

0.64/2.3 SERIES CONNECTOR (Wire to Board)

1. Part Name and Part Number

1.1 Housing

Part Number*	Part Name
1674477	0.64/2.3 20Position Cap Assembly Wire to Boad H-Type (Male Connector)
2040487	0.64/2.3 20Position Plug Asembly (Female 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.

1.2 Contact

Part Number	Part Name	Wire Type (○:Applicable, -:Not Applicable)								
		Type	0.3	0.3f	0.5	0.5f	0.75f	0.85	1.25	2.0
1674311-1	0.64Ⅲ Receptacle Contact (Female Contact)	CAVS	○	-	○	-	-	-	-	-
		AVSS	○	-	○	○	-	-	-	-
		CAVUS	○	-	○	-	-	-	-	-
		AVSSH	-	○	-	○	-	-	-	-
		AESSX	-	○	-	○	-	-	-	-
		AVX	-	○	-	-	-	-	-	-
1981341-1	2.3 TW Receptacle Contact (Female Contact) Barrel Size S	AVS	○	-	○	-	-	-	-	
		CAVS	○	-	○	-	-	-	-	
		AVSS	○	-	○	-	-	-	-	
		CAVUS	○	-	○	-	-	-	-	
		AVX	-	-	-	○	-	-	-	
		AEX	-	-	-	○	-	-	-	
1981341-2	2.3 TW Receptacle Contact (Female Contact) Barrel Size M	AVS	-	-	-	-	-	○	○	
		CAVS	-	-	-	-	-	○	○	
		AVSS	-	-	-	-	○	○	○	
		CAVUS	-	-	-	-	-	○	○	

Fig.2

1.3 Components View

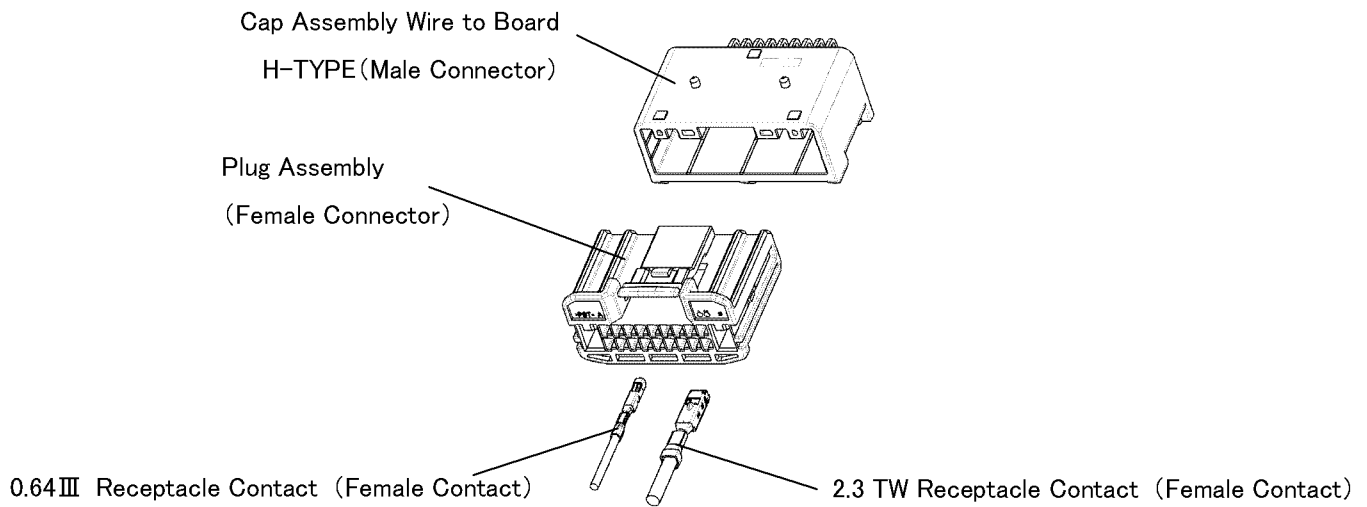


Fig.3

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)

