



State of Ohio
Weatherization Program
Standards

Section	MECHANICAL SYSTEMS INSTALLATION
Subject	Heat Distribution System

FORCED-AIR DISTRIBUTION SYSTEM 301-5.1

Clean the blower motor and fan if they are dirty. Replace or tighten the belt if it needs it. Check that the unit is operating properly.

**fan operation/
condition**
301-5.1a

Adjust, repair or replace the fan control, as necessary, so that it properly activates the fan.

fan control
301.5.1b

Uncover any blocked registers. Explain the importance of maintaining an unrestricted air flow to the customer. When appropriate, remove heat runs and registers located outside the heated area.

**register locations
and blockage**
301-5.1c

CEE

Use proper safety practices when working around suspected asbestos-containing materials. Do not remove or disturb friable asbestos on or around ducts (see 114-1.4a).

asbestos
301-5.1d

!

Test for duct leakage, and locate duct leak sites (see 1506-5).

duct leakage test
301-5.1e

Connect disconnected duct sections and replace missing as well as severely corroded, punctured or crushed duct sections.

**missing or
disconnected sections**
301-5.1f

Use hangar strap to eliminate sags in flex duct runs. Rehang flex duct sections in which strapping is constricting the duct and reducing air flow.

flex duct
301-5.1g

Repair or replace missing, loose or otherwise damaged return duct sections. All return leaks must be sealed. Repair all gaps, holes and problem connections in panned floor joists. Return duct runs must be connected by ductwork, panning, or a combination thereof, from a return register to the furnace.

return ducts
301-5.1h

NOTE: If a central air conditioner is present, be sure that there is enough return air so that the A-coils are not damaged by insufficient return air. If necessary, correctly install additional return air.

supply ducts
301-5.1i Repair or replace disconnected, missing or loose supply ducts. Seal supply duct leaks in nonconditioned areas and other areas where pressure pan testing indicates that sealing is necessary (see 1506-5). Seal applicable duct runs to achieve 1Pa or less pressure pan test.

room-to-room test
301-5.1j After all applicable sealing is complete, perform a room-to-room balance test and install relief as necessary to achieve a less than +/- 4pa difference in each room (see 1506-4).

duct insulation
301-5.1k Insulate uninsulated supply and return ducts in non-conditioned areas using vinyl-backed R-6 fiberglass duct insulation. Observe proper clearances from combustion appliance vent pipes.



WARNING: Do not insulate any duct work on a solid fuel furnace system because of possible high temperatures.

furnace filter
301-5.1l  Change the furnace filter, if it is needed. Demonstrate the filter changing procedures to the customer whenever possible.

GRAVITY DISTRIBUTION 301-5.2

register locations and blockage
301-5.2a  Clear any blocked registers if possible. Explain the importance of maintaining an unrestricted air flow to the customer. When necessary, remove heat runs and registers which terminate outside the heated area.

asbestos
301-5.2b  Follow proper safety precautions and use proper personal protective equipment when working near suspected asbestos. Do not disturb friable asbestos (see 114-1.4a).

missing or disconnected sections
301-5.2c Connect disconnected duct sections and replace missing, as well as severely corroded, punctured or crushed duct sections.

obstructions, flex duct
301-5.2d Repair or replace crushed ductwork and remove any obstructions that are restricting air flow. Install a metal connector midway in any flex duct section longer than 14 feet. Rehang any sagging sections of flex duct and adjust any strapping which is crimping flex duct.

return ducts
301-5.2e Repair or replace any missing or unsecured sections of return ductwork or panning.

Repair or replace any missing, unsecured or damaged sections of supply ductwork.

supply ducts
301-5.2f

Insulate uninsulated supply and return ducts in non-conditioned areas using vinyl-backed R-6 fiberglass duct insulation. Observe proper clearances from combustion appliance vent pipes.

duct insulation
301-5.2g

WARNING: Do not insulate any duct work on a solid fuel furnace system because of possible high temperatures.



BOILER DISTRIBUTION 301-5.3

Repair or replace any distribution water lines that leak.

distribution water lines
301-5.3a

Insulate heat distribution pipes running through non-conditioned areas with foam pipe wrap. Observe proper clearances from combustion appliance vent pipes.

pipe insulation
301-5.3b

Repair leaks in radiators and heat transfer fin connections. Clean dirty heat transfer fins. Straighten bent fins.

heat transfer fins, radiators
301-5.3c

Replace leaking or defective bleeder valves.

bleeder valves
301-5.3d

Repair or replace leaking or corroded zone valves. Test zone valves and repair or replace inoperative zone valves.

zone valves
301-5.3e

ELECTRIC BASEBOARD DISTRIBUTION SYSTEM
301-5.4

Clean dirty heat transfer fins. Straighten bent fins.

heat transfer fins
301-5.4a