



Electronic Service Manuals

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2360

Folding Handle Dust Control Burnisher

U.S. PATENT NO.: D.345,035 & 5,608,939

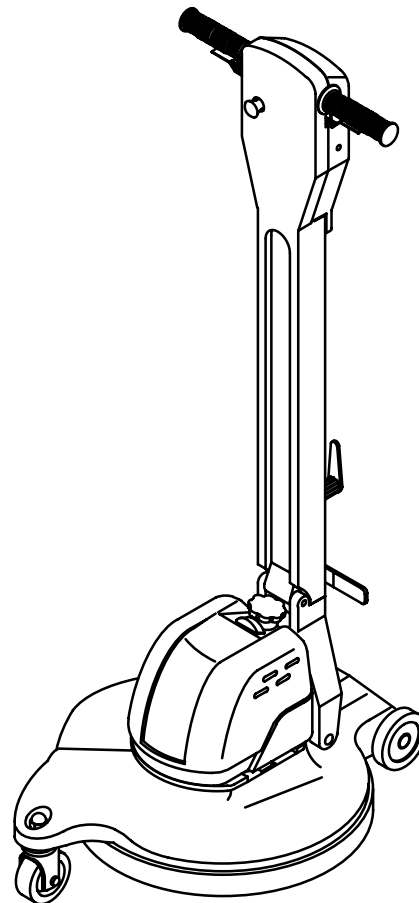
Model:

609655 – 120V

609495 – 230V

609678 – 240V EMC

Operator and Parts Manual



TENNANT COMPANY
Commercial Products
12875 RANSOM STREET
HOLLAND MI 49424

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609941
Rev. 00 (01-00)

OPERATION

This manual is furnished with each new model. It provides necessary operation, maintenance instructions and parts list.

Read this manual completely and understand the machine before operating or servicing.

This machine will provide excellent service. However, the best results will be obtained at minimum costs if:

- The machine is operated with reasonable care.
- The machine is maintained regularly - per the maintenance instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.

MACHINE DATA

Please fill out at time of installation for future reference.

Model No.- _____

Install. Date - _____

Serial No.- _____

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SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed to burnish hard floors in an indoor environment and is not constructed for any other use. Use only recommended burnishing pads.

The following safety alert symbols are used throughout this manual as indicated in their description.

⚠ WARNING: To warn of hazards or unsafe practices which could result in severe personal injury or death.

FOR SAFETY: To identify actions which must be followed for safe operation of equipment.

The following information signals potentially dangerous conditions to the operator or equipment:

FOR SAFETY:

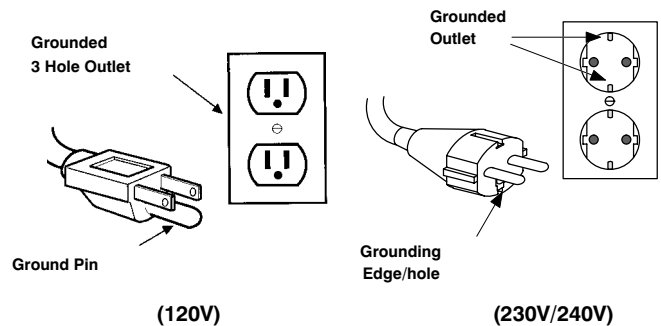
1. **DO NOT OPERATE MACHINE:**
 - Unless trained and authorized.
 - Unless operator manual is read and understood.
 - In flammable or explosive areas unless designed for use in those areas.
 - Unless cord is properly grounded.
 - With damaged cord or plug.
 - If not in proper operating condition.
 - In outdoor areas.
 - In standing water.
 - With the use of extension cords.
2. **BEFORE OPERATING MACHINE:**
 - Make sure all safety devices are in place and operate properly.
3. **WHEN USING MACHINE:**
 - Do not run machine over cord.
 - Do not pull machine by plug or cord.
 - Do not pull cord around sharp edges or corners.
 - Do not unplug by pulling on cord.
 - Do not stretch cord.
 - Do not handle plug with wet hands.
 - Keep cord away from heated surfaces.
 - Do not release handle grips until pad comes to a complete stop.
 - Go slow on inclines and slippery surfaces.
 - Report machine damage or faulty operation immediately.
4. **BEFORE LEAVING OR SERVICING MACHINE:**
 - Turn off machine.
 - Unplug cord from wall outlet.

5. **WHEN SERVICING MACHINE:**
 - Unplug cord from wall outlet.
 - Avoid moving parts. Do not wear loose jackets, shirts, or sleeves.
 - Use manufacturer supplied or approved replacement parts.

⚠ WARNING: Hazardous voltage. Shock or electrocution can result. Unplug machine before servicing.

GROUNDING INSTRUCTIONS

Machine must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electrical shock. This machine is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed in accordance with all local codes and ordinances. Do not remove ground pin; if missing, replace plug before use.



