



MASONRY SAWS

Instructions ■ Parts List

Models: BH-43, BH-23 BH-45,
BH-25 BH-47, BH-27

ELECTRICAL CONNECTIONS

DISCONNECT POWER BEFORE WORKING ON SAW.

IMPORTANT— Before connecting the motor lead wires to the power supply, be sure that voltage, cycles and phase shown on motor nameplate correspond to available power supply.

Masonry saw motors that have overload protectors are equipped with a reset button on the motor.

If, after proper electrical connections are made, the motor will not run, turn switch to off. Press the reset button to close the overload protector switch.

VOLTAGE SELECTION FOR SINGLE PHASE MOTOR—3 hp single phase masonry saw motors have a dual voltage switch so that 115 volt or 230 volt power supply can be used with no change in wiring. Wherever possible, use 230 volt power supply for best operation. **IMPORTANT** — Be sure that the dual voltage switch mechanical stop is positioned correctly. When the handle is in the "ON" position, it must point to the correct voltage marked on the switch plate.

A 3 & 5 HP single phase masonry saw motor has an "Off-On" switch only and must be run on 230 volt power supply. 230 volt single phase motors must not be operated on 208 volts or the result will be lack of power, overheating and possible damage to the motor. In the case of network systems of 208 volts, use a booster transformer to raise the 208 volt power supply to 230 volts. Be sure to continue ground through transformer.

VOLTAGE SELECTION FOR THREE PHASE MOTORS:

2, 3, 5 and 7 1/2 HP, three phase masonry saw motors have an "Off-On" switch only and switch wires must be connected properly to 208-220 volt or 440 volt power supply. 208-220 volt three phase motors may be run on 208 volts but will be less efficient.

POWER CONNECTIONS:

Always connect L4 or Green to Ground. Connect power supply wiring to the pigtail leads of the switch. Direct wiring connections is preferred but an extension cord with an electrical plug with 30 AMP minimum capacity may be used (35 AMP for 3 HP, dual voltage.) Connecting wires should be as short as possible and in one piece. In no case should the connecting wire be longer than shown in the following table for 2, 3 & 5 HP, single phase motors:

Blade must turn down in front. Consult Factory if saw is running backward.

Wire Gauge	Length of Wire		
	2 HP 115 Volts	3 & 5 HP 115 Volts	230 Volts
#12	25 Ft. -	----	50 Ft.
#10	50 Ft.	25 Ft.	100 Ft.
# 8	75 Ft. -	50 Ft.	150 Ft.
# 6	----	75 Ft.	----

Caution—When wires that are too small a gauge or too long are used, loss of power overheating or possible damage to the motor will result.

GROUND CONNECTIONS:

Important - Caution - Shock Hazard - Always provide suitable ground fault interruption for operator protection. Be sure to ground saw properly before operating — such as ground wire connection provided by the power company.

FUSES: Fuse each power line for the motor with a time delay fuse sized to motor nameplate amperage.

WATER PUMP OUTLET - The female electric outlet on rear of motor is a receptacle for electrical water pump. Do not use this receptacle for any other purpose, such as lights.

OPERATION: The best cutting speed and economy can be attained by following the instructions listed in this section and by selection of the right blade for the job. Your local *Clipper Dealer* or *Area Market Manager* can provide accurate blade recommendations to meet all cutting requirements.

SAFETY PRECAUTIONS

IMPORTANT - The following safety precautions must be observed:

1. Before mounting any blade on the saw, the blade should be inspected for any damage which might have occurred during shipment or handling.
2. The bladeshaft collars and arbor should be cleaned and examined for damage before mounting blade.
3. When tightening bolt against outside bladeshaft collar, be sure to tighten enough to hold blade firmly without slipping, but *do not overtighten*.
4. Adequate coolant must be used for wet cutting abrasive and diamond blades.
5. The blade must be operated within the specified maximum operating speed.
6. The operator should wear safety glasses.
7. When starting the saw, the operator should stand outside the path of the blade.
8. During cutting, the work piece must be held securely and prevented from twisting or slipping and the blade must not be forced into the material with excessive pressure.
9. *Never* operate saw with front of blade guard tilted upward.
10. *Never* use Diamond Blades Dry.

CAUTION: Always disconnect power before doing any maintenance as accidental start up may cause injuries.

