

- Windshield wiper motor
- Rain sensor
- SCCM

Visual Inspection and Diagnostic Pre-checks

- Inspect BJB fuse 23 (15A)
- Inspect the windshield for damage
- Inspect the rain sensor mounting for damage

DIAGNOSIS AND TESTING > WIPERS AND WASHERS > PINPOINT TESTS > PINPOINT TEST F : THE RAIN SENSITIVE WIPER FEATURE IS INOPERATIVE/DOES NOT OPERATE CORRECTLY > PINPOINT TEST F : THE RAIN SENSITIVE WIPER FEATURE IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

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

F1 CHECK THE LOW SPEED WIPER OPERATION

Ignition ON.

Place the wiper/washer switch to the low speed setting and observe the windshield wipers.
Place the wiper/washer switch to the off setting.

Do the low speed wipers operate when the low speed setting is selected?

Yes	GO to F2
No	GO to Pinpoint Test B

F2 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) B10AD:02 OR B10AD:08

Using a diagnostic scan tool, carry out the SCCM self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	For DTC B10AD:02 or B10AD:08, GO to F11 For all other Diagnostic Trouble Codes (DTCs), REFER to the SCCM DTC Chart .
No	GO to F3

F3 VERIFY THE RAIN SENSITIVE WIPER FEATURE IS ENABLED IN THE VEHICLE MESSAGE CENTER

Access the vehicle settings in the message center using the steering wheel controls. Make sure the rain sensitive feature is enabled.

Is the rain sensitive feature enabled?

Yes	GO to F4
No	ENABLE the rain sensitive feature. INFORM the customer how to enable/disable the rain sensitive feature.

F4 CHECK THE INPUT TO THE SCCM (STEERING COLUMN CONTROL MODULE) USING THE WIPER/WASHER SWITCH PARAMETER IDENTIFICATIONS (PIDS)

Using a diagnostic scan tool, monitor the following SCCM wiper/washer switch Parameter Identifications (PIDs):

F_WIP_INT_D1 (Front Wiper Intermittent Data 1)

F_WIP_INT_D2 (Front Wiper Intermittent Data 2)

F_WIP_INT_D3 (Front Wiper Intermittent Data 3)

F_WIP_INT_D4 (Front Wiper Intermittent Data 4)

F_WIP_INT_D5 (Front Wiper Intermittent Data 5)

Cycle the wiper/washer switch from off through each of the auto/intermittent sensitivity settings.

Do the Parameter Identifications (PIDs) correspond correctly with each setting selection?

Yes	GO to F5
No	INSTALL a new wiper/washer switch. REFER to: Steering Column Multifunction Switch LH . TEST the system for normal operation. If the concern is still present, INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) .

F5 CHECK THE WINDSHIELD FOR DAMAGE

Ignition OFF.

Inspect the windshield glass for any cracks, pits or other visible damage around the area of the rain sensor.

Is any windshield damage present near the area of the rain sensor?

Yes	INSTALL a new windshield. REFER to: Fixed Glass .
No	GO to F6

F6 CHECK THE WINDSHIELD GLASS FOR STREAKING

Ignition ON.

Turn the wiper/washer switch to the low speed wiper setting and while applying water to the windshield surface. Observe the wipe quality, especially around the area of the rain sensor.

Is any streaking present on the windshield around the area of the rain sensor?

Yes	GO to F7
No	GO to F9

F7 CHECK THE WINDSHIELD WIPER BLADES FOR STREAKING

Ignition OFF.

Clean the windshield glass with glass cleaner.

Clean the wiper blades with isopropyl alcohol swabs. Wipe the entire length of the wiper blades.

Ignition ON.

Place the wiper/washer switch to the low speed wiper setting and while applying water to the windshield surface. Observe the wipe quality, especially around the area of the rain sensor.

Was there noticeable improvement in the wipe quality after cleaning the glass and the wiper blades?

Yes	GO to F8
No	INSTALL new wiper blades. GO to F8

F8 RECHECK THE RAIN SENSITIVE WIPERS OPERATION

Place the wiper/washer switch to the auto/intermittent 5 setting (most sensitive to moisture) while applying water on the windshield above the rain sensor.

Do the wipers operate when water is applied to the windshield surface?

Yes	The system is operating correctly at this time. The concern may have been caused by poor wipe quality on the windshield around the rain sensor.
No	GO to F9

F9 CHECK FOR THE PRESENCE OF THE LENS GEL

Ignition OFF.

Lightly press the rain sensor against the windshield and release the rain sensor clips.

Does the rain sensor remain adhered to the windshield?

Yes	ATTACH the retaining clips. GO to F10
No	The sensor gel-type lens is missing or damaged. INSTALL a new rain sensor. REFER to: Rain Sensor .

F10 INSPECT THE RAIN SENSOR MOUNTING AREA

 **NOTE:** The rain sensor gel-type lens can be damaged or contaminated during rain sensor removal, rain sensor bracket separation or incorrect installation.

From the outside of the vehicle, inspect the area of the windshield glass where the rain sensor is mounted. The rain sensor contact area should appear black, with no bubbles, air pockets or contaminants between the windshield glass and the rain sensor.

Does the rain sensor contact area appear black, with no bubbles, air pockets or contaminants between the windshield glass and the rain sensor?

Yes	GO to F11
No	REMOVE the rain sensor. REFER to: Rain Sensor . CLEAN the mating surfaces between the windshield glass and the rain sensor. INSTALL the rain sensor correctly. TEST the system for normal operation. If the concern is still present, INSTALL a new windshield wiper motor. REFER to: Windshield Wiper Motor .

F11 CHECK THE RAIN SENSOR VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

Ignition OFF.

Disconnect Rain Sensor C914 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C914-1		Ground

Is the voltage greater than 11 volts?

Yes	GO to F12
No	VERIFY BJB fuse 23 (15A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the OEM WIRING DIAGRAMS to identify the possible causes of the circuit short.

F12 CHECK THE RAIN SENSOR GROUND CIRCUIT FOR AN OPEN

Measure:

Positive Lead	Measurement / Action	Negative Lead
C914-1		C914-3

Is the voltage greater than 11 volts?

Yes	GO to F13
No	REPAIR the circuit.

F13 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR AN OPEN

Ignition OFF.

Disconnect SCCM C226A.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C914-2	Ω	C226A-8

Is the resistance less than 3 ohms?

Yes	GO to F14
No	REPAIR the circuit.

F14 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

Disconnect and inspect all the SCCM connectors.

Repair:

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

damaged or bent pins - install new terminals/pins

pushed-out pins - install new pins as necessary

Reconnect all the SCCM 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 the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) .
------------	--