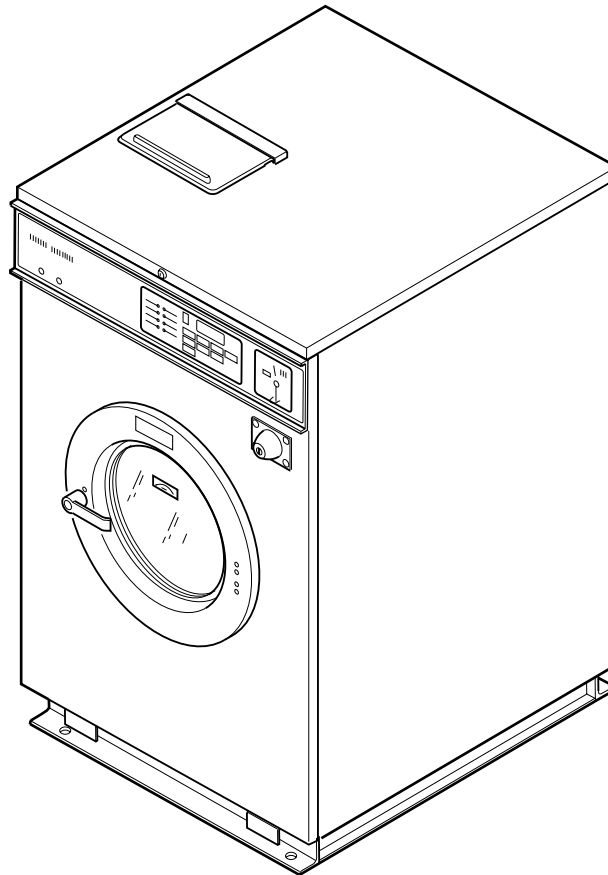


# Washer-Extractor

## Cabinet Hardmount

HC18	SC18	UC18
HC25	SC25	UC25
HC35	SC27	UC27
HC50	SC35	UC35
	SC50	UC50



B003C

— Preliminary Service —

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# Section 1

## Safety Information

Throughout this manual and on machine decals, you will find precautionary statements (“CAUTION,” “WARNING,” and “DANGER”) followed by specific instructions. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

### ▲ DANGER

Danger indicates the presence of a hazard that **will** cause **severe** personal injury, death, or substantial property damage if the danger is ignored.

### ▲ WARNING

Warning indicates the presence of a hazard that **can** cause **severe** personal injury, death, or substantial property damage if the warning is ignored.

### ▲ CAUTION

Caution indicates the presence of a hazard that **will** or **can** cause **minor** personal injury or property damage if the caution is ignored.

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.


### IMPORTANT

The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

### NOTE

The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

In the interest of safety, some general precautions relating to the operation of this machine follow.

	<b>WARNING</b>
<ul style="list-style-type: none"><li>• <b>Failure to install, maintain, and/or operate this product according to the manufacturer’s instructions may result in conditions which can produce serious injury, death and/or property damage.</b></li><li>• <b>Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in this Service Manual and that you understand and have the skills to carry out.</b></li><li>• <b>Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury, or death.</b></li></ul>	
<small>W006R1</small>	

(continued)



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171



## WARNING

Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly or adjustments subjecting you, or the inexperienced person making such repairs, to the risk of serious injury, electrical shock, or death.

W007



## WARNING

If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures.

W008

**NOTE: The WARNINGS and IMPORTANT INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining or operating the washer-extractor.**

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

### **Locating an Authorized Servicer:**

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Alliance Laundry Systems also recommends contacting an authorized technician and using authorized factory parts.

# Section 2 Introduction

## Customer Service

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

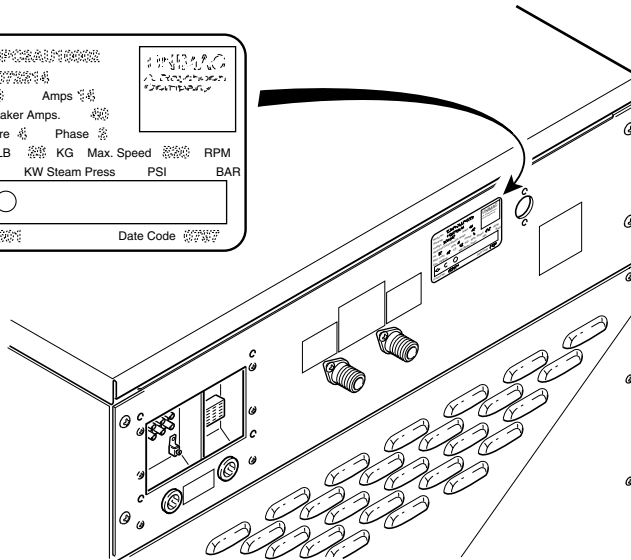
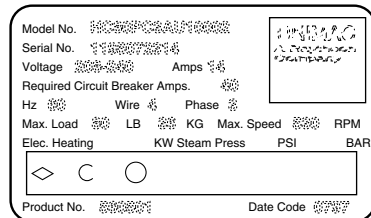
If literature or replacement parts are required, contact the source from whom the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name of the nearest authorized parts distributor.

For technical assistance, call any of the following numbers:

(850) 718-1035  
(850) 718-1026  
Marianna, Florida  
(920) 748-3121  
Ripon, Wisconsin

## Nameplate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are located on nameplate(s) as shown.



B155P

# Model Identification

Information in this manual is applicable to these washer-extractors:

HC18MC2	HC50MH2	SC27MN2	SC50VNV	UC27MV2	UC50MV3
HC18MD2	HC50MN2	SC27MV2		UC27PC2	UC50PC2
HC18MH2	HC50MV2	SC27SN2	UC18MC2	UC27PN2	UC50PC3
HC18MN2	HC50PC2	SC27VNV	UC18MC3	UC27VNV	UC50PN2
HC18MV2	HC50SN2	SC35MC2	UC18MD2	UC35MC2	UC50PN3
HC18PC2		SC35MC3	UC18MD3	UC35MC3	UC50VNV
HC18SN2	SC18MC2	SC35MD2	UC18MH2	UC35MD2	
HC25MC2	SC18MC3	SC35MD3	UC18MH3	UC35MD3	
HC25MD2	SC18MD2	SC35MH2	UC18MN2	UC35MH2	
HC25MH2	SC18MD3	SC35MH3	UC18MN3	UC35MH3	
HC25MN2	SC18MH2	SC35MN2	UC18MV2	UC35MN2	
HC25MV2	SC18MH3	SC35MN3	UC18MV3	UC35MN3	
HC25PC2	SC18MN2	SC35MV2	UC18PC2	UC35MV2	
HC25SN2	SC18MN3	SC35MV3	UC18PC3	UC35MV3	
HC27MC2	SC18MV2	SC35SN2	UC18PN2	UC35PC2	
HC27MD2	SC18MV3	SC35SN3	UC18PN3	UC35PC3	
HC27MH2	SC18SN2	SC35VNV	UC18VNV	UC35PN2	
HC27MN2	SC18SN3	SC50MC2	UC25MC2	UC35PN3	
HC27MV2	SC18VNV	SC50MC3	UC25MD2	UC35VNV	
HC35MC2	SC25MC2	SC50MD2	UC25MH2	UC50MC2	
HC35MD2	SC25MD2	SC50MD3	UC25MN2	UC50MC3	
HC35MH2	SC25MH2	SC50MH2	UC25MV2	UC50MD2	
HC35MN2	SC25MN2	SC50MH3	UC25PC2	UC50MD3	
HC35MV2	SC25MV2	SC50MN2	UC25PN2	UC50MH2	
HC35PC2	SC25SN2	SC50MN3	UC27MC2	UC50MH3	
HC35SN2	SC27MC2	SC50MV2	UC27MD2	UC50MN2	
HC50MC2	SC27MD2	SC50MV3	UC27MH2	UC50MN3	
HC50MD2	SC27MH2	SC50SN2	UC27MN2	UC50MV2	

# Model Familiarization

Model Number Familiarization Guide		
Sample Model Number: <b>SC35MN2CU20001</b>		
<b>SC</b>	Machine Type	C = Cabinet
<b>35</b>	Machine Capacity (pounds dry weight)	
<b>M</b> <b>(E)</b> <b>(P)</b> <b>(S)</b> <b>(V)</b>	Type of Electrical Control	M = Mechanical Timer E = WX/EDC Microcomputer P = P-Series Microcomputer† S = S-Series Microcomputer V = V-Series Microcomputer
<b>N</b> <b>(C)</b> <b>(D)</b> <b>(H)</b> <b>(V)</b>	Coin Meter Option	N = No Coin Meter C = W2000 (Computer-controlled models only)‡ D = Digital (Mechanical Timer models only) H = Horizontal Slide (Mechanical Timer models only) V = Vertical Drop (Mechanical Timer models only)
<b>2</b> <b>(3)</b> <b>(V)</b>	Speed	2 = 2-Speed 3 = 3-Speed V = Variable-Speed
<b>C</b>	Electrical Characteristics	See Voltage Designation Chart in this section.
<b>U2</b>	Design Series	
<b>0001</b>	Option Identification (varies from machine to machine)	
†Models designated “PN” use the S-Series Microcomputer.		
‡Models designated “MC” are prepared for use with an aftermarket coin meter.		

