

1. Part Name and Part Number

1.1 Housing

Part Number	Part Name
1565038	025/090II SER 20POS CAP ASSY (Male Housing)
1565041	025/090II SER 20POS PLUG ASSY (Female Housing)

Fig.1

1.2 Contact

Part Number	Part Name	Wire Type (○:Applicable, —:Not Applicable)						
		Type	0.22	0.3	0.5	0.85	1.25	2
1123343-1	025 RECEPTACLE	CAVS	○	○	○	—	—	—
		CAVUS	○	○	○	—	—	—
		AESSX	—	○	○	—	—	—
		AVSS/AVSSH	—	○	○	—	—	—
1376109-1	025 Tab	CAVUS	—	○	○	—	—	—
		AVSS/AVSSH/CAVS	—	○	○	—	—	—
/	090II RECEPTACLE(S)	CAVUS	—	○	○	—	—	—
		CAVS/AVSS	—	○	○	—	—	—
		AVS	—	○	○	—	—	—
/	090II RECEPTACLE(M)	CAVUS	—	—	○	○	○	—
		CAVS/AVSS	—	—	○	○	○	—
		AVS	—	—	○	○	○	—
/	090II RECEPTACLE(L)	AVSS	—	—	—	—	○	
/	090II Tab(S)	CAVUS	—	○	○	—	—	—
		CAVS/AVSS	—	○	○	—	—	—
		AVS	—	○	○	—	—	—
/	090II Tab(M)	CAVUS	—	—	○	○	○	—
		CAVS/AVSS	—	—	○	○	○	—
		AVS	—	—	○	○	○	—
/	090II Tab(L)	AVSS	—	—	—	—	○	

Fig.2

1.3 Components View

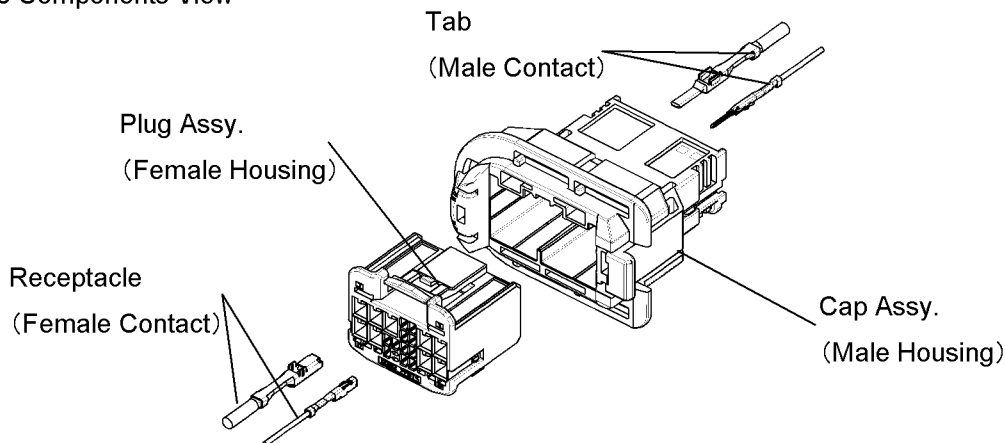


Fig.3

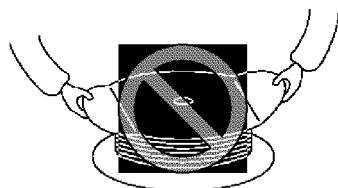
## 2. Customer Receiving Inspection

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)



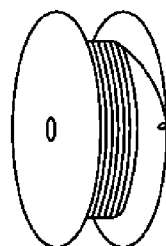
Do not lift up laterally holding one side only.



Acceptable

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)



Tie strip end with a wire neatly

Fig.5

### 3.2 Housing

- (1) 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.
- (2) Avoid leaving or carrying the contact reel in an open area without wrapping it in proper material.
- (3) Do not drop or shock the housing when carrying it.

