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2009 FORD Focus 5 Doors OEM Service and Repair Workshop Manual

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#### **CB2 CHECK THE WORK SURFACE SWITCH OPERATION**

- Ignition OFF.
- Disconnect Work Surface Status Switch C3890.
- Connect a fused jumper wire:

Lead 1	Measurement / Action	Lead 2
C3890-1		C3890-3

- Ignition ON.
- Wait one minute.
- Observe the work surface (stow before driving) message.

# Does the message display in the message center?

**Yes** REMOVE the fused jumper wire. INSTALL a new work surface status switch.

**No** REMOVE the fused jumper wire. GO to CB3

# CB3 CHECK THE WORK SURFACE STATUS SWITCH GROUND CIRCUIT FOR AN OPEN AT THE WORK SURFACE STATUS SWITCH

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3890-3	Ω	Ground

# Is the resistance less than 3 ohms?

- Ignition OFF.
- Disconnect Work Surface Status Switch C3890.
- Ignition ON.
- Wait one minute.
- Observe the work surface (stow before driving) message.

#### Did the message turn off?

No GO to CB6

#### **CB6 CHECK THE WORK SURFACE STATUS INPUT CIRCUIT FOR A SHORT TO GROUND**

- Ignition OFF.
- Disconnect BCM (body control module) C2280B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280B-33	Ω	Ground

# Is the resistance greater than 10,000 ohms?

Yes GO to CB7

**No** REPAIR the circuit.

# **CB7 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION**

- Ignition OFF.
- Disconnect and inspect the BCM (body control module) connector.
- Repair:
  - corrosion (install new connector or terminals clean module pins)

 Check the IPC (instrument panel cluster) and message center for illuminated warning indicator or message center displays.

# Does the IPC (instrument panel cluster) have any RTT (reconfigurable telltale) indicators illuminated or message center messages displayed?

Yes

REPAIR all message center indication concerns first. REFER to Symptom Chart: Indicators and Rotating Telltales (RTTs) or Symptom Chart: Message Center.

No

GO to CC2

#### **CC2 CHECK THE EXTERIOR LIGHTING OPERATION**

- Place the headlamp switch in the OFF position.
- · Close all doors.
- Wait one minute.
- Observe the exterior lights.

# Are the headlamps off?



No

REFER to: Headlamps(417-01 Exterior Lighting, Diagnosis and Testing).

# CC3 CHECK THE INTERIOR LIGHTING OPERATION

- Open and close the driver door.
- Observe the interior lights.

# Do the interior lights operate correctly from the driver door?

Yes	GO to	CC4

No

REFER to: Interior Lighting(417-02 Interior Lighting, Diagnosis and Testing).

#### CC4 PERFORM THE BCM (BODY CONTROL MODULE) SELF-TEST

# Is any voltage present?

Yes	GO to	CC7

No	GO to	CC8

#### **CC7 CHECK THE KEY-IN-IGNITION INPUT**

- Disconnect Ignition Switch C250.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280B-38	₹	Ground

# Is any voltage present?

Yes	REPAIR the circuit.

DIAGNOSE the ignition switch.

REFER to: Steering Wheel and Column Electrical Components

(211-05 Steering Wheel and Column Electrical Components, Diagnosis and Testing).

# CC8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the BCM (body control module) connectors.
- Repair:

No

• corrosion (install new connector or terminals - clean module pins)

- 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?

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).

REFER to: Instrument Panel Cluster (IPC)

(413-01 Instrumentation, Message Center and Warning Chimes, Removal and Installation).

No

Yes

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 CD: THE CHIME ONLY SOUNDS FROM THE IPC (INSTRUMENT PANEL CLUSTER)

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

**Normal Operation and Fault Conditions** REFER to: Warning Chimes - System Operation and Component Description

(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

#### **Possible Sources**

- Message center concern
- Audio system concern
- IPC (instrument panel cluster)

#### CD1 CHECK IPC (INSTRUMENT PANEL CLUSTER) DIAGNOSTIC TROUBLE CODES (DTCS)

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

- Ignition OFF.
- Ignition ON.
- Unbuckle the driver seatbelt.
- Monitor the seatbelt warning chime when the ignition is transitioned from OFF to RUN for 6 seconds.

# Does the seatbelt warning chime operate for approximately 6 seconds?

Yes GO to CE2
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**No** GO to Pinpoint Test A

# **CE2 VERIFY THE CHIMES FUNCTION THROUGH THE AUDIO SPEAKERS**

- Ignition OFF.
- Ignition ON.
- Monitor the location of the seatbelt warning chime (front/rear audio speakers or IPC (instrument panel cluster) ) when the ignition is transitioned from OFF to RUN.

# Does the chime sound through the audio speakers?



No GO to CE3

# **CE3 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?

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

No GO to CE4

#### **CE4 PERFORM THE IPMA (IMAGE PROCESSING MODULE A) SELF-TEST**

REFER to: Warning Chimes - System Operation and Component Description (413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

# **Possible Sources**

- Normal condition
- IPC (instrument panel cluster)

#### **CF1 CHECK IPC (INSTRUMENT PANEL CLUSTER) DIAGNOSTIC TROUBLE CODES (DTCS)**

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the IPC (instrument panel cluster) self-test.

#### Is DTC (diagnostic trouble code) P1534:01 recorded?

No

The system is operating correctly at this time. The airbag secondary warning chime sounds only when a fault in the airbag warning indicator is present and DTC (diagnostic trouble code) P1534:01 is recorded.

# PINPOINT TEST CG: THE SEATBELT WARNING CHIME OR THE BELT-MINDER® FEATURE IS INOPERATIVE

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

See Belt-Minder Feature or Seatbelt Warning Chime. REFER to: Warning Chimes - System Operation and Component Description(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

#### **Possible Sources**

- Belt-Minder® deactivated
- Communication concern
- Seatbelt warning indication concern
- Vehicle speed input concern
- GWM (gateway module A)
- RCM (restraints control module)
- IPC (instrument panel cluster)

#### **CG1 CHECK THE HEADLAMPS ON WARNING CHIME**

• Ignition OFF.

• 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 GO to CG5

#### CG5 PERFORM THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

• Using a diagnostic scan tool, perform the RCM (restraints control module) self-test.

# Are any Diagnostic Trouble Codes (DTCs) recorded?

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

No GO to CG6

# CG6 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 GO to CG7

#### CG7 CHECK THE DRIVER AND FRONT PASSENGER SEATBELT BUCKLE SWITCH

- Using a diagnostic scan tool, monitor the RCM (restraints control module) Parameter Identifications (PIDs).
- For driver seatbelt,

No

ACTIVATE the Belt-Minder® for the seating position in question.

REFER to: Seatbelt Minder Deactivating/Activating

(413-01 Instrumentation, Message Center and Warning Chimes, General Procedures).

#### PINPOINT TEST CH: THE DIESEL EXHAUST OVER-TEMPERATURE WARNING CHIME ALWAYS SOUNDS

# **Normal Operation and Fault Conditions**

See Diesel Exhaust Over-Temperature Warning Chime. REFER to: Warning Chimes - System Operation and Component Description (413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

#### **Possible Sources**

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

#### CH1 CHECK THE SEATBELT WARNING CHIME OPERATION

- Ignition OFF.
- Ignition ON.
- Unbuckle the driver seatbelt.
- Monitor the seatbelt warning chime when the ignition is transitioned from OFF to RUN for 6 seconds.

# Does the seatbelt warning chime operate for approximately 6 seconds?



#### CH2 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?

Yes REFER to DTC (diagnostic trouble code) Chart: IPC (instrument panel cluster) in this section.