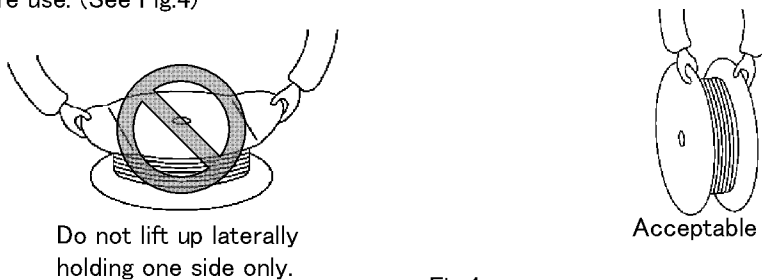


Fig.4

- (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 Fig5)

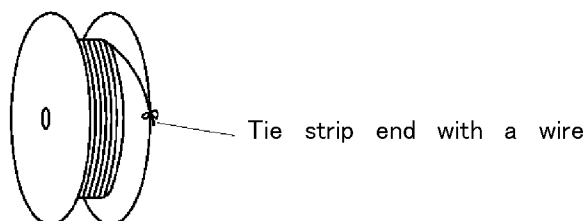


Fig.5

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. 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: set management value based on a combination of the board and the screw to use.
- (5) Do not tighten the screw again.
- (6) No discoloration nor deformation should be caused by the heat of soldering.
- (7) 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.

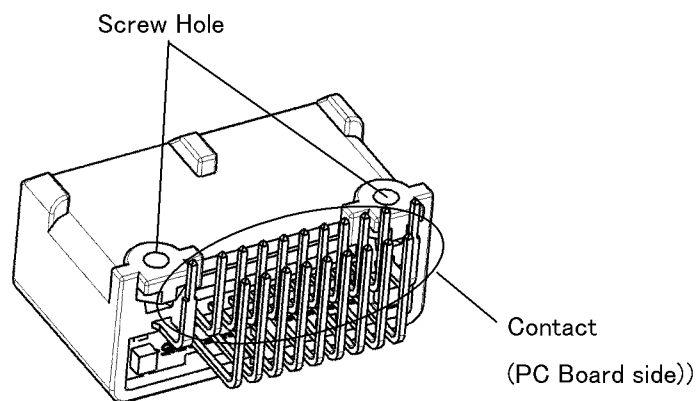


Fig.6

5. Crimping Operation

Any crimping of contacts must be performed by using appropriate Tyco 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.

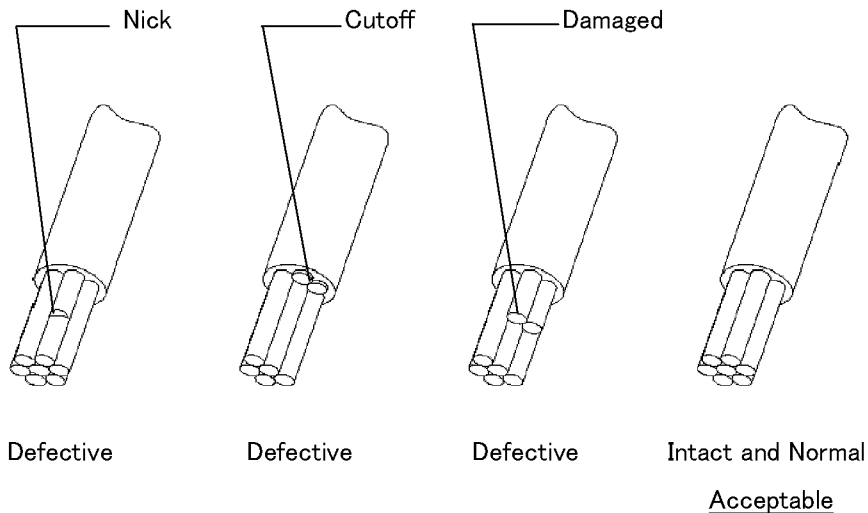


Fig.7

5.2 Operation of Crimping Machine

See instruction sheet “412-5022(separate volume)” for automatic terminating machine.

5.3 Crimping Specification

See the following application specification.