MAINTENANCE: The *Clipper Saw* requires very little maintenance for long satisfactory operation. The following point must be watched.

V-Belts: The drive belts are made of premium oil and heat resistant construction. They require very little adjustment, but should be tightened after the first few days of running.

1. **CAUTION** - Do not *overtighten* belts as damage will occur to the belts and bearings, resulting in shortened life. Belts that are too loose will cause undue slippage and short life.

2. When belts require replacement, always use a "matched set" of *Clipper Premium V-Belts*. Do not replace single belts - *always* use a matched set.

3. When installing new belts, do not attempt to stretch over pulleys. Loosen motor bolts and slide motor forward to install belts.

MOTOR: The motor is specially designed for masonry sawing. It is totally enclosed and the sealed bearings require no lubrication. The motor is equipped with thermal overload protection.

1. Periodically clean the dirt and sludge buildup from the motor fan, housing and cooling fins.

2. If the motor becomes overheated, the protector shuts off the motor. Turn the motor switch to "Off" and identify the cause of overheating, such as low voltage, long supply cables of insufficient size.

LUBRICATION:

1. Pivot points on foot lever should be oiled every day.

2. Raising screw should be greased every day.

3. Other pivot points should be oiled weekly.

BLADESHAFT BEARINGS: The bladeshaft bearings are permanently lubricated for life.

WATER PUMP - The submersible water pump is equipped with a thermal overload protector and the sealed bearings require no lubrication. For dry cutting, disconnect the pump.

1. Be sure to keep the pump clean - do not allow sediment to cake in pump and clog it.

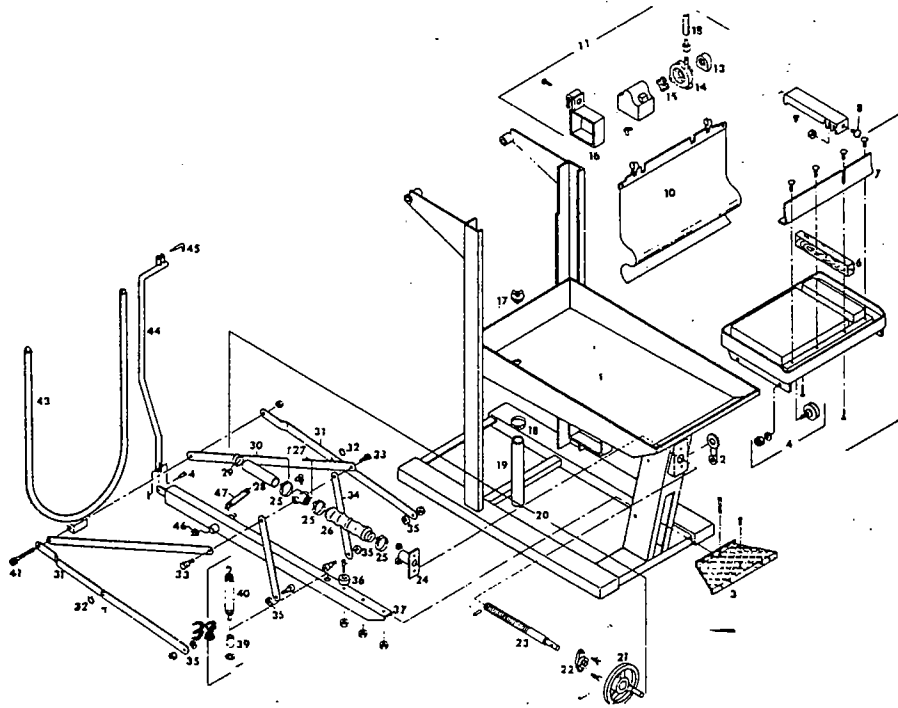
2. If the pump becomes overheated, the protector will shut off the pump. The pump will not start again until it cools down, which may require about thirty minutes. Pump will start automatically.

