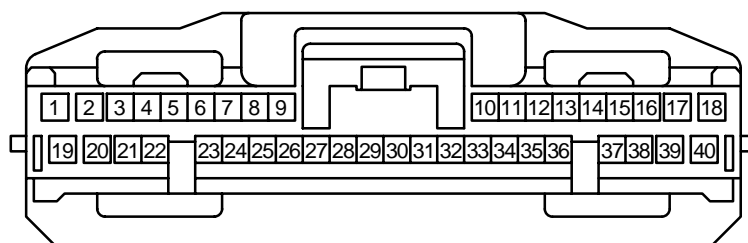


## TABLE OF HOUSING SHAPE

## &lt;FEMALE&gt; 40P Non-waterproof Type

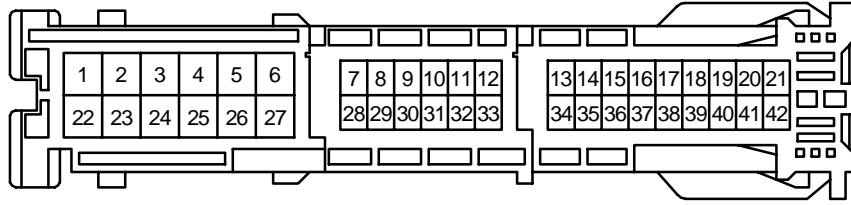


90980-12567



90980-12708

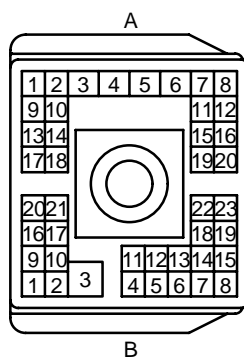
### <FEMALE> 42P Non-waterproof Type



90980-12184

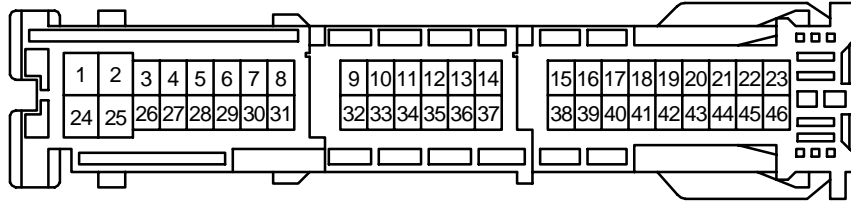
## TABLE OF HOUSING SHAPE

## &lt;FEMALE&gt; 43P Non-waterproof Type



90980-11360

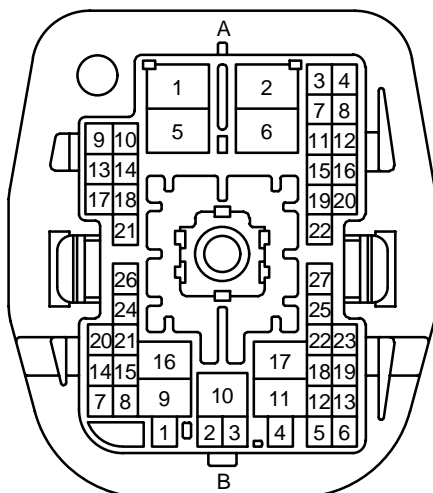
**<FEMALE> 46P Non-waterproof Type**



90980-12179



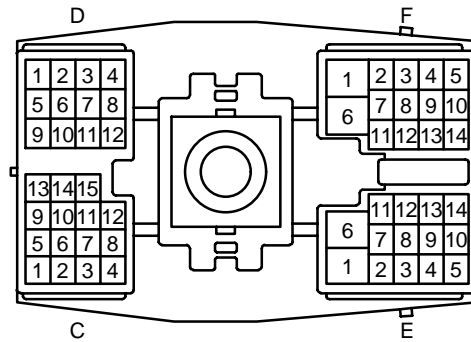
## TABLE OF HOUSING SHAPE

**<FEMALE> 49P Non-waterproof Type**

90980-11431

TABLE OF HOUSING SHAPE

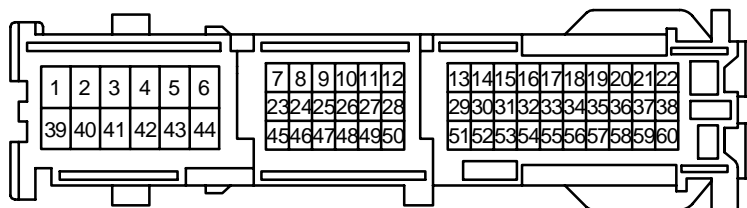
<FEMALE> 55P Non-waterproof Type



90980-11359

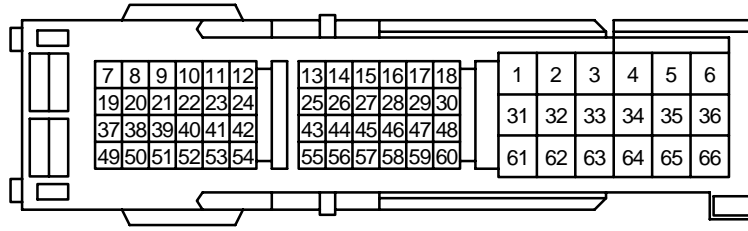
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## &lt;FEMALE&gt; 60P Non-waterproof Type



90980-12501

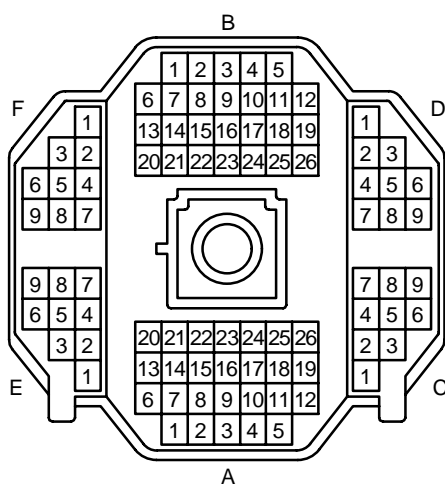
### <FEMALE> 66P Non-waterproof Type



90980-12672

## TABLE OF HOUSING SHAPE

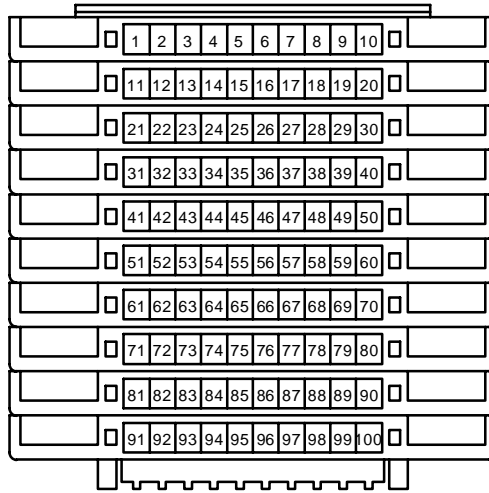
## &lt;FEMALE&gt; 88P Non-waterproof Type



90980-10950

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<FEMALE> 100P Non-waterproof Type



90980-12585

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<MALE> 1P Waterproof Type








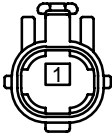



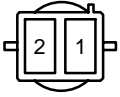




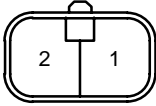
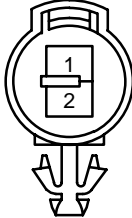


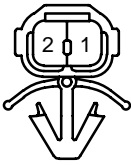

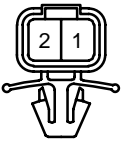


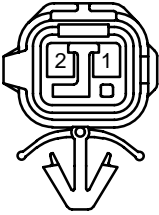





 <p>90980-10114 (Splash Proof)</p>	 <p>90980-10200 (Splash Proof)</p>	 <p>90980-10246 (Splash Proof)</p>	 <p>90980-10438</p>
 <p>90980-10836</p>	 <p>90980-10892</p>	 <p>90980-10982</p>	 <p>90980-11006</p>
 <p>90980-11183</p>	 <p>90980-11270</p>	 <p>90980-11962</p>	

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<MALE> 2P Waterproof Type

 <p>90980-10091 (Splash Proof)</p>	 <p>90980-10122 (Splash Proof)</p>	 <p>90980-10156 (Splash Proof)</p>	 <p>90980-10192 (Splash Proof)</p>
 <p>90980-10242 (Splash Proof)</p>	 <p>90980-10374 (Splash Proof)</p>	 <p>90980-10412 (Splash Proof)</p>	 <p>90980-10495</p>
 <p>90980-10497</p>	 <p>90980-10533</p>	 <p>90980-10555</p>	 <p>90980-10566</p>
 <p>90980-10571</p>	 <p>90980-10580</p>	 <p>90980-10582</p>	 <p>90980-10592</p>
 <p>90980-10594</p>	 <p>90980-10625</p>	 <p>90980-10665</p>	 <p>90980-10707</p>



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## &lt;MALE&gt; 2P Waterproof Type







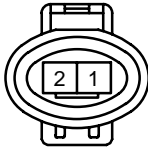



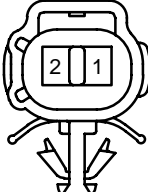






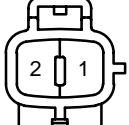

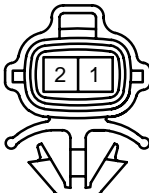
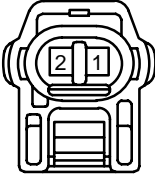



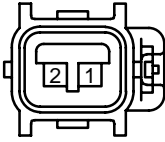
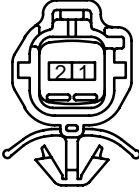

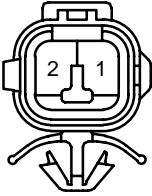


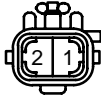

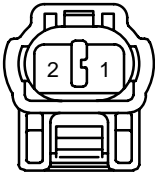




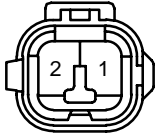
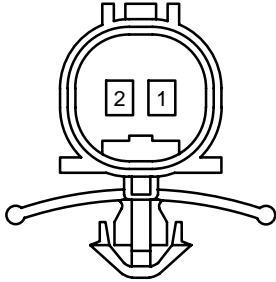
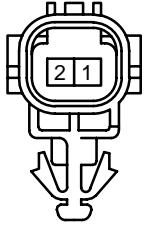
			
90980-10788	90980-10838	90980-10842	90980-10886
			
90980-10898	90980-10900	90980-10927	90980-10948
			
90980-10959	90980-10970 (Splash Proof)	90980-11002	90980-11004
			
90980-11008	90980-11029	90980-11031	90980-11050
			
90980-11069	90980-11072	90980-11073	90980-11074

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<MALE> 2P Waterproof Type

 <p>90980-11137</p>	 <p>90980-11141</p>	 <p>90980-11155</p>	 <p>90980-11168</p>
 <p>90980-11175</p>	 <p>90980-11188</p>	 <p>90980-11236</p>	 <p>90980-11247</p>
 <p>90980-11249</p>	 <p>90980-11254</p>	 <p>90980-11272</p>	 <p>90980-11303</p>
 <p>90980-11322</p>	 <p>90980-11409</p>	 <p>90980-11447</p>	 <p>90980-11466</p>
 <p>90980-11486</p>	 <p>90980-11901</p>	 <p>90980-12194</p>	 <p>90980-12627</p>

## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 2P Waterproof Type


 90980-12697			

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<MALE> 3P Waterproof Type

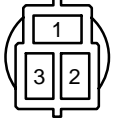

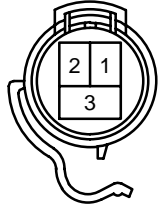

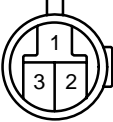

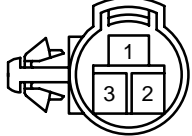
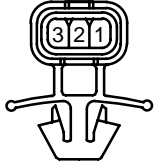


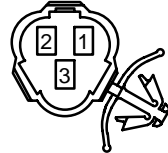
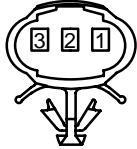
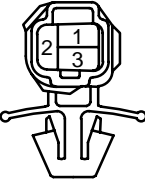
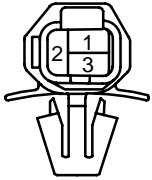
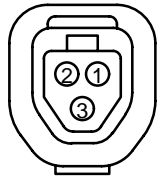




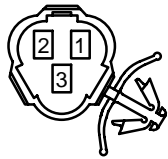
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 <p>90980-10244 (Splash Proof)</p>	 <p>90980-10248 (Splash Proof)</p>	 <p>90980-10347 (Splash Proof)</p>	 <p>90980-10394</p>
 <p>90980-10444</p>	 <p>90980-10492</p>	 <p>90980-10493</p>	 <p>90980-10500</p>
 <p>90980-10553</p>	 <p>90980-10577</p>	 <p>90980-10682</p>	 <p>90980-10689</p>
 <p>90980-10698</p>	 <p>90980-10774</p>	 <p>90980-10777</p>	 <p>90980-10787</p>

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<MALE> 3P Waterproof Type


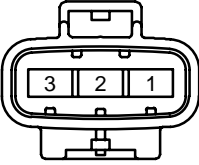
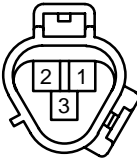


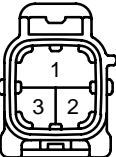

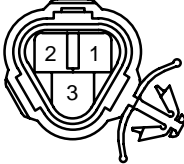

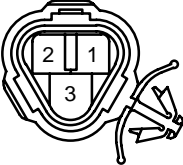




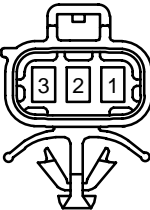

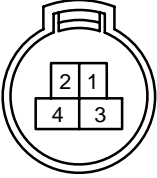
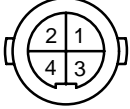




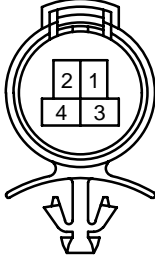
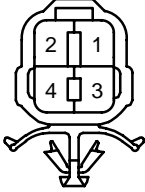







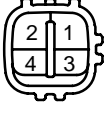

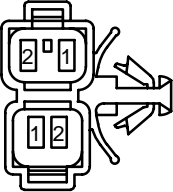
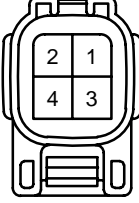

 <p>90980-10840</p>	 <p>90980-10944</p>	 <p>90980-11015</p>	 <p>90980-11044</p>
 <p>90980-11131</p>	 <p>90980-11160</p>	 <p>90980-11169</p>	 <p>90980-11244</p>
 <p>90980-11293</p>	 <p>90980-11295</p>	 <p>90980-11341</p>	 <p>90980-11348</p>
 <p>90980-11407</p>	 <p>90980-11607</p>	 <p>90980-11622</p>	 <p>90980-12179</p>

TABLE OF HOUSING SHAPE

<MALE> 4P Waterproof Type

 <p>90980-10139 (Splash Proof)</p>	 <p>90980-10202 (Splash Proof)</p>	 <p>90980-10217 (Splash Proof)</p>	 <p>90980-10475</p>
 <p>90980-10510</p>	 <p>90980-10590</p>	 <p>90980-10646 (Splash Proof)</p>	 <p>90980-10648</p>
 <p>90980-10662</p>	 <p>90980-10749</p>	 <p>90980-10751</p>	 <p>90980-10768</p>
 <p>90980-10868</p>	 <p>90980-10941</p>	 <p>90980-10989</p>	 <p>90980-11027</p>
 <p>90980-11035</p>	 <p>90980-11076</p>	 <p>90980-11122</p>	 <p>90980-11138</p>

## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 4P Waterproof Type




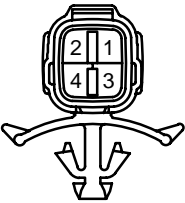

 <p>90980-11177</p>	 <p>90980-11268</p>	 <p>90980-11287</p>	 <p>90980-11291</p>
 <p>90980-11929</p>			

TABLE OF HOUSING SHAPE

<MALE> 5P Waterproof Type

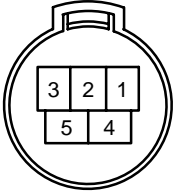
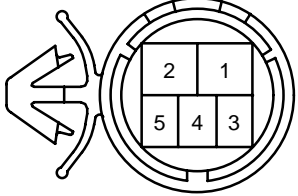
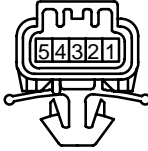
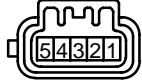
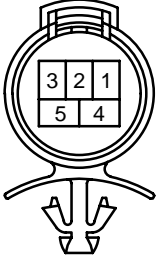
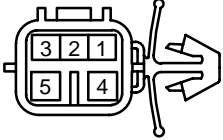


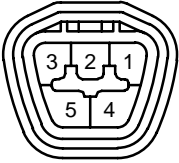



 <p>90980-10161 (Splash Proof)</p>	 <p>90980-10392 (Splash Proof)</p>	 <p>90980-10557</p>	 <p>90980-10570</p>
 <p>90980-10647 (Splash Proof)</p>	 <p>90980-10709</p>	 <p>90980-10945</p>	 <p>90980-11021</p>
 <p>90908-11078</p>	 <p>90980-11181</p>	 <p>90980-11412</p>	 <p>90980-11598</p>



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<MALE> 6P Waterproof Type

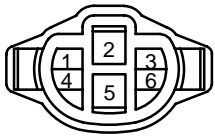
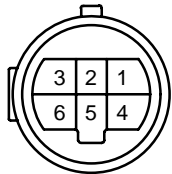

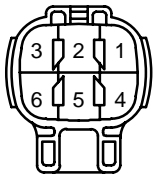
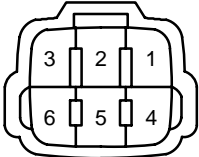


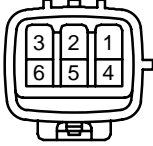

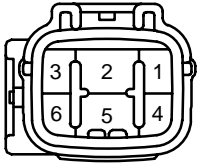
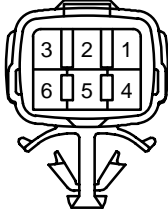
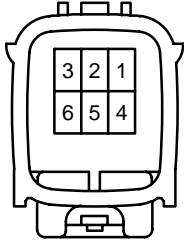
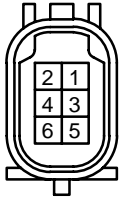
 <p>90980-10096 (Splash Proof)</p>	 <p>90980-10194 (Splash Proof)</p>	 <p>90980-10477</p>	 <p>90980-10596</p>
 <p>90980-10984</p>	 <p>90980-10987</p>	 <p>90980-11033</p>	 <p>90980-11193</p>
 <p>90980-11196</p>	 <p>90980-11267</p>	 <p>90980-11289</p>	 <p>90980-12256</p>
 <p>90980-12381</p>			

TABLE OF HOUSING SHAPE

<MALE> 7P Waterproof Type

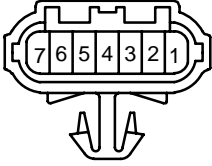
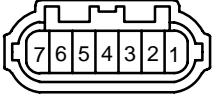
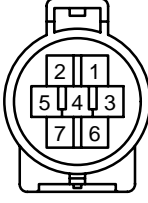
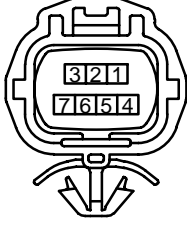
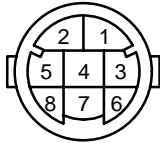
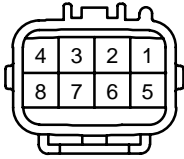
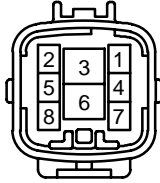
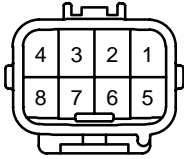

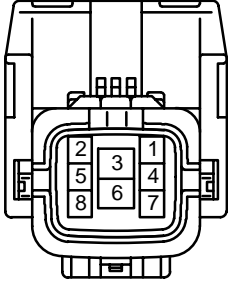


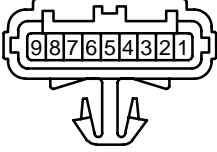
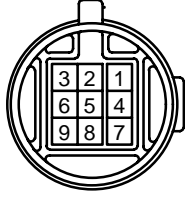
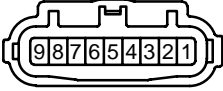
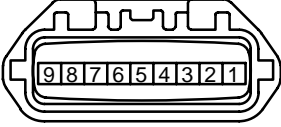
 <p>90980-10627</p>	 <p>90980-10676</p>	 <p>90980-10930</p>	 <p>90980-11171</p>

TABLE OF HOUSING SHAPE

<MALE> 8P Waterproof Type

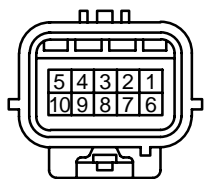
 <p>90980-10204 (Splash Proof)</p>	 <p>90980-10890</p>	 <p>90980-10894</p>
 <p>90980-10896</p>	 <p>90980-11241</p>	 <p>90980-11460</p>
 <p>90980-12519</p>		

<MALE> 9P Waterproof Type

 <p>90980-10379 (Splash Proof)</p>	 <p>90980-10677</p>	 <p>90980-10775 (Splash Proof)</p>
 <p>90980-10826</p>	 <p>90980-11191</p>	

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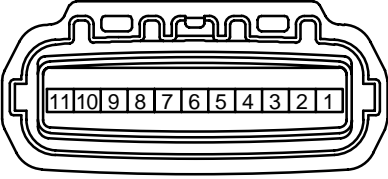
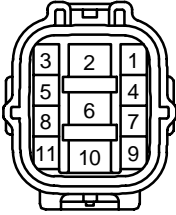
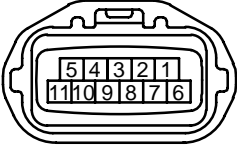
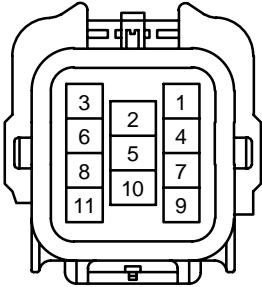
## &lt;MALE&gt; 10P Waterproof Type



90980-12379

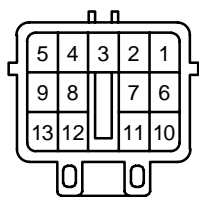
TABLE OF HOUSING SHAPE

<MALE> 11P Waterproof Type

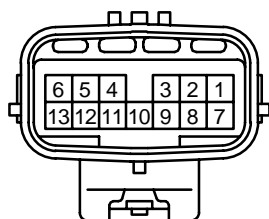
 <p>90980-11173</p>	 <p>90980-11239</p>	 <p>90980-11256</p>
 <p>90980-11609</p>		

## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 13P Waterproof Type



90980-10653



90980-12716

<MALE> 15P Waterproof Type

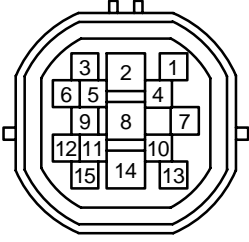
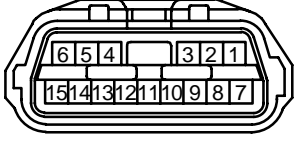
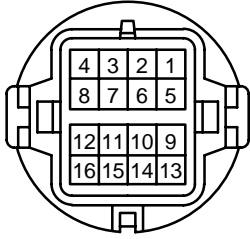
 <p>90980-10442</p>	 <p>90980-11088</p>	

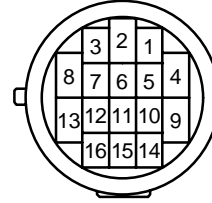


TABLE OF HOUSING SHAPE

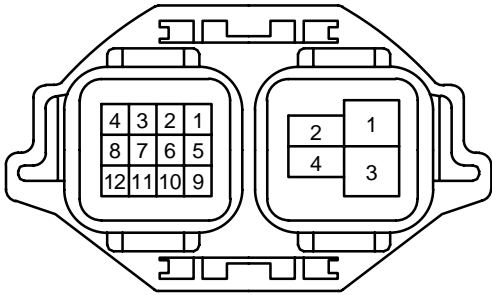
<MALE> 16P Waterproof Type



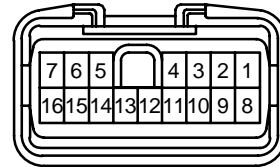
90980-10100  
(Splash Proof)



90980-10287  
(Splash Proof)

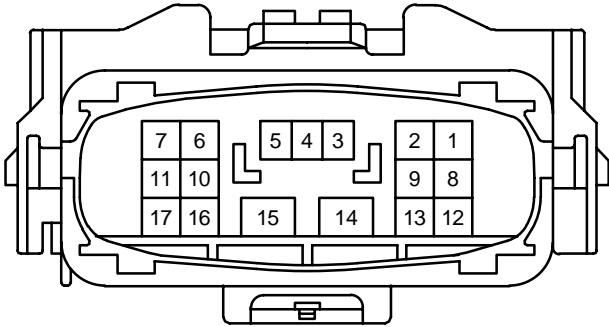


90980-10547



90980-11462

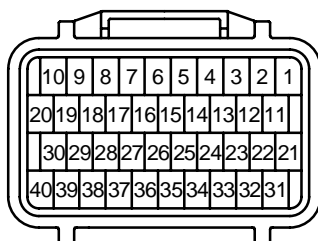
**<MALE> 17P Waterproof Type**



90980-11600

## TABLE OF HOUSING SHAPE

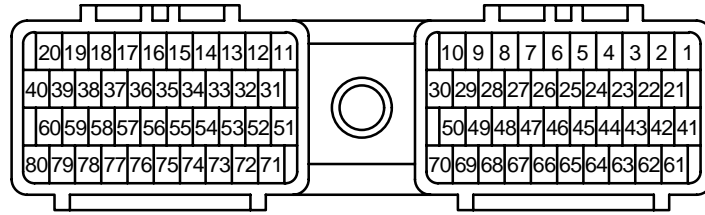
## &lt;MALE&gt; 40P Waterproof Type



90980-11342

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<MALE> 150P Waterproof Type



90980-11338

## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 1P Non-waterproof Type









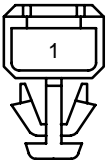

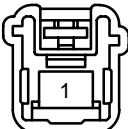

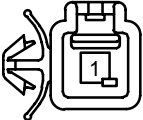


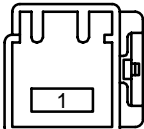

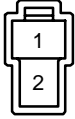
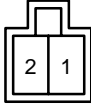

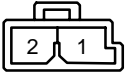
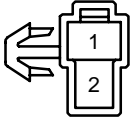

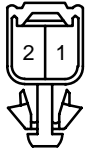


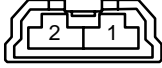
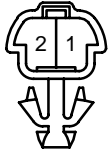


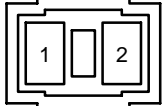

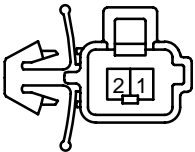



			
90980-10160	90980-10178 (90980-11741)	90980-10182	90980-10251
			
90980-10253	90980-10342	90980-10433	90980-10434
			
90980-10499	90980-10870 (90980-11737)	90980-10994	90980-11026
			
90980-11097 (90980-11767)	90980-11146	90980-11258	90980-11774

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<MALE> 2P Non-waterproof Type

 <p>90980-10038</p>	 <p>90980-10213</p>	 <p>90980-10255</p>	 <p>90980-10286</p>
 <p>90980-10297</p>	 <p>90980-10305</p>	 <p>90980-10344</p>	 <p>90980-10346</p>
 <p>90980-10354</p>	 <p>90980-10356</p>	 <p>90980-10424</p>	 <p>90980-10437</p>
 <p>90980-10620</p>	 <p>90980-10687</p>	 <p>90980-10700</p>	 <p>90980-10824</p>
 <p>90980-10833 (90980-11761)</p>	 <p>90980-10859</p>	 <p>90980-10905 (90980-11702) (90980-11735)</p>	 <p>90980-10915</p>

## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 2P Non-waterproof Type

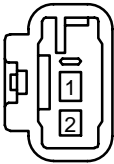
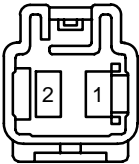
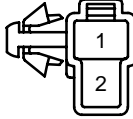
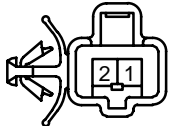


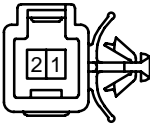
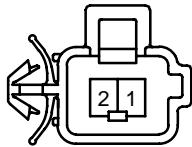
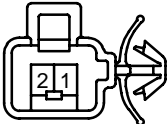

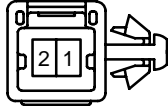
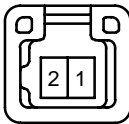
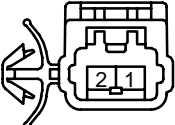
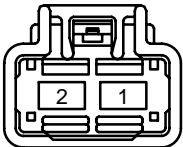

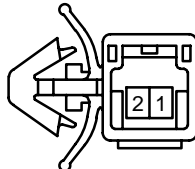
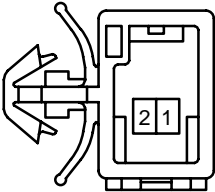
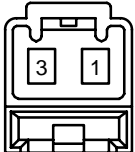
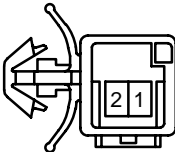
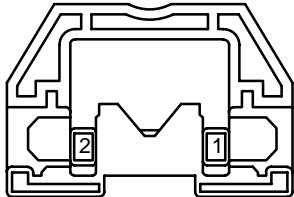
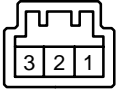
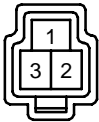
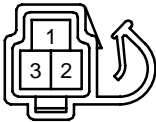
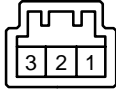

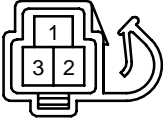
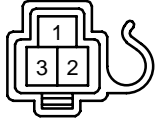
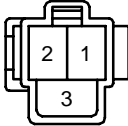
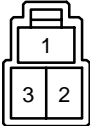

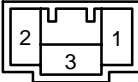
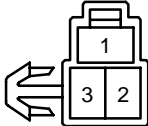
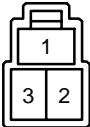
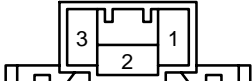
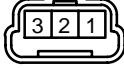
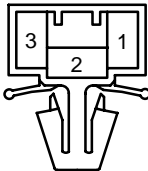




			 90980-11060 (90980-11724) (90980-11768)
90980-10934 (90980-11725)	90980-10958	90980-11014	
			 90980-11299
90980-11093	90980-11159 (90980-11803)	90980-11211	
			 90980-11368
90980-11300	90980-11305	90980-11367	
			 90980-11933
90980-11395	90980-11655	90980-11917	
			 90980-12322
90980-11967	90980-12029	90980-12062	

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<MALE> 3P Non-waterproof Type

 <p>90980-10055</p>	 <p>90980-10145</p>	 <p>90980-10154</p>	 <p>90980-10163</p>
 <p>90980-10180</p>	 <p>90980-10186</p>	 <p>90980-10187</p>	 <p>90980-10188</p>
 <p>90980-10215</p>	 <p>90980-10231</p>	 <p>90980-10257</p>	 <p>90980-10283</p>
 <p>90980-10299</p>	 <p>90980-10300</p>	 <p>90980-10364</p>	 <p>90980-10410</p>
 <p>90980-10554</p>	 <p>90980-10573</p>	 <p>90980-10907 (90980-11763)</p>	 <p>90980-10979</p>



## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 3P Non-waterproof Type


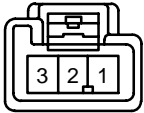
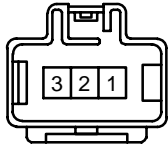

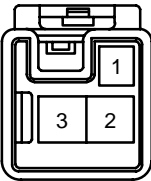
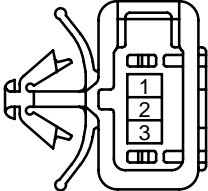
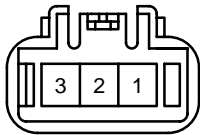
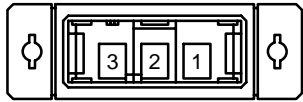
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 <p>90980-11484</p>	 <p>90980-11489</p>	 <p>90980-11936</p>	 <p>90980-12196</p>

TABLE OF HOUSING SHAPE

<MALE> 4P Non-waterproof Type

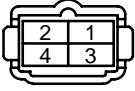

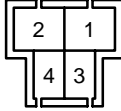
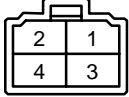
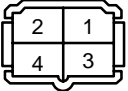
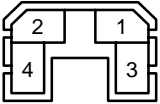
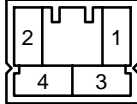
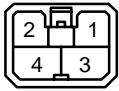
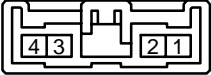


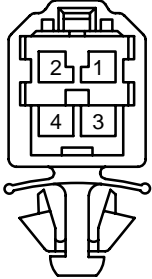

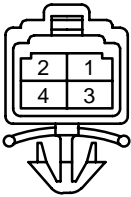
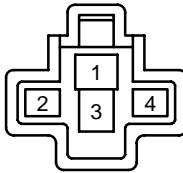
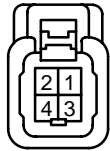
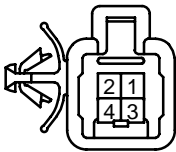
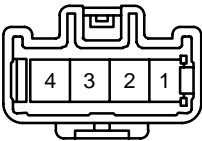
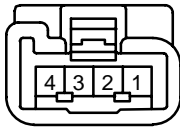
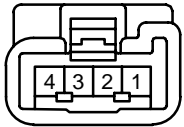
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 <p>90980-10219</p>	 <p>90980-10237</p>	 <p>90980-10259</p>	 <p>90980-10306</p>
 <p>90980-10399</p>	 <p>90980-10466</p>	 <p>90980-10502</p>	 <p>90980-10503</p>
 <p>90980-10600</p>	 <p>90980-10758</p>	 <p>90980-10791</p>	 <p>90980-10794 (90980-11726) (90980-11765)</p>
 <p>90980-10858 (90980-11801)</p>	 <p>90980-10866</p>	 <p>90980-11012 (90980-11812)</p>	 <p>90980-11100</p>

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<MALE> 4P Non-waterproof Type


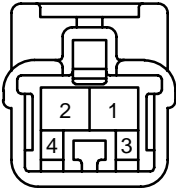
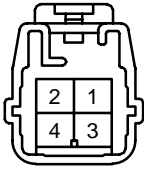
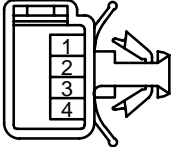
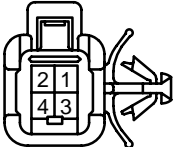
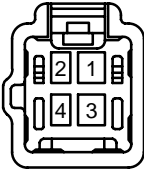
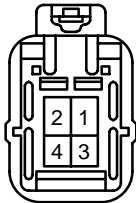

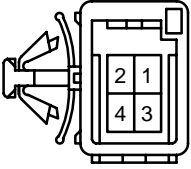
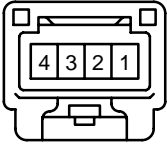
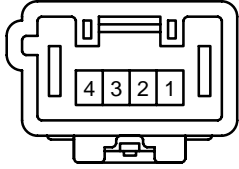
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 <p>90980-11399 (90980-11779) (90980-11811)</p>	 <p>90980-11605</p>	 <p>90980-11878 (90980-11809)</p>	 <p>90980-12123</p>
 <p>90980-12212</p>	 <p>90980-12247</p>	 <p>90980-12732</p>	

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<MALE> 5P Non-waterproof Type

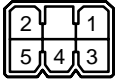
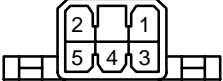
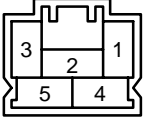
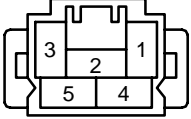
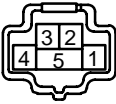

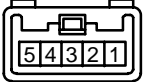
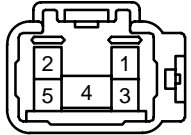
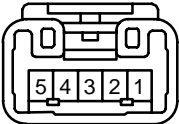


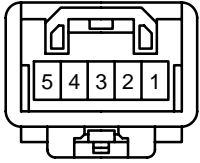
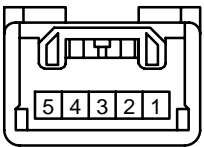
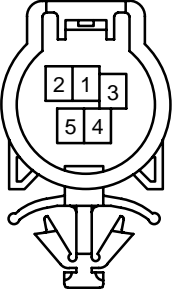
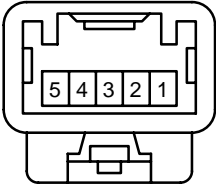
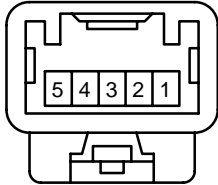
 <p>90980-10040</p>	 <p>90980-10117</p>	 <p>90980-10261</p>	 <p>90980-10276</p>
 <p>90980-10518</p>	 <p>90980-10519</p>	 <p>90980-10762</p>	 <p>90980-10985</p>
 <p>90980-11085 (90980-11719) (90980-11843)</p>	 <p>90980-11327</p>	 <p>90980-11602</p>	 <p>90980-11920</p>
 <p>90980-12036</p>	 <p>90980-12189</p>	 <p>90980-12365</p>	 <p>90980-12419</p>

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<MALE> 6P Non-waterproof Type

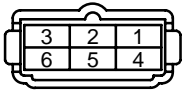
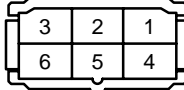


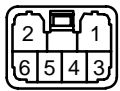
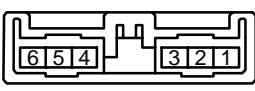
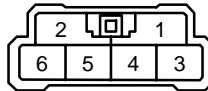

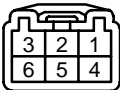
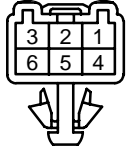
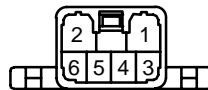
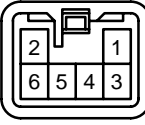
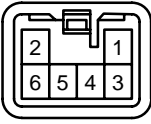

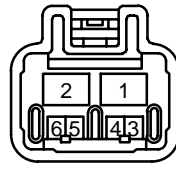
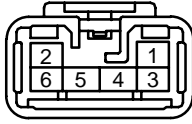
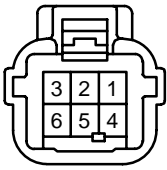
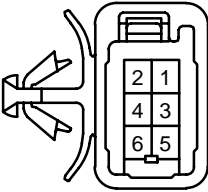
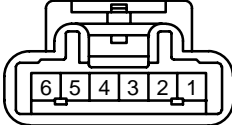

