THE DEXTER COMPANY

20 LB. WASHERS

WCB20KD

Service Procedures and Parts Data

WCB20

Fairfield, Iowa 52556

Telephone 515-472-5131
FAX 515-472-6336

Part No. 8533-012-002

WARNING

THESE WASHERS ARE EQUIPPED WITH DEVICES AND FEATURES RELATING TO THEIR SAFE OPERATION. TO AVOID INJURY OR ELECTRICAL SHOCK, DO NOT PERFORM ANY SERVICE, UNLESS QUALIFIED TO DO SO.

A machine should not be allowed to operate if any of the following occur:
- Excessively high water level.
- Machine is not connected to a properly grounded circuit.
- Loading door does not remain securely locked during the entire cycle.
- Vibration or shaking from an inadequate mounting or foundation.

WARNING - FOR SAFETY

1. Always shut off power and water supply and also discharge capacitors before servicing.
2. Do not overload the washer.
3. Do not open door if cylinder is in motion or contains water.
4. Do not mechanically force or override door lock in any way.
5. Do not bypass any safety devices of this washer.
6. Do not use volatile or flammable substances in or near this washer.
7. Keep all panels in place. They protect against shock and injury and add rigidity to the washer.

Table of Contents

Section 1
Specifications

Model WCB20

Capacity	20lbs.
Dimensions	
Cylinder Depth	13"
Cylinder Diameter	25"
Cylinder Volume (cubic feet)	3.7
Door Opening	11 1/4"
Door Height (floor to bottom of door)	13"
Overall Height	35 3/8"
Cabinet Width	30 1/8"
Overall Depth	26 1/16"
Drain Diameter (O.D.)	2"
Drain Height (floor to center of outlet)	2 1/2"
Water Inlet Size (hose thread)	3/4"
Necessary Service Clearance Behind Machine	24"
Cylinder RPM	
Tumble Speed	50
Extract Speed	370
Extract Speed G-Force	50
Cylinder Direction in Extract	clockwise
Motor H.P.	
Wash (single phase) (three phase)	0.5 N/A
Extract (single pahse) (three phase)	0.5 N/A
Amperage (average)	
Wash(three phase)	N/A
Wash (single phase)	6
Extract (three phase)	N/A
Extract (single phase)	6.2
Running Amps (maximum)	
Single Phase	8.5
Three Phase	N/A
Circuit Breaker (amps)	
Three Phase	N/A
Single Phase	15
Built-in Controls Circuit Breaker	yes
Built-in Motor Protection Circuit	yes

Voltage 60 Hz. **	
Three Phase	N/A
Single Phase	120
Service	
Three Phase	N/A
Single Phase	cord provided
Wire Size (min.)	
Three Phase	N/A
Single Phase	cord provided
Water	
Average Water Usage Normal Cycle with Full Load	42 gal.
Maximum Hot Water Use-- Hot cycle with Full Load	15 gal.
Recommended Hot Water (degrees)	140
Water Pressure (min/max)	30-120psi
Wash Cycle	
Normal Wash-Including Fill Time	24 min
Wash Temperatures	hot, warm & cold
Rinse Temperatures	cold-std. warm-opt.
Mounting Hole Dimensions	
Left to Right	26 7/8"
Front of Cabinet to First Hole	4 5/32"
First Hole to Second Hole	14 1/2"
Mounting Bolt Diameter	1/2"
Hole Diameter in Base	9/16"
Concrete Thickness (min.)	6"
Recommended Mounting Height	10" to 15"
Crated Weight (lbs.)	298
Net Weight (lbs.)	273

** International Voltages Available

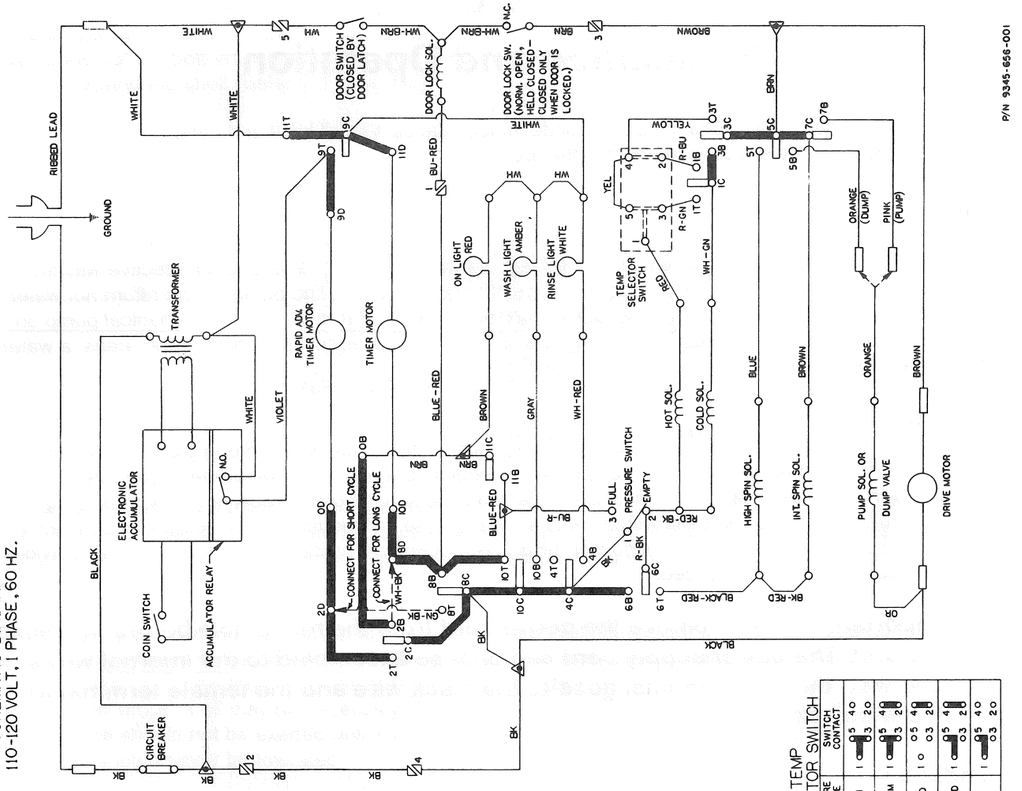
Section 2
Wiring Schematics

Timer Sequence Chart

The timer sequence charts are used in conjunction with the wiring diagrams to trace the circuitry during the timer cycle. The timer contacts and the operation or component that each contact controls are listed across the top of the chart. The phases of the complete cycle are shown down the left-hand side of the chart. The timer switch increments are numbered down the right-hand side of the chart. The solid vertical bars in the chart denote when the various contacts are closed during the cycle.

To use the timer sequence chart to trace the circuitry:

1. Locate the particular part of the cycle on the sequence chart.
2. Determine which timer contacts are closed during that particular step of the cycle by noting the solid vertical bars in that step across the chart.
3. Draw in the gap of the respective contacts on the wiring diagram with a soft dark pencil, to illustrate the contacts as being closed.
4. Similarly, determine which switch contacts are closed, by the switch chart, and illustrate them as closed on the wiring diagram.
5. The circuitry during the particular step of the cycle may then be easily traced on the wiring diagram, since all contacts and switches are then properly illustrated as being open or closed.



Section 3
Installation and Operation

All commercial washer installations should be made in accordance with all local and national building, electrical, plumbing, or other codes in effect in the area.

Plumbing
Separate hot and cold plumbing lines with shut off valves or faucets for inlet hose connections should be installed. In addition, a hot water supply of 140 degrees Fahrenheit is recommended for effective washing results. For multiple unit installation, a water heating system with a circulating pump on the return hot water line will assure that each unit has hot water at the maximum temperature available. A mechanical pump on the incoming water lines is an asset to any commercial application. In excessively hard water areas, a water softener is essential.

Electrical
The electrical power cord provided with each unit is equipped with a male type 3 prong plug. The round terminal pin on the plug is the ground. A UL approved receptacle, which has been properly grounded in accordance with local electrical codes, must be made available to each unit to receive this 3 prong plug. Each unit should be individually fused with at least a 15 amp fuse. Individual circuits facilitate maintenance procedure and permit arranging a balanced incoming power supply. A master control panel with an individual breaker for each unit is recommended.

Important: Always remove the power cord from the receptacle before servicing the unit. The power supply cord can only be assembled to the internal wires one way, the male terminal goes to the black wire and the female terminal to the white wire.

Foundation
The commercial washer must be secured to a foundation of adequate construction. Care must be stressed with all foundation work to insure a stable unit installation, eliminating possibilities of excessive vibration. Reinforced concrete is recommended for all multiple washer installations.

A. Platform
Concrete reinforced by angle bars is recommended for the washer platform. The concrete should have a water and alkali resistant finish. 1/2" anchor bolts, 8" long which are headed by a 4" fish plate or equal should be embedded in the concrete according to the bolt spacing dimensions of the washer. Be sure to extend the bolts out of the concrete sufficiently to secure the unit (Refer to Figure 1-1).

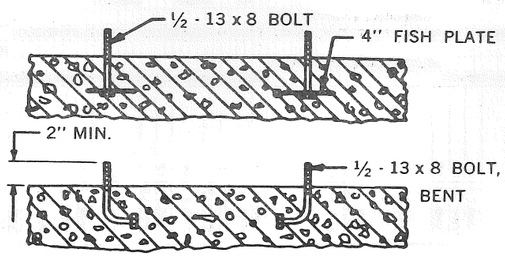


Figure 1-1 Bolts Imbedded in Concrete

B. Concrete Floor
If the installation is to be made on an existing concrete floor, the concrete must be at least 2" thick. Expansion anchors can be used for bolting down the washer. Drill holes with an appropriate size star drill 1 1/2" deep. Undercut the bottom portion of the holes for proper expansion of the anchor. Place the anchor in the hole and expand the shell (Refer to Figure 1-2).

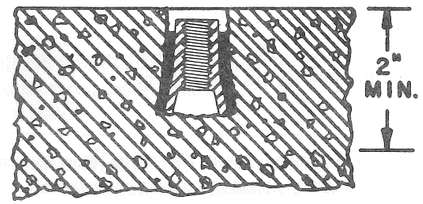


Figure 1-2 Expansion Anchors in Concrete

It should be remembered that concrete expansion anchors could be described as temperamental and that there are definite rules to be followed to insure proper results. Good concrete is essential; it must be of a consistency to prevent crumbling when it is drilled. In addition, it must not crack under the pressure of the expanding shield.

The ideal expansion anchor installation is one in which the shield has expanded into the undercut portion of the hole and therefore holds on the flare of the anchor rather than on the straight sides. Accordingly, care should be taken to obtain the expansion near the bottom of the hole. The shield should slip easily on the anchor; a few drops of oil may be necessary. The expansion tool should be driven cautiously at first, and extreme force should not be exerted until it is certain that the shield is expanding at the desired point. Undersized holes should never be tolerated.

Occasionally, it is possible to use an expansion anchor in a good concrete floor even though it is not thick enough for the customary type of installation. When such a floor is found, it is possible to expand the anchors even though it is necessary to drill the hole completely through the floor. If such a situation is encountered, expand the anchor slightly before installing it to prevent it from turning in the hole. Place a 1/2" pipe coupling over the shield and start the bolt in its thread. A flat washer under the head of the bolt will expand the shield in the hole without the necessity for driving on it. Extreme caution should be exercised in making an installation of this type and it should be used only if an emergency.

Ordinarily, the accepted means of installation under such conditions would be to invert two 1/2 X 8 inch bolts in the holes cut through the floor, and secure them with non shrink grout. This practice has many advantages in that it often compensates for a floor of somewhat lesser quality than that required by expansion anchors.

Non shrink grout can be purchased from hardware stores or lumber yards. It has one great advantage in that it expands instead of contracting when cured. The units should not be completely bolted down until the grout is completely cured.

In all concrete work, use 1 part common cement or super cement with 5 parts grout of 40-60 mix. The old flooring should be removed to a depth of at least 6 inches. The new flooring can be made level with the original floor or can be elevated to provide easier access to the clothes door. In either case, properly locate and suspend threaded bolts in the wet concrete to fasten the washer.

Uncrating

1. Cut the bottom steel strap and unfold the bottom cap of the container from the sleeve.
2. Lift the sleeve and top cap off the washer.
3. Remove the corrugated fillers that remain around the cabinet.
4. Remove the back panel.
5. Remove all hoses and other installation accessories from inside the clothes cylinder.
6. Remove the crate base boards by removing the nuts and lockwashers from the bolts holding the boards to the unit.

   Note: Save the 4 mounting spacers as they are used later in Bolt Down Procedure

7. Remove the shipping block from under the motor and transmission assembly.
8. Remove the transparent film from the face of the escutcheon.

Bolt-Down Procedure

The four mounting spacers removed at the same time as the crate base should be installed between the washer and mounting surface so the necessary spacing can be maintained.

1. The recommended method of installation is to use the spacers between the cabinet base and the supporting members (see Figure 1-3).
2. Another method is to bolt the optional leg brackets with 8 bolts to the base of the unit, leaving the out board section of each bracket to extend from under the unit on each side (see Figure 1-4). These extended sections are then bolted to the floor or supporting members. The optional leg brackets are available through your distributor and are not furnished with washers.
3. Place the unit in its final installed position aligning the holes in the washer with the respective anchor bolts or anchors.
4. Insert the unit mounting bolts or nuts and lockwashers and tighten securely.

   Note: All hold-down bolts should be periodically checked and retightened.

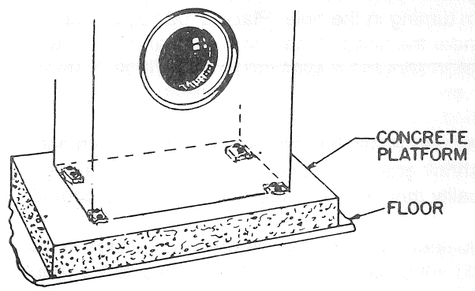


Figure 1-3 Bolting--Furnished Spacers

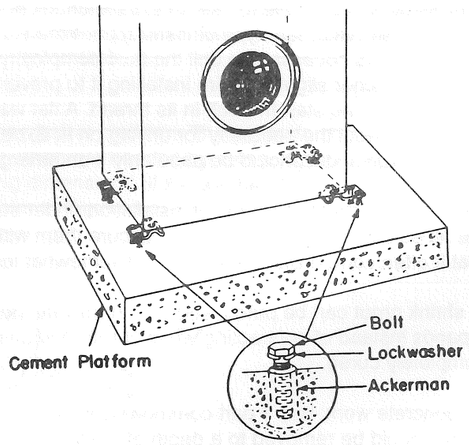


Figure 1-4 Bolting--Optional Leg Brackets

Washer Hook-up and Check-out

1. Insert the thick hose washers in one end of each water inlet hose coupling and attach to the threaded connections on the mixing valve.
2. Connect the appropriate hot and cold hoses to the water supply lines using the strainers and hose washers. (Looking at the back of the washer--Left side is Hot--Right side is Cold)
3. Check the transmission oil level. Use only special transmission oil listed in Accessories in the Parts Data section of this manual.
4. Install the drive belt.
5. The coin box and the lock and key for the coin box are furnished with the washer.
6. Insert the 3 prong power cord into the power supply for the unit.
7. To avoid inconvenience and loss of time, all connections and unit operation should be checked before installation is completed. It would be wise to run through a complete cycle with a load of clothes before assuming a successful installation has been made.
8. Install the back panel on the washer.

   Note: Never leave the back panel off the unit. This panel is a safety shield and it adds rigidity, supports the overflow hose, and protects the washer components from dirt, moisture, lint, etc. The panel will also help reduce the noise level in multiple installation stores.

