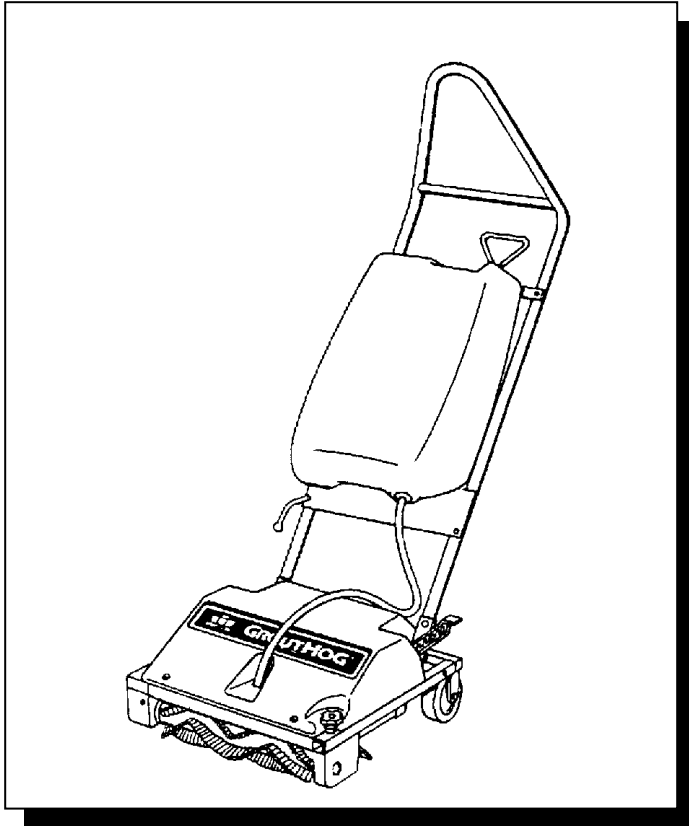


# GROUTHOG

## TILE AND GROUT MACHINE



Operating Instructions (ENG)



**MODEL: GH3 (115V)**  
**10050060**

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

*Read instructions before operating the machine.*

**P**

## SAFETY

# IMPORTANT SAFETY INSTRUCTIONS

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

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.



### **WARNING:**

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

GROUTHOG 86038000 05/17/07

## 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

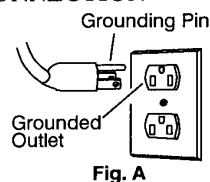


Fig. A

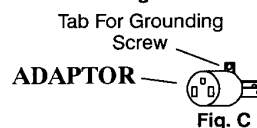


Fig. C

### GROUNDING CONNECTION USING AN ADAPTOR

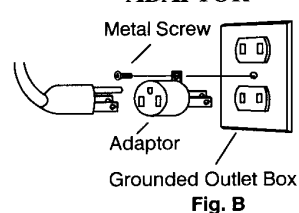


Fig. B

**NOTE:** Adaptors are not allowed in Canada.

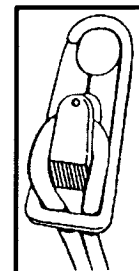
## EXTENSION CORDS

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.

