

Washer-Extractors

Pocket Hardmount

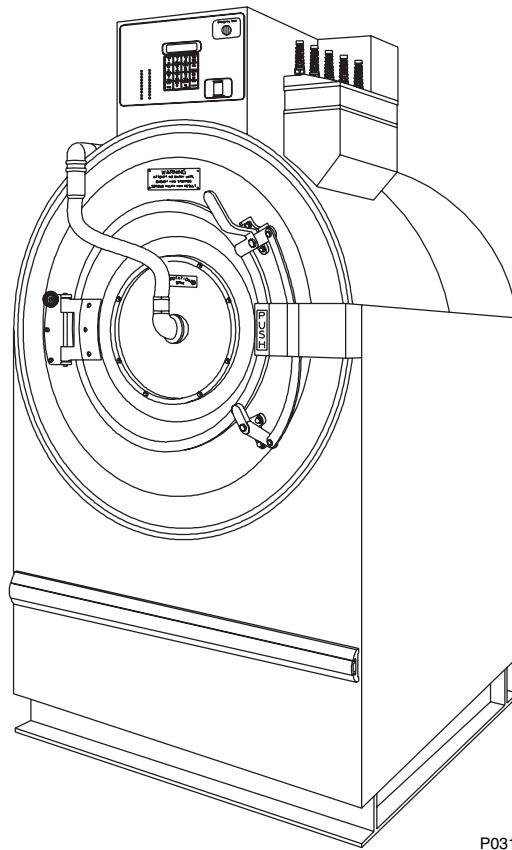
3-Speed

UW35P3

UW35S3

UW60P3

UW60S3



P0311

Para bajar una copia de estas instrucciones en español, visite www.comlaundry.com.

Keep These Instructions for Future Reference.

(If this machine changes ownership, this manual must accompany machine.)


Alliance
Laundry Systems

www.comlaundry.com

Part No. F232086R3
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Installation/Maintenance

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Safety Information

Explanation of Safety Messages

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

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

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


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

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

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

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

Important Safety Instructions

	WARNING
To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:	
W023	


1. Read all instructions before using the washer.
2. Refer to the GROUNDING INSTRUCTIONS in the INSTALLATION manual for the proper grounding of the washer.
3. Do not wash textiles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, kerosene, waxes, cooking oils, dry-cleaning solvents, or other flammable or explosive substances as they give off vapors that could ignite or explode.
4. Do not add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
5. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. **HYDROGEN GAS IS EXPLOSIVE.** If the hot water system has not been used for such a period, before using a washing machine or combination washer-dryer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable, do not smoke or use an open flame during this time.
6. Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children. This is a safety rule for all appliances.
7. Before the washer is removed from service or discarded, remove the door to the washing compartment.
8. Do not reach into the washer if the wash drum is moving.


Safety Information


9. Do not install or store the washer where it will be exposed to water and/or weather.
10. Do not tamper with the controls.
11. Do not repair or replace any part of the washer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out.
12. To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to the electrical power source.
13. Use washer only for its intended purpose, washing textiles.
14. Never wash machine parts or automotive parts in the machine. This could result in serious damage to the basket.
15. ALWAYS disconnect the washer from electrical supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
16. Install the washer according to the INSTALLATION INSTRUCTIONS. All connections for water, drain, electrical power and grounding must comply with local codes and be made by licensed personnel when required.
17. To reduce the risk of fire, textiles which have traces of any flammable substances such as vegetable oil, cooking oil, machine oil, flammable chemicals, thinner, etc., or anything containing wax or chemicals such as in mops and cleaning cloths, must not be put into the washer. These flammable substances may cause the fabric to catch on fire by itself.
18. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
19. Keep washer in good condition. Bumping or dropping the washer can damage safety features. If this occurs, have washer checked by a qualified service person.
20. Replace worn power cords and/or loose plugs.
21. Be sure water connections have a shut-off valve and that fill hose connections are tight. CLOSE the shut-off valves at the end of each wash day.
22. Loading door MUST BE CLOSED any time the washer is to fill, tumble or spin. DO NOT bypass the loading door switch by permitting the washer to operate with the loading door open.
23. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
24. Always follow the fabric care instructions supplied by the textile manufacturer.
25. Never operate the washer with any guards and/or panels removed.
26. DO NOT operate the washer with missing or broken parts.
27. DO NOT bypass any safety devices.
28. Failure to install, maintain, and/or operate this washer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.


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

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

	WARNING
<p>This machine must be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury and/or equipment damage, and may void the warranty.</p>	
SW004	

	CAUTION
<p>Ensure that the machine is installed on a level floor of sufficient strength and that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.</p>	
SW020	

	CAUTION
<p>Be careful around the open door, particularly when loading from a level below the door. Impact with door edges can cause personal injury.</p>	
SW025	

	WARNING
<p>Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.</p>	
SW014	

Safety Information

Key to Symbols



The lightning flash and arrowhead within the triangle is a warning sign indicating the presence of dangerous voltage.



The exclamation point within the triangle is a warning sign indicating important instructions concerning the machine and possibly dangerous conditions.



This warning symbol indicates the presence of potentially dangerous drive mechanisms within the machine. Guards should always be in place when the machine is in operation.



This warning symbol indicates the presence of possibly dangerous chemicals. Proper precautions should be taken when handling corrosive or caustic materials.



This warning symbol indicates the presence of hot surfaces that could cause serious burns. Stainless steel and steam lines can become extremely hot and should not be touched.



This warning symbol indicates the presence of possibly dangerous pinch-points. Moving mechanical parts can crush and/or sever body parts.

Safety Decals

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.

To provide personal safety and keep the machine in proper working order, follow all maintenance and safety procedures presented in this manual. If questions regarding safety arise, contact the manufacturer immediately.

Use manufacturer-authorized spare parts to avoid safety hazards.

Operator Safety

	WARNING
NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.	
SW012	


To ensure the safety of machine operators, the following maintenance checks must be performed daily:

1. Prior to operating the machine, verify that all warning signs are present and legible. Missing or illegible signs must be replaced immediately. Make certain that spares are available.
2. Check door interlock before starting operation of the machine:
 - a. Attempt to start the machine with the door open. The machine should not start with the door open.
 - b. Close the door without locking it and attempt to start the machine. The machine should not start with the door unlocked.
 - c. Close and lock the door and start a cycle. Attempt to open the door while the cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, call a service technician.

3. Do not attempt to operate the machine if any of the following conditions are present:
 - a. The door does not remain securely locked during the entire cycle.
 - b. Excessively high water level is evident.
 - c. Machine is not connected to a properly grounded circuit.

Do not bypass any safety devices in the machine.

	WARNING
Never operate the machine with a bypassed or disconnected balance system. Operating the machine with severe out-of-balance loads could result in personal injury and serious equipment damage.	
SW039	

Safe Operating Environment

Safe operation requires an appropriate operating environment for both the operator and the machine. If questions regarding safety arise, contact the manufacturer immediately.

Environmental Conditions

- *Ambient Temperature.* Water in the machine will freeze at temperatures of 32°F (0°C) or below.


Temperatures above 120°F (50°C) will result in more frequent motor overheating and, in some cases, malfunction or premature damage to solid state devices that are used in some models. Special cooling devices may be necessary.

Water pressure switches are affected by increases and decreases in temperature. Every 25°F (10°C) change in temperature will have a 1% effect on the water level.

- *Humidity.* Relative humidity above 90% may cause the machine's electronics or motors to malfunction or may trip the ground fault interrupter. Corrosion problems may occur on some metal components in the machine.

If the relative humidity is below 30%, belts and rubber hoses may eventually develop dry rot. This condition can result in hose leaks, which may cause safety hazards external to the machine in conjunction with adjacent electrical equipment.

- *Ventilation.* The need for make-up air openings for such laundry room accessories as dryers, ironers, water heaters, etc., must be evaluated periodically. Louvers, screens, or other separating devices may reduce the available air opening significantly.
- *Radio Frequency Emissions.* A filter is available for machines in installations where floor space is shared with equipment sensitive to radio frequency emissions.
- *Elevation.* If the machine is to be operated at elevations of over 3280 feet (1000 m) above sea level, pay special attention to water levels and electronic settings (particularly temperature) or desired results may not be achieved.
- *Chemicals.* Keep stainless steel surfaces free of chemical residues.


	DANGER
<p>Do not place volatile or flammable fluids in any machine. Do not clean the machine with volatile or flammable fluids such as acetone, lacquer thinners, enamel reducers, carbon tetrachloride, gasoline, benzene, naphtha, etc. Doing so could result in serious personal injury and/or damage to the machine.</p>	
SW002	

- *Water Damage.* Do not spray the machine with water. Short circuiting and serious damage may result. Repair immediately all seepage due to worn or damaged gaskets, etc.

Machine Location

- *Foundation.* The concrete floor must be of sufficient strength and thickness to handle the floor loads generated by the high extract speeds of the machine.
- *Service/Maintenance Space.* Provide sufficient space to allow comfortable performance of service procedures and routine preventive maintenance.

Consult installation instructions for specific details.


	CAUTION
<p>Replace all panels that are removed to perform service and maintenance procedures. Do not operate the machine with missing guards or with broken or missing parts. Do not bypass any safety devices.</p>	
SW019	

Input and Output Services

- *Water Pressure.* Best performance will be realized if water is provided at a pressure of 30 – 85 psi (2.0 – 5.7 bar). Although the machine will function properly at lower pressure, increased fill times will occur. Water pressure higher than 100 psi (6.7 bar) may result in damage to machine plumbing. Component failure(s) and personal injury could result.
- *Steam Heat (Optional) Pressure.* Best performance will be realized if steam is provided at a pressure of 30 – 80 psi (2.0 – 5.4 bar). Steam pressure higher than 125 psi (8.5 bar) may result in damage to steam components and may cause personal injury.

For machines equipped with optional steam heat, install piping in accordance with approved commercial steam practices. Failure to install the supplied steam filter may void the warranty.

- *Drainage System.* Provide drain lines or troughs large enough to accommodate the total number of gallons that could be dumped if all machines on the site drained at the same time from the highest attainable level. If troughs are used, they should be covered to support light foot traffic.
- *Power.* For personal safety and for proper operation, the machine must be grounded in accordance with state and local codes. The ground connection must be to a proven earth ground, not to conduit or water pipes. Do not use fuses in place of the circuit breaker. An easy-access cutoff switch should also be provided.

	WARNING
<p>Ensure that a ground wire from a proven earth ground is connected to the ground lug near the input power block on this machine. Without proper grounding, personal injury from electric shock could occur and machine malfunctions may be evident.</p>	
SW008	

Always disconnect power and water supplies before a service technician performs any service procedure. Where applicable, steam and/or compressed air supplies should also be disconnected before service is performed.

Installation

This manual is designed as a guide to the installation and maintenance of the UW35 and UW60 3-speed rigid-mount washer-extractor.

NOTE: All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

Machine Overview

The design of the washer-extractor emphasizes performance reliability and long service life. The cylinder, shell, and main body panels are fabricated of stainless steel. The washer-extractor is mounted on a welded base frame which supports the bearings, cylinder, and shell.

Electrical controls for the washer-extractor are housed in a separate enclosure located on the top of the machine. The controls are accessed by removing the top cover from the control module.

One single-speed and one dual-speed motor drive the cylinder. The cylinder is supported via the shaft by two bearings. The UW35 uses two ball bearings held in place by a single cast iron housing that is bolted to the A-frame. The UW60 uses two flange-mounted, spherical roller bearings bolted to the A-frame.

On the UW60, a balance switch is installed between the faces of the A-frame to signal the controls to slow the machine when a severely out-of-balance load occurs during extract.

The cylinder is constructed with lifters or ribs that lift the laundry from the bath solution when the cylinder rotates at slow speed and then allow the laundry to tumble back into the bath. This mechanical action accomplishes the washing function. The cylinder is perforated, allowing the water to drain from within during the wash and extract steps.