	0.64 III	2.3 TW
Female Contact	114-5329	114-5411

Fig.8

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.
Take care of the tangle and damage (Specially the lance of contact and Tab contact) on the products.
- (3) Avoid stacking and piling up the in-process products in large volume.
Contact failure and fall of retention force occur by deformation of the contact and specially lance.

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 cannot be inserted in final lock condition.

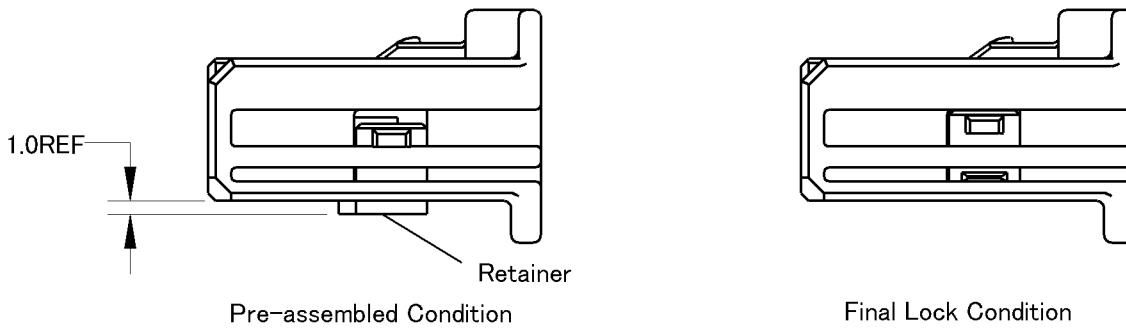


Fig.9

- (2) Confirm the contact size (0.64III, 2.3TW).

The cavity size of the housing can be identified by the shape of cavities.

See the customer drawings to know the construction of cavities.

- (3) Contact should discriminate the directivity of a terminal by direction of a stabilizer.

Insert the contacts into the housing with same direction as shown in Fig.10

When the insert contact is seated properly into the housing cavity, a clicking sound is heard which is made by the action of lance.

