



Mustang Cup Australia – Round 1, Phillip Island

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. Mustang Dark Horse R Technical Documentation & Conformity**
- 2. Aero-catch Bonnet Pin Preload**
- 3. Clutch Slave Cylinder/Throw-out Bearing Spacer**
- 4. Clutch Bleeding**
- 5. Engine Misfire Re-learn (via Pro-Cal tool)**
- 6. ABS System Errors**
- 7. PCM asleep/ABS lost communication – MoTeC Dash Warning**
- 8. Taping of Panel Gaps – Front and Rear Fascia**
- 9. Wheel Nut Torque**

Created: 31/3/2026.

Final update: 08/04/2026



1. Mustang Dark Horse R Technical Documentation & Conformity

Technical Documentation Location:

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

<https://www.fordracing.com/motorsport/mustang-challenge/competitor-info>

Technical Conformity:

The two key documents we reference with regards to the specification of the vehicle are the Homologation Document and the BOM (Bill of Materials) - they should be read together.

The two key documents can be found via the links below;

Homologation:

<https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2026/2/202...>

BOM:

<https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2026/2/202...>

Referencing the text on page 3 of the Homologation document, please draw your attention to the yellow highlighted points below:

- This homologation document is for Mustang Challenge and Mustang Cup
 - Mustang Challenge North America (NA) is sanctioned by IMSA (International Motor Sports Association)
 - Mustang Cup USA is sanctioned by USAC (United States Auto Club)



- Mustang Cup Australia (AU) is sanctioned by Driving Solutions
- Adjustments or modifications not specified in this document are not allowed
- The only optional equipment allowed is shown in this document
- All parts on vehicle must be production Ford Mustang Dark Horse components unless specifically listed in this document as detailed in the Bill of Materials
- Fluids are unrestricted. The recommended fluids are listed in this document
- Valve stem specification is open. Valve stem caps are required
- This homologation document may be updated if vehicle specification changes are made

Please note - we also make supplemental updates via TSB (technical service bulletin), which can be found on the same web portal as the Homologation Document and the BOM. If the parts listed within TSB's are available within country, then those TSB's are free to be applied.

In summary, if a part is listed in the BOM, or listed in the Homologation document - then it must be used in order to comply to the intent of the Mustang Cup Australia vehicle specification regulations.



1. Aero-catch Bonnet Pin Preload

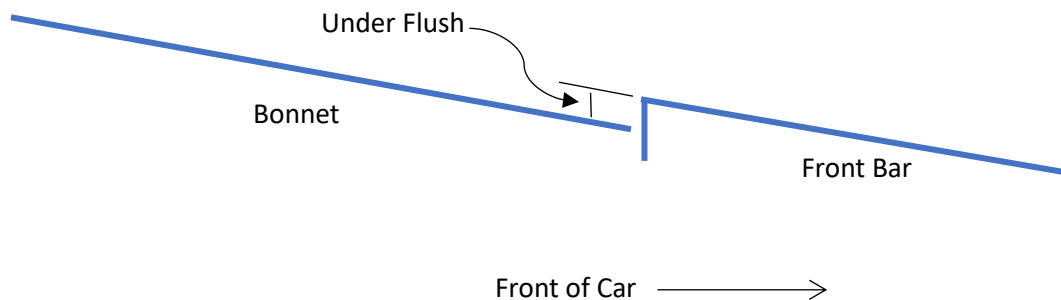
It is recommended that all teams inspect their aero catches and hood pins regularly – ensuring function, mechanical integrity and adequate preload applied to the bonnet.

We recommend that the pins are preloaded so as the bonnet leading edge is under-flush in relation to the front bar trailing edge.

Note - Ford will advise ahead of Taillem Bend regarding any allowable bonnet taping.

Section view – bonnet to front bar interface & flushness recommendation.

Note; diagram is for illustration only and is not to scale.





2. Clutch Slave Cylinder/Throw-out Bearing Spacer

Teams must ensure the “clutch spacer kit” is installed before the slave cylinder is fitted to the transmission.

The clutch spacer kit is located between the transmission and the slave cylinder.

Failure to install this spacer will compromise clutch and transmission function due to inadequate stack height of the slave assembly.

Reference Page 44 of homologation the document (DHR_v1.0_20260219)



Homologation Document can be found here:

[https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2026/2/2026%20Homologation%20DHR_v1.0_20260223%20\(1\).pdf](https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2026/2/2026%20Homologation%20DHR_v1.0_20260223%20(1).pdf)



3. Clutch Bleeding

The clutch master cylinder used on the Mustang Dark Horse R is a Ford production item, which is combined with the brake master cylinder.

As such, this system has no external bleed nipple/external bleeding interface.

Ford recommends that teams equip themselves with a suitable vacuum bleeder kit to complete this operation in a timely manner.

The reservoir ID is 50 mm (1.96 in).