#### 4. Installation of male connector to panel

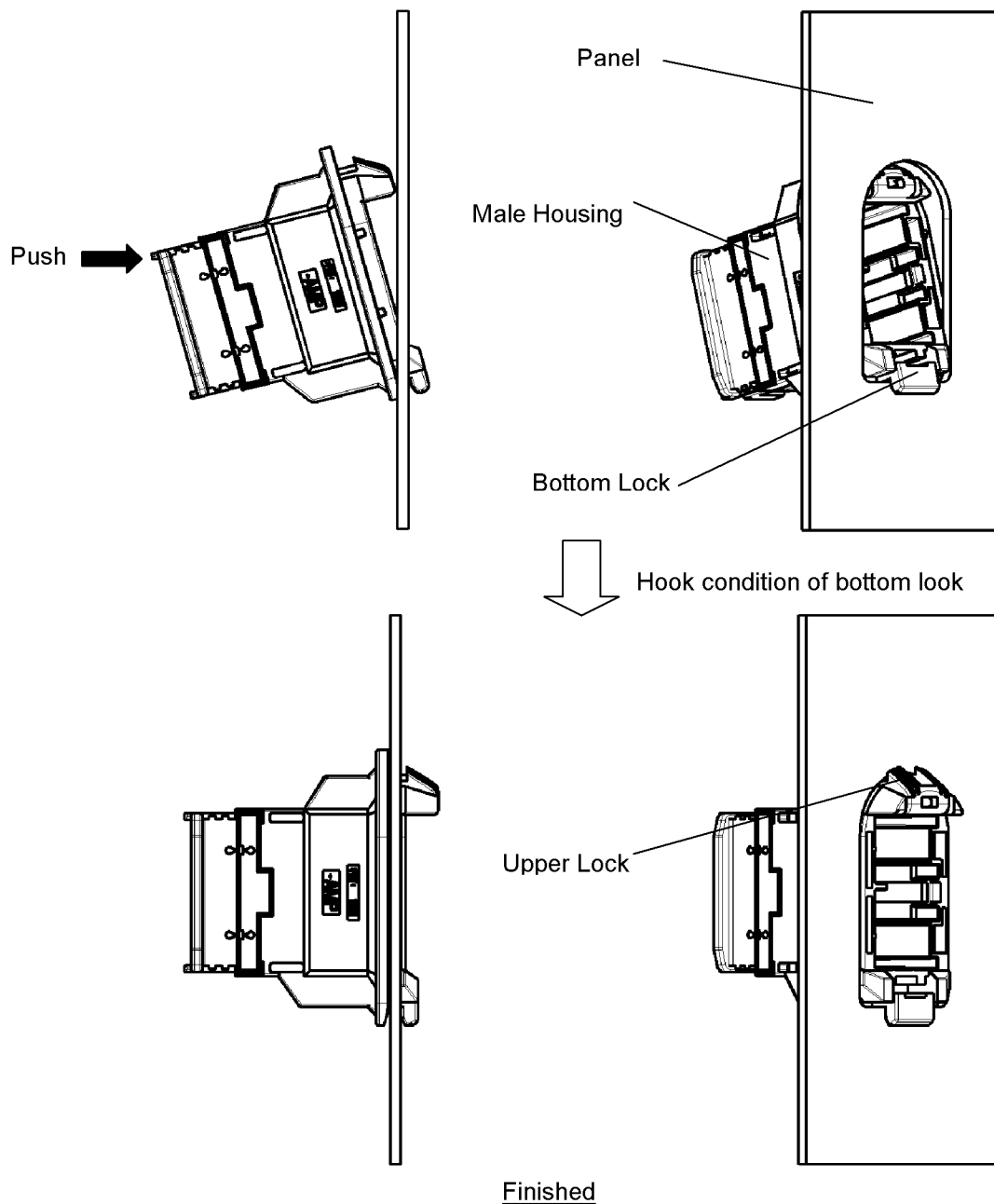
(1) Don't force to pull connector out, when you run to the connector through the panel hole.

