72 WAY BCM CONNECTOR

TABLE OF CONTENT

1 GENERAL

1.1 PURPOSE

THIS SPECIFICATION DESCRIBES HOW YOU HANDLE THE 72 WAY CONNECTOR COMPONENTS.

1.2 CUSTOMER DRAWINGS

THIS APPLICATION SPECIFICATION IS BASED ON THE LATEST VALID CUSTOMER DRAWING

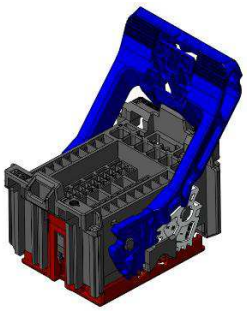
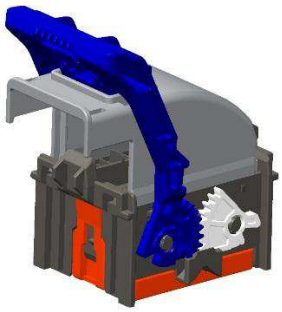
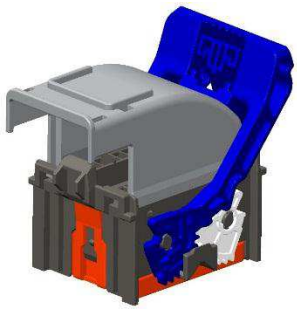
C-2287336 72 WAY CONNECTOR

INTERFACE SPECIFICATION

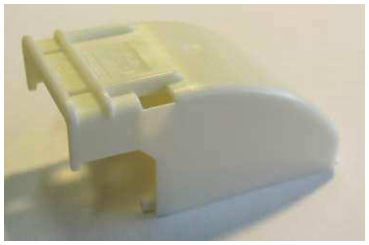
114-94384 72 WAY CONNECTOR

1.3 DELIVERY CONDITION

Table 1: lever position during delivery condition

Delivery Position From TE to harness maker	**Unmated Position** From harness maker to OEM	**Mated Position** (by usage)
		
Lever in END-LOCK position TPA in PRE-LOCK position Cover unmounted	Lever in PRE-LOCK Position TPA in END-LOCK position Cover mounted	Lever in END-LOCK Position TPA in END-LOCK position Cover mounted
This is the position in which the part will be shipped to harness maker.	Harness maker loads terminals and assembles Wire Dress cover. Moves lever to the pre-mate position.	Operator mates to BCM by rotating lever to final position.

1.3.1 72 WAY CONNECTOR CODINGS

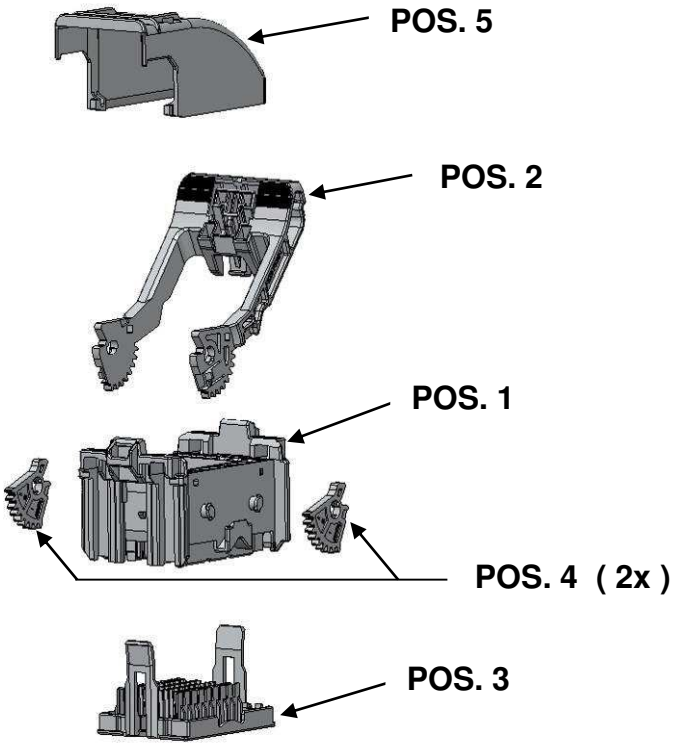
72 WAY CONNECTOR ASSYEMBLY	2287336-1 COLOR: **BLACK** 2287336-2 COLOR: **GRAY**	 
72 WAY COVER TO BE ORDERED SEPARATELY	2287341-2	

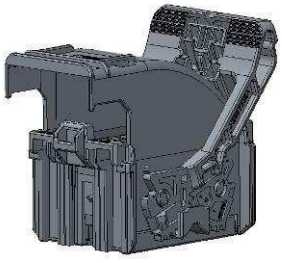
1.3.2 TERMINALS FOR 72 WAY CONNECTOR

0.64 GENERATION Y	USEABLE CONTACTS SHOWN ON TE CUSTOMER DRAWING 2287336	
MX150 OR YAZAKI 1.5	USEABLE CONTACTS SHOWN ON TE CUSTOMER DRAWING 2287336	
FCI APEX 2.8 OR SUMITOMO 2.8	USEABLE CONTACTS SHOWN ON TE CUSTOMER DRAWING 2287336	

2. 72 WAY CONNECTOR

2.1 ASSEMBLY OF THE 72 WAY CONNECTOR





POS. 1 HOUSING - 72 WAY UNSEALED HYBRID PLUG

POS. 2 LEVER - 72 WAY UNSEALED HYBRID PLUG

POS. 3 TPA - 72 WAY UNSEALED HYBRID PLUG

POS. 4 PINION GEAR - 72 WAY UNSEALED HYBRID PLUG

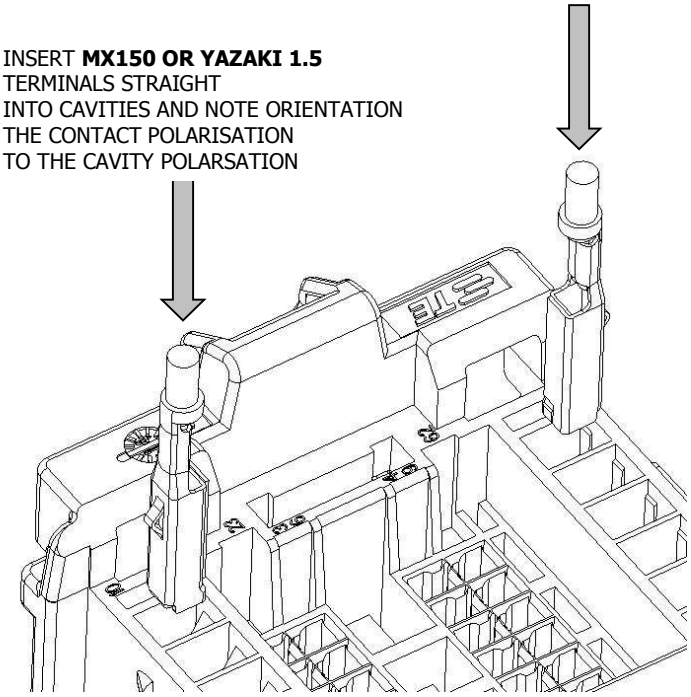
POS. 5 COVER - 72 WAY UNSEALED HYBRID PLUG

2.2 TERMINAL INSERTION INSTRUCTION

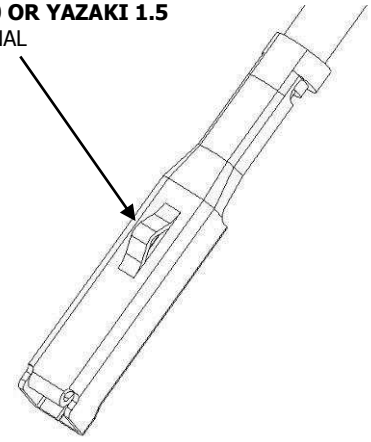
CAUTION

*DURING TERMINAL INSERTION THE LEVER SHOULD NOT BE MOVED OUT OF THE **END-LOCK POSITION** (DELIVERY CONDITION FROM TE TO HARNESSMEKER SEE FOR REFERENCE CHAPTER 1.3)*

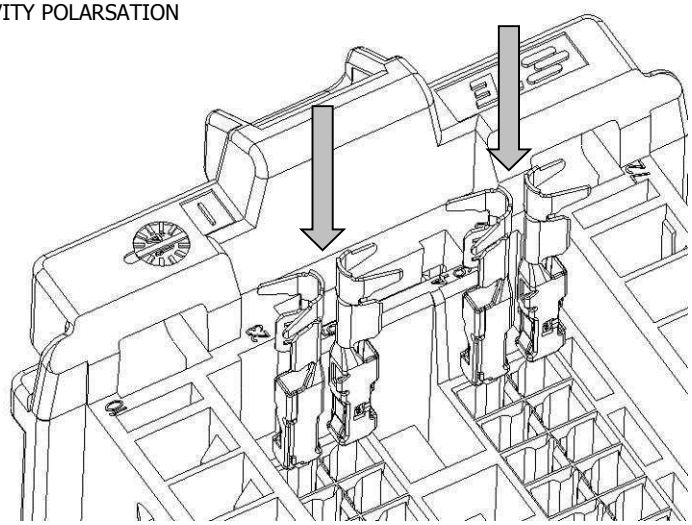
INSERT **MX150 OR YAZAKI 1.5**
TERMINALS STRAIGHT
INTO CAVITIES AND NOTE ORIENTATION
THE CONTACT POLARISATION
TO THE CAVITY POLARSATION



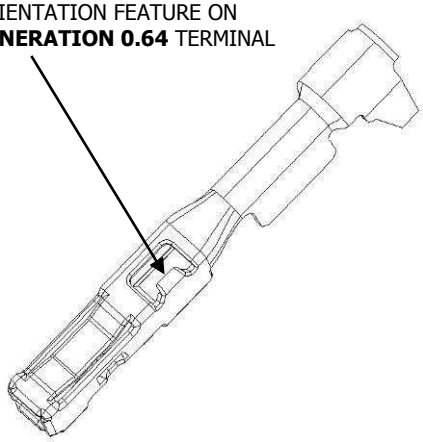
ORIENTATION FEATURE ON
MX150 OR YAZAKI 1.5
TERMINAL



