SECTION 3

AIR FLOW
&
FAN BLADE SPACING

AIR FLOW & FAN BLADE SPACING

NOTE: In all the following air flow illustrations the white arrow ⇨ signifies Pushed Air, while the shaded arrow ➡ signifies Returned Air.

Air Flow - Model 501R (Figure 3-1)

The air movement travels up the back channel and across the evaporator coil.

The cold air then discharges at the top of the cabinet and is pulled downward in all directions around the glass storage shelves, maintaining even shelf storage temperatures.

MADISON PRODUCTION PRIOR TO S/N 821353

The evaporator fan motor runs all the time once the door is closed, unless altered during field service repair.

PHOENIX & MADISON PRODUCTION AFTER S/N 821353

The evaporator motor cycles on and off with the compressor.

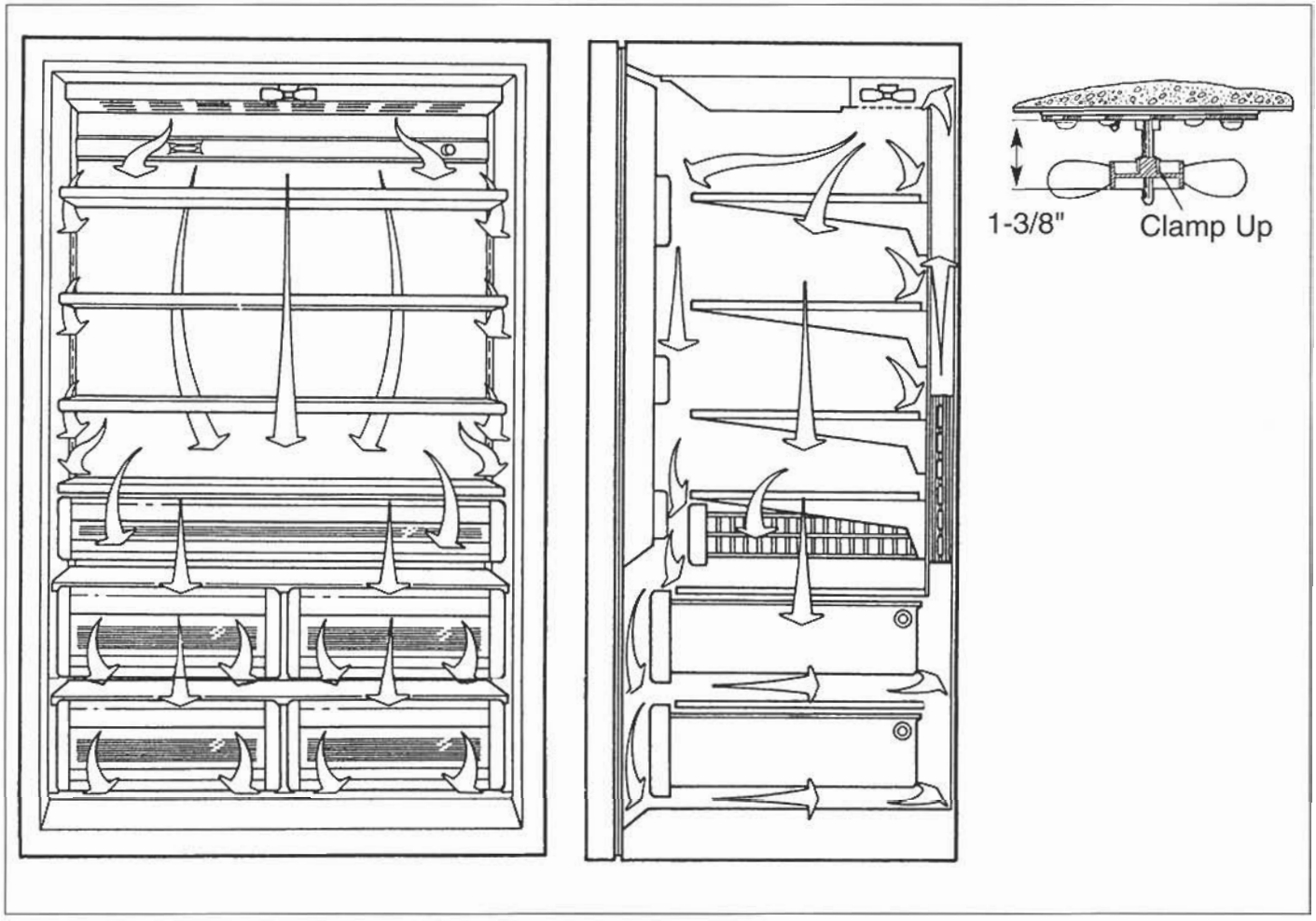

Figure 3-1. Air Flow - Model 501R

Air Flow - Model 501F (Figure 3-2)

The cold air travels up the back channel and across the evaporator coil.

