

Speed Queen

A **Raytheon** Company

Parts and Service Manual for Commercial SuperMate™ Washer- Extractors

WARNING

FAILURE TO INSTALL, MAINTAIN, AND/OR OPERATE THIS MACHINE ACCORDING TO MANUFACTURER'S INSTRUCTIONS MAY RESULT IN CONDITIONS WHICH CAN PRODUCE BODILY INJURY AND/OR PROPERTY DAMAGE.

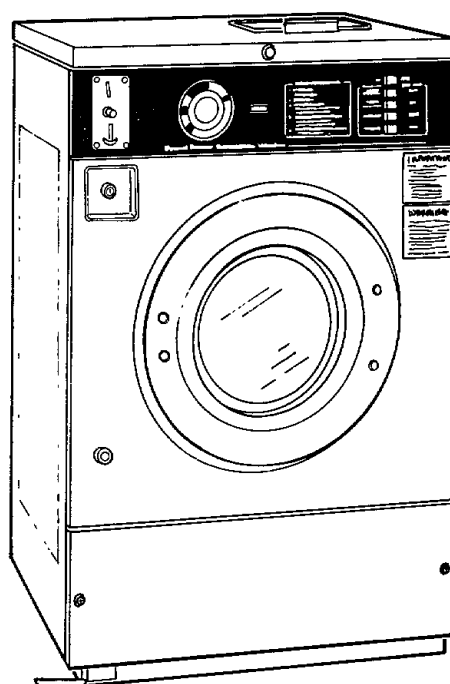
NOTE: The **WARNING** and **IMPORTANT** instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which **CANNOT** be built into this Washer-Extractor. These factors **MUST BE** supplied by the person(s) installing, maintaining or operating this unit.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

Nameplate Location

IMPORTANT

When writing for information on the SuperMate washer/extractor, be sure to mention model and serial numbers. The model and serial numbers will be found on the nameplate as shown.



NOTE: When reference to directions (right or left) is made in this manual, it is from the operator's position facing the front of the washer.

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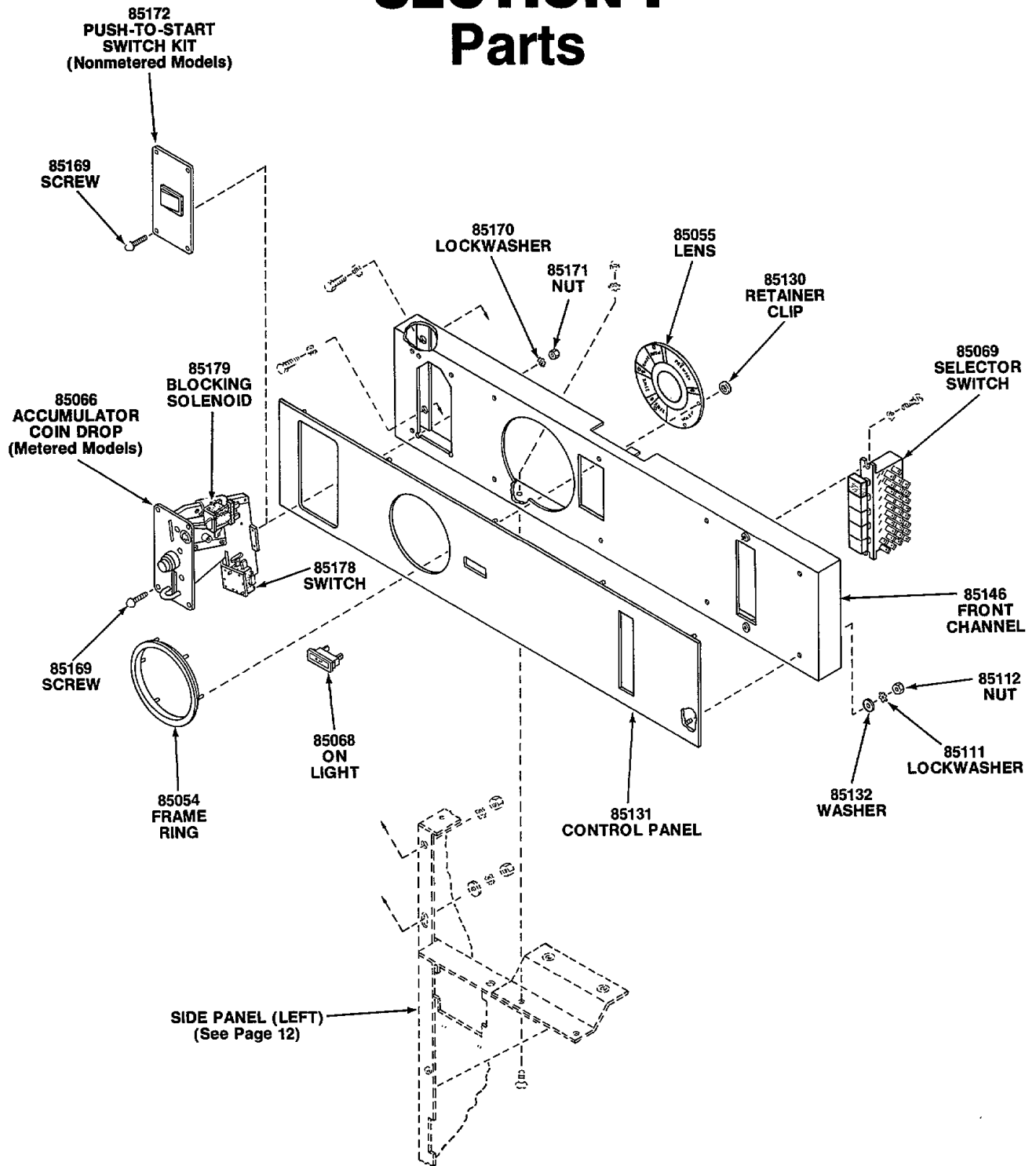
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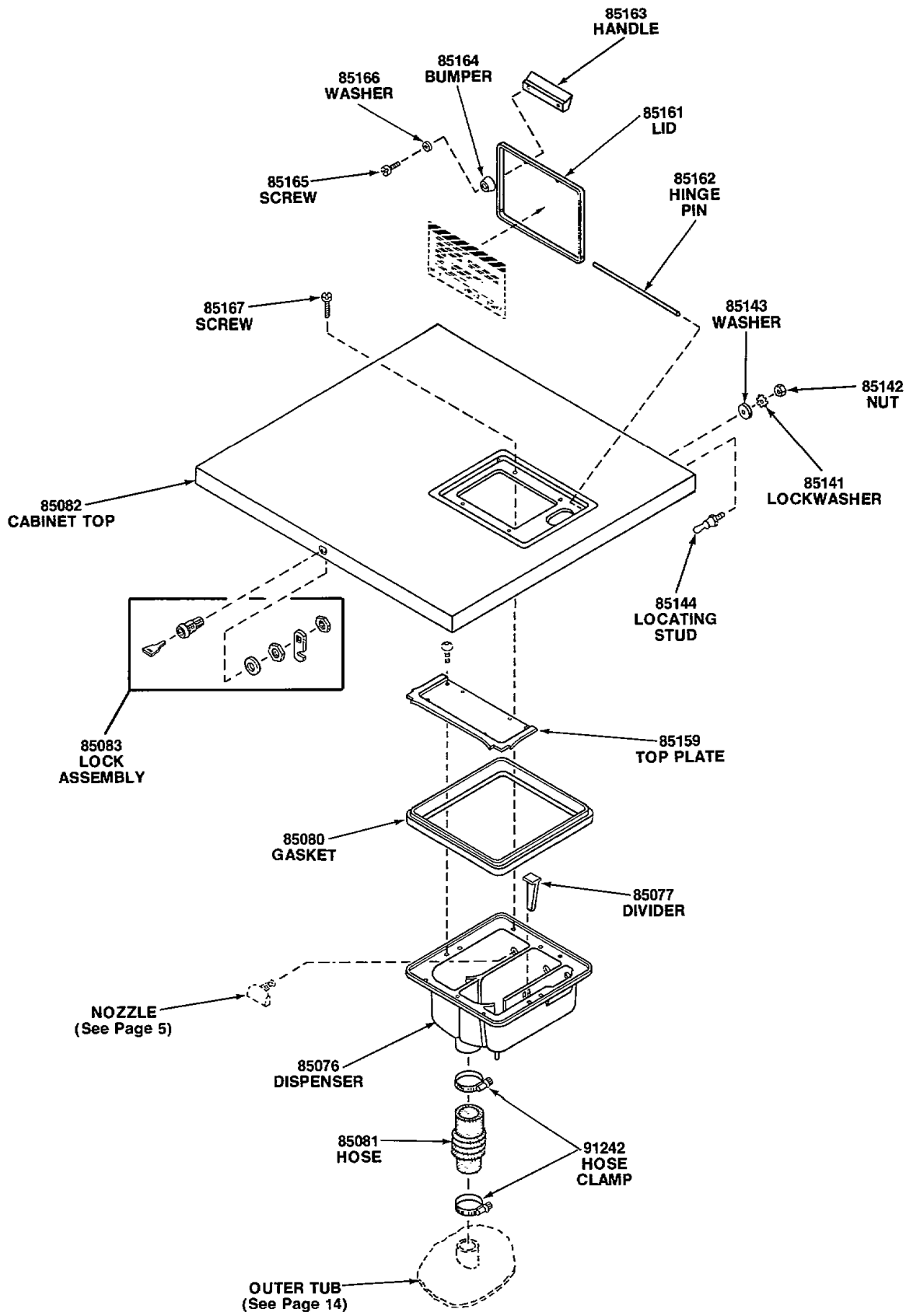
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SECTION I

