

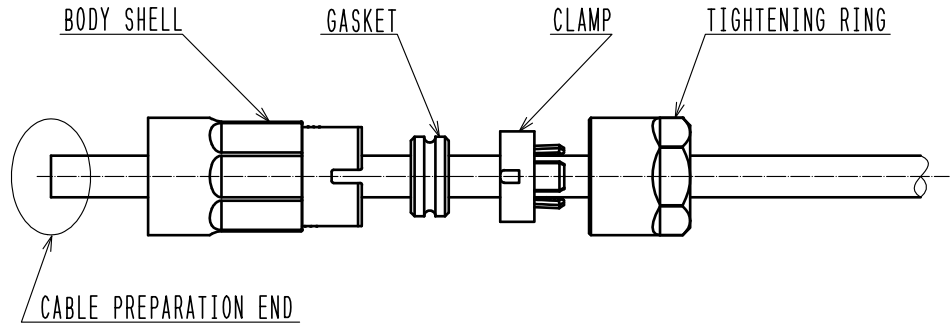


PLUG ASSEMBLY INSTRUCTIONS

ILLUSTRATION (OPERATION)

COMPONENTS INSERTION.

1

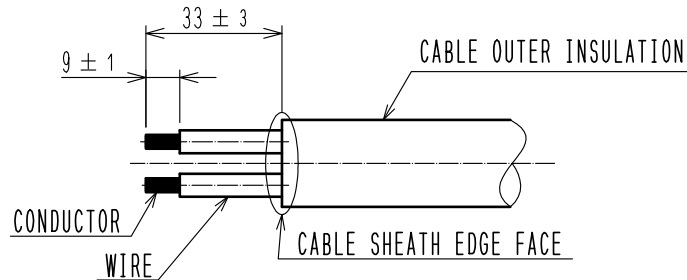


CABLE JACKET AND WIRE JACKET STRIP.

2

NOTES :

- EXERCISE CAUTION NOT TO DAMAGE THE JACKET AND THE CONDUCTOR TO PREVENT FROM BREAKDOWN AND CONDUCTIVITY ISSUE.
- PRIOR PROCESS EVALUATION IS NECESSARY AS CABLE CHARACTERISTICS VARY DEPENDING ON CABLE CONSTRUCTION.



CONTACT CRIMP FOR WIRES(FEMALE TERMINAL, MALE TERMINAL)

① INSERT THE SLEEVE OF THE CONTACT TO THE FEMALE DIE OF THE CRIMP TOOL AND THEN HOLD THE CONTACT WITH THE TOOL. AT THIS TIME, FIT THE DIRECTION OF CONTACT PRESS JOINT AND CENTER OF THE SLEEVE INTO THE MALE DIE OF THE TOOL.

3

USE OUR RECOMMENDED CRIMP TOOLS, THE TOOLS ARE SHOWN IN THE TABLE 1.
 APPLICABLE DIE SIZE OF THE CRIMP TOOL FOR EACH THE CONTACT IS SHOWN IN THE TABLE 2.

NOTES:

- THERE MIGHT BE DIFFERENCE IN THE CRIMP PERFORMANCE WITH THE TOOLS, PLEASE USE OUR RECOMMENDATION TOOLS.
- IT MUST NOT SATISFY CRIMP PERFORMANCE WITH INCORRECT DIE SIZE. PLEASE USE THE CORRECT DIE SIZE.
- IT MUST NOT SATISFY CRIMP PERFORMANCE WITH INCORRECT DIE POSITION. PLEASE USE THE CORRECT POSITION.
- MAINTAIN THE CRIMP TOOL ACCORDING TO THE INSTRUCTION OF TOOL MANUFACTURERS.


COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△ 3	DIS-C-00002672	TY. SUZUKI	HY. KOBAYASHI	20181001
名称 TITLE		 ヒロセ電機株式会社 HIROSE ELECTRIC CO., LTD.		
HR41 CONNECTOR ASSEMBLY PROCEDURE		APPROVED	SU. OBARA	20130305
		CHECKED	HY. KOBAYASHI	20130305
		CHARGED	TY. SUZUKI	20130305
		WRITTEN	KN. IKEHARA	20130305
技術指定書 TECHNICAL SPECIFICATION		ETAD-C0288		△ 1 / 8

ILLUSTRATION (OPERATION)

② INSERT THE CONDUCTOR OF INSULATED WIRE TO THE CONTACT FROM THE SLEEVE SIDE AS SHOWN IN FIG. A IN THE NEXT PAGE.

