

## **DESCRIPTION AND OPERATION > WARNING CHIMES - SYSTEM OPERATION AND COMPONENT DESCRIPTION > TURN SIGNAL ON CHIME TONE**

The IPC provides a repetitive 1-second on/off tick-tock chime tone along with visual RH or LH turn indicators to inform the driver the turn signal or hazard lamp function is on.

The IPC receives the left turn lamp request and the right turn lamp request messages from the GWM over the HS-CAN3.

The GWM receives the left turn lamp request and the right turn lamp request messages from the BCM over the HS-CAN1.

## **DESCRIPTION AND OPERATION > WARNING CHIMES - SYSTEM OPERATION AND COMPONENT DESCRIPTION > TURN SIGNAL LEFT ON CHIME**

The turn signal left on or turn signal minder chime uses both odometer and the turn signal status message to determine the turn signals have been left on. The turn signal left on chime sounds a repetitive 1-second chime through the front speakers when the vehicle is driven with the turn signal on for more than 3.2 km (2.0 miles).

The IPC receives the turn signal status from the GWM over the HS-CAN3.

The GWM receives the turn signal status from the BCM over the HS-CAN1.

When a chime request is received, the IPC sends the IPC chime request message to the ACM and the audio DSP module over the HS-CAN3 to sound the chime.

## **DIAGNOSIS AND TESTING > INSTRUMENTATION, MESSAGE CENTER AND WARNING CHIMES > DTC CHART: INSTRUMENT PANEL CLUSTER (IPC)**

Diagnostics in this article assume a certain skill level and knowledge of Ford-specific diagnostic practices. REFER to: Diagnostic Methods .

### **DTC Chart - IPC**

| DTC      | Description                                                     | Action                |
|----------|-----------------------------------------------------------------|-----------------------|
| P0460:11 | Fuel Level Sensor "A" Circuit: Circuit Short To Ground          | GO to Pinpoint Test C |
| P0460:13 | Fuel Level Sensor "A" Circuit: Circuit Open                     | GO to Pinpoint Test C |
| P1243:06 | Second Fuel Pump Fault or Ground Fault: Algorithm Based Failure | GO to Pinpoint Test C |
| P1346:11 | Fuel Level Sensor "B" Circuit: Circuit Short To Ground          | GO to Pinpoint Test C |

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| P1346:13 | Fuel Level Sensor "B" Circuit: Circuit Open                                                     | GO to Pinpoint Test C                                                                                                                                                  |
| P1534:01 | Restraint Deployment Indicator Circuit: General Electrical Failure                              | INSTALL a new IPC. REFER to: Instrument Panel Cluster (IPC) . Diagnose all RCM Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) . |
| P1706:00 | High Vehicle Speed Observed in Park: No Sub Type Information                                    | GO to Pinpoint Test V                                                                                                                                                  |
| U0100:00 | Lost Communication With ECM/PCM "A": No Sub Type Information                                    | GO to Pinpoint Test BM                                                                                                                                                 |
| U0104:00 | Lost Communication With Cruise Control Module: No Sub Type Information                          | GO to Pinpoint Test BO                                                                                                                                                 |
| U0121:00 | Lost Communication With Anti-Lock Brake System (ABS) Control Module: No Sub Type Information    | GO to Pinpoint Test BP                                                                                                                                                 |
| U0140:00 | Lost Communication With Body Control Module: No Sub Type Information                            | GO to Pinpoint Test BQ                                                                                                                                                 |
| U0146:00 | Lost Communication With Gateway "A": No Sub Type Information                                    | GO to Pinpoint Test BS                                                                                                                                                 |
| U0151:00 | Lost Communication With Restraints Control Module: No Sub Type Information                      | GO to Pinpoint Test BT                                                                                                                                                 |
| U0159:00 | Lost Communication With Parking Assist Control Module "A": No Sub Type Information              | GO to Pinpoint Test BV                                                                                                                                                 |
| U0184:00 | Lost Communication With Radio: No Sub Type Information                                          | GO to Pinpoint Test BW                                                                                                                                                 |
| U0212:00 | Lost Communication With Steering Column Control Module: No Sub Type Information                 | GO to Pinpoint Test BX                                                                                                                                                 |
| U0232:00 | Lost Communication With Side Obstacle Detection Control Module - Left: No Sub Type Information  | GO to Pinpoint Test BY                                                                                                                                                 |
| U0233:00 | Lost Communication With Side Obstacle Detection Control Module - Right: No Sub Type Information | GO to Pinpoint Test BY                                                                                                                                                 |
| U0401:00 | Invalid Data Received from ECM/PCM A: No Sub Type Information                                   | This DTC sets when the IPC receives invalid network data for the speedometer, engine temperature, or transmission                                                      |

|          |                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|          |                                                                                                   | <p>fluid temperature data from the PCM. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the PCM and other modules on the network. Refer to the appropriate article for the procedure. If no Diagnostic Trouble Codes (DTCs) are present in the PCM, DIAGNOSE the observable symptom.</p>                                                                                                                   |
| U0401:81 | <p>Invalid Data Received from ECM/PCM<br/>A: Invalid Serial Data Received</p>                     | <p>This DTC sets when the IPC receives invalid network data for the speedometer, engine temperature, or transmission fluid temperature data from the PCM. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the PCM and other modules on the network. Refer to the appropriate article for the procedure. If no Diagnostic Trouble Codes (DTCs) are present in the PCM, DIAGNOSE the observable symptom.</p> |
| U0401:82 | <p>Invalid Data Received from ECM/PCM<br/>A: Alive/Sequence Counter<br/>Incorrect/Not Updated</p> | <p>This DTC sets when the IPC receives invalid network data for the forward collision or adaptive cruise control data from the PCM. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the PCM and other modules on the network. Refer to the appropriate article for the procedure. If no Diagnostic Trouble Codes (DTCs) are present in the PCM, DIAGNOSE the observable symptom.</p>                       |
| U0405:56 | <p>Invalid Data Received From Cruise Control Module: Invalid/Incompatible Configuration</p>       | <p>This DTC sets when the IPC receives invalid network data for adaptive cruise control from the CCM. CHECK the vehicle service history for recent service actions related to this module. This DTC sets due to incomplete or incorrect Programmable Module Installation (PMI) procedures. If</p>                                                                                                                                 |

