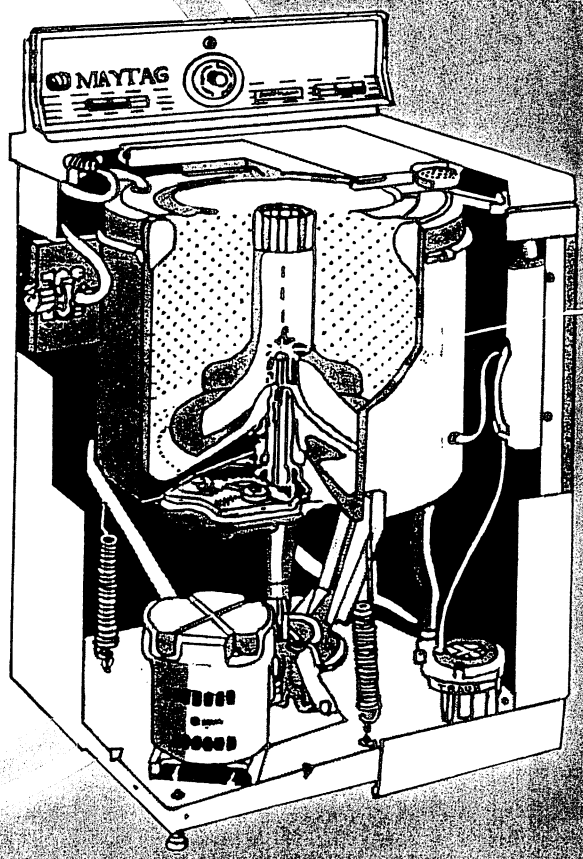
REPAIR-MASTER® for

MAYTAG
AUTOMATIC WASHERS

- DIAGNOSIS CHARTS
- CHECKING PROCEDURE
- SERVICE PROCEDURE
- COMPONENT DATA
- PARTS LISTS



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REPAIR-MASTER for..

MAYTAG

AUTOMATIC WASHERS

FOREWORD

This Repair Master contains information and service procedures to assist the service technician in correcting conditions that are not always obvious.

A thorough knowledge of the functional operation of the many component parts used on appliances is important to the serviceman, if he is to make a proper diagnosis when a malfunction of any part occurs.

We have used many representative illustrations, diagrams and photographs to portray more clearly these various components for a better over-all understanding of their use and operation.

IMPORTANT SAFETY NOTICE

You should be aware that all major appliances are complex electromechanical devices. Master Publication's REPAIR MASTER® Service Publications are intended for use by individuals possessing adequate backgrounds of electronic, electrical and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. Master Publications cannot be responsible for the interpretation of its service publications, nor can it assume any libility in connection with their use.

SAFE SERVICING PRACTICES

To preclude the possibility of resultant personal injury in the form of electrical shock, cuts, abrasions or burns, etc., that can occur spontaneously to the individual while attempting to repair or service the appliance; or may occur at a later time to any individual in the household who may come in contact with the appliance, Safe Servicing Practices must be observed. Also property damage, resulting from fire, flood, etc., can occur immediately or at a later time as a result of attempting to repair or service — unless safe service practices are observed.

The following are examples, but without limitation, of such safe practices:

1. Before servicing, always disconnect the source of electrical power to the appliance by removing the product's electrical plug from the wall receptacle, or by removing the fuse or tripping the circuit breaker to OFF in the branch circuit servicing the product.

NOTE: If a specific diagnostic check requires electrical power to be applied such as for a voltage or amperage measurements, reconnect electrical power only for time required for specific check, and disconnect power immediately thereafter. During any such check, ensure no other conductive parts, panels or yourself come into contact with any exposed current carrying metal parts.

2. Never bypass or interfere with the proper operation of any feature, part, or device engineered into the appliance.

3. If a replacement part is required, use the specified manufacturers part, or an equivalent which will provide comparable performance.

4. Before reconnecting the electrical power service to the appliance — be sure that:

   a. All electrical connections within the appliance are correctly and securely connected.
   b. All electrical harness leads are properly dressed and secured away from sharp edges, high-temperature components such as resistors, heaters, etc., and moving parts.
   c. Any uninsulated current-carrying metal parts are secured and spaced adequately from all non-current carrying metal parts.
   d. All electrical ground, both external and internal to the product are correctly and securely connected.
   e. All water connections are properly tightened.
   f. All panels and covers are properly and securely reassembled.

5. Do not attempt an appliance repair if you have any doubts as to your ability to complete it in a safe and satisfactory manner.

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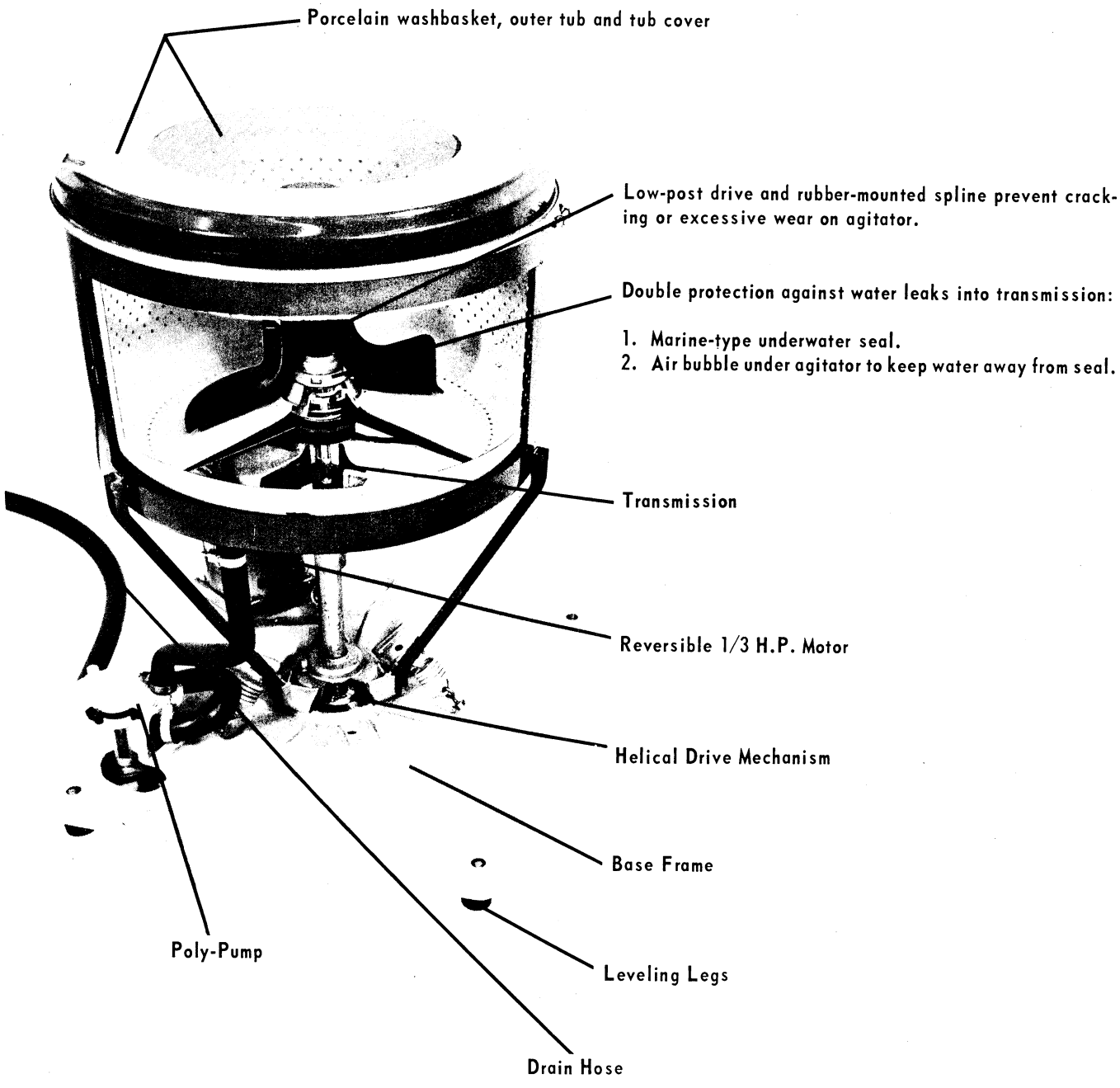
SECTION 1

SERVICE CHECK LIST

The following diagnosis chart is intended to be only a starting point in proceeding with the servicing of automatic washers. The diagnosis chart can only deal in generalities; to effectively service any appliance, the serviceman must thoroughly understand the mechanical functions and electrical circuitry of the appliance.

A considerable amount of time and money can be saved if a serviceman will take time to analyze the probable cause of a malfunction of a machine before proceeding to remove any parts. Always be sure first that the machine is properly installed and its power cord is plugged into a live receptacle that is properly fused. Be sure that the hot and cold water faucets are turned all the way open and that the operator of the machine has properly set the controls.

Always make a visual check first before using any testing equipment such as test lamps, voltmeters or ohmmeters. Before attempting to remove any electrical part from the machine, disconnect the power cord from the live receptacle. If a voltmeter or test lamp is being used for testing, the power cord must be plugged into a live receptacle, however.


Porcelain washbasket, outer tub and tub cover
Low-post drive and rubber-mounted spline prevent cracking or excessive wear on agitator.
Double protection against water leaks into transmission:
1. Marine-type underwater seal.
2. Air bubble under agitator to keep water away from seal.
Transmission
Reversible 1/3 H.P. Motor
Helical Drive Mechanism
Base Frame
Poly-Pump
Leveling Legs
Drain Hose

CONDITION	POSSIBLE CAUSE	REMEDY
WATER DOES NOT ENTER WASHER	Water faucets turned off	Open both faucets.
	No power to washer	Check wall outlet to insure proper power supply. Unbalance switch may be tripped. Raise lid sharply to reset switch, then shut lid.
	Timer	Check the timer line switch and the timer between terminal 8A and terminal 9 of the timer and terminals 9 and 5 with timer set to fill position. Replace if defective.
	Water valve solenoid	Test the solenoid by removing 2 wires and connecting directly to 120V with a live test cord. Replace if defective.
	Water temperature switch	Continuity should be read between terminals 5 and 6 of the switch on hot and between terminals 5 and 4 of the switch on warm.
	Loose electrical connector or break in wiring harness	Repair loose connector and use continuity test to examine wiring for breaks.
	Clogged screens in hose or valve	Remove fill hose from the faucets and valve and clean or replace the screens.
	Float switches hung up or defective	Remove lid cover and check position of switches as well as continuity of switches.
	* Erratic or defective pressure switch	Check for continuity between terminals 7 and 15 on the pressure switch. Also check for continuity at terminals 9 and 7T on the timer. Replace if defective.
	* Timer defective	Some timers used on both early and late washers use a time fill. Check these timers from the negative terminals 9 or W to the terminals W and/or 5 supplying power to the water selector switch. Replace if defective.

* Pertains to Helical Drive Models Only

CONDITION	POSSIBLE CAUSE	REMEDY
WATER DOES NOT ENTER WASHER (Continued)	Lid Switch	Lid switch opens the circuit to the washer. Check lid switch for continuity. Replace if defective.
	* Water fails to pump out	Check pump belt tension, pump for obstruction or kinked drain hose.
WATER DOES NOT SHUT OFF	Water valve not closing	Remove the mix valve and repair or replace it.
	Float switch not moving to a full position	Agitator float not properly positioned on agitator. Float cap loose from diaphragm. Remove agitator and reinstall cup to diaphragm.
	* Pressure switch	Remove pressure switch tube from pressure switch and blow hose clear of obstruction. Also check orifice opening in pressure switch and test switch for continuity. Pressure switch tube connections must be air tight.
	Defective timer on time fill washer	With timer advanced to wash position, there should be no continuity between negative terminal 9 or W and positive terminal 5 or W. Replace if defective.
WATER FILLS TOO SLOW IN MACHINE	Screens in hose or valve clogged	Remove hoses and clean or replace screens.
	Water pressure low	Pressure should be at least 20 lbs. Advise customer of condition.
	Clogged or obstructed fill spout at air gap	Remove cabinet and clear spout.

* Pertains to Helical Drive Models Only

CONDITION	POSSIBLE CAUSE	REMEDY
NO HOT WATER	Hoses reversed	Correct hose position.
	Water heater does not have enough capacity	Check hot water supply.
	Open solenoid on mix valve	Test solenoids with live test cord. Replace if defective.
	Miswired or broken wire	Check wiring. Repair as needed.
	Defective timer	With timer set in fill position, continuity should be present between timer terminals 9 or W negative and the positive terminals 5, W/OR, 7T, or 36, depending on the timer being checked. Replace if defective.
	Inoperative water selector switch	With the switch set for hot water, and the timer set for wash fill, use a piece of insulated wire to bridge across the terminals of the water selector switch. If the switch is at fault, water will begin to flow. MODEL NO. — JUMP TERMINALS 160 or A900 — 36 to 37 142 or A700 — W/Blue to OR 5 to 6 125 or A300 — Blue/Black to OR 126 or A500 — Blue/Black to OR 123 or A100 — White/OR to OR 124 or A200 — White/OR to OR 130,131,132, 140,141,142 — 5 to 6

CONDITION	POSSIBLE CAUSE	REMEDY
TIMER DOES NOT ADVANCE	Timer motor	Test motor with live test cord. Replace if defective.
	Escapement	If timer motor runs, the escapement should advance. Replace if defective.
	Line switch in timer	Continuity must be present between terminals 8A and 9. With the timer knob pull out. Replace the timer if defective.
	* Pressure switch	With the washer filled, there should be continuity between terminals 9 and 16 on the timer.
	Broken or loose wire	Check wiring for continuity. Replace if defective.
DRIVE MOTOR DOES NOT RUN	Defective motor	Check motor with live test cord. Replace if it does not run.
	Motor mercury switch	The switch must complete a circuit to the timer for the motor to run. Check for continuity and replace if defective.
	Off balance switch or lid switch	The off balance switch or lid switch must complete a circuit for any component to function. Check for continuity and replace if defective.
	Pressure switch	Check pressure switch and replace if defective.
	* Defective timer	Replace timer.
	Fabric speed switch banks on two speed washers	Controls run winding of the motor. Test switch for continuity. Replace if defective.
	Capacitor	Replace defective capacitor.

* Pertains to Helical Drive Models Only

CONDITION	POSSIBLE CAUSE	REMEDY
AGITATES AT ALL TIMES DURING COMPLETE CYCLE	Brake solenoid	Test solenoid with live test cord. Replace if defective.
	Timer defective	Replace timer.
	Loose or broken wire	Check for continuity and repair as necessary.
	Defective motor switch	With motor running, test for continuity between terminals 3 and 7.
NO SPIN CYCLE	Defective timer	Replace timer.
	Brake solenoid	Check with live test cord. Solenoid must be correctly positioned. Replace if defective.
	Loose or broken wires	Check for continuity. Repair as necessary.
	Brake assembly and shift mechanism	Check trip lever adjustment for proper drop. Tee-key must engage the torque spring and brake must open.
	* Drive pulley and brake package	Check stop lug securing drive pulley to shaft. Also check brake assembly.
	Loose or broken belt	Replace belt and adjust tension.
	Loose tub nut or stem assembly	Retighten or replace.
	Bearing assembly and sleeve	Seal leak causes tub bearing to bind. Remove old parts and replace them.
	Spin bearing in top of brake assembly	Remove and replace.
	Tub cover binding	Adjust cover for 5/16" clearances between tub cover and cabinet top.

* Pertains to Helical Drive Models Only

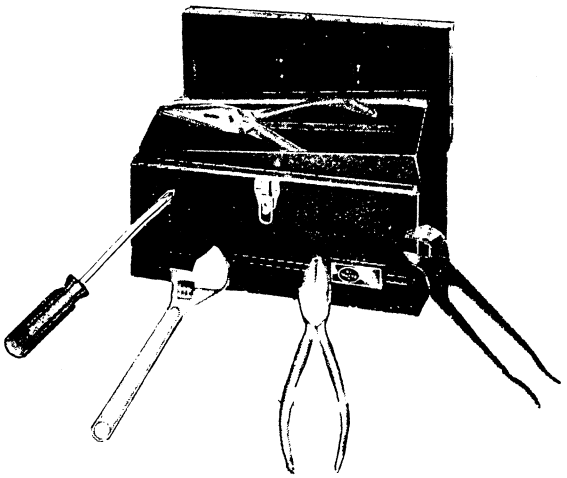
CONDITION	POSSIBLE CAUSE	REMEDY
WASHER DOES NOT AGITATE	Defective motor	Test motor with live test cord. Replace if defective.
	Broken or slipping belt	Check belt tension. Replace broken belt.
	Mercury switches or pressure switch	Lid must be closed and switches in run position.
	Slipping or loose clutch	Remove clutch and disassemble and replace necessary parts.
	Transmission defective	Disassemble and replace necessary parts.
	* Stop lug improperly adjusted	Adjust stop lug of drive pulley.
	Worn agitator spline	Replace agitator or have it resplined.
SPIN SPEED TOO SLOW	Water not pumping out	Check pump for obstruction or binding. Also check for kinked drain hose. Repair as necessary.
	Leaking tub boot seal	Remove transmission and clean damper bearings and replace boot seal.
	Clutch band spring	One end of spring may be unhooked from clutch band. Reinstall properly.
	Obstruction in collector tub	Remove transmission assembly and clear obstruction.
	Agitator shaft torque spring	Remove transmission assembly and replace torque spring. Spring must have a rough exterior surface.
	Loose and slipping belt	Adjust belt tension or replace belt if needed.
	Clothes load unbalanced	Stop washer and rearrange load.

* Pertains to Helical Drive Models Only

CONDITION	POSSIBLE CAUSE	REMEDY
TUB SPINS ALL THE TIME	Timer defective	Replace timer.
	Return spring on brake lever broken or loose	Replace or connect spring as necessary.
	Solenoid stuck in closed position	Replace solenoid.
	Brake assembly has broken spring	Disassemble washer and repair brake assembly.
	Misadjusted stop lug causing brake release	Remove stop lug and correctly adjust it.
WATER DOES NOT DRAIN PROPERLY	Stuck pump or obstruction to pump outlet	Lay machine on its side and remove pump and clear or replace.
	Broken or loose belt	Replace stretched or broken belt.
	Kinked hose	Reposition hose to avoid kinks.
	Motor tension spring off or broken	Replace spring.
	Loose impeller or worn pulley on pump	Disassemble and repair or replace pump.
WATER LEAKS	Defective tub boot seal	Remove transmission assembly and replace seal.
	Water pump leaking	Repair or replace as necessary.
	Hole in drain hose	Replace hose.
	Hose connection loose	Tighten connection.
	Water not jumping air gap or spraying around fill spout	Remove spout and clean and replace. Also check water pressure and fill screens.
	Top tub gasket	Remove cabinet or cabinet top and repair or replace tub gasket.

CONDITION	POSSIBLE CAUSE	REMEDY
VIBRATION EXCESSIVE IN SPIN	Spin tub not centered	Remove clutch and loosen the 3 Allen screws. Set machine in spin to center spin bearing. Do not overtighten Allen screws.
	Damper assembly spring loose or broken	Lay machine on its side and replace defective spring.
	Damper pads loose or greasy	Remove damper and replace pads or clean as necessary.
	Washer not level	Re-level washer. Be sure to secure lock nuts to base.
	Loose balance ring	Remove cabinet and secure balance ring to clothes basket.
	Weak floor	Normal solidity of floor necessary.
MACHINE NOISY IN WASH	Transmission trouble	Remove transmission and replace necessary parts.
	Worn agitator spline	Replace agitator or have it resplined.
	Brake assembly	Brake shoes worn. Dismantle brake and replace shoes.
	Pump	Remove and inspect pump.
	Belts	Replace belt.
	Motor pulley loose	Tighten pulley.

SERVICE PROCEDURE



COMPONENT DESCRIPTION

Before attempting to service an automatic washer of any make, the serviceman should be equipped with the proper tools. Many of these are special tools designed to do a particular job quickly and to protect various parts from damage. Special tools used to service all makes include a test lamp or voltmeter, a continuity tester or ohmmeter, and a wattmeter. Proper use of these special tools will help make fast efficient diagnosis and service much easier.

As a safety precuation, ALWAYS disconnect electrical power from the automatic washer before attempting to remove any parts from the machine. For testing purposes, the power cord can again be plugged into a live receptacle after the necessary parts are removed.

It is advisable to make certain that the water supply faucets or valves are closed and the washer is drained of all water, if any parts are to be removed or disconnected in the water system.

Due to the large number of models covered in this manual, no attempt will be made in this section to give a complete detailed step-by-step procedure on disassembly of each individual model. Instead we will give the service procedure and functional description of the various components as used on most models. In a few cases these components may not be identical to the machine being serviced but their function, as well as service procedure, will be the same.

Cabinet Service

On the early AMP series of Maytag Automatic Washers, the timer, the temperature selector switch and other components cannot be serviced without first removing the exterior cabinet from the outer tub and machine base. The cabinet top is not removable separately from the rest of the cabinet.

Figure 1 - Removing Control Dials

To remove the cabinet, first remove both the timer and temperature control dials, (unscrew the knobs counterclockwise and lift off the dials), *Figure 1.*

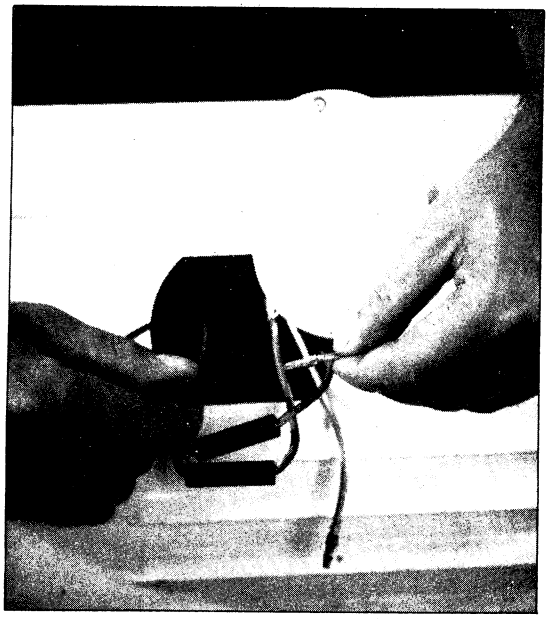


Figure 2 - Disconnecting Wiring Harness

Figure 3 - Removing Nameplate Lamp

NOTE: *Before lifting the cabinet from the base, the lamp located under the name plate should be removed to insure against breakage. Lift up on the lower portion of the name plate and pull out, Figure 3. Remove the lamp from its socket.*

Next, remove the small service plate at the upper rear section of the cabinet and disconnect the wires at the terminal connectors as shown in *Figure 2.* Remove the toeplate by pulling it straight off and unscrew the ball and stud bolts that hold the toeplate in place. Remove the remaining screws around the sides and rear that hold the cabinet to the base. At this point lift the cabinet up and over the base and drain tub, *Figure 4.*

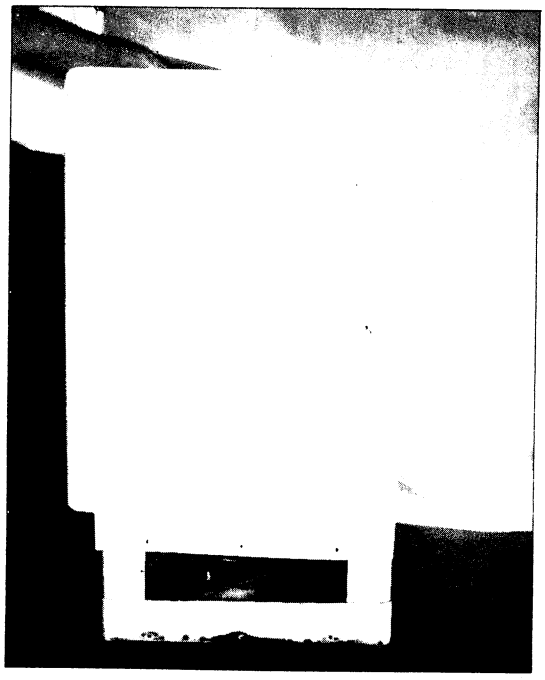


Figure 4 - Lifting Cabinet from Base and Tub

CABINET TOP

On the A3MP and later production models, it is not necessary to remove the entire cabinet in order to gain access to the timer and the temperature switch.

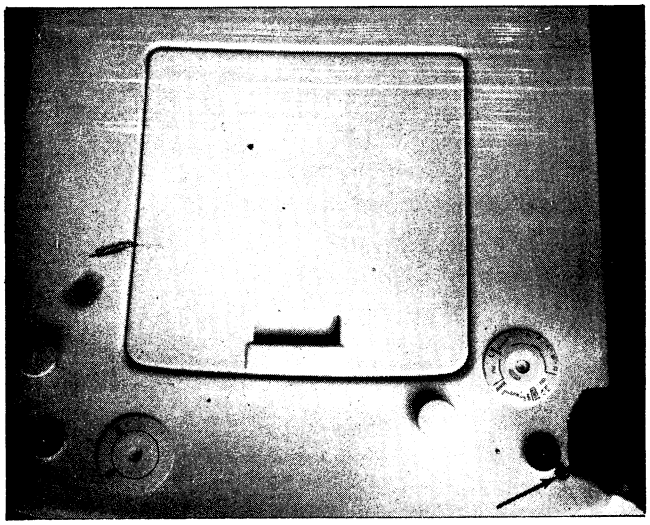


Figure 5 - Removing Cabinet Hold-down Screws

To remove the cabinet top, unscrew the plastic control knobs and remove the dials. Located under the control dials are two screws that hold the top to the cabinet, *Figure 5*. After removing the screws, raise the top enough to clear the controls and pull forward to disengage the brackets from the rear cabinet crossbrace. At this point let the top rest on the cabinet as shown in *Figure 6* and disconnect the wiring harness on models where applicable.

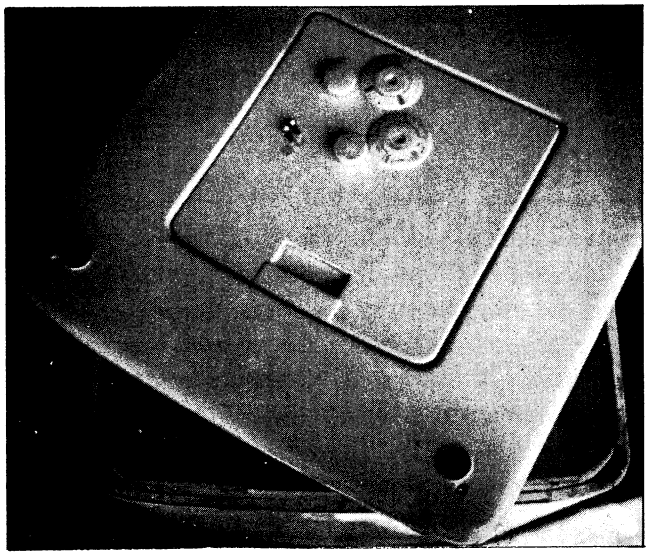


Figure 6 - Removing Cabinet Top Panel

NOTE: *It is advisable to tape the washer lid closed whenever removing the cabinet top. This is to eliminate the possibility of porcelain damage or mercury switch damage if the lid falls open.*

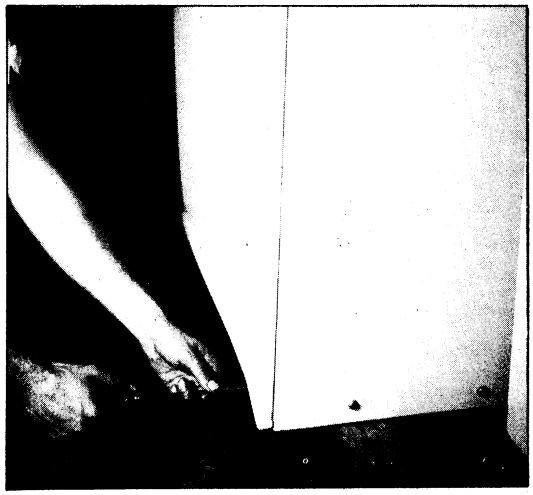


Figure 7 - Removing Front Panel

Starting with the model 101, the top cover is removed by first removing the front panel. At the lower front section of the washer, in each corner of the front panel, are two Phillips screws which must be removed, *Figure 7*. With the palms of both hands, push down on the trim bar of the front panel until all four clips of the panel are released from the cabinet, *Figure 8*. It may be necessary to ele-

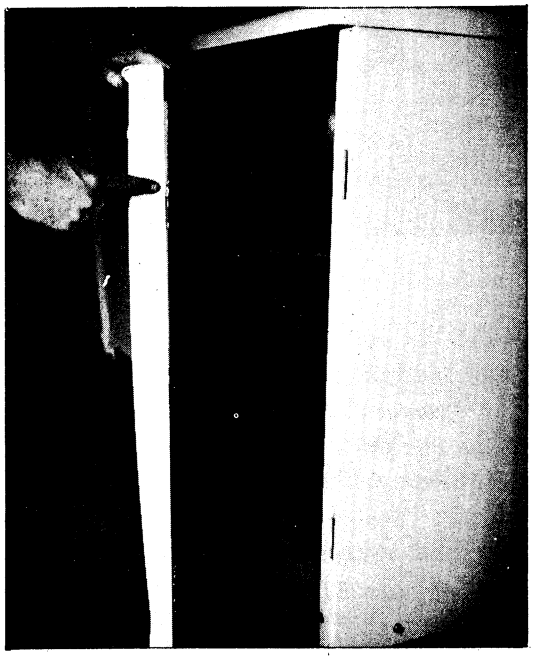


Figure 8

vate the front of the washer with blocks, *Figure 7*, in order for the front panel to be lowered sufficiently for removal.

The four clips, two on each side, are designed to fit in the slots of the cabinet front edge to hold the front panel firmly against the cabinet.

NOTE: *When replacing the front panel, make sure that all four clips are engaged in the cabinet slots before sliding the front panel up into position. Also it may be necessary to block the front of the cabinet to align the clips with the slots in the cabinet.*

With the front panel removed, two bolts located in each corner under the top must be removed in order to remove the top from the cabinet. Remove the bolts and pull the cabinet top forward to release the rear brackets from the cabinet crossbrace. Disconnect the wiring harness and remove the top.

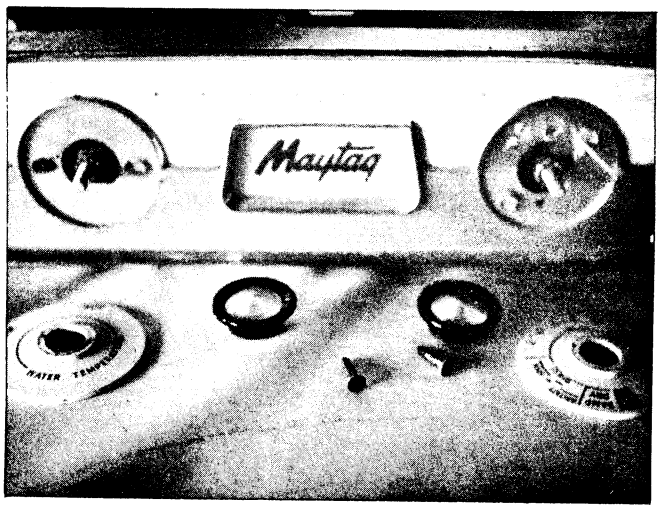


Figure 9

The Model 101 and later production models have an easier method of control accessibility. As shown in *Figures 9* and *10*, it is not necessary to remove the cabinet or the cabinet top cover to gain access to these controls. On the later model washers, including the A–hundred series, the controls are accessible by removing the control hood or service panel, *Figure 11*.

The cabinet top on the Highlander Models differs in the respect that there is no front panel to remove in order to gain access to the cabinet top mounting bolts. The cabinet top is mounted to the cabinet by eight screws hidden under the chrome strip around the top edge of the cabinet.

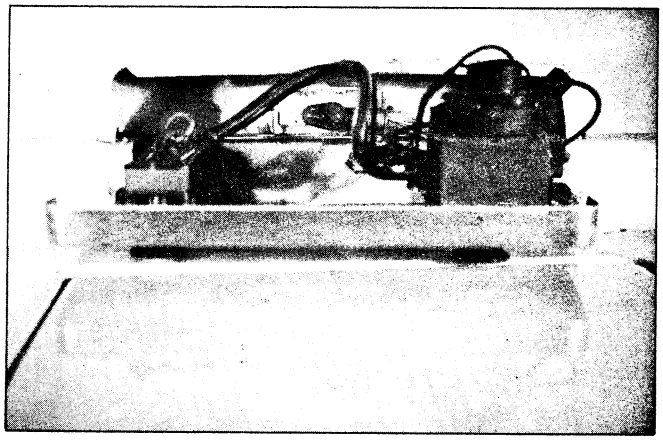


Figure 10

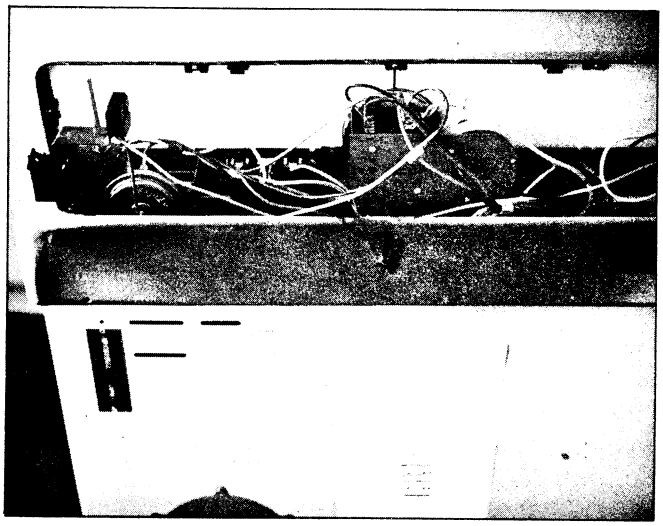


Figure 11 - Service Panel Removed

To remove the chrome strip, a small screwdriver can be used to separate the strip from its retainer on both sides at the rear of the cabinet, *Figure 12*. Once the chrome strip has been separated at the rear of the cabinet, place the screwdriver between the retainer and the strip and roll the strip with an upward motion from the bottom.

On the front section of the cabinet, repeat the same procedure as removing the strip from the side of the cabinet, *Figure 13*. A piece of heavy paper should be used under the screwdriver to protect

the cabinet finish. Also, care must be taken that the chrome strip is not bent when removing it.

