

The information presented here describes how to use FORScan and FORScan Lite on our 7.3L trucks, to read diagnostic trouble codes, run self tests, and monitor important engine parameters.

You will find basic instructions for use of this software on the FORScan.org website:

[FORScan Lite Instructions - Android](#)

[FORScan Instructions - PC](#)

[FORScan Lite Instructions - iOS](#)

The FORScan apps can be downloaded [here](#).

For OBDII dongles that connect to the OBDII port under the driver's knee panel, you have some choices. 3 are listed below.



[Bluetooth BAFX on Amazon](#)

[Wifi BAFX for iOS on Amazon](#)



[OBLink MX+ on Amazon](#)



[OBDLink EX on Amazon](#)

Note: If the links to these products don't work – searching on the description should get you what you need.

I'm using the bluetooth OBDII dongle from BAXF with FORScan Lite primarily on my ATOTO S8 android headunit, and sometimes a Samsung S7 android phone, but I've also used it to connect to my laptop running FORScan for Windows.

If using a wireless dongle, verify that you can pair the OBDII dongle with your head unit, phone, tablet or laptop. When the dongle is plugged in to the OBDII port and the key on, you should be able to see the dongle when you scan for devices.

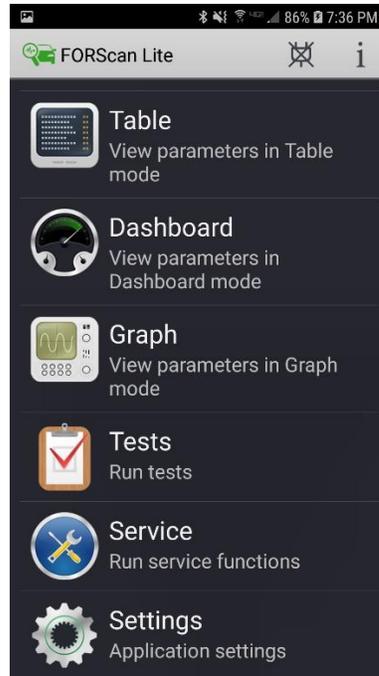
NOTE: Some OBDII dongles like the BAFX shown above have significant parasitic current draw when not in use. It's recommended to unplug these dongles when not using the vehicle for 48hrs or more. The OBDLink devices shown can be left plugged in, due to a sleep mode feature that results in negligible parasitic draw.

When you first download/install and then start the app, there are some things to setup.

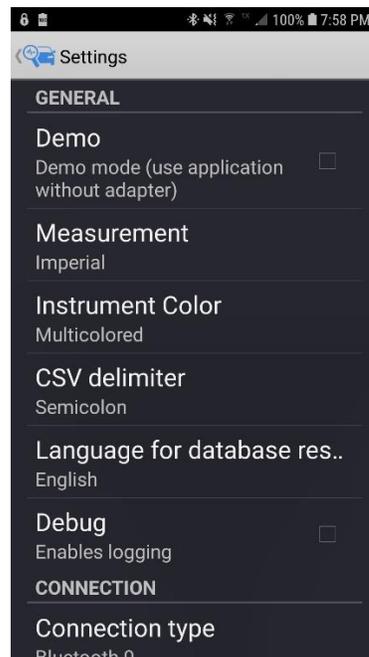
Sometimes it's helpful to view FORScan data in a spreadsheet, and chart the data, rather than use the software's own charting capability. To use Forscan CSV files in an Excel spreadsheet, a setting needs to be changed. "Comma" delimiting must be selected in order to export CSV files from Forscan that Excel will import correctly.

To update the setting in FORScan Lite:

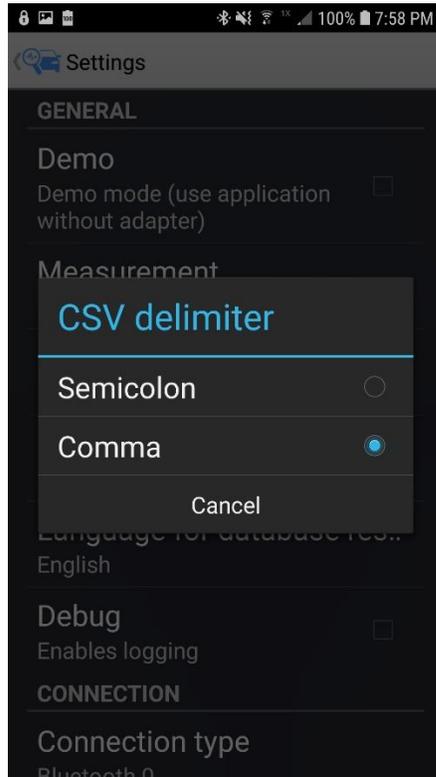
1. Open the App, scroll down and select Settings