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

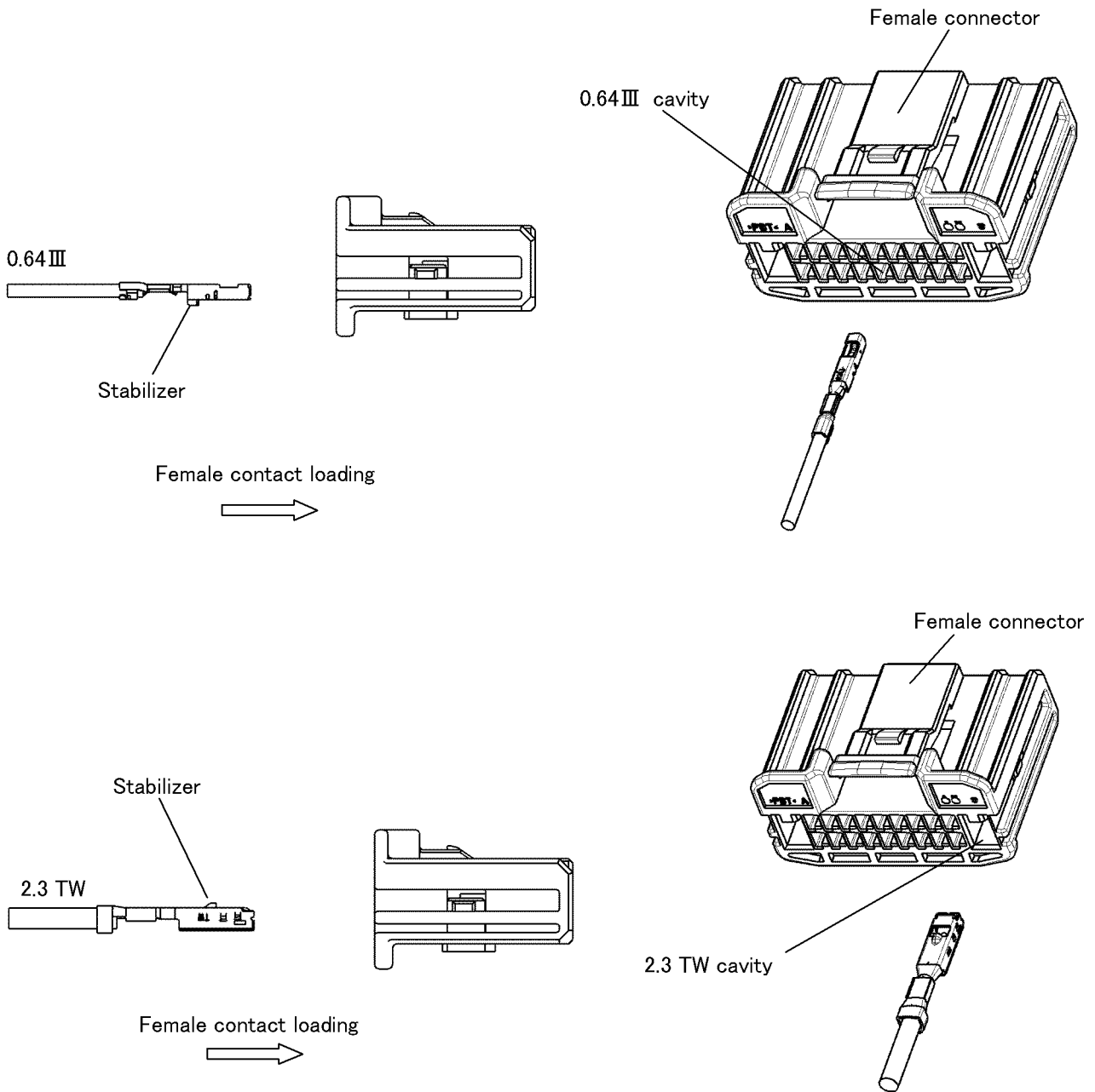


Fig.10

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

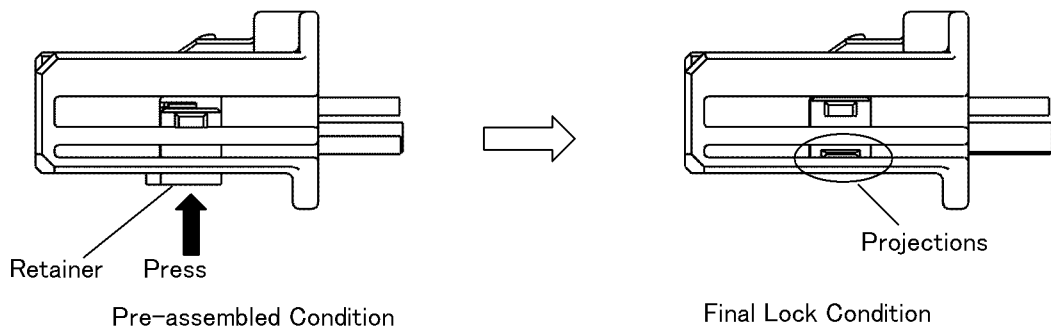


Fig.11

(2)The double lock operation cannot be completed if there are any half inserted contacts. When the retainer cannot 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 cannot be done in final lock condition.

(1)Insert the 1mm blade screwdriver into the window of the retainer pointed by the tear drop mark.

See Fig. 12.

(2)Draw out the retainer, about 1mm, to pre-assembled condition. Confirm that all of the projection is unlocked.

