



## ASSEMBLY MANUALS

PRE - ASSEMBLY

HARNESS ASSEMBLY

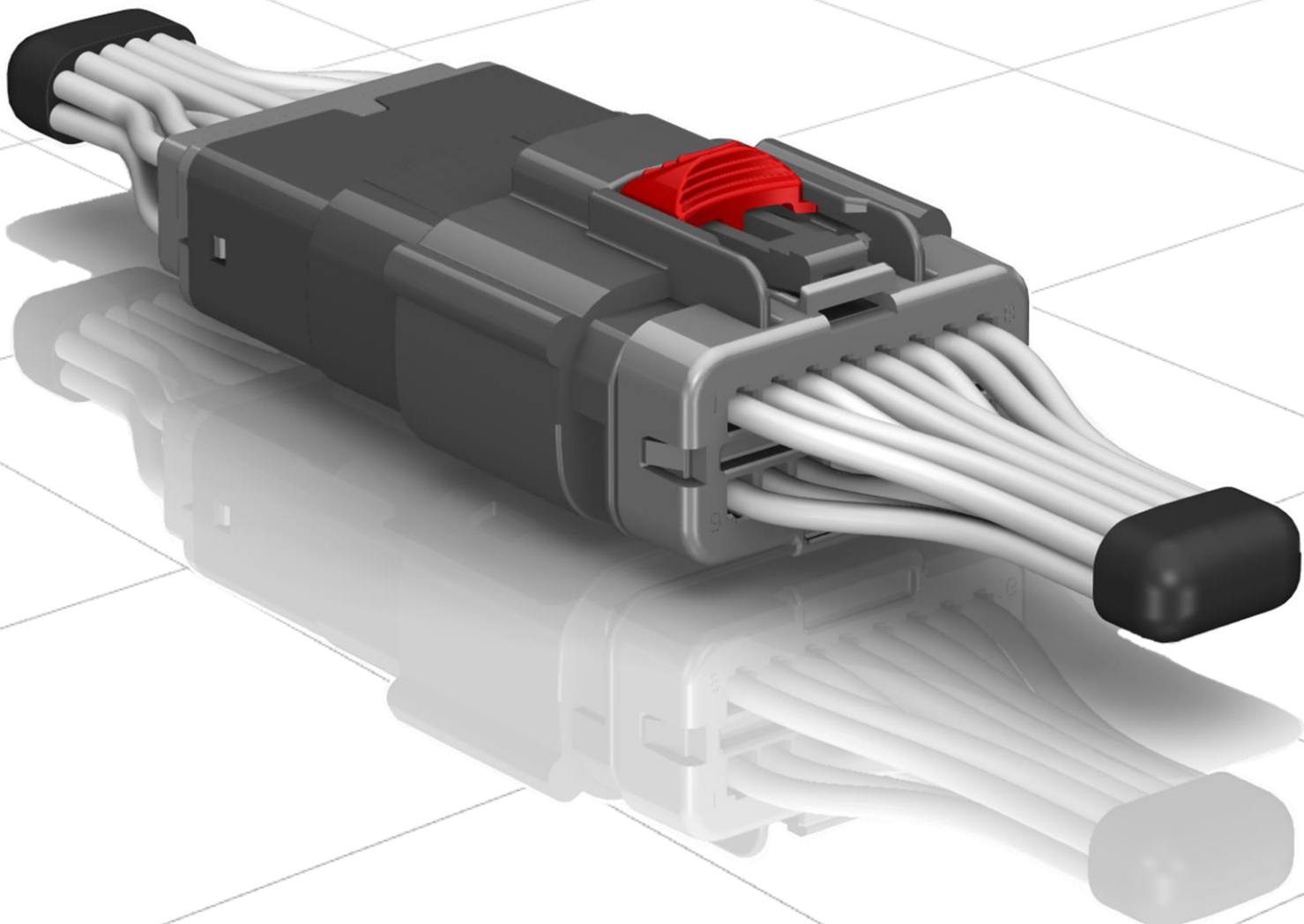
CAR ASSEMBLY

ASSEMBLY MANUAL - 13987928

# 1.5 OCS Sealed Connection System

## 1.5 Terminal System

February 2016



Issued by  
CTC Warren, Ohio  
STC Saltillo, Mex.

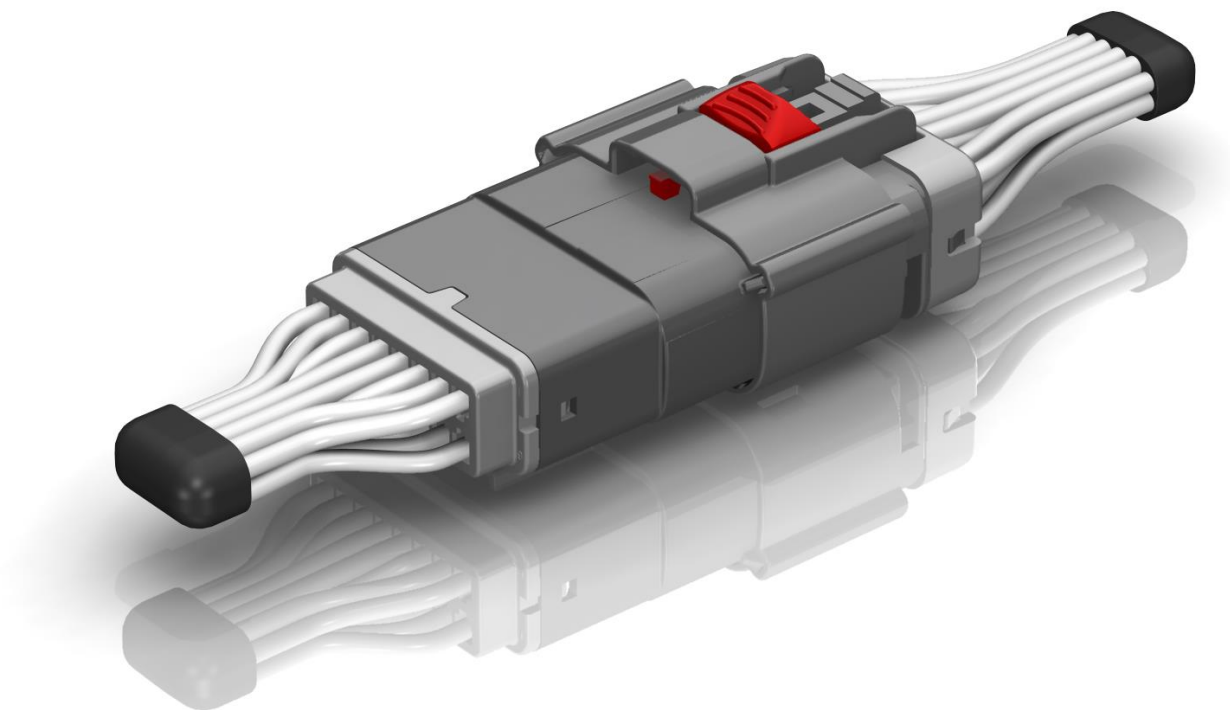


---

The information contained in these assembly instructions is subject to alteration without prior notice and does not represent any obligation on the part of DELPHI. All the information is correct at time of releasing. Reprinting or translation is not permitted without written permission from DELPHI. © **Copyright 2012 DELPHI**. All rights reserved.

---

TABLE OF CONTENTS



PRE-ASSEMBLY SECTION

<b>ASSEMBLY OF THE FEMALE CONNECTOR</b>	6
View of Versions	7
List of Components & Exploded View	9
 Step 1 - Insert Connector Seal	10
Step 2 - Align and Insert PLR (to Pre-Stage Position)	11
Step 3 - Lock CPA (to Pre-Stage Position)	12
Step 4 - Install Cable Seal	14
Step 5 - Insert Retainer	15
Female Connector – Completed Assembly	16
 <b>ASSEMBLY OF THE MALE CONNECTOR</b>	17
View of Versions	18
List of Components & Exploded View	20
 Step 1 - Align and Insert PLR (to Pre-Stage Position)	21
Step 2 - Install Cable Seal	22
Step 3 - Insert Retainer	23
Male Connector – Completed Assembly	24

HARNESS ASSEMBLY SECTION

<b>ASSEMBLY OF THE FEMALE HARNESS ASSEMBLY CONNECTOR</b>	25
--	----

TABLE OF CONTENTS

List of Components & Exploded View 26

Step 1 - Identify Cavities 27

Step 2 - Align Cavity Plug (Optional)/Terminals Female 1.5 and Female Assembly 27

Step 3 - Insert Cavity Plug (Optional)/Terminals OCS Female 1.5 28

Step 4 - Close PLR to Full-Stage 30

Female Assembly - Completed 30

ASSEMBLY OF THE MALE HARNESS ASSEMBLY CONNECTOR 31

List of Components & Exploded View 32

Step 1 - Identify Cavities 33

Step 2 - Align Cavity Plug (Optional)/Terminals Male 1.5 and Male Assembly 33

Step 3 - Insert Cavity Plug (Optional)/Terminals OCS Male 1.5 34

Step 4 - Close PLR to Full-Stage 36

Male Assembly - Completed 36

CAR ASSEMBLY SECTION

ASSEMBLY OF THE CONNECTION SYSTEM 37

3D Model 38

Step 1 - Identify and Align Index Features 39

Step 2 - Mate Female Assembly and Male Assembly Together Axially 39

Step 3 - Close CPA to Full-Stage 40

Connection System - Completed Assembly 40

DISASSEMBLY SECTION

DISASSEMBLY OF THE CONNECTION SYSTEM 41

Step 1 - Move CPA to Pre-Stage Position 42

Step 2 - Release the Connector Lock 43

Step 3 - Disconnect 43

Connection System - Completed Disassembly 44



TABLE OF CONTENTS

REPAIR / REPLACEMENT SECTION

<b>FEMALE CONNECTOR SUB COMPONENTS:</b>	45
PLR Replacement – Step 1 (Remove)	46
Step 2 (Install)	48
 TERMINAL F OCS 1.5/CAVITY PLUG Replacement – Step 1 (Remove)	48
Step 2 (Insert)	50
 RETAINER Replacement – Step 1 (Remove)	50
Step 2 (Install)	51
 CABLE SEAL Replacement – Step 1 (Remove)	52
Step 2 (Install)	53
 CPA Replacement – Step 1 (Remove)	53
Step 2 (Insert)	54
 CONNECTOR SEAL Replacement – Step 1 (Remove)	55
Step 2 (Install)	56
 <b>MALE CONNECTOR SUB COMPONENTS:</b>	57
TERMINAL M OCS 1.5/CAVITY PLUG Replacement – Step 1 (Move PLR to Pre-Stage)	58
Step 2 (Remove)	59
Step 3 (Insert)	61
 RETAINER Replacement – Step 1 (Remove)	61
Step 2 (Install)	62
 CABLE SEAL Replacement – Step 1 (Remove)	63
Step 2 (Insert)	64
 PLR Replacement – Step 1 (Remove)	64
Step 2 (Install)	66

Recommended Repair Tools	67
--------------------------	----

REVISIONS	68
-----------	----

**ASSEMBLY**

**ASSEMBLY OF THE  
FEMALE CONNECTOR**

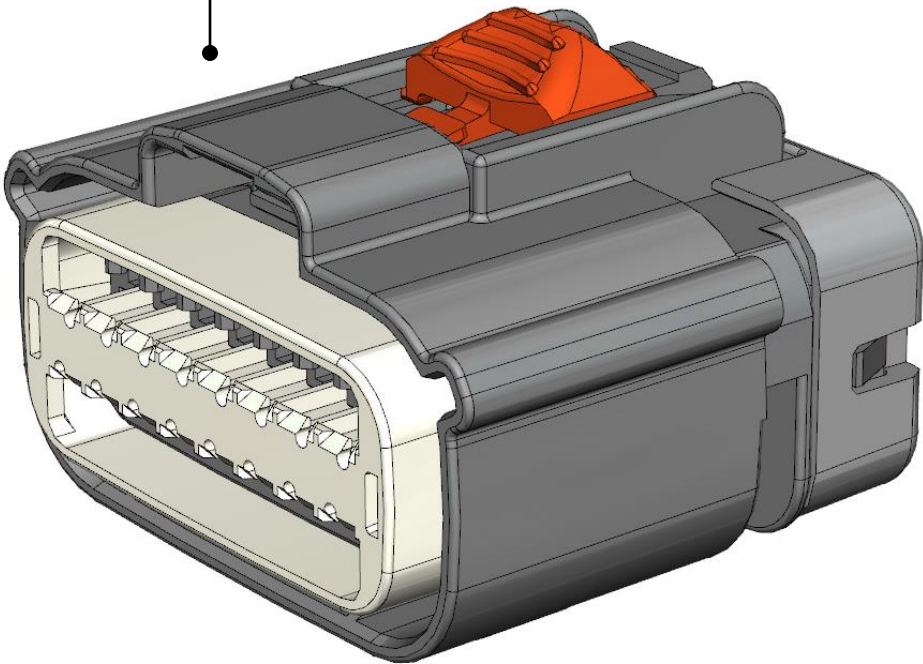
PRE - ASSEMBLY

HARNESS ASSEMBLY

CAR ASSEMBLY

**1.5 OCS Sealed Connection System**

FEMALE ASSEMBLY



ASSEMBLY

VIEW OF VERSIONS

2 WAY CONNECTOR

TYPE 101      TYPE 102      TYPE 103      TYPE 104      TYPE 105      TYPE 106



3 WAY CONNECTOR

TYPE 101      TYPE 102      TYPE 103      TYPE 104      TYPE 105      TYPE 106



4 WAY CONNECTOR

TYPE 101      TYPE 102      TYPE 103      TYPE 104      TYPE 105      TYPE 106



6 WAY CONNECTOR

TYPE 101      TYPE 102      TYPE 103      TYPE 104      TYPE 105      TYPE 106



EACH CONNECTION SYSTEM HAVE 6 DIFFERENT TYPES, WHICH DIFFER IN THE INDEXING AND COLOR, REFER TO LATEST DRAWINGS FOR DETAILS



ASSEMBLY

VIEW OF VERSIONS

8 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



10 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



12 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



16 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106

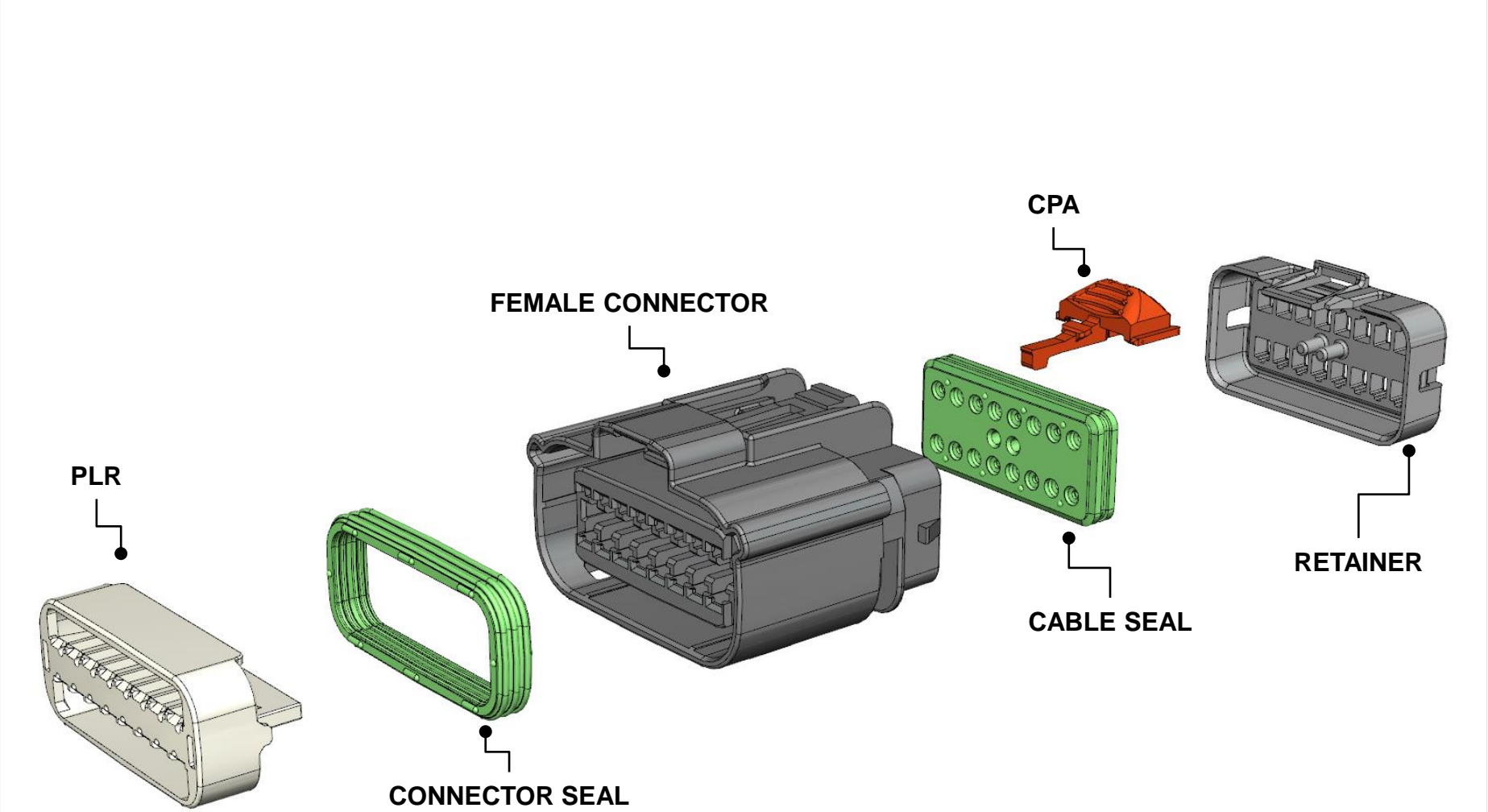


EACH CONNECTION SYSTEM HAVE 6 DIFFERENT TYPES, WHICH DIFFER IN THE INDEXING AND COLOR, REFER TO LATEST DRAWINGS FOR DETAILS

ASSEMBLY

LIST OF COMPONENTS & EXPLODED VIEW

QUANTITY	COMPONENTS OF 1.5 OCS FEMALE CONNECTOR
1	PLR
1	CONNECTOR SEAL
1	FEMALE CONNECTOR
1	CABLE SEAL
1	RETAINER
1	CPA



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

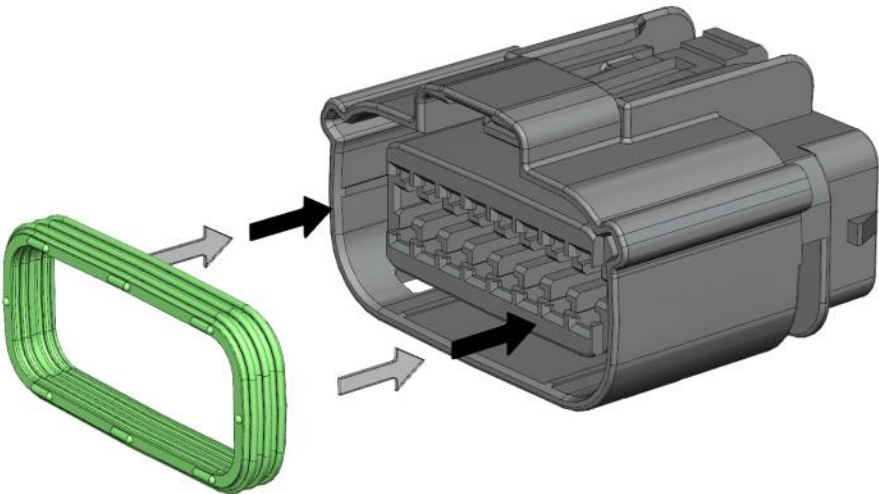
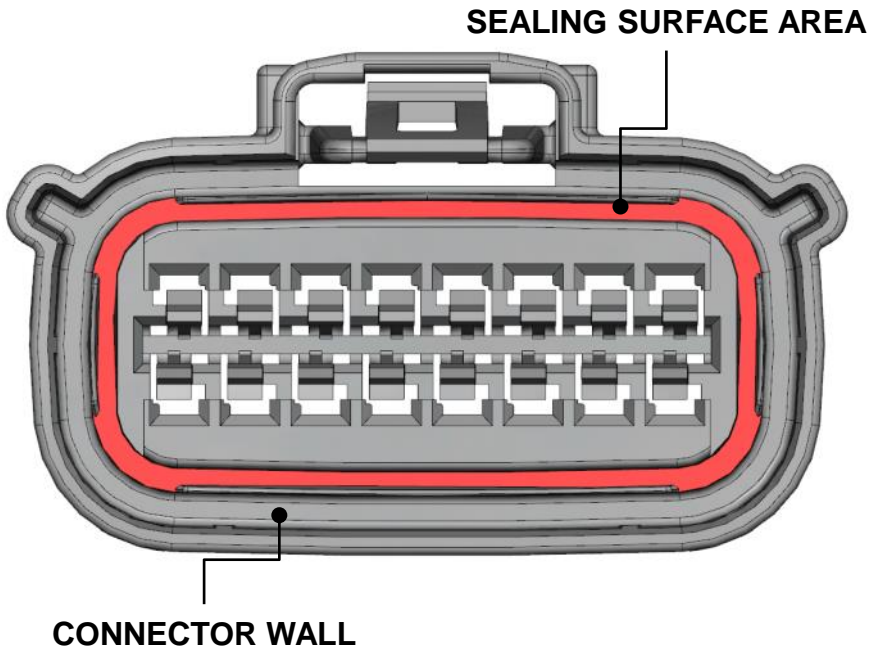


ASSEMBLY

STEP 1a – Insert Connector Seal

IDENTIFY THE SEALING SURFACE AREA TO  
INSERT THE CONNECTOR SEAL

THEN, PUSH THE CONNECTOR SEAL INTO THE  
CONNECTOR

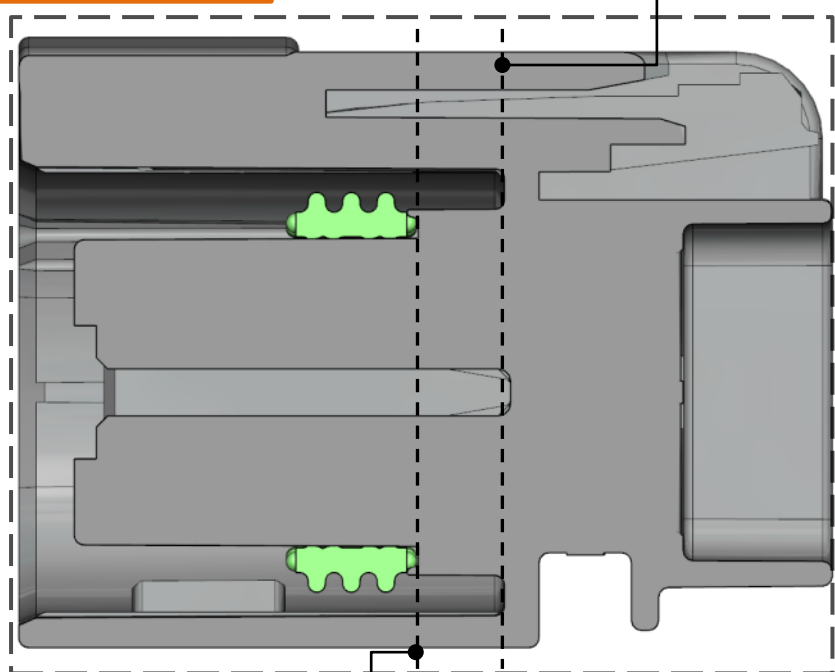


STEP 1b – Insert Connector Seal

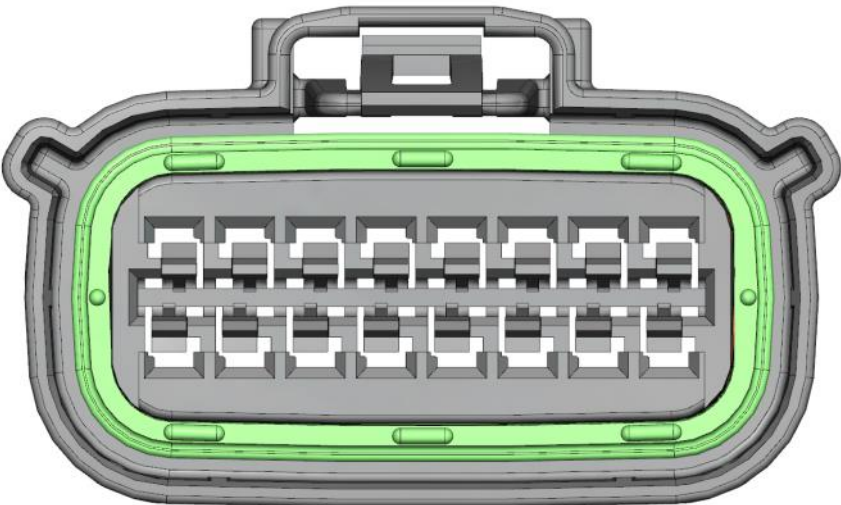
**IMPORTANT!** VERIFY THAT CONNECTOR SEAL IS NOT OVER SEATED,  
BUNCHED OR ROLLED DURING THE INSERTION

SECTION VIEW

CONNECTOR WALL



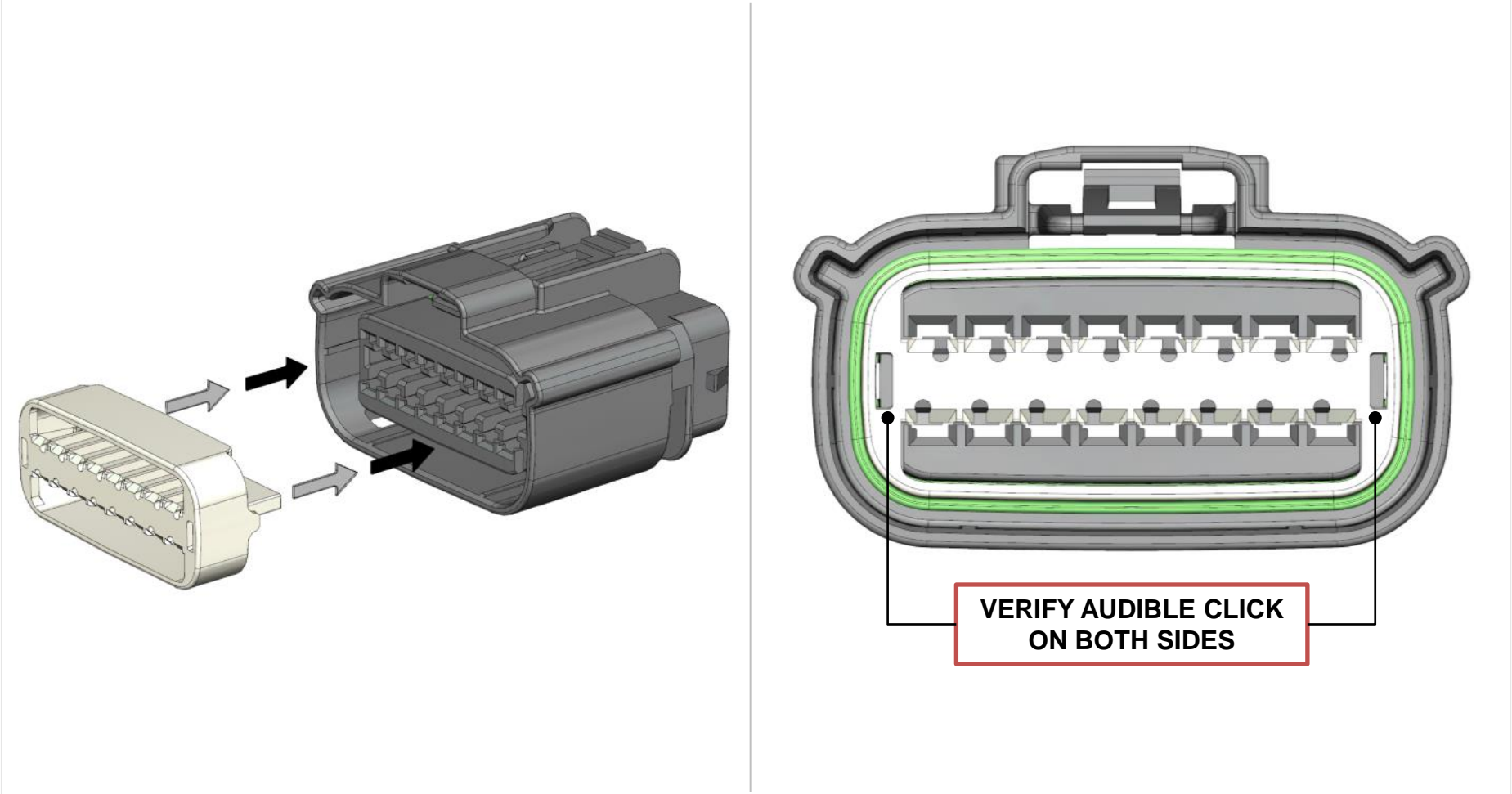
SEALING  
SURFACE AREA



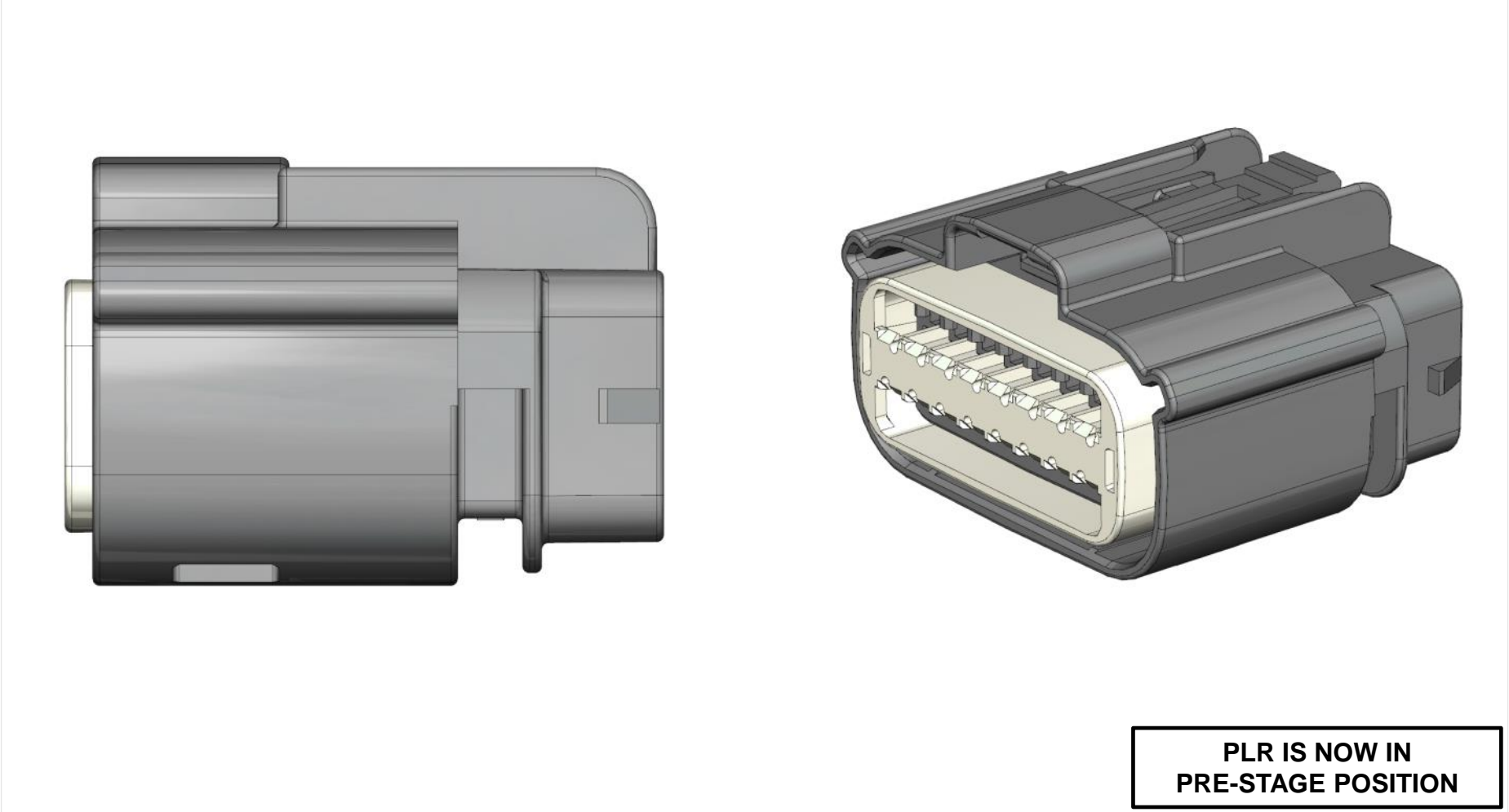
CONNECTOR SEAL INSERTED

ASSEMBLY

STEP 2a – Align and Insert PLR (to Pre-Stage Position)



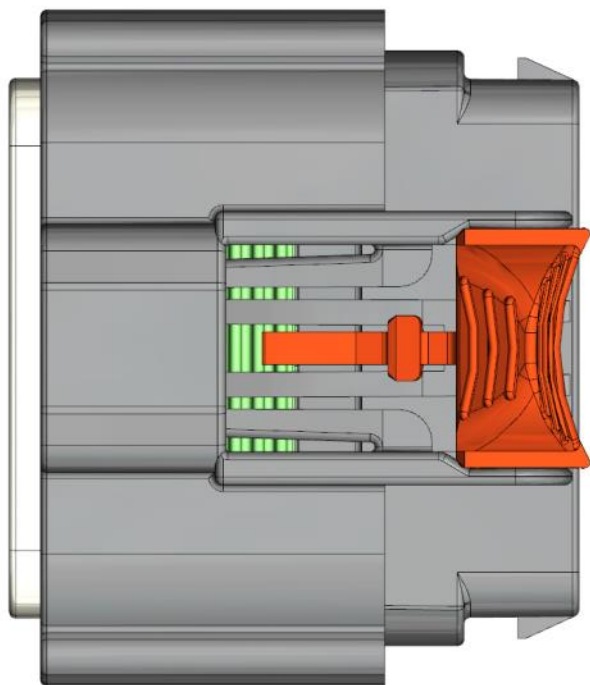
STEP 2b – Align and Insert PLR (to Pre-Stage Position)



ASSEMBLY

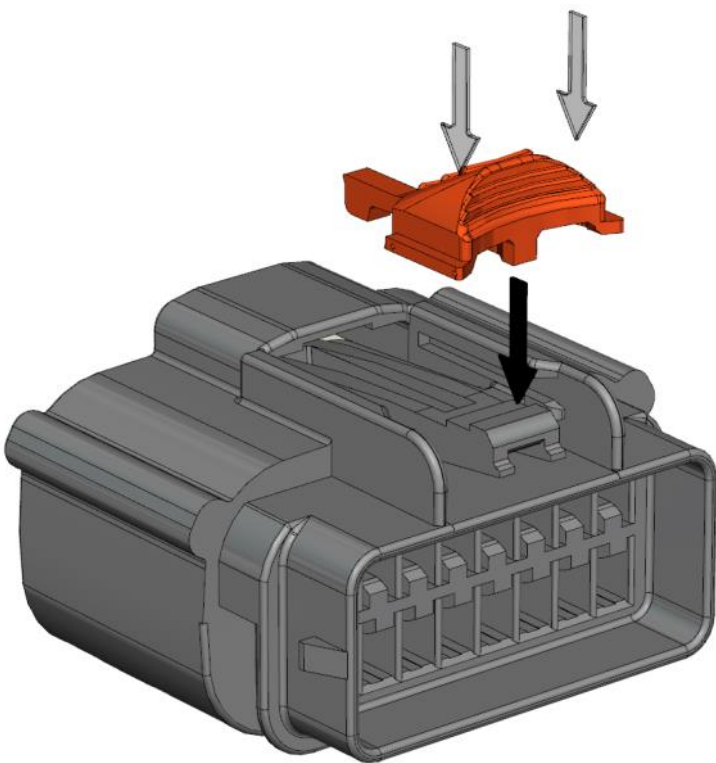
STEP 3a – Lock CPA (to Pre-Stage Position)

ALIGN CPA WITH THE CONNECTOR LOCK



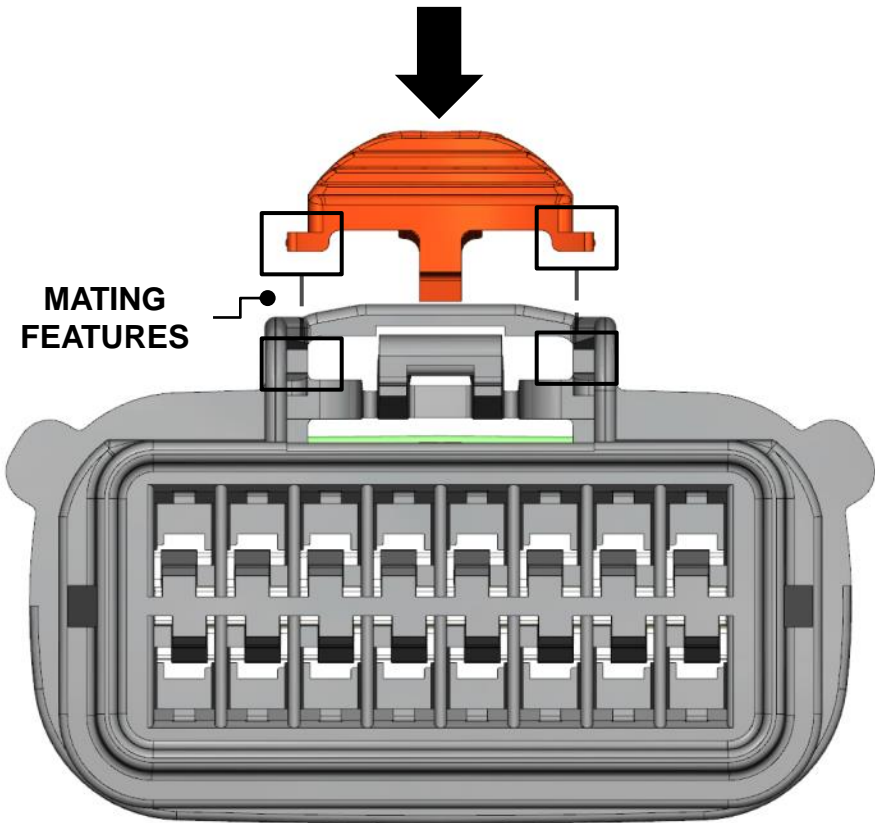
TOP VIEW

THEN, PUSH DOWN THE CPA



STEP 3b – Lock CPA (to Pre-Stage Position)

PRESS DOWN THE CPA UNTIL MATING FEATURES LINE UP  
AND THE CONNECTOR LOCK DEFLECTS



BACK VIEW

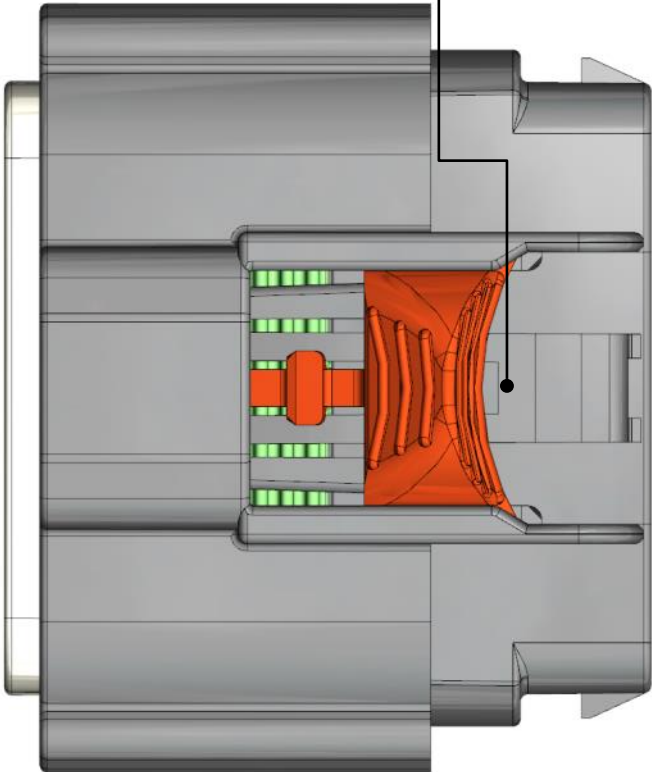
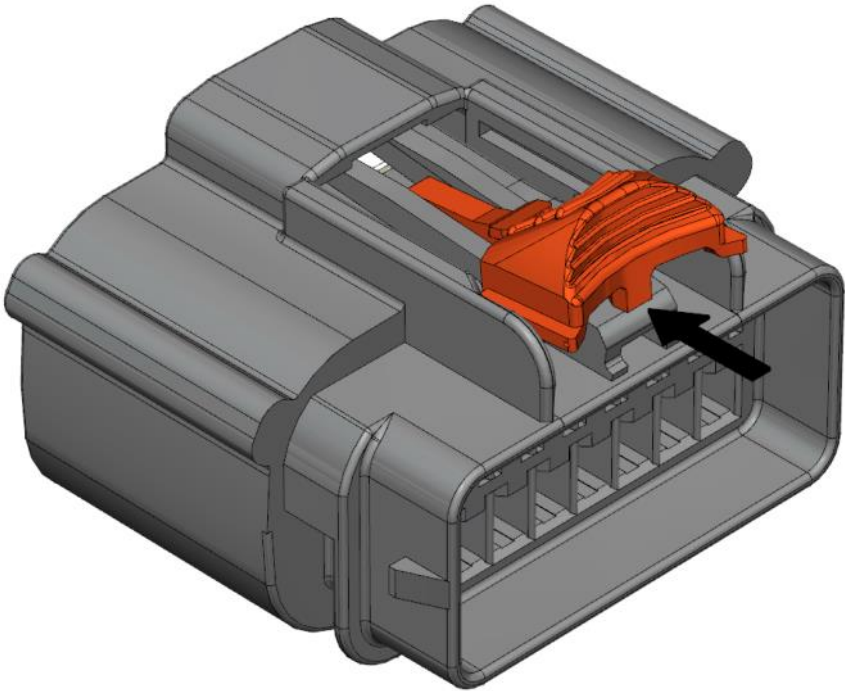


