

**1. PART NAME AND PART NUMBER**

1.1 Housing

040 III HIGH DENSITY CONNECTOR

| AMP PART NUMBER | PART NAME   |
|-----------------|---|
| 1318612-1       | 125 POSITION CAP HOUSING ASSEMBLY (MALE CONNECTOR)        |
| 1318613-1       | 108 POSITION CAP HOUSING ASSEMBLY (MALE CONNECTOR)        |
| 1318614-1       | 86 POSITION CAP HOUSING ASSEMBLY (MALE CONNECTOR)         |
| 1123038-2       | 72 POSITION CAP HOUSING ASSEMBLY (MALE CONNECTOR)         |
| 353027-1        | 17 POSITION PLUG HOUSING ASSEMBLY (FEMALE HOUSING)        |
| 353028-2        | 22 POSITION PLUG HOUSING ASSEMBLY (FEMALE HOUSING)        |
| 353029-1        | 24 POSITION PLUG HOUSING ASSEMBLY (FEMALE HOUSING)        |
| 353826-1        | 31 POSITION PLUG HOUSING ASSEMBLY B TYPE (FEMALE HOUSING) |
| 1318682-6       | 31 POSITION PLUG HOUSING ASSEMBLY C TYPE (FEMALE HOUSING) |

Fig.1

1.2 Contact

040 III NON-SEALED CONTACT

| AMP PART NUMBER | PART NAME  | WIRE TYPE |     |     |      |      |
|-----------------|--|-----------|-----|-----|------|------|
|                 |  | TYPE      | 0.3 | 0.5 | 0.85 | 1.25 |
| 316836          | RECEPTACLE (S)<br>TIN PLATING<br>(FEMALE CONTACT)  | CAVUS     | ○   | ○   | ○    | —    |
|                 |  | CAVS/AVSS | ○   | ○   | ○    | —    |
| 1123653         | RECEPTACLE (MS)<br>TIN PLATING<br>(FEMALE CONTACT) | CAVUS     | —   | —   | ○    | —    |
|                 |  | CAVS/AVSS | —   | —   | ○    | —    |
| 316838          | RECEPTACLE (M)<br>TIN PLATING<br>(FEMALE CONTACT)  | CAVUS     | —   | —   | —    | ○    |
|                 |  | CAVS/AVSS | —   | —   | ○    | ○    |
|                 |  | AVS       | —   | ○   | —    | —    |

