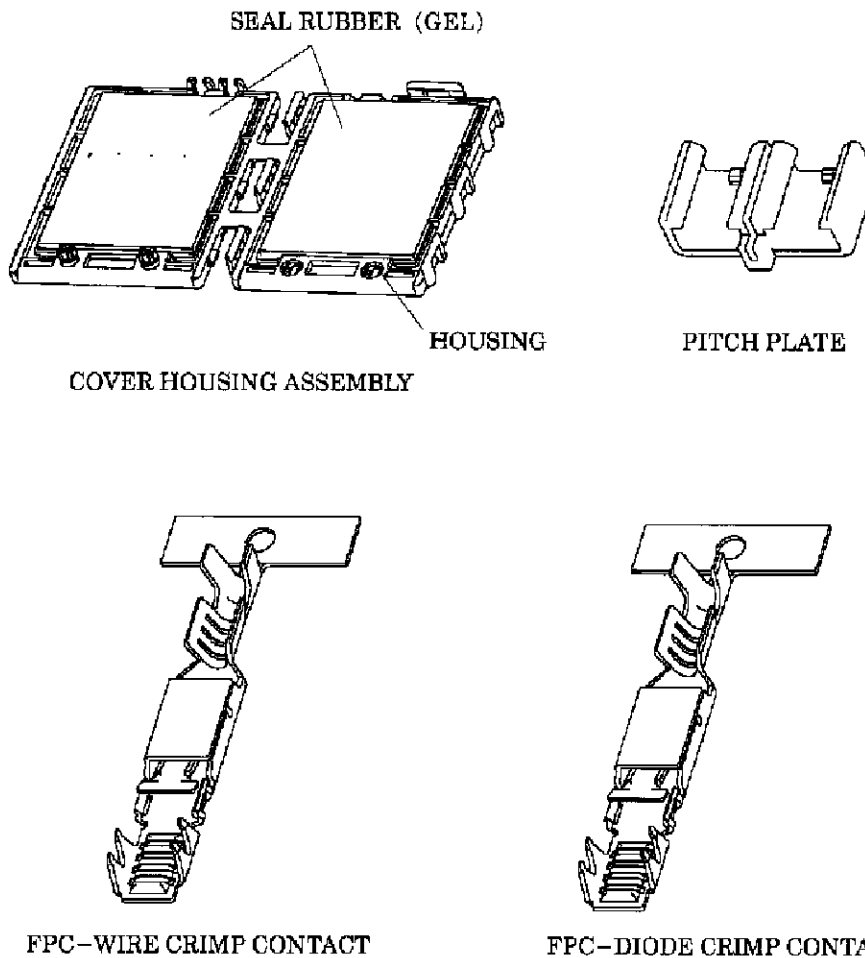


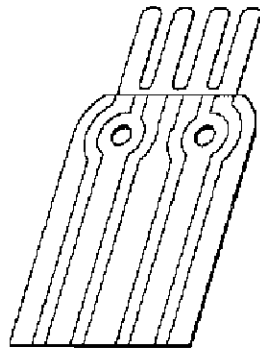
FPC SEAT SENSOR CONNECTOR MK-2 (SEALED TYPE)
1. PARTS NUMBER and NAMES

1-1 Parts Numbers

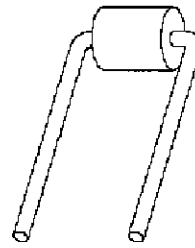
Names	TE Parts Numbers
FPC-WIRE CRIMP CONTACT	353842
FPC-DIODE CRIMP CONTACT	1318523
COVER HOUSING ASSEMBLY	1318526
PITCH PLATE	353840
FPC	—
DIODE	—

1-2 Parts Names





FPC



DIODE

2. CONTACT and HOUSING INSPECTION

2-1 Customer Receiving Inspection

<CONTACT>

Item	Check Points	Measuring Apparatus
Visual Inspection	1)Configuration and Appearance	Visual
	2)Plating Finish	
	3)Reeling Status of Strip Terminals	

<HOUSING ASSEMBLY>

Item	Check Points	Measuring Apparatus
Appearance Inspection	1)Burrs, Discoloration and Deformation of Housing	Visual
	2)Cracks, Breakage and Chipping off	
	3)Foreign Substance on Seal Rubber	

<PITCH PLATE>

Item	Check Points	Measuring Apparatus
Appearance Inspection	1)Burrs, Discoloration and Deformation of Housing	Visual
	2)Cracks, Breakage and Chipping off	

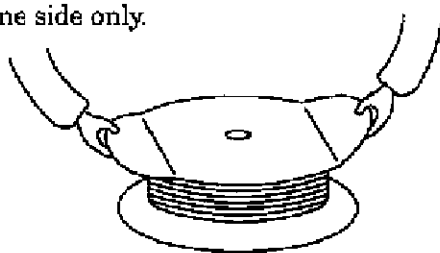
3. CRIMPING OPERATION

Crimping of contacts must be done using TE specified application tooling in accordance with the procedure specified in an applicable instruction sheet.

3-1 Storage and Transfer of Products

- (1) Avoid leaving terminal reel in an open area without wrapping it in proper material.
- (2) Do not lift up and carry the terminal reel by gripping it one the side of the reel, lest it results damage of reel, causing spoiling of terminals before using them for application.

Do not lift up laterally by holding one side only.



