APTIV

ASSEMBLY MANUALS

PRE - ASSEMBLY	HARNESS ASSEMBLY	CAR ASSEMBLY

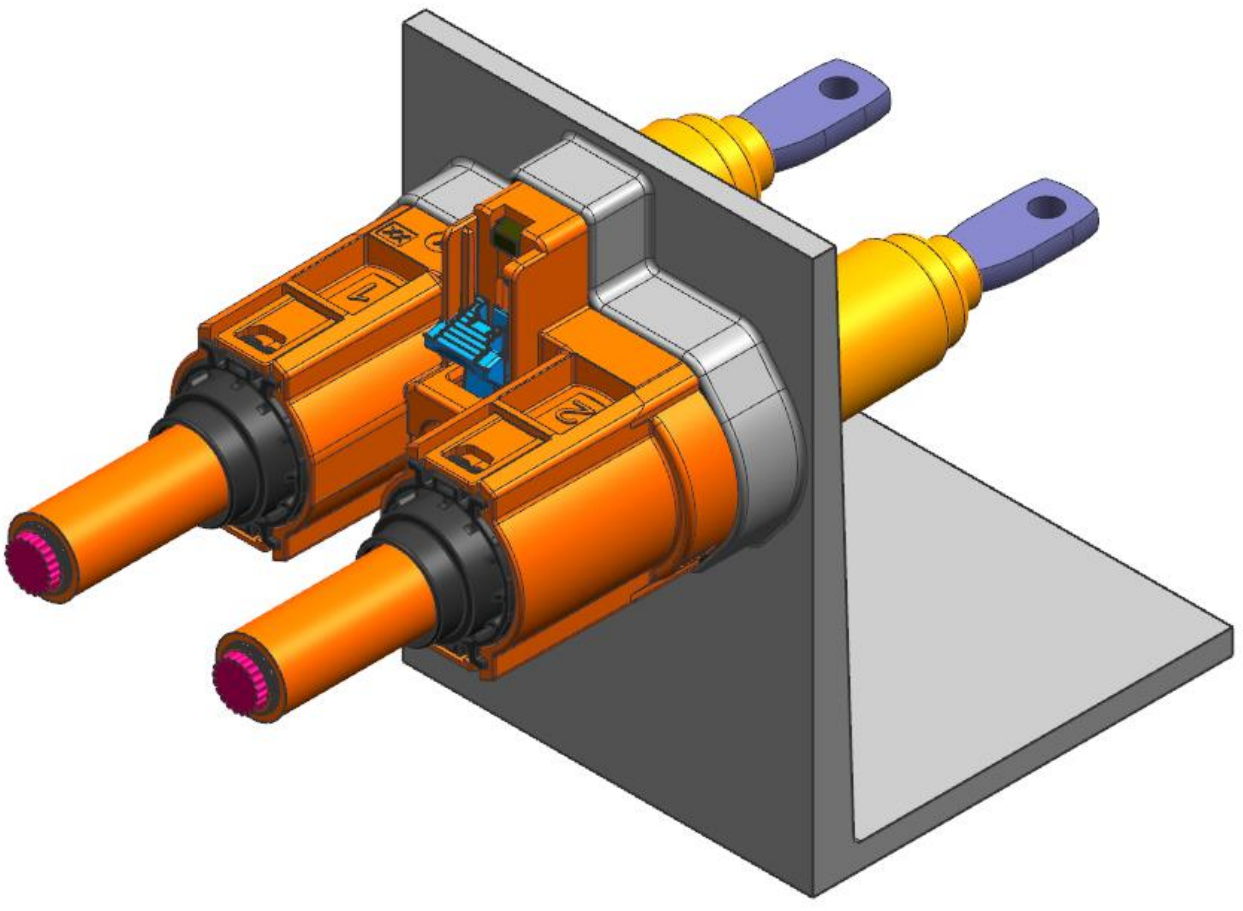
ASSEMBLY MANUAL - 35098460

Power Connector 2W Direct Mate RCS800 Connection System

RCS800 Terminal System (Sealed)

July 2020

D



Issued by

APTIV Epernon, France.

Assembly Manual
Power Connector 2W Direct Mate RCS800 Connection System
RCS800 Terminal System (Sealed)

Epernon Technical Center

Developed by : Jean Fabre – jean.fabre@aptiv.com

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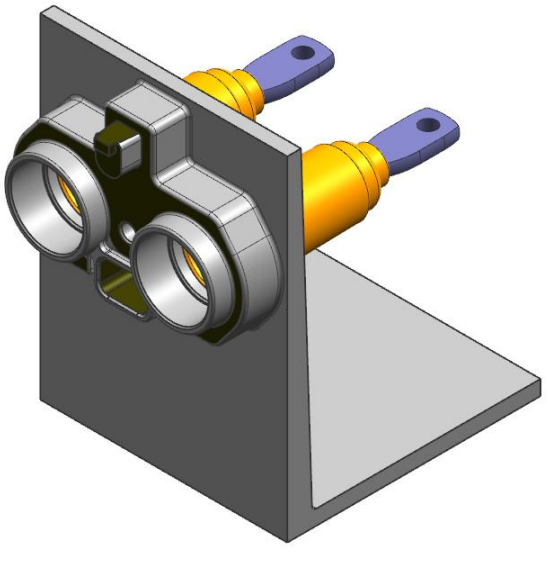

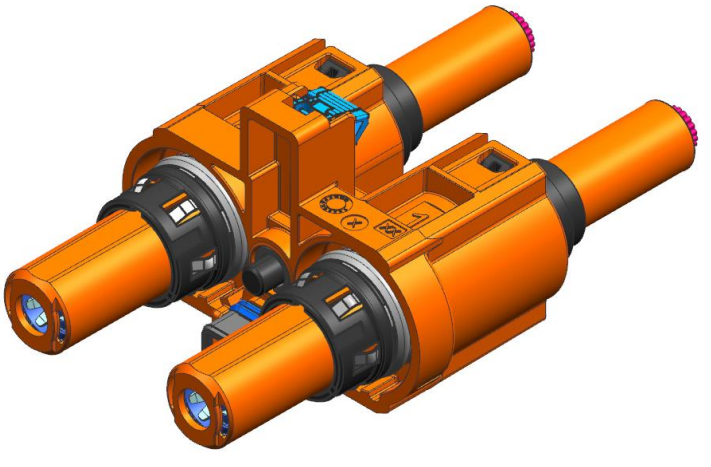

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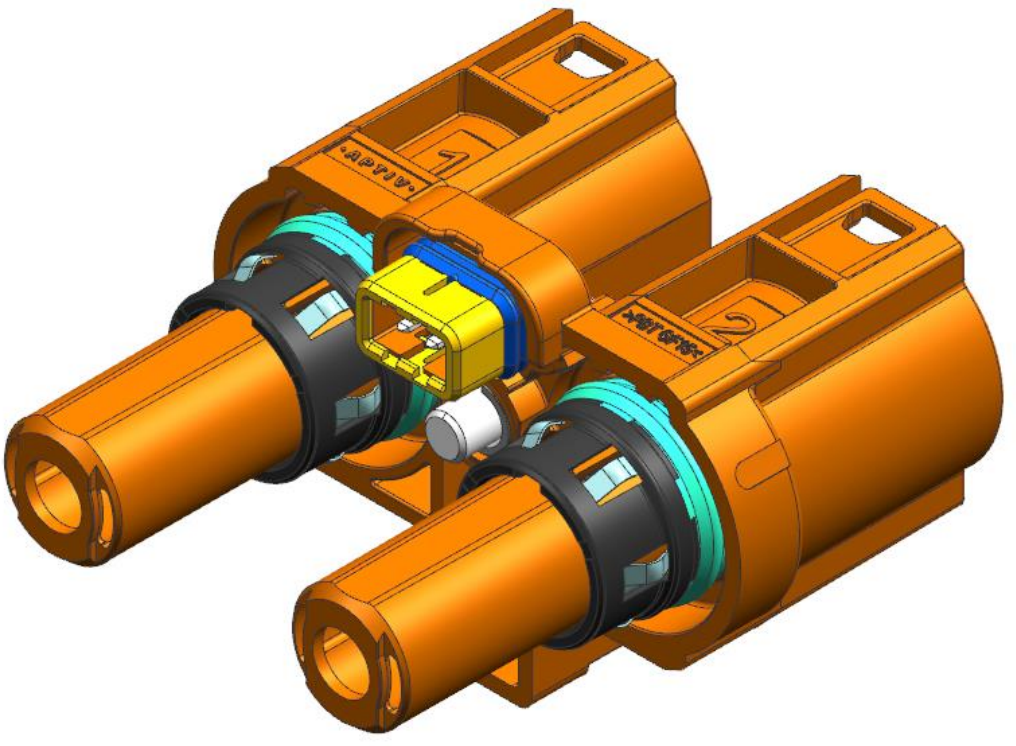
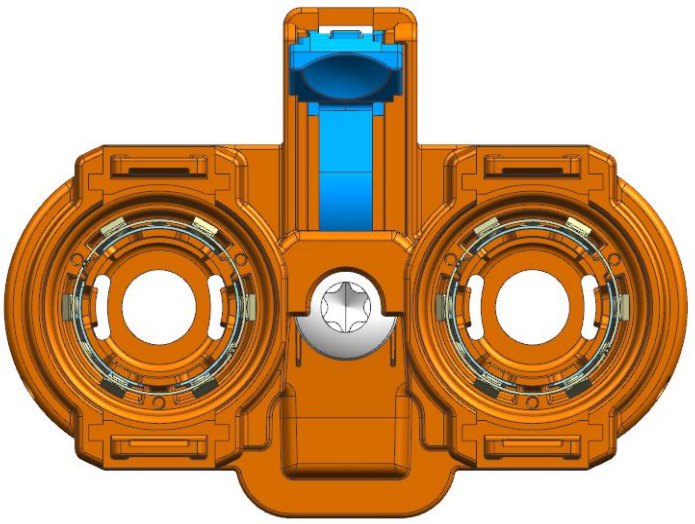
ASSEMBLY OF THE FEMALE CONNECTOR

PRE - ASSEMBLY HARNESS ASSEMBLY CAR ASSEMBLY

Power Connector 2W Direct Mate RCS800 Connection System



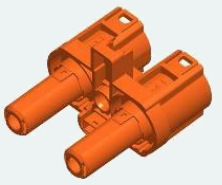
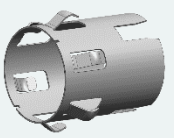
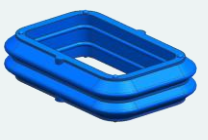
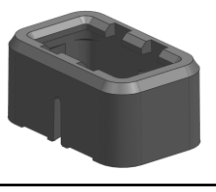
VIEW OF VERSIONS



Version
(35 & 50 mm²)

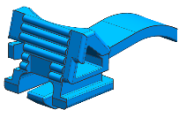
THIS CONNECTION SYSTEM HAS MULTIPLE CONFIGURATIONS, WHICH DIFFER IN THE INDEXING AND COLOR. THE METHOD OF ASSEMBLY IS THE SAME FOR ALL CONNECTORS REGARDLESS OF THEIR DIFFERENCES. REFER TO LATEST TAXI ASSEMBLY DRAWINGS FOR AVAILABLE KEYING OPTIONS AND DETAILS.

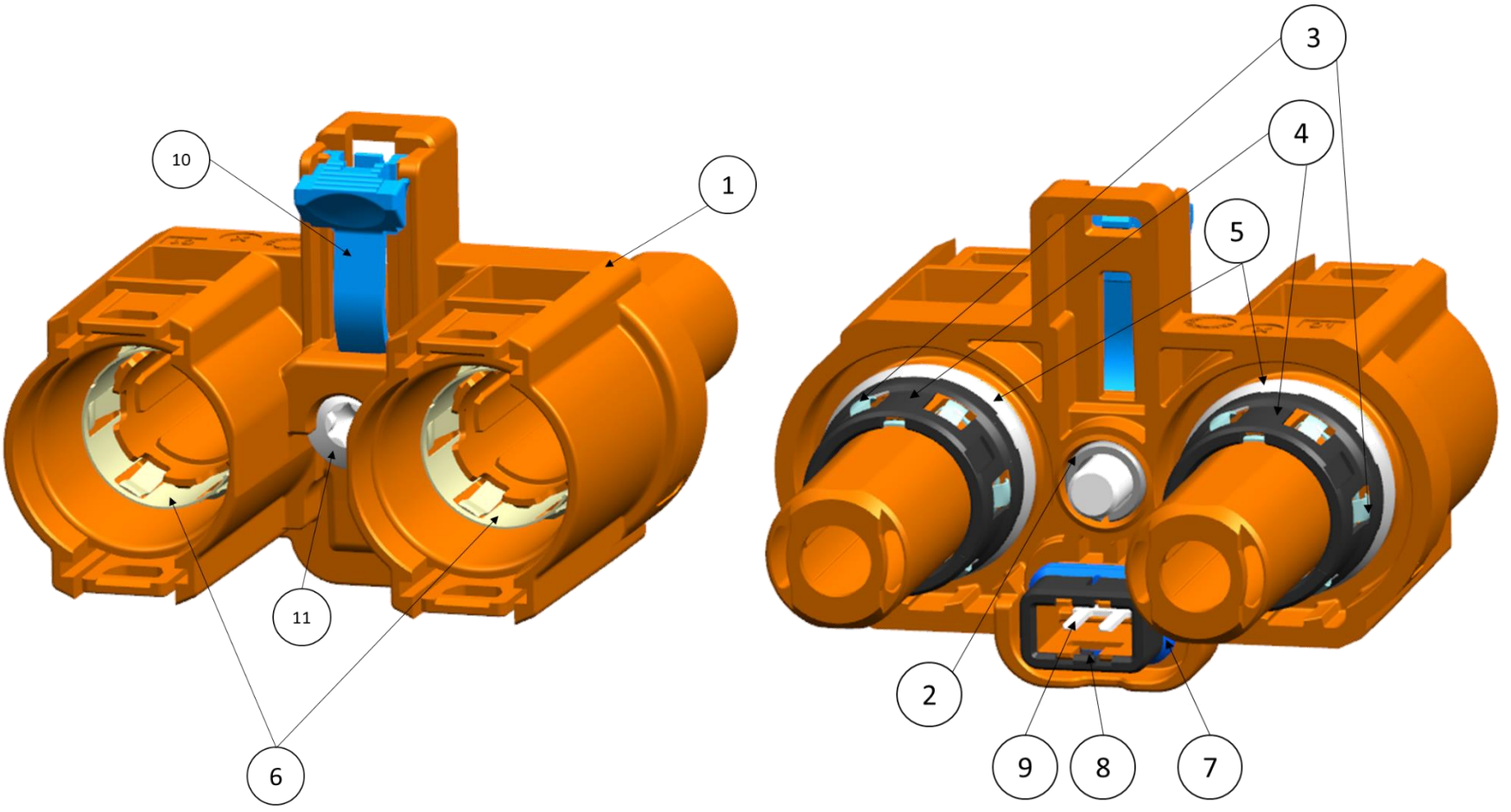
LIST OF COMPONENTS

SL.NO	QUANTITY	COMPONENTS	3D VIEWS	APTIV PART NUMBER
1	1	OUTER PLUG		35096671
2	1	METALLIC INSERT 8MM		33508801
3	2	INTERFACE SHIELD		35082110
4	2	PLASTIC CAP		35082111
5	2	UNIT SEAL		35082112
6	2	UPPER SHIELD		35099770
7	1	INTERLOCK SEAL		33501739
8	1	INTERLOCK CAP		35082113

Pictures used in this Assembly Manual and original parts may differ in some details. These differences have no influence on the assembly process.

LIST OF COMPONENTS

SL.NO	QUANTITY	COMPONENTS	3D VIEWS	APTIV PART NUMBER
9	1	SHORTING BAR		33296962
10	1	SPA (SCREW POSITION ASSURANCE)		35082103
11	1	SCREW M6X20 TORX 30		35158044



Pictures used in this Assembly Manual and original parts may differ in some details. These differences have no influence on the assembly process.

ASSOCIATED DOCUMENTS

CUSTOMER'S REQUEST	**-**
PRODUCT SPECIFICATION	**FE PS 20 017**
CUSTOMER DRAWING FOR THE FEMALE CONNECTOR	**APTIV: 35098460-CUS02**

STORAGE AND PACKAGING

PACKING IN ACCORDANCE WITH STANDARD: GALIA

IN SERIAL PRODUCTION, DELIVERIES ARE LINKED TO MINIMUM OF QUANTITIES – PACKAGING UNITS COULD BE MIXED ON PALLET.							
PRODUCTS	**PACKAGING**	**PACKAGING WEIGHT (KG)**	**QUANTITY OF PARTS / PACKAGING**	**PLASTIC BAG**	**QUANTITY OF TRAYS**	**TRAY WEIGHT (G)**	**PART WEIGHT (G)**
CONNECTOR 2W DM800	**CARDBOARD A13**	**0,42**	**24**	**NO**	**3**	**0,11**	**76,5**
RETAINER - SWS	**CARDBOARD A13**	**0,42**	**840**	**YES**	**0**	**0**	**7**
TUBE	**CARDBOARD A13**	**0,42**	**1500**	**YES**	**0**	**0**	**1,77**
FEMALE TERMINAL RCS800	**CARDBOARD A11**	**0,66**	**612**	**NO**	**3**	**0,3**	**16,2**
INNER FERRULE	**CARDBOARD 240*240*140**	**0,2**	**1000**	**YES**	**0**	**0**	**1,3**
OUTER FERRULE	**CARDBOARD 240*240*140**	**0,2**	**1000**	**YES**	**0**	**0**	**0,95**

STORAGE AND PACKAGING

IN SERIAL PRODUCTION, DELIVERIES ARE LINKED TO MINIMUM OF QUANTITIES – PACKAGING UNITS COULD BE MIXED ON PALLETS.							
PRODUCTS	PACKAGING NET WEIGHT (KG)	SHIPPED PACKAGING WEIGHT (KG)	SHIPPED PART WEIGHT (G)	PALLET (MM)	PALLET WEIGHT (KG)	NB OF PACKAGING ON PALLETS	TOTAL PALLET WEIGHT (KG)
CONNECTOR 2W DM800	1,836	2,5860	0,10775	800*1200*1100	10	8 * 5 LAYERS	113
RETAINER - SWS	5,88	6,3000	0,00750	800*1200*1100	10	8 * 5 LAYERS	262
TUBE	2,655	3,0750	0,00205	800*1200*1100	10	8 * 5 LAYERS	133
FEMALE TERMINAL RCS800	9,9144	11,4744	0,01875	800*1200*1100	10	8 * 5 LAYERS	469
INNER FERRULE	1,3	1,5000	0,00150	800*1200*1100	10	8 * 5 LAYERS	70
OUTER FERRULE	0,95	1,1500	0,00115	800*1200*1100	10	8 * 5 LAYERS	56

STORAGE OF CONNECTORS AND SWS RETAINER

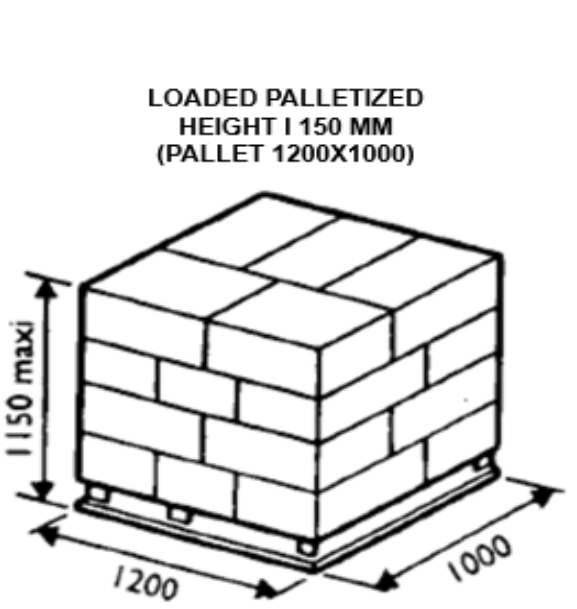
BEFORE ASSEMBLY

PRESERVING CONDITIONS	
STORAGE TIME	12 MONTHS MAX
STORAGE TEMPERATURE	-10°C TO +60°C
ATMOSPHERIC PRESSURE	860 HPA TO 1060 HPA
RELATIVE HUMIDITY*	FROM 45% TO 85% MAXIMUM*

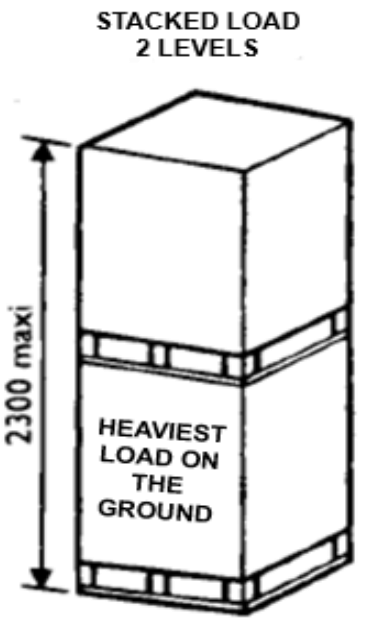
STORAGE OF CONNECTORS AND SWS RETAINER

STORE THE PACKAGING ON 5 POINTS PALLETS.

RESPECT THE DIRECTION UP AND DOWN OF THE BOXES.



MAXIMUM WEIGHT:
SEE BELOW
BY PACKAGING REFERENCE



TOTAL MAXIMUM WEIGHT
PALLET 5 RUNNERS: 1 TON
PALLET 3 RUNNERS: 600KG

STACKING CONDITION ON THE CARBOARD BOXES AND PALLETS MUST MEET THE STANDARD GALIA.

HANDLING OF BOX

HANDLING STEPS TO BE FOLLOWED

1. **ALWAYS OPEN CARDBOARD BOX TOP SIDE UP.**
2. **DO NOT THROW AWAY THE CARDBOARD BOXES.**
3. **DO NOT CRASH THE CARDBOARD BOXES.**
4. **DO NOT DETERIORATE THE CARDBOARD BOXES.**
5. **THE THERMAL PLASTIC TRAY USING ON ASSEMBLY WORK STATION IS MANDATORY**
6. **LOOSE FORBIDDEN**
7. **MAXIMUM STRAY STACKING NUMBER AT THE WORK STATION IS 4**

STACKING

STACKING STEPS TO BE FOLLOWED

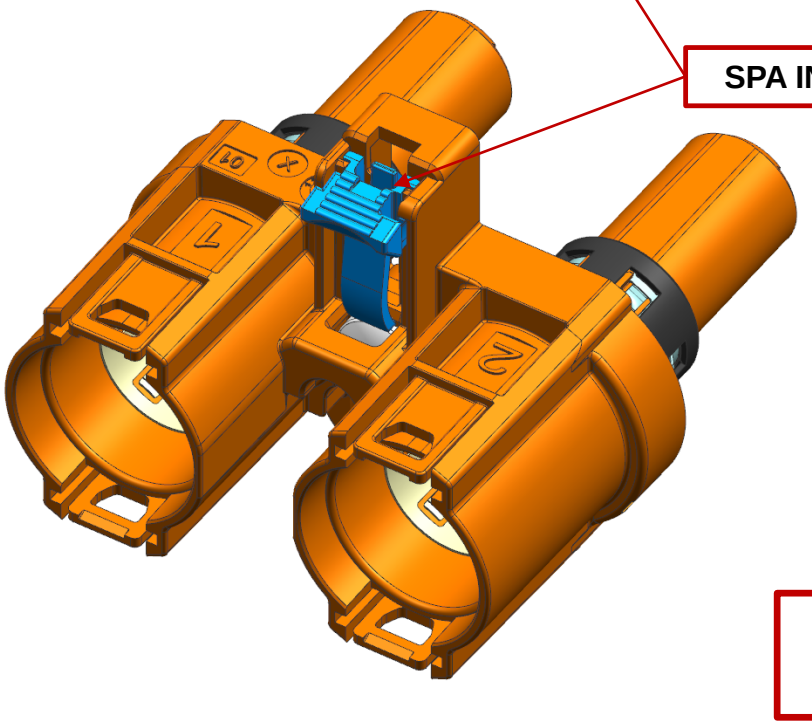
1. **RESPECT THE “UP AND DOWN” DIRECTIONS OF THE CARDBOARD BOX.**
2. **STORAGE ON PALLETS IN ORIGINAL PACKAGING.**
3. **STACKING CONDITION ON THE BOXES AND PALLET MUST MEET THE STANDARD GALIA.**
   FOR TERMINALS, STACKING, DON’T EXCEED 12 LAYERS OF CARDBOARD BOX WITH A MAXIMUM OF 6 LAYERS OF CARDBOARD BOX BY PALLET.
   FOR CONNECTORS, STACKING, DON’T EXCEED 10 LAYERS OF A13 CARDBOARD BOX WITH A MAXIMUM OF 5 LAYERS OF CARDBOARD BOX BY PALLET.
   HEAVIEST PALLET MUST BE LOCATED BELOW.

MAIN TECHNICAL CHARACTERISTICS

INSERTION FORCE OF AN RCS800 TERMINAL ALONE	**F < 40 N**
MATING BEFORE SCREWING	**F < 60 N**
RETENTION FORCE OF TERMINAL	**F > 100N**
RETENTION FORCE OF CONNECTOR	**F > 160N**
RESISTANCE TO MANOEUVRE TERMINAL	**4 INSERTIONS/ 3 EXTRACTIONS**
RESISTANCE TO MANOEUVRE CONNECTOR	**20**
SEALING CLASS	**E2A**
TEMPERATURE CLASS	**CLASSE T3 (-40°C ; +125°C)**
VIBRATION CLASS	**V1**
SCREWING TORQUE OF THE CONNECTOR	**8 NM ± 15%**
CABLE RETENTION STRENGTH	**160 N**

DELIVERY STATE

DELIVERY STATE OF FEMALE CONNECTOR



ASSEMBLY OF FEMALE CONNECTOR COMPLETED

WIRING OF CONNECTORS

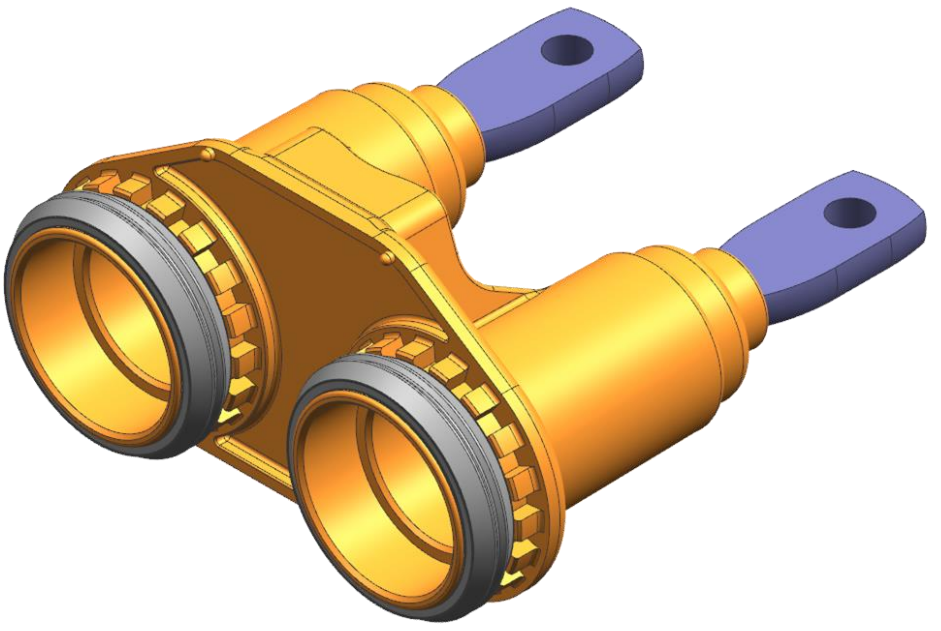
IMPORTANT NOTES :PARTICULAR RECOMMENDATIONS BEFORE USING

- WARNING : **ELECTRICAL HABILITATION COMPULSORY BEFORE HANDLING UNDER POWER**
- **IN CASE OF USING A SPECIFIC LATCHING DEVICE DURING TERMINALS INSERTION OPERATION INSIDE CONNECTOR WE RECOMMEND TO DO AS INDICATED ON THE CHAPTER AUTHORIZED SUPPORT AREA.**
- **DO NOT TRY TO DISMANTLE SEVERAL PART FROM CONNECTOR: THESE ONE CANNOT BE DISMANTLED.**
- **DO NOT TOUCH, DAMAGE, MARKED THE SHIELD ACTIVE AREA.**
- **IN CASE OF BREAKAGE OF A COMPONENT OF THE CONNECTOR: TO REJECT THE COMPLETE CONNECTOR.**
- **IN CASE OF FALL OR SHOCKS OF THE CONNECTOR IT IS PREFERABLE TO REJECT COMPLETELY THE CONNECTOR**
- **IF THE CONTACTS ARE REMOVED, DO NOT TRY TO EXTRACT THE CONTACTS IN ANY WAY OTHER THAN THAT RECOMMENDED IN THIS MANUAL: RISK OF BREAKAGE OR MALFUNCTION.**
- **TO CHECK BEFORE ASSEMBLY THE ADDRESSING OF WAYS NUMBER FROM CONNECTOR.**
- **TO CHECK THE POLARISATION OF THE TERMINALS BEFORE THEIR INSERTION: DO NOT FORCE ON THE TERMINAL IN CASE OF DIFFICULTY OF INSERTION**
- **DO NOT INTRODUCE A PARTICULAR SHAPE INSIDE THE GAP OF ACTIVE LANCE FROM FEMALE TERMINAL.**
- **DURING HANDLING OF THE HARNESS EQUIPPED: DO NOT PROJECT AND SHOCK THE CONNECTOR**
- **ONCE THE CONNECTOR IS MATED THE WIRES SHOULD NOT BE TENSED AND THE CURVE RADIUS MUST BE RESPECTED.**
- **THE THERMAL PLASTIC TRAY USING ON ASSEMBLY WORK STATION IS MANDATORY.**
- **LOOSE PARTS ARE FORBIDDEN.**
- **MAXIMUM STRAY STACKING NUMBER ON WORK STATION IS 4.**