The cold air then discharges at the top of the cabinet and is pulled downward in all directions around the storage shelves, maintaining even shelf storage temperatures.

NOTE: Figure 3-2 shows air flow for units manufactured after S/N M663116/P679466 with black fan blade, part no. 3-15-045-0. Units built prior to these serial numbers use a white fan blade, part no. 3-15-006-0, and the air flow is opposite than that shown. Starting with S/N M/P1004775, fan blade is grey, part no. 3150520.

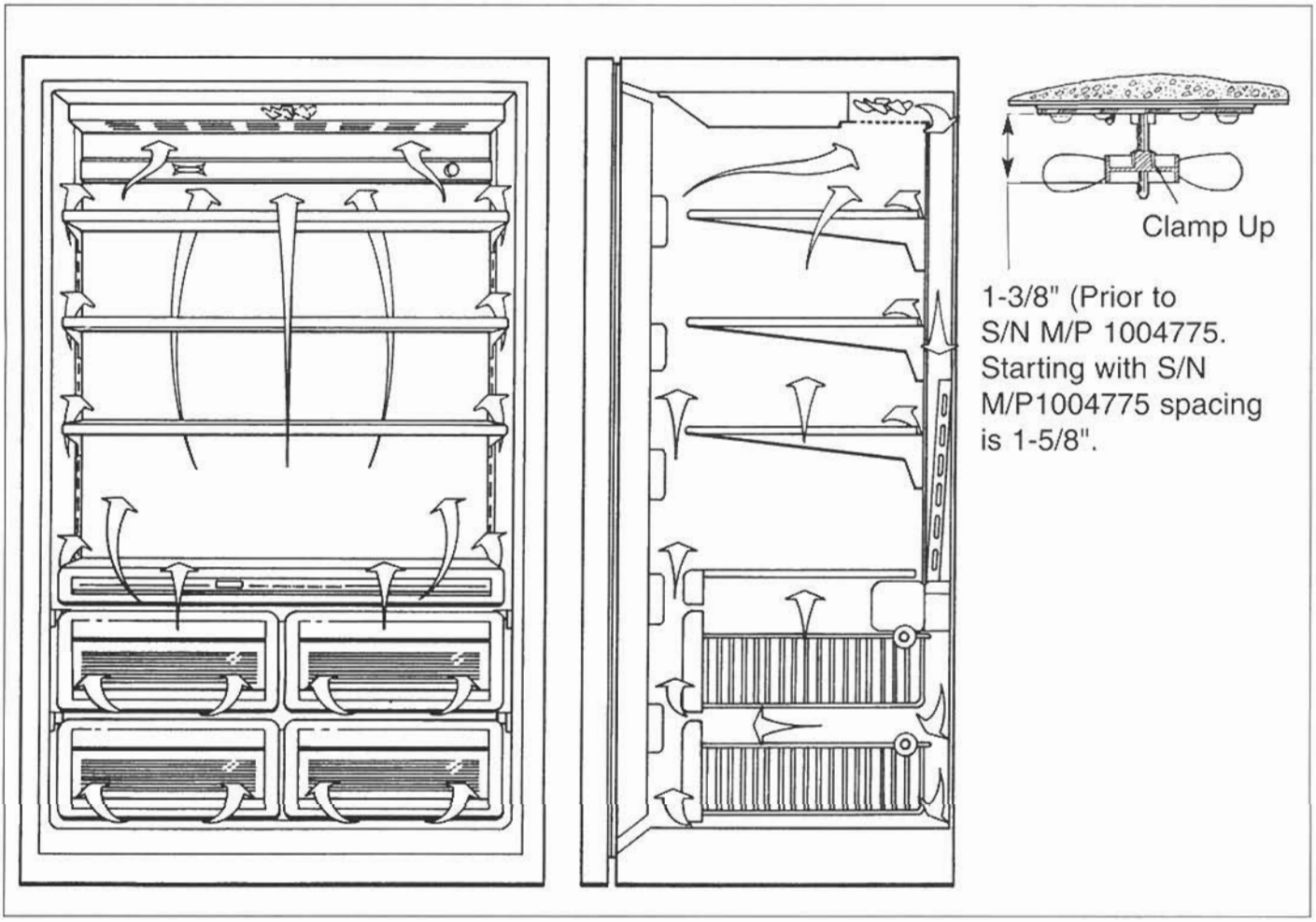

Figure 3-2. Air Flow - Model 501F

Refrigerator Air Flow - Models 511, 550 (Figure 3-3)