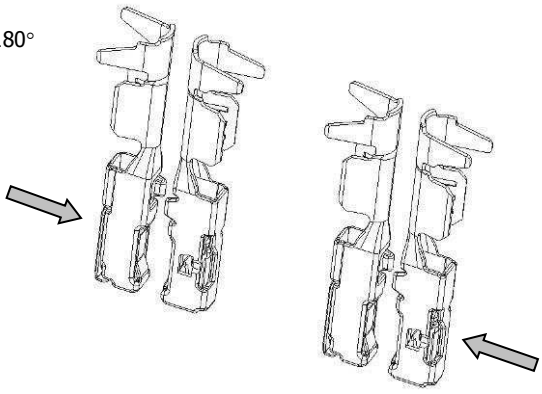
INSERT **GENERATION 0.64** TERMINALS STRAIGHT
INTO CAVITIES AND NOTE ORIENTATION
THE CONTACT POLARISATION
TO THE CAVITY POLARSATION



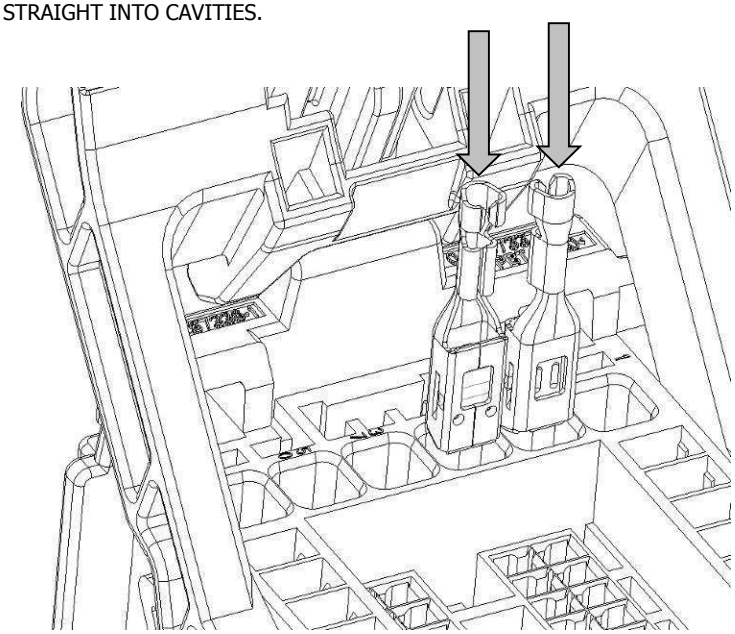
ORIENTATION FEATURE ON
GENERATION 0.64 TERMINAL



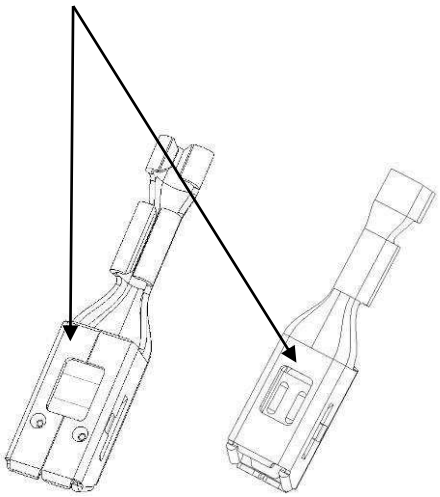
OUTER TERMINAL ROW ORIENTED 180°
FROM INSIDE TERMINAL ROW



INSERT **SUMITOMO 2.8 OR FCI APEX 2.8** TERMINALS
STRAIGHT INTO CAVITIES.



NO ORIENTATION FEATURE ON **SUMITOMO 2.8 OR FCI APEX 2.8** TERMINAL
BOTH ORIENTATIONS 0° AND 180° ALLOWED



INSERT TERMINALS UNTIL AN AUDIBLE '**CLICK**' IS HEARD OR FELT
TERMINALS ARE NOW LOCKED INTO THE CAVITY

CAUTION

ASSURE THAT TERMINALS ARE FULLY LOCKED INTO CAVITIES

2.3 TPA GENERAL INFORMATION

For the terminal position assurance (TPA) three different mating position exists:

- TPA in End-lock position (delivery condition from harness maker to OEM)
- TPA in Pre-lock (delivery condition from TE to harness maker)
- Removed position (service of contacts)

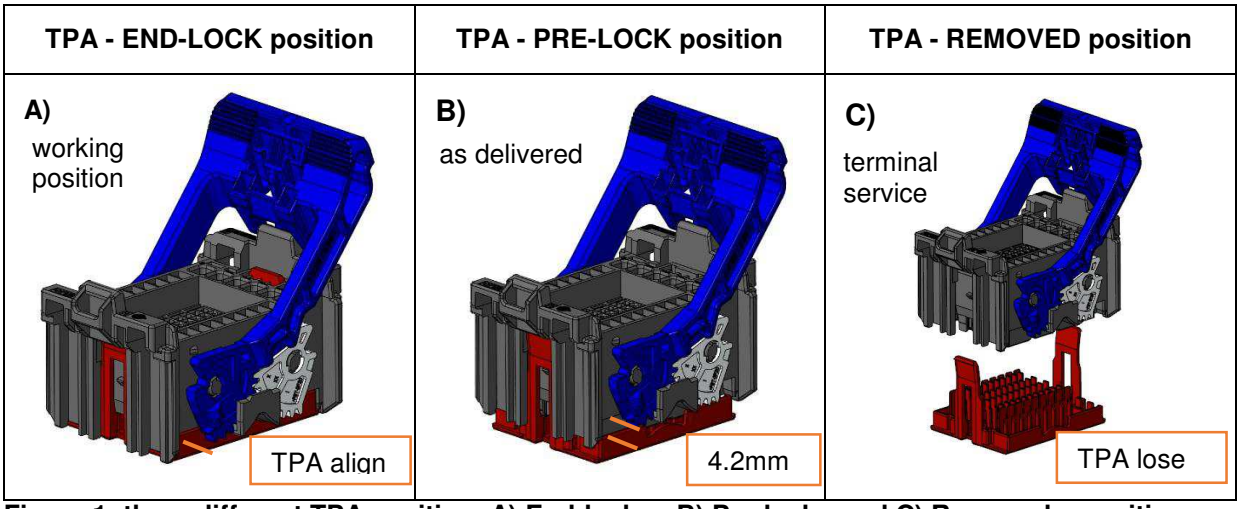


Figure 1: three different TPA position, A) End-lock - , B) Pre-lock - and C) Removed – position

2.3.1 TPA INSERTION INFORMATION - FROM PRE-LOCK TO END-LOCK POSITION

After terminal insertion, push both TPA latches to each other as shown in Figure 2 (step 1). If both locking features are unlocked, you can push the TPA into the End-lock position, as show in Figure 3 (step 2). If the TPA is complete installed, both locking latches should be locked as shown in Figure 4 (step 3).

Step 1:

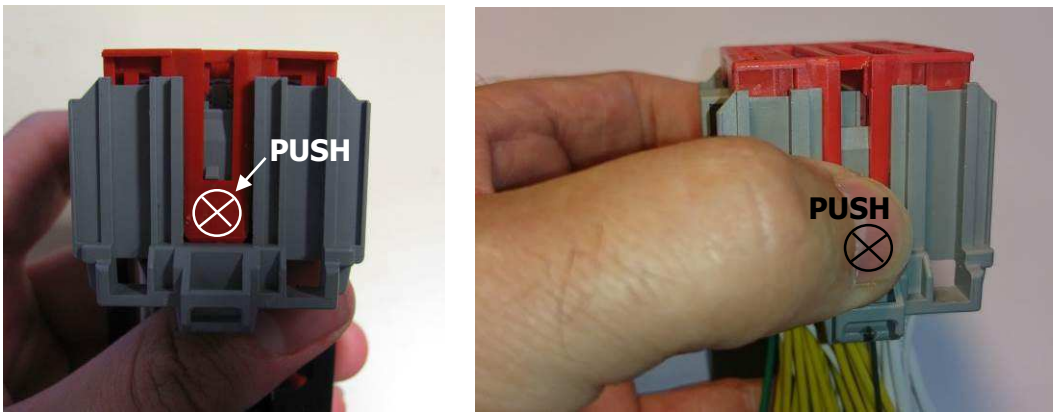
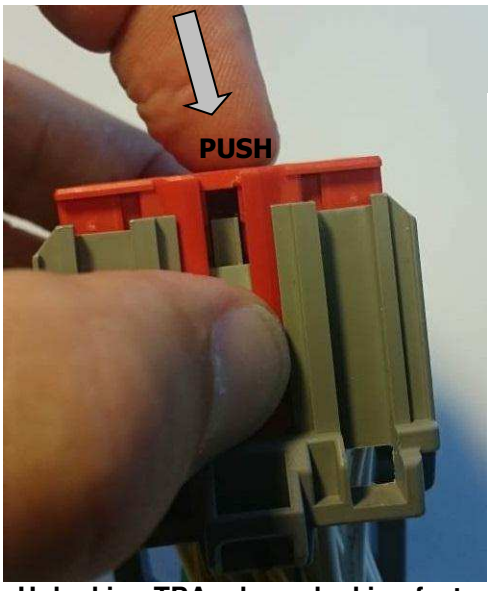


Figure 2: Unlock TPA latch in order to release TPA for insertion

Step 2:



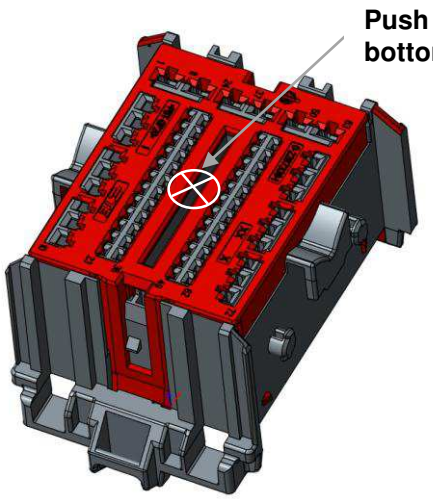


Figure 3: Unlocking TPA release locking feature with thumb and ring finger, than push the TPA bottom surface to the end-lock position

Step 3:

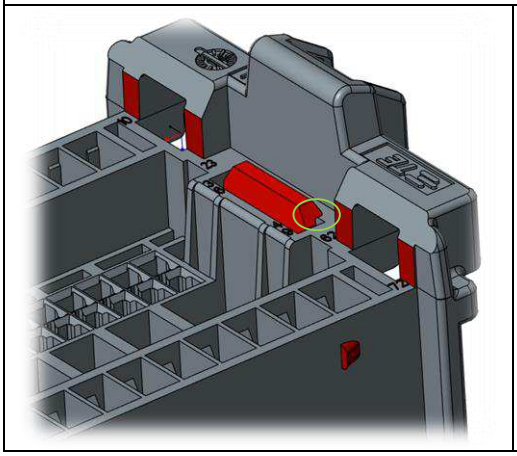
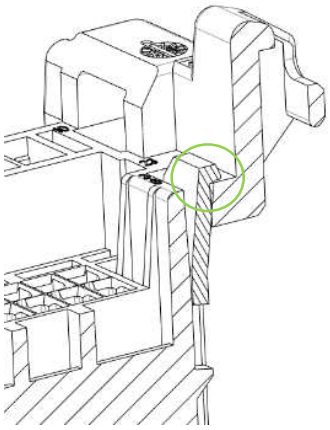
TPA locking feature in END-LOCK position		Locked TPA on 72way BCM Connector
		

Figure 4: TPA in end-lock position with terminals installed

CAUTION

Make sure both locking feature are locked as shown in Figure 4

2.3.2 TPA REMOVAL INSTRUCTION - FROM END-LOCK TO REMOVED POSITION (SERVICE CASE)

In case for service, the operator should remove the TPA in 5 steps.