(2) At inserting to bracket,

- ① Take male housing.
- ② Check position and direction between panel lock and panel hole.
- ③ Bottom lock is hooked on panel hole.
- ④ If operation is finished, you can hear upper lock sound.

(3) By pulling the female connector lightly, check to make sure that the connector can not be withdrawn.

**NOTE** *About the recommendable form and direction of panel, see the drawing of applicable product.*



## 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.

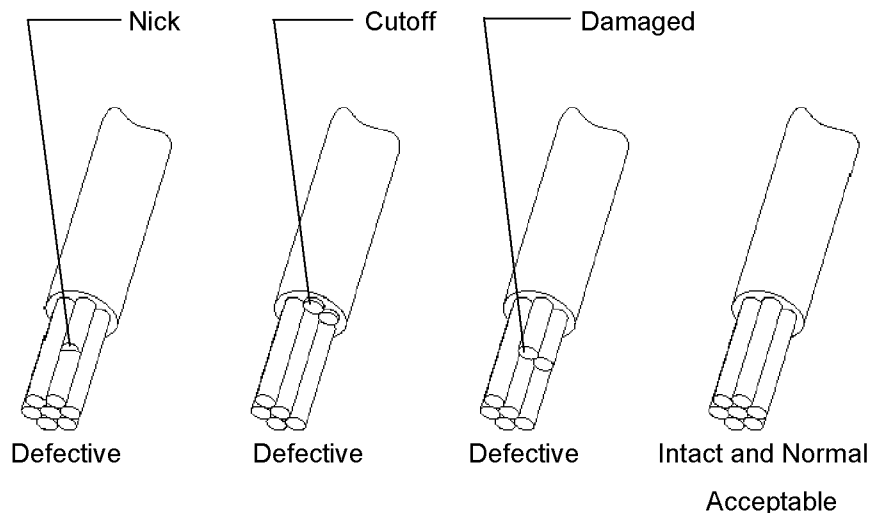


Fig.7

### 5.2 Operation of Crimping Machine

In the case of "025 Tab & Receptacle Contact", see instruction sheet "412-5022(separate volume)" for automatic terminating machine. And in the case of "090II Receptacle Contact", see instruction sheet of each terminating machine maker.

### 5.3 Crimping Specification

- ① In the case of "025 Receptacle Contact", see application specification "114-5250(separate volume)".
- ② In the case of "025 Tab Contact", see application specification "114-5291(separate volume)".
- ③ And in the case of "090II Tab & Receptacle Contact", see instruction sheet of each contact maker.

### 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 and the top of Tab Contact).
- (3) Avoid stacking and piling up the in-process products in large volume. Deformation of the contact and 025 receptacle's lance will result in malfunction of contacting parts electrically.
- (4) Don't tap or hit the top of contacts for arranging them, obstacle of mating and performance may be occurred by the damage of contact.

**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.6.3. The contact can not be inserted in final lock condition.

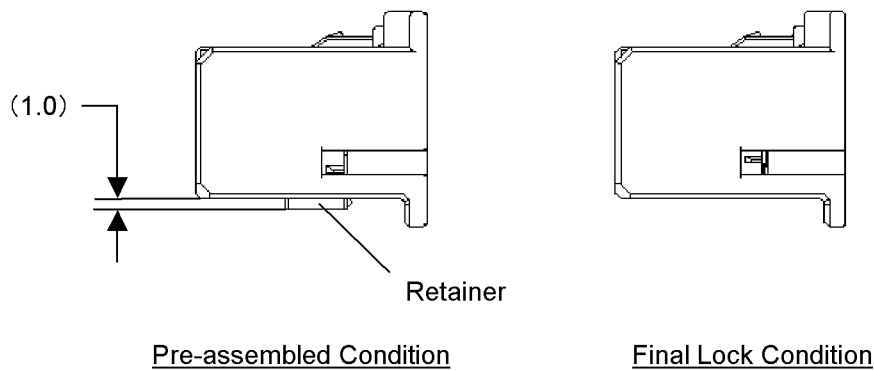


Fig.8

- (2) Confirm type of contact and housing.