The spray rinse feature consists of a fiber-reinforced clear hose connected to the center of the door glass and to both a hot and cold water inlet valve. A hemispherically-shaped spray nozzle inside the door glass produces a fan-action water spray which disperses rinse water throughout the load.

Water enters the machine through electromechanical water valves. Vacuum breakers are installed in the water-inlet plumbing to prevent backflow of water.

A motorized drain valve holds water in the machine during the wash, soak, and rinse steps. The drain valve is normally open, which means that it closes only when power is applied, thus allowing the machine to drain in the event of a power failure.

A door-lock system prevents opening of the stainless steel door when a cycle is in progress. It also prevents operation of the machine when the door is open. The doorbox contains the door-lock microswitch, door-closed magnetic switch, and the door unlock solenoid.

The UW35 shaft seal assembly includes two lip seals integrated into the cast-iron bearing housing. Each seal has two lips which make contact with a stainless steel bushing mounted to the shaft.

The UW60 shaft seal assembly includes a brass collar held in place on the cylinder shaft with set screws. The collar has a flange with a ceramic ring which makes contact with a spring-loaded phenolic face seal enclosed in a nylon housing mounted on the rear of the shell. The collar contains two internal O rings which maintain contact with the cylinder shaft.

The polypropylene supply dispenser is mounted on the right side of the washer-extractor, viewed from the front. The dispenser has five supply compartments, numbered 1 – 5, starting from the rear of the machine. The compartments hold plastic supply cups that are used for either liquid or dry supplies. A nozzle flushes supplies from the cups with water for the time programmed in the cycle.

Liquid supplies can be injected directly into the cups by a customer-supplied external chemical supply system. Five hose strain reliefs on top of the supply dispenser facilitate connection to an external supply system. A terminal strip inside a compartment attached to the left side of the control module, viewed from the rear of the washer-extractor, provides connection points for external supply signals.

Installation

Model Identification

Information in this manual is applicable to these models:

UW35P3	UW35S3
UW60P3	UW60S3

NOTE: All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

Delivery Inspection

Upon delivery, visually inspect crate, protective cover, and unit for any visible shipping damage. If the crate, protective cover, or unit are damaged or signs of possible damage are evident, have the carrier note the condition on the shipping papers before the shipping receipt is signed, or advise the carrier of the condition as soon as it is discovered.

Remove the crate and protective cover as soon after delivery as possible. If any damage is discovered upon removal of the crate and/or protective cover, advise the carrier and file a written claim immediately.

Nameplate Location

The nameplate is located above supply valve box, below inverter exhaust fan and at top of module. Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. Refer to *Figure 1*.

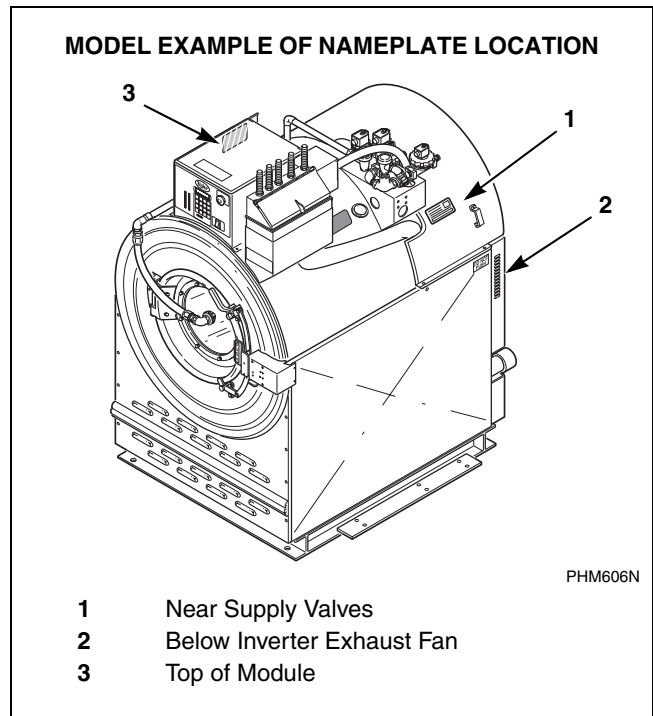


Figure 1

Replacement Parts

If literature or replacement parts are required, contact the source from which the washer-extractor was purchased or contact Alliance Laundry Systems LLC at (920) 748-3950 for the name of the nearest authorized parts distributor. A parts manual may be ordered by returning the reply card provided with each washer-extractor.

Customer Service

For technical assistance, contact your local distributor or call:

(920) 748-3121
Ripon, Wisconsin

A record of each machine is on file with the manufacturer. The serial number decal is located at the rear of the machine. Refer to *Figure 1*.

Model Number Familiarization Guide	
Sample Model Number: UW60P3DU10001	
UW	Model Number Prefix
60	Washer-Extractor Capacity (pounds dry weight)
P (S)	Type of Electrical Control P = WE-6 Computer S = 12-Cycle Computer
3	Washer-Extractor Speed Capabilities 3 = 3 Speeds
D	Electrical Characteristics See Electrical Specifications Chart in this section.
U1	Design Series
0001	Option Identification (varies from machine to machine)

Model No.	UW60P3DU10001				
Serial No.	000000000000				
Voltage	220-240	Amps	13		
Required Circuit Breaker	Amps 30				
Hz	50	Wire	3	Phase	3
Max. Load	60 LB	27 KG	Max. Speed	561	RPM
Elec. Heating	KW	Steam Press.	PSI	BAR	
<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 80%;"> <p style="font-size: small; margin: 0;">ETL LISTED CONFORMS TO ANSI/UL STD. 1555 ANSI/UL STD. 1206</p> <p style="font-size: x-small; margin: 0;">ETL TESTING LABORATORIES INC. CORTLAND, NEW YORK 13045</p> </div>					
Product No.	500000			Date Code	

P030I

Figure 2

Specifications and Dimensions

UW 3-Speed Pocket Hardmount			
	UW35	UW60	
Overall Dimensions			
Overall width, in (mm)	32-1/2 (826)	36 5/8 (930)	
Overall height, in (mm)	55-1/2 (1410)	64-1/2 (1638)	
Overall depth, in (mm)	38-1/8 (968)	45 (1143)	
Weight And Shipping Information			
Net weight, lb (kg)	750 (341)	1229 (557)	
Basket/shaft weight, lb (kg)	90 (41)	200 (92)	
Domestic shipping weight, lb (kg)	810 (367)	1268 (575)	
Domestic shipping volume, ft ³ (m ³)	66 (1.9)	84 (2.4)	
Domestic shipping dimensions [W x D x H, in (mm)]	38 x 47 x 64 (970 x 1200 x 1630)	40 x 49 x 74-1/2 (1016 x 1245 x 1892)	
Export shipping weight, lb (kg)	910 (413)	1392 (631)	
Export shipping volume, ft ³ (m ³)	78 (2.2)	96 (2.7)	
Export shipping dimensions [W x D x H, in (mm)]	41 x 50 x 65-1/2 (1050 x 1280 x 1670)	43 x 52-1/8 x 74-1/2 (1092 x 1324 x 1892)	
Wash Cylinder Information			
Cylinder diameter, in (mm)	26-1/4 (667)	32 (813)	
Cylinder depth, in (mm)	18-3/8 (467)	20 (508)	
Cylinder volume, ft ³ (l)	5.76 (163)	9.31 (264)	
Perforation size, in (mm)	3/16 (4.8)	3/16 (4.8)	
Perforation open area,%	18	22	
Door Opening Information			
Door opening size, in (mm)	14-11/32 (364)	17-1/2 (445)	
Height of door bottom above floor, in (mm)	23-3/4 (603)	28-1/4 (718)	
Water Consumption			
Average water consumption per cycle, gal (l)	HOT	45 (170)	61 (231)
	COLD	24 (91)	29 (110)
Average hot water used per hour, gal (l)		78 (295)	102 (386)

UW 3-Speed Pocket Hardmount			
		UW35	UW60
Power Consumption			
Average power used per cycle, kW/hr		0.24	0.47
Max nominal sound emission, dBA		72	81
Average HVAC load, BTU/hr (kcal/hr)		625 (157)	875 (220)
Drive Train Information			
Number of motors in drive train		2	2
Wash/reverse motor power, hp (kW)		.4 (.3)	.9 (.7)
Distribution motor power, hp (kW)		.45 (.34)	1.0 (0.8)
High extract motor power, hp (kW)		3 (2.2)	3.5 (2.6)
Cylinder Speeds/Centrifugal Force Data			
Wash/reverse speed, rpm/g		45 / .76	42 / .80
Distribution speed, rpm/g		75 / 2.10	67 / 2.04
High extract speed, rpm/g		597 / 133	561 / 139
Balance Detection			
Vibration safety switch installed		N/A	STD
Safety switch gap setting, in (mm)		N/A	0.006 (0.15)
Direct Steam Heating (Optional)			
Steam inlet connection size, in (mm)		1/2 (13)	1/2 (13)
Number of steam inlets		1	1
Steam required to raise bath temperature 10°F, lb (10°C, kg)	LOW	2.1 (1.5)	3.3 (2.4)
	MED	2.3 (1.7)	3.7 (2.6)
	HIGH	2.7 (1.9)	4.1 (2.9)
Average consumption per cycle, BHP (kg)		1.4 (21.4)	2.1 (33.4)
Electrical Heating (Optional)			
Total electrical heating capacity, kW		15.6	25.2
Number of electrical heating elements		6	6
Electrical heating element size, kW		2.6	4.2
Time required to raise bath temperature 10°F, min (10°C, min)	LOW	2.4 (3.6)	2.4 (3.7)
	MED	2.7 (4.1)	2.7 (4.1)
	HIGH	3.1 (4.7)	3.0 (4.6)

