

1.0. INTRODUCTION

These instructions cover insertion and extraction of contacts and the mating and un-mating procedures for the Generation 50 series plug assemblies.

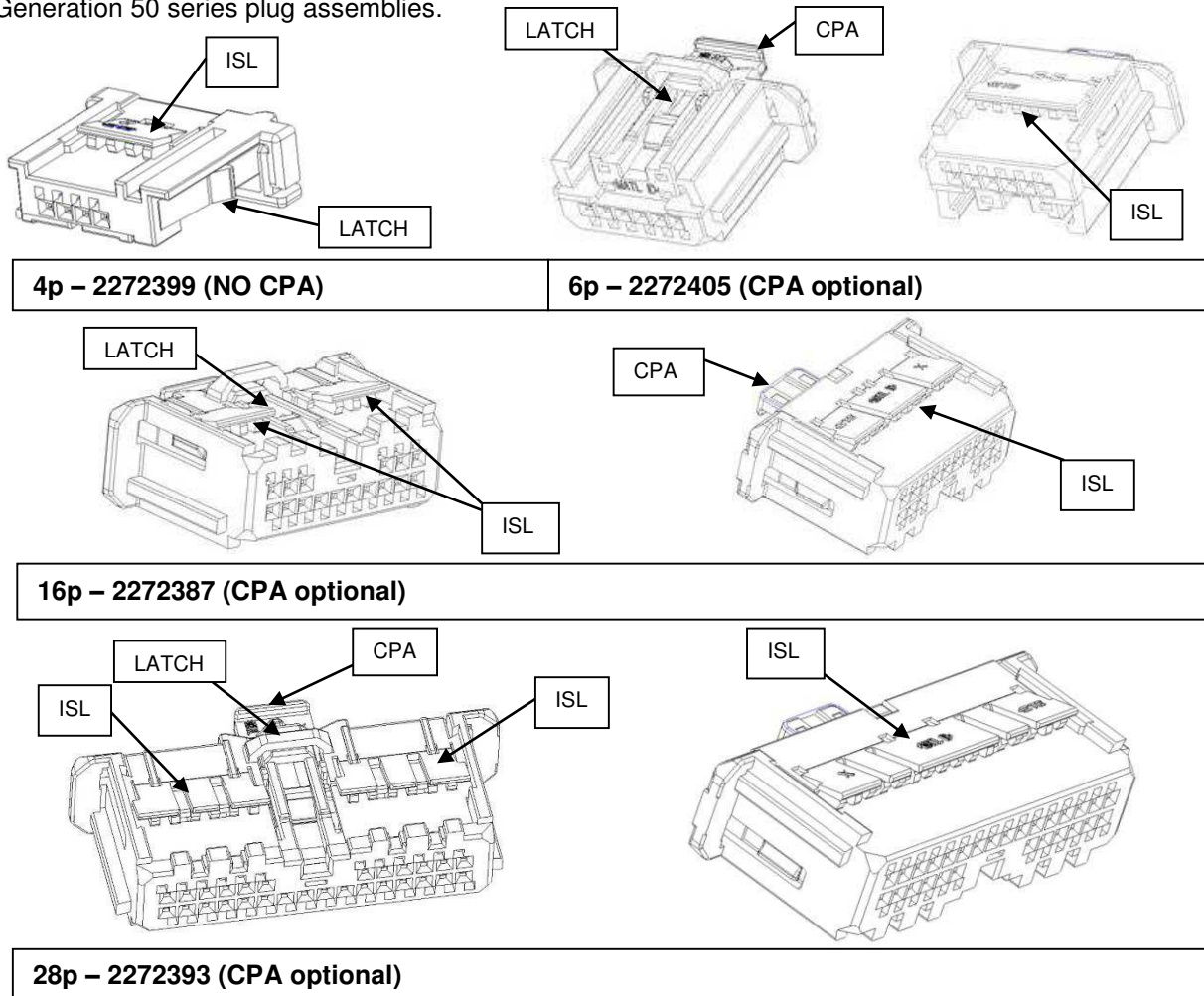


FIG 1. Plug Assemblies shown with the ISL and CPA in their pre-set (as shipped) positions (Not to scale).

