

Castex®

Max Trac

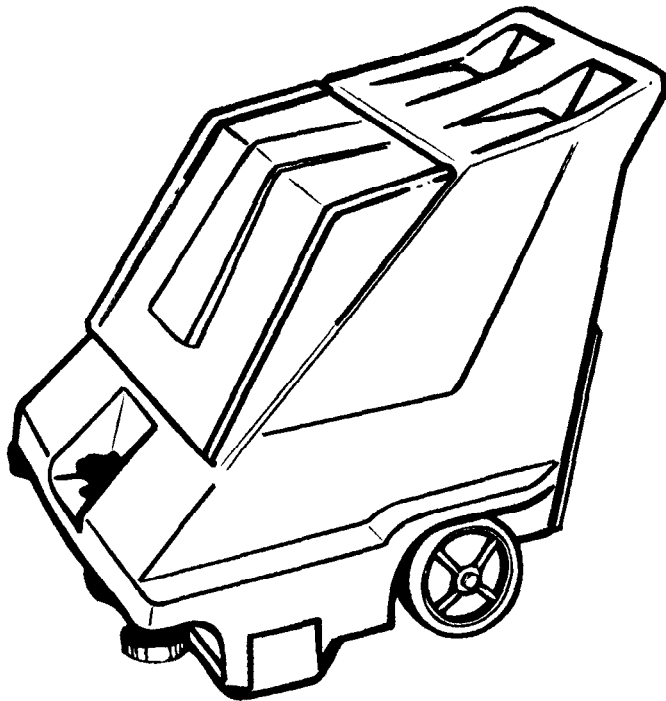
Wide Area Vacuum

Operator Manual
& Parts Lists

Models: BWV3000, WV3000



PDF Version of Manual by:
Michigan Company Inc.
2011 N. High St.
Lansing, Mich. 48906
(517) 484-9312
<http://www.Michco.Com>
Email: Shop@Michco.Com
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CASTEX INCORPORATED
12875 RANSOM STREET
HOLLAND MI 49424 U.S.A.

A  COMPANY

1-800-522-7839
616-786-2330
FAX: 1-800-678-4240
CUSTOMER SERVICE: 1-800-365-6625

173040
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OPERATION

This manual is furnished with each new Max Trac Model. It provides necessary operation, maintenance instructions for both the Electric and Battery Models. **Read this manual completely and understand the machine before operating or servicing it.**

When ordering replacement parts use the illustrated Parts Lists in this manual. Before ordering parts or supplies, be sure to have your machine model number and serial number handy. Parts and supplies may be ordered by phone or mail from any of the manufacturers service centers or distributors.

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 machine maintenance instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.

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MACHINE DATA

Please fill out at time of installation for future reference.

Model No.- _____

Install. Date - _____

Serial No.- _____

SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed to pick up dirt, dry debris and dust in an indoor environment and is not constructed for any other use. The pick up of any type of liquids is prohibited.

All operators must read, understand and practice the following safety precautions:

The following symbol is used throughout this manual as indicated in their descriptions.

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

⚠ CAUTION: To identify actions which must be followed for safety operation of equipment.

The following instructions are intended for either or both the Electric and Battery model.

1. DO NOT OPERATE, MAINTAIN OR SERVICE MACHINE:

- Unless trained and authorized.
- Unless operator manual is read and understood.
- If it is not in proper operating condition.
- Without hopper or shaker filter installed.
- If power cord or plug is damaged.
- If power cord is not properly grounded.

2. WHEN OPERATING MACHINE:

- Do not pick-up ashes or cigarette butts.
- Avoid wet surfaces.
- Avoid hazardous or combustible materials.
- Avoid explosive vapors or dust in the air.
- Do not run machine where flammable liquids or gases are present.

- Do not run on ramps or inclines unless adequate personnel are present for assistance.
- Do not run machine over power cord. A hazard may occur.
- Do not pull machine by power cord or pull cord around sharp edges or corners.
- Always work within power cord length to avoid cord stress and damage.
- Do not handle plug with wet hands.

3. BEFORE LEAVING OR SERVICING MACHINE:

- Stop on level surface.
- Turn machine power off.
- Disconnect batteries.
- Unplug power cord from wall outlet.

⚠ WARNING: Hazardous Voltage. Shock or electrocution can result. Always disconnect

batteries or unplug power cord before servicing machine.

⚠ WARNING: Batteries emit hydrogen gases, explosion or fire can result. Keep sparks and open flame away.

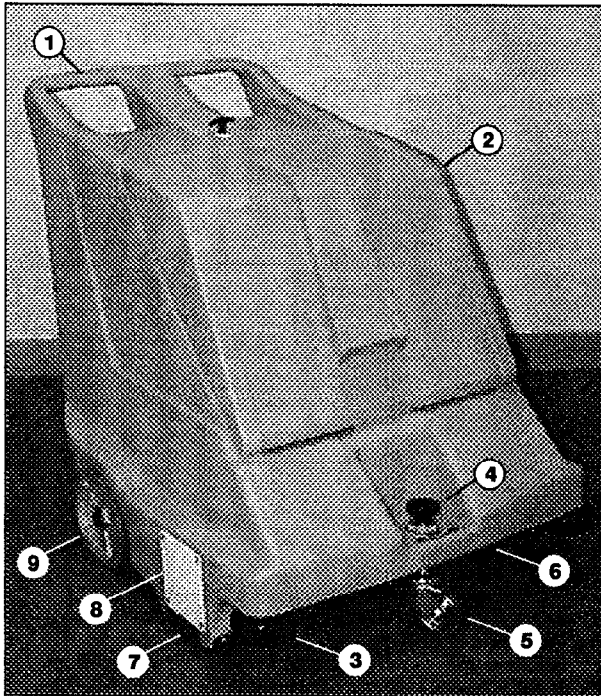
⚠ WARNING: Charge in a well ventilated area and keep hood propped open when charging batteries, explosion or fire can result.

⚠ WARNING: Avoid contact with battery acid. Severe burns can result.

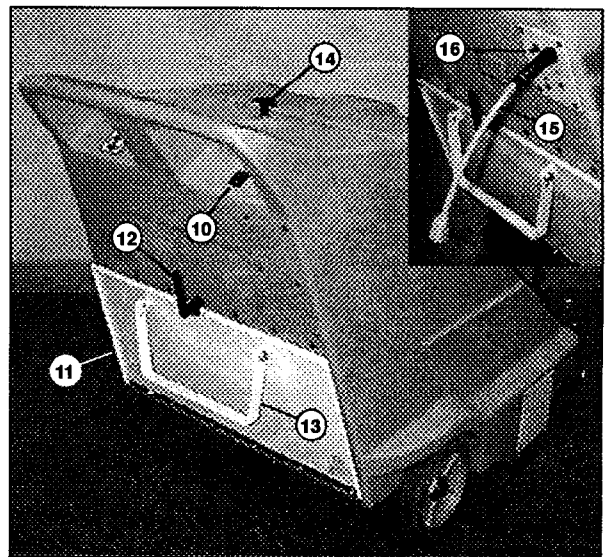
⚠ WARNING: Do not store outdoors and avoid getting wet.

⚠ WARNING: The use of supplies other than those recommended by manufacturer may cause damage.

MACHINE COMPONENTS



1. Control Handle
2. Battery Compartment Hood
3. Wall Roller
4. Brush Height Adjustment Knob
5. Pivotal Caster
6. 27" (69cm) Rotating Brush
7. Carpet Shoe



8. Brush Belt Plate
 9. 8" (20cm) Rear Wheels
 10. Machine ON/OFF Switch
 11. Hopper Compartment
 12. Hopper Door Latch
 13. Hopper Door Support
 14. Shaker Filter Handle
- Electric Model:
15. Power Cord Pigtail
 16. Brush Circuit Breaker Button

OPERATION

MACHINE UNCRATING

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

Battery Model:

Batteries and battery charger are packaged separately.

