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## 2005 FORD Freestyle OEM Service and Repair Workshop Manual

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- For additional information on the messages sent to the PSCM (power steering control module) from the FCIM (front controls interface module) , REFER to: [Power Steering - System Operation and Component Description](#)(211-02 Power Steering, Description and Operation).

### Pinpoint Test Applicability

- This test applies to PSCM (power steering control module) DTC (diagnostic trouble code) U0256 Lost Communication with the FCIM (front controls interface module) only. It does not apply to any other module except the PSCM (power steering control module) .

### DTC Diagnostic Strategy

- If the module DTC (diagnostic trouble code) list results in a large number of Diagnostic Trouble Codes (DTCs), diagnose all module hard faults first (C102D, C1B00, C200B, C200C, C200D, U2011 and U3000) before diagnosing any network faults (lost communication or invalid data). If voltage concern Diagnostic Trouble Codes (DTCs) are present, diagnose those after any module hard faults and before any network faults. Diagnose all current and active Diagnostic Trouble Codes (DTCs) before diagnosing any historic Diagnostic Trouble Codes (DTCs).

### Pinpoint Test Purpose

- To verify the PSCM (power steering control module) wiring harness and connectors are OK. This test checks the connectors and wiring from the PSCM (power steering control module) 3 pin connector at the steering gear to the in-line connector in the engine compartment. If these circuits are working correctly, the test then directs to check the FCIM (front controls interface module) and wiring harness.

### Diagnostic Aids

- Do not install a new PSCM (power steering control module) as part of the repair for a PSCM (power steering control module) DTC (diagnostic trouble code) U0256:00.
- DTC (diagnostic trouble code) U0256:00 indicates a possible failure of the HS-CAN (high-speed controller area network) which can be due to a circuit fault in the HS-CAN (high-speed controller area network) , the PSCM (power steering control module) wiring harness or a FCIM (front controls interface module) concern.

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PSCM (power steering control module) U0256:00	Lost Communication With Front Controls Interface Module 'A': No Sub Type Information	This DTC (diagnostic trouble code) sets when the PSCM (power steering control module) does not receive the FCIM (front controls interface module) messages within a certain time frame. This can occur if the FCIM (front controls interface module) wiring harness or electrical connectors are loose or damaged, or if the vehicle battery state of charge levels are low.

## Diagnostic Aids

- DTC (diagnostic trouble code) U045A:00 indicates a concern with the PAM (parking assist control module) . The module reporting this DTC (diagnostic trouble code) is not the problem module. Do not install a new PSCM (power steering control module) as part of the repair for PSCM (power steering control module) DTC (diagnostic trouble code) U045A:00.
- The presence of DTC (diagnostic trouble code) U045A:00 prevents the active park assist system (if equipped) from activating. If set during an active park assist event, the event is terminated and the active park assist system is deactivated.

## DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PSCM (power steering control module) U045A:00	Invalid Data Received From Parking Assist Control Module 'A': No Sub Type Information	This DTC (diagnostic trouble code) is set if the PSCM (power steering control module) receives invalid data from the PAM (parking assist control module) instead of valid sensor information. The data is likely invalid due to PAM (parking assist control module) internal errors, damaged or inoperative sensors or components the PAM (parking assist control module) uses to gather vehicle data. The invalid data DTC (diagnostic trouble code) is not set due to the PSCM (power steering control module) , PSCM (power steering control module) wiring or connectors.

## Possible Sources

- PAM (parking assist control module) sensors and components
- PAM (parking assist control module)

**Pinpoint Test Steps available in the on-line Workshop Manual.**

## PINPOINT TEST AX : PSCM (POWER STEERING CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) U053B:00 INVALID DATA RECEIVED FROM IMAGE PROCESSING MODULE A

### Normal Operation and Fault Conditions

#### Description

- The IPMA (image processing module A) uses input from several sensors and components to gather vehicle data, then sends this data to the PSCM (power steering control module) . If the data is corrupted or invalid, the IPMA (image processing module A) sends out "invalid", "fault" or "unknown" instead of the actual sensor data. For a list of the messages sent to the PSCM (power steering control

steering control module) , PSCM (power steering control module) wiring or connectors.

#### Possible Sources

- IPMA (image processing module A) sensors and components
- IPMA (image processing module A)

**Pinpoint Test Steps available in the on-line Workshop Manual.**

## PINPOINT TEST AY : PSCM (POWER STEERING CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) U0126:00 LOST COMMUNICATION WITH STEERING ANGLE SENSOR MODULE

### NOTE

Refer to Steering GSB (General Service Bulletin) for additional connector and wiring inspection tips.

