Mustang Cup Australia – Round 2, Tailem Bend

Post Event Technical Summary

Purpose: Provide supplemental technical clarifications/information regarding individual technical items raised at the most recent event.

Key areas of focus:

1. **MoTeC Dash Signal Definitions/Logged Channels**
2. **Front & Rear Anti-Roll Bar – Mandated Installation and Function**
3. **Fuel Remaining Calculation – MoTeC Dash**
4. **Brake Pedal Soft/Irregular Feel/Lack of Braking Performance**
5. **Gearbox Gear Position Sensor Incorrect Orientation**

Technical Documentation Location:

Reminder that all relevant Mustang Dark Horse R, Mustang Cup Australia technical documents and files can be found here:

https://www.fordracing.com/motorsport/mustang-cup-australia/competitor-info

Created: 12/5/2026.

Final update: 15/05/2026

1. MoTeC Dash Signal Definitions/Logged Channels

Technical Conformity:

Teams should be aware that the MoTeC logged channel list i.e. channel name and logging/sample rate, should at a minimum reflect the list found in the “Signal definitions” document per the link below. Units can be modified to suit the user.

https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/C187_Signal_Definitions_V009_and_V010_NG.pdf

Teams are free to add additional channels beyond the list prescribed in the document.

Teams are also free to make their own customisations to both the dash configuration and the display creator configuration supplied.

However, please note, when an updated MoTeC file is provided by Ford Racing, these individual team customisations will not be retained.

Additionally, if teams do make customisations, Ford Racing makes no guarantees of sustained functionality.

With that said, teams are reminded that the logged data provided to Ford Racing and Mustang Cup Australia is a scrutineering item, and as such needs to conform to the minimum requirements of the standard configuration files provided.

2. Front & Rear Anti-Roll Bar – Mandated Installation and Function

Technical Conformity:

Referring specifically to the “Anti-Roll Bars” section in the currently uploaded owner’s manual (page 54, 55 and 56) and to the homologation document wording

Anti Roll Bar and Adjustable Drop Link must be connected:

Both the front and rear anti-roll bars and all associated hardware (drop link body, drop link rod ends, body mounts, bushings and all associated fasteners) must be **installed and fastened to the correct torque at all times**, so as the front and rear anti-roll bars perform their intended function as a torsional spring.

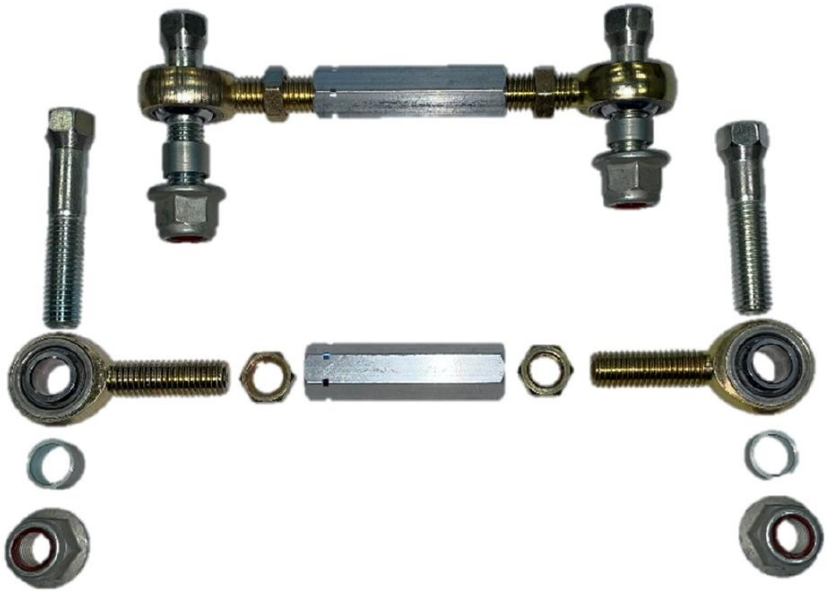
Your vehicle installation must reflect the reference photos found in the user manual and shown below, in all instances. This installation should be true for both the left and the right side of the vehicle.

No other interpretation or method employed to disconnect the anti-roll bar and circumvent its primary function as a torsion spring while all components are in situ will be accepted.