NOTE

BEFORE TO REMOVE THE TERMINALS THE TPA MUST BE DISMANTLED
UNLOCK THE TPA ON BOTH SIDES USING THE EXTRACTION TOOL 1452426-1

Remove the locking latch by using the extraction tool 1452426-1. Unlock both latches as shown in Figure 5. During the removal process the connector lever should not be moved. In the case that the lever was moved out of the end-lock position (see for reverence Table 1) the operator should return the lever for lever unlocking as described in step one of chapter “2.6.3 cover removal instruction”.

CAUTION

DURING TPA REMOVAL THE LEVER SHOULD NOT BE MOVED OUT OF THE ***END-LOCK POSITION*** *(DELIVERY CONDITION FROM TE TO HARNESSMEKER SEE FOR REFERENCE CHAPTER 1.3)*

Step 1:

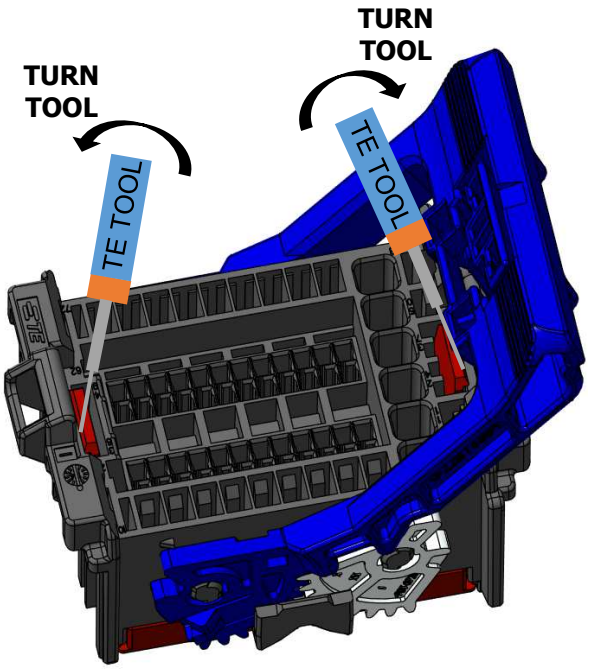


Figure 5: Unlock of TPA latch

NOTE

IF THE LOCKING FEATURES ARE UNLOCKED YOU CAN PULL TPA TO PRESET POSITION.

Step 2:

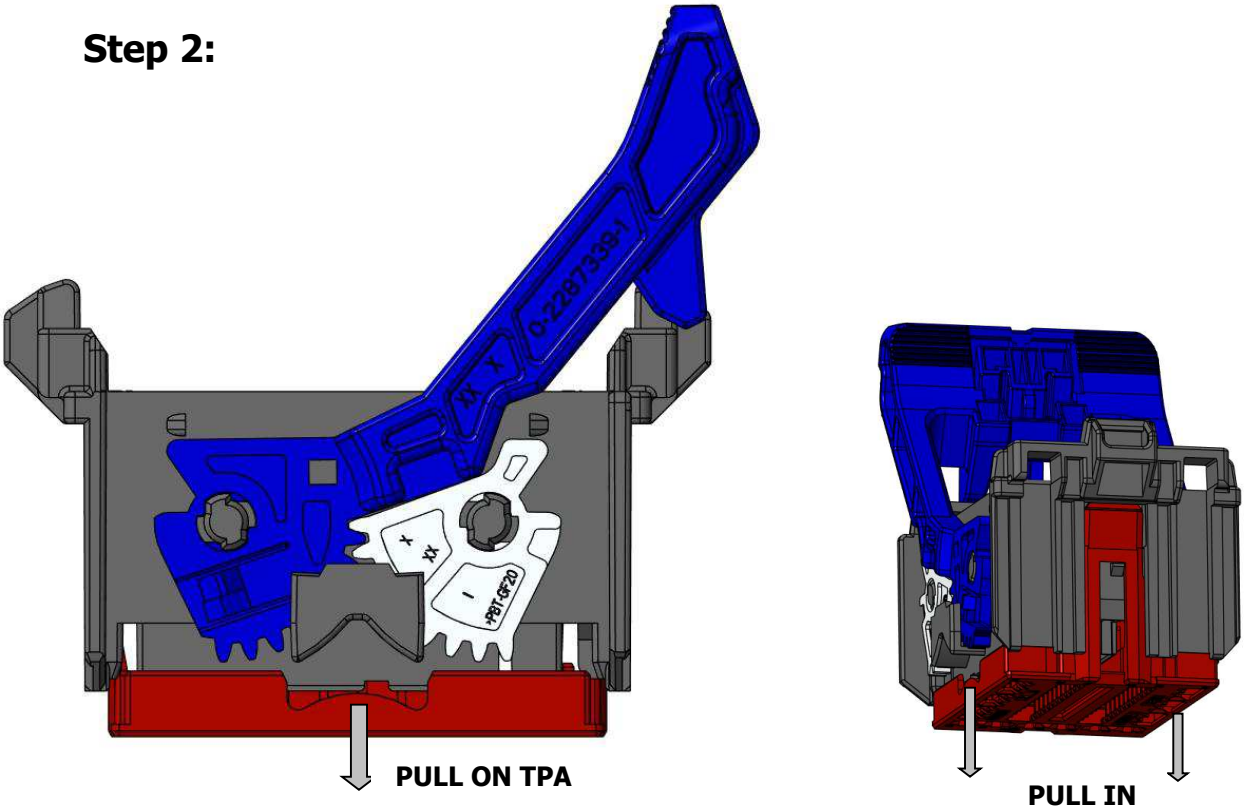


Figure 6: Pull out of TPA in both sides as shown

Step 3:

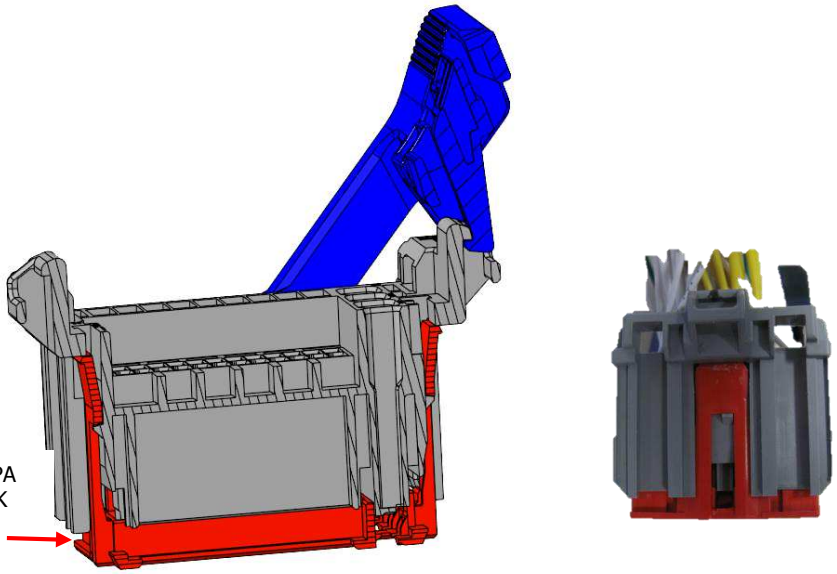


Figure 7: TPA will stop in pre-lock position as shown

INSERT THE EXTRACTION TOOL 1452426-1 FROM THE TOP AND LEVERAGE TPA OVER THE LOCKING LATCH.

