

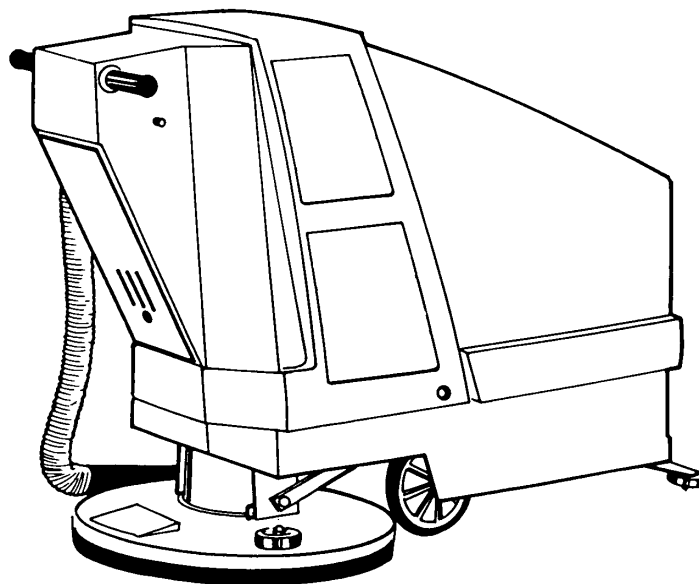
Castex®

BR-2250/2500

Burnisher

Model No.:
608192 – BR-2250
607358 – BR-2500

Operator and Parts Manual



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607357
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OPERATION

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

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

A complete illustrated parts list is also included in this manual, use this list to order parts. 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 authorized parts and service center, distributor or from any of the manufacturer's subsidiaries.

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 care 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 suited to burnish smooth floor surfaces in an indoor environment and is not constructed for any other use. The pick up of any liquid or dangerous type of dust is unsuitable and therefore usage of this type is not allowed.

The following safety alert symbols are 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 warn of hazards or unsafe practices which could result in minor personal injury.

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 operation manual is read and understood.
 - In flammable or explosive areas unless designed for use in those areas.
2. **Before starting machine:**
 - Make sure all safety devices are in place and operate properly.
3. **When using machine:**
 - Go slow on inclines and slippery surfaces.
 - Use care when reversing machine.
 - Always follow safety and traffic rules.
 - Report machine damage or faulty operation immediately.
4. **Before leaving or servicing machine:**
 - Stop on level surface.
 - Turn off machine.

5. When servicing machine:

- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves.
- Block machine tires before jacking machine up.
- Use hoist or jack of adequate capacity to lift machine.
- Disconnect battery connections before working on machine.
- Wear protective gloves when handling batteries or battery cables.
- Avoid contact with battery acid.
- Use manufacturer supplied or approved replacement parts.

⚠ WARNING: Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away. Keep battery compartment open when charging.

⚠ WARNING: Flammable materials or reactive metals can cause explosion or fire. Do not pick up.

⚠ WARNING: Moving parts. Turn off power before working on machine.

⚠ CAUTION: Pad head must be in full up (pad load) position before making pad pressure adjustment.

OPERATION

MACHINE COMPONENTS

1. Control Console
2. Dust Control Hose
3. Dust Bag Access Door
4. Dust Control Skirt
5. Battery Cover
6. Frame
7. Wall Rollers
8. Pad Driver
9. Main Wheels
10. Circuit Breakers
11. Pad Pressure Meter
12. Key ON Light
13. Travel Speed Selection Switch
14. Key Switch
15. Fuse Holder
16. Control Grips
17. Battery Level Meter
18. Carbon Brush Indicator Lamp

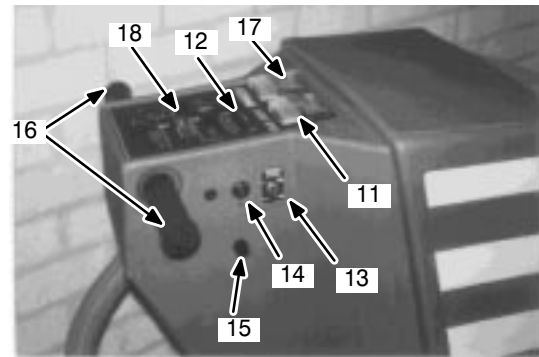
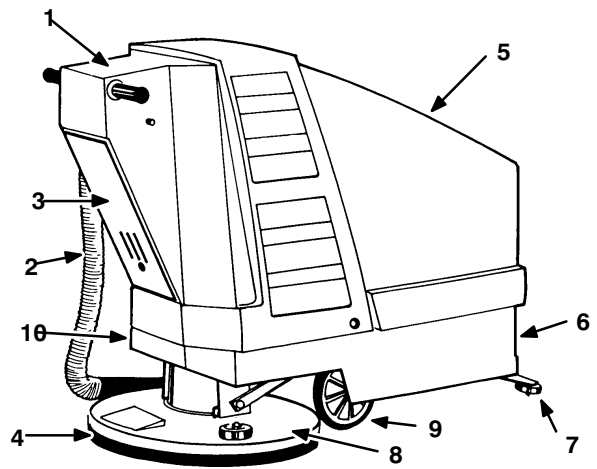


FIG. 1.

MACHINE SETUP

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

Unpack the machine and check machine for completeness according to the packing list.

Battery installation must be accomplished after removing the machine from the pallet. Carefully follow the battery installation diagram on page 28 in your parts manual.

Complete the machine:

1. Select a burnishing pad that is designed to operate over 2000 RPM. The pad should be a maximum of 25.4 mm (1 inch) thick, 483 mm (19 inch) in diameter with a standard 89 mm (3.5 inch) center hole.

FOR SAFETY: Before leaving or servicing machine, stop on level surface and turn off machine.

2. Tap the right front side of the pad shroud with your toe. The head will rise to the pad mounting position (*Figure 2*).

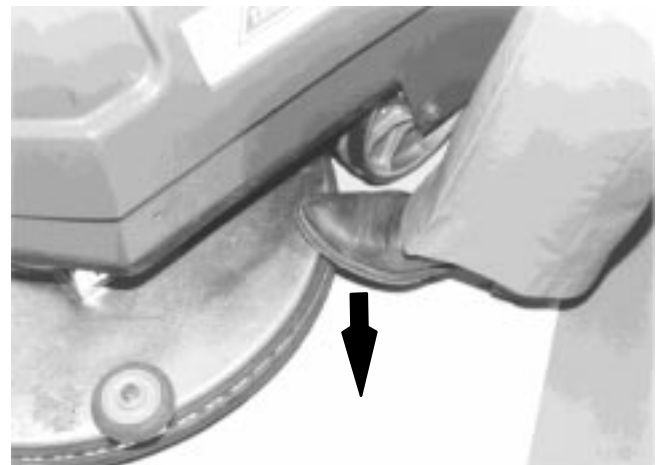


FIG. 2.

3. Remove the plastic centerlock from the pad driver by turning it clockwise. Position the pad accurately centered on the pad driver, and screw the centerlock in place counter-clockwise until it is tight (*Figure 3*).

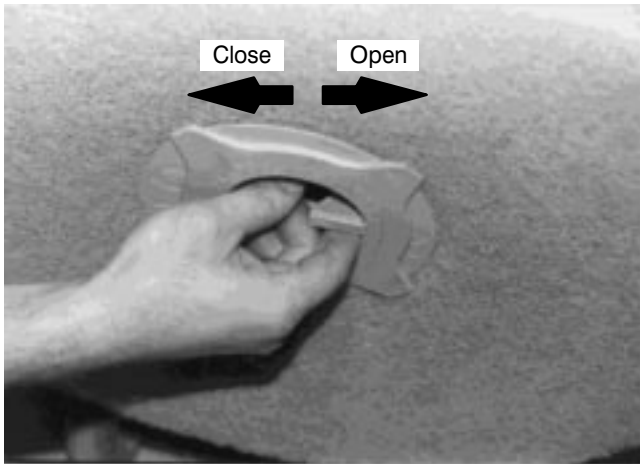


FIG. 3.

NOTE: This machine is equipped with a pad centerlock with a left hand thread.

ATTENTION: Care must be exercised to be sure centerlock does not cross-thread or floor damage could occur. Do not overtighten.

ATTENTION: Do not operate machine without a pad and the pad centerlock in place.

MACHINE OPERATION

PRE OPERATION CHECKS

1. Check battery meter charge level to ensure batteries are fully charged. See CHARGING THE BATTERIES.
2. Sweep or dust mop the floor to remove debris. Then damp mop or scrub the floor to assure that dirt is not burnished into the finish.
3. Check that a pad is installed.
4. Check that a dust bag is installed.
5. Make sure floor to be burnished is dry.

BURNISHING WITH THE NON-DRIVE MODEL

ATTENTION: Loose objects on floor can become dangerous projectiles if struck by the high speed pad. Remove them before operating the machine.

1. Turn the key switch to the "ON" position (Figure 4). The key ON light on the panel will light green.



FIG. 4.

2. With the control grips released, step down on the rear of the pad shroud until the head locks in the down position (Figure 5).

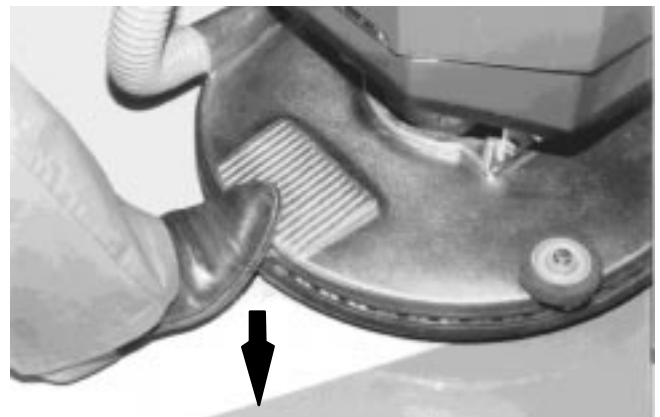


FIG. 5.

3. Remove foot from the pad shroud.
4. Twist the control grips forward (Figure 6). The pad motor will start and suction will draw the moving pad to the floor. Immediately push or pull the machine in the desired direction.



FIG. 6.

ATTENTION: Keep the machine moving at all times to prevent damage to the floor finish.

OPERATION

5. To stop, release the control grips. The pad will automatically lift from the floor until the grips are activated again.

BURNISHING WITH THE SELF-PROPELLED DRIVE MODEL

ATTENTION: Loose objects on floor can become dangerous projectiles if struck by the high speed pad. Remove them before operating the machine.

1. Turn the key switch to the "ON" position (Figure 4). The key ON light on the panel will light green.
2. With the control grips released, step down on the rear of the pad shroud until the head locks in the down position (Refer to Figure 5).
3. Remove foot from the pad shroud.
4. Select a speed with the travel speed selection switch (Figure 7):
UP position provides both slow and fast forward speeds.
DOWN position provides slow forward speed only. Use this position for maneuvering in tight areas.

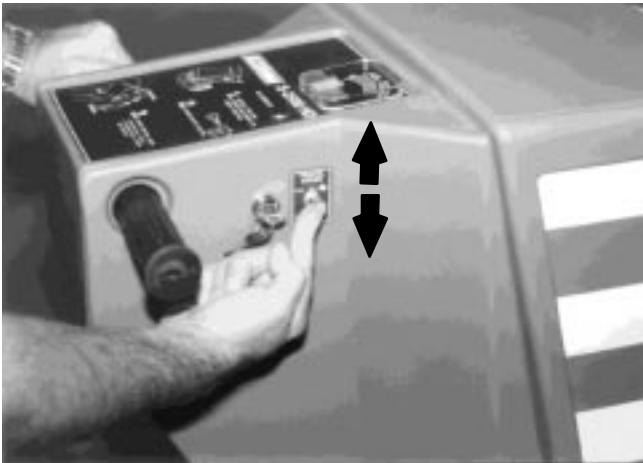


FIG. 7.