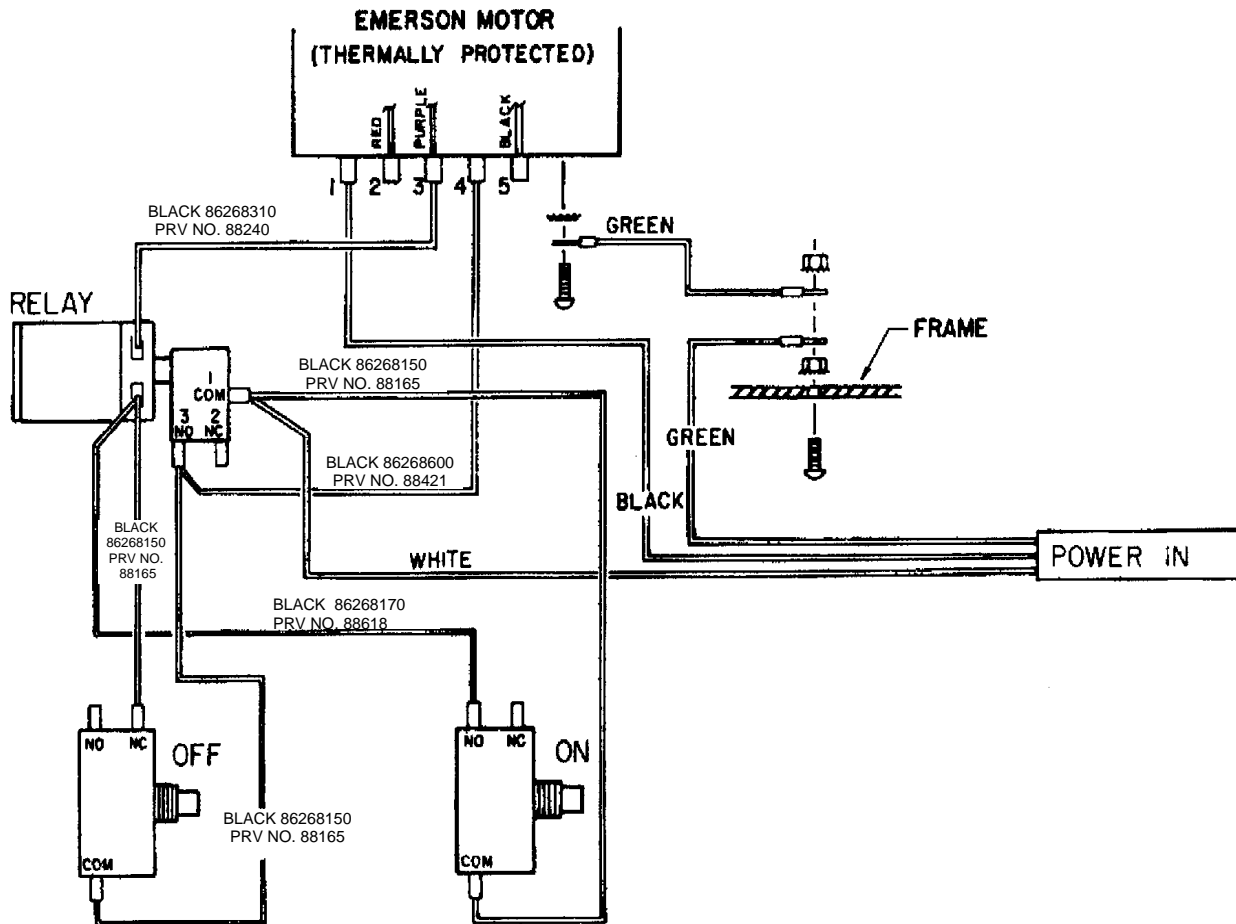
 **CAUTION:** Do not overheat block as this will damage the bearing.

