

SS 1033950 New Cascadia trailer receptacle backwall grounding stud

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Applicable Vehicles

New Cascadia

Symptoms

Trailer lights dim or blinking, possible ABS codes including 11/520216/19.

Issue

Some New Cascadia vehicles built with the seven way primary cable receptacle mounted at the lower left hand back of cab may have the trailer grounding circuit incorrectly attached to the interior back wall.

Solution

See the attached document for corrective action.

P4 Back wall Ground Stud Correction

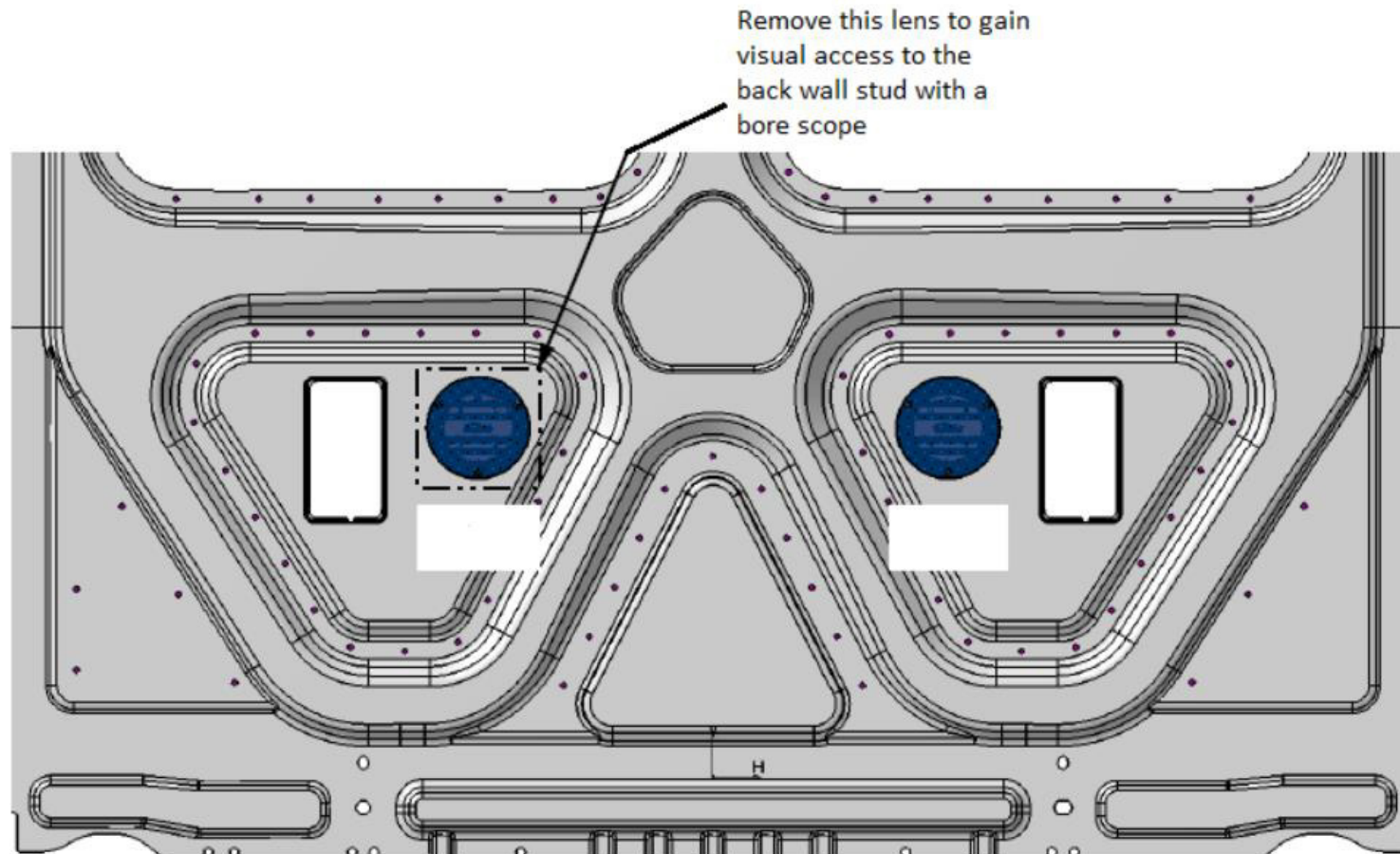
See attached visuals and notes for correction of possible incorrectly installed grounding concern

Disconnect batteries prior to performing this work!

P4 Back wall Ground Stud Correction

An initial determination of the back wall ground attachment strategy can be quickly determined with the use of a bore scope camera routed down through the driver's side utility light socket.

