

INSTRUCTIONS FOR PREPARING A REPLACEMENT ICEMAKER (LESS MOTOR AND TRANSMISSION) FOR INSTALLATION AND THE INSTALLATION OF THE RESULTING ASSEMBLY IN A NATIONAL VENDORS®, CROWN SEVENTY TWO®, COLD DRINK MERCHANDISER THAT IS EQUIPPED WITH A REYNOLDS PRODUCTS INC. ICEMAKER

I. INTRODUCTION

These Instructions cover both the preparation of the replacement Icemaker, (less Motor and Transmission) included in the Kit, for installation and the installation of the resulting Assembly in any National Vendors, Cold Drink Merchandiser that is equipped with a Reynolds Icemaker. The installation when completed, will, unless the Merchandiser was originally so equipped or unless it has been previously so up-dated, convert the Icemaker System to a reverse flow Refrigeration System, plus replace the Automatic Expansion Valve with a Thermostatic Expansion Valve.

The Replacement Icemaker Less Motor and Transmission Kit, Part Number 312-4116, includes the following parts:

Part Number	Description	Quantity
311-4083	Installation Instructions	1
312-4111	Icemaker less Motor and Transmission	1
310-4162	Ice Level Switch Harness Assembly (clear-plastic-cover)	1
310-4146	Ice Level Switch Cable Assembly (3-wire, Grey-molded-cover)	1
311-4030	Ice Chute Mounting Angle	1
310-4100	Liquid Line Tube Assembly	1
310-4155	Ice Chute Assembly	1
310-4157	Ice Chute Cover	1
311-4116	Icemaker Insulation	1
310-8338	Suction Line Tube Assembly	1
311-4121	Suction Line Tube Assembly	1
312-4064	Thermostatic Icemaker Valve	1
312-4083	Bulb Valve Insulation	1
312-4129	Icemaker Miscellaneous Parts consists of:	1
310-4068	Icemaker Record Cleaning Label	1
311-4039	Water Level Label	1
310-4153	Water Level Label	1
312-4090	Water Level Label	1
9900-039	No.10-32 Self Locking Wing Nut	2
310-4010	No.10-32 x 3/8 Thumb Screw	1
310-4123	No.1/4-20 x 3/8 FHS Screw W/LW	1
311-4126	Heat Shrinkable Tube	1
310-6145	Wire Tie	1
311-4114	Wire Tie	5

315-4059	Expansion Valve Bulb Clamp	2
613-8181	Plate Washer	2
301-4091	Coupling	1
310-6215	No.8-32 (Stainless) Nut	1
310-6221	No.8 External Tooth (Stainless) Lockwasher	1
310-8221	No.8-32 x 3/8 PHS (Stainless) Screw	1
312-4097	Ice Chute Upper Bracket Assembly	1
312-4029	Shutoff Plug	1
312-4060	3/8 Flare Gasket	1
314-4004	T.E.V. Icemaker Insulation	1

* * *

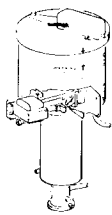
Special Tools Required: Flare Nut Wrench

The Kit includes various operating and mounting parts, which must be properly selected and assembled to the reconditioned Icemaker Assembly, before it can be installed or, during its installation in the Merchandiser. Figure I-1 illustrates and gives the part number of the parts included in the Kit. Check the contents of the Kit with Figure I-1 to be sure all the parts are included in the Kit before starting to replace the defective Icemaker.

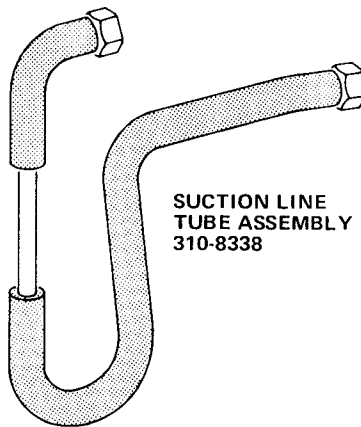
This Instruction is divided into five Sections: Section I - Introduction; Section II - Removal of the Defective Icemaker from the Merchandiser and Removal of the Motor and Transmission Assembly from the Defective Icemaker; Section III - Preparation of the Replacement Icemaker less Motor and Transmission for Installation in the Merchandiser; Section IV - Installation of the reconditioned Icemaker Assembly in the Merchandiser; Section V - Checking the Installation of the Icemaker Assembly in the Merchandiser.

Some of the Sections are divided into several Sub-sections each dealing with a specific aspect of the major procedure covered by the Section Title.

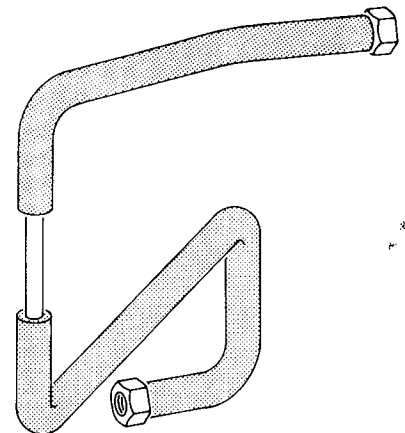
Before starting the work of installing the parts of the Kit, read these Instructions carefully and thoroughly. Because of the complexity of these Instructions, follow ONLY those steps which are applicable to the Merchandiser being worked on. The Non-applicable steps of these Instructions should be marked-out. Retain the Instructions for future part number identification and installation information.



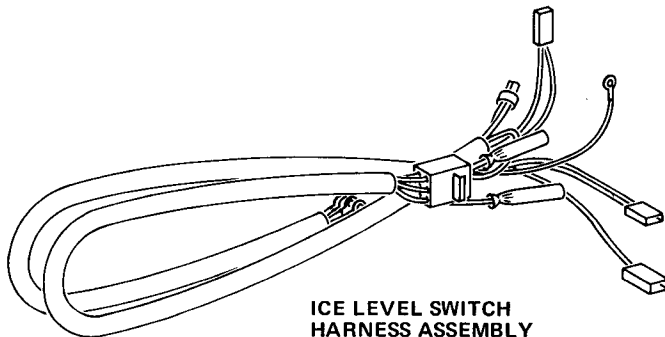
ICEMAKER - LESS
MOTOR AND TRANSMISSION
312-4111



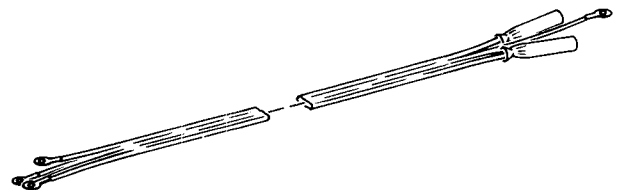
SUCTION LINE
TUBE ASSEMBLY
310-8338



SUCTION LINE
TUBE ASSEMBLY
311-4121



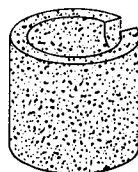
ICE LEVEL SWITCH
HARNESS ASSEMBLY
(CLEAR PLASTIC COVER)
310-4162



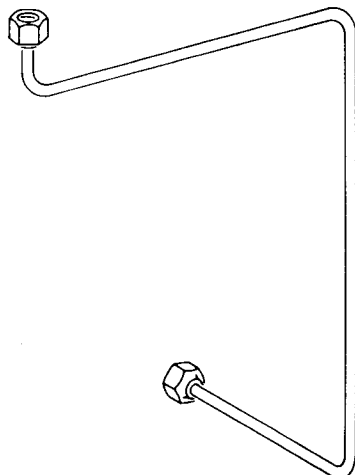
ICE LEVEL SWITCH
CABLE ASSEMBLY
(3-WIRE, GREY MOLDED COVER)
310-4146