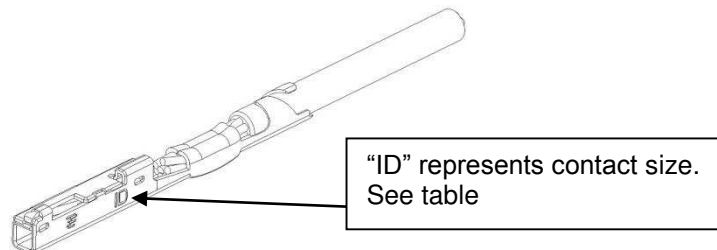


FIG 2. 0.50mm Female contact part number 2098583-2 or 2098583-4

2.0. DESCRIPTION

The plug assemblies consist of a molded plastic housing with 1.8mm cavity centerlines, a hinged independent secondary lock (ISL) and an optional CPA. The product is bulk packed with the ISL in the pre-set position shown in figure 1.

Terminal P/N	Terminal "ID"	Wire Size (mm ²)	Insulation Diameter
2098583-2*	N	0.35	Thin or Ultra-thin
2098583-4	S	0.13	Thin or Ultra-thin

*Not acceptable for 1.5 C/L.

FIG 3. Generation 0.50 Terminal and Wire

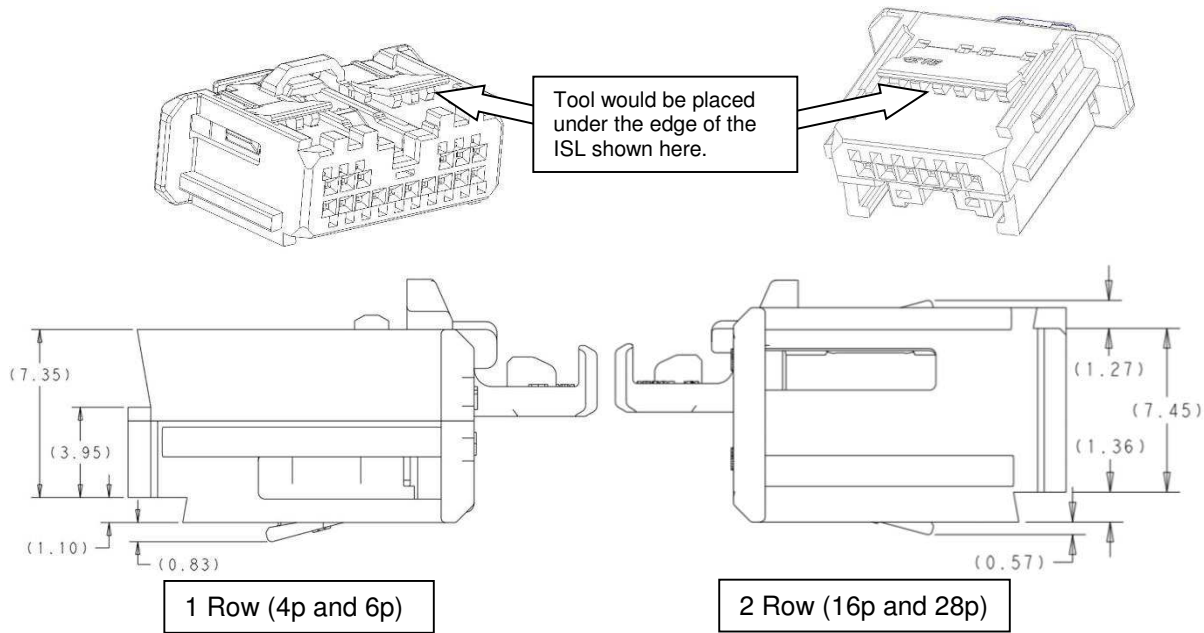
3.0.ASSEMBLY PROCEDURES

3.1. WIRE SELECTION AND PREPARATION

Refer to TE Specification [114-13287](#) for instructions on how to crimp the contact to wire.

3.2. CONTACT INSERTION

- 1 Verify that the hinged secondary lock is in the pre-set position. If it is not, insert a small tipped screwdriver or equivalent tool between the leading edge of the ISL and the housing. Twist or rotate the tool to return the ISL to its shipping position.



