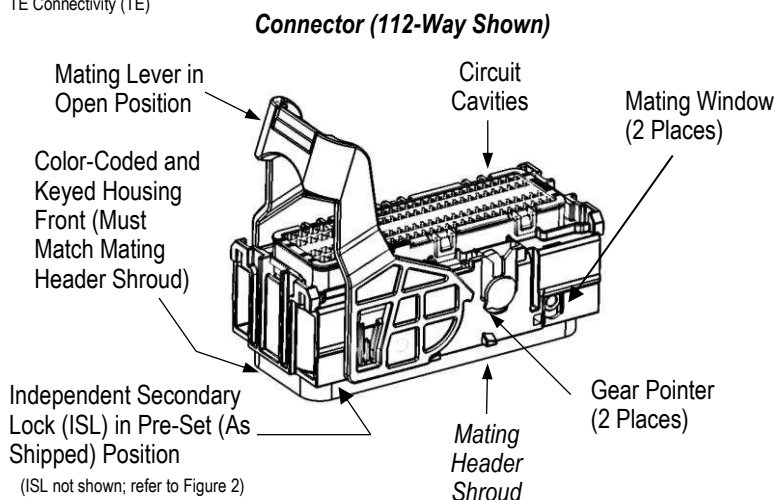
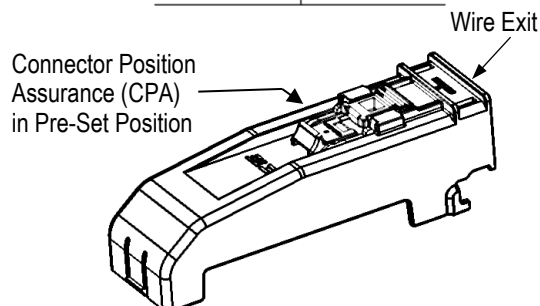


TE Connectivity (TE)



**Wire Dress Cover Assembly
(Available Separately)**

TE	GM
2288729-1	12670166



FEMALE CONNECTOR				WIRE EXIT
Type	TE	GM●	Key	
112-Way	2289934-2	12670164	B	Right
	5-2289934-2	12670165	B	Left
90-Way	2289940-1	12670161	A	Right
	5-2289940-1	12670162	A	Left

FEMALE CONNECTOR TYPE	TERMINAL			WIRE SEAL
	Part Number	Description	Wire Size ■	
112-Way	1-2138699-[]	Generation Y 0.64-mm	0.35-0.75 mm ²	NA
	-	MCON 1.2-mm	-	NA
	1670144-3		0.75 mm ²	
	1452503-3▲		1.0-1.5 mm ²	
90-Way	1-2138699-[]	Generation Y 0.64-mm	0.35-0.75 mm ²	NA
	-	-	-	
	1-968855-3	MCP 2.8-mm	0.50-0.75 mm ²	828905-1
	1-968857-3		2.5 mm ²	
	1241412-3	MCP 6.3-mm	0.5-1.0 mm ²	2177018-1
	1-1241418-3		4.0-6.0 mm ²	1719043-1

● Refer to GM drawing 12670160 for mating interface details; keying and color code details.

■ All wires must be thin-wall type in accordance with ISO/DIN standards.

▲ For USCAR-21 Compliance, CCH on 1.5mm² wire to be 1.26mm±0.05mm. Other dimensions per application specification.

Figure 1

Each connector requires terminals and a wire dress cover assembly (both available separately) for assembly. Features, part numbers, and descriptions are given in Figure 1.

This instruction sheet covers terminal insertion and extraction, wire dress cover assembly installation and removal, and connector mating and unmating procedures.

NOTE

All numerical values are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.

GM is a trademark.

1. ASSEMBLY PROCEDURE

1.1. Insert Terminals

1. Crimp the terminals according to the following application specifications:
 Generation Y 0.64-mm: [114-13183](#) MCP 2.8-mm: [114-18148-1](#)
 MCON 1.2-mm: [114-18464](#) MCP 6.3-mm: [114-18388](#)
2. Before inserting any terminals into the connector, make sure that the ISL is in the pre-set (as shipped) position.

The ISL is in the pre-set position when, from the mating face of the connector, the red ISL is visible in the connector center slots as shown in Figure 2, Detail A. If it is not, from the mating face of the connector with circuit cavity position 1 oriented at the bottom left, alternately insert the tip of a small screwdriver into the top ISL slots, and move the ISL down until it stops. There will be an audible click from each side.