Fig.2

1.3 Components View

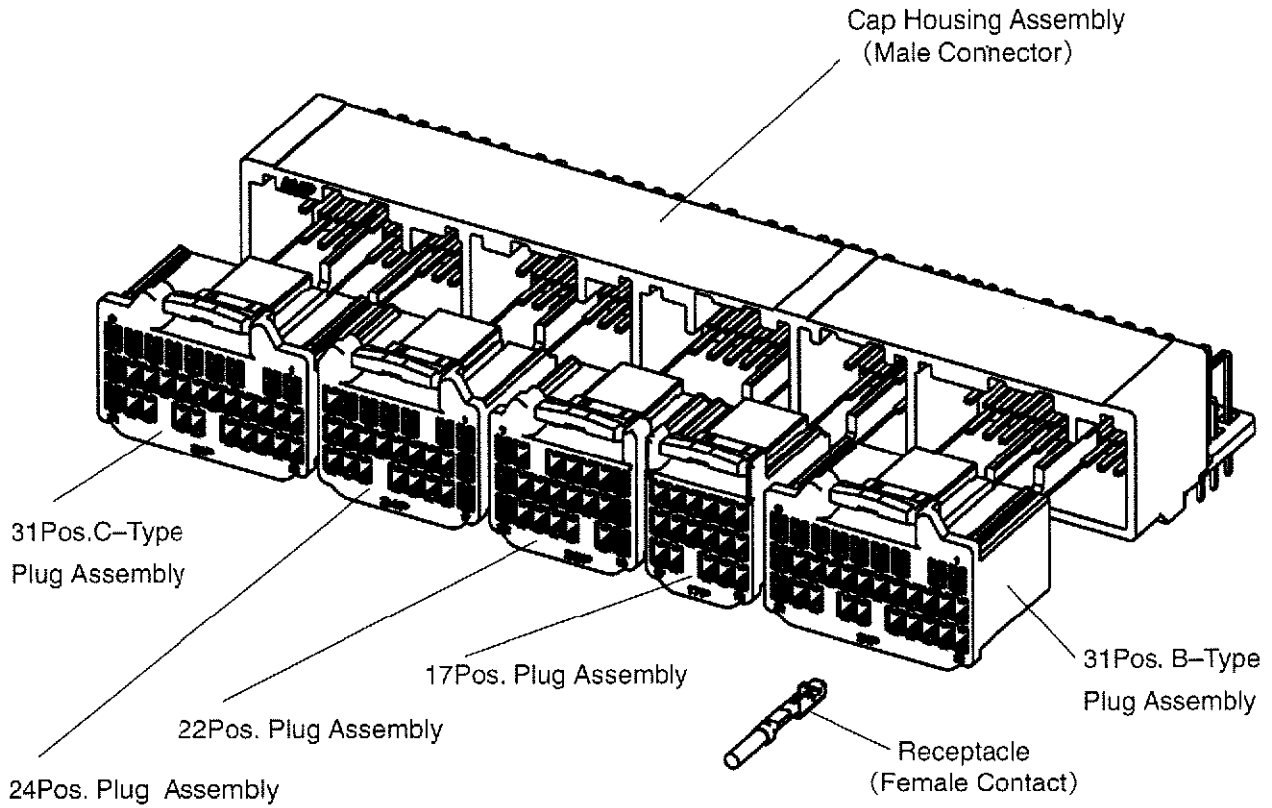


Fig.3

|              | Cap Housing Assembly<br>Part Number | Plug Housing Assembly<br>Part Number |
|--------------|-------------------------------------|--------------------------------------|
| 125 Position | 1318612                             | 353027,353028,353029,353826,1318682  |
| 108 Position | 1318613                             | 353028,353029,353826,1318682         |
| 86 Position  | 1318614                             | 353029,353826,1318682                |
| 72 Position  | 1123038                             | 353027,353029,353031                 |

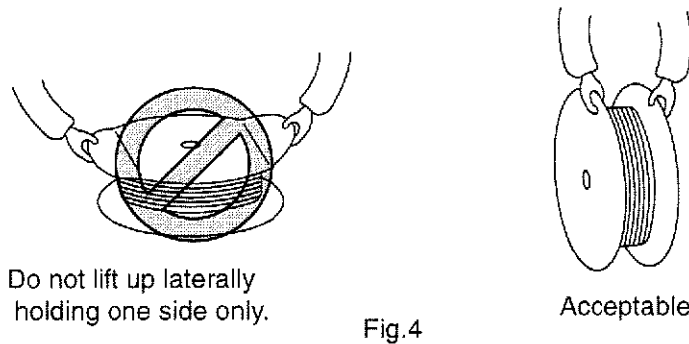
## 2. CUSTOMER RECEIVING INSPECTION

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.

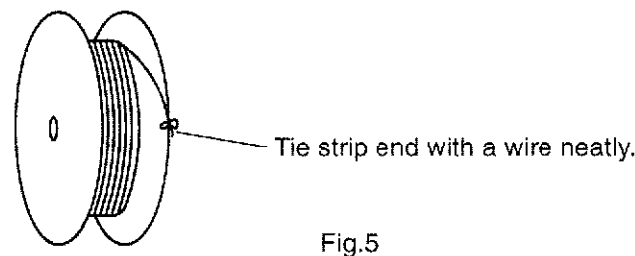
## 3. STORAGE AND CARRYING

### 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 the reel, this may result in damage to the reel, and contacts before use. 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 the contact strip onto the edge of the reel with use of proper string or wire. Fig.5



### 4.2 Housing

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

(1) See the customer drawing for the PC Board dimension.

(2) Do not deform the contact (PC Board side). Fig6.

(3) The fixing should be made with the proper type of screw and torque.

Recommended screw: M3X6, PAN HEAD, CLASS 2, TAPPING SCREW, JIS B1115, B1122

Recommended torque: 0.4 N·m MAX

(4) No discoloration nor deformation should be caused by the heat of soldering.

(5) 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 substance are permissible in the mating area.

