



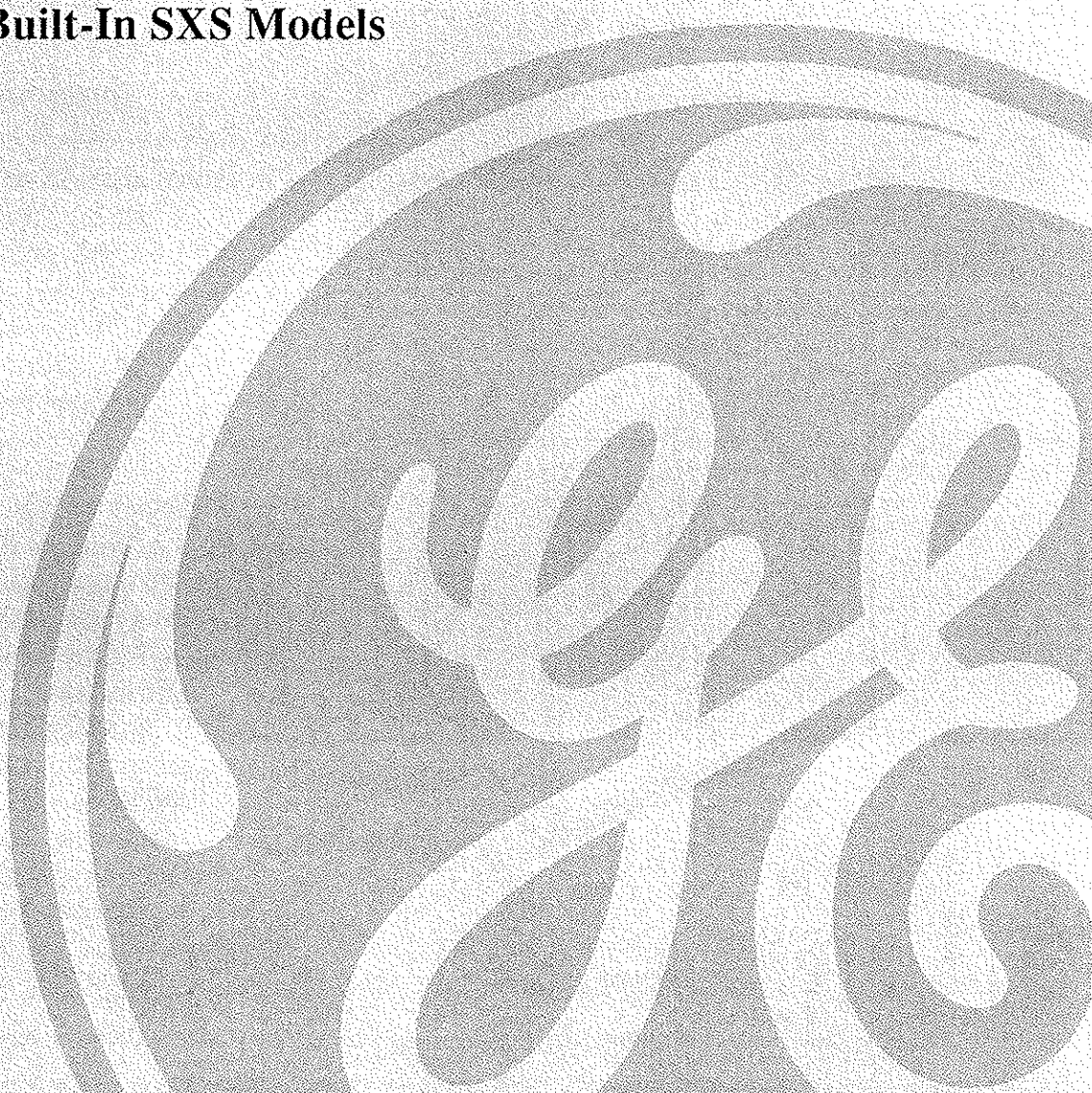
*GE Appliances*

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# **TECHNICIAN MANUAL**

**1995 REFRIGERATORS  
International Built-In SXS Models**

**Pub. No. 31-52001**



# 1995 REFRIGERATORS

# BUILT-IN SXS

## Model Nomenclature

A new built-in side-by-side (SXS) refrigerator, introduced during the spring of 1995, greatly enhances the GE family of Global products. The counter depth cabinet provides a built-in look to the new model. Two models are available that feature the Profile shelf package, and a non-electronic water and ice dispenser. Model TPG21B offers a trim kit for custom door panels, while TPG21P does not have the trim kit.

The total food storage capacity is 510 liters (360 liters fresh food and 150 liters freezer).