BULB VALVE
INSULATION
312-4083



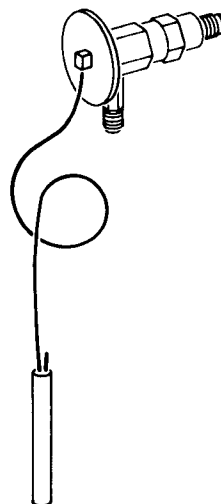
ICEMAKER
INSULATION
311-4116



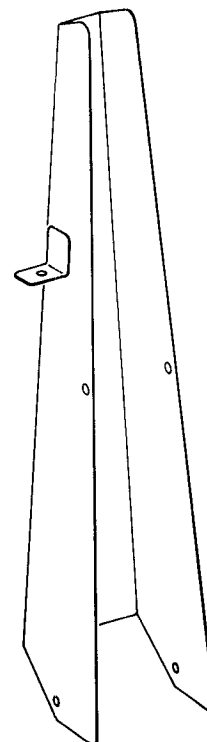
LIQUID LINE
TUBE ASSEMBLY
310-4100



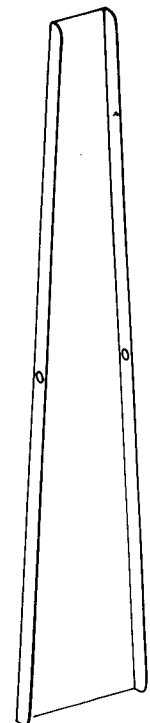
ICE CHUTE
MOUNTING ANGLE
311-4030



ICEMAKER
THERMOSTATIC
VALVE
312-4064



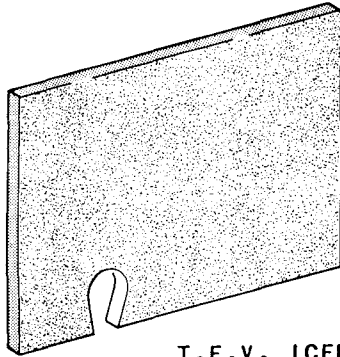
ICE CHUTE
ASSEMBLY
310-4155



ICE CHUTE COVER
310-4157

FIGURE I-1 (1 of 2)

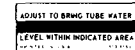
The parts shown on this page make up Icemaker Miscellaneous Parts,
Part Number 312-4129, included in the Kit.



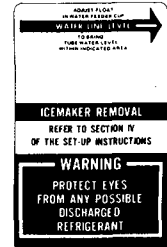
**T.E.V. ICEMAKER
INSULATION**
314-4004



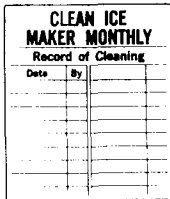
WATER LEVEL LABEL
311-4039



WATER LEVEL LABEL
310-4153



WATER LEVEL LABEL
312-4090



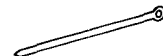
**ICEMAKER RECORD
CLEANING LABEL**
310-4068



COUPLING
301-4091



WIRE TIE
311-4114(5)



WIRE TIE
310-6145



SHUTOFF PLUG
312-4029



3/8 FLARE GASKET
312-4060



**CLAMP-STAINLESS
STEEL** 3154059



**NO.10-32 SELF
LOCKING WING NUT**
9900-039 (2)



**HEAT
SHRINKABLE
TUBE**
311-4126



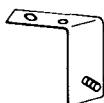
**NO.8-32 x 3/8 PHS
(STAINLESS) SCREW**
310-8221



**NO.1/4-20 x 3/8
FHS SCREW W/LW**
310-4123



**NO.10-32 x 3/8
THUMB SCREW**
310-4010



**ICE CHUTE UPPER
BRACKET ASSEMBLY**
312-4097



PLATE WASHER
613-8181 (2)



**NO.8-32
(STAINLESS) NUT**
310-6215



**NO.8 EXTERNAL TOOTH
(STAINLESS) LOCKWASHER**
310-6221

FIGURE I-1 (2 of 2)

NOTE

1. *For personal physical protection and safety, heed all of the SAFETY WARNINGS given in these Instructions and the WARNING given on the Label on the Icemaker Assembly.*
2. *For Merchandiser protection heed the CAUTIONS given in these Instructions.*
3. *The installation of the reconditioned Icemaker Assembly and some of its associated parts, will require the discharging and recharging of the Refrigeration System. These operations should be performed ONLY by a qualified refrigeration serviceman.*
4. *Use the proper size flare nut wrenches when tightening fittings. Any Tubing which vibrates will harden near the flare ends of the Tube and will become brittle and break.*
5. *None of the original parts replaced when the replacement parts in this Kit are installed, nor any of the unused parts in this Kit are returnable for credit. National Vendors suggests that all unused servicable parts be placed in inventory for replacement use in other National Vendors, Cold Drink Merchandisers.*
6. *Be sure the appropriate steps of the procedures of this Instruction are followed in the order given and that the reconditioned Icemaker Assembly is properly prepared according to the appropriate procedures given in this Instruction.*
7. *If a step of this Instruction indicates the use of an attaching part that is included in the Kit, DO NOT substitute the original equipment attaching part - use ONLY the attaching part included in the Kit, as specified.*
8. *Only certain parts of this Kit can be used on a CDM-312 Merchandiser including the Icemaker Assembly less Motor and Transmission. Therefore the Kit should be used on a CDM-312 only in emergencies. To keep the Kit complete, those parts used should be replaced and added to the Kit.*

A reconditioned Icemaker Assembly that is to be installed in a CDM-72A Merchandiser will use the Ice Level Switch Cable Assembly that is on the replacement Icemaker less Motor and Transmission when shipped. A reconditioned Icemaker Assembly that is to be installed in a CDM-72 Merchandiser, will have the Ice Level Switch Cable Assembly that is on the replacement Icemaker less Motor and Transmission Assembly when shipped, replaced by one of the Cable Assemblies included in the Kit.

There are three different Water Level Labels included in the Kit. The Label to be installed will depend upon whether the Merchandiser is equipped with a stainless-steel or plastic Water Feeder Cup.

The Lower Water Tube on the reconditioned Icemaker Assembly must be cut to a shorter length, if the reconditioned Icemaker Assembly is to be used in a Merchandiser equipped with a National Vendors, Cool-San[®], Manually Actuated Automatic Icemaker Cleaning System.

The Kit includes a Thermostatic Expansion Valve. The defective Icemaker Assembly which is in the Merchandiser and which is being reconditioned, may be equipped with an Automatic Expansion Valve. Be sure to use ONLY the Tubing specified in the applicable procedures of the Instructions.

The Thermostatic Expansion Valve is factory preset for the application.

II. REMOVAL OF THE DEFECTIVE ICEMAKER FROM THE MERCHANDISER AND REMOVAL OF THE MOTOR AND TRANSMISSION ASSEMBLY FROM THE DEFECTIVE ICEMAKER ASSEMBLY

WARNING

1. Installation of this Kit will involve discharging and recharging the Refrigeration System of the Merchandiser which should be performed only by a qualified refrigeration serviceman.
2. Wear safety glasses. R-12 refrigerant boils at minus twenty one degrees fahrenheit (-21°F.) and may freeze any skin area that comes in contact with the refrigerant. If R-12 refrigerant accidentally comes in contact with exposed skin, immediately flush the affected areas of skin with cold water and treat for frostbite.
3. DO NOT inhale the vapor from R-12. The refrigerant vapor acts as an anesthetic.
4. DO NOT discharge the Refrigeration System when an open flame exists in the area. R-12 and an open flame produce a toxic gas.

CAUTION

1. DO NOT allow moisture and air to enter the Refrigeration System. Moisture can freeze and block the openings in the Liquid Line Valve and corrode the metal parts in the system.
2. Always use two proper size wrenches when tightening the fittings. Any tubing allowed to vibrate will harden near the flare section and become brittle and break.

NOTE

1. Seal all lines and components and replace all Valve Caps to prevent moisture and air from entering the Refrigeration System.
2. Keep all refrigerant lines dry, clean, and free from kinks.

1. Disconnect the Merchandiser's electrical Service Cord from the wall receptacle.
2. Unlock and open the Cabinet Door.
3. Move the Power Switch in the Merchandiser to the OFF position.
4. Observe the above Warning, Caution and Notes and remove the defective Icemaker Assembly from the Merchandiser. For CDM-312 Merchandisers, see Set-Up Instructions for easy removal procedure. Retain the attaching hardware for installation of the replacement Icemaker Assembly.
5. Remove the Screw which attaches the Ice Chute Mounting Angle to the Transmission.
6. Remove and retain the four Hex. Head Bolts and Clips which attach the Housing at the base of the Evaporator to the Transmission.
7. Remove the upper portion of the Icemaker from the Motor and Transmission Assembly.
8. Remove the Coupling from the Transmission output Shaft.

