



Android and Torque Data Log Troubleshooting Procedure

This procedure explains how to data log using the torque application on an android device. We use this to fine tune/optimize the ECU tuning, troubleshoot mechanical issue, and gather data that can help us understand the engine better.

1. Download and Torque App

1. Once you have an android phone or tablet go to google play and download the application torque. It is about \$5
<https://play.google.com/store/apps/details?id=org.prowl.torque&hl=en>



Figure 1, Torque App Icon

2. Open the device and click on the settings icon in the lower left corner.



Figure 2, Torque Settings

3. Select the **Vehicle Profile** and **Create a New Profile** button to create a vehicle profile.

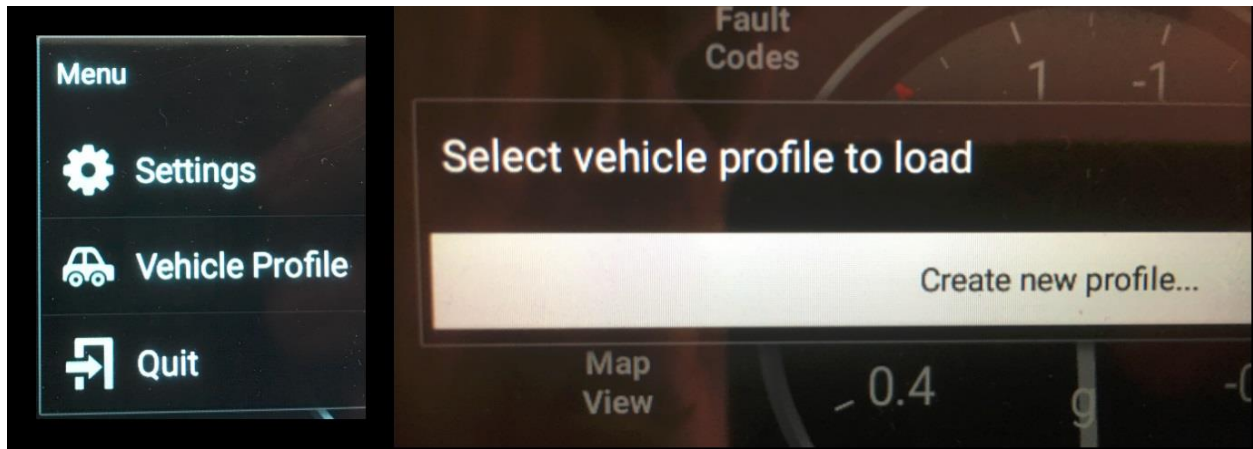


Figure 3, Vehicle Profile and Create a New Profile

4. Select, set, and name all items that matches your car profile and when finished select the **Save** button. Once saved the vehicle will have your name and setting for use later.
5. Click the **Return** button at the bottom of the Android device to the home page of the torque App.
6. Click on the **Settings** icon button in the lower left corner (see figure 2) and again on figure 2.
7. Click on the **Data Logging & upload** to select the items to logs.

