

025 SERIES I/O CONNECTORS (H-Type ,V-Type 2Row)

**1. Part Name and Part Number**

1.1 Housing

AMP Part Number★	Part Name
1376350	025 SERIES 8 POSITION CAP ASSY H-TYPE (Male Connector)
1376352	025 SERIES 8 POSITION PLUG ASSY (Female Housing)
1318772	025 SERIES 12 POSITION CAP ASSY H-TYPE (Male Connector)
1473898	025 SERIES 12 POSITION CAP ASSY V-TYPE (Male Connector)
1318774	025 SERIES 12 POSITION PLUG ASSY (Female Housing)
1376675	025 SERIES 12 POSITION PLUG ASSY SHORT BODY (Female Housing)
1318382	025 SERIES 16 POSITION CAP ASSY H-TYPE (Male Connector)
1318386	025 SERIES 16 POSITION PLUG ASSY (Female Housing)
1318853	025 SERIES 24 POSITION CAP ASSY H-TYPE (Male Connector)
1376111	025 SERIES 24 POSITION CAP ASSY V-TYPE (Male Connector)
1318917	025 SERIES 24 POSITION PLUG ASSY (Female Housing)
1565373	025 SERIES 28 POSITION CAP ASSY H-Type (MALE CONNECTOR)
1565375	025 SERIES 28 POSITION CAP ASSY V-Type (MALE CONNECTOR)
1565380	025 SERIES 28 POSITION PLUG ASSY (FEMALE CONNECTOR)
1318745	025 SERIES 32 POSITION CAP ASSY H-TYPE (Male Connector)
1318747	025 SERIES 32 POSITION PLUG ASSY (Female Housing)
1318384	025 SERIES 40 POSITION CAP ASSY H-TYPE (Male Connector)
1376113	025 SERIES 40 POSITION CAP ASSY V-TYPE (Male Connector)
1318389	025 SERIES 40 POSITION PLUG ASSY (Female Housing)
※1612446-2	025 SERIES 12 POSITION CAP ASSY V-TYPE
★1612446-3	025 SERIES 40 POSITION CAP ASSY V-TYPE
∴1-1612446-0	025 SERIES 40 POSITION CAP ASSY H-TYPE (Male Connector)

Fig.1

★ Note : Part number is consisted from listed base number and 1 digit numeric prefix and suffix with dash.  
Refer to catalog or customer drawing for specific part numbers for each base number.

When prefix is zero, zero and dash are omitted.

※Note: This part number will be superseded by X-1473898-X.

★Note: This part number will be superseded by X-1376113-X.

∴Note: This part number will be superseded by X-1318384-X.

1.2 Contact

AMP Part Number	Part Name	Wire Type (○:Applicable、-:Not Applicable)			
		Type	0.22	0.3	0.5
1123343-1	025 RECEPTACLE (Female Contact)	CAVUS	○	○	○
		AVSS/AVSSH	-	○	○
		CAVS	○	○	○

