SS 1034438 New Cascadia Cab to Chassis Redundant Ground Strap

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Applicable Vehicles
New Cascadia

Symptoms
Steering wheel switches inoperative, AM/FM radio reception corrupted, failure of the steering wheel clockspring.

Issue
Under certain conditions if the vehicle cab loses it's dedicated ground location various ground sneak paths may be created that can damage portions of the cab wiring.

Solution
Installing a simple redundant ground strap from the Main Ground Junction Block (MGJB) to the frame will protect the vehicle from an unexpected loss of cab grounding. See attached.

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Below are the installation instructions for installing a simple ground strap to assist in isolating stray voltages between the cab and chassis

NOTE!

Disconnect batteries prior to beginning this task!

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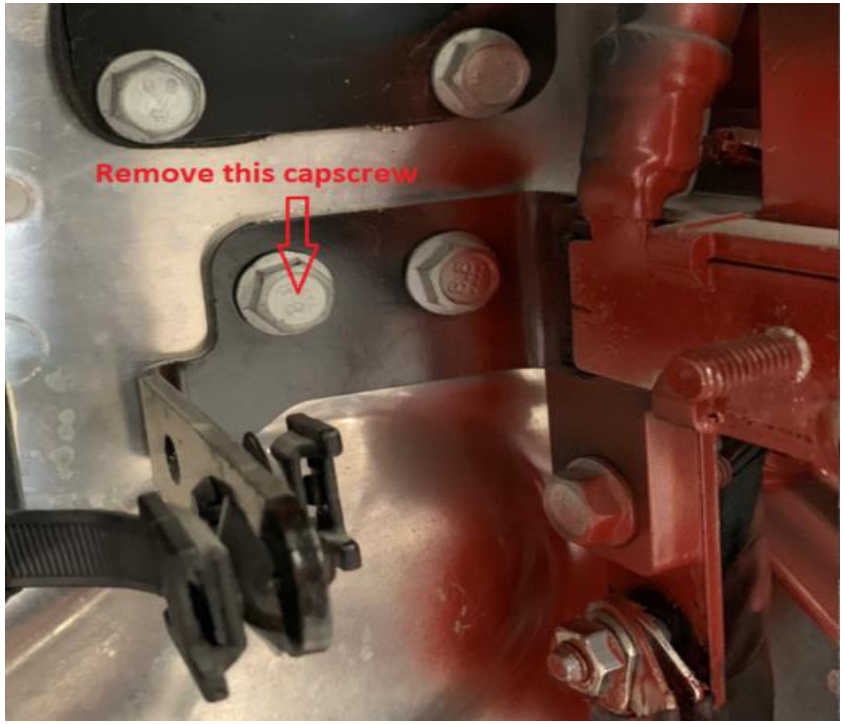
Locate the MGJB left side of enginewall. Use a 13mm socket to remove the lower leftside 8mm capscrew.



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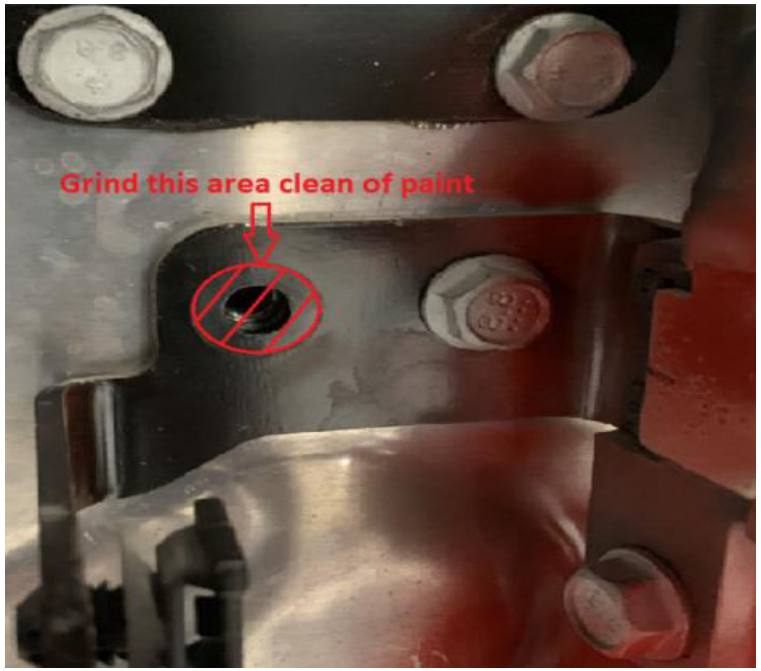
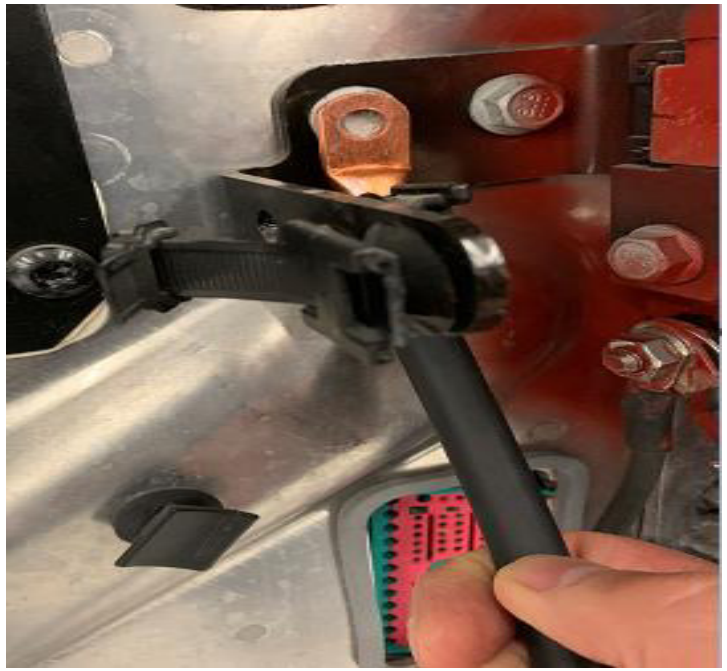
Grind a small amount of paint off of the bracket, sufficient enough for the face of the capscrew to have direct metal to metal contact. The goal is to ensure that the grounding strap and the MGJB have direct continuity with the frontwall when the nut is reinstalled.