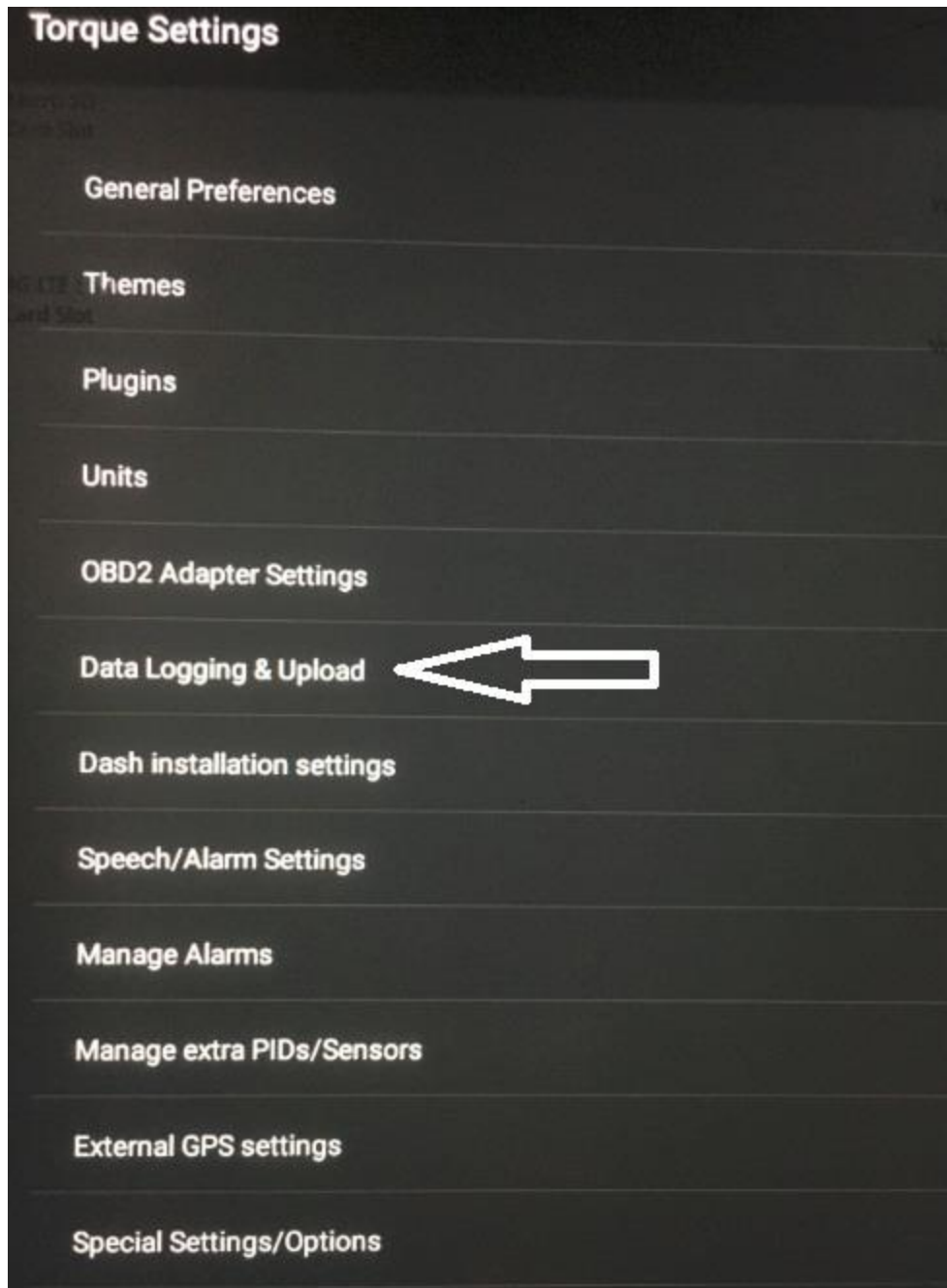


Figure 4, Data Logging & Upload

8. Select the button **Select What to Log** to setup the PID to log.

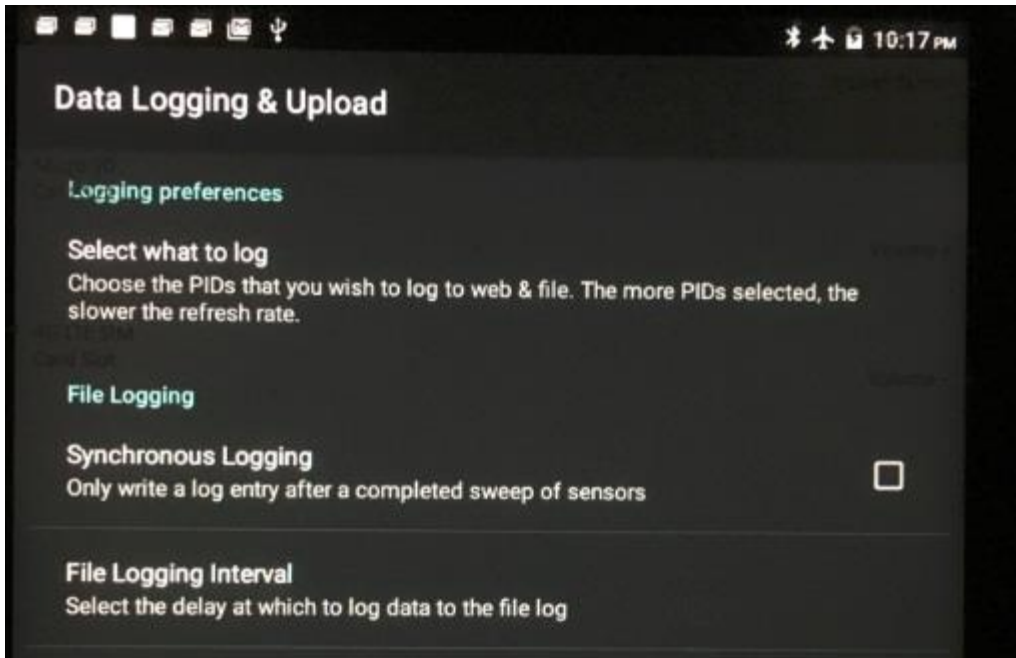


Figure 5, Select What to Log

9. Select the 3 vertical “.” in the corner of screen and select the **Add PID to Log** button.

