

Castex®

TS-2700/TS-3300

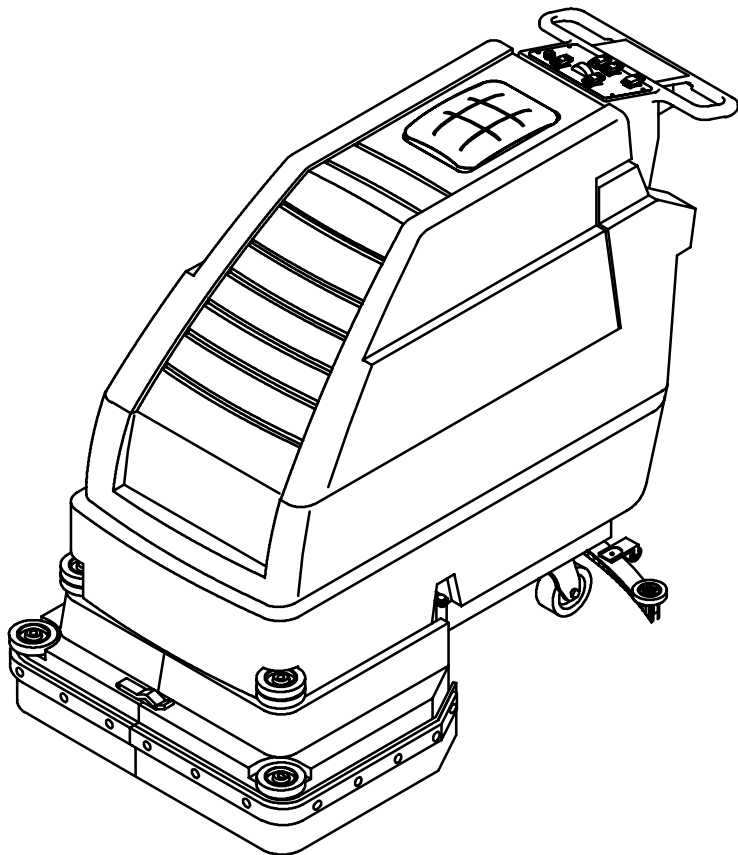
Automatic Floor Scrubber

Model No.:

607257 - TS-3300

607258 - TS-2700

Operator and Parts Manual



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607578
Rev. 01 (03-04)

OPERATION

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

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

Use the illustrated Parts Lists 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 intended for commercial use. It is designed exclusively to scrub hard floors in an indoor environment and is not constructed for any other use. Use only recommended pads, brushes and commercially available floor cleaners intended for machine application.

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

The following warning alert symbol and the "FOR SAFETY" heading are used throughout this manual as indicated in their description:

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

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

Failure to follow these warnings may result in: personal injury, electrical shock, fire or explosion.

⚠ WARNING: Fire Or Explosion Hazard. Never Use Flammable Liquids Or Operate Machine In Or Near Flammable Liquids, Vapors Or Combustible Dusts.

This machine is not equipped with explosion proof motors. The electric motors will spark upon start up and during operation which could cause a flash fire or explosion if machine is used in an area where flammable vapors/liquids or combustible dusts are present.

⚠ WARNING: Fire Or Explosion Hazard. Do Not Pick Up Flammable Materials Or Reactive Metals.

⚠ WARNING: Fire Or Explosion Hazard. Batteries Emit Hydrogen Gas. Keep Sparks And Open Flame Away. Keep Battery Compartment Open When Charging.

⚠ WARNING: Electrical Hazard. Disconnect Battery Cables Before Servicing Machine.

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

FOR SAFETY:

1. Do not operate machine:
 - With flammable liquids or near flammable vapors as an explosion or flash fire may occur.
 - Unless trained and authorized.
 - Unless operation manual is read and understood.
 - If not in proper operating condition.
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.
 - Wear no-slip shoes.
 - Use care when reversing machine.
 - Report machine damage or faulty operation immediately.
 - Never allow children to play on or around.
 - Follow mixing and handling instructions on chemical containers.
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 up.
 - Use hoist or jack that will support the weight of the machine.
 - Wear eye and ear protection when using pressurized air or water.
 - Disconnect battery connections before working on machine.
 - Wear protective gloves and safety glasses when handling batteries or battery cables.
 - Avoid contact with battery acid.
 - Use manufacturer supplied or approved replacement parts.
 - All repairs must be performed by a qualified service person.
 - Do not modify the machine from its original design.

OPERATION

6. When transporting machine:

- Turn machine off.
 - Get assistance when lifting machine.
 - Do not lift machine when batteries are installed.
- Use a recommended ramp when loading/unloading into/off truck or trailer.
 - Use tie-down straps to secure machine to truck or trailer.

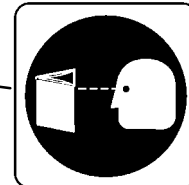
SAFETY LABEL

The safety label appears on the machine in the location indicated. Replace label if it becomes damaged or illegible.

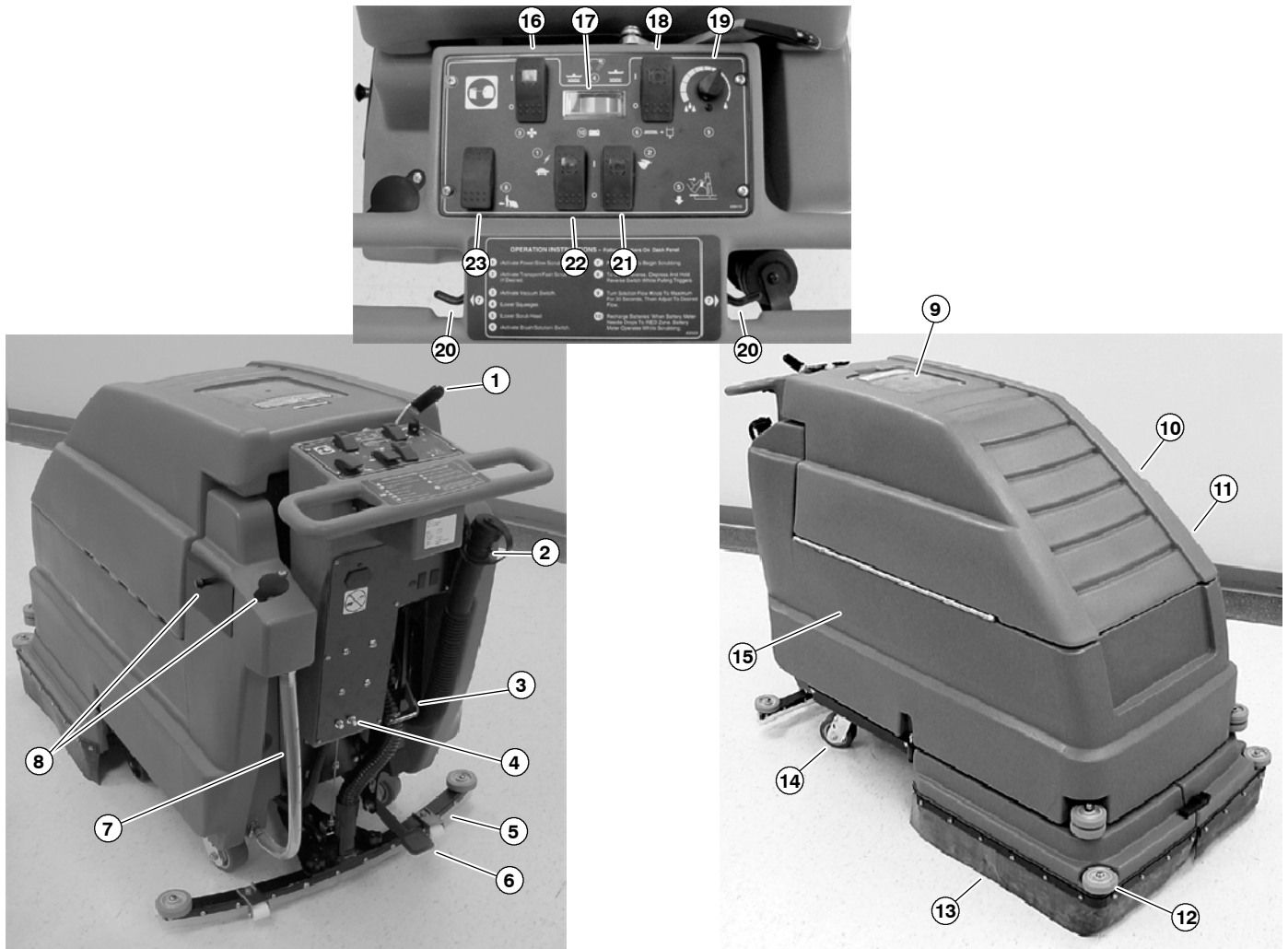
WARNING LABEL - LOCATED ON THE RECOVERY TANK LID.



FOR SAFETY LABEL - LOCATED ON THE SWITCH PANEL. READ MANUAL BEFORE OPERATING.

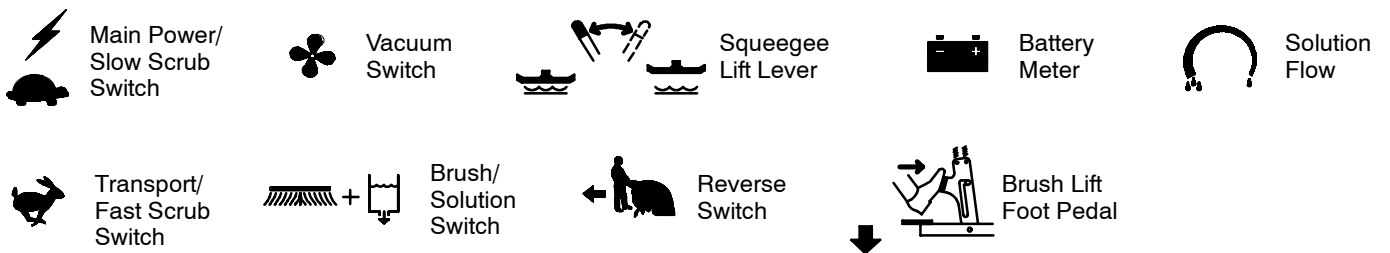


MACHINE COMPONENTS



- | | | |
|-----------------------------|--|----------------------------------|
| 1. Squeegee Lift Lever | 9. Recovery Tank Lid | 16. Vacuum On/Off Switch |
| 2. Recovery Tank Drain Hose | 10. Recovery Tank | 17. Battery Meter |
| 3. Brush Pressure Lever | 11. Battery Charger Receptacle
(inside Battery Compartment) | 18. Brush/Solution On/Off Switch |
| 4. Circuit Breakers | 12. Wall Rollers | 19. Solution Flow Control Knob |
| 5. Squeegee Assembly | 13. Scrub Head Skirt | 20. Trigger Switch |
| 6. Brush Lift Foot Pedal | 14. Rear Casters | 21. Transport/Fast Scrub Switch |
| 7. Solution Tank Drain Hose | 15. Battery Compartment | 22. Main Power/Slow Scrub Switch |
| 8. Solution Tank Fill Ports | | 23. Reverse Switch |

CONTROL PANEL SYMBOLS



OPERATION

MACHINE INSTALLATION

UNCRATING MACHINE

Carefully check carton for signs of damage. Report damages to carrier at once. Check carton contents to ensure all accessories are included. Squeegee is packaged with machine. Batteries, battery charger and pad drivers are packaged separately.

To uncrate your machine, remove shipping straps and raise scrub head. To raise scrub head, step down firmly on the bottom brush lift foot pedal until pedal locks into the raised position. Carefully lift or use a ramp to remove machine from pallet.

ATTENTION: Battery installation must be accomplished after removing machine from shipping crate.

ATTENTION: Do not roll machine off pallet, machine damage may occur.

ATTACHING SQUEEGEE ASSEMBLY

1. Slide squeegee lift lever to the right to raise squeegee mount bracket (Figure 1).

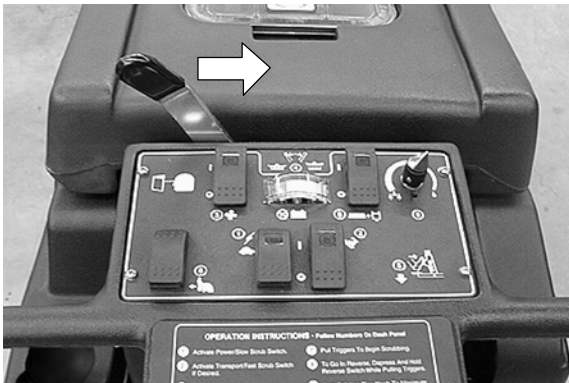


FIG. 1

2. Loosen two thumb knobs on squeegee and slide squeegee into slots at rear of squeegee mount bracket. Be certain that squeegee roller wheels are toward the rear (Figure 2).