ASSEMBLY

STEP 3c – Lock CPA (to Pre-Stage Position)

WITH THE FEATURES ALIGNED,  
MOVE THE CPA TO FRONT

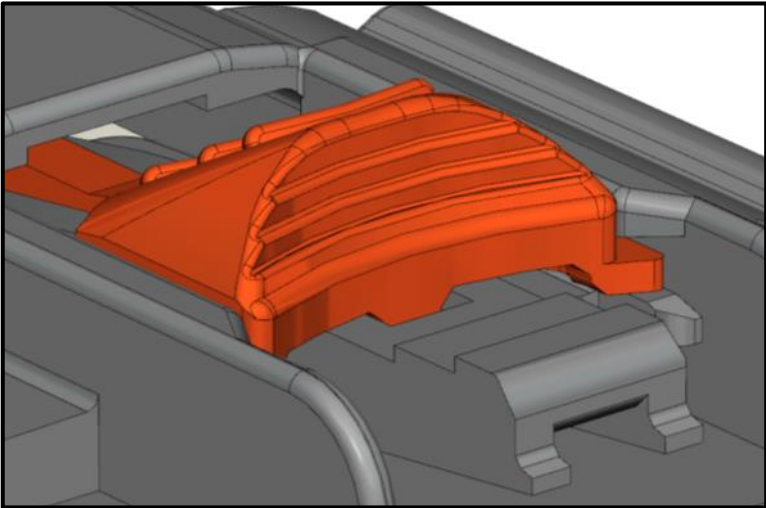
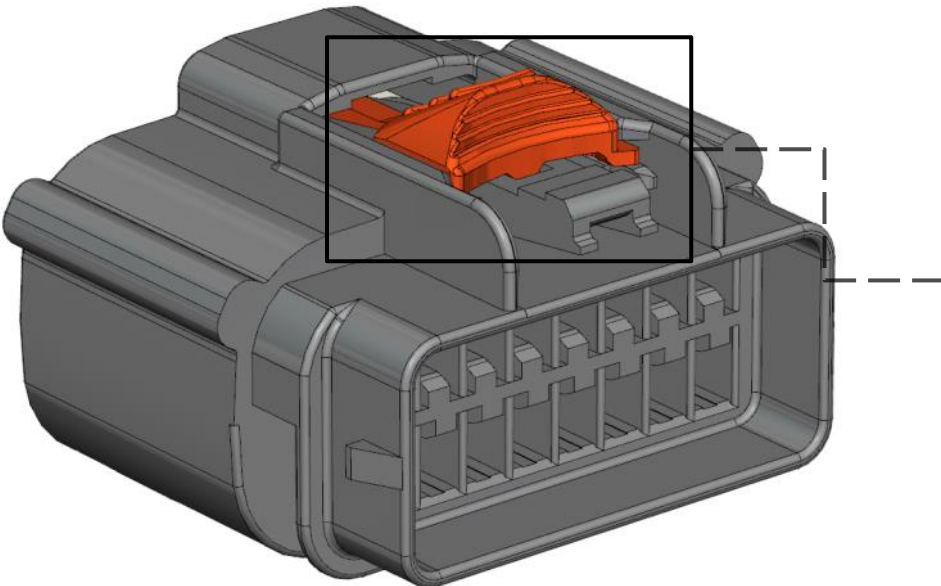
VERIFY AUDIBLE CLICK



TOP VIEW

STEP 3d – Lock CPA (to Pre-Stage Position)

THE CONNECTOR LOCK RETURNS TO ITS ORIGINAL POSITION



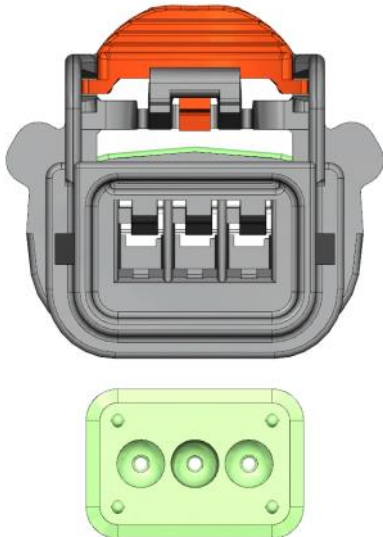
CPA IS NOW IN  
PRE-STAGE POSITION

ASSEMBLY

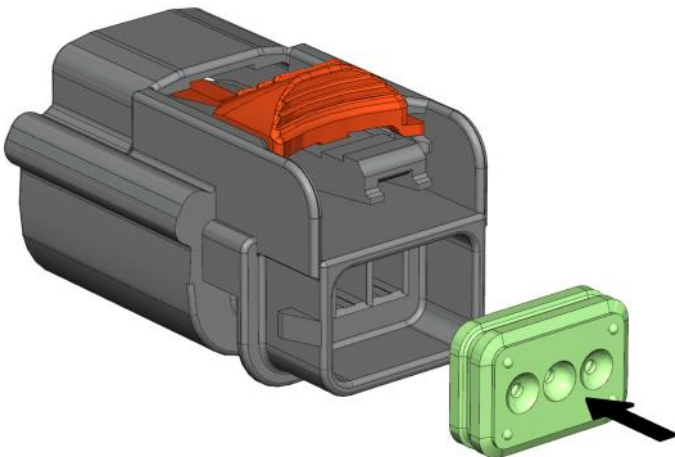
STEP 4 – Install Cable Seal

PROCESS FOR:  
3W & 4W CONNECTORS

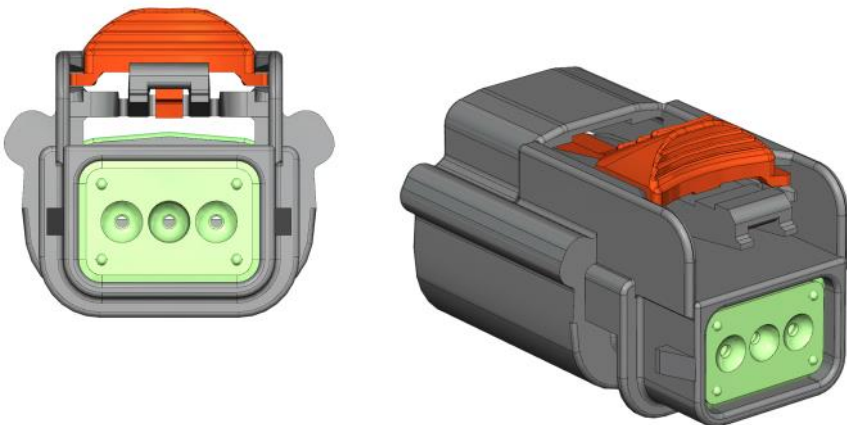
- 1 IDENTIFY THE CORRECT ORIENTATION OF THE SEAL



- 2 PUSH CABLE SEAL INTO THE CONNECTOR

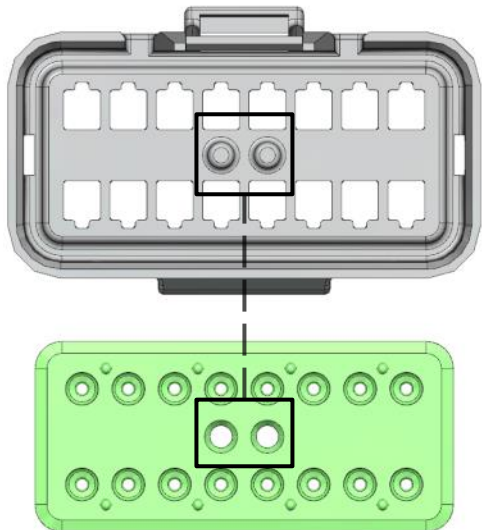


- 3 INSERTION COMPLETED

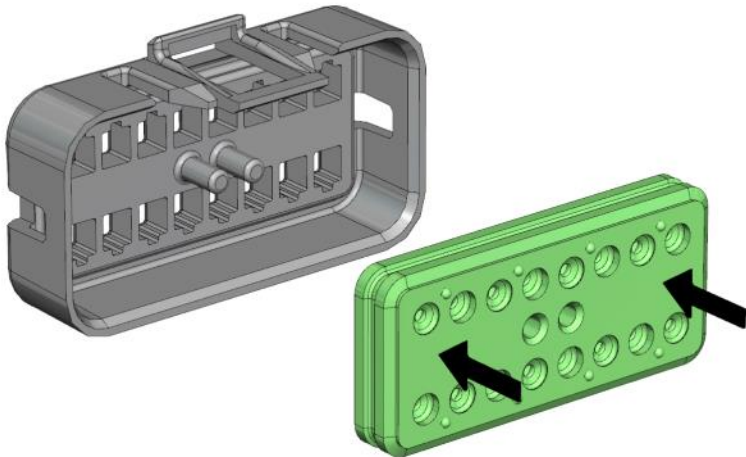


PROCESS FOR:  
2W, 6W, 8W, 10W, 12W & 16W CONNECTORS

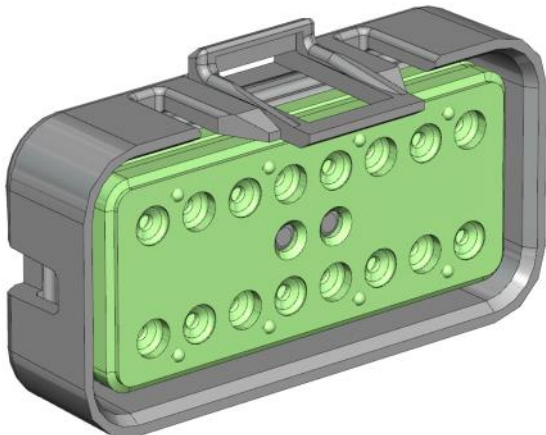
- 1 LOCATE AND ALIGN MATING FEATURES



- 2 PUSH CABLE SEAL INTO THE RETAINER



- 3 INSERTION COMPLETED



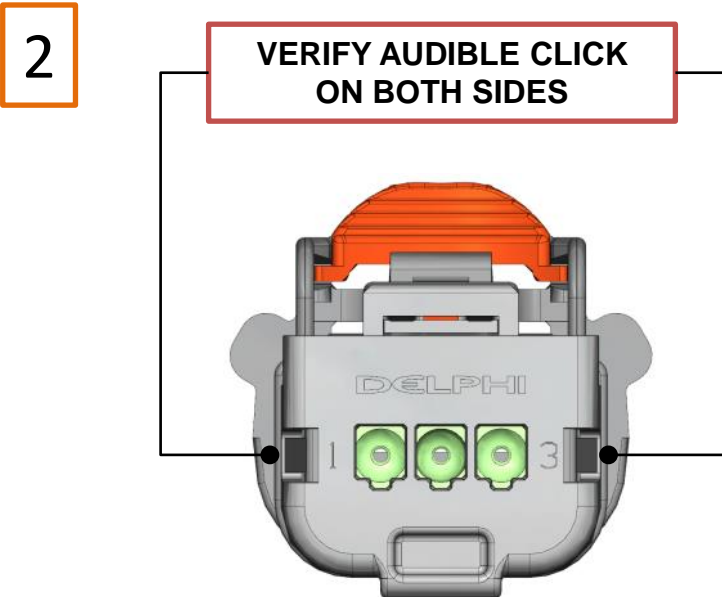
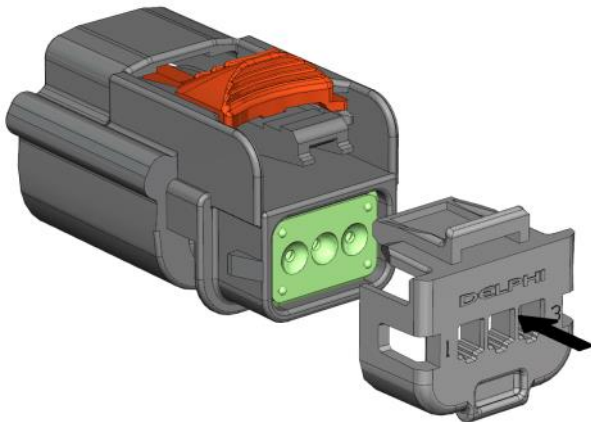


ASSEMBLY

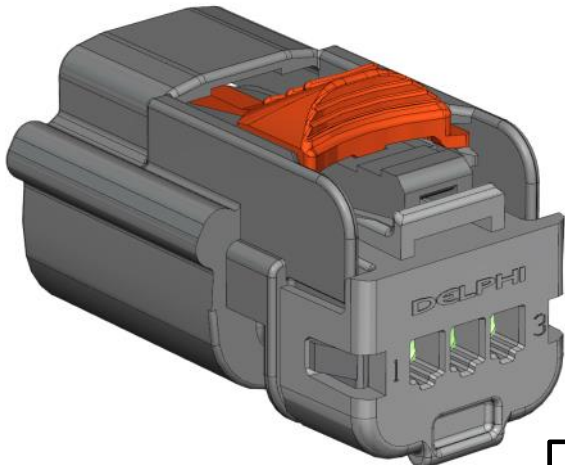
STEP 5 – Insert Retainer

THE INSERTION PROCESS OF THE RETAINER IS THE SAME REGARDLESS THE INSERTION PROCESS OF THE CABLE SEAL

1 PRESS RETAINER ONTO CONNECTOR

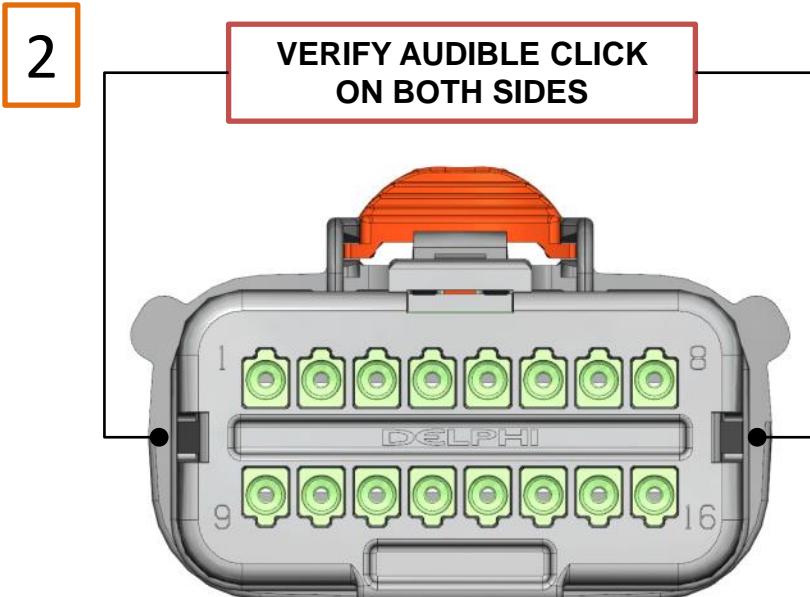
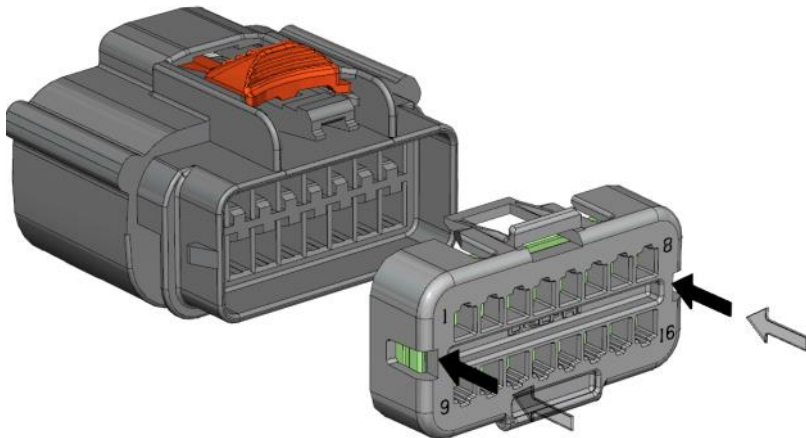


3 INSERTION COMPLETED

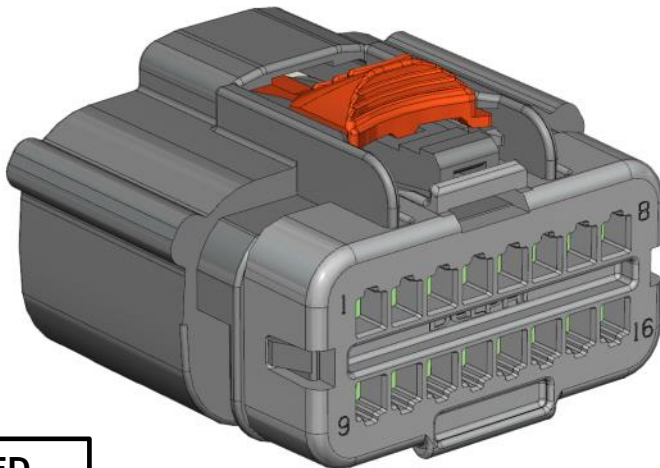


RETAINER LOCKED

1 PRESS RETAINER ONTO CONNECTOR

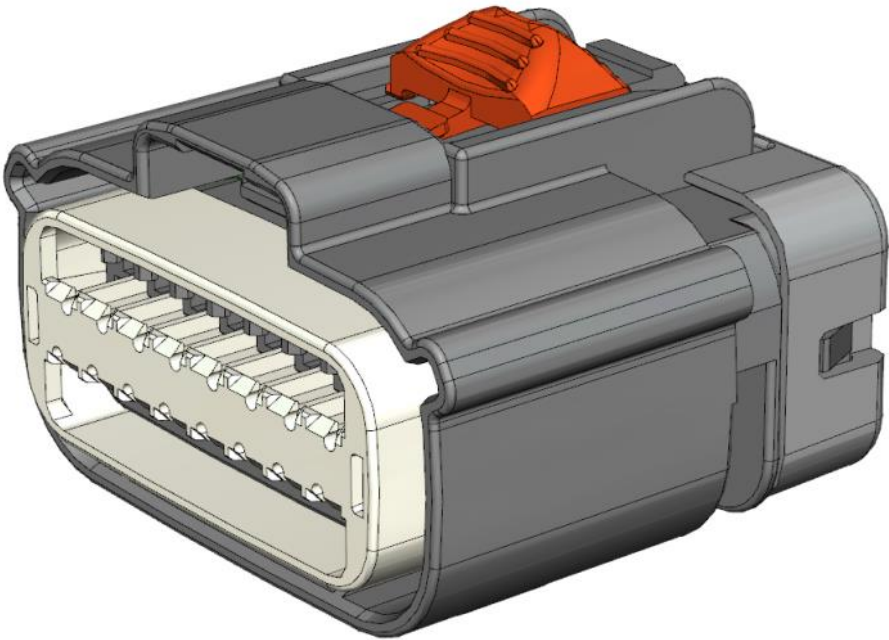


3 INSERTION COMPLETED



**ASSEMBLY**

**FEMALE CONNECTOR – COMPLETED ASSEMBLY**



ASSEMBLY

ASSEMBLY OF THE  
MALE CONNECTOR

PRE - ASSEMBLY

HARNESS ASSEMBLY

CAR ASSEMBLY

1.5 OCS Sealed Connection System

MALE ASSEMBLY



ASSEMBLY

VIEW OF VERSIONS

2 WAY CONNECTOR

TYPE 101

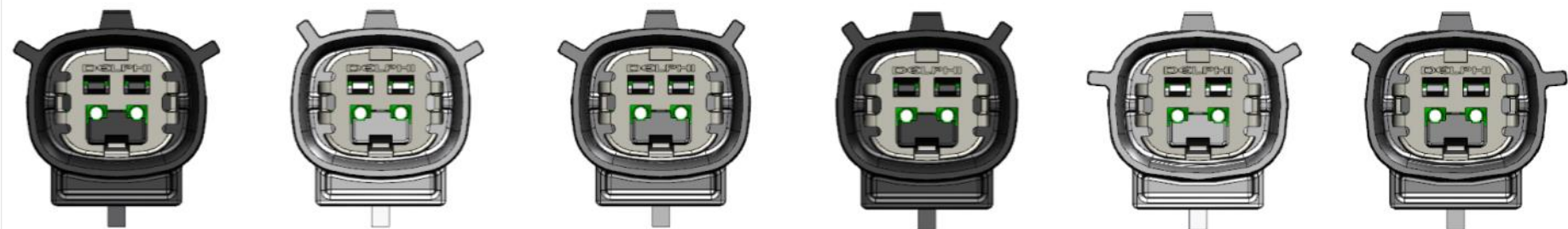
TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



3 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



4 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



6 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



EACH CONNECTION SYSTEM HAVE 6 DIFFERENT TYPES, WHICH DIFFER IN THE INDEXING AND COLOR, REFER TO LATEST DRAWINGS FOR DETAILS



ASSEMBLY

VIEW OF VERSIONS

8 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



10 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



12 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106



16 WAY CONNECTOR

TYPE 101

TYPE 102

TYPE 103

TYPE 104

TYPE 105

TYPE 106

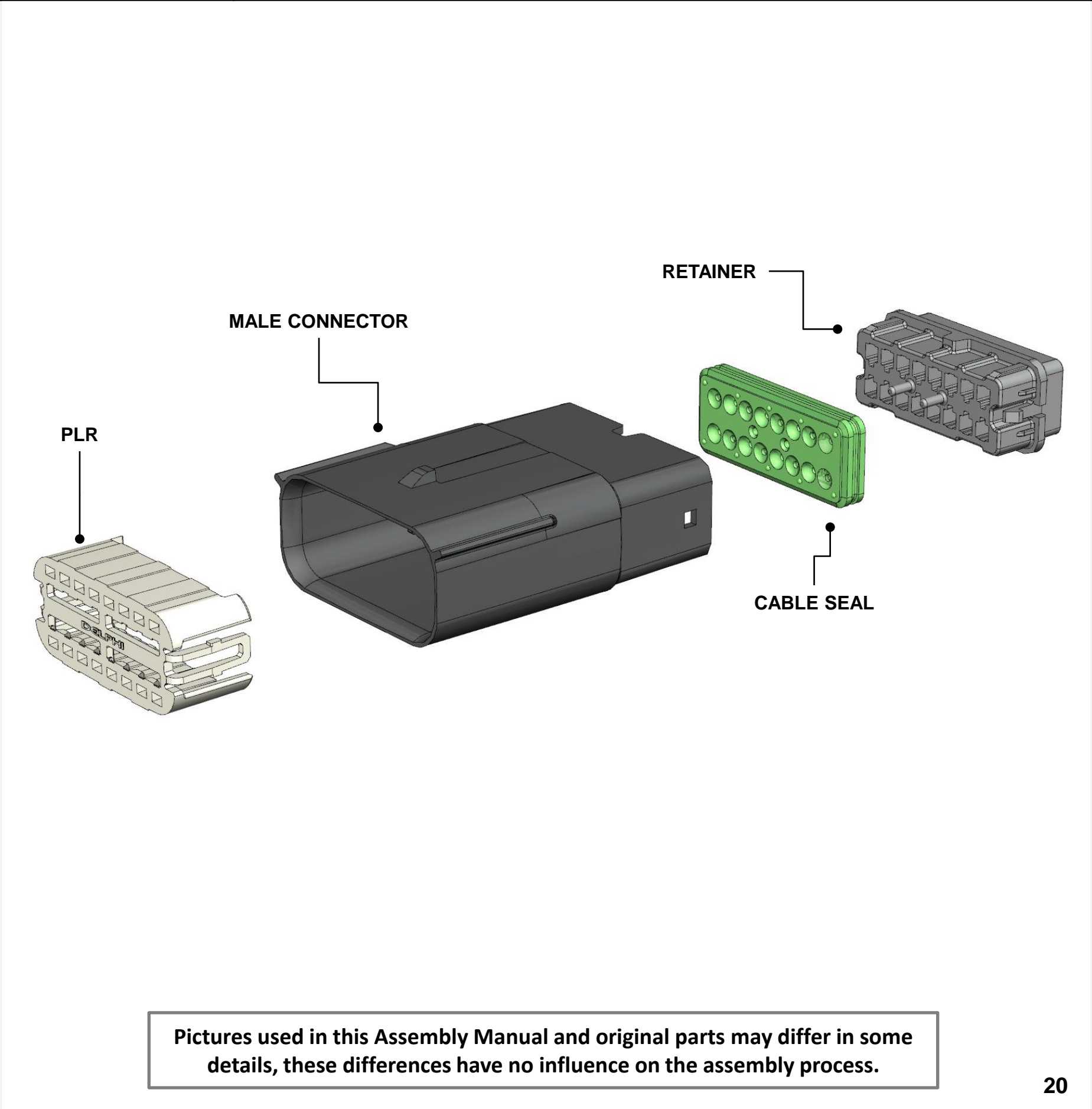


EACH CONNECTION SYSTEM HAVE 6 DIFFERENT TYPES, WHICH DIFFER IN THE INDEXING AND COLOR, REFER TO LATEST DRAWINGS FOR DETAILS

ASSEMBLY

LIST OF COMPONENTS & EXPLODED VIEW

QUANTITY	COMPONENTS OF 1.5 OCS MALE CONNECTOR
1	PLR
1	MALE CONNECTOR
1	CABLE SEAL
1	RETAINER

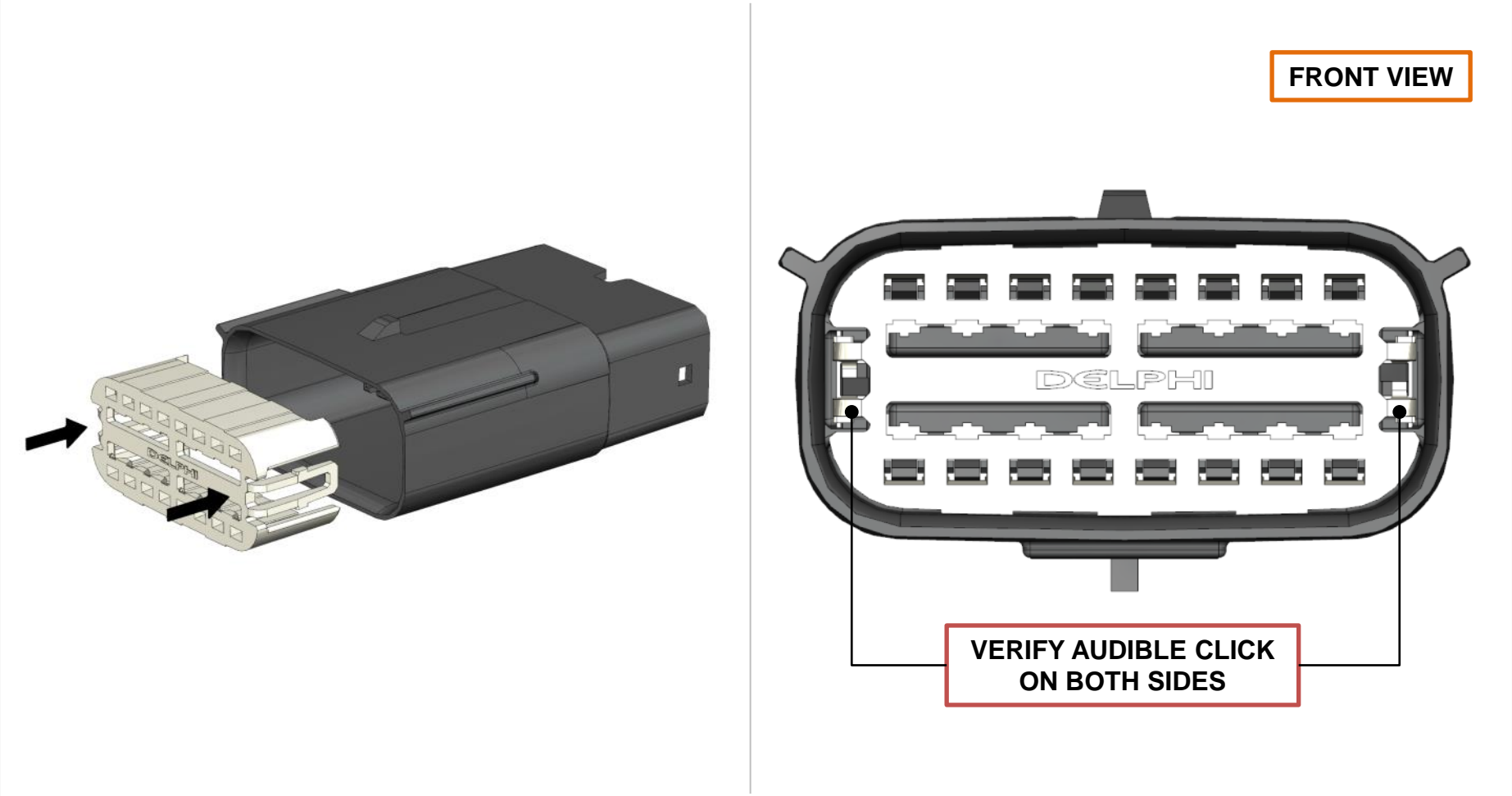


Pictures used in this Assembly Manual and original parts may differ in some details, these differences have no influence on the assembly process.

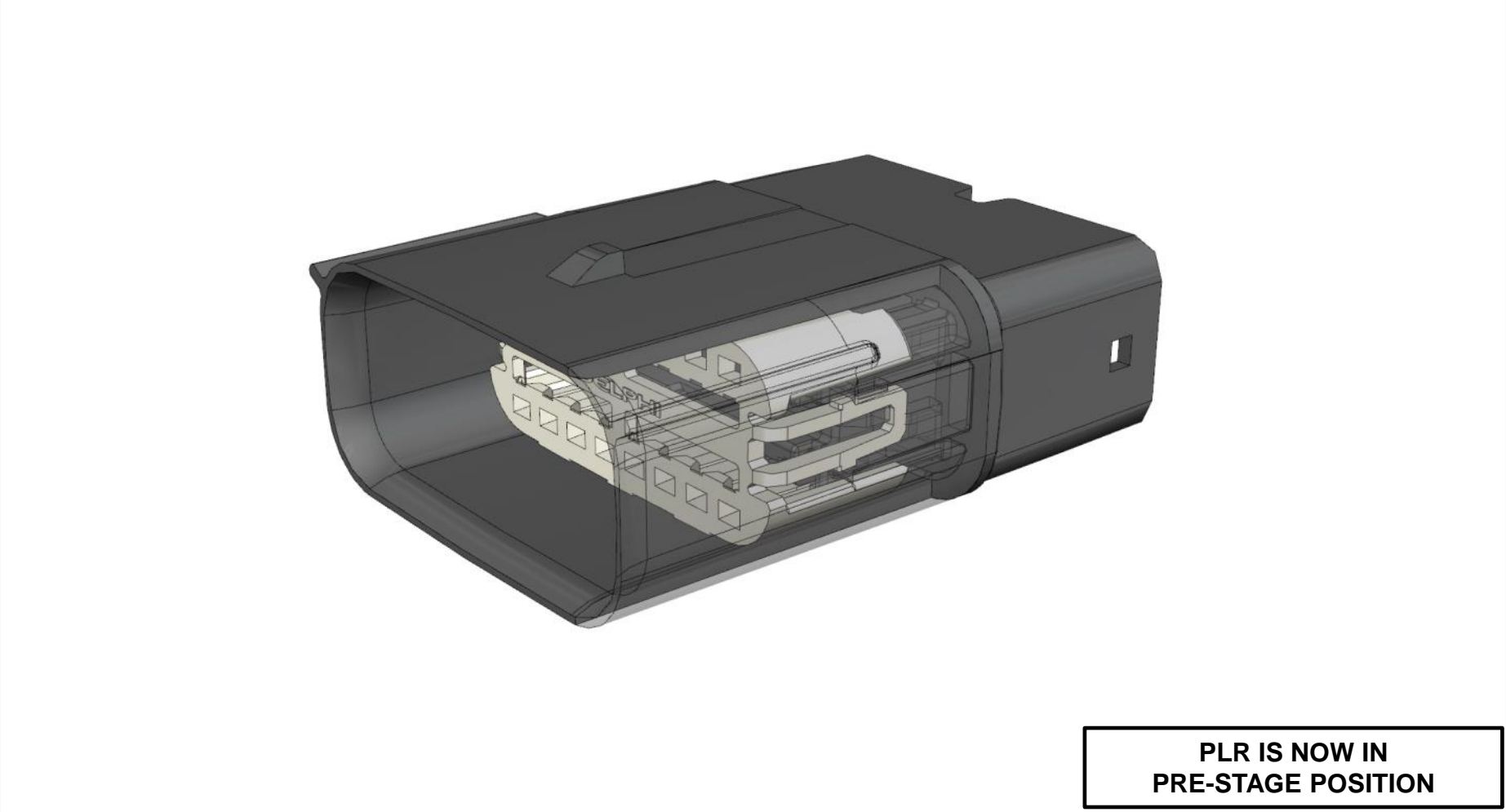


ASSEMBLY

STEP 1a – Align and Insert PLR (to Pre-Stage Position)



STEP 1b – Align and Insert PLR (to Pre-Stage Position)