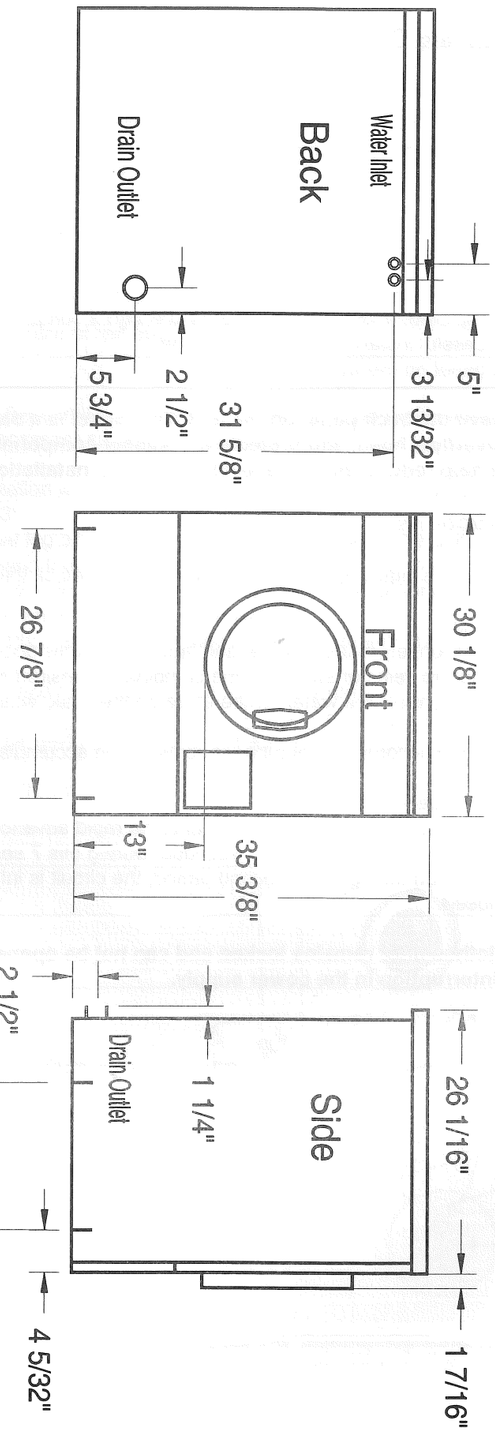
Operating Instructions

1. Standby
   A. When the washer is ready for use but not in operation, the clothes door may be opened.

2. Starting the washer
   A. Load the clothes loosely in the cylinder and latch the clothes door securely.
   B. Set the temperature selector switch on the combination desired for the particular load being washed. This one setting controls the water temperature on the soak, wash and various rinses for the complete cycle.
   C. Coins are inserted according to number of coins set on accumulator. (Start switch is depressed on manual models)
   D. "On" light immediately lights.
   E. Inlet water or tumble action does not begin until the rapid advance motor has advanced to the wash position. This involves approximately 7 seconds. During this 7 seconds, the door is not yet locked. If the door is reopened during this 7 second period, the circuit is interrupted and will not begin again until the door is closed.

   Note: The clothes door remains locked and can not be opened until the cycle is completed or there is an interruption in the power supply.

WCB20 - Mounting Dimensions



Section 4
Service Procedures

Removal of Top Panel
1. Remove the lock holding the top to the front panel.
2. Lift the front of the top panel and move it to the rear until it is clear of the hold down brackets. (The grounding bracket is easily disconnected by unplugging it from the terminal on the back panel)

Note: Do not misplace the 2 gaskets assembled to the top panel flanges, one on each side. When the top panel is reassembled, use a liquid soap lubricant on the under side of the panel, where the soap diaphragm contacts the seals. This will assure a water tight seal.

Removal of Soap Door From Top Panel
1. Remove the 2 screws and nuts holding the soap door assembly to the top panel.

Note; Do not misplace the 2 nylon and 2 fiber washers. These should be used in reassembly.

Removal of Back Panel
1. Remove the screws holding the back panel in place and remove the panel.

Note: This panel should never be removed except for servicing purposes. It adds rigidity to the unit and minimizes vibration.

Removal of Side Panels
1. Remove the top and back panels.
2. Remove the 2 screws along the bottom of the side panel securing it to the base.
3. Remove the 3 screws holding the upper back channel to the side panel.
4. Remove the screw holding the top of the side panel to the top of the front panel.
5. Spread the back of the side panel away from the unit.
6. Remove the 3 screws along the inside front of the side panel which holds the panel to the front.

Removal of the Front Panel
1. Remove the top, back and side panels.
2. Remove or disconnect all wiring necessary to remove front panel assembly.
3. Open the clothes door and remove the 6 screws and fiber washers holding the front panel to the sealing ring.

Note: When reassembling the 6 screws, do not overtighten.

Clothes Door Adjustment
1. Loosen the 3 hex head screws that mount the door until it is barely supporting itself on the hinge.
2. Slowly close the door until the latch starts to enter the latch opening in the cabinet. The latch should be centered in the latch opening. When centered, open the door.
3. Tighten the center screw and close the door. Examine the position of the clothes door in the cabinet clothes port. After it is properly adjusted, open the door and tighten all screws securely.

Door Ring, Handle and Latch
1. Remove the 6 screws securing the ring assembly and insert to the window and panel assembly.
2. Place the ring on a scratch free surface and remove the 2 screws securing the pin and latch (See "A" in Figure 4-1).
3. Lift the pin and latch from the grooves in the outer ring.

Note position of latch lever and spring.

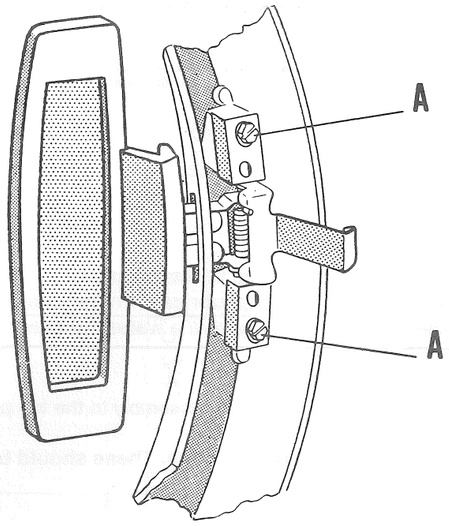


Figure 4-1 Latch Mechanism

Removal of Clothes Door

1. Remove the 3 hex head screws securing the door to the hinge leaf.

Disassembly of Clothes Door

1. Place the clothes door face down on a scratch free surface.
2. Remove the 6 outer phillips head screws from the door panel.
3. Lift the panel and window assembly out of the ring.
4. Removing the remaining 6 screws on the inner circumference of the clothes door panel will permit the accessibility to the rest of the serviceable component parts.

Removal of Clothes Door Sealing Gasket

1. To remove the clothes door assembly from the front panel, remove the 3 hex head screws securing the door assembly to the hinge.
2. Place the clothes door assembly face down on a scratch free surface.
3. Remove the 6 outer phillips head screws from the door panel.
4. Lift the panel and window assembly out of the ring.
5. Removal of the remaining screws and retainer on the inner circumference will permit the removal of the window from the gasket, and the gasket from the door panel.

Installation of Clothes Door Sealing Gasket

1. Place door panel with inner recess down. (Support the outer portion of this panel to allow clearance for sealing gasket and window when assembled)
2. Position the door sealing gasket into the inner recess of the door panel. (See Figure 4-2, cross section without glass)

   Note: The parting line or weld of the gasket should be positioned so it will be up when the door assembly is reassembled to the machine. (Small slit in gasket near weld is to allow gasket to breath and not take a set)
3. Place the door glass into the door sealing gasket. Using a small pick or screw driver, lift the rubber channel of the gasket up and around the outer ridge of the window. (See Figure 4-3, cross section with glass)
4. Once the window is fully seated inside the gasket, lift the rubber flange sufficiently to apply a bead of silastic sealer around the entire circumference of the gasket channel.
5. The window retainers and screws must be secured to the door panel before turning the assembly over. (To prevent window from falling out)
6. This portion of the clothes door can now be reassembled to the clothes door ring.

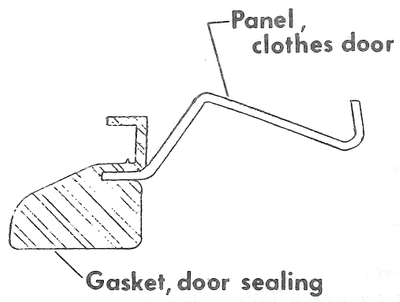


Figure 4-2 Cross Section Without Glass

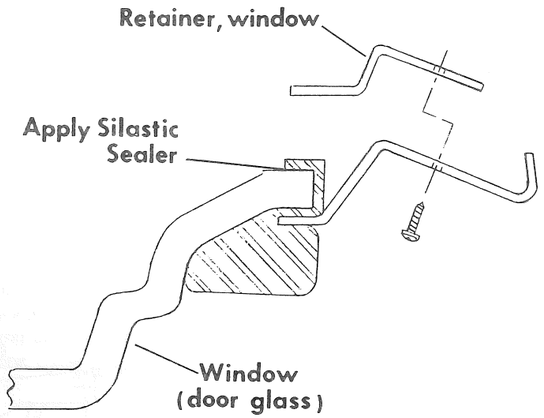


Figure 4-3 Cross Section With Glass

Removal of Sealing Ring and Collar

1. Remove front panel.
2. The sealing ring can now be removed by loosening the clamp which fastens the rubber collar to the plastic sealing ring.
3. The rubber collar can now be removed by loosening the clamp which secures the collar to the tub flange.

Installation of Collar and Sealing Ring

1. Place the rubber collar onto the tub flange making certain the parting line, or weld is at the highest position.
2. Assemble the clamp which secures the collar to the tub flange.

   Note tightening screw position--approximately 7 o'clock position.
3. Assemble the clamp and sealing ring to the collar. The sealing ring will only go on one way. The notched out area goes toward the door lock.
4. Using a level, align the upper and lower screw holes as near perpendicular as possible. This will align the screw holes in the front panel when reassembled. Tighten clamp. (Tightening screw position should be up)

Hinge Assembly (Refer to Figure 4-4)

1. Remove the top hinge screws and remove the top hinge and lift it off the leaf and pin assembly.
2. Remove the bottom hinge screws (hold the bracket in position while removing screws to prevent loosing the spacers) and slide the hinge down and off the leaf and pin assembly.
3. The leaf and pin assembly can be removed by sliding it out of the hinge slot in the front panel.

4. In reassembly be certain that the spacers are in position on the bottom hinge bracket.
5. If the hinge binds, loosen the top screws and gently move the leaf and pin assembly up and down. Tighten screws and check for bind. Repeat procedure on bottom bracket if bind persists.

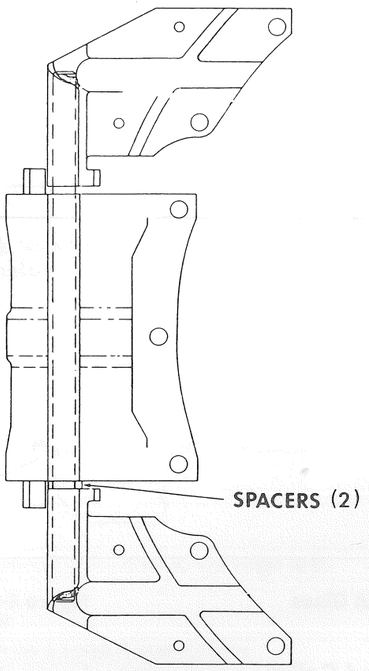


Figure 4-4 Hinge Assembly

Removal of Door Lock Mechanism

1. Remove the top panel.
2. Remove the coin meter from the front panel.
3. Remove the coin chute, located just below the coin meter, for clearance when removing the lock mechanism.
4. Reach down inside the front panel and hold the lock assembly while removing the 2 screws that secure the lock to the front panel.
5. Lift the lock mechanism up and out the top opening. Note the wiring connector in the harness for quick separation of the lock mechanism from the main wiring harness.

Removal of Escutcheon

1. Remove the water temperature knob.
2. Remove the 6 escutcheon attaching screws.

Removal of Indicator Lights and Water Temperature Switch

1. Remove the escutcheon.
2. Remove the top panel.
3. The switch and indicator lights are available for simple removal.

Timer Operation

An interval timer is incorporated which will coordinate the electrically controlled assemblies of the washer causing them to perform their various functions at the proper time during the cycle. The timer assembly includes 2 drive motors. Looking at the shaft side of the timer, the left motor is the main drive motor and the right motor is the rapid advance motor. The main timer motor drives a gear train which in turn rotates the cam-stack assembly at a constant speed. (One revolution in approximately 30 minutes) The rapid advance motor is wired from the factory to advance the timer through the presoak period and into the wash portion of the cycle. (To include the presoak in the cycle see Long Cycle/Presoak)

Note: The washer starting sequence is as follows

1. **Correct number of coins are inserted.**
2. **"On" light immediately comes on.**
3. **Neither inlet water nor tumbling action starts until the rapid advance motor moves the timer to the wash position. This time period is approximately 7 seconds. During this 7 second period the door is not yet locked. If the door is opened the timer stops and will not begin again until the door is closed.**

On manual start washers, there is an acceleration switch provided to offer rapid advancing of the timer through the cycle. Constant depression of the acceleration switch will advance the timer through the complete cycle except for the final one minute of spin.

Electrical connections to the timer are made with 2 multiple-wire connectors which plug into the timer terminals. As mounted in the washer, the top connector is black and the bottom connector is white. Each connector is keyed so that it can only be plugged in correctly. Immediately below the black connector area of the timer are the terminals which accept the wires for the short cycle or long cycle connections. (See Long Cycle/Presoak for cycle change instructions)

Removal of the Timer

1. Disconnect power to the machine.
2. Remove the top panel.
3. Remove the dipstick tube from its mounting hole in the timer support bracket.
4. Remove the 2 screws mounting the timer mounting bracket to the back channel.
5. Remove the 2 screws mounting the timer to the timer bracket.
6. Unplug both multiple-wire connectors from the timer by depressing the locking tabs and pulling the connectors free.
7. Unplug the green/black and white/black wires from the exposed timer terminals adjacent to the black connector.

Removal of Coin Acceptor (Meter)

The coin acceptor is secured to the recessed opening in the front panel by 4 Torx T-10 screws and lock nuts. This is done to limit access to the meter device without a special tool. The Torx T-10 driver is part number 8545-051-003. The 2 screws on the left side of the meter must be removed. The 2 screws on the right need only be loosened for the meter to slide free.

Long Cycle/Presoak

As shipped from the factory, the presoak has been bypassed to shorten the cycle and conserve water. If the long cycle/presoak is desired, use the following steps to convert.

1. Disconnect power to the machine.
2. Remove the top panel and the oil dipstick tubing from its mounting in the timer bracket.
3. Remove the 2 screws mounting the timer bracket to the back channel and orient the timer and bracket assembly for access to the side with the black harness connector.
4. Find the 4 individual wire terminals located just below the black connector.
5. Locate the white/black wire and, using needle-nose pliers or some other suitable tool, remove that terminal and place it on the previously empty terminal to the side of it.
6. Next, locate the green/black wire and place it on the new empty terminal to the side of it.

7. If there is any question, the illustrations below show the short and long cycle wiring.
8. Now reattach the timer to the back channel and reinsert the oil tube in the bracket.
9. Replace the top and reconnect the power.