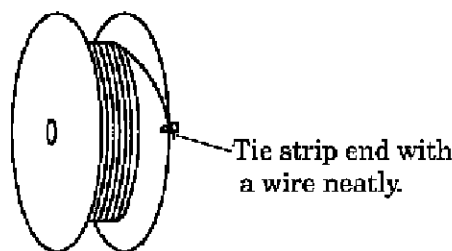
Not Acceptable

Lift up by holding both flanges vertically.



Acceptable

- (3) Avoid storing terminal reels in a moist area or dusty place. Stock contacts in a comparatively dry and clean place where the temperature of 5-35°C, with relative humidity ranging between 45-85% maintained without keen influence of the direct sunlight.
- (4) When the terminal reel is not in use for a long time, remove it from the machine, and fasten the end of terminal strip onto the edge of reel with use of proper string or wire as shown in Fig.



Tie strip end with a wire neatly.

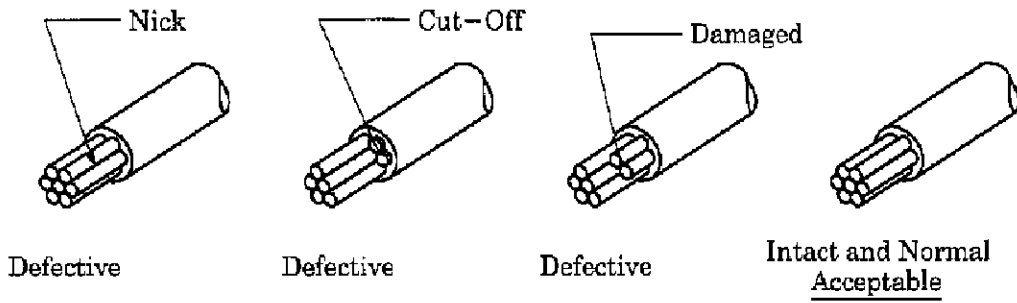
3-2 Control of Crimping Operation

The documents listed below should be referred to for the specific details of crimping operation.

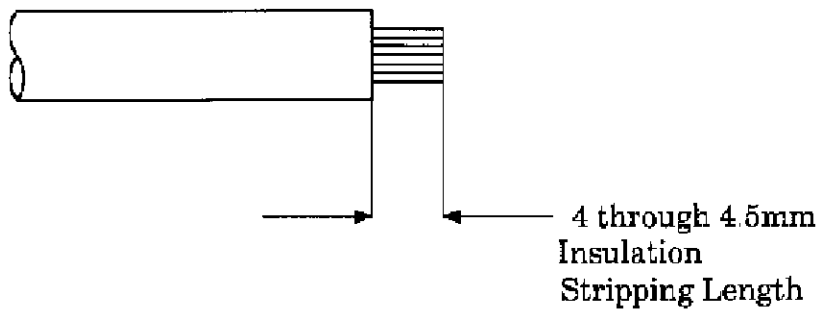
114-5241, 114-5270; Application Specification for FPC Contact

The following items are particularly important.

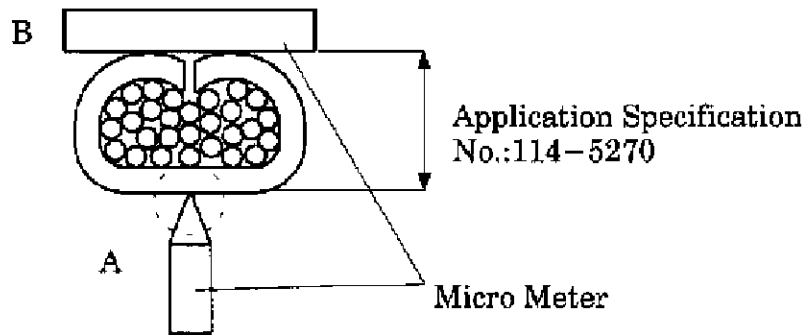
(1) Wire end must be stripped without cut nor damage of wire strands.



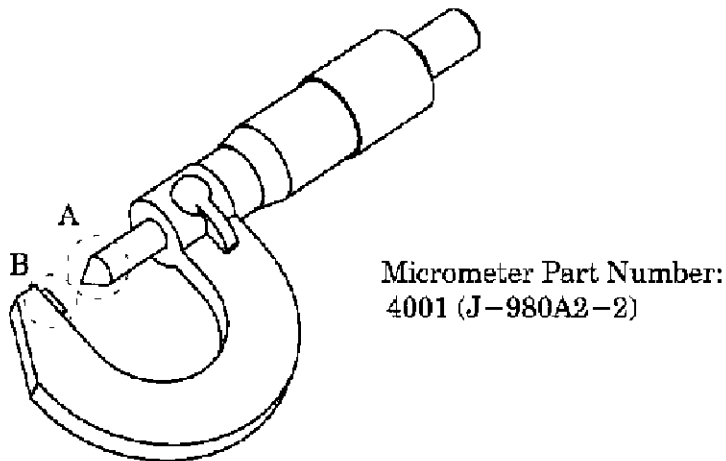
(2) Wire end Pre-treatment before Crimping.



(3) Cross-sectional View of Wire Barrel Crimp:



(4) Modified Micrometer for Measurement of Crimp Height:



3-3 Crimped Condition of Contact

Refer to Application Specification 114-5270 for detailed features.

3-4 Crimp Data

Following table shows the detailed data of contact crimping by applicator. Confirm the contents before the operation.