Model No.	SC35MN2CU20001				
Serial No.	00000000000				
Voltage	380 - 415	Amps	5		
Required Circuit Breaker Amps	15				
Hz	50	Wire	4	Phase	3
Max. Load	35 LB	16 KG	Max. Speed	470	RPM
Elec. Heating	KW	Steam Press.	PSI	BAR	
ETL LISTED CONFORMS TO ANSI/UL STD. 1555 ANSI/UL STD. 1206  ETL TESTING LABORATORIES, INC. CORTLAND, NEW YORK 13045					
Product No.	500000			Date Code	

B024S

## How Your Washer-Extractor Works

The design of the machine emphasizes performance reliability and long service life.

In washer-extractor sizes up through the 50-pound models, the cylinder is supported with two sealed bearings mounted in a machined cast iron trunnion. Bearing housings are bolted to a heavy gamma frame for all models.

The 2-speed machines use one dual-speed motor to drive the cylinder using a V-belt drive in wash and extract speeds.

The 3-speed 18-pound models use one triple-speed motor to drive the cylinder at wash, medium extract and high extract speeds. The 3-speed 35-pound and 50-pound models use one single-speed and one dual-speed motor to drive the cylinder at wash, medium extract and high extract speeds.

Variable speed washer-extractors use one motor to drive the cylinder. In all models, the motor is driven using a flat belt drive.

A door-lock system prevents opening of the stainless steel door when a cycle is in progress. It also prevents operation of the machine when the door is open.

An electrically operated drain valve is used to retain the water and wash solution in the machine during the wash and rinse steps. The drain valve closes when power is applied and opens when power is removed, allowing the machine to drain in the event of a power failure.

The cylinder is designed with lifters or ribs that lift the garments from the wash solution when the cylinder rotates at slow speed and allow the garments to tumble back into the solution. The cylinder is perforated, allowing the water to pass through and drain from within during the wash and extract cycles.

Electrical controls for the machine are housed in a separate enclosure located underneath the top cover of the machine.

The polypropylene supply dispenser is located under a flexible cover on the left side of the machine, viewed from the front. The compartments are numbered 1–3, starting from the left side of the machine. A nozzle flushes dry supplies from the compartment with water at the appropriate time in the cycle.

Liquid supplies can be injected directly into the dispenser compartments by a customer-supplied external chemical supply system. Hose barbs on the rear of the machine facilitate connection to an external chemical supply system. A terminal strip in the input power junction box provides control signals.



# Section 3

## Troubleshooting



### WARNING

- To reduce the risk of electrical shock, fire, explosion, serious injury or death:
- Disconnect electric power to the washer-extractor before servicing.
  - Never start the washer-extractor with any guards/panels removed.
  - Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

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**IMPORTANT:** Refer to appropriate model wiring diagram for aid in testing components.

#### 1. MACHINE WON'T START

POSSIBLE CAUSE	TO CORRECT
No current to machine.	<ul style="list-style-type: none"> <li>• Check main fuse or circuit breaker on power supply</li> <li>• Check control circuit fuse on the control module.</li> <li>• Check for broken or disconnected electrical wires.</li> </ul>
Door handle switch defective.	<ul style="list-style-type: none"> <li>• Check door handle switch operation. Make sure that the door handle switch lever arm has completely depressed the switch. Adjust or replace as required.</li> </ul>

#### 2. MACHINE DOES NOT OPERATE AT WASH SPEED

POSSIBLE CAUSE	TO CORRECT
No current to motor through wash contactor.	<ul style="list-style-type: none"> <li>• Check and replace wash contactor as required.</li> </ul>
Motor thermal protector tripped.	<ul style="list-style-type: none"> <li>• Automatically resets after 15-30 minutes. Check reason for overheating.</li> </ul>
Motor defective.	<ul style="list-style-type: none"> <li>• Check motor leads and ensure that motor receives power. If power is correct replace motor if necessary.</li> </ul>
Loose or worn drive belts.	<ul style="list-style-type: none"> <li>• Replace belts and/or check tension.</li> </ul>
Cylinder jammed by foreign objects.	<ul style="list-style-type: none"> <li>• Check for free rotation by hand. Remove foreign object (may require disassembly of machine).</li> </ul>

#### 3. MOTOR RUNS, BUT CYLINDER ROTATES SLOWLY, OR NOT AT ALL

POSSIBLE CAUSE	TO CORRECT
Loose or worn drive belts.	<ul style="list-style-type: none"> <li>• Replace belts and/or check tension spring.</li> </ul>
Motor pulley loose or off motor shaft.	<ul style="list-style-type: none"> <li>• Check pulley – tighten set screw or bushing. If necessary, replace with new key.</li> </ul>
Drive belt broken.	<ul style="list-style-type: none"> <li>• Check and replace drive belt.</li> </ul>



## WARNING

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### 4. WASH MOTOR RUNS CONTINUOUSLY IN ONE DIRECTION

POSSIBLE CAUSE	TO CORRECT
Drain valve stays open.	<ul style="list-style-type: none"> <li>• Check drain valve.</li> </ul>
Level will not build up in machine.	<ul style="list-style-type: none"> <li>• Check level switch function and drain valves.</li> </ul>
Level switch not satisfied or activated.	<ul style="list-style-type: none"> <li>• Check level switch function.</li> </ul>
Water overflows through overflow.	<ul style="list-style-type: none"> <li>• Check level switch function.</li> </ul>

### 5. MOTOR DOES NOT OPERATE AT SPIN SPEED

POSSIBLE CAUSE	TO CORRECT
Spin contactor defective.	<ul style="list-style-type: none"> <li>• Check coils and contactor functions. Replace contactor as required.</li> </ul>
Thermal overload protector in motor tripped.	<ul style="list-style-type: none"> <li>• Automatically resets after 15-30 minutes. If not, replace motor. Investigate reason for overheating.</li> </ul>
Water level switch has not reset.	<ul style="list-style-type: none"> <li>• Check level switch, replace as necessary. Check air chamber and hoses to switch.</li> </ul>
Drain will not open.	<ul style="list-style-type: none"> <li>• Check drain valve —might be stuck in closed position.</li> </ul>

### 6. MOTOR MOMENTARILY STARTS ON AND OFF IN SPIN

POSSIBLE CAUSE	TO CORRECT
Machine is not draining fast enough.	<ul style="list-style-type: none"> <li>• Check drain valve and drain system of the machine and facility.</li> </ul>

### 7. MACHINE WILL NOT FILL WITH WATER

POSSIBLE CAUSE	TO CORRECT
No water from service lines.	<ul style="list-style-type: none"> <li>• Check shut-off valves on main supply.</li> </ul>
Clogged inlet valve strainers.	<ul style="list-style-type: none"> <li>• Remove supply hoses and check strainers in valves — clean if clogged.</li> </ul>
Defective inlet valves.	<ul style="list-style-type: none"> <li>• Check solenoids for proper function.</li> <li>• Check diaphragm and plunger — replace with kit if necessary.</li> </ul>



## WARNING

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- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

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### 8. MACHINE WILL NOT DRAIN

POSSIBLE CAUSE	TO CORRECT
Defective drain valve.	<ul style="list-style-type: none"> <li>• Check drain valve — might be stuck in closed position.</li> <li>• Check drain system of facility.</li> <li>• Check drain valve return spring.</li> <li>• Check if drain to machine is clogged.</li> </ul>

### 9. MACHINE WILL NOT HOLD WATER

POSSIBLE CAUSE	TO CORRECT
Defective drain valve.	<ul style="list-style-type: none"> <li>• Check drain valve motor. Check drain valve for foreign matter which could keep valve open.</li> </ul>

### 10. DOOR WON'T OPEN

POSSIBLE CAUSE	TO CORRECT
Door unlock solenoid defective.	<ul style="list-style-type: none"> <li>• Check solenoid for continuity.</li> </ul>
Door locking arm stuck.	<ul style="list-style-type: none"> <li>• Check that locking arm is moving freely.</li> </ul>

### 11. WATER LEVEL TOO HIGH

POSSIBLE CAUSE	TO CORRECT
Defective water valves.	<ul style="list-style-type: none"> <li>• Check water valve diaphragm and plunger —replace with repair kit if necessary.</li> </ul>
Level control switch defective.	<ul style="list-style-type: none"> <li>• Replace water level control.</li> </ul>
Air trap or hoses to water level control leaking.	<ul style="list-style-type: none"> <li>• Check and correct for leaks in hoses and air trap.</li> </ul>

### 12. WATER LEVEL TOO LOW

POSSIBLE CAUSE	TO CORRECT
Water level control switch defective.	<ul style="list-style-type: none"> <li>• Replace water level control.</li> </ul>

### 13. DOOR LEAKS

POSSIBLE CAUSE	TO CORRECT
Insufficient pressure on door gasket.	<ul style="list-style-type: none"> <li>• Adjust number of shims under door hinge and door lock latch.</li> </ul>
Damaged gasket.	<ul style="list-style-type: none"> <li>• Replace gasket.</li> </ul>



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

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### 14. EXCESSIVE VIBRATION AND/OR NOISE DURING SPIN

POSSIBLE CAUSE	TO CORRECT
Inadequate foundation or loosened bolt.	<ul style="list-style-type: none"> <li>• Tighten bolts, be sure the foundation is adequate for the machine.</li> </ul>

### 15. EXCESSIVE CYCLE TIME

POSSIBLE CAUSE	TO CORRECT
Insufficient water supply to machine.	<ul style="list-style-type: none"> <li>• Water supply lines must be of adequate size.</li> <li>• Water pressure is too low — increase if possible.</li> </ul>
Clogged inlet valve strainer.	<ul style="list-style-type: none"> <li>• Check inlet valve strainer and clean as required.</li> </ul>
Clogged inlet hose strainer.	<ul style="list-style-type: none"> <li>• Check inlet hose strainer and clean as required.</li> </ul>

