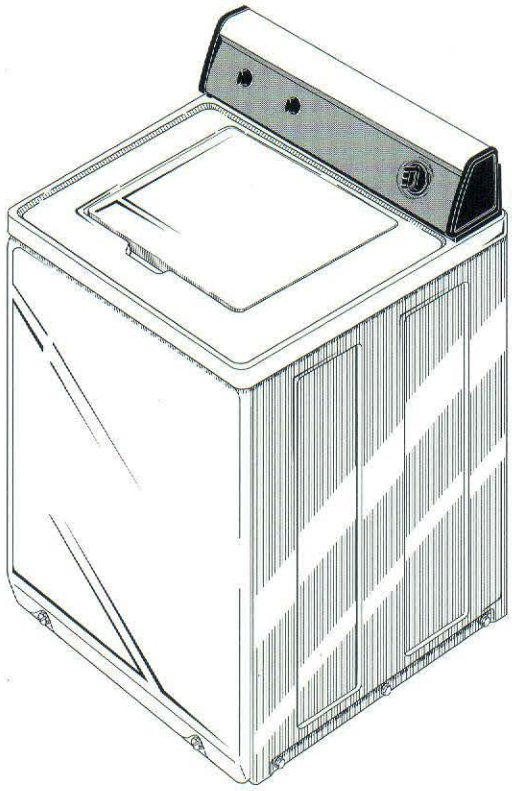
Speed Queen

A Raytheon Company

Service Manual for Automatic Washers

(Model Numbers are listed on Page 2)



July 1994

Amana
A Raytheon Company

Part No. RU310002
(36793)

⚠WARNING

Failure to install, maintain, and/or operate this machine according to the manufacturer's instructions may result in conditions which can produce serious injury, death and/or property damage.

Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in the Parts and Service Manual that you understand and have the skills to carry out.

Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury, or death. W006R1

⚠WARNING

Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly to adjustments subjecting you, or the inexperienced person making such repairs, to the risk of serious injury, electrical shock, or death. W007

⚠CAUTION

If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures. W008

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

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

In order to locate an authorized service agency, please consult your telephone book or the dealer from whom you purchased this product. If you require further assistance, please contact:

Consumer Affairs Dept.
Amana, Iowa 52204

or

1-319-622-5511
CALL and ask for the
Customer Affairs Department

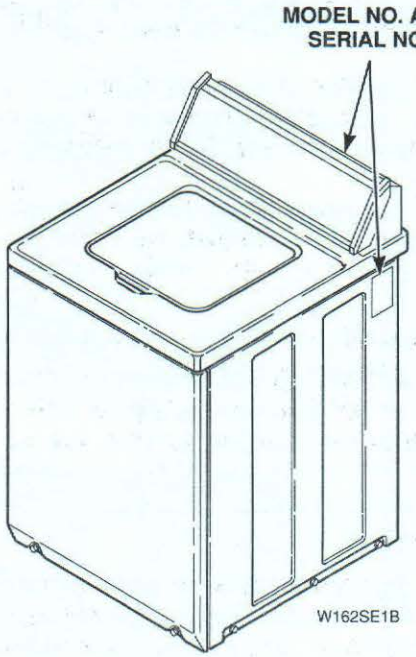
Recognize Safety Symbols, Words and Labels

⚠ DANGER — Immediate hazards which WILL result in serious injury or death.

⚠ WARNING — Hazards or unsafe practices which COULD result in serious injury or death.

⚠ CAUTION — Hazards or unsafe practices which COULD result in minor or moderate injury or product or property damage. W009

Nameplate Location



When calling or writing about your washer, PLEASE GIVE MODEL AND SERIAL NUMBERS. Model and serial numbers are located on nameplate. Nameplate will be in either location shown.

Information in this manual is applicable to these washers.

Washer Model	Timer Model	One-Speed Motor	Two-Speed Motor	Porcelain Washtub (Cubic Foot)	Stainless Steel Washtub (Cubic Foot)
AWM190	X	X		2.7	
AWM270	X	X		2.7	
AWM290	X	X		2.7	
AWM372	X	X		3.0	
AWM373	X	X			
AWM392	X	X		3.0	
AWM393	X	X			3.0
AWM472	X		X	3.0	
AWM473	X		X		3.0
AWM492	X		X	3.0	
AWM493	X		X		3.0
AWM572	X		X	3.0	
AWM573	X		X		3.0
AWM592	X		X	3.0	
AWM593	X		X		3.0
AWM692	X		X	3.0	
AWM693	X		X		3.0

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SECTION I
Grounding

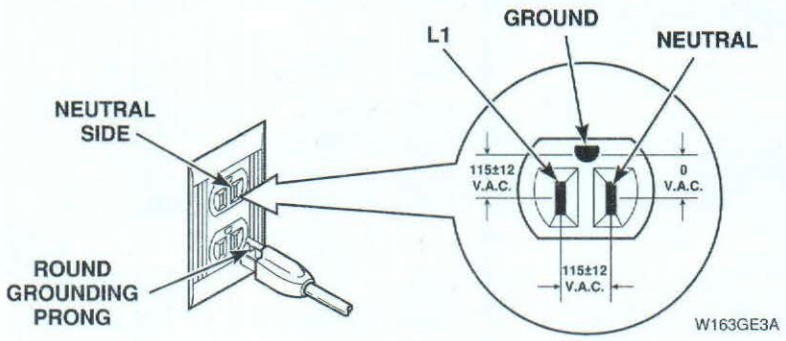
⚠ WARNING

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

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

W003

1. WALL RECEPTACLE POLARITY CHECK, *Figure 1.*



NOTE: Have a qualified electrician check polarity of wall receptacle. If a voltage reading is measured other than that illustrated, the qualified electrician should correct the problem.

Figure 1

2. POWER CORD TO CABINET TOP, CABINET TOP TO CONTROL HOOD MOUNTING BRACKET, PRESSURE SWITCH MOUNTING BRACKET AND GROUND TAB ON GRAPHICS PANEL, *Figure 2.*

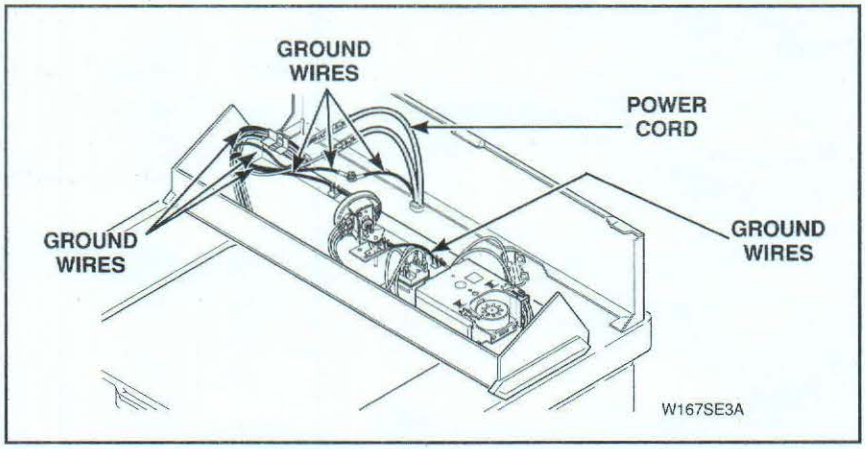


Figure 2

⚠ WARNING

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

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

W003

3. CONTROL HOOD WIRE HARNESS TO TOP LEFT REAR CORNER GUSSET OF CABINET, *Figure 3.*

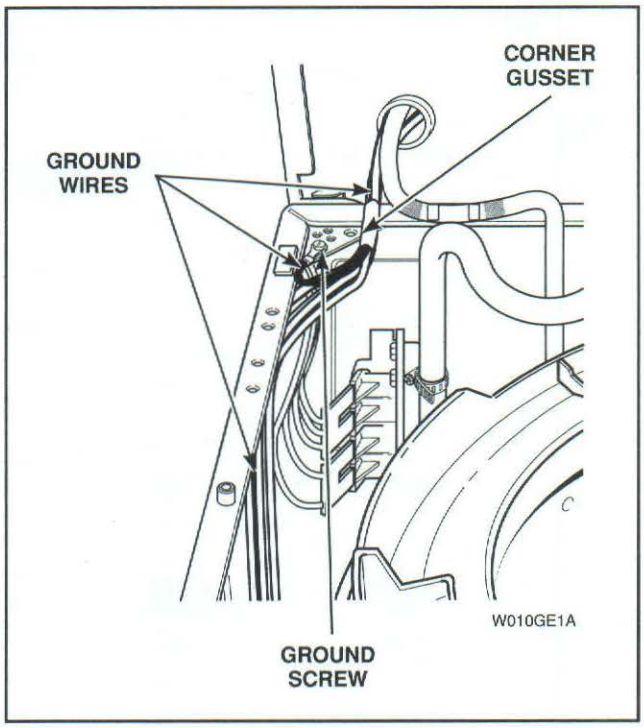


Figure 3

4. WIRE HARNESS TO MOTOR, *Figure 4.*

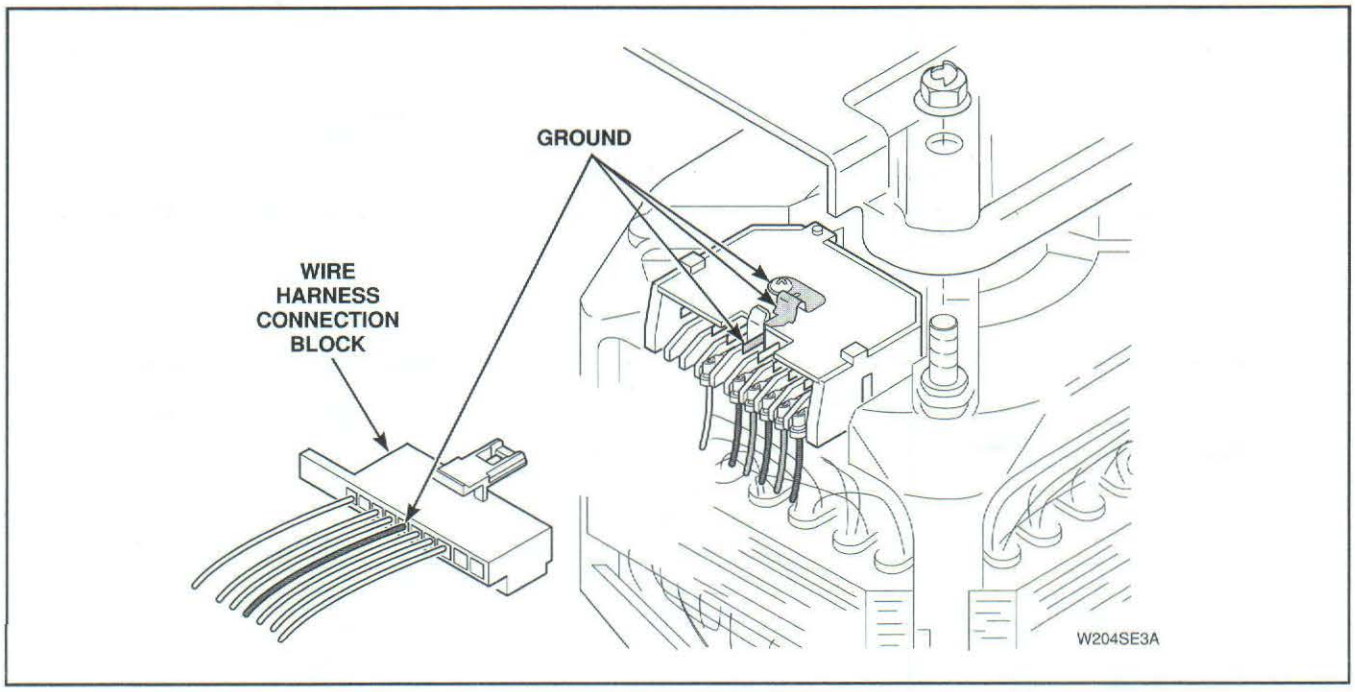


Figure 4

SECTION II
Service Procedures

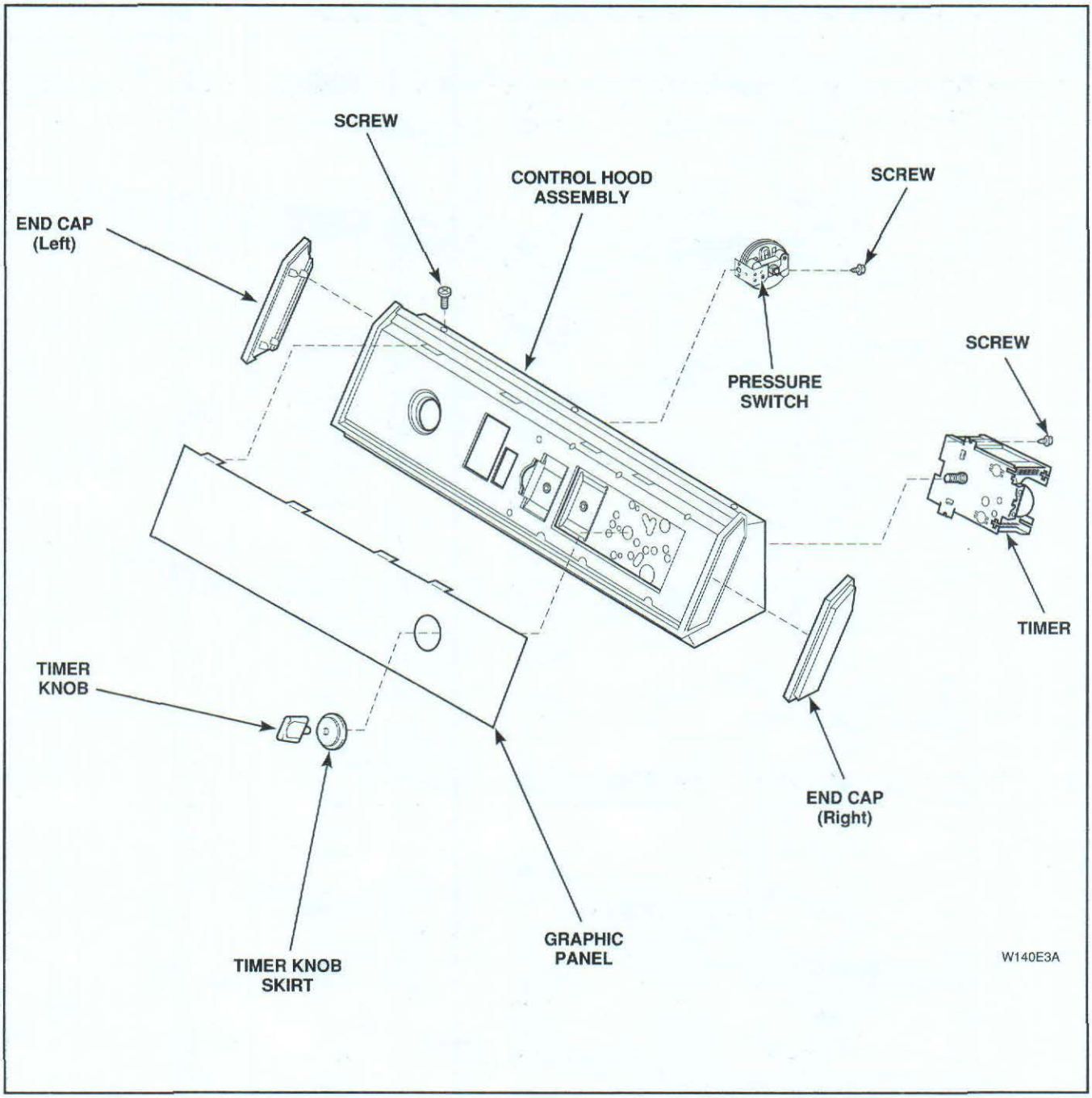


Figure 5

GRAPHIC PANEL, CONTROL HOOD AND CONTROLS
(Model AWM190)

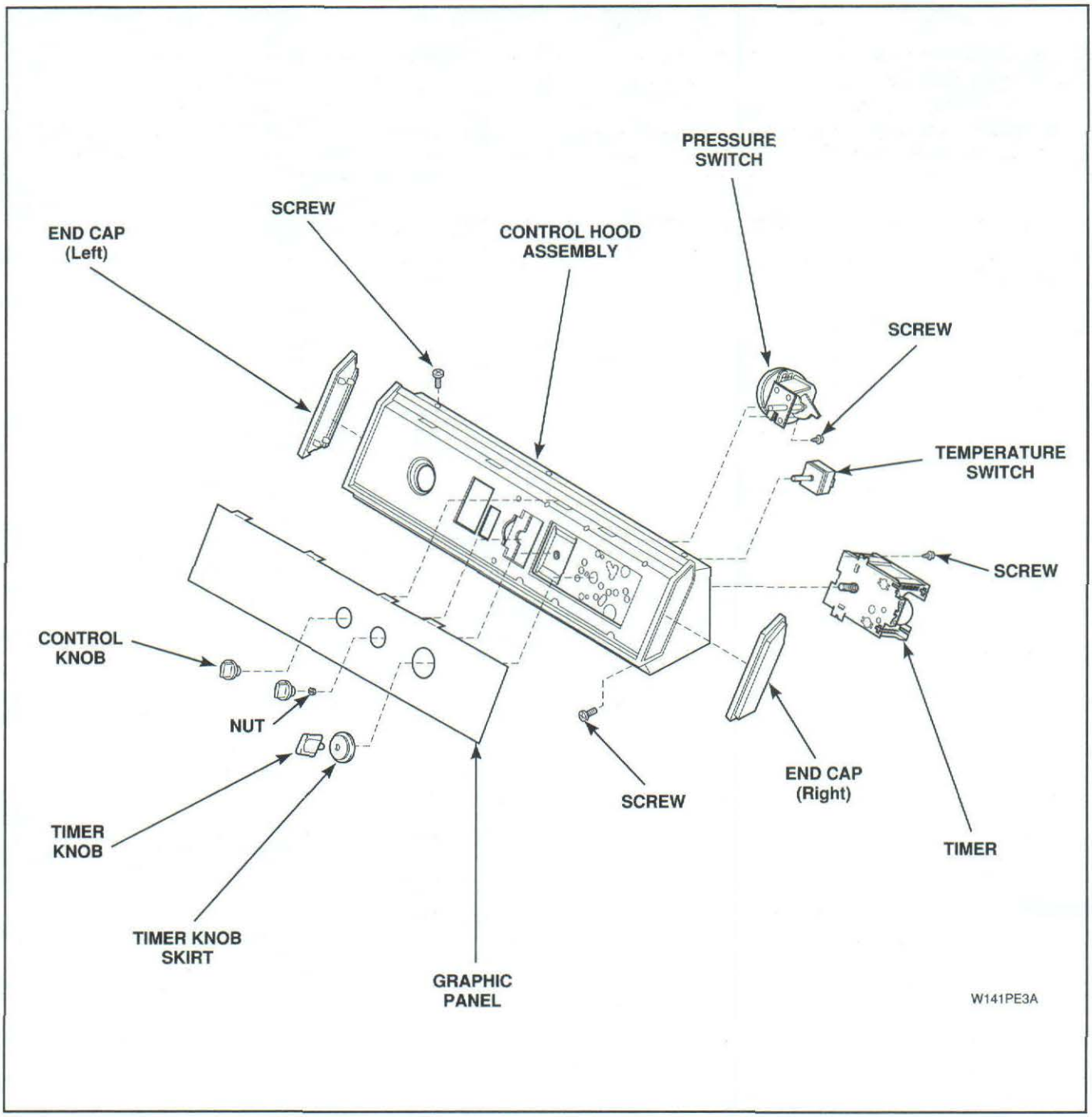


Figure 6

GRAPHIC PANEL, CONTROL HOOD AND CONTROLS
(Models AWM270, AWM290, AWM372, AWM373, AWM392 and AWM393)

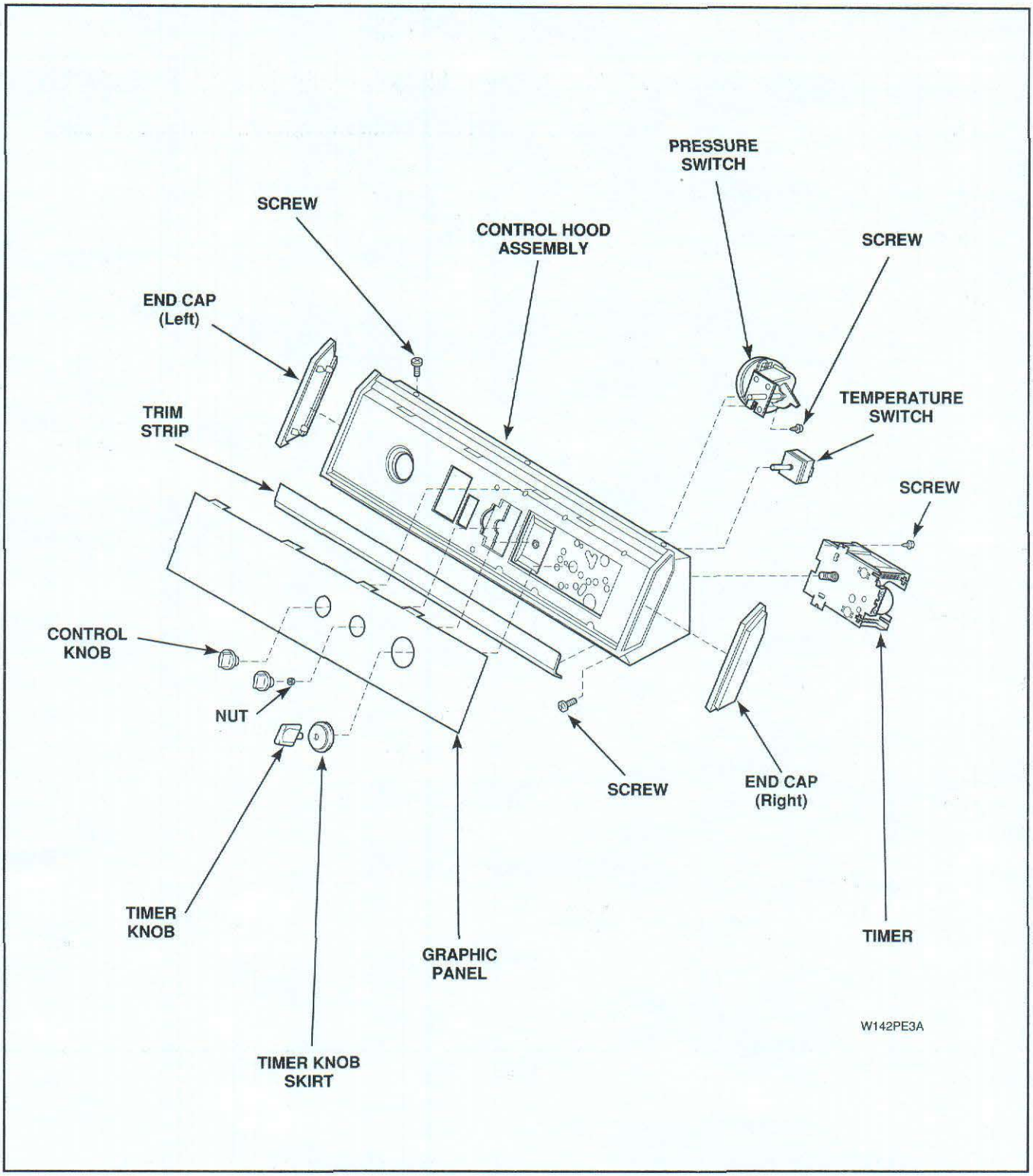


Figure 7

GRAPHIC PANEL, CONTROL HOOD AND CONTROLS
(Models AWM472, AWM473, AWM492, AWM493, AWM572, AWM573, AWM592 and AWM593)

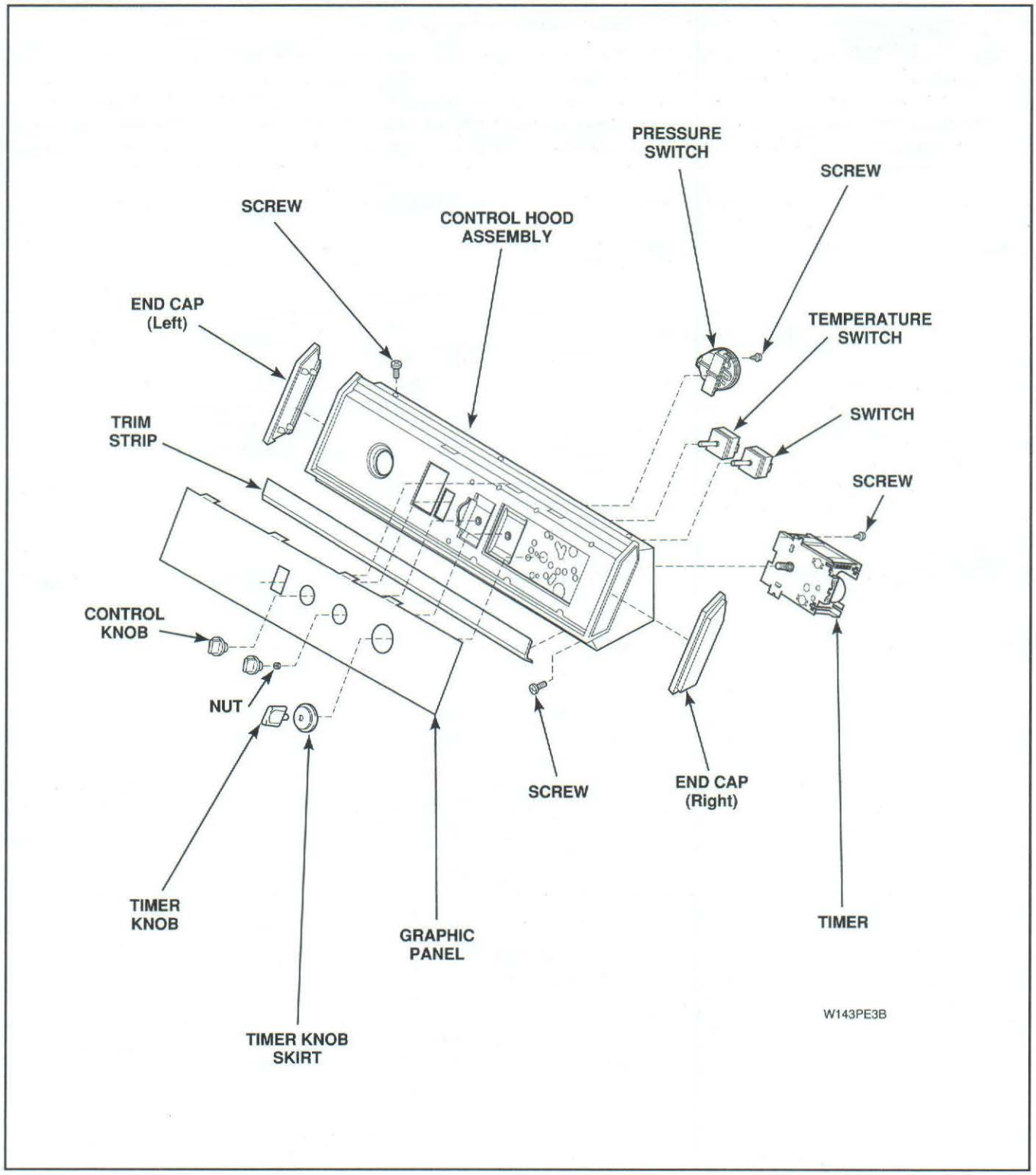


Figure 8

GRAPHIC PANEL, CONTROL HOOD AND CONTROLS
(Models AWM692 and AWM693)

⚠ WARNING

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

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

W003

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

5. CONTROL HOOD ASSEMBLY *(Figures 5 through 8)*

   a. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top.
   b. Disconnect wires from component parts and carefully remove components from hood assembly.

NOTE: Refer to appropriate wiring diagram when rewiring component parts.

TO REMOVE CONTROL HOOD END CAPS

Remove end caps by carefully prying caps out of slots in ends of hood.

6. TIMER (Refer to *Figures 5 through 8*)

   a. Unscrew timer knob from timer shaft (right hand thread), then remove timer knob skirt.
   b. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top.
   c. Pivot hood assembly forward on cabinet top.
   d. Remove two screws holding timer to control hood mounting plate, *Figure 9*.

NOTE: DO NOT attempt to repair timer.

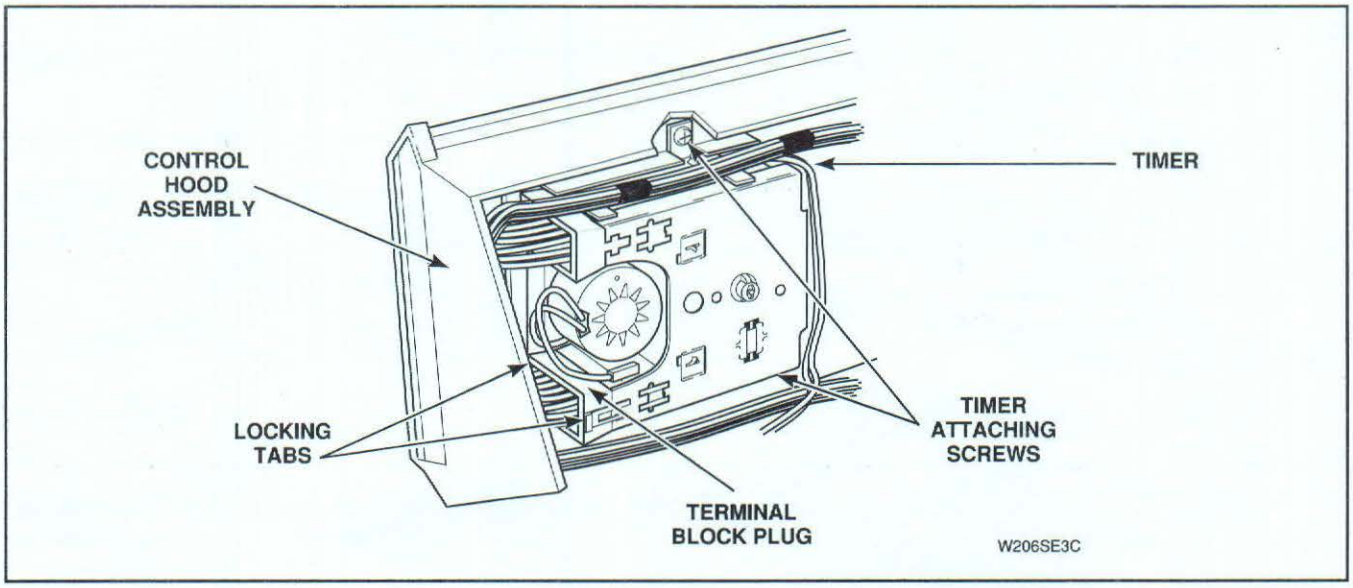


Figure 9

⚠ WARNING

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

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e. Disengage wire harness terminal block plug(s) from timer by pressing in on movable locking tabs (located on each side of terminal block plug) and pulling away from timer, *Figure 10.*

IMPORTANT: To avoid an open circuit, DO NOT pull on terminal block wires when removing blocks from timer as this could damage wires or terminal crimping.

Before attaching wire harness terminal blocks to timer, be sure all male terminals on timer are straight and are capable of accepting terminals from wire harness terminal blocks.

NOTE: When installing timer, be sure timer is installed correctly and is securely mounted to bracket on control hood, *Figure 10.*

f. Seat horizontal and vertical tabs on front plate of timer completely into slots on control hood mounting bracket.
g. Tighten attaching screws between 12 to 18 inch pounds (14 to 21 cm-kg).

IMPORTANT: To avoid timer damage, do not allow timer to be struck on corners, edges of frame, or on timer shaft.

7. TEMPERATURE SWITCH

a. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top.
b. Pivot hood assembly forward on cabinet top.
c. Disconnect wires from switch terminals.
d. Refer to *Figures 5 through 8* for switch removal.

NOTE: Refer to appropriate wiring diagram when rewiring switch.

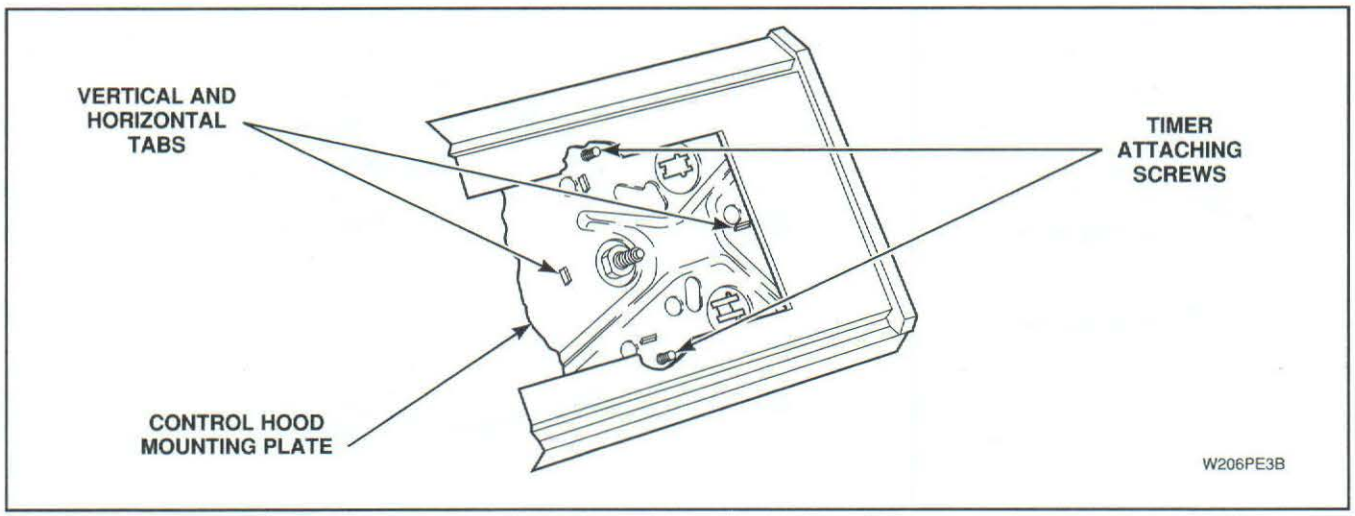

Figure 10

⚠ WARNING

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

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8. PRESSURE SWITCH

a. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top.
b. Pivot hood assembly forward on cabinet top.
c. Disconnect wires from pressure switch.
d. Refer to *Figures 5 through 8* for switch removal.

NOTE: Refer to appropriate wiring diagram when rewiring switch.

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

9. GRAPHIC PANEL
(Refer to *Figures 5 through 8*)

a. Unscrew timer knob from timer shaft (right hand thread), then remove timer knob skirt.
b. Pull knob off switch shaft.
c. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top.
d. Pivot hood assembly forward on cabinet top.
e. Disconnect wires from component parts and carefully remove components from control hood assembly.

NOTE: Refer to appropriate wiring diagram when rewiring component parts.

f. Bend tabs on graphic panel (located inside of control hood) straight out toward rear of hood.
g. Carefully remove graphic panel off front of control hood.

10. LOADING DOOR

a. Open loading door, *Figure 11.*
b. Remove two screws holding left hinge to door and remove hinge and gasket, *Figure 11.*
c. With loading door raised to vertical position, swing left side of door toward front of washer, *Figure 12, procedure one.*
d. Rotate loading door so door is upside down, *Figure 12, procedure two.*
e. Carefully remove loading door, right hinge and bushing from cabinet top, *Figure 12, procedure three.*

NOTE: Reverse procedure when installing door.