## 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.**

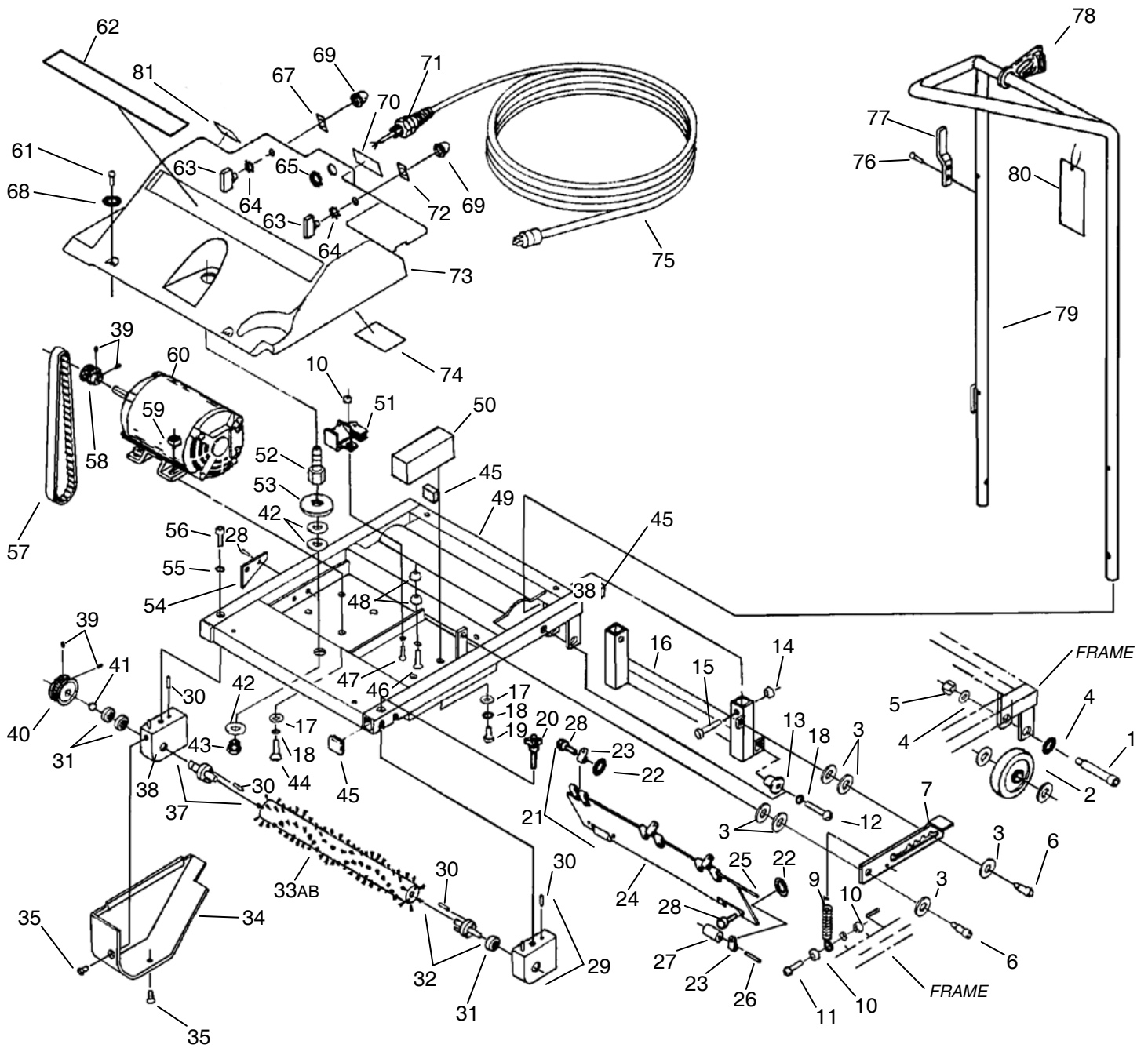
# WIRING DIAGRAM

115V GH3



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# GROUT HOG ASSEMBLY





## GROUT HOG ASSEMBLY

REF	PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86278140	70002	SHOULDER BOLT, 3/8 OD X 2.0 L		
2	86259660	89038	WHEEL, GH 4" DIA.		
3	86010680	87030	WASHER, 3/8 ID X 3/4 OD NYLON		
4	86278910	87003	WASHER, 3/8 ID X 7/8 OD SS		
5	86005750	57113	NUT, 5/16-18 HEX NYLOCK		
6	86274050	70078	SCR, 5/16 X 3/8 PHSB PH SS DL		
7	86091970	14222	BRKT ASM, GH HANDLE ADJ.		
8	-	OPEN	-		
9	86226780	73044	SPRING, EXT .44 D X 2.25 L X .054 W		
10	86005720	57106	NUT, 1/4-20 HEX NYLOCK		
11	76006490	70013	SCR, 8-32 X 3/4 PHMS SS		
12	86273920	70049	SCR, 1/4-20 X 1.75 PHMS SS		
13	86264220	66059	PLUG, GH HANDLE PIVOT		
14	86005680	57047	NUT, 1/4-20 HEX NYLOCK		
15	86273740	70010	SCR, 1/4-20 X 1.5 HHCS SS		
16	86093390	66058	PIVOT, GH HANDLE		
17	86010630	87013	WASHER, 1/4 ID X 5/8 OD SS		
18	86010660	87025	WASHER, 1/4 LOCK EXT STAR SS		
19	86273830	70020	SCR, 1/4-20 X 1/2 HHCS SS DL		
20	86028070	48013	KNOB ASM, GH BEARING BLOCK		
21	86028470	73183	SHIELD ASM, GH3 SPLASH		
22	86010690	87068	WASHER, 1/8 RIVET BACKUP		
23	86233060	20001	CLAMP, BAG SUPPORT		
24	86086930	73157	SHIELD, GH SPLASH		
25	86086340	67063	ROD, GH SPLASH SHLD HANGER		
26	86086330	67062	ROD, GH SPLASH SHLD ROLLER		
27	86264380	67061	ROLLER, SPLASH SHIELD		
28	86273070	67005	RIVET, 1/8 OD WHT AL		
29	86027310	14215	BLOCK ASM, GH LH BEARING		
30	86272180	66060	PIN, ROLL 1/4" X 3/4" L		
31	86228560	09021	BEARING, GH BRUSH SHAFT		
32	86094050	73161	SHAFT/HUB ASM, GH DRIVEN		
33A	86283940	12019	BRUSH, GH UNIVERSAL STANDARD		
33B	86283950	14248	BRUSH, GH ALL PURPOSE AGGRESSOR		
34	86064140	36045	GUARD, GH3 BELT		
35	86006650	70177	SCR, 10-32 X 1/2 FHMS SS		
36	-	OPEN	-		
37	86094060	73163	SHAFT/HUB ASM, GH BRUSH DRIVE		