The ISL is in the fully seated position when, from the mating face of the connector, the red ISL is not visible in the connector center slots as shown in Figure 2, Detail B. To move the ISL to the fully seated position, from the mating face of the connector and the connector oriented with circuit cavity position 1 at the bottom left, alternately insert the tip of a small screwdriver into the bottom ISL slots, and move the ISL up until it stops. There will be an audible click from each side.

Note: 112-Way connector shown; procedure for 90-way connector is the same.

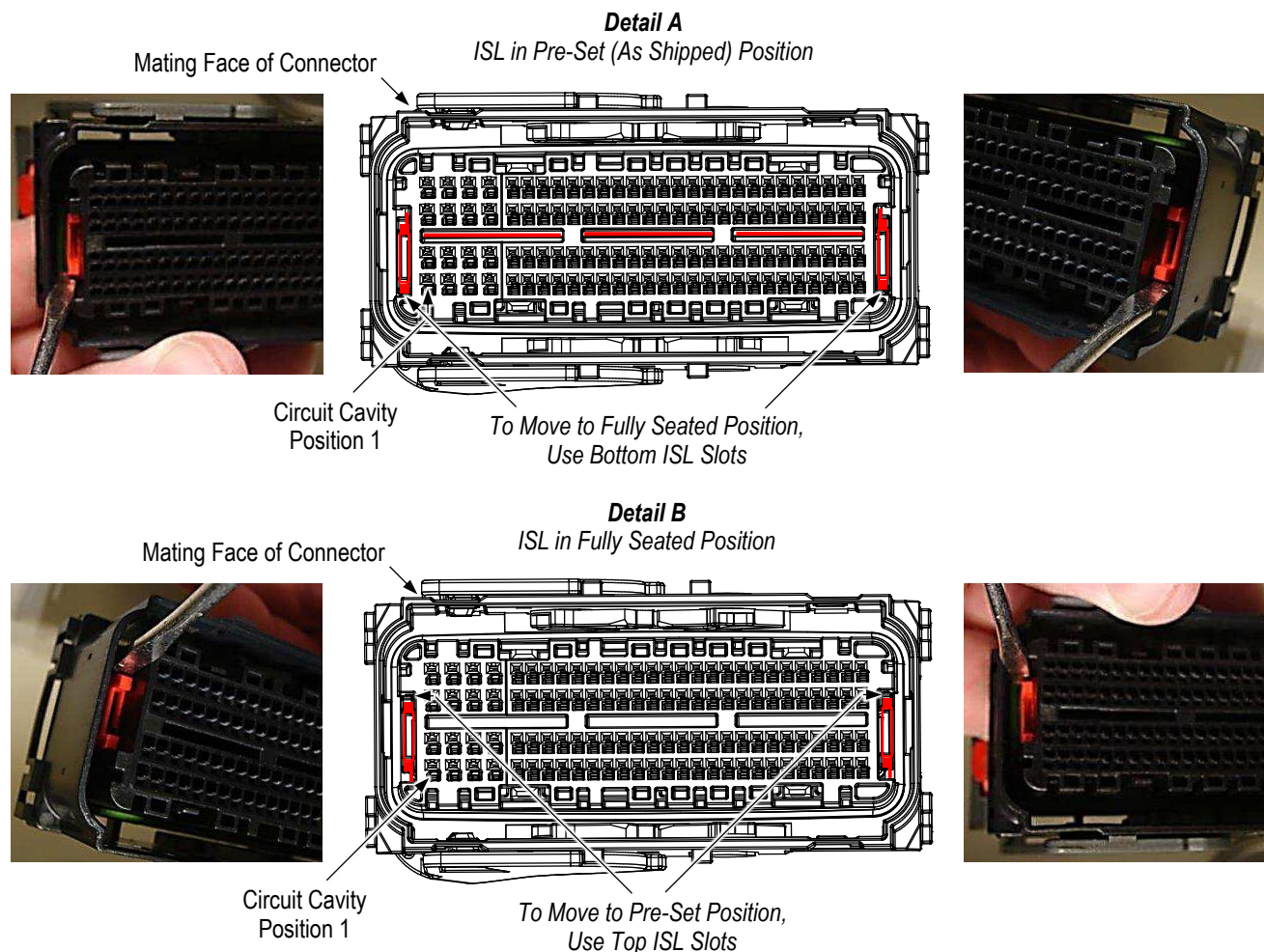


Figure 2

3. Circuit cavities are polarized so terminals are inserted in correct orientation. Align terminal with selected circuit cavity as illustrated in figure 3.
4. Insert the terminal into the cavity until it bottoms. There should be an audible or tactile click when the terminal is locked into place. Gently pull the wire to ensure the terminal is locked into place. If the terminal does not lock into the cavity check to verify that the ISL is open per figure 2 and that the terminal is in correct orientation to the circuit cavity per figure 3 and re-insert the terminal. For circuits with individual wire seals, check to ensure that the seal is below the top of the circuit cavity after successful insertion of terminal.


