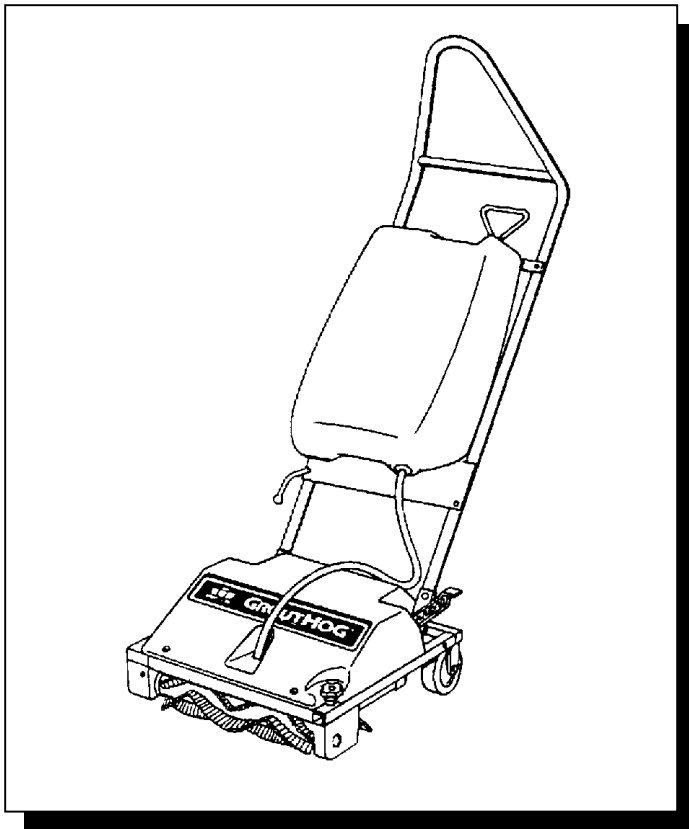


GROUTHOG

TILE AND GROUT MACHINE



Operating Instructions (ENG)



MODEL: GH3 (115V)

QUEST® . . . for Continuous Improvement.
Windsor's Quality Management System is Certified ISO 9001.

Read instructions before operating the machine.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precaution must always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.



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

Use only indoors. Do not use outdoors or expose to rain.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

If the machine is **not working properly**, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

Do not operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

This machine is **not** suitable for picking up hazardous dust.

Machine can cause a fire when operating near flammable vapors or materials. Do not operate this machine near flammable fluids, dust or vapors.

This machine is suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices for more than normal housekeeping purposes.

Maintenance and repairs **must be done** by qualified personnel.

During operation, attention shall be paid to other persons, especially children.

When leaving unattended, secure against unintentional movement.

The machine shall only be operated by instructed and authorized persons.

When leaving unattended, switch off or lock the main power switch to prevent unauthorized use.

Do not handle the plug or machine with wet hands.

Do not unplug machine by pulling on cord. To unplug, grasp the plug, not the cord.

Do not use with damaged cord or plug. Follow all instructions in this manual concerning grounding the machine.

Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners.

Do not pull/run machine over cord. **Keep** cord away from heated surfaces.

Connect to a **properly** grounded outlet. See Grounding Instructions.

Do not allow to be used as a toy. **Close attention** is necessary when used by or near children.

Do not use machine as a step.

Use extra caution when cleaning stairs.

Keep hair, loose clothing, fingers, and all parts of the body away from openings and moving parts.

Before opening cover, switch off machine. Wait until the fan/brush stops completely or dust and debris may be ejected.

SAVE THESE INSTRUCTIONS

INSPECTION

Please carefully unpack and inspect your GROUTHOG for shipping damage. Each unit is operated and thoroughly inspected before shipment, and any damaged is the responsibility of the delivering carrier who should be notified immediately.

ELECTRICAL

The Grouthog is designed to operate on a standard 15 amp, 115 volt, 60 hz, AC household current. Check that the voltage shown on the serial number plate is suitable for the supply available. Voltages below 105 volts or above 125 volts could cause damage to the motor.