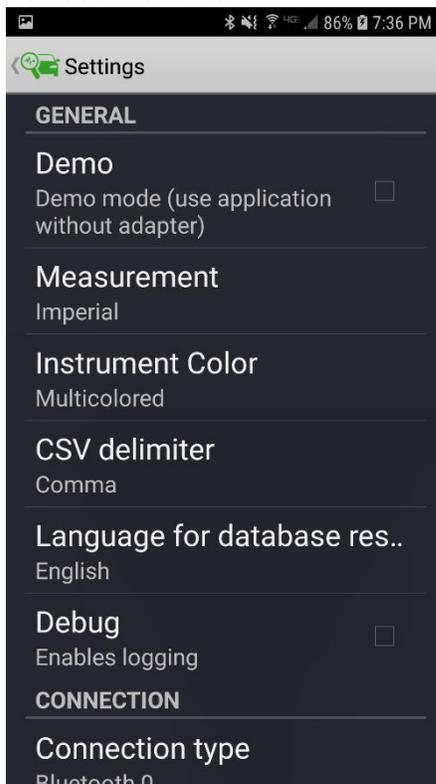
2. Select CSV Delimiter



3. Select the Comma radio button.

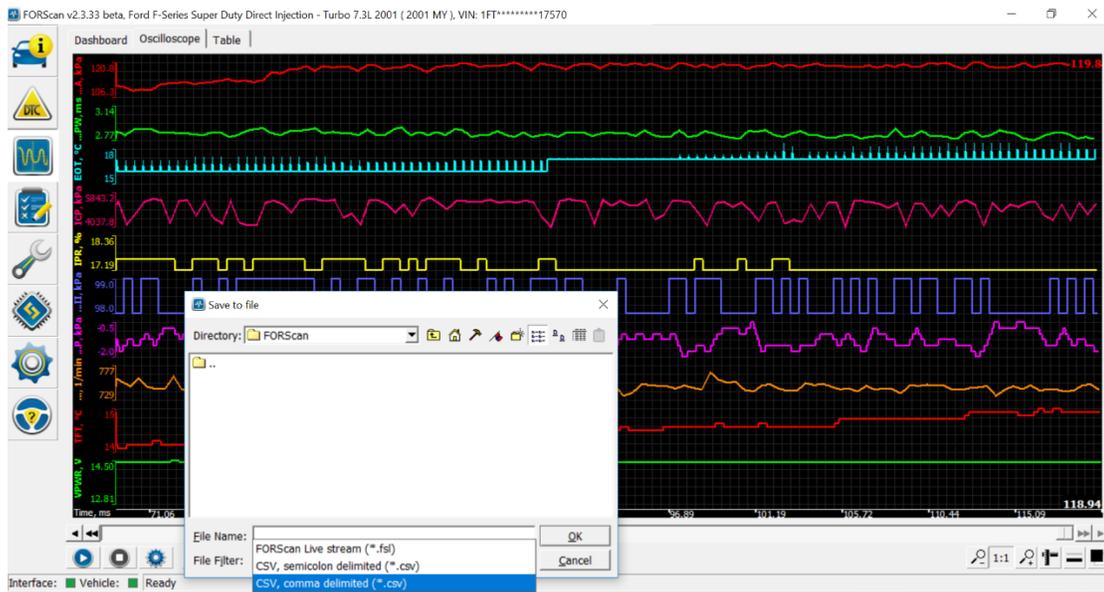
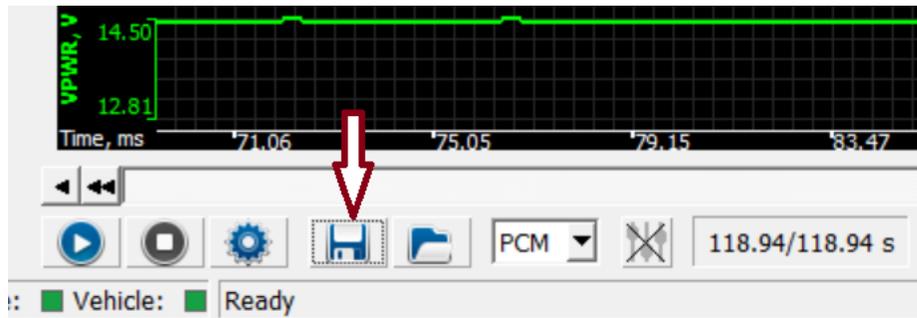


4. Verify Comma is listed under CSV delimiter.



The windows version of Forscan handles CSV file creation differently from Forscan Lite.

When saving your log file, enter the file name you wish to use for the log, and select the File Filter of CSV, comma delimited (*.csv). This will save the log in a format that can be read by MS Excel.



If you are using a bluetooth OBDII dongle, I also recommend checking "Enable Bluetooth on start" and setting Auto-Connect to "Connect automatically when the application is started". That way, as soon as you tap or click the application icon, it goes to work connecting to the truck.

Let's setup Forscan/Forscan Lite to capture most of the Parameter Identification Data (PID's) you might need to troubleshoot an issue. They are listed below.

