OPERATING & MAINTENANCE MANUAL

EX -80

471 1562-38/01
95.43

WARNING: ALL OPERATING AND MAINTENANCE PROCEDURES SHOWN ON THE NEXT PAGE OF THIS MANUAL MUST BE FOLLOWED DAILY FOR PROPER OPERATION OF YOUR WASCOMAT MACHINE.

PLEASE ENTER THE FOLLOWING INFORMATION AS IT APPEARS ON THE MACHINE(S) DATA PLATE(S).

MACHINE TYPE OR MODEL	**EX -80**
MACHINE SERIAL NUMBER(S)	
ELECTRICAL CHARACTERISTICS: _____ VOLTS, _____ PHASE, _____ HZ.	

MAKE CERTAIN TO KEEP THIS MANUAL IN A SECURE PLACE FOR FUTURE REFERENCE.

NOTICE TO: OWNERS, OPERATORS AND DEALERS OF WASCOMAT MACHINES

IMPROPER INSTALLATION AND INADEQUATE MAINTENANCE, POOR HOUSEKEEPING AND WILLFUL NEGLECT OR BYPASSING OF SAFETY DEVICES MAY RESULT IN SERIOUS ACCIDENTS OR INJURY. TO ASSURE THE SAFETY OF CUSTOMERS AND/OR OPERATORS OF YOUR MACHINE, THE FOLLOWING MAINTENANCE CHECKS MUST BE PERFORMED ON A DAILY BASIS.

1. Prior to operation of the machine, check to make certain that all operating instructions and warning signs are affixed to the machine and legible. (See the following page of this manual for description and location of the signs.) Missing or illegible ones must be replaced immediately. Be sure you have spare signs and labels available at all times. These can be obtained from your dealer or Wascomat.

2. Check the door safety interlock, as follows:

   (a) OPEN THE DOOR of the machine and attempt to start in the normal manner:

   For coin-operated models, insert the proper coins to start the machine.

   For manually operated models, place the ON/OFF switch in the ON position and press the Start switch.

   For FL models, insert a program card, turn the starter knob to the Start position and place the ON/OFF switch in the ON position.

   For HI-TEK microprocessor models, turn the key switch to the RUN position, choose a program and press the START button.

   THE MACHINE(S) SHOULD NOT START !

   (b) CLOSE THE DOOR to start machine operation and, while it is operating, attempt to open the door without exerting extreme force on the door handle. The door should remain locked!

   If the machine can start with the door open, or can continue to operate with the door unlocked, the door interlock is no longer operating properly. The machine must be placed out of order and the interlock immediately repaired or replaced. (See the door interlock section of this manual.)

3. DO NOT UNDER ANY CIRCUMSTANCES ATTEMPT TO BYPASS OR REWIRE ANY OF THE MACHINE SAFETY DEVICES AS THIS CAN RESULT IN SERIOUS ACCIDENTS.

4. **Be sure to keep the machine(s) in proper working order**: Follow **all** maintenance and safety procedures. Further information regarding machine safety, service and parts can be obtained from your dealer or from Wascomat through its Teletech Service Hotline - (516) 371-0700.

All requests for assistance must include the model, serial number and electrical characteristics as they appear on the machine identification plate. Insert this information in the space provided on the previous page of this manual.

5. **WARNING**: DO NOT OPERATE MACHINE(S) WITH SAFETY DEVICES BYPASSED, REWIRED OR INOPERATIVE! DO NOT OPEN MACHINE DOOR UNTIL DRUM HAS STOPPED ROTATING!

SAFETY AND WARNINGS SIGNS

Replace If Missing Or Illegible

One or more of these signs must be affixed on each machine as indicated, when not included as part of the front instruction panel.

LOCATED ON THE OPERATING INSTRUCTION SIGN OF THE MACHINE:

CAUTION

1. Do not open washer door until cycle is completed, operating light is off, and wash cylinder has stopped rotating.
2. Do not tamper with the door safety switch or door lock.
3. Do not attempt to open door or place hands into washer to remove or add clothes during operation. This can cause serious injury.

MACHINE SHOULD NOT BE USED BY CHILDREN

PRECAUCION

1. No abra la puerta de la máquina lavadora sino hasta que la máquina haya terminado su ciclo, la luz operativa esté apagada y el cilindro de lavado haya complemente terminado de girar.
2. No interferia o manipule el switch o la cerradura de la puerta.
3. No trate de abrir la puerta o meta las manos dentro de la máquina para meter o sacar ropa mientras la m´quina está en operación, pues puede resultar seriamente herido.

LAS MÁQUINAS NO DEBEN SER USADAS POR NIÑOS

LOCATED AT THE REAR OF THE MACHINE:

INSTALLATION AND MAINTENANCE WARNINGS

1. **When installed on a floor of combustible material the floor area below this machine must be covered by a metal sheet extending to the outer edges of the machine.**
2. **This washing machine MUST be securely bolted to an uncovered concrete floor according to the installation instructions to reduce the risk of fire and to prevent serious injury, or damage to the machine.**
3. **This washing machine MUST be serviced and operated in compliance with manufacturer's instructions. CHECK DOOR LOCKS EVERY DAY FOR PROPER OPERATION TO PREVENT INJURY OR DAMAGE.**
4. **Disconnect power prior to any servicing of machine.**
5. **This washing machine MUST be connected to a dedicated electrical circuit to which no other lighting unit or general purpose receptacle is connected.**
6. **TO REMOVE TOP PANEL FOR SERVICE, remove two screws under soap supply box cover, holding panel to the supply box, before unlocking. Be certain to reinstall screws when remounting the top panel to prevent leaks from the supply box.**

MANUFACTURED BY ELECTROLUX-WASCATOR, LJUNGBY, SWEDEN
DISTRIBUTED BY WASCOMAT OF AMERICA, INWOOD, NEW YORK, USA
SOLD AND SERVICED BY INDEPENDENT WASCOMAT DEALERS

471 7646-01

LOCATED ON THE DOOR:

If you need to order more safety or warning signs, call Wascomat's parts department at 516-371-2000, or call your local dealer.

WARNING !

DO NOT OPEN THE DOOR UNTIL 30 SEC.
AFTER THE PROGRAM IS COMPLETED

471 4009-53

Contents

The manufacturer reserves the right to make changes to design and material specifications.

Safety rules

- **The machine is designed for water washing only.**
- **Machine must not be used by children.**
- **All installation operations are to be carried out by qualified personnel. Licensed personnel are necessary for all electric power wiring.**
- **The interlock of the door must be checked daily for proper operation and must not be bypassed.**
- **All seepage in the system, due to faulty gaskets etc., must be repaired immediately.**
- **All service personnel must be fully familiar with the operating manual before attempting any repair or maintenance of the machine.**
- **The machine must not be sprayed with water, otherwise short circuiting may occur.**
- **Fabric softeners with volatile or inflammable fluids are not to be used in the machine.**

General

Fig. 1

Our automatic, high extract speed washing machine with a drum volume of 350 liters has been designed to satisfy stringent demands for satisfactory operation, reliability and large wash capacity.

The washing machine is controlled by program cards, which can be individually programmed according to the user's requirements. This enhances the ability to adapt the wash program according to previous experience, different kinds of textiles, degree of soiling etc.

The machine has a switch for selecting gentle action, bypassing high speed extraction and for adding washing powder later during the cycle. Machine functions such as filling with water, heating, wash motor and drain can also be operated manually.

By using a special process which cools the wash before rising, a mixture of textiles can be washed at high temperature with a good result. Cooling reduces the risk of creasing no-iron textiles, a risk that is always possible during the change from hot washing water to cold rinsing water.

To avoid damaging textiles during the extract cycle, the machine is equipped with an out-of-balance sensor. If an imbalance arises, the extract cycle is discontinued, and the machine is filled with water and operates with reversing action to redistribute the wash load. The drain valve then opens, the machine assumes distribution speed and a new extract cycle starts.

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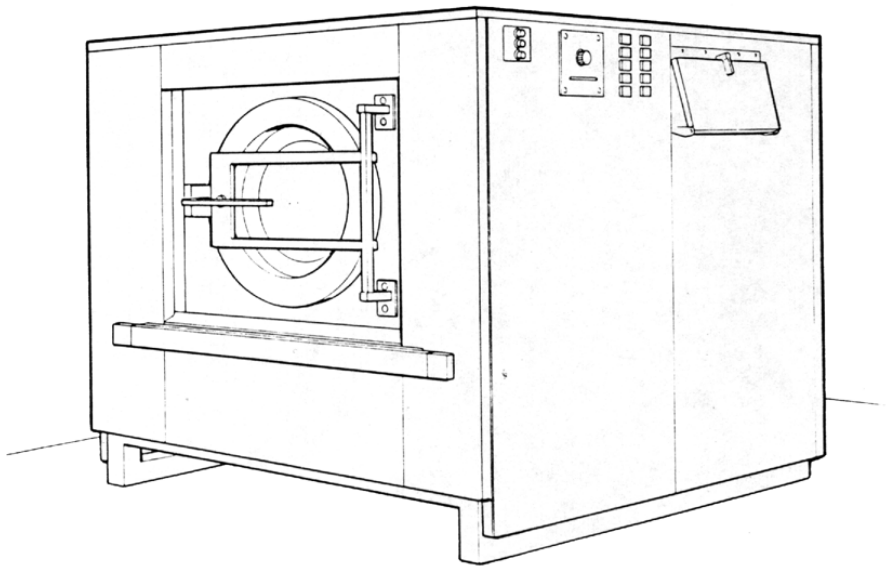

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Standard equipment

In its standard configuration, the washing machine is equipped with the following:

- a 16 channel card programmer for controlling the wash program
- stainless steel front panel, inner and outer drum
- five connections for external supply injectors
- automatic supply box with 5 cups
- connections for hot and cold water
- four drum speeds: wash, distribution, low and high extraction speeds
- three temperature settings

Additional equipment

- equipment for tilting machine forward.