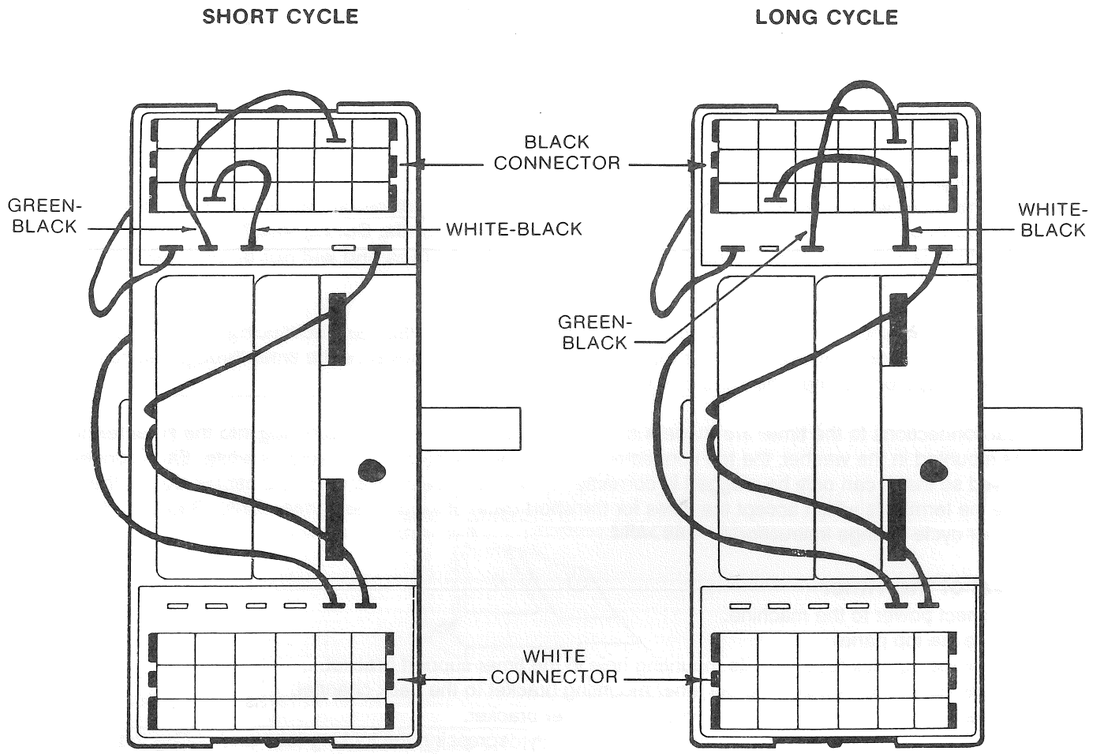


Figure 4-5 Timer Wiring

Setting the Coin Accumulator

1. Always disconnect electrical power to the machine before adjusting the accumulator.
2. Remove the washer top panel and locate the accumulator circuit board at the top of the right side as you face the machine.
3. The adjustment is made by setting the 6 dip switches. The switch combinations for 1 to 20 coins are shown below.
4. Replace the top panel and reconnect power.

		NUMBER OF COINS																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SWITCH NO.	1	X		X		X		X		X		X		X		X		X		X	
	2		X	X			X	X			X	X			X	X			X	X	
	3				X	X	X	X					X	X	X	X					X
	4								X	X	X	X	X	X	X	X					
	5																X	X	X	X	X
	6																				

Figure 4-6 Coin Accumulator Chart

Adjustment for Canadian Coins

1. Disconnect power.
2. Remove the coin acceptor and take the magnet on the right-hand side (looking from the front) out.
3. Reinstall the coin acceptor and reestablish power.

Removal--Servicing of Coin Accumulator

The complete coin accumulator assembly is fastened to the right side panel with 2 screws. The transformer, accumulator board and mounting hardware are available as individual components or as a complete unit.

Removal of Service Door

1. Unlock the service door.
2. Remove the 2 screws holding each hinge to the base of the washer.

Removal of Service Door Latch

1. With the service door open, pry the inside plastic retainer from the stud. (The stud is held captive by the two plastic retainers)
2. The latch receptacle can be slid on or off the bracket as needed.

Replacement of the Service Door Latch

1. Insert the receptacle onto the bracket with the "S" shaped wire facing the inside of the machine.
2. Assemble the stud and plastic retainers. (One on each side of the service panel)
3. Close the door and turn the stud 1/4 turn to fasten the door in place.

Removal of Circuit Breaker

The circuit breaker is located on the upper right hand side of the front cradle, just behind the coin chute. It is fastened in place with a nut on the front side of the cradle. The circuit breaker protects the drive motor from excessive overloads of the circuit. It is manually reset by pushing the red plunger.

Pressure Switch

The pressure switch is used to control the proper water level during the normal cycle of the unit. This switch is also designed to prevent the washer from going into extract until the water has been drained from the tub.

Pressure switch operation is as follows:
As the washer fills with water, an air pocket is formed in the pressure switch hose. The rising water in the tub increases the air pressure in the hose until it is sufficient to force the spring loaded diaphragm to open the switch contacts, opening the inlet valve circuit. As the tub is drained, the air pressure is gradually decreased and the spring loaded diaphragm resets the switch contacts for either fill or extract.

Removal of Pressure Switch

1. Disconnect from power supply.
2. Remove the top panel.
3. Remove the wires from the switch.
4. Remove the screws securing the switch in position.
5. Disconnect the hose from the switch.

Installation Hints

1. Before connecting the switch hose, blow through it to clear it of water or suds.
2. If the pressure switch hose does not have a tight fit, cut off 1/2" to assure an airtight fit.
3. Connect power supply and check water level with the washer operating.

Water Level Adjustment

1. Drain all water from tub.
2. Before adjusting the pressure switch, blow in the hose to be sure that it is clear of water and suds. Also, check the hose for leaks as it must be air tight.
3. Use the hex head screw in the center of the switch for adjustments.
4. Clockwise rotation of the screw raises the water level and counter clockwise rotation will lower the water level.
5. 1/8 of a turn on the adjustment screw will raise or lower the water level 1/4".

Two-Solenoid Water Inlet Valve

Allows 3 different water temperatures to be selected: hot, warm and cold.
The solenoids are electromagnets that, when energized, each pull back a plunger which releases a rubber seat allowing water to flow. When a solenoid is de-energized, a spring pushes in the opposite direction to move the plunger back against the seat.
Only one solenoid is energized to get either Hot or Cold water. Both solenoids are energized for Warm water.
A flow washer meters the amount of water entering the tub. (6.2 GPM)
The inlet valve is completely serviceable as all of the individual pieces are available. (See Parts Data)

Water Inlet Trough

The inlet trough incorporates an air gap to meet plumbing codes.

Removal of Water Inlet Trough

1. Remove top panel.
2. Squeeze and slide corbin clamps (one on each end) until they are free of the inlet trough.
3. Remove the 2 screws holding the inlet trough to the bracket.

Overflow Hose

The overflow hose is located at approximately the 3 o'clock position in the tub back assembly and extends directly to the drain.

Drain Valve

The gravity drain valve is a normally open valve. When power is off, a spring forces the valve to open. This allows the water to drain from the tub. When 120 volts is applied to the drain valve motor, the valve is driven closed and holds in that position until power is removed.

The drain valve is located in the left rear corner of the machine and is accessed by removing the back panel.

Drain Housing

The dump housing does not require the drain screen or sealing plate that was used on the pump housing. The housing compartment is blocked off with a partition. (See Figure 4-7)

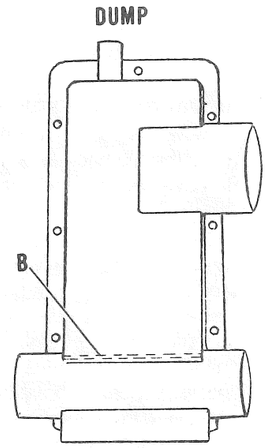


Figure 4-7 Drain Housing

Removal of Drain Housing

1. Open the lower service door.
2. Remove the retaining nuts and lockwashers and drop the housing.
3. Remove the gasket and 8 carriage bolts.

Installation of Drain Housing

1. Turn the cylinder so that a baffle is directly above the tub opening. This will allow more access room.
2. Place the carriage bolts into the drain duct. Use new rubber seal washers on each bolt.
3. Put a sealing compound on one side of the housing gasket and press it against the drain duct and over the carriage bolts. Make certain that the bolts are fully pressed through the gasket holes.
4. Carefully place the housing in position over the bolts, taking care not to push the bolts up and out of the duct.
5. Place a lockwasher and nut on each bolt, again taking care to start the nuts without raising the bolts.
6. Pull the nuts up snug, but not so tight as to cause the gasket to be extruded.
7. Complete installation as indicated and check for leaks.

Tub Back

The tub back, which is mounted on the back of the tub assembly by a clamping ring, houses the cylinder support bearings and the cylinder shaft seal. This seal is attached to the tub back with 6 screws. 2 ball bearings are pressed into the steel hub of the tub back, one at each end of the hub. The bearing at the water side of the hub is protected by an oil seal. The seal is installed with the lip facing the bearing. (See Figure 4-8)

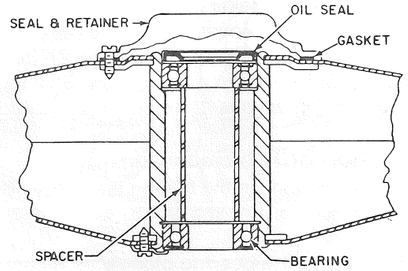


Figure 4-8 Oil Seal Application

Removal of Tub Back

1. Disconnect the power cord.
2. Turn off the water supply faucets and disconnect the inlet hoses from the inlet valve.
3. Unbolt machine. Remove the machine from the mounting base if one is used.
4. Remove the top and back panels.
5. Place a rug on the floor to cushion and protect the machine. Tip washer over on its face.
6. Remove the upper channel assembly and lay it on top of the tub.
7. Remove the cylinder drive belt.
8. Remove the tub back clamp ring. The nut and bolt securing this clamp ring is at the 1 o'clock position when facing the tub back.
9. Pull the cylinder and tub back out of the tub assembly.
10. Remove the pulley retaining nut.

Note: This is a left hand thread--turn clock-wise to remove.

11. Pull the pulley off its shaft and remove the key.
12. Remove the tub back from the cylinder shaft.

Tub Back Seal

The tub back seal is used to prevent water from leaking into the bearings. If a leaking seal is suspected, remove the back panel and examine the small hole at the 6 o'clock position on the tub back for evidence of water. Tub back bearings should always be replaced when a seal leak exists.

Removal of Tub Back Seal

1. Remove the tub back (See Removal of Tub Back)
2. Place the tub back on a flat surface, seal up, and remove the 6 screws securing the seal to the tub back.
3. Remove the seal and gasket.

Installation of Tub Back Seal

1. A service parts kit is available for replacement of the seal. To assemble the seal and housing properly, wipe a solution of mild soap and water around the inside of the rubber bellows between the metal and rubber. Insert the seal in the recess of the plastic housing and apply hand pressure until the seal is bottomed in the recess. To insure that the seal is installed properly, turn the assembly over and place the phenolic face on a clean flat surface, and press down evenly on the base of the seal housing. The rubber bellows should be bottomed in the recess and the metal cup should not be tilted in the rubber bellows when viewing it from the underside of the housing.
2. Place the tub assembly, seal side up, over the cylinder shaft.
3. Place the gasket on the tub back and align the 6 holes with the tub back holes.
4. Place the seal in position and start the 6 screws in the mounting holes.
5. Tighten the 6 screws in a crisscross pattern.
6. Remove the tub back from the cylinder shaft.

Note: When a tub back seal and retainer is replaced, the cylinder seal face should also be replaced.

Removal of Tub Back Bearing

1. Remove the tub back assembly. (See Removal of Tub Back)
2. Remove the tub back seal and retainer.
3. Remove the two bearing clips found on the opposite side of the assembly.
4. Place the tub back over an open box and press the bearing spacer aside with a long screwdriver.
5. Place a long blunt-nose drift pin through the top bearing and against the outer race of the opposite bearing. Strike the pin a sharp blow. Shift the drift pin to the other side of the bearing being removed and strike the drift pin again. Repeat this procedure until the bearing is free of the tub back hub.

Installation of Tub Back Bearing

1. Start one bearing in the hub on the pulley side of the tub back. Press the bearing in until it bottoms against the shoulder in the hub.

   Note: Watch the bearing closely as it enters the hub, if it is not entering straight, gently tap on the bearing at the high side to straighten it out.

2. When the bearing is bottomed, it should be flush with the tub back.
3. Install the spacer in the tub back housing. Repeat step No. 1 for the water side bearing. Be sure that the spacer is in position.
4. Pull the bearing in until the spacer is lightly bound between the front and rear bearings.

   Note: The water side bearing must be pulled in at least 1/4" to 5/16" below the surface of the tub back to allow the space necessary for the lip seal.

5. Install lip seal in front of water side bearing.
6. Install the 2 bearing clamps on the pulley side of the assembly.

Cylinder Shaft and Seal Face

The perforated cylinder has four equally spaced baffles to lift and distribute the clothes during the washing cycle. The belt driven cylinder pulley is keyed to the cylinder shaft.

Removal of Cylinder Shaft and Seal Face

1. Remove the tub back assembly and cylinder assembly. (See Removal of Tub Back)
2. Place the cylinder on its face with the shaft up.
3. Place a screwdriver under the seal face and pry up. Remove the rubber seal face gasket.
4. The cylinder shaft may be removed as illustrated in Figure 4-9. This is a left hand thread so the shaft must be turned in a clockwise direction to remove. Replace the key in the cylinder shaft and position an old pulley hub over the shaft and key. This provides a surface to grab with a pipe wrench while turning the shaft out of the cylinder.

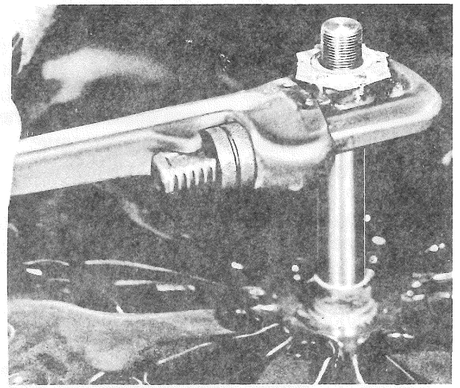


Figure 4-9 Cylinder Shaft Removal

Installation of Cylinder and Seal Face

1. Clean the sealing face seating area of the cylinder hub with a wire brush.
2. Replace the cylinder shaft--left hand thread--turn counter clockwise to install.
3. Place a small amount of sealing agent on the cylinder hub. Install a new seal face gasket over the hub.
4. Install a new seal face. (See Figure 4-10)

   Note the flat in the inner circumference of the face. This flat should coincide with the flat on the cylinder hub to prevent the face from rotating during operation.

5. Install the copper gasket and lip seal spacer on shaft. The copper gasket goes between the cylinder hub and the spacer.
6. Complete installation as described under Installation of Tub Back.

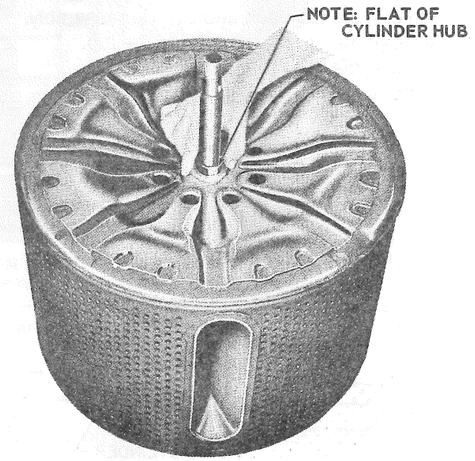


Figure 4-10 Seal Face Installation

Installation of Tub Back

1. Remove the clothes door and tip the washer on its face. Place a rug on the floor to protect the finish.
2. A locator hole will be found in the top of the tub back. Start one end of the tub back gasket at this point. The bead on the gasket should be up. Run the gasket around the tub back. Overlap the ends approximately 2" and secure in position with a clamp. (See Figure 4-11)
3. Lift the cylinder and tub back by the pulley. Take care not to brush the gasket as the assembly is raised.
4. Place the assembly in the tub so the locator hole in the tub back is directly over the locator hole in the tub flange.
5. Remove the clamps securing the tub back gasket. The weight of the tub back against the tub will hold the gasket in position.
6. Center the tub back over the tub assembly. Check by running your fingers around the tub and tub back circumference. They should be equally spaced around the entire circumference.

   Note: Do not let the tub back move after this check.

7. Check the tub back gasket bead to make certain it has not been pulled out of position.
8. Install the clamp ring. Start one end at the 1 o'clock position. Spread the clamp ends sufficiently to avoid letting the gasket move as the clamp is installed.
9. Place the bolt and nut in the clamp ends and tighten. Tap the circumference of the ring as the nut is tightened to guarantee equal pressure all the way around.
10. Set the machine upright. Check the gap between the cylinder and tub at the clothes door opening. This gap may be checked with a 3/16" drill and a 5/16" drill. Insert the shaft of the 3/16" drill between the cylinder throat and the tub throat This drill should go completely around the cylinder to tub gap. Use the 5/16" drill to check the gap at the 5, 6, and 7 o'clock positions. The 5/16" drill should not go in at these locations. If the gap at the bottom is excessive, turn the machine over on its face, loosen the clamp and shift the tub as required to close the gap.
11. Complete installation by replacing the balance of components removed.
12. Run the washer through a cycle, checking for water leaks and unit function.