RECOMMENDED STOCK ITEMS

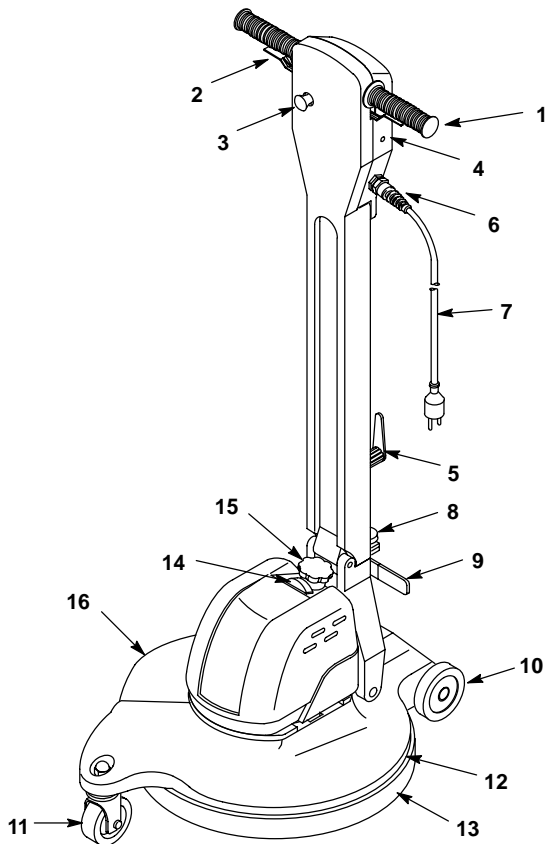
Refer to the Parts List section for recommended stock items. Stock Items are clearly identified with a bullet preceding the parts description (Figure 1).

Ref.	Part No.	Description	Qty.
1	201183	ASM_STANDOFF	1
2	108513	•FLC&E, SHUTOFF	1
3	228187	•NIPPLE	1
4	101714	•GASKET	1
5	218248	NUT, FLANGED	1

FIG. 1

OPERATION

MACHINE COMPONENTS



1. Handle Grips
2. Control Triggers
3. Safety Lock Button
4. Circuit Breaker Reset Button
5. Quick Release Power Cord Hook
6. Cord Grip
7. 75' (23M) Power Cord
8. Handle Lock Knob
9. Handle Release Foot Lever
10. Rear Wheels
11. Pivoting Caster
12. Pad Driver
13. Burnish Pad
14. Pad Pressure Meter
15. Pad Pressure Knob
16. Dust Bag Compartment

MACHINE SET UP

1. Carefully check carton for signs of damage. Report damages at once to carrier.

⚠ WARNING: Hazardous voltage. Shock or electrocution can result. Unplug machine before servicing.

2. Unfold handle to the upright position and lock handle using the handle lock knob (*Figure 2*).



FIG. 2

3. Carefully tilt machine back on handle..
4. Remove centerlock by turning counterclockwise and place pad on pad driver. Replace centerlock securely (*Figure 3*).

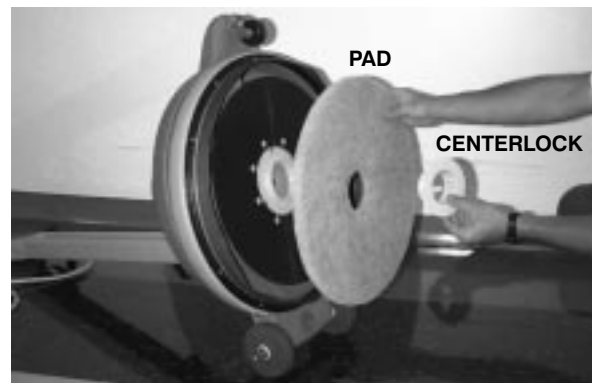


FIG. 3

NOTE: Pads are sold separately. Consult your authorized distributor for pad recommendations.

Pad Specifications:

- For 2000 RPM Burnishing.
- 1"/25,4 mm Thickness
- 20"/51cm. Diameter with 3.5"/9cm. center hole.

NOTE: Machine is not designed for spray buffing.

5. Return machine to upright position.

NOTE: See your authorized distributor to assist you in choosing the correct pad for your specific cleaning needs.

6. Check that dust bag is installed (Figure 4).



FIG. 4

7. For easy power cord removal, pull and turn cord hook upward (Figure 5).

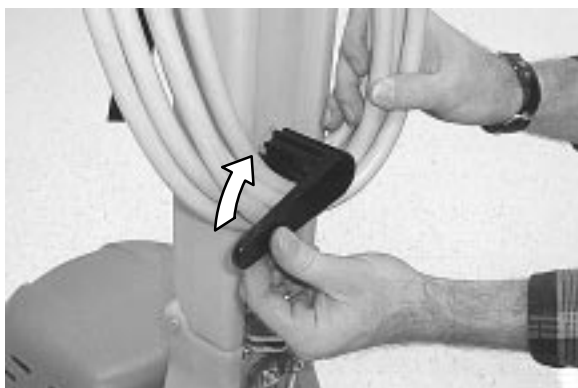


FIG. 5

8. Plug power cord into a grounded wall outlet (Figure 6).

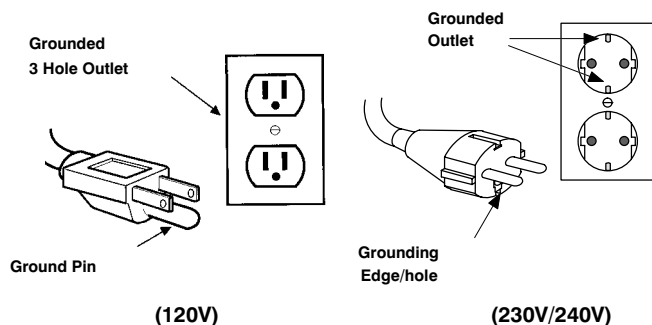


FIG. 6

FOR SAFETY: Do not operate machine unless cord is properly grounded.