Installation

Machine Dimensions

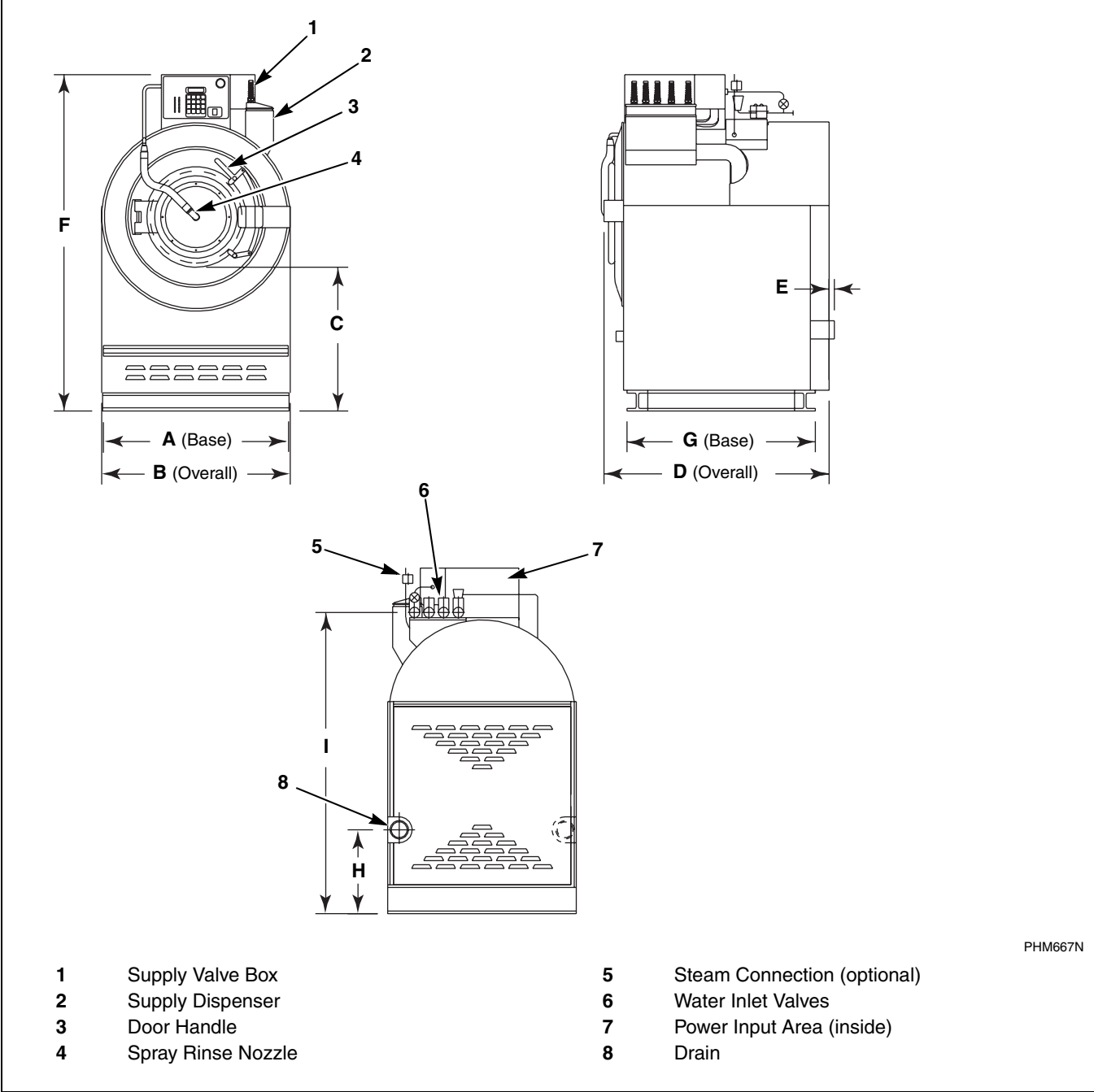
Dimensional Clearances

Allow a minimum of 24 inches (60 cm) at the rear and 18 inches (45 cm) at the sides for maintenance, inspection, and adjustment. Allow at least 18 inches (45 cm) between machines in multiple installations. Machine dimensions are indicated in Figure 3 and specified in the table below.

NOTE: The dimensions shown here are for planning purposes only. They are approximate and subject to normal manufacturing tolerances. If exact dimensions are required for construction purposes, contact the distributor or manufacturer. We reserve the right to make changes at any time without notice.

UW 3-Speed Pocket Hardmount Machine Dimensions (see Figure 3)				
Dimensions	35		60	
	in	mm	in	mm
A	30-1/8	765	35-5/8	905
B*	32-1/2	825	36-5/8	930
C	23-3/4	604	28-1/4	718
D	36-3/4	934	45	1143
E	1	25	1	25
F	55-1/2	1409	64-1/2	1638
G	30-1/2	775	36	914
H	7-5/8	194	15-1/2	394
I	43-5/8	1108	55	1397
* Overhang dimensions for the optional starch dispenser are as follows: UW35, 3-7/8 inches; UW60, 1-3/4 inches.				

Table 1



PHM667N

Figure 3


Installation

Machine Foundation

A proper foundation is absolutely necessary for UW 3-speed washer-extractors because of the high extract speed and the G-forces exerted.

Do not mount on wooden floors, above ground level, or over basements. Installation must be “slab on grade” or equal.

Thoroughness of detail must be stressed with all foundation work to ensure a stable unit installation, eliminating possibilities of excessive vibration during extract.

	CAUTION
<p>Ensure that the machine is installed on a level floor of sufficient strength and that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.</p>	
SW020	

The washer-extractor must be anchored to a smooth level surface so that the entire base of the machine is supported and rests on the mounting surface. (Do not support the washer-extractor on only four points.)

A concrete base designed to elevate the washer-extractor to a comfortable and more accessible height for loading and unloading laundry may be used. Care must be exercised in the design of such a base due to the force exerted by the machine during extract. This base must be adequately tied in to the existing floor.

Static and dynamic loads on the floor or foundation are shown in the table below. This table can be used as a reference when designing floors and foundations.

UW 3-Speed Pocket Hardmount Floor Load Data		
	35	60
Static floor load, lbs (kN)	1174 (5.2)	1682 (7.5)
Static pressure, lbs/ft ² (kN/m ²)	184 (8.9)	189 (9.1)
Dynamic floor load, lbs (kN)	930 (4.2)	1716 (7.6)
Dynamic pressure, lbs/ft ² (kN/m ²)	146 (7)	193 (9.2)
Dynamic load frequency, Hz	9.95	9.35
Maximum vertical load, lbs (kN)*	1715 (7.7)	2916 (13)
Minimum vertical load, lbs (kN)**	145 (.7)	516 (2.3)
Base moment, lb/ft (kN/m)	2402 (3.3)	5399 (7.3)
* Acting in the downward direction against the floor.		
** Acting in the upward direction away from the floor.		

Table 2

Mounting Bolt Hole Locations

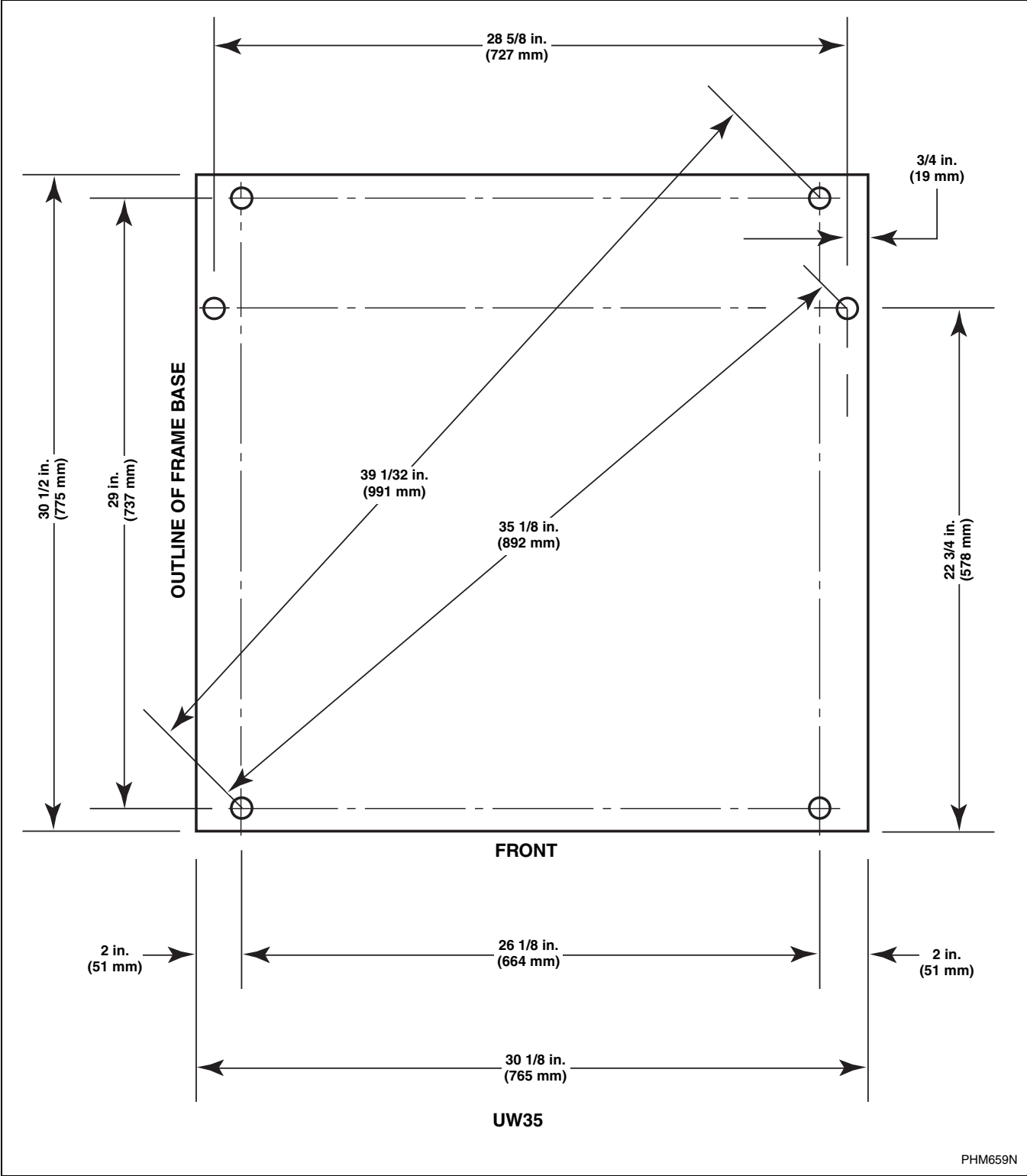


Figure 4

IMPORTANT: Drawing is not to scale.

Installation

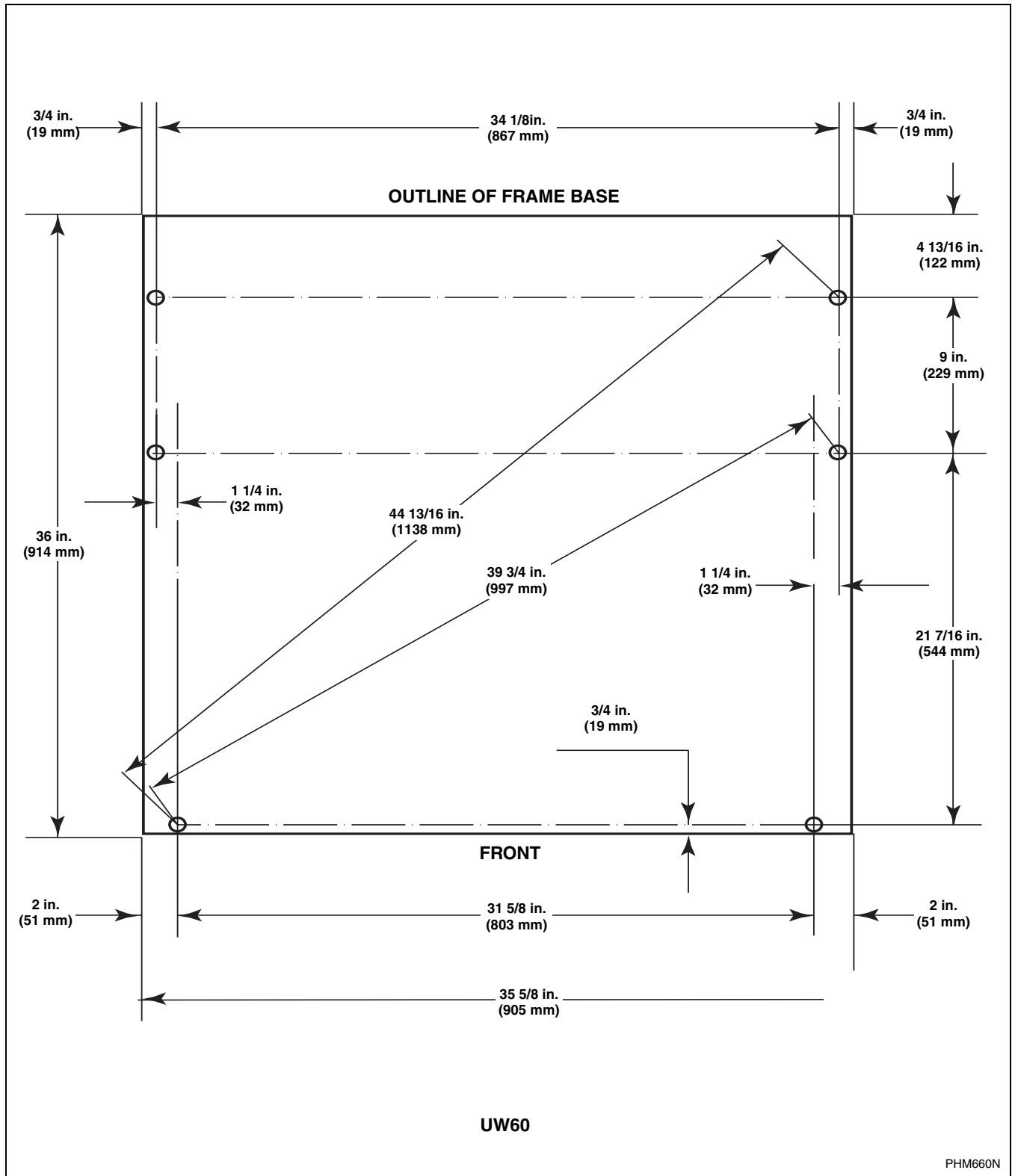


Figure 5

IMPORTANT: Drawing is not to scale.