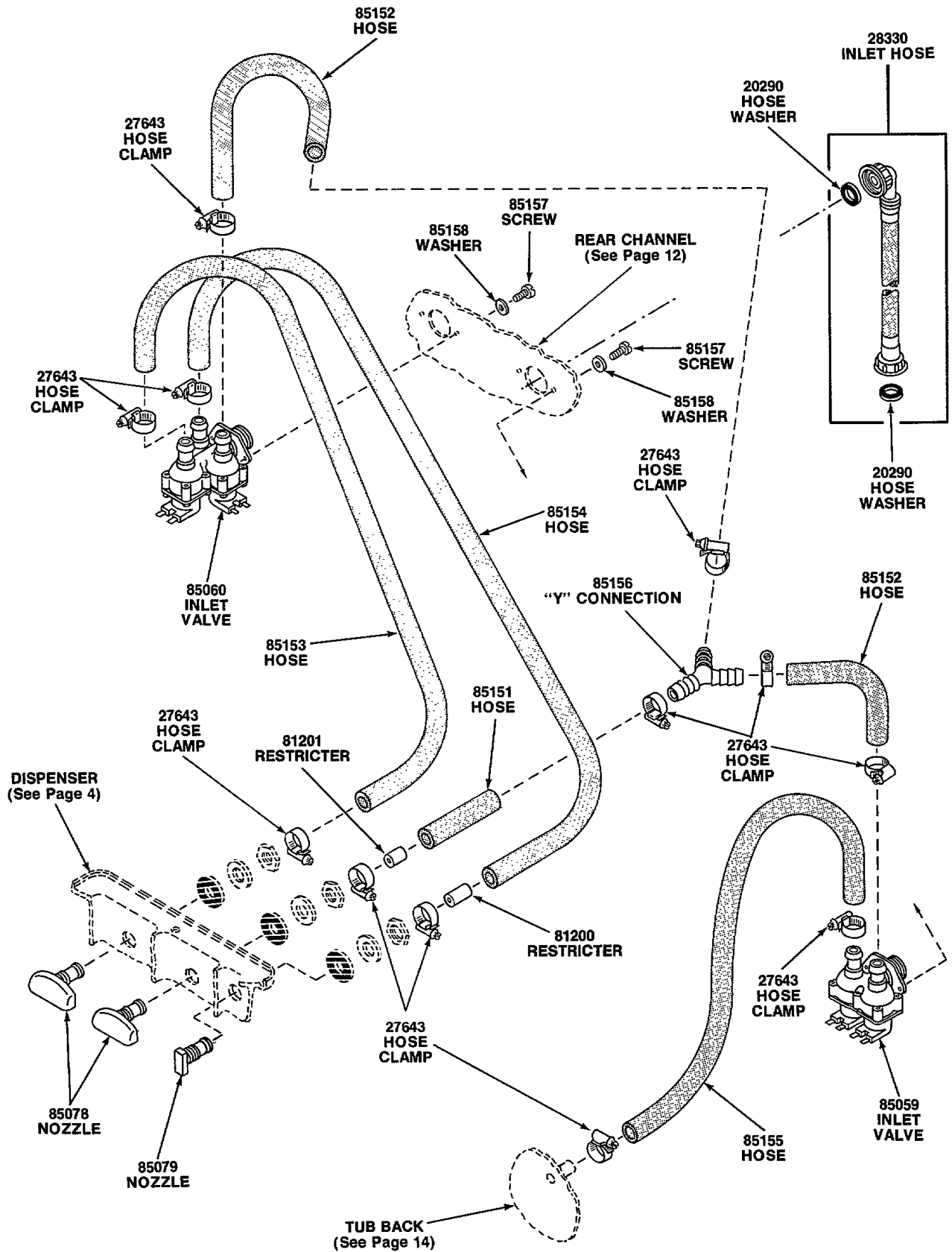
Parts



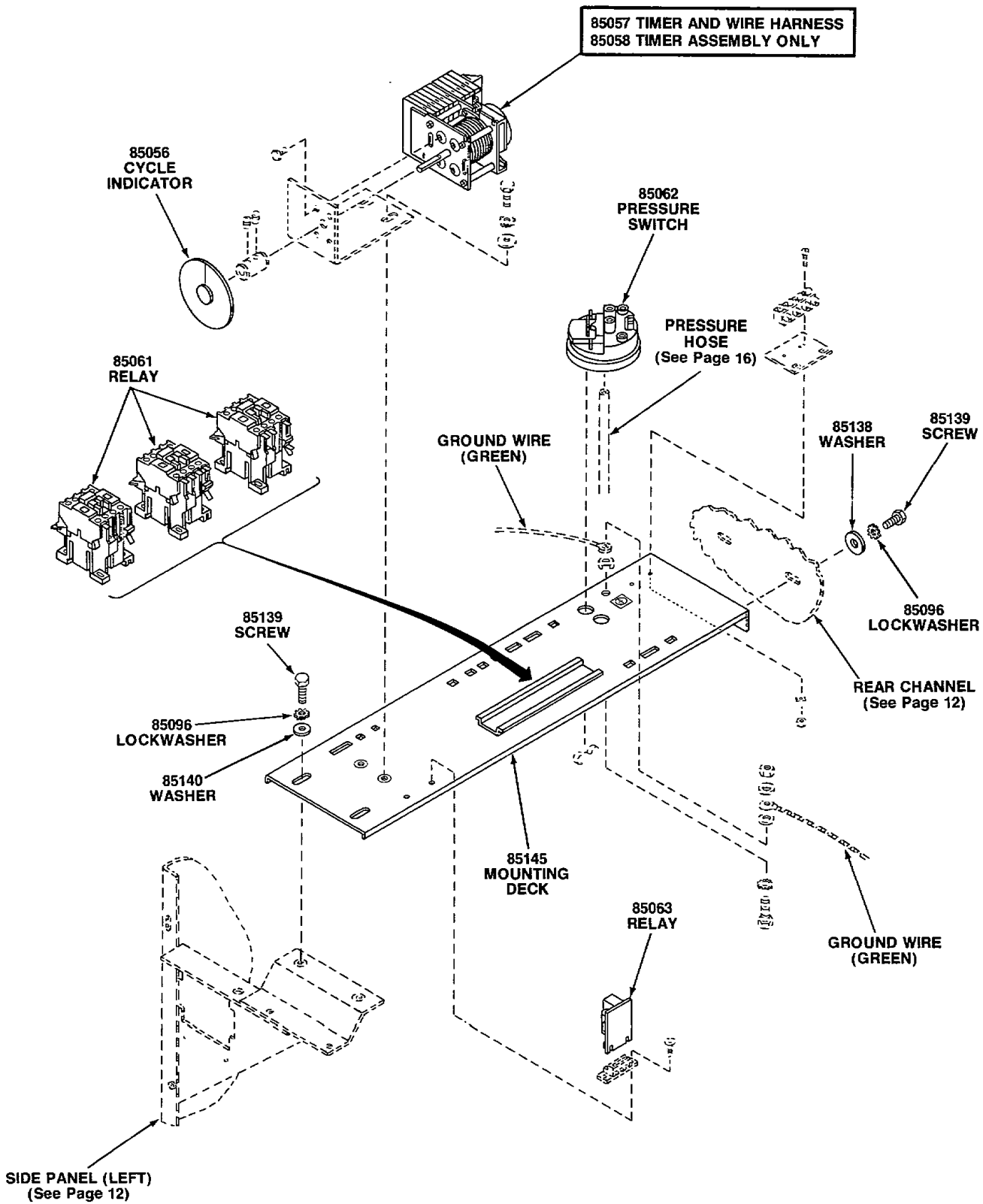
CONTROL PANEL AND CONTROLS



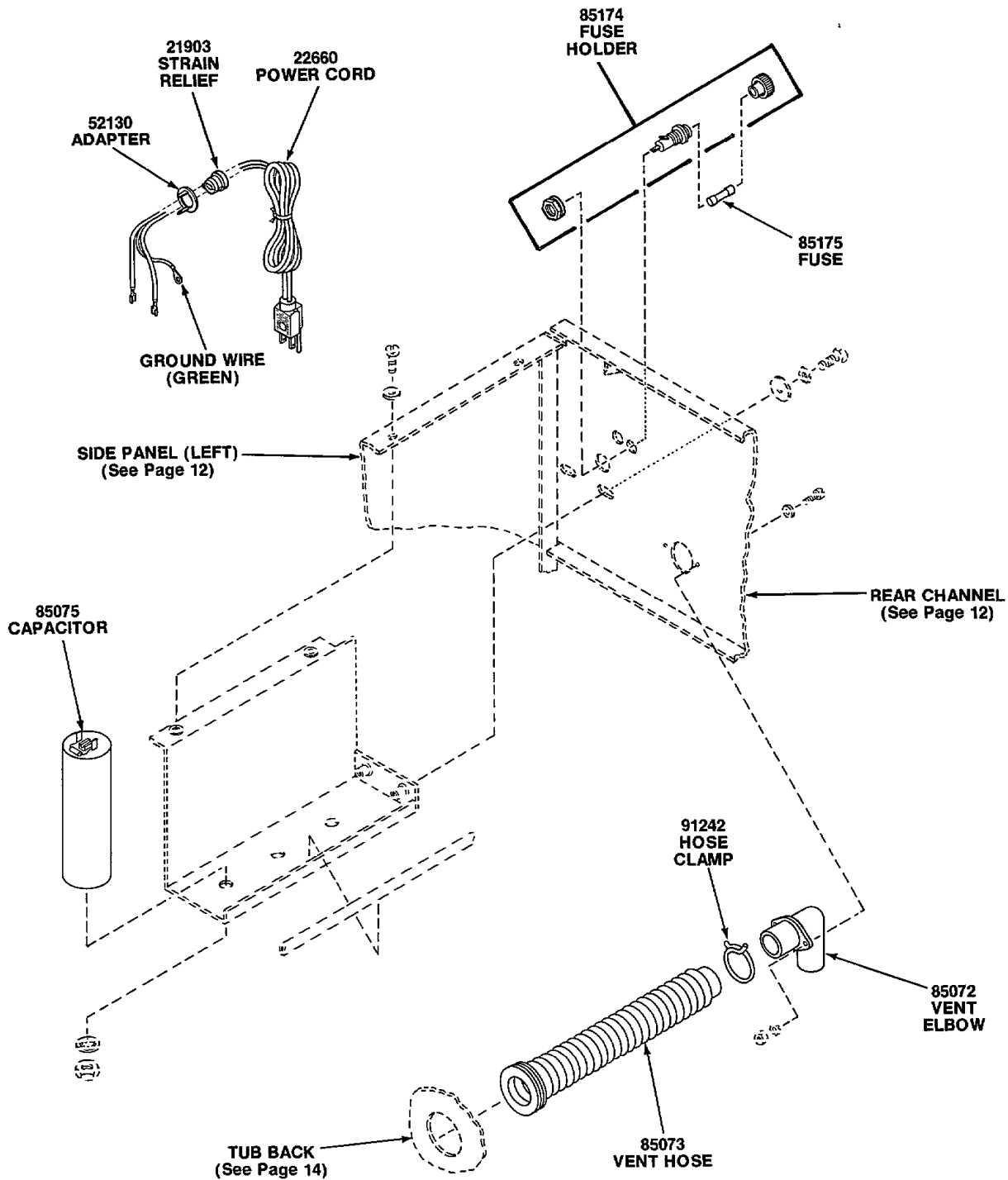
CABINET TOP AND DISPENSER



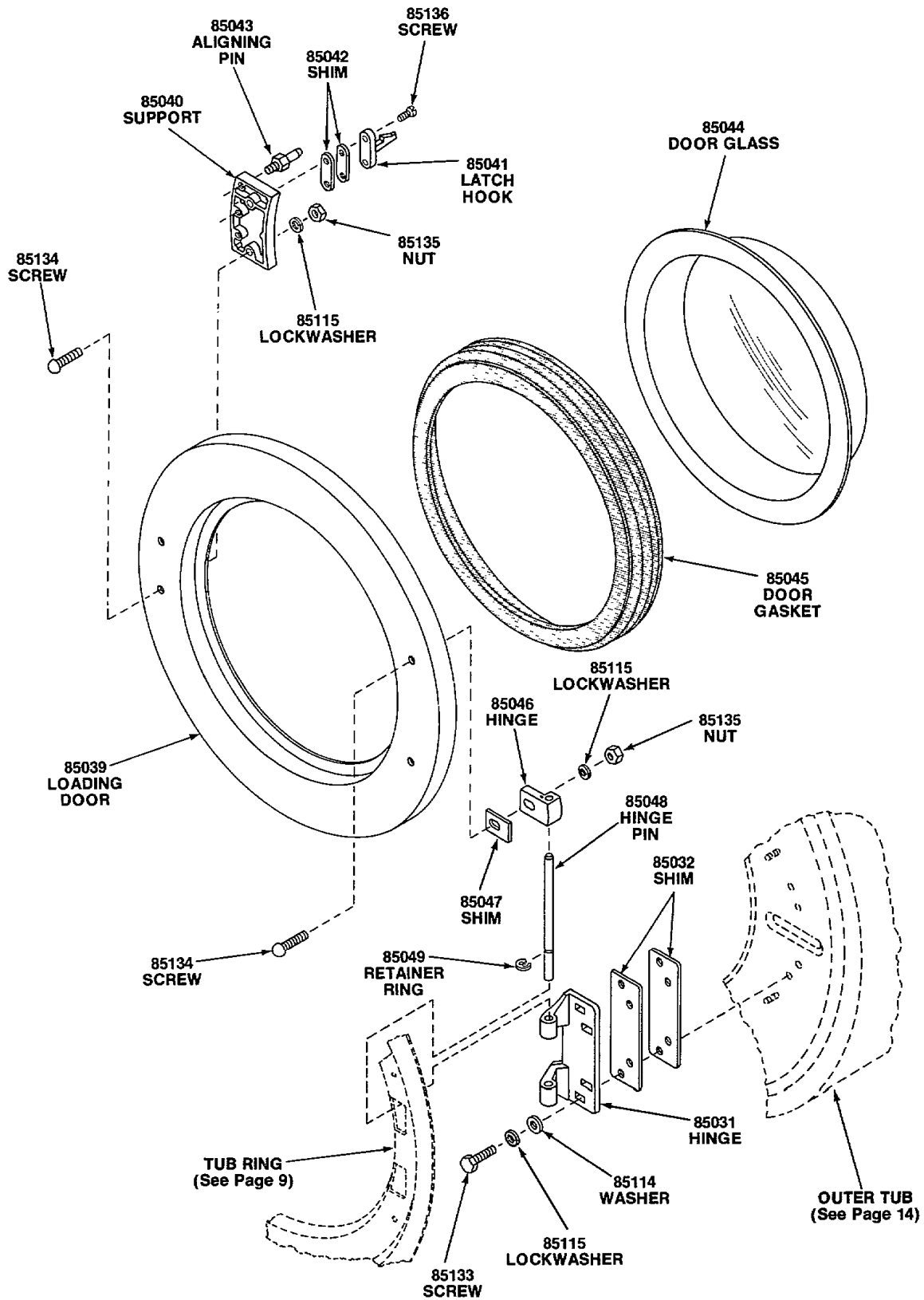
INLET VALVES AND HOSES



MOUNTING DECK, RELAYS, TIMER ASSEMBLY AND PRESSURE SWITCH



VENT HOSE, CAPACITOR, POWER CORD AND FUSE HOLDER



LOADING DOOR

FRONT CHANNEL
(See Page 3)

OUTER TUB
(See Page 14)

85126
SCREW

85125
CUPPED
WASHER

SIDE PANEL (LEFT)
(See Page 12)

85036
GASKET

85091
TUB RING

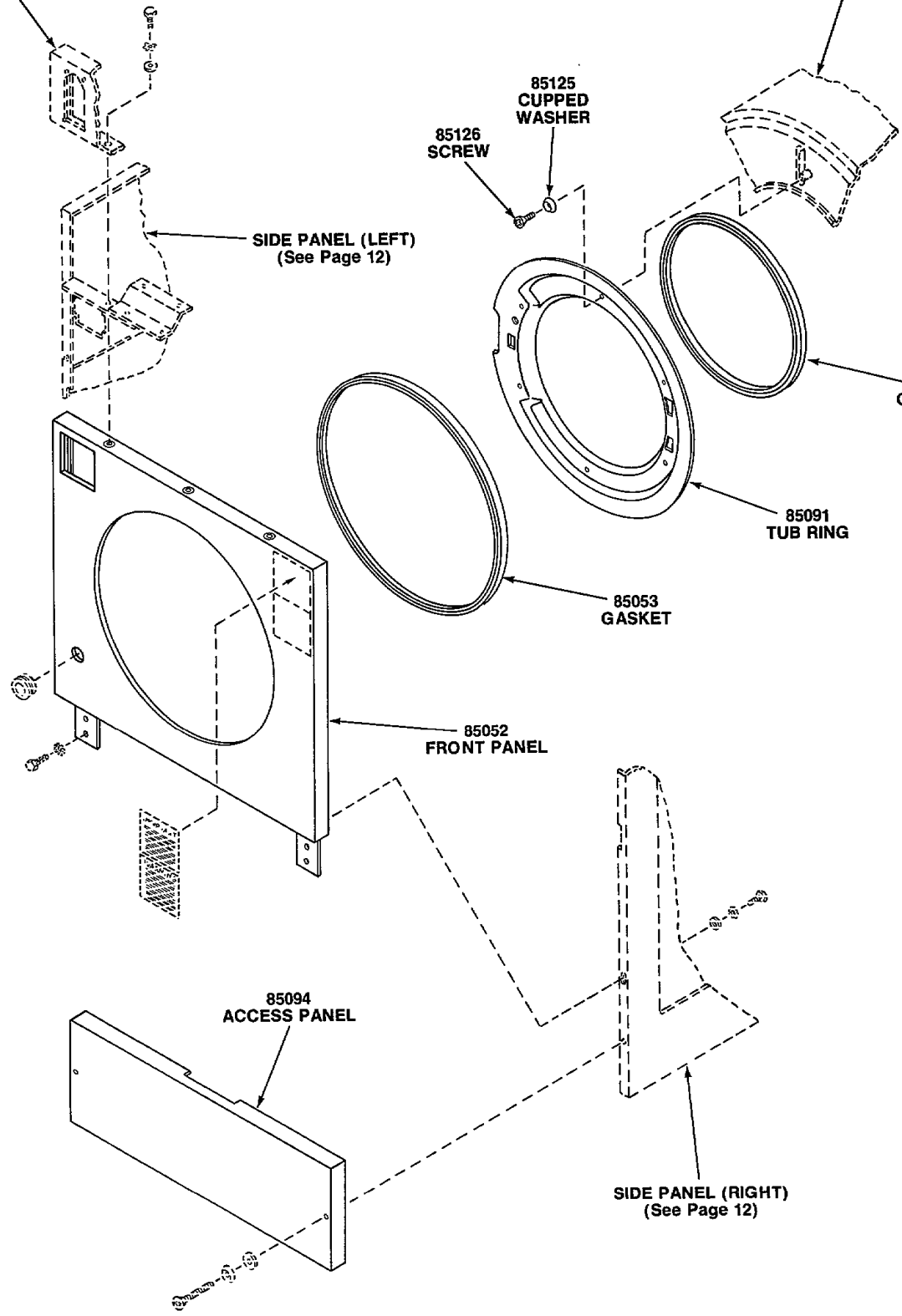
85053
GASKET

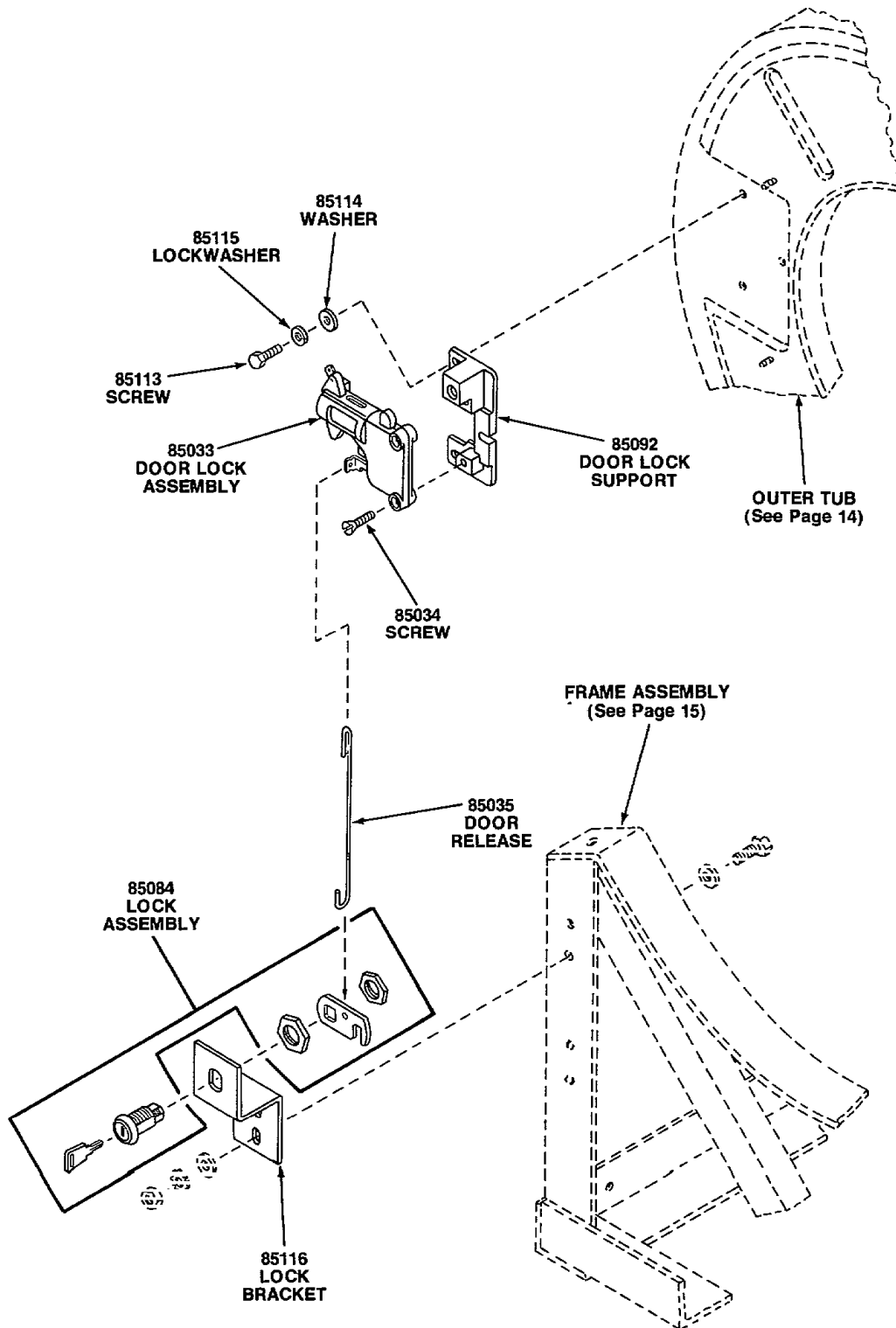
85052
FRONT PANEL

85094
ACCESS PANEL

SIDE PANEL (RIGHT)
(See Page 12)