Fig.2

1.3 Components View

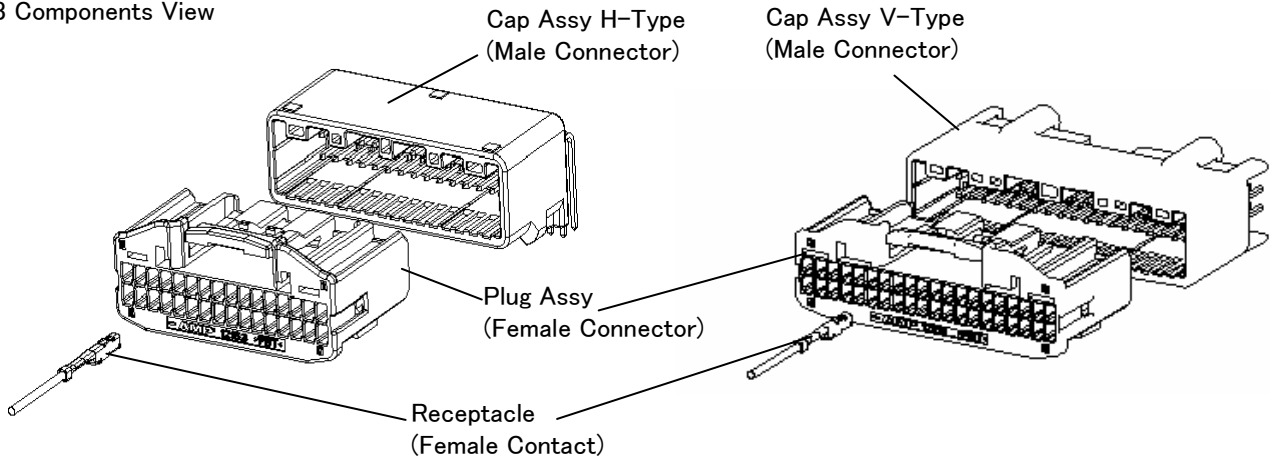


Fig.3

2. Customer Receiving Inspection

We conduct inspections according to our quality control regulations to maintain an over all lot control. In addition, the customers should conduct receiving inspections based on the specific customer drawings.

3.Storage and Carrying

3.1 Contact

- (1) Avoid leaving or carrying the contact reel in an open area without wrapping it in proper material.
- (2) Do not lift up and carry the contact reel by gripping one the side of reel, this may result in damage to the reel, and contacts before use. (See Fig.4)

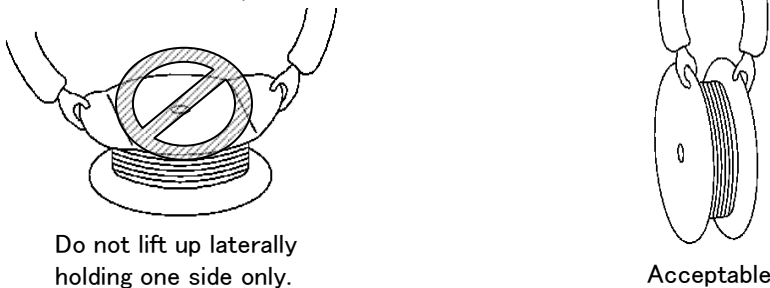


Fig.4

- (3) Avoid storing the contact reel in a moist or dusty place. Stock the reel in a comparatively dry and clean place (5~35°C, 45~85%RH) away from direct sunlight.
- (4) When removing the contact reel from the machine, fasten the end of contact strip onto the edge of the reel with use of proper string or wire. (See Fig.5)

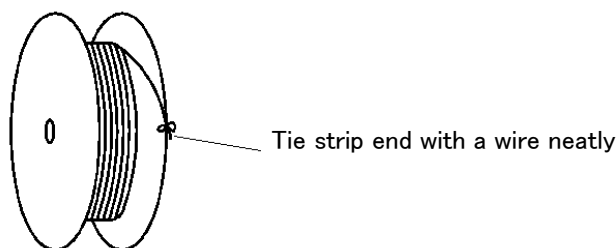


Fig.5

### 3.2 Housing

- (1) Avoid storing the housings in a moist or dusty place.  
Stock the housings in a comparatively dry and clean place (5~35°C, 45~85%RH) away from direct sunlight.
- (2) Avoid leaving or carrying the housings in an open area without wrapping it in proper material.
- (3) Do not drop or shock the housings when carrying it.

## 4. Fixing Housing and PC Board

Insert the contact of the male connector into the hole of PC Board. Then after fixing the housing and the board with a screw, solder the contacts. And take care of the following at the work.