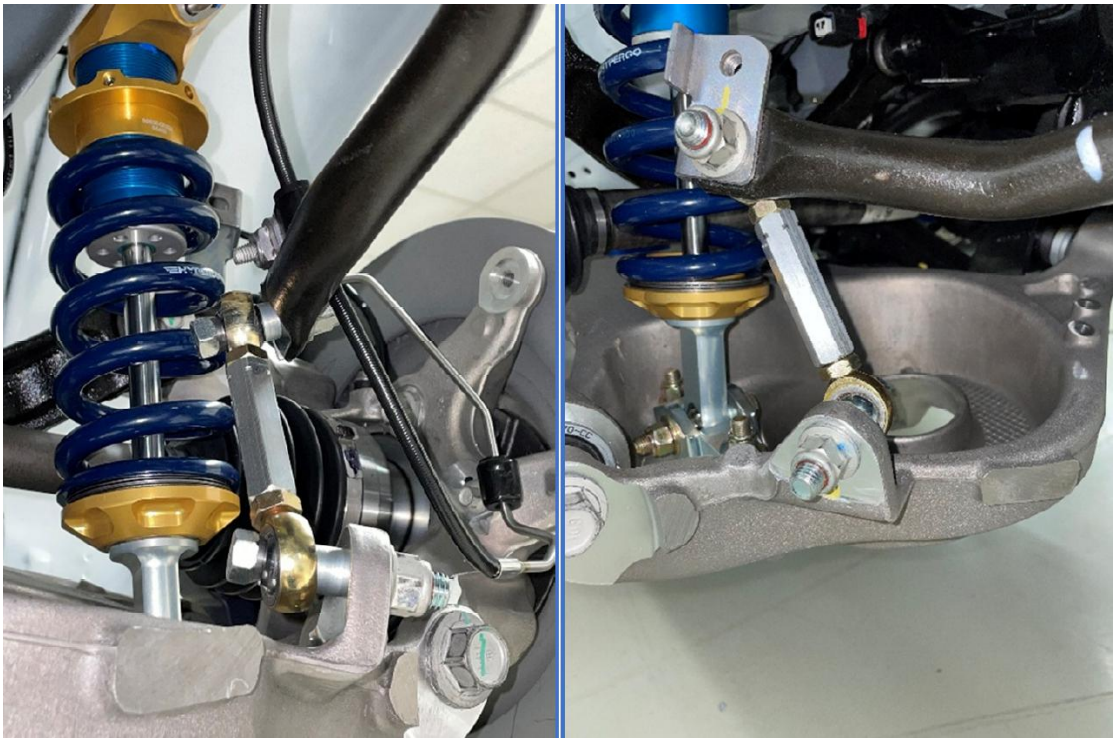
Any employed methods leading to disconnection/circumvention of function will result in disqualification.

Front Anti Roll Bar Drop Link Installation:

Front Anti-Roll Bar Drop Link components:



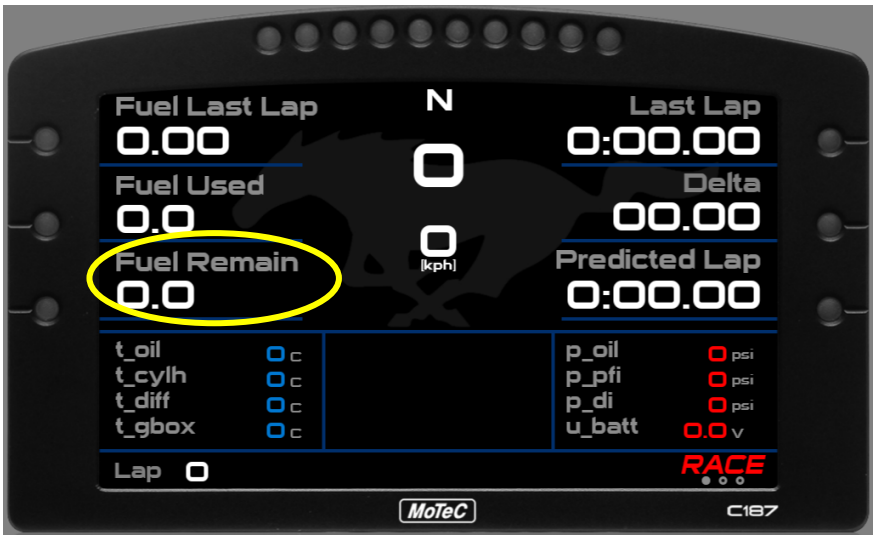
Rear *Anti Roll Bar Drop Link Installation:*



