



July 22, 2026

Technical Service Bulletin – 58

Mustang Dark Horse R Mandatory Calibration Updates: MoTeC Dash, Display Creator & PCM

Purpose: To explain the changes/refinements made to the MoTeC display/configuration and also the PCM calibration

Key areas of focus:

- 1. MoTeC Display – LED configuration updates**
- 2. ABS System Displays & Messaging**
- 3. Vehicle speed display**
- 4. Clutch system displays & messaging**
- 5. Rev-match function messaging**
- 6. Pit Speed Limit – PCM calibration update**

Technical Documentation Location:

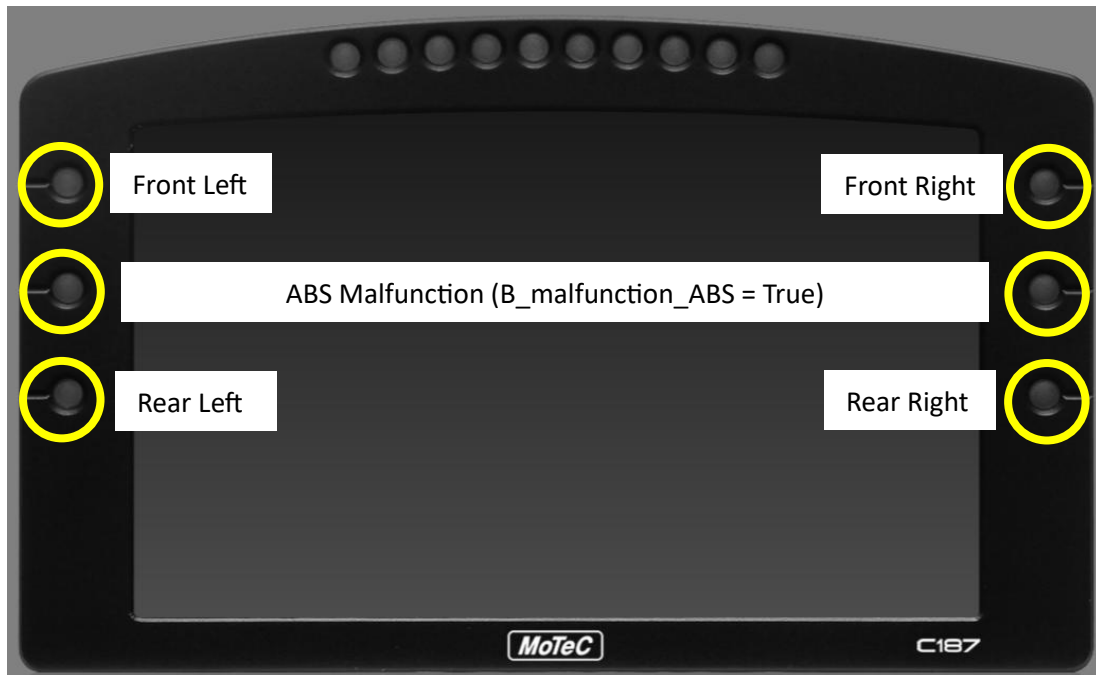
Reminder that all relevant Mustang Dark Horse R, Mustang Cup Australia technical documents and files can be found here:

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



1. MoTeC Display – LED configuration updates

From this update forward, the side LEDs circled in the C187 display diagram below will represent the four corners of the car – Left Front, Right Front, Left Rear, Right Rear. The center LED's are specific to ABS malfunction (refer to SLM updates).



Should a condition be triggered relating to a specific corner of the car, that corresponding LED will be illuminated (either solid or flashing).

In the case where the lights are illuminated due to the ABS system, a corresponding message will also be displayed – either as a warning banner or within the ABS settings window. Further details on these specific cases will be explained in section 2.

LED trigger/illumination conditions added include:

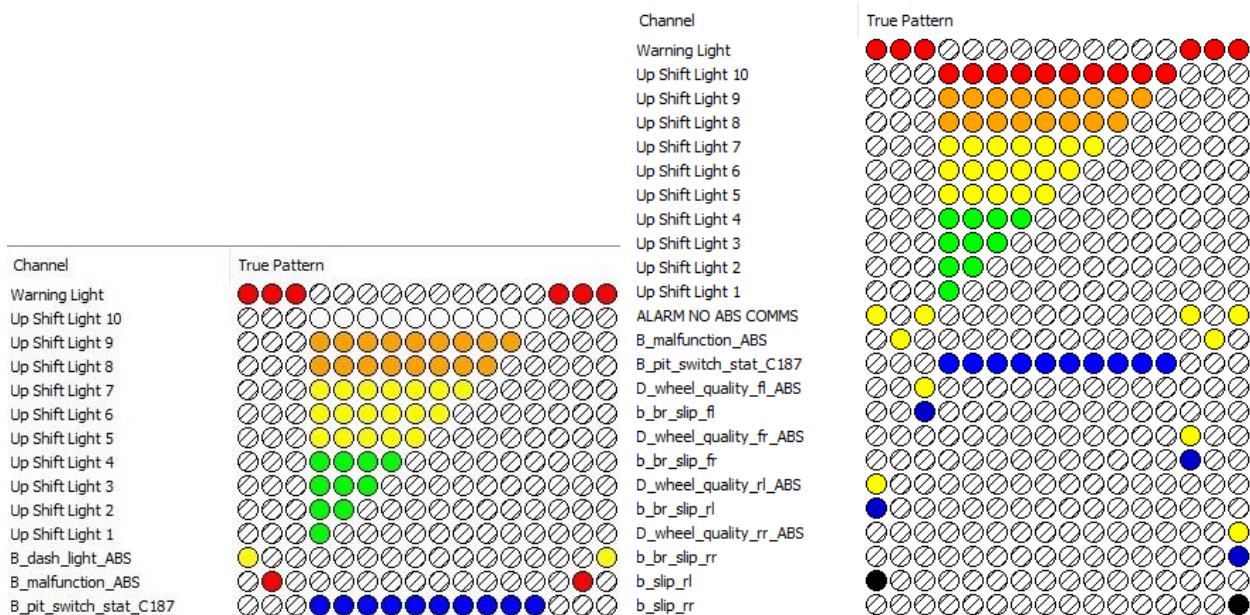
- Wheel Locking During Braking (FL, FR, RL, RR)
 - When ABS is active
 - Color: Blue/Black (flashing)



- ABS System Notifications (FL, FR, RL, RR)
 - Color: Yellow (solid)
 - Wheel Quality >1 (i.e. wheel speed signal issue/lost/error)
 - ABS lost communication/power switch moved to off position (lights between corner lights)
 - ABS rotary switch set to position 12
 - ABS malfunctioned
- Rear Wheel Slip During Acceleration (RL, RR)
 - Color: orange/black (flashing)
 - Left Rear and Right Rear only
 - Slip light activation threshold can be adjusted by changing the corresponding constant in the dash configuration
 - Calculations>constants>v_slippct (default 7%)

SLM Configuration comparison:

Previous shown on the left, updated/new shown on the right



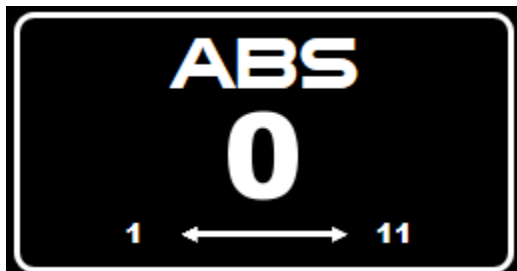


2. ABS System Displays & Messaging

These display updates are intended to improve the level of information provided to the driver, aiding their understanding of how to deal with a particular vehicle state, characteristic or problem they may have.

The ABS status display location is the same, however the surrounding box is enlarged, and coloration has changed to align with “normal: white” and then “alarm: yellow & red” conditions.

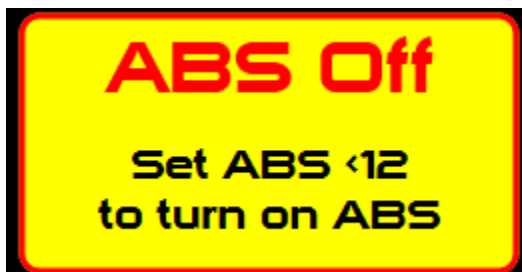
ABS Normal (Switch range 1 to 11):



Displays the current switch position when ABS system is functioning normally.

Per section 1, when the ABS system is not in normal operation state, the messages displayed below will also be accompanied by illuminated side LED's, as well as the ABS Mil () and potentially an error banner.

ABS Off – Switch Position = 12:





ABS Off – ABS power switch set to off:



Please note, when the ABS is powered off, pit speed limit (PSL) control will be unavailable, and this message will be displayed on the bottom line of the dash:

ABS OFF - PSL NOT AVAILABLE

ABS Malfunction – After an off-track excursion:



Per the last PETS post QR, drivers and teams are reminded that in the event their car has an off-track excursion and the driver spins the rear wheels and causes this fault, they should do the following;

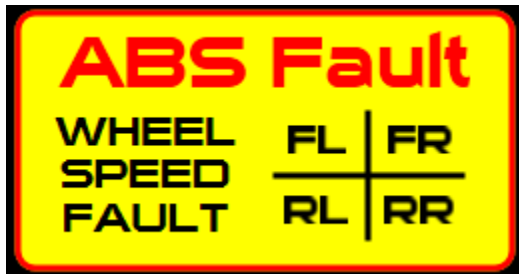
- Cycle ignition and re-start the car
- Drive away while paying attention to the ABS warning light and system behavior.