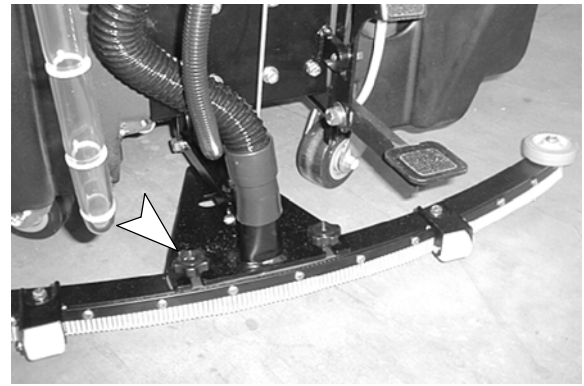


FIG. 2

3. Tighten thumb knobs securely.

INSTALLING BATTERIES

⚠ WARNING: Fire Or Explosion Hazard. Batteries Emit Hydrogen Gas. Keep Sparks And Open Flame Away. Keep Battery Compartment Open When Charging.

FOR SAFETY: When servicing machine, wear protective gloves and safety glasses when handling batteries or battery cables. Avoid contact with battery acid.

Recommended Battery Specifications:

Four 6 volt, deep cycle, 305 amp hour batteries. Part Number 606991. Maximum battery dimensions are 178mm (7 in.) W x 308mm (12.13 in.) L x 356mm (14in.) H.

1. Turn all switches to the off (O) position.
2. Carefully hinge open recovery tank to access battery compartment. Remove loose battery cables from compartment (Figure 3).



FIG. 3

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

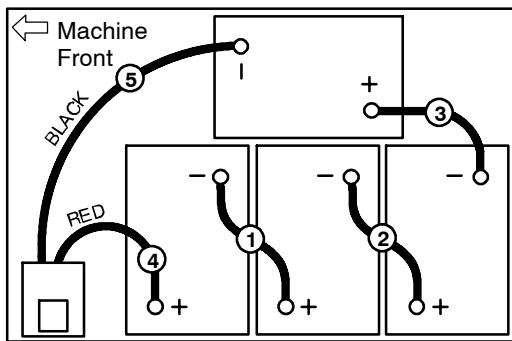


FIG. 4

ATTENTION: Do not drop batteries into compartment, battery and machine housing damage may result. This damage is not covered by warranty.

- Connect terminals to battery posts in numerical order as labeled, RED TO POSITIVE & BLACK TO NEGATIVE (Figure 4).
- Double check cable connections before closing up battery compartment.
- Turn main power switch on (I) and check battery meter charge level to ensure batteries are fully charged. If batteries need charging, see CHARGING BATTERIES.

MACHINE SETUP

PRE-OPERATION CHECKS

- Sweep and dust-mop floor to remove particles and other debris.
- Check battery meter charge level to ensure batteries are fully charged (See CHARGING BATTERIES).
- Check that pads or brushes are installed.
- Check that squeegee is installed.

INSTALLING BRUSH OR PAD DRIVERS

- Turn main power switch to the off (O) position.

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

- Raise scrub head. Step down firmly on bottom brush lift foot pedal to raise (Figure 5).

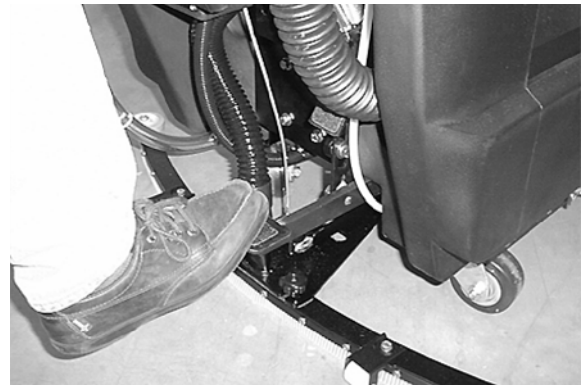


FIG. 5

- Unfasten black latch at front of machine and hinge open skirt housing to access motor hub (Figure 6).

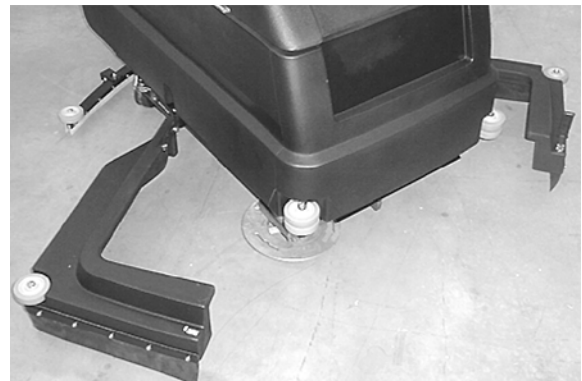


FIG. 6

- Select recommended pad or brush that best meets your cleaning needs.

NOTE: Consult your authorized distributor for pad/brush recommendations.

- (For Pad Installation)** Attach pads to pad drivers before connecting drivers to motor hub. To attach pad to driver, remove plastic centerlock ring from pad driver. Position pad on pad driver and replace centerlock ring (Figure 7).

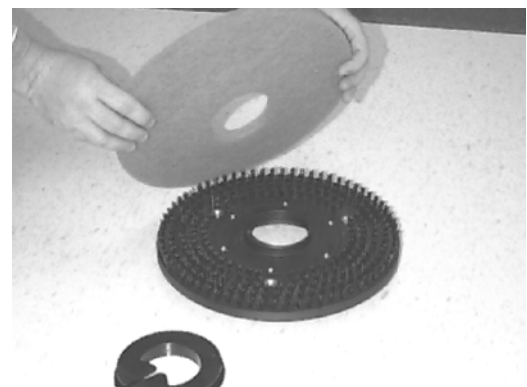


FIG. 7

OPERATION

6. Attach brush/pad drivers to motor hubs. Align (3) mounting studs with slots in motor hub. Give driver a quick turn toward spring clip located on motor hub. Be certain pad driver is securely fastened and spring clip locks into one of the studs before operating machine (Figure 8).

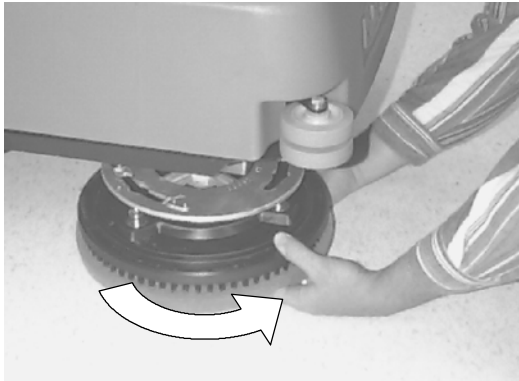


FIG. 8

NOTE: Always make sure pad driver and motor hub surfaces are clean before installing drivers. Keeping surfaces clean will make it easier when removing pad drivers.

7. Close skirt housing and refasten latch.

FILLING SOLUTION TANK

1. Transport machine to filling station. Raise squeegee and scrub head when transporting.
2. Turn off machine.

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

3. Open solution fill door on side of machine and fill solution tank with clean water, 60°C (140°F) maximum temperature. Or you can fill solution tank using hose fill port at rear of machine. Pull off plug and insert hose to fill. The clear tube below the fill port has 19L (5 gallon) increment markers to indicate amount of water in tank (Figure 9).

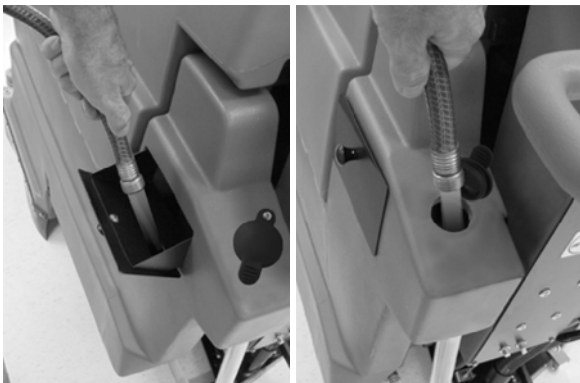


FIG. 9

NOTE: The water must **not** be hotter than 60°C (140°F) or tank damage may occur.

NOTE: If filling with a bucket be certain that bucket is clean. This will prevent possible solution line clogs.

4. Add cleaning chemical. See proper dilution ratio instructions on bottle.

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.

ATTENTION: Use only recommended detergents. Machine damage due to improper detergent usage will void the manufacturer's warranty. Contact your sales representative for detergent recommendations.

⚠ WARNING: Fire Or Explosion Hazard. Never Use Flammable Liquids.

MACHINE OPERATION

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

1. Slide squeegee lever to the left to lower squeegee assembly (Figure 10).



FIG. 10

2. Push top foot pedal forward to lower scrub head (Figure 11).



FIG. 11

3. Turn on main power, vacuum and brush/solution switches.

NOTE: The brush motors will start when triggers are activated.

4. Pull triggers to begin scrubbing.

⚠ WARNING: Fire Or Explosion Hazard. Do Not Pick Up Flammable Materials Or Reactive Metals.

5. Turn solution flow control knob to maximum for 30 seconds, then adjust to desired flow (Figure 12).

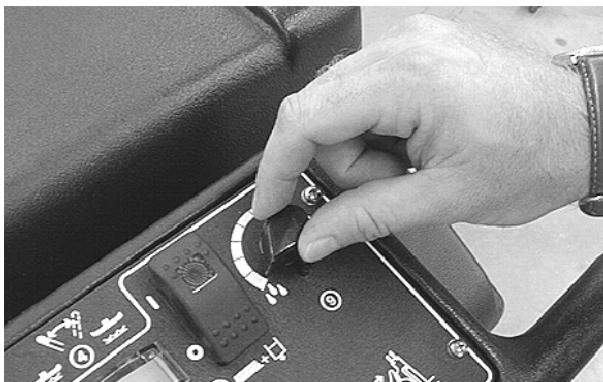


FIG. 12

6. To operate in reverse, push and hold reverse switch while pulling triggers (Figure 13).



FIG. 13

7. If additional scrubbing speed is desired, activate the transport/fast scrub switch.

WHILE OPERATING MACHINE

⚠ WARNING: Fire Or Explosion Hazard. Never Operate Machine In Or Near Flammable Liquids, Vapors Or Combustible Dusts.

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

1. Observe amount of solution on floor and adjust solution flow knob accordingly.

2. Periodically observe recovery tank for excessive foam (*look through clear lid*). If excessive foam appears, pour a recommended foam control solution into recovery tank.

ATTENTION: Do not allow foam or water to enter recovery tank float shut-off screen, vacuum motor damage will result. The float shut-off screen will not keep foam out. Vacuum damage due to foam or water is not covered by warranty.

3. Change or turn pads over when worn.
4. If squeegee leaves streaks, raise and wipe blades with a cloth. Pre-sweep area to prevent streaking.
5. During brief stops, it's not required to turn brush switch off, the brush will automatically stop when triggers are released.
6. Observe battery meter needle. When needle drops into the red zone, recharge batteries.

ATTENTION: Do not continue to run machine when battery meter needle is in the red zone, battery damage will result.

7. If additional scrubbing pressure is needed for small, heavily soiled areas, perform the following:
 - a. Lower scrub head.
 - b. Lift pad pressure lever to the locked position (Figure 14).

NOTE: Scrub head must be lowered to allow pad pressure lever to be lifted to the locked position. Lower lever before raising scrub head.



FIG. 14

8. Periodically observe clear tube for remaining cleaning solution.
9. When solution tank runs dry, transport machine to draining area (See DRAINING TANKS).

OPERATION

CIRCUIT BREAKERS

The machine is equipped with (4) circuit breakers to protect motors from damage. If circuit breakers should trip, they cannot be reset immediately. Determine cause, allow motor to cool and then reset. The brush motor circuit breakers (35A), located near charger plug, will trip due to excessive overload on pad. Turn over or change pads if breakers should trip. The main circuit breaker (10A) and vacuum/drive motor circuit breaker (35A) are located at rear of machine (Figure 15).