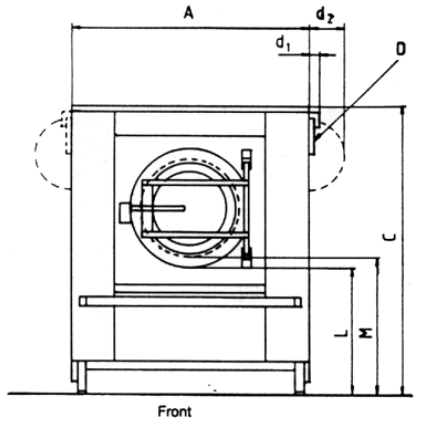
Technical data

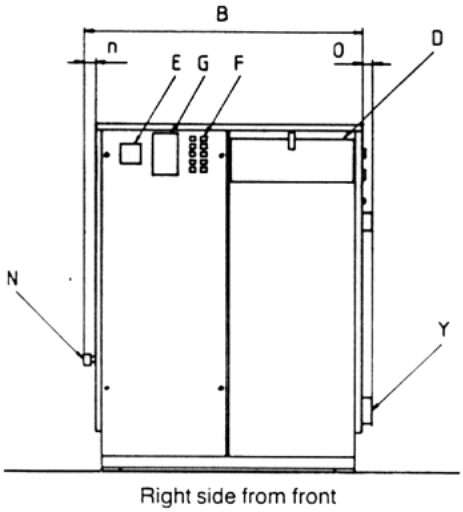
EX-80

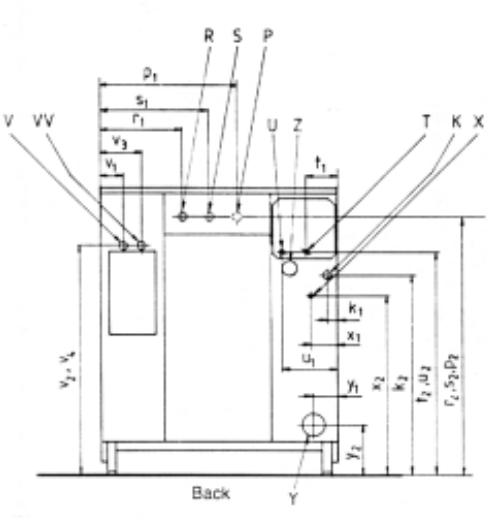
Dry load capacity	up to	35 kg	80 lbs
Overall dimensions	Width	1320 mm	52"
	Depth	1280 mm	50 3/8"
	Height	1620 mm	63 3/4"
	Net weight	958 kg	2113 lbs
	Dyn. weight		176 lbs/sqft
Crated dimensions	Volume	4.5 m^3	160 cu.ft
	Weight	1130 kg	2487 lbs
Inner drum	Diameter	920 mm	36 1/4"
	Depth	520 mm	20 1/2"
	Volume	350 litre	
Speed of rotation	Wash		39 r.p.m.
	Distribution		60 r.p.m
	Extraction low speed		390 r.p.m.
	Extraction high speed		775 r.p.m.
G-factor	During wash		0.8
	During extrac. low speed		77
	During extrac. high speed		308
Motor speed	During wash		530 r.p.m.
	During distrib.		860 r.p.m.
	During extrac. low speed		1660 r.p.m.
	During extrac. high speed		3380 r.p.m.
Voltage requirements	208-240 V 3-Phase 60 Hz		
Rated power	Motor, wash		0.9 kW 1.4 HP
	Motor, distrib.		1.0 kW 1.5 HP
	Motor, extrac. low speed		4.5 kW; 6.0 HP
	Motor, extrac. high speed		4.8 kW; 6.4 HP
Overcurrent protection	3-Phase		50 A
Water connections Water pressure, max	0.4-10 kp/cm^2		6-142 psi
Recommended water pressure	2-6 kp/cm^2		25-85 psi
Hose connection, cold and hotwater	32 mm		1 1/4"
Hose connection, soap supply injector and cool down	20 mm		3/4"
Hose connection, steam	20 mm		3/4"
Hose connection, drain	75 mm		3"

Technical data

Outline and dimensions







			mm	inches
A	Width		1320	52
B	Depth		1280	50 3/8"
C	Height		1620	63 3/4"
D*	Soap supply injector	d_1	50	2"
		d_2	205	8 1/8"
E*	Temperatur selector			
F*	Pushbuttons for manual controls			
G*	Programmer			
K	Inlets for sep. supply injector	k_1	55	2 3/16"
		k_2	1125	44 1/2"
L	Height to the door		710	28"
M	Height to the door opening		775	30 1/2"
N	Buffer	n	50	2"
O	Extension of valves		45	1 13/16"
R	Cold water inlet	r_1	225	8 7/8"
		r_2	1380	54 3/8"
S	Hot water inlet	s_1	295	11 5/8"
		s_2	1480	58 1/4"
T	Cold water inlet, soap supply injector	t_1	160	6 1/4"
	and cool down	t_2	1260	49 5/8"
U	Cold or warm water inlet,	u_1	300	11 13/16"
	soap supply injector	u_2	1260	49 5/8"
V	Power-connection	v_1	130	5 1/8"
		v_2	1290	50 3/4"
VV	Power-connection, (El heated)	v_3	230	9 1/16"
		v_4	1290	50 3/4"
X	Steam inlet	x_1	140	5 1/2"
		x_2	1010	39 3/4"
Y	Drain connection	y_1	130	5 1/8"
		y_2	280	11"
Z	Air inlet area 2000 sq. mm			

* Available to be mounted on right or left side.

Safety rules

- The machine is designed for water washing only.
- Machines must not be used by children.
- All installation operations are to be carried out by qualified personnel. Licensed personnel are necessary for all electric power wiring.
- The interlock of the door must be checked daily for proper operation and must not be bypassed.
- All seepage in the system, due to faulty gaskets etc., must be repaired immediately.
- All service personnel must be fully familiar with the operating manual before attempting any repair or maintenance of the machine.
- The machine must not be sprayed with water, otherwise short circuiting may occur.
- Fabrics softerner with volatile or inflammable fluids are not to be used in the machine.

Procedure

Preparations

- Sort the wash according to the instructions on the labels. Empty pockets and pull up zippers.
- Check that the manual shut-off valves are open.
- Switch on the external power supply.

Fig. 2
- Turn the knob on the card programmer to **0**.
- Press the **ON/OFF** button so the machine is supplied with power.
- Open the door, check that the drum is empty, insert the wash and close the door.

Fig. 3
- Add the detergent and other additives.

Fig. 4
- For machines with heating: select the temperature with the thermostat controls. For manual washing use the control marked **B** (red light).

Fig. 5
- Press **GENTLE ACTION** if required. Gentle action produces a shorter rotation time and a locnger rest period in between.

Fig. 5
- During automatic washing, high speed extraction is switched on approximately 70 seconds after the cycle starts. The slow spin speed can be maintained by pressing the **LOW EXTRACT** button.

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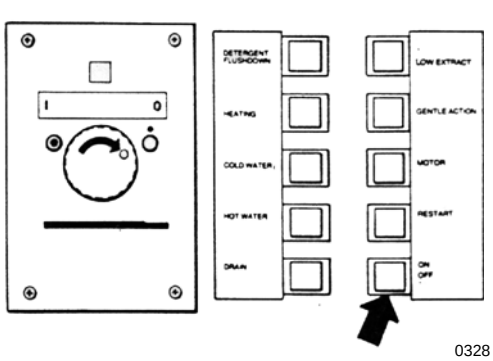

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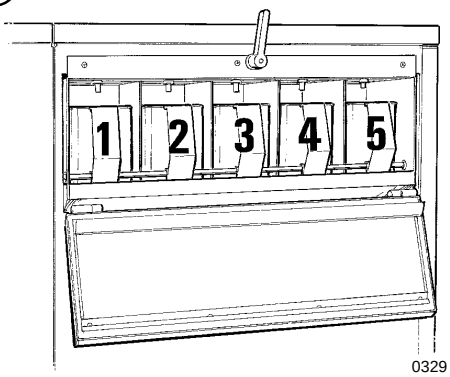

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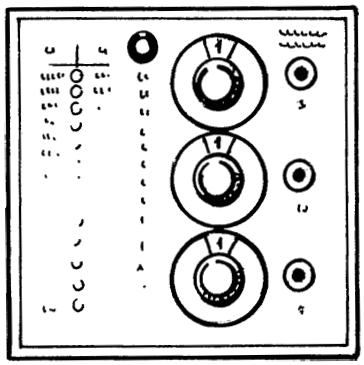

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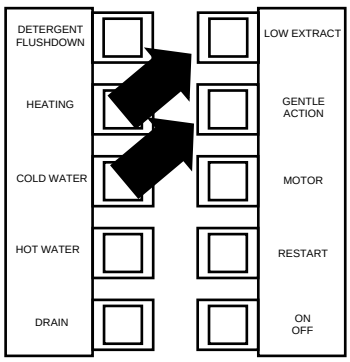


Automatic washing

Fig. 6
- Place a precut program card with the pegs upwards in the slot of the programmer panel. Push the card in as fast as it will go.
- Turn the knob on the panel to the **I** position.

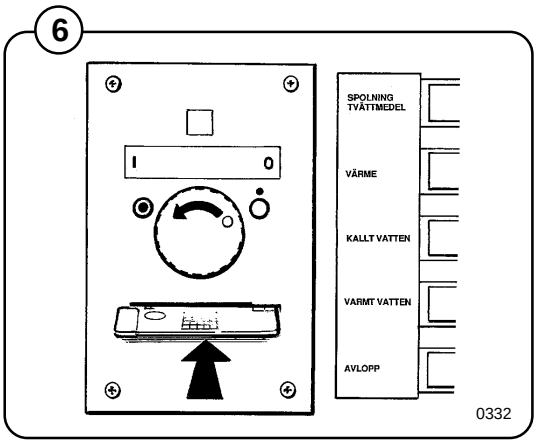
Fig. 7
- The water level is raised while the program is operating by pressing **COLD WATER** and **HOT WATER** as required.

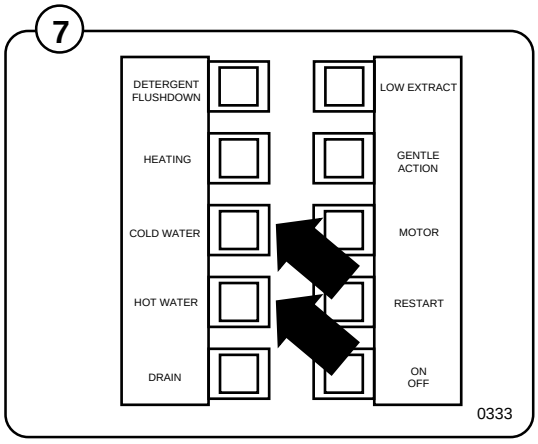
Fig. 8
- By pressing **DETERGENT FLUSH DOWN** additional detergent can be added from compartment 5 (to the far right).

