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2014 FORD Fiesta ST OEM Service and Repair Workshop Manual

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### **Symptom Chart**

Condition	Possible Sources	Actions
The electric motor temperature gauge is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test B
The high voltage battery (charge) gauge is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test
The high voltage battery temperature gauge is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test
Incorrect speedometer indication	Refer to the Pinpoint Test	GO to Pinpoint Test
The power (regenerative) gauge is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test B
The virtual speedometer is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test

# Symptom Chart: Instrument Panel Cluster (IPC) - RTT (reconfigurable telltale) Indicators

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: Diagnostic Methods

(100-00 General Information, Description and Operation).

## **Symptom Chart**

Condition	Possible Sources	Actions
The ABS (anti-lock brake system) RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test E
The airbag warning RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test F
The auto high beam RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test G

The high beam RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test Y
The high voltage battery (charge) warning RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test V
The high voltage battery temperature warning RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test V
The lane centering aid RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test W
The lane keeping system RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test X
The LH (left-hand) / RH (right-hand) turn RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test Y
The lights on RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test Z
The low washer fluid level RTT (reconfigurable telltale) warning indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AA
The one-pedal drive control RTT (reconfigurable telltale) warning indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AB
The overspeed warning RTT (reconfigurable telltale) warning indicator is never or always displayed (Gulf Cooperative Countries [GCC] only)	Refer to the Pinpoint Test	GO to Pinpoint Test AC
The powertrain malfunction (wrench) RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AD
The PRNDM RTT (reconfigurable telltale) indicator is never displayed or never displays P	Refer to the Pinpoint Test	GO to Pinpoint Test AE
The ready to drive RTT (reconfigurable telltale) indicator is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AF
The rear fog lamp RTT (reconfigurable telltale) indicator is never or always displayed (if equipped)	Refer to the Pinpoint Test	GO to Pinpoint Test Y

inoperative		
The battery charge (drive) range display is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test AN
The brake coach display is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test AO
The compass is inoperative	Refer to the Pinpoint Test	REFER to: Information and Entertainment System(415-00 Information and Entertainment System - General Information, Diagnosis and Testing).
The digital speedometer displays the incorrect speed	Refer to the Pinpoint Test	GO to Pinpoint Test C
The forward collision warning alert display is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test S
The lane centering aid display is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test W
The lane keeping system display is inoperative	Refer to the Pinpoint Test	REFER to: Lane Keeping System(419-07 Lane Keeping System, Diagnosis and Testing).
The odometer display is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test D
The outside air temperature display is inoperative or incorrect	Refer to the Pinpoint Test	GO to Pinpoint Test AP
The speed sign recognition display is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test AQ
The TPMS (tire pressure monitoring system) display is inoperative or incorrect	Refer to the Pinpoint Test	GO to Pinpoint Test AR

A door, hood or tailgate ajar warning message is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test N
The electric park brake fault message is always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test Q
An ELD (electronic locking differential) (eLocker) message is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test P
A load shed warning message is always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test L
A one-pedal drive control message is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AB
The passenger seat max recline warning message is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test BI
The seatbelt buckle message is never or always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AH
Service AdvanceTrac® warning message is always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test Al
The tailgate step warning message is always displayed	Refer to the Pinpoint Test	REFER to: Power Tailgate(501-04 Pickup Bed and Platform Body, Diagnosis and Testing).
A TPMS (tire pressure monitoring system) malfunction message is always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AK
The tire training complete message is never on (sensor training incomplete)	Refer to the Pinpoint Test	GO to Pinpoint Test AW
A tire training message (train left front, right front, left rear or right rear tire) message is never displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AW
The tires not trained message is always displayed	Refer to the Pinpoint Test	GO to Pinpoint Test AW

The CTA (cross traffic alert) warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BA
The door ajar warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BD
The forward collision warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BA
The headlamps on warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BE
The hood (front compartment) ajar warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BD
The highway assist (hard takeover) warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BA
The ignition-engine on warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BF
The memory feedback chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BG
The message center warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BH
The passenger seat max recline warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BI
The perimeter alarm chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BJ
The transmission not in park warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BK
The seatbelt warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BC
The Service AdvanceTrac® warning chime is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test BL

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					GO to A2
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#### A2 PERFORM THE NETWORK TEST FOR ALL MODULES

• Using a diagnostic scan tool, perform a network test.