CAUTION

Circuit cavities 1 through 4, 29 through 32, 57 through 60, and 85 through 88 have an opening for clearance of a 1.5-mm² wire; however, limited guidance is provided for the terminal through the mat seal cover. Take care not to angle the terminal during insertion; otherwise damage to the grommet seal could occur.

5. Repeat steps 3 and 4 for the remaining terminals.
6. After all terminals are inserted, from the mating face of the connector, move the ISL to the fully seated position as described in step 2. There should be audible or tactile click from each side of the ISL.


NOTE

If the ISL does not fully seat, move it to the pre-set position (refer to step 2), ensure that all terminals are fully inserted, then fully seat the ISL.

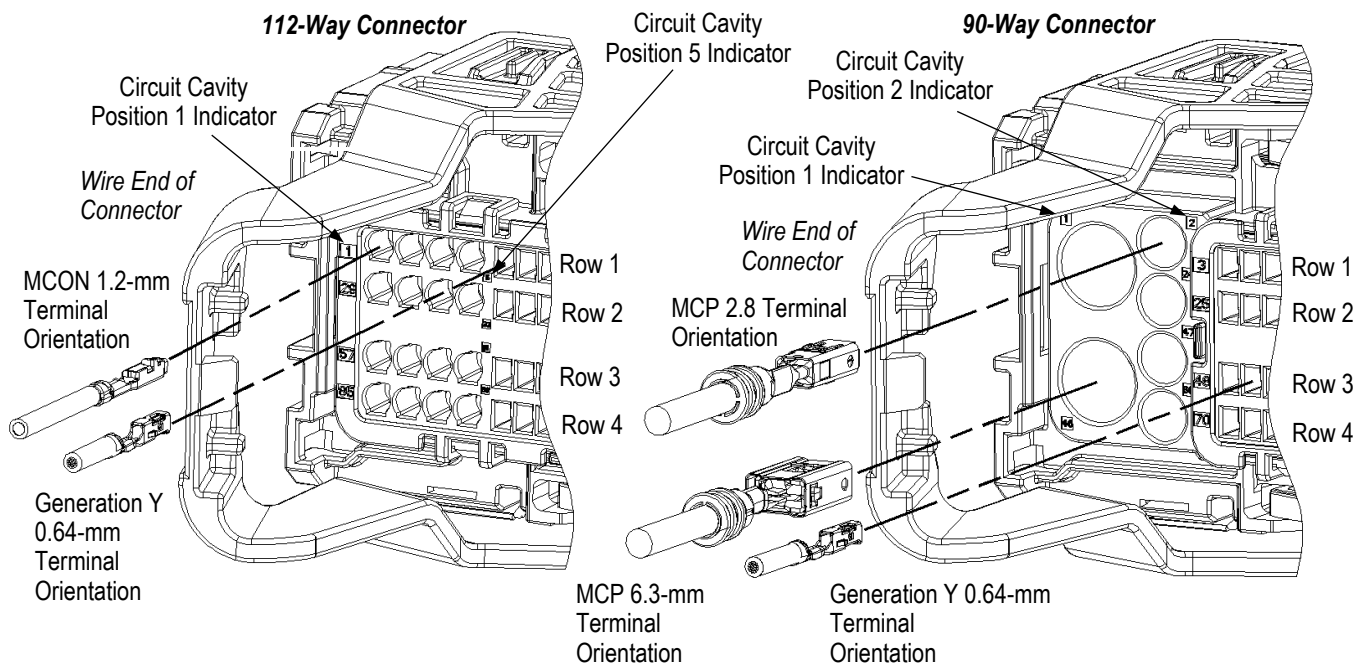


Figure 3

1.2. Install Wire Dress Cover

After all terminals are fully inserted, install the wire dress cover as follows:

1. Ensure that the mating lever is in the open position.
2. Bundle the wires to fit into the wire exit of the wire dress cover, then bend them in the direction of the exit (left or right). Refer to Detail A, Figure 4.
3. Position the wire dress cover over the connector with the wire exit over the wires, then tilt the wire exit end so that the locking tabs enter the slots of the connector as shown in Detail A, Figure 4.

