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1983 FORD Bronco OEM Service and Repair Workshop Manual

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Network Message Chart - Rear Window Defrost

Front Controls Interface Module (FCIM) Network Input Messages

Broadcast Message	Originating Module	Message Purpose
Rear window defrost request	HVAC (heating, ventilation and air conditioning) Module	When the BCMC (body control module C) receives the rear window defrost request message, the BCMC (body control module C) activates the rear window defrost system.

Delayed Accessory Feature

The BCM (body control module) activates the delayed accessory feature whenever the ignition is on, or whenever the ignition is changed from on to off while the LH (left-hand) and RH (right-hand) front doors are closed.

The BCM (body control module) deactivates the delayed accessory feature when:

- the LH (left-hand) or RH (right-hand) front door is ajar and the ignition is off.
- ten minutes have elapsed since the ignition status has changed from on to the off position.

Power Window Operation - Front

NOTE

If the vehicle battery is disconnected while the window is moving, the one-touch up and one-touch down feature (and obstacle detection) is disabled prior to initialization.

Refer to: Power Door Window Initialization(501-11 Glass, Frames and Mechanisms, General Procedures).

The power windows operate when the delayed accessory feature is active. Both front windows are equipped with obstacle detection and one-touch up and one-touch down functionality. If an obstacle has been detected as the window glass is moving upward, the window motor automatically reverses direction and moves the glass downward.

Driver Door Window Operation

(normally closed) contacts of the power sliding rear window open or close relay. Window direction is determined by the polarity of the voltage and ground being supplied to the motor.

Rear Window Defrost

When the rear window defrost switch (integral to the HVAC (heating, ventilation and air conditioning) module) is activated, the the HVAC (heating, ventilation and air conditioning) module sends the request message to the BCMC (body control module C) . The BCMC (body control module C) supplies voltage to the rear window defrost grid(s). In some cases, the rear window defrost system may automatically activate as an extra load for accelerated engine warm-up. However the rear window defrost status LED (light emitting diode) remains off unless the rear window defrost switch is activated.

If equipped, the rear window defrost can also be commanded on and off using the rear window defrost button located on the touchscreen interface. For additional information on touchscreen commanded features, refer to the Owner's Literature.

The BCMC (body control module C) deactivates the rear window defrost relay when one of these conditions is met:

- The rear window defrost switch is pressed when the feature is active.
- If equipped, the rear window defrost is commanded off using the touchscreen interface when the feature is active.
- Ignition state is changed from ON to OFF.
- A predetermined timer completes.
- Battery voltage has dropped below a specified threshold (load management strategy).

Remote Start - Rear Window Defrost Operation

The customer can select different climate control modes/preferences when the vehicle is started using the remote start feature. This can be accessed through the message center. For additional information on setting the remote start preferences, refer to the Owner's Literature. When the rear defrost is set to AUTO mode, the rear window defrost activates when the outside temperature is less than 0°C (32°F) and the vehicle is started using the remote start feature. No climate control adjustments are recognized during remote start operation. Once the ignition is cycled to the ON position, the climate control system returns to the previous settings (last ignition ON cycle) and adjustments can be made normally. If the previous setting was off, the climate control system turns off.

Component Description

Driver Door Window Control Switch

The driver door window control switch receives voltage whenever the delayed accessory feature is active. The driver door window control switch is grounded through the DDM (driver door module) . The driver door

The DDM (driver door module) receives power window commands from the driver door window control switch through a LIN (local interconnect network) . The DDM (driver door module) supplies voltage and ground to operate the driver door window regulator motor.

The DDM (driver door module) also communicates driver door window control switch requests to the PDM (passenger door module) through the MS-CAN (medium speed-controller area network) to operate the passenger door window regulator motor. PMI (programmable module installation) is required whenever installing a new module.

Passenger Door Module (PDM)

The PDM (passenger door module) receives power window commands from the passenger door window control switch or from the DDM (driver door module) through the MS-CAN (medium speed-controller area network) . The PDM (passenger door module) supplies voltage and ground to operate the passenger door window regulator motor. PMI (programmable module installation) is required whenever installing a new module.

