

DIAGNOSIS AND TESTING > PARKING AID > PINPOINT TEST(S) > PINPOINT TEST B : POOR IMAGE QUALITY - VEHICLES WITH REAR ONLY PARKING AID CAMERA

Refer to Parking Aid for schematic and connector information.

Normal Operation and Fault Conditions

The video signal is transmitted from the camera to the APIM on shielded, twisted pair circuits. REFER to: Parking Aid - System Operation and Component Description .

Possible Causes

- Dirty or scratched camera lens
- Wiring, terminals or connectors
- Fuse
- Rear parking aid camera
- APIM (vehicles with 8 in (203 mm) touchscreen)
- Interference from other sources

Visual Inspection and Diagnostic Pre-Checks

If the vehicle is equipped with an 8 in (203 mm) touchscreen display, perform an APIM reset and reevaluate the concern prior to following this pinpoint test. REFER to: Reset the SYNC Module [APIM] .

 *NOTE: Before disconnecting the camera, verify the connector is properly seated and latched.*

DIAGNOSIS AND TESTING > PARKING AID > PINPOINT TEST(S) > PINPOINT TEST B : POOR IMAGE QUALITY - VEHICLES WITH REAR ONLY PARKING AID CAMERA > PINPOINT TEST B : POOR IMAGE QUALITY - VEHICLES WITH REAR ONLY PARKING AID CAMERA

B1 CHECK AND CLEAN THE CAMERA LENS

Clean and make sure the rear video camera lens is clear of any debris and scratches.

Test the rear video camera system and inspect the video camera image.

Is the concern still present?

Yes	GO to B2
No	The system is operating correctly at this time. The concern may have been caused by dirt or debris on the camera lens or intermittent electromagnetic interference from an outside

	source.
--	---------

B2 CHECK THE VOLTAGE TO THE REAR CAMERA

Ignition OFF.

Disconnect Rear Parking Aid Camera C4360 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C4360-1		Ground

Is the voltage greater than 11 volts?

Yes	GO to B3
------------	----------

No	INSPECT BJB fuse 113 (7.5A). If the fuse is OK, repair the circuit for an open. If the fuse is not OK, REFER to the OEM WIRING DIAGRAMS to identify the possible causes of the short circuit.
-----------	---

B3 CHECK THE REAR CAMERA GROUND CIRCUIT

Measure:

Positive Lead	Measurement / Action	Negative Lead
C4360-1		C4360-5

Is the voltage greater than 11 volts?

Yes	GO to B5
------------	----------

No	For vehicles with an 8 in (203 mm) touchscreen, GO to B4 For vehicles with a 4.2 in (107 mm) centerstack infotainment display, REPAIR the circuit.
-----------	---

B4 CHECK THE REAR CAMERA GROUND CIRCUIT FOR AN OPEN

Ignition OFF.

Disconnect APIM C2383 .

Measure:

Positive Lead	Measurement / Action	Negative Lead
---------------	----------------------	---------------

C4360-5	Ω	C2383-33
---------	----------	----------

Is the resistance less than 3 ohms?

Yes	GO to B9
------------	----------

No	REPAIR the circuit.
-----------	---------------------

B5 CHECK THE VIDEO SIGNAL CIRCUITS FOR A SHORT TO VOLTAGE

Ignition OFF.

Disconnect APIM C2383 (vehicles with an 8 in (203 mm) touchscreen).

Disconnect FCDIM C2123 (vehicles with a 4.2 in (107 mm) centerstack infotainment display).

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C4360-3		Ground
C4360-4		Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
------------	---------------------------------

No	GO to B6
-----------	----------

B6 CHECK THE VIDEO SIGNAL CIRCUITS FOR A SHORT TO GROUND

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C4360-3	Ω	Ground
C4360-4	Ω	Ground

Are the resistances greater than 10, 000 ohms?

Yes	GO to B7
------------	----------

No	REPAIR the circuit in question.
-----------	---------------------------------

B7 CHECK THE VIDEO SIGNAL CIRCUITS FOR A SHORT TO VIDEO SHIELD

Measure:

Positive Lead	Measurement / Action	Negative Lead
C4360-3	Ω	C4360-5
C4360-4	Ω	C4360-5

Are the resistances greater than 10, 000 ohms?

Yes	GO to B8
------------	----------

No	REPAIR the circuit in question.
-----------	---------------------------------

B8 CHECK VIDEO SIGNAL CIRCUITS FOR AN OPEN

Measure:

8 in (203 mm) Touchscreen

Positive Lead	Measurement / Action	Negative Lead
C4360-3	Ω	C2383-15
C4360-4	Ω	C2383-14

4.2 in (107 mm) Centerstack Infotainment Display

Positive Lead	Measurement / Action	Negative Lead
C4360-3	Ω	C2123-12
C4360-4	Ω	C2123-6

Are the resistances less than 3 ohms?

Yes	GO to B10
------------	-----------

No	REPAIR the circuit in question.
-----------	---------------------------------

B9 CHECK FOR CORRECT APIM (SYNC MODULE) OPERATION

Ignition OFF.

Disconnect and inspect the APIM connector.

Repair:

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

damaged or bent pins - install new terminals/pins

pushed-out pins - install new pins as necessary

Reconnect the APIM connector. Make sure it seats and latches 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 the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, Refer to APIM HARDWARE TESTING .
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

B10 CHECK FOR CORRECT REAR PARKING AID CAMERA OPERATION

Ignition OFF.

Disconnect and inspect the rear parking aid camera connector.

Repair:

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

damaged or bent pins - install new terminals/pins

pushed-out pins - install new pins as necessary

Reconnect the rear parking aid camera connector. Make sure it seats and latches 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 the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new rear parking aid camera. REFER to: Rear Parking Aid Camera .
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.