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|          |                                                                                                           | there have been recent service actions with this module, REPEAT the Programmable Module Installation (PMI) procedure as directed by the diagnostic scan tool. If there have been no recent service actions, INSTALL a new module to correct the failure to retain configuration data.                                                                                                    |
| U0415:00 | Invalid Data Received From Anti-Lock Brake System (ABS) Control Module:<br>No Sub Type Information        | This DTC sets when the IPC receives invalid accelerometer network data from the ABS module. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the ABS module and other modules on the network. REFER to: Anti-Lock Brake System (ABS) and Stability Control . If no Diagnostic Trouble Codes (DTCs) are present in the ABS module, DIAGNOSE the observable symptom. |
| U0415:81 | Invalid Data Received From Anti-Lock Brake System (ABS) Control Module:<br>Invalid Serial Data Received   | This DTC sets when the IPC receives invalid accelerometer network data from the ABS module. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the ABS module and other modules on the network. REFER to: Anti-Lock Brake System (ABS) and Stability Control . If no Diagnostic Trouble Codes (DTCs) are present in the ABS module, DIAGNOSE the observable symptom. |
| U0420:82 | Invalid Data Received From Power Steering Control Module:<br>Alive/Sequence Counter Incorrect/Not Updated | GO to Pinpoint Test BZ                                                                                                                                                                                                                                                                                                                                                                   |
| U0422:00 | Invalid Data Received From Body Control Module: No Sub Type Information                                   | This DTC sets when the IPC receives invalid network TPMS data from the BCM. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the BCM and other modules on the network. REFER to: Body Control Module (BCM) .                                                                                                                                                       |

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|          |                                                                                                            | If no Diagnostic Trouble Codes (DTCs) are present in the BCM, DIAGNOSE the observable symptom.                                                                                                                                                                                                                                                                                                                                                                                |
| U0452:81 | Invalid Data Received From Restraints Control Module: Invalid Serial Data Received                         | This DTC sets when the IPC receives invalid network data from the RCM due to incorrect Belt-Minder ® configuration in the IPC. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the RCM and other modules on the network. REFER to: Airbag Supplemental Restraint System (SRS) . If no Diagnostic Trouble Codes (DTCs) are present in the RCM, DIAGNOSE the observable symptom.                                                                         |
| U046B:86 | Invalid Data Received From Global Positioning System Module: Signal Invalid                                | This DTC sets when the IPC receives invalid network data from the GPSM. RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in the GPSM and other modules on the network. Refer to the appropriate article for the procedure. If no Diagnostic Trouble Codes (DTCs) are present in the GPSM, DIAGNOSE the observable symptom.                                                                                                                                 |
| U0533:56 | Invalid Data Received From Side Obstacle Detection Control Module-Left: Invalid/Incompatible Configuration | CHECK the vehicle service history for recent service actions related to this module. This DTC sets due to incomplete or incorrect Programmable Module Installation (PMI) procedures. If there have been recent service actions with this module, REPEAT the Programmable Module Installation (PMI) procedure as directed by the diagnostic scan tool. If there have been no recent service actions, INSTALL a new module to correct the failure to retain configuration data. |
| U0534:56 | Invalid Data Received From Side Obstacle Detection Control Module-Right: Invalid/Incompatible              | CHECK the vehicle service history for recent service actions related to this module. This DTC                                                                                                                                                                                                                                                                                                                                                                                 |

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|          | Configuration                                               | sets due to incomplete or incorrect Programmable Module Installation (PMI) procedures. If there have been recent service actions with this module, REPEAT the Programmable Module Installation (PMI) procedure as directed by the diagnostic scan tool. If there have been no recent service actions, INSTALL a new module to correct the failure to retain configuration data.                                                                                               |
| U2100:00 | Initial Configuration Not Complete: No Sub Type Information | CHECK the vehicle service history for recent service actions related to this module. This DTC sets due to incomplete or incorrect Programmable Module Installation (PMI) procedures. If there have been recent service actions with this module, REPEAT the Programmable Module Installation (PMI) procedure as directed by the diagnostic scan tool. If there have been no recent service actions, INSTALL a new module to correct the failure to retain configuration data. |
| U3000:41 | Control Module: General Checksum Failure                    | CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If DTC U3000:41 is retrieved again, INSTALL a new IPC. REFER to: Instrument Panel Cluster (IPC) .                                                                                                                                                                                                                                                                                                            |
| U3000:42 | Control Module: General Memory Failure                      | CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If DTC U3000:42 is retrieved again, INSTALL a new IPC. REFER to: Instrument Panel Cluster (IPC) .                                                                                                                                                                                                                                                                                                            |
| U3000:44 | Control Module: Data Memory Failure                         | CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If DTC U3000:44 is retrieved again, INSTALL a new IPC. REFER to: Instrument Panel Cluster (IPC) .                                                                                                                                                                                                                                                                                                            |
| U3000:46 | Control Module: Calibration/Parameter Memory Failure        | CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the                                                                                                                                                                                                                                                                                                                                                                                                                         |