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2015 JEEP Renegade OEM Service and Repair Workshop Manual

Go to manual page

12. To open the High Voltage Disabling and Lockout (HVDL) connector, lift the red CPA lock tab on the black portion of the green HVDL connector. Using a small screwdriver or probe, lift the lock arm as shown and lift the black portion of the device until the padlock hole is completely exposed. When the center safety lockout loop of the connector is raised, a hole for a safety lock is exposed.

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13. The voltage reading on the multi-meter should change to 0 volts with the green HVDL connector open. (Some residual voltage may be present, up to 2.0 volts may be normal).

    1. Next, remove the black test harness lead from the black multi-meter socket and connect a good lead between chassis ground and the black multi-meter socket and monitor the voltage. Meter should read 0 volts. This is testing for voltage from a stuck contactor on the HV battery + cable at the test point connector.

    2. Lastly, switch the red and black leads at the multi-meter and monitor the voltage. Meter should read 0 volts. This is testing for voltage from a stuck contactor on the HV battery – cable at the test point connector.

        - If the voltage measured is below 2.0 volts for each measurement, the HV battery is powered down and it is safe to work on the high voltage components with the exception of the high voltage battery internal components. Continue to the next step to power down of the 12 volt system. This will prevent any possibility of the HV battery being powered up.

. If a cover is not available, a finger from an old insulated safety glove can be cut out and used to cover the terminal. This will remove the power source that supplies the contactors inside the high voltage battery but not completely power down the 12 volt system. If there is a 12 volt cable connected to rear lug (number 6), remove and cover it as well.

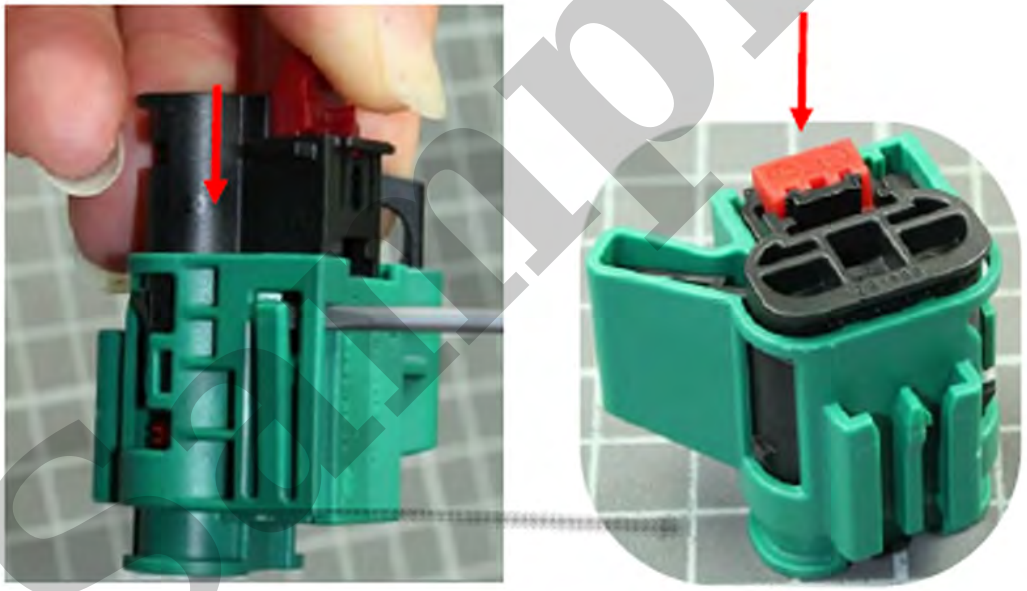
YOUR CURRENT VEHICLE

High Voltage Power Up

HIGH VOLTAGE POWER UP

1. **The Loss Of Isolation procedure must be performed** before powering up the high voltage system (Refer to Electrified Powertrain System/High Voltage Battery/Standard Procedure).