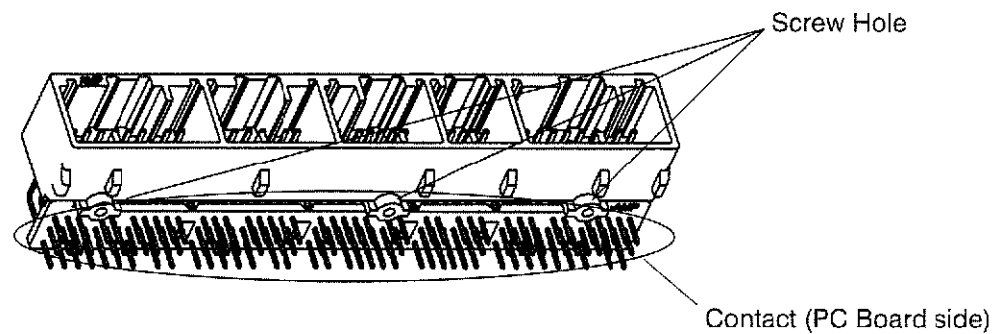


Fig.6

## 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 cut or damage of wire strands.

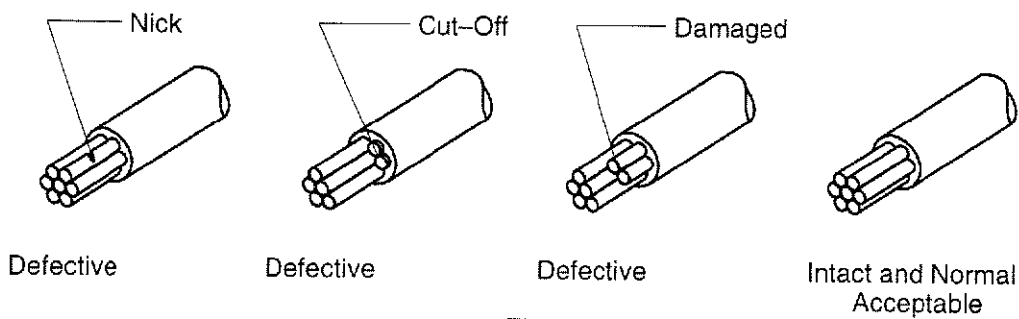


Fig.7

### 5.2 Operation of Crimping Machine

See Instruction Sheet for Automatic Terminating Machine : CM-022J (separate volume)

### 5.3 Crimping Specification

See Application Specification : 114-5217 (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 bands of less than 100 pieces. In addition, care should be taken in case the leads catch together or be tangled, causing damage and breakage of the products.
- (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. Fig.8. When the retainer is in final lock condition, it must be unlocked to pre-assembled condition. The contact can not be inserted in final lock condition.

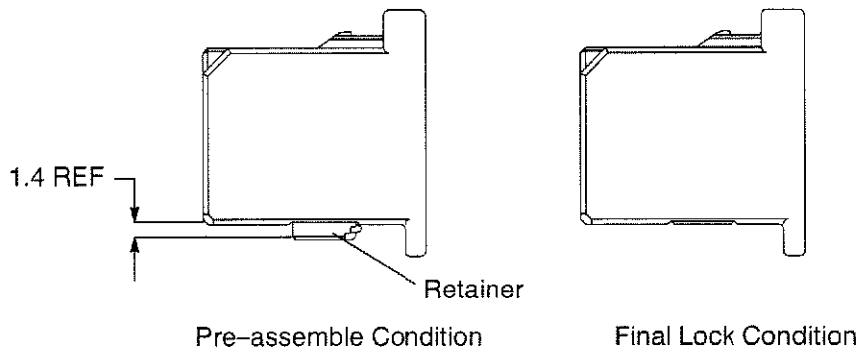


Fig.8

(2) Confirm the size mark on the contact (S ,MSor M ). Fig.9. The cavity size (S,MS or M) of the housing can be identified by the shape of cavities. Fig.9. See the customer drawings to know the construction of cavities.