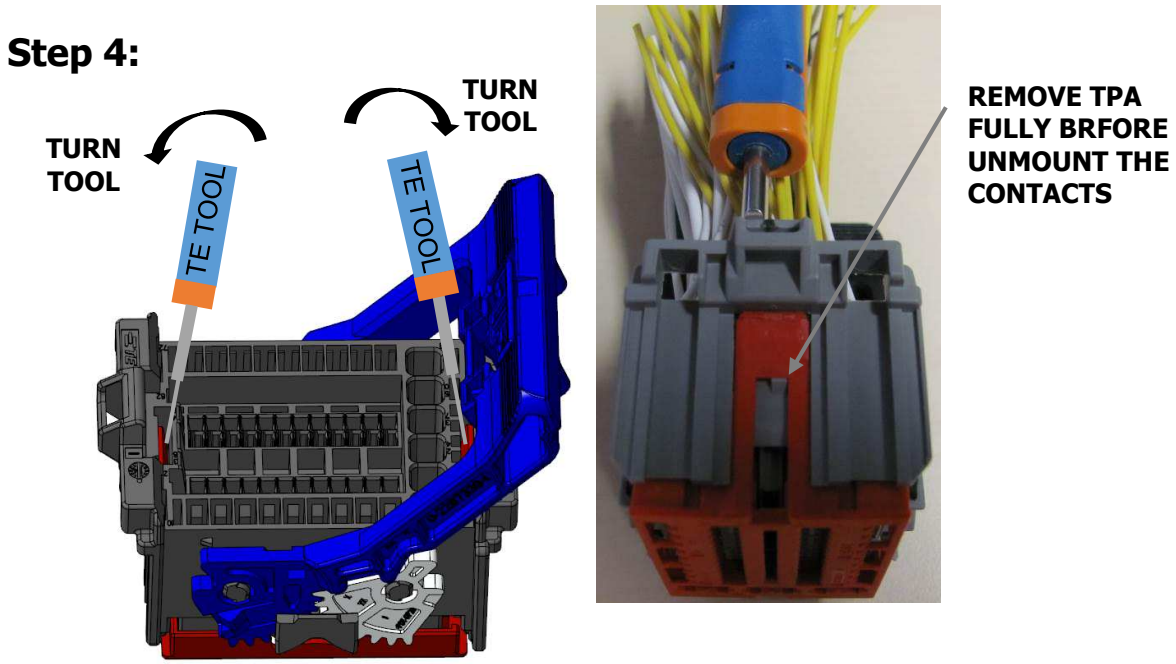


Figure 8: Insert TE extraction tool TE PN 0-1452426-1

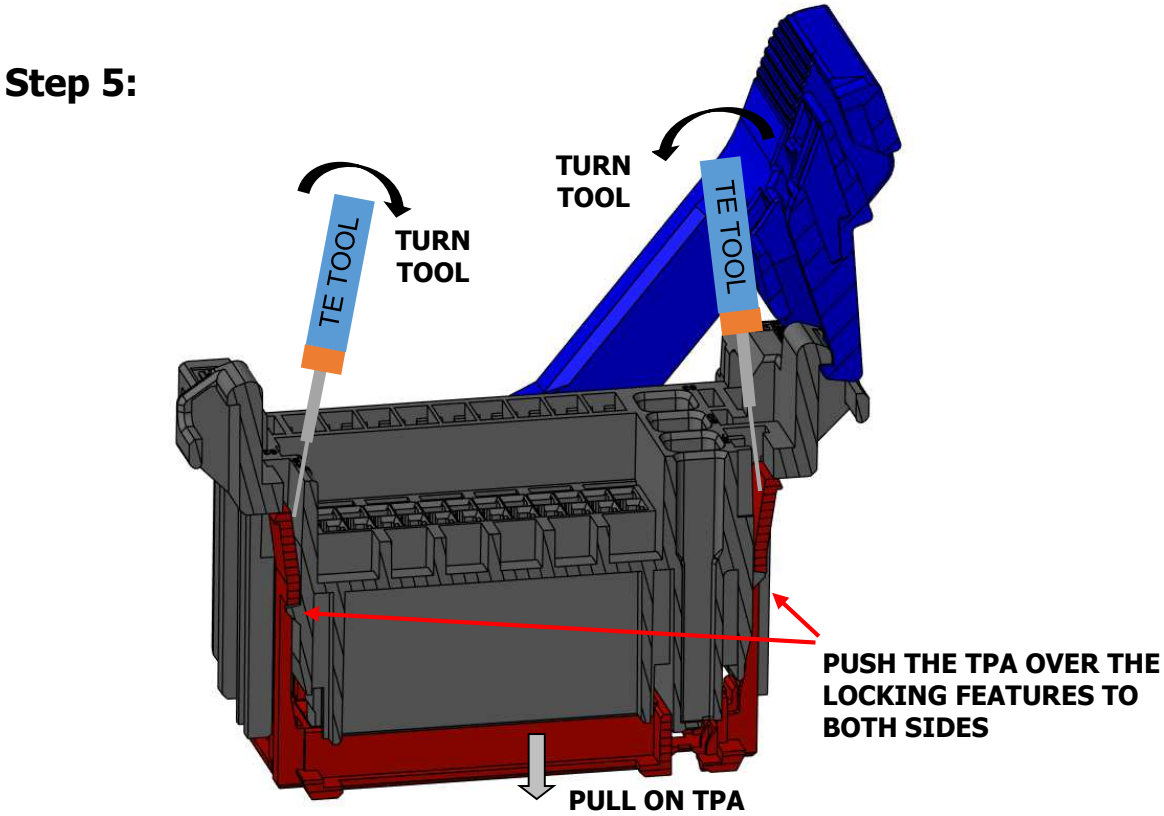


Figure 9: Unlock locking latch from pre-lock position as shown

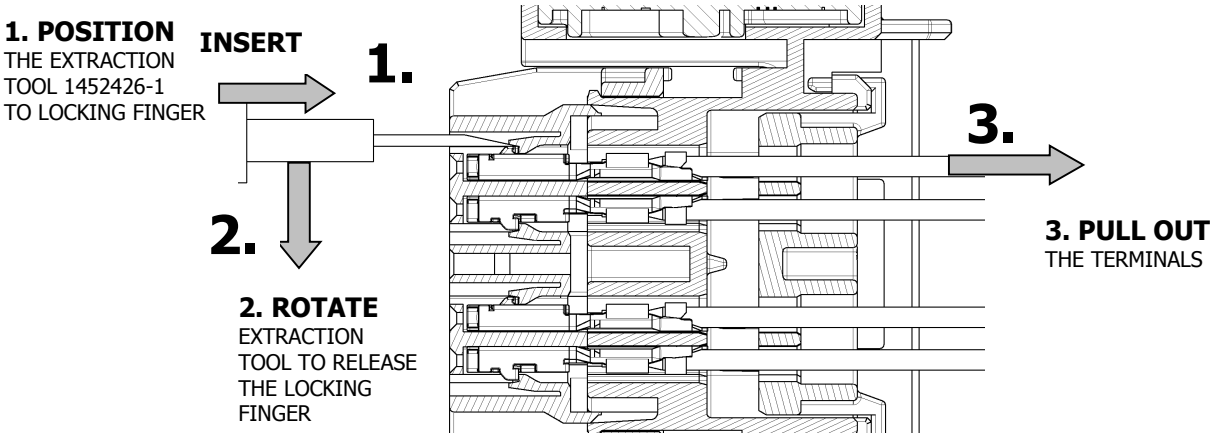
NOTE

IF BOTH LOCKING LATCHES WERE BETTERED YOU CAN REMOVE THE TPA FROM HOUSING

2.4 TERMINAL REMOVAL INSTRUCTIONS

CAUTION

TPA NEEDS TO BE FULLY REMOVED BEFORE TERMINALS CAN BE REMOVED. HOW TO REMOVE THE TPA SEE CHAPTER "2.3.2 TPA REMOVAL INSTRUCTION - FROM END-LOCK TO REMOVED POSITION (SERVICE CASE)*"*



CAUTION

DURING TERMINAL REMOVAL THE CONNECTOR LEVER SHOULD NOT BE MOVED OUT OF THE ***END-LOCK POSITION*** *(DELIVERY CONDITION FROM TE TO HARNESSMEKER SEE FOR REFERENCE CHAPTER 1.3)*

2.5 APPLICABLE WIRES

CONTACT SYSTEM	WIRE SIZE [mm ^{2}]	CABLE INSULATION DIAMETER [mm]
0.64 mm TERMINAL	0,35 mm ^{2} 0,50 mm ^{2} 0,75 mm ^{2}	1,4 $_{-0,2}$ mm 1,6 $_{-0,2}$ mm 1,9 $_{-0,2}$ mm
1.50 mm TERMINAL	0,35 mm² 0,50 mm ^{2} 0,75 mm ^{2} 1,0 mm ^{2} 1,5 mm ^{2}	1,4 $_{-0,2}$ mm 1,6 $_{-0,2}$ mm 1,9 $_{-0,2}$ mm 2,1 $_{-0,2}$ mm 2,4 $_{-0,2}$ mm
2.80 mm TERMINAL	0,35 mm² 0,50 mm² 0,75 mm² 1,0 mm² 1,5 mm² 2,5mm² 5,0mm²	1,4 $_{-0,2}$ mm 1,6 $_{-0,2}$ mm 1,9 $_{-0,2}$ mm 2,1 $_{-0,2}$ mm 2,4 $_{-0,2}$ mm 3,0 $_{-0,3}$ mm 4,0 $_{-0,3}$ mm

2.6 COVER INSERTION / REMOVAL INSTRUCTION

2.6.1 COVER INSERTION INSTRUCTION

CAUTION

*DURING COVER INSERTION THE CONNECTOR LEVER SHOULD NOT BE MOVED OUT OF THE **END-LOCK POSITION** (DELIVERY CONDITION FROM TE TO HARNESSMEKER SEE FOR REFERENCE CHAPTER 1.3)*

Step 1:

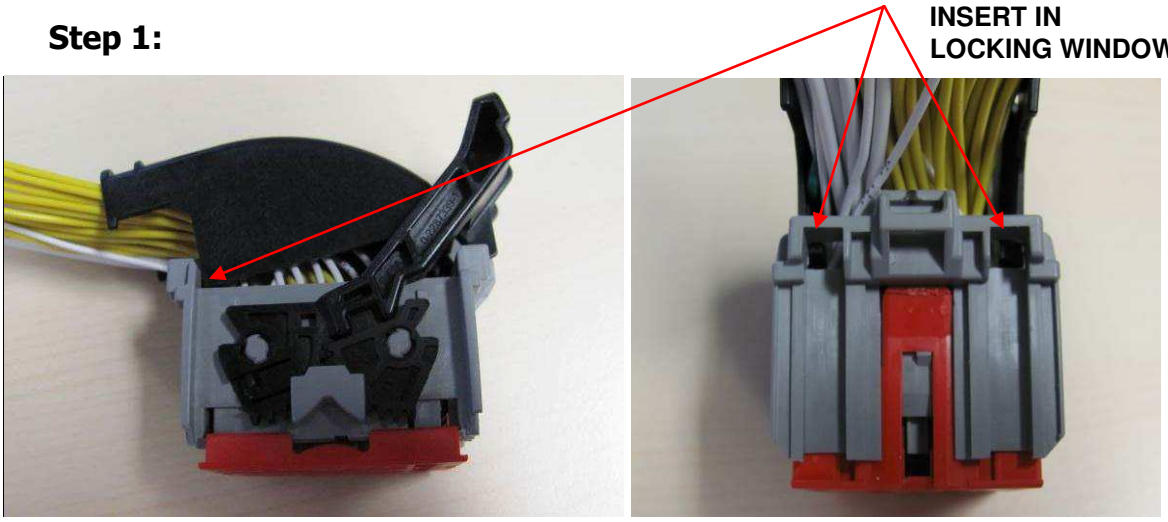


Figure 10: Rotate and place the cover as shown into the locking windows as shown

Step 2:

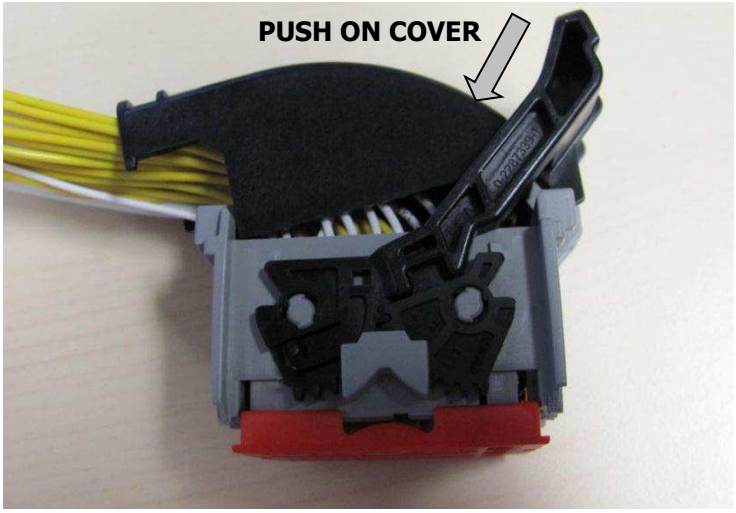


Figure 11: Press the cover into end-lock position until it locks (see next page)