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

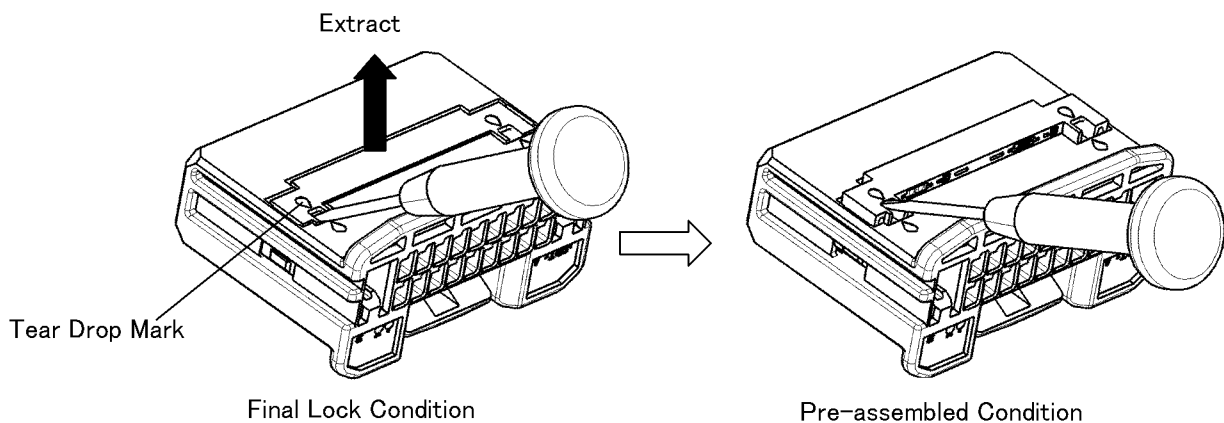


Fig.12

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 cannot be extracted in final assembled condition.

(2) In the case of 0.64III Contact

① Insert the extraction tool for 0.64III Receptacle contact (P/N:1729375-1) Obey instruction sheet 411-78139.

At this point, pull back the crimped wire lead and the contact can be removed. See Fig.13.

② In the case of using 1mm blade screwdriver, insert it into the proper hole and raise it gently just enough to unlock the lance. At this point, pull back the crimped wire lead and the contact can be removed. See Fig.13

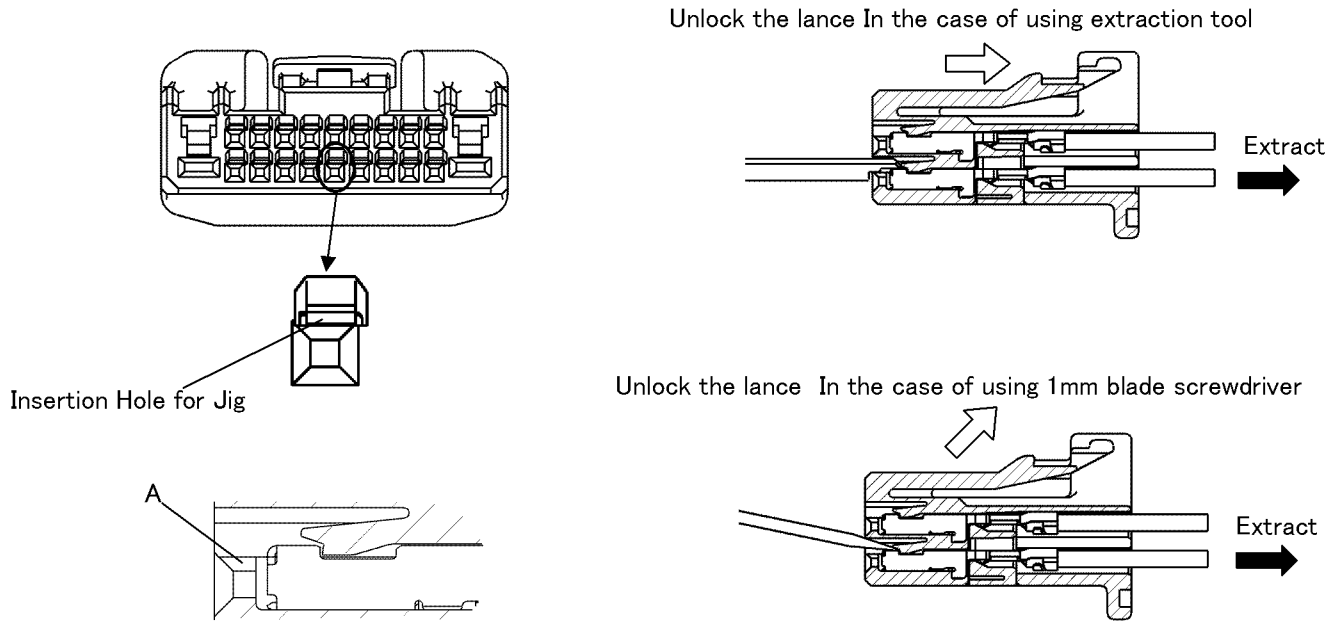


Fig.13

(3) In the case of 2.3 TW Contact

① Insert the extraction tool for 2.3TW Receptacle contact (P/N:1999077-1) into the proper hole . At this point, pull back the crimped wire lead and the contact can be removed. See Fig.14.

