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2015 FORD Taurus OEM Service and Repair Workshop Manual

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following list for examples.

Odor Source	Odor Description
Chemical Odors	
Coolant	Sweet smell
Fuel	Gasoline or diesel fuel smell
Oil	Oil type or burning smell
Power Steering Fluid	Oil type or burning smell
Transmission Fluid	Oil type or burning smell
Washer Fluid	Alcohol type smell
Gear Lube	Garlic/sulfur smell
Refrigerant Oil	Ether type smell
Carpet/trim Adhesives	Fishy, urine or sweet smell
Evaporator Core Coating	Wet cement type smell
Environmental Odors	
Exhaust	Exhaust, fuel or burning type smell
Industrial Pollutants	Various smells
Dust	Musty, mildew or wet cement type smell
Pollen	Sweet smell
Tobacco	Burning, tar smell
Human and Other Interior Generated Odors	
Body Secretions	Body odor
Perfuming Agents	Sweet or fragrance smell

To avoid damage, do not spill or spray this product on the blower motor speed control.

Remove the blower motor speed control.

Refer to: Blower Motor Control Module(412-00 Climate Control System - General Information, Removal and Installation).

6. **NOTE**

   To avoid damage, do not spill or spray this product or water on the blower motor speed control.

   Add water (Distilled or deionized water is preferred. Do not apply tap water) in bottle and apply with the A/C (air conditioning) Odor Remover Flexible Applicator Tool. For the correct odor removal tool applicator,

   Refer to: Climate Control Tools and Equipment(412-00 Climate Control System - General Information, General Procedures).

7. **NOTE**

   Observe the drained water till the water appearance turns to a clear or clean look.

   Insert the noozle into the evaporator housing and direct the spray toward the evaporator core face. Spray the deionized water to entire evaporator for 5 - 10 minutes.

8. Select REGISTER/PANEL mode (A/C (air conditioning) off).
9. Adjust the temperature setting to full warm.
10. Adjust the blower motor speed to HI.
11. Run the engine for 25 minutes to dry out the A/C (air conditioning) system.
12. Turn the ignition OFF.
13. **NOTICE**

    To avoid damage to the vehicle interior, do not spill or spray this product on any interior surface.

    NOTE

Air Conditioning (A/C) System Flushing

412-00 Climate Control System - General Information	***2022 F-150***
General Procedures	***Procedure revision date: 11/14/2022***

Air Conditioning (A/C) System Flushing

Flushing

NOTICE

Use the Refrigerant Identification Equipment before recovering any of the vehicle's refrigerant. Failure to do so puts the shop's bulk refrigerant at risk of contamination. If the vehicle's A/C (air conditioning) refrigerant is contaminated, refer the customer to the service facility that carried out the last A/C (air conditioning) service. If the customer wishes to pay the additional cost, use the A/C (air conditioning) recovery equipment that is designated for recovering contaminated A/C (air conditioning) refrigerant. All contaminated A/C (air conditioning) refrigerant must be disposed of as hazardous waste in accordance with all federal, state and local regulations. For all equipment, follow the equipment manufacturer procedures and instructions.

NOTICE

Before flushing the A/C (air conditioning) system, remove the receiver drier or receiver drier element, front Thermostatic Expansion Valve (TXV) , rear TXV (if equipped) and hoses with mufflers. Internal plumbing of these devices makes it impossible to correctly remove any residual-flushing agent. These components are typically discarded after A/C (air conditioning) system contamination. Hoses without mufflers can be reused unless they are clogged with foreign material. The 3.78L (1 gal) of Motorcraft® A/C (air conditioning) System Flushing Solvent (YN-23) and FL1-A filter used in A/C (air conditioning) Flush and Purge Service Unit are intended for use on one vehicle only. They may be used to flush both the A/C (air conditioning)

- remove the flushing solvent from the heat exchanger A/C (air conditioning) condenser, A/C (air conditioning) evaporator. In this step of the procedure the pressurized air 621-862 kPa (90-125 psi), that is connected to the service unit is used to push and evaporate any remaining flush solvent from the heat exchanger A/C (air conditioning) condenser, A/C (air conditioning) evaporator.

1. Recover the refrigerant.

   Refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging(412-00 Climate Control System - General Information, General Procedures).

