

APTB 06/12

SUBJECT: FICM Voltage Test

September 4, 2012



Technical Bulletin

Low fuel injection control module (FICM) output voltage is a common failure occurring on Navistar® VT365 and Ford® 6.0 L engines. This failure typically causes complaints such as hard start/no start or rough running in a cold engine (i.e. initial start of the day). Misdiagnosis of these complaints can lead to unneeded injector replacement. On Ford 6.0 L engines the FICM output voltage can be monitored using the scan tool (IDS). On Navistar VT365 engines it is more difficult to determine if the FICM is supplying the proper output voltage because you are unable to read FICM output voltage using the scan tool (ServiceMaxx). Below is a simple procedure using a volt meter to test both early style (seven screw) and late style (four screw) FICMs. This procedure can also be used on Ford applications if you do not have access to a scan tool.

Note: When performing this test the engine should be at or near the temperature which the complaint occurs.

The FICM on Ford applications is located on the driver side valve cover (F Series) or firewall (E Series). The FICM on Navistar applications is also located on the driver side valve cover but it is underneath the engine control module (ECM). Locate the small cover plate that is held on with two T20 torx screws. Remove the cover by gently prying it up once the screws are removed. Determine if you have the seven screw style or the four screw style. Set your volt meter to DC volts.

If you have the seven screw style, you will need to place your positive lead on the upper left hand screw and the negative lead on a good ground. For the four screw style you will need to place the positive lead on the right hand screw. **Caution:** Do not allow the positive lead to touch the FICM case or it could short out the FICM. Turn the ignition to the key on engine off position and read the voltage. Next crank the engine and read the voltage. Finally start the engine and read the voltage at idle. If voltage is below 45 volts during any of these checks it is very likely that you have a faulty FICM. The 12 volt supply circuit and ground circuit going to the FICM should always be verified when output voltage is below 45 volts.

Seven Screw Style (Early)
Place Positive Lead on this Screw



Four Screw Style (Late)
Place Positive Lead on this Screw