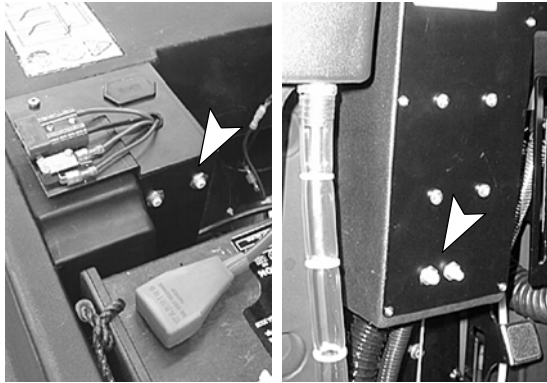


FIG. 15

DRAINING TANKS

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

DRAINING RECOVERY TANK

Recovery tank must be emptied prior to refilling solution tank. To drain recovery tank, perform the following steps:

ATTENTION: If recovery tank is not emptied between fill-ups, foam or water will enter float shut-off screen located in the recovery tank and damage vacuum motor. Float shut-off screen will not keep foam out. Vacuum damage due to foam or water is not covered by warranty.

1. Remove recovery tank drain hose from holder, position hose over floor drain and twist off cap. To completely drain recovery tank, hinge open tank sideways and flip up tank support stand to rest tank on (Figure 16).

NOTE: If using a bucket to drain machine, do not use same bucket for filling solution tank. This will prevent possible solution line clogs.

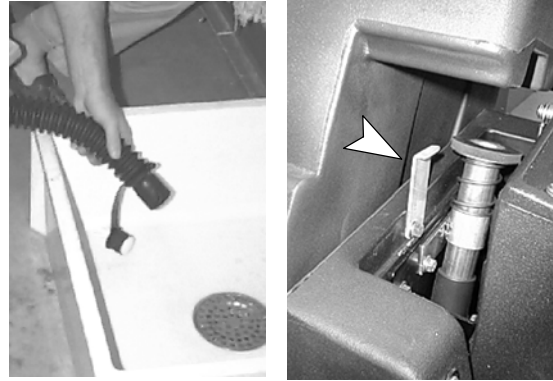


FIG. 16

2. Rinse out recovery tank after each use. This will prevent foul odor buildup. Use a hose to rinse out the recovery tank. Be careful not to spray water into shut-off float screen.
3. Replace drain hose cap tightly after draining.

DRAINING SOLUTION TANK

1. Pull solution tank drain hose (clear hose) off hose barb at rear of machine and drain solution into floor drain or bucket (Figure 17).

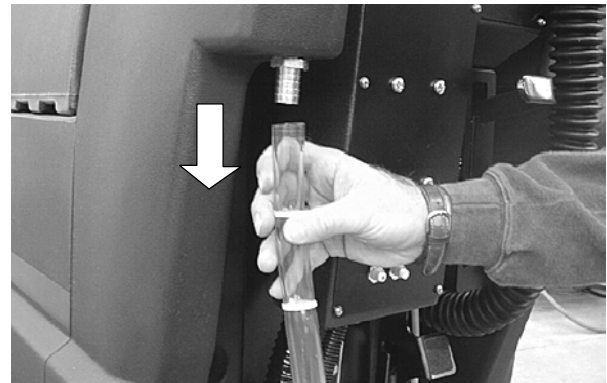


FIG. 17

2. Rinse out solution tank with clean water after each use and flush out solution flow system. This will prevent clogging due to chemical buildup. Use clear hose to drain solution tank.
3. Reconnect clear hose to hose barb. Be certain hose is completely pushed onto hose barb.

CHARGING BATTERIES

NOTE: Recharge batteries **ONLY** after a total of 30 minutes of use or more. This will prolong battery life.

The following charging instructions are intended for supplied 24V chargers only. Only use a charger with the following specifications to prevent battery damage.

CHARGER SPECIFICATIONS:

- OUTPUT VOLTAGE - 24 VOLTS
- OUTPUT CURRENT - 25 AMPS MAXIMUM
- AUTOMATIC SHUTOFF CIRCUIT
- FOR DEEP CYCLE BATTERY CHARGING

NOTE: For optimum machine operation, keep batteries charged at all times. Never leave batteries discharged for lengthy periods.

⚠ WARNING: Fire Or Explosion Hazard. Batteries Emit Hydrogen Gas. Keep Sparks And Open Flame Away. Keep Battery Compartment Open When Charging.

FOR SAFETY: When servicing machine, wear protective gloves and safety glasses when handling batteries or battery cables. Avoid contact with battery acid.

1. Transport machine to a flat, dry surface in a well-ventilated area for charging.
2. Turn off all switches.

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

3. Hinge open recovery tank to access batteries. Make sure recovery tank is empty before opening.
4. Before charging, check the fluid level (A) in each battery cell. If the battery plates (B) are exposed, add just enough distilled water to cover plates. **DO NOT OVERFILL.** Overfilled batteries can overflow during charging due to fluid expansion. Replace cell caps before charging (Figure 18).

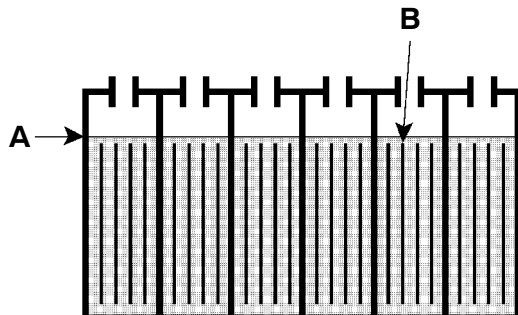


FIG. 18

5. With charger's power supply cord unplugged, connect battery charger into machine as shown. Flip up hood support stand and rest hood on stand to promote ventilation (Figure 19).

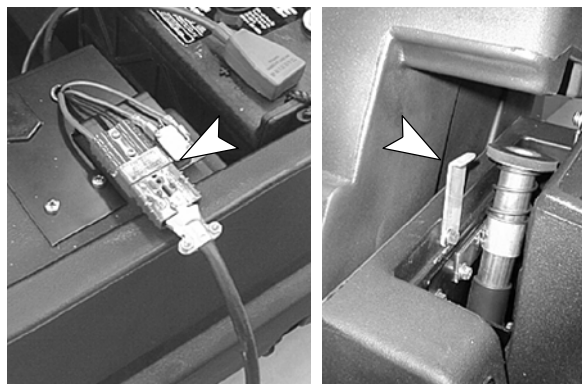


FIG. 19

6. Plug the charger's power supply cord into a grounded wall outlet (Figure 20).

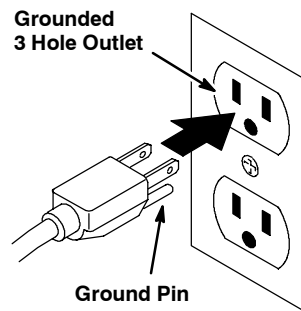


FIG. 20

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

NOTE: Once charger is connected, machine becomes inoperable.

7. The charger will automatically begin charging and shut off when fully charged.
8. When disconnecting charger, always unplug charger from wall outlet first.
9. After charging, recheck the battery fluid level (A) in each battery cell. The level should be 1 cm (3/8 in) from the bottom of sight tubes (B). Add distilled water if needed. **DO NOT OVERFILL** (Figure 21).

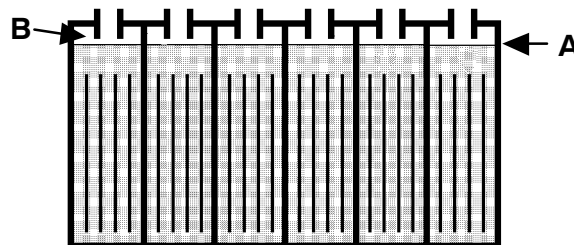


FIG. 21

OPERATION

MACHINE MAINTENANCE

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

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

FOR SAFETY: Electrical Hazard. Disconnect Battery Cables Before Servicing Machine.

DAILY MAINTENANCE (Every 4 Hours of Use)

1. Remove and clean pads or brushes. Never use soiled pads when cleaning. Replace pads when they become loaded with residue.
2. Remove and rinse float shut-off screen, located in recovery tank (Figure 22).



FIG. 22

3. Drain and rinse tanks thoroughly. Remove any clogging debris in tank drain hole.
4. Raise squeegee and wipe it down with a dry cloth. Store squeegee in the up position to prevent squeegee damage.
5. Clean machine housing with a nonabrasive, non-solvent cleaner.

ATTENTION: Do not power spray or hose off machine. Electrical component damage may result.

6. Recharge batteries if needed (See CHARGING BATTERIES).

WEEKLY MAINTENANCE (Every 20 Hours of Use)

1. Check fluid level in battery cells (See BATTERY MAINTENANCE).
 2. Clean battery tops to prevent corrosion (See BATTERY MAINTENANCE).
 3. Check for loose or corroded battery cables.
-

MONTHLY MAINTENANCE (Every 80 Hours of Use)

1. Hinge open right side skirt, remove filter bowl and clean screen. Be certain that solution tank is empty prior to removing filter bowl (Figure 23).

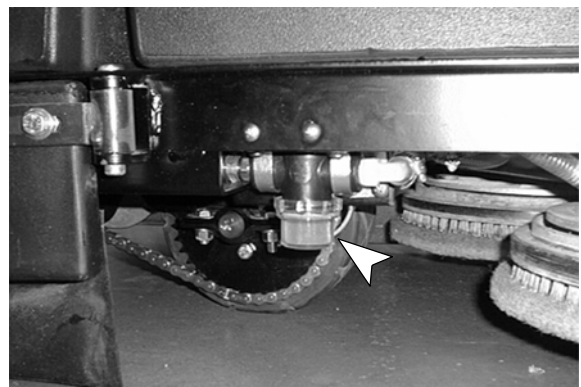


FIG. 23

2. Check drive chain for excess slack. If chain needs tightening, see DRIVE CHAIN MAINTENANCE.
 3. Lubricate chain with a water resistant grease.
 4. Lubricate axle and caster grease fittings with a water resistant grease.
 5. Lubricate all linkage pivot points with silicone spray then coat with a water resistant grease to maintain smooth operation.
 6. Check machine for water leaks and loose nuts and bolts.
-

QUARTERLY MAINTENANCE (Every 250 Hours of Use)

Inspect motors for carbon brush wear. Replace brushes when worn to a length of 10mm (0.38 in.) or less. Contact an Authorized Service Center for carbon brush inspection.

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

BATTERY MAINTENANCE

⚠ WARNING: Fire Or Explosion Hazard. Batteries Emit Hydrogen Gas. Keep Sparks And Open Flame Away. Keep Battery Compartment Open When Charging.

FOR SAFETY: When servicing machine, wear protective gloves and safety glasses when handling batteries and battery cables. Avoid contact with battery acid.

1. Always follow proper charging instructions (see CHARGING BATTERIES).
2. Check fluid level (A) in each battery cell. The fluid level should be 1 cm (3/8 in.) from the bottom of sight tubes after charging. Add distilled water if needed. **DO NOT OVERFILL.** Overfilled batteries can overflow during charging due to fluid expansion (Figure 24).

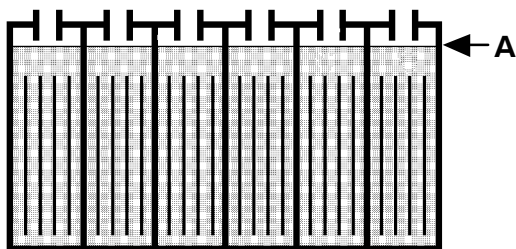


FIG. 24

3. After charging batteries, measure the specific gravity in each battery cell using a hydrometer (Figure 25). This will determine the charge level and condition of the batteries. If one or more of the battery cells test lower than the other battery cell (0.050 or more), the cell is damaged, shortened, or is about to fail.

NOTE: Do not take reading immediately after adding distilled water. The water and acid must be thoroughly mixed in order for accurate reading.



FIG. 25

SPECIFIC GRAVITY at 27°C (80°F)	BATTERY CHARGE
1.265	100% CHARGED
1.223	75% CHARGED
1.185	50% CHARGED
1.148	25% CHARGED
1.110	DISCHARGED

NOTE: Add or subtract 0.004 gravity reading for each 6°C (10°F) above or below 27°C (80°F).

4. Keep battery tops and terminals clean and dry.
 - a. Mix a strong solution of baking soda and water (Figure 26).



FIG. 26

- b. Brush solution sparingly over battery tops, terminals, and cable connectors.

NOTE: Do not allow baking soda solution to enter battery cells.

- c. Use wire brush to clean terminals and cable connections.
 - d. After cleaning, apply a coating of clear battery post protectant to terminals and cable connections.
5. Check for loose or worn cables. Replace if worn.

OPERATION

DRIVE CHAIN MAINTENANCE

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

Inspect drive chain for proper tension. Chain should flex between 6.35mm (0.25 in.) and 12.7mm (0.50 in.) from center. If chain flexes more than 12.7mm (0.50 in.) chain should be tightened. To tighten chain, follow steps below:

1. From operators right side of machine, locate and loosen 4 motor mount bolts, do not remove bolts.
2. Loosen locking nut on tension bolt (Figure 27).