RPM(1/min) – Engine revolutions per minute

IPR% - IPR duty cycle percentage

ICP(psi) – Injector Control Pressure (select ICP, not ICPV, as seen in the image below)

VSS(mph) Vehicle speed sensor

FUELPW(ms) – Fuel injector pulse width

MFDES(mg) – Mass fuel desired

EBP_A(psi) – Exhaust back pressure (select the EBP_A and not EBP)

MAP(psi) – Manifold air pressure

IAT(A°F) – Intake air temperature

MAT(A°F) – Manifold air temperature

EOT(A°F) – Engine oil temperature (select EOT, not EOTV, as seen in the image below)

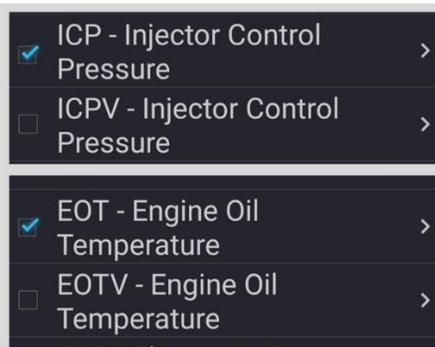
MGP(psi) – Manifold gauge pressure (boost)

ECT(A°F) – Engine coolant temperature (only available on ZF6)

TFT(A°F) – Transmission fluid temperature (only available on 4R100)

VPWR(V) – Vehicle battery power

TC_SLIPACT(1/min) – Torque converter (only available on 4R100)

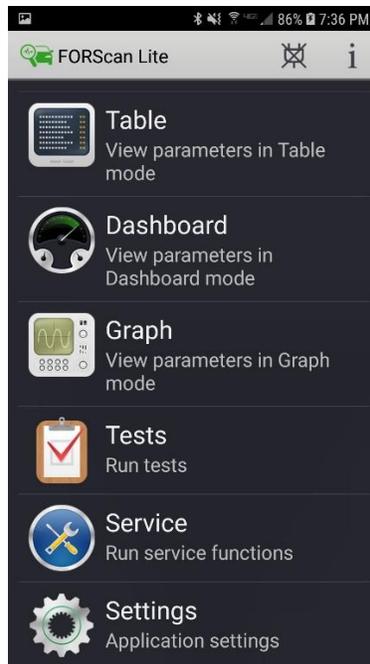


Two additional PIDs that might be helpful:

BAROV - Barometric pressure (select PSI instead of the default volts)

APP - Accelerator Pedal Position

To select these PIDs in Forscan Lite, tap the Table, Dashboard or Graph icon,



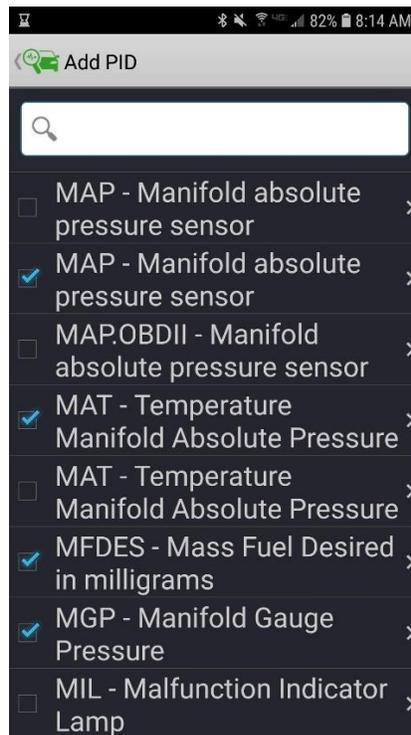
then tap the "gear" symbol,



and then the "+" symbol at the top of the screen.



All of these PIDs are in the PCM module. You can select each PID by checking the box next to it.



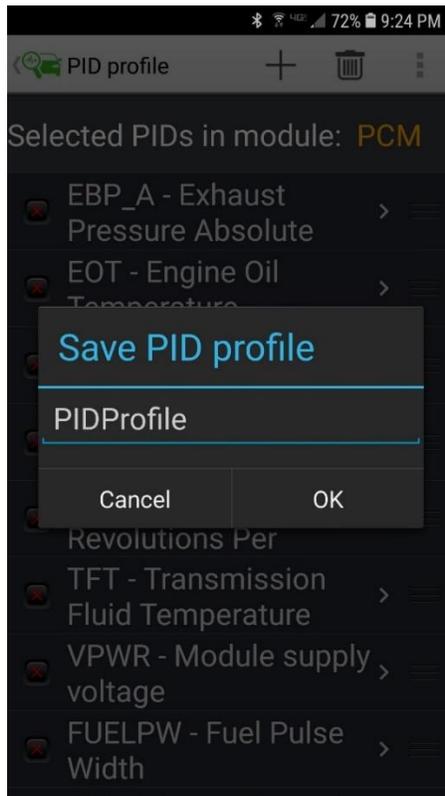
Once you have your PIDs selected, they will be available to you each time you start the application.



You can arrange them in the order you would like them displayed. Just tap and hold the PID you want to move, and drag it where you want it. In the Table, Dashboard or Graph/Oscilloscope displays, the PIDs will be arranged in the order of your PID list. I have not been able to drag them in the Graph, Dashboard, or Table views directly.