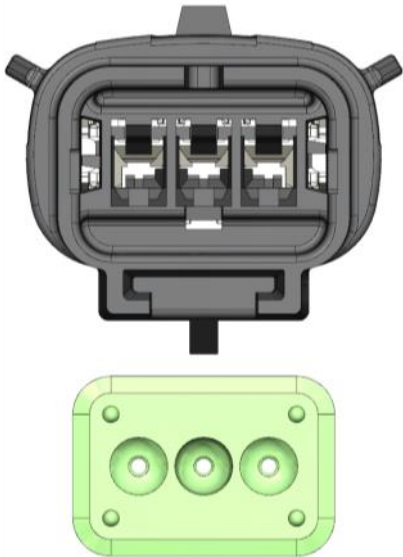


ASSEMBLY

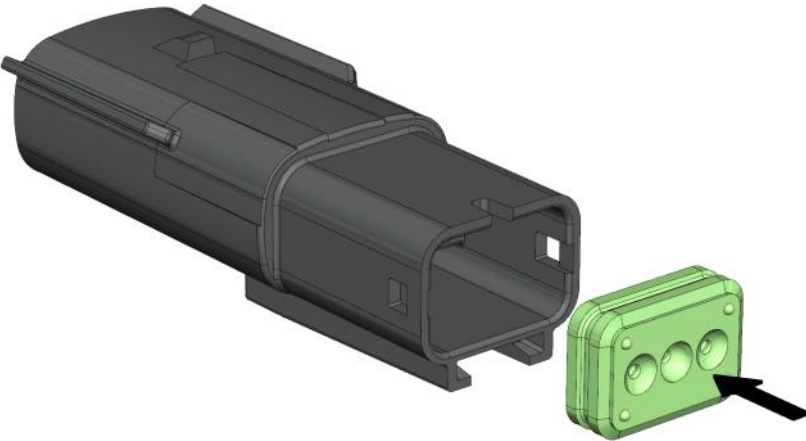
STEP 2 – Install Cable Seal

PROCESS FOR:  
3W & 4W CONNECTORS

- 1 IDENTIFY THE CORRECT ORIENTATION OF THE SEAL

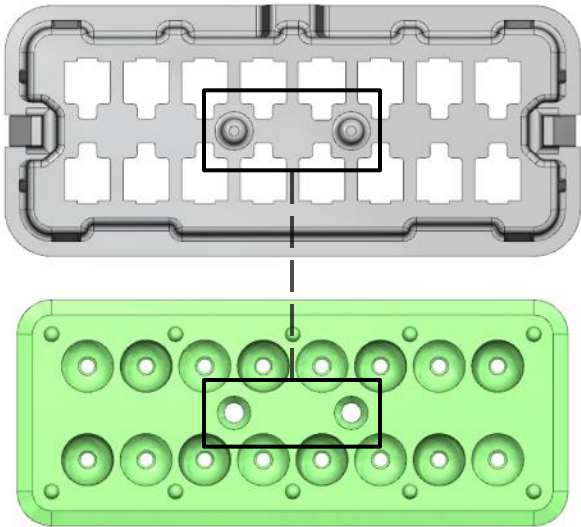


- 2 PUSH CABLE SEAL INTO CONNECTOR

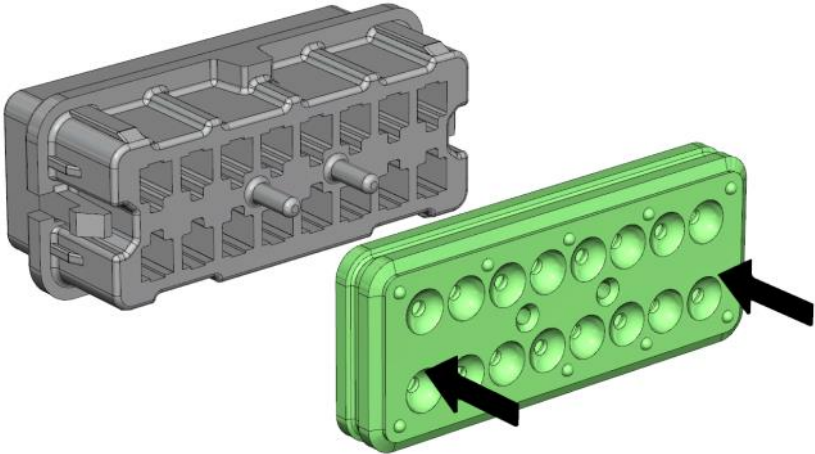


PROCESS FOR:  
2W, 6W, 8W, 10W, 12W & 16W CONNECTORS

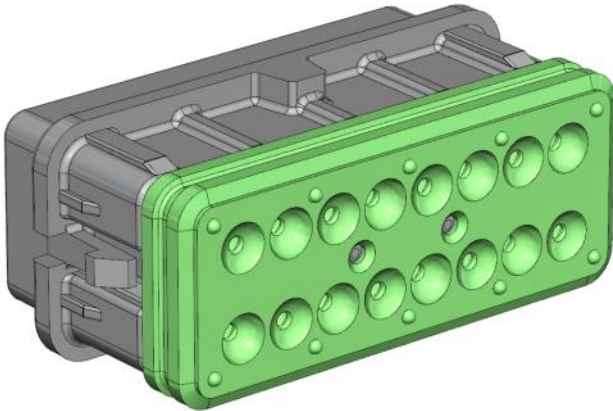
- 1 LOCATE AND ALIGN MATING FEATURES



- 2 PUSH CABLE SEAL ONTO RETAINER



- 3 INSERTION COMPLETED

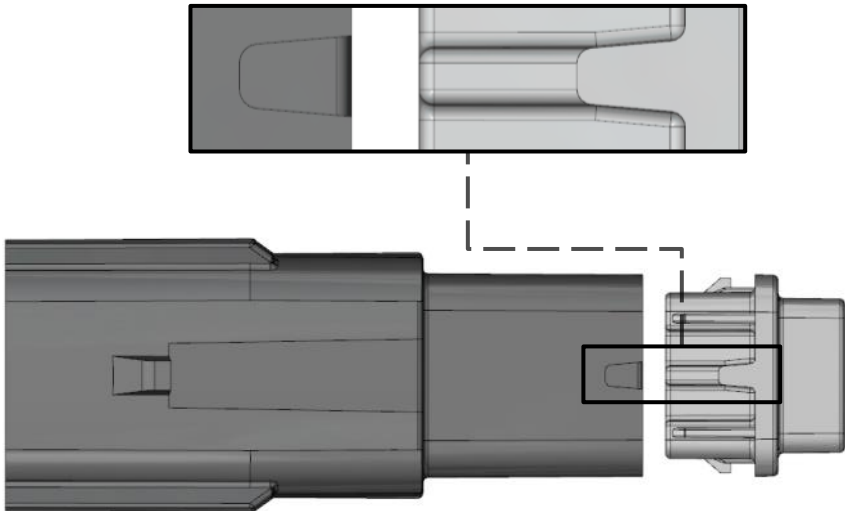


ASSEMBLY

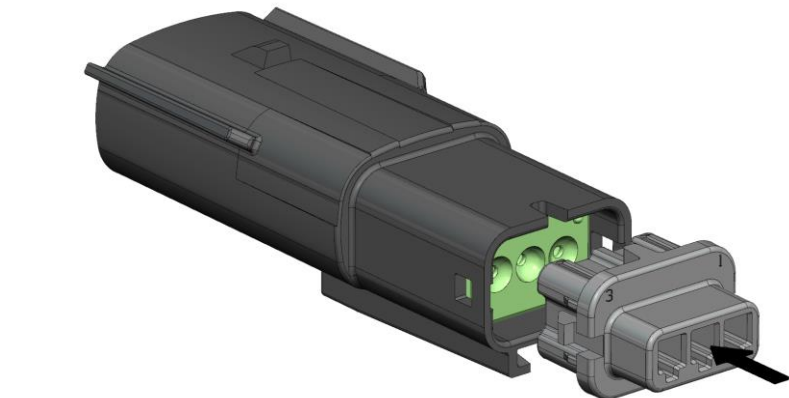
STEP 3 – Insert Retainer

THE INSERTION PROCESS OF THE RETAINER IS THE SAME REGARDLESS THE INSERTION PROCESS OF THE CABLE SEAL

1 LOCATE AND ALIGN MATING FEATURES



2 PRESS RETAINER ONTO THE CONNECTOR TO FULLY SEAT CABLE SEAL

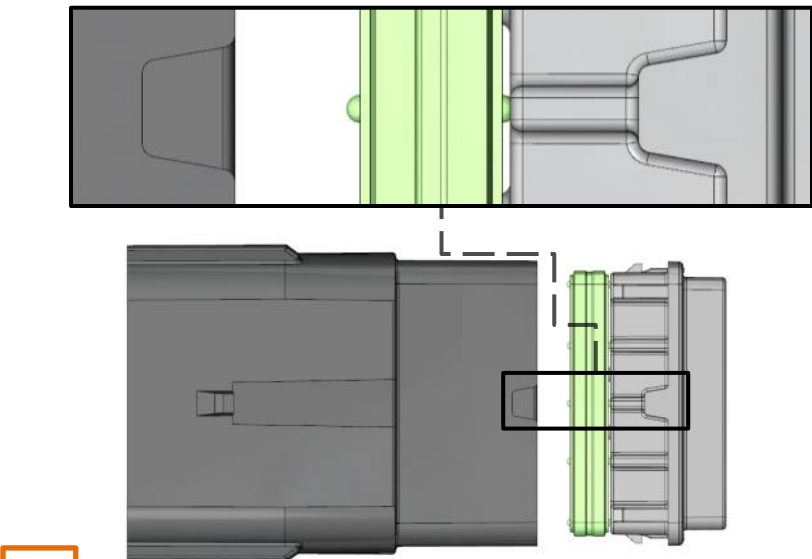


3 VERIFY AUDIBLE CLICK

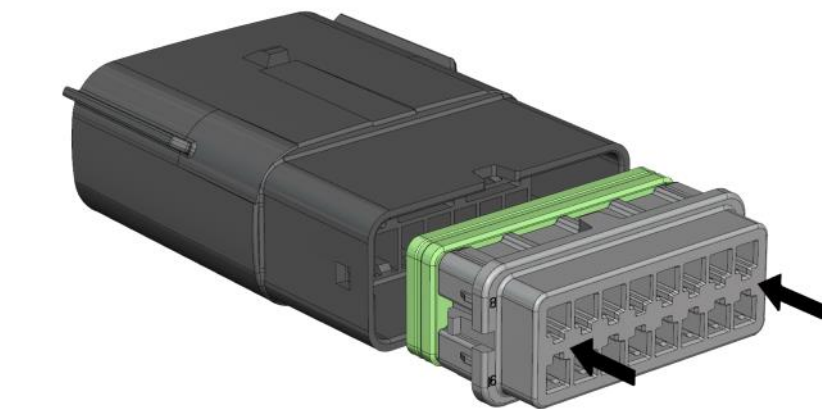


RETAINER LOCKED

1 LOCATE AND ALIGN MATING FEATURES



2 PRESS RETAINER ONTO THE CONNECTOR



3 VERIFY AUDIBLE CLICK



**ASSEMBLY**

**MALE CONNECTOR – COMPLETED ASSEMBLY**

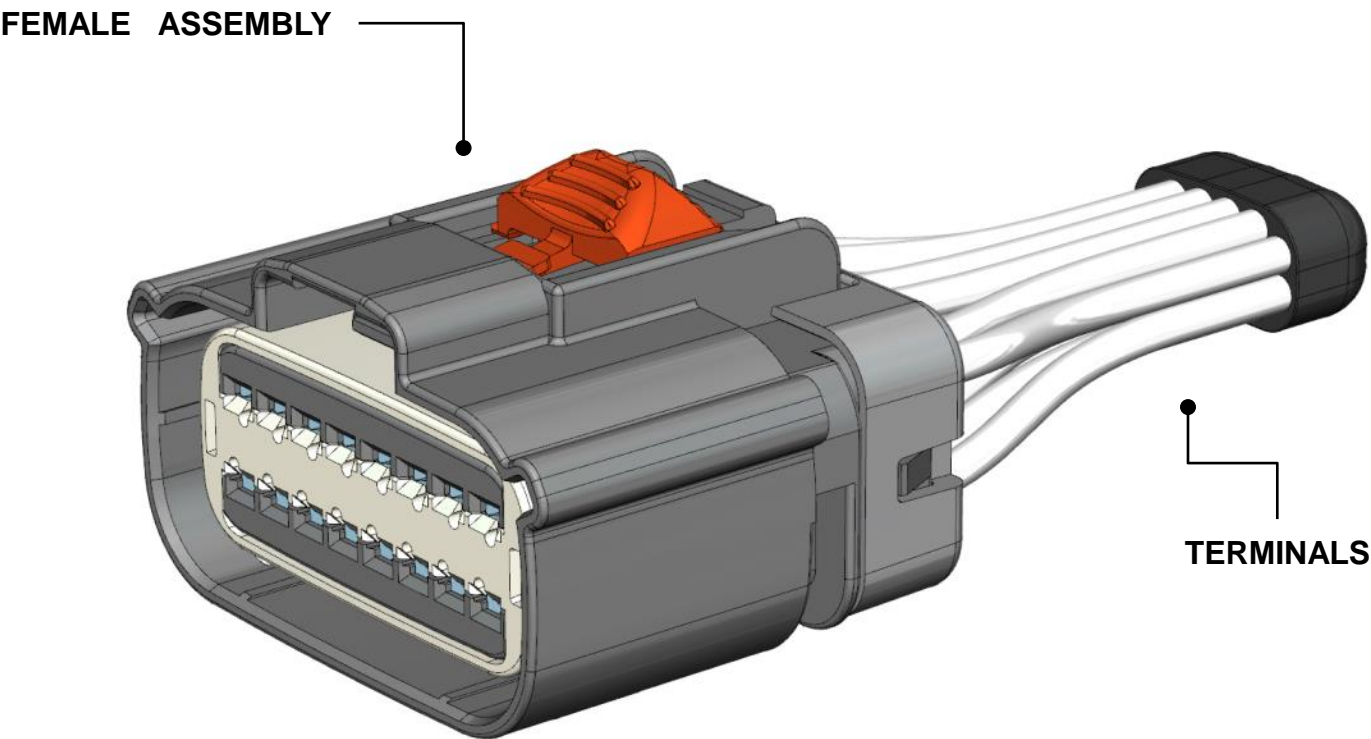


ASSEMBLY

ASSEMBLY OF THE  
FEMALE HARNESS ASSEMBLY

PRE - ASSEMBLY      HARNESS ASSEMBLY      CAR ASSEMBLY

1.5 OCS Sealed Connection System





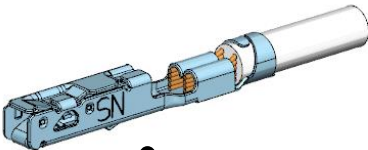
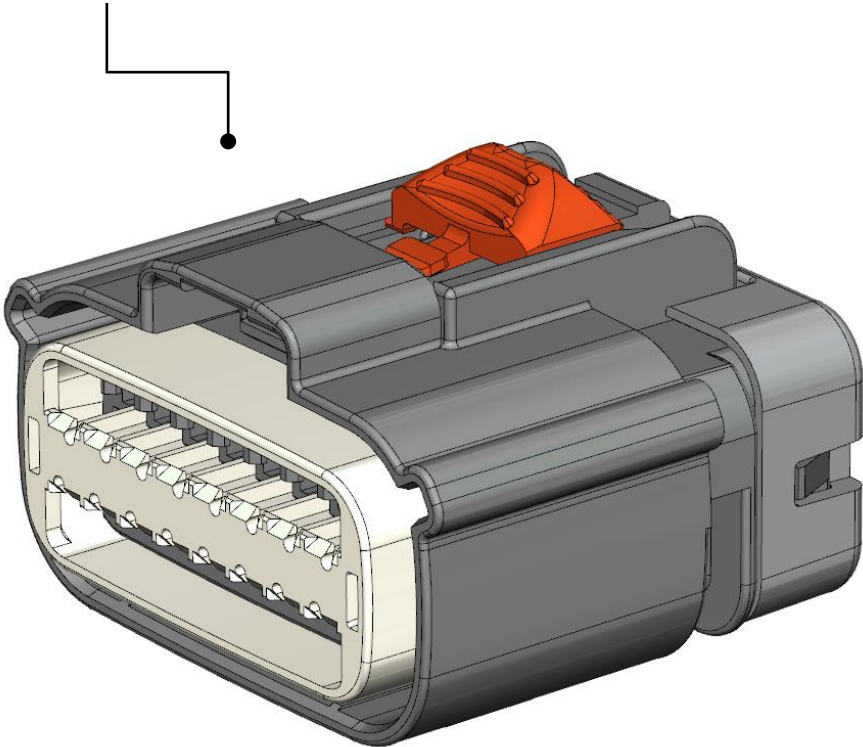
ASSEMBLY

LIST OF COMPONENTS & EXPLODED VIEW

QUANTITY	COMPONENTS OF 1.5 OCS FEMALE CONNECTION
1	FEMALE ASSEMBLY
16 *	TERMINALS (FEMALE 1.5 UNSEALED)

\* THE QUANTITY OF TERMINALS REQUIRED MIGHT VARY DEPENDING ON THE TYPE OF ASSEMBLY:  
2W, 3W, 4W, 6W, 8W, 10W, 12W & 16W.

FEMALE ASSEMBLY



TERMINAL

OPTIONAL COMPONENT

USE OF CAVITY  
PLUGS IF REQUIRED

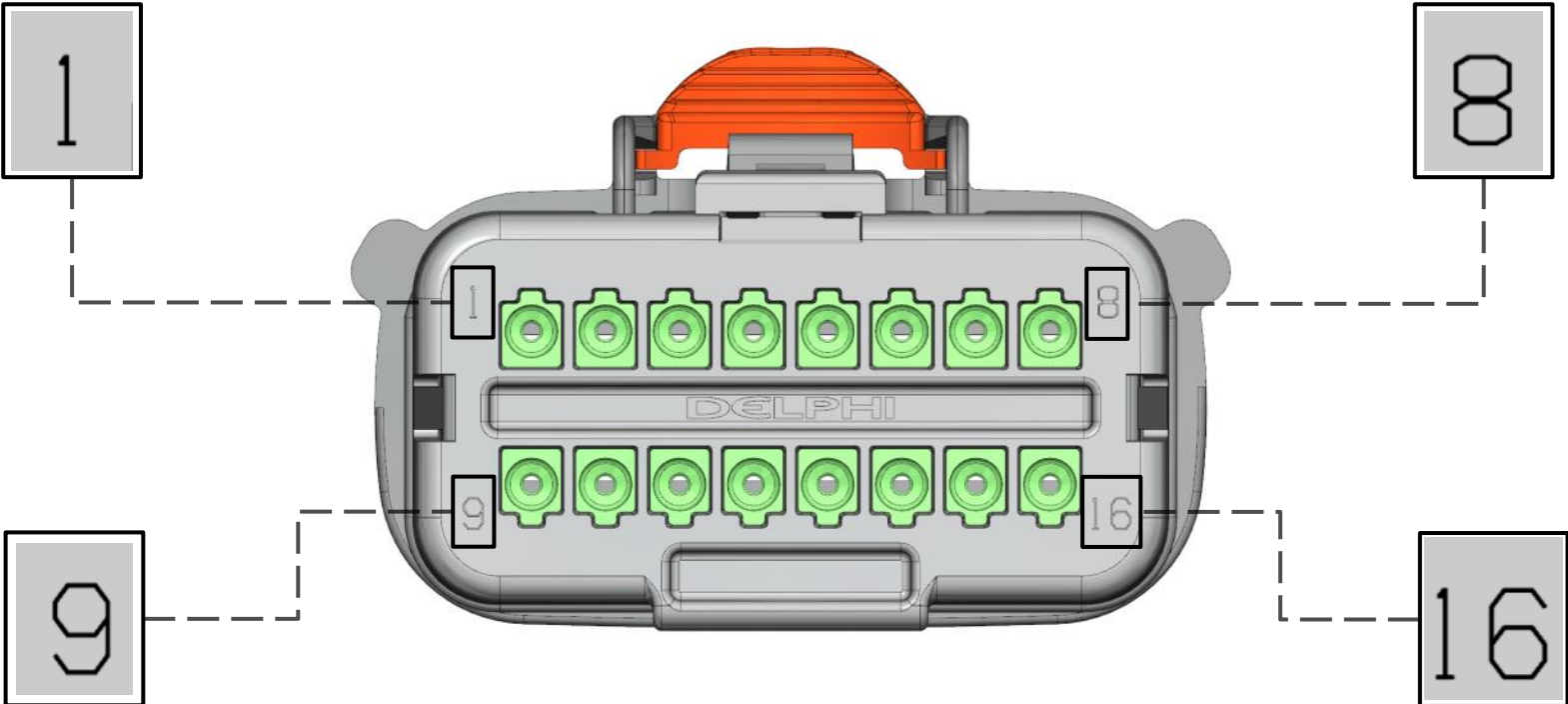


Pictures used in this Assembly Manual and original parts may differ in some details, these differences have no influence on the assembly process.

ASSEMBLY

STEP 1 – Identify Cavities

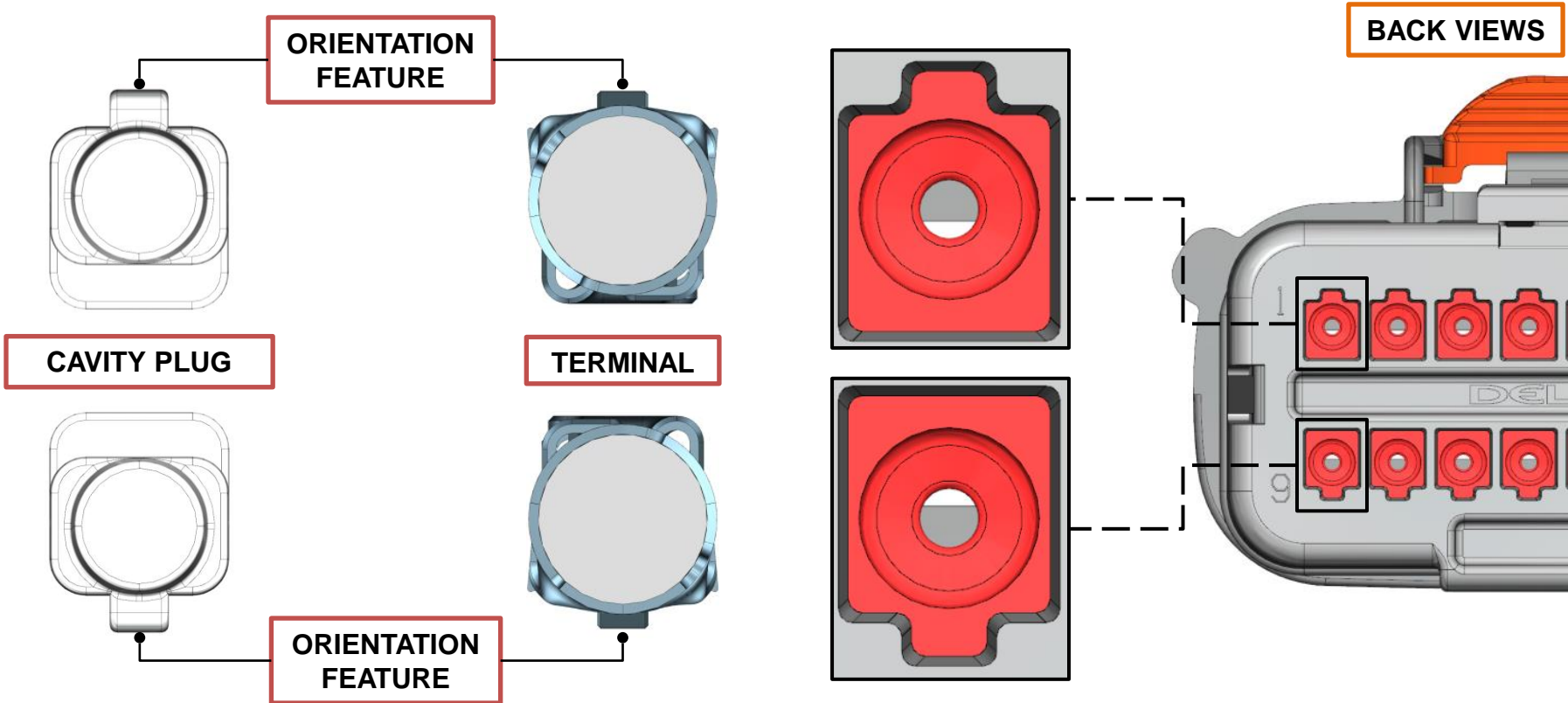
BACK VIEW



CAVITY IDENTIFICATION NUMBERS

STEP 2 – Align Cavity Plug (Optional)/Terminals Female 1.5 and Female Assembly

INSERT FEMALE TERMINAL INTO RECEPTACLE HOUSING ACCORDING TO INSERTION PLAN.  
- PROPER ORIENTATION OF TERMINAL REQUIRED -



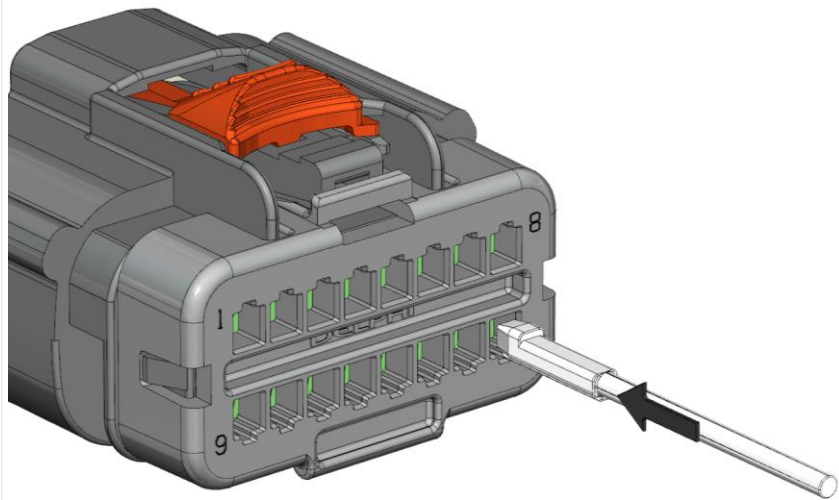
**IMPORTANT!** USE OF CAVITY PLUG IS ACCEPTABLE  
BUT USE OF RETAINER WITH MULTIPLE CAVITY CONFIGURATIONS IS PREFERABLE

ASSEMBLY

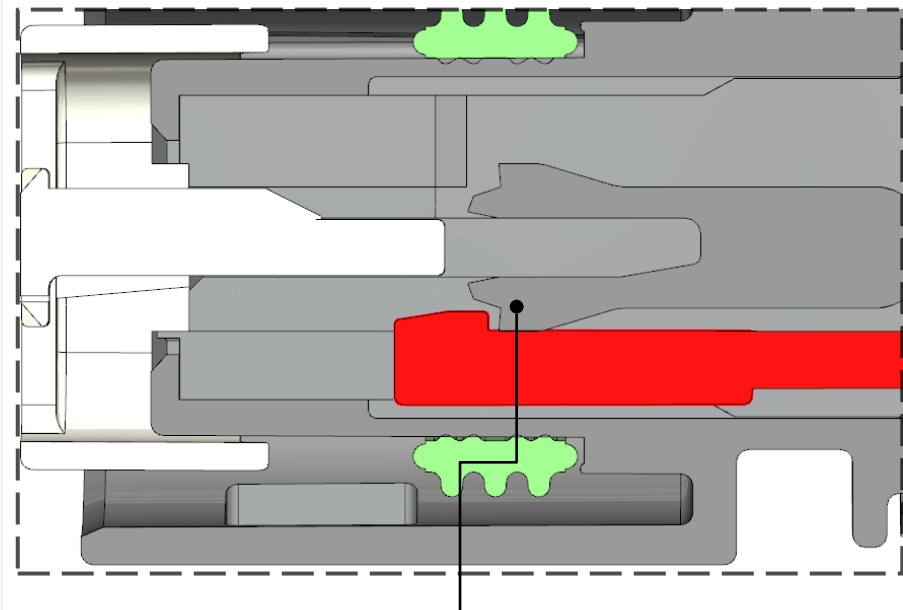
STEP 3a – Insert Cavity Plug (Optional)/Terminals OCS Female 1.5

CAVITY PLUG INSERTION:

- 1 PUSH THE CAVITY PLUG STRAIGHT INTO THE CAVITY



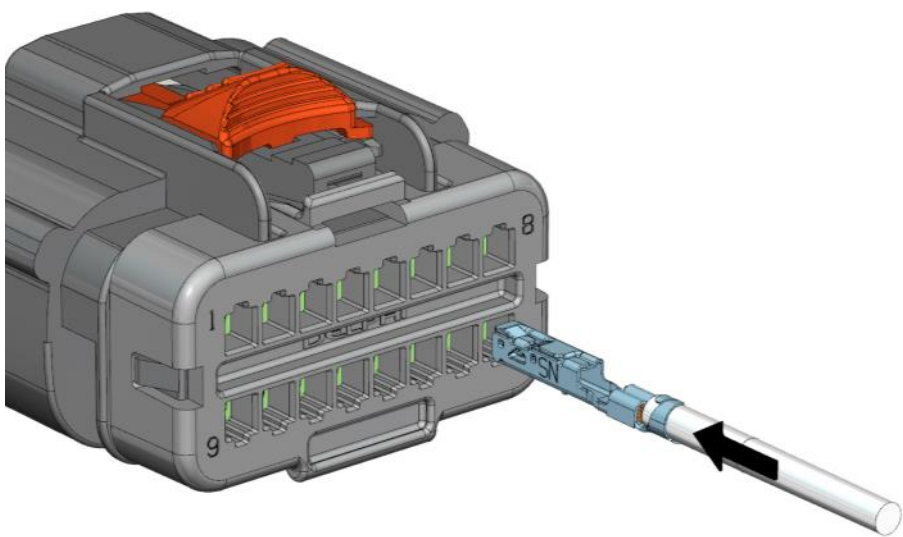
- 2 VERIFY AUDIBLE CLICK



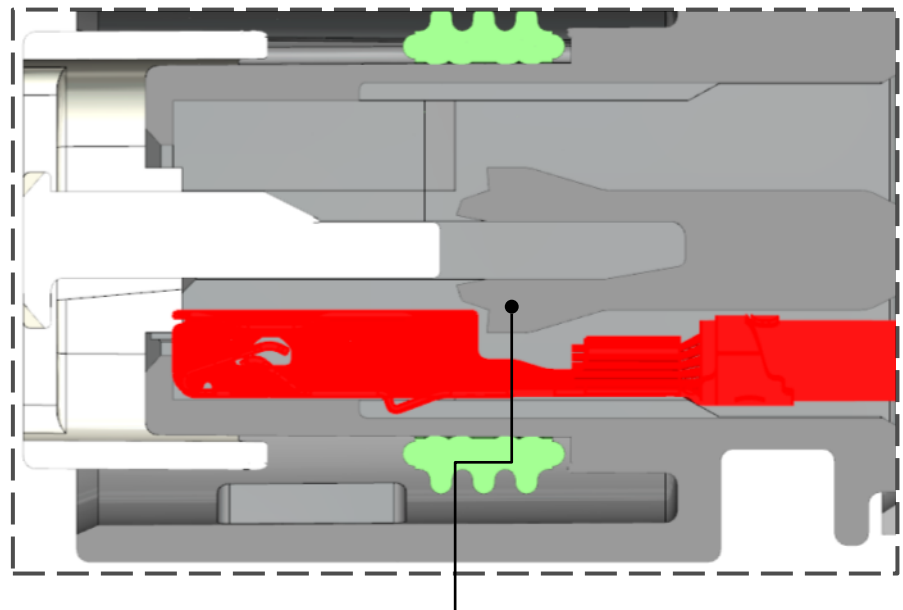
CAVITY PLUG IS FULLY ENGAGED UNDER THE FLEX LOCK

TERMINAL INSERTION:

- 1 PUSH THE TERMINAL STRAIGHT INTO THE CAVITY



- 2 VERIFY AUDIBLE CLICK



TERMINAL IS FULLY ENGAGED UNDER THE FLEX LOCK

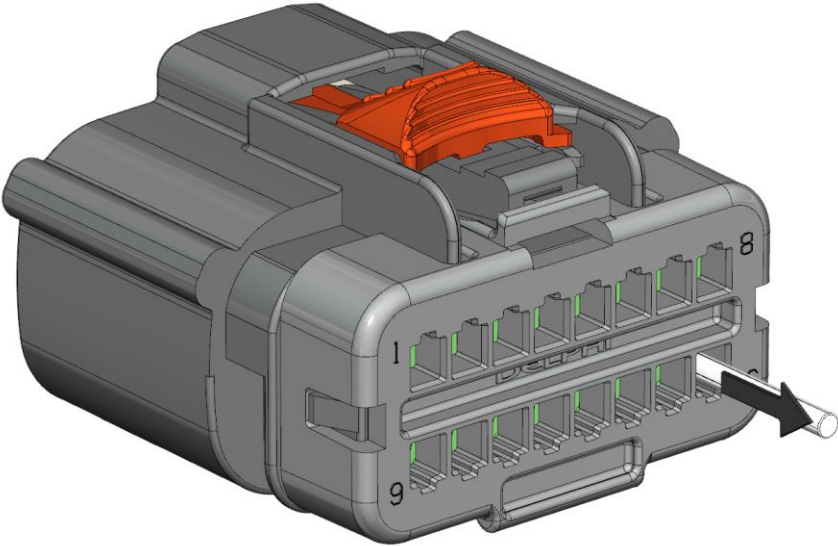


ASSEMBLY

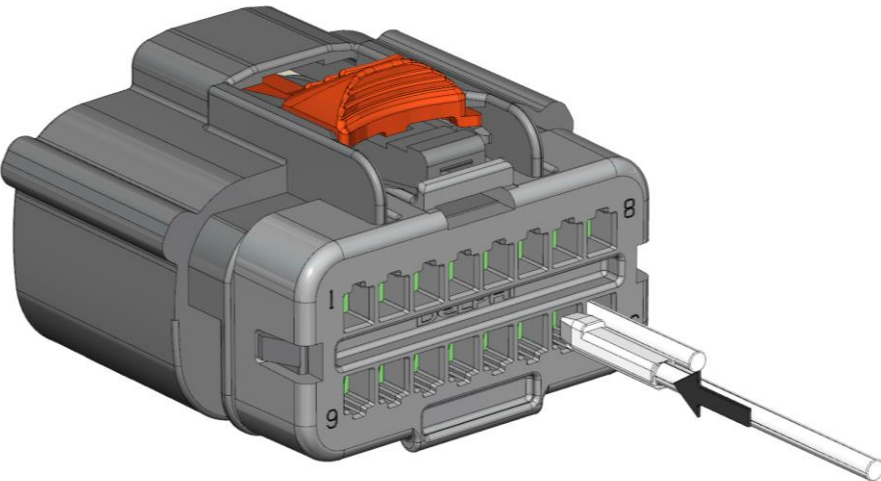
STEP 3b – Insert Cavity Plug (Optional)/Terminals OCS Female 1.5

CAVITY PLUG INSERTION:

- 3 GENTLY PULL ON THE PLUG TO VERIFY ITS COMPLETE INSERTION



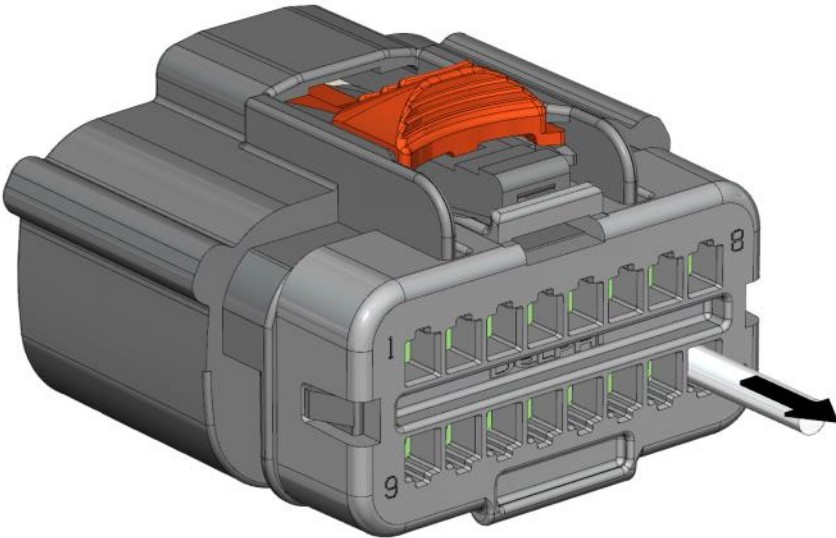
- 4 IF REQUIRED, FOLLOW THE SAME PROCEDURE TO INSERT THE NEEDED CAVITY PLUGS



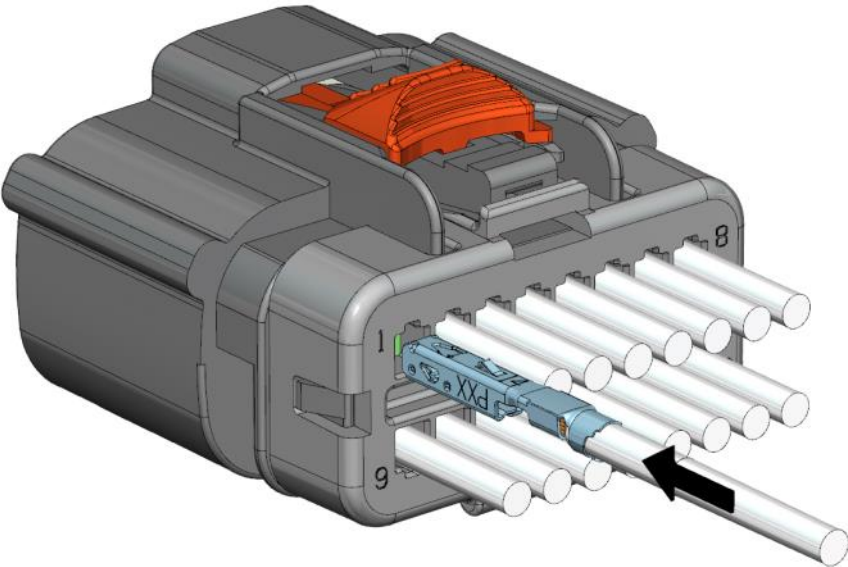
**OPTIONAL:** AFTER INSERTION CAVITY PLUGS CAN BE TRIMMED FLUSH TO AVOID WIRE CHAFING. DON'T TRIM WHEN TERMINALS ARE INSTALLED

TERMINAL INSERTION:

- 3 GENTLY PULL ON THE CABLE TO VERIFY THE LOCKING SYSTEM



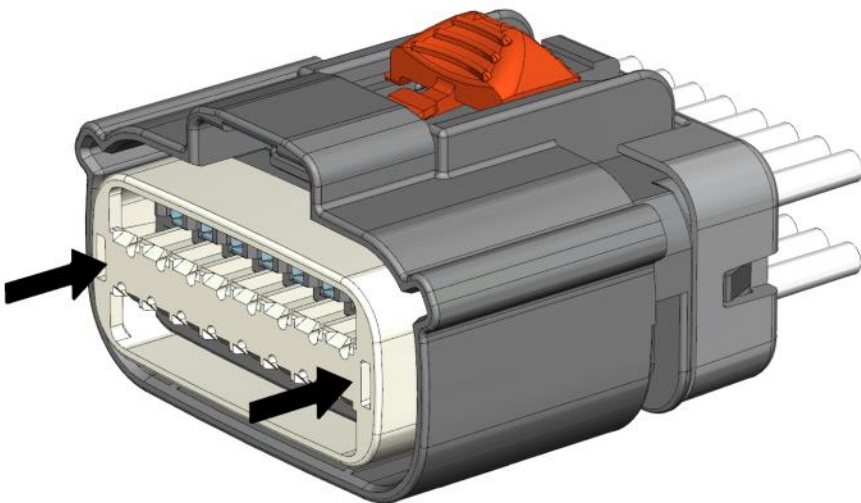
- 4 USE THE SAME PROCESS TO INSERT THE REST OF THE TERMINALS



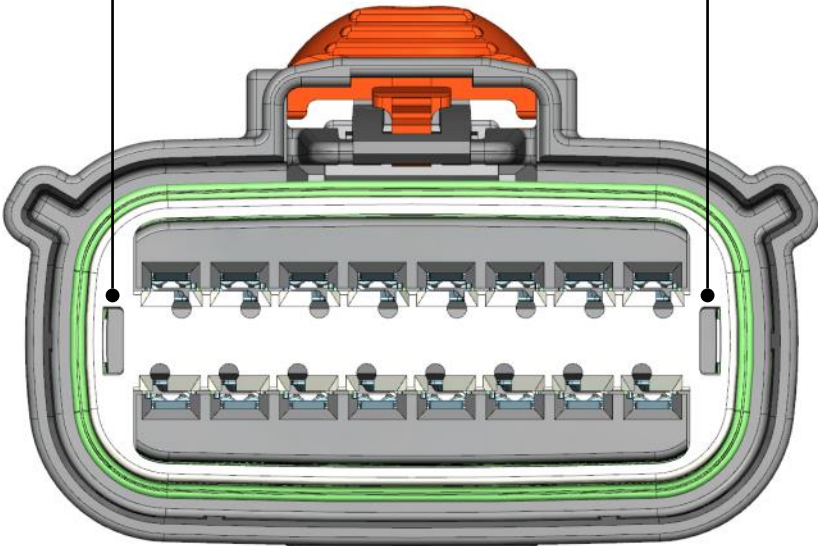
**ASSEMBLY**

**STEP 4 – Close PLR to Full-Stage**

**PUSH PLR TO THE END POSITION  
TO SECURE THE TERMINALS**

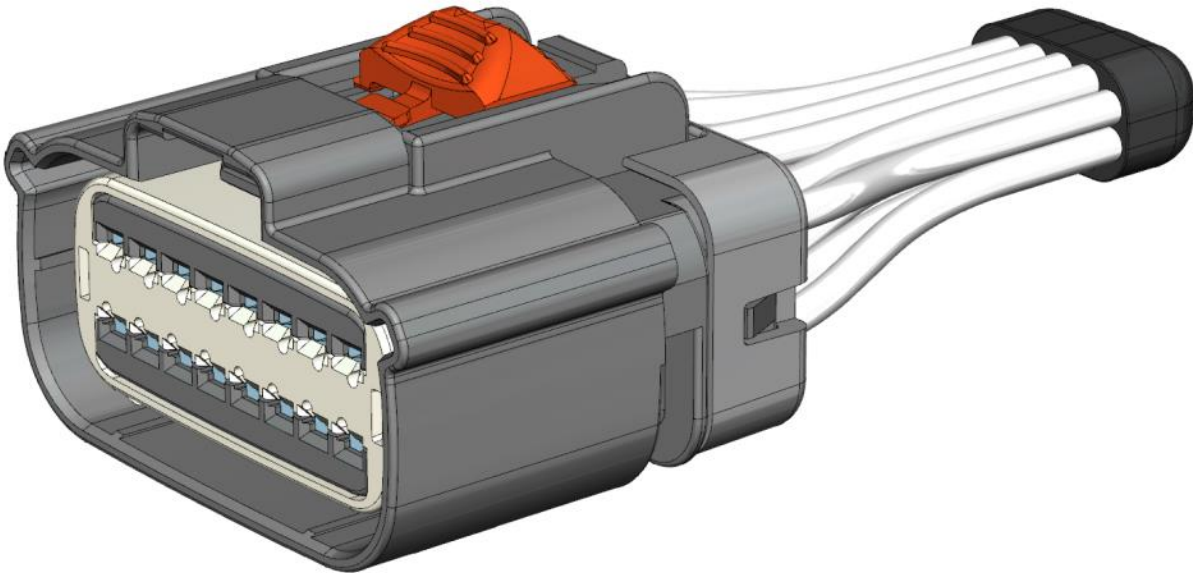


**VERIFY AUDIBLE CLICK  
ON BOTH SIDES**



**PLR IS NOW IN  
FULL-STAGE POSITION**

**FEMALE ASSEMBLY - COMPLETED**

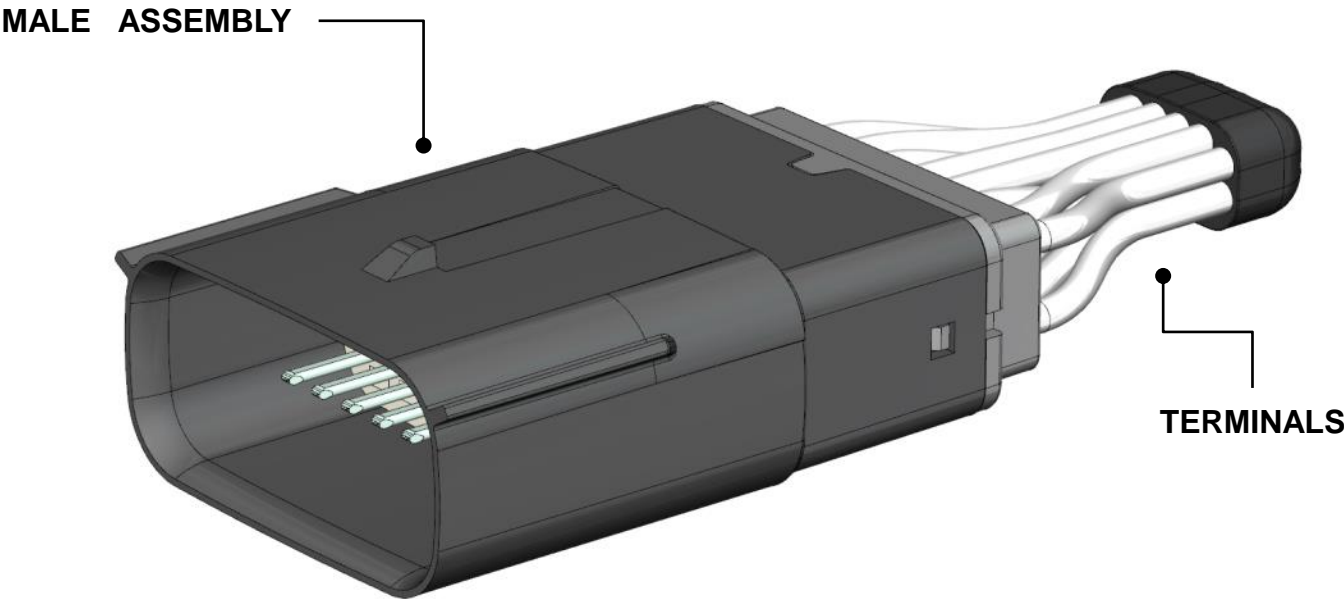


ASSEMBLY

ASSEMBLY OF THE  
MALE HARNESS ASSEMBLY

PRE - ASSEMBLY      HARNESS ASSEMBLY      CAR ASSEMBLY

1.5 OCS Sealed Connection System



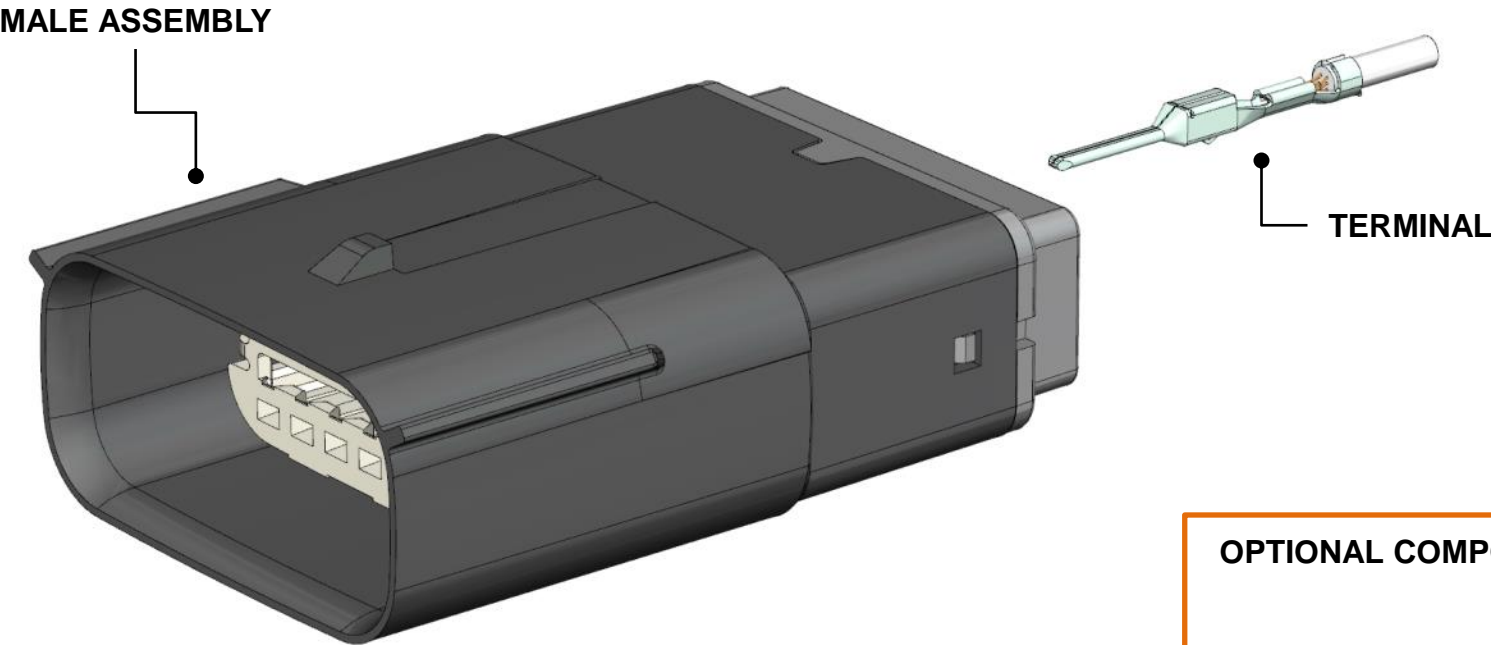
ASSEMBLY

LIST OF COMPONENTS

QUANTITY	COMPONENTS OF 1.5 OCS MALE CONNECTION
1	MALE ASSEMBLY
16*	TERMINALS (MALE 1.5 UNSEALED)

\* THE QUANTITY OF TERMINALS REQUIRED MIGHT VARY DEPENDING ON THE TYPE OF ASSEMBLY:  
2W, 3W, 4W, 6W, 8W, 10W, 12W & 16W.