It must be the same type of contact and housing (Insert the male contact to the male housing and the female contact to the female housing).

**NOTE** Should not insert the contact to different type housing.

If you insert different type, the contact and housing should be exchanged, not use.

- (3) Confirm the contact size (025 or 090II). The cavity size of the housing can be identified by the shape of cavities. See the customer drawings to know the construction of cavities.

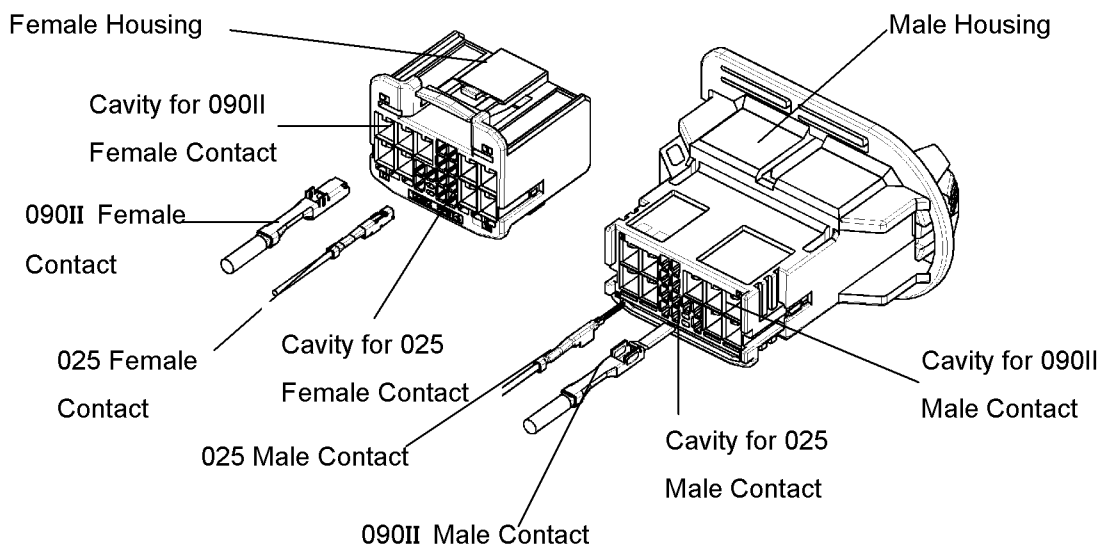


Fig.9

(4) Insert the contacts into the housing with same direction as shown in Fig.9. The insertion is finished when the lance(025:Contact Lance,090II:Housing Lance) is locked and the contact can not be more inserted.

(5) By pulling the contact by 20N MAX, check to make sure that the contact can not be withdrawn.

