SECTION 5

COMPONENT ACCESS AND REMOVAL

COMPONENT ACCESS AND REMOVAL

This section explains how to access and remove components in a model 315I ice maker.

This section is arranged as follows: Exterior components; followed by the internal components; followed by compressor area components. An attempt has been made to arrange these procedures in such a way as to simulate which components would need to be removed first in order to gain access to other components. When following a component removal procedure, it may be necessary to reference another component removal procedure listed earlier in this section.

NOTE: *Before continuing, please take note of the WARNINGS and CAUTIONS below.*

⚠ WARNING

TO AVOID ELECTRIC SHOCK, POWER TO THE UNIT MUST BE DISCONNECTED WHENEVER ACCESSING AND/OR REMOVING COMPONENTS POWERED BY ELECTRICITY OR COMPONENTS NEAR OTHER ELECTRICAL COMPONENTS.

⚠ CAUTION

- **If removing or disconnecting door hinge assemblies, remember they are spring loaded and may recoil quickly when released.**
- **If working in the compressor area, remember that compressor and tubing may be hot.**
- **If working on or around the condenser, remember that condenser fins are sharp.**

EXTERIOR COMPONENTS

Kickplate Removal

The kickplate is held in place with two screws, one at each side. To remove the kickplate, extract the screws and pull the kickplate forward. (See Figure 5-1)

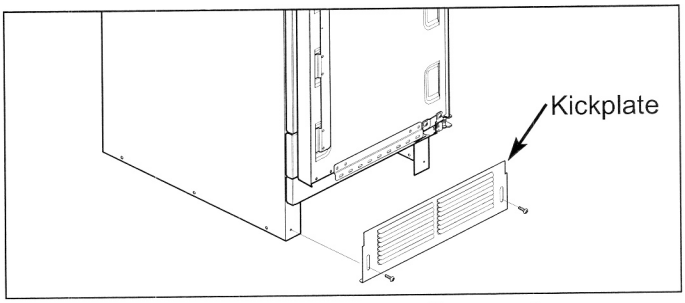

Figure 5-1. Kickplate Removal

Door Panel Mounting Hardware and Upper Door/Hinge Cover Removal

The handle-side panel mounting bracket is attached to the back side of the door panel with screws. The tabs of the handle-side bracket then fit into slots in the face of the door. The top and bottom panel mounting brackets are held to the front of the door with screws. The panel is secured to the top and bottom brackets by screws that pass through the brackets into the back of the panel. The upper door/hinge cover is also mounted to the face of the door with screws.

To access these components, the door panel will need to be removed. Begin by opening the door and extracting the door panel mounting screws from the bottom and top brackets. Then, slide the panel towards the hinge side to disengage the handle-side bracket from the slots in the door.

With the door panel off, remove the top and bottom panel mounting brackets and the upper door/hinge cover by extracting their mounting screws from the face of the door. Remove the handle-side bracket from the back of the door panel by extracting the panel mounting screws. (See Figure 5-2)

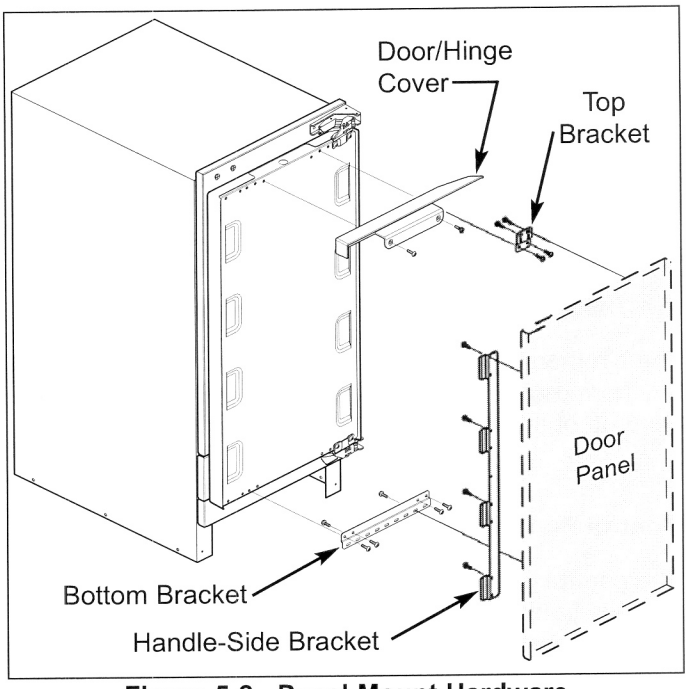

Figure 5-2. Panel Mount Hardware & Upper Door/Hinge Cover Removal

Door Gasket Removal

The door gasket has a rib on its back side that fits into a channel in the door liner. To remove the door gasket, open the door and pull the gasket from the door liner. (See Figure 5-3)

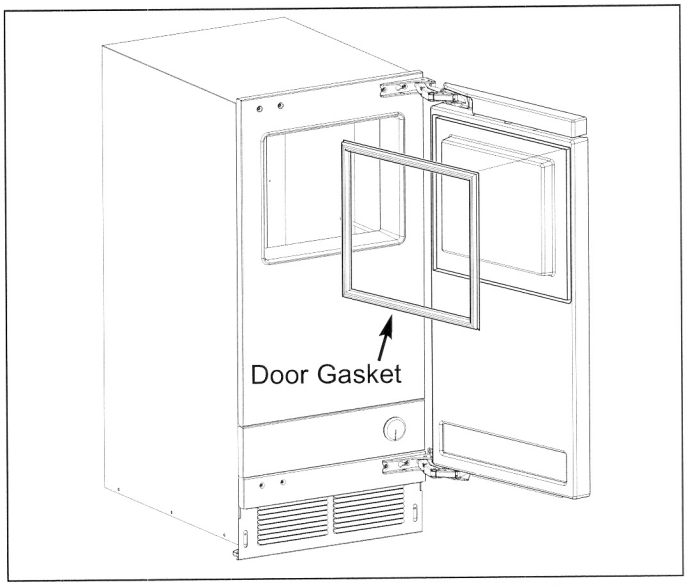

Figure 5-3. Door Gasket Removal

Door Removal

The door is held in place by screws that pass through the top and bottom hinges into the face of the door. To remove the door, the door panel will need to be removed first. With the door closed, extract the door mounting screws from the top and bottom hinges (two each hinge) and pull the door from the unit. (See Figure 5-4)

NOTE: *To remove the door with the hinges, see Hinge Removal below.*

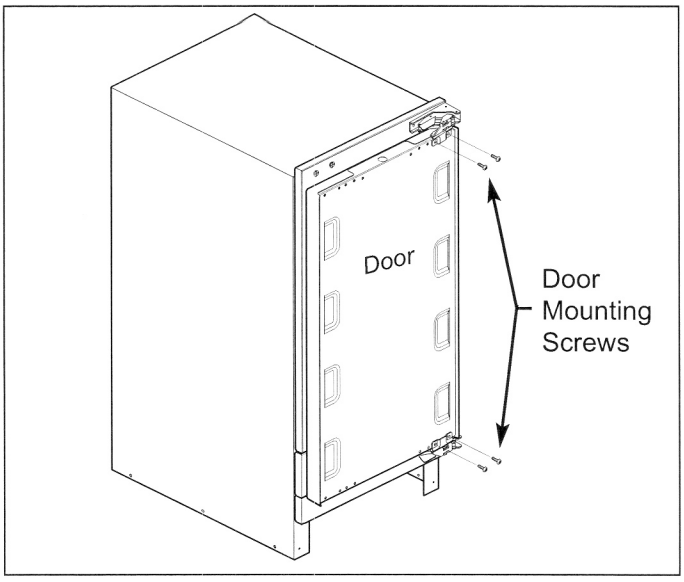

Figure 5-4. Door Removal

Hinge Removal

Two screws at each hinge secure the hinges to the unit. To remove the hinges, open them fully and extract the hinge mounting screws. (See Figure 5-5)