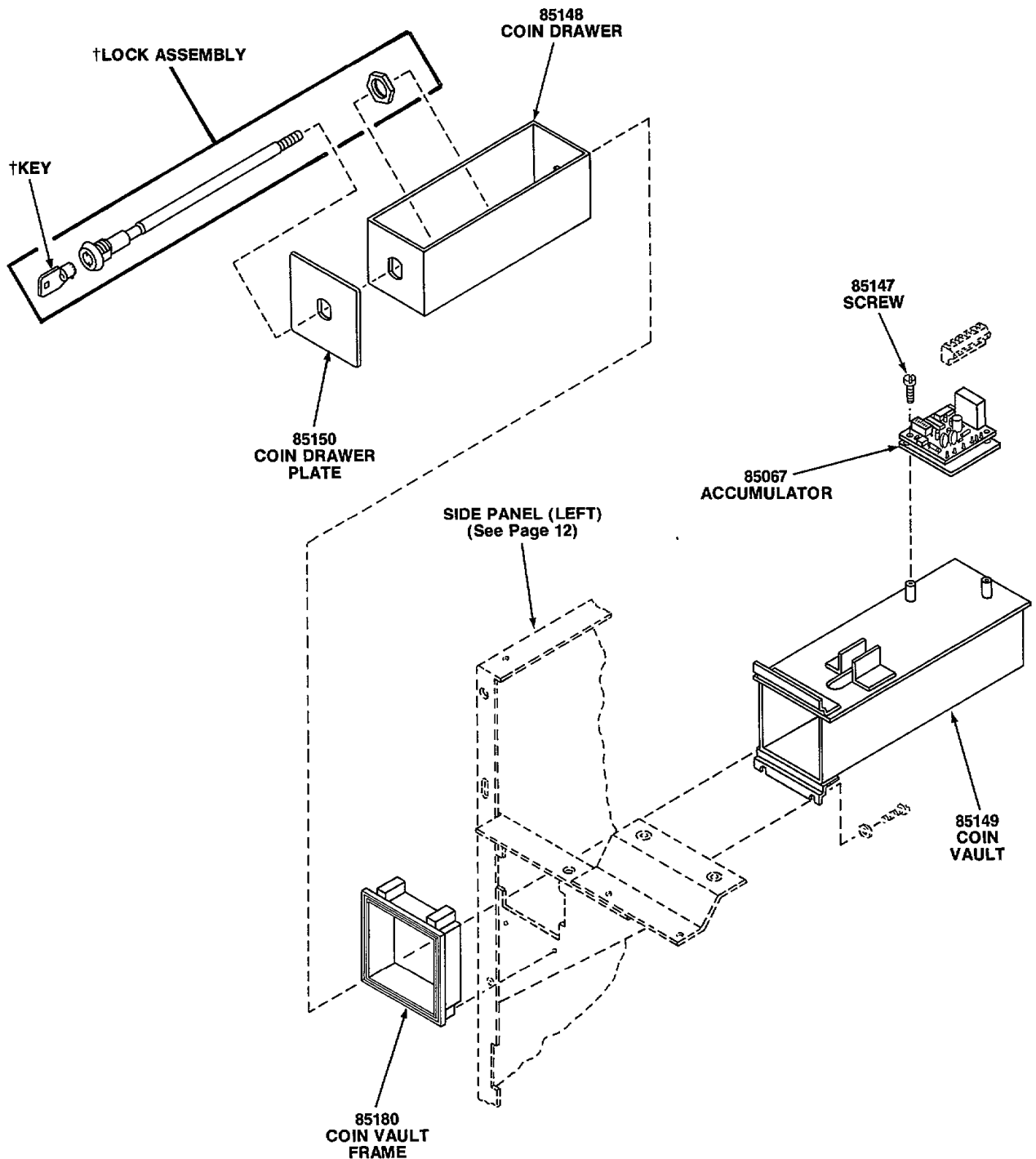
FRONT PANEL, GASKETS AND ACCESS PANEL



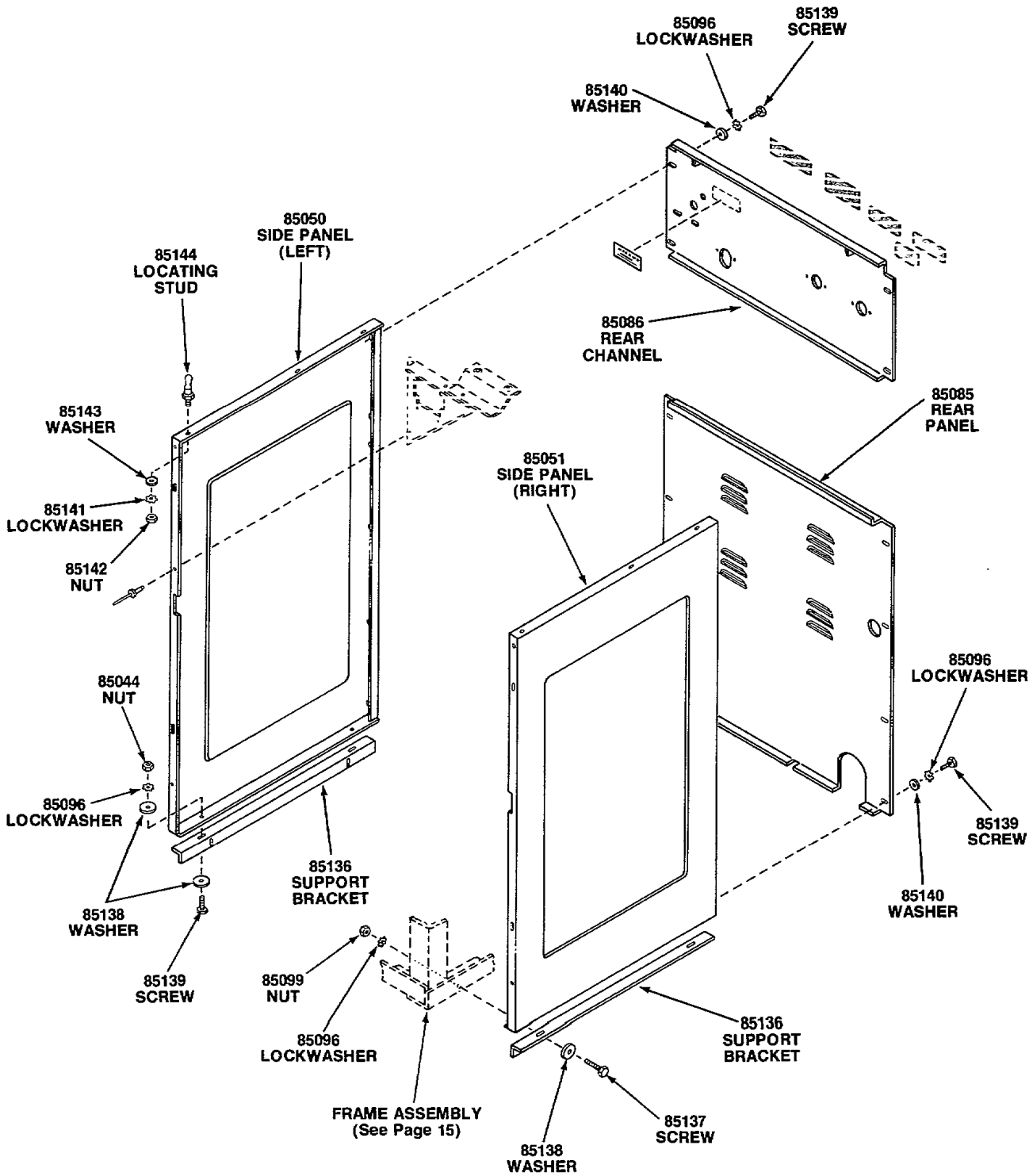


DOOR LOCK AND RELEASE

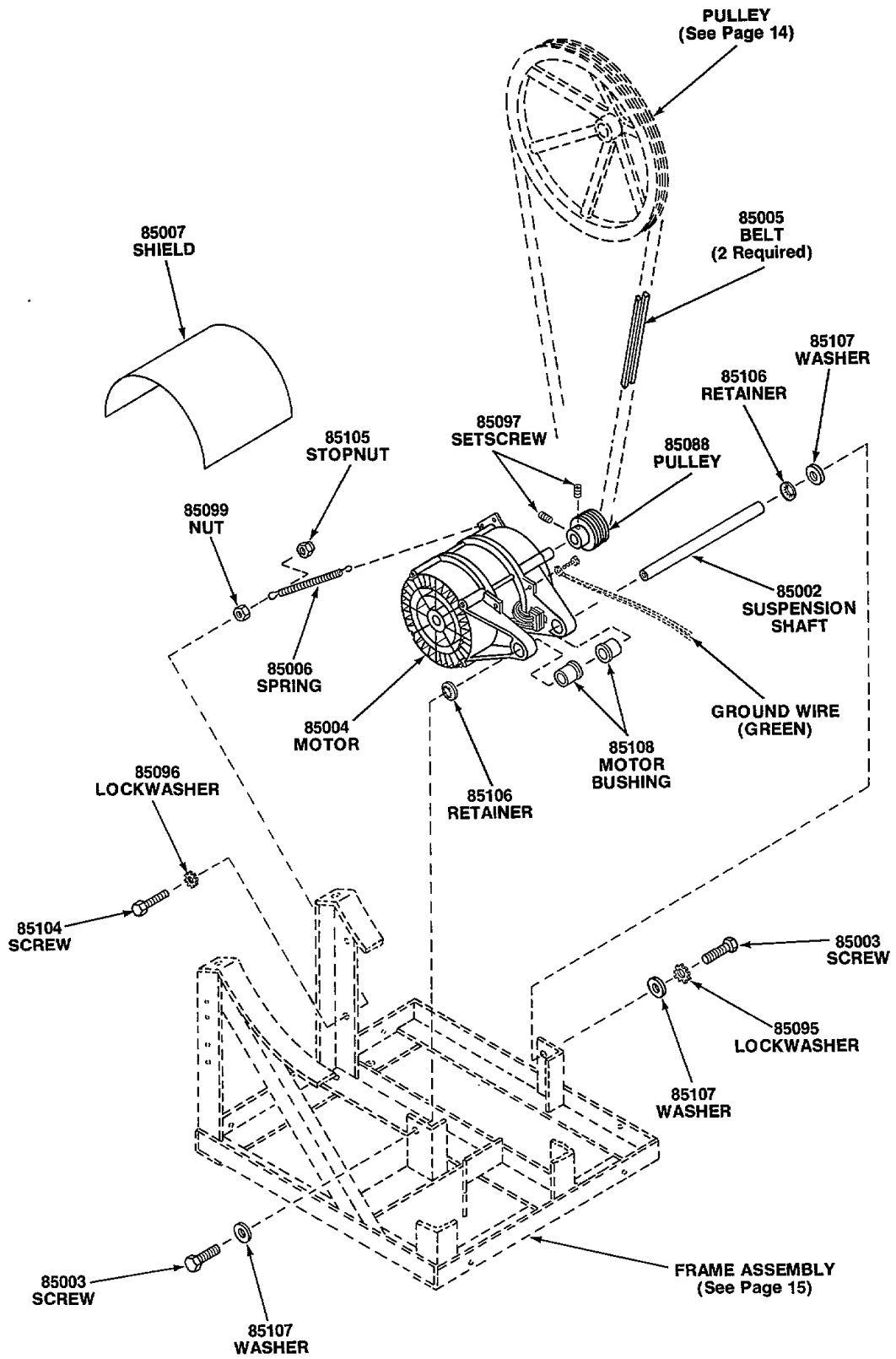
†ORDER LOCK OR KEY FROM SOURCE FROM WHOM WASHER-EXTRACTOR WAS PURCHASED. INCLUDE WASHER-EXTRACTOR SERIAL NUMBER WITH ORDER.



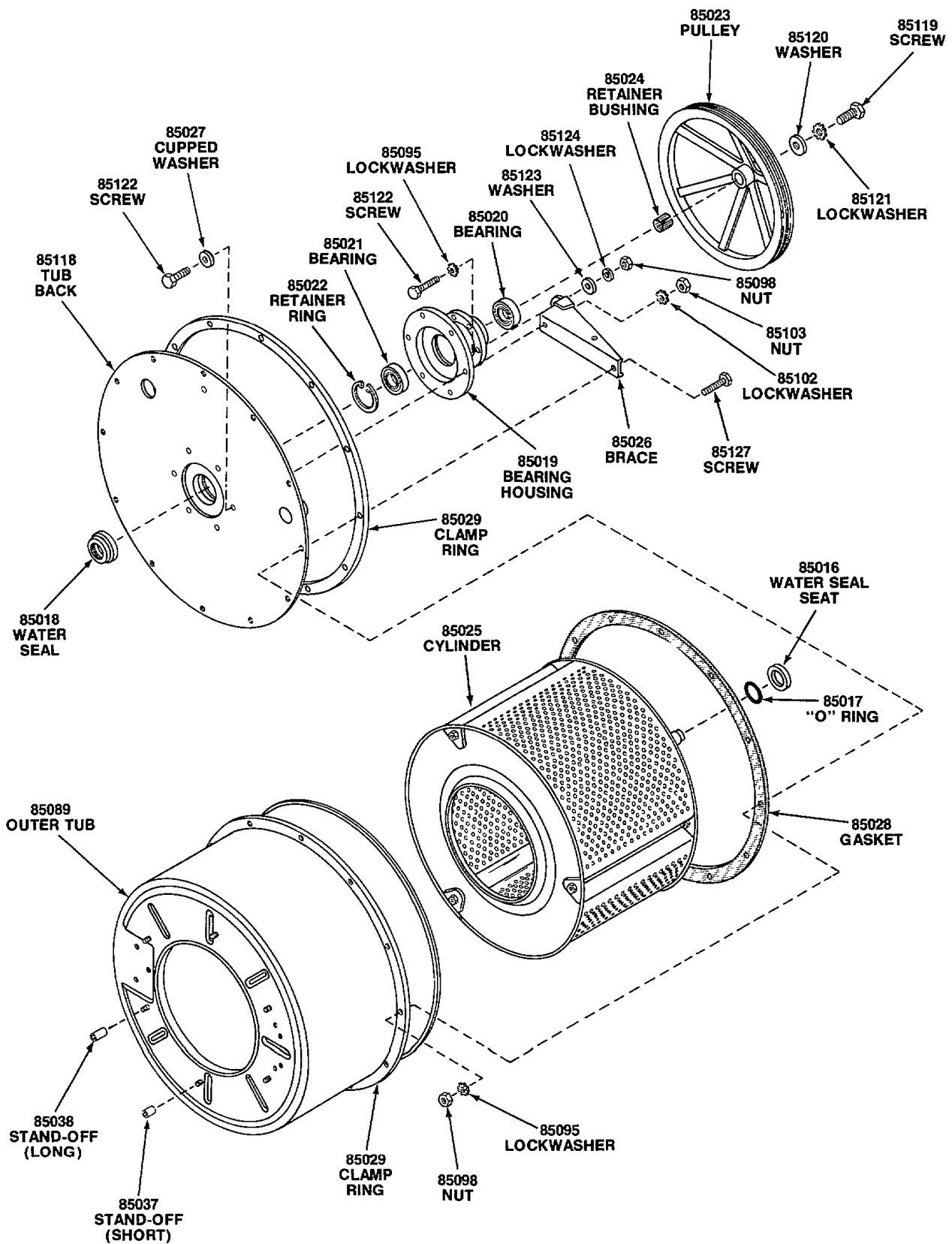
COIN VAULT AND DRAWER



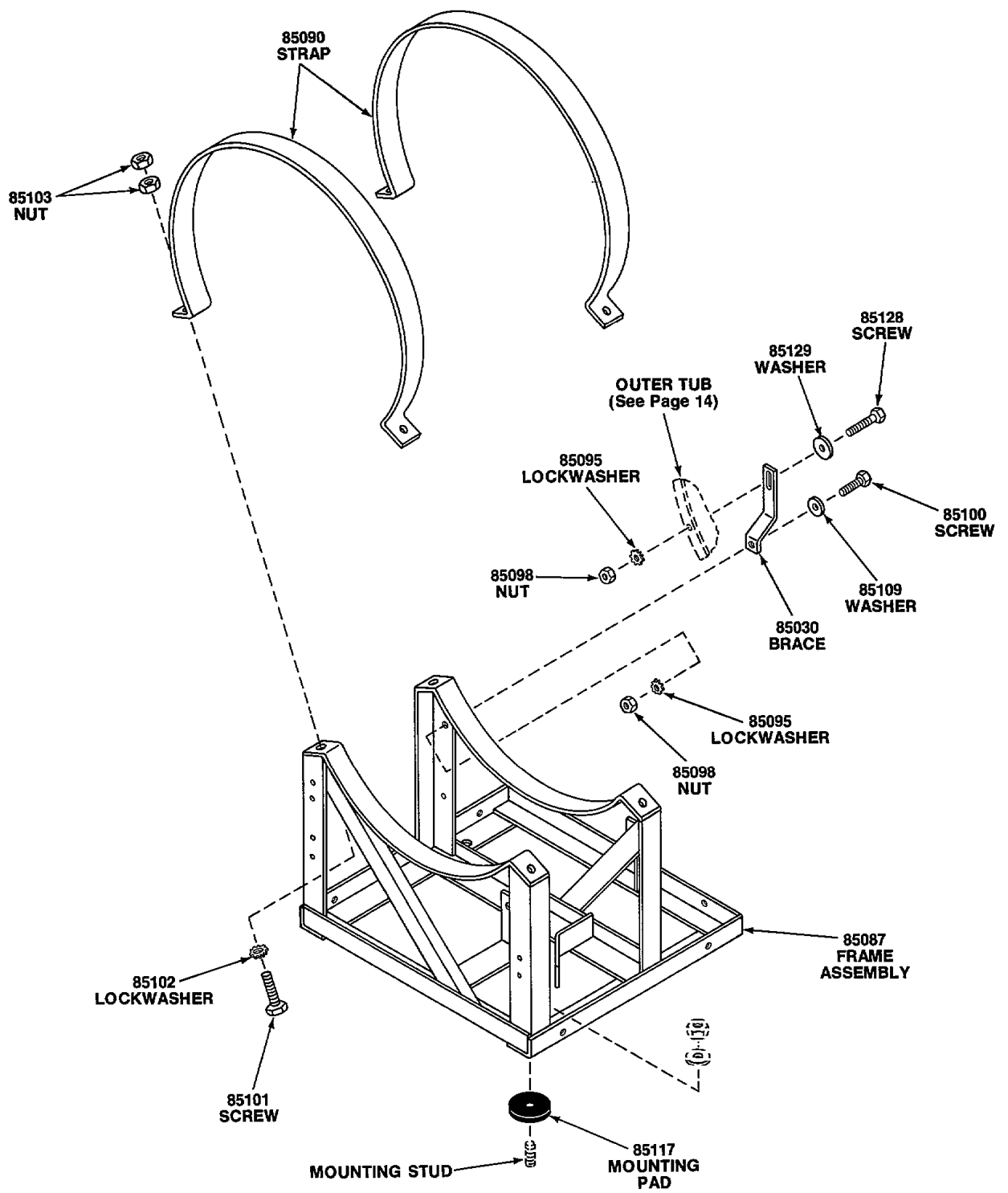
SIDE AND REAR PANELS



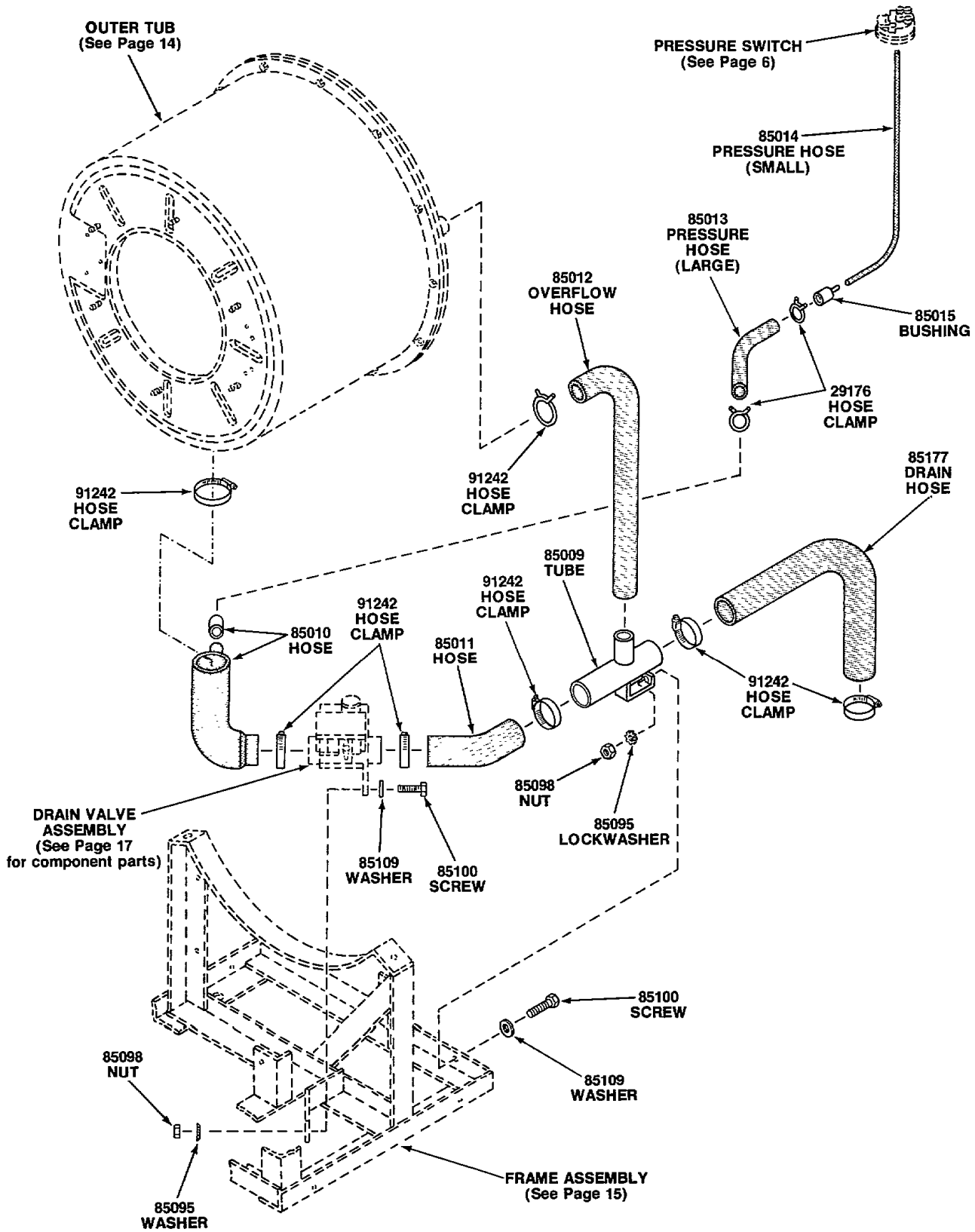
MOTOR AND BELTS



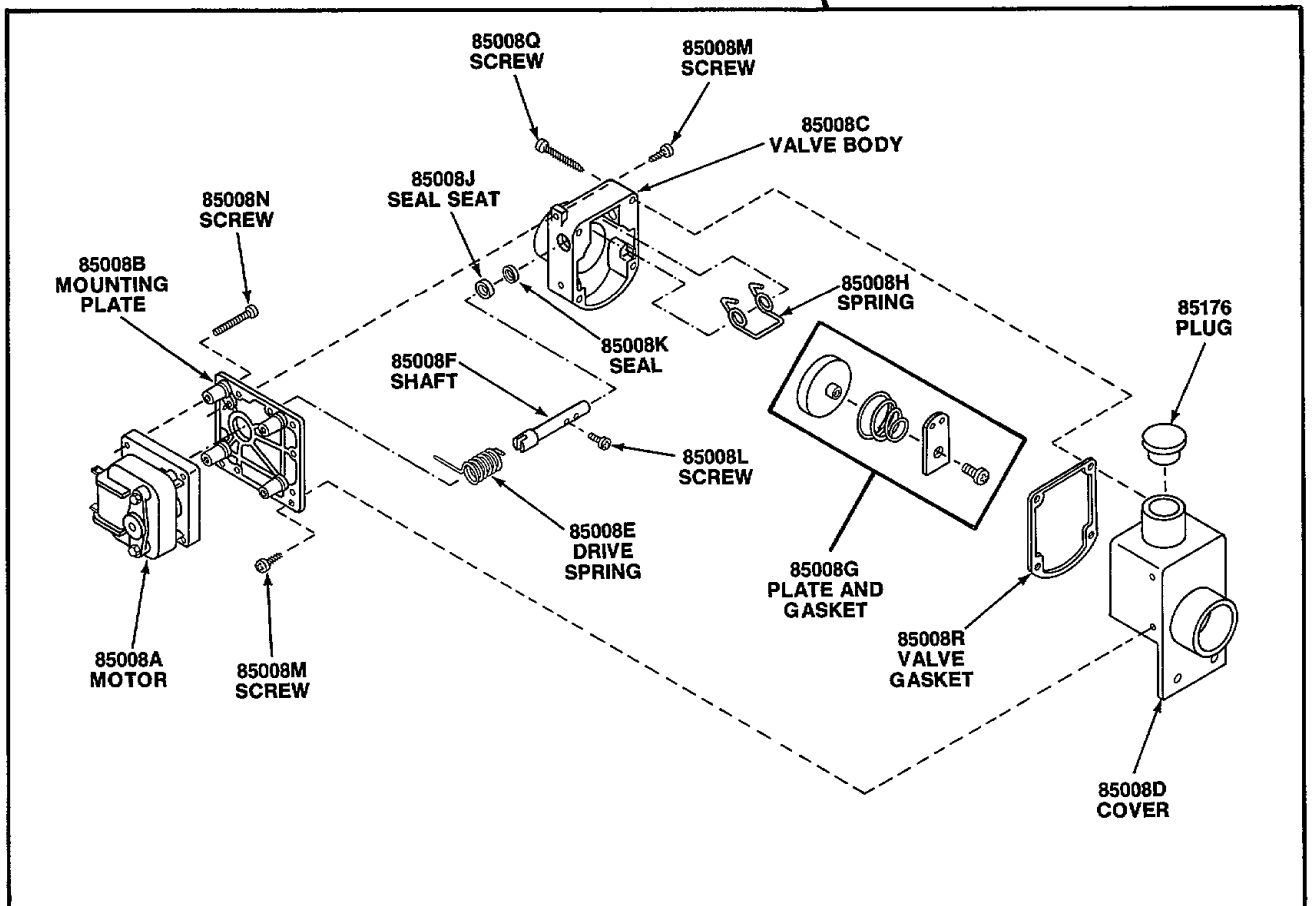
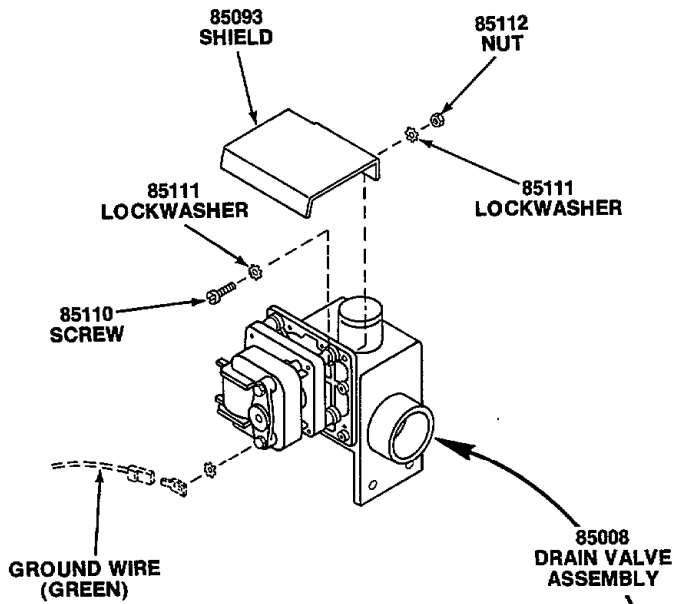
OUTER TUB, CYLINDER AND TUB BACK



FRAME ASSEMBLY AND TUB STRAPS



DRAIN VALVE AND HOSES



DRAIN VALVE ASSEMBLY

SECTION II

Service Procedures

WARNING

Disconnect electrical power and close water supply valves before attempting to service the washer-extractors.