② In the case of using 1mm blade screwdriver, insert it into the proper hole and raise it gently just enough to unlock the lance. At this point, pull back the crimped wire lead and the contact can be removed. See Fig.14.

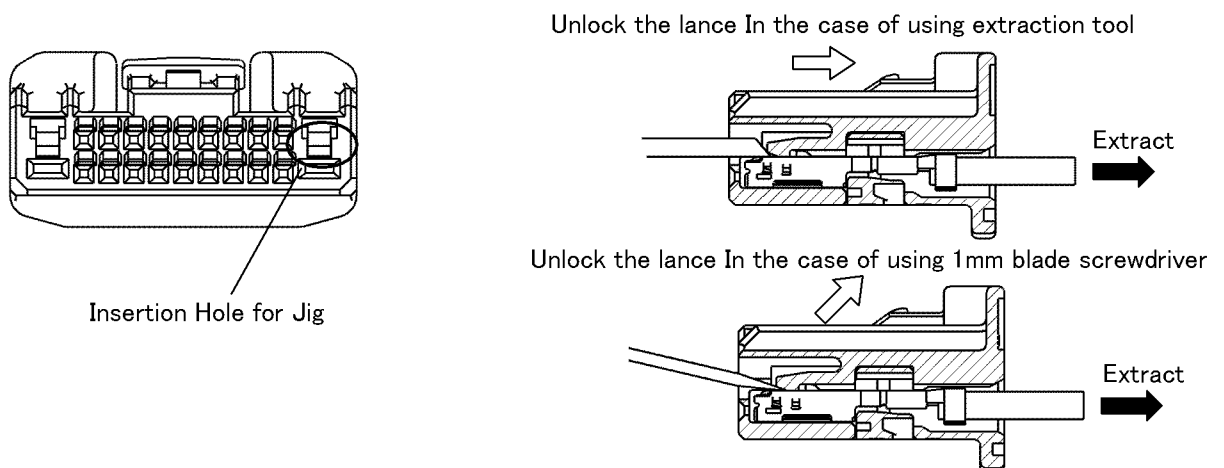


Fig.14

NOTE Do not increase the power that it is impossible for an A part to do.
It becomes the cause that a product is damaged.

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

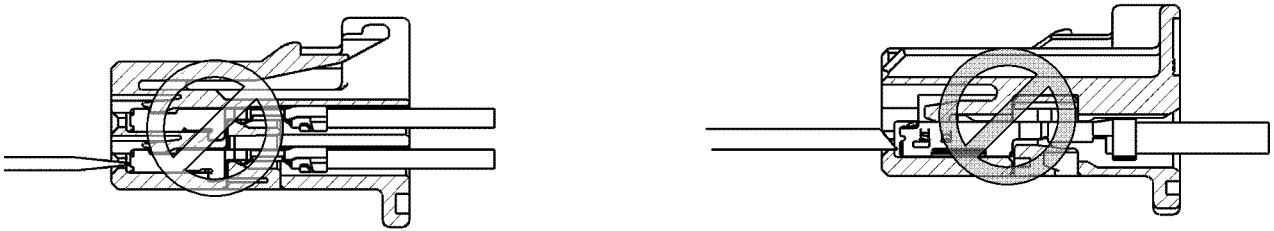


Fig.15

NOTE If only insert the jig, the 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 lance. And do not repeat extract more than 10 times, otherwise the retention force has fallen.

NOTE Attend to the crack and break of contact and housing, when you insert the extraction tool.