Ford OEM Clutch Bleed Procedure:

1. Make sure all hydraulic tubes are correctly seated.
2. Make sure the clutch pedal is in the most upward position.
3. Check the fluid level of the brake/clutch reservoir. Fill the reservoir with the specified fluid to the MAX mark. Refer to: Specifications (206-00 Brake System - General Information, Specifications).
4. Using a suitable bleeder kit and a Vacuum Pump Kit, install the rubber stopper in the reservoir opening. Make sure the rubber stopper has a tight fit.
5. Holding the rubber stopper in place, operate the vacuum pump to 15-20 inches of vacuum. Hold the vacuum for one minute, then quickly relieve the vacuum. Remove the special tools.
6. Check the fluid level of the reservoir. Fill the reservoir with the specified fluid to the MAX mark. Clean and install the reservoir cap.
7. Press and release the clutch pedal 10 to 12 times or until clutch pedal effort is consistent and positive at top of clutch pedal travel.
8. Repeat Steps 4 through 7 two additional times or until clutch pedal effort is consistent and positive at top of clutch pedal travel.
9. Install the reservoir cap.
10. Check the clutch pedal reserve. Test the clutch system for normal operation.



4. Engine Misfire Re-learn (via Pro-Cal tool)

If any of the following components have been removed or fitted:

- Powertrain Control Module (PCM)
- Crank Position Sensor
- Engine
- Transmission
- Clutch
- Flywheel

It is required that the misfire profile learning procedure be performed so that the crank position is calibrated, and the misfire monitor can properly function.

The misfire profile learning procedure can be performed using the Pro-Cal tool provided with your Mustang Dark Horse R. Step by step instructions can be found in the owner's manual, beginning on page 34.

The Owners Manual can be found here:

<https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2025%20Dark%20Horse%20R%20Manual%203-10-25.pdf>



5. ABS System Errors

Vehicle Warm-up/Run-up:

If you plan to warm the vehicle up by only having the rear wheels rotating, to avoid logging any ABS faults/errors during vehicle warmup, ensure the ABS power switch is set to the off position (to the right of the ABS rotary, ref below).



ABS Errors/Issue Diagnosis:

If you receive ABS warnings/errors at any other time, they can be assessed and cleared by using the MSA box supplied with your vehicle and the Race ABS software.

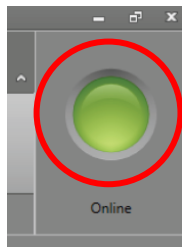
ABS related errors/warnings can be shown as a banner across the MoTeC Display, or via the LED lights on either side of the MoTeC Display. Ref below.



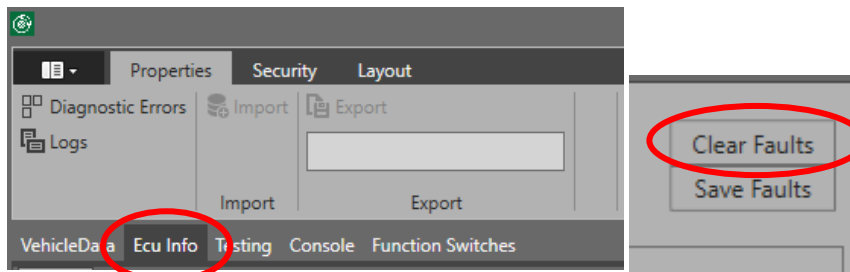


Error Assessment/Clearing Process:

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. If the dash warnings are rectified, and the software error log is clear, then all ABS faults are resolved. If not, continue to assess errors and address accordingly.

Note – some ABS related errors can be cleared by completing a vehicle power cycle and then driving the vehicle above 12kph. However it is recommended to rectify errors prior to commencement of driving where possible.

For further information regarding the ABS module and Race ABS software functions, refer to the specific section of our user manual, or the Bosch Motorsport Race ABS web site. <https://www.bosch-motorsport.de/content/downloads/Raceparts/en-GB/54592523230329995.html>



6. PCM asleep/ABS lost communication – MoTeC Dash Warning Banner

Under certain conditions an alarm banner may be present on the C187 display stating “PCM ASLEEP” (Figure A) and/or “NO ABS COMMS” ***accompanied with (6) flashing RED LEDs on side of C187***. (Figure B).

There are situations where these banners are warning of a legitimate fault, and others where the PCM (Powertrain Control Module) and/or ABS Modules have gone into sleep mode. See Table 1 for more information.