- (1) Mount and solder onto PC Board within 3 months after purchase.
- (2) See the customer drawing for the PC Board dimension.
- (3) Do not deform the contact (PC Board side), otherwise the male connector can not be fixed on the PC Board.
- (4) The fixing should be made with the proper type of screw and torque.
  - Recommended Screw: JIS B1115, B1122, Tapping screw, Pan head, Class 2, M3x6
  - Tightening Torque: 0.4N·m for reference. However, establish process condition of torque value in every combination of the board and the screw.
- (5) No discoloration nor deformation should be caused by the heat of soldering.
- (6) In addition, both sides (mating side and solder side) of the contact and the housing must not be damaged or deformed by the operation. No foreign substances are permissible in the mating area.

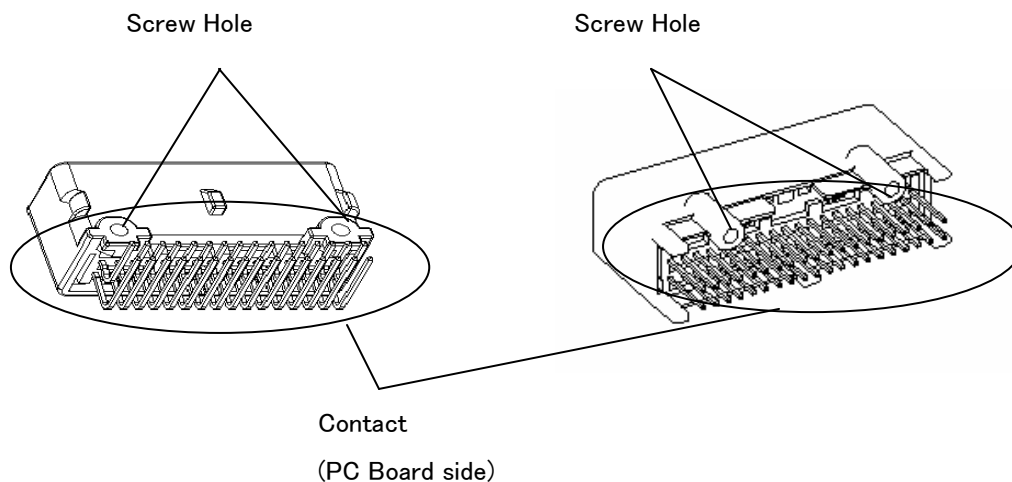


Fig.6

## 5.Crimping Operation

Any crimping of contacts must be performed by using appropriate AMP tools according to the applicable Instruction Sheet and Specification.

### 5.1 Wire

#### 5.1.1 Applicable Wire

See Fig.2 for applicable wire.

#### 5.1.2 Notes for Stripping of Wire End

Wire end must be stripped without nick, cutoff, or damage of wire strands.

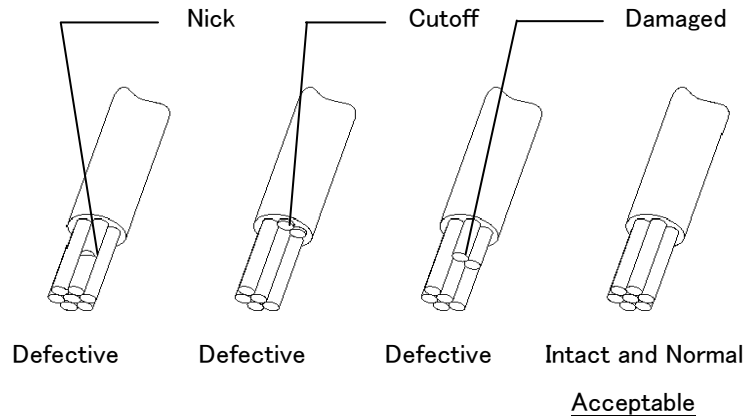


Fig.7

### 5.2 Operation of Crimping Machine

In the case of “025 Receptacle Contact”, see instruction sheet “412-5022(separate volume)” for automatic terminating machine.

### 5.3 Crimping Specification

In the case of “025 Receptacle Contact”, see application specification “114-5250(separate volume)” .