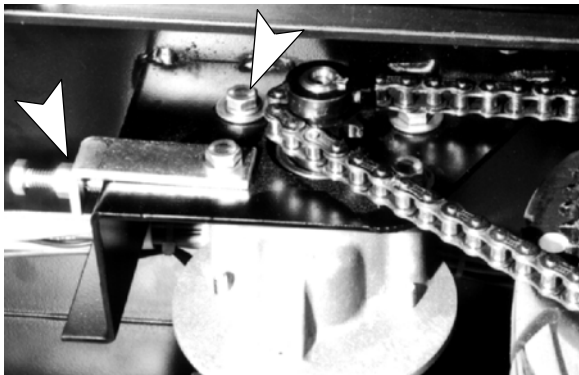


FIG. 27

3. Turn tension bolt clockwise until chain is properly adjusted.
4. Retighten locking nut and 4 motor mount screws.
5. Lubricate chain with a water resistant oil.

TRANSPORTING MACHINE

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

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

1. Remove squeegee from machine and raise brush head. Leave pad or brush installed.
2. Load machine using a recommended loading ramp.

3. Position front of machine up against front of trailer of truck. Once machine is positioned, lower brush head.
4. Place a block behind the drive wheel and the rear casters.
5. Place tie-down straps over top of machine and secure straps to floor. It may be necessary to install tie-down brackets to the floor of your trailer or truck.

STORING MACHINE

1. Before storing machine, be certain to flush tanks and drain machine of all water.
2. Store machine in a dry area with squeegee removed and pad driver in the raised position.
3. Remove recovery tank lid to promote air circulation.
4. When storing machine for short periods, raise pad driver and squeegee off floor to prevent damage.

ATTENTION: If storing machine in freezing temperatures, be certain to drain machine of all water. Damage due to freezing temperatures is not covered by warranty.

ATTENTION: Do not expose machine to rain; store indoors.

RECOMMENDED STOCK ITEMS

Refer to the Parts List section for recommended stock items. Stock Items are clearly identified with a bullet preceding the parts description. See example below:

Ref.	Part No.	Description	Qty.
1	701103	ASSEMBLY, STANDPIPE	1
2	180618	● FLOAT, SHUTOFF	1
3	230197	NIPPLE	1
4	101714	● GASKET	1
5	210240	NUT, FLANGED	1

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Batteries need charging.	See CHARGING BATTERIES.
	Faulty battery(s).	Replace battery(s).
	Loose battery cable.	Tighten loose cable.
	Improper battery connection.	See INSTALLING BATTERIES.
	Faulty main power switch	Contact Service Center.
	Main circuit breaker has tripped.	Determine cause and reset circuit breaker button.
	Faulty trigger switch.	Contact Service Center.
Brush motor does not operate.	Brush circuit breaker has tripped.	Clean or change to a less aggressive pad. Also, release pad pressure lever if it's in the up position. Reset breaker button.
	Loose wire connection.	Contact Service Center.
	Triggers not pulled.	Pull triggers to activate brushes.
	Faulty brush motor or wiring.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
	Faulty solenoid.	Contact Service Center.
Vacuum motor does not operate.	Vacuum circuit breaker has tripped.	Remove obstruction and reset breaker.
	Faulty vacuum switch.	Contact Service Center.
	Faulty wiring.	Contact Service Center.
	Faulty vacuum motor.	Contact Service Center.
	Faulty solenoid.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
Short run time.	Batteries not fully charged.	Charge batteries.
	Bad cell in one or more batteries.	Replace battery.
	Batteries need maintenance.	See BATTERY MAINTENANCE.
	Faulty charger.	Replace battery charger.
Poor squeegee pick up.	Full recovery tank.	Empty recovery tank.
	Clogged float shutoff screen.	Remove screen and clean.
	Clogged squeegee.	Clean squeegee.
	Worn squeegee blades.	Replace squeegee blades.
	Loose squeegee thumbscrews.	Tighten thumbscrews.
	Loose vacuum hose connections or hole in hose.	Push hose cuffs firmly on connections. Replace hose if damaged.
	Clogged vacuum hose.	Remove clogged debris.
	Worn recovery tank lid gasket.	Replace gasket.

OPERATION

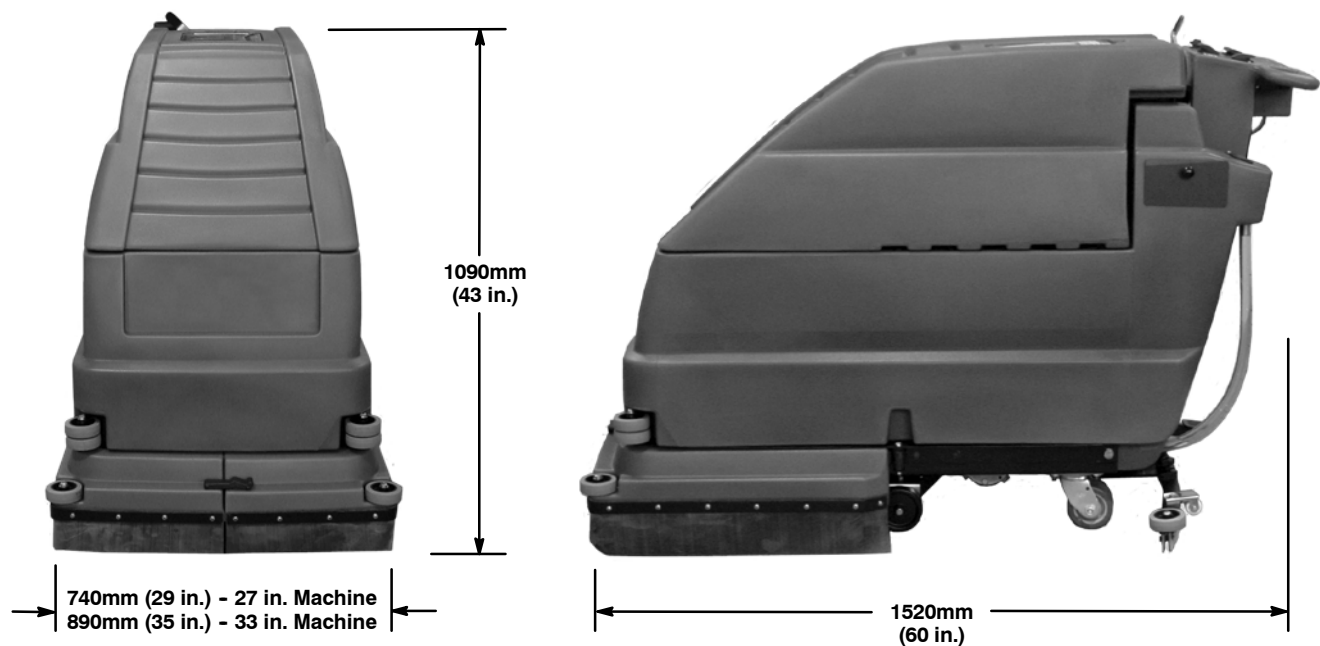
TROUBLE SHOOTING -continued

PROBLEM	CAUSE	SOLUTION
Poor squeegee pick up.	Drain hose plug is loose.	Tighten drain plug.
	Vacuum motor is loose.	Contact Service Center.
	Battery charge is low.	Charge batteries. Do not run machine when battery meter is in the red zone.
	Faulty vacuum motor.	Contact Service Center.
Drive motor does not operate.	Main circuit breaker has tripped.	Determine cause and reset circuit breaker.
	Faulty main power switch.	Contact Service Center.
	Faulty solenoid.	Contact Service Center.
	Faulty wiring.	Contact Service Center.
	Faulty drive motor.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
	Faulty resistor.	Contact Service Center.
Little or no solution flow.	Solution flow knob not activated.	Turn knob to desired flow.
	Clogged solution line or filter.	Remove hose and blow compressed air through it. Flush solution tank after each use.
	Clogged solenoid valve.	Remove valve and clean. Do not scratch or damage inside of valve.
	Faulty solenoid valve.	Contact Service Center.
	Loose set screw on solution knob.	Recalibrate solution flow and tighten knob set screw.

SPECIFICATIONS

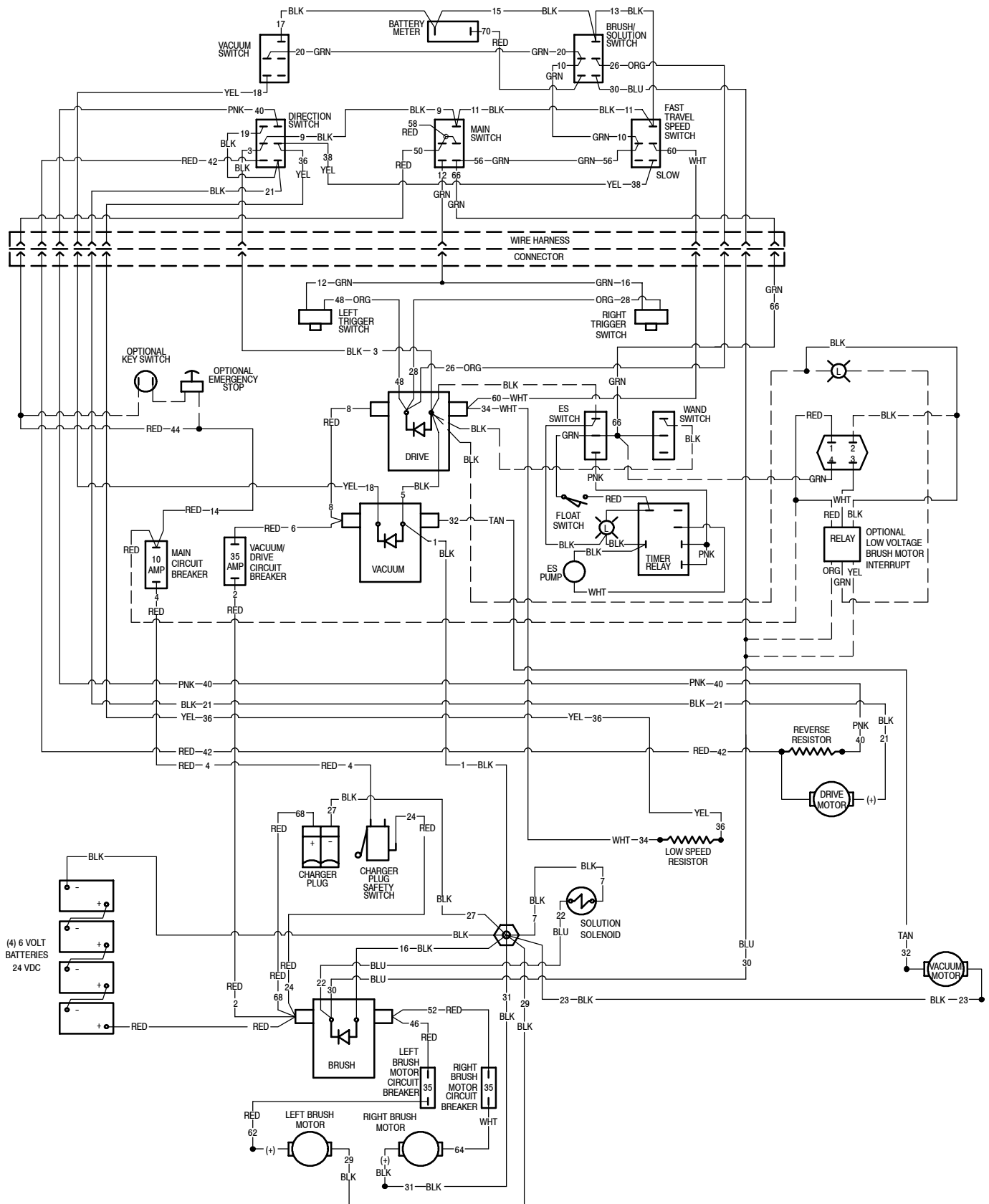
MODEL	TS-2700	TS-3300
LENGTH	1520mm (60 in.)	1520mm (60 in.)
WIDTH	740mm (29 in.)	890mm (35 in.)
HEIGHT	1090mm (43 in.)	1090mm (43 in.)
WEIGHT - WITH BATTERIES	352Kg (760 lbs)	355Kg (765 lbs)
TANKS CAPACITY	98L (26 gal)	98L (26 gal)
SPEED CONTROL	Two Speed Forward, One Speed Reverse	Two Speed Forward, One Speed Reverse
CLEANING SPEED	Maximun - 1858 sq. m. (20,000 sq. ft) per hr. Slow Scrub Speed - 35m (115 ft) per min. Transport/Fast Scrub Speed - 49m (160 ft) per min.	Maximun - 2322 sq. m.(25,000 sq. ft) per hr. Slow Scrub Speed - 35m (115 ft) per min. Transport/Fast Scrub Speed - 49m (160 ft) per min.
CLEANING PATH WIDTH	680mm (27 in.)	830mm (33 in.)
PAD DIAMETER	2 - 355mm (14 in.)	2 - 430mm (17 in.)
SQUEEGEE WIDTH	860mm (34 in.)	1010mm (40 in.)
DRIVE MOTOR	.5 h.p., 0-1560 rpm, 24V, 5A	.5 h.p., 0-1560 rpm, 24V, 5A
BRUSH MOTOR	2 - .75 h.p., 220 rpm, 24V, 20A, 550W	2 - .75 h.p., 220 rpm, 24V, 20A, 550W
VACUUM MOTOR	.75 h.p., 3-stage 5.7", 24V, 21A, 550W	.75 h.p., 3-stage 5.7", 24V, 21A, 550W
WATER LIFT	1720mm (68 in.)	1720mm (68 in.)
BATTERIES	4-305A/hr, 6V deep cycle	4-305A/hr, 6V deep cycle
RUN TIME on full charge	4.76 Hours	4.76 Hours
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON TILE.	<70dB(A)	<70dB(A)