Figure A

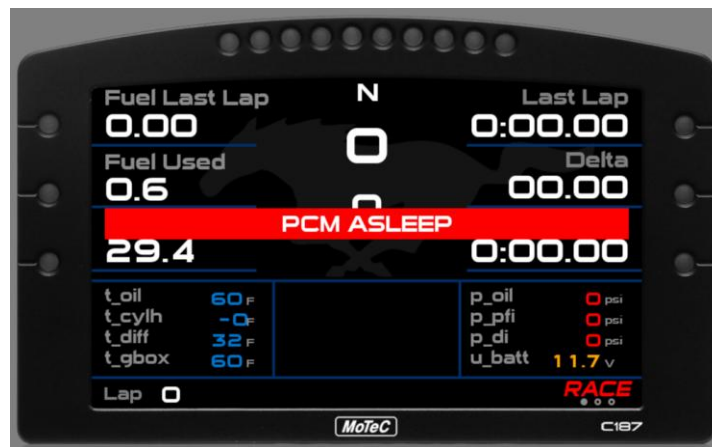


Figure B





Table 1

Switch Position	Condition
Both Master & Ignition ON (Engine OFF)	Both PCM & ABS warning banners will show after continuous 7 minutes of switches left ON with engine OFF. After 7 minutes the banners will cycle on/off every minute until the vehicle is powered off. <i>The warning banners showing under this condition is normal.</i>
Both Master & Ignition ON (Engine ON)	Neither warning banner should be present with the vehicle running. <i>If either banner shows while the vehicle is running there is a legitimate fault that will require further diagnosis.</i> <i>The only exception is if the ABS is powered off via the on/off switch or turned to position (12) on the rotary dial. The NO ABS COMMS banner will be present any time the ABS is turned off via the on/off switch or turned to position (12) on the rotary dial.</i>

For a legitimate PCM or ABS communication or power/ground fault refer to the vehicle electrical schematic document for further diagnosis.

NOTE: On limited occasions there have been spread terminals at the PCM CAN and/or relay control terminals at the PCM which have caused the PCM ASLEEP banner to display on the C187. *Only use the information below if your diagnosis leads you to the circuits outlined. *

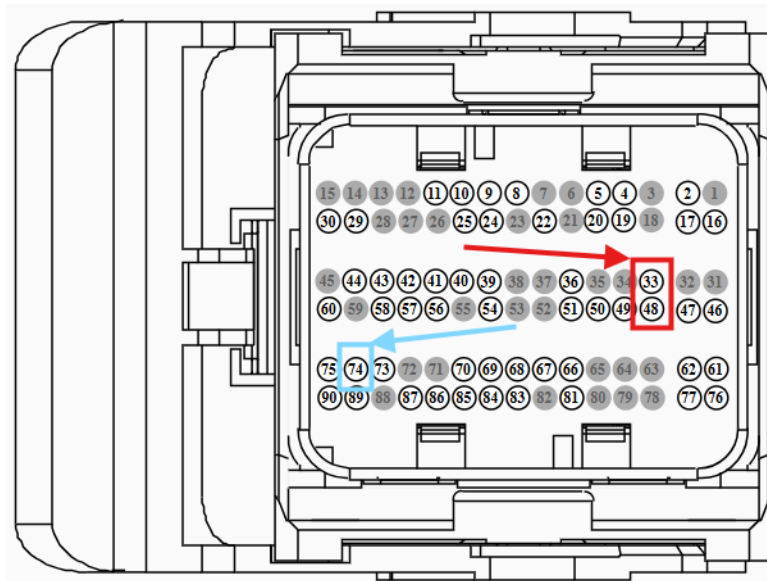
The document shared in conjunction with this pdf [*Mustang Dark Horse R_PCM Service Pigtail Procedure*] details how to remove and replace terminals from the PCM connector bodies with parts available on the parts truck.



The PCM CAN and relay control circuits are contained within C175B (Connector labeled FP-14S411-VA in above document). This will be the connector body at the most outside connector position (drivers right) with the PCM mounted in the vehicle.

PCM CAN circuits can be found at C175B cavities 33 & 48 (circled with RED in Figure C). PCM relay control can be found at cavity 74 (circled with BLUE in Figure C).

Figure C





7. Taping of Panel Gaps – Front and Rear Fascia

Per Motorsport Australia regulations for Mustang Cup Australia, unless otherwise stipulated, taping of panel gaps is **prohibited**.

At Le Mans, taping was permitted under special circumstances to improve the integrity of the front and rear fascia mounts. To alleviate the need for taping teams are allowed to carry out repairs/updates to their front or rear fascia mounting as described in TSB 38 and 39.

TSB 38 - Front Fascia Mount Repair

<https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/MC%20TSB%2038%202-19-2025%20Front%20Fascia%20Mount%20Repair.pdf>



TSB 39 – Rear Fascia Mount Repair

<https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/MC%20TSB%2039%202-19-2025%20Rear%20Fascia%20Mount%20Repair.pdf>





8. Wheel Nut Torque

Teams are reminded that the wheel nut and wheel stud are homologated parts.

The wheel nut torque is 122N.m

This torque is to be achieved **without** lubrication on the nut/stud thread interface.

Teams are also reminded to refer to **TSB 46 - Mustang Dark Horse R Wheel Studs Maintenance** regarding wheel stud recommended replacement schedules.

<https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/MC%20TSB%2046%208-19-2025%20Wheel%20Studs.pdf>