FOR SAFETY: Do not operate machine with the use of extension cords.

9. Lower handle to desired operating height by stepping on handle release foot lever (Figure 7).



FIG. 7

MACHINE OPERATION

FOR SAFETY: Do not operate machine unless operator manual is read and understood.

NOTE: Before operating machine, be certain that floor is dry and clean of debris.

1. To begin burnishing, depress safety lock button and pull triggers. Release safety lock button once machine starts (Figure 8).



FIG. 8

ATTENTION: Take extreme caution when starting out. Machine will jolt when triggers are pulled.

2. Adjust pad pressure knob so pad pressure meter reads in the green zone. Turn knob clockwise to decrease pad pressure (Figure 9).

FOR SAFETY: When operating machine, go slow on inclines and slippery surfaces.

OPERATION

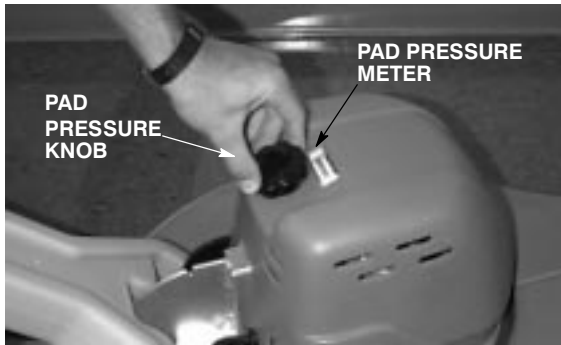


FIG. 9

ATTENTION: To prevent motor overload, periodically check pad pressure meter and build-up on pad. If circuit breaker should trip, unplug power cord, wait 15 seconds and reset breaker switch to resume operation (Figure 10).

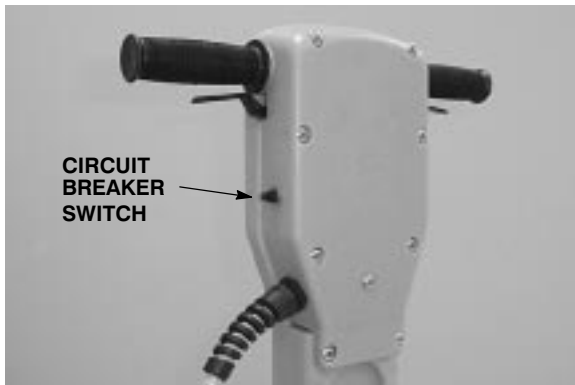


FIG. 10

4. Begin burnishing by moving machine forward and backwards or using a "W" pattern motion.

ATTENTION: Keep machine moving to prevent floor surface damage.

5. To stop machine, release triggers and the safety lock button will automatically engage.

FOR SAFETY: When using machine, do not release handle grips until pad comes to complete stop.

6. When job is completed, perform the following maintenance procedures.

MACHINE MAINTENANCE

⚠ WARNING: Hazardous voltage. Shock or electrocution can result. Unplug machine before servicing.

AFTER EACH USE:

1. Remove pad and wash. Never use soiled pads.

2. Clean machine base with damp cloth. Do not power spray or hose off machine.
3. Clean dust skirt with damp cloth. Inspect for wear. Replace if damaged.
4. Inspect power cord for damage, if worn or damaged, replace immediately.
5. Empty dust bag by sliding off bag clip (Figure 11).



FIG. 11

6. Wipe power cord with damp cloth and neatly coil around cord hook and handle.
7. Periodically check that all bolts and nuts are tight.
8. Every 250 hours of operation check motor carbon brushes for wear. Replace brushes when 3/8" (1 cm.) or less in length.

STORING MACHINE

1. Remove pad from machine and neatly coil cord around cord hook and handle (Figure 12).
2. Store in a dry area in the upright position.
3. For minimal storage or transport space, fold handle down and position as shown (Figure 11).

ATTENTION: Do not expose to rain. Store indoors.