* 230/250 volt 50 hz models are available.

NOTE: The GROUTHOG is equipped with a safety relay switching system that prevents accidental motor start-up. If the power cord is unplugged during use, the machine will not start when reconnected, until the the 'ON' switch is depressed.

GROUNDING INSTRUCTIONS

This appliance must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ WARNING: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug in "Fig. A" below. A temporary adaptor that looks like the adaptor in "Fig. C" below may be used to connect this plug to a 2-pole receptacle as shown in "Fig. B" below, if properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet (Fig. A) can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.

⚠ WARNING: To avoid electrical shock, use indoors only.

PROPER GROUNDING CONNECTION

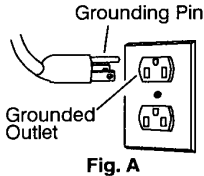


Fig. A

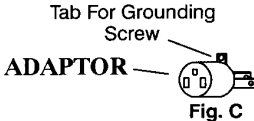


Fig. C

GROUNDING CONNECTION USING AN ADAPTOR

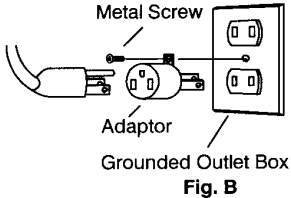


Fig. B

NOTE: Adaptors are not allowed in Canada.

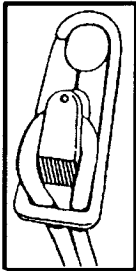
EXTENSION CORDS

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine and should be limited to 50 feet in length. Extension cord must be three wire grounded. The machine is equipped with a 18/3-40' power cord.

EQUIPMENT SETUP

NOTE: Attach stain relief/cord retainer to the power cord.

- 1. Make a loop in power cord approximately 18" from main housing.
- 2. Slide cord loop through slot in retainer arm. Pull slack cord back through slot to secure.



OPERATION

SELECT THE RIGHT CHEMICAL FOR THE JOB:

1. For greasy or oily soil – Use a heavy-duty degreaser.
2. For sealer or old wax - Use a heavy-duty stripper.
3. For soap residue and lime build-up – Use a mild acidic cleaner.
4. For routine maintenance – Use an all-purpose cleaner.

! CAUTION: Consult your Windsor dealer for proper chemicals. Always follow directions on the container of the chemical being used.

SELECT THE RIGHT BRUSH FOR THE JOB:

1. For routine maintenance use the Universal STANDARD Brush.
2. For cleaning groutlines use the Universal AGRESSOR Brush.

CLEANING PROCEDURE

1. Remove trash receptacles, etc., from the area to be cleaned.
2. Sweep or dust mop the floor.
3. Remove gum, labels or other debris from the surface with a scraper.
4. Apply the pre-mixed solution generously with a wet mop (or use optional tank) to a section of the floor. Let solution stand for 5 to 10 minutes. **Do not allow solution to dry on the floor.**
5. Plug the power cord of the machine into a properly grounded outlet.
6. Adjust handle to a comfortable height.
7. Depress the “ON” switch to start machine. (Depress the “OFF” switch to stop machine.)

! CAUTION: The brush-drive motor is thermally protected and should an overload condition occur causing the motor to stop, the machine will not start until the “ON” switch is depressed.

8. Start cleaning at the farthest corner and work toward the door. For best results, pull machine backwards at a steady pace.
9. Keep the machine moving to avoid possible damage to the grout.
10. Use a bristle hand brush to clean inside corners and small areas not accessible by machine.
11. After scrubbing, rinse floor with clean water. Use a wet vacuum to pick up loosened dirt an solution.
12. Groutlines will appear dark at first, but will lighten after they dry.

DAILY MAINTENANCE

1. Before storing the machine, clean exterior. Remove brush and rinse clean with hot water.
2. Periodically inspect electrical cable and connections. Because the cable will lie on wet, abrasive floors, the cable must be well insulated. If the insulation is broken or frayed, repair or replace immediately.
3. Remove wheels periodically and apply silicone lubricant to the axle.

