

NOBLES[®]

SpeedGleam[™]/Plus

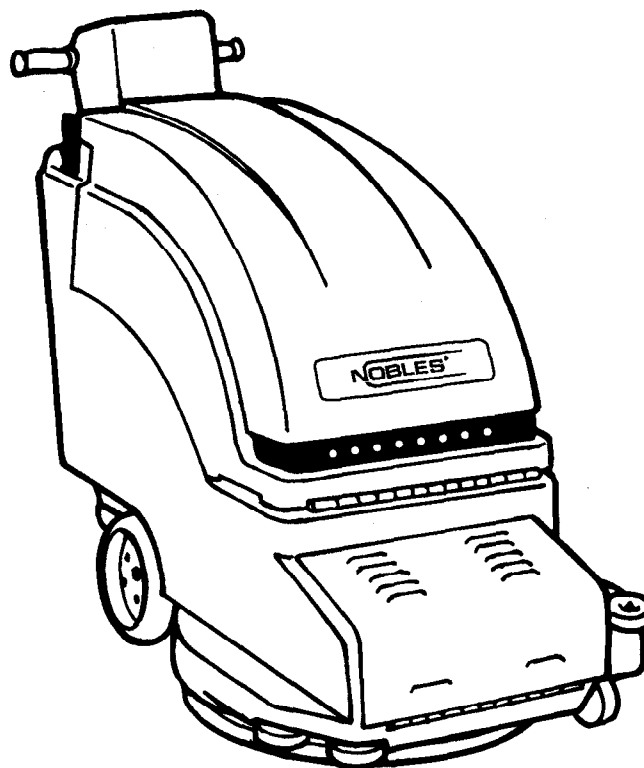
36 Volt Dust Control Burnisher

Model No.:
603266 – SpeedGleam
603287 – SpeedGleam Plus

Operator & Parts Manual



PDF Version of Manual by:
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604631
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OPERATION

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

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

When ordering replacement parts use the Standard Parts List 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 Nobles parts and service center, distributor or from any of the Nobles 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 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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TABLE OF CONTENTS

SAFETY PRECAUTIONS	3
RECOMMENDED STOCK ITEMS	3
MACHINE COMPONENTS	4
MACHINE INSTALLATION	5
MACHINE SETUP	6
MACHINE OPERATION	7
CHARGING BATTERIES	9
MAINTENANCE	10
STORING MACHINE	10
TROUBLE SHOOTING	11
SPECIFICATIONS	11
ELECTRICAL DIAGRAMS	12
STANDARD PARTS LIST	16

SAFETY PRECAUTIONS

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

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

The following safety alert symbol is used throughout this manual as indicated in their description:

⚠ WARNING: It warns the operator of hazards and unsafe practices which could result in severe personal injury or death.

⚠ CAUTION: It warns the operator of unsafe practices which could cause damage to the equipment.

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

- 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.
- 2. WHEN OPERATING MACHINE:**
 - Remove loose objects on floor. Loose objects may become dangerous projectiles if struck by revolving pad.
 - Keep hands and feet away from revolving pad.
 - Keep machine moving to prevent damage to finish or floor.
 - 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.
 - Always use extreme caution when maneuvering.
- 3. BEFORE LEAVING OR SERVICING MACHINE:**
 - Make sure machine is turned off.
 - Stop on level Surface.
 - Disconnect batteries.

⚠ WARNING: Always disconnect batteries before servicing machine. Hazardous Voltage. Shock or electrocution can result.

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

⚠ WARNING: Charge batteries in a well ventilated area and keep hood propped open. Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away.

⚠ WARNING: Wear protective gloves and shield eyes when servicing batteries. Battery acid can cause burns.

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

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

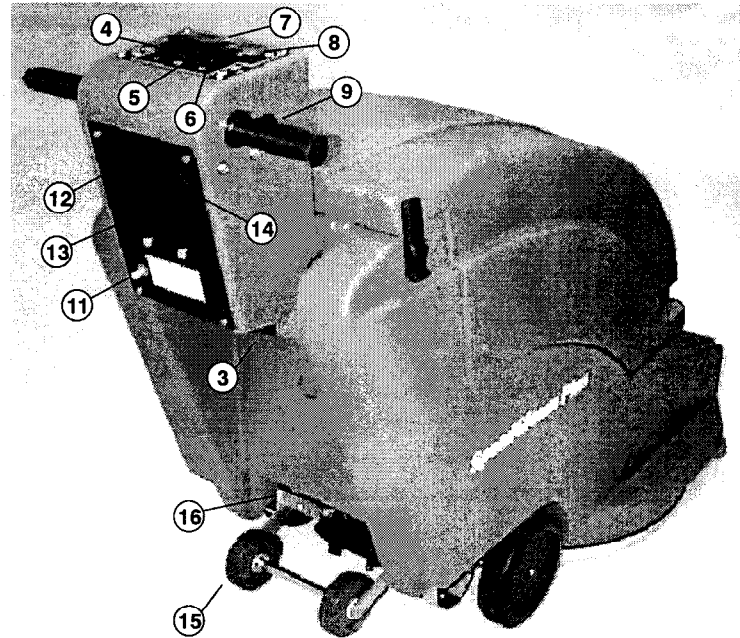
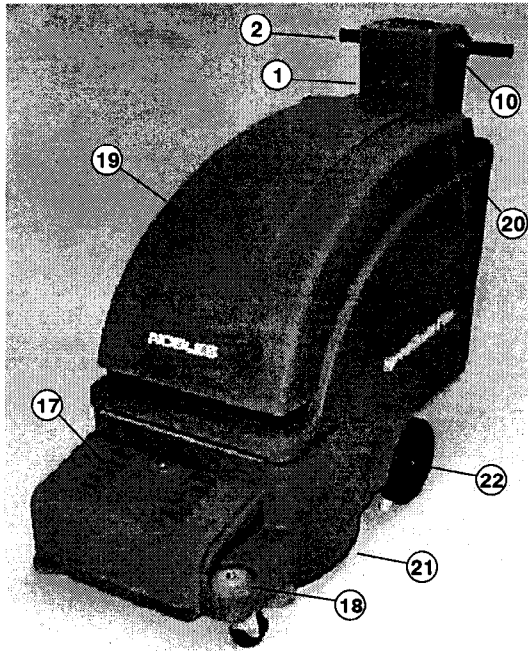
RECOMMENDED STOCK ITEMS

Refer to the Standard Parts section in this manual for recommended stock items. Stock Items are clearly identified with a Bullet preceding the parts description. See example below:

Ref.	Part No.	Description	Qty.
1	701103	ASM., STANDPIPE	1
2	180613	◆FLOAT, SHUTOFF	1
3	230187	◆NIPPLE	1
4	101714	◆GASKET	1
5	210240	NUT, FLANGED	1

OPERATION

MACHINE COMPONENTS



1. Adjustable Control Console
2. Control Grips
3. Console Height Adjustment Levers
4. Main ON/OFF Switch
5. Pad ON/OFF Switch (Plus Model)
6. Pad Pressure Switch
7. Battery Meter
8. Pad Pressure Meter
9. Speed Control Knob (Plus Model)
10. Reverse Trigger (Plus Model)
11. Main Circuit Breaker Button
12. Key Switch (optional) not shown
13. Emergency Stop Button (optional) not shown
14. Hour Meter (optional) not shown
15. Rear Tilt Wheels - for pad installation
16. Automatic Safety Shut-Off Switch - for pad installation
17. Dust Control Bag Housing
18. Wall Rollers
19. Battery Compartment Hood
20. Battery Charge Plug
21. Pad Driver
22. Drive Wheels

MACHINE INSTALLATION

UNCRATING MACHINE

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

Check Machine Contents to ensure package is complete, Contact Distributor for missing items.

Machine Contents:

- 2–Battery Cables
- 1–Battery Tray
- 1–Dust Control Bag
- 3–12V Batteries (Optional)
- 1–Battery Charger (Optional)
- Burnishing Pads sold separately.

To uncrate your machine, remove straps and carefully lift or use a ramp to remove machine from pallet.
Do not roll machine off pallet, damage may occur.

⚠ CAUTION: To prevent possible machine damage, install batteries *after* removing machine from pallet.

INSTALLING BATTERIES

⚠ WARNING: Wear protective gloves and shield eyes when handling batteries. Battery acid can cause burns.

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

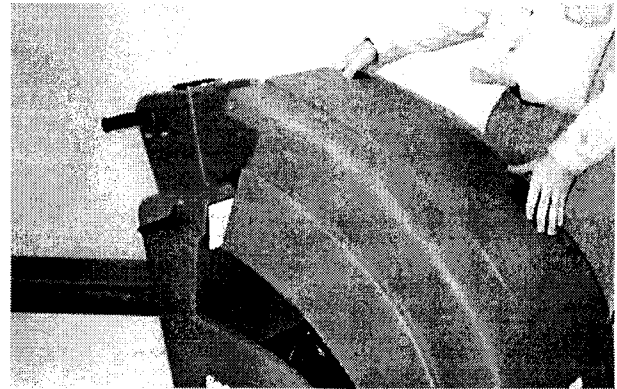
Recommended Battery Specifications:

Three 12 volt deep cycle 215 amp hour batteries. Part Number #600394. Maximum battery dimensions are 7"W (178 mm) x 15.5L (394 mm) x 14.25"H (362mm).

⚠ WARNING: To prevent accidental starting, be certain Main Power Switch is turned OFF.

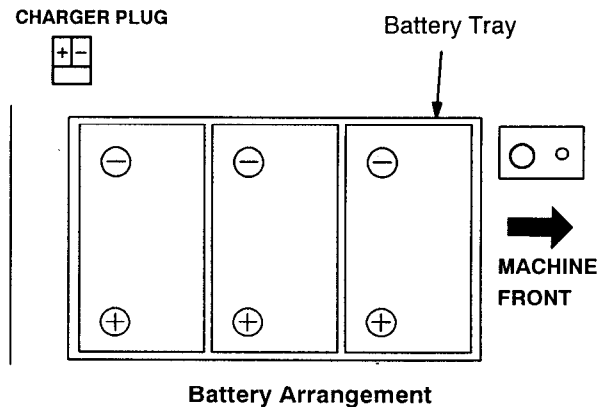
1. Park machine on a level surface and turn OFF all switches.

2. Unlatch battery hood latches and open battery compartment. Remove loose battery cables.



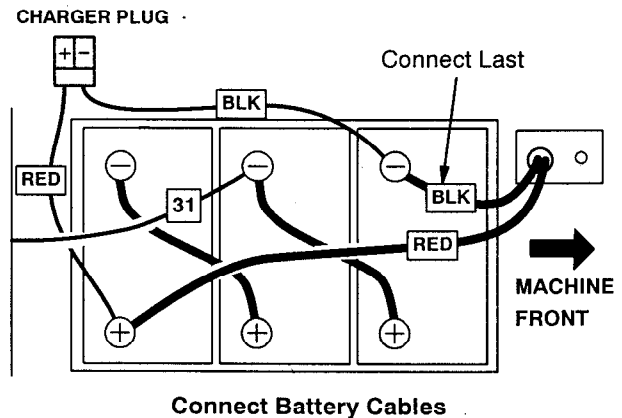
Open Battery Compartment

3. Carefully install batteries into battery tray and arrange battery posts as shown. After batteries are in place remove battery handles to allow clearance for battery hood.