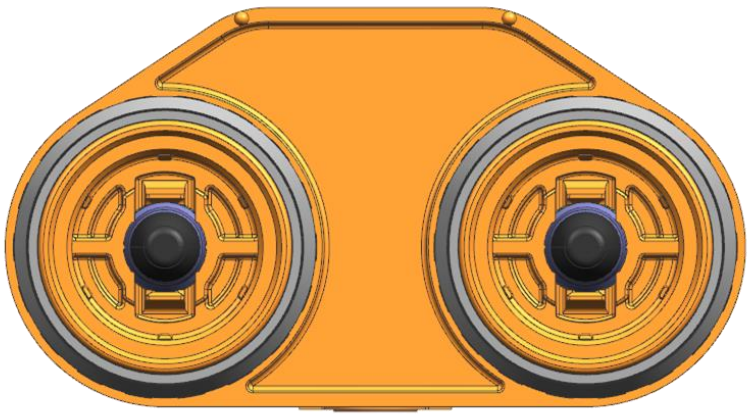
ASSEMBLY OF THE HEADER ASSEMBLY

PRE - ASSEMBLY HARNESS ASSEMBLY CAR ASSEMBLY

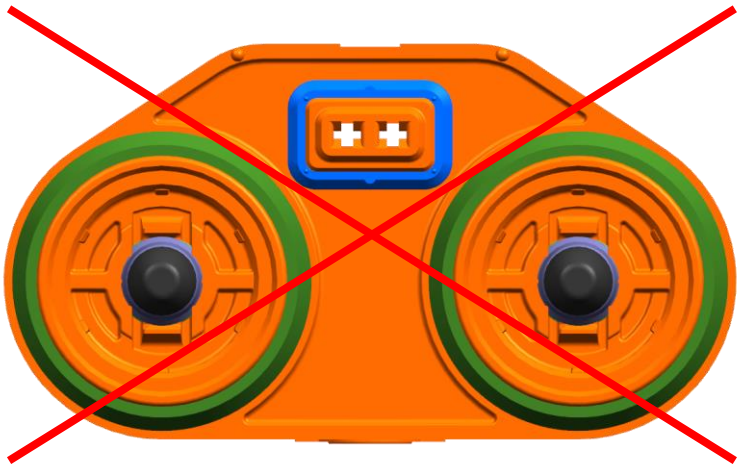
Power Connector 2W Direct Mate RCS800 Connection System



VIEW OF VERSIONS



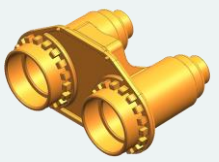
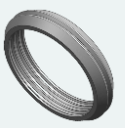
Without Interlock

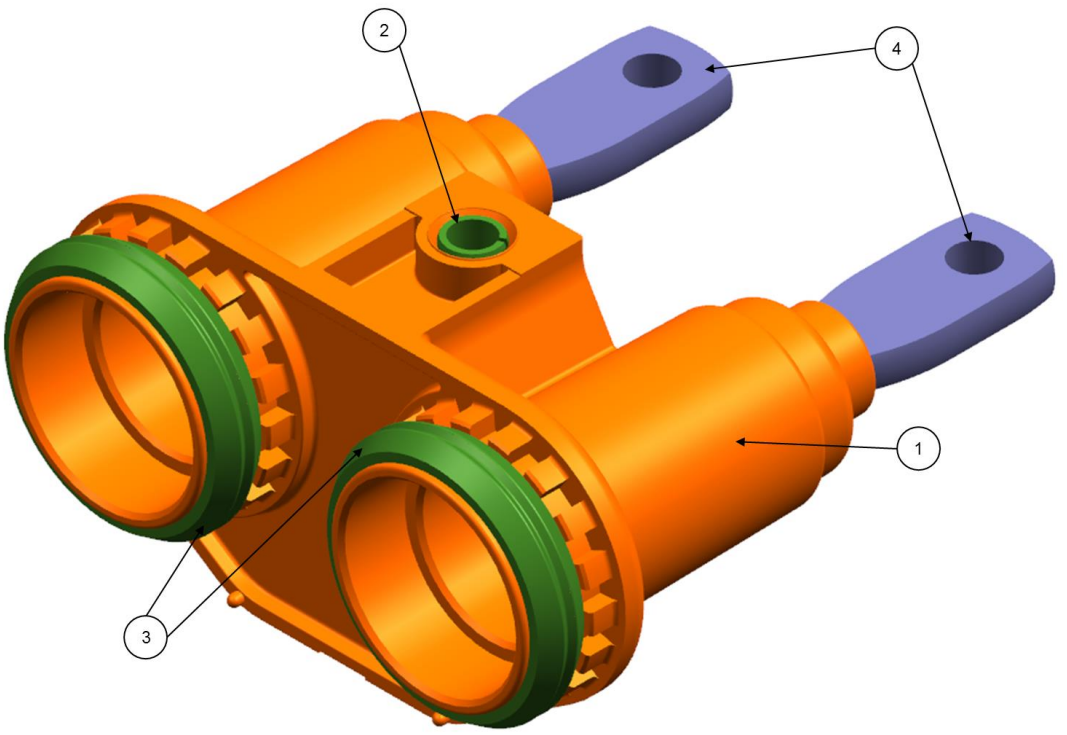


With Interlock (Upon Request)

THIS CONNECTION SYSTEM HAS MULTIPLE CONFIGURATIONS, WHICH DIFFER IN THE INDEXING AND COLOR. THE METHOD OF ASSEMBLY IS THE SAME FOR ALL CONNECTORS REGARDLESS OF THEIR DIFFERENCES. REFER TO LATEST TAXI ASSEMBLY DRAWINGS FOR AVAILABLE KEYING OPTIONS AND DETAILS.

LIST OF COMPONENTS

SL. NO	QUANTITY	COMPONENTS	3D VIEWS	APTIV PART NUMBER
1	1	OUTER HEADER		35096776
2	1	METALLIC INSERT 6MM		35163123
3	2	UNIT SEAL		35099765
4	2	PIN RSC 800 2W		35099782



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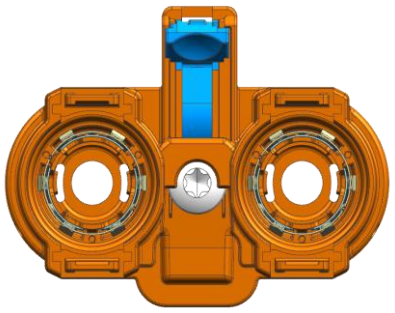
ASSOCIATED PRODUCTS

FEMALE CONNECTOR

VIEW	DESCRIPTION	APTIV PART NUMBER	CUSTOMER DRAWING
	FEMALE CONNECTOR RCS800 2W	35098453	APTIV : 35098460-CUS02

ASSOCIATED DOCUMENTS

HEADER 2W 800

CUSTOMER'S REQUEST	-
PRODUCT SPECIFICATION	FE PS 20 017
HEADER DRAWINGS	APTIV : 35099881-CUS02
INTERFACE'S DRAWING	APTIV: 35102116-CUS03

STORAGE AND PACKAGING

PACKAGING

PRODUCT	PACKAGING	TOTAL PARTS PER BOX	TOTAL WEIGHT
HEADER 800 2W	CARTON SIZE : 580*355*295MM 12 BOXES ON ONE PALLET 4 TRAY PART IN EACH carton BOX 18 PARTS IN EACH TRAY	72	ESTIMATION 6 KG

STORAGE AND PACKAGING

HANDLING

- ALWAYS OPEN CARDBOARD BOX TOP SIDE UP.
- DO NOT THROW AWAY THE CARDBOARD BOXES.
- DO NOT CRASH THE CARDBOARD BOXES.
- DO NOT DETERIORATE THE CARDBOARD BOXES.

MAIN TECHNICAL CHARACTERISTICS

APPLICABLE FOR HEADER 800 2W

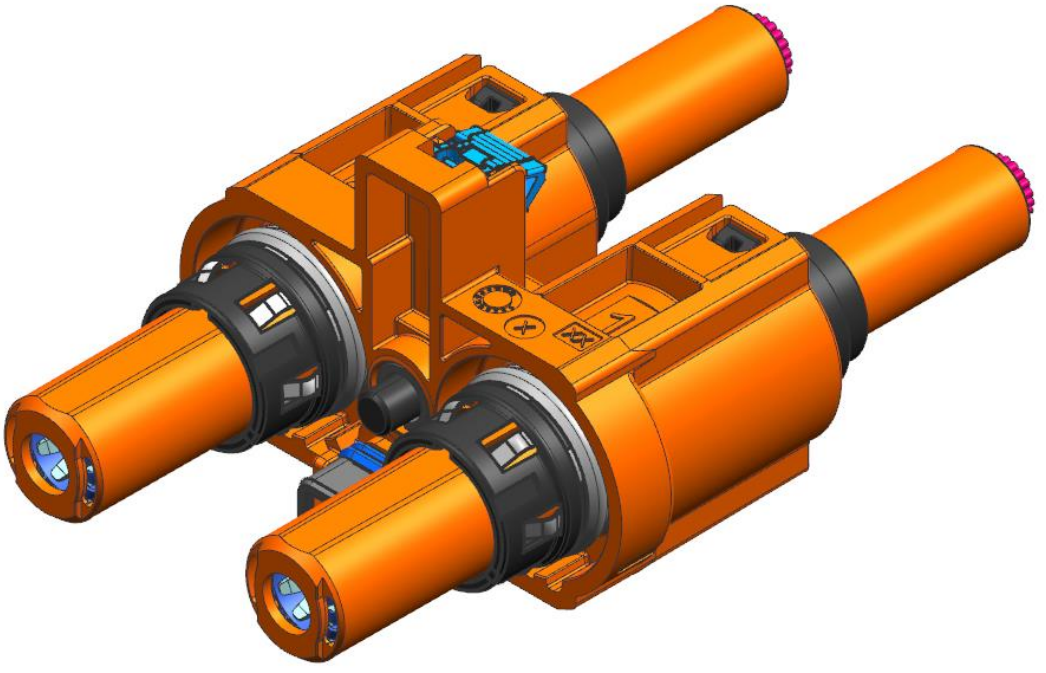
NUMBER OF HEADER MANEUVERS	20
SEALING CLASS	E2A ± 0.5 BARS
TEMPERATURE CLASS	CLASSE T3 (-40°C ; +125°C)
VIBRATION CLASS	V1
SCREWING TORQUE OF THE CONNECTOR	8 N.M ± 10%
INTERNATIONAL PROTECTION FOR FINGER PROTECTION	IP2XB

ASSEMBLY OF HEADER COMPLETED

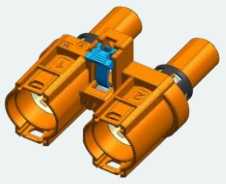
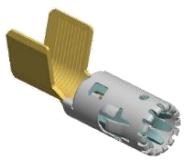
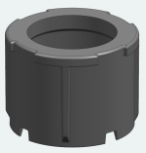
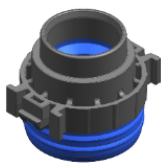
ASSEMBLY OF THE FEMALE CONNECTOR

PRE - ASSEMBLY | **HARNESS ASSEMBLY** | CAR ASSEMBLY

Power Connector 2W Direct Mate RCS800 Connection System

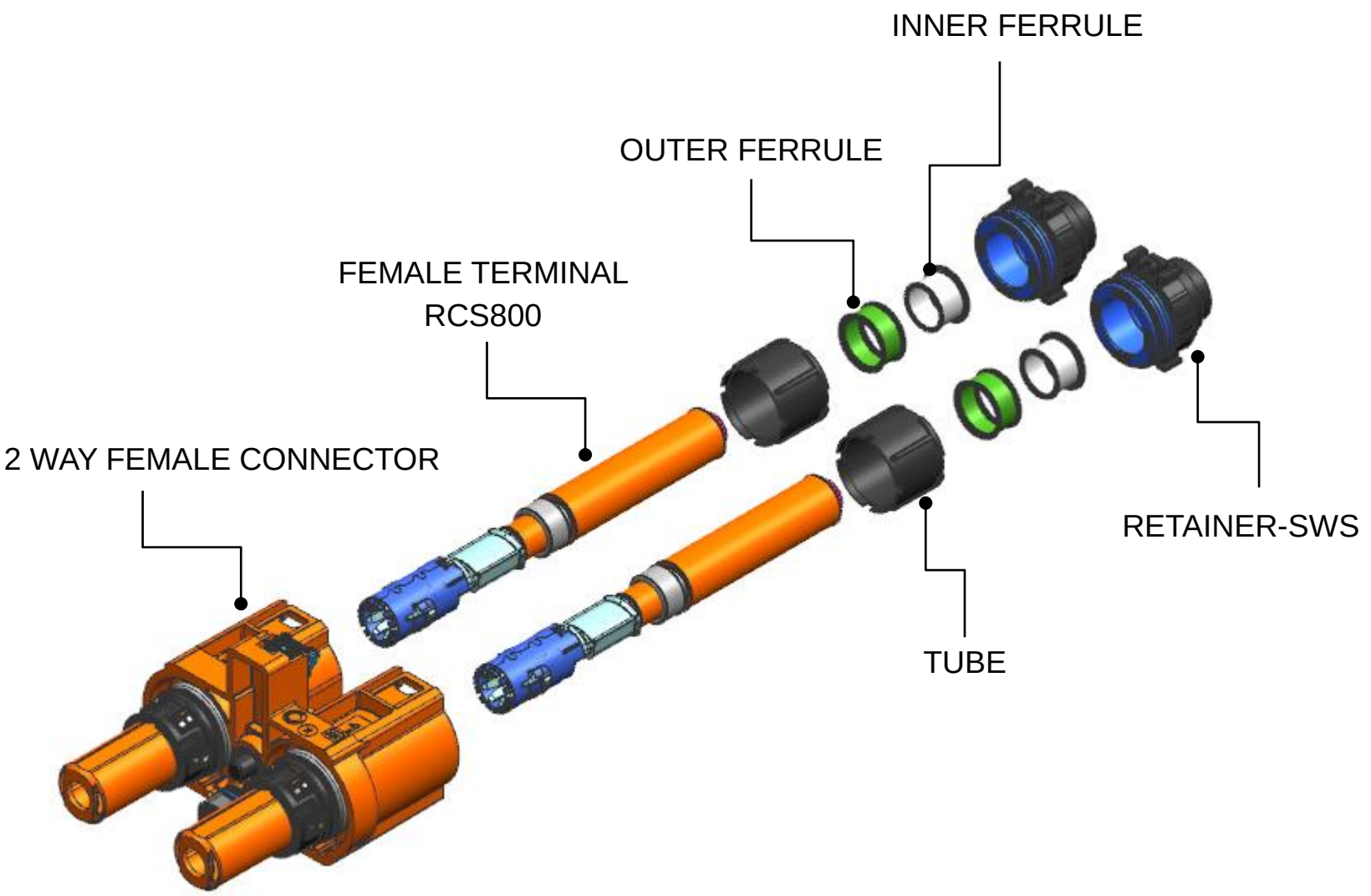


LIST OF COMPONENTS & EXPLODED VIEW

QUANTITY	COMPONENTS	3D VIEW	APTIV PART NUMBER	WIRES SECTION	APTIV DRAWING NUMBER
1	2 WAY FEMALE CONNECTOR		35098453	35 & 50 mm²	35099881-CUS02
2	FEMALE TERMINAL RCS800		13893887	35 mm² to 50 mm²	33518883-CUS03
2	TUBE		35092416	35 & 50 mm²	35097408-CUS03
2	RETAINER-SWS		35099247	35 mm²	35093966-CUS03
			35099248 (UPON REQUEST)	50 mm²	
2	INNER FERRULE		35082410	35 & 50 mm²	35082413-CUS02
2	OUTER FERRULE		35082415	35 & 50 mm²	35082414-CUS02

***ADDITIONAL INFORMATION AND REFERENCE TO ANOTHER DRAWINGS, DOCUMENTS, ETC. FOR EXAMPLE: REFER TO LATEST DRAWINGS FOR PART NUMBERS AND DETAILS**

LIST OF COMPONENTS & EXPLODED VIEW



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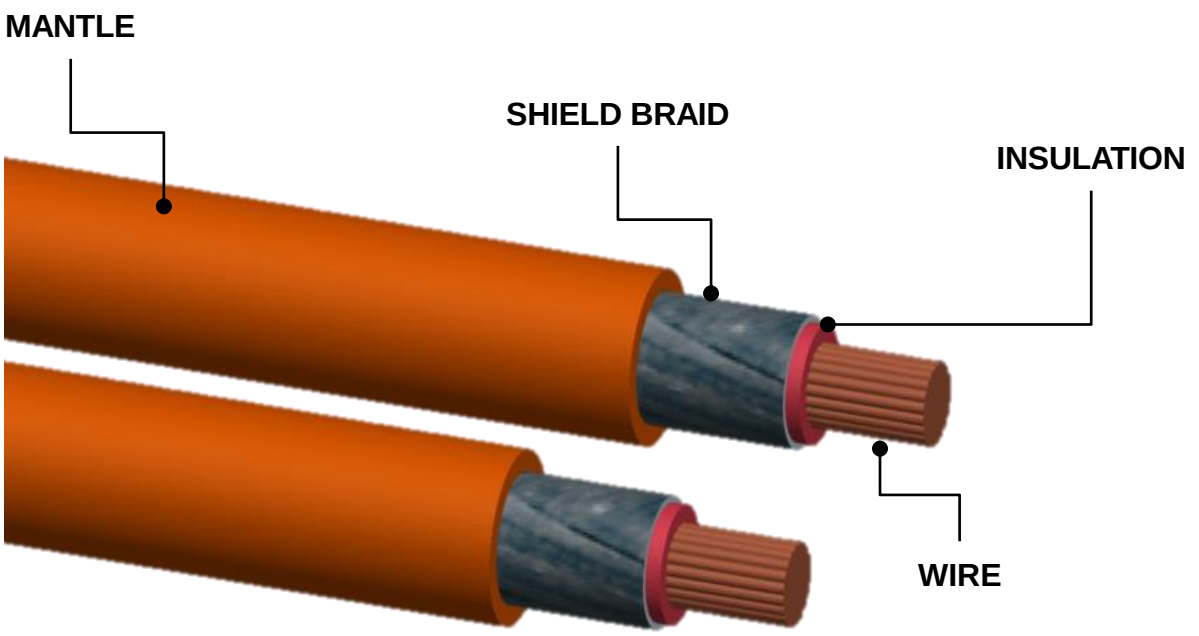
CABLE PRESENTATION

USE OF AN UNITARY SHIELDED CABLE



DETAIL VIEW

COPPER WIRE:

FOLLOWING WIRES CAN BE USED :

- **COFICAB WIRE COPPER 35 mm² PART-NO: FHLR91XCB91X CABLE**
- **SILITHERM WIRE COPPER 35 mm² PART-NO: FHLR2GCB2G 00009**

ALUMINUM WIRE:

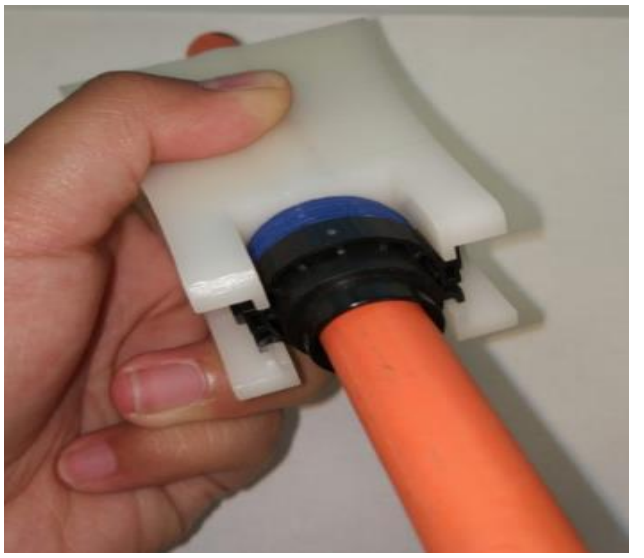
VALIDATED FOR COFICAB ALUMINUM 50 mm² PART-NO : FHLALR91XCB91X CABLE

CONSULT APTIV IF USE IS CONSIDERED.

Step 1 – Assembly of SWS-Retainer

1 **INSERT RETAINER-SWS WITH THE INSERTION TOOL. THE CABLE SHALL BE STRAIGHT TO HAVE AN EASY INSERTION.**

CUT THE CABLE AT THE LENGTH



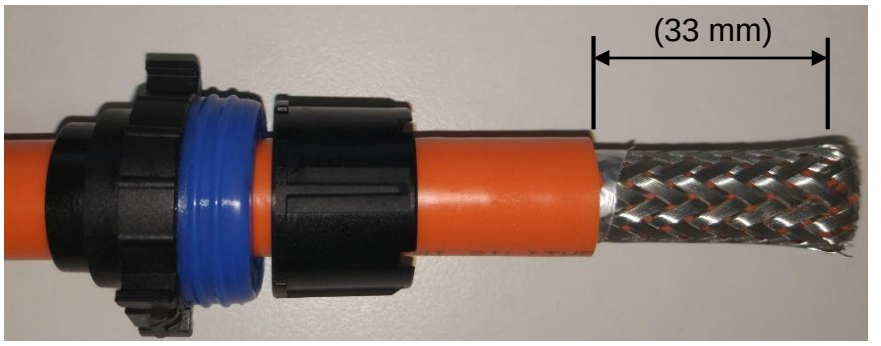
REAR SEALING DEVICE INSTALLED

STEP 2 – Insert Tube

2 **INSERT THE TUBE SO THE TUBE'S RING TOUCHES THE SWS.**

Step 3a – Assembly of Inner Ferrule

3 **STRIP THE MANTLE.**

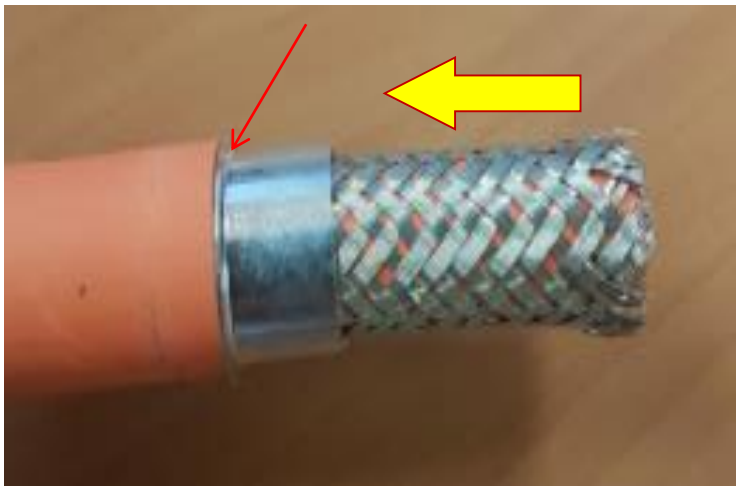


WARNING: DO NOT CUT OR DAMAGE OR MAKE A GASH INSULATION AND BRAID

REMARK : THE MANTLE CAN BE PRE-CUT BEFORE PUTTING RETAINER SWS. BUT IT HAS TO BE REMOVED AFTER INSERTING THE SEAL SO THE BRAID DOES NOT DAMAGED THE SWS.

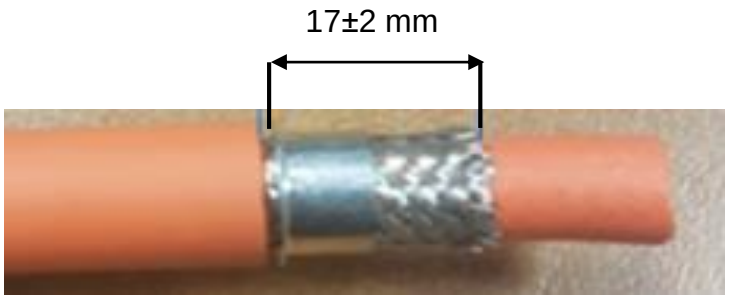
STEP 3b – Assembly of Inner Ferrule

4 **PUT THE INNER FERRULE OVER THE BRAID UNTIL IT TOUCHES THE MANTLE.**



Step 4a – Cable Preparation

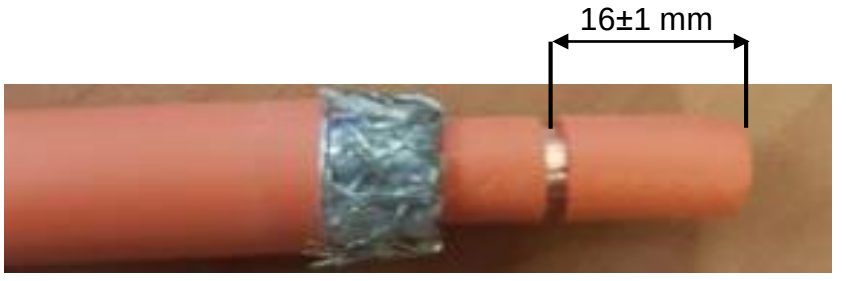
5 **CUT OUT THE BRAID.**



REMARK : STEP 4a CAN BE SIMULTANEOUSLY DONE WITH STEP 3a IF THE STRIP/CUTTING DEVICE CAN DO IT.

STEP 4b – Cable Preparation

6 **PRE STRIP THE INSULATION.**



STEP 4c – Cable Preparation

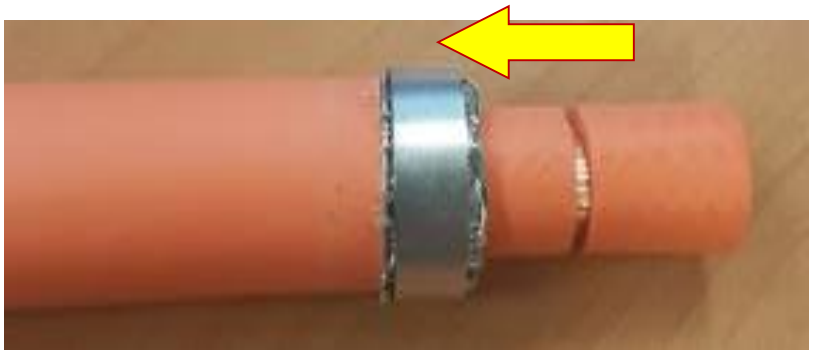
7

FOIL THE BRAID ABOVE THE INNER FERRULE. THE FERRULE SHALL BE ENTIRELY COVERED BY THE BRAID, WITHOUT ANY BRAID WIRE OVER THE MANTLE.

STEP 5 – Assembly of Outer Ferrule

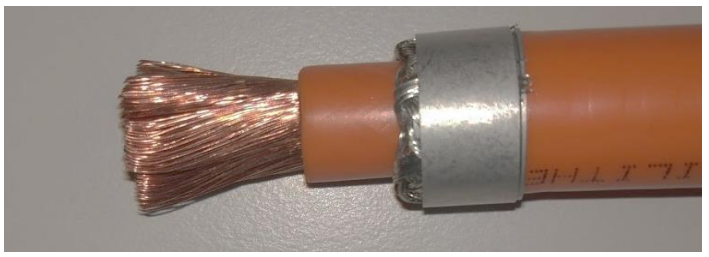
8

PUT THE OUTER FERRULE ABOVE THE INNER FERRULE.