To operate the washer through a complete cycle without water, remove the washer cabinet top and disconnect the WHITE/GRAY wire from terminal No. 13 on the pressure switch and reconnect it to terminal No. 22 on pressure switch. After completing the cycle, reconnect the WHITE/GRAY wire back on terminal No. 13 on pressure switch.

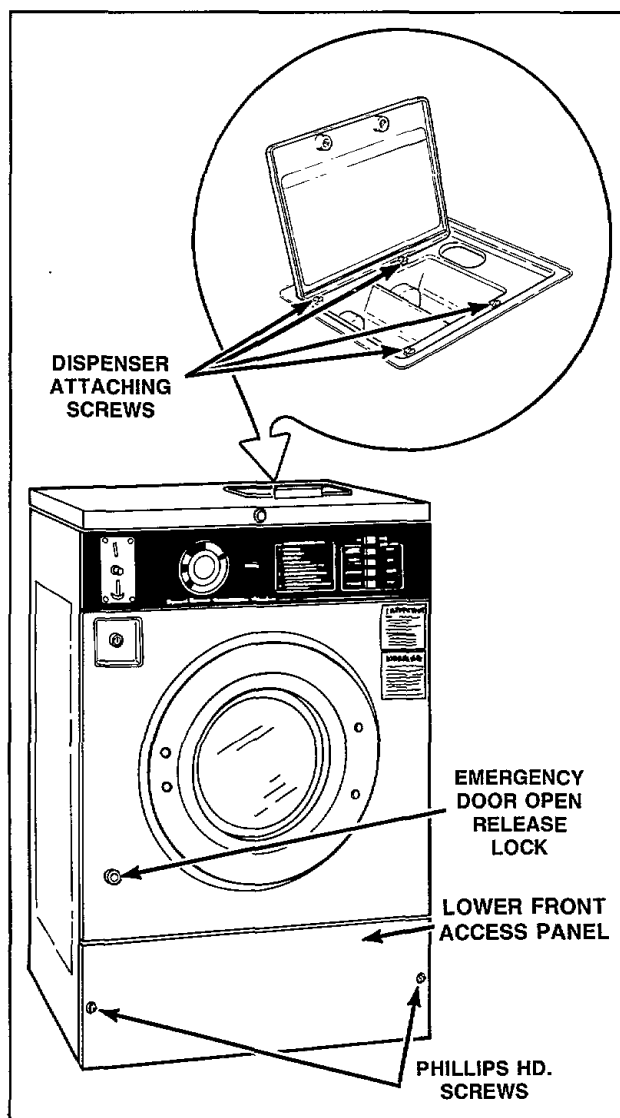


Figure 1

NOTE: When reference to directions (right or left) is made in this manual, it is from the operator's position facing the front of the washer.

IMPORTANT: Metric tools are required for servicing the washer-extractor.

1. CABINET TOP

- Open dispenser door and remove four screws holding cabinet top to dispenser, *Figure 1*.
- Insert key into cabinet top lock, turn the key 1/4 turn to the right (clockwise), *Figure 2*.
- Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.

2. LOWER FRONT ACCESS PANEL

Remove the two screws and cupped washers holding the lower front access panel to the washer side panels and remove the panel, *Figure 1*.

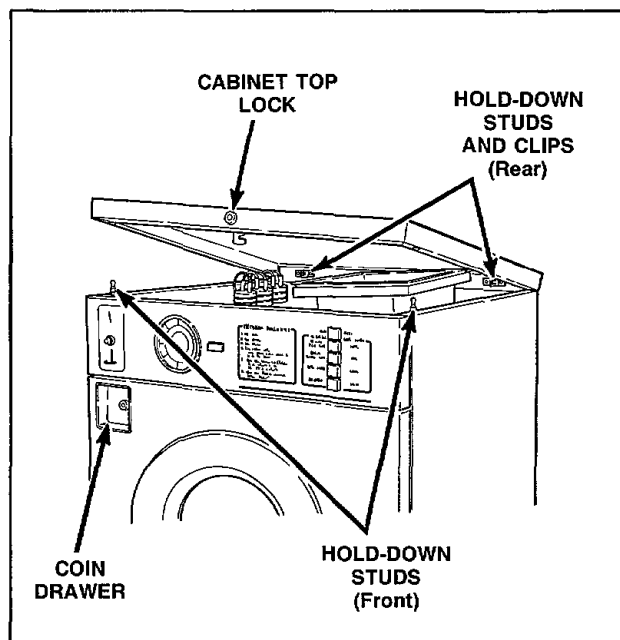


Figure 2

3. LOADING DOOR

- a. If water is present in the cylinder, disconnect the electrical power to the washer to allow the water to drain from the cylinder before proceeding.
- b. Insert key into the emergency door release lock, *Figure 1*. Turn the key 1/4 turn to the right (clockwise) to unlock and open the loading door.
- c. Remove two nuts, lockwashers and screws holding the loading door to the hinge blocks, *Figure 3*.
- d. Remove the retainer ring holding the hinge pin in the hinge and remove pin, *Figure 3*.

NOTE: Refer to *Figure 4* for loading door assembly sequence.

4. LOADING DOOR GASKET

NOTE: For best results, the loading door should be removed from the washer for ease of gasket removal and installation.

- a. Remove loading door, paragraph 3.
- b. Peel the door gasket loose from the door ring and remove door glass and gasket, *Figure 4*.

INSTALL DOOR GASKET

- Assemble the new gasket onto the door glass, then

work the door gasket onto the door ring. No adhesive is necessary.

5. LOADING DOOR LATCH

- a. If water is present in the cylinder, disconnect the electrical power to the washer to allow the water to drain from the cylinder before proceeding.
- b. Insert key into the emergency door release lock, *Figure 1*. Turn the key 1/4 turn to the right (clockwise) to unlock and open the loading door.
- c. Remove nuts, lockwashers and screws holding the latch, support and pin to loading door, *Figure 3*.

NOTE: Refer to *Figure 4* for loading door assembly sequence.

6. REAR PANEL

IMPORTANT: If the rear panel has been removed for service, the rear panel **MUST** be reinstalled before operating the SuperMate washer. The rear panel adds rigidity to the structure of the washer and keeps dust and dirt from accumulating on the motor and provides safety protection.

- a. Remove screws holding the rear panel to the side panels, *Figure 5*.

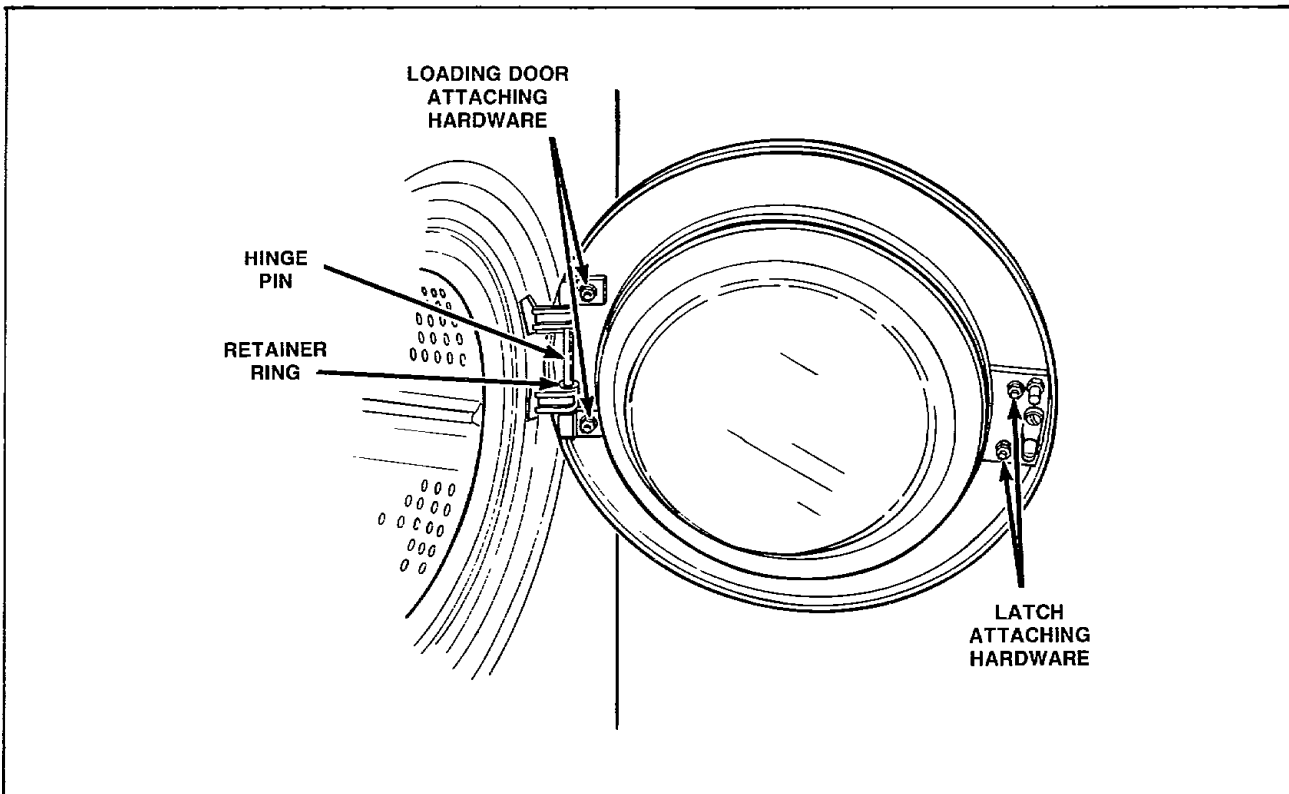


Figure 3

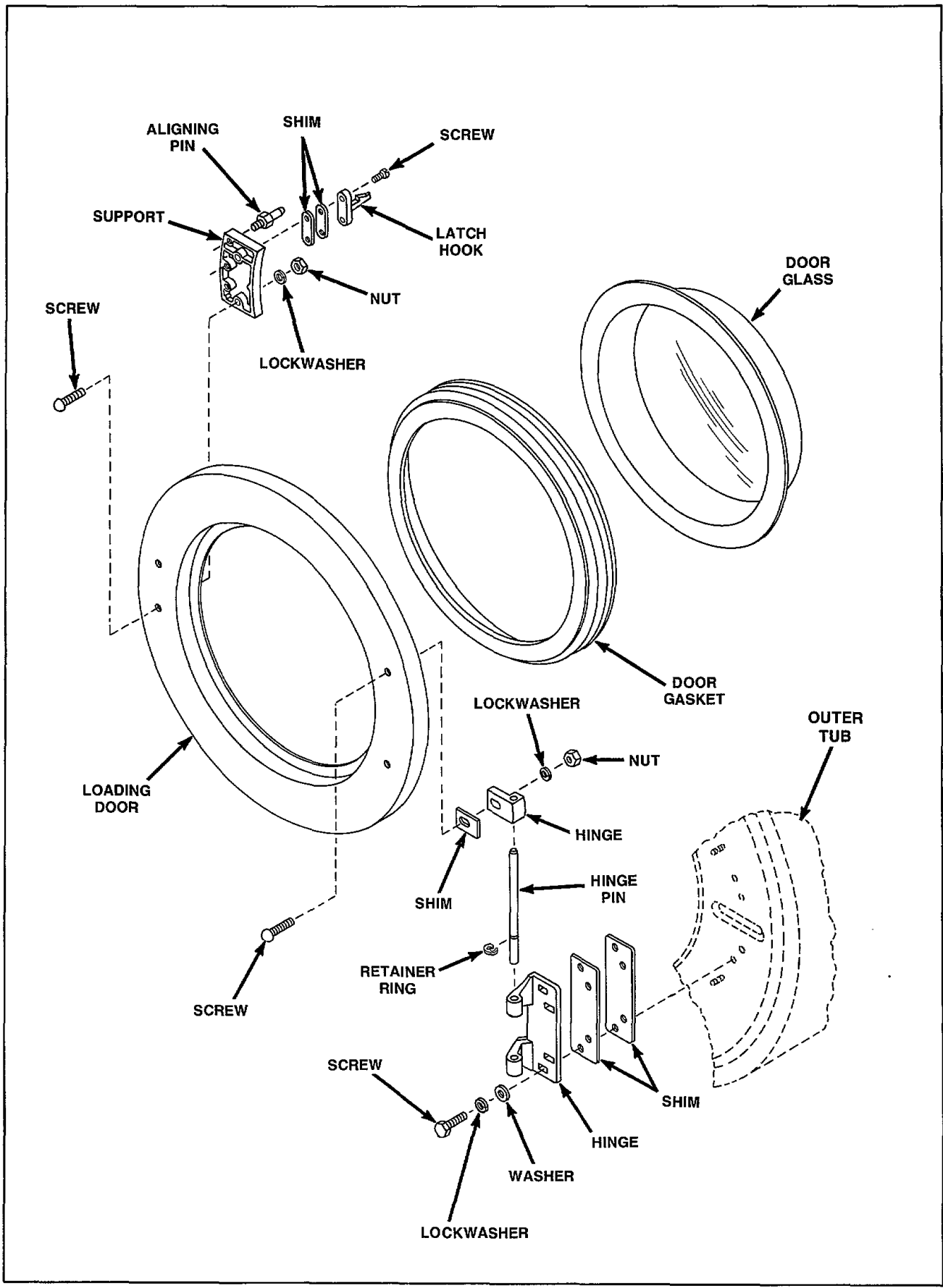


Figure 4

7. BELTS

IMPORTANT: If the rear panel has been removed for servicing the washer, the rear panel **MUST** be reinstalled before operating the SuperMate washer. The rear panel adds rigidity to the structure of the washer and keeps dust and dirt from accumulating on the motor and provides safety protection.

- Remove screws holding the rear panel to the washer, *Figure 5*.
- Run belts off cylinder pulley while slowly turning the pulley, *Figure 6*.

NOTE: There is no belt adjustment necessary, the motor is spring loaded.

8. MOTOR

- Remove the two belts, paragraph 7.
- Unplug the motor wire harness from the motor, *Figure 6*.
- Remove the screw, nut and lockwashers holding the green ground wire to the motor frame, *Figure 6*.
- Unhook the belt tension spring from the motor, *Figure 6*.
- Remove the two screws and cupped washers holding the lower front access panel to the

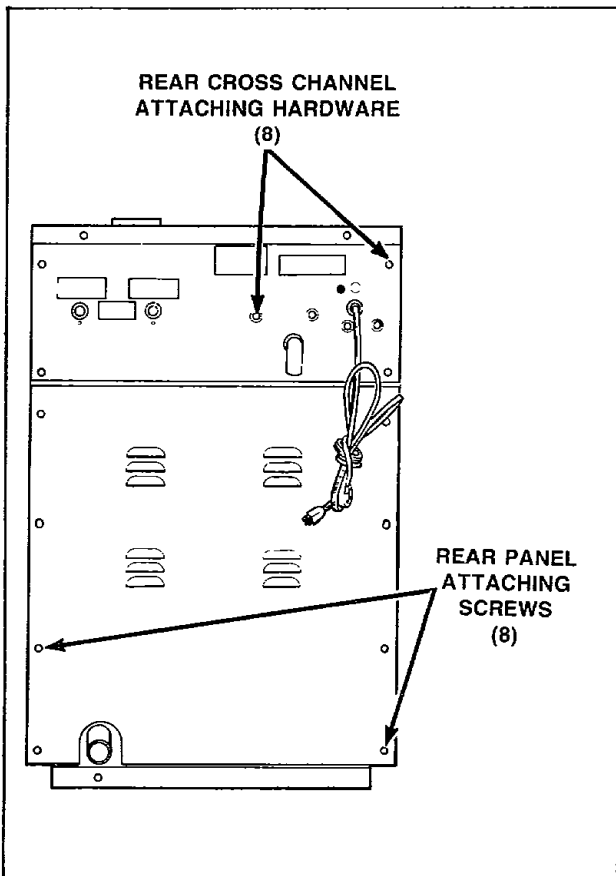


Figure 5

washer side panels and remove the access panel, *Figure 1*.

- Remove the front pivot bolt from the end of the motor suspension shaft. Then remove the rear pivot bolt from the motor suspension shaft, *Figure 6*.

NOTE: When reinstalling the motor, start the rear pivot bolt first but do not tighten.

- Carefully remove motor out through the rear of the washer.

9. FRONT PANEL

- Remove two screws and cupped washers holding the lower front access panel to the washer side panels and remove panel, *Figure 1*.
- Open dispenser door and remove four screws holding cabinet top to dispenser, *Figure 1*.
- Insert key into the cabinet top lock, turn the key 1/4 turn to the right clockwise, *Figure 2*.
- Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the two stud clips in the rear cross

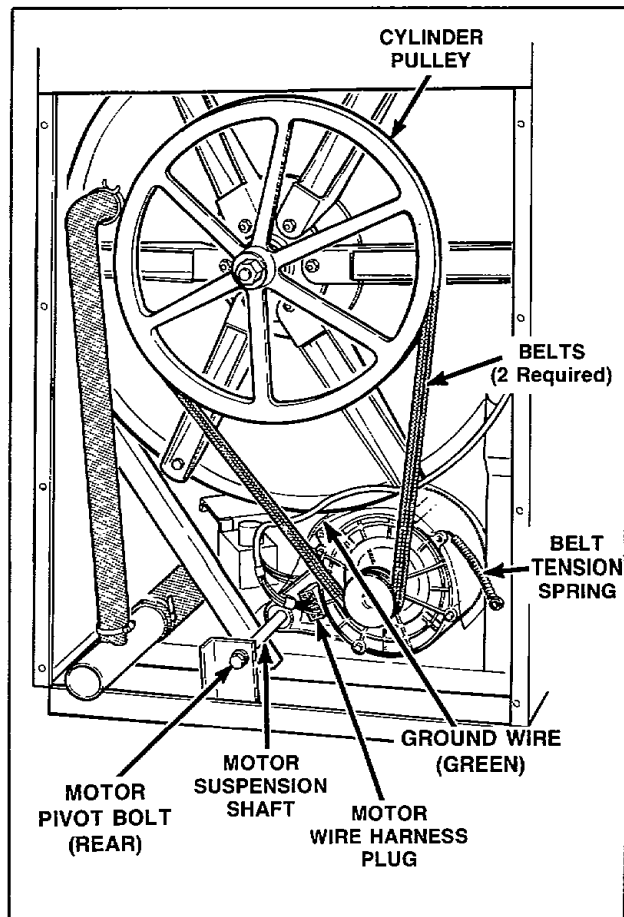


Figure 6

channel, *Figure 2*, and set the cabinet top out of the way.

f. Unlock and remove the coin drawer, *Figure 2*.

NOTE: Coin drawer may have a threaded lock or a 1/4 turn lock. If it is a threaded lock, it will require several counterclockwise turns to unlock.

- g. Remove two screws, lockwashers and washers (one set per side) from inside the lower front corners holding the front panel to the side panels, *Figure 7*.
- h. Remove the screws, washers, lockwashers and nuts (two sets per side) holding the front panel brackets to the frame, *Figure 7*.
- i. While supporting front panel, remove the three hex head screws, lockwashers and washers holding the top flange of the front panel to the lower flange of the front channel, *Figure 8*, and remove front panel and gasket from washer.

10. DOOR LOCK ASSEMBLY

- a. If water is present in the cylinder, disconnect the electrical power to the washer to allow the cylinder to drain before proceeding.
- b. Insert the key into the emergency door release lock, *Figure 1*. Turn the key 1/4 turn to the right (clockwise) to unlock and open the loading door.
- c. Remove two Phillips head screws (and cupped washers) holding lower front access panel to the washer side panels and remove panel, *Figure 1*.