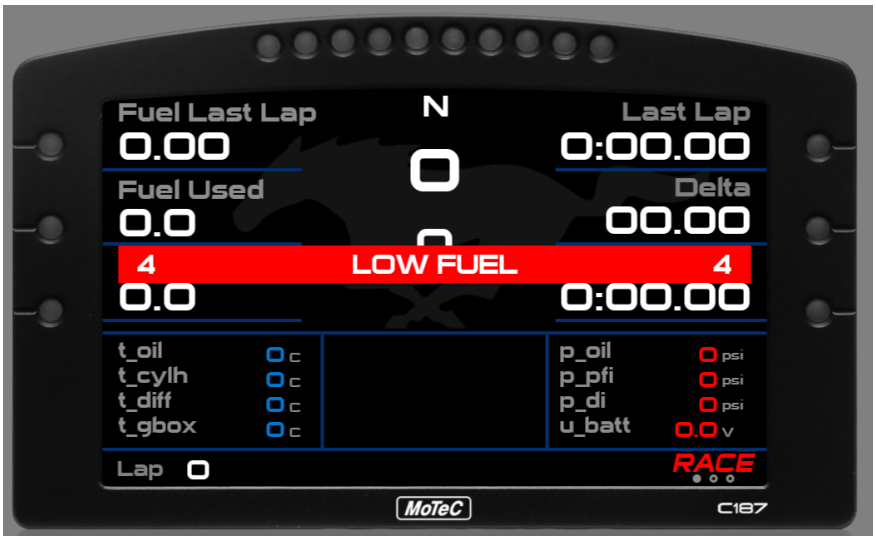
Rear Anti-Roll Bar Drop Link components:

3. Fuel Remaining Calculation – MoTeC Dash

The “fuel remaining” value displayed on your MoTeC dash, shown below, relies on your team modifying the “Fuel Tank Capacity” found in “vehicle editor” to ensure its accuracy.

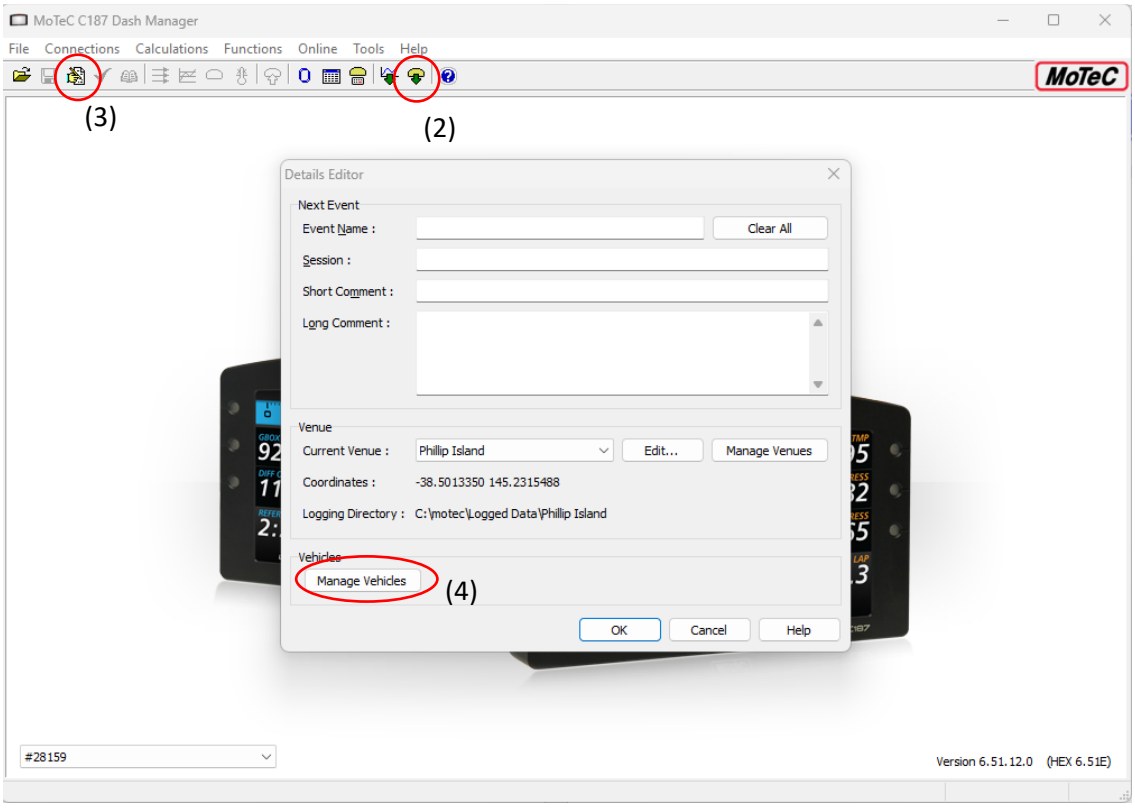


Without correctly setting the Fuel Tank Capacity value, the fuel remaining value and associated low fuel alarm (less than four litres remaining) shown below will be inaccurate.