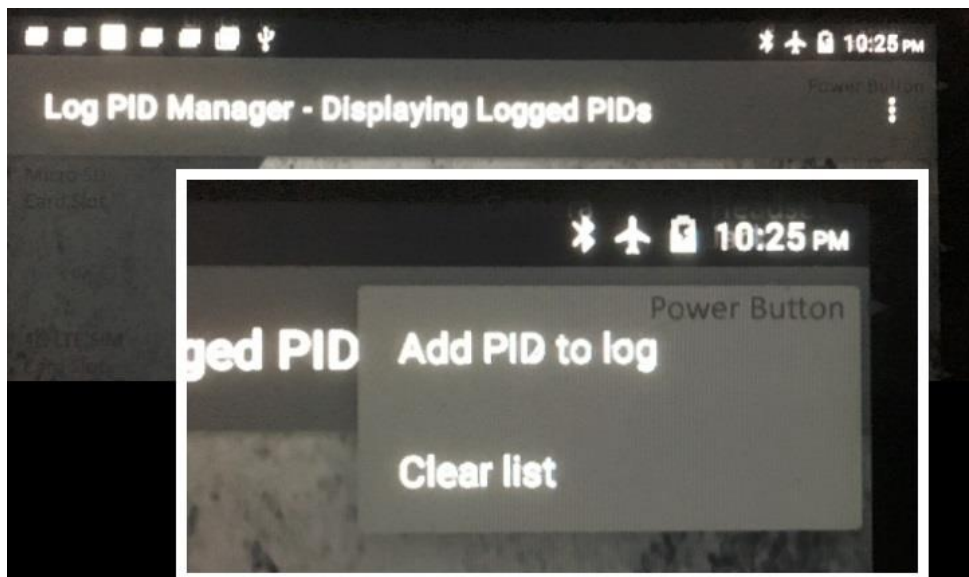


Figure 6, Add PID to Log

10. Select the following **Air to fuel ratio (measured), Absolute Throttle Position, Absolute Engine load, Engine RPM, Timing Advance, and Turbo Boost & Vacuum Gauge.**
Note; if connected to the ELM327 the active log-able PIDs will be green.