FIG. 12

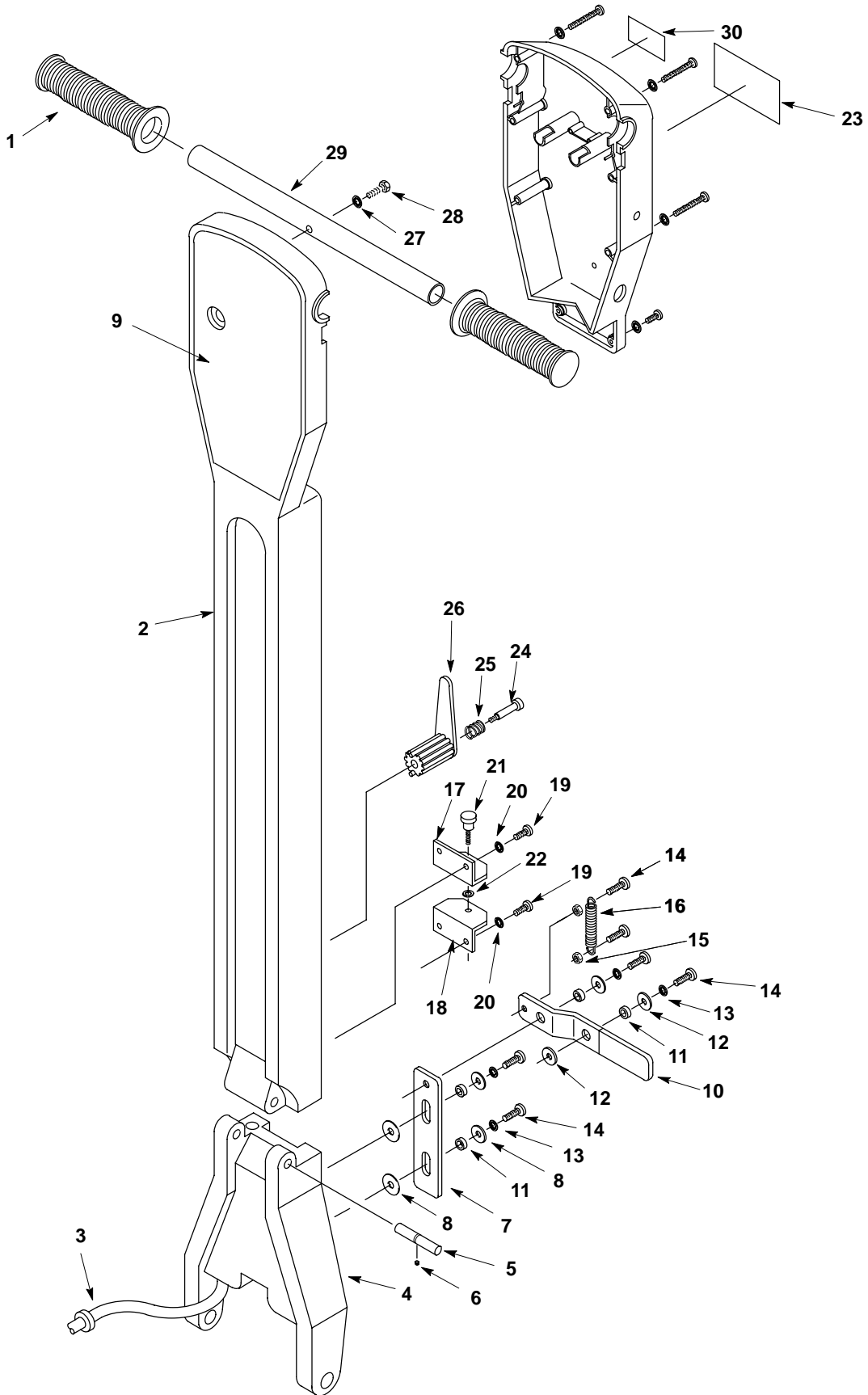
TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Machine unplugged.	Plug machine in.
	Tripped circuit breaker.	Reset circuit breaker button.
	Tripped building circuit breaker.	Reset breaker and change to a different circuit.
	Faulty power cord.	Contact Service Center.
	Faulty wiring.	Contact Service Center.
	Faulty trigger switch.	Contact Service Center.
	Faulty rectifier.	Contact Service Center.
Machine circuit breaker trips continuously.	Too much pad pressure.	Adjust pad pressure knob.
	Soiled Pad.	Replace pad.
	Improper pad for application.	Change to proper pad.
	Faulty circuit breaker.	Contact Service Center.
	Worn motor carbon brushes.	Contact Service Center.

SPECIFICATIONS

MODEL	2360
WIDTH	610 mm (24 in)
HEIGHT	1270 mm (50 in)
LENGTH	826 mm (32.5 in)
FOLDED HEIGHT	470 mm (18.50 in)
FOLDED LENGTH	826 mm (32.5 in)
WEIGHT	34.6Kg (76 lb)
DRIVE MOTOR	230V/240V – 1.12kW, 7AMP, 50Hz 120V – 1.5hp, 12AMP, 60Hz
PAD/BRUSH SPEED	2000 RPM
POWER CORD LENGTH	23M (75 ft)
BRUSH PAD DIA.	510 mm (20 in)
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON TILE FLOOR	<70dB(A)