Contact Part Number	Applicator part Number	Wire Size(mm ²)	AVSS	
			Crimp Height(mm)	Disk Number
353842	937257-2	0.3	0.94	C
		0.5	1.03	B
		0.5f	1.03	B

NOTE Applicable Wire: AVSS Automotive Low Voltage Wire

3-5 Control of Crimped In-process Products

3-5-1 Inspection of Products

Inspection of crimped, in-process products must be performed by the groups of the produced products during one work day operation.

The inspection should be performed according to the criteria shown in the listing below.

Inspection Types	Timing	Inspection Items
Inspection of Products made under initial set-up condition of applicator	At the time of completion of Initial set-up of applicator to crimp the contact.	Visual inspection and Dimensional Inspection on all items listed in following table.
Lot Inspection	Before to start a routine operation each work day	
		During continuous operation

Inspection Types	Checking Points and methods	Measuring Apparatus
Visual Inspection	1. Loose-out of the wire conductors out side the wire barrel crimp, and cut-off of conductors	Visual
	2. Defective crimped form of contact(forming up of bell mouth, and wire end protrusion)	Visual
	3. Defective wire barrel bottom area forming(burrs appearing inclusive)	Visual
	4. Misgripping of insulation barrel crimped on wire insulation	Visual
	5. Deformation of contacting area of contact	Visual
Dimensional Inspection	1. Dimensions of Cut-off Tab Length 0.5mm MAX	Caliper
	2. Deformation of contact(bend-up, lateral bend and twisting)	Magnifying Glass
	3. Crimp Height	Micrometer
	4. Front bellmouth forming 0.2mm MAX Rear bellmouth forming 0.5mm MAX	Caliper

3-5-2 Storage

- (1) Store the products in the clean, dry area, and should be covered with proper sheet or paper when placed in an open area until the next day.
- (2) One bundle of in-process crimped leads, should be confined within 50 leads at anytime.
- (3) Avoid stacking and piling up the in-process products heaping up in large volume, lest it should result in catching together or entangled in the projecting parts of the leads, causing damage and breakage of the products. Deformation of the contact will result in malfunction of contacting parts electrically.
- (4) When to separate one bangle of lead, each of them care should be taken to be tangled.
- (5) Avoid storing terminal reels in a moist area or dusty place. Stock contacts in a comparatively dry and clean place where the temperature of 5-35°C, with relative humidity ranging between 45-85% maintained without keen influence of the direct sunlight.
- (6) After crimping, at the time of taking into storage or transfer, beware not to have the leads entangled or caught together, or it incurs to deformation of the contacts.

4. OPERATION of DIODE CRIMPING

Crimping of diode contacts must be done using TE specified application tooling in accordance with the procedure specified in an applicable instruction sheet.

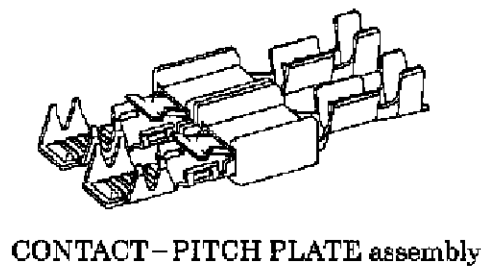
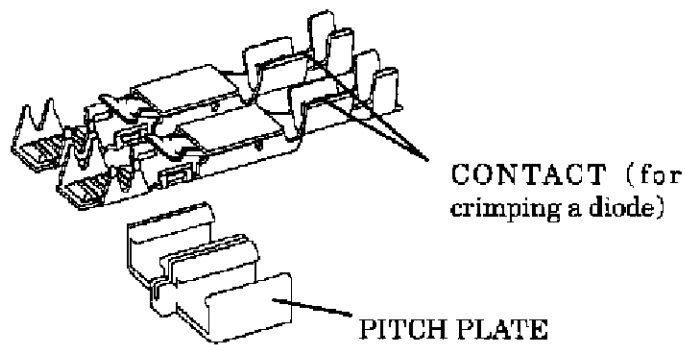
4-1 Insertion Operation of CONTACT to PITCH PLATE

Insertion a crimping contact for diode (P/N: 1318526-1) before crimp a diode to the pitch plate (P/N: 353840) right like the following figure after cutting a contact in two, the loose piece.

※Be careful of the transformation of the contact and pitch plate.

(The transformed one doesn't use.)

Don't use again a once insertion contact and pitch plate.



4-2 Diode Crimping Operation

Refer following specifications;

114-5270: Application Specification of FPC SEAT SENSOR CONN.

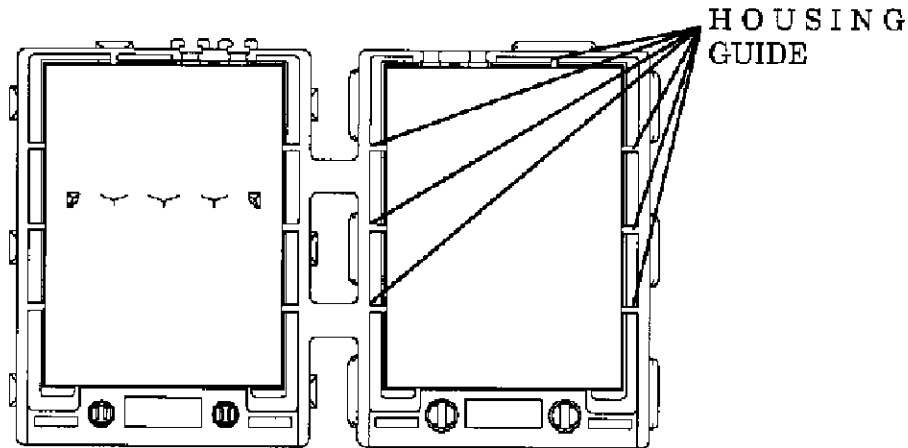
411-5895: Instruction Sheet of Diode Crimping Tool.