- NOTES :
- DO NOT CAUSE THE SPACE BETWEEN TERMINAL EDGE FACE AND TRUNKING EDGE FACE OF ELECTRIC WIRE AS MUCH AS POSSIBLE (THE SPACE: 1mm MAX).
 - GAP COULD CAUSE SHORT CIRCUIT.
 - MAKE SURE THAT ALL THE CONDUCTOR IS ENCLOSED INTO THE CONTACT, OR IT COULD CAUSE SHORT CIRCUIT.

③ MAKE SURE THAT THE HANDLE OF THE TOOL IS CLOSED TO THE END.

④ APPLY FORCE AND CRIMP THEM UNTIL THE CRIMP TOOL WILL BE OPEN AUTOMATICALLY.

⑤ REMOVE THE CONTACT AFTER THE CRIMP TOOL OPENS.

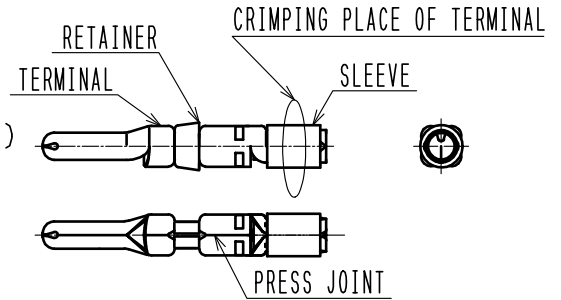


TABLE. 1 RECOMMENDED CRIMP TOOL.
(JIS C9711 WIRE TERMINATION TOOL FOR INTERIOR WIRING)

◆ MANUAL CRIMPING TOOL

MANUFACTURE	PART No.
HOZAN TOOL INDUSTRIAL CO., LTD	P-75
LOBTEX CO., LTD	AK15A
NICHIFU CO., LTD	NH1

◆ AIR CRIMPING TOOL

MANUFACTURE	PART No.
IZUMI PRODUCTS COMPANY	AC-5N. D DIE : No. 1 HEAD

TABLE. 2 CONTACTS AND APPLICABLE CABLE AND DIE SIZE.

APPLICABLE CONNECTOR PART No.	APPLICABLE TERMINAL		TOOL	APPLICABLE CABLE
	HRS No.	PART No.	APPLICABLE DIE SIZE	CONDUCTING CROSS-SECTION AREA
HR41-25WBPx-3SC \triangle	CL141-0001-7	HR41-SC-111	5.5	3.3~5.5mm ² (AWG#10~#12)
	CL141-0003-2	HR41-SC-121	2	1.3~2.5mm ² (AWG#14~#16)
	CL141-0008-6	HR41-SC-141	5.5	5.5~6.5mm ² (AWG#10)
HR41-25WBR-3PC	CL141-0002-0	HR41-PC-111	5.5	3.3~5.5mm ² (AWG#10~#12)
	CL141-0004-5	HR41-PC-121	2	1.3~2.5mm ² (AWG#14~#16)
HR41-25WBPx-5SC \triangle	CL141-0011-0	HR41-SC-151	5.5	0.75~2.5mm ² (AWG#14~#18)
	HR41-25WBRA-5PC	CL141-0012-3	HR41-PC-151	5.5

※DIFFERENT SPECIFICATION SUCH AS PLATING MATERIAL IS DESCRIBED WITH (**) FOLLOWED BY THE PART No. (NUMBER IS GIVEN TO **)