MACHINE DIMENSIONS

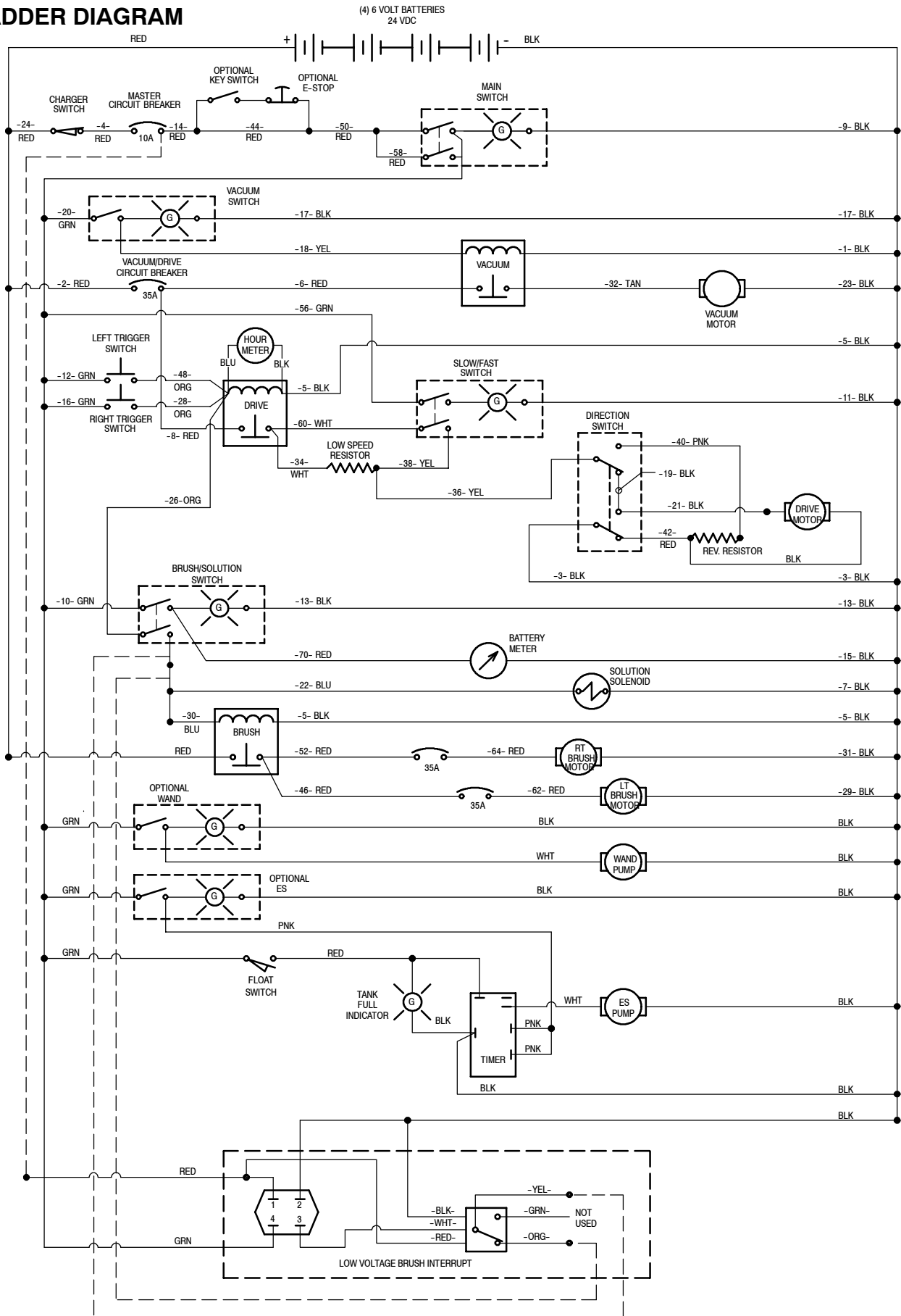


ELECTRICAL DIAGRAMS

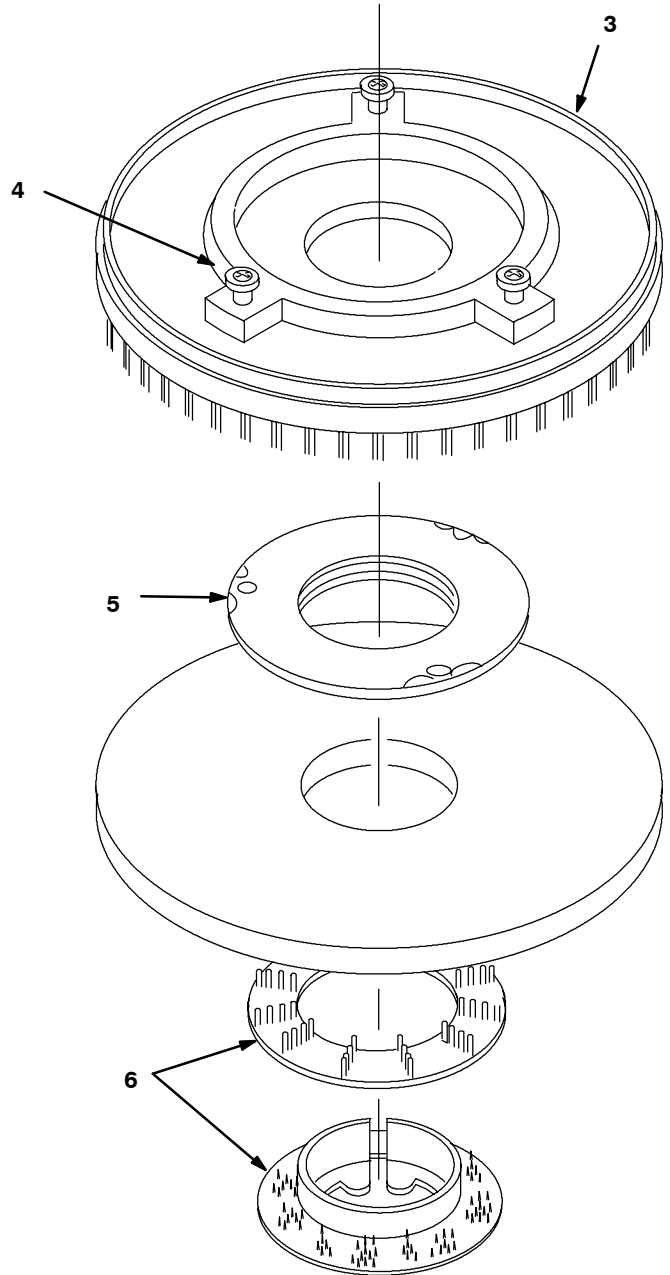
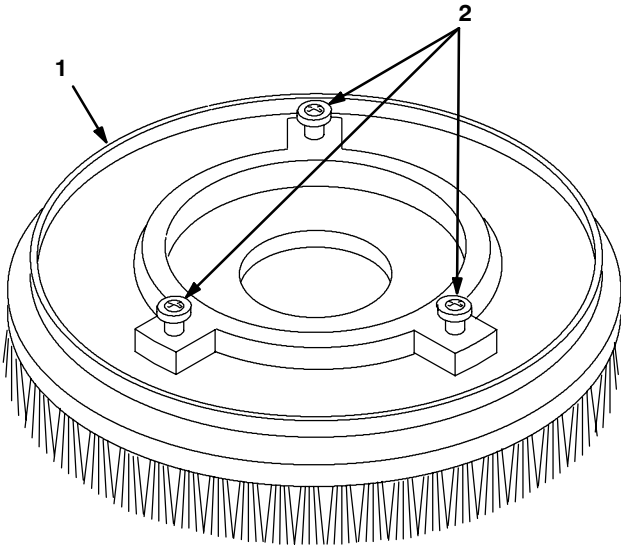
WIRE DIAGRAM



LADDER DIAGRAM



REPLACEMENT BRUSHES AND PAD DRIVER GROUP



REPLACEMENT BRUSHES AND PAD DRIVER GROUP

REF	PART #	DESCRIPTION	QTY.
▽ 1	240227	BRUSH, 14" POLY SCRUB (PK/2) (TS-2700)	1
	240234	BRUSH, 14" NYLON GRIT (PK/2) (TS-2700)	1
	240236	BRUSH, 14" DYNA SCRUB (PK/2) (TS-2700)	1
	240243	BRUSH, 14" SCRUB/STRIP (PK/2) (TS-2700)	1
	240230	BRUSH, 17" POLY SCRUB (PK/2) (TS-3300)	1
	240235	BRUSH, 17" NYLON GRIT (PK/2) (TS-3300)	1
	240237	BRUSH, 17" DYNA SCRUB (PK/2) (TS-3300)	1
	240241	BRUSH, 17" SCRUB/STRIP (PK/2) (TS-3300)	1
▲ 2	240238	LUGS, W/ SCREWS (PK/3)	2

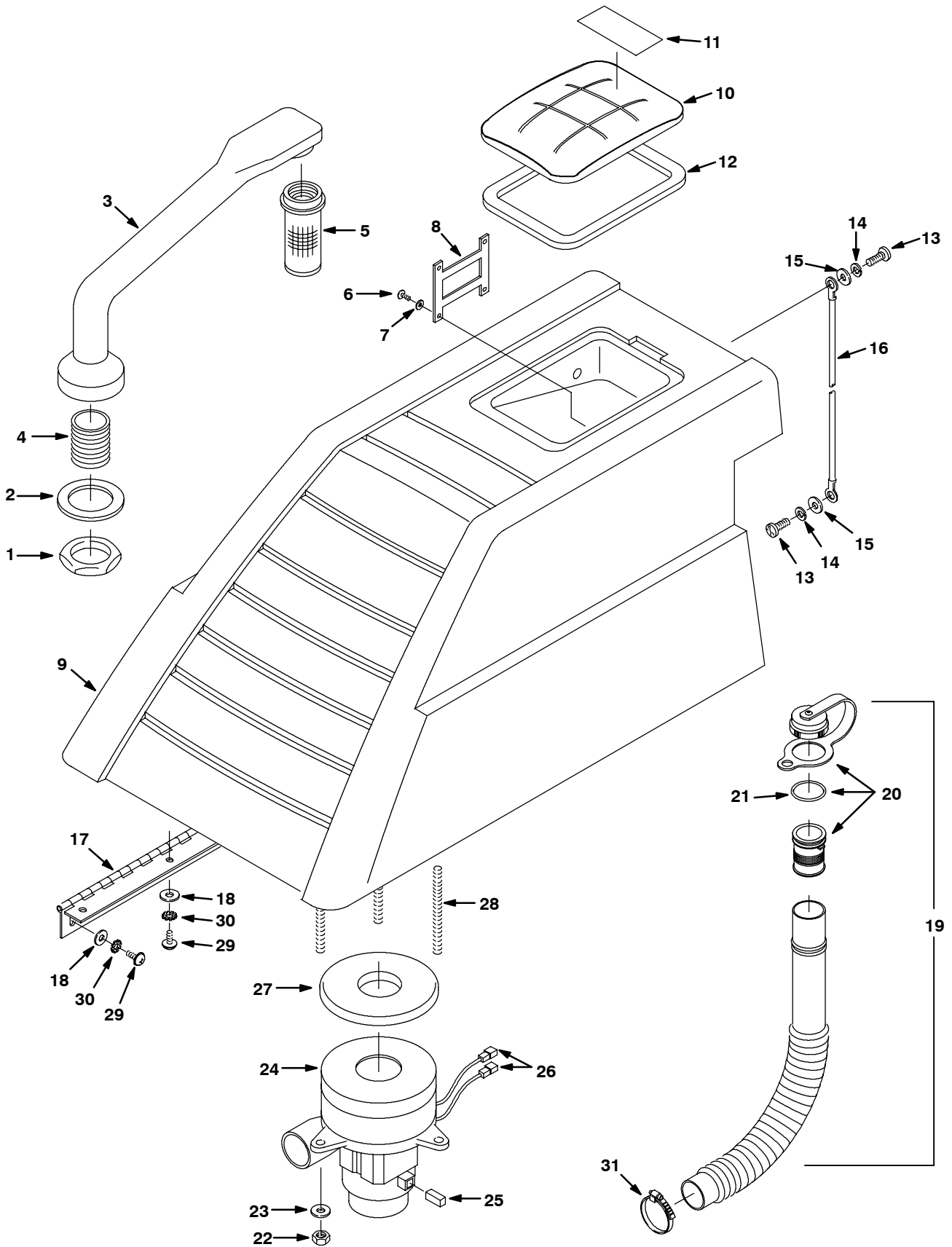
REF	PART #	DESCRIPTION	QTY.
▽ 3	240232	●ASM, 14" PAD DRIVER (PK/2) (TS-2700)	1
	240233	●ASM, 17" PAD DRIVER (PK/2) (TS-3300)	1
▲ 4	240238	LUGS, W/ SCREWS (PK/3)	2
▲ 5	100106	PLATE, PAD DRIVER BASE	2
▲ 6	100107	●RING, PAD RETAINER SNAP-IN	2