SERVICING THE GROUTHOG

 **CAUTION:** Always disconnect the power cord from electrical source before making repairs or adjustments.

BRUSH REMOVAL

1. Place handle in upright position. Tilt machine back with handle resting on floor.
2. Loosen Knob Assembly (item 20) holding the left bearing block (item 29).
3. Remove bearing block from the frame and brush core.
4. Remove brush (item 33) from the right bearing block (item 38). When re-installing the brush, make sure that the guide pins (item 30) on both ends are properly aligned with the holes in the brush core and the bearing block (items 29) is correctly seated.


BELT REPLACEMENT

1. Remove main cover (item 73 held on by (4) screws). Remove bottom belt guard (item 34 held on by (2) screws).
2. Using an allen wrench, remove the screw holding the right bearing block (item 56).
3. Remove bearing block along with the old belt. Replace belt and bearing block. Check belt for proper tension and alignment (see Motor Replacement for belt adjustment).

BEARING REPLACEMENT

Using a small torch, heat the aluminum bearing block just enough to allow the bearing and shaft (items 31 and 32, respectively) to be removed.

Use a bearing puller to remove old bearing. When replacing bearing, use a socket or metal sleeve just large enough to slip over the shaft and still contact the inner bearing race. Use an arbor press or vise to press new bearings on shaft. Re-heat aluminum block just enough to allow re-assembly of bearing and shaft.

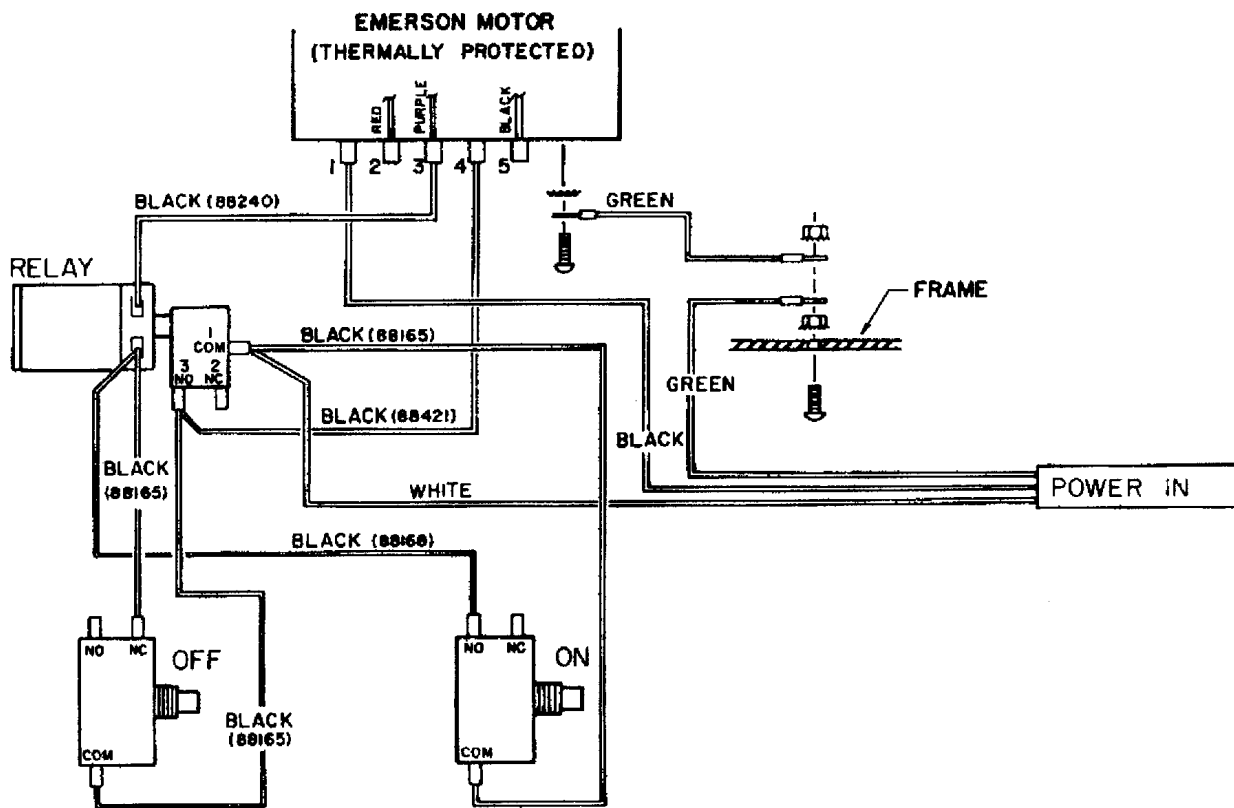
 **CAUTION:** Do not overheat block as this will damage the bearing.