※IN THE x PART, ANY ALPHABET (OR NO CHARACTER) ENTERED FOR EACH CABLE DIAMETER DIFFERENCE. \triangle

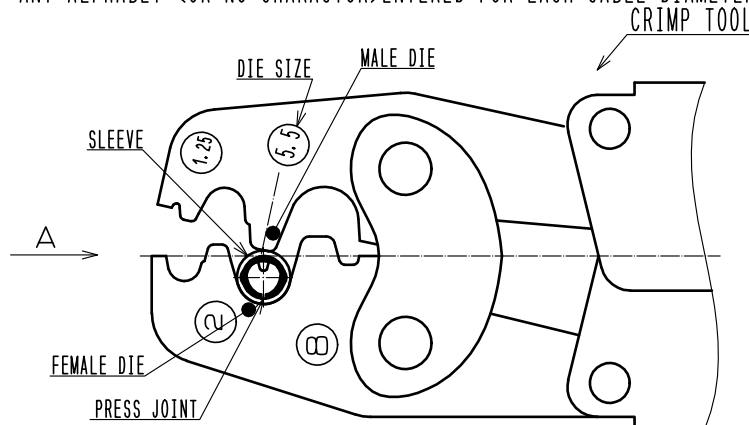
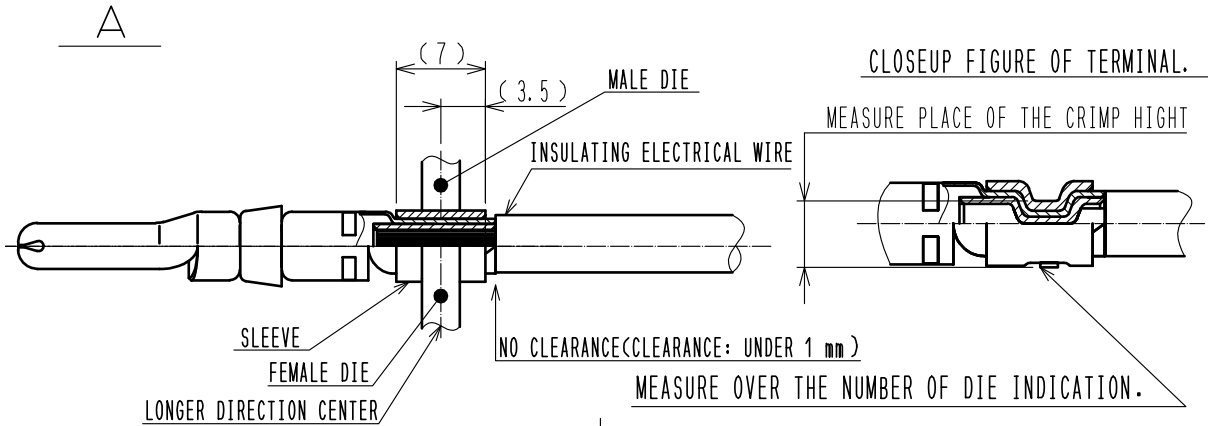


ILLUSTRATION (OPERATION)



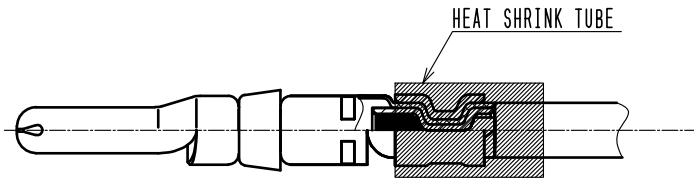
3 TABLE. 3 CRIMP STRENGTH (RECOMMENDED TOOL IS USED)
NO PULLING OUT OR LOOSE OF THE CABLE FROM
THE CONTACT UNDER THE SPECIFIED PULLING
FORCE APPLIED TO THE CABLE.

ELECTRICAL WIRE'S DIAMETER	ANCHORAGE STRENGTH(N)
0.75 sq	100
1.25 sq	150
2.0 sq	230
3.5 sq	450
5.5 sq	500

TABLE. 4 CRIMP HEIGHT (REFERENCE)
THE HEIGHT OF AFTER CRIMPING TERMINAL SHOWS
IN FOLLOWING TABLE.
DON'T CORRECT THE HEIGHT. PLEASE CONFIRMATION
THE TOOL.