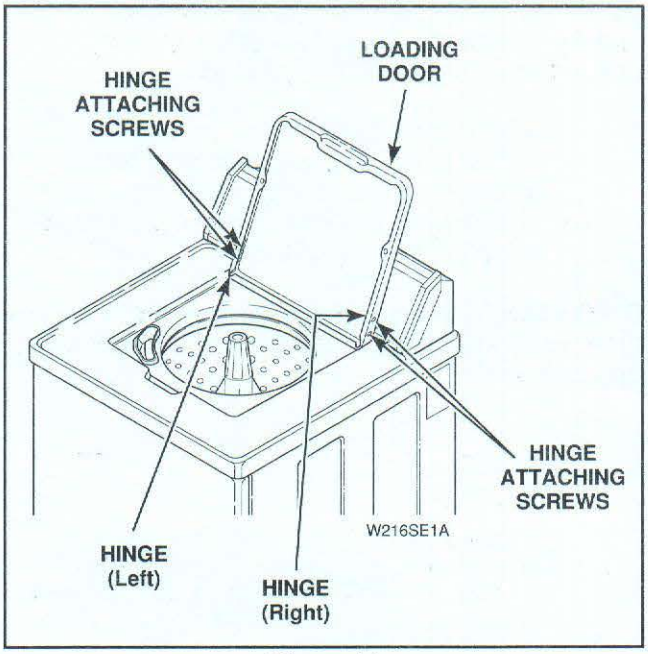

Figure 11

⚠ WARNING

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

W003

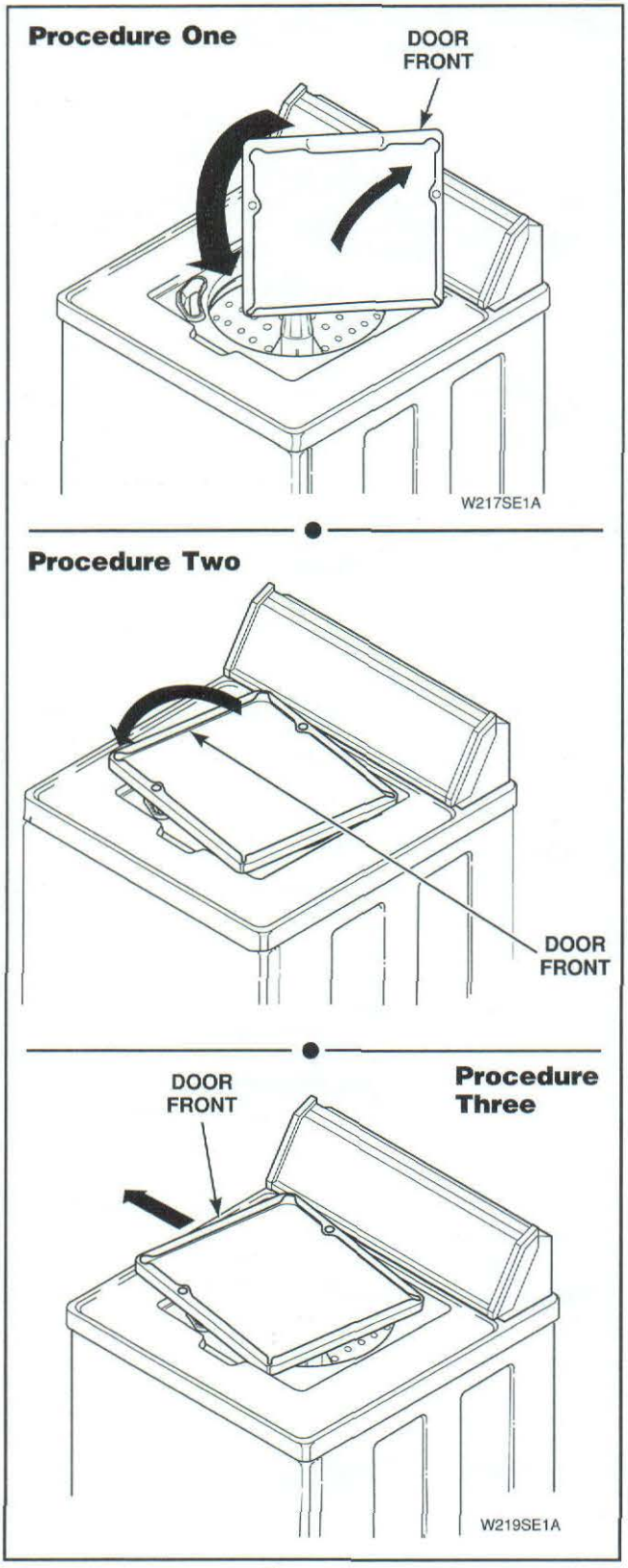

Figure 12

11. AGITATOR

a. Open loading door.
b. Remove agitator by placing two agitator hooks, No. 254P4P, under bottom edge of agitator, *Figure 13.*

IMPORTANT: Hooks should be positioned 180 degrees of each other, and must be placed under agitator vane for greater stability. If hooks are placed between vane area, agitator damage may occur.

c. Using a rocking motion (back and forth) carefully lift agitator off drive bell.

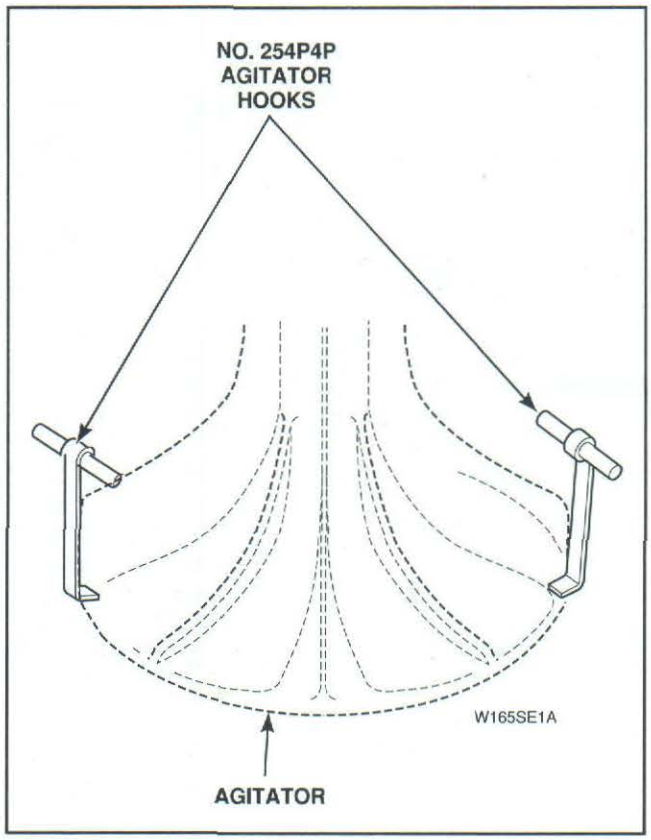

Figure 13

⚠ WARNING

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12. AGITATOR DRIVE BELL AND SEAL ASSEMBLY

IMPORTANT: If water is present in washtub, spin and pump out before attempting to remove drive bell and seal assembly.

a. Open loading door.
b. Remove agitator by placing two agitator hooks, No. 254P4P, under bottom edge of agitator, *Figure 13.*

IMPORTANT: Hooks should be positioned 180 degrees of each other, and must be placed under agitator vane for greater stability. If hooks are placed between vane area, agitator damage may occur.

c. Using a rocking motion (back and forth) carefully lift agitator off drive bell.
d. Remove screw and "O" ring washer from top side of drive bell.

NOTE: No. 253P4 Drive Bell Tool may be required to remove drive bell from transmission shaft, if not, proceed to step i.

e. Back bolt out of tool approximately three quarters of the way, *Figure 14.*
f. Place tool over drive bell, making sure indent on jaws line up with wide slots on bell, *Figure 15.*
g. Screw bolt down through hole in top of bell until bolt bottoms out in hole in shaft.
h. Place lip of each jaw under bottom edge of drive bell, making sure indent on jaws line up with wide slots on bell. Then tighten two wing nuts to hold jaws firmly against drive bell, *Figure 15.*

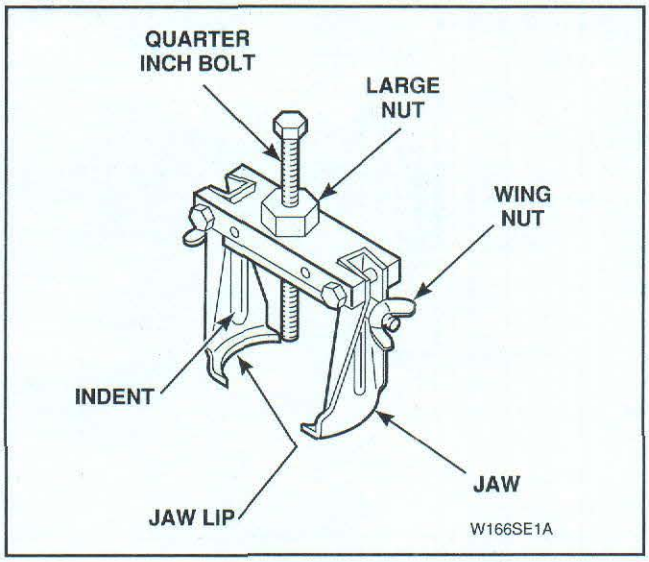

Figure 14

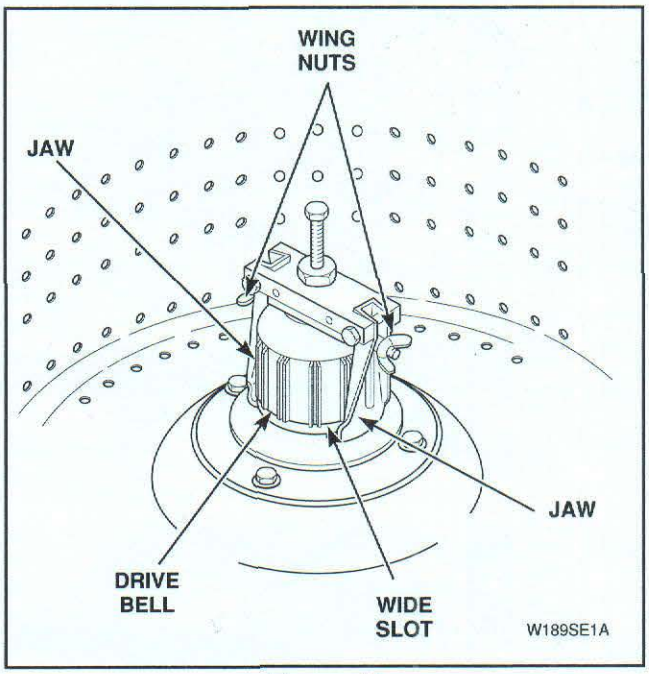

Figure 15

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W003

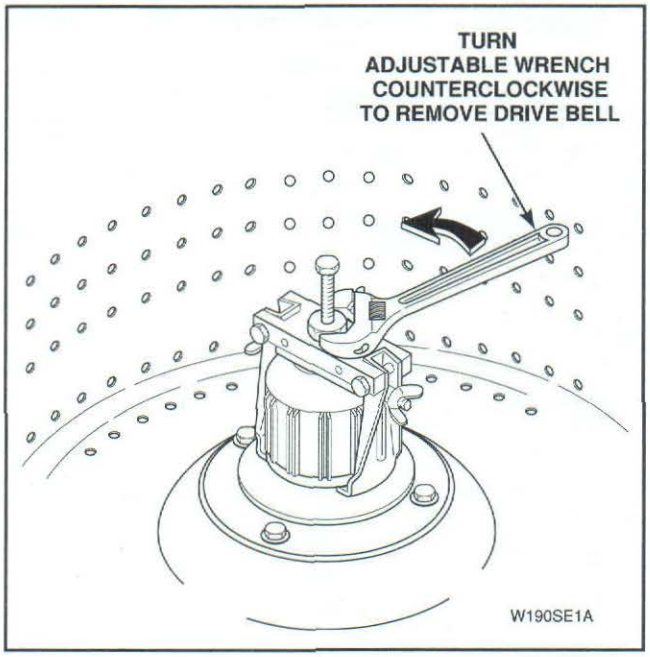

Figure 16

i. Use an adjustable wrench, turn large nut on tool **COUNTERCLOCKWISE** to pull drive bell from transmission shaft, *Figure 16.*

IMPORTANT: If large nut is turned clockwise when pulling drive bell, you will twist off quarter inch bolt.

j. Turn quarter inch bolt out of transmission shaft and remove tool and drive bell from washer.
k. Loosen two wing nuts and remove drive bell from tool.
l. Remove old seal from hub by placing a flat blade screwdriver between bottom edge of seal and hub, use washtub bolts as a pry area to pop off lower seal bead. Then grasp seal and pull straight up freeing upper seal bead.
m. Thoroughly clean any foreign material from seal surface area of hub and bronze bearing, *Figure 17.*
n. Lubricate new seal with liquid soap or soapy water to aid in assembling seal onto hub.
o. Place new drive bell seal on hub, *Figure 18*, and carefully push seal into position using large end of No. 274P4 Seal Tool, *Figure 19.*

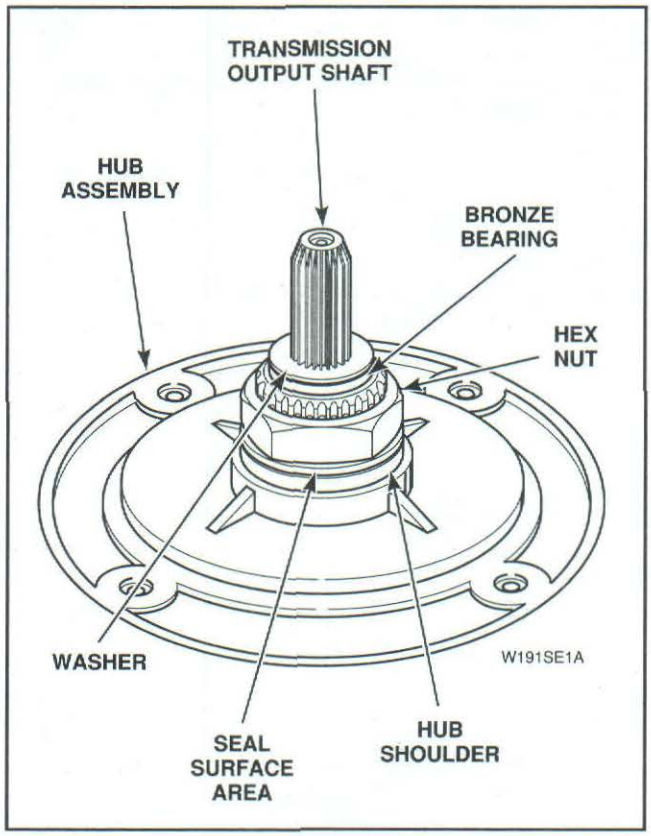

Figure 17

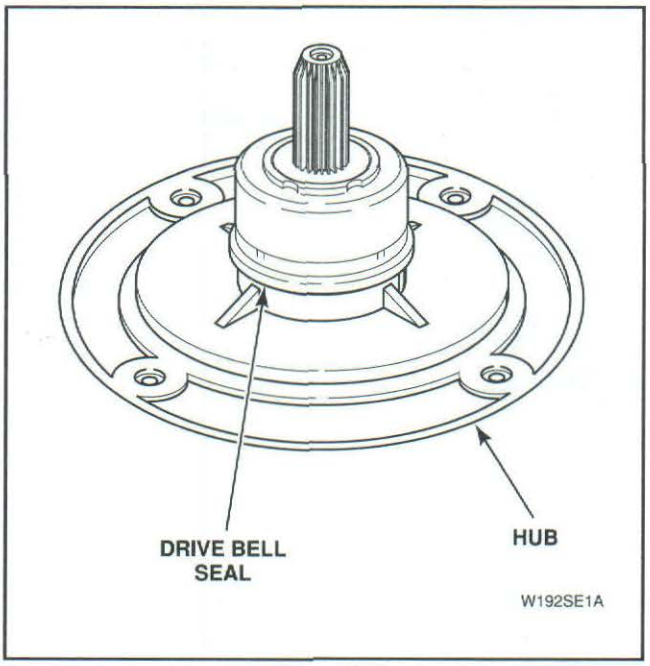

Figure 18

(continued)

⚠ WARNING

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IMPORTANT: Use a small pocket mirror to check entire circumference of seal flange making sure seal is pressed down against shoulder on hub; there should be no gap!

p. Turn seal tool upside-down and place small end over output shaft and onto washer, *Figure 20.*

q. Push down on tool with a quick motion until tool bottoms out and top of seal is fully seated, *Figure 20.*

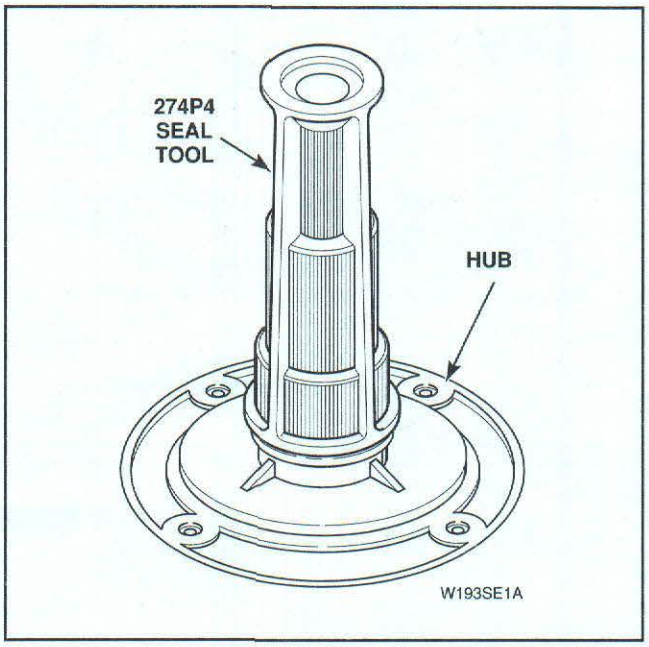

Figure 19

TO INSTALL NEW DRIVE BELL

a. Position new drive bell over transmission shaft. Rotate drive bell until splines in drive bell line up with splines on transmission shaft.

b. Push drive bell down on transmission shaft.

c. Place new "O" Ring onto new shoulder screw. Thread shoulder screw down through hole in top of drive bell and into transmission shaft. NOT reuse old screw or "O" ring.

NOTE: Torque new shoulder screw to approximately 75 inch pounds.

d. Place agitator on top of drive bell. Slowly rotate agitator until fingers on underside of agitator line up with large slots on drive bell.

e. A sharp blow on top of agitator, with palm of your hand, will force agitator down onto drive bell, allowing fingers on underside of agitator to lock under bottom edge of drive bell.

NOTE: Do not push agitator onto drive bell any further than necessary.

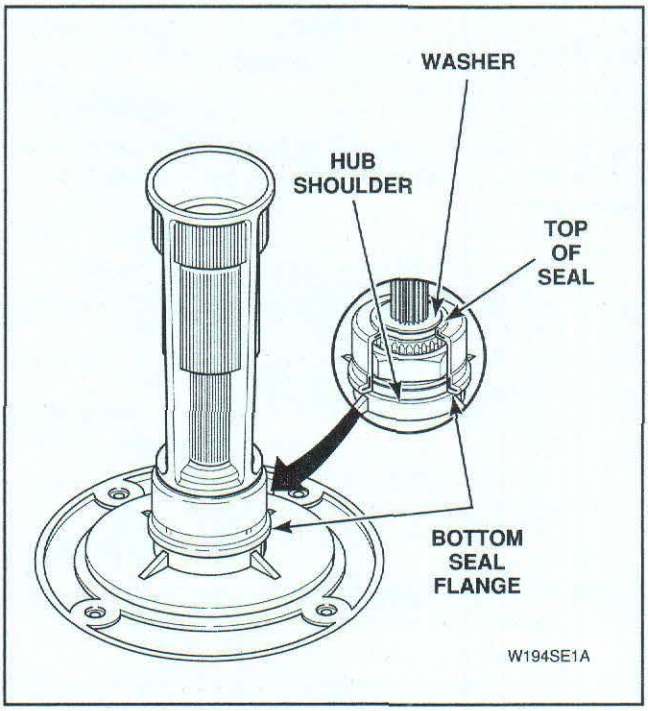

Figure 20

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13. FRONT PANEL (*Figure 21*)

a. Remove two screws from bottom edge of front panel.
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top.

Hold-Down Clips

Compress hold-down clips enough to remove them from slots in top flange of panel.

Guide Lugs

Remove screws holding guide lugs to side flanges of front panel.

Brace

Remove screws holding brace to side flanges of front panel. Remove brace from front panel by swinging one end toward bottom of front panel and remove brace.

14. MOTOR AND MOUNTING BRACKET

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top.

IMPORTANT: There will always be some water that will remain in outer tub, therefore, before removing hoses from pump, hoses must be pinched off or drained to prevent water spillage.

c. Loosen hose clamps and remove hoses from pump assembly, *Figure 22.*
d. Unhook idler spring from clip on front of motor mounting bracket, *Figure 22.*

IMPORTANT: Use care when releasing idler lever tension. If idler spring is overstretched, washer operation will be affected.

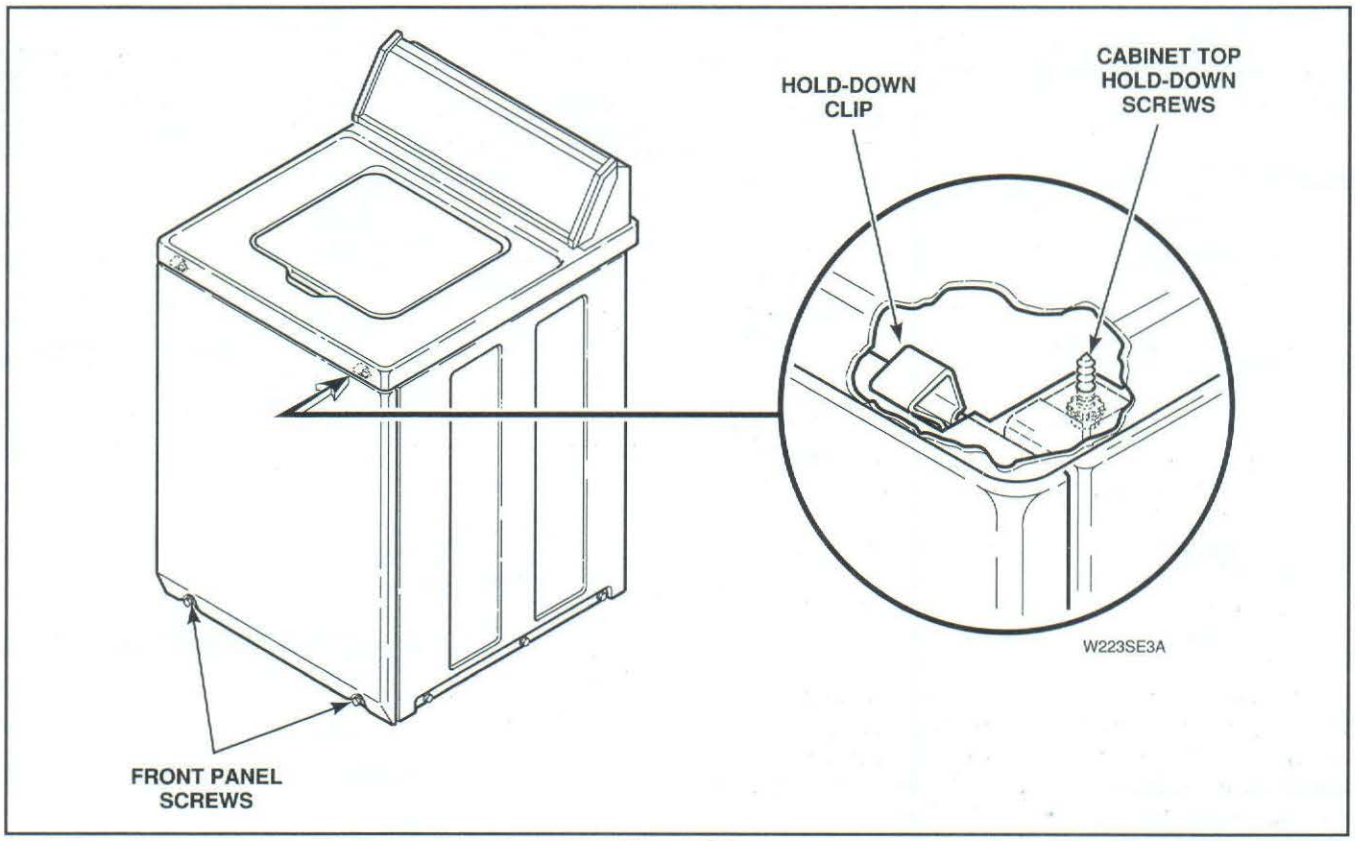

Figure 21

(continued)

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W003

e. Reach in and around right side of motor and run belt off right side of large drive pulley, *Figure 22.*
f. Disconnect wire harness from motor switch by pressing down on locking tab on top of connection block and at the same time pull connection block away from motor switch, *Figure 23.*
g. Remove four screws holding motor and mounting bracket to washer base, *Figure 23,* then lift complete assembly out of washer.

IMPORTANT: Carefully lay motor on its side. Observe belt configuration around rear pump leg. Belt MUST encircle rear pump leg when reassembling, *Figure 24.*

PUMP AND BELT REMOVAL

a. Remove three screws holding pump assembly to motor, *Figure 24.*

REASSEMBLY OF PUMP AND BELT

IMPORTANT: Install pump and belt together. Drive belt MUST be replaced with belt No. 28808 (special clutch-type belt) for proper washer operation.

a. Clean any corrosion or foreign material from motor shaft that will be contacting the double "D" slot in pump impeller.
b. Apply a thin film of No. 21814 Lubricant to end and sides of motor shaft. This lubricant helps keep moisture out of the hub area and retards corrosion.
c. Align pump impeller hub with motor shaft. Make sure belt encircles rear pump leg, carefully push pump onto motor shaft so three pump legs bottom out in the embosses on motor housing before screws are tightened, *Figure 24.*
d. Tighten three screws to 35 inch pounds max. DO NOT overtighten screws!
e. Reinstall motor and pump assembly into washer.

IMPORTANT: After installing motor and pump assembly in washer and all hoses have been reconnected, add at least a quart of water to washtub to lubricate pump seals. Running a pump without water will ruin its seals.

MOTOR REMOVAL

Remove nuts, steel washers, spacers and rubber mounts holding motor to mounting bracket, *Figure 25.* Lift motor off mounting bracket and remove balance of rubber mounts and steel washers from motor mounting studs.

IMPORTANT: When installing motor on mounting bracket, position motor with switch facing toward left side of mounting bracket.

NOTE: Refer to *Figure 25* for motor and mounting bracket assembly sequence.

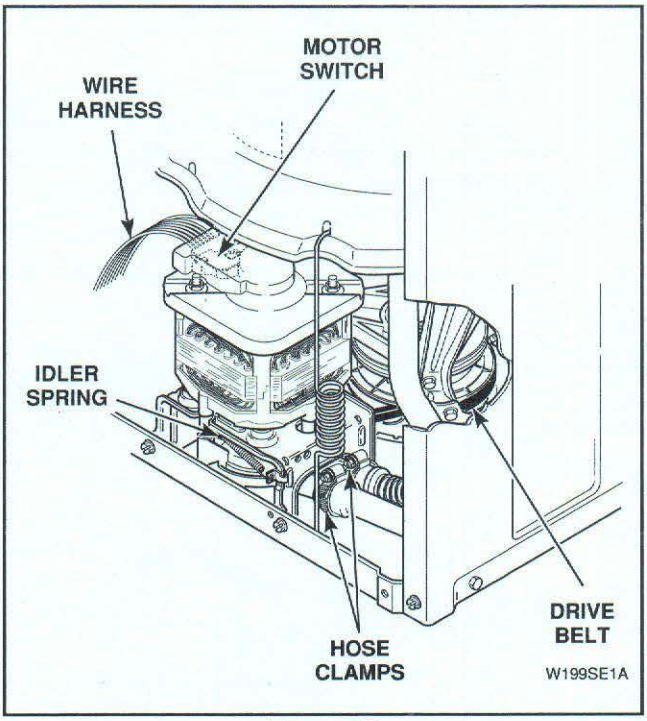


Figure 22

⚠ WARNING

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

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

W003

15. IDLER LEVER AND PULLEY

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top.

IMPORTANT: There will always be some water that will remain in outer tub, therefore, before removing hoses from pump, hoses must be pinched off or drained to prevent water spillage.

c. Loosen hose clamps and remove hoses from pump assembly, *Figure 22.*
d. Unhook idler spring and helper spring from idler lever, *Figure 25.*

IMPORTANT: Use care when removing idler spring and helper spring. If idler spring or helper spring are overstretched, washer operation will be affected.

e. Reach in and around right side of motor and run belt off right side of large drive pulley, *Figure 22.*
f. Disconnect wire harness from motor switch by pressing down on locking tab on top of connection block and at the same time pull connection block away from motor switch, *Figure 23.*
g. Remove four screws holding motor assembly to washer base, *Figure 23*, then lift complete assembly out of water.
h. Remove nut, washer and bolt holding idler lever and pulley to motor mounting bracket, *Figure 25.*

NOTE: Refer to *Figure 25* for idler lever and pulley assembly sequence.

i. Apply a light film of No. 21814 Lubricant to area of idler lever that makes contact with motor mounting bracket.

IMPORTANT: DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.

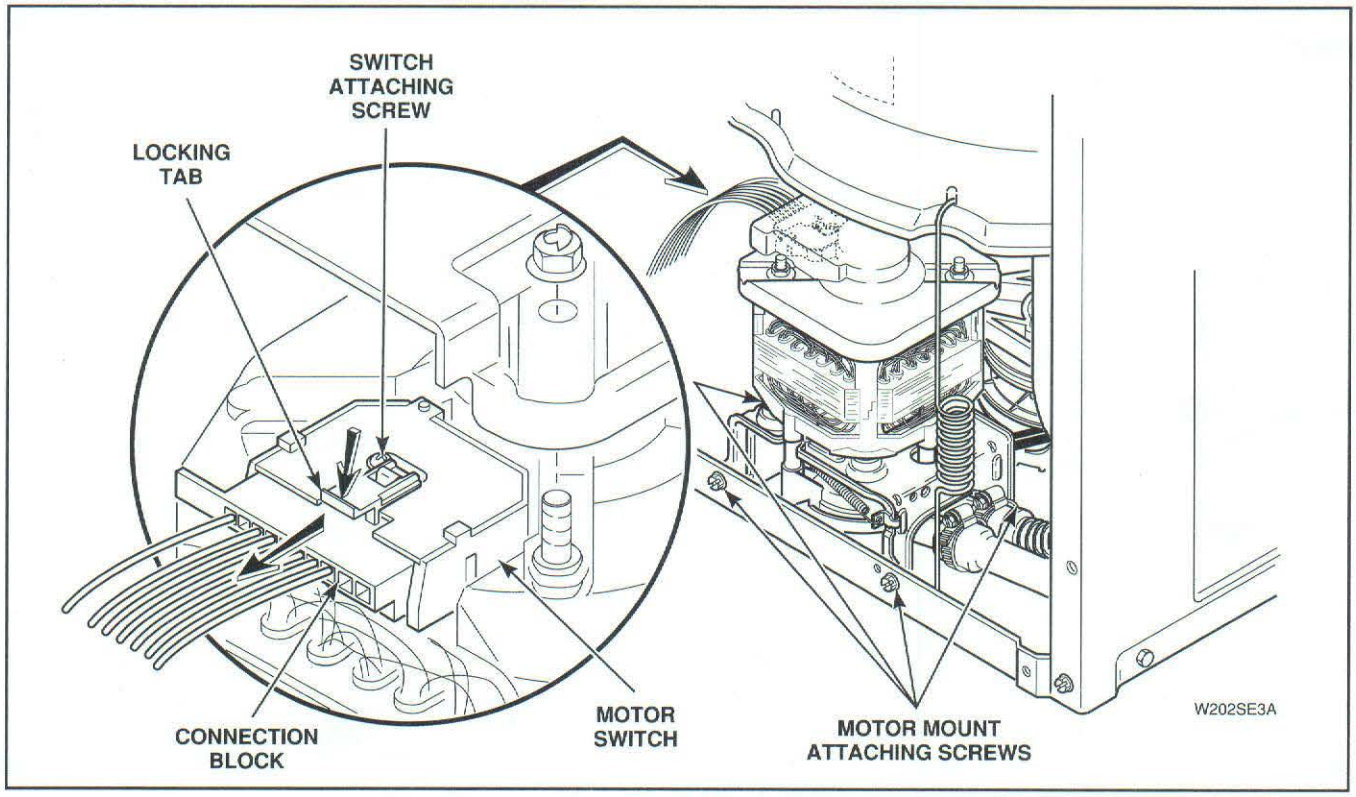


Figure 23

⚠ WARNING

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

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

W003

16. MOTOR DRIVE PULLEY

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top.

IMPORTANT: There will always be some water that will remain in outer tub, therefore, before removing hoses from pump, hoses must be pinched off or drained to prevent water spillage.

c. Loosen hose clamps and remove hoses from pump assembly, *Figure 23.*
d. Unhook idler spring and helper spring from idler lever, *Figure 25.*

IMPORTANT: Use care when removing idler spring and helper spring. If idler spring or helper spring are overstretched, washer operation will be affected.

e. Reach in and around right side of motor and run belt off right side of large drive pulley, *Figure 22.*
f. Disconnect wire harness from motor switch by pressing down on locking tab on top of connection block and at the same time pull connection block away from motor switch, *Figure 23.*
g. Remove four screws holding motor assembly to washer base, *Figure 23,* then lift complete assembly out of washer.
h. Lay motor assembly on its side.