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 <p>90980-10384</p>	 <p>90980-10401</p>	 <p>90980-10446</p>	 <p>90980-10505</p>
 <p>90980-10602</p>	 <p>90980-10603</p>	 <p>90980-10641</p>	 <p>90980-10694</p>
 <p>90980-10745</p>	 <p>90980-10796</p>	 <p>90980-10909</p>	 <p>90980-10975 (90980-11756)</p>
 <p>90980-10998 (90980-11706)</p>	 <p>90980-11010 (90980-11729)</p>	 <p>90980-11099</p>	 <p>90980-11101</p>

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<MALE> 6P Non-waterproof Type


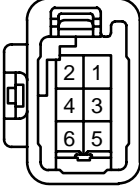
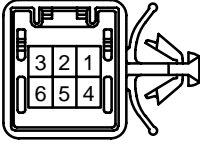
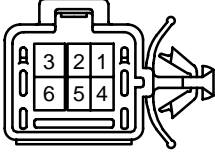
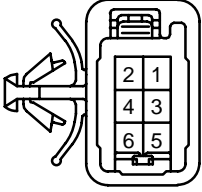
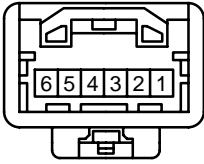
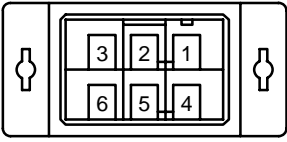
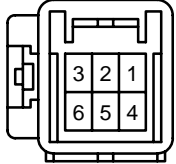
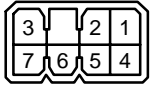
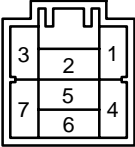
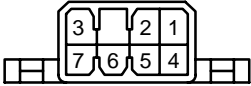
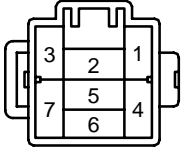
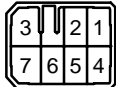
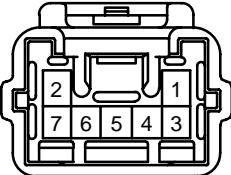
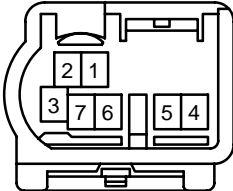
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 <p>90980-11587 (90980-11814)</p>	 <p>90980-12004</p>	 <p>90980-12198</p>	 <p>90980-12204</p>

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<MALE> 7P Non-waterproof Type

 <p>90980-10042</p>	 <p>90980-10263</p>	 <p>90980-10275</p>	 <p>90980-10277</p>
 <p>90980-10451</p>	 <p>90980-11528 (90980-11739)</p>	 <p>90980-12059</p>	

<MALE> 8P Non-waterproof Type

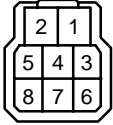

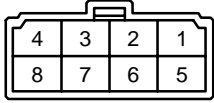
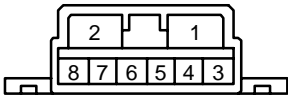
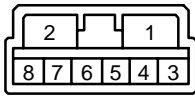
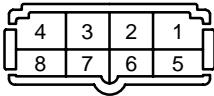
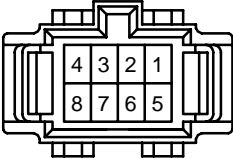
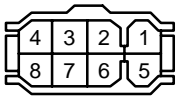
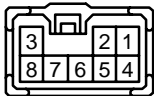
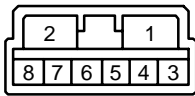
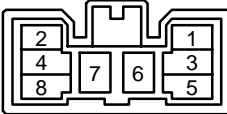
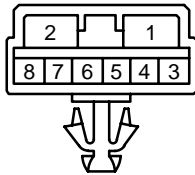
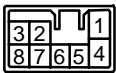
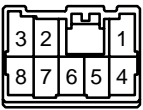
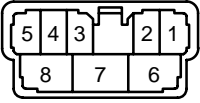
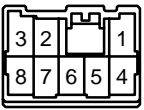

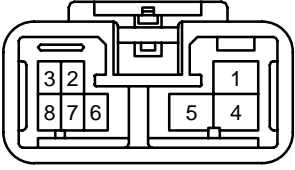
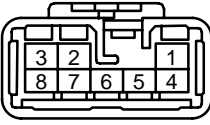

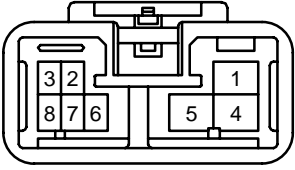
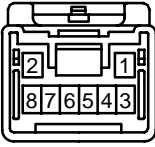
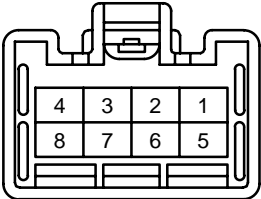
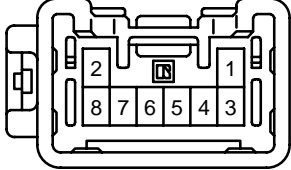
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 <p>90980-10208</p>	 <p>90980-10210</p>	 <p>90980-10225</p>
 <p>90980-10272</p>	 <p>90980-10279</p>	 <p>90980-10360</p>
 <p>90980-10383</p>	 <p>90980-10403</p>	 <p>90980-10411</p>

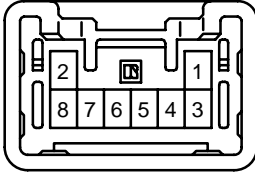
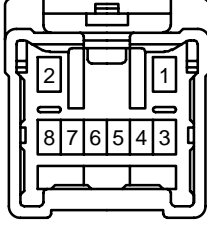
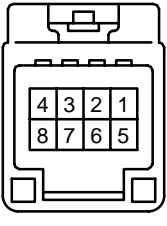
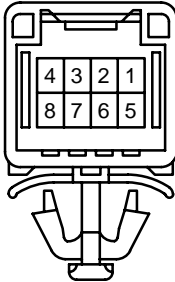
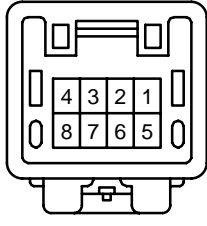


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<MALE> 8P Non-waterproof Type

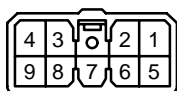
 <p>90980-10418</p>	 <p>90980-10430</p>	 <p>90980-10462</p>
 <p>90980-10546</p>	 <p>90980-10798 (90980-12480) (90980-12534)</p>	 <p>90980-10876</p>
 <p>90980-10963</p>	 <p>90980-11353</p>	 <p>90980-11438</p>
 <p>90980-11532</p>	 <p>90980-11551</p>	 <p>90980-11582</p>

<MALE> 8P Non-waterproof Type

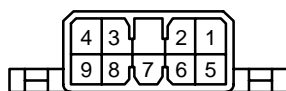
 <p>90980-11588</p>	 <p>90980-11623</p>	 <p>90980-12248</p>
 <p>90980-12364</p>	 <p>90980-12734</p>	

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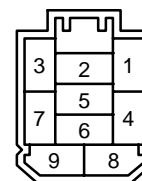
## &lt;MALE&gt; 9P Non-waterproof Type



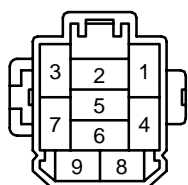
90980-10068



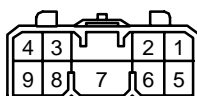
90980-10087



90980-10265




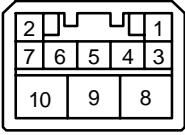
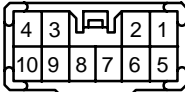
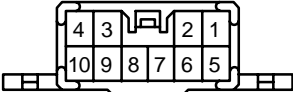
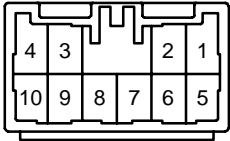
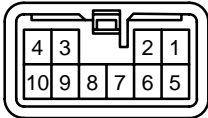
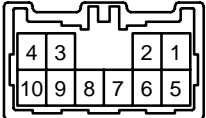
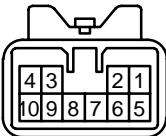
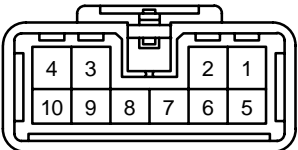
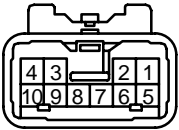
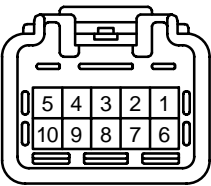
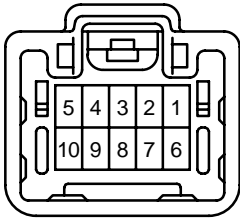
90980-10278



90980-10317

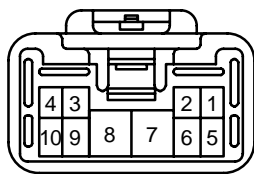
90980-11534  
(90980-11709)  
(90980-12533)

<MALE> 10P Non-waterproof Type

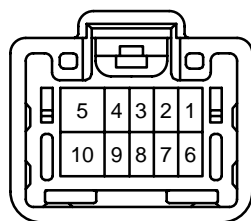
 <p>90980-10176</p>	 <p>90980-10281</p>	 <p>90980-10375</p>
 <p>90980-10427</p>	 <p>90980-10468</p>	 <p>90980-10693</p>
 <p>90980-10719</p>	 <p>90980-10800 (90980-11757)</p>	 <p>90980-10861</p>
 <p>90980-11102</p>	 <p>90980-11536 (90980-11823) (90980-12481)</p>	 <p>90980-11580</p>

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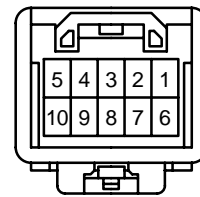
## &lt;MALE&gt; 10P Non-waterproof Type



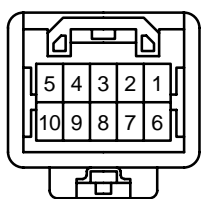
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(90980-11849)



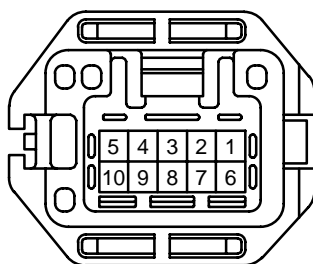
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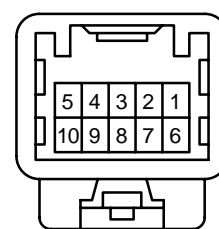
90980-11922



90980-12023



90980-12249



90980-12367  
(90980-12542)

TABLE OF HOUSING SHAPE

<MALE> 11P Non-waterproof Type

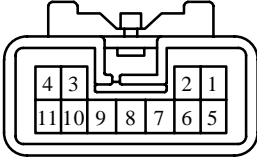
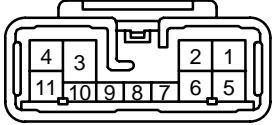
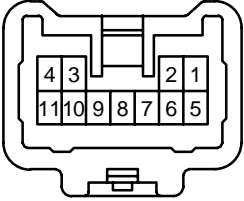
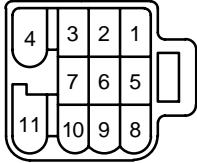
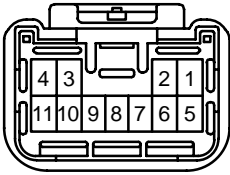
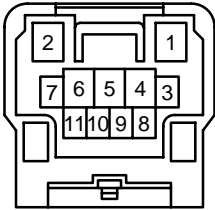
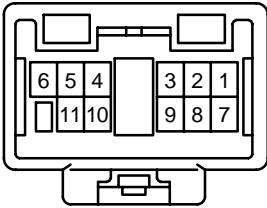
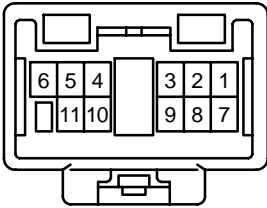
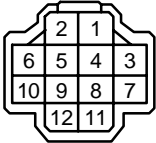
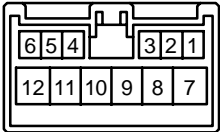
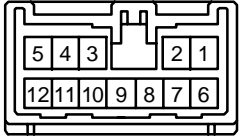
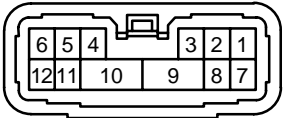
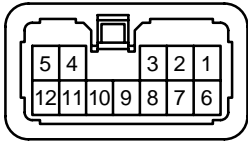
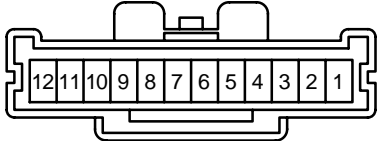
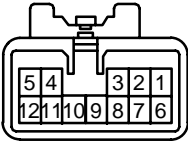
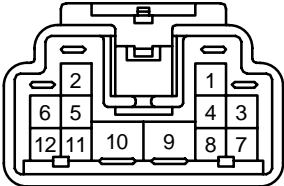
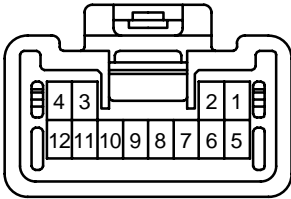


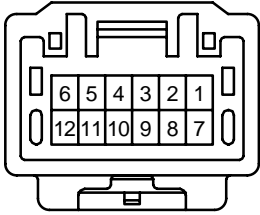
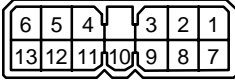
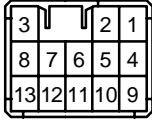
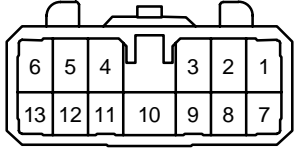
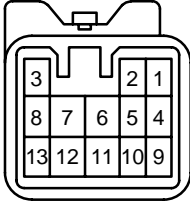
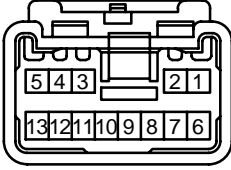
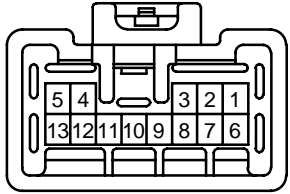
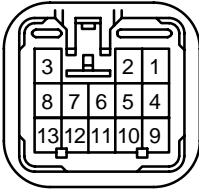
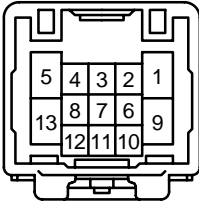
 <p>90980-10829</p>	 <p>90980-10872</p>	 <p>90980-11200</p>
 <p>90980-10531</p>	 <p>90980-11538 (90980-11711)</p>	 <p>90980-12002</p>
 <p>90980-12250</p>	 <p>90980-12610</p>	

TABLE OF HOUSING SHAPE

<MALE> 12P Non-waterproof Type

 <p>90980-10149</p>	 <p>90980-10405</p>	 <p>90980-10407</p>
 <p>90980-10415</p>	 <p>90980-10513</p>	 <p>90980-10564</p>
 <p>90980-10802</p>	 <p>90980-10878</p>	 <p>90980-11500</p>
 <p>90980-11530</p>	 <p>90980-11692</p>	 <p>90980-12736</p>

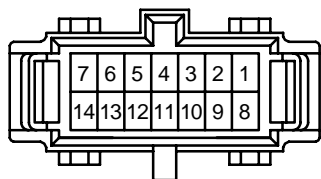
<MALE> 13P Non-waterproof Type

 <p>90980-10032</p>	 <p>90980-10323</p>	 <p>90980-10479</p>
 <p>90980-10804</p>	 <p>90980-11393</p>	 <p>90980-11541            (90980-11694)            (90980-11713)            (90980-12482)            (90980-12531)</p>
 <p>90980-11568</p>	 <p>90980-12499</p>	

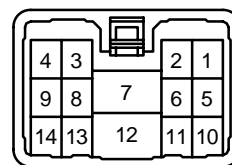


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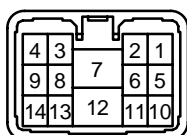
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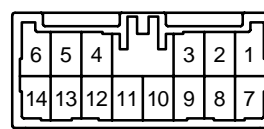
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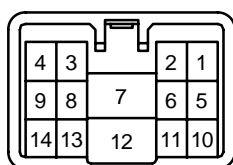
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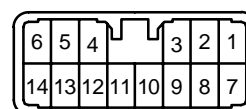
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90980-10470

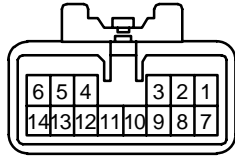


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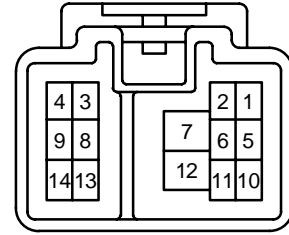


90980-10715

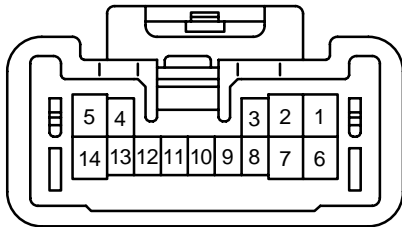
<MALE> 14P Non-waterproof Type



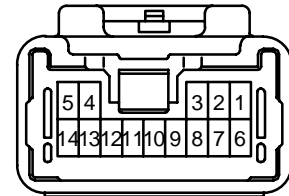
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 (90980-11721)  
 (90980-11734)



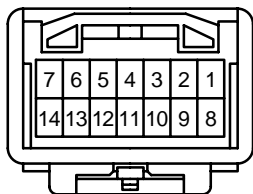
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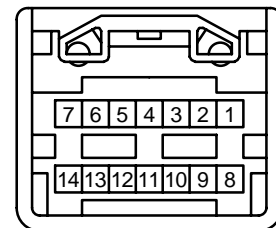
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90980-11654

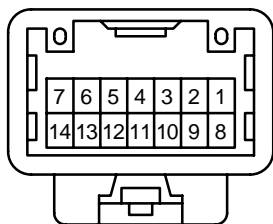


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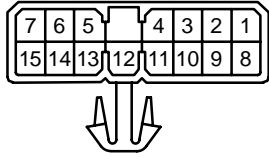
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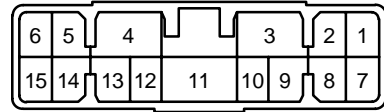
**<MALE> 14P Non-waterproof Type**

90980-12369

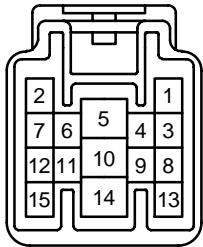
<MALE> 15P Non-waterproof Type



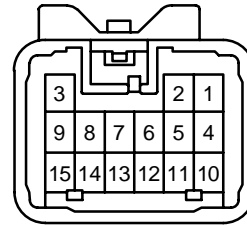
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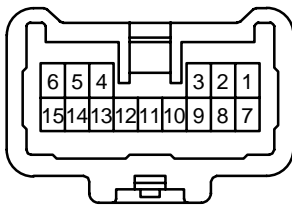
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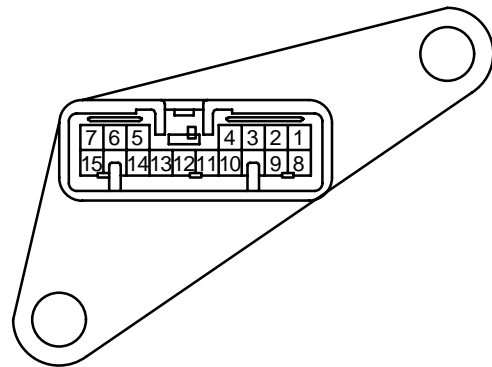
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90980-10827



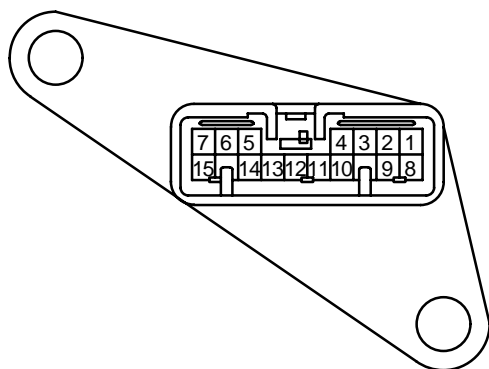
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90980-11370

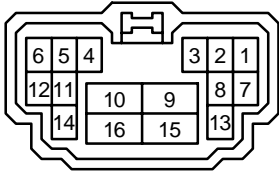
## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 15P Non-waterproof Type

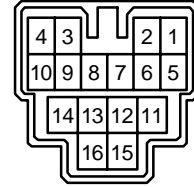


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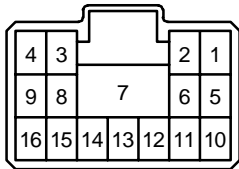
<MALE> 16P Non-waterproof Type



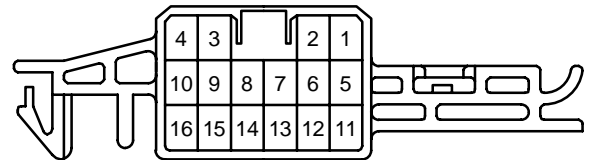
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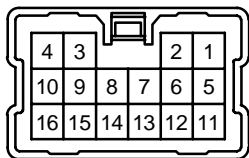
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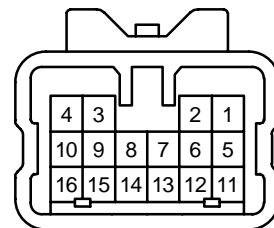
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90980-10542



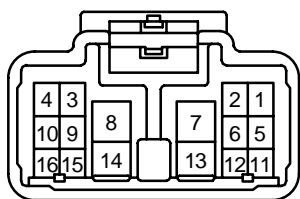
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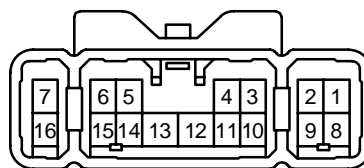
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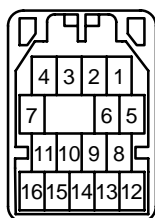
<MALE> 16P Non-waterproof Type



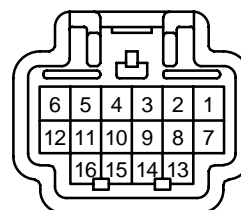
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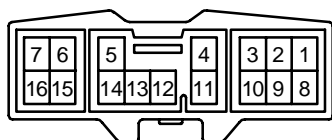
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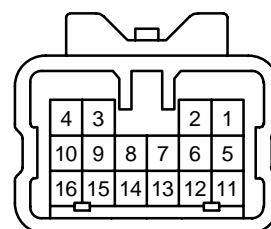
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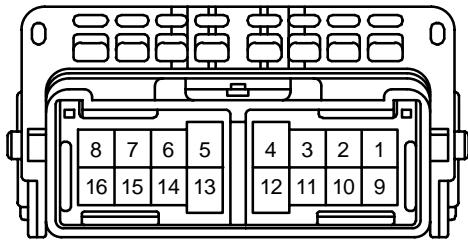


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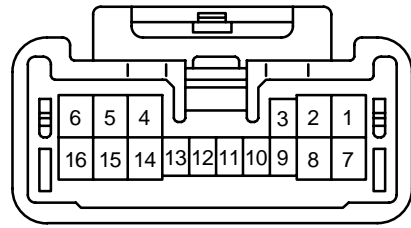


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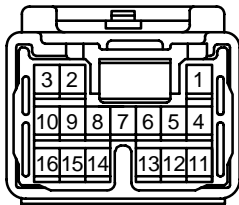
<MALE> 16P Non-waterproof Type



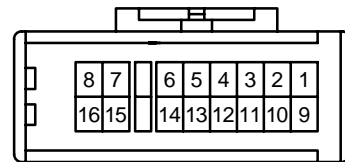
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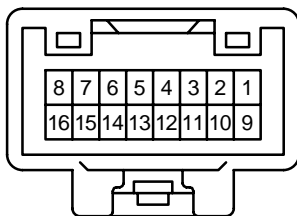
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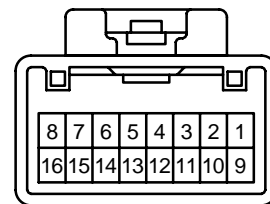
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90980-12105



90980-12192

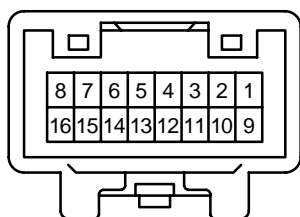


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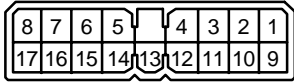
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## &lt;MALE&gt; 16P Non-waterproof Type

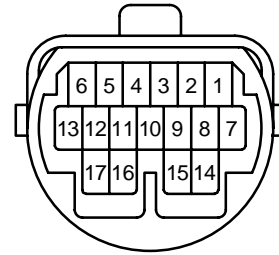


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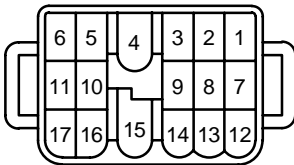
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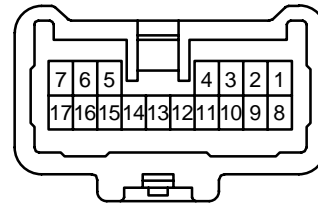
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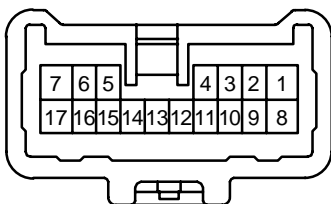
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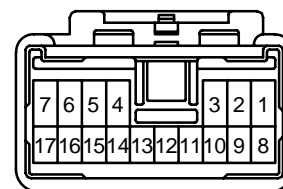
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90980-11202



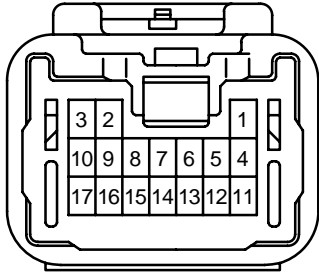
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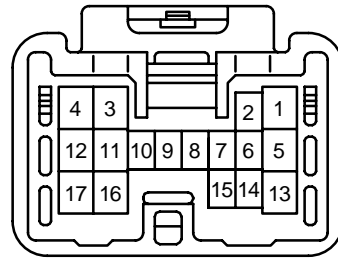
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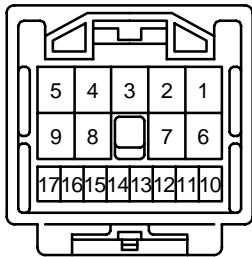
<MALE> 17P Non-waterproof Type



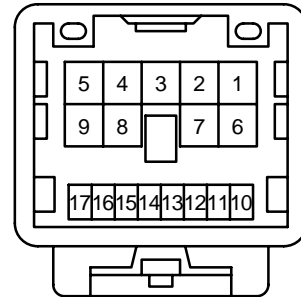
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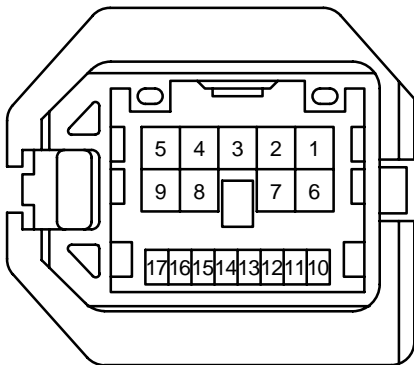
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90980-12161

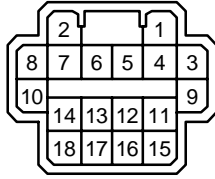


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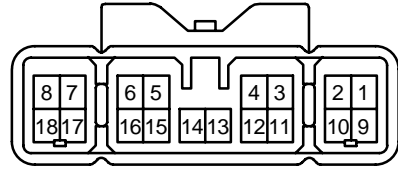


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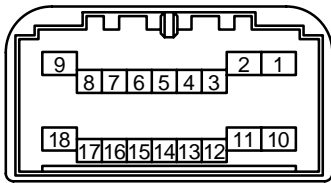
<MALE> 18P Non-waterproof Type



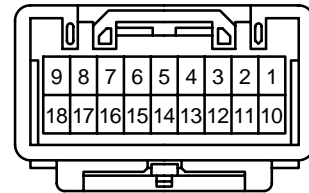
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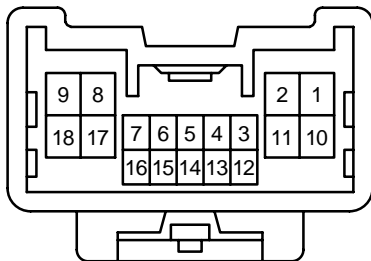
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(90980-11759)



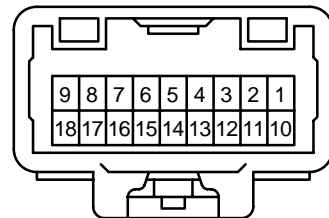
90980-11223



90980-11912



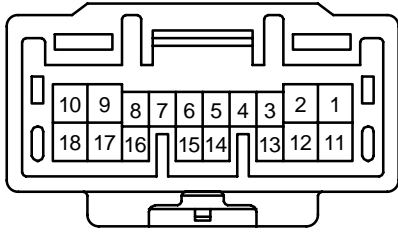
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(90980-12546)



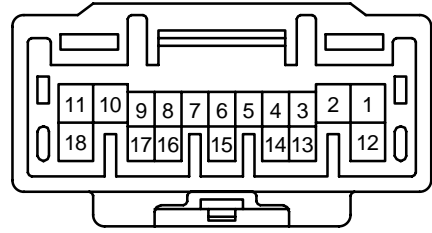
90980-12411

TABLE OF HOUSING SHAPE

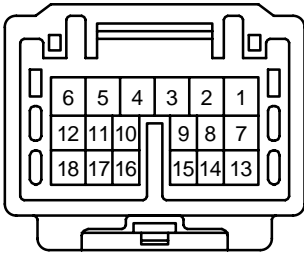
<MALE> 18P Non-waterproof Type



90980-12738

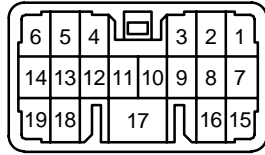


90980-12742

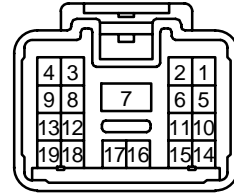


90980-12744

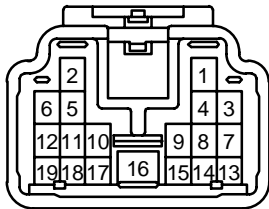
<MALE> 19P Non-waterproof Type



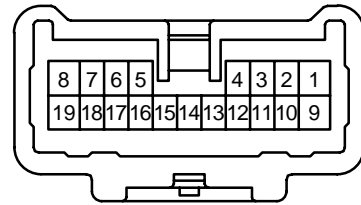
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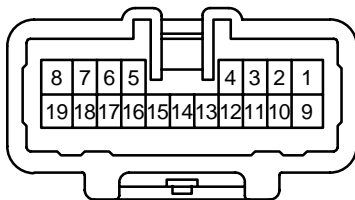
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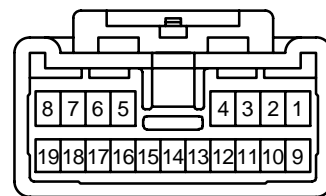
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90980-11204



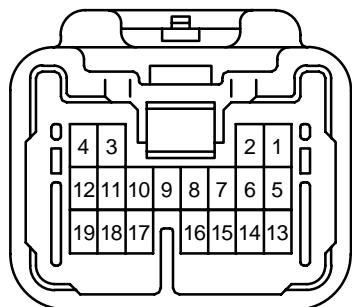
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90980-11376

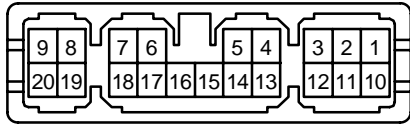
## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 19P Non-waterproof Type

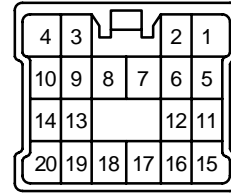


90980-11570

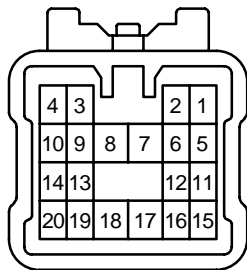
<MALE> 20P Non-waterproof Type



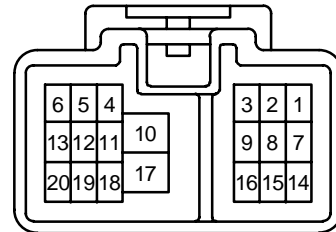
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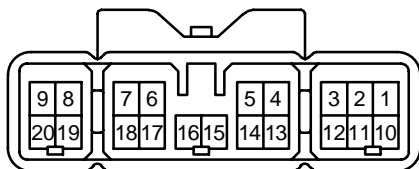
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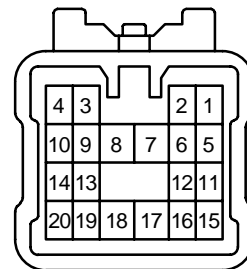
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90980-10816



90980-10820

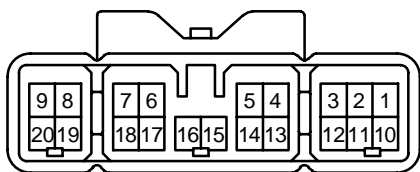


90980-11440

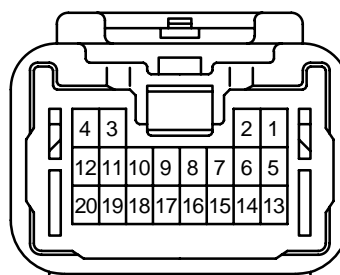


TABLE OF HOUSING SHAPE

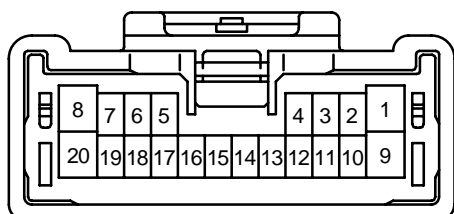
<MALE> 20P Non-waterproof Type



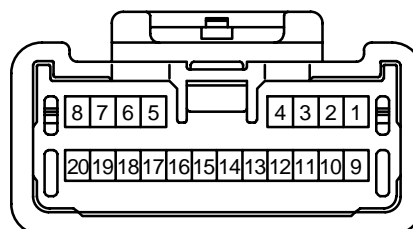
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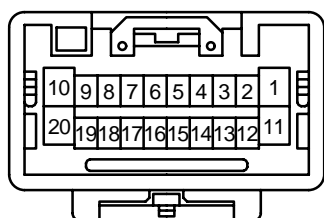
90980-11498



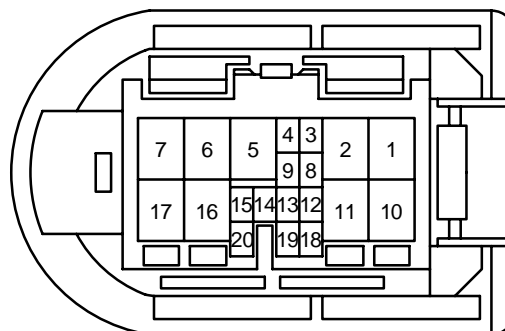
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90980-11627

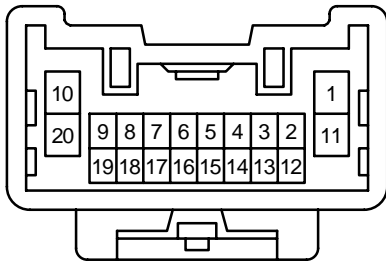


90980-12025



90980-12301

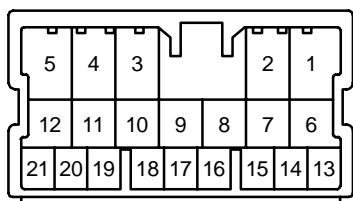
**<MALE> 20P Non-waterproof Type**



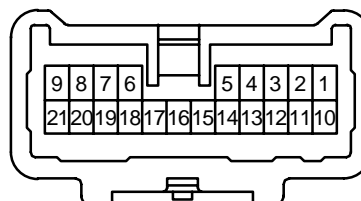
90980-12377  
(90980-12638)