TERMINAL \ TOOL	P-75	AK15A	NH1	AC-5N.D
HR41-*C-111	2.6±0.2	2.85±0.2	3.3±0.2	2.85±0.2
HR41-*C-121	1.85±0.2	1.9±0.2	2.35±0.2	1.75±0.2
HR41-*C-141	2.6±0.2	2.95±0.2	3.3±0.2	2.85±0.2
HR41-*C-151	2.65±0.2	2.95±0.2	3.35±0.2	2.85±0.2

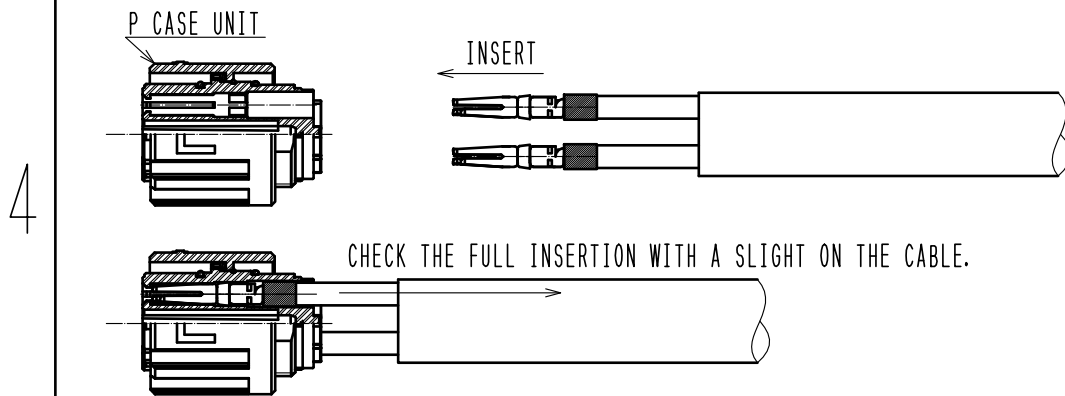
• COVERING WITH HEAT SHRINK TUBE IS RECOMMENDED TO PREVENT POSSIBLE SHORT CIRCUIT DESCRIBED IN ②.



INSET THE CRIMPED CONTACTS IN THE P CASE UNIT. FULL INSERTION WILL BE CONFIRMED WITH AUDIBLE CLICK AND TACTILE FEEL.

THIN AND/OR SOFT CABLE IS SO FLEXIBLE THAT IT COULD BE BENT DURING CONTACT INSERTION, THEREFORE, USE THIN ROD FOR CONTACT INSERTION.

CHECK THAT THE CONTACT IS FIXED TO THE CORRECT POSITION IN P CASE UNIT BY LIGHTLY PULLING THE INSULATED WIRE AFTER CONTACT INSTALLATION.



CHECK THE WIRING AFTER INSERTION THE CONTACTS.

IN CASE OF MISS WIRING, PLEASE REMOVE THE CONTACTS BY REMOVAL TOOL AND THEN FIX WIRING.

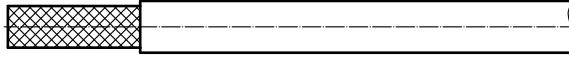
APPLICABLE REMOVAL :HR41-TP

ILLUSTRATION (OPERATION)

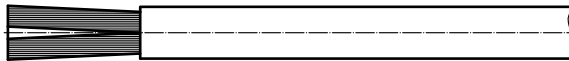
WIRE CONNECTION METHOD OF HR41-25WBPA-3SC 2-CENTER CORE USE TO SHIELD CABLE.
 CABLE ASSEMBLY PROCESS OF TWO-POSITION SHIELDED CABLE TO HR41-25WBPA-3SC
 No. 3 CONTACT IS USED FOR THE ASSEMBLY OF SHIELDING CABLE. FOR OTHER CABLES,
 THIS PROCESS IS UNNECESSARY.

① STRIP A SHEATH OF CABLE.

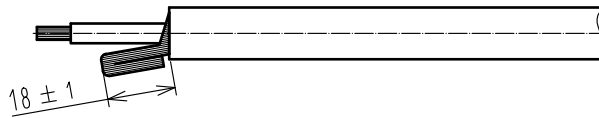
NOTES : TAKE CARE OF BANG UP THE SHIELD.



② UNBRAID THE SHIELDING WIRE.

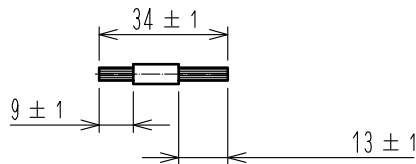


③ BUNDLE THE SHIELDING WIRE AND FOLD BACK.