4-3 Before daily operation, 10 samples should be inspected by micro meter.

5. CONTROL of COVER HOUSING ASSEMBLY

5-1 Customer Receiving Inspection

- (1) SEAL RUBBER must be in an internal area of HOUSING.



- (2) No foreign substances or oils and fats are allowed on HOUSING.
- (3) No foreign substances are allowed on SEAL RUBBER.

5-2 Storage

- (1) Products must be used in 3 months from receiving.
- (2) Avoid storing COVER HOUSING ASSEMBLY in a moist area. Stock the ASSEMBLY in a comparatively dry and clean place where the temperature of 5-35°C, with relative humidity ranging between 45-85% maintained without keen influence of the direct sunlight.

6. OPERATION of FPC CRIMPING

6-1 Insertion Operation of CONTACT to PITCH PLATE

- ① After turning LOCK LEG of PITCH PLATE and BARREL of CONTACT to upper side, and also setting KEYING PROTRUSION and BARREL for same direction, push the contacts to the plate so that CONTACT LATCHKEY can insert into BOTTOM HOLE. Figure A.
 - ② Check to make sure by seeing that CONTACT LATCHKEY is inserted into BOTTOM HOLE, and the contacts are latched by LOCK LEG. And also verify by moving the contacts after the assembly operation was completed. Figure B.
- ※ Care should be taken with deformation of the contact and the plate.
Operation rework is not allowed.

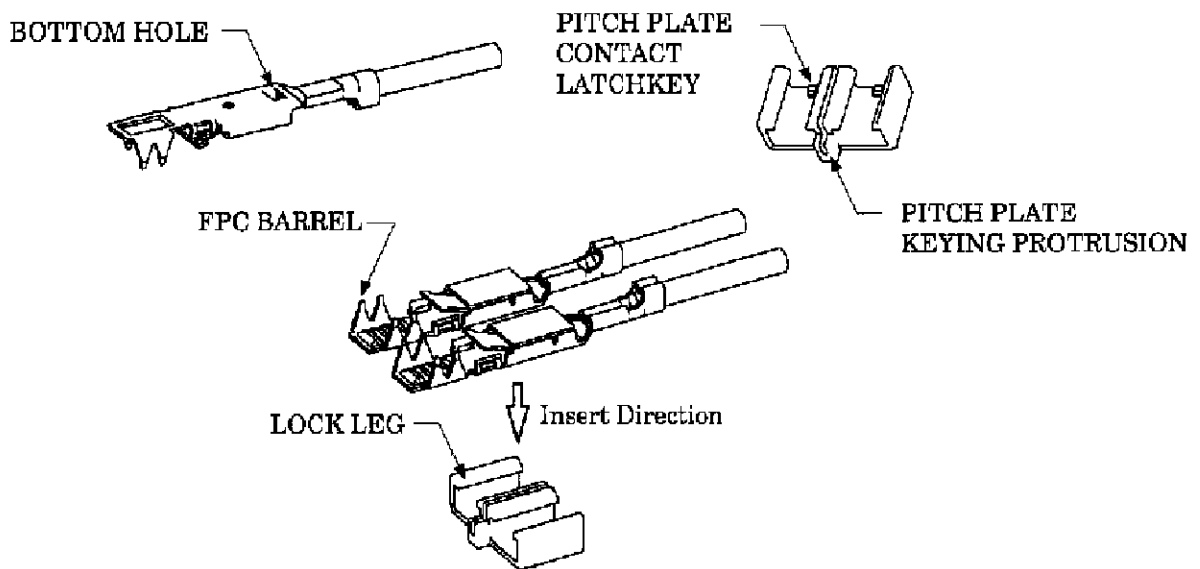


Figure A

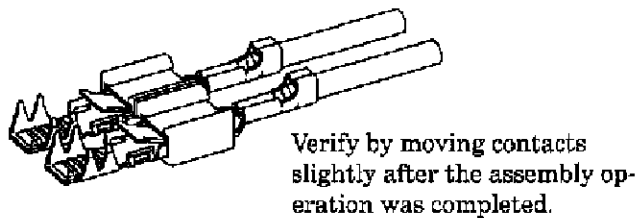


Figure B

6-2 FPC Crimping Operation

Refer following specifications;

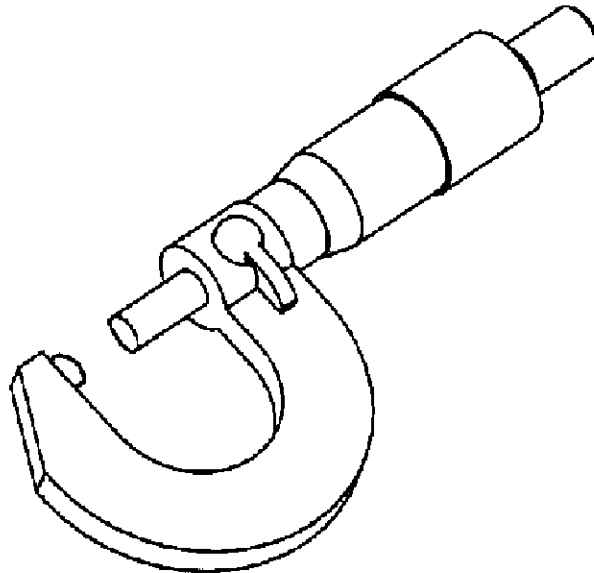
114-5270: Application Specification of Seat Belt FPC Contact

411-5892: Instruction Sheet of FPC Crimping Tool

6-3 FPC Crimping Data

Before daily operation, 10 samples should be inspected according to following data.