5. Twist control grips forward until the pad motor starts (Figure 6). The machine will transport forward and suction will draw the moving pad to the floor.
6. To reverse, twist the control grips backward. The pad motor will start and the machine will transport backwards.
7. To stop, release the control grips.

ATTENTION: Keep the machine moving at all times to prevent damage to the floor finish.

8. To increase travel speed (mode switch in "UP" position), twist the control grips all the way forward to select the second (high) travel speed.

9. To stop, release the control grips and hold back on the machine until it stops moving. The reverse direction may be used as a stopping brake if desired.

NOTE: The drive circuit is equipped with a circuit breaker located on the lower left rear frame. If the driver system is overloaded during use the breaker will trip. Allow it to cool for a few moments and reset the breaker by pushing on the black button (Figure 8).



FIG. 8.

ADJUSTING PAD PRESSURE

⚠ CAUTION: The pad head must be in the full up (pad load) position before making the pad pressure adjustment. **DO NOT ADJUST** in the down position as the head could release and pinch arm or fingers in the mechanism.

1. Your machine has a pad pressure meter located on top of the control console. This meter has one green bar and 2 red bars (Figure 9):

GREEN BAR: The operating zone within which the needle must read.

RED BAR TO THE RIGHT: Indicates too much pressure or pad resistance.

RED BAR TO THE LEFT: Indicates too low pressure or that the battery charge is low.

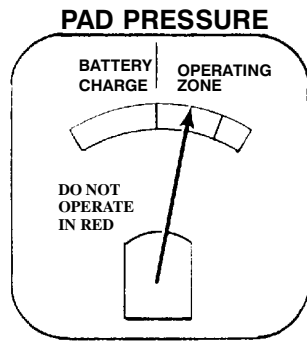


FIG. 9.

2. Operate the machine on the actual floor with the finish and pad you will be using. Notice the needle position on the meter. For most jobs the needle should be in the center of the green bar.
3. If the needle is not in the center of the green bar, raise the pad head into the full up position and locate the pad pressure knob under the rear frame (Figure 10).



FIG. 10.

4. If the needle indicates too much pressure turn the knob counterclockwise and repeat testing until the needle is in the center.
5. If the needle indicates too little pressure turn the knob clockwise and repeat testing until the needle is in the center.

NOTE: Increasing pad pressure will improve shine but it will also reduce battery run time.

ATTENTION: Do not adjust the pressure so the needle runs in the right red bar. This will cause the circuit breaker to trip.

6. If high performance is needed and run time is not a consideration, adjust the pressure so the needle runs in the higher (right side) of the green bar.
7. If long run time is needed, adjust the pressure so the needle runs in the lower (left side) of the green bar.

Once initial pad pressure has been set:

8. If during use the needle moves into the right red bar, it will cause the circuit breaker to trip. Allow the pad motor to cool down and then press the pad motor circuit breaker red reset button.
9. If the needle moves again into the right red bar and the circuit breaker trips, the pad may have become dirty and filled with finish. Turn the pad over to a clean side or replace the pad. Then reset the circuit breaker. To remove/change pads see INSTALLATION .

NOTE: The operator should watch the pad meter during operation and change the pad before the circuit breaker trips.

10. If the needle drops into the left red bar, this indicates the battery charge is low and recharging is required. See CHARGING BATTERIES in the Maintenance section.

BATTERY LEVEL METER

1. Your machine has a battery level meter located on top of the control console. This meter has one green bar and 2 red bars (Figure 11):

GREEN BAR: The operating zone within which the needle must read.

RED BAR TO THE RIGHT: Indicates the batteries are overcharged or that the batteries are connected wrong. **If the needle runs in this area, turn the machine power off immediately and call your service technician.**

RED BAR TO THE LEFT: Indicates the batteries need to be recharged. See CHARGING BATTERIES section.

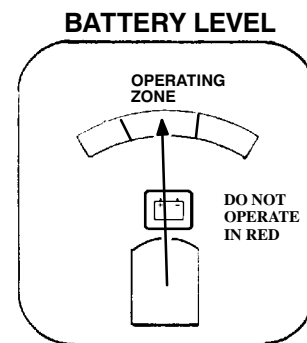


FIG. 11.

OPERATION

HOUR METER

1. Your machine has an hour meter located inside the battery compartment next to the machine connector (*Figure 12*).

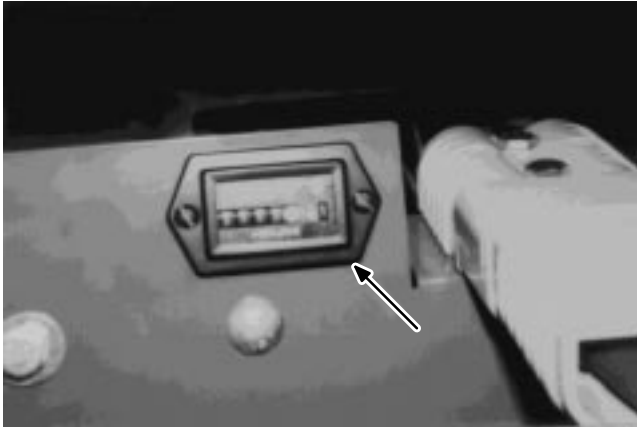


FIG. 12.

2. To gain access to this meter remove the battery cover.
3. This meter keeps a running total of the hours of operation of your machine.
4. Use this meter to determine when your machine should to be maintained.

CARBON BRUSH INDICATOR LAMP

1. Your machine has an amber carbon brush indicator lamp which will light when the carbon brushes in the pad drive motor need to be replaced (*Figure 13*). See EVERY 250 HOURS OF USE section.



FIG. 13.

MACHINE MAINTENANCE

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

FOR SAFETY: When leaving or servicing machine, stop on level surface and turn off machine.

FOR SAFETY: When servicing machine, disconnect battery connections before working on machine.

ATTENTION: Contact an Authorized Service Center for machine repairs. Machine repairs performed by other than an authorized person will void your warranty.

DAILY MAINTENANCE:

1. Remove burnishing pad. Clean and replace or install a new pad (*Refer to Figure 3*).
 2. Dust bag maintenance:
Open the dust bag access door to gain access to the dust bag.
Paper Bag: Grasp the bag to check the contents. Remove and discard the bag if it is full. Install a new bag on the fitting and close the dust bag access door.
Cloth Bag (Option): Remove the bag. Unzip, invert and shake the contents from the bag. Close the zipper and reinstall on the fitting. Close the dust bag access door.
NOTE: If the bag is extremely soiled, launder the bag before reuse.
 3. Wipe the entire machine with a damp cloth.
 4. Charge the batteries. See CHARGING BATTERIES.
-

WEEKLY MAINTENANCE:

1. Inspect the dust control skirt for wear and proper adjustment. The skirt should be adjusted so it just touches the floor in the run position.
To adjust: Loosen the band and push the skirt down. Tighten the band.
2. Check the specific gravity in each battery cell with a hydrometer. All cells should show a reading of at least 1.260 (*Figure 14*).

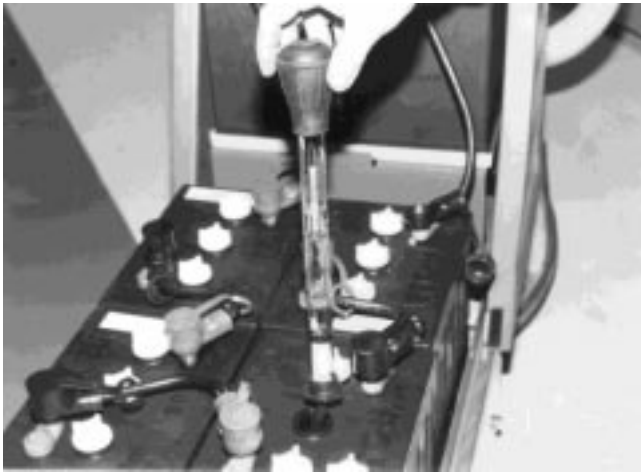


FIG. 14.

MONTHLY MAINTENANCE:

1. Check battery cables for tightness or corrosion. Clean and lubricate if necessary.
2. Grease main wheel bearings and swivel and wheel on the caster (Figure 15).

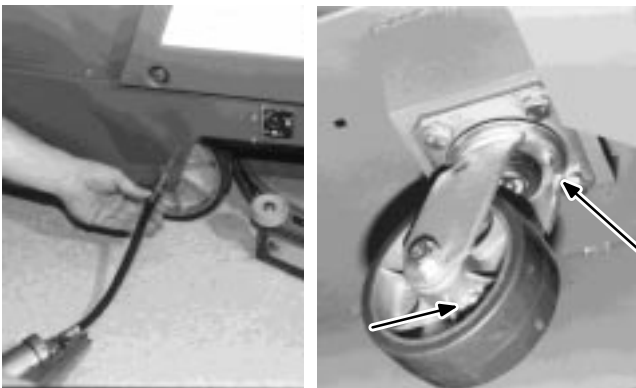


FIG. 15.

3. For self-propelled DRIVE Model: Check the lubrication and tension of the drive chain. If maintenance is necessary, ask assistance from your Authorized Service Center.
4. Grease the brass acorn nut on the head stop bracket.

EVERY 250 HOURS OF USE

It is recommended that these maintenance procedures be performed by technicians from your authorized service center.

1. Inspect carbon brushes in the pad motor. Replace if worn to 10 mm or less.
2. Inspect the carbon motor brushes in the traction motor. Replace if worn to 10 mm or less.

CHARGING THE BATTERIES

⚠ WARNING: Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away. Keep battery compartment open when charging.

FOR SAFETY: When servicing machine, avoid contact with battery acid.

1. Slide the battery cover from the machine.
2. Remove all battery caps and check the water level in each battery cell.
3. If needed add enough distilled water to cover plates or to a maximum of 6 mm below the fill neck ring (Figure 16).



FIG. 16.

4. For machines with 305 amp batteries, to gain access to the 2 top rear battery cells, remove the 2 acorn nuts holding the console to the frame (Figure 17). Tip the console back on the hinge to access these cells.



FIG. 17.

OPERATION

5. Disconnect the battery connector from the machine connector and plug the charger connector into the battery connector (Figure 18).



FIG. 18.

NOTE: Do not plug the charger connector into the machine connector or damage to the machine may occur.

6. Plug the charger cord into a wall outlet. The charger will automatically start and charge the batteries.

After charging:

7. Make sure that the charger has turned off by making sure the needle on the charger is at "0".
8. Unplug the charger connector from the battery connector. Plug the battery connector into the machine connector.
9. Check all battery cells for low water level. Add distilled water to just below the fill ring if needed.
10. Replace the battery caps.
11. Wipe off the top of the batteries with a clean cloth.
12. Slide the battery cover into place.

STORING MACHINE

The machine must be stored in a dry area in a horizontal upright position.