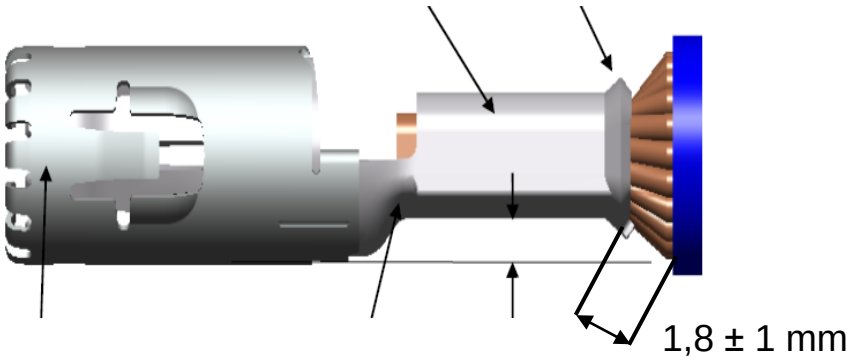
Step 6 – Remove The Insulation

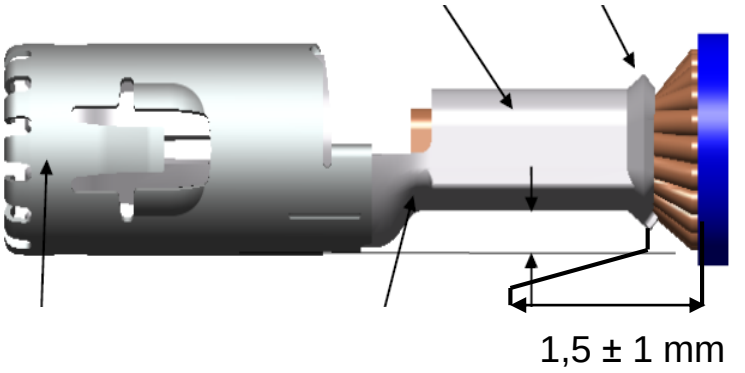
9 **REMOVE THE INSULATION.**



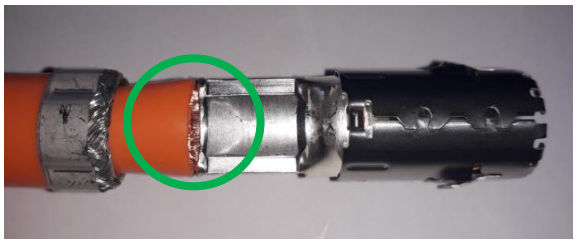
Step 7 – Crimping Female Terminal

10 **CRIMP THE RCS800 TERMINAL FOLLOW THE CRIMPING SPEC FE CS 17 005.**

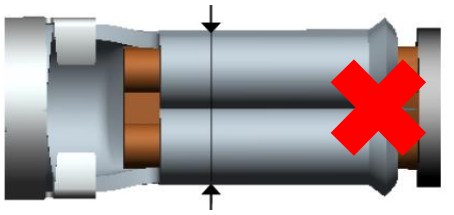




MEASUREMENT TO BE DONE ON THIS SIDE



NOT MEASURED ON THIS SIDE



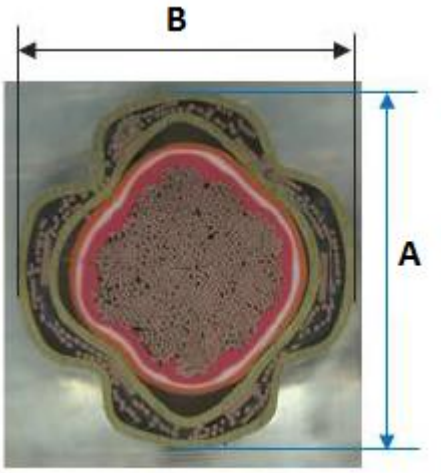
Step 8a – Crimp the Ferrule

11 **POSITION THE INNER FERRULE SO THAT IT IS IN CONTACT WITH THE MANTLE. PUT THE OUTER FERRULE ABOVE THE INNER FERRULE UNTIL CONTACT WITH THE LATTER. DO NOT OVERSTRESS THE MANTLE DURING THIS STEP.**

Step 8b – Crimp the Ferrule

12 **CRIMP THE FERRULE BY ENSURING DIMENSIONS**

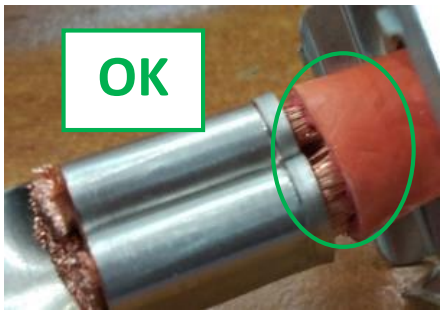
A=15.7 ± 0.1mm and B=15.5 ± 0.1 mm



Ferrule holding F > 30 N

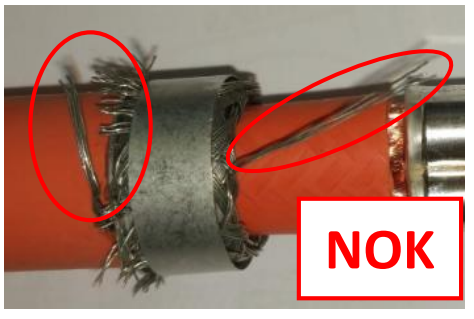
DEFECTS NOT ALLOWED

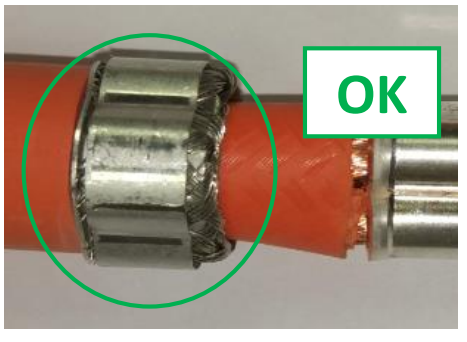
DO NOT CUT OR DAMAGE THE INSULATION



VISUAL CHECK NEEDED

DON'T HAVE ANY BRAID WIRE OUTSIDE OF OUTER FERRULE



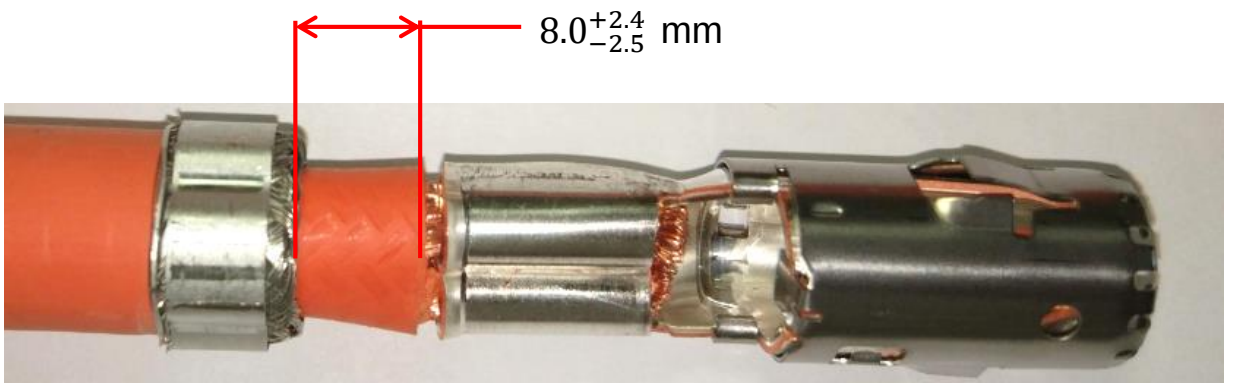


(*) IF THERE IS ANY BRAID OR WIRE STRAND OUTSIDE, IT MUST BE CUT

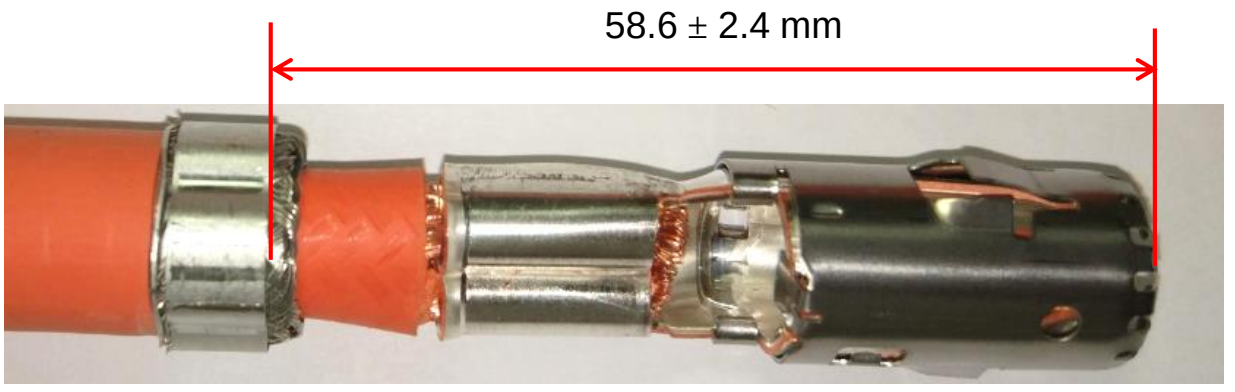
DIMENSIONS TO BE RESPECTED

FOLLOWING DIMENSIONS SHALL BE RESPECTED

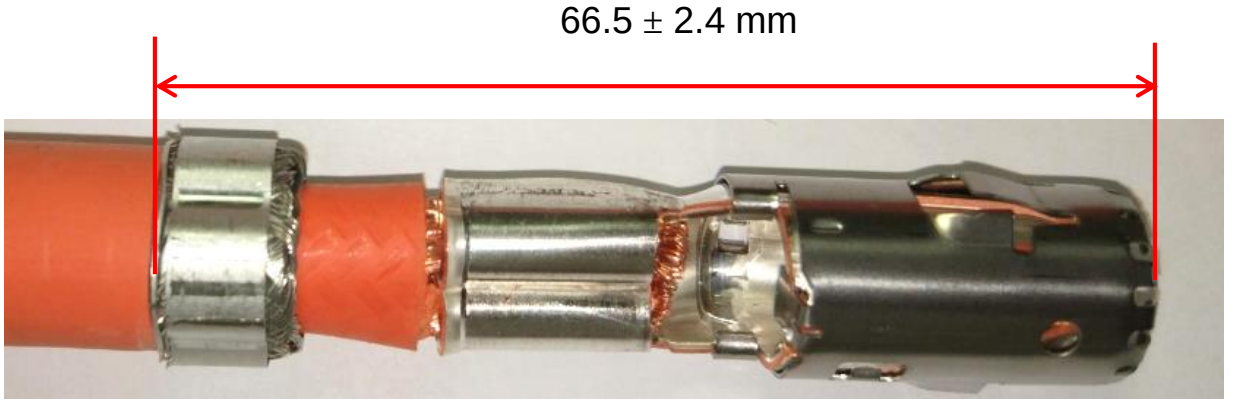
SECURITY CREEPAGE DISTANCE BETWEEN THE BRAID AND THE END OF THE INTERIOR INSULATOR.



DIMENSION FOR SHIELDING CONTINUITY BETWEEN FERRULE AND CONNECTOR, MEASURED BETWEEN THE END OF THE OUTER FERRULE AND THE END OF THE TERMINAL.

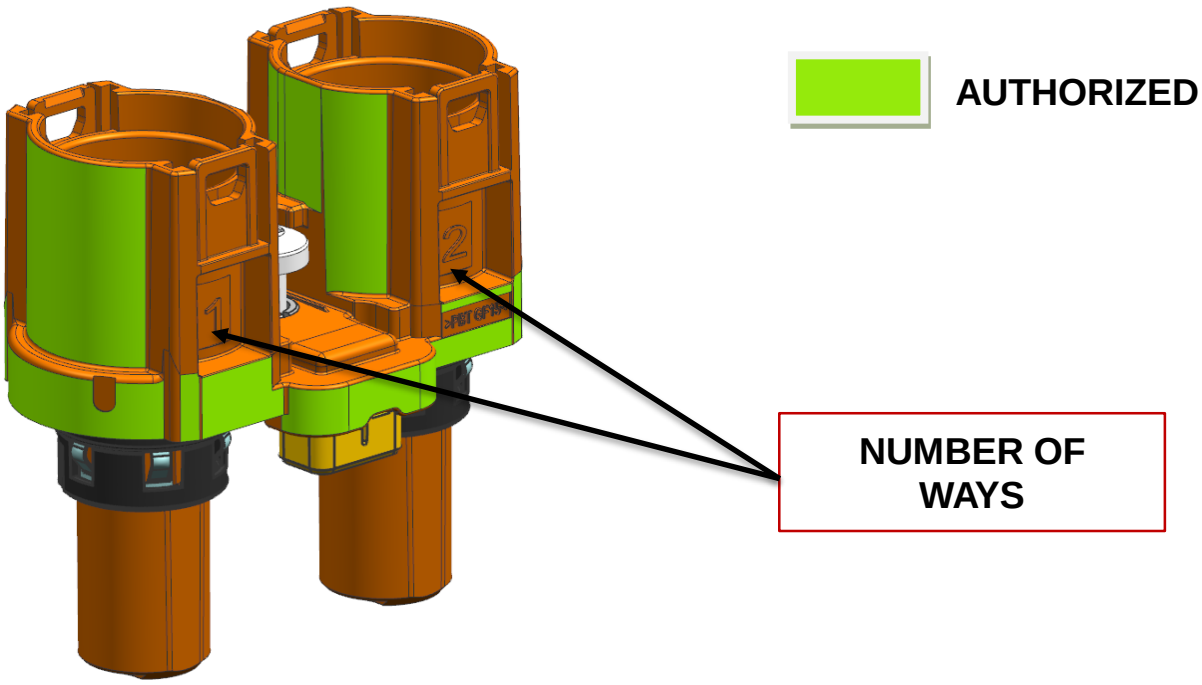


DIMENSION FOR SEALING BETWEEN WIRE AND CONNECTOR, MEASURED BETWEEN THE END OF THE MANTLE AND THE END OF THE TERMINAL.



Step 9a - Insertion of the Female Terminals

1 **CHECK THE WAY'S NUMBER**

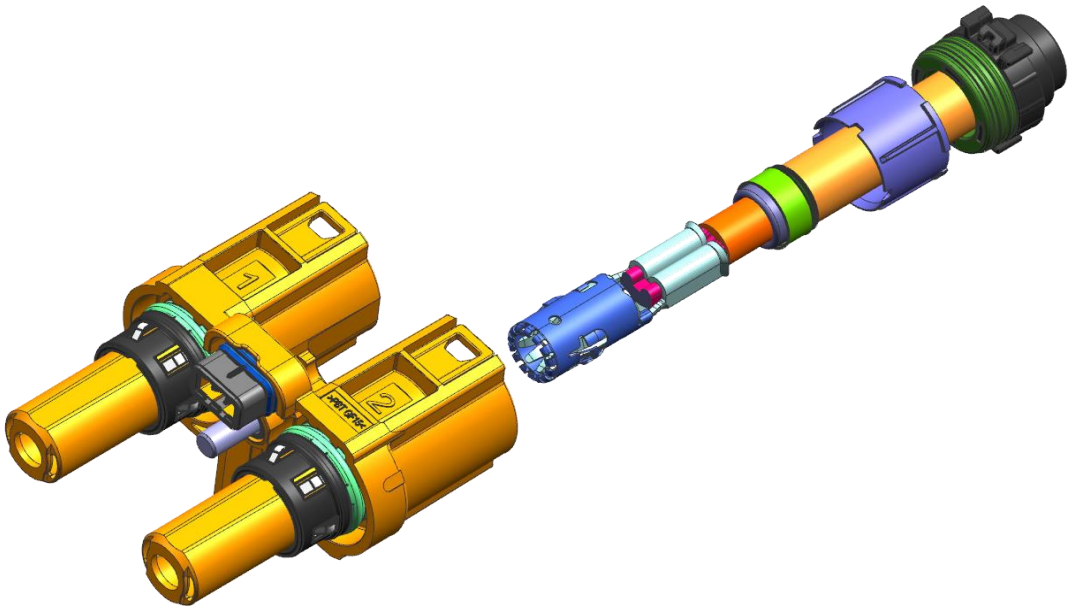


AUTHORIZED SUPPORT AREAS

STEP 9b – Insertion of the Female Terminals

2 **POSITION THE CRIMPED FEMALE TERMINAL , IN ACCORDANCE WITH THE SPECIFICATION, IN THE GOOD ORIENTATION AT THE BACK OF THE CONNECTOR. THERE IS A POLARIZATION, DO NOT FORCE ON THE TERMINAL IN CASE OF BLOCKING POINT.**

- PROPER ORIENTATION OF TERMINAL REQUIRED -

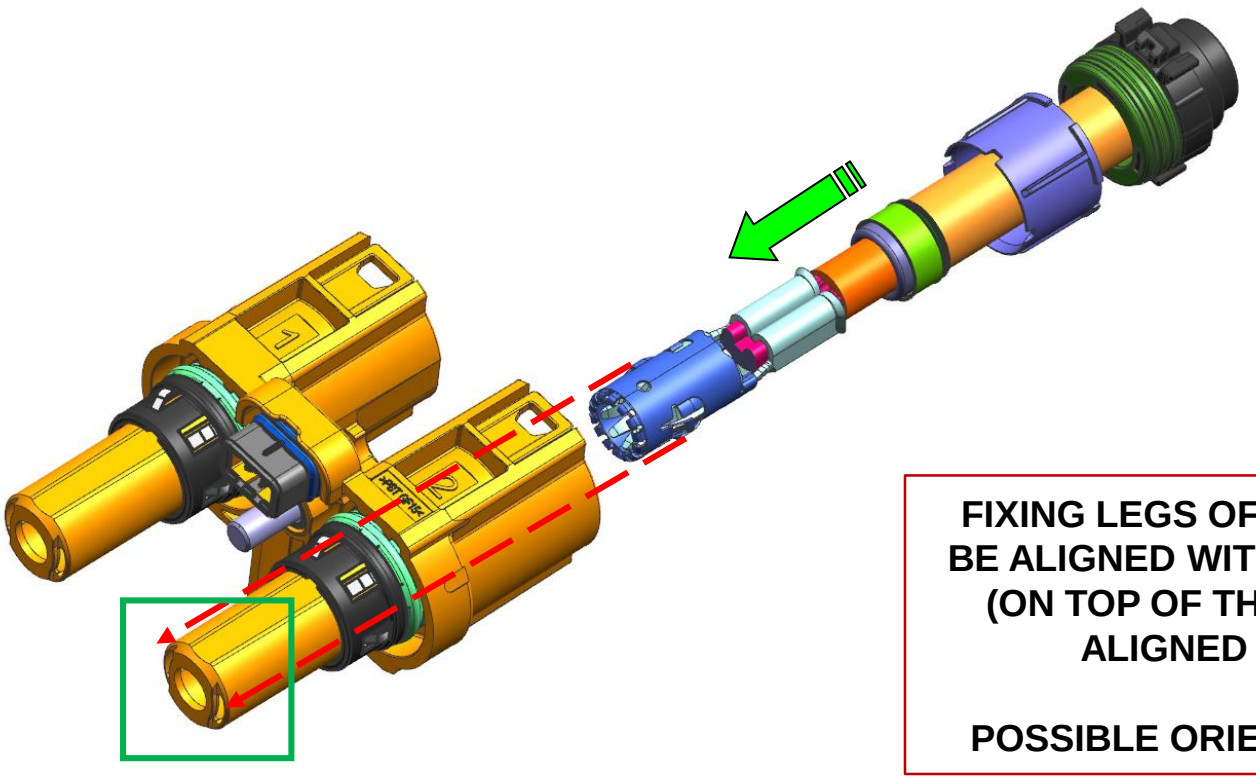


THE CABLES SHOULD NOT BE TENSED AND THE BENDING RADIUS MUST BE RESPECTED. THE WIRES SHALL BE ALIGNED WITH THE CONNECTOR BEFORE RETAINER-SWS CLOSURE.

Step 9c - Insertion of the Female Terminals

3

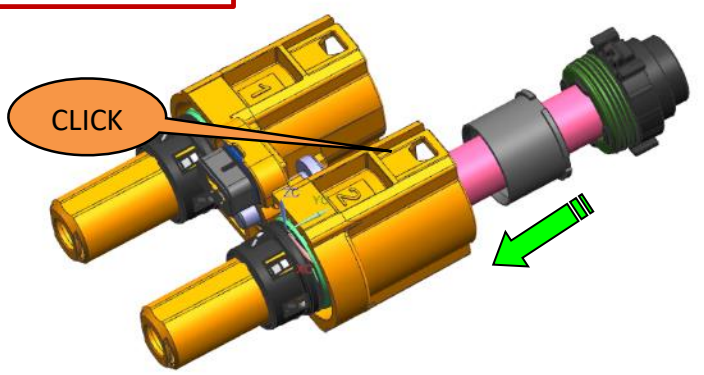
INSERT THE FEMALE TERMINAL INSIDE THE CAVITY UNTIL IT IS SNAPPED-IN OR MOVE THE CONNECTOR TOWARDS THE TERMINAL UNTIL IT IS SNAPPED-IN. DO NOT FORCE ON THE CONTACT IN CASE OF INSERTION DIFFICULTY.



FIXING LEGS OF THE TERMINAL MUST BE ALIGNED WITH THE PLASTIC HOLES (ON TOP OF THE CHIMNEYS); WIRE ALIGNED WITH CHIMNEY.

POSSIBLE ORIENTATION : 0° OR 180 °

VERIFY AUDIBLE CLICK

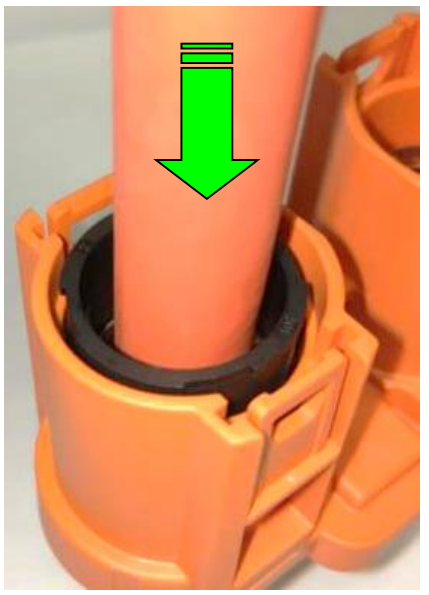


TERMINAL + SHIELDING INSERTION FORCE: 40 N	**TERMINALS RE-WORKING CYCLES**	**4 MAXI = 4 INSERTIONS / 3 EXTRACTIONS**

IMPORTANT : CHECK BY A SMALL PULL, THE GOOD CLICK AND LOCK OF THE FEMALE TERMINAL.

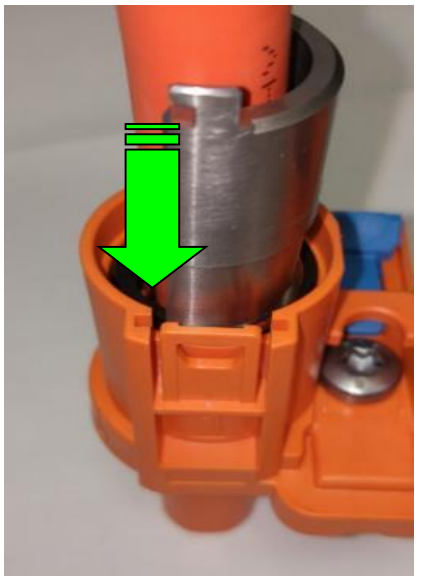
Step 10a – Insertion of Tube Retainer-SWS

4 **PRE–INSERT THE TUBE INSIDE THE PLUG.**



Step 10b – Insertion of Tube Retainer-SWS

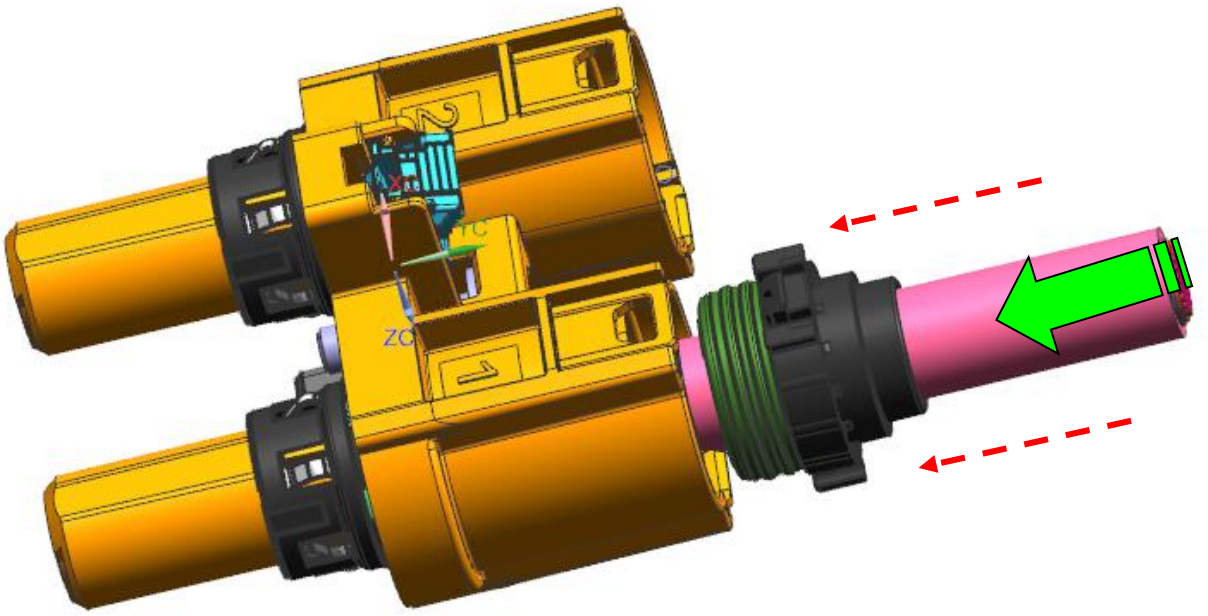
5 **PUSH ON THE TUBE WITH THE TUBE MOUNTING TOOL UNTIL THE MECHANICAL STOP.**
INSERTION FORCE OF TUBE: F < 50 N



WARNING: THE CABLES SHOULD BE ALIGNED WITH THE FEMALE CONNECTOR DURING CLIPPING OF RETAINER-SWS.

Step 10c – Insertion of Tube Retainer-SWS

6 **PUSH ON THE RETAINER-SWS UNTIL ITS CLICK AND LOCK.**



VISUAL CHECK OF RETAINER-SWS & CABLE

SWS CAN NOT BE VISIBLE

CABLE SHOULD BE STRAIGHT

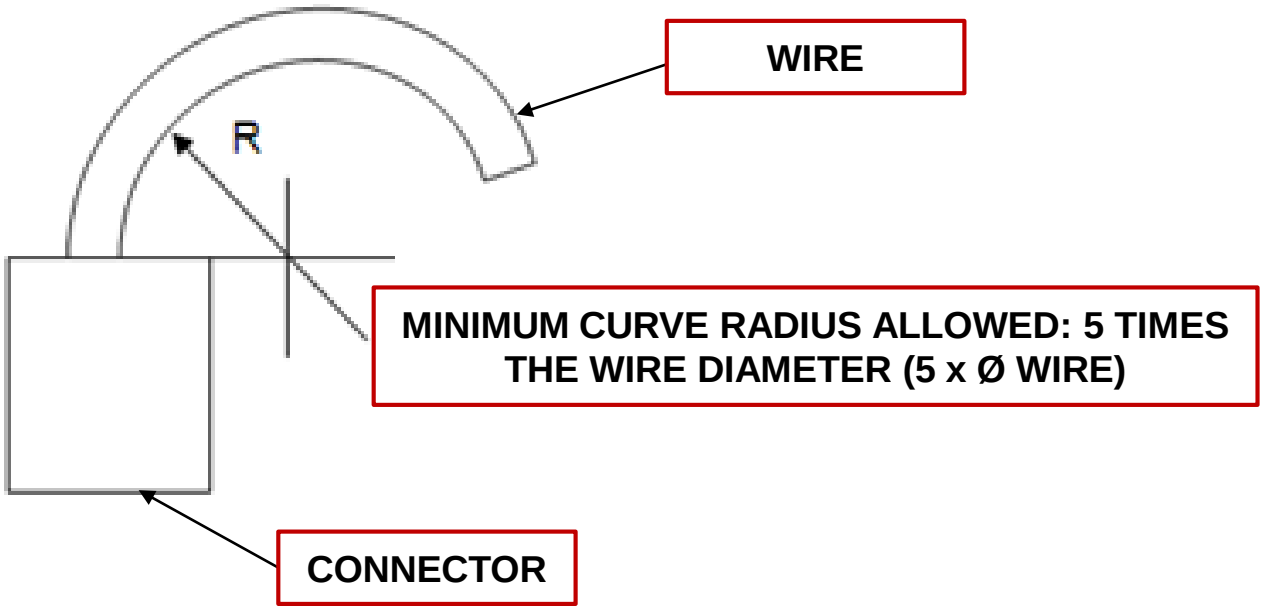
VISUAL CHECK NEEDED

Step 11 – Plug Insertion

INFORMATION :
NO PLUG FOR PLUG GP RCS800 2 WAYS

WIRE BENDING RADIUS

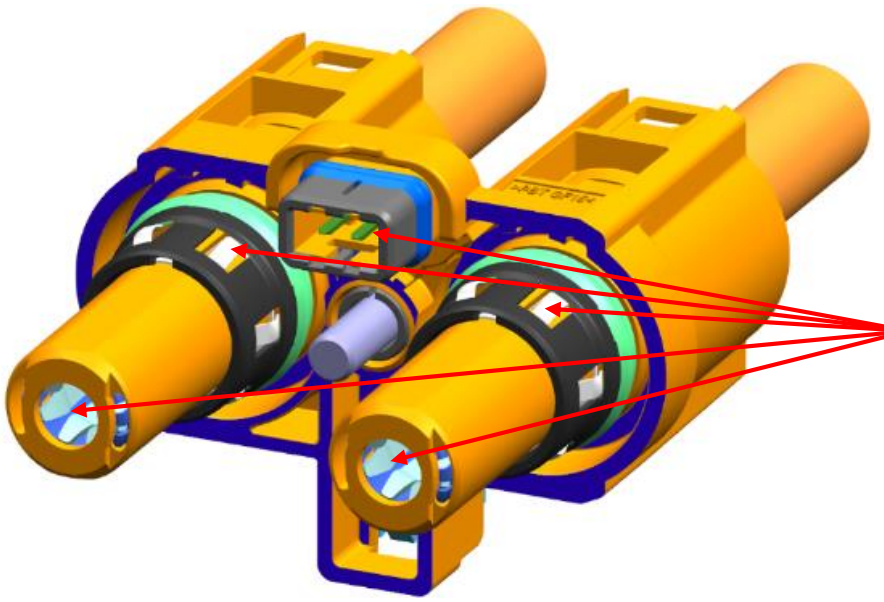
THE WIRES SHOULD NOT BE TENSED AND THE BENDING RADIUS MUST BE RESPECTED.



AUTHORIZED SUPPORT AREA

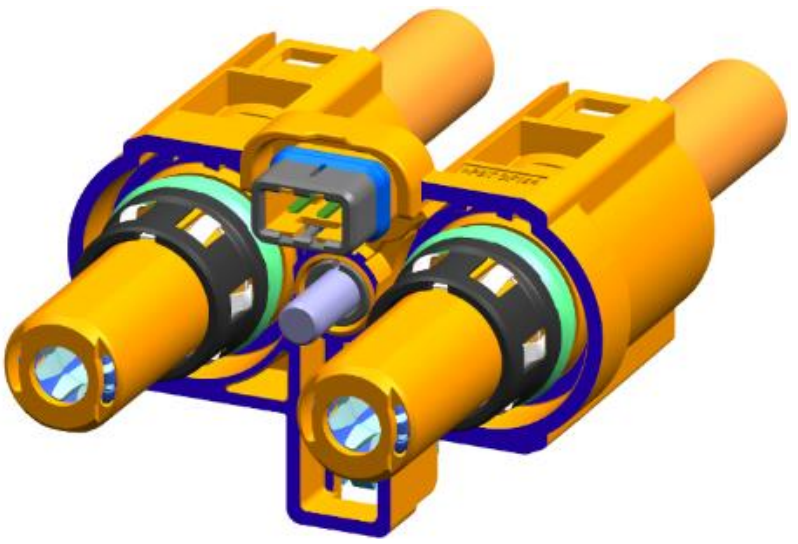
AUTHORIZED SUPPORT AERAS

WARNING : THE SEALS CONTRIBUTE TO A SEALING FUNCTION. DO NOT TOUCH IT.