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

RECOVERY TANK GROUP



RECOVERY TANK GROUP

REF	PART #	DESCRIPTION	QTY.
1	210240	NUT, FLANGED 1-1/2 FPT	1
2	101714	●GASKET, WASTE AIR CHAMBER	1
▽ 3	100162	ASM STANDPIPE W/NIPPLE	1
▲ 4	606088	FITTING, 1-1/2" NIPPLE CPVC	1
5	180613	●FLOAT, SHUT-OFF	1
6	140872	SCREW, #6X3/8 PANPHL	4
7	1009168	WASHER, FLAT, 0.17B 0.75D .04 SS	4
8	630056	STRAP, TANK COVER RETAINING	1
9	606813	TANK, RECOVERY, BLUE	1
▽ 10	613716	ASSEMBLY, LID & LABEL	1
▲ 11	613287	LABEL, WARNING	1
▲ 12	630367	●GASKET, REC. TANK COVER	1
13	16931	SCREW, M8X1.25X20 HEXHD	2
14	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
15	140027	WASHER, FLAT, 0.35B 0.75D .04 SS	2
16	140960	●CABLE, REC TANK SUPPORT	1

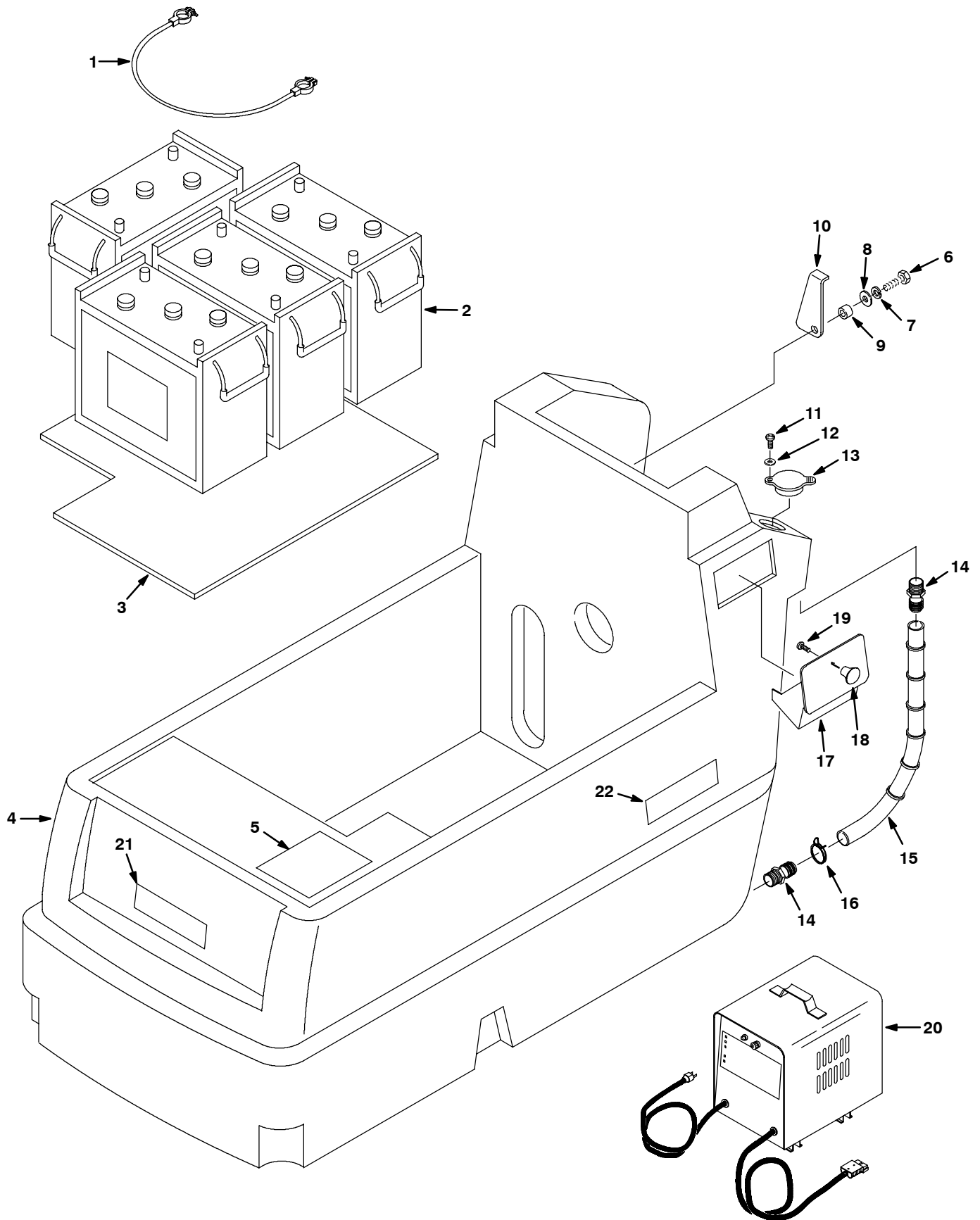
REF	PART #	DESCRIPTION	QTY.
17	230938	●HINGE, REC TANK	1
18	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	11
▽ 19	1010143	●ASSEMBLY, DRAIN HOSE	1
▲▽ 20	1008639	●ASSEMBLY, CAP, DRAIN HOSE	1
▲ 21	1008637	●O-RING	1
22	08712	NUT, HEX, LOCK, M6 X 1.00 SS, NL	3
23	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	3
▽ 24	130477	●MOTOR, VAC 5.7 3S 24V	1
▲ 25	190163	●BRUSH, CARBON 2/PK	1
26	130096	CONNECTOR ASSY, BLADE, MALE, .25	2
27	626092	●GASKET, VAC MOTOR	1
28	140353	SCREW, M6X1.0X108 STUD	3
29	363503	SCREW, M6X1.0X12 PANHD	11
30	140052	WASHER, 1/4 LOCK	11
31	140308	CLAMP, HOSE 1-5/16 TO 2-1/4	1

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

CHASSIS GROUP



CHASSIS GROUP

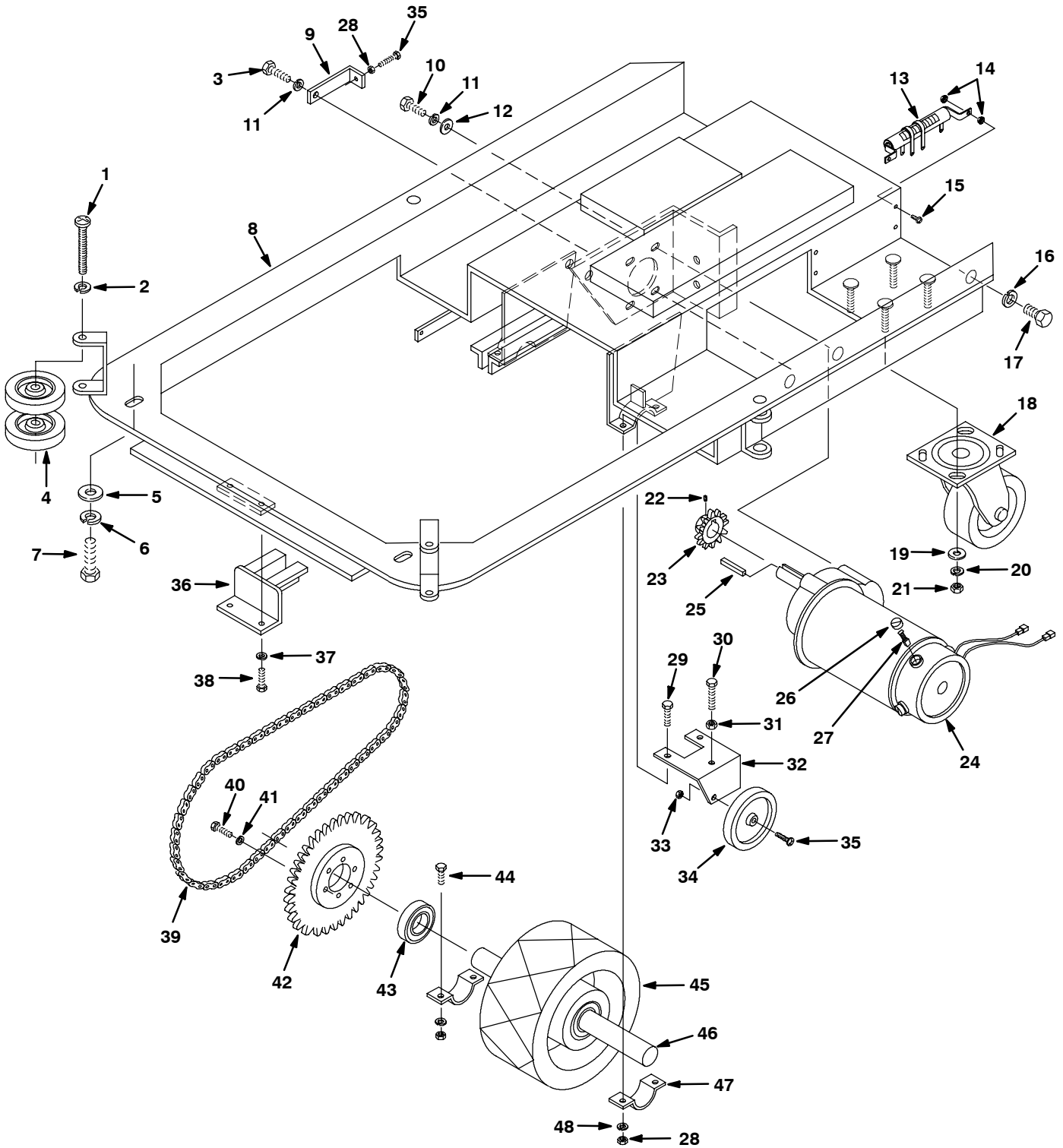
REF	PART #	DESCRIPTION	QTY.
1	130367	CABLE, BATTERY 15" BLK X 6 GA.	3
2	606991	BATTERY, 6V	4
3	100707	PLATE, BATTERY SUPPORT	1
4	606810	TANK, SOLUTION, BLUE	1
5	120567	DECAL, WARNING BATTERY DIAGRAM	1
6	578237000	SCREW M8X1.25X18 HXHDCP	1
7	140015	WASHER, LOCK, SPLIT, 0.31 SS	1
8	140027	WASHER, FLAT, 0.35B 0.75D .04 SS	1
9	611418	SLEEVE, .437D, .315B, .14L	1
10	230925	SUPPORT, RECOVERY TANK	1
11	140340	SCREW, PANPHL #10-24X.62 SS	1
12	01683	WASHER, FLAT #10 SS	1