TABLE OF HOUSING SHAPE

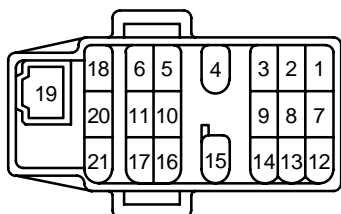
<MALE> 21P Non-waterproof Type



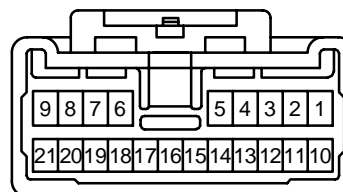
90980-10742



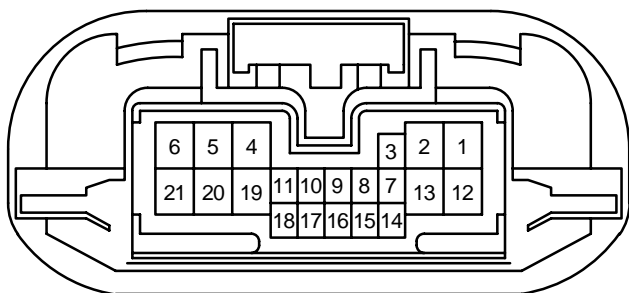
90980-11206



90980-11316

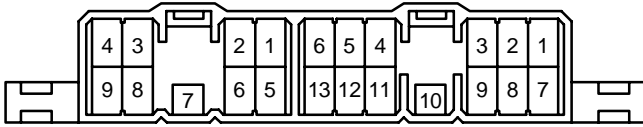


90980-11378

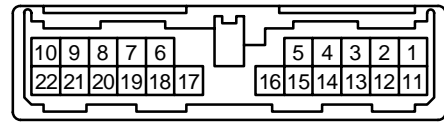


90980-12670

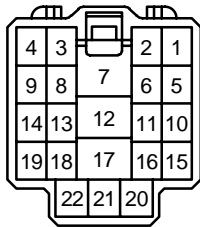
<MALE> 22P Non-waterproof Type



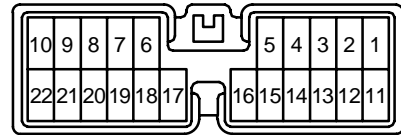
90980-10135



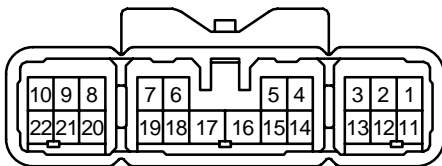
90980-10455



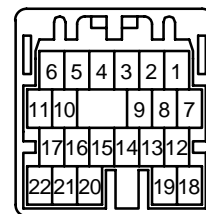
90980-10457



90980-10552



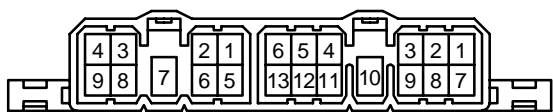
90980-10977



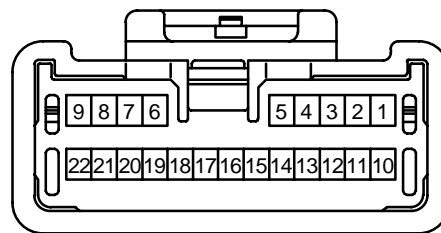
90980-11345

TABLE OF HOUSING SHAPE

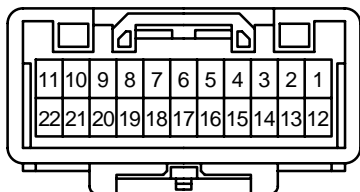
<MALE> 22P Non-waterproof Type



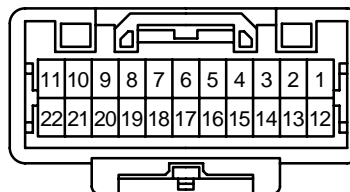
90980-11477



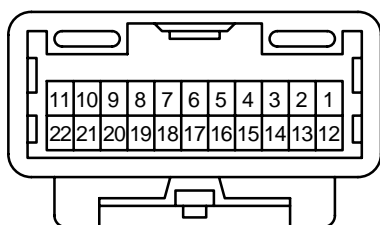
90980-11503



90980-11926

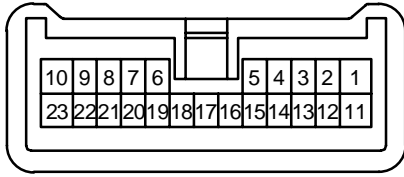


90980-12024

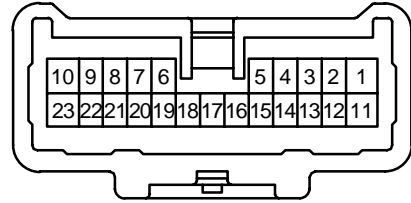


90980-12371  
(90980-12544)

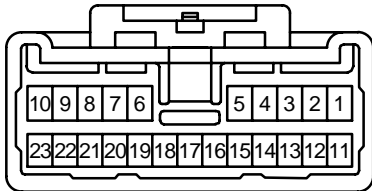
<MALE> 23P Non-waterproof Type



90980-10920



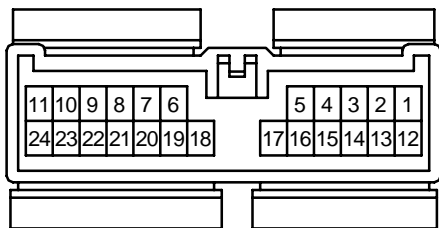
90980-11208



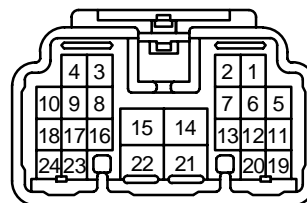
90980-11380

TABLE OF HOUSING SHAPE

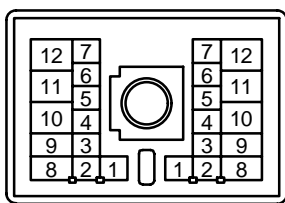
<MALE> 24P Non-waterproof Type



90980-10779

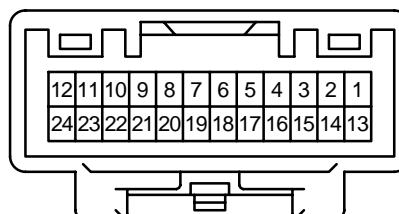


90980-10880  
(90980-11762)



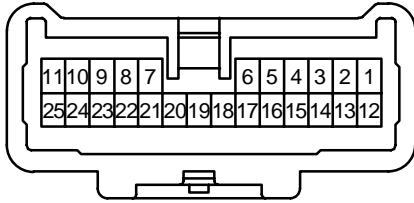
B A

90980-10954

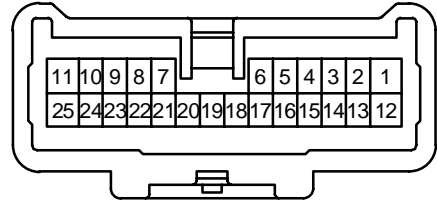


90980-12193

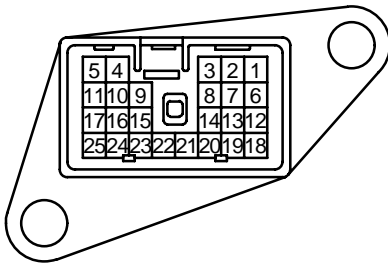
<MALE> 25P Non-waterproof Type



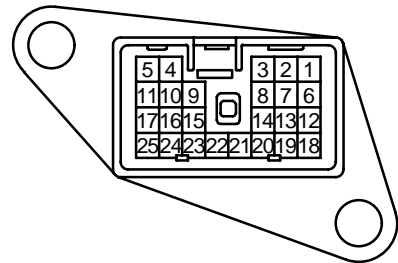
90980-11133



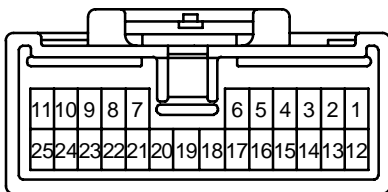
90980-11158



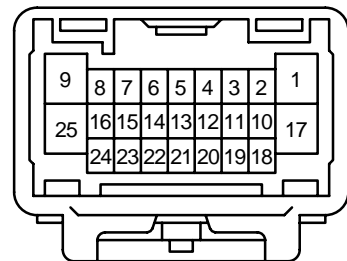
90980-11373



90980-11374



90980-11403

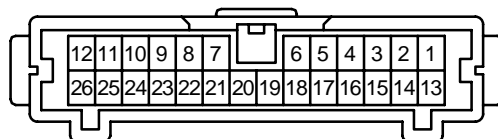


90980-12413

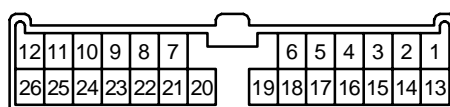


## TABLE OF HOUSING SHAPE

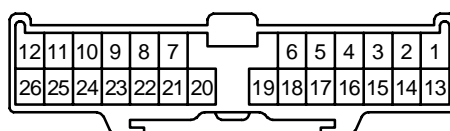
## &lt;MALE&gt; 26P Non-waterproof Type



90980-10315

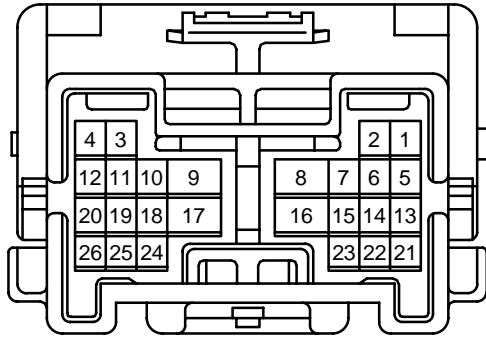


90980-10599

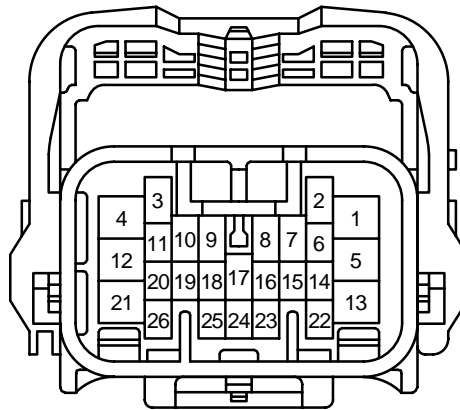


90980-10750

<MALE> 26P Non-waterproof Type



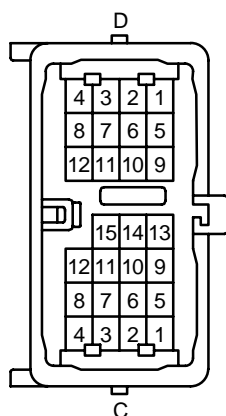
90980-11610



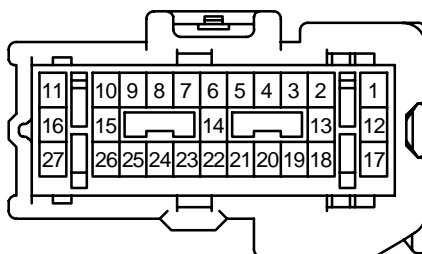
90980-11631

## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 27P Non-waterproof Type

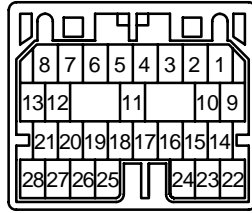


90980-11357

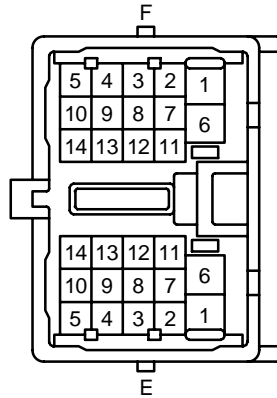


90980-11669

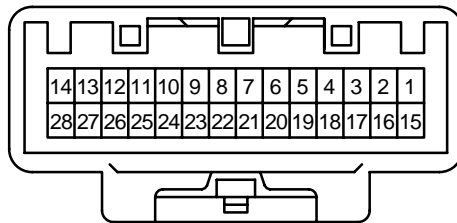
<MALE> 28P Non-waterproof Type



90980-11343



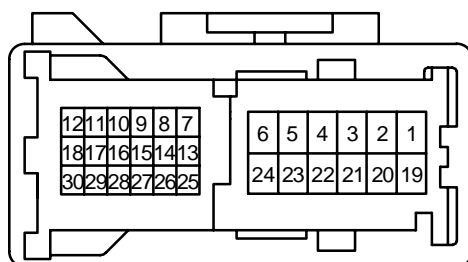
90980-11356



90980-12409

## TABLE OF HOUSING SHAPE

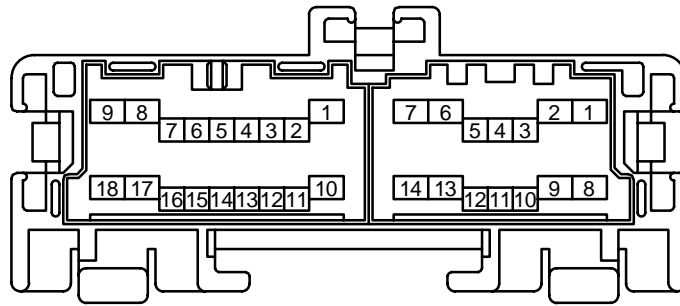
## &lt;MALE&gt; 30P Non-waterproof Type



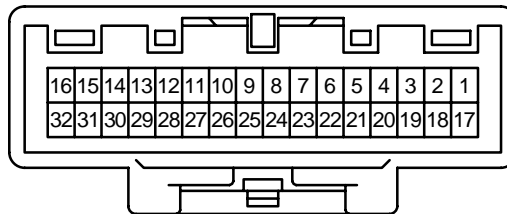
90980-12516

TABLE OF HOUSING SHAPE

<MALE> 32P Non-waterproof Type



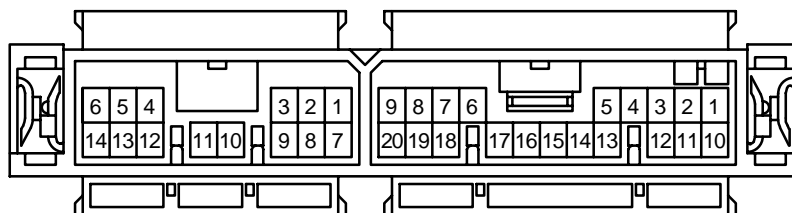
90980-11222



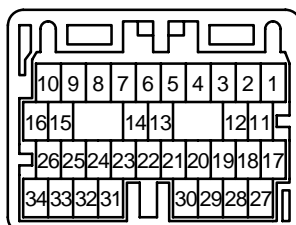
90980-12262

TABLE OF HOUSING SHAPE

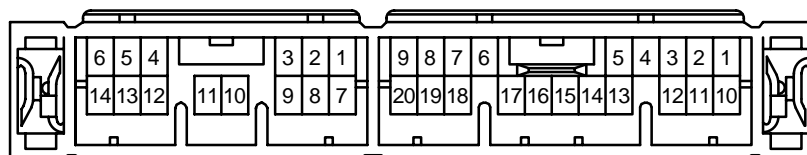
<MALE> 34P Non-waterproof Type



90980-10606  
(90980-10722)

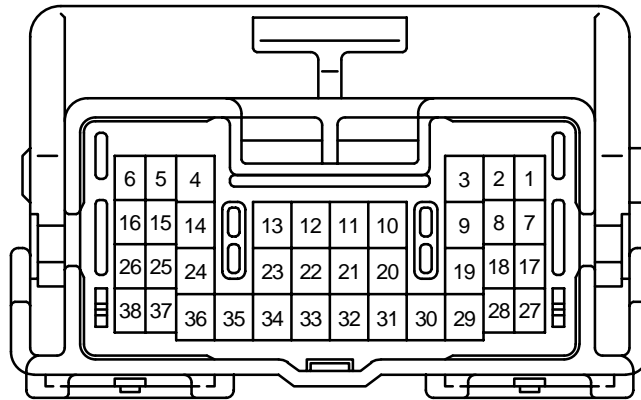


90980-11346



90980-11549

### <MALE> 38P Non-waterproof Type

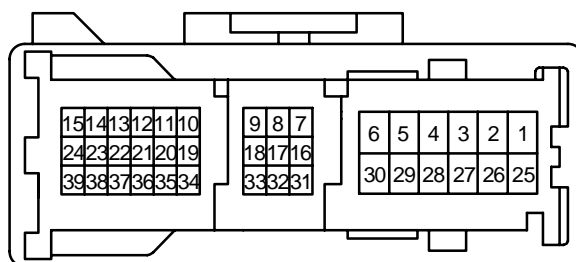


90980-11554



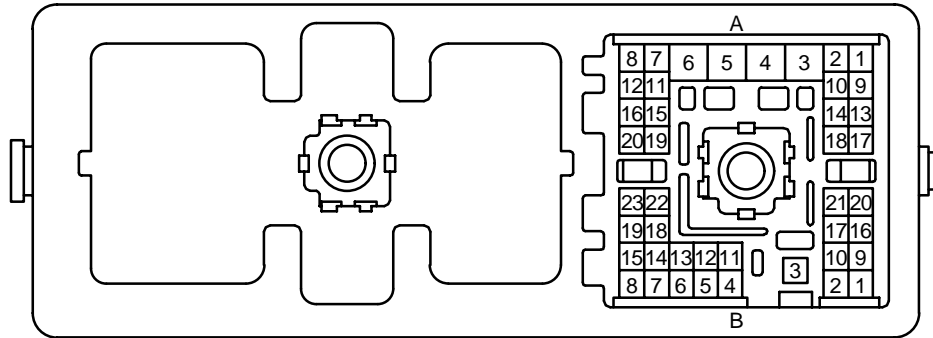
## TABLE OF HOUSING SHAPE

## &lt;MALE&gt; 39P Non-waterproof Type



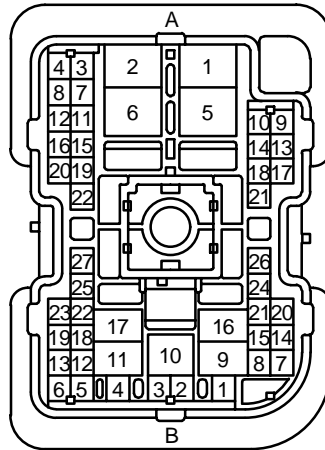
90980-12515

<MALE> 43P Non-waterproof Type



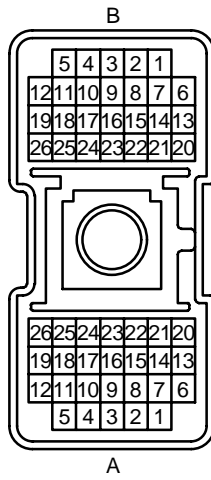
90980-11355

## TABLE OF HOUSING SHAPE

**<MALE> 49P Non-waterproof Type**

90980-11430

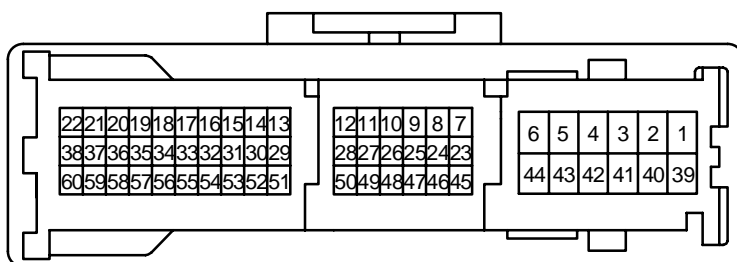
### <MALE> 52P Non-waterproof Type



90980-10951

TABLE OF HOUSING SHAPE

<MALE> 60P Non-waterproof Type



90980-12514



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# HOUSING PART NUMBER LIST

## HINT:

- The housing, which have more than two or more types mentioned at the terminal items, is hybrid type housing.
- The availability of the supply parts is effective as of the end of October, 2007.

## NOTES:

The following marks are used in the table.

O	Supply parts are available
X	Supply parts are not available
M	Male
F	Female
S	Sealed (Waterproof Type)
U	Unsealed (Non-waterproof Type)
*	Gold-plated repair wire is available
Y	Yellow
L	Blue
R	Red
PCB	Printed Circuit Board
IDC	Insulation Displacement Connector

E





## HOUSING PART NUMBER LIST

## List of equivalent for the gold and tin-plated repair wire

Repair Wire Part No.		
Tin-plated (Sn)		Gold-plated (Au)
82998-12160	(2.3.M.U)	-24050
-12190	(1.8.F.U)	-12300
-12260	(2.3.M.S)	-24070
-12270	(2.3.F.S)	-24080
-12310	(1.0.F.U)	-12320
-12330	(2.3II.M.U)	-12350
-12340	(2.3II.F.U)	-12360
-12430	(2.3II.M.S)	-12450
-12440	(2.3II.F.S)	-12460
-12670	(1.0III.M.U)	-12680
-12690	(1.0III.F.U)	-12880
-12720	(1.0III.F.S)	-12730
-12750	(0.64.F.U)	-12760
-12790	(2.3II.F.S)	-12780
-12830	(1.0JII.F.U)	-12850
-12870	(0.64III.F.U)	-12860
-24020	(1.0II.F.U)	-24110
-24090	(1.8II.M.U)	-24130
-24230	(0.64.M.U)	-24240
-24250	(0.64.F.S)	-24260
-24270	(0.64II.M.U)	-24280
-24290	(0.64II.F.U)	-24300
-24310	(1.0J.F.U)	-24320
-24360	(0.64.M.S)	-24370

\* Example : 82998-24050 indicates the gold-plated 82998-12160.

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10030	X	TODC	M	17	U	12080	-	Y	
10032	X	TODC	M	13	U	12080	-	Y	
10038	X	TODC	M	2	U	12080	-	Y	
10039	O	TODC	F	2	U	12090	-	Y	
10040	O	TODC	M	5	U	12080	-	Y	
10041	X	TODC	F	5	U	12090	-	Y	
10042	X	TODC	M	7	U	12080	-	Y	
10043	O	TODC	F	7	U	12090	-	Y	
10055	O	TODC	M	3	U	12080	-	Y	
10056	O	TODC	F	3	U	12090	-	Y	
10064	O	MIC	F	21	U	12120	-	Y	
10066	X	TODC	F	15	U	12090	-	Y	
10069	O	SL	F	2	S	-	-	-	
10087	O	TODC	M	9	U	12080	-	Y	
10088	X	6.3	F	3	U	-	-	-	Splash Proof, Terminal Lance Type1
10091	O	6.3	M	2	U	-	-	-	Splash Proof, Terminal Lance
10092	O	6.3	F	2	U	-	-	-	Splash Proof, Terminal Lance Type1
10093	O	6.3	M	3	U	-	-	-	Splash Proof, Terminal Lance
10096	X	TODC	M	6	U	12080	-	Y	Splash Proof
10097	O	TODC	F	6	U	12090	-	Y	Splash Proof
10100	X	TODC	M	16	U	12080	-	Y	Splash Proof
10101	X	TODC	F	16	U	12090	-	Y	Splash Proof
10104	X	6.3	M	4	U	-	-	-	Terminal Lance
10105	X	6.3	F	4	U	-	-	-	Terminal Lance Type1
10108	X	SL	F	2	S	-	-	-	
10109	X	SL	F	2	S	-	-	-	
10110	X	6.3	F	3	U	-	-	-	Splash Proof, Terminal Lance Type1
10111	X	FPC	F	3	U	-	-	-	
10112	X	FPC	F	8	U	-	-	-	
10113	X	FPC	F	8	U	-	-	-	
10114	O	7.7	M	1	U	12010	-	-	Splash Proof, Terminal Lance
10115	O	7.7	F	1	U	12020	-	-	Splash Proof, Terminal Lance

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10116	O	6.3	F	2	U	-	-	-	Splash Proof, Terminal Lance Type1
10117	O	TODC	M	5	U	12080	-	Y	
10118	O	7.7	F	3	U	12020	-	-	Terminal Lance
10119	X	FPC	F	8	U	-	-	-	
10121	O	TODC	F	2	U	12090	-	Y	
10122	X	7.7	M	2	U	12010	-	-	Splash Proof, Terminal Lance
10123	O	7.7	F	2	U	12020	-	-	Splash Proof, Terminal Lance
10124	X	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
10125	X	TODC	M	1	U	12080	-	Y	Splash Proof
10126	O	TODC	M	4	U	12080	-	Y	
10127	O	TODC	F	4	U	12090	-	Y	
10132	O	LAC	F	13	U	12110	-	Y	
10133	O	LAC	F	9	U	12110	-	Y	
10134	X	6.3	M	6	U	-	-	-	Terminal Lance
10136	X	LAC	F	13	U	12110	-	Y	
10137	X	LAC	F	9	U	12110	-	Y	
10139	O	6.3	M	4	U	-	-	-	Splash Proof, Terminal Lance
10140	X	6.3	F	4	U	-	-	-	Splash Proof, Terminal Lance Type1
10141	X	SL	F	2	S	-	-	-	
10142	O	6.3	F	4	U	-	-	-	Terminal Lance Type1
10143	X	FPC	F	3	U	-	-	-	
10144	X	6.3	M	4	U	-	-	-	Terminal Lance
10145	X	6.3 7.7	M	2 1	U	- 12010	- -	- -	Terminal Lance
10146	X	6.3 7.7	F	2 1	U	- 12020	- -	- -	Terminal Lance Type1 Terminal Lance
10147	X	TODC	M	8	U	12080	-	Y	
10148	X	TODC	F	8	U	12090	-	Y	
10149	O	TODC	M	12	U	12080	-	Y	
10150	X	TODC	F	12	U	12090	-	Y	
10152	O	MIC	F	9	U	12120	-	Y	
10153	O	2.3	F	12	U	12170	-	Y	

E

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10154	X	6.3 7.7	M	2 1	U	- 12010	- -	- -	Terminal Lance
10156	O	6.3	M	2	U	-	-	-	Splash Proof, Terminal Lance, w/o Clamp
10157	O	6.3	F	2	U	-	-	-	Splash Proof, Terminal Lance Type1
10158	X	FPC	F	10	U	-	-	-	
10159	X	FPC	F	10	U	-	-	-	
10160	O	7.7	M	1	U	12010	-	-	Terminal Lance
10161	O	6.3	M	5	U	-	-	-	Splash Proof, Terminal Lance, w/o Clamp
10162	O	6.3	F	5	U	-	-	-	Splash Proof, Terminal Lance Type1
10163	O	TODC	M	3	U	12080	-	Y	
10164	X	TODC	F	3	U	12090	-	Y	
10165	O	7.7	F	1	U	12020	-	-	Terminal Lance
10168	X	6.3	F	2	U	-	-	-	Splash Proof, Terminal Lance Type1
		7.7		1		12020	-	-	Splash Proof, Terminal Lance
10169	X	6.3	M	8	U	-	-	-	Terminal Lance
10170	O	6.3	M	4	U	12050	-	Y	Housing Lance, w/o Clamp
10171	O	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10173	O	6.3	F	6	U	12060	12580	Y	Housing Lance Type1
10174	O	6.3	M	8	U	12050	-	Y	Housing Lance
10175	O	6.3	F	8	U	12060	12580	Y	Housing Lance Type1
10176	O	6.3	M	10	U	12050	-	Y	Housing Lance
10177	O	6.3	F	10	U	12060	12580	Y	Housing Lance Type1
10178	O	6.3	M	1	U	12050	-	Y	Housing Lance
10179	O	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
10180	X	6.3	M	3	U	-	-	-	Terminal Lance
10181	X	6.3	F	3	U	-	-	-	Terminal Lance Type1
10182	O	TODC	M	1	U	12080	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10183	O	TODC	F	1	U	12090	-	Y	
10184	X	TODC	F	2	U	12090	-	Y	Splash Proof
10185	X	7.7	F	2	U	12020	-	-	Terminal Lance
10186	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Clamp
		7.7		1		12030	-	-	Housing Lance Type1, w/ Clamp
10187	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Clamp
		7.7		1		12030	-	-	Housing Lance Type1, w/ Clamp
10188	O	6.3	M	2	U	12050	-	Y	Housing Lance
		7.7		1		12030	-	-	Housing Lance Type1
10189	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
		7.7		1		12040	-	-	Housing Lance
10190	O	LAC	M	3	U	12100	-	Y	Splash Proof
10191	O	LAC	F	3	U	12110	-	Y	Splash Proof
10192	O	LAC	M	2	U	12100	-	Y	Splash Proof
10193	O	LAC	F	2	U	12110	-	Y	Splash Proof
10194	O	TODC	M	6	U	12080	-	Y	Splash Proof
10195	O	TODC	F	6	U	12090	-	Y	Splash Proof
10196	X	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10197	O	TODC	F	1	U	12090	-	Y	Splash Proof
10198	X	6.3	M	2	U	12050	-	Y	Splash Proof, Housing Lance, w/ Clamp
		7.7		1		12030	-	-	Splash Proof, Housing Lance Type1, w/ Clamp
10199	O	6.3	F	2	U	-	-	-	Splash Proof, Terminal Lance, w/o Clamp
		7.7		1		12020	-	-	
10200	O	LAC	M	1	U	12100	-	Y	Splash Proof
10201	O	LAC	F	1	U	12110	-	Y	Splash Proof
10202	O	LAC	M	4	U	12100	-	Y	Splash Proof
10203	O	LAC	F	4	U	12110	-	Y	Splash Proof
10204	O	LAC	M	8	U	12100	-	Y	Splash Proof
10205	O	LAC	F	8	U	12110	-	Y	Splash Proof

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-10207	X	TODC	F	21	U	82998-12090	82998--	Y	
10208	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Flange
		TODC		6		12080	-	Y	w/ Flange
10209	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
		TODC		6		12090	-	Y	
10210	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/o Clamp
		TODC		6		12080	-	Y	
10213	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/o Clamp
10214	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
10215	O	6.3	M	3	U	12050	-	Y	Housing Lance, w/o Clamp
10216	O	6.3	F	3	U	12060	12580	Y	Housing Lance Type1
10217	O	TODC	M	4	U	12080	-	Y	Splash Proof
10218	O	TODC	F	4	U	12090	-	Y	Splash Proof
10219	O	6.3	M	4	U	12050	-	Y	Housing Lance
10220	O	6.3	F	4	U	-	-	-	Splash Proof, Terminal Lance Type1
10221	O	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10222	X	6.3	F	3	U	12060	12580	Y	Housing Lance Type1
10223	O	6.3	M	6	U	12050	-	Y	Housing Lance
10224	O	6.3	F	6	U	12060	12580	Y	Housing Lance Type1
10225	X	6.3	M	8	U	12050	-	Y	Housing Lance
10228	O	8.0	F	3	U	-	-	-	Terminal Lance Type1, Head Lamp
10229	X	6.3	F	1	U	-	-	-	Terminal Lance Type2
10231	O	6.3	M	3	U	12050	-	Y	Housing Lance
10232	O	6.3	F	3	U	12060	12580	Y	Housing Lance Type1
10233	X	6.3	M	2	U	12050	-	Y	Housing Lance
		TODC		23		12080	-	Y	
10235	O	6.3	M	2	U	-	-	-	Splash Proof, Terminal Lance, w/ Clamp
		7.7		1		12010	-	-	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10236	X	6.3	F	2	U	12060	12580	Y	Splash Proof, Housing Lance Type1
		7.7		1		12040	-	-	Splash Proof, Housing Lance
10237	X	6.3	M	4	U	12050	-	Y	Housing Lance
10238	X	7.7	F	2	U	12040	-	-	Housing Lance
10239	O	6.3	F	3	U	12060	12580	Y	Splash Proof, Housing Lance Type1
10242	O	TODC	M	2	U	12080	-	Y	Splash Proof
10243	X	TODC	F	2	U	12090	-	Y	Splash Proof
10244	O	TODC	M	3	U	12080	-	Y	Splash Proof
10245	X	TODC	F	3	U	12090	-	Y	Splash Proof
10246	O	6.3	M	1	U	12050	-	Y	Splash Proof, Housing Lance, w/o Clamp
10247	O	6.3	F	1	U	12060	12580	Y	Splash Proof, Housing Lance Type1
10248	O	6.3	M	3	U	12050	-	Y	Splash Proof, Housing Lance, w/o Clamp
10249	O	6.3	F	3	U	12060	12580	Y	Splash Proof, Housing Lance Type1
10250	O	6.3	F	1	U	-	-	-	Terminal Lance Type3
10251	O	6.3	M	1	U	12050	-	Y	Housing Lance, w/o Clamp
10252	X	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
10253	O	6.3	M	1	U	12050	-	Y	Housing Lance
10254	X	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
10255	O	6.3	M	2	U	12050	-	Y	Housing Lance
10256	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
10257	X	6.3	M	3	U	12050	-	Y	Housing Lance, w/o Clamp
10258	X	6.3	F	1	U	-	-	-	Terminal Lance Type3
10259	X	6.3	M	4	U	12050	-	Y	Housing Lance
10260	X	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10261	X	6.3	M	5	U	12050	-	Y	Housing Lance

E

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10262	X	6.3	F	5	U	12060	12580	Y	Housing Lance Type1
10263	X	6.3	M	7	U	12050	-	Y	Housing Lance
10264	X	6.3	F	7	U	12060	12580	Y	Housing Lance Type1
10265	X	6.3	M	9	U	12050	-	Y	Housing Lance
10266	X	6.3	F	9	U	12060	12580	Y	Housing Lance Type1
10272	X	LC	M	8	U	-	-	-	
10273	X	LC	F	8	U	-	-	-	
10274	O	TODC	F	5	U	12090	-	Y	
10275	O	TODC	M	7	U	12080	-	Y	
10276	O	6.3	M	5	U	12050	-	Y	Housing Lance
10277	X	6.3	M	7	U	12050	-	Y	Housing Lance
10278	X	6.3	M	9	U	12050	-	Y	Housing Lance
10279	O	TODC	M	8	U	12080	-	Y	
10280	O	TODC	F	8	U	12090	-	Y	
10281	O	6.3 TODC	M	3 7	U	12050 12080	- -	Y Y	Housing Lance
10282	O	6.3 TODC	F	3 7	U	12060 12090	12580 -	Y Y	Housing Lance Type1
10283	O	6.3	M	3	U	12050	-	Y	Housing Lance, w/ Clamp
10284	X	TODC	M	18	U	12080	-	Y	
10285	X	TODC	F	18	U	12090	-	Y	
10286	X	TODC	M	2	U	12080	-	Y	
10287	O	TODC	M	16	U	12080	-	Y	Splash Proof
10288	X	TODC	F	16	U	12090	-	Y	Splash Proof
10290	X	LC	F	6	U	-	-	-	
10291	X	LC	M	14	U	-	-	-	
10292	X	LC	F	14	U	-	-	-	
10294	O	PULSE LOCK	F	10	U	12210	-	L	
10295	O	PULSE LOCK	F	18	U	12210	-	L	
10296	O	PULSE LOCK	F	24	U	12210	-	L	
10297	O	TODC	M	2	U	12080	-	Y	
10298	O	TODC	F	2	U	12090	-	Y	
10299	X	6.3	M	3	U	12050	-	Y	Housing Lance



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10300	O	6.3	M	3	U	12050	-	Y	Housing Lance, w/ Flange
10301	O	MFPC	F	8	U	12150	-	L	
10302	O	MFPC	F	10	U	12150	-	L	
10303	O	MFPC	F	12	U	12150	-	L	
10304	O	MFPC	F	10	U	12150	-	L	
10305	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Clamp
10306	O	6.3	M	2	U	12050	-	Y	Housing Lance
		TODC		2		12080	-	Y	
10307	X	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
		TODC		2		12090	-	Y	
10309	O	MIC	F	5	U	12120	-	Y	
10311	O	MIC	F	7	U	12120	-	Y	
10312	O	TODC	M	6	U	12080	-	Y	
10313	O	TODC	F	6	U	12090	-	Y	
10314	X	TODC	M	5	U	12080	-	Y	
10315	X	MODU	M	26	U	-	-	-	
10316	X	MODU	F	26	U	-	-	-	
10317	O	6.3	M	1	U	12050	-	Y	Housing Lance
		TODC		8		12080	-	Y	
10318	O	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
		TODC		8		12090	-	Y	
10319	O	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
		TODC		10		12090	-	Y	
10320	X	2.3	F	2	U	12170	-	Y	
10321	O	2.3	F	8	U	12170	-	Y	
10322	O	2.3	F	10	U	12170	-	Y	
10323	O	2.3	M	13	U	12160*	-	L,Y	
10324	O	2.3	F	13	U	12170	-	Y	
10326	O	2.3	F	18	U	12170	-	Y	
10327	X	2.3	F	20	U	12170	-	Y	
10328	X	2.3	F	22	U	12170	-	Y	
10329	X	2.3	M	12	U	12160*	-	L,Y	Housing Lance
		6.3		2		12050	-	Y	
10330	O	2.3	F	12	U	12170	-	Y	Housing Lance Type1
		6.3		2		12060	12580	Y	

E

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10331	X	2.3 6.3	F	14 1	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10332	O	7.7	F	1	U	12040	-	-	Housing Lance
10333	X	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
10334	O	6.3	F	6	U	12060	12580	Y	Housing Lance Type1
10335	O	6.3	F	6	U	12060	12580	Y	Housing Lance Type1
10336	X	6.3	F	8	U	12060	12580	Y	Housing Lance Type1
10337	X	6.3	F	11	U	12060	12580	Y	Housing Lance Type1
10338	O	6.3	F	11	U	12060	12580	Y	Housing Lance Type1
10339	X	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
		7.7		1		12040	-	-	Housing Lance
10340	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
		7.7		3		12040	-	-	Housing Lance
10341	O	6.3	F	3	U	12060	12580	Y	Splash Proof, Housing Lance Type1
10342	X	7.7	M	1	U	12030	-	-	Housing Lance Type1
10343	O	7.7	F	1	U	12040	-	-	Housing Lance
10344	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/o Clamp
10345	X	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
10346	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Clamp
10347	O	6.3	M	3	U	12050	-	Y	Splash Proof, Housing Lance, w/o Clamp
10348	X	6.3	F	2	U	-	-	-	Terminal Lance Type2
10350	O	PULSE LOCK	F	18	U	12210	-	L	
10351	O	PULSE LOCK	F	12	U	12210	-	L	
10352	O	TODC	F	2	U	12090	-	Y	Splash Proof, w/ Clamp
10353	O	TODC	F	3	U	12090	-	Y	Splash Proof, w/ Clamp

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10354	X	2.3	M	2	U	12160*	-	L,Y	w/o Clamp
10355	O	2.3	F	2	U	12170	-	Y	
10356	O	7.7	M	2	U	12030	-	-	Housing Lance Type1
10357	O	7.7	F	2	U	12040	-	-	Housing Lance
10358	O	6.3	F	8	U	12060	12580	Y	Housing Lance Type1
10359	O	6.3	F	1	U	-	-	-	Terminal Lance Type2
10360	X	2.3	M	8	U	12160*	-	L,Y	
10361	O	2.3	M	20	U	12160*	-	L,Y	
10362	O	SP	F	2	U	12530	-	L	Signal
10363	O	5.2	F	1	U	-	-	-	
10364	X	2.3	M	3	U	12160*	-	L,Y	w/o Clamp
10365	O	2.3	F	3	U	12170	-	Y	
10366	O	2.3	M	6	U	12160*	-	L,Y	w/o Clamp
10367	O	2.3	F	6	U	12170	-	Y	
10368	O	MFPC	F	14	U	12150	-	L	
10371	O	PULSE LOCK	F	14	U	12210	-	L	
10372	O	MFPC	F	12	U	12150	-	L	
10373	X	7.7	F	2	U	12040	-	-	Splash Proof, Housing Lance
		TODC		2		12090	-	Y	Splash Proof
10374	O	7.7	M	2	U	12030	-	-	Splash Proof, Housing Lance Type1
10375	O	2.3	M	10	U	12160*	-	L,Y	w/o Flange
10376	O	SP	F	3	U	12530	-	L	Signal
				2		12520	-	L	Power
10377	X	SP	F	10	U	12530	-	L	Signal
10378	O	MIC	F	4	S	-	-	-	
10379	O	TODC	M	9	U	12080	-	Y	Splash Proof
10380	X	TODC	F	9	U	12090	-	Y	Splash Proof, w/o Clamp
10381	O	TODC	F	9	U	12090	-	Y	Splash Proof, w/ Clamp
10382	O	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
		7.7		2		12040	-	-	Housing Lance
10383	X	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Flange
		TODC		6		12080	-	Y	w/ Flange