The cold air travels up the back channel and across the evaporator coil. The cool air then discharges out the diffuser area and is pulled downward in all directions around the glass storage shelves, maintaining even shelf storage temperatures.

MODEL 511

The refrigerator evaporator fan motor cycles with the refrigerator compressor.

MODEL 550

On Madison production prior to S/N M820553 the refrigerator evaporator fan motor runs all the time once the door is closed unless altered during field service repair.

On Phoenix and Madison production after S/N 820554, the refrigerator evaporator fan motor cycles with the compressor.

Freezer Air Flow - Models 511, 550 (Figure 3-4)

The cabinet air is drawn through the evaporator cover and across the coil. The duct directs the air to the ice maker and down the back.

Refrigerator Air Flow - Models 532, 542, 561 (Figure 3-5)

The air travels up the back channel and across the evaporator coil. The cool air then discharges out of the diffuser area and is pulled downward in all directions across the glass storage shelves, maintaining even shelf storage temperatures.

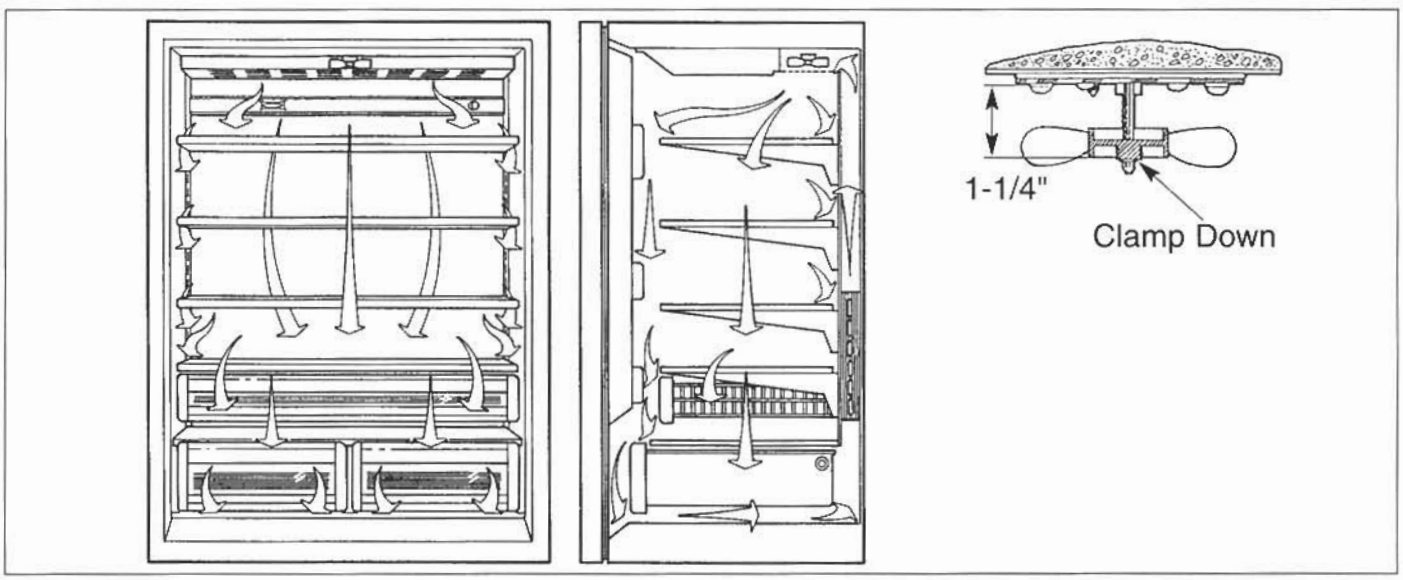

Figure 3-3. Refrigerator Air Flow - Model 511, 550

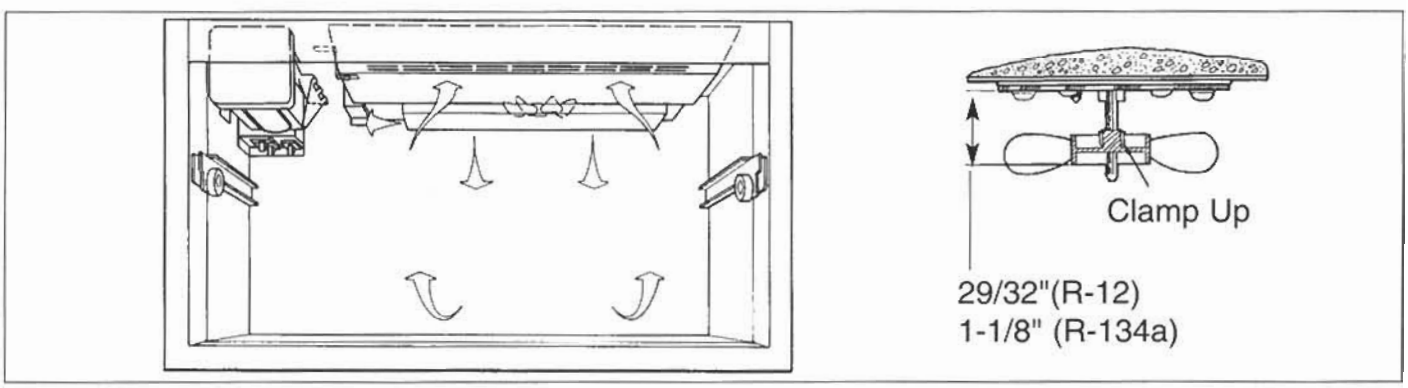

Figure 3-4. Freezer Air Flow - Model 511, 550

MODEL 532

Starting with S/N P629065, units are equipped with a white fan blade, part no. 3-15-021-0. Prior to this serial number, units were equipped with a gray fan blade. However, the white fan blade should be used as a service replacement if the unit experiences temperature problems.

On Madison production prior to S/N M815563 the refrigerator fan motor runs all the time once the door is closed unless altered during field service repair.

On Phoenix and Madison production after S/N 815564, the refrigerator fan motor cycles on and off with the refrigerator control.

MODEL 542

The refrigerator evaporator fan motor cycles with the compressor

MODEL 561

On Madison production prior to S/N M816263 the refrigerator fan motor runs all the time once the door is closed unless altered during field service repair.

On Phoenix and Madison production after S/N 816264, the refrigerator fan motor cycles on and off with the refrigerator control.

Freezer Air Flow - Models 532, 542, 561 (Figure 3-6)

The cabinet air is drawn in by the fan motor across the evaporator and then is forced in two directions.

In one direction, the air is forced up the back channel of the freezer and through the freezer duct assembly. The air diffuser distributes the air evenly throughout the top of the freezer section.

In the other direction, the air is forced into the bottom of the freezer. The heavy cold air cascades down through the freezer baskets. The fan motor pulls the air up and across the freezer control and ice maker, returning to the evaporator coil.

The freezer control senses this return air and shuts down the compressor and fan motor when the set temperature is reached.