NOTE: To remove pulley, support motor shaft (to prevent bending shaft) and drive out pulley roll pin, *Figure 25.*

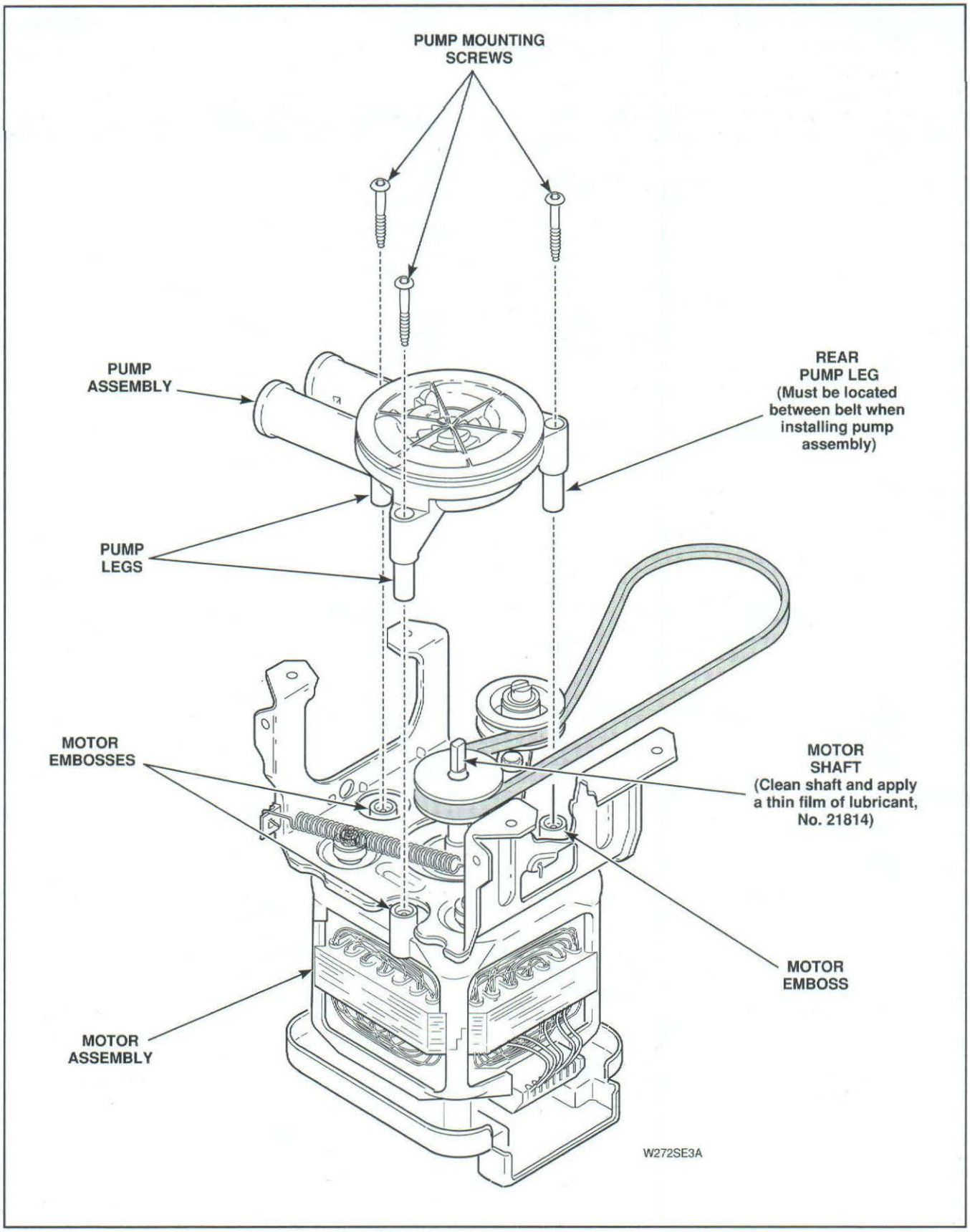

PUMP MOUNTING SCREWS
PUMP ASSEMBLY
REAR PUMP LEG (Must be located between belt when installing pump assembly)
PUMP LEGS
MOTOR EMBOSSES
MOTOR SHAFT (Clean shaft and apply a thin film of lubricant, No. 21814)
MOTOR EMBOSS
MOTOR ASSEMBLY
W272SE3A

Figure 24

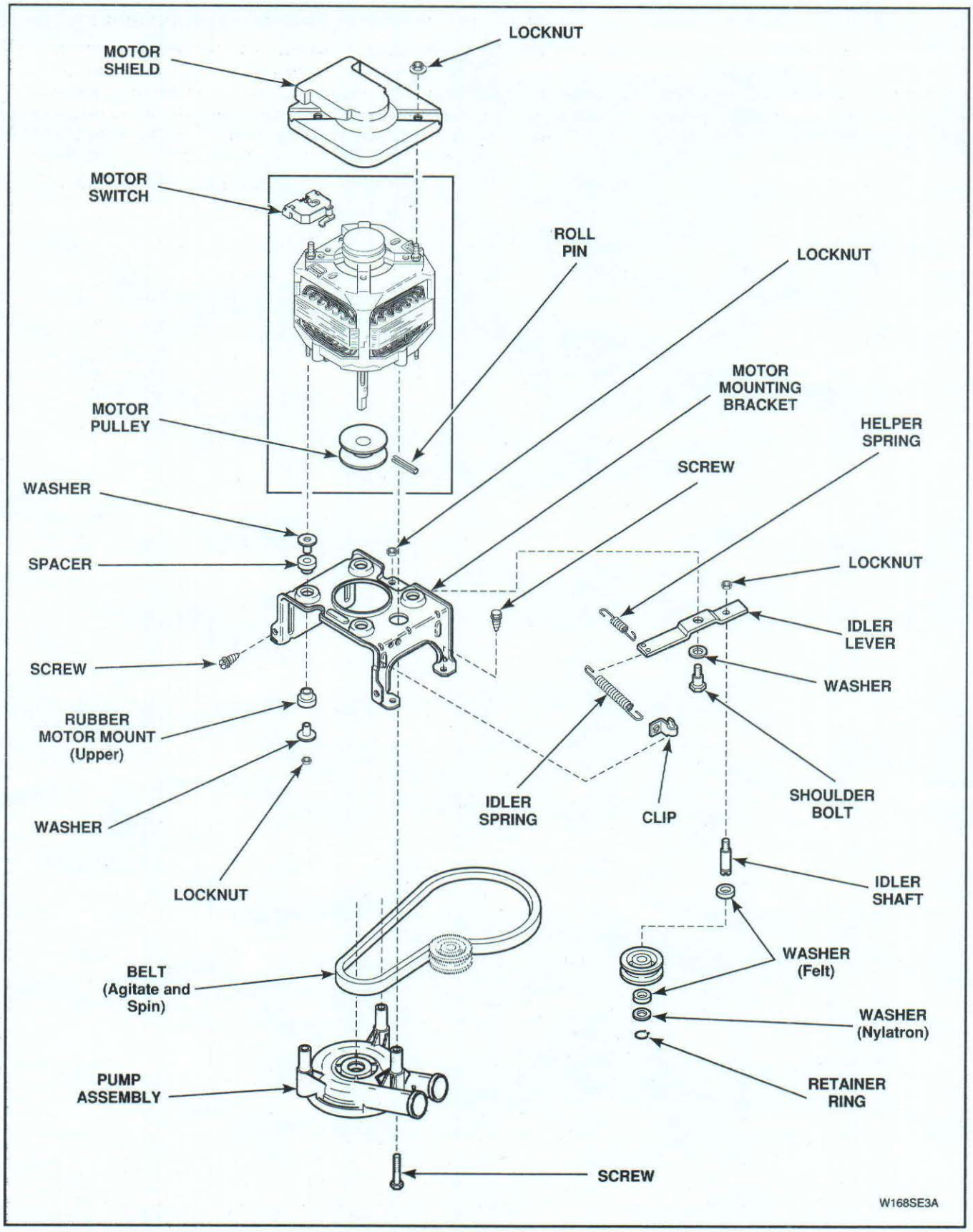

LOCKNUT
MOTOR SHIELD
MOTOR SWITCH
ROLL PIN
LOCKNUT
MOTOR MOUNTING BRACKET
MOTOR PULLEY
HELPER SPRING
SCREW
WASHER
SPACER
LOCKNUT
IDLER LEVER
SCREW
WASHER
RUBBER MOTOR MOUNT (Upper)
WASHER
IDLER SPRING
CLIP
SHOULDER BOLT
LOCKNUT
IDLER SHAFT
WASHER (Felt)
BELT (Agitate and Spin)
WASHER (Nylatron)
PUMP ASSEMBLY
RETAINER RING
SCREW
W168SE3A

Figure 25

⚠ WARNING

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

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

W003

17. MOTOR SWITCH

a. Remove two screws from bottom edge of front panel, *Figure 21*.
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top.
c. Remove two locknuts holding motor shield to motor, *Figure 25*, and remove shield.
d. Disconnect wire harness from motor switch by pressing down on locking tab on top of connection block and at the same time pull connection block away from motor switch, *Figure 23*.

IMPORTANT: To avoid an open circuit, DO NOT pull on terminal block wires when removing block from motor switch as this could damage wires or connection crimpings. Before attaching wire harness connection block to motor switch, make sure all male terminals on motor switch are straight and are capable of accepting terminals from wire harness connection block.

e. Remove screw holding motor switch to motor, *Figure 23*, and remove switch.
f. Disconnect internal motor leads from motor switch terminals.

NOTE: Refer to Wiring Schematics, Page 76 or 77, for rewiring internal switch wires.

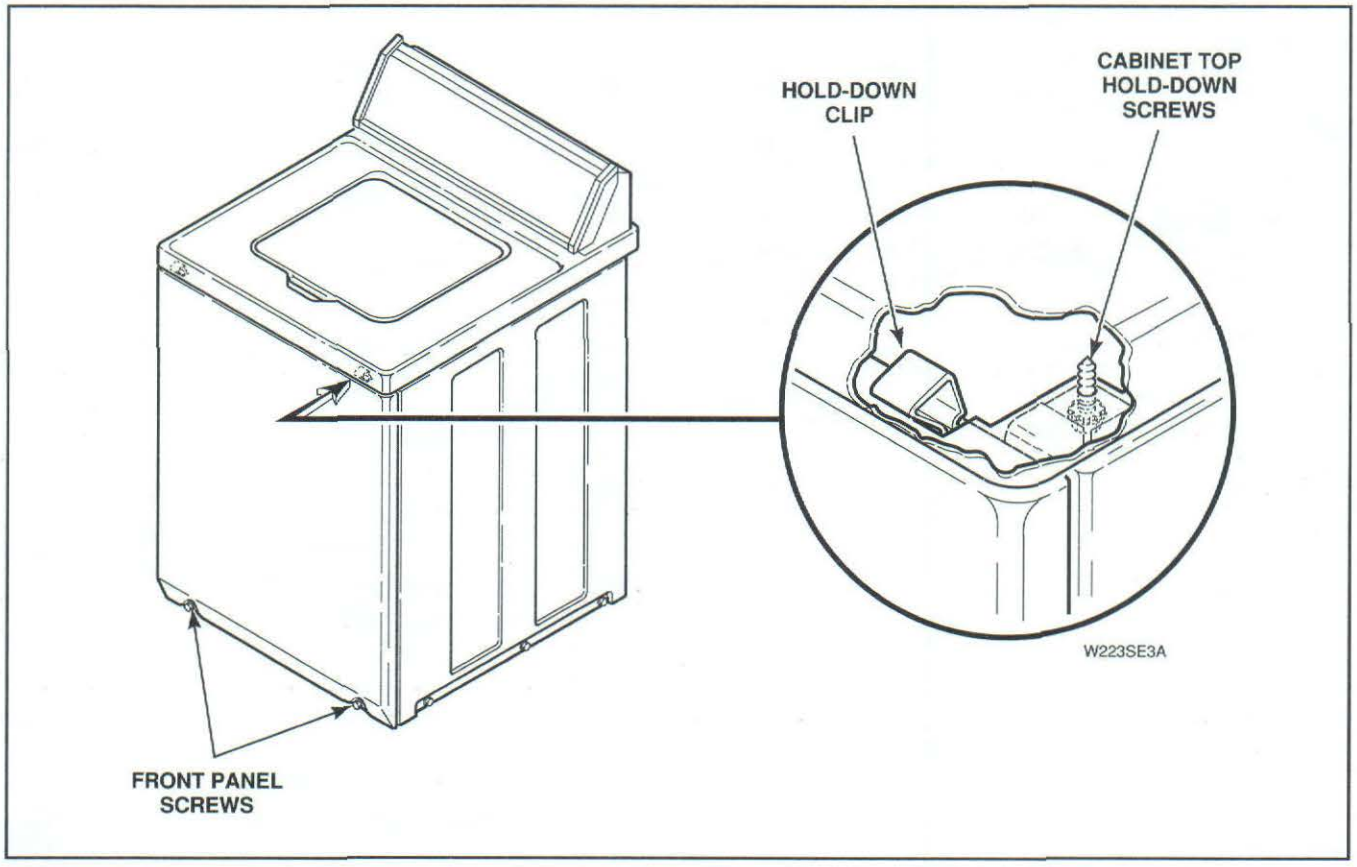


Figure 26

⚠ WARNING

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

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

W003

18. CABINET TOP ASSEMBLY

a. Remove two screws from bottom edge of front panel, *Figure 26.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 26.*
c. Remove two cabinet top hold-down screws, *Figure 26.*
d. If area or space permits, tape loading door closed and lift cabinet top to a vertical position by hinging it on the rear hold-down bracket.

NOTE: Cabinet top is self-supporting, however, a small chain may be used for additional support, *Figure 27.*

IMPORTANT: Before lowering cabinet top into position, pivot outer tub forward far enough to prevent damaging (bending) the out-of-balance switch lever.

TO REMOVE CABINET TOP FROM WASHER

a. Repeat steps "a", "b" and "c" above.
b. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top, *Figure 28.*
c. Disconnect hose from pressure switch and push hose down through hole in cabinet top.
d. Disconnect wire harness at disconnect blocks.
e. Reinstall control hood assembly.
f. Tape loading door closed.
g. Lift front of cabinet top slightly and pull forward to disengage from rear hold-down brackets.
h. Pull top forward far enough to permit disconnecting green ground wires from top left rear corner of washer cabinet, *Figure 29.*
i. Disconnect wires from mixing valve solenoids at quick disconnect blocks, *Figure 29.*

NOTE: Refer to appropriate wiring diagram when rewiring mixing valve solenoids.

j. Carefully lift cabinet top off washer and set alongside the washer cabinet on protective padding.

IMPORTANT: DO NOT lay cabinet top flat because it will damage door switch actuator arm or lever. When reinstalling cabinet top and before lowering top into position, pivot outer tub forward far enough to prevent damaging (bending) the out-of-balance switch lever.

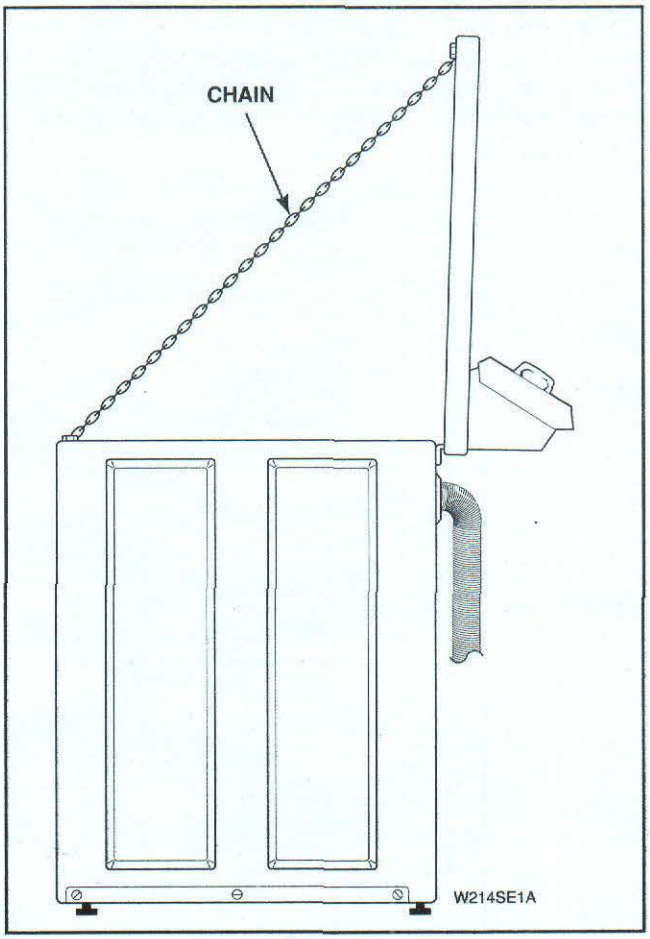


Figure 27

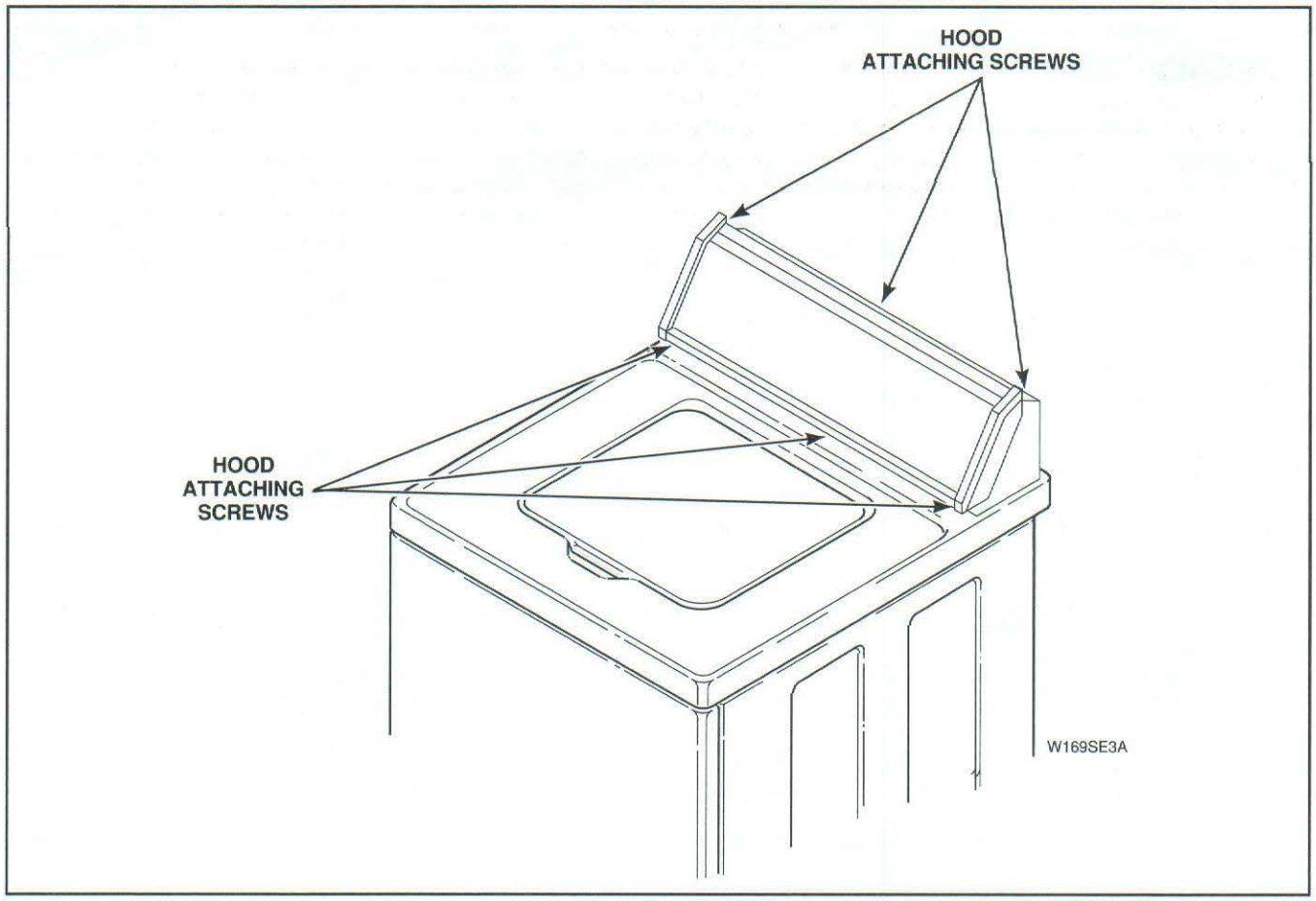


Figure 28

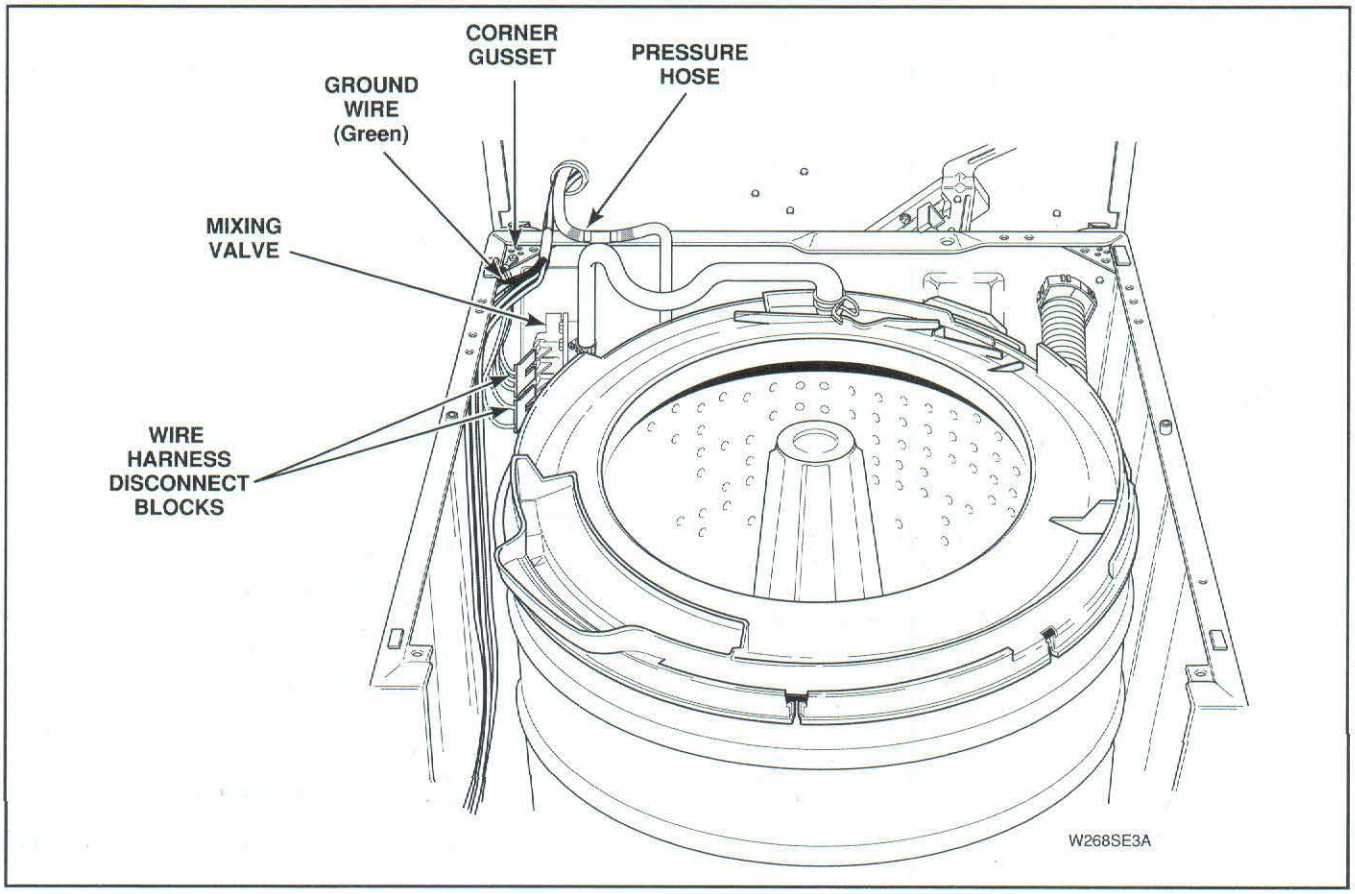


Figure 29

⚠ WARNING

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

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

W003

19. OUT-OF-BALANCE SWITCH ASSEMBLY

a. Remove six screws (3 on top and 3 at lower front) holding hood assembly to control hood rear panel and cabinet top, *Figure 28*, then set hood assembly on cabinet top on protective padding..
b. Disconnect wires from switch.
c. Move switch lever off switch plunger, *Figure 31*, by moving lever back under cabinet top.
d. Remove switch as follows:

Switch Clip Models:

1. Place blade of a small screwdriver, or similar device, between front of switch and switch holder, *Figure 30.*
2. Slide blade to the left to disengage switch clip tab holding switch to switch holder, *Figure 30.*
3. Disengage opposite end of switch clip tab from holder and remove switch out through opening in cabinet top.
4. Remove switch clip from old switch and place through holes in new switch, *Figure 32.*
5. Place switch tool, Part No. 272P4, over switch clip tabs as shown in *Figure 33.*
6. Carefully place switch down in to switch holder, *Figure 34;* line up the switch clip tabs with slots in switch holder, *Figure 34.*
7. Place a putty knife, or similar device, on backside of switch clip, *Figure 35;* push on switch clip as you carefully pull the switch tool out between switch and holder, allowing switch clip tabs to engage with slots in holder, *Figure 35.*

Tapping Screw Models:

1. Place a thin piece of metal or paper in front of switch to keep screws from falling through holes in switch holder.
2. Using a 13/16" open-end wrench retract tapping screws securing switch to switch holder, *Figure 30.*
3. Withdraw switch and screws from switch holder.
4. Insert tapping screws into holes in switch.
5. Place a thin piece of metal or paper in front of switch to keep screws from falling through holes in switch holder.
6. Place switch assembly into switch holder, *Figure 30.*
7. Tighten tapping screws using a 13/16" open-end wrench and torque to 10 inch/pounds.

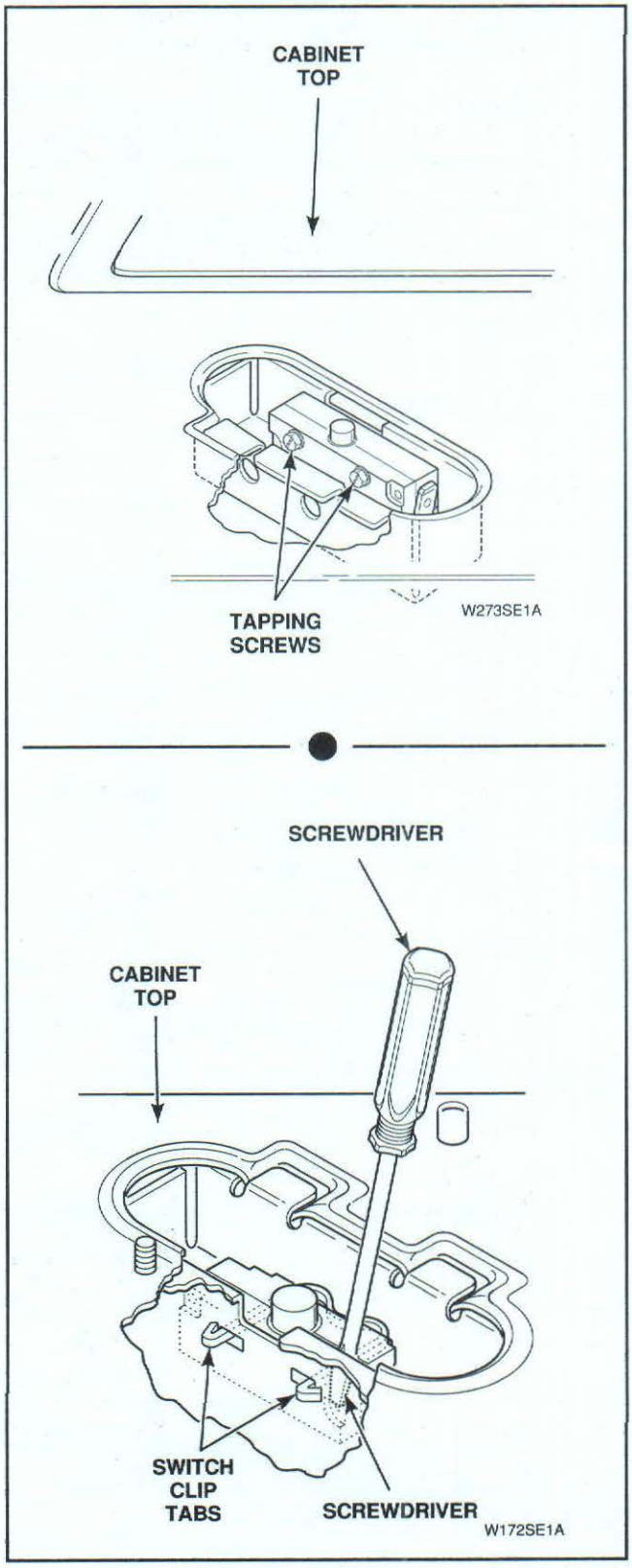


Figure 30

(continued)

⚠ WARNING

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

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

W003

NOTE: Make sure switch is secure within holder by wiggling it back and forth.

e. Reset switch lever by raising and lowering loading door.

NOTE: Be sure switch lever tab locates itself on top of switch plunger.

f. Reconnect wires to switch terminals.

NOTE: Refer to appropriate wiring diagram when rewiring switch.

g. Reinstall control hood assembly on cabinet top.

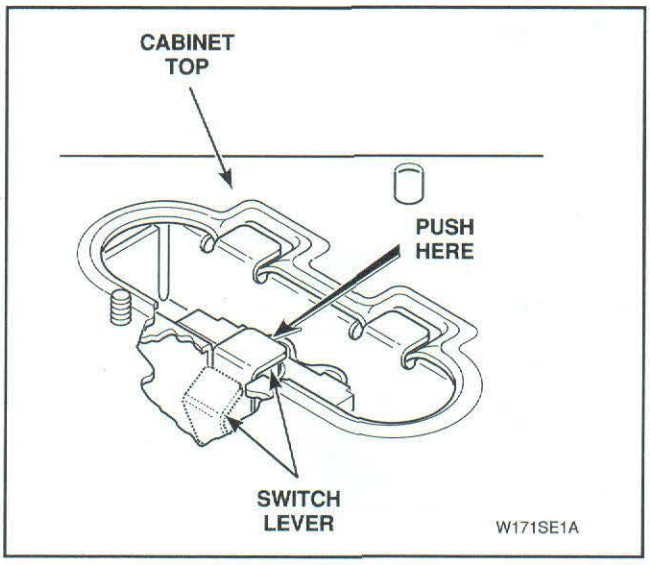


Figure 31

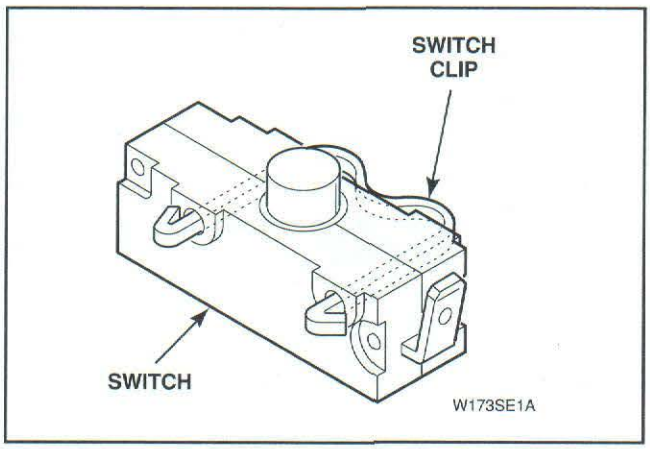


Figure 32

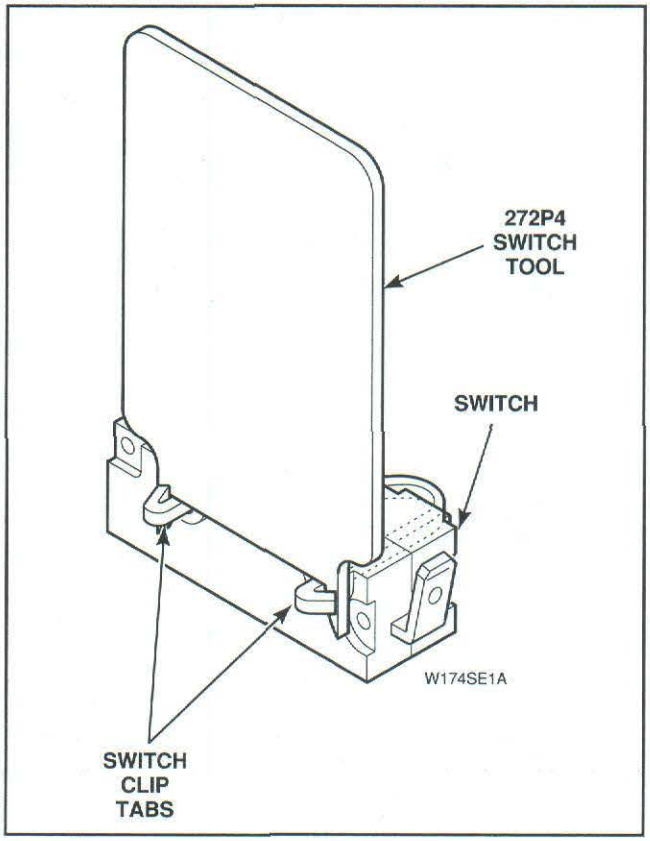


Figure 33

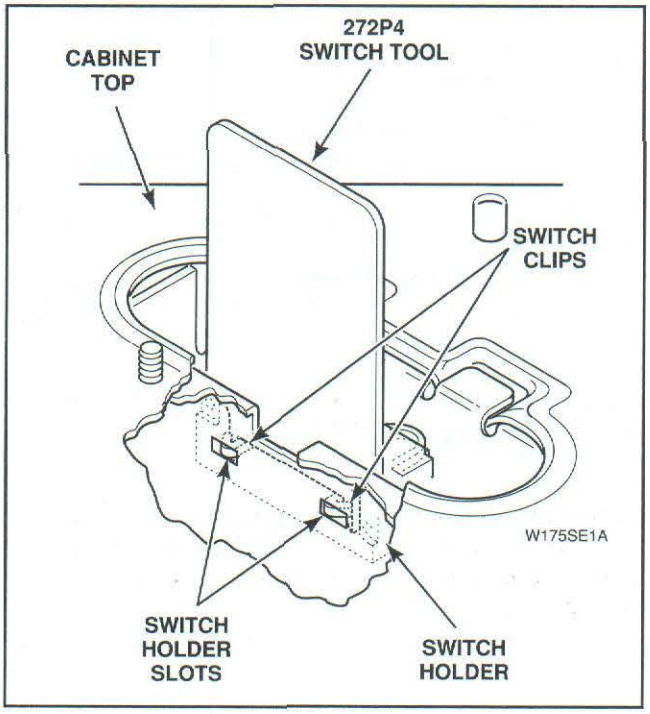


Figure 34

⚠ WARNING

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

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

W003

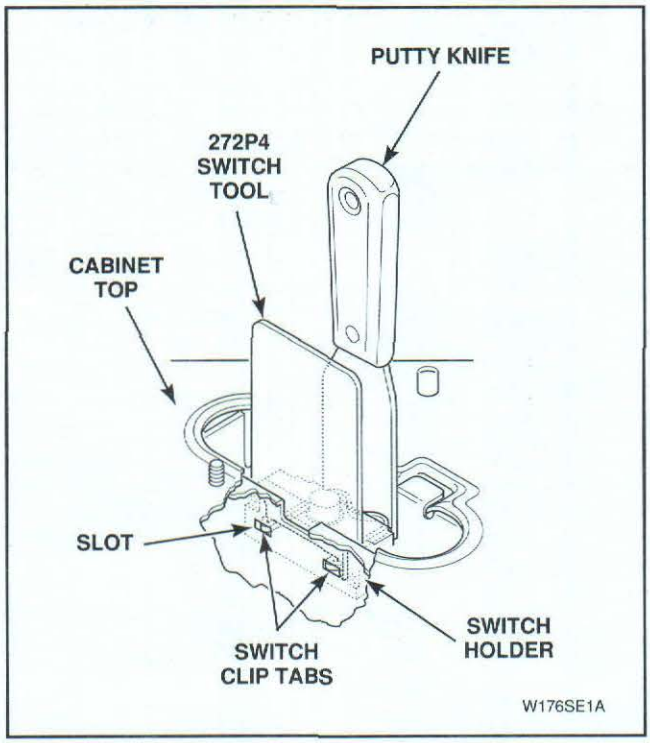


Figure 35

20. MIXING VALVE ASSEMBLY

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*
c. Remove two cabinet top hold-down screws, *Figure 26.*
d. If area or space permits, tape loading door closed and lift cabinet top to a vertical position by hinging it on rear hold-down bracket.

NOTE: Cabinet top is self-supporting, however, a small chain may be used for additional support, *Figure 27.*

IMPORTANT: Before lowering cabinet top into position, pivot outer tub forward far enough to prevent damaging (bending) the out-of-balance switch lever.

e. Remove two screws holding mixing valve to mounting bracket at rear of washer cabinet, *Figure 36.*

NOTE: When installing mixing valve, tab on bottom flange must be placed in positioning hole in mounting bracket.

f. Pull mixing valve out toward front of washer far enough to permit disconnecting water inlet and fill hoses from mixing valve, *Figure 36.*
g. Remove wires and quick disconnect blocks from mixing valve solenoid terminals, *Figure 36.*

NOTE: Refer to appropriate wiring diagram when rewiring solenoid.