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10384	O	2.3	M	6	U	12160*	-	L,Y	w/o Flange
10385	O	7.7	F	2	U	12040	-	-	Housing Lance
10386	O	6.3	F	9	U	12060	12580	Y	Housing Lance Type1
10392	X	TLC TODC	M	3	U	12220	-	L	Splash Proof, w/ Clamp
				2		12080	-	Y	
10393	X	TLC TODC	F	3	U	12230	-	L	Splash Proof
				2		12090	-	Y	
10394	O	TLC	M	3	S	12280	-	R	w/ Clamp
10395	O	TLC	F	3	S	12290	-	R	
10398	X	TLC	F	1	U	12230	-	L	
10399	O	TLC	M	4	U	12220	-	L	
10400	O	TLC	F	4	U	12230	-	L	
10401	O	TLC	M	6	U	12220	-	L	
10402	O	TLC	F	6	U	12230	-	L	
10403	O	TLC TODC	M	6	U	12220	-	L	
				2		12080	-	Y	
10404	O	TLC TODC	F	6	U	12230	-	L	
				2		12090	-	Y	
10405	O	2.3 TLC	M	6	U	12160*	-	L,Y	
				6		12220	-	L	
10406	O	2.3 TLC	F	6	U	12170	-	Y	
				6		12230	-	L	
10407	O	TLC	M	12	U	12220	-	L	
10408	O	TLC	F	12	U	12230	-	L	
10410	O	6.3	M	3	U	12050	-	Y	Housing Lance, w/ Clamp
10411	X	6.3 TODC	M	2	U	12050	-	Y	Housing Lance, w/ Clamp w/ Clamp
				6		12080	-	Y	
10412	O	6.3	M	2	U	-	-	-	Splash Proof, Terminal Lance, w/o Clamp
10413	X	2.3	M	18	U	12160*	-	L,Y	
10414	O	2.3	F	6	U	12170	-	Y	
10415	O	2.3 6.3	M	10	U	12160*	-	L,Y	Housing Lance
				2		12050	-	Y	
10418	O	2.3 TODC	M	6	U	12160*	-	L,Y	
				2		12080	-	Y	
10419	O	2.3 TODC	F	6	U	12170	-	Y	
				2		12090	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 10420	O	2.3	F	3	U	82998- 12170	82998- -	Y	
10421	O	2.3 6.3	F	10 2	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10422	X	2.3 6.3	M	12 2	U	12160* 12050	- -	L,Y Y	Housing Lance
10423	O	MIC	F	2	S	-	-	-	
10424	X	6.3	M	2	U	12050	-	Y	Housing Lance
10425	X	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
10426	O	MIC	F	2	S	-	-	-	
10427	X	2.3	M	10	U	12160*	-	L,Y	w/ Flange
10428	O	8.0	F	3	U	24140	24200	Y	Housing Lance Type1, Head Lamp
10430	O	TLC	M	8	U	12220	-	L	
10431	O	TLC	F	8	U	12230	-	L	
10432	O	2.3	F	12	U	12170	-	Y	
10433	X	2.3	M	1	U	12160*	-	L,Y	w/o Clamp
10434	X	2.3	M	1	U	12160*	-	L,Y	w/ Clamp
10435	X	2.3	F	1	U	12170	-	Y	
10437	O	2.3	M	2	U	12160*	-	L,Y	w/ Clamp
10438	X	2.3	M	1	S	12260*	-	L	w/ Clamp
10439	X	2.3	F	1	S	12270*	12600	L,Y	
10442	X	1.8 6.3	M	12 3	S	- -	- -	- -	Housing Lance
10443	X	1.8 6.3	F	12 3	S	12620 12540	- -	L Y	Housing Lance
10444	O	TLC	M	3	S	12280	-	R	w/o Clamp
10446	O	6.3 7.7	M	4 2	U	12050 12030	- -	Y -	Housing Lance Housing Lance Type1
10447	O	6.3 7.7	F	4 2	U	12060 12040	12580 -	Y -	Housing Lance Type1 Housing Lance
10448	O	8.0	F	3	U	24140	24200	Y	Housing Lance Type1, Head Lamp
10449	O	6.3 II	F	8	U	24170	-	Y	
10450	O	6.3 II	F	11	U	24170	-	Y	
10451	X	6.3	M	7	U	12050	-	Y	Housing Lance

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10452	X	6.3	F	7	U	12060	12580	Y	Housing Lance Type1
10453	O	2.3 6.3	M	12 4	U	12160* 12050	- -	L,Y Y	Housing Lance
10454	O	2.3 6.3	F	12 4	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10455	O	TLC	M	22	U	12220	-	L	
10456	O	TLC	F	22	U	12230	-	L	
10457	O	2.3 6.3	M	19 3	U	12160* 12050	- -	L,Y Y	Housing Lance
10458	X	2.3 6.3	F	19 3	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10460	O	TLC	F	7	U	12230	-	L	
10461	X	TODC	M	15	U	12080	-	Y	w/ Clamp
10462	O	2.3 6.3	M	5 3	U	12160* 12050	- -	L,Y Y	Housing Lance
10463	O	2.3 6.3	F	5 3	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10464	X	TODC	F	3	U	12090	-	Y	
10465	X	2.3	F	2	U	12170	-	Y	
10466	O	TNS	M	4	U	12240	-	L	
10467	O	TNS	F	4	U	12250	-	L	
10468	O	TNS	M	10	U	12240	-	L	
10469	O	TNS	F	10	U	12250	-	L	
10470	O	TNS	M	14	U	12240	-	L	
10471	O	TNS	F	14	U	12250	-	L	
10472	O	2.3 TNS	M	12 9	U	12160* 12240	- -	L,Y L	
10473	O	2.3 TNS	F	12 9	U	12170 12250	- -	Y L	
10474	O	2.3	F	2	S	12270*	12600	L,Y	
10475	O	2.3	M	4	S	12260*	-	L	
10476	O	2.3	F	4	S	12270*	12600	L,Y	
10477	X	2.3	M	6	S	12260*	-	L	
10478	X	2.3	F	6	S	12270*	12600	L,Y	
10479	O	2.3 6.3	M	12 1	U	12160* 12050	- -	L,Y Y	Housing Lance

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10480	O	2.3 6.3	F	12 1	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10481	O	6.3	F	2	U	-	24210	Y	Housing Lance Type2, FOG-LP
10482	X	2.3	F	2	U	12170	-	Y	
10483	O	2.3	F	3	U	12170	-	Y	
10484	O	2.3	F	4	U	12170	-	Y	
10485	X	2.3 TODC	M	10 6	U	12160* 12080	- -	L,Y Y	
10486	X	2.3 TODC	F	10 6	U	12170 12090	- -	Y Y	
10487	O	FTC	F	5	U	12510	-	Y	
10488	O	FTC	F	5	U	12510	-	Y	
10489	O	FTC	F	3	U	12510	-	Y	
10490	O	FTC	F	3	U	12510	-	Y	
10491	O	MIC	F	2	U	12120	-	Y	
10492	O	2.3	M	3	S	12260*	-	L	w/o Clamp
10493	O	2.3	M	3	S	12260*	-	L	w/ Clamp
10494	O	2.3	F	3	S	12270*	12600	L,Y	
10495	O	2.3	M	2	S	12260*	-	L	
10496	O	2.3	F	2	S	12270*	12600	L,Y	
10497	X	2.3	M	2	S	12260*	-	L	
10498	O	2.3	F	2	S	12270*	12600	L,Y	w/ Clamp
10499	O	6.3	M	1	U	12050	-	Y	Housing Lance, w/ Clamp
10500	O	2.3	M	3	S	12260*	-	L	w/ Clamp
10501	O	2.3	F	3	S	12270*	12600	L,Y	
10502	O	2.3	M	4	U	12160*	-	L,Y	
10503	O	2.3	M	4	U	12160*	-	L,Y	w/ Clamp
10504	O	2.3	F	4	U	12170	-	Y	
10505	X	2.3	M	6	U	12160*	-	L,Y	w/ Clamp
10507	X	2.3	F	14	U	12170	-	Y	
10509	O	TODC	F	5	U	12090	-	Y	
10510	O	TNS	M	4	S	-	-	-	w/o Clamp
10511	O	TNS	F	2	S	-	-	-	
10512	O	TNS	F	2	S	-	-	-	
10513	O	2.3	M	12	U	12160*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10514	X	2.3 6.3	F	2 2	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10515	O	2.3	F	4	U	12170	-	Y	
10517	X	2.3 6.3 7.7	F	4 2 2	U	12170 12060 12040	- 12580 -	Y Y -	Housing Lance Type1 Housing Lance
10518	O	2.3 6.3	M	4 1	U	12160* 12050	- -	L,Y Y	Housing Lance
10519	X	2.3 6.3	M	4 1	U	12160* 12050	- -	L,Y Y	w/ Clamp Housing Lance, w/ Clamp
10520	X	2.3 6.3	F	4 1	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10521	O	2.3 7.7	M	15 1	U	12160* 12030	- -	L,Y -	Housing Lance Type1
10522	X	2.3 7.7	F	15 1	U	12170 12040	- -	Y -	Housing Lance
10523	O	TNS	F	8	U	12250	-	L	
10524	O	TNS	F	12	U	12250	-	L	
10525	O	TNS	F	16	U	12250	-	L	
10526	O	TNS	F	22	U	12250	-	L	
10528	O	TLC	F	10	U	12230	-	L	
10531	X	2.3	M	11	U	12160*	-	L,Y	
10532	O	2.3	F	2	S	12270*	12600	L,Y	
10533	O	2.3	M	2	S	12260*	-	L	w/ Clamp
10534	O	2.3	F	2	S	12270*	12600	L,Y	
10536	O	2.3 6.3	F	8 1	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10537	O	2.3 6.3	F	10 1	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10538	O	2.3	F	14	U	12170	-	Y	
10539	O	2.3	F	16	U	12170	-	Y	
10542	X	2.3	M	16	U	12160*	-	L,Y	w/ Clamp
10543	X	2.3	F	16	U	12170	-	Y	
10544	X	2.3	M	3	U	12160*	-	L,Y	



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10545	X	2.3 6.3	M	12 2	U	12160* 12050	- -	L,Y Y	Housing Lance
10546	X	TLC	M	8	U	12220	-	L	
10547	X	2.3 6.3 7.7	M	12 2 2	S	12260* - -	- - -	L - -	Housing Lance Housing Lance Type1
10548	X	2.3	F	12	S	12270*	12600	L,Y	
10549	O	6.3 7.7	F	2 2	S	- -	- -	- -	Housing Lance
10550	X	2.3 6.3	F	3 2	S	12270* 12540	12600 -	L,Y Y	Housing Lance
10551	X	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10552	O	TNS	M	22	U	12240	-	L	
10553	O	TLC	M	3	S	12280	-	R	w/ Clamp
10554	O	TLC	F	3	S	12290	-	R	
10555	O	2.3	M	2	S	12260*	-	L	
10556	O	2.3	F	2	S	12270*	12600	L,Y	
10557	O	TLC	M	5	S	12280	-	R	w/ Clamp
10558	O	TLC	F	5	S	12290	-	R	
10559	O	7.7	F	2	U	12040	-	-	Housing Lance
10560	O	2.3	M	16	U	12160*	-	L,Y	
10561	O	2.3	F	16	U	12170	-	Y	
10562	X	2.3 6.3 7.7	M	12 2 1	U	12160* 12050 -	- - -	L,Y Y -	Housing Lance Housing Lance Type2
10563	X	2.3 6.3 7.7	F	12 2 1	U	12170 12060 12040	- 12580 -	Y Y -	Housing Lance Type1 Housing Lance
10564	X	1.8	M	12	U	12180	-	L	
10565	X	1.8	F	12	U	12190*	-	L	
10566	X	6.3	M	2	S	-	-	-	Housing Lance, w/ Clamp
10567	O	6.3	F	2	S	-	-	-	Housing Lance
10568	O	TODC	M	12	U	12080	-	Y	Splash Proof
10569	O	TODC	F	12	U	12090	-	Y	Splash Proof
10570	O	TLC	M	5	S	12280	-	R	w/o Clamp
10571	O	2.3	M	2	S	12260*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10572	O	2.3	F	2	S	12270*	12600	L,Y	
10573	O	2.3	M	3	U	12160*	-	L,Y	w/ Clamp
10574	O	2.8	F	3	S	12550	12610	Y	HB3,HB4
10576	O	2.3	F	2	S	12270*	12600	L,Y	
10577	O	TLC	M	3	S	12280	-	R	w/ Clamp
10578	O	2.3	F	2	S	12270*	12600	L,Y	
10579	O	2.8	F	3	S	12550	12610	Y	HB3,HB4
10580	O	2.3	M	2	S	12260*	-	L	
10581	X	2.3	F	2	S	12270*	12600	L,Y	
10582	X	2.3	M	2	S	12260*	-	L	w/ Clamp
10583	X	2.3	F	2	S	12270*	12600	L,Y	
10585	O	TNS	F	24	U	12250	-	L	
10587	O	TNS	F	26	U	12250	-	L	
10589	O	TNS	F	20	U	12250	-	L	
10590	O	2.3	M	4	S	12260*	-	L	
10591	O	2.3	F	4	S	12270*	12600	L,Y	
10592	O	2.3	M	2	S	12260*	-	L	
10593	O	2.3	F	2	S	12270*	12600	L,Y	
10594	O	2.3	M	2	S	12260*	-	L	
10595	O	2.3	F	2	S	12270*	12600	L,Y	
10596	O	2.3	M	6	S	12260*	-	L	
10597	O	2.3	F	6	S	12270*	12600	L,Y	
10598	O	2.3	F	2	S	12270*	12600	L,Y	
10599	O	TNS	M	26	U	12240	-	L	
10600	X	2.3	M	4	U	12160*	-	L,Y	
10601	O	2.3	F	4	U	12170	-	Y	
10602	X	2.3	M	6	U	12160*	-	L,Y	
10603	X	2.3	M	6	U	12160*	-	L,Y	w/ Clamp
10604	O	2.3	F	6	U	12170	-	Y	
10605	O	2.3	F	6	U	12170	-	Y	
10606	O	1.8	M	34	U	12180	-	L	
10607	O	1.8	F	20	U	12190*	-	L	
10608	O	1.8	F	14	U	12190*	-	L	
10609	O	2.3	F	2	S	12270*	12600	L,Y	
10610	O	2.3	F	1	U	12170	-	Y	
		TNS		4		12250	-	L	
10611	O	2.3	F	8	U	12170	-	Y	
		TNS		8		12250	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10612	O	2.3 TNS	F	10 10	U	12170 12250	- -	Y L	
10613	O	TNS	F	16	U	12250	-	L	
10614	O	TNS	F	16	U	12250	-	L	
10616	O	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10617	O	2.3	F	2	S	12270*	12600	L,Y	
10618	O	6.3 7.7	F	2 1	U	12060 12040	12580 -	Y -	Housing Lance Type1 Housing Lance
10619	O	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
10620	X	TLC	M	2	U	12220	-	L	
10621	O	TLC	F	2	U	12230	-	L	
10622	O	2.3	F	2	S	12270*	12600	L,Y	
10623	O	2.3	F	2	S	12270*	12600	L,Y	
10624	O	2.3	F	5	S	12270*	12600	L,Y	
10625	O	2.3	M	2	S	12260*	-	L	w/ Clamp
10626	O	2.3	F	2	S	12270*	12600	L,Y	
10627	O	TLC	M	7	S	12280	-	R	w/ Clamp
10628	O	TLC	F	7	S	12290	-	R	
10629	O	2.3	F	3	S	12270*	12600	L,Y	
10631	O	2.3	F	5	U	12170	-	Y	
10633	X	TLC	F	14	U	12230	-	L	
10634	O	TLC	F	14	U	12230	-	L	
10636	O	TLC	F	16	U	12230	-	L	
10637	X	2.3	F	2	U	12170	-	Y	
10638	O	2.3	F	3	U	12170	-	Y	
10639	O	2.3	M	20	U	12160*	-	L,Y	
10640	O	2.3	F	20	U	12170	-	Y	
10641	O	2.3	M	6	U	12160*	-	L,Y	w/ Flange
10643	O	2.3	F	6	S	12270*	12600	L,Y	
10644	O	2.3	F	5	U	12170	-	Y	
10645	O	MFPC	F	4	U	12150	-	L	
10646	O	6.3	M	4	U	-	-	-	Splash Proof, Terminal Lance, w/ Clamp
10647	O	6.3	M	5	U	-	-	-	Splash Proof, Terminal Lance, w/ Clamp
10648	O	2.3	M	4	S	12260*	-	L	w/ Clamp

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10649	O	2.3	F	4	S	12270*	12600	L,Y	
10651	O	2.3	F	6	S	12270*	12600	L,Y	
10652	O	7.7	F	1	U	12040	-	-	Housing Lance
10653	O	1.8	M	13	S	-	-	-	
10654	O	1.8	F	13	S	12620	-	L	
10656	O	1.8	F	18	U	12190*	-	L	
10658	O	1.8	F	12	U	12190*	-	L	
10659	X	FTC	F	5	U	12510	-	Y	
10660	O	2.3	F	3	U	12170	-	Y	
10662	O	TNS	M	4	S	-	-	-	
10665	O	2.3	M	2	S	12260*	-	L	
10669	O	2.3	F	10	U	12170	-	Y	
10672	O	2.3	F	6	U	12170	-	Y	
10673	X	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
		7.7		2		12040	-	-	Housing Lance
10674	O	2.3	M	18	U	12160*	-	L,Y	Housing Lance
		6.3		1		12050	-	Y	
10675	X	2.3	F	18	U	12170	-	Y	Housing Lance Type1
		6.3		1		12060	12580	Y	
10676	O	TLC	M	7	S	12280	-	R	
10677	O	TLC	M	9	S	12280	-	R	w/ Clamp
10678	O	TLC	F	9	S	12290	-	R	
10679	O	2.3	F	2	U	12170	-	Y	
10682	O	TNS	M	3	S	-	-	-	
10685	X	2.3	F	2	S	12270*	12600	L,Y	Housing Lance
		6.3		2		-	-	-	
10686	O	2.3	F	7	S	12270*	12600	L,Y	Housing Lance
		6.3		2		-	-	-	
10687	X	2.3	M	2	U	12160*	-	L,Y	w/ Clamp
10688	O	5.2	F	1	U	-	-	-	
10689	O	2.3	M	3	S	12260*	-	L	
10690	O	2.3	F	3	S	12270*	12600	L,Y	
10692	O	TNS	F	4	U	12250	-	L	
10693	O	2.3	M	10	U	12160*	-	L,Y	
10694	O	2.3	M	6	U	12160*	-	L,Y	
10695	O	2.3	F	3	S	12270*	12600	L,Y	
10696	O	1.8	F	20	U	12190*	-	L	
10697	O	1.8	F	14	U	12190*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10698	O	TLC	M	3	S	12280	-	R	
10700	O	6.3	M	2	U	-	-	-	Terminal Lance
10701	X	6.3	F	4	U	12060	12580	Y	Housing Lance Type1
10702	O	2.3	F	2	S	12270*	12600	L,Y	
10703	O	6.3	F	1	U	-	-	-	Housing Lance Type3
10704	O	6.3	F	3	U	-	-	-	Housing Lance Type3
10705	O	6.3	F	1	U	12060	12580	Y	Splash Proof, Housing Lance Type1
10706	O	2.3	F	2	S	12270*	12600	L,Y	w/ Clamp
10707	X	2.3	M	2	S	12260*	-	L	
10708	O	6.3	F	3	U	12060	12580	Y	Splash Proof, Housing Lance Type1
10709	O	2.3 TLC	M	2 3	S	12260* 12280	- -	L R	w/ Clamp
10710	O	2.3 TLC	F	2 3	S	12270* 12290	12600 -	L,Y R	
10711	O	1.8	F	4	S	12620	-	L	
10712	X	2.3	F	5	S	12270*	12600	L,Y	
10713	O	6.3 7.7	F	3 2	U	12060 12040	12580 -	Y -	Housing Lance Type1 Housing Lance
10714	O	2.3 6.3	F	9 3	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10715	O	2.3	M	14	U	12160*	-	L,Y	
10716	O	2.3	F	4	U	12170	-	Y	
10717	O	2.3	F	4	U	12170	-	Y	
10718	O	6.3	F	5	U	12060	12580	Y	Housing Lance Type1
10719	O	TLC	M	10	U	12220	-	L	
10720	O	2.3	F	2	S	12270*	12600	L,Y	
10721	X	2.3	F	10	U	12170	-	Y	
10722	O	1.8	M	34	U	12180	-	L	
10723	O	2.3	F	11	U	12170	-	Y	
10724	X	2.3	F	12	U	12170	-	Y	
10725	X	2.3	F	12	U	12170	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10729	O	2.3 6.3	F	5 2	U	12170 12060	- 12580	Y Y	Housing Lance Type1
10730	O	2.3	M	17	U	12160*	-	L,Y	
10731	O	2.3	F	17	U	12170	-	Y	
10734	X	1.8	F	2	S	12620	-	L	
10735	O	1.8	F	2	S	12620	-	L	
10736	O	1.8	F	2	S	12620	-	L	
10737	O	1.8	F	2	S	12620	-	L	
10743	O	1.8	F	12	U	12190*	-	L	
10747	X	8.0	F	3	U	-	-	-	Terminal Lance Type2, Head Lamp
10748	O	2.3	F	2	S	12270*	12600	L,Y	
10749	O	4.8 2.3 II	M	2 2	S	12470 12430*	- -	Y L,Y	
10750	X	TNS	M	26	U	12240	-	L	
10751	O	2.3	M	4	S	12260*	-	L	w/ Clamp
10757	X	Optical fiber	M	8	U	-	-	-	
10758	O	6.3	M	4	U	12050	-	Y	Housing Lance, w/ Clamp
10759	O	6.3 7.7	F	2 2	U	- 12020	- -	- -	Terminal Lance Type1 Terminal Lance
10760	O	5.2 6.3	F	1 1	U	- -	- -	- -	Housing Lance Type3
10762	X	2.3	M	5	U	12160*	-	L,Y	
10763	O	1.8 1.0	F	10 16	U	12190* 12310*	- -	L L	
10764	O	1.0	F	16	U	12310*	-	L	
10765	O	1.8 1.0	F	6 16	U	12190* 12310*	- -	L L	
10766	O	6.3 7.7	F	4 2	U	12060 12040	12580 -	Y -	Housing Lance Type1 Housing Lance
10768	O	2.3	M	4	S	12260*	-	L	w/o Clamp
10772	O	2.3 6.3	F	5 2	U	12170 -	- -	Y -	
10774	X	2.3	M	3	S	12260*	-	L	w/ Clamp
10775	O	TODC	M	9	U	12080	-	Y	Splash Proof

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10776	O	TODC	F	9	U	12090	-	Y	Splash Proof
10777	O	TLC	M	3	S	12280	-	R	w/ Clamp
10778	O	2.3	F	2	S	12270*	12600	L,Y	Housing Lance Type1
		2.3		15	U	12170	-	Y	
		6.3		1	U	12060	12580	Y	
10779	O	TNS	M	24	U	12240	-	L	
10781	O	MIC	F	11	U	12120	-	Y	
10782	O	7.7	F	1	U	12040	-	-	Housing Lance
10783	O	7.7	F	2	U	12040	-	-	Housing Lance
10784	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
		7.7		1		12040	-	-	Housing Lance
10785	X	2.3	F	6	U	12170	-	Y	
10786	O	6.3	F	1	U	12070	-	Y	Terminal Lance Type4,DEFG
10787	X	2.3	M	3	S	12260*	-	L	w/ Clamp
10788	O	2.3	M	2	S	12260*	-	L	w/ Clamp
10789	O	2.3 II	F	5	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10791	X	2.3	M	2	U	12160*	-	L,Y	Housing Lance
		6.3		2		12050	-	Y	
10792	O	6.3	F	1	U	12070	-	Y	Terminal Lance Type4,DEFG
10794	O	2.3 II	M	4	U	12330*	-	L,Y	
10795	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10796	O	2.3 II	M	6	U	12330*	-	L,Y	
10797	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10798	O	2.3 II	M	8	U	12330*	-	L,Y	
10799	O	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10800	O	2.3 II	M	10	U	12330*	-	L,Y	
10801	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10802	O	2.3 II	M	12	U	12330*	-	L,Y	
10803	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10804	O	2.3 II	M	13	U	12330*	-	L,Y	
10805	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10806	O	2.3 II	M	14	U	12330*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10807	O	2.3 II	F	14	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10808	O	2.3 II	M	16	U	12330*	-	L,Y	
10809	O	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10810	O	2.3 II	M	20	U	12330*	-	L,Y	
10811	O	2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10812	O	4.8 2.3 II	M	2 12	U	12370 12330*	- -	Y L,Y	
10813	O	4.8 2.3 II	F	2 12	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10814	O	4.8 2.3 II	M	3 12	U	12370 12330*	- -	Y L,Y	
10815	O	4.8 2.3 II	F	3 12	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10816	O	4.8 2.3 II	M	2 18	U	12370 12330*	- -	Y L,Y	
10817	O	4.8 2.3 II	F	2 18	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10818	O	2.3 II	M	18	U	12330*	-	L,Y	
10819	O	2.3 II	F	18	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10820	O	2.3 II	M	20	U	12330*	-	L,Y	
10821	O	2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10824	O	2.3 II	M	2	U	12330*	-	L,Y	
10825	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10826	X	TLC	M	9	S	12280	-	R	
10827	O	2.3 II	M	15	U	12330*	-	L,Y	
10828	O	2.3 II	F	15	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10829	O	2.3 II	M	11	U	12330*	-	L,Y	
10830	O	2.3 II	F	11	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10831	O	2.3	F	4	S	12270*	12600	L,Y	
10833	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10834	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10836	O	8.0	M	1	S	12490	-	-	
10837	O	8.0	F	1	S	12500	-	-	
10838	O	8.0	M	2	S	12490	-	-	
10839	O	8.0	F	2	S	12500	-	-	
10840	O	4.8	M	3	S	12470	-	Y	
10841	O	4.8	F	3	S	12480	-	Y	
10842	O	2.3 II	M	2	S	12430*	-	L,Y	
10843	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10844	O	4.8 2.3 II	F	2 2	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
10845	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10846	O	2.3	F	2	S	12270*	12600	L,Y	
10847	O	2.3	F	2	S	12270*	12600	L,Y	
10848	O	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10854	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10855	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10856	O	2.3 II 8.0	M	18 1	U	12330* 12390	- -	L,Y -	
10857	O	2.3 II 8.0	F	18 1	U	12340* (24380) 12400	- -	L,Y -	(Low Insertion Force) Housing Lance Type2
10858	O	2.3 II	M	4	U	12330*	-	L,Y	w/ Clamp
10859	O	2.3 II	M	2	U	12330*	-	L,Y	
10860	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10861	O	4.8	M	10	U	12370	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10862	O	4.8	F	10	U	12380	-	Y	
10866	O	8.0	M	4	U	12390	-	-	
10867	O	8.0	F	4	U	12400	-	-	Housing Lance Type2
10868	O	2.3 II	M	4	S	12430*	-	L,Y	
10869	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10870	O	2.3 II	M	1	U	12330*	-	L,Y	w/o Clamp
10871	O	2.3 II	F	1	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10872	O	4.8 2.3 II	M	7 4	U	12370 12330*	- -	Y L,Y	
10873	O	4.8 2.3 II	F	7 4	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10875	O	2.3 II	F	22	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10876	O	4.8 2.3 II	M	3 5	U	12370 12330*	- -	Y L,Y	
10877	O	4.8 2.3 II	F	3 5	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10878	O	4.8 2.3 II	M	2 10	U	12370 12330*	- -	Y L,Y	
10879	O	4.8 2.3 II	F	2 10	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10880	O	4.8 2.3 II	M	4 20	U	12370 12330*	- -	Y L,Y	
10881	O	4.8 2.3 II	F	4 20	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10882	O	4.8 2.3 II	M	1 18	U	12370 12330*	- -	Y L,Y	
10883	O	4.8 2.3 II	F	1 18	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10884	O	4.8 2.3 II	M	4 12	U	12370 12330*	- -	Y L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10885	O	4.8 2.3 II	F	4 12	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10886	O	2.3 II	M	2	S	12430*	-	L,Y	
10887	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10888	O	4.8 8.0	F	2 3	U	12380 12400	- -	Y -	Housing Lance Type2
10889	O	4.8 8.0	F	4 2	U	12380 12400	- -	Y -	Housing Lance Type2
10890	O	2.3 II	M	8	S	12430*	-	L,Y	
10891	O	2.3 II	F	8	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10892	O	2.3 II	M	1	S	12430*	-	L,Y	
10893	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10894	O	4.8 2.3 II	M	2 6	S	12470 12430*	- -	Y L,Y	
10895	O	4.8 2.3 II	F	2 6	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
10896	O	2.3 II	M	8	S	12430*	-	L,Y	
10897	O	2.3 II	F	8	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10898	O	2.3 II	M	2	S	12430*	-	L,Y	
10899	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10900	O	2.3 II	M	2	S	12430*	-	L,Y	
10901	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10902	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10903	O	8.0	F	2	U	12400	-	-	Housing Lance Type2
10905	O	2.3 II	M	2	U	12330*	-	L,Y	
10906	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10907	O	2.3 II	M	3	U	12330*	-	L,Y	
10908	O	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10909	O	2.3 II 8.0	M	4 2	U	12330* 12390	- -	L,Y -	
10910	O	2.3 II 8.0	F	4 2	U	12340* (24380) 12400	- -	L,Y -	(Low Insertion Force) Housing Lance Type2
10911	O	4.8	F	1	U	12380	-	Y	
10912	O	4.8	F	1	U	12380	-	Y	
10913	O	6.3	F	1	U	12070	-	Y	Terminal Lance Type4,DEFG
10914	X	6.3	F	1	U	12070	-	Y	Terminal Lance Type4,DEFG
10915	O	4.8	M	2	U	12370	-	Y	
10916	O	4.8	F	2	U	12380	-	Y	
10918	O	1.8 1.0	F	8 18	U	12190* 12310*	- -	L L	
10919	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10920	O	1.3 2.3 II	M	19 4	U	12410 12330*	- -	L L,Y	
10921	O	1.3 2.3 II	F	19 4	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
10923	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10925	O	1.8 1.0	F	10 16	U	12190* 12310*	- -	L L	
10926	O	4.8	F	8	U	12380	-	Y	
10927	O	4.8	M	2	S	12470	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10928	O	4.8	F	2	S	12480	-	Y	
10929	O	1.8	F	4	S	12620	-	L	
10930	O	2.3 II	M	7	S	12430*	-	L,Y	
10931	O	2.3 II	F	7	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10932	O	4.8 2.3 II	F	2 10	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10933	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10934	O	2.3 II	M	2	U	12330*	-	L,Y	
10935	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10939	O	4.8 2.3 II	F	2 4	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
10940	O	4.8 2.3 II	F	2 2	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
10941	O	2.3 II	M	4	S	12430*	-	L,Y	
10942	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10943	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10944	O	4.8	M	3	S	12470	-	Y	
10945	O	4.8 2.3 II	M	2 3	S	12470 12430*	- -	Y L,Y	
10946	O	4.8 2.3 II	F	2 3	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
10947	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10948	O	2.3 II	M	2	S	12430*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10949	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10950	X	2.3 II	F	88	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10951	X	2.3 II	M	52	U	12330*	-	L,Y	
10952	O	4.8	F	12	U	12380	-	Y	Housing Lance Type2
		8.0		8		12400	-	-	
10953	X	4.8	F	18	U	12380	-	Y	Housing Lance Type2
		8.0		4		12400	-	-	
10954	O	4.8	M	18	U	12370	-	Y	
		8.0		6		12390	-	-	
10955	X	4.8	F	18	U	12380	-	Y	Housing Lance Type2
		8.0		6		12400	-	-	
10956	O	8.0	F	3	U	12400	-	-	Housing Lance Type2
10957	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10958	O	8.0	M	2	U	12390	-	-	
10959	O	2.3 II	M	2	S	12430*	-	L,Y	
10962	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10963	O	4.8	M	8	U	12370	-	Y	
10964	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10965	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10966	O	2.3 II	F	11	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10967	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10968	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10970	O	7.7	M	2	U	12010	-	-	Splash Proof, Terminal Lance
10973	O	1.8	F	12	U	12190*	-	L	
10974	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10975	O	4.8	M	6	U	12370	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
10976	O	4.8	F	6	U	12380	-	Y	
10977	O	2.3 II	M	22	U	12330*	-	L,Y	
10979	O	4.8	M	3	U	12370	-	Y	
10980	O	4.8	F	3	U	12380	-	Y	
10981	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10982	O	4.8	M	1	S	12470	-	Y	
10983	O	4.8	F	1	S	12480	-	Y	
10984	O	2.3	M	6	S	12260*	-	L	w/o Clamp
10985	O	4.8 2.3 II	M	1 4	U	12370 12330*	- -	Y L,Y	
10986	O	4.8 2.3 II	F	1 4	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10987	O	2.3 II	M	6	S	12430*	-	L,Y	
10988	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
10989	O	4.8	M	4	S	12470	-	Y	
10990	O	4.8	F	4	S	12480	-	Y	
10993	O	4.8 2.3 II	F	4 6	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
10994	O	8.0	M	1	U	12390	-	-	
10995	O	8.0	F	1	U	12400	-	-	Housing Lance Type2
10996	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10997	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
10998	O	2.3 II	M	6	U	12330*	-	L,Y	
11001	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11002	O	2.3 II	M	2	S	12430*	-	L,Y	w/ Clamp
11003	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11004	O	2.3 II	M	2	S	12430*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11005	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11006	O	2.3 II	M	1	S	12430*	-	L,Y	
11007	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11008	O	2.3 II	M	2	S	12430*	-	L,Y	
11009	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11010	O	2.3 II	M	6	U	12330*	-	L,Y	w/ Clamp
11011	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11012	O	2.3 II	M	4	U	12330*	-	L,Y	
11013	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11014	O	6.3	M	2	U	12050	-	Y	Housing Lance, w/ Clamp
11015	O	2.3 II	M	3	S	12430*	-	L,Y	
11016	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11019	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11020	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11021	O	4.8 2.3 II	M	2 3	S	12470 12430*	- -	Y L,Y	
11022	O	4.8 2.3 II	F	2 3	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11024	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11025	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11026	O	2.3 II	M	1	U	12330*	-	L,Y	w/ Clamp
11027	O	2.3 II	M	4	S	12430*	-	L,Y	
11028	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11029	O	2.3 II	M	2	S	12430*	-	L,Y	
11030	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11031	O	8.0	M	2	S	12490	-	-	
11032	O	8.0	F	2	S	12500	-	-	
11033	O	2.3 II	M	6	S	12430*	-	L,Y	
11034	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11035	O	4.8	M	4	S	12470	-	Y	
11036	O	4.8	F	4	S	12480	-	Y	
11037	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11038	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11041	O	1.3	F	11	U	12420	-	L	
11042	O	1.3 2.3 II	F	11 4	U	12420 12340* (24380)	-	L,Y	(Low Insertion Force)
11043	O	1.3	F	25	U	12420	-	L	
11044	O	4.8 8.0	M	2 1	S	12470 12490	-	Y -	
11045	O	4.8 8.0	F	2 1	S	12480 12500	-	Y -	
11046	O	2.3 II	M	17	U	12330*	-	L,Y	
11049	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 11050	O	2.3 II	M	2	S	82998- 12430*	82998- -	L,Y	
11051	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11052	O	1.3	M	3	U	12410	-	L	
11053	O	1.3	F	3	U	12420	-	L	
11055	O	1.3	F	25	U	12420	-	L	
11056	O	1.3	F	11	U	12420	-	L	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
11058	O	1.3	F	21	U	12420	-	L	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
11060	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11061	O	1.8	F	2	S	12620	-	L	
11062	O	1.8	F	2	S	12620	-	L	
11068	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11069	O	2.3 II	M	2	S	12430*	-	L,Y	
11070	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11071	O	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11072	O	2.3 II	M	2	S	12430*	-	L,Y	
11073	O	2.3 II	M	2	S	12430*	-	L,Y	w/o Clamp
11074	O	2.3 II	M	2	S	12430*	-	L,Y	w/ Clamp
11075	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11076	X	TNS	M	4	S	-	-	-	w/ Clamp
11077	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11078	O	2.3 II	M	5	S	12430*	-	L,Y	
11079	O	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11080	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11082	O	1.0	F	16	U	12310*	-	L	
11083	O	1.3	F	11	U	12420	-	L	
11085	O	2.3 II	M	5	U	12330*	-	L,Y	
11086	O	2.3 II	M	12	S	12430*	-	L,Y	
11087	O	2.3 II	F	12	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11088	O	1.3	M	15	S	12630	-	L	
11089	O	1.3	F	15	S	12650	-	L	
11090	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11091	O	4.8	F	6	U	12380	-	Y	
11092	O	4.8	F	8	U	12380	-	Y	
11093	O	4.8	M	2	U	12370	-	Y	
11094	O	4.8	F	2	U	12380	-	Y	
11095	O	2.8	F	2	S	12550	12610	Y	HB3, HB4
11096	O	2.8	F	2	S	12550	12610	Y	HB3, HB4
11097	O	2.3 II	M	1	U	12330*	-	L,Y	w/ Clamp
11098	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11099	O	2.3 II	M	6	U	12330*	-	L,Y	
11100	O	2.3 II	M	4	U	12330*	-	L,Y	
11101	O	2.3 II	M	6	U	12330*	-	L,Y	
11102	O	2.3 II	M	10	U	12330*	-	L,Y	
11107	O	1.3	F	4	U	12420	-	L	
11108	X	MP 280	F	3	S	-	-	-	
11110	O	2.3 II	M	6	U	12330*	-	L,Y	
11112	X	6.3	F	3	U	12060	12580	Y	Splash Proof, Housing Lance Type1
11113	O	SFPC	F	16	U	24180	-	L	
11114	O	SFPC	F	13	U	24180	-	L	
11115	O	SFPC	F	13	U	24180	-	L	
11116	O	SFPC	F	10	U	24180	-	L	
11118	O	4.8 2.3 II	F	2 2	U	12380 12340* (24380)	-	Y L,Y	(Low Insertion Force)
11121	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11122	O	2.3 II	M	4	S	12430*	-	L,Y	
11125	O	1.3	F	21	U	12420	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11126	O	4.8 2.3 II	M	2 2	U	12370 12330*	- -	Y L,Y	
11129	O	1.0	F	12	U	12310*	-	L	
11130	O	4.8 2.3 II	F	2 6	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11131	O	2.3 II	M	3	S	12430*	-	L,Y	
11132	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11133	O	1.3	M	25	U	12410	-	L	
11135	O	4.8	M	4	U	12370	-	Y	
11136	O	4.8	F	4	U	12380	-	Y	
11137	O	2.3 II	M	2	S	12430*	-	L,Y	
11138	O	4.8 8.0	M	2 2	S	12470 12490	- -	Y -	
11139	O	4.8 8.0	F	2 2	S	12480 12500	- -	Y -	
11140	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11141	O	2.3 II	M	2	S	12430*	-	L,Y	
11142	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11143	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11144	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11145	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11146	O	2.3 II	M	1	U	12330*	-	L,Y	w/ Clamp
11147	O	2.3 II	F	1	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11148	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11149	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11150	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11151	O	2.3 II	F	12	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11152	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11153	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11154	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11155	O	2.3 II	M	2	S	12430*	-	L,Y	
11156	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11157	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11158	O	1.3 2.3 II	M	21 4	U	12410 12330*	- -	L L,Y	
11159	O	2.3 II	M	2	U	12330*	-	L,Y	
11160	O	4.8 2.3 II	M	1 2	S	12470 12430*	- -	Y L,Y	
11161	O	4.8 2.3 II	F	1 2	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11162	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11163	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 11165	O	1.3	F	7	U	82998- 12420	82998- -	L	
11166	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11167	O	2.3 II	M	16	U	12330*	-	L,Y	
11168	O	2.3 II	M	2	S	12430*	-	L,Y	
11169	O	1.3	M	3	S	12630	-	L	w/ Clamp
11170	O	1.3	F	3	S	12650	-	L	
11171	O	1.3	M	7	S	12630	-	L	w/ Clamp
11172	O	1.3	F	7	S	12650	-	L	
11173	O	1.3	M	11	S	12630	-	L	
11174	O	1.3	F	11	S	12650	-	L	
11175	O	2.3 II	M	2	S	12430*	-	L,Y	
11176	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11177	O	2.3 II	M	4	S	12430*	-	L,Y	
11178	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11179	O	1.3	F	15	U	12420	-	L	
11181	O	1.3	M	5	S	12630	-	L	
11182	O	1.3	F	5	S	12650	-	L	
11183	O	8.0	M	1	S	12490	-	-	
11184	O	8.0	F	1	S	12500	-	-	
11185	X	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11186	O	1.3	M	4	U	12410	-	L	w/ Clamp
11187	O	1.3	F	4	U	12420	-	L	
11188	O	1.3	M	2	S	12630	-	L	w/ Clamp
11189	O	1.3	F	2	S	12650	-	L	
11190	O	2.3 II	F	8	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11191	O	1.3	M	9	S	12630	-	L	
11192	O	1.3	F	9	S	12650	-	L	
11193	O	2.3 II	M	6	S	12430*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11194	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11195	O	2.3 II 6.3 II	F	22 1	U S	12340* (24380) 24160	- -	L,Y L	(Low Insertion Force)
11196	O	2.3 II	M	6	S	12430*	-	L,Y	
11197	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11199	O	1.3	F	13	U	12420	-	L	
11200	O	1.3	M	11	U	12410	-	L	
11201	O	1.3	M	15	U	12410	-	L	
11202	O	1.3	M	17	U	12410	-	L	
11203	O	1.3	F	17	U	12420	-	L	
11204	O	1.3 2.3 II	M	15 4	U	12410 12330*	- -	L L,Y	
11205	O	1.3 2.3 II	F	15 4	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11206	O	1.3	M	21	U	12410	-	L	
11207	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11208	O	1.3 2.3 II	M	19 4	U	12410 12330*	- -	L L,Y	
11211	O	1.3	M	2	U	12410	-	L	w/ Clamp
11212	O	1.3	F	2	U	12420	-	L	
11214	O	1.0	F	80	S	-	-	-	
11215	O	1.0	F	40	S	-	-	-	
11218	O	1.0 II	F	28	U	24020* -	- -	L L	Terminal Size S Terminal Size M
11219	O	1.0 II	F	16	U	24020* -	- -	L L	Terminal Size S Terminal Size M
11220	O	1.0 II	F	22	U	24020* -	- -	L L	Terminal Size S Terminal Size M
11221	O	1.0 II	F	34	U	24020* -	- -	L L	Terminal Size S Terminal Size M

