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2006 FORD Focus ST 5 Doors OEM Service and Repair Workshop Manual

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No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST AN : THE LOW ENGINE OIL PRESSURE WARNING INDICATOR IS NEVER OR ALWAYS ON

Refer to Wiring Diagrams Cell 60for schematic and connector information.

Normal Operation and Fault Conditions See Low Engine Oil Pressure Warning. REFER to: Instrument Panel Cluster (IPC) - System Operation and Component Description (413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

If the engine rpm data or engine oil pressure warning indicator request message is missing less than 5 seconds, the IPC (instrument panel cluster) defaults the low engine oil pressure warning indicator or RTT (reconfigurable telltale) warning indicator to the last state (on or off), based upon the last message received. If the engine rpm data or engine oil pressure warning indicator request message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the low engine oil pressure warning indicator or RTT (reconfigurable telltale) warning indicator on. **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P0520:00	Engine Oil Pressure Sensor/Switch 'A' Circuit: No Sub Type Information	Sets in the PCM (powertrain control module) when the PCM (powertrain control module) detects a fault on the hardwired input from the engine oil pressure sensor.
PCM (powertrain control module) P0522:00	Engine Oil Pressure Sensor/Switch 'A' Circuit Low: No Sub Type Information	Sets in the PCM (powertrain control module) when the PCM (powertrain control module) detects a short to ground on the hardwired input from the engine oil pressure sensor.
PCM (powertrain control module) P0523:00	Engine Oil Pressure Sensor/Switch 'A' Circuit High: No Sub Type Information	Sets in the PCM (powertrain control module) when the PCM (powertrain control module) detects an open on the hardwired input from the engine oil pressure sensor.
PCM (powertrain control module) U0600:00	Lost Communication With Engine Oil Pressure Sensor 'A': No Sub Type Information	Sets in the PCM (powertrain control module) when the PCM (powertrain control module) detects a loss of voltage on the engine oil pressure signal circuit.

No	GO to AN3

AN3 CHECK THE MESSAGE CENTER OPERATION

- Ignition ON.
- Close all doors and the hood.
- Clear all message center warnings by pressing the OK button for each warning present.
- Monitor the door ajar RTT (reconfigurable telltale) warning indicator.
- Open the driver door.
- Clear the message center popup warning.
- Monitor the door ajar RTT (reconfigurable telltale) warning indicator.

Is the door ajar RTT (reconfigurable telltale) warning indicator off with the door closed, and on with the door open?

Yes	GO to AN4

No	GO to Pinpoint Test A

AN4 CHECK THE TACHOMETER OPERATION

- Start the engine.
- Verify the tachometer operates.

Does the tachometer operate?

Yes	GO to AN5

No	For 12-inch display IPC (instrument panel cluster) , GO to Pinpoint Test B For the 4-inch or 8-inch display IPC (instrument panel cluster) , GO to Pinpoint Test H

AN5 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using a diagnostic scan tool, perform the IPC (instrument panel cluster) self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Positive Lead	Measurement / Action	Negative Lead
C1936-3	V	C1936-2

3.3L Engine

Positive Lead	Measurement / Action	Negative Lead
C1957-3	V	C1957-2

3.5L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-3	V	C1657-2

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
C103-3	V	C103-2

Is the voltage approximately 5 volts?

Yes	GO to AN8

No	GO to AN11

AN8 CHECK THE ENGINE OIL PRESSURE SENSOR SIGNAL CIRCUIT FOR A SHORT TO VOLTAGE

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
C103-1	V	Ground

Is any voltage present?

Yes	REPAIR the circuit.

No	GO to AN9

AN9 CHECK THE ENGINE OIL PRESSURE SENSOR SIGNAL CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

2.7L Engine

Positive Lead	Measurement / Action	Negative Lead
C1642-1	Ω	C1232E-29

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1936-1	Ω	C1233E-115

3.3L Engine

Positive Lead	Measurement / Action	Negative Lead

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1936-1	Ω	Ground

3.3L Engine

Positive Lead	Measurement / Action	Negative Lead
C1957-1	Ω	Ground

3.5L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-1	Ω	Ground

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
C103-1	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	INSTALL a new engine oil pressure sensor. REFER to the appropriate 303-14 section. CLEAR the Diagnostic Trouble Codes (DTCs). TEST the system for normal operation. If the engine oil pressure RTT (reconfigurable telltale) is still always on, REFER to the appropriate 303-14 section.

No	REPAIR the circuit.

C1657-3	V	Ground

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
C103-3	V	Ground

Is any voltage present?

Yes	REPAIR the circuit.

No	GO to AN12

AN12 CHECK THE ENGINE OIL PRESSURE SENSOR VREF CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

2.7L Engine

Positive Lead	Measurement / Action	Negative Lead
C1642-3	Ω	C1232E-117

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1936-3	Ω	C1233E-11

C1642-3	Ω	Ground

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1936-3	Ω	Ground

3.3L Engine

Positive Lead	Measurement / Action	Negative Lead
C1957-3	Ω	Ground

3.5L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-3	Ω	Ground

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
C103-3	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to AN14

Positive Lead	Measurement / Action	Negative Lead
C103-2	Ω	C1381E-112

Is the resistance less than 3 ohms?

Yes	INSTALL a new engine oil pressure sensor. REFER to the appropriate 303-14 section. CLEAR the Diagnostic Trouble Codes (DTCs). TEST the system for normal operation. If the low engine oil pressure RTT (reconfigurable telltale) is still always on, REFER to the appropriate 303-14 section.

No	REPAIR the circuit.

PINPOINT TEST AO : THE LOW FUEL WARNING RTT (RECONFIGURABLE TELLTALE) IS NEVER OR ALWAYS ON

Normal Operation and Fault Conditions

See Low Fuel. REFER to: Instrument Panel Cluster (IPC) - System Operation and Component Description(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

Possible Sources

- Communication concern
- Fuel gauge concern
- PCM (powertrain control module)
- GWM (gateway module A)
- IPC (instrument panel cluster)

AO1 CHECK THE MESSAGE CENTER OPERATION

- Ignition ON.
- Close all doors and the hood.
- Clear all message center warnings by pressing the OK button for each warning present.
- Monitor the door ajar RTT (reconfigurable telltale) warning indicator.
- Open the driver door.
- Clear the message center popup warning.
- Monitor the door ajar RTT (reconfigurable telltale) warning indicator.

Yes	REFER to: Controller Area Network (CAN) Module Communications Network(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing).

No	GO to AO5

AO5 CONFIRM THE CURRENT FUEL LEVEL

- Enter the Dealer Test Mode.
  REFER to: Instrument Panel Cluster (IPC) - System Operation and Component Description(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).
- Scroll to the
  Inst Fuel1
  display.

Does the FLPM (second value) indicate 104 or less with an administrator key or between 104 and 164 with a MyKey® programmed key?

Yes	If the low fuel RTT (reconfigurable telltale) warning indicator is always on, the system is operating correctly at this time based on the current fuel level. If the low fuel RTT (reconfigurable telltale) warning indicator is never on, GO to AO6

No	If the low fuel warning indicator is always on, GO to AO6 If the low fuel warning indicator is never on, the system is operating correctly at this time based on the current fuel level.

AO6 CHECK FOR CORRECT IPC (INSTRUMENT PANEL CLUSTER) OPERATION

- Ignition OFF.
- Disconnect and inspect the IPC (instrument panel cluster) connector.
- Repair:
  - corrosion (install new connector or terminals – clean module pins)
  - damaged or bent pins – install new terminals/pins
  - pushed-out pins – install new pins as necessary
- Reconnect the IPC (instrument panel cluster) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?