SPEED QUEEN®

SERVICE MANUAL

SUPER 20 WASHER-EXTRACTOR

MODELS

CL8761 CL8763

CL8771 CL8773

Speed Queen Company
Ripon, WI 54971

A Raytheon Company

PART NO. 81231R7
3/81

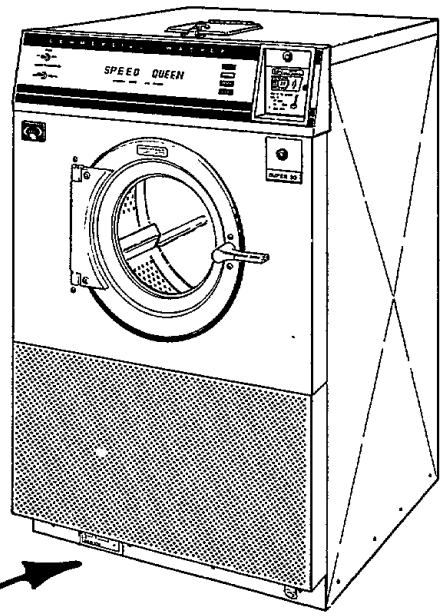
Table of Contents

Specifications

Cabinet Finish:	Hi-baked acrylic enamel rear and side panels; stainless steel front panel and air intake grille. Porcelain cabinet top.
Height:	46-1/2 inches.
Width:	30 inches.
Depth:	30-1/4 inches.
Electrical Rating:	120/240 volt, 60 Hertz. Single phase, three wire, 10.5 amps. Also available for 120/208 volt operation.
Drive Motor:	Internal overload protected. Wound for 230 volt 60 Hertz operation at 3450 and 400 R.P.M. Also available for 208 volt operation. Lifetime lubricated.
Blower Motor:	Wound for 115 volt, 60 Hertz operation at 3000 R.P.M.
Pump Motor: Models CL8763 & CL8773	Wound for 115 volt, 60 Hertz operation at 3000 R.P.M.
Clothes Cylinder:	Stainless Steel.
Cycle Timer:	30 minutes – complete cycle.
Reversing Timer:	Reverses drive motor every 30 seconds in tumble portion of cycle.
Water Mixing Valve:	3.8 gpm water flow rate.
Weight:	418 lbs. (approximate).

Nameplate Location

When writing for information on the Speed Queen Super 20 Washer-Extractor, be sure to mention model and serial numbers. The model and serial numbers will be found on the nameplate at front bottom of base.



MODELS	METERED	NONMETERED	PUMP	NONPUMP
CL8761	✔			✔
CL8763	✔		✔	
CL8771		✔		✔
CL8773		✔	✔	

Service Procedures

SECTION I

WARNING

Disconnect electrical power and close water supply valves before servicing washer.

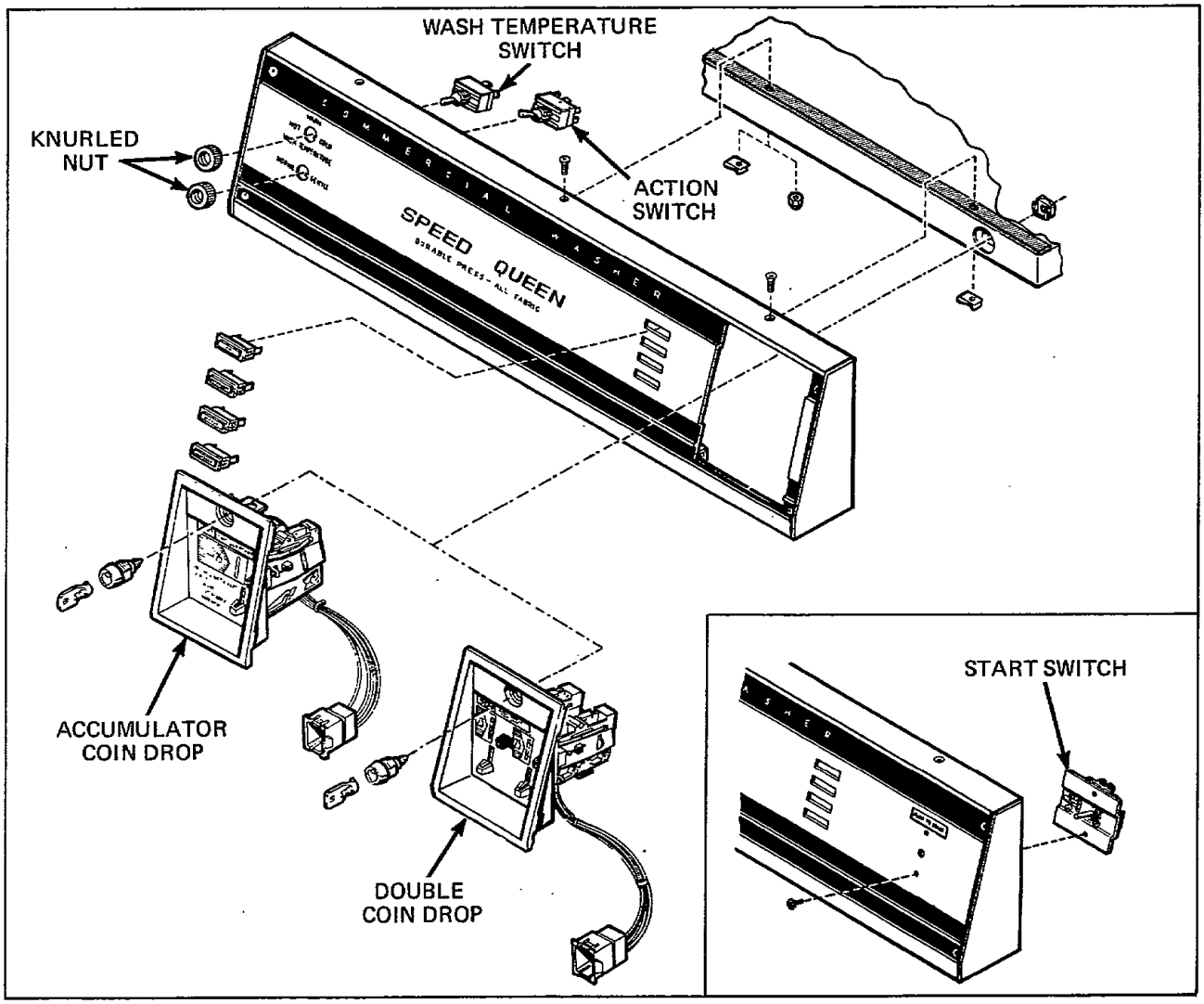


Figure 1

1. **COIN DROP (DOUBLE OR ACCUMULATOR) – Metered Models** *(Refer to Figure 1)*

   a. Unlock coin drop and pull it out of washer as far as wires will permit.

   NOTE: Coin drop has threaded lock and will require several counterclockwise turns to unlock.

   b. Through serial number 43P03: Remove screw holding ground wire to right leg.
   c. Disconnect wire harness at terminal block.

IMPORTANT

Use caution when removing coin drop not to damage coin actuator wires.

NOTE: Refer to *Figure 2* for accumulator coin drop assembly sequence.

IMPORTANT STEPS IN RE-ASSEMBLING ACCUMULATOR COIN DROP

(1) Install coin switch, *Figure 2*, so switch "clicks" before coin has completely dropped free of actuator arm. When actuator arm returns to natural position, there should be some free travel between the "click" and reseating against bottom of coin chute.

(2) Install cam switch, *Figure 3*, so it clicks "on" about 3/4 the distance up switch cam rise.

(3) Install advance solenoid, *Figure 3*, so plunger actuates the ratchet wheel enough for the pawl to latch it. Make sure ratchet wheel teeth can rotate clear of plunger boot after solenoid plunger has returned.

(4) Install release solenoid, *Figure 3*, so when fully actuated, the solenoid will pivot the pawl enough to allow the ratchet wheel to rotate freely.

2. **START SWITCH – Nonmetered Models** *(Refer to Figure 1)*

   a. Remove three screws holding control panel assembly to cabinet top and tilt assembly away from washer.
   b. Disconnect wire harness at terminal block.
   c. Remove two screws holding switch to control panel.

3. **CONTROL PANEL ASSEMBLY** *(Refer to Figure 1)*

   a. Remove coin drop, *paragraph 1.*
   b. Remove three screws holding control panel assembly to cabinet top.

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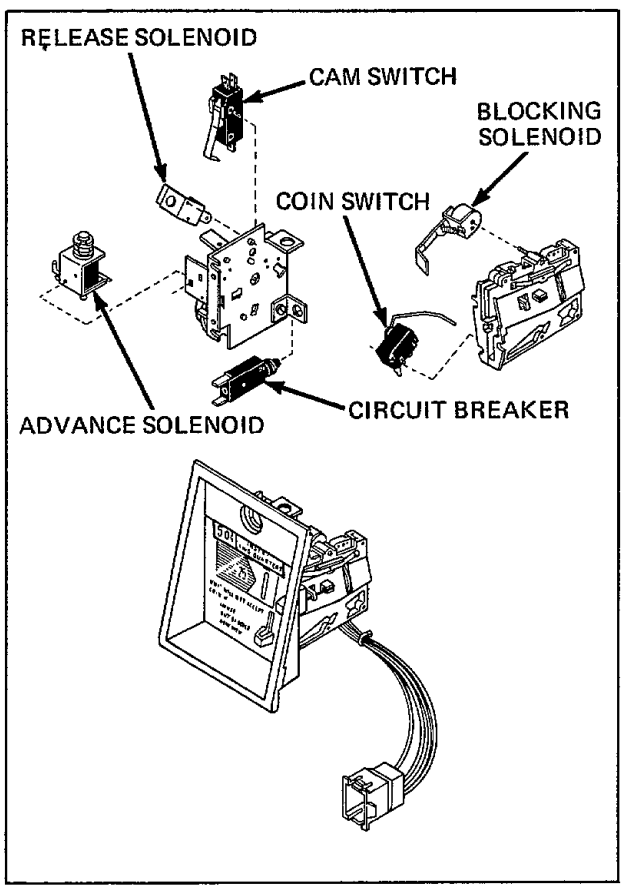

Figure 2

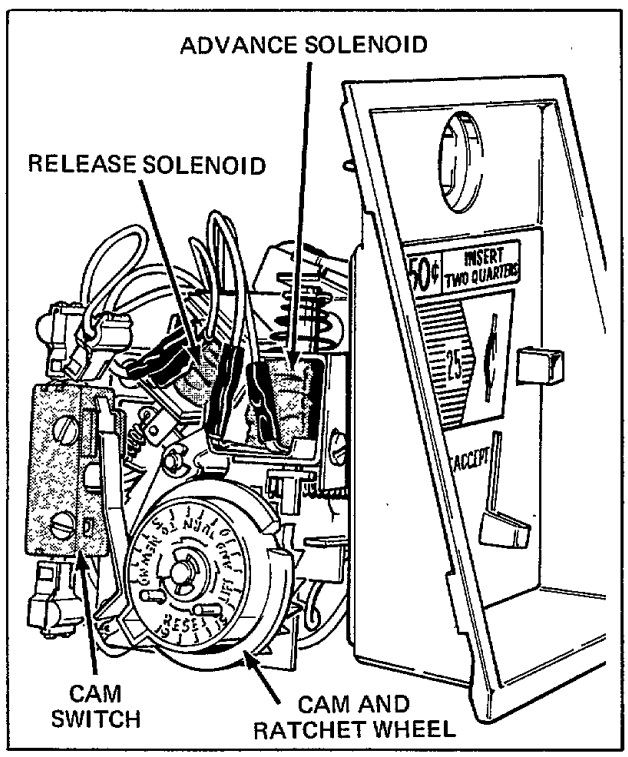

Figure 3

NOTE: Metered Models through serial number 31Q60 – Center screw has a locknut which must be held through coin drop opening.

c. Tilt control panel assembly away from washer and disconnect wire harnesses at terminal blocks.

4. **ON, DETERGENT, BLEACH OR SOFTENER LIGHT** *(Refer to Figure 1)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Disconnect wires from light, compress locking tabs, and push light out front of control panel.

5. **WASH TEMPERATURE OR ACTION SWITCH** *(Refer to Figure 1)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Disconnect wires from switch.
d. Remove knurled nut holding switch to control panel.

6. **AIR INTAKE GRILLE** *(Refer to Figure 4)*

a. Remove four screws from base of grille.
b. Pull bottom of grille away from washer and lower the grille.

NOTE: Pump Models – When grille is re-installed, end of overflow hose must protrude through hole in bottom of grille.

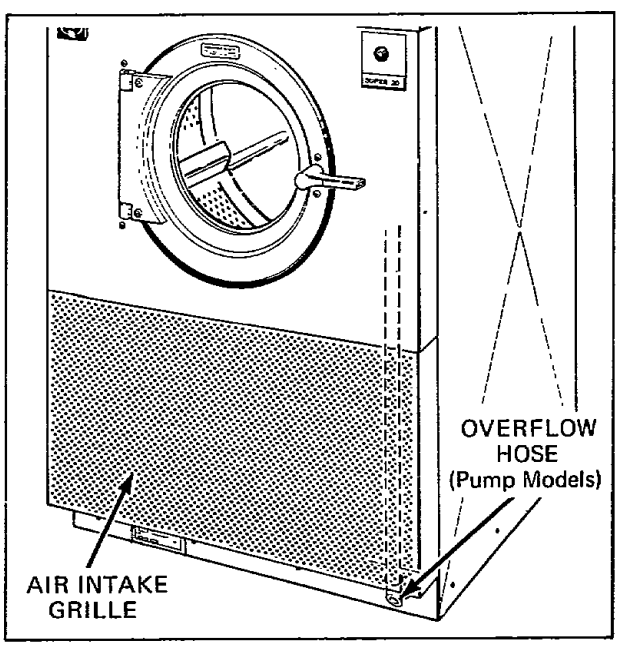

Figure 4

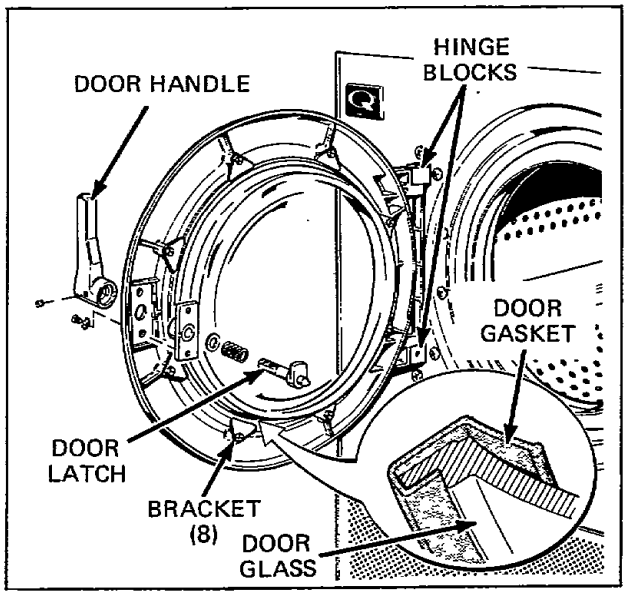

Figure 5

7. **DOOR LATCH AND HANDLE** *(Refer to Figure 5)*

a. Open loading door.
b. Loosen setscrew in door handle and turn latch out of handle.

NOTE: When re-installing, turn latch into door handle until door fits snugly when closed and latched. With latch parallel to door handle, tighten setscrew securely. (Apply a retaining compound such as Loctite® on setscrew threads.)

8. **DOOR GLASS AND GASKET**

a. For door shown in *Figure 6:* Remove clamp ring with round blunt tool, such as a drift punch, and remove door glass and gasket.

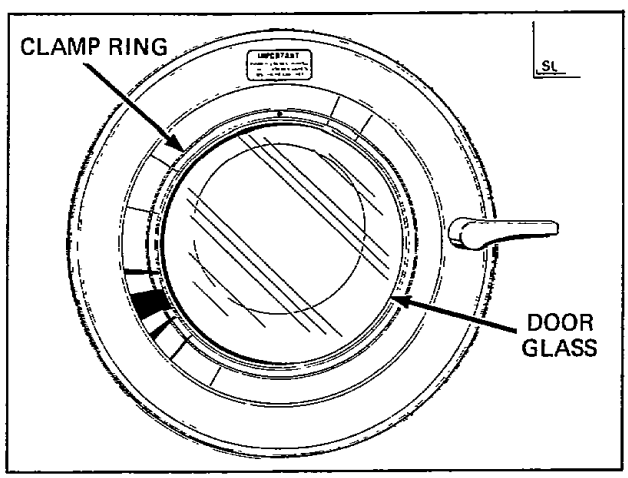

Figure 6

NOTE: When replacing clamp ring, butt open ends together at the top of the door and press ring into locking groove from this point.

b. For door shown in *Figure 5:* Open loading door and remove eight bracket screws holding door glass and gasket to door.

9. **LOADING DOOR ASSEMBLY**

a. For door shown in *Figure 7:* Open loading door and remove three nuts, lockwashers and washers holding loading door to hinge.

NOTE: When re-installing, center door in front panel opening.

b. For door shown in *Figure 5:* Open loading door, loosen setscrew in lower hinge block and remove hinge pin.

10. **CABINET TOP ASSEMBLY**

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Open dispenser door, compress dispenser boot and push boot down through cabinet top, *Figure 8.*
d. Remove two cabinet top hold-down screws, *Figure 9.*

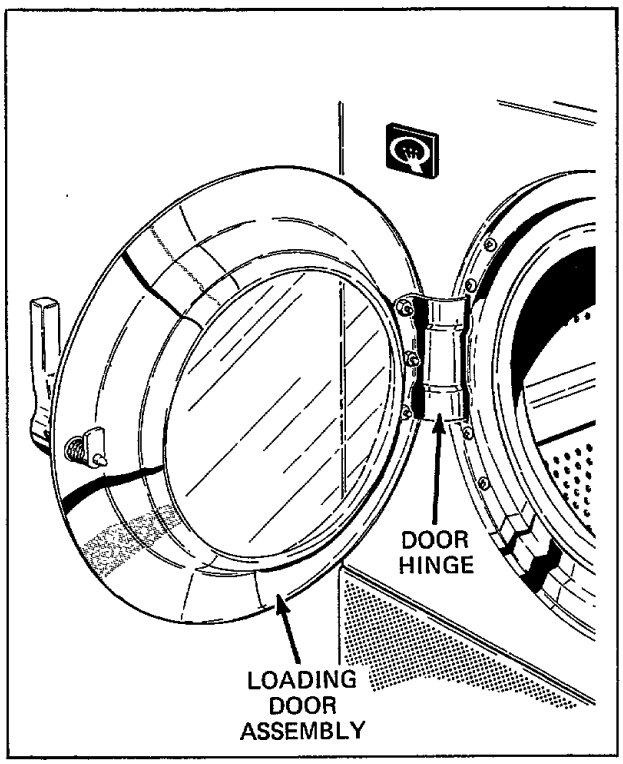

Figure 7

NOTE: If cabinet top has been converted for a built-in installation, remove two cap screws holding cabinet top mounting brackets to top hold-down brackets, *Figure 10,* and remove cabinet top assembly.