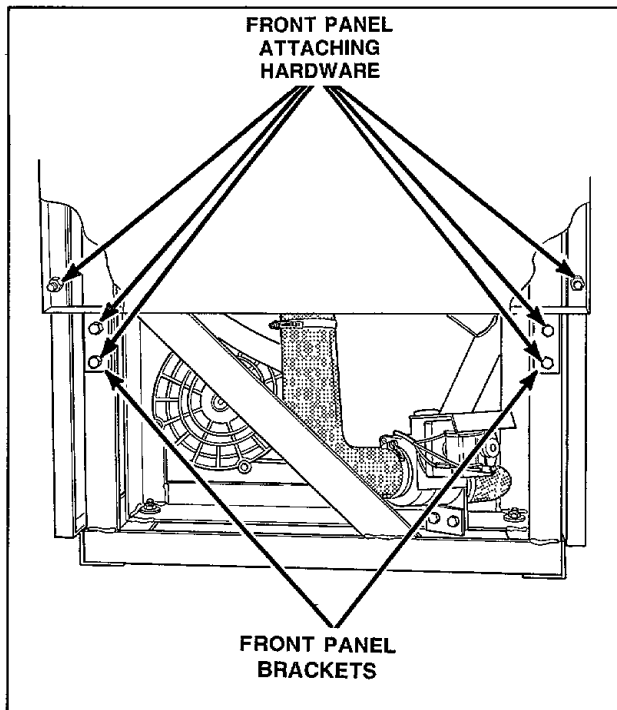


Figure 7

- d. Open dispenser door and remove four screws holding cabinet top to dispenser, *Figure 1*.
- e. Insert the key into the cabinet top lock, turn the key 1/4 turn to the right (clockwise), *Figure 2*.
- f. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- g. Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the two stud clips in the rear cross channel, *Figure 2*, and set the cabinet top out of the way.
- h. Unlock and remove the coin drawer, *Figure 2*.

NOTE: Coin drawer may have a threaded lock or a 1/4 turn lock. If it has a threaded lock, it will require several counterclockwise turns to unlock.

- i. Remove two screws, lockwashers and washers (one set per side) from inside the lower front corners holding the front panel to the side panels, *Figure 7*.
- j. Remove the screws, washers, lockwasher and nuts (two sets per side) holding the front panel brackets to the frame, *Figure 7*.
- k. While supporting the front panel, remove the three hex head screws, lockwashers and washers holding the top flange of the front panel to the lower flange of the front channel, *Figure 8*, and remove front panel and gasket from washer.
- l. Remove six screws and cupped washers holding tub ring to front of the outer tub, *Figure 9*. Swing tub ring away from front of

(continued)

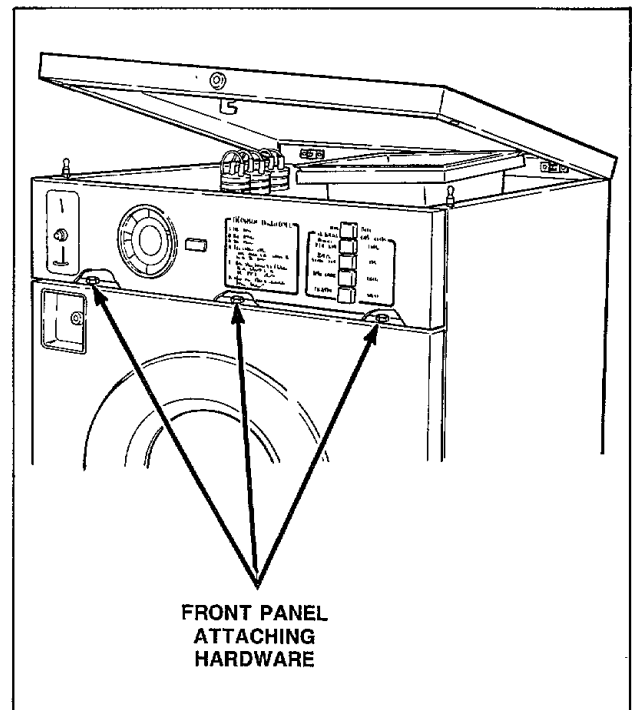


Figure 8

outer tub far enough to permit working on the door lock assembly.

- m. Disconnect the wire harness from the door lock assembly, *Figure 10*.
- n. Remove the two flat head screws holding door lock assembly to the door lock support, *Figure 10*.

NOTE: The door lock assembly MUST be replaced as a complete assembly only, it does not have any replaceable components.

11. DRAIN VALVE

- a. Remove two screws and cupped washers holding the lower front access panel to the washer side panels and remove the panel, *Figure 1*.
- b. If water is present in the cylinder, disconnect the electrical power to the washer to allow the water to drain from the cylinder before proceeding.
- c. Loosen hose clamp and remove the hose from drain valve, *Figure 11*.
- d. Disconnect wires from drain valve.

NOTE: Refer to wiring diagram when rewiring the drain valve.

- e. Remove screws, nuts, washers and lockwashers holding drain valve to washer frame, *Figure 11*.
- f. Loosen hose clamp on the drain valve-to-tube hose and remove drain valve from hose, *Figure 11*.

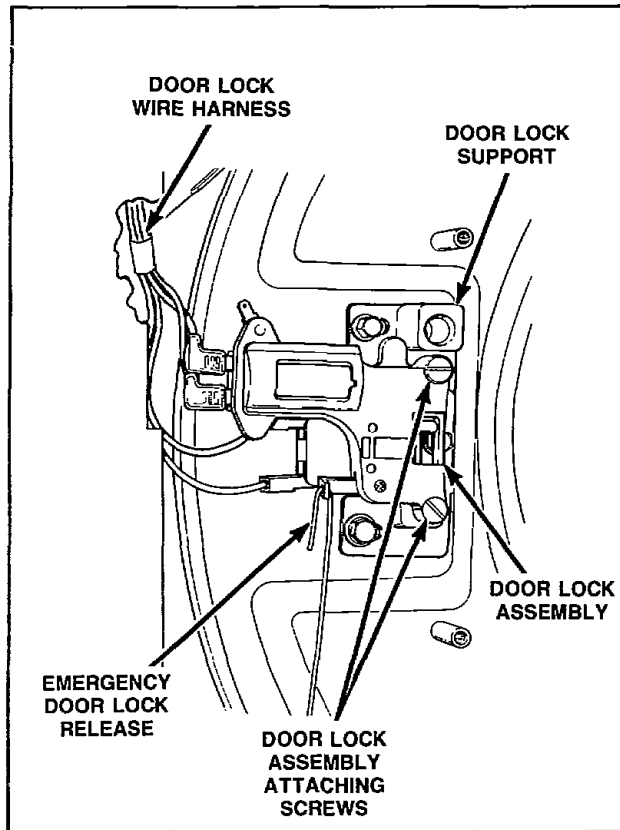


Figure 10

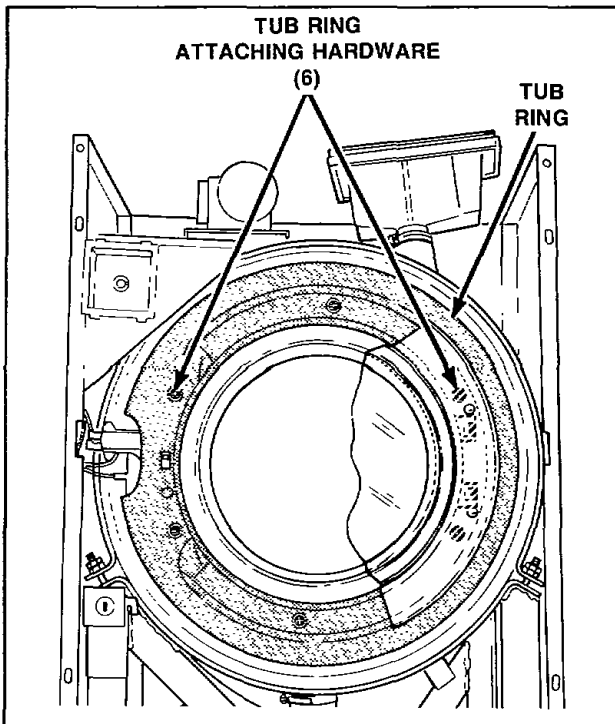


Figure 9

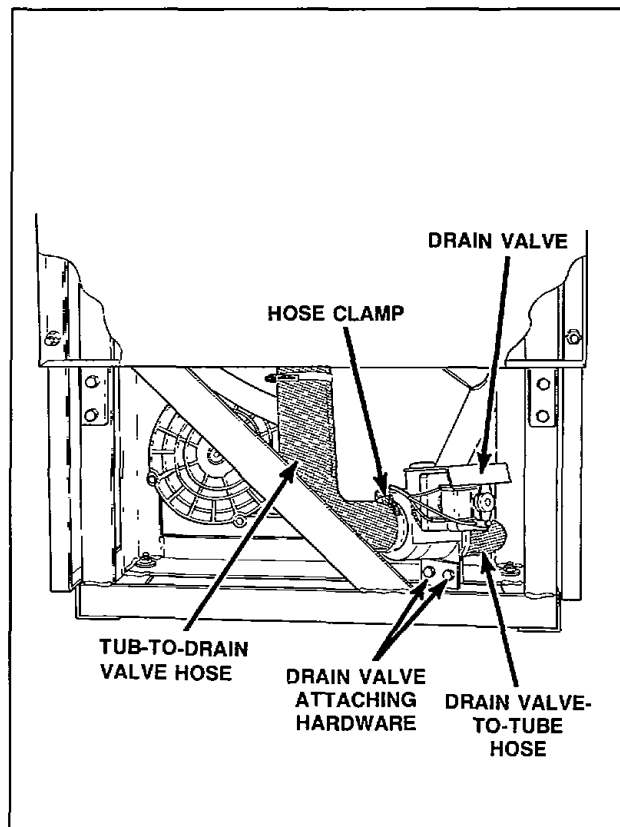


Figure 11

12. SIDE PANEL (Right or Left)

- a. Open dispenser door and remove four screws holding cabinet top to dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn the key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the two stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.
- e. Remove the two screws and cupped washers
- f. holding the lower front access panel to the washer side panels and remove panel, *Figure 1*.
- g. Remove the six screws holding the rear panel and cross channel to the side panel, *Figure 5*.
- h. Remove the screw, washer and lockwasher from inside the lower front corner holding the front panel to the side panel, *Figure 12*.
- i. Remove the hardware holding the side panel to the front channel, *Figure 13*.
- j. LEFT SIDE PANEL - remove the two screws and washers holding the capacitor mounting bracket to the top flange of the side panel, *Figure 14*.

(continued)

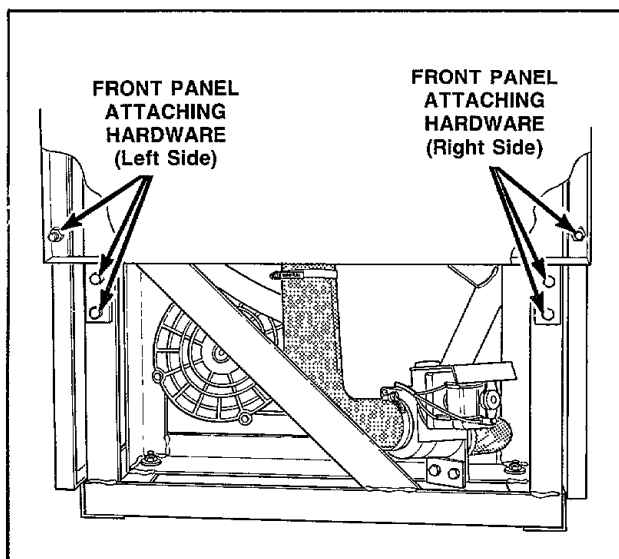


Figure 12

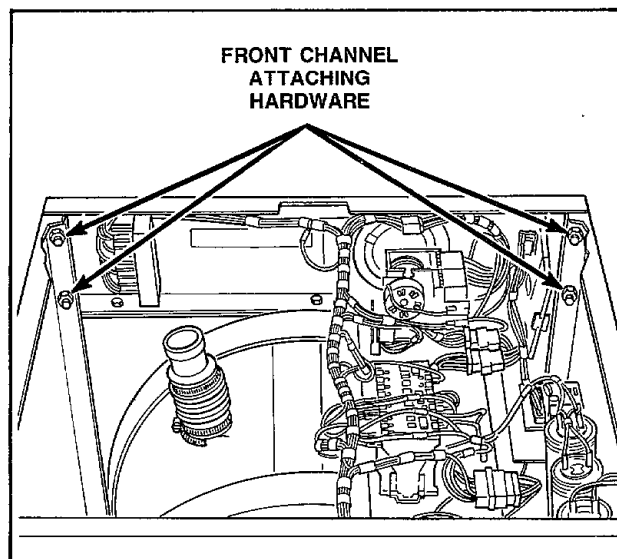


Figure 13

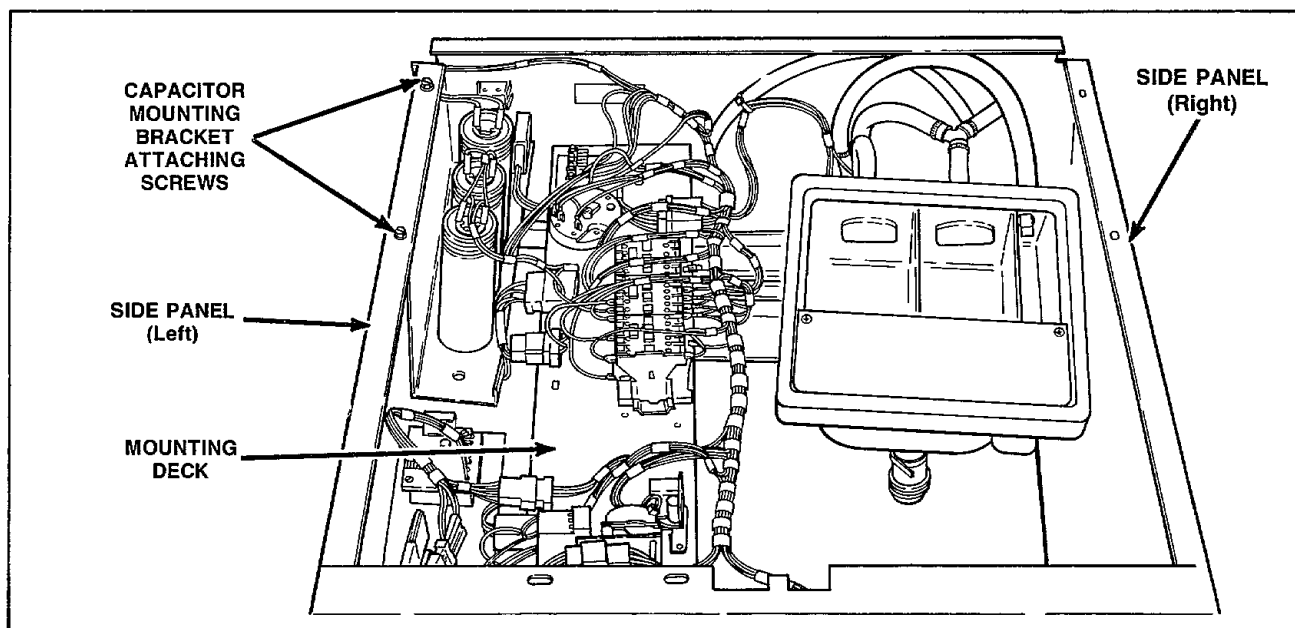


Figure 14

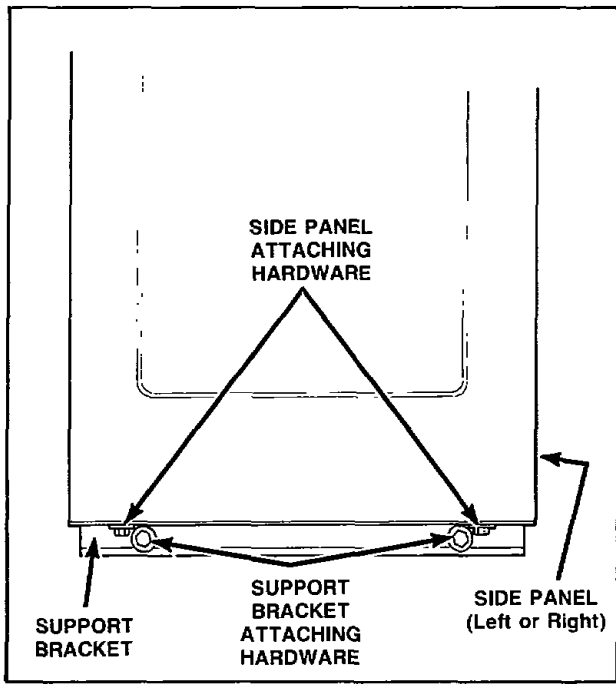


Figure 15

- j. Support side panel and remove the two sets of hardware holding the side panel to the support bracket, *Figure 15*.

13. SELECTOR SWITCH

- a. Open dispenser door and remove the four screws holding cabinet top to dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.
- e. Remove two screws and lockwashers holding the selector switch to the backside of the front channel, *Figure 16*.

IMPORTANT: Before removing all the wires from the old switch, rewire the new switch (wire for wire) from the old switch to be sure it is wired correctly.

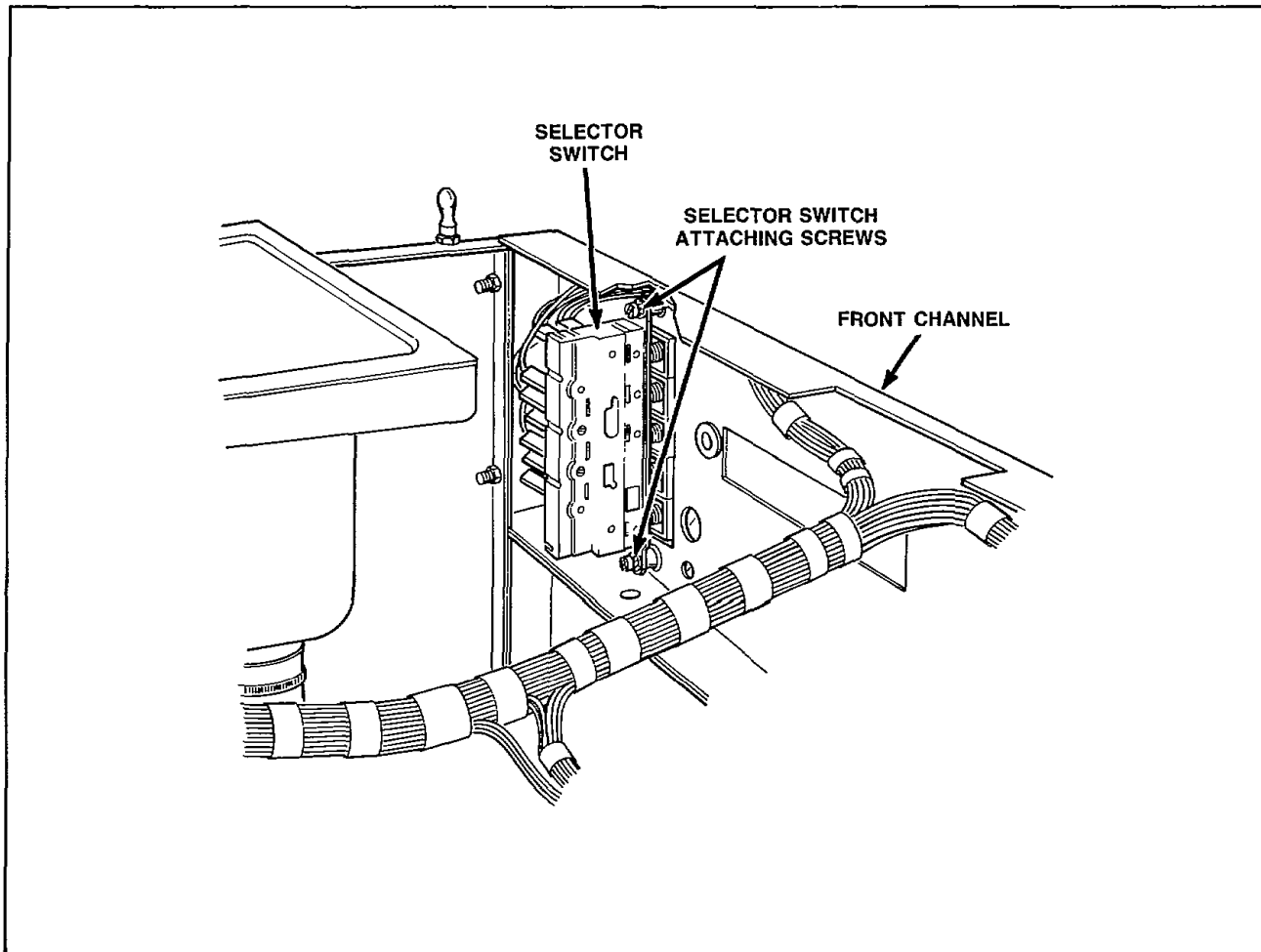


Figure 16

14. TIMER ASSEMBLY

- a. Open dispenser door and remove the four screws holding the cabinet top to the dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.
- e. Remove two screws and washers holding the timer and mounting bracket to the mounting deck, *Figure 17*.
- f. Disconnect the timer wire harness at the disconnect blocks.
- g. Loosen setscrew and remove sleeve from timer shaft, *Figure 17*.
- h. Remove four screws holding timer to mounting bracket, *Figure 17*.