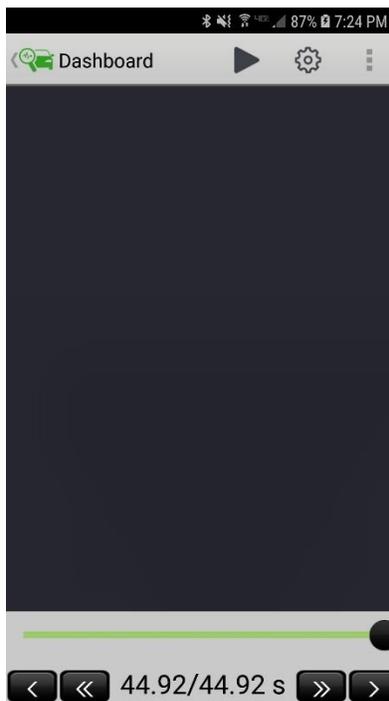
Once you have your PID list, it's a good idea to save it. Sometimes Forscan.org pushes an application update to your device, and the PID list is deleted. If you save the PID profile, you can easily load it back in.

To save your list, tap the 3 vertical dots in the upper right, then hit OK. You can change the name to save more than one PID list if you want. I made a separate list for PERDEL PIDS, for instance.

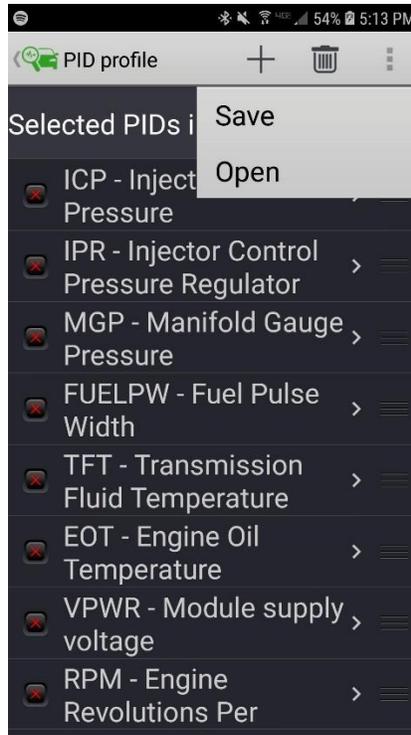


To load a PID profile into FSL, open the app and connect to the OBDII dongle.

When you have the green icon indicating it's connected, from the Home screen, go to any PID view: Dashboard, Graph or Table, and tap the gear icon:



Tap the 3 vertical dots, then tap OPEN

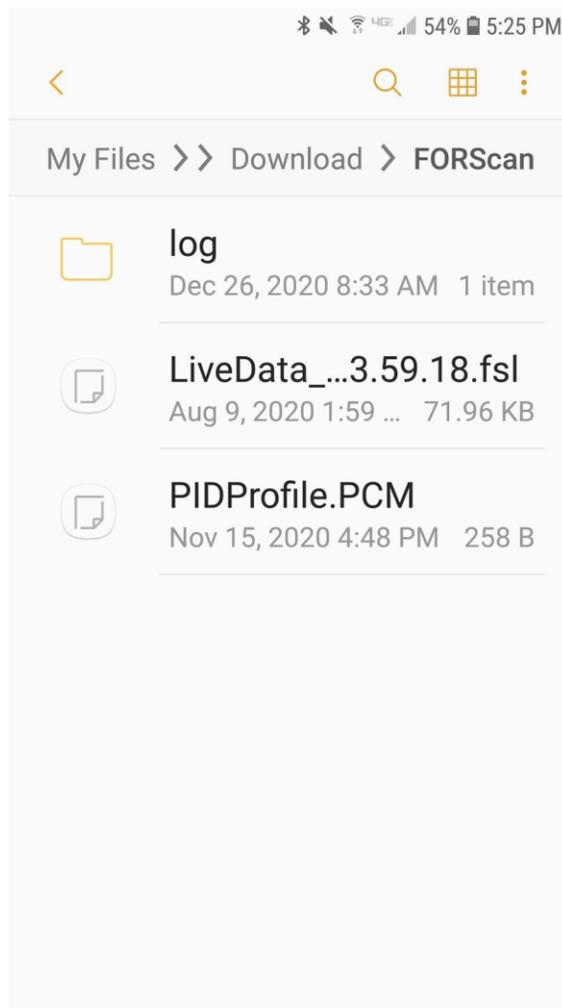


FSL will display the screen below, and the *.PCM PID profile file, if it finds it. The default name is shown below:

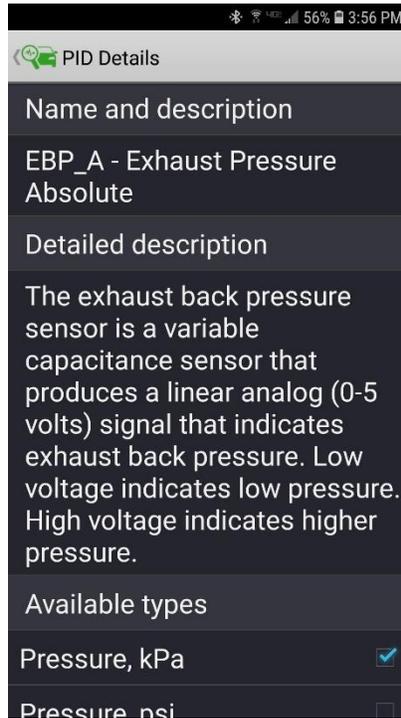


Tap the filename and it should load your PIDs.