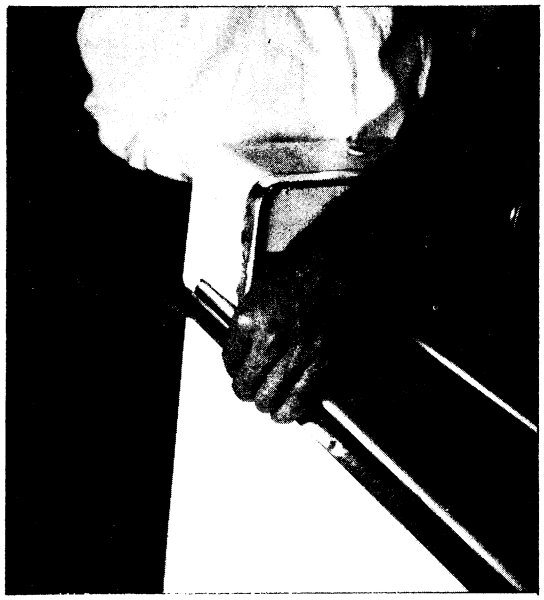


Figure 12 - Removing Cabinet Top, Highlander Models

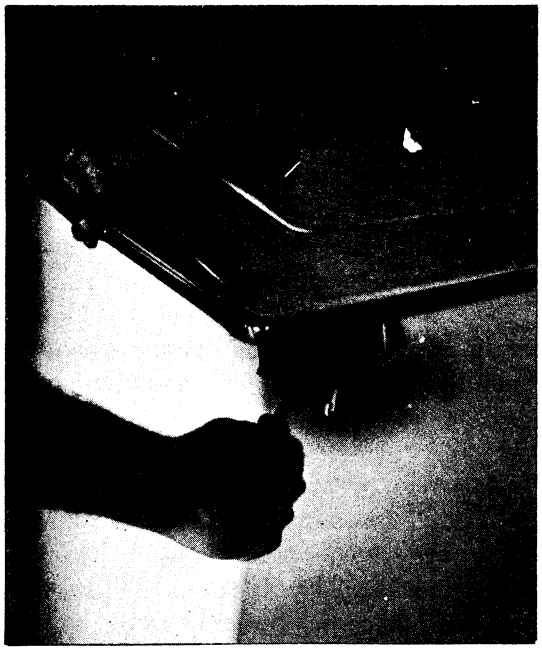


Figure 13

After removing the screws under the chrome strip, remove the timer and lift off the top. In many cases it may not be necessary to completely remove the top. In these cases, do not remove the timer, but merely twist the top into the proper position to gain access to the component being serviced.

LID ASSEMBLY

The lid on the early AMP series washers consists of a lid base and cover. Inside the lid are located the unbalance switch, float switches and terminal block. To remove the lid, first unscrew the two screws holding the handle to the top section. Then separate the lid cover from the base. Disconnect the wiring harness from the terminal strip and remove the two screws holding the switch assembly to the base. At this point, the lid base can be removed by removing the two bolts from the hinge, *Figure 14*.

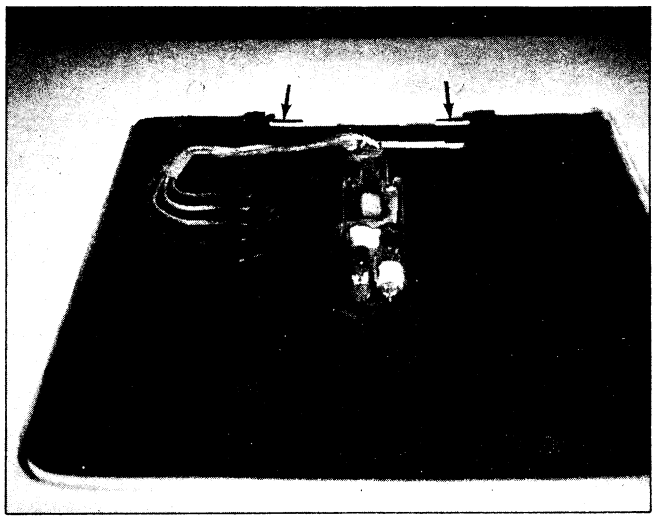


Figure 14 - Removing Lid Base

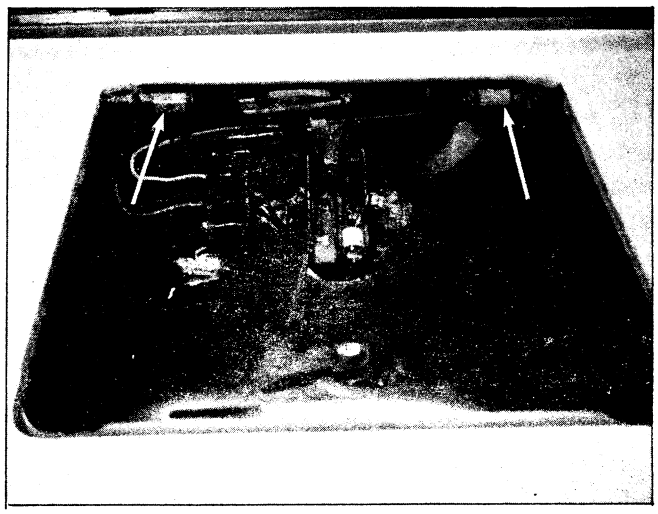


Figure 15 - Removing Lid Base Model 101

On the Model 101 and later models, the lid assembly is basically the same except for the hinging arrangement, *Figure 15*. The lid base is pivoted

on two tubular hinges extending through the hinge brackets and into the washer top. Located in the center of each hinge bracket, a lid stop is used to hold the lid and tubular hinges in place.

To remove the lid base after the cover and switch assembly have been disconnected, remove the wiring harness from the terminal block. Next, loosen the Allen set screws in the lid stops. With a screwdriver, pry out on the flange of the tubular hinge.

NOTE: *When prying out on the flange of the hinge, care must be exercised to avoid chipping the porcelain.*

After both tubular hinges have been removed from the washer top cover, feed the wiring harness through the tubular hinge and remove the base. When installing a new lid base, assemble the terminal block and switch assembly on the new lid base and reverse the removal procedure.

Single Piece Lid

On the later model washers, a single piece lid is used, and no longer has the mercury switch assembly. Also, the hinging arrangement has been changed to two nylon balls located in each rear corner of the top cover and lid. Recesses are used to hold the balls in place and let the lid pivot.

To remove the lid, grasp one side with one hand and hold the other hand to catch the pivot ball when it is released. Pull out on the lid and release the ball from its pivot point.

To install the lid, place a nylon ball in one side locating it in the recesses. Raise the lid to a vertical position and insert the other nylon ball in the lid recess of the other side. While holding the lid firmly, wedge the ball between the lid and cabinet top until the ball engages in the recess of the cabinet top, *Figure 16.*

NOTE: *A small amount of soap can be used to help the nylon ball to slide into place.*

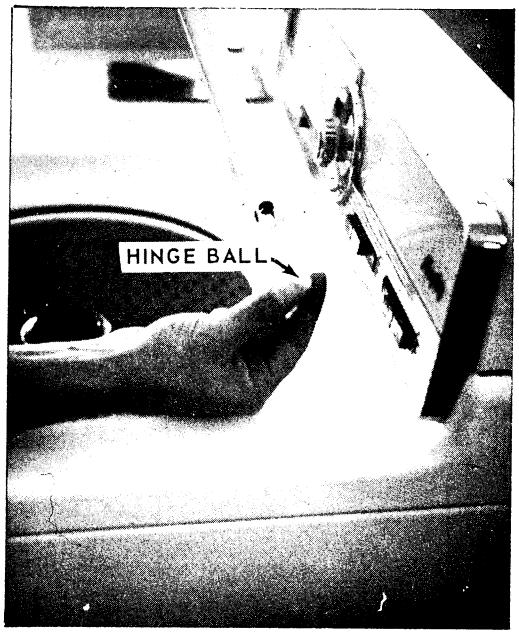


Figure 16 - Installing Single Piece Lid

Timers

The "brain" of the automatic washer is the timer. It programs the entire laundry sequence: water fill, wash, drain, rinse, spin, and shut down at the end. Not only does the timer eliminate the need of attention to the machine, but also insures uniformly good washing by evenly timing each laundering step during each complete laundry cycle.

Timers are durably built and usually provide years of trouble-free service. Dirt, moisture and vibration are the main causes of timer failure.

Unfortunately, too often the timer is the "scapegoat" for many problems that are in fact the malfunction of some other component of the machine. For this reason, a timer should never be replaced or condemned until all other possibilities have been eliminated.

Timers used on all automatic washers are similar in basic principal of operation and design. They are somewhat different in appearance due to different sources of manufacture. There are also differences in complexity due to the variations in functions and features of the various models.

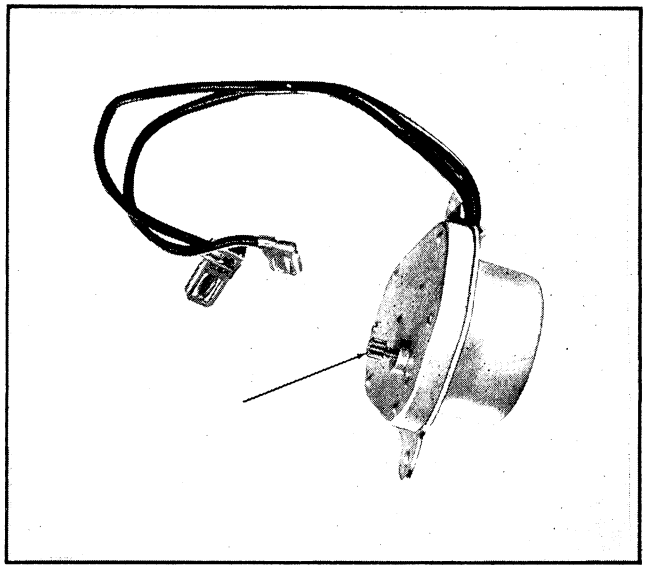


Figure 17 - Timer Motor

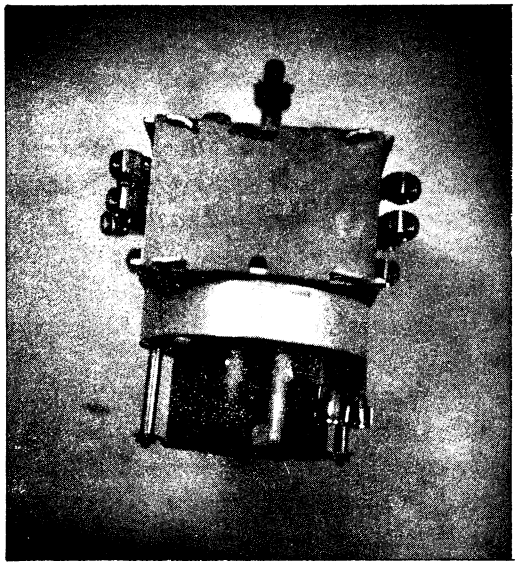


Figure 18 - Timer Assembly

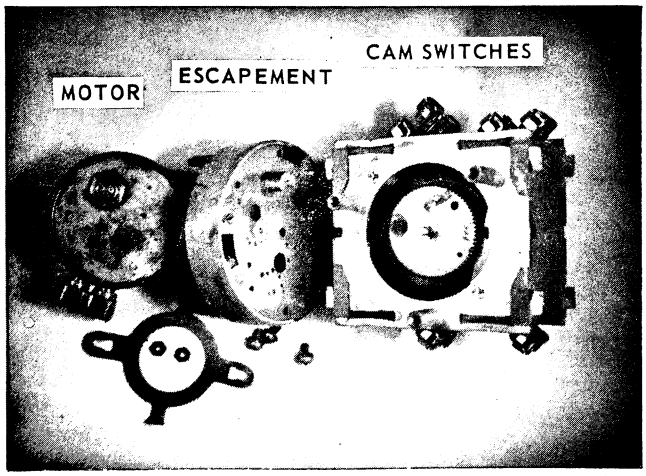


Figure 19

All automatic washer timers are driven by a synchronous type motor similar to those in electric clocks. A small pinion drives a gear in the escapement, *Figure 17*. Timers consist of three basic components assembled into one unit, *Figure 18*. The components are the motor, the escapement, and the multiple circuit cam switches. *Figure 19* shows these components separated.

TIMER MOTORS, *Figure 17*, may vary slightly in appearance due to the various sources of manufacture, but regardless of the difference in appearance, each functions in the same manner as the others. It is a synchronous type motor similar to those used in electric clocks, with a small pinion which drives a gear in the escapement.

THE ESCAPEMENT, *Figure 20* is a spring powered mechanism that advances the timer cam shaft a set number of degrees every set number of seconds, depending on the particular design of the timer.

The motor winds up a music wire torsion spring to a predetermined force. After the required time lapse, this spring unwinds abruptly, causing a chain of gears to advance the timer cam shaft the predetermined number of degrees.

To permit the timer cam shaft to be advanced manually, a ratchet mechanism is used in connection with the output gear of the escapement.

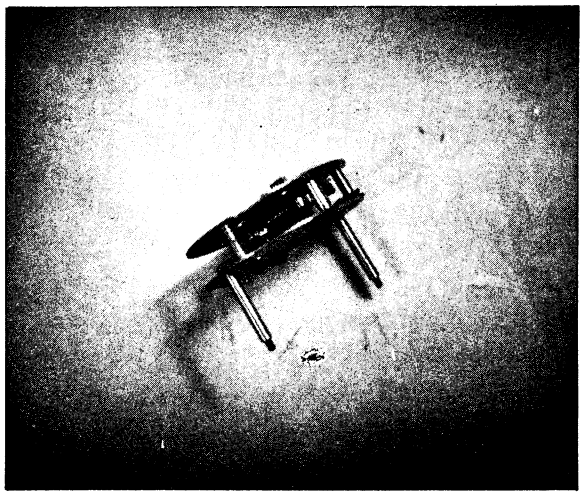


Figure 20 - Escapement

THE MULTIPLE CIRCUIT CAM SWITCHES ride on cams which cause contacts to make and break as the brass arms are raised and lowered by the cam profile. Since the cam shaft is quickly advanced in short steps by the action of the escapement, the switch contacts open and close with a snap action intended to reduce arcing damage.

Coin silver contact points are imbedded in the ends of the spring brass switch arms. Silver is a favorite contact material because satisfactory electrical connection is made even through blackened and pitted contact points.

The control knob fits on the switch end of the timer. In addition to turning, the knob can be pushed in or pulled out a short distance. On some machines the "pulled out" position and on others the "push in" position closes a set of contacts furnishing power to the timer motor and switch circuits.

The knob can be manually rotated from the front control panels but only in the clockwise direction. If an attempt is made to rotate it the other way, the cam indents will jam against and damage the contact arms. Damage might also be done to the escapement as it is designed to ratchet in one direction only.

It is recommended that the knob be in the "off" position for manual rotation, otherwise as it is turned with the power on, the washer motor, water valve, pump and other accessories would damage the contact points by being switched on and off too abruptly.

Testing a timer is a combination of observing, listening and checking electrical continuity. In quiet surroundings, the faint whirring sound of the timer motor can be heard indicating that it is operating satisfactorily.

The motor also may be removed from the timer, and with the use of a test cord as shown in *Figure 21*, the shaft rotation can be observed for positive indication that it is working. If the motor is defective, it can be replaced without replacing the timer.

If the escapement is working properly, it will advance the timer at evenly spaced intervals. These

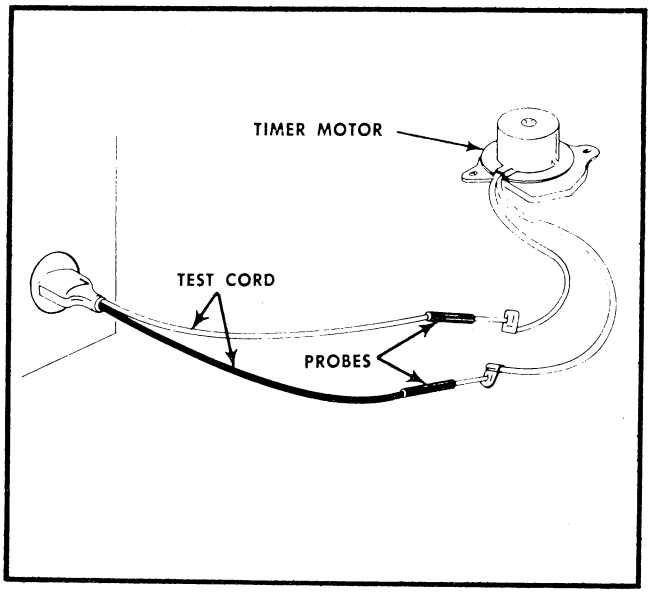


Figure 21 - Testing Timer Motor

intervals may be 30, 45, 60, 75, 90, or 120 seconds, depending on the gearing in the escapement.

If the motor is turning but the escapement is not advancing, the trouble probably is a broken spring or a stripped gear in the escapement. No attempt should be made to repair the escapement and the entire timer should be replaced, since on many timers the escapement requires a very careful adjustment.

In checking the cam switches, make a visual check first, looking for burned terminal boards, badly burned points or points burned together. A continuity check may be used across the points to test for proper operation. Adjustment or repair of the timer contacts should be done only by an experienced serviceman or a timer rebuilding shop.

When removing the timer, always check the wiring to make sure it is on the proper terminals, etc. If in doubt, make a simple diagram to be used when reinstalling the timer.

Always remove the wires from the timer with a pair of needle nose pliers, gripping the terminal, or pry the connectors off with a screwdriver. Do not pull on the wires as they may break off from the connectors.

Since the timer used on the automatic washer is a precise instrument and is easy to get out of ad-

justment, we strongly recommend that this unit not be disassembled in the field, other than removing the timer motor from the rest of the timer.

If it is determined that the timer motor is faulty, then it should be removed from the timer and replaced with a new one. If any other part of the timer is found to be defective, the entire unit including the motor should be replaced. After a new timer has been installed on a machine, always check the machine through an entire cycle to make certain all components are functioning properly.

The timer dial on the early Maytag Washers is removed by unscrewing the timer knob and lifting the dial from the timer shaft. On the later machines, the bezel is pried out of the center of the knob, *Figure 22*. Next, either a small "C" clip or nut is removed from under the bezel. This will allow the timer knob, dial and knob spring to be removed, *Figure 23*. The spring allows the knob to ratchet freely if an attempt is made to turn the knob backwards.

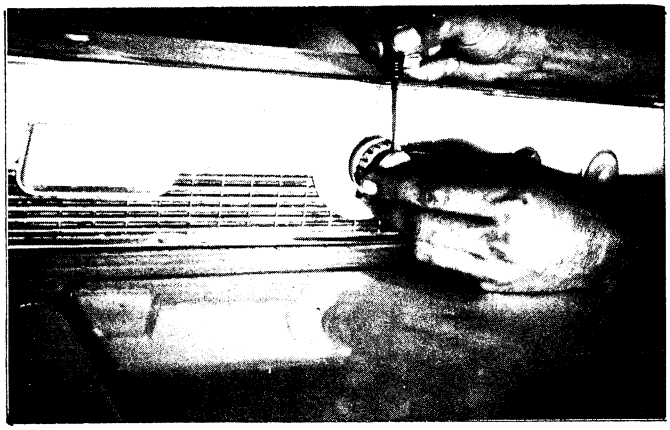


Figure 22 - Removing Timer Dial

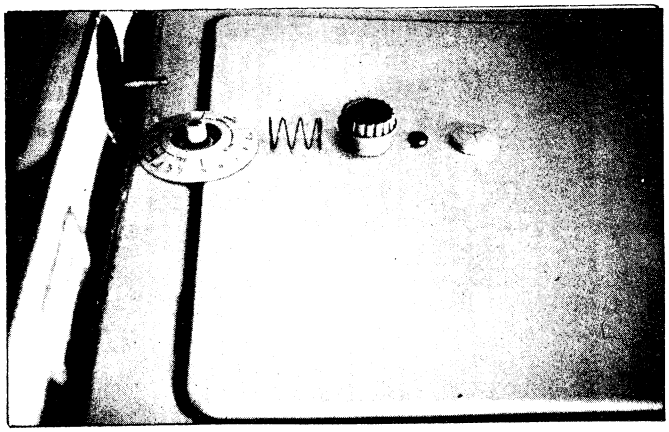


Figure 23 - Dial Assembly Removed

Switches

TEMPERATURE SELECTOR SWITCH

On the early AMP washers, the selector switch is a single pole double-throw switch connected in the water valve electrical circuit, *Figure 24*. It permits the user to select warm or hot water for the wash cycle only. The rinse water is selected by the timer and is always warm.

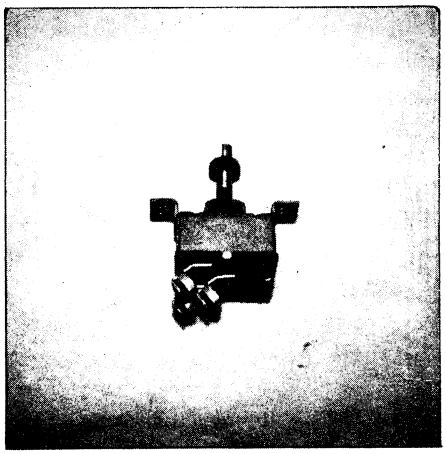


Figure 24 - Selector Switch AMP Models

To check or replace the temperature control switch on the early AMP models, the cabinet must be removed. Whereas on the later models of the A3MP series, the top can be removed. In later production, *Figure 25*, the model 101 has the temperature control switch located in the control panel. All of these switches are basically the same and also can be checked in the same manner.

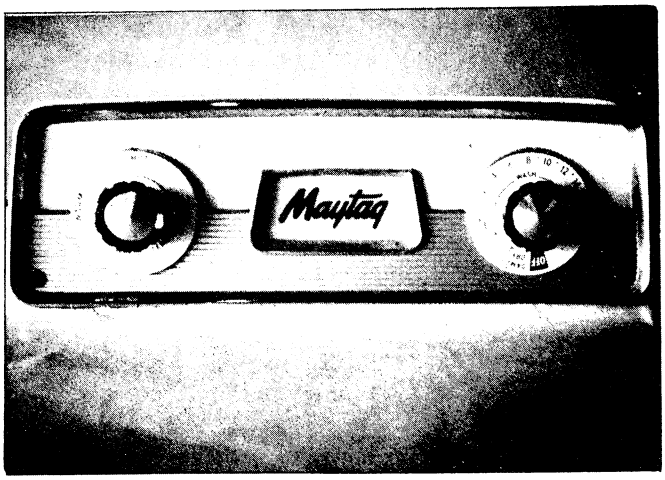


Figure 25 - Control Panel Model 101

To check the selector switch, turn the temperature dial to hot. Next, set the timer dial to the fill position. Plug the service cord into the electrical outlet and press down on the timer dial; at this point hot water should flow into the tub. Repeat the above procedure, except turn the temperature dial to Warm. Warm water should flow into the tub.

If neither warm nor hot water flows into the tub, or if only warm or only hot water flows, disconnect the service cord and remove the wires from the selector switch. Place the No. 6 wire and No. 5 wire together with the timer dial set on fill. Plug in the machine and hot water should flow into the tub.

To check the warm setting, go through the same procedure for checking the hot water, only place the No. 4 wire and the No. 5 wire together.

If water runs into the tub after this test, the temperature selector switch is inoperative and must be replaced.

NOTE: *On models with a nylon water valve and a four cam timer, line No. 6 goes to the timer, from the hot water solenoid, which by passes the temperature selector switch. Check the wiring diagram for current path.*

On the model 123 automatic washer, a toggle switch is used to control the water temperature. It is located on the console panel and can be easily serviced by removing the back service panel. This switch gives a hot or warm tempered wash water and an automatic warm rinse on either setting. This is also a single pole, double-throw switch and can be checked with a continuity checker, following the wiring diagram.

The pushbutton temperature switch gives three temperatures of water, *Figure 26*. It is located in the back control panel and can be replaced or checked by removing the control panel cover or rear service panel.

The temperature selector switch used on the Highlander suds saver models also incorporated a suds save switch in the same unit. This switch is replaceable as a one-piece item only.

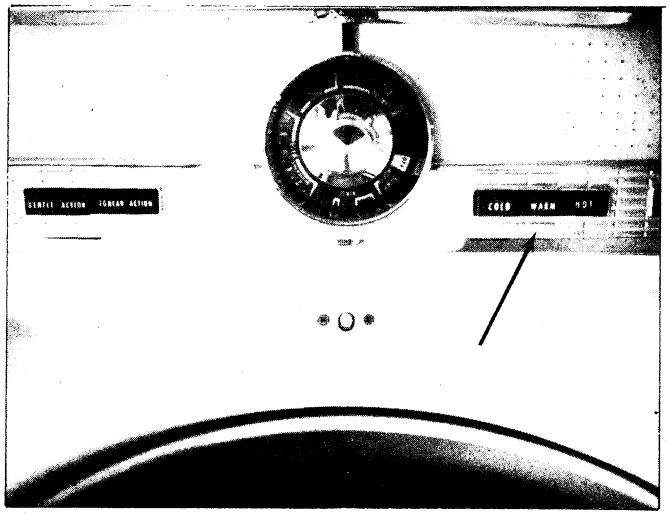


Figure 26 - Pushbutton Temperature Switch

Basically, all styles of the pushbutton switch are the same and can be checked in the same manner by using a continuity test cord and following the wiring diagram.

FLOAT SWITCHES

There are three mercury switches located in the lid of the AMP style washers, *Figure 27*. Two of them are actuated by the float (or cap on later models) in the top of the gyratator. As the water fills

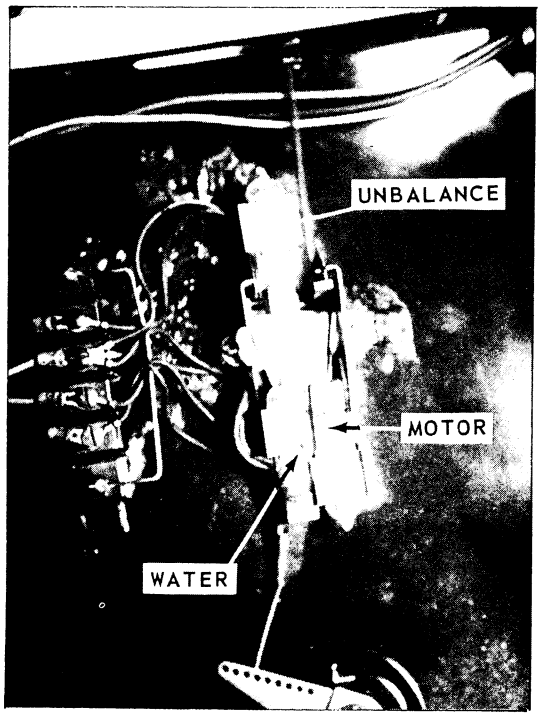


Figure 27 - Mercury Switches, AMP Models

in the spin tub, the float rises in the gyratator, making contact with the button in the center of the lid. Since the float switches are pivoted on a bracket, the float causes the switches to reverse their position, stopping the fill and starting the machine motor.

On some models the mercury switches are controlled by a spring hooked to an arm that gives three different water levels. Note the water level control dial in *Figure 28*. By turning this dial, more or less spring tension is held against the mercury switches pivoting. This in turn controls the amount of water entering the tub.

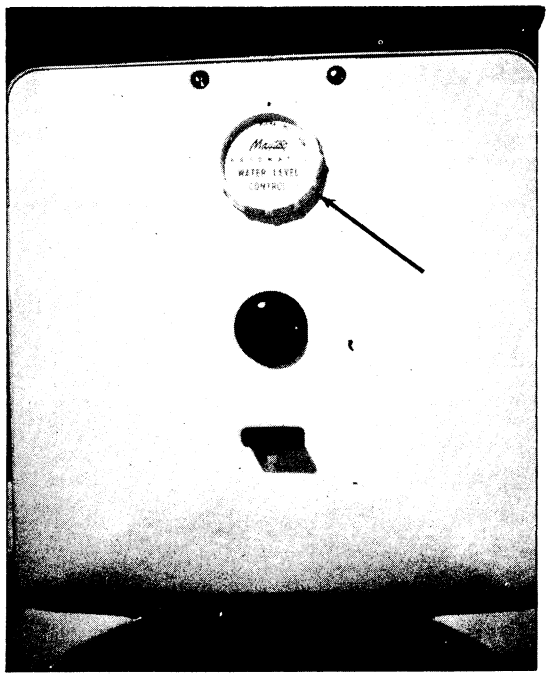


Figure 28 - Water Level Control Dial

WATER LEVEL SAFETY SWITCH

Some models use a pressure switch in conjunction with the mercury lid switches as a water level safety switch. It is wired in the circuit in such a way as to start the machine motor if the water fails to shut off.

If the mercury lid switches fail to shut the incoming water off, the water will overflow into the outer tub where it actuates the safety switch. This shuts the water off and starts the machine motor.

In the event the water valves fail to close, the overflowing water actuates the safety switch to start the machine motor but the water continues to enter the machine. Since the machine motor is operating, the pump is operating and, therefore, the overflowing water is pumped into the drain. This continues until the user shuts off the water manually and stops the machine.

> NOTE: ***Adjustment of the safety switch is not recommended since a very slight adjustment will increase or decrease the water level quite noticeably. Also, since the application of this switch is for a safety device only, any adjustments made following procedures of some other type of control is not recommended.***

In the event of an erratic or inoperative switch, the washer should first be drained of all water. Then remove the tube from the switch and blow out the tube to clear any water that might be trapped in the upper portion or air dome. Under normal conditions when the water is drained from the tub, the air dome is also cleared. But if water is found in the upper tube or air dome, check all connections between the switch and the outer tub for air leaks. All connections must be air tight for proper switch operation.

When a new switch is installed, the same procedure of clearing out the tube of water and dirt should be followed to insure proper performance of the pressure switch.

PUSHBUTTON WATER LEVEL SWITCH

The water level control switch used on the later model washers is a three position switch, *Figure 29*. The water level is controlled by pressing any one of the three selection buttons on the switch. When the button is depressed, it is locked in position by the extending arm on the tension bar, thus compressing the spring and applying pressure to the diaphragm of the pressure switch.

Each individual button exerts a different pressure against the diaphragm, thus controlling the amount of pressure required to actuate the switch.

As water enters the spin basket and outer tub, it rises in the air dome, pushing air pressure up

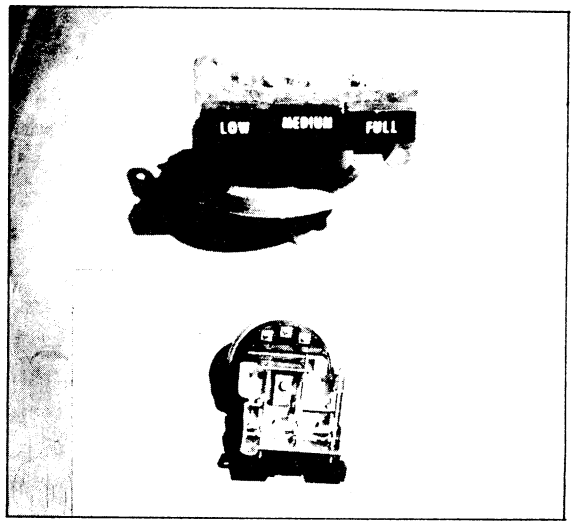


Figure 29 - Water Level Control Switch

through the small tube. When the water has reached its selected level in the tub, the air pressure in the tube exerts pressure on the switch diaphragm. This actuates the switch, breaking the fill contacts and closing the run contacts to start the machine motor.

As the timer advances into the spin cycle, the water begins to leave the tub and also the air dome. This relieves the air pressure of the air dome and tube, allowing the contacts of the pressure switch to return to the fill position.

There is an adjusting screw or nut on the pressure switch to adjust the water level. The adjustment should be made with the switch set on HIGH. When the tub fills and the water shuts off, the water level should be between just below the second row of holes in the tub to just above the first row of holes. When this adjustment is made properly, the MEDIUM and LOW settings will be correspondingly lower.

LID SWITCH

On the AMP model washers, the lid switch is the single mercury switch at the back of the lid, *Figure 15*. This same switch also serves as the unbalance switch.

When the washer lid is raised, the mercury drops to the opposite end of the glass tube shutting off the main power to the machine. As the lid is again closed, the mercury runs back to the contact end of the tube and the machine resumes operation where it stopped.

On models 123 and 124 washers, when the lid is opened all the way, it makes contact with the timer knob. This pushes in the timer knob opening the line switch in the timer to shut off the main power to the machine. When the lid is closed, the knob must be pulled out to resume the washer operation.

Most Maytag washers now use a mechanical lid shut off which consists of a nylon button located in the rear portion of the cabinet top opening, *Figure 30*. This button is linked with the unbalance lever to shut the machine off when the lid is raised.

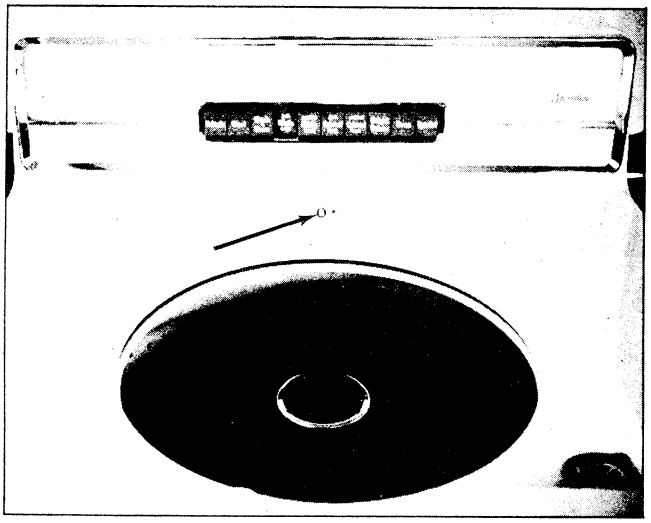


Figure 30 - Mechanical Lid Shut-Off Button

As the lid is raised, the back edge of the lid pushes the button in. The linkage, or trip lever, pulls the unbalance lever forward which in turn pulls the timer knob in to shut off the main line switch in the timer. To continue the cycle, lower the lid and pull out on the timer knob.

NOTE: *When any of the components of the off balance or shut off mechanism are removed or replaced, be sure the unbalance lever is replaced in front of the trip lever for proper operation.*

To operate properly, the lid button must be adjusted correctly between the cabinet top and the lid. The button may be adjusted by screwing it in or out. The proper adjustment is obtained when

the button protrudes 7/32" from the cabinet top, or when machine operation stops when the lid is raised between 3 and 5 inches.

The micro lid switch used on some models is a micro type switch, and is mounted in the control housing on the cabinet top. It can be adjusted by loosening the switch mounting screws and sliding the switch forward or back until it breaks the machine circuit when the lid is raised between 3 and 5 inches.

UNBALANCE SWITCH

Located in the lid of the AMP series washers is a mercury switch which is used to break the circuit when an off-balance load occurs. It is the same switch as the lid safety switch. The switch is on a pivot type bracket with a trip lever extending through a hole in the lid base, *Figure 31*. As the tub spins with an unbalanced load, the agitator trips the lever and lets the mercury switch pivot down, breaking the circuit and shutting off the machine. To reset the switch, raise the lid as far back as it will go and close it. The cycle will resume where it left off.

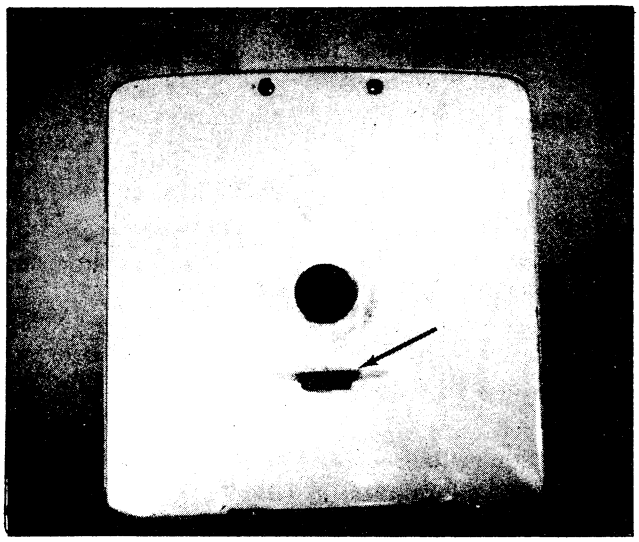


Figure 31 - Unbalance Switch AMP Models

The unbalance lever is a device used on the later style machines to shut off the machine in case of an off-balanced load. It extends from the timer shaft down to the tub cover. As the tub moves with an unbalanced load, the tub bumper comes in contact with the lever and opens the timer line switch by pushing in the timer shaft.