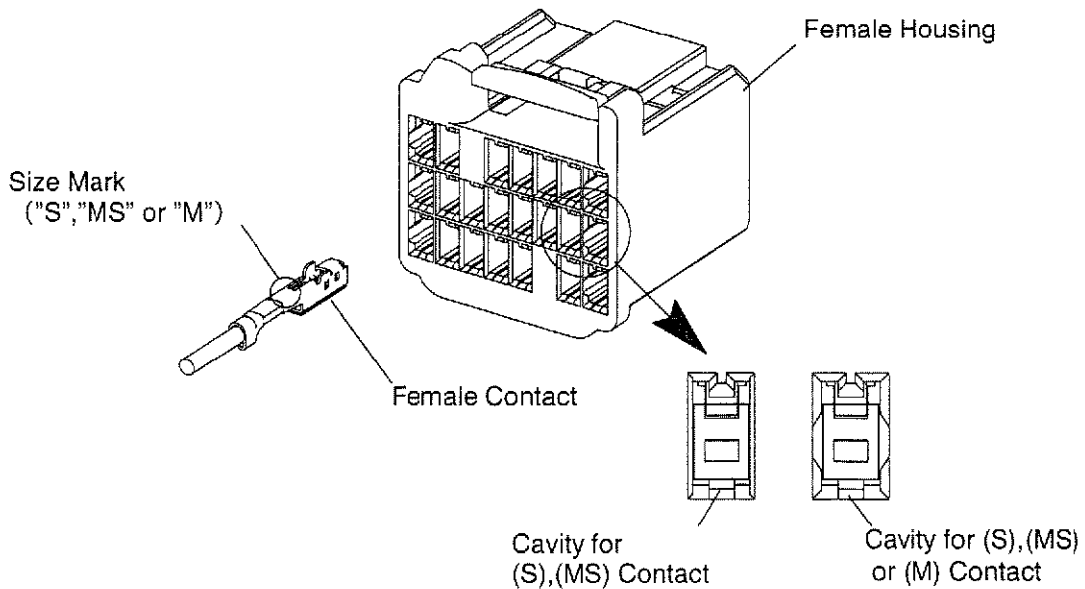


Fig.9

(3) Insert the contacts into the housing with same direction as shown in Fig.10. The insertion is finished when you hear click sound and the contact stops.

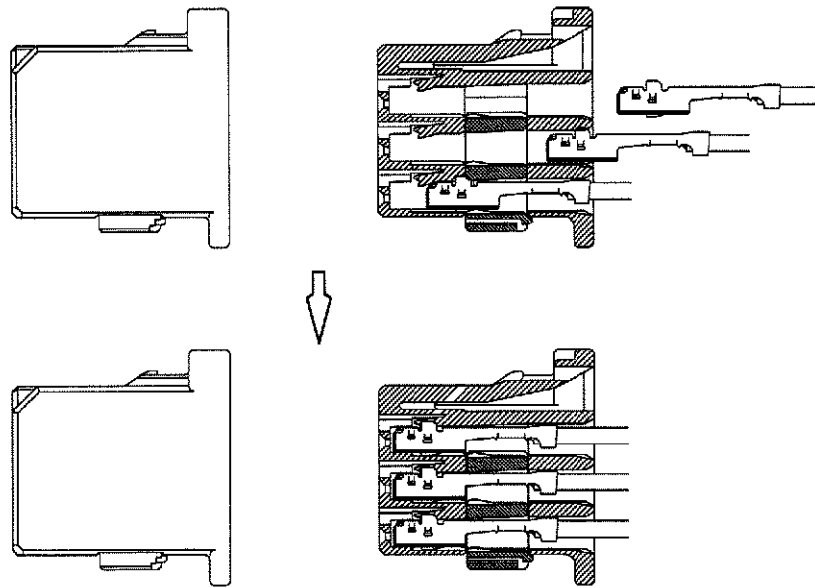


Fig.10

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

6.2 Double Lock (Secondary Lock) Operation

(1) After insertion of all of the contacts, press the retainer for final lock condition. Fig.11. The double lock operation is finished by confirmation that the retainer is kept in the final lock condition by the 3 projections. Fig 11.