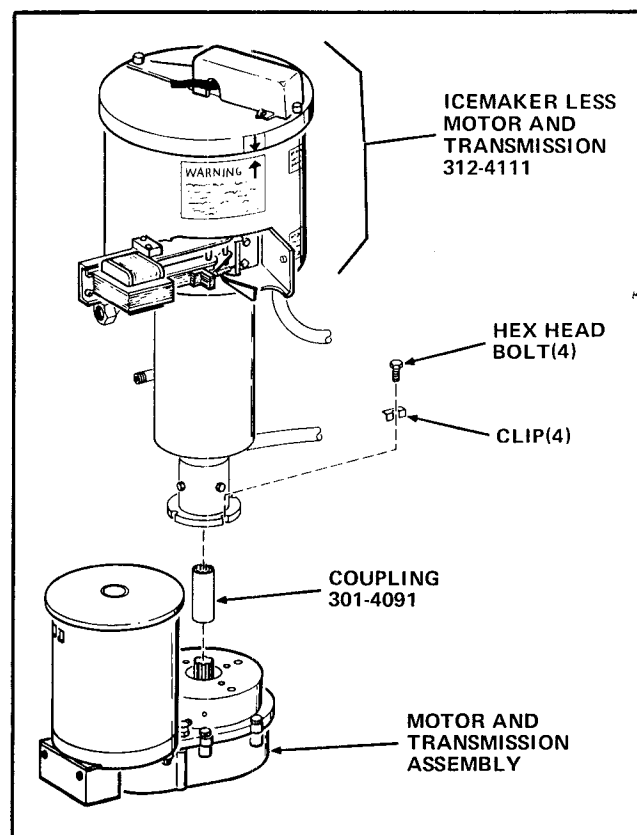


FIGURE III-1

III. PREPARATION OF THE REPLACEMENT ICEMAKER LESS MOTOR AND TRANSMISSION FOR INSTALLATION IN THE MERCHANDISER

A. INSTALLING THE REPLACEMENT ICEMAKER LESS MOTOR AND TRANSMISSION ON THE MOTOR AND TRANSMISSION ASSEMBLY

1. Install the Coupling, Part Number 301-4091, included in the Kit, on the Transmission output Shaft. See Figure III-1.
2. Install the replacement Icemaker less Motor and Transimssion, Part Number 312-4111, included in the Kit, on the Motor and Transmission Assembly. Position the Icemaker less Motor and Transmission so the tube for the Expansion Valve on the Evaporator is directly over the Motor on the Transmission. This positioning places the four cut-outs in the Housing Assembly at the base of the Evaporator in line with the Mounting holes in the Transmission.
3. Install the four clips removed in Step II-6 at the slots in the Housing and securely attach the Housing to the Transimssion with the four Hex. Head Bolts removed in Step II-6.

B. INSPECTION OF THE DEFECTIVE ICEMAKER, ICE LEVEL CONTROL COVER ASSEMBLY, ICEMAKER ICE LEVEL SWITCH CABLE ASSEMBLY

Inspect the Hopper Ice Level Control Cover Assembly on the defective Icemaker Assembly. Any one of 3 different Cable Assemblies may have been used on the Cover Assembly: a 3-wire Grey Molded Cover Cable Assembly; a Clear-plastic Covered Cable Assembly; or a Black-plastic Covered Cable Assembly which is the same as the Cable Assembly on the replacement Ice Level Control Cover Assembly. The Black-plastic covered Assembly may be of either of two lengths. The difference in length is unimportant. After determining the type of Cable Assembly on the defective Icemaker Assembly that is to be replaced, follow the appropriate instructions.

1. If the Ice Level Control Cover Assembly on the defective Icemaker Assembly is the same (except for Cable length) as the Cable Assembly (i.e. Black-plastic-covered) on the replacement Icemaker Assembly, fold the Cable back on itself and install the Wire Tie, Part Number 310-6145, included in the Kit. Skip to Section IV.
2. If the Cable Assembly on the defective Icemaker Assembly is Clear-plastic-covered, follow Procedure III-C, "To Install A Clear-plastic-covered Ice Level Switch Harness Assembly".

3. If the Cable Assembly is a 3-Wire, Grey-molded-covered Cable, follow Procedure III-D, "To Install A 3-Wire Grey-molded-covered Cable Assembly."

C. TO INSTALL A CLEAR-PLASTIC-COVERED ICE LEVEL SWITCH HARNESS ASSEMBLY

1. Remove the 2 No.6-32 x 3/8" Philips Head Screws which attach the Ice Level Switch Cover to the Ice Level Control Cover on the replacement Icemaker Assembly, Part Number 312-4025, included in the Kit. See Figure III-2.
2. Remove the Switch Cover from the Ice Level Control Cover Assembly.
3. Remove the Screw and Lockwasher which attaches the Green (grounding) Wire Terminal to the Switch Bracket.
4. Remove the 2 No.6-32 x 1" Philips Head Screws and the Speed Nut which attach the Ice Level Switch and the Insulator to the Switch Bracket on the replacement Ice Level Control Cover Assembly and remove the Ice Level Switch and the Insulator.

5. Remove the 2 wires from the Ice Level Switch Terminals.

6. Remove the Strain Relief which holds the Cable Assembly in place in the Switch Bracket.

NOTE

To remove the Strain Relief, squeeze the Strain Relief^x and push it out of the hole in the Switch Bracket.

7. Remove the factory installed Cable Assembly from the Ice Level Control Cover Assembly on the replacement Icemaker Assembly. This Cable Assembly will not be used in the Merchandiser, however, the Switch and Insulator will be used.

8. Remove the 2 Screws which attach the Ice Dispenser Switch and its Insulator to the Disposal Mechanism Assembly on the replacement Icemaker, and remove the Switch and the Insulator from the Icemaker.