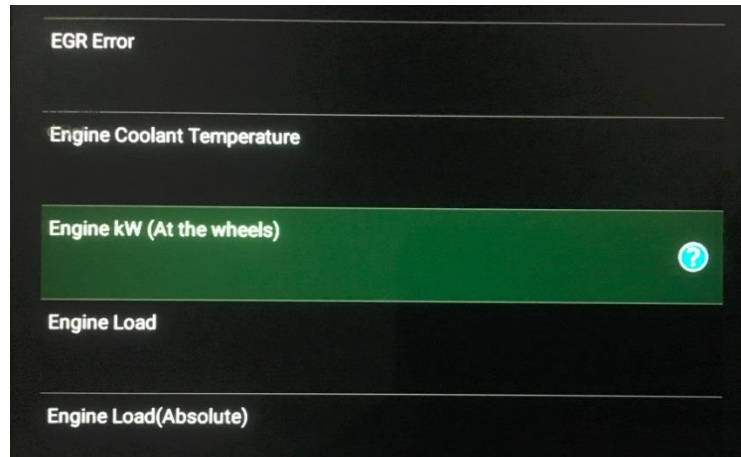


Figure 7, PID Selection

11. Once selected the logs will appear as shown below.

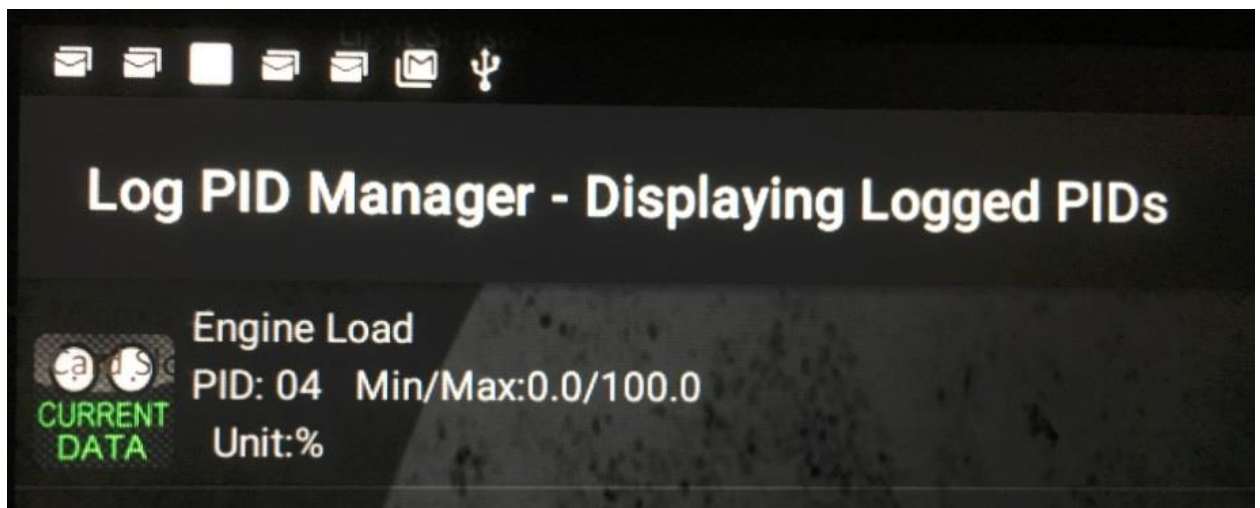


Figure 8, Added/Stored PID that will log

12. Once all PID selected use the back arrow to return to the **Data Logging & Upload** menu.
13. Select **File Logging Interval** and set the max interval of **.1 seconds** (sample per second).