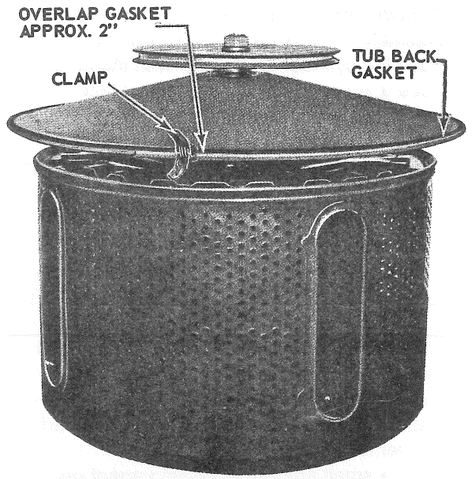


Figure 4-11 Tub Back Gasket Installation

Removal of Outer Tub

1. Remove the top, front, side and back panels.
2. Remove the tub back and cylinder assembly.
3. Remove the hoses attached to the tub.
4. Remove the tub assembly.
5. Remove the drain housing.

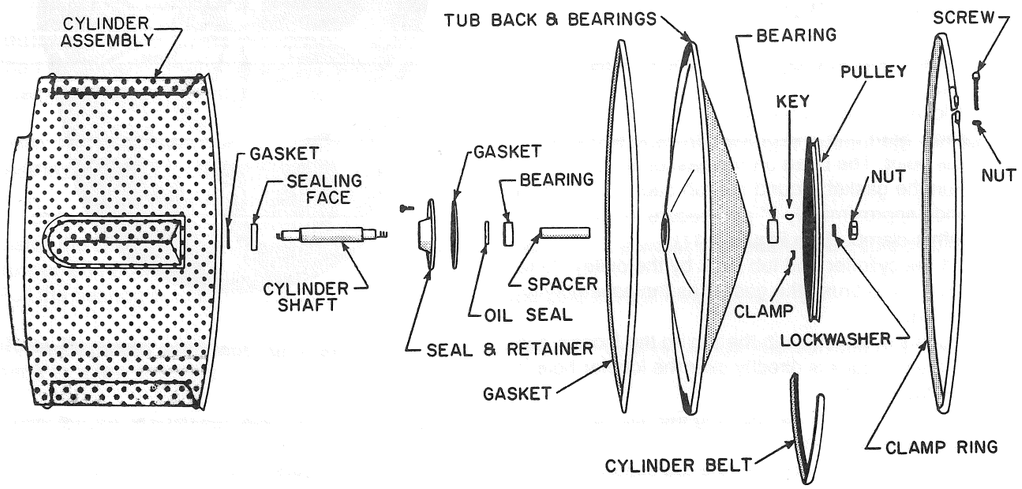


Figure 4-12 Exploded View of Cylinder, Tub Back and Pulley

Removal of Motor and Transmission Assembly

1. Remove back panel.
2. Disconnect wires to the motor, high speed spin solenoid and intermediate spin solenoid.
3. Disconnect the sump to drain valve hose.
4. Loosen front motor mounting bracket from tub bracket by removing nut from mounting stud. Remove nut and lockwasher that holds rear motor mounting bracket to rear mounting stud.
5. Remove drive belt from pulleys and release motor hold-down spring.
6. Lift front of motor so that front mounting bracket is free of slot. Pull motor and transmission toward rear of the cradle until the rear motor mounting bracket is free of the cradle. Rotate the motor in such a manner as to allow the capacitor to clear the opening in the rear channel as the entire assembly is moved out toward the rear of the unit.
7. Remove the high speed shifter from the side of the transmission housing, turn the entire assembly so the oil can flow out of the shifter pin opening and allow the oil to drain into a pan.

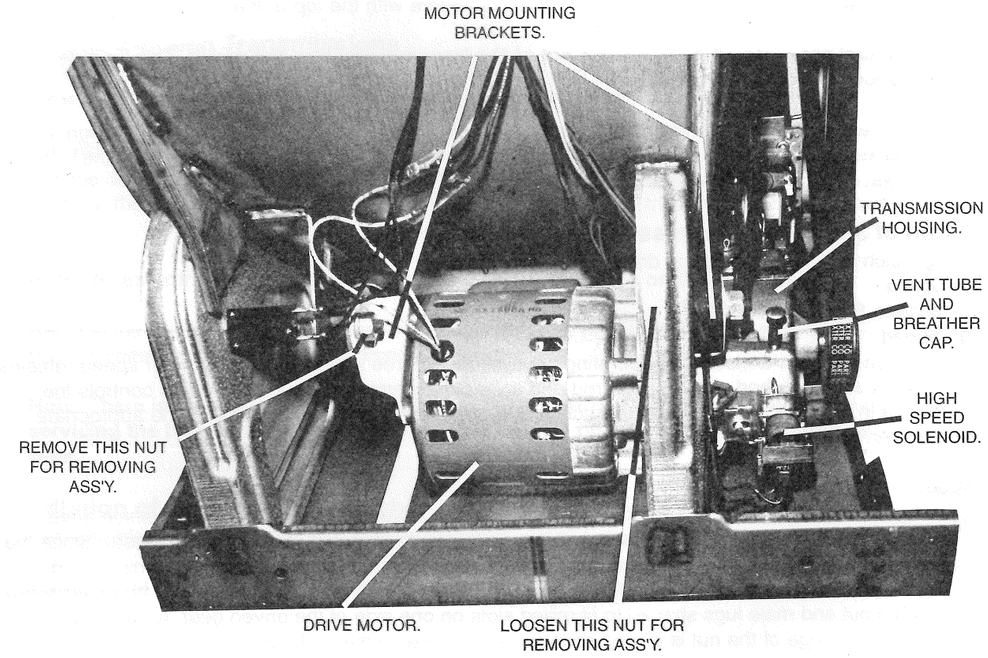


Figure 4-13 Motor and 3-Speed Transmission Assembly

Disassembly of Motor

1. With the transmission removed from the motor, scribe a mark along the length of the motor so the end bell and frame relationship is marked.
2. Remove the four long tie bolts holding the two end bells to the frame.
3. Hold the motor frame securely by means of a vise and lightly tap the transmission end bell with a soft mallet. Take care to drive the transmission end bell off evenly.

Note: Do not remove the opposite end bell or the motor rotor.

4. The jackshaft bearing is removed by driving the welsh plug out of the end bell.
5. Press the needle bearing out through the end bell in the direction of the welsh plug.
6. The motor shaft seal and bearing may also be removed in the same manner as the jackshaft bearing.

Reassembly of Motor

1. Clean the bearing hole in the end bell thoroughly.
2. Press the new jackshaft bearing in through the hole from the welsh plug end. Both ends of the bearing are identical. It is important that this bearing be kept square with the end bell during the pressing operation.
3. Place a new welsh plug bearing over the bearing.
4. Paint the edge of the welsh plug with a sealing agent. Be careful not to get any sealant on the bearing surface.
5. Drive a new welsh plug into position, making certain it is clinched properly.
6. To replace the motor shaft bushing, press the bushing into the end bell from the transmission end so the 1/8" hole in the bushing is on the transmission end and lines up with the "V" opening in the end bell boss. The bearing should be pressed flush with the machine surface of the boss.
7. Line ream the bushing to a .500 diameter.
8. To replace the motor shaft seal, clean the seal area of the housing thoroughly. Place a sealant on the edge of the seal and press it into the end bell until it is square with the top of the bossed area.

   Note: This seal prevents oil from leaking out of the transmission into the motor. The lip side should be towards the transmission.

9. Carefully slide the motor shaft through the seal and bushing of the transmission end bell and align so that the marks made prior to disassembly will meet as the end bell is driven into the frame of the motor. Replace the four tie bolts that connect the two end bells.

Operation of 3-Speed Transmission

The spring clutch type of transmission drives the clothes cylinder at the following speeds:

Low Speed	50 RPM
Intermediate Speed	205 RPM
High Speed	370 RPM

The transmission provides a means for operating the cylinder at three speeds while the motor speed remains constant. This is accomplished with a shifter rod and solenoid assembly arrangement which controls the speed changes in the transmission. Spring clutches activate the respective gear trains at the appropriate time for the intermediate and high speeds.

Low Speed

During the low speed periods, the power flow is from the motor drive shaft to the low speed pinion drive gear. The low speed driven gears on the jackshaft are in constant mesh with the pinion drive gear. Since the driven gear is not keyed to the jackshaft, the gear turns at a constant speed, all the time the motor is in operation. Mounted next to the low speed driven gear and keyed directly to the jackshaft is a threaded screw equipped with a nut and male lugs shaped to fit milled slots on one side of the driven gear. Assembled in a groove on the outer edge of the nut is a drag spring with an eyelet in the end that hooks on the retaining pin in the side of the driven gear. In low speed, the action of the drag spring causes the nut to thread itself toward the driven gear. With the driven gear and low speed clutch nut thus locked together, the jackshaft must turn with the low-speed driven gear.

To effectively utilize the jackshaft power, a pulley is employed. This pulley permits belt linkage with the large cylinder pulley. The cylinder assembly rotates at 50 RPM on low-speed transmission operation.

Intermediate Speed

This speed is controlled by the solenoid shifter assembly mounted closest to the motor pulley. When this solenoid is energized, the shifter rod is pulled away from the clutch sleeve allowing a left hand clutch spring to close. The power is then transferred to the intermediate drive gear, jackshaft and motor pulley. The tumble speed clutch is automatically disengaged at this time, allowing the tumbler (low) speed gears to free wheel.

High Speed

This speed is controlled by the solenoid shifter assembly mounted closest to the motor end bell. When this solenoid is energized, the high speed shifter rod is pulled away from a clutch sleeve, allowing a right hand clutch spring to close. The power is then transferred to the driven gear, jackshaft and motor pulley.

Shifter Solenoid

The shifter solenoid is a device that converts electrical energy into a mechanical pull force needed to operate the clutch. It consists of a laminated iron field supporting a coil which is wound around a hollow plastic core, providing space for an armature that moves endwise into a metal guide. When the coil is energized, it sets up a magnetic flux in the field laminations which passes through the armature and draws the armature into the coil. Two shading coils direct the path of the magnetic field to the "T" of the armature, providing an efficient circuit, increasing the holding force of the solenoid and eliminating residual magnetism when the coil is de-energized.

Shifter Rod Assembly

The tip of the shifter rod enters the transmission to engage the teeth on the clutch sleeve. This action allows the clutch spring to turn and grab the inner gear shaft thus transferring the power through the clutch spring. If there is any evidence of wear on the engaging end of the shifter rods, new parts should be installed. Freedom of movement of the shifter rods is important; hence, close inspection should be made whenever the transmission is serviced.

Servicing 3-Speed Transmissions

Transmission service may be accomplished with the motor and transmission assembly still in the unit. Removal of the housing will permit complete exposure of the entire transmission gear train.

Removal of Shifter Rod Assembly

1. Pull the cotter pin connecting the rod to the solenoid. (Intermediate Assembly Only)
2. Remove the screws holding the solenoid mounting bracket to the transmission housing and remove the bracket.

   Note: Wires going to the shifter solenoid may be left in place on the solenoid.

3. Remove the return spring and washer from the shifter rod. (Intermediate Assembly Only)
4. Pull the shifter rod out of the transmission housing.

   Note: There is a special "O" ring installed on the shifter rod. When replacing the shifter rod or servicing the transmission, be sure to inspect the "O" ring and replace it if it shows any signs of wear.

Installation of Shifter Rod Assembly

1. Reassemble in reverse order as outlined under removal.
2. Install the shifter solenoid assembly to the housing with two screws. Hand operate the solenoid for free movement of the shifter rod in the transmission housing. Adjust the solenoid bracket to avoid any interference.

Disassembly of Housing and Transmission

1. Disconnect the power supply and remove the back panel.
2. Disconnect the wiring leads at both shifter solenoids.
3. Place a shallow pan under the transmission to catch the oil.
4. Remove the cylinder drive belt.
5. Remove the screws securing the shifter solenoid brackets and remove.
6. Release motor hold down spring and intermediate speed shifter rod sleeve. Remove screws securing the transmission to the motor end bell, and complete removal.
7. Remove motor pulley from jackshaft. (Two allen set screws)
8. Remove the high speed drive gear assembly, pinion gear and jackshaft assembly. Be sure to recover the thrust washer at the low-speed gear end of the jackshaft.

Jackshaft Oil Seal

The transmission housing jackshaft oil seal should be replaced whenever work is performed on the transmission.

Removal of Jackshaft Oil Seal

1. Place a small drift pin through the housing needle bearing at an angle so the tip rests against the inside edge of the seal.
2. Tap out the seal by moving the drift pin from one side to the other. Do not damage the needle bearing during this operation.
3. Clean the seal surface in the housing until it is free of sealing compound.

Installation of Jackshaft Seal

1. Paint the outer edge of the new seal with sealing compound.
2. Lubricate seal lip.
3. Place the seal in position. (See Figure 4-14)
4. Gently drive the seal into position with a mallet or hammer. Take care to keep the seal square with the housing.
5. Continue to drive the seal in until the rounded edge is almost flush with the outside edge of the housing hub.

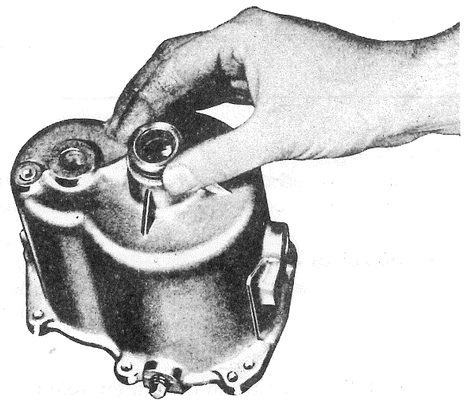


Figure 4-14 Jackshaft Seal Installation

Housing Bearings

No attempt should be made to replace the bearing mounted in the transmission housing unless an arbor press is available.

Removal of Housing Bearings

1. Remove the jackshaft oil seal, then press the jackshaft bearing out from the inside of the housing toward the seal opening.
2. The motor shaft bearing can be removed in a like manner.

Installation of Housing Bearings

1. Place the transmission housing on the arbor press with the machined surface face down on the surface plate.
2. Replace the jackshaft bearing by using the jackshaft and the two split washers as shoulders.
3. Press the bearing into the housing until the inside end of the housing is approximately 1/64 of an inch from the machined face of the hub. This slight recess is necessary in order that the jackshaft thrust washer will bear against the machined surface inside the housing rather than the bearing.
4. The motor shaft bearing may be pressed into the housing from the outside using the same basic method outlined above.
5. Be sure that the end of the bearing is recessed from the outside of the housing by approximately 1/64 of an inch.

Disassembly of Drive Shaft Assembly

1. Remove the drive shaft and gear assembly from the housing. Do not lose the pinion gear thrust washer.
2. Remove the tru-arc washer and intermediate drive gear.
3. Remove the key from the drive shaft.
4. Hold the clutch retainer sleeve and turn the high-speed gear off the shaft.
5. Rotate the sleeve in a counterclockwise direction to open the clutch and pull it off the drive shaft.
6. Tilt the clutch spring at an angle and gently pull until free. Remove the spring through the tooth end of the sleeve.

Reassembly of Drive Shaft Assembly

1. Examine all components and replace any that show evidence of wear.
2. Be sure and examine the clutch spring grabbing areas on the drive shaft and the high-speed drive gear. The spring tab in the clutch sleeve hole should be perpendicular to the spring coils. If the tab is bent, replacement is indicated.
3. Slide the clutch spring into the smooth end of the sleeve. Position the spring so the tail protruding off the end of the spring is opposite the hole in the sleeve. Slightly distort the spring and press it forward until the tail enters the hole in the sleeve.
4. Place the sleeve and the spring on the drive shaft. Turn the sleeve in a counterclockwise direction and press forward until the spring bottoms on the drive shaft bushing.
5. Place the high-speed gear (long hub first) on the drive shaft, press forward and turn gear until the gear hub fully enters the spring.
6. Replace the key in the drive shaft and slide the intermediate drive gear over the shaft.
7. Replace the tru-arc ring.
8. Assemble the thrust washer on the pinion gear.