REFERENCE HEIGHT OF OPEN ISL		
CONNECTOR	ISL LOCATION	
	TOP	BOTTOM
4P	N/A	0.83
6P	N/A	0.83
16P	1.27	0.57
28P	1.27	0.57

FIG 4. ISL shipping position heights

- 2** Align the contact with the applicable contact cavity. Make sure that the contact orientation feature is aligned with the notch of the contact cavity. Grip the conductor a minimum of 20mm behind the insulation crimp and insert the contact until there is an audible or tactile “Click” (If the contact is difficult to insert, verify that the ISL is in the pre-set position and that the contact is oriented correctly). Lightly tug on the conductor to ensure that the contact is fully seated. Do not wrap conductor around fingers to tug. Instead, pinch the conductor between the thumb and forefinger only.

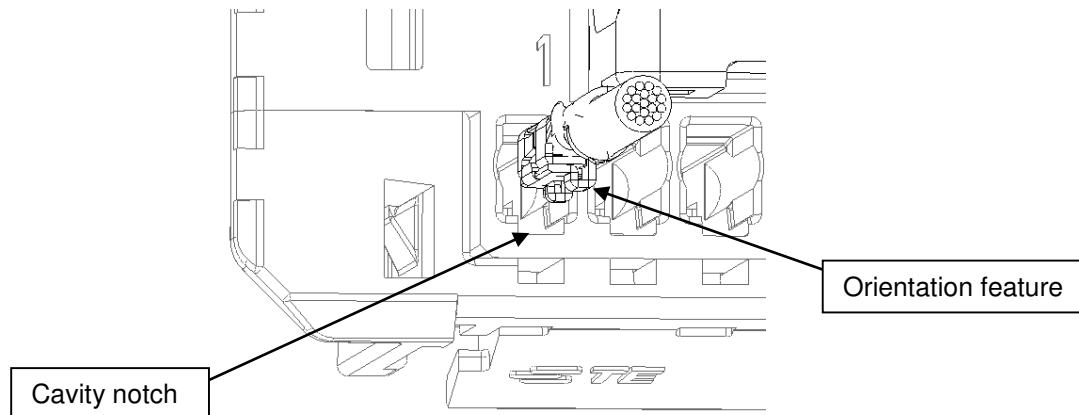


FIG 5. Contact Insertion orientation

- 3** Load all of the required contacts for the application. Press the ISL to the fully seated position after the contacts are inserted. For longer ISL's, press the right end of the ISL first then work your way to the left end of the ISL until it is fully seated. If any portion of the lock does not fully close, this indicates that one or more of the contacts may not be fully seated. Ensure that all contacts are fully seated (visually inspect and/or tug) and then press hinged secondary lock to the fully seated position. ISL's will be below the corner ribs when properly seated.

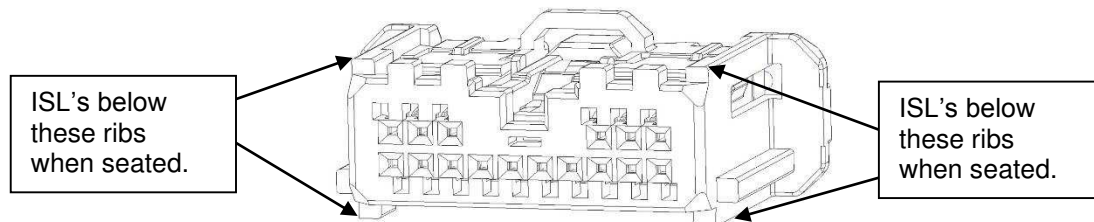


FIG 6. Seated ISL's

3.3. CONNECTOR MATING (NOTE: Disregard CPA steps if connector is not equipped with one.)

- 1** Verify the ISL(s) is/are fully seated into the plug. Confirm the CPA is in the shipping or unlocked position. To move the CPA from the locked to unlocked position, place a finger(nail) between the CPA and plug or grasp between thumb and forefinger and move the CPA rearward to the unlocked position.