Battery installation must be accomplished after removing machine from crate.

MACHINE SET-UP

ELECTRIC MODEL

1. Connect 75'/23m (120V Model Only) extension power cord to machines pigtail. Use belt clip as shown. (Figure 1)

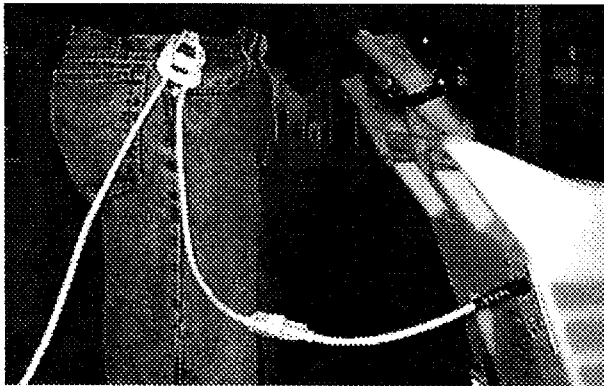


FIG. 1.

2. Plug power cord into a grounded wall outlet. (Figure 2)

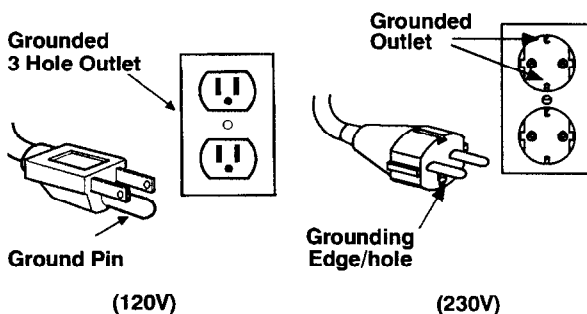


FIG. 2.

⚠ WARNING: To avoid an electrical hazard, machine must be grounded while in use to protect the user from electric shock and serious injury.

BATTERY MODEL

Recommended Battery Specifications:

Two 12 volt, deep cycle, sealed batteries. Maximum battery dimensions are 6.75"W (17cm) x 12.5L (32cm) x 10"H (25cm).

The manufacturer recommends that you use sealed batteries (maintenance free) with this machine.

To avoid any type of electrical hazard, which could result in severe personal injury, exercise the following warning statements when installing batteries:

⚠ WARNING: Batteries emit hydrogen gases, explosion or fire can result. Keep sparks and open flame away.

⚠ WARNING: When handling or working around batteries, NEVER place anything on top of the batteries. This could cause sparking and create an explosion hazard.

⚠ WARNING: Avoid contact with battery acid. Severe burns on skin can result.

1. Turn ON/OFF switch to off.

⚠ WARNING: To prevent accidental starting, be certain that machine is turned off.

2. Open battery hood to access battery compartment. (Figure 3)
3. Open hopper door at rear of machine. When door is open, the vacuum motors will raise allowing clearance for installing batteries. (Figure 3)

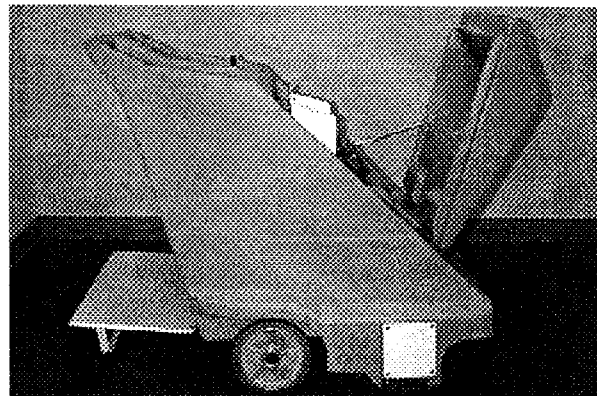


FIG. 3.

NOTE: For additional battery clearance, remove white vacuum motor covers and disconnect the hood stop bar.

3. Carefully install batteries into compartment and arrange battery posts as shown. (Figure 4)

⚠ WARNING: Do not drop batteries into compartment! Battery and machine housing damage may result. This damage is not covered by Warranty.

4. Find battery jumper wire located in your manual package. Connect jumper wire and two machine wires to battery posts as shown. RED to POSITIVE (+) and BLACK to NEGATIVE (-). Use rubber post covers provided. (Figure 4)

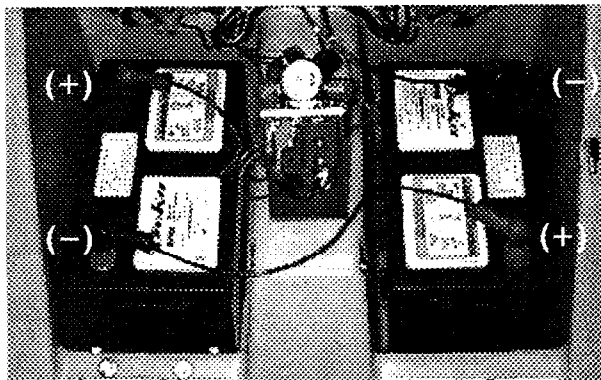


FIG. 4.

5. Double check connections before closing battery compartment.
6. To ensure a full battery charge for first time use, batteries may need charging before operating. See CHARGING BATTERIES on page 7.

MACHINE OPERATION

1. Read and understand **SAFETY PRECAUTIONS** on page 2 before operating machine.
2. Check that hopper is installed.
3. Adjust brush to proper height. To adjust brush, turn off power switch and rotate brush adjustment knob until brush bristles slightly deflect creating a "flicking" action. (Figure 5)

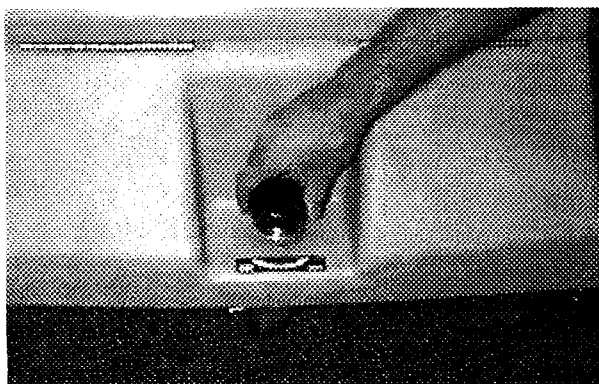


FIG. 5.

NOTE: With brush properly adjusted the brush will assist in propelling the machine forward.

4. Activate ON/OFF switch.
5. Begin cleaning by manually pushing machine forward.

WHILE OPERATING MACHINE

1. If brush circuit breaker should trip, re-adjust brush height or remove obstruction from brush. See BRUSH MAINTENANCE instructions for removing brush obstruction.
2. To maintain optimum performance, periodically check hopper for fullness. Empty when full. See EMPTYING HOPPER.
3. Battery Model: Do not continue to run machine when pick-up performance begins to decrease. See CHARGING BATTERIES.

FOR SAFETY: Before leaving machine; stop on level surface and turn off machine.

EMPTYING HOPPER

1. Turn machine power off.
2. Open hopper door at rear of machine and slide out hopper.
3. Remove hopper net and slide hopper back into machine and close door. (Figure 6)

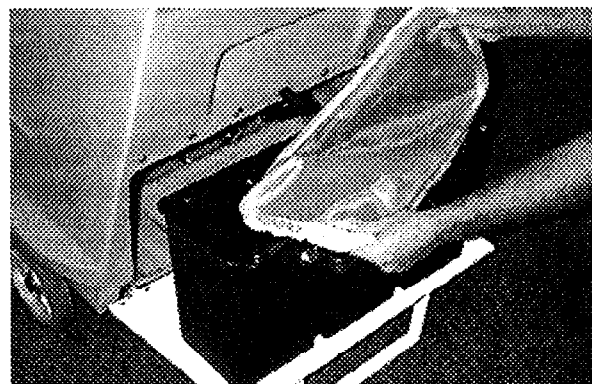


FIG. 6.

