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1997 FORD Taurus OEM Service and Repair Workshop Manual

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AC_INHIBIT_13	A/C Clutch Engagement is inhibited because the strategy is operating in Fail safe Cooling Mode	This inhibit PID (parameter identification) reads true when there is a concern with the vehicles over heating. A high oil or cylinder head temperature is detected.
AC_INHIBIT_14	A/C Clutch Engagement is inhibited to Protect the Clutch from Damage because the Compressor Load and Speed are Too High	This inhibit PID (parameter identification) reads true when there is a concern with high compressor speed or load. This is to protect the A/C (air conditioning) compressor clutch from damage. Do not reengage the A/C (air conditioning) Clutch when the pressure is above the threshold. Wait for the pressure or engine speed to fall. If this PID (parameter identification) is set to true during diagnosis, verify the compressor speed value in the PCM (powertrain control module) in case it may not be reading correctly. Observe compressor speed PID (parameter identification) .
AC_INHIBIT_15	A/C Clutch Engagement is inhibited by the off portion of the A/C Cycling Strategy invoked to manage High Engine Temperature	This inhibit PID (parameter identification) reads true when there is a concern with the vehicles over heating. A high temperature reading form the ECT (engine coolant temperature) sensor is detected. The A/C (air conditioning) clutch duty cycle is operated to provide some cooling to the cabin and some over heat protection. Instead of allowing the A/C (air conditioning) to operate normally, the A/C (air conditioning) clutch is allowed to be engaged ON and OFF for a calibrated time. The cycling ON and OFF is done until it is okay for the A/C (air conditioning) system to stay ON normally. Check engine temperature and diagnose an over temperature concern.
AC_INHIBIT_16	A/C Clutch Engagement is inhibited due to Low Battery State of Charge	This inhibit PID (parameter identification) reads true when there is a concern with the vehicles battery state of charge. When the 12 volt battery is almost fully discharged the A/C (air conditioning) clutch is disabled. Diagnose a battery or charging concern.
AC_INHIBIT_17	A/C Clutch Engagement is	This inhibit PID (parameter identification) reads true when there is a concern with the vehicle operating at to low of an

AC_INHIBIT_23	A/C Clutch Engagement is inhibited due to low torque availability	This inhibit PID (parameter identification) reads true when the engine torque is low. The compressor does not engage during this condition. Do not engage/reengage the A/C (air conditioning) clutch until there is enough engine torque available. If the A/C (air conditioning) relay/FET is off (cycled off or customer requested off), before engaging/reengaging the available engine torque reserve must be able to handle, without NVH (noise, vibration and harshness), the anticipated A/C torque demand.
AC_INHIBIT_24	A/C Clutch Engagement is inhibited Due to Request to Disable A/C from Stop-Start Strategy	This inhibit PID (parameter identification) reads true when during a stop-start condition. The compressor does not engage during this condition. This protects the A/C (air conditioning) relay/FET and also allows the engine to start without an A/C (air conditioning) load on the engine.
AC_INHIBIT_25	A/C Clutch Engagement is inhibited (Delayed) to make Power Available for Power Steering	This inhibit PID (parameter identification) reads true when the power steering load on the engine is detected for a short period of time. The A/C (air conditioning) clutch engagement is delayed if the power steering load on the engine is very active. These loads can result in an NVH (noise, vibration and harshness) concern.
EVACC_DERATE	Reason the Variable A/C Compressor is Limited	This inhibit PID (parameter identification) reads true when there is a concern with vehicle torque, high compressor speed, high ECT (engine coolant temperature) reading, during wide open throttle and/or discharge pressure.

Are any of the conditions described above not within normal parameters?

Yes	DIAGNOSE the condition found to be disabling the A/C (air conditioning) clutch Smart FET based off the information provide in the table above.
No	The A/C (air conditioning) compressor clutch can be commanded on using a diagnostic scan tool PCM (powertrain control module) Active command PID (parameter identification) . The A/C (air conditioning) inoperative concern may be caused by an intermittent condition due to a component or module connection, wiring or pin issue. ADDRESS the root cause of any connector or pin issues. CHECK the vehicle service history for recent service actions that have replaced

- Make sure the HVAC (heating, ventilation and air conditioning) controls are powered off.
- Using a diagnostic scan tool, clear the PCM (powertrain control module) Diagnostic Trouble Codes (DTCs).
- Using a diagnostic scan tool, carry out the PCM (powertrain control module) KOEO (key on, engine off) self-test.

Does DTC (diagnostic trouble code) P1464 return?

Yes	GO to M2
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No	IGNORE the DTC (diagnostic trouble code) and CONTINUE diagnosing other Diagnostic Trouble Codes (DTCs) or symptoms. GO to the DTC (diagnostic trouble code) Chart: PCM (powertrain control module) or Symptom Chart – Climate Control in this section.
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M2 CHECK THE AIR CONDITIONING (A/C) COMPRESSOR CLUTCH FIELD COIL VOLTAGE SUPPLY CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect BJB (battery junction box) C1035C .
- Disconnect A/C (air conditioning) compressor clutch field coil C100 .
- Ignition ON.
- Measure:

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

Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to M3
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Access the HVAC (heating, ventilation and air conditioning) and monitor the EVAP_TEMP (Evaporator Temperature) (Deg C) PID (parameter identification)

Are the temperature values similar [typically within $\pm 5^{\circ}\text{C}$ or 9°F of each other?

