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2008 FORD Fusion North American OEM Service and Repair Workshop Manual

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ABS (anti-lock brake system) U0212:00	Lost Communication With Steering Column Control Module: No Sub Type Information	Sets if the SCCM (steering column control module) messages are missing.

Possible Sources

- Wiring, terminals or connectors
- Network communication concern
- SCCM (steering column control module)
- EBB (electric brake booster) unit

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

PINPOINT TEST BQ : ABS (ANTI-LOCK BRAKE SYSTEM) MODULE COMMUNICATION CONCERN WITH THE IPMA (IMAGE PROCESSING MODULE A)

Refer to Wiring Diagrams Cell 42for schematic and connector information.
Normal Operation and Fault Conditions REFER to: Anti-Lock Brake System (ABS) and Stability Control - System Operation and Component Description
(206-09 Anti-Lock Brake System (ABS) and Stability Control, Description and Operation).
The IPMA (image processing module A) is part of the Advanced Driver Assistance System (ADAS). With the ignition ON, the IPMA (image processing module A) sends messages to the ABS (anti-lock brake system) module the over the FD-CAN (Flexible Data Rate Controller Area Network) . If the ABS (anti-lock brake system) module does not receive these messages within a certain time frame, the module sets Diagnostic Trouble Codes (DTCs). This can be due to an IPMA (image processing module A) failure, a circuit failure on the network or an excessive load on the network. **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ABS (anti-lock brake system) U023A:00	Lost Communication With Image Processing Module A: No Sub Type Information	Sets when the ABS (anti-lock brake system) module does not receive messages from the IPMA (image processing module A) .
ABS (anti-lock brake system) U053B:00	Invalid Data Received From Image Processing Module A: No Sub Type Information	Sets when the counter signal value in the adaptive cruise control data message from the IPMA (image processing module A) does not increase.

Possible Sources

- Wheel and tire size
- Chassis damage
- Steering damage or alignment
- Wheel speed sensor
- Steering wheel rotation sensor
- RCM (restraints control module) module

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

PINPOINT TEST AE : ABS (ANTI-LOCK BRAKE SYSTEM) MODULE COMMUNICATION CONCERN WITH PSCM (POWER STEERING CONTROL MODULE)

Refer to Wiring Diagrams Cell 14for schematic and connector information.
Normal Operation and Fault Conditions With the ignition ON, the PSCM (power steering control module) sends messages to the ABS (anti-lock brake system) module over the FD-CAN (Flexible Data Rate Controller Area Network) . If the ABS (anti-lock brake system) module does not receive these messages within the specified time frame, the ABS (anti-lock brake system) module sets Diagnostic Trouble Codes (DTCs). This can be due to a PSCM (power steering control module) failure, a circuit failure on the CAN (controller area network) or an excessive load on the network. For information on the messages sent to the ABS (anti-lock brake system) module by the PSCM (power steering control module) , REFER to: Anti-Lock Brake System (ABS) and Stability Control - System Operation and Component Description (206-09 Anti-Lock Brake System (ABS) and Stability Control, Description and Operation).
DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ABS (anti-lock brake system) C0051:64	Steering Wheel Position Sensor: Signal Plausibility Failure	This DTC (diagnostic trouble code) sets when the ABS (anti-lock brake system) module determines the steering angle message is implausible when compared to the steering angle module value (based on the yaw rate sensor information). This DTC (diagnostic trouble code) also sets if the long term offset compensation monitoring is completed after more than 30 km (18 miles) of straight driving resulting in a long term filtered steering angle offset greater than 15 degrees.
ABS (anti-lock brake system)	Steering Wheel Position Sensor: Signal Incorrect	Sets when the PSCM (power steering control module) indicates the steering center position cannot be found or has been lost.

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ABS (anti-lock brake system) U0146:00	Lost Communication With Serial Data Gateway 'A': No Sub Type Information	This DTC (diagnostic trouble code) sets in the ABS (anti-lock brake system) module if the IPC (instrument panel cluster) messages from the GWM (gateway module A) are missing for more than 5 seconds.

Possible Sources

- Network communication concern
- GWM (gateway module A)

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

PINPOINT TEST AR : ABS (ANTI-LOCK BRAKE SYSTEM) MODULE COMMUNICATION CONCERN WITH IPC (INSTRUMENT PANEL CLUSTER)

Refer to Wiring Diagrams Cell 42for schematic and connector information.
Normal Operation and Fault Conditions REFER to: Anti-Lock Brake System (ABS) and Stability Control - System Operation and Component Description
(206-09 Anti-Lock Brake System (ABS) and Stability Control, Description and Operation).
With the ignition ON, the IPC (instrument panel cluster) sends messages to the ABS (anti-lock brake system) module through the GWM (gateway module A) over the HS-CAN3 (high-speed controller area network 3) . If the ABS (anti-lock brake system) module does not receive these messages within a certain time frame, the module sets Diagnostic Trouble Codes (DTCs). **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ABS (anti-lock brake system) U0155:00	Lost Communication With Instrument Panel Cluster (IPC) Control Module: No Sub Type Information	This DTC (diagnostic trouble code) sets when the ABS (anti-lock brake system) module does not receive messages from the IPC (instrument panel cluster) . This can be due to a IPC (instrument panel cluster) failure, a circuit failure on the HS-CAN (high-speed controller area network) or an excessive load on the network.