# Section 4

## Service Procedures



### WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

#### 16. CABINET TOP

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set aside.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

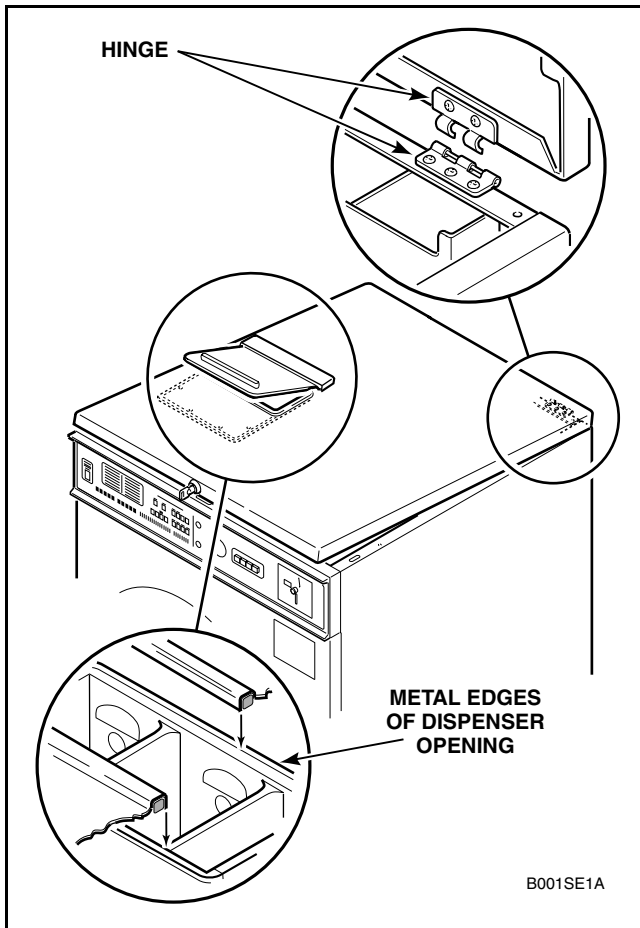


Figure 1

#### 17. CONTROL MODULE BOX COVER

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set aside.

**NOTE:** When reinstalling cabinet top, metal edges on the dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.

#### 18. COIN DROP

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- Loosen screw holding coin drop to backside of control panel.
- Remove screw in middle of coin drop.
- Disconnect red three-wire harness from power supply board. Remove wires from coin blocking solenoid, refer to *Figure 2*.
- Remove coin drop and set aside.



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

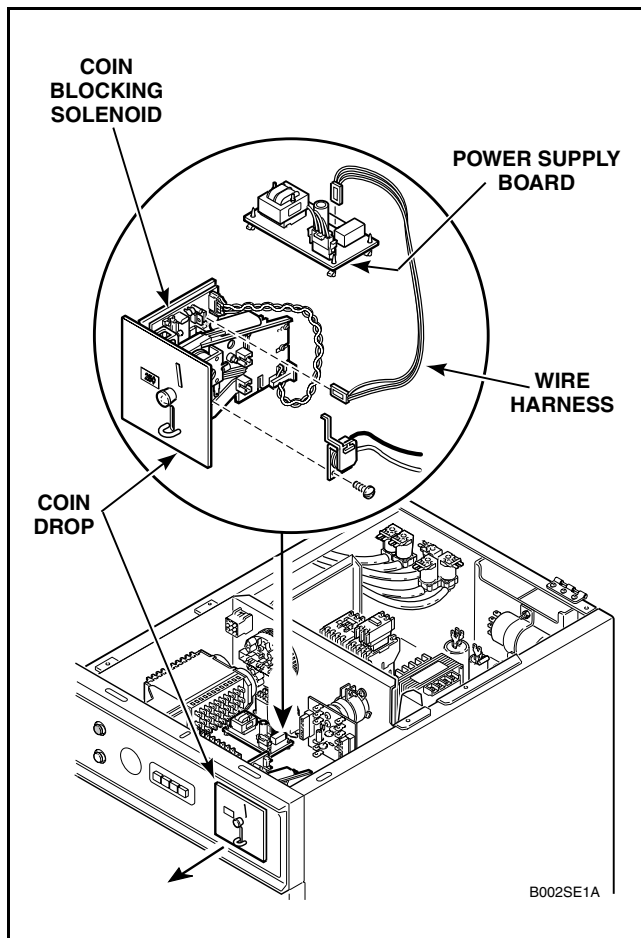


Figure 2

## 19. INDICATOR LIGHTS

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- c. Remove wires from indicator lights.
- d. Press in on locking tabs and push lights out through front of control panel, refer to *Figure 3*.

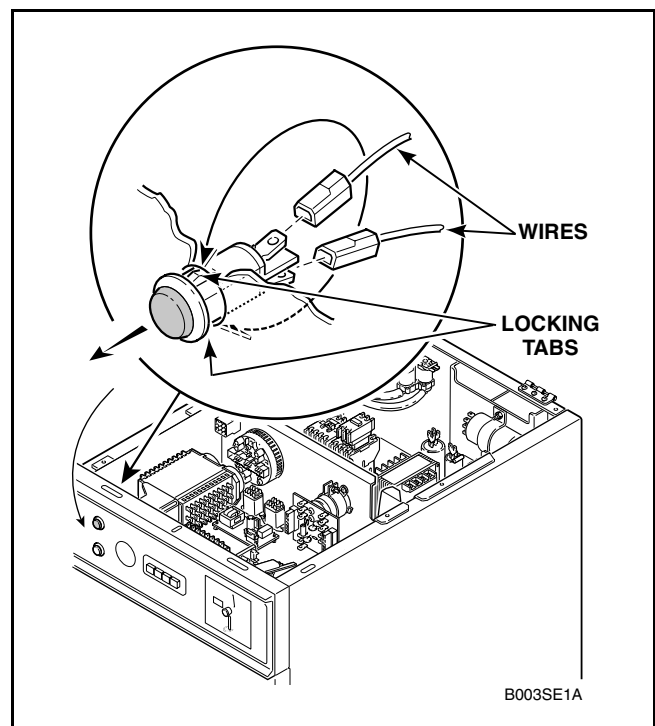


Figure 3



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

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### 20. GRAPHIC PANEL OVERLAY

**NOTE:** The graphic panel overlay has an adhesive backing. Using a hair dryer to heat up adhesive will make it easier to pull off overlay.

- Remove adhesive overlay by peeling it from front channel.

#### Installing Graphic Panel Overlay

**IMPORTANT:** Use denatured alcohol to clean residue from front channel before applying new decal.

**NOTE:** Before removing protective backing from new overlay, check fit of overlay to front channel. Indicator light holes and selector switch holes are the locating guides.

- Once panel overlay is fitted to front channel, carefully peel protective backing from right end of panel overlay and press in place.
- Remove rest of the protective backing from panel overlay and press overlay into place.

### 21. TIMER AND SELECTOR SWITCH BRACKET

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.

**IMPORTANT:** When replacing the timer and selector switch assembly, do a wire-for-wire exchange, or write down all the wire terminal connections before removing any wires. If you have a problem, refer to the wiring diagram on the underside of the cabinet top.

- Remove four nuts holding timer and bracket to front of control panel, refer to *Figure 4*.
- Remove timer and selector switch bracket as far as wires permit.

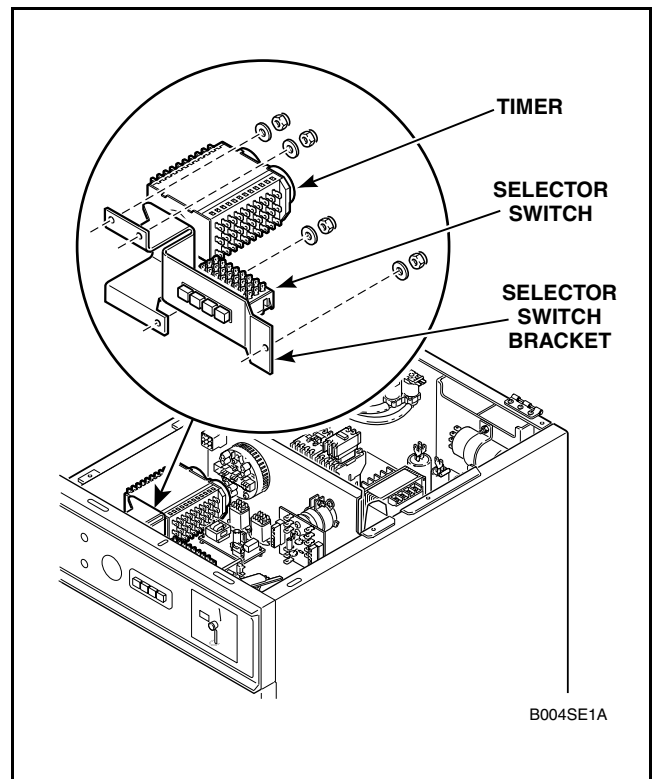


Figure 4



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

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### 22. PRESSURE SWITCH

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, the metal edges on dispenser opening must be fitted inside of dispenser.

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- c. Remove wires from pressure switch at disconnect block.
- d. Press in on locking tabs at back of switch and pull switch out to remove it from control box, refer to *Figure 5*.
- e. Disconnect pressure hose.

