

# SS 1033628 New Cascadia Ground Strategy - Steering Wheel Clockspring Failures

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### **Applicable Vehicles**

All New Cascadia models (P4).

### **Possible Symptoms**

- Clockspring / Steering wheel switches - Inoperative or intermittent
- Left and / or Right Stalk Switch (SSL / SSR) - Inoperative or intermittent
- Windshield Wipers - Switch OFF, Wipers Always ON

This list will be updated if further behaviors are confirmed.

### **Issue**

New Cascadia products have a new **separated ground strategy** that must be strictly adhered to. Incorrect mapping of the ground circuits may allow backfeed and overload an isolated portion of the grounds, possibly resulting in component damage (e.g. steering wheel clock spring, base part number 14-19090). Please see the [DTTS Insider 1: New Cascadia - Separated Ground Strategy](#) instructional material for additional information on this ground strategy.

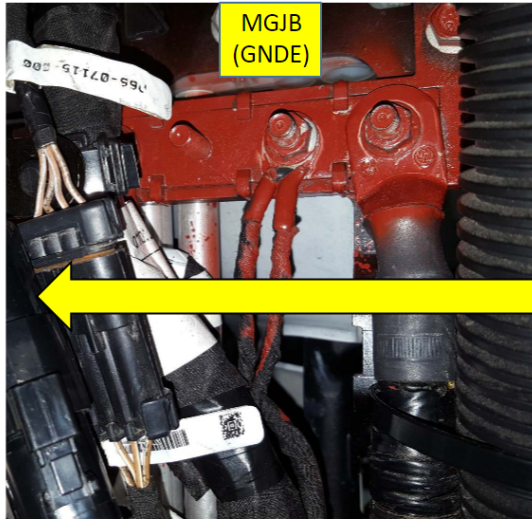
### **Case Study**

Units reporting symptoms like those above may find failure of the clockspring, with delamination of the internal ribbon, overheating, and shorting or fused circuits, as pictured here:



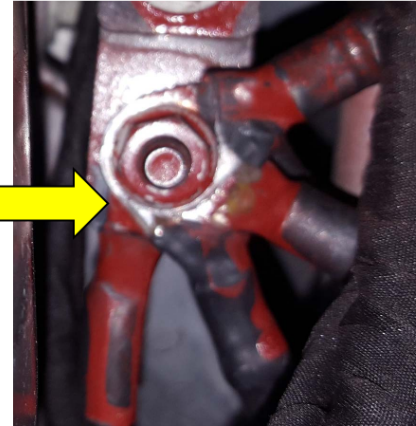
## Solution

If you find the clockspring failed in this way, inspect the frontwall GNDE / GNDP installation near the MGJB for correct ground separation and correct as needed.



Make sure all the contact surfaces are clean (lacquer thinner works well to wipe off any excess).

Non-isolated stud (GNDP)



Currently, every New Cascadia should have **FOUR** GNDP ring eyes here, **NOT** on the MGJB. Look for labels and white tape. The exception is the GNDP skin, which is not currently marked.

1. Cab skin stud (under cab)
2. Frame rail stud (near engine mount)
3. FWD GND module (28G)
4. AFT GND module (28G)  
(GND module A06-90236-000)

### **GNDP (only on the non-isolated MGJB bracket stud):**

- There are a total of four (4) circuits on ring eyes that must be attached to the GNDP non-isolated stud on EVERY TRUCK. If you have more or less than four (4), it is not correct.
- Make sure all ring eyes are "fanned-out" correctly to get maximum "flat surface" contact.
- These cables are often identified by a label marked "GNDP" and white tape wrap, BUT NOT ALWAYS (the cab skin cable does not have ANY packaging currently).
- This non-isolated stud is not a return path to ground through the bracket. It relies on the cable returning it to frame to get proper return to ground.

### **GNDE (only on the isolated MGJB bussbar):**

- Nothing should go on the MGJB buss studs unless it is GNDE.
- No more than 3 ring eyes per stud.
- Make sure all ring eyes are "fanned-out" correctly to get maximum "flat surface" contact. Watch out for overspray on the flat surfaces on the studs and in between the ring eyes.
  - Lacquer thinner works well to clean off any excess paint.

### **MGJB Bussbar Torque Specifications:**

- Below is the spec for the studs on the isolated portion. **21.7 max Nm is equal to 192 inch lbs, or 16 ft lbs.**