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

4. Connect cables to battery posts as shown. (RED TO POSITIVE & BLACK TO NEGATIVE)



5. Double check cable connections and close hood, fasten hood latches.

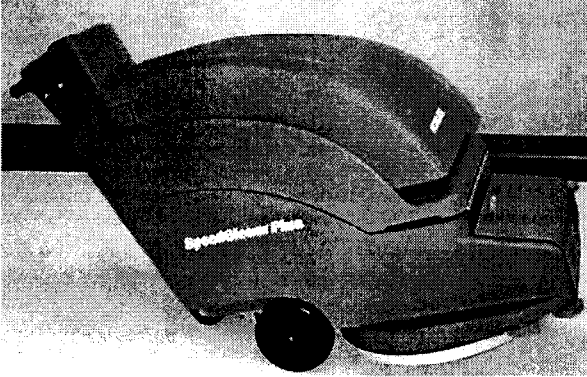
OPERATION

MACHINE SETUP

INSTALLING PAD

1. Tilt machine back on rear wheels.

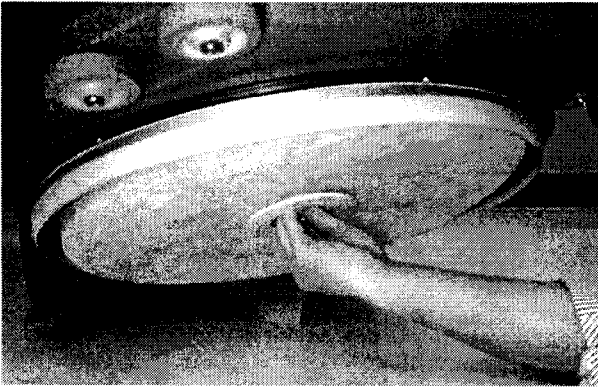
FOR SAFETY: When machine is tilted back it will automatically shut off power to pad motor.



Tilt Machine to Install Pad

CAUTION: Do not leave machine tilted back for an extended time, battery acid may leak.

2. Remove plastic center lock from pad driver by turning lock counterclockwise.
3. Position pad centered on pad driver and replace centerlock securely.



Installing Pad

IMPORTANT: Consult your authorized distributor for pad recommendations.

Pad Specifications:

- For 2000 RPM Burnishing.
- 1"/25,4 mm Thickness
- 20"/508mm Diameter with 3.5"/89mm center hole.

NOTE: Machine is not designed for spray buffing.

CAUTION: Make sure centerlock does not cross thread or floor damage may occur.

CAUTION: Do not operate machine without a pad and/or centerlock in place.

4. Return machine to operating position.

INSTALLING DUST CONTROL BAG

1. Open dust control bag compartment at front of machine.
2. Slide bag on plastic snout. Close compartment.



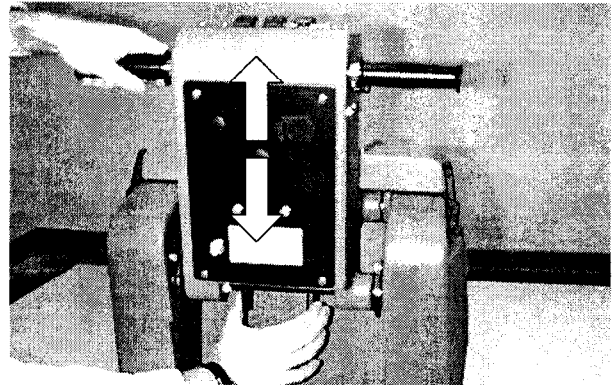
Installing Dust Control Bag

3. Empty or replace bag daily. Do not allow bag to fill beyond half full.

ADJUSTING CONTROL GRIP HEIGHT

The machine has three control grip height settings.

1. Locate two spring loaded levers below console.
2. Squeeze levers together and lift or lower control grips to a comfortable operating height.



Adjusting Control Grip Height

MACHINE OPERATION

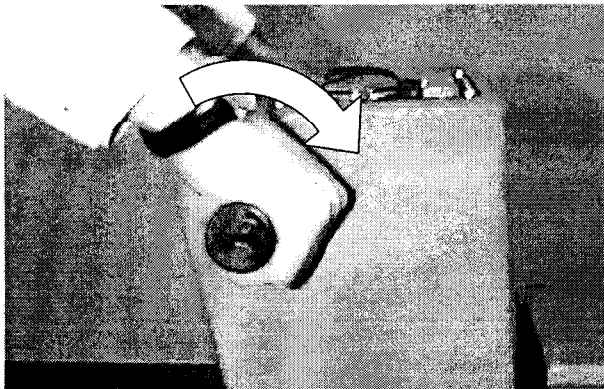
Read and understand **SAFETY PRECAUTIONS** on page 3 before operating machine.

PRE-OPERATION

1. Sweep floor and remove debris.
2. Check condition of pad.
3. Check battery charge level. *(For accurate reading brush must be spinning)*
4. Check that dust control bag is installed.
5. Make sure floor is dry.

BURNISHING WITH STANDARD MODEL

1. Turn on Main Power switch.
2. Twist control grips forward to lower pad to floor and to start pad motor.



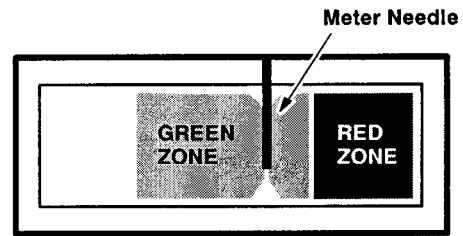
Twist Grips to Activate Pad

3. Begin burnishing by pushing machine forward.

NOTE: *If machine vibrates, realign pad.*

⚠ CAUTION: **Keep machine moving at all times to prevent floor damage, .**

4. Adjust pad pressure meter within Green Zone. Press the Pad Pressure switch to decrease or increase pressure. For best results adjust needle as shown.



Pad Pressure Meter

⚠ CAUTION: **Never operate in Red zone, floor damage and brush motor overload may result.**

5. Release grips to stop burnishing. The pad will automatically raise to the transport position.

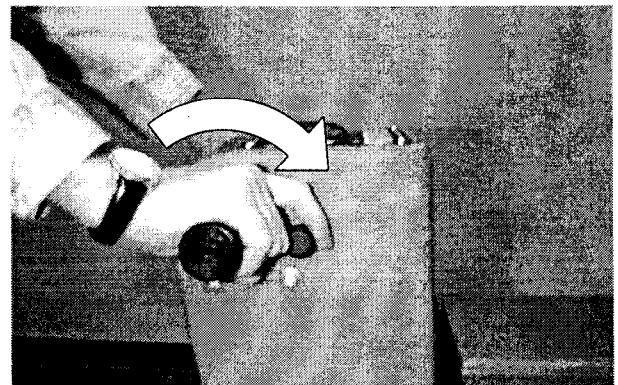
BURNISHING WITH PLUS MODEL

1. Turn on Main Power and Brush switches.
2. Turn Speed Control knob to slowest speed. This will prevent an abrupt take off.



Speed Control Knob

3. Twist control grips forward to begin burnishing. Gradually turn Speed Control knob to desired cleaning speed.

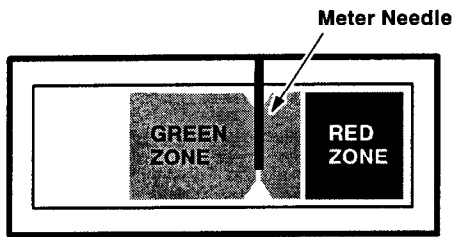


Twist Grips to Burnish

⚠ CAUTION: **For first time users, operate at a slow speed until maneuvering becomes easy.**

OPERATION

- Adjust pad pressure meter within Green Zone. Press the Pad Pressure switch to decrease or increase pressure. For best results adjust needle as shown.



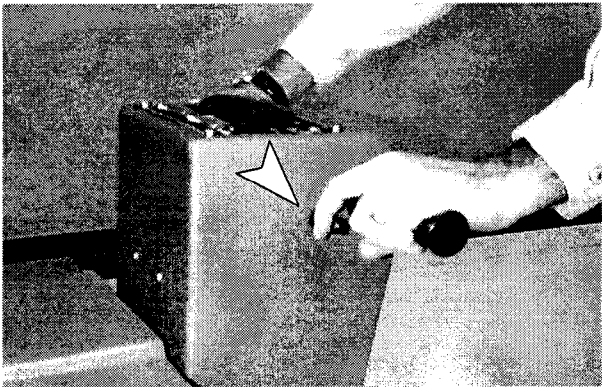
Pad Pressure Meter

CAUTION: Never operate in Red zone, floor damage and brush motor overload may result.

NOTE: If machine vibrates, realign pad.

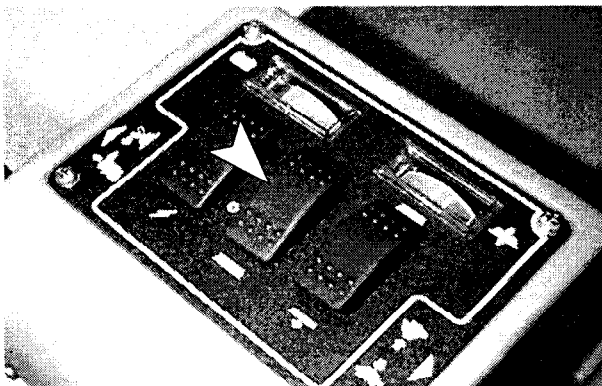
CAUTION: Keep machine moving at all times to prevent floor damage.

- To stop machine, release control grips.
- To operate machine in reverse, simply pull reverse trigger (one speed).



Reverse Trigger

- To transport machine, turn off Pad switch and twist control grips. Pad will automatically raise to the transport position.



Turn off Pad Switch

WHILE OPERATING MACHINE

WARNING: Keep hands and feet clear of revolving pad.

- Always operate with caution when burnishing around walls and obstacles.
- Always reduce speed to maintain control when turning.
- Stay clear of floor obstructions, such as electrical plates or grates, they will destroy pad.
- Change or turn pads over when soiled.
- Check battery meter's discharge level periodically. Recharge when needle drops to the red zone.

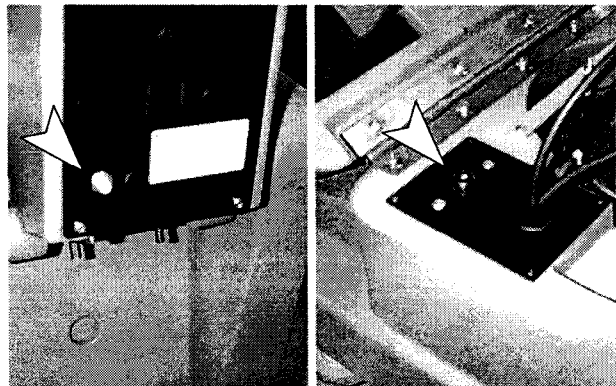
CAUTION: Do not operate machine when battery meter needle is in the red zone, battery damage will result.

- If pad motor circuit breaker trips, reduce pad pressure and/or replace soiled pad.

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

CIRCUIT BREAKERS

Machine is equipped with two resettable circuit breakers, Main (15A) and Pad Motor (80A), to protect machine from damage. If pad motor circuit breaker should trip, determine cause, allow motor to cool, then reset. Pad circuit breaker will trip due to excessive pad overload. Change pad or reduce pad pressure if breaker should trip. Pad motor circuit breaker button is located under battery hood at front of machine.



Resettable Circuit Breakers

CHARGING BATTERIES

ATTENTION: RECHARGE BATTERIES ONLY AFTER A TOTAL OF 30 MINUTES OF USE OR MORE. THIS WILL PROLONG BATTERY LIFE.