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11222	O	1.0 II 1.8 II 1.8 II	M	18 6 8	U	24010 24030 24090*	- - -	L Y L	Terminal Size L Terminal Size S,M
11223	O	1.0 II 1.8 II 1.8 II	M	12 2 4	U	24010 24090* 24030	- - -	L L Y	Terminal Size S,M Terminal Size L
11224	O	1.0 II 1.8 II 1.8 II	F	12 2 4	U	24020* 24100 24040	- - -	L L Y	Terminal Size S Terminal Size S,M Terminal Size L
11225	O	1.0 II 1.8 II 1.8 II	F	6 2 6	U	24020* 24040 24100	- - -	L Y L	Terminal Size S Terminal Size L Terminal Size S,M
11226	O	1.0 II 1.8 II 1.8 II	F	12 2 4	U	24020* 24100 24040	- - -	L L Y	Terminal Size S Terminal Size S,M Terminal Size L
11227	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11232	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11234	X	1.8 1.0	F	4 22	U	12190* 12310*	- -	L L	
11235	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11236	X	4.8	M	2	S	12470	-	Y	
11237	O	4.8	F	2	S	12480	-	Y	
11238	O	2.3 II	F	22	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11239	O	4.8 2.3 II	M	3 8	S	12470 12430*	- -	Y L,Y	
11240	O	4.8 2.3 II	F	3 8	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 11241	O	2.3 II 8.0	M	6 2	S	82998- 12430* 12490	82998- - -	L,Y -	
11242	O	2.3 II 8.0	F	6 2	S	12440* 12500	12590 (24400) 12800 (24410) -	L,Y -	6mm Pitch Type (Low Insertion Force)
11243	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11244	O	2.3 II	M	3	S	12430*	-	L,Y	w/ Clamp
11245	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11246	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11247	O	2.3 II	M	2	S	12430*	-	L,Y	w/ Clamp
11248	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11249	O	2.3 II	M	2	S	12430*	-	L,Y	
11250	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11251	O	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11252	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11254	O	2.3 II	M	2	S	12430*	-	L,Y	
11255	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11256	O	1.3	M	11	S	12630	-	L	
11257	O	1.3	F	11	S	12650	-	L	
11258	O	4.8	M	1	U	12370	-	Y	
11259	O	4.8	F	1	U	12380	-	Y	
11260	O	2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11261	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11264	O	1.3	F	15	U	12420	-	L	
11267	O	4.8 2.3 II	M	2 4	S	12470 12430*	- -	Y L,Y	
11268	O	2.3 II	M	4	S	12430*	-	L,Y	
11269	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11270	O	2.3 II	M	1	S	12430*	-	L,Y	w/ Clamp
11271	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11272	O	2.3 II	M	2	S	12430*	-	L,Y	
11273	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11276	O	4.8	F	10	U	12380	-	Y	
11277	O	4.8 2.3 II	F	1 8	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11278	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11279	O	4.8 2.3 II	F	2 6	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11280	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11282	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11283	O	4.8 2.3 II	F	2 2	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11284	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11285	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11286	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11287	O	2.3 II 8.0	M	2 2	S	12430* 12490	- -	L,Y -	
11288	O	2.3 II 8.0	F	2 2	S	12440* 12500	12590 (24400) 12800 (24410) -	L,Y -	6mm Pitch Type (Low Insertion Force)
11289	O	2.3 II	M	6	S	12430*	-	L,Y	
11290	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11291	O	2.3 II	M	4	S	12430*	-	L,Y	w/ Clamp
11292	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11293	O	2.3 II	M	3	S	12430*	-	L,Y	w/ Clamp
11294	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11295	O	2.3 II	M	3	S	12430*	-	L,Y	w/ Clamp
11296	O	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11297	O	4.8	F	6	U	12380	-	Y	
11298	O	2.3 II	M	3	U	12330*	-	L,Y	
11299	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11300	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11301	O	2.3 II	M	4	U	12330*	-	L,Y	
11302	O	4.8	F	9	U	12380	-	Y	
11303	O	2.3 II	M	2	S	12430*	-	L,Y	
11304	O	4.8 2.3 II	F	2 2	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11305	O	1.3	M	2	U	12410	-	L	
11306	O	1.3	F	2	U	12420	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11307	O	1.3 2.3 II	M	15 4	U	12410 12330*	- -	L L,Y	
11308	O	1.3 2.3 II	F	15 4	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11309	O	1.3 2.3 II	M	13 4	U	12410 12330*	- -	L L,Y	
11310	O	1.3 2.3 II	F	13 4	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11313	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11314	O	8.0	F	3	U	24140	24200	Y	Housing Lance Type1,Head Lamp
11315	O	2.3 II	F	1	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11316	O	2.3 II 6.3 II	M	20 1	U	12330* -	- -	L,Y -	
11317	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11319	O	1.3	F	5	U	12420	-	L	
11321	O	1.3	F	8	U	12420	-	L	
11322	O	2.3 II	M	2	S	12430*	-	L,Y	
11323	O	2.3 II	F	22	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
		2.3 II		22	U	12340* (24380)	-	L,Y	(Low Insertion Force)
		6.3 II		1	S	24160	-	L	
11326	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11327	O	2.3 II	M	5	U	12330*	-	L,Y	w/ Clamp
11332	O	4.8	F	2	S	12480	-	Y	6mm Pitch Type (Low Insertion Force)
		2.3 II		8		12440*	12590 (24400) 12800 (24410)	L,Y	
11334	O	1.3	M	17	U	12410	-	L	
11335	O	1.3	F	17	U	12420	-	L	
11336	O	1.3	F	3	U	12420	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11338	X	1.0	M	80	S	-	-	-	
11340	O	1.3	F	7	U	12420	-	L	
11341	O	2.3 II	M	3	S	12430*	-	L,Y	
11342	X	1.0	M	40	S	-	-	-	
11343	X	1.0	M	28	U	-	-	-	
11344	X	1.0	M	16	U	-	-	-	
11345	X	1.0	M	22	U	-	-	-	
11346	X	1.0	M	34	U	-	-	-	
11348	O	2.3 II	M	3	S	12430*	-	L,Y	
11349	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11350	X	1.3	F	13	U	12420	-	L	
11353	O	2.3 II	M	8	U	12330*	-	L,Y	
11354	O	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11355	O	4.8	M	4	U	12370	-	Y	
		2.3 II		38		12330*	-	L,Y	
		8.0		1		12390	-	-	
11356	O	4.8	M	4	U	12370	-	Y	
		2.3 II		24		12330*	-	L,Y	
11357	O	2.3 II	M	27	U	12330*	-	L,Y	
11359	O	4.8	F	4	U	12380	-	Y	(Low Insertion Force)
		2.3 II		51		12340* (24380)	-	L,Y	
11360	O	4.8	F	4	U	12380	-	Y	(Low Insertion Force) Housing Lance Type2
		2.3 II		38		12340* (24380)	-	L,Y	
		8.0		1		12400	-	-	
11362	O	4.8	F	4	U	12380	-	Y	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
11363	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11366	O	4.8	F	2	U	12380	-	Y	(Low Insertion Force)
		2.3 II		8		12340* (24380)	-	L,Y	
11367	O	1.3	M	2	U	12410	-	L	w/ Clamp
11368	O	1.3	M	2	U	12410	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11369	O	1.3	F	2	U	12420	-	L	
11370	O	2.3 II	M	15	U	12330*	-	L,Y	
11371	O	2.3 II	M	15	U	12330*	-	L,Y	
11372	O	2.3 II	F	15	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11373	O	2.3 II	M	25	U	12330*	-	L,Y	
11374	O	2.3 II	M	25	U	12330*	-	L,Y	
11375	O	2.3 II	F	25	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11376	O	1.3	M	19	U	12410	-	L	
11377	O	1.3	F	19	U	12420	-	L	
11378	O	1.3	M	21	U	12410	-	L	
11379	O	1.3	F	21	U	12420	-	L	
11380	O	1.3	M	23	U	12410	-	L	
11381	O	1.3	F	23	U	12420	-	L	
11385	O	8.0	M	3	U	12390	-	-	
11386	O	8.0	F	2	U	12400	-	-	Housing Lance Type2
11387	O	4.8	F	1	U	12380	-	Y	Housing Lance Type2
		8.0		2		12400	-	-	
11388	X	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11390	O	1.0 II	F	16	U	24020*	-	L	Terminal Size S
		1.8 II		10		24100	-	L	Terminal Size S,M
11391	O	1.0 II	F	16	U	24020*	-	L	Terminal Size S
11392	O	1.0 II	F	16	U	24020*	-	L	Terminal Size S
		1.8 II		6		24100	-	L	Terminal Size S,M
11393	O	1.3	M	13	U	12410	-	L	
11394	O	1.3	F	13	U	12420	-	L	
11395	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11396	O	2.3 II	F	2	U	12340* (24380)*	-	L,Y	(Low Insertion Force)
11397	X	2.3 II	F	8	U	12340* (24380)*	-	L,Y	(Low Insertion Force)
11398	O	2.3 II	F	4	U	12340* (24380)*	-	L,Y	(Low Insertion Force)
11399	O	2.3 II	M	4	U	12330*	-	L,Y	w/ Clamp
11400	O	4.8	F	1	S	12480	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11401	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11403	O	1.3	M	25	U	12410	-	L	
11404	X	1.3	F	25	U	12420	-	L	
11406	O	1.0 II	F	22	U	24020*	-	L	Terminal Size S
		1.8 II		4		24100	-	L	Terminal Size S,M
11407	O	2.3 II	M	3	S	12430*	-	L,Y	w/o Clamp
11408	O	1.0 II	F	12	U	24020*	-	L	Terminal Size S
11409	X	4.8	M	2	S	12470	-	Y	
11410	O	4.8	F	2	S	12480	-	Y	
11412	O	4.8	M	3	S	12470	-	Y	
		2.3 II		2		12430*	-	L,Y	
11413	O	4.8	F	3	S	12480	-	Y	
		2.3 II		2		12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11414	X	SL	F	3	S	-	-	-	
11415	O	2.3 II	M	16	U	12330*	-	L,Y	
11416	O	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11417	O	2.3 II	F	17	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11420	O	2.3	F	17	U	12170	-	Y	
11421	O	1.0 III	F	20	U	12690*	-	L	
		1.0 IV		11		12740	-	L	
11422	O	1.0 II	F	18	U	24020*	-	L	Terminal Size S
		1.8 II		8		24100	-	L	Terminal Size S,M
11423	O	1.0 II	F	16	U	24020*	-	L	Terminal Size S
		1.8 II		10		24100	-	L	Terminal Size S,M
11424	O	1.8 II	F	12	U	24100	-	L	Terminal Size S,M
11425	O	1.0 II	F	16	U	24020*	-	L	Terminal Size S
11427	X	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11428	O	2.3 II	F	1	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11430	O	4.8 2.3 II 8.0	M	4 40 5	U	12370 12330* 12390	- - -	Y L,Y -	
11431	O	4.8 2.3 II 8.0	F	4 40 5	U	12380 12340* (24380) 12400	- - -	Y L,Y -	(Low Insertion Force) Housing Lance Type2
11432	O	1.8 II	F	20	U	24100 24040	- -	L Y	Terminal Size S,M Terminal Size L
11433	O	1.8 II 1.8 II	F	14 14	U	24100 24040	- -	L Y	Terminal Size S,M Terminal Size L
11434	X	C-TYPE	M	16	U	-	-	-	
11435	X	C-TYPE	F	16	U	12570	-	L	
11436	O	1.3	F	2	U	12420	-	L	
11437	O	2.3 II	F	14	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11438	X	4.8 2.3 II	M	3 5	U	12370 12330*	- -	Y L,Y	
11439	X	4.8 2.3 II	F	3 5	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11440	O	2.3 II	M	20	U	12330*	-	L,Y	
11441	O	2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11442	O	2.3 II	M	20	U	12330*	-	L,Y	
11443	X	2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11444	O	2.3 II	M	16	U	12330*	-	L,Y	
11445	O	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11447	O	2.3 II	M	2	S	12430*	-	L,Y	
11448	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11450	O	1.3	F	10	U	12420	-	L	
11451	O	2.3 II	F	3	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11452	O	2.3 II	M	6	U	12330*	-	L,Y	



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11459	X	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11460	O	4.8 2.3 II	M	2 6	S	12470 12430*	- -	Y L,Y	
11461	O	4.8 2.3 II	F	2 6	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11462	O	1.3	M	16	S	12630	-	L	
11463	X	1.3	F	16	S	12650	-	L	
11466	O	2.3 II	M	2	S	12430*	-	L,Y	
11467	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11469	O	1.3 2.3 II	F	16 4	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11470	O	1.3	M	3	U	12410	-	L	
11471	O	1.3	F	3	U	12420	-	L	
11475	O	1.3	F	12	U	12420	-	L	
11476	O	1.0 III 1.0 IV	F	17 7	U	12690* 12740	- -	L L	
11477	O	LAC	M	22	U	12100	-	Y	
11478	O	LAC	F	13	U	12110	-	Y	
11479	O	LAC	F	9	U	12110	-	Y	
11484	O	2.3 II 8.0	M	1 2	U	12330* 12390	- -	L,Y -	
11485	O	2.3 II 8.0	F	1 2	U	12340* (24380) 12400	- -	L,Y -	(Low Insertion Force) Housing Lance Type2
11486	O	2.3 II	M	2	S	12430*	-	L,Y	
11487	O	1.3	M	6	U	12410	-	L	w/ Clamp
11488	O	1.3	F	6	U	12420	-	L	
11489	O	1.3	M	3	U	12410	-	L	w/ Clamp
11490	O	1.3	F	3	U	12420	-	L	
11491	X	6.3	F	3	U	12060	12580	Y	Splash Proof, Housing Lance Type1
11492	O	1.3 2.3 II	M	4 2	U	12410 12330*	- -	L L,Y	w/ Clamp

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11493	O	1.3 2.3 II	F	4 2	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11494	O	1.3	F	4	U	12420	-	L	
11495	O	1.3	F	4	U	12420	-	L	
11497	O	1.3	F	18	U	12420	-	L	
11498	X	1.3	M	20	U	12410	-	L	
11499	X	1.3	F	20	U	12420	-	L	
11500	O	1.3	M	12	U	12410	-	L	
11502	O	1.3	F	22	U	12420	-	L	
11503	O	1.3	M	22	U	12410	-	L	
11504	O	1.3 2.3 II	M	16 4	U	12410 12330*	- -	L L,Y	
11505	X	1.3	M	17	U	12410	-	L	
11506	X	1.3	F	17	U	12420	-	L	
11508	O	1.3	F	40	U	12420	-	L	
11509	O	1.3	F	24	U	12420	-	L	
11511	O	1.3	F	14	U	12420	-	L	
11512	X	4.8	F	2	U	12380	-	Y	
11514	X	MIC100	F	32	U	01010	-	L	
11517	X	MP280	F	6	S	-	-	-	
11519	X	MP150	F	2	S	-	-	-	
11520	X	MP150	F	2	S	-	-	-	
11522	X	MP280	F	4	S	-	-	-	
11524	X	MP280	F	12	U	01020	-	L	
11527	O	4.8 2.3 II	F	2 8	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11528	O	2.3 II	M	7	U	12330*	-	L,Y	
11529	O	2.3 II	F	7	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11530	O	2.3 II	M	12	U	12330*	-	L,Y	
11531	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11532	O	1.3	M	8	U	12410	-	L	
11533	O	1.3	F	8	U	12420	-	L	
11534	O	2.3 II	M	9	U	12330*	-	L,Y	
11535	O	2.3 II	F	9	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11536	O	2.3 II	M	10	U	12330*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11537	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11538	O	2.3 II	M	11	U	12330*	-	L,Y	
11539	O	2.3 II	F	11	U	24220 12340* (24380)	-	L,Y	IDC (Low Insertion Force)
11541	O	2.3 II	M	13	U	12330*	-	L,Y	
11542	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11546	O	4.8 2.3 II	M	4 12	U	12370 12330*	-	Y L,Y	
11547	O	4.8 2.3 II	F	4 12	U	12380 12340* (24380)	-	Y L,Y	(Low Insertion Force)
11549	O	1.8 II 1.8 II	M	34 34	U	24030 24090*	-	Y L	Terminal Size L Terminal Size S,M
11551	O	4.8	M	8	U	12370	-	Y	
11552	O	4.8 8.0	F	4 2	U	12380 12400	-	Y -	Housing Lance Type2
11554	X	1.3 2.3 II	M	16 22	U	12410 12330*	-	L L,Y	
11555	O	1.3 2.3 II	F	16 22	U	12420 12340* (24380)	-	L L,Y	(Low Insertion Force)
11556	O	1.3	F	14	U	12420	-	L	
11558	O	1.3	F	20	U	12420	-	L	
11559	O	1.3 2.3 II	M	8 9	U	12410 12330*	-	L L,Y	
11560	O	1.3 2.3 II	F	8 9	U	12420 12340* (24380)	-	L L,Y	(Low Insertion Force)
11561	O	1.3 2.3 II	M	6 10	U	12410 12330*	-	L L,Y	
11562	O	1.3 2.3 II	F	6 10	U	12420 12340* (24380)	-	L L,Y	(Low Insertion Force)
11565	O	1.0 II 1.8 II	F	10 6	U	24020* 24100	-	L L	Terminal Size S Terminal Size S,M
11566	O	1.0 II	F	40	S	24060	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 11568	O	2.3 II	M	13	U	82998- 12330*	82998- -	L,Y	
11569	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
		8.0		2			-	-	
11570	O	1.3	M	19	U	12410	-	L	
11571	O	1.3	F	19	U	12420	-	L	
11573	O	1.3	M	16	U	12410	-	L	
11574	O	1.3	F	16	U	12420	-	L	
11579	O	8.0	F	2	U	12400	-	-	Housing Lance Type2
11580	O	1.3	M	10	U	12410	-	L	
11581	O	1.3	F	10	U	12420	-	L	
11582	X	1.3	M	8	U	12410	-	L	
11583	O	4.8	F	6	U	12380	-	Y	
11586	O	1.0 III	F	17	U	12640	-	L	IDC
11587	O	2.3 II	M	6	U	12330*	-	L,Y	w/ Clamp
11588	O	1.3	M	8	U	12410	-	L	
11590	O	1.3	M	8	U	12410	-	L	
		2.3 II		6		12330*	-	L,Y	
11591	O	1.3	F	8	U	12420	-	L	
		2.3 II		6		12340* (24380)	-	L,Y	(Low Insertion Force)
11592	O	2.3 II	F	8	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11593	O	2.3 II	F	8	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11594	O	1.3	F	10	U	12420	-	L	
		2.3 II		8		12340* (24380)	-	L,Y	(Low Insertion Force)
11595	O	1.3	F	10	U	12420	-	L	
		2.3 II		8		12340* (24380)	-	L,Y	(Low Insertion Force)
11596	O	4.8	M	2	U	12370	-	Y	
		2.3 II		8		12330*	-	L,Y	
11598	O	2.3 II	M	5	S	12430*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11599	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11600	O	4.8 2.3 II 8.0	M	3 12 2	S	12470 12430* 12490	- - -	Y L,Y -	
11601	O	4.8 2.3 II 8.0	F	3 12 2	S	12480 12440* 12500	- 12590 (24400) 12800 (24410) -	Y L,Y -	6mm Pitch Type (Low Insertion Force)
11602	O	4.8 2.3 II	M	2 3	U	12370 12330*	- -	Y L,Y	
11603	O	4.8 2.3 II	F	2 3	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11604	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11605	O	1.3 2.3 II	M	2 2	U	12410 12330*	- -	L L,Y	
11606	O	1.3 2.3 II	F	2 2	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11607	O	2.3 II	M	3	S	12430*	-	L,Y	
11608	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11609	O	4.8 2.3 II	M	3 8	S	12470 12430*	- -	Y L,Y	
11610	X	4.8 2.3 II	M	4 22	U	12370 12330*	- -	Y L,Y	
11611	O	4.8 2.3 II	F	4 22	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11612	O	4.8 2.3 II	F	3 8	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11613	O	1.3 2.3 II	M	8 2	U	12410 12330*	- -	L L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11614	O	1.3 2.3 II	F	8 2	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11615	O	4.8	F	8	U	12380	-	Y	
11616	O	1.3	F	6	U	12420	-	L	
11617	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11618	O	1.3	F	40	U	12420	-	L	
11622	O	2.3 II	M	3	S	12430*	-	L,Y	w/ Clamp
11623	O	1.3	M	8	U	12410	-	L	
11626	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11627	O	1.3	M	20	U	12410	-	L	
11628	O	1.3	F	22	U	12420	-	L	
11631	O	4.8 2.3 II	M	6 20	U	12370 12330*	- -	Y L,Y	
11632	O	4.8 2.3 II	F	6 20	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11633	O	1.3	F	8	U	12420	-	L	
11637	O	1.0 III	F	28	U	12690*	-	L	
11638	X	1.0 III 1.0 IV	F	16 6	U	12690* 12740	- -	L L	
11639	X	HID	F	1	S	-	-	-	HID Socket
11640	X	6.3 II	F	4	S	24160	-	L	
11643	O	4.8 2.3 II	F	2 7	S	12480 12440*	- 12590 (24400) 12800 (24410)	Y L,Y	6mm Pitch Type (Low Insertion Force)
11648	O	1.3	F	16	U	12420	-	L	
11652	O	1.3 2.3 II	F	10 6	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11653	O	2.3 II	F	10	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11654	O	1.3	M	14	U	12410	-	L	
11655	O	8.0	M	2	U	12390	-	-	
11657	O	1.3	F	10	U	12420	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11658	O	2.3 II	F	10	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11659	O	2.8	F	2	S	12550	12610	Y	HB3,HB4
11660	O	2.8	F	2	S	12550	12610	Y	HB3,HB4
11661	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11662	O	8.0	F	4	U	12400	-	-	Housing Lance Type2
11663	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11664	O	2.3 II	F	12	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11665	O	OBD II	F	16	U	-	-	-	
11667	O	4.8	F	1	U	12380	-	Y	Housing Lance Type2
		8.0		2		12400	-	-	
11669	O	2.3 II	M	27	U	12330*	-	L,Y	
11670	O	2.3 II	F	27	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11671	O	1.3	F	8	U	12420	-	L	(Low Insertion Force)
		2.3 II		9		12340* (24380)	-	L,Y	
11672	O	1.3	F	8	U	12420	-	L	(Low Insertion Force)
		2.3 II		9		12340* (24380)	-	L,Y	
11676	O	8.0	F	4	U	12400	-	-	Housing Lance Type2
11677	O	2.3 II	F	15	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11684	O	8.0	F	2	U	12400	-	-	Housing Lance Type2
11685	O	8.0	F	3	U	12400	-	-	Housing Lance Type2
11686	O	4.8	F	8	U	12380	-	Y	
11687	O	6.3	F	1	U	12060	12580	Y	Housing Lance Type1
						-	-	-	Terminal Lance Type2
11692	O	2.3 II	M	12	U	12330*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11693	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11694	O	2.3 II	M	13	U	12330*	-	L,Y	
11695	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11697	O	1.5	F	6	U	-	-	-	Type1
11698	O	1.3	F	12	S	12650	-	L	
11701	O	4.8	F	4	U	12380	-	Y	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
11702	O	2.3 II	M	2	U	12330*	-	L,Y	
11703	O	2.3 II	F	1	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11704	O	2.3 II	F	18	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11705	O	2.3 II	F	15	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11706	O	2.3 II	M	6	U	12330*	-	L,Y	
11707	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11708	O	1.3	F	22	U	12420	-	L	
11709	O	2.3 II	M	9	U	12330*	-	L,Y	
11710	O	2.3 II	F	9	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11711	O	2.3 II	M	11	U	12330*	-	L,Y	
11712	O	2.3 II	F	11	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11713	O	2.3 II	M	13	U	12330*	-	L,Y	
11714	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11715	O	1.3	F	16	U	12420	-	L	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
11716	O	1.3	F	10	U	12420	-	L	(Low Insertion Force)
		2.3 II		8		12340* (24380)	-	L,Y	
11717	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11718	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11719	O	2.3 II	M	5	U	12330*	-	L,Y	
11720	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11721	O	2.3 II	M	14	U	12330*	-	L,Y	



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11722	O	1.3 2.3 II	F	10 8	U	12420 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11723	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11724	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11725	O	2.3 II	M	2	U	12330*	-	L,Y	
11726	O	2.3 II	M	4	U	12330*	-	L,Y	
11727	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11728	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11729	O	2.3 II	M	6	U	12330*	-	L,Y	w/ Clamp
11730	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11731	O	8.0	F	3	U	24140	24200	Y	Housing Lance Type1,Head Lamp
11732	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11734	O	2.3 II	M	14	U	12330*	-	L,Y	
11735	O	2.3 II	M	2	U	12330*	-	L,Y	
11736	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11737	O	2.3 II	M	1	U	12330*	-	L,Y	
11738	O	2.3 II	F	1	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11739	O	2.3 II	M	7	U	12330*	-	L,Y	
11740	O	2.3 II	F	7	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
11741	O	6.3 II	M	1	U	-	-	-	
11742	O	4.8	F	4	U	12380	-	Y	
11754	X	2.3 II 8.0	F	18 1	U	12340* (24380) 12400	- -	L,Y -	(Low Insertion Force) Housing Lance Type2
11755	X	4.8 2.3 II	F	2 10	U	12380 12340* (24380)	- -	Y L,Y	Low Insertion Force)
11756	X	4.8	M	6	U	12370	-	Y	
11757	O	2.3 II	M	10	U	12330*	-	L,Y	
11758	X	4.8	F	6	U	12380	-	Y	
11759	O	2.3 II	M	18	U	12330*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11760	X	2.3 II	F	22	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11761	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11762	X	4.8 2.3 II	M	4 20	U	12370 12330*	- -	Y L,Y	
11763	O	2.3 II	M	3	U	12330*	-	L,Y	
11764	O	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11765	O	2.3 II	M	4	U	12330*	-	L,Y	
11766	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11767	O	2.3 II	M	1	U	12330*	-	L,Y	w/ Clamp
11768	O	2.3 II	M	2	U	12330*	-	L,Y	w/ Clamp
11769	O	2.3 II	F	2	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
11770	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11771	O	4.8 2.3 II	F	2 2	U	12380 12340* (24380)	- -	Y L,Y	(Low Insertion Force)
11772	O	2.3 II	F	5	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
11773	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11774	O	9.5	M	1	U	-	-	-	
11775	O	9.5	F	1	U	-	-	-	
11776	O	1.3	F	10	U	12420	-	L	
11777	O	1.3	F	3	U	12420	-	L	
11778	O	4.8	F	6	U	12380	-	Y	
11779	O	2.3 II	M	4	U	12330*	-	L,Y	w/ Clamp
11780	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11781	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11782	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-		4.8		2		82998-	82998-		
11784	O	2.3 II	F	7	S	12480	-	Y	6mm Pitch Type (Low Insertion Force)
						12440*	12590 (24400) 12800 (24410)	L,Y	
11786	O	1.0 J 1.8 J	F	16 10	U	24310* 24330	- -	L Y	
11787	O	1.0 J 1.8 J	F	16 6	U	24310* 24330	- -	L Y	
11788	O	1.0 J	F	16	U	24310*	-	L	
11791	O	2.3 II	F	14	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11792	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11794	O	VH	F	7	U	-	-	-	
11797	O	2.3 II	F	5	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11799	O	4.8	F	4	U	12380	-	Y	
11800	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11801	O	2.3 II	M	4	U	12330*	-	L,Y	w/ Clamp
11802	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
		2.3 II		20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
		6.3 II		1	S	24160	-	L	
11803	O	2.3 II	M	2	U	12330*	-	L,Y	
11804	O	6.3	F	2	U	12060	12580	Y	Housing Lance Type1
11805	O	2.3 II	F	14	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11806	O	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11807	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11808	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11809	O	4.8	M	4	U	12370	-	Y	
11811	O	2.3 II	M	4	U	12330*	-	L,Y	w/ Clamp
11812	O	2.3 II	M	4	U	12330*	-	L,Y	
11814	O	2.3 II	M	6	U	12330*	-	L,Y	w/ Clamp
11817	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11820	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11823	O	2.3 II	M	10	U	12330*	-	L,Y	
11824	O	8.0	F	2	U	12400	-	-	Housing Lance Type2
11827	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11835	O	4.8	F	2	U	12380	-	Y	(Low Insertion Force)
		2.3 II				12340* (24380)	-	L,Y	
11840	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11841	O	2.3 II	F	4	U	24220	-	L	IDC (Low Insertion Force)
						12340* (24380)	-	L,Y	
11842	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11843	O	2.3 II	M	5	U	12330*	-	L,Y	
11847	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11848	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
11849	O	4.8	M	2	U	12370	-	Y	
		2.3 II		8		12330*	-	L,Y	
11850	O	4.8	F	2	U	12380	-	Y	IDC (Low Insertion Force)
		2.3 II		8		24220	-	L	
		2.3 II		12340* (24380)		-	L,Y		
11851	O	4.8	F	4	S	12480	-	Y	5mm Pitch Type (Low Insertion Force)
		2.3 II		20		-	12790* (24420)	L,Y	
11852	O	4.8	F	8	U	12380	-	Y	
11853	O	6.3	F	1	U	12070	-	Y	Terminal Lance Type4,DEFG
11858	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11859	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11860	O	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11861	O	4.8 1.5	F	4 21	S	12480 -	- -	Y -	
11867	O	1.0 III	F	12	U	12690*	-	L	
11869	O	1.0 III	F	12	U	12690*	-	L	
11871	O	1.0 III	F	12	U	12690*	-	L	
11872	O	1.0 III	F	28	U	12690*	-	L	
11873	O	1.0 III	F	12	U	12690*	-	L	
11875	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11877	O	1.0 III 2.3 II	F	19 6	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11878	O	4.8	M	4	U	12370	-	Y	
11879	O	4.8	F	6	U	12380	-	Y	
11880	O	8.0	F	3	U	12400	-	-	Housing Lance Type2
11881	O	9.5	F	1	U	-	-	-	
11882	O	4.8 2.3 II	F	4 20	S	12480 -	- 12790* (24420)	Y L,Y	5mm Pitch Type (Low Insertion Force)
11885	O	2.3 II	F	4	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11893	O	4.8 2.3 II	F	4 20	S	12480 -	- 12790* (24420)	Y L,Y	5mm Pitch Type (Low Insertion Force)
11900	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
11901	O	2.3 II	M	2	S	12430*	-	L,Y	
11904	O	1.0 III	F	5	S	12720*	-	L	
11909	O	1.0 III	F	5	U	12690*	-	L	
11910	O	1.0 III	M	14	U	12670*	-	L	
11911	O	1.0 III	F	14	U	12690*	-	L	
11912	O	1.0 III	M	18	U	12670*	-	L	
11913	O	1.0 III	F	18	U	12690*	-	L	
11914	X	1.0 III	F	18	U	12640	-	L	IDC

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11915	O	1.0 III	F	22	U	12690*	-	L	
11917	O	1.0 III	M	2	U	12670*	-	L	
11918	O	1.0 III	F	2	U	12690*	-	L	
11919	X	1.0 III	F	2	U	12640	-	L	IDC
11920	O	1.0 III	M	5	U	12670*	-	L	
11921	X	1.0 III	F	5	U	12640	-	L	IDC
11922	O	1.0 III	M	10	U	12670*	-	L	
11923	O	1.0 III	F	10	U	12690*	-	L	
11924	X	1.0 III	F	10	U	12640	-	L	IDC
11925	X	1.0 III	F	14	U	12640	-	L	IDC
11926	O	1.0 III	M	22	U	12670*	-	L	
11927	X	1.0 III	F	22	U	12640	-	L	IDC
11929	O	2.3 II	M	4	S	12430*	-	L,Y	
11930	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11932	X	HID	F	1	S	-	-	-	HID Socket
11933	X	1.0 III	M	2	U	12670*	-	L	w/ Clamp
11935	O	1.0 III 1.0 IV	F	20 11	U	12690* 12740	- -	L L	
11936	O	8.0	M	3	U	12390	-	-	
11943	O	SOCKET	F	1	S	-	-	-	
11944	O	SOCKET	F	1	S	-	-	-	
11945	O	PIN	M	2	S	-	-	-	
11947	O	1.0 III 2.3 II	F	8 4	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11948	X	1.0 III	F	10	U	12640	-	L	IDC
11950	O	1.0 III	F	4	U	12690*	-	L	
11952	O	1.0 III	F	13	U	12690*	-	L	
11954	O	1.0 III 2.3 II	F	8 9	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11955	O	1.0 III	F	19	U	12690*	-	L	
11956	O	1.0 III	F	21	U	12690*	-	L	
11957	O	1.0 III 2.3 II	F	16 5	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
11960	O	2.3 II	F	5	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11962	O	9.5	M	1	S	-	-	-	
11963	O	9.5	F	1	S	-	-	-	
11964	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
11967	O	1.0 III	M	2	U	12670*	-	L	w/ Clamp
11971	O	1.0 III 2.3 II	F	16 4	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11973	O	1.0 III 2.3 II	F	10 8	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
11974	O	1.0 III	F	20	U	12690*	-	L	
11975	O	6.3 II	F	4	U	24170	-	Y	
11977	X	MINI FUSE	F	3	U	12810	-	Y	
11978	O	OBD II	F	16	U	-	-	-	
11986	O	1.0 III	F	6	U	12690*	-	L	
11987	O	1.0 III	F	3	U	12690*	-	L	
11988	X	1.0 III	F	4	U	12640	-	L	IDC
11989	O	1.0 III	F	8	U	12690*	-	L	
11996	O	9.5	F	2	U	-	-	-	
12002	O	1.0 III 2.3 II	M	6 5	U	12670* 12330*	- -	L L,Y	
12003	O	1.0 III 2.3 II	F	6 5	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12004	X	1.0 III	M	6	U	12660	-	L	IDC
12005	O	2.3 II	F	4	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
12006	O	1.0 III	M	2	U	-	-	-	
12007	O	1.0 III 2.3 II	F	4 9	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12008	O	1.0 III 2.3 II	F	2 8	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12012	O	1.0 III	F	6	U	12690*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12014	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12018	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12019	X	1.0 III	F	4	U	12640	-	L	IDC
12020	O	4.8 1.0 III	F	4 30	S	12480 12720*	- -	Y L	
12021	O	4.8 1.0 III	F	4 23	S	12480 12720*	- -	Y L	
12022	O	4.8 1.0 III	F	4 16	S	12480 12720*	- -	Y L	
12023	X	1.0 III	M	10	U	12660	-	L	IDC
12024	X	1.0 III	M	22	U	12660	-	L	IDC
12025	O	1.0 III 2.3 II	M	16 4	U	12670* 12330*	- -	L L,Y	
12026	X	2.3 II	F	9	U	24220	-	L	IDC
12027	X	2.3 II	F	13	U	24220	-	L	IDC
12028	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12029	X	1.0 III	M	2	U	-	-	-	IDC,FPC
12032	O	1.0 J	F	12	U	24310*	-	L	
12034	O	4.8 1.0 III	F	2 18	U	12380 12690*	- -	Y L	
12038	O	1.0 III 2.3 II	F	16 4	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12039	O	VH	F	2	U	-	-	-	
12056	O	0.64	F	6	U	12750*	-	L	
12057	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12058	O	4.8 8.0	F	1 2	S	12480 12500	- -	Y -	
12059	O	1.0 III	M	7	U	12670*	-	L	
12060	O	1.0 III	F	7	U	12690*	-	L	
12062	X	1.0 III	M	2	U	12670*	-	L	w/ Clamp
12063	O	1.0 III	F	2	U	12690*	-	L	
12065	X	HID	F	1	S	-	-	-	HID Socket
12067	O	1.0 III	F	6	U	12690*	-	L	