Mechanical Installation

Mounting Bolt Installation

A bolt kit is available as an option. The UW35 uses 5/8-11 x 6 inch bolts; the UW60 uses 3/4-10 x 8 inch bolts. The bolts should be embedded in a 3500 psi minimum reinforced concrete floor that is a minimum of 6 inches thick. For mounting bolt layouts for both machines, see Figures 4 and 5. (The front of the washer-extractor is the bottom of the diagram.)

The threaded end of the bolts should extend 2 inches above the surface of the floor.

See Figure 6 for a typical installation of individual mounting bolts on a UW60.

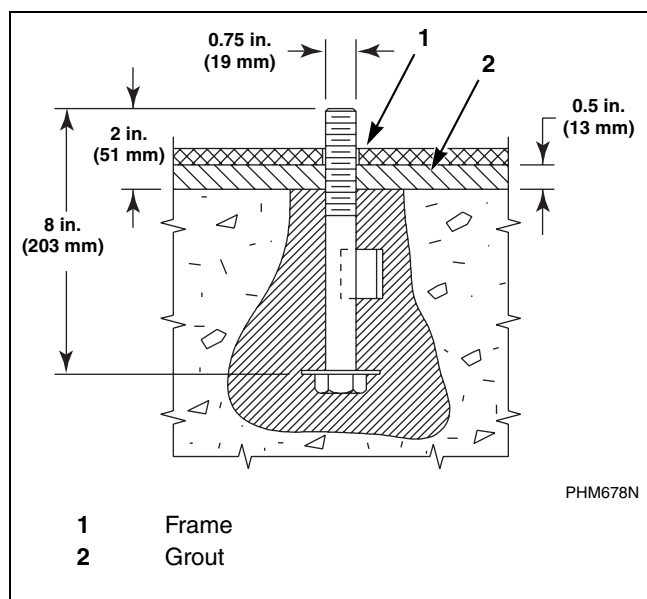


Figure 6

A bolt-locator fixture or rebar frame is available as an option. This rigid welded assembly made of reinforcing rod and mounting bolts is designed to be embedded in concrete. See Figure 7.

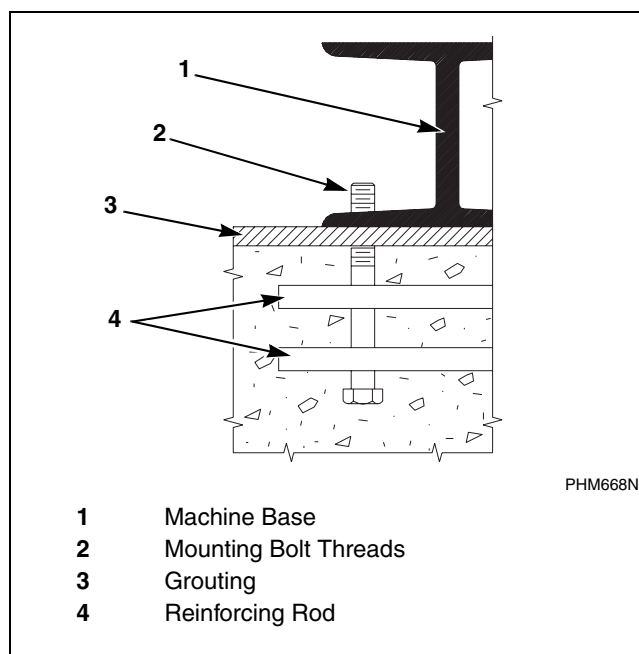


Figure 7

If the existing floor is not reinforced concrete at least 6 inches (152 mm) thick over a solid foundation, cut a hole approximately 5 feet square through the existing floor. Excavate to a depth of 6 inches from the top of the existing floor. Produce a pyramid-shaped hole by excavating the bottom of the hole to a width 6 inches wider on each side than the width of the top of the hole. Fill with 6 inches of reinforced concrete. Embed the mounting bolts or base frame as the concrete is poured. Ensure that the bolt threads extend 2 inches above floor level.

Installation

After the concrete has cured, proceed as follows:

1. Place the washer-extractor adjacent to the foundation. Do not attempt to move the machine by pushing on the sides. Always insert a pry bar or other device under the bottom frame of the machine to move it.
2. Remove the wood skid by unscrewing the carriage bolts holding the skid to the bottom frame of the washer-extractor.
3. Place the washer-extractor carefully over the anchor bolts. Never attempt to lift the machine by the door handle or by pushing on the cover panels.
4. Raise and level the washer-extractor 1/2 inch off the floor on three points, using spacers such as nut fasteners.
5. Fill the space between the washer-extractor base and the floor with a good quality non-shrinking machinery grout to ensure a stable installation. Grout completely under all frame members. (Remove front panel and rear panel to gain access to **all** frame members.) See *Figure 8* and *Figure 9*. Force grout under machine base until all voids are filled.

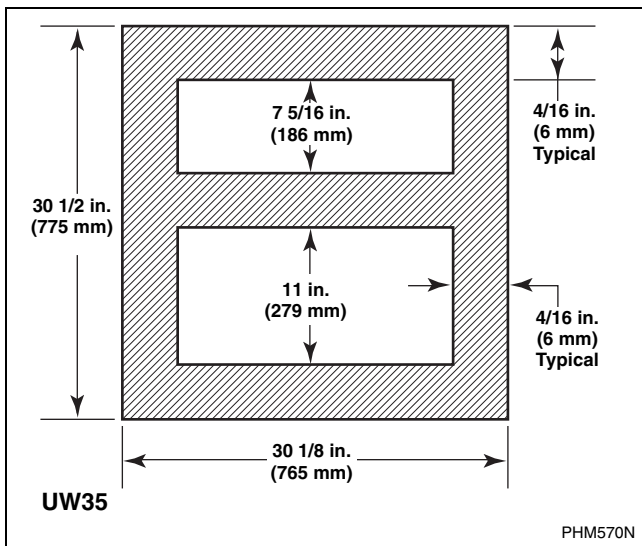


Figure 8

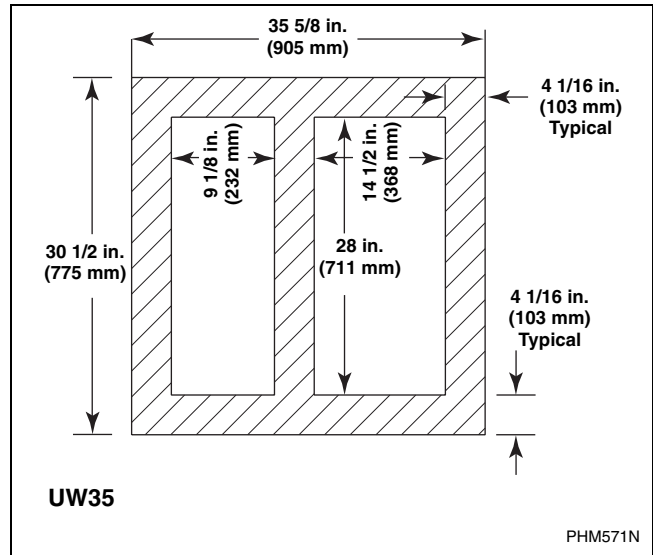


Figure 9

6. Remove the spacers carefully, allowing the machine to settle into the wet grout.
7. Before grout sets completely, make a drain opening in the rear of the washer-extractor grouting with a stiff piece of wire. This opening should be approximately 1/2 inch (13 mm) wide to allow any surface water build-up under the base of the machine to drain away. **Do not omit this step.**
8. Position the mounting bolt washers and locknuts on the anchor bolts and fingertighten locknuts to machine base.
9. After the grout is completely dry, tighten the locknuts by even increments—one after the other—until all are tightened evenly and the washer-extractor is fastened securely to the floor.

NOTE: Check and retighten the locknuts after five to ten days of operation and every month thereafter.

Drain Connection Requirements

A drain system of adequate capacity is essential to washer-extractor performance. Ideally, the water should empty through a vented pipe directly into a sump or floor drain. *Figure 10* and *Figure 11* show drain line and drain trough configurations.

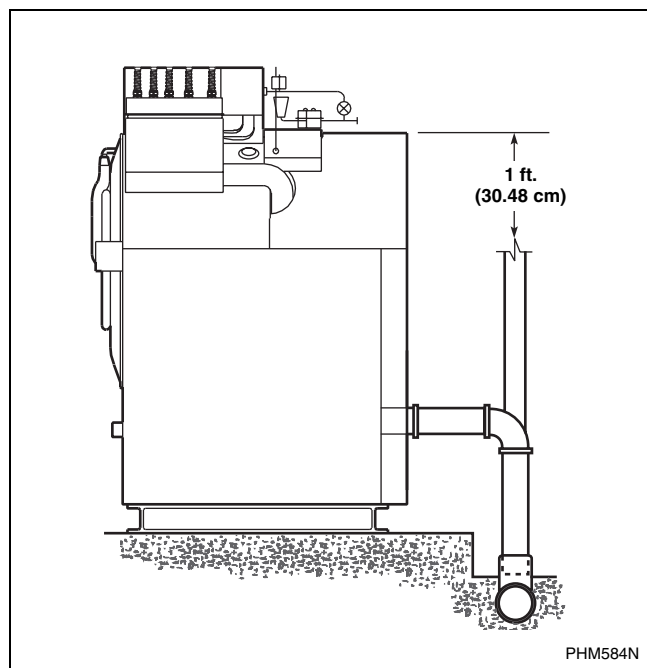


Figure 10

A flexible connection must be made to a vented drain system to prevent an air lock and to prevent siphoning.

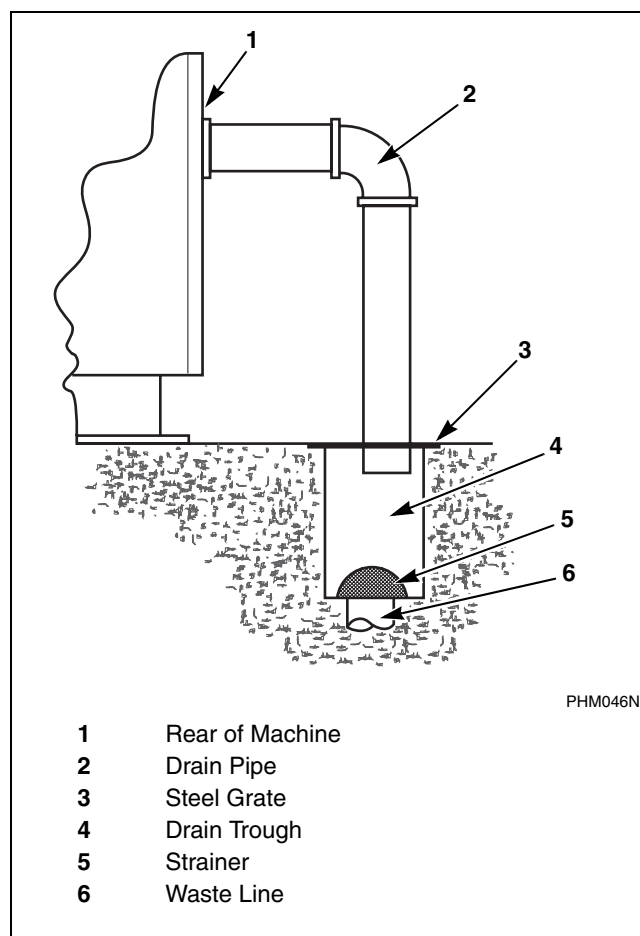
IMPORTANT: Washer-extractor must be installed in accordance with all local codes and ordinances.

