

City of Scott City

Residential Mechanical Final Inspection Checklist

This inspection checklist reflects the code requirements of the 2006 International Mechanical Code (IMC) and the 2015 International Residential Code (IRC)

Please verify the following before calling for a Mechanical Final Inspection.

Permits and Plans

- Job address is posted in a visible location. (IRC R319.1)
- Permit and approved plans and specification for roof and engineered systems are on site and accessible to the inspector (IRC R106.3.1 and R105.7)

Garage

- Equipment which has a flame, generates a spark, or uses a glowing ignition source which is open to the space in which it is installed is elevated such that the source of ignition is at least 18" above the floor, unless the appliance is listed as "flammable vapor ignition resistant" (FVIR). (IRC M1307.3, IMC 304.3)
- Bollard or wheel stop is installed if equipment is installed in a location where it could be damaged by a vehicle. (IRC M1307.3.1)

Gas Piping

- Drip legs are installed at each appliance or where condensation could collect. (IRC G2419.2)
- Sediment trap is installed downstream of the appliance shutoff valve as close to the appliance inlet as practical (exceptions). (IRC G2419.4)
- Unions are installed in accessible locations and within 6 feet of the appliance where appliances are connected by rigid metallic pipe. (IRC G2422.1.4)
- Unions and flex connectors are not concealed and they do not penetrate walls, floors, partitions or appliance housings. (IRC G2422.1.2.3)
- A shutoff valve is installed at each appliance. (IRC G2402.5)
- Fuel gas pipes are supported per IRC Table G2424.1.
- Fuel gas pipes are not installed in or through a ducted supply, return, supply or exhaust, or clothes chute, chimney or gas vent, ventilating duct, dumbwaiter or elevator shaft. Piping downstream from the point of delivery does not extend through any townhouse unit other than the unit served by such piping. (IRC G2415.3)

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Updated 7/2017

Appliance Vents

- Where vents extending into an attic pass through insulated assemblies, an insulation shield of 26 gauge steel is installed to provide clearance to the insulation material. The shield terminates not less than 2" above the insulation to be secured in place and maintain clearances to combustibles. (IRC G2426.4)
- Gas vents less than 12" in diameter in roofs with pitches less than or equal to 6/12 can terminate a minimum of 12" above the roof as long as such vents are at least 8' from a vertical wall or similar obstruction. (IRC G2427.6.3 & Figure G2427.6.3)
- Type B or L vents terminate at least 5' in vertical height above the highest connected equipment draft hood or flue collar. (IRC G2427.6.4)

Gas Water Heaters

- If a gas water heater has been installed it is a mechanical inspection but may include plumbing if piping was moved. If an electric water heater is installed, it is a plumbing inspection and will be covered on the Residential Plumbing Final Checklist.
- Temperature & Pressure Relief valve is installed to protect against thermal expansion. (IPC 504.4)
- TPR valve discharge piping meets requirements listed in IPC 504.6 or IRC P2804.6.
- Galvanized steel pan of at least 24 gauge thickness is installed if water heater is installed in a location where leaks could cause damage. Pan is at least 1.5" deep and drained by an indirect waste pipe of at least 0.75" in diameter. (IPC 504.7)
- Water heater with an ignition source, installed in a garage, is elevated at least 18" above the garage floor. (This is not required if the appliance is listed as "flammable vapor ignition resistant") (IRC P2801.7)

Furnace

- Furnace and Air Handler minimum working space clearance – sides minimum 3"; total minimum 12" bigger than appliance, except replacement appliances. (IRC M1305.1.1)
- Clearance from grade: Equipment supported on concrete pad or approved material extending above the adjoining ground. (IRC M1305.1.4.1)
- Condensate lines drain by gravity to an approved drain or condensate pump. (IRC M1411.3).
- Secondary condensate disposal provided per IRC M1411.3.1.

Range Cooktop

- Freestanding or built-in ranges have vertical clearance of at least 30" to unprotected combustible material. (IRC M1901.1)

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Laundry Room

- A 4" metal dryer exhaust duct is installed with smooth interior. Installed per the manufacturer instructions. (IRC M1502.4.1 & G2439.7.1)
- A flexible transition duct may connect the dryer to the vent. Flexible duct is listed for such use and is not longer than 8' in length. Transition duct is not concealed in wall, floor or ceiling. (IRC M1502.4.3 & G2438.7.3)
- Closets designed for gas clothes dryers exhausting more than 200 cfm provide a makeup air opening of at least 100 square inches (or other approved means of providing makeup air). (IRC G2439.5)

General

- Weather protect exterior gas line (IRC G2415.9 & G2415.11)
- Louvers and grills are sized to account for the net free area of the grill. Wood louvers will be assumed to have 25% free area and metal louvers and grills will have a 75% net free area. Screens are not to have a mesh size smaller than ¼". (IRC G2407.10)
- Combustion air ducts from outside of the building. GENERAL RULES FOR SUPPLYING COMBUSTION AIR ARE BELOW.
 - For vertical ducts: (2) openings, each having 1 square inch per 4000 Btu/h of total input of all appliances in the space. (IRC M2407.6.1)
 - For horizontal ducts: (2) openings each having 1 square inch per 2000 Btu/h of total input of all appliances in the space. (IRC M2407.6.1)
 - One opening in the upper 12" and one opening in the lower 12" of the room. (IRC M2407.6.1)
 - When the one opening method is used, locate the opening within 12" from top of enclosure and provide 1 square inch per 3000 Btu/h or total input rating of all appliances in the space. (IRC G2407.6.2)
 - The minimum cross sectional area of each vent opening is 3". (IRC M2407.6)
- Combustion air obtained from outside of the building, when the building is of ordinary construction and the area of the room is less than 50 cubic feet per 1000 Btu/h of aggregate input rating of appliances. (IRC G2407))
 - The minimum cross sectional area of each vent opening is 3 inches.
 - One opening in upper 12" and one opening in lower 12" of room.
 - Where vertical ducts are used each opening requires 1 square inch per 4,000 Btu/h of total input rating of all appliances in the space. (IRC G2407.6.1)
 - Where horizontal ducts are used each opening requires 1 square inch per 2,000 Btu/h or total input rating of all appliances in the space. (IRC G2407.6.1)
 - When the one opening method is used, locate the opening 12" from top of enclosure and provide 1 square inch per 3000 Btu/h or total input rating of all appliances in the space. (IRC G2407.6.2)

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- When the building is of ordinary construction and the area of a confined space is less than 50 cubic feet per 1000 Btu/h of aggregate input rating of appliances, combustion air can be taken from an adjacent space when installed as follows: (IRC G2407.5. thru G2407.5.3.2)
 - Minimum of 100 square inches of combustion air is required. (G2407.5.3.1)
 - One opening in upper 12" and one opening in lower 12" of room. (2407.5.3.1)
- All appliances secured in place per manufacturer's listing. (IRC M1307.2 & M1401.1)
- Confirm that there is a heat source in each habitable room. (IRC R303.10)

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