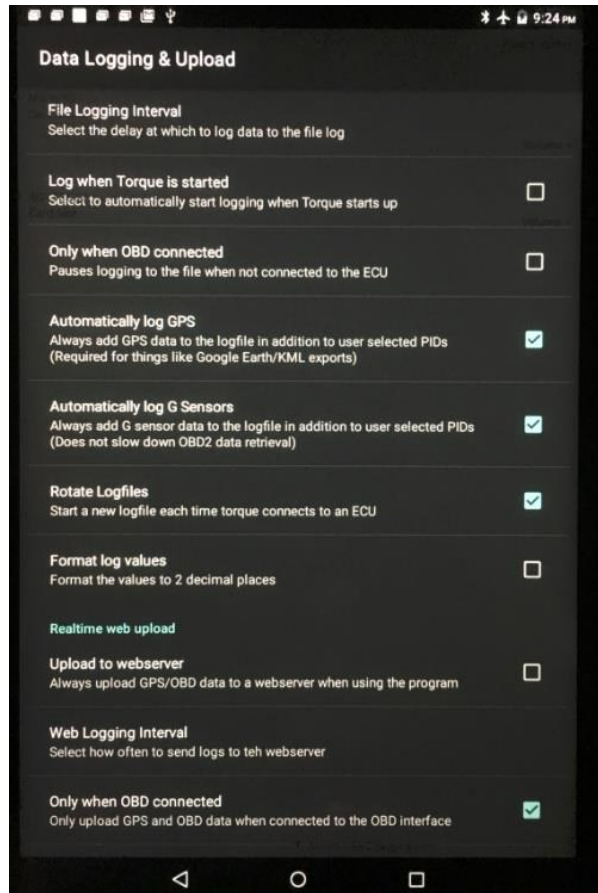


Figure 9, Data Logging & Upload Settings

14. Click on the box to **Un-check** the **Automatically Log GPS, Automatically Log G Sensor, Only When OBD Connected, Automatic trip recording, Log Trip Fuel Consumed, Log to Twitter, Add Location to tweet, and Only Tweet when ECU Connected**. This will slow down your android device and add a lot of needless data that could impede the function and quality of the data.
2. **Bluetooth and ELM327 Pairing**
 1. Plug the ELM327 into your OBD connector under the dash, driver side.