2. Disconnect the refrigerant lines from the heat exchanger(s) (A/C (air conditioning) condenser, A/C (air conditioning) evaporator) to be flushed. Refer to the appropriate removal and installation section in Group 412 for the procedure.

3. **NOTE**

   Do not flush through the condenser integrated receiver drier element (if equipped), TXV (if equipped) or hoses with mufflers. Internal plumbing and material make-up of these components make it impossible to correctly remove foreign material or residual flushing solvent.

   For the correct A/C (air conditioning) Flush and Purge Service Tools.

   Refer to: Climate Control Tools and Equipment(412-00 Climate Control System - General Information, General Procedures).

4. **NOTE**

   Use 3.78 L (1 gal) of Motorcraft® A/C (air conditioning) System Flushing Solvent (YN-23) to flush the heat exchanger A/C (air conditioning) condenser, A/C (air conditioning) evaporator for a minimum of 15 minutes. The flush solvent may be used for one or both heat exchangers in the A/C (air conditioning) system. However, the flush solvent is intended for one vehicle only. The filter used on the service unit is also intended for use on one vehicle only.

   Flush the heat exchanger for a minimum of 15 minutes.

   Material : Motorcraft® A/C System Flushing Solvent / YN-23

5. Apply the pressurized air 621-862 kPa (90-125 psi) to the service unit, purge the component for a minimum of 30 minutes. The 30-minute purge time is required to force and evaporate all residual solvent from the A/C (air conditioning) system component. Failure to successfully remove all residual solvent within the component can result in system damage when reconnected and operated. Dispose of the used flush solvent and filter in accordance with local, state and federal regulations.

Air Conditioning (A/C) System Leak Test Using Forming Gas

412-00 Climate Control System - General Information	***2022 F-150***
General Procedures	***Procedure revision date: 10/25/2021***

Air Conditioning (A/C) System Leak Test Using Forming Gas

Leak detection

All vehicles

1. **NOTE**

   Use a Rotunda-approved Forming Gas A/C System Dealership Leak Detection Service Kit that meets SAE J2790.

   Recover the refrigerant. Refer to the appropriate Recovery procedure in Group 412.

Hybrid\Electric vehicles

2. Electric or Hybrid vehicle with a battery chiller. It may be necessary to activate the battery chiller(s) to open the solenoid(s) to allow vacuum and gas to pass through to chiller for leak testing. Refer to shop manual refrigerant reclaim and charging to see if solenoid(s) activation is necessary. Follow the shop manual procedure to perform activation if needed.

All vehicles

3. Perform the vacuum leak test in accordance with the service unit manufacturer instructions.
4. Assemble the gas leak detection kit per manufacturer instructions.
5. Connect the forming gas pressure gauge and leak detector service hose to the high-pressure port of the air conditioning system in accordance with the manufacturer instructions.

   Use the General Equipment: Forming Gas Pressure Gauge and Leak Detector

Click here to learn about symbols, color coding, and icons used in this manual.

7. Leak test the refrigerant system. Follow the instructions included with the Leak Detector for handling and operation techniques.
   - For the correct D740 H2/N2 leak detector service tool.

     Refer to: Climate Control Tools and Equipment(412-00 Climate Control System - General Information, General Procedures).

8. **NOTE**

   Forming gas is lighter than air, and tends to move up from the source of the leak. It is possible that a leak may not be detected if the leak detector tip is held below the leaking fitting, line or component. Always be sure to thoroughly leak test below, above and around the fitting, line or component.

   Disconnect the forming gas pressure gauge and leak detector from the air conditioning system in accordance with the manufacturer instructions.

9. **NOTICE**

Air Conditioning (A/C) System Recovery, Evacuation and Charging - Electric

412-00 Climate Control System - General Information	***2022 F-150***
General Procedures	***Procedure revision date: 04/11/2022***

Air Conditioning (A/C) System Recovery, Evacuation and Charging - Electric

Check

NOTE

- For all equipment, follow the manufacturer's instructions.
- Follow and inspect all charging instructions.

