

MX150 BACKSHELL APPLICATION SPECIFICATION

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DOCUMENT NUMBER: AS-34951-001	CREATED / REVISED BY: Chris Taylor	CHECKED BY: Katy Cunningham	APPROVED BY: AJ Pill

1.0 SCOPE

The information in this document contains instructions pertaining to the assembly and disassembly of backshells on Molex connectors pertaining to Molex series numbers 34948, 34949, 34950, 34951, 34952, and 34953.

1.1 CONTENTS

- INSTALLATION PROCEDURE
- DISASSEMBLY PROCEDURE

1.2 PRODUCT DESCRIPTION

These backshells are designed to be used on various MX150 family products. They should only be installed when connector assembly is complete, and all connector / harness testing has passed end of line validation. Kindly refer to the required section depending on the circuit size of the connector being used to assembly and disassembly instructions.

Note: The conduit is supplied by an external supplier

1.3 REFERENCE DOCUMENTS

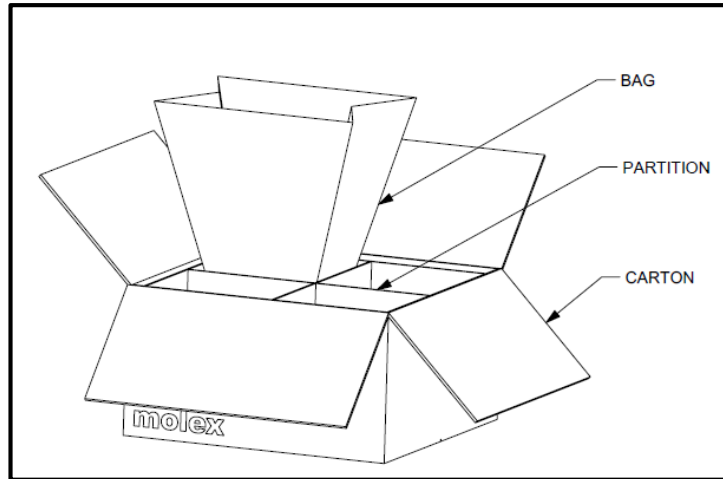
Sr. No	Circuit Size	Reference Documents
1	1x2	SD-34948-0001
2	1x3	2043510301
3	2x3	SD-34950-0001
4	2x4	
5	2x6	
6	2x8	
7	2x10	
8	16w Hybrid	349520001 349530001

1.4 PACKAGING

The adapter and backshell parts will be shipped in a carton, separated into compartmentalized boxes, in bags as shown below. The backshell and adapter are non-serviceable items. Therefore, if disassembled after first assembly, new parts must be used to ensure adequate performance. Refer drawing PK-31302-118 for additional details if required

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2.0 FOR CIRCUIT SIZES 1X2, 1X3, 2X3, 2X6, 16W HYBRID BACKSHELLS



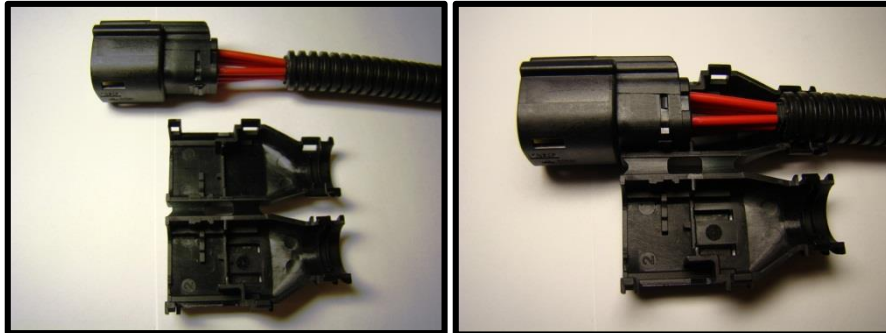
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2.1 PROCEDURE

2.1.1 BACKSHELL ASSEMBLY

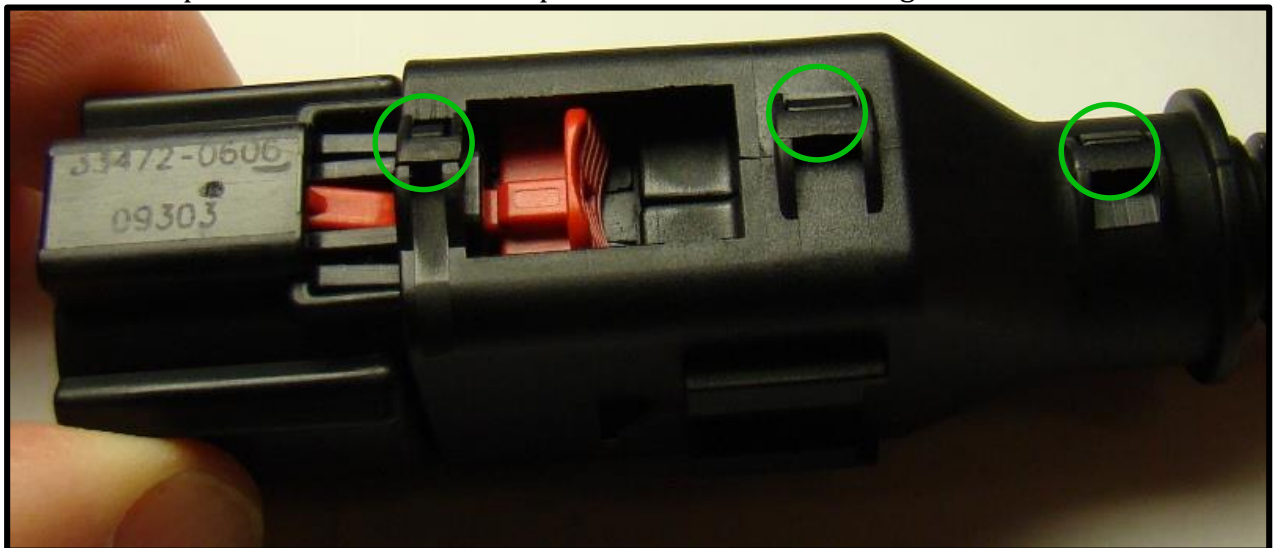
Receptacle connectors:



Align receptacle connector assembly with back shell retention features



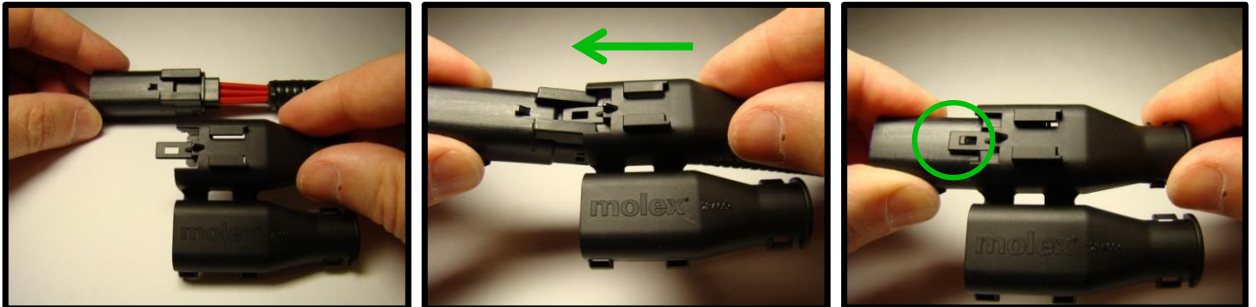
Once connector assembly is in place, rotate the back shell to close latches. Keep wire and conduit in place and take care not to pinch harness while closing back shell.



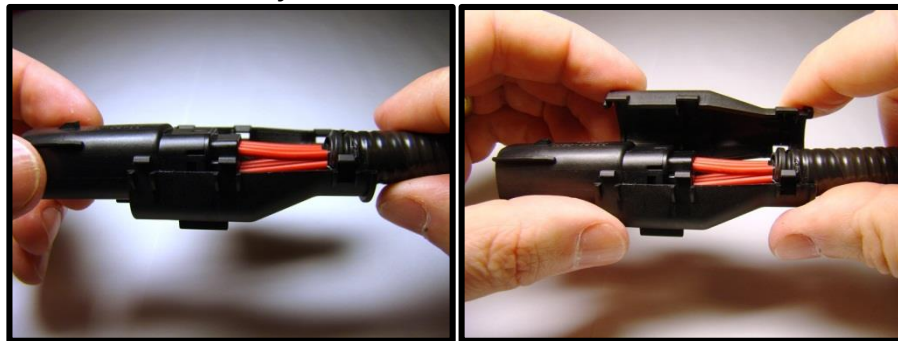
Back shell locked in place all latches locked.

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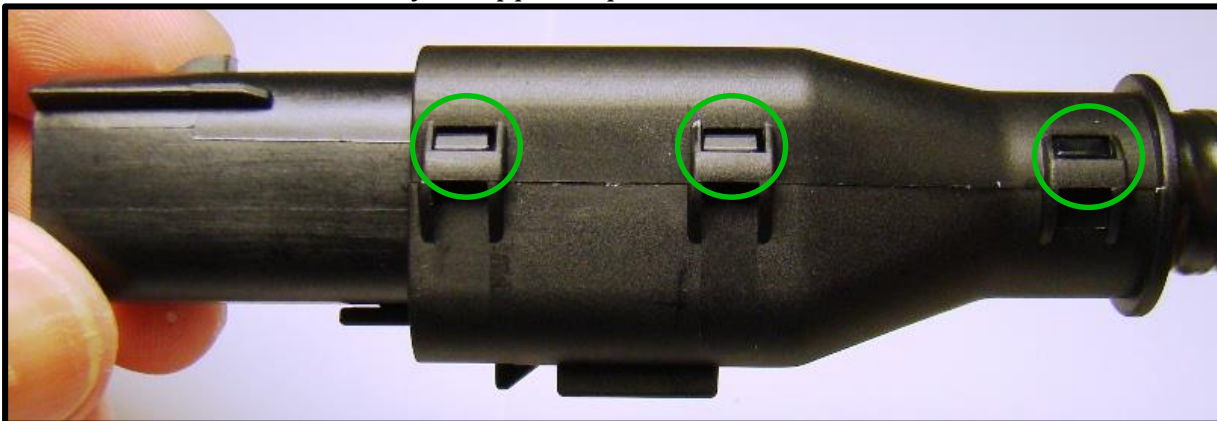
Blade Connectors:



Note and align clip slot feature with back shell retention features, slide these features together until you hear and audible click.



Once connector assembly is clipped in place, rotate the back shell to close the latches.

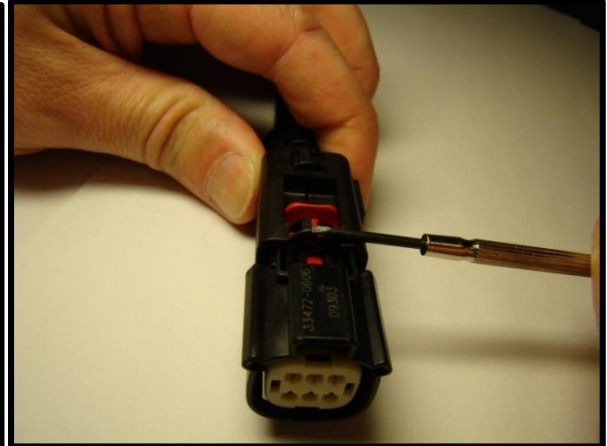
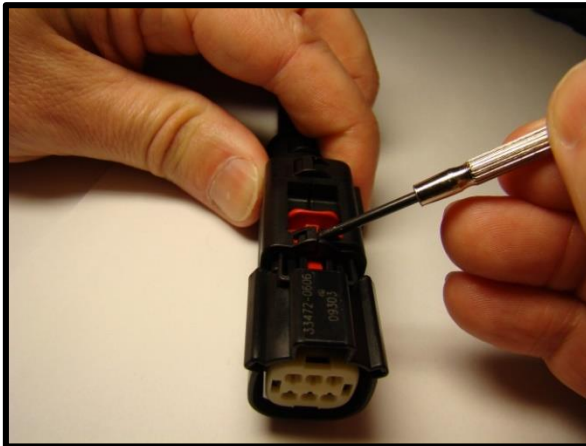


PERM APPROVAL

2.1.2 BACKSHELL DISSASSEMBLY

Back shell must be replaced after removal!!!