Power Sliding Rear Window Motor

The power sliding rear window motor is bi-directional. Window direction is determined by the polarity of the voltage being supplied to the motor. When the power sliding window switch is activated, voltage is supplied to activate either the power sliding window open relay or the power sliding window close relay (both relays are integral to the BCMC (body control module C)). When the power sliding window open (or close) relay is active, voltage is supplied to one side of the power sliding window motor while ground is supplied through the normally closed relay contacts of the opposing/inactive power sliding window open (or close) relay.

Rear Window Defrost

Press the rear window defrost switch to activate the rear window defrost. The rear window defrost automatically turns off after a short period of time. If equipped, the rear window defrost can also be activated/deactivated by using a touchscreen interface.

Remote Start - Rear Window Defrost (if equipped)

The customer can select different climate control modes/preferences when the vehicle is started using the remote start feature. This can be accessed through the message center. For additional information on setting the remote start preferences, refer to the Owner's Literature. When the rear window defrost is set to AUTO mode, the rear window defrost activates when the outside temperature is less than 0°C (32°F) and the vehicle is started using the remote start feature. No climate control adjustments are recognized during remote start operation. Once the ignition is cycled to the ON position, the climate control system returns to the previous settings (last ignition ON cycle) and adjustments can be made normally. If the previous setting was off, the climate control system turns off.

4	BCMC (body control module C)

Network Message Chart - Rear Window Defrost

Front Controls Interface Module (FCIM) Network Input Messages

Broadcast Message	Originating Module	Message Purpose
Rear window defrost request	HVAC (heating, ventilation and air conditioning) Module	When the BCMC (body control module C) receives the rear window defrost request message, the BCMC (body control module C) activates the rear window defrost system.

Delayed Accessory Feature

The BCM (body control module) activates the delayed accessory feature whenever the ignition is on, or whenever the ignition is changed from on to off while the LH (left-hand) and RH (right-hand) front doors are closed.

The BCM (body control module) deactivates the delayed accessory feature when:

- the LH (left-hand) or RH (right-hand) front door is ajar and the ignition is off.
- ten minutes have elapsed since the ignition status has changed from on to the off position.

Power Window Operation

The front power windows operate when the delayed accessory feature is active. The driver front power window is equipped with a one-touch down feature (controlled by the driver door window control switch integral electronics). This allows the driver door front power window to be completely lowered when the control switch is pressed to the second detent position and then released.

Rear Door Window Lock-Out - SuperCab and SuperCrew

When the lock-out switch (part of the driver door window control switch) is in the LOCK position, the rear passenger power windows only operate from the driver door window control switch.

Power Sliding Rear Window Control Switch

The power sliding rear window control switch contains normally open contacts. When a specific adjustment position is selected, an individual circuit is switched to voltage. When the power sliding rear window control switch is activated, voltage is supplied to activate either the power sliding rear window open or close relays (integral to the BCMC (body control module C)). When the power sliding rear window open or close relay is activated, voltage is supplied to operate the power sliding rear window motor.

Component Description

Driver Door Window Control Switch

The driver window control switch receives voltage whenever the accessory delay relay is active. The driver window control switch:

- contains integral electronics to control the one-touch down operation of the driver door front power window.
- supplies high current voltage and ground directly to the driver front power window motor to move the window upward and downward.

For SuperCab and SuperCrew, the driver door window control switch supplies low current voltage signal through momentary contacts to activate the internal relays within each of the rear passenger window control switches to operate the rear windows.

Passenger Door Window Control Switch

The passenger door window control switch receives voltage (high current circuit) from the accessory delay relay whenever it is active. The passenger door window control switch receives voltage (low current circuit) from the driver door window control switch. The passenger door window control switch has a dedicated ground circuit. The passenger door window control switch contain 2 relays, which when at rest (inactive), provide a ground path to the power window motor circuit(s).

When a passenger door window control switch is activated, the corresponding relay located within the rear window control switch is energized which supplies voltage (high current) to operate the power window motor in the desired direction.

Rear Door Window Control Switch - SuperCab and SuperCrew

The rear window control switches receive voltage (high current circuit) from the accessory delay relay whenever it is active. The rear window control switches receive voltage (low current circuit) from the driver door window control switch when the lock-out switch is in the UNLOCK position. The rear window control switches each have a dedicated ground circuit. The rear window control switches contain 2 relays, which when at rest (inactive), provide a ground path to their respective power window motor circuit(s).