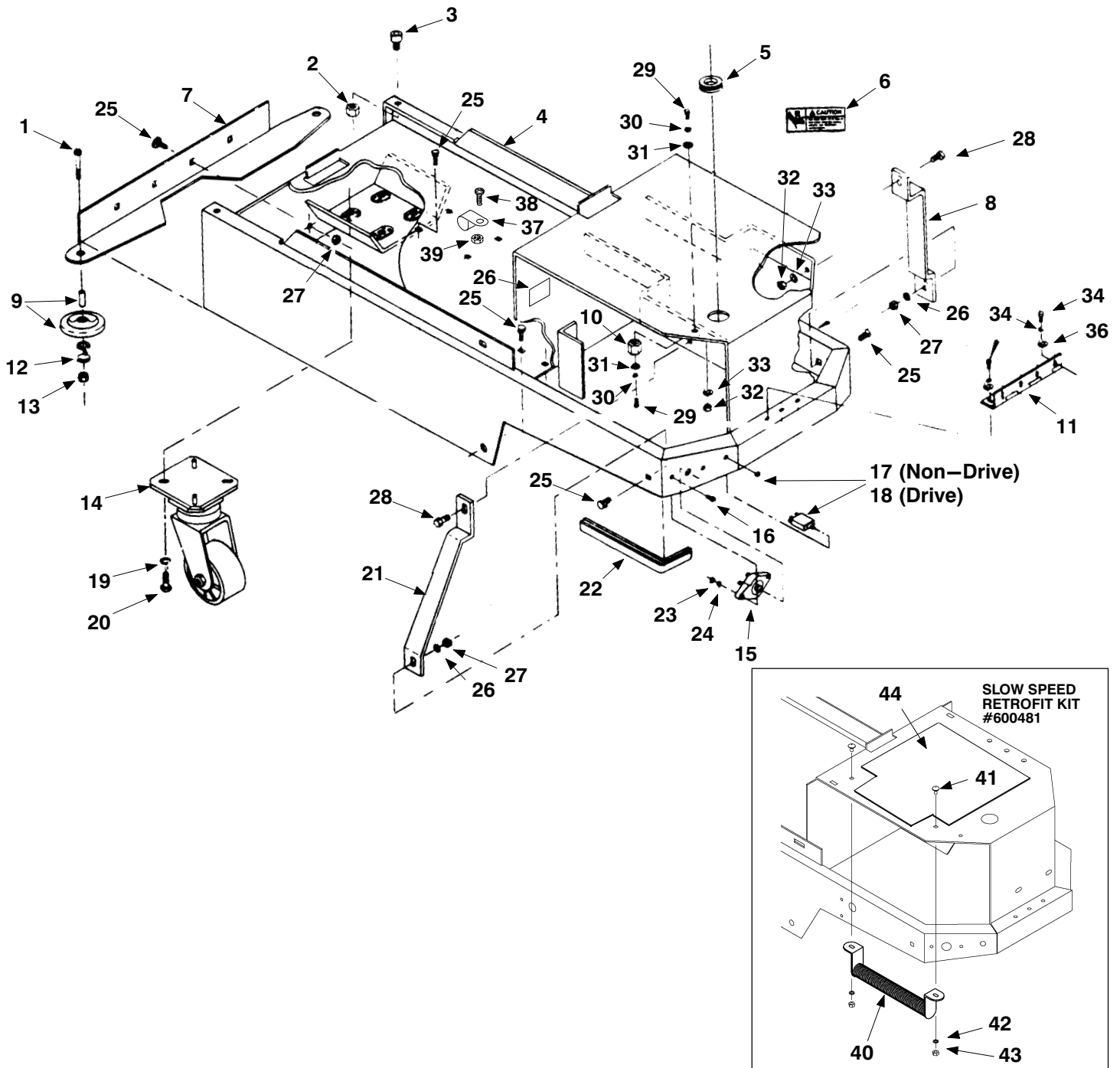
SPECIFICATIONS

ITEM	MEASURE
Length	1350 mm
Width	550 mm
Height	1020 mm
Weight: NON-DRIVE MODEL	104 kg (excluding batteries)
Weight: DRIVE MODEL	118 kg (excluding batteries)
Speed: NON-DRIVE MODEL	Push
Speed: DRIVE MODEL	5 k/hr
Pad Diameter/Burnishing Path	483 mm
Pad Motor	2,24 kW (3hp)
Pad Speed	2,500 rpm
Battery Life: NON-DRIVE MODEL	2,5-3,5 hours
Battery Life: DRIVE MODEL	2-3 hours
Decibel Level	75 dBA

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Key switch is OFF.	Turn key switch ON.
	Battery connector is not plugged into machine connector.	Plug connector into machine.
	Batteries discharged.	Charge batteries.
	Ignition fuse blown.	Replace fuse.
	Loose or corroded battery cables.	Clean and lubricate.
	Electrical malfunction.	Contact Authorized Service Center.
Machine does not self-propel (Drive model ONLY).	Drive circuit breaker tripped.	Reset breaker.
	Drive chain broken.	Replace.
	Electrical malfunction.	Contact Authorized Service Center.
	Wheel bearing frozen.	Contact Authorized Service Center.
Pad motor does not operate.	Head not lowered and locked in ready (down) position.	Lower head into ready position.
	Pad circuit breaker tripped.	Reset breaker.
	Electrical malfunction.	Contact Authorized Service Center.
Pad drive motor circuit breaker trips continuously.	Dirty pad.	Replace.
	Improper pad for application.	Change to correct pad.
	Improper pressure adjustment.	Reduce pressure.
	Defective circuit breaker.	Contact Authorized Service Center.
	Worn motor brushes.	Contact Authorized Service Center.
Pad driver vibrates during use.	Pad off center.	Reposition pad.
	Pad out of round or damaged.	Replace with new pad.
	Pad driver damaged or out of balance.	Contact Authorized Service Center.
	Batteries not fully charged.	Charge batteries.
Batteries deliver below-normal run time.	Electrolyte level is low.	Fill to proper level and charge.
	Cables are loose or corroded.	Clean and lubricate.
	Pad pressure is too heavy.	Reduce pressure.
	Improper pad causing too much amp draw.	Change to proper pad.
	Charger is defective.	Contact Authorized Service Center.
	Battery is defective.	Contact Authorized Service Center.
	Filter bag is full or dirty.	Empty, clean or replace.
	Skirt not adjusted properly or damaged.	Adjust skirt per instructions.
Dust control ineffective.	Pad is worn excessively.	Replace pad.
	Dust control hose plugged with debris.	Clean out hose.
	Operator attempting inclines.	Machine not designed for inclines.
	Machine travel obstructed.	Remove obstruction.
Transport drive circuit breaker trips during use.	Operator using directional control as brake.	Do not use directional control as brake.
	Drive circuit breaker defective.	Contact Authorized Service Center.
	Drive Motor brushes worn.	Contact Authorized Service Center.

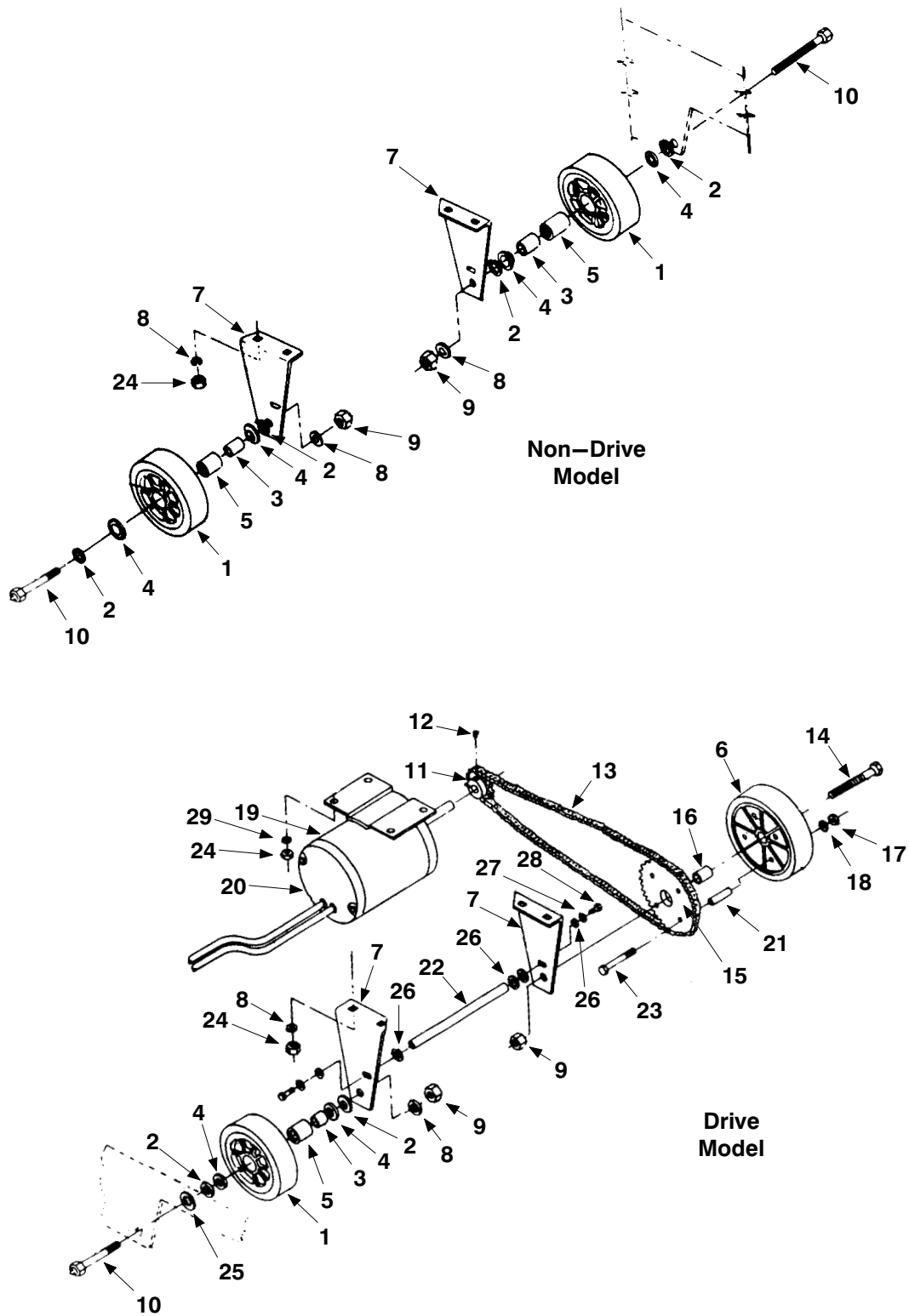
FRAME GROUP



FRAME GROUP

Ref.	Part No.	Description	Qty.
1	621 286 000	Screw, pan hd.	2
2	200 160 017	Nut	2
3	200 001 483	Screw	2
4	069 767 001	Frame weldt.	1
5	069 762 009	Grommet	1
6	602 040 000	Decal, Caution	1
7	069 767 102	Bracket, wall roller	1
8	069 767 178	Bracket, frame supp.	1
9	630450	Wheel, rubber	2
10	578427	Standoff, terminal	1
11	069 767 036	Hinge, shroud	1
12	140015	Washer lock	2
13	200 640 017	Nut, hex	2
14	069 760 030	Caster	1
15	190905	Circ. break., 70 amp	1
16	186 002 085	Screw, pan hd.	2
17	130781	Circ. break., 80 amp (non-drive model)	1
18	069 767 136	Circ. break., 7 amp (drive model)	1
19	200 351 020	Washer, lock	4
20	200 031 541	Screw, hex hd.	4
21	069 787 174	Bracket, frame supp.	1
22	069 767 121	Edging	1
23	575380	Nut, hex	2
24	069 762 005	Washer, lock	2
25	069 767 077	Screw, carriage	14
26	602 202 000	Decal, Hot Caution	1
27	140546	Nut, Lock	12
28	200 607 491	Screw, hex hd.	2
29	069 762 115	Screw hex hd.	2
30	140016	Washer, lock	2
31	200 651 019	Washer, Flat	2
32	200 160 017	Nut, hex lock	2
33	200 303 019	Washer, Flat	2
34	200 031 433	Screw hex hd.	7
35	578 728	Washer, lock	2
36	140012	Washer	7
37	140916	Clamp	1
38	140196	Screw	1
39	140552	Nut, Lock	1
40	069 764 063	Resistor, slow speed	1
41	069 767 164	Screw, carriage	2
42	140016	Washer, lock	2
43	059 650 595	Nut, hex	2
44	621 052 000	Plate, battery	1