EXPLODED COMPONENTS



OPTIONAL COMPONENT

USE OF CAVITY PLUGS IF REQUIRED



A vertical, cylindrical metal component, identified as an optional cavity plug, is shown within an orange-bordered box. The text 'OPTIONAL COMPONENT' and 'USE OF CAVITY PLUGS IF REQUIRED' is positioned to its left.

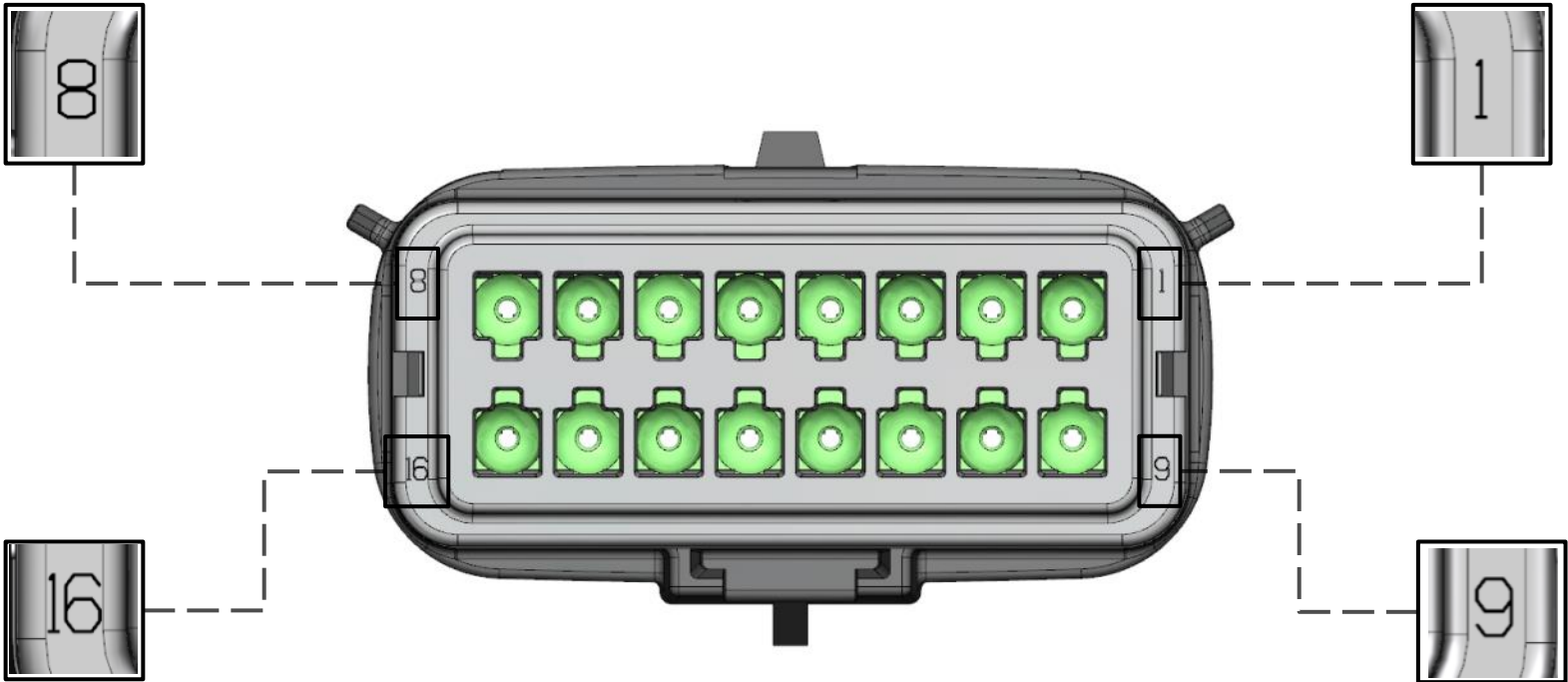
Pictures used in this Assembly Manual and original parts may differ in some details, these differences have no influence on the assembly process.



ASSEMBLY

STEP 1 – Identify Cavities

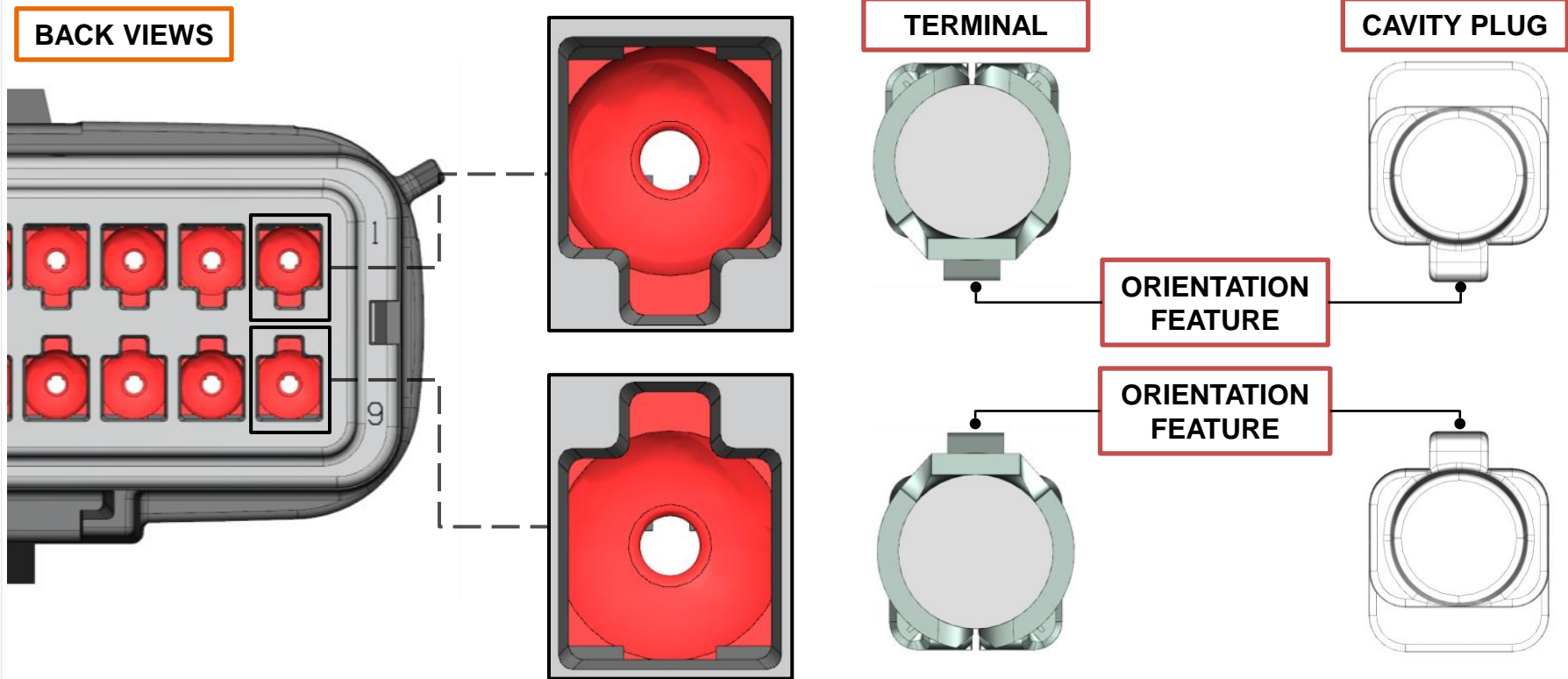
BACK VIEW



CAVITY IDENTIFICATION NUMBERS

STEP 2 – Align Cavity Plug (Optional)/Terminals Male 1.5 and Male Assembly

INSERT MALE TERMINAL INTO RECEPTACLE HOUSING ACCORDING TO INSERTION PLAN.  
- PROPER ORIENTATION OF TERMINAL REQUIRED -



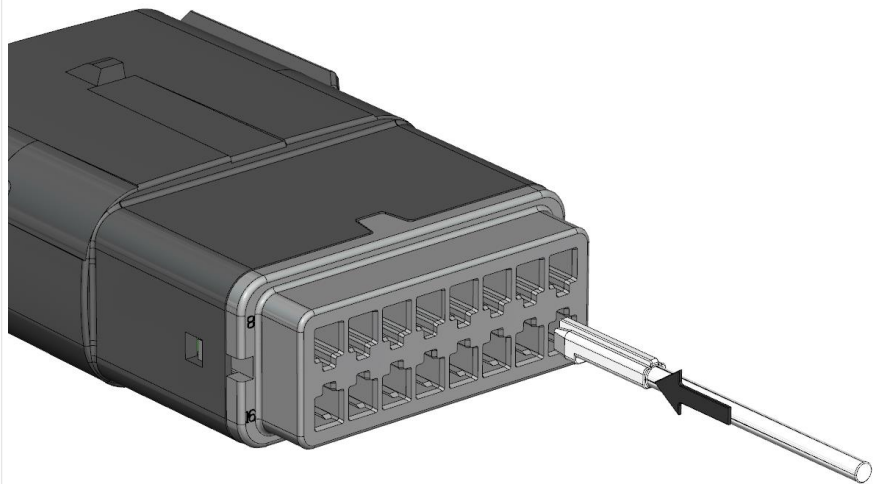
**IMPORTANT!** USE OF CAVITY PLUG IS ACCEPTABLE  
BUT USE OF RETAINER WITH MULTIPLE CAVITY CONFIGURATIONS IS PREFERABLE

ASSEMBLY

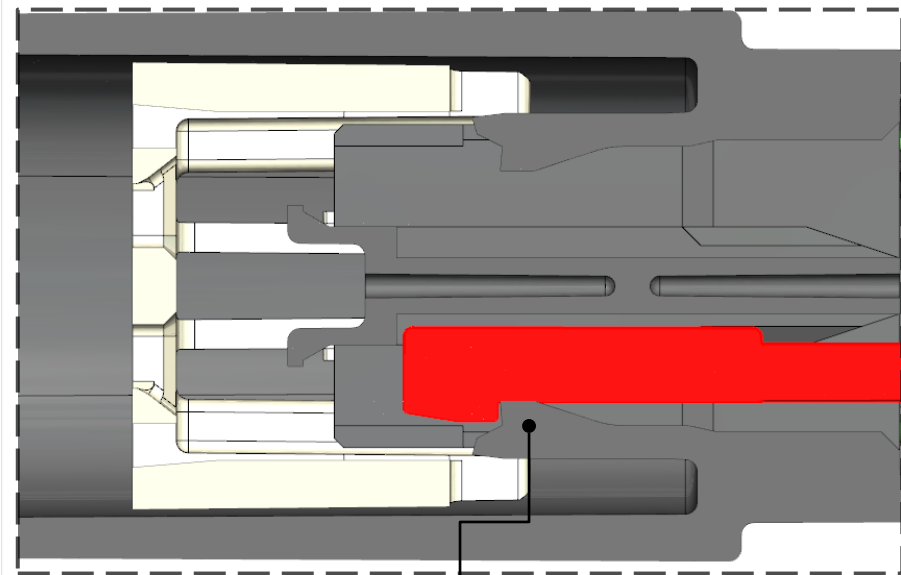
STEP 3a – Insert Cavity Plug (Optional)/Terminals OCS Male 1.5

CAVITY PLUG INSERTION:

- 1
- PUSH THE CAVITY PLUG STRAIGHT INTO THE CAVITY



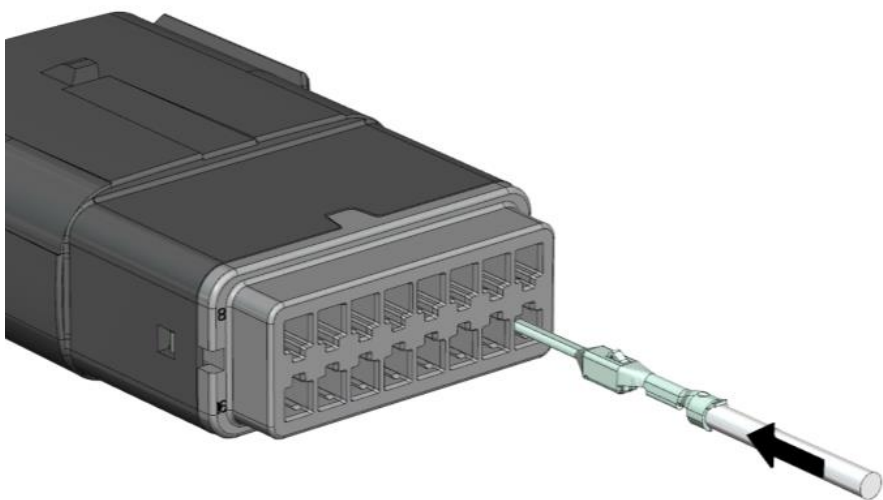
- 2
- VERIFY AUDIBLE CLICK



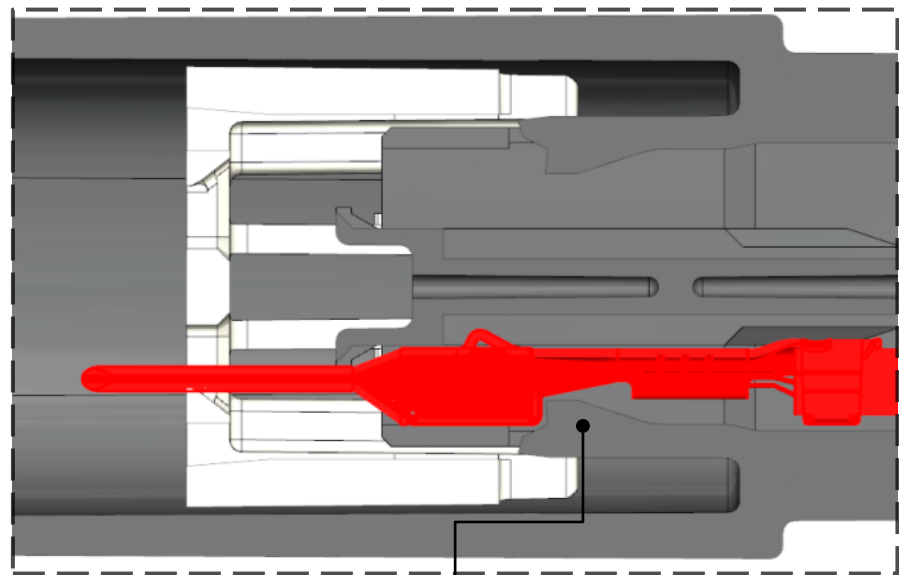
CAVITY PLUG IS FULLY ENGAGED UNDER THE FLEX LOCK

TERMINAL INSERTION:

- 1
- PUSH THE TERMINAL STRAIGHT INTO THE CAVITY



- 2
- VERIFY AUDIBLE CLICK



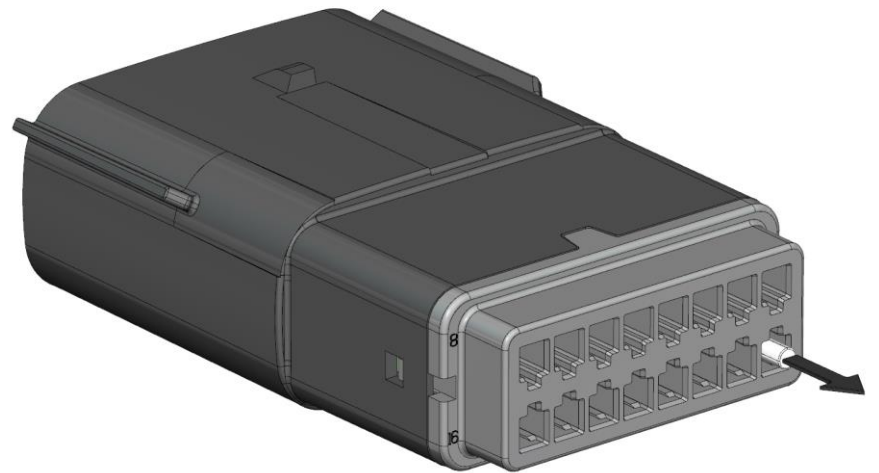
TERMINAL IS FULLY ENGAGED UNDER THE FLEX LOCK

ASSEMBLY

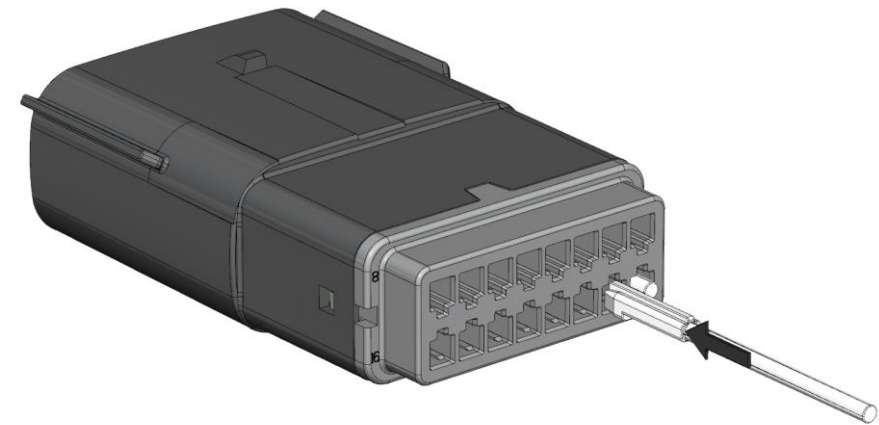
STEP 3b – Insert Cavity Plug (Optional)/Terminals OCS Male 1.5

CAVITY PLUG INSERTION:

- 3 GENTLY PULL ON THE PLUG TO VERIFY ITS COMPLETE INSERTION



- 4 IF REQUIRED, FOLLOW THE SAME PROCEDURE TO INSERT THE NEEDED CAVITY PLUGS



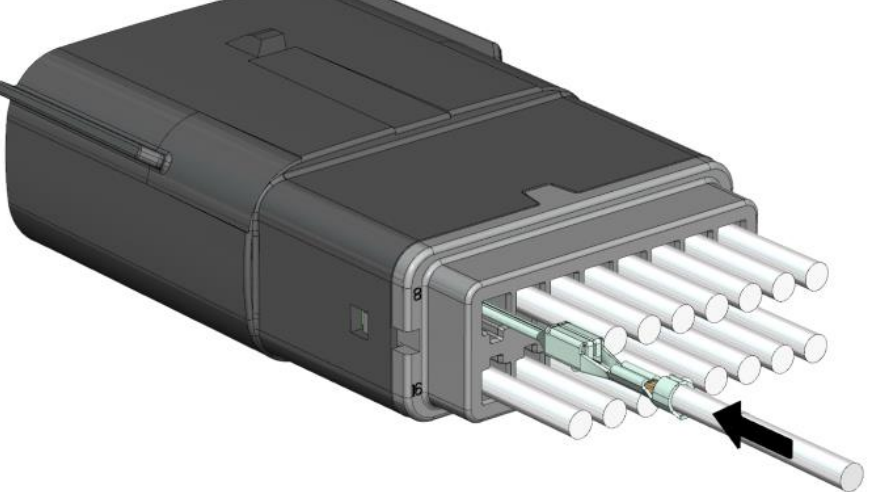
**OPTIONAL:** AFTER INSERTION CAVITY PLUGS CAN BE TRIMMED FLUSH TO AVOID WIRE CHAFING. DON'T TRIM WHEN TERMINALS ARE INSTALLED

TERMINAL INSERTION:

- 3 GENTLY PULL ON THE CABLE TO VERIFY THE LOCKING SYSTEM



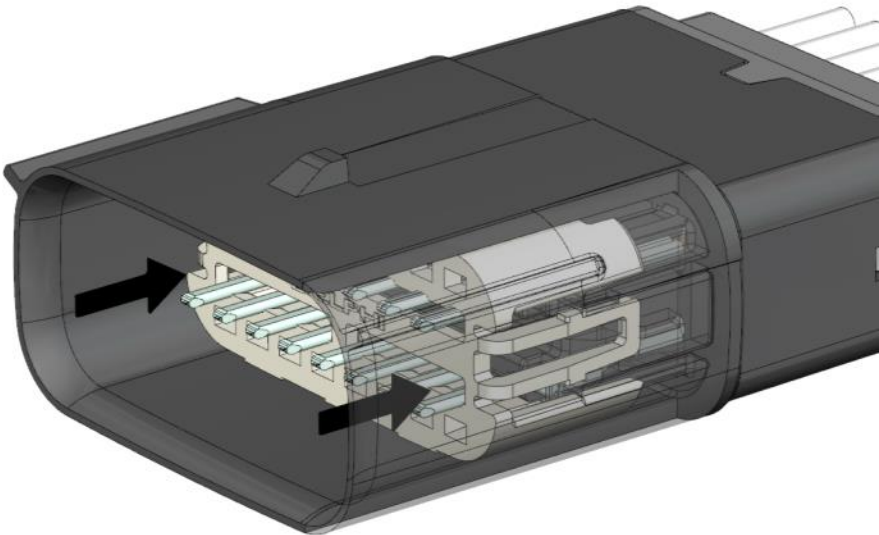
- 4 USE THE SAME PROCESS TO INSERT THE REST OF THE TERMINALS



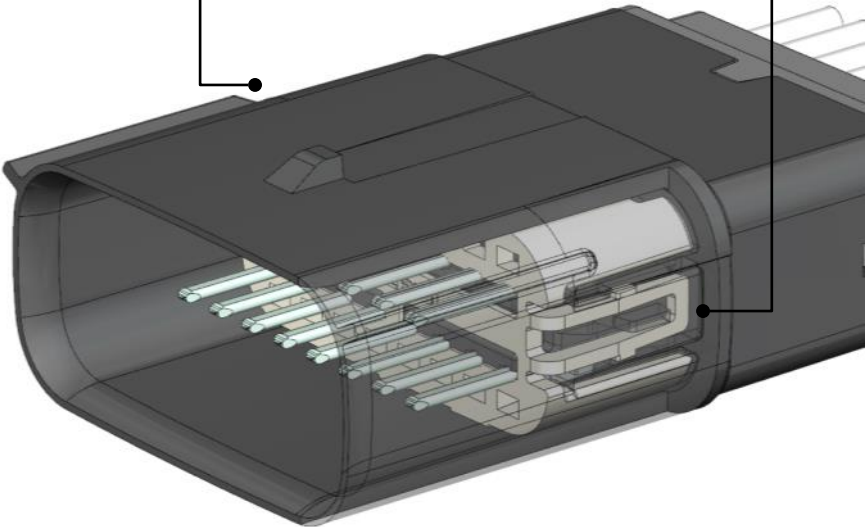
**ASSEMBLY**

**STEP 4 – Close PLR to Full-Stage**

**PUSH PLR TO THE END POSITION  
TO SECURE THE TERMINALS**

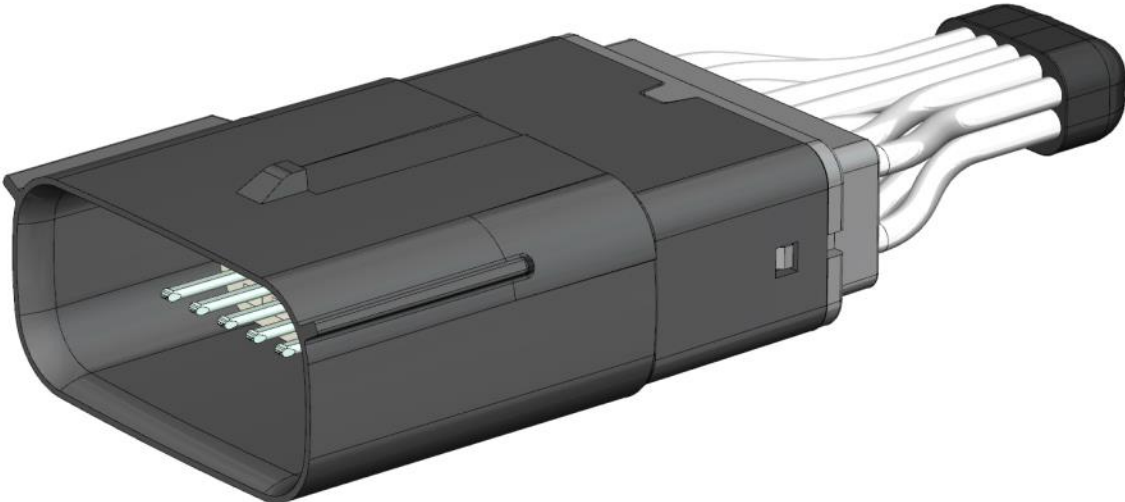


**VERIFY AUDIBLE CLICK  
ON BOTH SIDES**



**PLR IS NOW IN  
FULL-STAGE POSITION**

**MALE ASSEMBLY - COMPLETED**



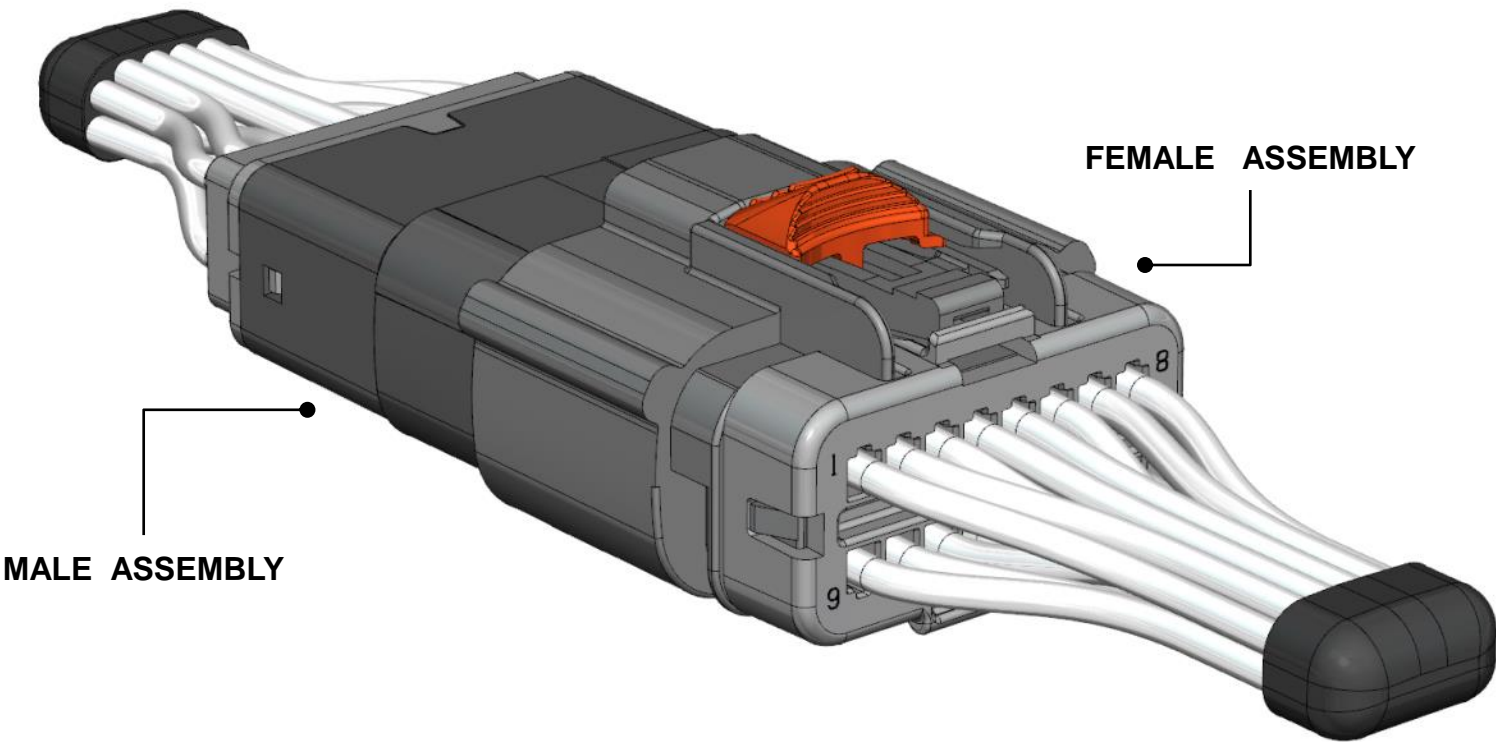


ASSEMBLY

ASSEMBLY OF THE  
CONNECTION SYSTEM

PRE - ASSEMBLY      HARNESS ASSEMBLY      CAR ASSEMBLY

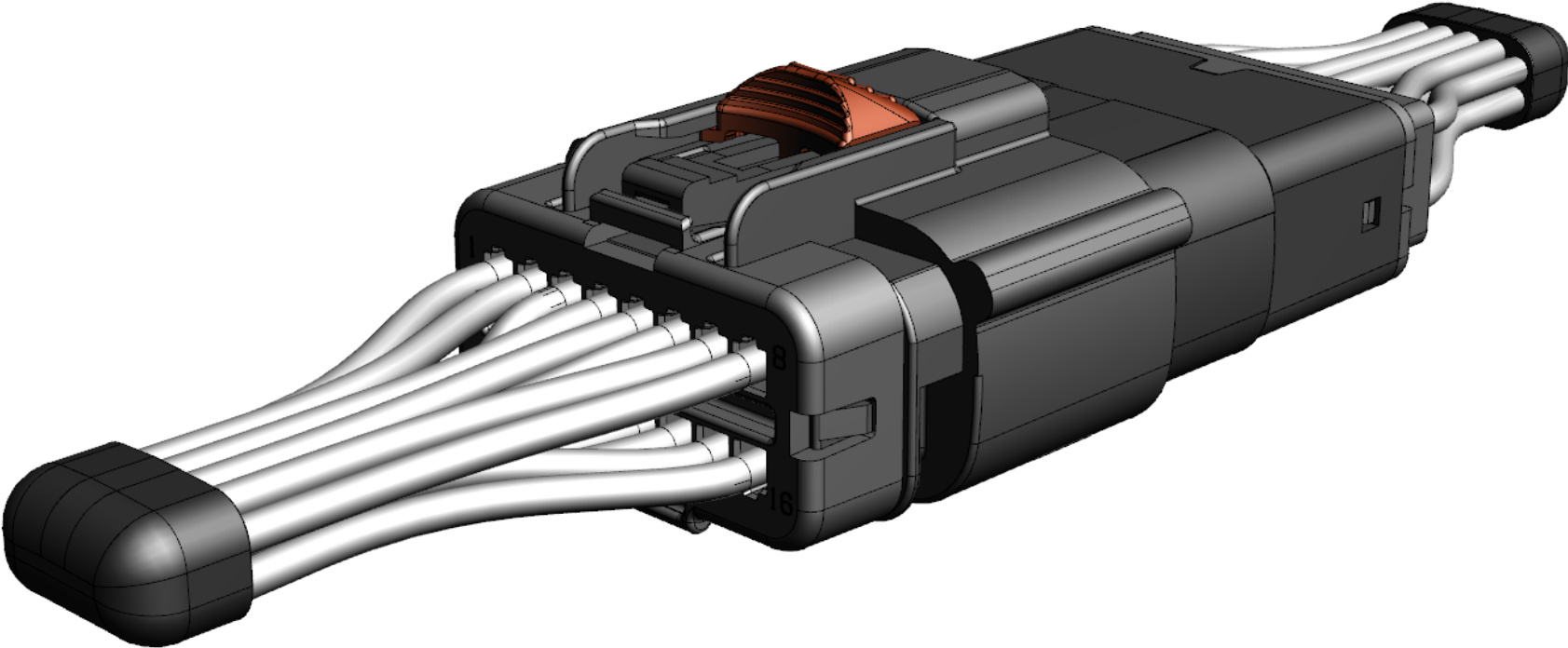
1.5 OCS Sealed Connection System



ASSEMBLY

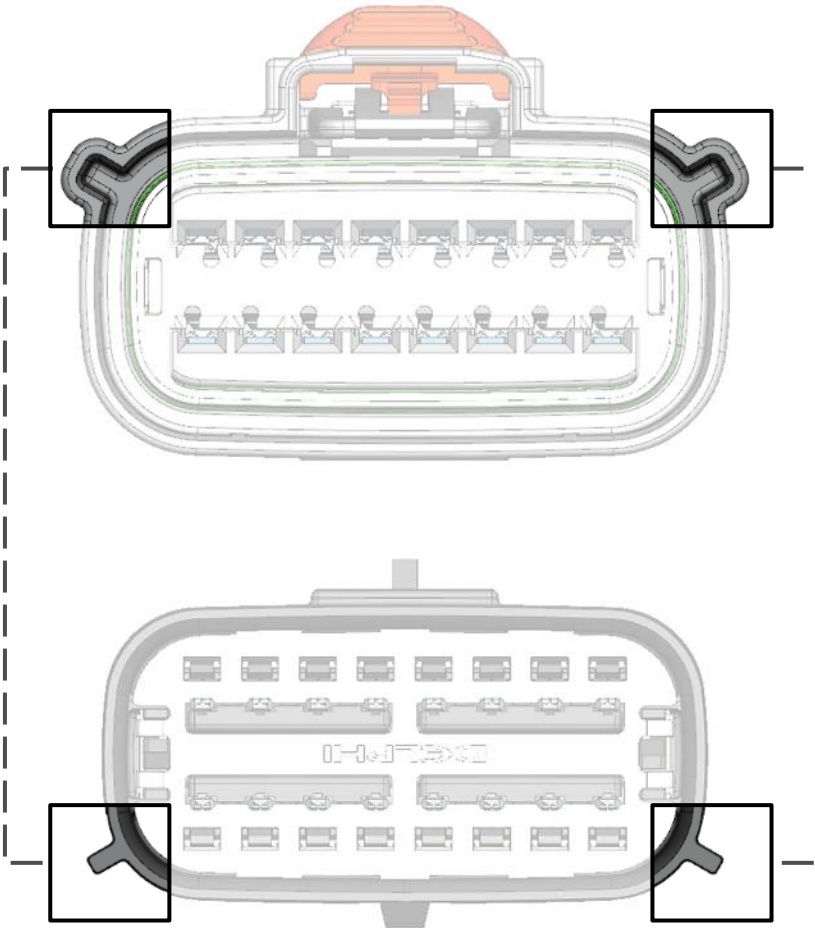
3D MODEL VIEW

CLICK IMAGE TO START  
3D VISUALIZATION



ASSEMBLY

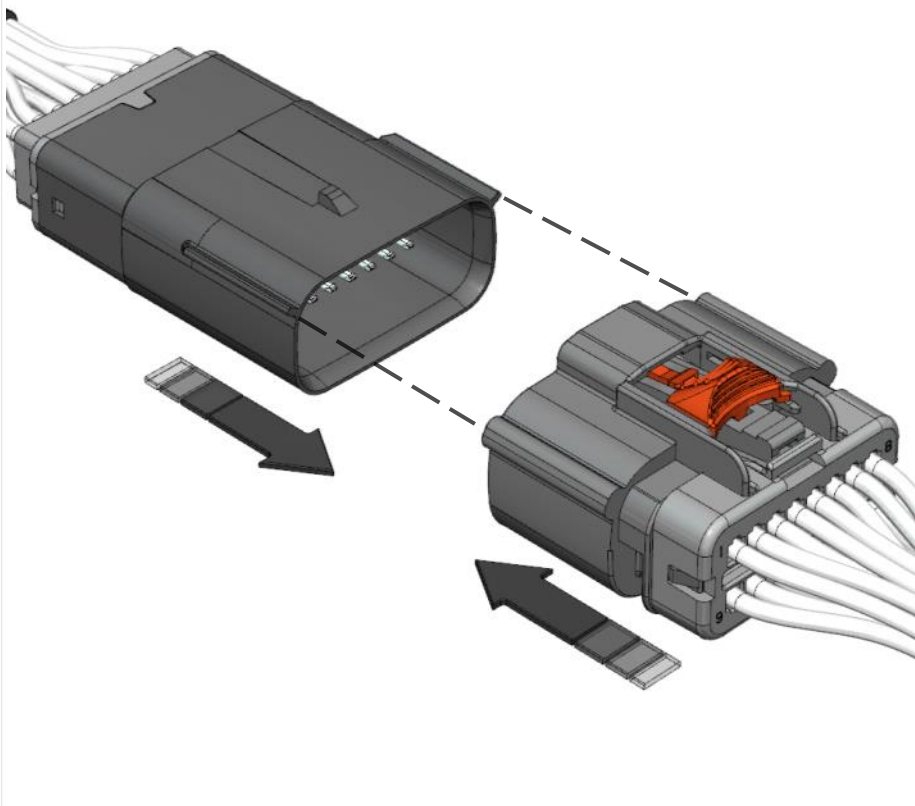
STEP 1 – Identify and Align Index Features