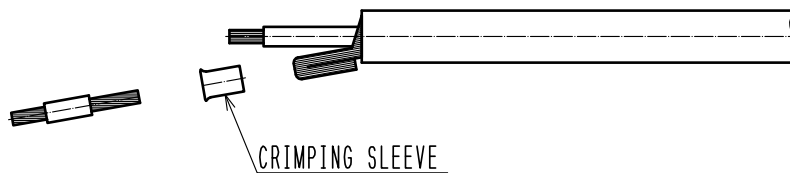


④ PREPARE THE INSULATED WIRE TO THE DIMENSIONS AS SHOWN BELOW.

NOTES : LONGER CABLES CANNOT BE HOUSED INTO THE BODY SHELL, WHICH INTERFERES ASSEMBLY,
 OR THE SHIELDING CABLE STICKS OUT TO GASKET SIDE AND COULD CAUSE WATER PROOF FAILURES.

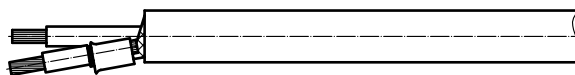


⑤ INSERT THE INSULATED WIRE AND SHIELDING WIRE TO A CRIMP SLEEVE.



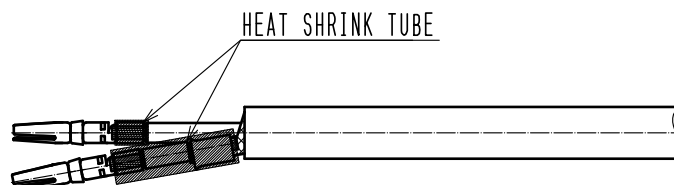
⑥ CRIMP THE SLEEVE.

TOOL DIE SIZE IS 8 CAVITY.



⑦ REFER TO THE PROCESS 3 TO CRIMP ANOTHER INSULATED WIRE SIMILAR TO OTHER WIRES.

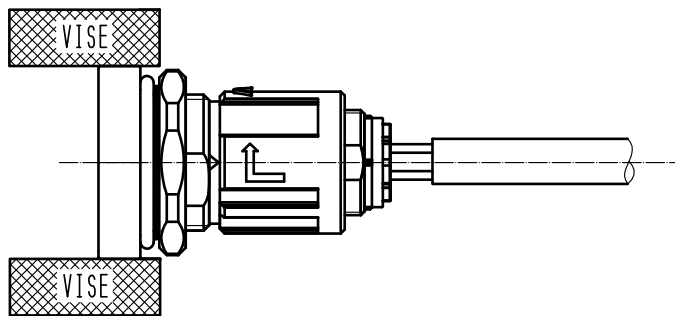
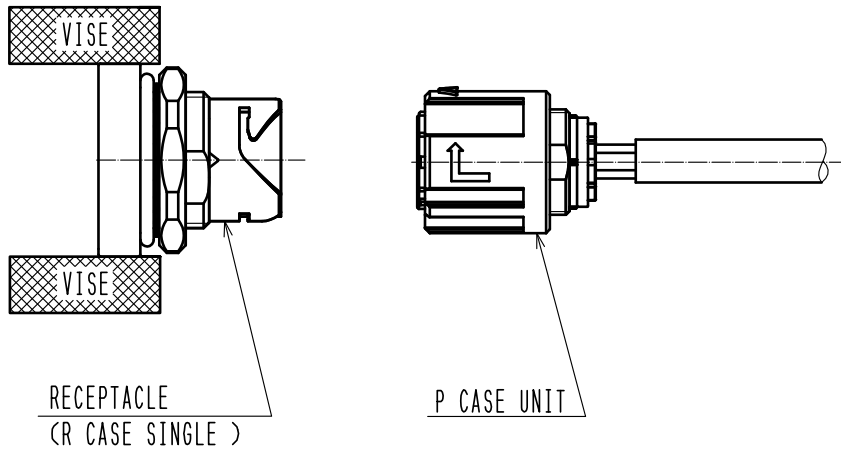
CRIMP SLEEVE IS EXPOSED AFTER THE CRIMPING, WHICH COULD CAUSE SHORT CIRCUIT.
 APPLYING HEAT SHRINK TUBE IS RECOMMENDED TO AVOID INSULATION FAILURE.