⚠ ATTENTION: The following charging instructions are intended for supplied 36V chargers only. Or use a charger with the following specifications to prevent battery damage.

CHARGER SPECIFICATIONS:

- OUTPUT VOLTAGE - 36 VOLTS
- OUTPUT CURRENT - 35 AMPS
- AUTOMATIC SHUTOFF CIRCUIT
- FOR DEEP CYCLE BATTERY CHARGING

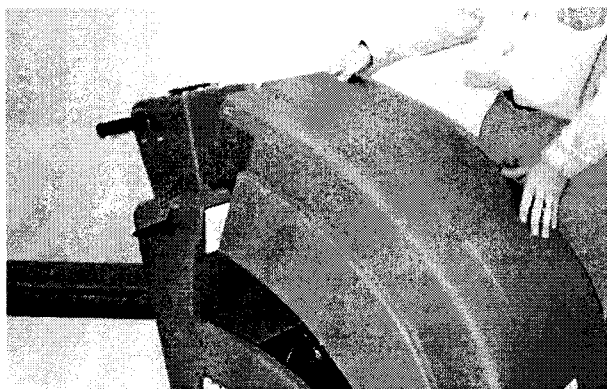
ATTENTION: For optimum machine operation, keep batteries charged at all times. Never let batteries set in a discharge condition for lengthy periods.

⚠ CAUTION: Do not operate machine when battery meter needle is in the red zone, battery damage will result.

⚠ WARNING: Charge batteries in a well ventilated area. Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away.

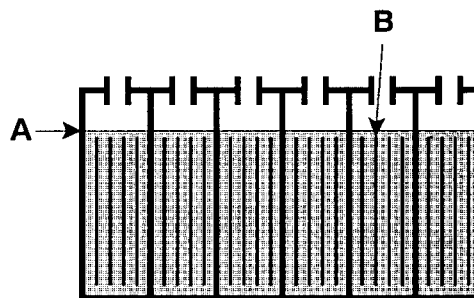
⚠ WARNING: Shield eyes when servicing batteries and avoid contact with battery acid.

1. Transport machine to a well ventilated area for charging.
2. Park machine on a level surface and turn off all switches.
3. Unlatch battery hood and open battery compartment.



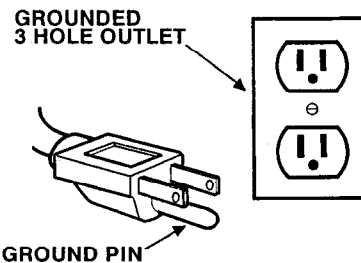
Open Battery Compartment

4. Check fluid level "A" in each battery cell. Do not charge batteries unless fluid is slightly covering battery plates "B". If needed, add just enough fluid to cover battery plates, do not overfill. Batteries can overflow during charging due to expansion. Replace cell caps before charging.



Check battery fluid level

5. With charger disconnected from machine, plug charger's power cord into a grounded wall outlet.



Connect charger to grounded outlet

6. Plug battery charger into machine's charging receptacle as shown. Flip up hood support stand and rest hood on stand.



Charging Batteries

⚠ WARNING: Keep hood propped open when charging batteries to promote ventilation.

NOTE: Once the charger is connected to the machine, machine becomes inoperable.

7. Charger will automatically begin charging and shut off when fully charged.
8. When disconnecting charger, always unplug charger from wall outlet first.

OPERATION

MAINTENANCE

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

⚠ WARNING: Before attempting any machine repair; 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. Remove burnishing pad and clean or replace.
2. Empty or replace dust control bag.
3. Clean machine housing with damp cloth.
4. Recharge batteries.

ATTENTION: RECHARGE BATTERIES ONLY AFTER A TOTAL OF 30 MINUTES OF USE OR MORE. THIS WILL PROLONG BATTERY LIFE.

WEEKLY MAINTENANCE

1. Check fluid level in battery cells.
2. Clean battery tops of corrosion.
3. Check for loose or corroded battery cables.

MONTHLY MAINTENANCE

1. Lubricate caster with a water resistant grease.
2. Lubricate wheel grease fittings with a water resistant grease (Standard Model Only).
3. Check machine for loose nuts and bolts.
4. Check condition of dust skirt, replace if worn.

EVERY 250 HOURS OF OPERATION

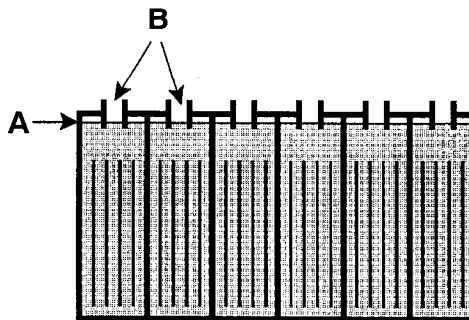
Check motor(s) for carbon brush wear, replace brushes if worn to a length of 3/8" (1cm) or less.

BATTERY MAINTENANCE

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

⚠ WARNING: Shield eyes when servicing batteries. Avoid contact with battery acid and keep all metal objects off batteries.

1. Always follow proper charging instructions. (See CHARGING BATTERIES)
2. Each week after charging, check water level in each battery cell. Fluid level (A) should reach bottom of sight tubes (B). Add fluid if necessary, do not overfill.



Correct fluid level after charging

3. Keep battery tops and terminals clean and dry.
 - a. Mix a strong solution of baking soda and water.
 - b. Brush solution sparingly over battery tops, terminal and cable connectors.
- NOTE:** Do not allow baking soda solution to enter battery cells.
- c. Use wire brush to clean terminal post and cable connections.
 - d. After cleaning, apply a coating of clear battery post protectant to terminals and cable connections.
4. Check for loose or worn cables. Replace if worn.

STORING MACHINE

Store machine in a dry area in the upright position.

⚠ CAUTION: Do not store machine tilted back, battery acid may leak.

⚠ CAUTION: Do not expose to rain. Store indoors.

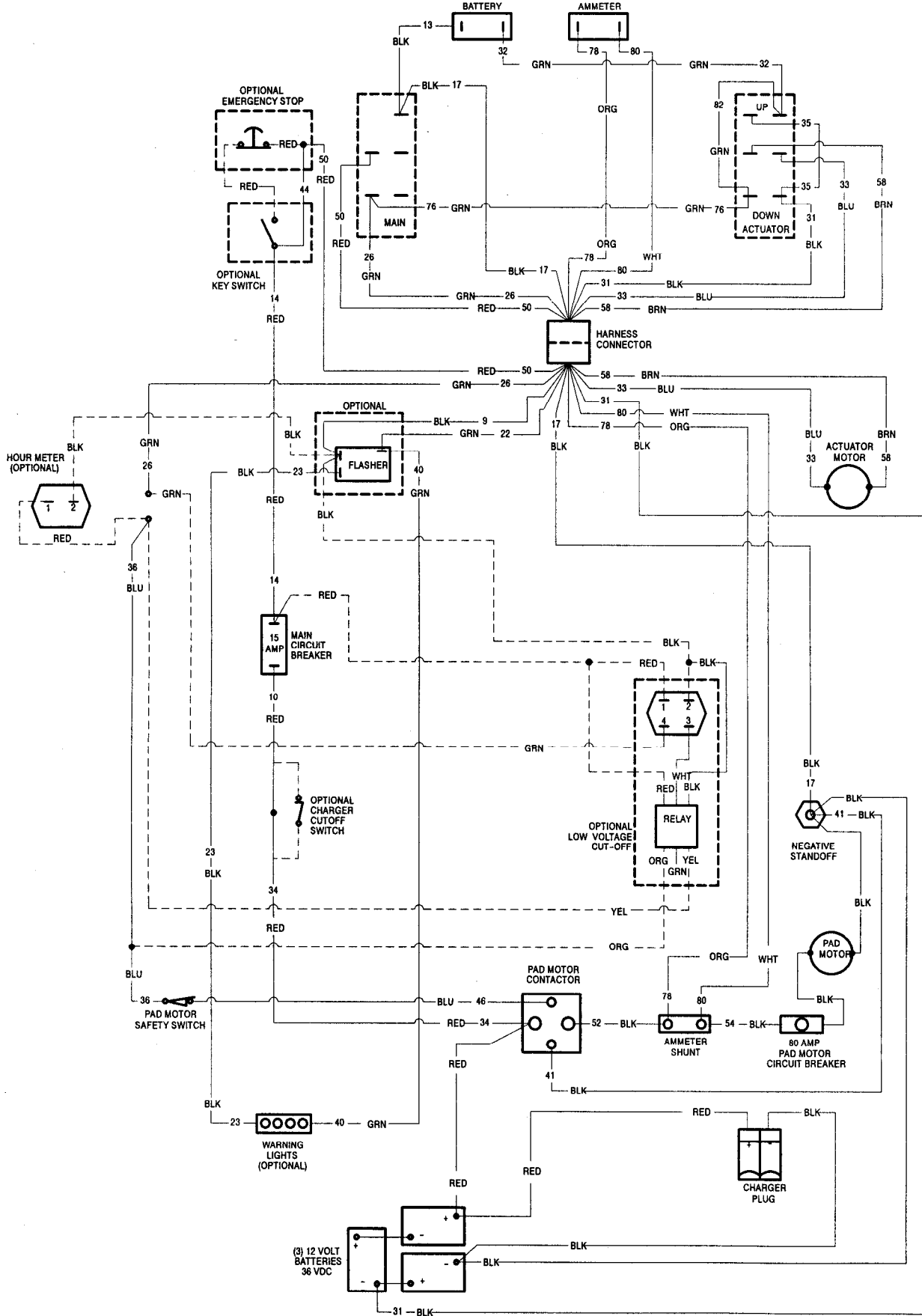
TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
No Power	Faulty Main Power switch	Contact Service Center.
	Faulty battery(s).	Replace battery(s)
	Loose battery cable.	Tighten loose cables.
	Improper battery cable connection.	See Installing Batteries.
	Tripped Main circuit breaker.	Determine cause and reset breaker.
	Charger is connected. (Plus Model)	Disconnect Battery charger
Pad motor does not operate	Faulty roll switch.	Contact Service Center.
	Tripped pad motor circuit breaker	Replace pad/adjust pressure and reset breaker.
	Faulty contactor.	Contact Service Center.
	Faulty wiring.	Contact Service Center.
	Faulty pad drive motor.	Contact Service Center.
	Worn carbon brushes	Contact Service Center.
	Tilt safety switch is activated or faulty.	Lower machine from tilt position.
Drive motor does not operate or operates incorrectly.	Faulty roll switch.	Contact Service Center.
	Faulty speed control board or connection.	Contact Service Center.
	Faulty solenoid.	Contact Service Center.
	Faulty drive motor.	Contact Service Center.
	Faulty wiring.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
	Faulty potentiometer or speed control board.	Contact Service Center.
	Loose wire connection.	Contact Service Center.
Short run time.	Low battery charge.	Charge batteries.
	Defective battery cell(s).	Replace battery.
	Batteries need maintenance.	See Battery Maintenance.
	Faulty battery charger.	Replace charger.