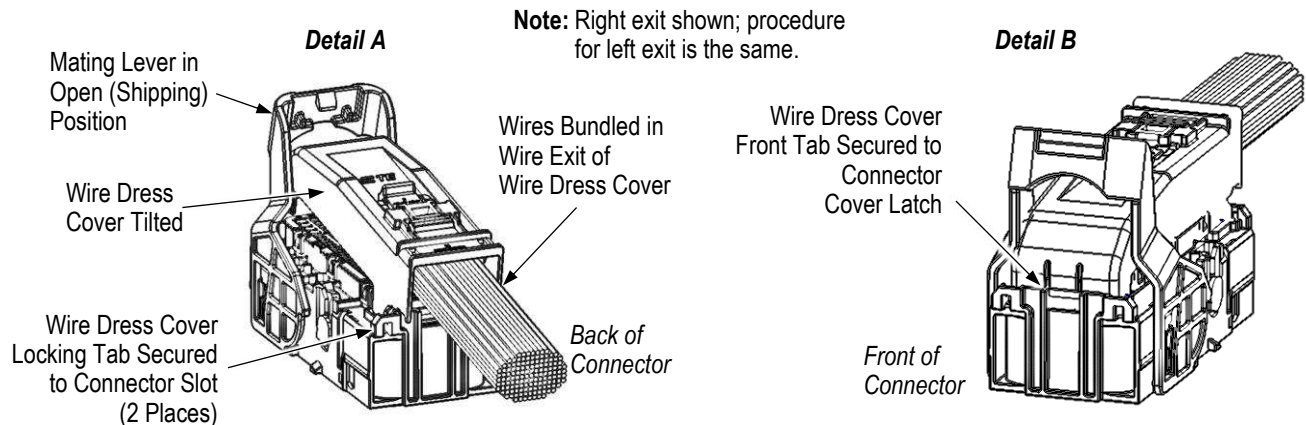


Figure 4

4. Ensure that the wires are completely captured within the wire exit, then while maintaining pressure on the locking tabs, lower the other end of the wire dress cover onto the connector until the front tab snaps into the connector cover latch; see Detail B, Figure 4. Pull up gently on the center of the cover to ensure both ends are locked into position.
5. Using tape or wire ties, secure the wire bundle to the wire dress cover.



CAUTION

Final packaging of harness connector should be in a manner to eliminate risk of inadvertent movement of lever from shipping position as shown in Detail A, Figure 4.

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1.3. Mate Connector with Header