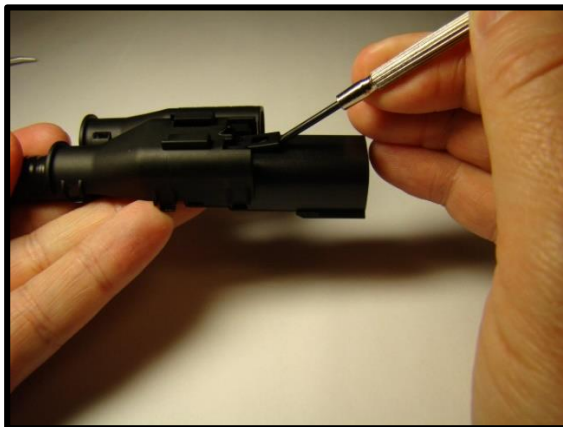
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To remove back shell, slide a small screwdriver blade into latch and twist. This action will unlock the latch. Repeat this action for all latches on both receptacle, and blade back shells.



To remove the blade connector back shell from the clip slot retention feature, slide a small screwdriver under the latch and slide the back shell off the locking feature.



BACK SHELL MUST BE REPLACED AFTER REMOVAL!!!

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<small>TEMPLATE FILENAME: APPLICATION_SPEC\SIZE_AJ(V.1).DOC</small>			

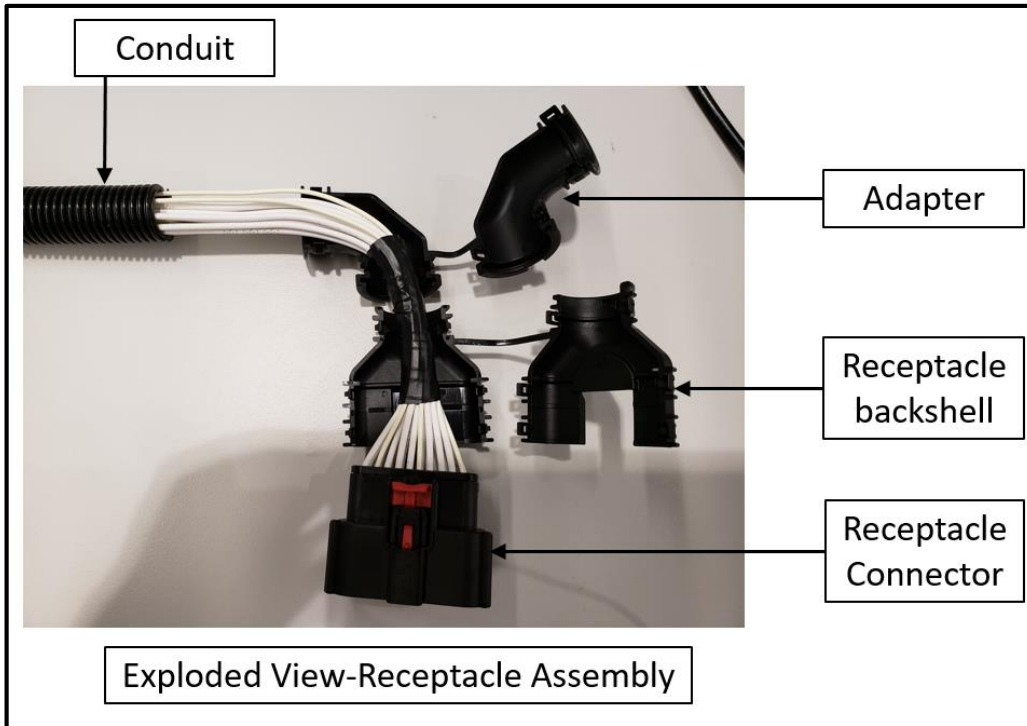
3.0 FOR CIRCUIT SIZES 2X4, 2X8, 2X10 BACKSHELLS