3. Keep all lines clean and free running.

ORDERING INFORMATION

1. List model number and serial number of machine.

2. List part number and description of part (*not item number*).



ITEM NO.	DESCRIPTION	PART NO.
1	FRAME	OBS 212500
2	BLADE SHAFT WRENCH	212105
3	PEDAL	216507
4	ROLLER ASSEMBLY	200062
5	CONVEYOR CART ASSEMBLY (INCLUDES 4, 6, 7)	213311
6	WOOD STRIP	213613 216632
7	BACK STOP ASSEMBLY	210625
8	THUMB SCREW	210660
9	GUIDE-A-CUT ASSY.	83892 216128
10	WATER CURTAIN ASSEMBLY	219038 216662
11	WATER PUMP (INCLUDES 13-16)	216138
12	HOSE	210643
	WATER PUMP	BECKETT 214169 LIT. GIANT
13	INLET SCOOP	11139 216641
14	IMPELLER HOUSING	21137 216642
15	IMPELLER	21138 216658
16	PUMP CLAMP	212188 216652
17	DRAIN PLUG ASSEMBLY	200298
18	CLAMP (DRAIN HOSE)	121123
19	DRAIN HOSE	OBS 216139
20	RAISING SCREW ASSEMBLY (INCLUDES 21-29)	OBS 212197
21	HANDWHEEL	219034 212144
22	BEARING	210071
23	RAISING SCREW	OBS 212181

ITEM NO.	DESCRIPTION	PART NO.
24	PROTECTOR TUBE	OBS 212184
25	CLAMP	210073
26	BOOT	120870
27	ADJUSTING SCREW NUT ASSEMBLY	B50064
28	SCREW COVER ASSY (INCLUDES RUBBER CAP)	212182
29	RUBBER CAP	210077
30	DIAGONAL LINK	212193
31	HORIZONTAL LINK	212524
32	"E" RING	212571
33	SHOULDER BOLT	9052068 210216
34	VERTICAL LINK	OBS 212144
35	MACHINERY BUSHING	212525
36	BUMPER	210051
37	FOOT PEDAL LEVER	212512
* 38	SPRING ASSEMBLY	72567 212534
39	TUBE	OBS 212516
40	SPRING	72567 212534
41	CAPSCREW	OBS 210129
42	PIVOT PIN	B50090
43	YOKE WELDMENT	OBS 212159
44	TILT BAR WELDMENT	OBS 212163
45	PIN	210097
46	WASHER	OBS 212748
47	PIN	OBS 212745

SWITCH & WIRING FOR 7 1/2 HP
TOGGLE SWITCH

SWITCH & WIRING	219059	212754
SWITCH ONLY	OBS	212752

SWITCH & WIRING FOR 7 1/2 HP
MAGNETIC STARTER

SWITCH & WIRING ASSY. 220 V., THREE PHASE, MAGNETIC STARTER (BH-27, BH-47)	OBS	212708
HEATERS - 220 VOLT		212639
SWITCH & WIRING ASSY. 440 V., THREE PHASE, MAGNETIC STARTER (BH-27, BH-47)		212646
HEATERS - 440 VOLT		212638

* NEED TO CONNECT SPRING TO FOOT PEDAL WITH HOOK OR LOOP

MODEL NO.	H.P.	BLADE CAP.	MOTOR KIT	CUTTING HEAD		FRAME ASSY.	
				WITH MOTOR & SWITCH	LESS MOTOR & SWITCH		
DUAL VOLTAGE	BH-43	3	14	212201	212613	212625	212634
	BH-23	3	20	212203	212610	212622	
230 VOLT	BH-43	3	14	212768	212771	212625	
ON-OFF ONLY	BH-23	3	20	212769	212770	212622	
	BH-45	5	14	212202	212614	212625	
	BH-25	5	20	212204	212611	212622	
230V 30 ONLY	BH-47	7 1/2	14		212615	212627	
	BH-27	7 1/2	20		212612	212624	