1. Connect the following items:
    1. FOLLOW the recovery process of the refrigerant analyzer and its importance.

Recovery

NOTICE

Use an A/C (air conditioning) refrigerant analyzer before recovering any of the vehicle's A/C (air conditioning) refrigerant. Failure to do so puts the shop's bulk refrigerant at risk of contamination. If the vehicle's A/C (air conditioning) refrigerant is contaminated, refer the customer to the service facility that carried out the last A/C (air conditioning) service. If the customer wishes to pay the additional cost, use the A/C (air conditioning) recovery equipment that is designated for recovering contaminated A/C (air conditioning) refrigerant. Dispose of all contaminated A/C (air conditioning) refrigerant as hazardous waste in accordance with all federal, state and local regulations. For all equipment, follow the manufacturer's instructions.

- Heat the refigerant in the evaporator by setting the vehicles climate control system to MAX defrost mode and monitoring the evaporator PID. The Cabin side for climate allows heating of refrigerant in the evaporator by the cabin coolant heater. For vehicles that have a seperate refrigerant system for cooling the coolant going to the high voltage battery like the Max trailer tow option on the F150, the refrigerant system for the high voltage battery cannot be heated. The cabin coolant heater is limited by strategy based on ambient temperature. Heating the refrigerant will help separate the refrigerant from the oil and limit the amount of oil removed.
- Ignition ON, Ready to drive mode.
- Using a diagnostic scan tool Access the HVAC (heating, ventilation and air conditioning) and monitor the EVAP_TEMP PID.
- Set the HVAC (heating, ventilation and air conditioning) controls to MAX defrost mode.
- Run in Max defrost mode until the EVAP_TEMP PID reads 40 Degrees C or 158 Degrees F.
- CLEAN and INSPECT the oil recovery bottle. Make sure it is dry and clean.

3. Connect the tool to the low-side and high-side service gauge port valves following the manufacturer's instructions.
   - For the A/C (air conditioning) Refrigerant Management Center and A/C (air conditioning) Service Unit. See A/C System Recovery, Evacuation and Charging Service Tools.

     Refer to: Climate Control Tools and Equipment(412-00 Climate Control System - General Information, General Procedures).

4. Connect the following items:
   1. All Warranty claims require paper print outs for the claims to be paid. FOLLOW the step and complete the vehicle Make, Model, Vin number and RO information.
   2. Connect battery charger.

5. 1. Pushing the recovery button, warm-up process begins the refrigerant identifier and starts the calibration process. Upon completion of the calibration process purity of the refrigerant within the system is complete.
   2. The machine asks if you wish to take an A/C (air conditioning) system pressure snapshot. Selections are (OK) to continue and (ESC) to Exit. Selection here is (ESC).
   3. The machine starts a self-cleaning process for the recovery process. This process will clean the internals of the recovery parts. Total time approximately 4 minutes.
   4. Actual recovery process starts. Total time approximately 10 minutes.

conditioning) recovery equipment that is designated for recovering contaminated A/C (air conditioning) refrigerant. Dispose of all contaminated A/C (air conditioning) refrigerant as hazardous waste in accordance with all federal, state and local regulations. For all equipment, follow the manufacturer's instructions.

NOTE

Use only Ford Approved R1234yf refrigerant management equipment.

1. Verify the refrigerant purity prior to recovery.

   Refer to: Refrigerant Identification Testing(412-00 Climate Control System - General Information, General Procedures).

2. Connect the tool to the low-side and high-side service gauge port valves following the manufacturer's instructions.

   - For location of high-side and low-side port valves. REFER to Climate Control - General Information Group 412 Component Location Description and Operation.

     Refer to: Climate Control System - Vehicles With: Dual Automatic Temperature Control (DATC)/Standard Performance Level - Component Location(412-00 Climate Control System - General Information, Description and Operation).

   - **NOTE**

     For the A/C (air conditioning) Refrigerant Management Center and A/C (air conditioning) Service Unit. See A/C (air conditioning) System Recovery, Evacuation and Charging Service Tools.

     Review Climate Control Tools and Equipment list for proper approved tools usage.

     Refer to: Climate Control Tools and Equipment(412-00 Climate Control System - General Information, General Procedures).

3. **NOTE**

   Never attempt to recover from only the low side service gauge port valve (solenoid valves in the system will not allow for full recovery). Open solenoid valves (if equipped).

Evacuate the system until the low-pressure gauge reads at least 99.4 kPa (29.5 in-Hg) of vacuum and as close to 101.1 kPa (30 in-Hg) as possible. Continue to operate the vacuum pump for a minimum of 45 minutes. For warranty claims the vacuum time of 45 minutes should be added to the print out.