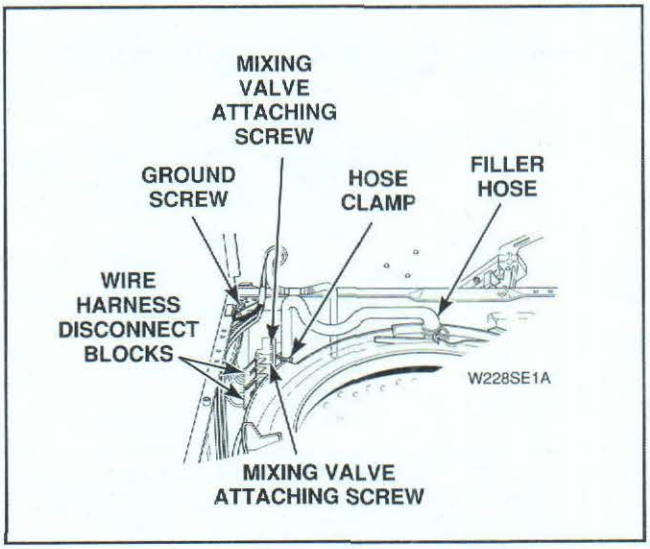


Figure 36

⚠ WARNING

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

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

W003

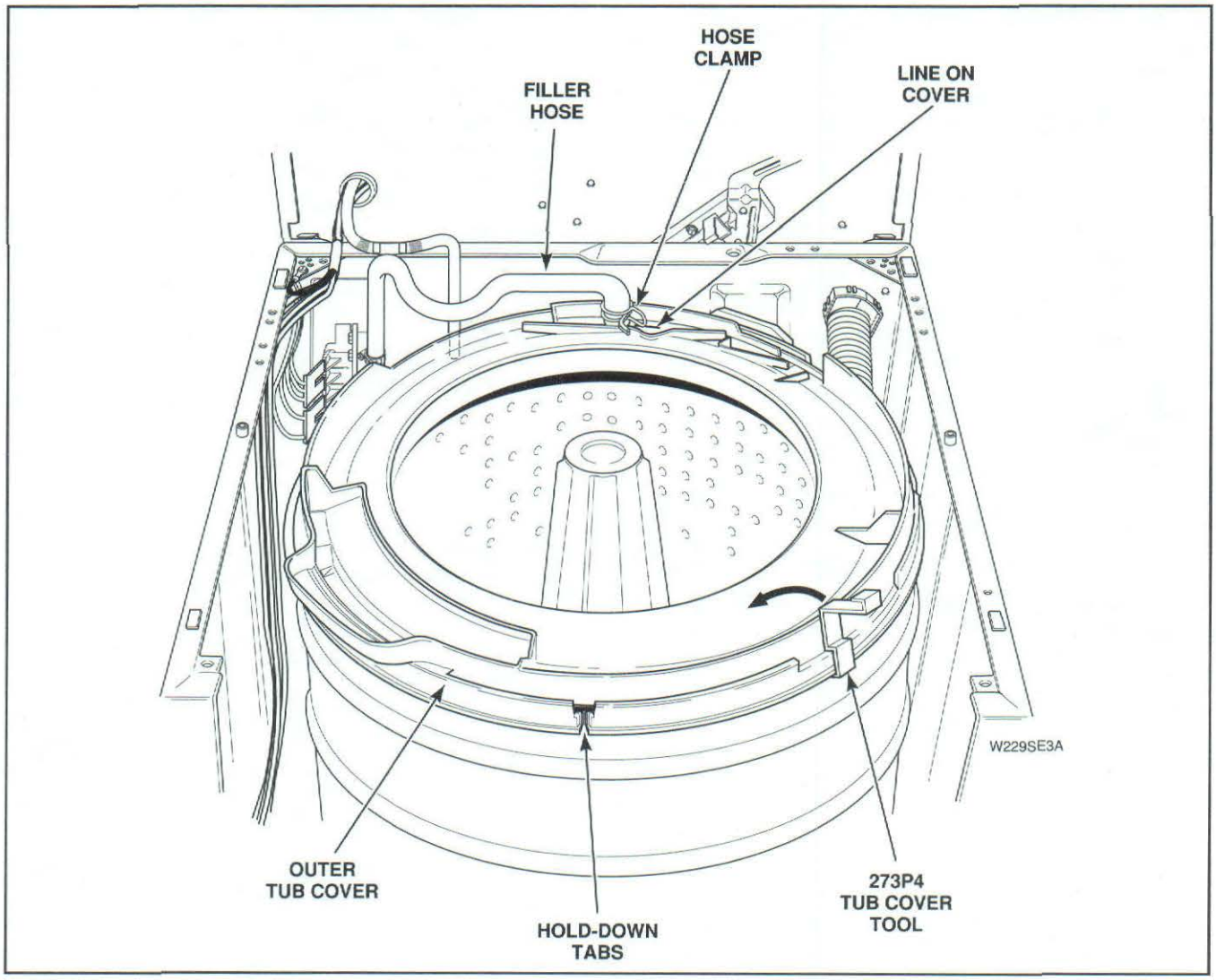


Figure 37

21. WASHTUB AND CLOTHES GUARD

a. Open loading door.
b. Remove agitator by placing two agitator hooks, No. 254P4P, under bottom edge of agitator, *Figure 13.*

IMPORTANT: Hooks should be positioned 180 degrees of each other, and must be placed under agitator vane for greater stability. If hooks are placed between vane area, agitator damage may occur.

c. Using a rocking motion (back and forth) carefully lift agitator off drive bell.
d. Hinge cabinet top or remove, paragraph 18.
e. Loosen hose clamp and remove filler hose from outer tub cover, *Figure 37.*

NOTE: When installing filler hose, white line on hose must be aligned with line located on top side of outer tub cover, *Figure 37.*

f. Unhook pressure hose and grommet from retainer clip located on left rear edge of outer tub cover, *Figure 37.*
g. There are eight tub cover hold-down tabs which snap over outer tub flange. Using special tub cover tool, Part No. 273P4, insert two prongs of tool underneath each side of tandem tabs, *Figure 37.* Tilt tool toward center of tub cover and at same time lift upward on cover to unsnap hold-down tabs from outer tub flange. One by one, disengage each of the eight hold-down tabs from outer tub flange and remove cover.

⚠ WARNING

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

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

W003

IMPORTANT: When installing outer tub cover, always use a new cover gasket.

NOTE: Clean and remove any foreign material in gasket groove of outer tub cover and outer tub flange.

h. Starting at positioning pin located between two bleach funnel outlet tabs, lay gasket into gasket groove of tub cover, *Figure 38*

i. Using your fingers, press gasket down into gasket groove of tub cover. Avoid pressing gasket past ends of hold-down tabs.

IMPORTANT: Care must be taken not to twist or bunch gasket in any one area to avoid leaks after assembly.

j. Install gasket past ends of hold-down tabs to bottom of gasket groove using semi-curled end of tub cover tool Part No. 273P4.

NOTE: Tub cover tool part No. 273P4 is designed to spread open hold-down tabs to prevent tearing of gasket during installation.

k. With tub cover tilted at approximately a 45 degree angle, insert the positioning pin into notch on outer tub flange, *Figure 39.*

NOTE: The two bleach funnel outlet tabs must be angled downward toward inside wall of outer tub for proper dispensing of bleach.

l. Lower cover and push down firmly on top of hold down tabs next to positioning pin until tabs snap over edge of outer tub flange.

m. Cross over to opposite side of tub cover and push down firmly on top of hold down tabs until tabs snap over edge of outer tub flange. Continue with this criss-cross pattern, until tub cover is fully seated. Visually check each tab area again to ensure cover is seated.

n. Check whether or not bleach drain tabs are in the down position by looking through the square holes in bleach funnel area of tub cover. If tabs are not down, a small screwdriver can be inserted down through holes in bleach funnel area to straighten tabs.

(continued on page 32)

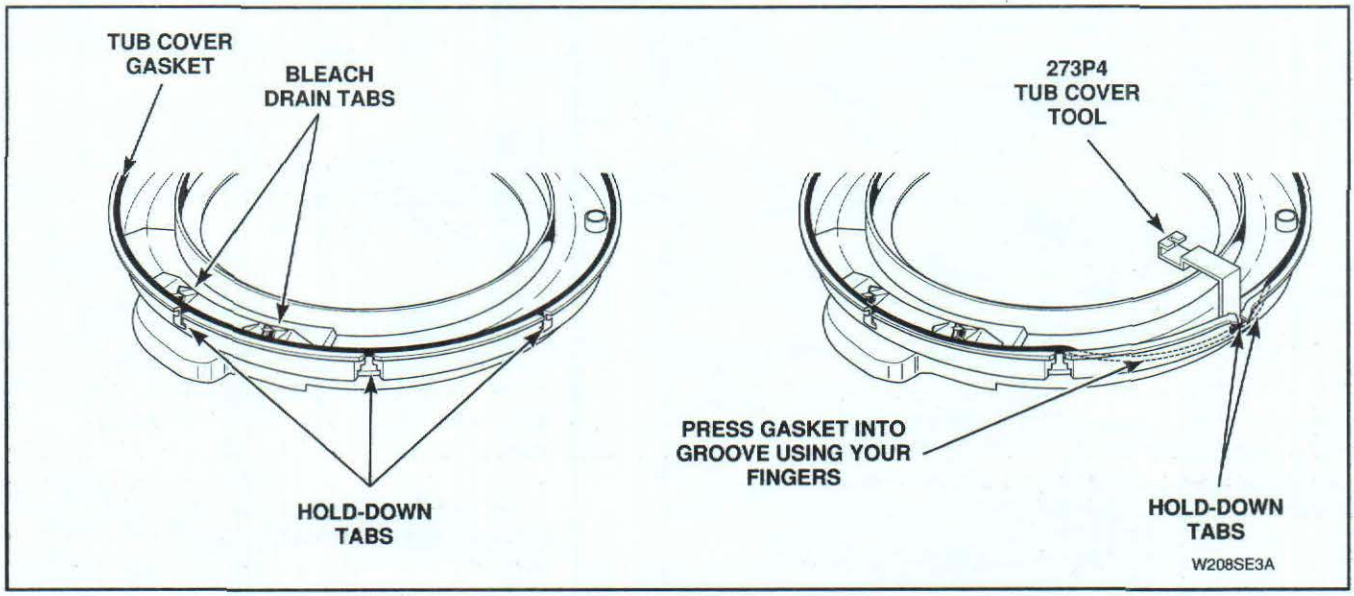


Figure 38

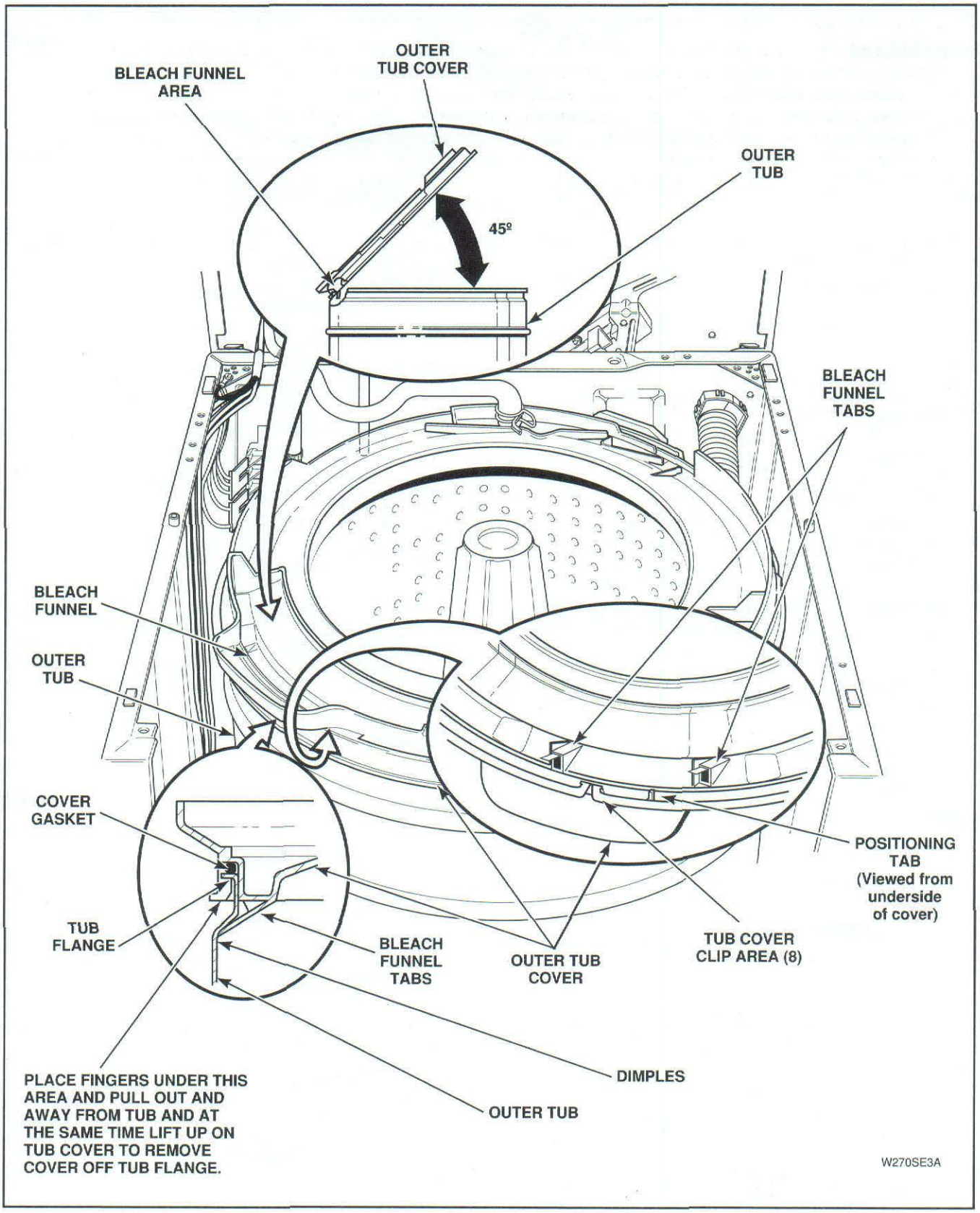

BLEACH FUNNEL AREA
OUTER TUB COVER
OUTER TUB
45º
BLEACH FUNNEL TABS
BLEACH FUNNEL
OUTER TUB
COVER GASKET
POSITIONING TAB (Viewed from underside of cover)
TUB FLANGE
BLEACH FUNNEL TABS
OUTER TUB COVER
TUB COVER CLIP AREA (8)
DIMPLES
PLACE FINGERS UNDER THIS AREA AND PULL OUT AND AWAY FROM TUB AND AT THE SAME TIME LIFT UP ON TUB COVER TO REMOVE COVER OFF TUB FLANGE.
OUTER TUB
W270SE3A

Figure 39

⚠ WARNING

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

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

W003

o. Remove four screws and washers holding washtub to hub, *Figure 40.*

IMPORTANT: Porcelain Washtub Models — Use care when tightening screws to avoid chipping porcelain on washtub.

p. Lift washtub and clothes guard out of outer tub.

IMPORTANT: When removing washtub and clothes guard, DO NOT lift up on clothes guard as you could damage it. Grasp top flange of washtub and remove from outer tub.

NOTE: When installing washtub, make sure lint filter is between underside of washtub and hub. Some models are equipped with a gasket. On these models, make sure all traces of old gasket are removed from bottom of washtub. When installing washtub in these models, always use a new gasket between washtub and hub.

TO REMOVE CLOTHES GUARD FROM WASHTUB

a. Place blade of a small screwdriver into slots between clothes guard and washtub, *Figure 40.*
b. Carefully pry pins of clothes guard out of holes in washtub, *Figure 40.*

NOTE: As you are prying out pins, lift up on clothes guard.

c. Pry pins out of washtub holes approximately half way around tub before clothes guard can be removed.

TO INSTALL CLOTHES GUARD IN WASHTUB

Place clothes guard on top of washtub, making sure clothes guard pins line up with holes in washtub. Then carefully push clothes guard down into washtub until all pins snap into their respective holes.

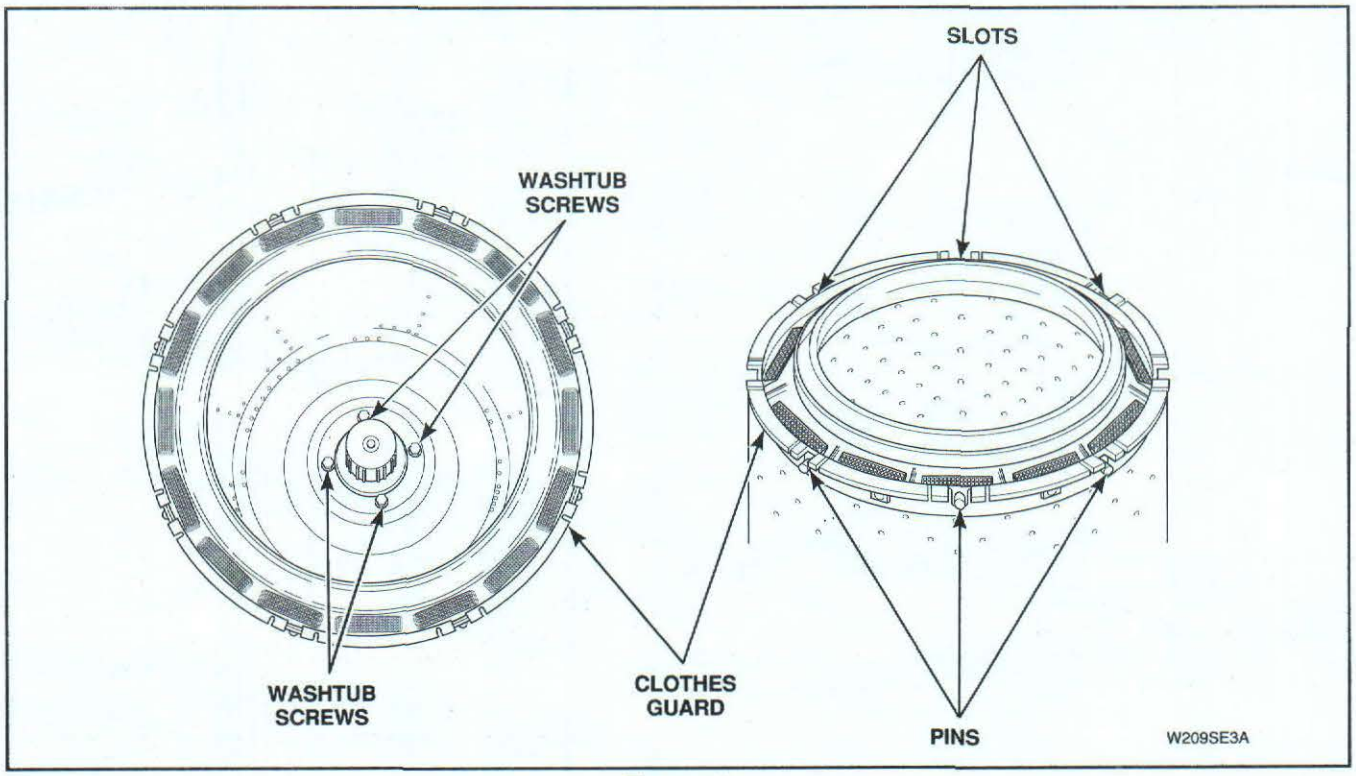


Figure 40

⚠ WARNING

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

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

W003

22. HUB AND SEAL KIT ASSEMBLY

IMPORTANT: If water is present in washtub, spin and pump out before removing drive bell.

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*
c. Open loading door.
d. Remove agitator by placing two agitator hooks, No. 254P4P, under bottom edge of agitator, *Figure 13.*

IMPORTANT: Hooks should be positioned 180 degrees of each other, and must be placed under agitator vanes for greater stability. If hooks are placed between vane area, damage to agitator may occur.

e. Using a rocking motion (back and forth) carefully lift agitator off drive bell.
f. Hinge cabinet top or remove, paragraph 18.
g. Unhook pressure hose and grommet from retainer clip located on left rear edge of outer tub cover, *Figure 37.*
h. Loosen hose clamp and remove filler hose from outer tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, white line on hose must be aligned with line located on top side of outer tub cover, *Figure 37.*

Tub Cover and Gasket:

1. There are eight tub cover hold-down tabs which snap over the outer tub flange. Using special tub cover tool, Part No. 273P4, insert two prongs of tool underneath each side of tandem tabs, *Figure 37.* Tilt tool toward center of tub cover and at the same time lift upward on cover to unsnap hold-down tabs from outer tub flange. One by one, disengage each of the eight hold-down tabs from outer tub flange and remove cover.
2. Lift cover off outer tub and set beside washer cabinet.

IMPORTANT: When installing outer tub cover, always use a new cover gasket.

NOTE: Clean and remove any foreign material in gasket groove of outer tub cover and outer tub

3. Starting at the positioning pin located between the two bleach funnel outlet tabs, lay gasket into gasket groove of tub cover, *Figure 38.*
4. Using your fingers, press gasket down into gasket groove of tub cover. Avoid pressing gasket past ends of hold-down tabs.

IMPORTANT: Care must be taken not to twist or bunch gasket in any one area to avoid leaks after assembly.

5. Install gasket past ends of hold-down tabs to bottom of gasket groove using semi-curled end of tub cover tool Part No. 273P4.

NOTE: Tub cover tool Part No. 273P4 is designed to spread open hold-down tabs to prevent tearing of gasket during installation.

6. With tub cover tilted at approximately a 45 degree angle, insert the positioning pin into notch on outer tub flange, *Figure 39*

NOTE: The two bleach funnel outlet tabs must be angled downward toward inside wall of outer tub for proper dispensing of bleach.

7. Lower cover and push down firmly on top of hold-down tabs next to positioning pin until tabs snap over edge of outer tub flange.
8. Cross over to opposite side of tub cover and push down firmly on top of hold-down tabs until tabs snap over edge of outer tub flange. Continue with this criss-cross pattern, until tub cover is fully seated. Visually check each tab area again to ensure cover is seated.
9. Check whether or not bleach drain tabs are in the down position by looking through the square holes in bleach funnel area of tub cover. If tabs are not down, a small screwdriver can be inserted down through holes in bleach funnel area to straighten tabs.

⚠ WARNING

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

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

W003

i. Remove four screws holding washtub to hub, *Figure 38,* then lift washtub out of outer tub.

IMPORTANT: When removing washtub, DO NOT lift up on clothes guard as you could damage it. Grasp top flange of washtub and remove from outer tub.

NOTE: When installing washtub, make sure lint filter is between underside of washtub and hub. Some models are equipped with a gasket. On these models, make sure all traces of old gasket are removed from bottom of washtub. When installing washtub in these models, always use a new gasket between washtub and hub.

TO REMOVE AGITATOR DRIVE BELL

a. Remove screw and "O" ring washer from top side of drive bell.

NOTE: No. 253P4 Drive Bell Tool may be required to remove drive bell from transmission shaft, if not, proceed to step i.

b. Back bolt out of tool approximately three quarters of the way.
c. Place tool over bell, making sure indent on jaw lines up with the wide slots on bell, *Figure 15.*
d. Screw bolt down through hole in top of bell until bolt bottoms out in hole in transmission shaft.
e. Place lip of each jaw under bottom edge of drive bell, making sure indent on jaw lines up with wide slots on bell. Then tighten two wing nuts to hold jaws firmly against drive bell, *Figure 15.*
f. Use an adjustable wrench and turn large nut on tool **COUNTERCLOCKWISE** to pull drive bell from transmission shaft, *Figure 16.*

IMPORTANT: If large nut is turned clockwise when pulling drive bell, you will twist off quarter inch bolt.

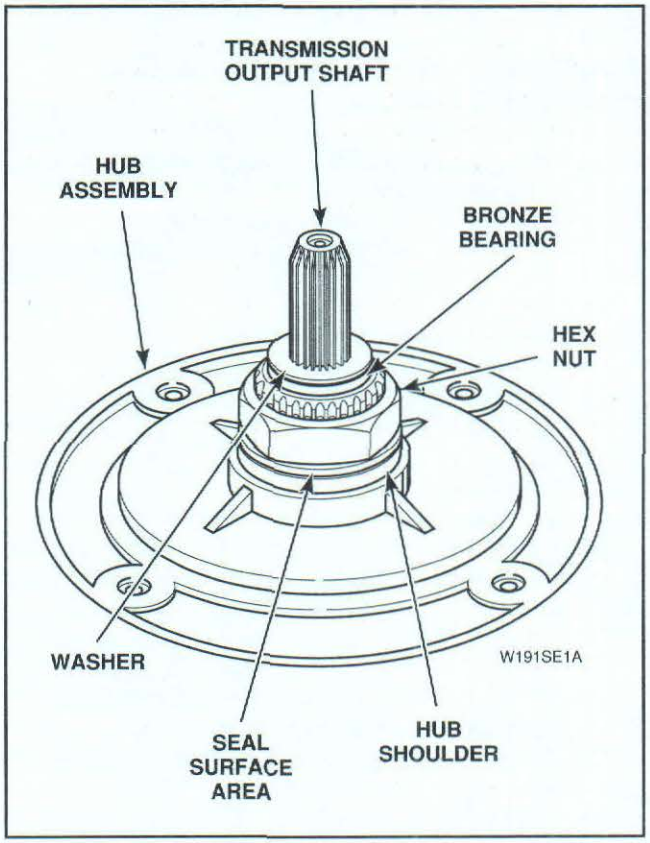


Figure 41

g. Turn quarter inch bolt out of transmission shaft, and remove tool and drive bell from washer.
h. Loosen two wing nuts and remove drive bell from tool.
i. Remove old seal from hub by placing a flat blade screwdriver between bottom edge of seal and hub using washtub bolts as a pry area to pop off lower seal bead. Then grasp seal and pull straight up freeing the upper seal bead.
j. Remove large hex nut using a No. 237P4 Hex Wrench, *Figure 41.*
k. Remove spline insert from transmission tube, *Figure 41.*

IMPORTANT: Use a new spline insert each time hex nut is removed. DO NOT reuse old insert because hex nut may loosen during washer operation.

(continued)

⚠ WARNING

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

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

W003

l. Remove hub from splines on transmission tube.

NOTE: It may be necessary to use a gear puller to remove hub.

m. Remove old water seal from outer tub.

IMPORTANT: Use care when removing old seal so as not to damage tub flange or porcelain.

TO INSTALL NO. 495P3 HUB AND SEAL KIT

IMPORTANT: Be sure inner surface of tub flange is clean of all foreign material before installing new seal.

a. Apply a small amount of 27615P Sealant, (supplied in kit) around outer surface of tub flange, *Figure 42.*

IMPORTANT: DO NOT allow sealant to contact flinger, *Figure 42,* because this could prevent flinger from keeping moisture out of upper bearing.

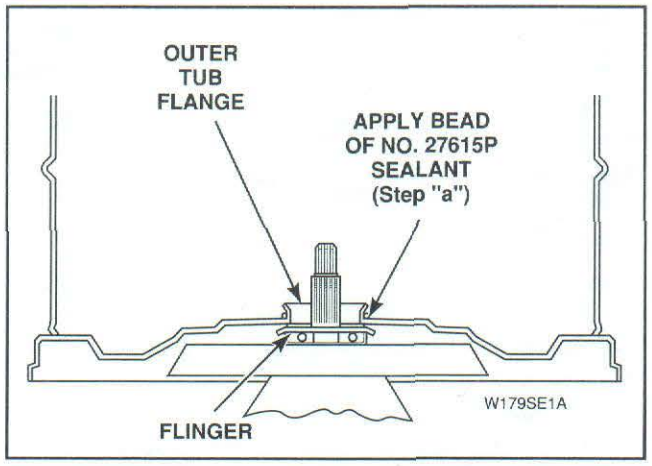


Figure 42

b. Apply a light film of non-staining petroleum jelly (such as Vaseline) to bronze portion of water seal and to outer surface of stainless steel sleeve, *Figure 43.*

IMPORTANT: Do not over lubricate!

c. Insert stainless steel sleeve into water seal from bottom side of seal, *Figure 43,* until sleeve is flush with bronze portion of seal.

d. Leave garter spring on seal. Place new seal over outer tub flange (with seal lip on outside of tub flange). Then press seal into tub flange opening using moderate finger pressure.

e. Carefully apply a small amount of No. 27615P Sealant (supplied with kit) around outer edge of seal and tub. (The area located just below garter spring, *Figure 43.*)

IMPORTANT: Do not allow sealant to contact sealing surface of water seal because it will cause a water leak.

f. Lubricate inner splines of new hub assembly (supplied in kit) with No. 27604P Anti-Seize compound.

g. Carefully place new hub assembly on splined transmission tube.

IMPORTANT: Firmly push hub down against outer tub seal and hold in this position.

h. While holding hub down, place new spline insert (with fingers pointing upward) onto transmission tube until it bottoms against hub. Then place hex nut on transmission tube (with larger inside bevel on nut toward spline insert), then tighten nut.

IMPORTANT: Torque hex nut between 40 to 70 foot pounds. If torque wrench is not available, tap hex wrench with a hammer until hub turns or until nut will no longer tighten.

⚠ WARNING

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

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

W003

i. Thoroughly clean any foreign material from seal surface area of hub and bronze bearing, *Figure 44.*

j. Lubricate new seal with liquid soap or soapy water to aid in assembling of seal onto hub.

k. Place new drive bell seal on hub, *Figure 45,* and carefully push seal into position using large end of No. 274P4 Seal Tool, *Figure 46.*

IMPORTANT: Use a small pocket mirror to check entire circumference of seal flange making sure seal is pressed down against shoulder on hub; there should be no gap!

l. Turn seal tool upside-down and place small end over output shaft and onto washer, *Figure 47.*

m. Push down on tool with a quick motion until tool bottoms out and top of seal is fully seated, *Figure 47.*

n. To Install Drive Bell:

1. Position new drive bell over transmission shaft. Rotate drive bell until splines in drive bell line up with splines on transmission shaft.
2. Push drive bell down on transmission shaft.
3. Place new "O" ring onto new shoulder screw. Thread shoulder screw down through hole in top of drive bell and into transmission shaft.

NOTE: Tighten new shoulder screw to approximately 75 inch pounds.

o. Place lint filter (gasket on some models) on hub.

NOTE: Be sure holes in lint filter (or gasket) are aligned with bolt holes in tub.

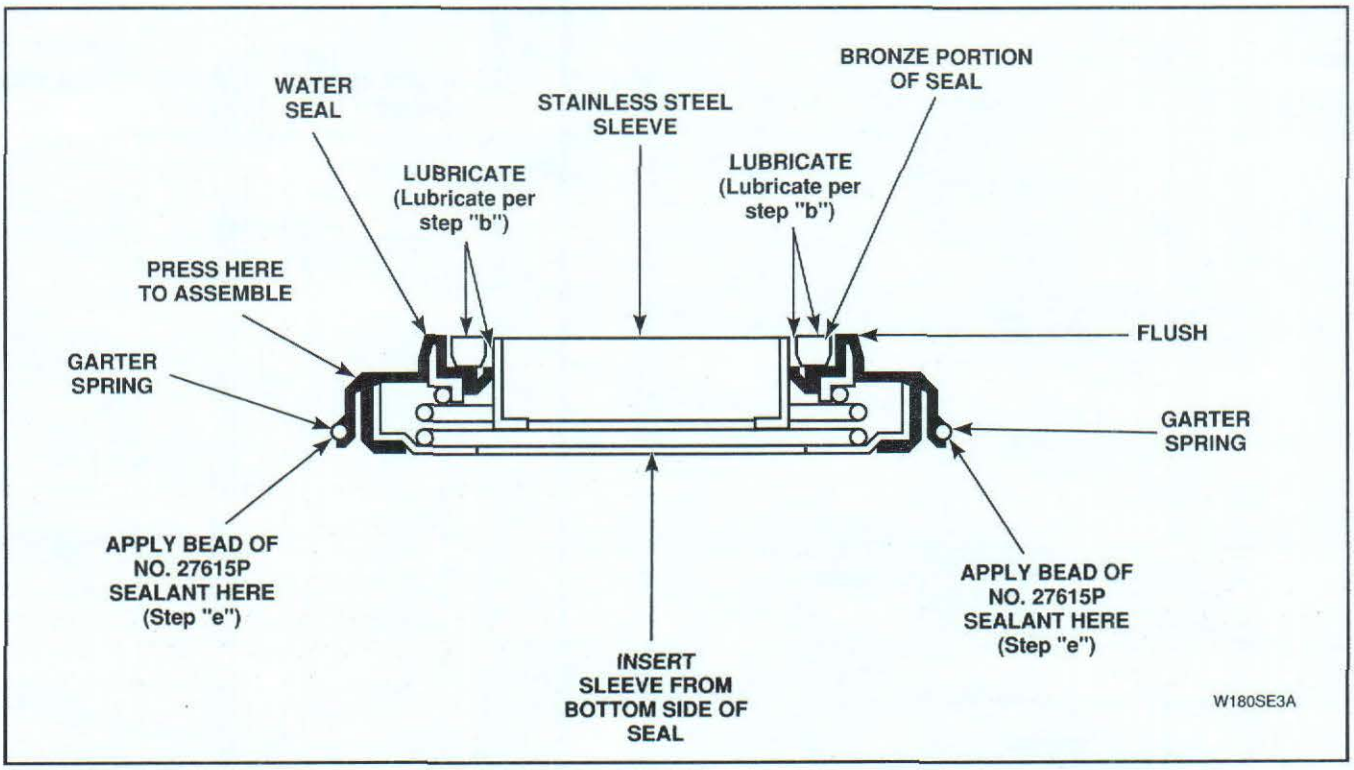


Figure 43

(continued)

⚠ WARNING

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

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

W003

p. Install washtub by grasping top flange of washtub and carefully lowering washtub down onto lint filter (or gasket) and hub.

IMPORTANT: Before setting tub into place, be sure bolt holes in washtub line up with holes in lint filter (or gasket) and hub.

q. Secure washtub to hub, using four screws previously removed.

IMPORTANT: Porcelain Washtub Models — Use care when tightening cap screws to avoid chipping porcelain on washtub.

Tub Cover and Gasket:

NOTE: When installing outer tub cover, always use a new cover gasket.

NOTE: Clean and remove any foreign material in gasket groove of outer tub cover and outer tub flange.

1. Starting at the positioning tab located between the two bleach funnel outlet tabs, lay gasket into gasket groove of tub cover, *Figure 38.*
2. Using your fingers, press gasket down into gasket groove of tub cover. Avoid pressing gasket past ends of hold-down tabs.

IMPORTANT: Care must be taken not to twist or bunch gasket in any one area to avoid leaks after assembly.

3. Install gasket past ends of hold-down tabs to bottom of gasket groove using semi-curled end of tub cover tool Part No. 273P4.

NOTE: Tub cover tool Part No. 273P4 is designed to spread open hold-down tabs to prevent tearing of gasket during installation.