Disassembly of Jackshaft Gear Assembly

1. Starting at the high-speed driven gear end, remove the large thrust washer.
2. Remove the snap ring.
3. Slide the high-speed gear off the shaft. If the gear binds, use a wheel puller.
4. Remove the two split washers held in position by the countersink in the rear of the gear.
5. Remove the woodruff key.
6. Remove the intermediate-speed gear from the shaft.
7. Remove the drive spring and sleeve from either the shaft or gear, which ever retains the spring.
8. Remove the clutch nut drag spring, clutch nut and screw.
9. Remove the woodruff key, low-speed gear and split washers.
10. Remove the low-speed gear pin.
11. Clean all components and examine for wear or broken parts.

Reassembly of Jackshaft Gear Assembly

1. Start with the jackshaft and install the parts from right to left on the jackshaft.
2. The low-speed gear and pin, drag spring and low-speed clutch nut make up a subassembly. Snap the drag spring on the gear pin so the spring runs in a counterclockwise direction (from pulley end of transmission). Next snap the clutch nut into the ring. Note the two embossments or lobes on the clutch nut. These embossments must face the low-speed gear and pin so they can enter and hold in the recessed grooves during tumbler speed.
3. Place the two split washers in the groove closest to the pulley end of the jackshaft. Drop the low-speed gear assembly on the jackshaft from the right so the counterbore in the gear holds the washers in place. Maintain a constant pressure while assembling the balance of the parts to avoid losing the split washers.
4. Complete installation of the parts making certain the washers and keys are placed as each succeeding part is installed.
5. After replacing the snap ring in the last groove in the jackshaft, place the thrust washer on the assembly (thrust washer is counterbored to fit over the snap ring).

Reassembly of Housing and Transmission

Installation of Jackshaft in Transmission Housing

1. Slide the jackshaft through the jackshaft seal in the housing.
2. With the jackshaft properly assembled, insert the pulley end of the jackshaft through the bearing and into the seal tool.
3. With the jackshaft fully inserted, pull the tool out of the seal and off the jackshaft.
4. Install the motor pulley on the shaft.

Installation of Drive Shaft in Transmission Housing

1. Assemble the thrust washer onto the pulley end of the pinion drive gear and insert the pinion shaft into the housing bearing.
2. Assemble the drive gear cluster onto the pinion gear shaft and mesh the drive and driven gears together.

Installation of Housing and Transmission to Motor End Bell

1. Place the large thrust washer on the motor shaft flush against the motor end bell boss.
2. Turn this motor shaft so its flat sides are parallel to the floor
3. The groove and end bell surface of the housing should be cleaned free of oil or grease. Apply a continuous bead of sealer into the groove sufficient to assure the groove will be filled, plus squeeze out onto the surfaces beside the groove.

   Note: The silastic-silicone rubber sealant can be procured through any hardware or other type supply stores. Two types that will work are: Dow Corning Silastic - Type 732 and General Electric Silicone Rubber Sealant.

   The housings now being used in production no longer have the groove depth maintained to allow the use of the 9206-105 gasket. All transmissions (new or old style) should be serviced using the new sealer.

4. Turn the inner drive shaft until its double flat is parallel to the bottom of the housing.
5. Align the housing assembly and insert the jackshaft into the jackshaft bearing in the motor end bell.
6. Rock the pulley slightly as the housing is pressed forward to align the inner drive shaft flats with the motor drive shaft flats.
7. Install the six screws holding the housing to the motor and check by hand, turning the motor pulley to make sure a bind does not exist. If the pulley will not turn, check the motor and thrust washers on the drive shaft and the component stack-up on both the jackshaft and drive shaft.
8. Replace the intermediate and high-speed shifter assemblies.

   Note: To avoid damage to the clutch spring, the shifter solenoid assemblies should not be installed until the housing is securely attached to the motor end bell.

Oil Level

The oil level in the transmission should be checked at time of installation. Additionally, it should be checked every three months or more often if required.

To check oil level:

1. Remove top panel.
2. Use the oil dipstick in the right rear corner of the cabinet to check the oil level.
3. If additional oil is needed, remove dipstick and add oil through the dipstick tube using a common oil can or funnel.

Note:
Oil Capacity - 10 1/4 oz.
Oil Type - 20 weight non detergent

Section 5
Trouble Shooting Guide

Symptom	Probable Cause	Suggested Remedy
Washer Does Not Start	Unit Unplugged	Replace in electrical outlet.
	Blown Fuse	Replace Fuse.
	Circuit Breaker Tripped	Press Reset Button. Check motor for overload or short. Check machine for total amperage draw and if it exceeds the maximum rating, trace all circuits until trouble is located. If total amperage is less than maximum rating then replace circuit breaker.
	Broken Wire	Trace with test meter or Dexter Circuit Tracer part #8545-055-002.
	Defective Timer Contact	Check timer with meter using timer chart.
	Defective Drive Motor	Check Motor for: Failed Capacitor Failed Start Switch High Amperage Draw Grounded or Shorted Windings Worn Bearings If any of the above are found, repair or replace the motor.
	Coin Meter Switch	Check switch to insure that it closes with each coin insertion.
	Coin Accumulator	See Figure 4-6 for switch settings. Check for 12 volt impulse from coin meter switch.. Transformer - 12 volt secondary. Replace accumulator board.
	Loose Timer Connectors	Check black and white multiple wire connectors, plugged into timer.
	Timer Drive Motor	Check timer drive motor and wire connections
	Delayed Start	See starting sequence under Installation and Operation.

Symptom	Probable Cause	Suggested Remedy
Motor Starts but Cylinder Does Not Turn	Broken or Loose Belt	Check belt tightening spring. Check belt for wear or breakage.
	Loose or Broken Pulley	Tighten or replace transmission or motor pulley.
	Transmission	Disassemble and replace worn or broken parts.
	Cylinder Binding	Check for article of clothing or other foreign material that might be between the cylinder and outer tub and remove. Check for worn or binding tub back.
Cylinder Does Not Spin	Defective Solenoid	Replace Solenoid.
	Solenoid Does Not Pull Shifter Rod	Check for cotter pin that connects solenoid and shift rod, if missing install new pin. May be caused by using the wrong transmission oil that will swell the shifter rod "O" ring making the rod stick.
	Broken or Loose Rear Motor Mounting Bracket or Stud	Tighten or replace the mounting bracket or mounting stud.
	Worn Clutch Spring	Overhaul transmission and replace worn parts.
	Loose Belt	Tighten or replace.
	No Current to Spin Solenoid	Check the timer contacts, pressure switch and wiring. (Refer to wiring diagram)
	Water Not Completely Drained	Check for plugged dump valve or drain.
	Woodruff Key in Transmission Worn or Missing	Disassemble transmission and repair.
Water Does Not Enter Washer	Clogged Inlet Screen or Hose	Remove hose and check. Always replace strainer screens.
	Open Solenoid Coil	Check for continuity and replace if necessary.
	Plugged Drain Outlet	Water not completely drained out from previous fill. Pressure switch has not reset.

Symptom	Probable Cause	Suggested Remedy
Water Does Not Enter Washer	Split Diaphragm in Water Valve	Replace diaphragm.
	Defective Pressure Switch	Check for obstruction in pressure switch hose. Check pressure switch with test meter. Replace if not working.
	Plunger Stuck in Inlet Valve	Remove inlet valve and clean or replace.
	Screen Clogged in Water Valve	Remove and clean or replace.
	Defective Selector Switch	Replace.
	Defective Timer Contacts	Replace timer.
Water Does Not Drain	Dump Valve Does Not Open	Tighten or replace return spring. Replace dump valve.
	Clogged Sump	Remove cover and clean sump.
	Clogged Hose from Sump to Dump Valve	Remove obstruction from hose.
	Clogged Dump Valve	Clean dump valve.
Inlet Water Does Not Shut Off	Failed Pressure Switch	Replace.
	Clogged Pressure Switch Hose	Clean hose.
	Dirt in Water Inlet Valve	Clean or replace valve.
	Failed Plunger	Clean inlet valve and replace plunger.
	Failed Timer Contacts	Test with meter (refer to timer chart) and replace timer if failed.
	Failed Inlet Valve Solenoid	Replace solenoid coil.
Tub Does Not Fill	Dump Valve Leaks	Clean or replace dump valve.

Symptom	Probable Cause	Suggested Remedy
Cylinder Spins All the Time	Shifter Rods Worn or Broken	Check and replace.
	Shifter Solenoid Bracket Loose	Check and tighten.
	Sleeve in Transmission Worn or Broken	Replace.
	Excess End Play in Gear Set	Worn bosses in housing. "C" rings worn or out of place.
Timer Does Not Advance	Timer Motor Defective	Remove and check for gear rotation (replace).
	Timer Gear Worn	Check and replace.
	Defective Timer	Check and replace.
	Broken Wire	Check circuit with Dexter Circuit Tracer part #8545-055-002.
Timer Does Not Rapid Advance	Wired Incorrectly	Check short and long cycle wiring instruction
	Failed Rapid Advance Motor	Check and replace.
Erratic Cycle Operation	Wired Incorrectly	Check GN-BK and WH-BK wires plugged onto separate terminals along side black timer connector.

Section 6

Parts Data

Accessories & Conversions

Part Number	Description
5130-019-002	Oil, 1/2 gallon
9472-001-001	Touch up Paint, 16 oz. Aerosol Can - white
9472-001-008	Touch up Paint, 16 oz. Aerosol Can - almond
9990-027-011	Hose, Water Supply
8641-242-000	Washer, Inlet Hose
9565-003-001	Strainer, Inlet Hose
9054-047-002	Spacer, Unit Mounting
8527-109-001	Decal-DOUBLE LOAD
8545-051-003	Drive Bit, Torx T-10
9732-055-002	Kit, Manual Start

Conversions

Cold Water Only in Soak and Rinse

Remove R-Gn wire from terminal number 3 on the temperature selector switch. Tape off the terminal on the end of the wire to prevent shorting.

Long Cycle - includes soak

(see Service Procedures - Short or Long Cycle Options)

Short Cycle - soak eliminated

(see Service Procedures - Short or Long Cycle Options)

Section 6

Parts Data

Kits & Assemblies

Part Number	Description
9732-092-001	WCA20 coin box guard
9732-055-002	Manual Start Kit
9732-040-001	Lower Serv Door Bracket and Fastener Kit
9732-038-001	Stator And Coil Kit Depend-O-Drain 120V
9732-030-001	High Speed Solenoid Ass'y New Style
9702-133-000	Pump Cover Kit
9702-119-000	Seal Kit
9702-112-000	Tub Back Seal Kit
9702-092-002	Tub Back Bearing and Seal Kit Complete

Cabinet and Front Panel Group

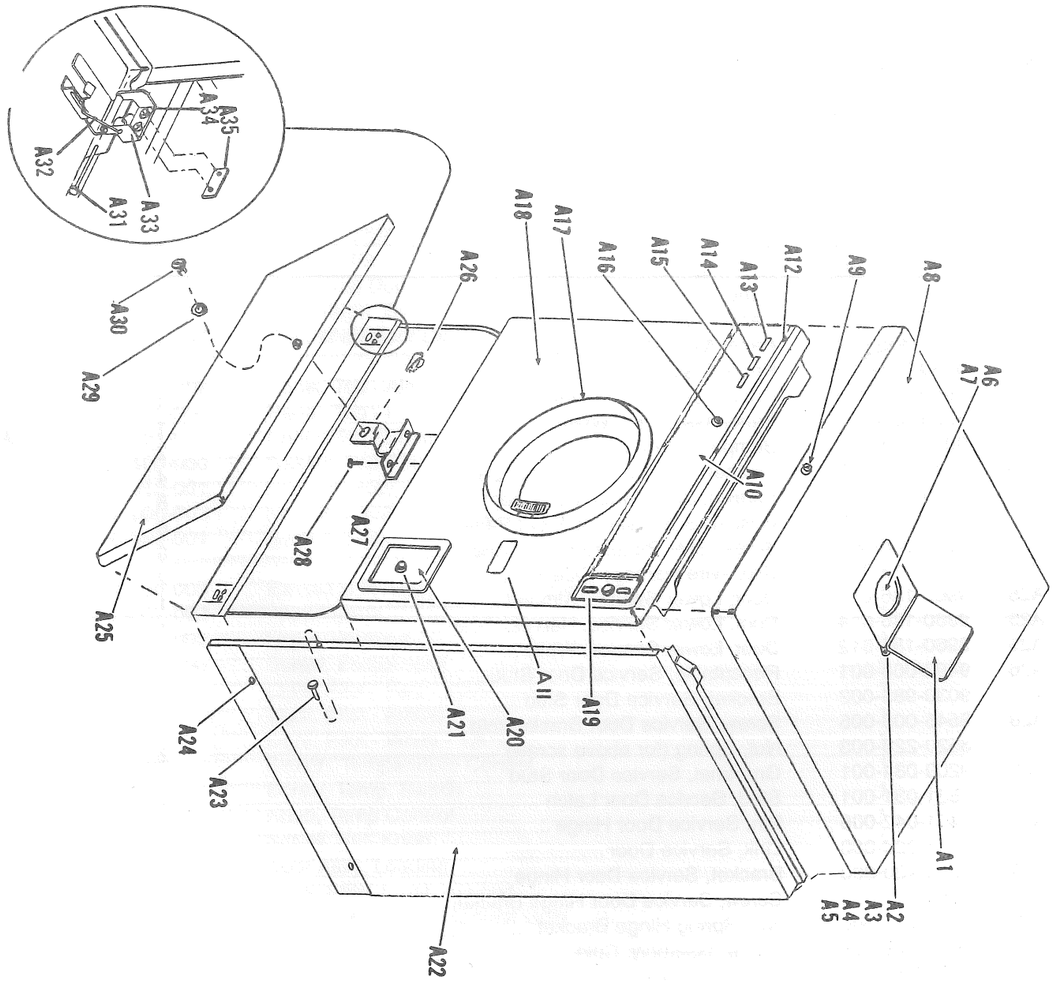
Key	Part Number	Description	
A1	9960-250-002	Door Assy, Soap - Black (includes the following)	1
*	9108-086-002	Door, Soap	1
*	9243-059-001	Hinge, Soap Door	1
*	9545-011-001	Screw, Drive	2
A2	9545-010-006	Screw, Soap Door Mtg	2
A3	8641-549-003	Washer, Soap Door	2
A4	8641-436-002	Washer, Fiber	2
A5	8640-412-003	Nut, Soap Door Mtg	2
A6	9118-035-002	Diaphragm, Soap Door	1
A7	9082-025-001	Cup, soap Door Diaphragm	1
A8	9989-121-009	Panel, Top - Almond	1
A8	9989-121-008	Panel, Top - Harvest Gold	1
A8	9989-121-007	Panel, Top - White	1
*	9206-100-000	Gasket, Top Panel	2
A9	8650-019-001	Lock and Key, Top Panel	1
*	6292-006-003	Key Only, (GR700) for Top Panel	1
*	9206-393-001	Gasket, Lock	1
A10	9994-029-003	Escutcheon Assy, includes Nameplate	1
A10	9412-067-002	Nameplate	1
A11	8502-598-002	Label, Warning	1
A12	9545-031-005	Screw, Escutcheon	6
A13	3310-009-000	Light, Pilot - Red - 120V	1
A14	3310-010-000	Light, Pilot - Amber - 120V	1
A15	3310-011-000	Light, Pilot - White - 120V	1
A16	9539-449-001	Switch, Temperature Control	1
A16	9545-044-003	Screw, Temp. Switch	1
A16	9307-090-002	Knob, Temp Control	1
A16	9545-028-006	Screw, Set- Knob	1
A17	9960-185-010	Door Assy, Loading	1
A18	9989-423-024	Panel Assy, Front- Almond	1
A18	9989-423-025	Panel Assy, Front- Harvest Gold	1
A18	9989-423-023	Panel Assy, Front- White	1
*	8502-617-001	Label, Made in USA	1
A19	9021-001-010	Acceptor, Coin	1
*	9545-020-002	Screw, Coin Acceptor mtg.	4
*	8640-424-002	Nut, Coin Acceptor mtg.	4
*	9003-170-001	Angle, Top Panel Hold Down	1
*	8640-359-002	Nut, Top Panel Lock Receiver	1
*	9545-008-005	Screw	2