**IMPORTANT:** After disconnecting pressure hose, tape hose to side of control module box to prevent hose from falling to washer-extractor base.

**IMPORTANT:** When installing the pressure hose, blow air through the pressure hose before connecting the hose to the pressure switch to remove any condensation that may have accumulated in the hose.

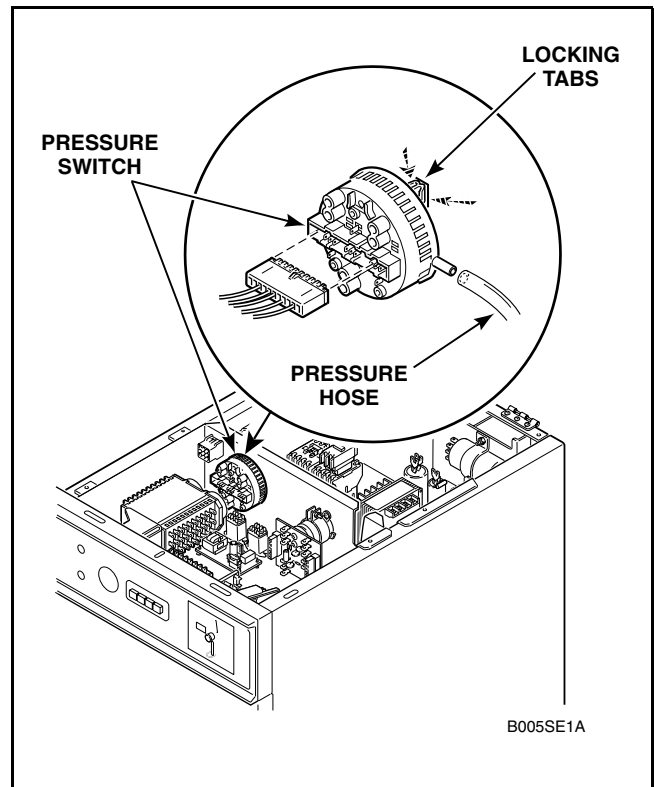


Figure 5





## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 23. DOOR LOCK PC BOARD / CAPACITOR

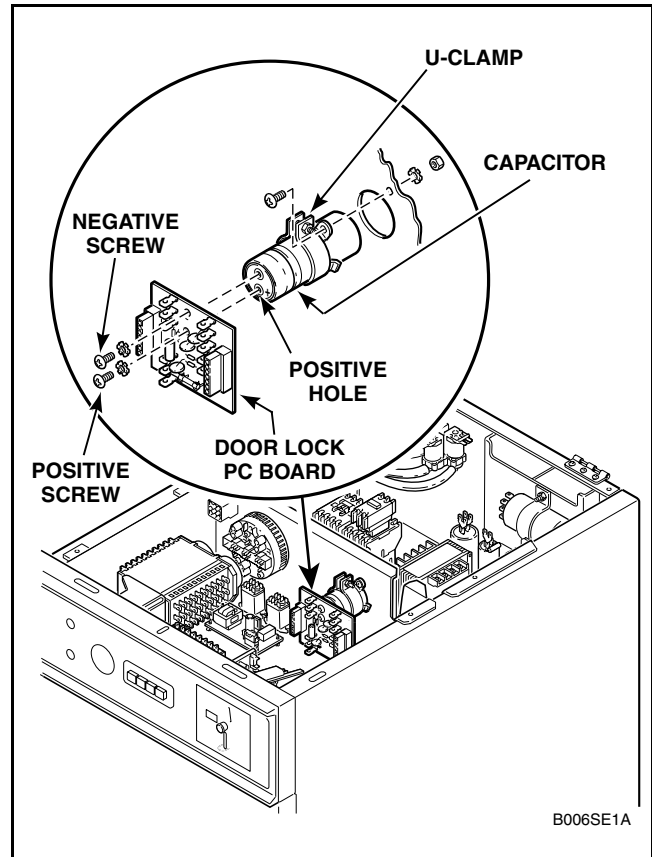
**IMPORTANT:** To reduce the risk of electrical shock, touch capacitor terminals with a resistor to discharge the capacitor.

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- Remove positive and negative screws holding board to capacitor, refer to *Figure 6*.
- Remove board from capacitor.
- Remove screws holding capacitor U-clamp to rear channel. Remove capacitor.

**IMPORTANT:** When reinstalling capacitor and PC Board, make sure the positive screw is in the positive hole, refer to *Figure 6*.



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Figure 6



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 24. TIMER DELAY RELAY

**IMPORTANT:** When replacing the timer delay relay assembly, do a wire-for-wire exchange, or write down all the wire terminal connections before removing any wires. If you have a problem, refer to the wiring diagram on the underside of the cabinet top.

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- c. Remove nut and washer holding relay to control module box.
- d. Remove timer delay relay from control module box, refer to *Figure 7*.

### 25. FLANGE RELAY

**IMPORTANT:** When replacing the flange relay assembly, do a wire-for-wire exchange, or write down all the wire terminal connections before removing any wires. If you have a problem, refer to the wiring diagram on the underside of the cabinet top.

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

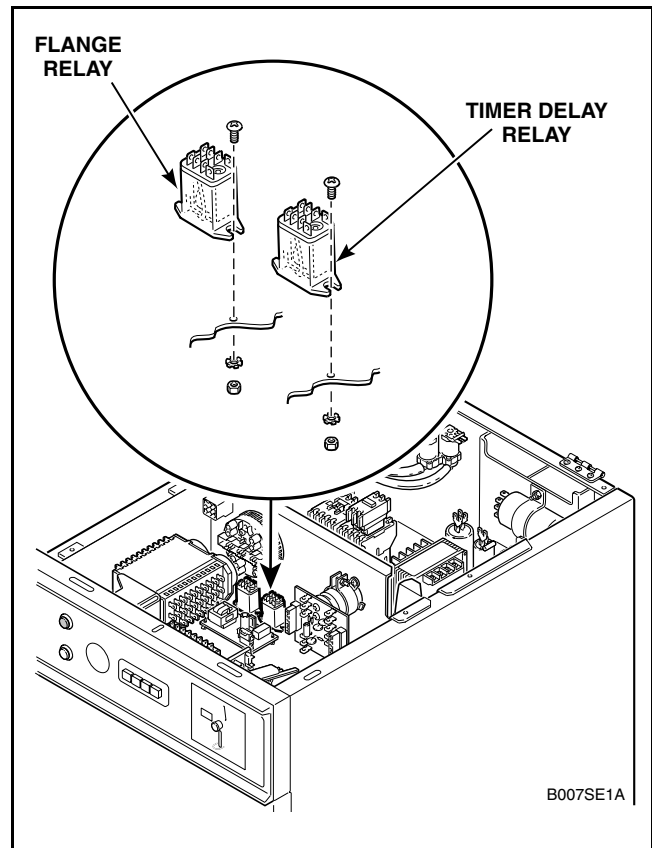


Figure 7

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- c. Remove two screws holding relay to control module box.
- d. Remove flange relay from control module box, refer to *Figure 7*.



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

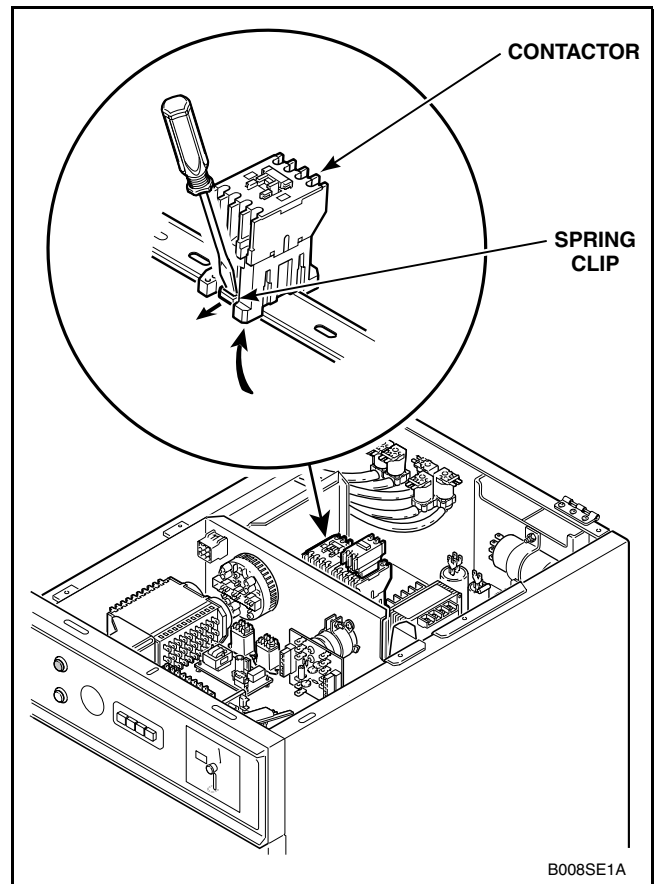
### 26. CONTACTORS

**IMPORTANT:** Before removing wires from contactors, mark the terminal contactors and the wire number so wires can be reinstalled correctly.

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- Pull spring clip on bottom of contactor and remove contactor from control module box, refer to *Figure 8*.



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Figure 8



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 27. OVERLOAD PROTECTOR

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- c. Remove screws holding overload protector to contactors.
- d. Remove overload protector, refer to *Figure 9*.