### TPG21BRXA

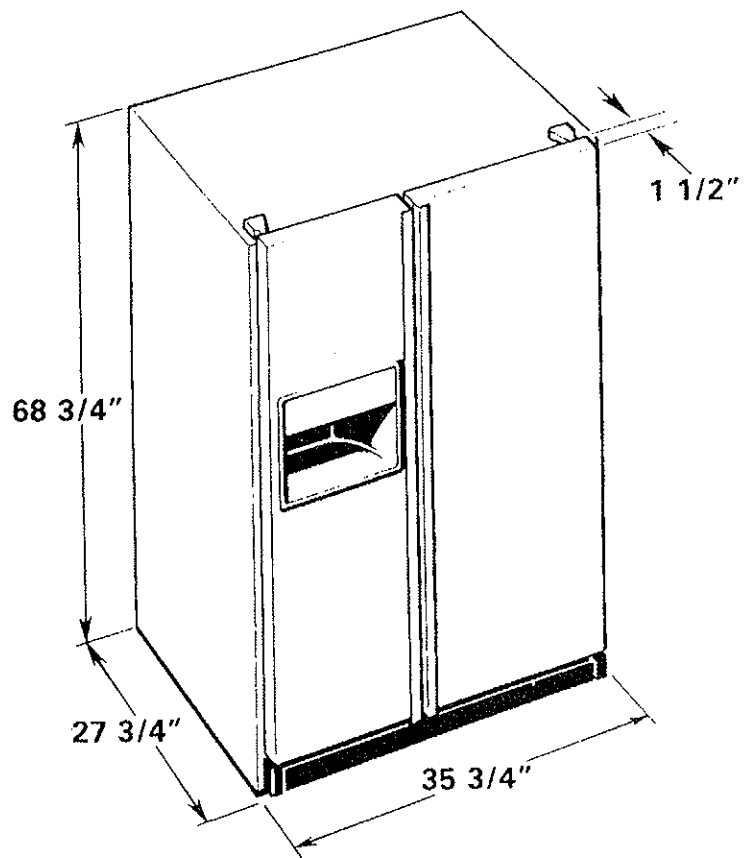
BRAND/PRODUCT	ENGINEERING DESIGN/REVISION
T - GE	A - Initial Design
CONFIGURATION	MODEL YEAR
P - Built-in Style	X - 1995
ENERGY	ICEMAKER/DISPENSER/EXTERIOR
G - Global model (230V - 50 Hz)	R - Cube, Crushed Ice, Water
CAPACITY	INTERIOR FEATURES/SHELVES
(cubic feet) AHAM Rated Volume	B - Trim kit included
	P - Without trim kit

## CABINET AND DOORS

The cabinet is similar to 27 cu. ft. models although not as deep front to back. Overall cabinet dimensions are: 68 3/4 inches (174.6 cm) high (excluding the top hinge covers), 35 3/4 inches (90.8 cm) wide, and only 27 3/4 inches (69.4 cm) deep (including the door handles).

### Doors

The outer doors of the trim kit model are 1 1/2 inches (38 mm) thick, similar to 24 cu ft. models. The overall width of the doors is narrower than the outer case by approximately 1/8 inch (3 mm). The door handles are the same as standard SXS Profile models. The doors extend approximately 1 1/4 inch (38 mm) above the top of the cabinet. The doors are equipped with full-length aluminum handles and trims at the top, bottom and outer edges to accept 1/4 inch (6 mm) thick decorative panels.



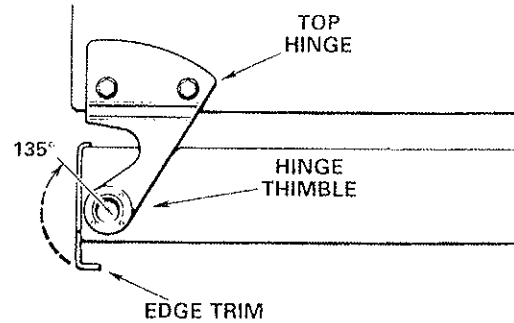
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## Hinges

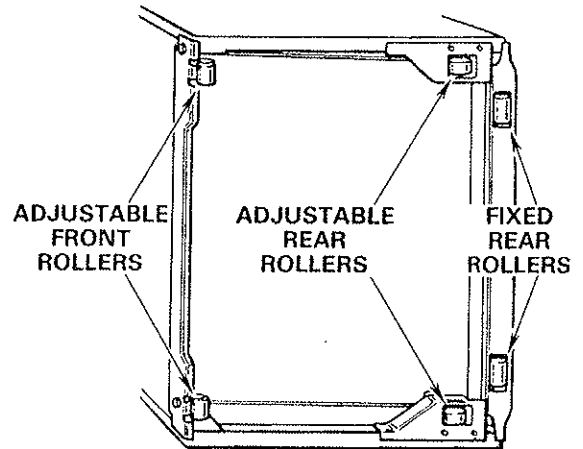
The hinge thimbles are located at the front outer corners of the doors to prevent contact with adjacent cabinets as the doors are opened. Accordingly, special top hinges are required. Notches at the outer edges of the top hinge covers provide clearance for the door edge trims when the doors are opened to a full 135 degree angle.

The door closer cams at the bottom hinges have steeper slopes to aid closing the doors and keeping them closed by gravity.

