



AIR SOURCE HEAT PUMPS

# MAINTENANCE CONSIDERATIONS FOR HOMES

Proper maintenance is critical to ensure your homeowners' heat pumps operate efficiently and reliably, and have a long service life. This guide provides a checklist for annual maintenance inspections performed by the contractor and describes the maintenance activities that should be communicated to the homeowner.

## REMINDERS FOR THE HOMEOWNER

After installing a new heat pump system, and during each subsequent maintenance or service call, remember to provide information to the customer about heat pump maintenance including:

- Model and serial numbers of all equipment
- Homeowner maintenance:
  - Filter replacements – what products are acceptable (size, efficiency, etc.) and timing, such as every three months, or as per product manual.
  - Ensure that vents and air registers in the home are not blocked by furniture, drapes, or carpeting, as inadequate airflow can shorten equipment lifespans and reduce efficiency of the system.
  - Watch for snow buildup that blocks the outdoor unit and clear it away as needed.
  - Identify if ice builds up or persists on the heat pump and contact the contractor with photos for support
  - The value of preventative maintenance contracts

## ANNUAL MAINTENANCE CONTRACTS

As a qualified contractor and HVAC specialist, you provide a range of services to address issues homeowners may face. An annual maintenance contract gives you the opportunity to maintain the relationship with homeowners, and ensure satisfaction and long service life for your installations. If maintenance issues go unaddressed, this can result in higher energy consumption, decreased equipment longevity, and sub-optimal occupant comfort. Benefits of maintenance contracts for customers can include:

- optimized energy efficiency
- improved occupant comfort
- improved indoor air quality
- reduced repair costs
- extended equipment life
- peace of mind

# CONTRACTOR ANNUAL MAINTENANCE VISIT CHECKLIST

## INDOORS

Make sure that the indoor and outdoor units turn on.

Check and adjust the indoor thermostat, and verify that the thermostat reflects current conditions in the space. Examine sensors.

Check that the humidistat is operating properly by comparing it to an accurate meter. Ensure the humidity is appropriate and discuss settings with the occupants.

Replace the air filter or clean it if it's reusable.

Inspect and clean, if necessary, the condensate drain system if necessary.

Check blower wheels and motors for restricted airflow and proper amp draw. Check the bearings and lubricate the blower motor if needed.

Inspect electrical wiring and connections; tighten or replace connections as needed.

Determine if the evaporator coil needs to be cleaned.

Check the voltage of the unit.

Visually inspect the ductwork and note your observations.

## OUTDOORS

Check for any changes in the placement or elevation of the compressor. Adjust as necessary to prevent drainage problems, freezing and other issues.

Check the compressor amp draw.

Check the crankcase heater if the compressor has one installed.

Test if the reversing valve operates properly.

Lubricate mechanical components to reduce friction and resistance.

Test heat pump controls to verify proper startup and shutdown, while listening for problematic noise or vibration.

Check the outdoor coil and fan for stability, amp draw, temperature and vibrations. Clean and lubricate.

Check the defrost assembly to verify the defrost timer is working.

Monitor coil temperatures; any variations may indicate an underlying issue.

Check safety panels and other features to ensure the unit operates and responds normally.

Examine unit disconnect switches and test time delay to prevent a variety of electrical hazards.

## PERFORM THE REMAINDER OF MAINTENANCE ACTIVITIES WITH THE HEAT PUMP SHUT OFF

Clean the outdoor coils and defrost water path. Some manufacturers require the fan housing on the outdoor unit be removed to clean the coils from the inside out.

Inspect belts, pulleys and other components for alignment issues and tension.

Measure and note refrigerant levels and recharge the unit if necessary.

Inspect the refrigeration metering device to ensure it's working.

Take pictures of gauge and ammeter readings. This is for the protection of the installer.

Tighten all electrical connections.

Flush/clean the condensate drain line to ensure it is clear and has no clogs, cracks, or leaks.

When condensate pumps and pump filters are in use, clean them. The pumps commonly cause noise complaints and can cause issues at large if not maintained.

Inspect ducts for dirt and obstructions, or any damage that can cause leakage or restrict airflow.

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