On all models that use this type of lever action to stop the machine when an off-balance load occurs, the mechanisms are basically the same, but are not interchangeable because of the differences in the lever lengths.

If the unbalance lever is not bent and the tub is correctly centered, the lever should be centered between the tub cover brackets and approximately 3/8" vertically with the tub cover bracket, *Figure 32*.

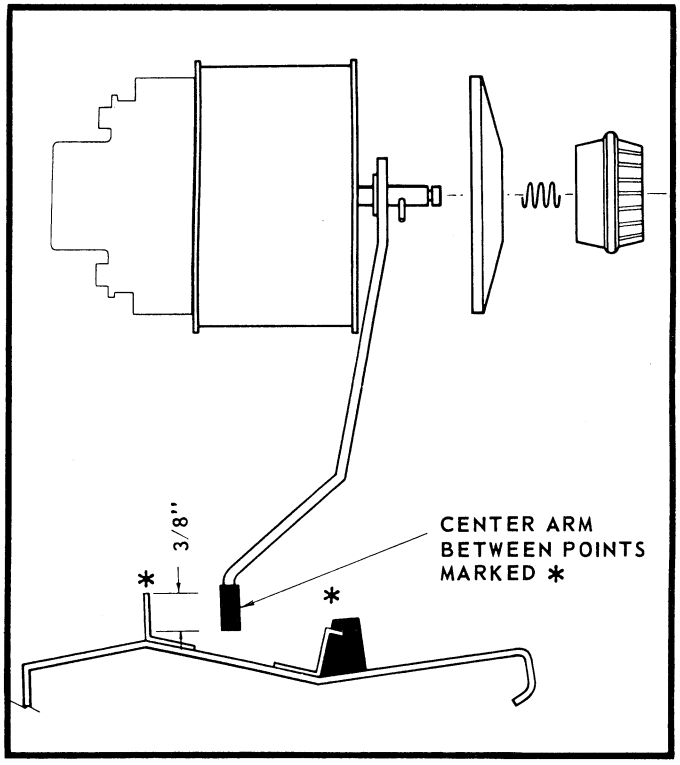


Figure 32

The unbalance lever used on the Model 160 and A900 is a mechanical linkage that disengages the micro lid switch when the tub comes in contact with the unbalance trigger.

Adjustment of this mechanism is made by loosening the switch mounting screws and sliding it back or forward in the elongated holes.

FABRIC OR SPEED SELECTOR SWITCH

The fabric or speed selector switch controls the motor speed on models with a two speed motor. This gives the user control of both the agitation and spin speeds. It is a pushbutton switch located on the control panel and is identified by the nomenclature "Modern" and "Regular" fabrics embossed on the face of the pushbuttons. If at any time this switch must be replaced, disconnect the wiring harness from the switch and remove the screws holding it to the panel.

To check the switch, use a test lamp and place one probe on terminal 3A of the switch. With the machine cord plugged into the wall outlet and the timer set on fill, the lamp should light with the other test lamp probe on switch terminal 32 and the *regular* button depressed. With the *gentle* button depressed, the lamp should light between terminals 3A and 31 of the switch.

SELECTOR CONTROL

The selector control, *Figure 33*, is a series of switches combined into one unit. As a button is depressed, a circuit is completed to the advance motor which advances the timer to the preset cycle. All variables such as motor speed, water temperature and wash time are preset in the timer.

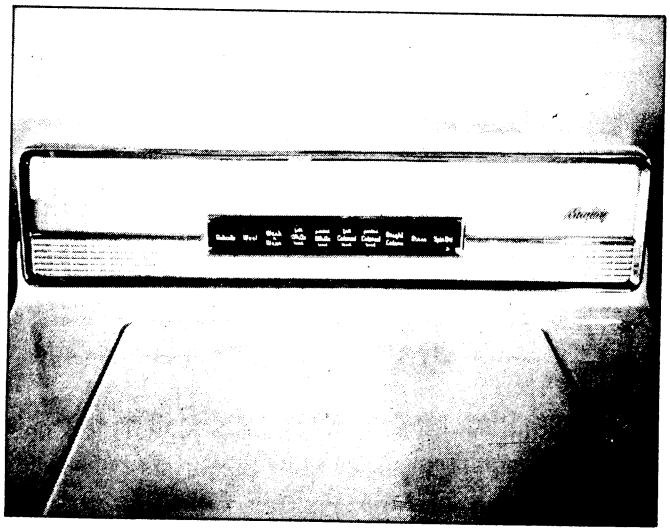


Figure 33 - Selector Control Switches

After a button is depressed, the panel lights will come on and remain on until the end of the cycle. Also, the button that is depressed will remain in after the cycle is completed. If the same cycle is to be used on the next load, merely depress the same button.

If at any time another cycle is desired, it can be changed by merely depressing another button. The new cycle that is selected will start from the beginning of that cycle and continue through the complete selected cycle.

In the process of checking the selector control, only one button should be depressed at a time.

The following switch circuits that are shown can be checked with a continuity test cord before the selector control is removed from the control panel.

For example, let's say no water enters the tub. At this point it would be unnecessary to check any other portion of the selector control other than the fill portion which are terminals 36, 37, 39, 40, 41.

In the following paragraphs the selector control is divided into separate sections and can be tested according to the portion that is in relation to the malfunction.

Starting with the fill portion of the control, remove the wires 36, 37, 39, 40, 41 from their terminals. Place one probe of a test lamp to terminal 3A.

Hot Water Fill Circuit

One at a time, depress the *full white* and the *partial white* buttons and check terminals 36 and 37. If the lamp does not light, the switch is defective and must be replaced.

Warm Water Fill Circuit

One at a time, depress the *delicate, wash 'n wear, full colored* and *partial colored* buttons and check terminals 36 and 39. If no light or continuity, the switch is defective and must be replaced.

Warm Water Rinse Circuit

One at a time, depress the *full white* and the *partial white* buttons and check terminals 39 and 41. If no light or continuity, the switch is defe ive and must be replaced.

Cold Water Rinse Water Level Switch Circuit

Remove No. 33 and 34 leads from the selector control and check the terminals with the test cord, first depressing the *partial white* button and then the *partial colored* button. If light fails to burn in either position, the switch is defective and must be replaced.

Momentary Contact Circuit

This portion of the selector control is used to start the washer operation by momentarily completing the circuit when a selection is made (button depressed). As soon as the button is released, the circuit is again opened and not used until the next cycle is selected.

To check this position of the control, disconnect the leads from terminals No. 21 and 22. Place the test leads on the terminals and, one at a time, fully depress each button of the selector control. If there is no light showing contact on any one of the ten buttons depressed, the switch is faulty and must be replaced.

Motor Switch Circuits

Remove the leads from terminals 29, 30, 31, 32 of the selector switch. Next, place the test cord on terminals 29 and 31. The light should burn any of the ten buttons depressed with the exception of the *delicate* cycle and the *wool* cycle.

Now check the terminals 30 and 32, depressing the *delicate* and *wool* buttons one at a time. The test light should light; if it does not, the selector control is defective and must be replaced.

Index Switch Circuits

The wire leads 23, 24, 25, 26, 27, 28 are to be removed for checking this portion of the selector control. In the process of checking the index switches, only one button should be depressed at a time. Place the test cord on terminal 28 and check the continuity between it and terminals 23, 24, 25, 26, and 27; the light will burn if the switches are good, except for the following: 23 on *delicate*, 24 on *wool*, 24 on *full white*, 24 on *bright colors*, 24 on *partial colored*, 25 on *rinse*, 26 on *wash 'n wear*, and 27 on *spin dry*.

ROTOR SWITCH

The rotor switch shown in ***Figure 34*** serves two purposes. One, it supplies power to the advance motor which advances the timer to the predetermined cycle. After the cycle is set, the advance motor circuit is broken by either cam switches in the timer or a circuit in the selector control.

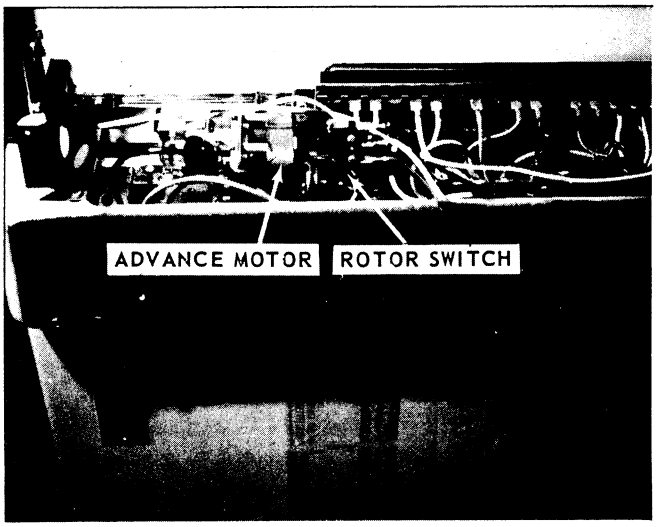


Figure 34

Secondly, the electro-magnetic field releases the rotor plunger which makes contact with another circuit in the rotor switch supplying power to other circuits of the machine.

To check the rotor switch for continuity, disconnect wire 22 and white wires from the terminals on the switch. Check the terminals with a continuity test cord. If there is no light between the two terminals, the switch is defective and must be replaced.

Now remove the wires 21 and 22. While holding the advance motor plunger in, check these terminals. If there is no light at this point, the switch will have to be replaced.

The rotor switch adjustment is made by loosening the mounting screws and sliding the switch in toward the advance motor. When the switch arm comes in contact with the advance motor plunger and one click of the switch is heard, this is the position to tighten the switch mounting screws. To further check the adjustment after the mounting

screws are tight, depress the motor plunger. If a second click is heard, the adjustment is good and the rotor switch should work satisfactorily.

To remove the rotor switch, merely disconnect the wires and remove the switch mounting screws.

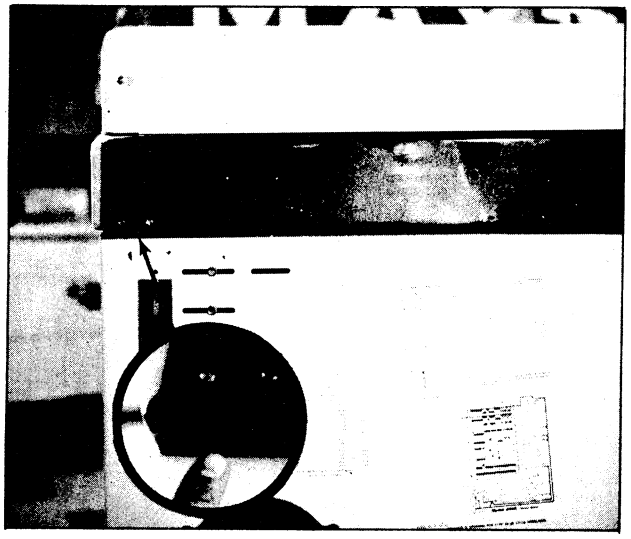


Figure 35 - Cancel Switch

CANCEL SWITCH

Facing the rear of the machine, the cancel switch is located in the left hand rear corner, *Figure 35*. When this switch is depressed, it will cancel any selected cycle in any phase of operation. The switch is primarily for the serviceman's use to cancel the various cycles rapidly when checking the machine. If this switch is used, it must be held in the depressed position until the control panel lights are out.

To remove the cancel switch, remove the wires from the switch terminals and remove the two screws holding the switch to the washer top.

Solenoids

A solenoid is a device used as a means for converting electrical energy into mechanical motion. It consists of a coil of enamel-coated wire wrapped around a non-metallic bobbin and supported by a laminated iron field or a steel frame of some type. Some solenoids have a metal core in one end of the bobbin and some have metal bushings in each end with a space in between them.

In late production, the design of the solenoids have changed from the old style cloth and metal covering to an epoxy covering. The solenoids are now captulated with a waterproof covering of epoxy. Also, this covering protects against damage to the wires and allows a more stable support for the solenoid terminals.

When an electric current flows through a coil of wire, a magnetic field is produced in the center of the coil. Therefore, when a solenoid is energized, it acts like a magnet, positioned so as to attract a predesignated metal object.

Some solenoids are equipped with a free moving armature or plunger which is so assembled that it can be easily moved in and out of the center of the coil. When the solenoid is energized, this plunger is pulled into the center of the coil by the magnetic attraction. When electrical current stops flowing through the coil, the magnetic force ceases, and the plunger moves back to its original position by gravity or by spring-action.

Other solenoids are equipped with a stationary core which pulls a metal leaf or plate against the end of the solenoid when electric current flows through the coil.

There are several different types of solenoids used on Maytag Automatic Washers. These will be covered in more detail in the following paragraphs.

Solenoids are checked by applying a 110 volt test cord to the terminals of the subject solenoid. The armature should immediately be pulled into the field coil. Defective solenoids must be replaced.

WATER CONTROL SOLENOIDS

Three different types of solenoids are used to control the water inlet valves used in the manufacture of Maytag Automatic Washers. These are the open type, the sealed type, and the captulated style.

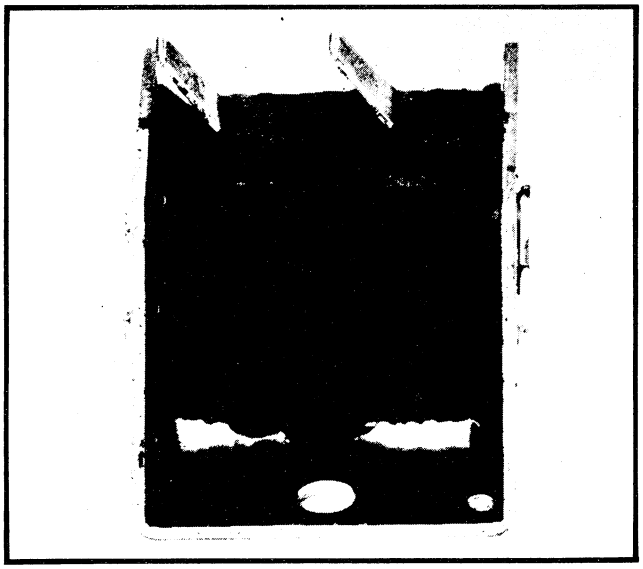


Figure 36 - Open Type Solenoid

The open type solenoid, *Figure 36*, is used primarily with brass bodied valves and is anchored to the valve by means of a coil tension spring. The coil is cradled in a steel frame and a bushing is inserted in each end of the coil, leaving a space between them to help center the plunger or armature and to prevent noisy operation. The spade terminal connections are on the side of the coil. The plunger is located in a cover or shield over which the solenoid is assembled. This plunger is spring-loaded to provide positive sealing action when the solenoid is not energized.

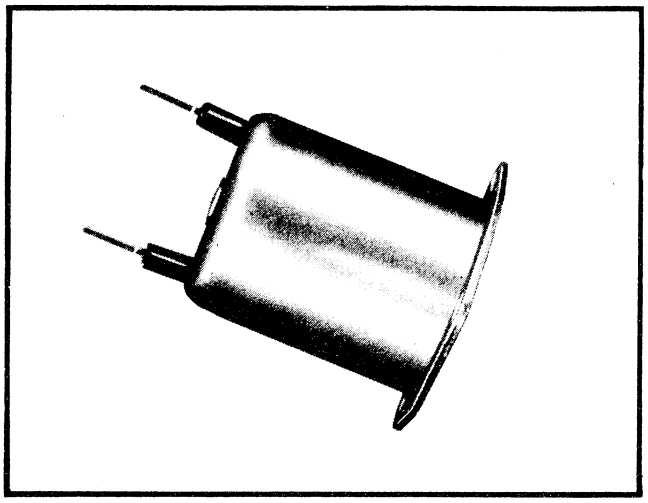


Figure 37 - Sealed Type Solenoid

The sealed type solenoid, *Figure 37*, functions in exactly the same manner as the open type but is secured to a nylon valve body by screws. Instead of being cradled in a steel frame, the solenoid coil is completely sealed in a can-like container to further protect the wire from the corrosive effects of water and detergents. The spade terminals are mounted on the outer end of this solenoid.

The captulated solenoid is designed for protection like the sealed type solenoid, except it is captulated in a hard epoxy shield to further its protection.

BRAKE SOLENOID

The brake solenoid, *Figure 38*, is used on the AMP style washers only. When energized, it performs two functions simultaneously. As it pulls the brake lever, it lets the trip lever move to allow the collar and "T" key to drop down. The "T" key engages to torque spring and the tub starts to spin. At the same time, the solenoid pulling on the brake lever releases the brake shoes from the brake drum, allowing the tub to turn freely.

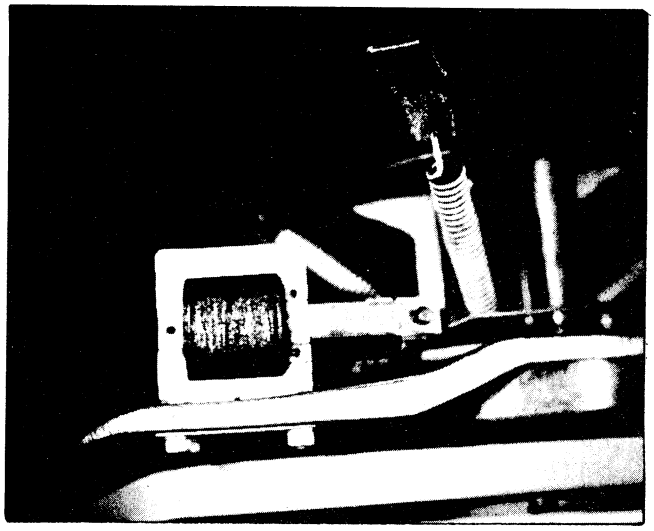


Figure 38 - Brake Solenoid

Originally, the brake solenoid was energized through the drive motor start windings. This was later changed so that the solenoid is connected directly to the power line through the motor centrifugal switch. The centrifugal switch is a single throw double-pole switch which energizes the solenoid when the motor has reached its running speed. In this way, the solenoid does not rob the motor of current during the initial start.

The brake solenoid is mounted to the brake shoe

support with four bolts, *Figure 38*. Elongated holes in the support allow the solenoid to be adjusted. This adjustment is very important because adjusted too far back can cause the solenoid to burn and too far in can cause undue strain on the motor, clutch and other components. Also, the "T" key may not drop down far enough to properly engage the torque spring in the spin period.

To adjust the brake solenoid, push the armature in by hand until the slack is taken up. This is the point where the load is first applied. From this point until the armature is fully seated should be 5/8". Most later style brake solenoids have a stop just below the "T" of the armature. This step is 5/8" wide so it can be used to measure the solenoid adjustment. At the point where the load is first applied, the edge of this "step" should be just ready to enter the solenoid frame.

After this adjustment is made, hold the solenoid armature fully seated and turn the tub by hand. If the brake shoes are fully released, the tub should turn freely.

LOW LEVEL SOLENOID

The low level solenoid, *Figure 39*, is used on models 190, A900 and A902 to give a partial water fill when a partial load button is pressed. When either the *partial white* or *partial colored* buttons are selected, the low level solenoid is energized. The low level solenoid releases a preset amount of tension from the pressure switch diaphragm, thus, giving a partial water fill.

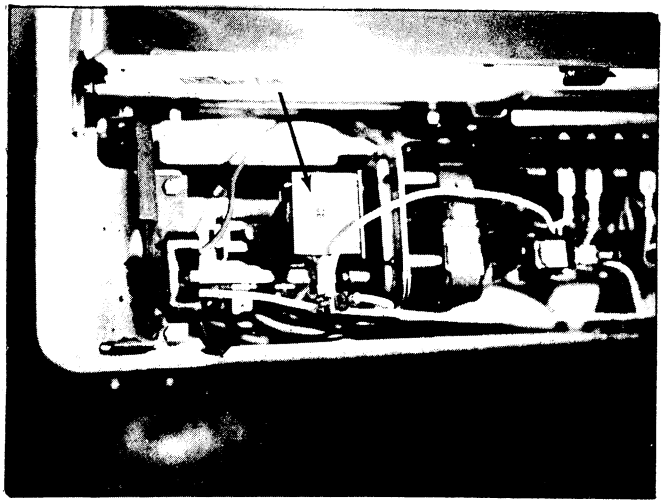


Figure 39 - Low-Level Solenoid

To test the solenoid, apply probes of a 110 volt test cord to the solenoid terminals. The solenoid should energize and pull the armature into the solenoid field. If the solenoid is defective, it and the pressure switch must be replaced as an assembly.

DIVERTER VALVE SOLENOID

The diverter valve solenoid is used on suds-saver models to operate the diverter valve which controls the path of the wash and rinse water leaving the machine.

It is located at the top of the diverter valve bracket over the pump. This solenoid is tested like any other solenoid and must be replaced if it is defective.

To remove the solenoid, first remove the bottom bolt that secures the solenoid to the bracket. Next, loosen the two top bolts and lower the solenoid to remove it from the bracket. Disconnect the valve arm from the solenoid arm and lift out. It is also necessary to remove the solenoid stop.

NOTE: *When installing a new solenoid, the solenoid stop and the solenoid must be positioned properly to keep the solenoid arm from coming in contact with the diverter valve arm.*

Motors

MAIN DRIVE MOTORS

Two different motors are used on Maytag Washers. The AMP style washer uses a motor that turns in a clockwise direction for both the spin and agitation action.

The helical drive washer uses a reversible motor that turns in a clockwise direction for the spin action and counterclockwise for the agitation action.

According to model application, these motors may be either a single-speed or a two-speed motor. Both of these motors will be discussed in more detail in the following paragraphs.

AMP Style Motors

The AMP style motor is a split phase motor turning in only one direction for both agitation and spin actions. It is mounted at the rear of the washer on a hinged bracket, *Figure 40.*

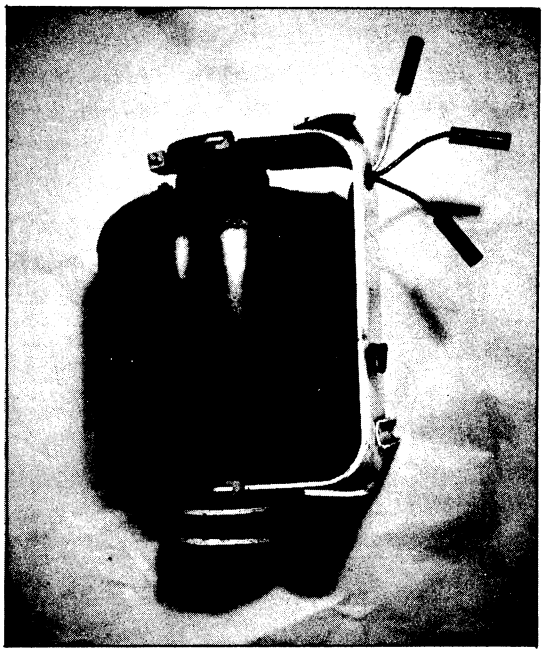


Figure 40 - Drive Motor AMP Models

It is not necessary to remove the washer cabinet in order to remove the motor. Lay the washer on its side using pads to protect the finish, *Figure 41.* Remove the belt and the belt tension spring. With the special tool available from Maytag, remove the bottom clip from the hinge pin. Push upward slightly to free the top clip and with the hooked end of the tool, reach in and remove the top clip.

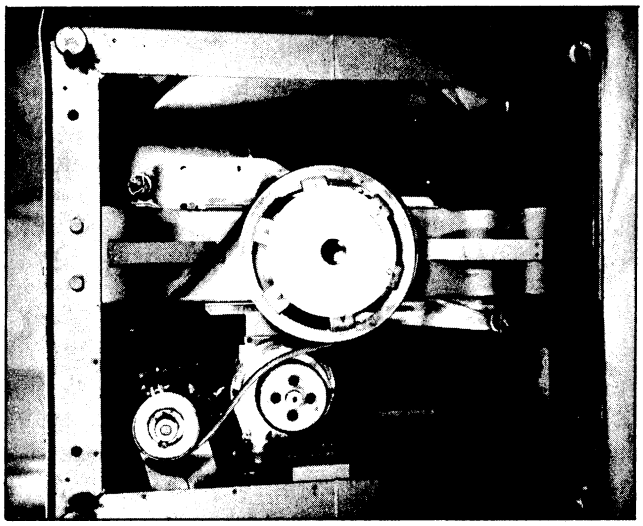


Figure 41

The hinge pin may now be removed in order to remove the motor, bracket and pulley.

To reinstall the motor, position the motor and bracket and insert the hinge pin. Using the special tool to hold a hinge pin clip, install the top clip. Push down on the hinge pin and install the bottom clip. Reinstall the belt and tension spring and reconnect the wires.

On the single speed motors, the number 7, or white wire, is the wire that supplies current to the brake solenoid. The red and green wires are the wires that supply current to the motor. Therefore, to test the motor, apply 120 volts to these two wires and the motor should run.

To test the two speed motor, apply one test cord lead to the blue and the green wires. Apply the other lead to the red wire and the motor should run at high speed. Apply one test cord lead to the orange and the green wires and the other to the red wire. The motor should now run at low speed.

Helical Drive Style Motors

The motor on the helical drive washers is a reversible motor. That is, it runs in one direction to give the machine its agitation action and reverses direction for the spin action.

Like the AMP style motors, the helical drive motors may be either a one or two speed motor. Also, according to model application, they may be either split phase or capacitor start motors. On those machines having a capacitor start motor, the capacitor is installed in the control hood or console instead of being attached to the motor. For this reason, any time work is being done in the control hood, the capacitor should first be discharged by shorting across the two terminals with the blade of an insulated screwdriver.

Since the test hook-up for these motors not only may vary from model to model, but also may vary according to motor manufacturer, no attempt will be made to give the various test hook-ups in this

manual. If the motor is suspected of being bad, it should be tested by a reliable motor repair shop.

Two types of mounting brackets are used on the helical drive washers. The early production machines use a pivot style mounting bracket, *Figure 42*. The pivot bushing mounted in the motor bracket allows the motor to pivot on the pivot stud which is mounted to the washer base. The correct belt tension is obtained by a tension spring and arm connected from the motor mounting bracket to the pump. The tension arm has a series of notches which hook onto a molded leg on the pump.

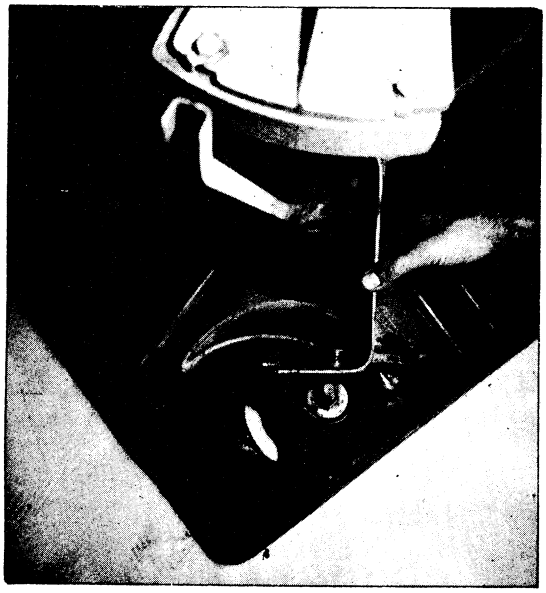


Figure 42 - Pivot Style Mounting Bracket

To remove the motor, first remove the tension spring and arm.

NOTE: *Grasp the tension arm when stretching the spring. Do not grasp the spring as this can distort it. Mark the notch that was hooked onto the pump so that on reassembly, this same notch can be used. The proper adjustment of this spring is covered in the BELT section of this manual.*

After removing the tension spring and arm, remove the drive belt and the pump belt. Next, remove the motor pulley using an Allen wrench to loosen the set screw in the lower groove of the pulley. Now remove the wires from the motor terminals and lift the motor and bracket from the pivot stud.

If the pivot bearing and stud are binding due to rust and corrosion, these parts must be carefully cleaned with fine emery cloth.

NOTE: *DO NOT LUBRICATE THE PIVOT STUD OR PIVOT BEARING! This can cause the motor to bounce as it starts, which allows the drive belt to drop off the pulleys.*

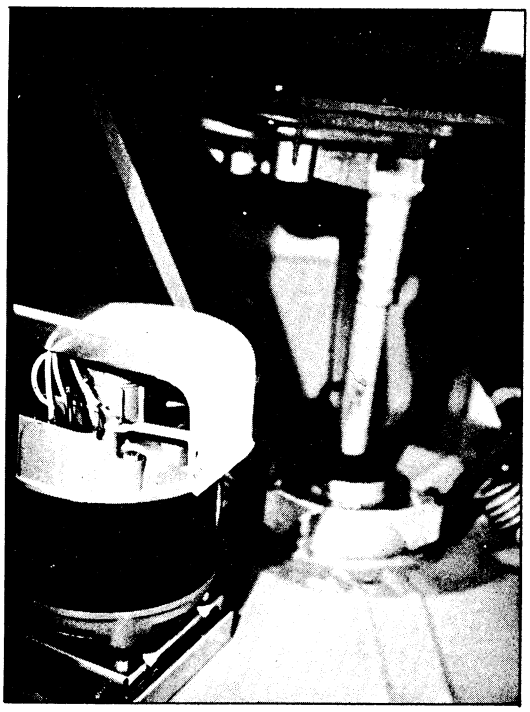


Figure 43 - Sliding Motor Base

The sliding motor base, *Figure 43*, is made up of two sections. The lower or stationary section is bolted to the washer base. The upper section which is mounted on the motor end bell has four wheels that roll in a track in the stationary section. Two springs between the sections pull the motor back to hold the proper tension on the belt.

As the motor starts in the spin period, the starting torque moves it towards the center of the machine. This loosens the belt and allows it to slip as the tub gradually starts to spin. As the spin speed of the tub increases, the motor moves back, pulling the belt deeper into the pulley grooves until the tub is spinning at full speed. This prevents the

motor from absorbing the full starting torque of the tub.

To remove the motor, it is necessary to remove the motor and base as an assembly. After removing the wires from the motor terminals, remove the four nuts holding the stationary base section to the washer base plate. These nuts are accessible from the under side of the base plate.

The motor base is removed from the motor by aligning the two sections so that the nuts on the motor through bolts are accessible with a nut driver or socket wrench. *Figure 44* shows the motor base removed from the motor. To reassemble, reverse the disassembly procedure.

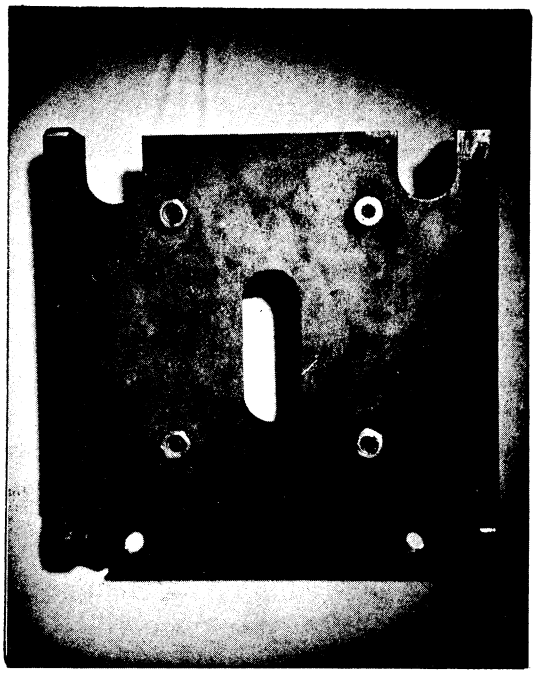


Figure 44

ADVANCE MOTOR

The advance motor is used on the 190, A900 and A902 models and is located in the control housing or console of the machine. When a button is pushed on the selector control, the advance motor turns the timer to the beginning of the selected cycle.

A drive shaft runs from the timer to the motor. When the advance motor is in operation, an electromagnetic field pulls the rotor plunger (or motor armature) in to engage the drive shaft and turn the timer. At the same time, the rotor plunger actuates the rotor switch.

The advance motor and pressure switch are mounted on the same bracket. To remove the advance motor, remove the screws holding the bracket to the washer top and then remove the four screws holding the motor to the bracket.

CAPACITOR

A capacitor is used on some models of Maytag Automatic Washers. It is a 230–290 MFD capacitor installed in the control housing or console of the machine.

> NOTE: ***When working in the control housing, always discharge the capacitor by shorting across the terminals with the blade of an insulated screwdriver.***

A defective capacitor can prevent the motor from starting or prevent it from reaching its full running speed.

The quickest method of testing the capacitor is to connect the leads to a known good capacitor. If the motor now runs satisfactorily, the capacitor is defective and should be replaced.

If another capacitor is not readily available, the machine capacitor can be checked by placing it in series with a 200 watt bulb in a test cord. With the test cord plugged into the wall, short across the two capacitor terminals and one of the following three results should be observed:

1. If the capacitor is *good*, the lamp should glow at about one-half normal brilliance and should increase in brilliance when the capacitor terminals are jumped.

2. If the capacitor is *shorted*, the lamp will glow at normal brilliance and there will be no change when the capacitor terminals are jumped.

3. If the capacitor is *open*, the lamp will *not* glow but will glow at normal brilliance when the terminals are jumped.

Water Mixing Valves

Maytag Automatic Washers use more than one type water valve, according to the model. These are mainly two-solenoid thermostatic and non-thermostatic or three-solenoid thermostatic and non-thermostatic.

Figure 45 shows the location of the water valve on the AMP style washers. The "Highlander" models have the valve mounted at the upper right corner of the machine. Three-solenoid valves are generally mounted on a bracket fastened to the machine base plate.

Figure 45 - Water Valve Location

On all nylon bodied valves, care must be taken when installing the hoses so as not to cross thread them.

The operation of the various valves is described in the following paragraphs:

TWO-SOLENOID Non-Thermostatic

On the two-solenoid mixing valve, *Figure 46*, three temperatures of water are available; *Hot, Warm,* and *Cold.* When the hot water solenoid is energized, only hot water is permitted to enter the machine. Energizing the cold water solenoid permits only cold water to enter the machine. To obtain warm water, both the hot and cold water solenoids are energized.