**NOTE** *When you insert contacts, you should have wire and take care the breakage of lance and contact point.*

### 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.

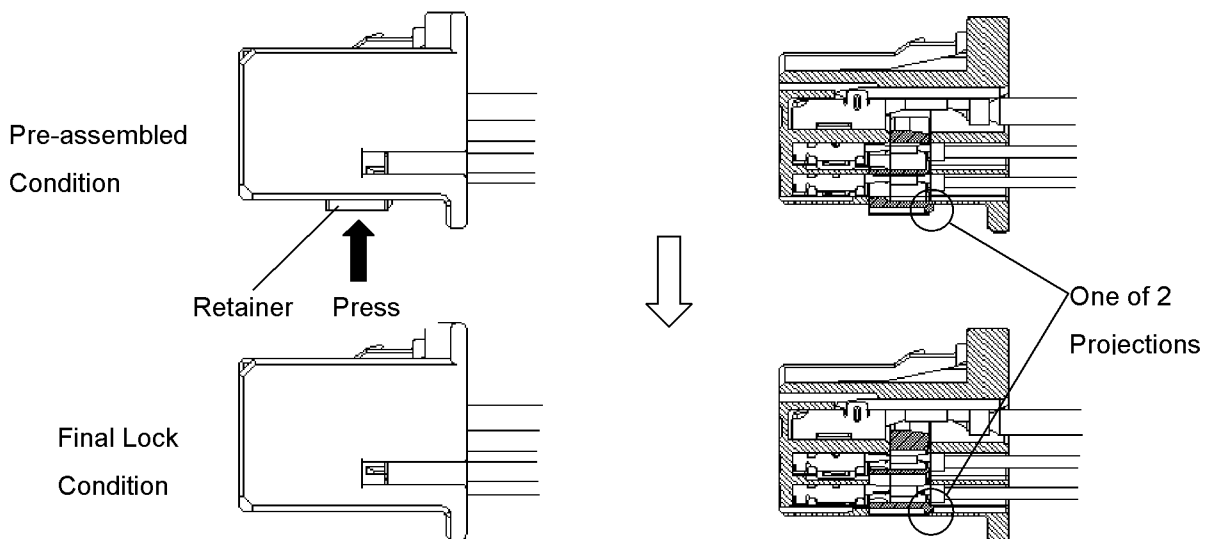


Fig.10

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 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 the jig, 1mm blade screwdriver, 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*

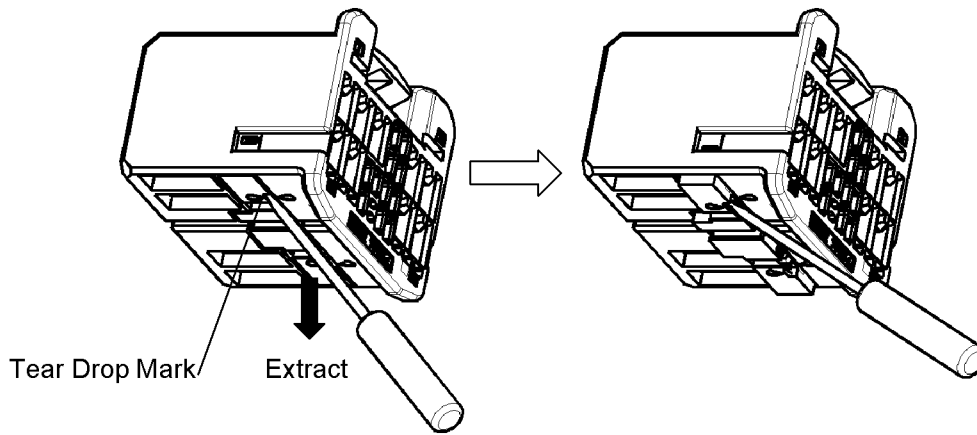


Fig.11

6.4 How to Extract 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) In the case of 025 female contact, insert the special extractive jig(Part Number:1366865) into the proper hole to the end, remove the loaded contact from housing while pull the crimped wire. See Fig.12.