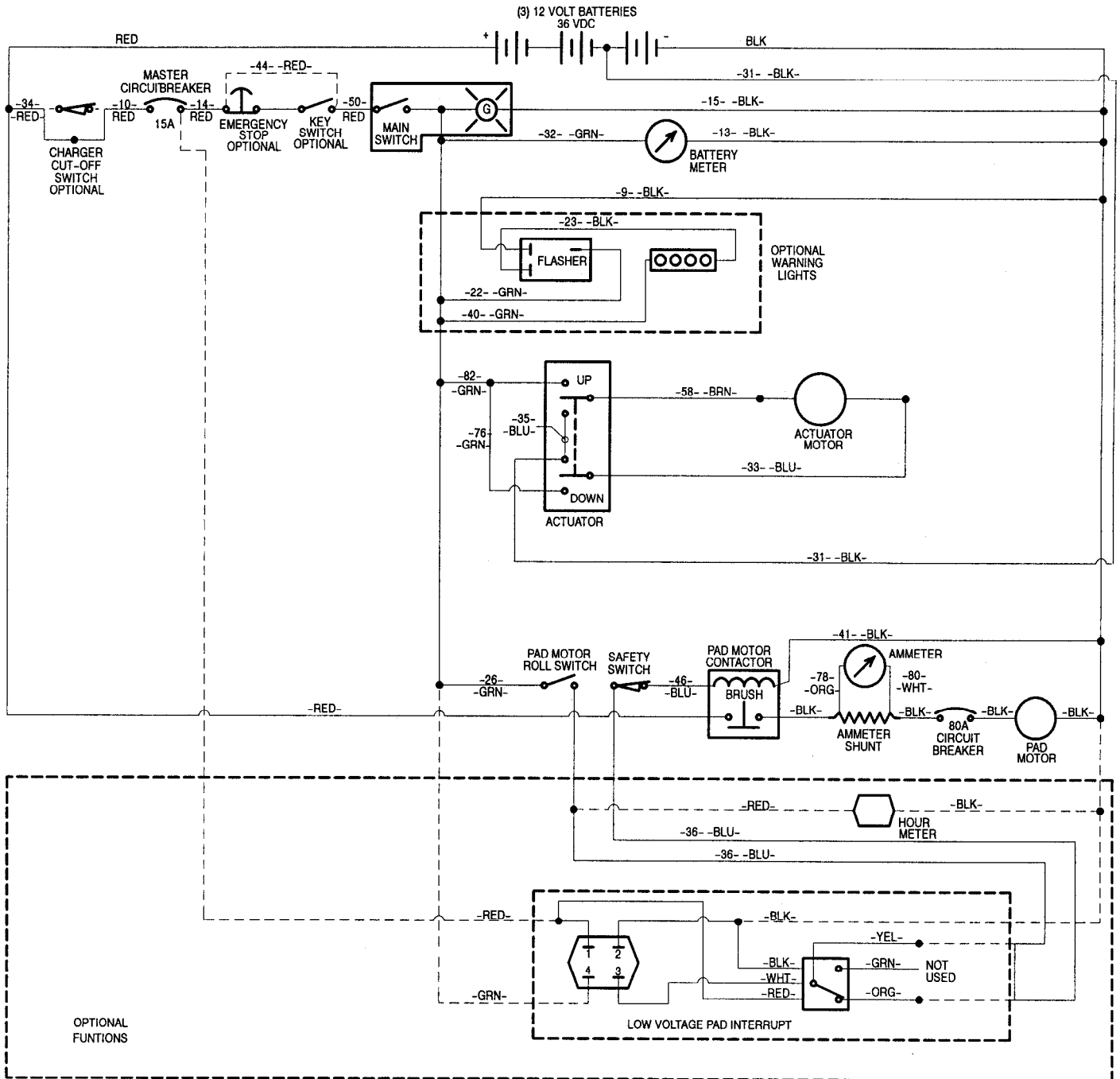
SPECIFICATIONS

Model	SpeedGleam	SpeedGleam Plus
LENGTH	52"/132cm	52"/132cm
WIDTH	24"/61 cm	24"/61 cm
HEIGHT	40"/102cm	40"/102cm
WEIGHT WITH BATTERIES	525 lbs/243 Kg	540 lbs/250 Kg
DRIVE SYSTEM	N/A (Pad assisted)	.2 hp Transaxle
DRIVE SPEED	N/A	0-240'/73M min.
PAD WIDTH	20"/508 mm	20"/508 mm
PAD MOTOR	36V, 3hp, 2000 rpm, 80A, 2238W	36V, 3hp, 2000 rpm, 80A, 2238W
PAD PRESSURE	Variable 15-40 lbs/7 - 9 kg	Variable 15-40 lbs/7 - 9 kg
DUST CONTROL BAG	Paper/Cloth - 99/98% @ 1.0 micron	Paper/Cloth Bag - 99/98% @ 1.0 micron
BATTERIES	3-215amp/hour, 12v deep cycle	3-215amp/hour, 12v deep cycle
RUN TIME, CONTINUOUS	Up to 3 hours	Up to 3 hours
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON TILE	65dB(A)	65dB(A)