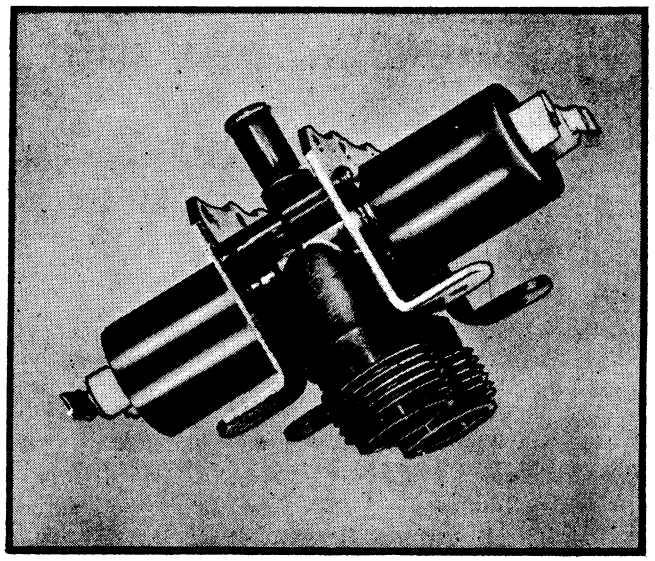


Figure 46

When the temperature control switch is set in the *Hot* position, only the solenoid on the hot water side of the valve is energized, permitting only hot water to enter the machine. When the switch is set in the *Warm* position, only the mixed water solenoid is energized, but some hot water will be allowed to mix with the incoming cold water in the cold water side of the valve.

Since the non-thermostatic valve has no thermal element to control the temperature of the water on the *Warm* setting, the temperature of the water entering the machine will vary from time to time depending on the differential in pressures and temperatures of the water entering the valve. In view of these wide variations, it is very important that the pressure on the hot and cold sides be equalized as much as possible. For example, a dirty screen in one of the mixing valve inlets, or at one of the faucet hose connections, can greatly reduce the pressure of water entering the side of the valve. Or if the user fails to turn both faucets all the way open, variances in pressure can occur on either the hot or cold side.

Figure 47 shows the two-solenoid non-thermostatic mixing valve in the *Off* position. Since neither

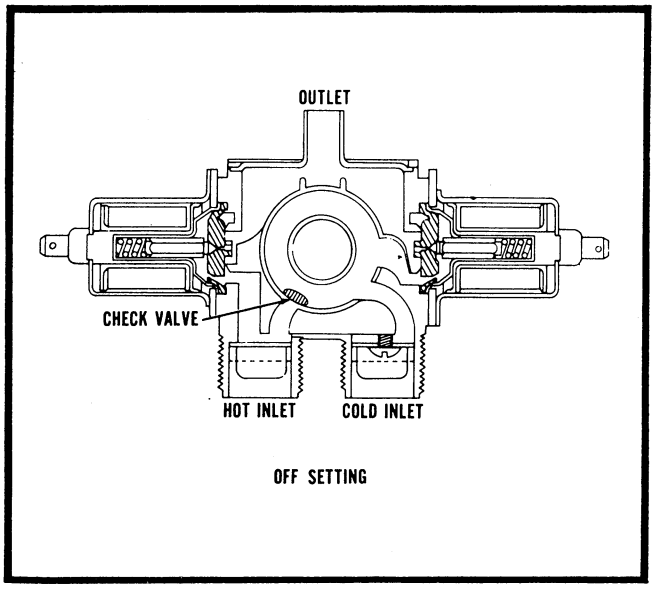


Figure 47

solenoid is energized, all diaphragms are seated to prevent water from flowing through the valve.

When the water temperature selector switch is set on ***Hot,*** the water solenoid on the left is energized, ***Figure 48.*** This allows hot water at tank temperature to flow out the left side of the valve. Since pressure from the cold water is being applied to the check valve disc in the mixing chamber, no hot water can enter this chamber.

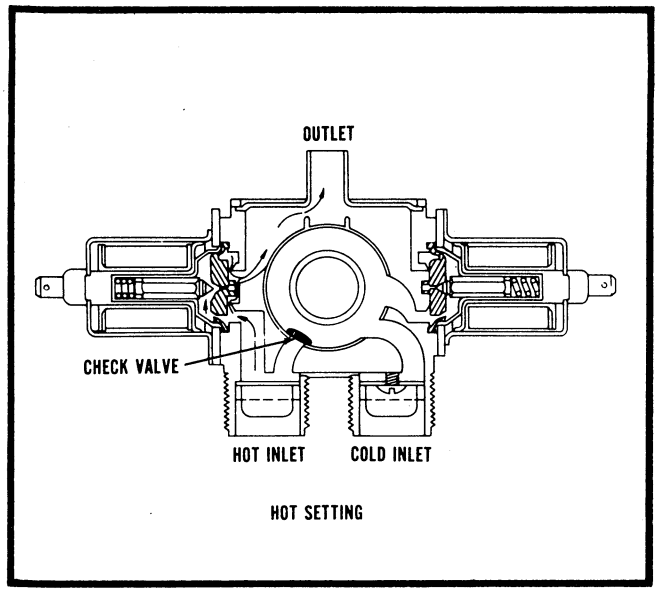


Figure 48

On the *Warm* setting, ***Figure 49,*** the solenoid on the right is energized, allowing cold water to pass by the diaphragm on the right. This relieves the pressure against the check valve in the mixing chamber. Thus, hot water will also enter the mixing chamber, resulting in a warm water mixture entering the machine.

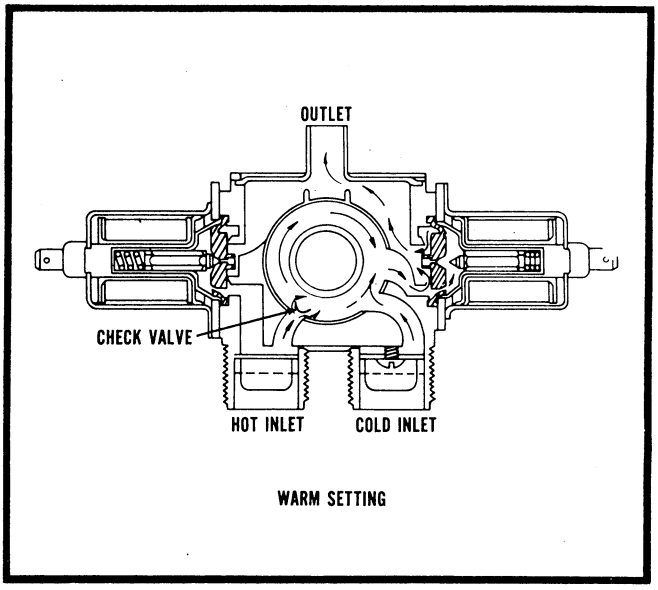


Figure 49

TWO-SOLENOID Thermostatic

The thermostatically controlled two-solenoid mixing valves, ***Figure 50,*** are more complicated, since they employ a thermal element to control the temperature of the water. Again, these valves may differ in appearance due to the different sources of manufacture.

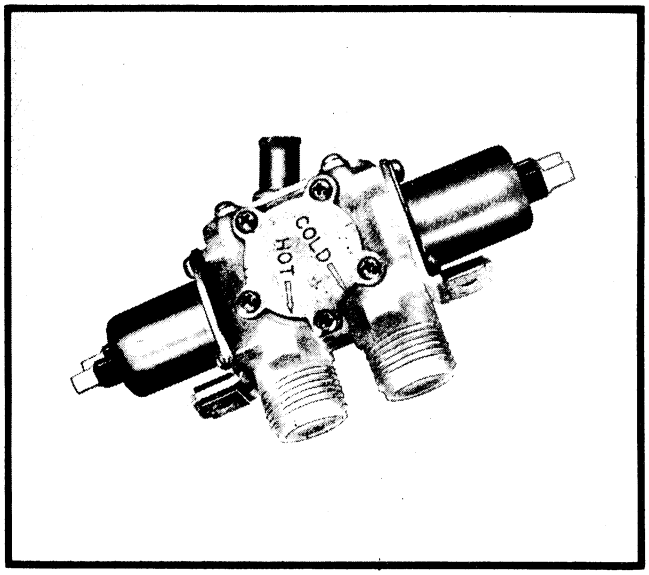


Figure 50

The following paragraphs describe the parts making up the one piece nylon bodied valve by its operational functions. The two piece valve functions in the same manner, however.

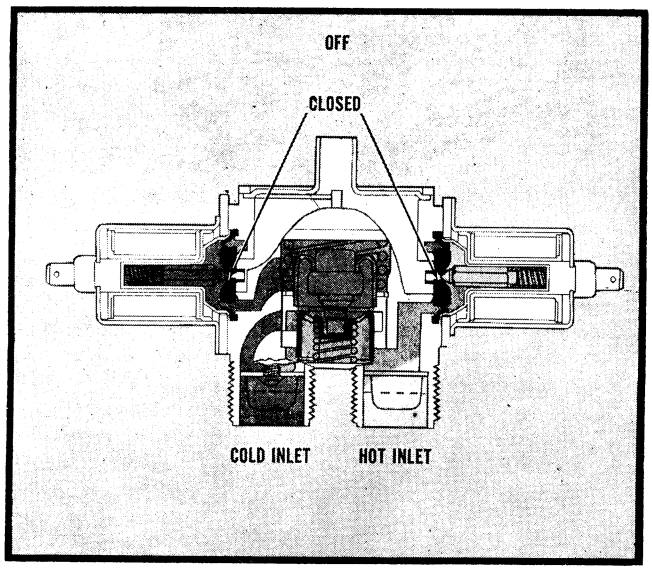


Figure 51

Figure 51 shows the mixing valve in the *Off* position. Both the mixed water solenoid on the left and the hot water solenoid on the right are deenergized. The diaphragms are seated to prevent water flow through the valve.

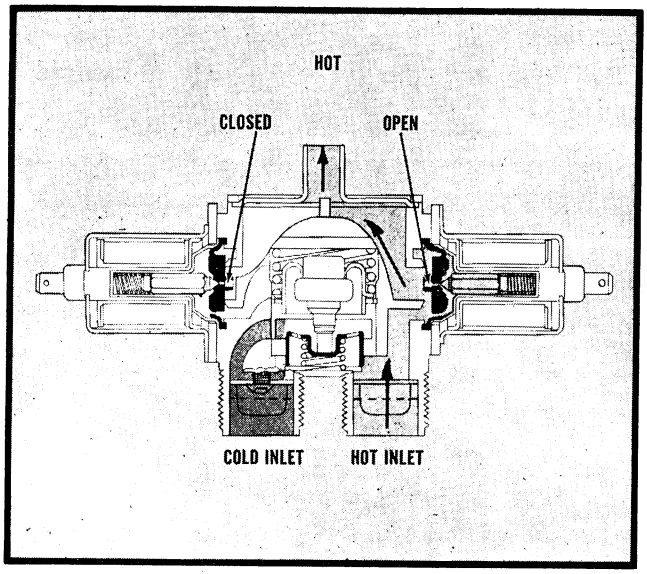


Figure 52

Figure 52 shows the action at the valve ports when the temperature selector is set on *Hot*. The hot water solenoid is energized, opening the diaphragm to permit hot water to flow. The flow pattern arrows show the course of water through the valve. Hot water of the temperature being delivered by the water heater will continue to flow until the hot water solenoid is deenergized.

In *Figure 53* we see the valve ports in the mixed water position, as they are when the temperature selector switch is set at *Warm*. Only the mixed water solenoid is energized, raising the armature and diaphragm so that the water is allowed to pass. The flow pattern arrows show how water from the hot and cold inlets flow over the element, which is a granular-filled thermal unit that has the property of expanding and contracting according to the temperature of the water passing over it.

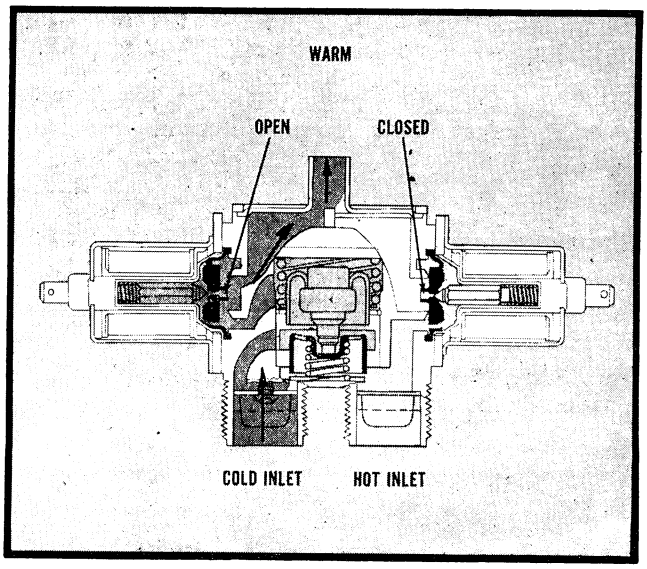


Figure 53

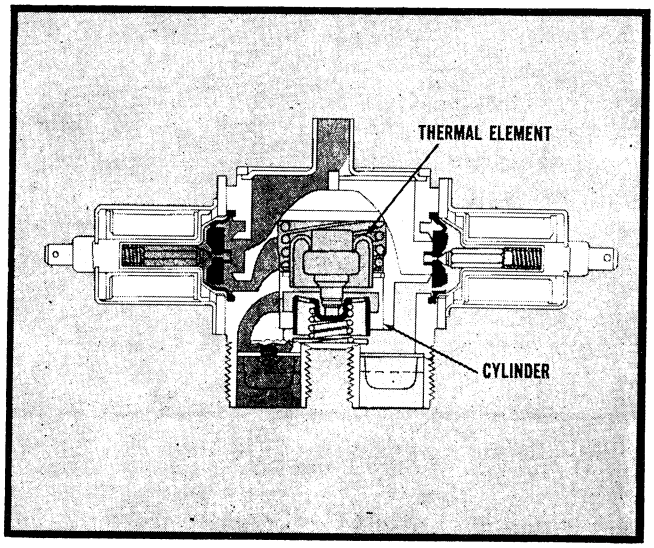


Figure 54

As shown in *Figure 54*, the expansion and contraction of the thermal element carries a cylinder up and down to mix hot and cold water properly to obtain a flow of water from the valve outlet at a temperature of 97°F. plus or minus 5°.

When the temperature selector switch is set at *Medium*, both the hot and mixed water solenoids are energized, *Figure 55*. This permits an equal amount of hot and 97° water to flow from the valve outlet; thus, it the water heater temperature is 150°, the water leaving the mixing valve will be approximately 124°.

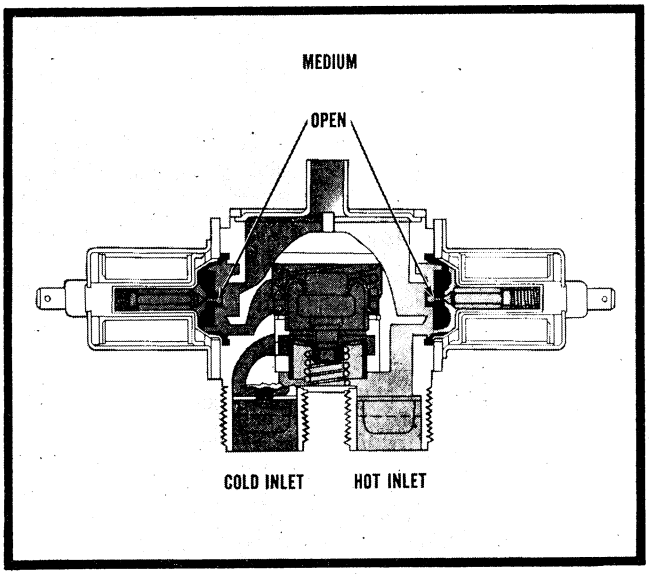


Figure 55

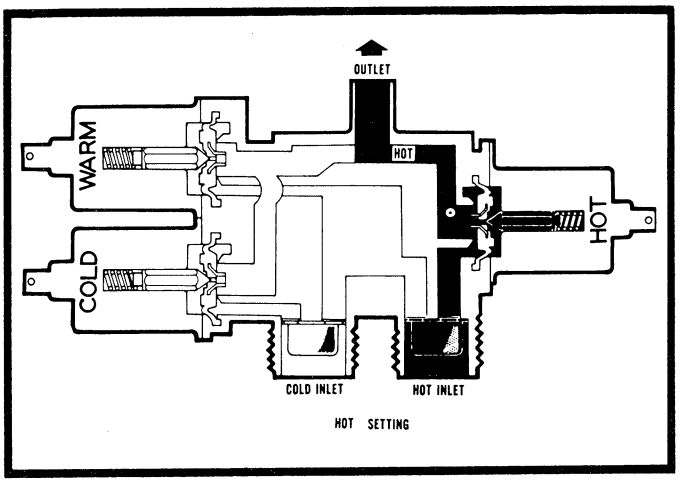


Figure 56

THREE-SOLENOID Non-Thermostatic

The three-solenoid non-thermostatic mixing valve, *Figure 56*, provides four different water temperatures; *Hot, Medium, Warm,* and *Cold.* The body of this valve is different in that it has a separate chamber for mixing the incoming hot water with the incoming cold water when the warm water solenoid is energized.

The following paragraphs describe the operational functions of this valve.

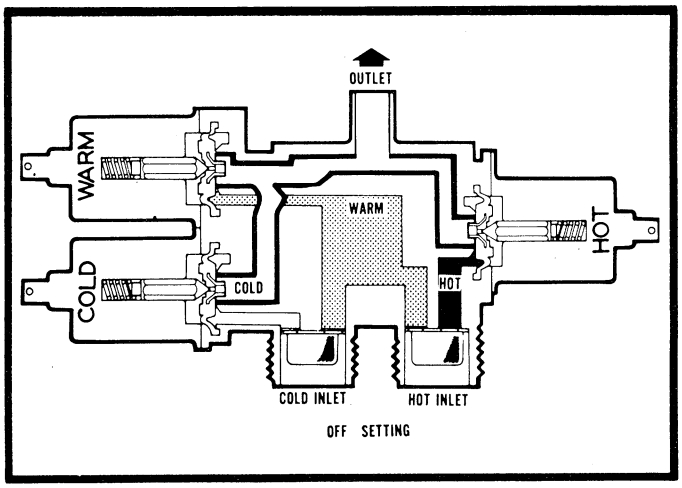


Figure 57

Figure 57 shows the non-thermostatic mixing valve in the *Off* position. Since neither solenoid is energized, all diaphragms are seated to prevent water from flowing through the valve.

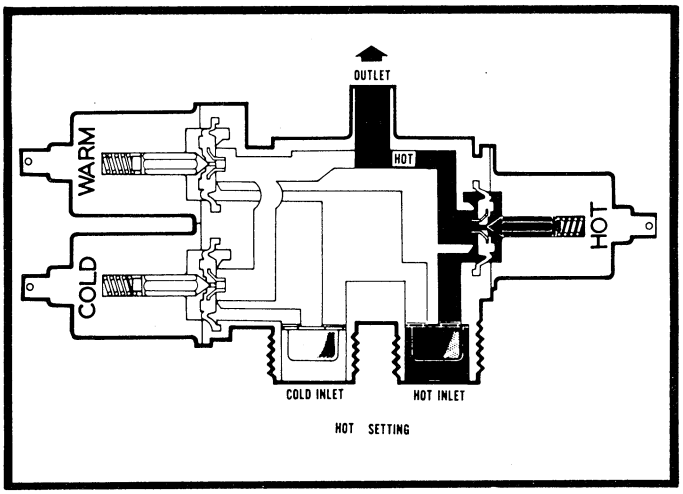


Figure 58

Figure 58 shows only the hot water solenoid energized. This allows hot water at tank temperature to flow out only the right side of the valve, since pressure from the cold water is being applied to the check valve disc in the mixing chamber.

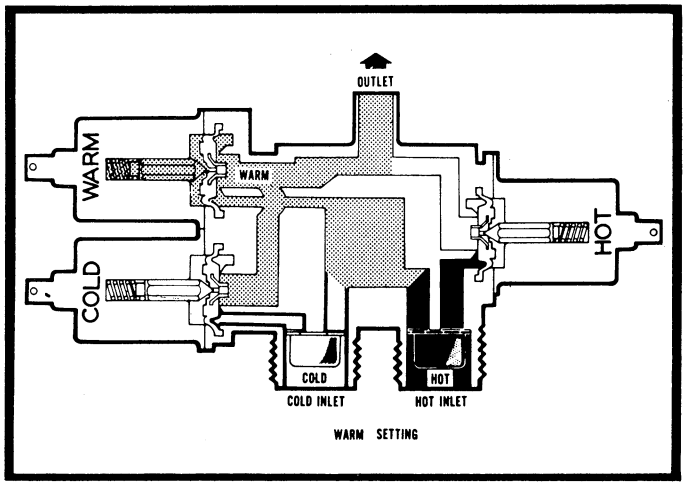


Figure 59

In *Figure 59*, only the warm water solenoid is energized, allowing cold water to pass by the diaphragm. This relieves the pressure against the check valve in the mixing chamber; thus, hot water will also enter the mixing chamber, resulting in a warm water mixture entering the machine.

The temperature of the warm water entering the machine will depend on the hot water tank temperature, the cold water tap temperature, and the differential of water pressures between hot and cold. For example, if the water pressure is equal, tank temperature is 160°F. and cold tap temperature is 60°, the warm temperature entering the machine would be half of the difference or 110°.

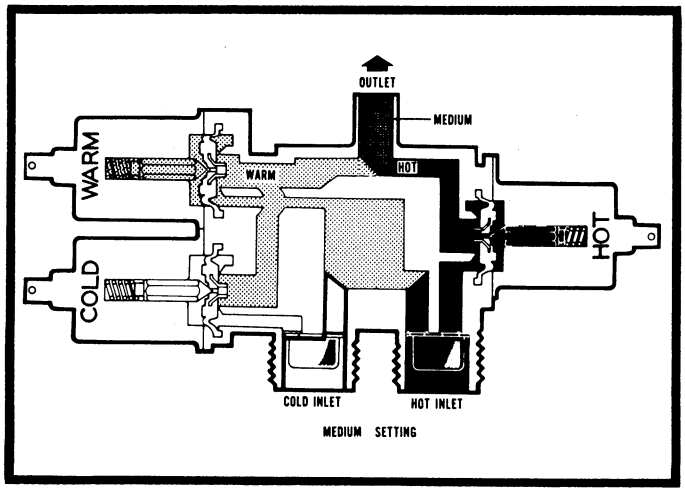


Figure 60

Medium water is obtained by opening both the hot and warm solenoids, *Figure 60*. Mixture here is also controlled by water temperatures and water pressures. If, again, the pressures are equal, the hot water is 160° and the warm is 110°, then the medium temperature would be half of the difference or 135°.

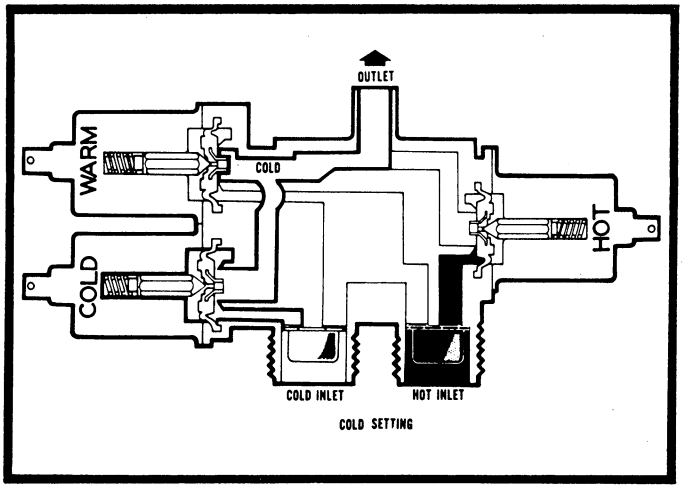


Figure 61

Opening of the cold water solenoid allows cold tap water to enter the washer, *Figure 61*.

THREE-SOLENOID Thermostatic

The three-solenoid thermostatic mixing valve, *Figure 62*, operates basically in the same manner as the two-solenoid thermostatic valve; however, it differs in that it incorporates an additional solenoid to provide cold water and gives five different water temperatures.

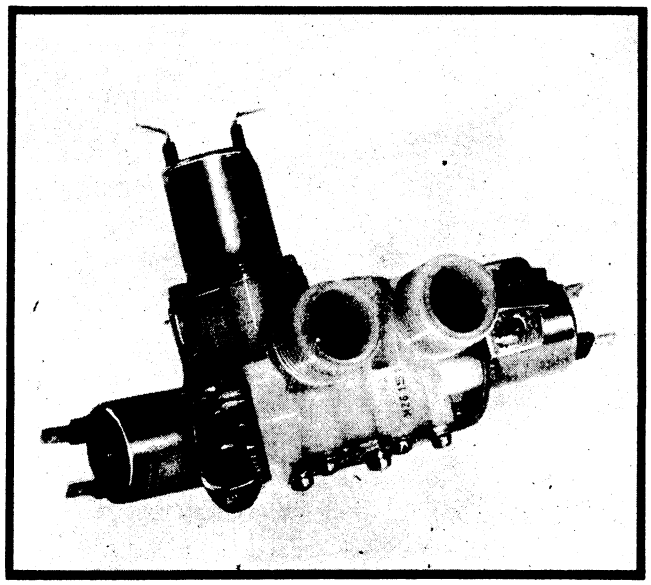


Figure 62

The following paragraphs and illustrations describe the operational functions of this valve:

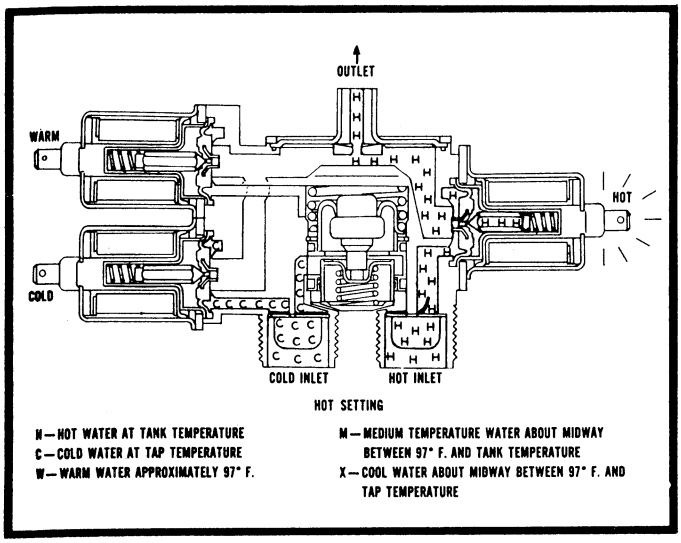


Figure 63

With the temperature selector set at ***Hot, Figure 63***, only the hot water solenoid is energized, opening the diaphragm to permit hot water to flow. Hot water at water heater tank temperature will continue to flow until the hot water solenoid is deenergized.

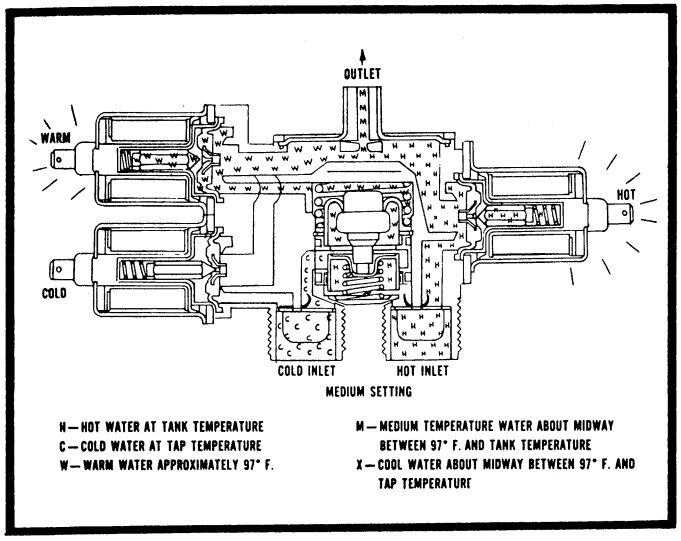


Figure 64

With the temperature selector set at ***Medium, Figure 64***, both the hot and mixed water solenoids are energized, allowing an equal amount of hot and 97° water to flow from the valve outlet.

With the temperature selector set at ***Warm, Figure 65***, only the warm water solenoid is energized, allowing water from the hot and cold inlets to flow over the thermal unit in the valve chamber. Water temperature at the outlet will be approximately 97°.

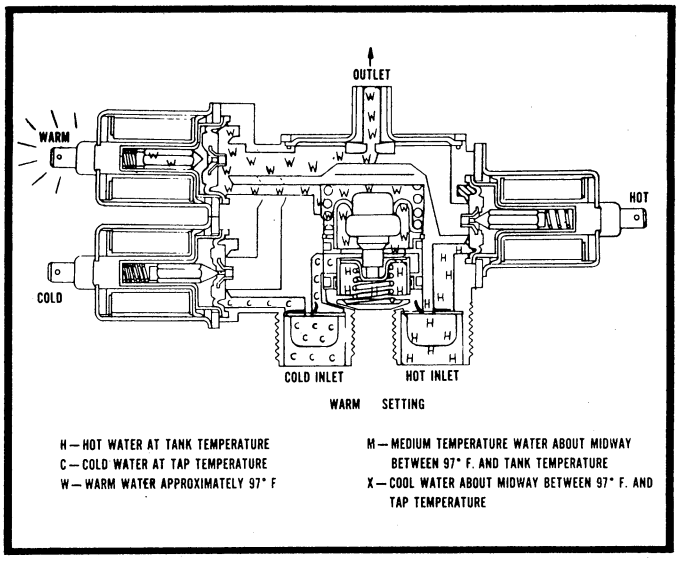


Figure 65

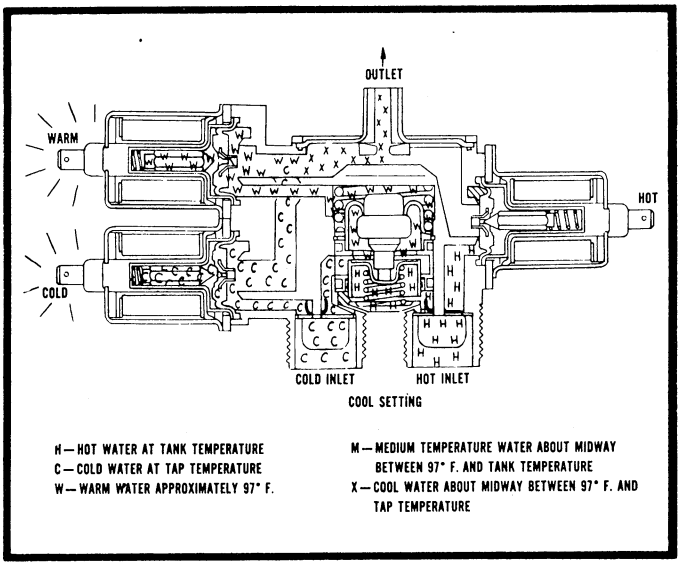


Figure 66

With the temperature selector set at ***Cool, Figure 66***, both the warm and cold water solenoids are energized, allowing warm water at 97° and cold water at tap temperature to mix, resulting in a cool temperature of water entering the washer.

With the temperature selector set at ***Cold, Figure 67***, only the cold water solenoid is energized. This allows the flow of only tap temperature water through the mixing valve.

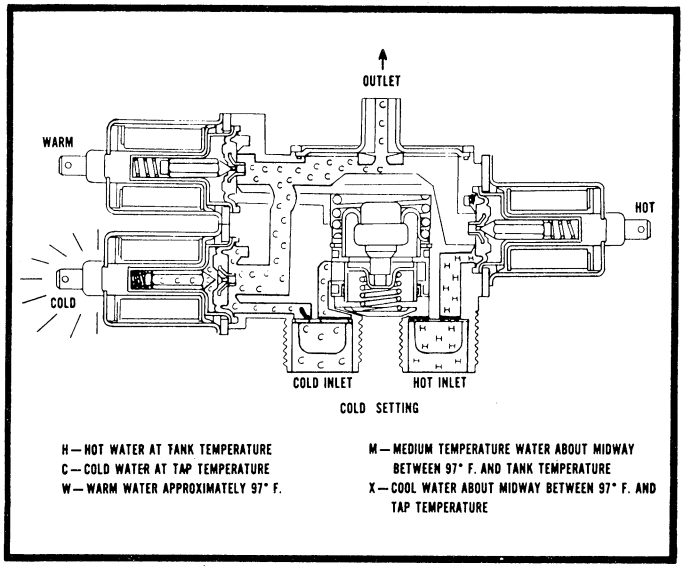


Figure 67

Always be sure the *correct part* for the particular valve being repaired is used, since there are very slight variations in some of the parts, which, if incorrectly used, may cause malfunctions.

Also, always make certain that all valve *parts are clean* before reassembly and that no foreign particles are left in the valve that might lodge under the diaphragms or check valves causing leaks, or that might clog any of the water passages.

FLOW WASHER

Some Models of Maytag Washers use a *time fill* method of measuring the amount of water put into the machine. On these models, a measured flow of water enters the tub during the timer fill period. In order to regulate this flow, the water valves on the machines have a flow washer to keep a constant flow of a specific number of gallons of water per minute.

These flow washers normally operate at a water pressure between 20 and 120 P.S.I. As the incoming water pressure increases, the flow washer is so designed that it puckers and restricts the flow.

Each flow washer is designed for a specific flow rate. For this reason, any time a water valve is exchanged on one of these *time fill* washers, the correct flow washer must be in the valve. In cases of extremely low water pressure, a flow washer with a larger flow rate can be installed in the valve to correct a low water level complaint. Usually a high water pressure complaint is best solved by having the water company install a pressure regulator in the water supply line to the house.

When installing a flow washer in the valve, always be sure the side with the lettering, or the rounded edge of the hole, is *towards* the water flow.

Pump

The AMP style pump, *Figure 68*, is mounted to the base frame by the pump bracket and incorporates a friction wheel that rides on the back of the drive belt. Since the motor and drive belt are in operation during both the spin and agitation periods, the pump is also in operation.

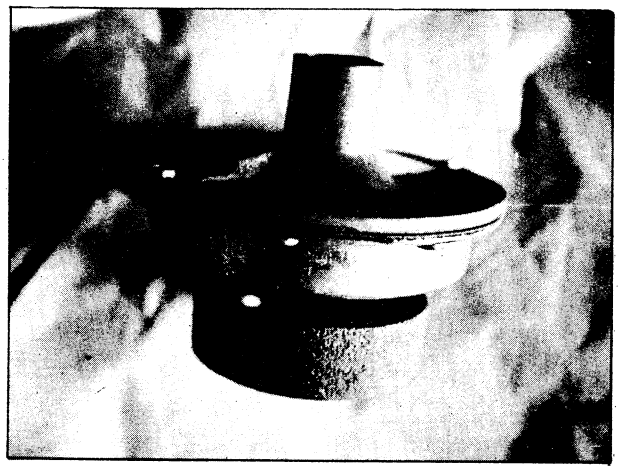


Figure 68 - AMP Style Pump

To check the pump for a noise condition, hold a block of wood or hammer handle against the drive belt, releasing the belt from the pump friction wheel. If the noise stops, you can be reasonably sure that the pump is at fault. Under some circumstances the pump can be noisy only when water is being pumped. If this is the case, add water to the machine and recheck using the same procedure.

To remove the pump, lay the machine on a pad with the back of the cabinet facing up (this is after the fill hoses and service cord have been disconnected). Remove the clamp holding the sump hose to

the pump and also remove the drain hose from the pump outlet. Remove the one screw holding one side of the mounting bracket to the base frame (closest to the rear of the machine). Next, remove the three remaining screws holding the pump to the front section of the mounting bracket. Lower the pump, disconnecting it from the sump hose, and remove it from the machine.

To disassemble the pump, remove the remaining five screws holding the top cover to the pump housing. Next, hold the impeller with one hand and unscrew the friction wheel with the other hand. At this point the impeller and shaft can be removed from the pump housing bushings.