4. With hopper in place, grasp the shaker handle at top of machine and vigorously shake the handle in a up and down motion. Dirt trapped in filter will work loose and fall into the hopper. (Figure 7)

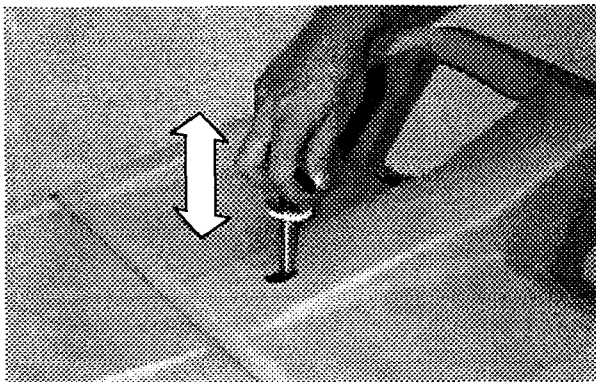
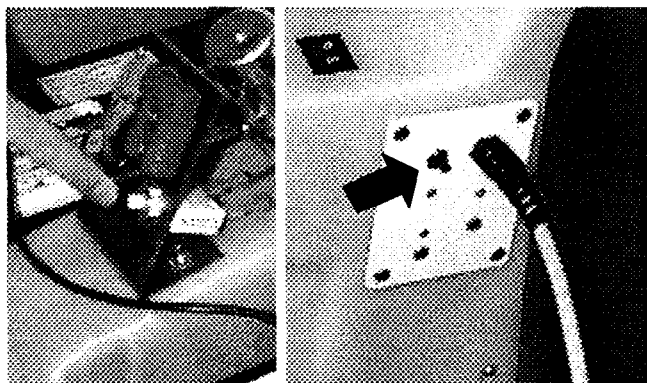


FIG. 7.

5. Remove hopper and empty.
6. Replace hopper with net. When closing door, make sure filter housing properly seals over top of hopper.

BRUSH MOTOR CIRCUIT BREAKER

The machine is equipped with a circuit breaker to protect brush motor from damage. The circuit breaker will trip due to excessive overload on brush. If breaker should trip, re-adjust brush height or remove obstruction from brush and reset breaker button. Circuit breaker button is located next to the charger connector for the battery model and near the power cord pigtail for the electric model. (Figure 8)



Battery Model

Electric Model

FIG. 8.

CHARGING BATTERIES (Battery Model)

CAUTION: The following charging instructions are intended for the 24V charger that is supplied with machine. Otherwise use a charger with the following specifications to prevent battery damage.

CHARGER SPECIFICATIONS:

- OUTPUT VOLTAGE - 24 VOLTS
- OUTPUT CURRENT - 15 AMPS
- AUTOMATIC SHUTOFF CIRCUIT
- FOR DEEP CYCLE BATTERY CHARGING

NOTE: For optimum machine operation, keep batteries charged at all times. Never let batteries set in a discharge condition.

WARNING: Do not continue to run machine when pick-up performance begins to decrease, battery damage may result.

DANGER EXPLOSIVE GASES: Always charge batteries in a well ventilated area. While charging, batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away.

1. Push machine to a well ventilated area when charging.
2. Turn power switch off.
3. Open battery hood to access battery compartment.
4. With the charger DC outlet plug disconnected from batteries, plug charger power supply cord into a grounded wall outlet. (Figure 9)

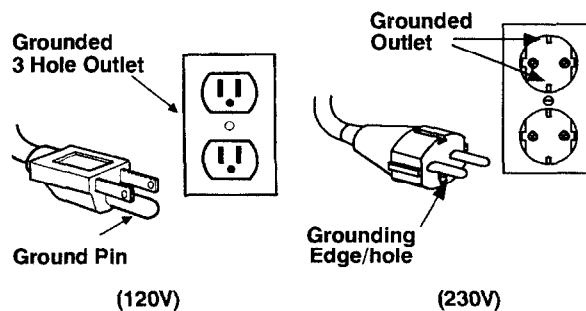


FIG. 9.

5. Connect charger DC outlet plug to battery charge connector. Leave hood open to promote ventilation while charging. (Figure 10)



FIG. 10.

NOTE: Once the charger is connected to the machine, power to the machine will be shut-off.

6. Follow specific charger operation instructions supplied with your charger.
7. After charging, disconnect charger from batteries before unplugging charger from wall outlet.

WHEN TO RECHARGE BATTERIES (Battery Model)

To prolong the life of your batteries:

- Recharge batteries after every 3 hours of run time.
- Do not charge batteries after every short time use. Wait until a total of 3 hours of run time.
- Do not continue to run machine when pick-up performance begins to decrease.
- Never let batteries set discharged for more than a few days.
- Always follow proper charging instructions.

MACHINE MAINTENANCE

The following maintenance instructions are intended for either or both the Electric and Battery model.

⚠ WARNING: Before attempting any maintenance procedures on machine; stop on level surface, turn off switch and unplug power cord or disconnect battery charger if charging machine.

⚠ WARNING: Before attempting any machine repair; unplug power cord or disconnect batteries. Repairs must be performed by authorized personnel.

To keep machine in good working condition, simply follow machines daily, weekly and monthly maintenance procedures.

DAILY MAINTENANCE

1. Empty hopper. Make sure to use shaker handle.
2. Clean machine housing with a nonabrasive, non-solvent cleaner.
3. Recharge batteries if needed.
4. Inspect power cord and cord grip for damage. Replace if damaged. Always coil extension cord neatly after each use.

WEEKLY MAINTENANCE

1. Keep terminal posts clean for good contact.
2. Inspect for loose battery wire connections and for worn wire insulation. Replace wires if worn.
3. Inspect brush area for entangled debris, string, etc.

MONTHLY MAINTENANCE

1. Inspect for brush wear. When bristles become worn, you can adjust the brush to extend its life. See BRUSH MAINTENANCE.
2. Lubricate axle and caster grease fittings with a water resistant grease.
3. Check machine for loose nuts and bolts.

EVERY 250 HOURS OF OPERATION

Check vacuum and brush motors for carbon brush wear, replace brushes if worn to 1cm (3/8") or less.

BRUSH MAINTENANCE

To Remove Brush Obstructions:

1. Turn machine power off.
2. Empty hopper.
3. Unplug power cord or disconnect jumper wire from batteries. This will prevent the motor from accidentally starting.

⚠ CAUTION: If batteries are not sealed batteries, you must remove them.

4. Carefully tilt machine back on rear handle.
5. Remove any entangled obstruction from bearings and brush.
6. Stand machine upright and reconnect batteries.
7. Reset circuit breaker button. See page 6.

To Extend Brush Life:

1. Turn machine power off.
2. Empty hopper.
3. Battery Model: Remove batteries from machine (See BATTERY INSTALLATION).
4. Loosen brush belt:
 - a. Loosen four bolts on brush motor lock plate, located inside battery compartment as shown. (Figure 11)
 - b. Turn the two brush adjustment screws counterclockwise an equal amount of turns (keeps motor shaft level) to loosen the brush belt. (Figure 11)

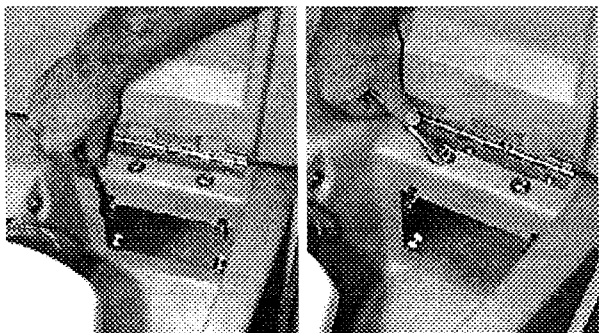


FIG. 11.