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12068	O	8.0	F	2	S	12500	-	-	
12069	O	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12070	X	2.3 II	F	24	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12071	X	2.3 II	F	32	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12072	O	-	F	-	U	-	-	-	Lever
12073	O	-	F	-	U	-	-	-	Lever
12074	O	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12075	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12076	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12077	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12078	O	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12080	O	1.0 III	F	8	S	12720*	-	L	
12083	O	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12085	O	IDC J/C	F	10	U	-	-	-	IDC
12086	O	-	F	-	U	-	-	-	Lever
12088	X	2.3 II	F	2	U	24220	-	L	IDC
12089	X	2.3 II	F	2	U	24220	-	L	IDC
12090	X	2.3 II	F	12	U	24220	-	L	IDC
12091	X	1.0 III	F	8	U	12640	-	L	IDC
12092	O	0.64		5		12750*	-	L	
		1.0 III	F	2	U	12690*	-	L	
		1.0 IV		2		12740	-	L	
12094	O	1.0 III	F	16	U	12690*	-	L	
12096	X	1.0 III		12		12690*	-	L	
		2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12097	O	-	F	-	U	-	-	-	Lever
12098	O	1.0 III	F	12	U	12690*	-	L	
12099	X	2.3 II	F	4	U	24220	-	L	IDC
12100	X	2.3 II	F	12	U	24220	-	L	IDC
12101	X	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12102	X	2.3 II	F	28	U	12340* (24380)	-	L,Y	(Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12103	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12104	O	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12105	O	2.3 II	M	16	U	12330*	-	L,Y	
12106	O	2.3 II	F	20	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12107	O	-	F	-	U	-	-	-	Lever
12110	X	SOCKET	F	2	U	-	-	-	
12111	X	SOCKET	F	2	U	-	-	-	
12113	O	1.0 III	F	8	U	12690*	-	L	
12114	O	1.0 III 2.3 II	F	6 28	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12115	O	1.0 III 2.3 II	F	6 8	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12116	O	4.8 1.0 III	F	4 20	S	12480 12720*	- -	Y L	
12117	O	2.3 II	F	2	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
12120	O	8.0	F	2	U	12400	-	-	Housing Lance Type2
12121	X	HID	F	1	S	-	-	-	HID Socket
12122	O	1.0 III 2.3 II	F	6 12	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12123	O	1.0 III	M	4	U	12670*	-	L	
12128	O	1.0 III	F	2	U	12640 12690*	- -	L L	IDC
12135	O	1.0 III	F	10	U	12690*	-	L	
12142	O	0.64 1.0 III 1.0 IV	F	24 7 7	U	12750* 12690* 12740	- - -	L L L	
12143	O	0.64 1.0 III 1.0 IV	F	25 7 7	U	12750* 12690* 12740	- - -	L L L	
12144	O	0.64 1.0 III 1.0 IV	F	27 7 7	U	12750* 12690* 12740	- - -	L L L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12145	O	0.64 1.0 III 1.0 IV	F	28 7 7	U	12750* 12690* 12740	- - -	L L L	
12146	O	0.64 1.0 III 1.0 IV	F	29 6 6	U	12750* 12690* 12740	- - -	L L L	
12149	O	0.64 2.3 II	F	20 4	U	12750* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12150	O	0.64 2.3 II	F	20 6	U	12750* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12151	O	0.64 2.3 II	F	28 2	U	12750* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12153	O	0.64	F	32	U	12750*	-	L	
12155	O	0.64	F	16	U	12750*	-	L	
12156	X	0.64	F	16	U	12770	-	L	IDC
12158	O	1.0 III	F	5	U	12640 12690*	- -	L L	IDC
12161	O	1.0 III 2.3 II	M	8 9	U	12670* 12330*	- -	L L,Y	
12162	O	1.0 III	F	10	U	12690*	-	L	
12163	X	2.3 II	M	8	S	12430*	-	L,Y	
12164	X	2.3 II	F	8	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12166	O	1.0 III 2.3 II	F	14 6	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12168	O	1.0 III	F	3	S	12720*	-	L	
12169	O	0.64	F	40	U	12750*	-	L	
12170	X	0.64	F	40	U	12770	-	L	IDC
12172	O	1.0 III	F	10	U	12640 12690*	- -	L L	IDC
12173	O	1.0 III	F	14	U	12640 12690*	- -	L L	IDC
12174	O	1.0 III	F	18	U	12640 12690*	- -	L L	IDC

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12175	O	1.0 III	F	22	U	12640 12690*	- -	L L	IDC
12176	O	2.3 II	F	4	S	-	12790* (24420)	L,Y	5mm Pitch Type (Low Insertion Force)
12179	O	1.0 III	F	42	U	12640 12690*	- -	L L	IDC
		2.3 II		4		24220	-	L	
12180	O	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12181	O	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12183	O	0.64	F	12	U	12750*	-	L	
12184	O	1.0 III	F	30	U	12640 12690*	- -	L L	IDC
		2.3 II		12		24220	-	L	
12185	O	1.0 III	F	18	U	12640 12690*	- -	L L	IDC
12186	O	1.0 III	F	12	U	12640 12690*	- -	L L	IDC
12187	O	1.0 III	F	12	U	12690*	-	L	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
12188	X	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12189	O	1.0 III	M	5	U	12670*	-	L	
12190	X	1.0 III	F	5	U	12690*	-	L	
12192	X	0.64	M	16	U	24230*	-	L	
12193	X	0.64	M	24	U	24230*	-	L	
12194	O	1.0 III	M	2	S	12710	-	L	w/ Clamp
12195	O	1.0 III	F	2	S	12720*	-	L	
12196	O	D-3	M	3	U	-	-	-	
12197	X	D-3	F	3	U	-	-	-	
12198	X	D-3	M	6	U	-	-	-	
12199	O	D-3	F	6	U	-	-	-	
12200	O	0.64	F	24	U	12750*	-	L	
12203	O	0.64	F	20	U	12750*	-	L	(Low Insertion Force)
		2.3 II		6		12340* (24380)	-	L,Y	
12204	O	1.0 III	M	6	U	12670*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12209	O	1.0 III	F	6	U	12690*	-	L	
12211	O	1.0 III	F	4	U	12690*	-	L	
12212	O	1.0 III	M	4	U	12670*	-	L	w/ Clamp
12217	O	0.64	F	8	U	12750*	-	L	
12219	X	PAI 1	F	2	U	-	82988-12010	L	A/B
12221	O	0.64	F	8	U	12750*	-	L	
12222	O	0.64	F	12	U	12750*	-	L	
12224	X	PAI 1	F	2	U	-	82988-12020	L	A/B
12225	O	0.64	F	4	U	-	-	-	Splash Proof, A/B
12226	O	1.0 III	F	6	U	12690*	-	L	(Low Insertion Force)
		2.3 II		4		12340* (24380)	-	L,Y	
12239	O	1.0 III	F	16	U	12640	-	L	IDC
		2.3 II		4		12690* 24220 12340* (24380)	- - -	L L L,Y	IDC (Low Insertion Force)
12241	O	0.64	F	2	U	-	-	-	Splash Proof, A/B
12242	X	PAI 1	F	2	U	-	82988-12030	L	A/B
12243	X	PAI 1	F	2	U	-	82988-12040	L	A/B
12244	X	1.0 III	F	12	U	12690*	-	L	
12247	X	0.64	M	4	U	24230*	-	L	
12248	O	0.64	M	8	U	24230*	-	L	
12249	O	2.3 II	M	10	U	12330*	-	L,Y	
12250	O	0.64	M	11	U	24230*	-	L	
12251	X	0.64	F	11	U	12750*	-	L	
12252	O	0.64	M	16	U	24230*	-	L	
12253	X	PAI 1	F	2	U	-	82988-12050	L	A/B
12255	X	2.3 II	F	3	U	24220	-	L	IDC (Low Insertion Force)
						12340* (24380)	-	L,Y	
12256	O	1.0 III	M	6	S	12170	-	L	
12257	O	1.0 III	F	6	S	12720*	-	L	
12259	O	0.64	F	20	U	12750*	-	L	
12261	O	0.64	M	16	U	24230*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12262	O	0.64	M	32	U	24230*	-	L	
12263	X	0.64	F	4	U	12770	-	L	IDC
12264	X	0.64	F	8	U	12770	-	L	IDC
12265	X	0.64	F	12	U	12770	-	L	IDC
12266	X	0.64	F	20	U	12770	-	L	IDC
12267	X	0.64	F	24	U	12770	-	L	IDC
12268	X	0.64	F	32	U	12770	-	L	IDC
12272	O	1.0 III	F	10	U	12690*	-	L	
12273	O	1.0 III	F	6	U	12640	-	L	IDC
		2.3 II		6		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12274	O	1.0 III	F	18	U	12640	-	L	IDC
		2.3 II		18		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12275	O	1.0 III	F	8	U	12640	-	L	IDC
		2.3 II		24		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12276	O	1.0 III	F	24	U	12640	-	L	IDC
		2.3 II		14		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12277	O	1.0 III	F	10	U	12640	-	L	IDC
		2.3 II		20		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12278	O	4.8	F	1	U	12380	-	Y	
		1.0 III		6		12690*	-	L	IDC
		2.3 II		18		12640	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
24220	-	L	IDC						
12279	O	-	F	-	U	-	-	-	Lever
12280	O	-	F	-	U	-	-	-	Lever

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12281	O	1.0 III	F	10	U	12640	-	L	IDC
		2.3 II		6		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12282	O	1.0 III	F	8	U	12640	-	L	IDC
		2.3 II		12		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12283	O	2.3 II	F	12	U	24220	-	L	IDC
						12340* (24380)	-	L,Y	(Low Insertion Force)
12284	O	1.0 III	F	8	U	12640	-	L	IDC
		2.3 II		4		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12285	O	1.0 III	F	6	U	12640	-	L	IDC
		2.3 II		4		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12286	O	1.0 III	F	10	U	12640	-	L	IDC
		2.3 II		6		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12287	O	1.0 III	F	4	U	12640	-	L	IDC
		2.3 II		10		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	
12288	O	1.0 III	F	6	U	12640	-	L	IDC
		2.3 II		10		12690*	-	L	IDC
						24220	-	L	(Low Insertion Force)
						12340* (24380)	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12289	O	4.8	F	1	U	12380	-	Y	IDC
		1.0 III		6		12640	-	L	
		2.3 II		12690*		-	L	IDC (Low Insertion Force)	
				24220		-	L		
					12340* (24380)	-	L,Y		
12290	O	0.64	F	12	U	12750*	-	L	
12292	O	0.64	F	5	S	-	24250*	L	
12293	O	0.64	F	15	S	-	24250*	L	
12294	O	0.64	F	2	S	-	24250*	L	
		4.8				12480	-	Y	
12295	X	0.64	F	8	S	-	24250*	L	
		4.8		2		12480	-	Y	
12296	O	0.64	F	3	U	12750*	-	L	
12297	O	0.64	F	42	S	-	24250*	L	
		4.8		4		12480	-	Y	
12299	O	9.5	F	2	U	-	-	-	
12300	O	9.5	F	2	U	-	-	-	
12301	O	0.64	M	11	U	24230*	-	L	
		2.3 II		9		12330*	-	L,Y	
12302	O	0.64	F	11	U	12750*	-	L	
		2.3 II		9		12340* (24380)	-	L,Y	(Low Insertion Force)
12303	O	0.64	F	6	S	-	24250*	L	
12304	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12306	O	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12307	O	-	F	-	U	-	-	-	Lever
12308	X	2.3 II	F	24	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12309	O	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12310	O	-	F	-	U	-	-	-	Lever
12311	X	2.3 II	F	32	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12312	O	1.0 III	F	12	U	12690*	-	L	
12313	O	-	F	-	U	-	-	-	Lever
12314	X	1.0 III	F	12	U	12690*	-	L	(Low Insertion Force)
		2.3 II		20		12340* (24380)	-	L,Y	



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12315	X	2.3 II	F	28	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12316	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12317	O	-	F	-	U	-	-	-	Lever
12318	X	2.3 II	F	16	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12319	O	1.0 III 2.3 II	F	6 8	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12320	X	1.0 III 2.3 II	F	6 28	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12321	X	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12322	O	1.0	M	2	U	-	-	-	IDC,Sunvisor
12323	O	1.0	F	2	U	-	-	-	Sunvisor
12324	X	2.3 II	F	8 12	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12325	X	2.3 II	F	8	U	24220	-	L	IDC
12326	O	0.64	F	13	S	-	24250*	L	
12328	X	0.64 II 2.3 II	F	8 2	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12329	O	0.64 II 2.3 II	F	14 2	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12330	O	0.64 II	F	28	U	24290*	-	L	
12331	O	8.0	F	4	U	12400	-	-	Housing Lance Type2
12332	O	8.0	F	4	U	12400	-	-	Housing Lance Type2
12333	O	8.0	F	4	U	12400	-	-	Housing Lance Type2
12334	X	2.3 II	F	4	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12335	X	2.3 II	F	4	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12336	X	2.3 II	F	7	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12337	X	2.3 II	F	9	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12338	X	2.3 II	F	10	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12339	X	2.3 II	F	12	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12340	X	2.3 II	F	1	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12341	X	2.3 II	F	2	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12342	X	2.3 II	F	2	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12343	X	2.3 II	F	2	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12344	X	2.3 II	F	6	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12345	X	2.3 II	F	11	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12346	X	2.3 II	F	13	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12347	X	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12348	X	2.3 II	F	5	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12349	X	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12350	X	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12351	X	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12352	O	0.64	F	2	U	-	-	-	Splash Proof, A/B
12353	O	0.64	F	3	S	-	24250*	L	
12354	O	0.64	F	3	S	-	24250*	L	
12355	O	1.0 III	F	2	U	12690*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12356	O	0.64	F	12	S	-	24250*	L	
12357	O	0.64	F	12	S	-	24250*	L	
12358	O	0.64 II	F	2	U	24290*	-	L	(Low Insertion Force)
		2.3 II		5		12340* (24380)	-	L,Y	
12359	O	0.64 II	F	4	U	24290*	-	L	(Low Insertion Force)
		2.3 II		6		12340* (24380)	-	L,Y	
12360	O	0.64 II	F	4	U	24290*	-	L	
12361	O	0.64 II	F	10	U	24290*	-	L	
12362	X	0.64	F	7	S	-	24250*	L	6mm Pitch Type (Low Insertion Force)
		2.3 II		2		12440*	12590 (24400) 12800 (24410)	L,Y	
12364	O	0.64	M	8	U	24230*	-	L	w/ Clamp
12365	O	0.64 II	M	5	U	24270*	-	L	
12366	O	0.64 II	F	5	U	24290*	-	L	
12367	O	0.64 II	M	10	U	24270*	-	L	
12368	O	0.64 II	F	10	U	24290*	-	L	
12369	O	0.64 II	M	14	U	24270*	-	L	
12370	O	0.64 II	F	14	U	24290*	-	L	
12371	O	0.64 II	M	22	U	24270*	-	L	
12372	O	0.64 II	F	22	U	24290*	-	L	
12373	O	0.64 II	M	8	U	24270*	-	L	
		2.3 II		9		12330*	-	L,Y	
12374	O	0.64 II	F	8	U	24290*	-	L	IDC (Low Insertion Force)
		2.3 II		9		24220 12340* (24380)	-	L,Y	
12375	O	0.64 II	M	10	U	24270*	-	L	
		2.3 II		8		12330*	-	L,Y	
12376	O	0.64 II	F	10	U	24290*	-	L	IDC (Low Insertion Force)
		2.3 II		8		24220 12340* (24380)	-	L,Y	
12377	O	0.64 II	M	16	U	24270*	-	L	
		2.3 II		4		12330*	-	L,Y	
12378	O	0.64 II	F	16	U	24290*	-	L	IDC (Low Insertion Force)
		2.3 II		4		24220 12340* (24380)	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12379	O	0.64	M	10	S	-	24360*	L	
12380	O	0.64	F	10	S	-	24250*	L	
12381	X	0.64	M	6	S	-	24360*	L	
12382	O	0.64	F	6	S	-	24250*	L	
12383	X	1.0 III	F	12	U	12690*	-	L	(Low Insertion Force)
		2.3 II		24		12340* (24380)	-	L,Y	
12384	X	1.0 III	F	12	U	12690*	-	L	(Low Insertion Force)
		2.3 II		20		12340* (24380)	-	L,Y	
12385	X	1.0 III	F	6	U	12690*	-	L	(Low Insertion Force)
		2.3 II		24		12340* (24380)	-	L,Y	
12386	O	1.0 III	F	6	U	12690*	-	L	(Low Insertion Force)
		2.3 II		8		12340* (24380)	-	L,Y	
12388	O	0.64 II	F	40	U	24290*	-	L	
12396	O	0.64	F	102	S	-	24250*	L	6mm Pitch Type (Low Insertion Force)
		2.3 II		24		12440*	12590 (24400) 12800 (24410)	L,Y	
12397	O	0.64	F	102	S	-	24250*	L	6mm Pitch Type (Low Insertion Force)
		2.3 II		24		12440*	12590 (24400) 12800 (24410)	L,Y	
12398	O	0.64	F	71	S	-	24250*	L	6mm Pitch Type (Low Insertion Force)
		2.3 II		18		12440*	12590 (24400) 12800 (24410)	L,Y	
12399	O	0.64	F	71	S	-	24250*	L	6mm Pitch Type (Low Insertion Force)
		2.3 II		18		12440*	12590 (24400) 12800 (24410)	L,Y	
12404	O	0.64 II	F	24	U	24290*	-	L	
12407	O	0.64	F	27	U	12750*	-	L	
		1.0 III		6		12690*	-	L	
		1.0 IV		6		12740	-	L	
12409	O	0.64	M	28	U	24230*	-	L	
12410	O	0.64	F	28	U	12750*	-	L	
12411	O	0.64 II	M	18	U	24270*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 12412	O	0.64 II	F	18	U	82998- 24290*	82998- -	L	
12413	O	0.64 II 2.3 II	M	21 4	U	24270* 12330*	- -	L L,Y	
12414	O	0.64 II 2.3 II	F	21 4	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12416	O	0.64	F	2	S	-	24250*	L	
12419	O	0.64 II	M	5	U	24270*	-	L	
12422	O	0.64 II	F	32	U	24290*	-	L	
12423	O	0.64 II	F	16	U	24290*	-	L	
12426	O	0.64 4.8	F	36 4	S	- 12480	24250* -	L Y	
12428	O	0.64 1.0 JII	F	28 7	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12429	O	0.64 1.0 JII	F	29 6	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12430	O	0.64 1.0 JII	F	27 7	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12431	O	0.64 1.0 JII	F	24 7	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12444	O	0.64 III 2.3 II	F	20 6	U	12870* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12446	O	0.64 2.3 II	F	6 4	S	- 12440*	24250* 12590 (24400) 12800 (24410)	L L,Y	6mm Pitch Type (Low Insertion Force)
12448	O	-	F	-	U	-	-	-	Outer,A/B
12452	X	PAI 1	F	2	U	-	82988- 12060	L	A/B
12454	X	0.64 1.0 JII	F	28 7	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12455	X	0.64 1.0 JII	F	29 6	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12456	X	0.64 1.0 JII	F	27 7	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12457	X	0.64 1.0 JII	F	24 7	U	12750* 12830* 12840	- - -	L L L	Terminal Size M Terminal Size L
12458	O	0.64 II	F	19	U	24290*	-	L	
12460	O	0.64 II	F	20	U	24290*	-	L	
12461	O	0.64 2.3 II	F	48 12	S	- 12440*	24250* 12590 (24400) 12800 (24410)	L L,Y	6mm Pitch Type (Low Insertion Force)
12462	O	0.64 2.3 II	F	48 12	S	- 12440*	24250* 12590 (24400) 12800 (24410)	L L,Y	6mm Pitch Type (Low Insertion Force)
12463	X	1.0 III	F	10	U	12690*	-	L	
12468	O	1.0 III 4.8	F	4 4	U	12690* 12380	- -	L Y	
12469	O	1.0 III 4.8	F	4 4	U	12690* 12380	- -	L Y	
12470	X	2.3 II	F	1	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12471	X	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12472	X	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12473	X	2.3 II	F	3	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12474	X	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12475	X	2.3 II	F	8	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12476	X	2.3 II	F	11	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12477	X	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12478	X	2.3 II	F	12	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12479	X	2.3 II	F	13	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12480	X	2.3 II	M	8	U	12330*	-	L,Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12481	X	2.3 II	M	10	U	12330*	-	L,Y	
12482	X	2.3 II	M	13	U	12330*	-	L,Y	
12483	O	1.0 III 8.0	F	9 2	S	12720* 12500	- -	L -	
12485	O	1.0 III 4.8	F	4 4	U	12690* 12380	- -	L Y	
12486	O	1.0 III 4.8	F	4 4	U	12690* 12380	- -	L Y	
12487	X	4.8	F	1	U	12380	-	Y	
12488	X	4.8	F	2	U	12380	-	Y	
12489	X	9.5	F	1	U	-	-	-	
12495	O	0.64	F	4	S	-	24250*	L	
12496	O	4.8	F	3	S	12480	-	Y	
12498	O	2.3 II	F	2	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12499	O	0.64 II 2.3 II	M	9 4	U	24270* 12330*	- -	L L,Y	
12500	O	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12501	X	0.64 II 2.3 II	F	48 12	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12502	X	0.64 II 2.3 II	F	27 12	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12503	X	0.64 II 2.3 II	F	18 12	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12504	X	1.0 III 2.3 II	F	6 24	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12505	X	1.0 III 2.3 II	F	12 16	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12506	X	1.0 III 2.3 II	F	18 16	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12507	O	0.64 II	F	30	U	24290*	-	L	
12508	O	0.64 II	F	18	U	24290*	-	L	
12509	O	0.64 II	F	18	U	24290*	-	L	
12510	O	0.64 II	F	9	U	24290*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-						82998-	82998-		
12511	O	1.0 III 2.3 II	F	6 4	U	12690* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12512	O	1.0 III	F	6	U	12690*	-	L	
12513	O	-	F	-	U	-	-	-	Lever
12514	X	0.64 II 2.3 II	M	48 12	U	24270* 12330*	- -	L L,Y	
12515	X	0.64 II 2.3 II	M	27 12	U	24270* 12330*	- -	L L,Y	
12516	X	0.64 II 2.3 II	M	18 12	U	24270* 12330*	- -	L L,Y	
12517	O	1.0	F	9	U	-	-	-	IDC,RCL
12518	O	1.0 III 4.8	F	13 3	U	12690* 12380	- -	L Y	
12519	O	0.64	M	6	S	-	24360*	L	
12520	O	0.64	F	8	S	-	24250*	L	
12522	O	0.64 II 2.3 II	F	8 4	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12525	O	0.64 III 1.0 III 1.0 IV	F	24 7 7	U	12870* 12690* 12740	- - -	L L L	
12526	O	0.64 III 1.0 III 1.0 IV	F	25 7 7	U	12870* 12690* 12740	- - -	L L L	
12527	O	0.64 III 1.0 III 1.0 IV	F	27 7 7	U	12870* 12690* 12740	- - -	L L L	
12528	O	0.64 III 1.0 III 1.0 IV	F	28 7 7	U	12870* 12690* 12740	- - -	L L L	
12529	O	0.64 III 1.0 III 1.0 IV	F	29 6 6	U	12870* 12690* 12740	- - -	L L L	
12530	X	4.8	F	2	U	12380	-	Y	
12531	X	2.3 II	M	13	U	12330*	-	L,Y	
12532	X	2.3 II	F	8	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12533	X	2.3 II	M	9	U	12330*	-	L,Y	



## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 12534	X	2.3 II	M	8	U	82998- 12330*	82998- -	L,Y	
12539	X	2.3 II	F	6	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12540	X	2.3 II	F	10	U	24220 12340* (24380)	- -	L L,Y	IDC (Low Insertion Force)
12541	O	0.64 II	F	5	U	24290*	-	L	
12542	O	0.64 II	M	10	U	24270*	-	L	
12543	O	0.64 II	F	10	U	24290*	-	L	
12544	O	0.64 II	M	22	U	24270*	-	L	
12545	O	0.64 II	F	22	U	24290*	-	L	
12546	O	0.64 II 2.3 II	M	10 8	U	24270* 12330*	- -	L L,Y	
12547	O	0.64 II 2.3 II	F	10 8	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12550	O	0.64 II	F	8	U	24290*	-	L	
12551	O	0.64 III	F	8	U	12870*	-	L	
12552	O	0.64 III	F	12	U	12870*	-	L	
12553	O	0.64 III	F	16	U	12870*	-	L	
12554	O	0.64 III	F	24	U	12870*	-	L	
12555	O	0.64 III	F	28	U	12870*	-	L	
12556	O	0.64 III	F	32	U	12870*	-	L	
12557	O	0.64 III	F	40	U	12870*	-	L	
12558	O	0.64 III	F	8	U	12870*	-	L	
12559	O	0.64 III	F	12	U	12870*	-	L	
12560	O	0.64 III 2.3 II	F	20 4	U	12870* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12561	O	0.64 III 2.3 II	F	20 6	U	12870* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12562	O	0.64 III 2.3 II	F	28 2	U	12870* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12564	O	0.64 II	F	36	U	24290*	-	L	
12566	X	0.64 II	F	28	U	24290*	-	L	
12567	O	0.64 II	F	40	U	24290*	-	L	
12569	X	1.0 III	F	14	U	12690*	-	L	
12570	X	1.0 III	F	18	U	12690*	-	L	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 12571	X	1.0 III	F	22	U	82998- 12690*	82998- -	L	
12574	O	0.64 II 2.3 II	M	8 9	U	24270* 12330*	- -	L L,Y	
12585	X	0.64 II	F	10	U	24290*	-	L	
12586	O	-	F	-	S	-	-	-	Lever
12587	O	-	F	-	S	-	-	-	Lever
12588	O	-	F	-	S	-	-	-	Lever
12589	O	-	F	-	S	-	-	-	Lever
12610	O	0.64 II	M	11	U	24270*	-	L	
12611	O	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12614	O	0.64 III	F	12	U	12870*	-	L	
12627	O	0.64	M	2	S	-	24360*	L	w/ Clamp
12630	X	0.64 2.3 II	F	36 4	S	- 12440*	24250* 12590 (24400) 12800 (24410)	L L,Y	6mm Pitch Type (Low Insertion Force)
12634	X	2.3 II	F	2	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12635	X	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12636	X	2.3 II	F	3	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12637	X	2.3 II 4.8	F F	2 2	U U	12340* (24380) 24220 12380	- - -	L,Y L Y	(Low Insertion Force) IDC
12638	O	0.64 II 2.3 II	M	16 4	U	24270* 12330*	- -	L L,Y	
12639	O	0.64 II 2.3 II	F	16 4	U	24290* 12340* (24380)	- -	L L,Y	(Low Insertion Force)
12648	O	4.8	F	3	S	12480	-	Y	

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980-  12649	  O	0.64  2.3 II	  F	23  3	  S	82998-  -  12440*	82998-  24250*  12590 (24400) 12800 (24410)	L  L,Y	  6mm Pitch Type (Low Insertion Force)
12651	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12652	X	0.64  2.3 II	  F	36  4	  S	-  12440*	24250*  12590 (24400) 12800 (24410)	L  L,Y	  6mm Pitch Type (Low Insertion Force)
12653	X	9.5	F	2	S	-	-	-	
12654	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12655	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12656	O	2.3 II	F	6	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12658	X	0.64  4.8	  F	30  4	  S	-  12480	24250*  -	L  Y	
12659	X	0.64  4.8	  F	30  4	  S	-  12480	24250*  -	L  Y	
12669	O	8.0	F	2	S	12500	-	-	
12670	O	0.64 II  2.3 II	  M	11  10	  U	24270*  12330*	-  -	L  L,Y	
12671	O	0.64 II  2.3 II	  F	11  10	  U	24290*  12340* (24380)	-  -	L  L,Y	  (Low Insertion Force)
12672	X	0.64 II  2.3 II	  F	48  18	  U	24290*  12340* (24380)	-  -	L  L,Y	  (Low Insertion Force)
12673	X	0.64 II  2.3 II	  F	12	U	24290*  12340* (24380)	-  -	L  L,Y	  (Low Insertion Force)
12674	X	0.64 II  2.3 II	  F	12	U	24290*  12340* (24380)	-  -	L  L,Y	  (Low Insertion Force)

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 12678	O	-	-	-	-	82998- -	82998- -	-	Volt,EV
12686	O	0.64 4.8	F	30 4	S	- 12480	24250* -	L Y	
12687	X	0.64 4.8	F	30 4	S	- 12480	24250* -	L Y	
12689	X	2.3 II	F	4	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12690	X	2.3 II	F	6	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12691	X	2.3 II	F	10	U	12340* (24380)	-	L,Y	(Low Insertion Force)
12694	X	HID	F	1	S	-	-	-	HID Socket
12695	X	0.64 II	F	3	U	24290*	-	L	
12699	O	0.64 II	F	4	U	-	-	-	Splash Proof, A/B
12700	O	0.64 III 1.0 III 1.0 IV	F	20 13 13	U	12870* 12690* 12740	- - -	L L L	
12704	O	2.3 II	F	4	S	12440*	12590 (24400) 12800 (24410)	L,Y	6mm Pitch Type (Low Insertion Force)
12708	X	0.50	F	40	U	-	-	-	
12710	O	0.64 II	F	30	U	24290*	-	L	
12712	O	0.64	F	30	S	-	24250*	L	
12716	O	0.64	M	13	U	24230*	-	L	
12717	O	0.64 II	F	2	U	-	-	-	Splash Proof, A/B
12719	O	0.64	M	3	S	-	24360*	L	
12728	X	0.64	F	2	S	-	24250*	L	
12732	X	1.5	M	4	U	24340	-	Y	Type2
12733	X	1.5	F	4	U	24350	-	Y	Type2
12734	X	1.5	M	8	U	24340	-	Y	Type2
12735	X	1.5	F	8	U	24350	-	Y	Type2
12736	X	1.5	M	12	U	24340	-	Y	Type2
12737	X	1.5	F	12	U	24350	-	Y	Type2
12738	X	0.64 II 1.5	M	10 8	U	24270* 24340	- -	L Y	Type2
12739	X	0.64 II 1.5	F	10 8	U	24290* 24350	- -	L Y	Type2
12740	X	0.64 II 1.5	M	16 4	U	24270* 24340	- -	L Y	Type2

## HOUSING PART NUMBER LIST

Part No. of Connector Body	Supply	Terminal	Male Female	Cav. No.	Terminal Sealing Ability	Part No. of Repair Wire		Sleeve Color	Memo
						160 mm Type	500 mm Type		
90980- 12741	X	0.64 II 1.5	F	16 4	U	82998- 24290* 24350	82998- - -	L Y	Type2
12742	X	0.64 II 1.5	M	12 6	U	24270* 24340	- -	L Y	Type2
12743	X	0.64 II 1.5	F	12 6	U	24290* 24350	- -	L Y	Type2
12744	X	0.64 II 1.5	M	8 10	U	24270* 24340	- -	L Y	Type2
12745	X	0.64 II 1.5	F	8 10	U	24290* 24350	- -	L Y	Type2
12756	X	9.5	F	1	U	-	-	-	



# TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

## REPAIR WIRE

WATERPROOF TYPE ..... F-1

NON-WATERPROOF TYPE ..... F-7

TERMINAL PACKING ..... F-25

HOLE PLUG ..... F  
NO TAG

PRESS SLEEVE ..... F-28

## HINT:

Waterproof exclusive repair wires for 7.7 and TODC are not available.

(Available wires are for both waterproof and non-waterproof)

## NOTES:

The following marks are used in the table.

A	Terminal width
B	Terminal diameter
C	Terminal guide width
D	Wire outside diameter
E	Nominal size of wire
*	Gold plated (Gilded)

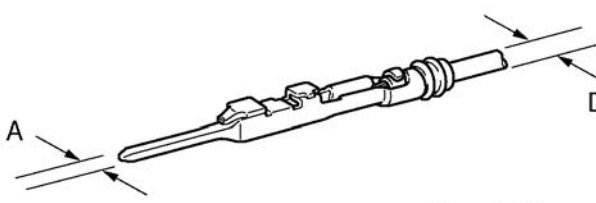
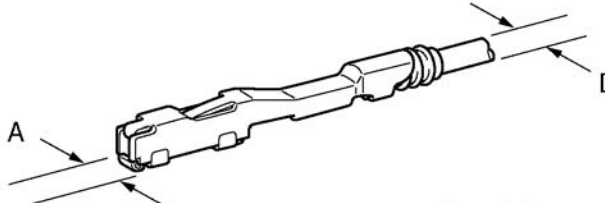
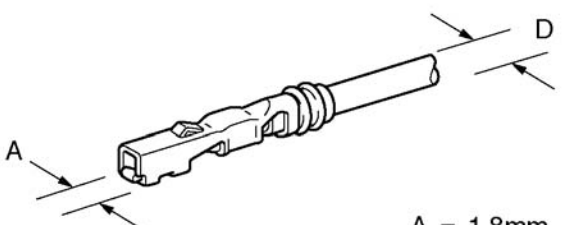
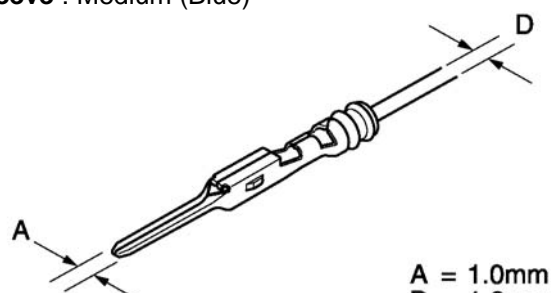
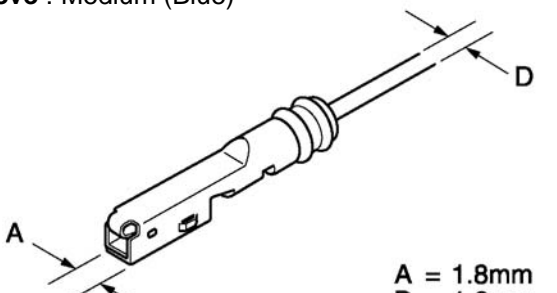
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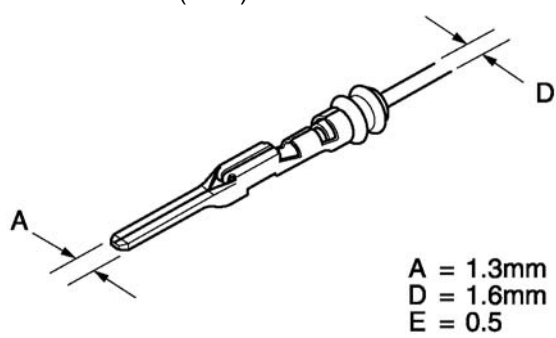
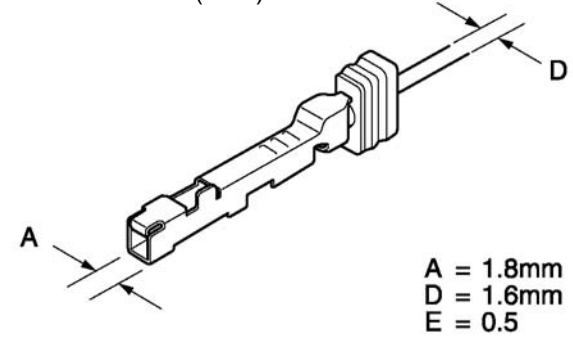

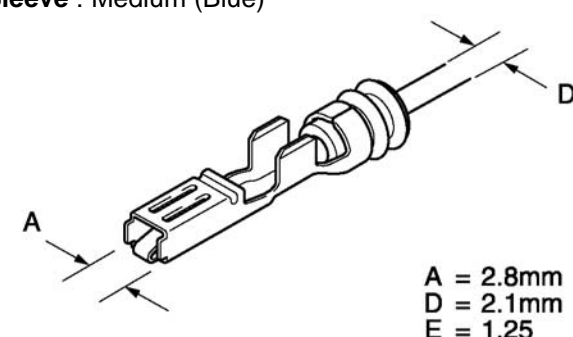
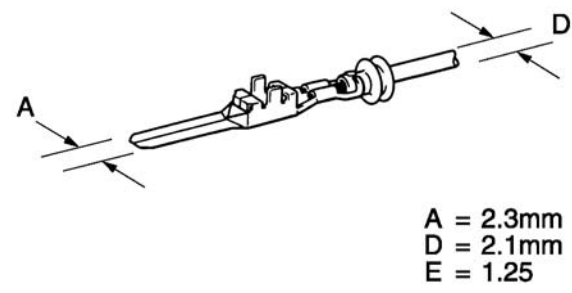
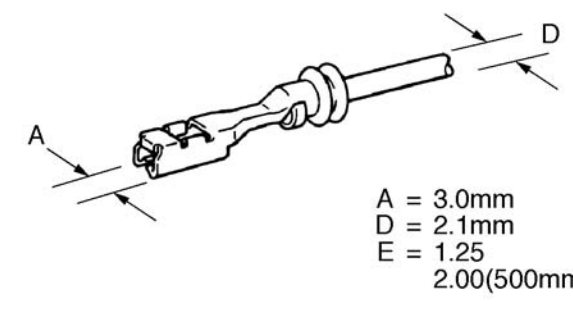
TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Waterproof Type)

Type	<b>0.64</b>	
	Male	Female
	 <p style="text-align: center;">A = 0.64mm D = 1.6mm E = 0.5</p>	 <p style="text-align: center;">A = 1.5mm D = 1.6mm E = 0.5</p>
P/N	82998-24360 (500mm) 82998-24370*	82998-24250 (500mm) 82998-24260*
Type	<b>1.0II</b>	
	Male	Female
	—————	 <p style="text-align: center;">A = 1.8mm D = 2.1mm E = 1.25</p>
P/N		82998-24060*
Type	<b>1.0III</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: center;">A = 1.0mm D = 1.6mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: center;">A = 1.8mm D = 1.6mm E = 0.5</p>
P/N	82998-12710*	82998-12720 82998-12730*

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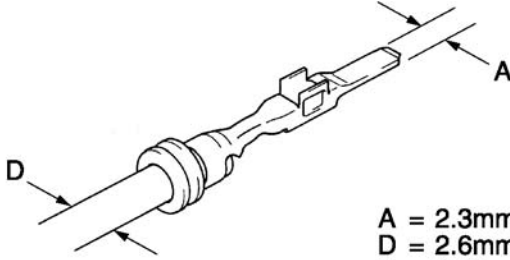
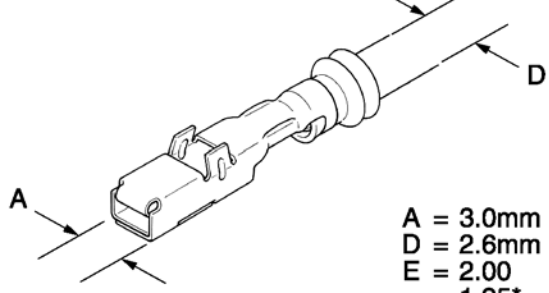

