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

Special Tool(s) / General Equipment

Air Conditioning Service Unit
Refrigerant Identification Equipment

Recovery

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

1. **NOTE:** *Use only Ford Approved R134A refrigerant management equipment.*

   Verify the refrigerant purity prior to recovery. Refer to Refrigerant Identification Testing procedure in Group 412.
   - 198-RI2012yfp A/C Refrigerant Analyzer for use with R134a and R1234yf vehicles
     Use the General Equipment: Refrigerant Identification Equipment

2. Connect the tool to the low-side and high-side service gauge port valves following the manufacturer's instructions.
   - 265-37887 Ritchie R134A A/C Refrigerant Hybrid Management System
     Use the General Equipment: Air Conditioning Service Unit

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).*

   Recover the refrigerant from the system following the manufacturer's instructions. Note the amount of oil removed during the refrigerant recovery (if any). Add that same amount back into the system once repairs are complete. Refer to the appropriate Refrigerant Oil Adding procedure in Group 412.

4. Allow the system to set for about 2 minutes and observe the system vacuum reading. If the vacuum is not lost, disconnect the recovery equipment.

5. If the system loses vacuum, repeat Steps 3 through 5 until the vacuum level remains stable for 2 minutes.

6. Carry out the required repairs.

Evacuation

1. **NOTICE: Use an A/C refrigerant analyzer 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 refrigerant is contaminated, refer the customer to the service facility that carried out the last A/C service. If the customer wishes to pay the additional cost, use the A/C recovery equipment that is designated for recovering contaminated A/C refrigerant. Dispose of all contaminated A/C refrigerant as hazardous waste in accordance with all federal, state and local regulations. For all equipment, follow the manufacturer's instructions.**

   - 198-RI2012yfp A/C Refrigerant Analyzer for use with R134a and R1234yf vehicles
     Use the General Equipment: Refrigerant Identification Equipment

2. Connect the tool to the low-side and high-side service gauge port valves following the manufacturer's instructions.
   - 265-37887 Ritchie R134A A/C Refrigerant Hybrid Management System
     Use the General Equipment: Air Conditioning Service Unit

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).*

   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.

4. Turn off the vacuum pump. Observe the low-pressure gauge for 10 minutes to make sure the system vacuum is held.

Charging

1. **NOTICE: Use an A/C refrigerant analyzer 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 refrigerant is contaminated, refer the customer to the service facility that carried out the last A/C service. If the customer wishes to pay the additional cost, use the A/C recovery equipment that is designated for recovering contaminated A/C refrigerant. Dispose of all contaminated A/C refrigerant as hazardous waste in accordance with all federal, state and local regulations. For all equipment, follow the manufacturer's instructions.**

    - 198-RI2012yfp A/C Refrigerant Analyzer for use with R134a and R1234yf vehicles
      Use the General Equipment: Refrigerant Identification Equipment

2. Lubricate the refrigerant system with the correct amount of clean PAG oil. Refer to the appropriate Refrigerant Oil Adding procedure in Group 412.

3. Connect the tool to the low-side and high-side service gauge port valves following the manufacturer's instructions.
    - 265-37887 Ritchie R134A A/C Refrigerant Hybrid Management System
      Use the General Equipment: Air Conditioning Service Unit

4. Set the refrigerant charge amount and charge the refrigerant system following the manufacturer's instructions.