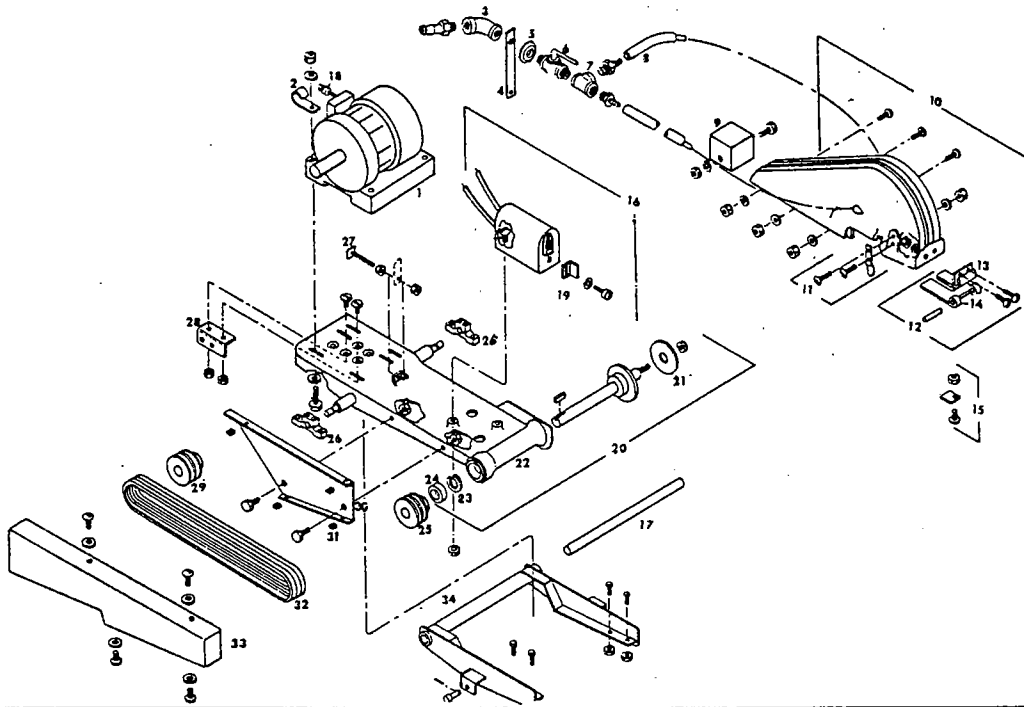
MOTOR KIT INCLUDES MOTOR, SWITCH & WIRING, MOTOR PULLEY, SINGLE PHASE ONLY.

CUTTING HEAD INCLUDES EVERYTHING MOUNTED ON HEAD, EITHER WITH OR WITHOUT MOTORS & SWITCH WET CUTTING INCLUDES SAWLESS CUTTING HEAD & CONVEYOR WET CUTTING.

FRAME CART

NORTON CONSTRUCTION PRODUCTS DIVISION

P.O. Box 2898, Gainesville, Ga. 30501



ITEM No.	DESCRIPTION	PART NO.
1	MOTORS, MOTOR KITS - SEE PAGE 4	
2	CABLE CLIP	200214
3	ELBOW 1/8 BRASS x 45°	210642 OBS
4	MOUNTING BRACKET	210644
5	CONE WASHER	210638
6	SHUT-OFF VALVE	200269
7	BRASS TEE	200332
8	WATER DISTRIBUTION ASSEMBLY	210645
9	SHIELD - 20" CAPACITY ONLY	210666
10	BLADE GUARD 14" CAP. (COMPLETE W/PARTS)	210613
	BLADE GUARD 20" CAP. (COMPLETE W/PARTS)	210592
11	SPRING CLIP ASSEMBLY	210599
12	BLADE GUARD COVER ASSEMBLY	210595
13	NOSE GUARD HINGE	210168
14	BLADE GUARD COVER	210596
15	COVER ADAPTER ASSY. 20" CAPACITY ONLY	210597
16	SWITCH & WIRING ASSY. 3, 5 HP, 30 ON-OFF	219059 212788
	SWITCH & WIRING ASSY. 3 HP, 10 ON-OFF	212788
	SWITCH & WIRING ASSY. 5 HP, 10 ON-OFF	212754
	SWITCH & WIRING ASSY. 3 HP, 10 DUAL V.	212759 OBS