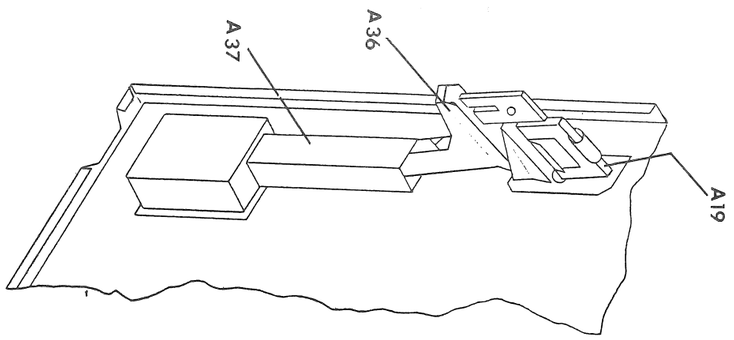
* Not Illustrated

Cabinet and Front Panel Group (continued)

Key	Part Number	Description	
A20	9807-075-005	Box Assy, Coin- Almond	1
A20	9807-075-003	Box Assy, Coin- Harvest Gold	1
A20	9807-075-001	Box Assy, Coin- White	1
A21	8650-018-003	Lock and Key, Coin Box	1
*	9208-045-001	Guard, Coin Box	1
*	9545-018-015	Bolt, mtg.	7
*	8641-581-018	Washer, mtg	7
*	8640-414-004	Nut, mtg	7
A22	9989-335-020	Panel Assy, R.H.- Almond	1
A22	9989-335-022	Panel Assy, R.H.- Harvest Gold	1
A22	9989-335-021	Panel Assy, R.H.- White	1
*	9989-335-023	Panel Assy, L.H.- Almond	1
*	9989-335-025	Panel Assy, L.H.- Harvest Gold	1
*	9989-335-024	Panel Assy, L.H.- White	1
A23	9051-021-000	Bumper, Lower Door	2
A24	8641-342-000	Washer, Spec, Side Panel to Base	4
A24	9545-008-005	Screws, Side Panel Attachment	8
*	9206-176-000	Gasket, Side Panel to Front Panel	6
*	9545-008-005	Screw, Side Panel to Front Panel	6
*	8023-118-000	Clip, Wire Harness-Side Panel	2
A25	9960-186-017	Door, Lower Service, Almond	1
A25	9960-186-014	Door, Lower Service, Harvest Gold	1
A25	9960-186-012	Door, Lower Service, White	1
A26	9492-008-001	Receptacle, Service Door Stud	1
A27	9039-985-002	Bracket, Service Door Stud	1
A28	9545-008-005	Screw, Service Door Bracket mtg.	2
*	8520-223-003	Nut, Spring (for above screw)	2
A29	9209-084-001	Grommet, Service Door Stud	2
A30	9531-031-001	Stud, Service Door Latch	1
A31	9451-042-000	Pin, Service Door Hinge	2
A32	9341-028-000	Link, Service Door	2
A33	9039-120-000	Bracket, Service Door Hinge	2
A34	9545-045-002	Screw, Service Door Hinge Bracket	4
A35	8520-123-000	Nut, Spring Hinge Bracket	2
A36	9940-012-001	Chute Assembly, Coin	1
A37	9574-235-003	Tube, Coin Vault	1
*	9545-008-006	Screw (for A36 and A37)	1

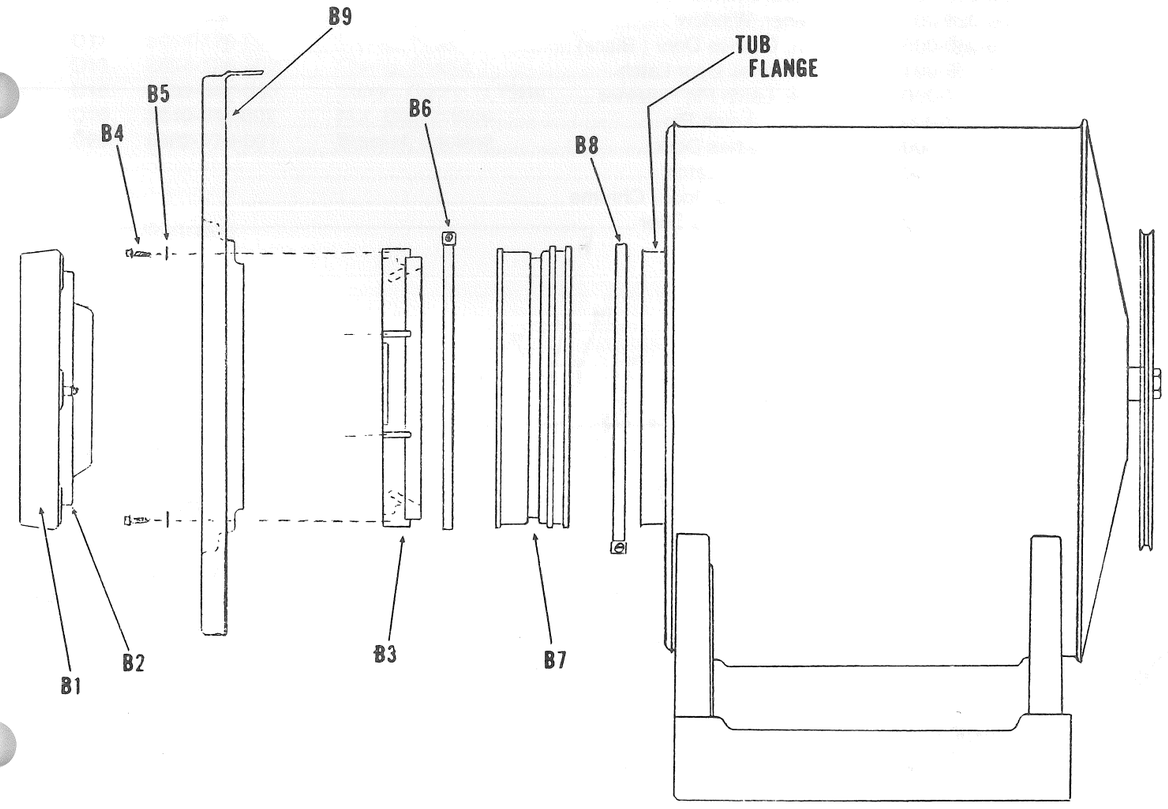
* Not Illustrated





Front Door Sealing Group

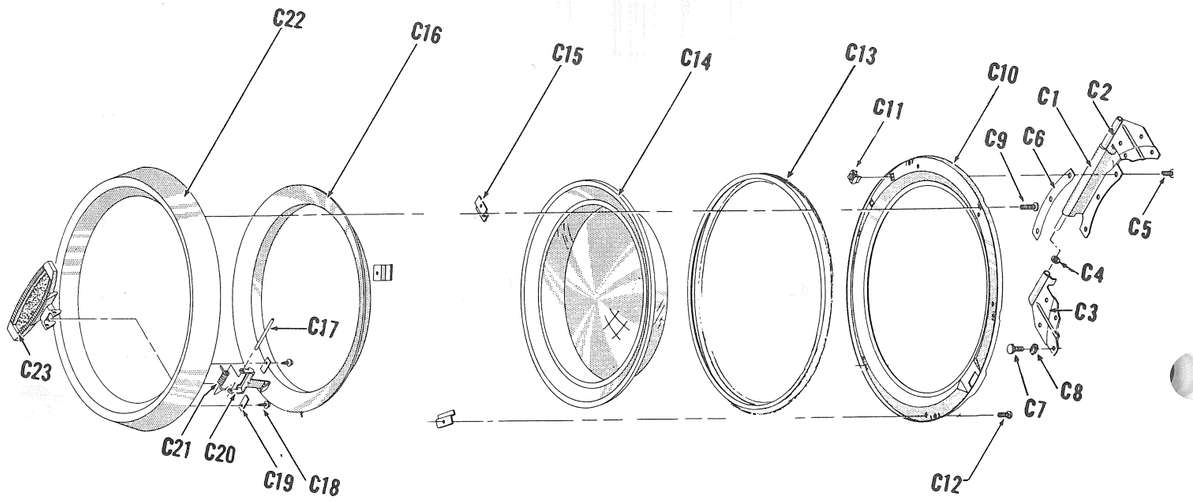
Key	Part Number	Description	
B1	9960-185-010	Door Assembly	1
B2	9206-418-001	Gasket, Door Sealing	1
B3	9487-219-001	Ring, Sealing	1
B4	9545-015-001	Screw, Ring to Panel	6
B5	8641-436-001	Washer, Fiber	6
B6	8654-117-012	Clamp, Ring to Collar	1
B7	9076-050-001	Collar	1
B8	9079-098-000	Clamp, Collar to Tub	1
B9	9989-423-023	Panel Assembly, Front-White	1
B9	9989-423-025	Panel Assembly, Front-Harvest Gold	1
B9	9989-423-024	Panel Assembly, Front-Almond	1



Clothes Door Group

Key	Part Number	Description	
*	9955-017-002	Hinge Assy, Complete	1
C1	9845-004-001	Leaf and Pin Assy	1
C2	9039-738-001	Bracket, Hinge - Upper	1
C3	9039-737-001	Bracket, Hinge - Lower	1
C4	9538-033-000	Spacer, Hinge	1
C5	9545-006-002	Screw, Hinge to Door	1
C6	9552-031-001	Shim, Door Hinge	AR
C7	9545-006-003	Screw, Hinge to Front Panel	4
C8	8641-582-007	Lockwasher	4
*	8640-414-002	Nut	4
*	9455-007-000	Pad, Clothes Door Latch (On Frt. Panel)	1
*	9545-006-001	Screw, Latch Pad Mtg	2
C9	8639-829-000	Screw, Spec	6
*	9960-185-010	Door Assy., Clothes - Complete	1
C10	9454-260-009	Panel, Clothes Door	1
C11	8640-172-000	Nut, Spring	3
C12	8639-827-000	Screw, Spec	3
C13	9206-402-001	Gasket, Door Sealing	1
C14	9635-015-001	Window	1
C15	9486-026-001	Retainer, Window	3
C16	9276-060-005	Insert, Clothes Door (Black)	1
C17	9451-156-001	Pin, Clothes Door Latch	1
C18	8639-547-000	Screw, Latch Pin Retainer	2
C19	9486-027-000	Retainer, Latch Pin	2
C20	9349-017-000	Latch, Clothes Door	1
C21	9534-066-000	Spring, Door Latch	1
C22	9487-055-000	Ring, Clothes Door - Chrome	1
C23	9244-075-002	Handle, Clothes Door	1

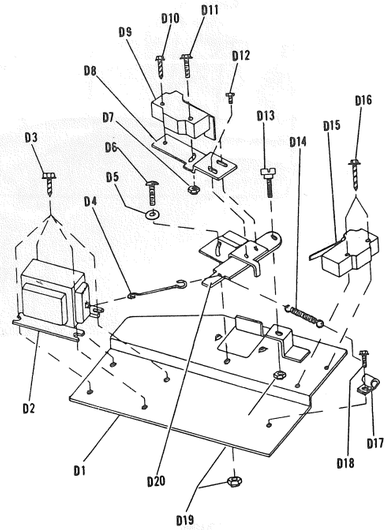
* Not Illustrated



Door Lock Mechanism

Key	Part Number	Description	
*	9885-019-003	Lock Assy, Door - Complete (120 volt-60hz)	1
D!	9982-276-002	Plate Assy, Latch Mech	1
D2	9536-078-003	Solenoid (120 volt-60hz)	1
D3	9545-008-001	Screw, Solenoid Mtg	4
*	8641-582-006	Lockwasher	4
D4	9341-042-001	Link, Sol. Latch	1
D5	8641-581-006	Washer.	1
D6	9545-012-013	Screw, Latch Plate Mtg	1
D7	8640-413-004	Nut, Elastic Stop	1
D8	9039-601-000	Bracket, Switch	1
D9	9539-446-004	Switch, Latching	1
*	9550-164-001	Shield, Insulator	1
D10	9545-031-006	Screw, Switch Mtg	1
D11	9545-044-002	Screw, Switch Mtg	1
D12	9545-031-003	Screw, Switch Brkt	2
D13	9451-098-000	Pin, Latch Pivot	1
D14	9534-350-001	Spring, Sol. Return	1
D15	9539-446-005	Switch, Door Lock Sensing	1
*	9550-164-001	Shield, Insulator	1
D16	9545-031-006	Screw, Switch Mtg	2
D17	8654-125-001	Clamp, Plastic	1
D17	8654-125-002	Clamp, Plastic	2
D18	8639-547-000	Screw, Clamp to Plate	1
D19	8640-411-002	Nut, Elastic Stop	2
D20	9982-173-001	Bracket, Locking	1

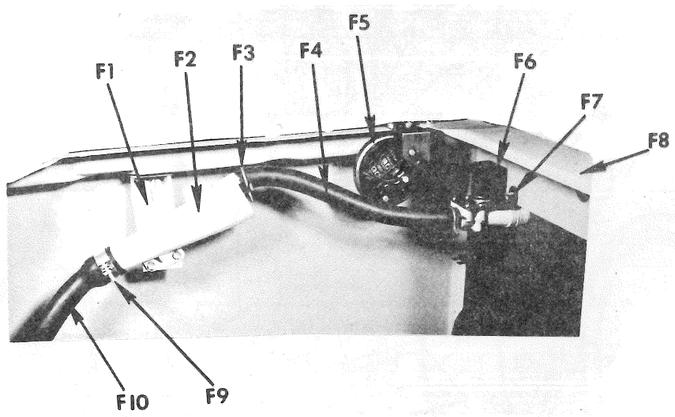
* Not Illustrated



Upper Rear Channel Components

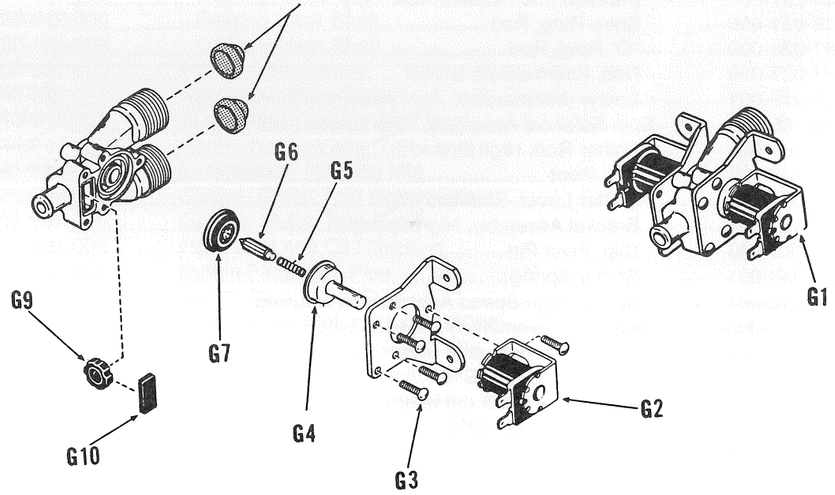
Key	Part Number	Description	
F1	9039-421-001	Bracket, Inlet Trough Mtg	1
F2	9575-026-001	Trough, Water Inlet	1
*	9413-030-001	Nozzle (For Item F1)	1
*	9545-031-005	Screw, Nozzle to Trough	2
*	9545-008-005	Screw, Trough and Bracket Mtg	4
F3	8654-093-000	Clamp, Hose	2
F4	9242-369-001	Hose, Water Valve to Trough	1
F5	9539-457-001	Switch, Pressure	1
*	9545-008-005	Screw, Pressure Switch to Side Panel	2
F6	9379-175-001	Valve, Water (120 volt-60hz)	1
F7	9545-008-008	Screw, Water Valve to Channel	2
*	8641-582-006	Lockwasher (For Item F7)	2
F8	9081-052-002	Channel, Upper Rear	1
*	9802-037-007	Cord, Service	1
*	8618-034-000	Strain Relief	1
*	8639-621-007	Screw, Terminal & Cord Eyelet	1
*	9039-996-002	Bracket, Timer Mounting	1
*	8652-130-037	Terminal, Ground Wire	1
*	9545-008-005	Screw, Rear Channel to Side Panel	4
F9	8654-112-000	Clamp, Inlet Hose	1
F10	9242-368-001	Hose, Trough to Tub	1
*	9132-001-001	Dipstick, Oil Checking	1
*	9242-427-002	Hose, Filler Tube	1
*	9206-176-000	Gasket, Spacer (Side Panels to Front)	6