MOTOR REPLACEMENT

1. Remove motor cover (item 73 held on by (4) screws).
2. Remove (4) screws holding motor (item 60). Disconnect motor lead and remove motor.
3. When re-installing the motor use a straight edge to realign pulleys. A screw driver can be used to adjust tension.
4. NOTE: Belt should be adjusted to snug fit to prevent slipping. **DO NOT OVERTIGHTEN.**

WIRING DIAGRAM

115V GH3



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GROUT HOG ASSEMBLY

REF	PART NO.	DESCRIPTION	SERIAL NO.	NOTES:
1	70002	SHOULDER BOLT, 3/8 OD X 2.0 L		
2	89039	WHEEL, GH 4" DIA.		
3	87030	WASHER, 3/8 ID X 3/4 OD NYLON		
4	87003	WASHER, 3/8 ID X 7/8 OD SS		
5	57113	NUT, 5/16-18 HEX NYLOCK		
6	70078	SCR, 5/16 X 3/8 PHSB PH SS DL		
7	14222	BRKT ASM, GH HANDLE ADJ.		
8	-	OPEN		
9	73044	SPRING, EXT .44 D X 2.25 L X .054 W		
10	57106	NUT, 1/4-20 HEX NYLOCK		
11	70013	SCR, 8-32 X 3/4 PHMS SS		
12	70049	SCR, 1/4-20 X 1.75 PHMS SS		
13	66059	PLUG, GH HANDLE PIVOT		
14	57047	NUT, 1/4-20 HEX NYLOCK		
15	70010	SCR, 1/4-20 X 1.5 HHCS SS		
16	66058	PIVOT, GH HANDLE		
17	87013	WASHER, 1/4 ID X 5/8 OD SS		
18	87025	WASHER, 1/4 LOCK EXT STAR SS		
19	70020	SCR, 1/4-20 X 1/2 HHCS SS DL		
20	48013	KNOB ASM, GH BEARING BLOCK		
21	73183	SHIELD ASM, GH3 SPLASH		
22	87068	WASHER, 1/8 RIVET BACKUP		
23	20001	CLAMP, BAG SUPPORT		
24	73157	SHIELD, GH SPLASH		
25	67063	ROD, GH SPLASH SHLD HANGER		
26	67062	ROD, GH SPLASH SHLD ROLLER		
27	67061	ROLLER, SPLASH SHIELD		
28	67005	RIVET, 1/8 OD WHT AL		
29	14215	BLOCK ASM, GH LH BEARING		
30	66060	PIN, ROLL 1/4" X 3/4" L		
31	09021	BEARING, GH BRUSH SHAFT		
32	73161	SHAFT/HUB ASM, GH DRIVEN		
33A	12019	BRUSH, GH UNIVERSAL STANDARD		
33B	14248	BRUSH, GH ALL PURPOSE AGGRESSOR		
34	36045	GUARD, GH3 BELT		
35	70177	SCR, 10-32 X 1/2 FHMS SS		
36	-	OPEN		
37	73163	SHAFT/HUB ASM, GH BRUSH DRIVE		
38	14216	BLOCK ASM, GH RH BEARING		
39	70126	SET SCR, 1/4-28 X 1/4 KCP		
40	64029	PULLEY, GH BRUSH 20L050		
41	73166	SNAP RING, EXTERNAL		
42	87015	WASHER, 9/16 ID X 1.06 OD SS		
43	14079	BUSHING, 1/8 FPT X 1/4 MPT HEX		
44	70015	SCR, 1/4-20 X 3/4 HHCS SS		
45	27218	CAP, GH FRAME TUBE		
46	70025	SCR, 10-32 X 3/4 IHHMS UN SL SS		
47	70051	SCR, 8-32 X 1/2 PPHMS		
48	57104	NUT, 10-32 W/STAR WASHER PLTD		