HANDLE GROUP



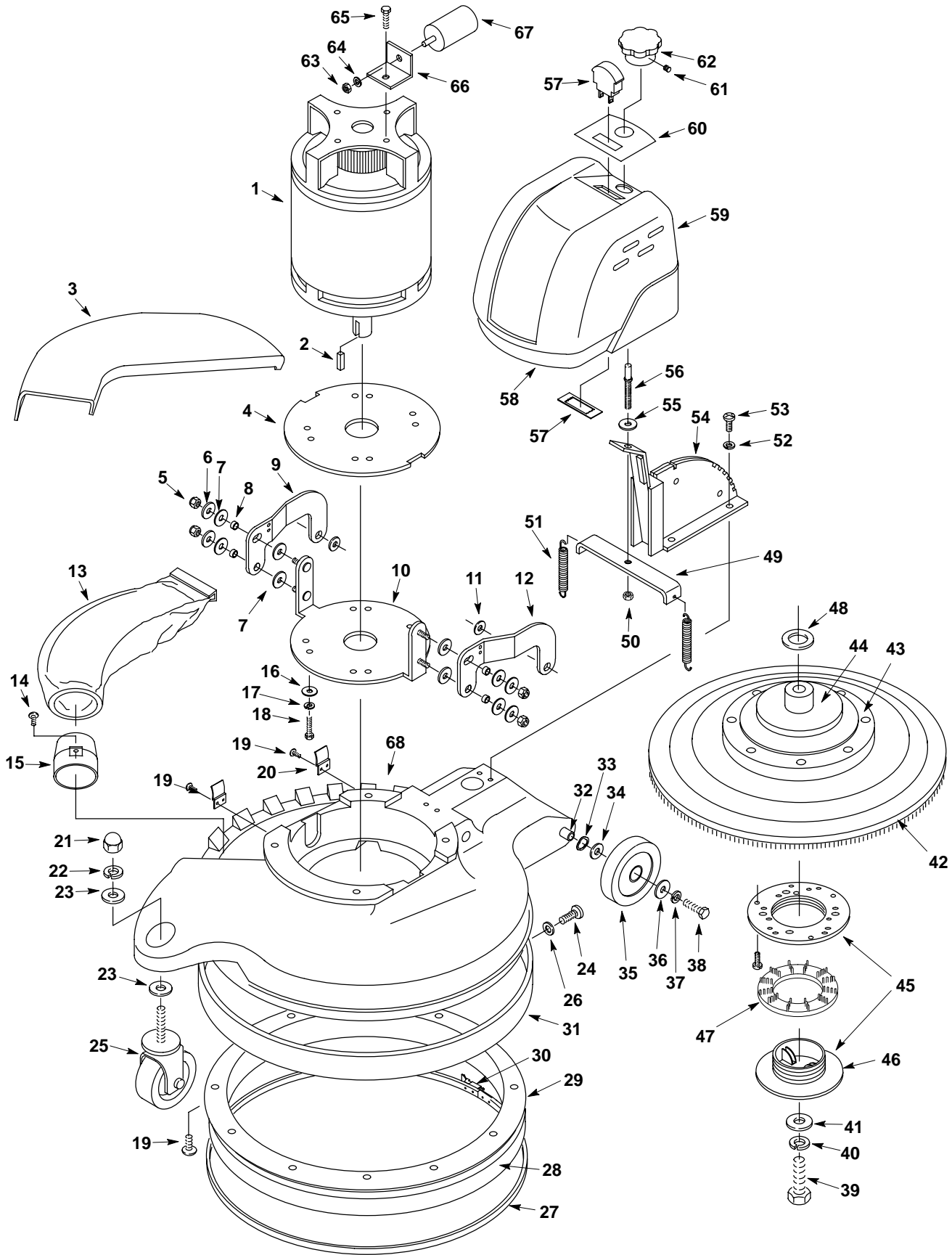
HANDLE GROUP

REF	PART #	DESCRIPTION	QTY.
1	200823	●GRIP, HANDLE TUBE	2
2	609040	HANDLE, UPPER, OFF-WHITE	1
3	130204	POWER CORD, 14/3X57", BLACK	1
4	609042	HANDLE, LOWER, OFF-WHITE	1
5	603116	PIN, HANDLE PIVOT	1
6	140860	SCREW, SET	1
7	603107	LATCH, HANDLE	1
8	140003	WASHER, 1/4X1	4
9	609656	DECAL, TENNANT 2360	1
10	603106	LEVER, HANDLE LATCH	1
11	140147	BUSHING	4
12	579210	WASHER, FLAT	3
13	578244000	WASHER, LOCK	4
14	578321000	SCREW, M6X1.0X16	6
15	579029	NUT, M6X1.0	2
16	606217	SPRING, HANDLE LATCH	1

REF	PART #	DESCRIPTION	QTY.
17	604267	BRACKET, PIVOT UPPER	1
18	604268	BRACKET, PIVOT LOWER	1
19	578321000	SCREW, M6X1.0X16	4
20	578244000	WASHER, LOCK	2
21	606015	●KNOB, HANDLE LOCK	1
22	140037	●WASHER, NYLON	1
23	120619	DECAL, WARNING	1
24	140239	SCREW, 3/8X1-3/4	1
25	603108	SPRING, SWITCH	1
26	603104	HOOK, CORD HANDLE	1
27	578244000	WASHER, LOCK	1
28	200031444	SCREW, M6X1.0X30	1
29	604306	TUBE, FOLDING HANDLE	1
30	578729	DECAL, READ MANUAL	1