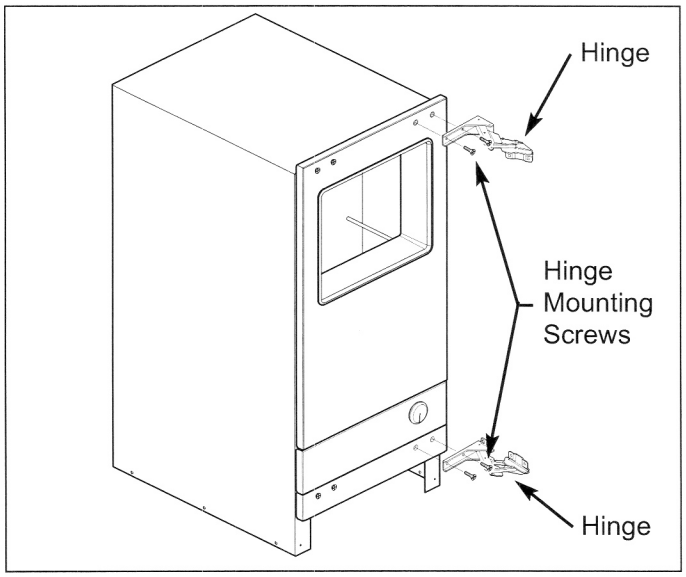

Figure 5-5. Hinge Removal

Bin Thermostat Control Knob Removal

The bin thermostat control knob fits over the shaft of the bin thermostat. To remove the knob, pull it straight forward off of the control shaft. (See Figure 5-6)

Control Panel Assembly Removal

The control panel assembly has a flange at the bottom that sits behind the lower cabinet face plate. Adhered to the top rear of the control panel are two halves of dual lock fastener pads (similar to velcro) which mate up with the other halves of the dual lock fastener pads adhered to the bottom flanges of the upper cabinet face plate.

To remove the control panel assembly, the bin thermostat control knob needs to be removed first. Then pull the top of the control panel forward to disengage the dual lock fastener pads and lift the panel up. (See Figure 5-6)

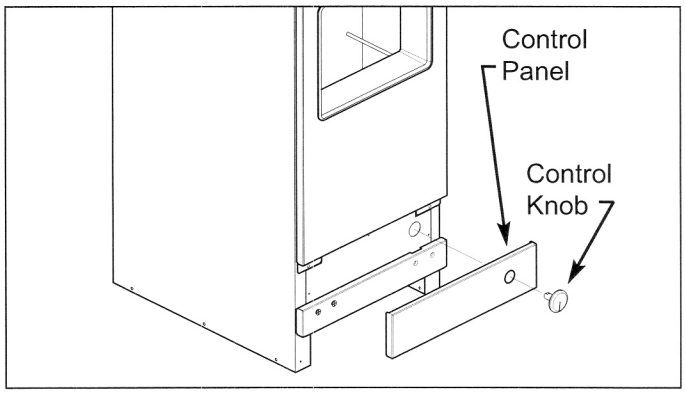

Figure 5-6. Control Knob and Panel Removal

Inner Control Access Panel Removal

The inner control access panel is behind the control panel assembly. The access panel is held in place with three screws that pass through the panel into the unit cabinet/shell, one at top center of the panel and one at each side.

To remove the inner control access panel, the control knob and control panel assembly must first be removed. Then, extract the three panel mounting screws and pull the top of the panel forward while lifting up. (See Figure 5-7)

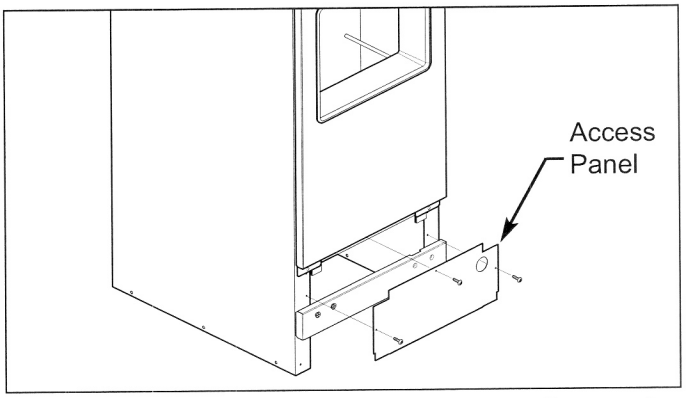

Figure 5-7. Inner Control Access Panel Removal

Bin Trim Ring Removal

The bin trim ring fits into the opening of the upper cabinet face plate and extends into the bin area. Tabs behind the outer flange on the trim ring hold the ring to the upper cabinet face plate, and a bead of permagum is placed behind the outer flange of the trim ring to prevent it from rattling.

To remove the bin trim ring, flex it inward at the top and sides while pulling forward, this will disengage the tabs from the upper cabinet face plate. (See Figure 5-8)

Upper Cabinet Face Plate & Bin Seal Removal

The bin seal is a 3/4" thick styrofoam sheet cut to approximately the same size and shape as the upper cabinet face plate. The bin seal is sandwiched between the face plate and the cabinet.

The upper cabinet face plate is attached to the cabinet with screws: two screws pass through the top hinge and the face plate into the top hinge mount support bracket; two screws pass through the face plate at the upper corner on the handle side and one screw at each bottom corner pass through flanges into the cabinet/shell.

To remove the upper cabinet face plate and bin seal, the control panel assembly, door, hinges and bin trim ring must be removed first. Then, extract the two screws at the upper corner on the handle side and the two screws at each bottom corner. Now, pull the face plate and bin seal forward. (See Figure 5-8)

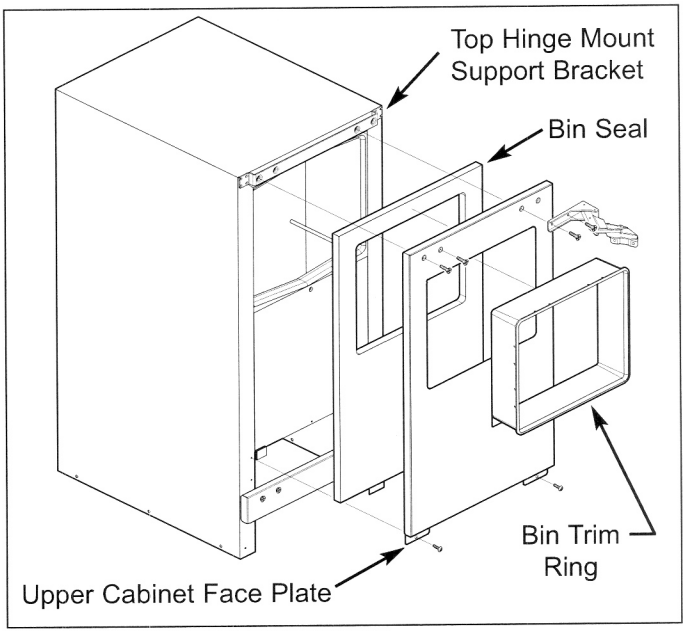

Figure 5-8. Bin Trim Ring, Upper Cabinet Face Plate and Bin Seal Removal

Decor Trim Gasket Removal

The decor trim gasket fits over the edge of the cabinet/shell at the opening of the bin. A screw at the top of the opening and one at the bottom of the opening help to hold the gasket in place.