### 5.4 Storage and Handling of Crimped Products

- ( 1 ) Store the products in a clean, dry area, cover with proper sheet or paper when placed in an open area until the next day.
- ( 2 ) Crimped leads should be processed in bundles of less than 100 pieces. In addition, care should be taken in case the leads catch together or be tangled, causing damage of the products (Specially the lance of 025 Receptacle Contact).
- ( 3 ) Avoid stacking and piling up the in-process products in large volume. Deformation of the contact will result in malfunction of contacting parts electrically.

**6.Harness Making**

6.1 Procedure for Female Contact Insertion into Housing

- (1) Confirm the retainer is in pre-assembled condition. When the retainer is in final lock condition, it must be unlocked to pre-assembled condition. See para.4.3. The contact can not be inserted in final lock condition.

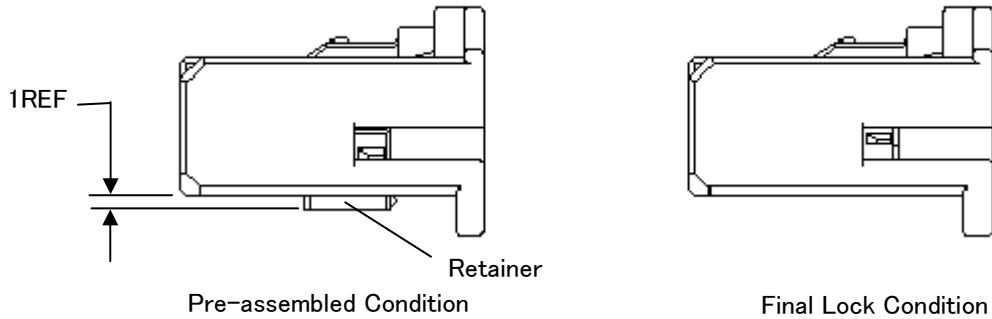


Fig.8

- (2) Confirm type of plating on the contact. It must be the same type of plating on the female contact and on the male contact.

The type of plating can be seen on the customer drawing.

**NOTE** Connection between different types of contacts should never be allowed.

- (3) Insert the contacts into the housing with same direction as shown in Fig.9. The insertion is finished when the lance (Contact Lance) is locked and the contact can not be more inserted.

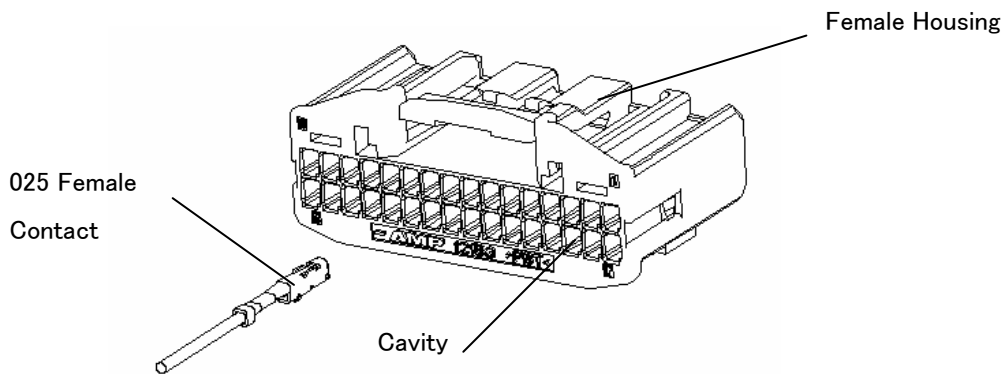


Fig.9

- (4) By pulling the contact by 20N MAX, check to make sure that the contact can not be with drawn.

6.2 Double Lock (Secondary Lock) Operation

(1) After insertion of all of the contacts, press the retainer for final lock condition. The double lock operation is finished by confirmation that the retainer is kept in the final condition by the 2 projections.