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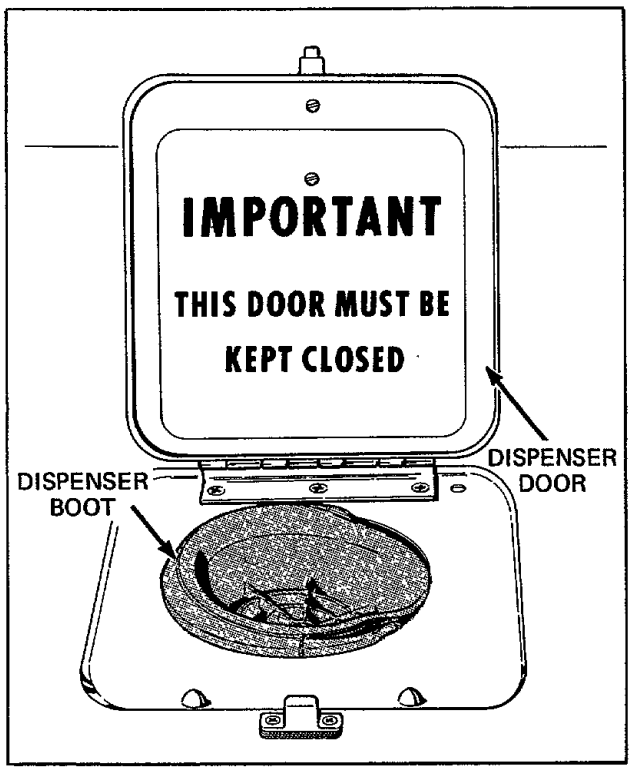

Figure 8

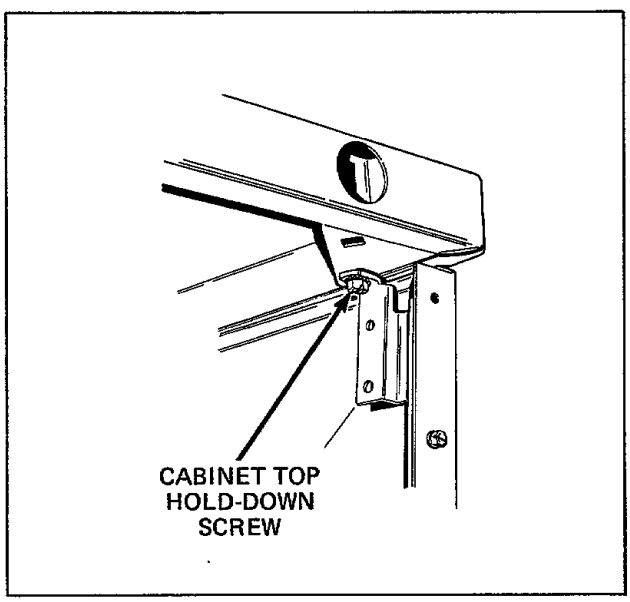

Figure 9

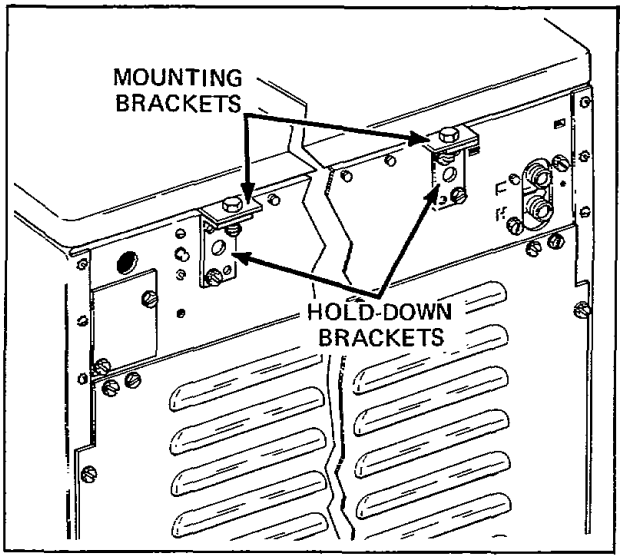

Figure 10

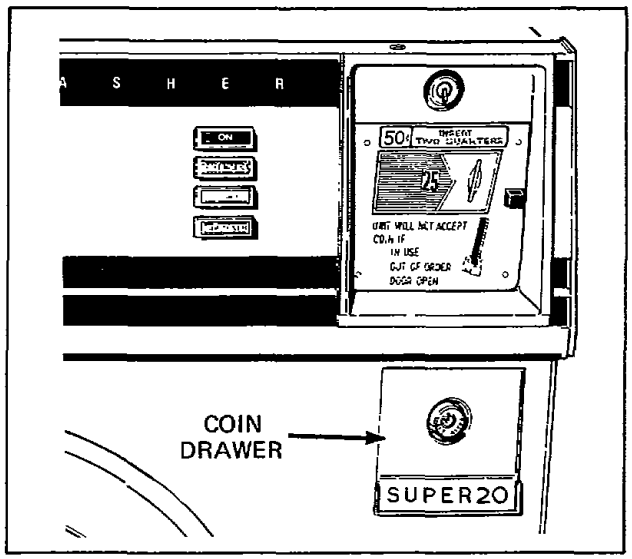

Figure 12

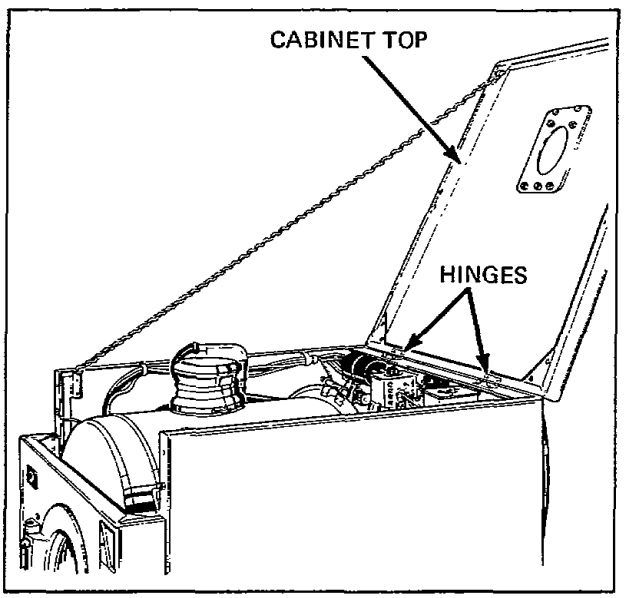

Figure 11

e. Tilt cabinet top backward and hold in raised position with a small chain, *Figure 11.*
f. Remove four screws and nuts holding cabinet top to hinges, *Figure 11.*

11. COIN VAULT – Metered Models

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Unlock and remove coin drawer, *Figure 12.*

NOTE: Coin drawer has threaded lock and will require several counterclockwise turns to unlock.

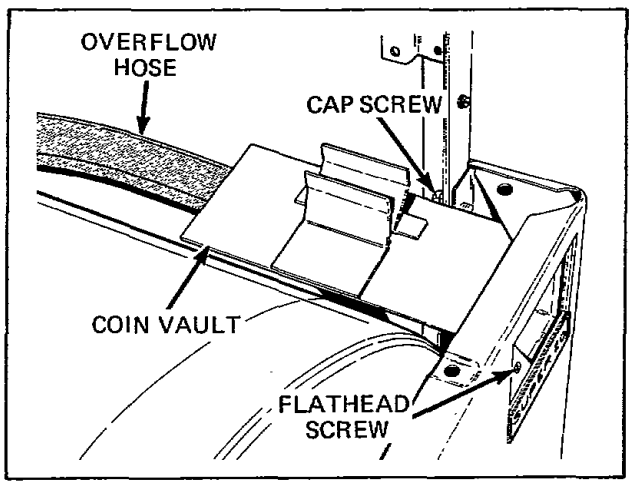

Figure 13

d. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
e. Remove flathead screw and locknut, *Figure 13,* holding coin vault to front panel.
f. Remove two cap screws and lockwasher holding coin vault to right leg, *Figure 13.*

12. FRONT PANEL ASSEMBLY

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Metered Models: Remove flathead screw and locknut holding coin vault to front panel.
e. Metered Pump Models: Remove coin vault, *paragraph 11, steps "c" through "f".*

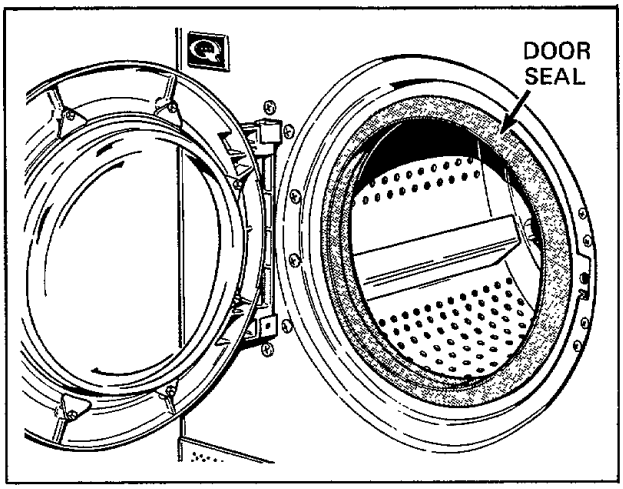

Figure 14

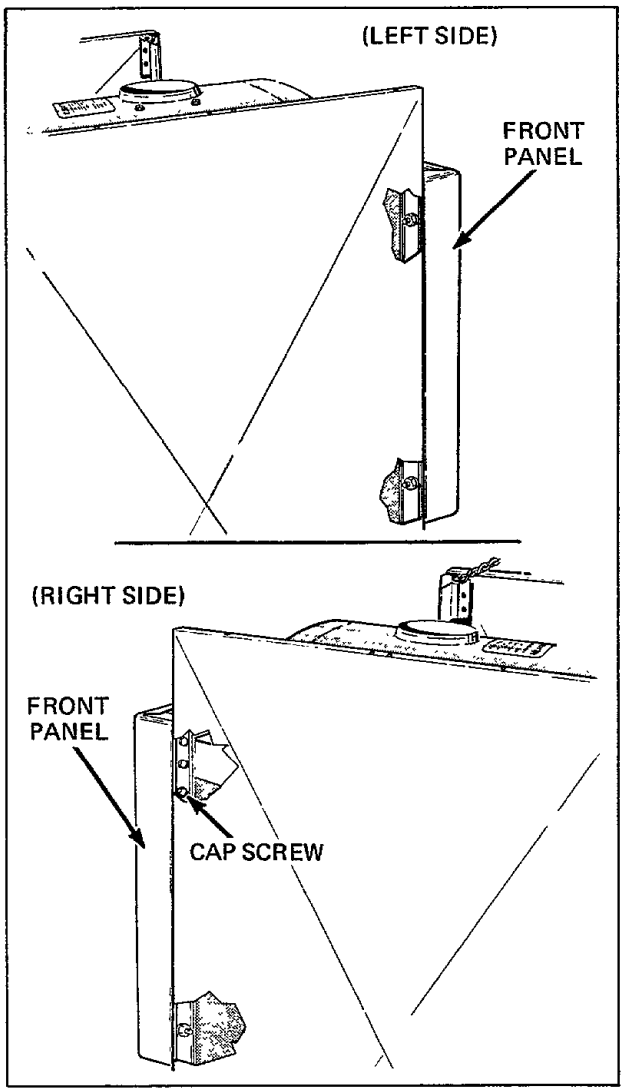

Figure 15

f. Disengage door seal from front panel flange, *Figure 14.*
g. Remove two nuts and lockwashers, *Figure 15,* holding front panel assembly to left leg (leave bolts in place).
h. Remove nut and lockwasher (bottom), and cap screw (top), *Figure 15,* holding front panel assembly to right leg.

NOTE: On pump models overflow hose, *Figure 13,* may have to be pushed down to gain access to cap screw holding top of front panel assembly to right leg.

i. Pull front panel assembly from washer.

IMPORTANT

When re-installing front panel assembly, leave bolts loose until the door gasket is properly positioned and the door opening is centered with the outer tub when loading door is in closed position.

13. DOOR HINGE

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Remove loading door, *paragraph 9.*
e. Remove front panel assembly, *paragraph 12, steps "d" through "i".*
f. Through serial number 572F9: Remove four screws, nuts and lockwashers holding door hinge to front panel.
g. Starting with serial number 573F0: Remove six screws holding door hinge to front panel.

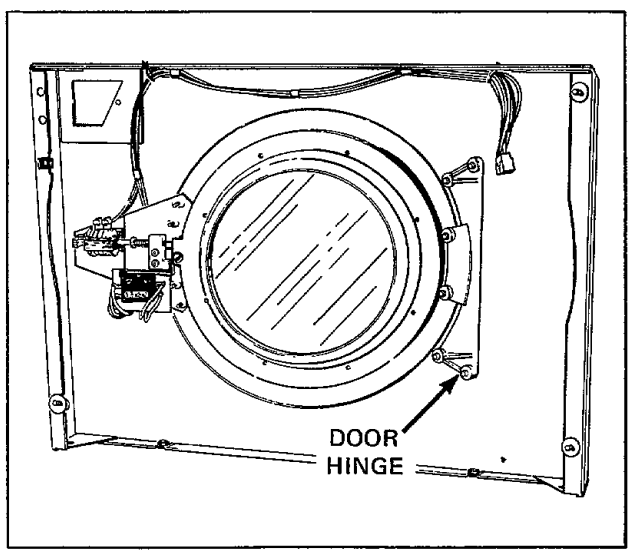

Figure 16

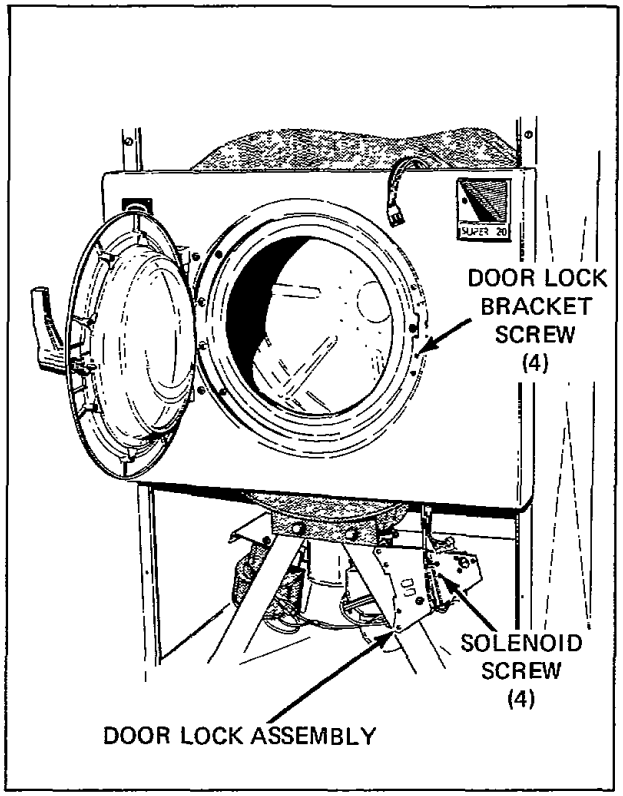

Figure 17

14. DOOR LOCK SOLENOID

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Remove two wire harness clips from top flange of front panel, *Figure 16.*
e. Hold wire harness, open loading door and remove four screws holding door lock assembly bracket to front panel, *Figure 17.*
f. Lower complete assembly (by use of wire harness) and remove through air intake grille opening, *Figure 17.*
g. Disconnect wires from solenoid.
h. Remove four screws holding solenoid to bracket, *Figure 17.*

NOTE: When re-installing solenoid, be sure that release pin moves freely in door lock cam, *Figure 18.*

15. DOOR LOCK SWITCH *(Refer to Figure 18)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Remove front panel assembly, *paragraph 12, steps "d" through "i".*

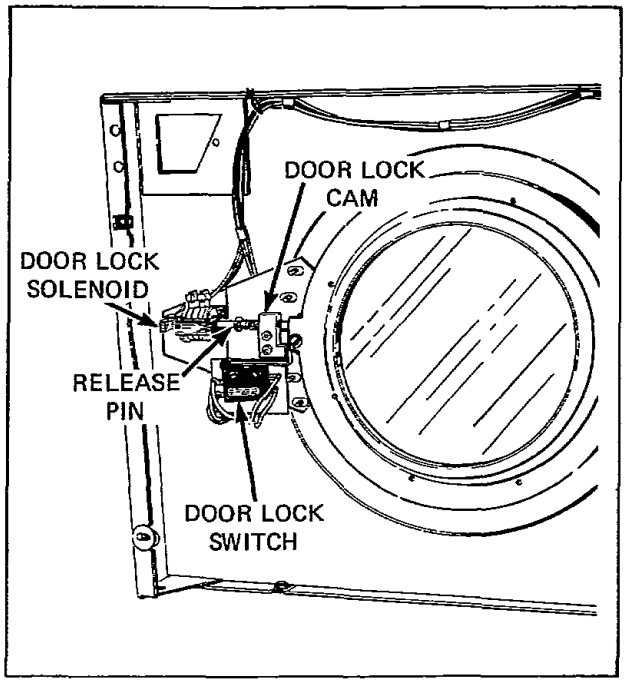

Figure 18

e. Disconnect wires from switch.
f. Remove two screws, nut and lockwasher holding switch to bracket.

IMPORTANT

Insulation must be in place between switch and bracket when switch is installed. Adjust switch per *paragraph 46.*

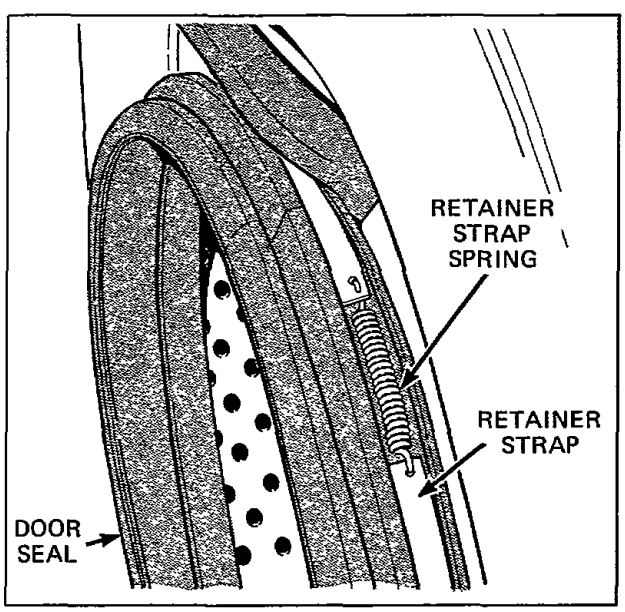

Figure 19

16. **DOOR SEAL** *(Refer to Figure 19)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Remove front panel assembly, *paragraph 12, steps "d" through "i".*
e. Disconnect retainer strap spring from retainer strap.
f. Pull door seal off flange of outer tub.

IMPORTANT

Re-install door seal with seam at top.

17. **BUTTON TRAP** *(Refer to Figure 20)*

a. Remove air intake grille, *paragraph 6.*
b. Loosen clamp holding button trap to outer tub.

18. **DRAIN VALVE AND BRACKET ASSEMBLY** *(Refer to Figure 20)*

a. Remove air intake grille, *paragraph 6.*
b. Disconnect wires from drain valve solenoid.
c. Disconnect hoses from drain valve.
d. Remove two screws, nuts and lockwashers holding valve bracket to front tub support.

NOTE: Refer to *Figure 21* for drain valve assembly sequence.

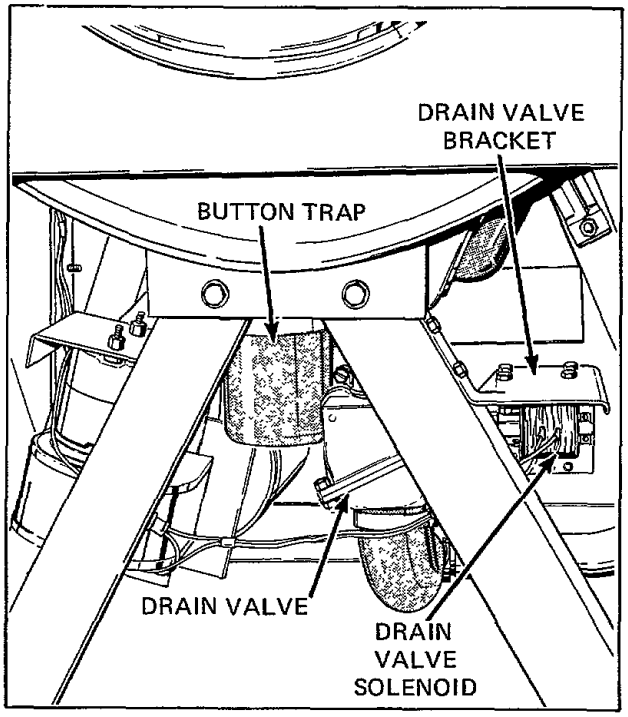

Figure 20

19. **DRAIN VALVE SOLENOID** *(Refer to Figure 20)*

a. Remove air intake grille, *paragraph 6.*
b. Disconnect wires from solenoid.
c. Support solenoid while removing four screws and nuts holding solenoid to drain valve bracket.
d. Lower solenoid and disengage spring.

20. **TERMINAL BLOCK**

a. Remove terminal block access plate from rear cross channel.
b. Disconnect wires from terminal block.
c. Remove two screws holding terminal block to bracket.

21. **PRESSURE SWITCH** *(Refer to Figure 22)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
d. Disconnect pressure hose from pressure switch.
e. Disconnect wires from switch.
f. Remove screw holding pressure switch and bracket to cross channel.