IMPORTANT: The top of the vent must be 1 foot (30.48 cm) lower than the bottom of the dispenser.

If proper drain size is not available or practical, a surge tank is required. A surge tank in conjunction with a sump pump should be used when gravity drainage is not possible, such as in below-ground-level installations.

Before any deviation from specified installation procedures is attempted, the customer or installer should contact the distributor.

Increasing the drain hose length, installing elbows, or causing bends will decrease drain flow rate and increase drain times, impairing washer-extractor performance.



- 1 Rear of Machine
- 2 Drain Pipe
- 3 Steel Grate
- 4 Drain Trough
- 5 Strainer
- 6 Waste Line

Figure 11

Installation

Refer to *Table 3* for capacity-specific drain information.

Installation of additional washer-extractors will require proportionately larger drain connections. Refer to *Table 4*.

Drain Information		
	35	60
Drain connection size, I.D., in (mm)	2-3/8 (60)	3 (76)
Number of drain outlets	1	1
Drain flow capacity, gal/min (l/min)	35 (132)	64 (242)
Recommended drain pit size, ft ³ (l)	5 (142)	6 (170)

Table 3

Drain Line Sizing Minimum Drain I.D. in (mm)		
Number of Machines	35	60
1	3 (76.2)	3 (76.2)
2	3 (76.2)	4 (102)
3	3-1/2 (89)	6 (152)
4	4 (102)	6 (152)

Table 4

Water Connection

Water Supply Information		
Water inlet connection size, in (mm)	3/4 (19)	
Number of water inlets (standard)	4	
Recommended pressure psi (bar)	30 – 85 (2 – 5.7)	
Inlet flow capacity, gal/min (l/min) (80 psi)	35	28 (106)
	60	39 (148)

Table 5

Connections should be supplied by hot and cold water lines of at least the sizes shown in the Water Supply Line Sizing table. Installation of additional machines will require proportionately larger water lines. See table.

To connect water service to machine with rubber hoses, use the following procedure:

1. Before installing hoses, flush the water system for at least two minutes.
2. Check filters in the washer-extractor's inlet hoses for proper fit and cleanliness before connecting.
3. Hang the hoses in a large loop; do not allow them to kink.

If additional hose lengths are needed, use flexible hoses with screen filters. Each hose should have a screen filter installed to keep rust and other foreign particles out of the water inlet valves.

Pressure of 30 – 85 psi (2 – 5.7 bar) provides best performance. Although the washer-extractor will function properly at lower pressures, increased fill times will occur.

Water Supply Line Sizing			
	Number of Machines	Supply Line Size in (mm)	
		Main	Hot/Cold
35	1	1 (25)	3/4 (19)
	2	1-1/2 (38)	1 (25)
	3	2 (50)	1-1/4 (32)
	4	2 (50)	1-1/2 (38)
60	1	1-1/4 (32)	1 (25)
	2	2 (50)	1-1/4 (32)
	3	2 (50)	1-1/2 (38)
	4	2-1/2 (64)	2 (50)

Table 6

Suitable air cushions should be installed in supply lines to prevent “hammering.” See *Figure 12*.

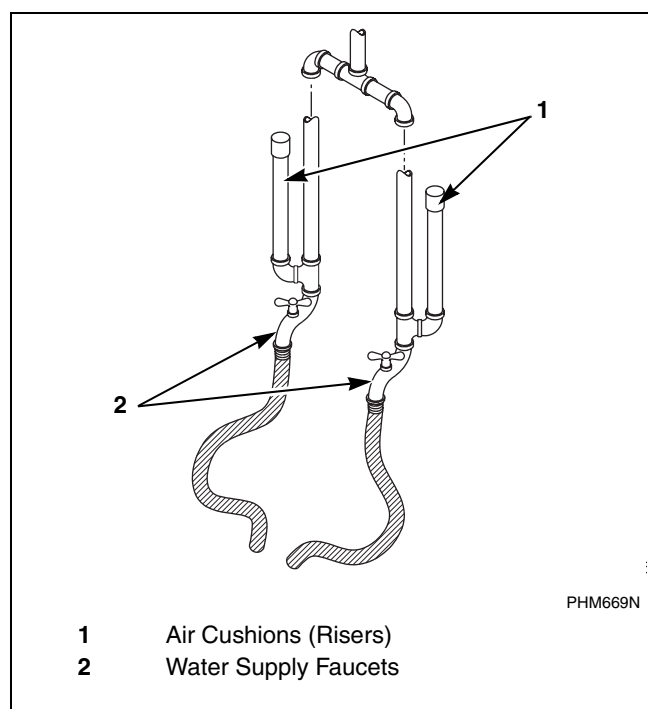


Figure 12

Electrical Installation

	CAUTION
<p>This machine must be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury and/or equipment damage, and may void the warranty.</p>	
SW004	

	WARNING
<p>Dangerous voltages are present in the electrical control box(es) and at the motor terminals. Only qualified personnel familiar with electrical test procedures, test equipment, and safety precautions should attempt adjustments and troubleshooting. Disconnect power from the machine before removing the control box cover, and before attempting any service procedures.</p>	
SW005	

	WARNING
<p>Ensure that a ground wire from a proven earth ground is connected to the ground lug near the input power block on this machine. Without proper grounding, personal injury from electric shock could occur and machine malfunctions may be evident.</p>	
SW008	

Electrical connections are made at the rear of the control module. The machine must be connected to the proper electrical supply shown on the identification plate attached to the side of the control module.

Installation

NOTE: Do NOT use fuses in place of a circuit breaker.

The washer-extractor should be connected to an individual branch circuit not shared with lighting or other equipment.

The connection should be shielded in a liquid-tight or approved flexible conduit with proper conductors of correct size installed in accordance with the National Electric Code or other applicable codes. The connection must be made by a qualified electrician using the wiring diagram provided with the washer-extractor.

Use wire sizes indicated in the Electrical Specifications chart for runs up to 50 feet. Use next larger size for runs of 50 to 100 feet. Use 2 sizes larger for runs greater than 100 feet.

For personal safety and for proper operation, the washer-extractor must be grounded in accordance with state and local codes. If such codes are not available, grounding must conform with the National Electric Code, article 250-95 or other applicable codes. The ground connection must be made to a proven earth ground, not to conduit or water pipes.

Do not connect the ground to the neutral (N-white wire) leg at the power input block terminal strip. See *Figure 13*.

If a delta supply system is used, the high leg **must** be connected to L3 (red wire) at the power input block. If three-phase service is not available and a phase adder is used, the artificial leg **must** be connected to L3. See *Figure 13*.

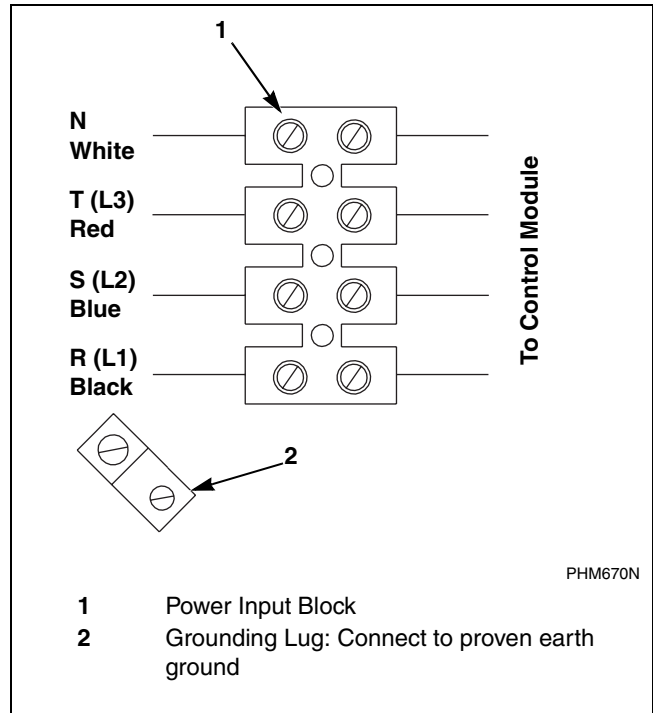


Figure 13

Refer to *Figure 14* for the terminal strip for models with “Design 5”.

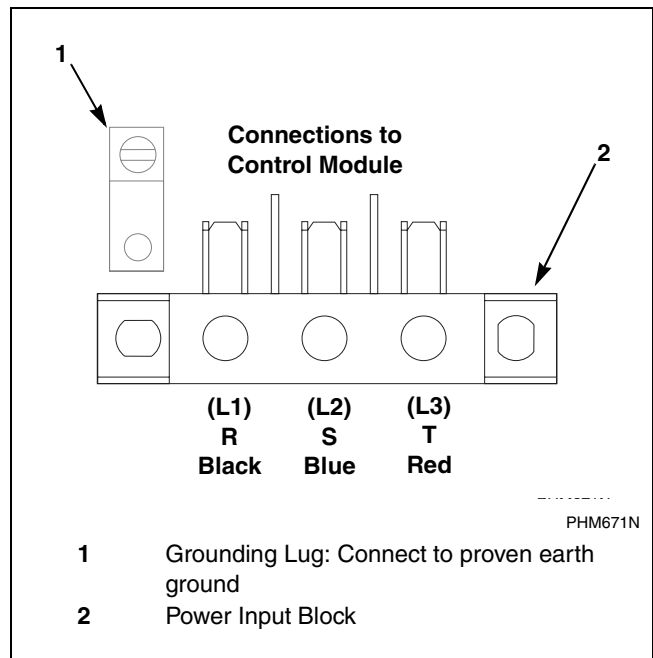



Figure 14

Electrical Specifications													
	Voltage Designation					Standard				Electric Heat			
	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Breaker	AWG	mm ²	Full Load Amps	Breaker	AWG	mm ²
35	D	220-240	50	3	3	14	25	10	3x6	38	50	6	3x16
	F	440-480	60	3	3	8	15	14	3x2.5	27	30	10	3x6
	G	440	50	3	3	8	15	14	3x2.5	27	30	10	3x6
	H	380	60	3	3	8	15	14	3x2.5	27	30	10	3x6
	M	550-575	60	3	3	8	15	14	3x2.5	Not available in this voltage.			
	O	208-240	60	3	3	14	25	10	3x6	48	50	6	3x16
	S	380	50	3	3	8	15	14	3x2.5	27	30	10	3x6
	W	380-415	50	3	3	8	15	14	3x2.5	22	30	10	3x6
60	D	220-240	50	3	3	13	30	10	3x6	66	80	3	3x30
	F	440-480	60	3	3	7	20	12	3x4	33	40	8	3x10
	G	440	50	3	3	7	20	12	3x4	30	40	8	3x10
	H	380	60	3	3	7	20	12	3x4	26	35	8	3x10
	M	550-575	60	3	3	7	20	12	3x4	Not available in this voltage.			
	O	208-240	60	3	3	13	30	10	3x6	66	80	3	3x30
	S	380	50	3	3	7	25	10	3x6	26	35	8	3x10
	W	380-415	50	3	3	7	20	12	3x4	29	40	8	3x10

NOTE: Wire sizes shown are for copper, THHN, 90° conductor per NEC article 310.

