



Mustang Cup Australia – Round 3, Queensland Raceway

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. Tools to bring to the track – Pro-Cal & MSA Box**
- 2. ABS Malfunction – After an off-track excursion**
- 3. ABS Malfunction – Speed Sensor Debris**
- 4. Auto Rev Match – Accidental Disablement**
- 5. PSL (Pit Speed Limit) Set Point Advisement**
- 6. Mandatory Technical Change: MC TSB 57 5-29-2026 Hood Pin System Upgrade**
- 7. Post Session Data & Footage rules and format reminder**

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: 22/5/2026.

Final update: 23/05/2026



1. Tools to bring to the track – Pro-Cal & Bosch MSA 2 Box

Teams are reminded to bring two key tools to the track with them:

- Pro-Cal



- Bosch MSA 2 Box





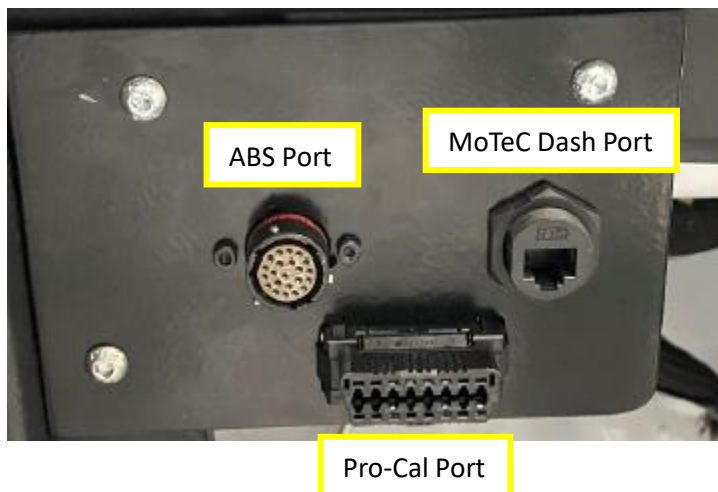
Both items should have been contained within the welcome pack for your car, if they were not. Please reach out.

These two items are critical to ensuring your team can interface with key electronics on your Dark Horse race car.

Pro-Cal tool connects to your PCM/ECU and the OEM electronic elements in your car.

The Bosch MSA 2 Box, via the use of “Race ABS” software, allows you to connect to the Bosch motorsport ABS module.

Both units are used for both updating and diagnosis of issues within their relevant systems and can be connected to the car via the Electronics Interface Panel (passengers’ side, dash mounted)



For further information on using both tools, please refer to your user manual:

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



2. ABS Malfunction – After an off-track excursion

Drivers and teams are reminded that in the event their car has an off-track excursion and the driver spins the rear wheels enough to cause an ABS warning light () (front wheels stationary, rears spinning), they should do the following;

- Turn the car off completely (ignition and main) and re-start the car
- Drive away while paying attention to the ABS warning light and system behavior.

Drivers need to monitor the dash after a power cycle and look for the following:

- If the ABS light extinguishes, the system is functional.
- If the ABS light remains, there may be further damage, and the driver should pit for repair.



3. ABS Malfunction – Speed Sensor Debris

Teams are reminded to inspect their wheel speed sensors and wheel bearing seal surface regularly and ensure neither the sensor or the seal surface have debris or buildup – per example photo below.



Wheel speed quality can be degraded and could lead to an ABS fault, which will disable the ABS system.

Teams should also ensure the front knuckle (upright) backing plate is in place, to reduce the likelihood of debris becoming lodged inside the bearing/sensor area.

Example of a malfunctioning/dirty sensor interface can be found below, where the FL wheel speed exhibits intermittent behaviour on review of the logged data.



This situation led to an ABS fault/ABS loss of functionality.



4. Auto Rev Match – Accidental Disablement

If a driver de-powers the ABS system while driving the car (switch circled in yellow below), it is recommended that a full power cycle of the vehicle is completed once coming to a stop, to regain all functionality.



If the vehicle is power cycled without re-powering the ABS and then driven, the PCM/ECU will lose its reference speed signal.