I did this on my S7 phone, and noted that the PID profile is stored in my downloads folder. Any logs I save on the device end up there as well:



Some of the PIDs may be in units that are not preferred. You can change the units of any PID by tapping on them in the PID profile screen. EBP_A for example, defaults to kPa units. We want PSI. Tap on the EBP_A PID. You will get a screen like this:

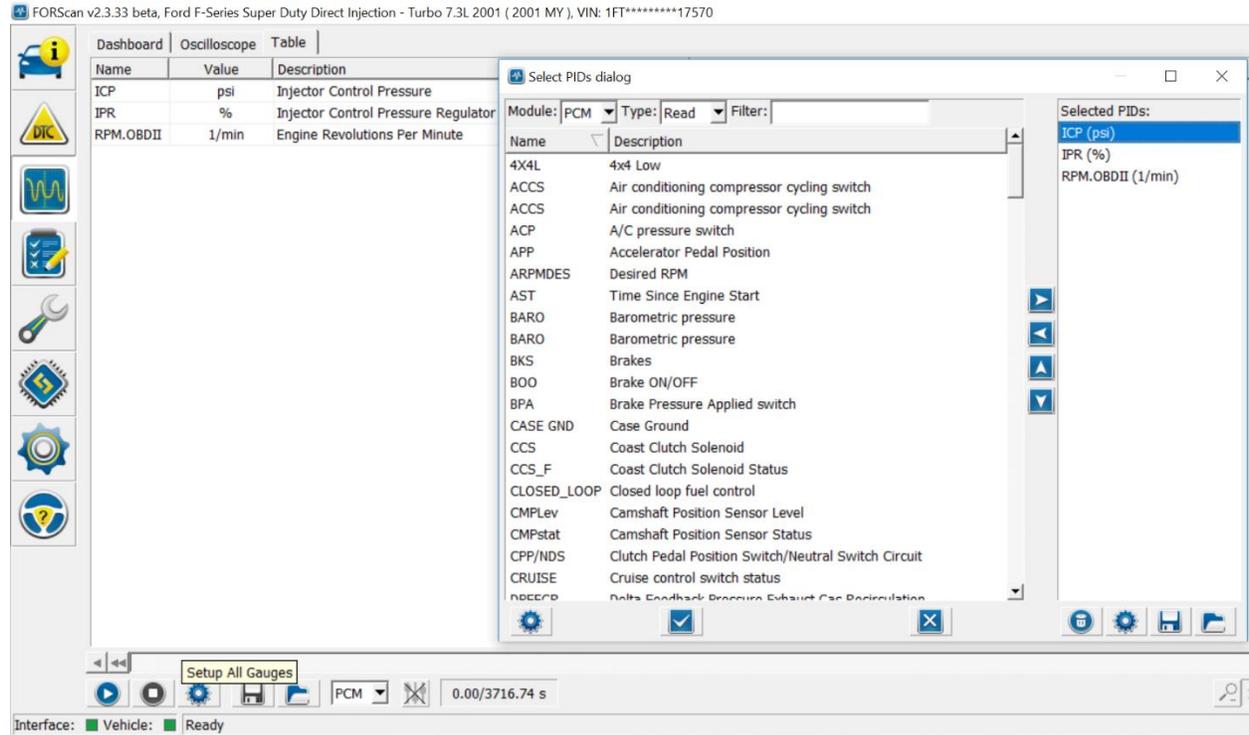


Uncheck Pressure, kPa and check Pressure, psi instead. Then back out of the screen.