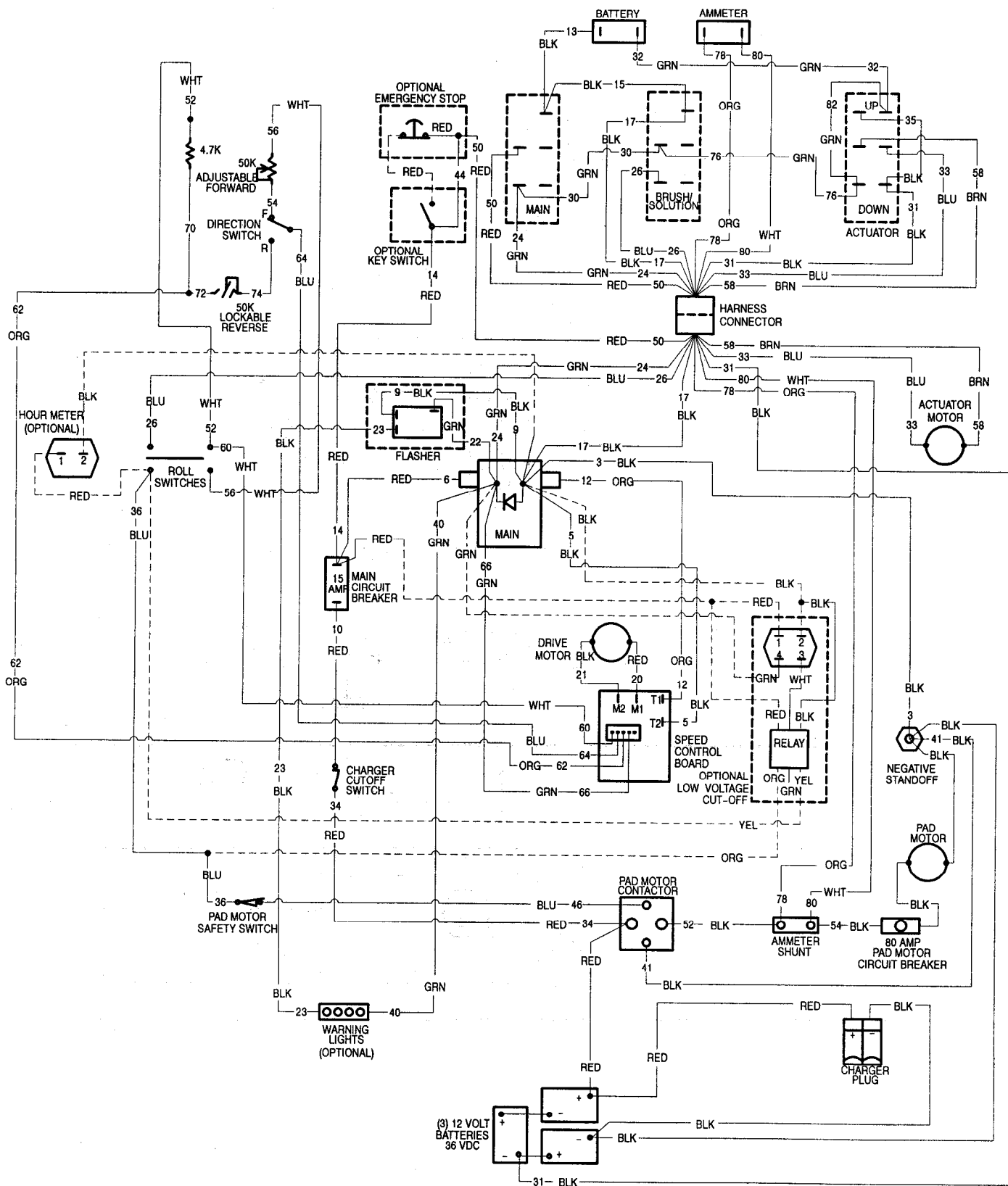
SpeedGleam Wiring



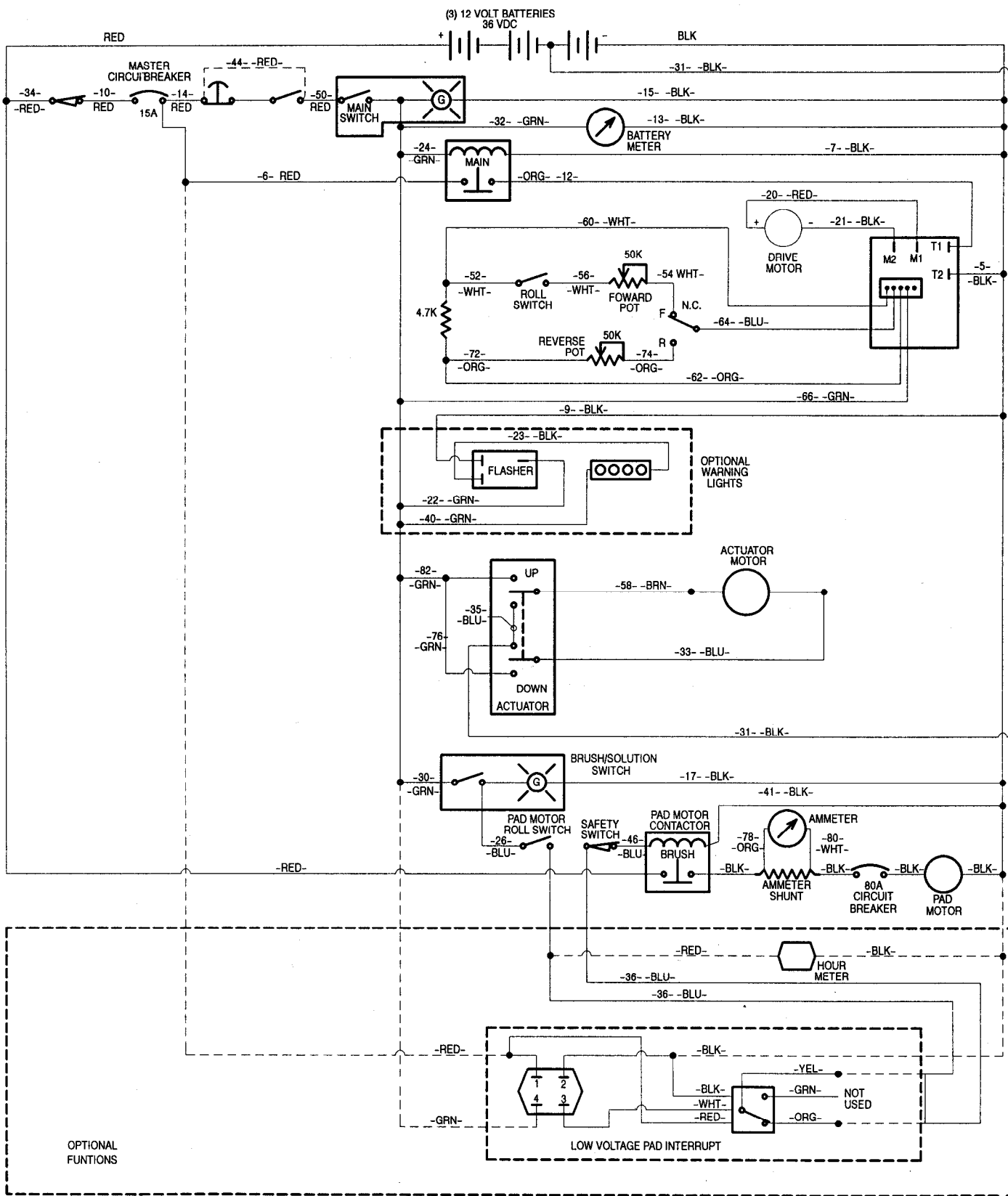
SpeedGleam Ladder



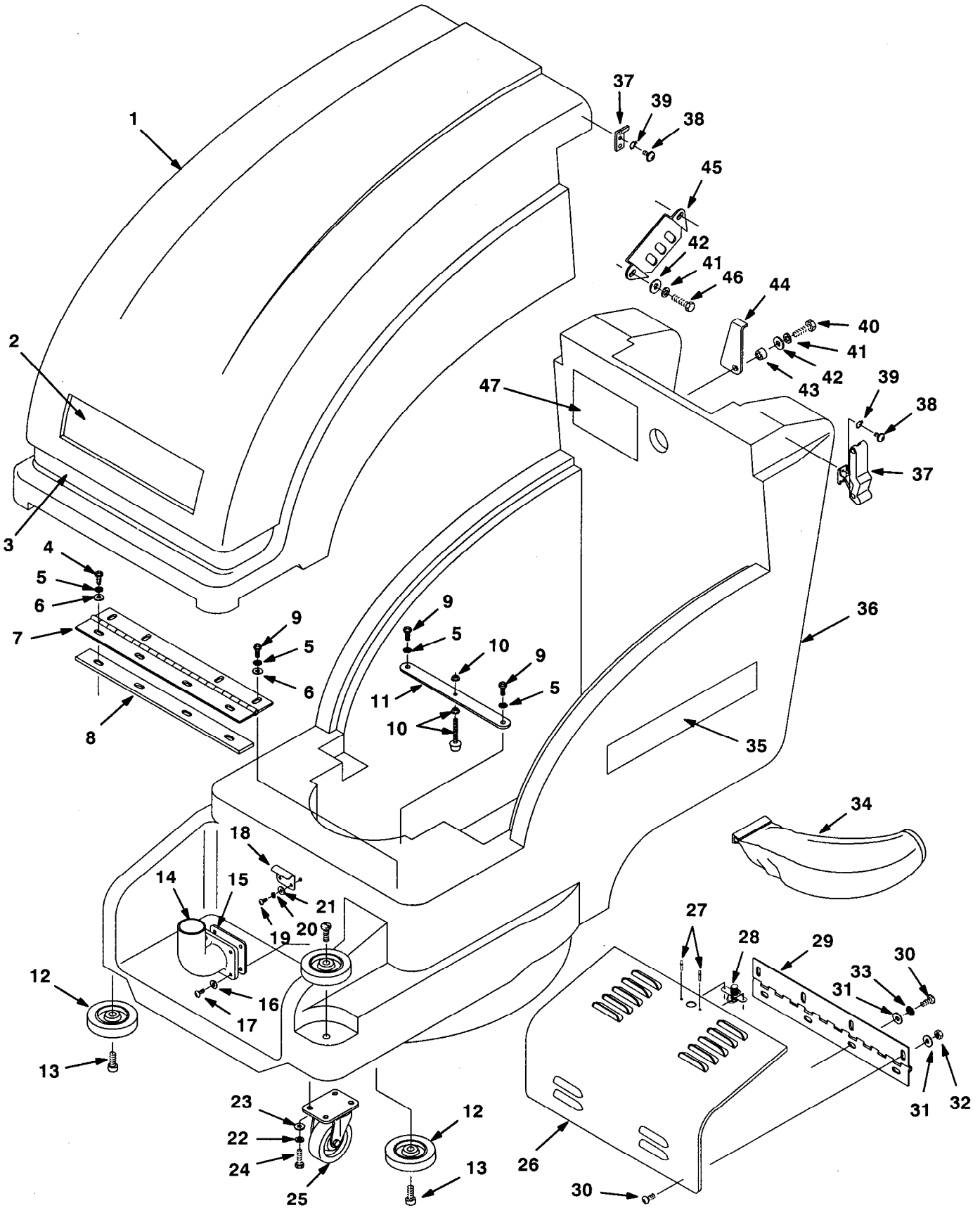
SpeedGleam Plus Wiring



SpeedGleam Plus Ladder



MAIN HOUSING GROUP



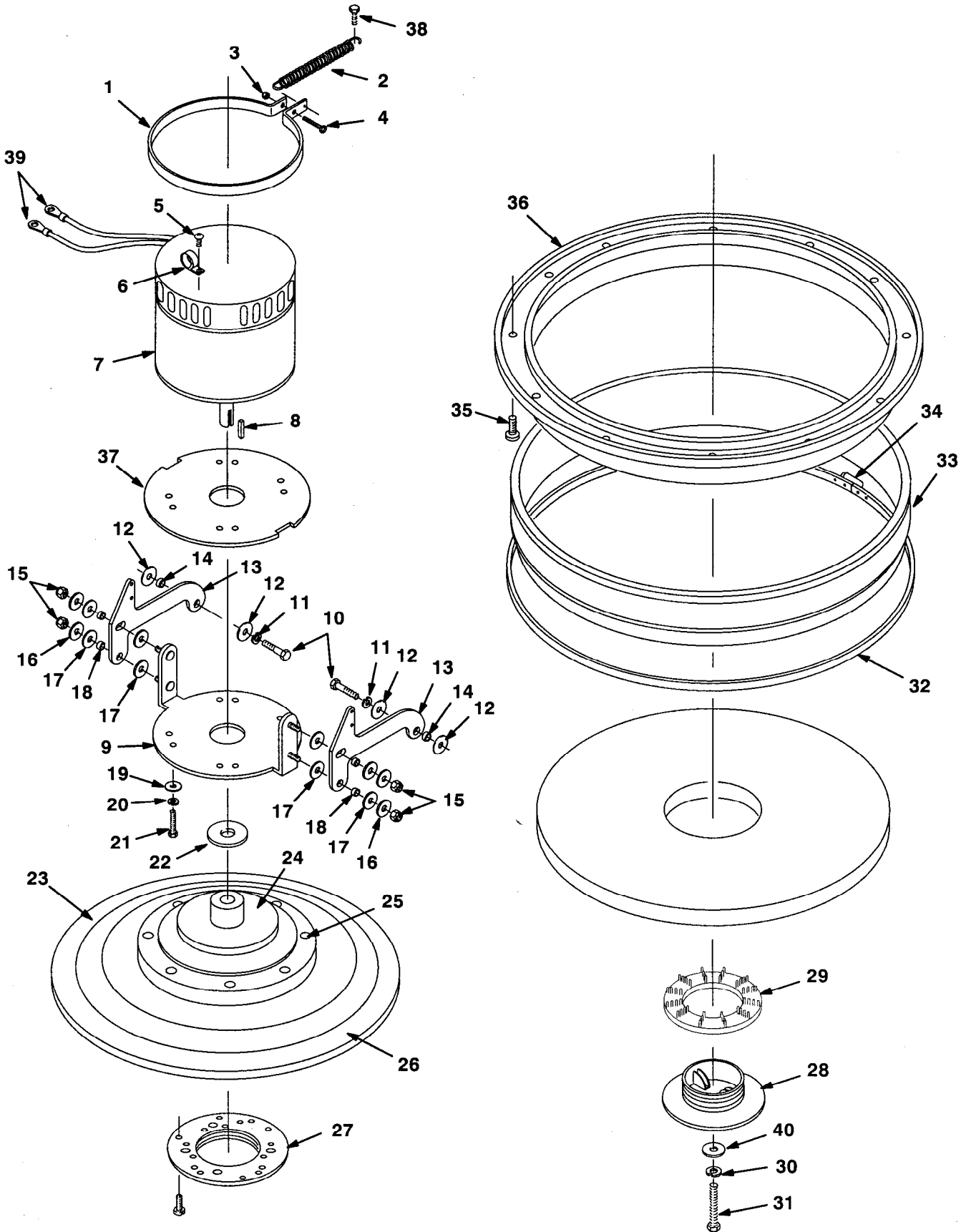
MAIN HOUSING GROUP

REF	PART #	DESCRIPTION	QTY.
1	603965	COVER, TANK	1
2	120239	DECAL, NOBLES LOGO	1
3	604297	DECAL, RECESS BLACK	1
4	600385	SCREW, M6X1.0X20	4
5	140016	WASHER, 1/4 LOCK	8
6	140000	WASHER, 1/4 FLAT	8
7	603268	HINGE, HOOD	1
8	604296	SPACER, 1X16X1/4	1
9	578 187 000	SCREW, M6X1.0X12	6
10	604294	STOP, MOTOR	1
11	604276	BRACKET, MOTOR STOP	1
12	630450	WHEEL, RUBBER DIA 76 X 23 WD	4
13	603154	SCREW, M8X1.25X40	4
14	604499	ELBOW, DEFLECTOR RM-NAT	1
15	100121	GASKET, ELBOW 1/4"	1
16	578 186 000	WASHER, FLAT 4.3X12X1.0"	4
17	069 760 103	SCREW, RNDPHL #10, 1.0	4
18	604295	PLATE, LATCH	1
19	578 187 000	SCREW, M6X1.0X12 PANPHL	2
20	140016	WASHER, 1/4 LOCK	2
21	140000	WASHER, 1/4 FLAT	2
22	140015	WASHER, 5/16 SPLITLOCK	4
23	140027	WASHER, 5/16 FLAT	4
24	140275	SCREW, M8X1.25X16 HXHDCP	4
25	103001	CASTER, SWIVEL 3"	1

REF	PART #	DESCRIPTION	QTY.
26	603276	COVER, DUST BAG	1
27	140706	RIVET, POP 1/8	2
28	140962	LATCH, SPRING KNURLED	1
29	603269	HINGE, DUST COVER	1
30	578 187 000	SCREW, M6X1.0X12	7
31	140000	WASHER, 1/4 FLAT	7
32	140284	NUT, M6X1.0 NYLOCK	3
33	140016	WASHER, 1/4 LOCK	4
34	900210	●BAG, CLOTH	1
35	603838 603837	DECAL, SPEEDGLEAM PLUS DECAL, SPEEDGLEAM	2 2
36	603964	CHASSIS, RM-NDG	1
37	140932	LATCH, HOOD RUBBER	2
38	200 070 340	SCREW, M4X.7X8 PANPHL	8
39	140023	WASHER, #8 INT	8
40	140275	SCREW, M8X1.25X16 HXHDCP	1
41	140015	WASHER, 5/16 SPLITLOCK	5
42	140027	WASHER, 5/16 FLAT	5
43	140116	BUSHING, 5/16ID X 7/16OD	1
44	604637	SUPPORT, RECOVERY TANK	1
45	230661	PLATE, LOCK CONTROL HOUSING	2
46	140275	SCREW, M8X1.25X16 HXHDCP	4
47	604304	DECAL, BATT HOOK-UP & CAUTIONS	1