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

REF	PART #	DESCRIPTION	QTY.
13	1012965	CAP, PORT, SOLUTION FILL	1
14	150529	FITTING, 3/4M X 3/4H BARB	2
15	600796	HOSE, DRAIN W/LEVEL INDICATOR	1
16	608915	CLAMP, HOSE 1.03-1.09	1
▽	613196	ASSEMBLY, REAR FILL	1
▲ 17	1001438	BRACKET, REAR FILL	1
▲ 18	601424	KNOB	1
▲ 19	140195	SCREW, TRS, .25-20 X 0.50 PHL SEM	1
20	130871	CHARGER, 24VDC 25AMP 120AC/60HZ	1
21	603083	DECAL, CASTEX LOGO	1
22	607260	DECAL, TS-2700	2
	607259	DECAL, TS-3300	2

DRIVE WHEEL GROUP



DRIVE WHEEL GROUP

REF	PART #	DESCRIPTION	QTY.
1	600349	SCREW, 5/16-18X2-3/4 HEXHD	2
2	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
3	611048	SCREW, HEX, .38-16 X 1.25 SS	1
4	1014918	WHEEL, 3.0D 1.00W, RUBBER	4
5	140028	WASHER, FLAT, 0.42B 1.00D .05 SS	2
6	140333	WASHER, M10 LOCK	2
7	140276	SCREW, M10X1.5X16 HEXHD	2
8	230932.BK	CHASSIS, WELDMENT	1
9	230655	BRACKET, DRIVE MOTOR TENSION	1
10	140202	SCREW, HEX, .38-16 X 1.00 SS	3
11	140017	WASHER, LOCK, SPLIT, 0.38 SS	3
12	140028	WASHER, FLAT, 0.42B 1.00D .05 SS	3
13	130713	●RESISTOR, 100 WATT .9 OHM	2
14	140519	NUT, HEX LOCK #10-24 KEP SS	8
15	140900	SCREW, #10-24X3/4 TRSPHL	4
16	140024	WASHER, LOCK, 0.50 SS	2
17	140352	SCREW, M12X1.75X25 HEXHD	2
18	103002	●CASTER, 4" SWIVEL	2
19	140036	WASHER, 3/8 FLAT	8
20	140333	WASHER, M10 LOCK	8
21	140285	NUT, M10X1.5 HEX	8
22	140859	SCREW, SET, .25-20X0.25 CUP PT	1
23	240087	SPROCKET, #40-12	1

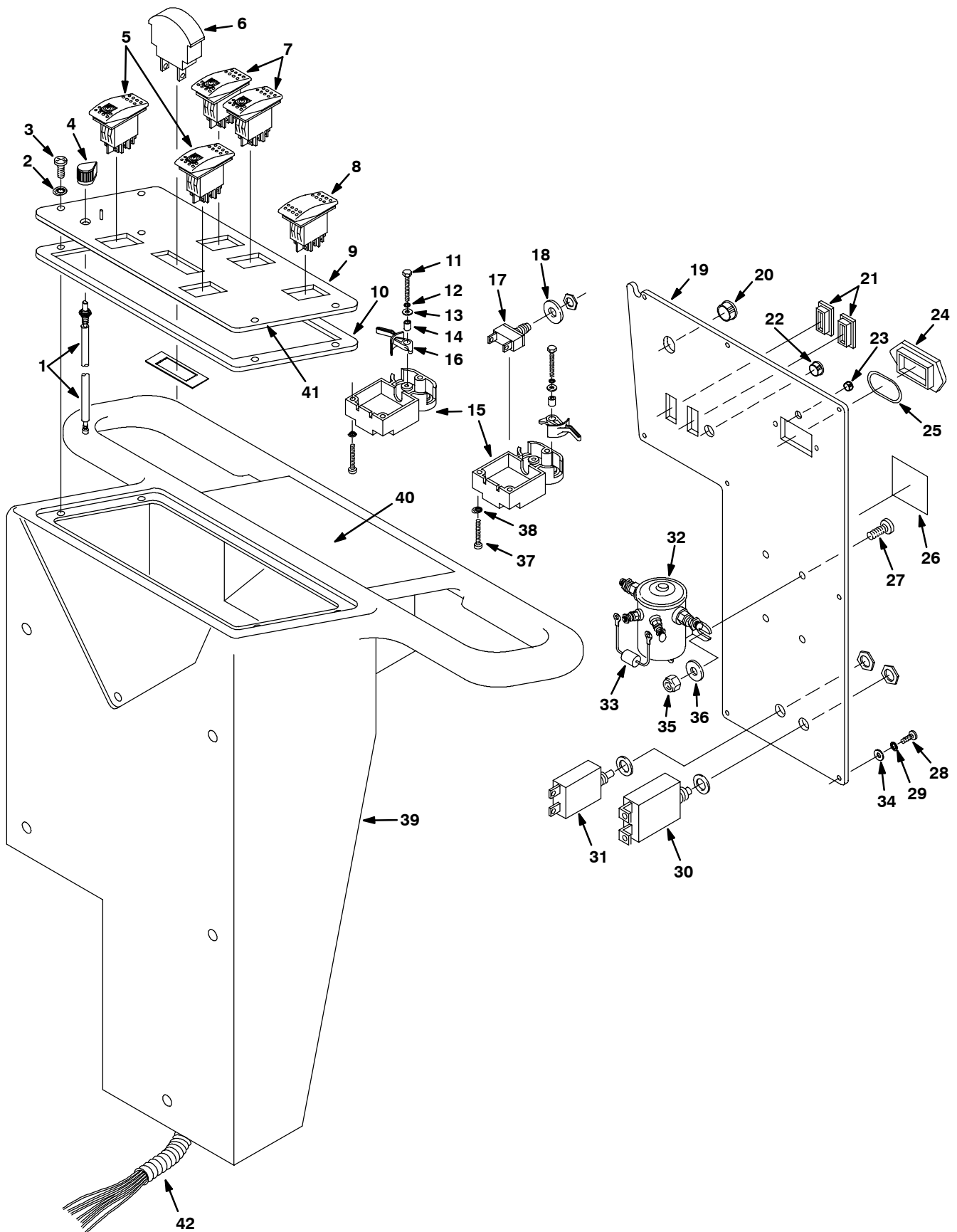
▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
▽ 24	613421	●MOTOR, DRIVE 24V	1
▲ 25	140632	KEY, .25 X .25 X 1.00L	1
▲ 26	613424	●CAP, CARBON BRUSH	4
▲ 27	130508	●CARBON BRUSH	4
28	140525	NUT, HEX, STD, .38-16 SS	5
29	611048	SCREW, HEX, .38-16 X 1.25 SS	2
30	140233	SCREW, HEX, .38-16 X 1.75 SS	1
31	140525	NUT, HEX, STD, .38-16 SS	1
32	230796	BRACKET, WHEEL SUPPORT	1
33	140525	NUT, HEX, STD, .38-16 SS	1
34	103007	WHEEL, 4" X 1"	1
35	140231	SCREW, HEX, .38-16 X 1.50	2
36	230941	BRACKET, FRONT LIFT GUIDE	1
37	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
38	15675	SCREW, M8X1.25X16 HEXHD	2
39	606426	●KIT, CHAIN & LINKS	1
40	02991	SCREW, HEX, .31-18 X 0.75 SS	6
41	140015	WASHER, LOCK, SPLIT, 0.31 SS	6
42	240070	SPROCKET, #40-39 DRIVE WHEEL	1
43	140124	BEARING	2
44	611048	SCREW, HEX, .38-16 X 1.25 SS	2
45	103058	WHEEL, 8" DRIVE	1
46	230205	SHAFT, DRIVE WHEEL	1
47	611980	CLAMP, AXLE	2
48	140017	WASHER, LOCK, SPLIT, 0.38 SS	4

CONTROL PANEL GROUP



CONTROL PANEL GROUP

REF	PART #	DESCRIPTION	QTY.
1	604950	CABLE, SOLUTION CONTROL	1
2	140023	WASHER, LOCK, INT #8 SS	4
3	49697	SCREW, M4X0.7X10 PANHD	4
4	626121	KNOB, WATER VALVE	1
5	601107	●SWITCH, ROCKER, LIGHTED	2
6	606020	●METER, BATTERY VOLTAGE 24V	1
7	601107	●SWITCH, ROCKER, LIGHTED	2
8	604622	●SWITCH, "ON"/"MOMENTERY ON"	1
9	604948	PANEL, SWITCH	1
10	604610	GASKET, DASH PANEL	1
∇	611470	TRIGGER CONSOLE ASM, LEFT	1
	611471	TRIGGER CONSOLE ASM, RIGHT	1
▲ 11	069764190	SCREW, M3X0.5X16 HXHD	1
▲ 12	200662012	WASHER, M3 LOCK	1
▲ 13	578186000	WASHER, M4.3 FLAT	1
▲ 14	578082000	SPACER, .14X.31X.44 NYLON	1
▲ 15	601429	CONSOLE, TRIGGER	1
▲ 16	578002000	ARM, TRIGGER	1
▲ 17	130712	●SWITCH, MOMENTARY PULSE	1
▲ 18	578430	WASHER, SPRING, DISC.	1
19	604944	COVER, CONTROL HOUSING	1
20	130175	PLUG, DOME .750 OD	1

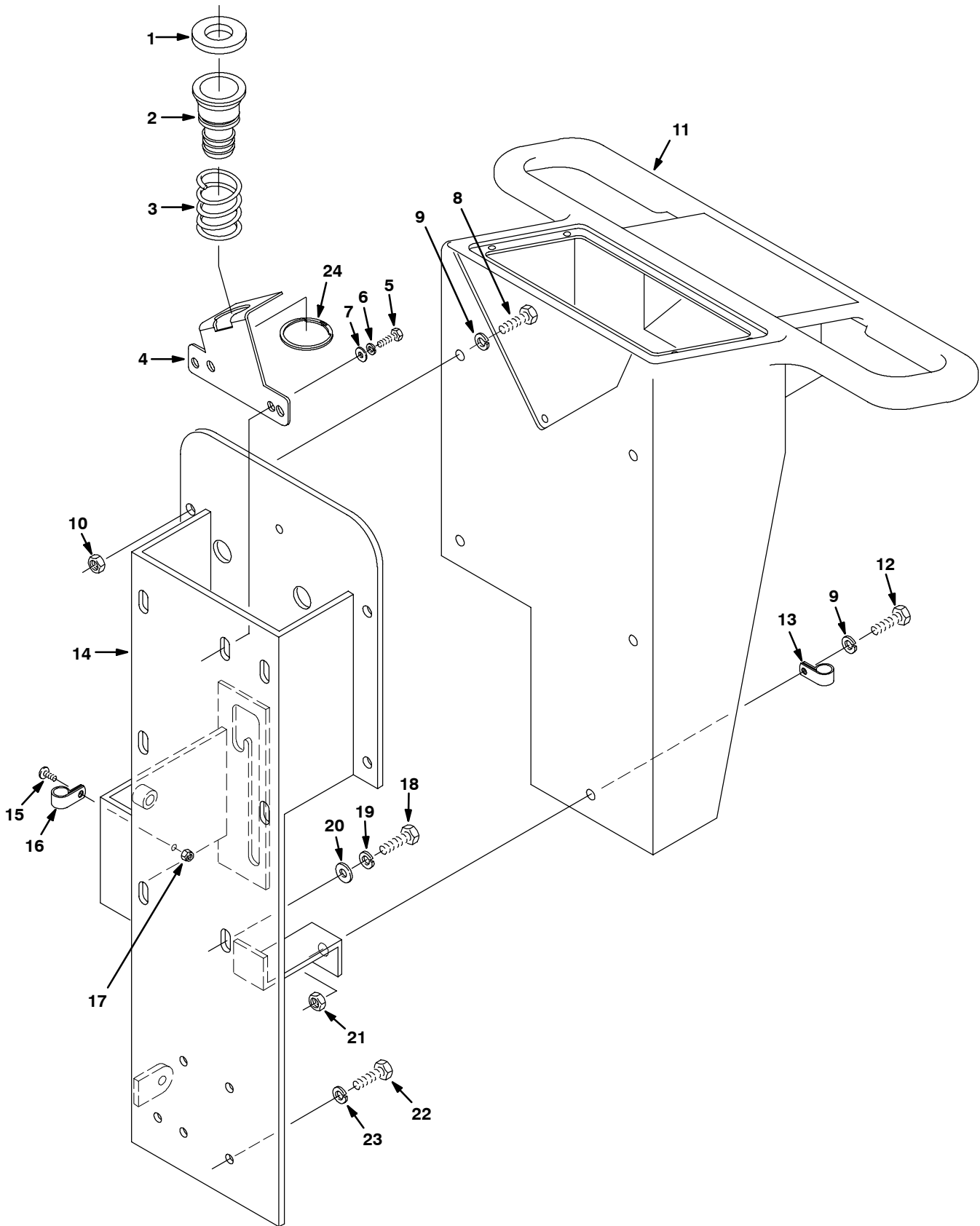
REF	PART #	DESCRIPTION	QTY.
21	582150	PLUG, ACCESSORY SWITCH	2
22	604940	PLUG, DOME, .312D	1
23	069764626	PLUG, HOLE, 012.7MM	1
24	609969	PLUG, HOUR METER	1
25	605823	O-RING	1
26	606105	LABEL, DO NOT SPRAY	1
27	608322	SCREW, TRS, M6X1.0X16 PHL SS	4
28	49697	SCREW, M4X0.7X10 PANHD	8
29	140023	WASHER, LOCK, INT #8 SS	8
30	602951	BREAKER, CIRCUIT, 35 AMP	1
31	130737	BREAKER, CIRCUIT, 10 AMP	1
32	605905	●SOLENOID, 24V	2
33	606404	●DIODE ASM, WITH RINGS	2
34	621288000	WASHER, M4 FLAT	8
35	08712	NUT, HEX, LOCK, M6 X 1.00 SS, NL	4
36	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	4
37	578193000	SCREW, M4X0.7X25 PANPHL	6
38	140023	WASHER, LOCK, INT #8 SS	6
39	606816	HOUSING, CONTROL, BLUE	1
40	605925	DECAL, OPER. INSTRUCTIONS	1
41	606412	DECAL, DASH	1
42	604623	HARNESS, MAIN WIRING	1