DRIVE GROUP



Non-Drive Model

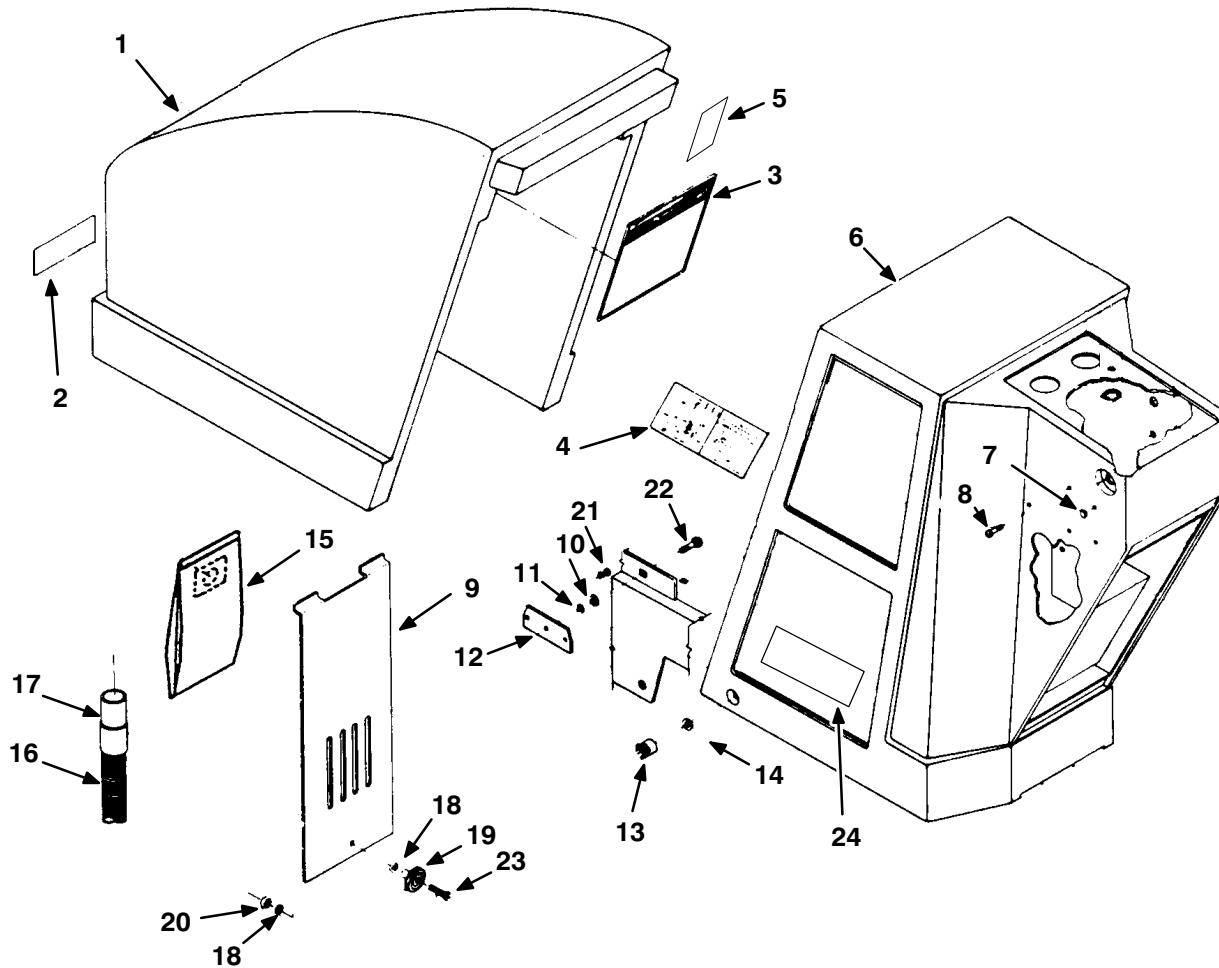
Drive Model

DRIVE GROUP

Ref.	Part No.	Description	Qty.
▽ 1	069 767 082	Wheel	1
▲ 2	602 171 000	Washer thrust	4
▲ 3	069 767 004	Spanner, bushing	2
▲ 4	602 014 000	Grease retainer	2
▲ 5	602 013 000	Bearing, wheel	2
6	069 767 003	Wheel	1
7	069 767 002	Bracket, wheel mnt.	2
8	069 760 082	Washer, flat	2
9	069 764 157	Nut, hex lock	2
10	621 237 000	Screw, hex hd.	2
11	069 767 008	Sprocket	1
12	602 011 000	Screw, set	2
13	069 767 011	Chain	1
14	621 238 000	Screw, hex hd.	1
15	069 767 007	Sprocket	1
16	069 767 005	Spacer, wheel	1
17	140501	Nut, hex	4
18	140016	Washer, lock	4
19	069 767 010	Motor, drive	1
20	602 130 000	Motor brush (set/2)	1
21	069 767 006	Spacer, sprock. mnt.	4
22	069 767 161	Support, wheel mnt.	1
23	579 212	Screw, hex hd.	4
	621 311 000	Service kit, whl shims	1
24	140546	Nut,Lock	4
25	621 311 000	Shim, wheel	1
26	579 210	Washer, flat	5
27	578 728	Washer, lock	9
28	200 031 438	Screw, hex hd.	2
29	14880.5	Washer	4

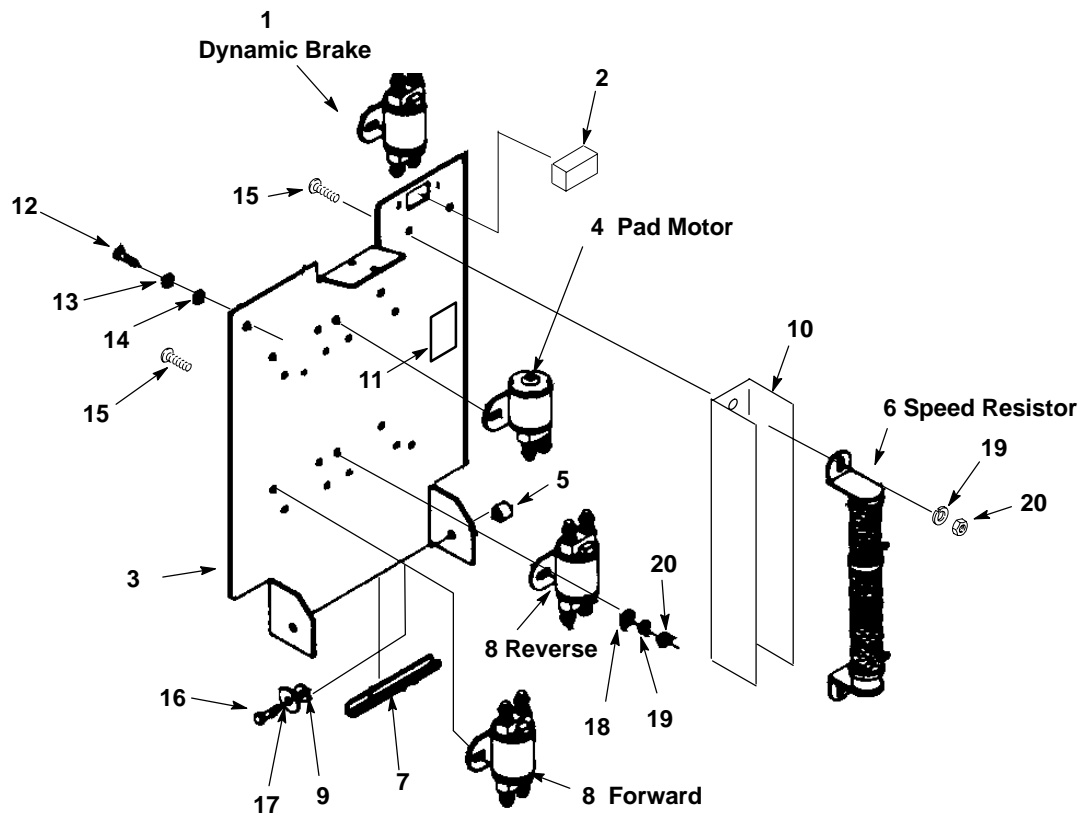
PARTS LIST

COVER GROUP



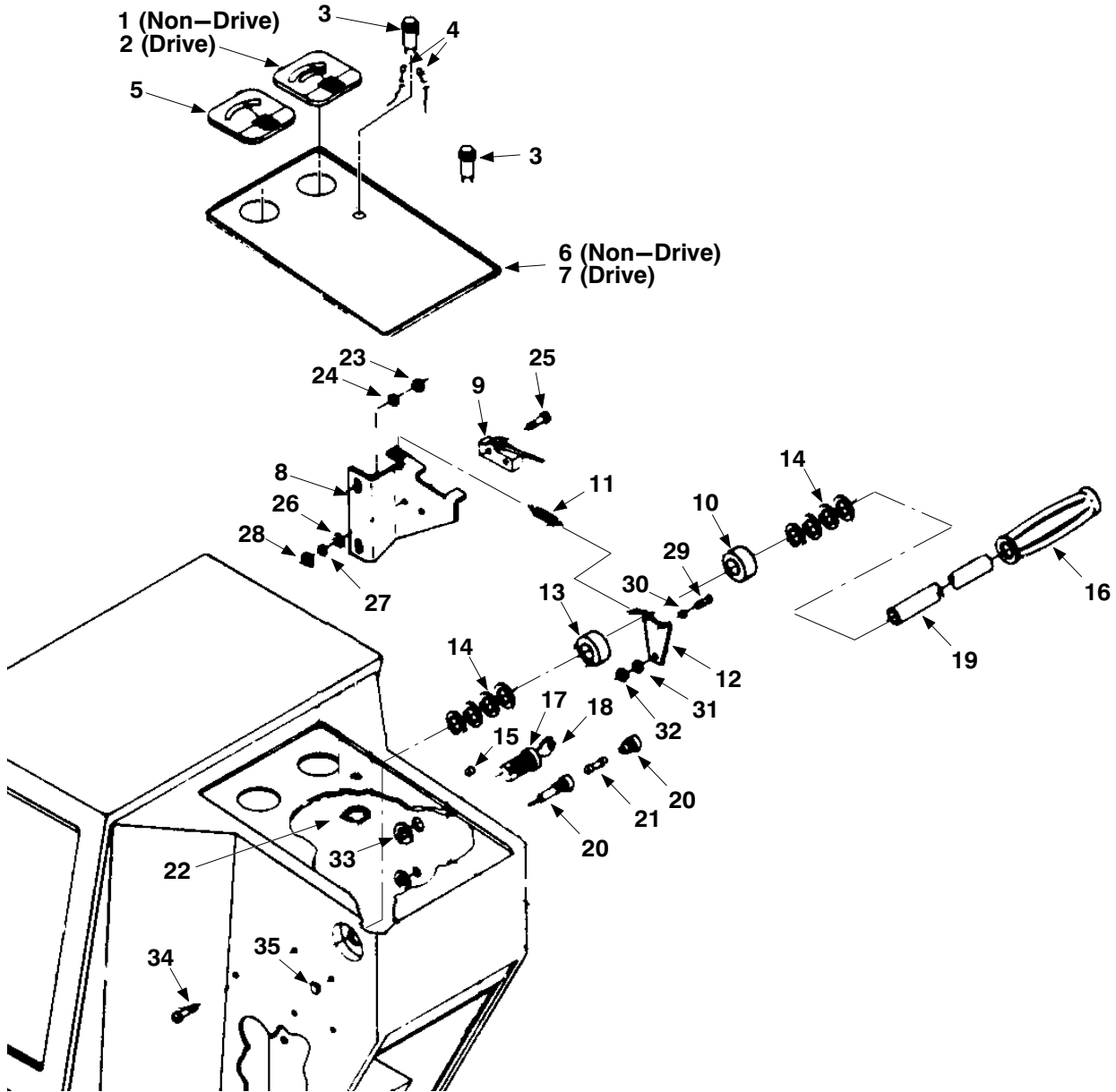
Ref.	Part No.	Description	Qty.
1	607355	Hood, front, Blue	1
2	603083	Decal, Castex	1
3	069 767 135	Decal, maint.	1
4	069 767 074	Decal, wire (non-drive model)	1
	069 767 119	Decal, wire (drive model)	1
5	069 780 017	Decal, Caution Charge	1
6	607353	Shroud, rear, Blue	1
7	130164	Plug, button	3
8	069 764 060	Screw, truss hd	2
9	069 767 179	Door, vac compart.	1
10	14880.5	Washer, plain	2
11	621 325 000	Retainer, e ring	2
12	069 767 096	Stiffener, r. shroud	2
13	602 074 000	Nut, wing, shroud	2
14	14880.5	Washer, plain	2
15	039 707 079	Bag, Vacuum (10pcs)	1
16	069 767 187	Hose, dust control	1
17	069 767 189	Cuff, dust control	1
18	602 139 000	Washer, flat, nylon	2
19	578439	Knob	1
20	579028	Nut, Hex	1
21	200058432	Screw	4
22	602068000	Screw, Carriage	2
23	200031441	Screw	1
24	607570	Decal, BR-2500	2
	608194	Decal, BR-2250	2