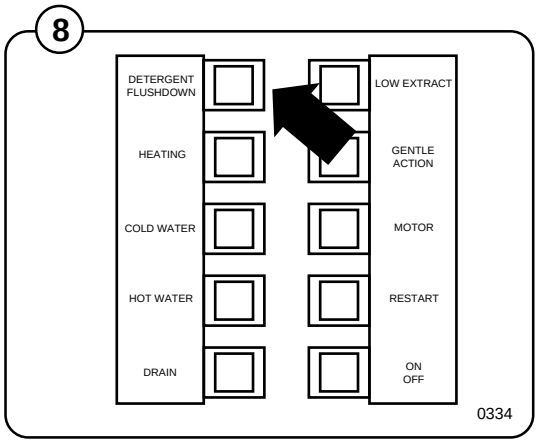
Programmed stop

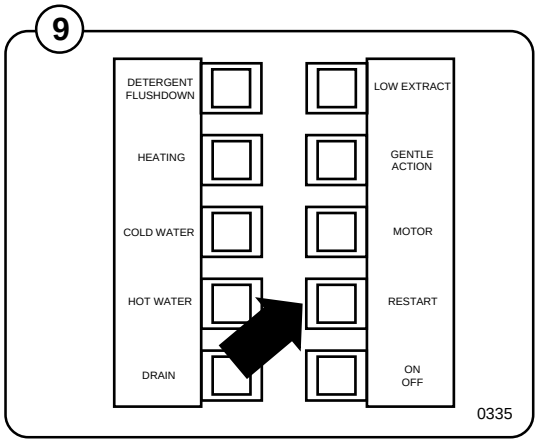
- If "stop at signal" has been programmed, the machine stops, a buzzer sounds and the yellow light in the **RESTART** button comes on.

Fig. 9
- The machine is started again by pressing **RESTART**.









After use

Fig. (10)
- Turn the control to **0** and remove the program card.

For machines without tilting

Fig. (11)
- Open the door and remove the wash. If the machine is not going to be used again, turn the **ON/OFF** switch to off.

For machines with tilting

Fig. (12)
- Open the door, set the **I 0 II** switch to the **I** position. The machine will then tilt forward.

Fig. (13)
- Empty the machine by rotating the drum alternately in both directions. For reasons of safety, the rotation requires two hands (see the illustratioin).
- Reset the **I 0 II** swith to the **0** position and the machine will return to its original position.
- If the machine is not going to be used again, turn the **ON/OFF** switch to off.

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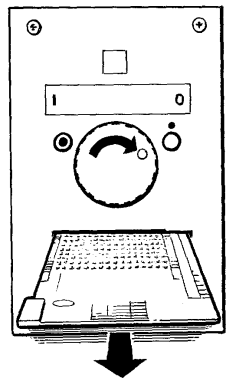

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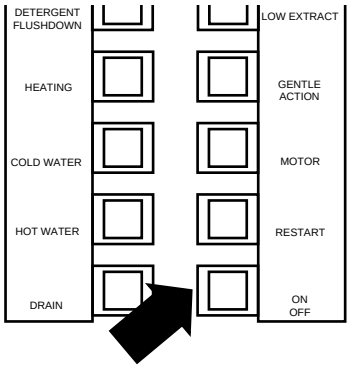

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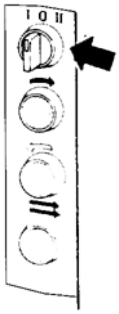

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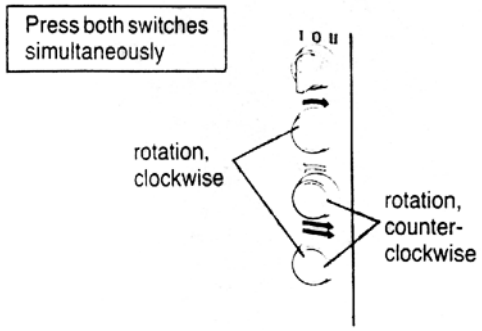

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Manual washing

Start/Stop

Fig. 14

- Press **MOTOR** to start the motor reversing action.
- Gentle action is obtained by pressing **GENTLE ACTION**.

Filling with water and detergent

Fig. 15

- Fill with water to the required level by pressing **COLD WATER** and/or **HOT WATER**.

Fig. 16

- Press **DETERGENT FLUSH DOWN** to flush down detergent from detergent compartment 5 (to the far light).

Heating, drain

Fig. 17

- Press **HEATING** to connect the heating and the water will be heated to the temperature set by thermostat B (red light).
- Water is drained from the machine by pressing **DRAIN**.

CAUTION! The heating must be switched off before the water is drained.

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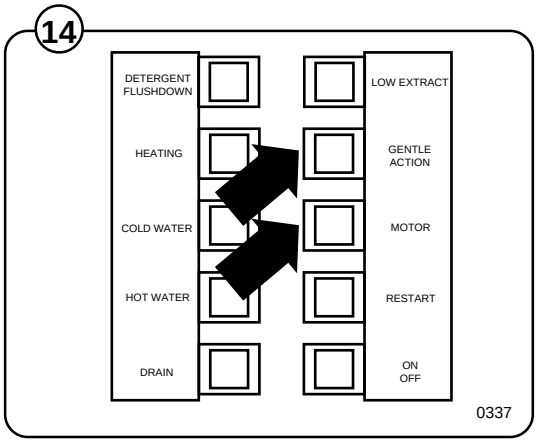

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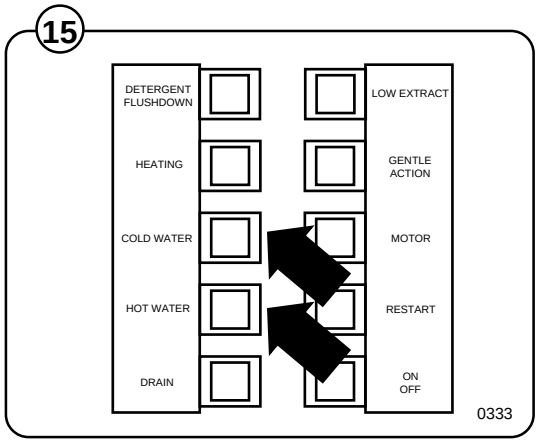

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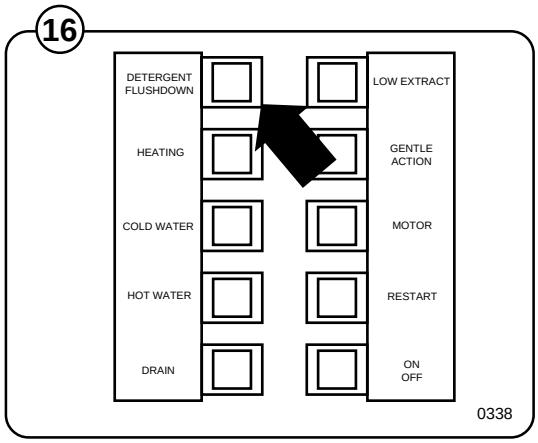

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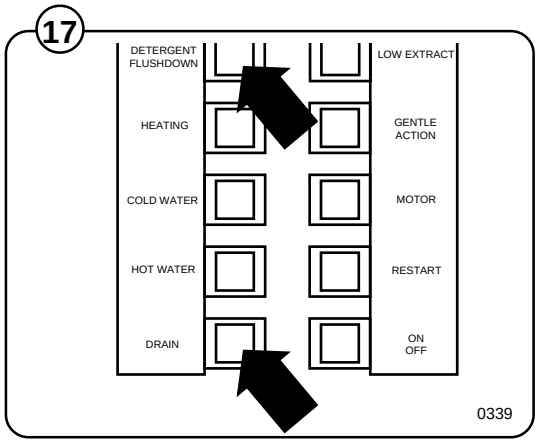

Extract cycle

The extract cycle is not available as a manual function for reasons of safety. If extraction is required, use a program card that has this function.

After use

For machines without tilting

Fig. 18

- Open the door and revove wash. If the machine is not going to be used again, turn the **ON/OFF** swich to off.

For machines with tilting

Fig. 19

- Open the door, set the **I 0 II** switch to the **I** position. The machine will then tilt forward.

Fig. 20

- Empty the machine by rotating the drum alternately in both directions. For reasons of safety, the rotation requires two hands (see the illustration).
- Reset the **I 0 II** switch to the **0** position and the machine will return to its original position.
- If the machine is not going to be used again, turn the **ON/OFF** switch to off.

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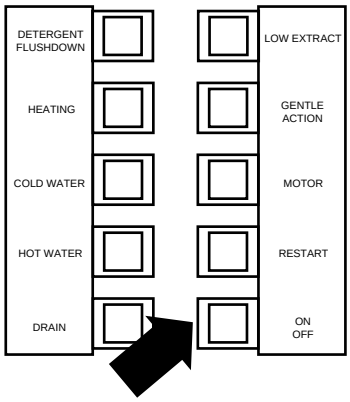

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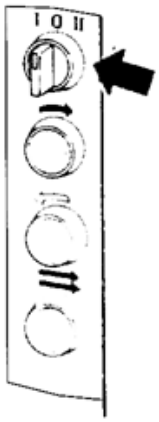

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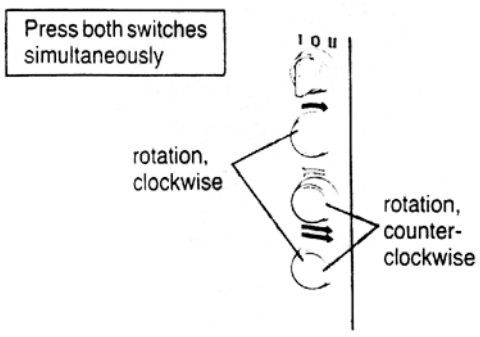

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Programming

General

Fig. (21) Program cards are used to control the various stages in the wash cycle. The cards have a pattern of pegs which are in 16 rows marked with the letter A-Q.

The cards are in two sizes: 80 and 120 steps, which are numbered from 0 and upwards.

The controls read one stage with 16 pegs at a time. Every 30 seconds, the controls feed the card forward so that a new step can be read. When the machine is fillling with water, or is heating the water, the programmer motor stops until the correct level or temperature is reached.

If required, the program controls can be simply modified so that each step corresponds to 1 minute instead of 30 seconds.

Procedure for programming

Fig. (22) Programming is carried out by removing the pegs in the different steps with a special pair of pliers. The removal of a peg means that the corresponding function is activated when the controls are fed forwards to that particular step.

Use a felt tip pen to mark the pegs to be removed. Then check again before you remove the pegs.