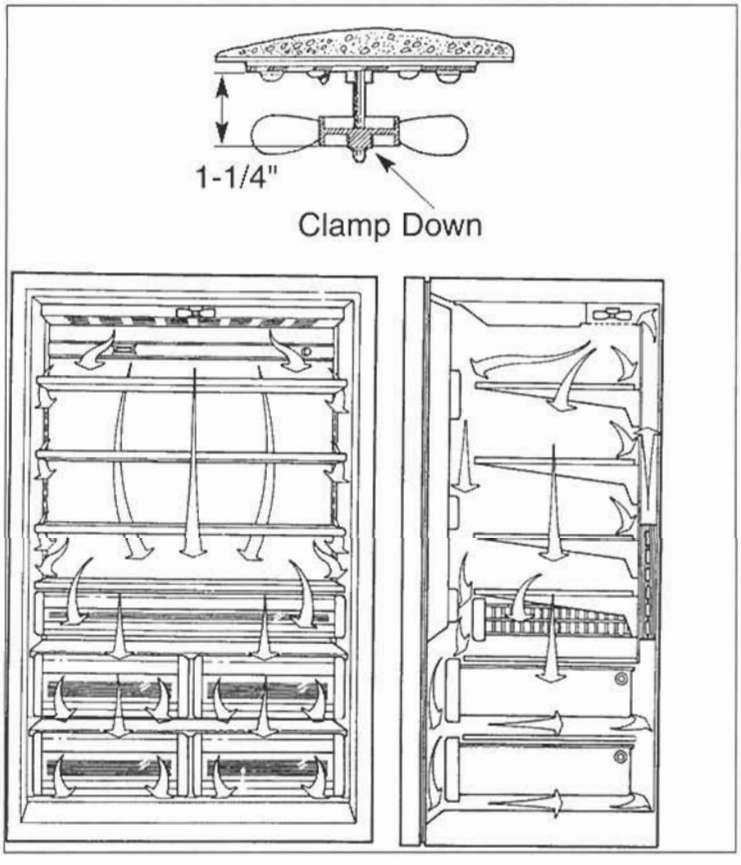

Figure 3-5. Refrigerator Air Flow - Models 532, 542, 561

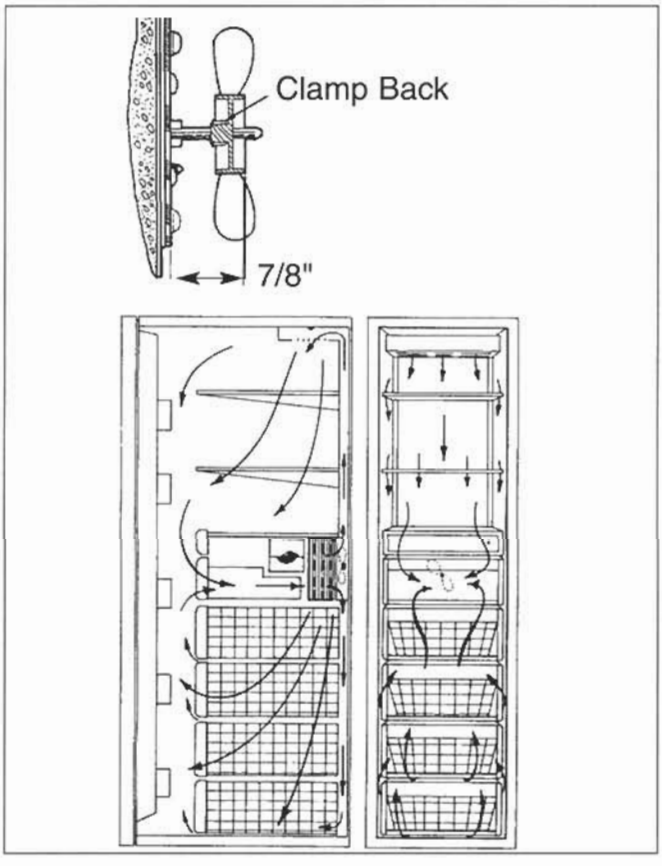

Figure 3-6. Freezer Air Flow - Models 532, 542, 561

Refrigerator Air Flow - Model 590 (Figure 3-7)

The air travels up the back channel and across the evaporator coil.

The cool air discharges out of the diffuser area and is pulled downward in all directions around the glass storage shelves, maintaining even shelf storage temperatures.

The refrigerator evaporator fan motor cycles with the refrigerator compressor.

Freezer Air Flow - Model 590 (Figure 3-8)

The cabinet air is drawn in by the fan motor assy. across the evaporator and then forced downward.

The majority of the air is forced through an air duct located along the back wall into the bottom of the freezer. The remaining air flow cascades down through the freezer baskets. The fan motor pulls the air up and across the freezer control ice maker returning to the evaporator coil.