Possible Sources

- EBB (electric brake booster) unit

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

PINPOINT TEST AI : ABS (ANTI-LOCK BRAKE SYSTEM) MODULE COMMUNICATION CONCERN WITH PCM (POWERTRAIN CONTROL MODULE)

Refer to Wiring Diagrams Cell 14for schematic and connector information.
Normal Operation and Fault Conditions With the ignition ON, the PCM (powertrain control module) sends messages to the ABS (anti-lock brake system) module over the FD-CAN (Flexible Data Rate Controller Area Network) . If the ABS (anti-lock brake system) module does not receive these messages within the specified time frame, the ABS (anti-lock brake system) module sets Diagnostic Trouble Codes (DTCs). This can be due to a PCM (powertrain control module) failure, a circuit failure on the CAN (controller area network) or an excessive load on the network. For information on the messages sent to the ABS (anti-lock brake system) module by the PCM (powertrain control module) , REFER to: Anti-Lock Brake System (ABS) and Stability Control - System Operation and Component Description (206-09 Anti-Lock Brake System (ABS) and Stability Control, Description and Operation).
DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ABS (anti-lock brake system) U0100:00	Lost Communication With ECM/PCM 'A': No Sub Type Information	Sets if the PCM (powertrain control module) messages are missing.
ABS (anti-lock brake system) U0100:87	Lost Communication With ECM/PCM 'A': Missing Message	Sets if the PCM (powertrain control module) transmission data or the engine torque data messages are missing.
ABS (anti-lock brake system) U0401:00	Invalid Data Received from ECM/PCM A: No Sub Type Information	Sets if the information in one or more messages from the PCM (powertrain control module) contains invalid or out of range information.
ABS (anti-lock brake system) U0401:64	Invalid Data Received from ECM/PCM A: Signal Plausibility Failure	Sets if the information in one or more messages from the PCM (powertrain control module) contains invalid or out of range information.
ABS (anti-lock brake system)	Invalid Data Received from ECM/PCM A: Signal Invalid	Sets if the information in one or more messages from the PCM (powertrain control module)

- TCCM (transfer case control module)
- EBB (electric brake booster) unit

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

PINPOINT TEST BF : ABS (ANTI-LOCK BRAKE SYSTEM) FALSE ACTIVATION, ABS (ANTI-LOCK BRAKE SYSTEM) TOO SENSITIVE, OR ABS (ANTI-LOCK BRAKE SYSTEM) ACTIVATES ON NORMAL STOP

Refer to Wiring Diagrams Cell 42for schematic and connector information.
Normal Operation and Fault Conditions The ABS (anti-lock brake system) module uses several sensors (wheel speed, steering wheel rotation, stability control) to determine if ABS (anti-lock brake system) or stability control intervention is required. Accurate sensor readings rely on the vehicle being in good operational condition with as few mechanical and electrical concerns as possible. In addition, the wheels and tires must be within vehicle manufacturer's specifications as described on the VC (vehicle certification) label and the base brake system and parking brake system must be in good operational condition. If one or more of these items or systems are in need of repair or are not working at full capacity, the ABS (anti-lock brake system) or stability control system may activate when the driving condition does not warrant activation. REFER to: Anti-Lock Brake System (ABS) and Stability Control - System Operation and Component Description
(206-09 Anti-Lock Brake System (ABS) and Stability Control, Description and Operation).
Possible Sources

- Wheels
- Tires
- Suspension components
- Parking brake shoes out of adjustment (dragging)
- Steering wheel rotation sensor
- RCM (restraints control module)

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

PINPOINT TEST AN : STABILITY CONTROL SENSOR INITIALIZATION FAULT

Refer to Wiring Diagrams Cell 42for schematic and connector information.
Normal Operation and Fault Conditions The ABS (anti-lock brake system) module monitors various inputs and compares the values to what should be expected. If the values received are out of range or not what is expected, the ABS (anti-lock brake system) module sets a DTC (diagnostic trouble code) . When a new ABS (anti-lock brake system) module or RCM (restraints control module) is installed, the stability control sensors in the RCM (restraints control module) must be initialized. This is accomplished using a

system) C0044:64	Signal Plausibility Failure	detects a fault with the brake fluid pressure.
ABS (anti-lock brake system) C0044:8F	Brake Pressure Sensor 'A': Erratic	Sets when the ABS (anti-lock brake system) module detects an internal fault with the EBB (electric brake booster) unit.