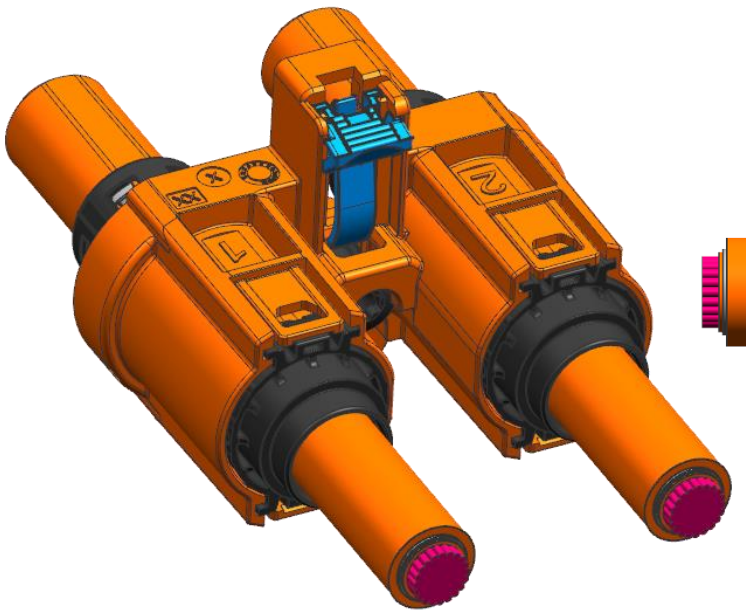
WARNING: DO NOT TOUCH AND DAMAGE THE SHIELD ACTIVE AREA, SHUNT AND SEALS.

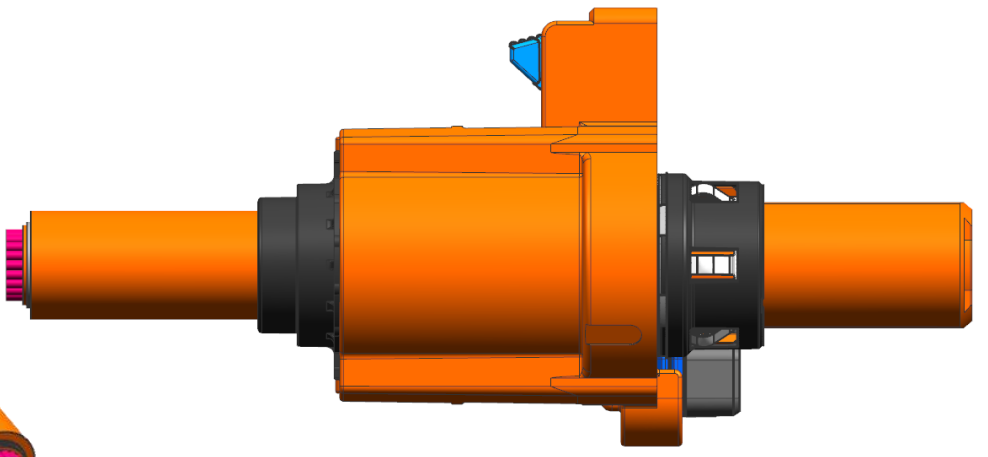
FOR OTHER ANY AUTHORIZED LOADING AREAS, CONTACT APTIV.



ADVISE TIGHTENING FORCE INTO THE CONTROL DEVICE < 300 N. IF THIS FORCE IS HIGHER THEN CHECK WITH APTIV.

FEMALE HARNESS ASSEMBLY - COMPLETED





FEMALE HARNESS ASSEMBLY COMPLETED

QUALITY CHECKS (HI-POT, SEALING CAPABILITY AND RING OUT) REQUIRED ON COMPLETED FEMALE ASSEMBLY TO ENSURE ISOLATION, SEALING INTEGRITY AND TERMINAL POSITION.

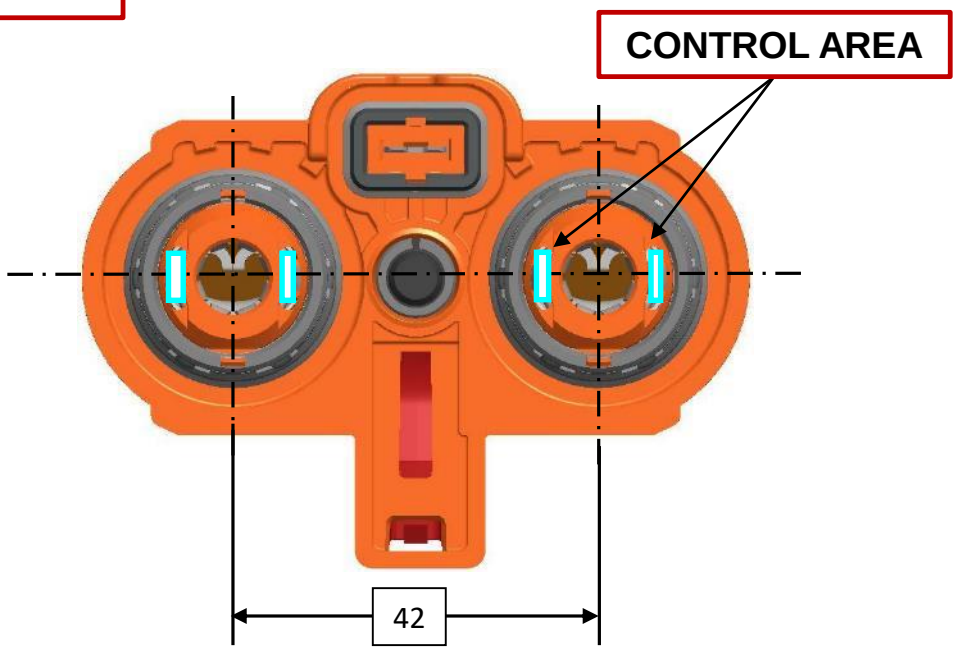
CONNECTOR PACKAGING ON HARNESS

CONNECTORS HAVE TO BE PACKED WITH BUBBLE WRAP FROM THE HARNESS MANUFACTURING FACTORY UNTIL THE ASSEMBLY ON THE CAR.

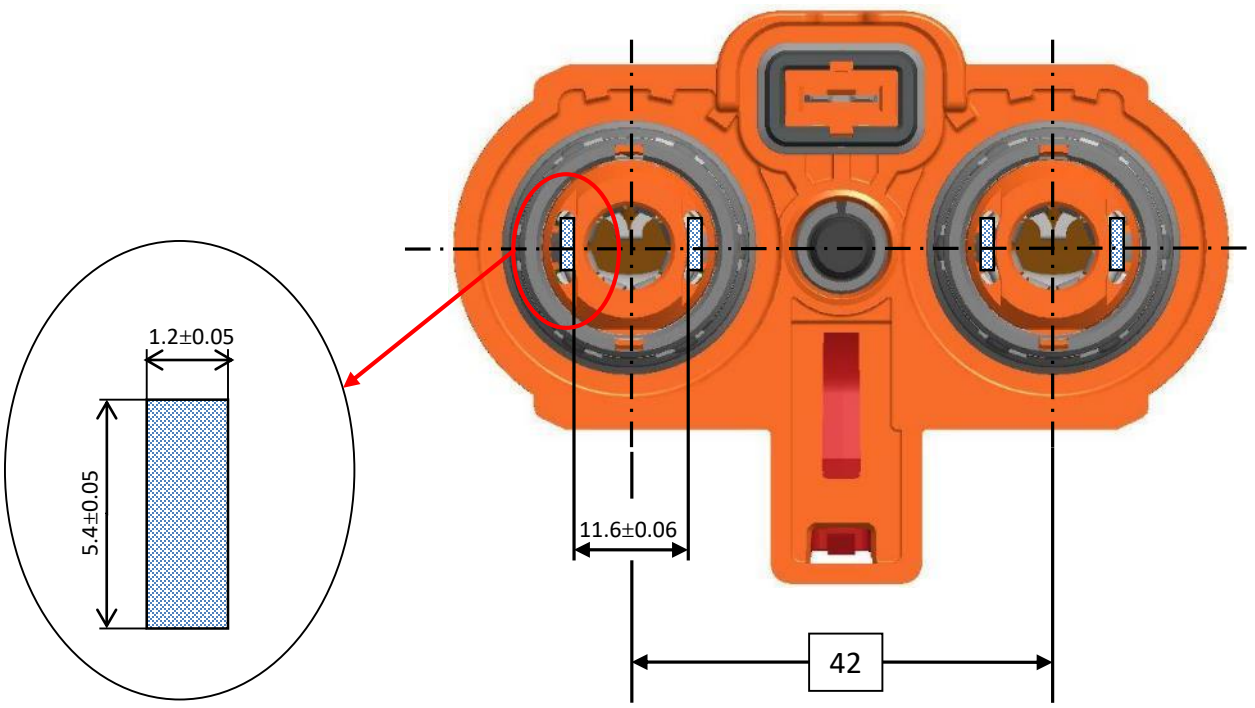
DETAILS FOR ELECTRICAL TEST

POSITIONING AND ELECTRICAL TEST

OPTION 1 : PRESENCE TEST

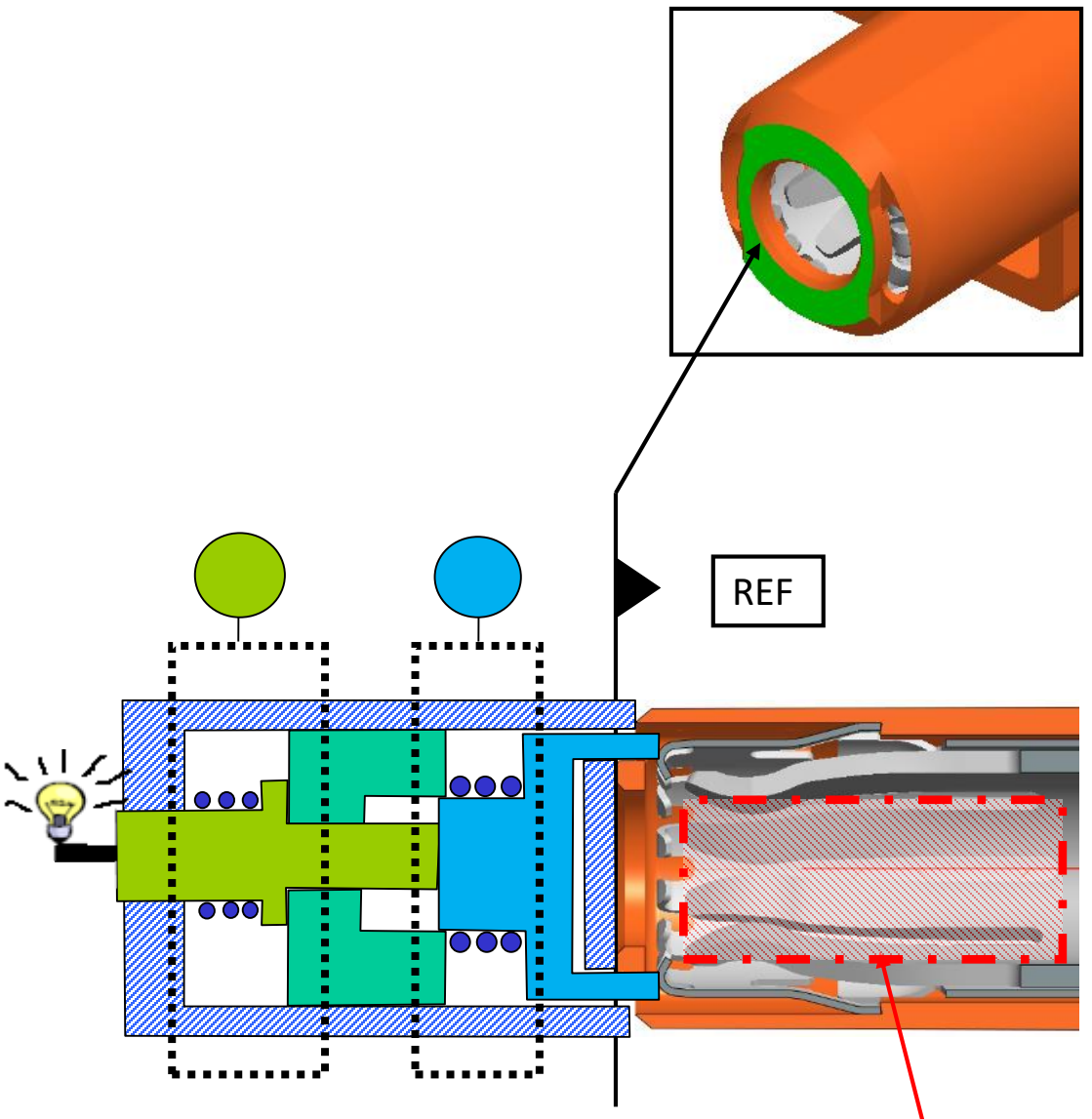


TEST PROBE WITH FLAT EXTREMITY FOR THE CONTROL ON THE FRONT FACE OF THE TERMINALS.



NO PARTICULAR CONSTRAINT ON THE FLAT EXTREMITY FOR THE TEST PROOF: STANDARD MATERIAL IS RECOMMENDED.

DETAILS FOR ELECTRICAL TEST

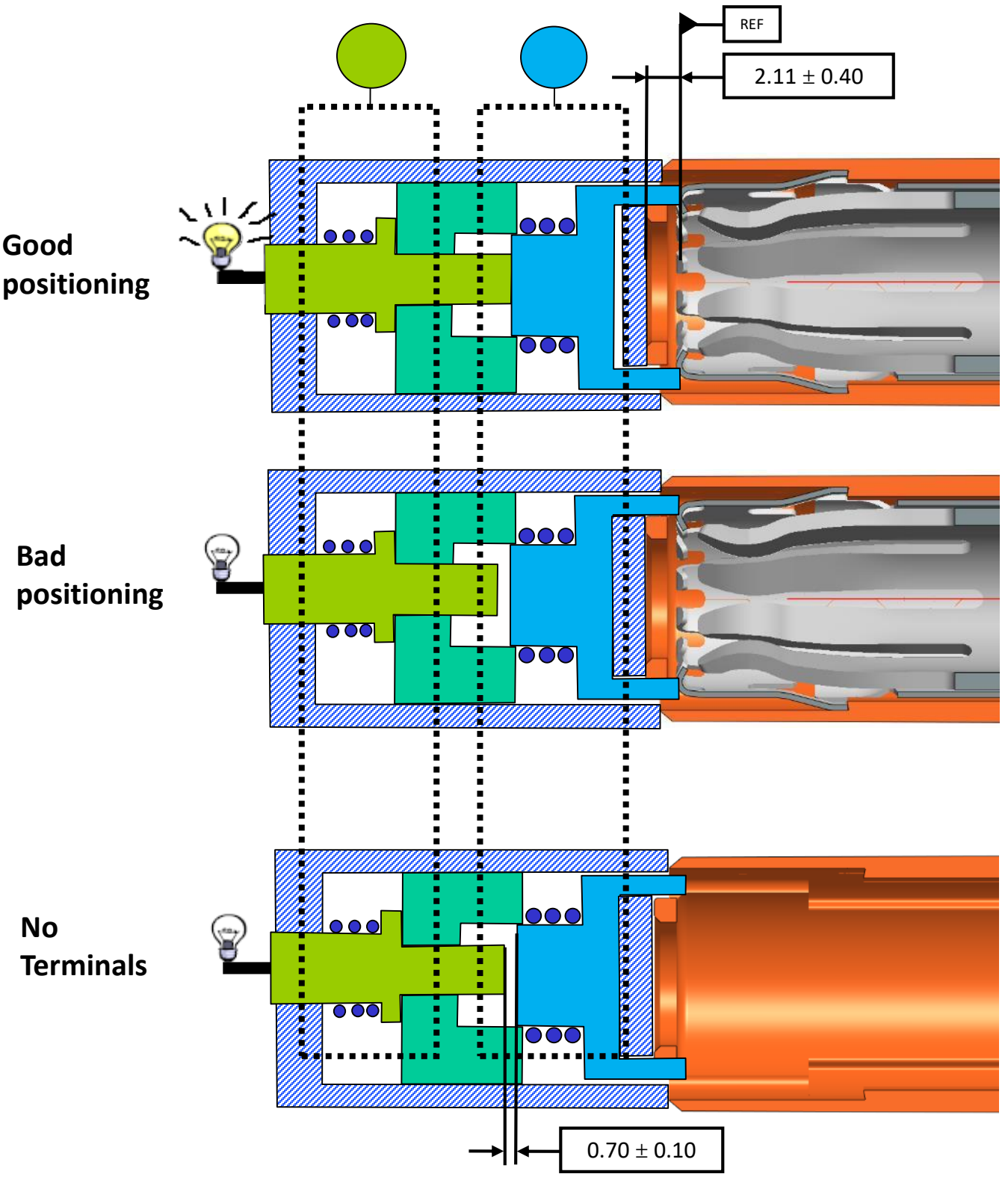


SPRING ADJUSTMENT 20 ± 2N

SPRING ADJUSTMENT 2 ± 1N

DO NOT INTRODUCE A PARTICULAR SHAPE OR TOUCH INSIDE THE ACTIVE TERMINAL AREA

DETAILS FOR ELECTRICAL TEST



DETECTION OF THE FEMALE TERMINAL PRESENCE AND ITS ADDRESSING BY TEST PROF CONTACT AT THE END OF TRAVEL.

INFORMATION : THE APPLICABLE FORCE BY THE PUMP CONTACT (FLAT EXTREMITY) ON THE FEMALE TERMINAL: 35N

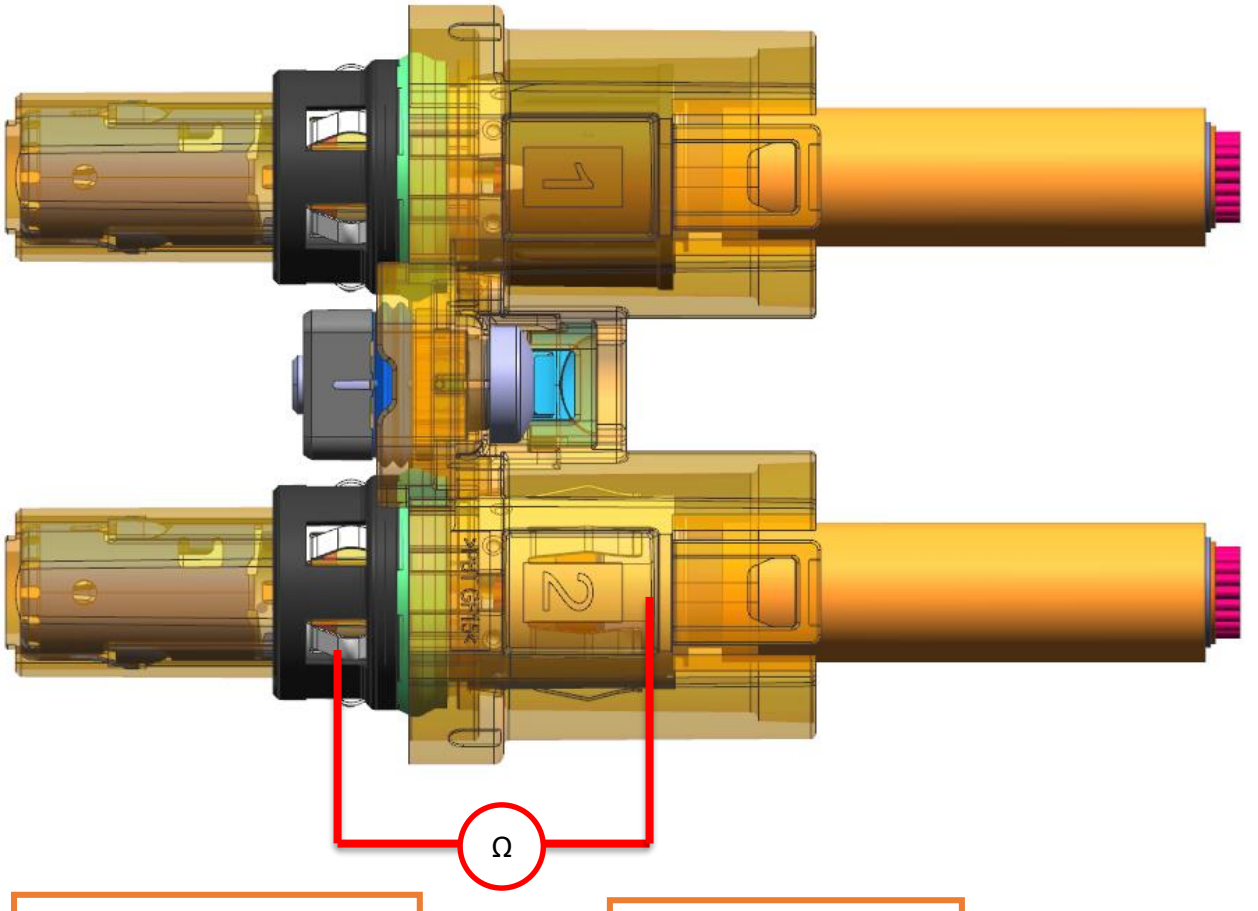
DETAILS FOR ELECTRICAL TEST

ELECTRICAL CONTROL

- **INITIAL CRIMPING RESISTANCE, Rt < 1 mΩ**
- **OPTIONAL TEST : INITIAL RESISTANCE OF SHIELD ONLY ON THE CONNECTOR : Rc < 50 mΩ**
- **CONCRETELY, THE RC HAS TO BE MEASURED ON THE CABLE AND TO HAVE TO REAL VALUE, THE RESISTANCE OF THE CABLE HAS TO BE REMOVED.**

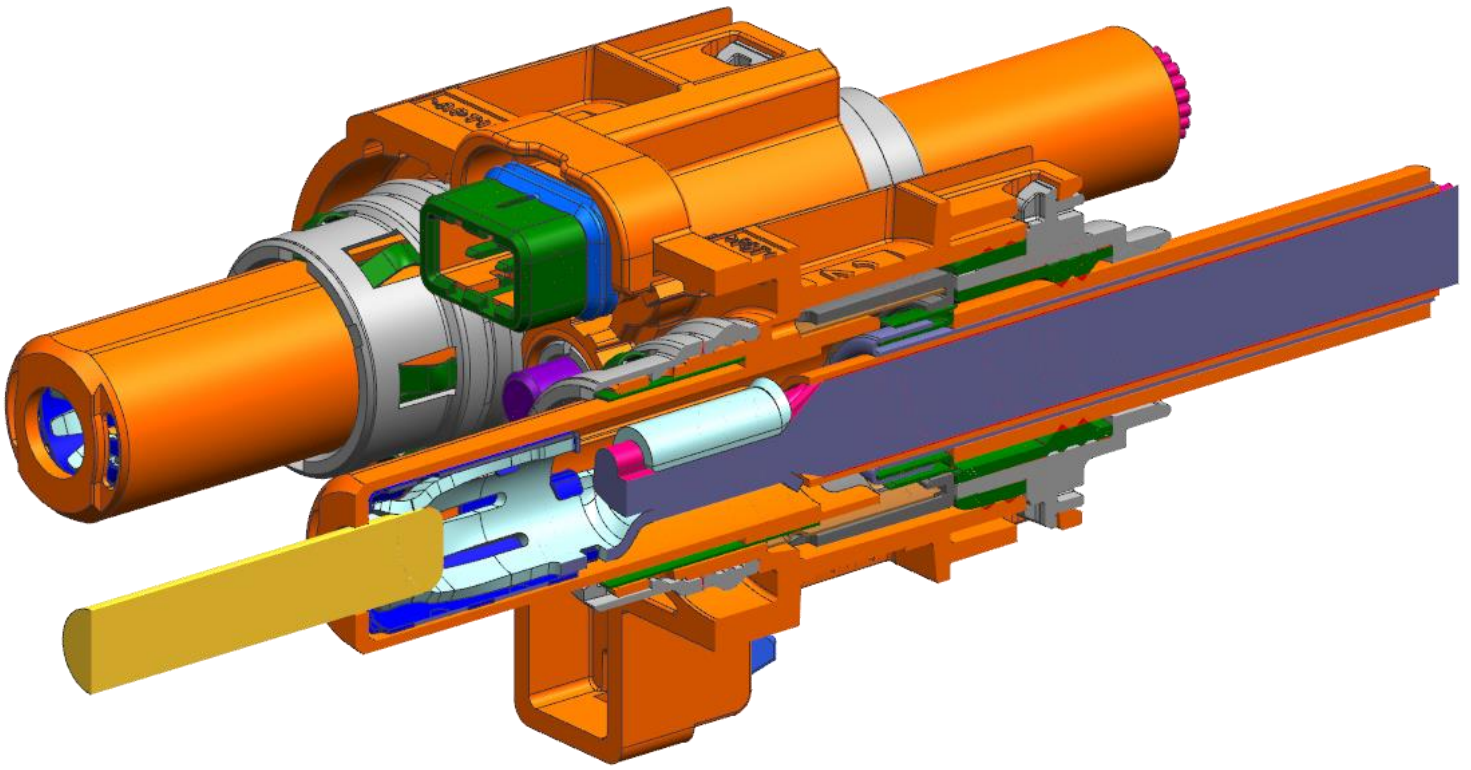
REMARK : IF THERE NO CONTINUITY ON SHIELD, CHECK THAT THE TUBE IS IN RIGHT POSITION.

OPTIONAL TEST : DIELECTRIC RIGIDITY – 3000 V + 50V 50 Hz FOR 60s.



DETAILS FOR ELECTRICAL TEST

OPTION 2 : ELECTRICAL TEST

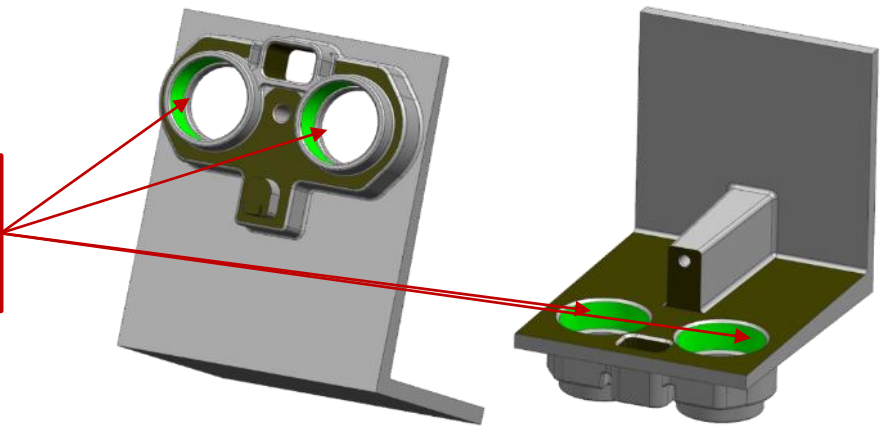


THE ELECTRICAL TEST CAN BE CARRIED OUT WITH A Ø8.00 MAX ROD, INSERTED INTO THE FEMALE TERMINAL WITHOUT DAMAGING IT OR DETERIORATE THE COATING.

DETAILS FOR SEALING TEST

SEE APTIV DRAWING PART NUMBER: 35102116-CUS03

WARNING: THIS ZONE IS USED FOR THE SEALING FUNCTION OF THE CONNECTOR, DO NOT DAMAGE THIS AREA.

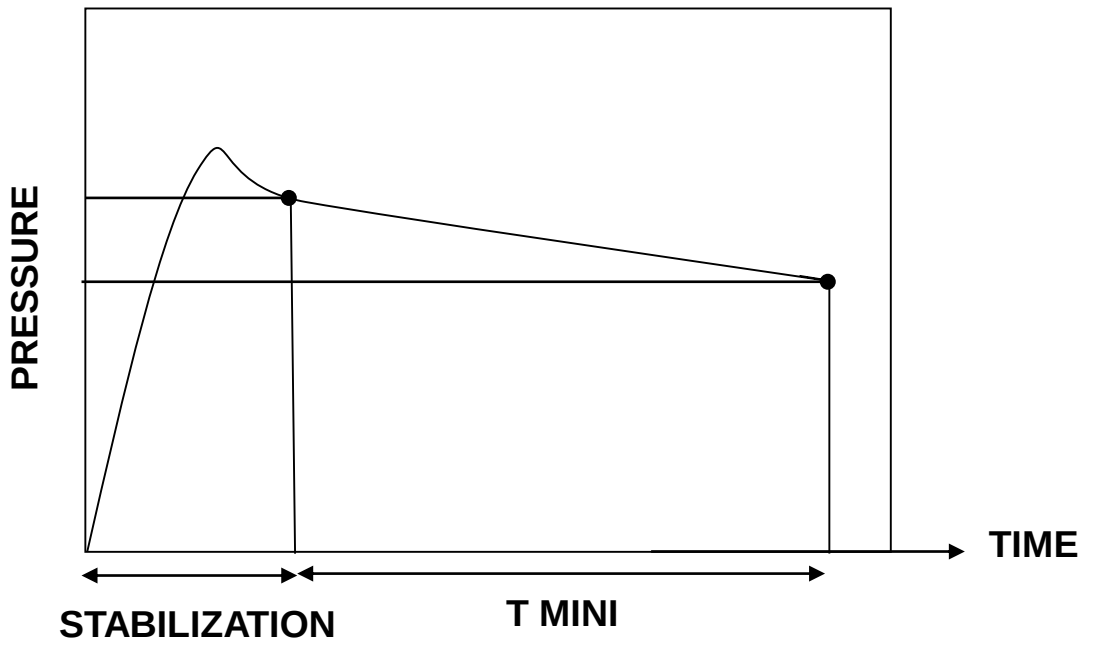


THE SEALING TEST HAS TO BE DONE AFTER THE ELECTRICAL TEST. THE CONTROL PRESSURE HAS TO BE DETERMINED ACCORDING TO THE SEALING OF THE HARNESS. THE SEALING TEST PERFORMED BY THE HARNESS MAKER AIMS AT CHECKING THAT THE REAR SEAL DEVICE IS IN PLACE.