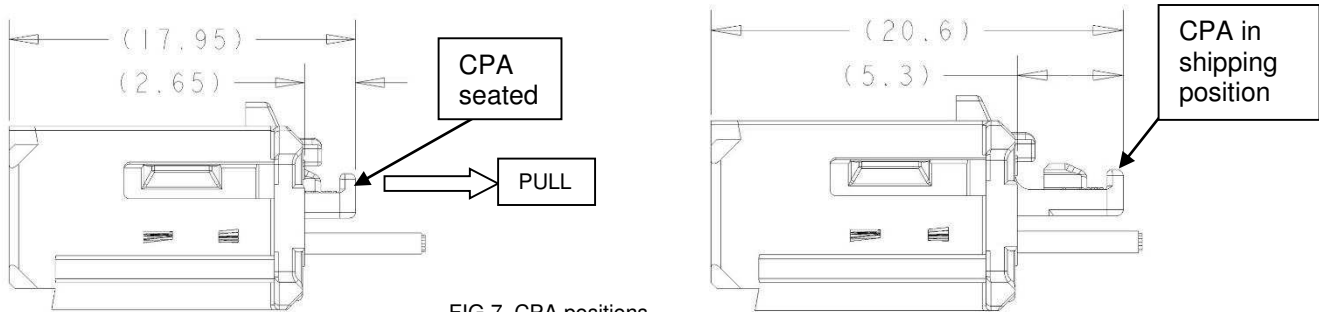


FIG 7. CPA positions

- 2** Confirm the correctly keyed plug and headers are being used. Orient the plug so that the latch aligns with the bump on the header. Align the plug to the header and apply force to the push surfaces until there is an audible or tactile click. The harness may be used in addition to the push surfaces (reference USCAR-25 Section 3.2 and Table 3.1), but care must be taken not to use the harness to twist or rotate the plug while it is being seated into the header. Lightly tug on the conductor harness to confirm proper mating of the connectors.

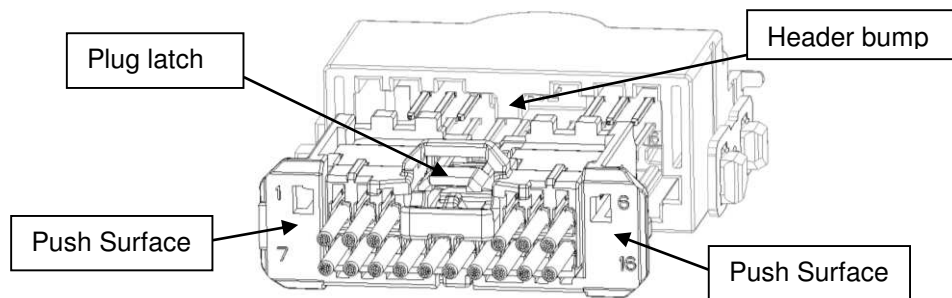


FIG 8. Connector alignment

- 3** If the plug is difficult to seat in the header this could indicate any of the following:

1. The ISL is not fully seated.
2. CPA is not in the unlocked or shipping position.
3. Incorrect keys are being used.
4. The plug and header housings are not properly aligned.

Refer to previous steps to correct these situations and seat the plug fully into the header. Once the plug is fully seated, move the CPA into the locked position. Push the CPA toward the plug housing until there is an audible or tactile click. If the CPA is difficult to seat, this indicates the plug is not fully mated. Refer to previous steps to correct and fully mate the plug and fully seat the CPA.

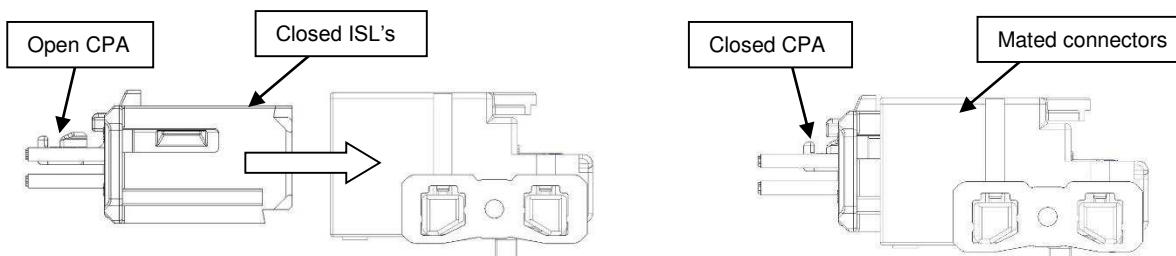


FIG 9. Mating connectors

4.0. DISASSEMBLY PROCEDURES (NOTE: Disregard CPA steps if connector is not equipped with one.)

4.1. CONNECTOR UN-MATING

- 1** Grasp the CPA tab between the thumb and forefinger and pull the CPA from the locked position back one detent to the unlocked position.