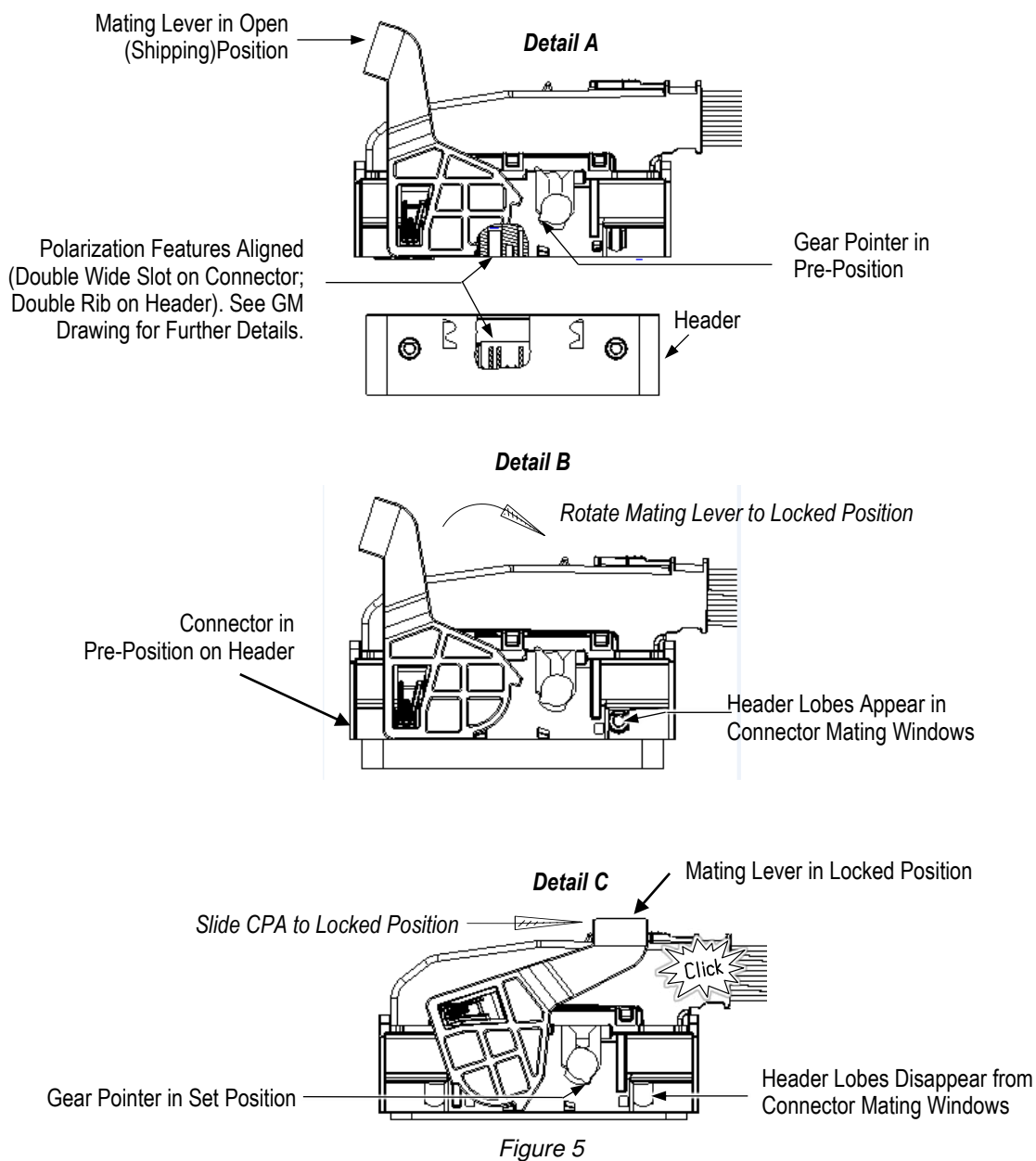


NOTE

The connector housing front color and key must match the mating header shroud color and key. Refer to Figure 1.

1. Ensure that the mating lever is in the open position as shown in
2. Figure 5, Detail A. The gear pointer should be in pre-position.
3. Align the polarization features of the connector mating faces, then push the connector straight onto the header. The connector is now in pre-position on the header. The header lobes will appear in the connector mating windows. Refer to

4. Figure 5, Detail B.



5. Rotate the mating lever until it latches onto the wire dress cover and there is an audible and tactile click. The mating lever is now in the locked position. The gear pointer should be in the set position and the header lobes should disappear from the connector mating windows. See
6. Figure 5, Detail C.


NOTE

The mating lever cannot be rotated until the connector is in pre-position on the header shown in Detail B.

7. Apply a slight downward pressure to the mating lever, then slide the CPA toward the mating lever until it stops. The CPA is now in the locked position. Pull back on the mating lever to ensure that it is secure.


NOTE

If there is significant resistance when sliding the CPA, ensure that the mating lever is completely latched onto the wire dress cover.

2. DISASSEMBLY

Perform disassembly in the following order:

2.1. Unmate Connector from Header

1. Slide the CPA away from the mating lever until it stops. The CPA is now in the open position. Refer to Figure 6, Detail A.
2. Press the mating latch to release the mating lever, then rotate the mating lever until it stops. See Figure 6, Detail B. The mating lever is now in the open position (as shown in
3. Figure 5, Detail A).
4. Evenly lift the connector from the header.