FOR INFORMATION : THE PRODUCT IS WATERTIGHT UNTIL 500 mbar

CONTROL GRAPH

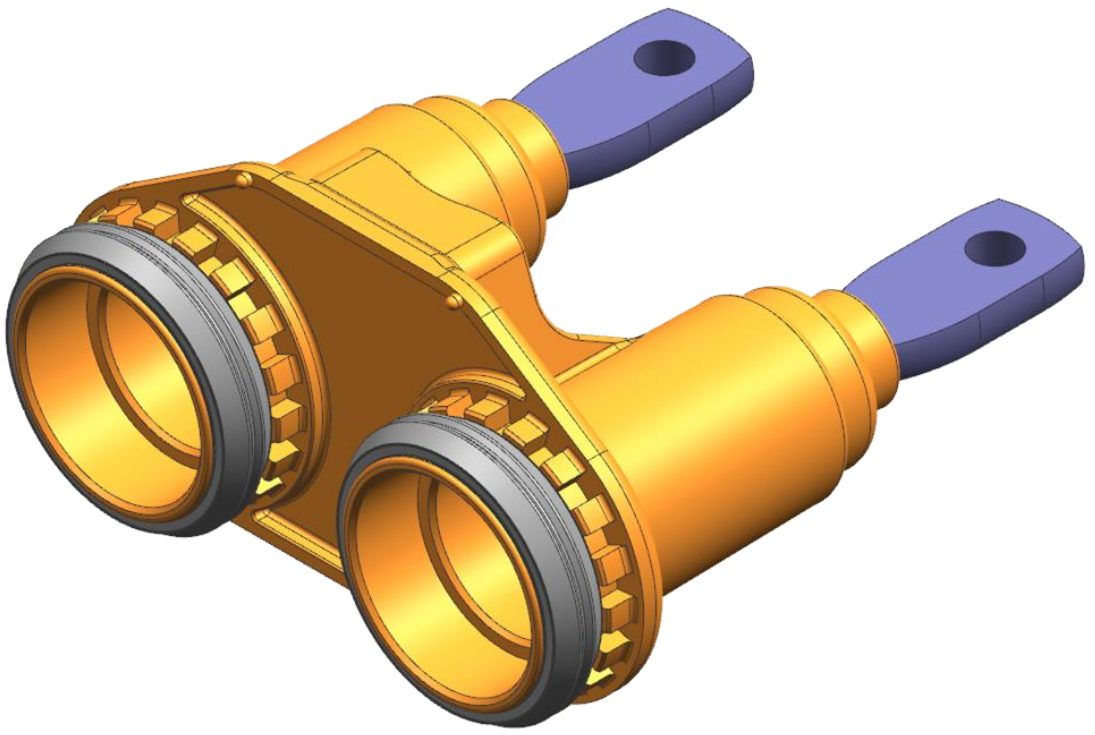
VALUES HAVE TO BE DETERMINED BY HARNESS MAKER



HARNESS ASSEMBLY OF THE HEADER

PRE - ASSEMBLY | **HARNESS ASSEMBLY** | CAR ASSEMBLY

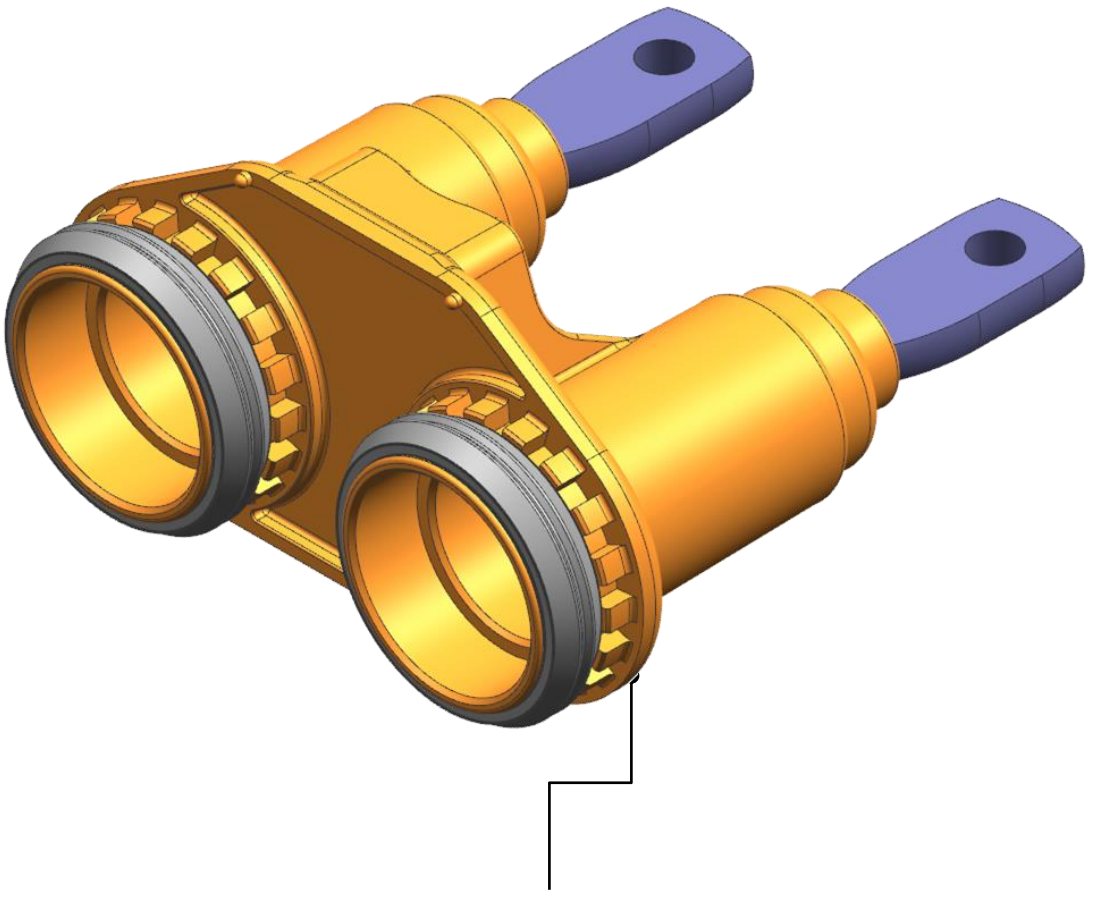
Power Connector 2W Direct Mate RCS800 Connection System



LIST OF COMPONENTS

QUANTITY	COMPONENTS	APTIV PART NUMBER
1	2 WAY HEADER ASSEMBLY	35099885

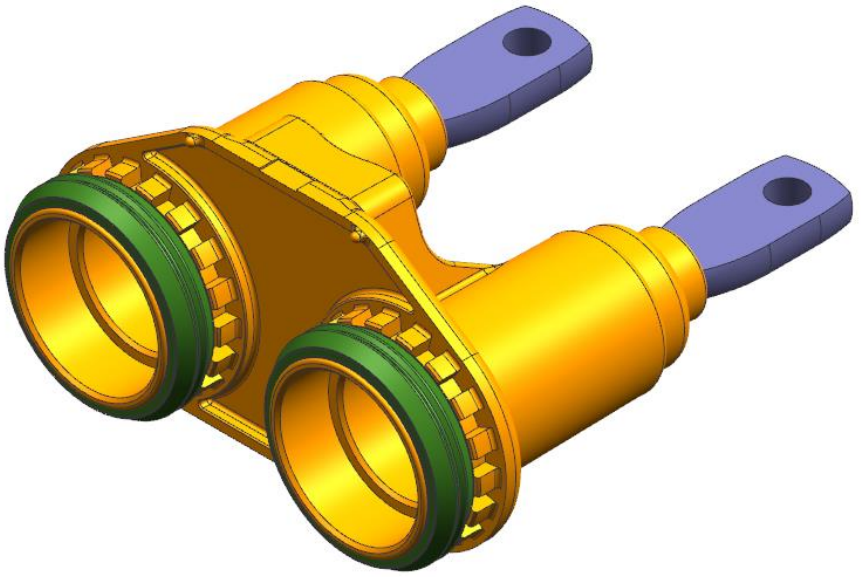
***ADDITIONAL INFORMATION AND REFERENCE TO ANOTHER DRAWINGS, DOCUMENTS, ETC. FOR EXAMPLE: REFER TO LATEST DRAWINGS FOR PART NUMBERS AND DETAILS**

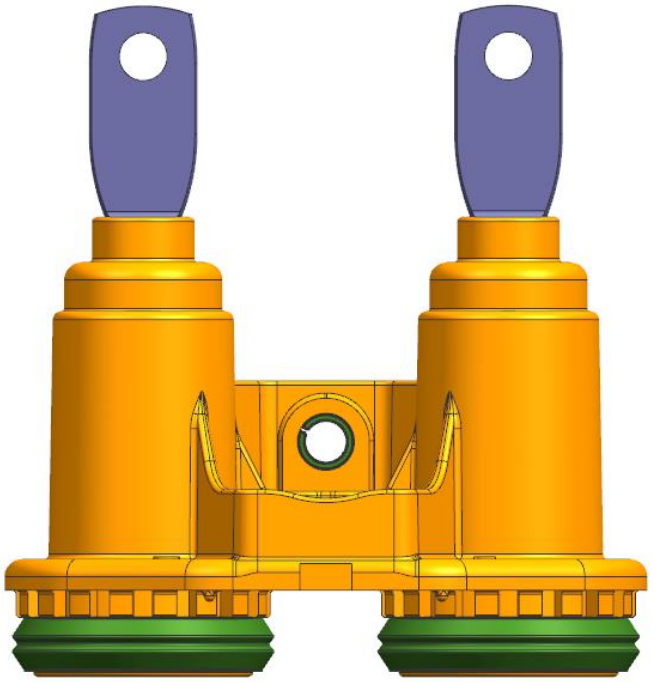


2 WAY HEADER ASSEMBLY

Pictures used in this Assembly Manual and original parts may differ in some details, these differences have no influence on the assembly process.

HEADER HARNESS ASSEMBLY - COMPLETED





PERFORM TESTS, APPLY COVERINGS AS REQUIRED. INSPECT THE ASSEMBLY.

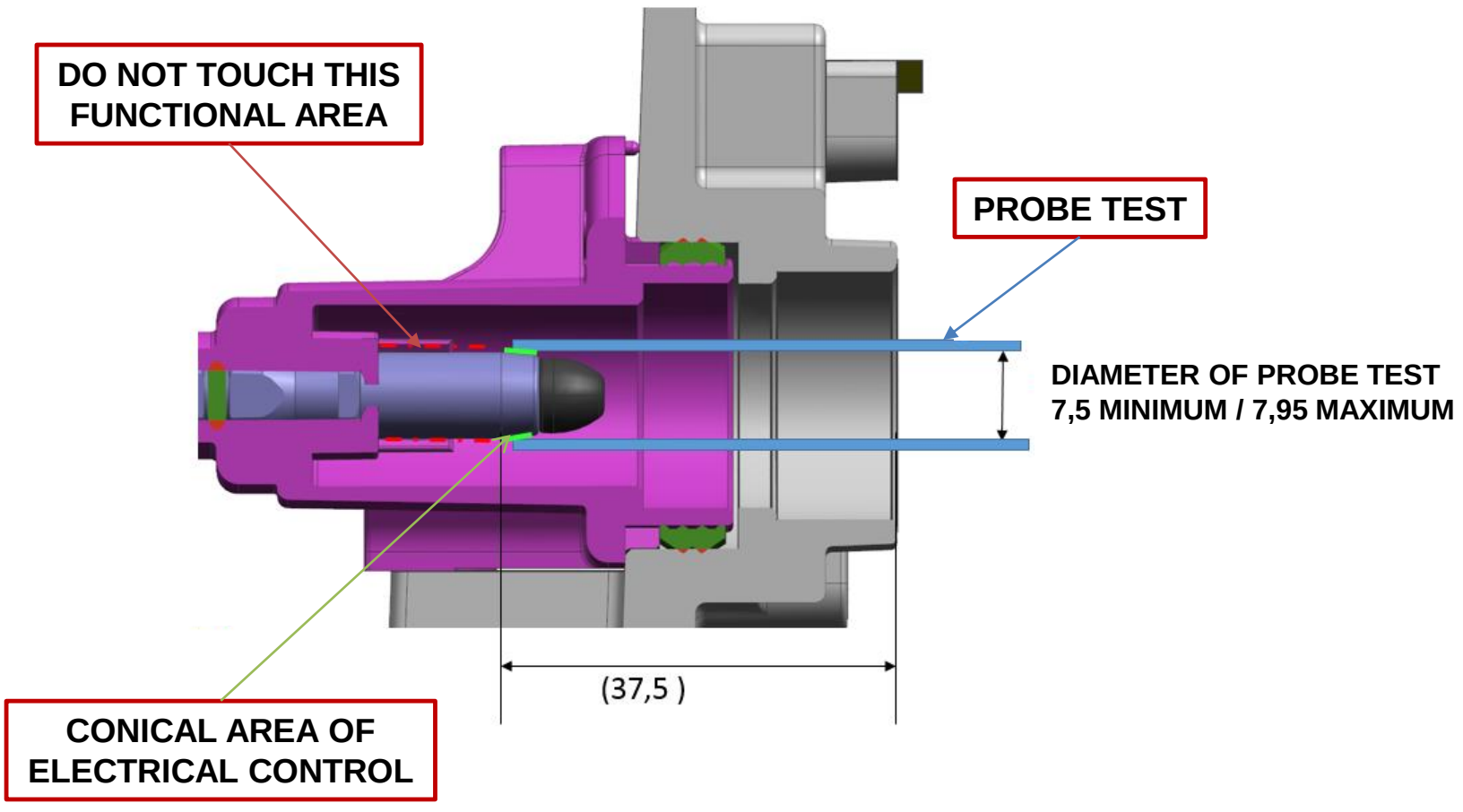
HEADER HARNESS ASSEMBLY COMPLETED

DETAILS FOR ELECTRICAL TEST

ELECTRICAL CONTROL

DETAIL OF TERMINALS WITH PLASTIC CAP

THE PROBE TESTS MUST NOT TOUCH THE TERMINAL IN THE CONTACT ZONE.



DETECTION OF THE FEMALE TERMINAL PRESENCE AND ITS ADDRESSING BY TEST PROBE

DETAILS FOR SEALING TEST

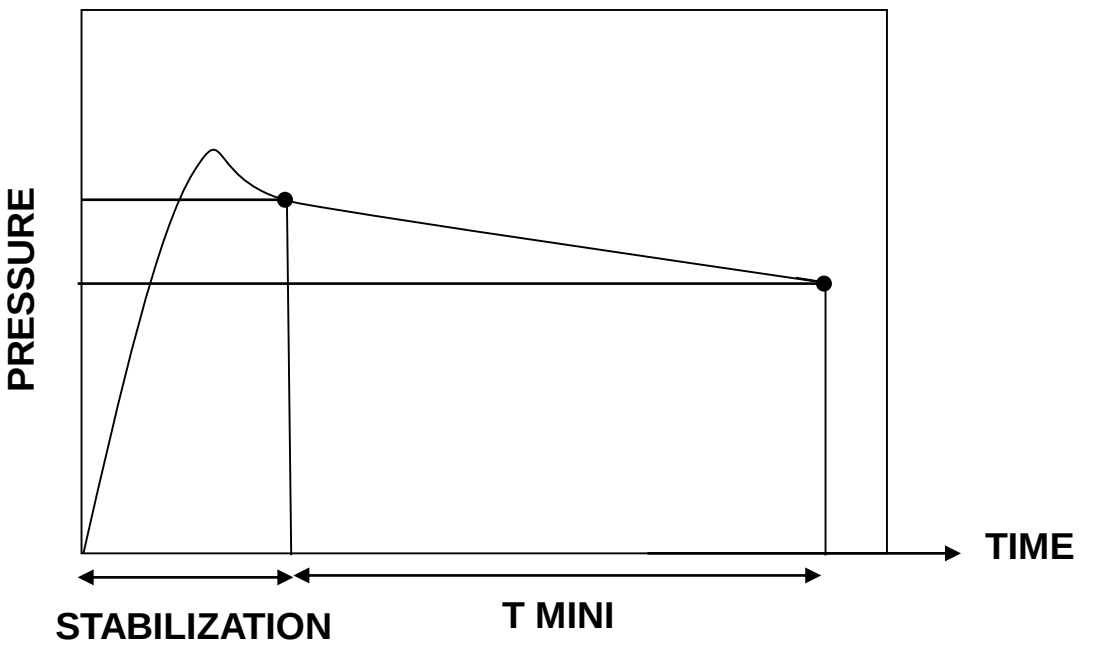
HEADER SEALING CONTROL

THE SEALING TEST HAVE TO BE DONE AFTER THE ELECTRICAL TEST. THE CONTROL PRESSURE HAVE TO BE DETERMINED WITH THE SEALING OF EQUIPMENT. THE SEALING TEST BY SUPPLIER IS TO CHECK IF THE CONNECTOR IS IN ITS PLACE

INFORMATION : THE PRODUCT IS SEALED UNTIL 500 mbar DURING 30s.

CONTROL GRAPH

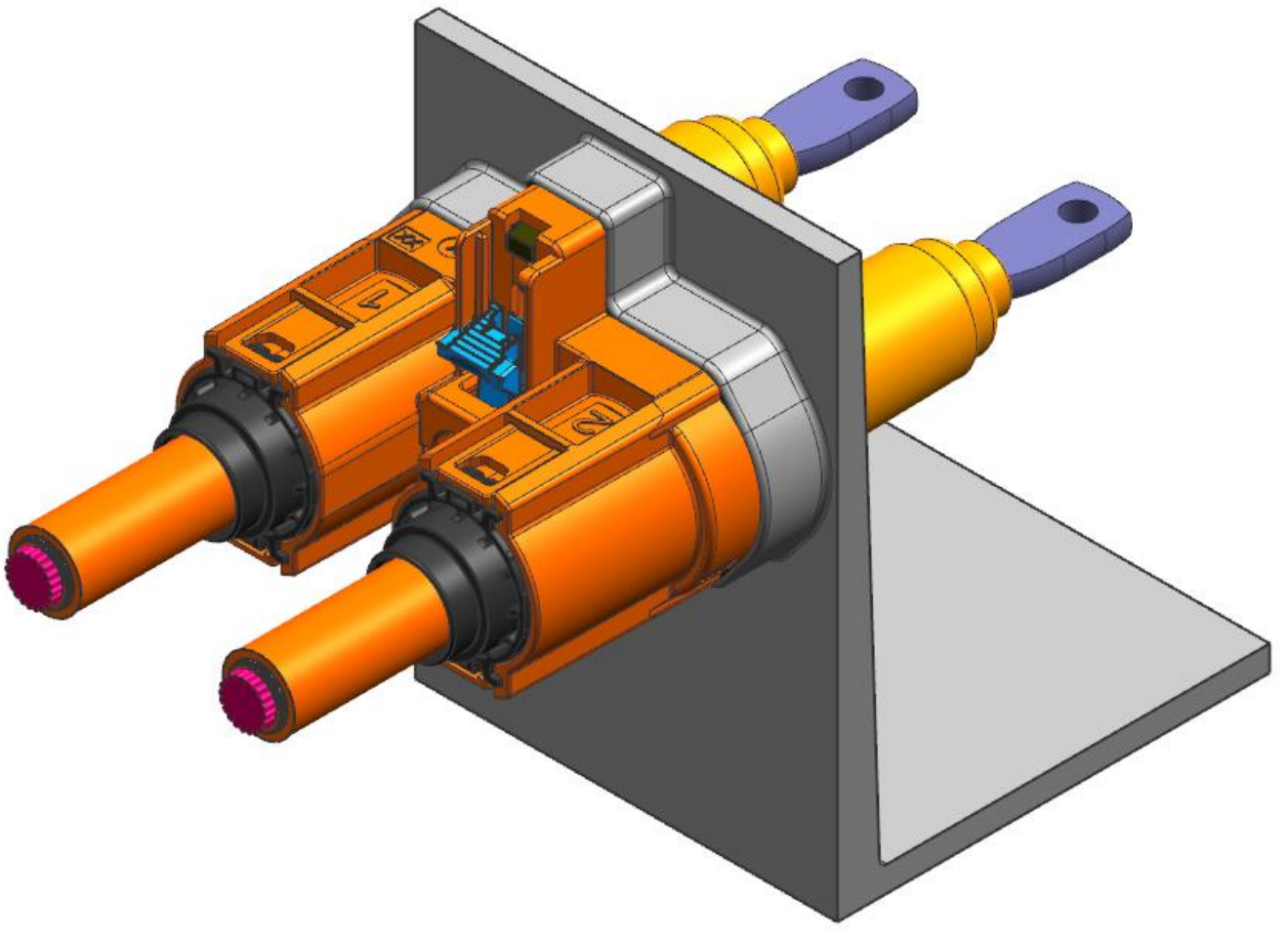
VALUES ARE TO BE DETERMINATE BY SUPPLIER



ASSEMBLY OF THE CONNECTION SYSTEM

PRE - ASSEMBLY HARNESS ASSEMBLY **CAR ASSEMBLY**

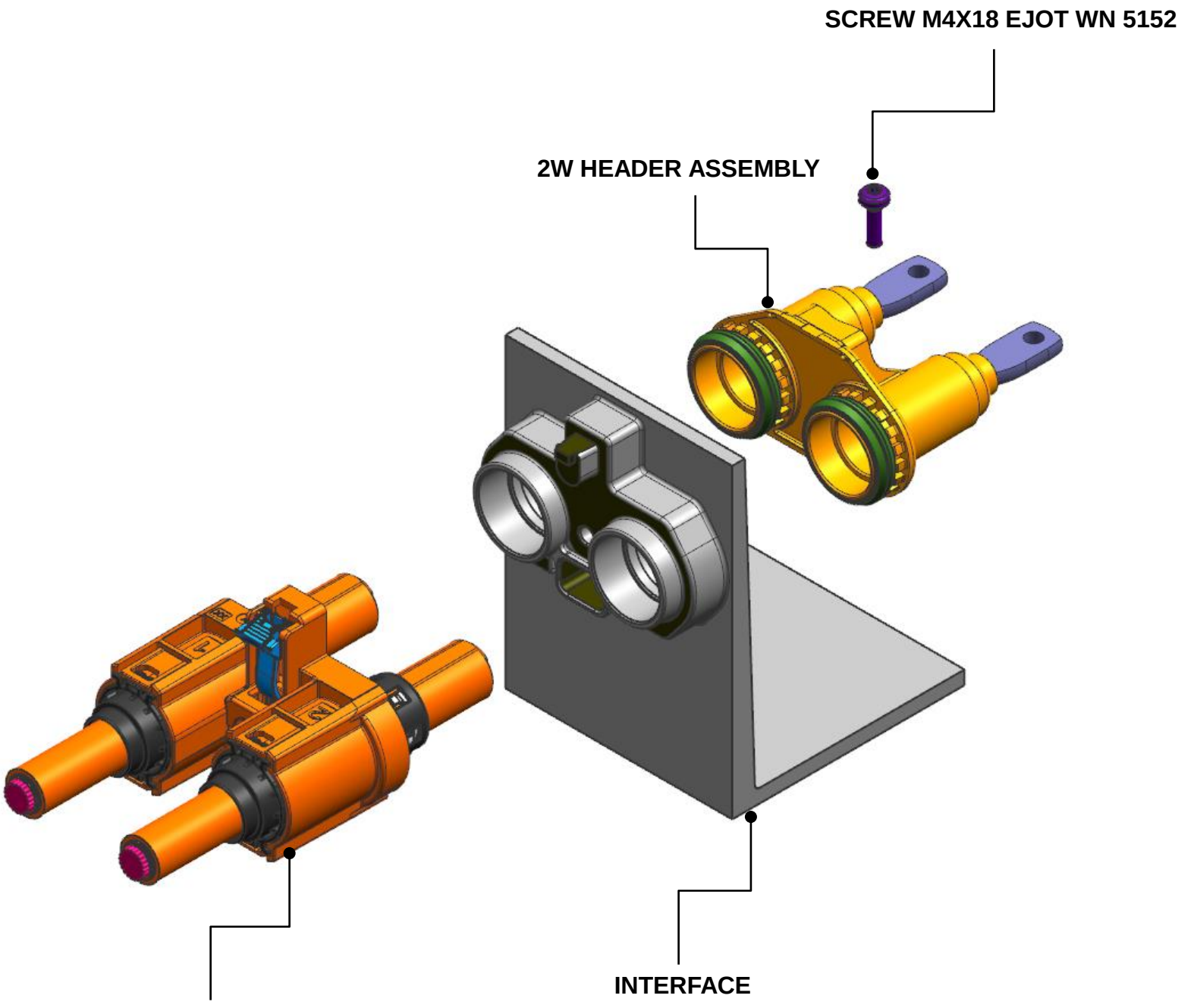
Power Connector 2W Direct Mate RCS800 Connection System



LIST OF COMPONENTS & EXPLODED VIEW

QUANTITY	COMPONENTS	APTIV PART NUMBER
1	2W FEMALE CONNECTOR	-
1	INTERFACE	35102155
1	2W HEADER ASSEMBLY WITHOUT INTERLOCK	35099885
1	SCREW M4X18 EJOT WN 5152	-

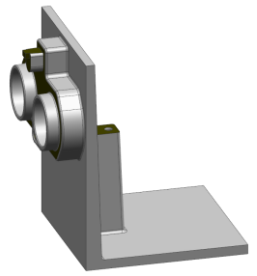
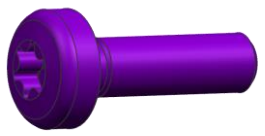
REFER TO LATEST DRAWING FOR PART NUMBERS AND DETAILS



Pictures used in this Assembly Manual and original parts may differ in some details. These differences have no influence on the assembly process.

ASSOCIATED PRODUCTS

INTERFACE AND SCREW

VIEW	DESCRIPTION	APTIV PART NUMBER	CUSTOMER DRAWING
	INTERFACE 2W	35102155	APTIV : 35102116-CUS03
	SCREW M4X18 EJOT WN 5152	-	

3D MODEL VIEW

CLICK IMAGE TO START 3D VISUALIZATION

PARTICULAR RECOMMENDATIONS BEFORE USING

IMPORTANT NOTES

IMPORTANT NOTES:

-  **WARNING : ELECTRICAL HABILITATION COMPULSORY BEFORE HANDLING UNDER POWER**

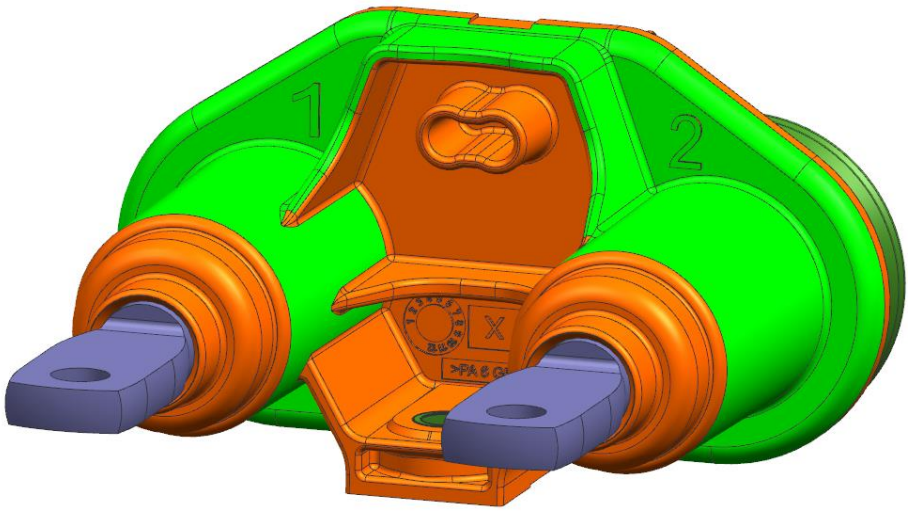
- **DO NOT TRY TO DISMANTLE SEVERAL PART FROM CONNECTOR: THESE ONE CANNOT BE DISMANTLED.**

- **IN CASE OF BREAKAGE OF A COMPONENT OF THE CONNECTOR: WHOLE CONNECTOR HAVE TO REJECT.**

- **IN CASE OF FALL OR SHOCKS OF THE CONNECTOR THE WHOLE CONNECTOR HAVE TO REJECT.**

STEP 1a – Assembly of Header on Interface

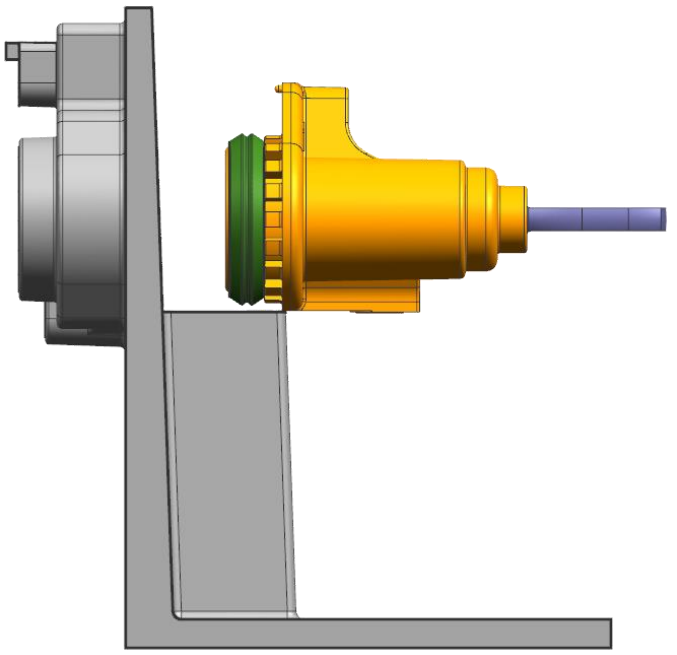
HEADER 2W 800



ALLOWED SUPPORT AREAS

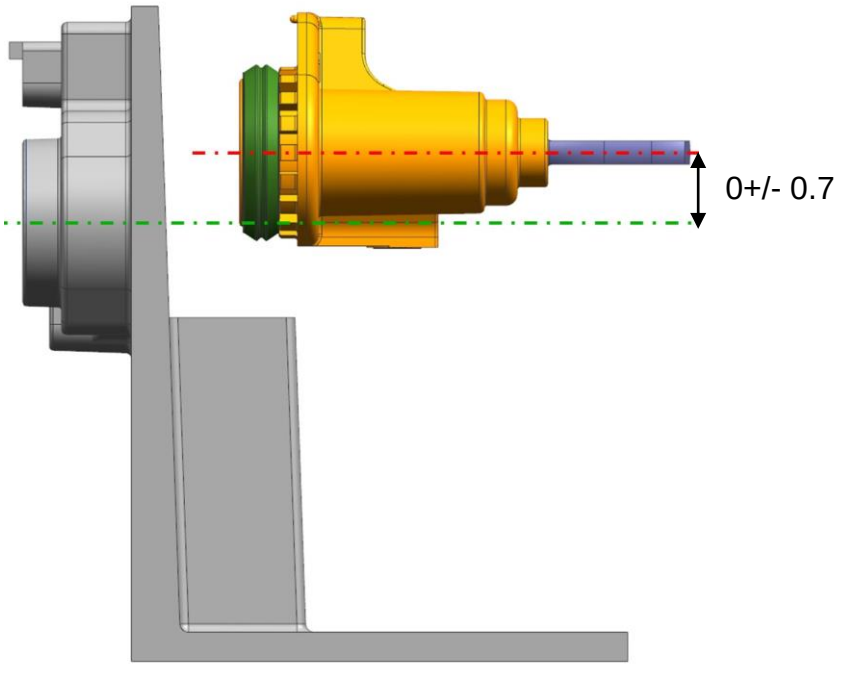
STEP 1b – Assembly of Header on Interface

PUT GASKET IN FRONT OF THE HOLE ON THE RIGHT SIDE OF THE INTERFACE AND USE THE PLATFORM AS A SUPPORT WITH A MAXIMUM ANGLE OF 3° AND COAXIALITY BETWEEN HEADER AND INTERFACE OF 0 ± 0.7 mm. INSERT THE HEADER PUSHING ON ZONE 1.