(1) Micro meter for FPC crimp height inspection

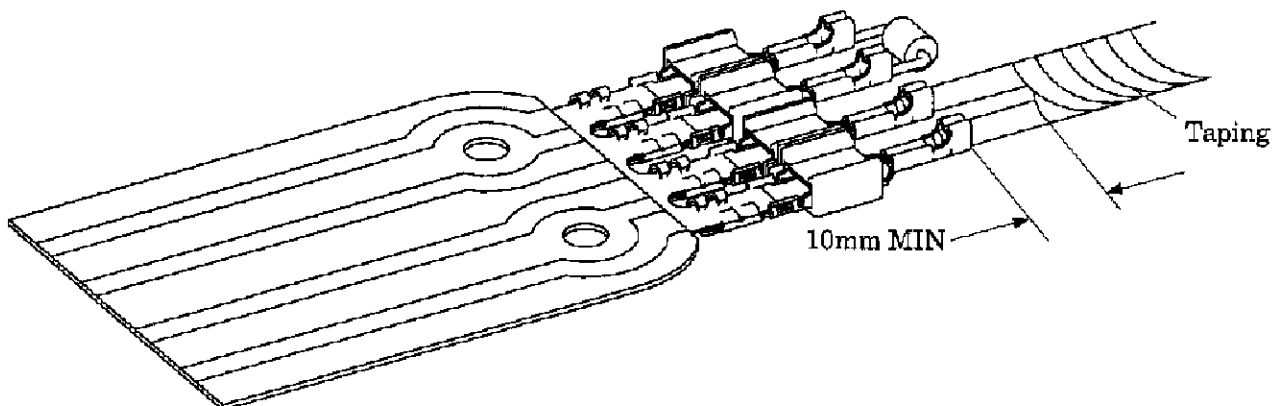


(2) FPC crimping data

CONTACT PART NUMBER	FPC CRIMPING TOOL NUMBER	FPC crimping area THICKNESS(μ m)	CRIMP HEIGHT(mm)
353842-1 1318526-1	1366293-□	95	1.08
	1276819-1	118	1.13
		175	1.19

5-2-3 Taping up CONTROL of COVER HOUSING ASSEMBLY Crimped Parts

When tape up harness after crimping FPC, 10mm minimum straight area must be kept from the end of contacts.



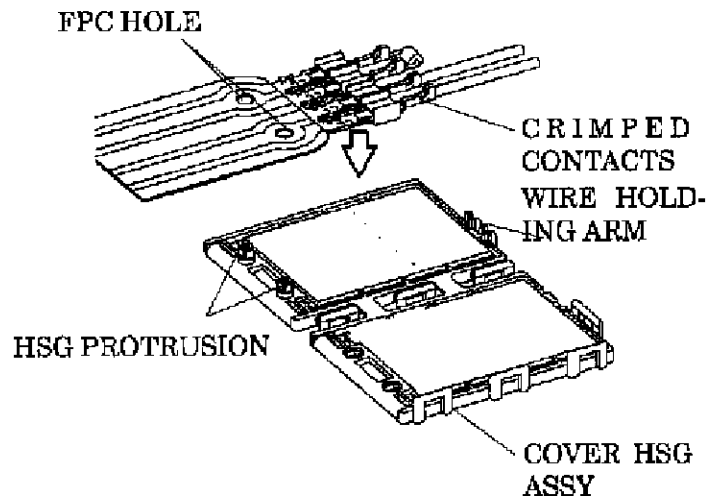
※The operation should be done applying 15N maximum force to the wires.

7. OPERATION and CONTROL of ASSEMBLY

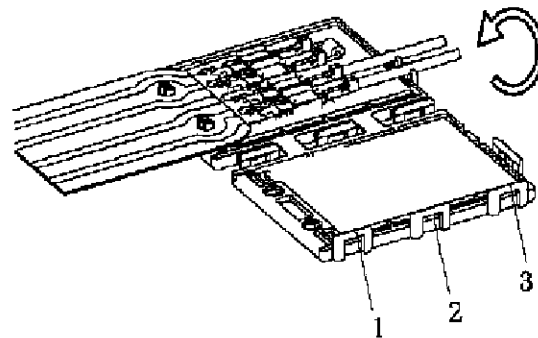
7-1 Installation in HOUSING

No foreign substances are allowed on SEALED RUBBER, then

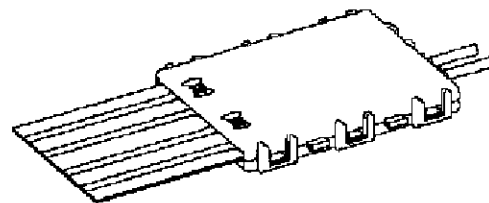
①Put crimped CONTACTS on COVER HOUSING ASSEMBLY and mating FPC HOLE with HOUSING PROTRUSION, and push crimped wires into each WIRE HOLDING ARM, Press PITCH PLATE against GEL about 3 seconds.