COMPONENT PANEL GROUP



Ref.	Part No.	Description	Qty.
1	069 760 440	Contactors, SPDT, 100A	1
2	621 297 000	Meter, Hour (Option)	1
3	069 767 033	Panel, Electrical	1
4	621 381 000	Contactors, 200A, Pad Motor	1
5	019 686 055	Spacer, Nylon	2
6	069 764 063	Resistor, Speed (drive model)	1
7	069 767 121	Edging, 8" L	11
8	069 760 440	Contactors, SPDT, 100A	2
9	630446	Washer, Nylon	2
10	602 203 000	Heat shield	1
11	602 202 000	Decal, Caution HOT	1
12	200 031 433	Screw, M06x10	2
13	578728	Washer, Lock, Spg.	2
14	579210	Washer	2
15	069 767 164	Screw, Carriage, .25-20x.5"	10
16	200 031 438	Screw, M06 x 20	2
17	579 210	Washer, Flat, 6.4 ID	2
18	200 303 019	Washer, Flat, M08	10
19	140016	Washer, Lock, SPG.	10
20	059 650 595	Nut, Hex, 1/4-20	10

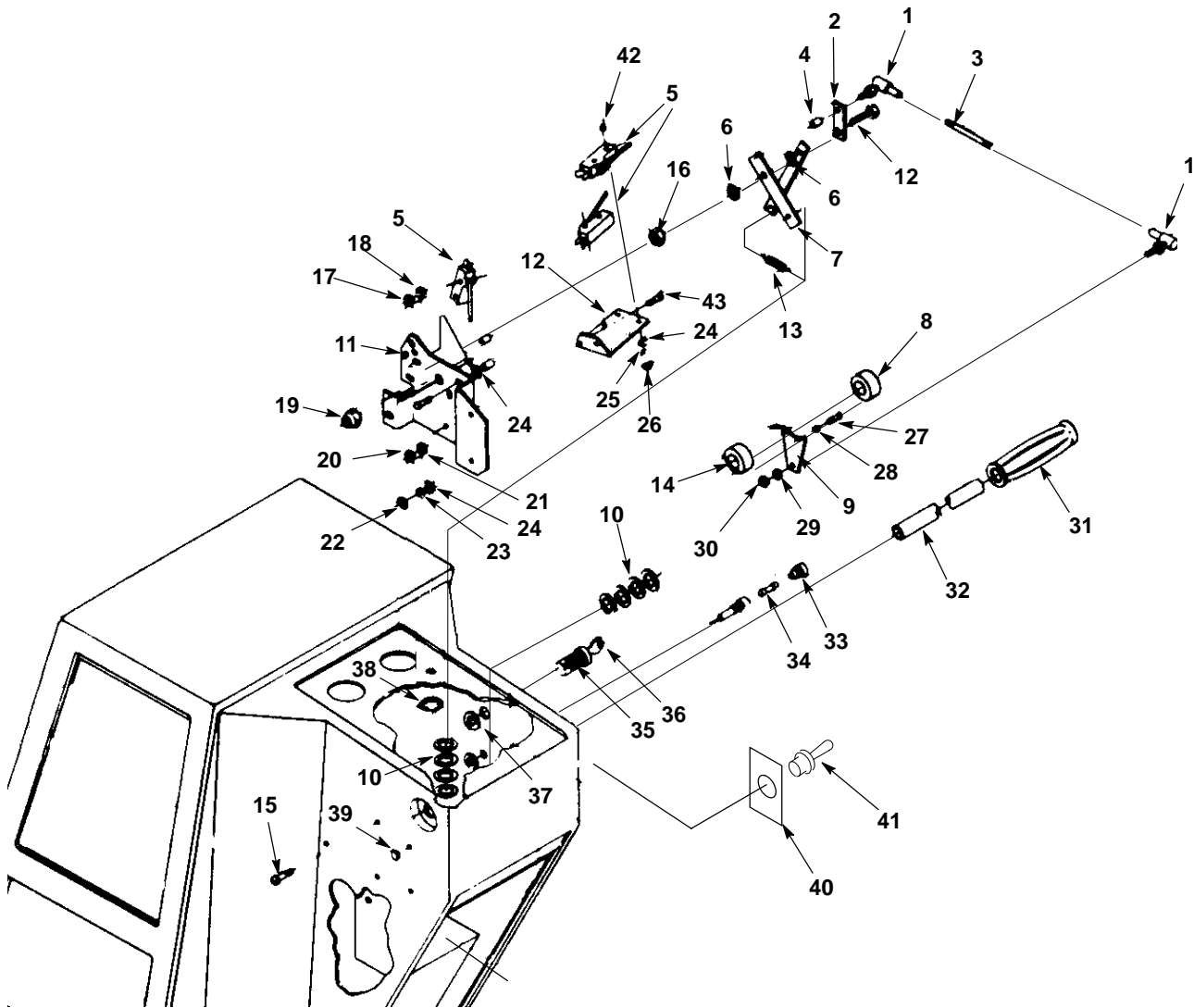
INSTRUMENT PANEL GROUP



INSTRUMENT PANEL GROUP

Ref.	Part No.	Description	Qty.
1	602235	Gauge, amp (non-drive model)	1
2	602235	Gauge, amp (drive model)	1
3	626114	Pilot light	1
4	602 050 000	Wire assy	2
5	610026	Meter, Battery	1
6	600345	Decal, console (non-drive model)	1
7	600346	Decal, console (drive model)	1
8	069 767 055	Bracket, switch	1
9	069 764 009	Switch, snap	1
10	630186	Collar, shaft	1
11	069 764 069	Spring	1
12	069 767 026	Plate	1
13	069 764 005	Collar, swtch.actuator	1
14	069 760 582	Washer, nylon	8
15	N/A	Tab, key switch	2
16	200823	Grip, handle bar	2
17	612471	Switch, key lock	1
18	069 762 236	Key	1
	621 437 000	Bracket, key Switch	1
19	069 764 062	Bar, Handle	1
20	578418	Fuse holder	1
21	069 760 639	Fuse	1
22	602 140 000	Washer, retention	1
23	140506	Nut	1
24	140015	Washer	1
25	069 764 002	Screw	2
26	069 764 053	Washer, flat	2
27	140023	Washer, lock	2
28	200 102 014	Nut, Hex	2
29	069 764 190	Screw	2
30	200 351 012	Washer	2
31	069 762 005	Washer, lock	1
32	575380	Nut	1
33	069 762 306	Washer, lock	1
34	069 764 060	Screw	3
35	130164	Plug, dome	3

SPEED CONTROL GROUP (DRIVE MODEL)

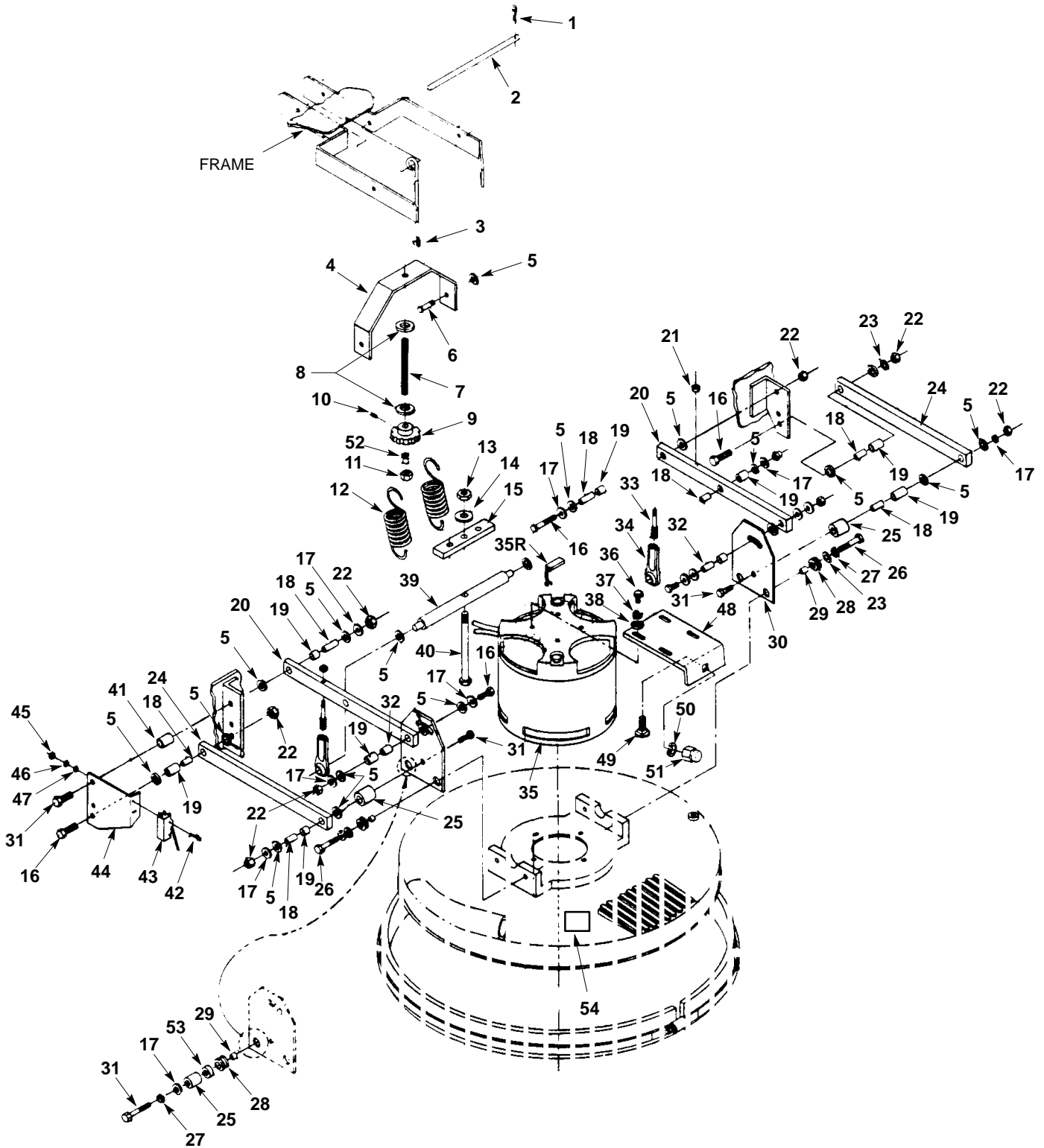


SPEED CONTROL GROUP (DRIVE MODEL)

