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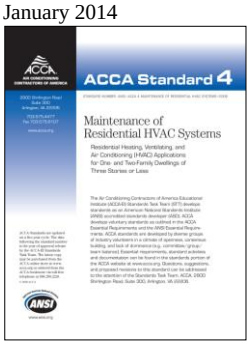


# Maintenance of Residential HVAC Systems (A Quality Maintenance Standard)

*Your HVAC System's Required Service*

The HVAC system is the single largest user of energy in your home, making it one of your biggest household expenditures. If it is not maintained in proper working order you will be sacrificing your indoor comfort while seeing increased power usage, and will likely incur higher repair costs and premature equipment replacement costs. That is why it is so important for you to utilize a quality contractor to regularly inspect and service your HVAC system. But how can you tell which contractor will do the best job? The maintenance plans that contractors offer vary in scope and pricing from all-inclusive to minimal inspection and filter change. The first step in choosing a contractor is to know what basic items are included in competing contractors' maintenance plans in order to effectively compare relative plan values.

## USING THE QUALITY MAINTENANCE CHECKLIST

The checklist below will help you evaluate maintenance proposals. The questions found in the 'What to Ask the Contractor' column are designed to help you determine whether or not the contractor is complying with the industry-recognized standard maintenance practices. When filling out the checklist, simply write a 'yes' or 'no' reflecting the contractors' response to each question in the box provided. After the interview, you will have an indication as to whether the contractors' proposed services meet the requirements in the *Quality Maintenance Standard* (ANSI/ACCA 4 QM). Always remember that before signing any agreement, you should compare the contractor's written maintenance agreement with the interview responses to make sure that they are the same. The time to clarify questions is before the contract is signed.

| What to Ask the Contractor | Why the Question is Important | Contractor 1 | Contractor 2 | Contractor 3 |
|---|---|---|---|---|
| **If so required under your jurisdiction, is your contractor license to do the work?** | You should only hire contractors that are compliant with your local licensing requirements. | | | |
| **How long will the maintenance inspection take?** | A complete HVAC system inspection will generally take between 45 minutes and an hour. (less time generally = less inspected) | | | |
| **Did the contractor inquire how the system has been operating and whether you have any concerns or issues?** | This understanding provides a better basis for assessing equipment operation and will better enable the contractor to meet your expectations. | | | |
| **Does the maintenance agreement include a safety inspection to make sure the HVAC system is installed according to code?** | Safety hazards that are not obvious to you will be immediately recognized by a trained technician and reported to you. | | | |
| **Will the contractor review the ACCA 4 QM maintenance requirements for your home's HVAC system with you? (For a sample list see component list on next page.)** | Maintenance plans are based on the type of equipment you have. Additionally, you may need to perform some maintenance tasks like changing filters between contractor visits. | | | |
| **Does the contractor's maintenance plan include evaluating the equipment's performance?** | HVAC equipment performance must be checked for your HVAC equipment to operate efficiently. | | | |
| **Will the contractor review the maintenance issues with you?** | It is important for you to understand what was found during the scheduled maintenance visit especially if corrective action is needed. | | | |

## OTHER CONSIDERATIONS

A partial maintenance plan may seem appealing from an economic point of view, but you should consider the hidden costs that come with one. Hidden costs can include higher operating expenses and an increased likelihood of early equipment failure and replacement. You will also want to make sure that you consider the unique characteristics and environmental concerns for your region of the country, as they will also influence your inspection task list. The original equipment manufacturer's instructions, municipal ordinances, applicable codes, and other industry standards provide further guidance on these possible regional considerations. The contractor you choose should take the time to tailor your inspection task list and maintenance plan to your particular situation.

A quality contractor will conduct an inspection of your system and suggest corrective actions that are based on ACCA's industry-recognized ANSI/ACCA 4 QM-2013 (*Maintenance of Residential HVAC Systems*). An electronic copy of the *QM Standard* is available at no-charge from: https://www.acca.org/standards/quality. Detailed maintenance information on varied residential HVAC equipment contained in that standard (see table below):

| Component / Equipment (Equipment Survey) | Component / Equipment Description | Standard Checklist Number |
|---|---|---|
| **Air Distribution System** | Plenums, trunk ducts, fittings, branch ducts, boots, grilles, registers and diffusers | 5.1 |
| **Steam Distribution System** | Piping, radiator, controls, steam traps. | 5.2 |
| **Controls and Safeties** | Thermostats, outdoor sensors, humidistats, zone controls | 5.3 |
| **Furnace** | Gas-fired air heating system | 5.4 |
| | Oil-fired air heating system | 5.5 |
| | Electric air heating system | 5.6 |
| **Evaporator Coil** | The cased or field enclosed evaporator coil, metering device, condensate drain, and associated refrigeration tubing | 5.7 |
| **Condenser Unit** | The outdoor section of a split system: air conditioner or heat pump | 5.8 |
| **Fan Coil** | The filter rack, evaporator coil, metering device, associated refrigeration tubing, blower assembly, condensate drain, and electric auxiliary heat | 5.9 |
| **Boiler** | Gas-fired water heating system | 5.10 |
| | Oil-fired water heating system | 5.11 |
| | Electric water heating system | 5.12 |
| **Package Units** | Packaged air conditioners or heat pumps | 5.13 |
| **Geothermal/ Water Source Heat Pumps** | Packaged geothermal/water source heat pump units | 5.14 |
| **Evaporative Coolers** | Packaged cooling only equipment using evaporative heat transfer | 5.15 |
| **Accessories** | Heat and energy recovery ventilators, central system humidifiers, central system dehumidifiers, electronic air cleaners, media air cleaners, ultra-violet lights, economizers, and condensate pumps | 5.16 |

## IN CONCLUSION

Don't be afraid to ask your contractor to answer any additional questions you may have. A professional contractor who is practicing *QM Standard* protocols will welcome questions and appreciate that homeowners want to keep their HVAC equipment operating as efficiently and safely as possible.