- Recommended Stock Items

BASE GROUP



BASE GROUP

REF	PART #	DESCRIPTION	QTY.
1	600475	●MOTOR, 230V/240V	1
	190311	●CARBON BRUSH (600281 BRUSH CARD ASSEMBLY)	4
	190312	RECTIFIER	1
	130461	●MOTOR, 120V	1
	22117	●CARBON BRUSH	4
	190747	RECTIFIER	1
2	140628	KEY, MOTOR 3/16X1	1
3	607611	COVER, BAG, TEAL	1
4	600195	SEAL, MOTOR	1
5	600200	NUT, NYLON LOCK, JAM 3/8-16	5
6	140013	WASHER, FLAT	4
7	630447	WASHER	9
8	600191	SPACER	4
9	600196	ARM, LIFT LH	1
10	600198	BRACKET, MOTOR	1
11	600190	WASHER, RUBBER	2
12	600197	ARM, LIFT RH	1
13	900210	●BAG, CLOTH	1
14	140340	SCREW, #10X5/8	1
15	230911	TUBE, VACUUM	1
16	140013	WASHER, FLAT	4
17	140017	WASHER, LOCK	4
18	140201	SCREW, 3/8-16X3/4	4
19	140340	SCREW, #10X5/8	16
20	230910	BRACKET, BAG COVER	2
21	3058	NUT	1
22	140024	WASHER, LOCK	1
23	140045	WASHER, FLAT	2
24	140824	SCREW, 1/4-20X5/8	2
25	600189	●CASTER	1
26	140003	WASHER, 1/4X1	2
27	230912	STRAP, DUST SHIELD	6.2'
28	603744	SKIRT, DUST CONTROL	1
29	230888	RING, DUST SHIELD	1
30	230913	SCRU-SEAL RACK	1
31	602542	KIT, BUMPER	1
32	230444	PIVOT, SHAFT HANDLE	1
33	4252	WASHER, COMPRESSION	2

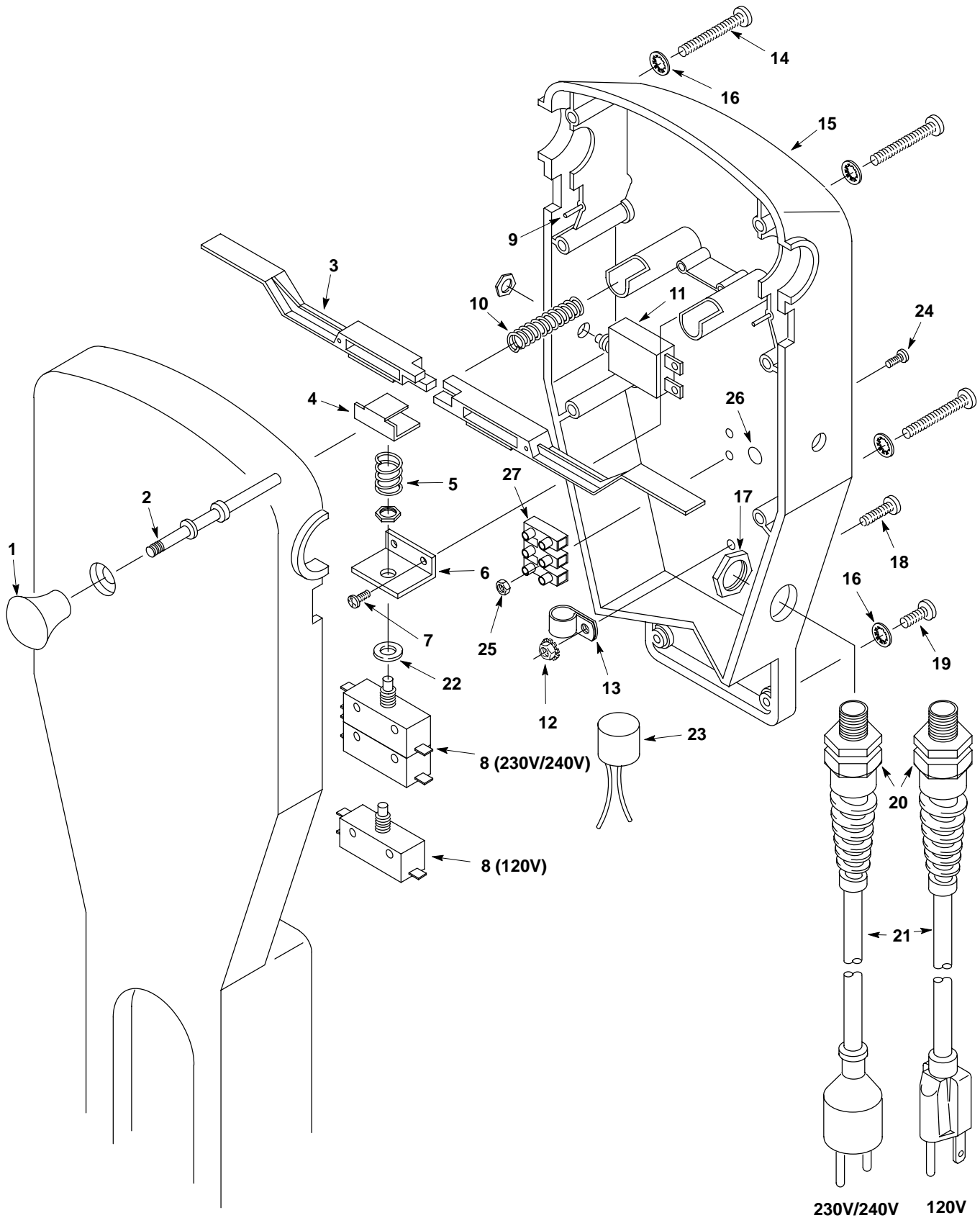
REF	PART #	DESCRIPTION	QTY.
34	3148.816	WASHER, FLAT	2
35	103067	WHEEL	2
36	140003	WASHER, 1/4	4
37	140016	WASHER, LOCK	2
38	140553	SCREW, 1/4-20X1/2	2
39	140221	SCREW, 5/16-18X1-1/4	1
40	140015	WASHER, LOCK 5/16	6
41	25732	WASHER, FLAT	1
▽42	27073	●ASM., DRIVER PAD	1
▲	27071	DISC, FLEXIBLE	1
▲43	190177	SCREW & CAPS (PACK OF 8)	1
▲44	27900	HUB, PAD DRIVER	1
▲▽45	25707	ASM., PAD CENTERLOCK	1
▲46	100101	●RING, PAD RETAINER	1
47	572084000	WASHER, PAD CENTERLOCK	1
48	069760023	WASHER, FLAT	1
49	600194	BRACKET, SPRING	1
50	600200	NUT, NYLON LOCK, JAM 3/8-16	5
51	600201	SPRING	2
52	140015	WASHER, LOCK	4
53	140226	SCREW, 5/16-18X5/8	4
54	600199	PLATE, LATCH	1
55	630447	WASHER	9
56	600193	STUD, ADJUST	1
57	130029	●GAUGE, SENSOR 230V/240V	1
	603766	●GAUGE, SENSOR 120V	1
58	120582	DECAL, RECESS	1
59	607609	COVER, MOTOR, TEAL	1
60	600202	DECAL, PRESSURE ADJ.	1
61	140894	SCREW, SET	1
62	600974	KNOB	1
63	200160017	NUT M8 HXLCK (EMC MODEL)	1
64	140062	WASHER, 5/16 (EMC MODEL)	1
65	140879	SCREW 6-32X3/4 (EMC MODEL)	1
66	601356	BRACKET RFI FILTER (EMC MODEL)	1
67	600383	FILTER, RFI, LARGE (EMC MODEL)	1
68	607607	BASE, TEAL	1