Refer to Wiring Diagrams Cell 43 for schematic and connector information.

#### Normal Operation and Fault Conditions Description

- The PSCM (power steering control module) monitors the HS-CAN (high-speed controller area network) messages when the voltage to the PSCM (power steering control module) is greater than 10 volts and there are no Diagnostic Trouble Codes (DTCs) present inhibiting PSCM (power steering control module) operation.
- For additional information on the messages sent to the PSCM (power steering control module) from the SASM (steering angle sensor module) module, REFER to: [Power Steering - System Operation and Component Description](#) (211-02 Power Steering, Description and Operation).

#### Pinpoint Test Applicability

- This test applies to PSCM (power steering control module) DTC (diagnostic trouble code) U0126 Lost Communication with the SASM (steering angle sensor module) only. It does not apply to any other module except the PSCM (power steering control module) .

#### DTC Diagnostic Strategy

- If the module DTC (diagnostic trouble code) list results in a large number of Diagnostic Trouble Codes (DTCs), diagnose all module hard faults first (C102D, C1B00, C200B, C200C, C200D, U2011 and U3000) before diagnosing any network faults (lost communication or invalid data). If voltage concern Diagnostic Trouble Codes (DTCs) are present, diagnose those after any module hard faults and before any network faults. Diagnose all current and active Diagnostic Trouble Codes (DTCs) before diagnosing any historic Diagnostic Trouble Codes (DTCs).

#### Pinpoint Test Purpose

## NOTE

Refer to Steering GSB (General Service Bulletin) for additional connector and wiring inspection tips.

Refer to Wiring Diagrams Cell 43 for schematic and connector information.

### Normal Operation and Fault Conditions Description

- The PSCM (power steering control module) monitors the HS-CAN (high-speed controller area network) messages when the ignition has been on for more than 5 seconds, the voltage to the PSCM (power steering control module) is greater than 10 volts and there are no Diagnostic Trouble Codes (DTCs) present inhibiting PSCM (power steering control module) operation.
- The Lighting Control Module - Rear is also known as the TRM (trailer module)
- For additional information on the messages sent to the PSCM (power steering control module) from the TRM (trailer module), REFER to: [Power Steering - System Operation and Component Description](#) (211-02 Power Steering, Description and Operation).

### Pinpoint Test Applicability

- This test applies to PSCM (power steering control module) DTC (diagnostic trouble code) U0252 Lost Communication with Lighting Control Module- Rear only. It does not apply to any other module except the PSCM (power steering control module).

### DTC Diagnostic Strategy

- If the module DTC (diagnostic trouble code) list results in a large number of Diagnostic Trouble Codes (DTCs), diagnose all module hard faults first (C102D, C1B00, C200B, C200C, C200D, U2011 and U3000) before diagnosing any network faults (lost communication or invalid data). If voltage concern Diagnostic Trouble Codes (DTCs) are present, diagnose those after any module hard faults and before any network faults. Diagnose all current and active Diagnostic Trouble Codes (DTCs) before diagnosing any historic Diagnostic Trouble Codes (DTCs).

### Pinpoint Test Purpose

- To verify the PSCM (power steering control module) wiring harness and connectors are OK. This test checks the connectors and wiring from the PSCM (power steering control module) 3 pin connector at the steering gear to the in-line connector in the engine compartment. If these circuits are working correctly, the test then directs to check the TRM (trailer module) and wiring harness.

### Diagnostic Aids

- Do not install a new PSCM (power steering control module) as part of the repair for a PSCM (power steering control module) DTC (diagnostic trouble code) U0252:00.
- DTC (diagnostic trouble code) U0252:00 indicates a possible failure of the HS-CAN (high-speed controller area network) which can be due to a circuit fault in the HS-CAN (high-speed controller area network), the PSCM (power steering control module) wiring harness or a TRM (trailer module) concern.

### DTC Fault Trigger Conditions

## Description

- The PSCM (power steering control module) monitors the HS-CAN (high-speed controller area network) messages when the ignition has been on for more than 5 seconds, the voltage to the PSCM (power steering control module) is greater than 10 volts and there are no Diagnostic Trouble Codes (DTCs) present inhibiting PSCM (power steering control module) operation.
- For additional information on the messages sent to the PSCM (power steering control module) from the TCCM (transfer case control module)

## Pinpoint Test Applicability

- This test applies to PSCM (power steering control module) DTC (diagnostic trouble code) U0102 Lost Communication with the TCCM (transfer case control module) only. It does not apply to any other module except the PSCM (power steering control module) .