9. Remove the Switch from the Cable Assembly. The Switch, Insulator, and Screws will be reinstalled.

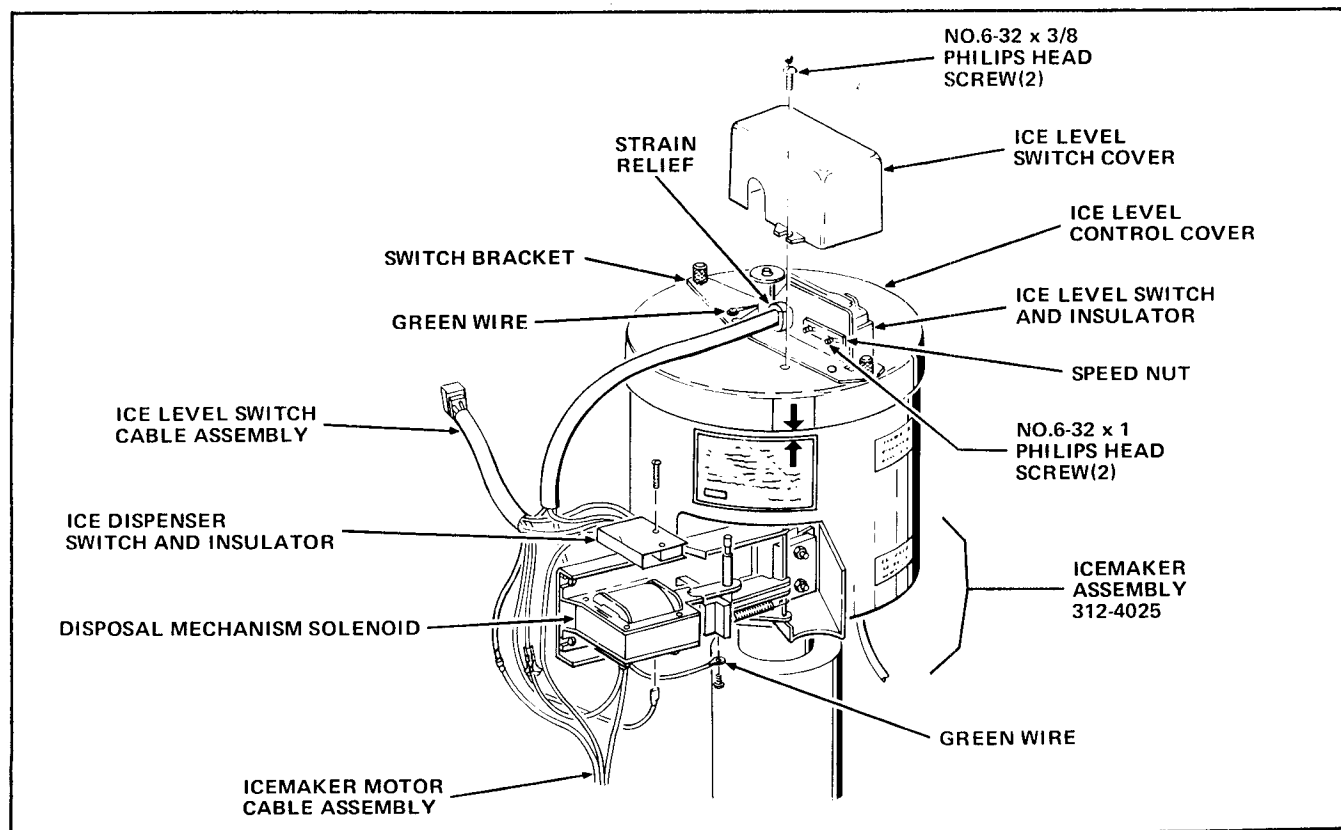


FIGURE III-2

10. Disconnect the Cable from the Icemaker Motor Cable Assembly and Disposal Mechanism Solenoid. DO NOT remove the quick-disconnect on the Icemaker Motor Cable Assembly from the Disposal Mechanism Solenoid.
11. Remove the Screw which attaches the Green grounding wire to the Bracket and save the Screw for reinstallation. Remove the Ice Level Switch Cable Assembly from the Icemaker.
12. Insert the replacement Ice Level Switch Harness Assembly, clear-plastic-covered, (part number 310-4162, included in the Kit) through the hole in the Switch Bracket from which the Cable Assembly was removed in step III-C7. Be sure the end of the Cable with the 4-brass ring-terminals is toward the Switch side of the Switch Bracket. See Figure III-3.
13. Attach the Orange Wire on the Cable Assembly to the Normally Open (center) contact of the Switch removed in step III-B4.
14. Attach the Black Wire to the Common (rear blade-hinge-end) contact of the Switch.
15. Attach the Red/White Wire to the Normally Closed (front) contact of the Switch.
16. Install the Insulator (removed in step III-C3) and the Ice Level Switch, to which the replacement Cable Assembly has been attached, on the Switch Bracket of the replacement Ice Level Control Cover Assembly.
17. Loosely attach the Insulator and Ice Level Switch with the 2 No.6-32 x 1" Screws and the Speed Nut removed in step III-C4. Insert the Screws through the Insulator and Switch, into the Switch Bracket, and then into the Speed Nut.

NOTE

Before proceeding, check the following:

1. Be sure the Switch Bracket is in its proper place on the Ice Level Control Cover.
 2. Be sure the Actuation Blade on the Ice Level Switch is under the Switch Actuation Washer on the Cover Assembly. See Figure III-4.
18. Pull the replacement Ice Level Switch Harness Assembly through the Switch Bracket hole to remove most of the slack from the Switch side of the Bracket.