The bushings located in the pump housing are press-fit bushings and are pressed in from each end of the pump housing. They are replaceable items, but should be replaced with a bearing press or vise, using a block of wood between the bushing and the vise jaws.

The helical drive washers have a turbine type pump, *Figure 69*. On machines that do not have a removable front panel, the pump is located at the rear of the washer and mounted to the base frame by three screws. These screws fit through elongated holes in the base frame to allow the pump to be moved in order to adjust the belt.

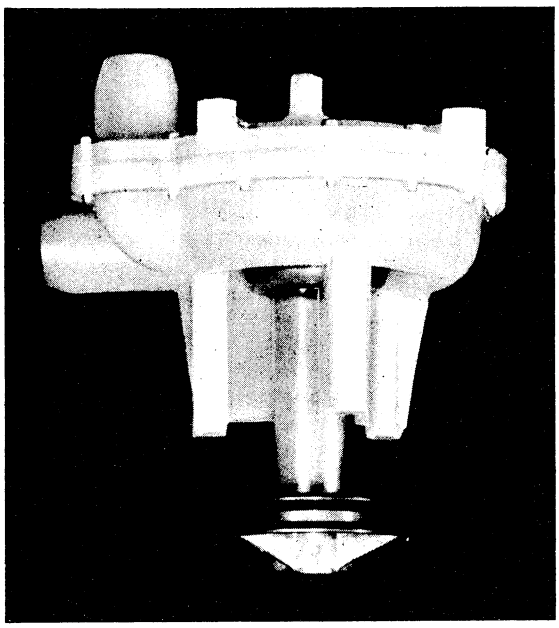


Figure 69 - Turbine Style Pump

This pump, like the AMP style pump, is in operation in both the agitation and spin periods. It has a turbine type pump impeller mounted on a shaft that rides in two bushings pressed into the lower housing. Located on the end of the impeller shaft, a pulley is used to drive the pump. The pump cover is mounted to the housing by self-tapping screws and incorporates the spout for the tub to pump hose. A cork gasket is used between the housing and pump cover and should be replaced if the two sections are separated.

On the models that have a removable front panel, the pump is located in the lower front section of the washer and is mounted in the same way as models with the rear mounted pump. Both pumps are alike with the exception of the bleach dispenser models which have a spout located in the top cover to attach the delivery tube for the bleach dispenser.

In later production, a polyethelene pump is used in the place of the metal pump. This pump is designed identically to the metal pump but is made of a polyethelene plastic. The only difference between the two pumps is an added amount of screws to hold the cover on the polyethelene pump.

To remove the pump, first remove the motor tension spring arm after marking the original mounting notch for proper reassembly. Next, remove the belt and loosen the set screws holding the pulley to the pump shaft. (These first two steps apply only to the original Highlander models). In later models, the opening in the base plate is made large enough for the pump pulley to be lifted out with the pump. Remove the mounting screws holding the pump to the base and lift out the pump.

To disassemble the pump, first remove the cover screws and separate the cover from the housing. Remove the pulley by loosening the set screws located in the pulley groove. Pull the impeller from the housing and with a screwdriver pry off the metal retainer holding the seals and felt washer in place.

NOTE: *When reinstalling the pump pulley, make sure the set screws are in the groove of the impeller shaft and lock the set screw with loctite.*

DIVERTER VALVE ASSEMBLY

The diverter valve and solenoid is mounted to the top of the pump on the suds saver models and works in conjunction with the pump. On these models the pump serves two purposes. Number One, it discharges water to the drain, and Second, it returns the suds water to the spin basket for the next load of clothes. The diverter valve directs the flow of the water to either a storage tub or a drain.

In the drain period (washer spinning), the pump rotation will be counterclockwise. This will either direct the water to the drain or to the storage tub, depending where the suds save switch is positioned. Let's say the suds save switch is on *drain* and the washer is in the first spin cycle. The diverter valve solenoid will be deenergized, allowing the water to be pumped to the drain. Now let's say the suds save switch is set on *suds save* and the washer is in the first spin cycle. The diverter valve solenoid will be energized, allowing the water to be pumped to the storage tub for saving.

After the wash water is stored in the storage tank, the timer breaks the circuit to the diverter valve solenoid. Also, the automatic canceling mechanism attached to the suds save switch cancels the circuit from suds save to the drain position. This allows the water from the rinse period to be pumped out through the drain and not discharged into the storage tank with the saved water.

As the washer enters into the deep rinse agitation, the diverter valve keeps the stored water from entering the basket by blocking the water passageway when the suds save switch is set on drain. Also, in the same switch position, it allows the rinse water to be pumped out through the drain.

Now let's assume the first load of laundry is completed and the wash water is stored. Before adding the next load of laundry, it will be necessary to set the suds save switch to *suds save* and set the timer to *wash*. This will energize the diverter valve solenoid, allowing the saved water to be pumped back into the machine while the agitator is in motion. After the water has entered the tub, the laundry can at this time be added and the remaining portion of the cycle will continue automatically.

Before the first washing is started, be sure the suds save hose is placed in a set tub that will hold at least 12 gallons of water.

NOTE: ***The suds hose and main hose should not be discharged into the same tub if suds are to be saved.***

LINT FILTER

The lint filter located in the top portion of the agitator is designed to filter the lint by the circulation of the water as the agitator is revolving. As water passes through the holes in the top portion of the agitator, it flows through the perforations of the lint filter and deposits lint on its outside surface.

As the water flows through the filter, it is forced down by the pulling action of the agitator motion. Located on the bottom of the filter, a rubber seal is used to keep the lint from passing through the channels in the lower section of the agitator.

After the water has passed through the filter, it is forced through the channels in the lower portion of the agitator by the agitator movement, and discharged into the washer basket for recirculation.

BLEACH DISPENSER

As bleach is poured into the funnel, located at the top right hand corner of the lid opening, it flows through the fill tube and into the clear plastic reservoir, ***Figure 70.*** In the fill period, the washer basket fills with water and at the same time the bleach dispenser reservoir is filling with water to dilute the bleach. This is accomplished by the transfer tube connected between the basket and the reservoir. As the water level in the basket reaches its peak, the machine starts the wash cycle. At this point, both the reservoir and wash basket have the same water level.

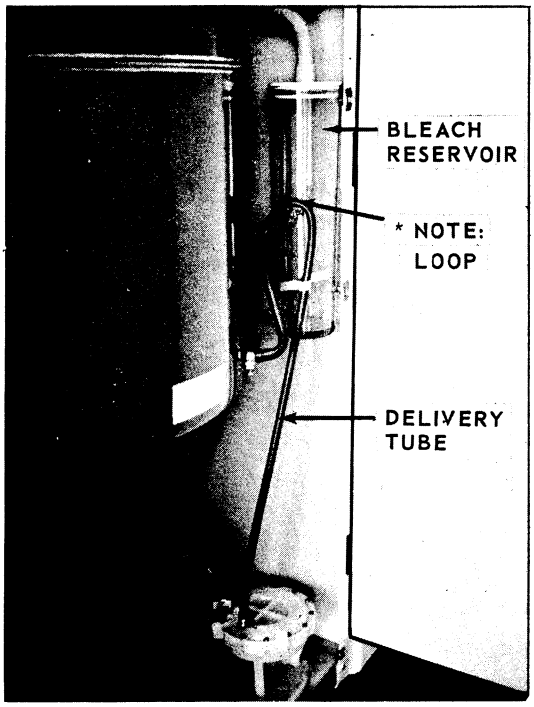


Figure 70 - Bleach Dispenser and Parts

The delivery tube, connected between the reservoir and the pump, is designed with a loop that extends high enough to keep the bleach from entering into the pump and wash basket in the fill period.

As the machine starts in the wash cycle, the reverse action of the pump creates a vacuum pulling the diluted bleach over the loop of the delivery tube and forcing it up into the wash basket through the pump. Thus, during the whole wash period, water is continually circulating through the bleach dispenser system. Since the bleach dispenser system is made up of separate changeable component parts consisting of the plastic reservoir and rubber tubes, these parts can be individually inspected and replaced if necessary without any difficulty. They are located in the right hand corner of the washer cabinet and are accessible by removing the front service panel.

NOTE: *The delivery tube is designed with a material loop that creates an air-lock to keep the bleach from escaping into the pump and wash basket in the fill portion of the cycle. When replacing this tube, it must be looped over the transfer tube as shown in Figure 70.*

MECHANICAL - AMP MODELS

SEQUENCE OF OPERATION - AMP Models

To properly diagnose or service the Maytag Automatic Washer, an understanding of how it functions should be thoroughly understood. It takes both electrical and mechanical components to control each cycle of operation. The timer first acts as the "brain" of the washer by supplying power to various electrical components at the proper time. Set the timer dial to the start position and pull up on the knob. This closes the line switch in the timer and allows a path to be completed to the unbalance switch. When the lid is closed, a path is then completed to the pilot lamp, water float switch, and back to the timer. It is then directed to the water temperature switch allowing hot or warm water to be selected. One of the water valve solenoids is now energized and the float switches take command over the fill cycle while the timer remains idle.

As the water rises in the clothes basket, the agitator float also rises, exerting pressure against the float button. As the pressure of the agitator float increases, it causes the float switches to change positions, thereby breaking the electrical path through the water float switch and the water valve solenoid. Simultaneously, a circuit is completed to the motor mercury switch, returning control of the washer to the timer motor. When the motor mercury switch completes a circuit to the timer motor, it also energizes the main drive motor. This action supplies power from the drive motor belt to the clutch pulley assembly and the pump.

With the brake solenoid deenergized, the brake holds the spin tub from turning and allows only the center shaft to turn. As the center shaft is rotated, it causes the gears of the transmission to drive the agitator shaft, thus creating the wash action. The wash cycle continues from 1 to 15 minutes, depending on the time selected on the timer dial. At the end of the wash cycle, a circuit is completed through the timer to the spin solenoid.

With the closing of the spin solenoid, a brake lever is moved, disengaging the brake shoes from the brake drum. The brake lever moving to open the brake also allows the trip lever to drop, and since the collar is no longer supported, it also drops. As the collar drops, the tee-key secured in the collar opening engages the torque clutch spring of the center shaft. Since the torque spring cannot turn on the shaft, it starts to unwind. This causes the diameter of the spring to increase and thereby engage the inside of the spin tube. With the pressure increase of the torque spring mating with the spin tube, the spin tub starts to rotate. As rotation speed increases, the water and clothes are forced against the inside of the clothes basket. The water is now forced through the holes of the inner tub and is spun up and out of the spin tub and into the collector tub. The agitator float drops back down and the timer is in complete control for the remainder of the spin period. With the pump running whenever the drive motor is turning, the water is now removed from the collector tub to the drain facilities.

After 3 minutes of the spin cycle, a circuit is completed to the warm water solenoid permitting a half minute of spray rinse. This half minute is the only water to enter the washer that is not controlled by the float switch. At the end of the spray rinse, there is another minute of spin before the drive motor and timer motor are deenergized. This action also disengages the spin solenoid, thereby setting the brake and stopping the spin period. The washer now starts to fill with rinse water and again the float switches are in control until the tub is filled to reposition the mercury switches.

There is then two minutes of deep agitation rinse and a final spin of four minutes. The timer then shuts off all power except for the pilot light which is turned off by either raising the lid to break the circuit through the unbalance mercury switch or by pushing in on the timer knob.

CLUTCH ASSEMBLY - AMP Models

The clutch assembly consists of two basic types; the first being a *dry* type clutch, and the second, a *wet* or oil lubricated clutch. The dry clutch was used in the original production and was later changed to the wet clutch. The operation of both clutches remains the same, and removal of the clutch assemblies is very similar.

To remove either one of these clutch assemblies, lay the machine on its side, being careful to protect the finish. Now remove the Truarc ring, using a pair of Truarc pliers to spread the ring, *Figure 71*.

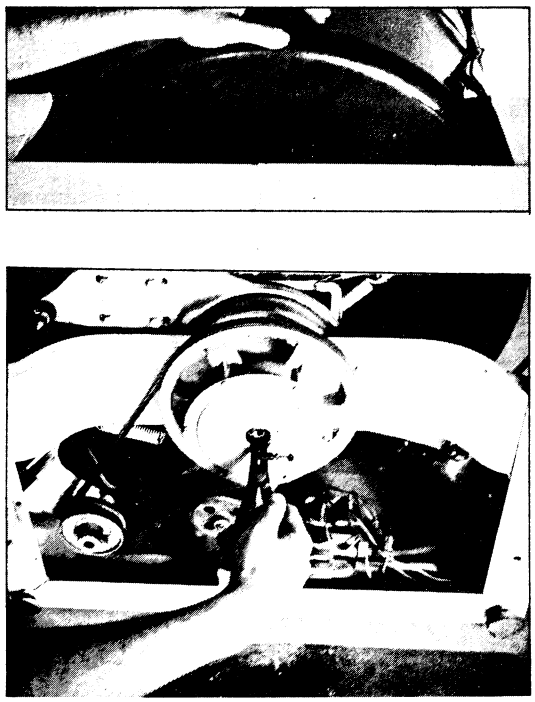


Figure 71 - Removing Truarc Ring from Clutch

On the oil lubricated clutch, a rubber oil seal stopper must be removed before the Truarc ring can be removed, *Figure 72*. Now remove the Allen screw in the bottom of the center drive shaft, *Figure 73*. The clutch assembly may now be pulled free from the center drive shaft. If the pulley clutch assembly does not come off easily, use a wheel puller, but protect the threads in the center of the shaft that the Allen screw was removed from.

The clutch may be disassembled to clean or replace parts. On the dry clutch, remove inner drive drum from the clutch assembly by lifting the inner drum straight out. Note how the clutch tension spring and clutch band are secured to the inner pulley.

The tension spring is notched to fit into the clutch band slots, and the inner drum is notched to receive the tension spring with the inner drive drum between the tension spring and the back of the clutch band.

On reassembling, the inner drive drum must be assembled as explained, in order to prevent the clutch band from rubbing the bottom of the pulley. On the oil lubricated clutch, the oil pan must be removed before the inner drum of the clutch assembly can be lifted out.

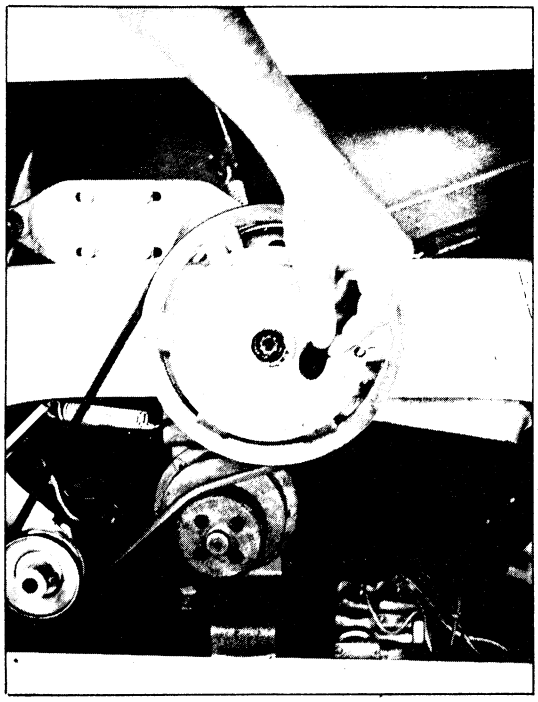


Figure 72 - Rubber Stopper used on Wet Clutch

Figure 73 - Removing Allen Screw from Center Shaft

On reassembling the oil clutch, about two ounces of extra heavy weight oil should be added before oil seal stopper plug is replaced. The clutch is designed to slip a little if malfunction occurs. This

slip action is used to bring the spin tub to spin speed slowly, therefore acting as a protective device for the motor and belt. It also allows the clothes in the spin tub to gradually come in contact with the spin basket, helping to control the balancing of the spin tub.

TRANSMISSION - AMP Models

The only similarity between the transmissions used on the Maytag AMP and Helical Drive Automatic Washers are the gears. These gears are directly interchangeable from one transmission to the other and the gasket also remains the same. The outside cover of the transmissions are not the same and cannot be interchanged.

Although the nylon or fiber pinion is somewhat different, they may still be used by drilling a Number 33 hole for the locking pin used in the helical drive transmission. There is also a distinct difference in removing the transmissions for service from the two styles of washers.

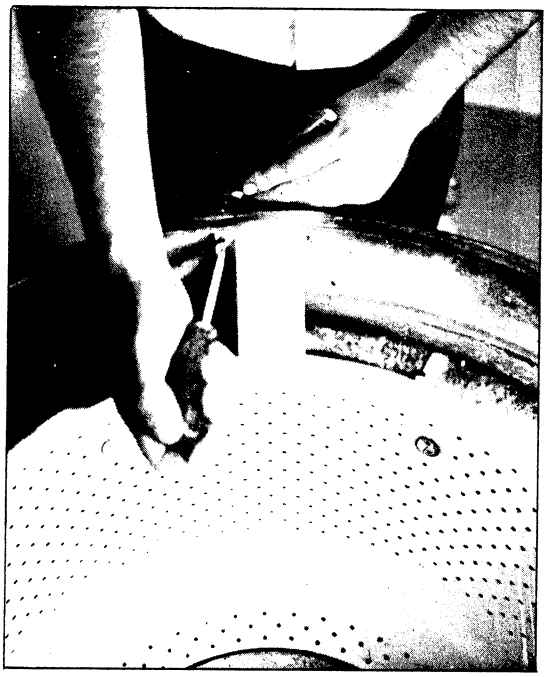


Figure 74 - Removing Inlet Spout

To remove the transmission from the AMP style washers, first remove the cabinet as explained under Cabinet Service in this manual. Next, remove the water inlet spout, *Figure 74*, and lay the washer on its side. Remove the belt and the clutch assembly. Detailed instructions for removing the clutch assembly are covered in the Clutch section of this manual.

Set the washer back upright and remove the stop-bolt, located above the trip lever, from the damper assembly, *Figure 75*. The function of the stop-bolt is to keep the collar from bouncing up high enough to allow the tee-key to turn and thereby hold the collar from dropping. Care must be taken to insure that this stop-bolt is installed on reassembly.

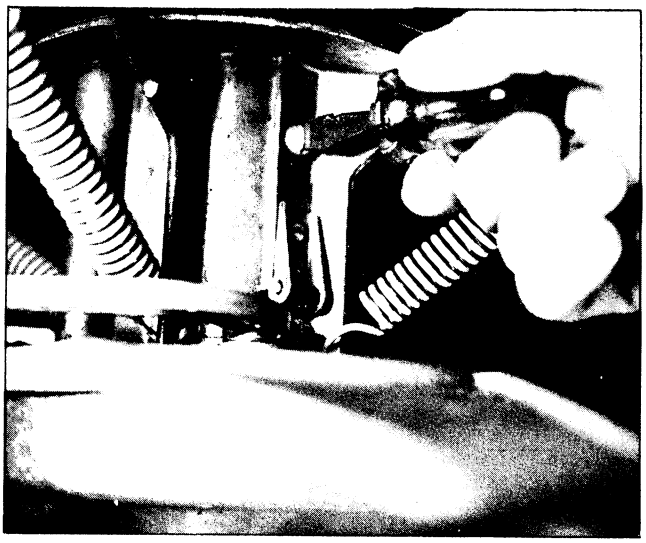


Figure 75 - Removing Stop-Bolt from Damper

Hold the tee-key with a pair of long nose pliers and raise it, along with collar, to the top of the slot in the spin tube. It can now be turned a quarter of a turn and then pulled straight out for removal, *Figure 76*.

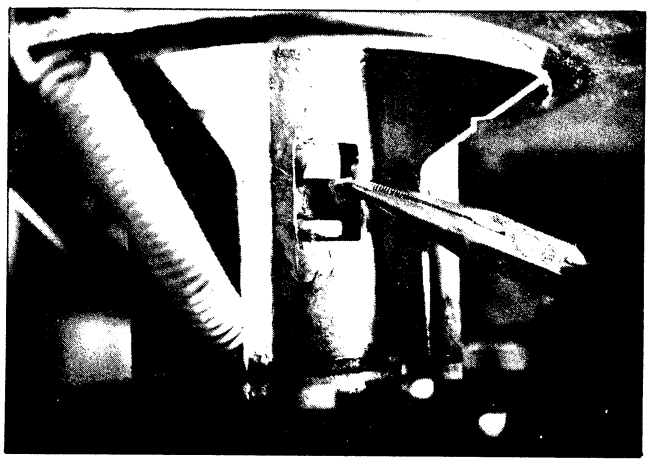


Figure 76 - Removing Tee-Key

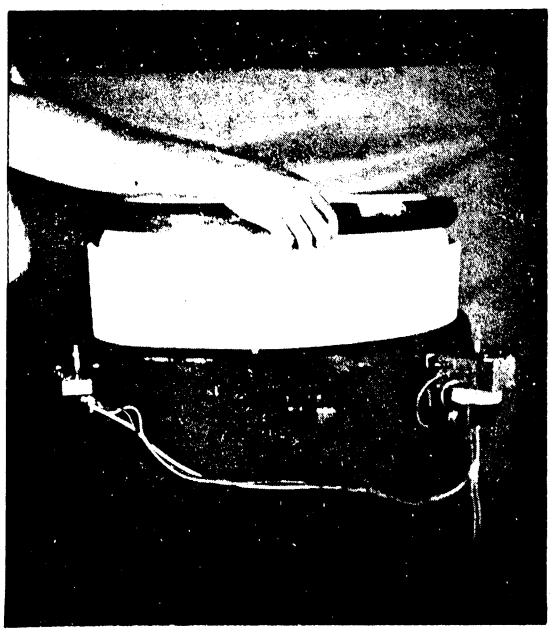


Figure 77 - Removing Spin Tub and Transmission

Grasp the spin tub and transmission assembly and lift it straight up and out of the collector tub, *Figure 77*. Set the spin tub upside down on a piece of cardboard or blanket to protect the finish.

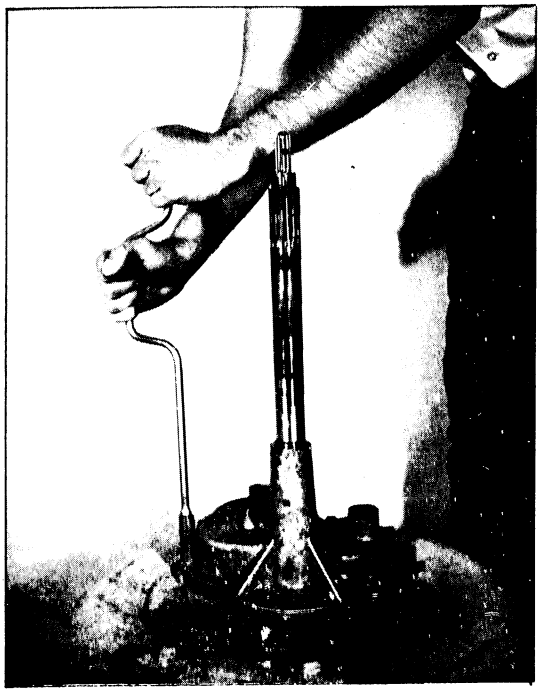


Figure 78 - Removing Transmission Bolts

The transmission may now be removed from the spin tub by removing the securing bolts, *Figure 78*. A sharp tap with a hammer on the bolt heads makes removal easier. Also note the length of the bolts to correctly reinstall them in the right holes, as there are two different lengths of bolts used. After the transmission housings have been parted, a method of holding the lower half should be devised, such as a hole in a wood box to accommodate the spin tube, thus allowing the easy access to the gears, *Figure 79*. Any time a transmission is opened, it should be thoroughly cleaned, inspected and any defective parts replaced.

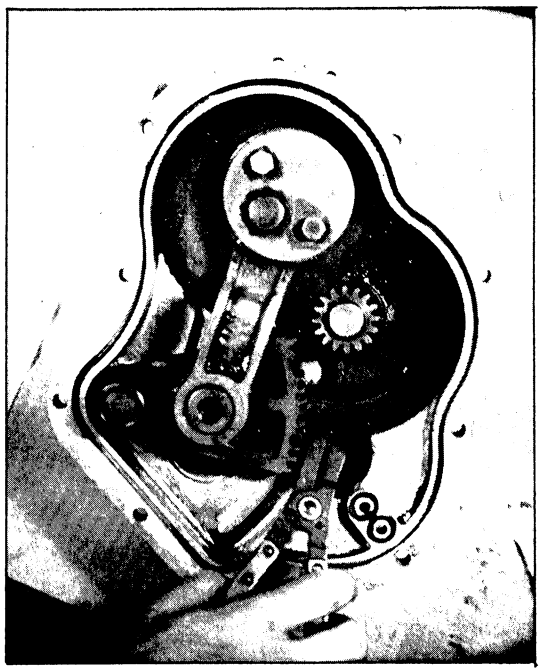


Figure 79 - Transmission Gears

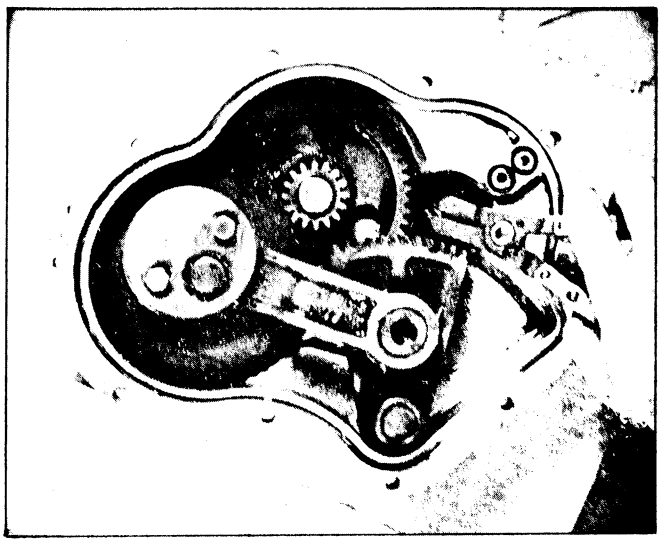


Figure 80 - Removing Truarc Ring from Center Shaft

Using a pair of Truarc pliers, as in *Figure 80*, remove the Truarc ring from the center shaft and lift

the pinion gear and washer off. Slide the center shaft out of the spin tube as in *Figure 81*.

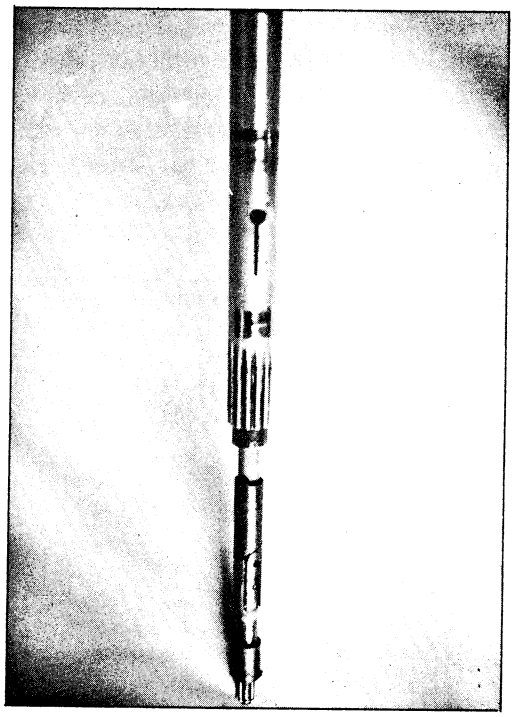


Figure 81 - Removing Center Shaft

This allows a careful inspection of the torque spring which should have a rough surface on the exterior. If the spring is smooth, it must be replaced. The spring can be removed from the center shaft by removing the pin and sliding the spring off of the shaft, *Figure 82*. The spring removed from the shaft in *Figure 83* shows a sharp edge on one end of the spring that the tee-key catches. This edge should be thoroughly inspected to be sure that it has not been chipped or has a piece of the spring missing. If there is the slightest doubt that the spring is good, it should be replaced.

There is an O-ring inside the spin tube six inches below from where the pinion gear was removed. This O-ring should always be replaced when servicing the transmission. It may be removed by forming a hook on the end of a piece of wire. This is used to reach down into the tube and pull the O-ring free.

A simple method of reinstalling this ring is to use the center shaft as a guide. Slide the shaft up the spin tube to the O-ring location. With the O-ring placed in the top of the spin tube, a dowel or similar tool is used to push the O-ring to the groove designed to hold it.

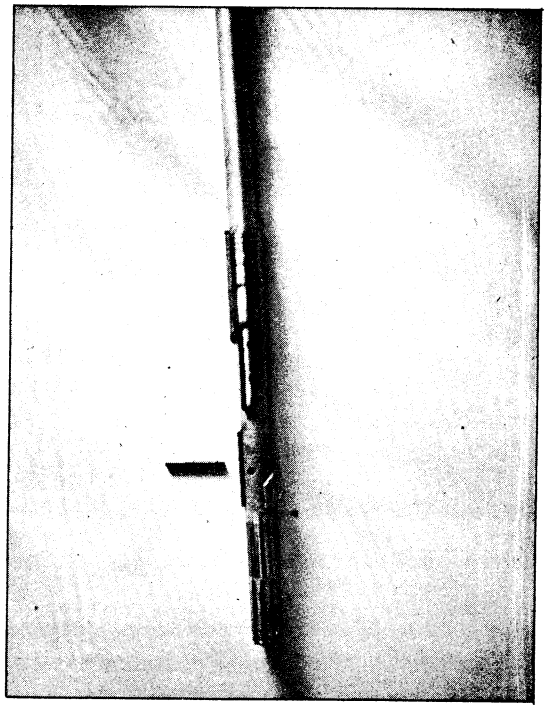


Figure 82 - Torque Spring Removal

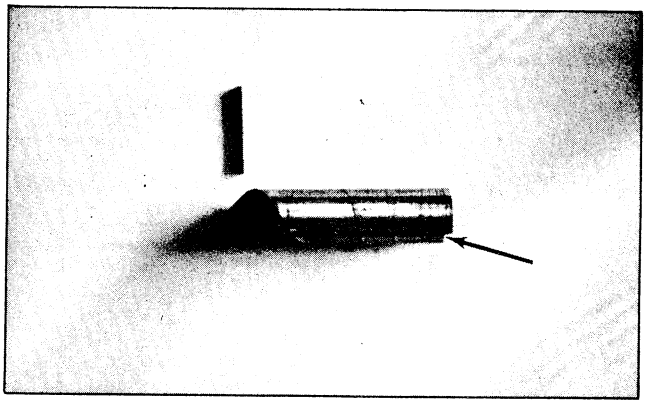


Figure 83 - Torque Spring

The agitator pinion gear, *Figure 84*, in the top half of the transmission, is removed by driving the pin free and lifting the gear off. From the inside of the tub, remove the retainer nut which permits the shaft and the agitator shaft seal to be removed. When reinstalling, be sure to use a new seal. *Figure 85* shows the agitator shaft, seal, gear and other parts that make up this assembly in the top half of the transmission.

When reassembling the transmission, coat the center shaft and torque spring with Part No. 56085-X

anti-rust grease. Replace the grease in the transmission with Part No. 56080-X 1 3/4 lb. (1 fill) power unit grease. Assemble all the parts and secure the two halves of the transmission together using a new gasket.

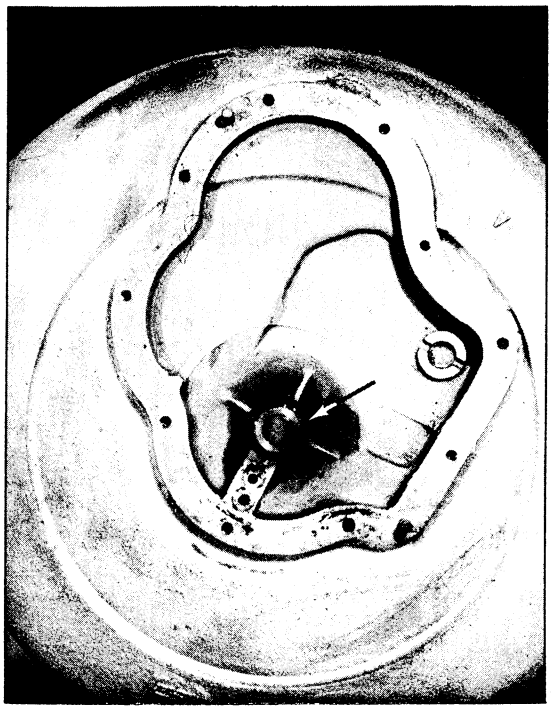


Figure 84 - Agitator Pinion Gear

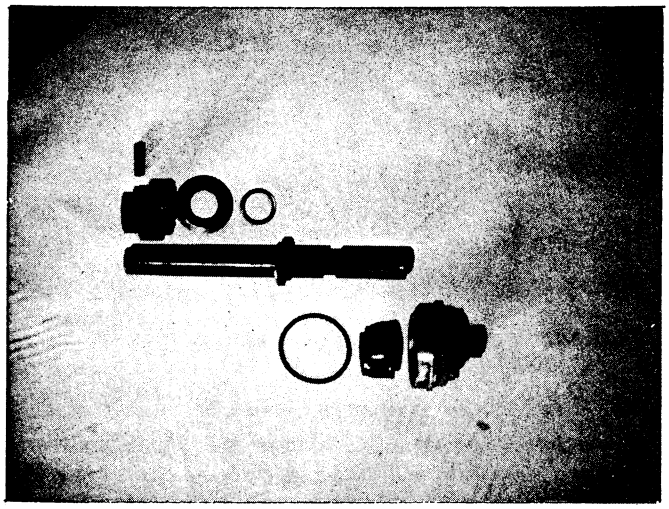


Figure 85 - Agitator Shaft, Seal and Gear Assembly

Before reinstalling the spin tub and transmission assembly, wipe the spin bushings in the damper assembly with a clean rag and turbine oil. This will not only clean the bearings but will also add lubricant to them. Install a *new* tub basin seal, *Figure 86*, and if the spring located in the seal is rusty or damaged, it should be replaced. Cement the new tub basin seal to the collector tub, using Maytag adhesive part No. 55978-X.

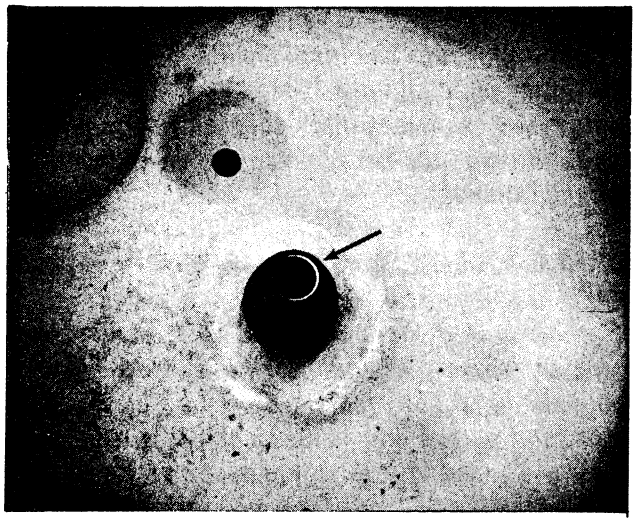


Figure 86 - Tub Basin Seal

Install a No. 2–1381 seal washer on the bottom section of the transmission. Slide the washer on the spin tube with the rubber side toward the transmission. The metal portion will now seat against the carbon face of the basin seal to form a more positive seal than the transmission face. Put a thin coat of anti-rust lubricant on the spin tube before installing the assembly in the machine.