Completed Assembly- Receptacle

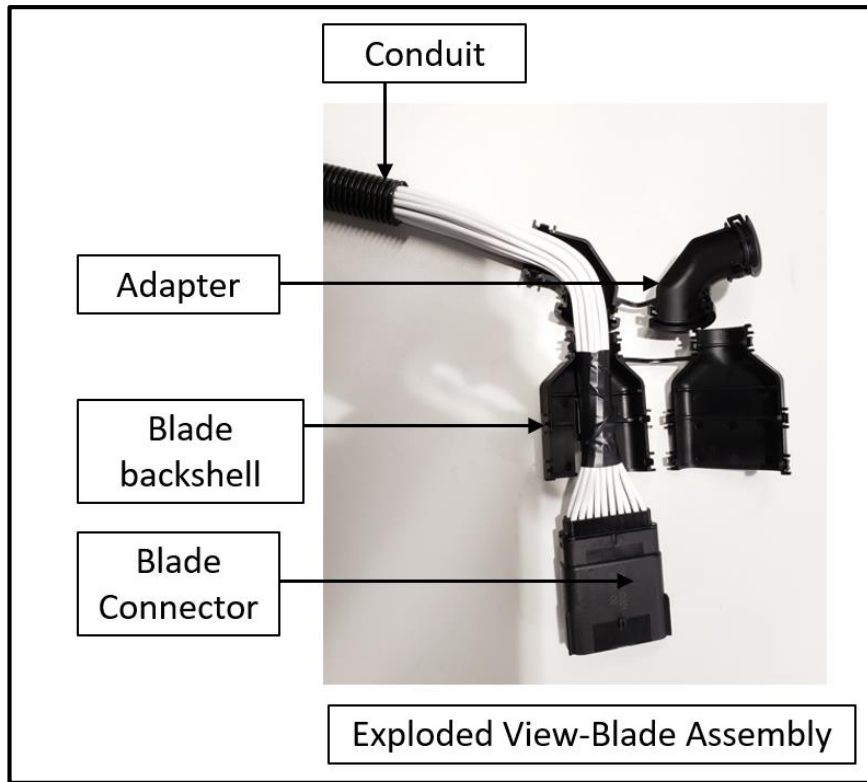


Completed Assembly- Blade

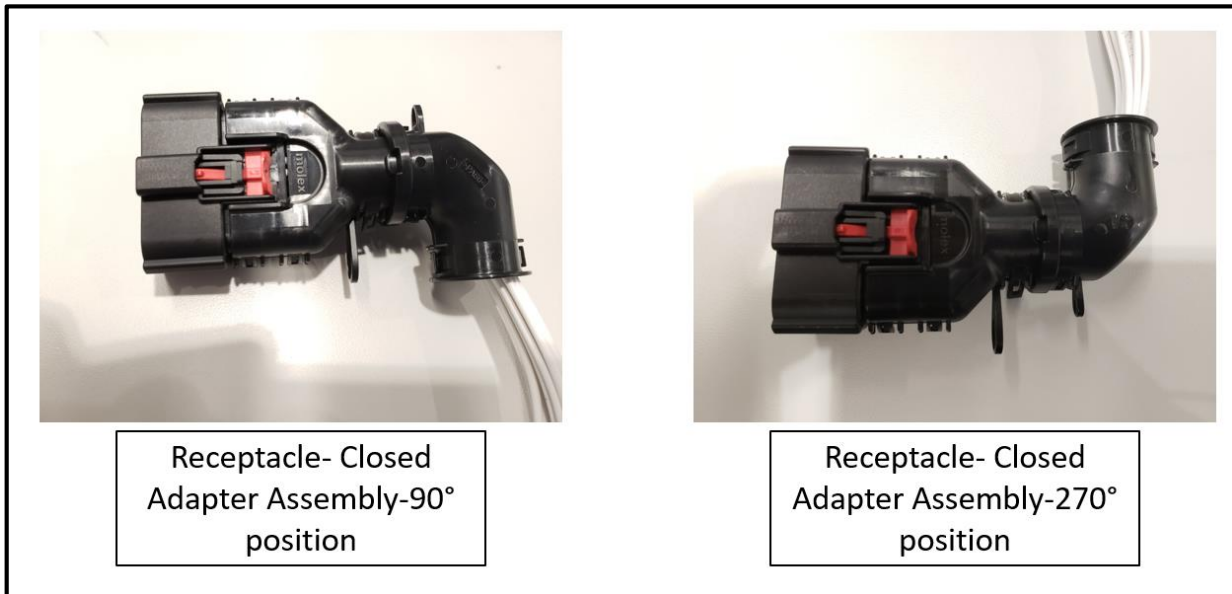


Exploded View-Receptacle Assembly

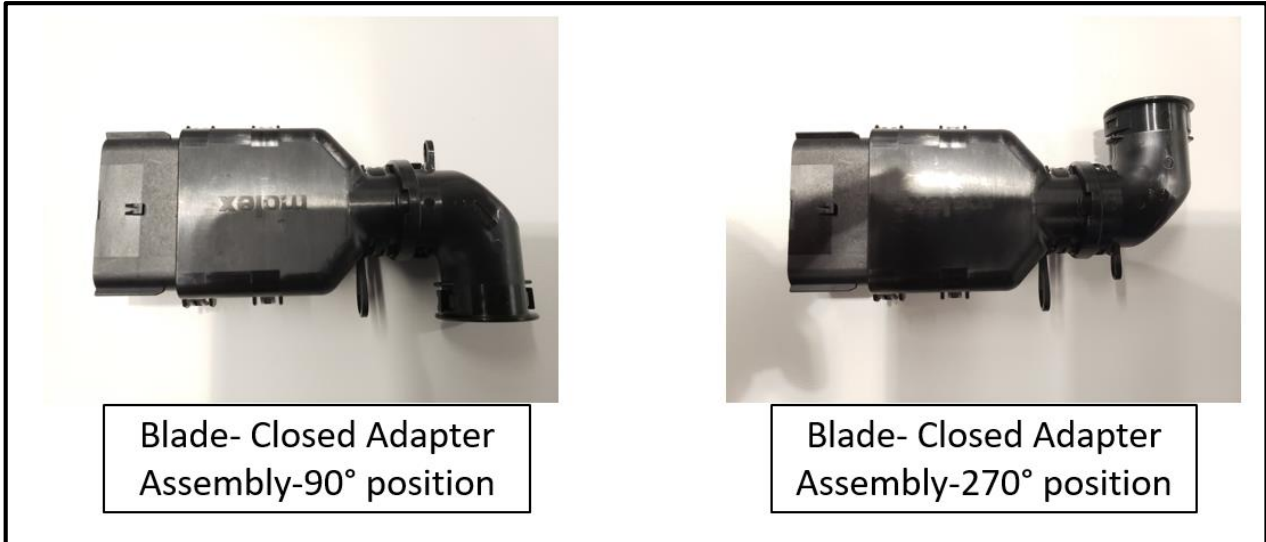
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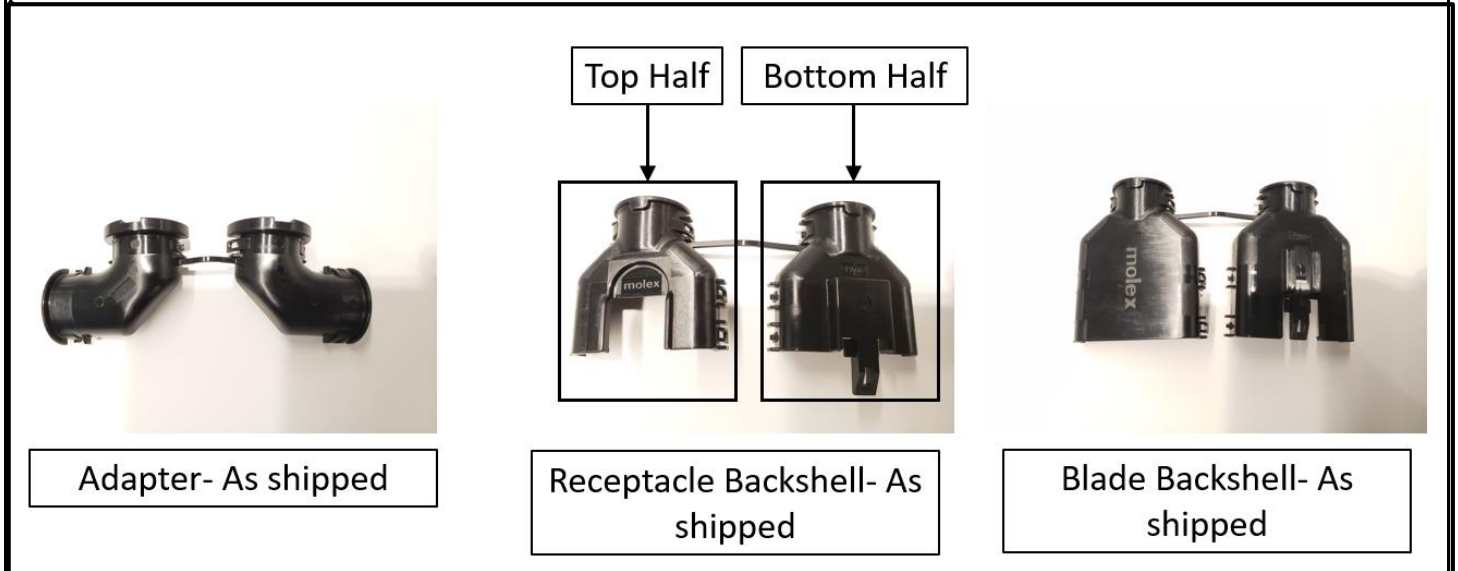
The adapter and backshell assembly have 2 possible configurations that it can be assembled in, as shown in the pictures below: 90° and 270° positions. The adapter itself is an auxiliary component that may or may not be used with the backshell and conduit assembly.