To remove the decor trim gasket, the control panel assembly, door, top hinge, bin trim ring, upper cabinet face plate and bin seal must be removed first. Then, loosen the screws at top and bottom center of the bin opening and pull the gasket from the edge of the cabinet/shell. (See Figure 5-9)

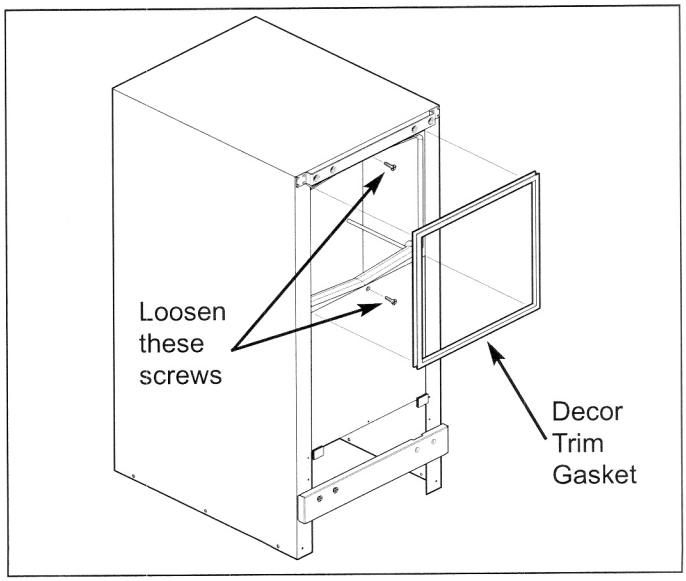

Figure 5-9. Decor Trim Gasket Removal

Lower Cabinet Face Plate Removal

The lower cabinet face plate is attached to the cabinet with screws: two screws pass through the bottom hinge and the face plate, and two screws pass through the face plate on the handle side. All four screws then attach to the bottom hinge mount support bracket

To remove the lower cabinet face plate, the door must be removed first. Then, extract the two screws on the handle side and pull the face plate forward. (See Figure 5-10)

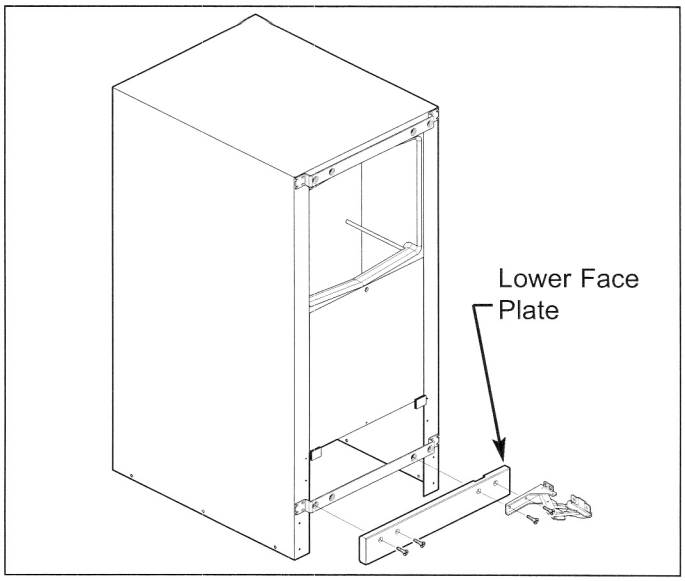

Figure 5-10. Lower Cabinet Face Plate Removal

Hinge Mount Support Bracket Removal

The upper and lower hinge mount support brackets are secured to the cabinet/shell with screws.

To remove the hinge mount support brackets, the door, bin trim ring, upper cabinet face plate, bin seal and lower cabinet face plate must be removed first. Then, extract the bracket mounting screws. (See Figure 5-11)

Rear Panel Removal

The rear panel is held to the back of the unit with screws. To remove the rear panel, extract the panel mounting screws and pull the panel from the unit. (See Figure 5-11)

Cabinet/Shell Removal

The cabinet/shell is secured to the rest of the unit with screws along the bottom of both sides of the unit, screws at the top and bottom of the bin opening and mounting screws for some of the exterior components.

To remove the cabinet/shell, the rear panel, kickplate, control knob, control panel assembly, inner control access panel, door, hinges, bin trim ring, upper cabinet face plate, bin seal and lower cabinet face plate must be removed first. Then, extract the screws at the bottom and top of the bin opening. Extract the screws along the bottom of both sides of the unit and lift the cabinet/shell up off of the base frame. (See Figure 5-11)

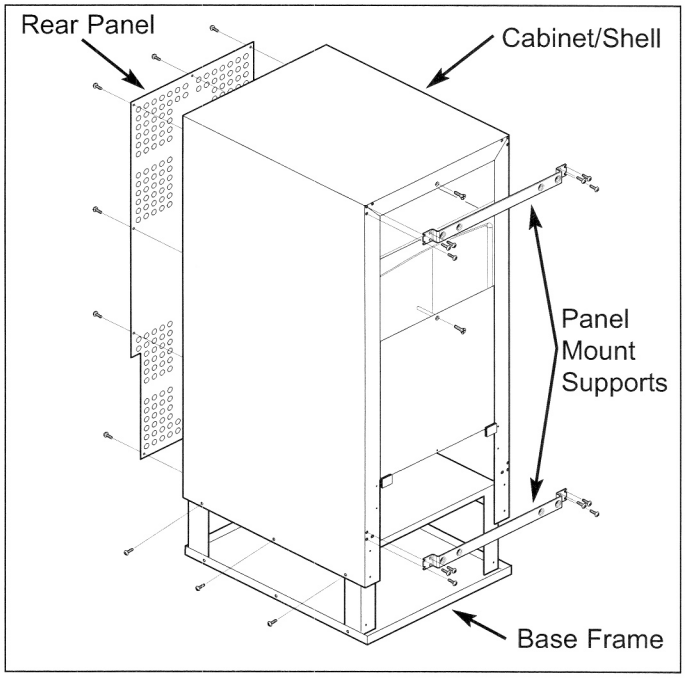

Figure 5-11. Hinge Mount Support Bracket, Rear Panel & Cabinet/Shell Removal

COMPONENTS IN BIN AREA

Bin Thermostat Bracket Removal

The bin thermostat bracket is a hollow cylindrical tube which holds the bin thermostat control bulb. The bracket fits into holes, one each in the front wall and rear wall of the bin.

To remove the bin thermostat bracket, push the bracket back into the hole in the rear bin wall until the front of the bracket clears the hole in the front wall. Then, lift the front of the bracket up and pull it from the hole in the rear wall. (See Figure 5-12)

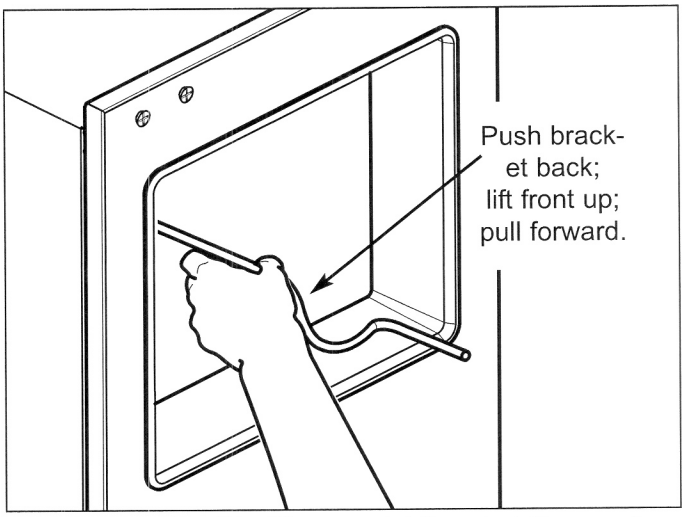

Figure 5-12. Bin Thermostat Bracket Removal

Curtain and Curtain Stiffener Removal

The curtain and curtain stiffener are held to the reservoir with screws that pass through the front of the reservoir and stiffener, then into the bracket of the curtain.

To remove the curtain and stiffener, extract the curtain mounting screws and pull the curtain and stiffener from the reservoir. (See Figure 5-13)

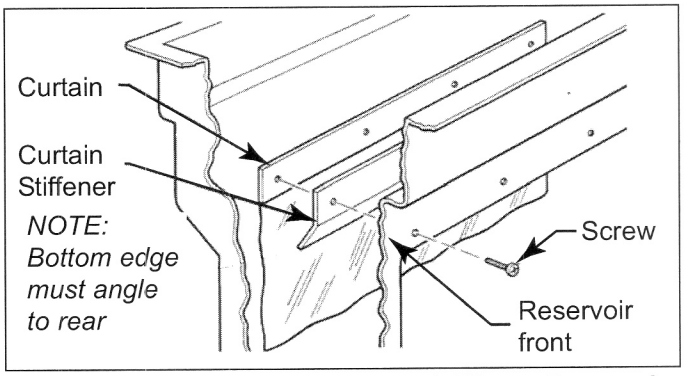

Figure 5-13. Curtain & Curtain Stiffener Removal

Cube Chute Removal

The cube chute has two notches at its rear flange that fit over the stems of the spray jet bases. The spray jet bases are then tightened down to sandwich the rear flange of the chute between the bottom flat surface of the jet base and the reservoir wall.

