SWEEP CHARGE PROCEDURES FOR THE 90's

NON-CONTAMINATED SEALED SYSTEM REPAIRS

Refrigerators, Freezers and Undercounter Ice Makers

NOTE: Always replace the filter-drier during ANY repair on an R12 or R134a sealed system

PURGING PROCEDURE AND REPAIR

1. Diagnose failure.
2. Purge sealed system.

   (Operating Compressor)

   a. Attach temporary access valve to inlet end of filter-drier.
   b. Turn compressor "ON" and purge for 8 minutes.

   (Non-Operating Compressor)

   a. Attach temporary access valve to inlet end of filter-drier.
   b. Install additional temporary access valve on low-side of system.
      1) Horizontal Rotary Compressor - Attach temporary access valve to process stub on low-side.
      2) Reciprocating Compressors - Attach temporary access valve to process stub on compressor.
   c. Purge refrigerant into Ozone Saver Recovery Bag for 15 minutes.
   d. Heat compressor during entire purge.
   e. Sharply wrap with mallet several times after heating and purging for 12 minutes.
   f. Continue heating and purging for 3 more minutes.
3. Remove temporary access valve(s).
4. Perform repairs.
5. Replace filter-drier.

LEAK CHECKING, SWEEPING & CHARGING

1. Warm refrigerant tank or charging cylinder.
2. Horizontal Rotary Compressor - Heat compressor for five minutes.
3. Charge with 4 oz. of refrigerant into access valve at replacement filter-drier or condenser inlet.
4. Leak check system with bubble solution.
5. Horizontal Rotary Compressor - continue to heat.
6. Run compressor for 3 minutes to sweep system.
7. Check evaporator for frost pattern.
8. Purge refrigerant into Ozone Saver Recovery Bag for 5 minutes.
9. Leave compressor running and charge system with factory specified charge.
10. Securely tighten the cap on the access valve.
11. Check for heat at the condenser inlet.

Note: If replacing a reversing valve (also called a Hot Gas Valve in free-standing ice makers) in a product equipped with one, follow these additional steps after following purging procedure listed above:

1. Purge the sealed system on both sides of the valve per the above procedure.
2. Cut the tubing on both sides of the valve.
3. Remove the valve from the system. Remove the tubing stubs from the system.
4. Replace the valve in the system.
5. Leak check, sweep, and recharge the system.

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If a restriction is suspected in the reverse cycle tubing:

1. Purge the sealed system on both sides of the valve per the above procedure.
2. Cut the tubing on both sides of the reversing valve.
3. Remove the part with the restriction. Remove the tubing stubs from the valve.
4. Replace the part.
5. Leak check, sweep, and recharge the system.

NON-CONTAMINATED SEALED SYSTEM REPAIRS

Air Conditioners and Dehumidifiers

PURGING PROCEDURE AND REPAIR

1. Diagnose failure.
2. Purge sealed system.

   (Operating Compressor)

   a. Braze a saddle access valve to high-side of sealed system.
   b. Turn compressor “ON” and purge for 8 minutes.

   (Non-Operating Compressor)

   a. Braze saddle access valve to high-side of sealed system.
   b. Install temporary access valve on low-side of system.
   c. Purge refrigerant into Ozone Saver Recovery Bag for 15minutes.
   d. Heat compressor during entire purge.
   e. Sharply wrap with mallet several times after heating and purging for 12 minutes.
   f. Continue heating and purging for 3 more minutes.
3. Remove temporary access valve(s).
4. Perform repairs.
5. Replace filter-drier.

LEAK CHECKING, SWEEPING & CHARGING

1. Charge with 4 oz. of refrigerant into high-side access valve.
2. Leak check system with bubble solution.
3. Run compressor for 3 minutes to sweep system.
4. Purge refrigerant into Ozone Saver Recovery Bag for 5 minutes.
5. Shut off the compressor and charge system with factory specified charge.
6. Securely tighten the cap on the access valve.
7. Start the compressor and the check for heat at the condenser inlet.

CONTAMINATED SEALED SYSTEM REPAIRS

R12, R500, R22 SYSTEMS

NOTE: Always replace the filter-drier during ANY repair on an R12 or R134a sealed system.