Ref.	Part No.	Description	Qty.
1	069 767 070	Ball joint	2
2	621 059 000	Strip arm	1
3	069 767 058	Rod, spd. ctrl.	1
4	621 440 000	Spacer, nylon	3
5	069 764 009	Switch, snap	1
6	630446	Washer, nylon	3
7	069 767 066	Link, Scissor	2
8	630186	Collar, shaft	1
9	069 767 026	Plate	1
10	069 760 582	Washer, nylon	8
11	621 058 000	Bracket, spd./dir.ctrl	1
12	069 767 057	Bracket, switch	1
13	069 764 069	Spring	1
14	069 764 005	Collar, swtch.actuator	1
15	069 764 060	Screw, truss hd.	3
16	200160 017	Nut	1
17	140015	Washer, Lock	1
18	140506	Nut	1
19	200 160 017	Nut, lock	1
20	140506	Nut	3
21	140015	Washer	1
22	200 102 014	Nut	2
23	140023	Washer, Lock	2
24	069 764 053	Washer, flat	2
25	069 764 054	Washer, Lock	2
26	069 762 159	Nut	2
27	069 764 190	Screw	2
28	200 351 012	Washer, lock	2
29	069 762 005	Washer, lock	1
30	575380	Nut	2
31	590 002 000	Grip, handle	2
32	069 764 062	Bar, Handle	1
33	578418	Holder, fuse	1
34	069 760 639	Fuse, 15A, 32V	1
35	612471	Switch, key lock	1
36	621 437 000	Bracket, key Switch	1
37	069 762 236	Key	1
38	069 762 306	Washer, lock	1
39	602 140 000	Washer, retention	1
40	130164	Plug, button	1
41	602 212 000	Decal, speed	1
42	130728	Switch, Toggle speed	1
43	069 764 002	Screw	6
44	579259	Screw	2

PARTS LIST

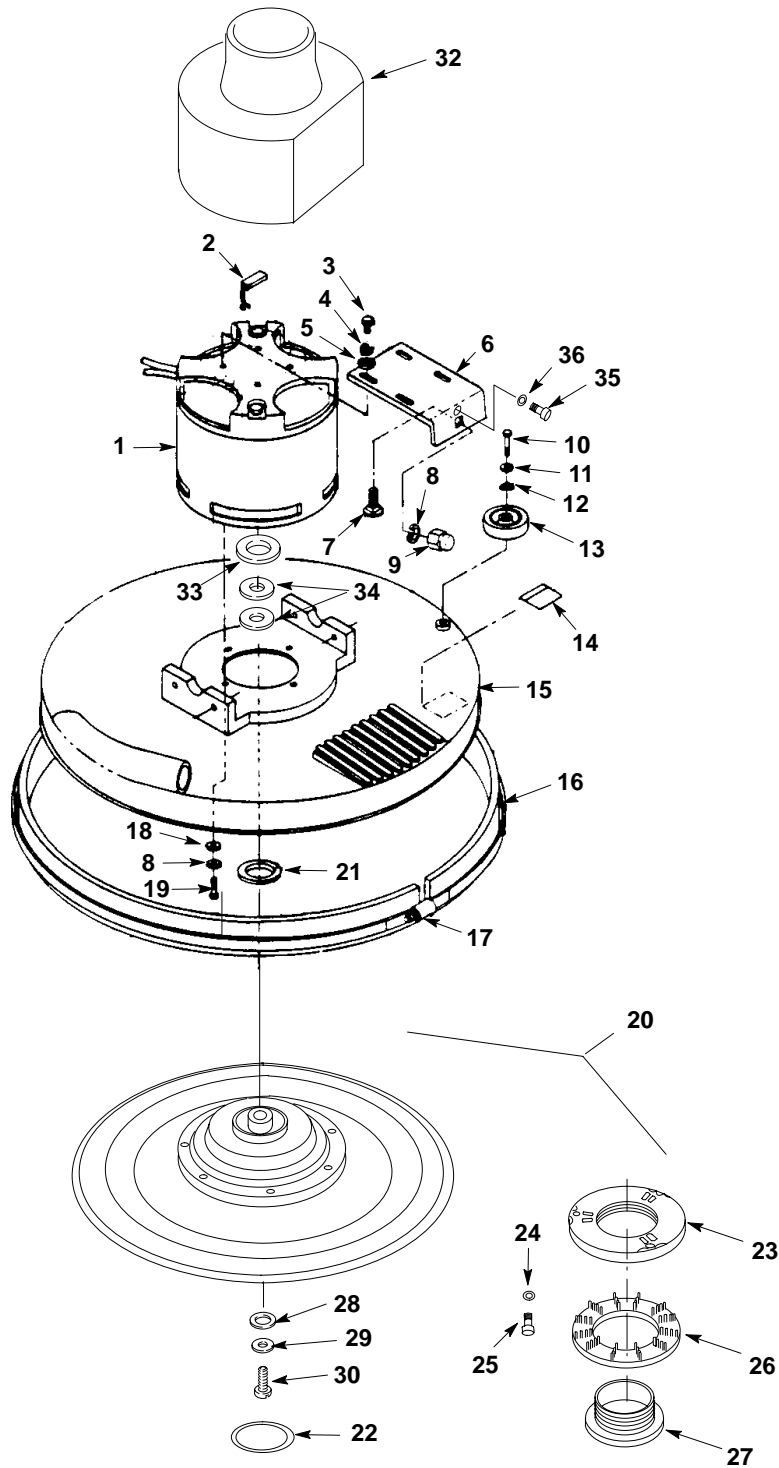
PAD SHROUD LINKAGE GROUP



PAD SHROUD LINKAGE GROUP

Ref.	Part No.	Description	Qty.
1	578421	Pin, Cotter	2
2	602 009 000	Pin, Headless	1
3	602 027 000	Bolt, Eye, .38-16x10.00	1
4	621 178 000	Bracket, spring supp.	1
5	630447	Washer, Nylon, 12.7x25.4	22
6	200 031 494	Screw, Hex, M08x30	2
7	621 446	Spring, pressure adj.	1
8	579 144	Washer, Flat	2
9	602 029 000	Knob, adjusting	1
10	602 046 000	Screw, set, nylon	1
11	140515	Nut, Hex Lock, .38-18	1
12	069 767 128	Spring, ext.	2
13	069 767 162	Nut, Hex, 1/2-20	1
14	069 760 091	Washer, Plain, .5	1
15	069 767 148	Plate, spring adj.	1
16	200 031 496	Screw, Hex M08x35	5
17	14880.5	Washer, Plain, .31	11
18	069 760 417	Sleeve, Bearing	8
19	069 760 416	Bearing, Journal, .5	10
20	069 767 012	Link, Suspension, Upper	2
21	579 028	Nut, Hex Lock, M06	2
22	200 160 017	Nut, Hex Lock, M08	10
23	14880.5	Washer, Plain, .31	4
24	069 767 013	Link, Suspension, Lower	2
25	069 767 163	Spacer, 1.0x.75	4
26	200 031 494	Screw, Hex, M08x30	2
27	575 533 000	Washer, Lock, Spg.	4
28	602 055 000	Grommet	4
29	602 056 000	Spacer	4
30	069 767 137	Bracket,	1
31	200 031 501	Screw, Hex	5
32	069 767 177	Sleeve, Bearing	2
33	069 767 171	Mounting, Rod End	2
34	069 767 091	Rod End	2
35	621445	Motor, 36 VDC, 3 HP	1
35R	621478	Brushes, Motor	4
36	200 609 438	Screw, M6 x 20, HXHDCP	4
37	578728	Washer, lock	4
38	019 680 127	Washer, Flat, Wheel Axle	4
39	621 177 000	Cross Arm, Head Lift	1
40	069 767 158	Screw, Hex, 1/2-20x6.0	1
41	621 207 000	Spacer	1
42	069 764 002	Screw, Hex, #6-32x1.0	2
43	069 764 009	Switch, Snap, 25A	1
44	069 767 056	Bracket, Switch	1
45	069 762 159	Nut, Hex, #6-32	2
46	069 764 054	Washer, Lock, #06,	2
47	069 764 053	Washer, Plain, #06,	2
48	621 186 000	Bracket, Head Stop	1
49	602 079 000	Carriage Bolt, .38-16x.63"	1
50	140017	Washer, Lock, .38	5
51	602 080 000	Nut, Acorn, .38-16	1
52	140153	Spacer, Knob	1
53	140015	Washer, Flat	3
54	602 063 000	Decal, Caution Pad Adj.	1