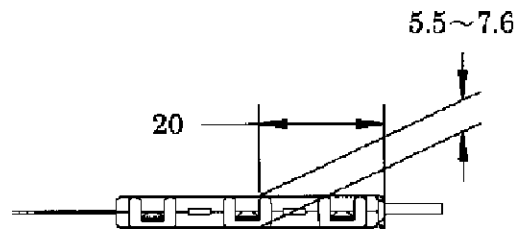
②After confirming the condition of ①, close the cover of the HOUSING with holding FPC or the wires so that the CONTACTS can not be moved. It hands 1,2,3 in the right figure locks first beforehand, being manual first. Next, hang the lock of the remainder with the tool. The press area and the fixation area when hanging a lock refer to figure C-G. The lock hang when pressing for about 3 seconds to the position that the housing height is 5mm.



③Check to make sure that seven HOUSING PROTRUSION LOCKS complete latching. (After locking, recommendable height of HOUSING is 5.5-7.6mm (reference)).



NOTE: When HOUSING LOCK is latched, care should be taken for deformation of FPC, COVER HOUSING ASSEMBLY, WIRE HOLDING ARMS, the wires, or found, they must be removed before latching. Silicone oil, which is included in GEL, may stick to surface of the HOUSING if touch the HOUSING with same finger as touching the GEL. Care should be taken to shift position of the CONTACTS, or to add unnecessary pressure since GEL may be pushed out. It never be allowed to reuse parts which are assembled the CONTACT or are deformed by pressure.



Measure point after housing lock
lock(reference)