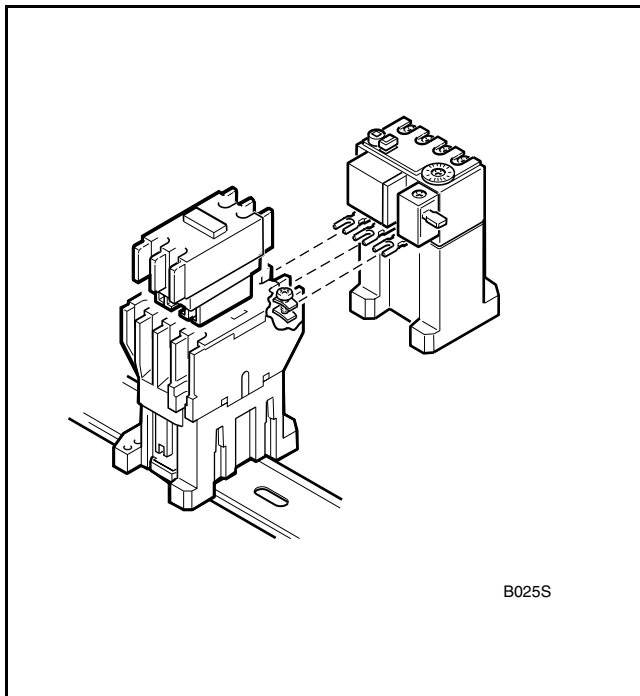


Figure 9

**IMPORTANT:** When installing the overload protector, line wires up with contactor. Set blue manual switch, located on top of overload protector to manual.

### 28. CONTROL TRANSFORMER

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.

**IMPORTANT:** When replacing the control transformer, do a wire-for-wire exchange, or write down all the wire terminal connections before removing any wires. If you have a problem, refer to the wiring diagram on the underside of the cabinet top.

- c. Remove two screws holding transformer to control module box.
- d. Pull transformer off as far as wires permit.
- e. Disconnect wires from transformer.



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 29. MECHANICAL INTERLOCK

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- Lift black tab on bottom of interlock with screwdriver and slide interlock off of contactor, refer to *Figure 10*.

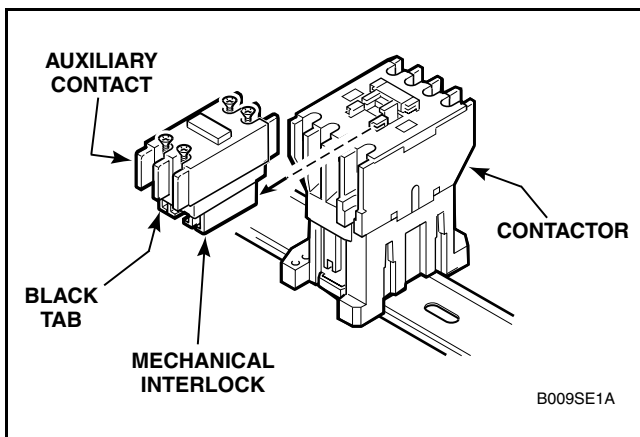


Figure 10

### 30. SOLID STATE/START SWITCH

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.

**IMPORTANT:** When replacing the solid state/start switch, do a wire-for-wire exchange, or write down all the wire terminal connections before removing any wires. If you have a problem, refer to the wiring diagram on the underside of the cabinet top.

- Remove nut holding clamp to cross channel, refer to *Figure 11*.
- Pull solid state/start switch out as far as wires permit.
- Disconnect wires and remove solid state/start switch.

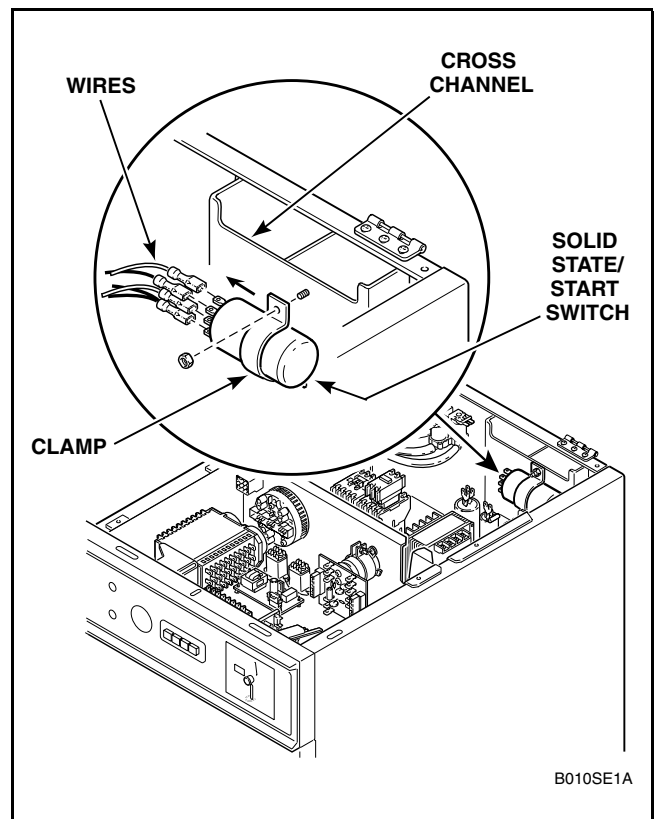


Figure 11



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 31. WATER VALVES

**NOTE:** Turn off water supply to the washer-extractor.

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- b. Disconnect wires from valve solenoid, refer to *Figure 12*.

**NOTE:** Refer to wiring diagram when rewiring valve solenoids.

- c. Loosen hose clamps and remove hoses from valves, *Figure 12*.

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

- d. Go to rear of washer-extractor and disconnect the external hose from valve.
- e. While supporting valve, remove two screws and washers holding valve to rear cross channel and remove valve from inside of machine.

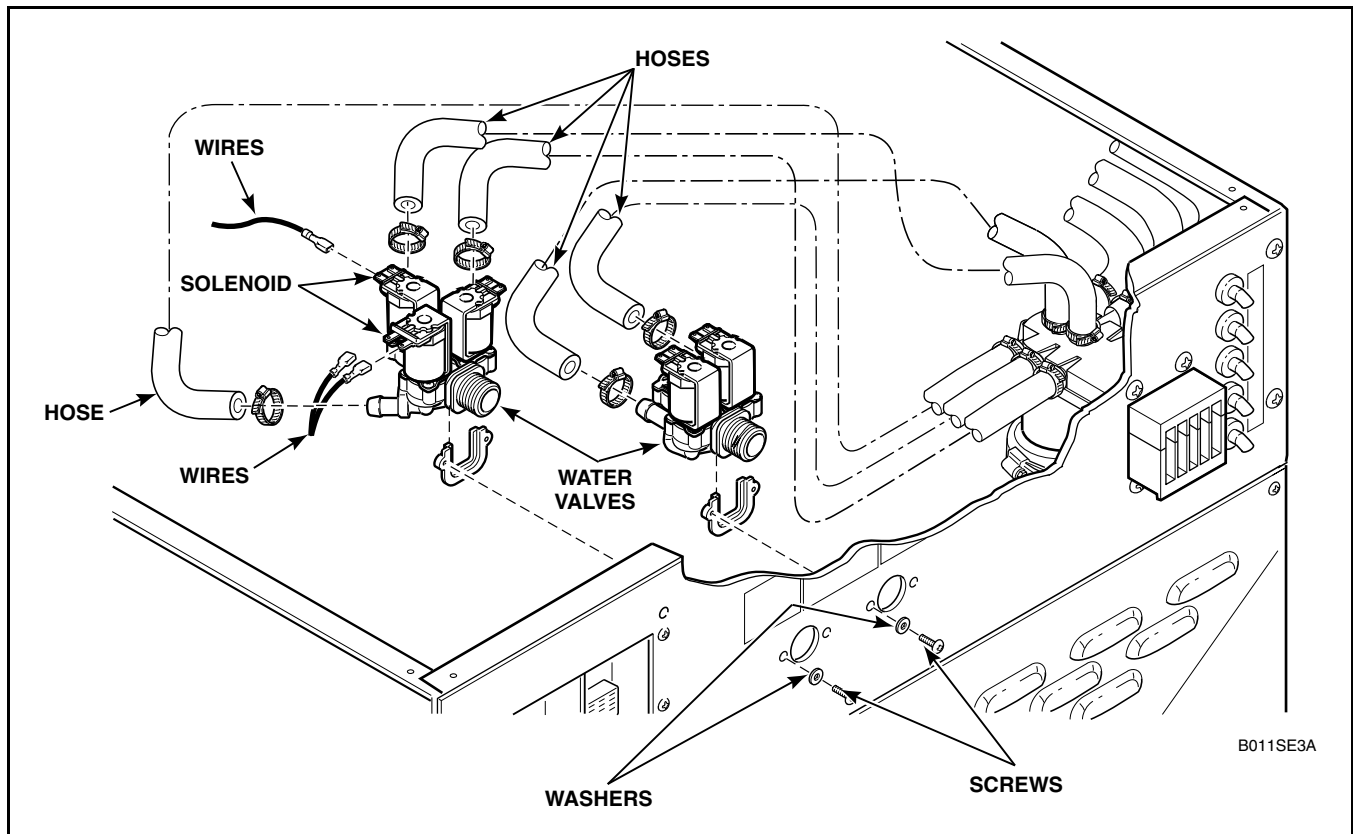


Figure 12



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 32. SIPHON BREAK

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

**NOTE:** Label all hoses and their appropriate nipple on siphon break before removing hoses.

- Loosen hose clamps and carefully remove all hoses from siphon break, refer to *Figure 13*.