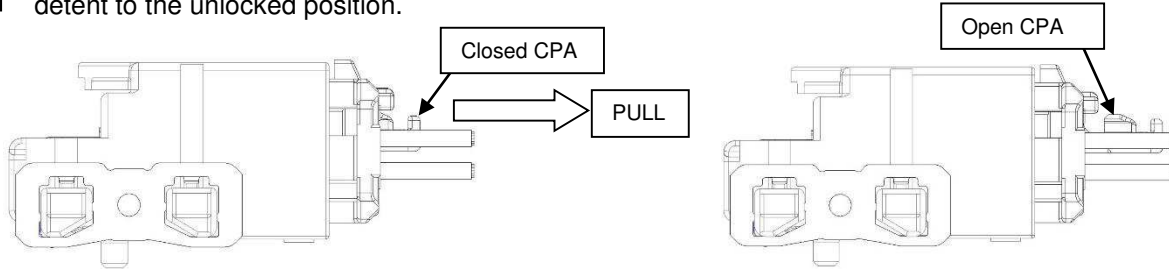


FIG 10. Unmating connectors – deactivating the CPA

- 2** Fully depress the plug connector latch with a thumb while grasping the side push flanges with the remaining fingers and pull the plug from the header.

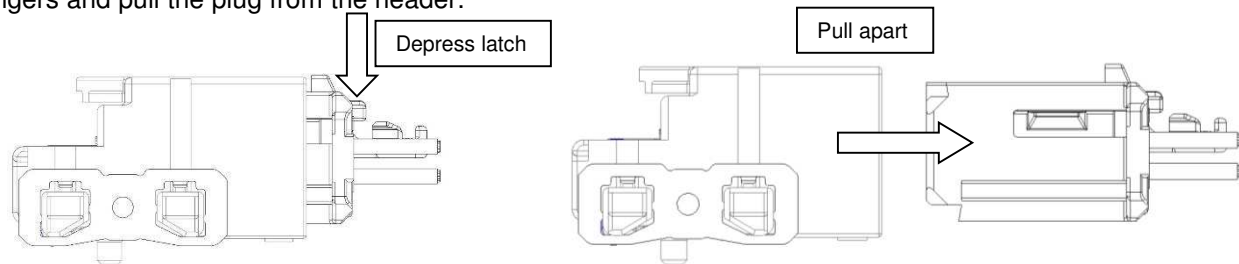


FIG 11. Unmating connectors

4.2. CONTACT REMOVAL

1 Once the plug is unmated, insert a small tipped screwdriver or equivalent tool between the leading edge of the ISL (for the contact to be removed) and the plug housing. Twist or rotate the tool to return the ISL to the shipping position.

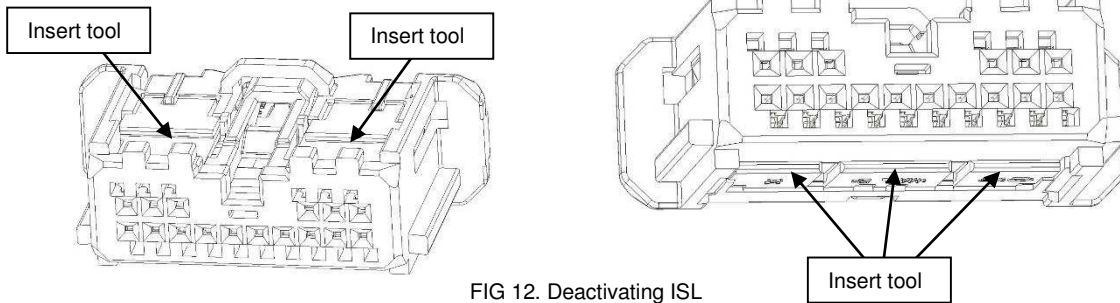


FIG 12. Deactivating ISL

2 Locate the contact to be replaced and insert the Generation 50 removal tool (J-38125-251-A) into this contact's latch deactivation window (the angled surface of the tool should face away from the contact being removed, toward the outside of the connector). With one hand, press the tool into the window while gently pulling on the contact's conductor with the other hand to remove the contact. (Tip: With the thumb and forefinger up against the back of the housing, pinch and lightly pull the conductor before the removal tool is pressed into the window. This adds a light preload to the contact/conductor.) As force is applied to the removal tool, the preloaded contact will move when the contact latch has been deflected the minimal distance. Once removed, replace with a new contact per the previous instructions.