● Recommended Stock Item

PAD DRIVER GROUP



PAD DRIVER GROUP

REF	PART #	DESCRIPTION	QTY.
1	604278	BRACKET, MOTOR	1
2	039 708 241	SPRING, EXT 1X.095X5	1
3	140284	NUT, M6X1.0 NYLOCK	1
4	630431	SCREW, M6X1.0X40 HXHDCP	1
5	140890	SCREW, 10-24X1/2 TRSPLH	1
6	140323	CLAMP, NYLON 1/2" ID	1
∇7	603398	MOTOR, 36VDC 2000 RPM 3HP	1
	621478	BRUSH, CARBON	4
▲8	140628	KEY, MOTOR 3/16X1	1
9	600198	BRACKET, MOTOR	1
10	140352	SCREW, M12X1.75X25 HXHDS	2
11	140024	WASHER, 1/2" LOCK	2
12	140045	WASHER, FLAT .510X1.25X.06	4
13	603273	LIFT ARM MOTOR	2
14	140139	BUSHING	2
15	600200	NUT, 3/8-16 JAM NYLOCK	4
16	140013	WASHER, 3/8 FLAT	4
17	630447	WASHER, NYLON	8
18	600191	BUSHING, 3/8X1/2X.260	4
19	140013	WASHER, 3/8 FLAT	4
20	140017	WASHER, 3/8 SPLIT LOCK	4

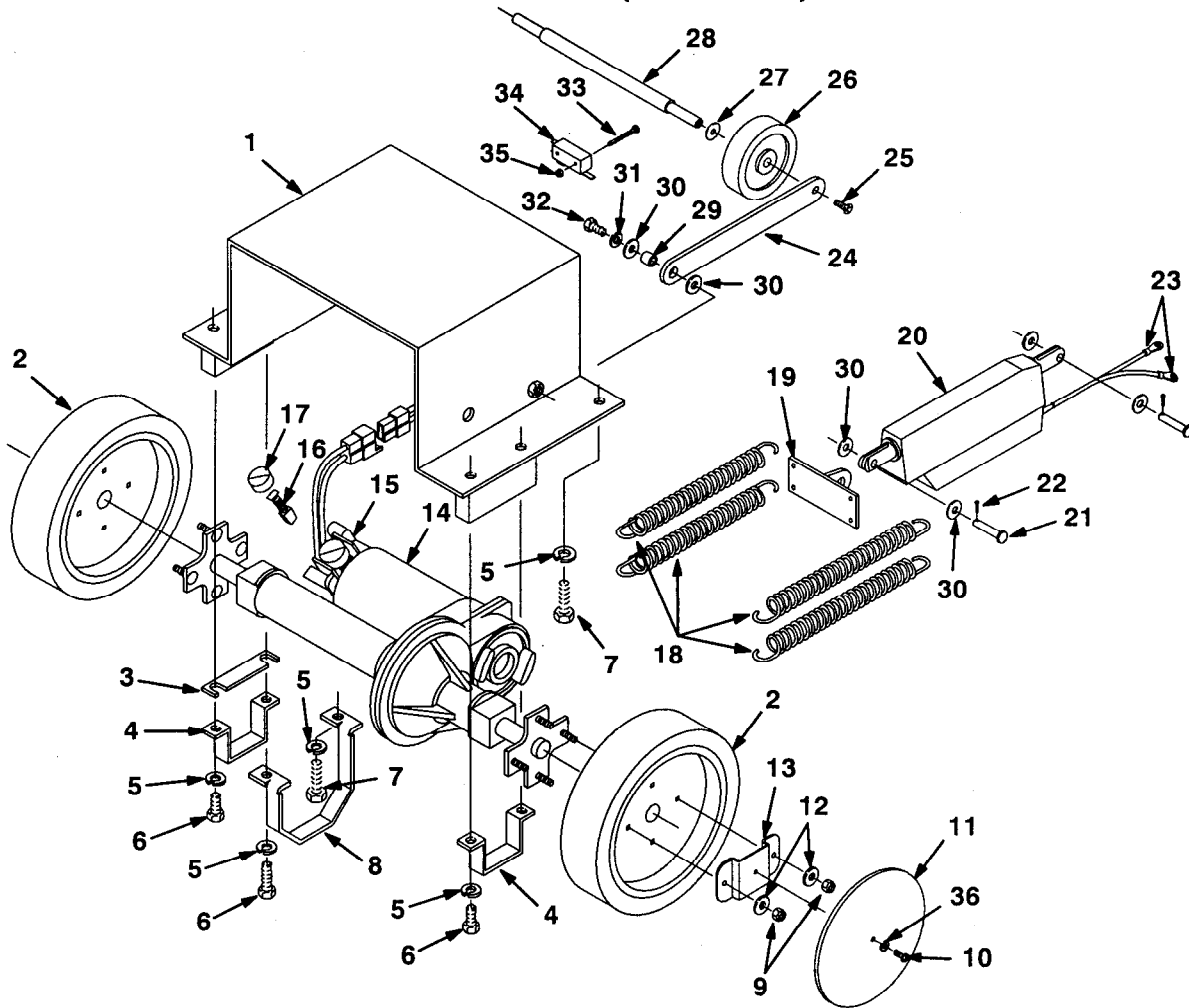
REF	PART #	DESCRIPTION	QTY.
21	140201	SCREW, 3/8-16X3/4 HXHDCP	4
22	069 760 023	WASHER, FLAT .77X1.26X.03	1
∇23	27073	ASM., DRIVER PAD	1
▲24	27900	HUB, PAD DRIVER	1
▲25	190177	SCREW & CAPS (PACK OF 8)	1
▲26	27071	DISC, FLEXIBLE	1
▲∇27	25707	ASM., CENTERLOCK	1
▲28	100101	RING, PAD RETAINER	1
29	572 084 000	WASHER, PAD DRIVER LOCK	1
30	140015	WASHER, 5/16 SPLITLOCK	1
31	140203	SCREW, 5/16-24X1-1/4 HXHDCP	1
32	230912	STRAP, 3/8X100"	6.17ft
33	603187	●SKIRT, DUST CONTROL	1
34	230913	SCRU-SEAL & RACK	1
35	140340	SCREW, #10X5/8 PANPHL	6
36	230888	RING, DUST SHIELD	1
37	600195	SEAL, MOTOR BASE	1
38	600385	SCREW, M6X1.0X20 PANPHL	1
39	130162	TERMIANL, RING 1/4 8GA RED	2
40	25732	WASHER, FLAT 1.25X.359X.093	1

∇ Assembly

▲ Included in Assembly

● Recommended Stock Item

DRIVE GROUP (Plus Model)



REF	PART #	DESCRIPTION	QTY.
1	603277	FRAME WELDMENT	1
2	640013	WHEEL, 8" DIA, 2" WIDE NEOPRENE	2
3	604293	SPACER, 3/4X4X1/16	1
4	602881	BRACKET, TRANSAXLE MTG	2
5	140333	WASHER, M10 SPLITLOCK	6
6	200 031 554	SCREW, HXHD M10X65	4
7	140277	SCREW, M10X1.50X20 HXHDCP	2
8	604277	GUARD, TRANSAXLE	1
9	630268	NUT, 1/4-28 HXLOCK	8
10	578 187 000	SCREW, M6X1.0X12 PANPHL	2
11	604263	PLATE, HUB CAP	2
12	140000	WASHER, 1/4 FLAT	8
13	604262	BRACKET, HUB CAP	2
14	603450	TRANSAXLE, 36VDC	1
15	600606	END BELL, TRANSAXLE MOTOR	1
16	630504	● CARBON BRUSH (36V)	2
17	630503	● CAP, (36V)	2
18	140431	SPRING, EXT 1X.095X5	4
19	603272	BRACKET, SPRING	1

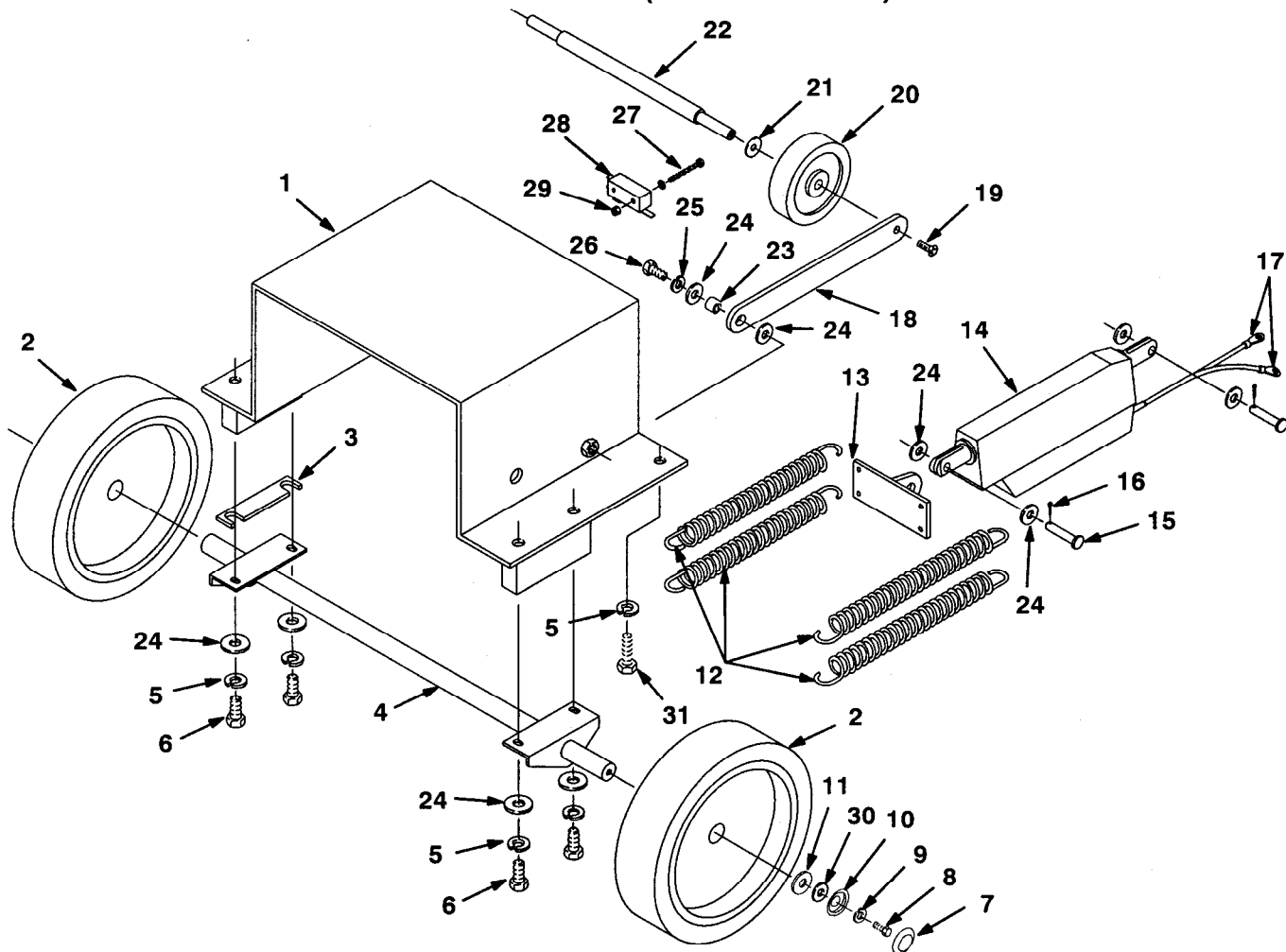
REF	PART #	DESCRIPTION	QTY.
20	600952	ACTUATOR	1
21	604076	PIN, CLEVIS 10X28MM	2
22	578421	PIN, COTTER	2
23	130133	TERMINAL	2
24	603267	PLATE, PIVOT ARM	2
25	069 762 098	SCREW, M6X1.0X16 FLTPHL	2
26	103066	WHEEL, 4" DIA X 1.5 HUB X .50 GRAY	2
27	140045	WASHER, .510X1.25X.06 FLAT	2
28	603274	AXLE, REAR WHEELS	1
29	140144	BUSHING, .375X.500	2
30	140028	WASHER, 3/8 FLAT	4
31	140017	WASHER, 3/8 SPLITLOCK	2
32	140202	SCREW, 3/8-16X1 HXHDCP	2
33	140829	SCREW, 6-32X1 PANPHL	2
34	069 764 009	● SWITCH, SNAP 25A LEVER	1
35	140539	NUT, 6-32 KEP	2
36	140016	WASHER, 1/4 LOCK	2