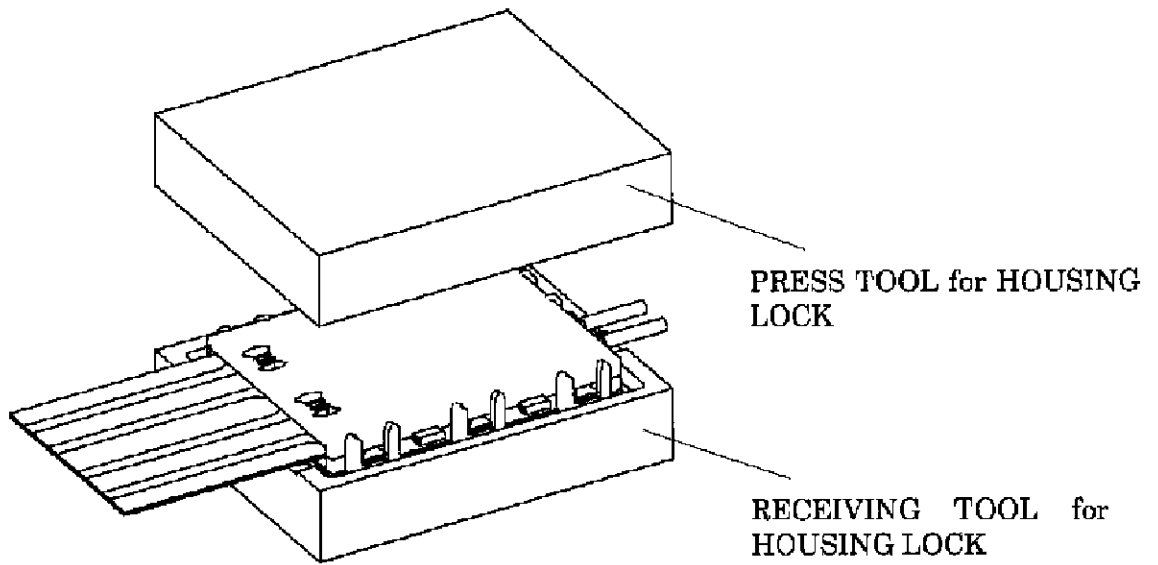


Fig.C : HOUSING LOCK

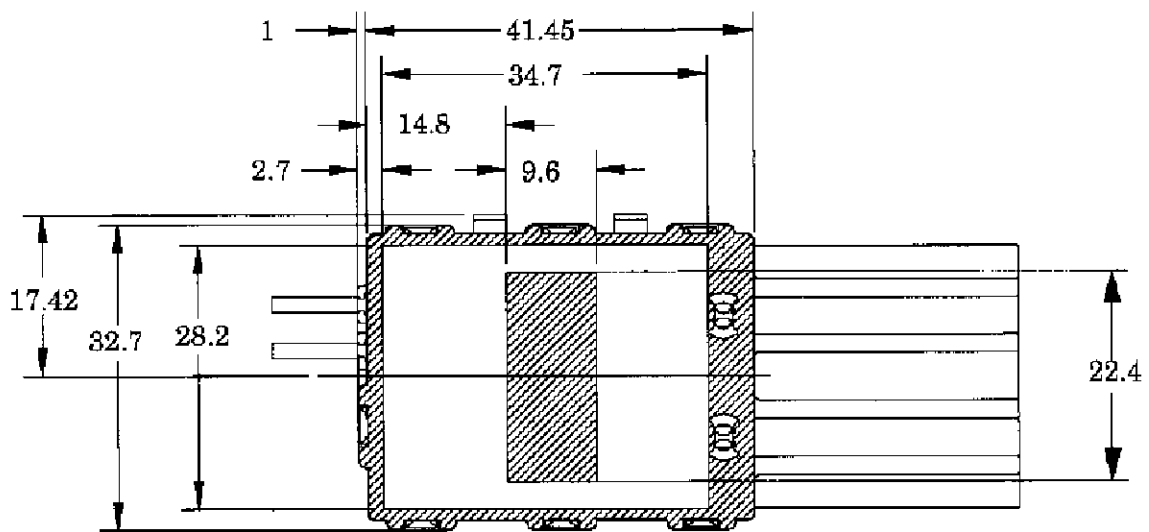
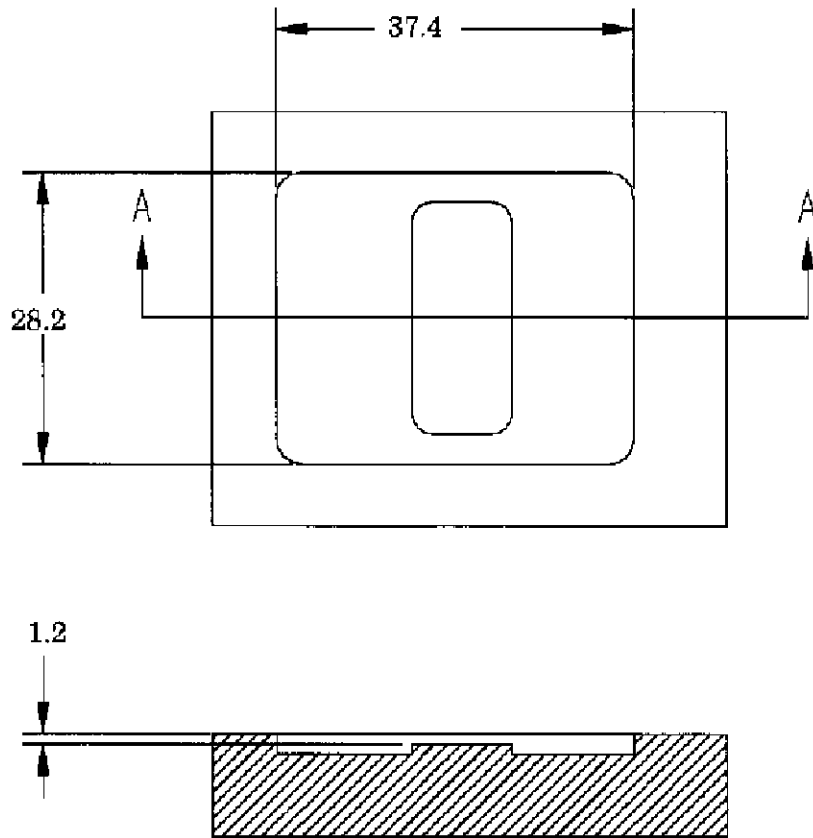


Fig.D : AREA of PRESS TOOL (connec-
tor top surface)



A - A
Fig.E PRESS TOOL SECTION

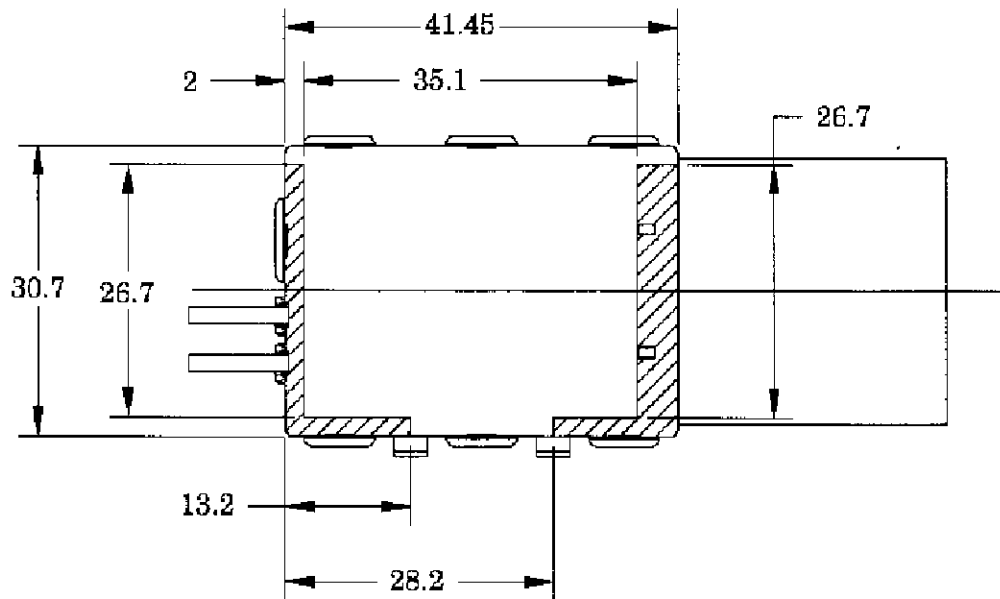


Fig.F : Area of Receiving press tool
(connector bottom surface)