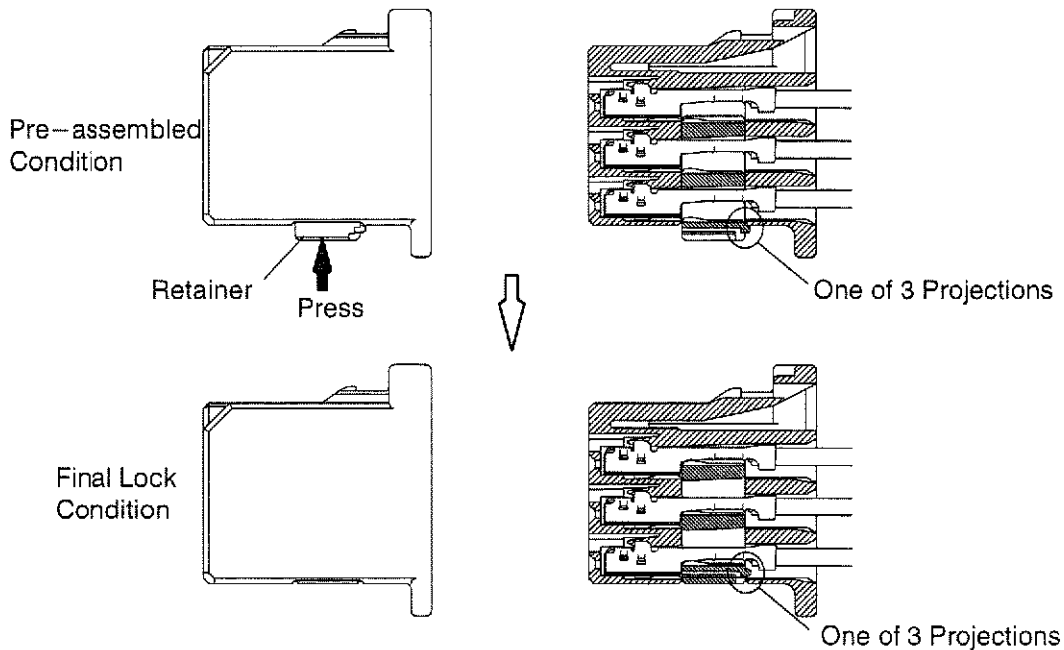


Fig.11

- (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 lock condition, do not press by force, find the half inserted contact, and insert it to proper position. Para. 6.1

### 6.3 How to Unlock Retainer from Final Lock Condition

When the female contact requires insertion or to 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, 2 mm blade screw driver, into the window of the retainer pointed by the tear drop mark. Fig.12.
- (2) Draw out the retainer, about 1.4mm, to pre-assembled condition. Confirm that all of the 3 projection are unlocked. Fig.12.

**NOTE**

*Do not draw out the retainer more than appropriate length. Otherwise, the retainer may be damaged. Maximum repetition (final lock $\leftrightarrow$ pre-assemble) is twice. Must change to new Plug when repeat more than thrice.*

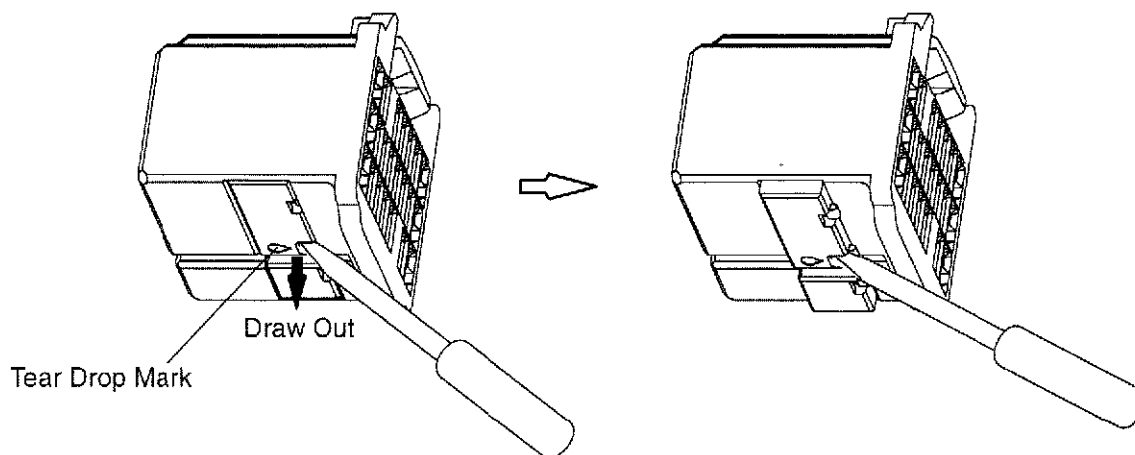


Fig.12

### 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. Para. 6.3. The female contact can not be extracted in final assembled condition.