▽ Assembly

▲ Included in Assembly

● Recommended Stock Item

WHEEL GROUP (Standard Model)



REF	PART #	DESCRIPTION	QTY.
1	603277	FRAME WELDMENT	1
2	25656	WHEEL, 8X1-5/8	2
	103071	BEARING, WHEEL REPLACEMENT	1
3	604293	SPACER, 3/4X4X1/16	1
4	603275	AXLE WELDMENT	1
5	140333	WASHER, M10 SPLITLOCK	6
6	200 031 554	SCREW, HXHD M10X65	4
7	150210	PLUG, CAP BLACK	2
8	140275	SCREW, M8X1.25X16 HXHDCP	2
9	140015	WASHER, 5/16 SPLITLOCK	2
10	140048	WASHER, 5/16 (FOR #150210)	2
11	140047	WASHER, 1.24X.754X.062	2
12	140431	SPRING, EXT 1.0X5	4
13	603272	BRACKET, SPRING	1
14	600952	ACTUATOR	1
15	602926	PIN, CLEVIS 10X28MM	2

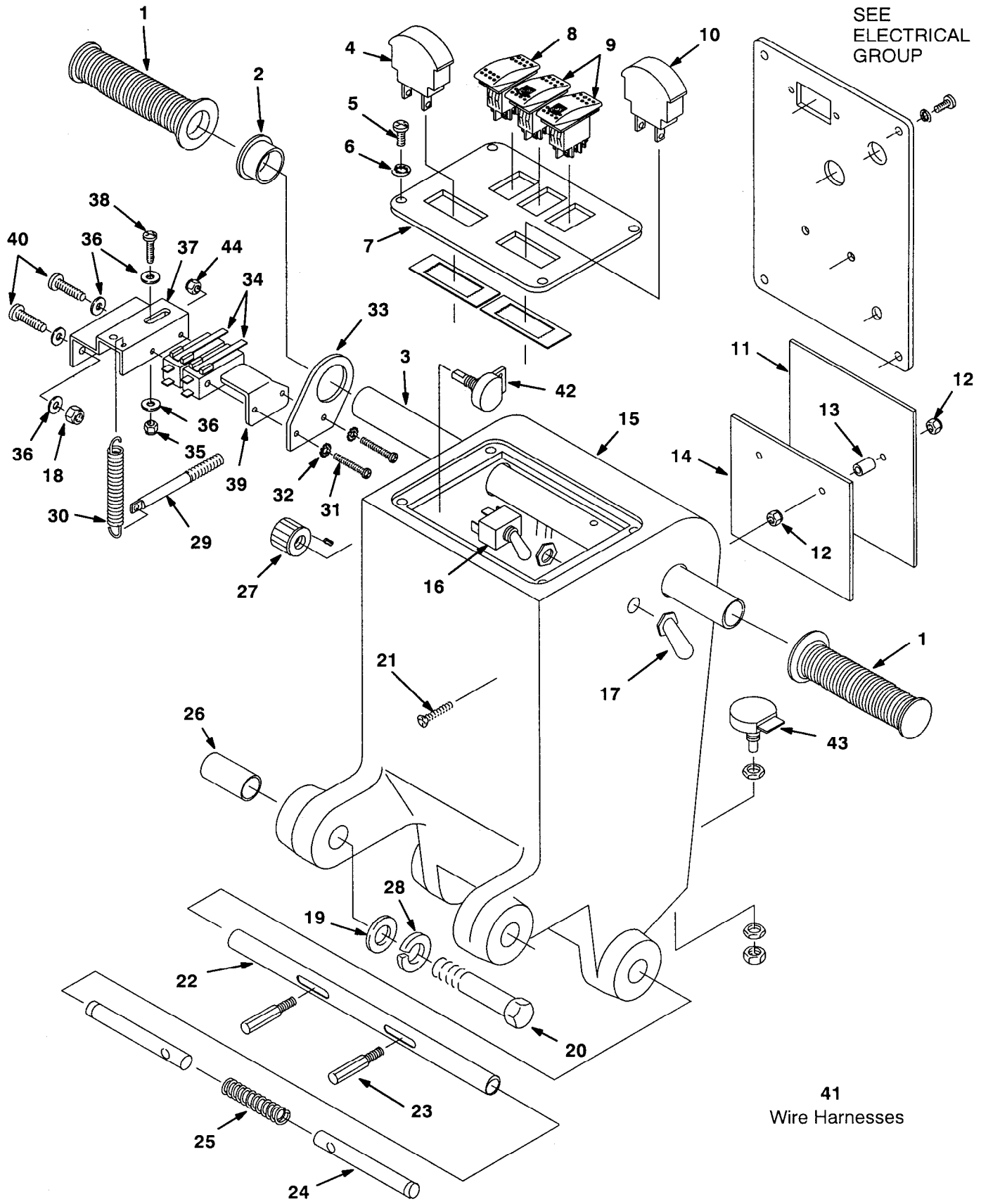
REF	PART #	DESCRIPTION	QTY.
16	578421	PIN, COTTER	2
17	130133	TERMINAL	2
18	603267	PLATE, PIVOT ARM	2
19	069 762 098	SCREW, M6X1.0X16 FLTPHL	2
20	103066	WHEEL, 4"DIA X 1.5HUB X .50 GRAY	2
21	140045	WASHER, .510X1.25X.06 FLAT	2
22	603274	AXLE, REAR WHEELS	1
23	140144	BUSHING, .375X.500	2
24	140028	WASHER, 3/8 FLAT	6
25	140017	WASHER, 3/8 SPLITLOCK	2
26	140202	SCREW, 3/8-16X1 HXHDCP	2
27	140829	SCREW, 6-32X1 PANPHL	2
28	069 764 009	●SWITCH, SNAP 25A LEVER	1
29	140539	NUT, 6-32 KEP	2
30	140055	WASHER, FLAT .343X1.25X.057	2
31	140277	SCREW, M10X1.50X20	2

▽ Assembly

▲ Included in Assembly

● Recommended Stock Item

CONTROL CONSOLE GROUP (Plus Model)



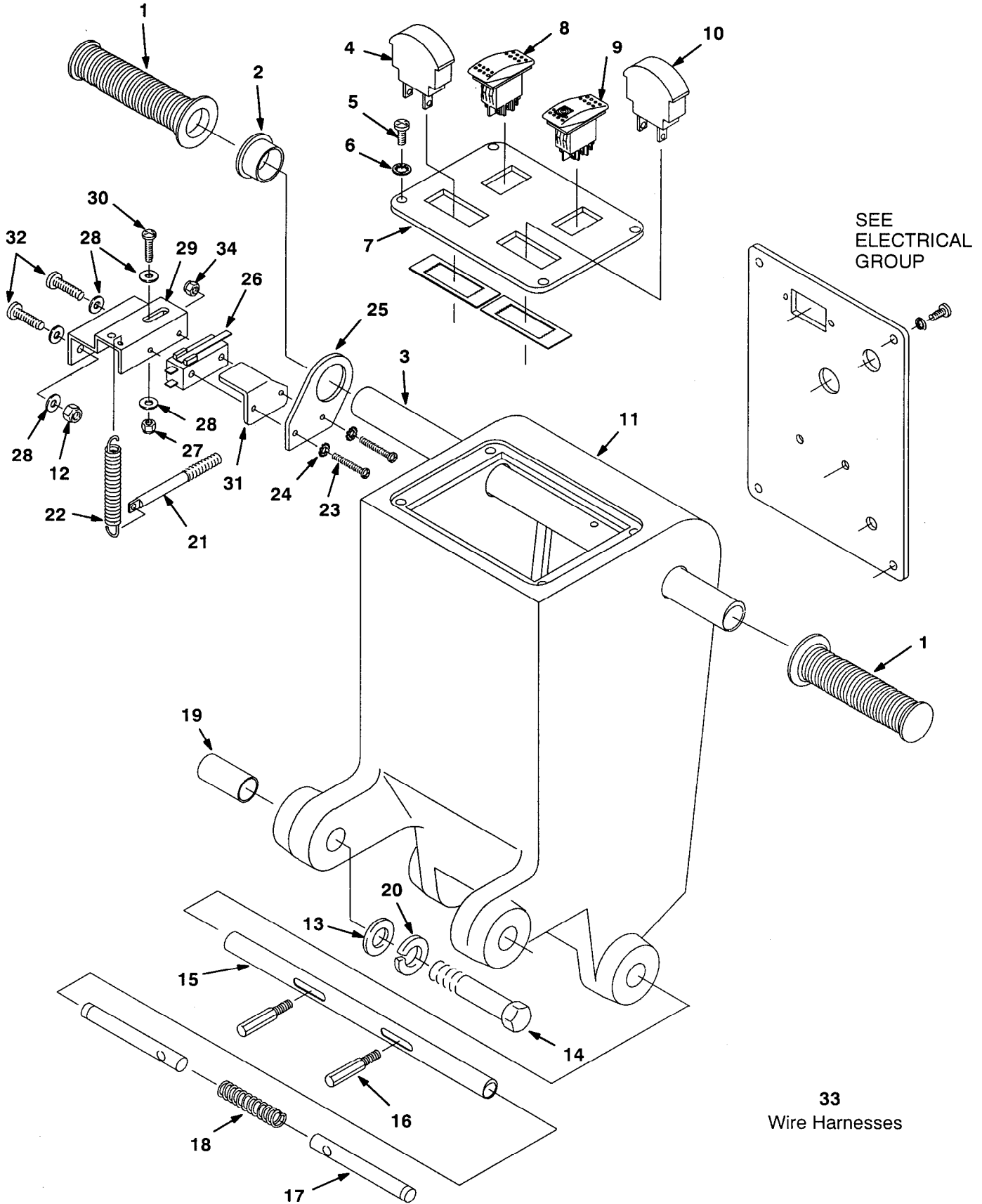
CONTROL CONSOLE GROUP (Plus Model)