Table 7

Steam Requirements (Steam Heat Option Only)

	WARNING
<p>Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.</p>	
SW014	

For washer-extractors equipped with optional steam heat, install piping in accordance with approved commercial steam practices. Steam requirements are shown in the table below.


The optional steam connection for above models is located at the upper right corner of the rear panel, as seen from the rear.

Steam Supply Information	
Steam inlet connection, in (mm)	1/2 [DN13] (12.7)
Number of steam inlets	1
Recommended pressure, psi (bar)	30 – 80 (2.0 – 5.4)
Maximum pressure, psi (bar)	80 (5.4)

Table 8

NOTE: Failure to install the supplied steam filter may void the warranty.

Chemical Injection Supply System

	<h3>WARNING</h3>
<p>Wear eye and hand protection when handling chemicals; always avoid direct contact with raw chemicals. Read the manufacturer's directions for accidental contact before handling chemicals. Ensure an eye-rinse facility and an emergency shower are within easy reach. Check at regular intervals for chemical leaks.</p>	
<small>SW016</small>	

Undiluted chemical dripping can damage the washer-extractor. Therefore, all chemical supply dispenser pumps should be mounted below the washer's injection point. All dispenser tubing should also run below the injection point. Loops do not prevent drips if these instructions are not followed. Failure to follow these instructions could damage the machine and void the warranty. *Figure 15* shows a typical Chemical Injection Supply System.

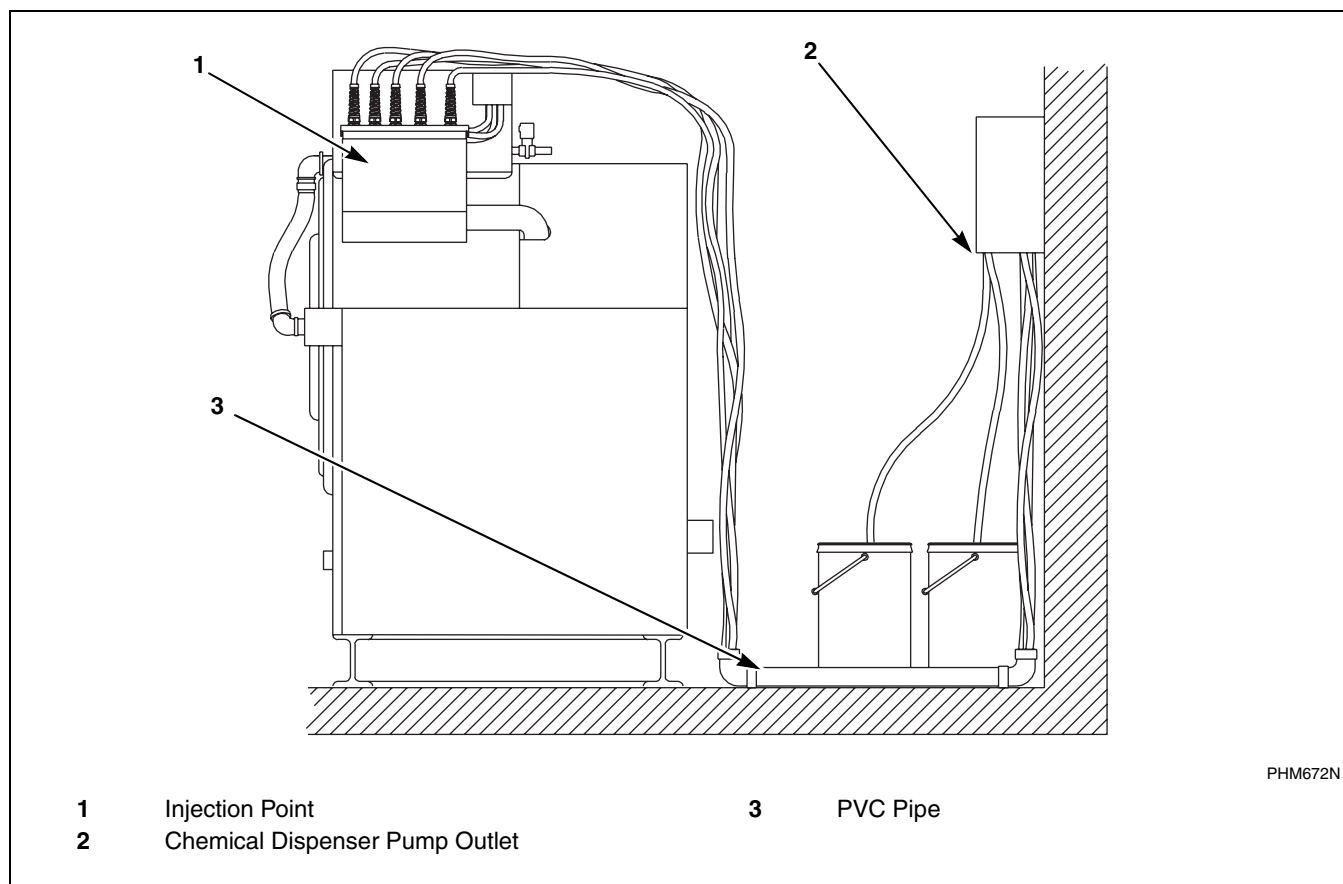


Figure 15

Installation

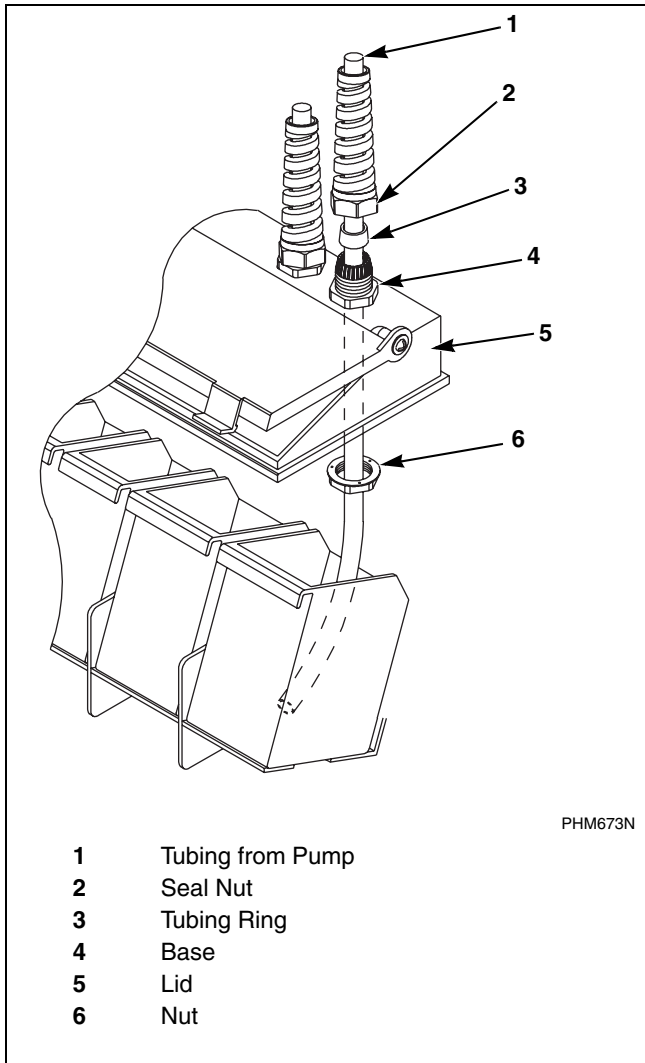


Figure 16

Connecting External Liquid Supplies to the Washer-Extractor

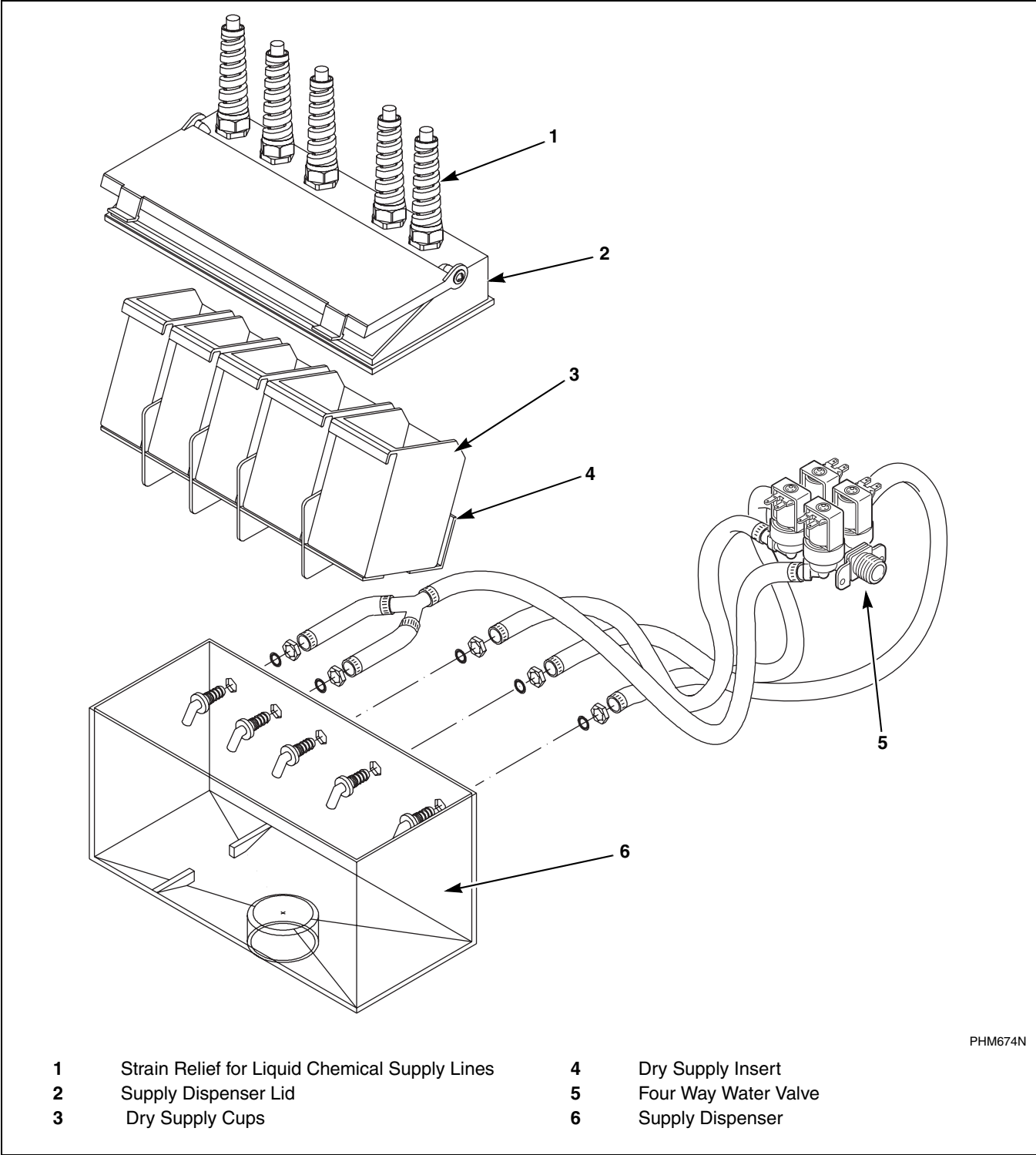
1. Remove plugs from base. See *Figure 16*. Plugs are assembled inside the tubing ring.
2. Install strain reliefs, included in the seal nut.
3. Insert tubes through base. Do not remove cups. Tube should extend into the plastic cup, with the exception of the softener tube, which should be routed to the outside of the cup.
4. Tighten the seal nut to prevent tubing from escaping the assembly.

The UW 3-speed washer-extractor has a polypropylene supply dispenser with five supply compartments. See *Figure 17*.