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The connector assembly, backshell, adapter and conduit are to be assembled and will arrive in their respective pre-assembled conditions as shown below. Ensure that the lock-fingers on the backshell and/or adapter are not damaged prior to assembly by visual inspection. If they are damaged, use another part.



3.1 PROCEDURE

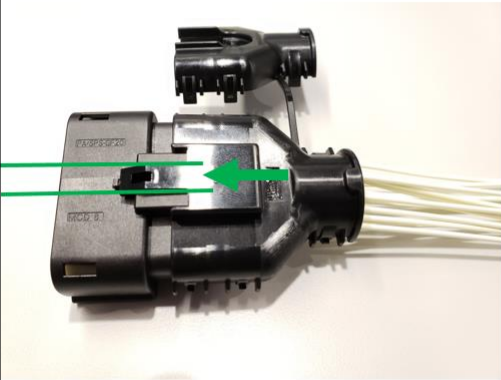
3.1.1 BACKSHELL ASSEMBLY

After the terminals are inserted into the receptacle/blade cavity correctly, the bottom backshell half is to be assembled to the connector as shown below:


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RECEPTACLE ASSEMBLY

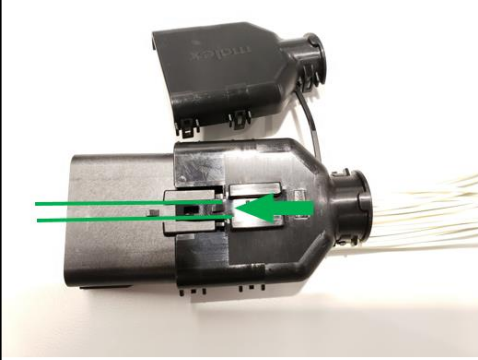


Align the backshell feature with the slot on the receptacle housing




Push backshell until it positively locks on the connector housing

BLADE ASSEMBLY



Align the backshell feature with the slot on the blade housing



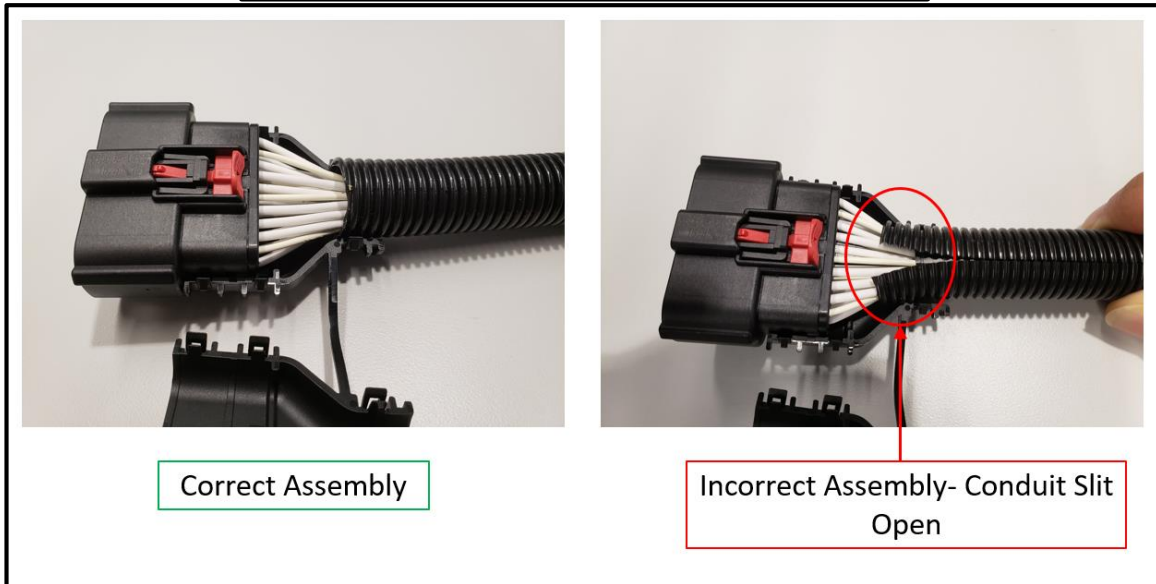
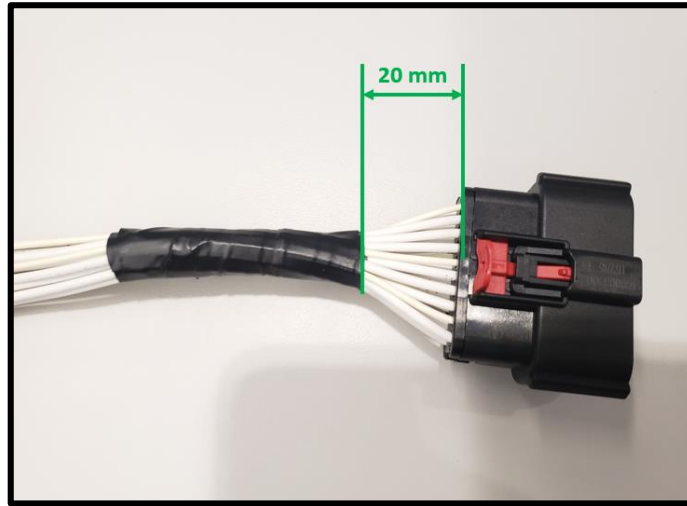
Push backshell until it positively locks on the connector housing

Note: For the receptacle backshell assembly, the receptacle housing must have a clipslot. Non-clipslot receptacle housings cannot use backshells.

