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2002 FORD Taurus OEM Service and Repair Workshop Manual

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AO2 CHECK THE AIR CONDITIONING (A/C) SYSTEM PRESSURE

NOTE

Static refrigerant pressure, under perfect conditions, should approximately reflect ambient air temperature. Do not rely upon the static refrigerant pressure alone to determine if the system is properly charged. Refer to the current Ford Web Based Technical Training courses for basic HVAC system refrigerant operation.

- Ignition OFF.
- Connect a manifold gauge set.
- With a manifold gauge set connected, check for A/C (air conditioning) system pressure.

Is the A/C (air conditioning) system pressure between 413-551 kPa (60-80 psi) at 24°C (75.2°F)?

Yes	GO to AO3
No	GO to AO4

AO3 CHECK FOR LEAKS USING THE ELECTRONIC LEAK DETECTION

NOTE

Proper Air Conditioning (A/C) system diagnosis on a vehicle's compressor is dependent on correct refrigerant system charge and tested in ambient temperatures above 21.1°C (70°F).

- Carry out the electronic leak detection.
  REFER to: Electronic Leak Detection(412-00 Climate Control System - General Information, General Procedures).
- Leak test the refrigerant system using the probe by slowly following the path of the refrigerant circuit checking each component and connection. Follow the instructions included with the Electronic Leak Detector for handling and operation techniques.

Is the presence of a leak found using the electronic leak detection?

Yes	Repair any leaks found using the appropriate procedure from Group 412 of the Shop Manual. After the leak(s) is repaired, remove any traces of fluorescent dye with a dye cleaner. REFER to: Climate Control Tools and Equipment (412-00 Climate Control System - General Information, General Procedures).

AO5 CHECK FOR LEAKS USING THE AIR CONDITIONING (A/C) SYSTEM LEAK TEST USING FORMING GAS

- Carry out the A/C system leak test using forming gas.
  REFER to: Air Conditioning (A/C) System Leak Test Using Forming Gas(412-00 Climate Control System - General Information, General Procedures).

Was a leak found using the A/C system leak test using forming gas?

Yes	Repair any leaks found using the appropriate procedure from Group 412 of the Shop Manual. After the leak(s) is repaired, remove any traces of fluorescent dye with a dye cleaner. REFER to: Climate Control Tools and Equipment (412-00 Climate Control System - General Information, General Procedures).

No	GO to AO6

AO6 CHECK FOR LEAKS IN THE EVAPORATOR CORE

- Carry out the evaporator core leak check.
  REFER to: Evaporator Core Leak Check(412-00 Climate Control System - General Information, General Procedures).

Did the low pressure gauge maintain 29.In HG for the 30 minutes in the evaporator core?

Yes	GO to AO7

No	INSTALL a new evaporator core. REFER to: Evaporator (412-00 Climate Control System - General Information, Removal and Installation).

AO7 CHECK FOR LEAKS IN THE CONDENSER CORE

- Carry out the condenser core leak check.
  REFER to: Condenser Core Leak Check(412-00 Climate Control System - General Information, General Procedures).

Did the low pressure gauge maintain 29.In HG for the 30 minutes in the condenser core?

Yes	GO to AO8

Normal Operation and Fault Conditions The Auto Start/Stop Deactivation Switch is part of the Instrument Panel Center Stack Left Switch. REFER to: Climate Control System - Vehicles With: Dual Automatic Temperature Control (DATC) - 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) B10B8:63	Push Buttons: Circuit/Component Protection Time-Out	This DTC (diagnostic trouble code) sets when the HVAC (heating, ventilation and air conditioning) control module senses the auto start-stop deactivation switch is stuck for more than 120 seconds.

Possible Sources

- Wiring, terminals or connectors
- Instrument panel center stack left switch
- HVAC (heating, ventilation and air conditioning) control module

NOTICE

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

AP1 CHECK THE INSTRUMENT PANEL CENTER STACK LEFT SWITCH CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect HVAC (heating, ventilation and air conditioning) control module C228A and C228B .
- Disconnect Instrument Panel Center Stack Left Switch C2480 .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2480-1	V	Ground

C2480-1	Ω	C228A-13
C2480-4	Ω	C228A-5

Are the resistances less than 3 ohms?

Yes	GO to AP4

No	REPAIR the affected circuits.

