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2003 FORD Tourneo Connect OEM Service and Repair Workshop Manual

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- Access the SCCM (steering column control module) and monitor the F_WIP_INT_D4 (Front Wiper Intermittent Data 4) PID (parameter identification)
- Access the SCCM (steering column control module) and monitor the F_WIP_SLO_SW (Front Wiper Command Low Speed) PID (parameter identification)
- Access the SCCM (steering column control module) and monitor the F_WIPE_FAST_SW (Front Wiper Command High Speed) PID (parameter identification)
- Cycle the wiper/washer switch from off to the high speed setting and then back to off.


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

Yes	GO to A8
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No	<p>INSTALL a new wiper/washer switch.</p> <p>REFER to: Steering Column Multifunction Switch LH (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).</p> <p>TEST the system for normal operation. If the concern is still present, INSTALL a new SCCM (steering column control module) .</p> <p>REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).</p> <p>REFER to: Steering Column Control Module (SCCM) - Vehicles With: Adaptive Steering (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).</p> <p>Refer to the appropriate section in Group 211 for the procedure.</p>
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A8 CHECK FOR VOLTAGE TO THE WINDSHIELD WIPER MOTOR

- Ignition OFF.
- Disconnect Windshield Wiper Motor C125 .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C125-8		Ground

Is the voltage greater than 11 volts?

Yes	GO to A10
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Yes	GO to A11
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No	REPAIR the circuit.
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A11 CHECK THE FAIL-SAFE HIGH SPEED WIPER GROUND CIRCUIT CONTROL

NOTICE

This pinpoint test step uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250-300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.

- Ignition OFF.
- Disconnect Windshield Wiper Motor C125 .
- Connect:

Positive Lead	Measurement / Action	Negative Lead
C125-8		C125-1

- Ignition ON.
- Place the wiper/washer switch to the high speed setting and then off.
- Ignition OFF.

Does the test lamp illuminate when the wiper washer switch is in the high speed setting?

Yes	GO to A13
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No	GO to A12
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A12 CHECK THE FAIL-SAFE HIGH SPEED WIPER GROUND CIRCUIT FOR AN OPEN

exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new windshield wiper motor.

REFER to: [Windshield Wiper Motor](#)

(501-16 Wipers and Washers, Removal and Installation).

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.

A14 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

- Disconnect and inspect all the SCCM (steering column control module) connectors:
- 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 SCCM (steering column control module) connectors. Make sure they seat and latch correctly.

Is the concern still present?

Yes

CHECK OASIS for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) , or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new SCCM (steering column control module) .

REFER to: [Steering Column Control Module \(SCCM\)](#)

(211-05 Steering Wheel and Column Electrical Components, Removal and Installation).

REFER to: [Steering Column Control Module \(SCCM\) - Vehicles With: Adaptive Steering](#)

(211-05 Steering Wheel and Column Electrical Components, Removal and Installation).

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.

A15 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all the BCM (body control module) connectors:
- Repair:

- Wiring, terminals or connectors
- Wiper/washer switch
- Windshield wiper motor
- Rain sensor
- SCCM (steering column control module)

Visual Inspection and Pre-checks

- Inspect the wiper/washer switch for damage

NOTICE

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

NOTE

It may be necessary to disconnect and then reconnect the battery after the repair to enable the wiper operation.

B1 CHECK THE HIGH SPEED WIPER OPERATION

- Ignition ON.
- Place the wiper/washer switch to the high speed setting and observe the windshield wipers. Place the wiper/washer switch to the off setting.

Do the windshield wipers operate with the wiper/washer switch in the high speed setting?

Yes	GO to B2
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No	GO to Pinpoint Test A
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B2 CHECK THE LOW SPEED WIPER OPERATION

- 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 windshield wipers operate with the wiper/washer switch in the low speed setting?


Yes	If not equipped with a rain sensor, GO to Pinpoint Test E If equipped with a rain sensor, GO to
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Yes	INSTALL a new rain sensor. REFER to: Rain Sensor (501-16 Wipers and Washers, Removal and Installation).
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No	GO to B5
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B5 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect Windshield Wiper Motor C125 .
- Disconnect SCCM (steering column control module) C226A .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C125-4		Ground

Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to B6
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B6 CHECK THE LIN (LOCAL INTERCONNECT NETWORK) CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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Is the concern still present?

Yes	<p>CHECK OASIS for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) , or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new windshield wiper motor.</p> <p>REFER to: Windshield Wiper Motor (501-16 Wipers and Washers, Removal and Installation).</p> <p>TEST the system for normal operation. If the concern is still present, GO to B9</p>
No	<p>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.</p>

B9 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

- Using a diagnostic scan tool, view the SCCM (steering column control module) Parameter Identifications (PIDs).
- Access the SCCM (steering column control module) and monitor the F_WIPE_FAST_SW (Front Wiper Command High Speed) PID (parameter identification)
- Place the wiper/washer switch to the high speed setting.

Does the PID (parameter identification) indicate the wiper/washer switch is in the high speed setting?

Yes	GO to C2
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No	<p>INSTALL a new wiper/washer switch.</p> <p>REFER to: Steering Column Multifunction Switch LH (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).</p> <p>TEST the system for normal operation. If the concern is still present, INSTALL a new SCCM (steering column control module) .</p> <p>REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).</p> <p>REFER to: Steering Column Control Module (SCCM) - Vehicles With: Adaptive Steering (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).</p>
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C2 CHECK FOR CORRECT WINDSHIELD WIPER MOTOR OPERATION

- 1) Disconnect and inspect the windshield wiper motor 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 the BCM (body control module) 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	<p>CHECK OASIS for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) , or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new windshield wiper motor.</p> <p>REFER to: Windshield Wiper Motor (501-16 Wipers and Washers, Removal and Installation).</p>
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Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

D1 CHECK THE WINDSHIELD WIPER OPERATION WITH THE IGNITION OFF

- Ignition OFF.
- Observe the windshield wiper operation.

Do the windshield wipers operate with the ignition off?

Yes	GO to D5
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No	GO to D2
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D2 CHECK THE WINDSHIELD WIPER OPERATION WITH THE SCCM (STEERING COLUMN CONTROL MODULE) DISCONNECTED

- Ignition OFF.
- Disconnect SCCM (steering column control module) C226A .
- Ignition ON.
- Observe the windshield wiper operation.

Does the windshield wiper motor continue to operate?

Yes	GO to D3
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No	INSTALL a new wiper/washer switch. Refer to the appropriate section in Group 211 for the procedure. TEST the system for normal operation. If the concern is still present, GO to D9
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D3 CHECK THE HIGH SPEED FAIL-SAFE CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect Windshield Wiper Motor C125 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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- Using a diagnostic scan tool, carry out the BCM (body control module) self-test.

Is DTC (diagnostic trouble code) B130F:14 present?

Yes	GO to D6
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No	GO to D8
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D6 CHECK THE WIPER RELAY CONTROL CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect BCM (body control module) C2280F .
- Disconnect: negative battery cable.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280F-24	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to D10
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No	GO to D7
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D7 ISOLATE THE WIPER RELAY CONTROL CIRCUIT SHORT TO GROUND

- Ignition OFF.
- Disconnect BCMC (body control module C) C1035B .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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