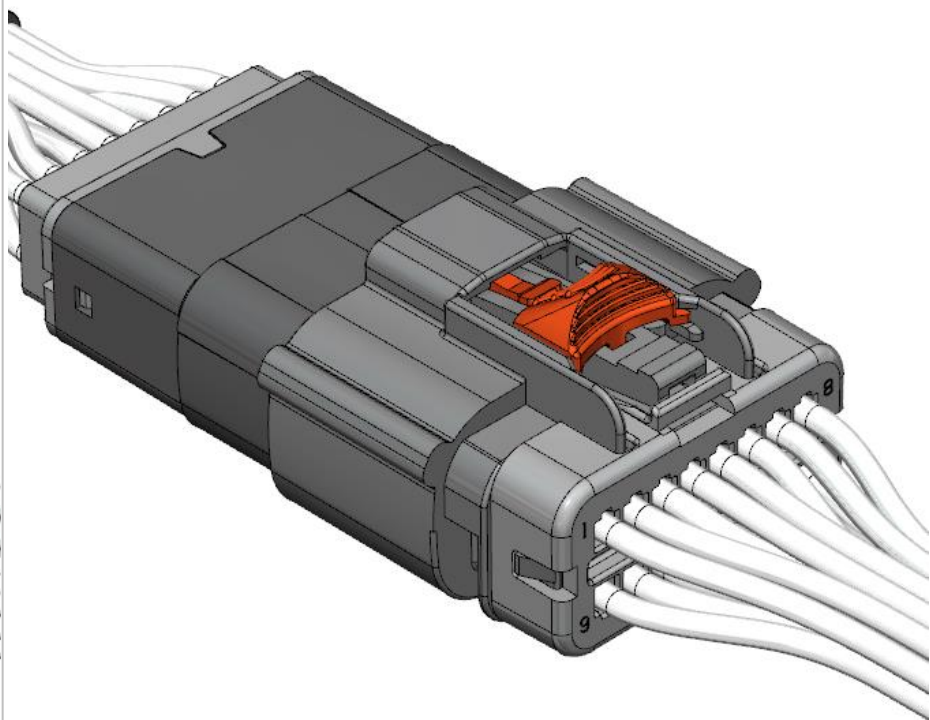
FRONT VIEWS

STEP 2 – Mate Female Assembly and Male Assembly Together Axially

**IMPORTANT!** IF THE INDEXES DON'T LINE UP,  
DO NOT CONTINUE



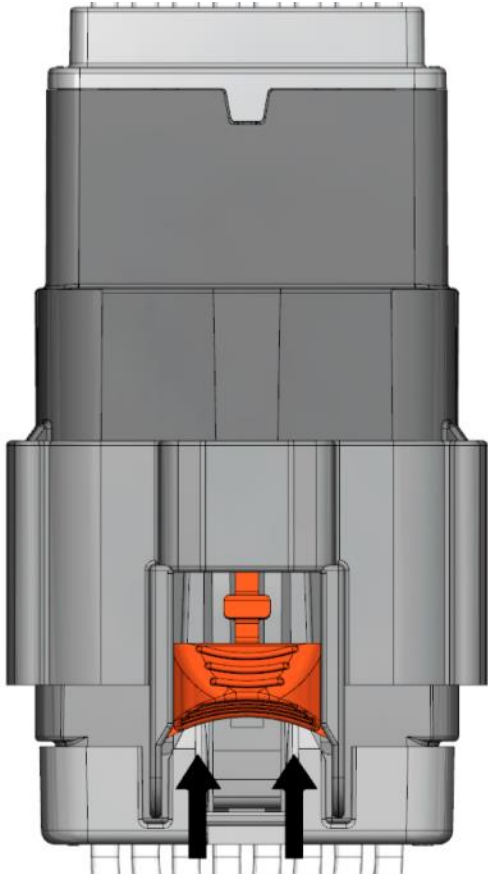
VERIFY AUDIBLE CLICK



ASSEMBLY

STEP 3 – Close CPA to Full-Stage

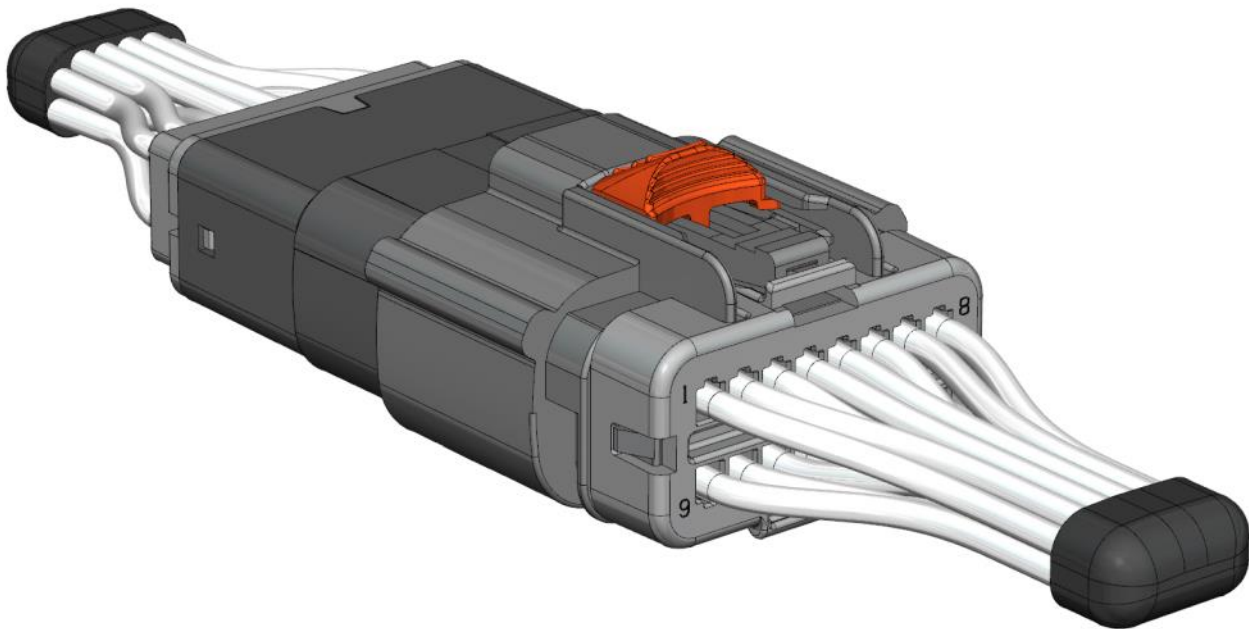
SLIDE CPA TO THE END POSITION TO SECURE THE ASSEMBLY



VERIFY AUDIBLE CLICK



CONNECTION SYSTEM – COMPLETED ASSEMBLY





DISASSEMBLY

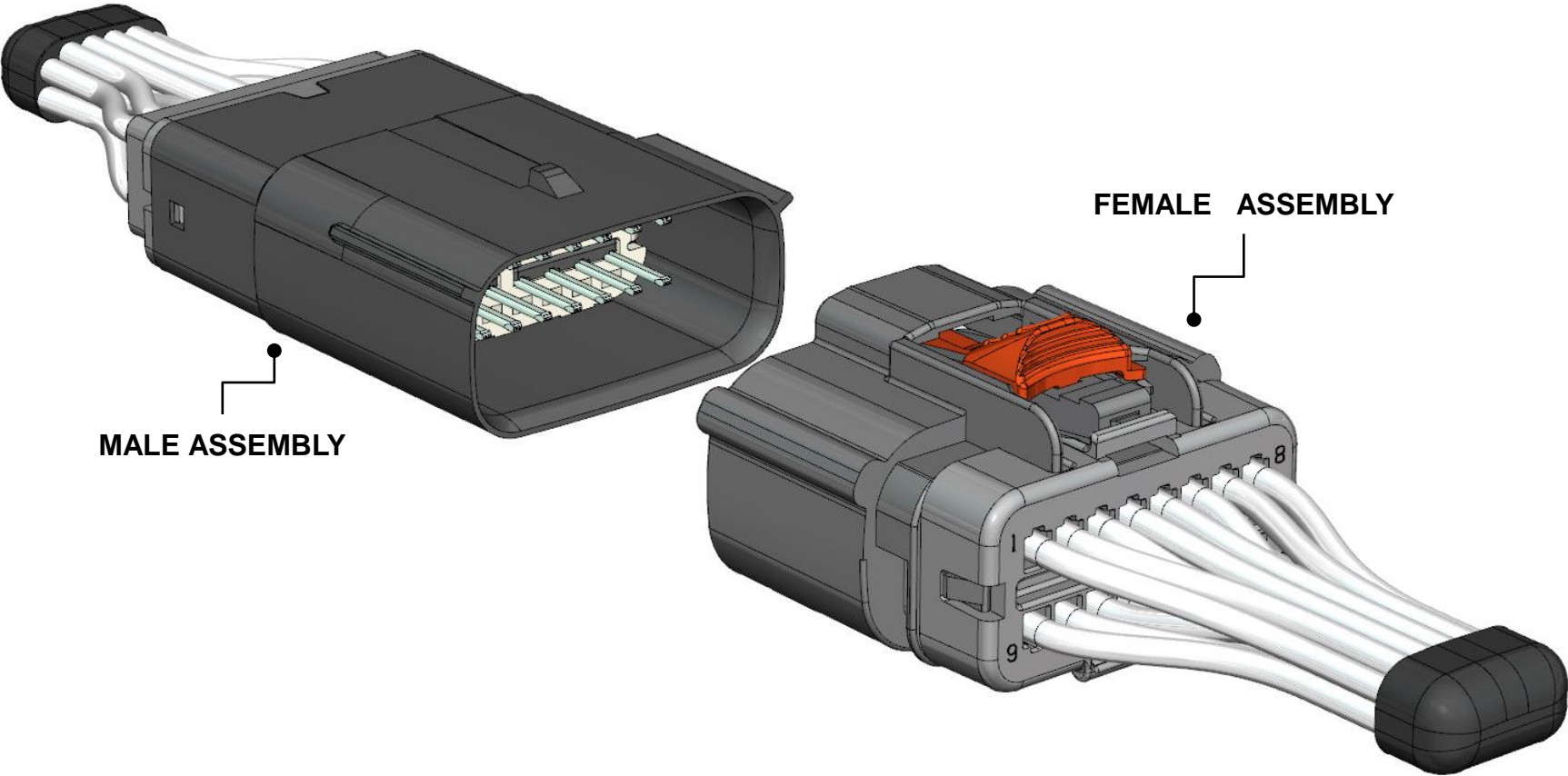
DISASSEMBLY OF THE  
CONNECTION SYSTEM

PRE - ASSEMBLY

HARNESS ASSEMBLY

CAR ASSEMBLY

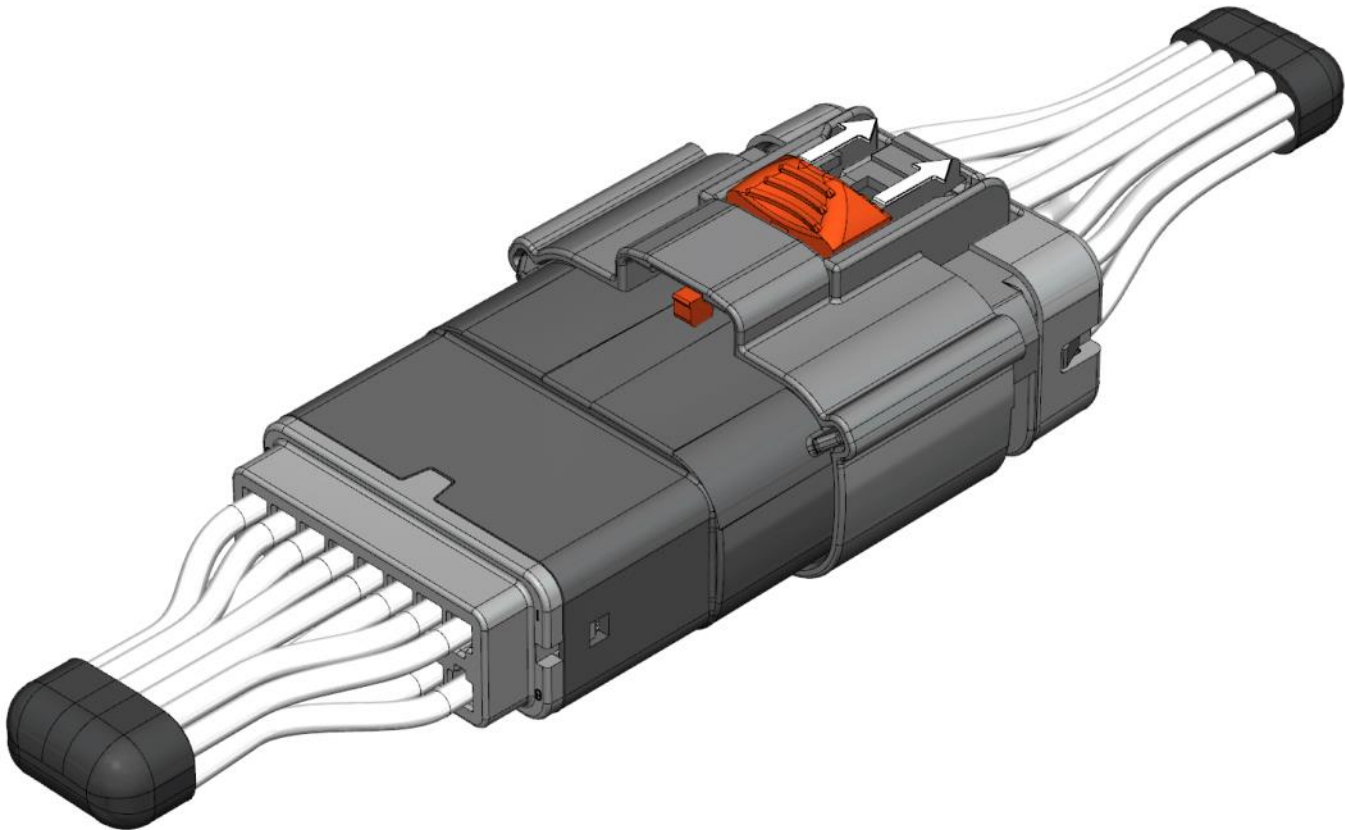
1.5 OCS Sealed Connection System



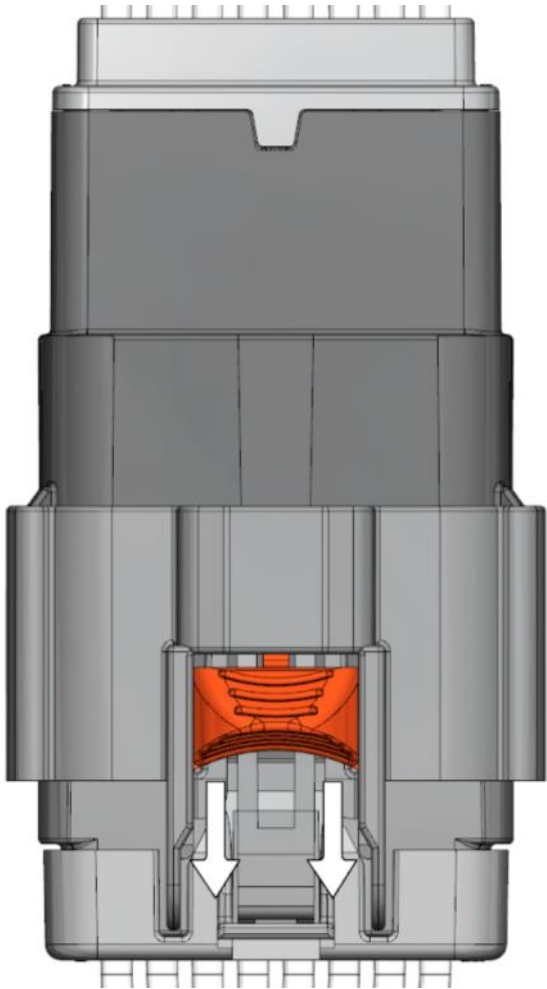
DISASSEMBLY

STEP 1a – Move CPA to Pre-Stage Position

PULL BACK THE CPA TO RELEASE THE ASSEMBLY



STEP 1b – Move CPA to Pre-Stage Position



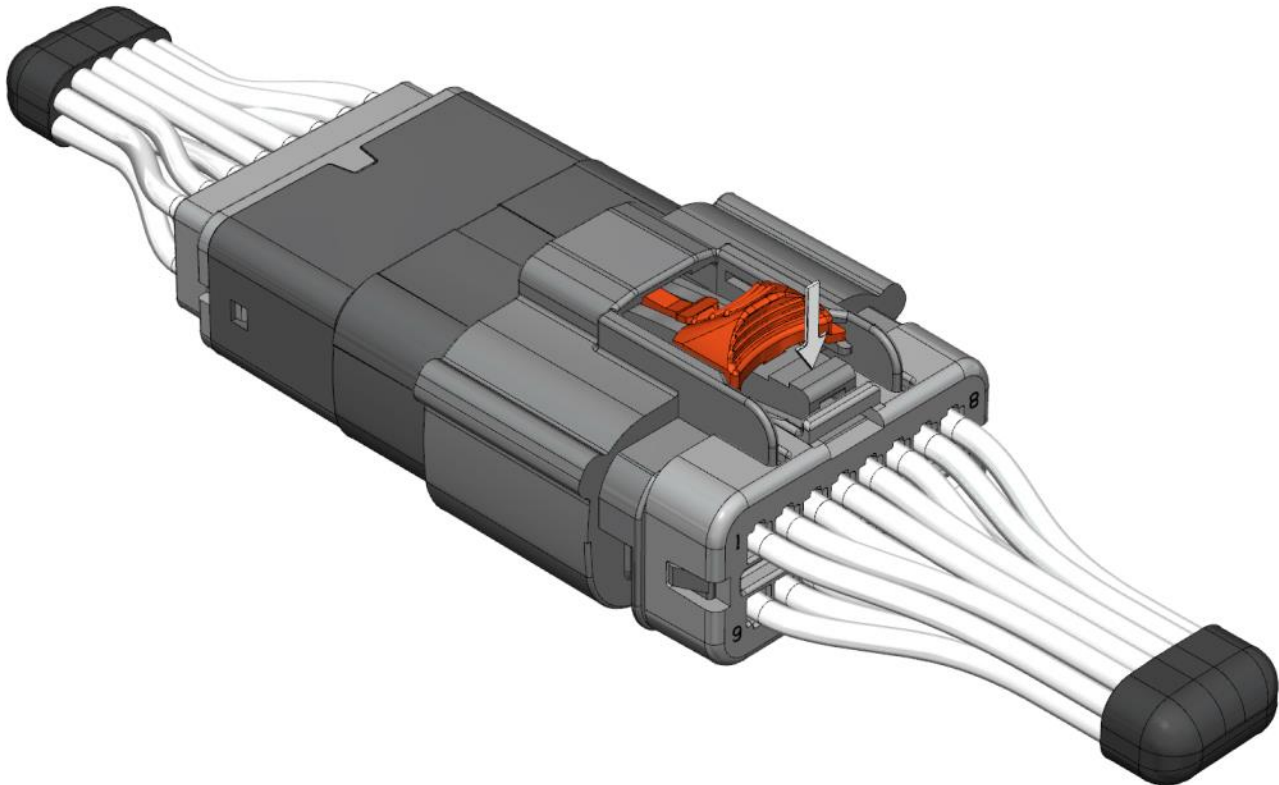
VERIFY AUDIBLE CLICK

CPA IS NOW IN PRE-STAGE POSITION

**DISASSEMBLY**

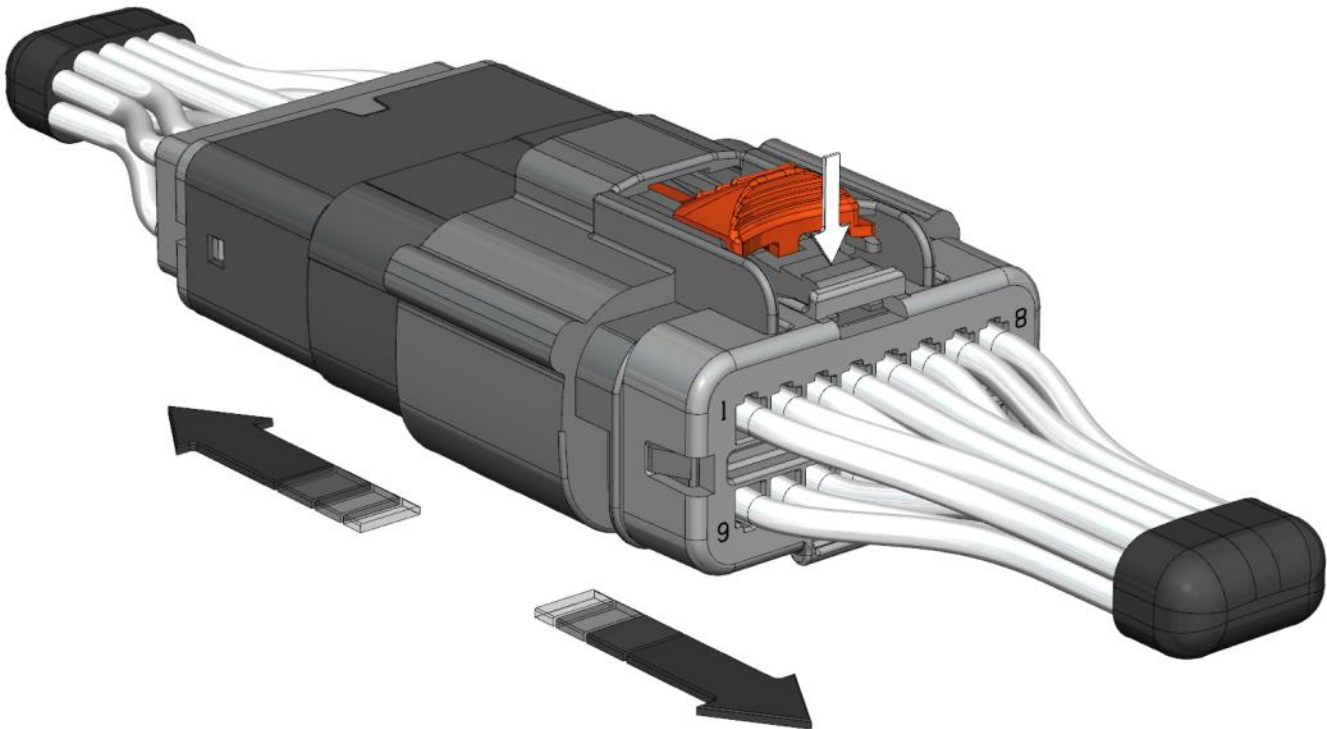
**STEP 2a – Release the Connector Lock**

**LOCATE AND PRESS DOWN THE CONNECTOR LOCK**



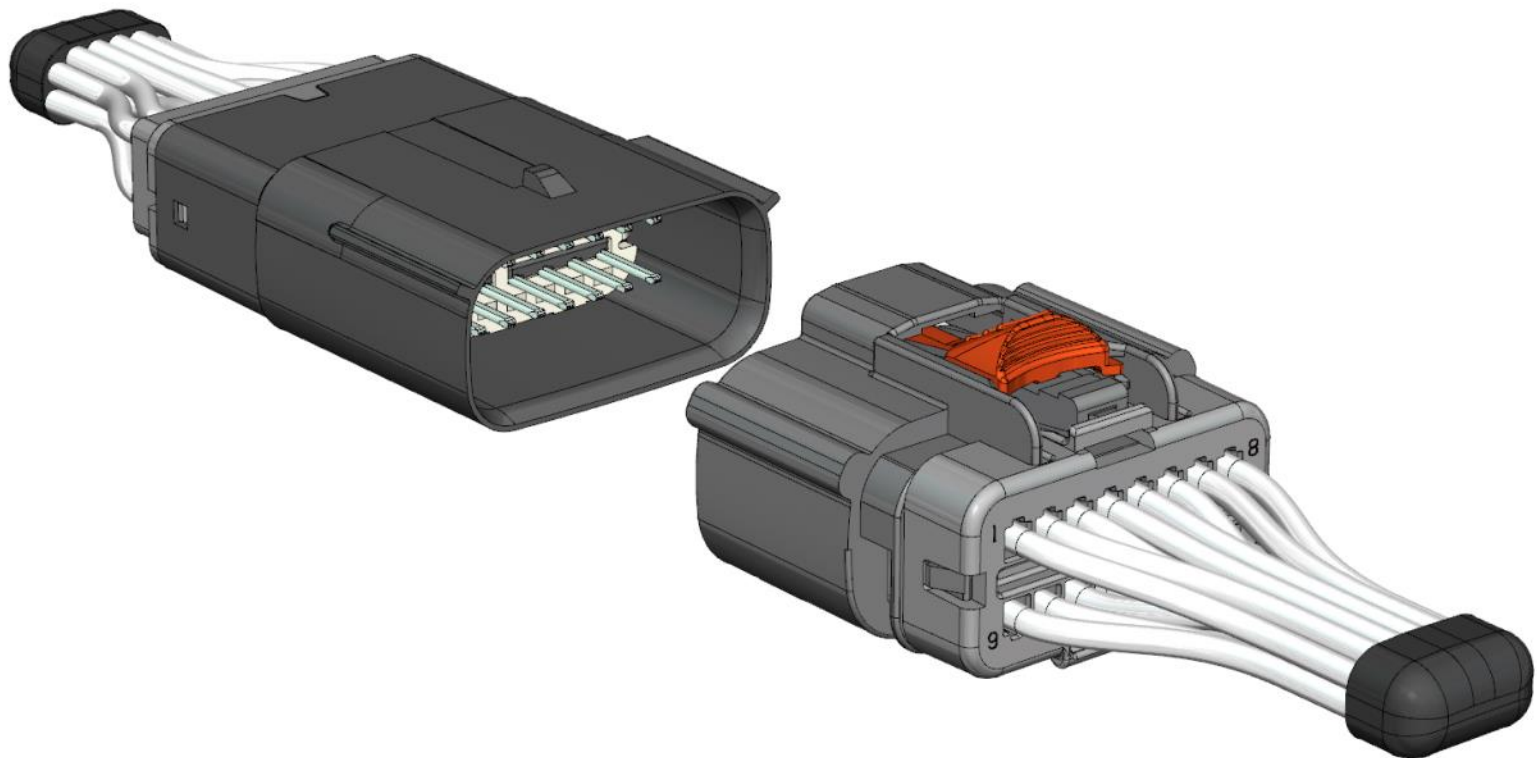
**STEP 3 – Disconnect**

**WITH THE CONNECTOR LOCK DEFLECTED, PULL BACK BOTH ASSEMBLIES**



**DISASSEMBLY**

**CONNECTION SYSTEM – COMPLETED DISASSEMBLY**



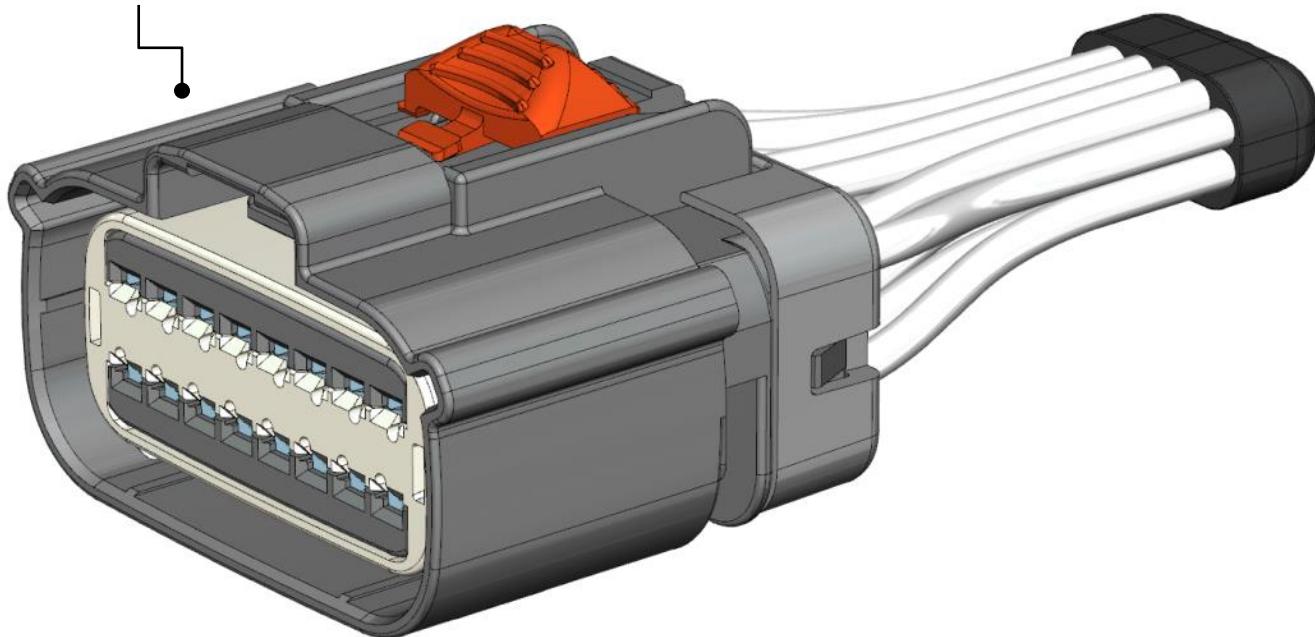


## REPAIR / REPLACEMENT

### REPAIR / REPLACEMENT OF THE FEMALE ASSEMBLY

# 1.5 OCS Sealed Connection System

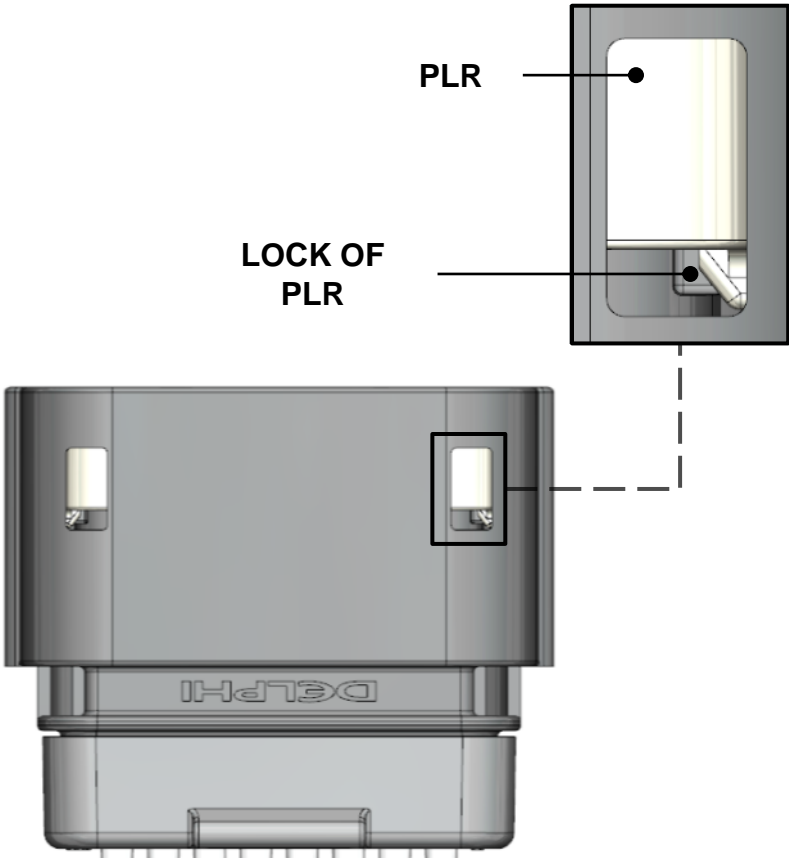
FEMALE ASSEMBLY



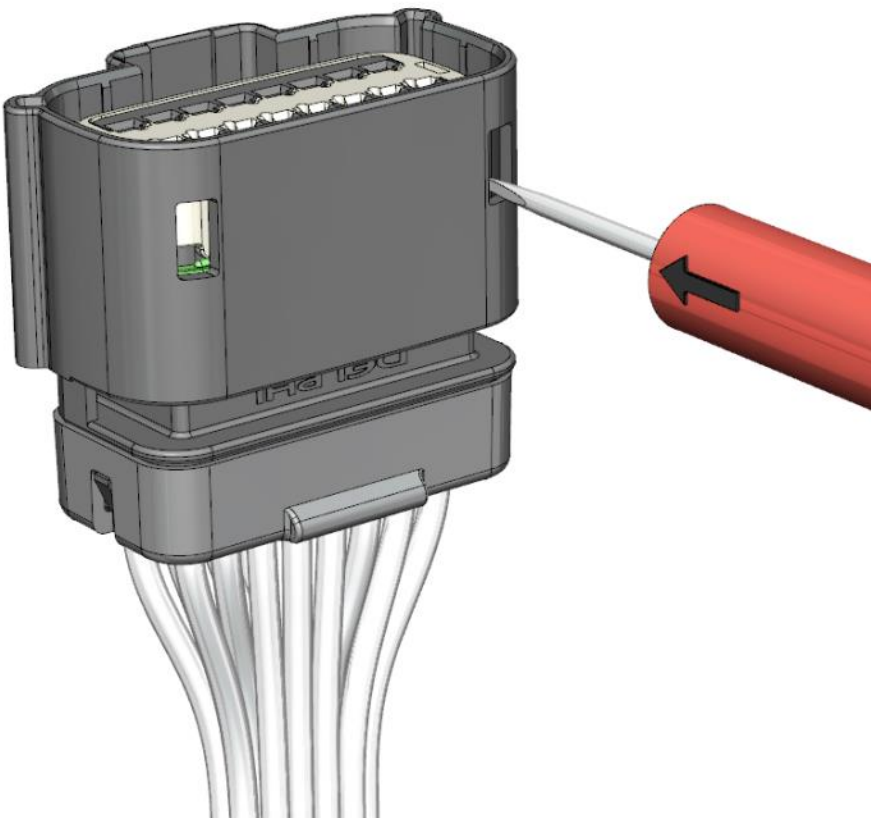
REPAIR / REPLACEMENT

PLR REPLACEMENT (Remove) – STEP 1a

LOCATE THE SLOTS AT THE BOTTOM SIDE OF THE CONNECTOR

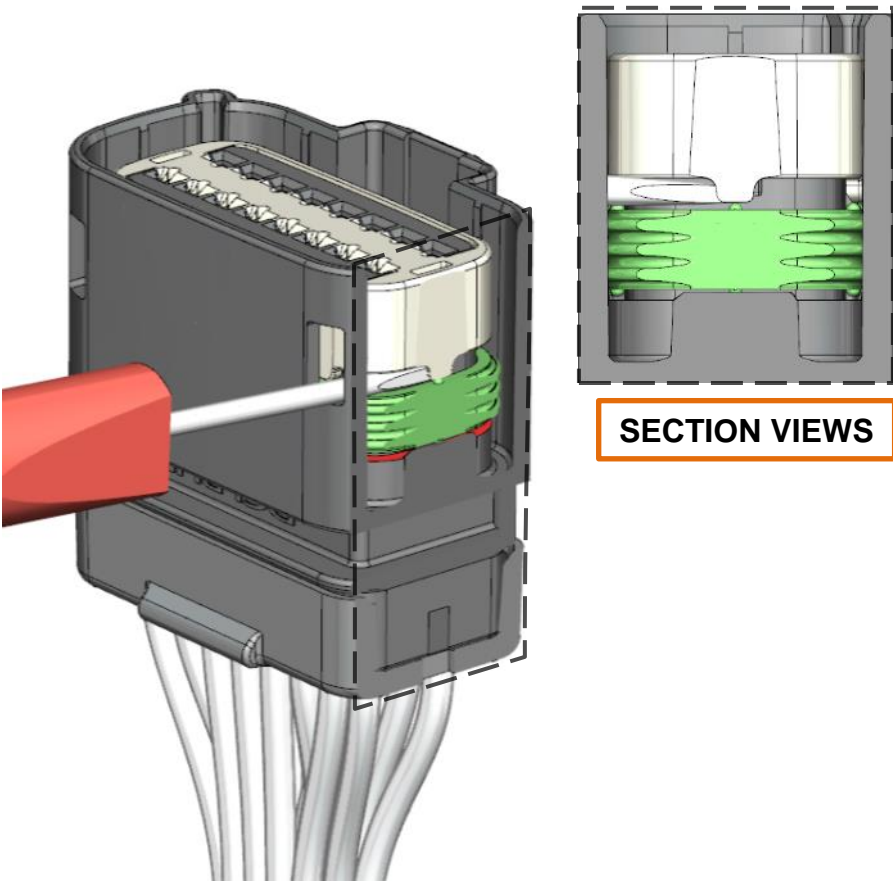


INSERT TOOL 12122647 OR 12094430 INTO THE SLOT

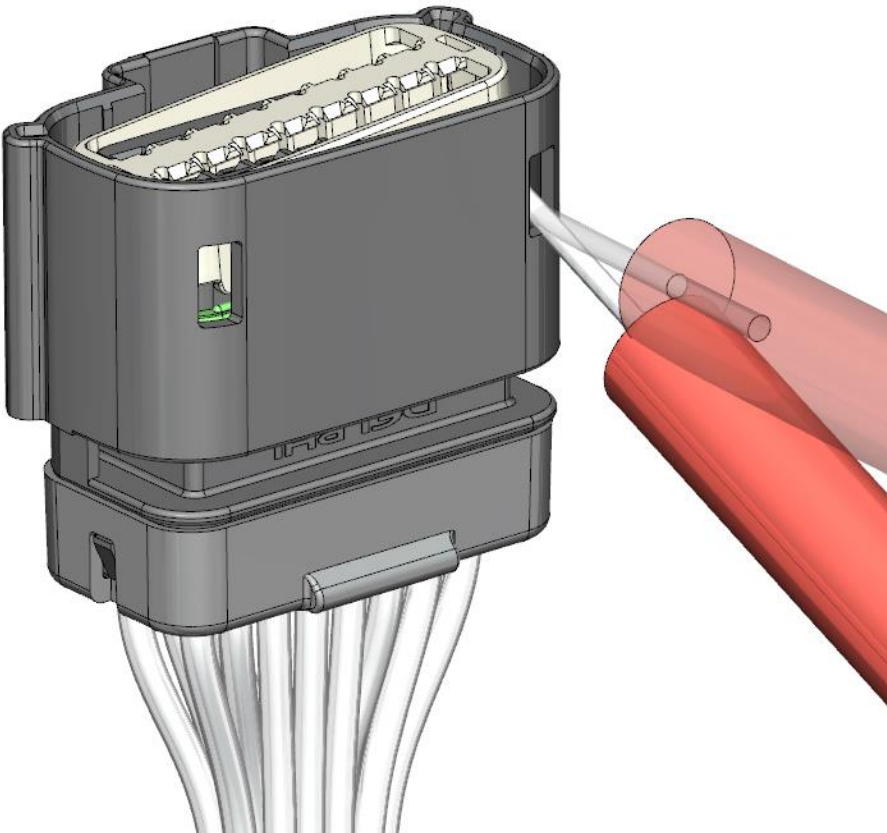


PLR REPLACEMENT (Remove) – STEP 1b

TOOL MUST BE PLACED BETWEEN PLR LOCK AND CONNECTOR



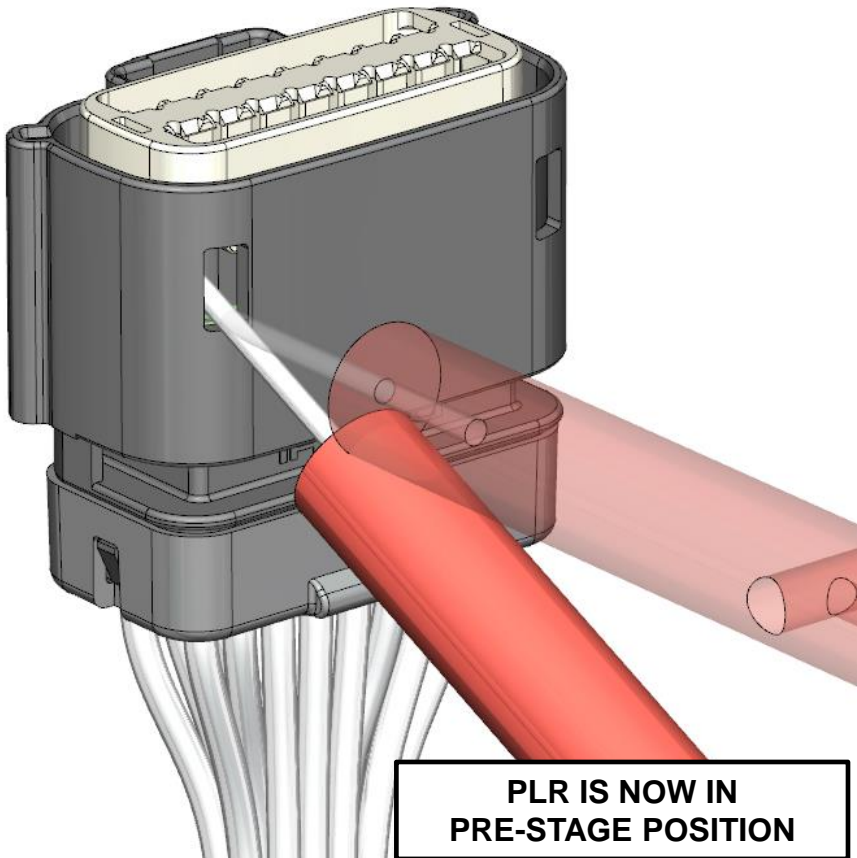
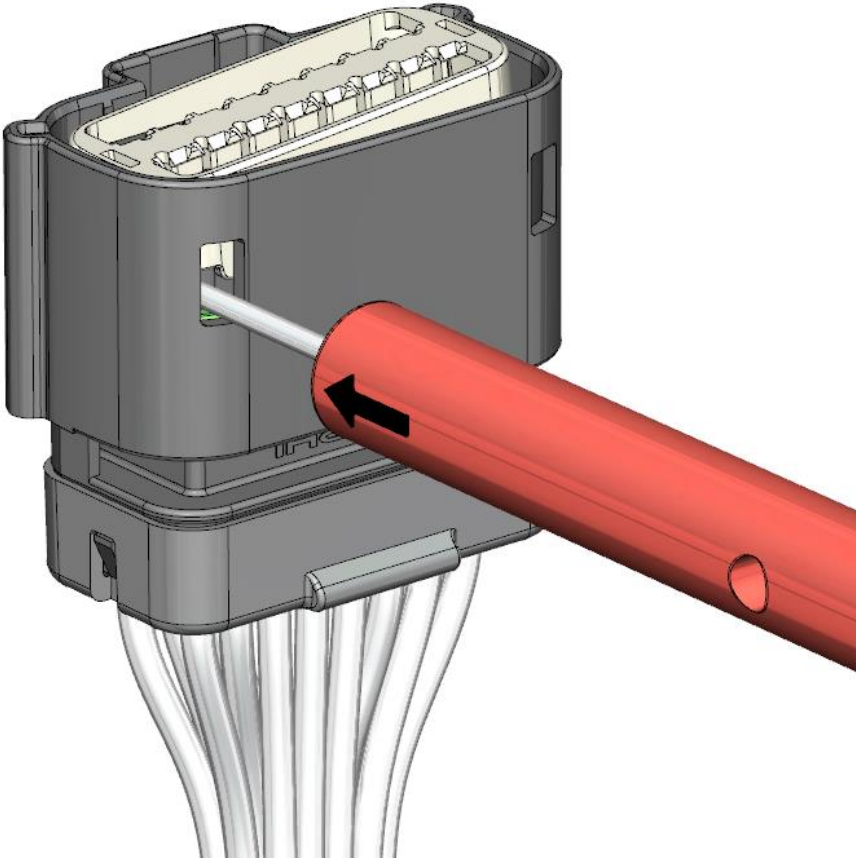
LIFT THE PLR CAREFULLY TO RELEASE THE LOCK FROM THE CONNECTOR