* Not Illustrated



Water Inlet Valve Group

Key	Part Number	Description	
G1	9379-175-001	Valve, Water Inlet (120 volt-50/60hz)	1
G2	9089-017-000	Coil (120 volt)	2
G3	8639-827-000	Screw	10
G4	9211-021-002	Guide, Armature	2
G5	9534-298-001	Spring, Armature	2
G6	9015-008-001	Armature	2
G7	9118-049-001	Diaphragm	2
G8	9555-056-001	Screen	2
G9	9626-052-003	Washer, Flow	1
G10	9206-401-001	Gasket, Flow Washer Outlet	1



Motor and Transmission Group

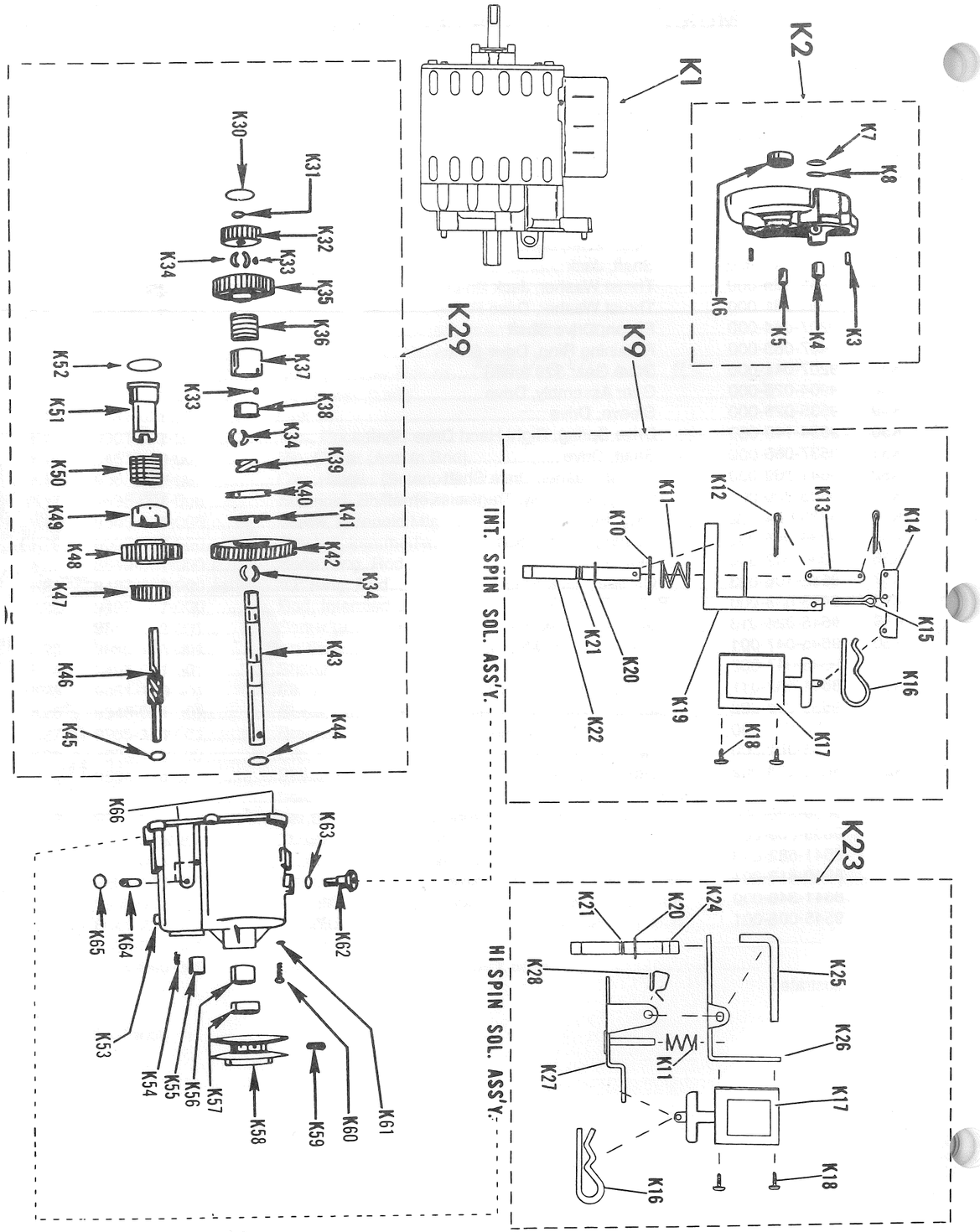
Key	Part Number	Description	
*	9902-143-008	Transmission Assembly-120 volt-60hz (includes K1 thru K66)	1
K1	9914-107-010	Motor & End Bell (120 volt-60hz)	1
K2	9879-032-001	End Bell Assembly	1
K3	8688-003-000	Pin, Dowel	2
K4	9036-042-000	Bearing, Jack Shaft	1
K5	9053-012-000	Bushing, Motor Shaft	1
K6	9532-016-000	Seal, Motor Shaft Oil	1
K7	9456-046-001	Plug, Welsh	1
K8	9206-073-000	Gasket, Welsh Plug	1
K9	9985-064-001	Spin Solenoid Assembly, Intermediate (120 volt)	1
K10	8641-262-000	Washer, Shifter Return Spring	1
K11	9534-150-000 IM	Spring, Shifter Return 9534-346-001 HS	1
K12	9451-169-008	Pin, Cotter (Link)	2
K13	9341-023-000	Link	1
K14	9001-022-000	Arm, Rocker	1
K15	9451-169-006	Pin, Cotter (Arm to Brkt)	1
K16	9083-107-001	Clip, Hairpin (Solenoid)	2
K17	9536-007-000	Solenoid, Shifter (120 volt)	2
K18	9545-031-005	Screw, Solenoid Mtg	4
K19	9039-297-000	Bracket, Intermediate Assembly	1
K20	8649-031-000	Snap Ring, Rod	2
K21	9487-026-000	"O" Ring, Rod	2
K22	9497-007-000	Rod, Intermediate Shifter	1
*	9545-012-001	Screw (Intermediate Spin Assembly to Housing)	2
K23	9985-155-001	Spin Solenoid Assembly, High Speed (120 volt)	1
K24	9497-051-001	Shifter Rod, High Speed	1
K25	9451-166-001	Pin, Pivot	1
K26	9348-064-001	Shifter Lever, Solenoid Mtg	1
K27	9985-156-001	Bracket Assembly, High Speed	1
K28	8023-118-000	Clip, Pivot Pin	1
*	9534-346-001	Shifter Spring	1
*	9545-012-001	Screw, High Speed Assembly to Housing	2
K29	9904-027-000	Gear Set Assembly, 3 speed	1
K30	8641-270-000	Thrust Washer, Jack Shaft	1
K31	9487-014-000	Snap Ring, Jack Shaft	1
K32	9207-043-000	Gear, Jack Shaft (39 teeth)	1
K33	9306-007-002	Key, Woodruff	4
K34	8641-228-000	"C" Washer, Jack Shaft	6
K35	9904-005-000	Gear Assembly, Jack Shaft	1
K36	9534-080-000	Drive Spring, Left Hand Jack Shaft	1

* Not Illustrated

Motor and Transmission Group (continued)

Key	Part Number	Description	
K37	9535-018-000	Sleeve, Drive	1
K38	9053-018-000	Bushing, Jack Shaft	1
K39	8639-423-002	Screw, Clutch Thread	1
K40	9583-001-000	Thread, Clutch	1
K41	9534-079-000	Spring, Clutch Drag	1
K42	9980-002-000	Gear Assembly	1
K43	9537-041-000	Shaft, Jack	1
K44	8641-224-000	Thrust Washer, Jack Shaft	1
K45	8641-231-000	Thrust Washer, Drive Pinion	1
K46	9207-044-000	Pinion, Drive Shaft	1
*	9487-083-000	Retaining Ring, Drive Gears	1
K47	9207-041-000	Drive Gear, (29 teeth)	1
K48	9904-025-000	Gear Assembly, Drive	1
K49	9535-029-000	Sleeve, Drive	1
K50	9534-149-000	Drive Spring, Right Hand Drive Shaft	1
K51	9537-066-000	Shaft, Drive	1
K52	8641-269-000	Thrust Washer, Drive Shaft	1
K53	9803-009-001	Housing Assembly, Transmission	1
K54	8615-104-032	Plug, Pipe	1
K55	9036-043-000	Bearing, Drive Shaft	1
K56	9036-042-000	Bearing, Jack Shaft	1
K57	9532-106-003	Oil Seal, Jack Shaft	1
K58	9453-033-000	Pulley, Drive (60hz)	1
K59	9545-028-013	Set Screw, Drive Pulley	2
K60	9545-047-001	Screw, Housing Mtg (3/4" long)	5
K60	9545-047-002	Screw, housing Mtg (7/8" Long)	1
K61	8641-582-011	Lockwasher, Housing Mtg	6
K62	9535-019-000	Sleeve, Shifter Rod (Intermediate)	1
K63	9206-097-000	Gasket, Shifter Rod Sleeve	1
K64	9458-002-000	Pipe, Vent and Oil Checking	2
K65	8651-023-002	Button Plug, Vent Pipe	1
*	9039-696-000	Bracket, Rear Motor Support	1
*	9039-988-001	Bracket, Front Motor Support (60hz)	1
*	9895-008-001	Stud Assembly, Transmission Mtg	2
*	8641-582-013	Lockwasher (for Stud Assembly above)	4
*	8640-416-001	Nut (for Stud Assembly above)	4
*	8641-340-000	Spacer Washer, Transmission Mtg	1
*	9545-006-001	Screw, Motor Mtg	3

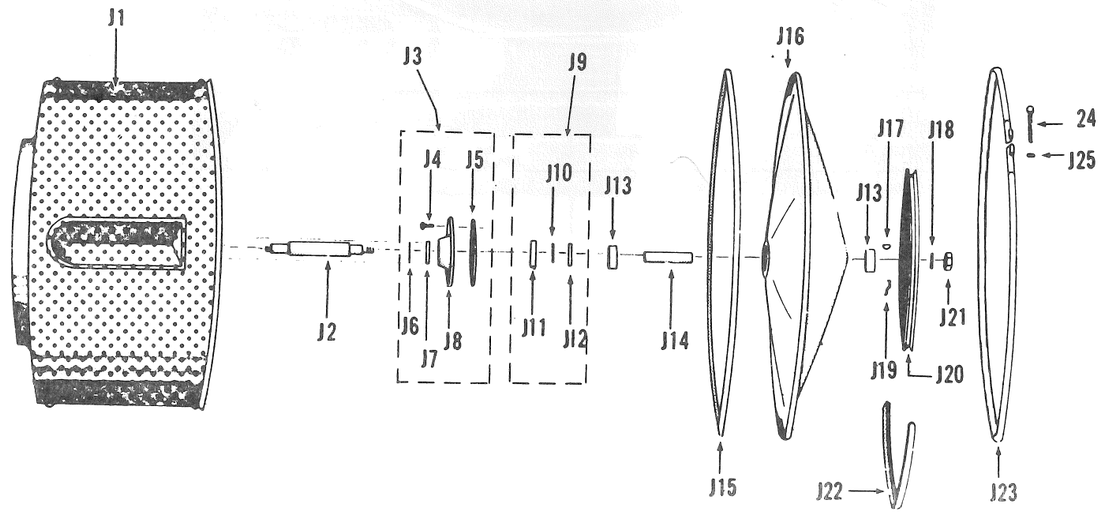
* Not Illustrated



Cylinder, Tub Back and Pulley Group

Key	Part Number	Description	
J1	9850-002-005	Cylinder Assembly	1
J2	9537-038-000	Shaft, Cylinder	1
J3	9702-119-000	Seal Kit (includes J4, J5, J6, J7 & J8)	1
J4	9545-008-018	Screw, Seal Housing	6
J5	9206-071-000	Gasket, Seal Housing	1
J6	9206-072-000	Gasket, Seal Mating Ring	1
J8	9276-056-000	Seal, Main	1
J8	9702-119-000	Housing, Seal	1
J9	9702-112-000	Seal Kit, Tub Back (includes J10, J11 & J12)	1
J10	9206-294-000	Gasket, Cylinder Shaft (copper)	1
J11	9535-085-000	Seal, Tub Back	1
J12	9538-108-000	Spacer, Cylinder Shaft	1
J13	9037-012-000	Bearing, Ball (Tub Back)	2
J14	9538-106-000	Spacer, Bearing	1
J15	9206-229-002	Gasket, Tub Back	1
J16	9982-196-007	Tub Back Assembly (includes J19 & Mtg Screws)	1
J17	9306-006-000	Key, Cylinder Shaft	1
J18	8641-240-000	Lockwasher, Pulley Mtg	1
J19	9079-022-000	Clamp, Bearing Retainer	2
*	9545-008-018	Screw, Clamp Mtg	2
J20	9908-040-002	Pulley, Cylinder	1
J21	8640-167-001	Nut, Pulley Mtg	1
J22	9040-032-000	Belt, Drive (60hz)	1
J22	9040-038-001	Belt, Drive (50hz)	1
J23	9859-003-002	Clamp, Tub Back	1
J24	9545-014-001	Screw, Clamp Ring	1
J25	8640-400-001	Nut, Clamp Ring	1
*	9702-092-001	Tub Back Bearing & Seal Kit (includes J3, J13, J15 & J17)	1
*	9702-092-002	Tub Back Bearing & Seal Kit (includes J3, J9, J13, J15 & J17)	1

* Not Illustrated

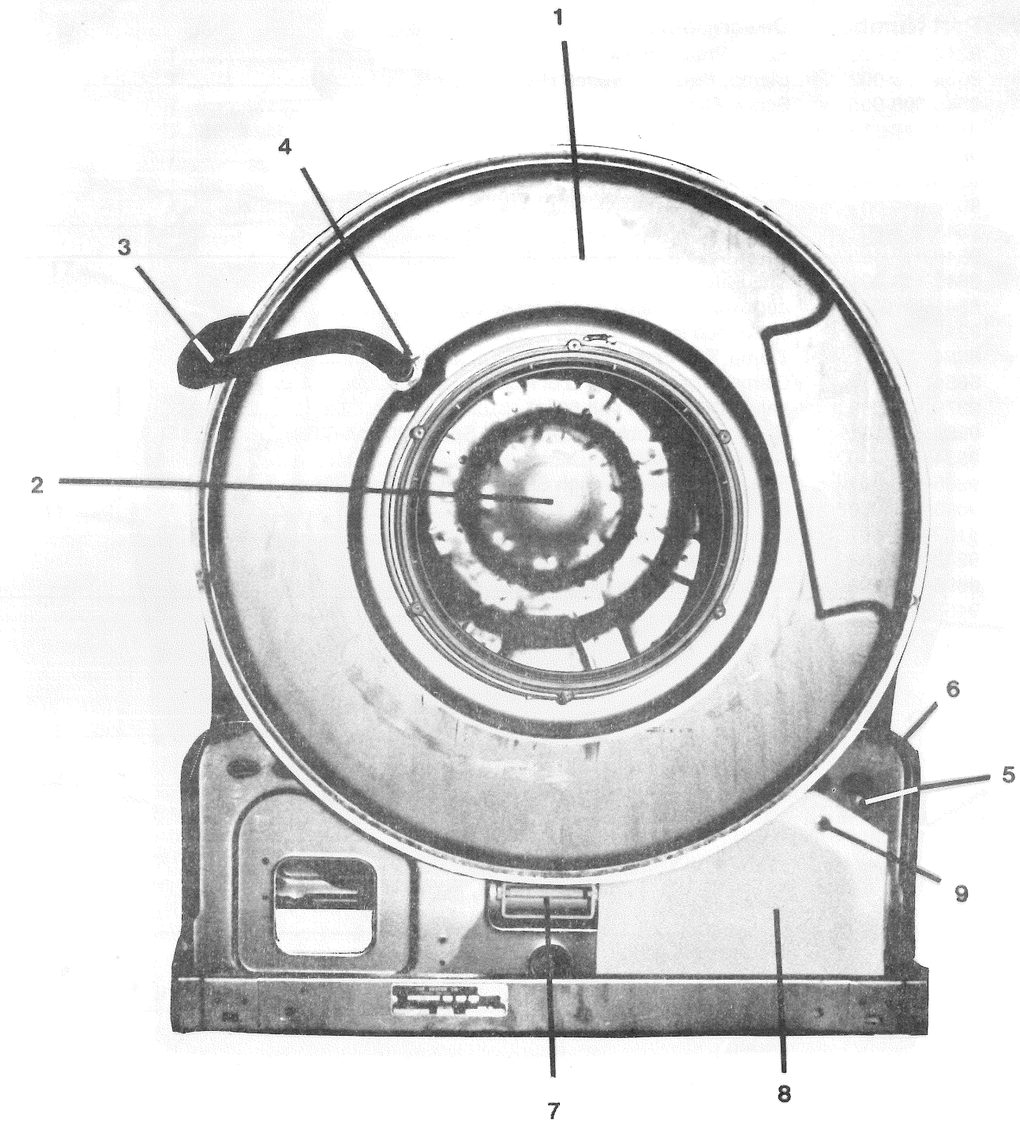


Tub, Cradle and Drain Housing Group

Front View

Key	Part Number	Description	
1	9869-001-010	Tub & Cradle Assembly	1
2	9850-002-005	Cylinder Assembly	1
3	9242-368-001	Hose, Trough to Tub	1
*	8654-112-000	Clamp, Hose (Trough End)	1
4	8654-093-000	Clamp, Hose (Tub End)	1
*	9118-035-002	Diaphragm, Soap Door	1
5	5198-211-001	Circuit Breaker (120 volt)	1
*	8641-582-014	Lockwasher	1
6	9902-143-008	Transmission (120 volt-60hz)	1
*	9460-004-000	Pan, Base	1
*	9545-008-005	Screw, Base Pan Mtg	4
7	9241-159-002	Housing, Drain	1
7	9206-086-000	Gasket, Drain Housing	1
7	8639-424-000	Screw, Drain Housing Mtg	8
7	8641-222-000	Washer, Rubber (Drain Housing Mtg)	8
7	8640-413-001	Nut, Drain Housing Mtg	8
7	8641-581-005	Washer, Flat	7
*	9242-425-001	Hose, Housing to Dump Valve	1
*	8654-117-008	Clamp, Hose to Dump Valve	1
*	8654-117-011	Clamp, Hose to Drain Housing	1
8	9550-127-003	Shield, Motor Shaft	1
9	8651-053-001	Plug, Button	1