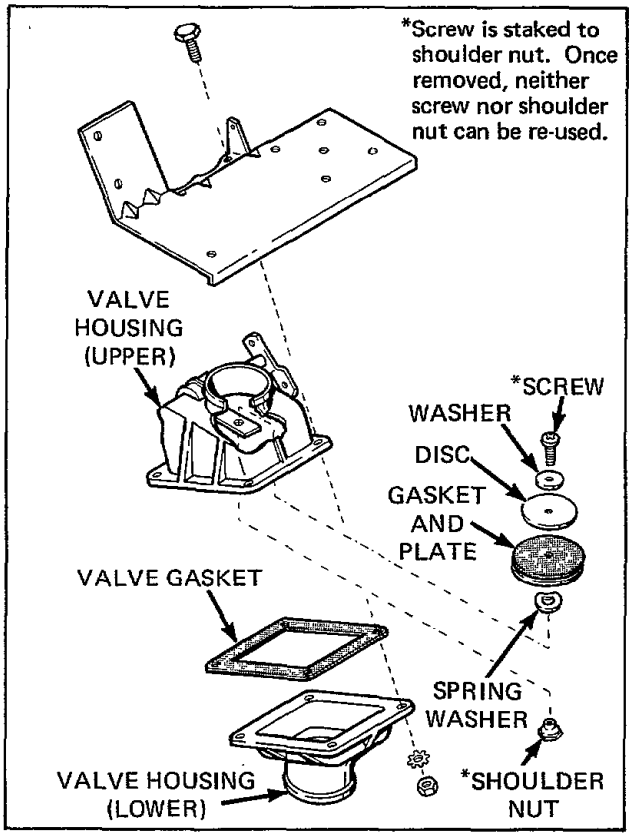

Figure 21

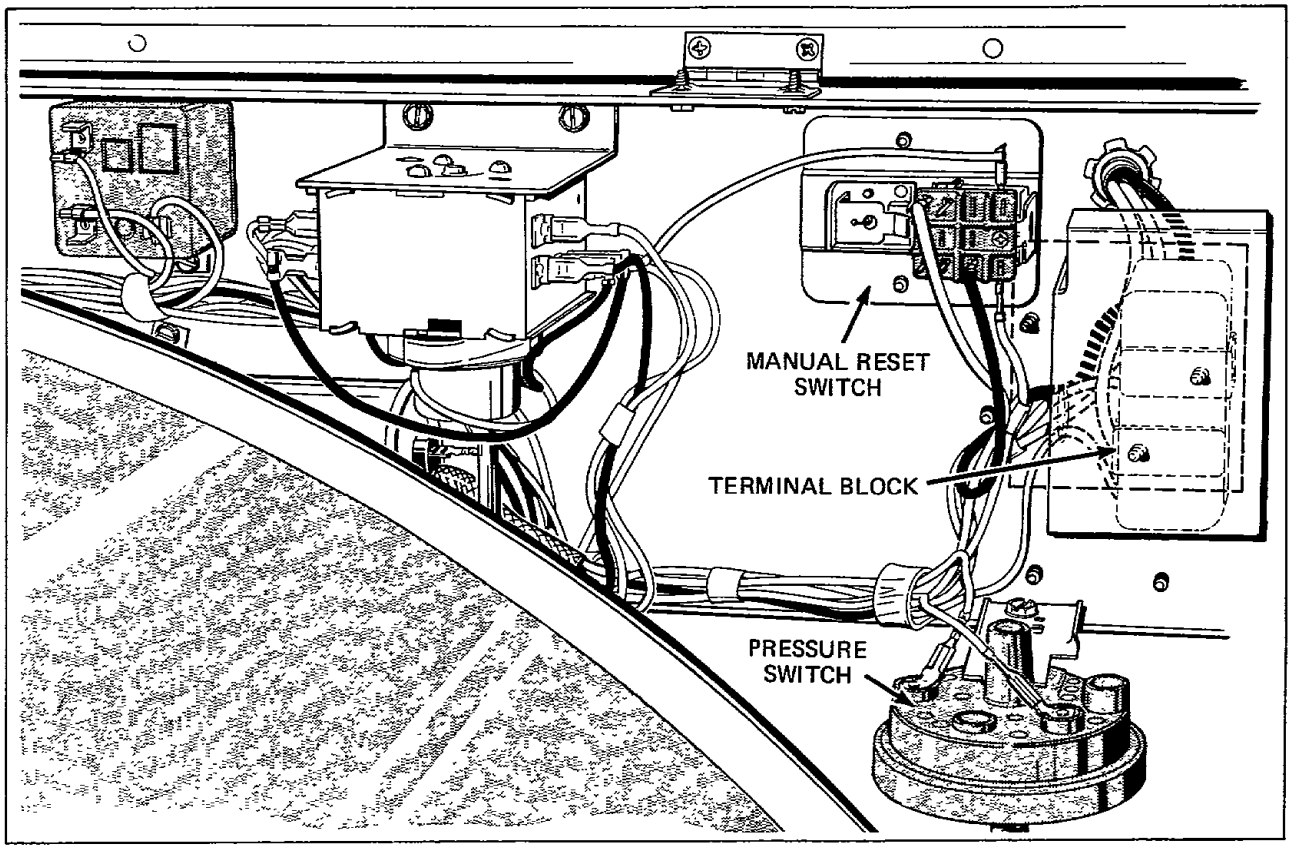

Figure 22

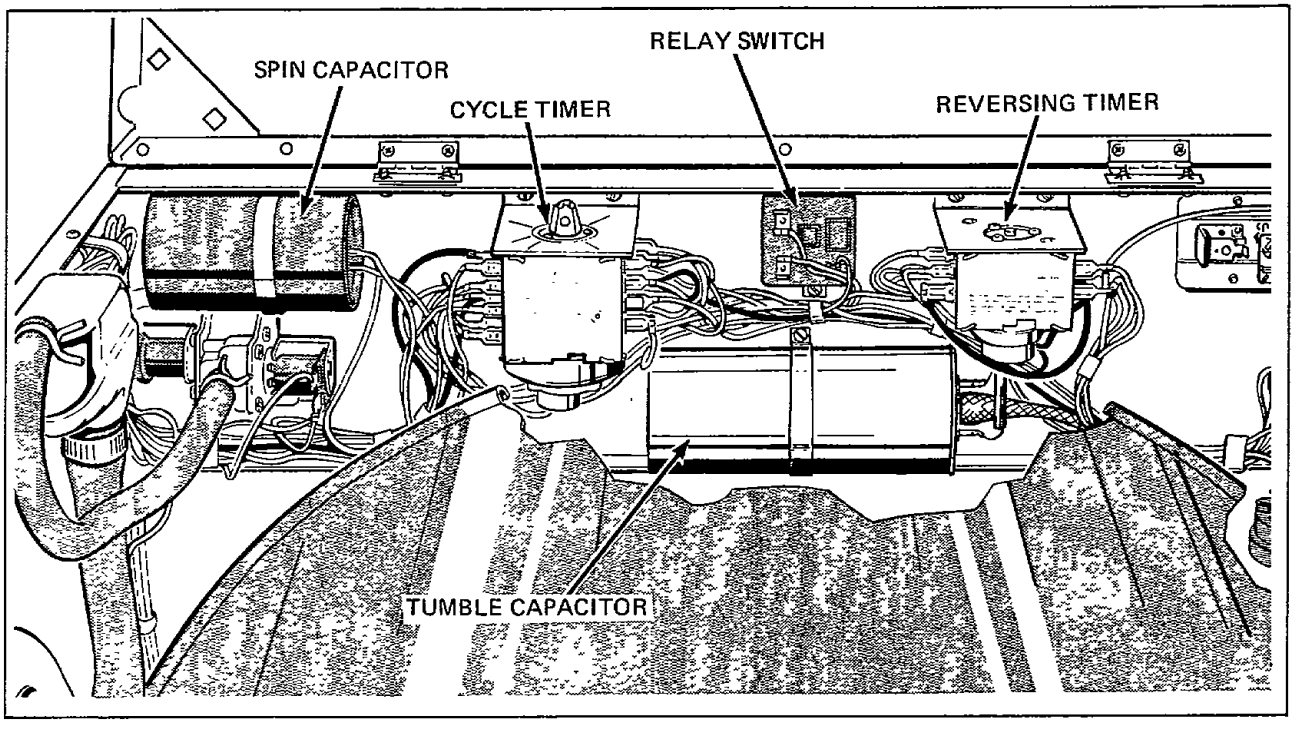

Figure 23

22. **MANUAL RESET SWITCH – Through Serial Number 592J8** *(Refer to Figure 22)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
d. Disconnect wires from switch.
e. Remove two screws holding switch to cross channel.

23. **RELAY SWITCH** *(Refer to Figure 23)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
d. Disconnect wires from relay.
e. Remove screw holding switch to cross channel.

24. **CYCLE OR REVERSING TIMER ASSEMBLY** *(Refer to Figure 23)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
d. Cycle timer: Loosen setscrew holding knob to timer shaft.
e. Remove three screws holding timer to bracket.
f. Disconnect wires from timer.

IMPORTANT

When installing timer, refer to appropriate wiring diagram.

TO REMOVE TIMER MOTOR (CYCLE TIMER)

a. Remove timer assembly.
b. Remove two nuts holding timer motor to timer assembly.

TO REMOVE TIMER ESCAPEMENT (CYCLE TIMER)

a. Remove timer motor.
b. Remove three screws holding timer escapement to timer.

25. **TUMBLE OR SPIN CAPACITOR** *(Refer to Figure 23)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*

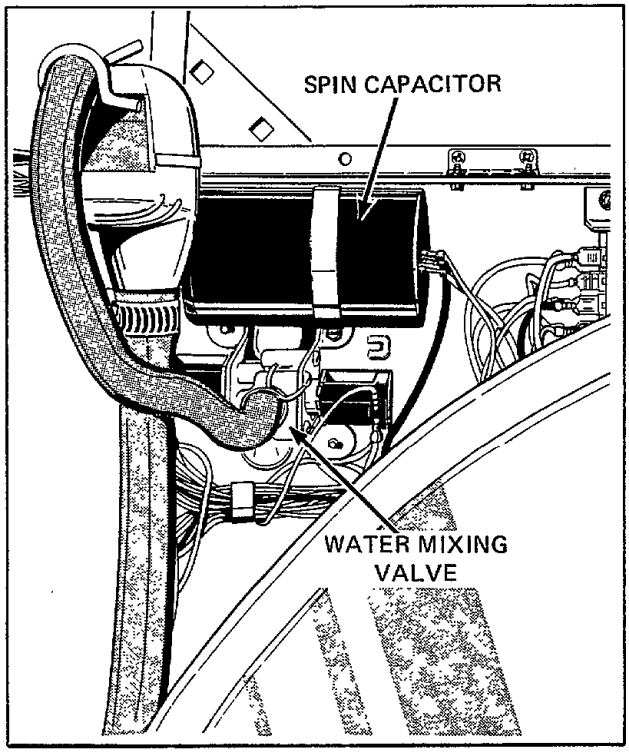

Figure 24

WARNING

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

d. Disconnect wires from capacitor.
e. Remove capacitor clamp screw holding capacitor to cross channel.

IMPORTANT

When installing capacitor, refer to appropriate wiring diagram.

26. **WATER MIXING VALVE** *(Refer to Figure 24)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove spin capacitor, *paragraph 25, steps "c" through "e".*
d. Disconnect hoses and wires from mixing valve.
e. Remove two screws holding water mixing valve to cross channel.

NOTE: Refer to *Figure 25* for water mixing valve assembly sequence.

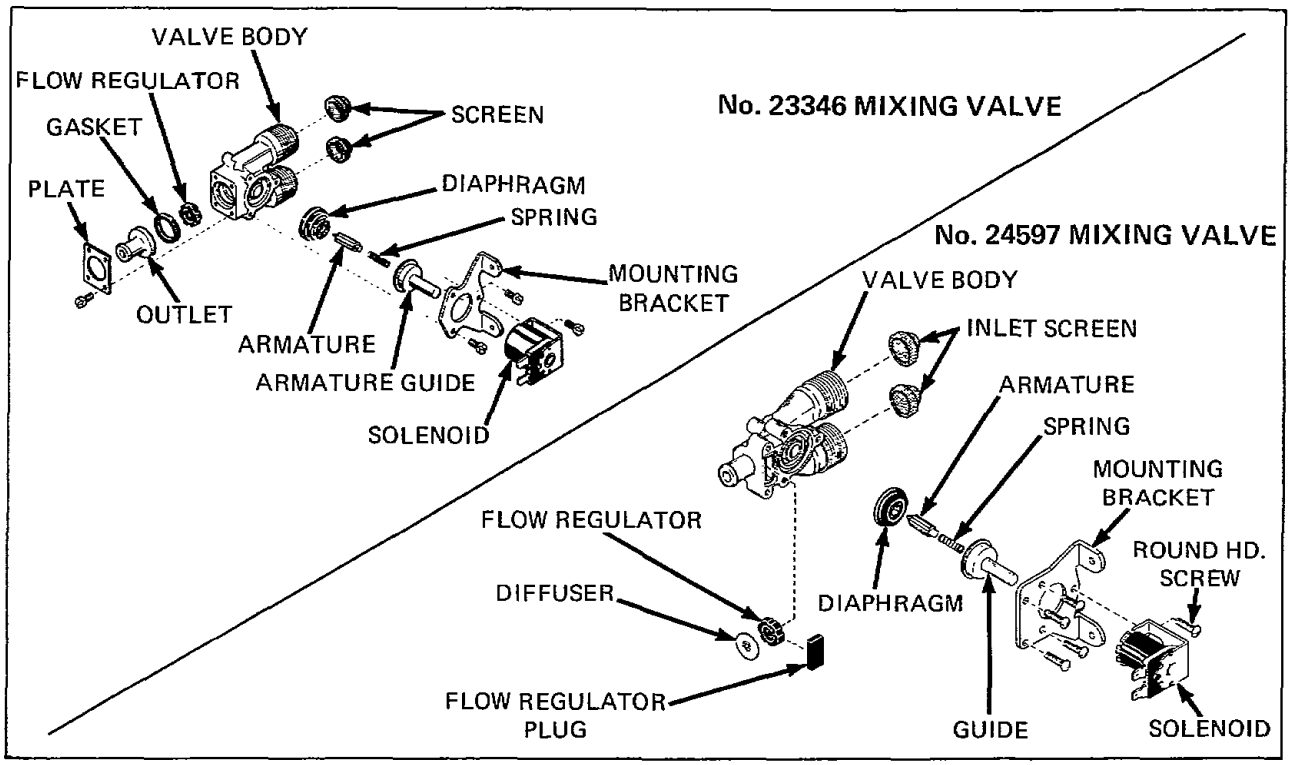

Figure 25

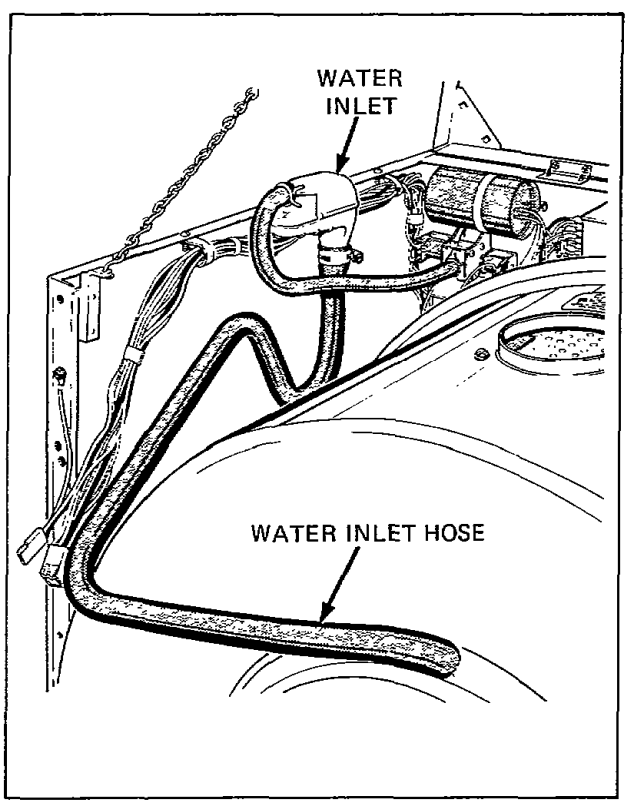

Figure 26

27. **WATER INLET** *(Refer to Figure 26)*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
d. Disconnect hoses from water inlet.
e. Remove two screws and fiber washer holding water inlet to left side panel.

NOTE: When installing water inlet, be sure fiber washer is repositioned on rear screw between the inlet and flange of side panel. DO NOT over-tighten screws.

28. **WATER INLET HOSE**

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Remove front panel assembly, *paragraph 12, steps "d" through "i".*
e. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
f. Disconnect water inlet hose from water inlet and from outer tub, *Figure 26.*

NOTE: Before installing hose in outer tub, apply rubber base cement to hose flange to assure a water-tight seal.

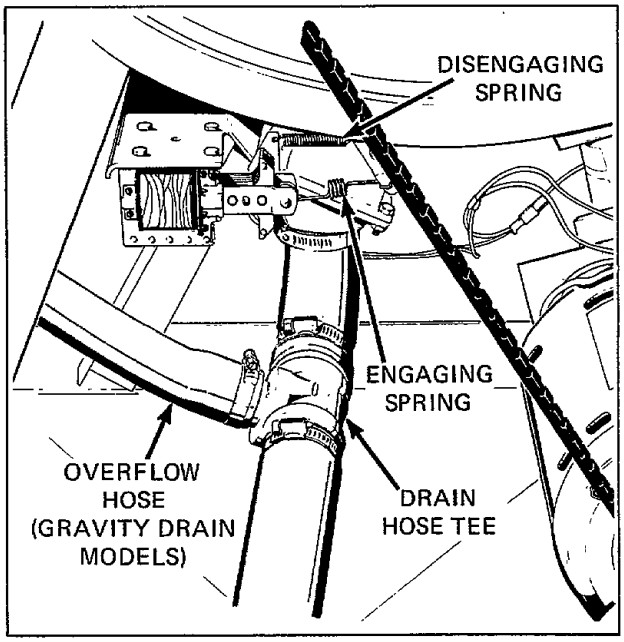

Figure 27

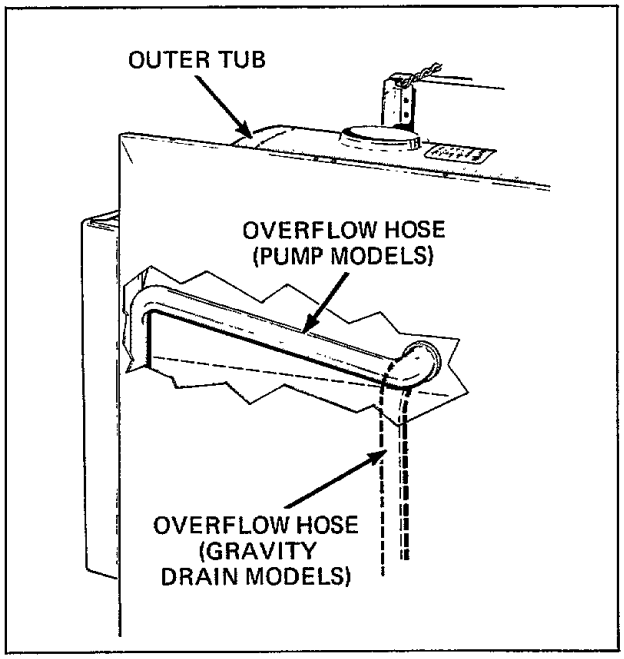

Figure 28

29. OVERFLOW HOSE

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Raise cabinet top assembly, *paragraph 10, steps "c" through "e".*
e. Gravity Drain Models: Disconnect overflow hose from drain hose tee, *Figure 27.*

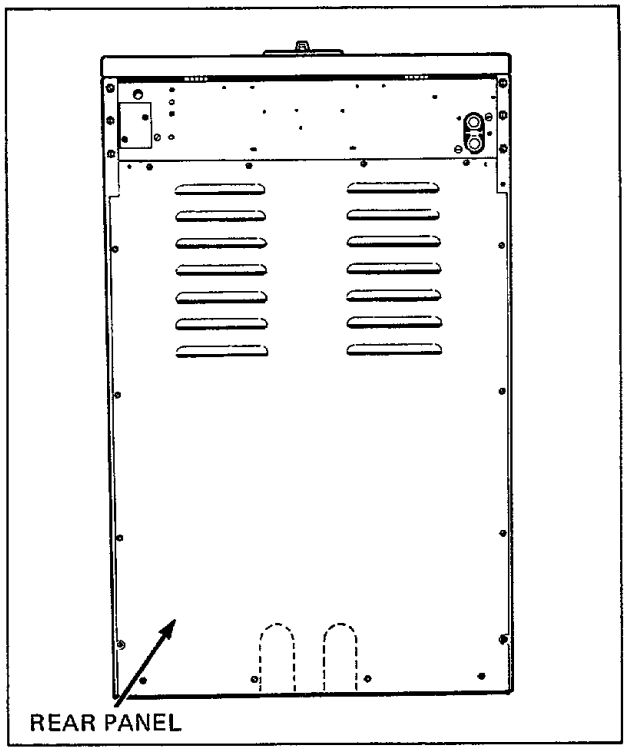

Figure 29

f. Disconnect overflow hose from outer tub, *Figure 28.* Do not chip porcelain tub.

NOTE: Before installing hose in outer tub, apply rubber base cement to hose flange to assure water-tight seal.

IMPORTANT

When re-installing overflow hose (pump models), run hose on incline toward front of washer. See *Figure 28.*

30. REAR PANEL *(Refer to Figure 29)*

a. Remove four screws holding rear panel to base, and four screws holding panel to cross channel.
b. Remove six screws holding rear panel to side panels.

31. CROSS CHANNEL ASSEMBLY

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove cabinet top assembly, *paragraph 10, steps "c" through "f".*
d. Remove rear panel, *paragraph 30.*
e. Disconnect hoses from water mixing valve and from pressure switch.

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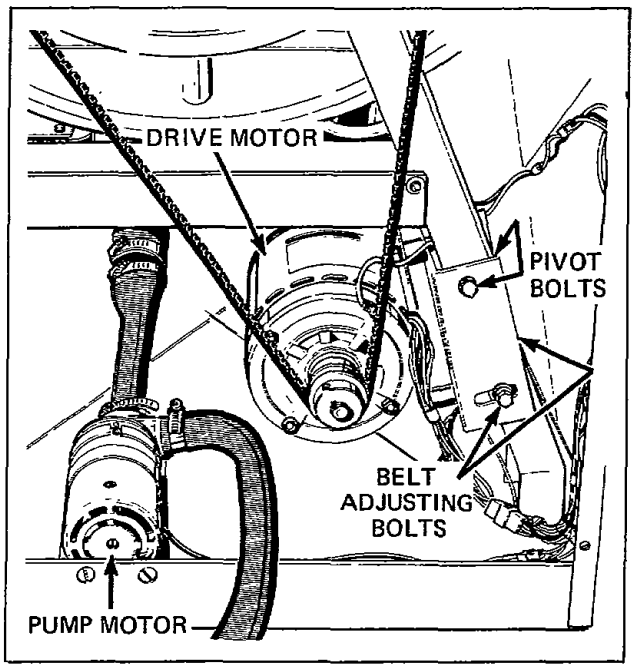

Figure 30

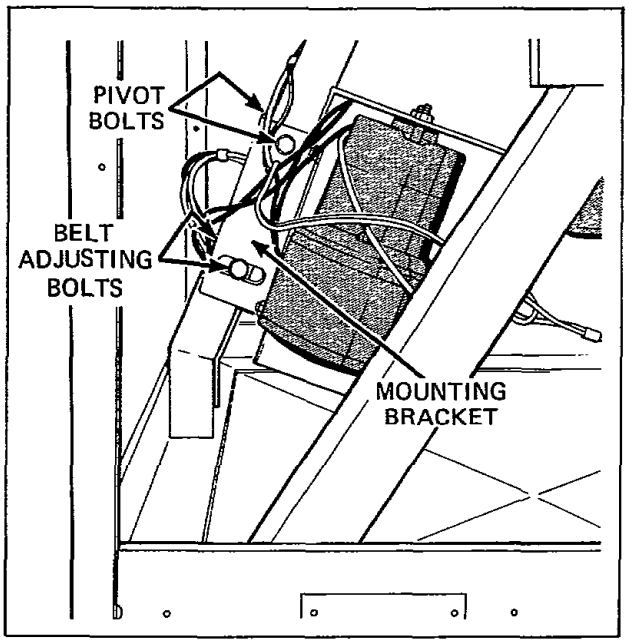

Figure 31

f. Remove cable clips from left side panel.
g. Disconnect drive motor wire harness at terminal block, and blower motor and out-of-balance switch wires at connectors, *Figure 30.*
h. Pump Models: Disconnect pump motor wires at connectors, *Figure 30.*
i. Remove three screws holding cross channel assembly to left side panel, and three screws holding assembly to right side panel.

32. DRIVE MOTOR AND BLOWER ASSEMBLY *(Refer to Figure 30)*

a. Remove rear panel, *paragraph 30.*
b. Run belt off cylinder (large) pulley.
c. Disconnect motor wire harness at terminal block, and blower motor wires at connectors.
d. Remove two mounting plate pivot bolts and lockwashers, and allow assembly to pivot down and rest on washer base. Belt adjusting bolts may have to be loosened slightly.
e. Remove two belt adjusting bolts, washers and lockwashers and lift assembly out of washer.