PAD DRIVER GROUP

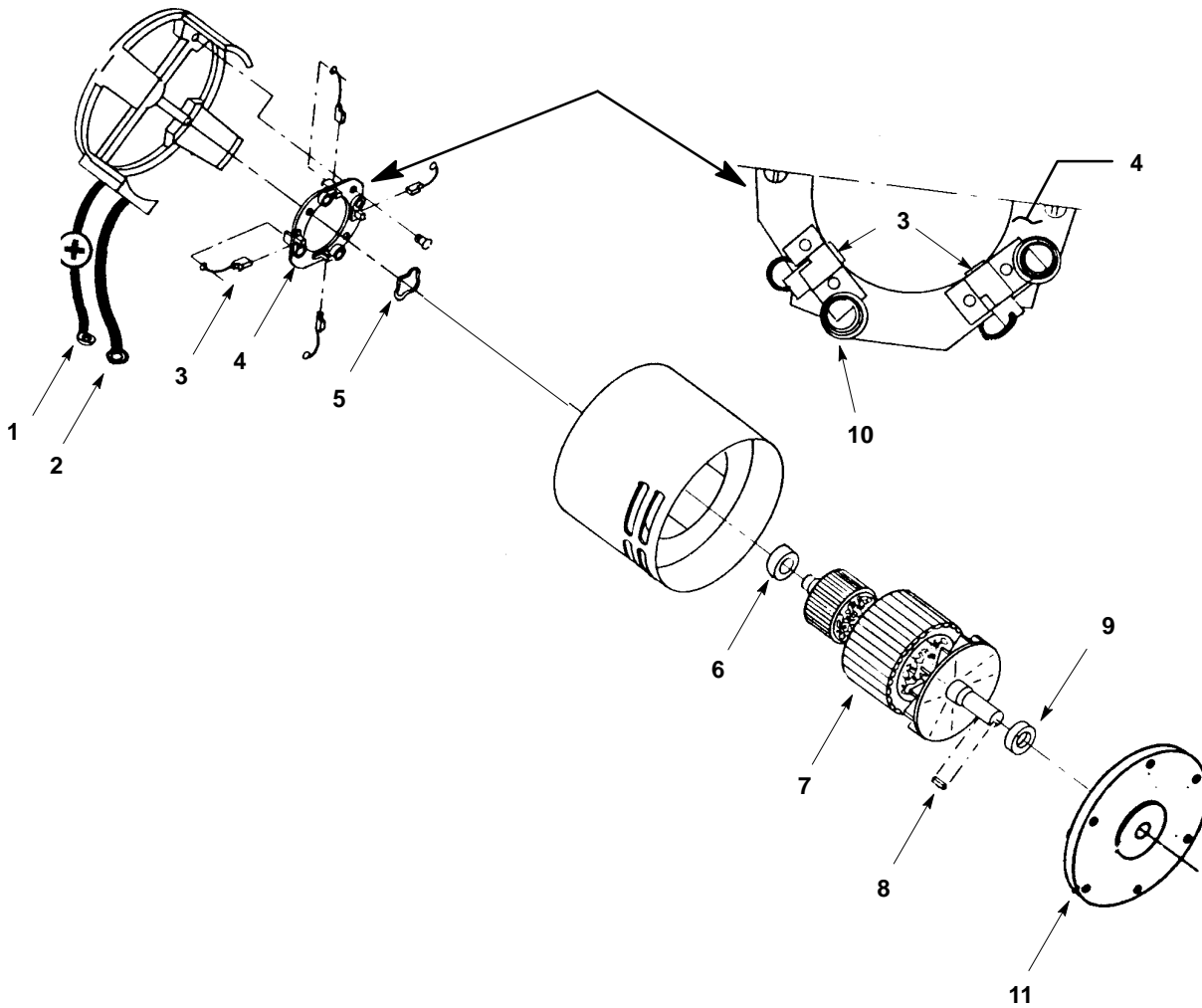


PAD DRIVER GROUP

Ref.	Part No.	Description	Qty.
1	621445	Motor, 36 VDC, 3 HP (120V)	1
2	621478	Motor brush (set/4)	4
3	200 609 438	Screw, M6 x 20, HXHDCP	4
4	578728	Washer, lock, SPG, 6.1MM	4
5	019 680 127	Washer, Flat, Wheel Axle	4
6	621 186 000	Bracket, Head Stop	1
7	602 079 000	Carriage Bolt, .38-16x.63"	1
8	140017	Washer, Lock, .38	5
9	602 080 000	Nut, Acorn, .38-16	1
10	069 767 190	Screw, M08x4	1
11	069 760 082	Washer, Plain, .25	1
12	602 035 000	Washer, Wave	1
13	630450	Wheel, Rubber	1
14	602 040 000	Decal, Caution Hand & Feet	1
15	069 767 020	Head, Drive Block	1
16	621474	Asm., Skirt	1
17	602 044 000	Fastener, Adjusting Band	1
	069 767 094	Band, pad head	1
	630613	Skid Strip, 1.524M (Not Shown)	1
18	140013	Washer, Plain	4
19	019 686 107	Screw, Hex, .38-16x.75	4
∇20	621 340 000	Asm., Driver, Flexible Disc	1
▲21	069 764 512	Ring, Water Containment	1
▲22	572 061 000	O-Ring, Drive Block Hub	1
▲23	621 326 000	Centerlock, Stationary	1
▲24	069 760 097	Washer	3
▲25	186 002 062	Screw, Slotted, #8-32	3
▲26	572 084 000	Ring, Pad Lock	1
▲27	621 327 000	Centerlock, Removeable	1
28	069 764 631	Washer, Flat	3
29	140015	Washer, Lock, .31	1
30	602 173 000	Screw, Hex, .31-24x1.0	1
32	100834	Cover, Motor	1
33	231059	Washer,.786x1.5x.3	1
34	621471	Spacer	2
35	200070432	Screw, Stop	1
36	140016	Washer, Lock	1

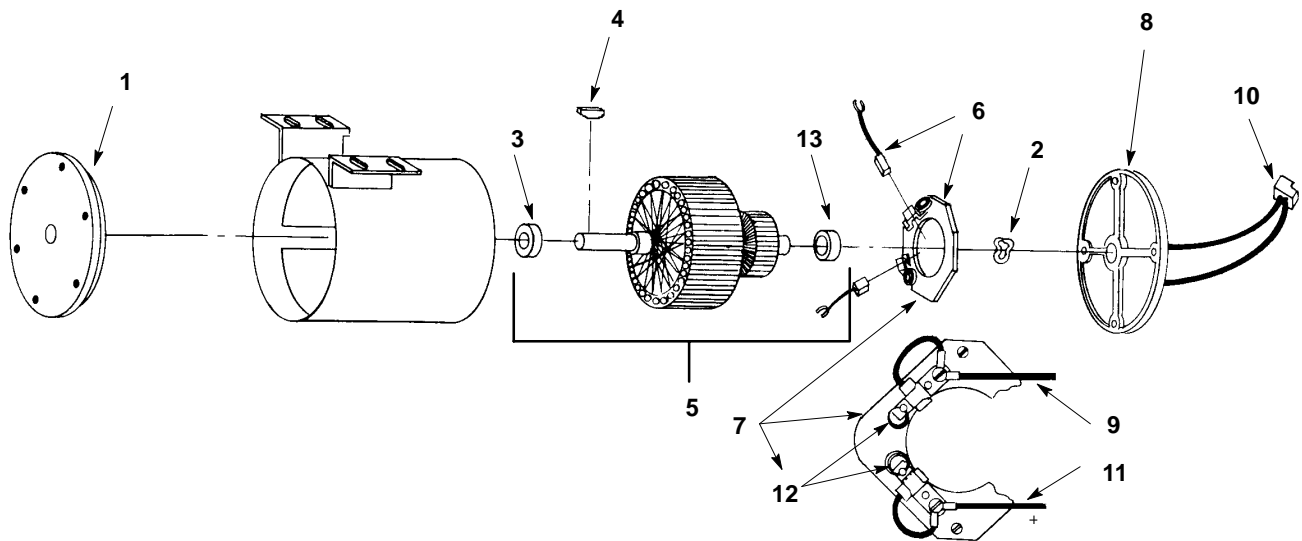
PARTS LIST

PAD MOTOR BREAKDOWN



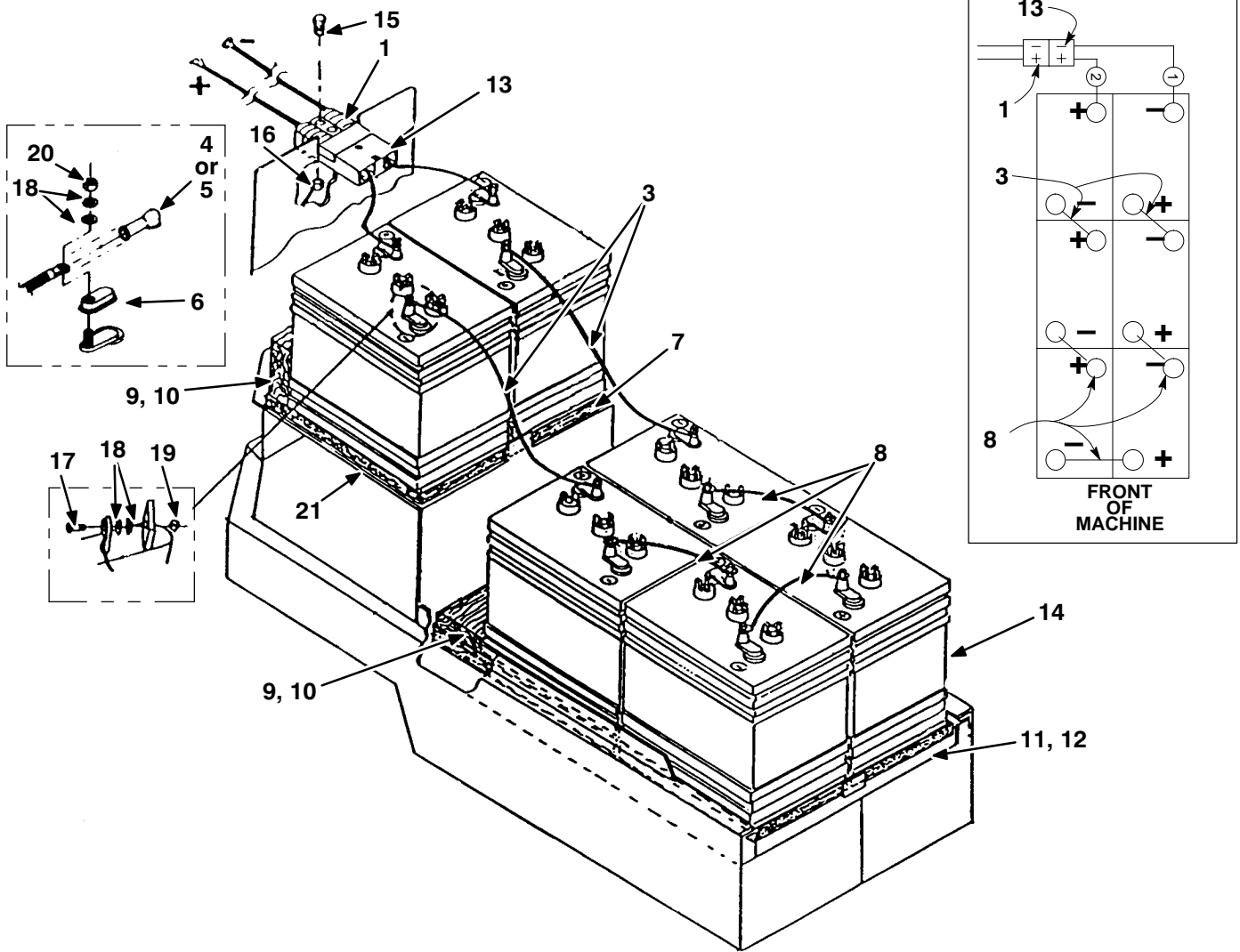
Ref.	Part No.	Description	Qty.
	621445	Motor, 36V, 3hp (Complete)	1
1	621 362 000	Asm., Lead (Positive)	1
2	621 362 000	Asm., Lead (Negative)	1
3	621478	Asm., Brush (Set of 4)	4
4	621 300 000	Asm., Brush Board	1
5	602 087 000	Washer, Helical	1
6	602 088 000	Bearing	1
7	190313	Asm., Armature	1
8	602 010 000	Key, Shaft	1
9	140124	Bearing	1
10	621 307 000	Spring, Brush (Set of 4)	4
11	019 683 016	Endbell, Motor	1

DRIVE MOTOR BREAKDOWN



Ref.	Part No.	Description	Qty.
1	069 767 010	Motor, .15 HP (Complete)	1
	602 086 000	Bracket, B.E.	1
2	602 087 000	Washer, Helical	1
3	602 088 000	Bearing	1
4	069 764 176	Key, Wooddrif	1
5	602 090 000	Armature	1
6	602 130 000	Asm., Brush	2
7	602 091 000	Asm., Brush Board	1
8	602 092 000	Bracket, Commutator	1
9	602 093 000	Asm., Lead Neg	1
10	602 094 000	Connector, Housing	1
11	602 095 000	Asm., Lead, Positive	1
12	602 131 000	Spring, Brush (Set of 2)	2
13	602 088 000	Bearing	1