**REPAIR / REPLACEMENT**

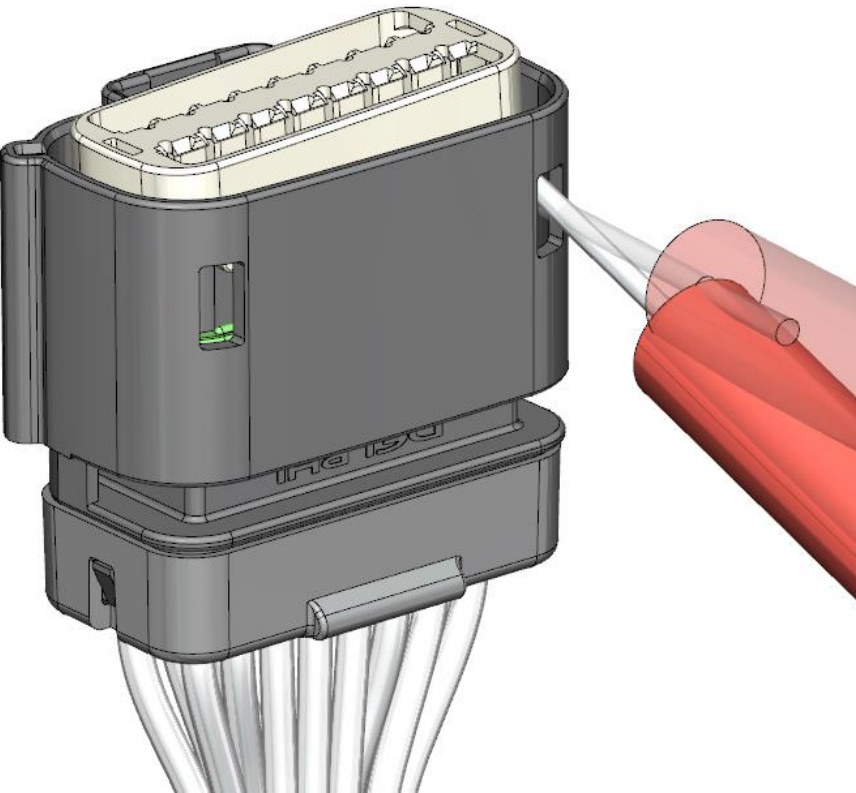
**PLR REPLACEMENT (Remove) – STEP 1c**

REPEAT THE PROCESS TO RELEASE THE OTHER SIDE OF PLR FROM FULL-STAGE

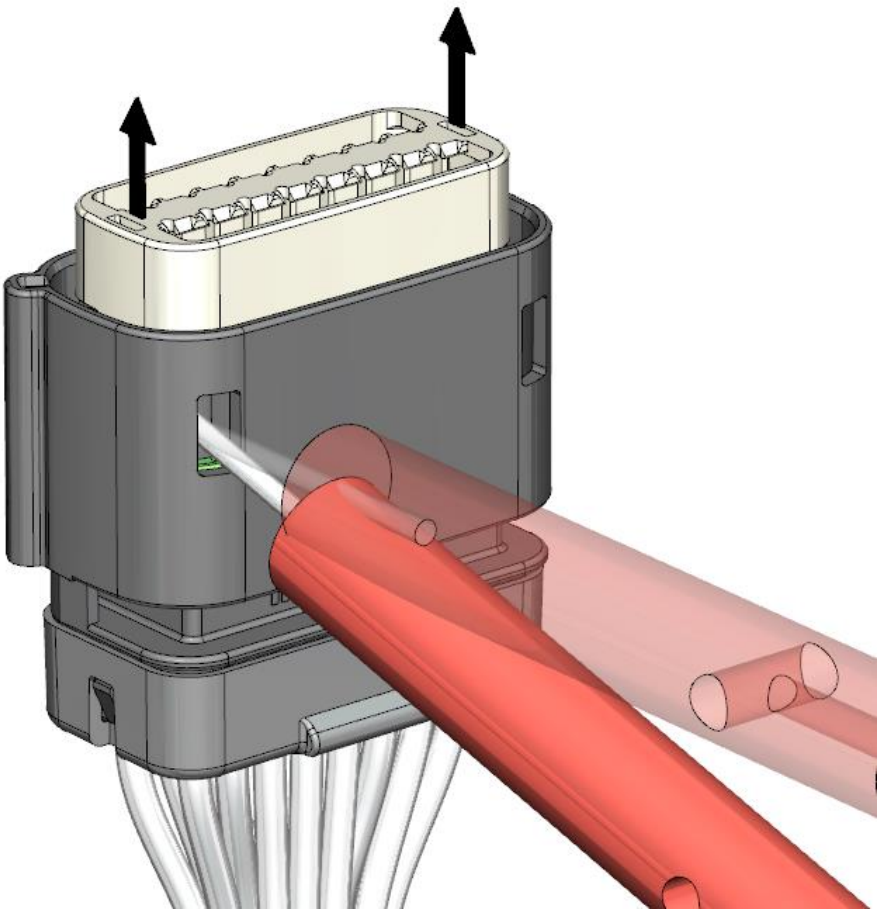


**PLR REPLACEMENT (Remove) – STEP 1d**

USE THE SAME PROCEDURE TO RELEASE PLR FROM PRE-STAGE POSITION



THEN REMOVE PLR FROM CONNECTOR

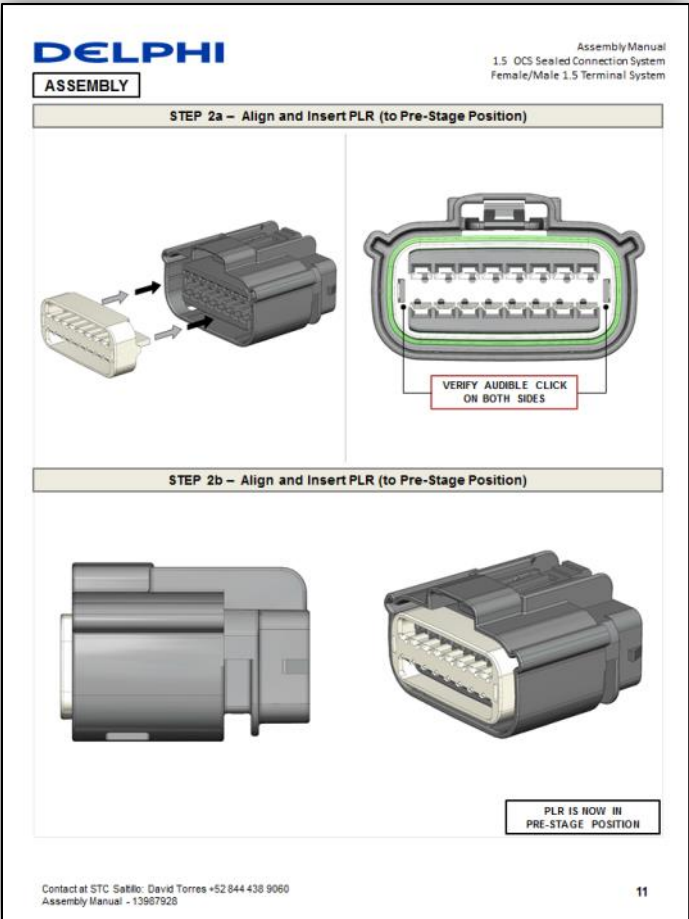
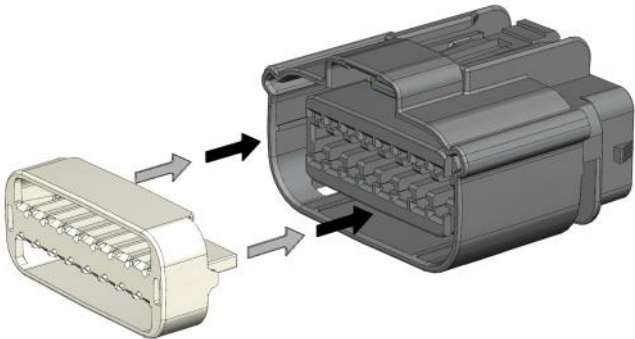




REPAIR / REPLACEMENT

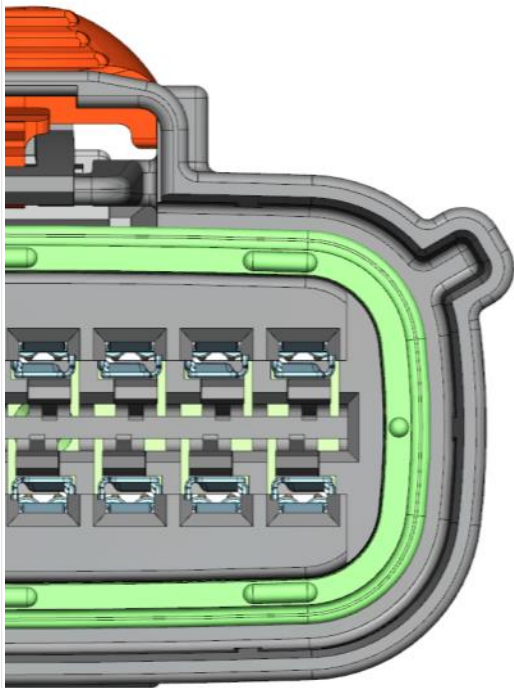
PLR REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION

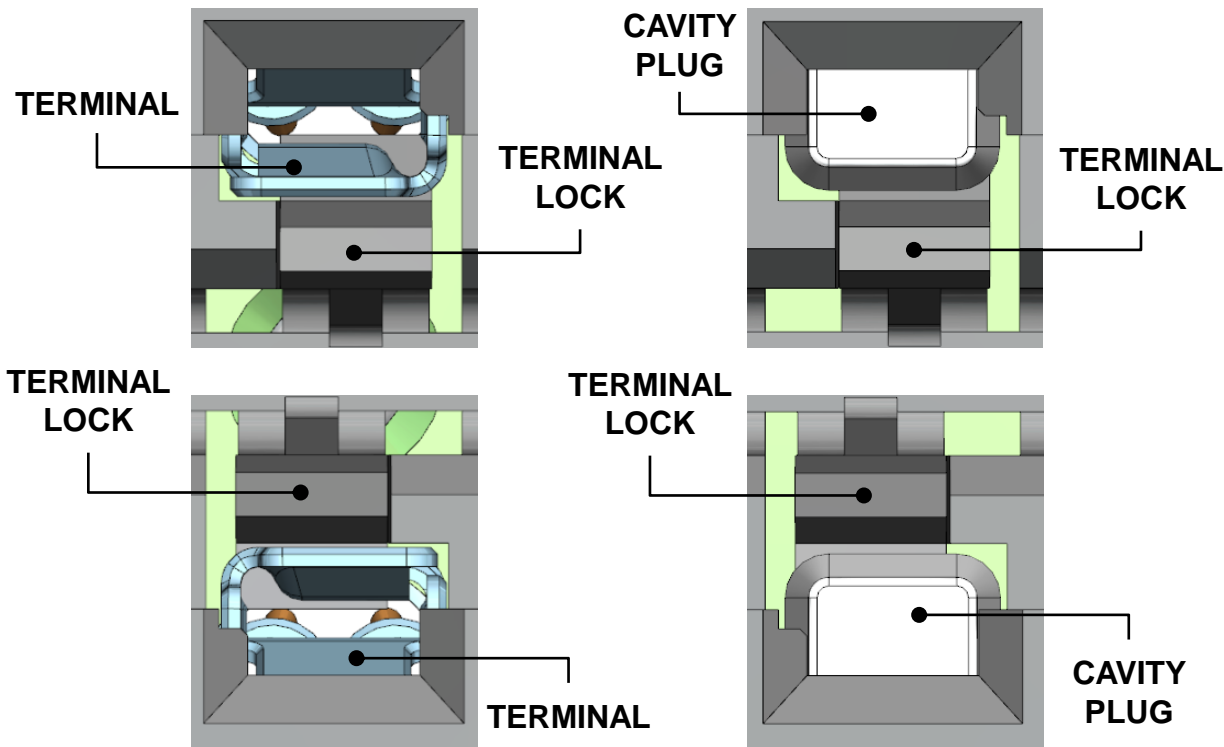


FEMALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Remove) – STEP 1a

**IMPORTANT!** PLR MUST BE RELEASED FROM CONNECTOR  
BEFORE TERMINAL/PLUG REMOVAL



FRONT VIEWS





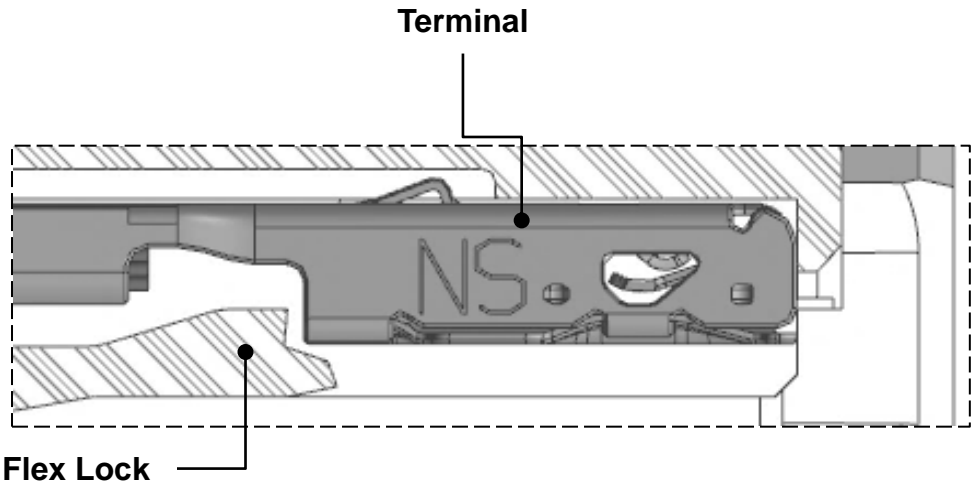
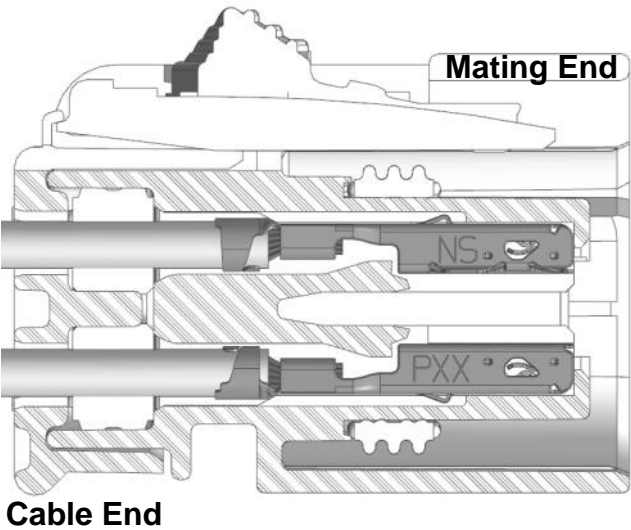
REPAIR / REPLACEMENT

FEMALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Remove) – STEP 1b

REMOVE TERMINALS

IDENTIFY

Flex Lock

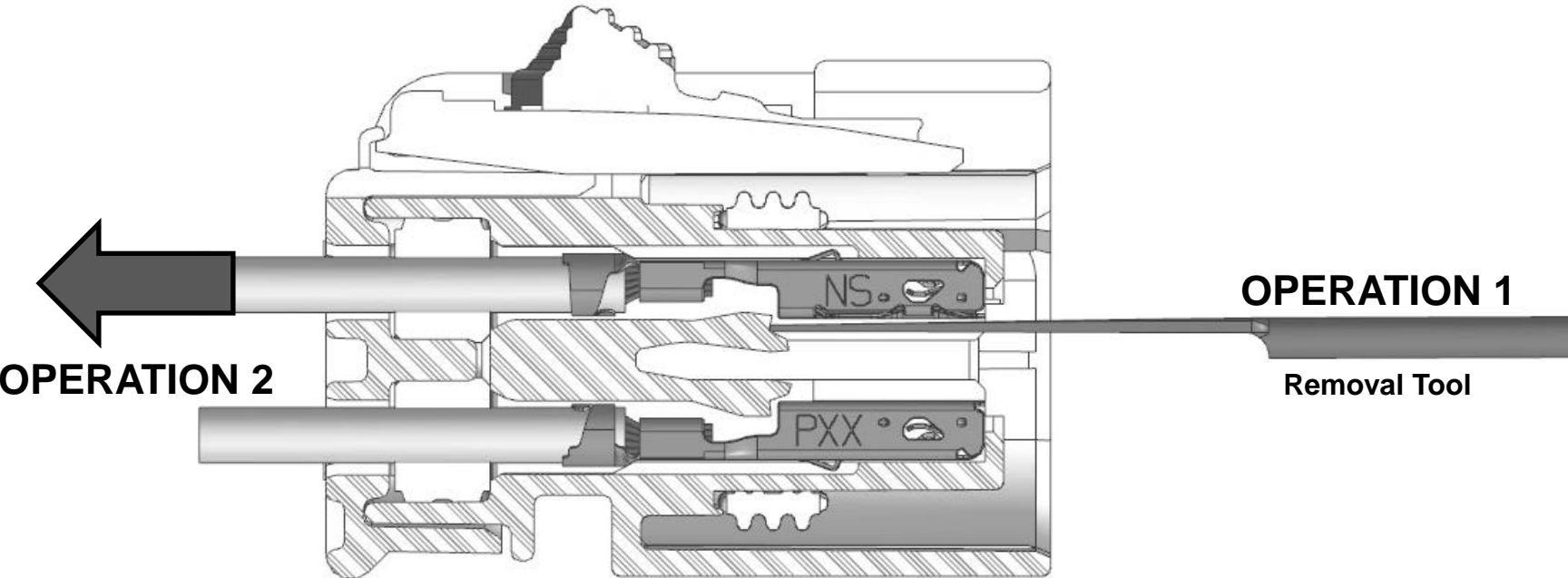


\* This graph just represents how this kind of terminals are removed.

FEMALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Remove) – STEP 1c

REMOVE TERMINALS

Locate Flex Lock at the front of the Connector. Insert (Operation 1) tool 12094429 straight into the window, deflect the Flex Lock to unseat the Terminal/Cavity Plug and gently pull on the cable to remove (Operation 2) the Female Terminal/Cavity Plug from the receptacle (Needle Nose Pliers can be used to pull on the Plug).

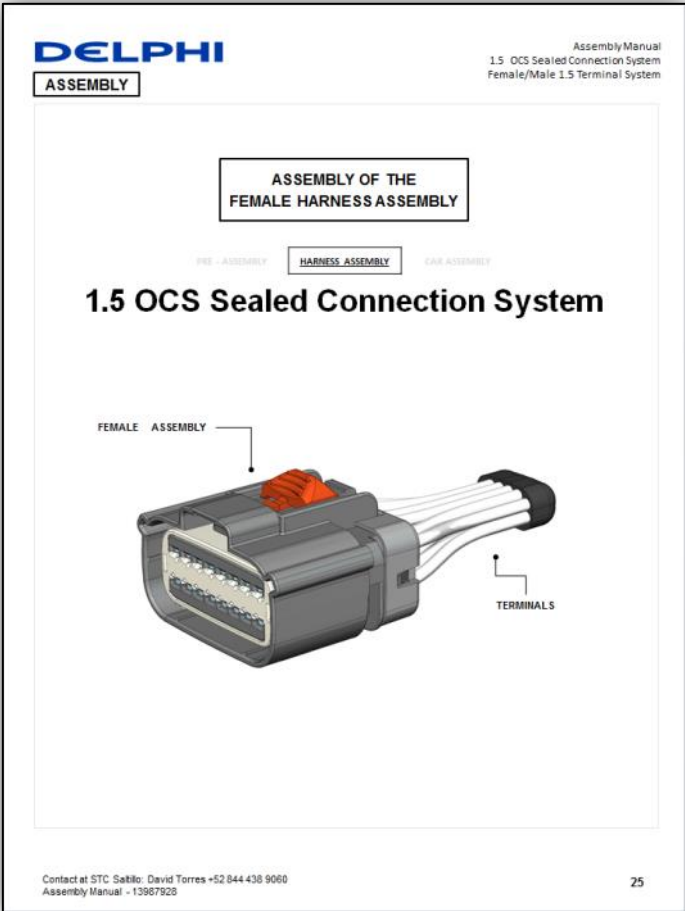
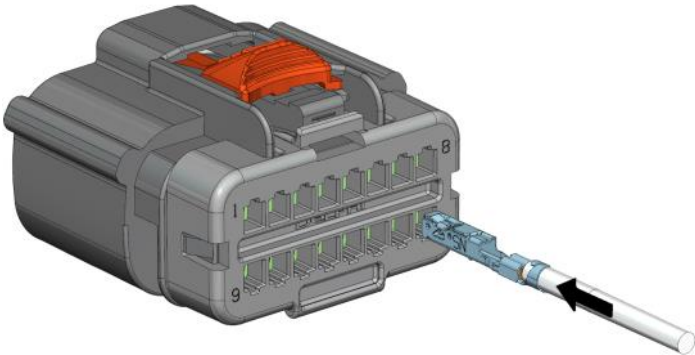


\* This graph just represents how this kind of terminals are removed.

REPAIR / REPLACEMENT

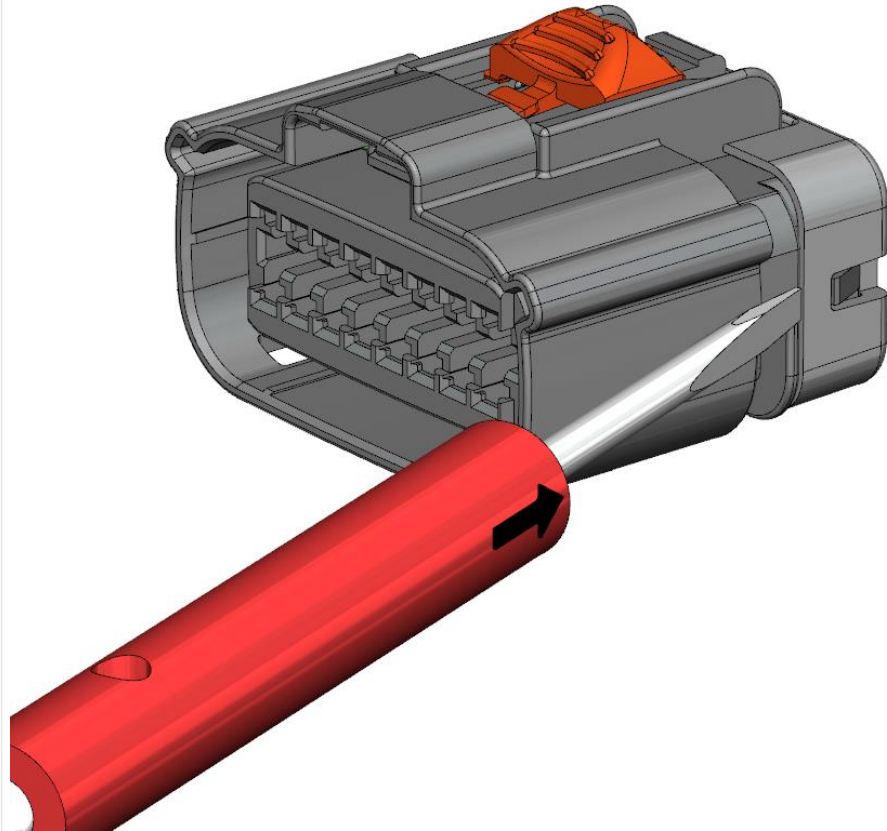
FEMALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Insert) – STEP 2

REFER TO HARNESS  
MANUAL SECTION

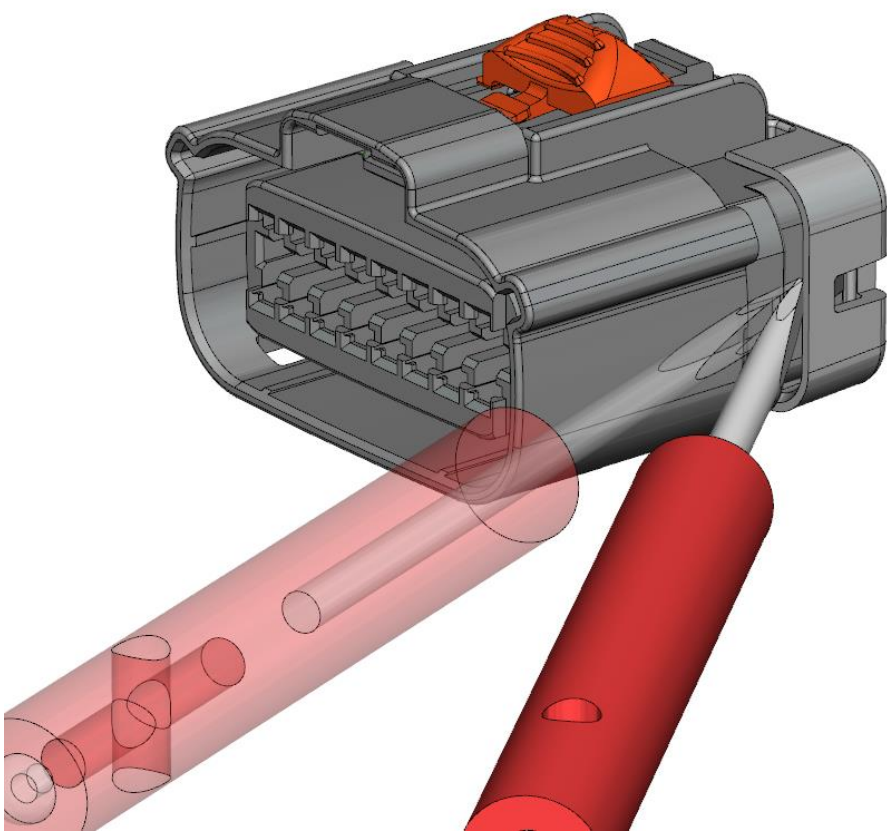


RETAINER REPLACEMENT (Remove) – STEP 1a

PLACE TOOL 12094441 BETWEEN THE  
CONNECTOR AND RETAINER



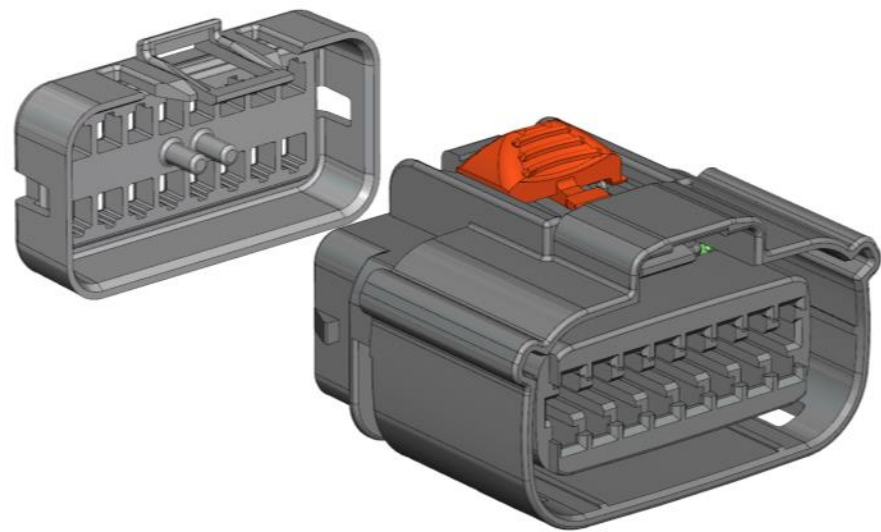
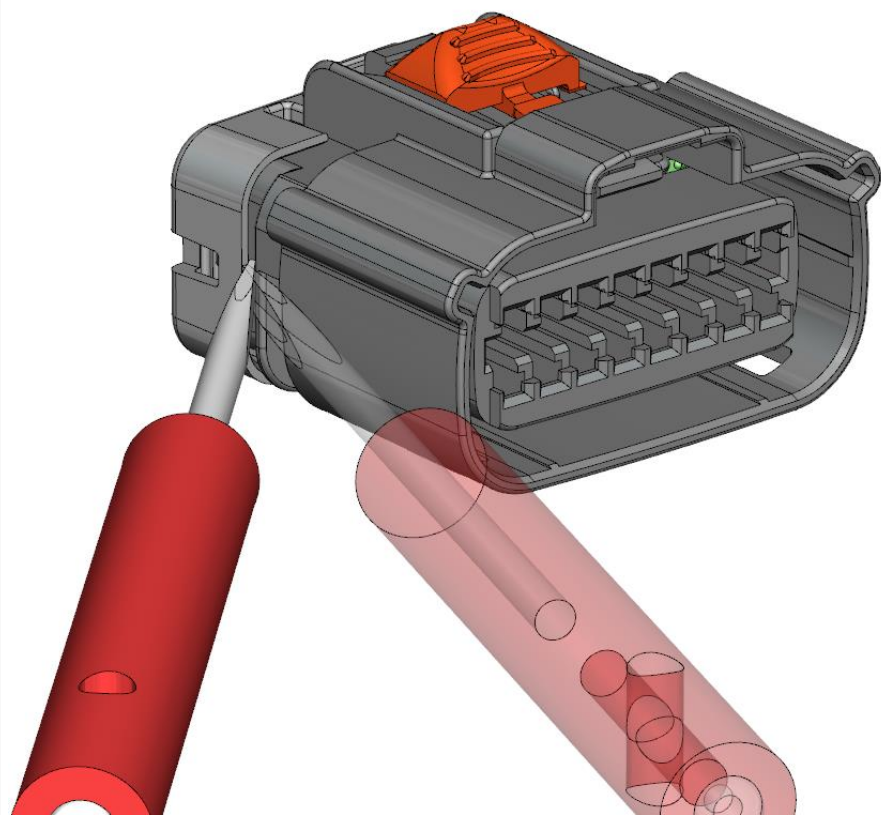
ROTATE THE TOOL CAREFULLY TO RELEASE  
THAT SIDE OF THE RETAINER



REPAIR / REPLACEMENT

RETAINER REPLACEMENT (Remove) – STEP 1b

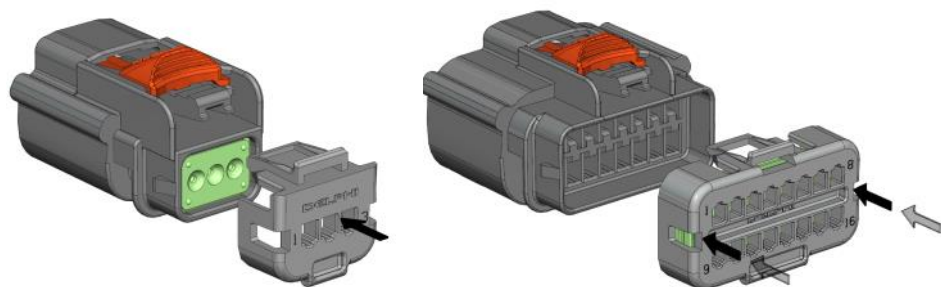
REPEAT THE PROCEDURE TO RELEASE THE OTHER SIDE OF RETAINER



RETAINER REMOVED

RETAINER REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION



**DELPHI**

Assembly Manual  
1.5 OCS Sealed Connection System  
Female/Male 1.5 Terminal System

**ASSEMBLY**

**STEP 5 – Insert Retainer**

THE INSERTION PROCESS OF THE RETAINER IS THE SAME REGARDLESS THE INSERTION PROCESS OF THE CABLE SEAL

**1** PRESS RETAINER ONTO CONNECTOR

**2** VERIFY AUDIBLE CLICK ON BOTH SIDES

**3** INSERTION COMPLETED

RETAINER LOCKED

Contact at STC Saltillo: David Torres +52 844 438 9060  
Assembly Manual - 13987928

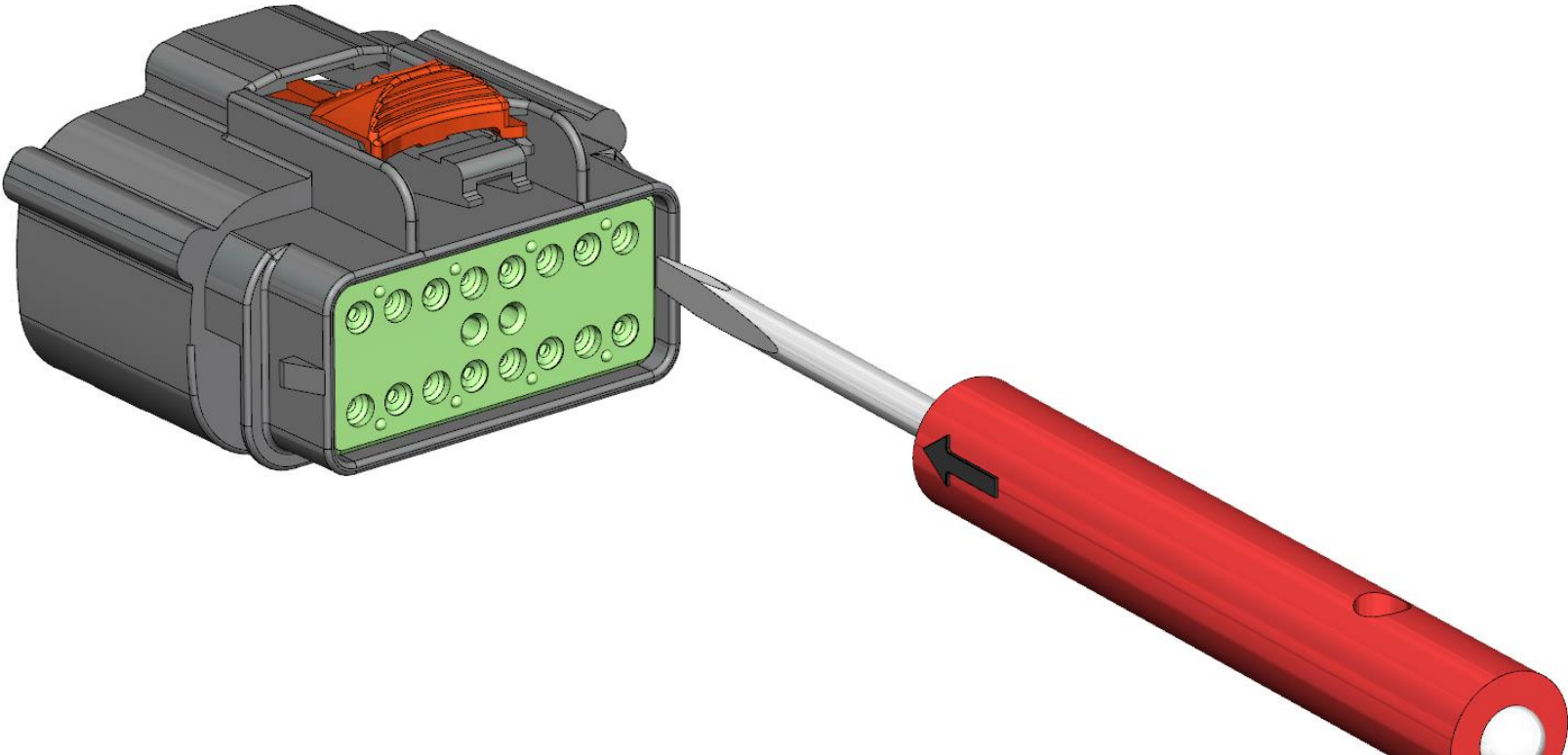
15



**REPAIR / REPLACEMENT**

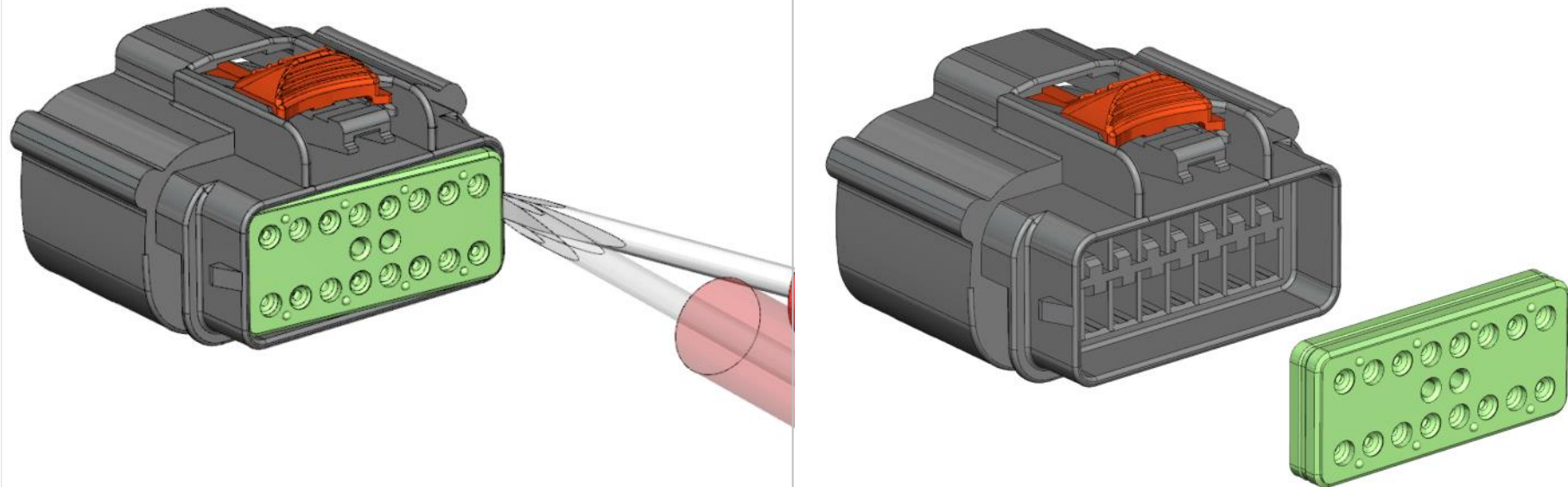
**CABLE SEAL REPLACEMENT (Remove) – STEP 1a**