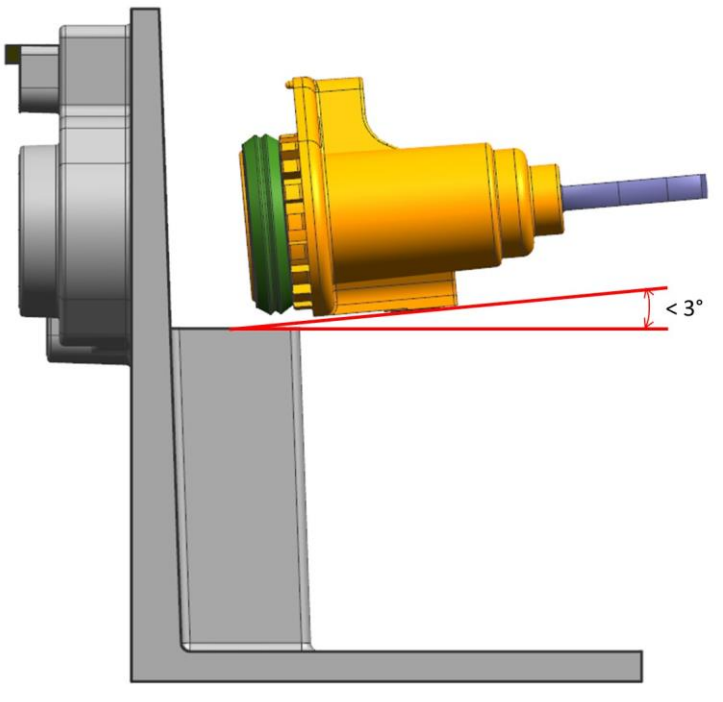


MAXIMUM INSERTION FORCE: 75 N

STEP 1c – Assembly of Header on Interface



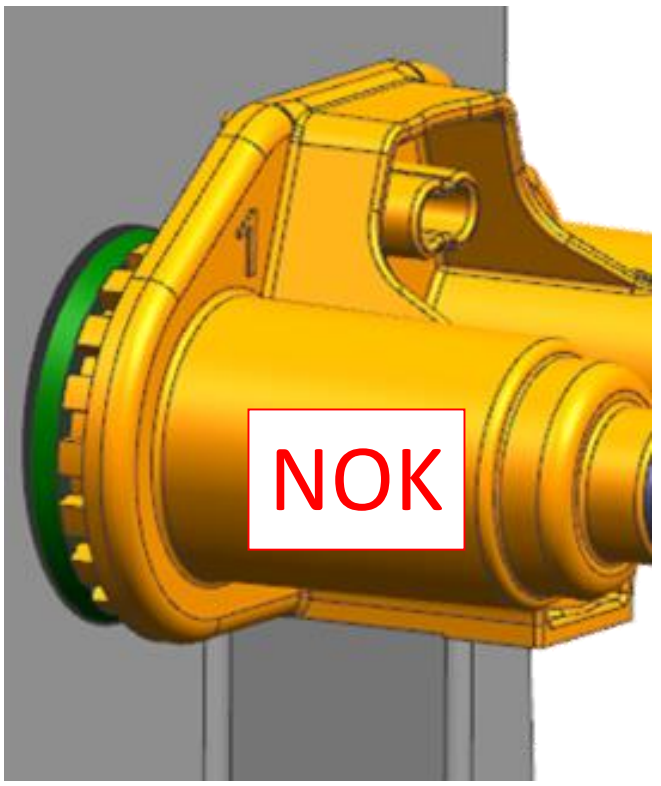
COAXIALITY BETWEEN INTERFACE AND HEADER : 0 +/- 0.7 mm

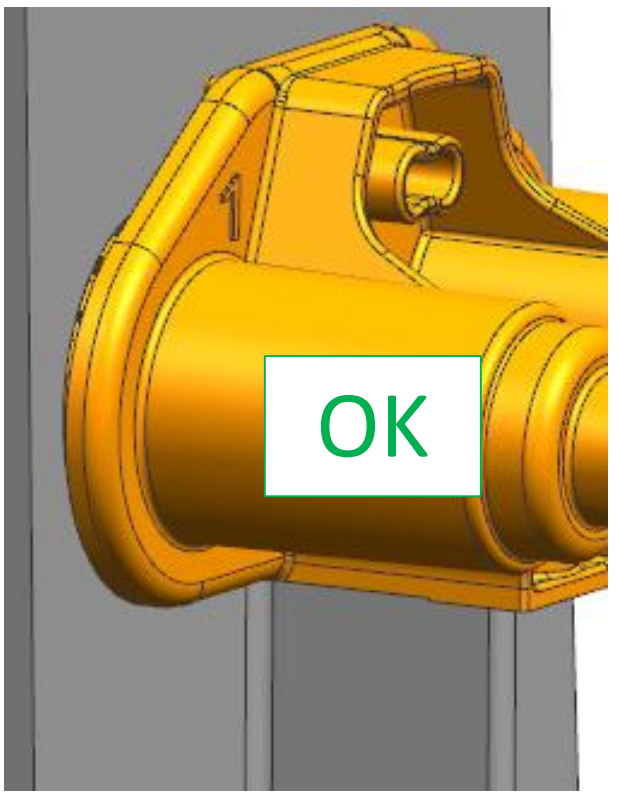


MAXIMAL POSITIONING ANGLE : A < 3°

STEP 1d – Position of Ribs

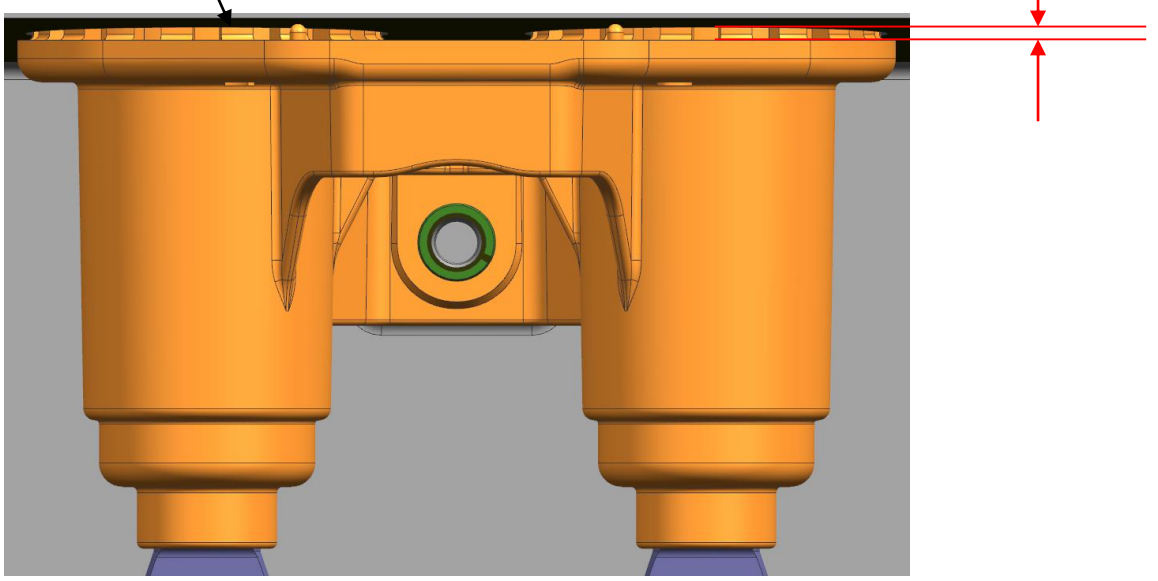
THE COLLAR AROUND THE HEADER DOESN'T TOUCH THE INTERFACE, ONLY THE RIB ARE IN CONTACT WITH INTERFACE, A GAP BETWEEN THE INTERFACE AND THE COLLAR IS VISIBLE AROUND 1.35 mm. HOWEVER THE SEALS SHOULD NOT BE VISIBLE.





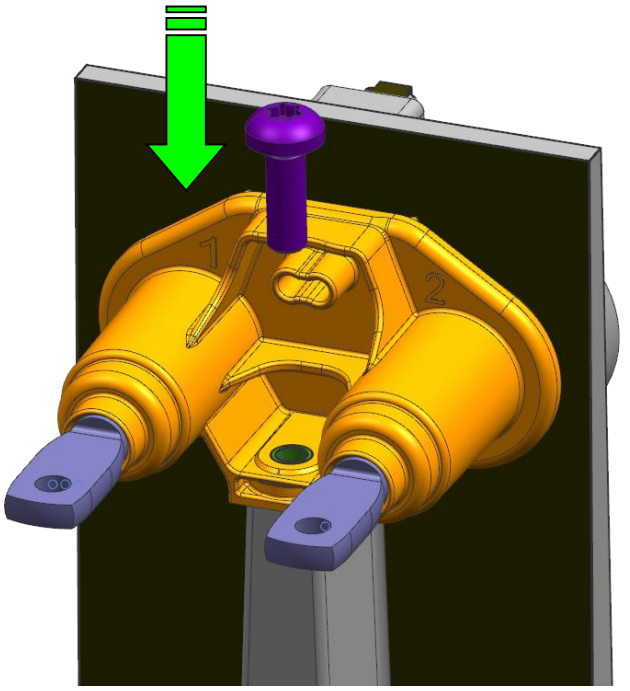
PUSH UNTIL MECHANICAL STOP

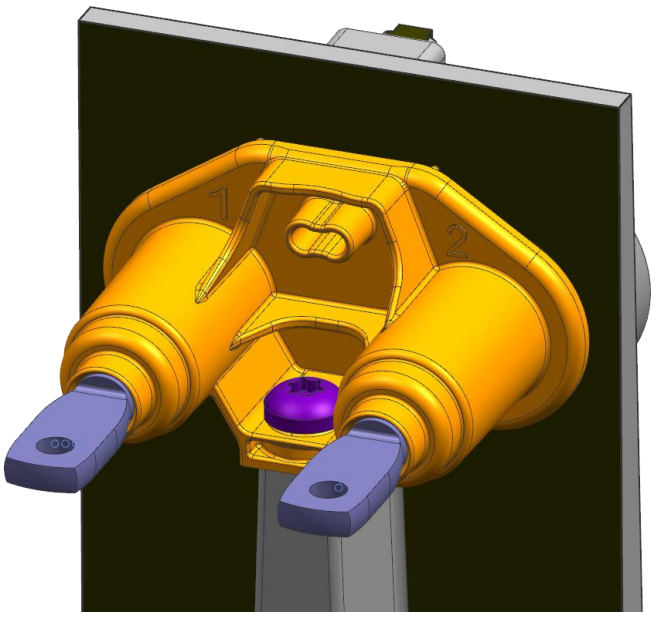
RIBS IN CONTACT WITH INTERFACE



Step 1e – Insert Screw

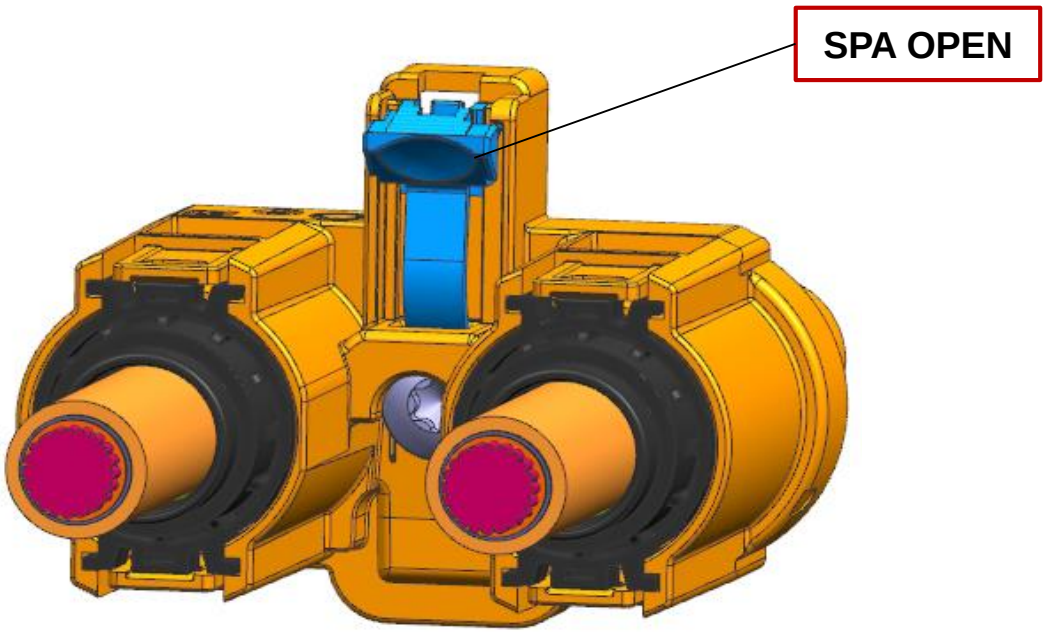
**WHEN THE HEADER IS WELL POSITIONED, INSERT THE M4 X 18 EJOT WN 5152 SCREW.
(TORQUE AND ANGLE TO BE DEFINED WITH SCREW SUPPLIER).**





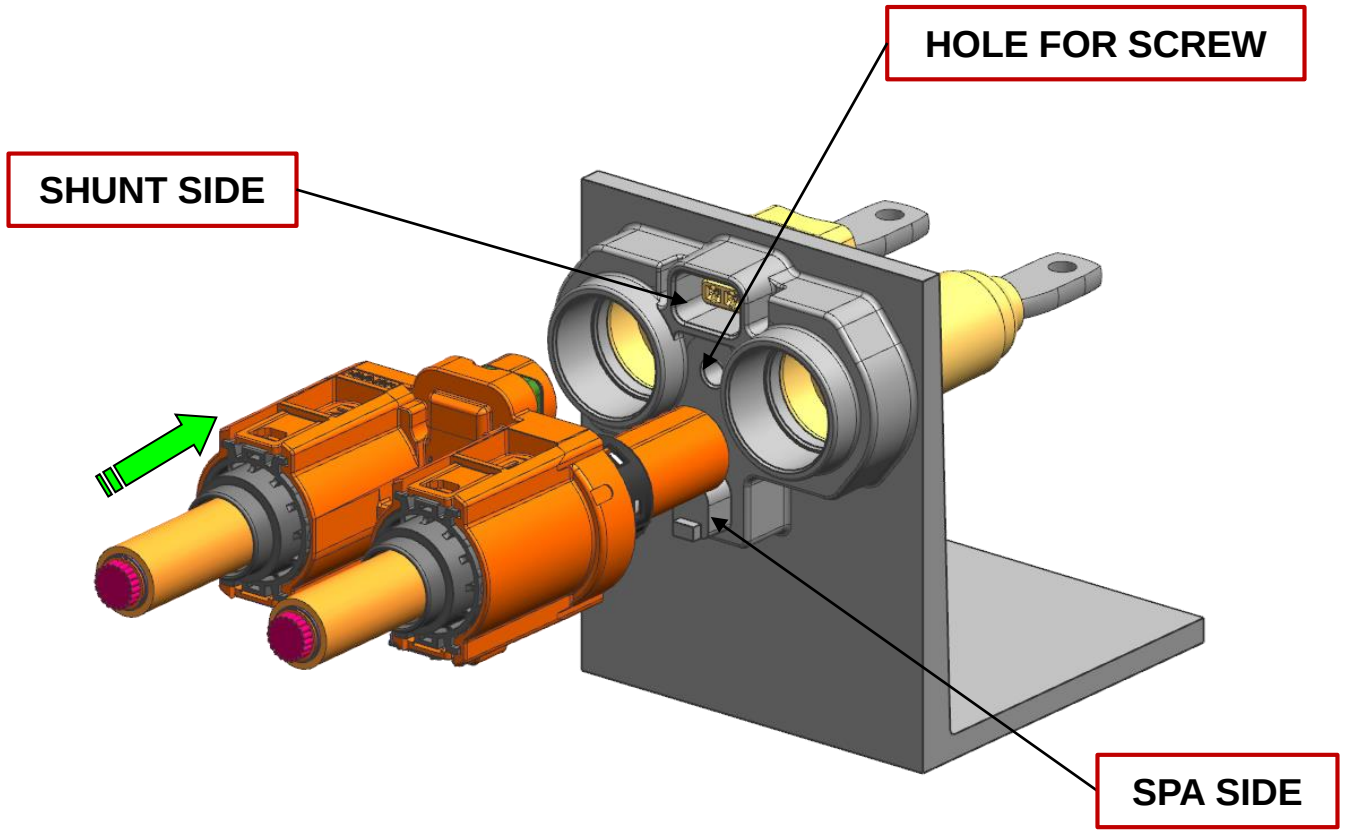
NOTE : WITH SELF TAPPING SCREW REWORK IS FORBIDDEN.

DELIVERY POSITION ON ASSEMBLY LINES



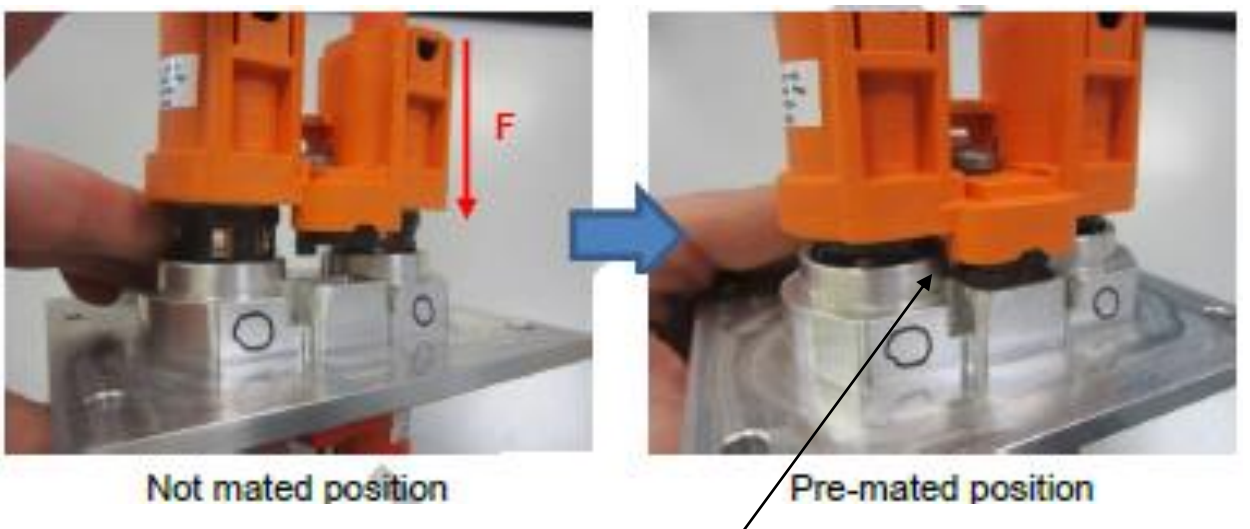
STEP 2a – Assembly of Female Connector on Interface

PRESENT THE PLUG RCS800 NEAR THE HEADER RCS800 IN THE GOOD ORIENTATION.



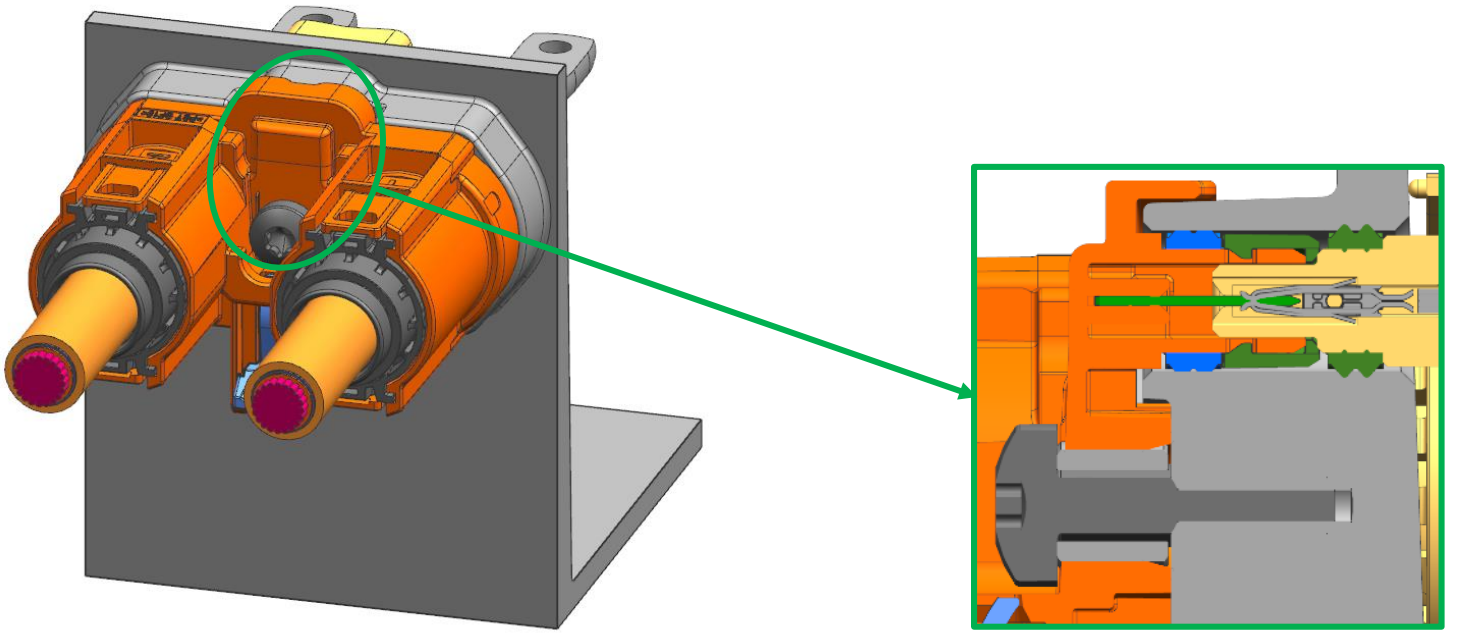
STEP 2b – Fix Mating Position

PUSH CONNECTOR BY HAND UNTIL THERE IS CONTACT BETWEEN THE SCREW AND THE INTERFACE PLATE.



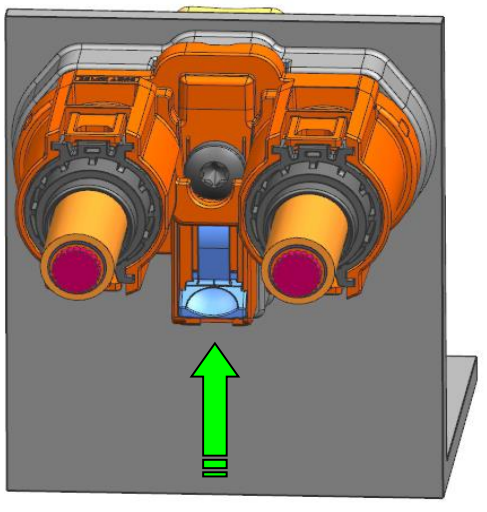
STEP 2c – Fasten Screw

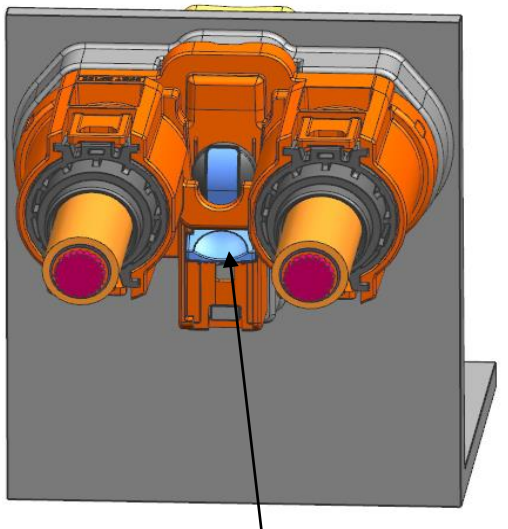
FASTEN THE SCREW WITH TORQUE OF 8Nm ± 15%. USE HEAD SCREW TORX 30.



STEP 2d – Lock the SPA

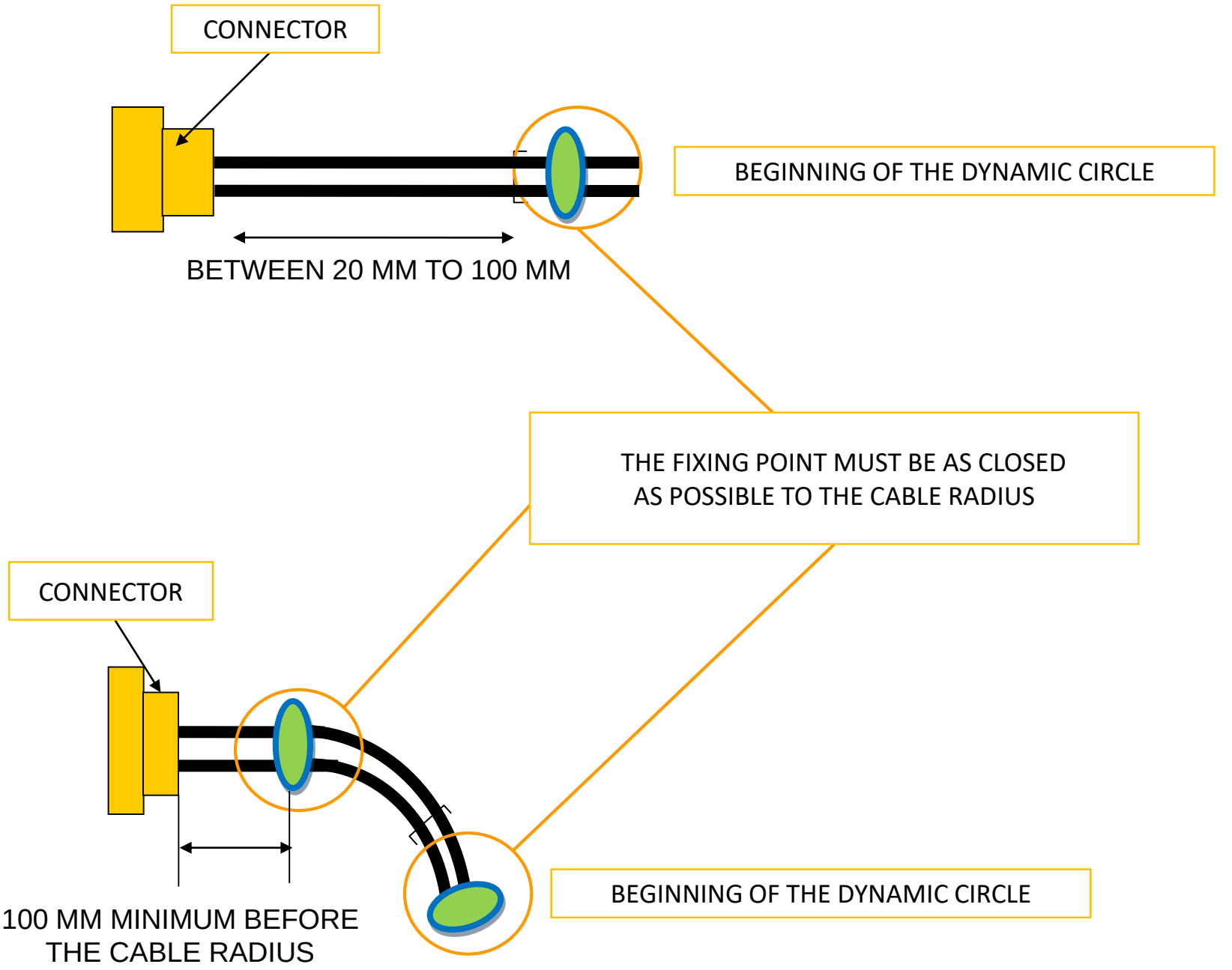
PUSH ON SPA TO SECURE A GOOD SCREWING OPERATION AND THE RIGHT POSITION OF THE CONNECTION ON THE INTERFACE. NOMINAL ACTIVATION EFFORT IS 30N. IF THE CLOSING EFFORT IS TOO HIGH, STOP PUSHING AND CHECK THAT THE CONNECTOR IS ON GOOD POSITION. SPA BLOCKING FORCE IS 80N MINIMUM.