To remove the cube chute, loosen both spray jet bases and pull the cube chute forward. (See Figure 5-14)

Spray Jet Assembly Removal

A spray jet assembly consists of a cap/nozzle, spinner and jet base. The nozzle screws onto the base, captivating the spinner. The stem of the jet base passes down through the a notch in the cube chute, a hole in the reservoir and an O-ring, then is threaded into the spray bar assembly tubing.

To remove the nozzle and access the spinner, unscrew the nozzle counterclockwise off of the jet base.

To remove the jet base, or the spray jet assembly, use a 5/8" wrench to unscrew the stem of the jet base from the spray bar assembly tubing. (See Figure 5-14)

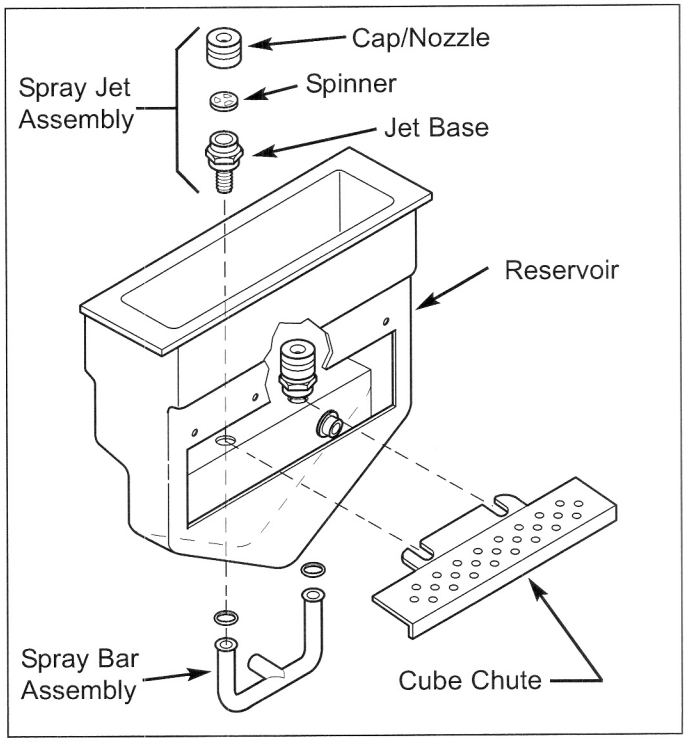

Figure 5-14. Cube Chute & Spray Jet Assy Removal

O-Ring and Spray Bar Assembly Removal

The spray bar is a copper tubing assembly with one inlet port and two outlet ports. The inlet fits inside the circulating/spray pump discharge tube. An O-ring is positioned at the top of each spray bar outlet port. The jet base stems pass down through the reservoir wall and the O-rings and then screw into the outlet ports, sandwiching the O-rings which seal the connection.

NOTE: *The use of a mirror will help in the following removal procedures.*

To remove an O-ring, extract the appropriate jet base and pull the O-ring from the top of the spray bar tubing.

To remove the spray bar assembly, extract both spray jet assemblies or jet bases and remove the O-rings. With a pliers, depress the ends of the hose clamp at the spray bar inlet and pull the spray bar from the the circulating/spray pump discharge tube. (See Figure 5-15)

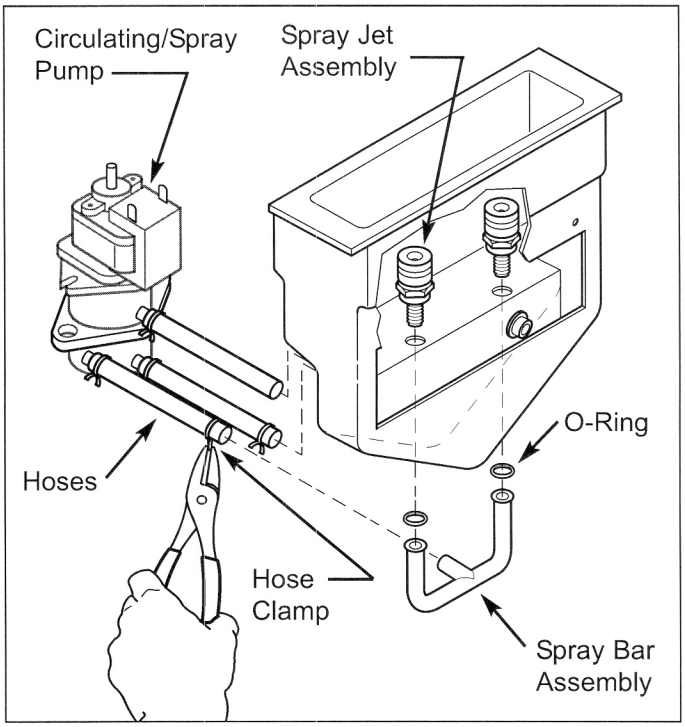

Figure 5-15. O-Ring, Spray Bar and Hose Removal

Circulating/Spray Pump Hose Removal

There are three hoses connected to the circulating spray pump nipples. The bottom hose is the pump inlet hose, leading from the reservoir bottom nipple. The second hose up is the spray discharge hose leading to the spray bar assembly. The top hose on the pump leads to the top center reservoir nipple. The purpose of the top discharge hose is to bypass the spray discharge hose if it were to become clogged or air-locked.

NOTE: *The use of a mirror will help in the following removal procedures.*

To remove a pump hose, depress the ends of the hose clamp on the hose and pull the hose off of the nipples and/or spray bar assembly. (See Figure 5-15)

Reservoir Drain Hose Removal

The reservoir drain hose fits between the top right reservoir nipple and the ice bin drain fitting.

NOTE: *The use of a mirror will help in the following removal procedures.*

To remove the drain hose, pull it off of the top right reservoir nipple and the drain fitting. (See Figure 5-16)

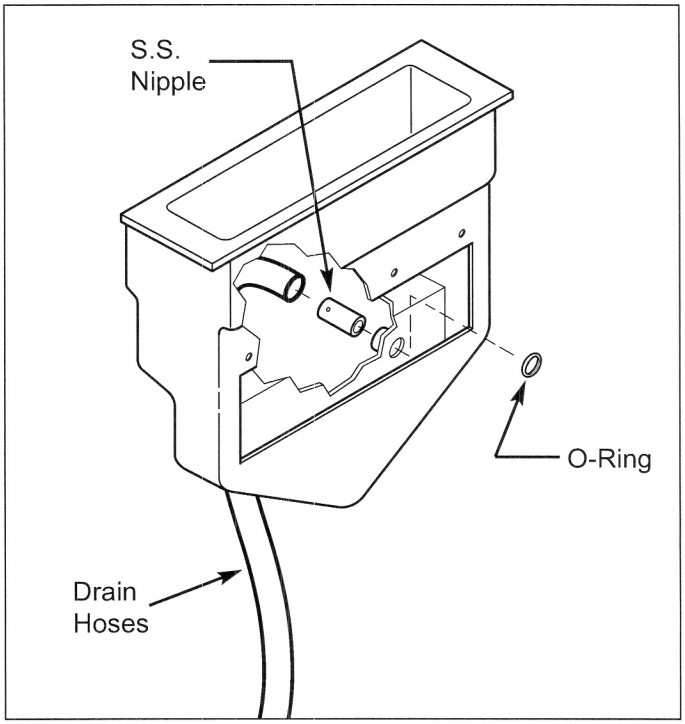

Figure 5-16. Drain Hose, O-Ring & SS Nipple Removal

O-Ring and Stainless Steel Drain Nipple Removal

The stainless steel drain nipple is inserted through the back of the top right reservoir nipple, up to the nub on the nipple. An O-ring is then placed over the stainless nipple inside the reservoir.

