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2007 FORD Taurus OEM Service and Repair Workshop Manual

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N4 CHECK FOR CORRECT ACTUATOR OPERATION

- Ignition OFF.
- Disconnect and inspect the temperature door actuator 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 all disconnected connectors. CONNECT the actuator electrical connector before the HVAC (heating, ventilation and air conditioning) control module. This allows the actuator to be calibrated when the HVAC (heating, ventilation and air conditioning) control module is connected. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	INSTALL a new temperature door actuator. REFER to: Temperature Door Actuator (412-00 Climate Control System - General Information, Removal and Installation). CONNECT the actuator electrical connector before the HVAC (heating, ventilation and air conditioning) control module. This allows the actuator to be calibrated when the HVAC (heating, ventilation and air conditioning) control module is connected. TEST the system for normal operation. If the concern is still present, GO to N5

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.

N5 CHECK FOR CORRECT HVAC (HEATING, VENTILATION AND AIR CONDITIONING) CONTROL MODULE OPERATION

- Ignition OFF.
- Disconnect and inspect all HVAC (heating, ventilation and air conditioning) control module electrical connectors (if not previously disconnected).
- Repair:
  - corrosion (install new connector or terminal - clean module pins)
  - damaged or bent pins - install new terminals or pins
  - pushed-out pins - install new pins as necessary

HVAC (heating, ventilation and air conditioning) B10B9:12	Blower Control: Circuit Short To Battery	Module senses high voltage on the blower motor control PWM (pulse width modulation) circuit, indicating a short directly to voltage. The blower motor is inoperative.
HVAC (heating, ventilation and air conditioning) B10B9:14	Blower Control: Circuit Short To Ground Or Open	Module senses no voltage on the blower motor control PWM (pulse width modulation) circuit, indicating a short directly to ground or an open circuit. The blower motor runs at full speed if the circuit is shorted to ground. The blower motor is inoperative if the circuit is open.

Possible Sources

- Fuse
- Wiring, terminals or connectors
- Blower motor relay [non-serviceable, part of the BCMC (body control module C) also known as BJB (battery junction box)]
- Blower motor control module
- HVAC (heating, ventilation and air conditioning) control module

Visual Inspection and Pre-checks

- Make sure BJB (battery junction box) fuse 13 (40A) is OK.

NOTICE

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

O1 CHECK THE BLOWER MOTOR RELAY CONTROL CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect BJB (battery junction box) C1035C .
- Disconnect HVAC (heating, ventilation and air conditioning) control module C228A and C228B .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C228A-11	Ω	Ground

C1035C-57	Ω	C297-3

Is the resistance less than 3 ohms?

Yes	GO to O4

No	REPAIR the circuit.

O4 CHECK FOR VOLTAGE TO THE BLOWER MOTOR CONTROL MODULE

Is the resistance less than 3 ohms?

Yes	GO to O6

No	REPAIR the circuit.

O6 CHECK THE BLOWER MOTOR CONTROL MODULE PWM (PULSE WIDTH MODULATION) CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect HVAC (heating, ventilation and air conditioning) control module C228A and C228B .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C297-4	V	Ground

Is any voltage present?

Yes	REPAIR the circuit.

No	GO to O7

O7 CHECK THE BLOWER MOTOR CONTROL MODULE PWM (PULSE WIDTH MODULATION) CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead

- Disconnect and inspect all HVAC (heating, ventilation and air conditioning) control module electrical connectors (if not previously disconnected).
- Repair:
  - corrosion (install new connector or terminal - clean module pins)
  - damaged or bent pins - install new terminals or pins
  - pushed-out pins - install new pins as necessary
- Connect all HVAC (heating, ventilation and air conditioning) control module electrical 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 (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, INSTALL a new HVAC (heating, ventilation and air conditioning) control module. REFER to: Heating, Ventilation and Air Conditioning (HVAC) Control Module (412-00 Climate Control System - General Information, 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.

PINPOINT TEST P : THE BLOWER MOTOR DOES NOT OPERATE CORRECTLY

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

Normal Operation and Fault Conditions Air Handling, 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
HVAC (heating, ventilation and air conditioning) B10AF:12	Blower Fan Relay: Circuit Short To Battery	Module senses high voltage on the relay coil voltage circuit when the module is energizing the circuit. Blower relay is permanently active.

C297-4	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to P3

No	REPAIR the circuit.

P3 CHECK THE BLOWER MOTOR RELAY CONTROL CIRCUIT FOR A SHORT TO VOLTAGE

- Disconnect HVAC (heating, ventilation and air conditioning) control module C228A and C228B .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C228A-11	V	Ground

Is any voltage present?

Yes	REPAIR the circuit.

No	GO to P4

P4 CHECK THE BLOWER MOTOR CONTROL MODULE VOLTAGE CIRCUIT FOR A SHORT TO VOLTAGE

- Disconnect BJB (battery junction box) fuse 13 (40A).
- Measure:

Positive Lead	Measurement / Action	Negative Lead

- Disconnect and inspect all HVAC (heating, ventilation and air conditioning) control module electrical connectors (if not previously disconnected).
- Repair:
  - corrosion (install new connector or terminal - clean module pins)
  - damaged or bent pins - install new terminals or pins
  - pushed-out pins - install new pins as necessary
- Connect all HVAC (heating, ventilation and air conditioning) control module electrical 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 (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, INSTALL a new HVAC (heating, ventilation and air conditioning) control module. REFER to: Heating, Ventilation and Air Conditioning (HVAC) Control Module (412-00 Climate Control System - General Information, 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.

PINPOINT TEST Q : B10B5:11, B10B5:15, B10B6:11, B10B6:15

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

Normal Operation and Fault Conditions The air discharge sensors supply a varying voltage to the HVAC (heating, ventilation and air conditioning) control module based on the temperature of the air being discharged from the vent. The HVAC (heating, ventilation and air conditioning) control module adjusts the system based on the voltage from each sensor. Each air discharge sensor is supplied voltage from the HVAC (heating, ventilation and air conditioning) control module and all sensors share a common sensor ground. An open, a short to ground, a short to voltage on one or more of these circuits or a failed air discharge sensor causes the HVAC (heating, ventilation and air conditioning) control module to set one or more Diagnostic Trouble Codes (DTCs). **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition

C2436-A	V	C2436-B

- For the Driver Side Register (Panel) Air Discharge Temperature Sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C2438-1	V	C2438-3

Are the voltages between 4.7 and 5.1 volts?

Yes	INSTALL a new air discharge temperature sensor. REFER to the appropriate procedure in Group 412-00. CLEAR the Diagnostic Trouble Codes (DTCs). REPEAT the self-test. If the DTC (diagnostic trouble code) returns, GO to Q6

No	GO to Q2

Q2 CHECK THE AIR DISCHARGE TEMPERATURE SENSOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect HVAC (heating, ventilation and air conditioning) control module C228A and C228B .
- Ignition ON.
- For the Driver Side Footwell (Floor) Air Discharge Temperature Sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C2436-A	V	Ground
C2436-B	V	Ground

C2438-1	Ω	Ground
C2438-3	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to Q4

No	REPAIR the circuit.

Q4 CHECK THE AIR DISCHARGE TEMPERATURE SENSOR CIRCUITS FOR AN OPEN

- For the Driver Side Footwell (Floor) Air Discharge Temperature Sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C2436-A	Ω	C228B-5

Positive Lead	Measurement / Action	Negative Lead
C2436-B	Ω	C228A-2

- For the Driver Side Register (Panel) Air Discharge Temperature Sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C2438-1	Ω	C228B-4