IF THE SPA IS COMPLETELY PUSHED, IT WILL COVER THE SCREW.

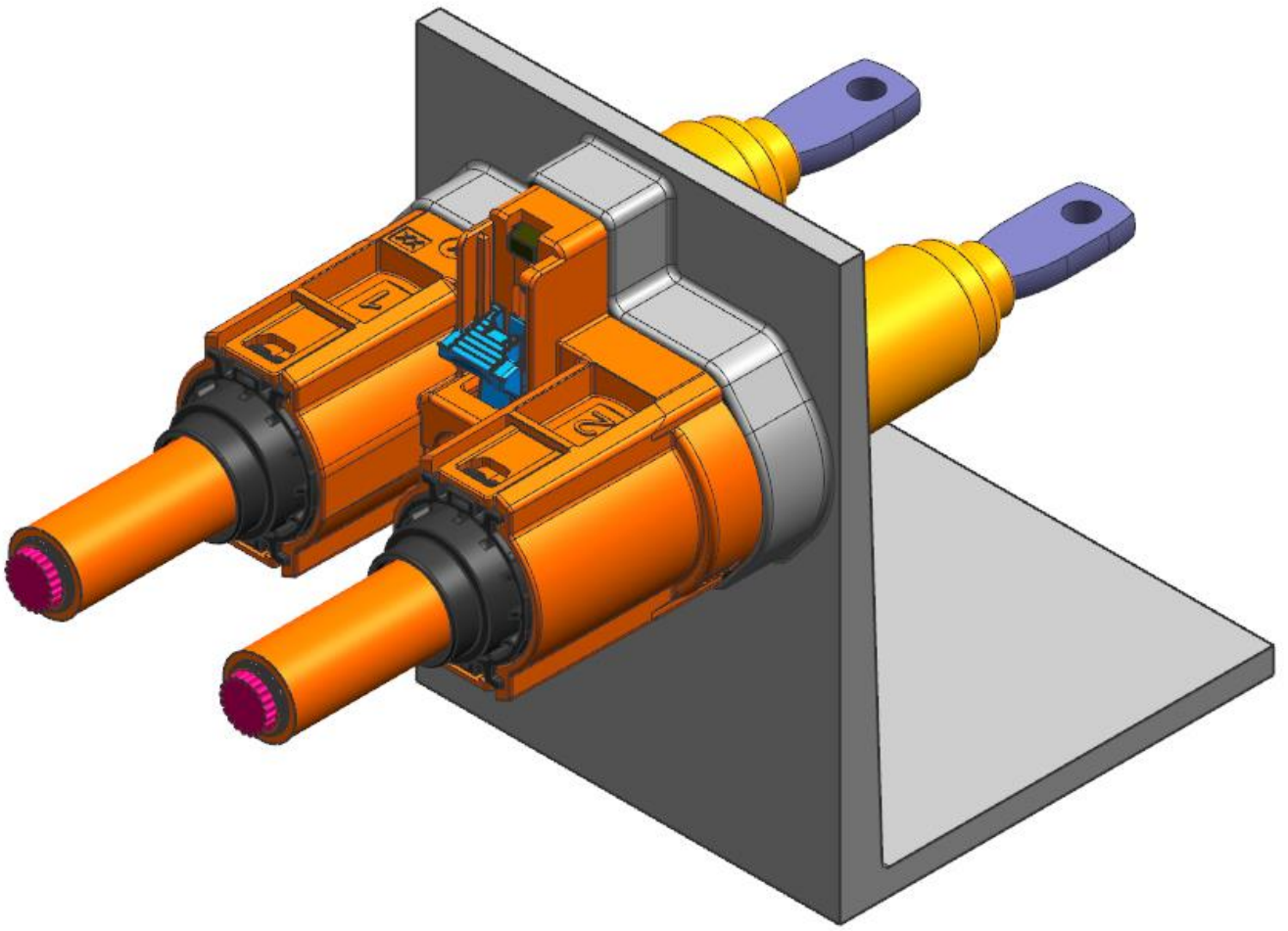
CABLE FIXING POINT RECOMMENDATIONS



IMPORTANT!

IF THESE RECOMMENDATIONS CANNOT BE FULFILLED DUE TO ARCHITECTURE CONSTRAINTS ON THE VEHICLE, PLEASE ASK APTIV.

CONNECTION SYSTEM ASSEMBLY - COMPLETED

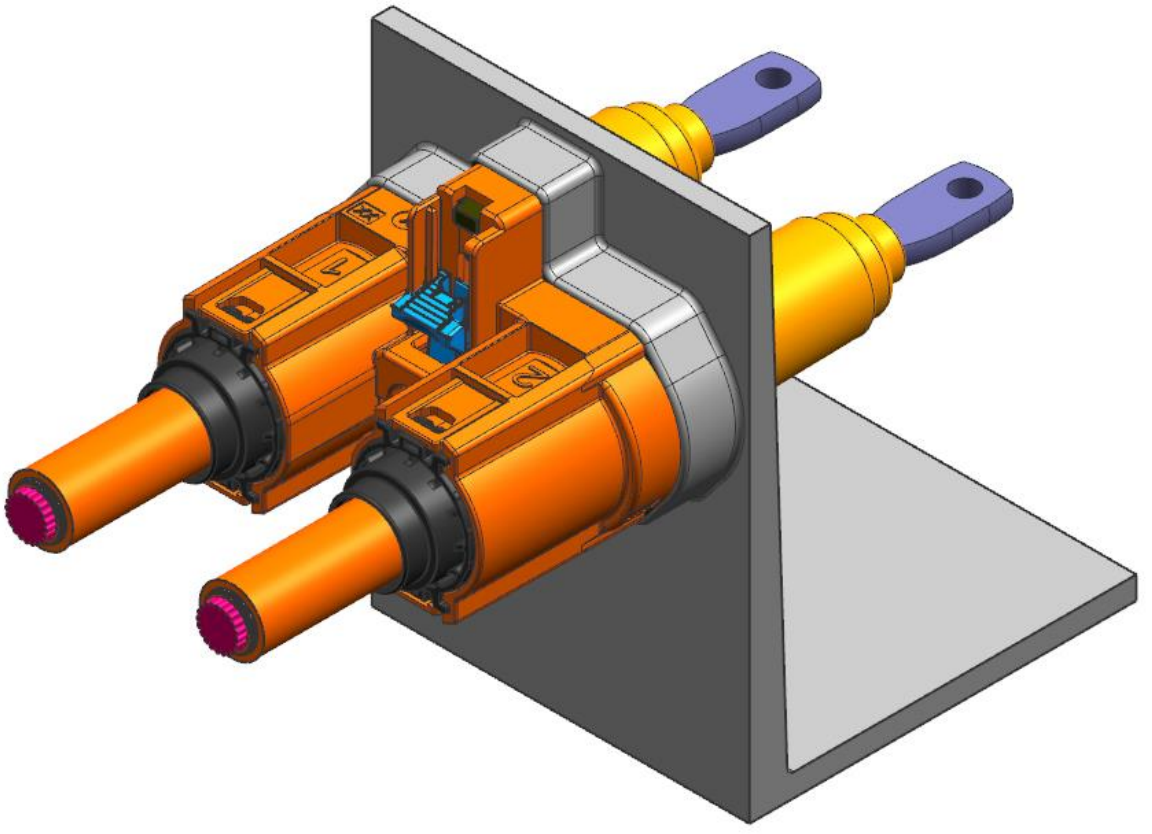


ASSEMBLY OF THE CONNECTION SYSTEM COMPLETED

DISASSEMBLY OF THE CONNECTION SYSTEM

PRE - ASSEMBLY HARNESS ASSEMBLY **CAR ASSEMBLY**

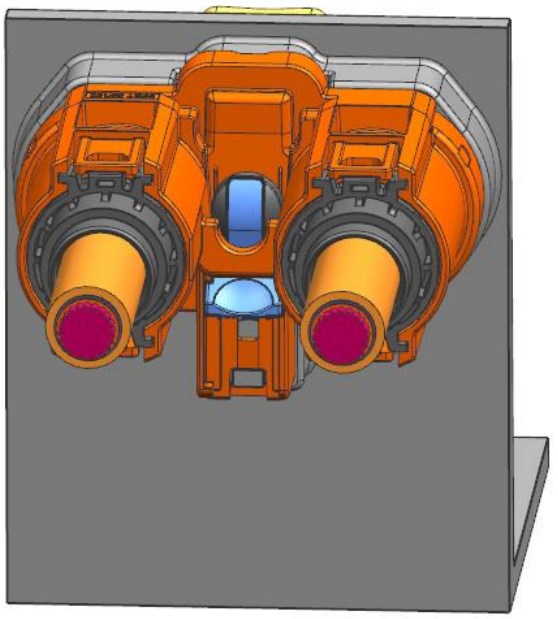
Power Connector 2W Direct Mate RCS800 Connection System

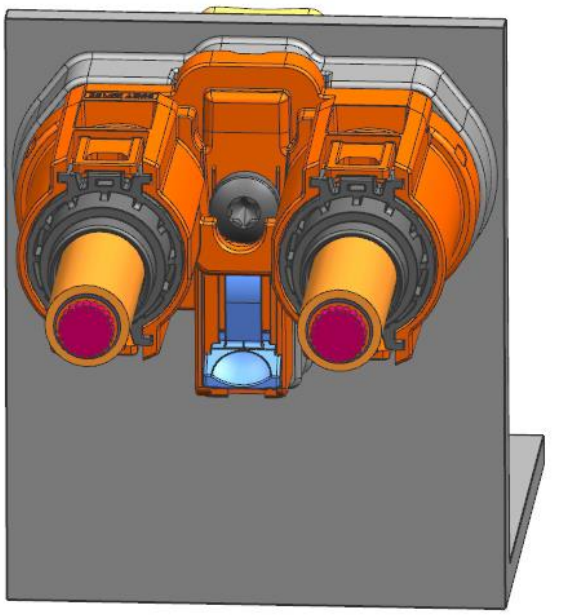


DISASSEMBLY

STEP 1a – Unmating of the Female Connector from its Interface

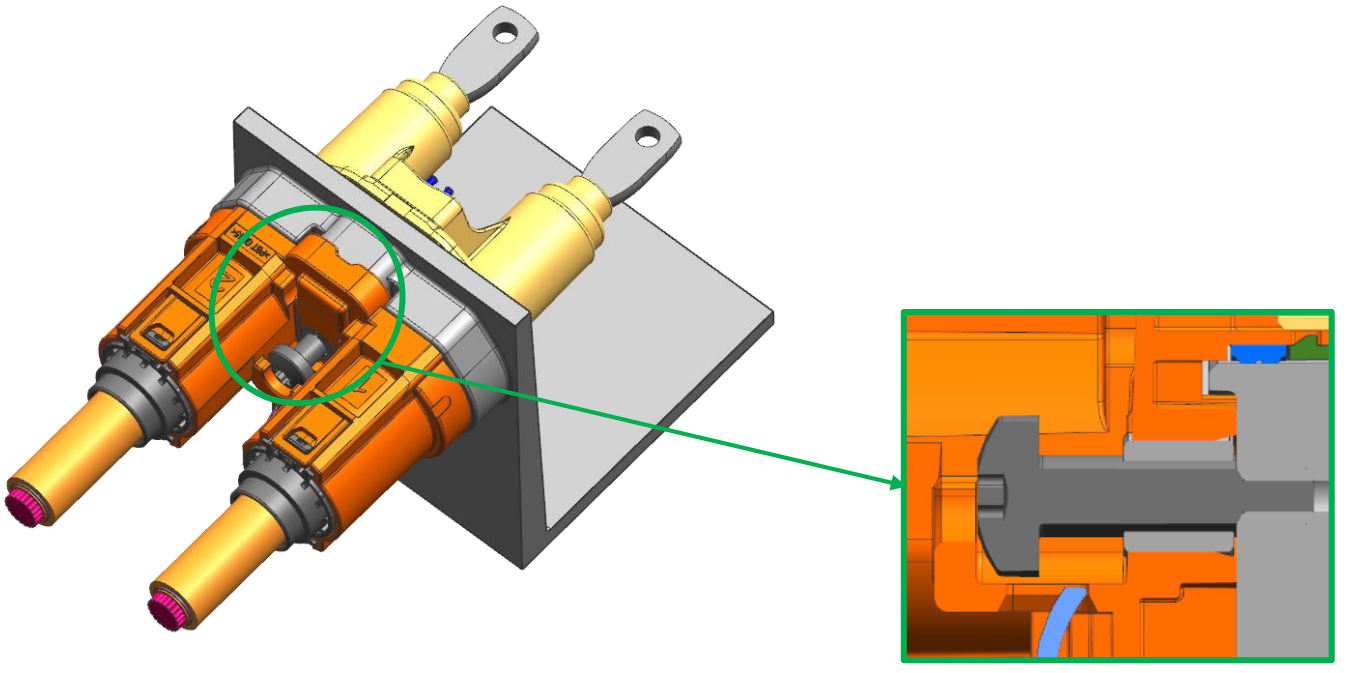
PUSH BACK THE SPA TO PRE-LOCK POSITION..





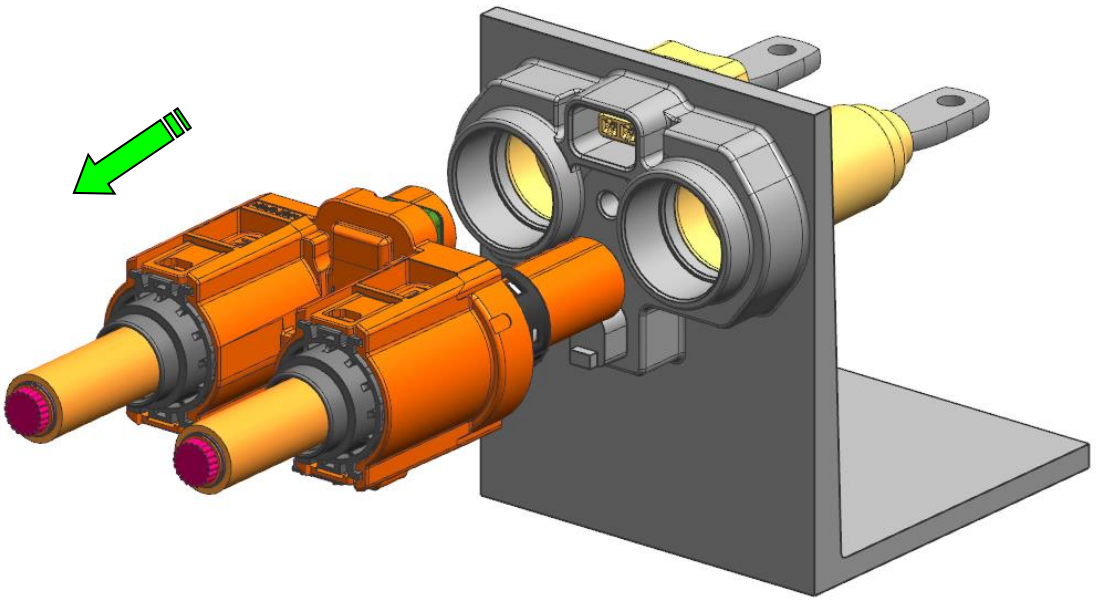
STEP 1b – Unscrew

UNSCREW UNTIL THE SCREW FREE TURNS; THE CONNECTOR IS PULLED BACK AUTOMATICALLY BY THE SCREW.



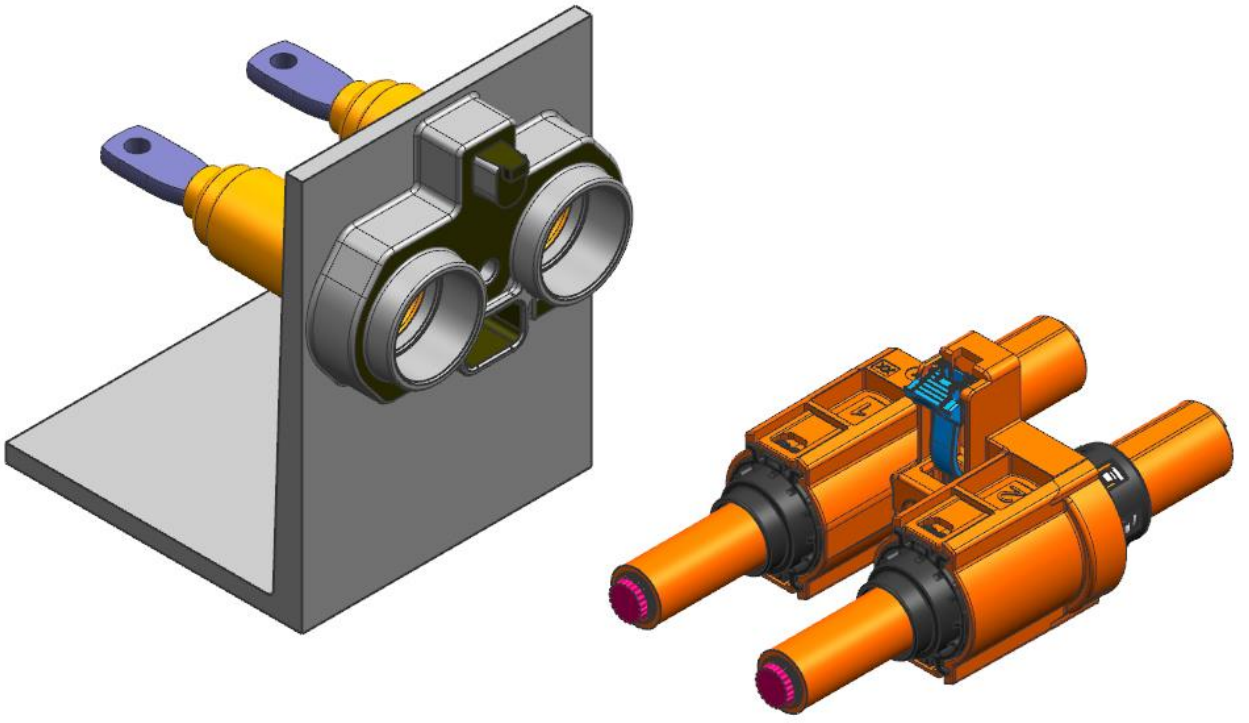
STEP 1c – Unmating of the Female Connector from its Interface

MOVE BACK THE CONNECTOR TO COMPLETELY UNMATE IT.



WARNING : THE REWORK ON LINE BY CONSTRUCTOR AND IN AFTER-SALE IS FORBIDDEN. PARTICULARLY, THE CRIMPING OF TERMINAL BY CONSTRUCTOR IS STRICTLY FORBIDDEN

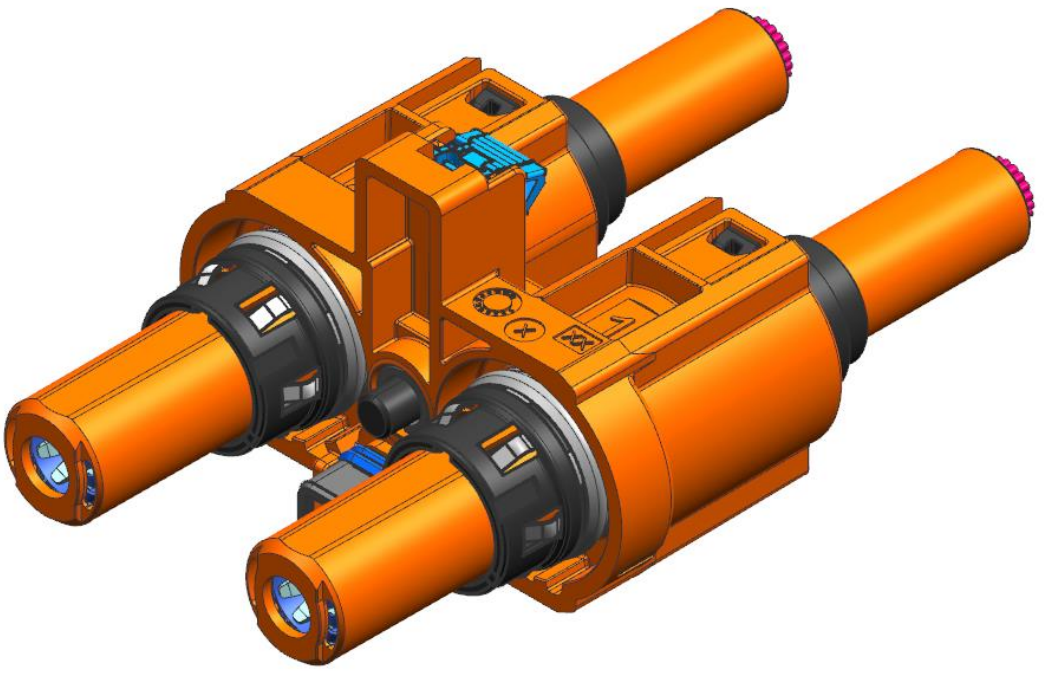
DISASSEMBLY OF THE CONNECTION SYSTEM



DISASSEMBLY OF THE CONNECTION SYSTEM COMPLETED

REPAIR / REPLACEMENT OF THE FEMALE ASSEMBLY

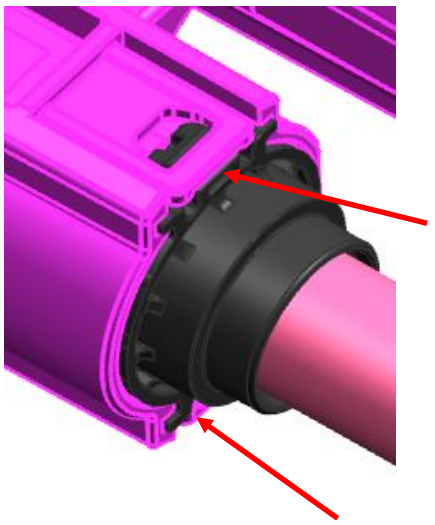
Power Connector 2W Direct Mate RCS800 Connection System

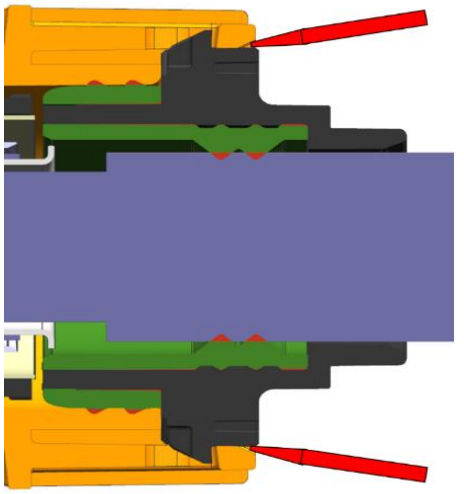


FEMALE TERMINAL REPLACEMENT (Remove Retainer-SWS) – STEP 1a

WARNING : THE REWORK ON CAR ASSEMBLY LINE AND IN AFTER-SALE IS FORBIDDEN.

REMOVE THE RETAINER-SWS USING A 3 mm FLAT TOOL. USE THE TIP AS THE LEVER SO THE RETAINER'S CLIP IS NO MORE HELD BY THE HOUSING.

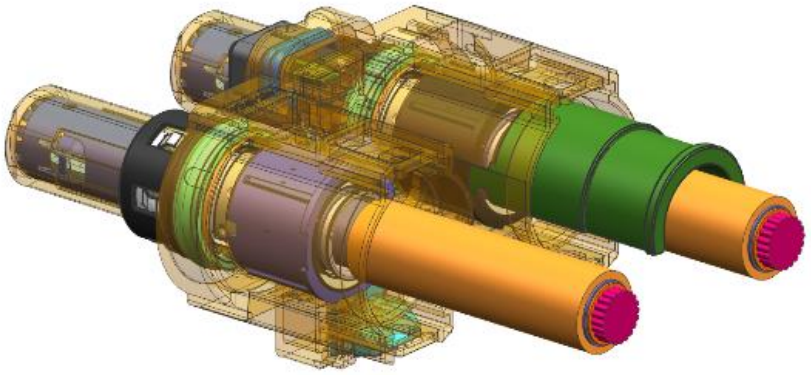


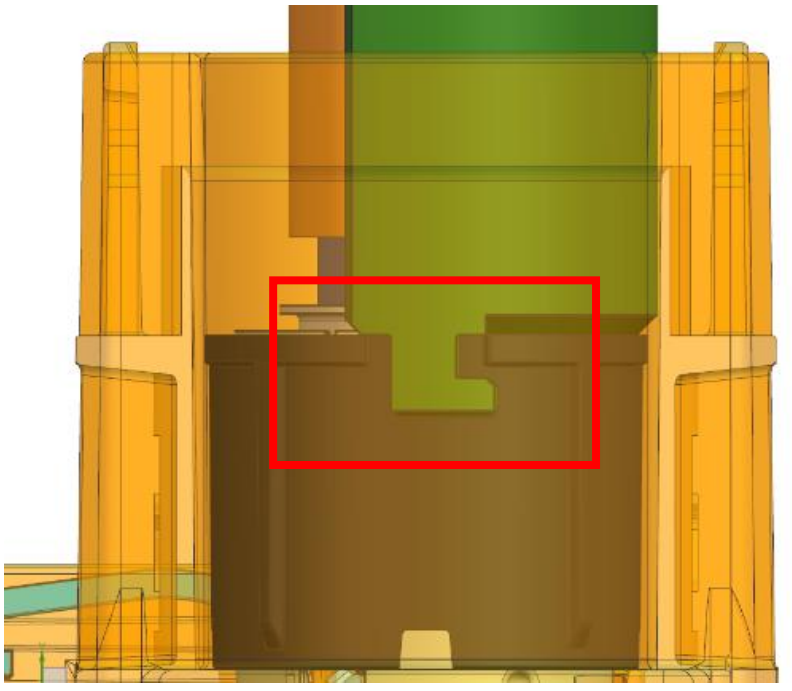


WARNING: DO NOT DAMAGE THE HOUSING PLASTIC RETENTION ZONES.

FEMALE TERMINAL REPLACEMENT (Insert Tube Removing Tool) – STEP 1b

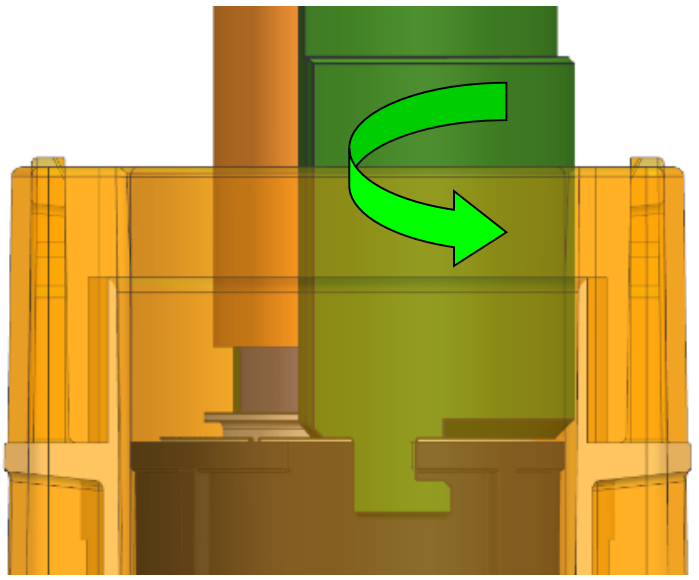
INSERT THE TUBE REMOVING TOOL. THE TOOL LEGS MUST BE INSIDE THE OPENINGS OF THE TUBE.

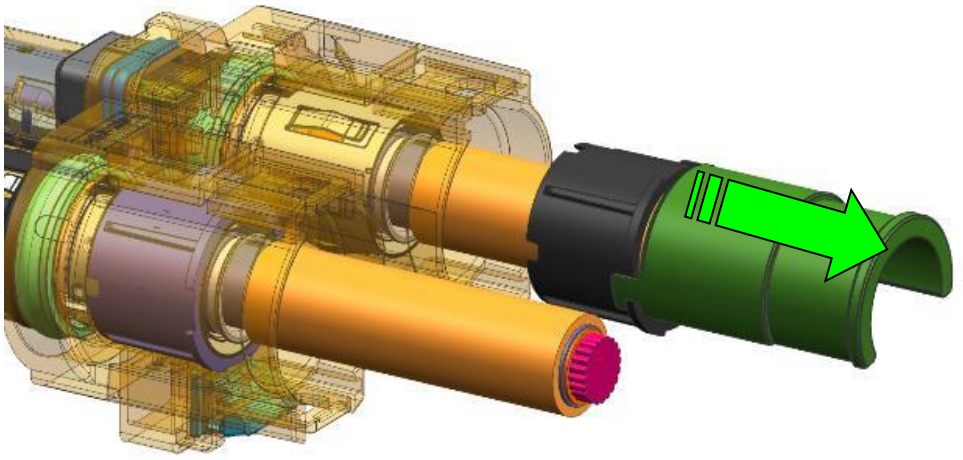




FEMALE TERMINAL REPLACEMENT (Removal of Retainer-SWS) – STEP 1c

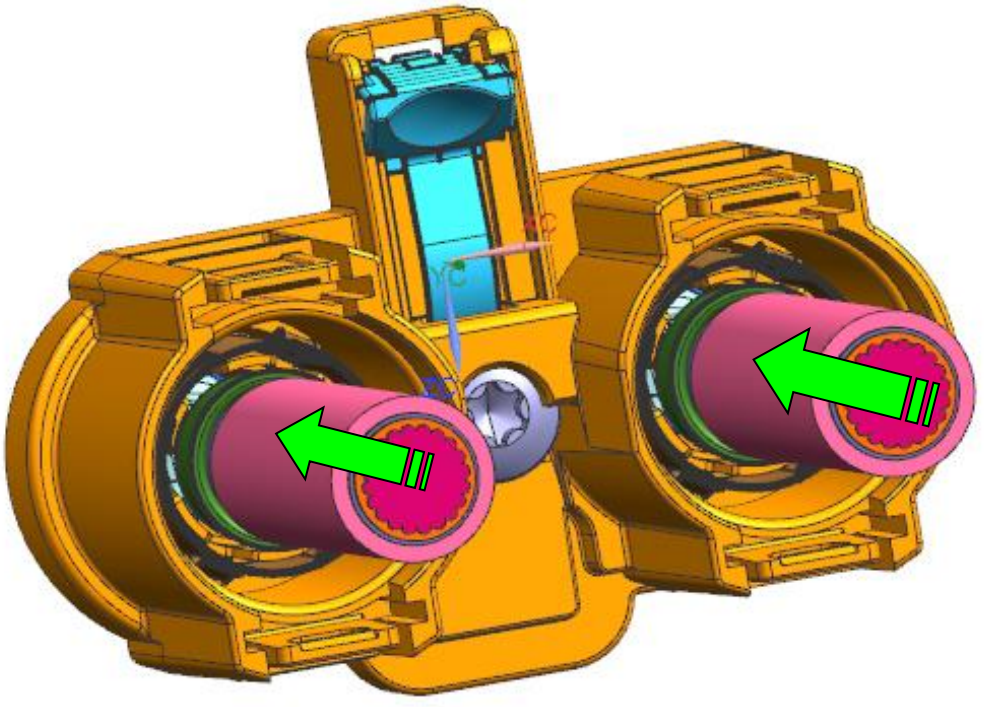
ROTATE THE TOOL TO SECURE IT INTO THE TUBE THEN PULL TO REMOVE THE TUBE.