NOTE: *The use of a mirror will help in the following removal procedures.*

To remove the stainless steel nipple, the drain hose must be removed from the top right reservoir nipple first. Then, remove the O-ring inside the reservoir and pull the stainless steel nipple out through the back of the reservoir top right nipple. (See Figure 5-16)

COMPONENTS BEHIND PANELS AND SHELL

Inlet Water Valve Removal

The inlet water valve is attached to the left side of the control box with screws. The inlet and outlet water lines are connected to the valve with compression fittings.

To access the inlet water valve, remove the control panel and inner access panel.

Before removing the water valve, shut off the water supply and disconnect power to the unit. Then, unplug the valve electrical leads. With a wrench, disconnect the inlet water line from the valve. Extract the valve mounting screws, pull the valve forward and disconnect the outlet water line. (See Figure 5-17)

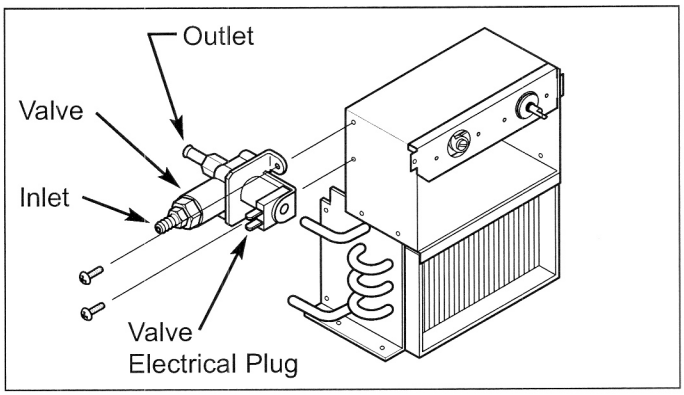

Figure 5-17. Water Valve Removal

Harvest Cycle Timer & Switch Removal

The harvest cycle timer switch is attached to the timer. The timer is attached inside the control box with screws and spacers. Three wires are connected to the switch. One electrical lead from the timer runs to the terminal board, the other runs to the cube size control.

To access the cycle timer, remove the control panel and inner access panel.

Before removing the harvest cycle timer and switch, disconnect the power to the unit. Then, unplug the electrical leads from the switch. Extract the timer mounting screws and pull the timer forward. Disconnect the timer electrical lead from the terminal board. Extract the control box face plate mounting screw, pull the face plate forward and disconnect the timer electrical lead from the cube size control. (See Figure 5-18)

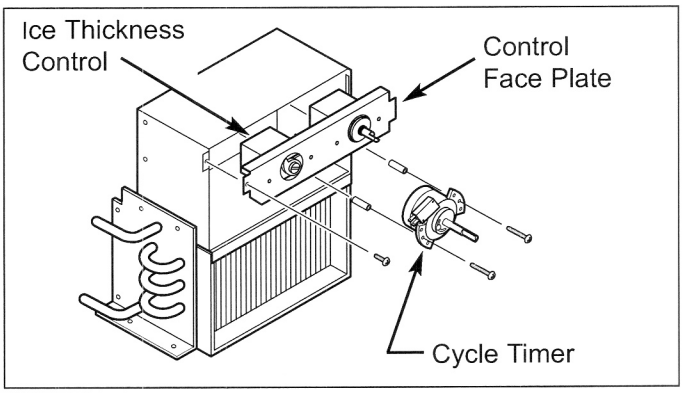

Figure 5-18. Cycle Timer Removal

Terminal Board Removal

The terminal board is attached inside the control box with screws.

To access the terminal board, remove the control panel, inner access panel and lower face plate.

Before removing the terminal board, disconnect power to the unit. Then, extract the board mounting screws, disconnect all electrical leads from the terminal board and pull the board forward. (See Figure 5-19)

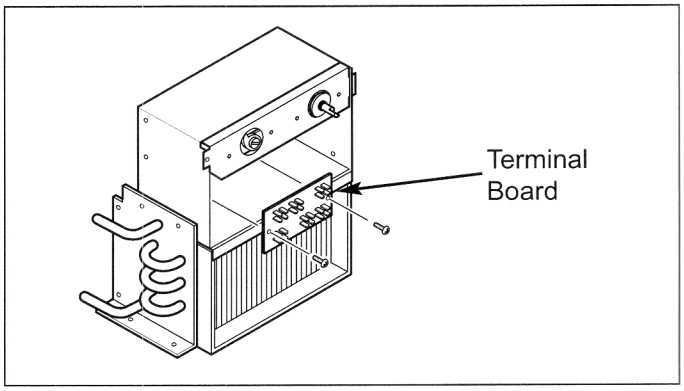

Figure 5-19. Terminal Board Removal

Hot Gas Solenoid Coil Removal

The hot gas solenoid coil is attached to the top of the hot gas valve body with a clip. The electrical leads of the coil pass through a grommet in the side of the control box and plug into the terminal board.

To access the hot gas solenoid coil, remove the control panel and inner access panel.

Before removing the hot gas solenoid coil, disconnect the power to the unit. Then, unplug the coil electrical leads from the terminal board. With a small flat blade screwdriver, pull the clip off of the top of the hot gas valve body, lift the coil off of the valve body and pull the electrical leads from the control box. (See Figure 5-20)

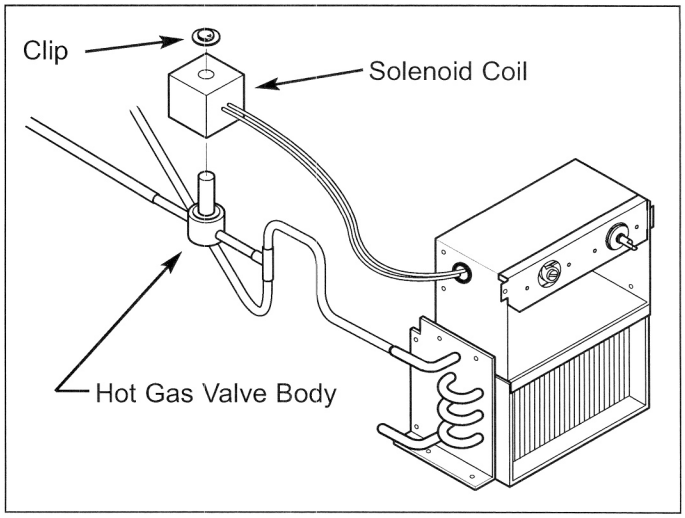

Figure 5-20. Hot Gas Solenoid Coil Removal

Drain Pump Pressure Switch Removal (315IP Only)

The drain pump pressure switch is attached to the pump bracket with screws. Electrical leads are connected to both sides of the switch, and a pressure sensing hose leading from the drain pump inlet hose is fit over the pressure sensing port of the switch.

To access the drain pump pressure switch, remove the control panel, inner access panel and lower face plate.

Before removing the drain pump pressure switch, disconnect the power to the unit and scoop all the ice cubes out of the storage bin. Then, unplug the electrical leads from both sides of the switch. Pull the hose from the pressure sensing port. Extract the switch mounting screws and pull the switch forward. (See Figure 5-21)

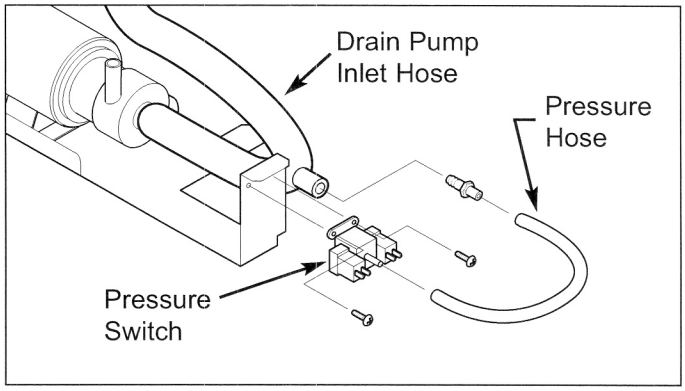

Figure 5-21. Drain Pump Pressure Switch Removal

Circulating/Spray Pump Removal

A rubber gasket/bushing assembly is positioned at the base of the circulating/spray pump motor. The circulating/spray pump is inserted down through a hole in the back of the bin assembly. Two screws are inserted down through the flanges at the base of the pump motor, then into screw anchors. The anchors are inserted into mounting holes on either side of the pump. As the screws are tightened down into the anchors, the anchors expand at the bottom to hold the pump in position. The circulating/spray hoses are attached to the pump inside the bin.