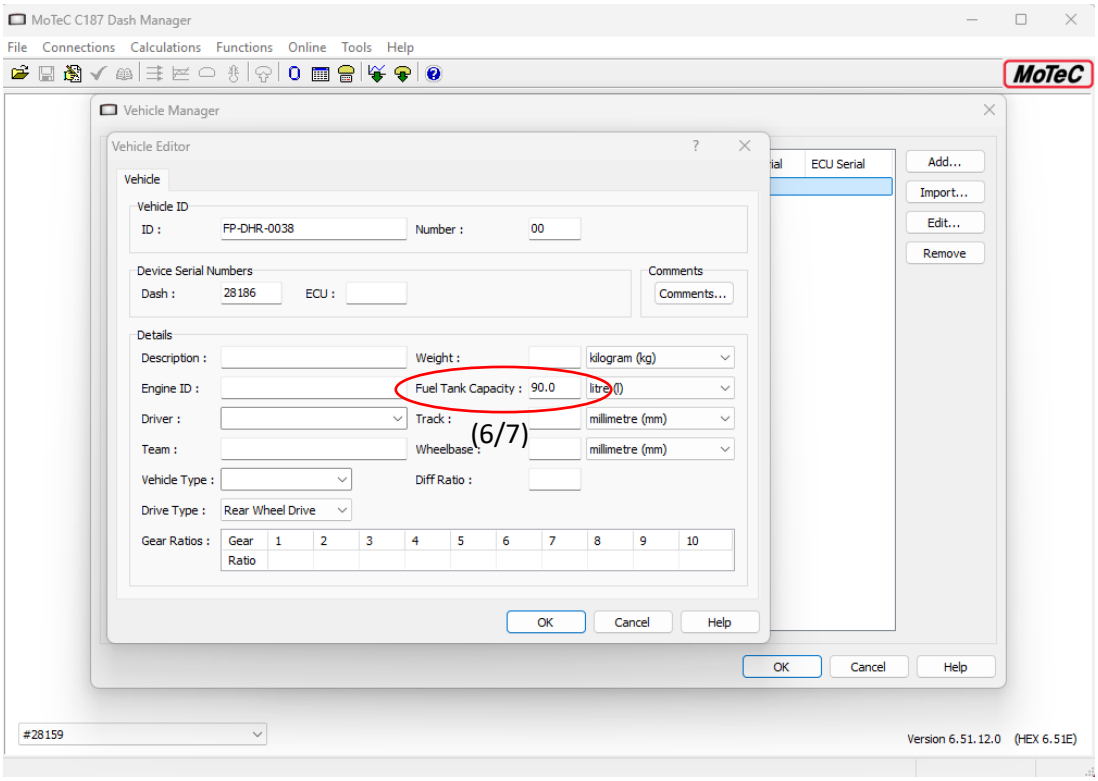


To ensure the accuracy of the fuel remaining calculation, please follow these steps prior to each time the car runs on track, after which fuel has been added.

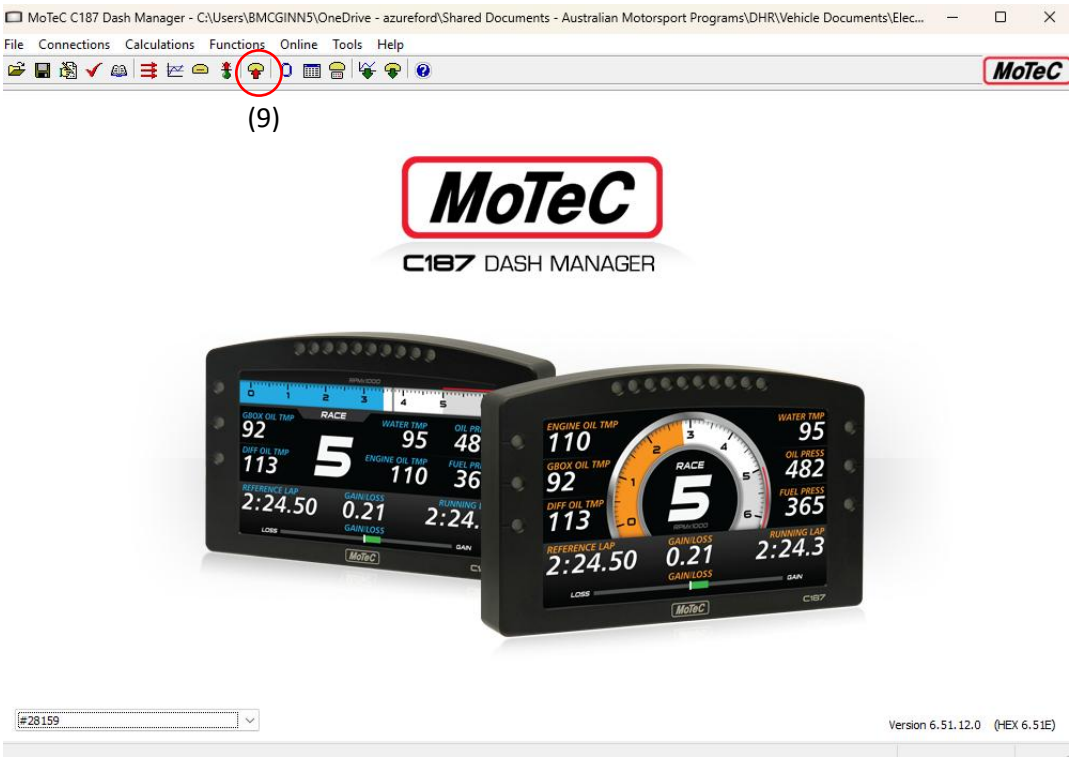
1. Connect to your MoTeC dash and turn the Master Power “on”
2. Open MoTeC Dash Manager and download the configuration from your vehicle
3. Click “Details” icon or follow File->Edit Details
4. Click “Mange Vehicles”