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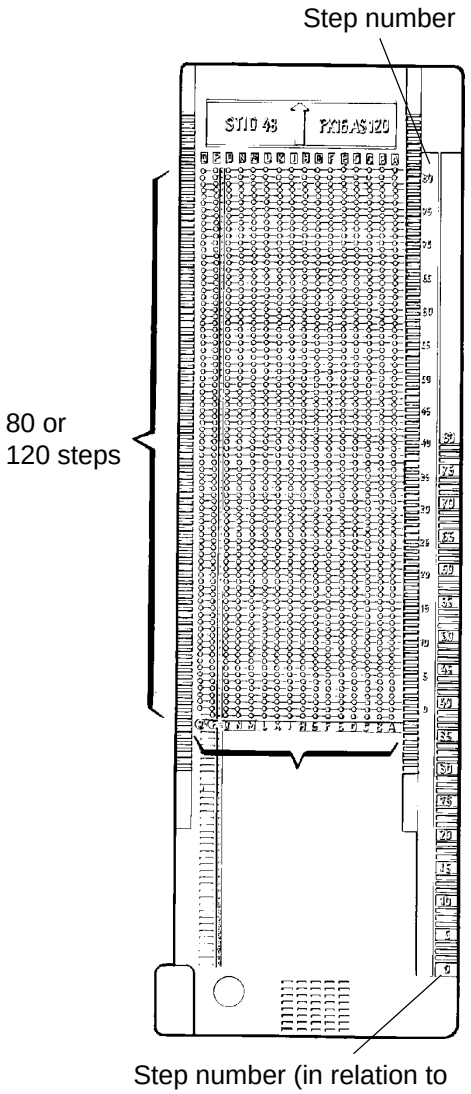

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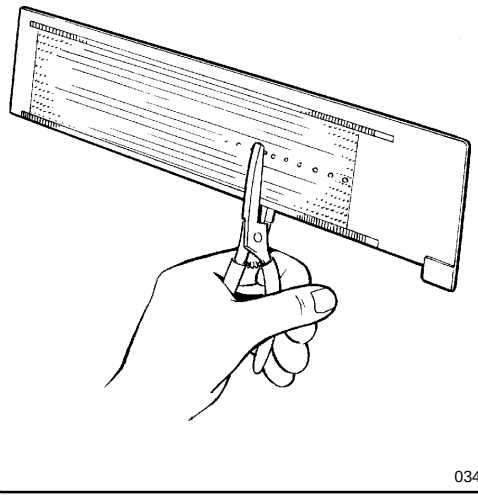

Fig. 23 The 16 ribs (A-Q) correspond to the following functions in the washing machine:

A – Flushdown fo compartment 1

B – Heating thermostat control B (red light)

C – Flushdown of compartment 2

D – Heating, thermostat control D (blue light)

E – Flushdown of compartment 3

F – Heating, thermostat control F (yellow light)

G – Flushdown of compartment 4

H – Extraction

I – Flushdown of comparment 5

K – Drain

L – Reserve (Not normlly used)

M – Stop with signal (see explanation below)

N – High water level

O – Filling with cold water

P – Cool down (see explanation below)

Q – Filling with hot water

Function M – Stop with signal.

Fig. 24 This is used as the last function in a program or for a temporary stop in the washing process. A buzzer sound when the machine stops and the yellow light in the **RESTART** button comes on. The machine is restarted after a temporary stop by pressing **RESTART**.

Function P – Cooling.

Supplies cold water gradually until the wash water temperature is reduced to 55°C. This avoids the risk of creasing with a sudden changeover from hot washing water to cold rinsing water.

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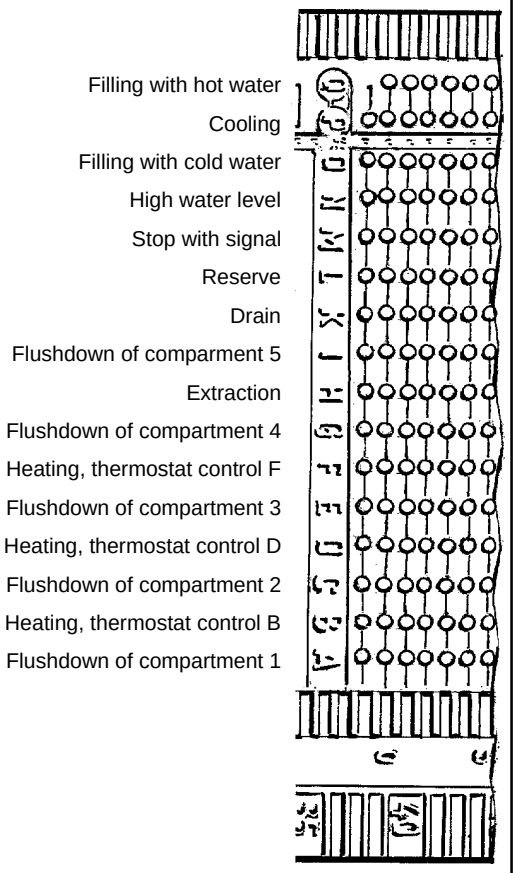

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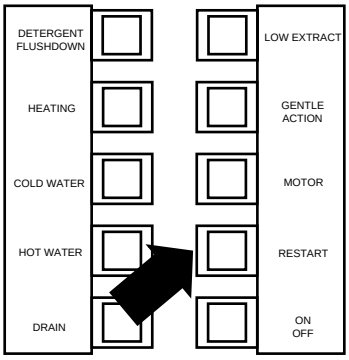

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Instructions for programming

Fig. 25

- The program begins with step 0. Program the step before 0 in the same way as step 0. In this way the program will start correctly even if the card should go too far into the programmer for any reason.
- Program times:

Fig. 26

  – each step on the program card correspondens to 30 seconds,

  – the times for heating and filling with water are not included in the program time. This also applies to filling with water for cooling (function P). The programmer motor remains stationary during these sequences.

- Extract cycle:

  – after the extract cycle has been in progress for about 70 seconds, the machine changes over automatically to high extract speed unless the **LOW EXTRACT** switch is pressed.

Fig. 27

  – the drum must be filled with water to a high level before draining and the extract cycle starts (this is so that the wash is effectively distributed in the drum):

  – drain (rib D) must be programmed at least one minute (two program steps) before extraction.

  – drain must be programmed during the entire extract cycle.

- Drain

  – the machine always operates at distribution speed when the drain is activated (rib K).

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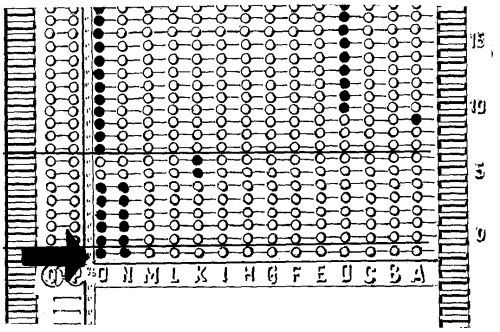

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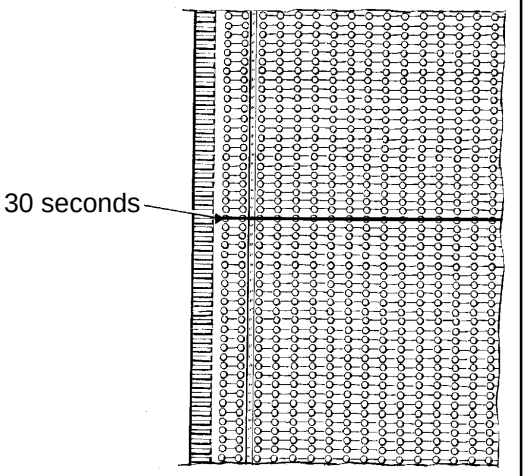

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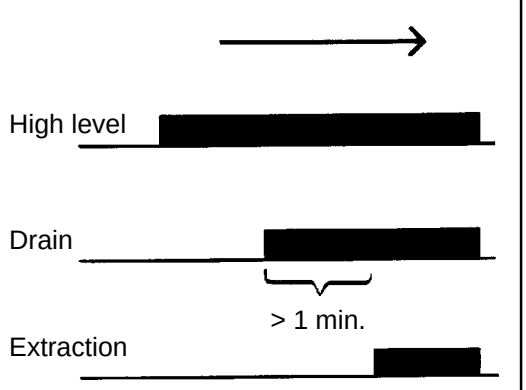

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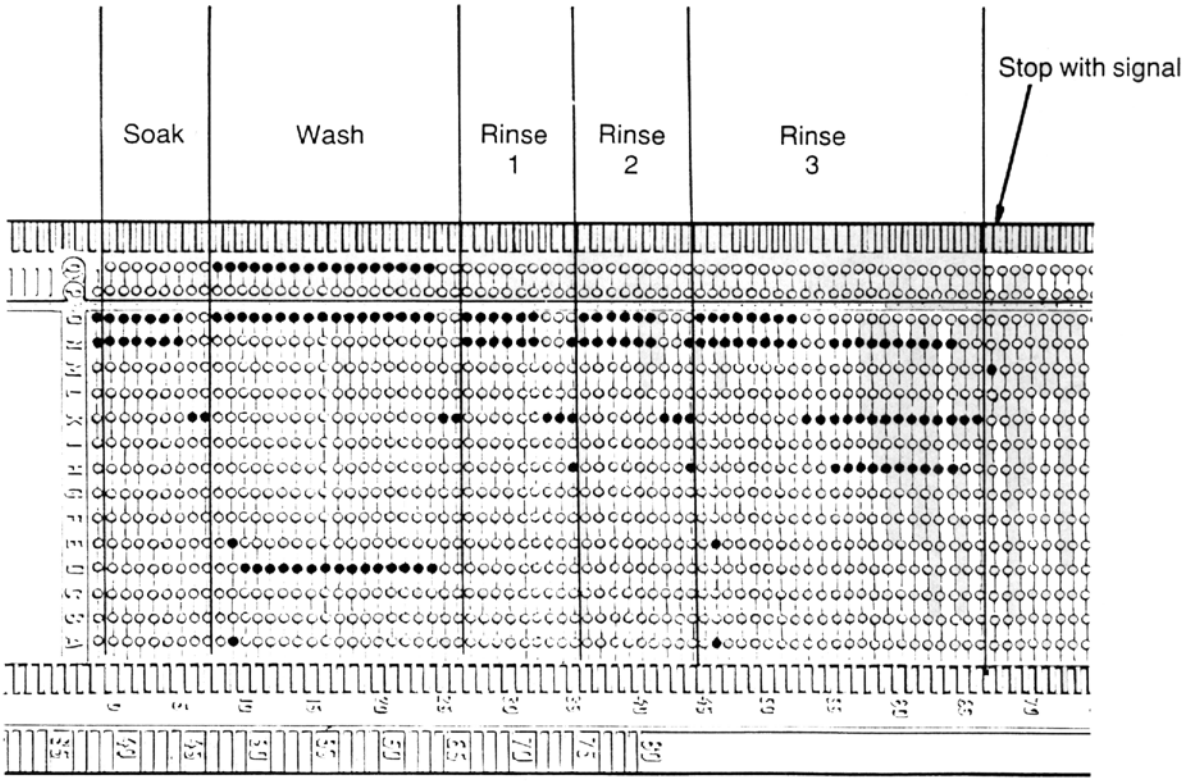
Programming example

Fig. 28

The card supplied with the machine is programmed for a normally soiled wash load. The following is a description of how the card is programmed.

