

Check List for New Air Conditioner

The first 18 items listed below are done in order to assure that you have an efficient and reliable system.

1. Heat loads using Manual J by Air Conditioning Contractors of America (ACCA) will be done to make sure that the unit is the proper size. If unit is too large it will short cycle which can cause mold, result in uneven temperatures, shorten the life of the unit and cost more to operate. If the unit is too small it will not cool adequately. See the Energy Star Web Site found at www.energystar.gov and the comfort institute web site found at www.comfortinstitute.org.
2. Heating and Air Conditioning contractor will guarantee 75 degree space temperature at the thermostat when the outside temperature is 95 Degrees F.
3. Ductwork will be checked to see that it is adequate for size of unit.
4. On an existing system the evaporator coil will be changed so that the evaporator coil matches the new condensing unit. If the evaporator coil is not changed the result will be lower than rated efficiency and most likely pre-mature compressor failure in the new unit.
5. The evaporator coil will be installed so that it is centered over the furnace and does not stick out over the edge of the furnace more than two inches.
6. The evaporator coil to be sealed in the ductwork so that all of the air goes through the evaporator coil and not around the evaporator coil.
7. All ductwork that is installed in the process of installing the evaporator coil to be taped with a good grade of aluminum foil tape or sealed with an approved duct sealer. If this is new construction please see Ductwork.

Items 5, through 7 insure that the air goes through the evaporator coil and that air does not leak out of the ductwork. This is important to the efficiency of the air conditioning system.

8. Evaporator coil will be installed so that drain pan does not hold water and create mold.
9. Contractor to furnish Certificate of Insurance to prove insurance coverage.
10. Contractor to furnish a copy of a business license.

11. Refrigerant lines on the old unit will be checked to see if they are the right size for the new unit. Many newer units require a larger suction line in order to achieve rated efficiency. If a refrigerant 410A unit is installed, in place of an older refrigerant 22 unit, the refrigerant lines will have to be changed because the refrigerant oil in the new unit is not compatible with the refrigerant oil in older refrigerant 22 systems. Refrigerant lines to be sized as per manufacture's recommendations. If it is not possible to replace the refrigerant lines it is necessary to flush the refrigerant lines with an approved flush, and in an approved method.
12. If tight bends in the refrigeration tubing are necessary for a professional job, long radius elbows will be used on the larger insulated suction line.
13. If high temperature Sil-Fos solder is used, nitrogen will be purged on the inside of the refrigerant lines while soldering to prevent copper oxide **per industry standards**. Copper oxide is used in certain types of grinding wheels and will grind the close fitting parts of the compressor in your air conditioning unit. Note: If a unit with the newer R410A refrigerant is installed it is necessary to solder the lines with Sil-Fos solder.
14. When the refrigerant lines are connected between the evaporator coil (A coil) and the condensing unit the system will be pressurized to 125 PSI, all refrigerant connections are checked for leaks with soap bubbles.
15. The condensate line to the evaporator coil will be installed using PVC plastic pipe and elbows. A PVC union will be installed so that the pipe can be removed from the evaporator coil for servicing purposes.
16. The refrigerant lines and evaporator coil will be evacuated to 500 microns (29.90 inches of vacuum) as per the **manufacturer's instructions**. This will remove practically all of the air and reduce the boiling point of water to minus 12 degrees F. This will insure a reliable and efficient air conditioning system. This procedure will also help to determine if there are leaks in the system. **A micron vacuum gauge is required!**
17. The unit will be checked to make sure that it is operating correctly. The following items will be checked. High pressure, low pressure, suction line temperature, outside temperature, return air temperature at the furnace, supply air temperature at the furnace, compressor amperes, and condenser fan motor amperes. These checks are done to make sure that the unit is operating properly and that the system is operating efficiently.
18. Contractor will remove all old equipment and parts and will take care to work in a clean and neat manner. Tarps will be used when necessary to protect your home. **All refrigerant from old unit will be recovered and disposed of properly.**

This checklist is for work being done at _____

Signed _____ Date _____
CONTRACTOR