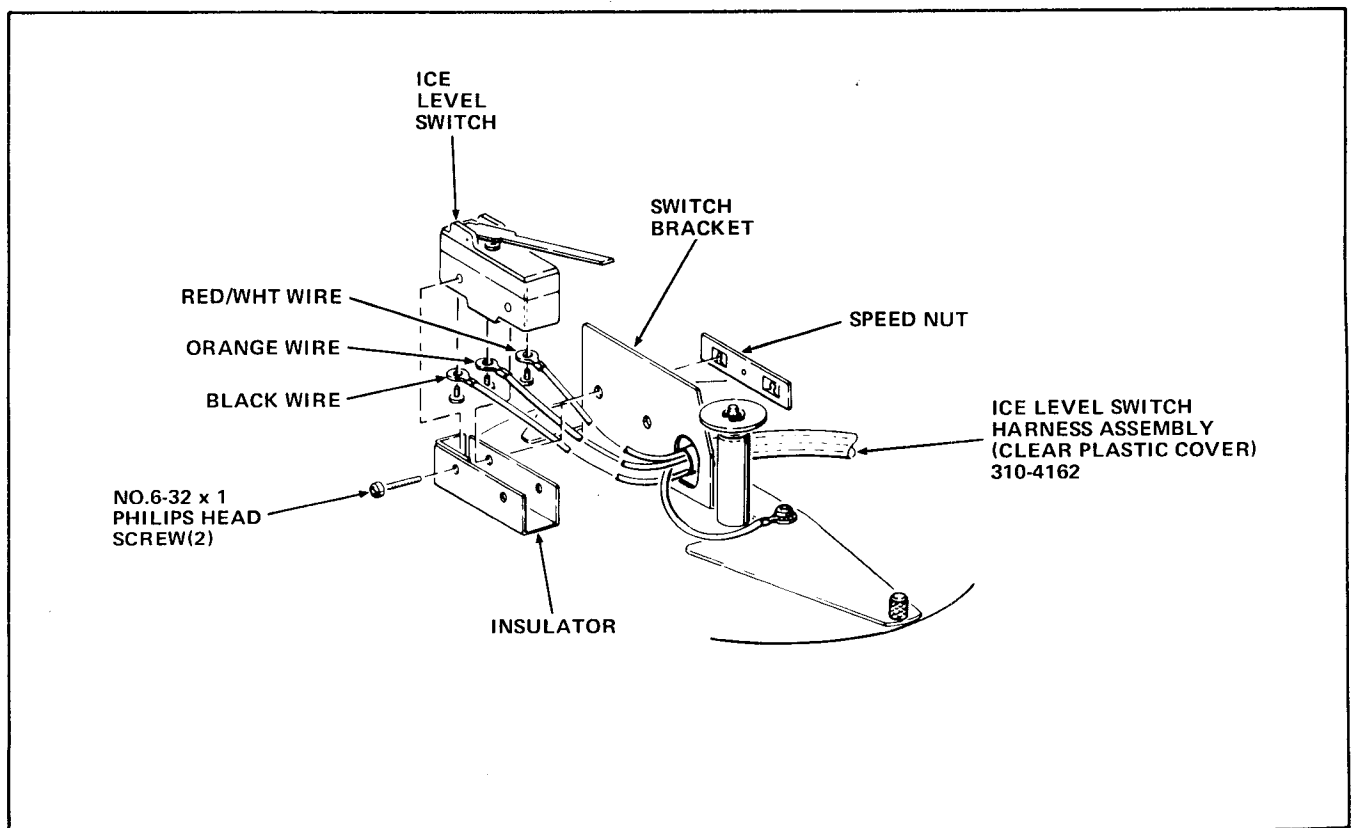


FIGURE III-3

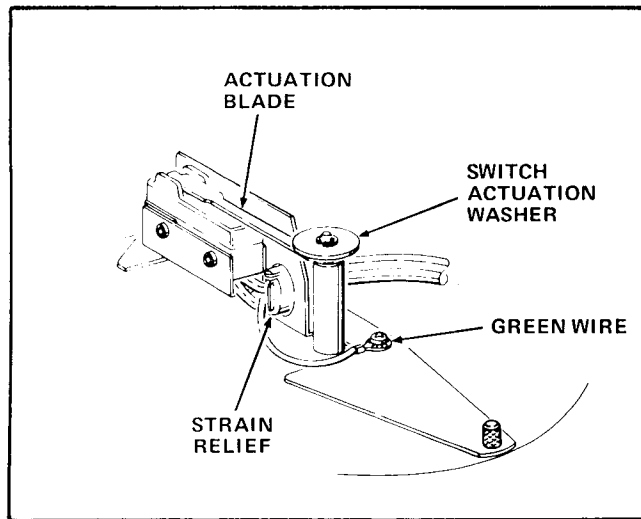


FIGURE III-4

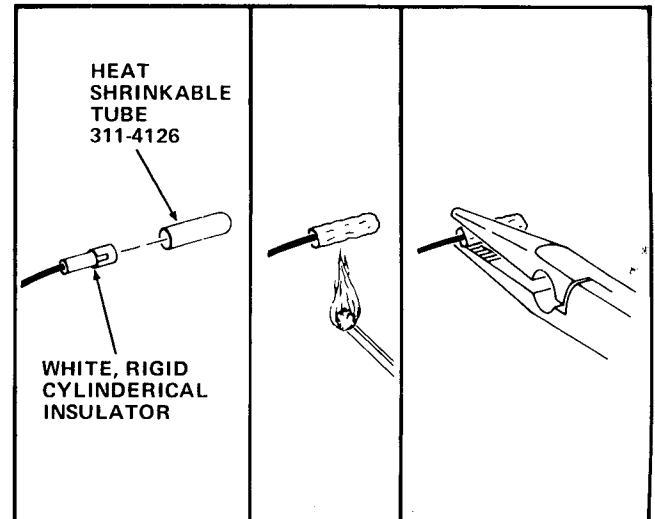


FIGURE III-5

19. Place the Strain Relief, removed in step III-C6, on the replacement Harness Assembly. The Strain Relief is to be on the side of the Bracket opposite the Switch. The tapered end of the Strain Relief is to be toward the Bracket and as close to the hole in the Bracket as possible.
20. Push the Strain Relief into the hole in the Switch Bracket.
21. Tighten the two Screws installed in step III-C17.
22. Attach the Green (grounding) Wire Terminal, on the replacement Harness Assembly, to the Switch Bracket at the spot from which the Green Wire was removed.
23. Install the Switch Cover removed in step III-C2 and attach the Cover with the 2 Screws removed in step III-C1.
24. Attach the Switch and Insulator referred to in step III-C9, to the Ice Level Harness Assembly.
 - a. Attach the quick-disconnect-insulated Connector at the end of the 2 Orange Wires to the Normally Closed contact of the Switch.
 - b. Attach the quick-disconnect-insulated Connector at the end of the 2 Black Wires to the Normally Open contact of the Switch.
 - c. Attach the terminal of the wire with the single quick-disconnect terminal on the Icemaker Motor Cable Assembly, to the Common contact of the Switch.
25. Install the Ice Dispenser Switch and its Insulator on the Disposal Mechanism Assembly on the Icemaker. Attach the Switch and the Insulator. Use the 2 Screws referred to in step III-C8.
26. Attach the ring-terminal on the Green (grounding) Wire to the underside of the Disposal Mechanism Assembly with the Screw and Lockwasher which attached the Green wire in the original Cable Assembly.
27. Attach the quick-disconnect Terminal on the Red/Yellow Wire to the open terminal on the Disposal Mechanism Solenoid.
28. Attach the quick-disconnect Spade Connector on the White Wire that is at the end of the 2-White Wire spliced pair to the soft-plastic-insulator-covered Terminal on the Black Wire that connects to the Black Wire which is connected to the Icemaker Dispenser Solenoid and the Icemaker Motor.
29. Place the Heat Shrinkable Tube (part number 311-4126) over the white, rigid, cylindrical Insulator on the end of the third Black Wire on the Icemaker Motor Cable Assembly. See Figure III-5.
30. Heat the Tube with a lighted match until the Tube shrinks into place around the cylindrical Insulator. While the Tube is hot, seal the ends with a pair of pliers.
31. Follow the Procedures given in Section IV. "Installation Of The Replacement Icemaker Assembly In the Merchandiser".

**D. TO INSTALL A 3-WIRE
GREY-MOLDED-COVERED CABLE ASSEMBLY**

1. Follow steps III-C1 through III-C-11.
2. Insert the replacement Ice Level Switch Cable Assembly - 3-wire Grey Molded Cover (part number 310-4146 included in the Kit) through the hole in the Switch Bracket from which the Cable Assembly was removed in step III-C7. Be sure the end of the Cable with the 3-brass ring-terminals is toward the Switch side of the Switch Bracket. See Figure III-6.
3. Attach the terminal on the end of the shorter of the 2 outer leads to the Normally Open (center) contact of the Switch.
4. Attach the terminal on the end of the longer of the 2 outer leads to the Common (rear blade-hinge-end) contact of the Switch.
5. Follow steps III-C16 through III-C23 and III-C29 through III-C31.

**IV. THE INSTALLATION OF THE RECONDITIONED
ICEMAKER ASSEMBLY IN THE MERCHANDISER**

- A. Attach the appropriate Water Level Label to the replacement Icemaker Assembly Evaporator. See Figure IV-1.
 1. If the Merchandiser is equipped with a stainless-steel Water Feeder Cup, use Water Level Label (part number 310-4153).
 2. If the Merchandiser is equipped with a plastic Water Feeder Cup, use Water Level Label (part number 311-4039).
 3. Use Water Level Label (part number 312-4090) on CDM-312 Merchandisers.
- B. Attach the Icemaker Cleaning Record Label (part number 310-4068) to the replacement Icemaker Assembly Evaporator. See Figure IV-1.

NOTE

The Cleaning Record Label may be placed on the Merchandiser wall behind the Icemaker Assembly.