Loss of the PCM speed signal (v_veh_speed_PCM) **will disable the Auto Rev Match function**, even if the Rev Match switch is enabled.

Without a reference vehicle speed, the PCM/ECU does not have enough vehicle information to correctly match engine rpm during a downshift.

Drivers will also notice that no speed will be displayed on the dash if v_veh_speed_PCM has been lost.



5. PSL (Pit Speed Limit) Set Point Advisement

Teams are advised to set their Pit Speed Limit speed to 40kph.

This can be found in your MoTeC dash configuration within the following menu:

Calculations > Constants > v_pit_speed_lim

Get the configuration from your dash, then set "v_pit_speed_lim" to 40.0 km/h and re-send the configuration.

The current PCM software will not control your pit speed limit if set below 40kph.

(Note: If future software updates are made to permanently rectify this issue, customers will be notified via TSB.)

When functioning correctly, and the limit is approached moderately, the pit speed limit should not exceed the 40.0kph set point.

We see ~1-1.5kph margin in most cases.

The following will disable pit speed limit function, even if the pit limit button is activated:

- Clutch position > 0%
- ABS module power is off
- Any ABS malfunction where power is lost or wheel speeds are lost or interrupted
- ABS switch position = 12
- PCM speed is lost (refer to item 4)



6. Mandatory Technical Change: MC TSB 57 5-29-2026 Hood Pin System Upgrade

Customers are advised that as of Round 4 of Mustang Cup Australia, items listed in TSB 57 are considered **mandatory**.

[https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2026/6/MC%20TSB%20%2057%205-29-2026%20Hood%20Pin%20System%20Upgrade%20\(1\).pdf](https://www.fordracing.com/content/dam/fordPerformance/motorsport/mustang-challenge/pdfs/2026/6/MC%20TSB%20%2057%205-29-2026%20Hood%20Pin%20System%20Upgrade%20(1).pdf)

As such, taping of bonnets will no longer be permitted.

Updated Hood Pin/Aero Catch with internal and external reinforcing plates:





7. Post Session Data Download & Footage rules and format reminder

Competitors are reminded of the following, as per Version 3 of the sporting regulations:

Parc Ferme Data Download:

12.3.4 One team member per Automobile may enter Parc Fermé for the sole purpose of checking tyre pressures, removing the in-car camera SD card and, if advised by the TD via the Dark Horse R messenger app, downloading data, and must leave Parc Fermé immediately when these operations are completed. Each operation may be performed by a different team member but only one team member per Automobile is permitted in Parc Fermé at the same time.

This rule has been revised since version 1, and as such teams are reminded that they must wait for approval to download their data during Parc Ferme.

Once approval is given:

21.5 The TM or nominee will provide each Competitor with a USB stick at the conclusion of each session and all MoTeC logged data for each of their Automobiles from that session must be downloaded onto the USB stick and returned to the TM or nominee within 30 minutes.

Data & Fastest Lap Footage Sharing Schedule:

21.9 The Driver who records the fastest lap time in Practice 1, Practice 2, Qualifying 1 and Qualifying 2 at each Round (as displayed on the timing screen at the end of each session) will have their fastest lap footage and a minimum of the data as listed in the table below from their Automobile's fastest lap time data shared with each other Driver

Refer to the minimum channels table on the following page.



Minimum Channels Table:

Channel	Unit	Logging Rate	Precision
v_ground_speed	km/h	20 Hz	1 dp
D_gear_PCM		10 Hz	0 dp
a_steer_wheel_PSCM	deg	100 Hz	1 dp
p_brake_front_abs	bar	100 Hz	1 dp
p_brake_rear_abs	bar	100 Hz	1 dp
n_engine_rpm_PCM	rpm	100 Hz	0 dp
r_aps1_PCM ecu	%	20 Hz	1 dp
GPS Speed	km/h	20 Hz	1 dp
GPS Altitude	m	20 Hz	1 dp
GPS Heading	deg	5 Hz	2 dp
GPS Latitude	deg	20 Hz	7 dp
GPS Longitude	deg	20 Hz	7 dp

Note: This table shows the minimum required value; the actual precision can be equal to or exceed the minimum.