5. In Vehicle Manager, choose the vehicle which you wish to edit, and click the edit button. The Vehicle Editor screen will open per the image below

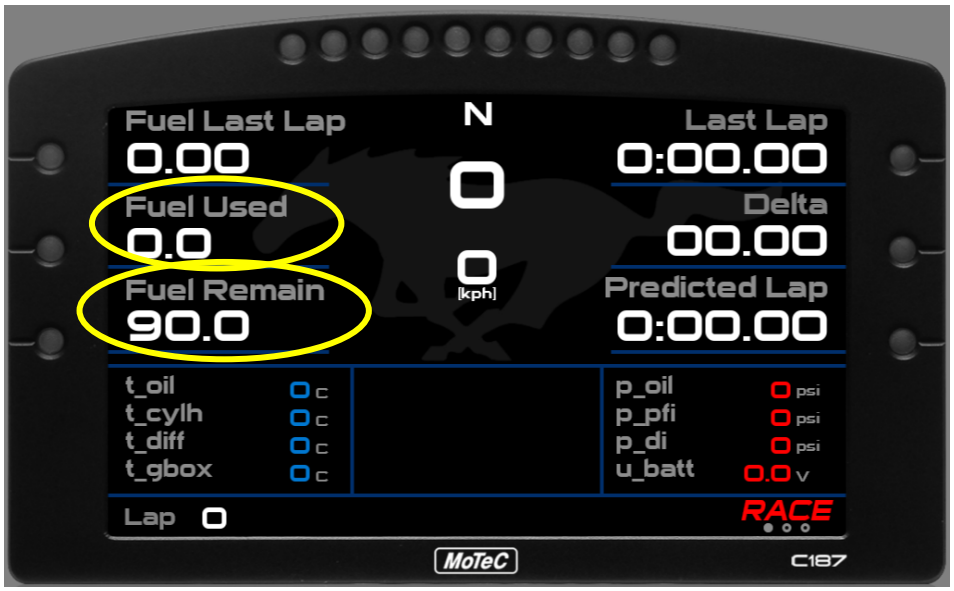


6. Refer to “Fuel Tank Capacity” – this is the value which you need to update
    a. If this has been unchanged since you purchased the vehicle, it is likely set to either 90 litres, or the full capacity of 30 US Gallons (113.6 litres)
    b. This value, while named capacity, should reflect the amount of fuel, in litres, which will be in your tank prior to the start of a given session
7. Set the fuel tank capacity to your intended fill amount/the known amount of fuel in the tank at that given time
    a. Setting this value to reflect your filled amount, means the “fuel remaining calculation showing on the dash and the “LOW FUEL” alarm will function as intended
8. Once set, click ok until you return to the Dash Manager main screen
9. Upload/send the configuration to your vehicle



10. The final step is to reset the “fuel used” amount, by pressing and holding the “dash mode” steering wheel button for 8 seconds, until you see the “FUEL RESET” message.

Now having completed these steps, the “fuel remaining” should equal the “Fuel Tank Capacity” value which you set in step 7 (90 litres per this example) and the “fuel used” value should equal zero.



If either or neither of these values are what you expect, please repeat steps 1 through 10.

4. Brake Pedal Soft/Irregular Feel/Lack of Braking Performance

If your vehicle is suffering from a soft/long/irregular brake pedal or it is lacking braking performance over its normal level, Bosch provides an additional system bleed mechanism called a “repair bleed”. This performs a bleed of the ABS unit via software based actuation of the internal pumping circuits.

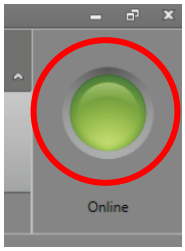
The repair bleed should only be performed once you have thoroughly checked all brake system components and undertaken routine system functional checks and component life inspections and ruled those out as causes of your braking issues.