Do not attempt to make chemical injection electrical connections to points other than those provided specifically for that purpose by the factory.

Chemical Injection Supply System	
Number of dry supply compartments	5
Number of liquid supply connections	5
Liquid supply connection size, in (mm)	5/8 (15.9)

Table 9



PHM674N

Figure 17

Installation

Chemical Injection Supply System (continued)

A stainless steel box at the right rear of the control module houses a terminal strip which furnishes supply output signals for the chemical injection supply pumps. See Figure 17 for an example of a typical terminal strip decal.


Terminals **SUPPLY 1** through **SUPPLY 5** provide 120VAC or 240VAC fused at 500mA. (Refer to the decal at the external supply terminal strip to determine whether the washer-extractor provides 120VAC or 240VAC, as well as other pertinent information.)

These terminals may be used to provide signals to the chemical injection supply system but must not be used to provide power to the actual pump. Do not attempt to increase fuse rating as this may cause damage to the washer-extractor's circuitry.

On models with "design 5", the terminal strip which furnishes the supply output signal is located inside the control module at the rear. Access is through the rear panel of the control module.

All terminals, Supply 1 through Supply 5, on "Design 5" models provide 200-240 VAC fused at 500 mA.

Any injection system pump which requires 110VAC must be powered by a separate external power source.

	<h2>CAUTION</h2>
<p>Attempting to obtain 110VAC by using L1 or L2 with the common may damage laundry machine circuitry and/or the chemical injection system. Using a 240VAC power wire in the washer-extractor and an earth ground to obtain 110VAC could cause microprocessor problems.</p>	
<small>SW028</small>	

Consult the chemical injection supply system instructions for operational details.

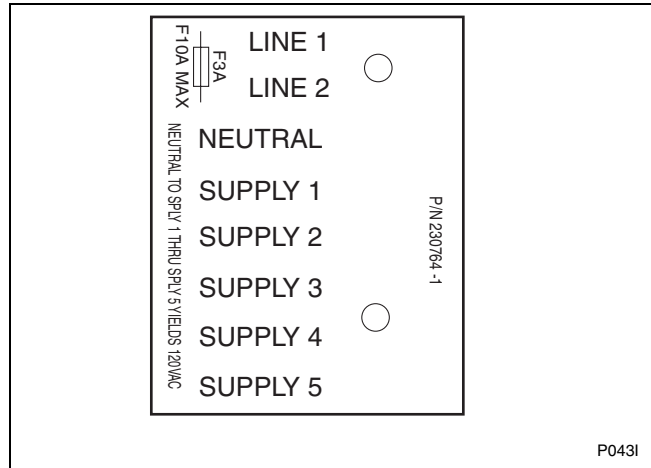


Figure 18

Control Function Test

The washer-extractor should be cleaned after the installation is complete. A function test should then be executed on the unloaded machine:

1. Check the power supply for such characteristics as correct voltage, phase, and cycles to be certain they are correct for the washer-extractor.
2. Open manual shut-off valves to the washer-extractor.

NOTE: If the washer-extractor is equipped with the WE-6 microcomputer, press the Emergency Stop button at this point in the procedure.

3. Apply power to the washer-extractor.

NOTE: If the washer-extractor is equipped with the WE-6 microcomputer, release the Emergency Stop button at this point in the procedure by pulling the button sharply.

4. Check the door interlock before starting operation:
 - a. Attempt to start the washer with the door open. The washer should not start with the door open.
 - b. Close the door without locking it and attempt to start the washer. The washer should not start with the door unlocked.
 - c. Close and lock the door and start a cycle. Attempt to open the door while the cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, call a service technician.

5. Run a full test cycle:
 - a. For washer-extractors equipped with the WE-6 microcomputer, select Cycle 01 by pressing key **0** and key **1** on the keypad. Then press the **Start** key.

Run the complete cycle, checking operation of all functions.

- b. For washer-extractors equipped with the S-series microcomputer, select an appropriate cycle from the 12 cycles listed in the S-series Operation/Programming manual F232087.

Run the complete cycle, checking operation of all functions.


As an alternative, a test cycle is available for the S-series microcomputer. To access the test cycle, verify that the RUN/PROGRAM mode toggle switch is in the RUN position. Press the **Up** or **Down** key until the display alternately flashes "CHEC" and "CYC," indicating that the test cycle is selected. Press the **Start** key to begin the test cycle.


NOTE: Pressing the Start key while the test cycle is in progress will prompt the computer to advance to the next step in the test cycle. Drain steps may *not* be skipped.

6. Cylinder rotation must be clockwise in the extract step. If rotation is not clockwise in the extract step, disconnect power. A qualified electrician must reverse any two leads between the mains contactor and the motor.

Maintenance

Routine maintenance maximizes operating efficiency and minimizes downtime. The maintenance procedures described below will prolong the life of the machine and help prevent accidents.

	WARNING
Be careful when handling sheet-metal parts. Sharp edges can cause personal injury. Wear safety glasses and gloves, use the proper tools, and provide adequate lighting.	
SW035	

	WARNING
Replace all panels that are removed to perform service and maintenance procedures. Do not operate the machine with missing guards or with broken or missing parts. Do not bypass any safety devices.	
SW019	

Daily, weekly, monthly, and quarterly checklists are provided at the end of this section. Laminate the checklists to preserve them for repeated copying. Operators and technicians are encouraged to add checks specific to their washer-extractor's particular application. Where possible, space is provided on the checklists for this purpose.

The following maintenance procedures must be performed regularly at the required intervals.

Daily

Beginning of Day

1. Inspect water inlet valve hose connections on the back of the washer-extractor for leaks.
2. Inspect steam hose connections for leaks (where applicable).
3. Verify that insulation is intact on all external wires and that all connections are secure. If bare wire is evident, call a service technician.
4. Check door interlock before starting operation:
 - a. Attempt to start the washer with the door open. The washer should not start with the door open.
 - b. Close the door without locking it and attempt to start the washer. The washer should not start with the door unlocked.
 - c. Close and lock the door and start a cycle. Attempt to open the door while the cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, call a service technician.

End of Day

5. Clean the door gasket of residual detergent and all foreign matter.
6. Clean automatic supply dispenser and lid inside and out with mild detergent. Rinse with clean water.
7. Clean washer's top, front, and side panels with mild detergent. Rinse with clean water.
8. Leave loading door open at the end of each day to allow moisture to evaporate.

NOTE: Unload the washer-extractor promptly after each completed cycle to prevent moisture buildup. Leave loading door open at the end of each completed cycle to allow moisture to evaporate.

Maintenance

Weekly

1. Check the washer-extractor for leaks.
 - a. Start an unloaded cycle to fill the washer-extractor.
 - b. Verify that door and door gasket do not leak.
 - c. Verify that the drain valve is operating and that the drain system is free from obstruction. If water does not leak out during the prewash segment, drain valve is closed and functioning properly.

Monthly

NOTE: Disconnect power to the washer-extractor at its source before performing the monthly maintenance procedures.

1. Each month OR after every 200 hours of operation, lubricate bearings of the UW60. (Locate the bearing lubrication decal. See *Figure 19*.)

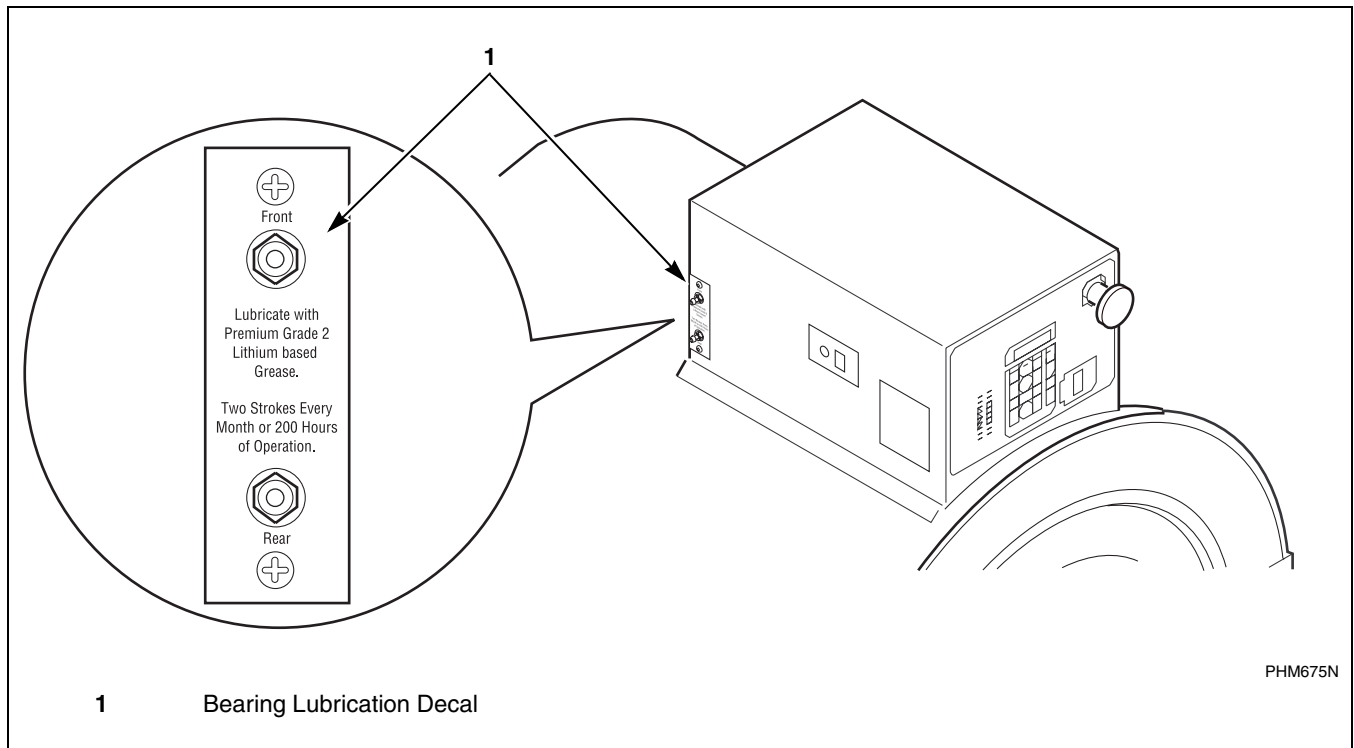


Figure 19

The grease must have the following characteristics:

- NLGI Grade 2
- Lithium-based
- Water-insoluble
- Anti-rusting
- Anti-oxidizing
- Mechanically stable

The grease must have adequate base oil viscosity with one of the following ratings:

- ISO VG 150 (135 – 165 cSt at 40°C or 709 – 871 SUS at 100°F)
- ISO VG 220 (198 – 242 cSt at 40°C or 1047 – 1283 SUS at 100°F)
- An SAE 40 rating is also acceptable as long as the cSt or SUS values are within the specified ranges.
- Pump the grease gun slowly, permitting only 2 strokes.

NOTE: The UW35 3-speed bearings are permanently greased bearings and do not require lubrication.

2. Use the following procedures to determine if V-belts require replacement or adjustment. Call a qualified service technician in either case.
 - a. Check V-belts for uneven wear and frayed edges.
 - b. After disconnecting power to the washer-extractor and removing all panels necessary for access to the drive belt, use one of the following methods to verify that V-belts are properly tensioned.
 - **Tension Gauge.** Increase spring tension to change belt span length. The UW 3-speed belt tension should be set according to the data listed in the table below.

Model	Frequency (Hz)	Tension Force (lbs*)	
		Basket/Extract Motor	Wash Motor/Extract Motor
35	50	55 – 65	40 – 50
	60	50 – 60	50 – 60
60	50	80 – 100	35 – 45
	60	70 – 90	35 – 45

*Tolerance: ± 5 pounds
Set initial tension towards high end of these ranges.

