
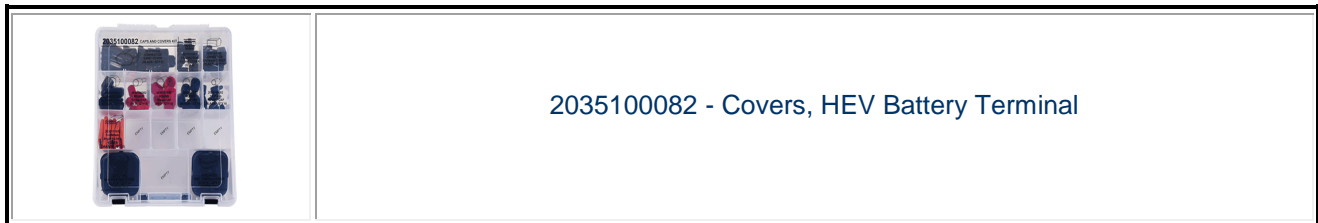


REMOVAL AND INSTALLATION

 **Labor Operations:** Click to display a list of Labor Operations associated with this procedure

 **Special Tools:** Click to hide the list of tools used in this procedure

[Click here to launch the form to order any tools you need.](#)



REMOVAL

WARNING: Before performing any diagnostic or service procedure, you must thoroughly read and follow all applicable high voltage safety procedures. You must perform the high voltage power down procedures.

Loss of isolation must be performed before high voltage power up in cases where service has been performed on a high-voltage component or when diagnosing a LOI condition.

Be sure to use the proper safety equipment when working on any high voltage system or component. Failure to do so may result in serious or fatal injury.

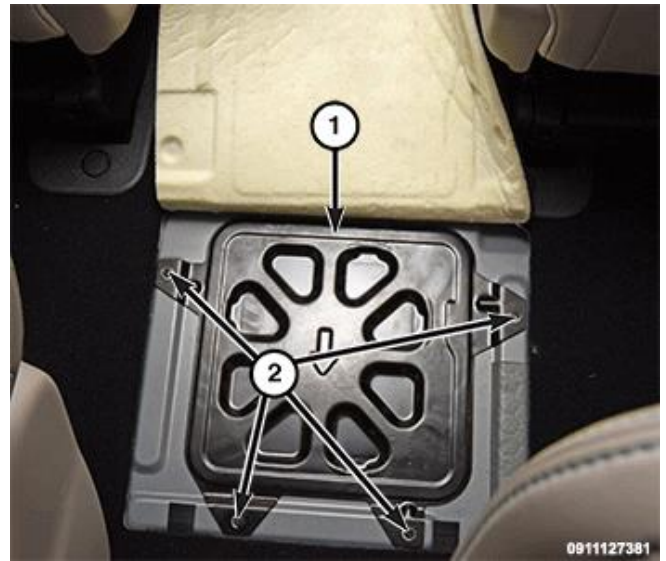
Wait a minimum of two minutes after performing the high voltage battery disconnect procedure safety procedures before attempting to access the high voltage system, failure to do so may result in serious or fatal injury.

NOTE: Manual Service Disconnect (MSD) removal is performed as part of the High Voltage Power Down procedure.

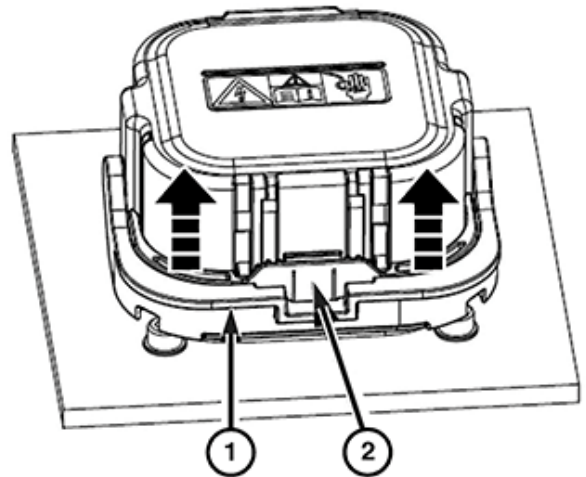
1. Power down the high voltage system ([Refer to 08 - Electrical/Standard Procedure](#)) .