Note – you will need two bleed bottles and three people to perform this process correctly. One to operate the laptop and brake pedal and two people to operate the two bleed bottles/bleed nipples on the brake calipers.

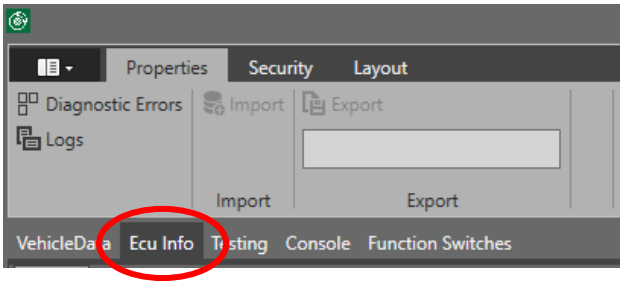
Please ensure the ABS system is powered via the toggle switch shown below.

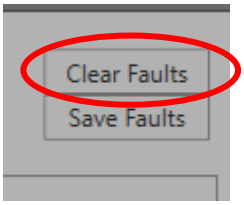
Repair Bleeding Process:

1. Connect your MSA box to the vehicle via the mill-spec connector.
2. Open Race ABS software, follow the prompts and ensure “green light” in the top right of the screen for connection.

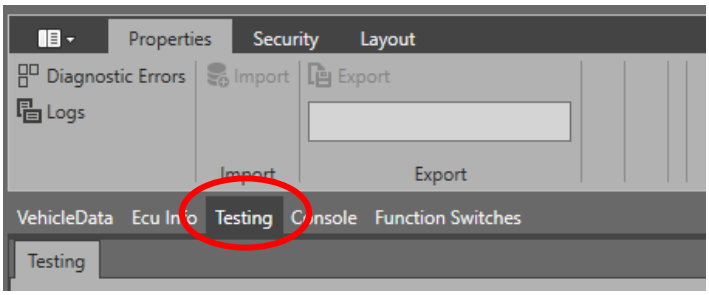


3. Select ECU info tab, then “clear faults” and follow the prompts.

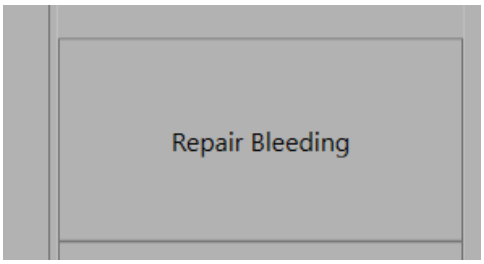




4. Power cycle the car and reconnect to the ABS Module.
5. Once connected again per step 2, select the testing tab



6. Select the “Repair Bleeding” button in the bottom right-hand corner of the screen and follow the prompts.



7. Follow the remaining steps as outlined in the Bosch M5 user manual

https://www.bosch-motorsport.de/content/downloads/Raceparts/en-GB/54592523230329995.html

5. Gearbox Gear Position Sensor Incorrect Orientation

As an FYI to customers, this sensor can be installed both ways but only has one correct orientation. If the sensor is fitted upside down, with connector locking tab facing upward, all gear shift related functions and vehicle drivability will be heavily impacted.

Symptoms of incorrect sensor orientation:

- Gear shift indicator (gear number) on the MoTeC display does not match physical shifter position/physical gear
- Downshift rev-matching will not function correctly.
- The ECU could attempt to deploy rev matching on upshift instead – which would result in an rpm flare between gears
- The check engine light may be illuminated and the DTC page should have multiple DTC's logged: P086E, P095B

Figures 1 through 4 explain the correct orientation of the sensor.

The gear position sensor has a Ford oval, QR code and other text printed on the part as seen in Figure 1 below.

