

		predetermined amount of time, the PCM sets this DTC.
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Possible Causes

- Fuse
- Wiring, terminals or connectors
- Active grille shutter actuator
- Active grille shutters
- PCM

Visual Inspection and Diagnostic Pre-checks

- Verify BJB fuse 97 (10A) is OK.
- Make sure the grille opening does not have any debris or other obstructions that inhibit operation of the active grille shutter.
- Make sure the active grille shutter actuator electrical connector is not disconnected.

DIAGNOSIS AND TESTING > ACTIVE GRILLE SHUTTER > PINPOINT TEST(S) > PINPOINT TEST B : THE ACTIVE GRILLE SHUTTER IS INOPERATIVE OR DOES NOT OPERATE CORRECTLY - 2.7L OR 3.5L GTDI ENGINE > PINPOINT TEST B : THE ACTIVE GRILLE SHUTTER IS INOPERATIVE OR DOES NOT OPERATE CORRECTLY - 2.7L OR 3.5L GTDI ENGINE

B1 RETRIEVE THE PCM (POWERTRAIN CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

Ignition ON.

Using a diagnostic scan tool, perform PCM self-test.

Is DTC P05A7, P05B6, U0046, U0284 or U0285 present?

Yes	For P05A7, U0046 or U0284, GO to B2. For P05B6 or U0285, GO to B11
No	For DTC P059F or P05A1, GO to B7. For P05AE or P05B0, GO to B16 For all other PCM Diagnostic Trouble Codes (DTCs), REFER to the DTC Chart: Powertrain Control Module (PCM) .

B2 CHECK THE VOLTAGE SUPPLY TO THE UPPER ACTIVE GRILLE SHUTTER ACTUATOR

Ignition OFF.

Disconnect: Upper Active Grille Shutter Actuator C1766 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1766-3		Ground

Is the voltage greater than 11 volts?

Yes	GO to B3
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No	VERIFY BJB fuse 97 (10A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the SYSTEM WIRING DIAGRAMS article to identify the cause of the circuit short.
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B3 CHECK THE UPPER ACTIVE GRILLE SHUTTER ACTUATOR GROUND CIRCUIT FOR AN OPEN

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1766-1	Ω	Ground

Is the resistance less than 3 ohms?

Yes	For DTC U0046 or U0284, GO to B4. For DTC P05A7, GO to B9
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No	REPAIR the circuit.
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B4 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR AN OPEN

Disconnect: Upper Active Grille Shutter Actuator C1766 .

Disconnect: PCM C1232B (2.7L) or C175B (3.5L GTDI).

For 2.7L, measure:

Positive Lead	Measurement / Action	Negative Lead
C1766-2	Ω	C1232B-50

For 3.5L GTDI, measure:

Positive Lead	Measurement / Action	Negative Lead
C1766-2	Ω	C175B-50

Is the resistance less than 3 ohms?

Yes	GO to B5
No	REPAIR the circuit.

B5 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR A SHORT TO VOLTAGE

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1766-2		Ground

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to B6

B6 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR A SHORT TO GROUND

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1766-2	Ω	Ground

Is the resistance greater than 10, 000 ohms?

Yes	GO to B10
No	REPAIR the circuit. CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test.

B7 VERIFY THE UPPER ACTIVE GRILLE SHUTTER OPERATION USING THE GRILLE SHUTTER A POSITION - COMMANDED (GRILL_A_CMD) PARAMETER IDENTIFICATION (PID)

Start the engine and allow it to idle for at least 30 seconds to allow for the active grille shutter calibration to complete.

Using a diagnostic scan tool, view PCM Parameter Identifications (PIDs).

Using a diagnostic scan tool, select the PCM Parameter Identification (PID) GRILL_A_CMD and active command the upper active grille shutter from 100% (open) to 0% (closed) while observing the upper active grille shutter operation from the front of the vehicle.

Does the upper active grille shutter fully open and close when commanded by the diagnostic scan tool?

Yes	The upper active grille shutter system is operating correctly at this time. The concern may have been caused by debris or obstruction.
No	GO to B8

B8 CHECK THE UPPER ACTIVE GRILLE SHUTTER FOR OBSTRUCTIONS AND/OR MECHANICAL BINDING CONCERNS

Ignition OFF.

Remove the upper active grille shutter actuator. REFER to: Active Grille Shutter Actuator .

Manually open and close the upper active grille shutter, removing any obstructions which can inhibit operation of the upper active grille shutter or linkage. The active grille shutter should open and close easily with no binding.

Does the upper active grille shutter operate freely with no binding or obstruction?

Yes	GO to B9
No	REPAIR the binding/obstruction, or if necessary, INSTALL a new upper active grille shutter. REFER to: Active Grille Shutter .

B9 CHECK FOR CORRECT UPPER ACTIVE GRILLE SHUTTER ACTUATOR OPERATION

Disconnect: Upper Active Grille Shutter Actuator C1766 (if not previously disconnected).

Inspect the upper active grille shutter actuator electrical connector and jumper harness.