2. Lift the carpet away from the high-voltage MSD floor access cover.

3. Remove the four screws (2) and remove the high-voltage MSD access cover (1).



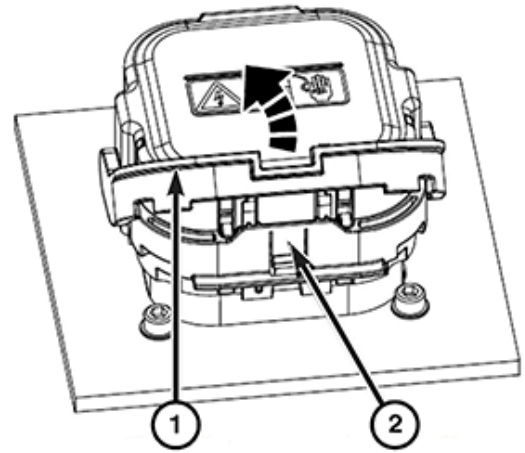
4. Depress the lever release latch (2) firmly. With the latch fully depressed, rotate the lever (1) upward. The lever will stop at the 45° position.



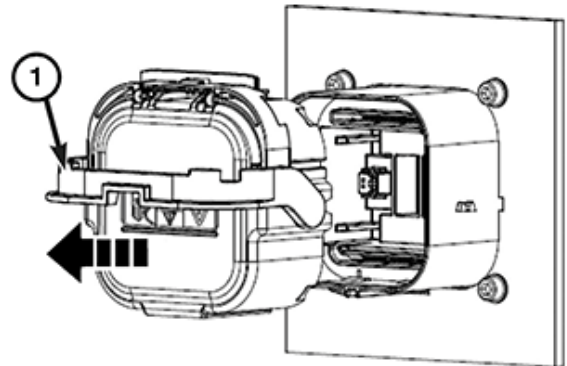
NOTE: At this stage, the High Voltage Inter-Lock (HVIL) connection has been broken and the circuit is de-energized.

- 5.

6. Again depress the locking tab (2) and continue to rotate the lever to the end of travel (90° position).



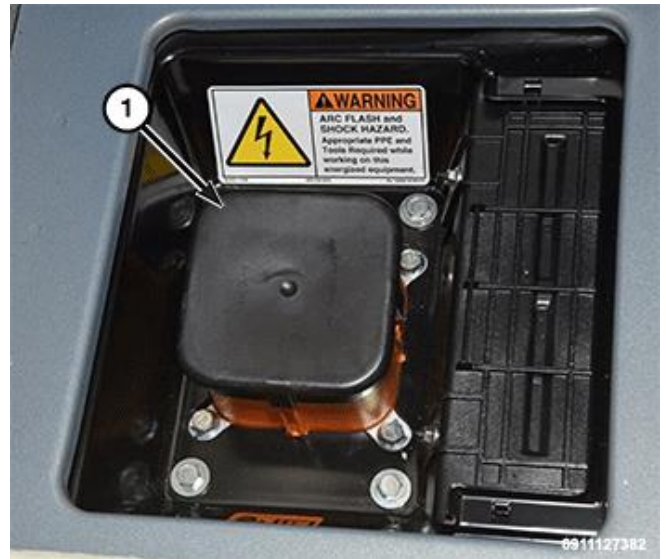
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7. Pull straight back on the plug lever (1) to disengage and remove the high-voltage manual service disconnect from the receptacle.

8. Cap the receptacle on the high-voltage battery with the [Covers, HEV Battery Terminal 2035100082](#) (1) to prevent foreign objects from entering.



NOTE: Make sure the location of the high-voltage MSDt is always known; after removal, it is best practice to place the high-voltage MSD in a highly visible location.