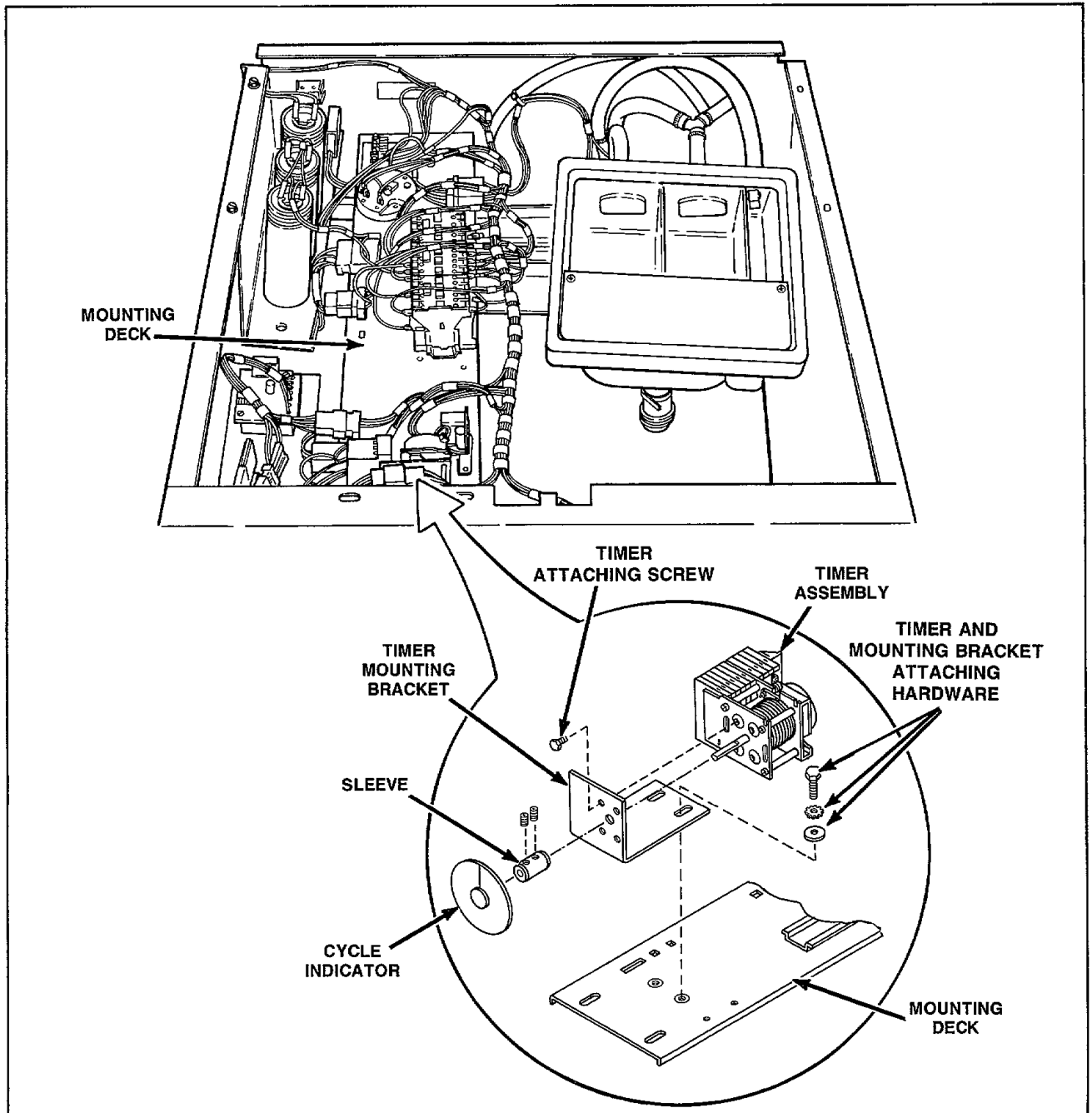


Figure 17

15. PRESSURE SWITCH

NOTE: Refer to Section III of this manual for HIGH WATER LEVEL OPTIONS.

- a. Open dispenser door and remove the four screws holding the cabinet top to the dispenser, *Figure 1*.
- b. Insert key into cabinet to lock, turn key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down

studs from the stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.

- e. Remove clip from underside of mounting deck holding the pressure switch to the deck, *Figure 18*.
- f. Remove wires from pressure switch.

NOTE: Refer to wiring diagram when rewiring the pressure switch.

- g. Lift pressure switch off the mounting deck far enough to permit disconnecting the pressure hose from the switch, *Figure 18*.

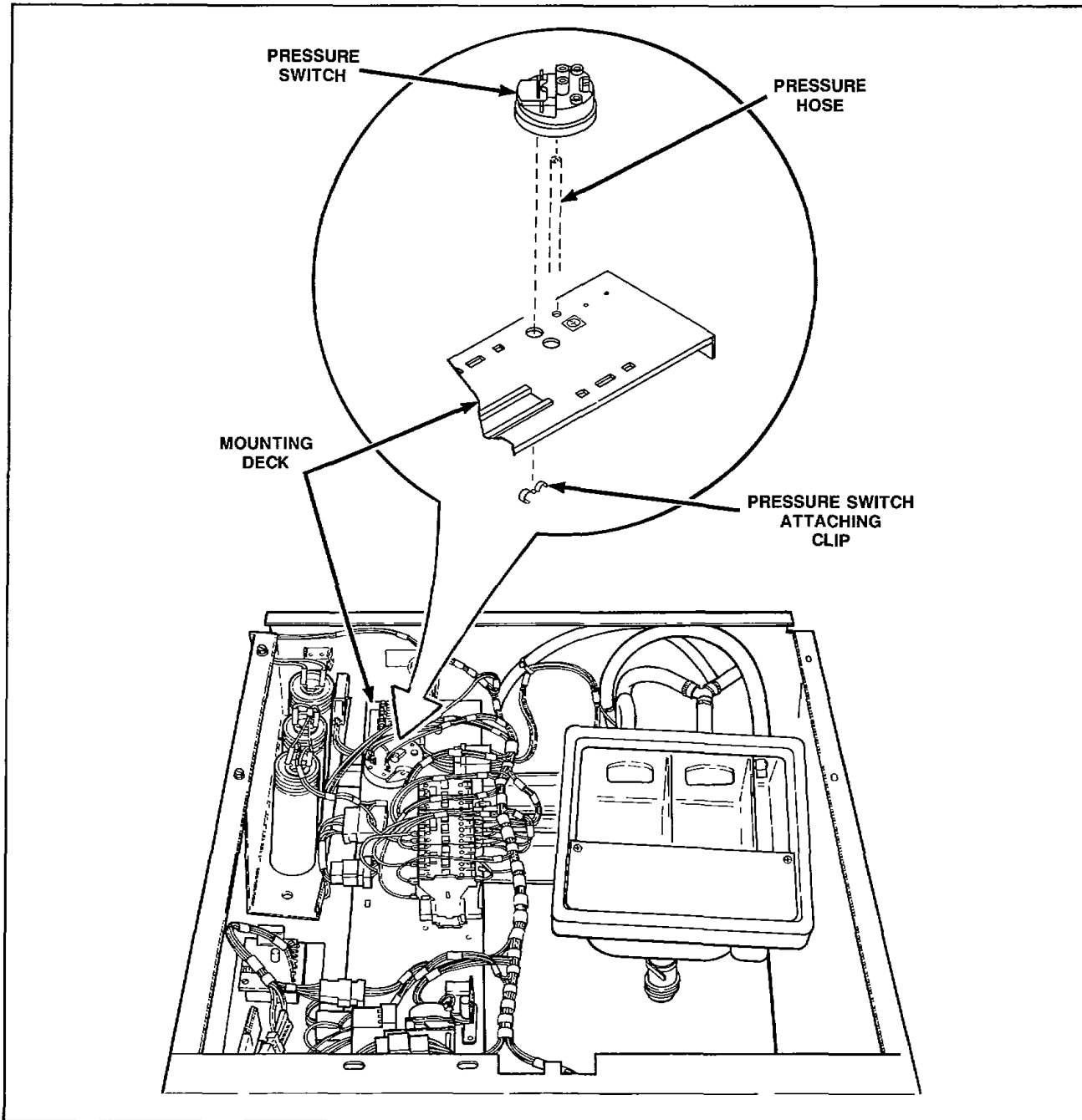


Figure 18

16. RELAY

- a. Open dispenser door and remove the four screws holding the cabinet top to the dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down

studs from the stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.

IMPORTANT: Before removing all the wires from each relay, rewire the new relay (wire for wire) from the old relay to be sure it is wired correctly.

- e. Remove the relay from the mounting deck by snapping the relay on and off the rail, *Figure 19*.

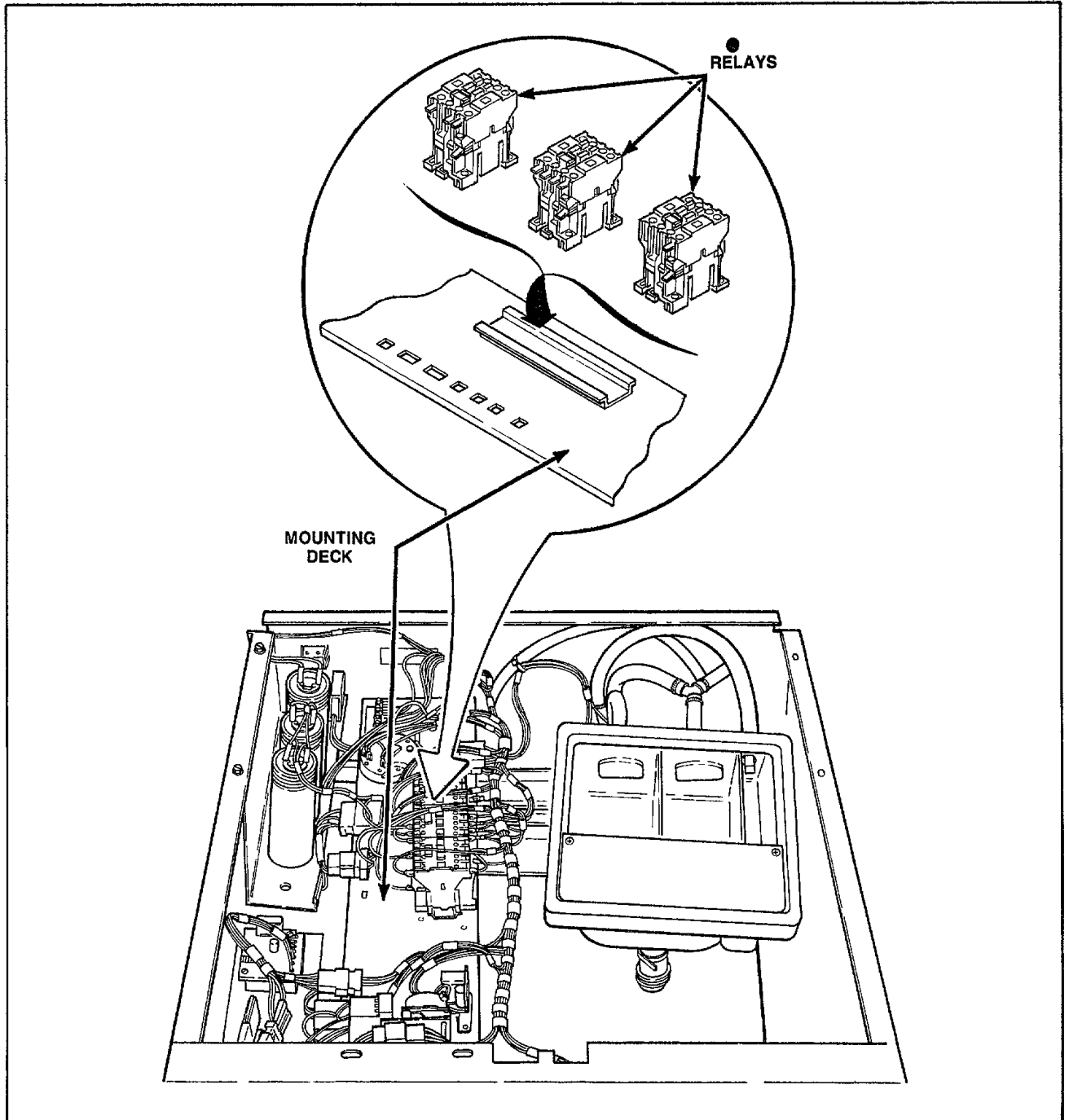


Figure 19

17. CAPACITOR

WARNING

Before handling capacitor, touch capacitor terminals with ends of insulated wire to discharge capacitor.

- a. Open dispenser door and remove the four screws holding the cabinet top to the dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.
- e. Disconnect wires from capacitor.
- f. Reach under capacitor mounting bracket and remove nut and lockwasher holding capacitor to mounting bracket, *Figure 20*.

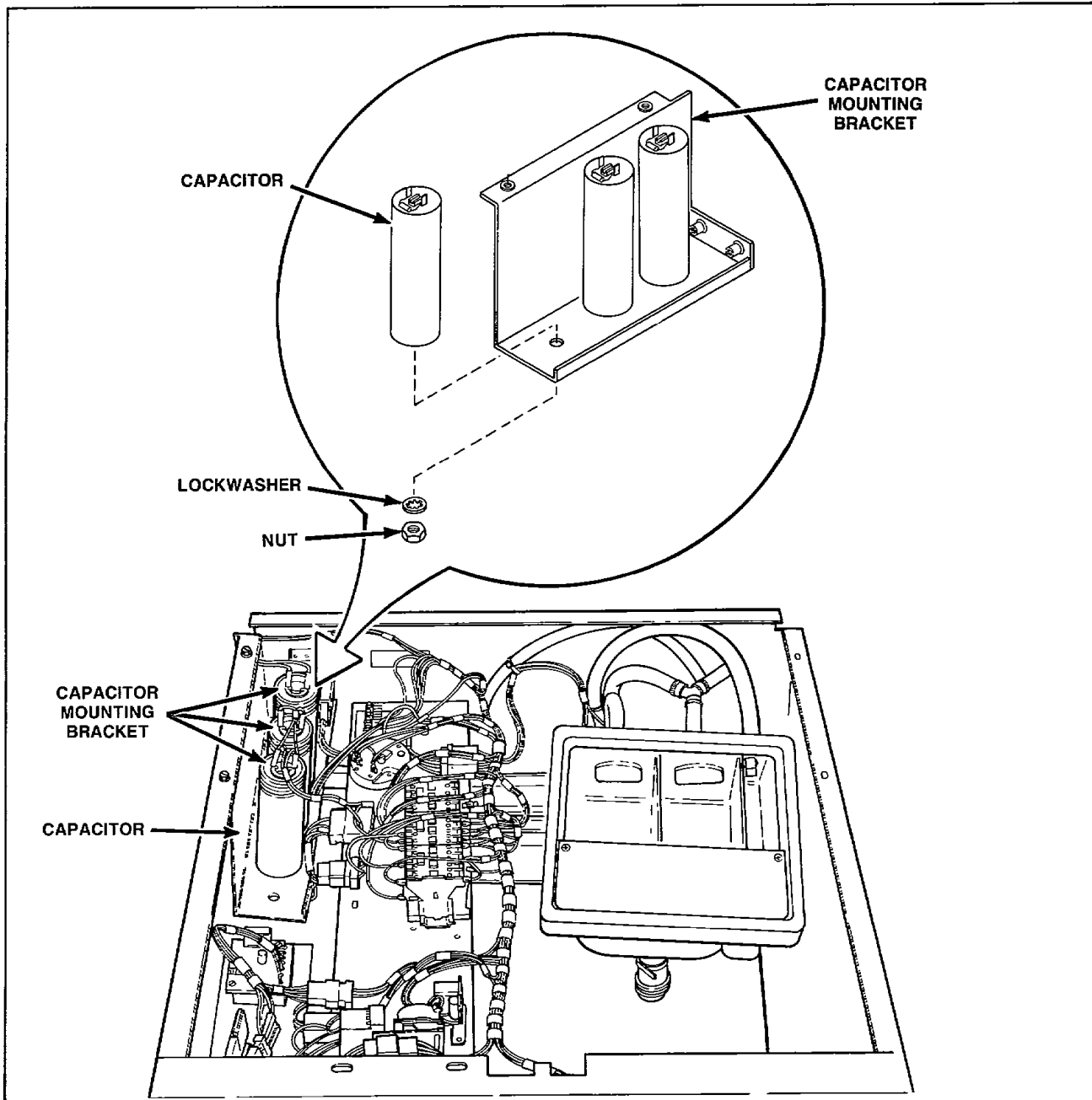


Figure 20

18. WATER INLET VALVE (Hot or Cold)

- a. Open dispenser door and remove the four screws holding the cabinet top to the dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down studs from the stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.
- e. Disconnect wires from inlet valve solenoids.

NOTE: Refer to the wiring diagram when rewiring the inlet valve solenoids.

- f. Loosen hose clamps and remove the dispenser hoses at the inlet valve, *Figure 21*.

IMPORTANT: Mark the hoses so they can be reinstalled on the correct valve outlet.

- g. Go to the rear of washer and disconnect the inlet hose from the inlet valve.
- h. Support inlet valve and remove the two screws and washers holding the inlet valve to the rear cross channel. Remove valve out from inside of washer.