P4 Back wall Ground Stud Correction



P4 Back wall Ground Stud Correction

Note the visuals below for incorrectly installed trailer grounding circuit inside the back of cab regarding datacode 1AZ. Note that there can be more than (1) eyelet, if the vehicle has an optional connection for trailer ABS only.

P4 Back wall Ground Stud Correction



Bore scope camera visual from driver's side utility light access



P4 Back wall Ground Stud Correction

In daycab applications, the back panel can be simply removed.

In sleepercab applications, The corrugated back panel requires excessive effort and downtime for removal.

P4 Back wall Ground Stud Correction

Tools needed:

3.5" hole saw

½" drive drill

½" drill bit

Fabricated clinch stud retaining tool

Bore scope camera

Parts needed:

1 QTY 23-13425-022 clinch stud, star washer, and nut

1 QTY 8" X .025" mild steel bar stock

1 QTY tube sealant

P4 Back wall Ground Stud Correction

Measurements for centering of hole saw in back panel

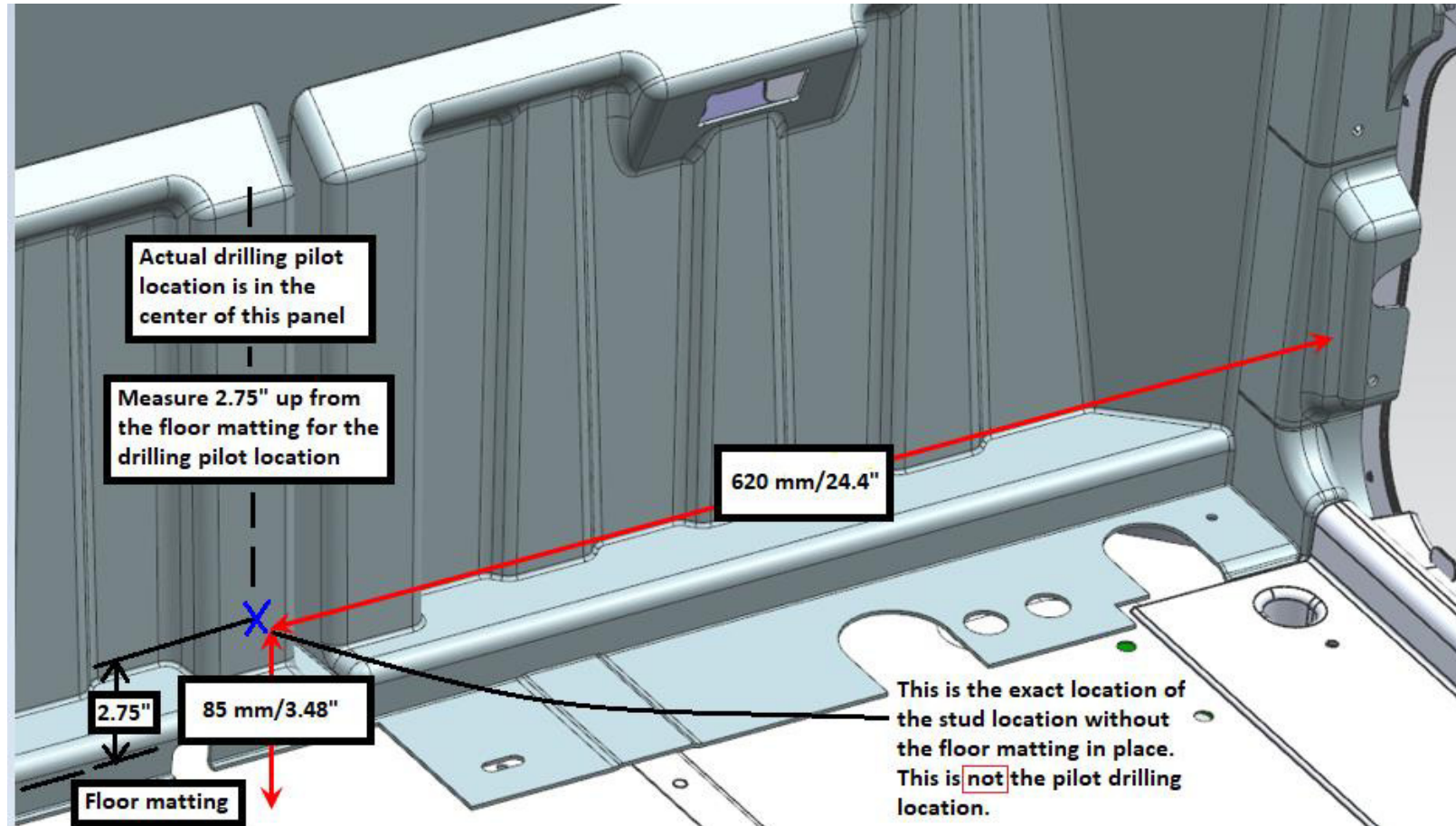
Vertical/Y location directly off of the floor mat:

2.75"

Horizontal/X location:

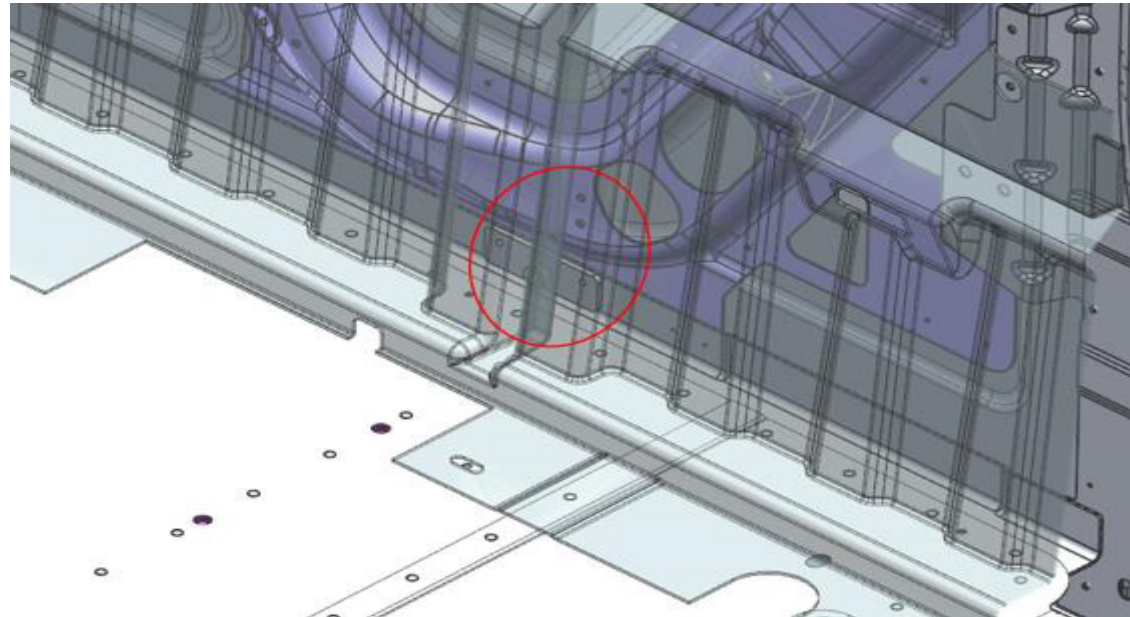
26" approximate

P4 Back wall Ground Stud Correction



P4 Back wall Ground Stud Correction

Note in the visual below, the parting of the corrugated panel, roughly 24" inboard from the drivers side when measured from the door latch as noted in previous slide.



P4 Back wall Ground Stud Correction

See below for the drilling function. Set the pilot on the hole saw to a shallow minimal depth. Carefully drill the hole, leave one side of the drilled portion attached to the panel to act as a hinge for later closure. We are purposely drilling off to the left of the stud location to allow access for the clinch nut retaining tool in the opening.