4. With tub cover tilted at approximately a 39 degree angle, insert positioning pin into notch on outer tub flange, *Figure 39.*

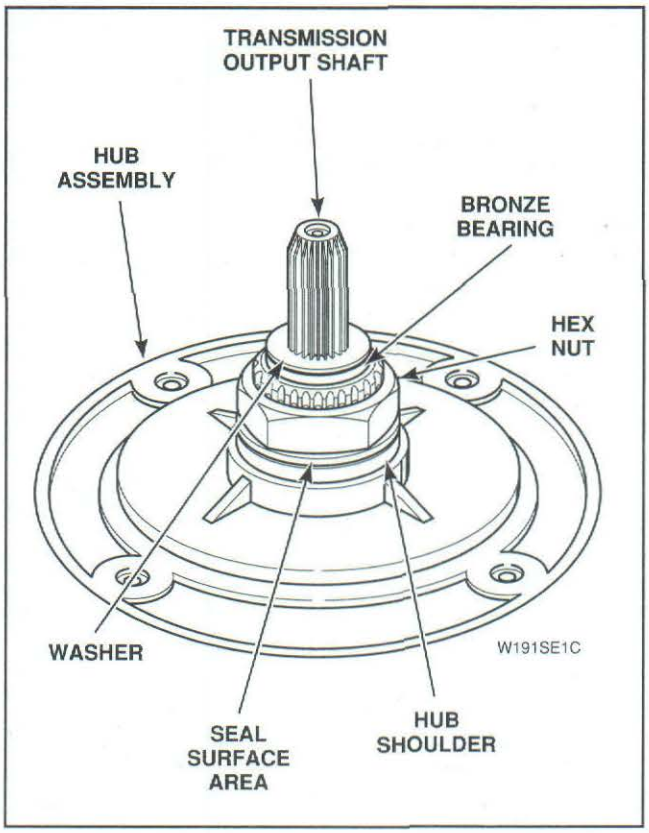


Figure 44

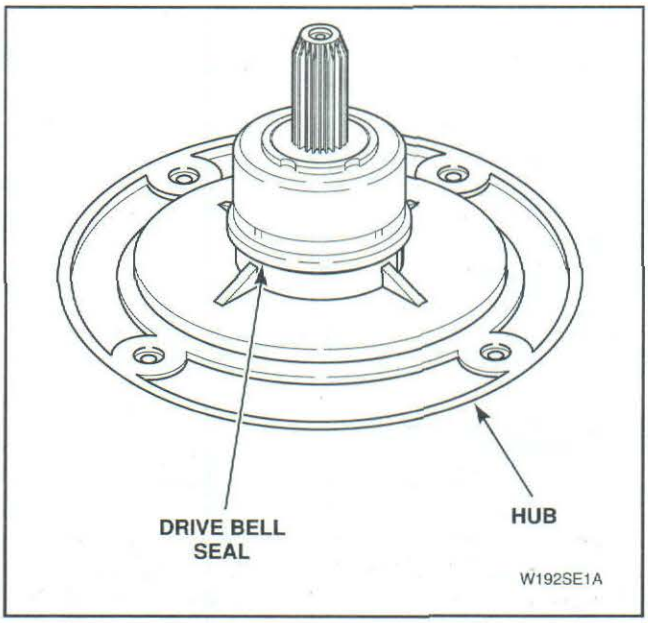


Figure 45

⚠ WARNING

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

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

W003

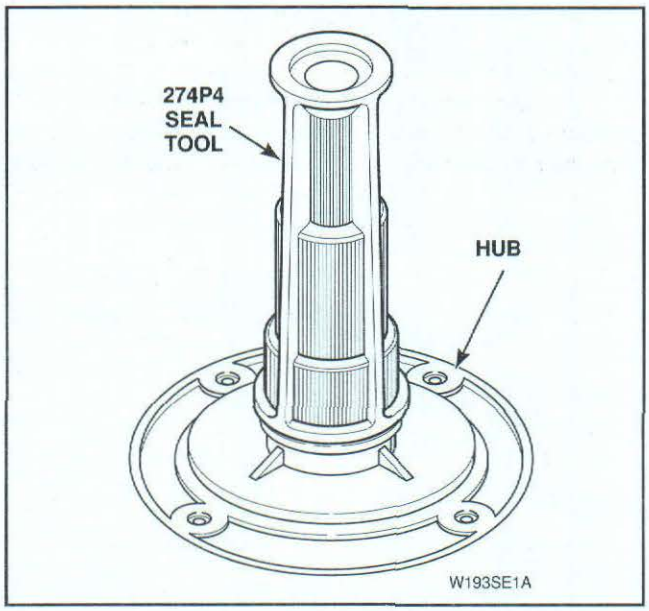


Figure 46

NOTE: Two bleach funnel outlet tabs must be angled downward toward inside wall of outer tub for proper dispensing of bleach.

5. Lower cover and push down firmly on top of hold-down tabs next to positioning pin until tabs snap over edge of outer tub flange.
6. Cross over to opposite side of tub cover and push down firmly on top of hold-down tabs until tabs snap over edge of outer tub flange. Continue with this criss-cross pattern, until tub cover is fully seated. Visually check each tab area again to ensure cover is seated.
7. Check whether or not bleach drain tabs are in the down position by looking through the square holes in bleach funnel area of tub cover. If tabs are not down, a small screwdriver can be inserted down through holes in bleach funnel area to straighten tabs.

r. Reinstall filler hose on outer tub cover.

NOTE: When reinstalling filler hose, the white line on hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.*

s. Place agitator on top of drive bell. Slowly rotate agitator until fingers on underside of agitator line up with large slots on drive bell.
t. A sharp blow on top of agitator, with palm of your hand, will force agitator down onto drive bell, allowing fingers on underside of agitator to lock under bottom edge of drive bell.

NOTE: Do not push agitator onto drive bell any further than necessary.

u. Reinstall cabinet top and secure to washer cabinet using screws previously removed.
v. Reinstall front panel.

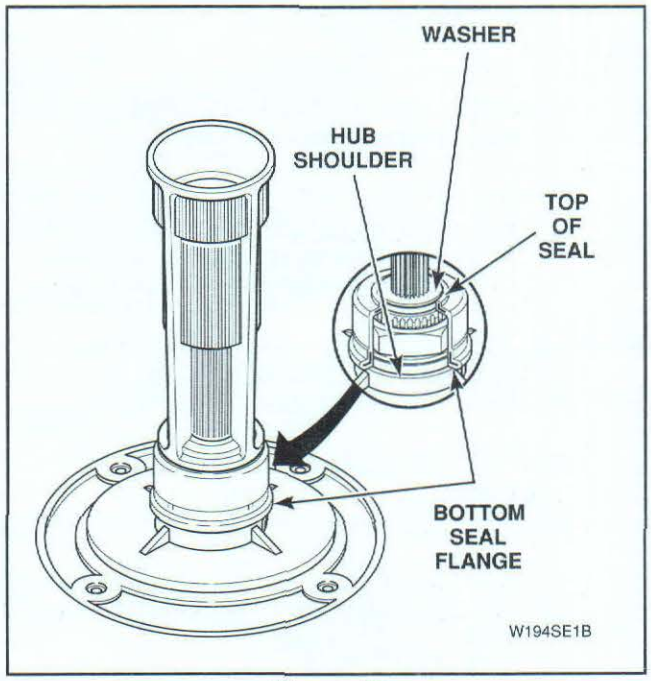


Figure 47

⚠ WARNING

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

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

W003

23. OUTER TUB

a. Open loading door.
b. Remove agitator by placing two agitator hooks, No. 254P4P, under bottom edge of agitator, *Figure 13.*

IMPORTANT: Hooks should be positioned 180 degrees of each other, and must be placed under agitator vane for greater stability. If hooks are placed between vane area, agitator damage may occur.

c. Using a rocking motion (back and forth) carefully lift agitator off drive bell.
d. Remove two screws from bottom edge of front panel, *Figure 21.*
e. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*
f. Hinge cabinet top or remove, paragraph 18.
g. Loosen hose clamp, and disconnect filler hose from outer tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, the white line on hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.*

Tub Cover and Gasket:

1. There are eight tub cover hold-down tabs which snap over the outer tub flange. Using special tub cover tool, Part No. 273P4, insert two prongs of tool underneath each side of tandem tabs, *Figure 37.* Tilt tool toward center of tub cover and at the same time lift upward on cover to unsnap hold-down tabs from outer tub flange. One by one, disengage each of the eight hold-down tabs from outer tub flange and remove cover.
2. Remove cover from outer tub and remove old gasket from tub cover.

NOTE: When installing outer tub cover, always use a new cover gasket.

NOTE: Clean and remove any foreign material in gasket groove of outer tub cover and outer tub flange.

3. Starting at positioning pin located between two bleach funnel outlet tabs, lay gasket into gasket groove of tub cover, *Figure 38.*
4. Using your fingers, press gasket down into gasket groove of tub cover. Avoid pressing gasket past ends of hold-down tabs.

IMPORTANT: Care must be taken not to twist or bunch gasket in any one area to avoid leaks after assembly.

5. Install gasket past ends of hold-down tabs to bottom of gasket groove using semi-curled end hof tub cover tool part No. 273P4.

NOTE: Tub cover tool Part No. 273P4 is designed to spread open hold-down tabs to prevent tearing of gasket during installation.

6. With tub cover tilted at approximately a 45 degree angle, insert the positioning pin into notch on outer tub flange, *Figure 39.*

NOTE: Two bleach funnel outlet tabs must be angled downward toward inside wall of outer tub for proper dispensing of bleach.

7. Lower cover and push down firmly on top of hold-down tabs next to positioning pin until tabs snap over edge of outer tub flange.
8. Cross over to opposite side of tub cover and push down firmly on top of hold-down tabs until tabs snap over edge of outer tub flange. Continue with this criss-cross pattern, until tub cover is fully seated. Visually check each tab area again to ensure cover is seated.
9. Check whether or not bleach drain tabs are in the down position by looking through the square holes in bleach funnel area of tub cover. If tabs are not down, a small screwdriver can be inserted down through holes in bleach funnel area to straighten tabs.

h. Remove four screws and washers holding washtub to hub, *Figure 40.*

IMPORTANT: Porcelain Washtub Models — Use care when tightening cap screws to avoid chipping porcelain on washtub.

⚠ WARNING

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

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

W003

i. Lift washtub (with clothes guard attached) out of outer tub.

IMPORTANT: When removing washtub and clothes guard, DO NOT lift up on guard as you could damage it. Grasp top flange of washtub and remove from outer tub.

j. Remove agitator drive bell, paragraph 12.

k. Remove large hex nut using No. 237P4 Hex Wrench. Then remove spline insert from transmission tube, *Figure 41.*

IMPORTANT: Use a new spline insert each time the hex nut is removed. DO NOT reuse the old insert as hex nut may loosen during the washer operation.

l. Remove hub from splines on transmission tube.

NOTE: It may be necessary to use a gear puller to remove hub.

m. Remove old water seal from outer tub.

IMPORTANT: Use care when removing old seal so as not to damage tub flange or porcelain.

NOTE: When reinstalling or replacing outer tub, always install a new No. 495P3 Hub and Seal Kit, paragraph 22.

n. Reach in through front of motor mounting bracket and move idler lever to left to release tension on belt.

IMPORTANT: Use care when releasing idler lever tension. If idler lever spring, or helper spring, are overstretched, washer operation will be affected.

o. While holding idler lever, reach in and around right side of motor and run belt off right side of pulley.

IMPORTANT: When removing or reinstalling complete outer tub into washer (with transmission, balance ring and pivot dome attached), damage could occur to idler lever if idler spring and helper spring are left hooked to motor mounting bracket.

With idler spring and helper spring hooked to motor mounting bracket, idler lever extends out through rear of bracket. When removing or reinstalling complete tub assembly, idler lever is in the way and can be damaged (bent), or idler pulley could be chipped. A bent idler lever will cause misalignment of idler pulley with drive belt, and a chipped idler pulley will damage belt.

We recommend that before removing or reinstalling the complete tub assembly, you unhook idler spring and helper spring and move idler lever out of the way. This will prevent the possibility of idler lever or pulley damage.

p. Using No. 289P4 Spring Hook Tool, unhook seven centering springs from lower edge of outer tub, *Figure 48.*

IMPORTANT: When installing centering springs, make sure spring hook is fully seated in hole in tub skirt. Mark the word "FRONT" on front side of outer tub so complete tub module can be reinstalled in same position.

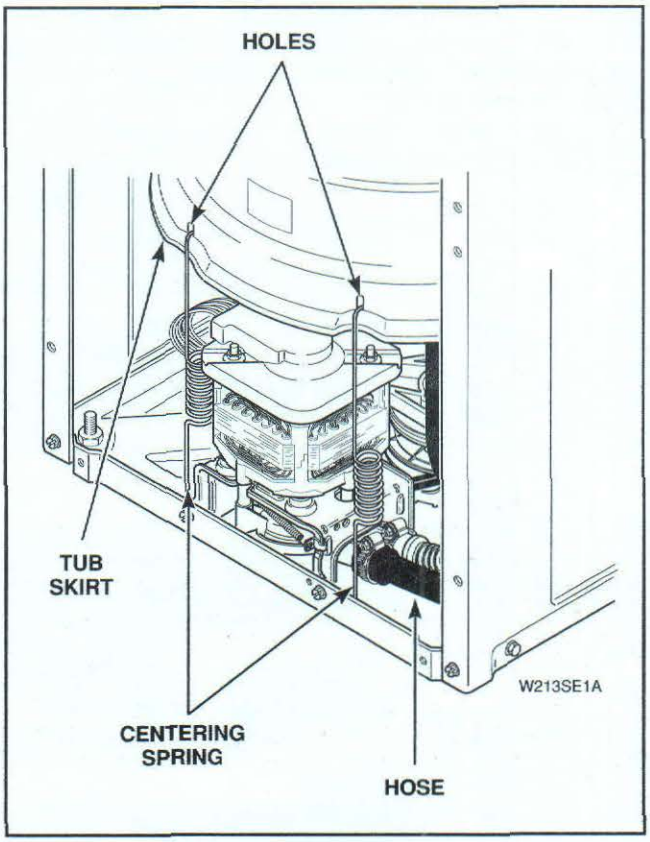


Figure 48

(continued)

⚠ WARNING

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

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

W003

q. Disconnect hose from bottom of outer tub.
r. Remove pressure hose from pressure bulb. Then remove tape holding pressure hose to outer tub, *Figure 52.*
s. Grasp outer tub and lift complete tub assembly (with transmission, balance ring and pivot dome attached) straight up and out of washer cabinet.
t. Turn outer tub upside-down and set on protective padding.
u. Remove screws and lockwashers holding each support leg to outer tub, *Figure 49.* Then lift transmission, balance ring and pivot dome off tub.

NOTE: To prevent porcelain damage, leg plates must be installed on outside of outer tub flange when reinstalling support legs. Do not overtighten screws as this could cause stripping or porcelain damage. Torque screws between 90 to 130 inch pounds.

v. Turn outer tub upright and remove pressure bulb and grommet.

NOTE: When installing grommet into outer tub, thicker lip of grommet must be installed to outside of tub. Lubricate outer surface of large opening of pressure bulb with liquid soap to aid when assembling pressure bulb into grommet.

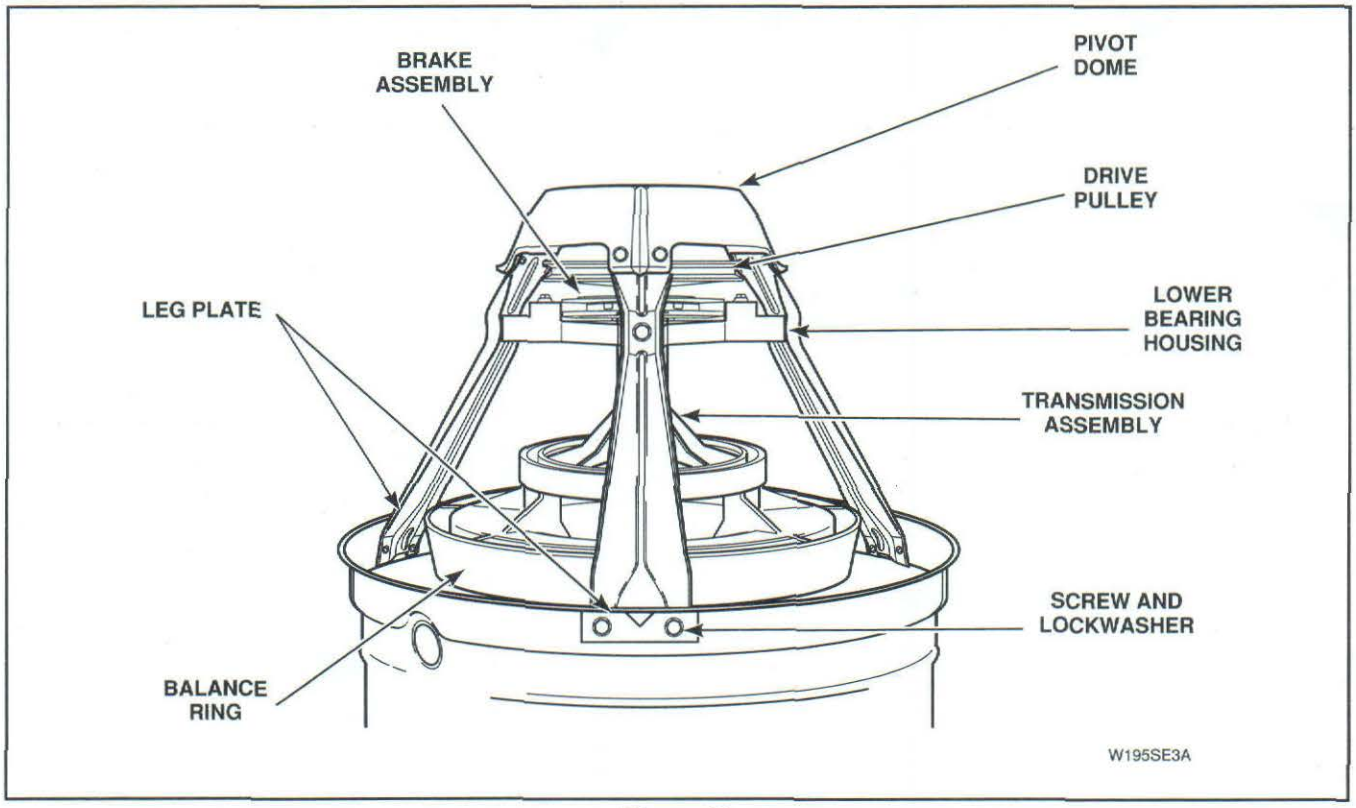


Figure 49

⚠ WARNING

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

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

W003

24. DRIVE PULLEY AND HELIX

a. Remove two screws from bottom edge of front panel, *Figure 21.*

b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*

c. Hinge cabinet top or remove, paragraph 18.

d. Loosen hose clamp and disconnect filler hose from outer tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, the white line on hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.*

e. Reach in through front of motor mounting bracket and move idler lever to left to release tension on belt.

IMPORTANT: Use care when releasing idler lever tension. If idler lever spring, or helper spring, are overstretched, washer operation will be affected.

f. While holding idler lever, reach in and around right side of motor and run belt off right side of pulley.

IMPORTANT: When removing or reinstalling complete outer tub into washer (with transmission, balance ring and pivot dome attached), damage could occur to idler lever if idler spring and helper spring are left hooked to motor mounting bracket.

With idler spring and helper spring hooked to motor mounting bracket, idler lever extends out through rear of bracket. When removing or reinstalling complete tub assembly, idler lever is in the way and can be damaged (bent), or idler pulley could be chipped. A bent idler lever will cause misalignment of idler pulley with drive belt, and a chipped idler pulley will damage belt.

We recommend that before removing or reinstalling the complete assembly, you unhook idler spring and helper spring and move idler lever out of the way. This will prevent the possibility of idler lever or pulley damage.

g. Using No. 289P4 Spring Hook Tool, unhook seven centering springs from lower edge of outer tub, *Figure 48.*

IMPORTANT: When installing centering springs, make sure spring hook is fully seated in hole in tub skirt. Mark the word "FRONT" on the front side of the outer tub so complete tub module can be reinstalled in the same position.

(continued)

⚠ WARNING

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

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

W003

h. Disconnect hose from bottom of outer tub.
i. Remove pressure hose from pressure bulb. Then remove tape holding pressure hose to outer tub, *Figure 52.*
j. Grasp outer tub and lift complete tub module assembly (with transmission, balance ring, and pivot dome attached) straight up and out of washer cabinet.
k. Turn complete tub module upside-down and set on protective padding.
l. Remove screws holding three support legs to pivot dome and remove dome, *Figure 49.*
m. Remove screw, washer and helix holding drive pulley to input shaft of transmission assembly, *Figure 50.*
n. Lift drive pulley up and out from between tub support legs.

NOTE: When reinstalling pulley, place a small amount of No. 03200 Lubricant on top side of the drive pulley that will be contacting large flat washers. Lubricate helix ramps and bore with a small amount of No. 03200 Lubricant. See *Figure 51.*

IMPORTANT: **DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on pivot dome or isolator will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.**

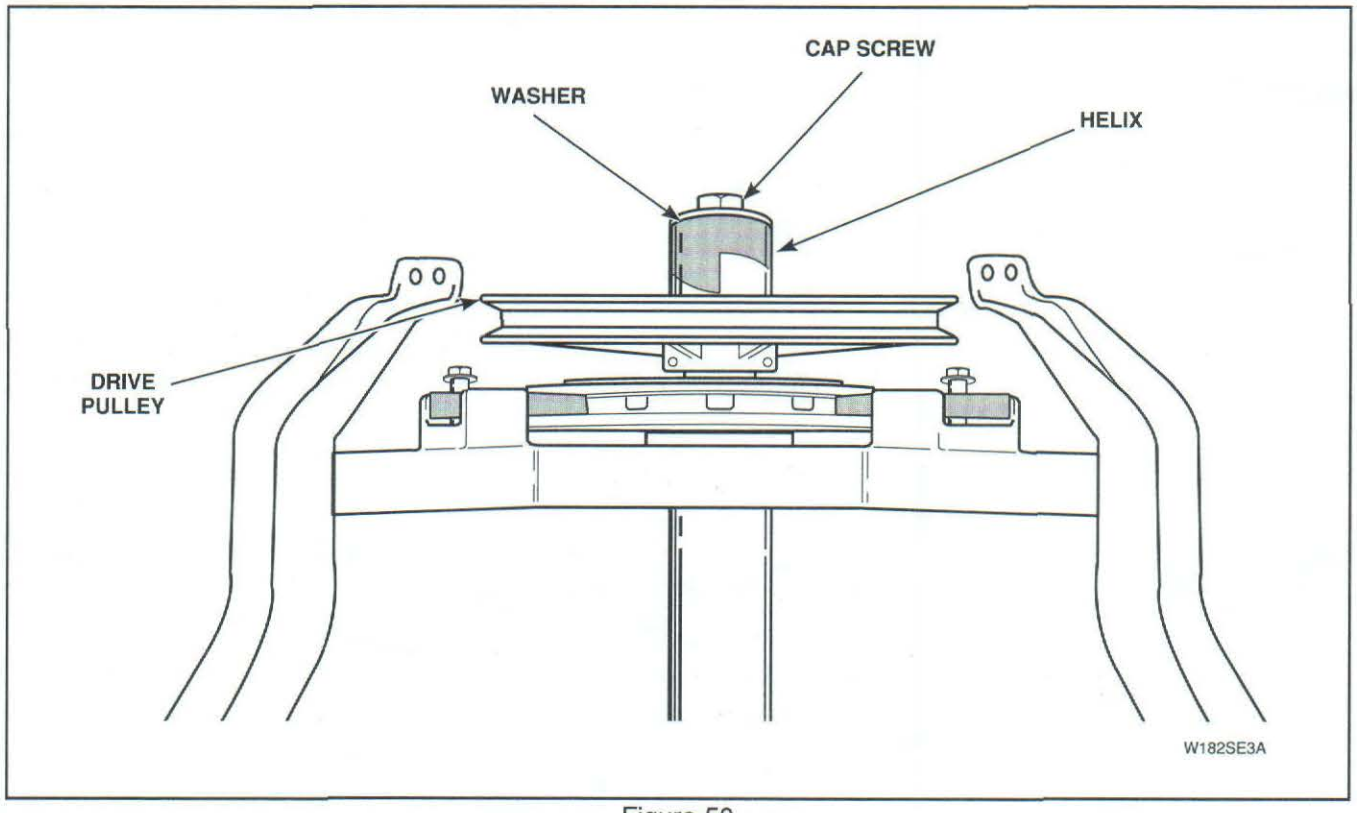


Figure 50

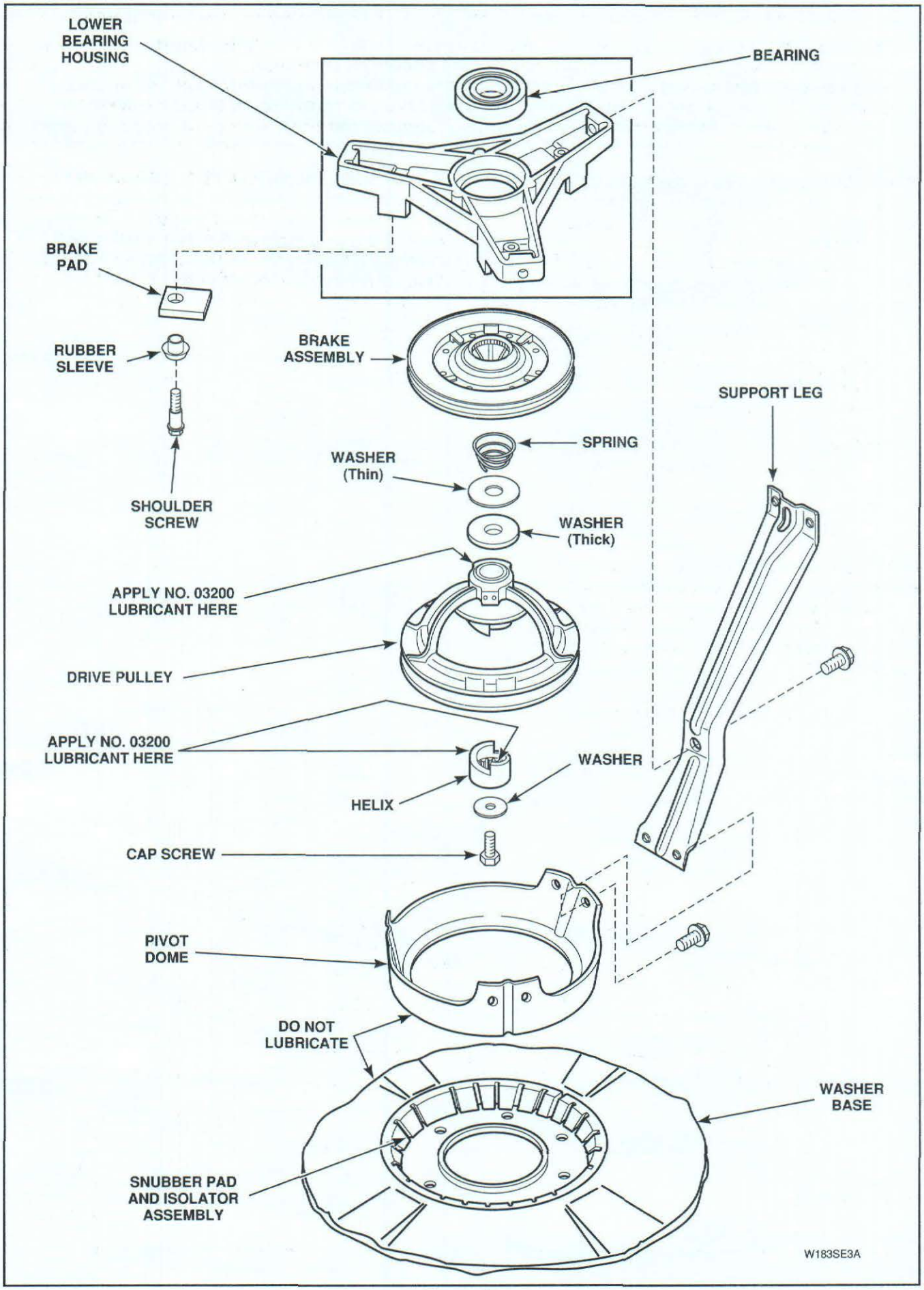

LOWER BEARING HOUSING
BEARING
BRAKE PAD
RUBBER SLEEVE
BRAKE ASSEMBLY
SUPPORT LEG
SPRING
WASHER (Thin)
SHOULDER SCREW
WASHER (Thick)
APPLY NO. 03200 LUBRICANT HERE
DRIVE PULLEY
APPLY NO. 03200 LUBRICANT HERE
WASHER
HELIX
CAP SCREW
PIVOT DOME
DO NOT LUBRICATE
WASHER BASE
SNUBBER PAD AND ISOLATOR ASSEMBLY
W183SE3A

Figure 51

⚠ WARNING

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

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

W003

25. BRAKE ASSEMBLY

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*
c. Hinge cabinet top or remove, paragraph 18.
d. Loosen hose clamp and disconnect filler hose from outer tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, the white line on hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.*

e. Reach in through front of motor mounting bracket and move idler lever to left to release tension on belt.

IMPORTANT: Use care when releasing idler lever tension. If idler lever spring, or helper spring, are overstretched, washer operation will be affected.

f. While holding idler lever, reach in and around right side of motor and run belt off right side of pulley.

IMPORTANT: When removing or reinstalling complete outer tub into washer (with transmission, balance ring and pivot dome attached), damage could occur to idler lever if idler spring and helper spring are left hooked to motor mounting bracket.

With idler spring and helper spring hooked to motor mounting bracket, idler lever extends out through rear of bracket. When removing or reinstalling complete tub assembly, idler lever is in the way and can be damaged (bent), or idler pulley could be chipped. A bent idler lever will cause misalignment of idler pulley with drive belt, and a chipped idler pulley will damage belt.

We recommend that before removing or reinstalling the complete assembly, you unhook idler spring and helper spring and move idler lever out of the way. This will prevent possibility of idler lever or pulley damage.

g. Using No. 289P4 Spring Hook Tool, unhook seven centering springs from lower edge of outer tub, *Figure 48.*

IMPORTANT: When installing centering springs, make sure spring hook is fully seated in hole in tub skirt. Mark the word "FRONT" on the front side of the outer tub so complete tub module can be reinstalled in same position.

h. Disconnect hose from bottom of outer tub.
i. Remove pressure hose from pressure bulb. Then remove tape holding pressure hose to outer tub, *Figure 52.*
j. Grasp outer tub and lift complete tub module assembly (with transmission, balance ring, and pivot dome attached) straight up and out of washer cabinet.
k. Turn complete tub module upside-down and set on protective padding.
l. Remove screws holding three support legs to pivot dome and remove dome, *Figure 49.*
m. Remove screw, washer and helix holding drive pulley to input shaft of transmission assembly, *Figure 50.*
n. Lift drive pulley up and out from between tub support legs.

NOTE: When reinstalling pulley, place a small amount of No. 03200 Lubricant on top side of drive pulley that will be contacting large flat washer. Lubricate helix ramps and bore with a small amount of No. 03200 Lubricant. See *Figure 51.*

IMPORTANT: DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on the pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.

IMPORTANT: Two large flat washers must be in place between spring and drive pulley when reassembling. Thicker washer must contact top side of drive pulley. See *Figure 51* for assembly sequence.

NOTE: When reassembling, place a small amount of No. 03200 Lubricant to top side of drive pulley that will be contacting the large flat washer. Lubricate helix ramps and bore with a small amount of No. 03200 Lubricant. See *Figure 51.*

⚠ WARNING

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

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

W003

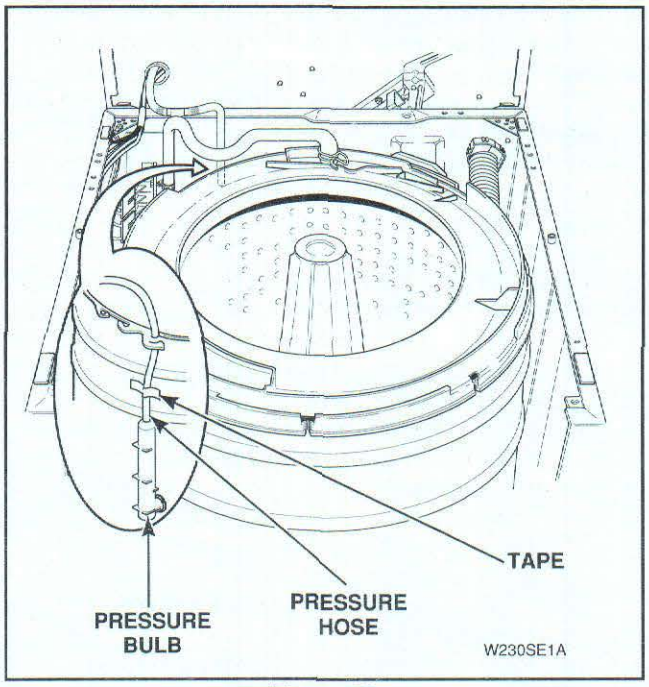


Figure 52

IMPORTANT: **DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.**

o. Using a right angle needle nose pliers, remove spring from around lower transmission tube (located inside brake assembly), *Figure 51.*

NOTE: Remove spring by turning in a COUNTERCLOCKWISE direction (looking from lower end of input shaft of transmission assembly).

p. Remove three screws holding brake pads, rubber sleeves and brake assembly to lower bearing housing, *Figure 51,* then remove brake assembly and pads off bottom of transmission assembly.

IMPORTANT: When reinstalling brake assembly, we recommend replacing three brake pads. DO NOT replace just worn pads. Apply a small amount of No. 26594P Silicone Lubricant to both sides of each brake pad where it will contact brake assembly.

IMPORTANT: **DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.**

NOTE: Refer to *Figure 51* for assembly sequence.

IMPORTANT: When installing spring, be sure it is inserted into groove in large splines of lower transmission tube. Use tool, No. 242P4, for installing the spring.

q. After brake is installed, put washer through the following check to make sure brake is operating properly.
   1. Turn off electrical power to washer.
   2. Turn drive pulley one complete revolution in agitation direction, then push drive pulley up against brake.
   3. Check for a .030 minimum gap between drive pulley and helix **ramp** surfaces.

IMPORTANT: If gap is less than .030, brake may not stop washtub from spinning in required seven seconds because brake will not close properly.

4. Turn on electrical power to washer and start washer in the final spin.

NOTE: After washtub has been spinning for two minutes, normal spin speed should be approximately 580 RPM. If not, the cause could be dragging brake pads. If problems occur with steps 3 or 4, remove brake assembly and correct problem.

⚠ WARNING

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

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

W003

26. LOWER BEARING HOUSING

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*
c. Remove two cabinet top hold-down screws, and hinge cabinet top or remove, paragraph 18.
d. Loosen hose clamp and disconnect filler hose from outer tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, the white line on hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.*

e. Reach in through front of motor mounting bracket and move idler lever to left to release tension on belt.

IMPORTANT: Use care when releasing idler lever tension. If idler lever spring, or helper spring, are overstretched, washer operation will be affected.

f. While holding idler lever, reach in and around right side of motor and run belt off right side of pulley.

IMPORTANT: When removing or reinstalling complete module assembly into washer (with transmission, balance ring and pivot dome attached), damage could occur to idler lever if idler spring and helper spring are left hooked to motor mounting bracket.

With idler spring and helper spring hooked to motor mounting bracket, idler lever extends out through rear of bracket. When removing or reinstalling complete tub assembly, idler lever is in the way and can be damaged (bent), or idler pulley could be chipped. A bent idler lever will cause misalignment of idler pulley with the drive belt, and a chipped idler pulley will damage belt.