5

ILLUSTRATION (OPERATION)

- ①MATE P CASE UNIT TO RECEPTACLE STABILIZED BY VISE AND SUCH.
 THIS OPERATION CAN BE DONE WITHOUT THE RECEPTACLE.
 IN THIS CASE, DO NOT DAMAGE OR DEFORM THE P CASE UNIT WITH EXCESSIVE FORCE WHEN STABILIZING IT.



- ②TIGHT THE BODY SHELL TO THE P CASE UNIT.
 THE BODY SHELL MUST NOT BE ATTACHED ASLANT TO THE P CASE UNIT.
 TIGHTENING TORQUE IS 5~5.5N · m.

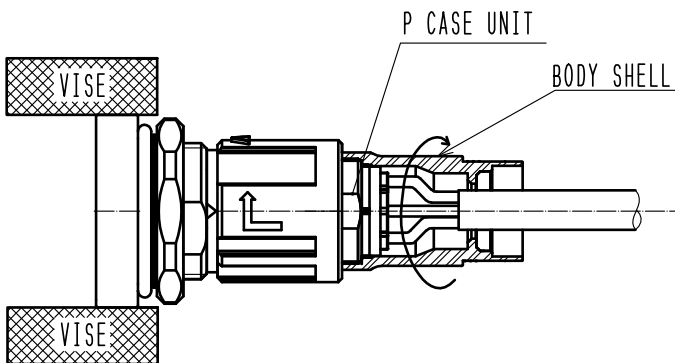
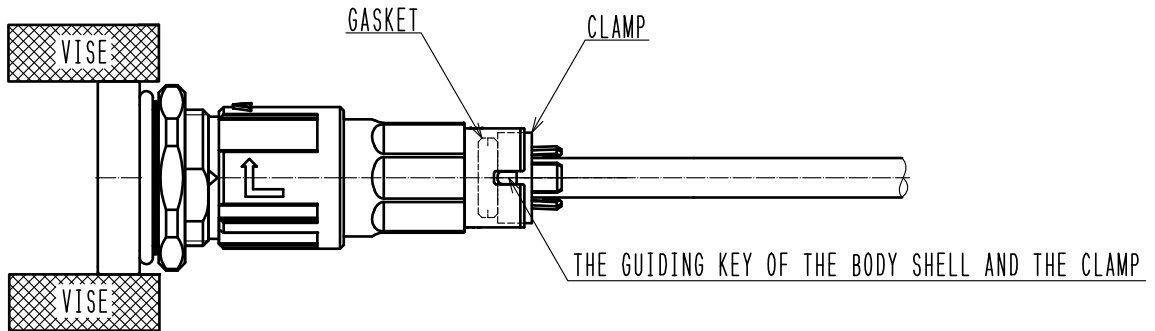


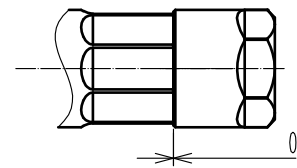
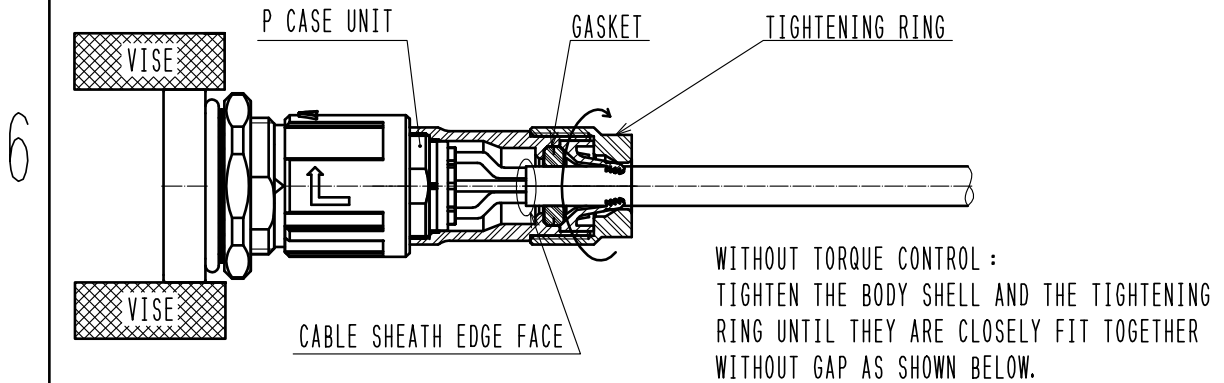
ILLUSTRATION (OPERATION)

③ SLIDE THE GASKET AND THE CLAMP INTO THE BODY SHELL WITH ALIGNING THE GUIDING KEY OF THE BODY SHELL AND THE CLAMP.