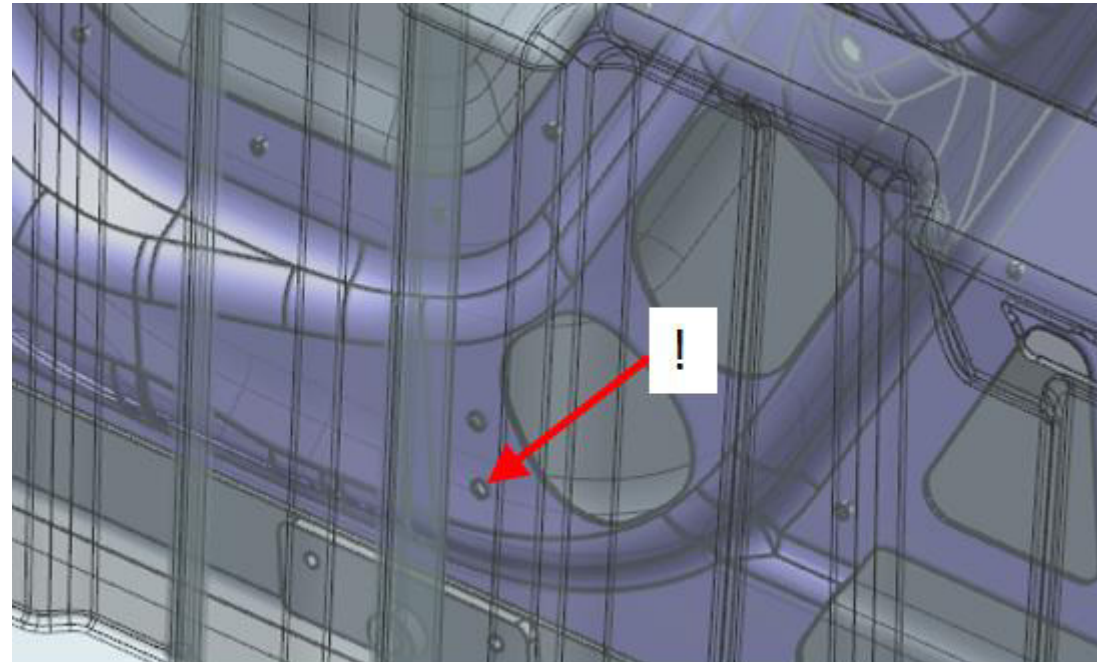


See here for the deep
portion of the
corrugated back panel

P4 Back wall Ground Stud Correction

Remove and discard the improperly installed self tapping screw and washer.

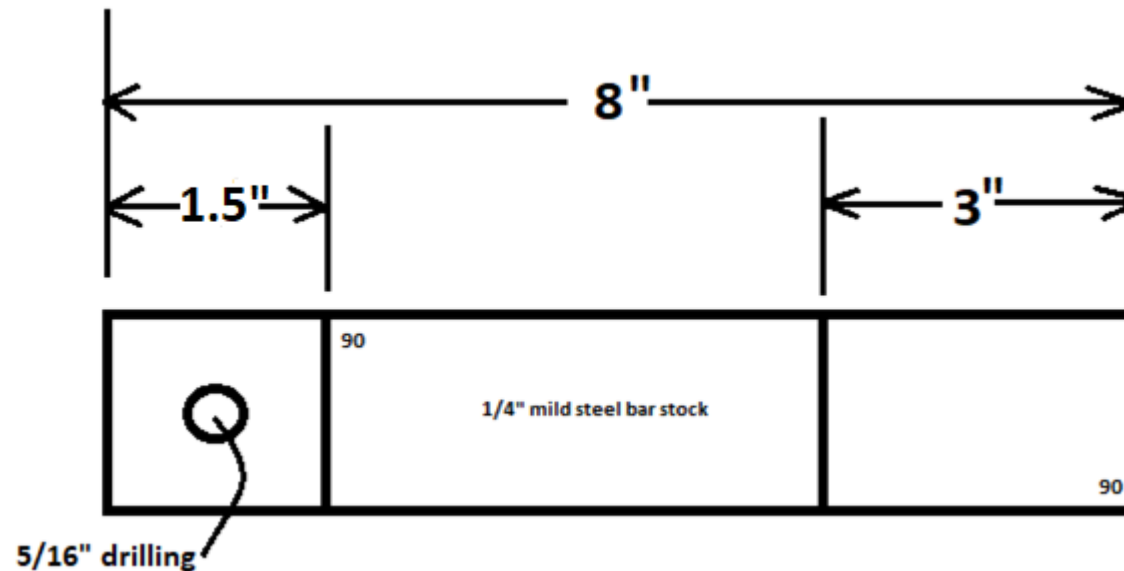
Locate the 2nd hole in the back wall as noted below. Remove the paint directly around where the eyelet(s) will mate with the panel:



Note the second hole in the backwall as noted above. Drill this hole out slightly over 1/2".

P4 Back wall Ground Stud Correction

Fabricate the clinch stud retaining tool to the following dimensions:



P4 Back wall Ground Stud Correction

Finished view of clinch stud retaining tool



P4 Back wall Ground Stud Correction

Part number 23-13425-022 clinch stud



P4 Back wall Ground Stud Correction

Clinch stud and retaining tool



P4 Back wall Ground Stud Correction

Install clinch stud part number 23-13425-022 into the freshly drilled out ½"+ hole and hold in place with the fabricated clinch nut tool. Note the following slide that the tool is not bent at 90 degree angles since there is no back panel in this mock up sample. In our example, the tool must have a 90 degree bend to clear the 3.5" drilled hole.

P4 Back wall Ground Stud Correction

Install a nut and washer on the clinch stud. Using a 3/8" impact gun, tighten and secure the clinch stud, then remove the nut, washer, and retaining tool.



P4 Back wall Ground Stud Correction

Install ground cable onto newly installed clinch stud. As noted earlier, there may be (2) cables if the vehicle has an additional trailer ABS power cord.



P4 Back wall Ground Stud Correction



Fold the attached drilled
portion back into place,
seal with caulking