We recommend that before removing or reinstalling the complete assembly, you unhook idler spring and helper spring and move idler lever out of the way. This will prevent the possibility of idler lever or pulley damage.

g. Using No. 289P4 Spring Hook Tool, unhook seven centering springs from lower edge of outer tub, *Figure 48.*

IMPORTANT: When installing centering springs, make sure spring hook is fully seated in hole in tub skirt. Mark the word "FRONT" on the front side of the outer tub so complete tub module can be reinstalled in the same position.

h. Disconnect hose from bottom of outer tub.
i. Remove pressure hose from pressure bulb. Then remove tape holding pressure hose to outer tub, *Figure 52.*
j. Grasp outer tub and lift complete tub module assembly (with transmission, balance ring, and pivot dome attached) straight up and out of washer cabinet.
k. Turn complete tub module upside-down and set on protective padding.
l. Remove screws holding three support legs to pivot dome and remove dome, *Figure 49.*
m. Remove screw, washer and helix holding drive pulley to input shaft of transmission assembly, *Figure 50.*
n. Lift drive pulley up and out from between tub support legs.

NOTE: When reinstalling pulley, place a small amount of No. 03200 Lubricant on top side of the drive pulley that will be contacting large flat washer. Lubricate helix ramps and bore with a small amount of No. 03200 Lubricant. See *Figure 51.*

IMPORTANT: DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on the pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.

o. Remove two large flat washers from transmission shaft, *Figure 51.*

IMPORTANT: Two large flat washers must be in place between spring and drive pulley when reassembling. Thicker washer must contact top *side of the drive pulley. See Figure 51 for* assembly sequence.

⚠ WARNING

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

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

W003

p. Use a right angle needle nose pliers and remove spring from around lower transmission tube (located inside brake assembly).

NOTE: Remove spring by turning in a COUNTERCLOCKWISE direction (looking at bottom end of shaft).

IMPORTANT: When installing spring, be sure it is inserted into groove in large splines of lower transmission tube. Use spring tool, No. 242P4, for installing spring.

NOTE: When reassembling, place a small amount of No. 03200 Lubricant to top side of drive pulley that will be contacting large flat washer. Lubricate helix ramps and bore with a small amount of No. 03200 Lubricant. See *Figure 51.*

IMPORTANT: DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on the pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.

q. Remove three screws and rubber sleeves holding brake pads to lower bearing housing, *Figure 51.*

q. Lift brake assembly and pads off transmission tube.

s. Remove three screws holding lower bearing housing to tub support legs, *Figure 51.*

t. Rotate bearing housing past legs, then carefully lift bearing housing off transmission tube.

NOTE: It may be necessary to loosen one leg from outer tub to rotate housing. Tap lightly on housing to loosen it from transmission tube.

IMPORTANT: When installing lower bearing housing, apply No. 27604P Anti-Seize compound to the area of transmission tube that will be contacting bearing, *Figure 53.*

TO REMOVE BEARING

a. Support bearing housing around outside diameter of bearing opening and carefully press bearing out of the housing.

b. Clean all foreign material from inner diameter of bearing opening.

c. Clean any foreign material from outside diameter of new bearing.

d. Apply a retaining compound (such as Loctite) to outside diameter of new bearing and carefully press new bearing into housing (with sealed side facing up).

IMPORTANT: Press new bearing into housing by pressing on outer race of bearing only, and press until bearing bottoms out in housing.

27. TRANSMISSION ASSEMBLY

a. Open loading door.

b. Remove agitator by placing two agitator hooks, No. 254P4P, under bottom edge of agitator, *Figure 13.*

IMPORTANT: Hooks should be positioned 180 degrees of each other, and must be placed under agitator vane for greater stability. If hooks are placed between vane area, damage to agitator may occur.

c. Using a rocking motion (back and forth) carefully lift agitator off drive bell.

d. Remove two screws from bottom edge of front panel, *Figure 21.*

e. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*

f. Remove two cabinet top hold-down screws, and hinge cabinet top or remove, paragraph 18.

g. Loosen hose clamp and disconnect filler hose from outer tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, the white line or hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.*

(continued)

⚠ WARNING

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

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

W003

Tub Cover and Gasket:

1. There are eight tub cover hold-down tabs which snap over the outer tub flange. Using special tub cover tool, Part No. 273P4, insert two prongs of tool underneath each side of tandem tabs, *Figure 37.* Tilt tool toward center of tub cover and at the same time lift upward on cover to unsnap hold-down tabs from outer tub flange. One by one, disengage each of the eight hold-down tabs from outer tub flange and remove cover.
2. Remove cover from the outer tub and remove old gasket from tub cover.

IMPORTANT: When installing outer tub cover, always use a new cover gasket.

NOTE: Clean and remove any foreign material in gasket groove of outer tub cover and outer tub flange.

3. Starting at positioning pin located between two bleach funnel outlet tabs, lay gasket into gasket groove of tub cover, *Figure 38.*
4. Using your fingers, press gasket down into gasket groove of tub cover. Avoid pressing gasket past ends of hold-down tabs.

IMPORTANT: Care must be taken not to twist or bunch gasket in any one area to avoid leaks after assembly.

5. Install gasket past ends of hold-down tabs to bottom of gasket groove using semi-curled end of tub cover tool Part No. 273P4.

NOTE: Tub cover tool Part No. 273P4 is desinged to spread open hold-down tabs to prevent tearing of gasket during installation.

6. With tub cover tilted at approximately a 45 degree angle, insert the positioning pin into notch on outer tub flange, *Figure 39.*

NOTE: The two bleach funnel outlet tabs must be angled downward toward inside wall of outer tub for proper dispensing of bleach.

7. Lower cover and push down firmly on top of hold-down tabs next to positioning pin until tabs snap over edge of outer tub flange.
8. Cross over to opposite side of tub cover and push down firmly on top of hold-down tabs until tabs snap over edge of outer tub flange. Continue with this criss-cross pattern, until tub cover is fully seated. Visually check each tab area again to ensure cover is seated.
9. Check whether or not bleach drain tabs are in the down position by looking through the square holes in bleach funnel area of tub cover. If tabs are not down, a small screwdriver can be inserted down through holes in bleach funnel area to straighten tabs.

h. Remove four screws and washers holding washtub to hub, *Figure 40.*

IMPORTANT: Porcelain Washtub Models — Use care when tightening cap screws to avoid chipping porcelain on washtub.

i. Lift washtub (with clothes guard attached) out of outer tub.

IMPORTANT: When removing washtub and clothes guard, DO NOT lift up on guard as you could damage it. Grasp top flange of washtub and remove from outer tub.

j. Remove agitator drive bell, paragraph 12.
k. Remove large hex nut using a No. 237P4 Hex Wrench. Then remove spline insert from transmission tube, *Figure 41.*
l. Remove hub from splines on transmission tube.

NOTE: It may be necessary to use a gear puller to remove hub.

m. Remove old water seal from outer tub.

IMPORTANT: Use care when removing old water seal so as not to damage tub flange or porcelain.

⚠ WARNING

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

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

W003

NOTE: When reinstalling or replacing outer tub, we recommend installing a new No. 495P3 Hub and Seal Kit, paragraph 22.

While holding idler lever, reach in and around right side of motor and run belt off right side of pulley.

We recommend that before removing or reinstalling complete tub module assembly, you unhook idler spring and helper spring and move idler lever out of the way. This will prevent the possibility of idler lever or pulley damage.

n. Using No. 289P4 Spring Hook Tool, unhook seven centering springs from lower edge of outer tub, *Figure 48.*

IMPORTANT: Mark the word "FRONT" on front side of outer tub so complete tub module can be reinstalled in same position.

o. Disconnect hose from bottom of outer tub.

IMPORTANT: Some water will always remain in outer tub. Therefore, before removing hose from pump, pinch off or drain hose to prevent water spillage.

p. Remove pressure hose from pressure accumulator. Then remove tape holding pressure hose to outer tub, *Figure 52.*
q. Grasp outer tub and lift complete tub assembly (with transmission, balance ring and pivot dome attached) straight up and out of washer cabinet.
r. Turn outer tub upside-down and set on protective padding, *Figure 49.*
s. Remove screw, washer and helix holding drive pulley to input shaft of transmission assembly, *Figure 50.*
t. Lift drive pulley up and out from between tub support legs.

NOTE: When reinstalling pulley, place a small amount of No. 03200 Lubricant to top side of drive pulley that will be contacting the large flat washer. Lubricate helix ramps with a small amount of No. 03200 Lubricant. See *Figure 51.*

IMPORTANT: DO NOT OVER LUBRICATE! Excess lubricant can be thrown into pivot dome area during normal washer operation. Any lubricant on pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch. This condition will persist until lubricant is removed.

u. Using a right angle needle nose pliers, remove spring from around lower transmission tube (located inside brake assembly), *Figure 51.*

NOTE: Remove spring by turning in a COUNTERCLOCKWISE direction (looking at bottom end of shaft).

IMPORTANT: When reinstalling spring, be sure it is inserted into groove in large spline of transmission tube. Use spring tool, No. 242P4, when installing spring.

v. Remove screws and lockwashers holding each support leg to outer tub, *Figure 51,* then lift pivot dome, brake assembly and lower bearing housing off transmission tube.

NOTE: It may be necessary to tap lightly on bearing housing to loosen it from transmission tube.

IMPORTANT: When installing lower bearing housing, pivot dome and brake assembly, apply No. 27604P Anti-Seize compound to area of transmission tube that will be contacting bearing, *Figure 53.*

To prevent porcelain damage, leg plates must be installed on outer tub flange when reinstalling support legs. (Plate must be installed on outside of tub flange.) Do not overtighten screws as this could cause stripping or porcelain damage. Torque screws between 90 to 130 inch pounds.

(continued)

⚠ WARNING

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

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

W003

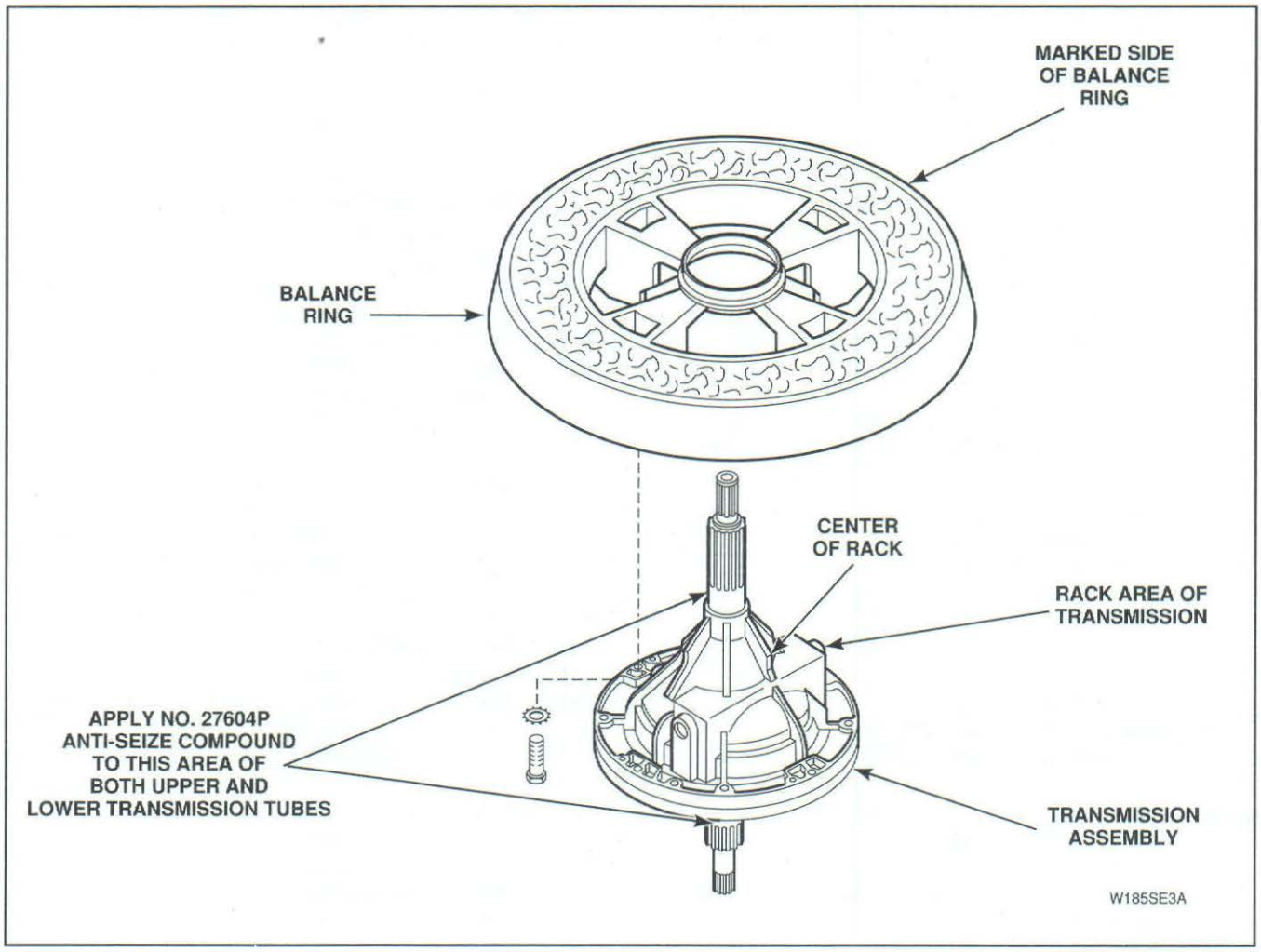


Figure 53

w. Remove four screws and lockwashers holding transmission assembly to balance ring, *Figure 53,* then lift transmission assembly straight up and out of balance ring and upper bearing.

IMPORTANT: When replacing or reinstalling transmission assembly, it is important that No. 27604 Anti-Seize Compound be applied to area of the transmission tubes where they will be contacting upper and lower bearings, *Figure 53.*

When reinstalling transmission assembly, note, if there is a mark located on outer edge of balance ring this mark (if present) indicates light side of ring. This light side must be installed at a 9 o'clock position with center of rack at 12 o'clock when viewed from top of transmission, *Figure 53.* Carefully lower transmission through balance ring and upper bearing. DO NOT DROP OR LOWER TRANSMISSION ASSEMBLY INTO POSITION TOO HARD, this can cause bearing to move within bearing housing which will cause vibration, noise, wear or no spin.

⚠ WARNING

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

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

W003

TO DISASSEMBLE TRANSMISSION ASSEMBLY (Refer to *Figure 54* for assembly sequence).

a. Place transmission in a vise with input shaft end up. Clamp only the case, not the shaft.

NOTE: Supporting transmission in this manner will allow oil to collect in the transmission case.

b. Before disassembling transmission halves, mark outer edge of transmission case and cover so two can be reassembled in the same position.
c. Place transmission in vise so three of the eight screws holding transmission case and cover together are in the twelve, four, and seven o'clock positions.
d. Loosen three screws, mentioned in step "c", approximately two turns. DO NOT remove these three screws at this time. Remove remaining five screws and lockwashers completely.
e. Remove transmission assembly from vise.
f. While holding transmission by cover end, gently tap each of the three remaining screws until two halves separate. Place assembly back into vise (cover end up) and remove three screws and lockwashers.
g. Remove screw and washer holding reduction gear to transmission cover and remove gear.
h. Remove special screw, lockwasher and flat washer holding drive pinion to input shaft.

NOTE: To prevent input shaft from turning during removal of special screw, place an old helix onto shaft and hold helix with a locking pliers.

i. Remove drive pinion from input shaft using a hammer and punch to drive shaft out of pinion.
j. Remove input shaft from transmission cover.

IMPORTANT: Carefully examine area inside cover tube (seals, bearing, roller clutch, etc.). If oil is present between seals and bearing, or roller clutch is bad, it will require replacing complete transmission cover assembly. These components are not available separately.

k. Remove internal gear, slide and rack from transmission case.
l. Remove transmission case from vise and drain oil.
m. Remove retainer ring from output shaft.
n. Using a hammer and punch, carefully drive shaft out of agitator pinion.
o. Carefully remove output shaft and washer from transmission case.

IMPORTANT: Carefully examine area inside transmission case tube (seals, bearings, etc.). If oil is present between seals and bearings, it will require replacing complete transmission case. Seals and bearings are not available separately.

TO REASSEMBLE TRANSMISSION ASSEMBLY

IMPORTANT: Wash all components in a cleaning solution (mineral spirits). Wipe inside of transmission case and cover with a clean cloth, dampened with cleaning solution, to remove any impurities. DO NOT allow cleaning solution to come in contact with bearings and seals in transmission case and/or cover.

a. Carefully insert output shaft and washer into transmission case.
b. Place agitator pinion on splines of output shaft and press onto shaft.
c. Install retainer ring on output shaft.
d. Place transmission case into a vise. Clamp only the case, not the shaft.
e. Place rack inside transmission case with rack resting on bar in case. Agitator pinion must engage the rack.

NOTE: Put a light film of transmission oil on bar where rack will slide back and forth.

f. Position slide in slot on rack.

NOTE: Put a light film of transmission oil in slot on rack, also, transmission case where internal gear will ride.

(continued)

⚠ WARNING

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

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

W003

g. Place internal gear into transmission case. Make sure guide pin on internal gear fits in hole on slide.

IMPORTANT: Never install a used internal gear in a new transmission case. If transmission case and internal gear are to be reused, be sure they are used as the original set.

h. Refill transmission case with new No. 27243P Transmission Oil (one fill).
i. To prevent seal damage, insert input shaft into cover starting at outer end of cover tube.

IMPORTANT: End of shaft with identification groove, *Figure 54,* must be facing outward. This is the end that will mate with the helix.

j. Install drive pinion, flat washer, lockwasher and special screw onto input shaft.

NOTE: Use a thread locking compound on threads of special screw to prevent screw from loosening on shaft.

IMPORTANT: Be sure mating surfaces of transmission cover and case are free of oil or any other foreign material.

k. Place reduction gear on stub shaft of cover and install screw and washer.
l. Apply a bead of sealant, No. 28434P Loctite, on mating surface of transmission case.

IMPORTANT: Bead of sealant should be no more than one sixteenth inch in diameter. DO NOT allow any sealant to contact edges of internal gear (sealer may damage moving parts).

m. Carefully place transmission cover over top of transmission case. Make sure holes in cover line up with holes in case, and marked edges of two halves are aligned.
n. Carefully lower cover onto case.
o. Secure two transmission halves together, using eight screws removed during disassembly. Tighten eight screws evenly.
p. Remove complete transmission assembly from vise.
q. Apply Anti-Seize compound, No. 27604P, to smooth area of both transmission tubes that will be contacting upper and lower bearings, *Figure 53.*

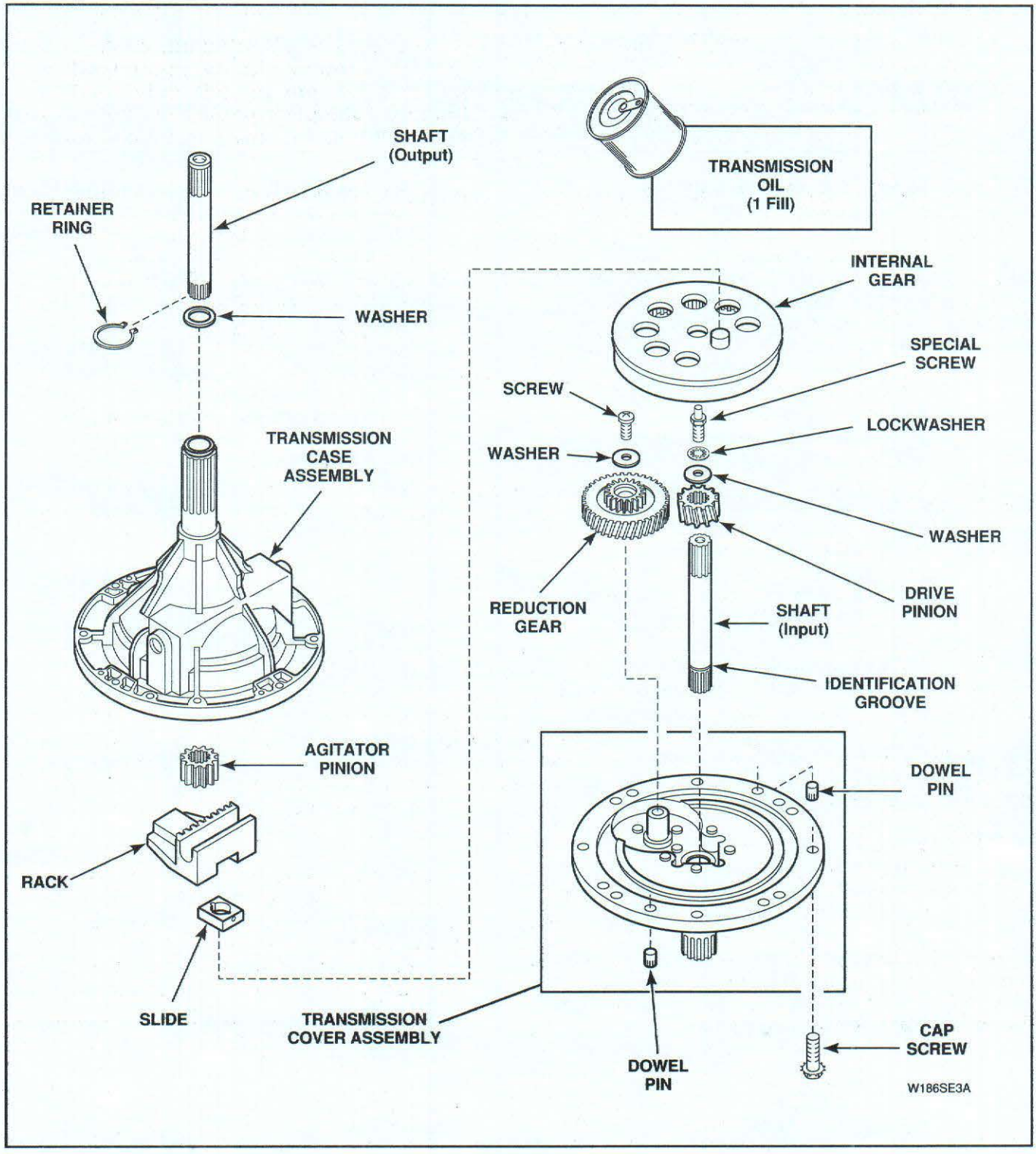


Figure 54

LOCTITE
(Use as a sealant between Transmission Case and Cover)

⚠ WARNING

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

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

W003

28. BALANCE RING

a. Remove transmission assembly, paragraph 27.
b. Lift balance ring off outer tub.

IMPORTANT: When reinstalling balance ring, note, if there is a mark located on outer edge of balance ring, this mark (if present) indicates light side of ring. This light side must be installed at a 9 o'clock position with center of rack at 12 o'clock when viewed from top of transmission, *Figure 53.*

29. UPPER BEARING ASSEMBLY

a. Remove transmission assembly, paragraph 27, steps "a" through "u".
b. Remove screws and lockwashers holding each support leg to outer tub, *Figure 49.*
c. Lift complete pivot dome (with drive pulley, brake assembly, lower bearing housing, transmission assembly, and balance ring attached) off outer tub.

IMPORTANT: To prevent porcelain damage, leg plates must be installed on outer tub flange when reinstalling support legs. (Plate must be installed on outside of tub flange). Do not overtighten screws as this could cause stripping or porcelain damage.

d. Remove three screws holding upper bearing and housing to bottom of outer tub, *Figure 55.*

NOTE: Replace bearing and housing as an assembly, and be sure flinger is properly positioned between outer tub and bearing assembly, *Figure 55.*

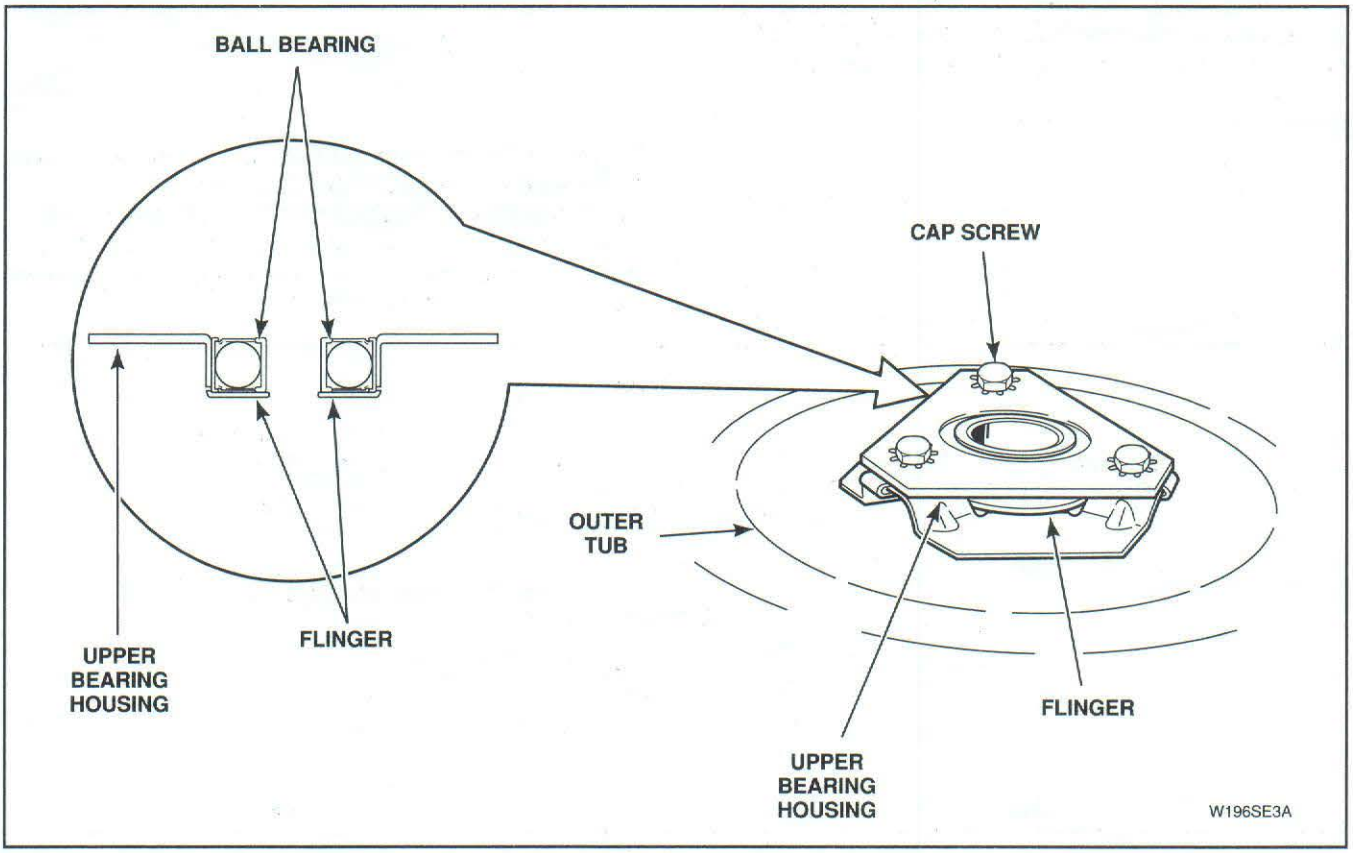


Figure 55

⚠ WARNING

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

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

W003

30. SNUBBER PAD AND ISOLATOR ASSEMBLY

a. Remove outer tub, paragraph 19, steps "n" through "t".

b. Locate splint end of snubber pad and isolator assembly strip and using a flat blade screwdriver, carefully unsnap snubber pad and isolator assembly strip from pivot dome area of washer base, *Figure 56.*

TO INSTALL NEW SNUBBER PAD AND ISOLATOR ASSEMBLY

a. Starting at elongated hole in pivot dome area of washer base, place one end of snubber pad and isolator assembly strip into elongated hole, then snap pins on snubber pad and isolator assembly strip into their respective holes in base. It may require shifting snubber pad and isolator assembly strip to get two ends of strip to meet in area of elongated hole.

IMPORTANT: **DO NOT APPLY ANY LUBRICANT to surface of new isolator that will be contacting pivot dome. Any lubricant on pivot dome or snubber pad and isolator assembly will cause premature tripping of the out-of-balance switch.**

b. Clean surface of pivot dome then carefully place tub module back into washer making sure pivot dome is positioned properly in dome recess of washer base.

NOTE: Be sure the word "FRONT" (on outer tub) is facing toward front of washer.

c. Use No. 289P4 Spring Hook Tool and starting with rear springs, hook seven centering springs into lower edge of outer tub, *Figure 48.*

IMPORTANT: When installing centering springs, make sure spring hook is fully seated in hole in tub skirt, *Figure 48.*

d. Connect hose to bottom of outer tub, tighten hose clamp.

e. Reconnect idler spring to the clip on motor mounting bracket, and helper spring into back hole in mounting bracket, *Figure 22.*

f. Place drive belt on motor pulley, reach around right side of motor, starting with belt on right side of large pulley, run belt onto large pulley.

h. Route pressure hose as shown in *Figure 57.* Then route pressure hose back up through hole in the cabinet top.

i. Reconnect filler hose to tub cover, *Figure 37.*

NOTE: When reinstalling filler hose, the white line on hose that connects to tub cover must be aligned with line located on top side of outer tub cover, *Figure 37.* Make sure hose is in its natural position (not kinked or twisted). If it is not, loosen hose clamp and straighten hose.

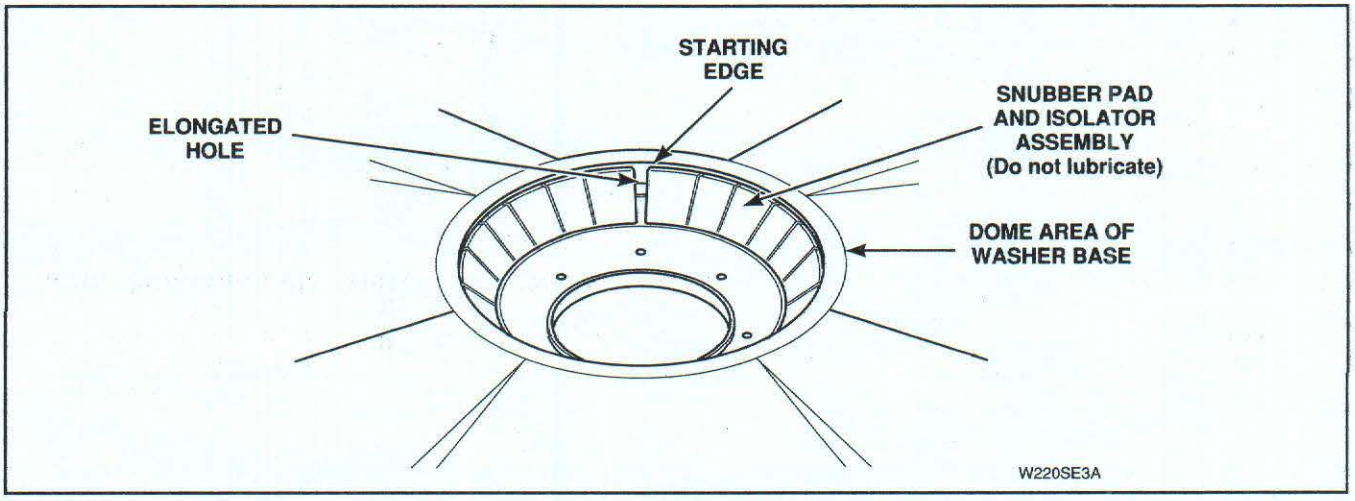


Figure 56

(continued)

⚠ WARNING

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

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

W003

j. Reinstall cabinet top.
k. Remove control panel, reconnect pressure hose to pressure switch. Then reinstall control panel.
l. Reinstall washer front panel.
m. Reconnect washer power cord and open water supply valves.

NOTE: Washer must be run through a complete cycle to make sure it is operating properly.

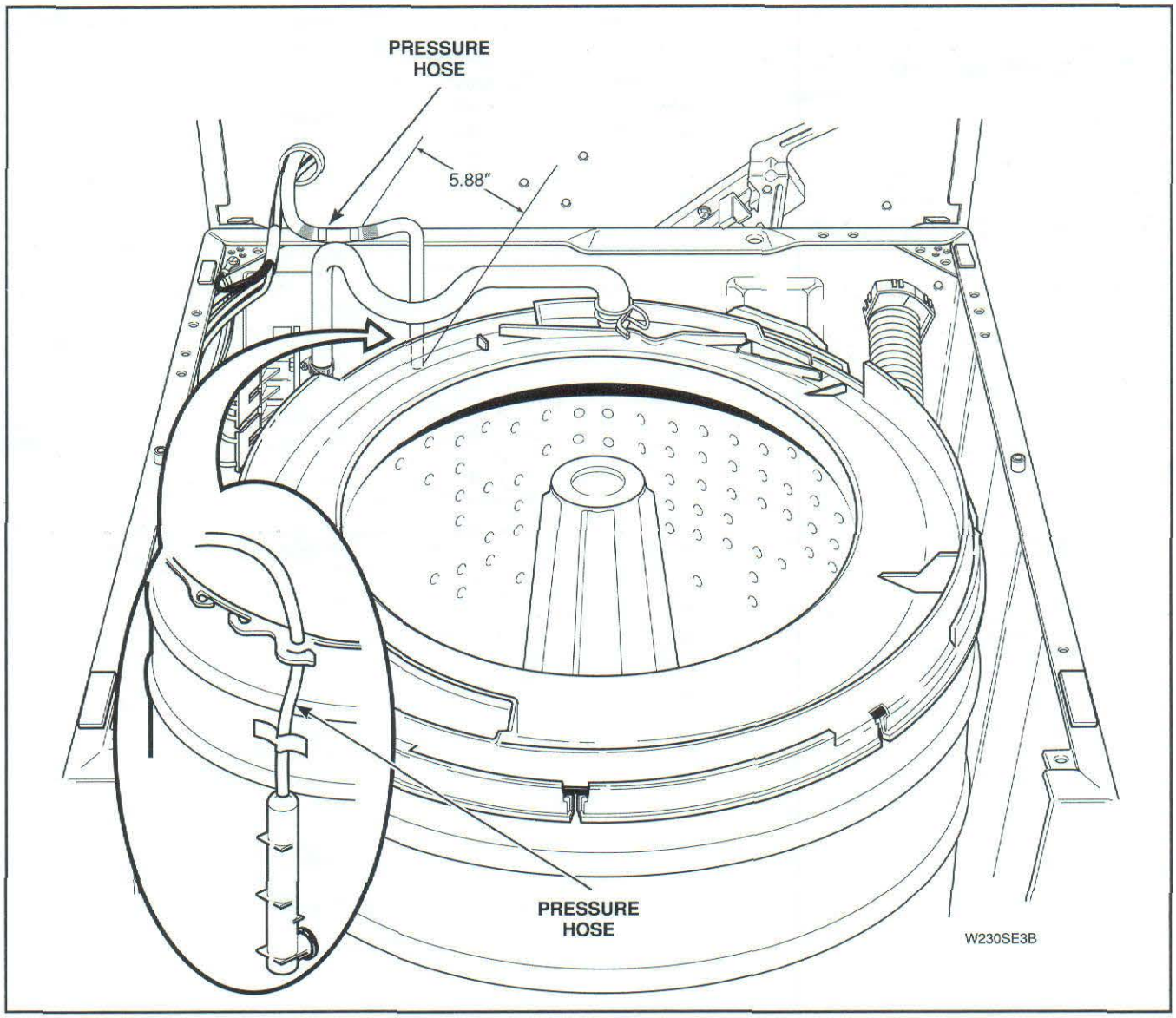


Figure 57

SECTION III
Adjustments

31. LEVELING LEGS (Refer to *Figure 58*)

a. Place rubber feet on all four leveling legs.
b. Place washer in position on a clean, dry, and reasonably firm floor.
c. Loosen locknuts and adjust two front leveling legs. Once adjusted, tilt unit forward on front legs and lower back down into position to set the rear self-leveling legs.
d. Washer must not rock. After washer is at desired height, tighten locknuts securely against bottom of washer base. If these locknuts are not tight, washer will not remain stationary during operation.