2. Remove the high voltage test adapter from the orange high voltage disconnect test connector.



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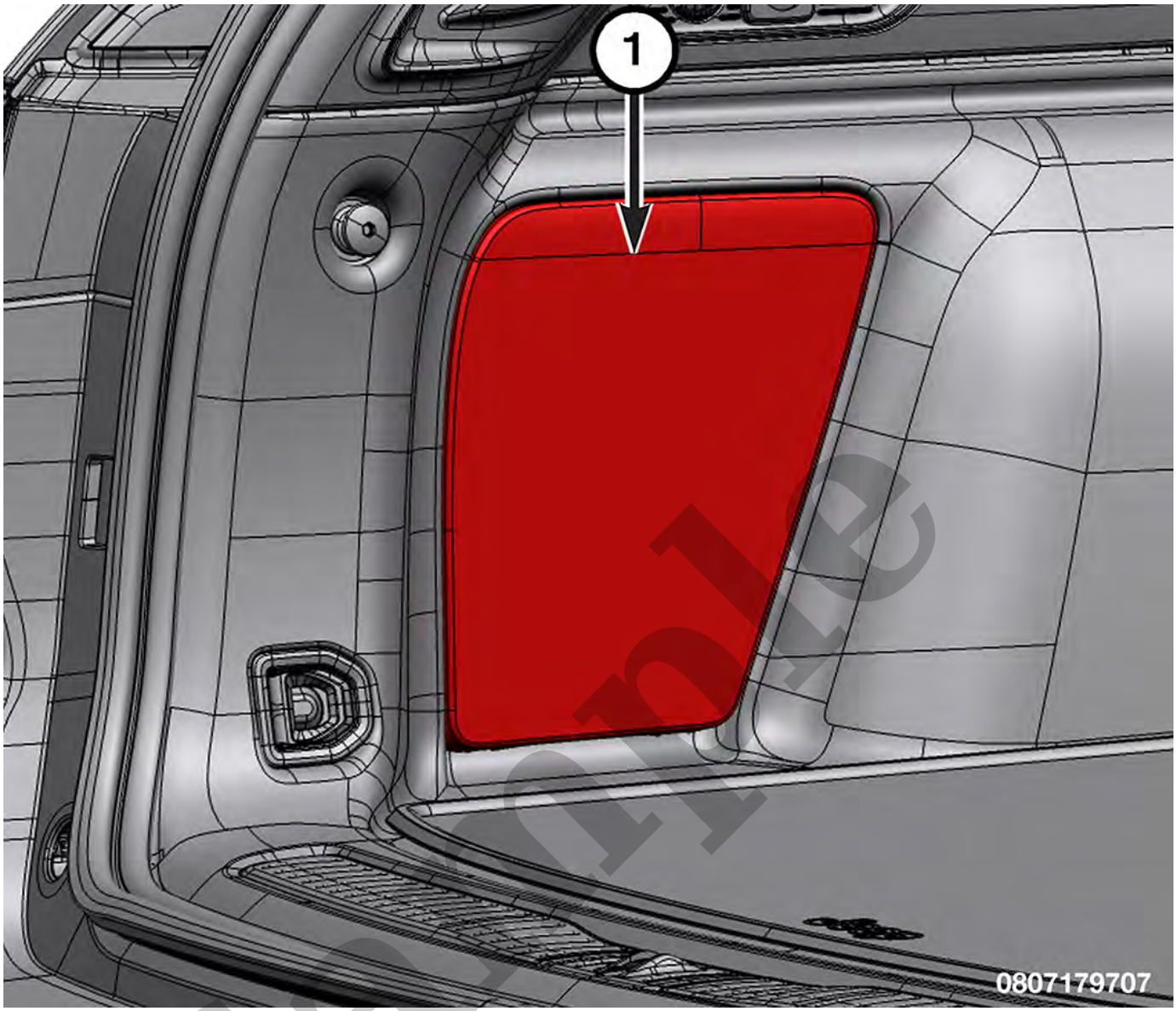

1 - Rear PDC Cover

10. Install the rear PDC access cover.

Personal Protection Equipment

WARNING

Be sure to utilize the proper Personal Protection Equipment (PPE) when working on any high voltage system. Failure to do so may result in serious or fatal injury.

- Safety Glasses
- Natural Fiber clothing
- Hand tools HV rated with a dielectric barrier of not less than 1000 volts
- Rated and non-expired rubber insulating gloves with leather protectors