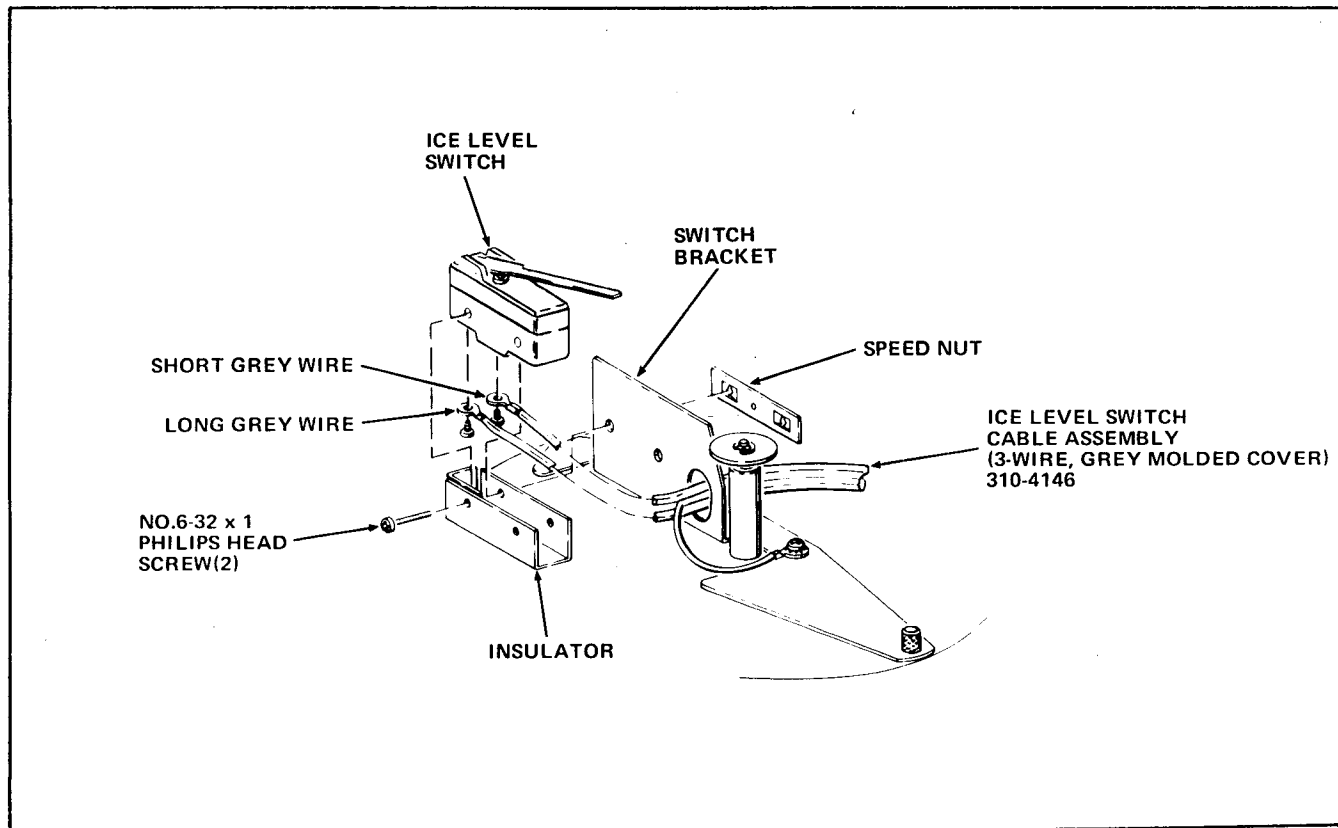


FIGURE III-6

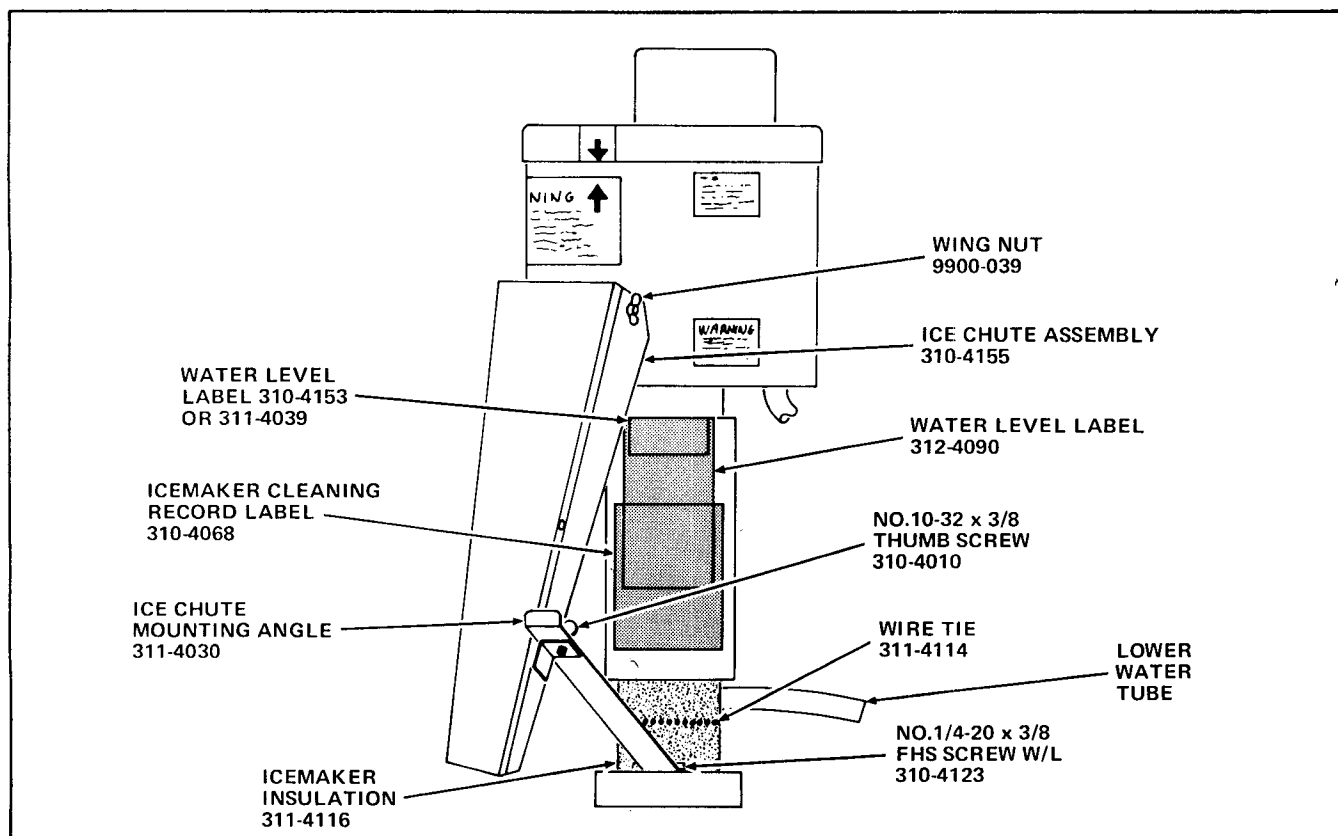


FIGURE IV-1

- C. Install the Icemaker Insulation (part number 311-4116) around the Lower Bearing Housing of the replacement Icemaker Assembly. Attach the Insulation with one of the Wire Ties (part number 311-4114). See Figure IV-1.
- D. If the replacement Icemaker Assembly is to be installed in a Merchandiser that is equipped with a National Vendors, Cool-San Manually Actuated Automatic Icemaker Cleaning System, cut the lower plastic tube (Lower Water Tube) on the Icemaker Assembly to a length of 4 3/4". Use a sharp knife and make a clean square cut. See Figure IV-1.

NOTE

1. If the Merchandiser is a CDM-72 or CDM-72A perform step E and skip steps F and G.
 2. If the Merchandiser is a CDM-312 skip step E and perform steps F and G.
- E. Install the replacement Ice Chute Mounting Angle, Part Number 311-4030, included in the Kit, on the replacement Icemaker. See Figure IV-1. Attach the Angle with the 1/4 - 20 x 3/8 Screw/Lockwasher, Part Number 310-4123,

included in the Kit. Install the replacement Ice Chute Assembly, Part Number 310-4155, included in the Kit, on the Icemaker. Attach the Chute Assembly to the Icemaker Hopper with the Wing Nut, Part Number 9900-039, included in the Kit, and to the Mounting Angle with the Thumb Screw, Part Number 310-4010, included in the Kit. Place the Ice Chute Cover, Part Number 310-4157, included in the Kit, on the Ice Chute Assembly by fitting the bosses on the Ice Chute Assembly in the holes in the Ice Chute Cover. See Figure IV-1.

- F. Remove the Green (grounding) Wire Terminal from the Switch Bracket on the replacement Icemaker Assembly. Attach the Green Wire and the Ice Chute Upper Bracket Assembly, Part Number 312-4097, included in the Kit, to the Switch Bracket using the No.8-32 x 3/8 Pan Head (Stainless) Screw, Part Number 310-8221, No.8 External Tooth (Stainless) Lockwasher, Part Number 310-6221, and No.8-32 (Stainless) Nut, Part Number 310-6215, all included in the Kit.
- G. Remove the Ice Chute Assembly from the defective Icemaker and attach the Ice Chute Assembly to the replacement Icemaker Assembly using the two Wing Nuts, Part Number 9900-039, and two Plate Washers, Part Number 613-8181, both parts included in the Kit.

NOTE

1. If the Merchandiser is a CDM-72 and had the Expansion Valve toward the bottom of the Evaporator or had the Reverse Flow Kit, Part Number 310-4091, installed, perform steps H and I.
 2. If Merchandiser is a CDM-72 or CDM-72A and had the Expansion Valve toward the top of the Evaporator but not equipped with the Reverse Flow Kit, Part Number 310-4091, perform Step H and omit Step I.
- H. Remove the Tube Assembly that was connected between the Icemaker and the Solenoid Valve.
- I. Remove the Tube Assembly that was connected between the Icemaker and Sight Glass Tee.
- J. Install the replacement Icemaker Assembly in the Merchandiser using the Screws removed in Step II-4.

CAUTION

1. **DO NOT** allow moisture and air to enter the Refrigeration System. Moisture can freeze and block the openings in the Liquid Line Valve and corrode the metal parts in the system.
2. Always use the proper size wrenches when tightening the fittings. Any tubing allowed to vibrate will harden near the flare section and become brittle and break.

NOTE

If installing the Icemaker Assembly in a CDM-312 Merchandiser, install the 3/8 Flare Gasket, Part Number 312-4060 and the Shut off Plug, Part Number 312-4029, both included in the Kit, on the Icemaker Assembly before attaching the Suction Line Tube Assembly. See Figure IV-2.