NOTE: Improper installation, installation on carpet or flexing of a weak floor will cause excessive vibration.

IMPORTANT: Do not slide washer across floor once leveling legs have been extended, as legs and base could become damaged.

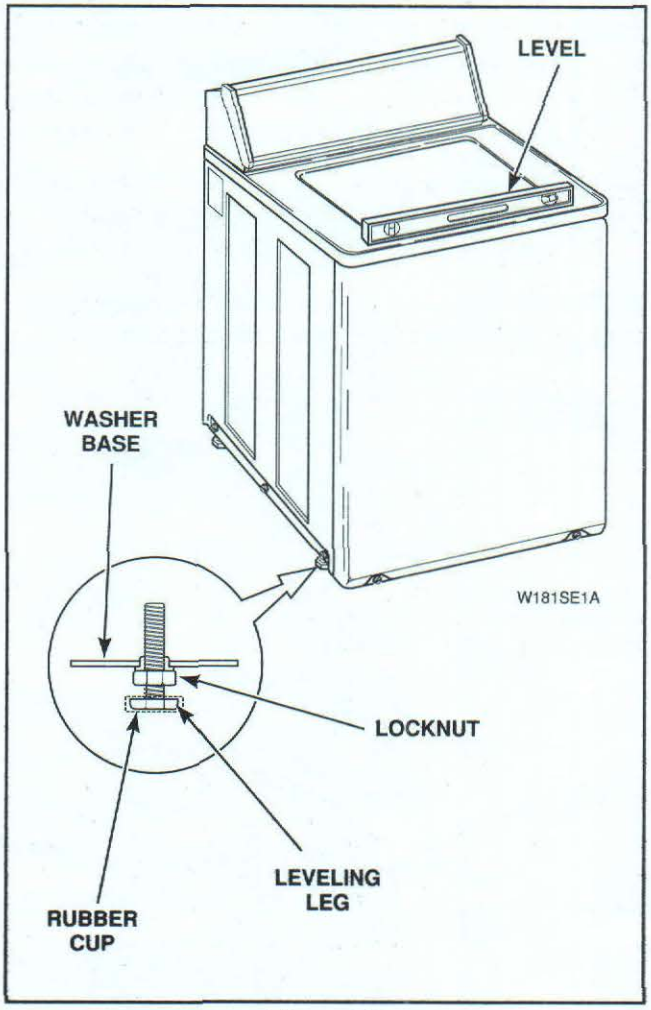


Figure 58

32. PRESSURE SWITCH (Refer to *Figure 59*)

NOTE: DO NOT ADJUST PRESSURE SWITCH IF WASHER IS WITHIN THE WARRANTY PERIOD.

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

Maximum water fill level can be increased by turning adjusting screw CLOCKWISE, and decreased by turning screw COUNTERCLOCKWISE.

One quarter turn of the adjusting screw represents approximately one inch (2.54 cm) increase or decrease of water level in washtub.

IMPORTANT: **DO NOT** turn adjusting screw more than 3/4 of a turn in either direction as the switch may be damaged and flooding could result.

33. BELT (Agitate and Spin)

No belt adjustment is required.

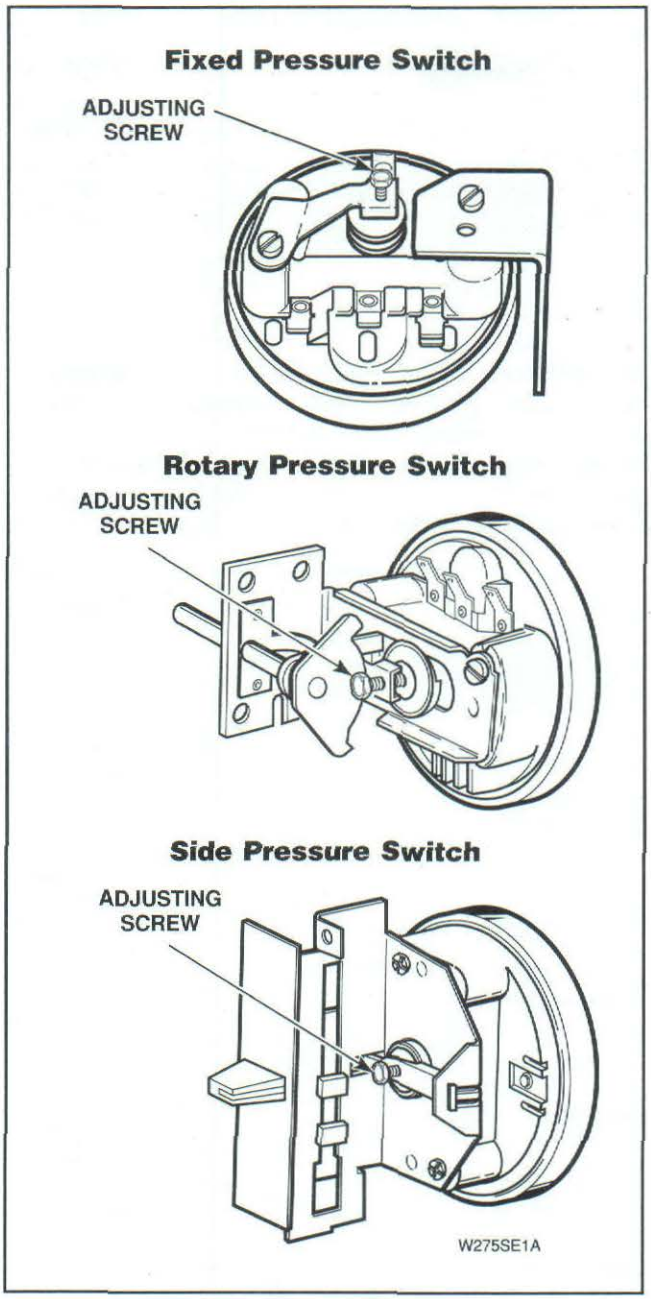


Figure 59

34. OUT-OF-BALANCE SWITCH

a. Remove two screws from bottom edge of front panel, *Figure 21.*
b. Pull bottom of panel away from washer until hold-down clips (located on top flange of panel) disengage from slots in cabinet top, *Figure 21.*
c. Hinge or remove cabinet top, paragraph 18.
d. Check for bent actuator arm or lever, *Figure 60.*

IMPORTANT: If switch lever repeatedly trips the out-of-balance switch, check centering of agitator within the loading door opening. If tub module is not centered within opening, centering spring(s) may have been overstretched. Replace necessary spring(s) and recheck centering, *Figure 61.*

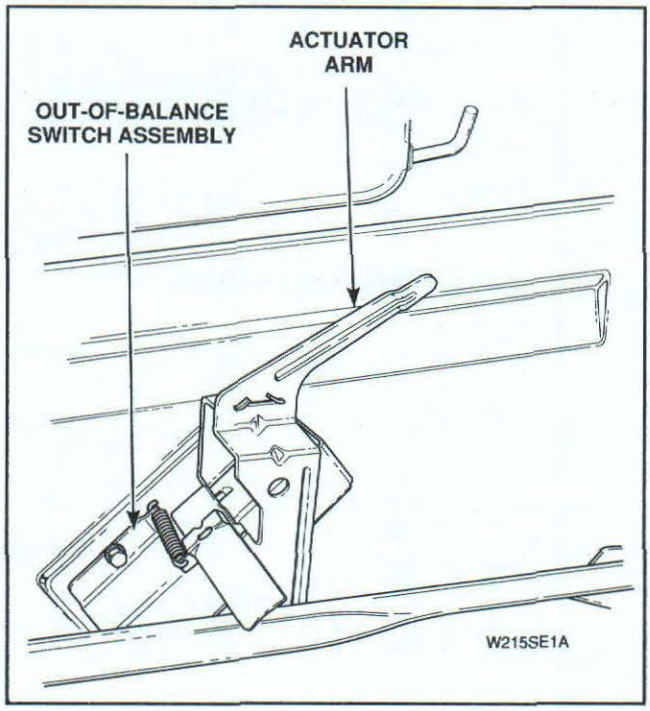


Figure 60

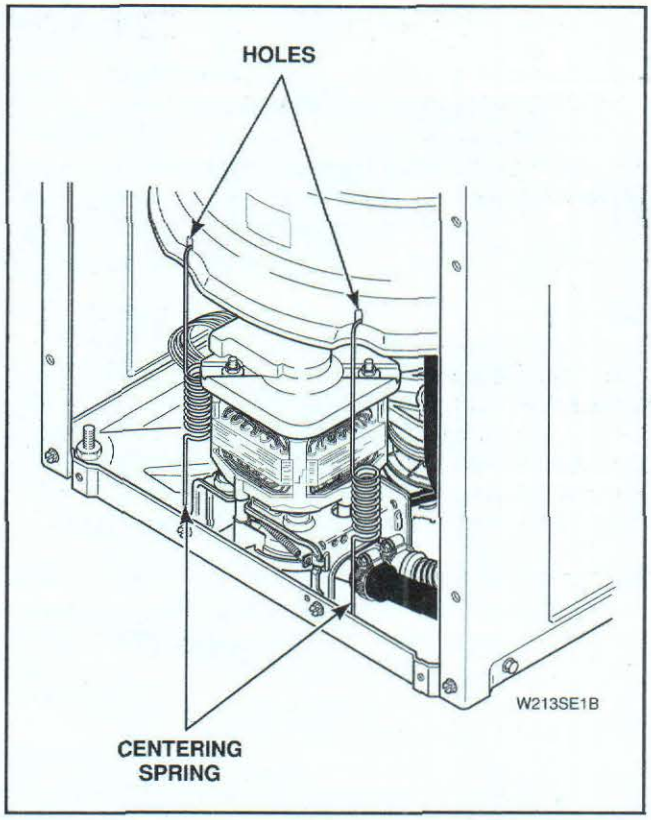


Figure 61

SECTION IV
Service Helps

⚠ WARNING

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

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

W003

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

35. NO HOT WATER

POSSIBLE CAUSE	TO CORRECT
Hot water supply faucet is closed.	Open faucet.
Water supply is cold.	Check water heater.
Kinked hot water inlet hose.	Straighten or replace hose.
Clogged mixing valve screen, or screen in outer end of inlet hose nearest water supply faucet.	Disconnect hot water inlet hose, and clean or replace screen.
Inoperative hot water mixing valve solenoid.	Test solenoid and replace if inoperative.
Inoperative timer.	Test timer and replace if inoperative.
Inoperative temperature switch.	Test switch and replace if inoperative.
Inoperative pressure switch.	Test switch and replace if inoperative.
Clogged pressure hose.	Remove and clean or replace hose.
Broken, loose, or incorrect wiring.	Refer to appropriate Wiring Diagram.

36. NO COLD WATER

POSSIBLE CAUSE	TO CORRECT
Cold water supply faucet is closed.	Open faucet.
Kinked cold water inlet hose.	Straighten or replace hose.
Clogged mixing valve screen, or screen in outer end of inlet hose nearest water supply faucet.	Disconnect cold water inlet hose, and clean or replace screen.
Inoperative cold water mixing valve solenoid.	Test solenoid and replace if inoperative.
Inoperative timer.	Test timer and replace if inoperative.
Inoperative temperature switch.	Test switch and replace if inoperative.
Inoperative pressure switch.	Test switch and replace if inoperative.
Clogged pressure hose.	Remove and clean or replace hose.
Broken, loose, or incorrect wiring.	Refer to appropriate wiring diagram.

⚠ WARNING

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

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

W003

37. NO WARM WATER

POSSIBLE CAUSE	TO CORRECT
No hot water.	Refer to paragraph 35.
No cold water.	Refer to paragraph 36.

38. WATER FILL DOES NOT STOP AT PROPER LEVEL

POSSIBLE CAUSE	TO CORRECT
Inoperative pressure switch.	Test switch and replace if inoperative.
Air leak in pressure hose.	Replace hose.
Sediment on or under mixing valve diaphragm, defective diaphragm, or armature binding in armature guide.	Disassemble and clean mixing valve. Replace deteriorated or not-easily-cleaned components.
Broken, weak, or missing mixing valve armature spring.	Disassembly valve and replace spring.
A siphoning action started in washer will cause water to be siphoned from washer during cycle due to end of drain hose being lower than cabinet top of washer. Drain hose fits tight in standpipe or drain.	Install No. 562P3 Siphon Break Kit. Provide an air gap around drain hose and drain receptacle.
Water in pressure hose.	Blow air through hose to remove water.
Broken, loose, shorted, or incorrect wiring.	Refer to appropriate wiring diagram.

39. TIMER DOES NOT ADVANCE

POSSIBLE CAUSE	TO CORRECT
Timer is designed to pause during fill periods.	Allow completion of fill period.
Inoperative timer.	Test timer, and replace if inoperative.
Loading door is open.	Close loading door. Loading door MUST be closed any time the washer is to agitate or spin.
Washer will not fill.	Timer pauses until pressure switch is satisfied. Refer to paragraphs 35 and 36.
Timer motor lead wire off timer terminal.	Refer to appropriate wiring diagram and reattach wire.
Broken, loose or incorrect wiring.	Refer to appropriate wiring diagram.

⚠ WARNING

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

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

W003

40. MOTOR DOES NOT RUN

POSSIBLE CAUSE	TO CORRECT
Electrical power off, fuse blown, or power cord not plugged in.	Check laundry room for blown or loose fuse(s) or open circuit breakers. (Washer itself does not have an electrical fuse).
Loading door not closed or inoperative switch.	Close door or test switch and replace if inoperative.
Timer improperly set.	Reset timer, or try another cycle.
Inoperative timer.	Test timer and replace if inoperative.
Motor starting functions inoperative. No start; or motor hums only.	Refer to SECTION V to check start switch and start windings.
Motor is dead, won't run.	Refer to SECTION V to check switch and windings.
Motor overload protector has cycled.	Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to paragraph 43.
Bind in upper or lower motor bearing.	*Remove belts and determine if motor shaft will spin.* Replace motor if shaft is locked up.
Broken, loose, or incorrect wiring.	Refer to appropriate wiring diagram.
Power cord is miswired.	Refer to appropriate wiring diagram for correct wiring.

⚠ WARNING

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

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

W003

41. NO AGITATION

POSSIBLE CAUSE	TO CORRECT
Inoperative timer. Timer is designed to pause (SOAK) during DELICATE cycle.	Test timer and replace if inoperative.
Motor will not run.	Refer to SECTION V to check switch and windings.
No Delicate cycle agitate.	Refer to SECTION V to check low speed switch and windings.
Inoperative pressure switch.	Test switch and replace if inoperative.
Broken, loose, or incorrect wiring.	Refer to appropriate wiring diagram.
Loose or broken drive belt.	Adjust or replace belt.
Inoperative transmission assembly.	Repair or replace transmission assembly.
Sheared motor pulley roll pin.	Remove drive motor and replace roll pin and any other damaged parts.
Motor overload protector has cycled.	Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to paragraph 43.
Bind in pump.	Replace pump.
Loading door is open or door switch is inoperative.	Close door or test switch and replace if inoperative.

42. CONSTANT AGITATION

POSSIBLE CAUSE	TO CORRECT
Inoperative timer.	Test timer and replace if inoperative.
Shorted or incorrect wiring.	Refer to appropriate wiring Diagram.
Inoperative transmission assembly.	Repair or replace transmission assembly.

⚠ WARNING

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

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

W003

43. UNIT SMOKES, OVERHEATS, CYCLES ON MOTOR THERMAL PROTECTOR, SWITCH ACTUATOR KICKS IN AND OUT

POSSIBLE CAUSE	TO CORRECT
Belt is tacky and does not allow proper slip.	Check belt and replace if defective.
Belt tension is too great and does not allow proper slip.	Make sure idler and helper springs are properly connected.
Inoperative timer.	Test timer and replace if inoperative.
Motor switch functions inoperative.	Refer to SECTION V to check switch functions.
Bind in water pump.	Replace pump.
Brake pads binding.	Free binding pads, or replace pads.
Brake, transmission, or motor have locked up and will not turn.	Check that all these components are able to move freely. Correct binding component.
Incorrect voltage.	Contact local utility company, or have a qualified electrician check power supply.

44. SLOW SPIN OR NO SPIN

POSSIBLE CAUSE	TO CORRECT
Inoperative timer.	Test timer and replace if inoperative.
Some model washers, timer is programmed for SLOW spin in DELICATE CYCLE regardless of action switch setting.	Use a different cycle.
Loading door is open or door safety switch is inoperative.	Close loading door, or test switch and replace if inoperative.
Bind in water pump.	Replace pump.
Loose or broken drive belt.	Adjust or replace belt.
Washer has gone OUT-OF-BALANCE LED (Light Emitting Diode) is flashing on electronic control.	Open loading door to reset OUT-OF-BALANCE switch. Rearrange load in washtub.
Motor will not run.	Refer to MOTOR TEST SECTION V to check switch and windings.
Sheared motor pulley roll pin.	Remove drive motor and appropriately replace roll pin and any other damaged parts.
Motor overload protector has cycled.	Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to paragraph 43.
No clearance or stuck brake pads.	Free sticky brake pads or replace pads.
Broken, loose, or incorrect wiring.	Refer to appropriate wiring diagram.
Inoperative transmission assembly.	Repair or replace the transmission assembly.

⚠ WARNING

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

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

W003

45. CONSTANT SPIN

POSSIBLE CAUSE	TO CORRECT
Inoperative timer.	Test timer and replace if inoperative.
Washtub does not stop spinning within seven seconds after loading door is opened.	Replace brake pads.
Excessive wear on brake pads, or missing brake pads.	Replace brake pads.
Shorted or incorrect wiring.	Refer to appropriate wiring diagram.

46. UNIT STOPS IN CYCLE; QUITS AFTER A COUPLE LOADS; IS INTERMITTENT

POSSIBLE CAUSE	TO CORRECT
Belt is tacky and does not allow proper slip.	Check belt and replace if defective.
Belt tension is too great and does not allow proper slip.	Make sure idler and helper springs are properly connected.
Inoperative timer.	Test timer and replace if inoperative.
Broken, loose, or incorrect wiring.	Refer to appropriate wiring diagram.
Motor overload protector has cycled.	Wait two or three minutes for overload protector to reset. If protector cycles repeatedly, refer to paragraph 43.
Motor switch functions inoperative.	Refer to SECTION V to check switch functions.
Brake, transmission, or motor have locked up and will not turn.	Check that all these components are able to move freely.

47. WASHER IS LOCKED UP OR BINDING

POSSIBLE CAUSE	TO CORRECT
Excessive belt tension.	Adjust belts.
Bind in upper or lower bearing.	Replace bearing.
Bind in water pump.	Replace pump.
Bind in transmission.	Repair or replace transmission.
Brake pads binding.	Free binding pads, or replace pads.
Incorrect voltage.	Contact local utility company, or have a qualified electrician check power supply.

⚠ WARNING

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

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

W003

48. OUTER TUB DOES NOT EMPTY

POSSIBLE CAUSE	TO CORRECT
Kinked drain hose.	Straighten hose.
Drain hose out of clamp in back of cabinet.	Remove washer front panel and install drain hose into clamp.
Inoperative water pump.	Replace pump.
Obstruction in outer tub outlet hose.	Remove obstruction.

49. EXCESSIVE VIBRATION

POSSIBLE CAUSE	TO CORRECT
Unbalanced load in tub.	Stop washer, redistribute load, then restart washer.
Broken, or disconnected centering spring(s).	Connect or replace centering spring(s).
Washer is not properly leveled.	Adjust leveling legs.
Washer is installed on weak, "spongy", carpeted or built-up floor.	Relocate washer, or support floor to eliminate weak or "spongy" condition.
Incorrect or loose cabinet screws.	Replace with correct screws or tighten.
Base damaged (washer was dropped).	Replace base assembly.
Balance ring not positioned properly on transmission assembly.	Refer to paragraph 27.
Lubricant on Pivot Dome and/or Snubber Pad and isolator assembly.	Remove lubricant.

50. WATER LEAKING FROM OUTER TUB

POSSIBLE CAUSE	TO CORRECT
Leaking water seal in outer tub.	Replace hub and seal kit assembly, paragraph 22.
Hole in outer tub.	Replace outer tub.
Pressure hose or accumulator leaking.	Replace pressure hose and/or accumulator.
Outer tub cover gasket leaking.	Replace gasket.
Obstruction in drain causing water to come over top of outer drain tub cover.	Remove obstruction.
Tub-to-pump hose leaking at clamp.	Tighten clamp.

NOTES

SECTION V
Test Procedures

⚠ WARNING

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

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

W003

EMERSON MOTOR SWITCH

NOTE: Refer to SECTION VII for Internal Wiring of Washer Motor Switch.

⚠WARNING

Disconnect electric power to washer before performing the following steps, or when replacing switch.

START TERMINALS

A. CONTINUITY EXISTS BETWEEN SWITCH TERMINAL **R** AND RED WIRE.
- NO → INOPERATIVE START SWITCH. REPLACE SWITCH.
- YES ↓

B. MANUALLY DEPRESS ACTUATOR. CONTINUITY BROKEN BETWEEN SWITCH TERMINAL **R** AND RED WIRE.
- NO → INOPERATIVE START SWITCH. REPLACE SWITCH.
- YES ↓

HIGH SPEED TERMINALS

C. CONTINUITY EXISTS BETWEEN SWITCH TERMINAL **P** AND BLUE WIRE.
- NO → INOPERATIVE HIGH SPEED SWITCH. REPLACE SWITCH.
- YES ↓

D. MANUALLY DEPRESS ACTUATOR. CONTINUITY BROKEN BETWEEN SWITCH TERMINAL **P** AND BLUE WIRE.
- NO → INOPERATIVE HIGH SPEED SWITCH. REPLACE SWITCH.
- YES ↓

LOW SPEED TERMINALS

E. CONTINUITY **BROKEN** BETWEEN SWITCH TERMINAL **P** AND VIOLET WIRE.
- NO → INOPERATIVE LOW SPEED SWITCH. REPLACE SWITCH.
- YES ↓

F. MANUALLY DEPRESS ACTUATOR. CONTINUITY EXISTS BETWEEN SWITCH TERMINAL **P** AND VIOLET WIRE.
- NO → INOPERATIVE LOW SPEED SWITCH. REPLACE SWITCH.
- YES ↓

MOTOR SWITCH CHECKS OK.

⚠ WARNING

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

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

W003

EMERSON MOTOR WINDINGS

NOTE: Refer to SECTION VII for Internal Wiring of Washer Motor Switch.

⚠WARNING

Disconnect electric power to washer before performing the following steps, or when replacing switch.

START WINDING

G. 4 - 5 OHMS BETWEEN BROWN WIRE AND RED WIRE. — NO → INOPERATIVE START WINDING. REPLACE MOTOR.

YES

HIGH SPEED WINDING

H. 1 - 2 OHMS BETWEEN BLUE WIRE AND YELLOW WIRE. — NO → INOPERATIVE HIGH SPEED WINDING. REPLACE MOTOR.

YES

LOW SPEED WINDING

I. 1 - 2 OHMS BETWEEN YELLOW WIRE AND VIOLET WIRE. — NO → INOPERATIVE LOW SPEED WINDING. REPLACE MOTOR.

YES

PROTECTOR

J. CONTINUITY EXISTS BETWEEN YELLOW WIRE AND WHITE WIRE. — NO → INOPERATIVE COMMON LEAD. REPLACE MOTOR.

YES

ALL MOTOR WINDINGS CHECK OK.

INDICATE WHETHER **YES**, MOTOR PASSED THIS TEST OR, **NO** IT FAILED THIS TEST

Y YES **N NO**

Washer Motor Failure

MOTOR SWITCH

Start Terminals: ☐ A. ☐ B.

High Speed Terminals: ☐ C. ☐ D.

Low Speed Terminals: ☐ E. ☐ F.

MOTOR WINDINGS

Start Winding: ☐ G.

High Speed Winding: ☐ H.

Low Speed Winding: ☐ I.

Protector/Common Lead: ☐ J.

SECTION VI
Cycle Sequence Charts

NOTE: Times listed are approximate.

CYCLE	FUNCTION		WATER TEMP.	*MOTOR SPEED	EATON TIMER		MALLORY TIMER	
					TIME (MIN. & SEC.)	DEGREES	TIME (MIN. & SEC.)	DEGREES
REGULAR 33:58 PLUS FILL	WASH FILL or AGITATE		H,W,C	FAST	15:00	82.25	15:00	82.91
	PAUSE			FAST	1:14	6.76	1:13	6.72
	SPIN			FAST	1:30	8.23	1:30	8.29
	SPIN and SPRAY		COLD	FAST	1:00	5.48	1:00	5.53
	SPIN			FAST	1:30	8.23	1:30	8.29
	PAUSE			FAST	:18	1.65	:17	1.57
	RINSE FILL (Timer Motor Runs)		W or C	FAST	:44	4.02	:44	4.05
	PAUSE or FILL		W or C	FAST	:12	1.10	:12	1.11
	RINSE FILL or AGITATE		W or C	FAST	5:00	27.42	5:00	27.63
	PAUSE			FAST	1:14	6.76	1:13	6.72
	SPIN			FAST	7:00	38.39	6.47	37.49
OFF					2:00	10.97	2:09	10.96
PERMANENT PRESS 26.13 PLUS FILL	WASH FILL or AGITATE		H,W,C	FAST	9:00	49.35	9:00	49.74
	PAUSE			FAST	1:14	6.76	1:13	6.72
	COOL DOWN	SPIN (Partial Drain)		SLOW	:45	4.11	:45	4.15
	(Press Sw. Controlled)	FILL	COLD		Variable		Variable	
	PAUSE				:55	5.03	:50	4.61
	SPIN			SLOW	1:25	7.77	1:25	7.83
	SPIN and SPRAY		COLD	SLOW	:45	4.11	:45	4.15
	SPIN			SLOW	1:30	8.23	1:30	8.29
	PAUSE				:18	1.65	:17	1.57
	RINSE FILL (Timer Motor Runs)		W or C		:44	4.02	:44	4.05
	PAUSE or FILL		W or C		:12	1.10	:12	1.11
	RINSE FILL or AGITATE		W or C	FAST	3:00	16.45	3:00	16.58
	PAUSE				1.14	6.76	1:13	6.72
	SPIN			FAST	5:55	32.44	5.50	32.24
OFF					2:00	10.97	1:59	10.96
	TOTALS				65.39	360.00	65.08	360.00

* ON SINGLE SPEED MODEL WASHERS, ALL SPEEDS ARE FAST.

KEY:
H = HOT
W = WARM
C = COLD

Timer No. 31238 Cycle Sequence (Two Cycle)

NOTE: Times listed are approximate.

CYCLE	FUNCTION		WATER TEMP.	*MOTOR SPEED	EATON TIMER TIME (MIN. & SEC.)	EATON TIMER DEGREES	MALLORY TIMER TIME (MIN. & SEC.)	MALLORY TIMER DEGREES
PERMANENT PRESS 28.13 PLUS FILL	WASH FILL or AGITATE		H,W,C	FAST	9:00	32.79	9:00	33.16
	PAUSE				1:50	6.68	1:49	6.69
	COOL DOWN	SPIN (Partial Drain)		SLOW	:45	2.73	:45	2.76
	(Press Sw. Controlled)	FILL	COLD		Variable		Variable	
	PAUSE				1:23	5.04	1:13	4.48
	SPIN			SLOW	1:25	5.16	1:25	5.22
	SPIN and SPRAY		COLD	SLOW	:40	2.43	:40	2.46
	SPIN			SLOW	1:40	6.07	1:40	6.14
	PAUSE				:27	1.64	:22	1.35
	RINSE FILL (Timer Motor Runs)		W or C		1:02	3.76	1:12	4.42
	PAUSE or FILL		W or C		:22	1.34	:15	.92
	RINSE FILL or AGITATE		W or C	FAST	3:00	10.93	3:00	11.05
	PAUSE				1.50	6.68	1:49	6.69
	SPIN			FAST	5:51	21.31	5.45	21.18
OFF					1:88	8.99	1:86	8.97
DELICATE 24:37 PLUS FILL	WASH FILL or SOAK		H,W,C		1:09	4.19	1:00	3.68
	WASH FILL or AGITATE		H,W,C	SLOW	:45	2.73	:45	2.76
	WASH FILL or SOAK		H,W,C,		2:00	7.29	2:00	7.37
	WASH FILL or AGITATE		H,W,C,	SLOW	:45	2.73	:45	2.76
	WASH FILL or SOAK		H,W,C,		2:00	7.29	2:00	7.37
	WASH FILL or AGITATE		H,W,C	SLOW	:45	2.73	:45	2.73
	PAUSE (Soak)				1:50	6.68	1:49	6.69
	COOL DOWN	SPIN (Partial Drain)		SLOW	:45	2.79	:45	2.76
	(Press Sw. Controlled)	FILL	COLD		Variable		Variable	
	PAUSE				1:23	5.04	1:13	4.48
	SPIN			SLOW	1:30	5.46	1:30	5.53
	SPIN and SPRAY		COLD	SLOW	:40	2.43	:40	2.46
	SPIN			SLOW	1:35	5.77	1:35	5.83
	PAUSE				:27	1.64	:22	1.35
	RINSE FILL (Timer Motor Runs)		COLD		1:02	3.76	1:13	4.48
	PAUSE or FILL		COLD		:22	1.34	:15	.92
	RINSE FILL or AGITATE		COLD	SLOW	2:30	9.11	2:30	9.21
	PAUSE				1:50	6.68	1:49	6.69
	SPIN			SLOW	4:21	15.84	4:26	16.33
OFF					1:88	8.99	1:86	8.97
REGULAR 35:29 PLUS FILL	WASH FILL or AGITATE		H,W,C	FAST	15:00	54.65	15:00	55.26
	PAUSE				1:50	6.68	1:49	6.69
	SPIN			FAST	1:30	5.46	1:30	5.53
	SPIN and SPRAY		COLD	FAST	1:00	3.64	1:00	3.68
	SPIN			FAST	1:30	5.46	1:30	5.53
	PAUSE				:27	1.64	:22	1.35
	RINSE FILL (Timer Motor Runs)		W or C		1:02	3.76	1:12	4.42
	PAUSE or FILL		W or C		:22	1.34	:15	.92
	RINSE FILL or AGITATE		W or C	FAST	5:00	18.22	4:50	17.81
	PAUSE				1:50	6.68	1.49	6.69
	SPIN			FAST	7:00	25.50	6.50	25.17
OFF					1:88	8.99	1:85	8.91
	TOTALS				98.49	360.00	97.43	360.00

*ON SINGLE SPEED MODEL WASHERS, ALL SPEEDS ARE FAST.

KEY:
H = HOT
W = WARM
C = COLD

Timer No. 31239 Cycle Sequence (Three Cycle)

NOTE: Times listed are approximate.

CYCLE	FUNCTION		WATER TEMP.	MOTOR SPEED	TIME (MIN. & SEC.)	DEGREES
PERMANENT PRESS 30:56 PLUS FILL	WASH FILL or AGITATE		H,W,C	FAST	9:00	20.49
	PAUSE				2:19	5.27
	COOL DOWN (Press Sw. Controlled)	SPIN (Partial Drain)		SLOW	1:00	2.28
		FILL	COLD		Variable	
	PAUSE				2:16	5.16
	SPIN			SLOW	1:25	3.23
	SPIN and SPRAY		COLD	SLOW	1:00	2.28
	SPIN			SLOW	1:40	3.79
	PAUSE				:29	1.10
	RINSE FILL (Timer Motor Runs)		W or C		1:22	3.11
	PAUSE or FILL		W or C		:28	1.06
	RINSE FILL or AGITATE		W or C	FAST	3:00	6.83
	PAUSE				2:19	5.27
	SPIN			FAST	5:57	13.55
	SPIN and BUZZER				:03	.11
OFF	BUZZER (Timer Motor Runs) Timer Motor Runs				1:00 :30 2:30	2.28 1.14 5.69
DELICATE 28:05 PLUS FILL	WASH FILL or SOAK		H,W,C		1:09	2.62
	WASH FILL or AGITATE		H,W,C	SLOW	1:00	2.28
	WASH FILL or SOAK		H,W,C		2:00	4.55
	WASH FILL or AGITATE		H,W,C	SLOW	1:00	2.28
	WASH FILL or SOAK		H,W,C		2:00	4.55
	WASH FILL or AGITATE			SLOW	1:00	2.28
	PAUSE (Soak)				2:19	5.27
	COOL DOWN (Press Sw. Controlled)	SPIN (Partial Drain)		SLOW	1:00	2.28
		FILL	COLD		Variable	
	PAUSE				2:16	5.16
	SPIN			SLOW	1:30	3.41
	SPIN and SPRAY		COLD	SLOW	1:00	2.28
	SPIN			SLOW	1:35	3.60
	PAUSE				:29	1.10
	RINSE FILL (Timer Motor Runs)		COLD		1:22	3.11
	PAUSE or FILL		COLD		:28	1.06
	RINSE FILL or AGITATE		COLD	SLOW	2:30	5.69
	PAUSE				2:19	5.27
	SPIN			SLOW	4:27	10.13
	SPIN and BUZZER				:03	.11
OFF	BUZZER (Timer Motor Runs) Timer Motor Runs				1:00 :30 2:30	2.28 1.14 5.69

CYCLE	FUNCTION	WATER TEMP.	MOTOR SPEED	TIME (MIN. & SEC.)	DEGREES
† SOAK/PREWASH	WASH FILL or AGITATE	H,W,C	FAST	3:00	6.83
	SOAK			6:09	14.01
	WASH FILL or AGITATE	H,W,C	FAST	1:30	3.41
	SOAK			6:09	14.01
	WASH FILL or AGITATE	H,W,C		1:30	3.41
	SOAK (Infinite Unless Prewash Option Selected)			2:19	5.27
	SPIN		FAST	3:53	8.84
	SPIN AND BUZZER			:07	.27
OFF (If Prewash Not Selected)	BUZZER (Timer Motor Runs)			1:00 3:00	2.29 6.83
OFF (If Prewash Selected)	PAUSE			2:20	3.87
	WASH FILL (Timer Motor Runs)	H,W,C		1:08	4.02
	PAUSE or FILL			:32	1.21
REGULAR 36:35 PLUS FILL	WASH FILL or AGITATE	H,W,C	FAST	15:00	34.15
	PAUSE			2:19	5.27
	SPIN		FAST	1:30	3.41
	SPIN and SPRAY	COLD	FAST	1:00	2.28
	SPIN		FAST	1:30	3.41
	PAUSE			:29	1.10
	RINSE FILL (Timer Motor Runs)	W or C		1:22	3.11
	PAUSE or FILL	W or C		:28	1.06
	RINSE FILL or AGITATE	W or C	FAST	5:00	11.38
	PAUSE			2:19	5.27
	SPIN		FAST	6:50	15.56
	SPIN and BUZZER		FAST	:10	.38
OFF (If Extra Rinse Not Selected)	BUZZER (Timer Motor Runs)			1:00 2:30	2.28 5.69
OFF (If Extra Rinse Selected	PAUSE			2:20	3.87
	RINSE FILL (Timer Motor Runs)			:38	2.88
	PAUSE or FILL			:32	1.21
EXTRA RINSE	RINSE FILL or AGITATE		FAST	5:00	11.38
	PAUSE			2:19	5.27
	SPIN		FAST	6:57	15.82
	SPIN and BUZZER			:03	.11
OFF 14:19 Plus Fill	BUZZER (Timer Motor Runs) Timer Motor Runs			1:00 :30 2:30	2.28 1.14 5.69
	TOTALS			158:08	360.00

† SOAK IS "INFINITE". PREWASH IS 24:37 PLUS FILL.

