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## 2013 FORD Focus 5 Doors OEM Service and Repair Workshop Manual

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## Normal Operation and Fault Conditions

See Turn Signal On Chime Tone or Turn Signal Left On Chime. REFER to: [Warning Chimes - System Operation and Component Description](#)(413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

### Possible Sources

- Turn signal indication concern
- Communication concern
- BCM (body control module)
- GWM (gateway module A)
- IPC (instrument panel cluster)

## CT1 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?**

<b>Yes</b>	GO to <a href="#">CT2</a>
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<b>No</b>	<a href="#">GO to Pinpoint Test A</a>
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## CT2 CHECK THE TURN SIGNAL INDICATOR OPERATION

- Verify the RH (right-hand) and LH (left-hand) turn signal indicators operate correctly.

**Do the turn signal indicators operate correctly?**

<b>Yes</b>	GO to <a href="#">CT3</a>
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<b>No</b>	<a href="#">GO to Pinpoint Test AL</a>
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## CT3 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).

## CU2 CHECK THE AIRBAG WARNING INDICATOR OR RTT (RECONFIGURABLE TELLTALE) INDICATOR

- Ignition OFF.
- Ignition ON.
- Observe the airbag warning indicator or RTT (reconfigurable telltale) indicator during initial indicator prove out.

**Does the airbag warning indicator or RTT (reconfigurable telltale) indicator illuminate then turn off during initial indicator prove out?**

<b>Yes</b>	CLEAR the DTC (diagnostic trouble code) . DIAGNOSE the SRS (supplemental restraint system) . REFER to: <a href="#">Airbag Supplemental Restraint System (SRS)</a> (501-20B Supplemental Restraint System, Diagnosis and Testing).
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<b>No</b>	INSTALL a new IPC (instrument panel cluster) . REFER to: <a href="#">Instrument Panel Cluster (IPC)</a> (413-01 Instrumentation, Message Center and Warning Chimes, Removal and Installation).
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## PINPOINT TEST CV : LOST COMMUNICATION WITH A MODULE (NO SUB TYPE INFORMATION)

### Normal Operation and Fault Conditions

REFER to: [Controller Area Network \(CAN\) Module Communications Network - System Operation and Component Description](#)(418-00A Controller Area Network (CAN) Module Communications Network, Description and Operation).

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPC (instrument panel cluster) U0100:00	Lost Communication With ECM/PCM 'A': No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the PCM (powertrain control module) through the GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0101:00	Lost Communication with TCM: No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the TCM (transmission control module) through the GWM

	Module: No Sub Type Information	GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0140:00	Lost Communication With Body Control Module: No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the BCM (body control module) through the GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0146:00	Lost Communication With Serial Data Gateway 'A': No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0151:00	Lost Communication With Restraints Control Module: No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the RCM (restraints control module) through the GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0184:00	Lost Communication With Radio: No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the ACM (audio front control module) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0199:00	Lost Communication With 'Door Control Module A': No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the DDM (driver door module) through the GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U0212:00	Lost Communication With Steering Column Control Module: No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the SCCM (steering column control module) through the GWM (gateway module A) are missing for 5 seconds or longer.
IPC (instrument panel cluster) U023A:00	Lost Communication With Image Processing Module A: No Sub Type Information	Sets in continuous memory in the IPC (instrument panel cluster) if data messages received from the IPMA (image processing module A) through the GWM

- Ignition ON.
- Verify there is an observable symptom present.

**Is an observable symptom present?**

<b>Yes</b>	GO to <a href="#">CV2</a>
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<b>No</b>	CLEAR the DTC (diagnostic trouble code) . The system is operating normally at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.
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**CV2 CHECK THE COMMUNICATION NETWORK**

- Using a diagnostic scan tool, perform the network test.

**Do all modules pass the network test?**

<b>Yes</b>	GO to <a href="#">CV3</a>
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<b>No</b>	REFER to: <a href="#">Controller Area Network (CAN) Module Communications Network(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing)</a> .
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**CV3 CHECK THE IPC (INSTRUMENT PANEL CLUSTER) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)**

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

**Are any non-network Diagnostic Trouble Codes (DTCs) present?**

<b>Yes</b>	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to DTC (diagnostic trouble code) Chart: IPC (instrument panel cluster) in this section.
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<b>Yes</b>	GO to <a href="#">CV7</a>
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<b>No</b>	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have set due to high network traffic or an intermittent fault condition.
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## CV7 CHECK FOR OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

### NOTE

If new modules were installed prior to the DTC (diagnostic trouble code) being set, the module configuration can be incorrectly set during the PMI (programmable module installation) or the PMI (programmable module installation) may not have been carried out.

- CHECK the vehicle service history for recent service actions related to the module(s) in question, GWM (gateway module A) or IPC (instrument panel cluster) . If recent service history is found:
  - verify correct replacement module was installed
    - vehicle parts build may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into customer vehicle
    - return the swapped module to source vehicle and obtain new replacement module
- Operate the system and determine if the observable symptom is still present.