SEE PAGE 4 FOR SWITCH ON 7 1/2 HP

ITEM NO.	DESCRIPTION	PART NO.
17	SHAFT	212537 OBS
18	WATER PUMP CONNECTOR	216579
19	DUAL VOLTAGE STOP	219191 OBS
20	BLADE SHAFT REPLACEMENT KIT	217007
21	LOOSE COLLAR	212656
22	CUTTING HEAD CSTG. (INCLUDES PIVOT BAR)	212100 OBS
23	LOADING SPRING	212139
24	BEARING	212142
25	PULLEY (BLADESHAFT) 14" CAPACITY	210164
	PULLEY (BLADESHAFT) 20" CAPACITY	210254
26	PILLOW BLOCK ASSEMBLY	212521
27	ADJUSTING SCREW	850751 OBS
28	TILT BRACKET	212526 OBS
29	PULLEY (MTRI) 14" BLADE, 60 CYCLE 20'-50C	76130 210668
	PULLEY (MTRI) 20" BLADE, 50 CYCLE	210066 OBS
	PULLEY (MTRI) 20" BLADE, 60 CYCLE 2 & 5 HP	76131 210590
	PULLEY (MTRI) 20" BLADE, 60 CYCLE 7 1/2 HP	210926
30	BRACKET	212173 OBS
31	NUT	210616 OBS
32	V-BELT (SET OF 2)	210162
33	GUARD	216134
34	SWING ARM	212522 OBS
35	CLEVIS PIN	210096 OBS

MOTOR & MOTOR REPLACEMENT PARTS ONLY

MOTOR PART NO.	H. P.	P H A S E	V O L T S	C Y C L E	MOTOR MFG.	MOTOR MFG. NO. (SEE MOTOR NAMEPLATE)	OVERLOAD PROTECT. NO. & MFG. MFG. NO.	START CAPAC.	TERM. BOX	FAN	FAN GUARD
218411	3	1	115 230	60	CENT.	323846	211103 OBS	211151	211163 OBS	211155	211156
218412	3	1	115 230	60	G.E.	5KC182BL12U	211123 OBS	211124 211127	211127	211125	211163
218413	3	3	220 440	60	G.E.	5K182BL185U	211126 OBS		211127	211129	211163
212600	3	3	550	60	G.E.					211155	
215415	5	1	230	60	G.E.	5KC184BL12U	211143 OBS	211130 211127	211127	211125	211164
232088		INCL SWITCH BOX					BRJ9494 OBS				
218414	5	1	230	60	CENT.	324074	211158 OBS	211090	211153	211155	211156
232088		NO SWITCH BOX					BEJ28DB OBS				
215416	5	3	220 440	60	G.E.	5K184BL167U			211127	211129	211164
232099	5	3	550	60	G.E.	5K184BL1120				211155	
212607	7 1/2	3	220	60	G.E.	5K184BL1757U			211148	211129	

FOR MOTOR KITS INCLUDE MOTOR, PULLEY & SWITCH, SEE PAGE
 ALL 3 HP, SINGLE PHASE MOTORS ARE 115 OR 230 VOLT, 60 OR 50 CYCLE
 ALL 5 HP, SINGLE PHASE MOTORS ARE 220 OR 230 VOLT, 60 OR 50 CYCLE