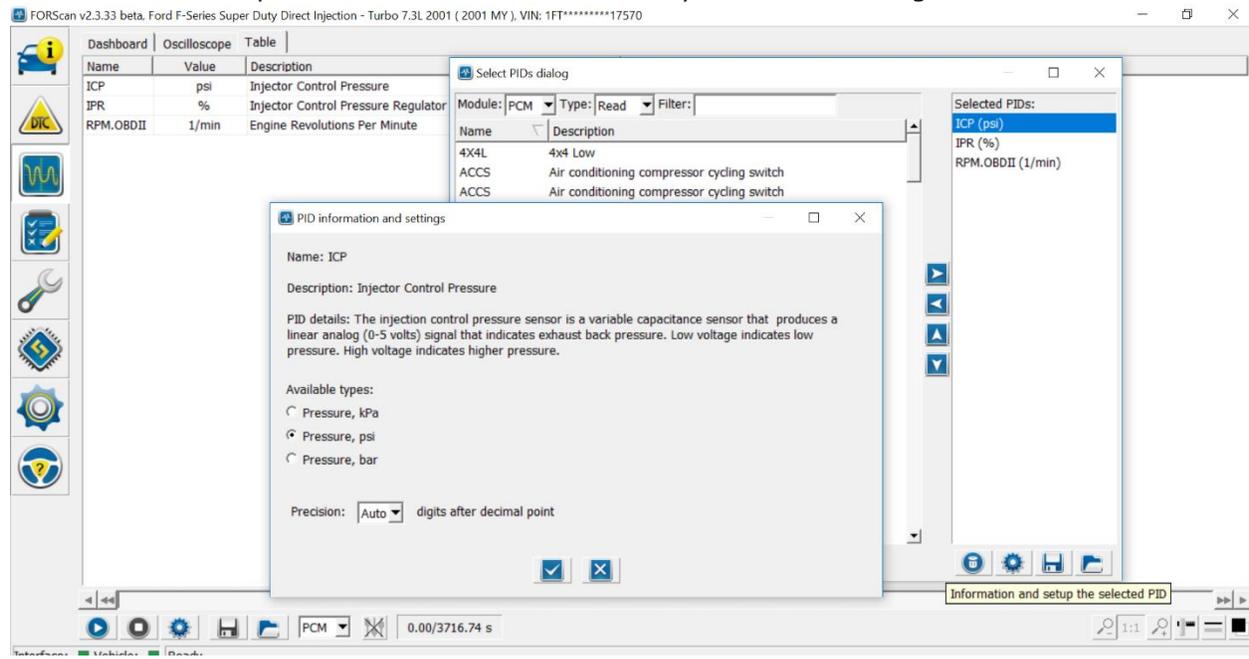
To change units in Forscan for Windows, In the Dashboard/Oscilloscope/Table view, click the gear icon in the lower left ("Setup All Gauges" appears if you hover over it with your mouse arrow). The "Select PIDs dialog" will open.

Then click the PID you want to edit in the "Selected PIDs" window on the right.



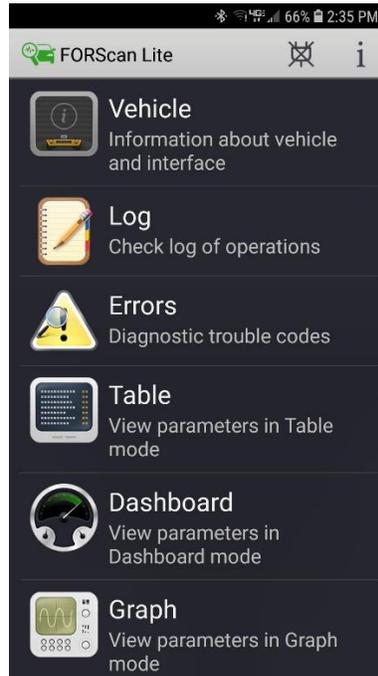
Click the gear on the lower right ("Information and setup the selected PID" will display if you hover over it).

The window that opens will have the check boxes you need to change the units of the PID.



Now we are ready to check for diagnostic trouble codes, and start logging engine parameters.

To check for DTCs, from the home screen, tap Errors – Diagnostic Trouble Codes to view any codes. Tap on a code to get additional detail.