NOTE: When re-installing assembly, adjust belt per *paragraph 42.*

ATTENTION

The following is an alternate method for removing drive motor and blower assembly from Super 20 installed with an inadequate service area behind the washer. Refer to *Figure 31.*

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Raise cabinet top assembly, *paragraph 10, steps "c" through "e"*, and run belt off drive pulley.
d. Remove air intake grille, *paragraph 6.*
e. Disconnect wires from drain valve solenoid and blower assembly.
f. Disconnect motor wire harness at terminal block.
g. Remove two mounting bracket pivot bolts and lockwashers, and allow assembly to pivot down and rest on washer base. Belt adjusting bolts may have to be loosened slightly.
h. Remove two belt adjusting bolts, washers and lockwashers and carefully lift assembly out front of washer.

IMPORTANT

When re-installing motor and blower assembly, refer to paragraph 42 for proper belt tension adjustment.

33. DRIVE MOTOR

a. Remove rear panel, *paragraph 30.*
b. Run belt off cylinder (large) pulley.
c. Loosen motor pulley setscrews and remove pulley, *Figure 30.*

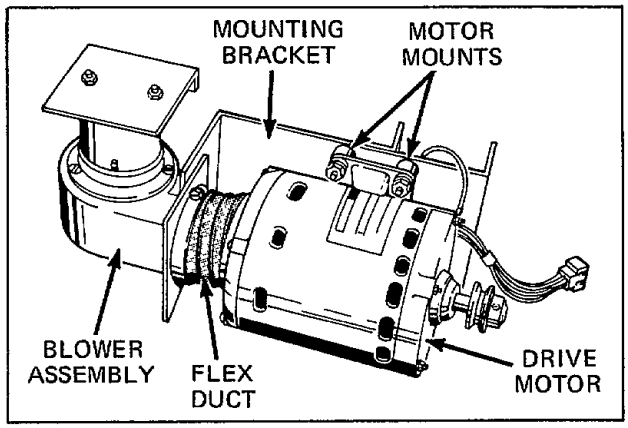

Figure 32

NOTE: When re-installing motor pulley, align motor pulley with cylinder (large) pulley.

d. Remove drive motor and blower assembly, *paragraph 32, steps "c" through "e".*
e. Loosen clamp holding flex duct to motor, *Figure 32.*
f. Remove nut holding ground wire to motor and four nuts, washers and lockwashers holding drive motor to rubber motor mounts, *Figure 32.*

34. BLOWER ASSEMBLY *(Refer to Figure 32)*

a. Remove drive motor and blower assembly, *paragraph 32.*
b. Remove drive motor, *paragraph 33, steps "e" and "f".*
c. Remove flex duct and three screws holding vent adapter to blower assembly.

TO REMOVE BLOWER IMPELLER

a. Remove drive motor and blower assembly, *paragraph 32.*
b. Loosen impeller setscrew and pull impeller off blower motor shaft.

35. OUT-OF-BALANCE SWITCH – Through Serial Number 592J8

a. Remove rear panel, *paragraph 30.*
b. Disconnect switch wires at connectors and disengage switch from clamp, *Figure 33.*

NOTE: Install out-of-balance switch with tab on top. See *Figure 65.*

36. PUMP ASSEMBLY *(Refer to Figure 30)*

a. Remove rear panel, *paragraph 30.*
b. Disconnect pump wires at connectors.
c. Remove screw and nut holding ground wire to side panel.

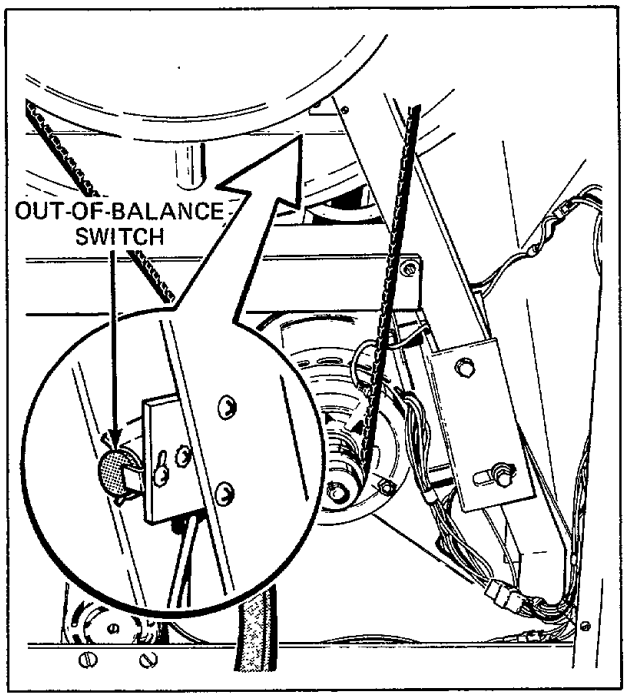

Figure 33

d. Disconnect hoses from pump.
e. Remove two screws, nuts and lockwashers holding pump mounting bracket to washer base.
f. Remove four screws holding pump assembly to mounting bracket.

NOTE: See *Figure 34* for pump assembly sequence.

IMPORTANT

Mark pump cover before disassembling so cover can be re-installed in same position.

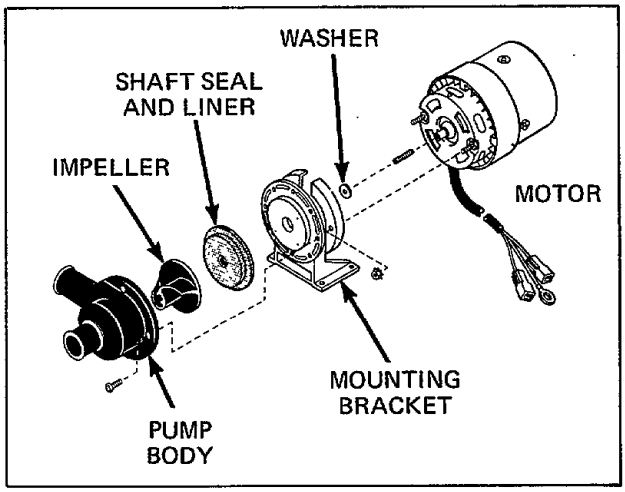

Figure 34

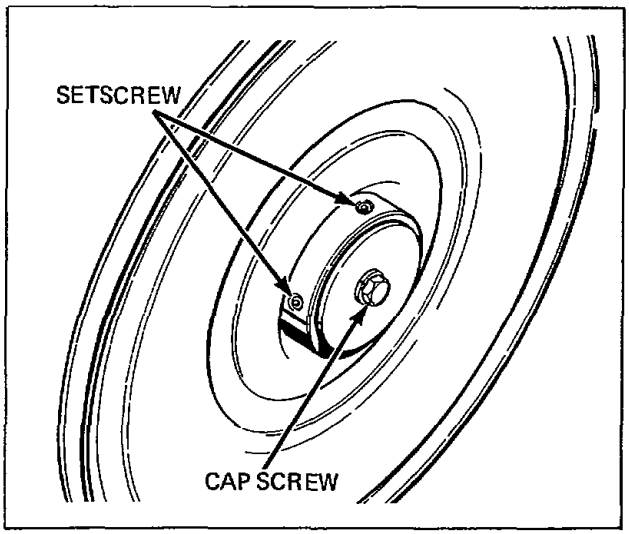

Figure 35

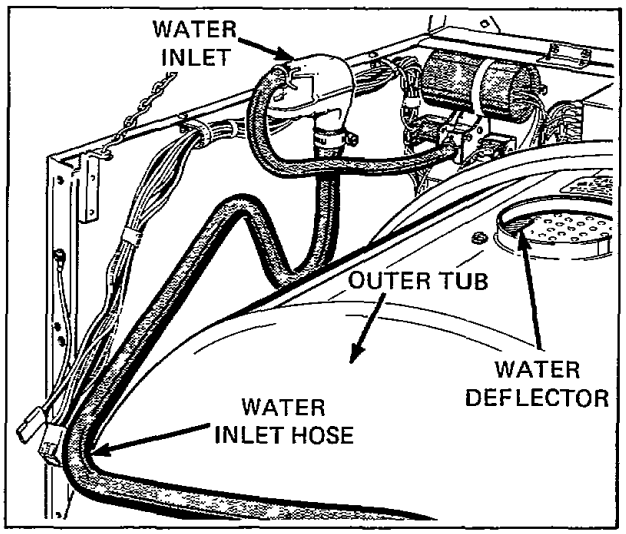

Figure 36

37. PULLEY AND HUB ASSEMBLY *(Refer to Figure 35)*

a. Remove rear panel, *paragraph 30.*
b. Run belt off of pulley.
c. Remove cap screw, lockwasher and washer from end of cylinder shaft.

WARNING

Touch tumble capacitor terminals with ends of insulated wire to discharge capacitor.

d. Loosen two setscrews holding pulley and hub assembly to cylinder shaft and pull pulley off shaft.

NOTE: When re-installing pulley, cap screw should be tightened before setscrews.

e. Remove key from shaft.

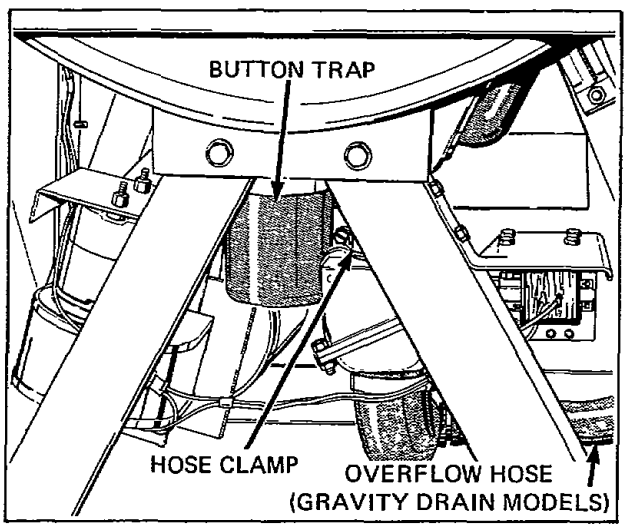

Figure 37

38. CLOTHES CYLINDER

a. Remove coin drop, *paragraph 1.*
b. Remove control panel assembly, *paragraph 3, steps "b" and "c".*
c. Remove air intake grille, *paragraph 6.*
d. Remove front panel assembly, *paragraph 12, steps "d" through "i".*
e. Remove cabinet top assembly, *paragraph 10, steps "c" through "f".*
f. Remove rear panel, *paragraph 30.*
g. Remove pulley and hub assembly, *paragraph 37, steps "b" through "e".*
h. Disconnect water inlet hose from water inlet, *Figure 36,* and hose from pressure switch.
i. Remove dispenser boot.
j. Starting with serial number 34K36: Remove two screws holding water deflector to outer tub, *Figure 36,* and lift deflector out through dispenser opening.

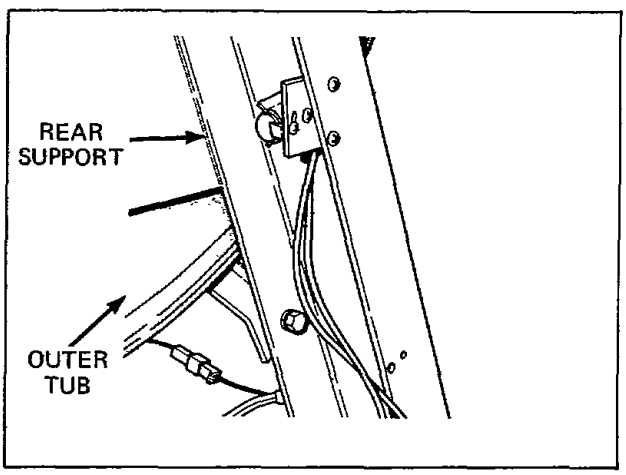

Figure 38

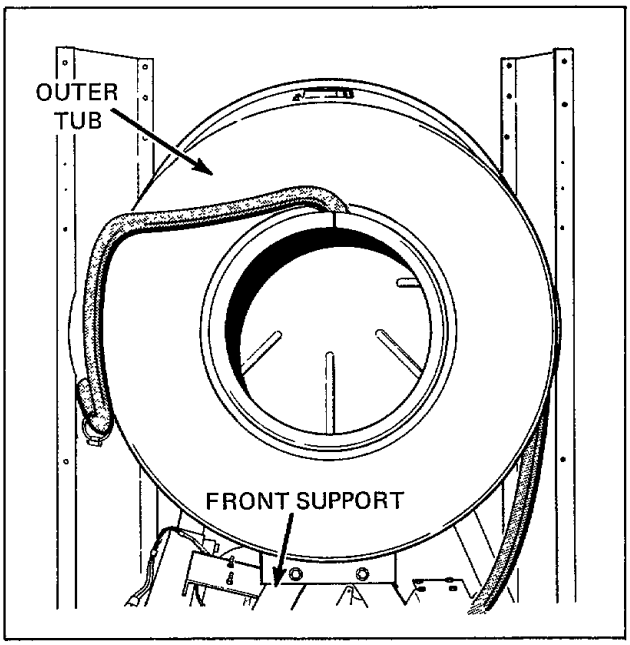

Figure 39

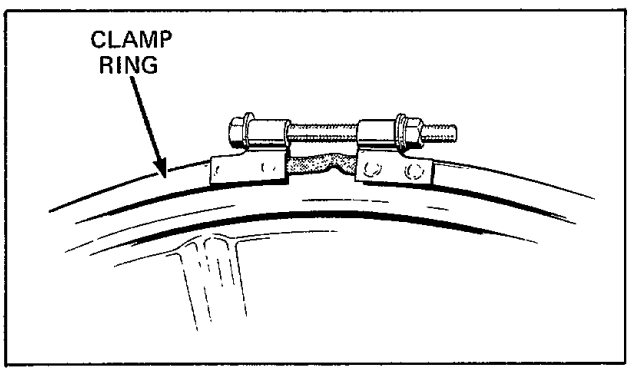

Figure 40

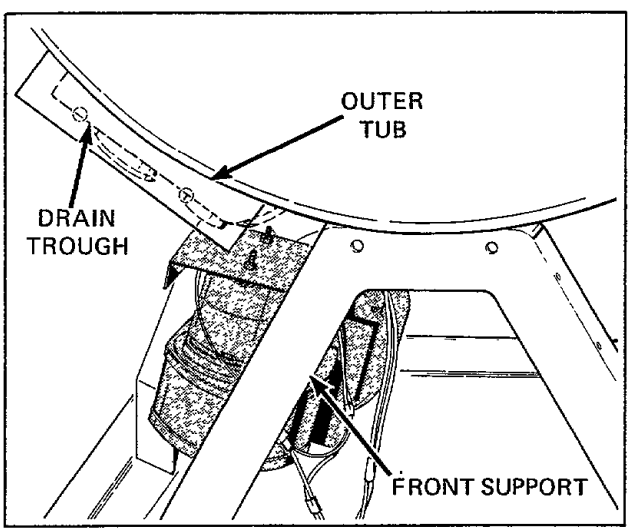

Figure 41

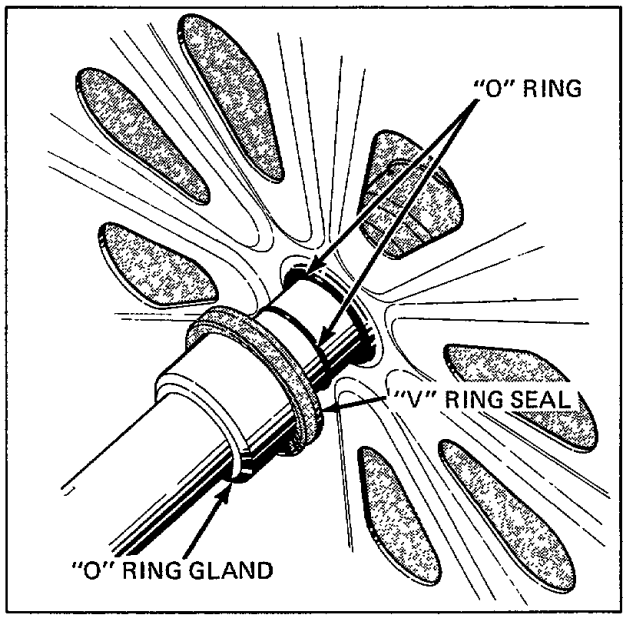

Figure 42

k. Remove button trap and loosen hose clamp on tub outlet, *Figure 37.*

l. Gravity Drain Models: Disconnect overflow hose from drain hose tee, *Figure 37.*

m. Remove two screws, nuts, washers, and lockwashers holding outer tub to rear support, *Figure 38.*

n. Remove two screws, nuts, washers, and lockwashers holding outer tub to front support, *Figure 39.*

o. Remove clamp screw, nut, lockwasher and washers holding clamp ring to rear tub head assembly, *Figure 40.*

p. Grasp outer tub at dispenser opening and loading door opening, rotate clockwise far enough for drain trough to clear front support, *Figure 41,* and pull outer tub off cylinder.

q. Carefully pull cylinder and shaft out of bearing housing.

r. Remove "O" ring gland and two "O" rings from cylinder shaft, *Figure 42.*

IMPORTANT

Install new "O" rings whenever clothes cylinder is removed. Lubricate inside diameter of "O" rings before installing. Care must be taken that "O" rings are not cut or damaged and are in their normal (not inside-out) position when in place.

s. Starting with serial number W11835: Remove "v" ring seal from "o" ring gland, Figure 42.

39. REAR TUB HEAD *(Refer to Figure 43)*

a. Remove clothes cylinder, *paragraph 38.*

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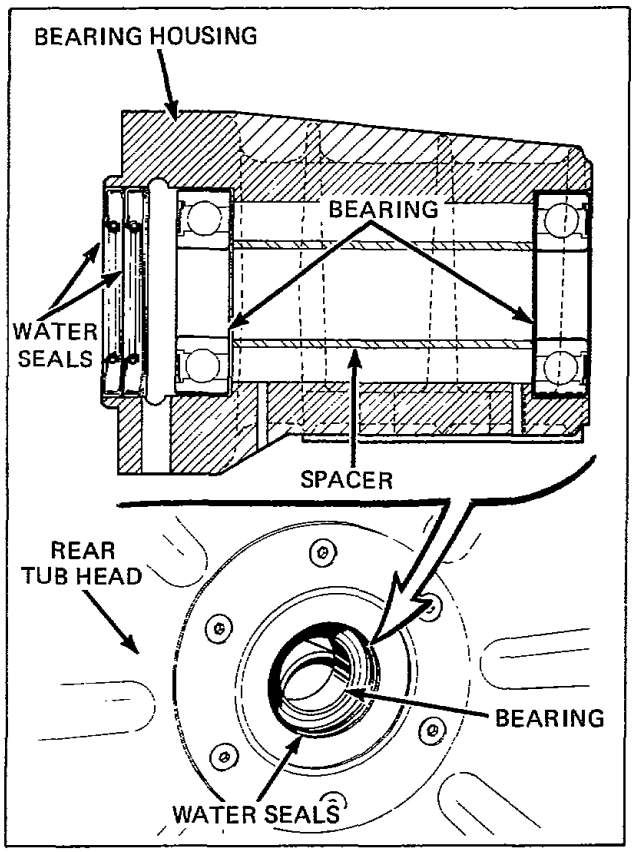

Figure 43

b. Remove six screws, lockwashers, gasket retainer and gaskets holding rear tub head to bearing housing.

NOTE: When re-installing rear tub head, the two plug holes must be at the top.

40. WATER SEALS

a. Remove clothes cylinder, *paragraph 38.*
b. Pry water seals out of bearing housing using pry bar, *Figure 43.*

NOTE: New seals should be installed with spring loaded lip facing in as shown in *Figure 43.*

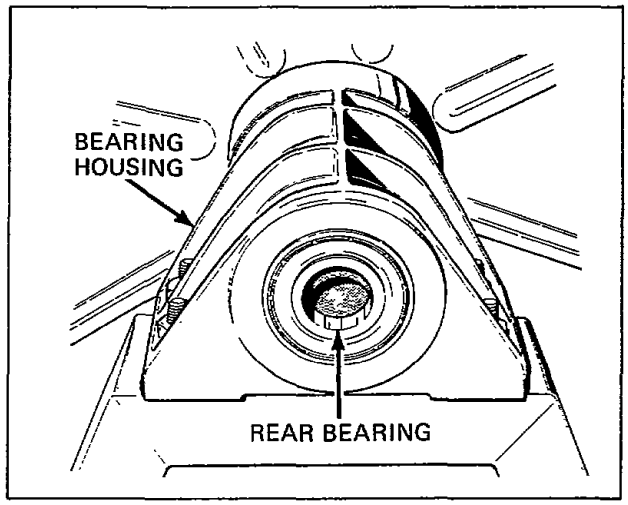

Figure 44

IMPORTANT

When installing new seals, apply a retaining compound such as Loctite® to outside diameter of seals to insure water-tight seal. Lubricate inside diameter of seals, and inside and outside diameter of "O" ring gland with No. 21814 Lubricant.

41. CYLINDER SHAFT BEARING

a. Remove clothes cylinder, *paragraph 38.*
b. Drive rear bearing out rear of bearing housing using hammer and hardwood dowel.
c. Drive front bearing and both water seals out front of bearing housing using hammer and hardwood dowel. When replacing bearings, always install new water seals as per *paragraph 40.* Apply a retaining compound such as Loctite® to outside diameter of bearings, and install bearings with sealed side facing out, *Figure 44.*

IMPORTANT

If bearing housing is removed, leave mounting bolts slightly loose until outer tub is positioned to allow for proper alignment of cylinder to opening of outer tub. Then tighten bolts securely (approximately 100 foot lbs. of torque).

Adjustments

SECTION II

WARNING

Disconnect electrical power to washer before performing any of the following adjustments.