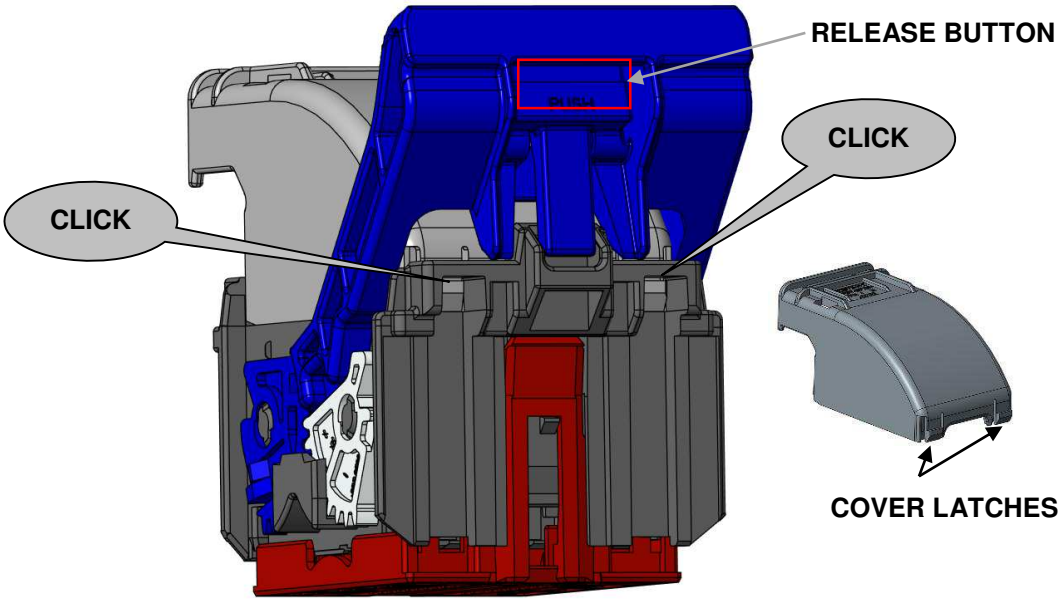


Figure 12: Both cover latches will lock into the locking windows

NOTE

After cover insertion, push the release button (shown in Figure 12) and turn the lever into the PRE-LOCK position shown in Figure 13

Step 4:

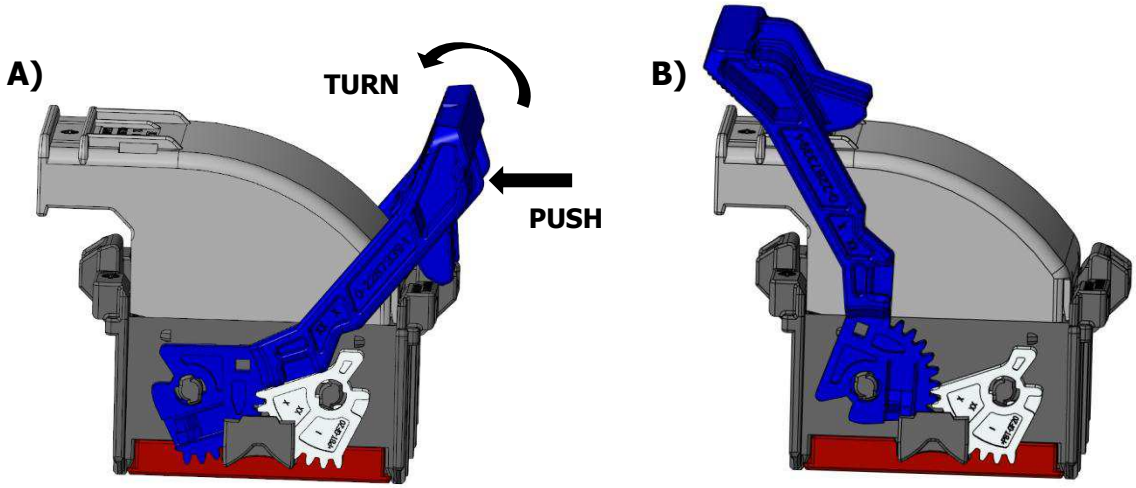
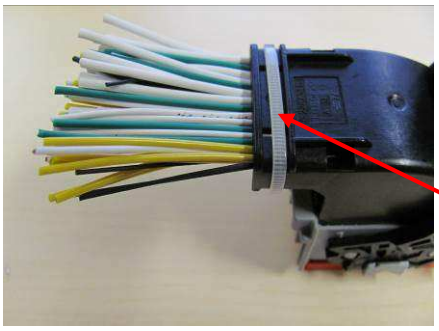


Figure 13: A) Cover in END-LOCK position **B) cover in PRE-LOCK position**

2.6.2 CABLE STRIP INSTRUCTION

VARIANT 1:



OR

VARIANT 2:

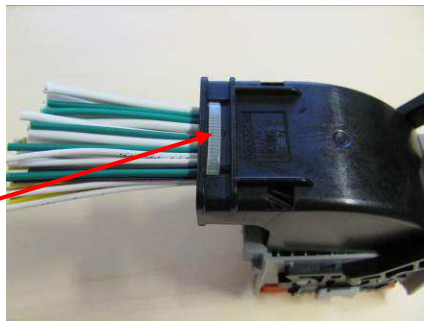
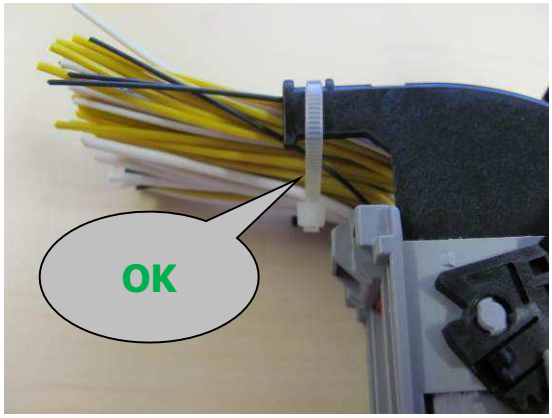
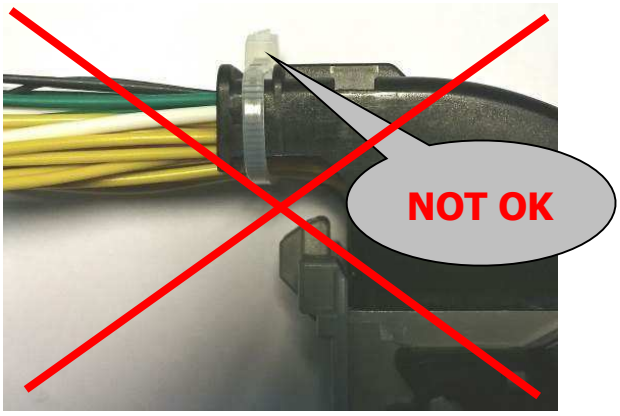


Figure 14: Variations of cable strip insertion





CAUTION

CABLE STRIP MUST BE TIGHTENED. THE MAX ALLOWED CABLE STRIP WIDE IS 4.5mm

2.6.3 COVER REMOVAL INSTRUCTION

CAUTION

IN SERVICE CASE THE CONNECTOR LEVER HAS TO BE MOVED IN END-LOCK POSITION. IF THE LEVER IS NOT IN END-LOCK POSITION, FOLLOW STEP 1 BELOW. IF THE LEVER IS ALLREADY IN PRE-LOCK POSITION PROCEED WITH SETP 2.

Step 1:

A) LEVER IN PRE-LOCK POSITION:

B) LEVER IN END-LOCK POSITION:

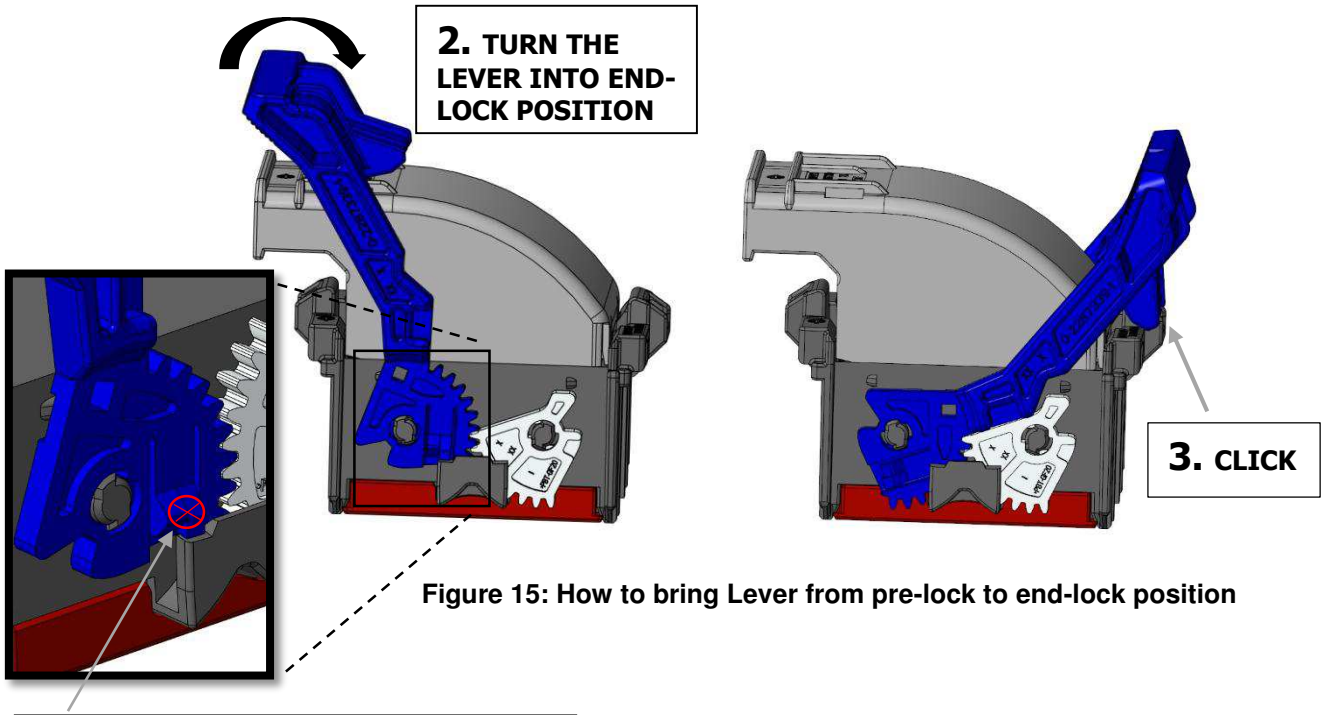


Figure 15: How to bring Lever from pre-lock to end-lock position

Step 2:

UNLOCK THE COVER BY USING A SMALL SCREW DRIVER AS SHOWN. IF BOTH LOCKING LATCHES ARE UNLOCKED YOU CAN REMOVE THE COVER

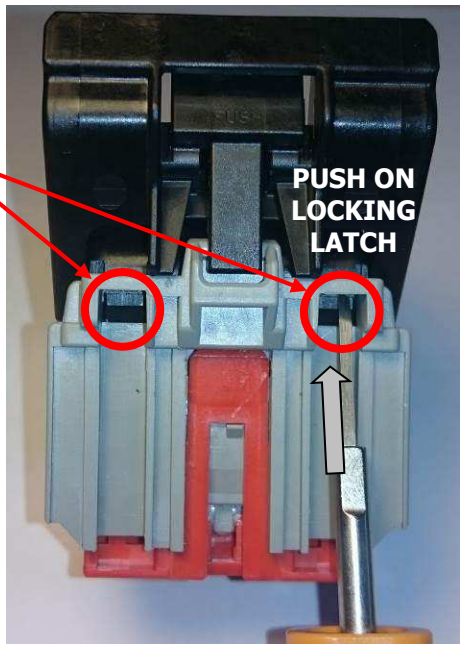


Figure 16: Unlock of wire dress cover

Step 3:

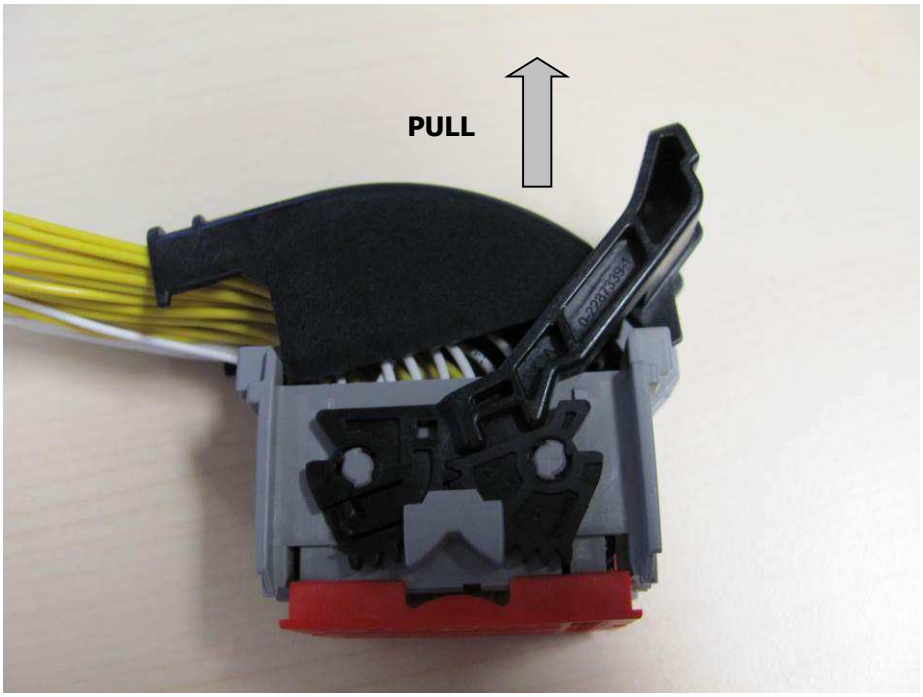


Figure 17: Remval of wire dress cover

NOTE

IF BOTH LOCKING LATCHES BETTERED YOU CAN REMOVE THE COVER FROM THE HOUSING

2.7 72 WAY CONNECTOR INTERFACE INSERTION / REMOVAL INSTRUCTION

2.7.1 72 WAY CONNECTOR INTERFACE INSERTION

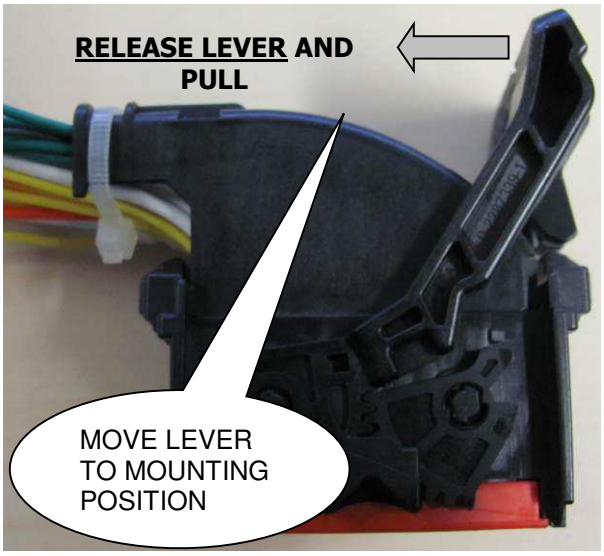
CAUTION

IF THE TERMINALS ARE INSTALLED, TPA IN END-LOCK POSITION, COVER MOUNTED AND THE CABLE STRIP IS TIGHTENED PUT THE LEVER INTO PRELOCK POSITION.
THE CONNECTOR CAN BE MOUNTED WITH LEVER IN PRELOCK POSITION ONLY!

CAUTION

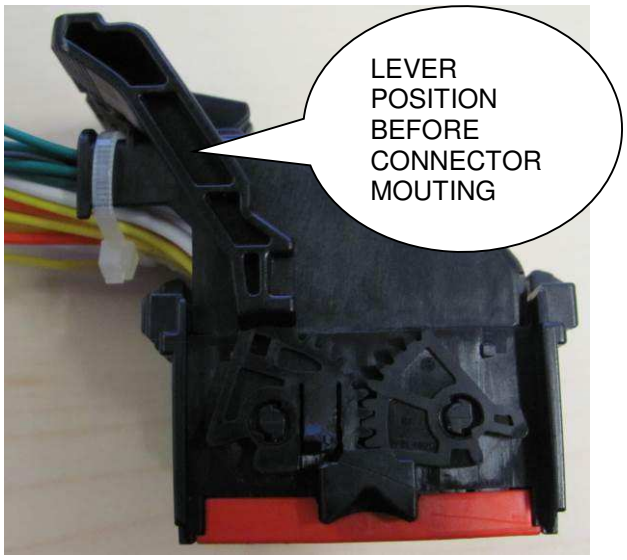
Step 1:- check lever position

72 WAY CONNECTOR **ENDLOCK POSITION**



72 WAY CONNECTOR DOES NOT FIT TO INTERFACE WITH THE LEVER IN THIS POSITION

72 WAY CONNECTOR **PRELOCK POSITION**



LEVER POSITION OK 72 WAY CONNECTOR READY TO MATE TO THE INTERFACE

Figure 18: Check if lever is in the correct position

NOTE

HOW TO RELEASE THE LEVER FROM END-LOCK POSITION SEE CHAPTER 2.7.2. MAKE SURE THE RELEASE FEAURE IS NOT BROKEN BEFOR INSERTION INTO INTERFACE.

CODING A **CODING B**

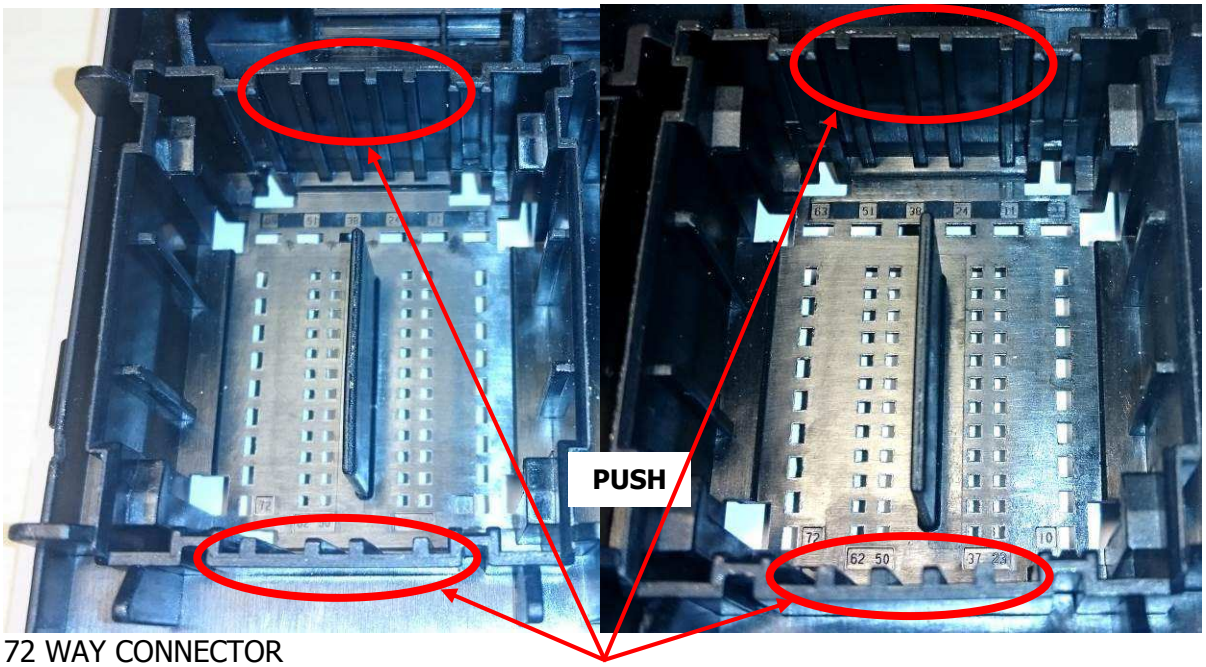
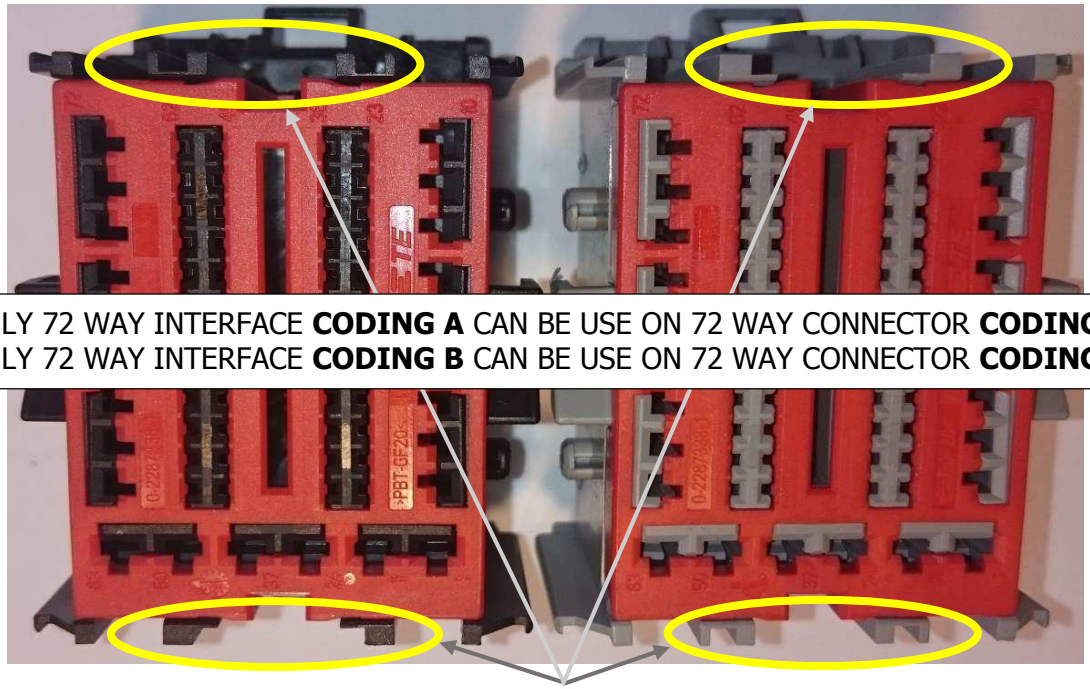