**IMPORTANT:** Use a hair dryer or similar heating device to heat ends of hoses where they attach to siphon break. This will help loosen hoses and prevent nipples on siphon break from breaking off when hoses are removed.

**NOTE:** Pull hoses straight off nipples. If you do not, nipples may break off siphon break.

- Remove three screws holding cover to siphon break and remove cover.
- Remove nuts holding siphon break to rear channel and remove siphon break, refer to *Figure 13*.

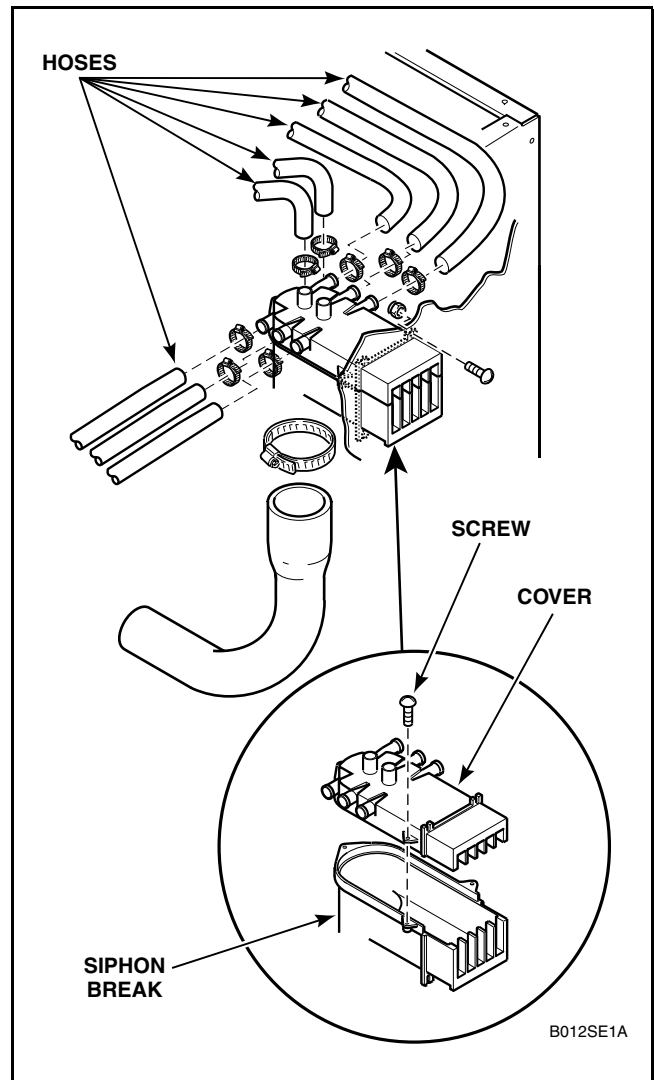


Figure 13

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## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 33. DISPENSER

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Loosen hose clamps attaching hoses to dispenser, refer to *Figure 14*.

**NOTE:** Mark all hoses and their appropriate connection before removing hoses so they can be reinstalled correctly. When reinstalling hoses to dispenser, **DO NOT** overtighten hose clamps; if you do, water will shoot out of dispenser lid.

- Remove hoses from dispenser and remove dispenser.

**NOTE:** If replacing the siphon tube, the long end of the tube must be placed in the wash compartment.

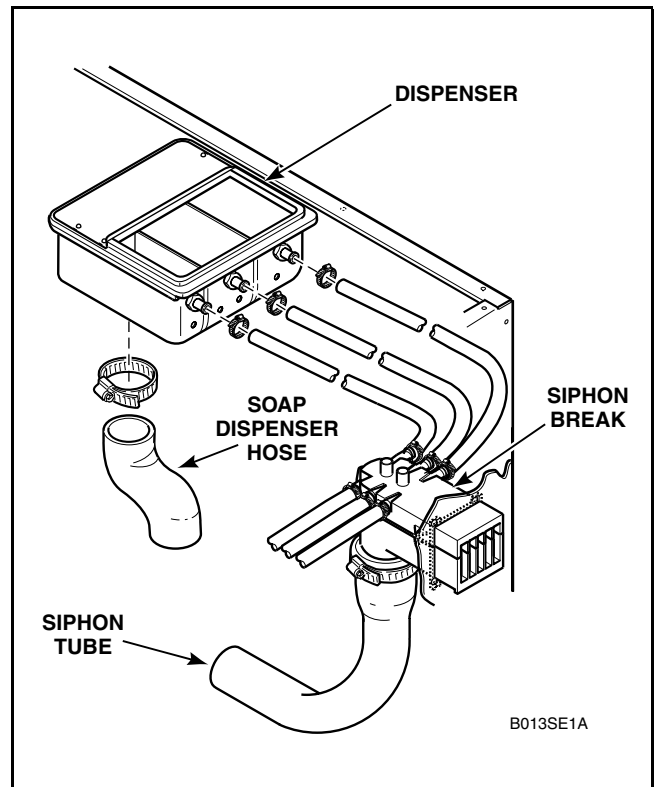


Figure 14

B013SE1A





## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 34. BELT

- Remove screws holding rear panel to cabinet and remove rear panel.



## WARNING

To reduce the risk of serious injury or death, the rear panel **MUST** be installed before operating the washer-extractor. The rear panel keeps dust and dirt from accumulating on motor, adds rigidity to structure of the washer-extractor and provides safety protection.

W266

- Use a piece of two-by-four or something similar to support motor, refer to *Figure 15*. Rotate pulley to run belt off pulley and motor. Once belt has been removed from pulley, take out support and lower motor gradually. **DO NOT** let the motor drop or you could damage the motor.

### 35. MOTOR

- Remove screws holding rear panel to cabinet and remove rear panel.
- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE: When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.**

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- Disconnect motor wire harness from contactors in control module box.

**NOTE: Disconnect ground wire before removing motor.**

- Remove ground screw from frame, refer to *Figure 15*.
- Use a piece of two-by-four or something similar to support motor, refer to *Figure 15*. Rotate pulley to run belt off pulley and motor.
- Lower motor gradually. **DO NOT** let the motor drop or you could damage the motor. Remove tension spring from frame and motor, refer to *Figure 15*. Once spring has been removed, take out support.
- Remove inner cotter pin and drive motor shaft out using a drift punch.

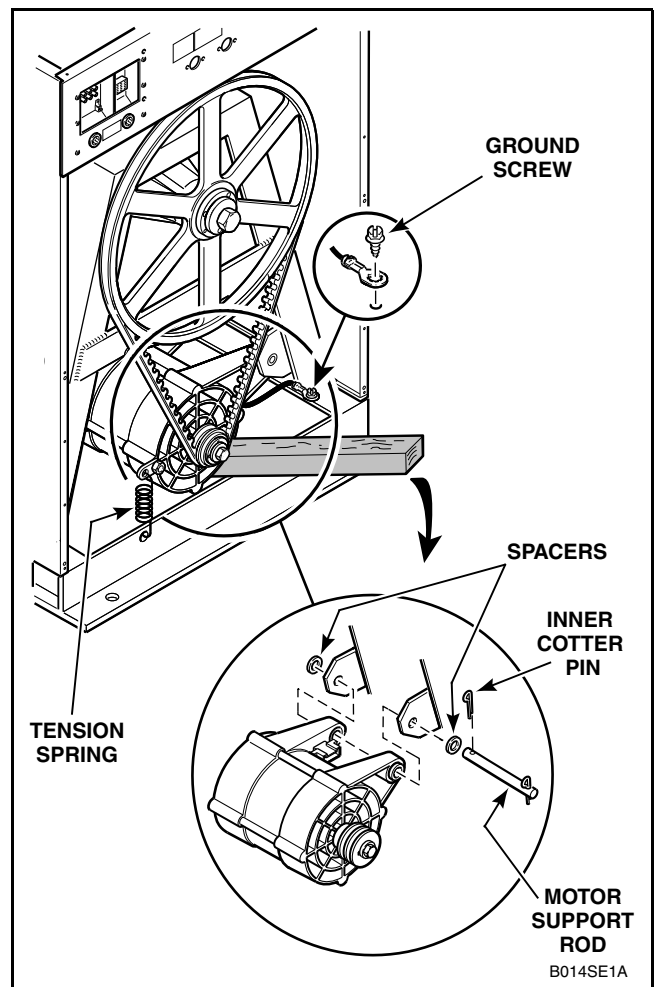


Figure 15



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 36. MOTOR CAPACITORS

- Remove screws holding rear panel to cabinet and remove rear panel.

**IMPORTANT:** To reduce the risk of electrical shock, touch capacitor terminals with a resistor to discharge the capacitor.

- Disconnect wires from capacitors, refer to *Figure 16*.

**IMPORTANT:** When replacing the capacitors, do a wire-for-wire exchange, or write down all of the wire terminal connections before removing any wires. If you have a problem, refer to the wiring diagram on the underside of the cabinet top.

- Remove nuts holding capacitors to capacitor tray and remove capacitor.