Now the conduit pipe should be installed on the wires as shown in the pictures below
 Molex recommends that the wires should be taped together for an easier assembly process at 20 mm from the end of the grommet cap as shown in the image below. **Less than 20 mm** will stretch the

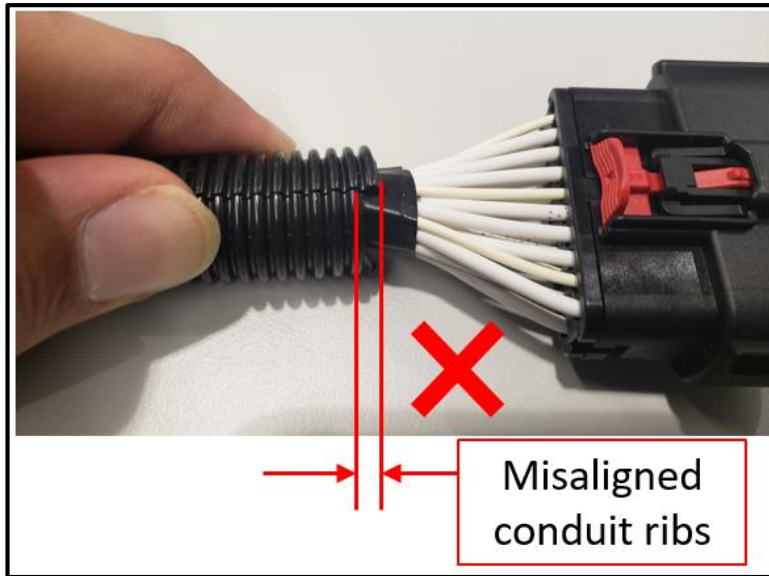
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terminals inside the receptacle cavity **undesirably**. This applies to both the blade and receptacle connectors.

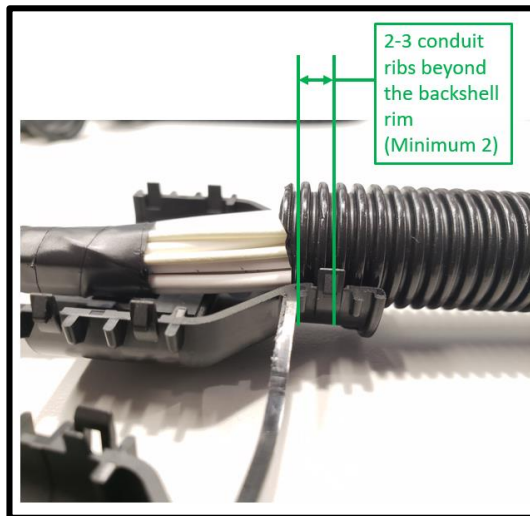


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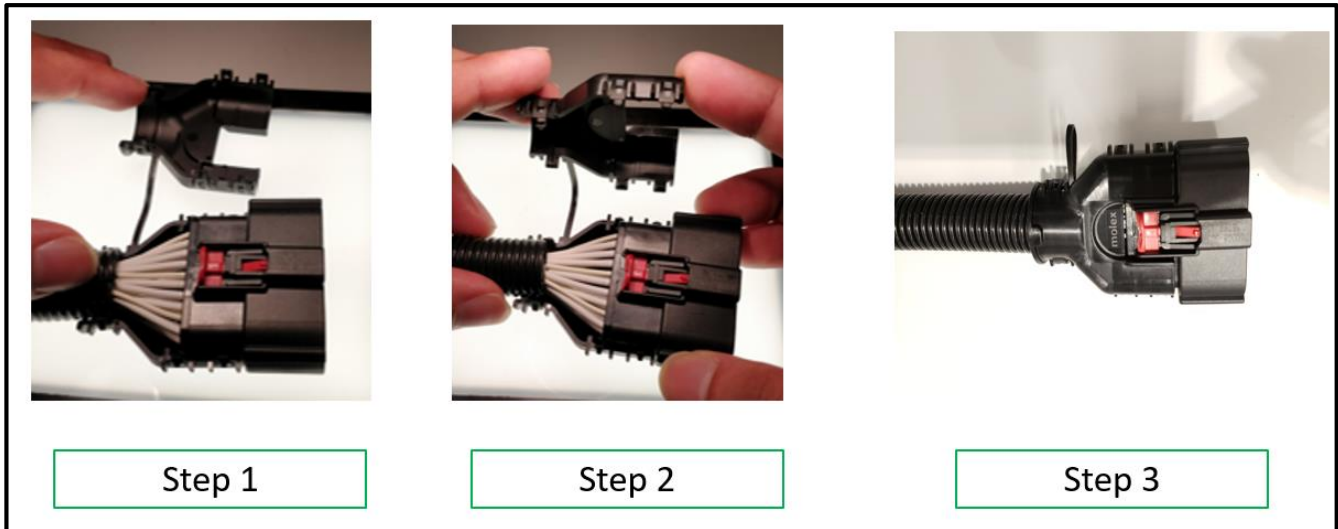
Place the conduit such that there are 2- 3 conduit ribs beyond the half-circular ridge on the backshell as shown below.



Flip and close the backshell as shown below once the conduit is placed correctly.