COMPRESSOR BURN OUT:

1. Purge refrigerant from the system.
2. Permanently remove the fluid control valve.
3. Back flush the high-side of the system.
4. Replace the filter-drier or the strainer. (For Air Conditioners refer to Whirlpool Service Pointer R-316, part number 4321619, or Roper Service Communique R-19, part number 4349092.)
5. Replace the compressor.
6. Leak check, sweep and recharge the system. (See Procedure on pages 1&2)

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LOW-SIDE LEAKS/EXCESSIVE MOISTURE

1. Heat the evaporator for 5 minutes before purging refrigerant.
2. Purge refrigerant from the system.
3. Repair the leak.
4. Permanently remove the fluid control valve.
5. Replace the filter-drier.
6. Examine compressor oil for contamination (dark color.) If not contaminated, go on to step 6.
   a. Backflush the high-side of the system.
   b. Replace the compressor.
7. Leak check, sweep and recharge the system. (See Procedure on pages 1&2)

RESTRICTION IN THE SYSTEM

1. Purge refrigerant from the system.
2. Determine location of restriction and repair if possible.
   a. If restriction is in capillary tube and it (heat exchanger) is accessible, replace the heat exchanger. Then go to step 3.
   b. If restriction is in capillary tube and it (heat exchanger) is accessible, call the Consumer Assistance Center for appropriate action.
3. Permanently remove the fluid control valve.
4. Replace the filter-drier.
5. Examine compressor oil for contamination (dark color.) If not contaminated, go on to step 5.
   a. Backflush the high-side of the system.
   b. Replace the compressor.
6. Leak check, sweep and recharge the system. (See Procedure on pages 1&2)

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R134a SEALED SYSTEMS
IMPORTANT SERVICE CONSIDERATIONS

- R134a systems cannot tolerate trace amounts of foreign substances, chemical contamination (from other refrigerants) or moisture.
- Examples of detrimental substances are wax or paraffin, silicone, greases, oils, rust preventatives, lubricants, leak detection dye or any other additives.
- Do not use R12, R500, or R22 servicing equipment to repair an R134a system.
- Use new servicing equipment. Old equipment (hoses, coupler/valve seals and O-rings) are not compatible with R134a.
- Oil in R134a compressors is very sensitive and capable of absorbing large quantities of moisture. Moisture cannot be removed from the compressor oil.
- Check service replacement compressor to make sure the stubs seals are in place and not tampered with.
- Do not open compressor stubs for more than ten minutes.
- Always replace the filter-drier in ANY repair of R134a sealed system failure.

REPLACING R134a COMPRESSORS

CAUTION: Never open replacement compressor stubs to the air for longer than 10 minutes.

1. Carefully inspect rubber plugs in the service replacement compressor stubs. If the plug appears to have been removed or tampered with, DO NOT USE THE COMPRESSOR. Get another one.
2. Clean compressor stubs with plugs still in them.
3. Install into system last.
4. Braze into system within ten minutes.

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CONTAMINATED SEALED SYSTEM REPAIRS
R134a SEALED SYSTEMS

NOTE: Always replace the filter -drier during ANY repair on an R12 or R134a sealed system.

COMPRESSOR BURN OUT

1. Purge refrigerant from the system.
2. Backflush the high-side of the system.
3. Replace the filter-drier.
4. Replace the compressor.
5. Leak check, sweep and recharge the system. (See Procedure on page 1)

LOW-SIDE LEAKS/EXCESSIVE MOISTURE

1. Heat the evaporator for 5 minutes before purging refrigerant.
2. Purge refrigerant from the system.
3. Repair the leak.
4. Backflush the high-side of the system.
5. Replace the filter-drier.
6. Leak check and sweep the system.
7. Heat the evaporator and purge sweep charge.
8. Recharge the system.

RESTRICTION IN THE SYSTEM

1. Purge refrigerant from the system.
2. Determine location of restriction and repair if possible.
   a. If restriction is in capillary tube and it (heat exchanger) is accessible, replace the heat exchanger. Then go to step 3.
   b. If restriction is in capillary tube and it (heat exchanger) is not accessible, call the Consumer Assistance Center for appropriate action.
3. Backflush the high-side of the system.
4. Replace the filter-drier.
5. Replace the compressor.
6. Leak check, sweep and recharge the system. (See Procedure on page 1)

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BACKFLUSHING THE HIGH-SIDE

- Servicer has the choice of backflushing the entire high-side of the system or the condenser and heat loop separately. (Use no more than 20 oz. of refrigerant for each back flush.)
- Use a charging scale or charging cylinder to meter the required amount of refrigerant.
- Backflush high-side or components in reverse direction from normal flow of refrigerant.
- Use R22 to backflush R12, R22, and R500 systems.
- Use R134a ONLY to backflush R134a systems.
- Do not overfill the recovery bag during backflushing. Put no more than 20 oz. of R12, R500, R22, or R134a in an Ozone Saver Recovery Bag.

NEW SWEEP CHARGE PROCEDURE PROGRAM

Sweep Charge Procedure for the 90's
(including R134a Sealed Systems)
To order call: 219-325-2359
Job Aid: 4321717
Video: 4321718

CONSUMER ASSISTANCE PHONE NUMBERS

Whirlpool 1-800-253-1301
KitchenAid 1-800-422-1230
Roper 1-800-447-6737