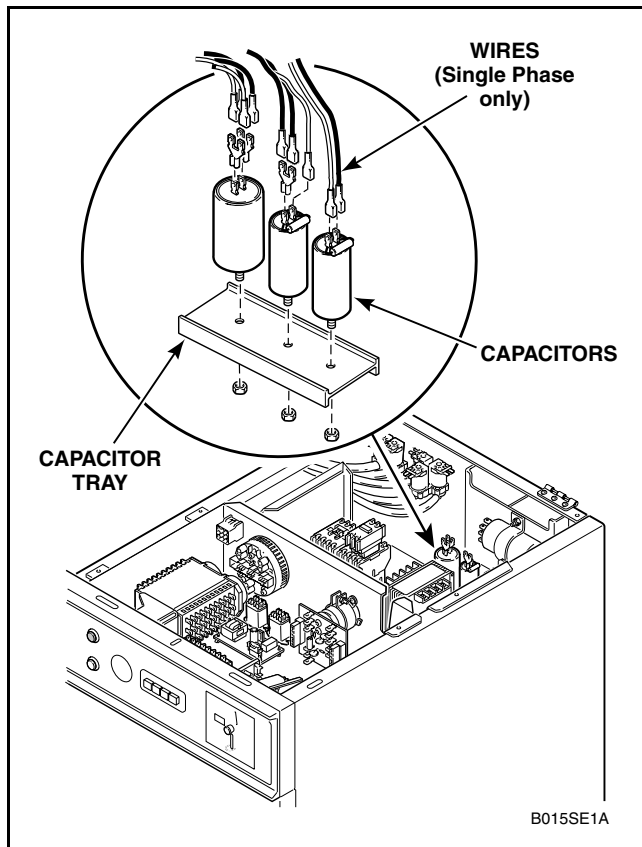


Figure 16

### 37. OUTER FRONT PANEL

- Support outer front panel while removing six screws holding panel to front of washer-extractor, refer to *Figure 17*.
- Remove outer front panel and set aside.

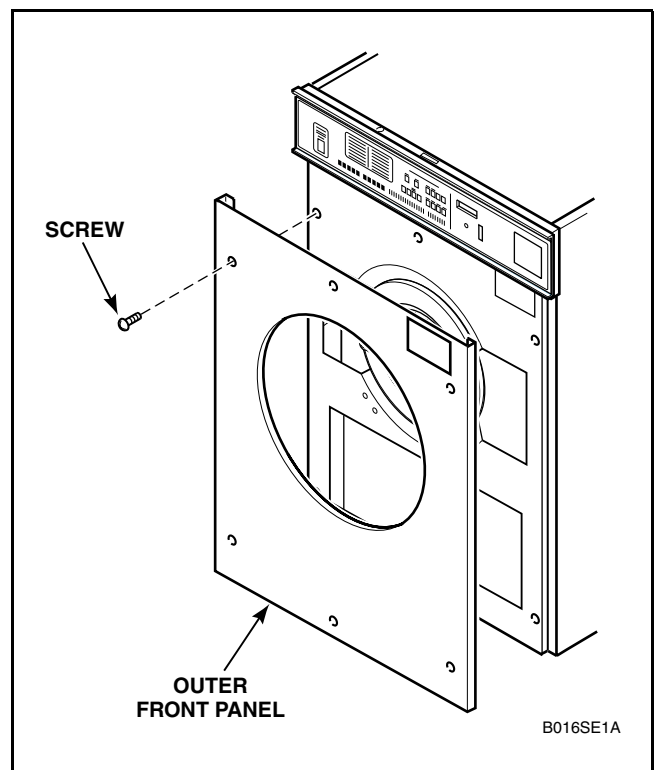


Figure 17



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 38. LOADING DOOR

- Support outer front panel while removing six screws holding panel to front of washer-extractor, refer to *Figure 17*.
- Remove outer front panel and set aside.
- Remove four nuts holding loading door hinge to shell front, refer to *Figure 18*.
- Remove loading door and hinge together.
- Remove loading door shims.

**NOTE:** When replacing door hinge, use same number of shims as existed prior to removal.

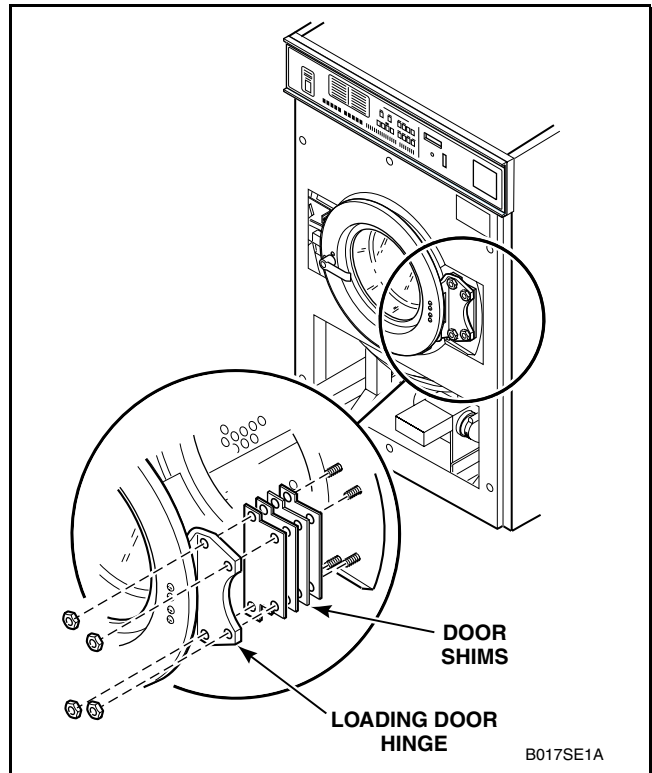


Figure 18

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## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 39. DOOR LOCK ASSEMBLY

- a. Support outer front panel while removing six screws holding panel to front of washer-extractor, refer to *Figure 17*.
- b. Remove outer front panel and set aside.
- c. Remove three screws holding L-bracket to shell front, refer to *Figure 19*.

**IMPORTANT:** When reinstalling the three screws, coat threads of screws with silicone to prevent water leakage.

- d. Remove two nuts holding door lock subassembly to shell front, refer to *Figure 20*.
- e. Carefully work door lock subassembly off studs on shell front.

#### Door Release Solenoid Replacement/Removal

- a. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- b. Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- c. Disconnect solenoid harness from control box.
- d. Remove two screws holding solenoid to door lock subassembly bracket, refer to *Figure 20*.

**NOTE:** When reinstalling door lock sub-assembly, use same number of shims that existed prior to removal.

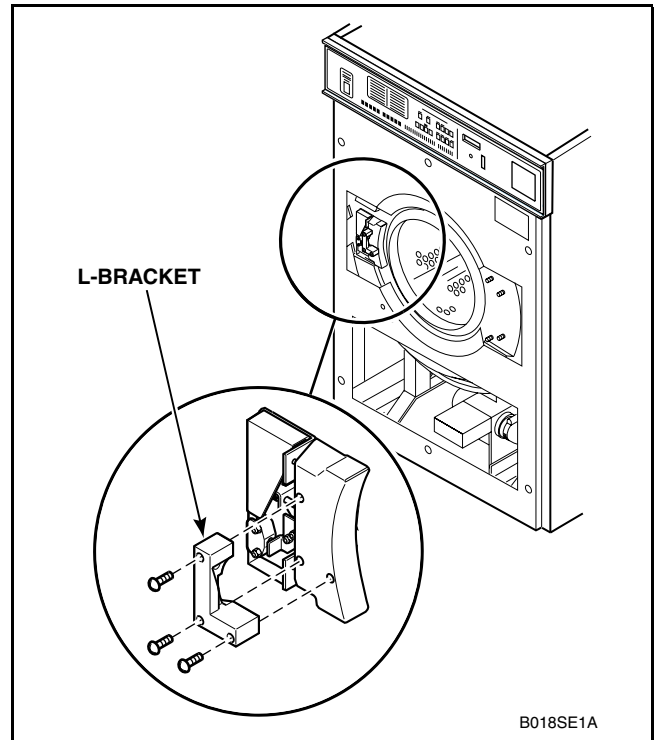


Figure 19

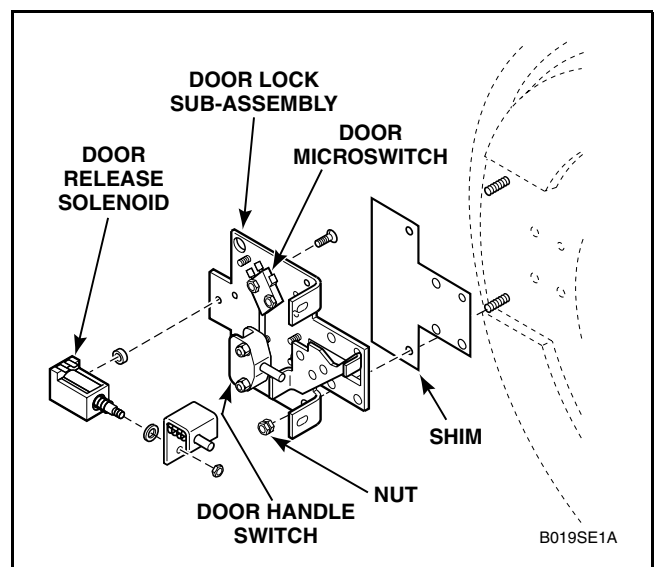


Figure 20



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 40. CYLINDER ASSEMBLY

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove two T20 Torx head screws from control module box cover. Lift up cover and set aside.
- Remove screws holding rear panel to cabinet and remove rear panel.

### 41. TRUNNION ASSEMBLY

- Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE:** When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.

- Remove screws holding rear panel to cabinet and remove rear panel.
- Remove belt.