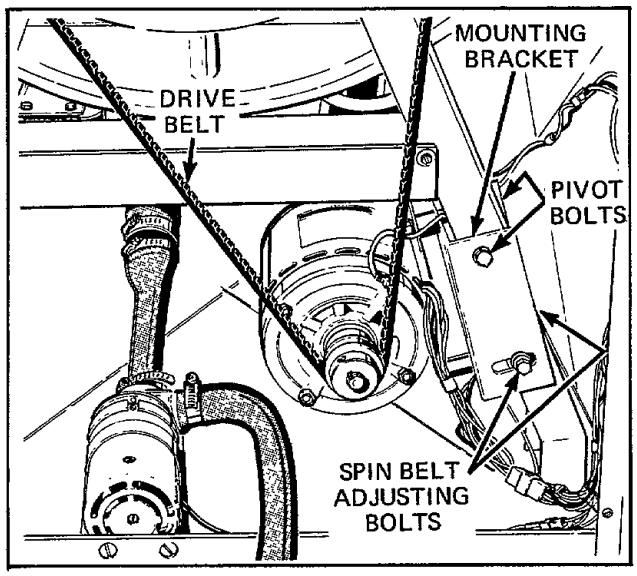

Figure 45

42. **DRIVE BELT** *(Refer to Figure 45)*

a. Remove rear panel, *paragraph 30*.
b. Loosen four bolts holding motor mounting bracket to rear tub support.
c. Move bracket to secure proper belt tension. Proper belt tension is obtained when belt can be deflected approximately 1/2 inch from normal position when moderate pressure (5 lb.) is applied to a point midway between pulleys.

NOTE: No. 205P4 Belt Tension Meter is available to aid in making exact belt adjustments.

d. Tighten belt adjusting bolts securely, then tighten pivot bolts.

43. **PRESSURE SWITCH** *(Refer to Figure 46)*

a. Remove pressure switch, *paragraph 21*, steps "a" through "c".
b. Remove sealer from around pressure switch adjusting screw.

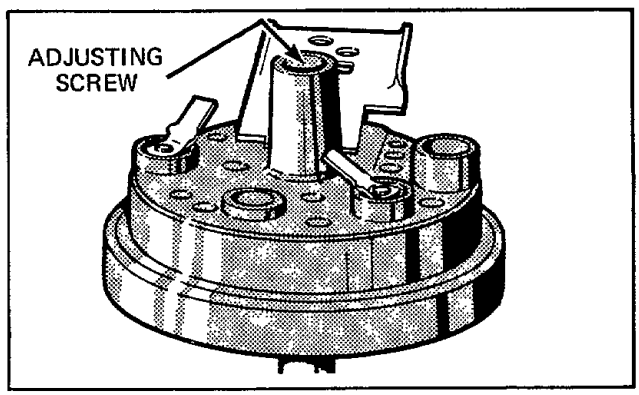

Figure 46

c. Turn adjusting screw clockwise to increase water level in clothes cylinder and counterclockwise to decrease water level.

NOTE: 1/4 turn of adjusting screw represents approximately one inch increase or decrease of water level in clothes cylinder.

44. **OUT-OF-BALANCE SWITCH – Through Serial Number 592J8** *(Refer to Figure 47)*

a. Remove rear panel, *paragraph 30*.
b. Loosen out-of-balance switch screws "A" and "B"

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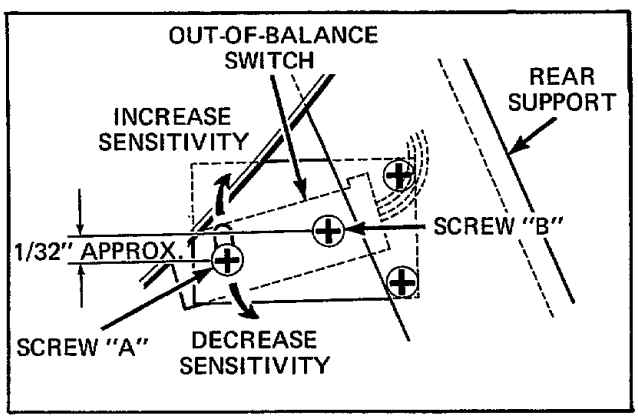


Figure 47

1/2 turn. Move end of switch down approximately 1/32 inch below position of switch when level.

c. Tighten screw "A", then screw "B".
d. Connect electrical power and start cycle – washer should complete cycle without manual reset switch breaking the circuit.

NOTE: If the manual reset switch breaks the circuit, decrease sensitivity of out-of-balance switch by repeating *steps "b" through "d".*

IMPORTANT

If an out-of-balance situation causes the circuit to be broken during a cycle, the manual reset switch must be reset and the cycle completed before starting another cycle. (If out-of-balance situation continues, check mounting bolts for tightness.)

45. ACCUMULATOR COIN DROP *(Refer to Figure 48)*

a. Remove coin drop, *paragraph 1.*
b. Depress cam switch actuator arm.
c. Pull out on cam wheel and turn to desired setting (number of coins per load) by aligning number with elbow in actuator arm.

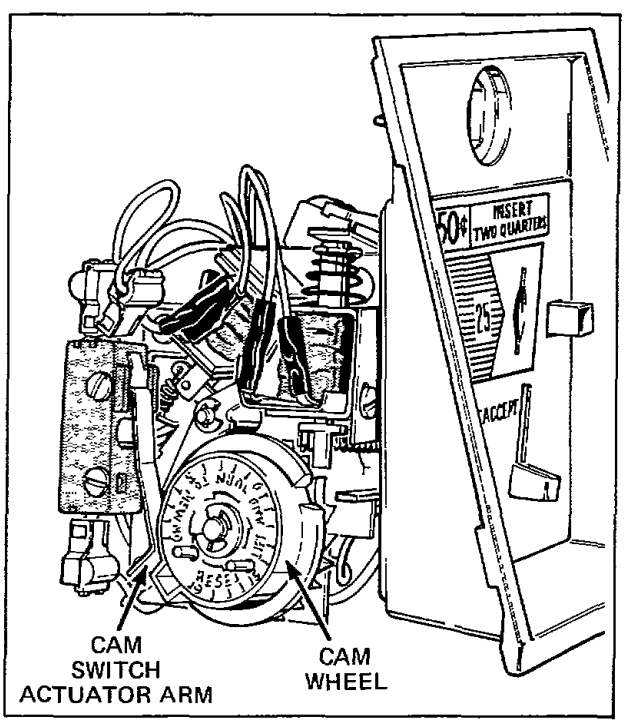


Figure 48

46. DOOR LOCK ASSEMBLY *(Refer to Figure 49)*

a. Remove front panel assembly, *paragraph 12.*
b. Loosen nut and lockwasher on adjusting screw.
c. Move switch until switch arm is depressed just enough to close the switch (audible "click") when door latch is in closed position.
d. Without moving switch, tighten nut, lockwasher and screw.
e. Hold door lock solenoid in energized position. Door lock release pin should clear top of door latch when switch is closed.

NOTE: When door switch is adjusted properly, the door latch can be raised to the release pin without the switch opening. See inset.

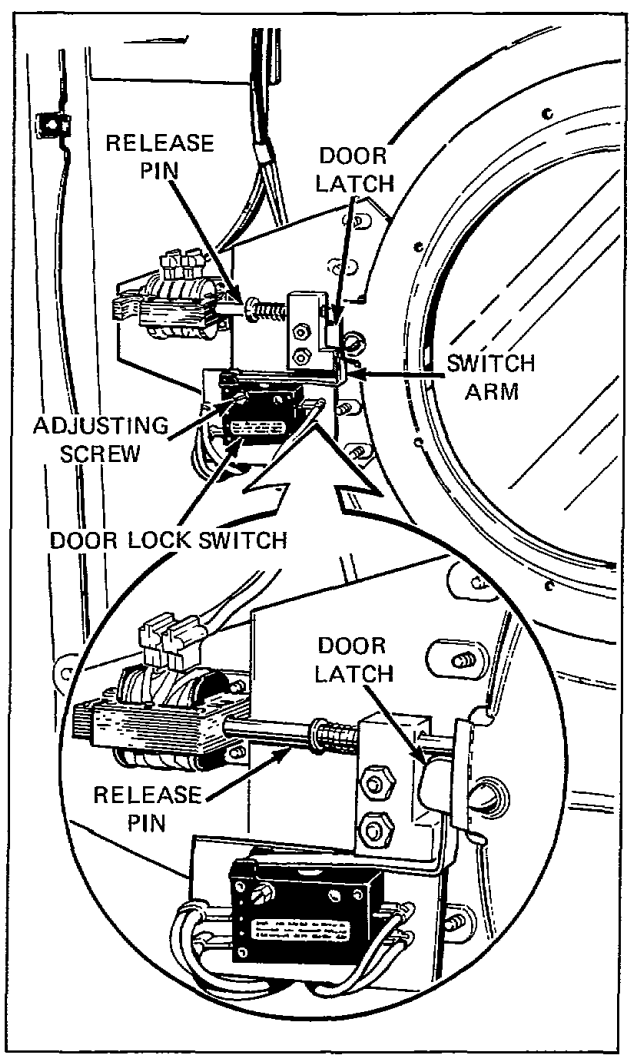


Figure 49

Test Procedures

SECTION III

WARNING

Disconnect electrical power to washer and close water supply valves before performing test procedures.

IMPORTANT

Electrical test procedures in this service manual are performed using a "live" test cord, a "live" test lamp, test lamp, or a combination of these. See *Figure 50.*

47. COIN DROPS

DOUBLE COIN DROP

a. Remove coin drop, *paragraph 1.*
b. Apply "live" test lamp probes to terminals on orange (or brown) and black wires. "Live" test lamp should not light.
c. Insert one coin into coin drop; "live" test lamp should not light.
d. Insert second coin into coin drop (in opposite slot); "live" test lamp should light.
e. With "live" test lamp connected, apply "live" test cord to terminals on pink (or blue) and white wires; coins should drop and "live" test lamp should go out.

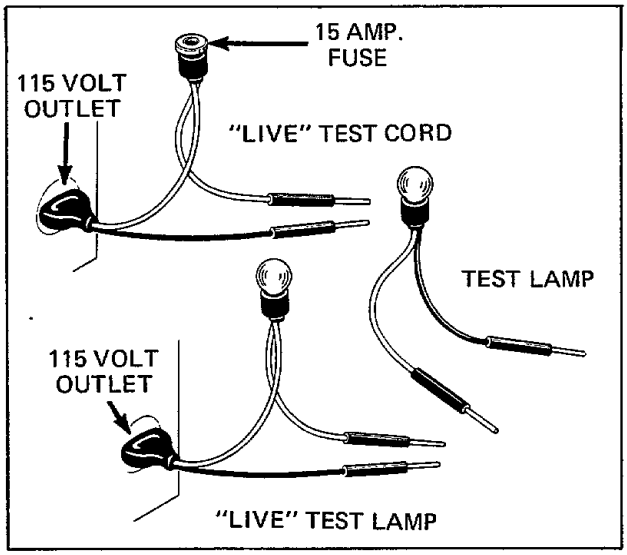


Figure 50

ACCUMULATOR COIN DROP *(Refer to Figure 51)*

a Remove coin drop accumulator, *paragraph 1.*
b. With cam and ratchet wheel in starting position, apply "live" test cord probes to terminals on black and white wires. Blocking solenoid should be energized.
c. Place specified number of coins in coin chute, one at a time. As each coin depresses coin switch actuator arm, the switch contacts are made, momentarily providing a pulse to the advance solenoid.
d. Each time the advance solenoid is energized, the solenoid plunger should turn the ratchet wheel one notch.
e. When raised portion of cam depresses cam switch arm, blocking solenoid should be de-energized blocking coin chute.
f. Apply "live" test cord probes to terminals on white and blue wires. Release solenoid should be energized, permitting cam and ratchet wheel to return to starting position.

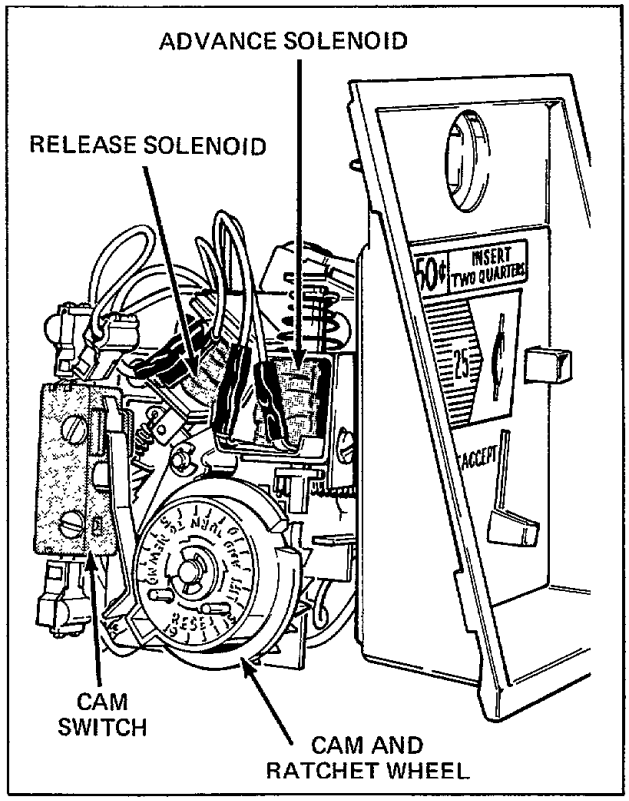


Figure 51

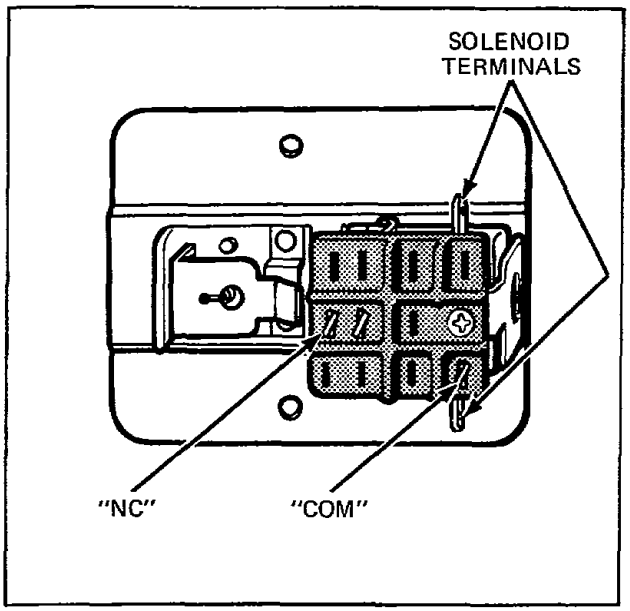


Figure 52

48. **START SWITCH** *(Refer to Figure 52)*

a. Remove start switch, *paragraph 2.*
b. Apply "live" test lamp probes to common (COM) and normally closed (NC) terminals. "Live" test lamp should not light.
c. With "live" test lamp still connected, press button in; "live" test lamp should light.
d. With "live" test lamp still connected, apply "live" test cord to solenoid terminals. "Live" test lamp should go out.

49. **ON, DETERGENT, BLEACH or SOFTENER LIGHT**

a. Remove control panel assembly, *paragraph 3.*
b. Disconnect wires from light.
c. Apply "live" test cord probes to light terminals; light should go on.

50. **ACTION SWITCH** *(Refer to Figure 53)*

a. Remove control panel assembly, *paragraph 3.*
b. Disconnect wires from switch.
c. With action switch set at GENTLE, apply "live" test lamp probes to terminals **1** and **2**. "Live" test lamp should light. Apply "live" test lamp probes to terminals **4** and **5**; "live" test lamp should light.
d. With action switch set at NORMAL, apply "live" test lamp probes to terminals **2** and **3**. "Live" test lamp should light. Apply "live" test lamp probes to terminals **5** and **6**; "live" test lamp should light.

51. **WASH TEMPERATURE SWITCH** *(Refer to Figure 54)*

a. Remove control panel assembly, *paragraph 3.*
b. Disconnect wires from switch.

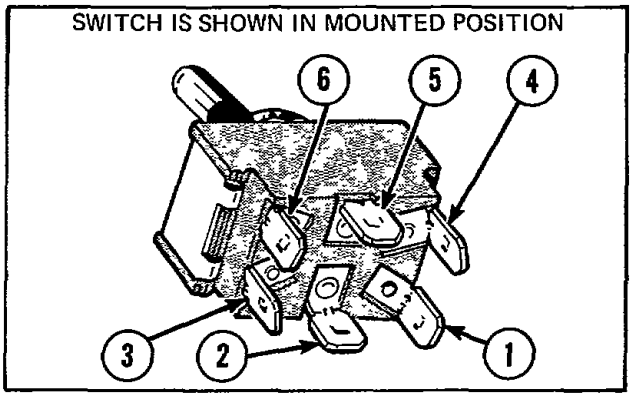


Figure 53

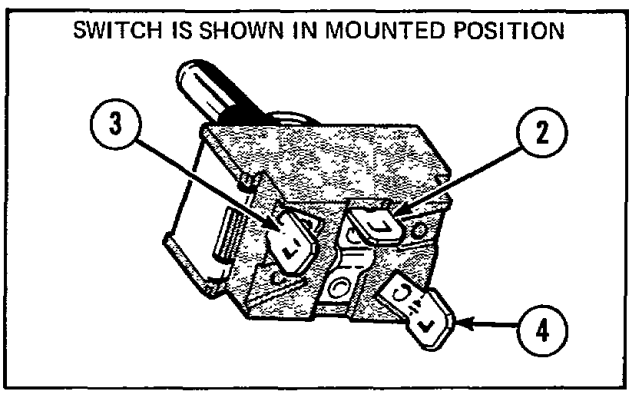


Figure 54

c. Apply "live" test lamp probes to switch terminals **2** and **3**. "Live" test lamp should light with switch set at HOT or WARM, but should not light with switch set at COLD.
d. Apply "live" test lamp probes to switch terminals **2** and **4**. "Live" test lamp should light with switch set at WARM and COLD, but should not light with switch set at HOT.

52. **DRAIN VALVE SOLENOID** *(Refer to Figure 55)*

a. Remove air intake grille, *paragraph 6.*
b. Disconnect wires from solenoid.
c. Apply "live" test cord probes to solenoid terminals; solenoid should close.

53. **DOOR LOCK SOLENOID** *(Refer to Figure 56)*

a. Remove door lock solenoid, *paragraph 14, steps "a" through "f".*
b. Disconnect wires from solenoid.
c. Apply "live" test cord probes to solenoid terminals; solenoid should close.

54. **DOOR LOCK SWITCH**

a. Remove door lock solenoid, *paragraph 14, steps "a" through "f".*

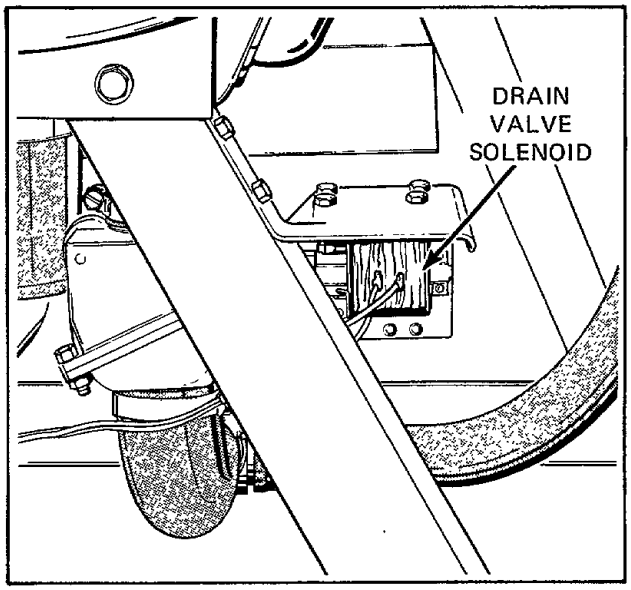


Figure 55

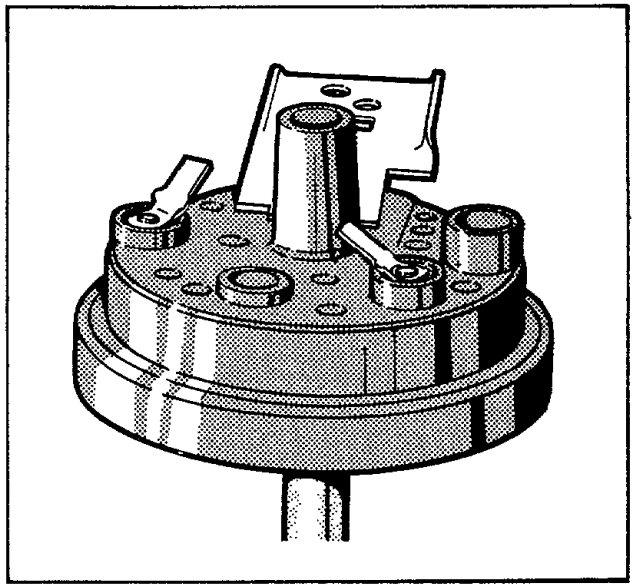


Figure 57

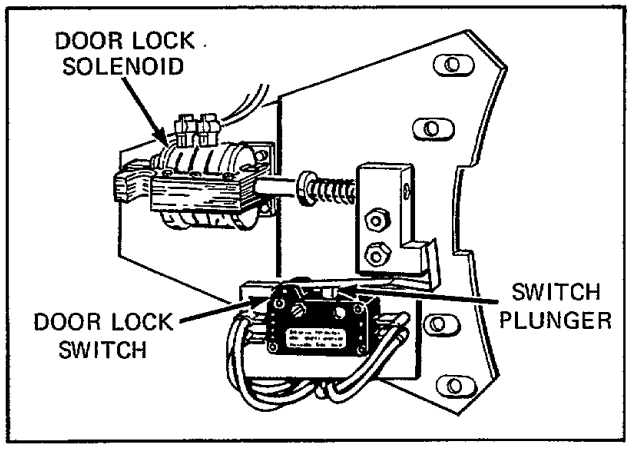


Figure 56

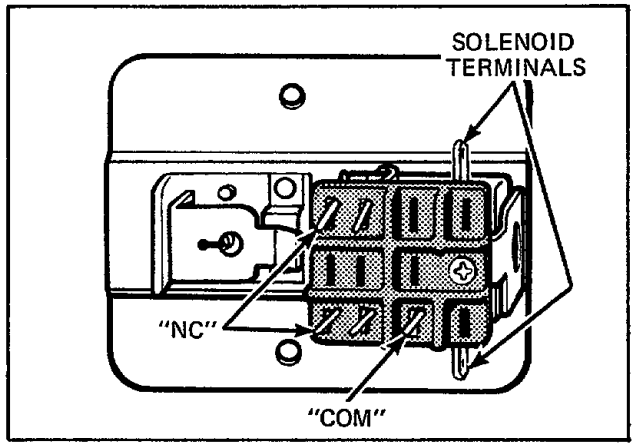


Figure 58

b. Disconnect wires from door lock switch.
c. Through serial number 49U30: Apply "live" test lamp probes to switch terminals; "live" test lamp should not light. Depress switch plunger; "live" test lamp should light.
d. Starting with serial number 49U31: Apply "live" test lamp probes to terminals **1** and **2**; "live" test lamp should not light. Depress switch plunger; "live" test lamp should light. (Use same procedure for checking terminals 4 and 5.)