KEY:
H = HOT
W = WARM
C = COLD

Timer No. 31240 Cycle Sequence (Five Cycle)

NOTE: Times listed are approximate.

CYCLE	FUNCTION		WATER TEMP.	*MOTOR SPEED	TIME (MIN. & SEC.)	DEGREES
PERMANENT PRESS	WASH FILL or AGITATE		H,W,C	FAST	9:00	24.84
	PAUSE				2:06	5.80
	COOL DOWN (Press Sw. Controlled)	SPIN (Partial Drain)		SLOW	:50	2.29
		FILL	COLD		Variable	
	PAUSE				1:32	4.22
	SPIN			SLOW	1:25	3.92
	SPIN and SPRAY		COLD	SLOW	:50	2.29
	SPIN			SLOW	1:40	4.61
	PAUSE				:30	1.38
	RINSE FILL (Timer Motor Runs)		W or C		1:20	3.67
	PAUSE or FILL		W or C		:21	.97
	RINSE FILL or AGITATE		W or C	FAST	3:00	8.28
30.56 PLUS FILL	PAUSE				2:06	5.80
	SPIN			FAST	5:55	16.34
OFF	Timer Motor Runs				1:05	3.01
					2:10	5.96
DELICATE	WASH FILL or SOAK		H,W,C		1:00	2.76
	WASH FILL or AGITATE		H,W,C	SLOW	:50	2.29
	WASH FILL or SOAK		H,W,C		2:00	5.52
	WASH FILL or AGITATE		H,W,C	SLOW	:50	2.29
	WASH FILL or SOAK		H,W,C		2:00	5.52
	WASH FILL or AGITATE		H,W,C	SLOW	:50	2.29
	PAUSE (Soak)				*2:06*	*5.80*
	COOL DOWN (Press Sw. Controlled)	SPIN (Partial Drain)		SLOW	:50	2.29
		FILL	COLD		Variable	
	PAUSE				1:32	4.22
	SPIN			SLOW	1:30	4.14
	SPIN and SPRAY		COLD	SLOW	:50	2.29
	SPIN			SLOW	1:35	4.36
	PAUSE				:30	1.38
28:05 PLUS FILL	RINSE FILL (Timer Motor Runs)		COLD		1:20	3.67
	PAUSE or FILL		COLD		:21	.97
	RINSE FILL or AGITATE		COLD	SLOW	2:30	6.90
	PAUSE				2:06	5.80
	SPIN			SLOW	4:30	12.42
OFF	Timer Motor Runs				1:05	3.01
					2:10	5.96

CYCLE	FUNCTION	WATER TEMP.	*MOTOR SPEED	TIME (MIN. & SEC.)	DEGREES
PREWASH	WASH FILL or AGITATE	H,W,C	SLOW	3:00	8.28
	SOAK	H,W,C		5:00	13.80
	WASH FILL or AGITATE	H,W,C	SLOW	1:30	4.14
	SOAK	H,W,C		4:04	11.21
	WASH FILL or AGITATE	H,W,C	SLOW	1:30	4.14
22:10 PLUS FILL	SOAK (Infinite Unless Prewash Option Selected)			2:06	5.80
	SPIN		SLOW	5:00	13.80
OFF	Timer Motor Runs			1:05	3.01
				2:10	5.96
REGULAR	WASH FILL or AGITATE	H,W,C	FAST	15:00	41.40
	PAUSE			2:06	5.80
	SPIN		FAST	1:30	4.14
	SPIN and SPRAY	COLD	FAST	1:00	2.76
	SPIN		FAST	1:30	4.14
	PAUSE			:30	1.38
	RINSE FILL (Timer Motor Runs)	W or C		1:20	3.67
	PAUSE or FILL	W or C		:21	.97
	RINSE FILL or AGITATE	W or C	FAST	5:10	14.27
36:35 PLUS FILL	PAUSE			2:06	5.80
	SPIN		FAST	7:00	19.32
OFF	Timer Motor Runs			1:05	2.98
				2:10	5.99
	TOTALS			130:26	360.00

* ON SINGLE SPEED MODEL WASHERS, ALL SPEEDS ARE FAST.

KEY:
H = HOT
W = WARM
C = COLD

Timer No. 32039 Cycle Sequence (Four Cycle)

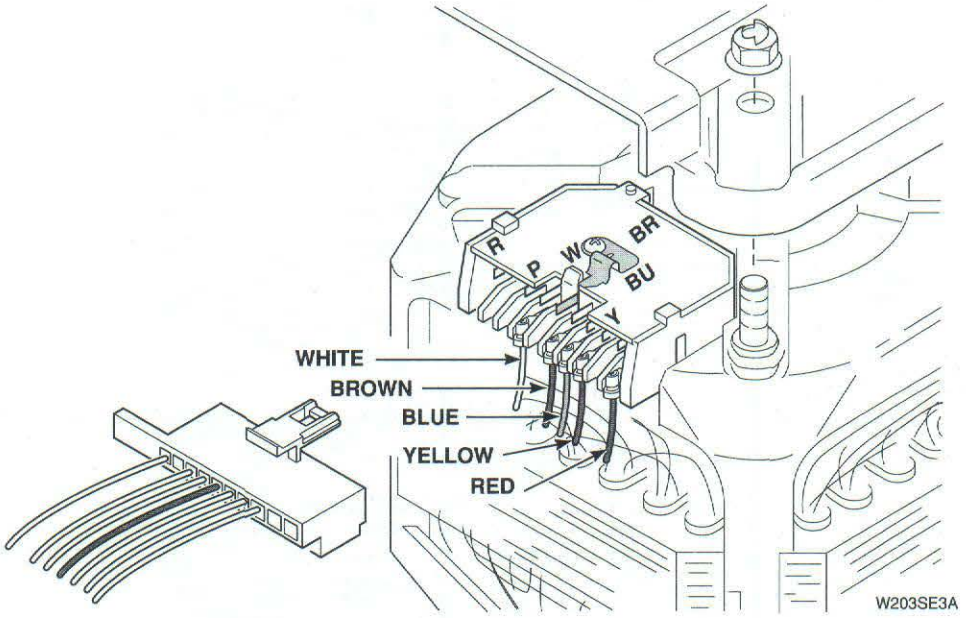
SECTION VII
Internal Wiring of Washer Motor Switch

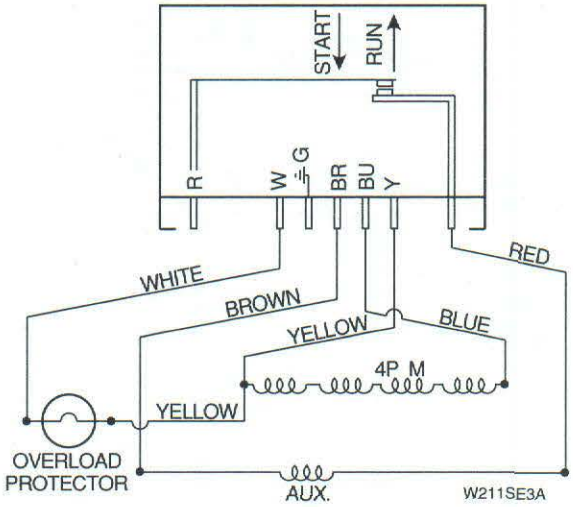
⚠ WARNING

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

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

W003





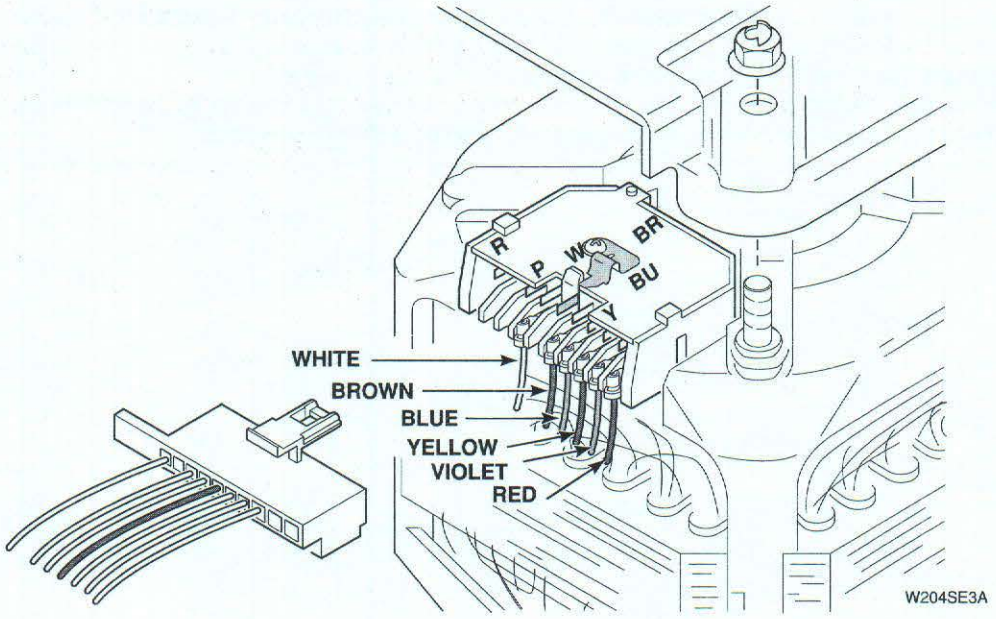
Motor Assembly (1 Speed Motors)

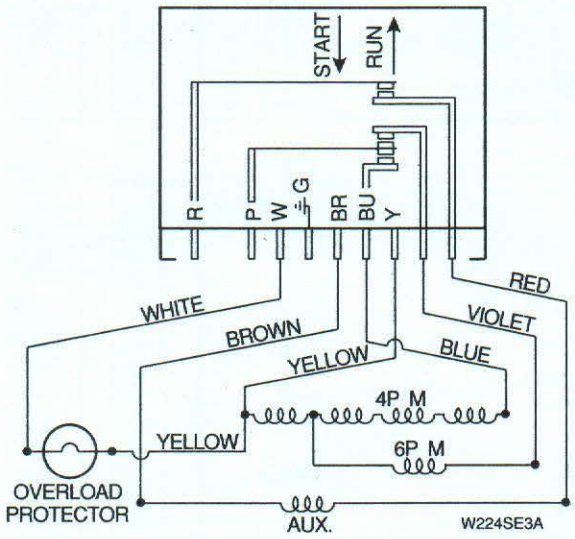
⚠ WARNING

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

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

W003





Motor Assembly (2 Speed Motors)

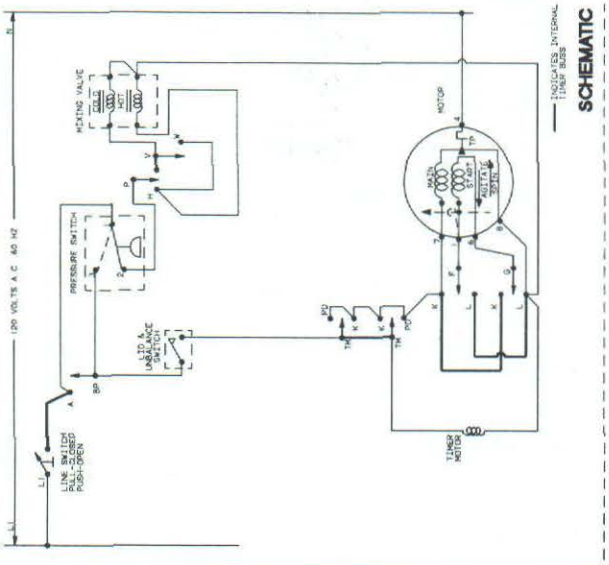
SECTION VIII
Wiring Diagrams

⚠WARNING

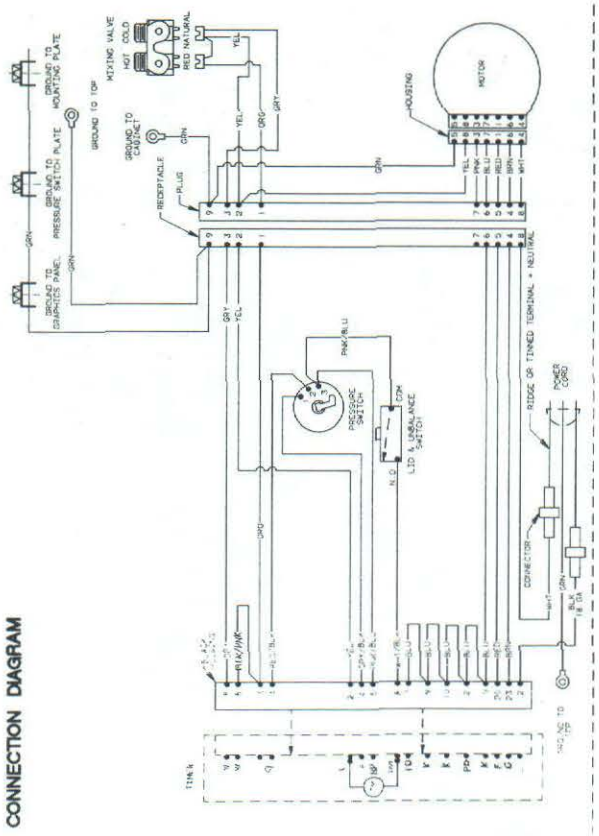
To reduce the risk of electric shock, fire, explosion, serious injury or death:

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

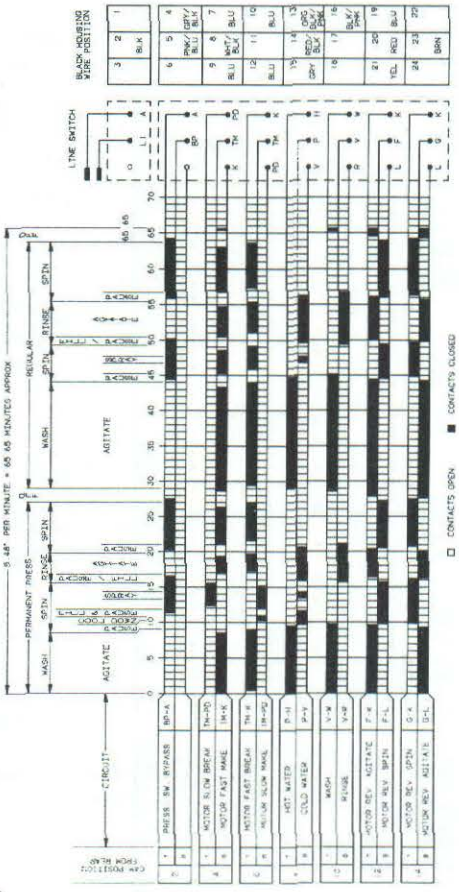
SCHEMATIC



CONNECTION DIAGRAM



TIMER CHART



PART NO. 35068R2

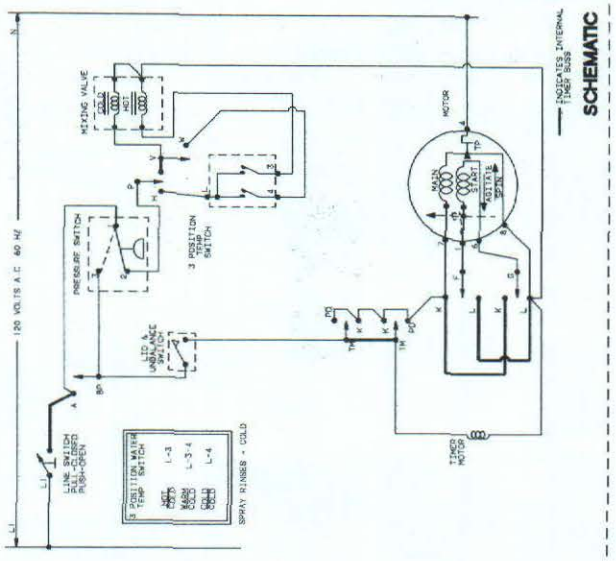
Model AWM190

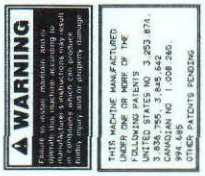
⚠ WARNING

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

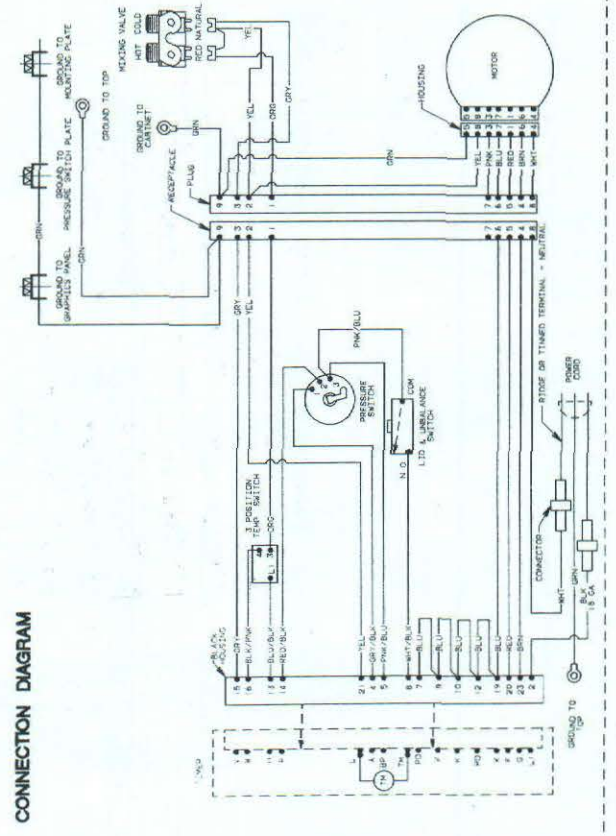
- **Disconnect electric power to the washer before servicing.**
- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded.**

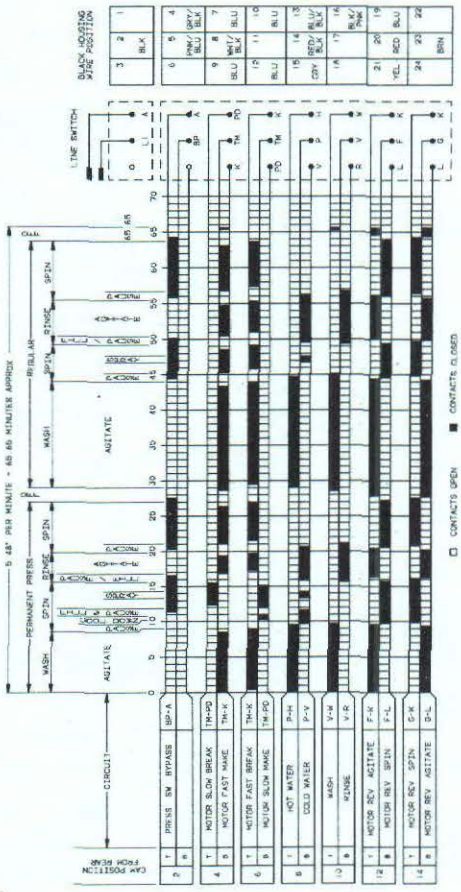
W003





PART NO. 35000R2





Models AWM270 and AWM290

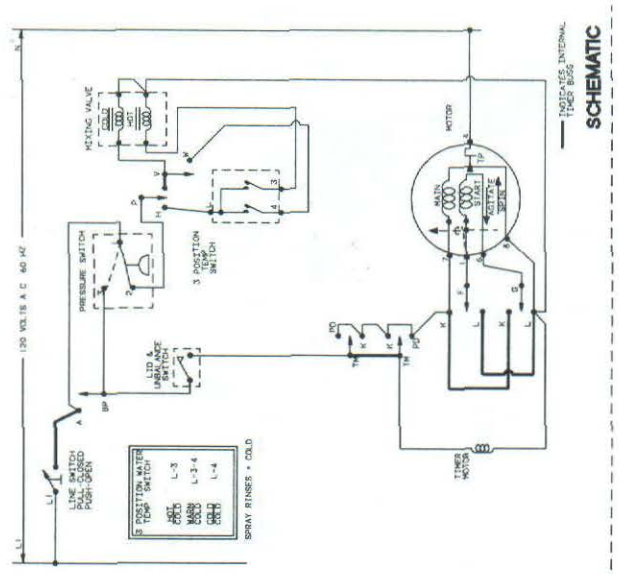
36793

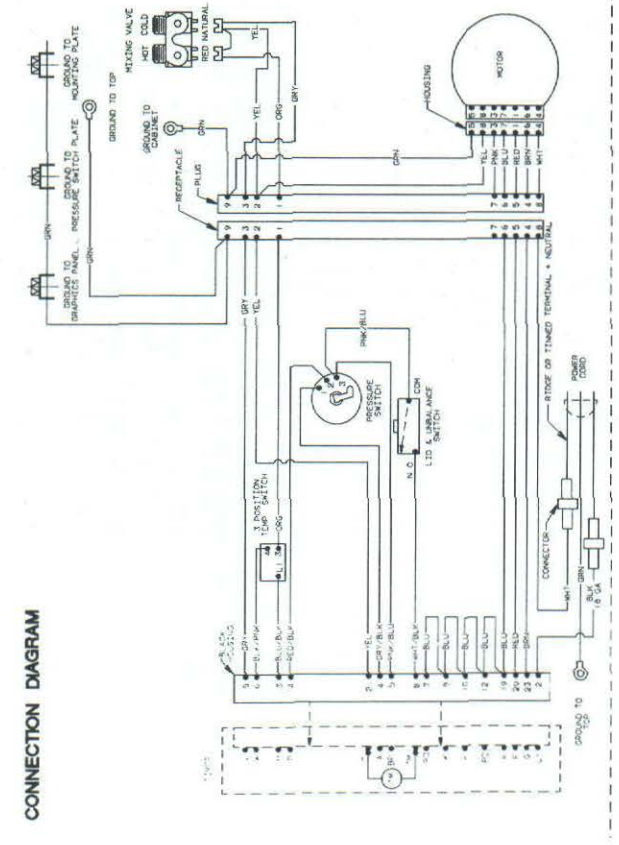
⚠ WARNING

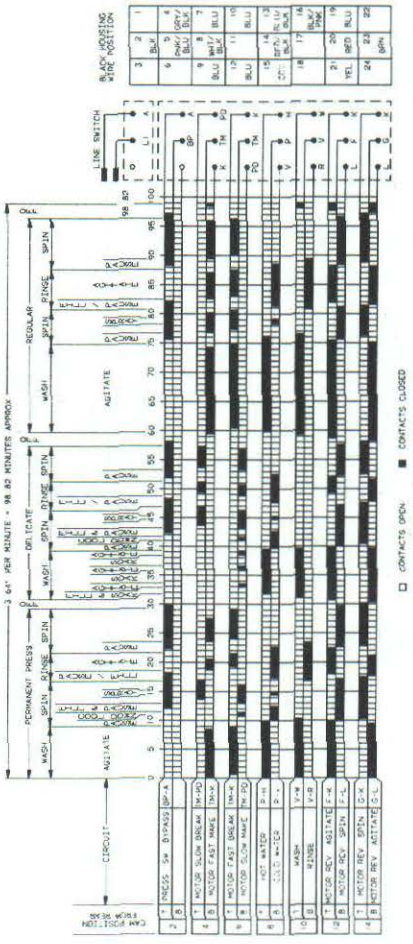
To reduce the risk of electric shock, fire, explosion, serious injury or death:

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

W003







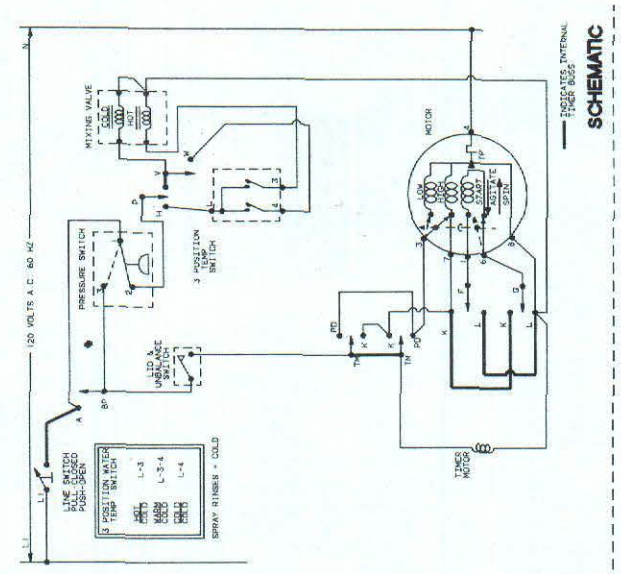
Models AWM372, AWM373, AWM392 and AWM393

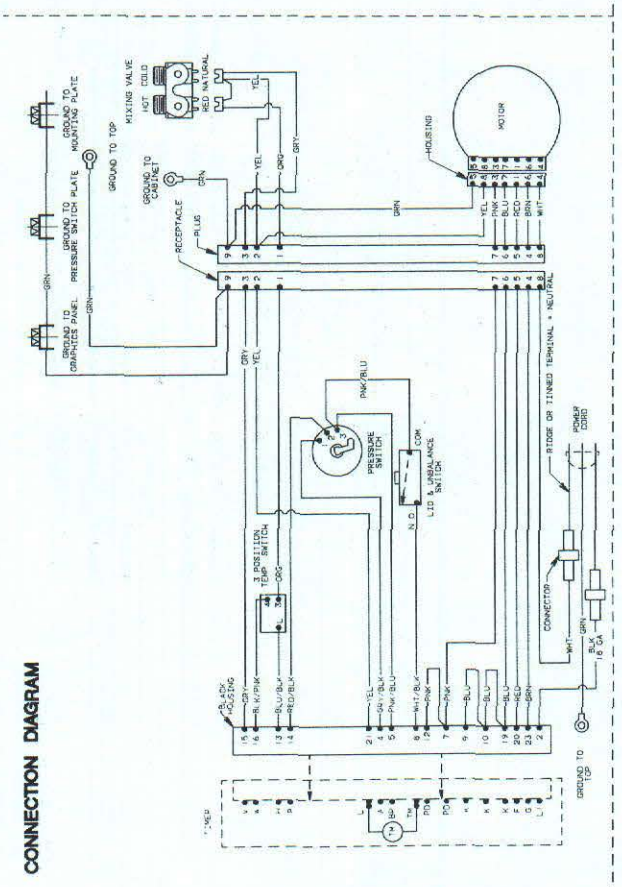
⚠ WARNING

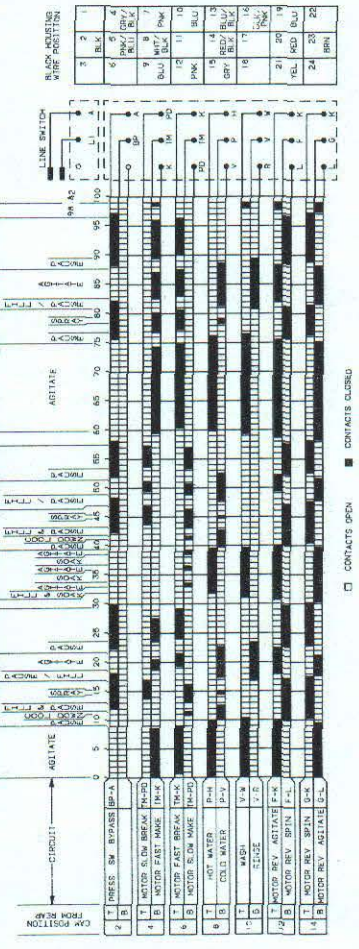
To reduce the risk of electric shock, fire, explosion, serious injury or death:

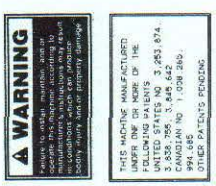
- **Disconnect electric power to the washer before servicing.**
- **Never start the washer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be *reconnected to ensure that the washer is properly grounded.***

W003









Models AWM472, AWM473, AWM492 and AWM493

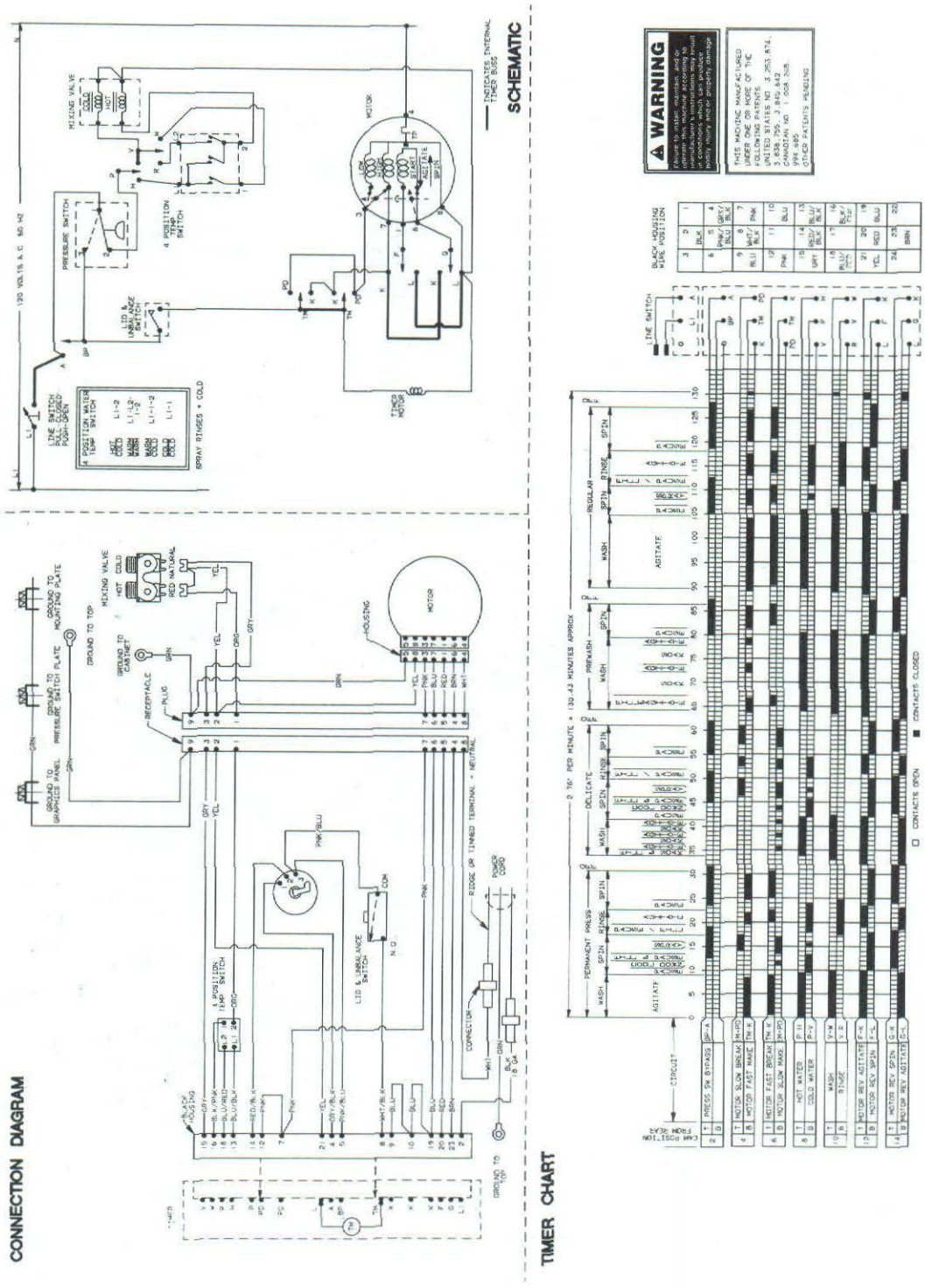
36793

⚠ WARNING

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

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

W003



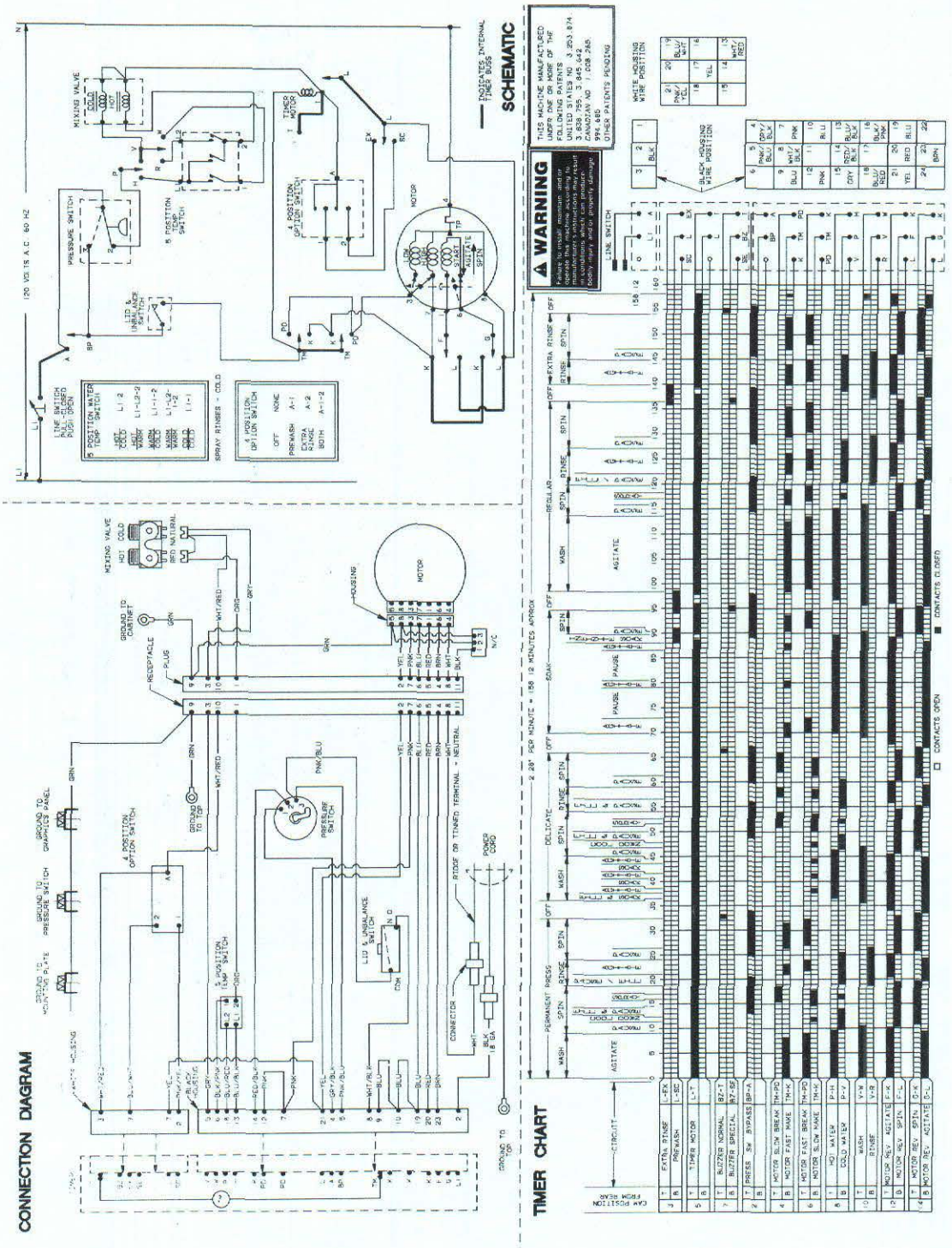
Models AWM572, AWM573, AWM592 and AWM593

⚠ WARNING

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

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

W003



Models AWM692 and AWM693