2015 Corvette: GM TechLink: Performance Data Recorder

Subject: Performance Data Recorder
Model and Year: 2015 Corvette
Source: GM TechLink
Page Number: NA
Date: September 8, 2014

The 2015 Chevrolet Corvette Stingray (Fig 1) is offering an industry-first factory-installed, integrated Performance Data Recorder (PDR). The PDR, developed by Cosworth Engineering, the British motorsports-engineering company that supplies telemetry for the Corvette Racing team, enables drivers to record high-definition video, with telemetry overlays, of their driving experiences. (Fig. 2)

Fig. 1

The PDR is available as an option on any 2015 Corvette Stingray equipped with the navigation system. It will appeal to drivers who wish to improve their driving skills through studying and analyzing results as well as those who want to share their driving experiences with others on the web.

The recorded video can be reviewed immediately in-car when parked or downloaded to a personal computer.

Click below to see the PDR in action. (Fig. 3)

Components

The PDR consists of three components: a high-definition (HD) camera, telemetry recorder and a dedicated SD-card slot.

The HD camera, integrated with the rearview mirror, captures the driver's point-of-view through the windshield, and sound is captured with a dedicated microphone.

The telemetry recorder obtains data from two sources. First a dedicated GPS receiver operates at 5 hertz, five times faster than a typical in-dash navigation system. The recorder is hard-wired into the Stingray's Controller Area Network, or CAN, to access 30 channels of vehicle information, ranging from engine speed and transmission-gear selection to braking force and steering-wheel angle.

The dedicated SD-card slot is located in the glove box. It provided the capability to record and transfer video and vehicle data. An 8 GB card can hold approximately 160 minutes of video and

data, while a 32 GB card stores up to 800 minutes — more than 13 hours of driving time.

Telemetry Overlays

Depending on the data desired, the driver can choose to overlay the driving video with four different levels of information.

The **Sport Overlay** includes key vehicle data, such as speed, gear position, RPM and lateral G-forces. (Fig. 4)

Fig. 4

The **Track Overlay** adds GPS tracking map and brake/throttle application. This is the maximum information overlay. (Fig. 5)

Fig. 5

The **Performance Timer** overlay provides performance metrics, including 0-60 mph (0-100 km/h) time, 0-100 mph (0-200 km/h) runs and 1/4-mile (400 m) time. (Fig. 6)

Fig. 6

And finally, the **Tour Mode** provides video and audio with no data overlay. (Fig. 7)

Fig. 7

Playback

There are several choices for playing back and reviewing the recorded data.

The driver can view the data on the car's 8-inch (203 mm) color touch screen when the vehicle is parked.

The SD card can be removed from the car and plugged into a computer for viewing.

In addition, the SD card can be used to drive the Cosworth Toolbox, an included application that provides a number of viewing options and data analysis.

The Cosworth Toolbox includes:

- Stats Page – Allows comparison of lap-to-lap data.
- Video Plus Data – Permits comparing acceleration, braking, and steering angle to aid in improving lap-to-lap performance.
- Corners Page – Provides a satellite map of the track with displays of maximum speed, gear number, steering angle and gain/lose comparisons. (Fig. 8) This permits the driver to visualize driving inputs as they relate to specific portions of the road or track being driven.

Fig. 8

Click below to see how these tools were used by several driver's on a closed course in the PDR Track Challenge. (Fig. 9)

Valet Mode

The PDR also works with the Valet Mode, which allows drivers to lock the interior storage, disable the infotainment system and record video, audio and vehicle data by entering a unique four-digit code on the infotainment touch screen. (Fig. 10) With Valet Mode activated, any vehicle activity is recorded while the owner is away from the vehicle.

Fig. 10

- Thanks to Jeff Strausser
GM TechLink

Online URL: https://www.corvetteactioncenter.com/tech/knowledgebase/article.php?id=884