55. PRESSURE SWITCH *(Refer to Figure 57)*

a. Remove pressure switch, *paragraph 21, steps "a" through "e".*
b. Attach a short length of hose to pressure switch.
c. Apply "live" test lamp probes to switch terminals; "live" test lamp should light.
d. Blow into hose; "live" test lamp should go out.

56. MANUAL RESET SWITCH – Through Serial Number 592J8 *(Refer to Figure 58)*

a. Remove wires from manual reset switch, *paragraph 22, steps "a" through "d".*
b. Apply "live" test lamp probes to common (COM) terminal and a normally closed (NC) terminal. "Live" test lamp should light.
c. With "live" test lamp still connected, apply "live" test cord probes to solenoid terminals. "Live" test lamp should go out.
d. With "live" test lamp still connected, press button in; "live" test lamp should light.

57. RELAY SWITCH *(Refer to Figure 59)*

The relay switch is an enclosed, voltage type relay. It cannot be accurately tested in the field. If the relay is suspected to be faulty (see *paragraph 74 or 75*), install a relay known to be good and start washer in

(continued on next page)

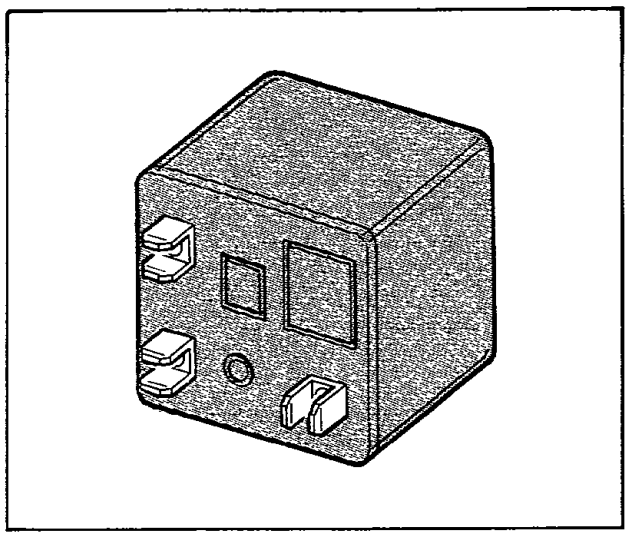


Figure 59

the last spin portion of cycle to check for proper operation. If washer operation is satisfactory, assume that original relay is faulty. If problem persists, re-install original relay and check out other possible causes.

58. TUMBLE OR SPIN CAPACITOR

a. Remove capacitor, *paragraph 25.*
b. Check capacitor visually for ruptures or corrosion.
c. Apply "live" test lamp probes (use 200 watt bulb) to capacitor terminals; "live" test lamp should light, *Figure 60.*
d. Apply one "live" test lamp probe to case of capacitor and the other one to a capacitor terminal, *Figure 61;* "live" test lamp should not light.
e. Substitute a 10 amp fuse for the test lamp, *Figure 62.* Touch probes to capacitor terminals momentarily (not longer than 2 seconds). If fuse burns out, replace the capacitor.

NOTE: Check tumble capacitor resistor with Ohm meter.

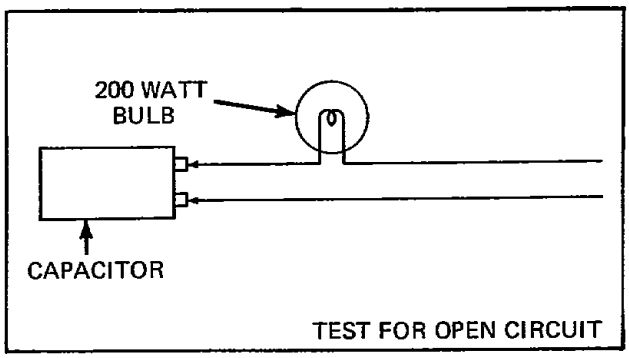


Figure 60

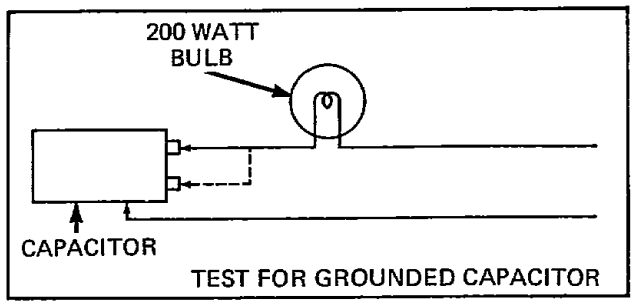


Figure 61

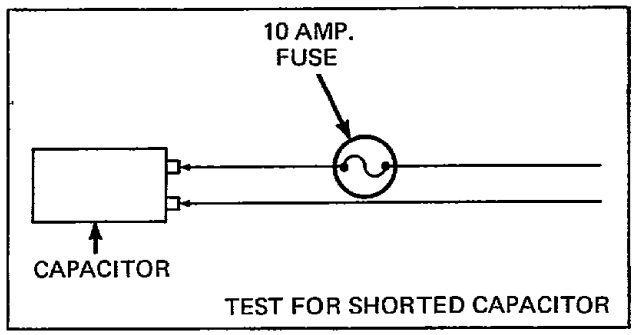


Figure 62

59. TIMER MOTOR (Cycle Timer)

a. Remove timer motor, *paragraph 24.*
b. Apply "live" test cord to timer motor wire terminals; timer motor should run.

60. REVERSING TIMER CONTACT POINTS *(Refer to Figure 63)*

a. Remove timer, *paragraph 24.*
b. Connect jumper wire between terminals **X** and **B.**
c. Apply "live" test cord probes to timer motor wire terminals.
d. Apply "live" test lamp probes to terminals **TJ** and **C.** "Live" test lamp should light and remain lit except in the 58th and 118th increment (see appropriate wiring diagram).
e. Apply "live" test lamp probes to terminals **L** and **SJ.** "Live" test lamp should light for 12 seconds, go out for 18 seconds, light for 12 seconds, etc. (see appropriate wiring diagram).
f. Apply "live" test lamp probes to terminals **H** and **SJ.** "Live" test lamp should light for 27 seconds, go out for 3 seconds, light for 27 seconds, etc. (see appropriate wiring diagram).
g. For Timer No. 81477: Apply "live" test lamp probes to terminals "Y" and "T-M". "Live" test lamp should light for 58 seconds, go out for 2 seconds, light for 58 seconds, etc. (see wiring diagram on Page 36).

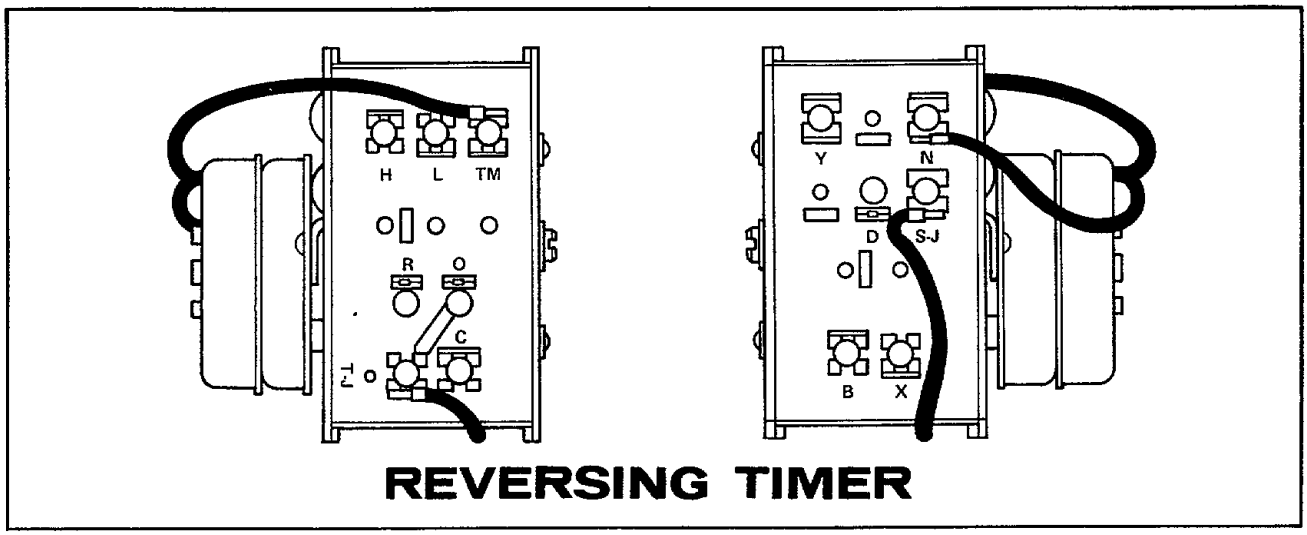


Figure 63

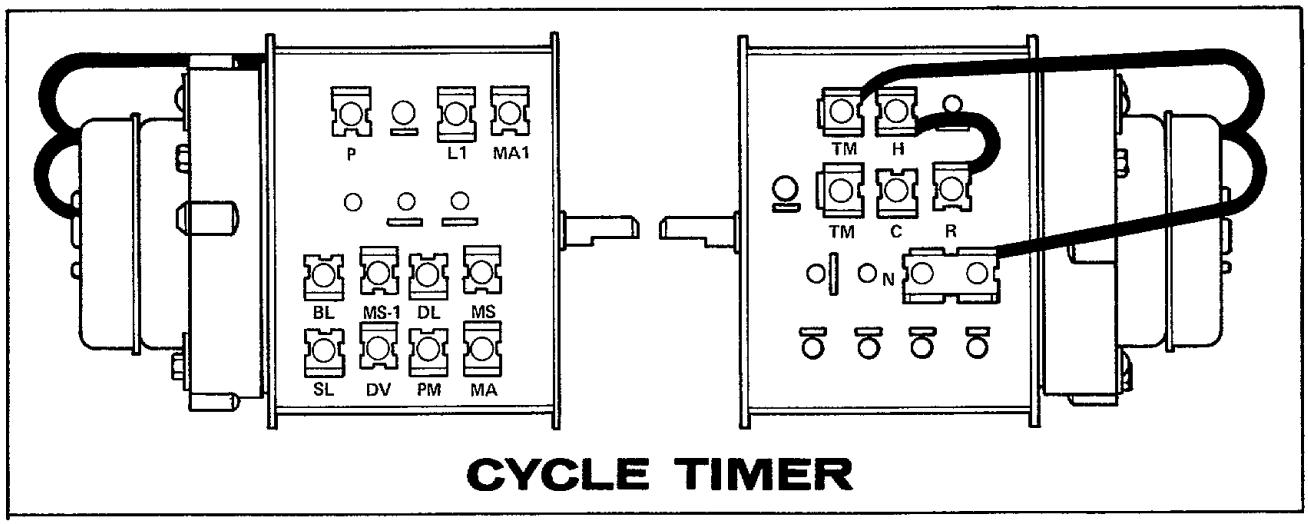


Figure 64

61. CYCLE TIMER CONTACT POINTS *(Refer to Figure 64)*

TO REMOVE TIMER FOR TESTING

A. Raise cabinet top, paragraph 10.
B. Remove two screws holding timer bracket to rear cross channel.
C. Disconnect all wires from timer and remove timer with bracket attached.

NOTE: When installing timer, refer to appropriate wiring diagram for proper wiring sequence.

a. Timer Motor

(1) Apply "live" test lamp probes to terminals **L1** and **TM.**

(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF.** "Live" test lamp should light and remain lit during entire revolution of timer knob except in the first increment (see appropriate wiring diagram).

b. Motor Agitation

(1) Apply "live" test lamp probes to terminals **L1** and **MA.**

(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF.** "Live" test lamp should light only when Motor Agitation (MA) contacts are closed (see appropriate wiring diagram).

(continued on next page)

c. Motor Spin (Normal Setting)

(1) Apply "live" test lamp probes to terminals **L1** and **MS**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Motor Spin (MS) contacts are closed (see appropriate wiring diagram).

d. Motor Spin (Delicate Setting)

(1) Apply "live" test lamp probes to terminals **L1** and **MS-1**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Motor Spin (MS-1) contacts are closed (see appropriate wiring diagram).

e. Drain Valve

(1) Apply "live" test lamp probes to terminals **L1** and **DV**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Drain Valve (DV) contacts are closed (see appropriate wiring diagram).

f. Detergent Light

(1) Apply "live" test lamp probes to terminals **L1** and **DL**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Detergent Light (DL) contacts are closed (see appropriate wiring diagram).

g. Softener Light

(1) Apply "live" test lamp probes to terminals **L1** and **SL**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Softener Light (SL) contacts are closed (see appropriate wiring diagram).

h. Bleach Light

(1) Apply "live" test lamp probes to terminals **L1** and **BL**.
(2) Slowly turn timer knob clockwise from **OFF** Position until it again points toward **OFF**. "live" test lamp should light only when Bleach Light (BL) contacts are closed (see appropriate wiring diagram).

i. Wash Water

(1) Disconnect **R** to **H** jumper.
(2) Apply "live" test lamp probes to terminals **P** and **H**.
(3) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Wash Water (H) contacts are closed (see appropriate wiring diagram).

j. Rinse Water

(1) Disconnect **R** to **H** jumper.
(2) Apply "live" test lamp probes to terminals **P** and **R**.
(3) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Rinse Water (R) contacts are closed (see appropriate wiring diagram).
(4) Apply "live" test lamp probes to terminals **P** and **C**.
(5) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "live" test lamp should light only when Cold Water (C) contacts are closed (see appropriate wiring diagram).

k. Pump Motor (Starting with serial number 31Q34)

(1) Apply "live" test lamp probes to terminals **L1** and **PM**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Pump Motor (PM) contacts are closed (see appropriate wiring diagram).

l. Tumble Sychronization (Starting with serial number B10843)

(1) Apply "live" test lamp probes to terminals **L1** and **MA1**.
(2) Slowly turn timer knob clockwise from **OFF** position until it again points toward **OFF**. "Live" test lamp should light only when Tumble Synchronization (MA1) contacts are closed (see wiring diagram on Page 36).

62. MIXING VALVE SOLENOID

a. Remove mixing valve, *paragraph 26, steps "a" through "c"*.

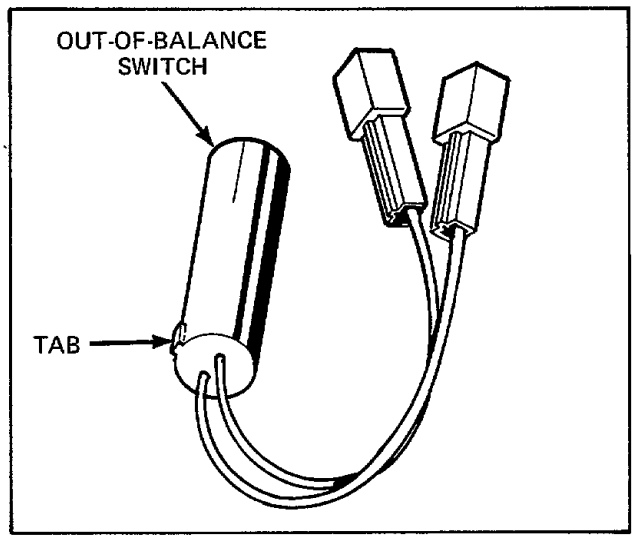


Figure 65

b. Disconnect wires from solenoid.
c. Apply "live" test cord probes to solenoid terminals; solenoid should "click", then "hum".

63. OUT-OF-BALANCE SWITCH – Through Serial Number 592J8 *(Refer to Figure 65)*

a. Remove out-of-balance switch, *paragraph 35.*
b. Hold switch in position with wire leads down and apply "live" test lamp probes to wire leads; "live" test lamp should light. Invert switch, lamp should go off.

64. BLOWER MOTOR

a. Remove air intake grille, *paragraph 6.*
b. Disconnect blower motor wires at connectors.
c. Apply "live" test cord probes to terminals on blower motor wires; blower motor should run.

65. PUMP MOTOR *(Refer to Figure 66)*

a. Remove rear panel, *paragraph 30.*
b. Disconnect pump motor wires at connectors.
c. Apply "live" test cord probes to terminals on pump motor wires; pump motor should run.

66. DRIVE MOTOR *(Refer to Figure 66)*

a. Remove rear panel, *paragraph 30.*
b. Disconnect motor wire harness at terminal block.
c. Continuity Test

(1) Apply "live" test lamp probes to motor wire terminals **1** and **2**, **3** and **4**, **6** and **8**, and then **7** and **9**. "Live" test lamp should light in each step.

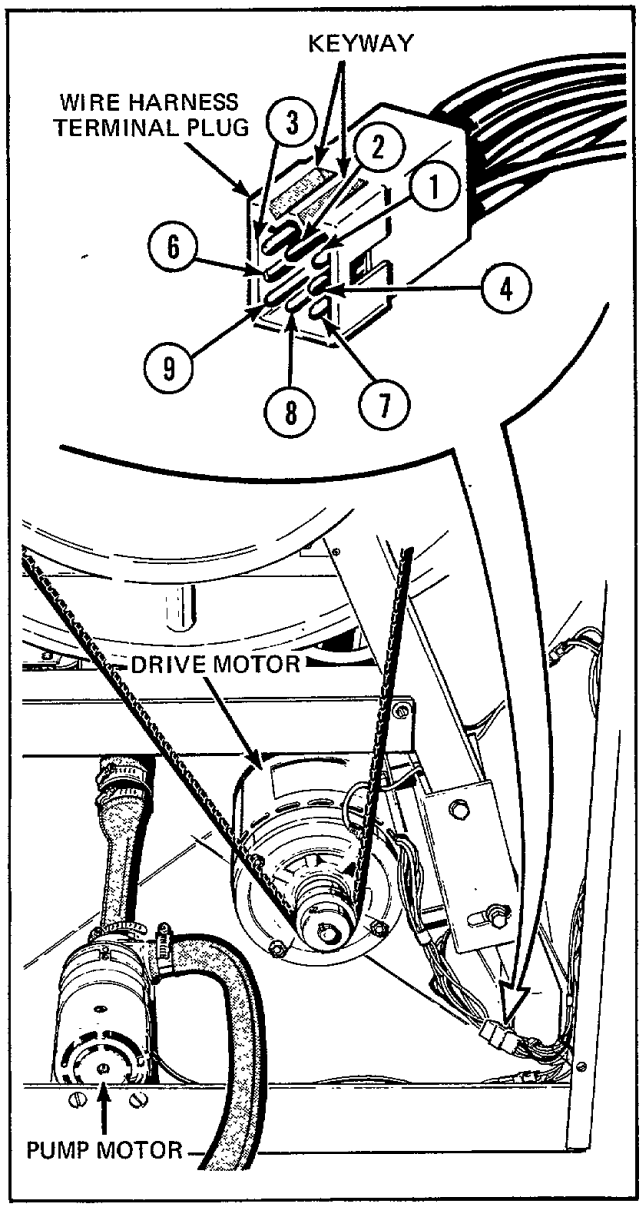


Figure 66

d. Grounding Test

(1) Apply one probe of "live" test lamp to motor casing and the other probe to each of the motor wire terminals. "Live" test lamp should not light.

ATTENTION

No. 188P4 Motor Testing Kit is available for testing drive motor right in washer in a matter of minutes. Also a No. 81483 service harness is available for checking the motor by using it in conjunction with an adjacent Super 20.

Service Helps

SECTION IV

PROBLEM	POSSIBLE CAUSE	TO CORRECT
67. WASHER DOES NOT START	Electric power disconnected or fuse blown.	Connect electric power or replace fuse.
	Inoperative start switch (Non-metered Models).	Test start switch, *paragraph 48*, and replace if inoperative, *paragraph 2*.
	Accumulator Coin Drop (Metered Models) A. Coin drop does not accept coins. (1) Inoperative blocking solenoid. B. Coin drop does accept coins. (1 Inoperative coin switch. (2) Inoperative advance solenoid. (3) Bent coin switch trip wire. (4) Ratchet binding. (5) Advance Solenoid plunger binding. (6) Advance solenoid does not pivot.	Check out accumulator coin drop per paragraph 47.
	Inoperative manual reset switch.	Test switch, *paragraph 56*, and replace if inoperative, *paragraph 22*.
	Improperly adjusted door lock switch.	Adjust switch, *paragraph 46*.
	Inoperative door lock switch.	Test switch, *paragraph 54*, and replace if inoperative, *paragraph 15*.
	Broken, loose or incorrect wiring.	Refer to appropriate wiring diagram.
	Improperly adjusted Out-Of-Balance switch.	Adjust switch, *paragraph 44*.
68. CYLINDER DOES NOT FILL	No hot water.	Refer to *paragraph 69*.
	No cold water.	Refer to *paragraph 70*.
	Inoperative pressure switch.	Test switch, *paragraph 55*, and replace if inoperative, *paragraph 21*.
	Improperly adjusted pressure switch.	Adjust switch, *paragraph 43*.
	Inoperative cycle timer.	Test timer, *paragraph 61, step "e" or "k"*, and replace if inoperative, *paragraph 24*.
	Inoperative drain valve solenoid.	Test solenoid, *paragraph 52*, and replace if inoperative, *paragraph 19*.
	Broken, weak or disconnected drain valve engaging spring.	Replace or connect spring. See *Figure 27*.
	Obstruction in drain valve.	Clean vlave. See *Figure 21*.
	Broken, loose or incorrect wiring.	Refer to appropriate wiring diagram.