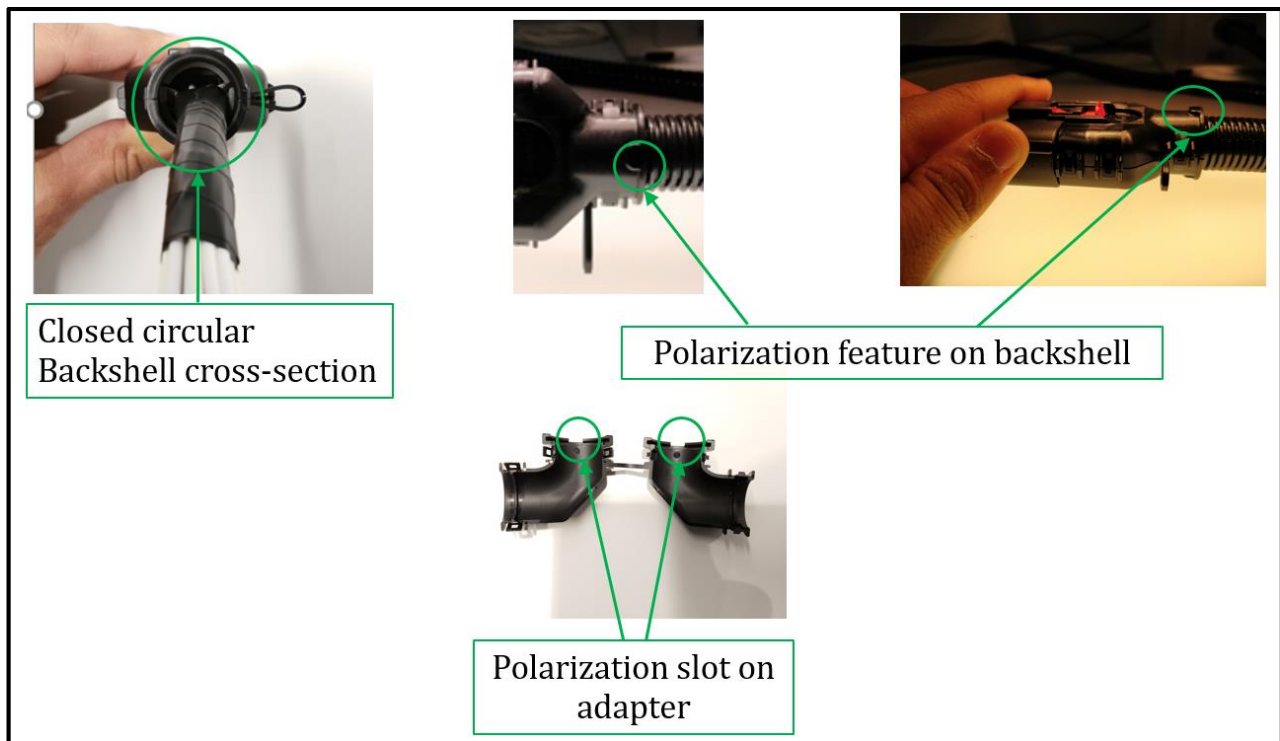
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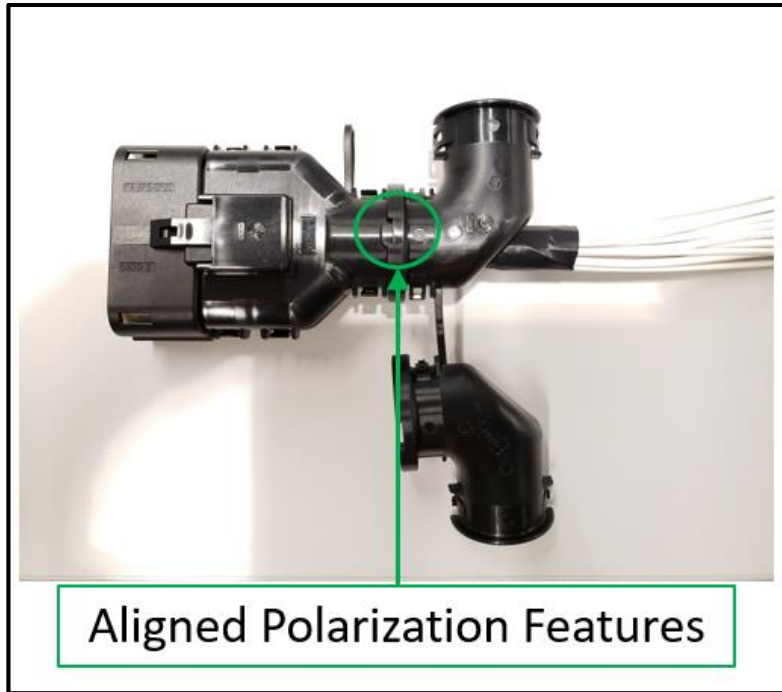


3.1.2 ADAPTER ASSEMBLY

To install the adapter in either 90° or 270° position, match the polarization feature on the closed circular cross-section of the backshell, to the polarization slot on either half of the adapter. The polarization features are encircled as shown in the picture below.



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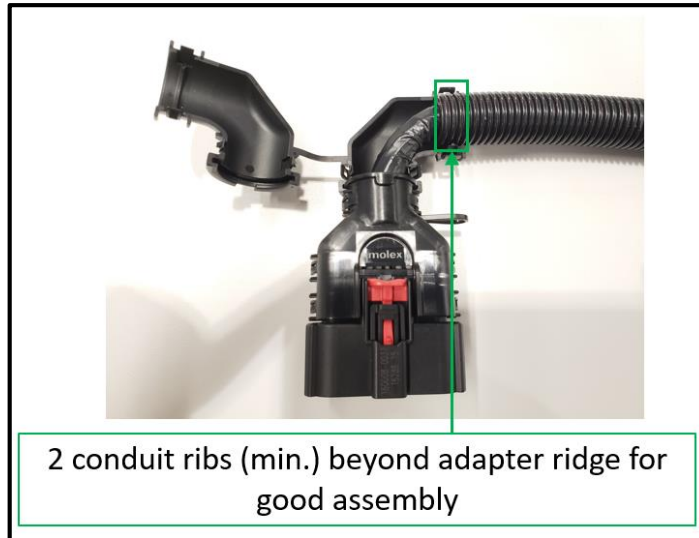
Do not close and lock the adapter if the conduit is yet to be installed.

The conduit pipe is to be installed AFTER the adapter. To install the conduit after the adapter, keep the adapter open after positioning it correctly as shown. Place the conduit on the half-circular ridge as shown below with at least 2 conduit ribs beyond the ridge towards the backshell.