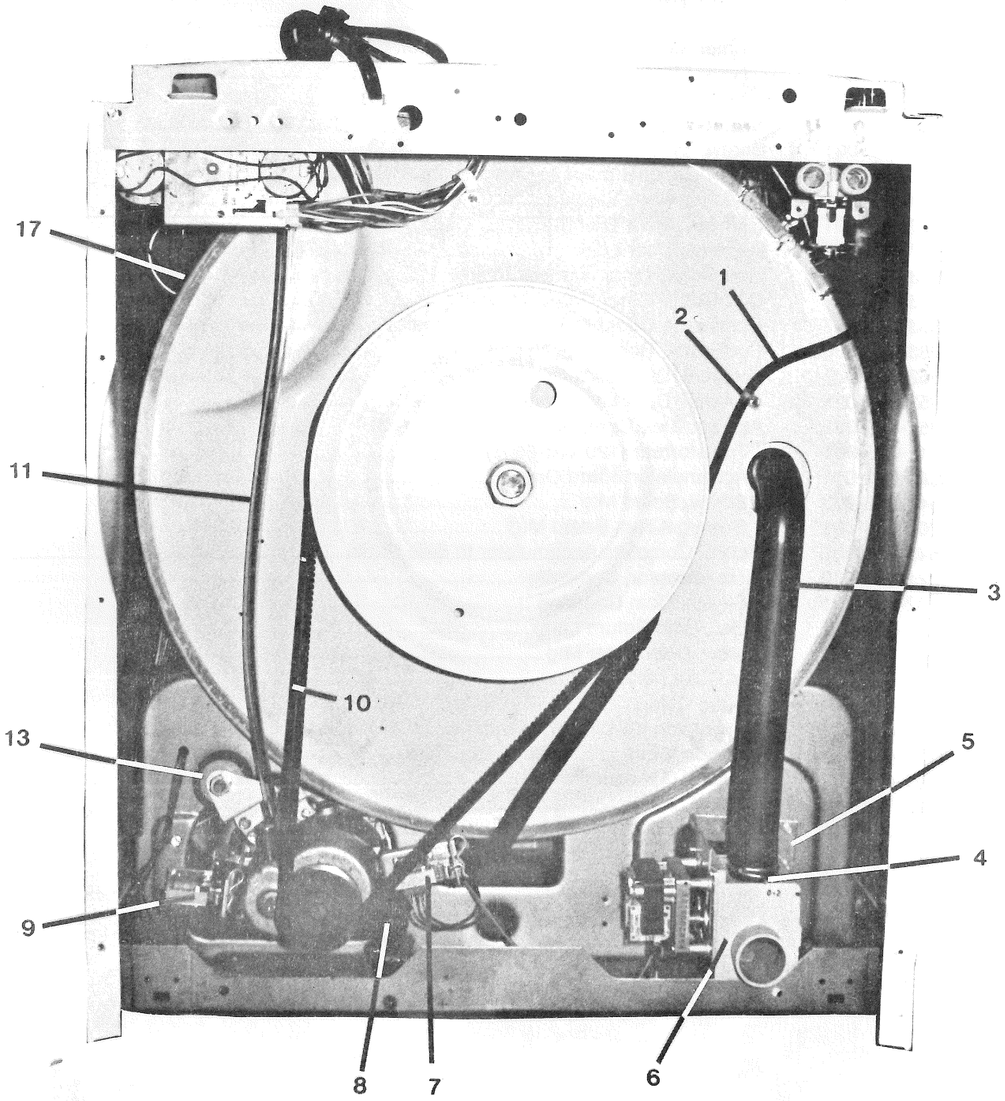
* Not Illustrated



Tub, Cradle and Drain Group
Rear View

Key	Part Number	Description	
1	9242-175-000	Hose, Pressure Switch	1
2	8654-125-002	Clamp, Pressure Switch Hose Retaining	1
2	9545-008-005	Screw, Clamp	1
*	8654-117-015	Clamp, Pressure Switch Hose to Tub	1
3	9242-426-001	Hose, Overflow	1
4	8654-034-000	Overflow Hose to Drain Valve	1
5	9029-030-001	Bracket, Dump Valve Mtg	1
*	9545-045-002	Screw, Valve to Bracket	1
*	9545-012-005	Screw, Valve and Bracket Mtg	2
*	8640-413-001	Nut, Valve and Bracket Mtg	2
*	8641-582-006	Lockwasher, Valve and Bracket Mtg	2
*	9242-425-001	Hose, Tub to Drain Valve	1
*	8654-117-011	Clamp, Tub End of Hose	1
*	8654-117-008	Clamp, Drain Valve End of Hose	1
6	9379-177-003	Valve, Drain (120 volt-60hz)	1
7	9985-064-001	Solenoid Assembly, Intermediate Spin (120 volt-60hz)	1
8	9534-151-000	Spring, Belt Tension	1
9	9985-155-001	Solenoid Assembly, High Speed Spin (120 volt-60hz)	1
10	9040-032-000	Belt, Drive	1
11	9132-001-001	Dipstick, Oil Checking	1
11	9242-427-002	Hose, Filler Tube	1
13	9895-008-001	Stud, Transmission Mtg	2
17	9456-042-001	Plug, Cap	1

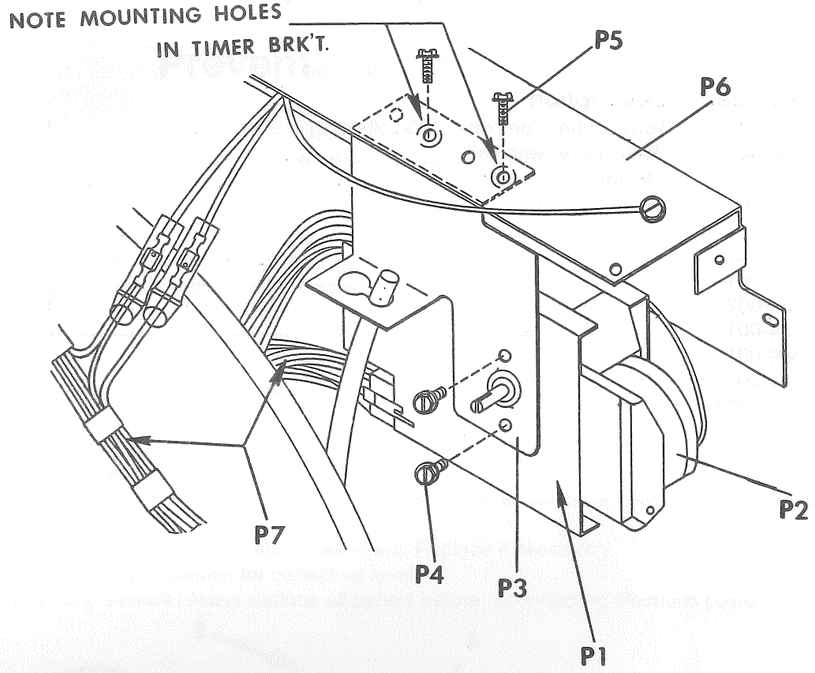
* Not Illustrated

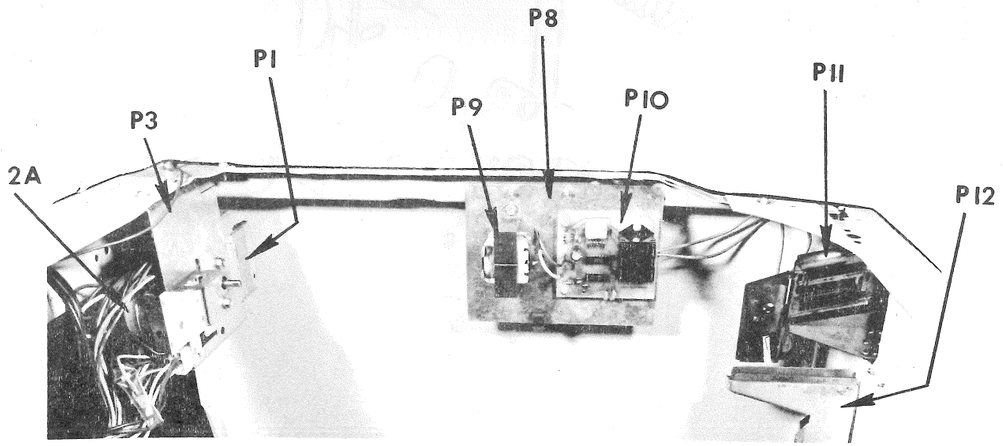


Timer Group

Key	Part Number	Description	
P1	9571-351-001	Timer (120 volt-60hz)	1
P2	9376-286-002	Timer Motor, Rapid Advance (120 volt-60hz)	1
P2A	9376-285-002	Timer Motor, Drive (120 volt-60hz)	1
*	9207-096-001	Gear, Idler (33 tooth)	1
P3	9039-996-002	Bracket, Timer Mtg	1
P4	9545-012-001	Screw, Timer to Bracket	2
P5	9545-008-005	Screw, Timer Bracket to Channel	2
P6	9081-052-001	Channel, Back Support	1
P7	9627-641-001	Harness, Main Wiring	1
*	9627-668-001	Harness, Door Lock	1
*	8683-027-010	Connector, Timer Harness (black)	1
*	8683-027-009	Connector, Timer Harness (white)	1
*	8683-027-007	Connector, Door Lock Harness (female)	1
*	8683-027-008	Connector, Door Lock Harness (male)	1
*	8652-124-031	Terminal, Door Lock Connector (female)	
*	8652-124-029	Terminal, Door Lock Connector (male)	
P8	9857-119-001	Accumulator, Complete (120 volt-60hz)	1
P9	8711-003-001	Transformer (120 volt-60hz)	1
P10	9020-002-001	Accumulator Board Only	1
*	9545-015-002	Screw, Board Mtg	4
*	9209-085-001	Grommet-Nut, Board Mtg	4
*	9545-008-005	Screw, Complete Accumulator to Side Panel	2
P11	9021-001-010	Coin Acceptor, Complete	1
*	9732-126-001	Switch, Coin Counting	1
*	9063-004-001	Bail, Coin Return Loop	1
*	9545-020-002	Screw, Coin Meter Mtg	4
*	8640-424-002	Nut, Coin Meter Mtg	4
P12	9940-012-001	Chute, Coin	1
*	9732-055-002	Conversion Kit, Coin to Manual	1
*	9539-464-001	Switch, Start	1
*	9539-465-001	Switch, Acceleration	1
*	8502-604-001	Decal, Instruction	1
*	8545-051-003	Tool, Torx T-10 Driver	1

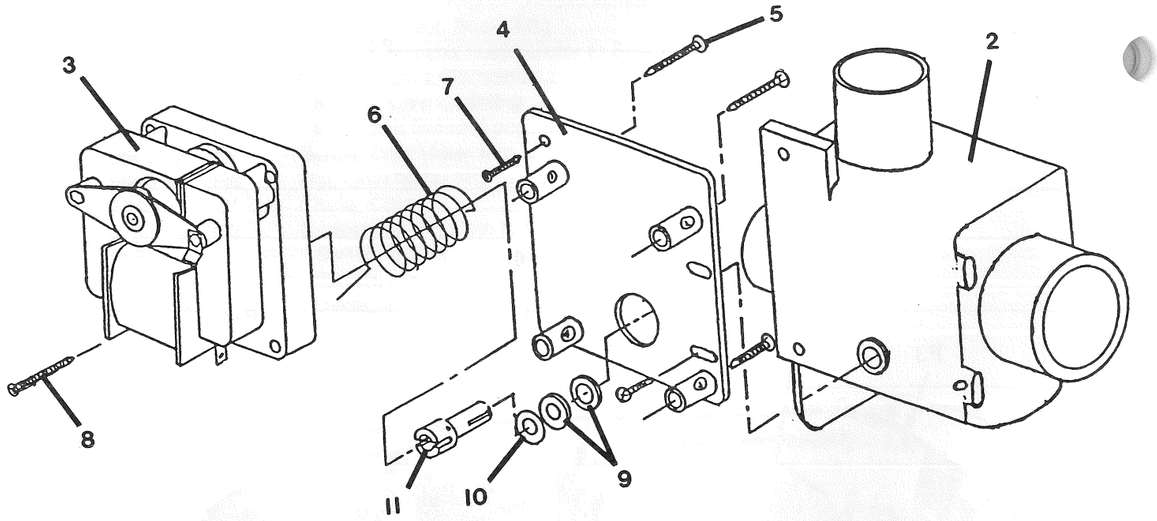
* Not Illustrated





Drain Valve Group

Key	Part Number	Description	
1	9379-177-003	Valve Drain, Complete (120 volt-60hz)	1
2	9064-063-001	Body, Valve (with ball)	1
3	9914-137-004	Motor and Gear Train (120 volt-60hz)	1
4	9452-538-001	Plate, Motor Mtg	1
5	8639-994-001	Screw	3
6	9534-340-001	Spring, Drive	1
7	9545-054-001	Screw	2
8	9545-054-002	Screw	1
9	9532-134-001	Seal, V Packer	2
10	8641-584-001	Washer	1
11	9451-185-001	Pin, Main Drive	1



Section 7

Preventative Maintenance

Daily

1. Clean the top and the cabinet to remove residue.
2. Clean the soap dispenser and soap lid.
3. Check the drain for leaking and proper draining.
4. Check the loading door for leaks.
5. Clean the door seal of all foreign material.
6. Leave the loading door open to aerate the washer when not in use.

Quarterly

Make sure the power is disconnected before making the following checks.

1. Check the drive belt for wear and proper tension.
2. Clean lint and other foreign material from around drive motor.
3. Check all water connections for leaks.
4. Wipe and clean the inside of the washer and check all electrical components for moisture and dust.
5. Remove and clean water inlet hose filters. Replace if necessary.
6. Check the transmission for correct oil level.
7. After any service always replace all panels before reconnecting electrical power.

Maintenance Notes

Maintenance Notes