**INSERT TOOL 12094441 BETWEEN THE CONNECTOR AND CABLE SEAL**



**CABLE SEAL REPLACEMENT (Remove) – STEP 1b**

**WITH THE TIP OF TOOL REMOVE THE SEAL FROM THE SHROUD**



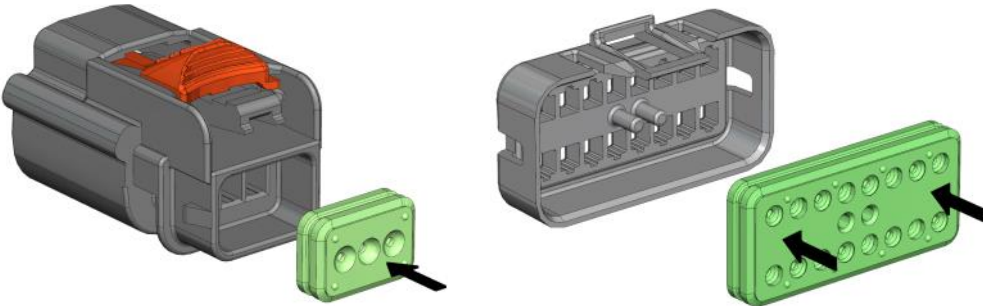
**RETAINER REMOVED**



REPAIR / REPLACEMENT

CABLE SEAL REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION



CABLE SEAL is not a reusable sub-component.  
REPLACE ENTIRE CABLE SEAL

**DELPHI**

Assembly Manual  
1.5 OCS Sealed Connection System  
Female/Male 1.5 Terminal System

**ASSEMBLY**

**STEP 4 – Install Cable Seal**

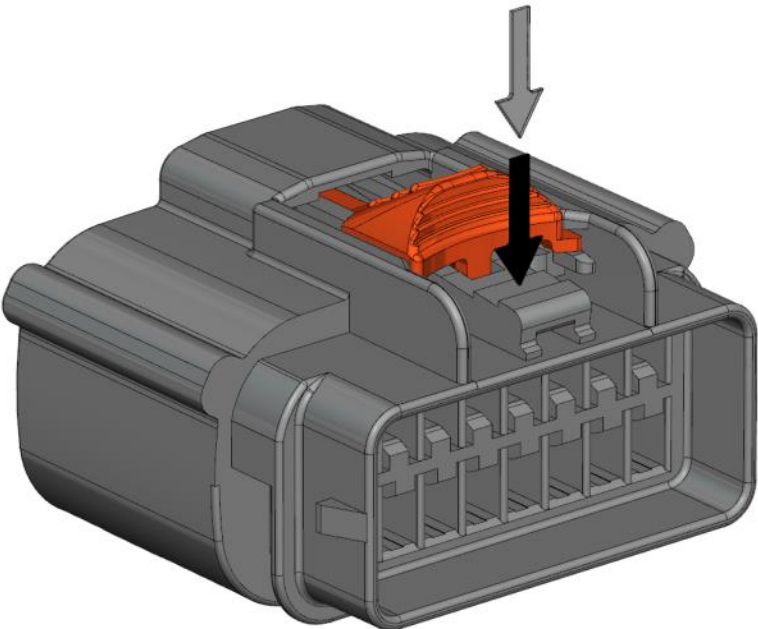
PROCESS FOR: 3W & 4W CONNECTORS	PROCESS FOR: 2W, 6W, 8W, 10W, 12W & 16W CONNECTORS
<p><b>1</b> IDENTIFY THE CORRECT ORIENTATION OF THE SEAL</p>	<p><b>1</b> LOCATE AND ALIGN MATING FEATURES</p>
<p><b>2</b> PUSH CABLE SEAL INTO THE CONNECTOR</p>	<p><b>2</b> PUSH CABLE SEAL INTO THE RETAINER</p>
<p><b>3</b> INSERTION COMPLETED</p>	<p><b>3</b> INSERTION COMPLETED</p>

Contact at STC Saltillo: David Torres +52 844 438 9060  
Assembly Manual - 13987928

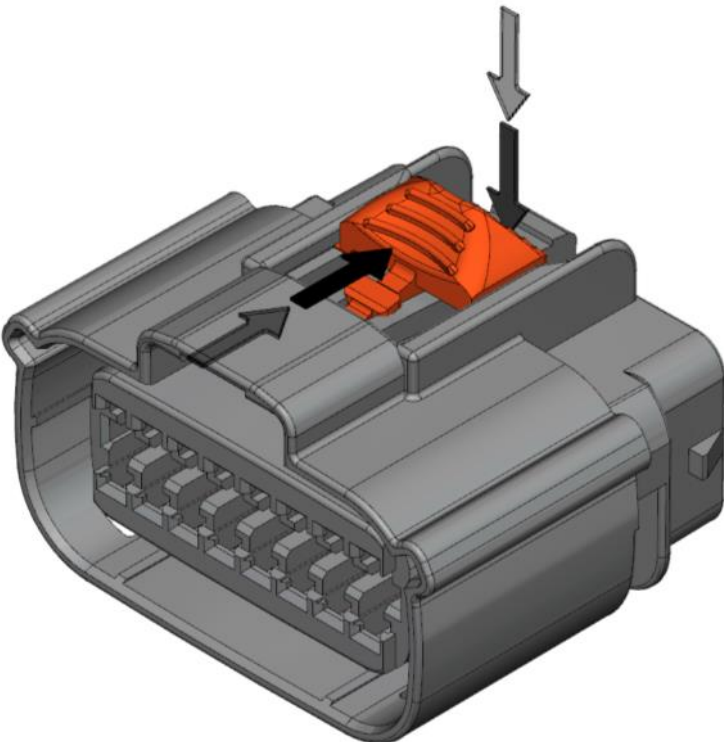
14

CPA REPLACEMENT (Remove) – STEP 1a

PRESS DOWN THE CONNECTOR LOCK



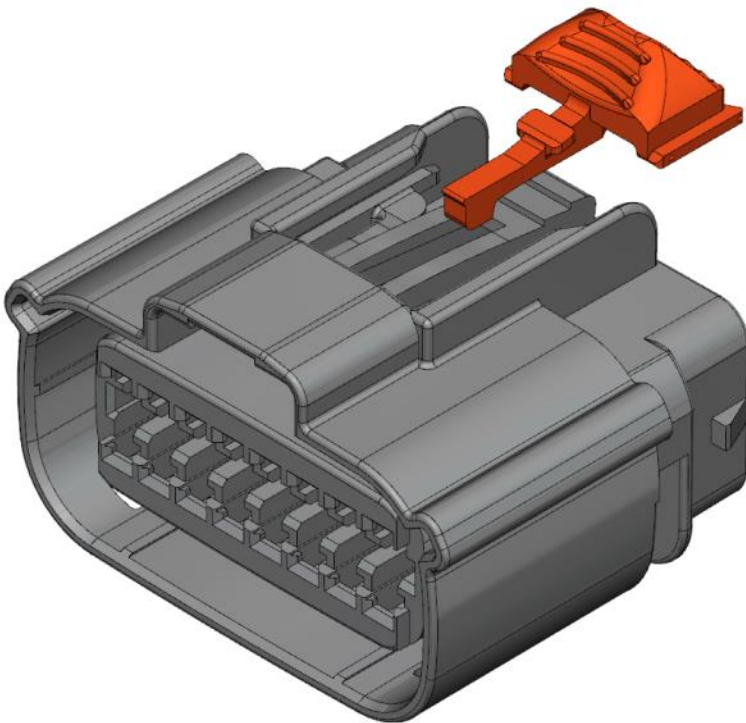
WITH THE LOCK DEFLECTED, SLIDE THE CPA  
BACKWARDS TO REMOVE IT



**IMPORTANT!** RETAINER MUST BE COMPLETELY  
REMOVED FROM CONNECTOR BEFORE CPA REMOVAL

REPAIR / REPLACEMENT

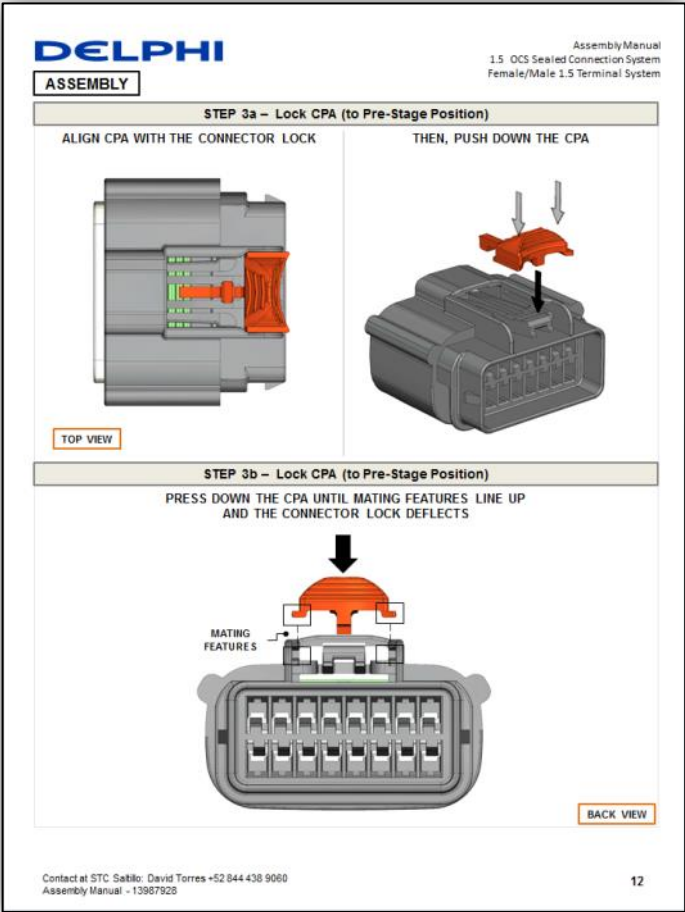
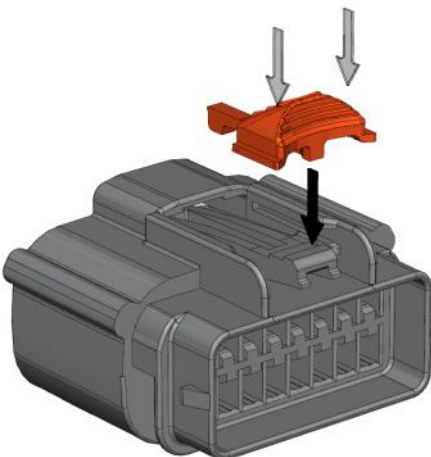
CPA REPLACEMENT (Remove) – STEP 1b



RETAINER REMOVED

CPA REPLACEMENT (Install) – STEP 2

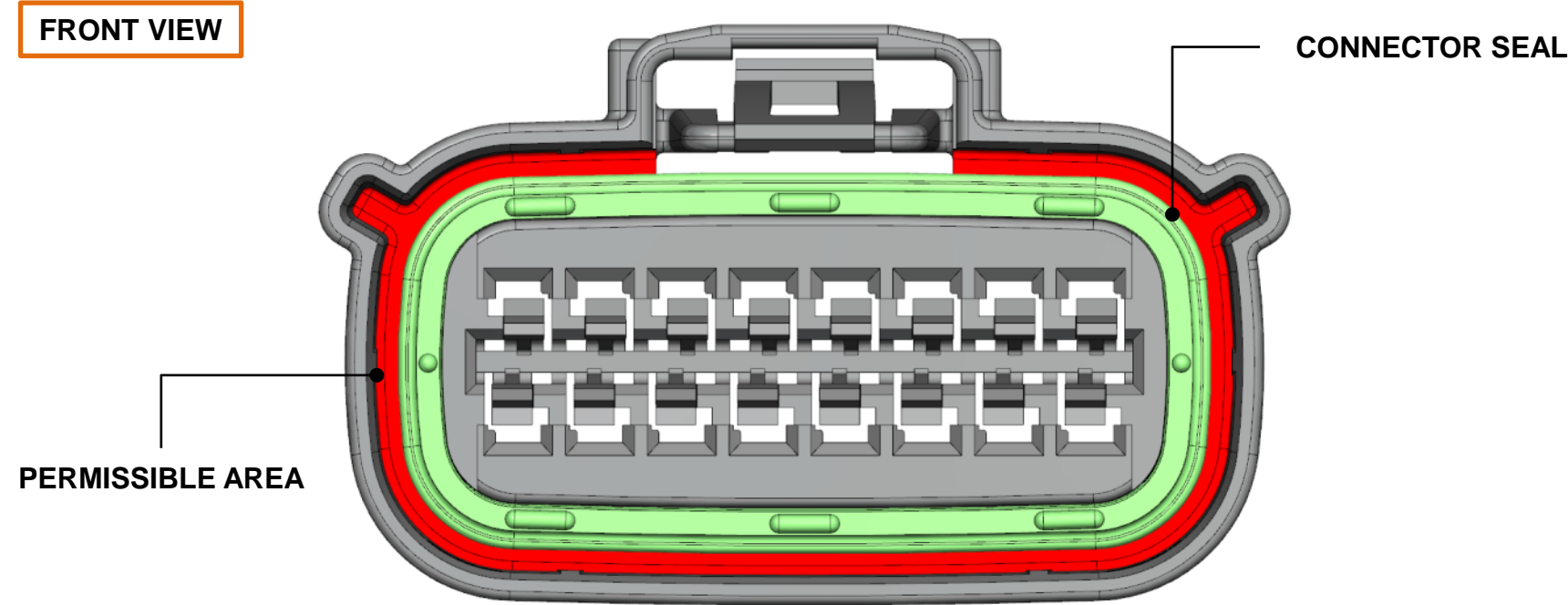
REFER TO PRE-ASSEMBLY  
MANUAL SECTION



REPAIR / REPLACEMENT

CONNECTOR SEAL REPLACEMENT (Remove) – STEP 1a

IDENTIFY THE PERMISSIBLE AREAS FOR THE TOOL

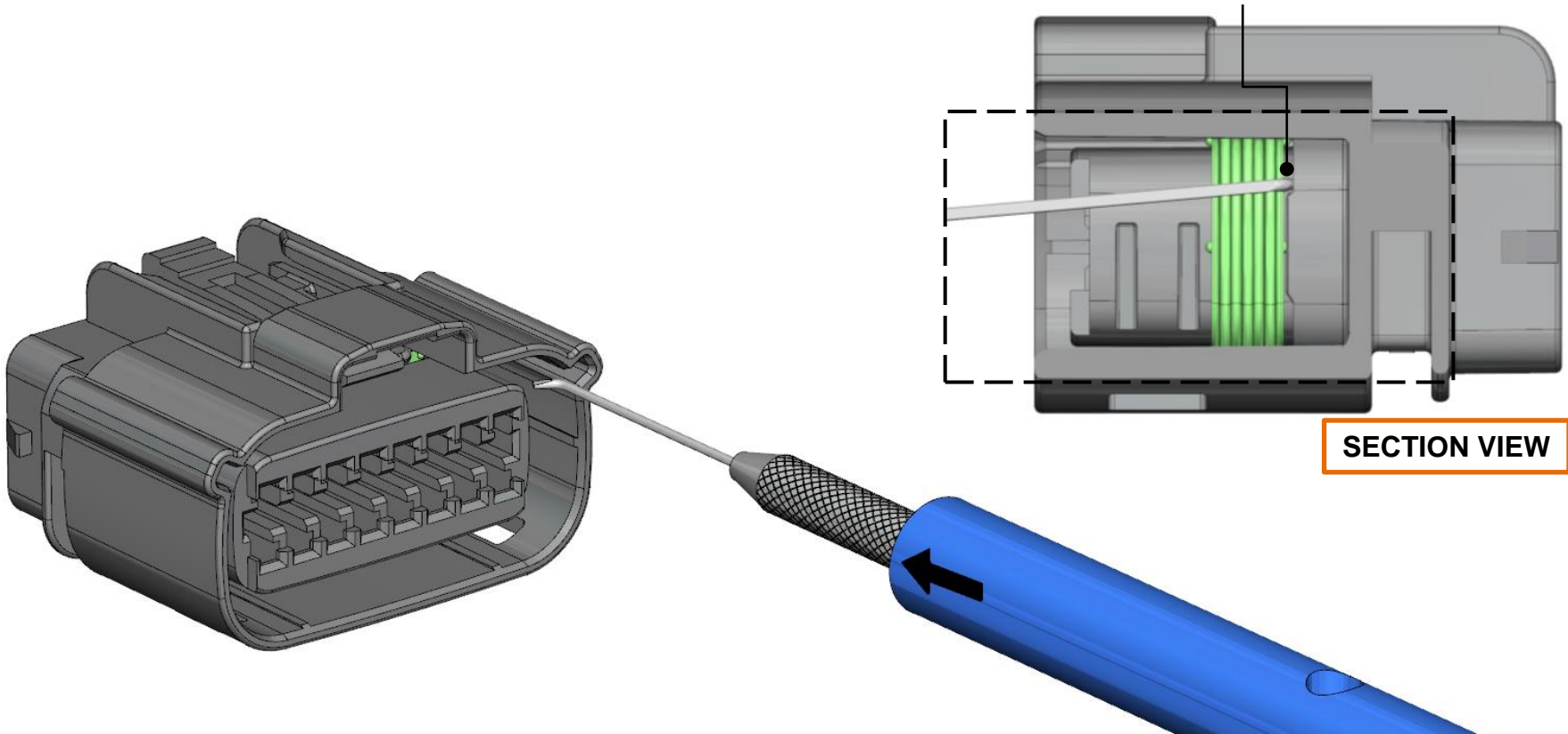


**IMPORTANT!** PLR MUST BE COMPLETELY REMOVED FROM THE CONNECTOR BEFORE THE SEAL REMOVAL

CONNECTOR SEAL REPLACEMENT (Remove) – STEP 1b

INSERT TOOL 15313892 INTO THE CONNECTOR

THE HOOK OF TOOL SHOULD BE PLACED BEHIND THE CONNECTOR SEAL

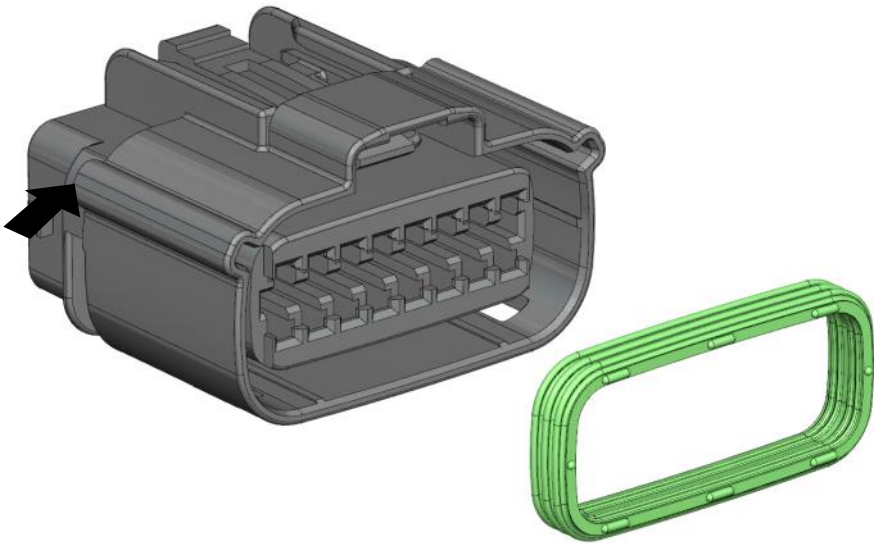
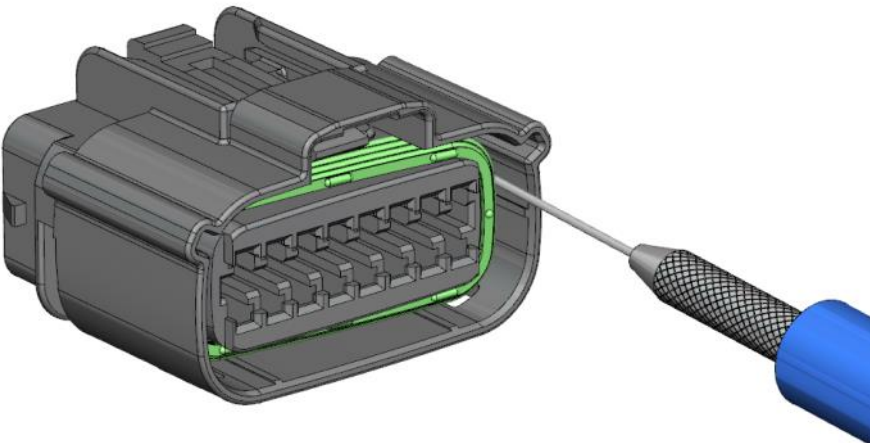




REPAIR / REPLACEMENT

CONNECTOR SEAL REPLACEMENT (Remove) – STEP 1c

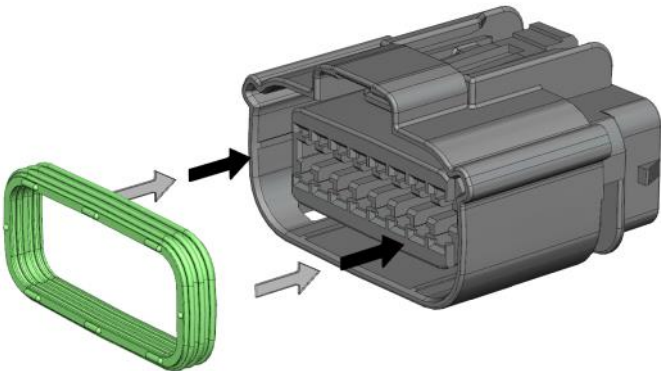
EXTRACT SEAL FROM THE SHROUD



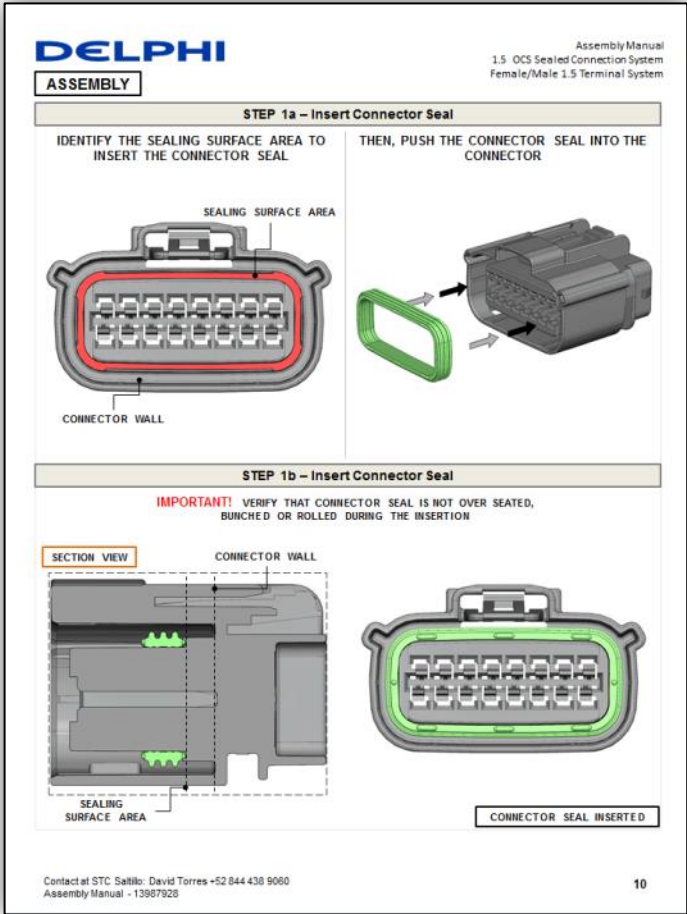
CONNECTOR SEAL REMOVED

CONNECTOR SEAL REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION



CONNECTOR SEAL is not a reusable sub-component.  
REPLACE CONNECTOR SEAL. TOOL 12150860  
COULD BE USED TO PLACE SEAL INTO SHROUD



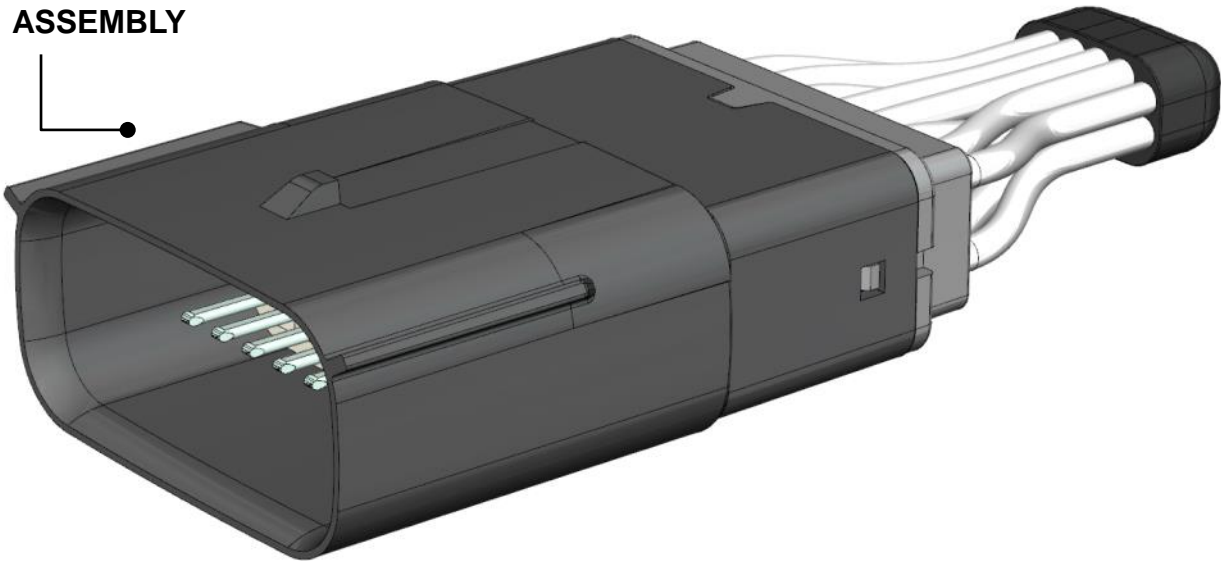


**REPAIR / REPLACEMENT**

**REPAIR / REPLACEMENT OF  
THE MALE ASSEMBLY**

# 1.5 OCS Sealed Connection System

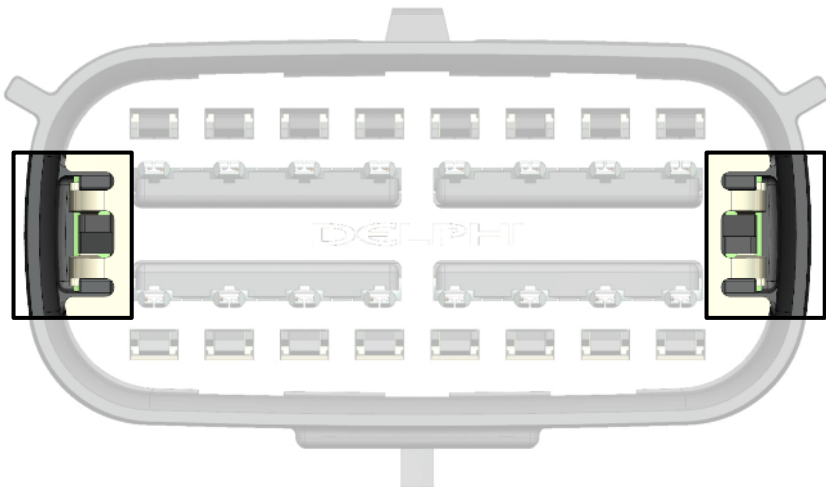
MALE ASSEMBLY



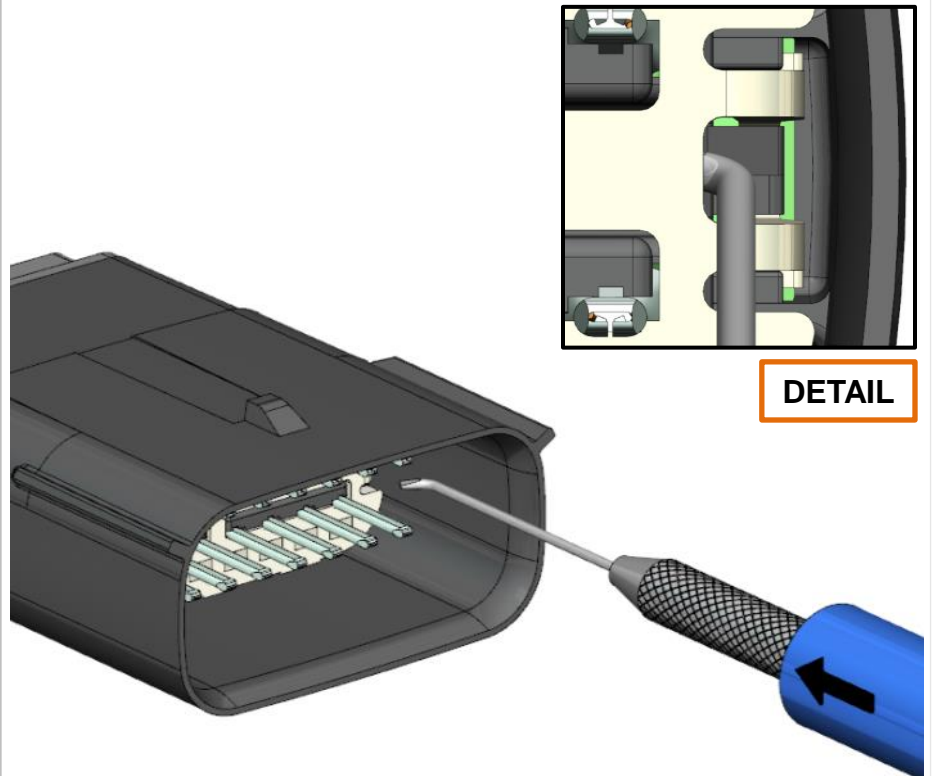
## REPAIR / REPLACEMENT

### MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Move PLR to Pre-Stage) – STEP 1a

LOCATE THE AREAS TO INSERT TOOL 15313892



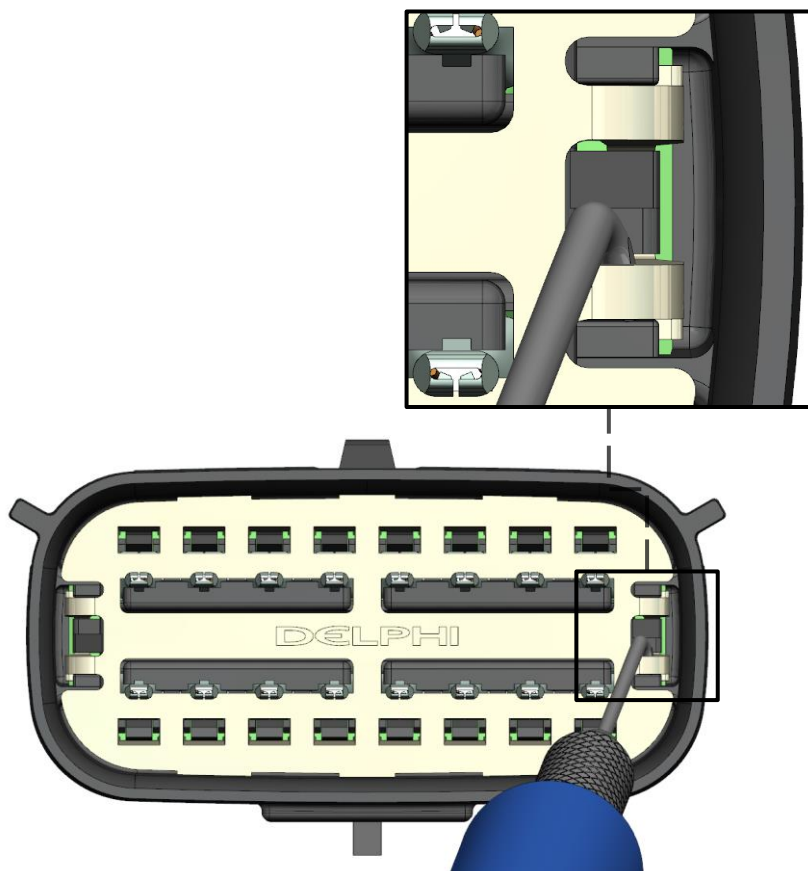
INSERT TOOL INTO THE SHROUD, WITH THE HOOK FACING TOWARD THE CENTER OF CONNECTOR AND PLACE IT BEHIND THE PLR



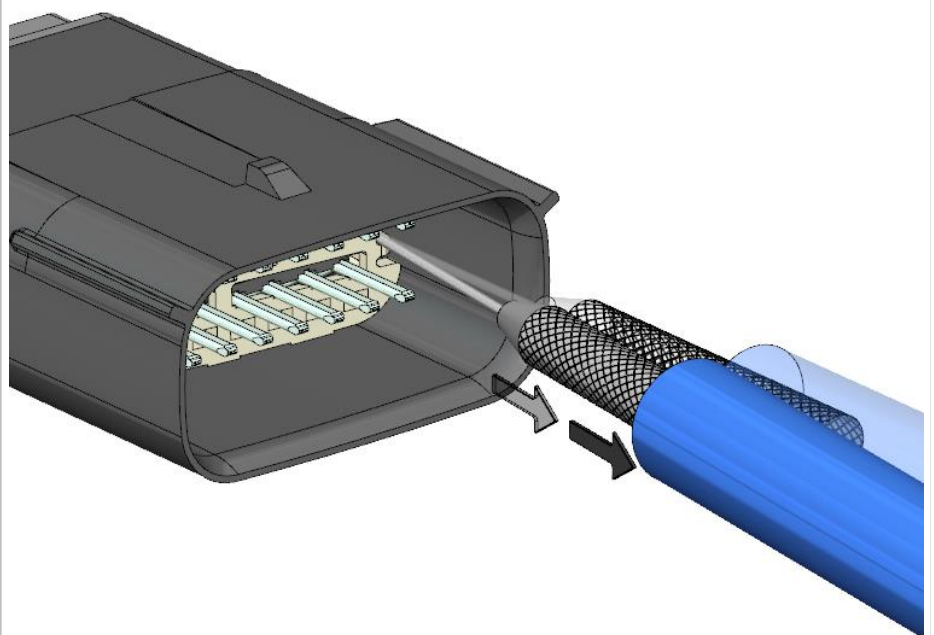
DETAIL

### MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Move PLR to Pre-Stage) – STEP 1b

ONCE THE TOOL IS IN PLACE, ROTATE IT TO GRASP THE PLR ARM



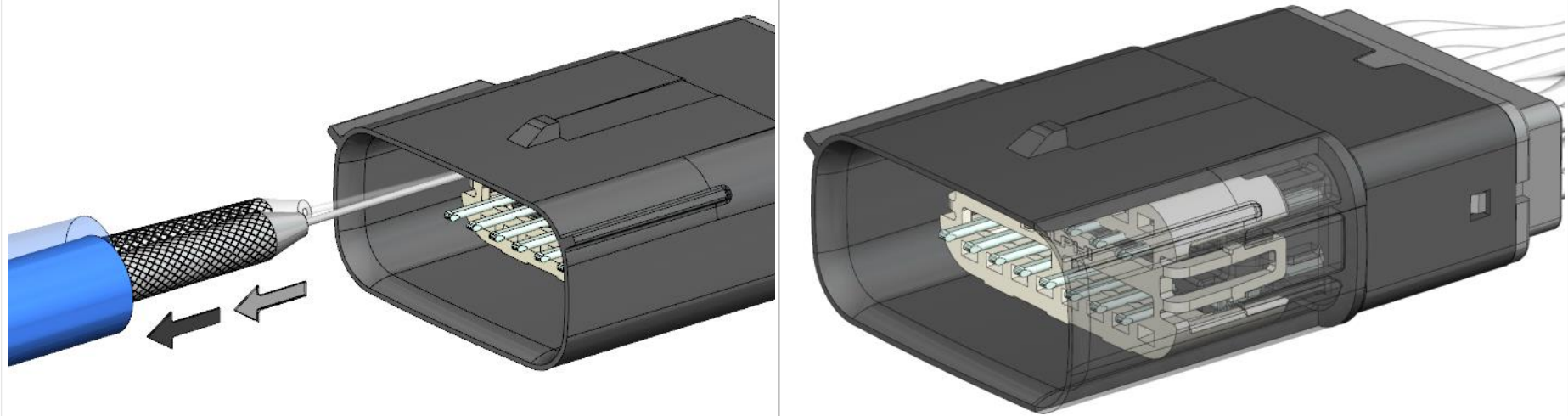
TWIST THE TOOL TO DEFLECT THE PLR ARM AND CAREFULLY PULL THE TOOL BACKWARDS TO MOVE THE PLR



REPAIR / REPLACEMENT

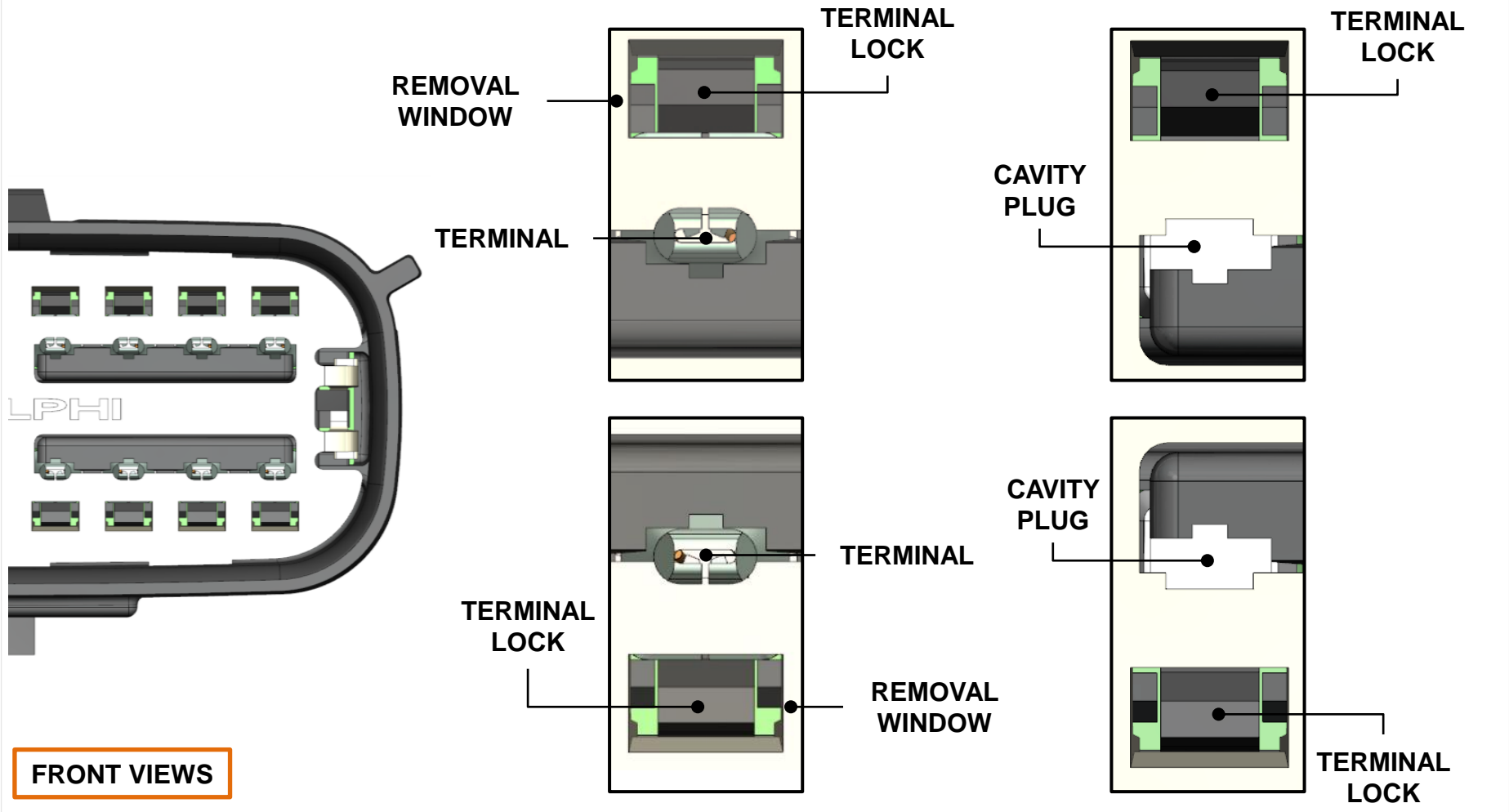
MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Move PLR to Pre-Stage) – STEP 1c

USE THE SAME PROCESS TO MOVE THE  
OTHER SIDE IF NEEDED



PLR IS NOW IN  
PRE-STAGE POSITION

MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Remove) – STEP 2a



FRONT VIEWS

REPAIR / REPLACEMENT

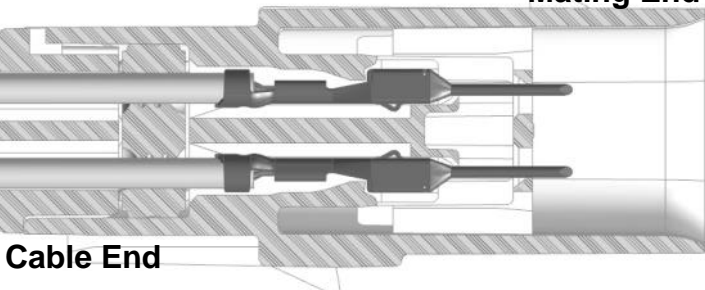
MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Remove) – STEP 2b

REMOVE TERMINALS

IDENTIFY

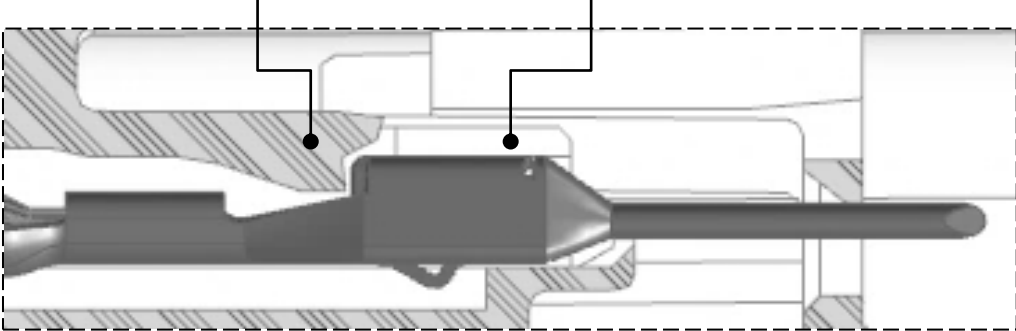
Flex Lock

Mating End



Flex Lock

Terminal



\* This graph just represents how this kind of terminals are removed.