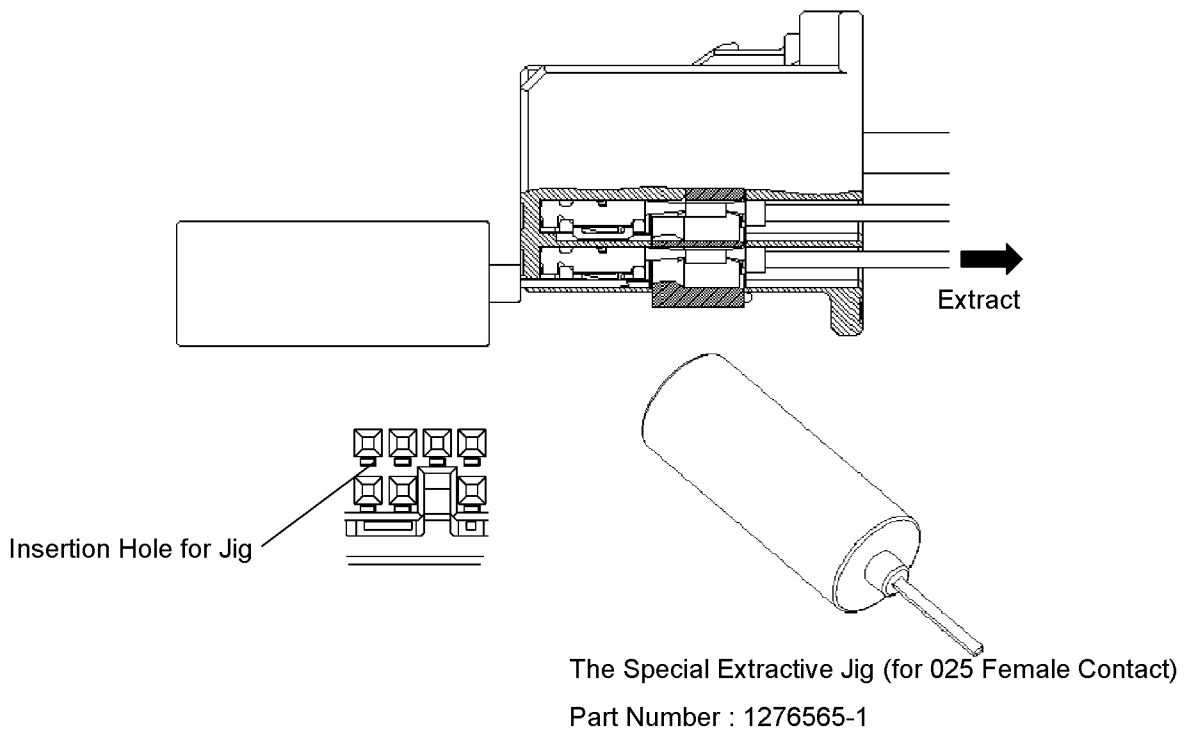
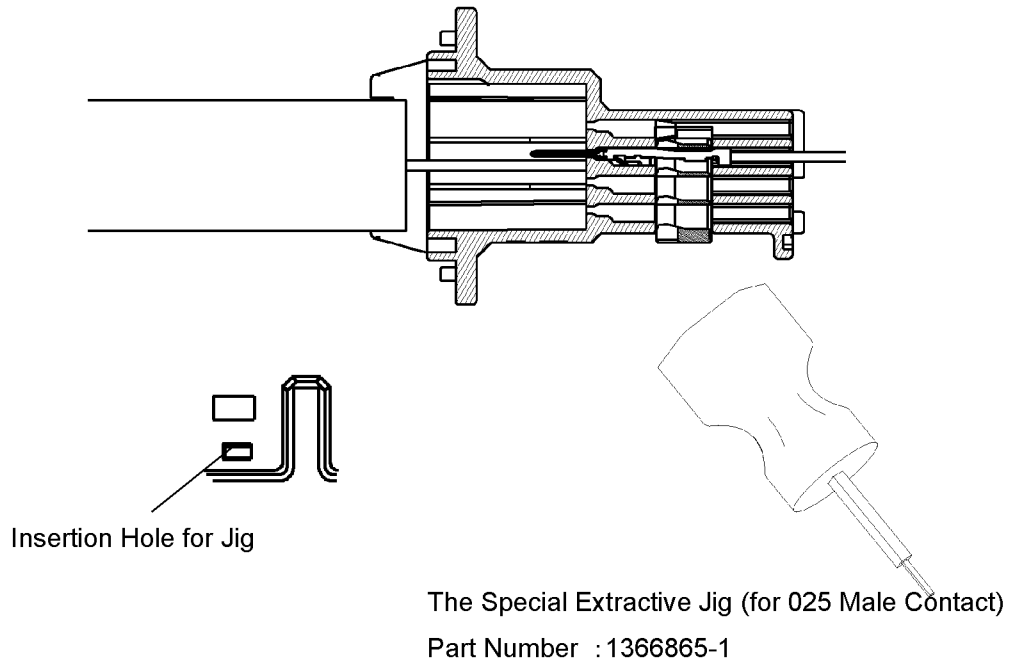