Repair:

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

damaged or bent pins - install new terminals/pins as necessary

pushed-out pins - install new pins as necessary

Reconnect the upper active grille shutter actuator connector, jumper harness and all previously disconnected system connectors. Make sure they seat and latch correctly.

Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for
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	this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new upper active grille shutter actuator. REFER to: Active Grille Shutter Actuator .
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No	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.
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B10 CHECK FOR THE CORRECT UPPER ACTIVE GRILLE SHUTTER ACTUATOR OPERATION

Inspect the upper active grille shutter actuator and PCM electrical connectors.

Repair:

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

damaged or bent pins - install new terminals/pins as necessary

pushed-out pins - install new pins as necessary

Reconnect the upper active grille shutter actuator connector, jumper harness and all previously disconnected system connectors. Make sure they seat and latch correctly.

Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new upper active grille shutter actuator. REFER to: Active Grille Shutter Actuator . CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If the concern is still present, INSTALL a new PCM. Refer to the appropriate Engine article for the procedure.
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No	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.
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B11 CHECK THE VOLTAGE SUPPLY TO THE LOWER ACTIVE GRILLE SHUTTER ACTUATOR

Ignition OFF.

Disconnect: Lower Active Grille Shutter Actuator C1767 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1767-3		Ground

Is the voltage greater than 11 volts?

Yes	GO to B12
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No	VERIFY BJB fuse 97 (10A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the SYSTEM WIRING DIAGRAMS article to identify the cause of the circuit short.
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B12 CHECK THE LOWER ACTIVE GRILLE SHUTTER ACTUATOR GROUND CIRCUIT FOR AN OPEN

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1767-1	Ω	Ground

Is the resistance less than 3 ohms?

Yes	For DTC U0285, GO to B13. For DTC P05B6, GO to B18
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No	REPAIR the circuit.
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B13 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR AN OPEN

Disconnect: Lower Active Grille Shutter Actuator C1767 .

Disconnect: PCM C1232B (2.7L) or C175B (3.5L GTDI).

For 2.7L, measure:

Positive Lead	Measurement / Action	Negative Lead
C1767-2	Ω	C1232B-50

For 3.5L GTDI, measure:

Positive Lead	Measurement / Action	Negative Lead
C1767-2	Ω	C175B-50

Is the resistance less than 3 ohms?

Yes	GO to B14
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No	REPAIR the circuit.
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B14 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR A SHORT TO VOLTAGE

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1767-2		Ground

Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to B15
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B15 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR A SHORT TO GROUND

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1767-2	Ω	Ground

Is the resistance greater than 10, 000 ohms?

Yes	GO to B19
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No	REPAIR the circuit. CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test.
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B16 VERIFY THE LOWER ACTIVE GRILLE SHUTTER OPERATION USING THE GRILLE SHUTTER B POSITION - COMMANDED (GRILL_B_CMD) PARAMETER IDENTIFICATION (PID)

Start the engine and allow it to idle for at least 30 seconds to allow for the active grille shutter calibration to complete.

Using a diagnostic scan tool, view PCM Parameter Identifications (PIDs).

Using a diagnostic scan tool, select the PCM Parameter Identification (PID) GRILL_B_CMD and active command the lower active grille shutter from 100% (open) to 0% (closed) while observing the lower active grille shutter operation from the front of the vehicle.

Does the lower active grille shutter fully open and close when commanded by the diagnostic scan tool?

Yes	The lower active grille shutter system is operating correctly at this time. The concern may have been caused by debris or obstruction.
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No	GO to B17
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B17 CHECK THE LOWER ACTIVE GRILLE SHUTTER FOR OBSTRUCTIONS AND/OR MECHANICAL BINDING CONCERNS

Ignition OFF.

Remove the lower active grille shutter actuator. REFER to: Active Grille Shutter Actuator .

Manually open and close the lower active grille shutter, removing any obstructions which can inhibit operation of the active grille shutter or linkage. The active grille shutter should open and close easily with no binding.

Does the lower active grille shutter operate freely with no binding or obstruction?

Yes	GO to B18
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No	REPAIR the binding/obstruction, or if necessary, INSTALL a new lower active grille shutter. REFER to: Active Grille Shutter .
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B18 CHECK FOR CORRECT LOWER ACTIVE GRILLE SHUTTER ACTUATOR OPERATION

Disconnect: Lower Active Grille Shutter Actuator C1767 (if not previously disconnected).

Inspect the lower active grille shutter actuator electrical connector and jumper harness.

Repair:

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

damaged or bent pins - install new terminals/pins as necessary

pushed-out pins - install new pins as necessary

Reconnect the lower active grille shutter actuator connector, jumper harness and all previously disconnected system connectors. Make sure they seat and latch correctly.

Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new active grille shutter actuator. REFER to: Active Grille Shutter Actuator .
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No	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.
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B19 CHECK FOR THE CORRECT LOWER ACTIVE GRILLE SHUTTER ACTUATOR OPERATION