### Is the observable symptom still present?

<b>Yes</b>	GO to <a href="#">CV8</a>
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<b>No</b>	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.
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## CV8 CHECK FOR CORRECT OPERATION OF THE MODULE IN QUESTION

- Ignition OFF.
- Disconnect and inspect the module connector(s).
- Repair:

IPC (instrument panel cluster) U0401:86	Invalid Data Received from ECM/PCM A: Signal Invalid	Invalid odometer data received for 5 seconds or longer.
IPC (instrument panel cluster) U0402:00	Invalid Data Received from TCM: No Sub Type Information	Invalid or missing transmission temperature gauge data received for 5 seconds or longer.
IPC (instrument panel cluster) U0402:81	Invalid Data Received from TCM: Invalid Serial Data Received	Invalid or missing transmission temperature gauge data received for 5 seconds or longer.
IPC (instrument panel cluster) U0403:00	Invalid Data Received From Transfer Case Control Module: No Sub Type Information	Invalid or missing data received for 5 seconds or longer.
IPC (instrument panel cluster) U0415:00	Invalid Data Received from Anti-Lock Brake System (ABS) Control Module 'A': No Sub Type Information	Invalid or missing selectable drive mode data received for 5 seconds or longer.
IPC (instrument panel cluster) U0415:82	Invalid Data Received from Anti-Lock Brake System (ABS) Control Module 'A': Alive/Sequence Counter Incorrect/Not Updated	Invalid or missing hill start assist, off road display, traction control on/off, or auto hold RTT (reconfigurable telltale) data received for 5 seconds or longer.
IPC (instrument panel cluster) U0420:00	Invalid Data Received from Power Steering Control Module 'A': No Sub Type Information	Invalid or missing power steering control data received for 5 seconds or longer.
IPC (instrument panel cluster) U0420:82	Invalid Data Received from Power Steering Control Module 'A': Alive/Sequence Counter Incorrect/Not Updated	Invalid or missing power steering control data received for 5 seconds or longer.
IPC (instrument panel cluster) U0422:00	Invalid Data Received From Body Control Module: No Sub Type Information	Invalid or missing TPMS (tire pressure monitoring system) data received for 5 seconds or longer. (The TPMS (tire pressure monitoring system) indicator flashes for 75 seconds the on solid.)

IPC (instrument panel cluster) U0554:00	Invalid Data Received From Accessory Protocol Interface Module: No Sub Type Information	Invalid or missing navigation data received for 10 seconds or longer.
IPC (instrument panel cluster) U0594:86	Invalid Data Received From Hybrid/EV Powertrain Control Module 'A': Signal Invalid	Invalid or missing brake coach display data received for 5 seconds or longer ( HEV (hybrid electric vehicle) ).

#### Possible Sources

- Suspect module

#### CW1 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE MODULE SENDING INVALID DATA

- Ignition ON.
- Using a diagnostic scan tool, perform the self-test for the module in question sending the invalid data.

#### Are any Diagnostic Trouble Codes (DTCs) present from the module sending the invalid data?

<b>Yes</b>	DIAGNOSE the module sending the invalid data. REFER to the appropriate section in the Workshop Manual.
<b>No</b>	DIAGNOSE the observable symptom present. REFER to the appropriate symptom chart in this section.

#### PINPOINT TEST CX : INVALID DATA RECEIVED - INVALID/INCOMPATIBLE CONFIGURATION

##### Normal Operation and Fault Conditions

REFER to: [Controller Area Network \(CAN\) Module Communications Network - System Operation and Component Description](#)(418-00A Controller Area Network (CAN) Module Communications Network, Description and Operation).

##### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
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<b>Yes</b>	The system is operating correctly at this time. The concern may have been caused by incomplete or incorrect PMI (programmable module installation) procedure.
<b>No</b>	The IPC (instrument panel cluster) fails to retain configuration data. INSTALL a new IPC (instrument panel cluster) . REFER to: <a href="#">Instrument Panel Cluster (IPC)</a> (413-01 Instrumentation, Message Center and Warning Chimes, Removal and Installation).

#### PINPOINT TEST CY : U2100:00

#### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPC (instrument panel cluster) U2100:00	Initial Configuration Not Complete: No Sub Type Information	Sets in the IPC (instrument panel cluster) due to incomplete or incorrect PMI (programmable module installation) procedures.

#### Possible Sources

- IPC (instrument panel cluster)

#### CY1 CHECK VEHICLE HISTORY FOR RECENT SERVICE ACTIONS

- Check the vehicle history for any recent service actions related to the IPC (instrument panel cluster) .

#### Have any service actions been performed?

<b>Yes</b>	REPEAT the PMI (programmable module installation) as directed by the diagnostic scan tool.
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<b>No</b>	GO to <a href="#">CY2</a>
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#### CY2 RECONFIGURE THE MODULE

IPC (instrument panel cluster) U3000:46	Control Module: Calibration/Parameter Memory Failure	Sets in the IPC (instrument panel cluster) when the IPC (instrument panel cluster) detects an EEPROM failure.
IPC (instrument panel cluster) U3000:54	Control Module: Missing Calibration	Sets in the IPC (instrument panel cluster) when the IPC (instrument panel cluster) detects missing or corrupted graphics application data.

### Possible Sources

- IPC (instrument panel cluster)

### CZ1 RETRIEVE 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 U3000:04, U3000:41, U3000:42, U3000:44, U3000:46 or U3000:54 recorded?

<b>Yes</b>	INSTALL a new IPC (instrument panel cluster) . REFER to: <a href="#">Instrument Panel Cluster (IPC)</a> (413-01 Instrumentation, Message Center and Warning Chimes, Removal and Installation).
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<b>No</b>	The system is operating correctly at this time.
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### PINPOINT TEST DA : U3003:16

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

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPC (instrument panel cluster) U3003:16	Battery Voltage: Circuit Voltage Below Threshold	Sets in the IPC (instrument panel cluster) in continuous memory if the IPC (instrument panel cluster) detects battery