GROUT HOG ASSEMBLY

REF	PART NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
49	34111	FRAME, GH3 MAIN		
50	89037	WEIGHT, GROUT HOG COUNTERBALANCE		
51	67064	RELAY, 120V SPDT		
52	40015	HOSEBARB, 1/4 FPT X 3/8		
53	35065	GASKET, GH3 COVER		
54	36051	GUSSET, GH3		
55	87067	WASHER, 5/16 LOCK INT. STAR PLT		
56	70126	SET SCR, 1/4-28 X 1/4 KCP DL		
57	11011	BELT, GH3 DRIVE		
58	64028	PULLEY, GH MOTOR 10L050		
59	57123	NUT, 1/4-20 CAPTIVE (.074 W)		
60	53113	MOTOR, 115V 1/3 HP W/T.O.		
61	70110	SCR, 10-24 X 3/4 PHTC -F-		
62	50211	LABEL, GROUTHOG MAIN		
63	72015	SWITCH, SPDT 20A SNAP-ACTION		
64	87075	WASHER, 3/8 ID INT. LOCK		
65	57040	NUT, 1/2 NPT CONDUIT		
66	50228	LABEL, GH WARNING		
67	50212	LABEL, GROUTHOG ON		
68	-	OPEN		
69	27237	COVER, SWITCH PROTECTIVE		
70	50399	LABEL, L1500 WARNING		
71	73200	STRAIN RELIEF, 1/2 NPT FLEX		
72	50213	LABEL, GROUTHOG OFF		
73	27230	COVER, GH3 BLUE		
74	50490	LABEL, 115V GH3 WIRING		
75	23075	CORD ASM, 18/3 X 40 SJT, YL GH3		
76	70361	SCR, 10-32 X 1/2 PHTR PLT		
77	41144	HOOK, CORD		
78	73169	STRAIN RELIEF, CORD HOOK		
79	38079	HANDLE, GH MAIN		
80	50352	CARD, GH3 INSTRUCTION		
81	50776	LABEL, FOR SAFETY		



WINDSOR INDUSTRIES

New Machine Warranty

Limited Warranty

Windsor Industries, Inc. warrants new machines against defects in material and workmanship under normal use and service to the original purchaser. Any statutory implied warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of this written warranty. Windsor will not be liable for any other damages, including but not limited to indirect or special consequential damages arising out of or in connection with the furnishing, performance, use or inability to use the machine. This remedy shall be the exclusive remedy of the buyer. The warranty period is subject to the conditions stated below.

6 / 3 / 1 Warranty: 6 Years Polyethylene (PE) Housings, 3 Years Parts, and 1 Year Service Labor

Subject to conditions outlined below, Windsor Industries warrants rotationally molded PE housings and parts on all of its machines to be free from defects in material and workmanship, under normal use and service for six (6) years to the original owner.

Under this warranty we guarantee the performance of non-polyethylene parts and components to be free from defects and for up to three (3) years to the original end user. Parts replaced or repaired under this warranty are guaranteed for the remainder of the original warranty period. (See table below)

Service labor charges are covered for up to one (1) year from the date of purchase through authorized Windsor service provider. No travel coverage is extended for cord-electric models. See table below for each general product model warranty coverage.