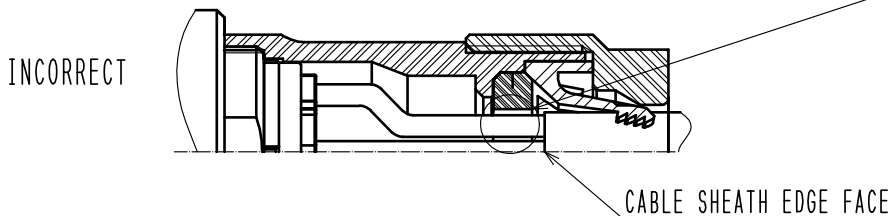
④ HOLD THE P CASE UNIT AND TIGHTEN RECEPTACLE TO THE BODY SHELL WITH USING A WRENCH UNTIL NO GAP BETWEEN BOTH PARTS.
 CONSTRUCT ON OVER TO GIVE OUT THE CLEARANCE BETWEEN BODY SHELL AND TIGHTEN RING.
 OR TIGHTENING TORQUE IS $5 \sim 5.5 \text{ N} \cdot \text{m}$ WITH LOCKED THE CABLE.
 MAKE SURE THAT THE END OF CABLE SHEATH IS KEPT INSIDE THE GASKET.

THE CABLE PULL AND TWISTING STRENGTH, WATER RESISTANCE AND OTHER CHARACTERISTICS MAY DIFFER DEPENDING ON THE CABLE STRUCTURE.
 PLEASE CONFIRM BEFORE THE USE.



NOTES :
 WATER RESISTANCE IS NOT MAINTAINED, IF THE END OF CABLE SHEATH IS NOT KEPT INSIDE THE GASKET.

COME ABOUT THE CLEARANCE, AND WATER IS INCURSION.



ANTI-LOOSENING SOLVENT IS UNNECESSARY FOR INITIAL ASSEMBLY.
 FOR REASSEMBLY CAUSED BY POSSIBLE MISWIRING, IT IS RECOMMENDED TO APPLY HENKEL JAPAN Ltd., LOCTITE 263 AND LOCPRIMER 7649 TO THE MALE THREAD ON P CASE UNIT AND BODY SHELL.

7 THERE IS NO MORE TO IT.
 RECOMMEND TO THE WATER PROOF TESTING AND ELECTRICAL TESTING BY ANY METHOD AFTER ASSEMBLY.

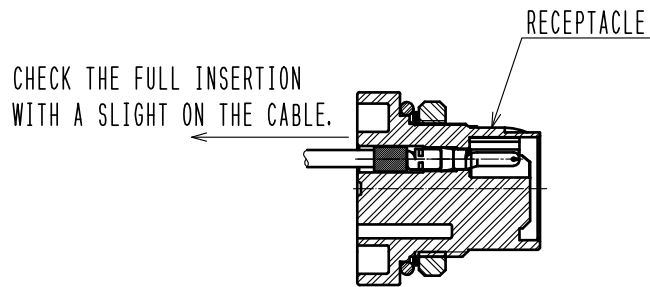
RECEPTACLE ASSEMBLY INSTRUCTION

ILLUSTRATION (OPERATION)

1

INSET THE CRIMPED CONTACTS IN THE RECEPTACLE. FULL INSERTION WILL BE CONFIRMED WITH AUDIBLE CLICK AND TACTILE FEEL. CHECK FULL INSETION WITH A SLIGHT PULL ON THE CABLE.

THIN AND/OR SOFT CABLE IS SO FLEXIBLE THAT IT COULD BE BENT DURING CONTACT INSERTION, THEREFORE, USE THIN ROD FOR CONTACT INSERTION. CHECK THAT THE CONTACT IS FIXED TO THE CORRECT POSITION IN RECEPTACLE BY LIGHTLY PULLING THE INSULATED WIRE AFTER CONTACT INSTALLATION.