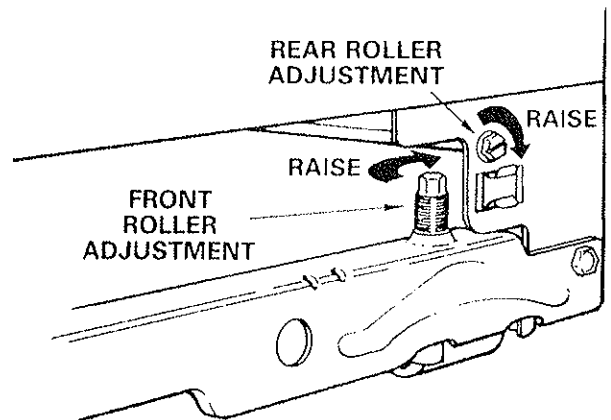


## Rollers

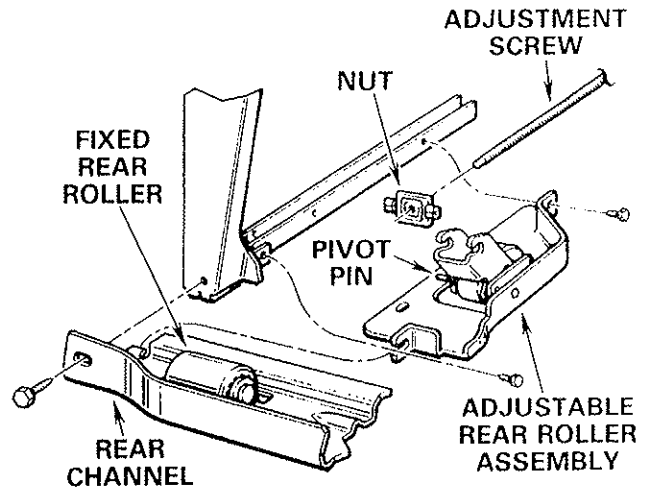
The models have six rollers. The two front rollers are adjustable, as standard SXS models. The two rear rollers are fixed, and larger in diameter than standard SXS models so the cabinet does not tilt toward the rear. The two adjustable rear rollers are unique on these models to permit adjustment at all four corners for leveling the cabinet as desired by the consumer.



In most installations of these models the consumer will likely insist upon leveling the refrigerator to align with adjacent kitchen cabinets. Adjustment of the front and rear rollers is made at the front of the cabinet after removing the base grille.



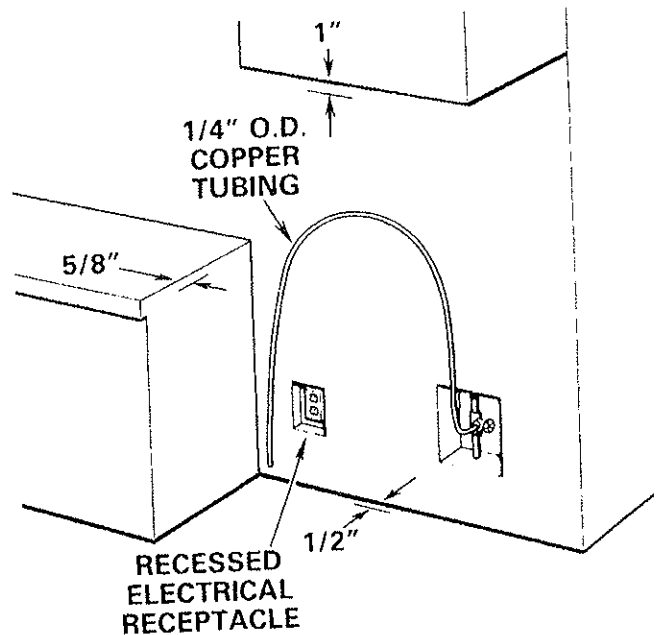
To remove the adjustable rear roller assembly, tilt the cabinet and place a 3 inch wood block under each side of the outer case. Dismount the rear channel and remove all four 1/4-inch (6 mm) hex-head screws that secure the roller assembly to the side of the outer case. (One screw is located at the front of the roller assembly, one at the rear, and two at the bottom.) Pull the roller assembly from the side to disengage the pivot pin from the hole in the outer case side channel. Remove the adjustment screw and nut from the roller assembly.



## INSTALLATION

Clearances must be provided at the top, sides, and rear of the cabinet for ease of installation and air circulation. The minimum clearances are: 1 inch (25 mm) at the top, 5/8 inch (3.1 mm) at each side, and only 1/2 inch (12.5 mm) at the rear.

To maintain a minimum 1/2 inch (12.5 mm) clearance at the rear, the electrical receptacle must be recessed into the wall or located on either side of the refrigerator. The water line tubing must be routed through the wall and formed into a single large loop (high arch), rather than the usual 3 or 4 coils.



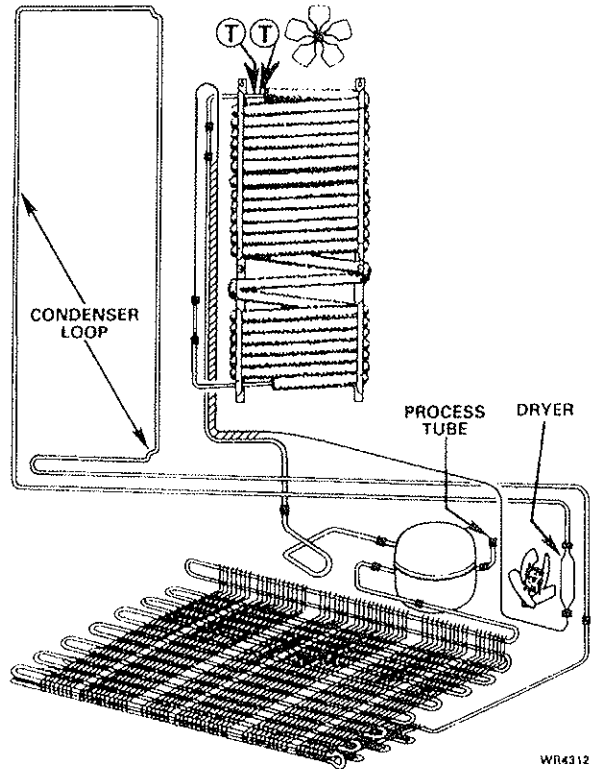
# 1995 REFRIGERATORS

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## REFRIGERATION SYSTEM

The compressor is a Danfoss (SC18G) rated at 1306 BTU per hour and 342 watts. The compressor is started by using a start capacitor and current type relay. Danfoss compressors have an internal, non-replaceable overload.