Times for filling with water and heating must be added to the times shown in the example where applicable.

28



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Prewash

Time: 4 minutes (step 0-7).

Prewash comprises the following:

1. Filling with water and soaking (steps 0-5).

   Cold water is added (rib 0) to the high water level (rib N) with the valve activated throughout the entire prewash sequence. In this way, the level is adjusted automatically while the program is in progress.

2. Draining (steps 6-7).

   The drain valve opens (rib K).

Wash

Time: 9,5 minutes (step 8-26).

The main wash comprises three phases:

1. Filling with water and detergent (steps 8-9).

   Hot and cold water are filled (rib O and Q). After 30 seconds, detergent in compartment 1 is flushed down (rib A).

2. Washing (steps 10-24).

   Heating to the preset temperature on the thermostat control marked D (rib D). (Applies to machines with built-in heating).

   Hot and cold water are filled (rib O and Q) and heating (rib D) are activated during the entire wash sequence. In this way, the level and temperature are controlled automatically during the wash sequence.

3. Draining (steps 25-26).

   The drain valve opens (rib K).

Rinsing 1-2

The first two rinses are identical.

Time: 4 minutes and 30 seconds (steps 27-35, 36-44).

Each rinse comprises three phases:

1. Filling with water and rinsing (steps 27-32, 36-41).
   Cold water (rib O) is added to high water level (rib N).
2. Draining (steps 33-34, 42-43).
   The drain valve opens (rib K).
3. Extraction (steps 35, 44).
   Extract cycle (rib H).

   Note that the drain valve (rib K) and high level (rib N) are activated while the extract cycle is in progress.

Rinsing 3

Time: 11 minutes (step 45-66).

The third rinse comprises five phases:

1. Filling with water and fabric conditioner (steps 45-46). Cold water (rib O) is added to high water level (rib N). After 30 seconds, the fabric conditioner in compartment 2 is flushed down (rib C).
2. Rinsing (steps 47-52).

   Filling with cold water (rib O) and high water level (rib N) are activated throughout the rinse cycle. This ensures that the water level is regulated automatically during the rinse cycle.
3. Draining (steps 53-54).

   The drain valve opens (rib K).
4. Extraction (steps 55, 64).

   Extract cycle (rib H).
   Note that the drain vavle (rib K) and high level (rib N) are activated while the extract cycle is in progress.
5. Coast down (steps 65-66).
   The drain valve is open (rib K).

Stopping (step 67).

The machine stops and a buzzer sounds (rib M).

Installation

The washing machine is supplied bolted to a transport pallet and packaged in a transportation frame. In certain cases, the machine may be supplied in sealed packaging.

Positioning and mounting suface

The machine must not be positioned above an open floor drain. Check to ensure that the floor is flat and level. The floor shall be capable of supporting the following loads:

- static: 2,520 lbs
- dynamic: 2,520±960 lbs

Fig. 29 The following clearances are recommended:

- at least 2'8" between the machine and the wall behind.
- at least 1'8" side clearance in addition to controls and/or detergent container to a wall or between machines where more than one machine is installed.
- at least 3'4" side clearance with controls and/or detergent container to a wall or between machines where more than one machine is installed.

Mechanical installation

When installing machines that can be tilted, refer to the section "Additional equipment, tilting".

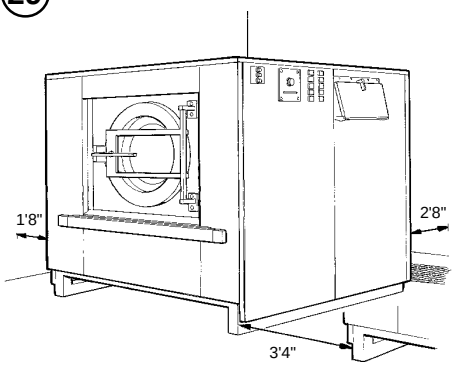
- Remove the packaging. Undo the machine's top cover, the rear protective plate and the lower front plate.

Fig. 30
- Remove the machine from the transport pallet by undoing the four anchor bolts. Lift off the machine and place it in position. Check that it is horizontal and rests securely on all four feet.

Fig. 31
- Remove the transport locks that go through the machine (four angle irons which lock the machine frame).

Fig. 32
- Remove the plastic tie from around the door lock's draw magnet so that the lock catch can move freely.

29



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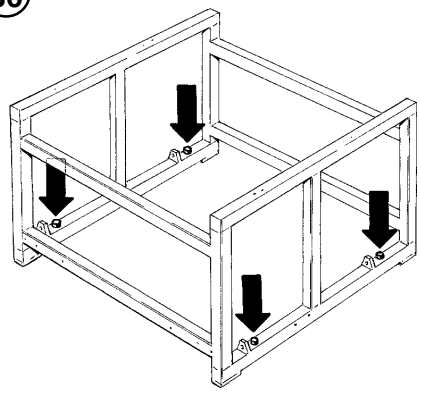

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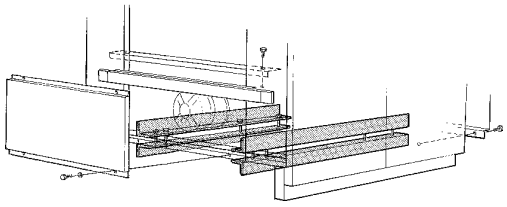

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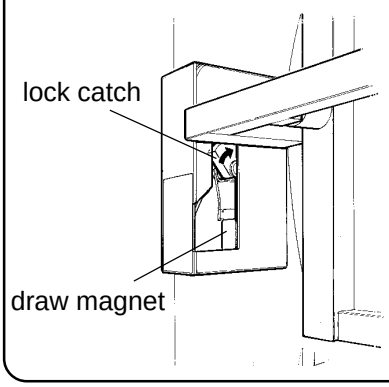

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Water connection

The supply lines to the machine shall be provided with shut-off valves to facilitate installatioin and servicing. Add the filters supplied with the machine to the manual shut-off valves. Refer to local plumbing regulations when adding non-return valves.

The lines shall be suitable for high pressure and shall be approved for 355 PSI.

The following values apply to water pressure:

- recommeded: 43-86 PSI
- limiting values: 6 PSI min.
  142 PSI max.

Lines and hoses must be flushed through before being connected.

Hoses shall hang in gradual arcs. This is particularly important if the machine is equipped for tilting.

Connect as follows:

Fig. 33

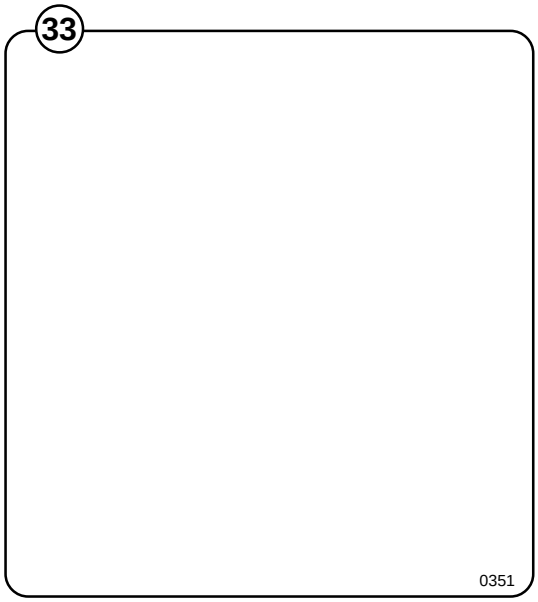
- cold water to outlet A.
- hot water to outlet B.

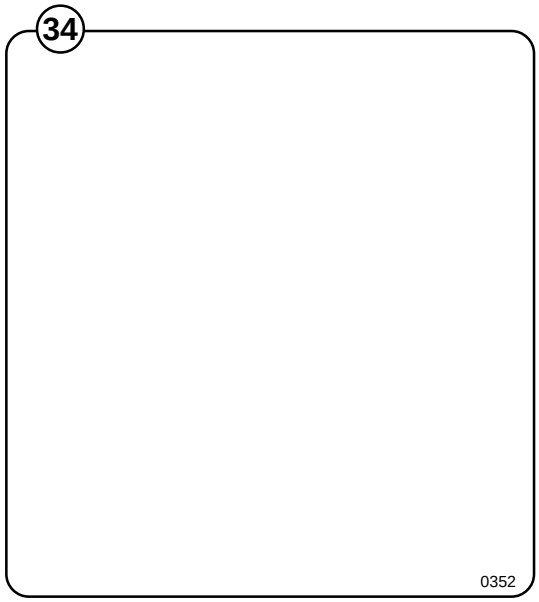
  Sizes A and B: DN 32 (1 1/4" BSP)

Fig. 34

- cold water to outlet C (flushing down detergent and cooling),
- cold or hot water to outlet D (flushing down detergent).

  Sizes C and D: DN 20 (3/4" BSP).





Steam connection

The supply line to the machine shall be provided with a manual shut-off valve to facilitate installation and servicing. Fit the filter supplied on the manual shut-off valve.

Connect an approved hose between the filter and machine.

The line shall be of a, type which is equivalent to ISO/1403-1976.

The following values apply to steam pressure:

- recommeded: 43-86 PSI
- limiting values: 7 PSI min.
  113 PSI max.

Fig. (35) The hose shall hang in a gradual arc. This is particularly important if the machine is fitted with a tipping function.

Connection size: DN 20 (3/4" BSP).

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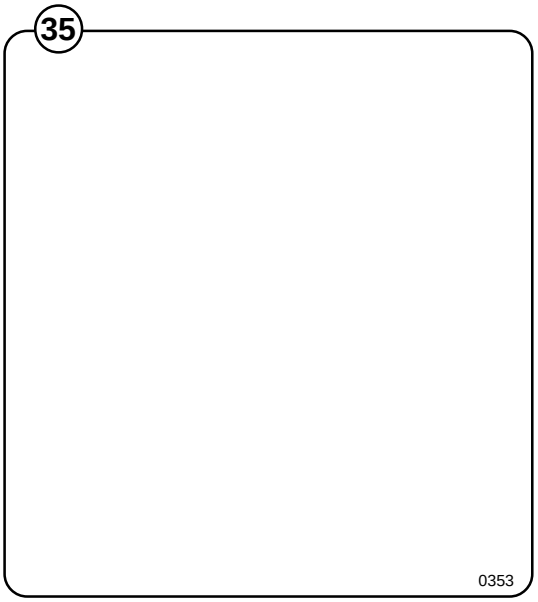

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Drain

The machine's outlet pipe has an outside diameter of 3".