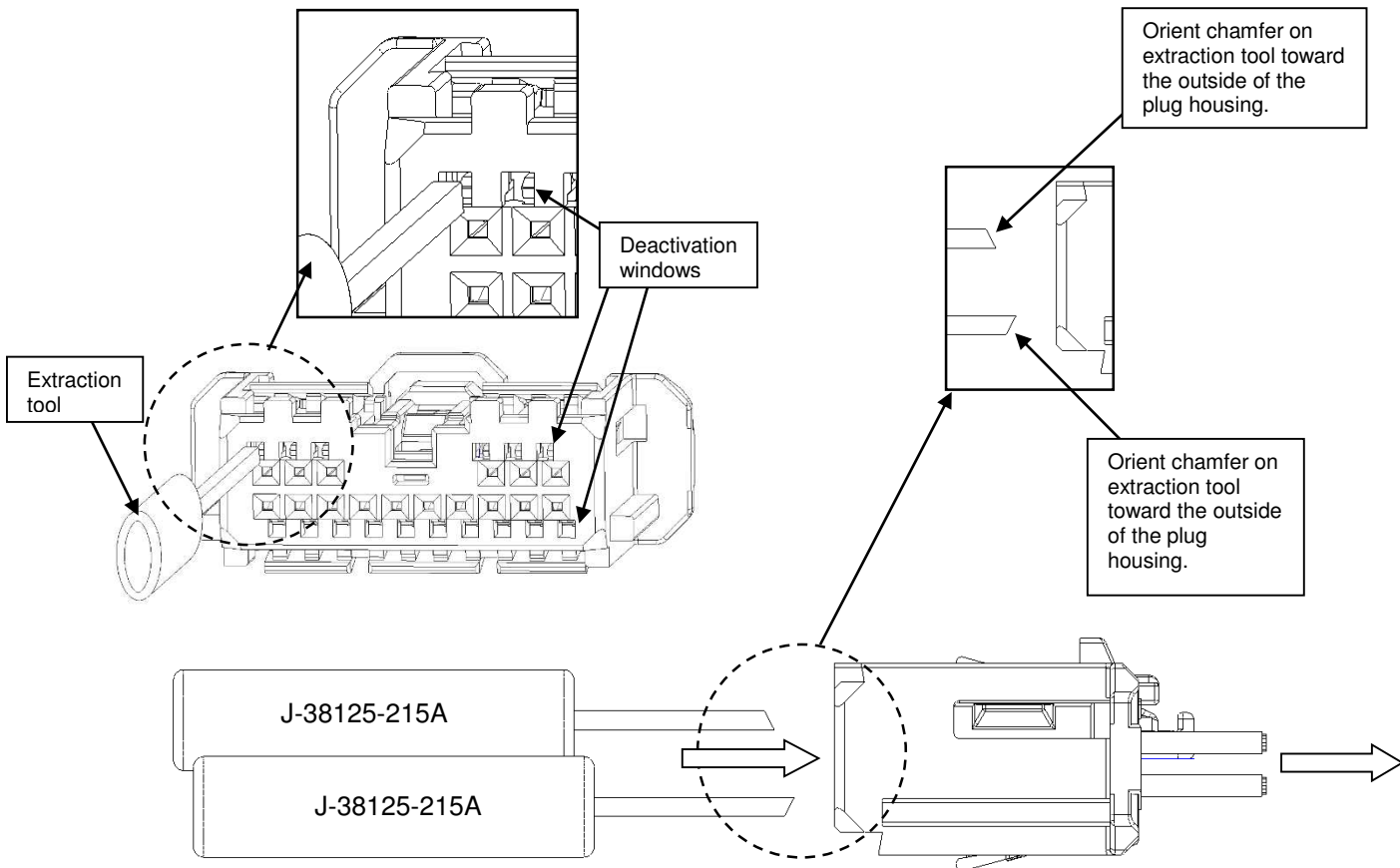


FIG 13. Removing Contacts