NOTE: Failure to keep motor shaft level will result in premature belt wear and noisy operation.

5. Carefully tilt machine back on rear handle.

6. Remove belt cover and carpet shoe as shown. Use a philips screwdriver and 1/2" (13mm) wrench. (Figure 12)

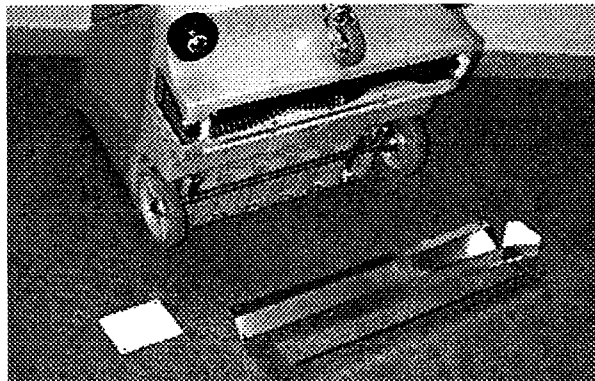


FIG. 12.

7. Remove brush belt from motor pulley.
8. Grasp brush and pull brush bearing blocks from housing. Remove entire brush assembly from machine.
9. Rotate both bearing blocks 180° and reinstall brush. The bearings are positioned off-center in the blocks allowing for the brush to be lowered 3/16" (5mm). (Figure 13)

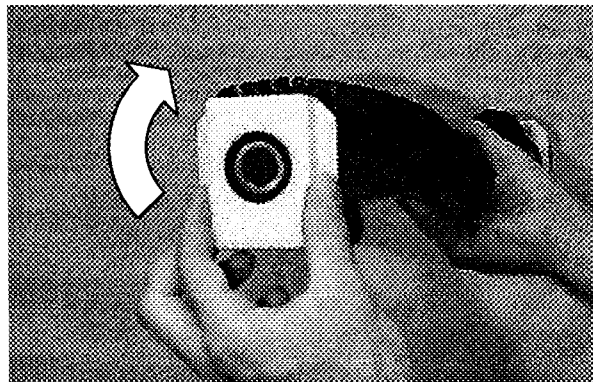


FIG. 13.

10. Reinstall belt. Place belt on motor pulley and stretch it on the brush pulley. Inspect belt for wear before reinstalling.
11. Replace carpet shoe and stand machine upright.
12. Tighten belt, turn tension adjustment screws clockwise an equal amount of turns to tighten. Belt should flex 1/4" (6mm) each way for correct tension.
13. Observe belt position. Manually rotate brush with hands, if belt rubs on the sides of the pulleys, motor is not level. To level motor, turn only one tension adjustment screw a 1/4 turn at a time until belt is centered on pulley and motor is level. (Figure 14)

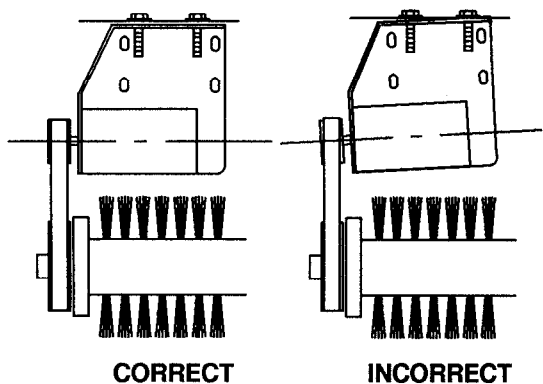


FIG. 14.

NOTE: Failure to keep motor level will result in premature belt wear and noisy operation.

14. When belt alignment and tension is correct, tighten the four bolts on brush motor lock plate and replace belt cover.
15. Battery Model: Replace batteries (See BATTERY INSTALLATION).

TRANSPORTING MACHINE

When transporting machine by trailer or truck, be certain to follow tie-down procedures below:

1. Raise brush with brush adjustment knob.
2. With adequate personal, load machine using a recommended loading ramp.
3. Position front of machine up against front of trailer or truck.
4. Place a block behind the rear wheels and the front casters.
5. Place tie-down straps over top of machine and secure straps to floor. It may be necessary to install some tie-down brackets to the floor of your trailer or truck.

STORING MACHINE

Store machine in a dry area in the upright position. Remove batteries if storing for a lengthy period.

OPERATION

TROUBLE SHOOTING GUIDE

The following Trouble Shooting instructions are intended for either or both the Electric and Battery model.

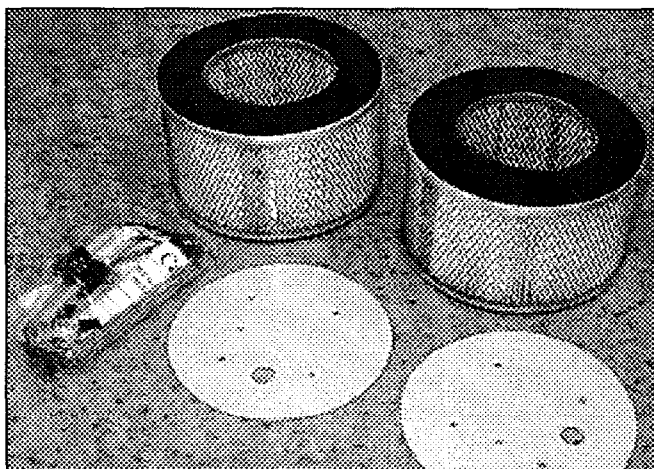
PROBLEM	CAUSE	SOLUTION
No power. (Electric Model)	Faulty ON/OFF switch	Contact Service Center.
	Power cord disconnected.	Connect power cord.
	Faulty power supply cord.	Replace power supply cord.
	Loose or broken wiring	Contact Service Center.
	Tripped circuit breaker in building.	Reset breaker in building.
No power. (Battery Model)	Faulty ON/OFF switch	Contact Service Center.
	Batteries need charging.	See Battery Charging.
	Faulty battery(s)	Replace battery(s).
	Loose battery cable.	Tighten loose cables.
	Batteries are not connected correctly.	See Battery Installation in manual.
	Faulty solenoid.	Contact Service Center.
Vacuum motor not operating.	Faulty wiring.	Contact Service Center.
	Faulty motor.	Contact Service Center.
	Carbon brushes worn.	Contact Service Center.
	Vacuum motor thermal overload tripped.	Check air flow for obstruction, wait 20 minutes for motor to cool.
Brush motor not operating.	Circuit breaker has tripped.	Remove obstruction or raise brush height and reset breaker button.
	Defective brush belt.	Replace belt.
	Faulty solenoid.	Contact Service Center.
	Faulty wiring.	Contact Service Center.
	Faulty brush motor.	Contact Service Center.
	Carbon brushes worn.	Contact Service Center.
Poor pick-up.	Hopper is full.	Empty hopper.
	Plugged shaker filter.	Shake filter clean.
	Batteries need charging.	Charge batteries.
	Clogged vacuum inlet tube.	Remove obstruction.
	Hopper is not properly positioned under shaker filter housing, causing vacuum leak.	Properly position hopper under shaker filter housing. Shaker housing will properly seal down over hopper when door is closed.
	Worn brush bristles.	See Maintenance section.
	Brush height incorrect.	Adjust brush height knob.
	Loose brush belt.	Tighten belt. See Maintenance section.
	Worn hopper gasket.	Replace gasket.
	Vacuum motor secondary filter is plugged.	Contact Service Center.
	Faulty vacuum motor or wiring.	Contact Service Center.
	Vacuum motor carbon brushes worn.	Contact Service Center.
	Short run time.	Batteries not fully charged.
Faulty battery(s).		Replace battery.
Faulty charger.		Replace charger.
Machine pushes hard.	Brush height set too low.	Adjust brush height knob.

