Blower Speed Connection

Proper air volume must be provided over the evaporator coil. Select a blower motor speed tap that will provide 400 ± 50 CFM per 12,000 Btuh of cooling capacity (wet coil).

A static pressure reading must be taken to see if the pressure drops are within the proper range. See figure 15 to see for an example to obtain an accurate reading.

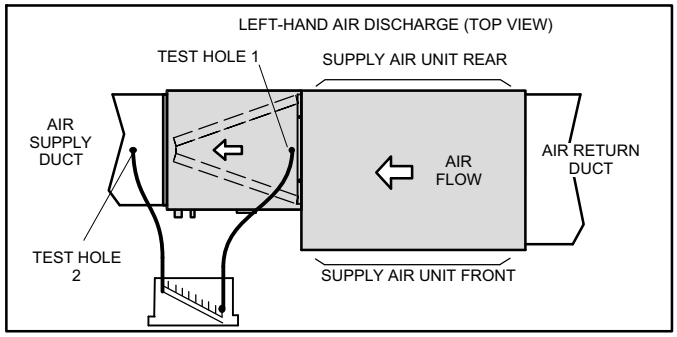

Figure 15. Static Pressure Test

To ensure accuracy, test the air on both sides of the coil (figure 15 exemplifies the two test hole locations).

⚠ CAUTION

Take care when drilling test holes into the furnace flange and the duct. Drill holes away from refrigerant piping. Test holes should be drilled where specified in order to avoid unit damage.

1. Drill a 5/16" (8 mm) test hole in the coil case 1" from the furnace flange (figure 15, test hole 1).
2. Drill a 5/16" (8 mm) test hole into the air supply duct connected to the coil. (test hole 2 in figure 15).
3. Connect the zero end of the draft gauge scale to the furnace end of the coil. Insert the hoses so that 1/4" (6 mm) extends inside the duct or end seal. Seal around holes with Permagum.
4. Turn on the electrical power to the furnace and set the thermostat to initiate a cooling demand.
5. Table 2 lists the range of air volumes and equivalent draft gauge readings for this unit. Observe the draft gauge reading and if below the required air volume, increase the blower speed; if above the required air volume, decrease the blower speed. Refer to the furnace wiring diagram for blower speed settings.
6. When the required draft gauge readings are obtained, remove the draft gauge lines and insert snaphole plugs into the test holes.

Table 2. Air Volume/Static Pressure Drop Across Coil

Model CH33	Cabinet Width in (mm)	Volume: CFM (L/s)	Drop: in. w.g. (Pa) [Dry]	[Wet]
-18-F	14-1/2 (394)	600 (285)	.14 (35)	.17 (42)
-19-F	14-1/2 (394)	800 (380)	.15 (37)	.17 (42)
-25-F	14-1/2 (394)	800 (380)	.15 (37)	.19 (47)
-25-F	17-1/2 (444)	800 (380)	.09 (22)	.11 (27)
-24/30-F	14-1/2 (394)	1000 (470)	.22 (55)	.30 (80)
-31-F	14-1/2 (394)	1000 (470)	.24 (60)	.27 (67)
-31-F	17-1/2 (444)	1000 (470)	.14 (35)	.16 (40)
-36-F	14-1/2 (394)	1200 (565)	.27 (67)	.30 (75)
-36-F	17-1/2 (444)	1200 (565)	.17 (42)	.21 (52)
-36-F	21 (533)	1200 (565)	.17 (42)	.21 (52)
-42-F	17-1/2 (444)	1400 (660)	.22 (55)	.28 (70)
-43-F	14-1/2 (394)	1400 (660)	.26 (65)	.31 (77)
-43-F	17-1/2 (444)	1400 (660)	.18 (45)	.21 (52)
-44/48-F	17-1/2 (444)	1400 (660)	.18 (45)	.23 (57)
-48-F	21 (533)	1600 (755)	.17 (42)	.21 (52)
-49-F	21 (533)	1600 (755)	.25 (62)	.29 (72)
-50/60-F	21 (533)	1600 (755)	.23 (57)	.29 (72)
-60/62-F	24-1/2 (622)	2000 (945)	.21 (52)	.27 (67)

Maintenance

A trained technician or service agency must perform maintenance and service on equipment. At the beginning of each heating or cooling season, indoor coils should be cleaned.

Do not use hydrofluoric acid, alkaline, or similar chemicals on all coils. These chemicals are not necessary to dissolve salt, and may damage the fin coating. Acid washes are used to dissolve oils and greases, which generally are not present on most installations.

Alkaline washes are useful for dissolving oxides such as zinc oxide, aluminum oxide, and iron oxide (rust). These three oxides are more corrosion resistant than base metals, so dissolving or removing them will cause an increase in corrosion.

⚠ CAUTION

A damaged coil fin can affect equipment operation and performance. Do not use flame, high-pressure water, steam, or volatile cleaners on fins or tubing surfaces. If cleaning requires the use of acidic or alkaline cleaners, follow the manufacturer's instructions. Thoroughly flush cleaner from all equipment components. (Be careful to prevent damage or corrosion of the components connected to the system or areas surrounding the equipment being cleaned.)

CLEANING THE COIL:

1. Remove the coil from the cabinet or plenum, and take the coil to an appropriate place to clean it.
2. Vacuum or brush the coil to remove matted and surface debris from the fin. Use vacuum attachments and /or brushes that are non-destructive to fins.

3. If oil deposits are present, spray the coil with ordinary household liquid detergent. Allow detergent to soften deposits. Wait 10 minutes.

NOTE - For units in coastal regions, fresh water will dissolve away any salt deposits. (Wash coils with fresh water at least every six months.)

4. Spray the coil at a vertical angle of 30 to 45 degrees with a constant stream of water at moderate pressure. A pressure washer with a fan nozzle will work best. Do not spray the coil from a horizontal direction.
5. Direct the spray so that any debris is washed out of the coil and basepan. For most residential units, hot water is not necessary.

NOTE - Attempting to back flush from the inside of the coil will require removing parts from the unit, and it may be very difficult to flush the whole coil surface. Attempting to blow water through a coil will slow the water stream and reduce the flushing action of the outer fin surface.

6. Replace the coil into the cabinet or plenum. Ensure that you have followed the proper procedure for routing and securing the refrigerant tubing.

⚠ IMPORTANT

Ensure that the distributor lines are not rubbing together or kinked. All tubes must have enough clearance from other metal parts. Use wire ties to secure tubes to prevent movement that could cause the refrigerant tubing to fail. Adjust the tubes as necessary.

Wires should never touch or be secured to refrigerant lines that will contain hot gas in certain system modes.