Fig.12

(3) In the case of 025 male contact, insert the special extractive jig (Part Number:1366865) into the proper hole to the end, remove the loaded contact from housing while pull the crimped wire. See Fig.12.



(4) In the case of 090II female contact, to extract the contact, pull the wire while unlocking the housing lance with a 1mm blade screwdriver.

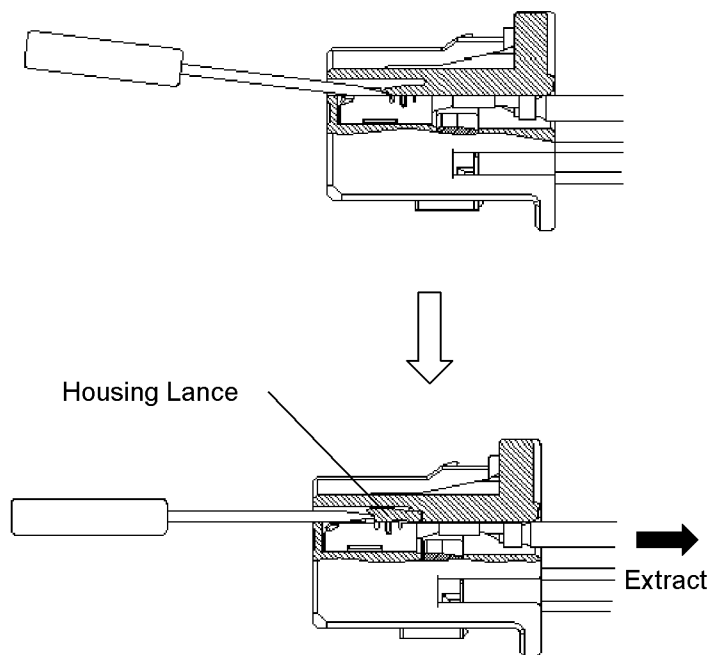


Fig13



(5) In the case of 090II male contact, to extract the contact, pull the wire while unlocking the housing lance with a 1mm blade screwdriver

