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2001 FORD Taurus OEM Service and Repair Workshop Manual

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module C)			Test X
SOBDMC (secondary on-board diagnostic control module C)	P26FD:00	A/C Compressor Internal Control Module Performance: No Sub Type Information	GO to Pinpoint Test W
SOBDMC (secondary on-board diagnostic control module C)	P2D41:00	A/C Compressor Motor Voltage "B" Performance: No Sub Type Information	GO to Pinpoint Test W
SOBDMC (secondary on-board diagnostic control module C)	P2D42:00	A/C Compressor Motor Voltage "B" Low: No Sub Type Information	GO to Pinpoint Test W
SOBDMC (secondary on-board diagnostic control module C)	P2D44:00	A/C Compressor Motor Performance: No Sub Type Information	GO to Pinpoint Test W

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
Comfort & Entertainment > Climate Control > Air Distribution > Inaccurate	GO to Pinpoint Test J
Comfort & Entertainment > Climate Control > Air Distribution > Inaccurate	GO to Pinpoint Test P
Comfort & Entertainment > Climate Control > Air Distribution > Inoperative	GO to Pinpoint Test O
Comfort & Entertainment > Climate Control > Function/Operation > Blows Cold	GO to Pinpoint Test F
Comfort & Entertainment > Climate Control > Function/Operation > Poor Cooling	GO to Pinpoint Test G
Comfort & Entertainment > Climate Control > Function/Operation > Blows Warm	GO to Pinpoint Test I
Comfort & Entertainment > Climate Control > Function/Operation > Blows Warm	GO to Pinpoint Test L

The A/C (air conditioning) Pressure Relief Valve Is Discharging	GO to Pinpoint Test H
AIR CONDITIONING (A/C) ELECTRIC COMPRESSOR INOPERATIVE OR OPERATING POORLY AIR CONDITIONING CONTROL MODULE (ACCM)	GO to Pinpoint Test W
The Air Inlet Door Is Erratic Or Does Not Operate Correctly	GO to Pinpoint Test D
The Blower Motor Is Inoperative	GO to Pinpoint Test O
The Blower Motor Does Not Operate Correctly	GO to Pinpoint Test P
Incorrect Or Erratic Direction Of Airflow From Outlets	GO to Pinpoint Test E
Insufficient, Erratic Or No Heat	GO to Pinpoint Test F
Reduced Outlet Airflow	GO to Pinpoint Test J
The Temperature Control Is Inoperative Or Does Not Operate Correctly	GO to Pinpoint Test N
A/C (air conditioning) system NVH (noise, vibration and harshness)	GO to Pinpoint Test V
Refrigerant Leak Detection	GO to Pinpoint Test AN

Pinpoint Test(s)

PINPOINT TEST A : P0531, P0532, P0533, P0534

Refer to Wiring Diagrams Cell 54 for schematic and connector information.

Normal Operation and Fault Conditions The A/C (air conditioning) pressure transducer receives a ground from the PCM (powertrain control module) . A 5-volt reference voltage is supplied to the A/C (air conditioning) pressure transducer from the PCM (powertrain control module) . The A/C (air conditioning) pressure transducer then sends a voltage to the PCM (powertrain control module) to indicate the A/C (air conditioning) pressure. **DTC Fault Trigger Conditions**

The following pinpoint test step is tested in ambient temperature of approximately 21.1°C (70°F). As ambient temperatures near 38°C (100.4°F), the pressure value difference increases above ± 15 psi (103 kPa) range.

- Allow the A/C (air conditioning) system to stabilize to the outside ambient temperature.
- Ignition ON.
- Using a diagnostic scan tool, view PCM (powertrain control module) Parameter Identifications (PIDs).
- With the manifold gauge set connected, compare the pressure readings of the manifold gauge set and the
Access the PCM (powertrain control module) and monitor the ACP_PRESS ((A/C) pressure sensor) (kPa) PID (parameter identification)

Are the pressure values of the manifold gauge set and the ACP_PRESS Powertrain Control Module (PCM) Parameter Identification (PID), dependent upon ambient temperatures, within ± 103 kPa (15 psi)?