PROBLEM	POSSIBLE CAUSE	TO CORRECT
69. NO HOT WATER	Water in hot water tank cold.	
	Hot water supply line closed.	Check for closed valve, kinked hose or obstruction in line.
	Clogged water mixing valve inlet screen.	Remove and clean or replace screens. See *Figure 25.*
	WASH TEMPERATURE switch improperly set or inoperative.	Set switch or test switch, *paragraph 51,* and replace if inoperative, *paragraph 5.*
	Inoperative hot water solenoid.	Test solenoid, *paragraph 62,* and replace if inoperative. See *Figure 25.*
	Inoperative cycle timer.	Test timer, *paragraph 61, step "i",* and replace if inoperative, *paragraph 24.*
	Broken, loose or incorrect wiring.	Refer to appropriate wiring diagram.
70. NO COLD WATER	Cold water supply line closed.	Check for closed valve, kinked hose or obstruction in line.
	Clogged water mixing valve inlet screen.	Remove and clean, or replace screens. See *Figure 25.*
	WASH TEMPERATURE switch improperly set or inoperative.	Set switch or test switch, *paragraph 51,* and replace if inoperative, *paragraph 5.*
	Inoperative cold water solenoid.	Test solenoid, *paragraph 62,* and replace if inoperative. See *Figure 25.*
	Inoperative cycle timer.	Test timer, *paragraph 61, step "j"* and replace if inoperative, *paragraph 24.*
	Broken, loose or incorrect wiring.	Refer to appropriate wiring diagram.
71. NO WARM WATER	No hot water.	Refer to *paragraph 69.*
	No cold water	Refer to *paragraph 70.*
72. WATER DOES NOT SHUT OFF	Sediment in water mixing valve.	Disassemble and clean. See *Figure 25.*
	Weak or broken armature spring in water mixing valve.	Replace spring. See *Figure 25.*
	Inoperative pressure switch.	Test switch, *paragraph 55,* and replace if inoperative, *paragraph 21.*
	Improperly adjusted pressure switch.	Adjust switch, *paragraph 43.*
	Incorrect wiring.	Refer to appropriate wiring diagram.
73. WATER DOES NOT DRAIN FROM CLOTHES CYLINDER	Obstruction in drain valve.	Clean valve. See *Figure 21.*
	Kinked drain hose.	Straighten drain hose.
	Pump Models: Obstruction in pump.	Clean pump. See *Figure 34.*
	Pump Models: Inoperative pump motor.	Test pump motor, *paragraph 65,* and replace if inoperative, *paragraph 36.*
	Inoperative cycle timer.	Test timer, *paragraph 61, step "e"* or *"k",* and replace if inoperative, *paragraph 24.*
	Broken, weak or disconnected drain valve disengaging spring.	Replace or connect spring. See *Figure 27.*
	Incorrect wiring.	Refer to appropriate wiring diagram.

PROBLEM	POSSIBLE CAUSE	TO CORRECT
74. DRIVE MOTOR DOES NOT RUN	No electrical power.	Check fuses, switch box and power cord.
	Inoperative cycle timer.	Test timer, *paragraph 61, steps "b", "c" and "d"*, and replace if inoperative, *paragraph 24.*
	Inoperative reversing timer.	Test timer, *paragraph 60*, and replace if inoperative, *paragraph 24.*
	Inoperative action switch.	Test switch, *paragraph 50*, and replace if inoperative, *paragraph 5.*
	Motor overload protector has cycled.	Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to *paragraph 75.*
	Inoperative capacitor(s).	Test capacitor(s), *paragraph 58*, and replace if inoperative, *paragraph 25.*
	Inoperative drive motor.	Test motor, *paragraph 66*, and replace if inoperative, *paragraph 33.*
	Out-of-balance switch improperly adjusted or inoperative.	Adjust switch, *paragraph 44*, or test switch, *paragraph 63*, and replace if inoperative, *paragraph 35.*
	Broken, loose or incorrect wiring.	Refer to appropriate wiring diagram.
	Inoperative relay switch.	Refer to *paragraph 57.*
75. MOTOR OVERLOAD PROTECTOR CYCLES REPEATEDLY	Low voltage.	Refer to INSTALLATION MANUAL supplied with washer for electrical requirements.
	Belt is too tight.	Adjust belt, *paragraph 42.*
	Inoperative overload protector.	Replace drive motor, *paragraph 33.*
	Water does not drain from clothes cylinder.	Refer to *paragraph 73.*
	Inoperative blower motor.	Test blower motor, *paragraph 64*, and replace if inoperative, *paragraph 34.*
	Inoperative relay switch.	Refer to *paragraph 57.*
76. CYLINDER DOES NOT TURN	Drive motor does not run.	Refer to *paragraph 74.*
	Loose or broken drive belt.	Adjust belt, *paragraph 42*, or replace belt.
77. CYCLE TIMER DOES NOT ADVANCE	Inoperative timer motor.	Test timer motor, *paragraph 59*, and replace if inoperative, *paragraph 24.*
	Inoperative timer escapement.	If timer motor operates correctly but timer does not advance, replace escapement, *paragraph 24.*

Timer Sequence Charts

TIMER NOS. 81088, 81346 & 81427

OPERATIONS	MINUTES	GALLONS WATER	†WATER TEMP. WITH WASH TEMP. SWITCH SET AT: HOT	WARM	COLD
WASH FILL	1/2	1.9	HOT	WARM	COLD
WASH FILL AND TUMBLE	7	*VARIABLE	HOT	WARM	COLD
TUMBLE	1/2				
TUMBLE AND RINSE FILL	3	*VARIABLE	COLD	WARM	COLD
TUMBLE	1/2				
SPIN	1				
RINSE FILL	1/2	1.9	WARM	WARM	COLD
TUMBLE AND RINSE FILL	3-1/2	*VARIABLE	WARM	WARM	COLD
TUMBLE	1				
**SPIN (NORMAL setting only)	2				
RINSE FILL	1/2	1.9	WARM	WARM	COLD
TUMBLE AND RINSE FILL	4	*VARIABLE	WARM	WARM	COLD
TUMBLE	1				
SPIN	3-1/2				
PAUSE	1/2				
TUMBLE	1/2				
PAUSE	1/2				
TOTALS	30	***VARIABLE			

TIMER NOS. 81457 & 81478

OPERATIONS	MINUTES	GALLONS WATER	†WATER TEMP. WITH WASH TEMP. SWITCH SET AT: HOT	WARM	COLD
WASH FILL	1/2	1.9	HOT	WARM	COLD
WASH FILL AND TUMBLE	7	*VARIABLE	HOT	WARM	COLD
TUMBLE AND RINSE FILL	3	*VARIABLE	COLD	WARM	COLD
TUMBLE	1				
SPIN	1				
RINSE FILL	1/2	1.9	WARM	WARM	COLD
TUMBLE AND RINSE FILL	2	*VARIABLE	WARM	WARM	COLD
TUMBLE	1				
**SPIN (NORMAL setting only)	1-1/2				
RINSE FILL	1/2	1.9	WARM	WARM	COLD
TUMBLE AND RINSE FILL	2	*VARIABLE	WARM	WARM	COLD
TUMBLE	1				
SPIN	3				
PAUSE	1/2				
TUMBLE	1				
SPIN	3-1/2				
PAUSE	1/2				
TUMBLE	1/2				
TOTALS	30	***VARIABLE			

*If proper water level is reached before end of fill period, pressure switch will stop water fill.

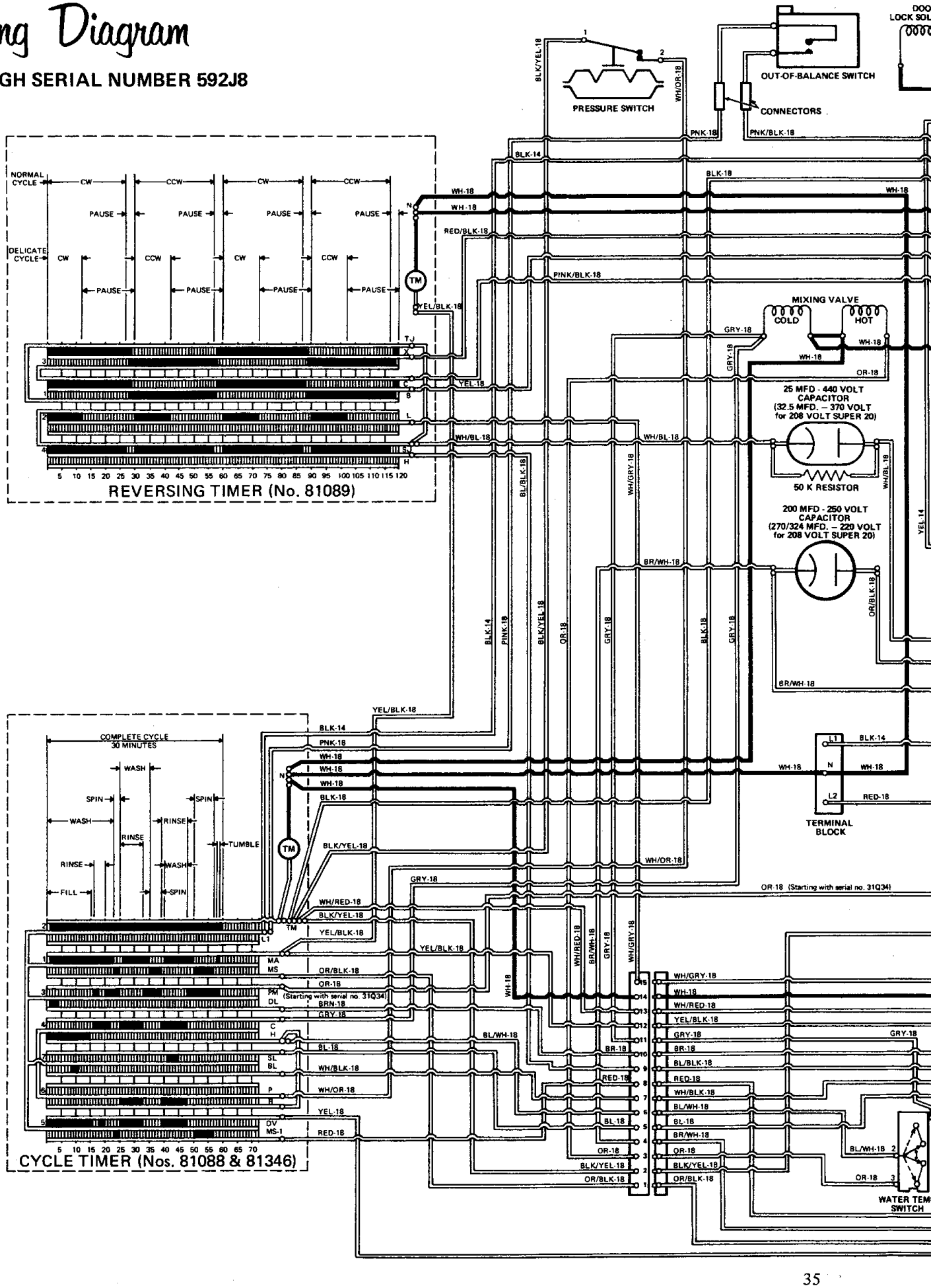
**In GENTLE setting, there will be a 2 minute pause instead of a spin.

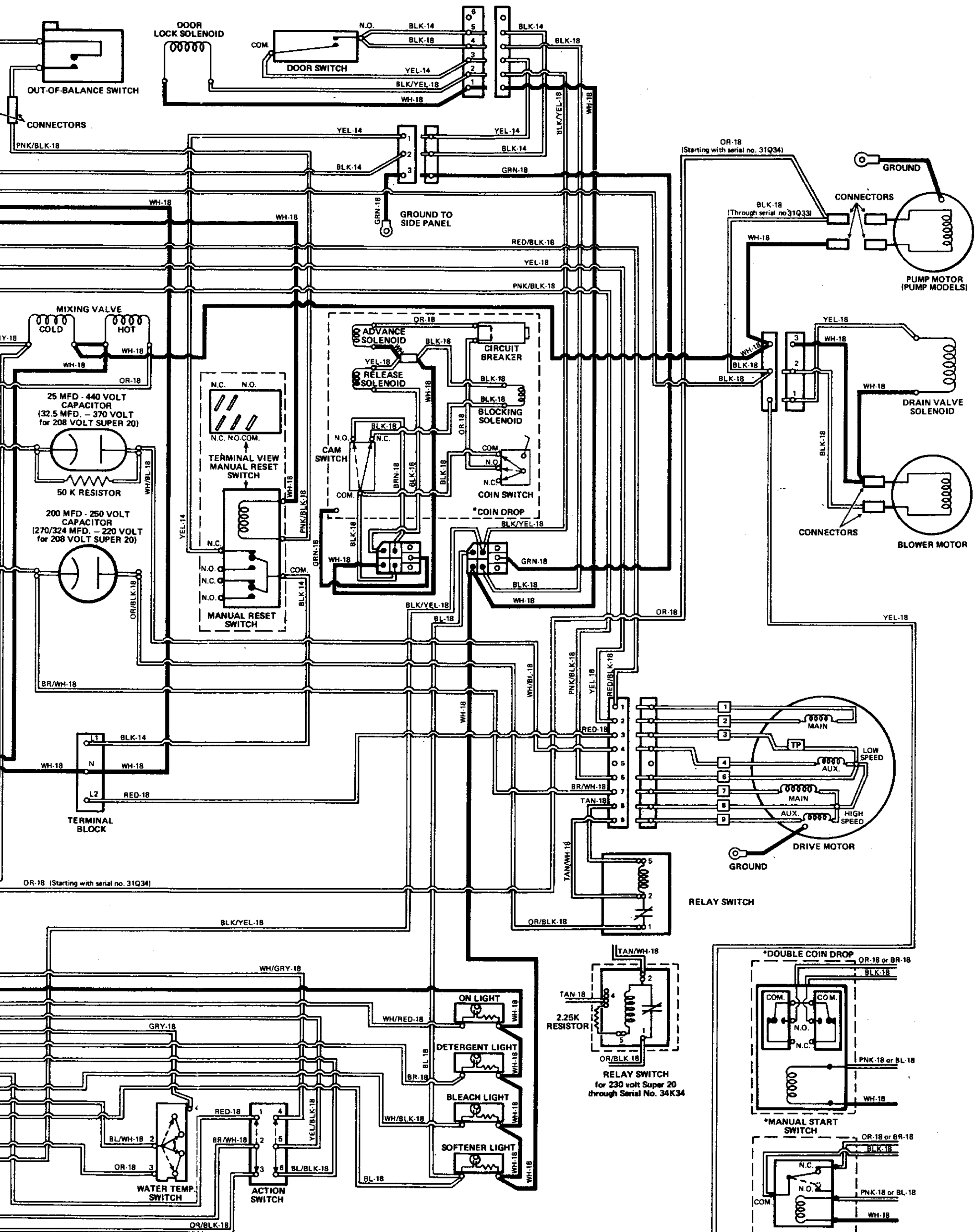
***Amount of water used depends on size of load and fabrics being washed. (Approximately 45 gallons for 20 lb. load.)

†All cold water rinses can be obtained by removing the R to H jumper wire from timer.

Wiring Diagram

THROUGH SERIAL NUMBER 592J8

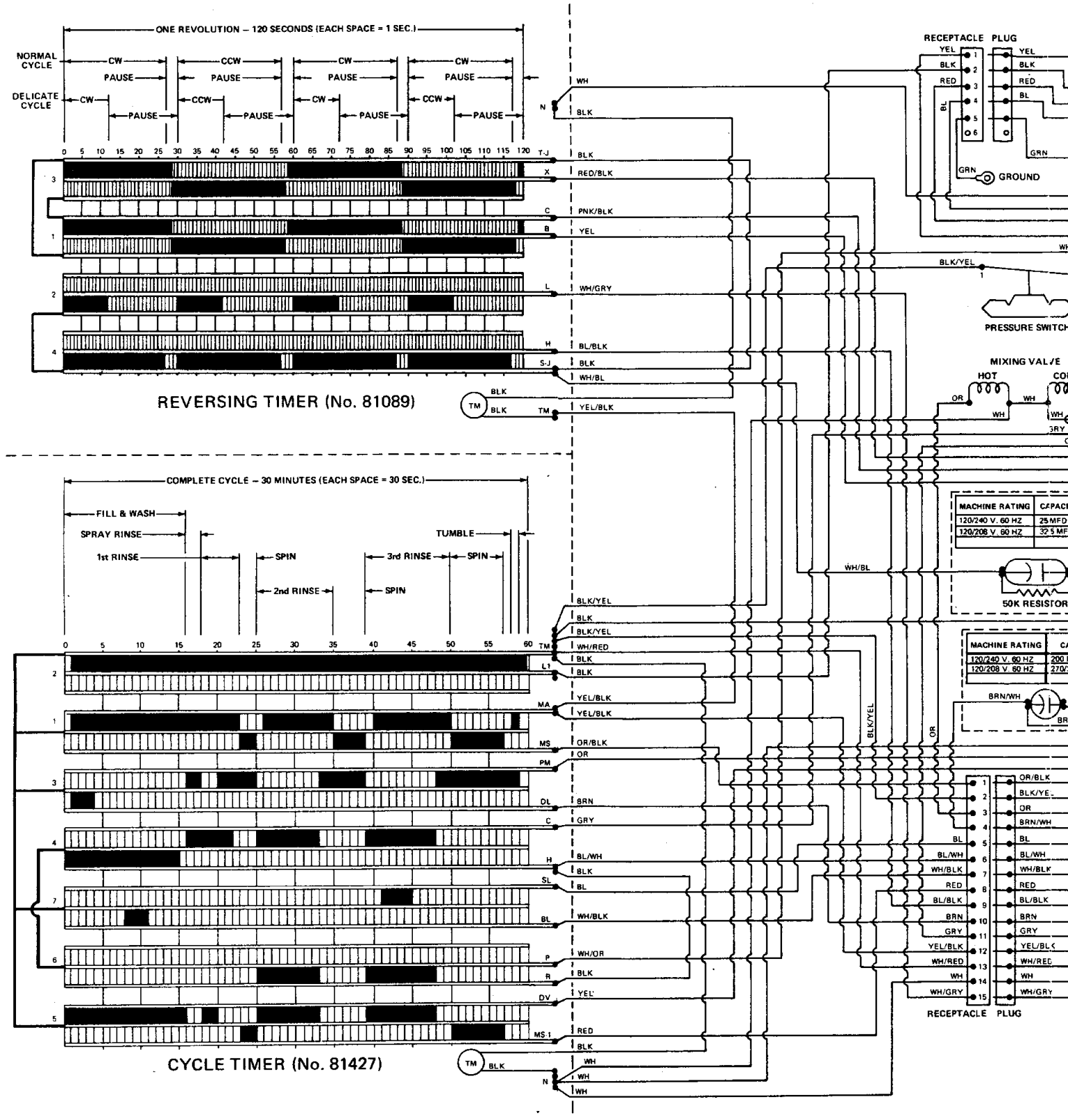


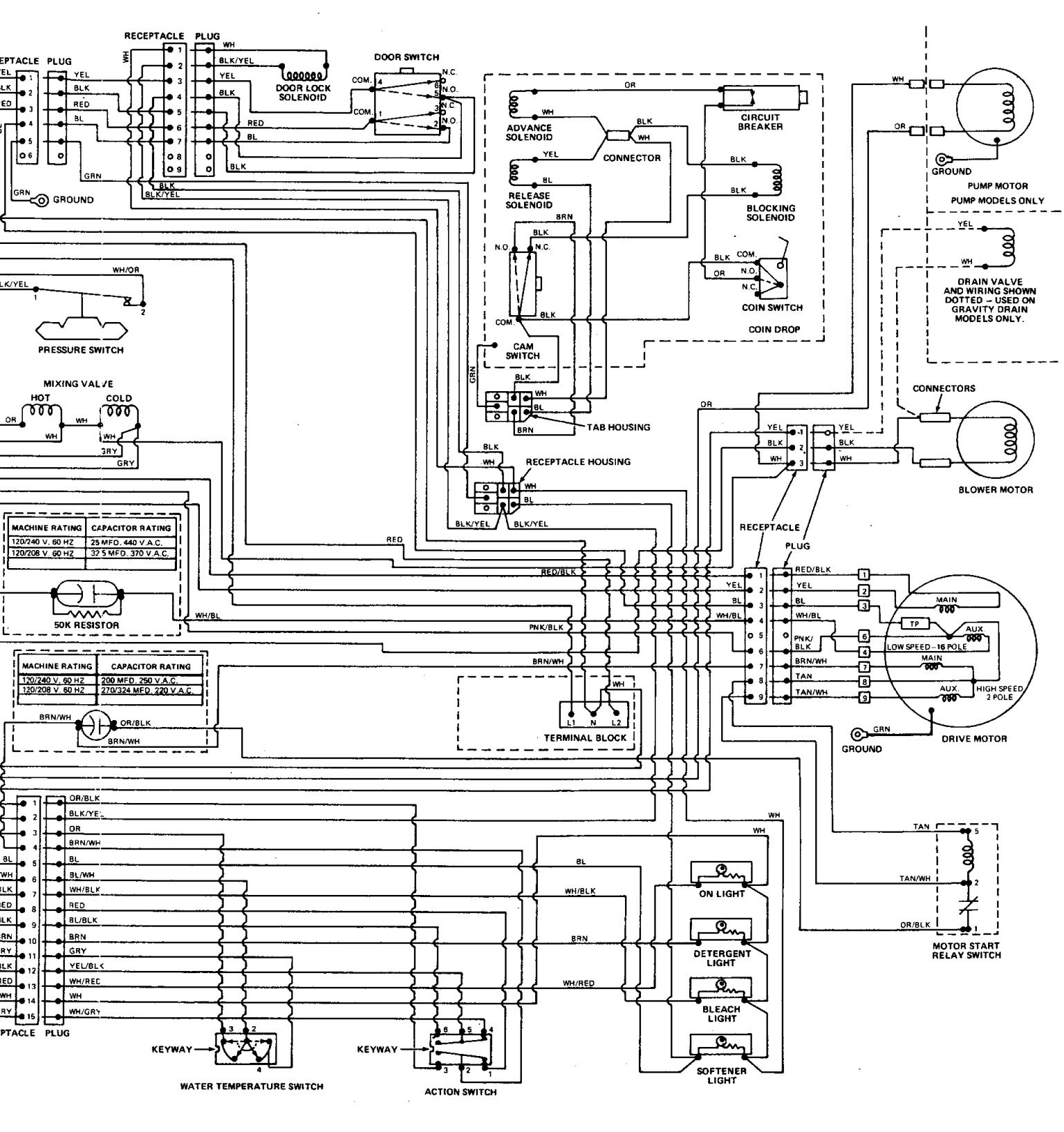


OUT-OF-BALANCE SWITCH
CONNECTORS
DOOR LOCK SOLENOID
DOOR SWITCH
N.O.
COM.
GROUND TO SIDE PANEL
OR-18 (Starting with serial no. 31Q34)
BLK-18 (Through serial no. 31Q33)
CONNECTORS
GROUND
PUMP MOTOR (PUMP MODELS)
MIXING VALVE
COLD
HOT
25 MFD - 440 VOLT CAPACITOR (32.5 MFD. – 370 VOLT for 208 VOLT SUPER 20)
50 K RESISTOR
200 MFD - 250 VOLT CAPACITOR (270/324 MFD. – 220 VOLT for 208 VOLT SUPER 20)
TERMINAL VIEW MANUAL RESET SWITCH
MANUAL RESET SWITCH
ADVANCE SOLENOID
RELEASE SOLENOID
CIRCUIT BREAKER
BLOCKING SOLENOID
CAM SWITCH
COIN SWITCH
*COIN DROP
DRAIN VALVE SOLENOID
CONNECTORS
BLOWER MOTOR
TERMINAL BLOCK
MAIN
TP
LOW SPEED
AUX.
HIGH SPEED
DRIVE MOTOR
GROUND
RELAY SWITCH
OR-18 (Starting with serial no. 31Q34)
2.25K RESISTOR
RELAY SWITCH for 230 volt Super 20 through Serial No. 34K34
*DOUBLE COIN DROP
*MANUAL START SWITCH
OR-18 or BR-18
PNK-18 or BL-18
ON LIGHT
DETERGENT LIGHT
BLEACH LIGHT
SOFTENER LIGHT
WATER TEMP. SWITCH
ACTION SWITCH