Fig. (36) Connect a hose or pipe to the drain pipe. Avoid sharp bends and kinks which restrict the flow of water. The hose or the pipe shall drain freely over a floor trough or equivalent. Make sure that the hose is not trapped by a machine that is equipped with tilting.

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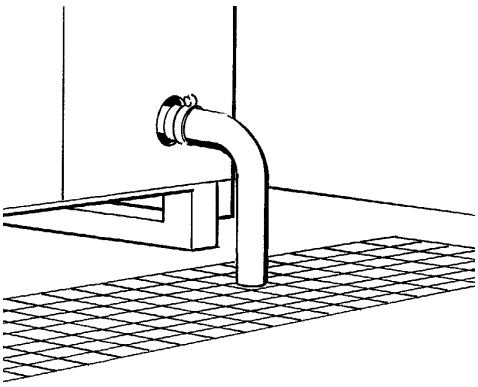

0354

Detergent supply box, powder detergent

The following is recommended if only powder detergent is used in the detergent supply box:

Fig. (37) Drill two 3/16" holes in the bottom of each detergent cup so that residual water can drain away.

Installation of external supply injection equipment

CAUTION
The electrical installation must be carried out by qualified personnel.

Fig. (38) The standard machine is fitted with 5 pipe connections with a diameter of 5/16" designed for connection to external supply injection equipment. The connections are located at the rear of the machine behind the protective plates. The tubes are drawn through the existing holes in the rear protective plate.

Fig. (39) The electrical connection device for the supply injection equipment is located at the top of the automatic control's side. Undo the connection for the internal supply box controls and connect the external equipment.

Make sure that the equipment is connected to ground on the machine.

Mating connectors for the controls are available as follows:

Part number: 762 32 01-01 (insulator)
760 88 57-01 (pin)

Wiring for the connector is as follows:

Pin No.	Function	Wire number
1.	valve 1	84 TV
2.	valve 2	79 TV
3.	valve 3	80 TV
4.	valve 4	81 TV
5.	valve 5	82 TV
6.	common lead	3 TV A

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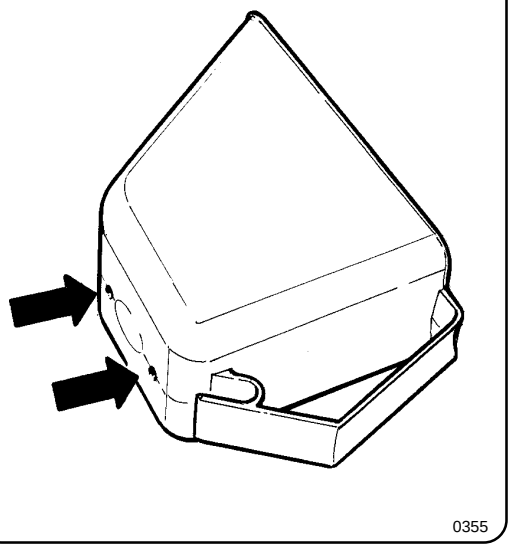

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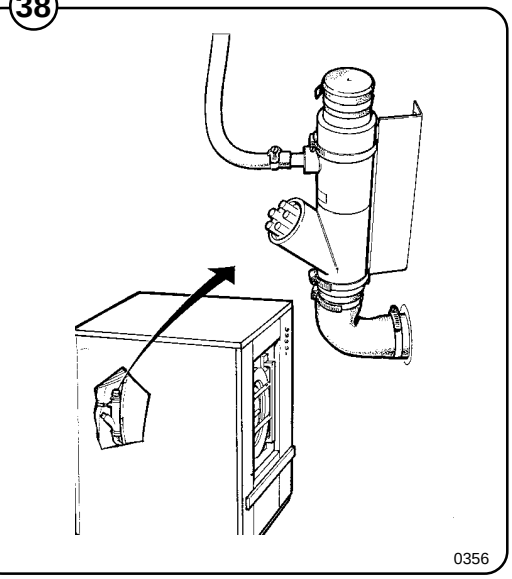

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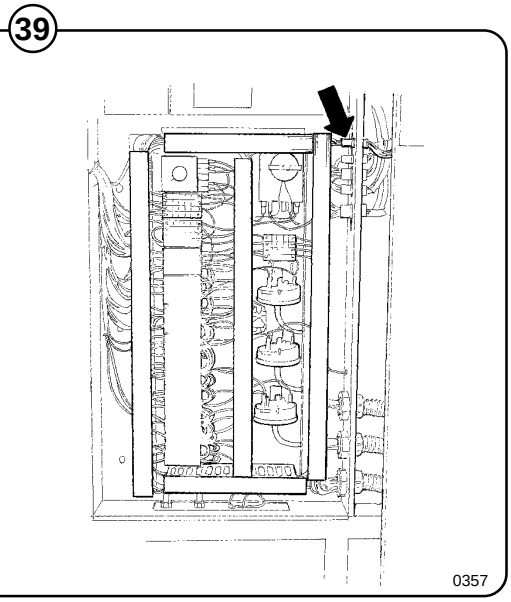

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Electrical installation

CAUTION
The electrical installation must be carried out by qualified personnel.

Cables between the circuit breaker and the machine shall comply at least with local electrical codes and shall hang in gradual ares. This is particularly important if the machine is equipped for tilting.

Machines with steam or hot water heating

Fig. 40 Mount an external circuit breaker to provide overcurrent protection and to facilitate installation and servicing.

Connect the cable to the terminal block in the connection box at the rear of the machine.

The circuit braker ratings shall comply with the values stated in the table.

Machines with electrical heating

Fig. 41 Mount an external circuit breaker to provide overcurrent protection and to facilitate installation and servicing.

Connect two cables to the terminal block in the connection box at the rear of the machine. Connect the heating element to a separate breaker or fuses.

The overcurrent protection ratings shall comply with the values stated in the table.

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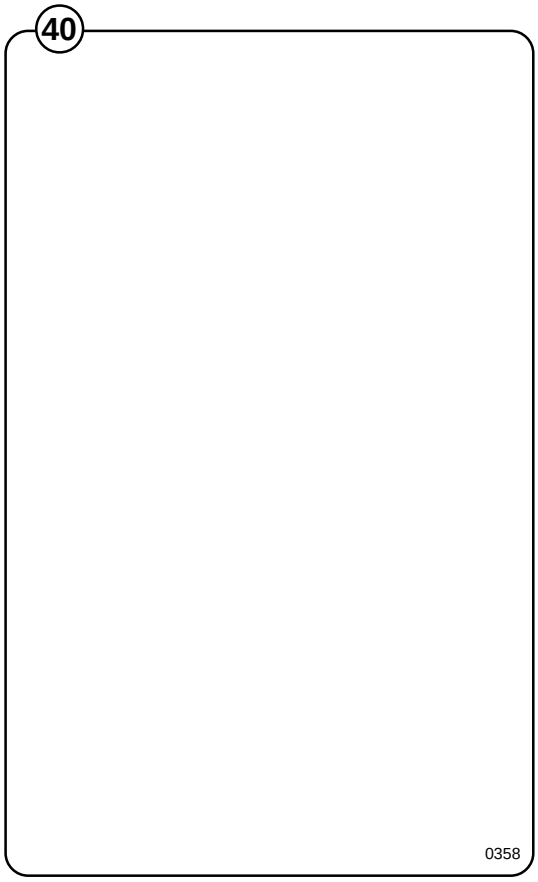

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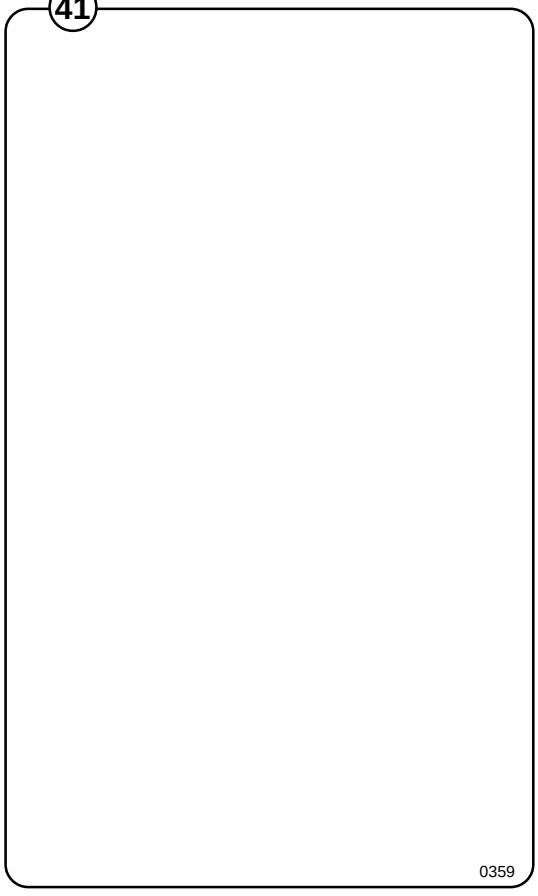

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Functional checks

Fig. 42

- Turn on the external power supply and the **ON/FF** switch on the machine.
- Open the manual shut-off valves for water and steam (where applicable on steam heated machines).

Manual operation

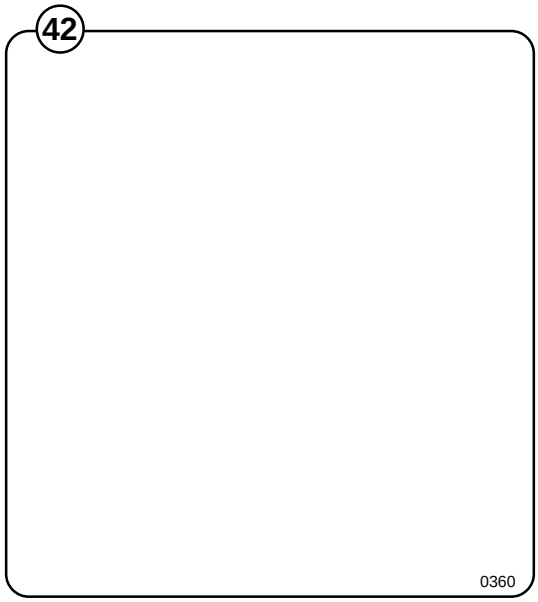
- Check that the drum is empty and close the door.