SPECIFICATIONS

Models:	120V-Electric	24V-Battery	230V-Electric
LENGTH	40"/102cm	40"/102cm	40"/102cm
WIDTH	30"/76 cm	30"/76 cm	30"/76 cm
HEIGHT	35.5"/90cm	35.5"/90cm	35.5"/90cm
WEIGHT	145 lbs/66Kg	145 lbs/66Kg	145 lbs/66Kg
WT. W/ BATTERIES	N/A	248 lbs/112Kg	N/A
VACUUM MOTOR	2-120V, 1hp, 1 stage, 6A, 720W	2- 24V, .5hp, 2 stge, 13A, 310W	2-230V, 1hp, 1 stage, 3A, 720W
WATER LIFT -AIR FLOW	63"/160cm - 220cfm combined	47"/122cm - 130cfm combined	63"/160cm - 220cfm combined
BRUSH MOTOR	120V, 2400 rpm, 1.4A, 204W	24V, 2400 rpm, 8.1A, 190W	230V, 2400 rpm, 0.7A, 204W
CLEANING PATH	27"/69cm	27"/69cm	27"/69cm
HOPPER CAPACITY	.5 Bushel/17.6L	.5 Bushel/17.6L	.5 Bushel/17.6L
POWER CORD LENGTH	75'/23m Extension Cord	N/A	77'/23.5m Attached Cord
BATTERIES	N/A	2-12V, deep cycle,sealed, gel cell	N/A
RUN TIME on full charge	N/A	Approx. 3 hours	N/A
DECIBEL RATING AT OPERATOR'S EAR INDOORS.	74dB(A)	74dB(A)	74dB(A)

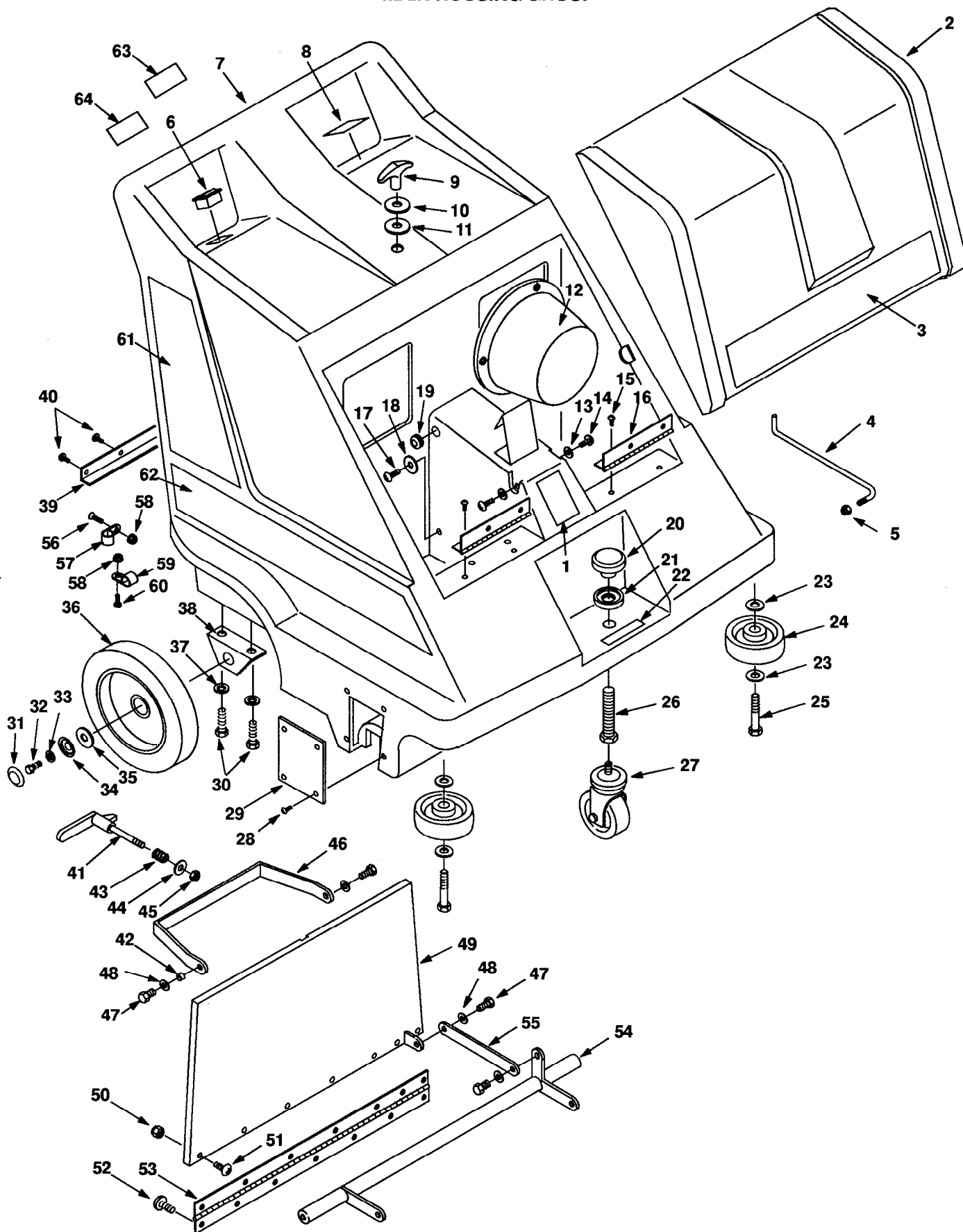
OPTIONAL HEPA FILTER KIT

To order HEPA Filter kit (High Efficiency Particulate Air, 99.97% efficient at 0.3 microns) , contact your local distributor and specify part number 190807.