- K. Install the replacement Icemaker Suction Line Tube Assembly, Part Number 310-8338 (CDM-72 Merchandisers) or Part Number 311-4121 (CDM-72A Merchandisers) included in the Kit, in the Merchandiser by connecting one end of the Icemaker Suction Line Tube Assembly to the Solenoid Valve and the other end to the Icemaker Assembly. See Figure IV-3 for CDM-72A Merchandisers and Figure IV-4 for CDM-72 Merchandisers.
- L. Install the Icemaker Thermostatic Valve, Part Number 312-4064, included in the Kit, in the Merchandiser by connecting the Icemaker Thermostatic Valve to the Icemaker Assembly.

NOTE

Step M applies only if Step I was performed.

- M. Install the replacement Icemaker Liquid Line Tube Assembly, Part Number 310-4100, included in the Kit, between the Sight Glass Tee and the Thermostatic Icemaker Valve.
- N. Connect the Icemaker Liquid Line Tube Assembly to the 1/4 Male Flare on the Icemaker Thermostatic Valve.
- O. Attach the sensor (or bulb) on the Icemaker Thermostatic Valve at the break in the Insulation on the Icemaker Suction Line Tube Assembly with two Clamps, Part Number 315-4059, included in the Kit.
- P. Wrap the Insulation, Part Number 312-4083, included in the Kit, around the sensor on the Icemaker Thermostatic Valve and the Icemaker Suction Line Tube Assembly and secure with two Wire Ties, Part Number 311-4114, included in the Kit.

NOTE

It is very important that the sensor (bulb) makes good contact with the Icemaker Suction Line Tube Assembly and that the Insulation is properly installed to assure that the sensor is sensing the temperature of the R-12 refrigerant in the Tube and not the atmospheric temperature.

- Q. Place the Icemaker Insulation, Part Number 314-4004, around the Icemaker Thermostatic Valve.
- R. Secure the Insulation installed in Step Q with two Wire Ties, Part Number 311-4114, included in the Kit.
- S. If the Ice Level Switch Harness Assembly has a black or clear cover connect the Harness Plug to its mating Merchandiser Receptacle.

NOTE

If the Ice Level Switch Harness Assembly (clear cover) was used, perform Steps T and U.

- T. Attach the soft-plastic-insulator-covered Terminal on the White Wire to the Black Wire Terminal connected to the Icemaker Refrigeration Solenoid.
- U. Attach the soft-plastic insulator-covered Terminal on the Orange Wire to the Orange (No.12) Wire Terminal.

NOTE

If the Ice Level Switch Cable Assembly (Grey molded cover) was used, perform Steps V, W, and X.