All 1995 GE refrigerators use R134a refrigerant. A new filter/dryer is used with R134a systems to chemically neutralize contaminants which may have entered into the sealed system during manufacture. Since the new models use R134a, the dryer/filter must be replaced anytime the sealed system is entered. Use only WR86X0096 as a replacement dryer/filter, and add an additional 1/2 ounce/14g refrigerant to the system to compensate for the larger replacement dryer/filter.

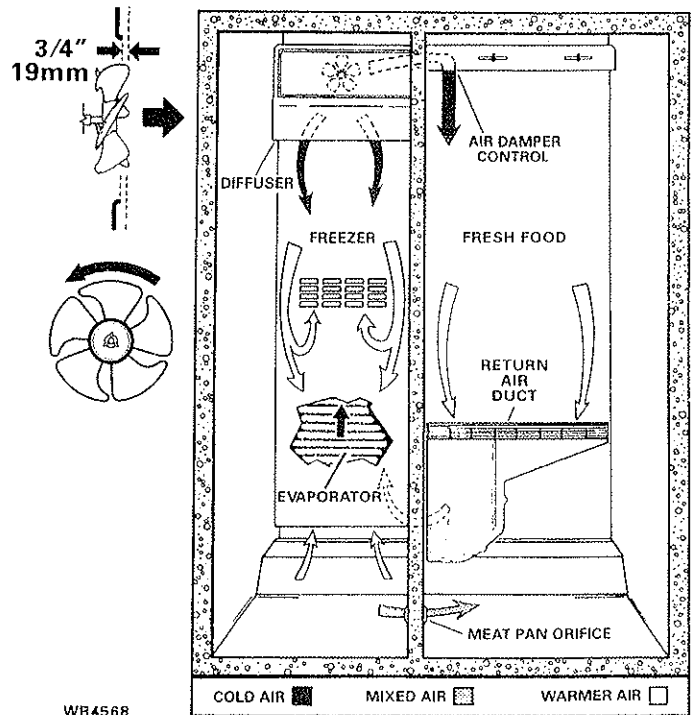


## AIR FLOW

The air flow system is slightly different on the built-in than on the standard "G" line side-by-side models. Unlike standard models, the fresh food air travels in a downward direction upon entering the cabinet, then passes back into the freezer.

As on the standard "G" line, the fresh food temperature is regulated by an automatic air damper that provides better response to ambient and usage conditions. The air damper, located at the left end of the control console, is adjustable by the consumer so that fresh food temperatures can be selected as desired.

The damper is opened and closed by a capillary and bellows assembly that reacts to changes in air temperature. Upon temperature rise in the fresh food compartment, the damper will gradually open. If the temperature



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# BUILT-IN SX5

continues to rise, the damper will continue to open, thus providing a supply of cold air upon demand. At the mid (#5) setting, the damper will close when the fresh food compartment temperature drops to 30°F (-1°C). A new temperature control is used because the automatic air damper will at times shut off the supply of cold air to the fresh food compartment. The new temperature control has a longer capillary, and a much colder calibration to sense the temperature inside the freezer compartment, rather than at the control console.

## Air Damper Testing

To test operation of the air damper, position the fresh food temperature control to the warmest (#1) setting and hold an ice cube in contact with the air damper capillary. The damper should slowly close in response to the cold temperature of the ice cube. Then, remove the ice cube and grasp the capillary with your hand. The damper should quickly open in response to your warm body temperature.

## Evaporator Fan

The evaporator fan motor (WR60X0244) is unique to the built-in models. The wiring terminals are located on the motor's left side, rather than at the bottom.

The evaporator fan housing is also unique to these models. The housing is not as deep (front to back) as standard models. In addition, a recessed area below the fan orifice is provided for the ice dispenser auger motor.

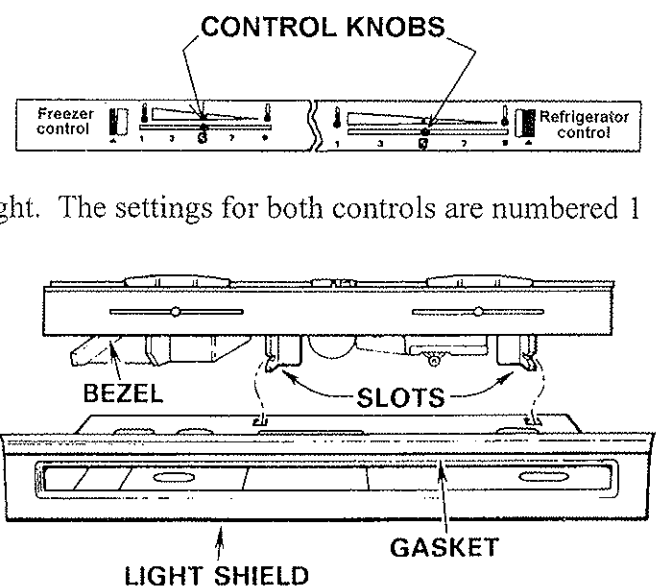
## CONTROL CONSOLE

The freezer temperature control and fresh food air damper are operated by rack and pinion gears. Sliding knobs for the gear racks are located at the front of the control console. The freezer control knob is at the left, the fresh food control knob at the right. The settings for both controls are numbered 1 through 9 and should initially be set to mid (#5) positions.