▽ Assembly

▲ Included in Assembly

● Recommended Stock Items

CONTROL HANDLE GROUP



CONTROL HANDLE GROUP

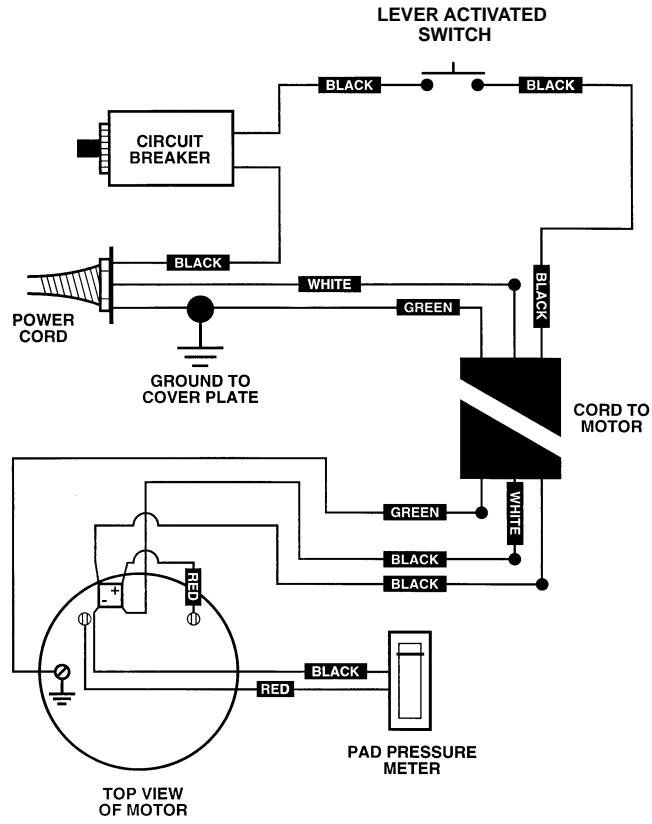
REF	PART #	DESCRIPTION	QTY.
1	603291	KNOB, PLASTIC	1
2	603112	PIN, HANDLE LOCK	1
3	603105	TRIGGER, HANDLE	2
4	603111	CLIP, SWITCH LEVER	1
5	603108	SPRING, SWITCH	1
6	603109	BRACKET, SWITCH	1
7	140350	SCREW, #10X1/2	2
8	603110	●SWITCH, 20 AMP (230V/240V)	1
	606292	●SWITCH, 20 AMP (120V)	1
9	603114	DOWEL	2
10	140401	SPRING, LOCK BUTTON	1
11	130670	●BREAKER, CIRCUIT 12 AMP (230V/240V)	1
	605197	●BREAKER, CIRCUIT 15 AMP (120V)	1
12	140519	NUT, 10-24 KEP	1
13	140324	CLAMP, 5/16 NYLON	1
14	603292	SCREW, M6X1.0X45	6
15	603102	HOUSING, HANDLE BOTTOM	1