Yes	GO to M5
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No	DIAGNOSE the evaporator temperature sensor. GO to Pinpoint Test U
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M5 CHECK THE HVAC (HEATING, VENTILATION AND AIR CONDITIONING) CONTROL MODULE AIR CONDITIONING (A/C) SWITCH STATUS (CC_SW_AC) PARAMETER IDENTIFICATION (PID)

- Ignition ON.
- Using a diagnostic scan tool, view HVAC (heating, ventilation and air conditioning) control module Parameter Identifications (PIDs).
- Access the HVAC (heating, ventilation and air conditioning) and monitor the CC_SW_AC ((A/C) Switch) PID (parameter identification)
- Select panel mode, press and release the A/C (air conditioning) button (indicator off) on the HVAC (heating, ventilation and air conditioning) controls.

Does the PID (parameter identification) display Active when pressed and Inactive when released?

Yes	GO to M6
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No	GO to M9
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M6 CHECK THE AIR CONDITIONING (A/C) PRESSURE SENSOR (ACP_PRESS) PARAMETER IDENTIFICATION (PID)

- Using a diagnostic scan tool, view the PCM (powertrain control module) Parameter Identification (PIDs).
- With a 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 PCM (powertrain control module) PID (parameter identification) within ± 103 kPa (15) psi?

No

GO to [M9](#)

M9 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.
- 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 HVAC (heating, ventilation and air conditioning) control module connectors. Make sure they seat and latch correctly.
- Connect all disconnected 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.

M10 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM (powertrain control module) connectors.
- Repair:
 - corrosion (replace connector or terminals – clean module pins)

HVAC (heating, ventilation and air conditioning) B1081:07	Left Temperature Damper Motor: Mechanical Failures	Module senses the temperature door actuator motor control is awake, no actuator drive, stall before achieving target position within 15 seconds.
HVAC (heating, ventilation and air conditioning) B1081:11	Left Temperature Damper Motor: Circuit Short To Ground	Module senses lower the expected voltage on the temperature door actuator motor circuit when voltage is applied to drive the motor, indicating a short to ground. The motor can move only in one direction.
HVAC (heating, ventilation and air conditioning) B1081:12	Left Temperature Damper Motor: Circuit Short To Battery	Module senses a short to voltage on the temperature door actuator circuits when motor movement is commanded.
HVAC (heating, ventilation and air conditioning) B1081:13	Left Temperature Damper Motor: Circuit Open	Module senses an open on the temperature door actuator circuits when motor movement is commanded.
HVAC (heating, ventilation and air conditioning) B11E5:11	Left HVAC Damper Position Sensor: Circuit Short To Ground	Module senses a short to ground on the temperature door actuator circuits when motor movement is commanded.
HVAC (heating, ventilation and air conditioning) B11E5:15	Left HVAC Damper Position Sensor: Circuit Short To Battery Or Open	Module senses a short to voltage or an open on the temperature door actuator circuits when motor movement is commanded.

Possible Sources

- Wiring, terminals or connectors
- Temperature door actuator
- Temperature door is binding or stuck
- HVAC (heating, ventilation and air conditioning) control module

NOTICE

N2 CHECK THE DRIVER TEMPERATURE DOOR ACTUATOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C228A-8	Ω	Ground
C228A-2	Ω	Ground
C228A-3	Ω	Ground
C228A-10	Ω	Ground
C228A-9	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes GO to [N3](#)

No REPAIR the circuit.

N3 CHECK THE DRIVER TEMPERATURE DOOR ACTUATOR CIRCUITS FOR AN OPEN

- Disconnect Drivers temperature door actuator C2091 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	<p>INSTALL a new driver temperature door actuator.</p> <p>REFER to: Driver Temperature Door Actuator (412-00 Climate Control System - General Information, Removal and Installation).</p> <p>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</p>
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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>
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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.
- 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	<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, INSTALL a new HVAC (heating, ventilation and air conditioning) control module.</p> <p>REFER to: Heating, Ventilation and Air Conditioning (HVAC) Control Module (412-00 Climate Control System - General Information, Removal and Installation).</p>
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conditioning) B1082:13	Open	commanded.
HVAC (heating, ventilation and air conditioning) B11E6:11	Right HVAC Damper Position Sensor: Circuit Short To Ground	Module senses a short to ground on the temperature door actuator circuits when motor movement is commanded.
HVAC (heating, ventilation and air conditioning) B11E6:15	Right HVAC Damper Position Sensor: Circuit Short To Battery Or Open	Module senses a short to voltage or an open on the temperature door actuator circuits when motor movement is commanded.

Possible Sources

- Wiring, terminals or connectors
- Temperature door actuator
- Temperature door is binding or stuck
- 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.

01 CHECK THE PASSENGER TEMPERATURE DOOR ACTUATOR CIRCUITS FOR A SHORT TO VOLTAGE

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

C228A

Positive Lead	Measurement / Action	Negative Lead
C228A-2		Ground