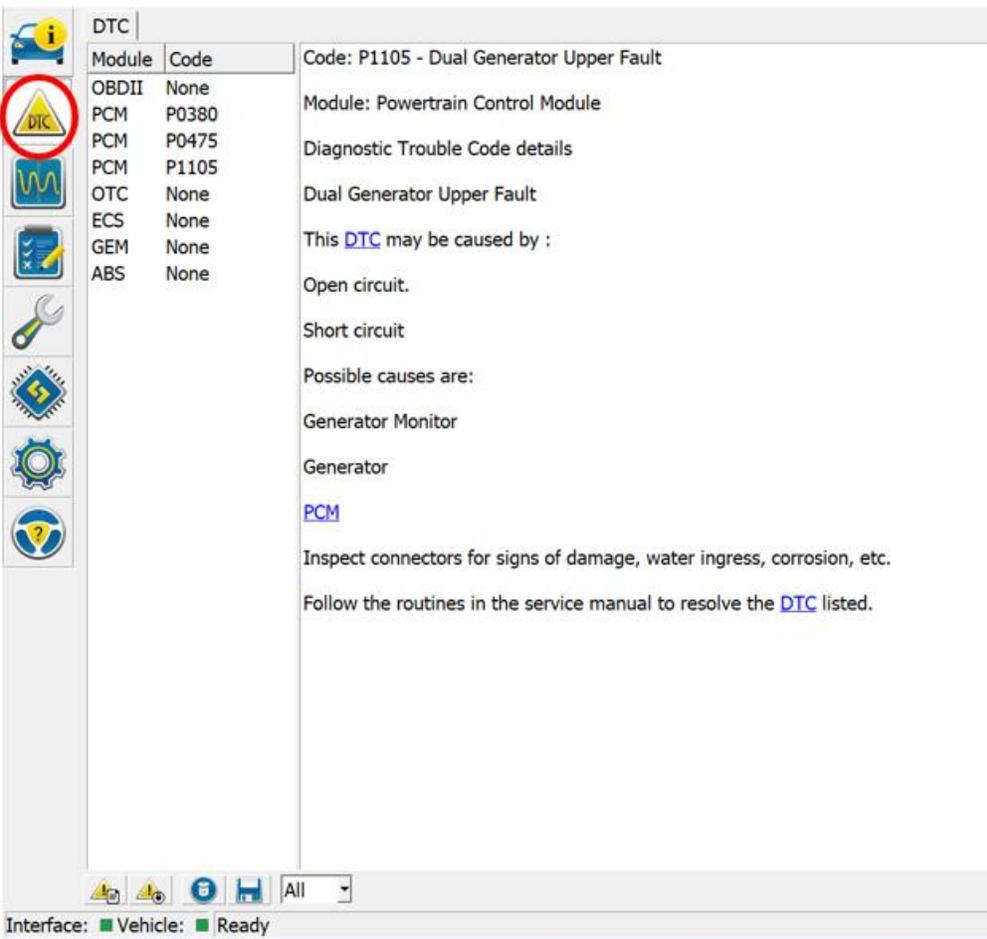


If you have not viewed your DTCs before, some of them might not be current codes. Take note of them, then clear the codes by tapping the triangle with circle in it (circled in red). You will be asked to confirm, then the codes will be cleared. The app will ask you to cycle the key. Codes, if any, will be read and displayed. These are current issues that need to be addressed.

Take a short drive, or if a no start, crank the engine for a few seconds, and read the codes again, to see if there are any additional codes captured – often called “pending” codes.



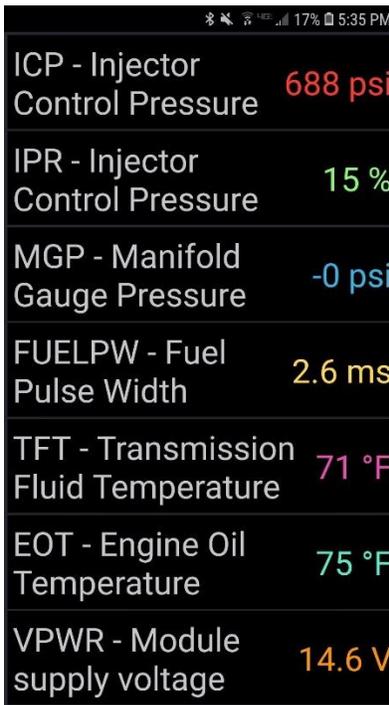
In FORScan for Windows, click the DTC icon for this information.



Now let's capture a log of the engine parameters we set up earlier. I recommend doing this when your truck is running well, so you have a baseline for how your truck behaves, and you can start noticing when readings drift away from normal.

When I get ready to log some data with FORScan Lite, I do the following:

1. Check that the OBDII dongle is plugged in. I leave mine plugged in, but I do drive the truck every few days. You can connect it now if you keep yours disconnected.
2. Turn the ignition key to on.
3. Start the FSL app on your phone.
4. Wait for the app to connect to the truck, indicated by the icon in the upper left. It will start white, then yellow and finally green.
5. Tap the display you want to use. Dashboard (gauges), Table or Graph. I use Table, and arrange the order of the PIDs such that the top 7 I am interested in are displayed in a font size I can read at a glance.



The screenshot shows a mobile application interface with a dark background. At the top, there is a status bar with icons for signal strength, Wi-Fi, battery level (17%), and time (5:35 PM). Below the status bar is a list of seven engine parameters, each with a label and a numerical value. The labels are in white text, and the values are in a color that matches the label's text. The parameters are: ICP - Injector Control Pressure (688 psi), IPR - Injector Control Pressure (15 %), MGP - Manifold Gauge Pressure (-0 psi), FUELPW - Fuel Pulse Width (2.6 ms), TFT - Transmission Fluid Temperature (71 °F), EOT - Engine Oil Temperature (75 °F), and VPWR - Module supply voltage (14.6 V).

Parameter	Value
ICP - Injector Control Pressure	688 psi
IPR - Injector Control Pressure	15 %
MGP - Manifold Gauge Pressure	-0 psi
FUELPW - Fuel Pulse Width	2.6 ms
TFT - Transmission Fluid Temperature	71 °F
EOT - Engine Oil Temperature	75 °F
VPWR - Module supply voltage	14.6 V

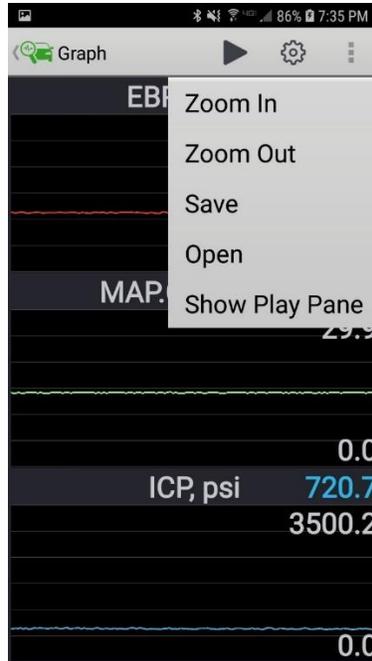
The other PIDs are there and can be accessed by scrolling with your finger.