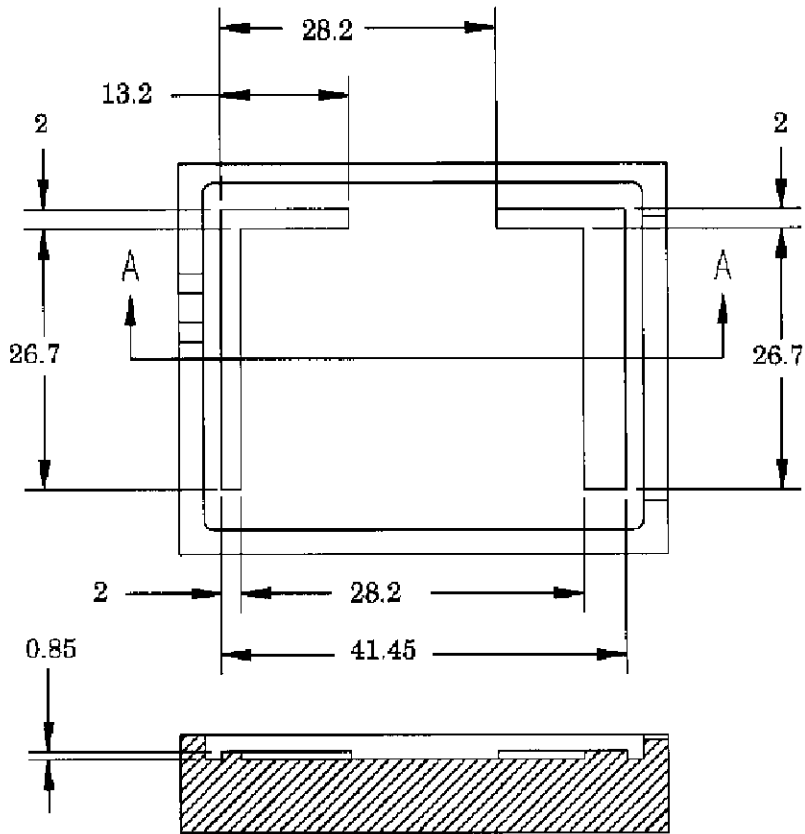


Fig G-1 Receiving tool section(exe.1)

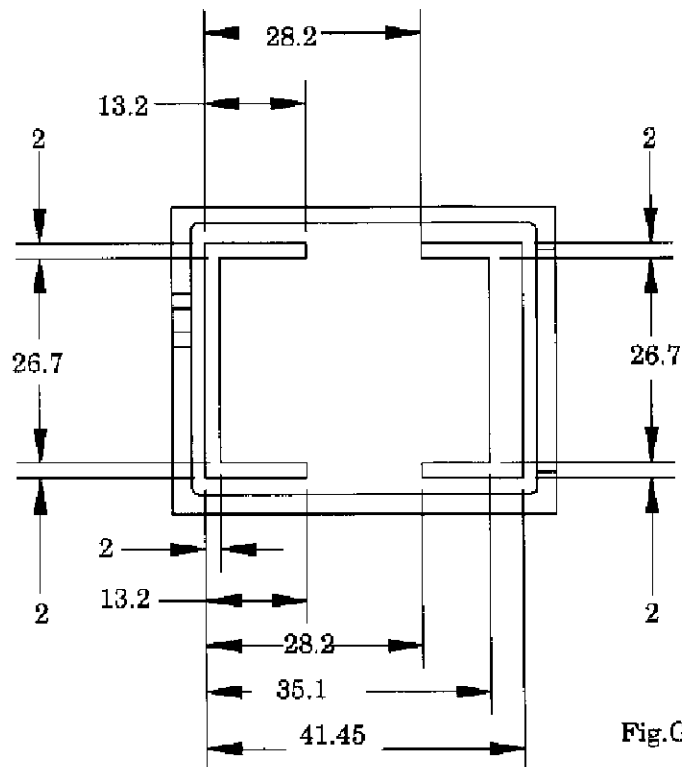


Fig.G-2 Receiving tool (exe.2)

7-2 Inspection, Storage and Transit of the Harness

7-2-1 Inspection

Take a harness assembly as a unit, to inspect all the circuit continuity and product normality. During the inspection of the harness product, the following practice should be observed accurately.

7-2-2 Storage

For storage of the harness, place them in clean, dry place without fear of contamination. It is advised that leaving the products in open air for long time tends to get contaminated by dust and particles. Leaving under the open air for a long time should be forbidden from this point of view.

7-2-3 Delivery Transit and Carrying

- (1) Use proper carton box or container for delivery transit and carrying, to protect the harness product from contamination as dust and rain water etc. Try to handle moderately without shock, weighty load and impact.
- (2) For the correct and normal control, the product part number, quantity and product code etc. must be clearly marked on the container legibly.

8. FINAL ASSEMBLY on VEHICLES

8-1 Receiving Inspection

For final receiving the inspection, the following items are required for confirmation of assembly normality at least.

- (1) The bundling positions of leading wires bundle out of the connector should not be less than 20mm when the bundle is not bent, and 10mm when the bundle is bent.
- (2) Condition checking on latching at HOUSING LOCKS.
- (3) Check for presence on cracks, defects and discoloration of the HOUSING.
- (4) Check on any abnormalities existing in the contained products.

8-2 Check and Control Assembly Operation

Harness assemblies must be handled moderately, eliminating the inadequate manners as follows:

- (1) Rough handling as throw the products over the floor.
- (2) Careless handling as to let the connector touch or draw on the floor.
- (3) Rough handling as to jerk the wires, that may incur damage of the connectors.