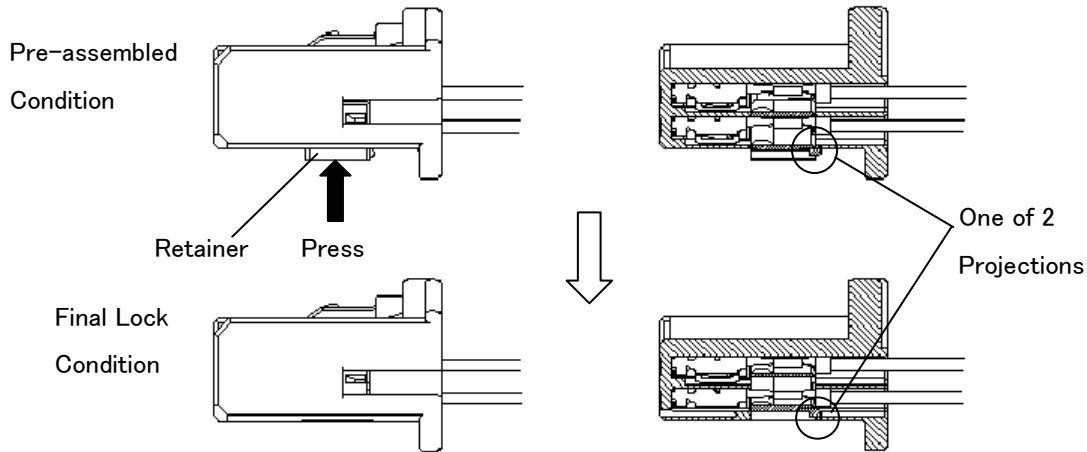


Fig.10

(2) The double lock operation can not be completed if there are any half-inserted contacts. When the retainer can not be pressed to the final condition, do not press by force, find the half inserted contact, and insert it to proper position. See para.6.1.

6.3 How to Unlock Retainer from Final Lock Condition

When the female contact requires insertion or extraction, the retainer must be in the pre-assembled condition. The insertion or extraction can not be done in final lock condition.

- (1) Insert a tool such as a 1mm blade screw driver, into the window of the retainer pointed by the tear drop mark. See Fig.11 (next page).
- (2) Draw out the retainer, about 1mm, to pre-assembled condition. Confirm that all of the projection is unlocked. See Fig.11 (next page).

**NOTE** Do not extract the retainer more than appropriate length. Otherwise the retainer may be damaged.

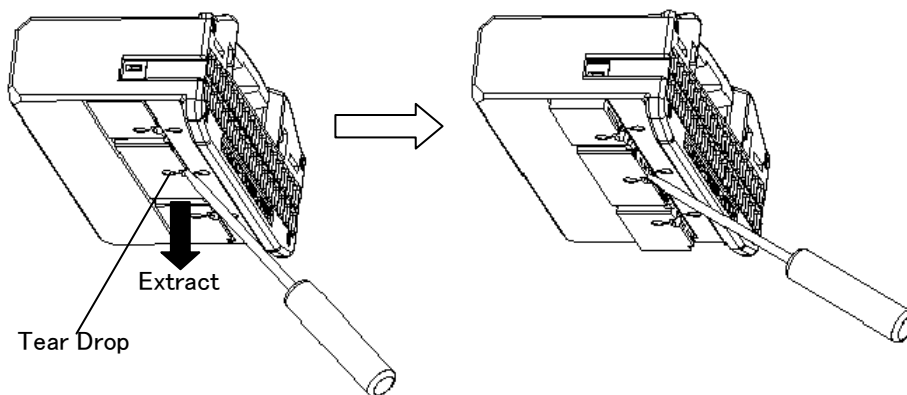


Fig.11

6.4 How to Extract Female Contact

- (1) Confirm the retainer is in pre-assembled condition. When the retainer is in final lock condition, it must be changed to pre-assembled condition. See para.6.3. The female contact can not be extracted in final assembled condition.
- (2) Insert the tip of a special extractive tool into the proper hole to the end, remove the loaded contact from housing while pull the crimped wire. See Fig.12.