**NOTE:** Support motor to avoid shaft damage.

- Remove center bolt, refer to *Figure 21*.
- Remove drive pulley, refer to *Figure 21*.
- Remove shaft key, refer to *Figure 21*.
- Remove trunnion locknuts, refer to *Figure 21*.

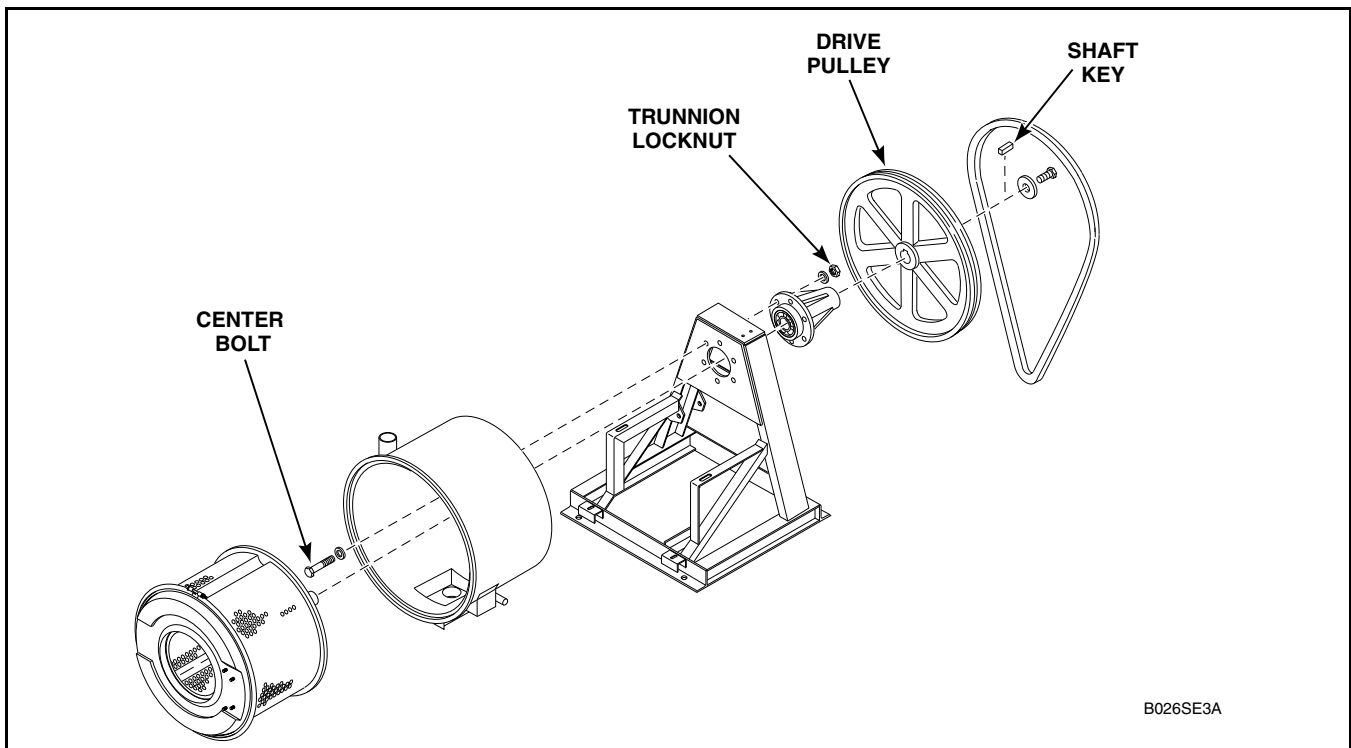


Figure 21



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

### 42. BEARINGS AND SEALS

- a. Disconnect machine from electrical power source. Turn off water supply.
- b. Disconnect supply hoses and drain hose from the rear of the machine.
- c. Insert key into cabinet top lock and turn clockwise. Lift up on front of cabinet top until it is just past the rear hinges, or 90 degrees, refer to *Figure 1*. Lift cabinet top off machine and set out of way.

**NOTE: When reinstalling cabinet top, metal edges on dispenser opening must be fitted inside of dispenser.**

- d. Remove screws holding rear panel to cabinet and remove rear panel.
- e. Support outer front panel while removing six screws holding panel to front of washer-extractor, refer to *Figure 17*.

**NOTE: On premise laundry machines use a magnetic switch mounted inside the outer front panel which must be disconnected before the front panel is removed.**

- f. Remove outer front panel and set aside.
- g. Remove four nuts holding loading door hinge to shell front, refer to *Figure 18*.
- h. Remove loading door and hinge together.
- i. Loosen the hose clamp on the lower portion of the large hose which connects the soap dispenser hose to the shell weldment. Pull the hose free.
- j. Remove screws and nuts holding inner front panel, refer to *Figure 22*. Remove inner front panel and set aside.
- k. Remove V-belt and bolt holding main pulley on basket shaft. Remove main shaft pulley using a puller.
- l. Disassemble and remove shell front band, refer to *Figure 23*.

**NOTE: Before removing shell front, carefully mark the shell front's position in relation to the shell for use when reassembling the machine. The shell front**

**must be returned to the same position relative to the shell when reassembled.**

- m. Remove the shell front.
- n. Pull out basket using basket puller.
- o. Loosen and remove the six bolts holding the shell to the frame of the machine.

**NOTE: Machines manufactured after July 1, 1991, use a flat seal (gasket) between the shell and the shell front.**

- p. Install the seal around the shell with the adhesive side towards the shell. There should be a slight gap (0 to 1/4 inch) at the top, refer to *Figure 22*. No additional sealant is used.

**IMPORTANT: If the seal ends overlap, the seal has been stretched and must be remounted. A stretched seal is too thin and will cause leaks.**

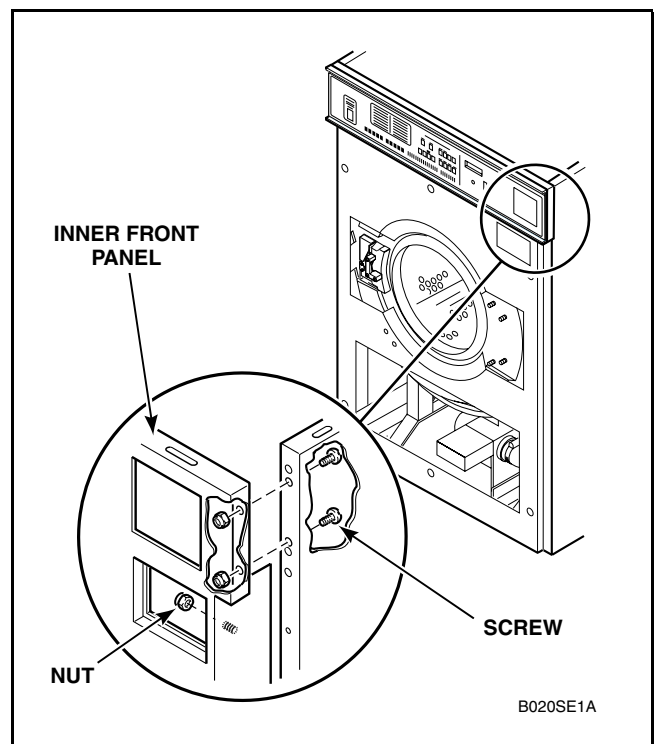


Figure 22



## WARNING

To reduce the risk of electrical shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W171

**NOTE:** Must remove nut that holds the outer front panel to side panel before removing control module.

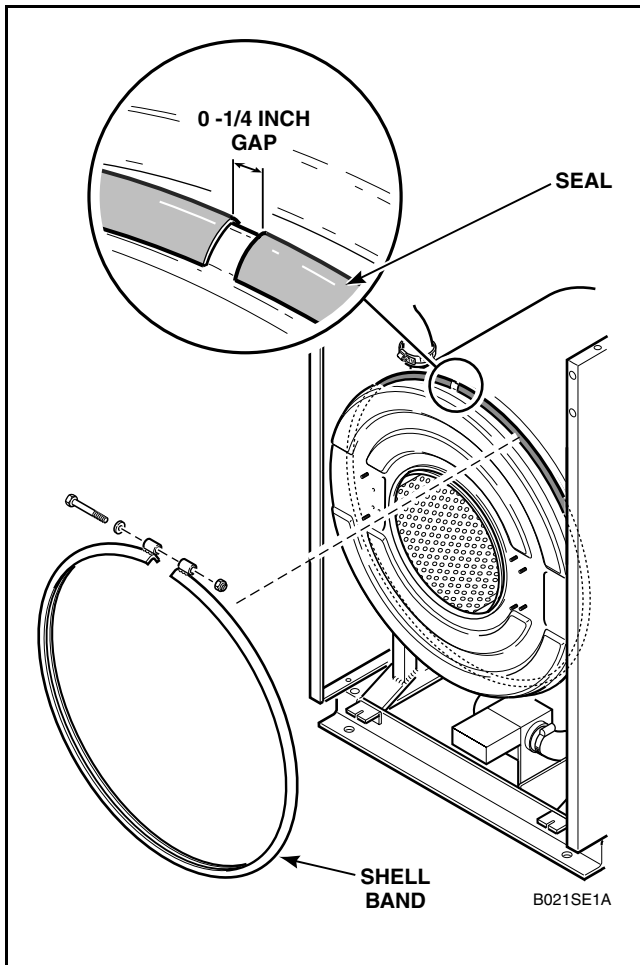


Figure 23