To access the circulating/spray pump, remove the rear panel.

Before removing the circulating/spray pump, disconnect the power to the unit. Then, disconnect all hoses from the pump inside the ice storage bin. Disconnect the electrical leads from the pump motor. Remove the pump mounting screws and lift the pump and the gasket/bushing assembly up out of the hole in the back of the storage bin. (See Figure 5-22)

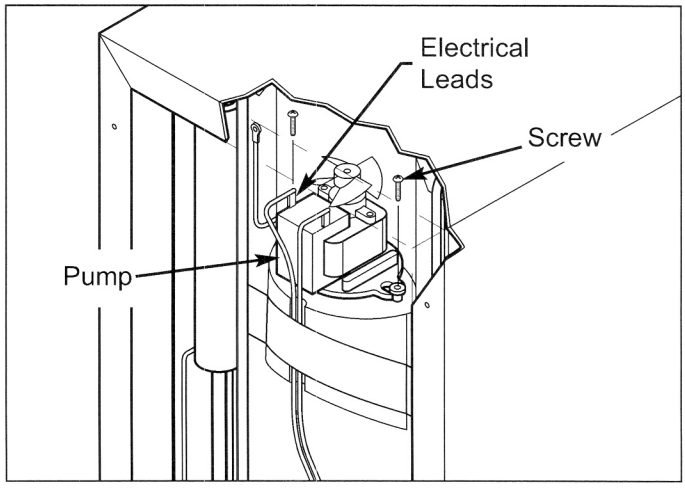

Figure 5-22. Circulating/Spray Pump Removal

Bin Level Control (Thermostat) Removal

The bin level control is mounted to the right side of the control box face plate with screws. Two wires are connected to the back of the control. The control capillary tube is inserted into a plastic sleeve and routed out the back of the control box, up through a grommet in the base assembly, up the back of the bin assembly and into the back of the cylindrical bin thermostat bracket.

To access the bin level control, remove the control panel, inner access panel and back panel.

Before removing the bin level control, disconnect the power to the unit. Then, extract the control box face plate mounting screw and pull the face plate forward. Extract the control mounting screws. Disconnect the electrical leads from the control. At the back of the unit, pull the control capillary tube from the thermostat bracket, then pull the capillary tube with the sleave from the grommet in the base assembly. At the front of the unit, pull the control body, capillary tube and sleeve forward, out of the control box. (See Figure 5-23)

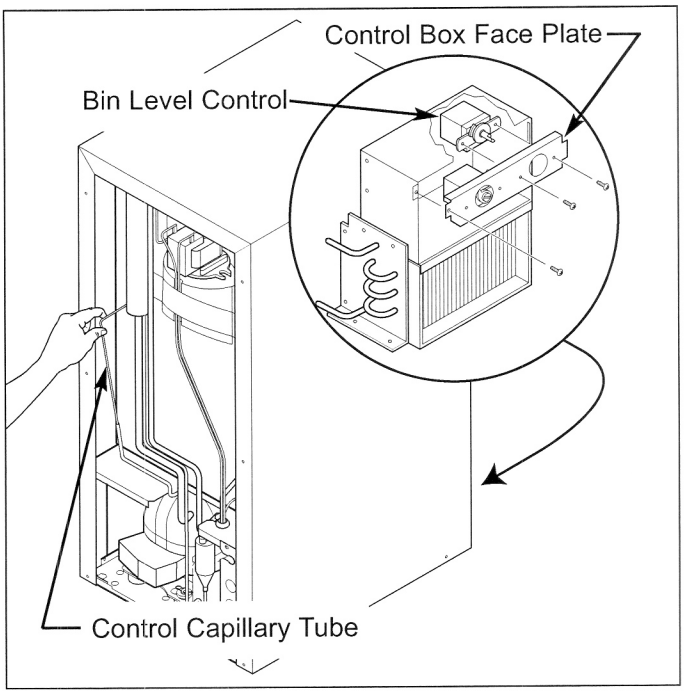

Figure 5-23. Bin Level Control Removal

Cube Size Control (Evap. Thermostat) Removal

The cube size control is mounted to the left side of the control box face plate with screws. Three wires are connected to the back of the control. The control capillary tube is routed out the back of the control box, up through a grommet in the base assembly, up the back of the bin assembly, then inserted into a tube attached to the evaporator.

To access the cube size control, remove the control panel, inner access panel, upper and lower face plates, back panel, unit shell, insulation bag, tube retaining clip and evaporator/platen cover.

Before removing the cube size control, disconnect the power to the unit. Then, extract the control box face plate mounting screw and pull the face plate forward. Extract the control mounting screws. Disconnect the electrical leads from the control. At the back of the unit, pull the control capillary tube from the tube on the evaporator, then pull the capillary tube from the grommet in the base assembly. At the front of the unit, pull the control body and capillary tube forward, out of the control box. (See Figure 5-24)

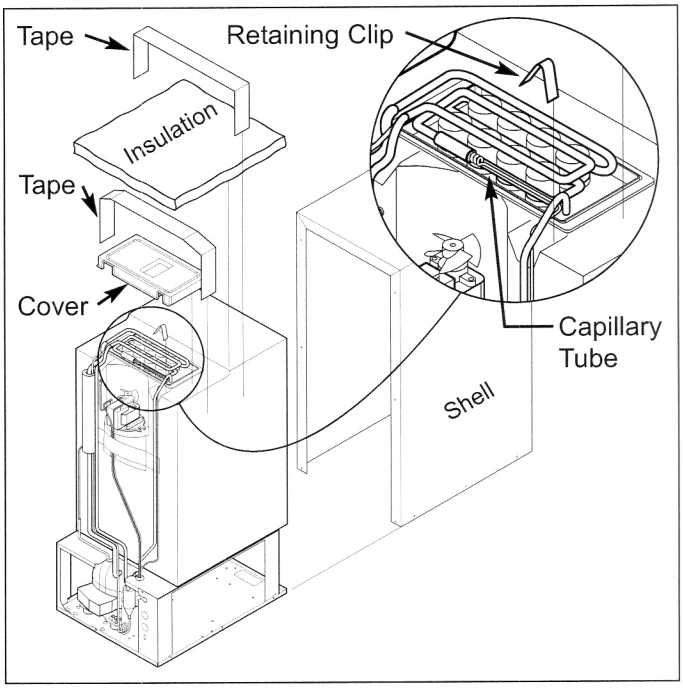

Figure 5-24. Cube Size Control Removal

Reservoir Fill Tube Assembly Removal

The reservoir fill tube assembly is attached to the water valve outlet port. The tube is routed to the rear of the base assembly, up through a grommet in the base assembly, up the back of the bin assembly, then hooked over the back edge of the evaporator.

To access the reservoir fill tube assembly, remove the control panel, inner access panel, upper and lower face plates, back panel, unit shell, insulation bag, tube retaining clip and evaporator/platen cover.