PARTS LIST

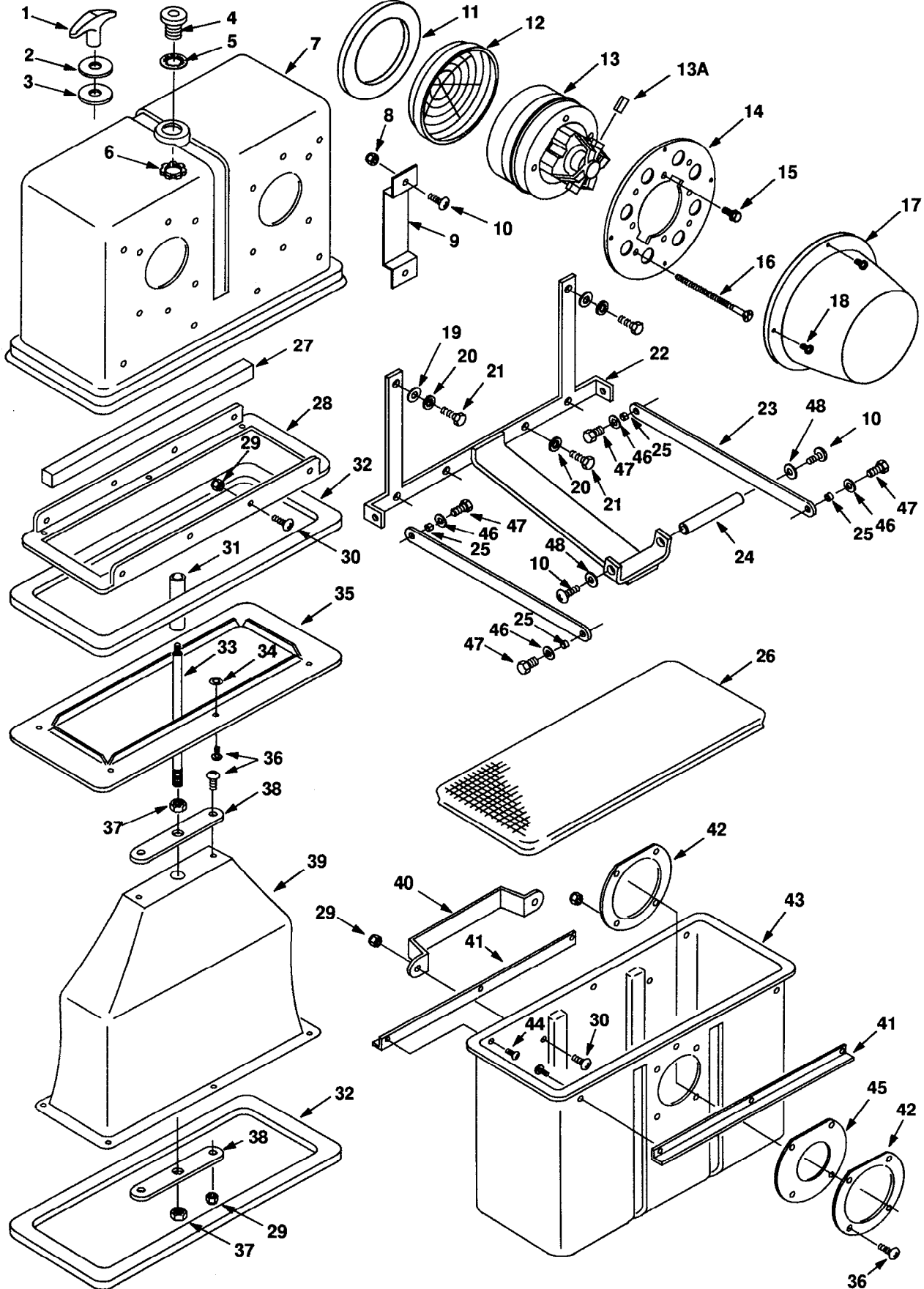
MAIN HOUSING GROUP



MAIN HOUSING GROUP			
Ref.	Part No.	Description	Qty.
1	120842	DECAL, INSTR. BAT.	1
2	602707	HOOD, COVER (CASTEX)	1
2	602705	HOOD, COVER (NOBLES)	1
3	120840	DECAL, FRONT (CASTEX)	1
3	120239	DECAL, FRONT (NOBLES)	1
4	230684	ROD, HOOD	1
5	140501	NUT, LOCK	1
6	602669	SWITCH	1
7	100323	CHASSIS, NOBLES BATT.	1
7	602795	CHASSIS, NOBLES 230V	1
7	100779.DCL	CHASSIS, CASTEX BATT.	1
7	602794	CHASSIS, CASTEX 120V	1
8	120843	DECAL, OPERATION	1
9	240194	KNOB, HEIGHT ADJ.	1
10	140014	WASHER, FENDER	1
11	140039	WASHER, FELT	1
12	230566.WH	COVER, VAC MOTOR	2
13	140000	WASHER, FLAT	2
14	140885	SCREW, 4-40X1/4	9
15	140837	SCREW, 10-24X3/8	8
16	230683	HINGE	2
17	140864	SCREW, 1/4-20X3/4	2
18	140041	WASHER, FENDER	2
19	240195	GROMMET	1
20	240202	KNOB, HEIGHT ADJ.	1
21	230565	NUT, LOCK	1
22	601695	DECAL, HEIGHT ADJ.	1
23	140008	WASHER, FLAT	2
24	103026	WHEEL, BUMPER	2
25	140234	SCREW, 1/2-13X2 1/2	2
26	230583	STEM, CASTER	1
27	103051	CASTER, FRONT SWIVEL	1
28	140837	SCREW, 4-40XX3/8	4
29	230588.WH	COVER, BELT	1
30	140237	SCREW, 1/2-13X1	4
31	150210	PLUG, CAP	2
32	140226	SCREW, 5/16-18X5/8	2
33	140015	WASHER, LOCK	2
34	140048	WASHER	2
35	140055	WASHER, FLAT	2
36	103069	WHEEL, 8"	2
37	140024	WASHER, LOCK	4
38	230582	BRACKET, AXLE	2
39	230584	BRACKET, HOUSING	1
40	140824	SCREW, 1/4-20X5/8	6
41	700002	LATCH, HANDLE	1
42	140912	BUSHING	4
43	140419	SPRING	1
44	140025	WASHER, FLAT	1
45	140545	NUT, JAM	1
46	230595.WH	BRACKET, SUPPORT	1
47	140226	SCREW, 5/16-18X5/8	1
48	140027	WASHER, FLAT	1
49	230596.WH	PANEL, REAR COVER	1
50	140511	NUT, ACORN	1
51	140837	SCREW, 10-24X3/8	7
52	140885	SCREW, 1/4-20X1/2	7
53	230585	HINGE	1
54	230837	AXLE WELDMENT	1
55	230574	LINK, HOPPER LIFT	1
56	15858.12	SCREW, 10-24X3/4	1
57	140304	CLAMP	2
58	140519	NUT, KEP	4
59	140323	CLAMP	2
60	140895	SCREW, 10-24X3/4	3
61	120835	DECAL, SIDE, UPPER RT	1
	120836	DECAL, SIDE, UPPER LT	1
62	120838	DECAL, SIDE, LOWER RT	1
	120837	DECAL, SIDE, LOWER LT	1
63	120618	DECAL, WARNING (120V-230V MODELS)	1
63	120649	DECAL, WARNING (BATTERY MODEL)	1
64	120615	DECAL, WARNING, WET RUG	1