REF	PART #	DESCRIPTION	QTY.
1	200823	GRIP, HANDLE TUBE	2
2	27099	BUSHING	1
3	603050	HANDLE, TUBE	1
4	603848	GUAGE, PAD PRESSURE	1
5	578 141 000	SCREW, M5X10MM	4
6	140018	WASHER, LOCK	4
7	603757	PANEL, CONTROL W/SILKSCREEN	1
8	603399	●SWITCH, DPST MOM ON/OFF	1
9	130772	●SWITCH, DPST ROCKER	2
10	603847	METER, BATTERY VOLTAGE 36V	1
11	611 081 000	●SPEED CONTROL, PMC, 40 AMP	1
12	200 160 014	NUT, M4	4
13	630261	SPACER	2
14	630128	HEAT SINK	1
15	604299	HOUSING, CONTROL	1
16	601108	●SWITCH, TOGGLE	1
17	130753	BOOT, SWITCH	1
18	140284	NUT, M6 NYLOCK	2
19	140045	WASHER, FLAT 1/2	2
20	140351	SCREW, M12X70MM	2
21	630304	SCREW, M4X35MM	2
22	230715	TUBE, HANDLE ADJUSTMENT	1
23	230649	PIN, HANDLE ADJUSTMENT	2
24	230710	PIN, HANDLE LOCK	2

REF	PART #	DESCRIPTION	QTY.
25	140415	SPRING, LOCK PIN	1
26	140155	BUSHING	2
27	601110	KNOB, SPEED CONTROL	1
28	140024	WASHER, LOCK 1/2	2
29	602886	PIN, SPRING RETURN	1
30	601118	SPRING, EXTENSION	1
31	140830	SCREW, 6-32X1-5/8	2
32	140019	WASHER, LOCK #6	2
33	27098	BRACKET, SWITCH	1
34	130729	●SWITCH, ROLL	2
35	140552	NUT, M6	1
36	140000	WASHER, FLAT 1/4	6
37	25671	MOUNT, SWITCH	1
38	140890	SCREW. 10-24X1/2	1
39	603830	PLATE, GUARD SWITCH	1
40	578 321 000	SCREW, M6X16MM	2
▽41	602873	●HARNESS CONSOLE W/POT. (NOT SHOWN)	1
	604236	HARNESS, WIRE MAIN (NOT SHOWN)	1
	130009	WRAP, LOOM .75DIA (NOT SHOWN)	1ft
▲42	130776	●POTENTIOMETER, 50K	1
▲43	130775	●POTENTIOMETER, 50K LOCKABLE	1
44	069 762 159	NUT, 6-32 HEX STD	2

- ▽ Assembly
- ▲ Included in Assembly
- Recommended Stock Item

CONTROL CONSOLE GROUP (Standard Model)



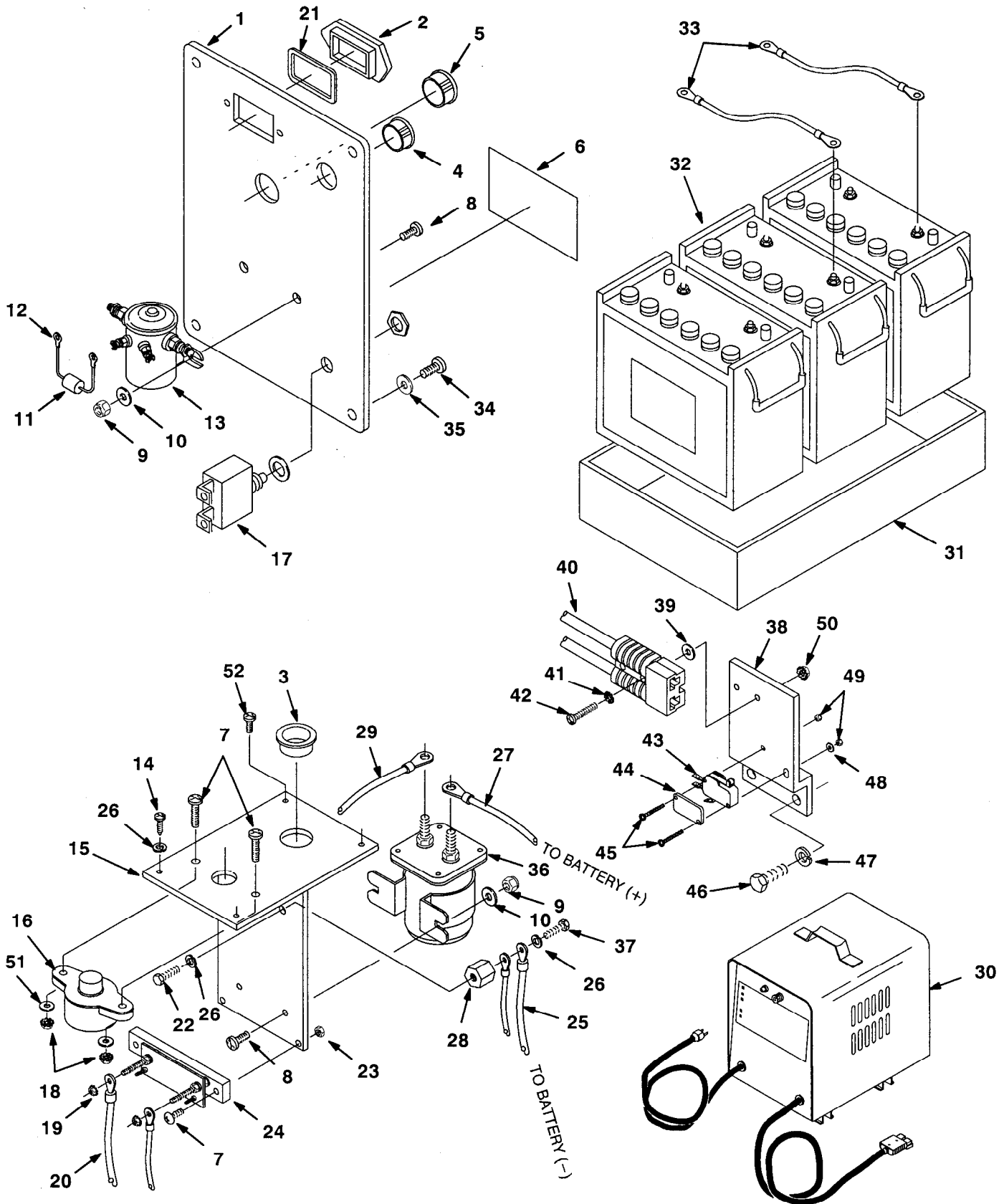
CONTROL CONSOLE GROUP (Standard Model)

REF	PART #	DESCRIPTION	QTY.
1	200823	GRIP, HANDLE TUBE	2
2	27099	BUSHING	1
3	603050	HANDLE, TUBE	1
4	603848	GUAGE, PAD PRESSURE	1
5	578 141 000	SCREW, M5X10MM	4
6	140018	WASHER, LOCK	4
7	604269	PANEL, CONTROL W/SILKSCREEN	1
8	603399	●SWITCH, DPST MOM ON/OFF	1
9	130772	●SWITCH, DPST ROCKER	1
10	603847	METER, BATTERY VOLTAGE 36V	1
11	604299	HOUSING, CONTROL	1
12	140284	NUT, M6 NYLOCK	2
13	140045	WASHER, FLAT 1/2	2
14	140351	SCREW, M12X70MM	2
15	230715	TUBE, HANDLE ADJUSTMENT	1
16	230649	PIN, HANDLE ADJUSTMENT	2
17	230710	PIN, HANDLE LOCK	2
18	140415	SPRING, LOCK PIN	1

REF	PART #	DESCRIPTION	QTY.
19	140155	BUSHING	2
20	140024	WASHER, LOCK 1/2	2
21	602886	PIN, SPRING RETURN	1
22	601118	SPRING, EXTENSION	1
23	140829	SCREW, 6-32X1	2
24	140019	WASHER, LOCK #6	2
25	27098	BRACKET, SWITCH	1
26	130729	●SWITCH, ROLL	1
27	140552	NUT, 10-24 NYLOCK	1
28	140000	WASHER, FLAT 1/4	5
29	25671	MOUNT, SWITCH	1
30	140890	SCREW, 10-24X1/2	1
31	603830	PLATE, GUARD SWITCH	1
32	578 321 000	SCREW, M6X16MM	2
33	604303	HARNESS, WIRE MAIN (NOT SHOWN)	1
	130009	WRAP, LOOM .75DIA (NOT SHOWN)	1ft
34	069 762 159	NUT, 6-32 HEX STD	2

● Recommended Stock Item

ELECTRICAL/BATTERY GROUP



BATTERY/ELECTRICAL GROUP

REF	PART #	DESCRIPTION	QTY.
1	604283	PANEL, CONTROL HOUSING	1
2	222519	PLUG	1
3	069 762 009	GROMMET, DIA 25.4X03	2
4	130175	PLUG, DOME .750	1
5	130161	PLUG, DOME .875	1
6	120649	DECAL, WARNING BATT MCHS	1
7	578 302 000	SCREW, M5X26 PANPHL	4
8	578 321 000	SCREW, M6X16MM	4
9	140284	NUT, M6 NYLOCK	4
10	140000	WASHER, FLAT 1/4	4
11	130423	●DIODE, 400V (PLUS MODEL ONLY)	1
12	130125	RING, TERMINAL (PLUS MODEL ONLY)	2
13	130733	●SOLENOID, 36V (PLUS MODEL ONLY)	1
14	578 187 000	SCREW, M6X1.0X12 PANPHL	3
15	604271	BRACKET, ELECTRICAL CHASSIS	1
16	130781	●BREAKER, CIRCUIT 80 AMP	1
17	603487	●BREAKER, CIRCUIT BRUSH 15 AMP	1
18	140283	NUT, M5X.8 NYLOCK	2
19	140524	NUT, 1/4-20 KEP	2
20	604292	ASM, WIRE #4 BLK X 6"	1
21	603224	O-RING	1
22	140553	SCREW, 1/4-20X1/2 HXHDCP	1
23	140283	NUT, M5X.8 NYLOCK	2
24	25646	SHUNT	1
25	604290	ASM, WIRE #4 BLK X 27"	1
26	140016	WASHER, LOCK 1/4	5
27	604289	ASM, WIRE #4 RED X 46"	1

REF	PART #	DESCRIPTION	QTY.
28	578427	STANDOFF, TERMINAL	1
29	604291	ASM, WIRE #4 BLK X 6"	1
30	469 760 868	CHARGER, 36DC 25 AMP (OPTIONAL)	1
31	604298	TRAY, BATTERY	1
32	600394	BATTERY, 12V 215A (OPTIONAL)	3
33	611 116 000	CABLE, BATTERY #6 BLACKX15"	2
34	578 141 000	SCREW, M5X10	4
35	140018	WASHER, LOCK #10	4
36	621 381 000	●CONTACTOR	1
37	140259	SCREW, 1/4-20X5/8 HXHDCP	1
38	604270	BRACKET, CHARGER PLUG	1
39	140026	WASHER, #6 FLAT	4
40	604288	ASM., CABLE CHARGE PLUG	1
41	140019	WASHER, 36 EXT	2
42	140829	SCREW, 6-32X1 PANPHL	2
43	600437	●SWITCH, ROLLER 15A (PLUS MODEL ONLY)	1
44	601359	PLATE, SWITCH BACKING (PLUS MODEL ONLY)	1
45	578 403 000	SCREW, M3X20 PANPHL (PLUS MODEL ONLY)	2
46	578 187 000	SCREW, M6X1.0X12 PANPHL	2
47	140016	WASHER, 1/4 LOCK	2
48	601 127 000	WASHER, FLAT (PLUS MODEL ONLY)	1
49	579211	NUT, M3 HEXLOCK (PLUS MODEL ONLY)	2
50	140539	NUT, 6-32 KEP	2
51	140011	WASHER, 3/16 FLAT	2
52	140340	SCREW, #10X5/8 PANPHL	1

● Recommended Stock Item