REF	PART #	DESCRIPTION	QTY.
16	578244000	WASHER, LOCK	8
17	140504	NUT, LOCK 1/2"	1
18	140900	SCREW, 10-24X3/4	1
19	578321000	SCREW, M6X1.0X16	2
20	130167	●CORD GRIP	1
21	600396	POWER CORD, 230V/240V 23M	1
	602747	POWER CORD, 120V 23M	1
22	140028	WASHER, FLAT	1
23	601312	CHOKE (EMC MODEL)	1
24	140946	SCREW, 6-32X1 (EMC MODEL)	2
25	140534	NUT, 6-32 (EMC MODEL)	2
26	578859	DECAL, GROUND SYMBOL (EMC MODEL)	1
27	130005	STRIP, TERMINAL 25A (EMC MODEL)	1

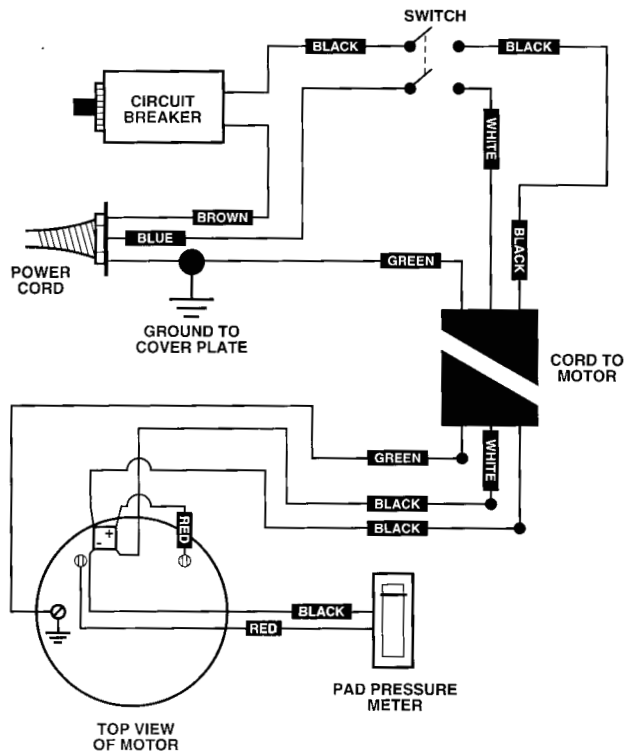
- Recommended Stock Items

ELECTRICAL DIAGRAMS

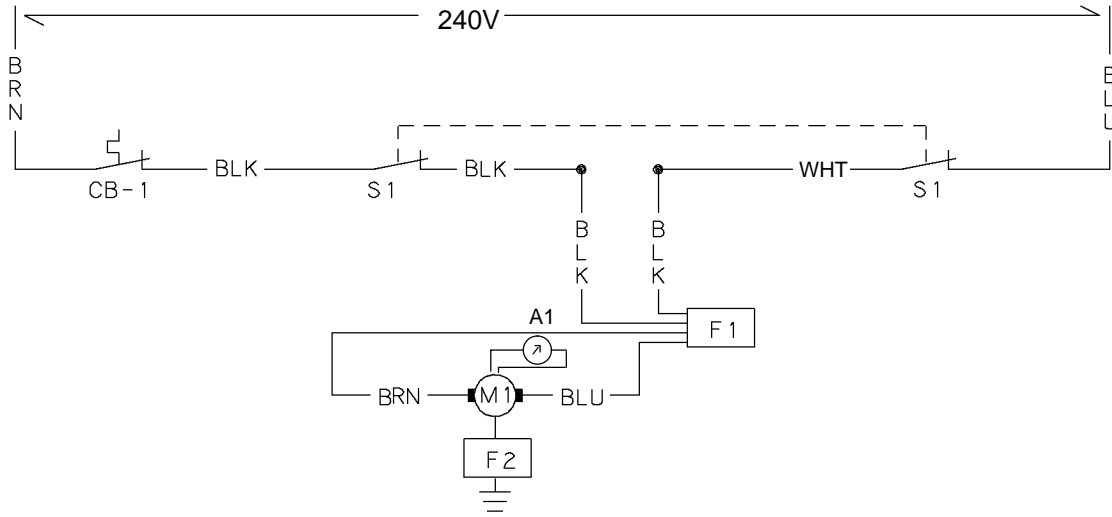
120V



230V



240V EMC MODEL



REF LEGEND

- BLK = Black
- BRN = Brown
- BLU = Blue
- WHT = White
- S1 = Switch
- CB1 = Circuit Breaker
- M1 = Motor
- F 1= Filter, RFI
- F 2= Choke, RFI
- A1= Ammeter