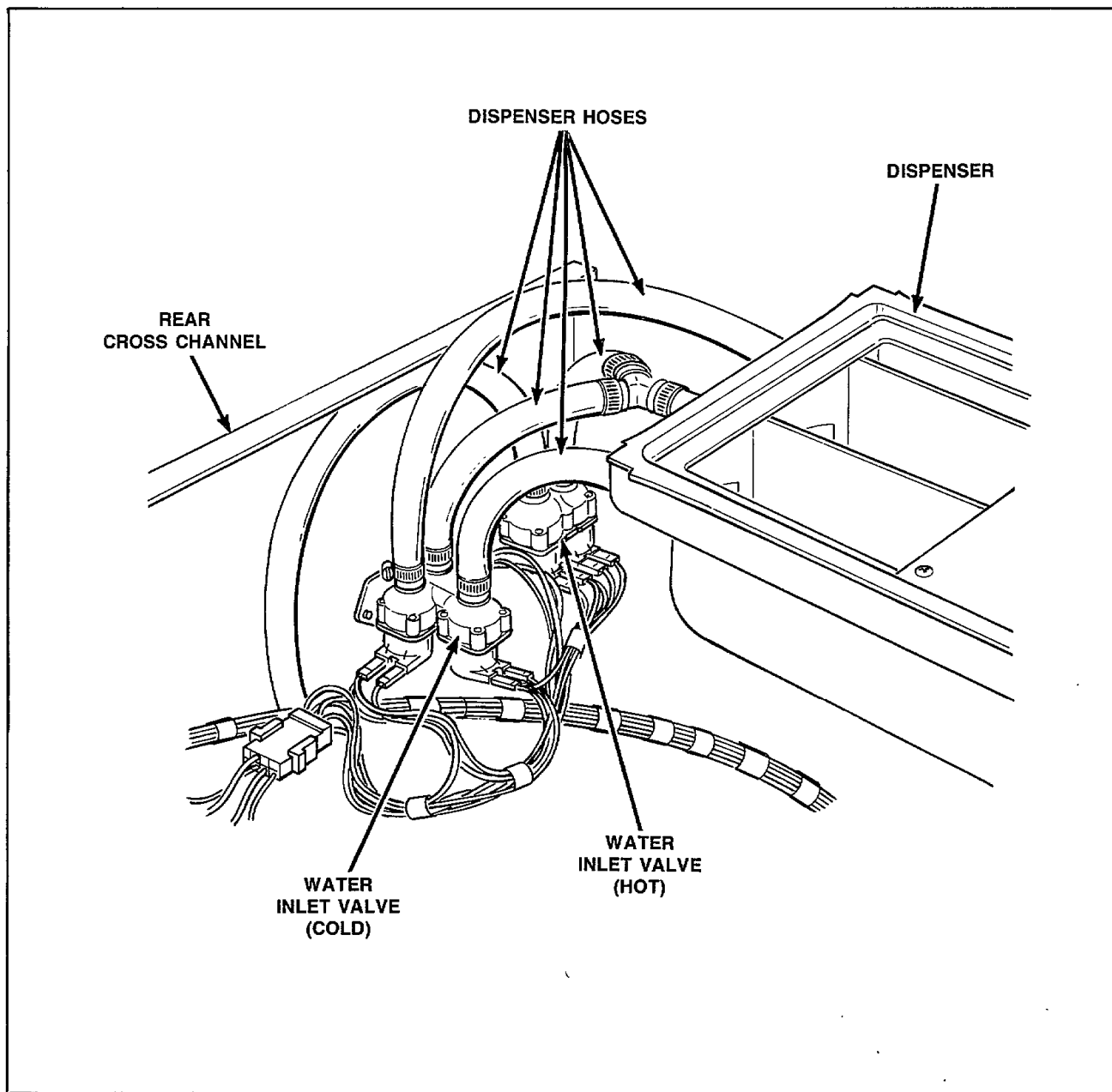


Figure 21

19. DISPENSER

- a. Open dispenser door and remove four screws holding cabinet top to dispenser, *Figure 1*.
- b. Insert key into cabinet top lock, turn the key 1/4 turn to the right (clockwise), *Figure 2*.
- c. Lift up on front of cabinet top to disengage the top from the two cabinet top hold-down studs, *Figure 2*.
- d. Slide the cabinet top back far enough to disengage the two cabinet top hold-down stud clips in the rear cross channel, *Figure 2*. Set cabinet top out of the way.
- e. Loosen hose clamps and remove hoses from nozzles on rear of dispenser, *Figure 22*.
- f. Loosen hose clamps and remove hose from underside of dispenser, *Figure 23*. and remove dispenser.

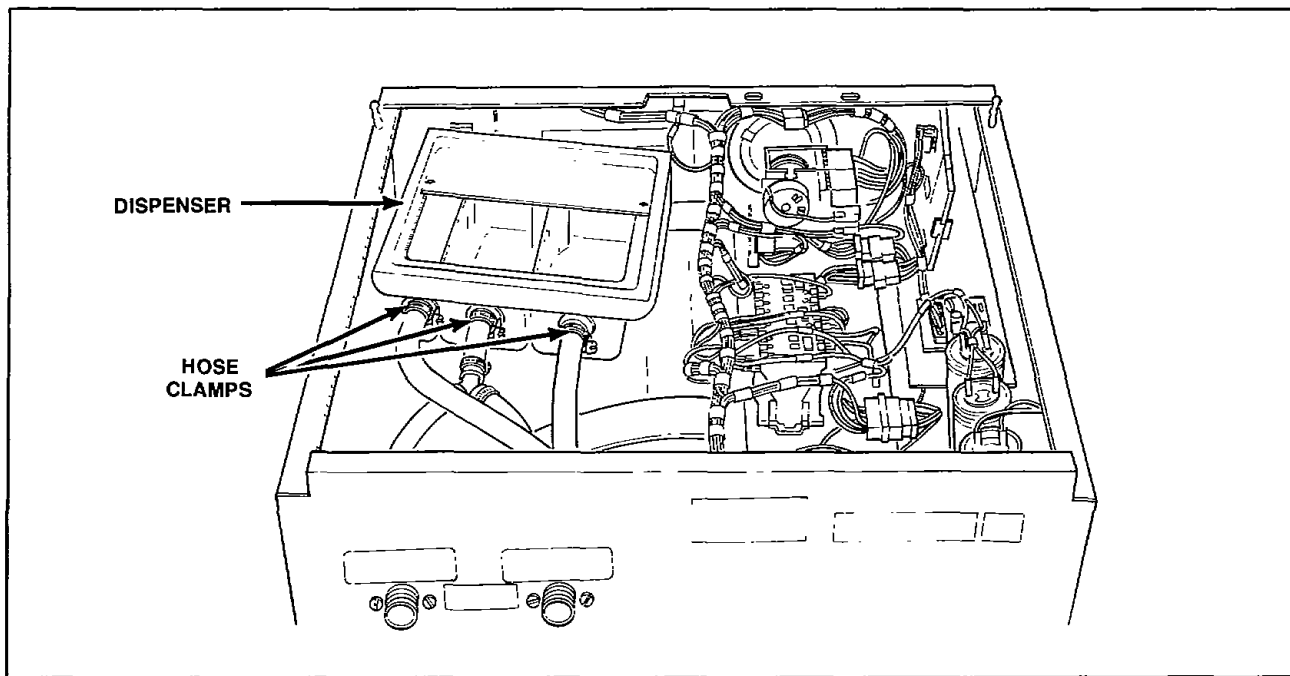


Figure 22

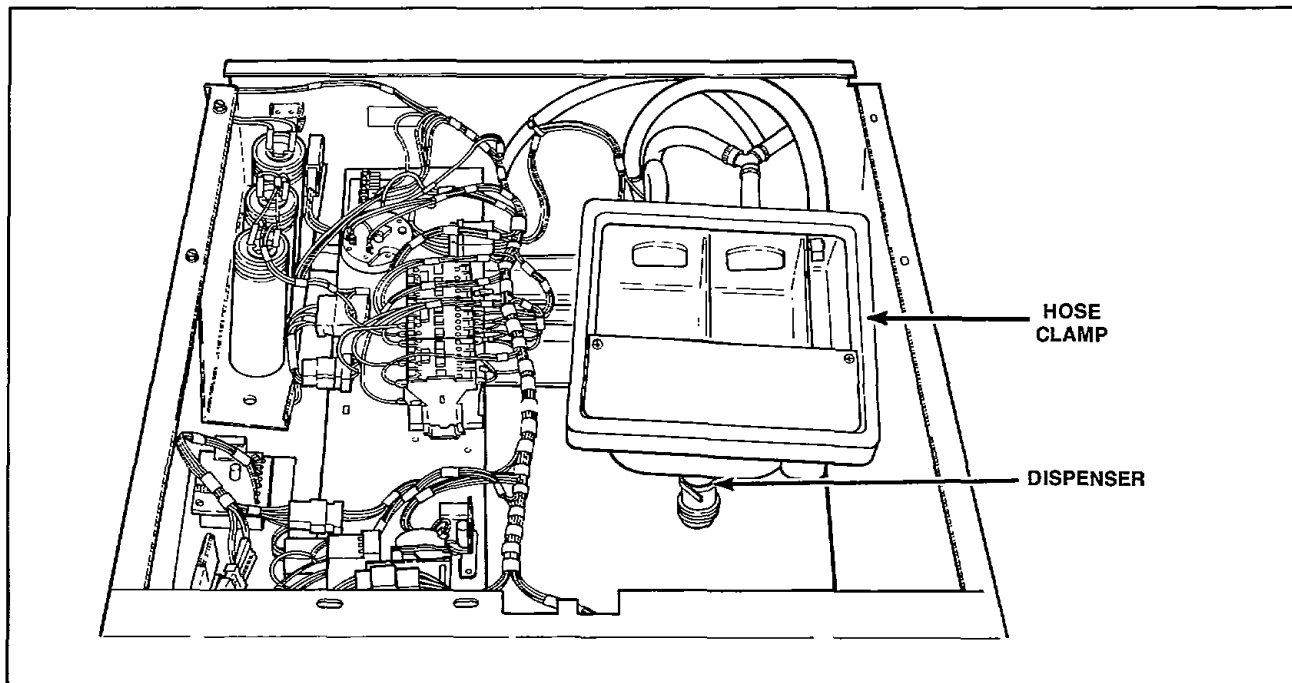


Figure 23

20. CLOTHES CYLINDER ASSEMBLY

IMPORTANT: Before attempting to remove the cylinder from the rear of the washer, determine if there is enough service area behind the washer. We recommend a minimum clearance of 24 inches (60.96 cm). If you do not have enough clearance, then the washer will first have to be removed from its permanent mountings and moved to an area where the service work can be performed.

- a. Disconnect washer power cord, close water supply valves and disconnect water inlet hoses at rear of washer.
- b. Remove cabinet top, paragraph 1.
- c. Remove screws holding the rear panel to the washer side panels, *Figure 5*.
- d. Run the two belts off the motor pulley while slowly turning the cylinder pulley, *Figure 24*.
- e. Remove the eight screws holding the rear channel to the washer, *Figure 24*.
- f. Loosen hose clamp and remove vent hose at the elbow, *Figure 24*.

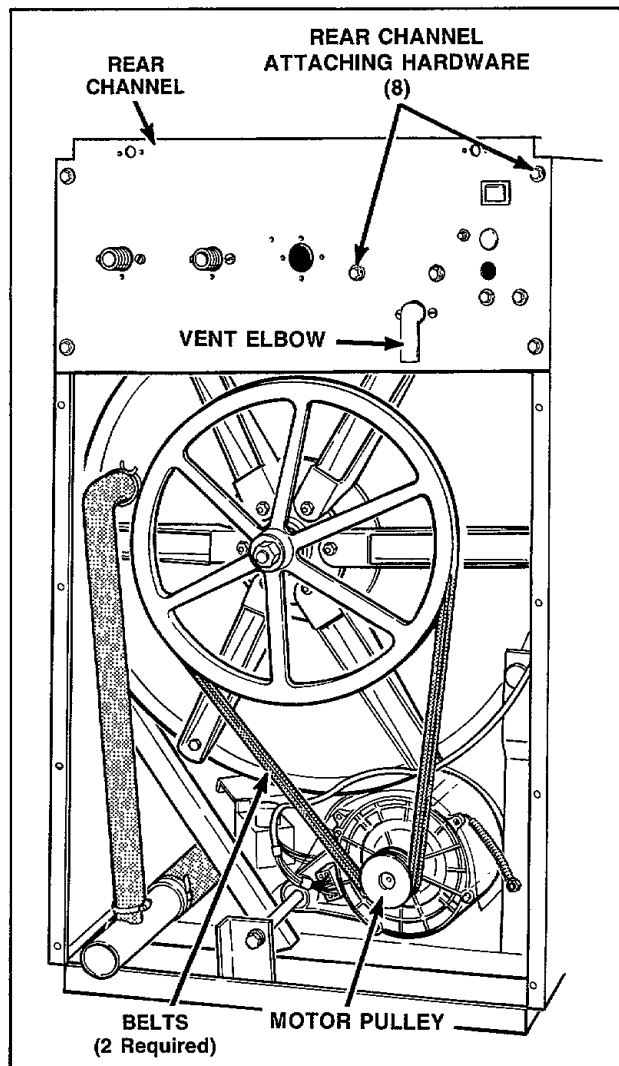


Figure 24

- g. Swing the rear channel up and lay channel across top of washer, this will allow complete access to the tub back.

IMPORTANT: Secure rear channel to top of washer with a small chain or wire to insure that it will stay.

- h. Loosen hose clamps and remove the fill hose and vent hose from the tub back, *Figure 25*.
- i. Loosen hose clamps and remove the overflow hose from tub back and drain tube, *Figure 25*.
- j. Remove the main wire harness from the three metal clamps, *Figure 25*. Position the wire harness around the side of the outer tub so it will be out of the way.
- k. Remove hardware holding tub support brace to frame, *Figure 25*.

IMPORTANT: Before removing the cylinder, mark the tub back, both clamp rings and the bearing housing and braces so all these parts can be reinstalled in the same position.

(continued)

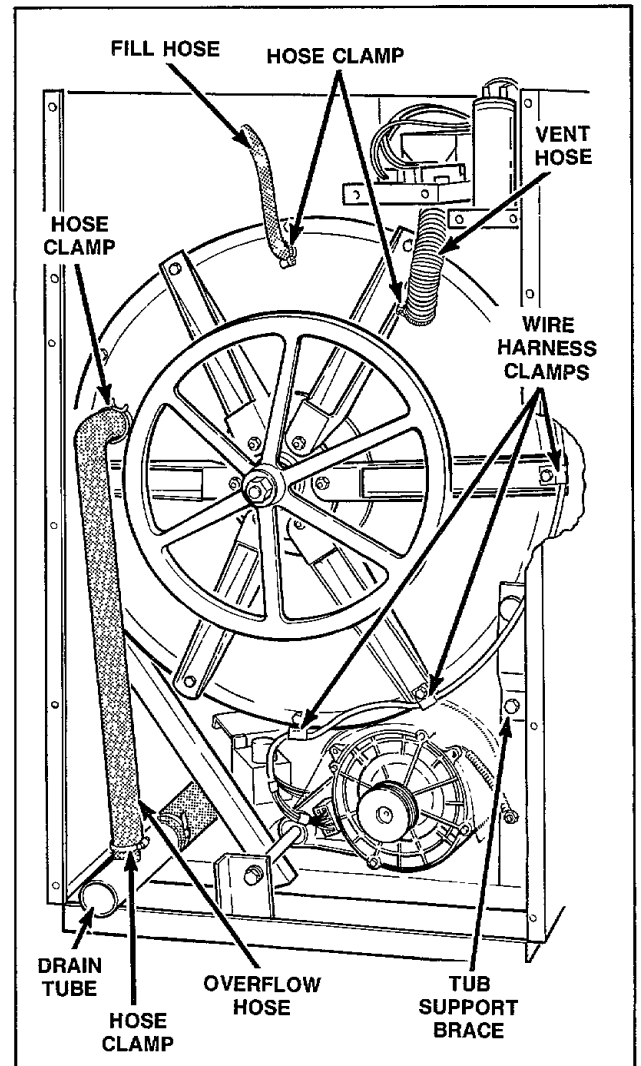


Figure 25

- l. Support the complete tub back and cylinder assembly and remove the hardware holding the assembly to the outer tub, *Figure 26*.
- m. Carefully remove tub back and cylinder assembly straight out the back until cylinder clears the outer tub.
- n. Place complete assembly face down on a couple of 2 x 4 wood blocks.

IMPORTANT: When placing the cylinder on the blocking, be careful not to damage the flange on the front of the cylinder.

- o. Remove the screw, lockwasher and flat washer holding the pulley to the cylinder shaft, *Figure 27*.
- p. Remove pulley from cylinder shaft.

NOTE: It will require using a gear puller together with guide tool No. 251P4 for removing the pulley from shaft.

- q. Remove the bearing housing and tub back off the cylinder shaft.

NOTE: Use a gear puller and guide tool No. 251P4 to remove the tub back and bearing housing assembly from shaft.

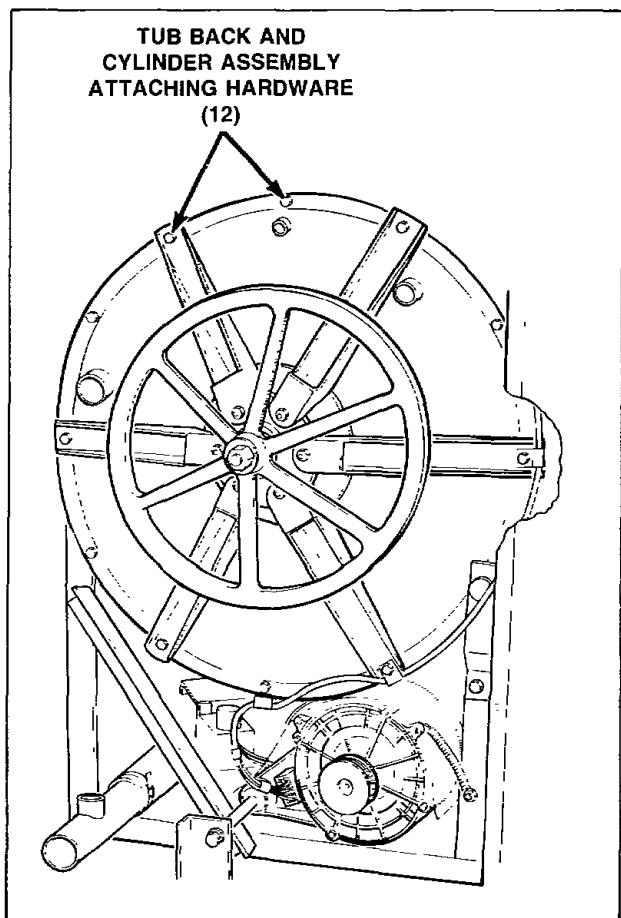


Figure 26

21. BEARING HOUSING ASSEMBLY

- a. Remove clothes cylinder assembly, paragraph 20.
- b. Remove the attaching hardware holding the bearing housing braces and tub back to the bearing housing, *Figure 27*.

22. WATER SEAL

- a. Remove clothes cylinder assembly, paragraph 20.
- b. Carefully pry water seal out of the tub back, *Figure 27*.
- c. Clean the seal area of the tub back of any foreign material.

NOTE: New water seal should be installed with the spring loaded lip facing toward the seal seat, *Figure 27*.

CAUTION: Be careful when installing the water seal as not to damage the seal surface. Be sure the outer rubber skirt of the seal is pressed into the tub back opening and the seal is square with the tub back (not crooked).

IMPORTANT: When installing the new water seal, apply a retaining compound such as Loctite to the outside diameter of the seal to assure a water tight seal. Lubricate the inside diameter of seal that will be contacting the water seal seat and cylinder shaft with No. 21814 Lubricant.

23. WATER SEAL SEAT AND "O" RING

- a. Remove clothes cylinder assembly, paragraph 20.
- b. Carefully pry the water seal seat off the cylinder shaft, *Figure 28*.
- c. Remove the "O" ring from cylinder shaft, *Figure 28*.
- d. Clean the cylinder shaft of any foreign material.

IMPORTANT: We recommend installing a new "O" ring and water seal seat whenever the clothes cylinder is removed. Lubricate the inside of the new "O" ring with No. 21814 Lubricant before installing on cylinder shaft. Care must be taken that the "O" ring is not cut or damaged and is in its normal (not inside out) position when in place on the shaft. Apply a bead of sealant, such as Dow Corning Silastic® 732-RTV or equivalent (these are clear silicone sealants), around the entire area where the "O" ring and water seal seat will contact the back side of the cylinder. When installing the new water seal seat, be sure the beveled side is toward the "O" ring and rear of cylinder.

- e. Place the new water seal seat on cylinder shaft, be sure the beveled side of seat is toward the "O" ring and rear of cylinder.