## Light shield

To dismantle the light shield, pull it forward along the top to disengage it from the bezel. Then, pull the bottom edge of the light shield from the slots in the mounting supports.

To reinstall the light shield, first position the gasket at the top so that the flap is toward the front. Then, position the lower edges of the light shield firmly into the slots in the mounting supports. Lift the top edge of the light shield and engage it over the top of the bezel.



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## Lamps

The models have two lights in the fresh food compartment. Along with an upper light near the control housing, a second light is on the rear wall directly above the vegetable bins. Both lamps are 40 watt clear appliance bulbs. The upper lamp is replaced by removing the clear light shield insert and reaching through the opening at the bottom. The lower light shield is removed by raising up at the top and swinging out.

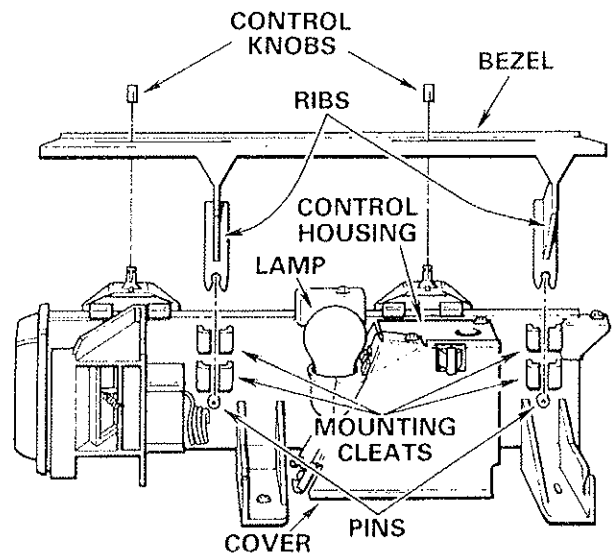
## Bezel

To dismantle the bezel, first position the control knobs to the extreme left ("cold") positions then pull the knobs from the shafts. Grasp the two ribs of the bezel and pull the bezel out of the mounting cleats.

To reinstall the bezel, first position the knob shafts to the extreme left positions. Then, engage the ribs into the mounting cleats and press each rib firmly to seat the slots on the pins.

## Control Module

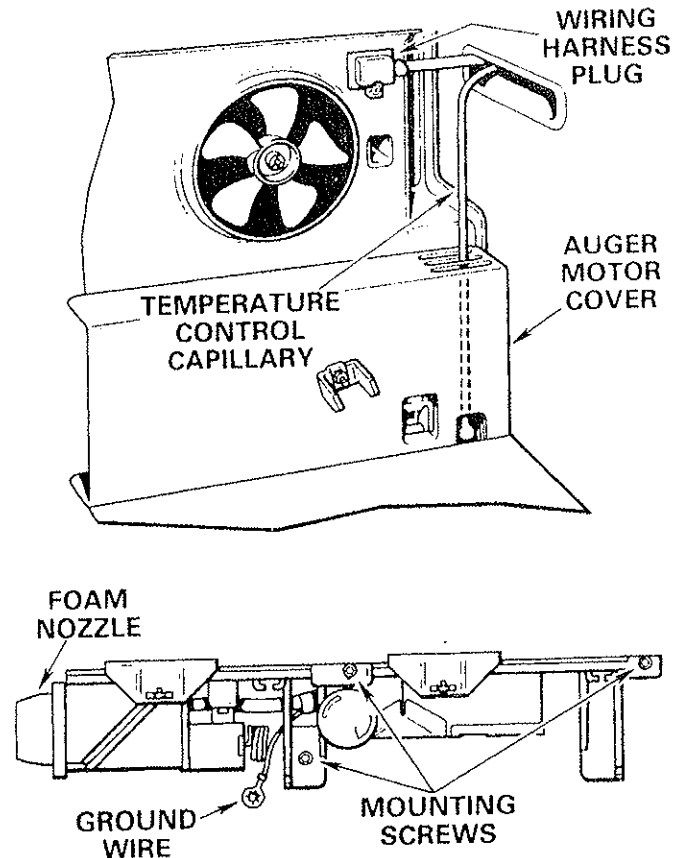
The lamp socket, and defrost and temperature controls mount into the control housing. The lamp socket is replaced after removing the lamp and releasing the locking tab. The defrost control can be replaced after removing the cover at the bottom of the control housing. However, to replace either the temperature control or air damper, the control module must be removed and disassembled.