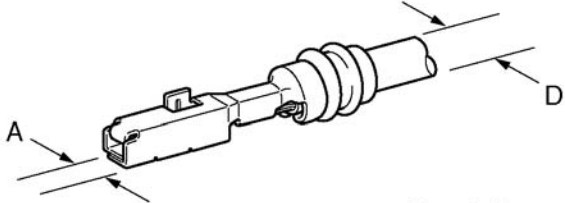

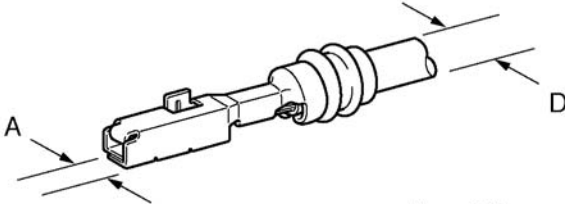
### Repair Wire (Waterproof Type)

Type	<b>1.3</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.3mm D = 1.6mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 1.6mm E = 0.5</p>
P/N	82998-12630	82998-12650
Type	<b>1.8</b>	
	Male	Female
		<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 2.8mm D = 2.1mm E = 1.25</p>
P/N		82998-12620
Type	<b>2.3</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 2.3mm D = 2.1mm E = 1.25</p>	<p><b>Sleeve : Medium (Blue) or Large (Yellow)</b></p>  <p>A = 3.0mm D = 2.1mm E = 1.25 2.00(500mm)</p>
P/N	82998-12260 82998-24070*	82998-12270(160mm) 82998-24080*    82998-12600(500mm)

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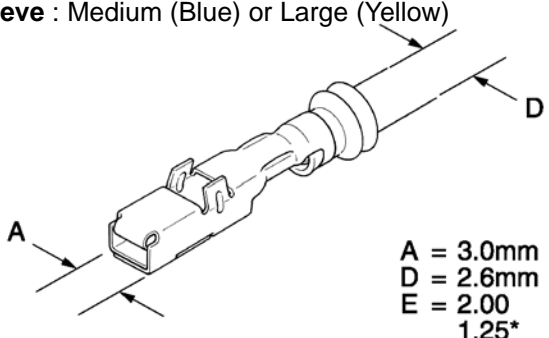
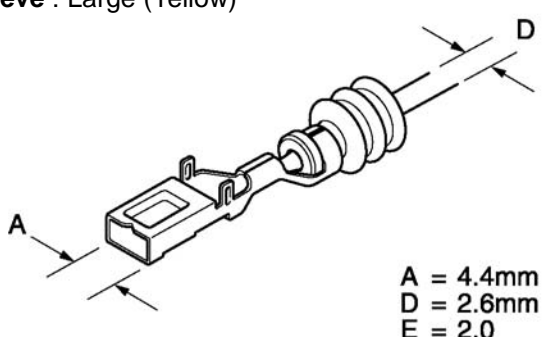
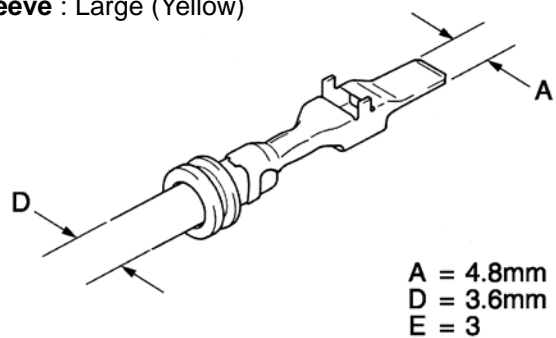
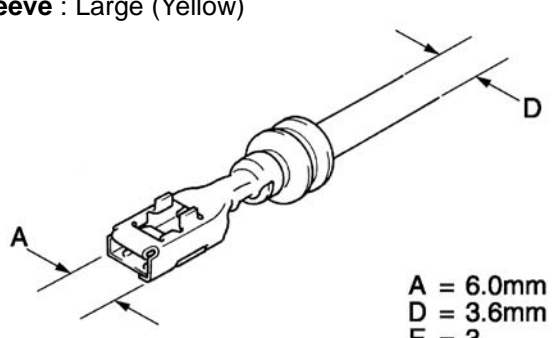
TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Waterproof Type)

Type	2.3II (6mm Pitch Type)	
	Male	Female
	<p>Sleeve : Medium (Blue) or Large (Yellow)</p>  <p>A = 2.3mm D = 2.6mm E = 2.00 1.25*</p>	<p>Sleeve : Medium (Blue) or Large (Yellow)</p>  <p>A = 3.0mm D = 2.6mm E = 2.00 1.25*</p>
P/N	82998-12430 82998-12450*	82998-12440(160mm) 82998-12590(500mm) 82998-12460 * 82998-12800(500mm)
Type	2.3II (6mm Pitch Type Low Insertion Force)	
	Male	Female
		 <p>A = 3.0mm D = 2.6mm E = 2.0</p>
P/N		82998-24400(500mm) 82998-24410(500mm)
Type	2.3II (5mm Pitch Type Low Insertion Force)	
	Male	Female
		 <p>A = 3.0mm D = 2.6mm E = 2.0</p>
P/N		82998-24420(500mm)

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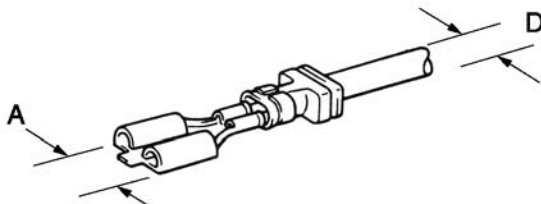

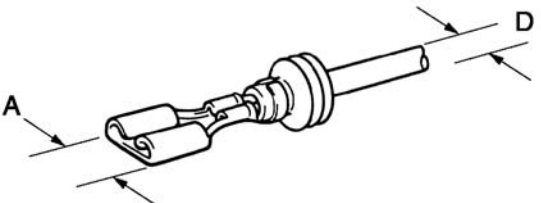
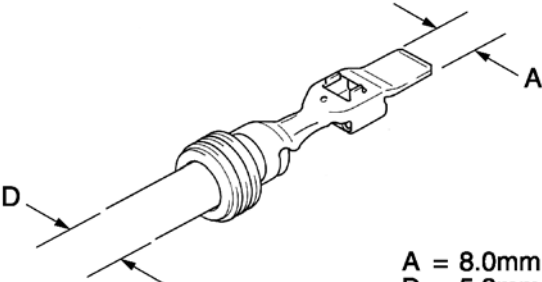
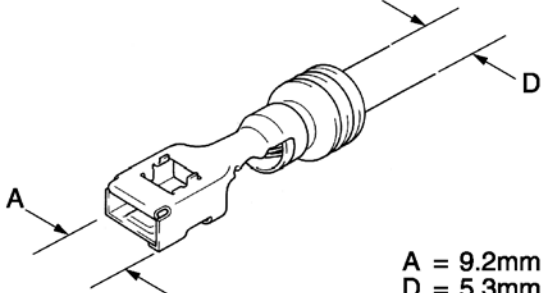
### Repair Wire (Waterproof Type)

Type	2.3II (5mm Pitch Type)	
	Male	Female
	_____	<p>Sleeve : Medium (Blue) or Large (Yellow)</p>  <p>A = 3.0mm D = 2.6mm E = 2.00 1.25*</p>
P/N		82998-12790(500mm) 82998-12780*
Type	2.8 (HB3, HB4)	
	Male	Female
	_____	<p>Sleeve : Large (Yellow)</p>  <p>A = 4.4mm D = 2.6mm E = 2.0</p>
P/N		82998-12550(160mm) 82998-12610(500mm)
Type	4.8	
	Male	Female
	<p>Sleeve : Large (Yellow)</p>  <p>A = 4.8mm D = 3.6mm E = 3</p>	<p>Sleeve : Large (Yellow)</p>  <p>A = 6.0mm D = 3.6mm E = 3</p>
P/N	82998-12470	82998-12480

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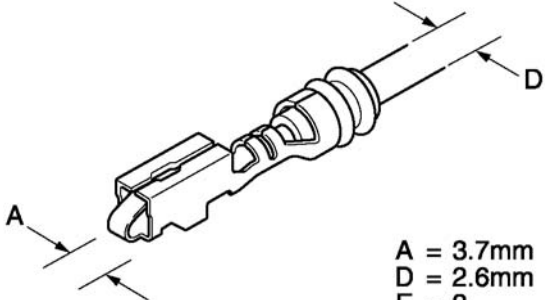
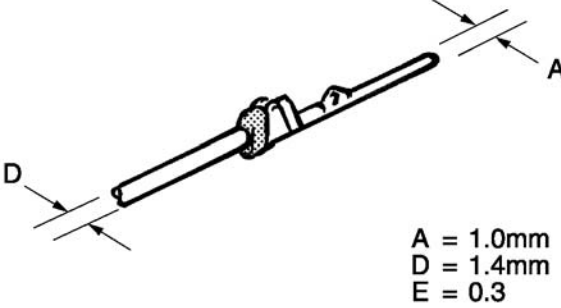
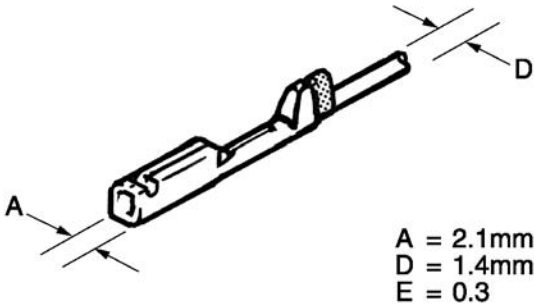
TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Waterproof Type)

Type	<b>6.3</b>	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 7.5mm D = 3.6mm E = 3</p>
P/N		82998-12540
Type	<b>6.3II</b>	
	Male	Female
		<p>Sleeve : Medium (Blue)</p>  <p>A = 7.8mm D = 1.6mm E = 0.5</p>
P/N		82998-24160
Type	<b>8.0</b>	
	Male	Female
	 <p>A = 8.0mm D = 5.3mm E = 8</p>	 <p>A = 9.2mm D = 5.3mm E = 8</p>
P/N	82998-12490	82998-12500

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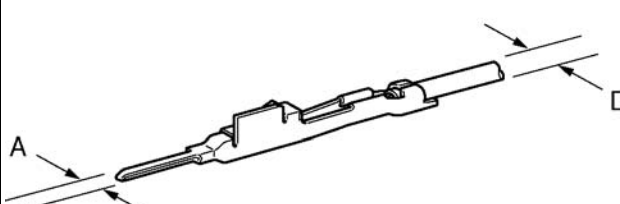
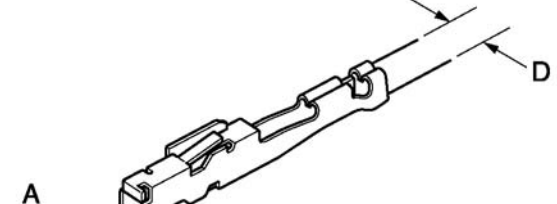

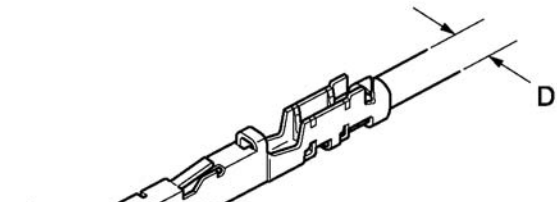
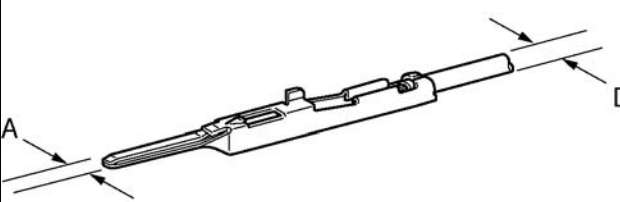
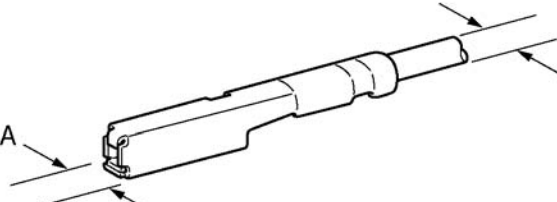
### Repair Wire (Waterproof Type)

Type	HEAD LAMP	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 3.7mm D = 2.6mm E = 2</p>
P/N		82998-24150(160mm) 82998-24190(500mm)
Type	TLC	
	Male	Female
	<p>Sleeve : Small (Red)</p>  <p>A = 1.0mm D = 1.4mm E = 0.3</p>	<p>Sleeve : Small (Red)</p>  <p>A = 2.1mm D = 1.4mm E = 0.3</p>
P/N	82998-12280	82998-12290

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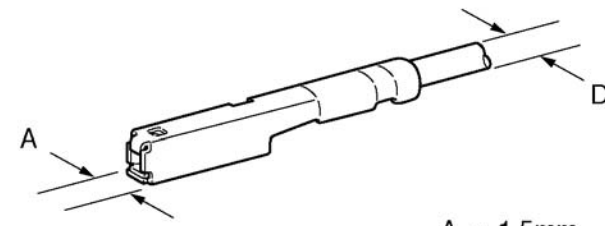
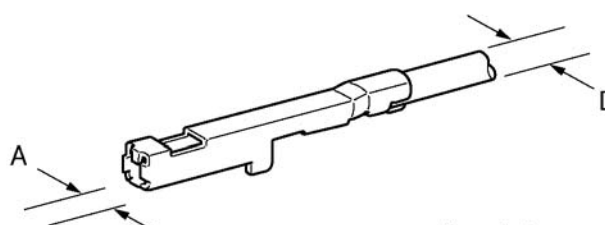
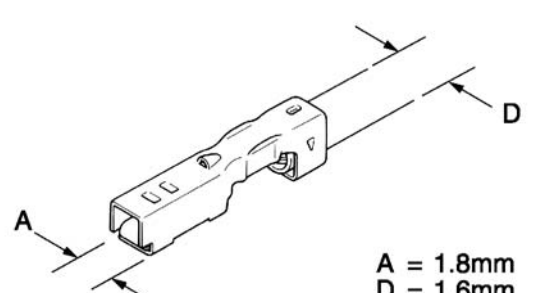
TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	0.64	
	Male	Female
	<p>Sleeve : Medium (Blue)</p>  <p>A = 0.64mm D = 1.6mm E = 0.5</p>	<p>Sleeve : Medium (Blue)</p>  <p>A = 1.5mm D = 1.6mm E = 0.5</p>
P/N	82998-24230 82998-24240*	82998-12750 82998-12760*
Type	0.64 IDC	
	Male	Female
		<p>Sleeve : Medium (Blue)</p>  <p>A = 1.5mm D = 1.6mm E = 0.5</p>
P/N		82998-12770
Type	0.64II	
	Male	Female
	<p>Sleeve : Medium (Blue)</p>  <p>A = 0.64mm D = 1.6mm E = 0.5</p>	<p>Sleeve : Medium (Blue)</p>  <p>A = 1.5mm D = 1.6mm E = 0.5</p>
P/N	82998-24270 82998-24280*	82998-24290 82998-24300*

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### Repair Wire (Non-waterproof Type)

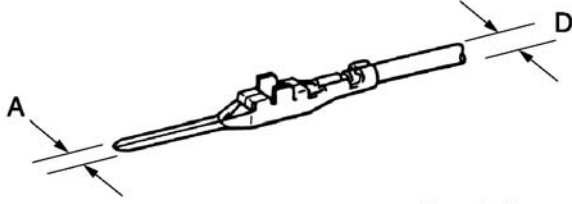
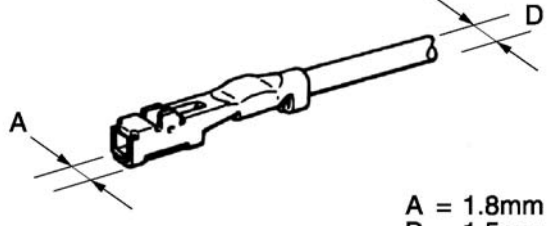

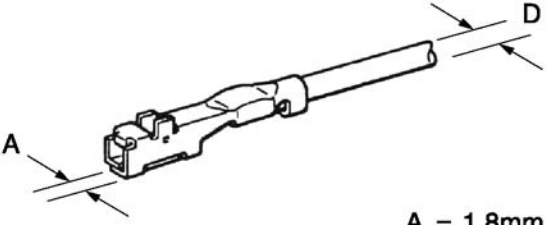
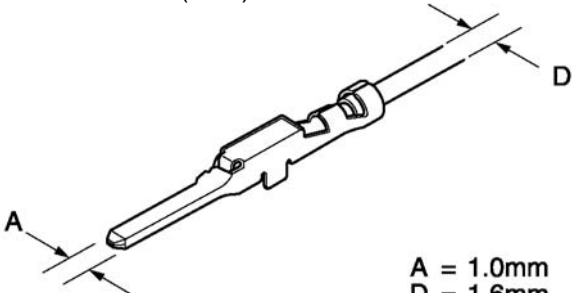
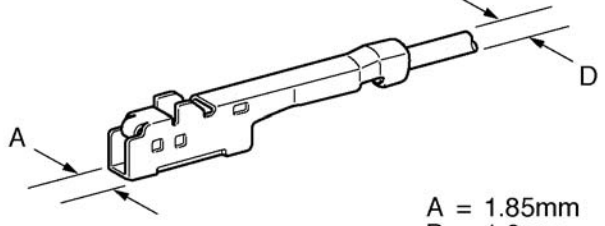
Type	<b>0.64II</b>	
	Male	Female (Outer)
	_____	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.5mm D = 1.6mm E = 0.5</p>
P/N		82998-24390*
Type	<b>0.64III</b>	
	Male	Female
	_____	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.6mm D = 1.6mm E = 0.5</p>
P/N		82998-12870 82998-12860*
Type	<b>1.0</b>	
	Male	Female
	_____	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 1.6mm E = 0.5</p>
P/N		82998-12310 82998-12320*

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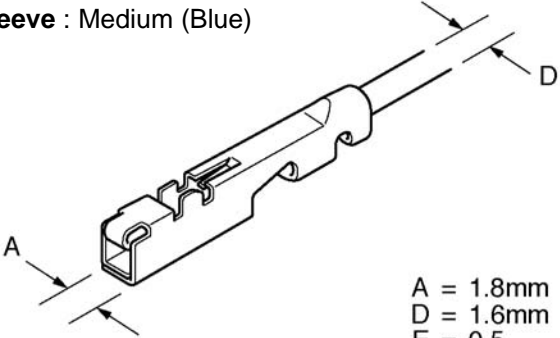
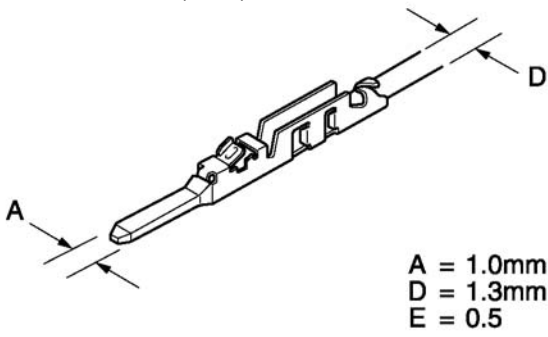
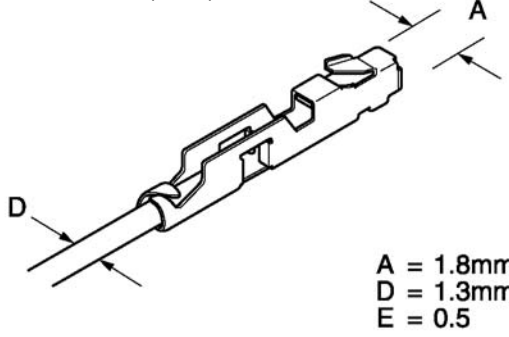

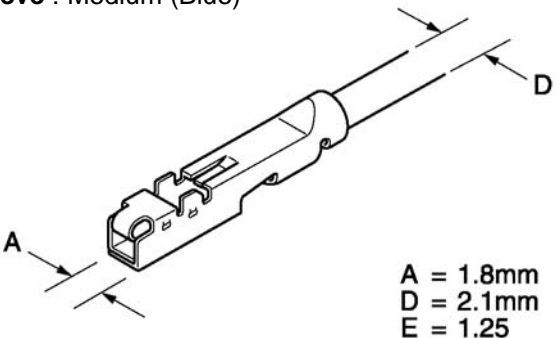
TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>1.0II</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">A = 1.0mm D = 1.5mm E = 0.85</p>	<p><b>Sleeve : Medium (Blue)</b> <b>Size : S</b></p>  <p style="text-align: right;">A = 1.8mm D = 1.5mm E = 0.85</p>
P/N	82998-24010	82998-24020 82998-24110*
Type	<b>1.0II</b>	
	Male	Female
		<p><b>Sleeve : Medium (Blue)</b> <b>Size : M</b></p>  <p style="text-align: right;">A = 1.8mm D = 2.1mm E = 1.25</p>
P/N		82998-24120*
Type	<b>1.0III</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">A = 1.0mm D = 1.6mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">A = 1.85mm D = 1.6mm E = 0.5</p>
P/N	82998-12670 82998-12680*	82998-12690 82998-12880*

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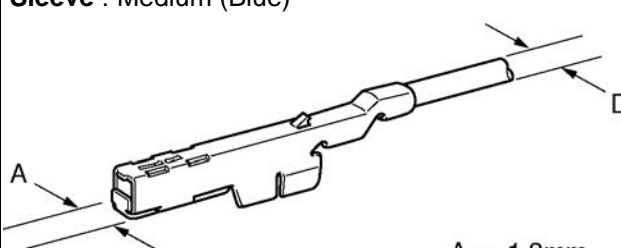
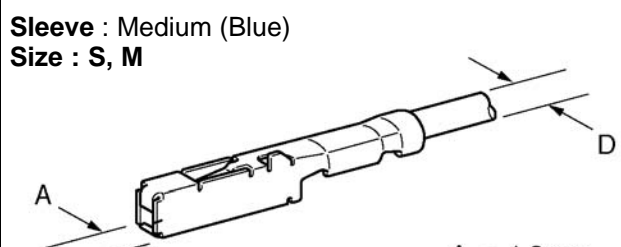
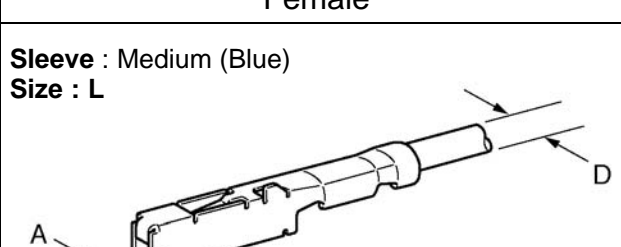
### Repair Wire (Non-waterproof Type)

Type	<b>1.0III</b>	
	Male	Female (Outer)
		<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 1.6mm E = 0.5</p>
P/N		82998-12700*
Type	<b>1.0III IDC</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.0mm D = 1.3mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 1.3mm E = 0.5</p>
P/N	82998-12660	82998-12640
Type	<b>1.0IV</b>	
	Male	Female
		<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 2.1mm E = 1.25</p>
P/N		82998-12740

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TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

**Repair Wire (Non-waterproof Type)**

Type	<b>1.0J</b>	
	Male	Female
	_____	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 1.6mm E = 0.5</p>
P/N		82998-24310 82998-24320*
Type	<b>1.0JII</b>	
	Male	Female
	_____	<p><b>Sleeve : Medium (Blue)</b> <b>Size : S, M</b></p>  <p>A = 1.8mm D = 2.1mm E = 1.25 0.85*</p>
P/N		82998-12830 82998-12850*
Type	<b>1.0JII</b>	
	Male	Female
	_____	<p><b>Sleeve : Medium (Blue)</b> <b>Size : L</b></p>  <p>A = 1.8mm D = 1.85mm E = 1.5</p>
P/N		82998-12840

### Repair Wire (Non-waterproof Type)

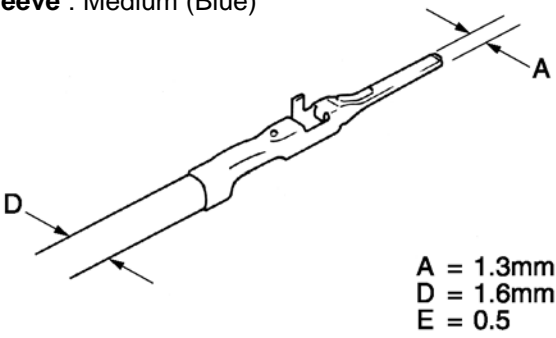
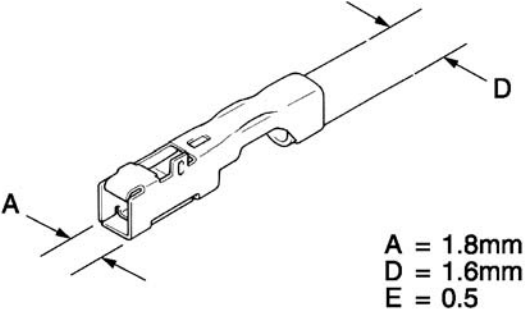
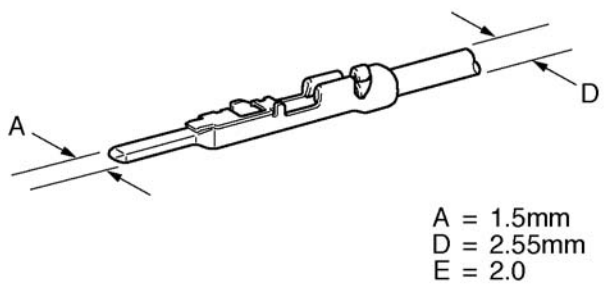
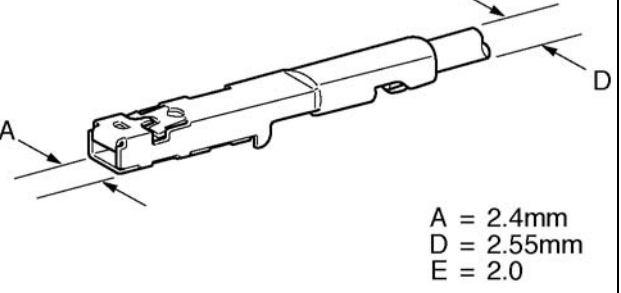
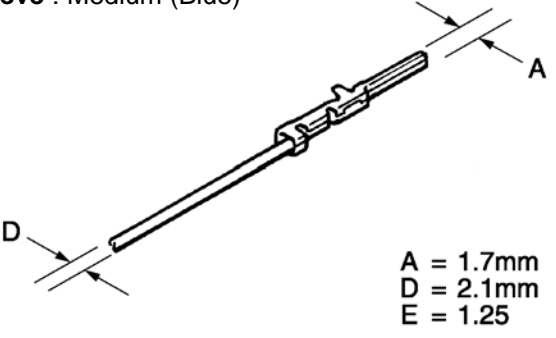
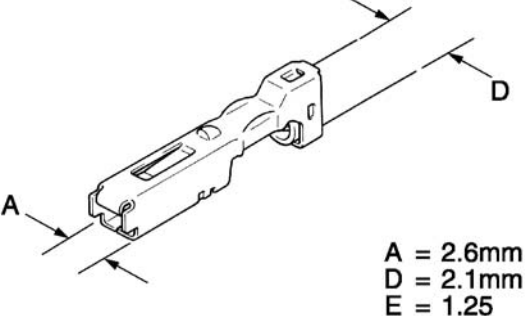
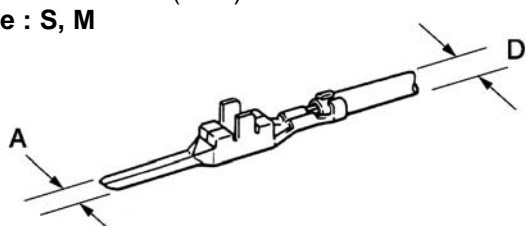
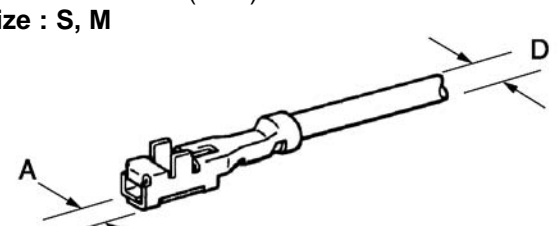
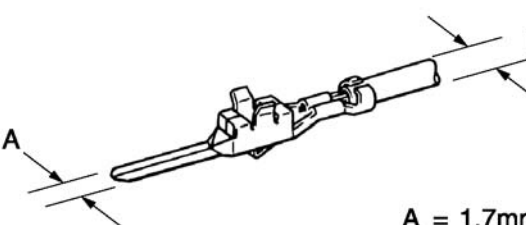
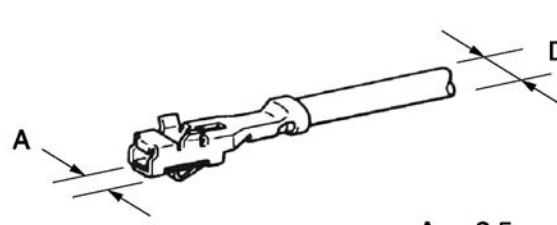

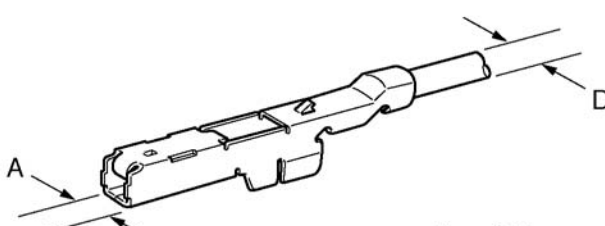
Type	1.3	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.3mm D = 1.6mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.8mm D = 1.6mm E = 0.5</p>
P/N	82998-12410	82998-12420
Type	1.5	
	Male	Female
	<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 1.5mm D = 2.55mm E = 2.0</p>	<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 2.4mm D = 2.55mm E = 2.0</p>
P/N	82998-24340	82998-24350
Type	1.8	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.7mm D = 2.1mm E = 1.25</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 2.6mm D = 2.1mm E = 1.25</p>
P/N	82998-12180	82998-12190 82998-12300*

TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>1.8II</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b> <b>Size : S, M</b></p>  <p style="text-align: right;">A = 1.7mm D = 2.1mm E = 1.25</p>	<p><b>Sleeve : Medium (Blue)</b> <b>Size : S, M</b></p>  <p style="text-align: right;">A = 2.5mm D = 2.1mm E = 1.25</p>
P/N	82998-24090 82998-24130*	82998-24100
Type	<b>1.8II</b>	
	Male	Female
	<p><b>Sleeve : Large (Yellow)</b> <b>Size : L</b></p>  <p style="text-align: right;">A = 1.7mm D = 2.6mm E = 2</p>	<p><b>Sleeve : Large (Yellow)</b> <b>Size : L</b></p>  <p style="text-align: right;">A = 2.5mm D = 2.6mm E = 2</p>
P/N	82998-24030	82998-24040
Type	<b>1.8J</b>	
	Male	Female
		<p><b>Sleeve : Large (Yellow)</b></p>  <p style="text-align: right;">A = 2.7mm D = 2.6mm E = 2.0</p>
P/N		82998-24330

### Repair Wire (Non-waterproof Type)

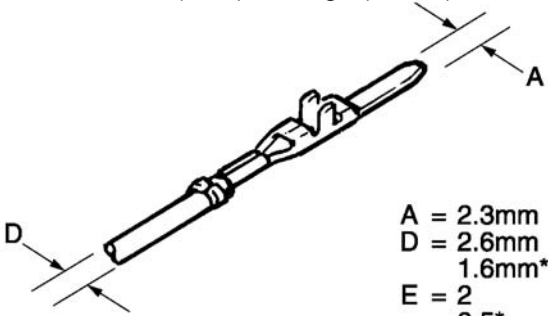
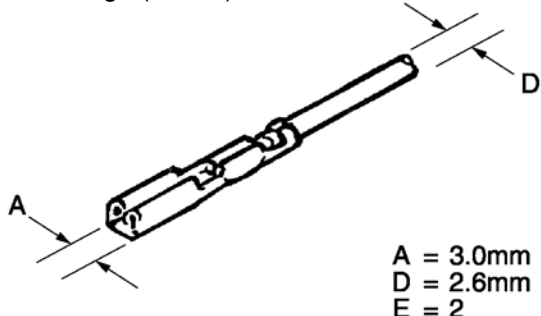
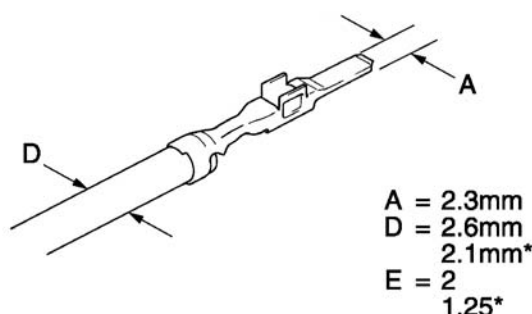
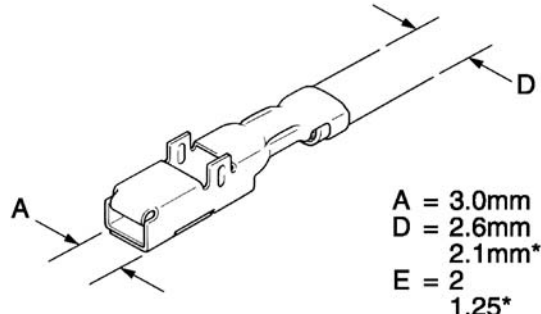

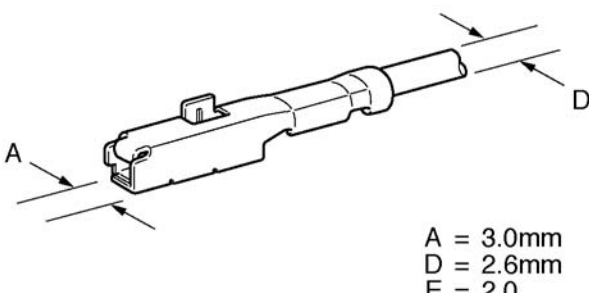

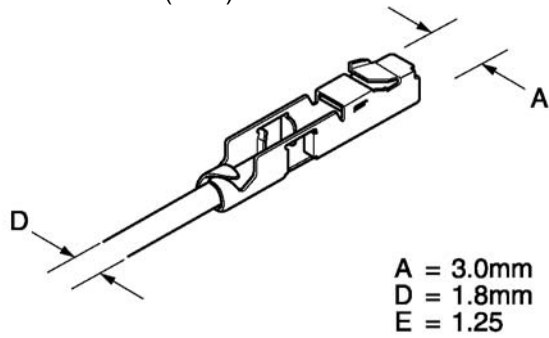
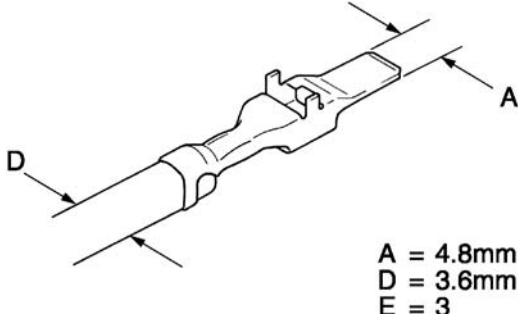
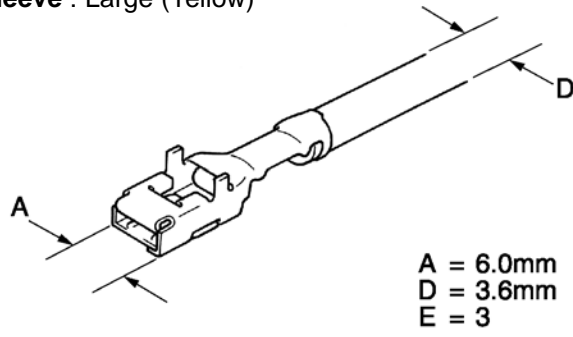
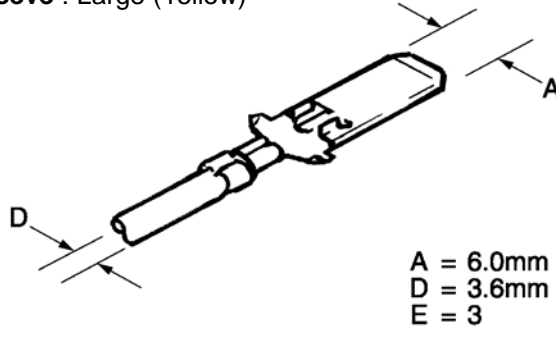
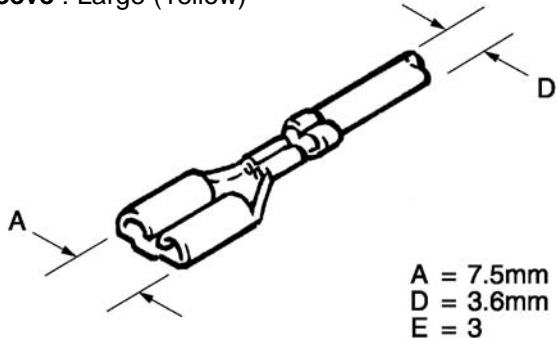
Type	<b>2.3</b>	
	Male	Female
	<p><b>Sleeve :</b> Medium (Blue) or Large (Yellow)</p>  <p>A = 2.3mm D = 2.6mm 1.6mm* E = 2 0.5*</p>	<p><b>Sleeve :</b> Large (Yellow)</p>  <p>A = 3.0mm D = 2.6mm E = 2</p>
P/N	82998-12160 82998-24050*	82998-12170
Type	<b>2.3II</b>	
	Male	Female
	<p><b>Sleeve :</b> Medium (Blue) or Large (Yellow)</p>  <p>A = 2.3mm D = 2.6mm 2.1mm* E = 2 1.25*</p>	<p><b>Sleeve :</b> Medium (Blue) or Large (Yellow)</p>  <p>A = 3.0mm D = 2.6mm 2.1mm* E = 2 1.25*</p>
P/N	82998-12330 82998-12350*	82998-12340 82998-12360*
Type	<b>2.3II (Low Insertion Force)</b>	
	Male	Female
		<p><b>Sleeve :</b> Large (Yellow)</p>  <p>A = 3.0mm D = 2.6mm E = 2.0</p>
P/N		82998-24380

TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>2.3II IDC</b>	
	Male	Female
		<p>Sleeve : Medium (Blue)</p>  <p>A = 3.0mm D = 1.8mm E = 1.25</p>
P/N		82998-24220
Type	<b>4.8</b>	
	Male	Female
	<p>Sleeve : Large (Yellow)</p>  <p>A = 4.8mm D = 3.6mm E = 3</p>	<p>Sleeve : Large (Yellow)</p>  <p>A = 6.0mm D = 3.6mm E = 3</p>
P/N	82998-12370	82998-12380
Type	<b>6.3 Housing Lance</b>	
	Male	Female
	<p>Sleeve : Large (Yellow)</p>  <p>A = 6.0mm D = 3.6mm E = 3</p>	<p>Sleeve : Large (Yellow)</p>  <p>A = 7.5mm D = 3.6mm E = 3</p>
P/N	82998-12050	82998-12060(160mm) 82998-12580(500mm)

### Repair Wire (Non-waterproof Type)


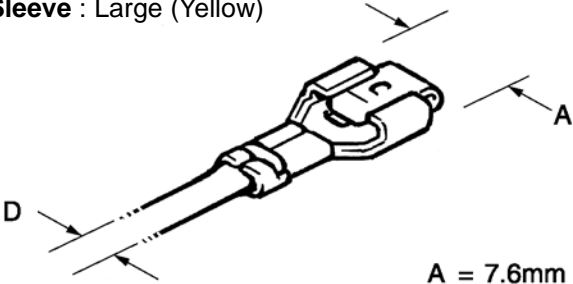

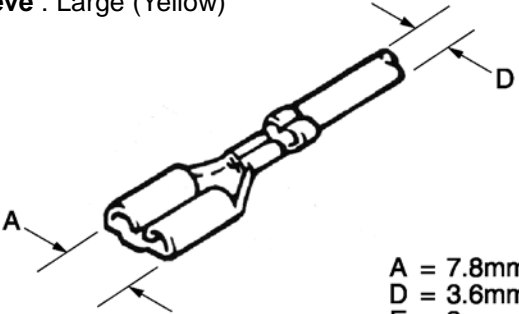
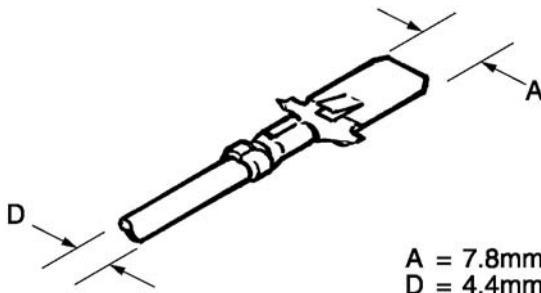
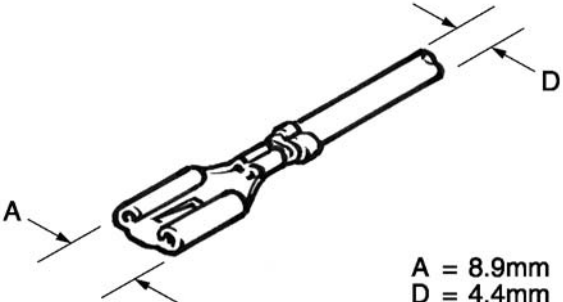
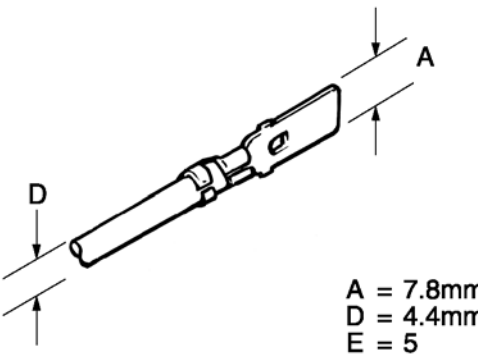
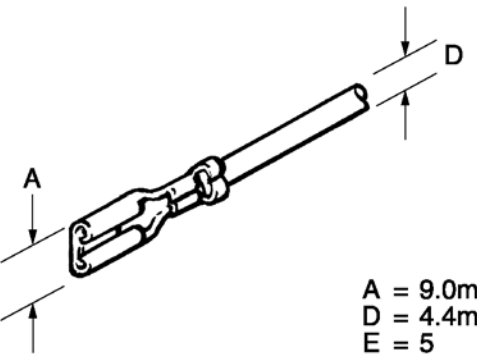
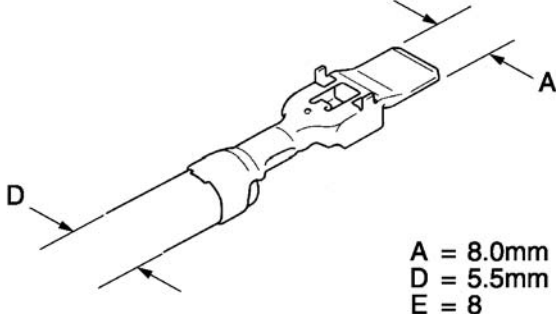
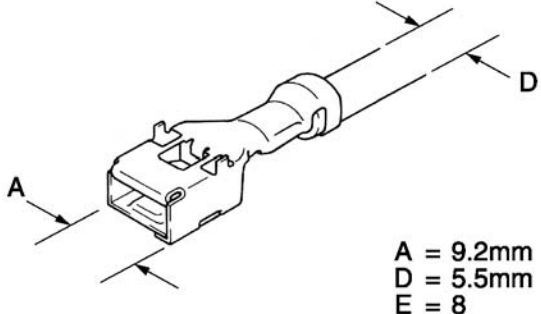

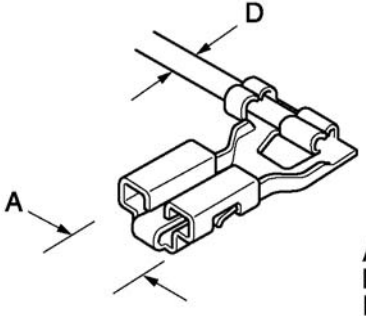
Type	<b>6.3 Terminal Lance</b>	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 7.6mm D = 3.6mm E = 3</p>
P/N		82998-12070
Type	<b>6.3II</b>	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 7.8mm D = 3.6mm E = 3</p>
P/N		82998-24170
Type	<b>7.7 Terminal Lance</b>	
	Male	Female
	 <p>A = 7.8mm D = 4.4mm E = 5</p>	 <p>A = 8.9mm D = 4.4mm E = 5</p>
P/N	82998-12010	82998-12020



TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>7.7 Housing Lance</b>	
	Male	Female
	 <p>A = 7.8mm D = 4.4mm E = 5</p>	 <p>A = 9.0mm D = 4.4mm E = 5</p>
P/N	82998-12030	82998-12040
Type	<b>8.0</b>	
	Male	Female
	 <p>A = 8.0mm D = 5.5mm E = 8</p>	 <p>A = 9.2mm D = 5.5mm E = 8</p>
P/N	82998-12390	82998-12400
Type	<b>8.0 (HEAD LAMP)</b>	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 8.9mm D = 2.6mm E = 2.0</p>
P/N	82998-24140(160mm)	82998-24200(500mm)

### Repair Wire (Non-waterproof Type)


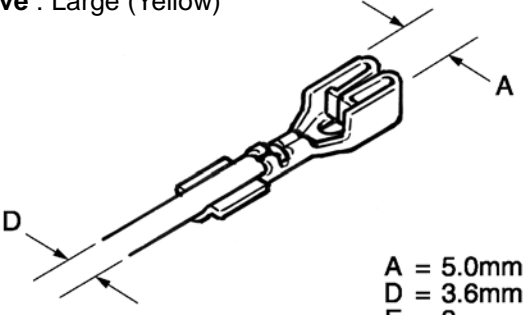
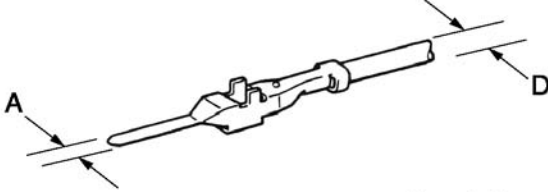
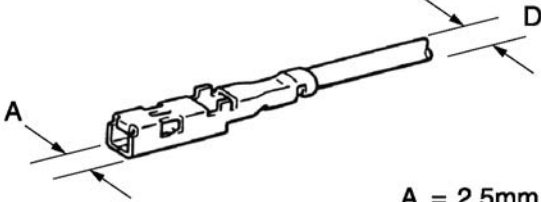

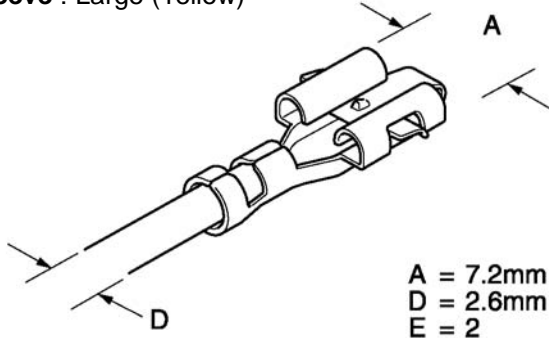

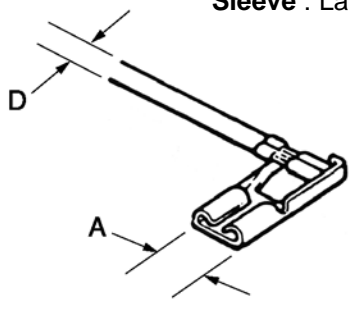
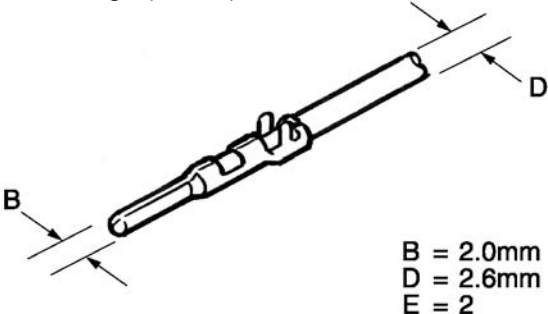
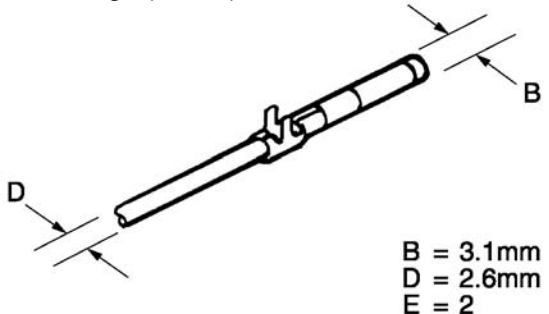

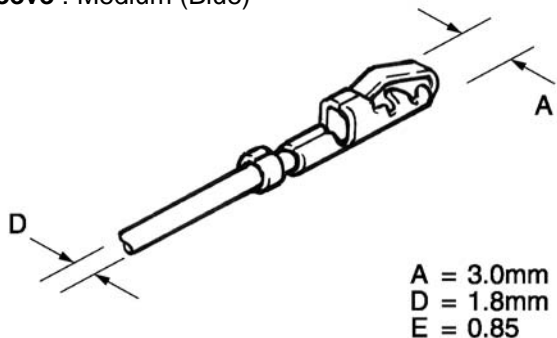
Type	<b>BLADE FUSE</b>	
	Male	Female
		<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 5.0mm D = 3.6mm E = 3</p>
P/N		82998-12140
Type	<b>C-Type</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.5mm D = 1.8mm E = 0.85</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 2.5mm D = 1.8mm E = 0.85</p>
P/N	82998-12560	82998-12570
Type	<b>FOG-LP</b>	
	Male	Female
		<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 7.2mm D = 2.6mm E = 2</p>
P/N		82998-24210(500mm)

TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>FTC</b>	
	Male	Female
		<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 6.2mm D = 2.6mm E = 2</p>
P/N		82998-12510
Type	<b>LAC</b>	
	Male	Female
	<p><b>Sleeve : Large (Yellow)</b></p>  <p>B = 2.0mm D = 2.6mm E = 2</p>	<p><b>Sleeve : Large (Yellow)</b></p>  <p>B = 3.1mm D = 2.6mm E = 2</p>
P/N	82998-12100	82998-12110
Type	<b>MFPC</b>	
	Male	Female
		<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 3.0mm D = 1.8mm E = 0.85</p>
P/N		82998-12150

### Repair Wire (Non-waterproof Type)

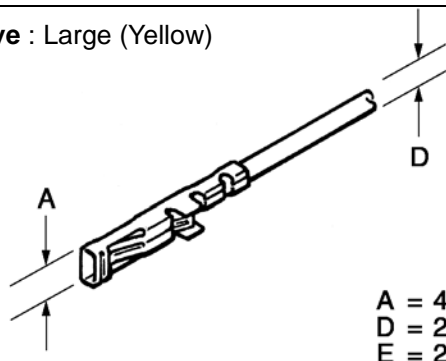
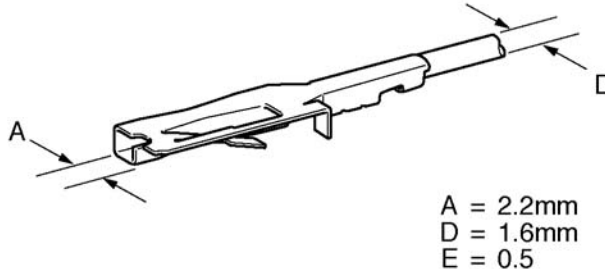
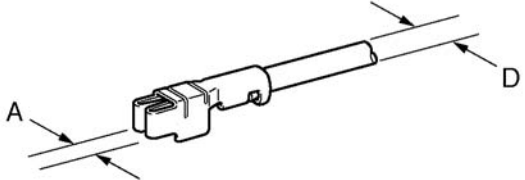

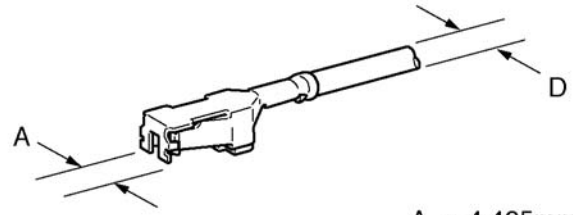

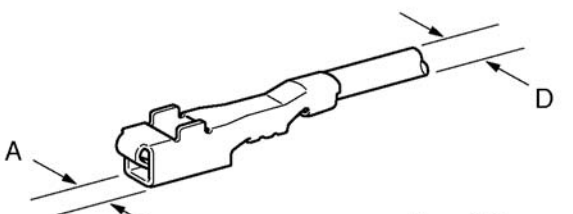

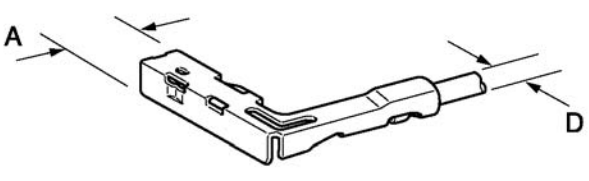
Type	MIC	
	Male	Female
	_____	<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 4.0mm D = 2.6mm E = 2</p>
P/N		82998-12120
Type	MIC100	
	Male	Female
	_____	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 2.2mm D = 1.6mm E = 0.5</p>
P/N		82998-01010
Type	MINI FUSE	
	Male	Female
	_____	<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 4.5mm D = 3.6mm E = 3.0</p>
P/N		82998-12810

TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>MINI FUSE (Low Profile)</b>	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 4.425mm D = 3.6mm E = 3.0</p>
P/N		82998-12820
Type	<b>MP280</b>	
	Male	Female
		<p>Sleeve : Large (Yellow)</p>  <p>A = 2.8mm D = 2.6mm E = 2.0</p>
P/N		82998-01020
Type	<b>PAI1</b>	
	Male	Female
		<p>Sleeve : Medium (Blue)</p>  <p>A = 2.2mm D = 1.6mm E = 0.5</p>
P/N		82988-12010*(500mm) 82988-12030*(500mm) 82988-12020*(500mm) 82988-12040*(500mm)

### Repair Wire (Non-waterproof Type)


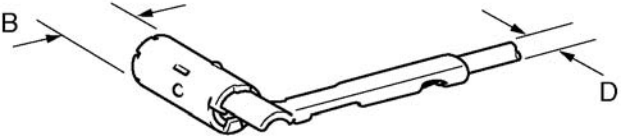
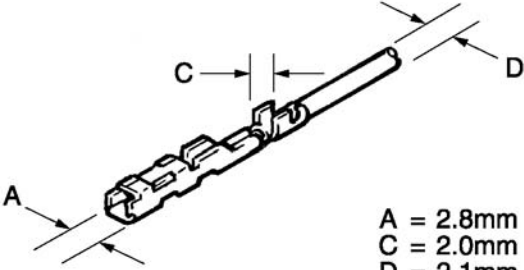
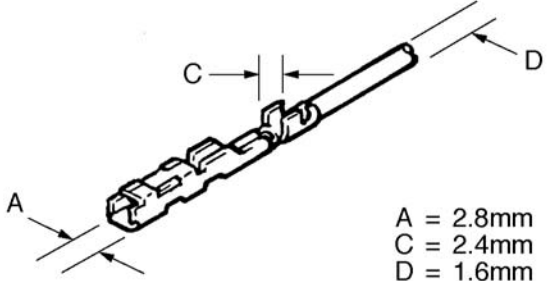

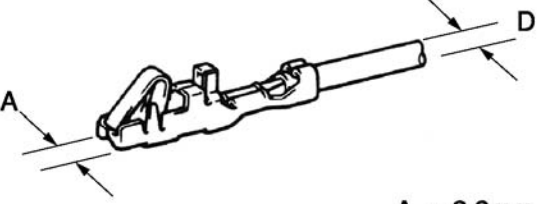

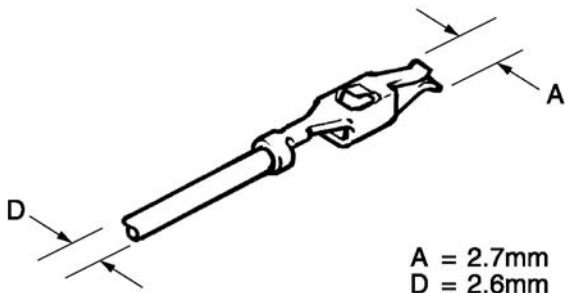
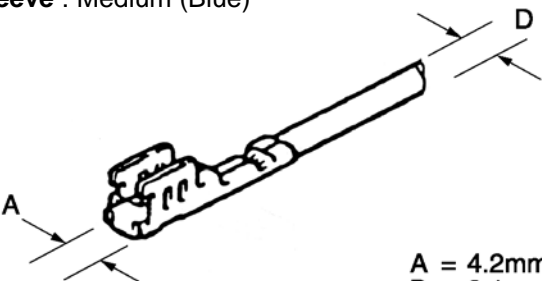
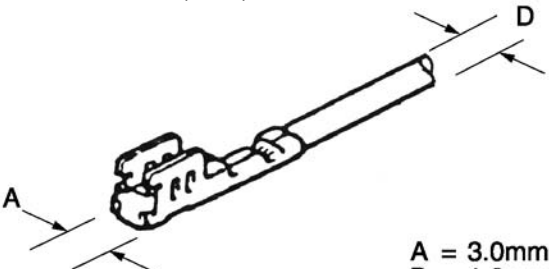
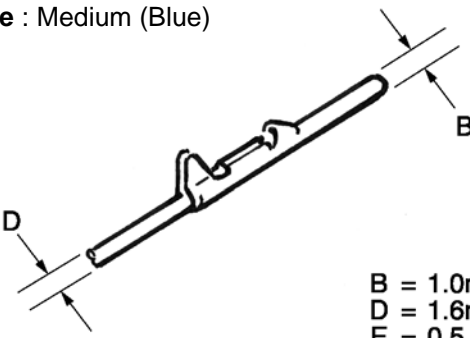
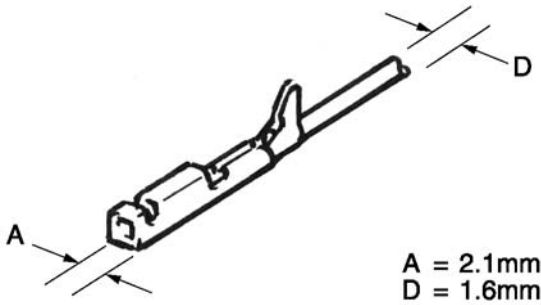
Type	<b>PAI1</b>	
	Male	Female
		<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">                 B = 2.6mm                  D = 1.6mm                  E = 0.5             </p>
P/N		82988-12050* (500mm) 82988-12060* (500mm)
Type	<b>PULSE LOCK</b>	
	Female (Power)	Female (Signal)
	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">                 A = 2.8mm                  C = 2.0mm                  D = 2.1mm                  E = 1.25             </p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">                 A = 2.8mm                  C = 2.4mm                  D = 1.6mm                  E = 0.5             </p>
P/N	82998-12200	82998-12210
Type	<b>SFPC</b>	
	Male	Female
		<p><b>Sleeve : Medium (Blue)</b></p>  <p style="text-align: right;">                 A = 2.2mm                  D = 1.6mm                  E = 0.5             </p>
P/N		82998-24180

TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

Repair Wire (Non-waterproof Type)

Type	<b>SL</b>	
	Male	Female
		<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 2.7mm D = 2.6mm E = 2</p>
P/N		82998-12130*
Type	<b>SP</b>	
	Female (Power)	Female (Signal)
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 4.2mm D = 2.1mm E = 1.25</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 3.0mm D = 1.8mm E = 0.85</p>
P/N	82998-12520	82998-12530
Type	<b>TLC</b>	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>B = 1.0mm D = 1.6mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 2.1mm D = 1.6mm E = 0.5</p>
P/N	82998-12220	82998-12230

### Repair Wire (Non-waterproof Type)

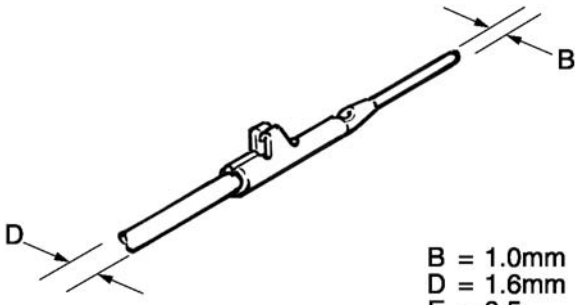
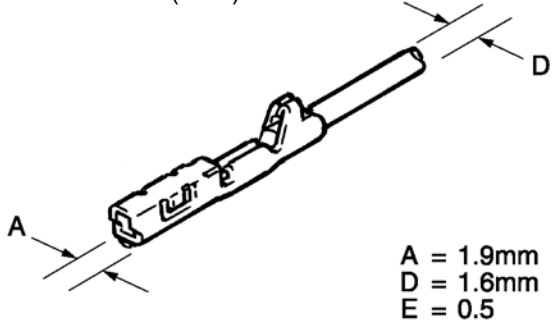
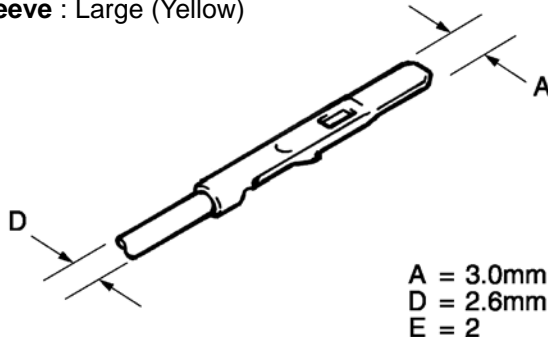
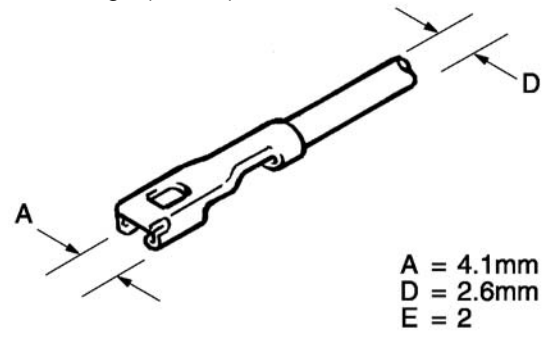
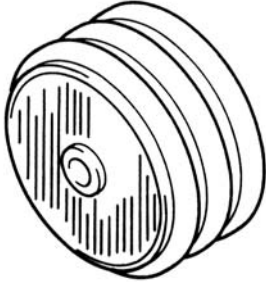
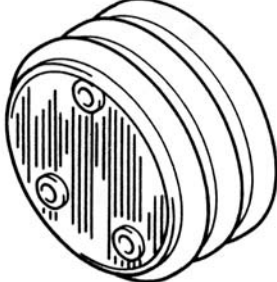
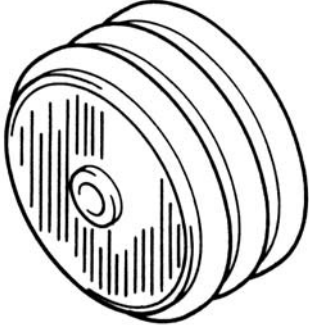

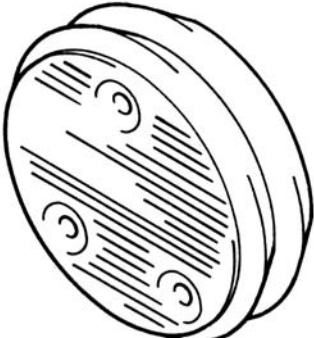
Type	TNS	
	Male	Female
	<p><b>Sleeve : Medium (Blue)</b></p>  <p>B = 1.0mm D = 1.6mm E = 0.5</p>	<p><b>Sleeve : Medium (Blue)</b></p>  <p>A = 1.9mm D = 1.6mm E = 0.5</p>
P/N	82998-12240	82998-12250
Type	TODC	
	Male	Female
	<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 3.0mm D = 2.6mm E = 2</p>	<p><b>Sleeve : Large (Yellow)</b></p>  <p>A = 4.1mm D = 2.6mm E = 2</p>
P/N	82998-12080	82998-12090



TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

**Terminal Packing**

Type	<b>6.3</b>	
Cav. No.	1	3
		
P/N	90980-09210	90980-09211
Type	<b>7.7</b>	
Cav. No.	1	
		_____
P/N	90980-09380	
Type	<b>TODC</b>	
Cav. No.	1	3
		
P/N	90980-09378	90980-09379

### Hole Plug

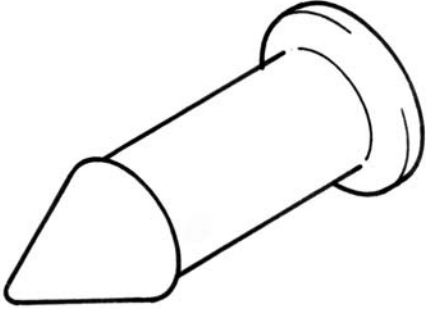
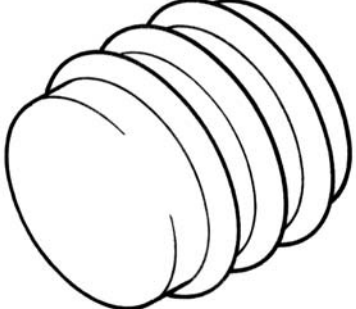
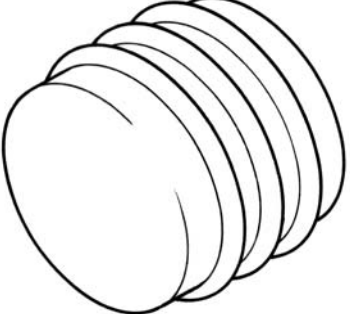

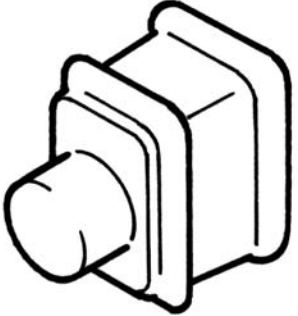
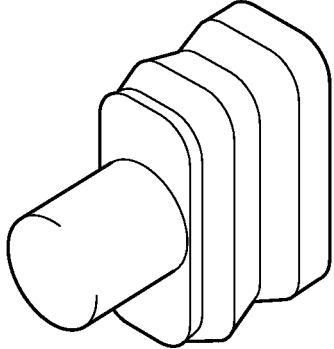
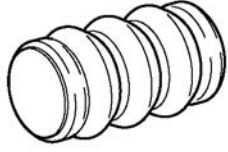


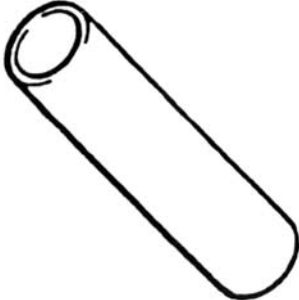

Type	<b>6.3, 7.7, TODC</b>	<b>4.8</b>
		
P/N	90950-01730	90980-09325
Type	<b>8.0</b>	<b>2.3II</b>
		
P/N	90980-09353	90980-09152(6mm) 90980-09229(5mm)
Type	<b>TLC</b>	<b>1.3</b>
		
P/N	90980-09162	90980-09414

TABLE OF REPAIR WIRE, TERMINAL PACKING, HOLE PLUG AND PRESS SLEEVE

**Hole Plug**

Type	1.0III	0.64
		
P/N	90980-09717	90980-09871
Type		
P/N		
Type		
P/N		

### Press Sleeve

Color	YELLOW	BLUE
		
P/N	82999-12030	82999-12020
Color	RED	
		
P/N	82999-12010	

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# APPENDIX

WIRE HARNESS REPAIR KIT WITH CASE ...	G-1
REPORTING OF WIRE HARNESS PROBLEM .....	G-2

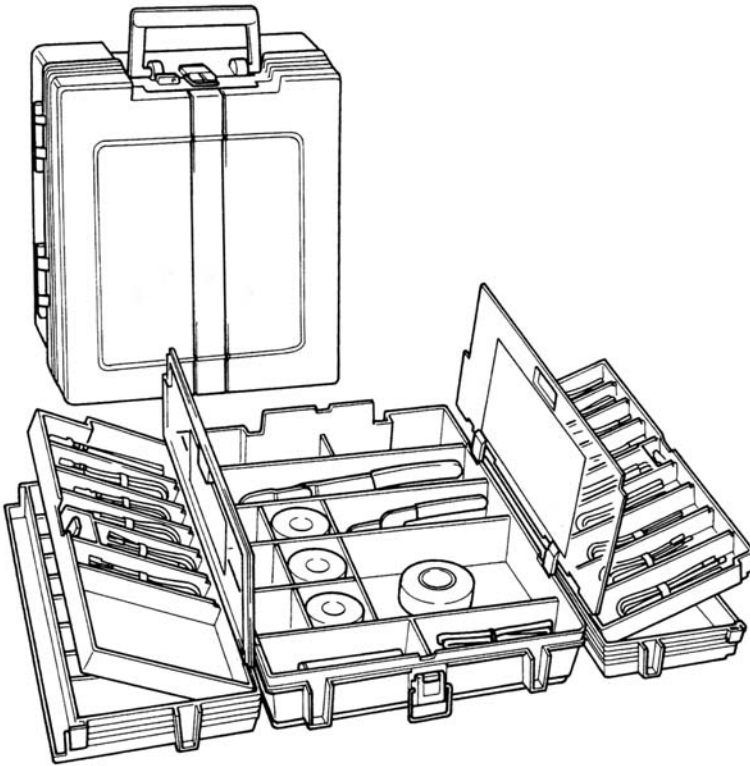


## APPENDIX–WIRE HARNESS REPAIR KIT WITH CASE

### WIRE HARNESS REPAIR KIT WITH CASE (REFERENCE ONLY)

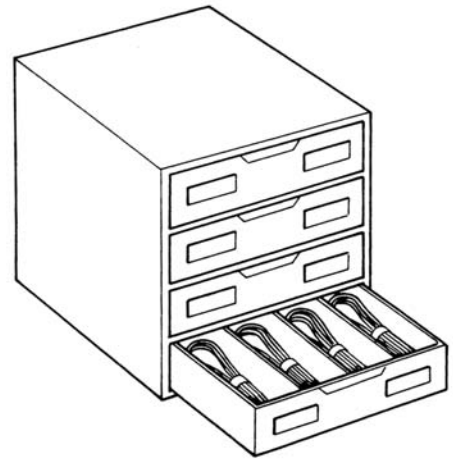
We would like to recommend to you use of the "Wire Harness Repair Kit with the Case" according to your after service market demand.

Example:



[portable type]

or



[stationary type]

Remark: This kind of kit is not available from Toyota Motor Corporation.

**REPORTING OF WIRE HARNESS PROBLEM**

It is more difficult to understand the cause of wire harness problems and to make production improvements, due to the number of wire harness routings and connectors and their wide scope of use.

The position of the problem occurrence and the problem cause will be very clear if you proceed with wire harness/connector repairs.

We request that when you perform repairs, you fill in the attached "WIRE HARNESS/CONNECTOR PROBLEM CHECK SHEET" and send it to your distributor.

Toyota Motor Corporation will be able to make production improvements more quickly and surely based on the results of the above mentioned reports (Check Sheets).



APPENDIX-REPORTING OF WIRE HARNESS PROBLEM

**WIRE HARNESS/CONNECTOR PROBLEM CHECK SHEET** page 1/3

Please use the TOYOTA ELECTRICAL WIRING DIAGRAM (EWD) manual to answer this questionnaire accurately.

Dealer Name \_\_\_\_\_ Dealer Code \_\_\_\_\_

Full Model Code \_\_\_\_\_ Frame No. \_\_\_\_\_

P/D \_\_\_\_\_ / \_\_\_\_\_ km-reading/Mileage Date of Problem \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Customer Complaint: \_\_\_\_\_

Electrical Component with Problem: \_\_\_\_\_

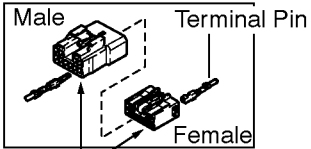
Condition:  Intermittent operation  Inoperative  Others

Symptom:  Short  Open circuit  Moisture

Others (Eg.Rattle,Noise etc. - Please proceed to "Box B" on next page.)

**CONNECTOR PROBLEM:**

Please fill in the required information in the brackets and check the appropriate box.



EWD page ( )  
CONNECTOR NO.( )

TERMINAL  
 Male  Female  
 PIN No. ( )  
 WIRE COLOR ( )

TERMINAL MISSING (Terminal Coming off)  
 TERMINAL BROKEN  
 TERMINAL BENT (Male)  
 TERMINAL EXPANDED (Female)  
 WIRE POORLY CRIMPED AT TERMINAL  
 CORROSION, RUST, MOISTURE  
 POOR CONTACT  
 OTHERS ( )

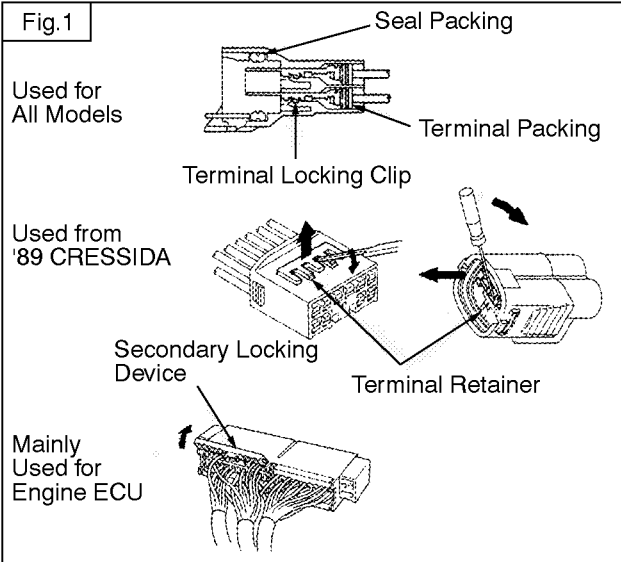
NON-WATERPROOF TYPE  
 WATERPROOF TYPE  
 WATER ENTERING FROM:  
 (  SEAL PACKING  WIRE HARNESS  
 TERMINAL PACKING  UNCLEAR, OTHERS )

Please refer to Fig. 1  
 BROKEN LOCKING CLIP OF CONNECTOR  
 TERMINAL LOCKING CLIP MISSING  
 TERMINAL RETAINER BROKEN  
 SECONDARY LOCKING PLATE MISSING  
 OTHERS; ( )

CONNECTOR BODY  
 Male  Female

NOT CONNECTED/HALF CONNECTED  
 BROKEN CONNECTOR  
 BROKEN LOCKING CLIP OF CONNECTOR  
 OTHERS ( )

Fig.1



G

**WIRE HARNESS PROBLEM:**

Please fill in the required information in the brackets and check the appropriate box.


E.W.D Page (                    )

Problem occurred between { \*CONNECTOR NO.A (                    )  
 PIN NO. (                    )  
 WIRE COLOR (                    ) } and { CONNECTOR NO.B (                    )  
 PIN NO. (                    )  
 WIRE COLOR (                    ) }

\* The problem indicated below occurred at a distance of (                    mm) from connector A (                    )

SHORT

OPEN



PINCHED  
 INTERFERENCE/ABRATION  
 MOISTURE  
 CORROSION, RUST  
 OTHERS;

CUT WIRE  
 SPLICE POINT  
 OTHRES;

POOR CONTACT OF RING TYPE TERMINAL  
 EARTH TERMINAL  
 POWER SOURCE TERMINAL  
      BATTERY  
      STARTER  
      ALTERNATOR

Name of the other part which cause the short/open of wire  
  
 BODY                    { Name }  
 PART  
 OTHERS

INSULATION:  
 YES                     NO  
      CONDUIT TUBE  
      VINYL TUBE  
      VINYL TAPE  
      VINYL SHEET  
      OTHERS (                    )

LOOSE SET BOLT  
 CORROSION, RUST  
 OTHERS (                    )

Note: If possible, attach an illustration or photo to show the part causing the short or open, and the position of the wire and the other part. This will help to make the cause of the problem clear and help us to take prompt action.

<b>Box B</b>	If you checked the "Others" box in the "Symptom" section on page 3-1, please describe:
Symptom:	_____
Condition:	_____
Related Wire Harness or Connector;	_____
Name or Part NO.:	_____
Location:	_____

APPENDIX-REPORTING OF WIRE HARNESS PROBLEM

REPAIR:

1. Please identify repair method:

Troubleshooting methods

WIRING DIAGRAM

VOLTMETER: ANALOG \_\_\_\_\_ , DIGITAL \_\_\_\_\_

2. Please check one box and fill in prethesis:

REPLACE WIRE HARNESS

REPLACE CONNECTOR OR TERMINAL

REPAIR TERMINAL

OTHERS ( )

SOLDER CONNECTION

WIRE HARNESS TOOLS

CRIMPING PLIERS

PICK

OTHERS ( )

3. Please attach a copy of the TOYOTA ELECTRICAL WIRING DIAGRAM for the vehicle repaired:

Indicate the affected connector number by arrow, or circle and identify the affected wire harness.

EXAMPLE: COROLLA (ZZE 110)

Condition: Engine does not start

Cause: Connector pin backed out from female connector at clutch start switch

Component: Clutch start switch inoperation

