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2011 FORD Focus ST 5 Doors OEM Service and Repair Workshop Manual

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

No	DIAGNOSE all PCM (powertrain control module) Diagnostic Trouble Codes (DTCs). REFER to the Master DTC (diagnostic trouble code) Chart.

PINPOINT TEST AX : THE REAR SEATBELT RTT (RECONFIGURABLE TELLTALE) WARNING INDICATOR IS NEVER OR ALWAYS ON

Normal Operation and Fault Conditions

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

If the driver rear seatbelt buckle status, passenger rear seatbelt buckle status or rear center seatbelt buckle status message is missing for less than 5 seconds, the IPC (instrument panel cluster) defaults the rear seatbelt RTT (reconfigurable telltale) warning indicator to its last indication state (on or off), based upon the last message received.

If the driver rear seatbelt buckle status, passenger rear seatbelt buckle status or rear center seatbelt buckle status message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the rear seatbelt buckle RTT (reconfigurable telltale) warning indicator off.

Possible Sources

- Driver rear seatbelt buckle concern
- Passenger rear seatbelt buckle concern
- Communication concern
- GWM (gateway module A)
- SRS (supplemental restraint system)
- IPC (instrument panel cluster)

AX1 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) .

PINPOINT TEST AY : THE REVERSE BRAKING ASSIST RTT (RECONFIGURABLE TELLTALE) INDICATOR IS NEVER OR ALWAYS ON

Normal Operation and Fault Conditions

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

If the cross traffic alert brake warning-left, cross traffic alert brake warning-right, cross traffic alert left brake enable request, cross traffic alert right brake enable request, parking aid chime request or gear lever position message is missing or invalid for less than 5 seconds, the IPC (instrument panel cluster) defaults the reverse braking assist RTT (reconfigurable telltale) indicator to its last state (on or off) based upon the last known good message received.

If the cross traffic alert brake warning-left, cross traffic alert brake warning-right, cross traffic alert left brake enable request, cross traffic alert right brake enable request, parking aid chime request or gear lever position message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the reverse braking assist RTT (reconfigurable telltale) indicator off.

Possible Sources

- Communication concern
- IPMA (image processing module A)
- PCM (powertrain control module) (Gas)/ TCM (transmission control module) (Diesel)
- GWM (gateway module A) concern
- IPC (instrument panel cluster)

AY1 CHECK THE MESSAGE CENTER OPERATION

- Ignition ON.
- Close all doors, tailgate 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 AY2
No	GO to Pinpoint Test A

Yes	REFER to the Master DTC (diagnostic trouble code) Chart.

No	DIAGNOSE the automatic braking system. REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).

AY6 PERFORM THE TCM (TRANSMISSION CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the TCM (transmission control module) self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to the Master DTC (diagnostic trouble code) Chart.

No	DIAGNOSE the automatic braking system. REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).

PINPOINT TEST AZ : THE SEATBELT WARNING INDICATOR OR RTT (RECONFIGURABLE TELLTALE) WARNING INDICATOR IS NEVER OR ALWAYS ON

Normal Operation and Fault Conditions

See Seatbelt 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 driver seatbelt buckle status or passenger seatbelt buckle status message is missing for less than 5 seconds, the IPC (instrument panel cluster) defaults the seatbelt warning indicator or RTT (reconfigurable telltale) indicator to its last indication state (on or off), based upon the last message received.

If the driver seatbelt buckle status or passenger seatbelt buckle status message is missing for 5 seconds or longer, the IPC (instrument panel cluster) defaults the seatbelt warning indicator or RTT (reconfigurable telltale) warning indicator off.

Possible Sources

- Driver or passenger seatbelt buckle concern
- Communication concern
- GWM (gateway module A)
- SRS (supplemental restraint system)

- For passenger seatbelt,
  Access the RCM (restraints control module) and monitor the SBELT_P_ST (Passenger Seatbelt Sensor Status) PID (parameter identification)
- Monitor the RCM (restraints control module) seatbelt buckle Parameter Identifications (PIDs) while buckling and unbuckling the driver or passenger seatbelt.

Does the PID (parameter identification) display BUCKLED with the seatbelt buckled and UNBUCKLED with the seatbelt unbuckled?

Yes	For 4-inch display IPC (instrument panel cluster) , GO to AZ4 For 8-inch or 12-inch display IPC (instrument panel cluster) , GO to AZ5

No	INSTALL a new seatbelt buckle. REFER to: Front Seatbelt Buckle (501-20A Seatbelt Systems, Removal and Installation).