AP4 CHECK THE INSTRUMENT PANEL CENTER STACK LEFT SWITCH CIRCUITS FOR A SHORT TOGETHER

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2480-1	Ω	C2480-4

Is the resistance greater than 10,000 ohms?

Yes	INSTALL a new Instrument Panel Center Stack Left Switch. CLEAR codes and CARRY out the HVAC (heating, ventilation and air conditioning) control module self-test. TEST the system for normal operation. If the concern is still present, GO to AP5

No	REPAIR the circuits.

AP5 CHECK FOR CORRECT HVAC (HEATING, VENTILATION AND AIR CONDITIONING) CONTROL MODULE OPERATION

- Ignition OFF.

Climate Control System - Vehicles With: Electronic Manual Temperature Control (EMTC)

412-00 Climate Control System - General Information	***2022 F-150***
Diagnosis and Testing	***Procedure revision date: 08/16/2022***

Climate Control System - Vehicles With: Electronic Manual Temperature Control (EMTC)

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
ACCM (air conditioning control module)	B11EE:19	A/C Compressor: Circuit Current Above Threshold	GO to Pinpoint Test W
ACCM (air conditioning control module)	B11EE:41	A/C Compressor: General Checksum Failure	GO to Pinpoint Test AK
ACCM (air conditioning control module)	B11EE:4B	A/C Compressor: Over Temperature	GO to Pinpoint Test W
ACCM (air conditioning control module)	B11EE:92	A/C Compressor: Performance or Incorrect Operation	GO to Pinpoint

ACCM (air conditioning control module)	U3000:49	Control Module: Internal Electronic Failure	GO to Pinpoint Test AK
BCMC (body control module C)	P0EE3:00	A/C Refrigerant Distribution Valve "B" Control Circuit/Open: No Sub Type Information	GO to Pinpoint Test Y
BCMC (body control module C)	P0EE4:00	A/C Refrigerant Distribution Valve "B" Control Circuit Low: No Sub Type Information	GO to Pinpoint Test Y
BCMC (body control module C)	P0EE5:00	A/C Refrigerant Distribution Valve "B" Control Circuit High: No Sub Type Information	GO to Pinpoint Test Y
BCMC (body control module C)	P2611:00	A/C Refrigerant Distribution Valve "A" Control Circuit/Open: No Sub Type Information	GO to Pinpoint Test X
BCMC (body control module C)	P2612:00	A/C Refrigerant Distribution Valve "A" Control Circuit Low: No Sub Type Information	GO to Pinpoint Test X
BCMC (body control module C)	P2613:00	A/C Refrigerant Distribution Valve "A" Control Circuit High: No Sub Type Information	GO to Pinpoint Test X
BCMC (body control module C)	P2CFC:00	A/C Clutch Control Circuit: No Sub Type Information	GO to Pinpoint Test C
BCMC (body control module C)	P2CFD:00	A/C Clutch Control Circuit Low: No Sub Type Information	GO to Pinpoint Test C
BCMC (body control module C)	P2CFE:00	A/C Clutch Control Circuit: No Sub Type Information	GO to Pinpoint Test C
HVAC (heating, ventilation and air conditioning)	B1081:07	Left Temperature Damper Motor: Mechanical Failure	GO to Pinpoint Test N

HVAC (heating, ventilation and air conditioning)	B10AF:11	Blower Fan Relay: Circuit Short To Ground	GO to Pinpoint Test O
HVAC (heating, ventilation and air conditioning)	B10AF:12	Blower Fan Relay: Circuit Short To Battery	GO to Pinpoint Test P
HVAC (heating, ventilation and air conditioning)	B10AF:13	Blower Fan Relay: Circuit Open	GO to Pinpoint Test O
HVAC (heating, ventilation and air conditioning)	B10B5:11	Left Panel Air Discharge Temperature: Circuit Short To Ground	GO to Pinpoint Test Q
HVAC (heating, ventilation and air conditioning)	B10B5:15	Left Panel Air Discharge Temperature: Circuit Short To Battery or Open	GO to Pinpoint Test Q
HVAC (heating, ventilation and air conditioning)	B10B6:11	Left Floor Air Discharge Temperature: Circuit Short To Ground	GO to Pinpoint Test Q
HVAC (heating, ventilation and air conditioning)	B10B6:15	Left Floor Air Discharge Temperature: Circuit Short To Battery or Open	GO to Pinpoint Test Q
HVAC (heating, ventilation and air conditioning)	B10B8:63	Push Buttons: Circuit / Component Protection Time-Out	GO to Pinpoint Test AO
HVAC (heating, ventilation and air conditioning)	B10B9:12	Blower Control: Circuit Short To Battery	GO to Pinpoint Test O
HVAC (heating, ventilation and air conditioning)	B10B9:14	Blower Control: Circuit Short To Ground or Open	GO to Pinpoint Test O
HVAC (heating, ventilation and air conditioning)	B10B9:14	Blower Control: Circuit Short To Ground or Open	GO to Pinpoint Test P