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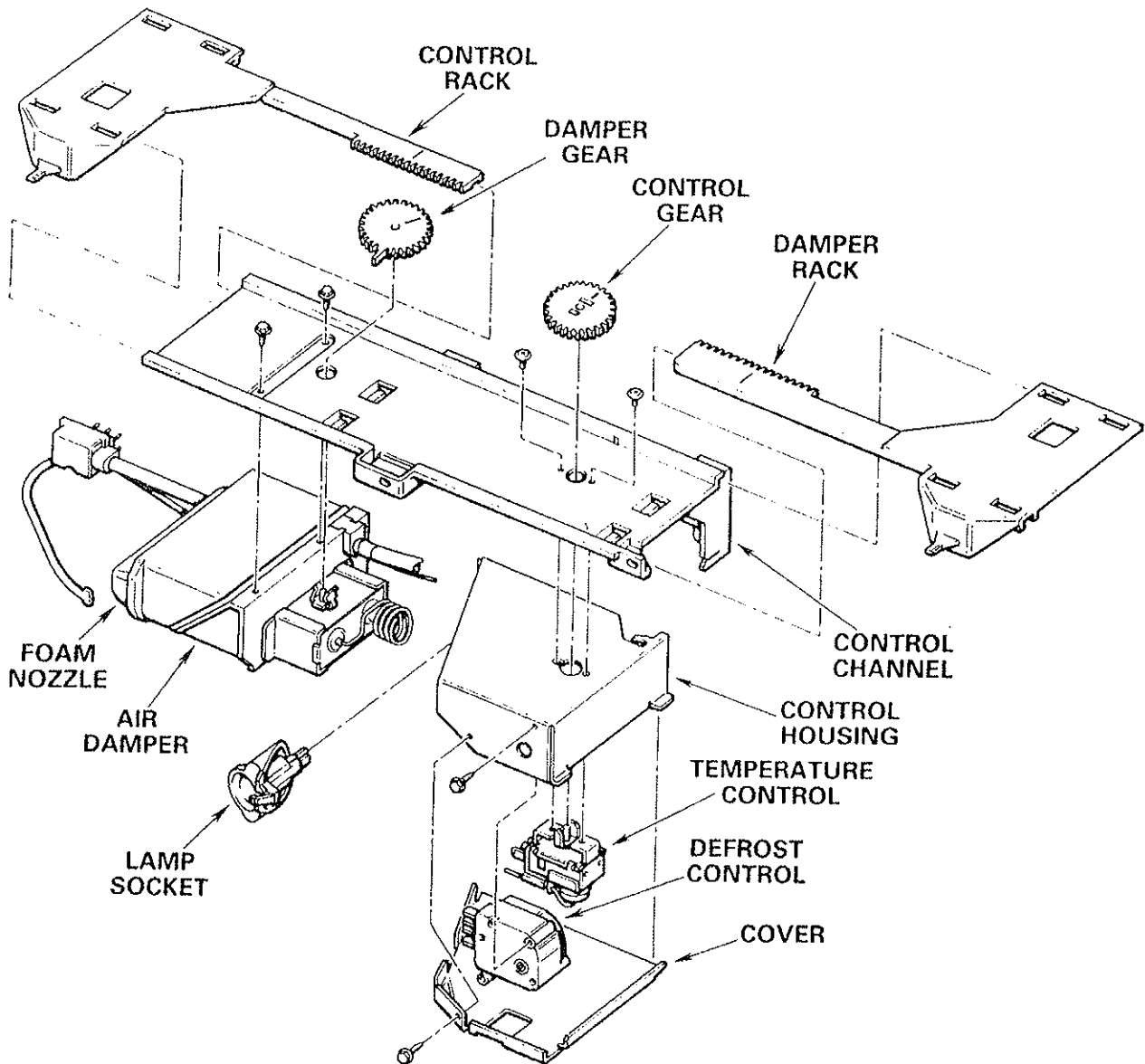
## BUILT-IN SXS

To dismantle the control module, remove the evaporator fan shield, and disconnect the wiring harness plug (secured with a screw) at the evaporator fan orifice. Pull the control capillary (covered with a vinyl sleeve) from behind the auger motor cover. Then remove the light shield, control knobs, and bezel. Remove the three (3) mounting screws that secure the module to the fresh food liner. Disconnect the ground wire at the back of the liner. Tip the module downward at the top center support and pull it from the liner at the right side. Withdraw the foam nozzle, wiring harness, and control capillary carefully to prevent damaging either the foam nozzle or the foam insert in the compartment divider.



To disassemble the control module, first remove the two gear racks from the control channel. Slide the damper rack off at the right end. Lift the serrated arm of the control rack (to disengage the control gear), and slide the control rack off at the left end. Pull the gears from the air damper and the temperature control. (The gears are fitted onto shafts in the same manner as standard temperature control knobs.) The damper is mounted to the left end of the control channel with two screws. The temperature control is mounted to the right end of the control channel with two screws that also secure the control housing.



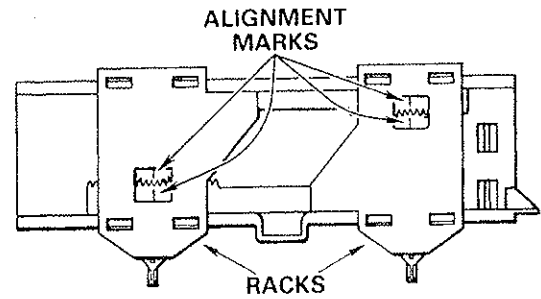


When reassembling the control module, the gears for the air damper and temperature control must be firmly pressed onto the respective control shafts and correctly positioned before installing the racks. (Although both gears are the same diameter, they are not interchangeable.) Rotate the damper gear fully counterclockwise so that the finger is pointing forward. Rotate the temperature control gear so that the alignment mark is toward the rear. Then, slide the control rack onto the left end of the control channel, and lift the serrated arm to engage the control gear so that the marks on the arm and gear are aligned. Next, slide the damper rack onto the right end of the control channel until the serrated arm engages the damper gear.