FEMALE TERMINAL REPLACEMENT (Remove of Terminal) – STEP 2a

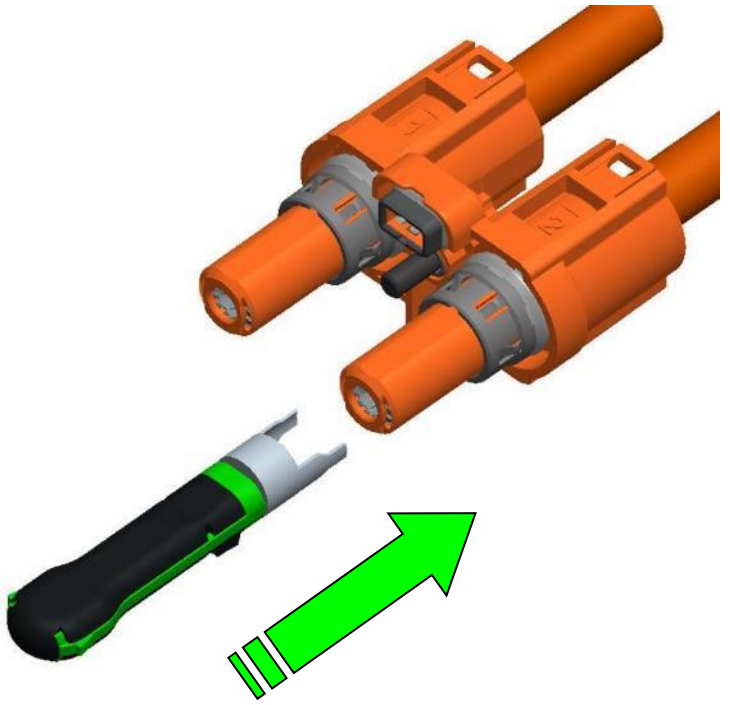
PULL ON THE WIRE IN ORDER TO PUT THE TERMINAL IN FRONT STOP.



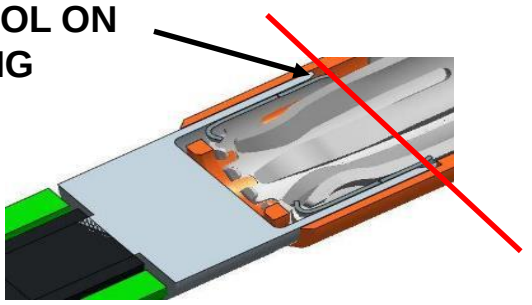
PUSH ON WIRE SWS TUBE

FEMALE TERMINAL REPLACEMENT (Insert Removing Tool) – STEP 1b

INSERT THE REMOVING TOOL FOR THE FEMALE TERMINAL UNTIL ITS STOP.

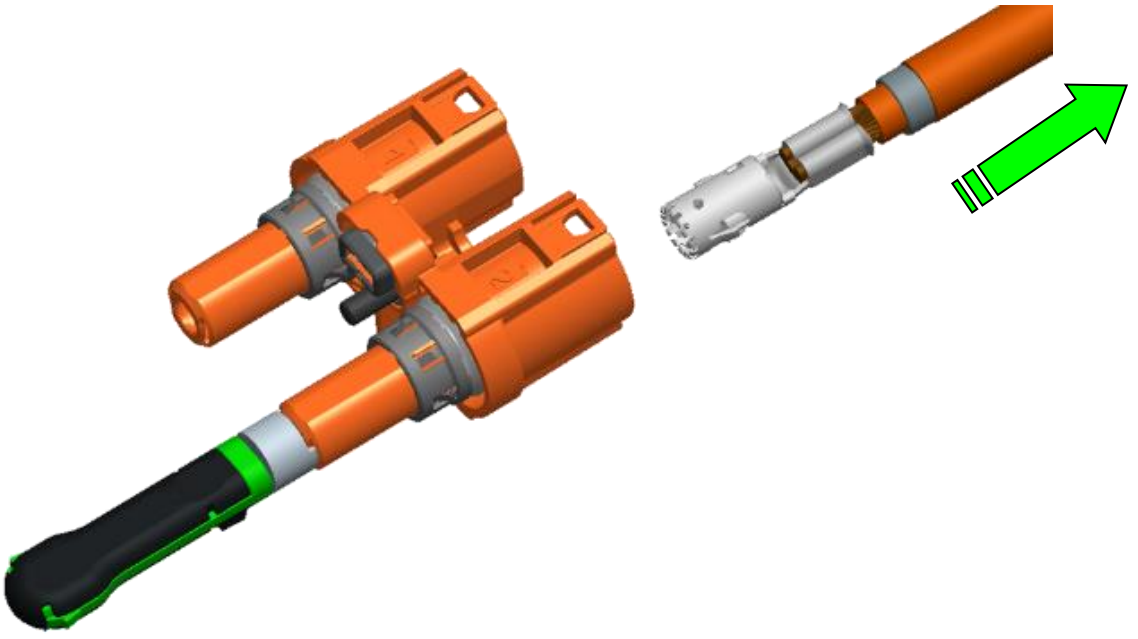


STOP OF THE TOOL ON THE HOUSING



FEMALE TERMINAL REPLACEMENT (Removal of Terminal) – STEP 1c

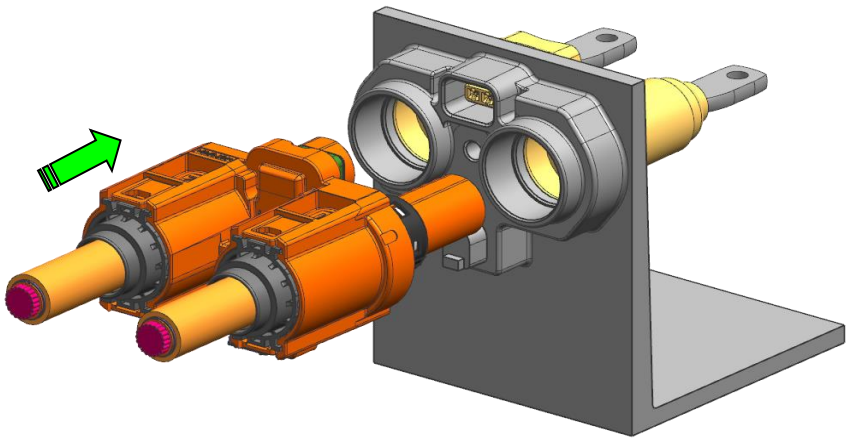
PULL OUT ON WIRE TO EXTRACT TERMINAL AND SEAL

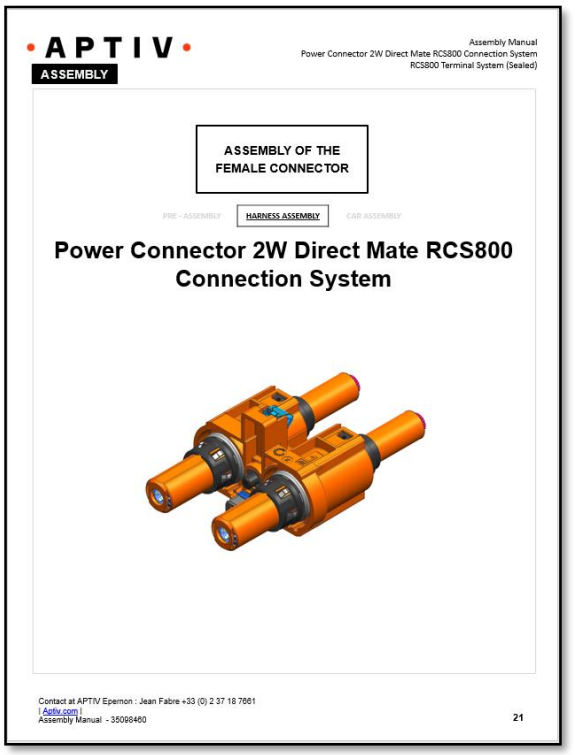


REWORK ON THE SHIELDING IS FORBIDDEN.

FEMALE TERMINAL REPLACEMENT (Insert Terminal) – STEP 3

REFER TO HARNESS ASSEMBLY SECTION

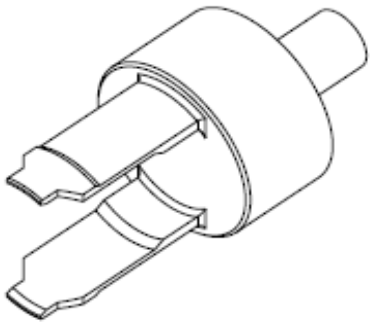


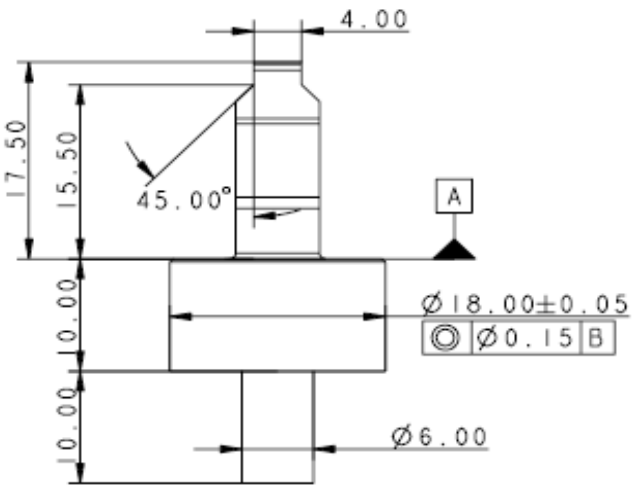


REPAIR / REPLACEMENT OF FEMALE CONNECTOR COMPLETED

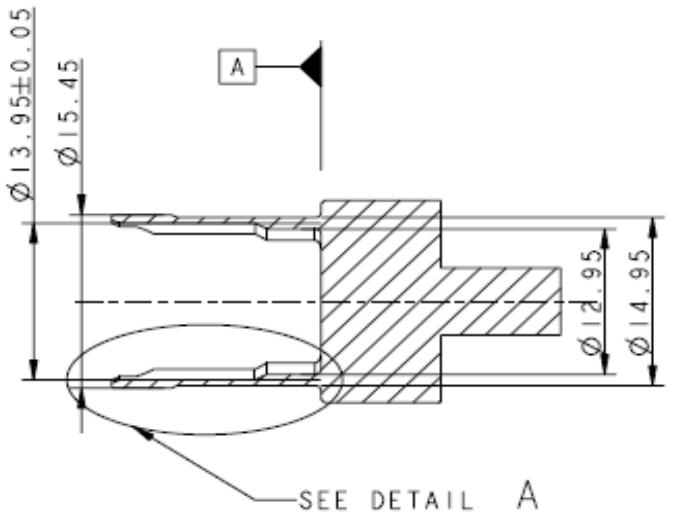
ANNEX 1

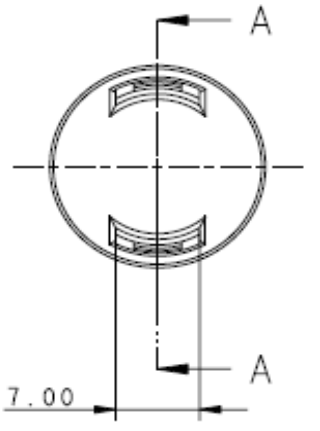
1 REMOVING TERMINAL TOOL RCS800

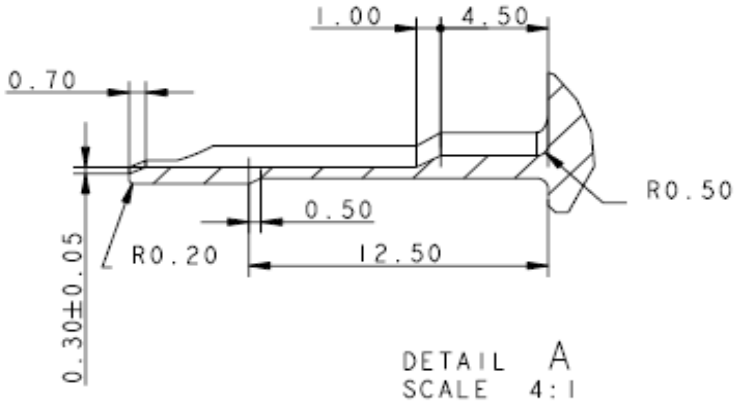




SECTION A - A



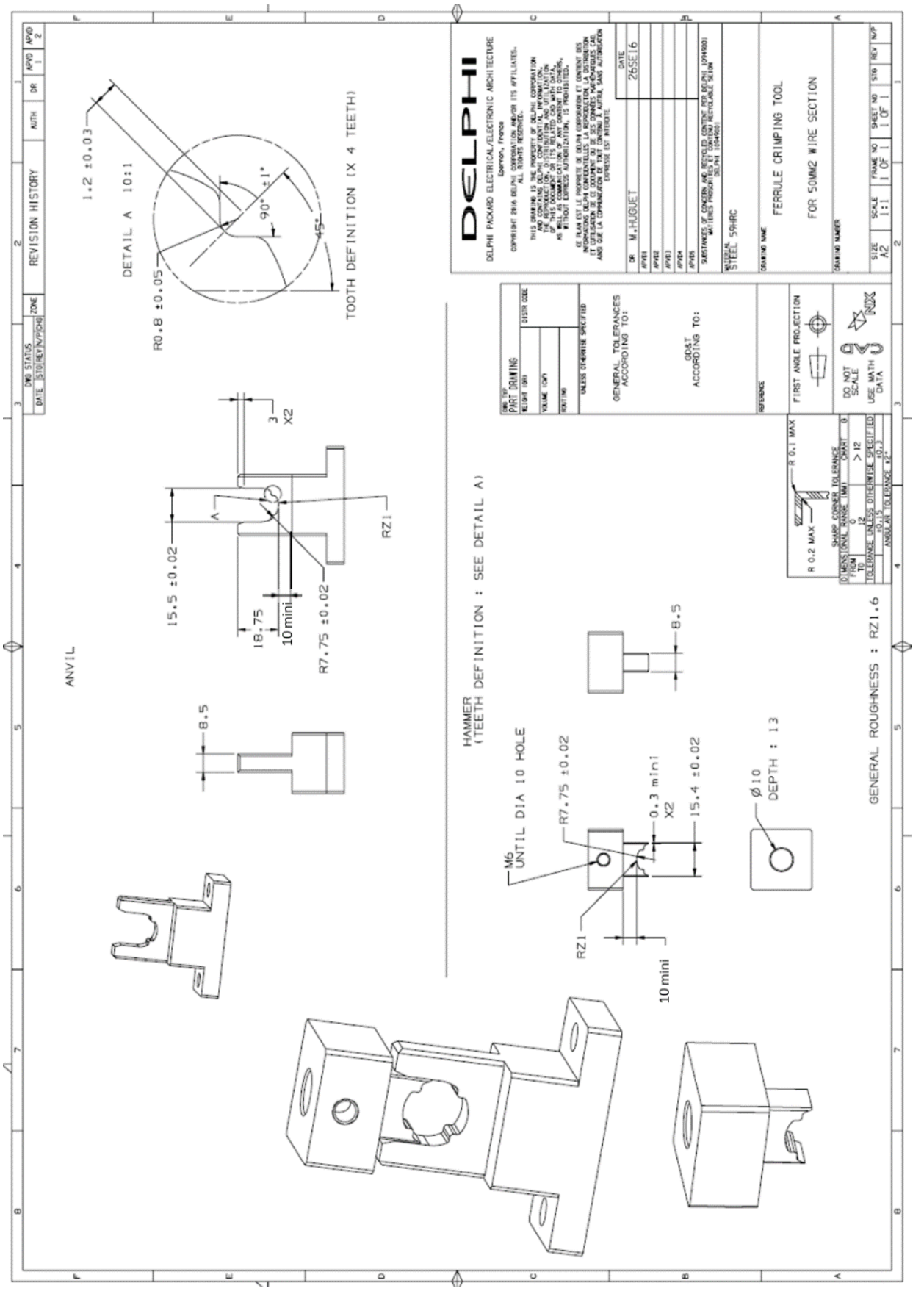




DETAIL A
SCALE 4:1

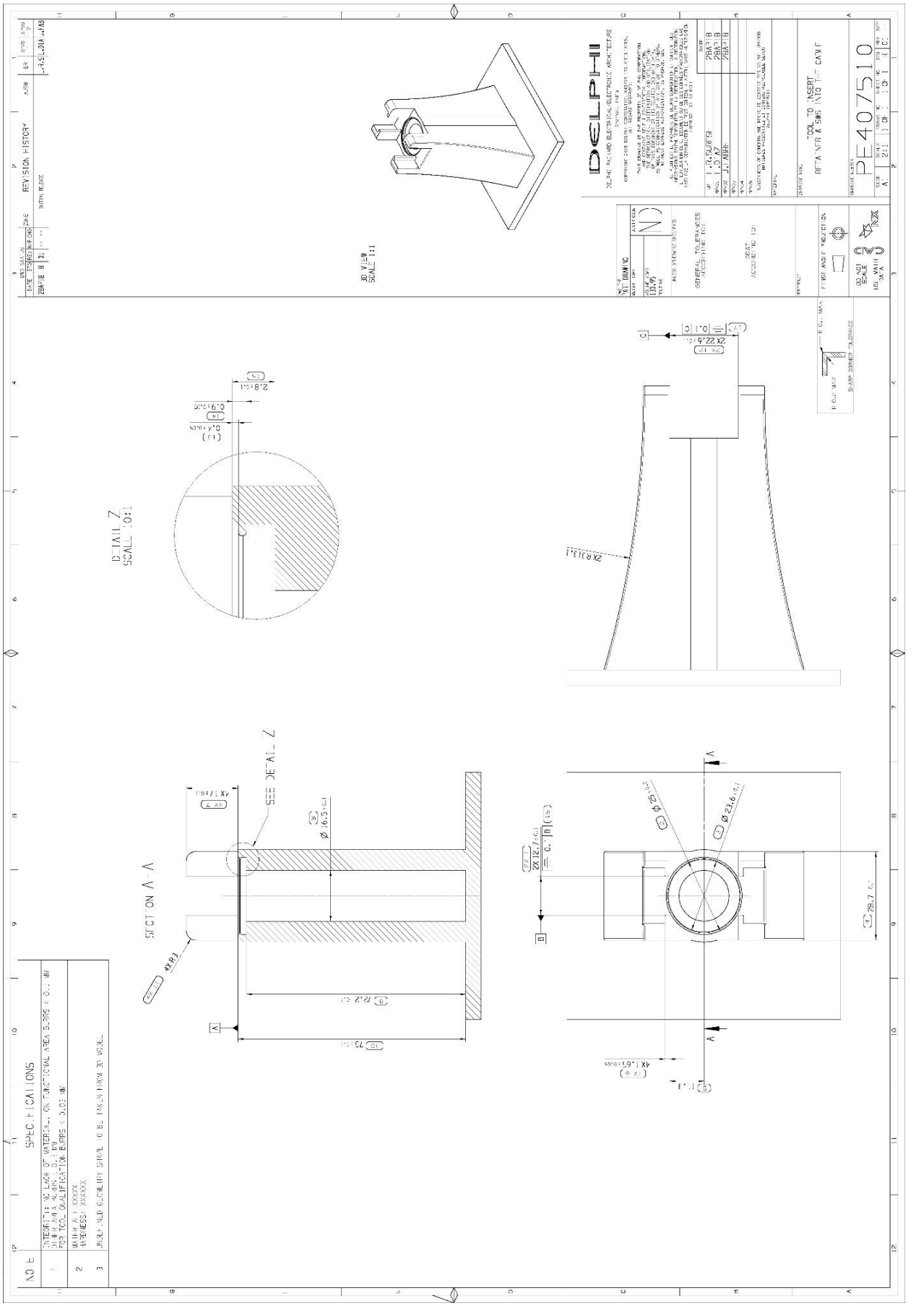
ANNEX 2

2 CRIMPING TOOL FOR FERRULE 15.6



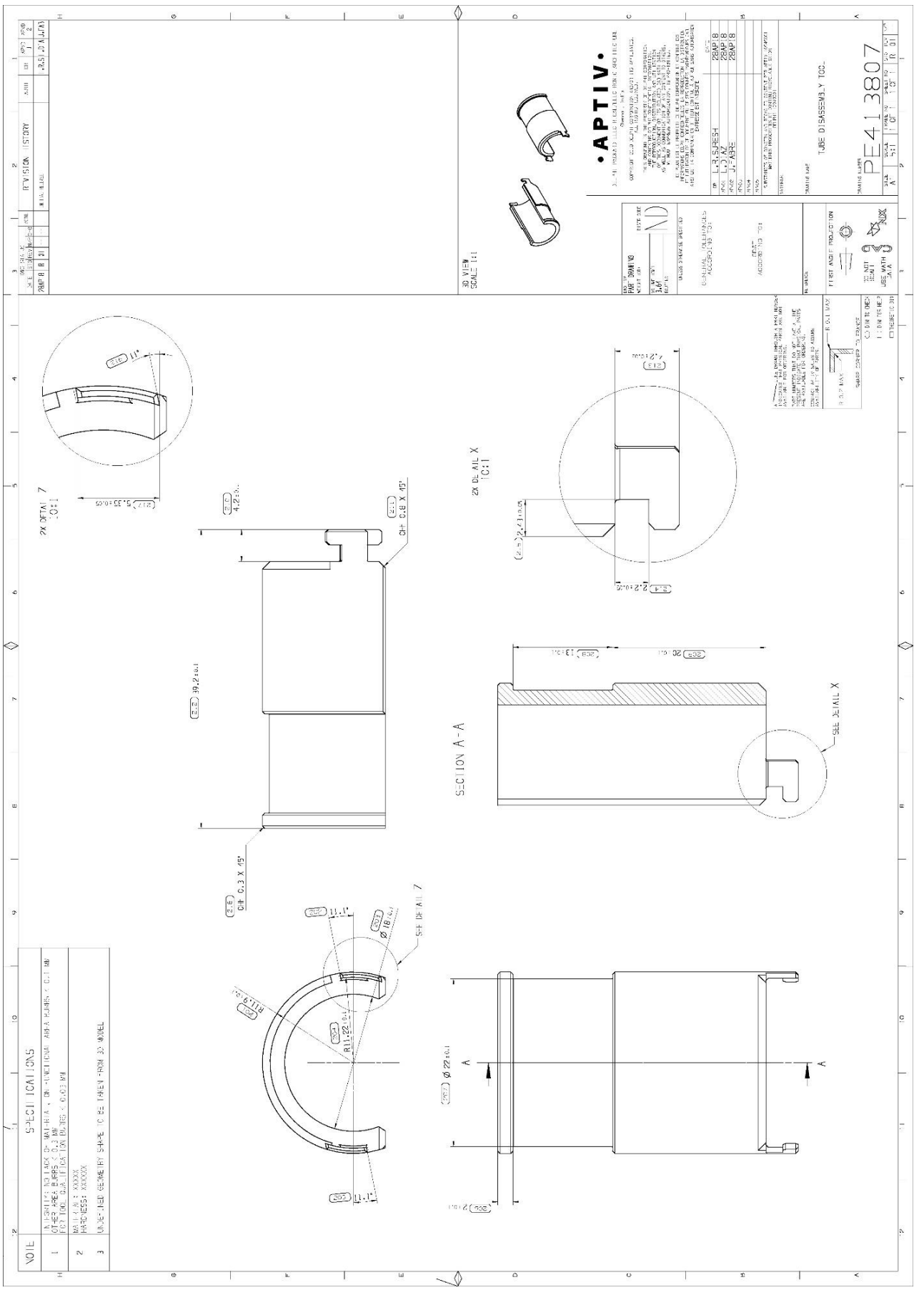
ANNEX 3

3 INSERTION TOOL FOR RETAINER-SWS ON HARNESS



ANNEX 4

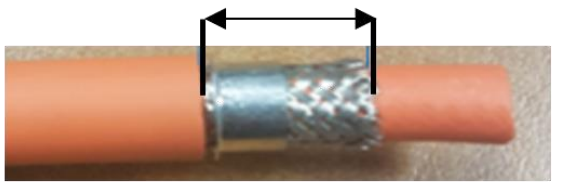
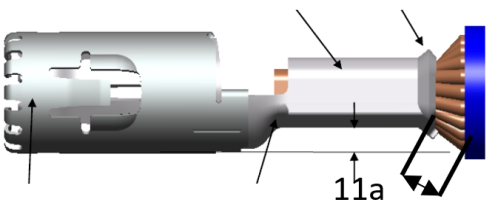
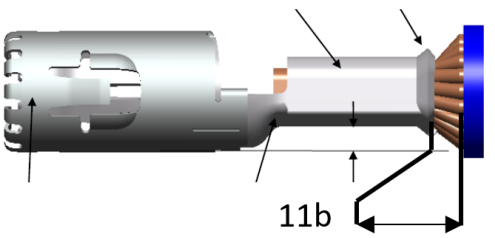
4 TUBE DEMOUNTING TOOL

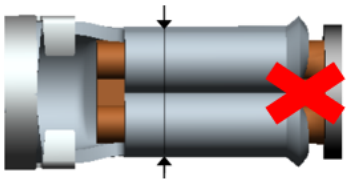


ANNEX 5

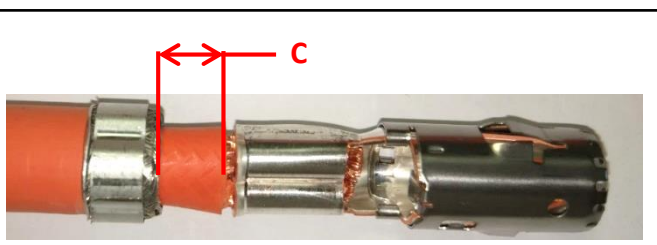
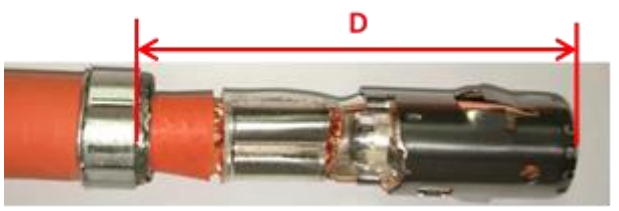
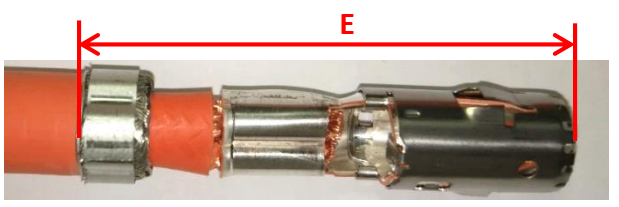
PRODUCT:	**35098453 (PLUG CONNECTOR 2 WAYS RCS800)**
HARNESS-MAKER:	**LEONI**
WIRE REFERENCE:	**LEONI FHLR2GCB2G 00009 (35MM²)**

RECOMMENDED PROCESS DIMENSIONS

STEP	OPERATION	DIMENSION
3a	**STRIPPING OF THE MANTLE** 	**33 ± 1 mm**
4a	**CUTTING OF THE BRAID** 	**17 ± 2 mm**
4b	**PRE-STRIPPING OF THE INSULATION** 	**16 ± 1 mm**
7	 	**11a = 1,8 ± 1 mm OR 11b = 1,5 ± 1 mm**

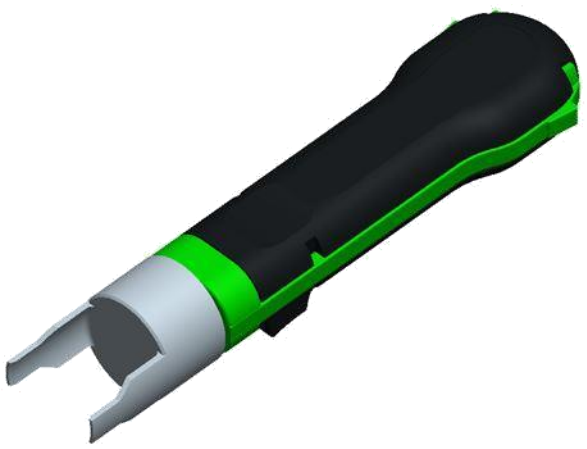
7 (Cont.,)	 Measurement to be done on this side  Not measured on this side	

DIMENSIONS TO BE RESPECTED AFTER CRIMPING

REFERENCE	DIMENSION	VALUE AND TOLERANCE
C		**C = $8,0^{+2,4}_{-2,5}$ mm**
D		**D = 58,6 ± 2,4 mm**
E		**E = 66,5 ± 2,4 mm**

RECOMMENDED REPAIR TOOLS

1



REMOVING TERMINAL TOOL RCS800

2

TUBE DEMOUNTING TOOL

ITEM	APTIV PART NUMBER
1	33512654
2	TBD

REVISIONS

DATE	REV	REVISION HISTORY	AUTH
31JL20	01	RELEASED	-