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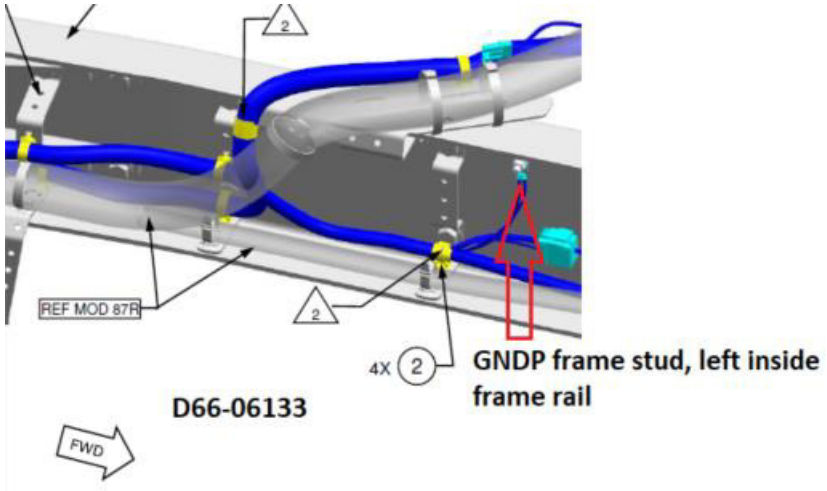
Both sleepercabs and daycabs with in cab battery box mounting have the same frame mounted stud for GNDP.

See 288 content print D66-06133 for the routing of GNDP to the frame.



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In applications that have the battery box mounted on the rail, there will be a ground strap running from the flywheel housing to the left side frame rail. This is the easiest and most accessible frame rail stud for mounting the redundant ground strap, as noted below in the blue outline:

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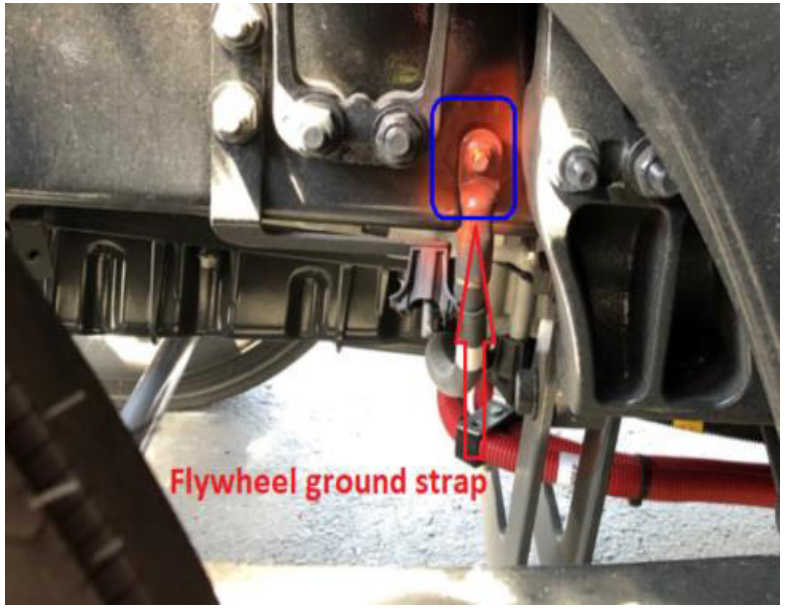
Check for availability of the ground stud on the left side outer frame rail. There will be a difference between applications with frame rail battery box mounting and in-cab battery box mounting depending upon the respective 282 datacode of the build. Vehicles with in cab battery box mounting will not have the ground mounting stud as per the visual noted below on the left. In such cases, the next location is the GNDP stud as mentioned earlier, located in the inner left side frame rail, as noted below on the right:



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Parts needed:

1 length of black 2 AWG cable, part number 48-25450-008, or equivalent.

2 ring eye terminals, part number 23-11194-502 or equivalent, 2 AWG cable with a 3/8” ring eye.

2 one inch sections of shrink tubing.

Assemble the jumper cable as necessary to accommodate either the flywheel ground stud or the GNDP stud, as determined earlier.

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After determining the stud for the redundant ground strap, remove the nut from the stud. Clean off the anticorrosion spray as necessary to ensure clean contact to the face of the existing cable. Install the ring eye part number 23-11194-502 or equivalent on the stud, and reinstall the nut. Torque to 26 ft. lbs. Repeat for the location at the MGJB. Torque the 8mm capscrew at the MGJB 11-17 ft. lbs.

IMPORTANT NOTE!

If the GNDP stud is used for this redundant strap installation, the technician must be absolutely certain that the original GNDP ring eye is clean, secure, and torqued properly to 26 ft. lbs.

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Cover the stud on the frame used for this jumper with anti corrosion spray. Reconnect batteries. As a last check, use a voltmeter to verify that there is no voltage present between the frontwall and the frame in both key on and key off positions.