## DTC Diagnostic Strategy

- If the module DTC (diagnostic trouble code) list results in a large number of Diagnostic Trouble Codes (DTCs), diagnose all module hard faults first (C102D, C1B00, C200B, C200C, C200D, U2011 and U3000) before diagnosing any network faults (lost communication or invalid data). If voltage concern Diagnostic Trouble Codes (DTCs) are present, diagnose those after any module hard faults and before any network faults. Diagnose all current and active Diagnostic Trouble Codes (DTCs) before diagnosing any historic Diagnostic Trouble Codes (DTCs).

## Pinpoint Test Purpose

- To verify the PSCM (power steering control module) wiring harness and connectors are OK. This test checks the connectors and wiring from the PSCM (power steering control module) 3 pin connector at the steering gear to the in-line connector in the engine compartment. If these circuits are working correctly, the test then directs to check the TCCM (transfer case control module) and wiring harness.

## Diagnostic Aids

- Do not install a new PSCM (power steering control module) as part of the repair for a PSCM (power steering control module) DTC (diagnostic trouble code) U0102:00.
- DTC (diagnostic trouble code) U0102:00 indicates a possible failure of the HS-CAN (high-speed controller area network) which can be due to a circuit fault in the HS-CAN (high-speed controller area network) , the PSCM (power steering control module) wiring harness or a TCCM (transfer case control module) concern.
- When the selectable drive mode is changed, the PSCM (power steering control module) modifies the steering characteristics of the EPAS (electronic power assist steering) system. The presence of this DTC (diagnostic trouble code) prevents the selectable drive mode system (if equipped) from activating. If set while the vehicle is in a drive mode other than NORMAL, the PSCM (power steering control module) defaults to NORMAL and the system is disabled.

## DTC Fault Trigger Conditions

DTC (diagnostic	Description	Fault Trigger Condition

## Pinpoint Test Applicability

- This test applies to PSCM (power steering control module) DTC (diagnostic trouble code) B1D23 Overheat Sensor only. It does not apply to any other module except the PSCM (power steering control module).

## DTC Diagnostic Strategy

- This test inspects the steering gear and the surrounding engine compartment for hot components, missing heat shields or a damaged steering gear housing creating an opening into the steering gear.
- If the module DTC (diagnostic trouble code) list results in a large number of Diagnostic Trouble Codes (DTCs), diagnose all module hard faults first (C102D, C1B00, C200C, C200D, U2011 and U3000) before diagnosing any network faults (lost communication or invalid data). If voltage concern Diagnostic Trouble Codes (DTCs) are present, diagnose those after any module hard faults and before any network faults.

## Diagnostic Aids

- The PSCM (power steering control module) reporting only DTC (diagnostic trouble code) B1D23:4B does not indicate a fault in the PSCM (power steering control module). It indicates an over-temperature condition due to ambient conditions or a heavy load on the EPAS system. An example of a heavy load would be multiple parking lot maneuvers over a short duration of time with low tire pressure or towing for long distances followed by multiple parking maneuvers
- The thermistor used by the PSCM (power steering control module) is calibrated for 80°C (176°F) and as ambient temperature decreases, so does the accuracy of the sensor. At room temperature and lower, the sensor is +/- 20°C (68°F).
- The presence of DTC (diagnostic trouble code) B1D23:4B prevents the active park assist system (if equipped) from activating. If set during an active park assist event, the event is terminated and the active park assist system is deactivated.

## DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PSCM (power steering control module) B1D23:4B	Overheat Sensor: Over Temperature	This DTC (diagnostic trouble code) sets when the internal temperature of the EPAS (electronic power assist steering) gear exceeds a predetermined threshold. This is most likely due to high ambient temperature conditions, heavy loads on the steering gear, or a damaged PSCM (power steering control module) housing allowing heat into the steering gear.

## Possible Sources

- Heat shield missing
- Heavy loads on the EPAS (electronic power assist steering) gear

of the workshop manual.

- DTC (diagnostic trouble code) U0557:00 indicates a concern with the lane information sent from the FCIM (front controls interface module) . The module reporting this DTC (diagnostic trouble code) is not the problem module. Do not install a new PSCM (power steering control module) as part of the repair for PSCM (power steering control module) DTC (diagnostic trouble code) U0557:00.