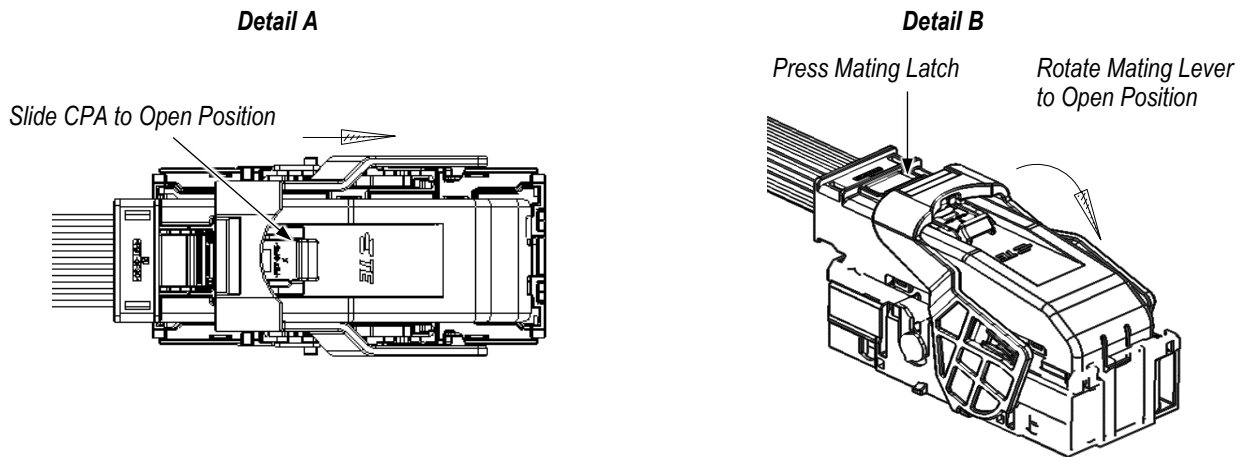


Figure 6

2.2. Remove Wire Dress Cover

1. Remove any tape or wire ties from the wire dress cover.
2. Press and hold the front tab of the wire dress cover (so that it releases from the cover latch of the connector), then lift the front of the wire dress cover until it clears the mating lever. See Figure 7.
3. Rotate the wire dress cover so that the locking tabs move out of the connector slots until the wire dress cover is free.

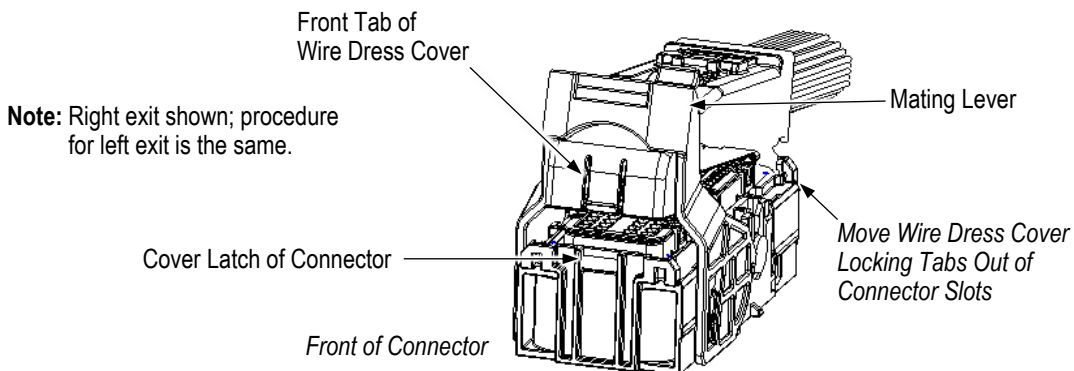


Figure 7

2.3. Remove Terminals

1. Move the ISL to the pre-set position as described in step 2 of Paragraph 1.1.
2. Push the wire of the terminal to be removed into the circuit cavity until it stops (this will maximize the clearance between the circuit cavity latch and top of terminal).
3. Refer to Figure 8 for the applicable extraction tool part number.

For Generation Y 0.64-mm and MCON 1.2-mm terminals, proceed as follows:

- a. Hold the wire in place and, from the mating face of the connector, insert the tip of the extraction tool into the circuit cavity so that it locates between the top of the terminal and the circuit cavity latch. See Figure 8, Detail A.
- b. *Gently* push the tool and rotate it toward the terminal to deflect the circuit cavity latch. See Figure 8, Detail B.

For MCP 2.8-mm and MCP 6.3-mm terminals, proceed as follows:

- a. Hold the wire in place and, from the mating face of the connector, insert the tips of the extraction tool into the circuit cavity so that one tip locates in the opening above the circuit cavity and the other tip locates in the opening below the circuit cavity. See Figure 8, Detail C.
 - b. *Gently* push the tool until the terminal locking lances are deflected. See Figure 8, Detail D.
4. Holding the tool in place, *gently* pull the wire until the terminal is free from the connector.