Possible Sources

- Incorrect sensor input
- Air trapped in the hydraulic system
- EBB (electric brake booster) unit

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

ABS (anti-lock brake system)	C0031:4A	Left Front Wheel Speed Sensor: Incorrect Component Installed	GO to Pinpoint Test AL
ABS (anti-lock brake system)	C0031:64	Left Front Wheel Speed Sensor: Signal Plausibility Failure	GO to Pinpoint Test B
ABS (anti-lock brake system)	C0033:07	Right Front Tone Wheel: Mechanical Failures	GO to Pinpoint Test B
ABS (anti-lock brake system)	C0034:01	Right Front Wheel Speed Sensor: General Electrical Failure	GO to Pinpoint Test M
ABS (anti-lock brake system)	C0034:2F	Right Front Wheel Speed Sensor: Signal Erratic	GO to Pinpoint Test B
ABS (anti-lock brake system)	C0034:4A	Right Front Wheel Speed Sensor: Incorrect Component Installed	GO to Pinpoint Test AL
ABS (anti-lock brake system)	C0034:64	Right Front Wheel Speed Sensor: Signal Plausibility Failure	GO to Pinpoint Test B
ABS (anti-lock brake system)	C0036:07	Left Rear Tone Wheel: Mechanical Failures	GO to Pinpoint Test B
ABS (anti-lock brake system)	C0037:01	Left Rear Wheel Speed Sensor: General Electrical Failure	GO to Pinpoint Test N
ABS (anti-lock brake system)	C0037:2F	Left Rear Wheel Speed Sensor: Signal Erratic	GO to Pinpoint Test B
ABS (anti-lock brake system)	C0037:4A	Left Rear Wheel Speed Sensor: Incorrect Component Installed	GO to Pinpoint Test AL

ABS (anti-lock brake system)	C0041:04	Brake Pedal Switch "B": System Internal Failures	GO to Pinpoint Test CW
ABS (anti-lock brake system)	C0041:14	Brake Pedal Switch "B": Circuit Short To Ground Or Open	GO to Pinpoint Test CW
ABS (anti-lock brake system)	C0041:4B	Brake Pedal Switch "B": Over Temperature	GO to Pinpoint Test CW
ABS (anti-lock brake system)	C0044:49	Brake Pressure Sensor "A": Internal Electronic Failure	GO to Pinpoint Test AM
ABS (anti-lock brake system)	C0044:64	Brake Pressure Sensor "A": Signal Plausibility Failure	GO to Pinpoint Test AM
ABS (anti-lock brake system)	C0044:8F	Brake Pressure Sensor "A": Erratic	GO to Pinpoint Test AM
ABS (anti-lock brake system)	C0047:01	Brake Booster Pressure Sensor: General Electrical Failure	GO to Pinpoint Test CO
ABS (anti-lock brake system)	C0047:1C	Brake Booster Pressure Sensor: Circuit Voltage Out Of Range	GO to Pinpoint Test CO
ABS (anti-lock brake system)	C0047:31	Brake Booster Pressure Sensor: No Signal	GO to Pinpoint Test CO
ABS (anti-lock brake system)	C0047:64	Brake Booster Pressure Sensor: Signal Plausibility Failure	GO to Pinpoint Test CO
ABS (anti-lock brake system)	C0049:01	Brake Fluid Level: General Electrical Failure	GO to Pinpoint Test L

ABS (anti-lock brake system)	C0064:28	Roll Rate Sensor: Signal Bias Level Out Of Range/Zero Adjustment Failure	GO to Pinpoint Test BH
ABS (anti-lock brake system)	C0064:64	Roll Rate Sensor: Signal Plausibility Failure	GO to Pinpoint Test BH
ABS (anti-lock brake system)	C006B:00	Stability System Active Too Long: No Sub Type Information	GO to Pinpoint Test AD
ABS (anti-lock brake system)	C0072:4B	Brake Temperature Too High: Over Temperature	GO to Pinpoint Test Q
ABS (anti-lock brake system)	C0078:56	Tire Diameter: Invalid/Incompatible Configuration	GO to Pinpoint Test ZA
ABS (anti-lock brake system)	C052B:93	ABS Pump Motor Control Range/Performance: No Operation	GO to Pinpoint Test Z
ABS (anti-lock brake system)	C052F:00	ABS Pump Motor Supply Voltage "A" Circuit/Open: No Sub Type Information	GO to Pinpoint Test A
ABS (anti-lock brake system)	C0564:00	ABS Control Module System Voltage Low: No Sub Type Information	GO to Pinpoint Test A
ABS (anti-lock brake system)	C0594:78	Brake Booster Motor "A" Performance: Alignment Or Adjustment Incorrect	GO to Pinpoint Test CP
ABS (anti-lock brake system)	C0594:92	Brake Booster Motor "A" Performance: Performance Or Incorrect Operation	GO to Pinpoint Test CP
ABS (anti-lock brake system)	C05CC:00	Brake Master Cylinder Piston Position Sensor "A" Circuit Range/Performance: No Sub Type Information	GO to Pinpoint Test CO