BATTERY GROUP

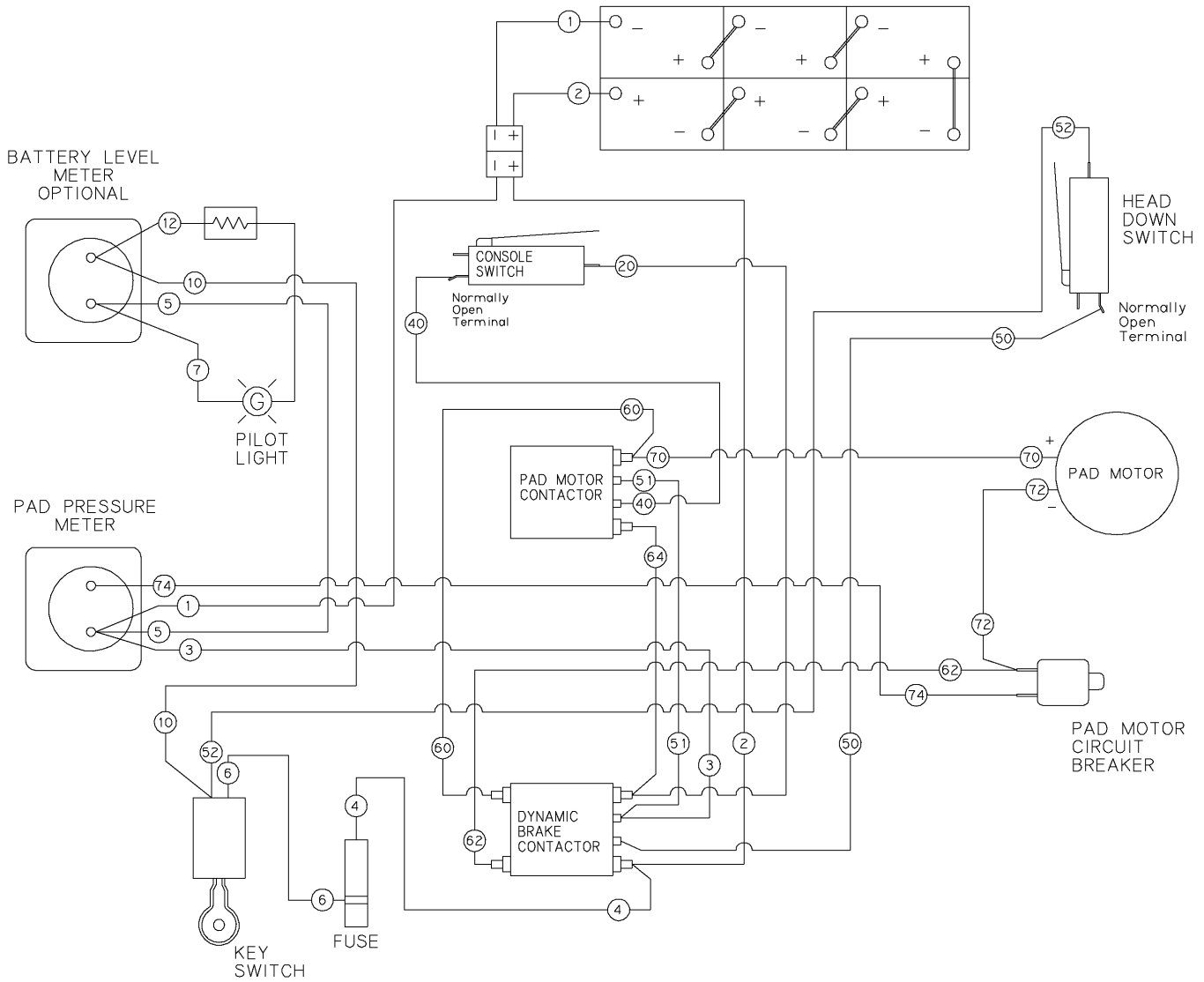


BATTERY CABLES GROUP

Ref.	Part No.	Description	Qty.
1	069 767 101	Wire harness, battery	1
∇ 2	469 767 951	Kit, battery cables	1
▲ 3	611 117 000	Cable, Battery	2
▲ 4	611 222	Boot, red	6
▲ 5	611 221	Boot, black	6
▲ 6	611 223	Terminal, cover	12
▲ 7	069 767 088	Battery tray, upper	1
▲ 8	611 116 000	Cable, Battery	3
9	630375	Insert, battery Non-Drive	2
10	602 032 000	Insert, battery Drive	1
11	602 146 000	Plate, battery supp.	1
12	069 767 089	Battery tray, lower	1
13	602 015 000	Battery cable assy.	1
14	069 764 222	Battery, 6v. 240 Amp (non-drive model)	6
	069 760 654	Battery, 6v. 305 Amp (drive model)	6
▲ 15	200 031 444	Screw	2
▲ 16	579028	Nut	2
▲ 17	200 031 488	Screw	12
▲ 18	200 394 019	Washer	24
▲ 19	200 102 017	Nut	12
▲ 20	019 201 034	Nut	12
21	621 052 000	Plate, battery	1

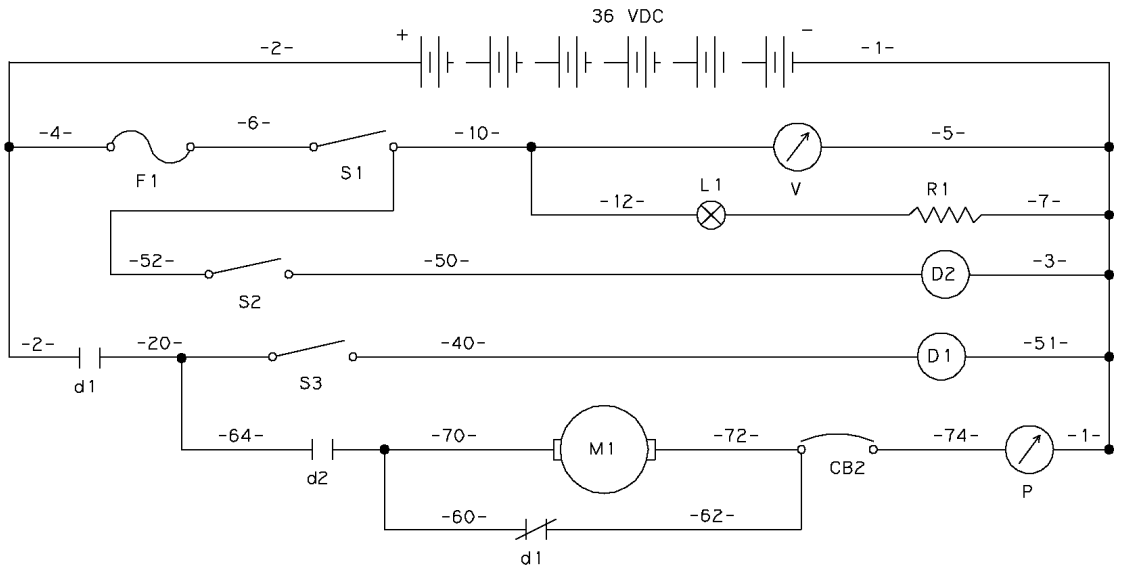
ELECTRICAL DIAGRAMS

NON-DRIVE MODEL WIRE DIAGRAM

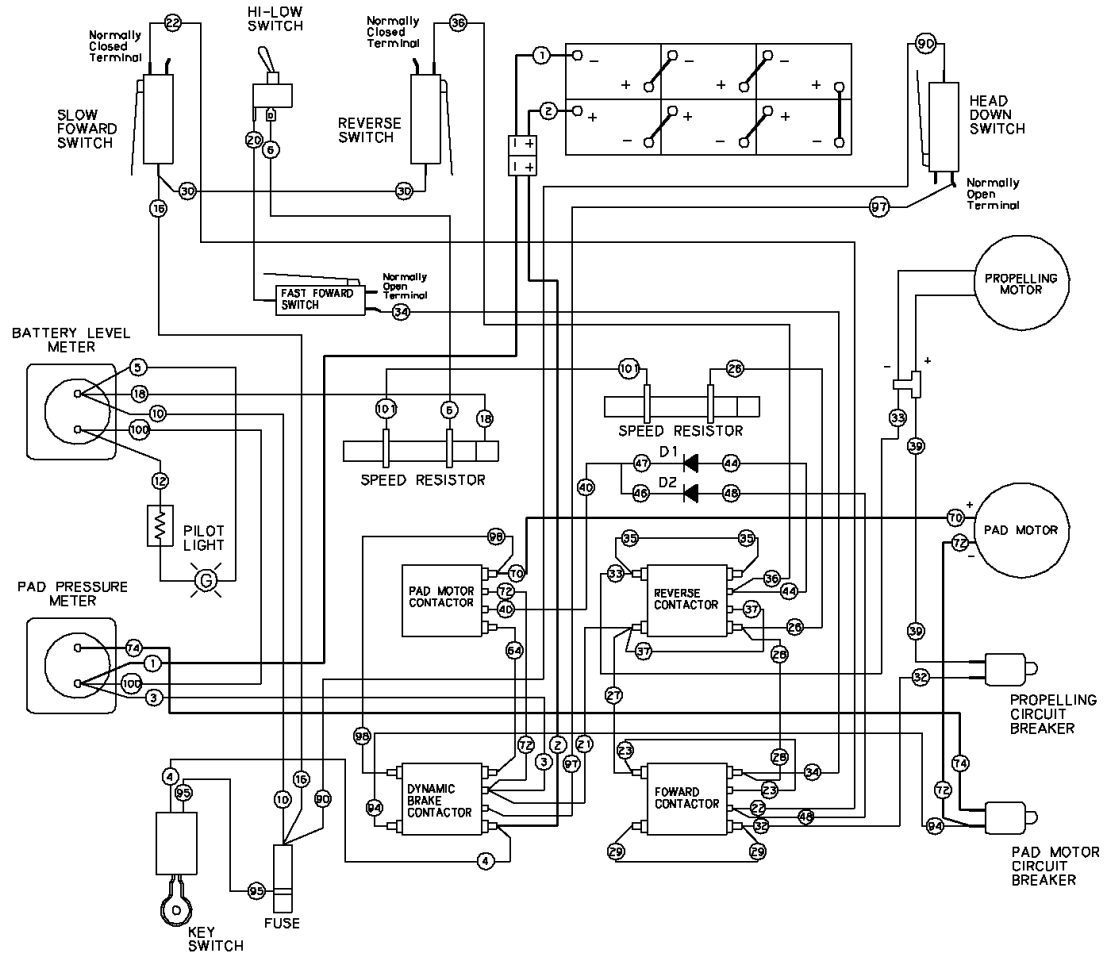


NON-DRIVE MODEL LADDER DIAGRAM

REF	LEGEND
S1 =	Switch, Key
S2 =	Switch, Head down
S3 =	Switch, console
CB-2 =	Circuit Breaker 15A
D1 =	Relay, Brake
D2 =	Relay, Main pad
d1 =	Contact, brake relay
d2 =	Contact, pad relay
M1 =	Motor, pad
L1 =	Light, pilot
P =	Meter, pad press.
F1 =	Fuse
V =	Volt Meter



DRIVE MODEL WIRE DIAGRAM



DRIVE MODEL LADDER DIAGRAM