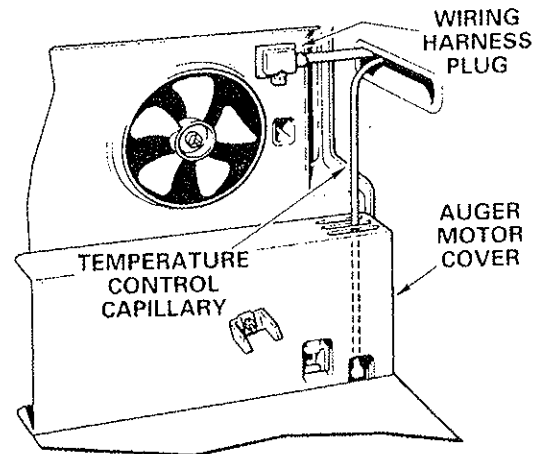
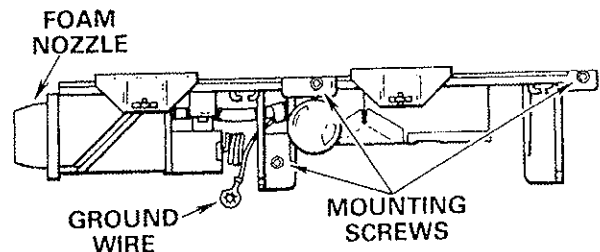
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Position both racks so that the alignment marks can be observed through the windows in the racks. Verify proper alignment to the marks at both sets of gears before reinstalling the control module.

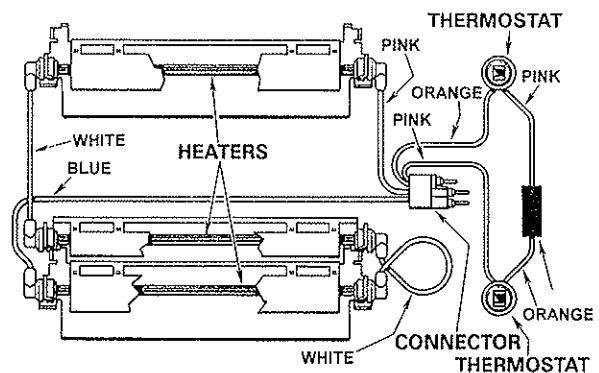


When reinstalling the control module, make sure the vinyl sleeve is fully positioned over the end of the foam nozzle. Carefully insert the capillary and wiring harness through the foam insert in the compartment divider. Then, position the foam nozzle into the foam insert and engage the pin at the lower right support into the locator hole in the back of the liner. Next, engage the module onto the top center support and drive all three (3) mounting screws. Connect the wiring harness plug and secure it to the fan housing with the screw. Position the temperature control capillary through the middle slot at the top right end of the auger motor cover. Dress the capillary so that it does not restrict air movement through the foam nozzle.



## SELF-DEFROST

Three defrost heaters are used in series with two defrost thermostats. Total defrost wattage is 720 watts. The defrost thermostats are replaceable individually, however, defrost heaters are replaced as an assembly. The assembly includes three defrost heaters, two thermostats, and the wiring harness.



**DISCONNECT POWER CORD BEFORE SERVICING.**  
**IMPORTANT - RECONNECT ALL GROUNDING DEVICES**

All parts of this appliance capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

**IMPORTANT SAFETY NOTICE**

This information is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

**ELECTRICAL COMPONENT OPERATION**

Fz. Temperature Control (Pos. 5)..... (-14.4)-(-24.4) °C  
 Defrost Control @ 230V~50Hz..... 7.2 hrs @ 30 min  
 Defrost Thermostat (2)..... 15.6-(-2.2) °C

**PERFORMANCE: FOOD LOAD, NO DOOR OPENINGS**

Control Position 5/5 and Ambient Temperature of:	21°C	32°C
Fresh Food.....	4-9°C	3-6°C
Frozen Food.....	(-17)-(-15) °C	(-19)-(-17)°C
Run Time.....	31-33 %	50-63 %