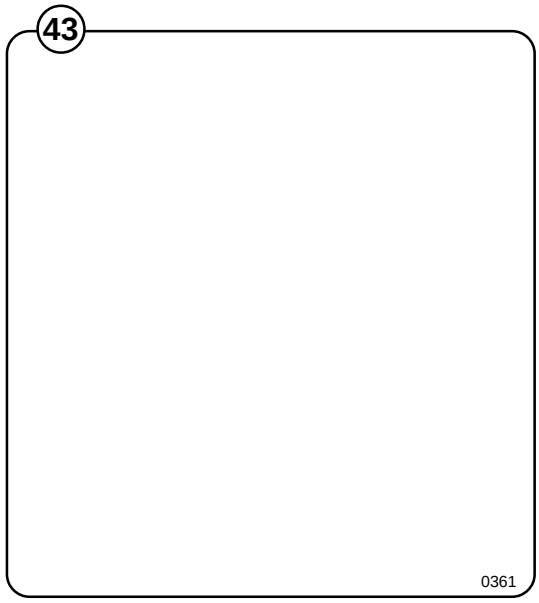
Fig. 43

- Fill with water using **COLD WATER** and **HOT WATER**. Check that the correct water valves open. Check that the door cannot be opened with water in the drum.
- Start the wash motor with **MOTOR** and check that the motor operates with a reversing action. Press **GENTLE ACTION** and check that the drum operates with gentle action (short rotation time, longer pause).

For machines with heating

- Set the thermostat control marked B to a temperature higher than that of the water in the machine. Press **HEATING** and check that the steam valve opens (or in the case of electrical heating that the heater contactor operates).
- Press **DETERGENT FLUSHDOWN** and check that cup 5 is flushed (far right).
- Check that there are no leaks at the water and steam connections or from the drain valve.
- Empty the machine with **DRAIN** and reset the controls to their original positions.





Functional checks

Automatic operation

A precut program card is supplied with the machine. This is described in "Programming".

Fig. (44)

- Turn the knob on the program controls to **0**. Check that the external power supply and the **ON/OFF** switch on the machine are on, and that the manual shut-off valves for water and steam are open.
- Check that the wash drum is empty and close the door.

Fig. (45)

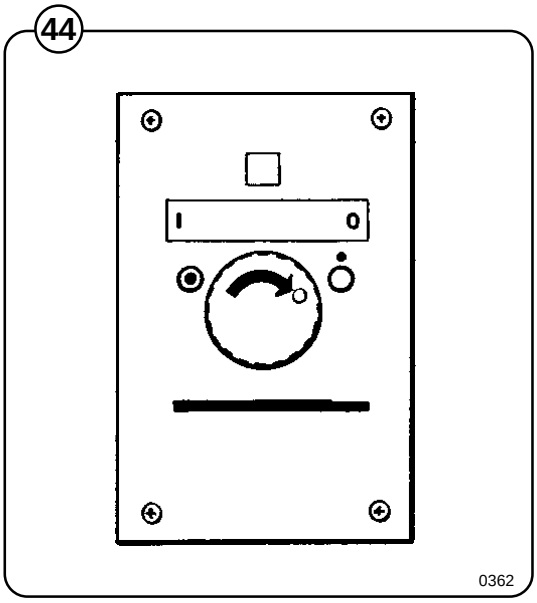
- Place the program card with the pegs upwards in the programmer slot and push it in as far as it will go. Turn the knob to position **I**.

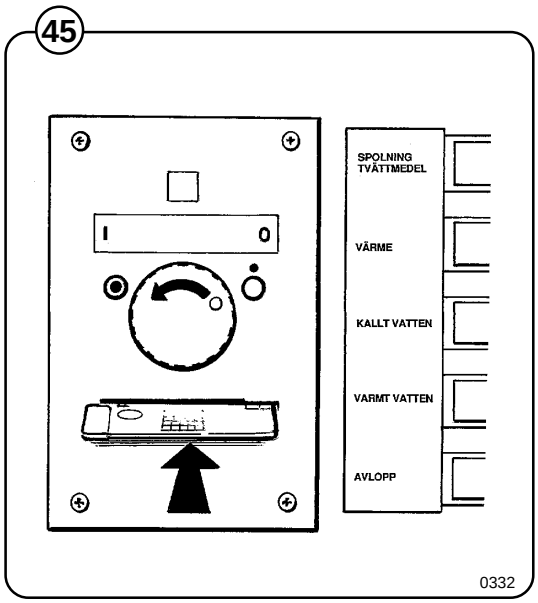
Check that:

- the door is locked,
- the wash drum rotates with a reversing action,
- water is being added,
- the drum speed increases to distribution speed while the draining phase is in progress.

Fig. (46)

- the wash drum rotates counter-clockwise, when viewed from the front during the drain cycle. If this is not the case, switch off the power and interchange two phases in the machine's terminal block.





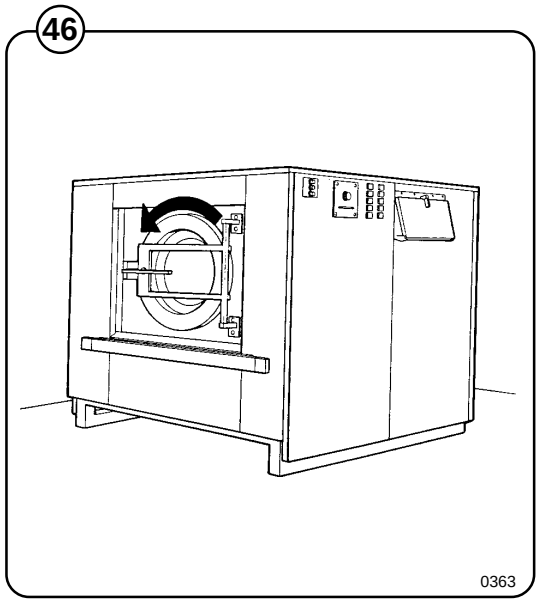


Fig. 47

– the automatic restart operates if there is an imbalance in the wash load.

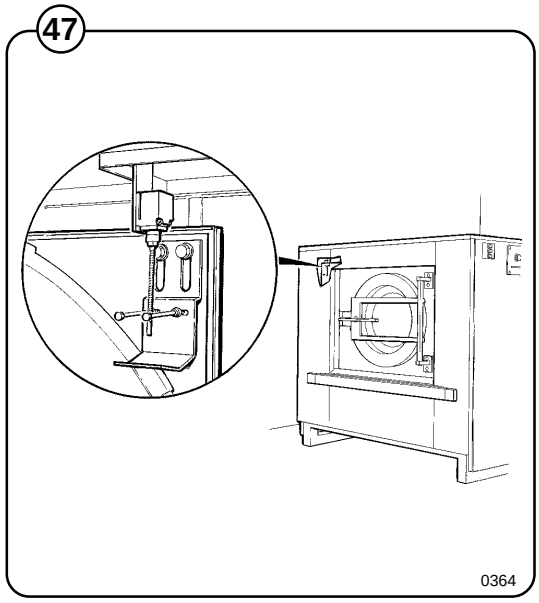
  Activate the out-of-balance switch when the extract cycle starts (the switch is mounted up to the far left on the machine frame, just behind the front plate).

  The following should happen: The extract cycle is discontinued, the drum decreases speed and water is added. The drain valve is then opened, the drum rotation increases to distribution speed and the extract cycle is started again.

– the high extract speed is connected after about 70 seconds during the final extraction providing **LOW EXTRACT** is not selected.

– the buzzer sounds and a yellow indicator light comes on when the program is complete.

– the buzzer goes off and the yellow indicator goes out when **RESTART** is pressed.



Final check

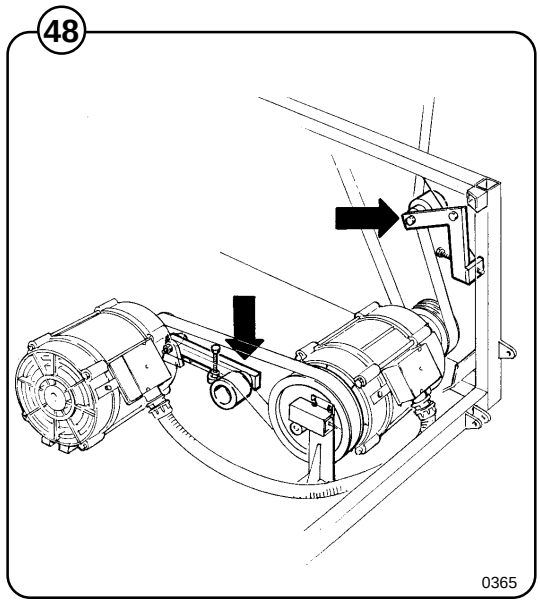
If all checks have been carried out to your approval, attach the side panels, the rear protective panel and other panels that have been removed during installation.

Subsequent tensioning of drive belts

Fig. 48

Check the belt tension after a few hours' use and adjust as required with the adjusters.

Make sure that the external power supply is switched **OFF** before removing the protective plates on the machine.



Instruction for setting timing on electro-lube oil dispensing

Fig. 49

Pry off the switch panel cap with a screwdriver.

Fig. 50

- Under the cap are the switches for time setting.

Fig. 51

- Set the "Light" and "12M" dip switches to the "On" position. Make certain all other switches are in "Off" position.
- The light will start flashing after a few minutes and will continue to flash every 15th to 20th seconds as long as the dispencer is in operation.

Fig. 52

- The decal shown below should be affixed at the front of the machine and updated as required.

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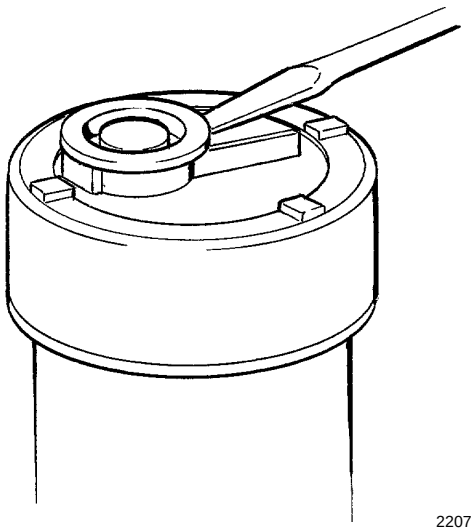

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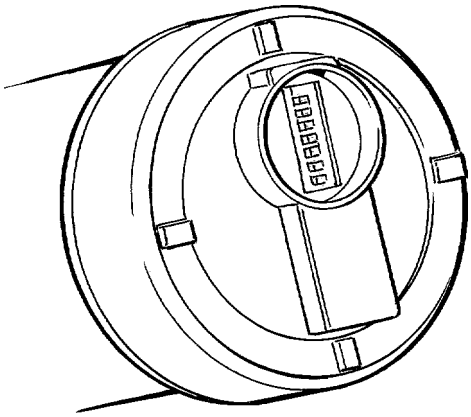

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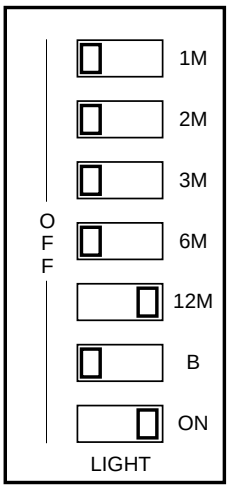
52

IMPORTANT NOTICE

This machine is equipped with an automatic oiler, located at the right rear of the machine, which keeps it lubricated for long bearing and seal life.
The amount of oil in the container is sufficient for approximately one year's lubrication. It is of utmost importance that the oiler does not become empty. Therefore we recommend that the rear panel to be removed and a visual inspection to be made on a bimonthly basis. When the oil reaches a low level, the cannister must be replaced with a new one available from Wascomat as Part No. 827601.