CHECK THE WIRING AFTER INSERTION THE CONTACTS.
IN CASE OF MISS WIRING, PLEASE REMOVE THE CONTACTS BY REMOVAL TOOL AND THEN FIX WIRING.
APPLICABLE REMOVAL :HR41-TP

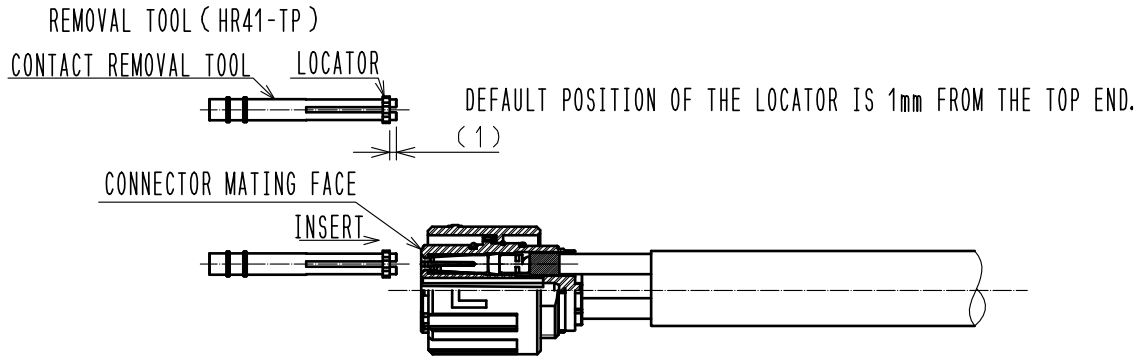
2

THERE IS NO MORE TO IT.
RECOMMEND TO THE WATER PROOF TESTING AND ELECTRICAL TESTING BY ANY METHOD AFTER ASSEMBLY.

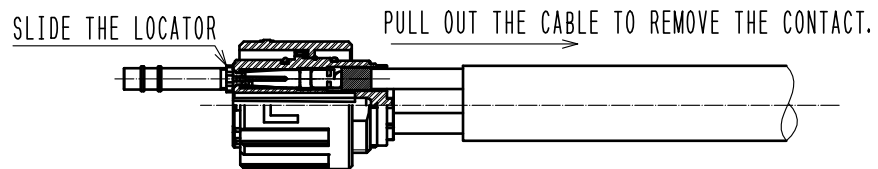
◆HOW TO USE CONTACT REMOVAL TOOL(MALE CONTACT, FEMALE CONTACT)

ILLUSTRATION (OPEARATION)

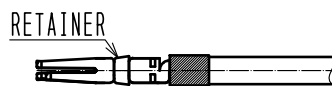
① INSERT THE REMOVAL TOOL INTO THE CONTACT CAVITY FROM THE MATING FACE UNTIL IT REACHES TO THE END, WHICH SLIDES THE LOCATOR AT THE SAME TIME. RETAINER TUCKS INWARD AND BE RELEASED.



② LEAVE THE TOOL. AND PULL OUT THE CABLE TO REMOVE THE CONTACT.



REMOVED CONTACT IS ALLOWED TO BE REUSED ONLY ONE TIME. MAKE SURE THAT NO DEFORMATION IS FOUND ON THE RETAINER OF THE CONTACT REMOVED WITH THE TOOL. DO NOT REUSE THE CONTACT WHEN ANY DEFORMATION IS FOUND.



③ PLACE THE LOCATOR BACK TO THE ORIGINAL POSITION, APPROX. 1 mm AWAY FROM THE TOP END OF THE TOOL WHEN NOT IN USE.

PLACE THE LOCATOR BACK TO THE ORIGINAL POSITION.



LIFE OF THIS TOOL IS 50 TIMES MAX.

ATTENTIONS: MAKE SURE THAT THE RETAINER IS FULLY TUCKS INWARD WHEN REMOVING THE CONTACT. OTHERWISE, THE CABLE IS BROKEN AND/OR THE RETAINER IS DAMAGED WITH THE FORCIBLE CABLE PULL.

1