PARTS LIST

HOPPER & FILTER GROUP

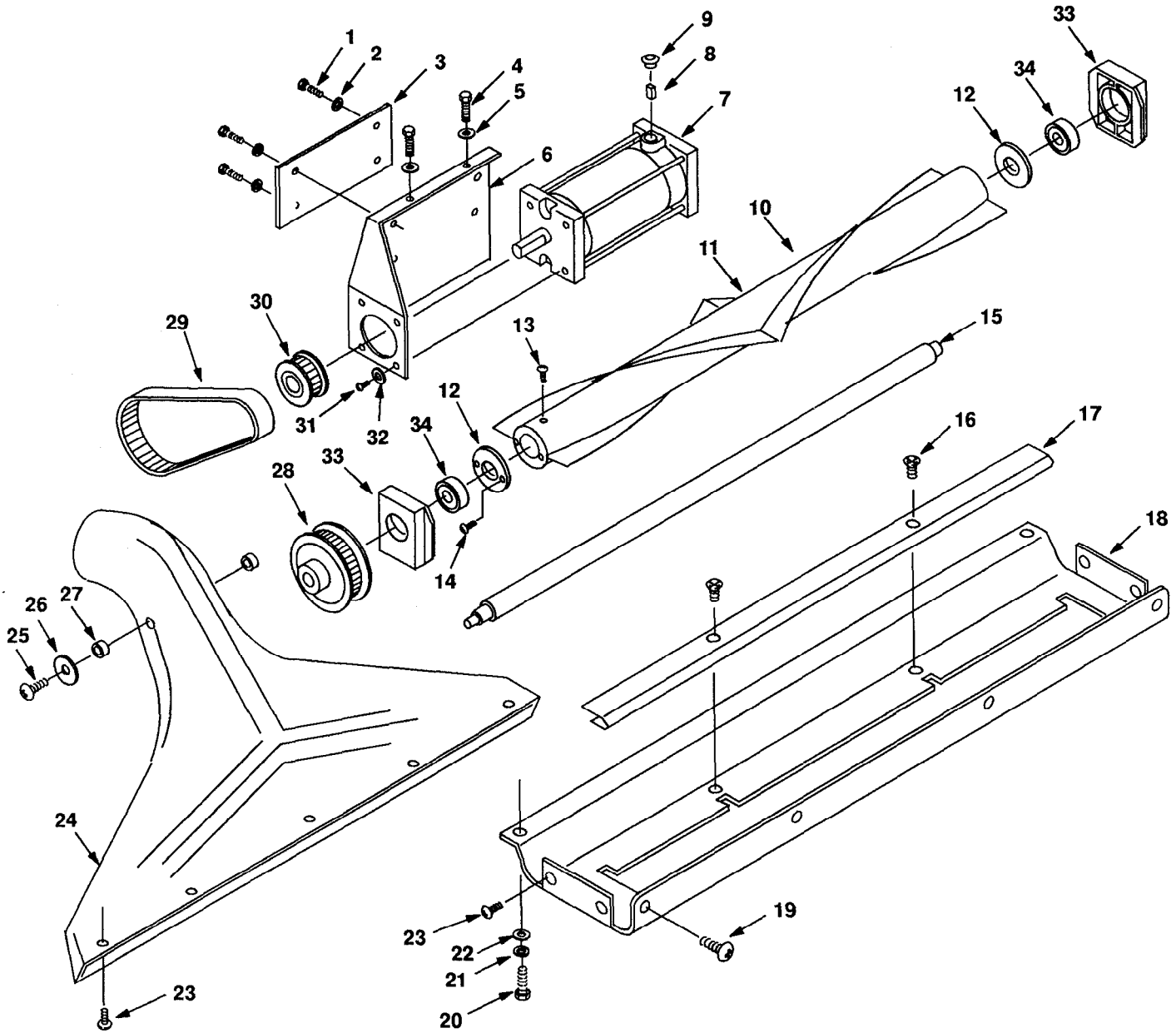


HOPPER & FILTER GROUP

Ref.	Part No.	Description	Qty.
1	240194	KNOB	
2	140014	WASHER, FENDER	1
3	140039	WASHER, FELT	1
4	140909	BUSHING, GUIDE PIN	1
5	140044	WASHER, LOCK	1
6	140504	NUT, CONDUIT	1
7	602704	HOUSING, FILTER	1
8	140501	NUT, LOCK	4
9	230434	BRACKET, FILTER	2
10	140885	SCREW, 1/4-20X3/4	6
11	100140	GASKET, VAC	2
12	180626	FILTER, VAC MOTOR	2
13	130995	MOTOR, VACUUM, 24V	2
13A	190163	CARBON BRUSH, 24V	2
13	130988	MOTOR, VACUUM, 120V	2
13A	602043	CARBON BRUSH, 120V	2
13	130997	MOTOR, VACUUM, 230V	2
13A	602059	CARBON BRUSH, 230V	2
14	230572	PLATE, VAC MOUNT	2
15	140751	SCREW, 10-32x1 1/2	8
16	140817	SCREW, 1/4-20X3 3/4	8
17	230566.WH	COVER, VAC MOTOR	2
18	140803	SCREW, 10-24X1/4	5
19	140041	WASHER, FENDER	2
20	140016	WASHER, LOCK	6
21	140554	SCREW, 1/4-20X3/4	6
22	230592	BRACKET, PIVOT	1
23	230573	LINK, HOPPER	2
24	230597	SHAFT, PIVOT BAR	1
25	140912	BUSHING	4
26	900227	FILTER, HOPPER	1
27	100114	GASKET	2
28	230435	BRACKET, FILTER	1
29	140501	NUT, LOCK	2
30	140824	SCREW, 1/4-20X5/8	6
31	140957	SPACER	1
32	100134	GASKET	2
33	230432	PIN, GUIDE FILTER	1
34	140037	WASHER, NYLON	6
35	230436	PLATE, FILTER MOUNT	1
36	140864	SCREW, 1/4-20X3/4	12
37	140509	NUT, JAM	2
38	230433	PLATE, SHAKER FILTER	2
39	900151	BAG, CLOTH FILTER	1
40	230568	HANDLE, HOPPER	1
41	230578	BRACKET, HOPPER	2
42	230576	RING, INLET TUBE	2
43	602703	HOPPER	1
44	140837	SCREW, 10-24X3/8	6
45	100133	SEAL, INLET TUBE	1
46	140027	WASHER, FLAT	4
47	140226	SCREW, 5/16-18X5/8	4
48	140000	WASHER, FLAT	2