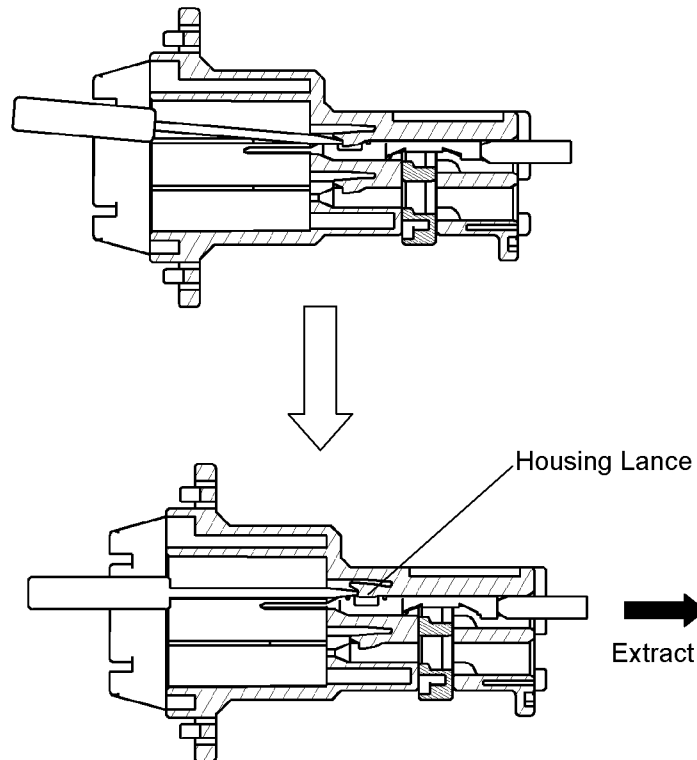


Fig.14

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

**NOTE** *Attend to the crack and break of male contact, when you insert the extractive jig. If you find them, the contact should be exchanged, not use.*

**NOTE** *If only insert the jig, the 025 contact lance will be released. Take care not to apply unnecessary force, otherwise the deformation of the jig 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 jig (for 025 contact).*

**NOTE** *If the contact is damaged or deformed by the operation, the contact must be renewed.*

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

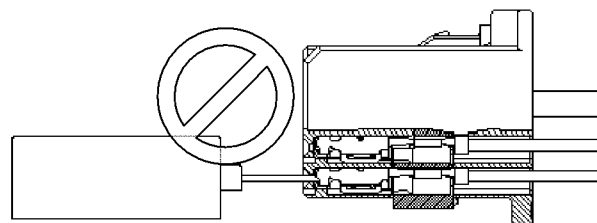


Fig.15

## 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.

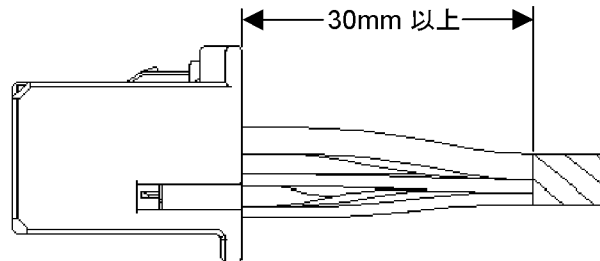


Fig.16

### 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.

### 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.5.
- (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.17. 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.*

**NOTE** *At the insertion operation, take care not to hit the female housing to upper & bottom lock of the male housing(as for the worst, the male housing drops out of the panel).*

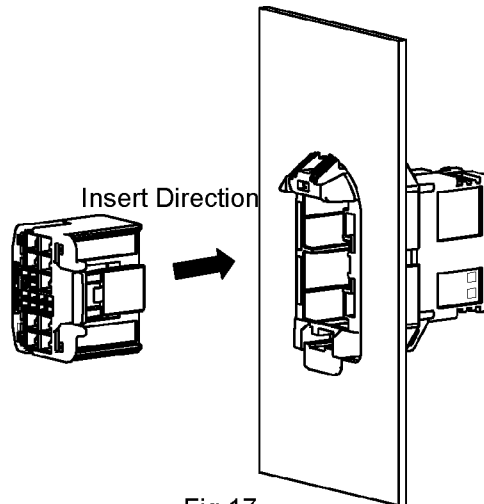


Fig.17

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

### 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.*

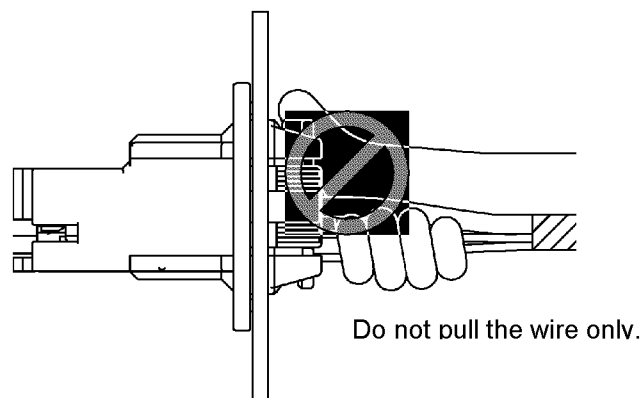


Fig.18

### 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.