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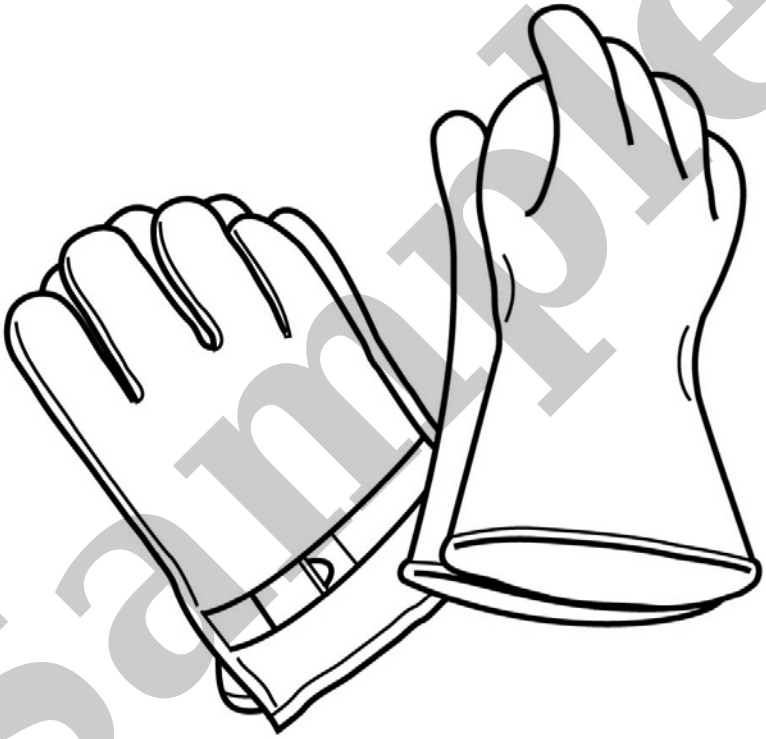
WARNING

- 
  Protective Glove Set - Medium
- 
  Protective Glove Set - Large

When taking electrical measurements, high voltage must never be allowed to “escape” beyond the article under test. This assures:

- That those taking measurements will not come into contact
- That others in other areas will not come into contact
- That equipment will not be damaged
- That measurements will be accurate

For electrical measurements, there are three forms of separation:

- Non-contact measurement or indirect sensing of high voltage current (in amps) using a clamp-on type current probe
- Isolating voltage probes or differential probes with galvanic separation between the input probes and the measurement device
- Isolation of the test equipment from the building using a Isolation Transformer or a battery-powered device

The Fluke

Meter, Multi

Post Incident Handling

POST INCIDENT HANDLING

Following the initial incident, certain actions and precautions are necessary. If air bags have been deployed, the vehicle cannot be driven again until repaired, as air bag protection will not be available to occupants in the event of a collision. After any collision the vehicle should be taken to an authorized dealer immediately.

While the Grand Cherokee High Voltage battery is designed for safety, industry-wide experience has demonstrated that the unlikely possibility of delayed ignition or reignition of a damaged battery must be considered in post incident handling. Any battery exposed to accident forces sufficient to deploy air bags or to a vehicle fire requires special precautions until verified as undamaged.

- The vehicle or battery pack must not be stored inside an occupied structure.
- Adequate ventilation must be present at the storage location to prevent buildup of any outgassing.
- Batteries to be recycled must be shipped in accordance with regulations governing the transport of damaged lithium-ion batteries (and never by air).
- Thermal monitoring of any damaged, flooded or burned battery should be performed during storage.
- The battery test point access cover must not be reinstalled by other than an authorized technician.
- The battery test point opening must be covered/sealed to prevent water or debris from entering the battery.

The battery pack in this vehicle uses non-spillable lithium-ion, and it is unlikely that electrolyte, which is clear, will escape from the pack in the event of damage. Liquid emissions from damaged packs are typically colored battery coolant, which should be addressed in the same manner as spilled engine coolant.

Do not apply chemical neutralizers used for other battery types or take any other action which could result in battery cell contents being aerosolized.

Do not ingest, inhale or make bare skin contact with any internal material from the battery cells. In the event of accidental contact of this nature, wash exposed skin thoroughly with soap and water for at least 5 minutes and seek medical attention. In the event of ingestion, seek emergency medical care immediately.

- An impact deformation (dent) in the body chassis between and including the B and C pillar side area that deforms the body (exclusive of removable panels such as doors and plastic fascia) by more than 101 mm (4 inches) from the proper undamaged position;
- Any evidence, such as collapsed suspension components, that the vehicle became air born and struck the ground with sufficient force to cause significant structural damage;

Potential Water Penetration into Battery

- An open Manual Battery Service Disconnect port with doors and/or windows open or missing allowing rain and/or snow to enter the vehicle interior;
- A vehicle that has been involved in fire suppression activities;
- A vehicle that has been flooded or immersed in water above the level of the underbody protector;

Fire

- A vehicle that has experienced a fire onboard;
- A vehicle that was immediately adjacent to a burning vehicle or structure;
- A battery pack that was involved in a vehicle or structure fire while not installed;

Electrical Fault

- A battery pack that, through FCA or supplier test procedures, is found to no longer provide sufficient isolation;
- A battery pack that has been identified as faulted through manual isolation checks in the High Voltage Loss of Isolation (LOI) Test Procedures (Refer to 28 - DTC Based Diagnostic/MODULE, Battery Pack Control (BPCM)/Standard Procedure).

NOTE

Damaged batteries must be shipped for disposal in accordance with all FCA and US DOT requirements.