INSTALLATION

WARNING: Before performing any diagnostic or service procedure, you must thoroughly read and follow all applicable high voltage safety procedures. You must perform the high voltage power down procedures.

Loss of isolation must be performed before high voltage power up in cases where service has been performed on a high-voltage component or when diagnosing a LOI condition.

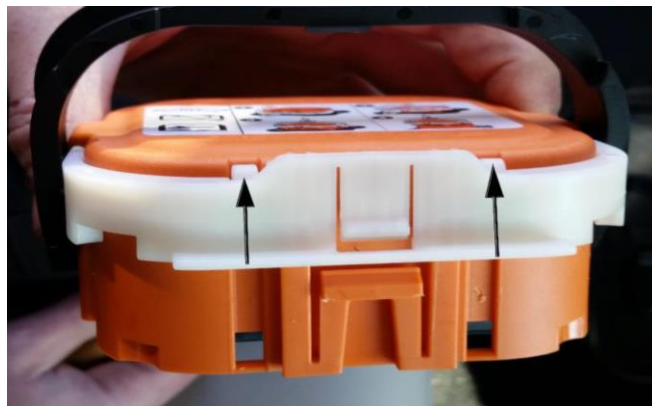
Be sure to use the proper safety equipment when working on any high voltage system or component. Failure to do so may result in serious or fatal injury.

Wait a minimum of two minutes after performing the high voltage battery disconnect procedure safety procedures before attempting to access the high voltage system, failure to do so may result in serious or fatal injury.

NOTE: Manual Service Disconnect (MSD) installation is performed as part of the High Voltage Power Up procedure.

1. Power up the high voltage system ([Refer to 08 - Electrical/Standard Procedure](#)) .

2. Position the white sleeve in the full upright position for installation of the MSD to verify proper engagement as shown.



- 3.

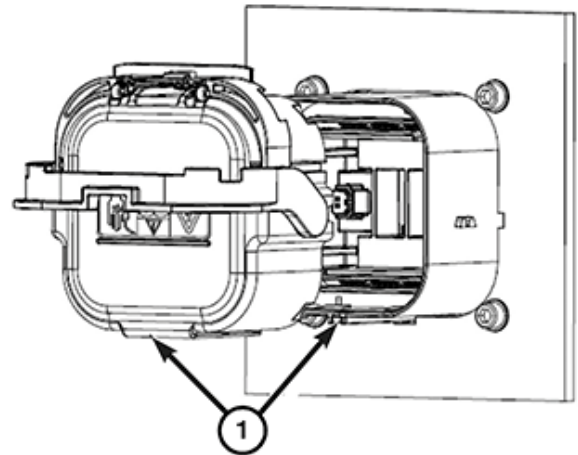


NOTE: If necessary use a small screwdriver to loosen and guide the white sleeve to the full upward position as shown.

- 4.

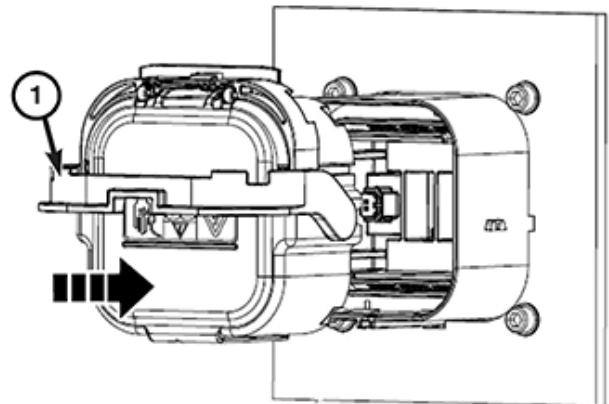
5. Ensure that the mounting interface surface of the high-voltage Manual Service Disconnect (MSD) and the receptacle wall is clean, and that there are no surface contaminants or foreign objects within the receptacle.

6. Align the polarization feature (1) of the high-voltage MSD with the receptacle on the high-voltage battery.



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7. Push the high-voltage MSD evenly into the receptacle with the lever (1) in the 90° position.