Wiring Diagram

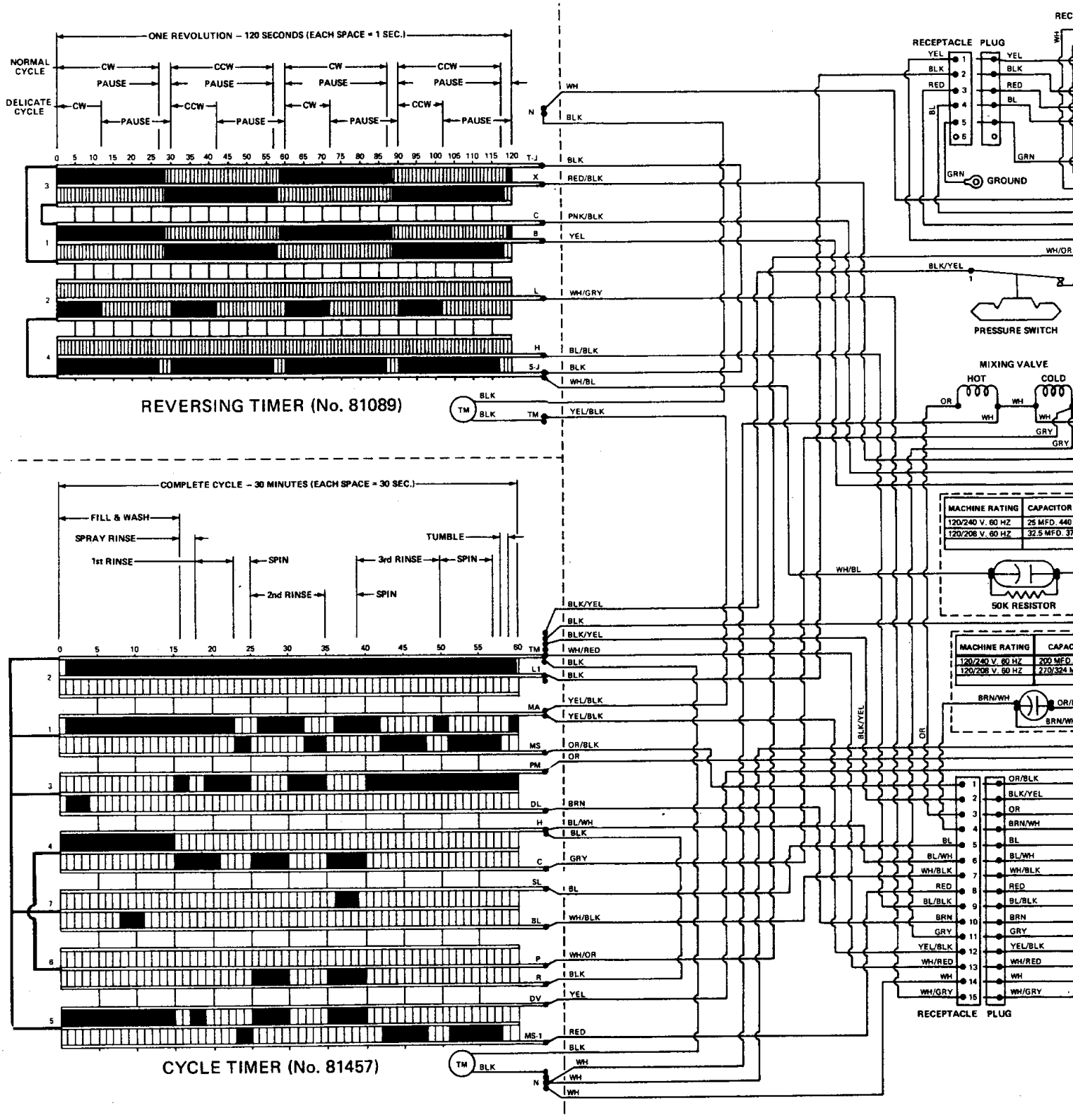
STARTING SERIAL NUMBER 592J9 AND CONTINUING THROUGH G10842

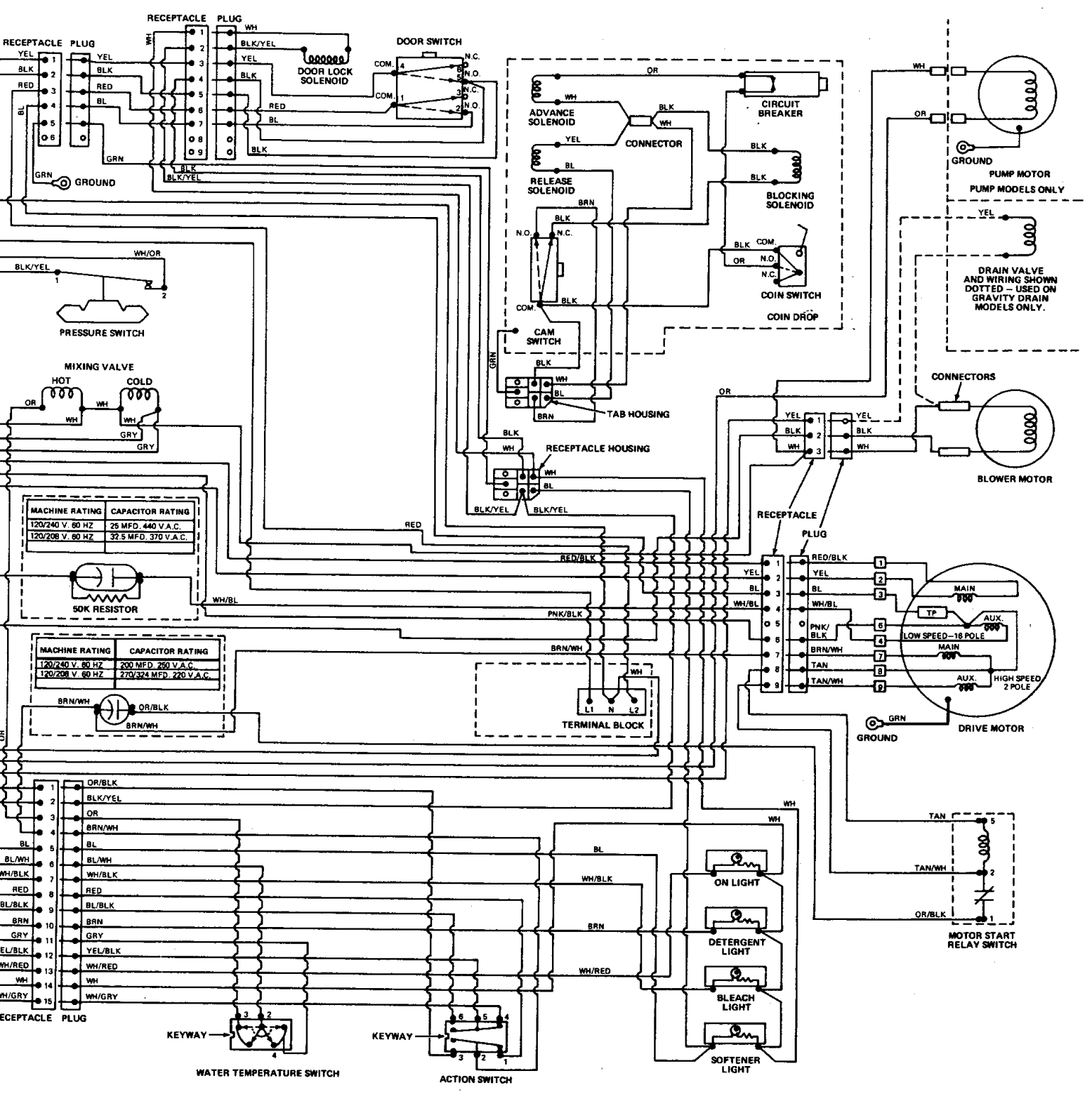



RECEPTACLE
PLUG
DOOR SWITCH
DOOR LOCK SOLENOID
GROUND
PRESSURE SWITCH
MIXING VALVE
HOT
COLD
ADVANCE SOLENOID
RELEASE SOLENOID
CONNECTOR
CIRCUIT BREAKER
BLOCKING SOLENOID
COIN SWITCH
COIN DROP
CAM SWITCH
TAB HOUSING
RECEPTACLE HOUSING
PUMP MOTOR
PUMP MODELS ONLY
DRAIN VALVE AND WIRING SHOWN DOTTED – USED ON GRAVITY DRAIN MODELS ONLY.
CONNECTORS
BLOWER MOTOR
MACHINE RATING
CAPACITOR RATING
120/240 V. 60 HZ
25 MFD. 440 V.A.C.
120/208 V. 60 HZ
35 MFD. 370 V.A.C.
50K RESISTOR
120/240 V. 60 HZ
200 MFD. 250 V.A.C.
120/208 V. 60 HZ
270/324 MFD. 220 V.A.C.
TERMINAL BLOCK
MAIN
TP
AUX
LOW SPEED – 16 POLE
HIGH SPEED 2 POLE
DRIVE MOTOR
MOTOR START RELAY SWITCH
ON LIGHT
DETERGENT LIGHT
BLEACH LIGHT
SOFTENER LIGHT
KEYWAY
WATER TEMPERATURE SWITCH
ACTION SWITCH

Wiring Diagram

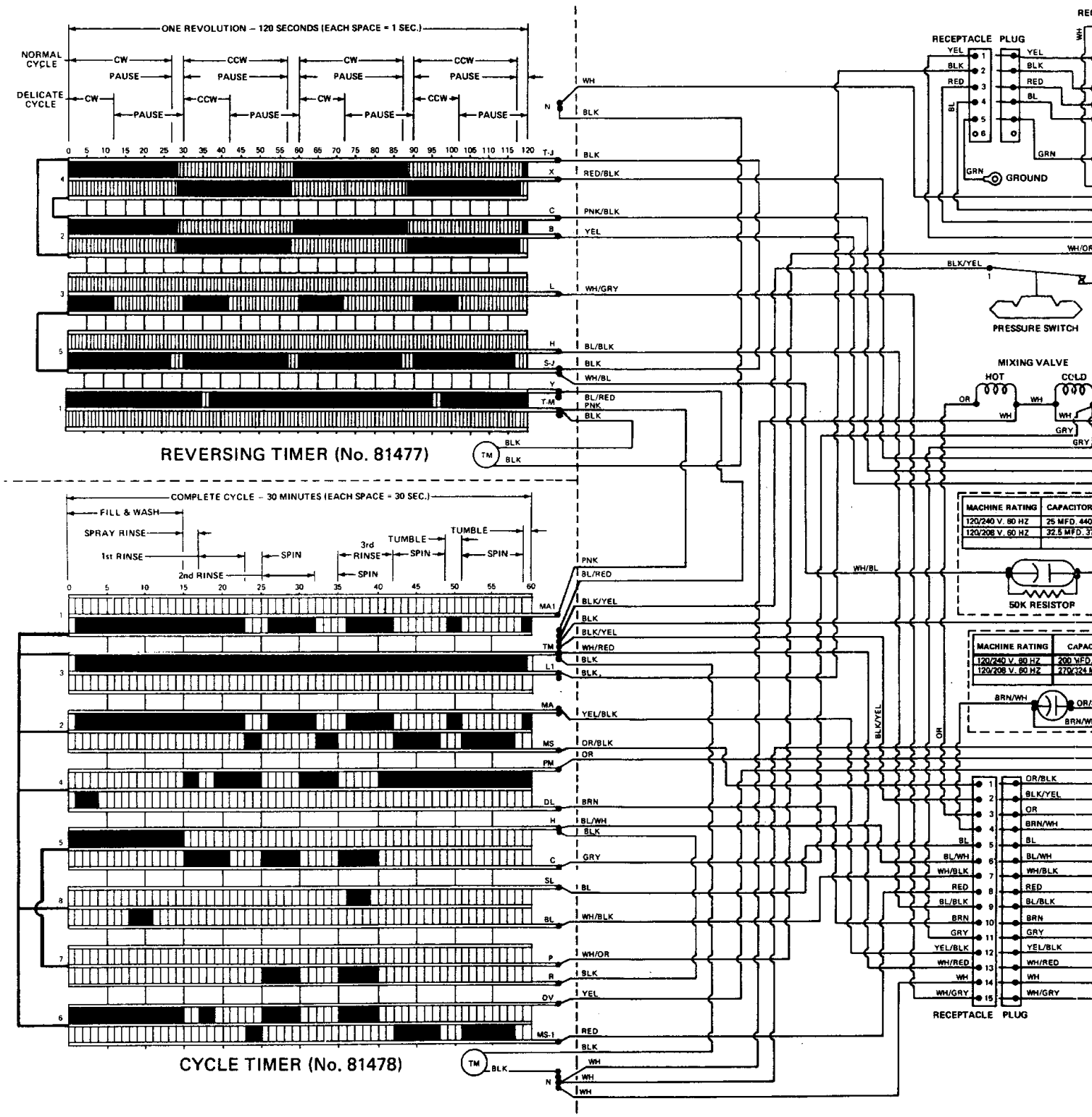
STARTING SERIAL NUMBER B10843 AND CONTINUING THROUGH W11874

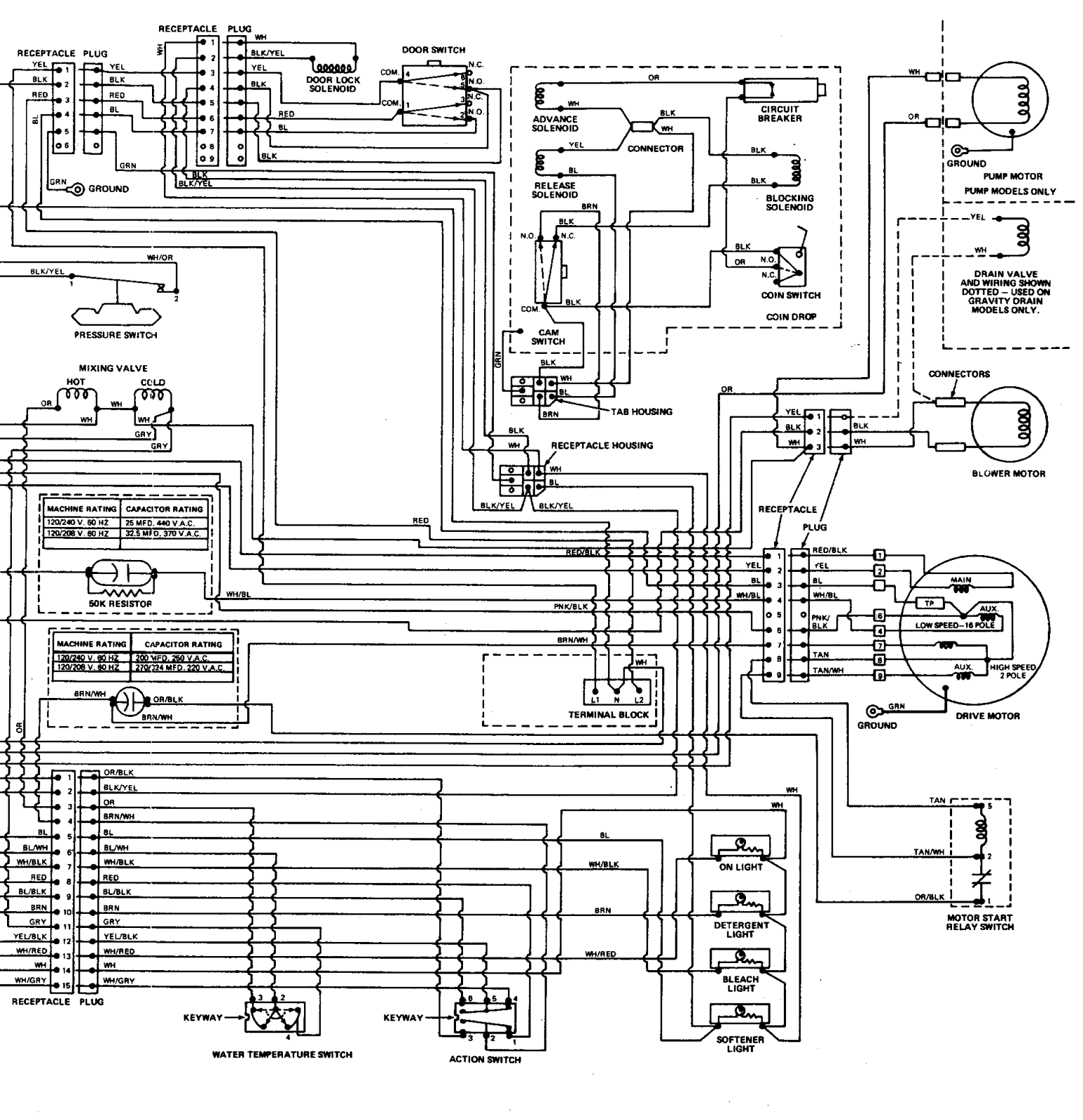



RECEPTACLE
PLUG
DOOR SWITCH
DOOR LOCK SOLENOID
GROUND
PRESSURE SWITCH
MIXING VALVE
HOT
COLD
ADVANCE SOLENOID
CONNECTOR
RELEASE SOLENOID
CIRCUIT BREAKER
BLOCKING SOLENOID
COIN SWITCH
COIN DROP
CAM SWITCH
TAB HOUSING
RECEPTACLE HOUSING
PUMP MOTOR
PUMP MODELS ONLY
DRAIN VALVE AND WIRING SHOWN DOTTED – USED ON GRAVITY DRAIN MODELS ONLY.
CONNECTORS
BLOWER MOTOR
MACHINE RATING
CAPACITOR RATING
120/240 V. 60 HZ
25 MFD. 440 V.A.C.
120/208 V. 60 HZ
32.5 MFD. 370 V.A.C.
50K RESISTOR
120/240 V. 60 HZ
200 MFD. 250 V.A.C.
120/208 V. 60 HZ
270/324 MFD. 220 V.A.C.
TERMINAL BLOCK
MAIN
TP
AUX.
LOW SPEED–16 POLE
HIGH SPEED 2 POLE
DRIVE MOTOR
MOTOR START RELAY SWITCH
ON LIGHT
DETERGENT LIGHT
BLEACH LIGHT
SOFTENER LIGHT
KEYWAY
WATER TEMPERATURE SWITCH
ACTION SWITCH

Wiring Diagram

STARTING SERIAL NUMBER W11875




RECEPTACLE
PLUG
DOOR SWITCH
DOOR LOCK SOLENOID
GROUND
PRESSURE SWITCH
MIXING VALVE
HOT
COLD
ADVANCE SOLENOID
RELEASE SOLENOID
CONNECTOR
CIRCUIT BREAKER
BLOCKING SOLENOID
COIN SWITCH
COIN DROP
CAM SWITCH
TAB HOUSING
RECEPTACLE HOUSING
PUMP MOTOR
PUMP MODELS ONLY
DRAIN VALVE AND WIRING SHOWN DOTTED – USED ON GRAVITY DRAIN MODELS ONLY.
CONNECTORS
BLOWER MOTOR
MACHINE RATING
CAPACITOR RATING
120/240 V. 60 HZ
25 MFD. 440 V.A.C.
120/208 V. 60 HZ
32.5 MFD. 370 V.A.C.
50K RESISTOR
120/240 V. 60 HZ
200 MFD. 250 V.A.C.
120/208 V. 60 HZ
270/224 MFD. 220 V.A.C.
TERMINAL BLOCK
L1
N
L2
MAIN
TP
AUX.
LOW SPEED–16 POLE
HIGH SPEED 2 POLE
DRIVE MOTOR
ON LIGHT
DETERGENT LIGHT
BLEACH LIGHT
SOFTENER LIGHT
MOTOR START RELAY SWITCH
WATER TEMPERATURE SWITCH
ACTION SWITCH
KEYWAY