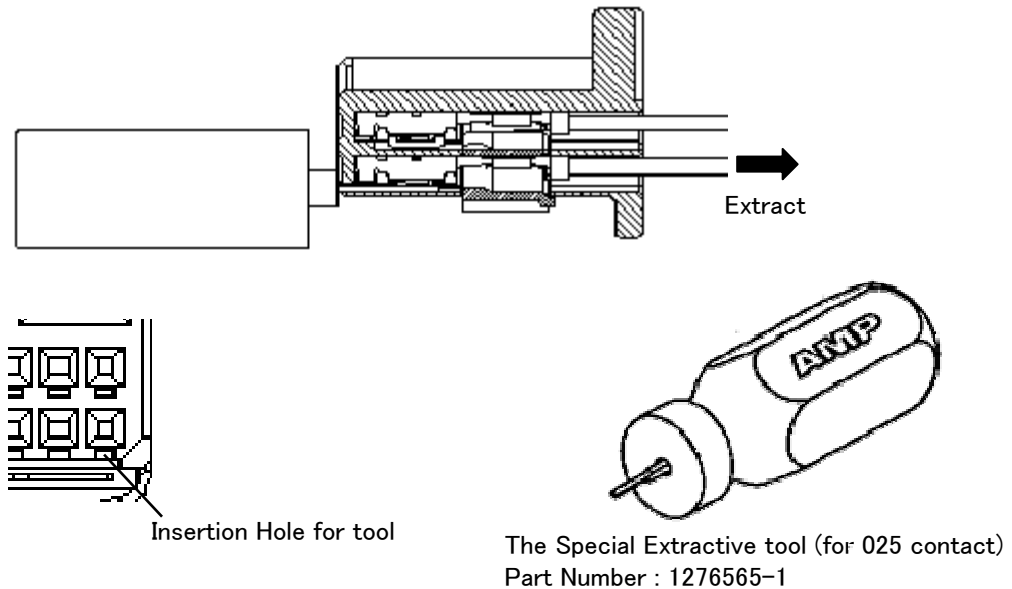


Fig.12

**NOTE** If only insert the tool, the contact lance will be released. Take care not to apply unnecessary force, otherwise the deformation of the tool occurs or it is cause for falling of retention force by the deformation of the contact lance. And do not repeat extract more than 10 times, otherwise the retention force has fallen.

**NOTE** Do not extract the retainer by this extractive tool (for 025 contact).

- (3) When the female contact can not be extracted, do not pull the wire by force but ensure the housing lance is unlocked.

**NOTE** Take care not to insert the screwdriver or the extractive tool into the female contact. If those should be inserted, the female contact must be renewed. Re-using is never allowed.

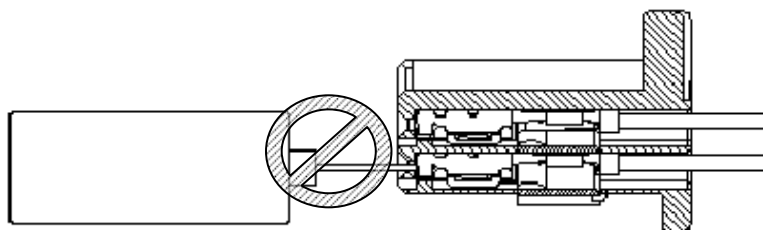


Fig.13

## 6.5 Harness Control

### 6.5.1 Handling

Take care not to apply unnecessary force or shock to the connector or the wire.

### 6.5.2 Taping up Wires

The wires must not be taped up more than 30mm from the end of the housing to avoid applying unnecessary force to the wires.

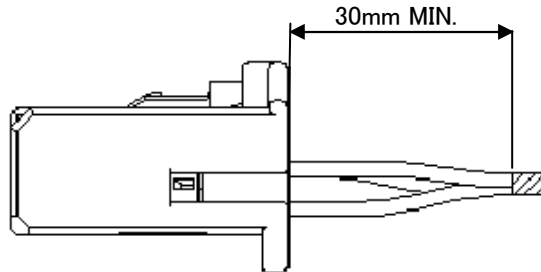


Fig.14

### 6.5.3 Electric Circuit Check

- (1) For making a check on electric circuit, the applicable mating half or equivalent product should be used.
- (2) Never insert the probe pin for the inspection into the female contact. The pin must be probed from the wire side.