232100

ITEM NO.	DESCRIPTION	PART NO.	
1	BLADESHAFT REPLACEMENT KIT (INCLUDES REPLACEMENT PARTS LISTED BELOW)	216187	217007
	BEARING (PULLEY SIDE)	212142	
	LOADING SPRING	212139	
	LOOSE COLLAR	210132	200132B
2	CAST CUTTING HEAD (INCLUDES PIVOT BAR)	216130	OBS
	CUTTING HEAD KIT (CASTING & PIVOT BAR WITH BLADE SHAFT & BEARINGS INSTALLED)	216216	
THE FOLLOWING CUTTING HEAD KITS INCLUDE CUTTING HEAD, BLADE GUARD, BELT GUARD, PULLEYS & BELTS (NO MTR. SW. & WRG.)			
3	*CUTTING HEAD KIT-WET (BE-142, 143, 145)	216206	
	CUTTING HEAD KIT-DRY (BE-142, 143, 145)	216207	
	*CUTTING HEAD KIT-WET (BE-203, BE-205)	216208	
	CUTTING HEAD KIT-DRY (BE-203, BE-205)	216209	
THE FOLLOWING CUTTING HEAD KITS INCLUDE CUTTING HEAD, BLD GUARD, BELT GUARD, PULLEYS & BELTS (NO MTR. SW. & WRG.)			
2	*CUTTING HEAD KIT-WET 2 HP 115/230/60/1(142)	216196	
	CUTTING HEAD KIT-DRY 2HP 115/230/60/1(142)	216197	
	*CUTTING HEAD KIT-WET 3HP 115/230/60/1(143)	216197	
	*CUTTING HEAD KIT-DRY 3HP 115/230/60/1(203)	216199	
	CUTTING HEAD KIT-WET 3HP 115/230/60/1(143)	216200	
	CUTTING HEAD KIT-DRY 3HP 115/230/60/1(203)	216201	
	*CUTTING HEAD KIT-WET 5HP 230/60/1 (BE-145)	216202	
	*CUTTING HEAD KIT-WET 5HP 230/60/1 (BE-205)	216203	
	CUTTING HEAD KIT-DRY 5HP 230/60/1 (BE-145)	216204	
	CUTTING HEAD KIT-WET 5HP 230/60/1 (BE-205)	216205	
3	PULLEY (BLADE SHAFT) BE-142, 143, 145	210164	
	PULLEY (BLADE SHAFT) BE-203 & BE-205	210254	
4	V-BELT (MATCHED PAIR)	210162	
5	PULLEY (MOTOR) BE-142, 143, 145 (60 CYCLE)	210568	76130
	PULLEY (MOTOR) BE-142, 143, 145 (50 CYCLE)	210569	OBS
	PULLEY (MOTOR) BE-203 & BE-205 (60 CYCLE)	210570	76131
	PULLEY (MOTOR) BE-203 & BE-205 (50 CYCLE)	210563	76130
6	MOTOR-2HP 115/230/60/1 (BE-142)	216144	231095
	MOTOR-2HP 220/440/60/3 (BE-142)	216147	OBS
	MOTOR-3HP 115/230/60/1 (BE-143 & BE-203)	211036	
	MOTOR-3HP 220/440/60/3 (BE-143 & BE-203)	211039	OBS
	MOTOR-5HP 230/60/1 (BE-145 & BE-205)	211038	232088
	MOTOR-5HP 220/440/60/3 (BE-145 & BE-205)	211051	219040
THE FOLLOWING MOTOR KITS INCLUDE MOTOR, PULLEY WATER PUMP PIGTAIL, SWITCH & WIRING			
5	MOTOR KIT 2 HP 115/230/60/1 (BE-142)	216191	OBS
	MOTOR KIT 3 HP 115/230/60/1 (BE-143)	216192	
	MOTOR KIT 5 HP 230/60/1 (BE-145)	216193	
	MOTOR KIT 3 HP 115/230/60/1 (BE-203)	216194	
	MOTOR KIT 5 HP 230/60/1 (BE-205)	216195	
7	SWITCH & WIRING ASSEMBLY (DUAL VOLTAGE FOR 2 & 3 HP SINGLE PHASE (BE-142, BE-143, BE-145 (INCLUDES REPLACEMENT PARTS LISTED BELOW)	210703	219060
	DRUM SWITCH (ONLY)	210704	OBS
	SWITCH HANDLE (ONLY) FOR DRUM SWITCH	200448	
	STOP BRACKET (ONLY) FOR DRUM SWITCH	200456	
8	SWITCH & WIRING ASSEMBLY, SINGLE VOLTAGE FOR 5 HP SINGLE PHASE (BE-145, BE-205) INCLUDES REPLACEMENT PARTS LISTED BELOW	210683	219059
	DRUM SWITCH (ONLY)	210704	OBS
	SWITCH HANDLE (ONLY) FOR DRUM SWITCH	200448	
9	SWITCH & WIRING ASSEMBLY, SINGLE VOLTAGE FOR 3 & 5 HP THREE PHASE (BE-142, BE-143, BE-145, BE-203, BE-205) INCLUDES REPLACEMENT PARTS LISTED BELOW	210787	219059
	DRUM SWITCH (ONLY)	210704	OBS
	SWITCH HANDLE (ONLY) FOR DRUM SWITCH	200448	
10	BLADE GUARD ASSEMBLY - 14"	210613	
11	BLADE GUARD ASSEMBLY - 20"	210592	
12	BLADE GUARD COVER ASSEMBLY	210595	
	NOSE GUARD HINGE	210168	
13	SPRING CLIP ASSEMBLY	210594	
14	GUARD MOUNTING ASSEMBLY (INCLUDED WITH ITEM 10 FIGURE 1) (INCLUDES REPLACEMENT PARTS LISTED BELOW)	216136	
	SPEED NUT	210616	
15	ADJUSTING SCREW ASSEMBLY (BELT TENSION)	216137	