HVAC (heating, ventilation and air conditioning)	B1B71:11	Evaporator Temperature Sensor: Circuit Short To Ground	GO to Pinpoint Test S
HVAC (heating, ventilation and air conditioning)	B1B71:15	Evaporator Temperature Sensor: Circuit Short To Battery or Open	GO to Pinpoint Test S
HVAC (heating, ventilation and air conditioning)	C1B14:11	Sensor Supply Voltage A: Circuit Short to Ground	GO to Pinpoint Test K
HVAC (heating, ventilation and air conditioning)	C1B14:11	Sensor Supply Voltage A: Circuit Short to Ground	GO to Pinpoint Test T
HVAC (heating, ventilation and air conditioning)	C1B14:12	Sensor Supply Voltage A: Circuit Short to Battery	GO to Pinpoint Test K
HVAC (heating, ventilation and air conditioning)	C1B14:12	Sensor Supply Voltage A: Circuit Short to Battery	GO to Pinpoint Test T
HVAC (heating, ventilation and air conditioning)	U0100:00	Lost Communication with ECM/PCM "A": No Sub Type Information	GO to Pinpoint Test AA
HVAC (heating, ventilation and air conditioning)	U0140:00	Lost Communication With Body Control Module: No Sub Type Information	GO to Pinpoint Test AC
HVAC (heating, ventilation and air conditioning)	U0151:00	Lost Communication With Restraints Control Module: No Sub Type Information	GO to Pinpoint Test AD
HVAC (heating, ventilation and air conditioning)	U0155:00	Lost Communication With Instrument Panel Cluster (IPC) Control Module: No Sub-Type Information	GO to Pinpoint Test AE
HVAC (heating, ventilation and air conditioning)	U0253:00	Lost Communication With Accessory Protocol Interface Module: No Sub Type Information	GO to Pinpoint Test AF

HVAC (heating, ventilation and air conditioning)	U3003:17	Battery Voltage: Circuit Voltage Above Threshold	GO to Pinpoint Test AM
PCM (powertrain control module)	P0531:00	A/C Refrigerant Pressure Sensor "A" Circuit Range/Performance: No Sub Type Information	GO to Pinpoint Test A
PCM (powertrain control module)	P0532:00	A/C Refrigerant Pressure Sensor "A" Circuit Low: No Sub Type Information	GO to Pinpoint Test A
PCM (powertrain control module)	P0533:00	A/C Refrigerant Pressure Sensor "A" Circuit High: No Sub Type Information	GO to Pinpoint Test A
PCM (powertrain control module)	P0534:00	A/C Refrigerant System "A" Charge Loss: No Sub Type Information	GO to Pinpoint Test A
PCM (powertrain control module)	P0645:00	A/C Clutch Control Circuit: No Sub Type Information	GO to Pinpoint Test B
PCM (powertrain control module)	P06A0:00	Variable Compressor Control Circuit: No Sub Type Information	GO to Pinpoint Test G
PCM (powertrain control module)	P1464:00	A/C Demand Out Of Self Test Range: No Sub Type Information	GO to Pinpoint Test M
PCM (powertrain control module)	P193E:00	A/C Clutch Request Signal: No Sub Type Information	GO to Pinpoint Test U
PCM (powertrain control module)	P2600:00	Coolant Pump "A" Control Circuit/Open: No Sub Type Information	GO to Pinpoint Test AI
PCM (powertrain control module)	P2601:00	Coolant Pump "A" Control Circuit Performance/Stuck Off: No Sub Type Information	GO to Pinpoint Test AI