NOTE: *On units manufactured prior to S/N M862414, if warmer temperatures are experienced in the freezer basket areas, install Freezer Air Duct Kit, part no. 4-20-099-0.*

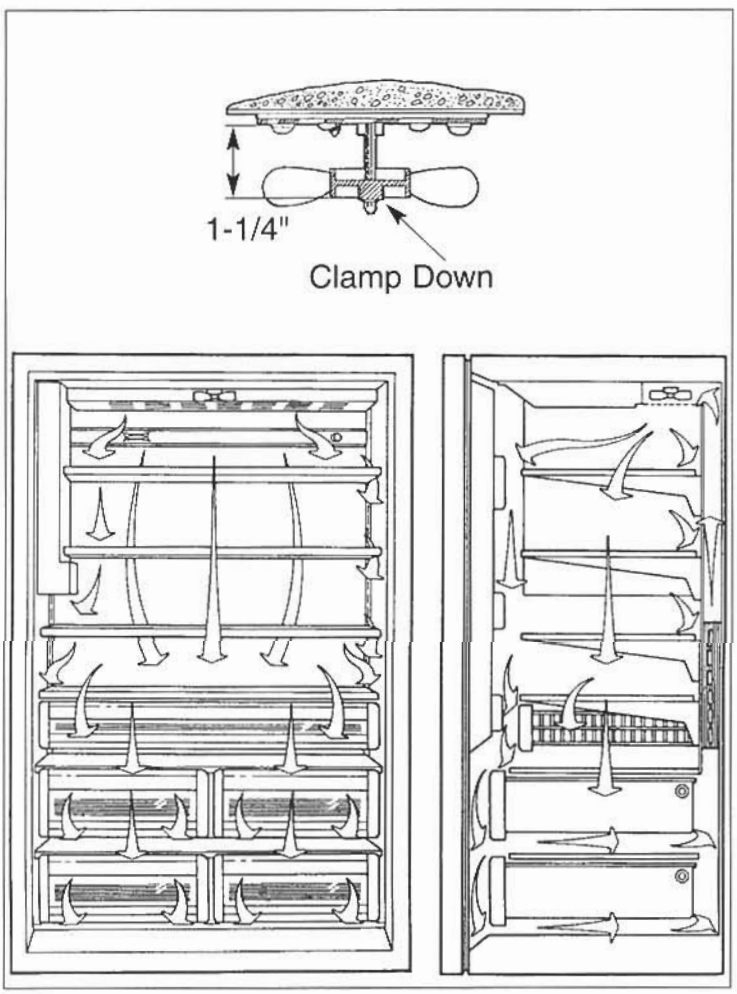

Figure 3-7. Refrigerator Air Flow - Model 690

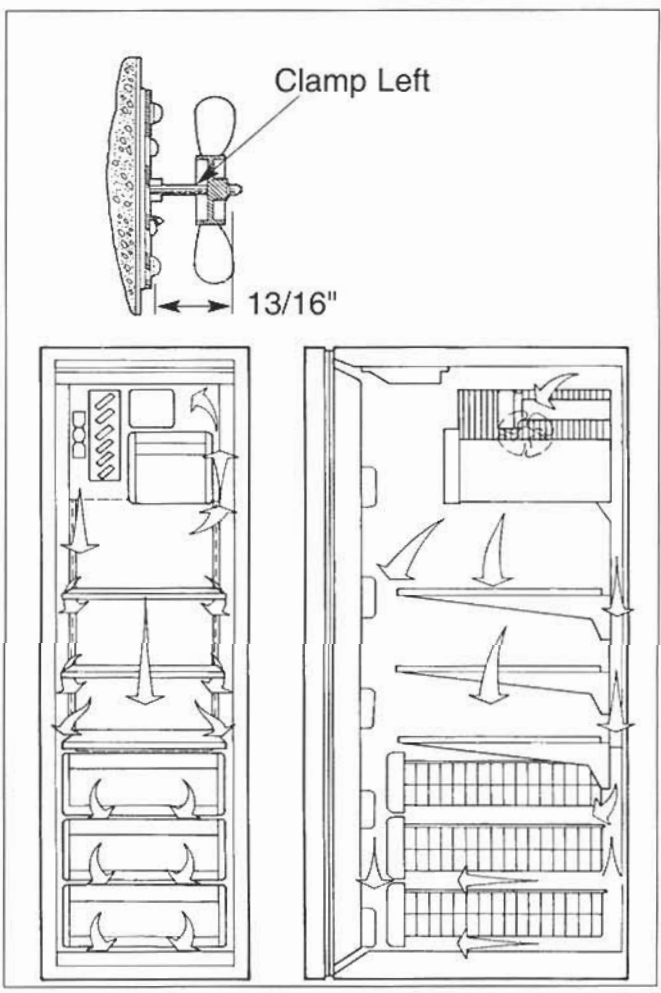

Figure 3-8. Freezer Air Flow - Model 590