Product	PE Housing & Parts	Non- PE Parts	Service Labor	Travel
Rider Scrubbers	6 years	3 years	1 years	6 Months
Rider Sweepers	6 years	1 year	1 years	6 Months
Walk Behind Scrubbers	6 years	3 years	1 years	6 Months
Walk Behind Sweepers	6 years	1 year	1 years	6 Months
Extractors	6 years	3 years	1 years	-
Polishers / Elec. Burnishers / GH	6 years	3 years	1 years	-
Wide Areas Vacuums	6 years	3 years	1 years	-
VacPak Vacuums	6 years	1 year	1 year	-
Air Movers / Dri-matic / TITAN™	1 year	1 year	1 year	-
Propane Burnishers / Strippers	-	2 year	1 year	-
Tracer/Flex Sweepers/Scrubbers	6 years	2 year	6 months	90 days

VERSAMATIC®	Brush motor, Vacuum motor, Belts – 3 years	All other parts – 1 year
SENSOR®	Vacuum motor, Belts – 2 years	All other parts – 1 year

Product exceptions and Exclusions:

- Extractor brush motors, pump motors, **ALL** PC boards and electronics, **ALL** Vacuum motors (other than VERSAMATIC® and SENSOR®), **ALL** pumps, and FLEXSOL™ diaphragms carry a one (1) year parts and service labor warranty.
- The Onan® engines have three (3) year manufacturer’s warranty. The Honda® and Kawasaki® engines have two (2) year manufacturer’s warranty. **NOTE:** The engine warranty is administered through the engine manufacturer and must be repaired at an authorized service center.

Normal wear items and accessories including, but not limited to, belts, brushes, capacitors, carbon brushes, casters, clutches, cords, filters, finishes, gaskets, hoses, light bulbs, rectifiers, switches, squeegees, bearings, pulleys, relays, actuating cables, wheels, tires, propane tanks, and batteries will be warranted for manufacturing defects for 90-days from the purchase date.

The warranty commences on the purchase date by the original end user from an authorized Windsor agent, subject to proof of purchase. The Machine Registration Card must be completed and returned immediately at the time of purchase. If proof of purchase cannot be identified, the warranty start date is 90 days after the date of sale to an authorized Windsor distributor. Parts replaced or repaired under warranty are guaranteed for the remainder of the original warranty period.



WINDSOR INDUSTRIES New Machine Warranty

90 Day Warranty Extension Available

Upon receipt of the Machine Registration Card, Windsor will extend by 90 days, from the date of purchase, all items included under the one-year provision. This applies only to one-year items and does not include 90-day wear items.

This Warranty Shall Not Apply To:

1. Any product that has been subject to abuse, misuse, neglect or unauthorized alteration (including the use of incompatible or corrosive chemicals or overloading of capacity).
2. Products that have experienced shipping or freight damage.
3. Repairs necessary to correct any failure due to improper pre-delivery service and inspection by the selling dealer.
4. Excessive time for cleaning units in preparation for repair.
5. Any repairs resulting from poor initial service work or improper diagnosis.
6. Tune-up parts such as plugs, plug wires and condensers.
7. Any design alterations performed by an organization not authorized or specified by Windsor.
8. Battery and charger warranties are handled directly with the manufacturer (Trojan® batteries and Lester® chargers).
9. High-pressure washing.
10. Electrical components exposed to moisture.

If difficulty develops during the warranty period, contact the authorized Windsor agent from whom the product was purchased. Windsor Industries, Inc. may elect to require the return of components to validate a claim. Any defective part to be returned must be shipped freight prepaid to an authorized Windsor Distributor/Service Center or to the Windsor factory.

Use Of Parts Not Approved By Windsor Industries, Inc. Will Void All Warranties

This warranty is valid only for all products sold after July 1, 1995. A product sold before that date shall be covered by the limited warranty in effect at the date of sale to the original purchaser.