There are two methods of installing the spin tub and transmission back into the machine. In either case, extreme care must be taken not to damage the tub basin seal. One method requires two men. With the machine in an upright position, lift the tub up and center the spin tube over the basin seal. Carefully lower it into the collector tub. If the spin tube enters the seal properly, the assembly will drop into the bearings in its correct position. Slowly turn the tub and it should bottom all the way down.

The other method of installing this assembly is done with the machine on its side and requires a special tool, Maytag Part No. 38717. The tool is inserted through the bushings and seal and inserted over the end of the center shaft. The entire assembly is then guided into its proper position.

After the transmission is installed, install a new tee-key in the damper assembly and install the collar stop-bolt. Lay the machine on its side and

install the lower center shaft bushing with the ears inserted into the notches in the center shaft. Install the steel thrust washer, the clutch assembly and the belt.

At this time the machine should be set upright, the inlet spout installed and the machine given a water check to insure the basin seal does not leak. Reinstall the cabinet and run the machine through a complete cycle.

BRAKE ASSEMBLY - AMP Models

The brake assembly consists of a brake support bracket, brake drum, brake shoes and linkage. Its purpose is to hold the tub from turning during the agitation period and to bring the tub to a smooth stop at the end of the spin period.

This assembly will rarely need servicing by itself but should always be inspected any time the transmission is removed for service. Sometimes the brake shoes may squeal when the tub stops at the end of the spin period. To correct this, lay the machine on its side and place a few drops of power unit oil through one of the holes in the brake drum. This will usually eliminate the noise.

In the event the brake assembly requires service, the spin tub and transmission must be removed. Detailed instructions for the transmission removal are given in the Transmission section of this manual.

NOTE: ***This applies only to the early production models where the bottom cross member is riveted to the base frame. In later production, the cross member is removable to gain access to these lower components, thereby eliminating the necessity to remove the transmission and collector tub.***

Detailed instructions for the removal of the cross member are given under Radial Bearing in this section.

After the spin tub and transmission assembly is removed, remove the four bolts securing the collector tub to the base frame. Disconnect the wire leads to the brake solenoid and remove the two cotter pins from the stabilizer links connected to the brake support bracket, *Figure 87*. Swing the stabilizer links out of the way, and the collector tub, damper and brake assembly can now be lifted from the base.

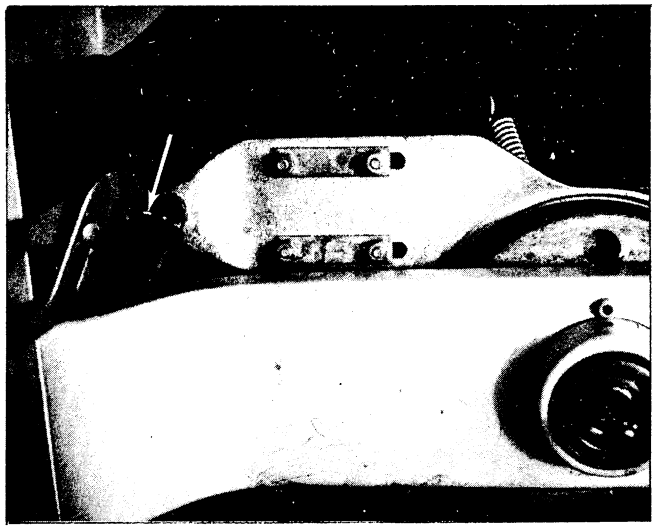


Figure 87 - Removing Cotter Pins from Stabilizer Links

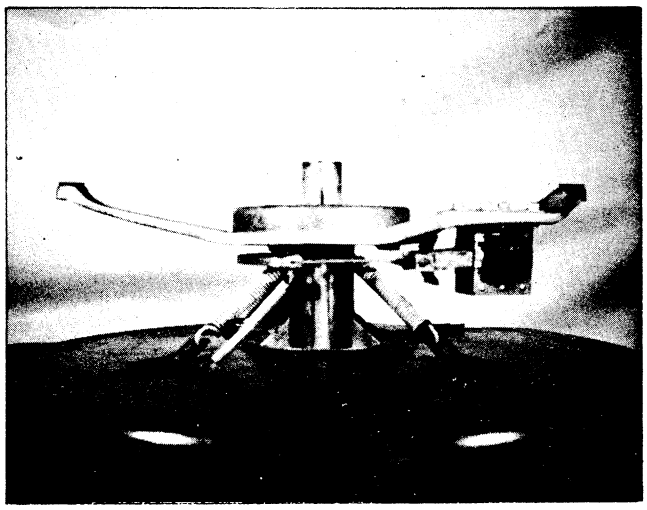


Figure 88 - Collector Tub Inverted Showing Brake Assembly

Invert the tub as shown in *Figure 88* to gain access to the brake assembly. Close the brake solenoid manually and lift the brake drum from the assembly. Next remove the two bolts securing the brake support bracket to the damper, *Figure 89*. The brake support bracket, brake shoes, and solenoid can now be removed.

Clean all the parts thoroughly and inspect for any wear or damage. The brake shoes can be reversed or turned over to lengthen their life. Care must be taken to reinstall the linkage correctly or the brakes

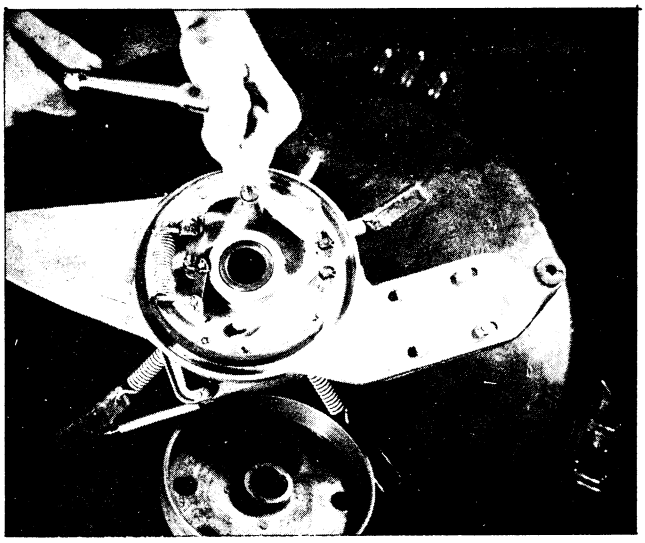


Figure 89 - Removing Brake Support Bracket

will not operate properly. Apply a thin coat of Molykote (Maytag Part No. 55976-X) to the brake shoes and the braking surface of the brake drum before assembling. If Molykote is not available, mix powdered graphite with Lubriplate grease and apply this.

DAMPER ASSEMBLY - AMP Models

The damper assembly, *Figure 90,* is an important component of the Maytag Automatic Washer since it incorporates the snubber or damper pads, the spin tube bushings and the sliding collar that holds the tee-key.

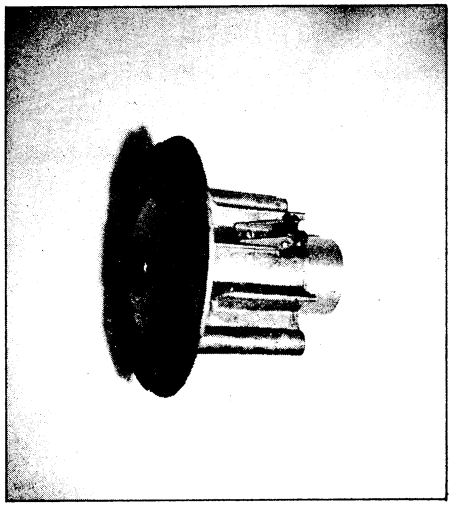


Figure 90 - Damper Assembly

Access to the damper assembly is gained by removing the spin tub and transmission assembly, removing the collector tub and the brake assembly. Detailed instructions for removing these assemblies are given under Transmission and Brake Assembly in this manual. *Figure 91* shows the damper assembly mounted to the collector tub after all the other components have been removed.

NOTE: *This applies only to the early production models where the bottom cross member is riveted to the base frame. In later production, the cross member is removable to gain access to these lower components, thereby eliminating the necessity to remove the transmission and collector tub.*

Detailed instructions for the removal of the cross member are given under Radial Bearing in this section.

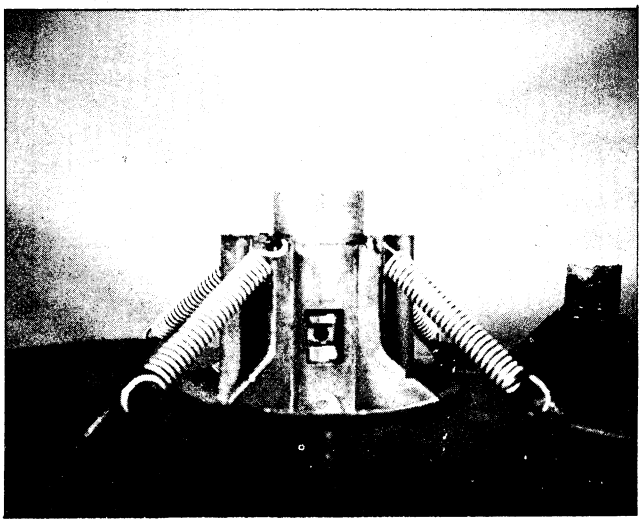


Figure 91 - Damper Assembly and Retaining Springs

Before removing the damper assembly from the collector tub, mark its position, as it must be replaced in this same position. The four springs holding it to the collector tub are interchangeable. Before reinstalling the assembly, brush a coat of Molykote on the damper pads.

The cork damper pads are the only part of this assembly that are field serviceable. A kit containing new pads and adhesive for bonding them to the housing is available from Maytag. The purpose of this portion of the assembly is to dampen the oscillation of the spin tub during the spin period without transmitting noise or vibration to the cabinet.

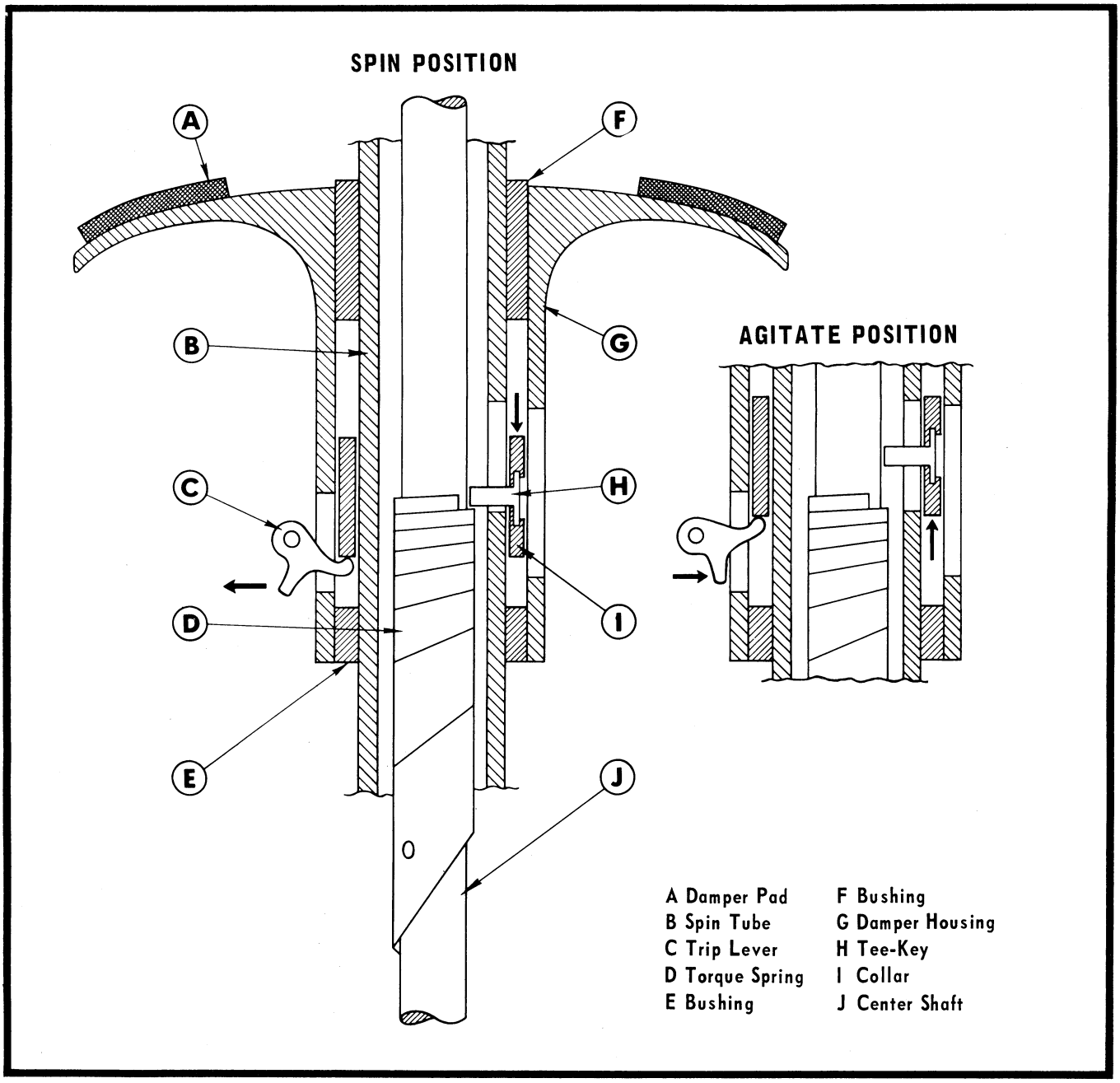


Figure 92 - Operation of Tee-Key and Torque Spring

The two spin tube bushings in the assembly are not field serviceable. These bushings are pressed in and then line reamed, making it impractical to service them. If the bushings are worn or scored, the entire damper assembly should be replaced.

The sliding collar placed between the two bushings holds the tee-key and moves up or down to engage or disengage the tee-key with the torque spring.

To better understand the operation of this portion of the mechanism, please refer to *Figure 92*. The center shaft (J) turns in a clockwise direction looking at the pulley end of the shaft. When the brake solenoid is energized, it releases the brake shoes from the brake drum and simultaneously releases the trip lever (C). This allows the collar (I) to drop down until the tee-key (H) engages the end of the torque spring (D). Since one end of the torque spring is pinned to the center shaft, the shaft cannot turn inside the spring while the tee-key is holding the other end of the spring from turning. This causes the spring to start unwinding and as it does, the outer diameter increases in size until it engages

the wall of the spin tube (3). Now the center shaft, torque spring and spin tube are locked together as a unit and start turning together, thus transmitting this action to the clothes basket and results in the spin action. The spin tube has a slot which enables the tee-key to move up or down. At the top of the slot is a hole which allows the tee-key to be turned for removal or installation, *Figure 93*.

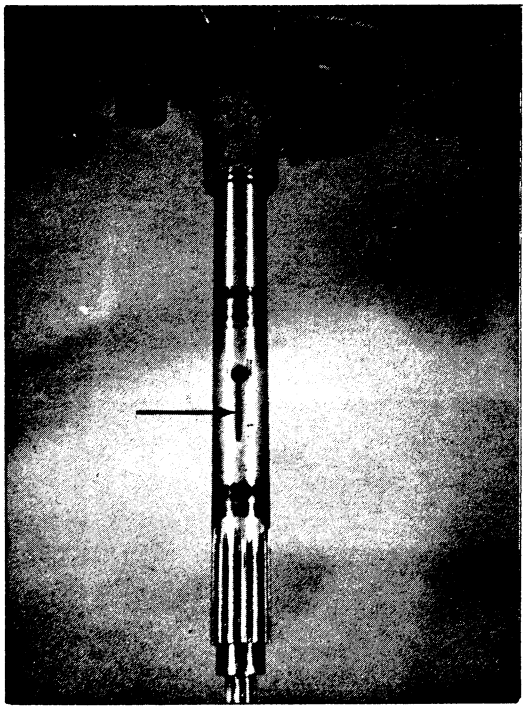


Figure 93 - Spin Tube showing Tee-Key Slot

When the solenoid is deenergized, the trip lever raises the collar and disengages the tee-key from the end of the torque spring. The torque spring returns to its natural form and releases the spin tube, allowing the center shaft and spring to turn independently from the spin tube. Simultaneously, the brake shoes engage the brake drum and the spin tub is brought to a smooth stop.

RADIAL BEARING - AMP Models

On the AMP style washers, the spin or radial bearing is a rubber mounted ball bearing located in the cross member at the bottom of the base frame. This bearing can actually be called a part of the suspension system since it helps center the spin tube and also helps prevent unwanted noise and vibration from being transmitted to the cabinet.

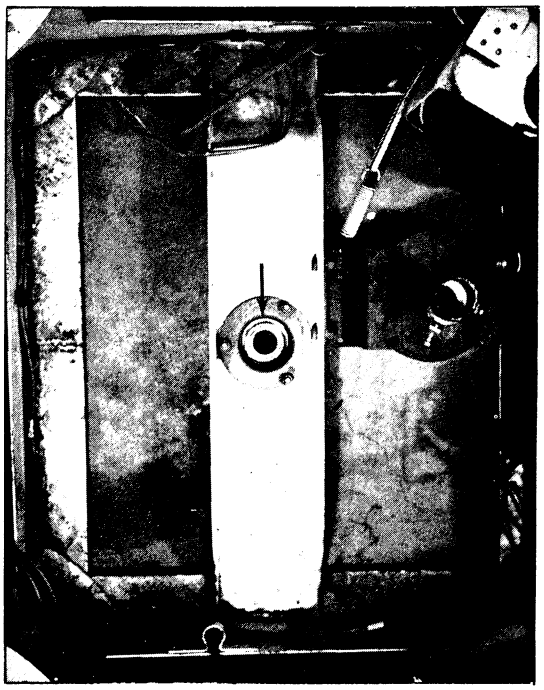


Figure 94 - Radial Bearing Located in Cross Member

On the early production models, this bearing is accessible only by removing the transmission assembly and the outer tub from the base frame since the cross member is riveted in place. *Figure 94* shows the location of the radial bearing in the cross member after the necessary components have been removed.

Figure 95 - Replacing Radial Bearing

Remove the three Allen head bolts from the underneath of the cross member and remove the bearing retainer from the top. The bearing can now be removed, *Figure 95*. Hold the inner bearing race in one hand and turn the outer race with the other hand. If the bearing feels rough, it must be replaced. Do not wash the bearing in solvent as it is sealed and lubricant cannot be added to it.

On later production machines, the cross member is removable so that the radial bearing, brake assembly and damper can be serviced.

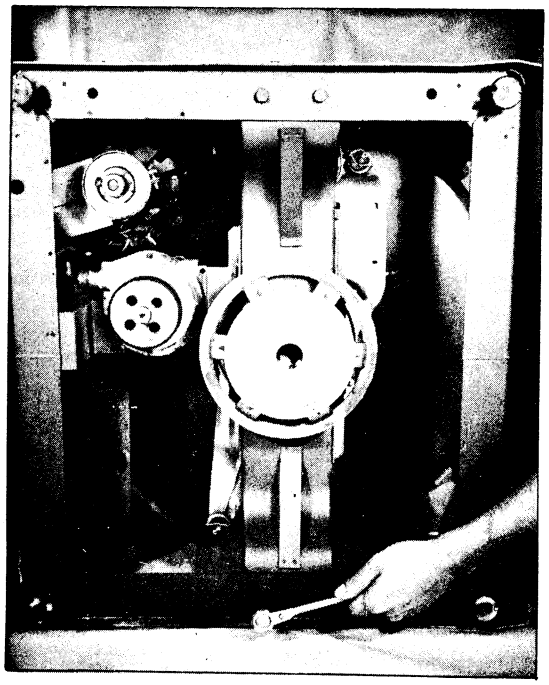


Figure 96 - Removing Cross Member Bolts

To remove the cross member, remove the four bolts shown in *Figure 96*. Next remove the belt, clutch, and pump and turn the cross member diagonally, *Figure 97*. The cross member can now be removed for service to any of the lower components.

When replacing the radial bearing, DO NOT TIGHTEN THE HEX HEAD RETAINING BOLTS TIGHT. Tighten the bolts evenly until there is a 3/32" space between the bearing retainer and the cross member. Also, always replace the rubber mount when replacing the bearing.

If the spin tub is not centered and repeatedly hits the off balance button, the radial bearing may be at fault. This condition usually can be removed by

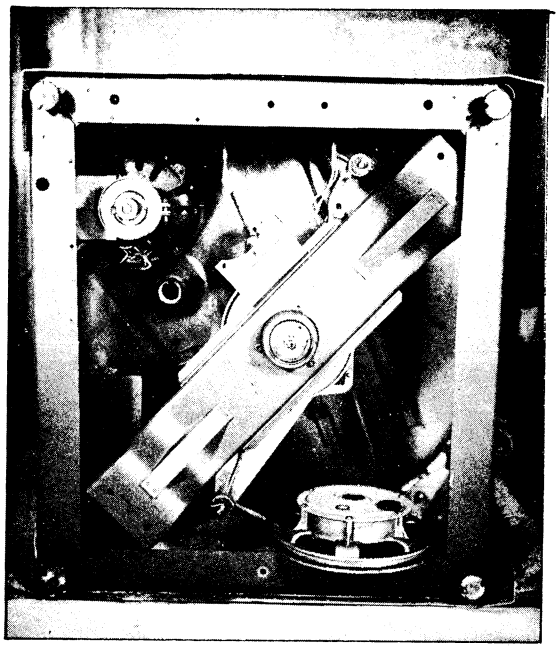


Figure 97 - Removing Cross Member

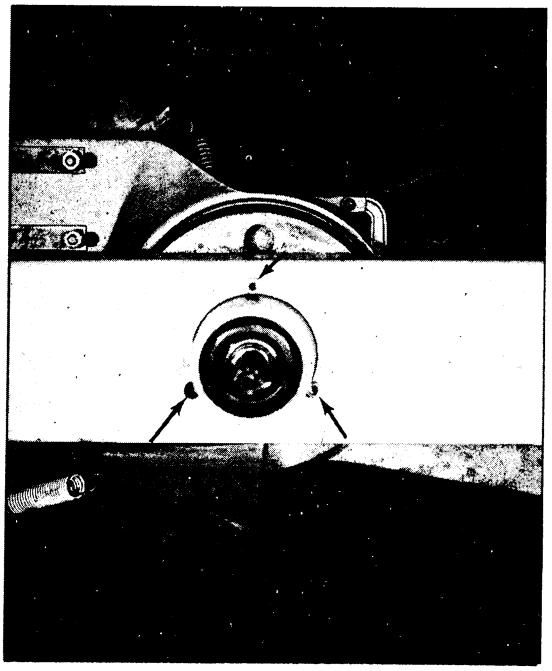


Figure 98 - Radial Bearing Retaining Bolts

removing the clutch and loosening all three retaining bolts, *Figure 98*. Now replace the clutch and allow the machine to go through the spin period. Tighten the three retaining bolts evenly until there is a 3/32" space between the bearing retainer and the cross member. Generally, this will correct this problem. In more extreme cases, it may be necessary to remove the cross brace and inspect the bearing carefully. Lubricate the rubber mounting

on reassembly and continue with the adjustment procedure described above. If the condition is caused by a bent or damaged cross member, the cross member must be replaced.

■ MECHANICAL - HELICAL DRIVE MODELS ■

As its name implies, the helical drive automatic washer uses a helix to supply the proper action for the wash and spin periods. This type of drive system uses a reversible motor turning in one direction for the agitation and reversing for the spin action. For a detailed explanation of how the helical drive mechanism operates, please refer to *Figure 99.*

The center shaft helix (L) and the drive pulley (I) operate in the same manner as a nut and bolt. That is, as a nut is turned in one direction it will run up on the threads of the bolt and turned in the other direction, it will run back down the threads and come off. In this case, however, the drive pulley does not come off the helix because there is a stop

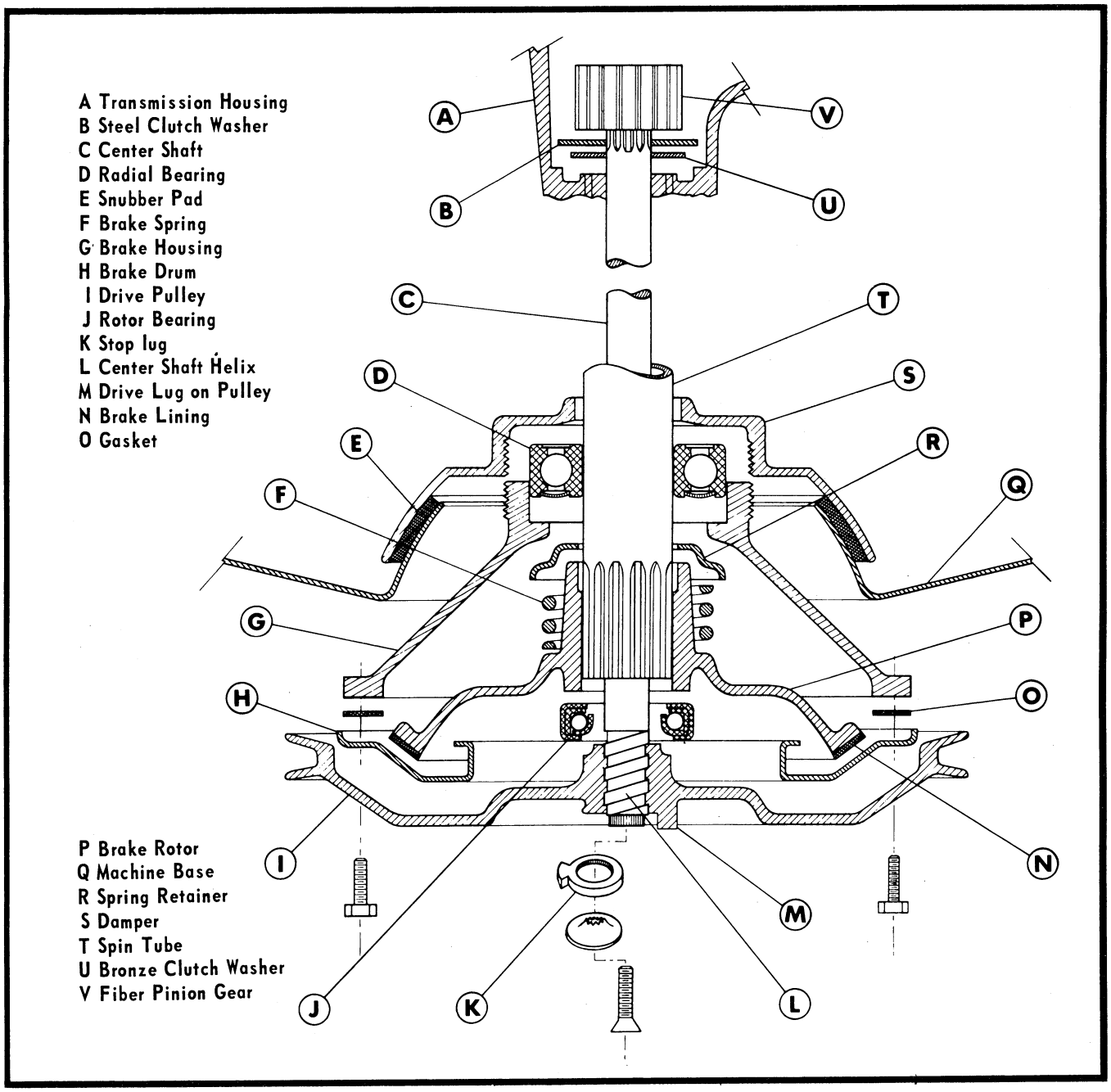


Figure 99 - Helical Drive Components

lug attached to the bottom of the center shaft to prevent this. The stop lug also drives the center shaft during the agitation period.

In the agitation period, the motor turns the drive pulley (I) in a counterclockwise direction. The drive pulley runs down the center shaft helix (L). As this happens, the pulley drive lug (M) contacts the stop lug (K) on the center shaft. The pulley now turns the center shaft (C) which in turn drives the gears in the transmission to create the wash action. Since the drive pulley has turned down the helix, the brake spring (F) exerts pressure downward on the brake rotor (P). This holds the brake lining (N) against the brake drum (H), preventing the tub from spinning during the agitation period.

When the motor reverses its direction for the spin period, it now reverses the direction of the drive pulley. The drive pulley now climbs up the helix and pushes the rotor bearing (J) against the brake rotor (P). The brake rotor overcomes the downward pressure of the brake spring and thereby raises the brake lining from the brake drum so that the tub is free to turn.

Now the center shaft is pulled downward, pulling the fiber pinion gear (V) into contact with the clutch washers (B) and (U). The phosphor-bronze clutch washer (U) is splined to the center shaft and the steel clutch washer (B) locks into the transmission housing. As the fiber gear is pulled downward against these two washers, they lock the transmission, center shaft, spin tube and pulley together as one unit. This entire unit can now rotate as it is being turned with the drive pulley and the spin action now takes place.

At the end of the spin period, the motor stops and the drive pulley, no longer being driven, now turns back down the helix by the force of the brake spring. This allows the brake rotor to move downward and engage the brake lining with the brake drum, thus braking the tub to a stop.

CLUTCH AND BRAKE - Helical Drive Models

The clutch and brake assembly has no similarity to the AMP series washers since it depends on a reversing type motor and a helical or spiral shaft and a stop lug to properly function. The brake and clutch assembly consists of several components. Each component has its own function, but must assist other components if this brake package is to work properly.

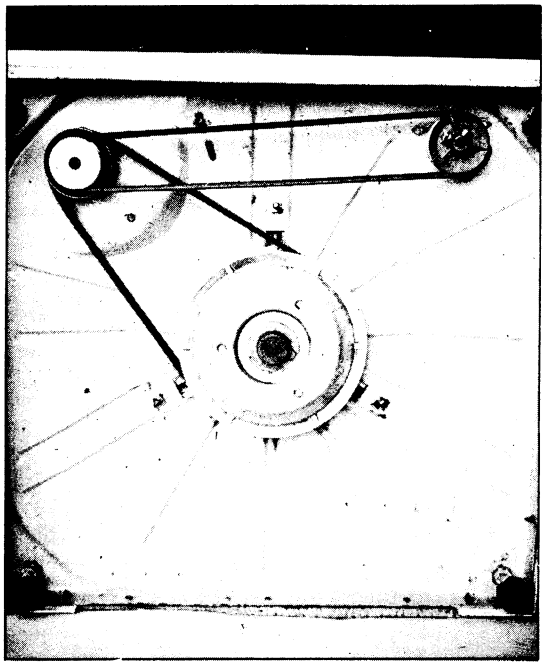


Figure 100

The clutch brake package can be serviced by laying the washer on its side, ***Figure 100 (bottom view)***. Any time the washer is to be laid over on its side, steps should be taken to protect the exterior finish. With the machine on its side, the drive pulley or brake may be removed or adjusted. To remove the pulley, remove the belts and rubber oil cap, ***Figure 100***. Remove the Phillips screw through the center of the stop lug and lift off the stop lug. Turning the drive pulley counterclockwise will remove the pulley. Now remove the front or back panel, depending on the model and loosen the Allen screw in the damper assembly, ***Figure 101***. With a special tool, No. 38315, remove the brake assembly, ***Figure 102***. The brake is removed by turning it counterclockwise and reinstalled clockwise.

CAUTION: ***Do not remove the screws from the brake package without taking precautionary measures to release the 200 pound spring pressure gradually.***

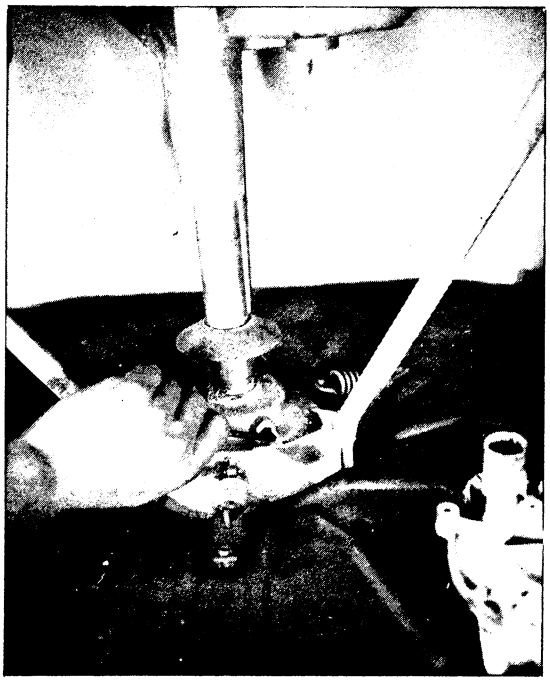


Figure 101 - Removing Allen Screw from Damper

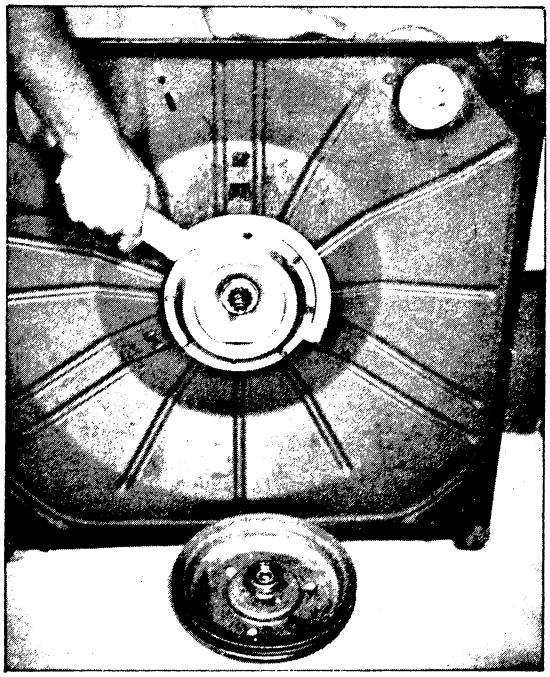


Figure 102 - Removing Brake Package

Figure 103 shows a large bolt and washer used to hold the assembly together while the screws are removed. A press or vise may also be used instead of the bolt. After cleaning and replacing any necessary parts in the brake, the brake package may be reinstalled to the damper assembly. To avoid cross threading, screw the assembly in by hand as far as it will go. Then secure it tightly using the No. 38315 tool and be sure to replace and tighten the Allen screw in the damper assembly. Replace the drive pulley and adjust the stop lug.