Figure 19: 72 WAY INTERFACE

CODING **A** / HOUSING COLOR **BLACK** CODING **B** / HOUSING COLOR **GREY**



ONLY 72 WAY INTERFACE **CODING A** CAN BE USE ON 72 WAY CONNECTOR **CODING A**
ONLY 72 WAY INTERFACE **CODING B** CAN BE USE ON 72 WAY CONNECTOR **CODING B**

CNNECTOR HOUSING CODING RIBS

Figure 20: CNNECTOR HOUSING CODING RIBS

Step 2:

Insert connector until lever moves

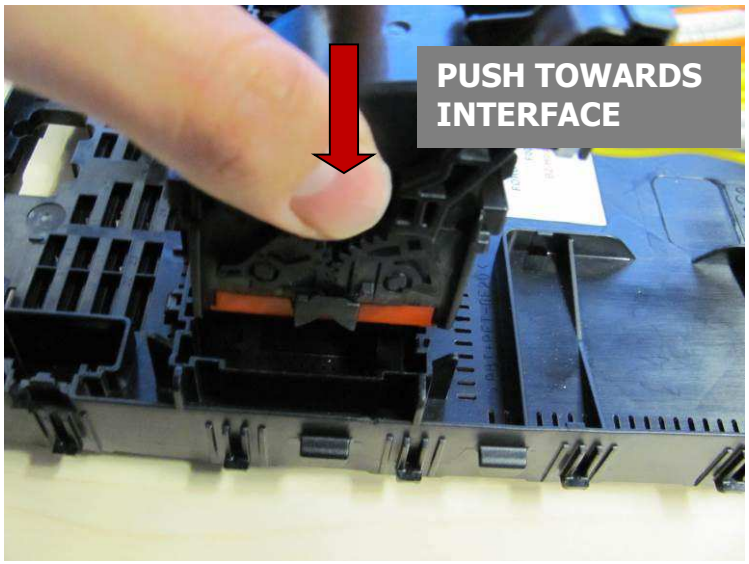


Figure 21: Connector insertion into the interface

NOTE

IF THE LEVER IS IN PRE-LOCK POSITION AND THE ORIENTATION ON INTERFACE IS CORRECT, THE 72 POS. CONNTECTOR CAN BE MATED. ONLY ONE ORIENTATION CAN BE MOUNTED

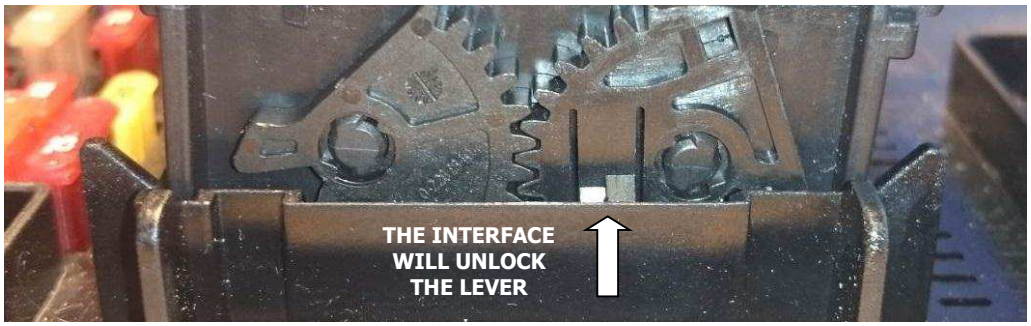
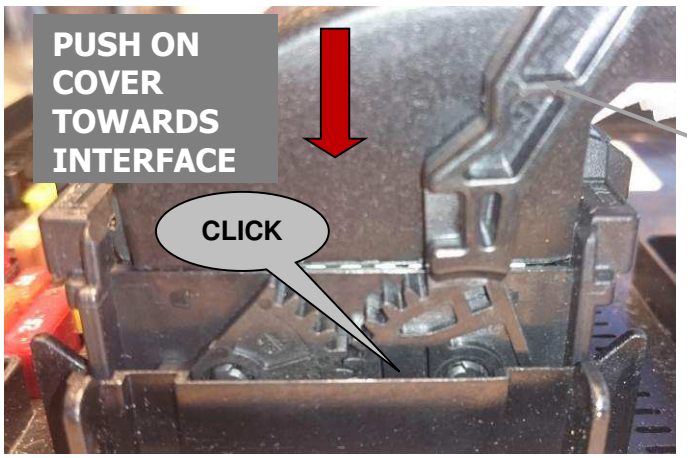


Figure 22: Shows the lever release feature (for information only)

Step 3:



LEVER BECOMES RELEASED (SEE NEXT PAGE)

Figure 23: Push onto the wire dress cover

Step 4:

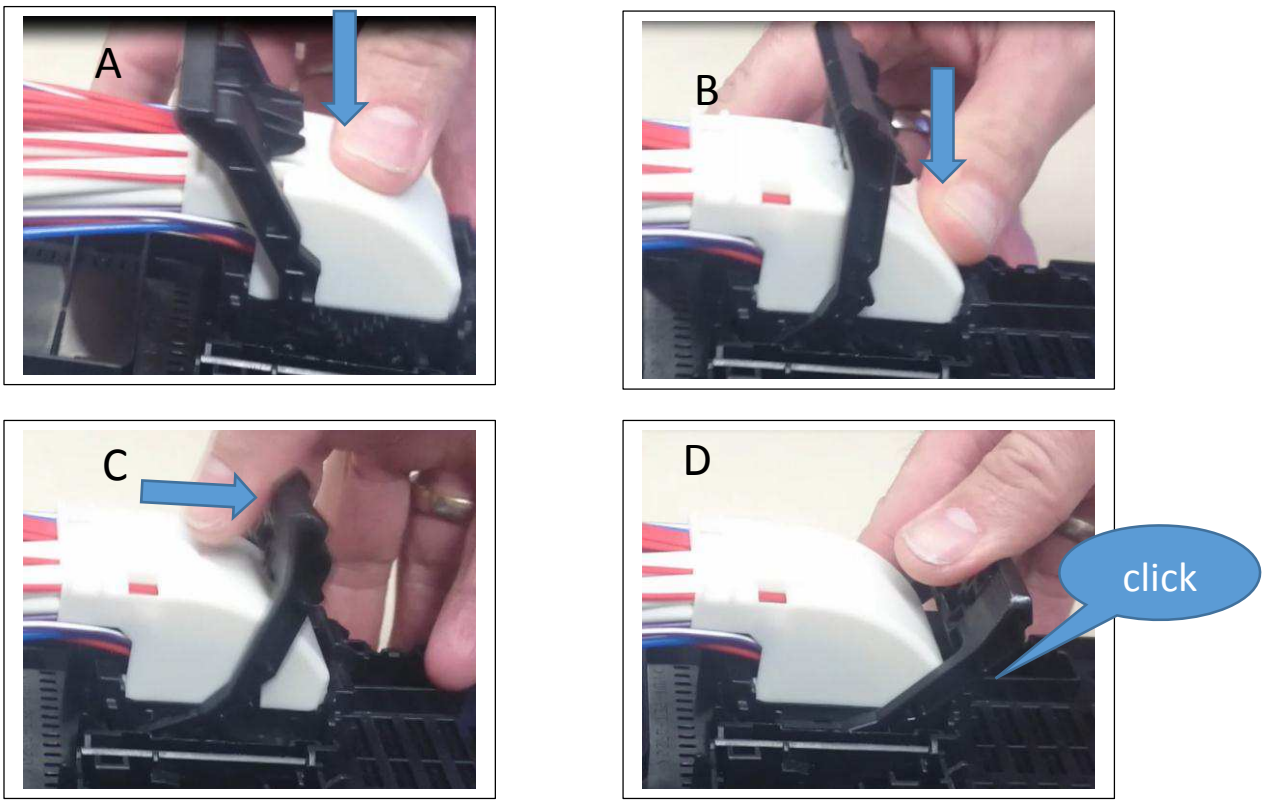


Figure 24: Push onto the wire dress cover until the lever is moved as shown by step B

CAUTION

*PUSH THE 72 WAY CONNECTOR AS SHOWN IN FIGURE*Figure 24 *B. NOW THE LEVER CAN BE MOVED TO THE END-LOCK POSITION AS SHOWN BY FIGURE*Figure 24 *D.*

NOTE

MAKE SHUR THAT THE LEVER IS LOCKED INTO THE HOUSING PROPERLY.