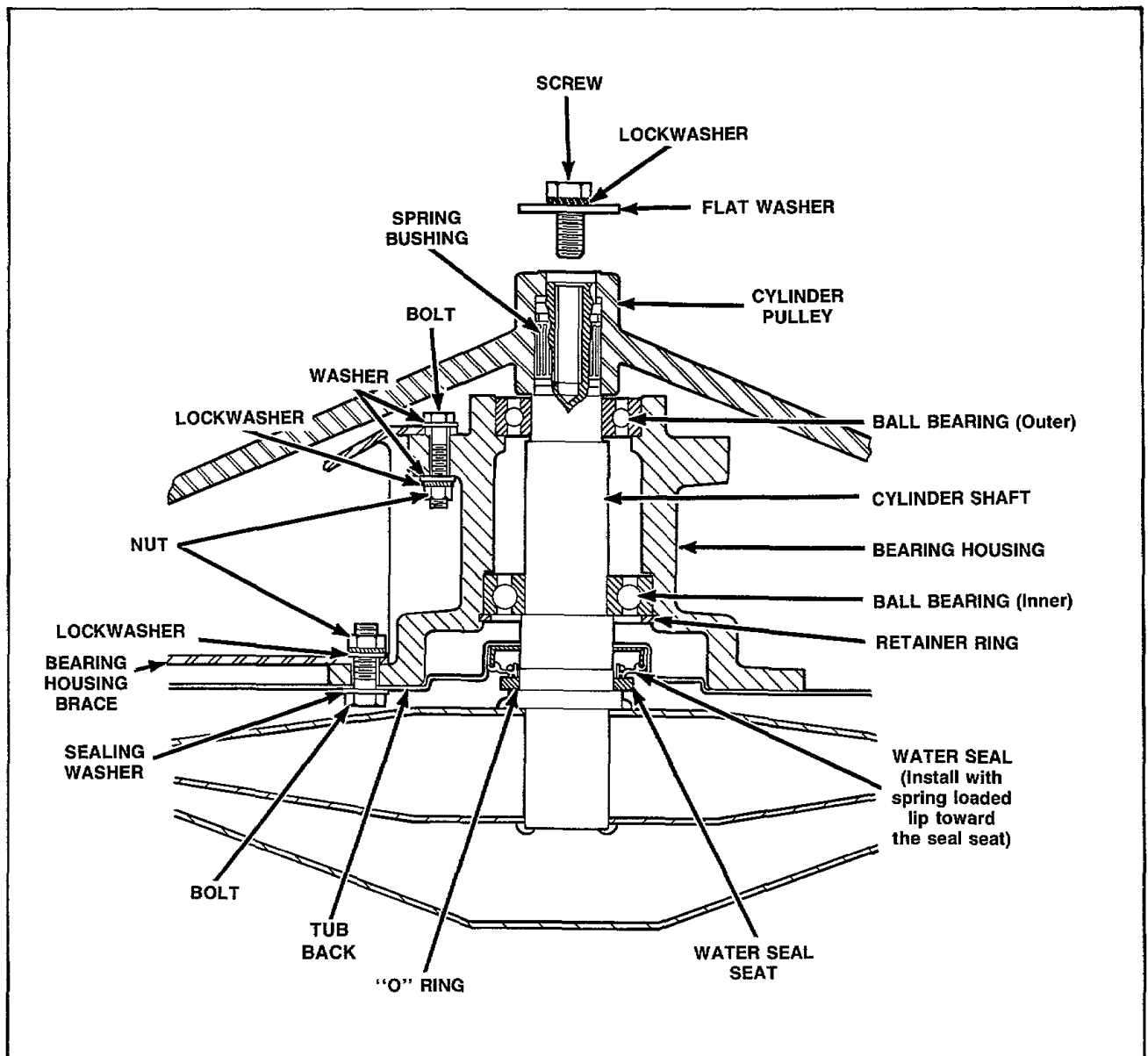


Figure 27

- f. Use a plastic tipped hammer and carefully drive seat down until the seat bottoms out on shaft.

CAUTION: Be careful when installing the seal seat as not to scratch or mar the surface where the water seal will be contacting the seal seat.

24. CYLINDER SHAFT BEARINGS

- Remove clothes cylinder assembly, paragraph 20.
- Remove the attaching hardware holding the bearing housing braces and tub back to the bearing housing, *Figure 27*.

NOTE: Bearings are a press fit in the bearing housing and can be driven out using a hammer

and a piece of hardwood dowel. The inner bearing is held in place with a retainer ring which must be removed first before attempting to remove the inner bearing, *Figure 27*.

- The outer bearing (pulley end) should be removed first to provide more room for driving out the inner bearing.

IMPORTANT: Never re-use bearings once they have been removed from the bearing housing.

- Clean all foreign material from inside diameter of the bearing housing.
- Apply a retaining compound (such as Loctite) to the outside diameter of the new bearing and carefully press the new bearing into housing (with sealed side facing up).

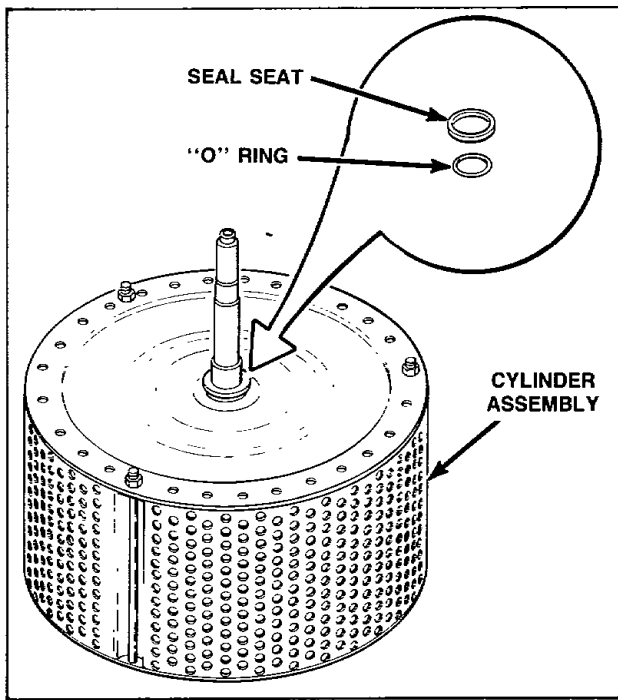


Figure 28

IMPORTANT: Press new bearing into housing by pressing on the outer race of the bearing only, and press until bearing bottoms out in housing. DO NOT hammer the bearing into the housing!

25. REASSEMBLING OF BEARING HOUSING AND CYLINDER ASSEMBLY

IMPORTANT: The reassembling of the bearing housing and cylinder assembly is a big factor in the proper operation of the washer-extractor.

- a. Apply a light film of No. 21814 Lubricant to the surface of the cylinder shaft, to the inner diameter of the water seal and bearings, and to the sealing surface of the water seal seat. (This is the area of the seat where the water seal will be contacting it.)

NOTE: This lubrication will aid in the reassembling of parts and will help to minimize the rusting of the cylinder shaft.

- b. Reinstall the tub back and braces on the bearing housing assembly using six screws, sealing washers, lockwashers and nuts, *Figure 27*.

IMPORTANT: We recommend using new sealing washers when reassembling tub back and braces to the bearing housing. Apply a retaining compound (such as Loctite) to the screw threads. Be sure the bearing housing, braces and tub back are in proper alignment when reassembling.

- c. Tighten the six screws holding the tub back and braces to the bearing housing. Recommended torque of 240 to 280 inch pounds (27.11 to 31.63 N.M). DO NOT tighten the other brace screws at this time, *Figure 27*.
- d. Carefully place the bearing housing and tub back onto the cylinder shaft, *Figure 27*.

CAUTION: Be careful not to damage the water seal when reassembling.

- e. Use tool, No. 252P4, and press bearing housing and tub back assembly down on cylinder shaft until housing bottoms out on shaft.

IMPORTANT: We recommend a new spring bushing be used when reinstalling the pulley on the cylinder shaft, *Figure 27*.

- f. Align the flat of the pulley with the flat on the cylinder shaft and carefully press the pulley onto the shaft using tool No.252P4.

NOTE: The spring bushing locks the pulley onto the shaft.

- g. Reinstall the screw, lockwasher and flat washer on shaft, *Figure 27*.
- h. Carefully place the cylinder assembly, with tub back and bearing housing attached, into the outer tub.

IMPORTANT: Be sure to align the match marks that were made where the cylinder assembly was removed and always use a new tub back gasket.

- i. Align the holes in the two clamp rings, outer tub and the tub back, and install the attaching hardware. Tighten all twelve bolts and nuts evenly. Recommended torque of 130 to 150 inch pounds (14.69 to 16.95 N.M).
- j. Go to front of washer and open the loading door. Spin the cylinder to see if it is centered within the door opening. If it is not centered, go to rear of washer and use a pry bar between the bearing housing and the appropriate brace to align the cylinder assembly. Cylinder should be slightly above center.
- k. Apply a retaining compound (such as Loctite) to the screw threads. Tighten the six screws and nuts holding the braces to the outer flange of the bearing housing. Recommended torque of 240 to 280 inch pounds (27.11 to 31.63 N.M).
- l. Reassemble the balance of the washer by reversing the disassembly procedure.

SECTION III

Adjustments

26. PRESSURE SWITCH

The pressure switch is set at the factory for proper water fill levels. However, if there is a problem of overfilling or underfilling, the pressure switch can be adjusted as follows:

WARNING

Disconnect electrical power to washer before performing the following adjustment.

- Open dispenser door and remove the four screws holding cabinet top to dispenser, *Figure 1*.
- Use one of the keys (from the accessories bag) and unlock the cabinet top.

NOTE: Turn the key 1/4 turn to the right (clockwise).

- Lift up on front of cabinet top to disengage the top from the two front hold-down studs, *Figure 2*.

- Slide the cabinet top back far enough to disengage the two rear hold-down studs from the clips in the rear cross channel, *Figure 2*.
- To **increase** the water level, turn adjustment screw "C" clockwise, *Figure 29*.
- To **decrease** the water level, turn adjustment screw "C" counterclockwise.
- To **increase** the reset point of water setting, turn adjustment screw "D" clockwise, *Figure 29*.
- To **decrease** the reset point of water setting, turn adjustment screw "D" counterclockwise.

NOTE: Adjustment screws "A" and "B" are not used with this washer.

HIGH WATER LEVEL OPTIONS

To get HIGH WATER LEVEL on final rinse; Move the WHITE/ORANGE (18 Gauge) wire from terminal No. 12 on pressure switch to terminal No. 22.

To get HIGH WATER LEVELS on all fills; Move both the WHITE/ORANGE (18 Gauge) wire and the RED/BLACK (18 Gauge) wire from terminal No. 12 on pressure switch to terminal No. 22.

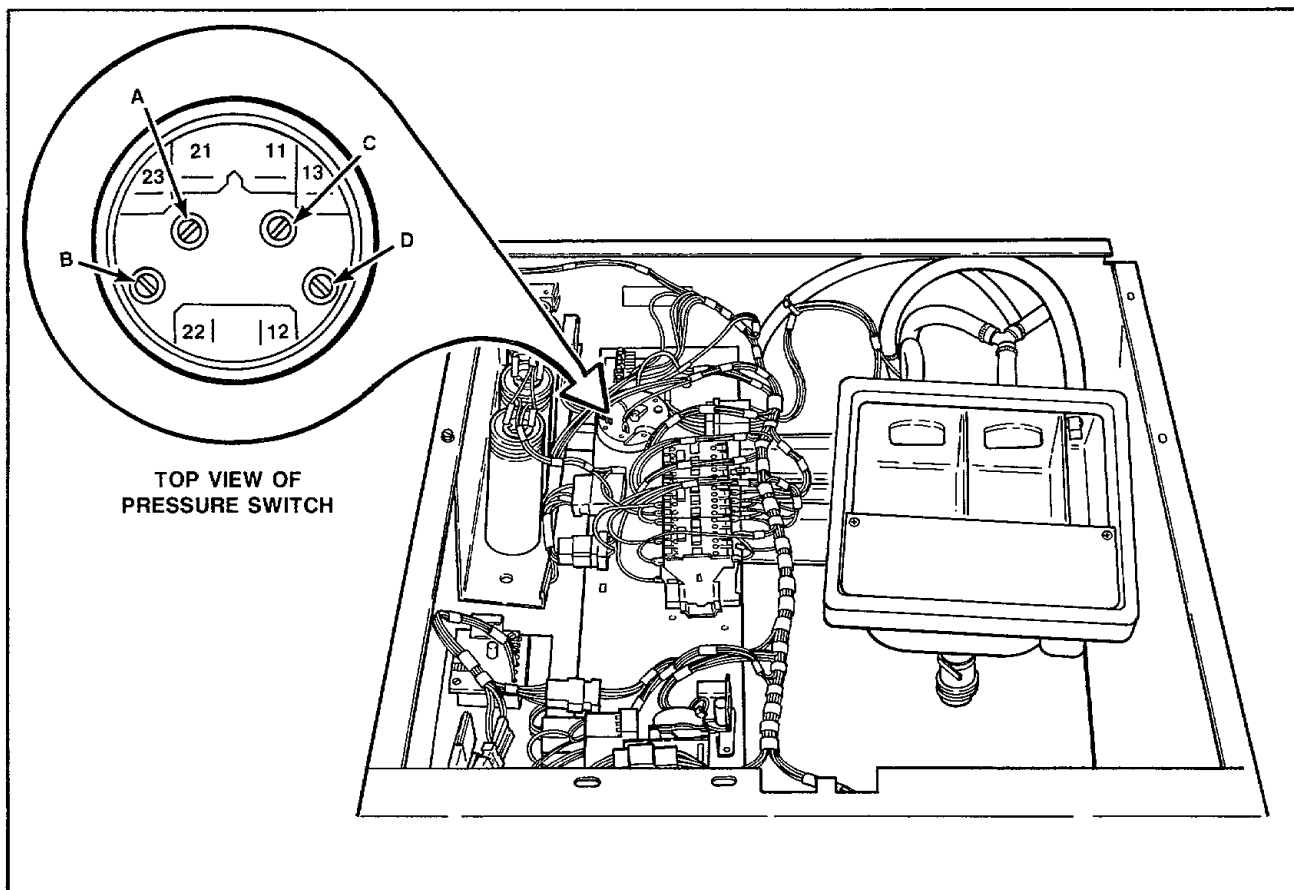


Figure 29

SECTION IV

Service Helps

IMPORTANT: Refer to the Wiring Diagram for aid in testing washer components.

27. WASHER DOES NOT START

POSSIBLE CAUSE	TO CORRECT
Electric power disconnected or fuse blown.	Connect electrical power or replace fuse. Check fuses (located on rear channel) and replace if blown.
Inoperative Accumulator Coinmeter	Check coin switch for proper operation. Replace if inoperative. Check accumulator and replace if inoperative.
Door safety switch is inoperative or is not tripped.	Check door lock assembly and replace if inoperative. Check door latch hook to ensure proper switch engagement.
Motor overload protector has cycled.	Wait 15 to 30 minutes for overload protector to reset. If protector cycles repeatedly, refer to paragraph 35.
Inoperative timer.	Test timer start circuit continuity across contacts 68 and 70 (contacts must be closed during OFF). Replace timer if inoperative.
Inoperative timer motor.	Replace timer assembly.
Broken, loose or incorrect wiring.	Refer to the wiring diagram.

28. CYLINDER DOES NOT FILL

POSSIBLE CAUSE	TO CORRECT
No hot water.	Refer to paragraph 29.
No cold water.	Refer to paragraph 30.
Inoperative pressure switch.	Check switch and replace if inoperative.
Improperly adjusted pressure switch.	Adjust switch, paragraph 26.
Inoperative timer.	Check timer and replace if inoperative.
Inoperative drain valve.	Check drain valve and replace if inoperative.
Obstruction in drain valve.	Clean drain valve, refer to the parts section for assembly sequence of valve.
Clogged inlet valve screens.	Remove inlet hoses from inlet valve and clean or replace screens.
Inoperative inlet valve.	Check inlet valve solenoids for proper operation, replace if inoperative.
Inoperative selector switch.	Check switch and replace if inoperative.
Broken, loose or incorrect wiring.	Refer to the wiring diagram.

29. NO HOT WATER

POSSIBLE CAUSE	TO CORRECT
Water in hot water tank is cold.	
Hot water supply line is closed.	Check for closed valve, kinked hose, or obstruction in line.
Clogged inlet valve screens.	Remove and clean or replace screens.
SELECTOR SWITCH improperly set or inoperative.	Set switch or replace switch if inoperative.
Inoperative hot water solenoid.	Check solenoid and replace complete inlet valve if inoperative.
Inoperative timer assembly.	Check timer contacts 9-15, 11-13, and 17-23. Replace timer if contacts are inoperative.
Inoperative pressure switch.	Check timer contacts 11-12. Replace timer if inoperative contacts. Check pressure switch and replace if inoperative.
Broken, loose or incorrect wiring.	Refer to wiring diagram.

30. NO COLD WATER

POSSIBLE CAUSE	TO CORRECT
Cold water supply line is closed.	Check for closed valve, kinked hose, or obstruction in line.
Clogged inlet valve screen.	Remove and clean or replace screens.
SELECTOR SWITCH improperly set or inoperative.	Set switch or replace switch if inoperative.
Inoperative cold water solenoid.	Check solenoid and replace complete inlet valve if inoperative.
Inoperative timer assembly.	Check timer contacts 9-15, 11-13 and 17-23. Replace timer assembly if contacts are inoperative.
Inoperative pressure switch.	Check timer contacts 11-12 and replace timer if inoperative contacts. Check pressure switch and replace if inoperative.
Broken, loose or incorrect wiring.	Refer to the wiring diagram.

31. NO WARM WATER

POSSIBLE CAUSE	TO CORRECT
No hot water.	Refer to paragraph 29.
No cold water.	Refer to paragraph 30.

32. WATER DOES NOT SHUT OFF

POSSIBLE CAUSE	TO CORRECT
Sediment in inlet valve.	Replace complete inlet valve.
Inoperative pressure switch.	Check switch and replace if inoperative.
Pressure switch improperly adjusted	Adjust switch, paragraph 26.
Incorrect wiring.	Refer to wiring diagram.

33. WATER DOES NOT DRAIN FROM CLOTHES CYLINDER

POSSIBLE CAUSE	TO CORRECT
Obstruction in drain valve.	Disassemble and clean valve, refer to parts section for assembly sequence of valve.
Kinked drain hose.	Straighten drain hose.
Inoperative drain valve motor.	Check motor and replace if inoperative.
Inoperative timer assembly.	Check timer and replace if inoperative.
Incorrect wiring.	Refer to wiring diagram.

34. MOTOR DOES NOT RUN

POSSIBLE CAUSE	TO CORRECT
No electrical power.	Check fuses, switch outlet or power cord.
Inoperative timer assembly.	Check timer and replace if inoperative.
SELECTOR SWITCH improperly set, or inoperative.	Set switch, check switch and replace if inoperative.
Door lock assembly improperly adjusted.	Adjust door lock assembly, paragraph.
Motor overload protector has cycled.	Wait 15 to 30 minutes for overload protector to reset. If protector cycles repeatedly, refer to paragraph 35.
Inoperative capacitor.	Check capacitor and replace if inoperative.
Inoperative drive motor.	Check motor and replace if inoperative.
Inoperative motor relay.	Check motor relay and replace if inoperative.
Inoperative pressure switch.	Switch must be in the "normally closed" position (across terminals 11-12). Check pressure hose to see if it is clogged preventing pressure switch from resetting. Check switch and replace if inoperative.
Broken, loose or incorrect wiring.	Refer to wiring diagram.

35. MOTOR OVERLOAD PROTECTOR CYCLES REPEATEDLY

POSSIBLE CAUSE	TO CORRECT
Low voltage.	See Installation Instructions (supplied with washer) for electrical requirements.
Inoperative motor overload protector.	Replace motor.
Water does not drain from cylinder.	Refer to paragraph 33.
Inoperative motor relay.	Check relay and replace if inoperative.

36. CYLINDER DOES NOT TURN

POSSIBLE CAUSE	TO CORRECT
Drive motor does not run.	Refer to paragraph 34.
Loose or broken belts.	Check belt tension or replace belts.

37. TIMER DOES NOT ADVANCE

POSSIBLE CAUSE	TO CORRECT
Inoperative timer motor.	Replace complete timer assembly.
Incorrect wiring.	Refer to wiring diagram.

38. DOOR WILL NOT OPEN

POSSIBLE CAUSE	TO CORRECT
Inoperative DOOR OPEN switch contacts.	Replace selector switch.
Inoperative door relay.	Replace relay.
Inoperative door solenoid.	Replace complete door lock assembly.
No electrical power to door relay (control fuse blown).	Replace fuse.
Motor overload protector has cycled.	Wait 15 to 30 minutes for motor overload protector to reset. If overload protector cycles repeatedly, refer to paragraph 35.
Door switch not energized.	Check door lock and switch mechanism, and door latch hook for proper alignment and operation.

39. DOOR LEAKS

POSSIBLE CAUSE	TO CORRECT
Insufficient pressure on door gasket.	Adjust pressure by removing shims from either the hinge or from the latch hook, depending on the area of the leak.
Damaged gasket.	Replace gasket.

40. EXCESSIVE VIBRATION

POSSIBLE CAUSE	TO CORRECT
Unbalanced load in cylinder.	Stop washer, redistribute load, then restart washer.
Loosened mounting bolts.	Tighten bolts.
Loose cabinet screws.	Tighten screws.