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PSCM (power steering control module) U0557:00	Invalid Data Received From Front Controls Interface Module 'A': No Sub Type Information	This DTC (diagnostic trouble code) is set if the PSCM (power steering control module) receives an "fault" or "unknown" message from the FCIM (front controls interface module) instead of valid information.

### Possible Sources

- HS-CAN (high-speed controller area network) concern
- FCIM (front controls interface module)
- This DTC (diagnostic trouble code) sets when the PSCM (power steering control module) does not receive the FCIM (front controls interface module) messages within a certain time frame. This can occur if the FCIM (front controls interface module) wiring harness or electrical connectors are loose or damaged, or if the vehicle battery state of charge levels are low. Consult the DTC (diagnostic trouble code) Index for additional information if needed.

**Pinpoint Test Steps available in the on-line Workshop Manual.**

## PINPOINT TEST BD : PSCM (POWER STEERING CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) U3001:68 OR U3001:89 CONTROL MODULE IMPROPER SHUTDOWN PERFORMANCE

### NOTE

Refer to Steering GSB (General Service Bulletin) for additional connector and wiring inspection tips.

Refer to Wiring Diagrams Cell 43for schematic and connector information.

### Normal Operation and Fault Conditions Description

- When the ignition is set to OFF, the PSCM (power steering control module) remains powered up for a short period of time to store data in memory. When the ignition is set to ON, the PSCM (power steering control module) retrieves this information and if the information is missing or corrupted a DTC (diagnostic trouble code) is set.



module) U3001:89	Performance: Data Transfer Failure	improper shutdown. Prior to shutting down, the PSCM (power steering control module) stores data in memory, when the ignition is set to ON, the PSCM (power steering control module) reads this information. If the information is missing or corrupted, DTC (diagnostic trouble code) U3001:89 is set.
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### Possible Sources

- Fuses
- Wiring, terminals or connectors
- 12 volt battery
- Charging system
- PSCM (power steering control module)

### Visual Inspection and Pre-checks

- Make sure the vehicle battery terminals and cables are free of any corrosion and other contaminants.
- Make sure the vehicle battery terminals are tightened to their correct torque specifications.
- Make sure all PSCM (power steering control module) fuses in the BJB (battery junction box) and High-Current BJB (battery junction box) are OK.

### NOTICE

Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may cause damage to the connector.

**Pinpoint Test Steps available in the on-line Workshop Manual.**

## PINPOINT TEST BS : PSCM (POWER STEERING CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) U023B:00 LOST COMMUNICATION WITH IMAGE PROCESSING MODULE B

### NOTE

Refer to Steering GSB (General Service Bulletin) for additional connector and wiring inspection tips.

Refer to Wiring Diagrams Cell 43 for schematic and connector information.

### Normal Operation and Fault Conditions Description

- The PSCM (power steering control module) monitors the HS-CAN (high-speed controller area network) messages when the ignition has been on for more than 5 seconds, the voltage to the PSCM (power steering control module) is greater than 10 volts and there are no Diagnostic Trouble Codes (DTCs) present inhibiting PSCM (power steering control module) operation.

damaged, or if the vehicle battery state of charge levels are low.

#### Possible Sources

- Fuse(s)
- Wiring, terminals or connectors
- IPMB (image processing module B)

#### NOTICE

Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may cause damage to the connector.

**Pinpoint Test Steps available in the on-line Workshop Manual.**

### PINPOINT TEST BT : PSCM (POWER STEERING CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) U0253:00 LOST COMMUNICATION WITH ACCESSORY PROTOCOL INTERFACE MODULE

#### NOTE

Refer to Steering GSB (General Service Bulletin) for additional connector and wiring inspection tips.

Refer to Wiring Diagrams Cell 43 for schematic and connector information.

#### Normal Operation and Fault Conditions Description

- The PSCM (power steering control module) monitors the HS-CAN (high-speed controller area network) messages when the ignition has been on for more than 5 seconds, the voltage to the PSCM (power steering control module) is greater than 10 volts and there are no Diagnostic Trouble Codes (DTCs) present inhibiting PSCM (power steering control module) operation.
- For additional information on the messages sent to the PSCM (power steering control module) from the APIM (SYNC module), REFER to: [Power Steering - System Operation and Component Description](#) (211-02 Power Steering, Description and Operation).

#### Pinpoint Test Applicability

- This test applies to PSCM (power steering control module) DTC (diagnostic trouble code) U0253 Lost Communication with the APIM (SYNC module) only. It does not apply to any other module except the PSCM (power steering control module).

#### DTC Diagnostic Strategy