PARTS LIST

BRUSH GROUP

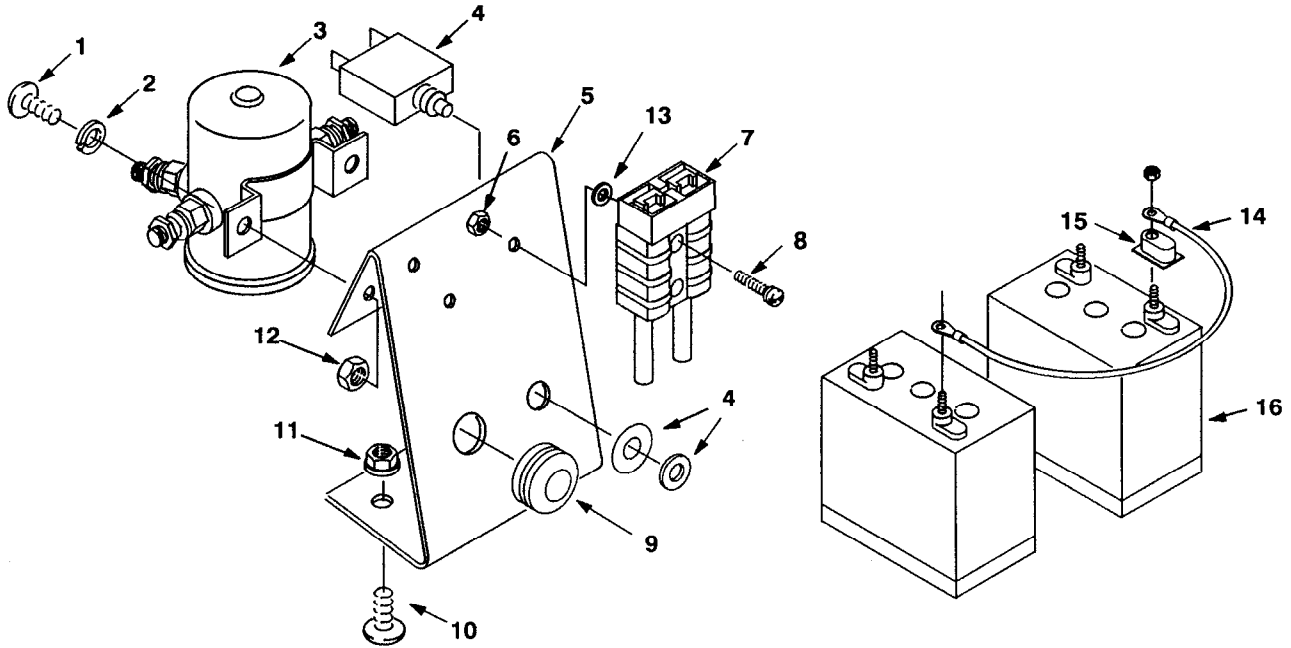


BRUSH GROUP

Ref.	Part No.	Description	Qty.
1	140223	SCREW, 5/16-18X3/4	
2	140015	WASHER, LOCK	4
3	230577	PLATE, MOTOR	1
4	140220	SCREW, 5/16-18X2 1/2	2
5	140027	WASHER, FLAT	2
6	230587	BRACKET, MOTOR	1
7	130991	MOTOR, BRUSH DRIVE, 24V	1
7	130985	MOTOR, BRUSH DRIVE, 120V	1
7	130473	MOTOR, BRUSH DRIVE, 230V	1
8	190169	CARBON BRUSH, 24V	1
	190168	HOLDER, 24V	1
9	190166	PLUG/CAP, 24V	1
▽10	700830	ASM., BRUSH 30"	1
▲11	240065	BRUSH, CYLINDER 30"	1
▲12	230570	GUARD, STRING	2
▲13	140864	SCREW, 1/4-20X3/4	2
▲14	140820	SCREW, #6X1/2	4
▲15	230567	SHAFT, BRUSH	1
16	140800	SCREW, 8-32X1/4	2
17	230571	LIP, CARPET SHOE	1
18	230598	SHOE, CARPET	1
19	140885	SCREW, 1/4-20X1/2	5
20	140226	SCREW, 5/16-18X5/8	2
21	140015	WASHER, LOCK	2
22	140027	WASHER, FLAT	2
23	140837	SCREW, 10-24X3/8	2
24	602708	HOUSING, VAC TUBE	1
25	140864	SCREW, 1/4-20X3/4	2
26	140041	WASHER, FENDER	2
27	230363	SPACER	2
28	230580	PULLEY, BRUSH	1
29	230581	BELT, BRUSH DRIVE	1
30	230579	PULLEY	1
31	140824	SCREW, 1/4-20-5/8	4
32	140052	WASHER, LOCK	4
33	230551	BLOCK, BEARING	2
34	140123	BEARING, BRUSH	2

PARTS LIST

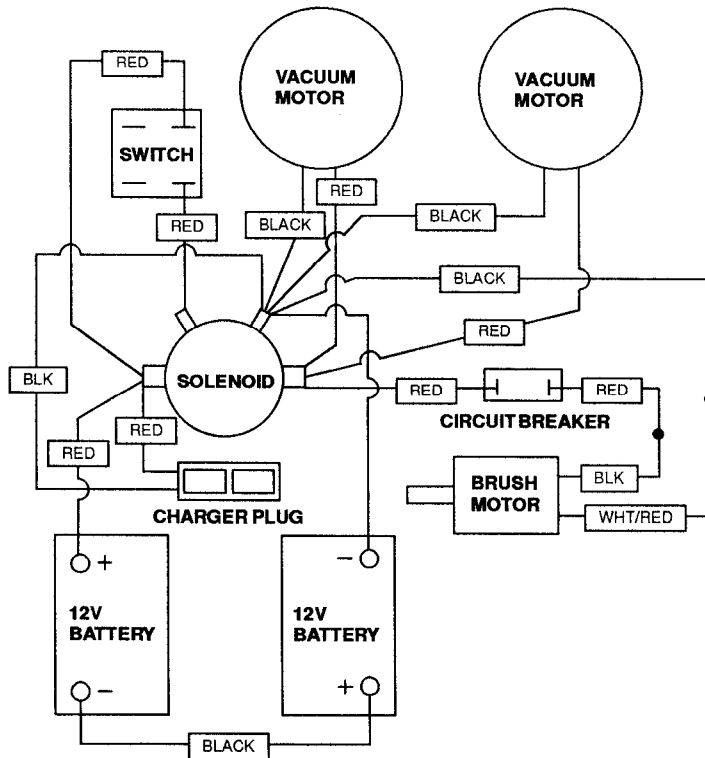
24V BATTERY ELECTRICAL GROUP



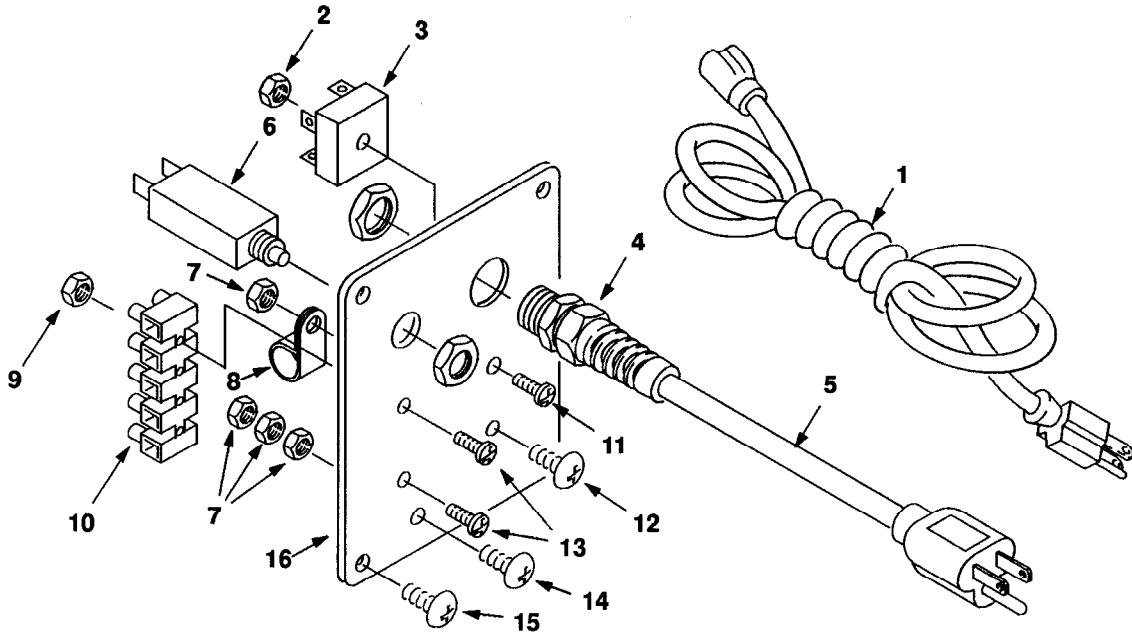
Ref.	Part No.	Description	Qty.
1	140885	SCREW, 1/4-20X1/2	
2	140016	WASHER, LOCK	2
3	130218	SOLENOID, 24 V	1
4	130737	BREAKER, CIRCUIT 10A	1
5	230704	BRACKET, SOLENOID	1
6	140539	NUT, KEP	2
7	27833	CONNECTOR, RED 50A	1
8	140829	SCREW, 6-32X1	2
9	240195	GROMMET	1
10	140824	SCREW, 1/4-20X5/8	2

Ref.	Part No.	Description	Qty.
11	140524	NUT, KEP	2
12	140510	NUT, JAM	2
13	140026	WASHER, FLAT	4
14	700938	ASM., WIRE 10GA X 13	1
15	611223	COVER, TERMINAL	4
16	130868	BATTERY, 12V SEALED	2
17	130862	CHARGER, 120V (NOT SHOWN)	1

24V ELECTRICAL DIAGRAM



120V & 230V ELECTRICAL GROUP



Ref.	Part No.	Description	Qty.	Ref.	Part No.	Description	Qty.
1	130229	CORD, 14/3X75' (120V)	1	9	140540	NUT, HEX	2
2	140539	NUT, KEP	1	10	130006	STRIP, TERMINAL	1
3	130304	RECTIFIER, BRIDGE	1	11	140831	SCREW, 6-32X5/8	1
4	130166	CORD GRIP	1	12	140885	SCREW, 1/4X20X1/2	1
5	130227	CORD, 14/3X20" (120V)	1	13	140829	SCREW, 6-32X1	2
5	600396	CORD, PWR 3X1.5MM2X23M (220V)	1	14	140900	SCREW, 10-24X3/4	1
6	130746	BREAKER, CIRCUIT 2.5 AMP	1	15	140837	SCREW, 10-24X3/8	4
7	140519	NUT, KEP	4	16	230599.WH	PLATE, CORD MOUNTING	1
8	140323	CLAMP	1				

120V ELECTRICAL DIAGRAM