AZ4 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) INDICATOR LAMP CONTROL ACTIVE COMMAND

- Using a diagnostic scan tool, view the IPC (instrument panel cluster) Parameter Identifications (PIDs).
- Access the IPC (instrument panel cluster) and control the W_SBLT (Seatbelt warning enable) PID (parameter identification)
- Command the seatbelt warning indicator on and off while observing the seatbelt warning indicator.

Does the seatbelt warning indicator illuminate when commanded on and turn off when commanded off?

Yes	GO to AZ5

No	GO to AZ7

AZ5 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to the IPC (instrument panel cluster) DTC (diagnostic trouble code) Chart.

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 BA : THE STABILITY-TRACTION CONTROL (SLIDING CAR ICON) INDICATOR OR RTT (RECONFIGURABLE TELLTALE) INDICATOR IS NEVER OR ALWAYS ON

Normal Operation and Fault Conditions

See Stability-Traction Control (Sliding Car Icon). REFER to: Instrument Panel Cluster (IPC) - System Operation and Component Description(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

If the stability-traction control indicator request is missing or invalid for less than 5 seconds, the IPC (instrument panel cluster) defaults the stability-traction control (sliding car icon) indicator or RTT (reconfigurable telltale) indicator to the last indication state (on or off), based upon the last message received.

If the IPC (instrument panel cluster) does not receive the stability-traction control indicator request for 5 seconds or longer, the IPC (instrument panel cluster) defaults the stability-traction control (sliding car icon) indicator on.

Possible Sources

- Communication concern
- Stability-traction control system concern
- GWM (gateway module A)
- IPC (instrument panel cluster)

BA1 IDENTIFY THE IPC (INSTRUMENT PANEL CLUSTER) LEVEL

- Determine if the vehicle is equipped with a 4-inch display IPC (instrument panel cluster) .
  REFER to: Instrument Panel Cluster (IPC) - Overview(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

Is the vehicle equipped with a 4-inch display IPC (instrument panel cluster) ?

Yes	GO to BA3

No	GO to BA2

BA2 CHECK THE MESSAGE CENTER OPERATION

No	GO to BA5

BA5 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(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing).

No	If the stability-traction control (sliding car icon) indicator is never on, the system is operating correctly. If the stability-traction control (sliding car icon) indicator is always on, DIAGNOSE all ABS (anti-lock brake system) module Diagnostic Trouble Codes (DTCs). REFER to the Master DTC (diagnostic trouble code) Chart.

BA6 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	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new IPC (instrument panel cluster) .

Is the vehicle equipped with a 4-inch display IPC (instrument panel cluster) ?

Yes	GO to BB3

No	GO to BB2

BB2 CHECK THE MESSAGE CENTER OPERATION

- Ignition ON.
- Close all doors and 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 BB4

No	GO to Pinpoint Test A

BB3 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) INDICATOR LAMP CONTROL ACTIVE COMMAND

- Using a diagnostic scan tool, view the IPC (instrument panel cluster) Parameter Identifications (PIDs).
- Access the IPC (instrument panel cluster) and control the ALL_LAMPS (All Warning Lamps) PID (parameter identification)
- Command the stability-traction control disabled (sliding car OFF icon) indicator on and off while observing the indicator.

Does the stability-traction control disabled (sliding car OFF icon) indicator illuminate when commanded on and turn off when commanded off?

Yes	GO to BB4

- Check if the key is a MyKey® programmed key or an administrator key. Refer to the Owner's Literature.

Is the key an administrator key?

Yes	GO to BB7

No	DIAGNOSE the stability-traction control system cannot be disabled. REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).

BB7 CHECK FOR THE ADVANCETRAC ON FEATURE CONFIGURED ALWAYS ON

- Check if the AdvanceTrac feature is configured always on. Refer to the Owner's Literature.

Is the AdvanceTrac feature configured always on?

Yes	The traction control system cannot be disabled when the AdvanceTrac on feature is configured always on.

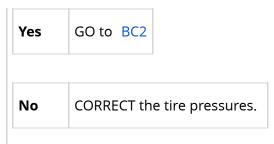| No	DIAGNOSE the stability-traction control system cannot be disabled. REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).

BB8 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	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or

Yes	GO to BC2

No	CORRECT the tire pressures.

BC2 IDENTIFY THE IPC (INSTRUMENT PANEL CLUSTER) LEVEL

- Determine if the vehicle is equipped with a 4-inch display IPC (instrument panel cluster) .
  REFER to: Instrument Panel Cluster (IPC) - Overview(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

Is the vehicle equipped with a 4-inch display IPC (instrument panel cluster) ?

Yes	GO to BC4

No	GO to BC3

BC3 CHECK THE MESSAGE CENTER OPERATION

- Ignition ON.
- Close all doors and 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 BC5

No	GO to Pinpoint Test A

BC4 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) INDICATOR LAMP CONTROL ACTIVE COMMAND