Date Last Replaced	Date Last Replaced

51



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Maintenance

The carefully considered machine design means that the need for preventive maintenance has been reduced to a minimum. The following measures should however be carried out regularly and to the extent determined by the frequency of use.

Daily

- Check that the door lock operates normally and that the door does not leak. Clean the door seal to remove detergent residues.
- If supply injection equipment for powder detergent is used: clean the equipment (including the cups) to remove detergent residues.
- Check that the drain valve does not leak and that it opens and closes normally.

Every three months

- Remove the top cover, the rear and side panels.
- Make sure that the external power supply is switched **OFF** before the protective panels are removed.
- Check that hoses and connections do not leak.

Fig. 53

- Check that the drive belts are undamaged and properly tensioned. Adjust as required with the two tensioners.

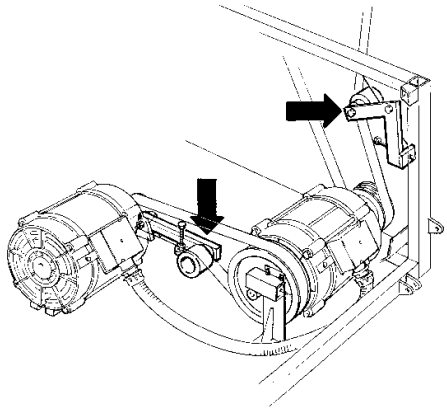
Fig. 54

- Check that the out-of-balance switch operating arm is not bent or damaged and that it is correctly adjusted. The operating arm shall lie half way between the two adjustment screws and 3/8" from the angled plate (when the machine is empty). The distance between the two adjustment screws shall be 1 1/2"

Fig. 55

- Clean the filters at the steam and water connections.

53



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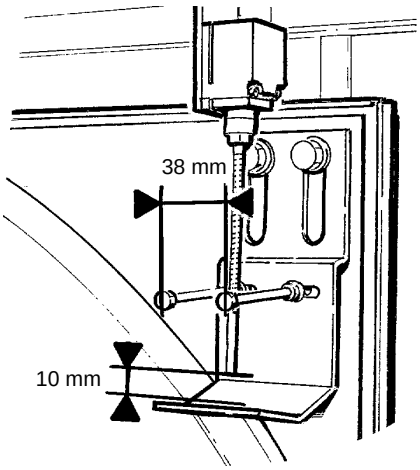

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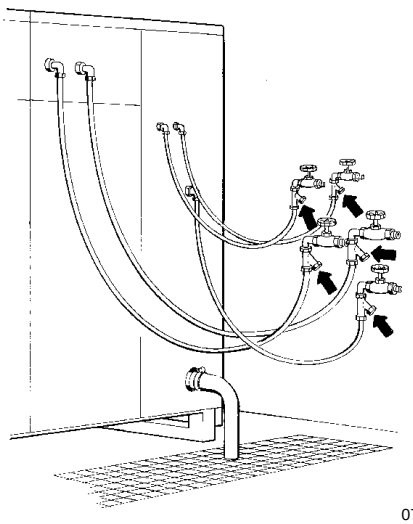


0748

Cleaning the nozzles in the water valve

Hard water causes scaling in the valve. If the efficiency of the valve gradually decreases, it may be necessary to clean the balancing nozzle:

Fig. 56

- Turn off the manual water valve.
- Unscrew the nozzle.

Fig. 57

- Clean the hole in the nozzle carefully with a needle or other device.
- Screw the nozzle back in position. Be careful to ensure that the seal sits properly and does not leak.
- Open the manual water valve again.
- Check that there are no leaks.

Adjusting the final temperature when cooling

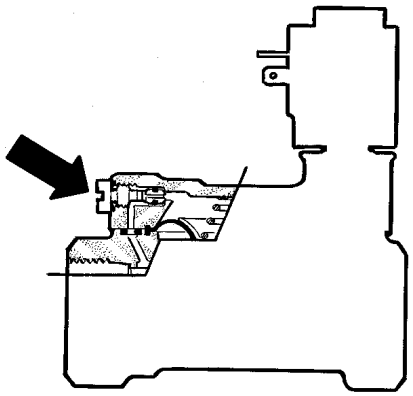
The final temperature when cooling shall be adjusted to between 40-60°C. When the machine is supplied, the temperature is set to 55°C. Adjustment is carried out by turning the adjustment screw on the side of the thermostat unit on the control panel.

The procedure is as follows:

Fig. 58

- Open and hinge out the control panel. The adjustment screw is on the side of the thermostat housing.
- To facilitate adjustment, the thermostat unit's mounting screws can be undone and the unit removed so that the adjustment screw is accessible from the front on the control panel.
- Check the temperature by running a wash program and measuring the temperature after cooling has taken place.

56



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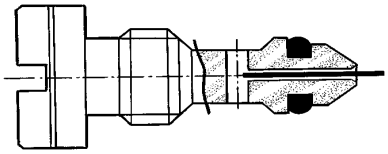

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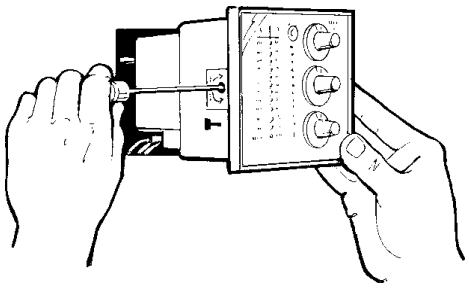


0448

General

The equipment has been designed to facilitate unloading of the wash as follows:

Fig. 59

- A bellows cylinder, mounted under the rear of the machine, is filled with compressed air so that the machine leans forward.
- The drum is then allowed to rotate so that the wash goods are lifted out of the machine.

Fig. 60

Tilting is carried out using a separate control unit.

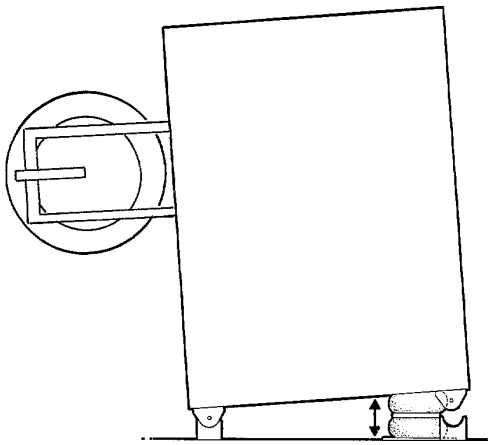
Installation

The machine is supplied with the equipment fitted but without the bellows cylinder or the support bearings. These are connected as follows:

Fig. 61

- Lift the machine and fit the part of the support bearing that is fitted to the machine. The support bearing is fitted with two bolts and the hinged fastener which passes inside the frame beam. Fit a support bearing to each corner of the machine.

59



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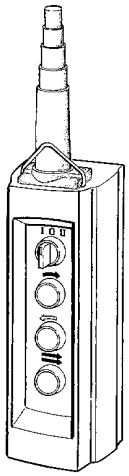

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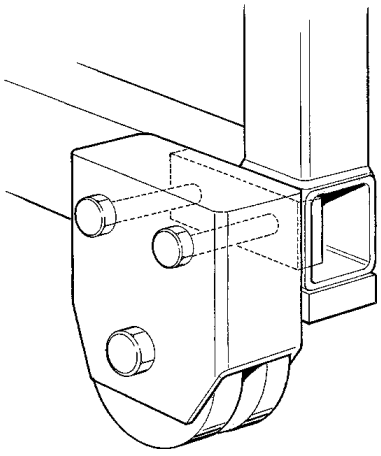

0451

Installation
Additional equipment, forward tilting

Fig. 62
- Place the lower part of the support bearings in position and lower the machine. Check that the machine is horizontal and stands firmly on all four supports. If necessary, use the plates supplied to adjust the height. Screw the lower sections to the floor with at least two bolts in each (located diagonally).

Fig. 63
- Fit the cross beam supplied to the bellows cylinder mounting plate. Then fit the unit under the machine with two bolts in the machine's rear frame beam and two bolts in the cross beam. Connect the air hose to the bellows cylinder.

Fig. 64
- Connect the compressed air to the inlet at the rear of the machine, outside diameter R 1/4", internal thread R 1/8".

Fig. 65
- The air pressure shall be: 43 PSI min.
  86 PSI max.

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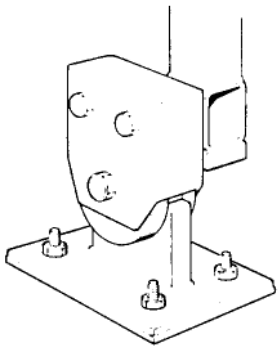

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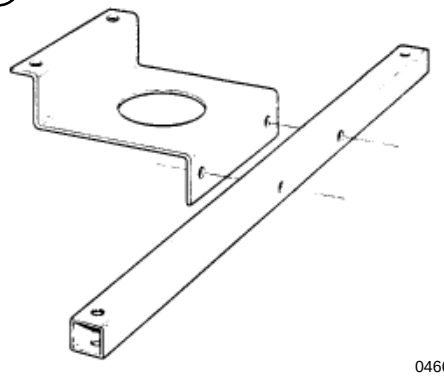

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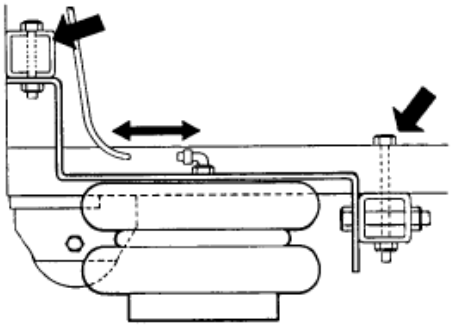

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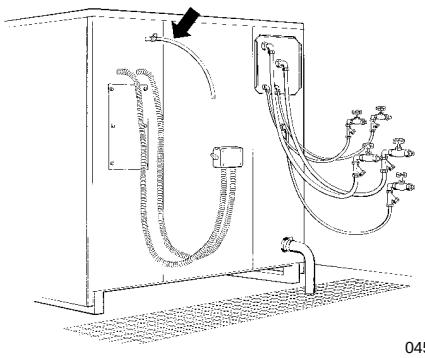

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