**NOTE** If the probe pin should be inserted, the female contact must be renewed.

- (3) Please report to our company the treatment device for energizing inspection use.

### 6.5.4 Storage

Avoid storing the connector in a moist or dusty place. Stock the connector away from direct sunlight.

### 6.5.5 Shipping and Carrying

The connector should be used with the proper packaging to prevent the ingress of dust, moisture, etc.



## 7. Mating and Extraction of Connector

### 7.1 Mating of Connector

- (1) Check to make sure that the contact is inserted into the housing in proper condition, the wire is taped up from proper position, and the retainer is in final lock condition. If the retainer is in pre-assembled condition, it must be changed to be in final lock condition. See para.6.
- (2) And then check the contact and the housing into the male housing for defects, deformation, discoloration, damage, rust, crack, deficit, etc.

**NOTE** The connector must be renewed if any defects are found.

- (3) Insert the proper female housing into the male housing straight with same direction as shown in Fig.15. The operation is finished when you hear the click sound and can not insert further. When you can not insert the housing, do not insert by force, and check the items in (1), (2).

**NOTE** At the insertion operation, take care not to apply force except in the insertion direction.

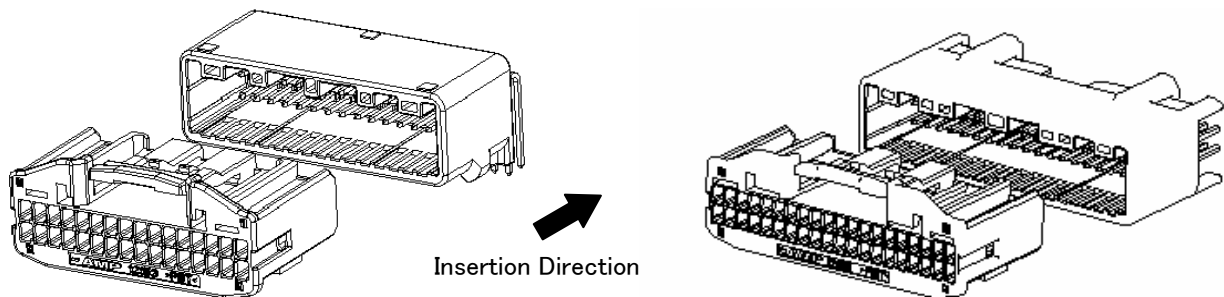


Fig.15

- (4) By pulling the female connector lightly, check to make sure that the connector can not be with drawn.

### 7.2 Extraction of Connector

Grip the female housing, and then draw straight out while pressing down the locking lever.

When the housing can not be drawn out, do not pull it by force but check to make sure if the locking mechanism is released.

**NOTE** At the extraction operation, take care not to apply force except in the extraction direction.

**NOTE** Do not pull the wire only.

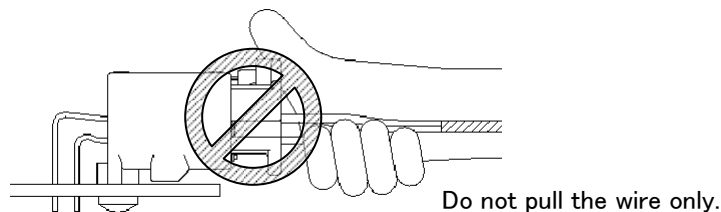


Fig.16

### 7.3 General Attention Matters

- (1) Do not mate and extract the connector unnecessarily.
- (2) Do not insert any objects except the proper connector.
- (3) At mating/extraction operation, or after mating operation, take care not to apply unnecessary force or shock to the wire and the connector.