NOTE: The conduit is supplied by an external supplier

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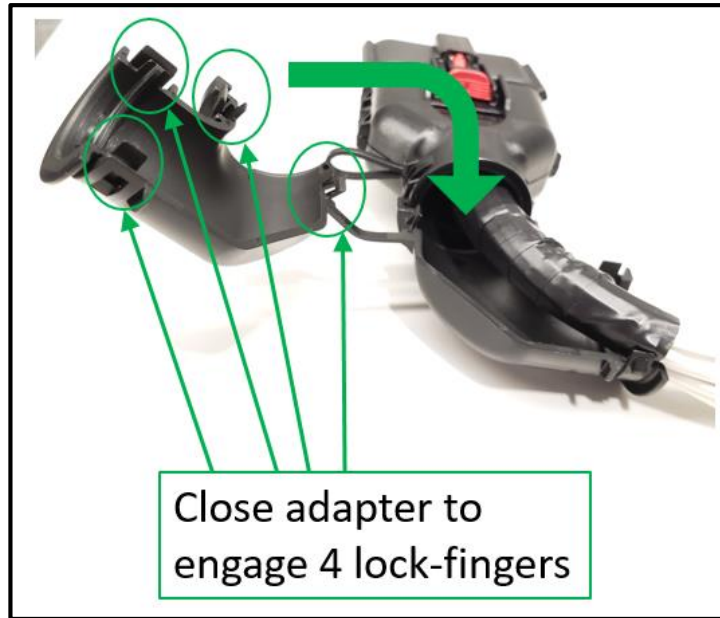


Do not try to install the conduit after the backshell and then turn/bend it through the adapter, as it can damage the parts.



Once correctly positioned, close the adapter halves on each other until the 3 lock fingers are engaged.

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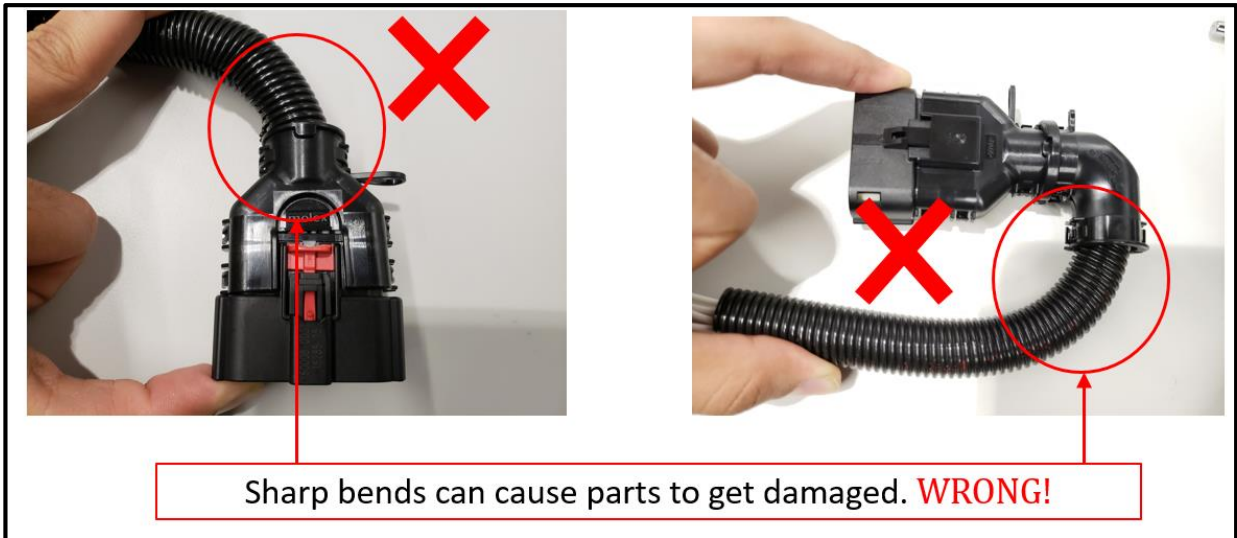


NOTE:

- 1) Both the backshell and adapter are non-serviceable items. Once assembled, in case of disassembly, use new parts.
- 2) Do not bend the conduit sharply after the backshell if being used without the adapter, or after the adapter if the backshell + adapter assembly is being used. Route the wires inside the conduit with a gradual/large radius to prevent overstressing the wires, terminals and cavities.
- 3) Taping distance from the end of grommet cap = 20 mm

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3.1.3 DISASSEMBLY INSTRUCTIONS

NOTE: Backshell and Adapter must be replaced after removal

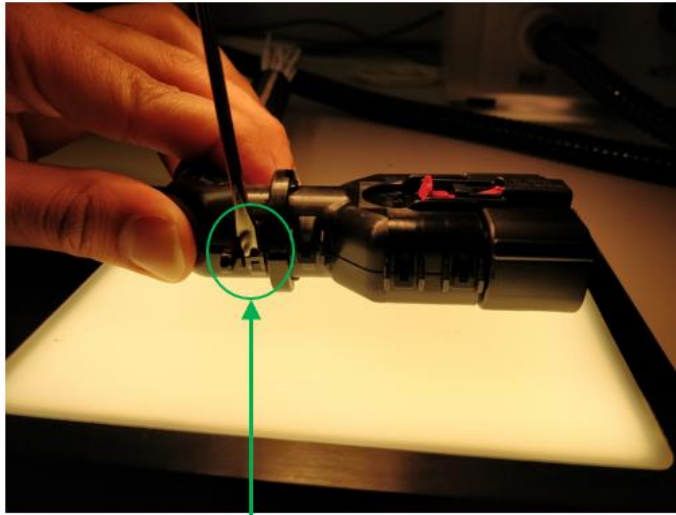
Disengage all lock-fingers as shown below using a flat-head screwdriver. The same method is to be used to disengage lock-fingers on the adapter and the backshell.



1. Insert the screw driver in the lock-finger between the notch and slotted tab feature to wedge open the lock finger as shown.

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Disengagement of lock-finger: Push out lock-finger tab with the flat-head screw driver

2. Disassemble parts in the reverse order of assembly.
 - a. Remove the lock-fingers on the adapter (if used)
 - b. Open the two adapter halves
 - c. Remove conduit/Slide it out
 - d. Disengage backshell lock-fingers and open the 2 halves
 - e. Remove conduit/ Slide it out
 - f. Slide out the backshell in the same way it was assembled

3. Do not re-use disassembled parts

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