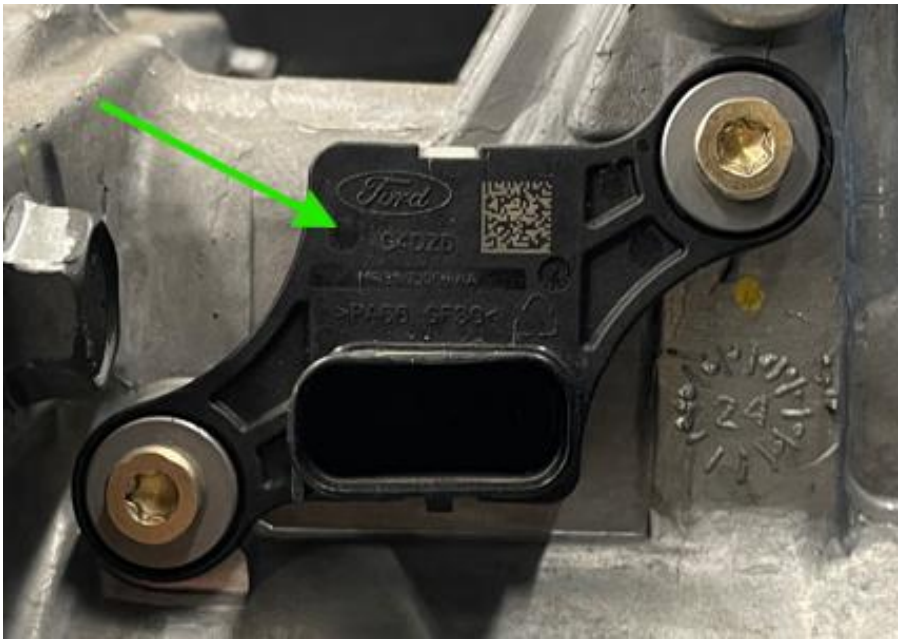


Figure 1 – Gear Position Sensor

The orientation of the text on the gear position sensor is to be consistent with the orientation of the text on the transmission case as seen in Figure 2.

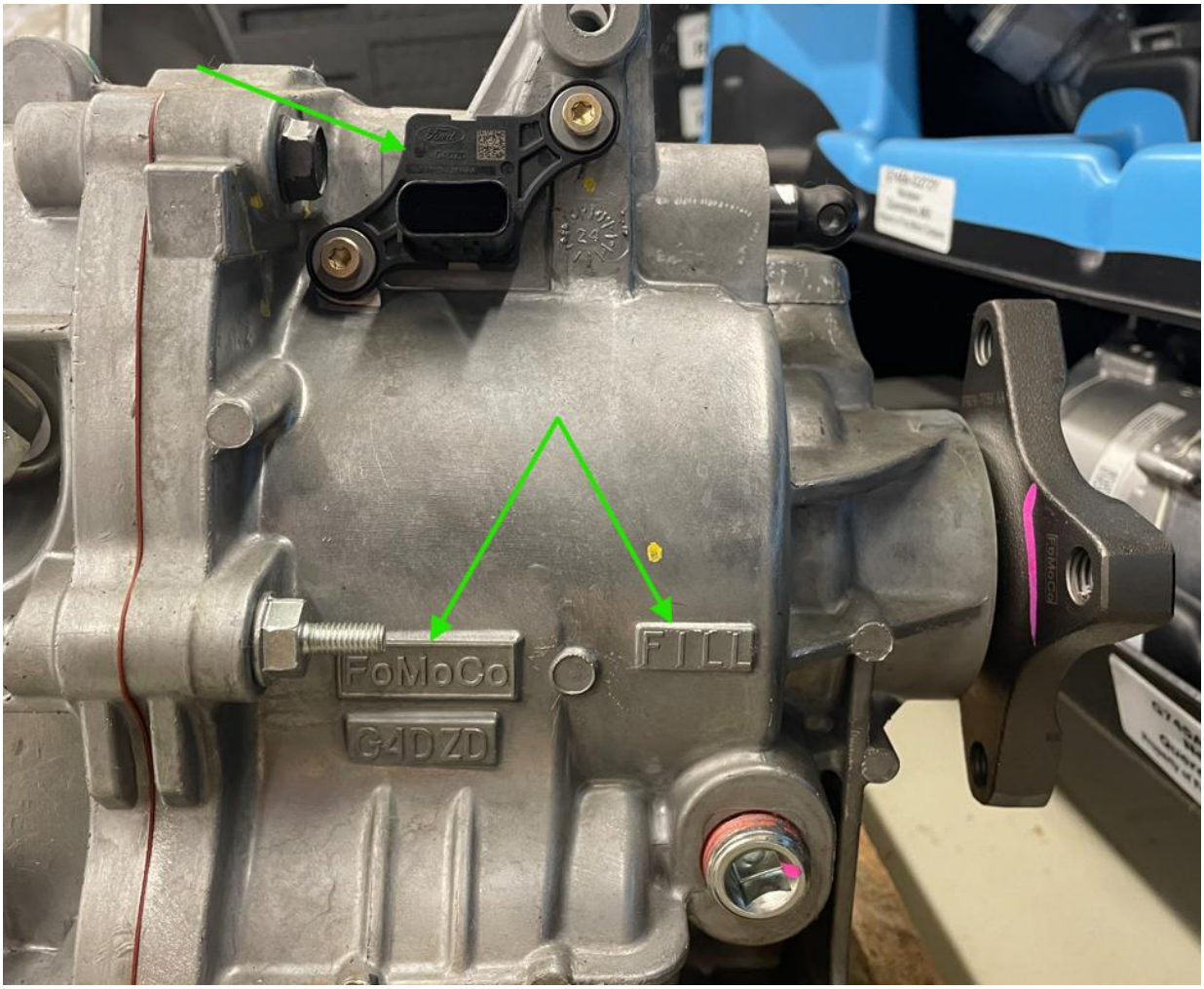


Figure 2 – Transmission Case Text

Ensure the red locking tab on the gear position sensor electrical connector is pointed down (toward the ground). The location of the gear position sensor is toward the rear (tail section) of the transmission case on drivers left of the vehicle. See Figures 3 and 4 below.