When a rear window control switch is activated, the corresponding relay located within the rear window control switch is energized which supplies voltage (high current) to operate the power window motor in the desired direction.

Front Door Window Regulator Motor

The door window regulator motor(s) are bi-directional. Window direction is determined by the polarity of the voltage being supplied to the motor from the associated door window control switch.

Rear Door Window Regulator Motor - SuperCab and SuperCrew

Glass, Frames and Mechanisms - Vehicles With: One-Touch Open and Close Front Windows

501-11 Glass, Frames and Mechanisms	***2022 F-150***
Diagnosis and Testing	***Procedure revision date: 04/4/2022***

Glass, Frames and Mechanisms - Vehicles With: One-Touch Open and Close Front Windows

Diagnostic Trouble Code (DTC) Chart

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: Diagnostic Methods

(100-00 General Information, Description and Operation).

Diagnostic Trouble Code Chart

Module	DTC (diagnostic trouble code)	Description	Action
BCMC (body control module C)	B15E5:11	Rear Heated Windscreen Output: Circuit Short To Ground	GO to Pinpoint Test I
BCMC (body control module C)	B15E5:15	Rear Heated Windscreen Output: Circuit Short To Battery Or Open	GO to Pinpoint Test I
BCMC (body control module C)	B15E5:15	Rear Heated Windscreen Output: Circuit Short To Battery Or Open	GO to Pinpoint Test J
DDM (driver door module)	B1087:83	LIN Bus "A": Value of Signal Protection Calculation Incorrect	GO to Pinpoint Test D

PDM (passenger door module)	B117F:19	Front Power Window Down: Circuit Current Above Threshold	GO to Pinpoint Test E
PDM (passenger door module)	B12DC:21	Front Window Motion/Position Sensor: Signal Amplitude Less Than Minimum	GO to Pinpoint Test E
PDM (passenger door module)	B12DC:31	Front Window Motion/Position Sensor: No Signal	GO to Pinpoint Test E
PDM (passenger door module)	B13E5:23	Passenger Power Window Switch Up: Signal Stuck Low	GO to Pinpoint Test E
PDM (passenger door module)	B13E6:23	Passenger Power Window Switch Down: Signal Stuck Low	GO to Pinpoint Test E
PDM (passenger door module)	B13F2:4B	Passenger Power Window Motor: Over Temperature	GO to Pinpoint Test L

Global Customer Symptom Code (GCSC) Chart

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: Diagnostic Methods

(100-00 General Information, Description and Operation).

Global Customer Symptom Code Chart

Customer Symptom	Action
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test B
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test C
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test D
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test E
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test F
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test G
Lighting/Glass/Vision > Windows/Glass > Door > Power Function	GO to Pinpoint Test H

	G
The one-touch up feature is inoperative	• GO to Pinpoint Test H
The rear window defrost system is inoperative	• GO to Pinpoint Test I
The rear window defrost system does not shut off automatically	• GO to Pinpoint Test J
One or more individual defrost grid wires are inoperative	• GO to Pinpoint Test K

Pinpoint Test(s)

PINPOINT TEST A : THE POWER SLIDING REAR WINDOW IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

Refer to Wiring Diagrams Cell 100for schematic and connector information.

Normal Operation and Fault Conditions REFER to: Glass, Frames and Mechanisms - Vehicles With: One-Touch Open and Close Front Windows - System Operation and Component Description (501-11 Glass, Frames and Mechanisms, Description and Operation).

Possible Sources

- Fuse(s)
- Wiring, terminals or connectors
- Power sliding rear window switch
- Rear sliding window motor
- BCMC (body control module C)

Visual Inspection and Pre-checks

- Verify BCMC (body control module C) fuse 41 (25A) is OK.
- Verify BCM (body control module) fuse 2 (10A) is OK.

A1 CHECK THE SLIDING REAR WINDOW FUSE

- Ignition OFF.
- Inspect the BCMC (body control module C) fuse 41 (25A).

Is the fuse OK?

Yes	GO to A2