Table 10

- **Deflection.** See Figure 19. Increase spring tension to change belt span length. Belt tension measurements should be taken as close to the center of the belt span as possible. For every inch of span length, the belt should deflect 1/64 inch (0.40 mm). Thus, a belt with span length of 50 inches should deflect 50/64 inch (19.84 mm). An initial (run-in) force should be used to set the belt tension. An operating (normal) force should be used after the washer-extractor has been operated for a few hours. See the table below.

Model	Frequency (Hz)	Deflection Force (lbs)			
		Basket/Extract Motor		Wash Motor/Extract Motor	
		Run-in	Normal	Run-in	Normal
35	50	7	5	6	4
	60	7	5	5	3
60	50	7.125	4.75	5	3
	60	5.25	3.5	5	3

Table 11

Maintenance

- c. Verify that V-belts are properly aligned by checking pulley alignment. Place a straightedge across both pulley faces. The straightedge should make contact with the pulleys in four places. See *Figure 21*.
3. Remove back panel and check overflow hose and drain hose for leaks.

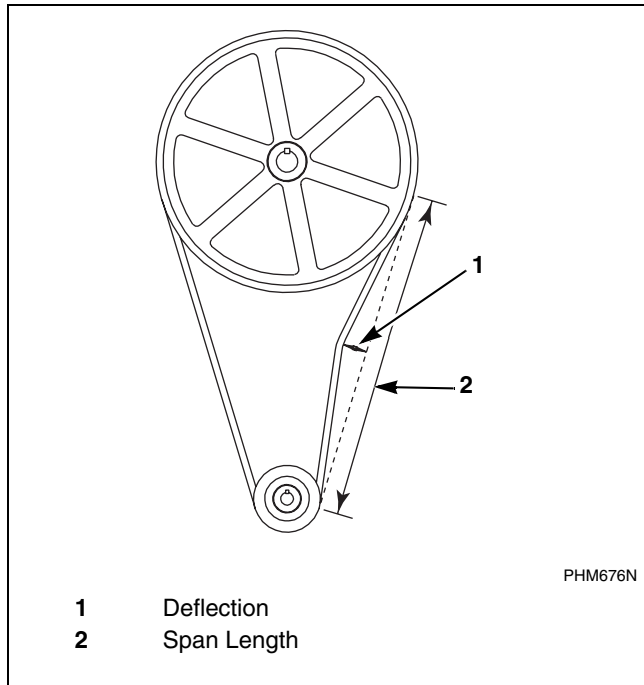


Figure 20

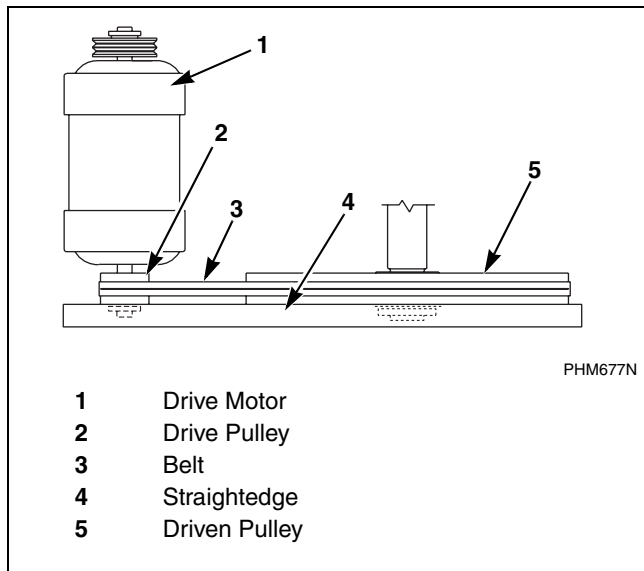


Figure 21

4. Unlock the hinged lid and check the supply dispenser hoses and hose connections.
5. Clean inlet hose filter screens:
 - a. Turn water off and allow valve to cool, if necessary.
 - b. Unscrew inlet hose and remove filter screen.
 - c. Clean with soapy water and reinstall. Replace if worn or damaged.
6. Remove back panel and check overflow hose and drain hose for leaks.
7. Tighten motor mounting bolt locknuts and bearing bolt locknuts, if necessary.
8. Use compressed air to clean lint from motor.
9. Clean interior of washer-extractor, both basket and shell, by wiping with a water-soaked sponge or cloth.
10. Use compressed air to ensure that all electrical components are free of moisture and dust.

Quarterly

NOTE: Disconnect power to the washer-extractor before performing the quarterly maintenance procedures.

1. Tighten door hinges and fasteners, if necessary.
2. Tighten anchor bolts, if necessary.
3. Verify that the drain motor shield is in place and secure.
4. Check all painted surfaces for bare metal.
(Matching gray paint is available from the manufacturer.)
 - If bare metal is showing, paint with primer or solvent-based paint.
 - If rust appears, remove it with sandpaper or by chemical means.
Then paint with primer or solvent-based paint.
5. Clean steam filter, where applicable.
 - a. Turn off steam supply and allow time for the valve to cool.
 - b. Unscrew nut.
 - c. Remove element and clean.
 - d. Replace element and nut.

Maintenance

Care of Stainless Steel

Maintain the natural beauty of stainless steel and prolong its service life by following these tips:

- Ordinary deposits of dirt and grease can be removed with detergent and water. The metal should be thoroughly rinsed and dried after washing. Periodic cleaning will help to maintain the bright surface appearance and prevent corrosion.
- Contact with dissimilar metals should be avoided whenever possible. This will help prevent galvanic corrosion when salty or acidic solutions are present.
- Salty or acidic solutions should not be allowed to evaporate and dry on stainless steel. They may cause corrosion. Ensure that the stainless steel is wiped clean of acidic solution residues.
- Deposits that adhere to the stainless steel should be removed, especially from crevices and corners. When using abrasive cleaners, always rub in the direction of the polish lines or “grain” of the stainless steel to avoid scratch marks. Never use ordinary steel wool or steel brushes on the stainless steel. Use stainless steel wool or soft non-metal bristle brushes.
- If the stainless steel appears to be rusting, the source of the rust may actually be an iron or steel part not made of stainless steel, such as a nail or screw. One remedy is to paint all carbon steel parts with a heavy protective coating. Stainless steel fasteners should be used whenever possible.
- Discolorations or heat tint from overheating may be removed by scouring with a powder or by employing special chemical solutions.
- Sanitizers or sterilizing solutions should not be left in stainless steel equipment for prolonged periods of time. They often contain chlorine, which may cause corrosion. The stainless steel should be cleaned and rinsed thoroughly of any solution containing chlorine.
- When an external chemical supply system is used, make certain that no siphoning of chemicals occurs when the washer-extractor is not in use. Highly concentrated chemicals can cause severe damage to stainless steel and other components within the washer-extractor. Damage of this kind is not covered by the manufacturer’s warranty. Locate the pump below the washer-extractor’s injection point to prevent siphoning of chemicals into the washer-extractor. See *Figure 15* in the Installation section.

Daily Preventive Maintenance Checklist

Machine _____ Operator _____	Week Of: _____						
	Days						
Checks	1	2	3	4	5	6	7
Observe All Safety Warnings!							
Beginning of Day							
1. Inspect water inlet valve hose connections on the back of the washer-extractor for leaks.							
2. Inspect steam hose connections for leaks (where applicable).							
3. Verify that insulation is intact on all external wires and that all connections are secure.							
4. Check door lock and interlock before starting operation:							
a. Attempt to start the washer with door open.							
b. Close the door without locking it and attempt to start the washer.							
c. Close and lock the door, start a cycle, and attempt to open the door while the cycle is in progress.							
5.							
End of Day							
1. Clean the door gasket of all foreign matter.							
2. Clean automatic supply dispenser and lid.							
3. Clean the washer's top, front, and side panels.							
4. Leave loading door open at the end of each day to allow moisture to evaporate.							
5.							
6.							
NOTE: Unload the washer-extractor promptly after each completed cycle to prevent moisture buildup. NOTE: Leave loading door open after each completed cycle to allow moisture to evaporate.							

Maintenance

Weekly Preventive Maintenance Checklist

Machine _____	Month _____				
Operator _____	Week Ending:				
Checks	/	/	/	/	/
Observe All Safety Warnings!					
1. Check the washer-extractor for leaks:					
a. Start an unloaded cycle to fill the washer-extractor.					
b. Verify that door and door gasket do not leak.					
c. Verify that the drain valve is operating.					
2.					
3.					
4.					
5.					
6.					
7.					

Monthly Preventive Maintenance Checklist

Machine _____ Operator _____	Month			
Checks				
Observe All Safety Warnings! Disconnect power to the washer-extractor before performing the monthly maintenance procedures.				
1. Each month OR after every 200 hours of operation, lubricate bearings.				
2. Determine if V-belts require replacement or adjustment:				
a. Check V-belts for uneven wear and frayed edges.				
b. Verify that V-belts are properly tensioned.				
c. Verify that V-belts are properly aligned.				
3. Remove back panel and check hoses for leaks.				
4. Unlock the hinged lid and check supply dispenser hoses and connections.				
5. Clean inlet hose filter screens. Replace if worn or damaged.				
6. Tighten motor mounting bolt locknuts and bearing bolt locknuts, if necessary.				
7. Use compressed air to clean lint from motor.				
8. Clean interior of washer-extractor, both basket and shell, by wiping with a water-soaked sponge or cloth.				
9. Use compressed air to clean moisture and dust from all electrical components.				
10.				
11.				
12.				
13.				
14.				

Quarterly Preventive Maintenance Checklist

Machine _____	Quarter			
Operator _____				
Checks				
Observe All Safety Warnings! Disconnect power to the washer-extractor before performing the quarterly maintenance procedures.				
1. Tighten door hinges and fasteners, if necessary.				
2. Tighten anchor bolts, if necessary.				
3. Verify that the drain motor shield is in place and secure.				
4. Check all painted surfaces for bare metal. Repair, if necessary.				
5. Clean steam filter, if applicable.				
6.				
7.				
8.				
9.				
10.				
11.				

Removal from Service

Decommissioning

In the event that the machine must be decommissioned, follow these steps:

1. Remove the chemical injection supply system, if applicable.
 - a. Have a qualified electrician disconnect power to the chemical injection supply system at its source.
 - b. Using the manufacturer's instructions, carefully remove the chemical injection supply system from the machine. Make certain that no chemical supplies come into contact with skin or clothing.
2. Clean interior of machine, both basket and shell.
 - a. Flush supply dispenser (soap dish) with water.
 - b. Run a short rinse cycle to clean detergent and chemical residues from the interior of the machine.
3. Disconnect electrical power.
 - a. Shut off main power supply at the breaker box or main control panel.
 - b. Do not attempt to disconnect power supply wires from power supply. Have a qualified electrician disconnect power to machine and reuse unit, if applicable, at its source.
4. Disconnect hoses.
 - a. Disconnect drain hose from sump, gutter, or drain.
 - b. Turn off water supply. Disconnect individual hot and cold water inlet hoses from the machine.
 - c. Allow time for residual water in the machine to drain. Then disconnect drain hose from the machine.
5. Disconnect steam hose, if applicable.
 - a. Turn off steam supply and allow time for the valve to cool.
 - b. Disconnect steam hose from machine.
6. Remove the washer-extractor from its foundation pad.
 - a. Keep all panels in place to provide stability when moving the machine.
 - b. Verify that door is closed and secure.
 - c. Loosen and remove anchor bolts holding machine base to floor.
 - d. Break the grout seal at each corner of the machine, using a crowbar.
 - e. Use crowbars at the front corners to lift the machine a few inches so that the forks of a forklift truck can reach under the machine.
 - f. Bolting the base frame to a pallet will facilitate removal to a transport vehicle.