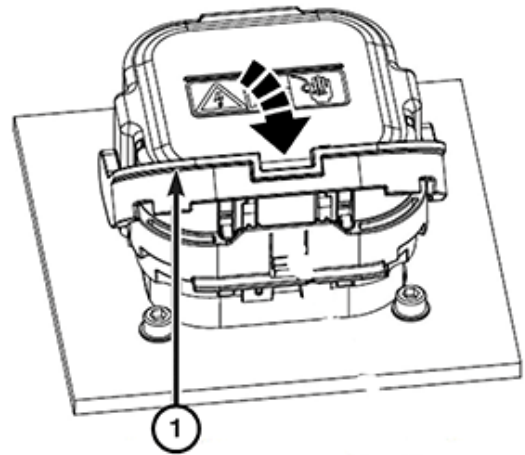


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NOTE: With the high-voltage MSD properly aligned with the receptacle, the lever (1) will be released and allowed to rotate to the lock position.

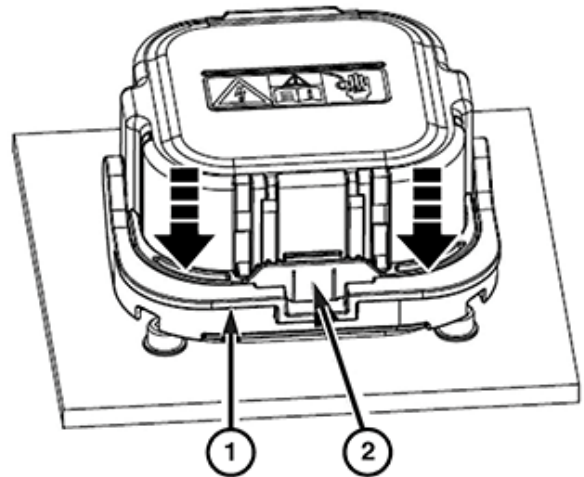
- 8.

9. Rotate the lever (1) while maintaining a slight force on the high-voltage MSD. The lever will engage the receptacle and draw the high-voltage MSD down onto the receptacle as the lever is rotated.



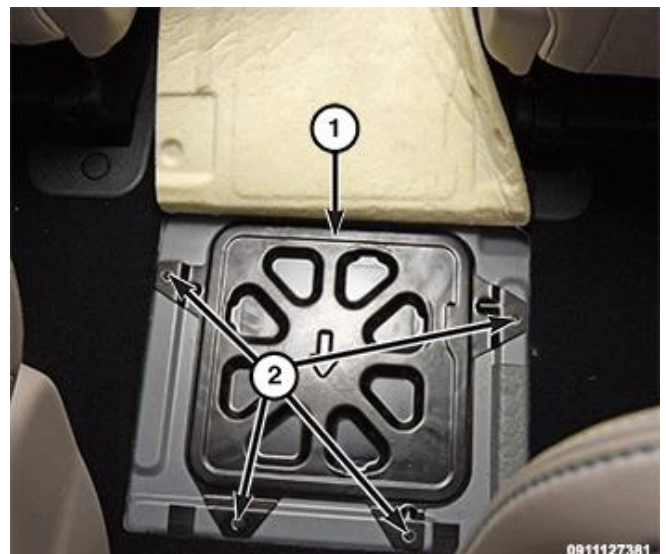
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10. Rotate the lever (1) downward until it is fully engaged and locked by the lever release latch (2). An audible “click” will be heard as the lever latches into position. Gently pull the high-voltage MSD upward to ensure that it is fully seated in the receptacle and locked. If the MSD is able to be removed, repeat steps 2 - 4.



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11. Install the high-voltage MSD floor access cover (1) and tighten the four screws (2) to the proper (Refer to 08 - Torque Specifications) .



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NOTE: The clearance between the top of the high-voltage MSD and the bottom of the access cover is such that the access cover cannot be installed if the high-voltage MSD is not fully seated.

12. Install the rear carpet.