Begin removing the reservoir fill tube assembly by disconnecting it from the water valve outlet. Then, pull the tube from the grommet in the base assembly and unhook it from the back edge of the evaporator. (See Figure 5-25)

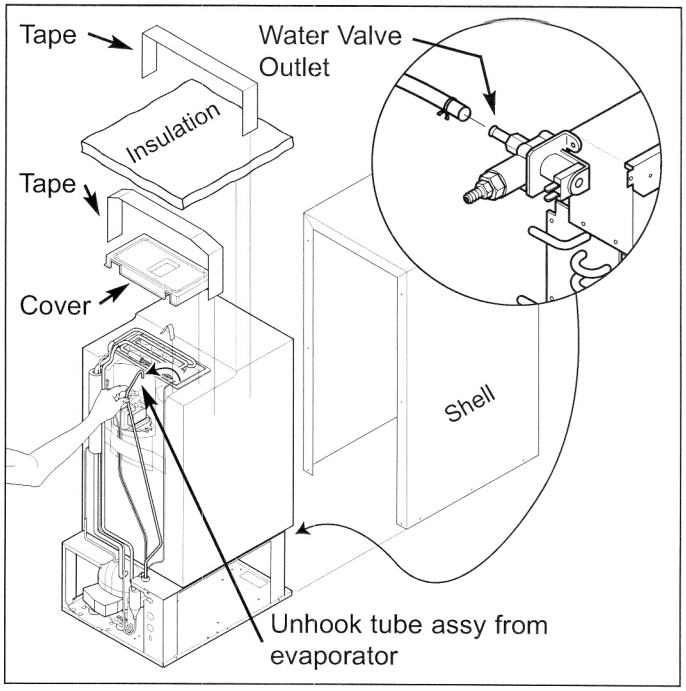

Figure 5-25. Reservoir Fill Tube Removal

Drain Pump Assembly Removal (315IP Only)

The drain pump assembly on the model 315IP sits on the pump bracket. The pump is held in place with a cable tie that loops through two holes in the bracket and around the body of the pump. The bracket is held to the base assembly with screws. The pump inlet hose fits over the front port of the pump. The outlet hose is attached to the top port of the pump.

To access the drain pump assembly, remove the control panel, inner access panel, upper and lower face plates, back panel and unit shell.

Before removing the drain pump assembly, disconnect the power to the unit and scoop all the ice cubes out of the storage bin. Then, disconnect the inlet and outlet hoses from the pump, cut the cable tie holding the pump to the pump bracket and pull the pump off of the bracket. (See Figure 5-26)

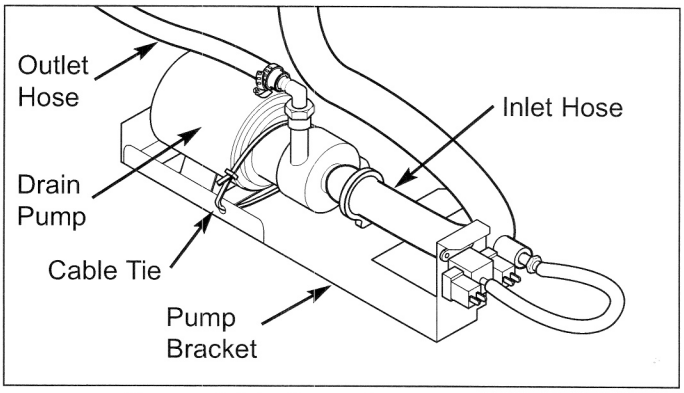

Figure 5-26. Drain Pump Removal

Condenser Fan Assembly Removal

The condenser fan motor is attached to the fan bracket with screws that pass up through the bracket into the motor body. The fan bracket is attached to the base assembly with screws that pass up through the base into the fan bracket. The condenser fan blade fits over the shaft of the motor. A flat nut screws onto the motor shaft to hold the blade in place. The fan motor electrical leads pass through a grommet in the side of the control box and plug into the terminal board.

To access the condenser fan assembly, remove the control panel, inner access panel, upper and lower face plates, back panel and unit shell.

Before removing the condenser fan assembly, disconnect the power to the unit. Then, disconnect the fan motor electrical leads from the terminal board. Extract the fan bracket mounting screws from the bottom of the base assembly and lift the fan assembly off of the base plate. The fan motor can then be removed from the bracket by extracting the motor mounting screws, and the fan blade can be removed from the motor shaft by first removing the flat nut. (See Figure 5-27)

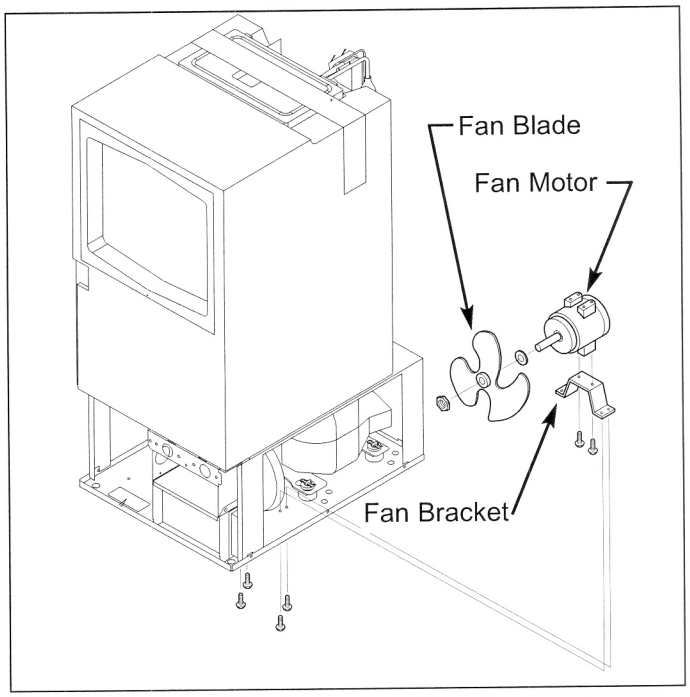

Figure 5-27. Condenser Fan Removal

High-Side Filter-Drier Removal

The high-side filter-drier is attached between the condenser outlet and the capillary tube and is located at the rear of the base assembly.

To access the high-side filter-drier, remove the back panel.

Before removing the high-side filter-drier, capture the refrigerant from the sealed system. Then, use a file to score a line around the capillary tube approximately one inch from the filter-drier. Fatigue the capillary tube at this point until it separates. Now, use a tube cutter to cut the drier inlet tube approximately one inch from the drier. (See Figure 5-28)

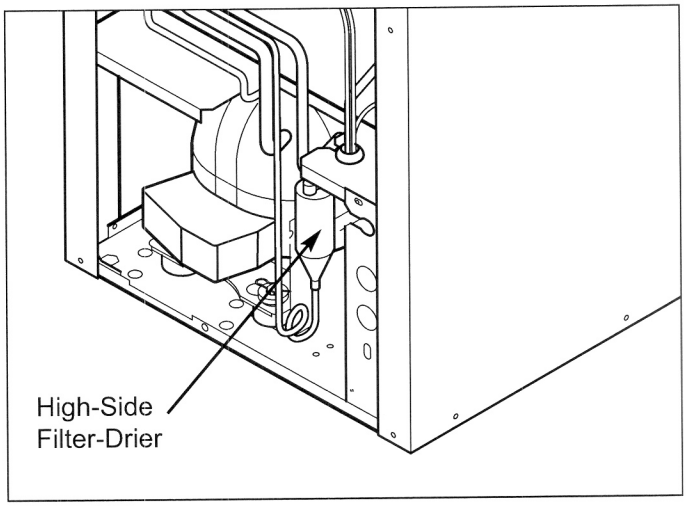

Figure 5-28. High-Side Filter-Drier Removal

Evaporator Assembly Removal

The evaporator assembly consists of the evaporator, heat exchanger assembly and hot gas line from the gas valve. The evaporator/cube mold sits inside the top of the reservoir insert. The evaporator/platen cover is placed over the evaporator and a piece of tape is placed over the cover to keep it in place.

To access the evaporator assembly, remove the control panel, inner access panel, upper and lower face plates, back panel, unit shell, insulation bag, tube retaining clip and evaporator/platen cover.