2.7.2 72 WAY CONNECTOR / INTERFACE UNLOCK AND REMOVAL FROM BACKSIDE

NOTE

TO REMOVE THE 72 WAY CONNECTOR FROM THE MODULE (INTERFACE) PUSH ON THE MARKED SURFACE SHOWN IN Figure 25

Step 1:

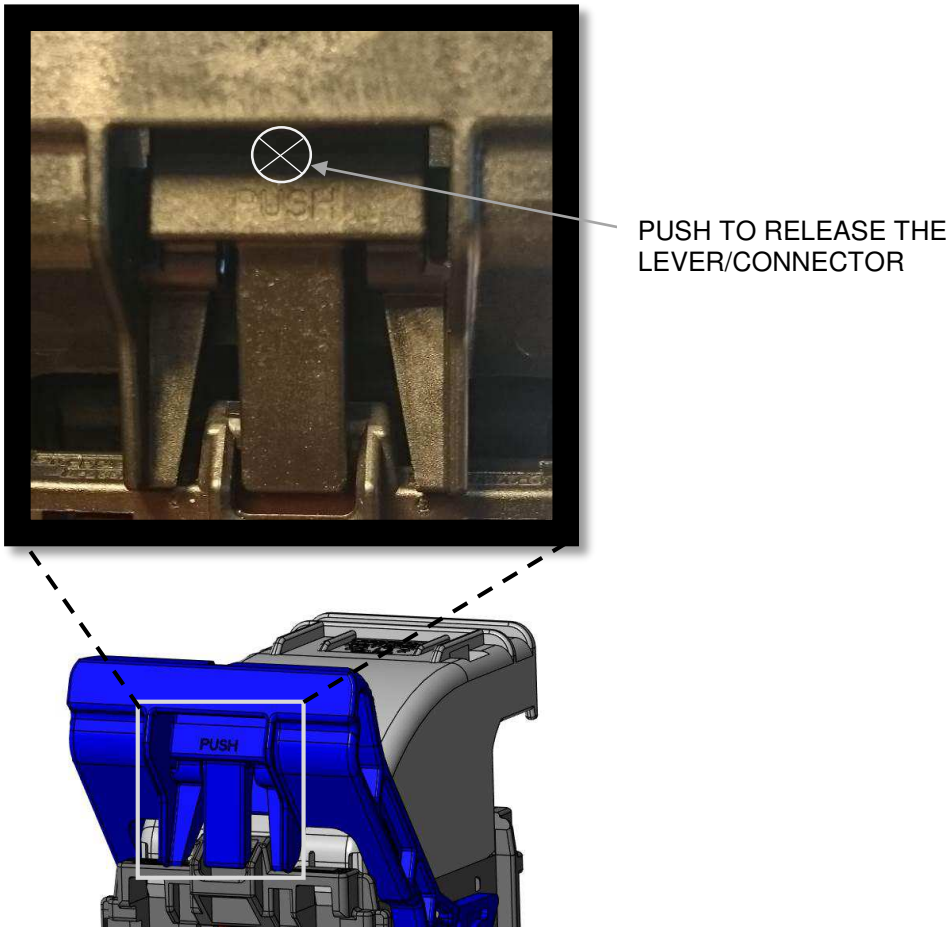
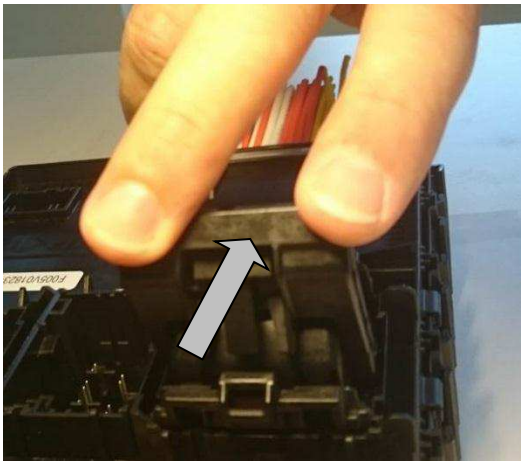


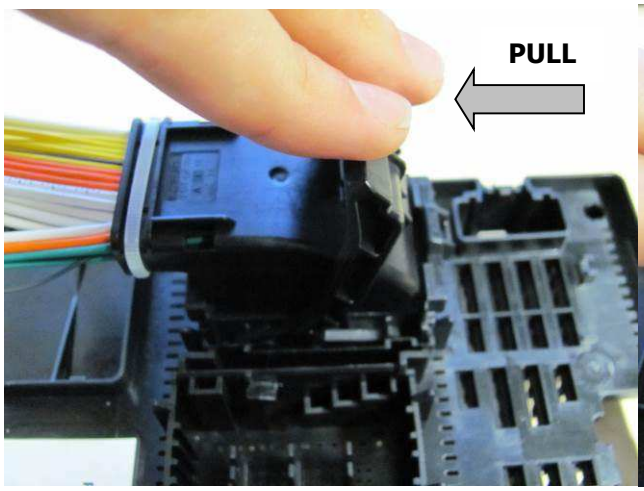
Figure 25: Release area of 72 way connector

Step 2a:

MOVE THE UNLOCKED LEVER TO UNMATE THE CONNECTOR. (SEE NEXT PAGE)



Step 2b:



Step 2c:

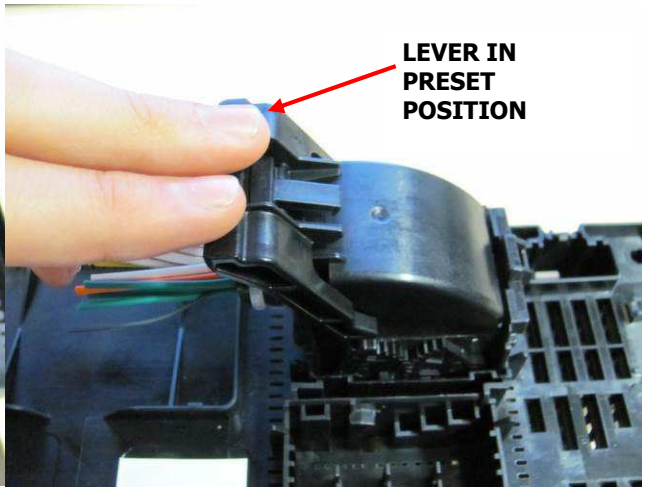
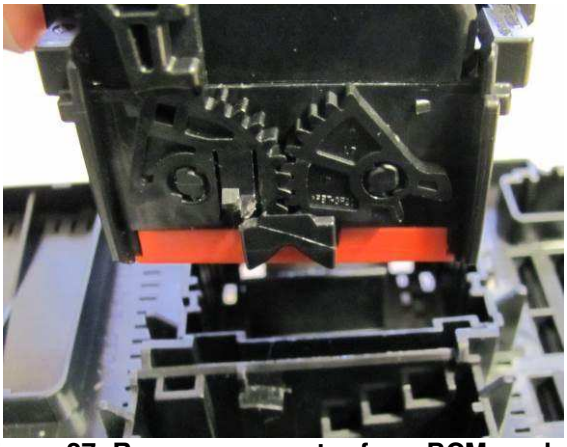


Figure 26: Unmate connector by moving lever back into the pre-lock position

Step 3:



PULL THE 72 WAY CONNECTOR RETURN IN PRESET POSITION

Figure 27: Remove connector from BCM module

NOTE

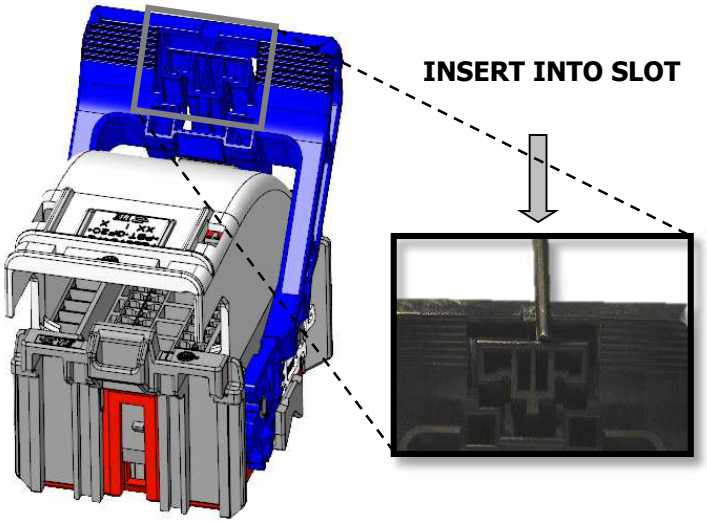
AFTER STEP 1 & 2 WAS SUCCESSFULLY PERFORMED, YOU CAN REMOVE THE CONNECTOR FROM BCM MODULE

2.7.3 72 WAY CONNECTOR / INTERFACE UNLOCK AND REMOVAL FROM FRONTSIDE WITH SCREWDRIVER

(OPTIONAL)

Step 1:

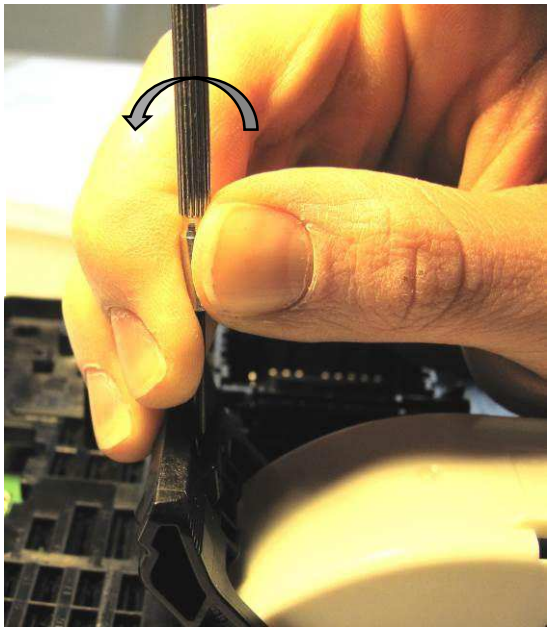
TO BE DONE ONLY IF USAGE OF SCREW DRIVER IS ALLOWED!



PUSH THE SCREWDRIVER BEHIND THE LEVER RELEASE FEATURE AS SHOWN ABOVE

Step 2:

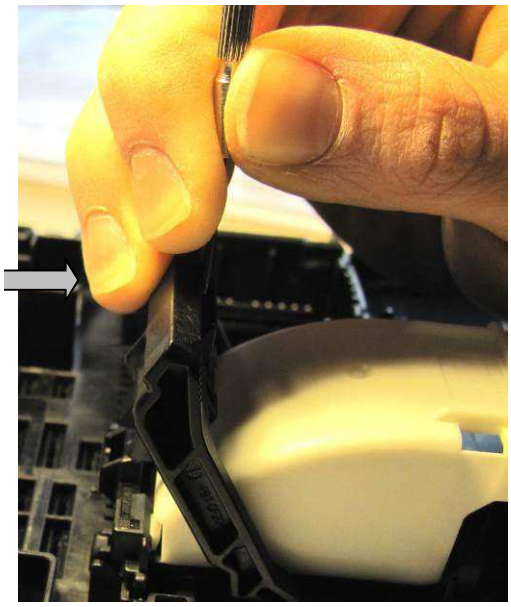
TURN TO UNLOCK THE LEVER RELEAS FEATURE



UNLOCK THE LEVER!

Step 3:

PUSH THE LEVER TO UNMATE THE CONNECTOR



PUSH THE LEVER INTO PRE-LOCK POSITION BY HAND AND REMOVE THE CONNECTOR FROM THE BCM MODUL (HEADER)