38	86027320	14216	BLOCK ASM, GH RH BEARING		
39	86277940	70126	SET SCR, 1/4-28 X 1/4 KCP		
40	86250440	64029	PULLEY, GH BRUSH 20L050		
41	86007670	73166	SNAP RING, EXTERNAL		
42	86090230	87015	WASHER, 9/16 ID X 1.06 OD SS		
43	86197300	14079	BUSHING, 1/8 FPT X 1/4 MPT HEX		
44	86273780	70015	SCR, 1/4-20 X 3/4 HHCS SS		
45	86226390	27218	CAP, GH FRAME TUBE		
46	86273860	70025	SCR, 10-32 X 3/4 IHHMS UN SL SS		
47	86273930	70051	SCR, 8-32 X 1/2 PPHMS		
48	86005700	57104	NUT, 10-32 W/STAR WASHER PLTD		

## GROUT HOG ASSEMBLY

REF	PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
49	86092320	34111	FRAME, GH3 MAIN		
50	86090390	89037	WEIGHT, GROUT HOG COUNTERBALANCE		
51	86251350	67064	RELAY, 120V SPDT		
52	86197560	40015	HOSEBARB, 1/4 FPT X 3/8		
53	86237150	35065	GASKET, GH3 COVER		
54	86076200	36051	GUSSET, GH3		
55	86279090	87067	WASHER, 5/16 LOCK INT. STAR PLT		
56	86277940	70126	SET SCR, 1/4-28 X 1/4 KCP DL		
57	86229270	11011	BELT, GH3 DRIVE		
58	86250430	64028	PULLEY, GH MOTOR 10L050		
59	86271110	57123	NUT, 1/4-20 CAPTIVE (.074 W)		
60	86247080	53113	MOTOR, 115V 1/3 HP W/T.O.		
61	86274160	70110	SCR, 10-24 X 3/4 PHTC -F-		
62	86244960	50211	LABEL, GROUTHOG MAIN		
63	86256610	72015	SWITCH, SPDT 20A SNAP-ACTION		
64	86279110	87075	WASHER, 3/8 ID INT. LOCK		
65	86005670	57040	NUT, 1/2 NPT CONDUIT		
66	OPEN	-	-		
67	86244970	50212	LABEL, GROUTHOG ON		
68	OPEN	-	-		
69	86234710	27237	COVER, SWITCH PROTECTIVE		
70	86245160	50399	LABEL, L1500 WARNING		
71	86256200	73200	STRAIN RELIEF, 1/2 NPT FLEX		
72	86244980	50213	LABEL, GROUTHOG OFF		
73	86063380	27230	COVER, GH3 BLUE		
74	86245260	50490	LABEL, 115V GH3 WIRING		
75	86234100	23075	CORD ASM, 18/3 X 40 SJT, YL GH3		
76	86006800	70361	SCR, 10-32 X 1/2 PHTR PLT		
77	86076740	41144	HOOK, CORD		
78	86256170	73169	STRAIN RELIEF, CORD HOOK		
79	86092630	38079	HANDLE, GH MAIN		
80	86232340	50352	CARD, GH3 INSTRUCTION		
81	86245650	50776	LABEL, FOR SAFETY		