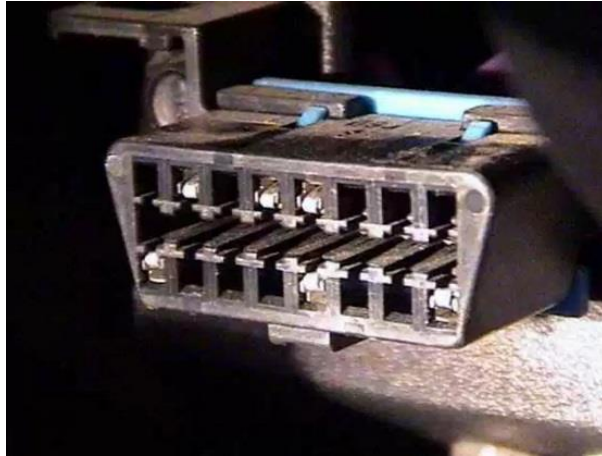


Figure 10, OBD2 Connector

2. Start the car and click on the Settings Icon/button on the android home screen or in the Application screen.

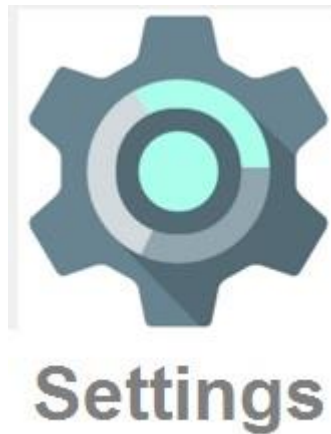


Figure 11, Android Settings

3. Select the **Bluetooth Icon** for more information see the link https://torque-bhp.com/wiki/Main_Page.



Figure 12 Bluetooth Icon

4. Turn on the Bluetooth by clicking or toggling the setting to **on** in the upper right corner (see figure 13).

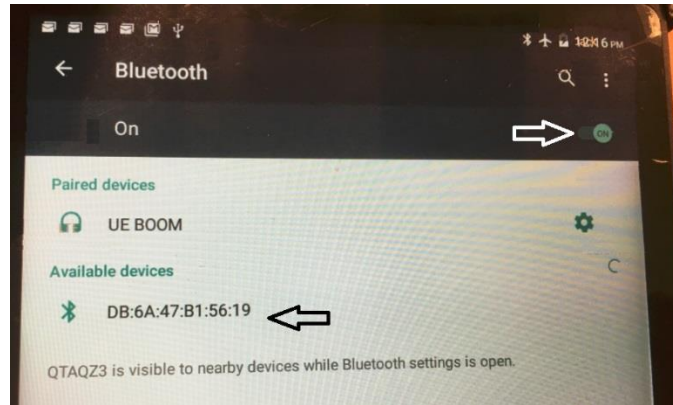


Figure 13, Bluetooth Pair Menu

5. Select the **ELM327** under the **available devices**, it may not be named "ELM327" figure 13 shows the device name as "DB:6A:47:b:56:19". To eliminate any confusion you may want to disable all other Bluetooth devices.
6. Once the device is detected select the device and the **Pairing** will appear below the device see figure 14.

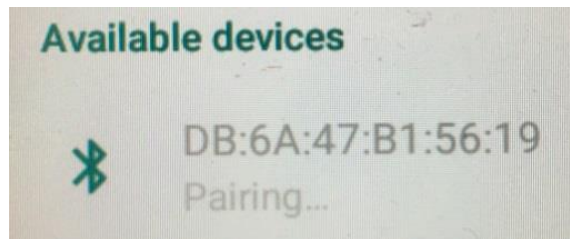


Figure 14 Bluetooth Device Pairing

7. Depending on the device it may require a password to be entered, most passwords are either 0000 or 1234 and click **OK**.
 8. Once paired the device will appear under **Paired Devices** (See Figure 13).
 9. Close the settings screen by clicking the back arrow < at the bottom of the android device (see Figure 9).
- 3. Data Logging Start, Stop, and Simulated Dyno Pull.**
1. Open the Torque app by selecting the Torque icon on your android device (see Figure 1).
 2. From the torque home screen select the **Realtime Information** (small gauge above the large Acceleration gauge) on the home screen (see Figure 15).

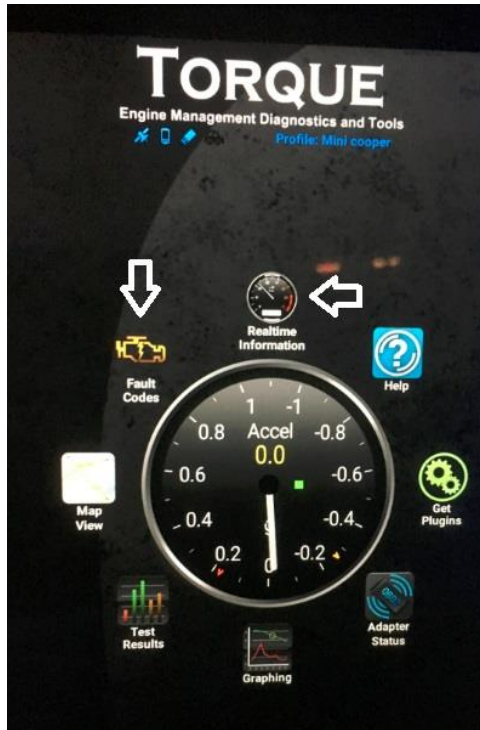


Figure 15, Torque Home Screen

- Once on the **Realtime Information** screen wait for the **Revs** (RPM) gauge to display the real time RPM of your car. If it doesn't connect in a few moments make sure that the ELM327 device is installed and working (may have lights that blink), and it is connected to the Bluetooth and your car is running.



Figure 16 Realtime Information Screen

4. Once the device is working take your car to a safe place to do a simulated dyno pull select the settings button in the lower right hand corner of the **Realtime Information Screen** (see Figure 16).



CAUTION!

We do not recommend braking the law or putting yourself or anyone in danger so please do not operate this device while driving!

5. Select the **Start Logging** button from the **Realtime Information** Screen to start logging the PIDs setup in [step 7 of section 1. Download and Torque App](#). This will start the Torque App data logging and will log all PIDs that were selected. When logging the button will change to the state of **Stop Logging**.