Yes	If refrigerant pressures are low, INSPECT the A/C (air conditioning) system for a leak. GO to Pinpoint Test AN IGNORE the Diagnostic Trouble Codes (DTCs). REFER to the Symptom Chart in this section.
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No	GO to A2
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A2 CHECK THE A/C (AIR CONDITIONING) PRESSURE SENSOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect PCM (powertrain control module) , 2.7L C1232B, 3.3L C1551B, 3.5L C175B or 5.0L C1381B .
- Disconnect A/C (air conditioning) pressure transducer C1260 .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1260-1	V̄	Ground
C1260-2	V̄	Ground

- Measure:

2.7L

Positive Lead	Measurement / Action	Negative Lead
C1260-1	Ω	C1232B-81
C1260-2	Ω	C1232B-51
C1260-3	Ω	C1232B-84

3.3L


Positive Lead	Measurement / Action	Negative Lead
C1260-1	Ω	C1551B-81
C1260-2	Ω	C1551B-51
C1260-3	Ω	C1551B-84

3.5L

Positive Lead	Measurement / Action	Negative Lead
C1260-1	Ω	C175B-81

- 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 all PCM (powertrain 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?

<p>Yes</p>	<p>CHECK OASIS (Online Automotive Service Information System) 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,</p>  <p>Guided Routine available in the on-line Workshop Manual.</p>
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<p>No</p>	<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>
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PINPOINT TEST B : P0645:00

Refer to Wiring Diagrams Cell 54for schematic and connector information.


Normal Operation and Fault Conditions Voltage is provided to the A/C (air conditioning) clutch SMART (FET) at all times. The A/C (air conditioning) clutch SMART (FET) is a non serviceable part of the printed circuit board on the BCMC (body control module C) [also known as BJB (battery junction box)]. When A/C (air conditioning) is requested and A/C (air conditioning) line pressures and all conditions allow, the PCM (powertrain control module) provides a ground to the A/C (air conditioning) clutch SMART (FET) control input circuit, energizing the A/C (air conditioning) clutch SMART (FET). For additional information on A/C Request, REFER to: [Climate Control System - Vehicles With: Electronic Manual Temperature Control \(EMTC\) - System Operation and Component Description](#) (412-00 Climate Control System - General Information, Description and Operation).

DTC Fault Trigger Conditions


DTC (diagnostic trouble code)	Description	Fault Trigger Condition
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C1551B-44		Ground
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3.5L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
C175B-44		Ground

5.0L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
C1381B-44		Ground

Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to B2
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B2 CHECK THE A/C (AIR CONDITIONING) CLUTCH SMART FET (FIELD-EFFECT TRANSISTOR) INPUT CONTROL CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

2.7L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
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2.7L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
C1035B-29	Ω	C1232B-44

3.3L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
C1035B-29	Ω	C1551B-44

3.5L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
C1035B-29	Ω	C175B-44

5.0L Input Circuit from Powertrain Control Module (PCM) to Body Control Module C (BCMC)

Positive Lead	Measurement / Action	Negative Lead
C1035B-29	Ω	C1381B-44

Is the resistance less than 3 ohms?

Yes	GO to B4
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No	REPAIR the circuit.
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System - Vehicles With: Electronic Manual Temperature Control (EMTC) - System Operation and Component Description

(412-00 Climate Control System - General Information, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
BCMC (body control module C) P2CFC:00	A/C Clutch Control Circuit: No Sub Type Information	BCMC (body control module C) reports the clutch Smart FET control output circuit is open.
BCMC (body control module C) P2CFD:00	A/C Clutch Control Circuit Low: No Sub Type Information	BCMC (body control module C) reports the clutch Smart FET control output circuit is shorted to ground.
BCMC (body control module C) P2CFE:00	A/C Clutch Control Circuit High: No Sub Type Information	BCMC (body control module C) reports the clutch Smart FET control output circuit is shorted to power.

Possible Sources

- Wiring, terminals or connectors
- A/C (air conditioning) clutch control FET (Field Effect Transistor) [non-serviceable, part of the BCMC (body control module C)]
- BCMC (body control module C)

NOTICE

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

C1 CHECK THE A/C (AIR CONDITIONING) COMPRESSOR CLUTCH FIELD COIL GROUND CIRCUIT FOR AN OPEN

- Make sure HVAC (heating, ventilation and air conditioning) controls are selected OFF.
- Ignition OFF.
- Disconnect A/C (air conditioning) clutch and field coil C100 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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CLEAR all Diagnostic Trouble Codes (DTCs). TEST the system for normal operation.

No GO to [C3](#)

C3 CHECK THE A/C (AIR CONDITIONING) CLUTCH SMART FET (FIELD-EFFECT TRANSISTOR) OUTPUT CONTROL CIRCUIT FOR A SHORT TO VOLTAGE

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C100-1	\bar{V}	Ground

Is any voltage present?

Yes REPAIR the circuit.

No GO to [C4](#)

C4 CHECK THE A/C (AIR CONDITIONING) CLUTCH SMART FET (FIELD-EFFECT TRANSISTOR) OUTPUT CONTROL CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C100-1	Ω	Ground

Is the resistance greater than 10,000 ohms?