- (2) To extract the female contact, pull the wire whilst unlocking the housing lance with a 1mm blade screw driver. Fig.13.

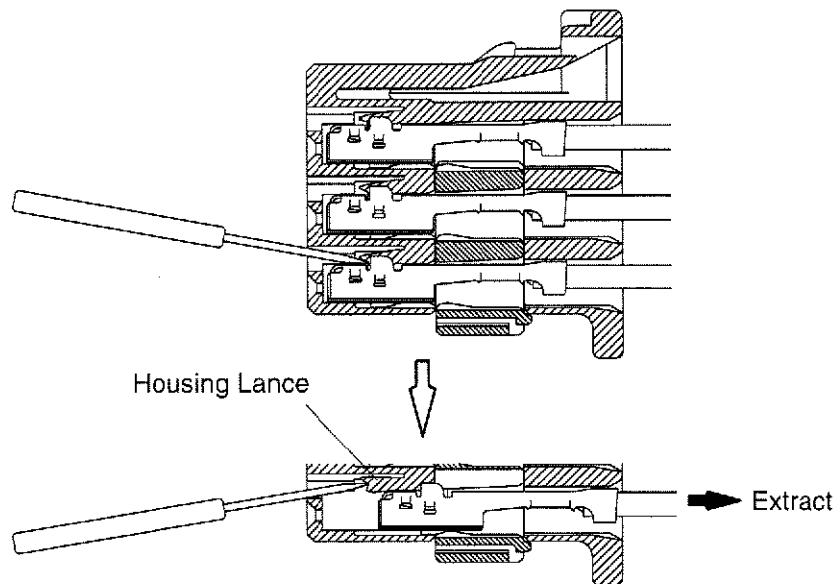


Fig.13

- (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 driver into the female contact. If the driver should be inserted, the female contact must be renewed. Re-using is never allowed. Fig.14.*

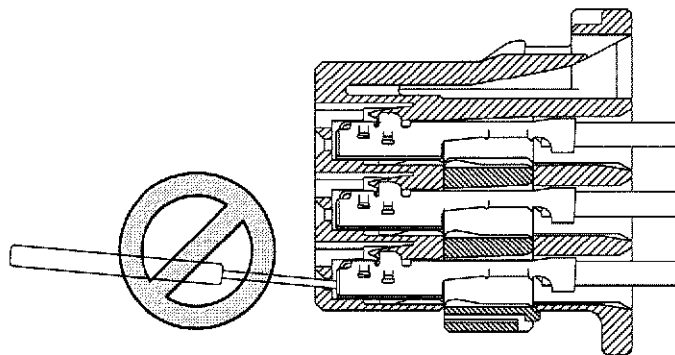


Fig.14

## 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.15.

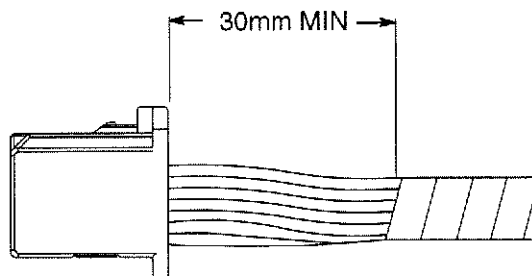


Fig.15

### 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 or moisture, etc..

## 7. MATING AND EXTRACTION OF CONNECTER

### 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 locked condition. If the retainer is in pre-assembled condition, it must be changed to be in final locked condition. Para.6.
- (2) And then check the contact and the housing for defects, deformation, discoloration, damage, rust, crack, missing parts, etc.

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

- (3) Insert the proper female housing into the male housing. 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) and (2).