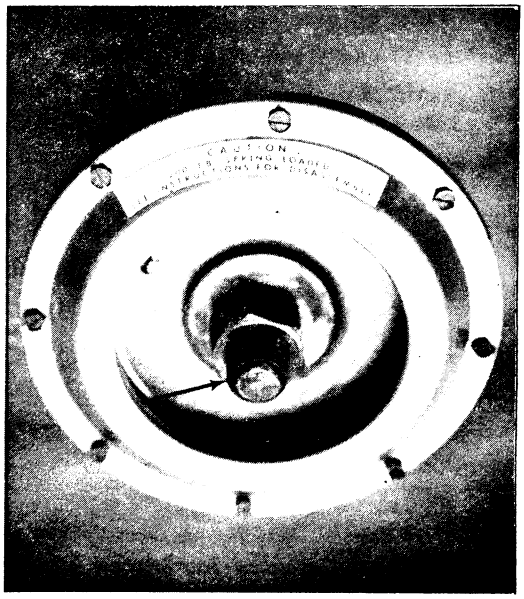


Figure 103 - Special Bolt to Disassemble Brake Package

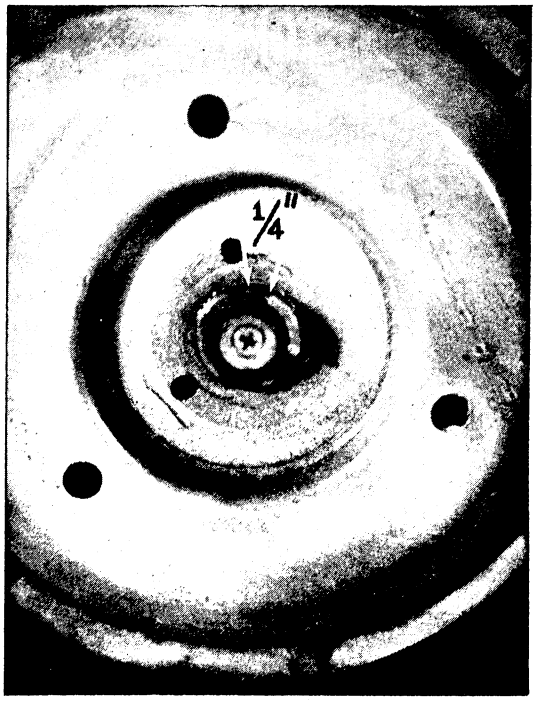


Figure 104 - Adjustment of Stop Lug

The drive pulley is turned onto the center shaft helix just enough to remove the end play or at the point where the rotor bearing just contacts the rotor. Now the stop lug is placed on the splined portion

of the shaft with 1/4" clearance between the stop lug and the drive lug of the pulley, *Figure 104*. When the drive pulley is turned on to the helical of the agitation shaft, do not go past the point where the play is taken up or the adjustment will be incorrect. This adjustment is the only adjustment that is made on the clutch-brake package. If a malfunction is present in the wash cycle, the trouble could be either in the brake package, radial bearing, tub bearing and seal assembly, or the transmission.

TRANSMISSION - Helical Drive Models

The gears in the helical drive transmission are interchangeable with those used in the AMP transmission. The transmission housings themselves are different, however.

Although it is not necessary to remove the washer cabinet in order to remove the transmission, it is usually the best method. Before removing the cabinet, disconnect all wires connected to the motor, water valve and diverter valve. It is not necessary to remove the cabinet top from the cabinet, but instead, remove the two pieces together.

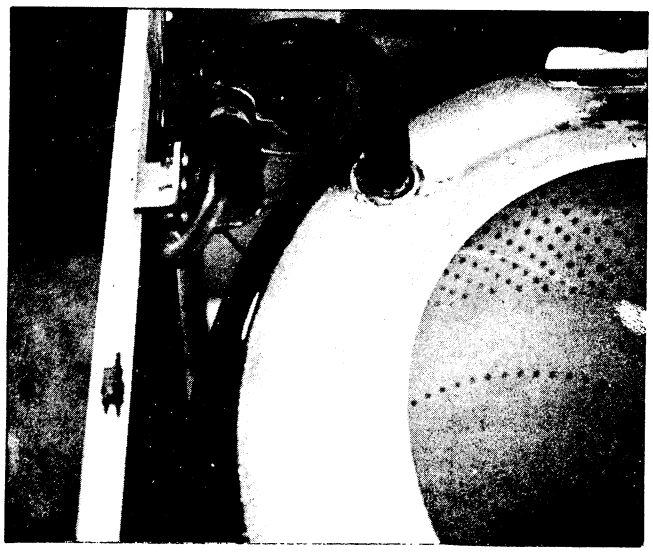


Figure 105 - Injector hose and Injector Funnel

After the cabinet has been removed, remove the injector hose from the injector funnel, *Figure 105*. Loosen the tub cover clamp ring and remove the tub cover. Remove the agitator and remove the tub locking nut with the special spanner wrench,

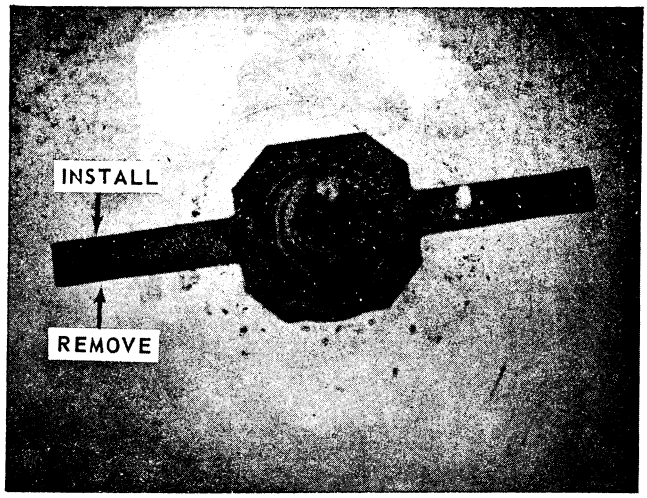


Figure 106 - Removing Tub Locking Nut with Special Wrench

No. 38313, shown in *Figure 106*. The tub can now be lifted out.

After removing the spin tub, remove the Allen set screw in the mounting stem, *Figure 107*. Remove the mounting stem with the same spanner wrench used to remove the spin tub locking nut, *Figure 108*. The mounting stem has a left hand thread and must be turned clockwise for removal.

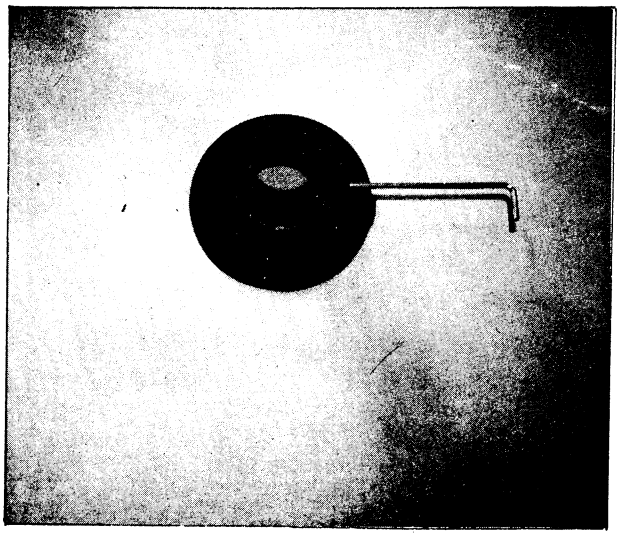


Figure 107 - Mounting Stem and Allen Screw

Now, remove the tub-to-pump hose from the collector tub. Remove the three sealing bolts securing the collector tub to the support braces, *Figure 109*. Be sure to carefully note the position of the various washers when removing them. They must be replaced in the same order or a leak will occur.

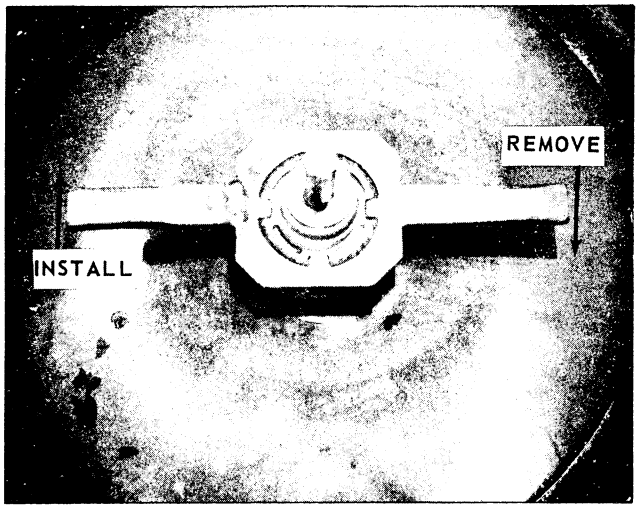


Figure 108 - Removing Mounting Stem

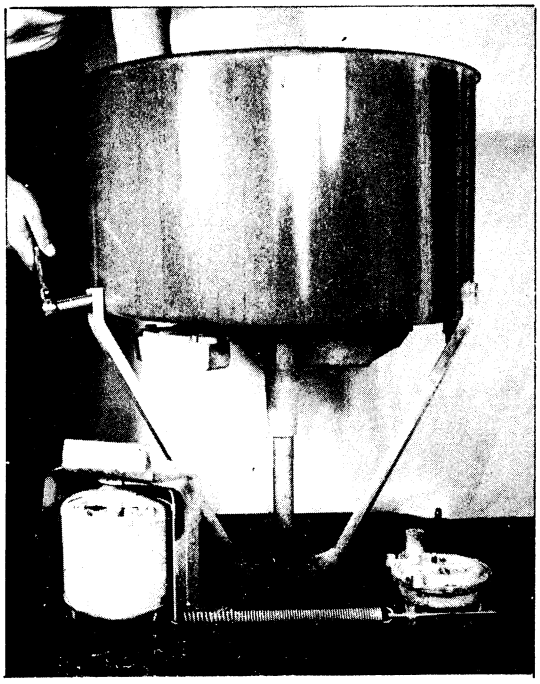


Figure 109 - Removing Collector Tub from Support Braces

After the sealing bolts are removed, the collector tub can then be lifted free of the support braces, *Figure 110.*

Tilt the machine base up and remove the Phillips screw holding the stop lug to the center shaft. Remove the stop lug and turn the pulley off the shaft. The entire transmission can now be lifted out of the brake and damper assembly. A means of supporting the gear case while working on it should be devised. This can be a hole in a wooden box or

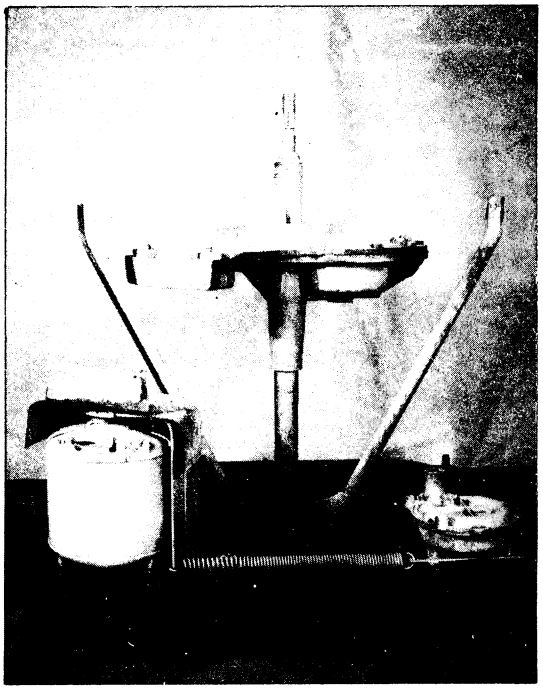


Figure 110 - Collector Tub Removed from Base

in the top of a work bench that the spin tube can be placed into.

Separate the two halves of the transmission and dispose of the grease in a suitable container. The only difference in the gears between the helical drive and the AMP transmission is the method used to secure the fiber pinion gear to the center shaft. The AMP models use a Truarc ring to secure this gear, while on the helical drive models, it is secured with a screw and a locking pin to prevent the screw from loosening, *Figure 111.*

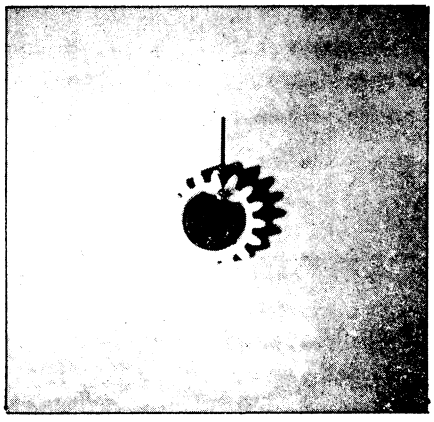


Figure 111 - Pinion Gear Locking Pin

There are two methods of removing the fiber or nylon gear. On the early helical drive transmis-

sion, the locking pin on the gear must be driven down into the gear to allow the securing screw to be removed. This is necessary because there is no way to get hold of the pin to remove it. In later production, the securing screw was changed, which now permits access to the locking pin. This locking pin may be pulled free with the use of a pair of diagonal pliers.

When removing the nylon gear from the helical shaft, be sure to note the location of the clutch washers under the gear. The phosphor-bronze clutch washer goes on first, followed by the steel clutch washer, then the gear, locking screw and pin.

NOTE: *The steel clutch washer has two ears that lock into notches in the transmission housing. After assembling the transmission, do not turn it upside down or the steel washer will slip out of place.*

After the transmission is disassembled, thoroughly clean and inspect all parts. Replace any that are defective. Always install a new O-ring seal in the spin tube. This seal is located in a groove approximately six inches from the top and inside the spin tube. Make a hook on the end of a piece of wire and hook the O-ring to remove it. When installing a new O-ring, make sure it is properly seated in its correct position.

Put a thin coat of Part No. 56085-X anti-rust grease on the center shaft and install it, the pinion gear and clutch washers in the lower transmission housing. Install all transmission gears and replace the transmission grease with Part No. 56080-X, 1 3/4 pound (1 fill) power unit grease. Use a new gasket and assemble the two halves of the transmission together.

SUSPENSION SYSTEM - Helical Drive Models

The suspension system consists of the damper pads, damper and three centering springs that hold the damper against the damper pads. The damper and damper pads are used to dampen the tub oscillation during the spin period. The centering springs center the tub in its proper position and also are used to adjust the unbalance kick-off position.

While the transmission is removed is the proper time to inspect or repair the damper assembly. After the transmission is removed, loosen the Allen screw in the damper assembly and remove the brake package with the special wrench described under Brake and Clutch in this section. Now, remove the centering springs and lift the damper assembly off the machine base, *Figure 112*.

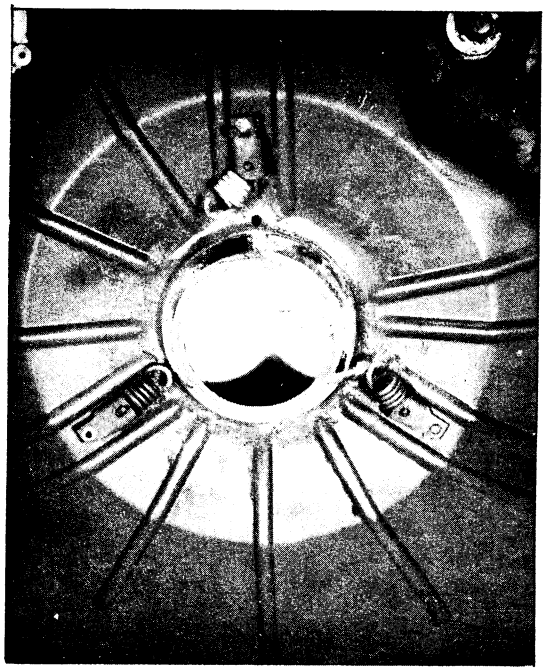


Figure 112 - Machine Base with Damper Removed

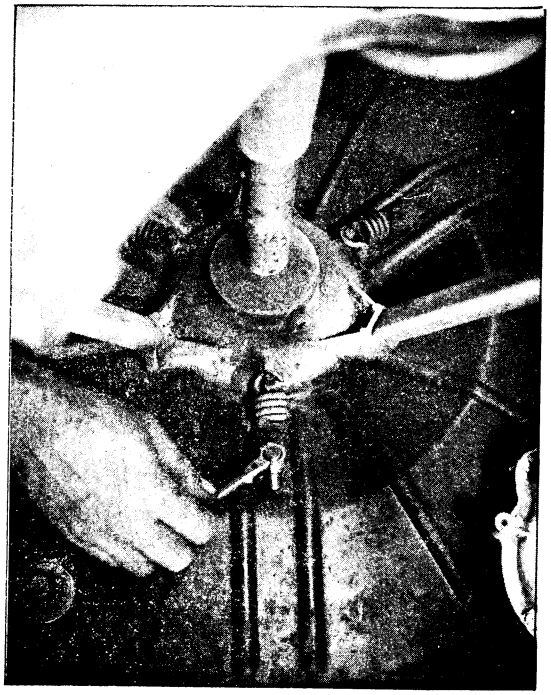


Figure 113 - Adjusting Early Style Centering Springs

The damper pads can be purchased separately and cemented on the base if they need replacing. Clean the base thoroughly and cement the new pads in position with Maytag Part No. 55978–X cement. *After* the pads are cemented in place, saturate them with power unit grease and apply a coat of Molykote to them.

Two styles of centering springs are used. The early style Highlander models have the springs hooked to projections on the damper and on the other end, a bracket with an adjusting screw that screws into the washer base, *Figure 113.*

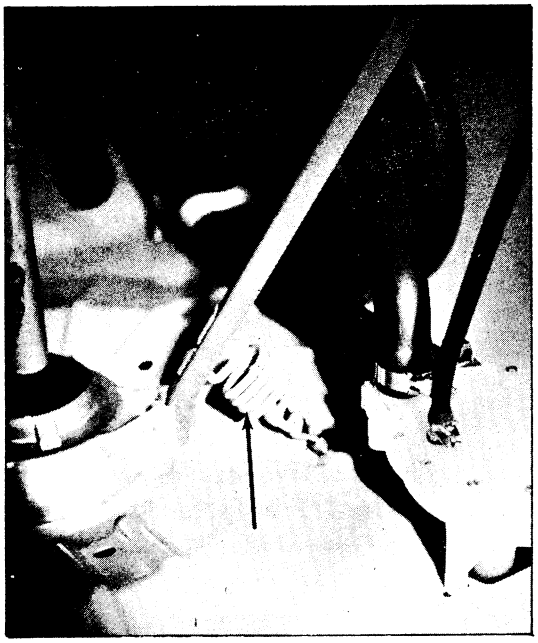


Figure 114 - Late Style Centering Springs

The later style centering springs are hooked onto the support braces, *Figure 114.* This raises the end of the spring up to a higher position from the damper assembly, giving a more stable operation. The new springs also have an eye bolt that goes through the washer base with an adjusting nut that has two hex heads. These nuts are adjustable from either the top or the bottom of the washer base, making it unnecessary to remove any panels for a minor adjustment. *Figure 115* shows this new style spring removed from the washer.

The centering springs are adjusted to both center the tub and to properly adjust the off-balance mechanism. Before adjusting the springs, level the washer with the machine setting as close to the floor as possible and the lock nuts tightened se-

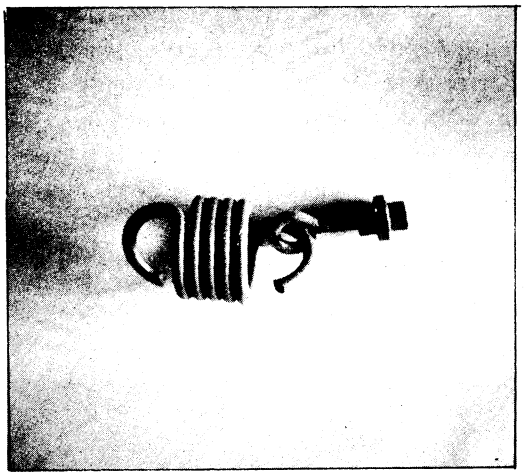


Figure 115 - New Style Centering Spring

curely. On the early style machines, adjust the adjusting screws until there is a clearance of 3/16 inch between the back edge of the bracket and the washer base.

On the later style washers, if the springs have not been removed, start the adjustment from the position where the adjusting nuts are found. If the springs have been removed, install the adjusting nuts to the point where the eye bolt just starts through the opposite end of the nut.

Put a normal load of clothes in the machine, fill with water and start the agitation period. After four or five minutes, stop the machine and check the tub. It should be centered in the opening of the cabinet top. If it is not, tighten the spring adjusting bolts on one or two springs on the side the tub is leaning from. Now restart the agitation action and again check the tub centering.

NOTE: ***Always tighten rather than loosen the adjusting bolts whenever possible.***

The next adjustment to be made is the off-balance adjustment. For this adjustment a 4 1/2 and a 5 pound weight are required. Place the 4 1/2 pound weight in the tub and start the spin action. The off-balance mechanism should not be actuated with the 4 1/2 pound weight. Since the position of the segment gear in the transmission will have something to do with the balancing, the weight should be placed in three or four different positions around the tub when making this test. Usually this is done by placing the weight at each agitator rib.

Now remove the 4 1/2 pound weight and place the 5 pound weight in the tub. Again, start the spinning action and the off-balance mechanism should actuate with this weight. If it does not, slightly loosen all three centering spring adjustments evenly and test the machine again. After this adjustment has been completed, check the tub centering again to make certain this adjustment has not been changed.

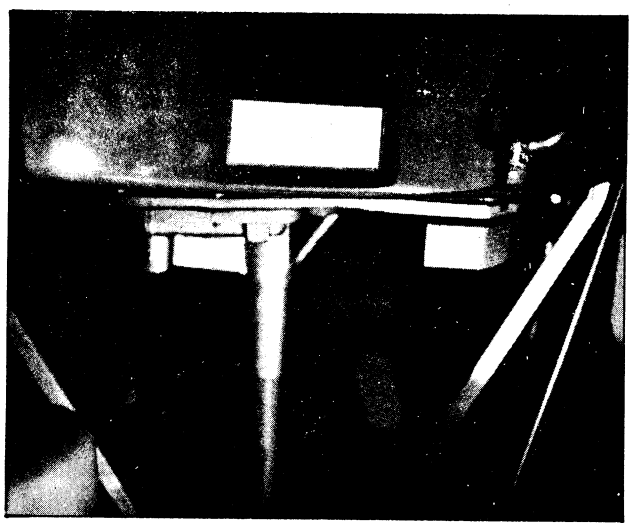


Figure 116 - Caution Label

CAUTION: *Do not adjust the centering springs while the tub is spinning. Severe injury can result if struck by the spinning power unit. Figure 116 shows the caution label warning against this practice.*

TUB BEARING - Helical Drive Models

The tub bearing consists of two parts: a rubber mounted bronze bushing pressed into the collector tub and an inner metal sleeve that fits on the stem of the center plate or top transmission housing. This bearing is very important as any binding can prevent the tub from coming up to its proper speed. It should always be carefully checked anytime the collector tub is removed.

The metal sleeve can be removed by merely lifting it off the center plate stem. To remove the bearing from the collector tub, place the tub in an upright position on two 2 x 4's. Place your foot on the bearing and carefully use your body weight to push the bearing out of the tub.

Carefully inspect the bearing and sleeve for any signs of scoring or abnormal wear. Insert the sleeve in the bearing and make certain it turns smoothly in the bearing. In handling the bearing and sleeve, always be sure to keep them clean. Any dirt can badly damage the bearing.

Figure 117

Roll back a portion of the rubber lip on the bearing as shown in *Figure 117* and saturate the felt wick with turbine oil, *Figure 118*.

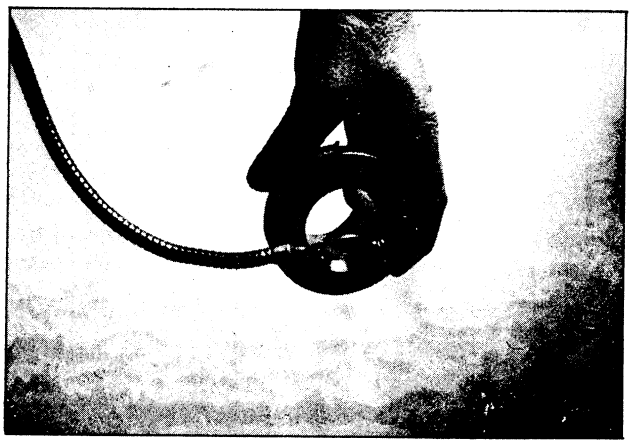


Figure 118 - Lubricating Felt Wick

Invert the collector tub and apply a thin coat of grease to the inside of the hole where the bearing is to be inserted. Place the bearing in the hole, *Figure 119*, being careful to start the bearing straight. If it is started in the hole crooked, it

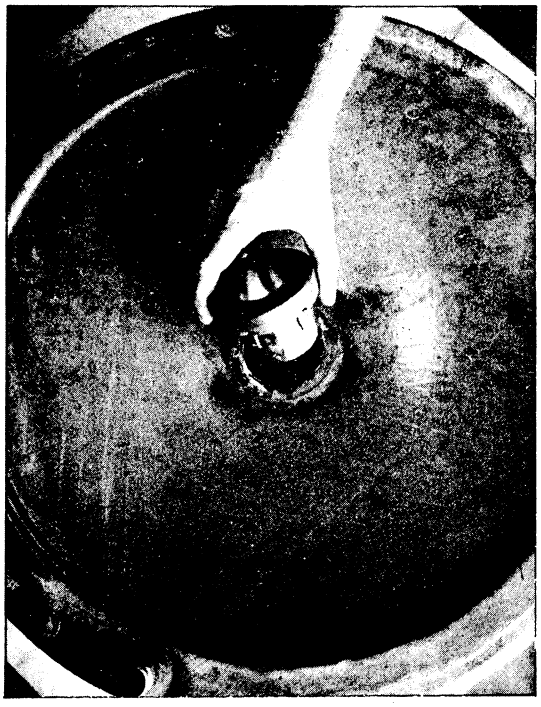


Figure 119 - Replacing Tub Bearing

may be forced out-of-round when pressing it into the tub. Place the foot on the bearing and carefully use body weight to press in the bearing, *Figure 120.*

Figure 120 - Pressing Tub Bearing into Collector Tub

The metal sleeve may be placed on the center plate stem before setting the collector tub in position. Care must be taken when setting the tub and bearing over the sleeve that the bearing is not scratched. The sleeve may be inserted into the bearing after the collector tub is set in position, *Figure 121.* Before assembling these units, use a clean rag to coat the exterior of the metal sleeve and the interior of the bearing with turbine oil. Do not use grease on these parts.

Figure 121 - Inserting Metal Sleeve

When setting the collector tub in position, make sure the drain outlet on the tub is in proper relationship to the pump so that the tub to pump hose can be installed. Assemble the support braces to the collector tub, installing the sealing bolts in the following order: Insert the bolt from inside the tub making sure the rubber seal under the bolt head is in good condition. Install the lead washer on the outside of the tub between the tub and support brace. Place the rectangular washer on the outside of the support brace and then the lockwasher and nut. Tighten the nuts securely.

BOOT SEAL - Helical Drive Models

The boot seal, *Figure 122,* should always be replaced with a new one when it is leaking or when general service is performed on the washer. When removing or replacing the seal, grip the seal in the center and turn in a counterclockwise direction, pulling up to remove and pushing down to install.

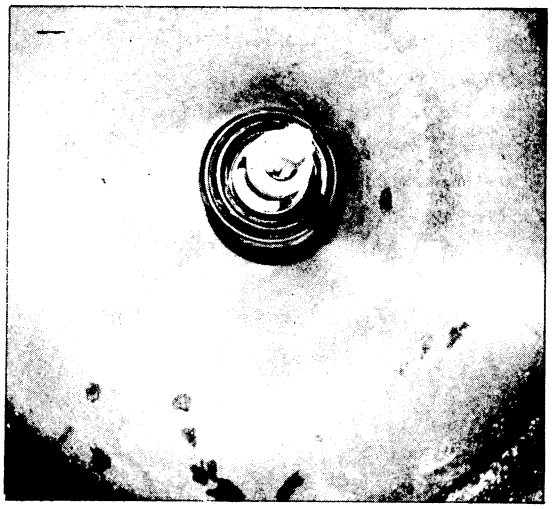


Figure 122 - Tub Boot Seal

Early production machines have a metal clamp around the lower edge of the seal. It is not necessary to replace this clamp when installing a new seal.

NOTE: *Do not grip the seal by the carbon sealing ring. Grip the seal in the center close to the lip that goes on the tub flange.*

Put soap on the lower lip of the new seal where it fits over the tub flange and install the seal, turning in a counterclockwise direction while pushing downward. Lubricate the seal face with a thin coat of turbine oil. Install a new O-ring on the agitator shaft at the top of the center plate stem.

Carefully examine the seal face on the mounting stem. If it is rough, pitted or worn, replace the mounting stem. Do not attempt to smooth the seal face as it must mate with the carbon seal ring properly to prevent a water leak. Apply a thin coat of Lubriplate to the center plate threads and install the mounting stem. The mounting stem has a left hand thread and must be turned counterclockwise to install it. After the mounting stem is installed and tightened securely, install and tighten the Allen set screw.

Install a new agitator shaft seal in the top of the mounting stem. *Figure 123* shows the assembly sequence of this seal.

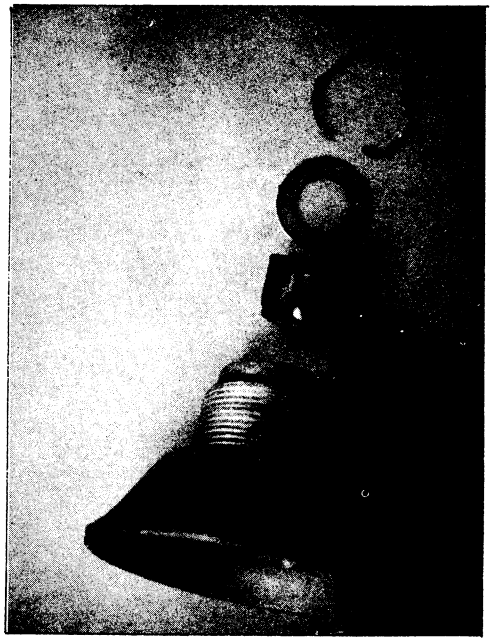


Figure 123 - Mounting Stem and Agitator Shaft Seal

NOTE: *When installing the rubber agitator shaft seal, the end with the small diameter must be facing down.*

Now, set the clothes basket on the mounting stem. Apply a thin coat of Lubriplate on the mounting stem threads and securely tighten the tub locking nut down on the tub. The tub locking nut also has a left hand thread and therefore, must be turned counterclockwise to install it.

TUB COVER - Helical Drive Models

The tub cover is clamped inside the collector tub and projects over the clothes tub to prevent water from splashing outside the collector tub during the spin period.

On models with a tub bumper and off-balance bracket attached to the tub cover, the bumper and bracket must be placed to the rear of the machine and centered at the rear. The tub cover must be adjusted to the proper height to clear the clothes tub. This adjustment is easily made with two wooden clothes hangers placed between the tub and tub cover, *Figure 124*.

Place the tub cover in the collector tub and down against the clothes hangers. Next, install the rubber gasket around the outside of the tub cover

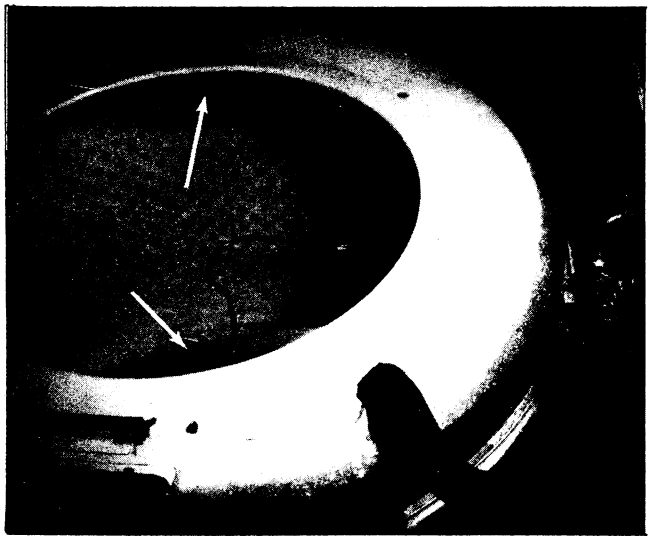


Figure 124 - Adjusting Tub Cover Height

and into the "V" channel formed by the flanged collector tub edge. Be sure this gasket is not twisted or a water leak will occur during spin. Place the tub cover clamp over the collector tub and gasket with the clamp bolts diagonally in two corners of the machine. The bolts are placed in this position so that they will not strike the cabinet should a severe off-balance condition occur. *Figure 125* shows the tub cover and clamp correctly installed.

Figure 125 - Tub Cover Installed

Agitators

Figure 126 shows the early style AMP agitator. This is a plastic agitator with a rubber mounted spline pressed into the bottom and a removable metal float in the top. The purpose of the metal float is to shut off the water entering the machine when the proper level has been reached. This action is explained further under Water Level Control in this manual.

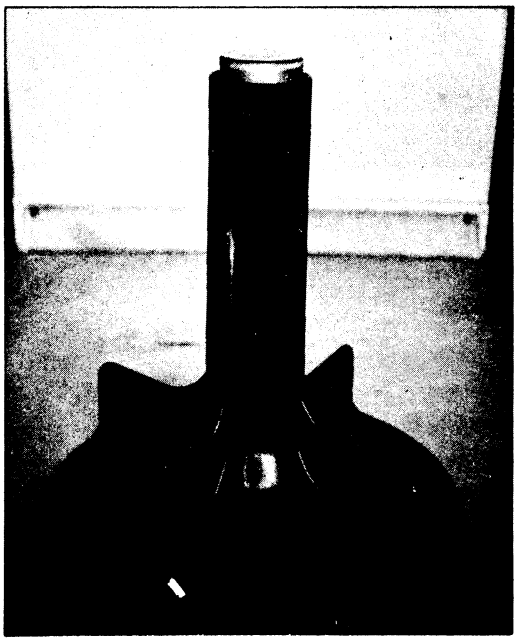


Figure 126

On the side of the agitator is a small hole to allow water to enter the float cavity of the agitator. This hole must be kept clean of soap scum and lint as the machine will overflow if the water cannot enter to raise the float.

The later style AMP agitator is shown in *Figure 127*. In place of the float on the early agitator, this agitator has a rubber diaphragm across the top with a stainless steel cap attached to it. Instead of water raising the diaphragm and cap, air pressure is used. The air pressure is created by the water creating an air pocket on the underside of the agitator.

The water pressure enters a small hole located at the bottom of the agitator near the spline. This hole must be kept clear of lint or soap scum, or

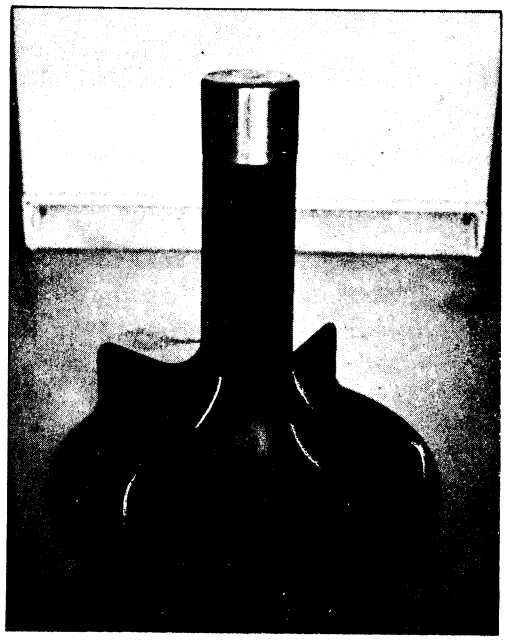


Figure 127

the machine may overfill with water. As the water entering the machine increases in depth, more pressure is exerted against the air pocket under the agitator. This increases the pressure through the small hole and against the rubber diaphragm until the proper pressure is obtained to raise the cap against the lid float button and trip the mercury switches.

One advantage to this agitator is the fact that the air pocket does not allow water to go under the agitator and surround the agitator shaft seal. This eliminates a water leak at this seal.