Before removing the evaporator assembly, capture the refrigerant from the sealed system. Then, use a file to score and separate the capillary tube approximately one inch from the filter-drier. Use a tube cutter to cut the suction line approximately one inch from the compressor. Cut the hot gas line approximately one inch from the hot gas valve and lift the assembly out of the reservoir insert and off of the back of the bin assembly. (See Figure 5-29)

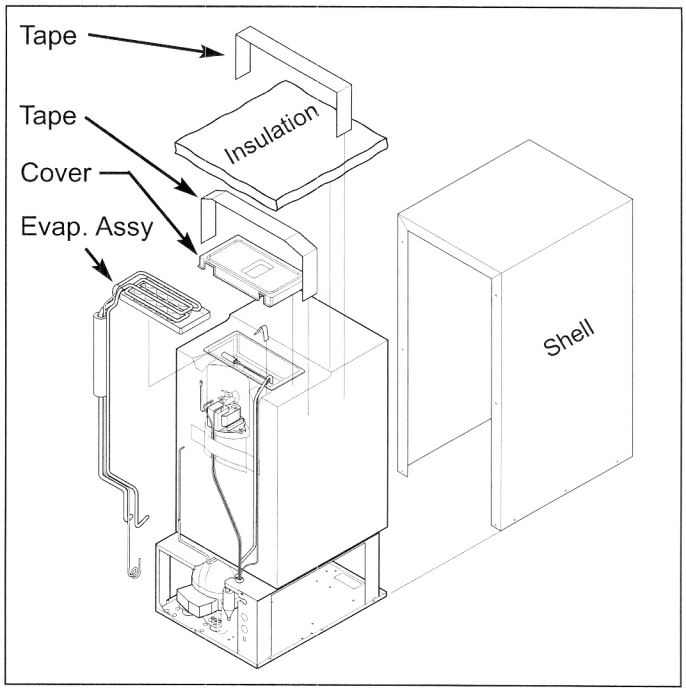

Figure 5-29. Evaporator Assembly Removal

Hot Gas Valve Removal

The inlet of the hot gas valve is attached to a "T" connection off of the compressor discharge line. The outlet of the valve is attached to the hot gas line that runs up to the evaporator. The hot gas solenoid coil is attached to the top of the hot gas valve body with a clip.

To access the hot gas valve, remove the control panel, inner access panel, upper and lower face plates, back panel and unit shell.

NOTE:: *Separating the top of the base assembly from the bottom by extracting the screws from the base assembly legs will allow easier access to the hot gas valve.*

Before removing the hot gas valve, capture the refrigerant from the sealed system. Then, disconnect the solenoid coil from the valve body. With a a tube cutter, cut the valve inlet and outlet tubing approximately one inch from the valve body and lift the valve off of the base assembly. (See Figure 5-30)

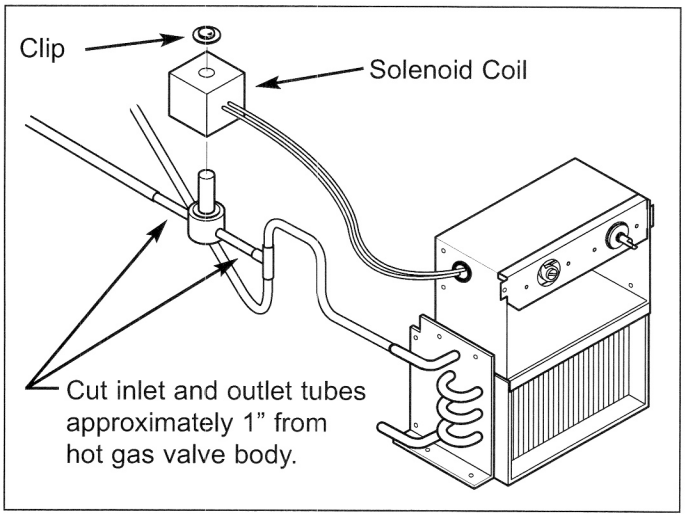

Figure 5-30. Hot Gas Valve Removal

Compressor Removal

The compressor sits on the bottom plate of the base assembly. Two "U" shaped compressor brackets are passed up through the base plate, compressor grommets and washers. Cotter-pin clips are attached to the compressor brackets over the washers and grommets to hold the compressor in place.

To access the compressor, remove the control panel, inner access panel, upper and lower face plates, back panel and unit shell.

NOTE:: *Separating the top of the base assembly from the bottom by extracting the screws from the base assembly legs will allow easier access to the compressor.*

Before removing the compressor, capture the refrigerant from the sealed system. Then, disconnect the electrical leads from the compressor. With a a tube cutter, cut the suction and discharge lines approximately one inch from compressor ports, remove the clips and lift the compressor off of the base assembly. (See Figure 5-31)

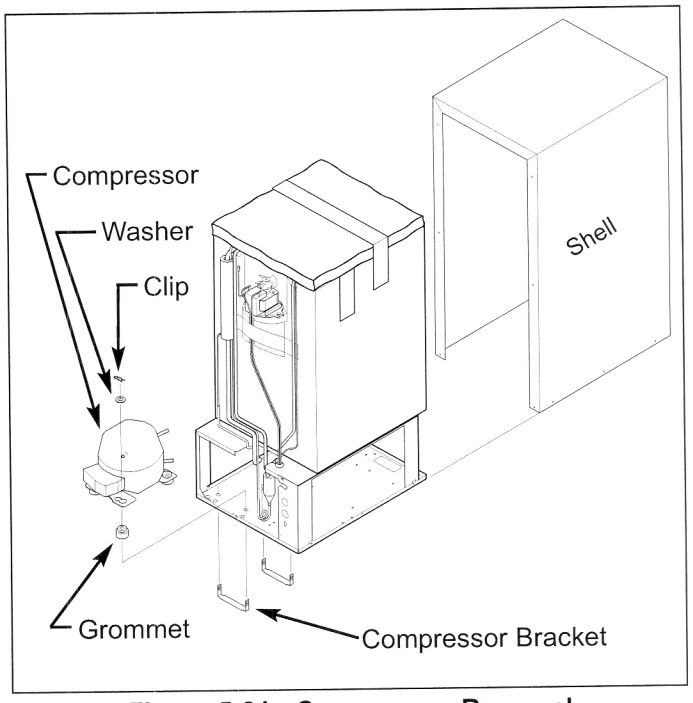

Figure 5-31. Compressor Removal

Condenser Removal

The condenser is attached to the base assembly with screws that pass up through the base into the the bottom side flanges on the condenser. The control box is attached to the top of the condenser with screws that pass through the top side flanges of the condenser into the sides of the control box. The condenser fan shroud is attached to the back of the condenser with screws passing through the shroud into the rear side flanges of the condenser. A styrofoam gasket is sandwiched between the fan shroud and the condenser to prevent air leaks around the shroud. The inlet port of the condenser is attached to the compressor discharge line. The condenser outlet leads to the high-side filter-drier.

To access the condenser, remove the control panel, inner access panel, upper and lower face plates, back panel and unit shell.

NOTE: *Separating the top of the base assembly from the bottom by extracting the screws from the base assembly legs will allow easier access to the condenser.*

Before removing the condenser, capture the refrigerant from the sealed system. Then, cut the compressor discharge line and drier inlet line approximately one inch from the condenser inlet and outlet ports. Disconnect the control box from the top of the condenser. Disconnect the fan shroud from the back of the condenser and lift the condenser off of the base assembly. (See Figure 5-32)

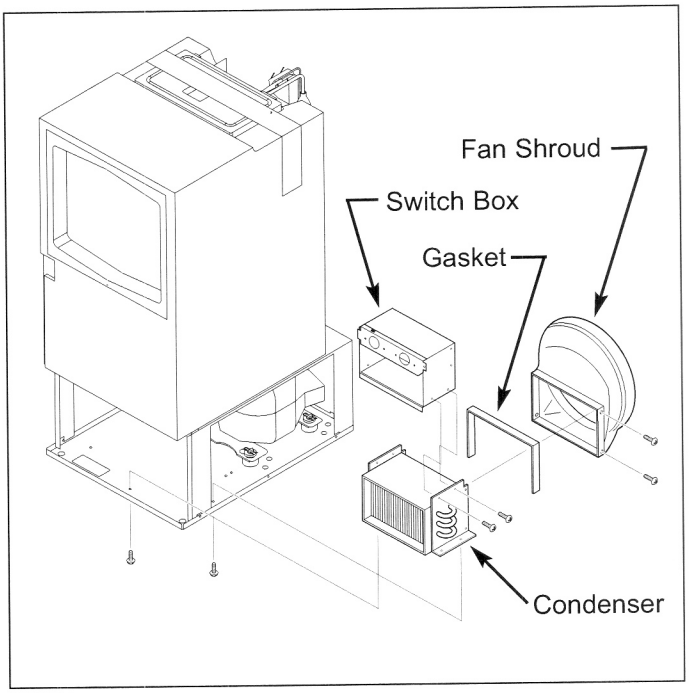

Figure 5-32. Condenser Removal