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

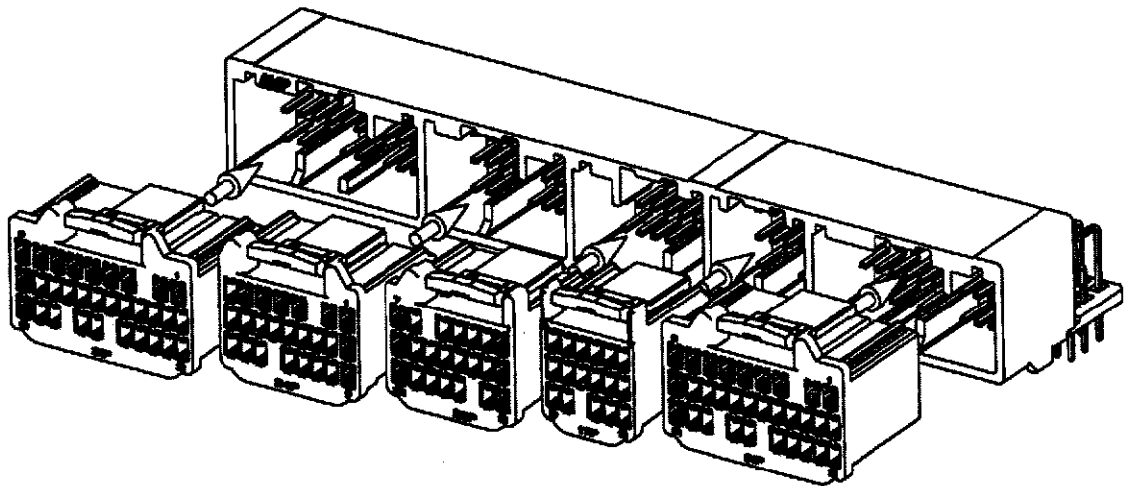


Fig.16

- (3) 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 whilst 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. Fig.17.

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

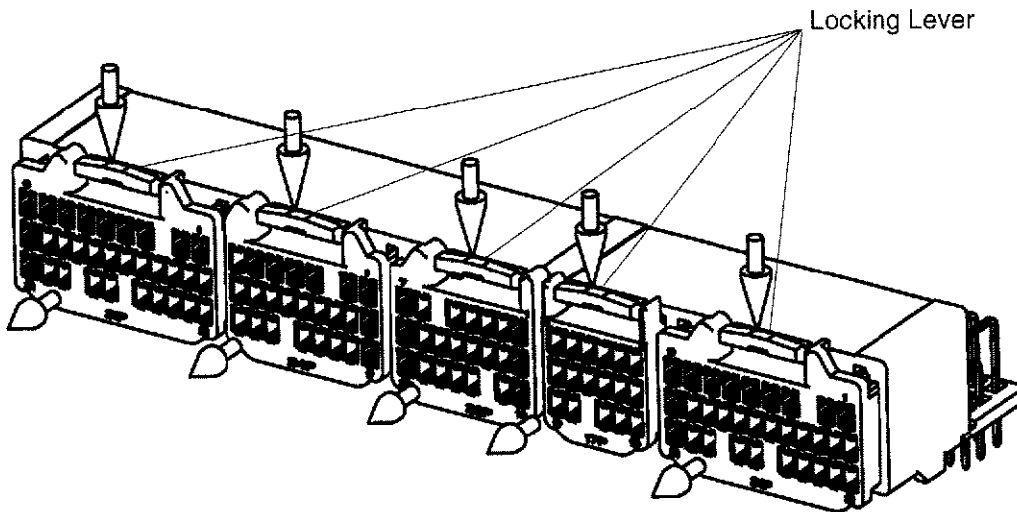


Fig.17

**NOTE** *Do not pull the wire only Fig.18.*

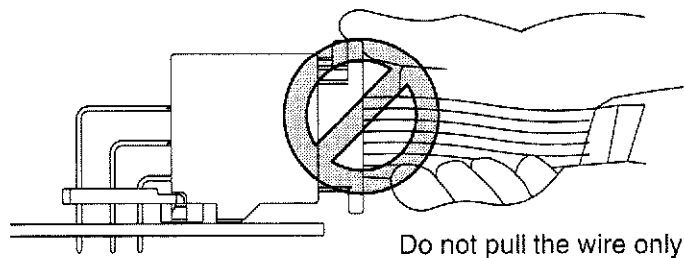


Fig.18

## 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.