Sometimes this agitator will swell from the action of hot water, bleaches and detergents. When this happens, the stainless steel cap will stick and not rise to shut off the water or not drop down to start the next water fill. An oversize cap, which is the only one now available, may be purchased to correct this condition.

If the stainless steel cap has been accidentally pulled loose from the diaphragm, or is to be replaced, it can be installed easily. First remove the agitator from the machine and remove the rubber diaphragm. Carefully check the diaphragm for any cracks or holes and make sure it fits snugly on the agitator.

Install the diaphragm on the agitator making sure the lip around the edge is in the groove around the top of the agitator. Put soap on the depression in the center of the diaphragm that the button in the cap snaps into. Insert a rod (a 5/8" wood dowel works well) up through the agitator spline and raise the center of the diaphragm up slightly. Push the cap down on the diaphragm and a distinct snap will be felt when the button snaps into the diaphragm.

In the event the agitator is stuck too tight to be removed and a puller is not available, the following method can be used to reinstall the cap. Remove the diaphragm and fill the agitator cavity with ice cubes. Place one cube in the center at the top so it is slightly higher than the top of the agitator. Reinstall the diaphragm and the center should be raised high enough to snap the cap on. In a short time the ice will melt and let the cap drop down to the fill position.

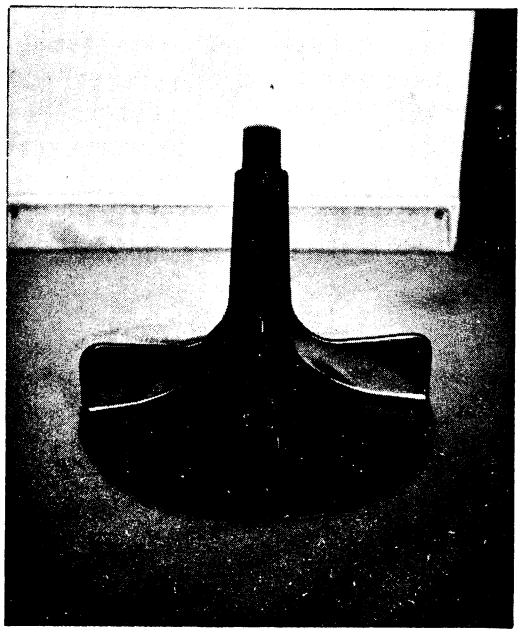


Figure 128

Figure 128 shows the agitator used in the *time fill* or Highlander models. Since these machines have no mercury lid switches, there is no float or other device used to control the water level. Like all Maytag agitators, it has a replaceable rubber mounted spline which will be explained in more detail in later paragraphs.

The lint filter agitator shown in *Figure 129* is used on the early helical drive models. Since these machines use a pressure switch to control the water

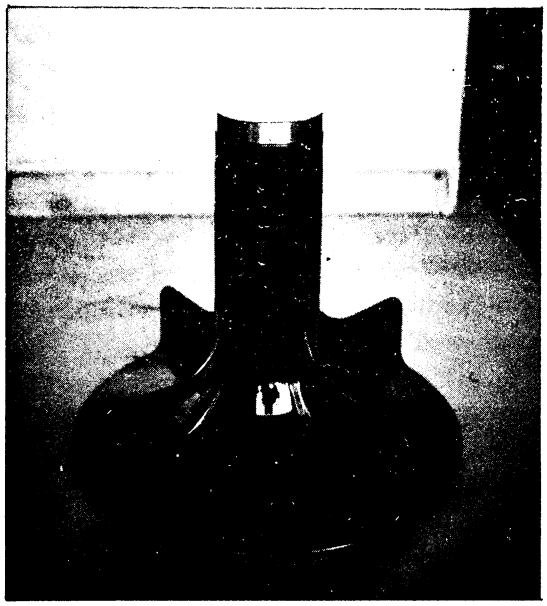


Figure 129

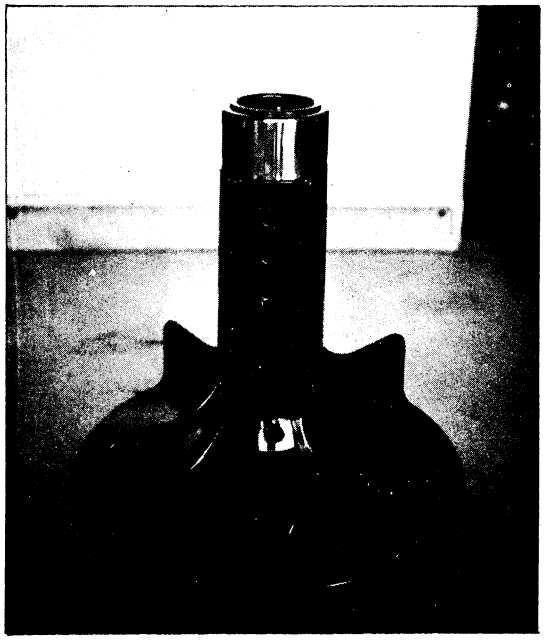


Figure 130

level, no float or other device is used in the agitator as in the AMP agitators. Instead, a lint screen is inserted in the agitator cavity. A removable baffle plate is fastened to the underside of the agitator which may be removed to clean any lint that may accumulate between it and the agitator.

During the agitation period, the wash water enters the agitator cavity through a series of holes around the outside of the agitator. Due to the pumping action of the agitator, it is then pulled through the lint screen which traps any lint in the water. The water continues down the center of the agitator, out between the baffle plate and lower portion of the agitator and back into the wash water. This recirculation of the water goes on all during the agitation action in both the wash and rinse periods. The pumping action of this agitator has two advantages. One, it recirculates the water to remove the lint, and secondly, it gives a better wash action to the wash water.

The late style lint filter agitator, ***Figure 130***, is identical to the early style mentioned above, except for the filter. The filter has been redesigned to allow a plastic detergent dispenser to be placed in its center.

Resplining Agitator

Pressed into the bottom of all Maytag agitators is a rubber mounted metal spline that mates with the splined agitator shaft. The spline is made of metal since it will wear considerably longer than if the spline were formed directly in the plastic agitator.

Two rubber mounts are bonded around the outside of the metal spline. These rubber mounts absorb the shock of the agitation action and thereby help to prevent damage to the agitator itself. If the agitator spline becomes worn, or if it works loose from the agitator, it can be replaced without replacing the entire agitator. A special tool is available from Maytag to remove the spline from the agitator. Another special tool is available to install a new spline in the agitator, however, it requires a press to use it.

If a press is not available, the following method of removal and installation will work quite well. Clamp an old agitator shaft in a vise with the splined end up. Use a torch and heat the shaft until it is quite hot. Now place the agitator on the shaft and in a few seconds, the rubber will be sufficiently softened to allow the agitator to be twisted off the spline.

Chamfer the leading edge of both rubber mounts on the new spline. Notice that one end of the spline is squared off and the other end has a groove that fits over the rubber stop ring on the agitator shaft. The squared off end goes into the agitator first.

Carefully examine the agitator for any cracks around the hole where the spline goes. If there are any cracks, the entire agitator should be replaced. After the agitator shaft in the vise is sufficiently cooled, place the new spline on the shaft. Lubricate the rubber mounts with rubber lubricant or liquid soap and place the agitator in position on the spline. The agitator can now be twisted down on the spline. Do not press the spline too far into the agitator. After the new spline is installed, check the agitator again for cracks.

Removing Stuck Agitator

Since the agitator shaft and the agitator both have a straight spline, it is very easy for the agitator to become stuck to the shaft. In order to prevent this, the user should remove the agitator periodically and put a thin coat of white vaseline on the splines. This will prevent the agitator from becoming stuck.

In cases where this has not been properly done and the agitator must be removed, Maytag has a special puller available to remove the agitator. The machine owner should be cautioned, however, that the use of this puller can possibly break the agitator. Also, many times the agitator will pull loose from the agitator spline, requiring the agitator to be resplined.

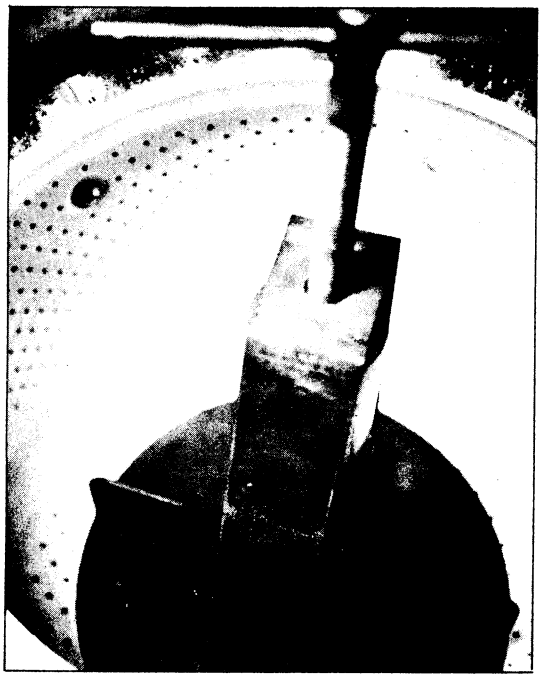


Figure 131 - Removing Stuck Agitator

When pulling any float type or lint filter type agitator, the puller is used as shown in *Figure 131*. Remove the float, cap and diaphragm or lint filter. The two legs of the puller have slots in them that fit over opposing agitator fins and then hook under the lip of the agitator. The threaded shaft goes down through the center of the agitator and presses against the end of the agitator shaft. Turning the handle applies pressure to release the agitator from the shaft.

Figure 132 - Removing Stuck Agitator

Figure 132 shows the puller used on agitators that do not have a float or lint filter cavity for the threaded puller shaft to enter. A 2 x 4 is placed across the spin tub with a metal plate in the center to prevent the threaded shaft from cutting into the wood. The two extension legs that come with the puller are hooked onto the puller legs and under the agitator. Turning the puller handle applies pressure to release the agitator.

Belts

To remove, adjust or replace any belt on a Maytag Automatic Washer, lay the washer on its side for easy servicing. The AMP model washers use a

single belt and the belt tension is preadjusted by a motor tension spring. It may be noted that the pump pulley is driven by the back of the belt. Always check the belt carefully for excessive wear or cracks and replace it if required.

On all models that use an oil clutch, there is a limiting wire through the center of the tension spring. Always be sure this wire is in proper position. Its function is to limit the motor bounce at the initial start of the spin period. The wire is placed through the center of the spring and hooked on the coils at one end. The other end is then bent over the coils at the other end of the spring. A new limiting wire is supplied with oil type clutches purchased from Maytag.

PUMP BELT

All the helical drive washers use two belts: the pump belt and the drive belt.

The pump belt should always be correctly adjusted before attempting to adjust the drive belt. The pump belt is adjusted by loosening the pump mounting screws and sliding the pump in the elongated holes in the washer base. Test pump belt tension by compressing the belt together midway between the pulleys; it should measure approximately 3/8" between the inside edges without excessive pressure being applied. On models with a sliding motor base, pull the motor out until the drive belt is tight before checking this adjustment.

DRIVE BELT

The drive belt used on the Helical Drive machines has a special covering on the outside. This allows the proper slippage of the belt in the initial start of the spin action. DO NOT USE ANY OTHER TYPE BELT. The correct belt and the correct belt tension must be maintained for proper operation of the washer.

The early model helical drive motor base sets on a pivot pin attached to the machine base, and spring tension is controlled by a spring and a saw tooth arm that hooks to the pump. Proper adjustment is applied to the motor spring by using a wattmeter. With the washer filled with water and set to agitate, the reading of the wattmeter should be approximately 385 watts. Empty the washer of water and drain the pump; set the machine for spin. At the start of the spin cycle, the watt reading will be approximately 520 watts and will drop to about 370 watts when the spin reaches full spin speed. Full spin speed wattage is the average wattage and should be reached in approximately 45 seconds after the spin cycle starts. Excessive high watt readings can be caused by a binding condition on other components, which should not be overlooked when testing wattage.

When adjusting the drive belt tension, the saw tooth arm only should be gripped. Do not grip the spring as it may be stretched unevenly and lose its proper shape. The saw tooth arm normally is adjusted at the third or fourth notch.

Sometimes it may be necessary to reposition the spring to the outside of the motor bracket. This will increase the leverage applied to the bracket. File a notch on the side of the motor bracket level with one spring hole and hook the spring in this notch with the end hooked into the spring hole.

On washers having a sliding motor base, the belt tension is properly adjusted by the springs in the motor base. No further adjustment is required. Always use the correct springs in the motor base. Substitute springs may result in an incorrect belt tension and improper operation of the washer.

Basket

The spin tub or clothes basket used on the AMP models is made up from three components. These components are the inner porcelain tub, the outer aluminum tub and the balance ring.

The outer aluminum tub completely encloses the inner tub and also forms the top transmission cover. Since it has no holes or perforations, it holds the wash or rinse water from entering the collector tub until the washer goes into the spin period.

The inner porcelain tub is a perforated tub and is mounted inside the aluminum tub by six screws.

During the agitation action, sand and heavy soil go through the tub perforations into the space between the two tubs. As the machine goes into the spin period, the water goes through these perforations, up the sides of the aluminum tub and over the top into the collector tub. The water carries the sand and heavy soil with it.

The balance ring is a steel tube, formed into a circle and mounted on the inner porcelain tub. It is filled with a heavy liquid that tends to flow toward the light side of the tub when an off balance condition occurs. This helps to maintain the tub in its true axis. Although the balance ring very rarely requires service, it can be removed without removing the inner tub from the aluminum tub.

The inner tub and balance ring can be removed from the aluminum tub as an assembly by removing the six screws from the inside of the tub. Generally, the tubs are not separated, but instead, both tubs and the power unit are removed from the machine as an assembly.

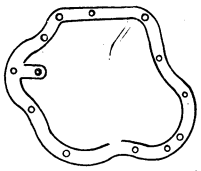
The tub used on the helical drive machines is a perforated, one piece porcelain tub. No outer tub is used, which means the wash and rinse water is in the collector tub as well as the spin tub during the agitation action. The sand and heavy soil goes directly into the collector tub where it is flushed into the drain in the spin period.

SECTION 3

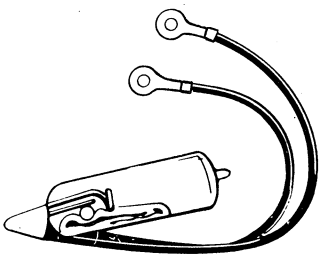
PARTS LISTS

The following parts lists are representative of the majority of the more popular parts used in servicing Maytag Automatic Washers. Mainly they are shown as an aid in assembly sequence and to show the nomenclature of the various parts.

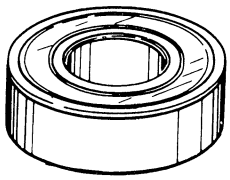
When ordering parts, always give the full model and serial number of the washer. These numbers are found on a metal identification plate on the back of the machine.



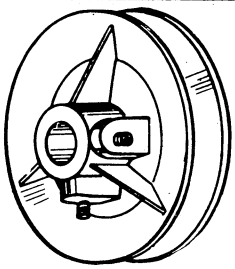
2–10632
Transmission Gasket
(fiber)



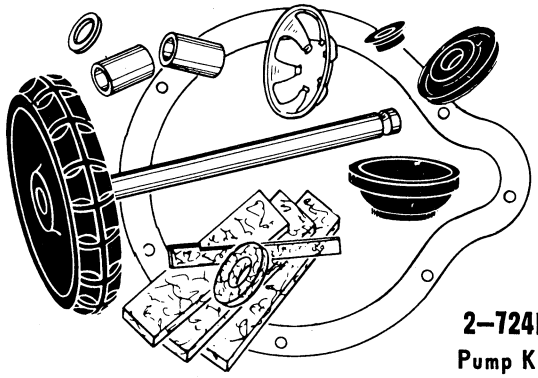
2–140
Mercury Switch



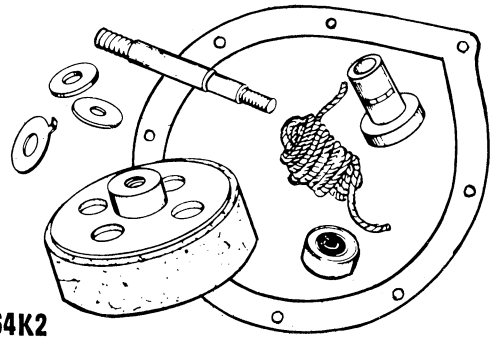
2–671
Radial Ball Bearing



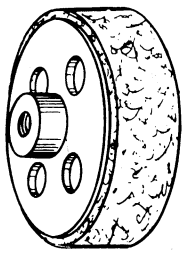
2–809
Pulley



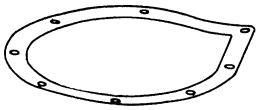
2–724K
Pump Kit
for 2–724, 2–1693



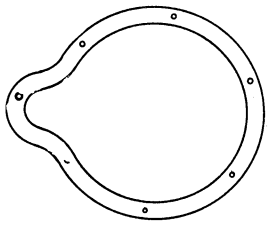
2–64K2
Pump Kit
with Friction Pulley



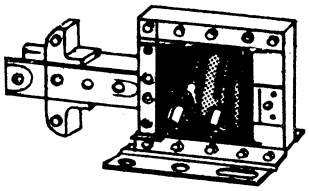
2–624
Pump Pulley Assem.



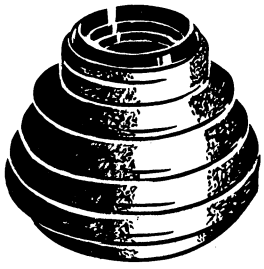
2–10098
Pump Gasket



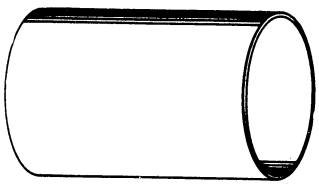
2–11055
Pump Gasket



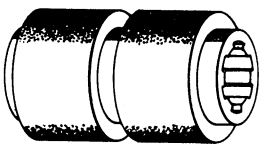
2–382
Solenoid



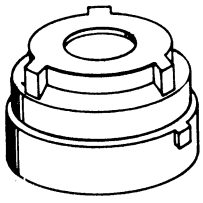
2–165
Boot



2–11130
Bearing Sleeve



A–4731
Spline



K–1438
Retainer Cap for
Gyrator Seal

TIMER

Model	Part Number	Model	Part Number	Model	Part Number	Model	Part Number
AMP	2-14	A207	2-4454	A702S	2-2775	141	2-1320
				A806	2-3182		
A2MP	2-14	A207S	2-4463		2-4499	141S	2-1166
				A806S	2-3183		
A3MP	2-14	A208	2-4454		2-4509	142	2-1230
A4MP	2-553	A208S	2-4463	A900	2-1831	142S	2-1166
A100	2-729	A300	2-1750	A900S	2-1831	160	2-1831
A100S	2-729	A300S	2-1759	A902	2-1831	160S	2-1831
				A906	2-4231		
A101	2-729	A302	2-2772		2-5211		
A102	2-2923	A302S	2-2773	101P	2-14		
A102S	2-2923	A406	2-3180	102P	2-686		
			2-4476				
A103	2-1750	A406S	2-3181	121P	2-553		
A103S	2-1759		2-4483	123	2-729		
A106	2-3178	A407	2-4889				
	2-4454	A407S	2-4895	123S	2-729		
A106S	2-3179						
	2-4463	A408	2-4889	124	2-729		
A107	2-5001	A408S	2-4895	124S	2-729		
A107S	2-5002	A500	2-1750	125	2-1750		
A108	2-5001	A500S	2-1759	125S	2-1759		
A108S	2-5002	A502	2-2772	126	2-1750		
A200	2-729	A502S	2-2773	126S	2-1759		
		A606	2-3180				
A200S	2-729		2-4476	130	2-14		
A202	2-2923	A606S	2-3181	131	2-1230		
A202S	2-2923		2-4483	131S	2-1166		
A203	2-1750	A608	2-4476	132	2-1230		
A203S	2-1759	A608S	2-4483	132S	2-1166		
A206	2-3179	A700	2-1230				
	2-4454	A700S	2-1166	140	2-14		
A206S	2-3179						
	2-4463	A702	2-2774	140S	2-14		

TEMPERATURE SWITCH

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP	2-118		2-5321	A207	2-3167	A408	2-5261
A2MP	2-118			A207S	2-3168		
A3MP	2-118	A107	2-3167	A208	2-5261	A408S	2-5321
A4MP	2-118	A107S	2-3168	A208S	2-5321	A500	2-1781
A100	2-733	A108	2-5261	A300	2-1781	A500S	2-1782
A100S	2-733	A108S	2-5321	A300S	2-1782	A502	2-1781
		A200	2-1781			A502S	2-1782
A101	2-733	A200S	2-1782	A302	2-1781	A606	2-3167
A102	2-1781	A202	2-1781	A302S	21782	A606S	2-3168
A102S	2-1782	A202S	2-1782	A406	2-3167	A608	2-5261
A103	2-1781	A203	2-1781	A406S	2-3168	A608S	2-5321
A103S	2-1782	A203S	2-1782	A407	2-4887	A700	2-1790
A106	2-3167	A206	2-3167			A700S	2-1837
	2-5320	A206S	2-3168	A407S	2-4894	A702	2-1790
A106S	2-3168						

TEMPERATURE SWITCH (Cont'd)

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
A702S	2-1837		2-1223	141	2-871		
A806	2-3158	124S	2-1782	141S	2-871		
A806S	2-3158		2-1220	142	2-871		
A900	2-1822	125	2-1781	142S	2-871		
A900S	2-1822	125S	2-1782	160	2-1822		
A902	2-1822	126	2-1781	160S	2-1822		
A906	2-3170	126S	2-1782				
	2-4230	130	2-871				
101P	2-118	131	2-871				
102P	2-118	131S	2-871				
121P	2-118	132	2-871				
123	2-733	132S	2-871				
		140	2-871				
123S	2-733	140S	2-871				
124	2-1781						

PRESSURE SWITCH

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP		A207	2-3362	A702S	2-1754	141	2-1356
				A806	2-3169		
A2MP		A207S	2-3362		2-5336	141S	2-1356
				A806S	2-7169		
A3MP		A208	2-5337		2-5336	142	2-1395
A4MP		A208S	2-5337	A900		142S	2-1395
A100		A300	2-1754	A900S		160	2-1826
A100S		A300S	2-1754	A902		160S	2-1826
A101		A302	2-1754	A906			
A102		A302S	2-1754	101P			
A102S		A406	2-3169	102P			
A103	2-1754	A406S	2-3169	121P			
A103S	2-1754	A407	2-3169	123			
A106	2-3362						
	2-5337	A407S	2-3169	123S			
A106S	2-3362						
	2-5337	A408	2-5336	124			
A107	2-3362	A408S	2-5336	124S			
A107S	2-3362	A500	2-1754	125			
A108	2-5337	A500S	2-1754	125S			
A108S	2-5337	A502	2-1754	126	2-1754		
A200	2-1754	A502S	2-1754	126S	2-1754		
A200S	2-1754	A606	2-3169	130			
A202		A606S	2-3169	131			
A202S		A608	2-5336	131S			
A203	2-1754	A608S	2-5336	132	2-1395		
A203S	2-1754	A700	2-1754	132S	2-1395		
A206	2-3362	A700S	2-1754	140			
A206S	2-3362	A702	2-1754	140S			

HOSE, TUB TO PUMP

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP	2-10012	126S	2-11107	142BS	2-11107	A900S	2-11107
A2MP	2-10012	130	2-10012	160	2-11107	A900	2-11107
A3MP	2-10012	131	2-11107	160S	2-11107	A102	2-11107
A4MP	2-10012	131S	2-11107	A100S	2-11107	A102S	2-11107
101P	2-10012	132	2-11107	A100	2-11107	A202	2-11107
102	2-10012	132S	2-11107	A200S	2-11107	A202S	2-11107
121P	2-10012	140	2-10012	A200	2-11107	A302	2-11107
123	2-11107	140S	2-10012	A300S	2-11107	A302S	2-11107
123S	2-11107	141	2-11107	A300	2-11107	A502	2-11107
124	2-11107	141S	2-11107	A500S	2-11107	A502S	2-11107
124S	2-11107	142	2-11107	A500	2-11107	A702	2-11107
125	2-11107	142S	2-11107	A700S	2-11107	A702S	2-11107
125S	2-11107	142B	2-11107	A700	2-11107	A902	2-11107
126	2-11107						

PUMP

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP	2-64	126S	2-724	142BS	2-1693	A900S	2-1693
A2MP	2-64.	130	2-64	160	2-1693	A900	2-1693
A3MP	2-64	131	2-724	160S	2-1693	A102	2-2203
A4MP	2-64	131S	2-724	A100S	2-724	A102S	2-2203
101P	2-64	132	2-724	A100	2-724	A202	2-2203
102	2-64	132S	2-724	A200S	2-724	A202S	2-2203
121P	2-64	140	2-64	A200	2-724	A302	2-2203
123	2-724	140S	2-64	A300S	2-724	A302S	2-2203
123S	2-724	141	2-724	A300	2-724	A502	2-2203
142	2-724	141S	2-724	A500S	2-724	A502S	2-2203
124S	2-724	142	2-724	A500	2-724	A702	2-2532
125	2-724	142S	2-724	A700S	2-724	A702S	2-2532
125S	2-724	142B	2-1693	A700	2-724	A902	2-2532
126	2-724						

LID SWITCH

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP	2-140	A103S	2-2770	A207	2-2770	A407	2-2770
		A106	2-2770			A407S	2-2770
A2MP	2-140	A106S	2-2770	A207S	2-2770	A408	2-2770
		A107	2-2770			A408S	2-2770
A3MP	2-140	A107S	2-2770	A208	2-2770	A500	2-1809
A4MP		A108	2-2770	A208S	2-2770	A500S	2-1809
A100	2-1809	A108S	2-2770	A300	2-1809	A502	2-2770
A100S	2-1809	A200		A300S	2-1809	A502S	2-2770
A101	2-1809	A200S		A302	2-2770	A606	2-2770
A102	2-2770	A202	2-2770	A302S	2-2770	A606S	2-2770
A102S	2-2770	A202S	2-2770	A406	2-2770	A608	2-2770
A103	2-2770	A203	2-2770	A406S	2-2770	A608S	2-2772
		A203S	2-2770			A700	
		A206	2-2770			A700S	
		206S	2-2770			A702	2-1946

LID SWITCH (Cont'd)

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
A702S	2-1946	123S	2-1809	141	2-140		
A806	2-2770		2-1495				
	2-1946	124	21809	141S	2-140		
A806S	2-2770	124S	2-1809				
	2-1946	125	2-1809	142	2-140		
A900	2-1946	125S	2-1809	142S	2-140		
A900S	2-1946	126	2-1809	160	2-1946		
A902	2-1946	126S	2-1809	160S	2-1946		
A906	2-1946	130	2-140				
101P	2-140	131	2-140				
102P	2-140	131S	2-140				
121P		132	2-140				
123	2-1495	132S	2-140				
	2-1809	140	2-140				
		140S	2-140				

BOOT SEAL

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP	2-165	126	2-1537	142B	2-1116	A700	2-1116
A2MP	2-165	126S	2-1537	142BS	2-1116	A900S	2-1537
A3MP	2-165	130	2-165	160	2-1537	A900	2-1537
A4MP	2-165	131	2-1116	160S	2-1537	A102	2-1537
101P	2-165	131S	2-1116	A100S	2-1116	A102S	2-1537
102	2-165	132	2-1116	A100	2-1116	A202	2-1537
121P	2-165	132S	2-1116	A200S	2-1116	A202S	2-1537
123	2-1116	140	2-165	A200	2-1116	A302	2-1537
123S	2-1116	140S	2-165	A300S	2-1116	A302S	2-1537
124	2-1116	141	2-1116	A300	2-1116	A502	2-1537
124S	2-1116	141S	2-1116	A500S	2-1537	A502S	2-1537
125	2-1116	142	2-1116	A500	2-1537	A702	2-1537
125S	2-1116	142S	2-1116	A700S	2-1116	A702S	2-1537
						A902	2-1537

MOTORS

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
AMP	2-224	A107	2-1805	A207	2-1807	A408S	2-1805
A2MP	2-224	A107S	2-1805	A207S	2-1807	A500	2-1807
A3MP	2-224	A108	2-1805	A208	2-1807	A500S	2-1807
A4MP	2-224	A108S	2-1805	A208S	2-1807	A502	2-1807
A100	2-1805	A200	2-1805	A300	2-1805	A502S	2-1807
A100S	2-1805	A200S	2-1805	A300S	2-1805	A606	2-1807
A101	2-1807	A202	2-1807	A302	2-1805	A606S	2-1807
A102	2-1805	A202S	2-1807	A302S	2-1805	A608	2-1807
A102S	2-1805	A203	2-1807	A406	2-1805	A608S	2-1807
A103	2-1805	A203S	2-1807	A406S	2-1805	A700	2-1807
A103S	2-1805	A206	2-1807	A407	2-1805	A700S	2-1807
A106	2-1805	A206S	2-1807	A407S	2-1805	A702	2-1807
A106S	2-1805			A408	2-1805		

MOTORS (Cont'd)

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
A702S	2-1807	124S	2-1805	141	2-1807		
A806	2-1807	125	2-1805	141S	2-1807		
A806S	2-1807	125S	2-1805	142	2-1807		
A900	2-1807	126	2-1807	142S	2-1807		
A900S	2-1807	126S	2-1807	160	2-1807		
A902	2-1807	130	2-224	160S	2-1807		
A906	2-1807	131	2-1805				
101P	2-224	131S	2-1805				
102P	2-224	132	2-1805				
121P	2-224	132S	2-1805				
123	2-1805	140	2-865				
123S	2-1805	140S	2-865				
124	2-1805						

PUMP BELT

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
All Models	2-11124						

DRIVE BELT

MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER	MODEL	PART NUMBER
All Models	2-11125						

Advance Motor 29,35
Agitator 12,24,25,44,46,67-70
Agitator Shaft Seal 50,66

Balance Ring 14,72
Basket, Clothes 14,25,46,48,49,52,56,71,72
Bearing, Radial 55-57,60,74
Bearing, Tub 11,64,65,74
Belts 11-14,34,43,70.71,79
Belt Drive 71,79
Belt, Pump 8,43,71,79
Bleach Dispenser 44,45
Boot & Seal, Tub 12,13,51,65,66,74,78
Bracket, Motor Mounting 34
Brake Assembly 11,14,52,53,57-60,62
Brake Drum 31,46,52,55
Brake Shoes 31,46,52,55
Brake Solenoid 11,13,31,32,46,52,55,74

Cabinet 16,18
Cabinet Top 17-20
Cabinet Top Panel 17
Cancel Switch 30
Capacitor 10,33,35
Center Shaft 49,50,54,55,57,58
Centrifugal Switch 31
Clothes Basket 14,25,46,48,49,52,56,71,72
Clutch 12,46-48,52,56-58
Clutch Spring 11,12,46,50,54,55
Collector Tub 12,52,53,61,65
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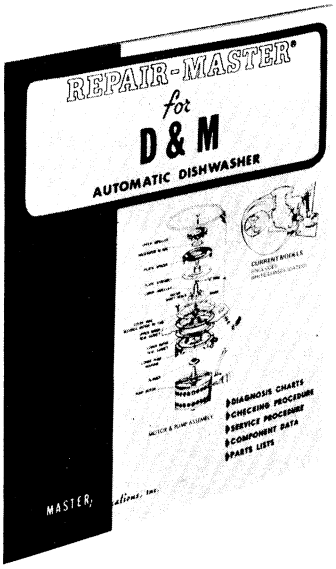

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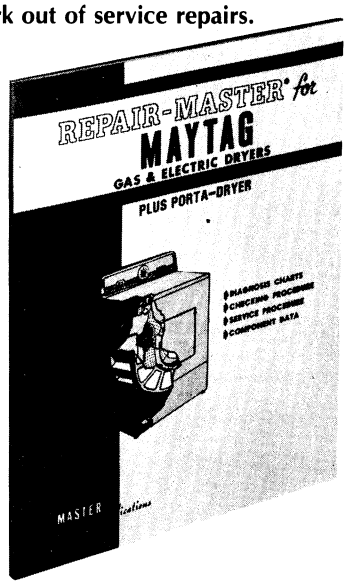

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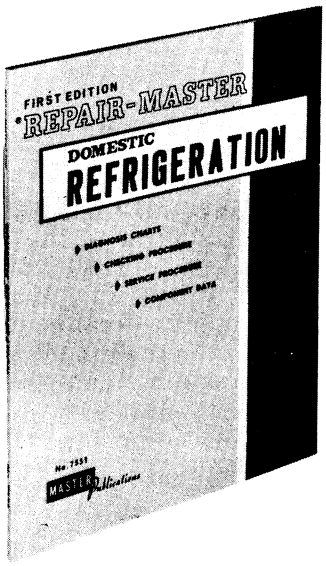

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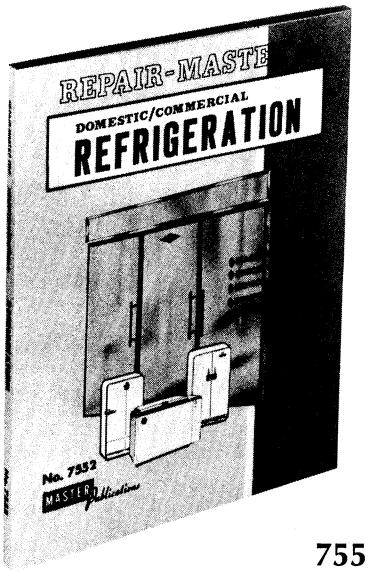

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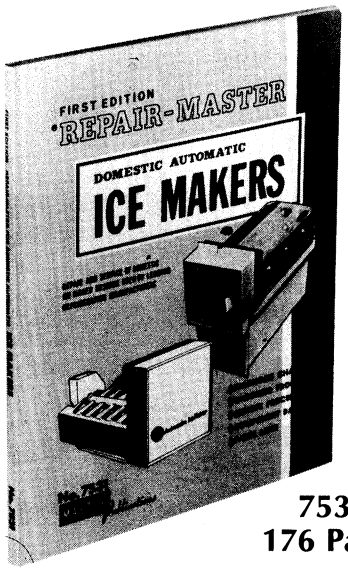

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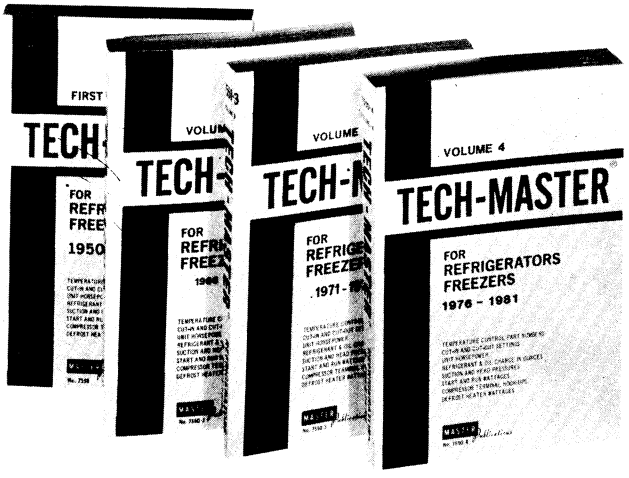

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