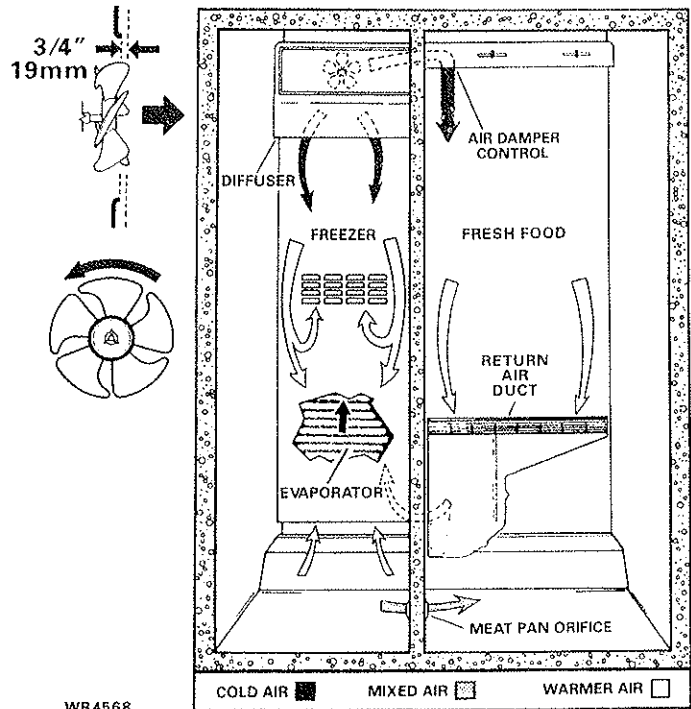
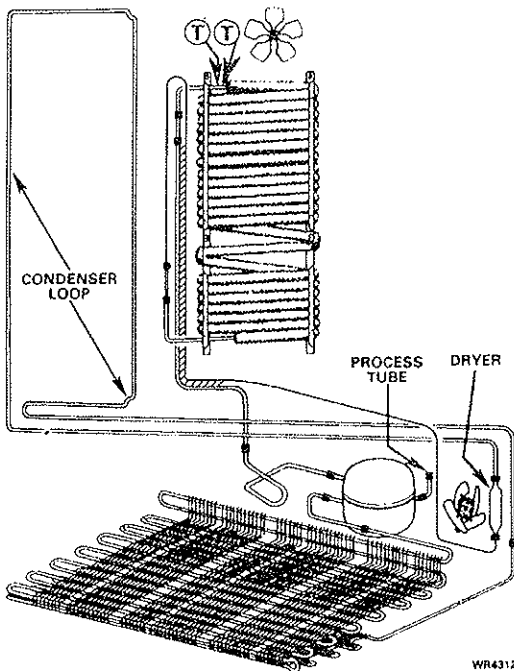
**REFRIGERATION SYSTEM**

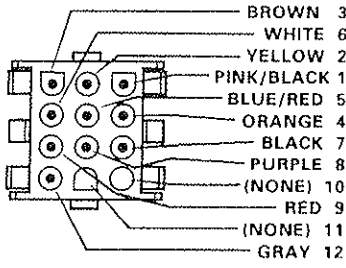
Refrigerant Charge (R-134A)..... See Rating Plate  
 Compressor @ 220V~50Hz..... 1306 Btu/hr - 342 W  
 Compressor Capacity Test (see Service Handbook)  
 Minimum Vacuum @ 2 minutes..... 19 in/ 48 cm  
 Minimum Equalized Pressure  
 @ 21 °C..... 28 psig / 287.5 kPa  
 @ 32 °C..... 39 psig / 370.3 kPa

**REPLACEMENT PARTS**

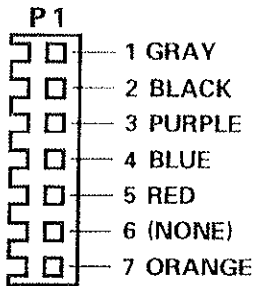
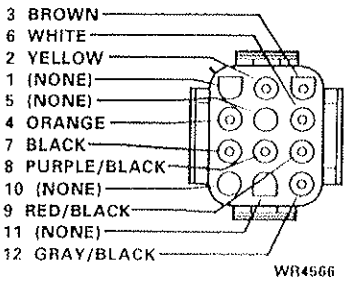
Freezer Temperature Control .....	WR09X0521
Fresh Food Damper Control .....	WR09X0522
Defrost Timer/Control .....	WR09X0541
Defrost Thermostat (2).....	WR50X0122
Defrost Heater Assembly.....	WR51X0445
Condenser Fan Motor.....	WR60X0228
Evaporator Fan Motor.....	WR60X0244
Relay.....	WR07X0238
Compressor.....	WR87X0467
Dryer.....	WR86X0096
Fresh Food Door Gasket (white).....	WR24X0529
Freezer Door Gasket (white).....	WR24X0530
Water Valve Assembly.....	WR57X0108
Start Capacitor.....	WR62X0085

**AIR FLOW**

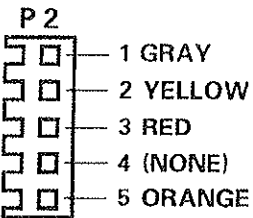




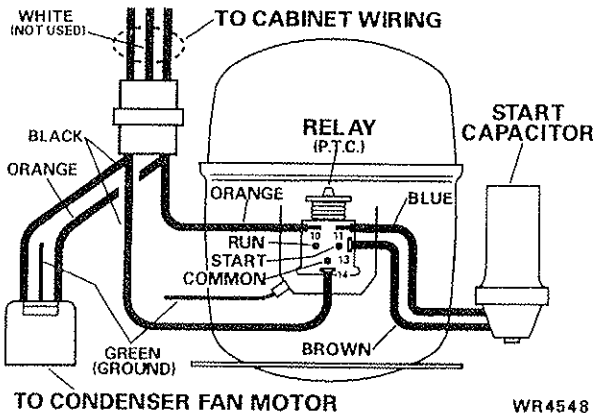
UPPER CABINET HARNESS  
HARNESS CONNECTORS



TIME DELAY CONTROL MODULE CONNECTORS



WR4441



IRF-145B