CAUTION

To avoid damage to the terminal, do not pull the wire until the circuit cavity latch is deflected.



NOTE

Do not re-use a terminal after removal.

5. If desired, insert a new terminal as described in Paragraph 1.1.

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3. REPLACEMENT AND REPAIR

Do not use defective or damaged product. The connector, wire dress cover, and terminals cannot be repaired.

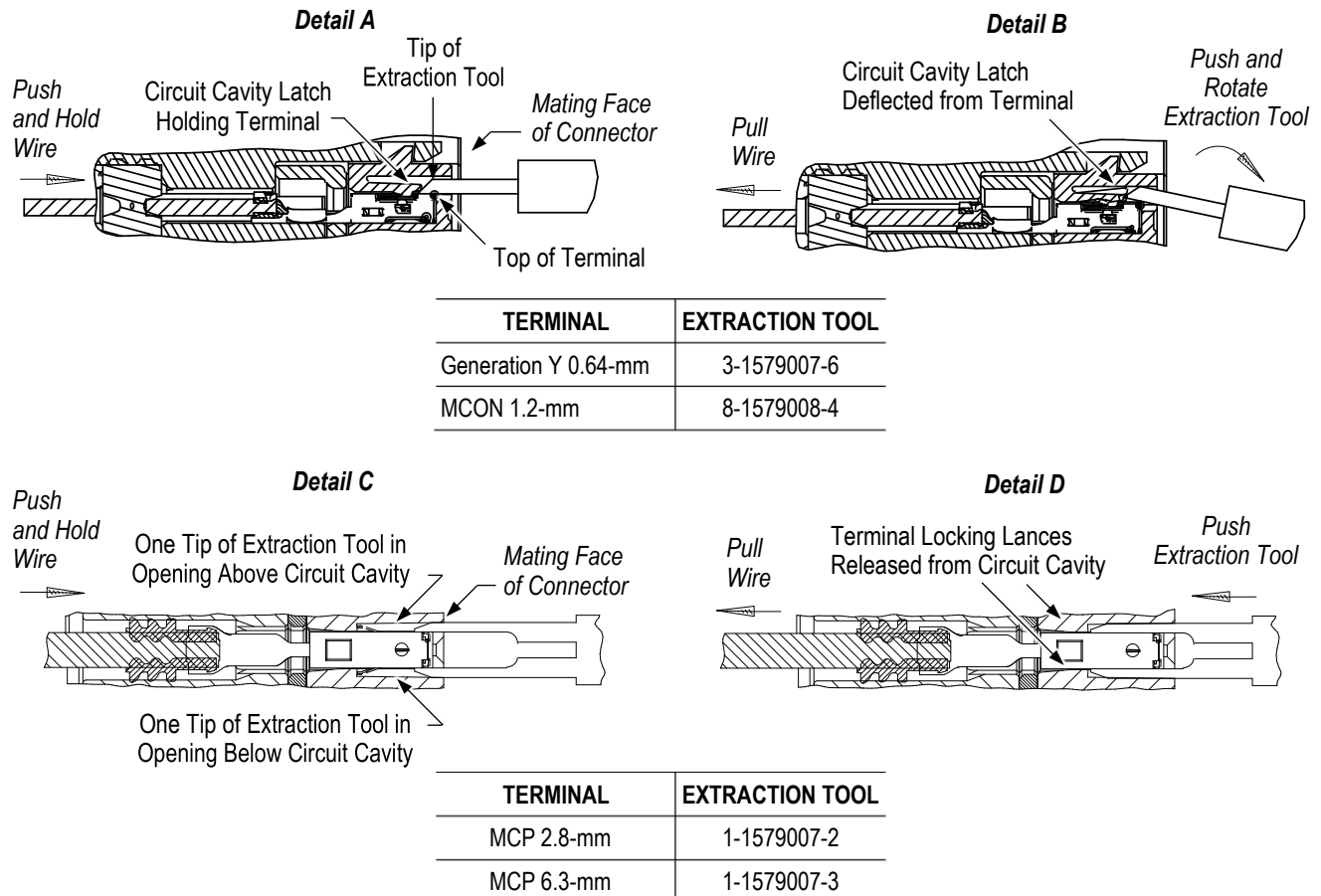


Figure 8

4. REVISION SUMMARY

Revisions to this instruction sheet revision include:

- Updated terminal insertion views. Add GM drawing to connector p/n table. Added final packaging caution note under assembly procedures.