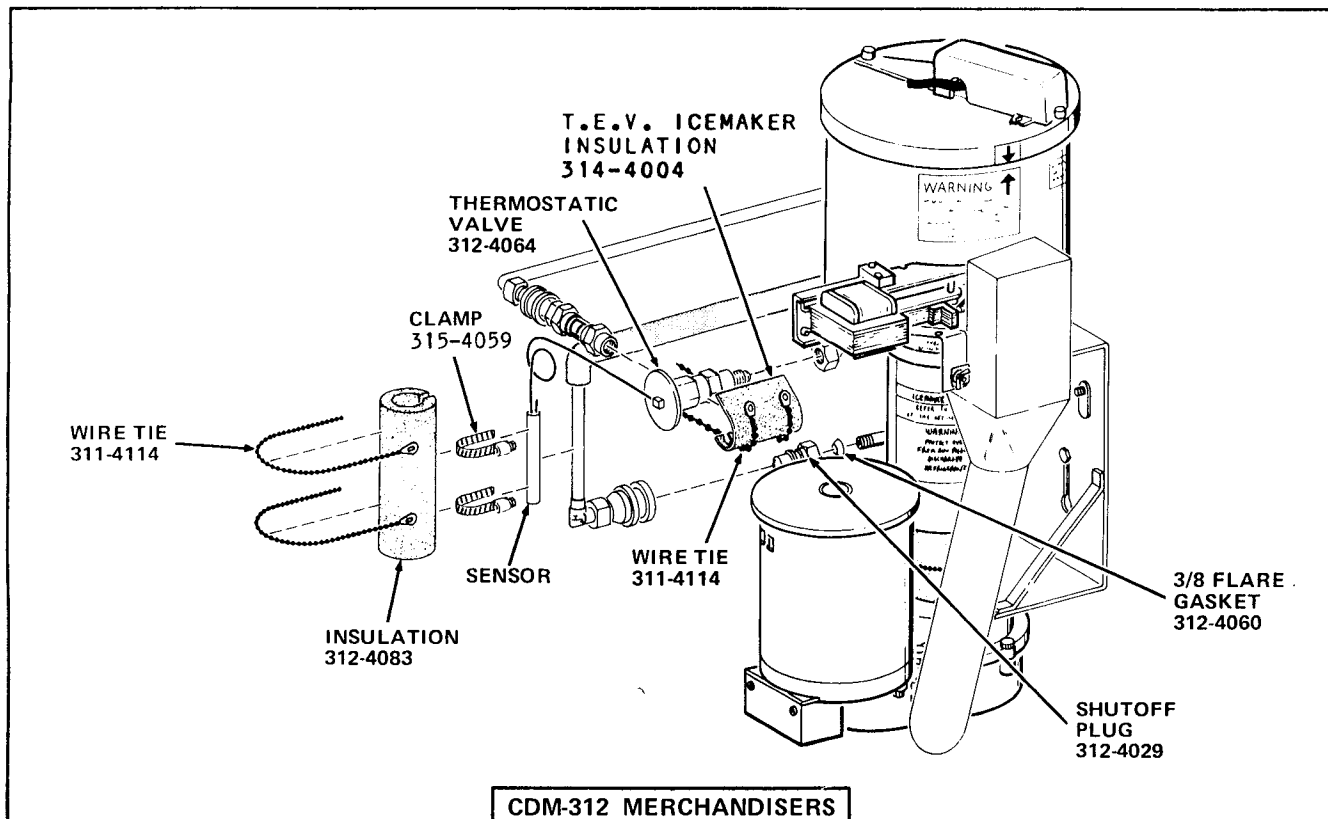


FIGURE IV-2

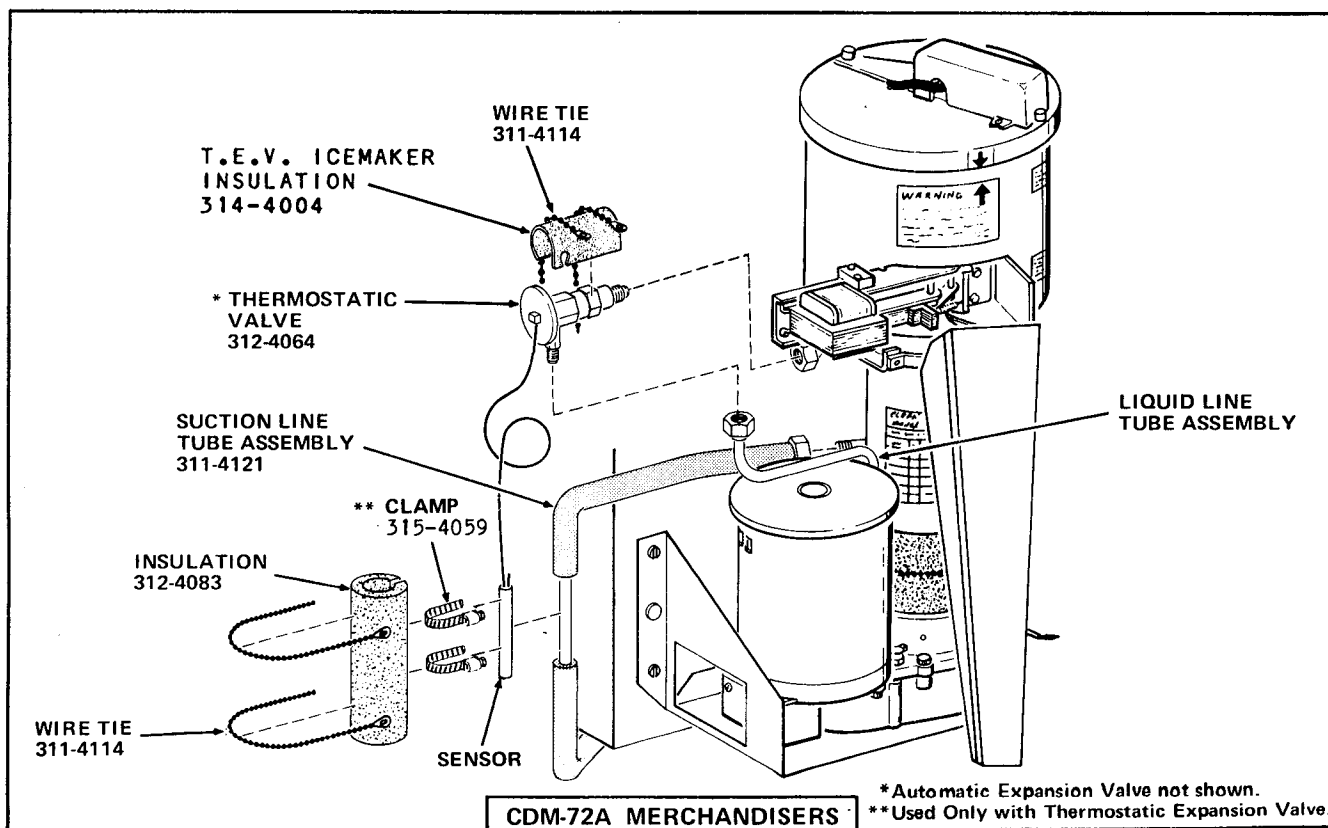


FIGURE IV-3

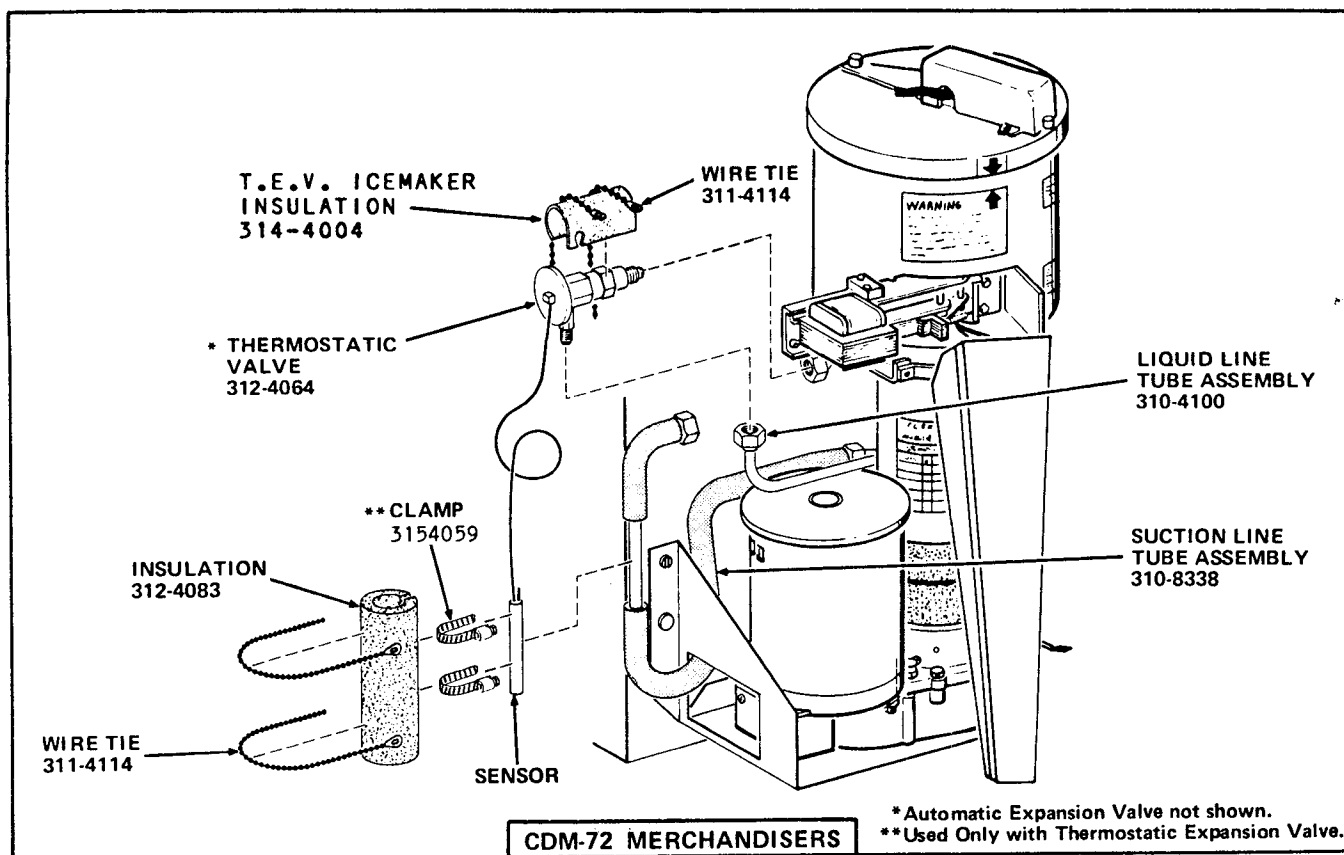


FIGURE IV-4

V. Attach the 2 quick-disconnect Terminals on the ends of the replacement Ice Level Switch Cable Assembly to the quick-disconnects on the Control Box To Icemaker And Water Feeder Cup Cable Assembly. The polarity of the connection is not imperative. See Figure IV-5.

W. Attach the terminal of the wire with the single quick-disconnect terminal on the Icemaker Motor Cable Assembly to the Common Contact of the Ice Dispenser Switch, the white wire to the Normally Open contact of the Ice Dispenser Switch, and install the Ice Dispenser Switch and its insulator on the Disposal Mechanism Assembly using the two Screws removed in Step III-B8.

X. Attach the remaining soft-plastic-insulator-covered Terminal on the Icemaker Motor Cable Assembly to its mating Merchandiser Connection.

V. CHECKING THE INSTALLATION OF THE ICEMAKER ASSEMBLY IN THE MERCHANDISER

1. Be sure all tubing is properly connected.
2. Connect the Merchandisers electrical Service Cord to a properly polarized wall receptacle.

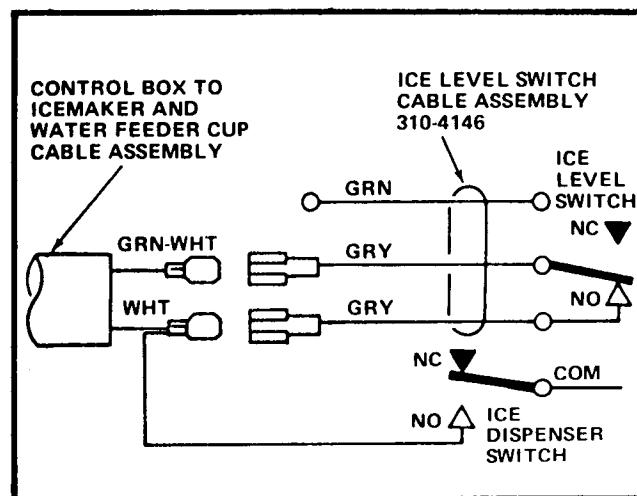


FIGURE IV-5

3. Charge the Refrigeration System with R-12 refrigerant as specified on Merchandiser. Observe the Warning and Caution given at the beginning of this Instruction.
4. Check the Refrigeration System.

NOTE

Icemaker Pressure Readings:

- Low Side - approximately 10 psi on the low side pressure gauge*
- High Side - 125 psi @75° Ambient temperature*
135 psi @85° Ambient temperature
150 psi @95° Ambient temperature

Water Bath Pressure Readings:

- Low Side - approximately 10 psi at the Compressor just before cut-out*
- High Side - 130 psi @75° Ambient temperature*
140 psi @85° Ambient temperature
155 psi @95° Ambient temperature

The head pressure readings may vary as much as \pm 10 psi, and the system still be operating properly. When the refrigeration system is operating properly there should be a minimum of one inch of frost on the outlet side Tube on the Icemaker Evaporator.

5. Test vend the Merchandiser.
6. Close and lock the Cabinet Door.