6. Tap the 'Play' button at the top of the screen to begin logging data. PID values will begin to display, and a log will start capturing this data.

Now you are ready to start the truck and take a drive, or crank the engine if you have a no start condition.

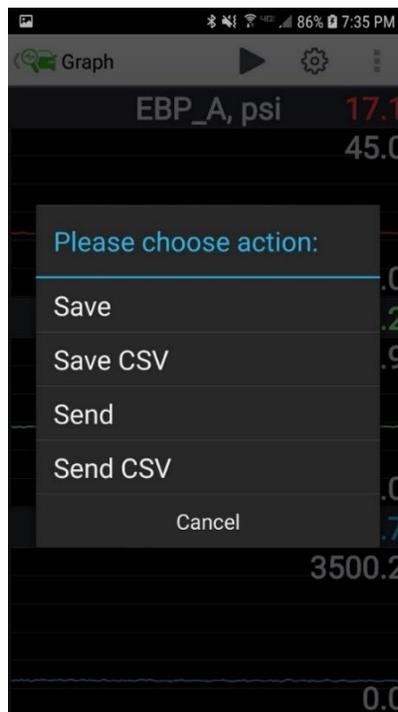
When you are done taking data, tap the 'stop' button at the top of the screen. You may have to tap the screen once to get the toolbar to display. You can also just shut off the truck and the app will stop logging.

At this point, remember to save your data. On the Dashboard, Table or Graph screen, tap the 3 vertical dots at the top right for the save menu.



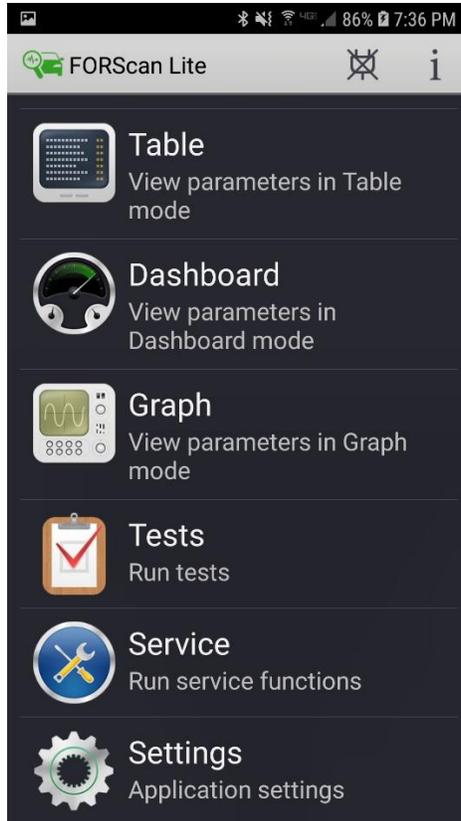
Tap 'Save', then 'Save' again to save the log in FSL format for later viewing in the application.

What I sometimes do is "Send CSV" to save the log in comma separated value format and send it to my email. That way, it can be viewed later in a spreadsheet/chart, using my PC or laptop (a bigger screen is helpful).

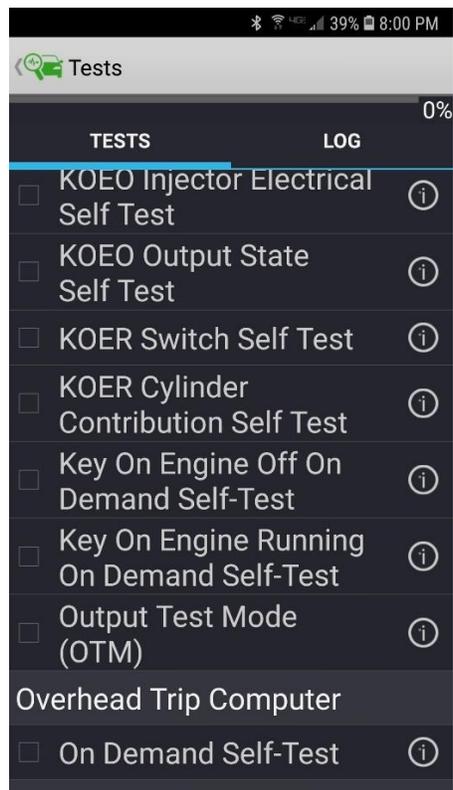


FSL will prompt you for your email, and then you can name the file and send it.

To run the various self tests available, In FORScan Lite, click the Tests icon:



Then select the test you want to run:



In FORScan for Windows, clicke the clipboard icon, then select the test you would like to run:

Module	Name
PCM	KOEO Injector Electrical Self Test
PCM	KOEO Output State Self Test
PCM	KOER Switch Self Test
PCM	KOER Cylinder Contribution Self Test
PCM	Key On Engine Off On Demand Self-Test
PCM	Key On Engine Running On Demand Self-Test
PCM	Output Test Mode (OTM)
OBDII	Read system monitor status
OBDII	Mode 6 - Test Results for Specific Monitored Systems
OTC	On Demand Self-Test
ECS	On Demand Self-Test
GEM	On Demand Self-Test
ABS	On Demand Self-Test

Interface: ■ Vehicle: ■ Ready