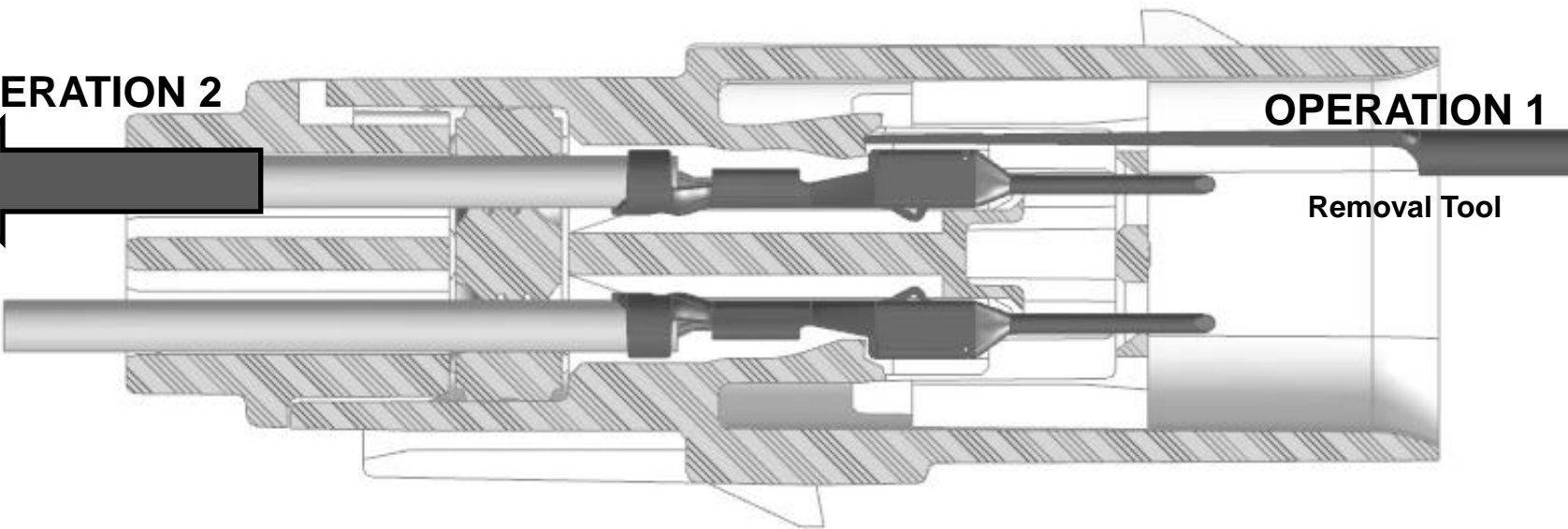
MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Remove) – STEP 2c

REMOVE TERMINALS

Locate Flex Lock at the front of the Connector. Insert (Operation 1) tool 12094429 straight into the window, deflect the Flex Lock to unseat the Terminal/Cavity Plug and gently pull on the cable to remove (Operation 2) the Female Terminal/Cavity Plug from the receptacle (Needle Nose Pliers can be used to pull on the Plug).

OPERATION 2

OPERATION 1



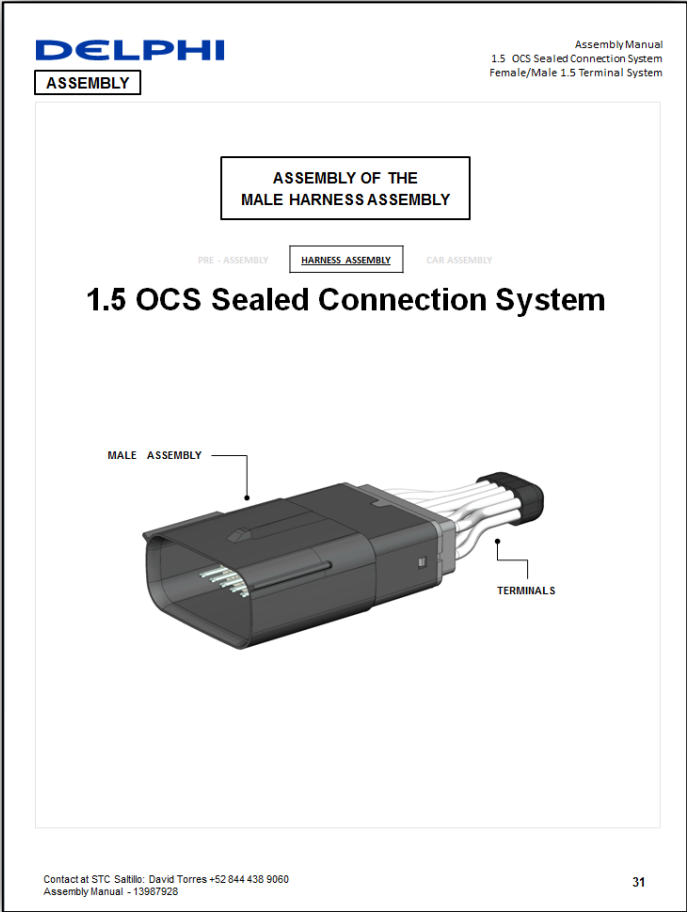
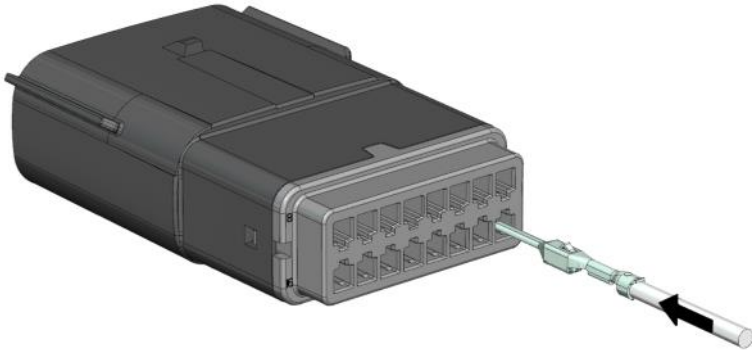
\* This graph just represents how this kind of terminals are removed.



REPAIR / REPLACEMENT

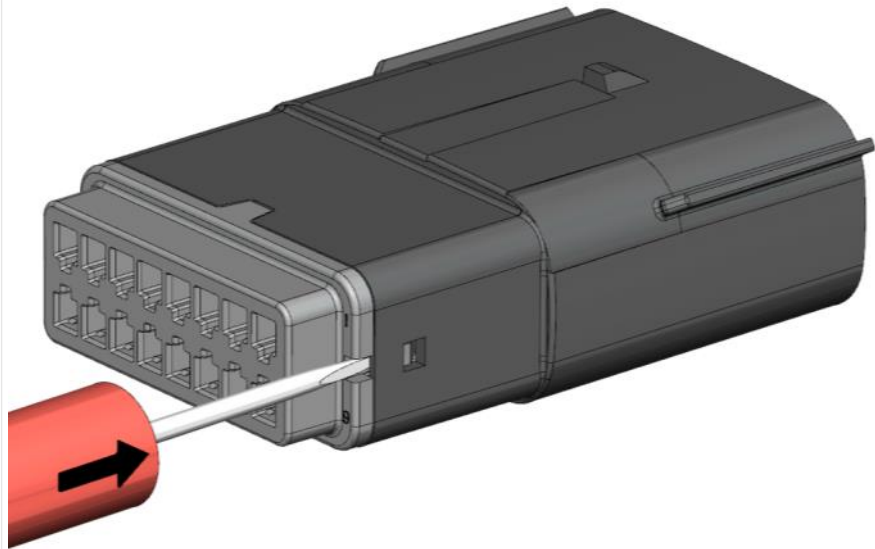
MALE TERMINAL OCS 1.5/CAVITY PLUG REPLACEMENT (Insert) – STEP 3

REFER TO HARNESS  
MANUAL SECTION

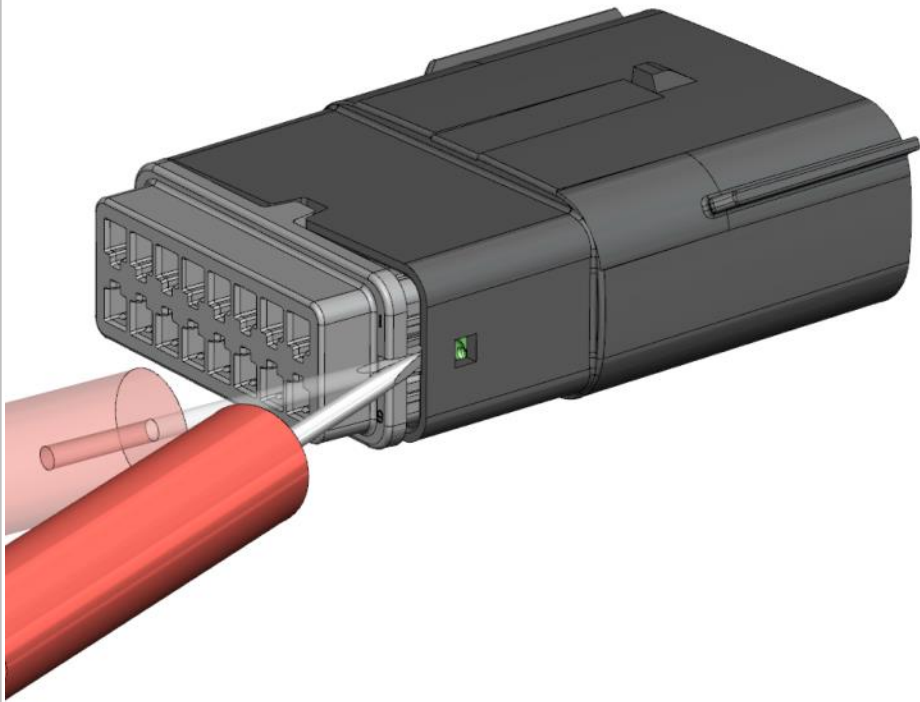


RETAINER REPLACEMENT (Remove) – STEP 1a

PLACE TOOL 12094441 BETWEEN THE  
CONNECTOR AND RETAINER



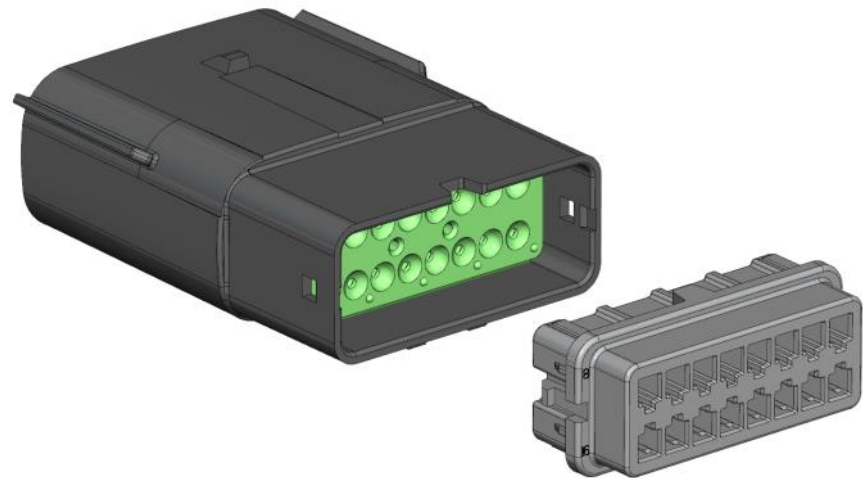
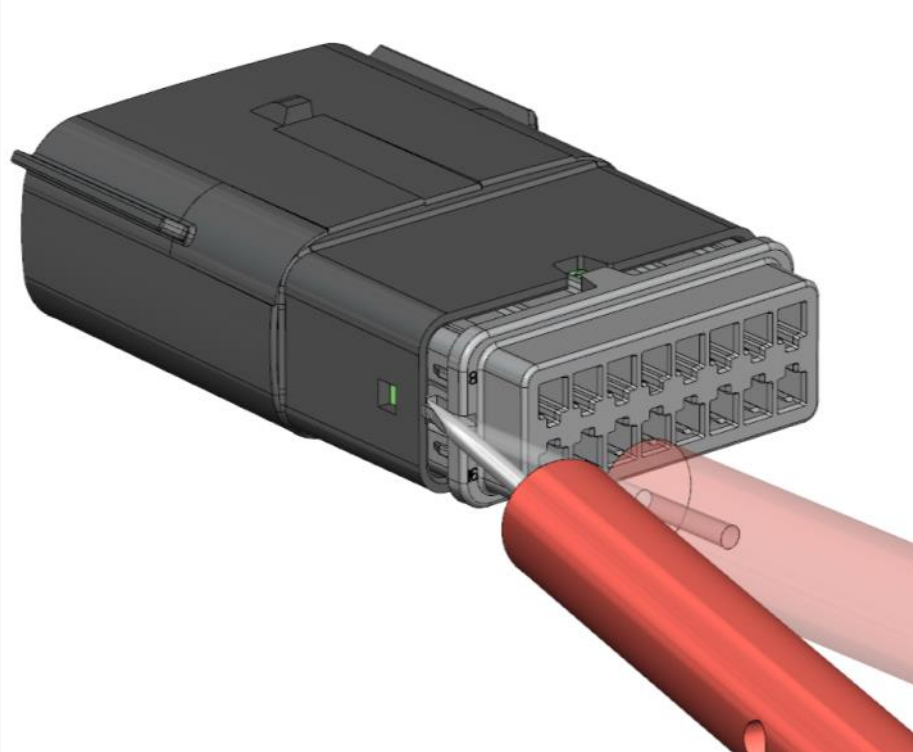
ROTATE THE TOOL CAREFULLY TO RELEASE  
THAT SIDE OF THE RETAINER



REPAIR / REPLACEMENT

RETAINER REPLACEMENT (Remove) – STEP 1b

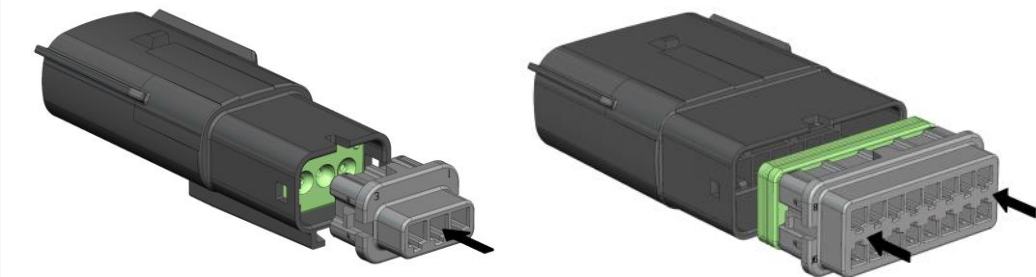
REPEAT THE PROCEDURE TO RELEASE THE OTHER SIDE OF RETAINER



RETAINER REMOVED

RETAINER REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION



**DELPHI**

Assembly Manual  
1.5 OCS Sealed Connection System  
Female/Male 1.5 Terminal System

**ASSEMBLY**

**STEP 3 – Insert Retainer**

THE INSERTION PROCESS OF THE RETAINER IS THE SAME REGARDLESS THE INSERTION PROCESS OF THE CABLE SEAL

**1** LOCATE AND ALIGN MATING FEATURES

**2** PRESS RETAINER ONTO THE CONNECTOR TO FULLY SEAT CABLE SEAL

**3** VERIFY AUDIBLE CLICK

RETAINER LOCKED

**1** LOCATE AND ALIGN MATING FEATURES

**2** PRESS RETAINER ONTO THE CONNECTOR

**3** VERIFY AUDIBLE CLICK

RETAINER LOCKED

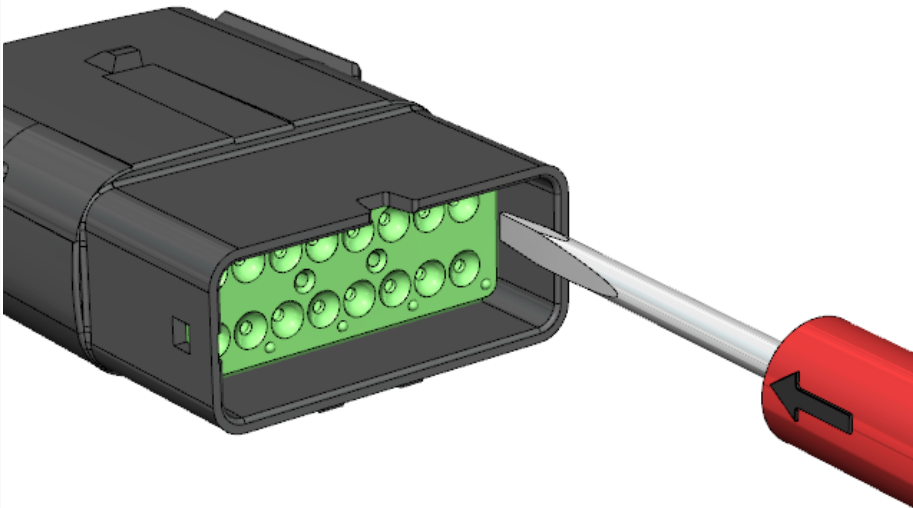
Contact at STC Saltillo: David Torres +52 844 438 9060  
Assembly Manual - 13987928

23

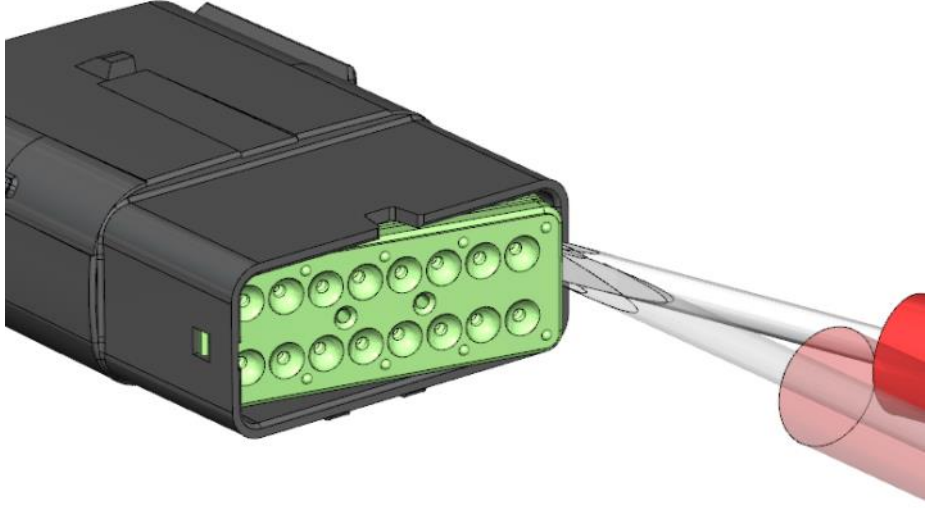
**REPAIR / REPLACEMENT**

**CABLE SEAL REPLACEMENT (Remove) – STEP 1a**

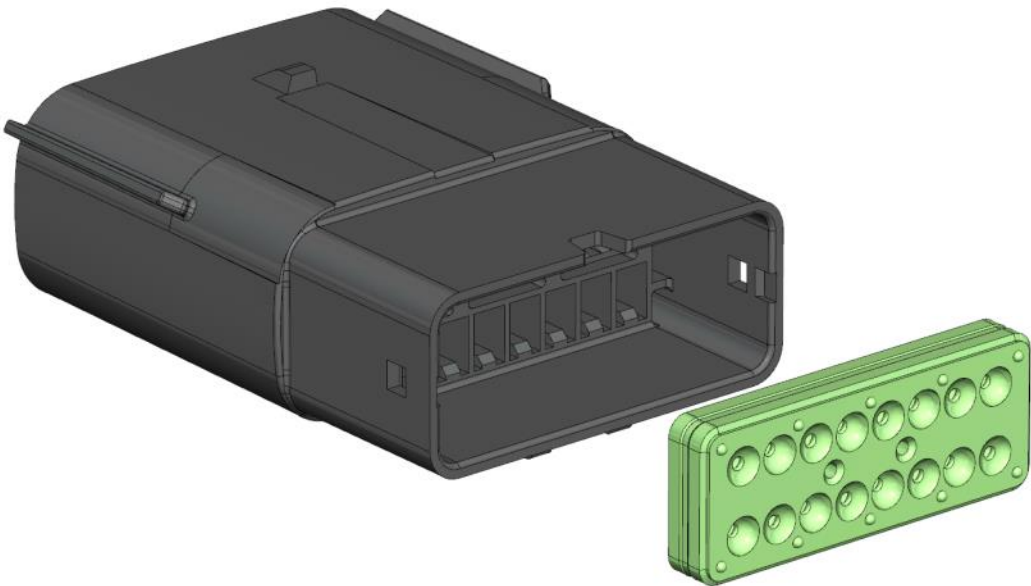
INSERT TOOL 12094441 BETWEEN THE  
CONNECTOR AND CABLE SEAL



WITH THE TIP OF TOOL REMOVE THE SEAL  
FROM THE SHROUD



**CABLE SEAL REPLACEMENT (Remove) – STEP 1b**

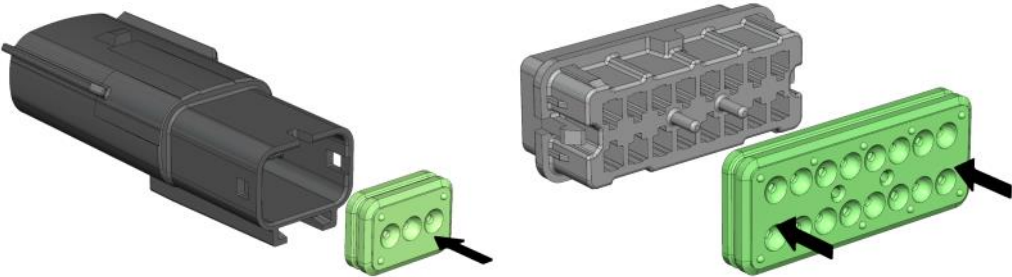


**RETAINER REMOVED**

REPAIR / REPLACEMENT

CABLE SEAL REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION



CABLE SEAL is not a reusable sub-component.  
REPLACE ENTIRE CABLE SEAL

**DELPHI**

Assembly Manual  
1.5 OCS Sealed Connection System  
Female/Male 1.5 Terminal System

**ASSEMBLY**

**STEP 2 – Install Cable Seal**

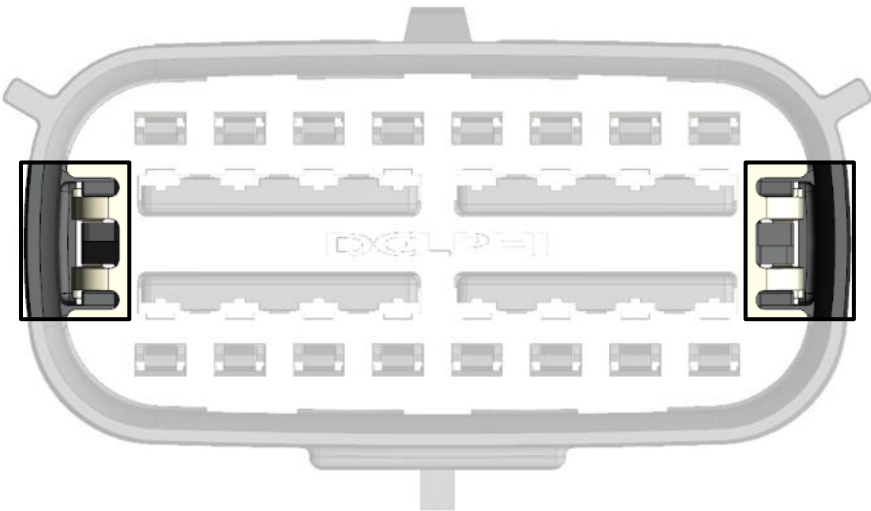
PROCESS FOR: 3W & 4W CONNECTORS	PROCESS FOR: 2W, 6W, 8W, 10W, 12W & 16W CONNECTORS
<p><b>1</b> IDENTIFY THE CORRECT ORIENTATION OF THE SEAL</p>	<p><b>1</b> LOCATE AND ALIGN MATING FEATURES</p>
<p><b>2</b> PUSH CABLE SEAL INTO CONNECTOR</p>	<p><b>2</b> PUSH CABLE SEAL ONTO RETAINER</p>
	<p><b>3</b> INSERTION COMPLETED</p>

Contact at STC Saltillo: David Torres +52 844 438 9060  
Assembly Manual - 13987928

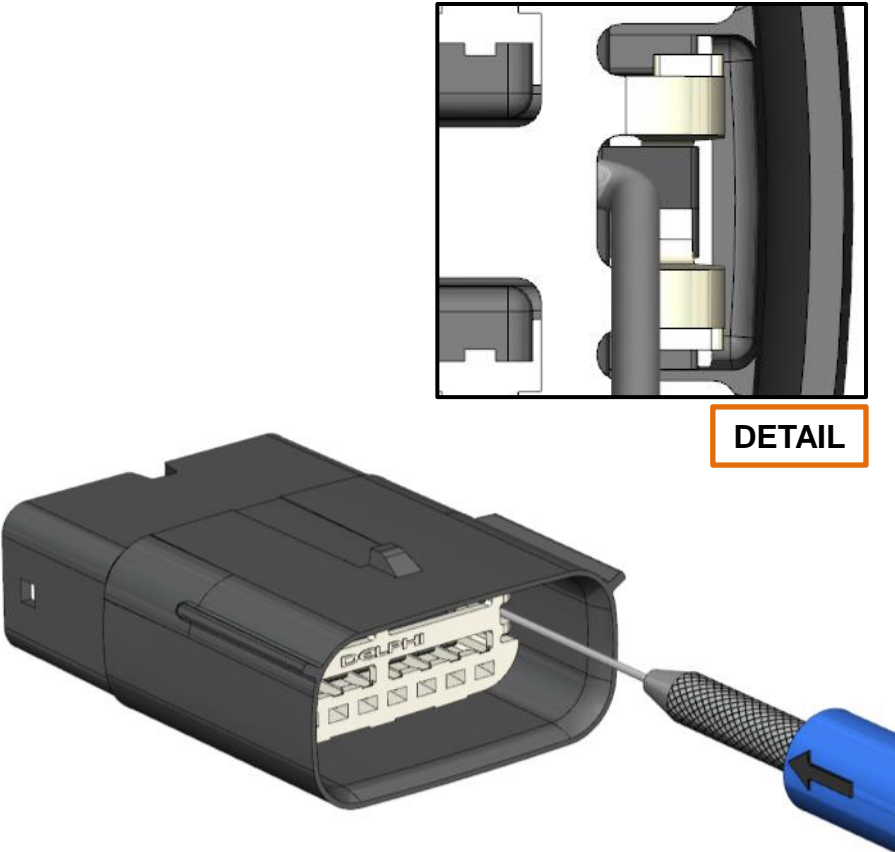
22

PLR REPLACEMENT (Remove) – STEP 1a

LOCATE THE AREAS TO INSERT TOOL 15313892



INSERT THE TOOL BEHIND THE PLR



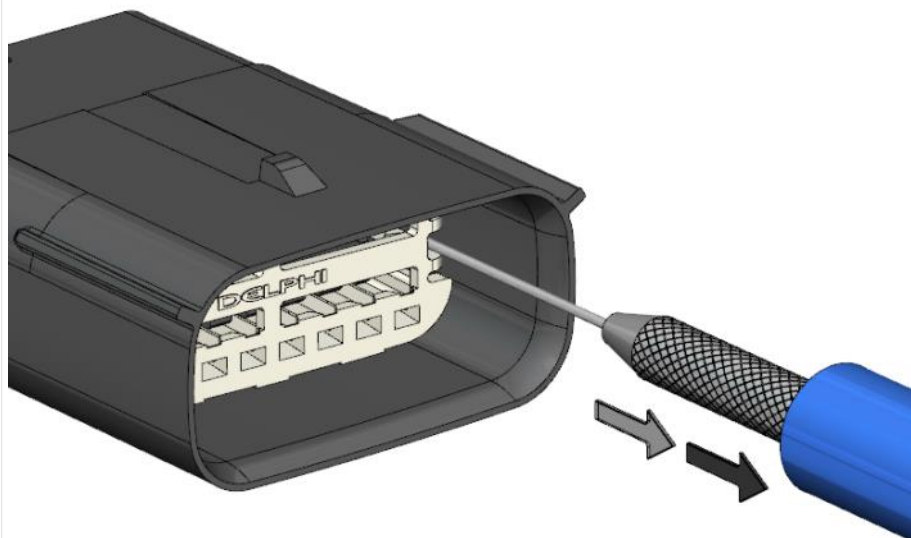
DETAIL



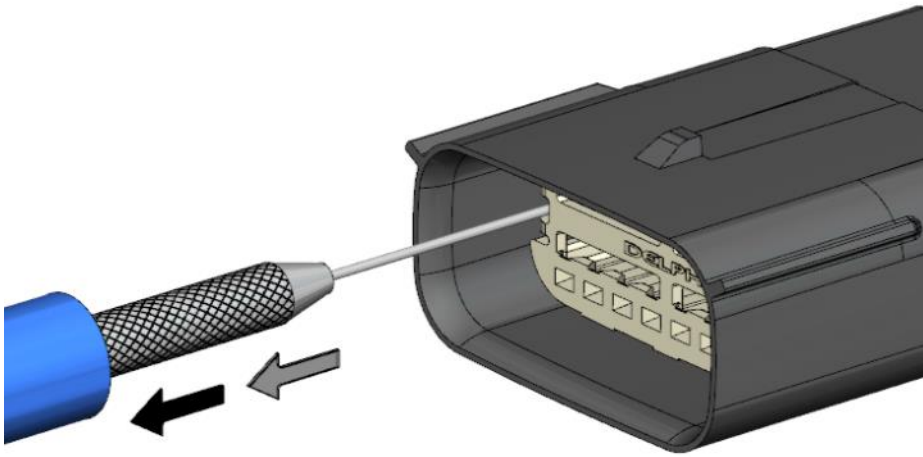
**REPAIR / REPLACEMENT**

**PLR REPLACEMENT (Remove) – STEP 1b**

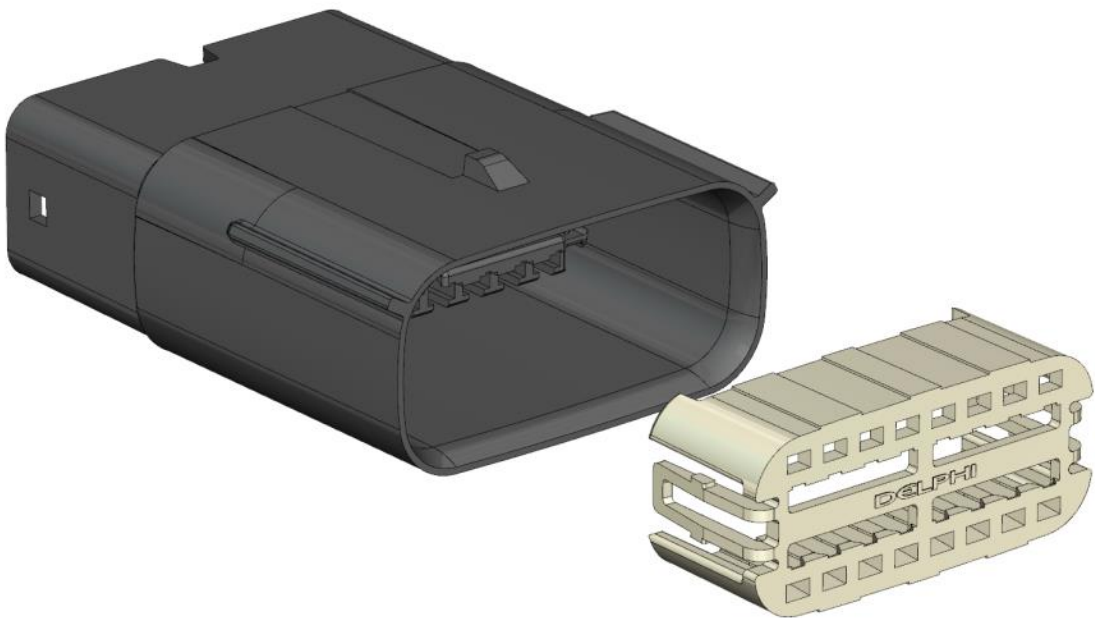
CAREFULLY PULL THE TOOL BACKWARDS TO REMOVE THAT SIDE OF PLR



REPEAT THE PROCESS ON THE OTHER SIDE AND REMOVE PLR COMPLETELY



**PLR REPLACEMENT (Remove) – STEP 1c**

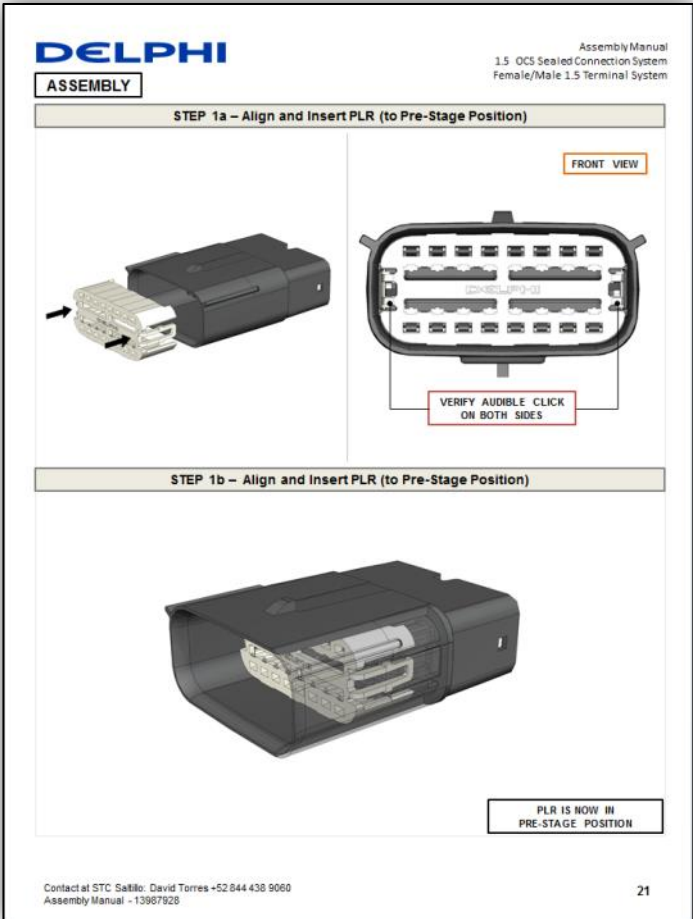
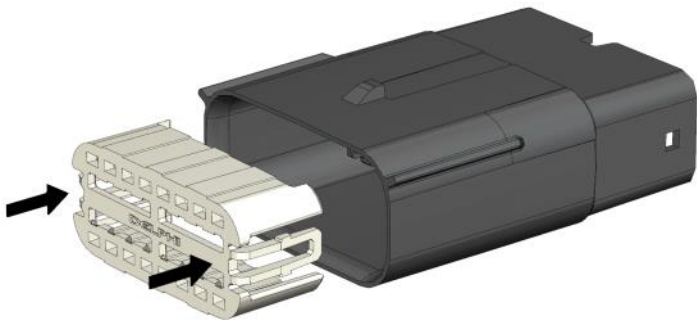


**PLR REMOVED**

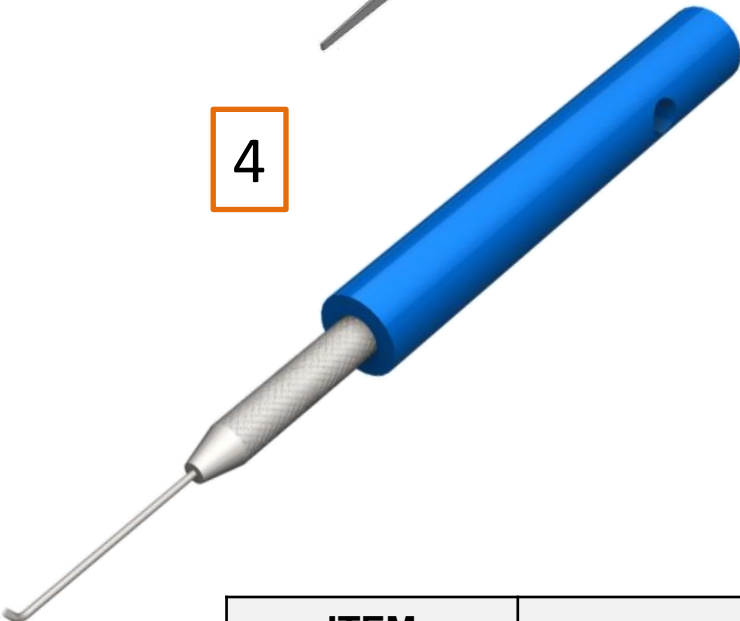
REPAIR / REPLACEMENT

PLR REPLACEMENT (Install) – STEP 2

REFER TO PRE-ASSEMBLY  
MANUAL SECTION



RECOMMENDED REPAIR TOOLS



ITEM	DELPHI PART NUMBER
1	12122647 OR 12094430
2	12094441
3	12094429
4	15313892
5	12150860

REVISIONS			
DATE	REV	REVISION HISTORY	AUTH
12OC12	01	RELEASED	419944
12JL13	02	ADDED CAR-ASM & REPAIR SECTIONS, UPDATED GRAPHICS & MATTE SEAL ASM, CHANGED NAME OF THE MANUAL AND ADDED VIEW OF VERSIONS SHEETS	420327
23FE16	03	UPDATED GRAPHICS WITH LATEST DESIGNS & REPAIR SECTION AND ADDED REPAIR TOOL NUMBERS	431453