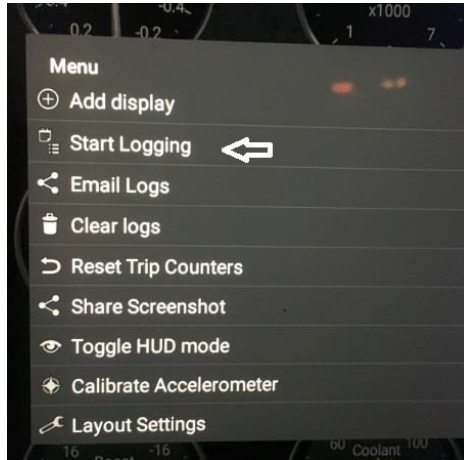


Figure 17, Realtime Information Screen Menu

6. Perform dyno pull, recommended performing the following steps on a dyno.
Manual Transmission
 - i. Accelerate slowly until in third gear and about 1200 to 1500 RPMs.
 - ii. Depress the throttle fully to achieve max RPM and Power quickly without shifting into another gear.
 - iii. Once 6500 RPMs have been reached Lett off throttle and drive normally for one minute, cruse and shift equal time.Automatic Transmission
 - i. Accelerate slowly until in third gear and about 1200 to 1500 RPMs.
 - ii. Depress the throttle fully to achieve max RPM and Power quickly.
 - iii. Once 6500 RPMs have been reached in 4th or 5th geatr lett off throttle and drive normally for one minute, cruse and shift for equal time.
7. Select the settings button in the lower right hand corker of the **Realtime Information Screen** (see Figure 16).

8. Select the **Stop Logging** Button to Disable/Stop the log function, and the button will return to its default state of **Start Logging** (See Figure 17).

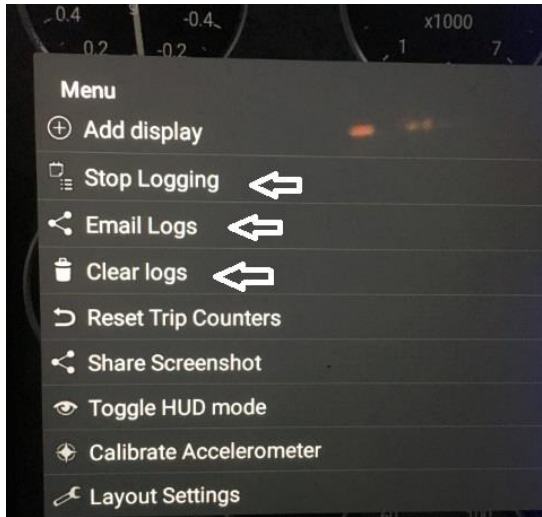


Figure 17, Stop Logging

4. Sending the logs to JMTC Support
 1. Connect the device to the internet and press the the **Email Logs** button from the **Realtime Information Screen Menu**.
 2. Select the **CSV (Comma Separated Values)** format (See Figure 18).

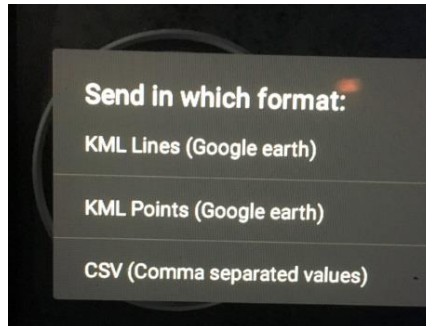


Figure 18, Comma Separated Values

3. Choose the email you wish to use to send the file (See figure 19) and send it to support@jmturbocoopers.com.

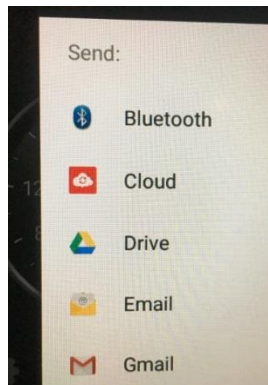


Figure 19, Email File

4. Fill in the email information and include the following info.
 - Name,
 - Date
 - Symptom of the problem
 - Year and model of the car
 - List of the upgrades