

## **J1939 Translator 1939JM401-A**

### **2003-2007 Ford F250-550 Series Diesel Engines**

#### **Introduction**

The 1939JM401-A system acts as a “translator” for chassis data. It is a unidirectional communication portal for J1939 based systems to operate in a J2284 environment. Select data collected via OBDII (CAN) data stream will be transmitted over a separate CAN network that adheres to the J1939 protocol. This will allow various devices (Vehicle Data Recorders, Fuel Management Systems, etc.) from multiple manufacturers to simply read the provided J1939 data without having to make significant changes to their systems. As soon as power is applied, the module begins operation; it needs no additional set-up. In addition, many other types of data may be available depending on the vehicle. Because many auxiliary devices may be added to the CAN bus, the 1939JM401-A acquires all pre-2011 model year CAN bus data passively. However, it requires the device to actively request VIN data once on installation.

#### **Installation Instructions**

Remove the lower dash panel below the steering column area and find a suitable location to mount the 1939JM401-A Translator module. Do not mount the module until all wire harnesses are routed and secure. (The last step of the installation is to mount the module).

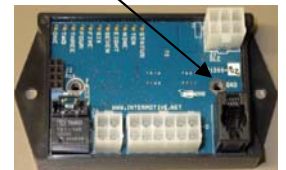
**It is the installer’s responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.**

#### **Data Link Harness (6-pin connector)**

- Locate the vehicle OBDII Data Link Connector. It will be mounted below the lower left dash panel.
- Remove the mounting screws for the OBDII connector. Plug the red connector from the Data Link Harness into the vehicle’s OBDII connector. Ensure the connection is fully seated and secured with the supplied wire tie.
- Mount the black connector from the Data Link Harness in the former location of the vehicle’s OBDII connector. Reconnect the Battery.
- **Important:** With the key on and the engine off, plug the 6-pin “Data Link” connector into the 6-pin connector on the J1939 Translator module while holding a ground source to the TEST pad. This action prompts the module to request and store the Vehicle Identification Number (VIN). This action only needs to occur once.

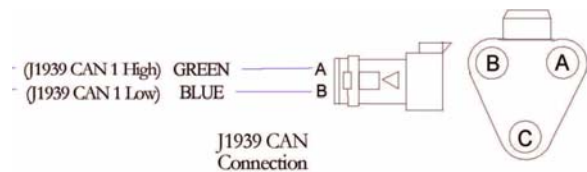


TEST  
pad



## 1939JM401-A Translator Connection Output

- The 1939JM401-A Data Link Harness has a three pin connector that provides CAN 1 High, and CAN 1 Low signals.
- Pin A - Green Wire - J1939 CAN 1 High.
- Pin B - Blue Wire - J1939 CAN 1 Low.
- Attach the connector to the desired external device. (FRC unit, etc...)



## System Diagnostic Mode

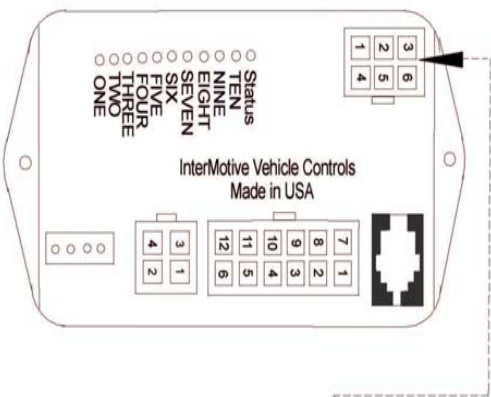
The 1939JM401-A can be placed into a diagnostic mode by applying a ground potential to the "TEST" pad. The module remains in this mode for 30 sec, and then reverts back to normal operation. While in the diagnostic mode, LEDs on the PCB will illuminate under specific conditions giving the observer a peek at operational status as follows:

- STATUS LED – ON continuous for the duration of Diagnostic mode (30 sec).
- Initially, LED1 will "blink out" the FW version.
- LED 1 – After initial activity, Blinks to indicate data reception on the HSCAN bus.
- LED 2 – Not used.
- LED 3 – Blinks @ J1939 bus data transmission of Intake Manifold Temp.
- LED 4 – Blinks @ J1939 bus data transmission of Intake Manifold Pressure.
- LED 5 – Blinks @ J1939 bus data transmission of RPM value.
- LED 6 – Blinks @ J1939 bus data transmission of engine % Load.
- LED 7-9 – Not used.
- LED 10 – Blinks any time J1939 bus is not detected i.e. no listeners present.

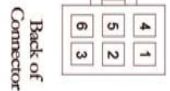
In addition to the above diagnostics, the module provides additional functions via its communications port connection. If a proper USB translator cable is attached and the appropriate application is running on a PC/laptop, the following commands (not including braces) can be utilized:

- \* {watch imp} – continuous display of Intake Manifold Pressure value.
- \* {watch imt} – continuous display of Intake Manifold Temperature value.
- \* {watch rpm} – continuous display of RPM value.
- \* {watch load} – continuous display of % Load value.
- {vers} – displays firmware version.
- {pid acc} – displays PID availability.
- {samp} – displays hardware revision value (ADC count).
- {reset} – resets the module.

\* Only able to watch one PID at a time; pressing ESC will stop displaying the PID.

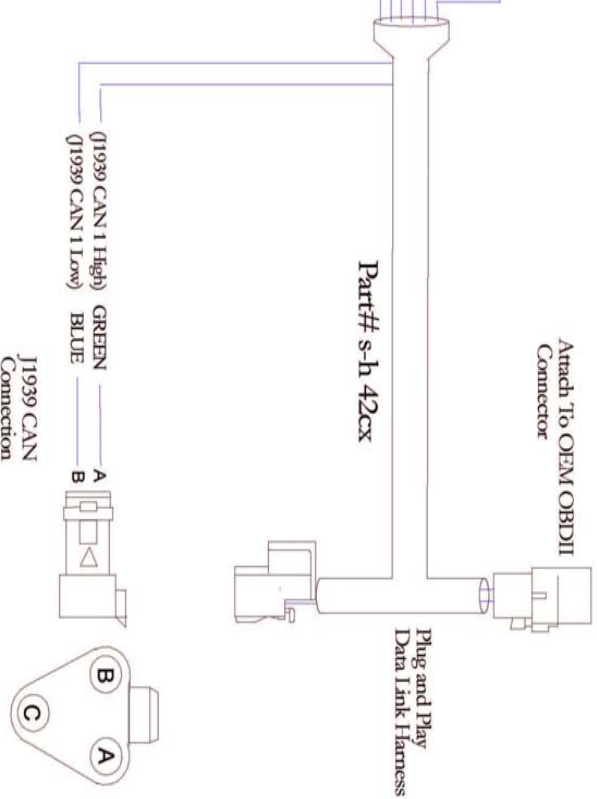


1939JM401-A Translator  
Part# s-m 1200-37



- 1 RED
- 2 GREEN
- 3 YELLOW
- 4 GRAY
- 5 BLUE
- 6 BROWN

- (Battery Voltage)
- (1939 CAN 1 High)
- (2284 CAN 2 High)
- (Ground)
- (1939 CAN 1 Low)
- (2284 CAN 2 Low)



**Submit product registration at [www.intermotive.net](http://www.intermotive.net)**  
If the J1939 Translator fails any step in the System Operation Test, review the installation instructions and check all connections.  
If necessary, call

**InterMotive technical support @ (530) 823-1048.**