### Do all modules pass the network test?



No

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

#### A3 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

 Using a diagnostic scan tool, check the GWM (gateway module A) Continuous Memory Diagnostic Trouble Codes (DTCs).

### Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes

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

No GO to A4

### A4 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

#### **Normal Operation and Fault Conditions**

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

#### **Electric Motor Temperature**

- If the engine temperature status message is missing for less than 5 seconds, the IPC (instrument panel cluster) defaults the electric motor temperature gauge to the last indication state, based upon the last message received.
- If the engine temperature status message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the electric motor temperature gauge to the full hot position.

## **High Voltage Battery (Charge)**

- If the battery state of charge display message is missing for less than 5 seconds, the IPC (instrument panel cluster) defaults the high voltage battery (charge) gauge to the last indication state, based upon the last message received.
- If the battery state of charge display message is missing for 5 seconds or longer, IPC (instrument panel cluster) defaults the high voltage battery (charge) gauge to 0 % fill.

#### **High Voltage Battery Temperature Gauge**

- If the high voltage battery temperature status message is missing for less than 5 seconds, the IPC (instrument panel cluster) defaults the temperature gauge to the last indication state, based upon the last message received.
- If the high voltage battery temperature status message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the temperature gauge to the full hot position.

#### **Power (Regenerative)**

- If the power regeneration average display message is missing for less than 5 seconds, the IPC (instrument panel cluster) defaults the power gauge to the last indication state, based upon the last message received.
- If the power regeneration average display message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the power gauge to the 0 fill position.

## **Speedometer**

- If the vehicle speed message is missing or invalid for less than 5 seconds, the IPC (instrument panel cluster) defaults the speedometer to the last indication state, based upon the last message received.
- If the vehicle speed message is missing or invalid for 5 seconds or longer, the IPC (instrument panel cluster) defaults the speedometer to 0 km/h (0 mph).

#### **Possible Sources**

- Communication concern
- GWM (gateway module A)
- PCM (powertrain control module) concern
- SOBDMC (secondary on-board diagnostic control module C) concern
- BECM (battery energy control module) concern

#### **B4 PERFORM THE BECM (BATTERY ENERGY CONTROL MODULE) SELF-TEST**

- Using a diagnostic scan tool, perform the BECM (battery energy control module) self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs).

## Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes

REFER to: High Voltage Battery, Mounting and Cables - Electric(414-03A High Voltage Battery, Mounting and Cables, Diagnosis and Testing).

No GO to B5

## **B5 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)**

 Using a diagnostic scan tool, check the GWM (gateway module A) Continuous Memory Diagnostic Trouble Codes (DTCs).

## Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes

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

No GO to B6

### **B6 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?

Yes	GO to C2
No	CONFIGURE the correct axle ratio as required.

#### **C2 CHECK THE TIRE SIZE**

NOTE

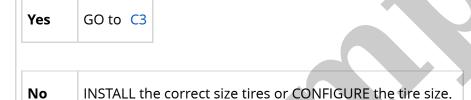
The correct tire size can be found on the VC (vehicle certification) label.

Verify the size of the tires installed on the vehicle matches the VC (vehicle certification) label.

REFER to: Identification Codes(100-01 Identification Codes, Description and Operation).

• Verify the tire size is correctly configured.

Does the tire size match the VC (vehicle certification) label and is the tire size correctly configured?



#### C3 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using a diagnostic scan tool, perform the IPC (instrument panel cluster) self-test.
- Check for recorded Diagnostic Trouble Codes (DTCs) from the IPC (instrument panel cluster) self-test.

## Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes REFER to the DTC (diagnostic trouble code) Chart in this section.

No GO to C4

## C4 PERFORM THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE SELF-TEST

• Using a diagnostic scan tool, perform the ABS (anti-lock brake system) self-test.

#### Are any Diagnostic Trouble Codes (DTCs) recorded?