Drivers need to monitor the dash after an ignition cycle and look for the following:

- If the ABS normal function display returns once the vehicle exceeds 12kph, the system is functional.
- If the ABS fault messaging remains, there may be further damage, and the driver should pit for repair.



ABS Malfunction – Wheel Speed Sensor Fault:



Note – the four-box will only display the corner which is currently in a state of fault. In this image as displayed, all four sensors would be at fault.

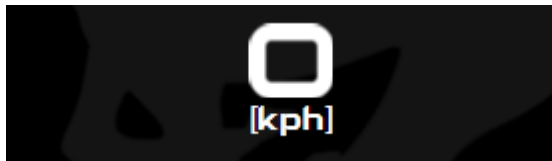


3. Vehicle Speed Display

In the event that the PCM speed signal is lost, the speed value displayed in the center of the dash will automatically switch to GPS speed.

If PCM speed and GPS speed are both lost and ground speed is still available, that will be displayed as a last resort. (Note: this is an unlikely scenario given the linkage between PCM speed and Ground Speed)

PCM Speed normal function (default):



PCM Speed Lost, GPS Speed Active:



PCM & GPS Speed Lost, Ground Speed Active:



Please note, that if PCM speed is lost, there will be other accompanying errors which will be detailed in the next section. As that speed signal is used for other items, such as rev match and pit speed control.

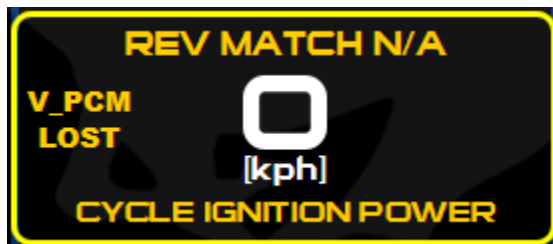


4. Rev-match function messaging

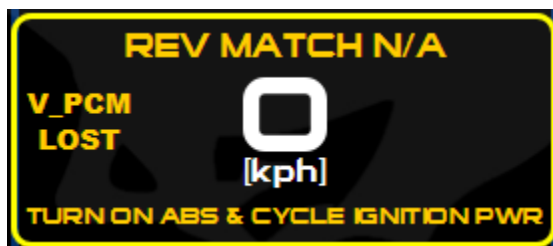
Following on from section three, if PCM speed is lost while driving, rev match functionality will also be lost, even if the rev match toggle switch is active.

Updated Display Messaging is as follows.

PCM Speed Lost:



PCM Speed lost, via ABS power off:



In order to reinstate rev match functionality, the message instructions should be followed i.e. cycle ignition power.

If the dash message instructions are followed and the problem is not rectified, the driver must decide the best course of action or look for other error messages displayed.

Note: the vehicle can still be driven without rev match functionality.



5. Clutch system displays & messaging

The bottom line of the dash now has added information relayed to the driver informing them if they are actuating the clutch abnormally during situations when the vehicle needs to see 0% clutch pedal.

On track:

If the driver is riding the clutch while on track during an acceleration zone, where a gear change is not occurring, they will see the following message on the bottom line of the dash:

RESTING ON CLUTCH

In pit lane:

If the driver is riding the clutch while in pit lane, and the PCM is actively trying to control vehicle speed to meet the pit speed limit (PSL) threshold, they will see this message on the bottom line of the dash:

ON CLUTCH - PSL DISABLED

If the PCM sees any clutch position value ($>0\%$) during PSL control, the PSL control will be disabled.



6. Pit Speed Limit – PCM calibration update

During the Queensland raceway event, it was discovered that if the pit speed limit value (v_pit_speed_lim) was set below 40.0kph, the PCM was unable to control vehicle speed.

Channel	Initial Value
Brightness_Override	0 %
driveshaft_limit	9000 rpm
n_software_ver_C187	14.0
r_axle_ratio	3.55
v_pit_speed_lim	40 km/h

As such, the updated calibration (available via Pro-Cal) allows teams to set PSL speed at or below 40.0kph and still have vehicle speed control with PSL active.

Calibration Name: 2026DarkHorseR v10

The update process will be identical to previous calibration updates, i.e. refer TSB 47, link: [Technical Service Bulletin - 47](#)

Please note, if a driver accelerates rapidly up to the PSL set point (large change in throttle position) the PSL function may be unable to control vehicle speed to meet the set point value.

Per PETS Round 3, 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