NOTE When the female contact can not be extracted, do not pull the wire by force but ensure the housing lance
is unlocked. If those should be inserted, the female contact must be replaced. Re-using is never allowed.

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.

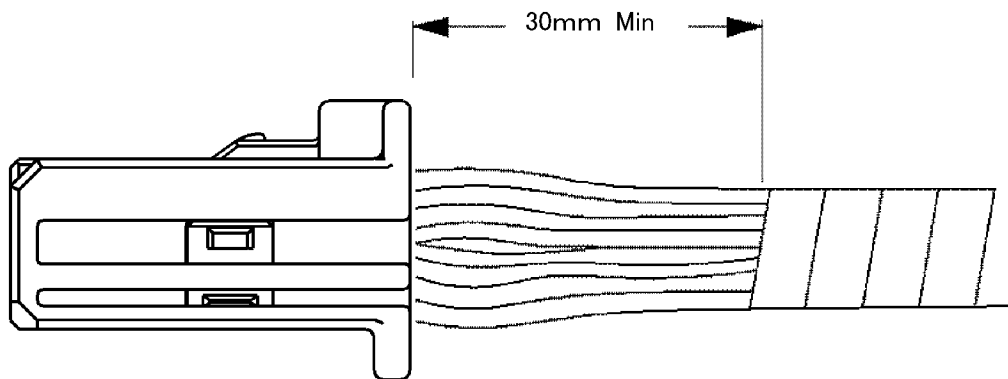


Fig.16

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.6.2.
- (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.21. The operation is finished when you hear the click sound and cannot insert further. When you cannot 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.*

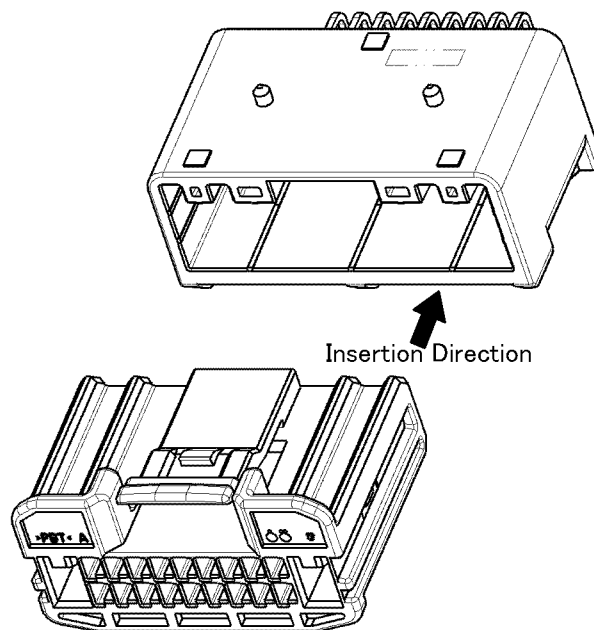


Fig.17

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

7.2 Extraction of Connector

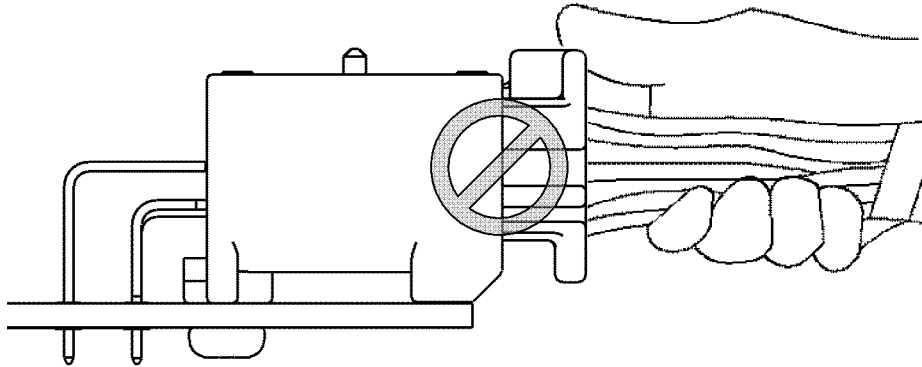
(1) In the case of Wire to Board connector

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

When the housing cannot 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.*



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.