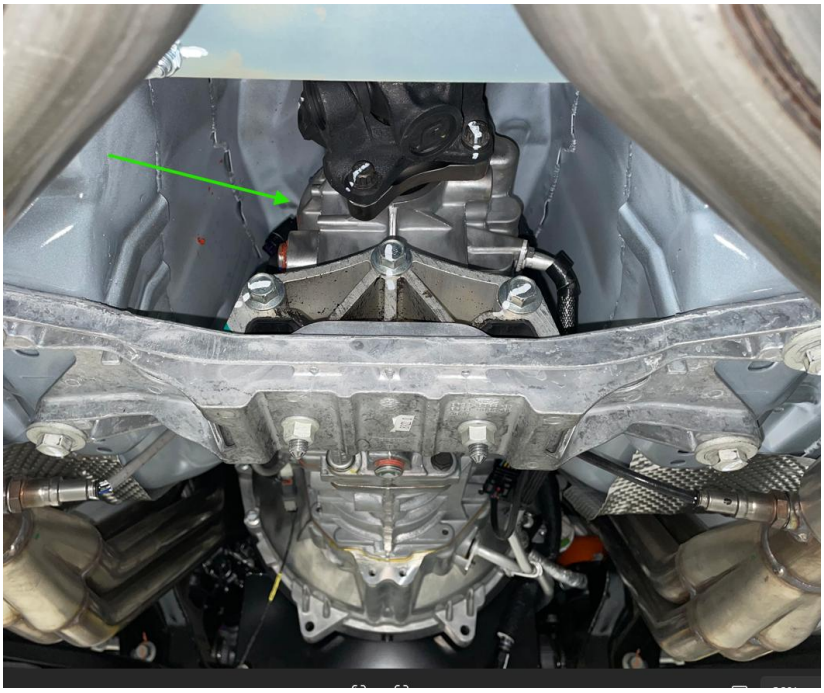


Figure 3 – Sensor Location noted by green arrow

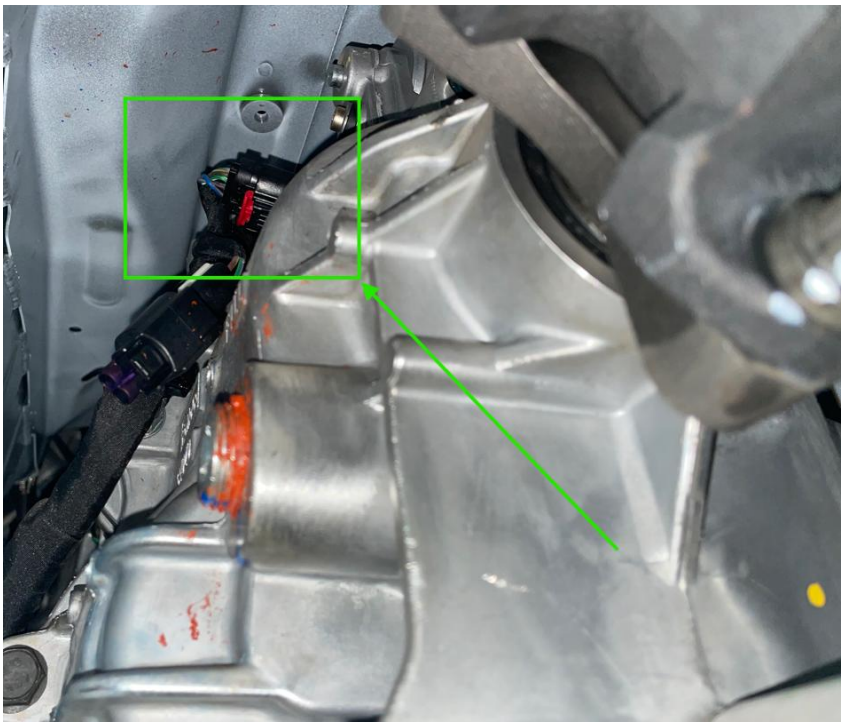


Figure 4 – Connector Red Retaining Clip Visible from below