∇ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

CONTROL CONSOLE GROUP



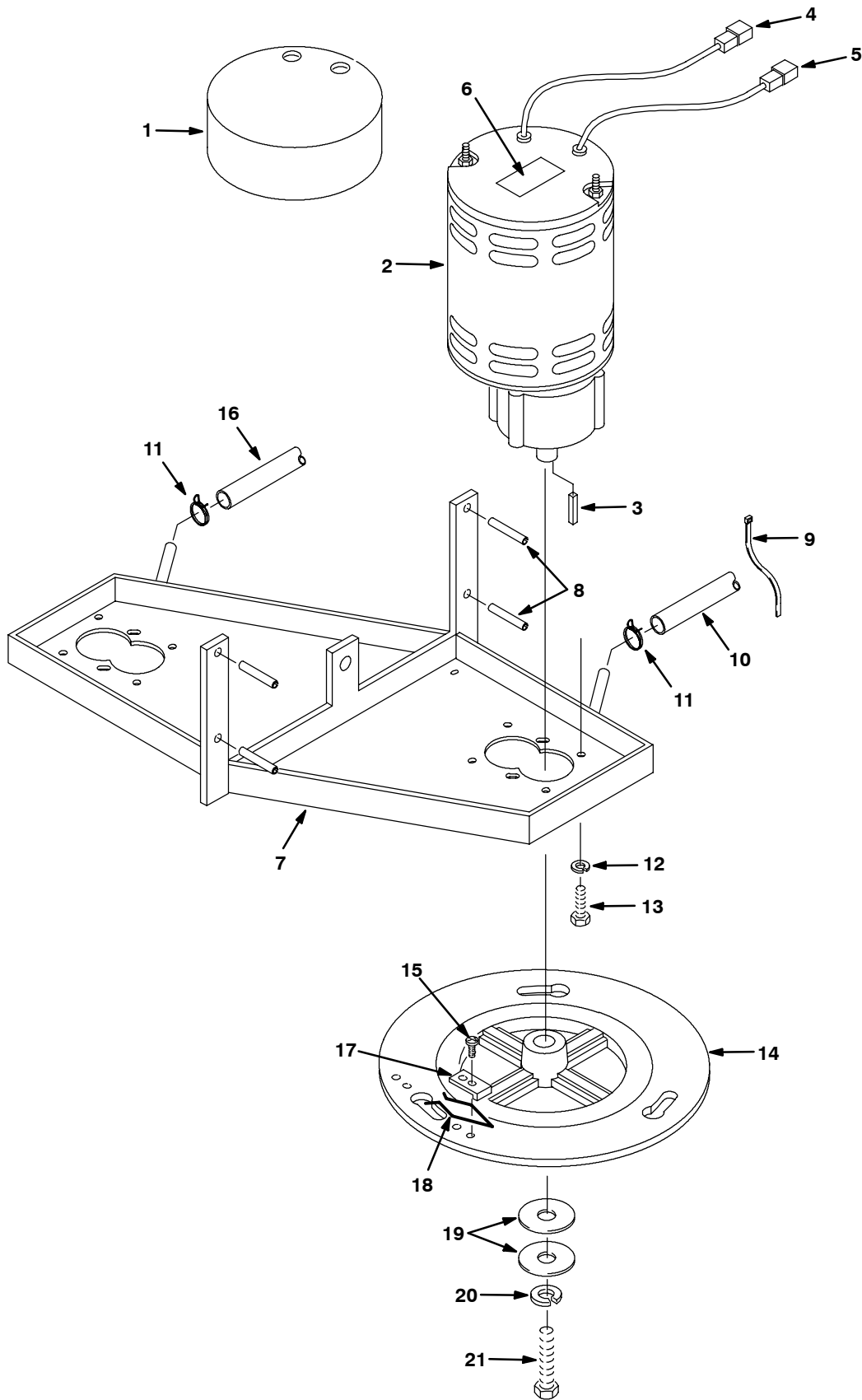
CONTROL CONSOLE GROUP

REF	PART #	DESCRIPTION	QTY.
1	630010	●GASKET, 70 OD, 43 ID, 12.7 THK	1
2	630011	TUBE, VAC TRANS	1
3	630267	SPRING, CMPR, 59.9D, 3.0W, 60.8L	1
4	608706	BRACKET, VAC TRANS	1
5	578237000	SCREW M8X1.25X18 HXHDCP	2
6	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
7	140027	WASHER, FLAT, 0.35B 0.75D .04 SS	2
8	09010	SCREW, M8X1.25X25 HEXHD	4
9	140027	WASHER, FLAT, 0.35B 0.75D .04 SS	5
10	08709	NUT, HEX LOCK, M8 X 1.25, NL	4
11	606816	HOUSING, CONTROL, BLUE	1
12	09010	SCREW, M8X1.25X25 HEXHD	1

REF	PART #	DESCRIPTION	QTY.
13	140314	CLAMP, CABLE 3/4" ID	1
14	604943	PANEL, REAR WELDMENT	1
15	578144000	SCREW, M5X0.8X16 PANPHL	1
16	140328	CLAMP, TUBE	1
17	09739	NUT, M5X0.8 NYLOCK	1
18	578237000	SCREW M8X1.25X18 HXHDCP	5
19	140015	WASHER, LOCK, SPLIT, 0.31 SS	5
20	140027	WASHER, FLAT, 0.35B 0.75D .04 SS	5
21	08709	NUT, HEX LOCK, M8 X 1.25, NL	1
22	578237000	SCREW M8X1.25X18 HXHDCP	5
23	140015	WASHER, LOCK, SPLIT, 0.31 SS	5
24	630016	RING, RETAINING	1

● RECOMMENDED STOCK ITEMS

PAD DRIVER GROUP



PAD DRIVER GROUP

REF	PART #	DESCRIPTION	QTY.
1	100764	COVER, BRUSH MOTOR	2
∇ 2	130491	●MOTOR, W/GEARBOX 24V 0.75HP IMP	2
▲	190970	●CARBON BRUSH	4
▲ 3	140632	KEY, .25 X .25 X 1.00L	1
4	130191	TERMINAL, FEMALE	2
5	130192	TERMINAL, MALE	2
6	606243	TAPE, DOUBLE STICK	1
7	230691	BRACKET, BRUSH MOTOR MOUNT	1
8	140618	PIN, ROLL 1/4 X 1-1/2	4
9	130041	WIRE TIE	1
10	613439	HOSE, 3/8ID X 14.5	1

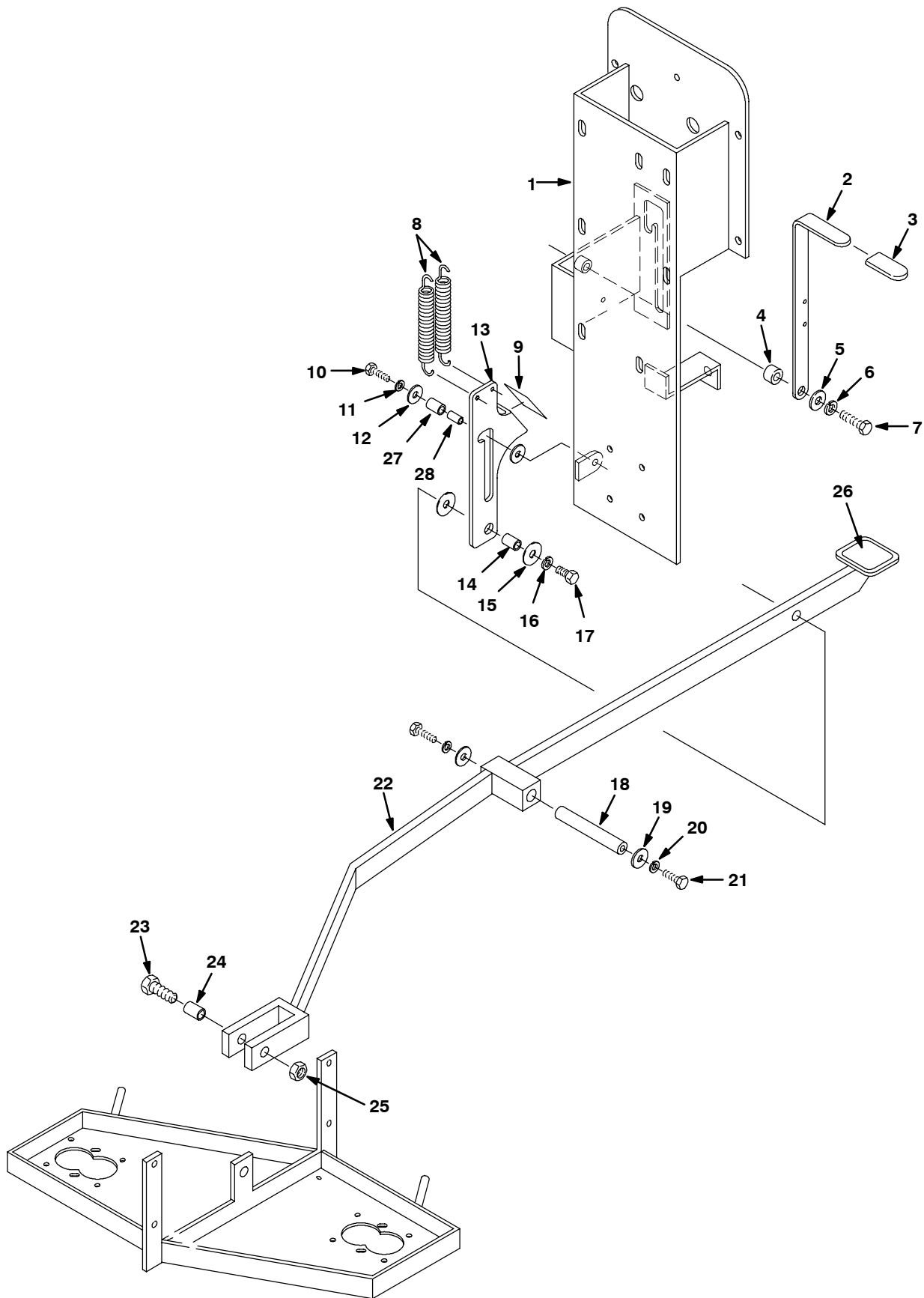
REF	PART #	DESCRIPTION	QTY.
11	607775	CLAMP, HOSE .63-.66	2
12	140017	WASHER, LOCK, SPLIT, 0.38 SS	8
13	140202	SCREW, HEX, .38-16 X 1.00 SS	8
14	606335	PLATE, DRIVE	2
15	606915	SCREW, #10-16X3/8 HIGH-LOW	4
16	613440	HOSE, 3/8ID X 9"	1
17	230651	CLAMP, BRUSH PLATE	2
18	140417	CLIP, SPRING	2
19	25732	WASHER, 1.25X.359X.093	4
20	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
21	140219	SCREW, HEX, .31-18 X 1.00 SS	2

∇ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

BRUSH LIFT GROUP

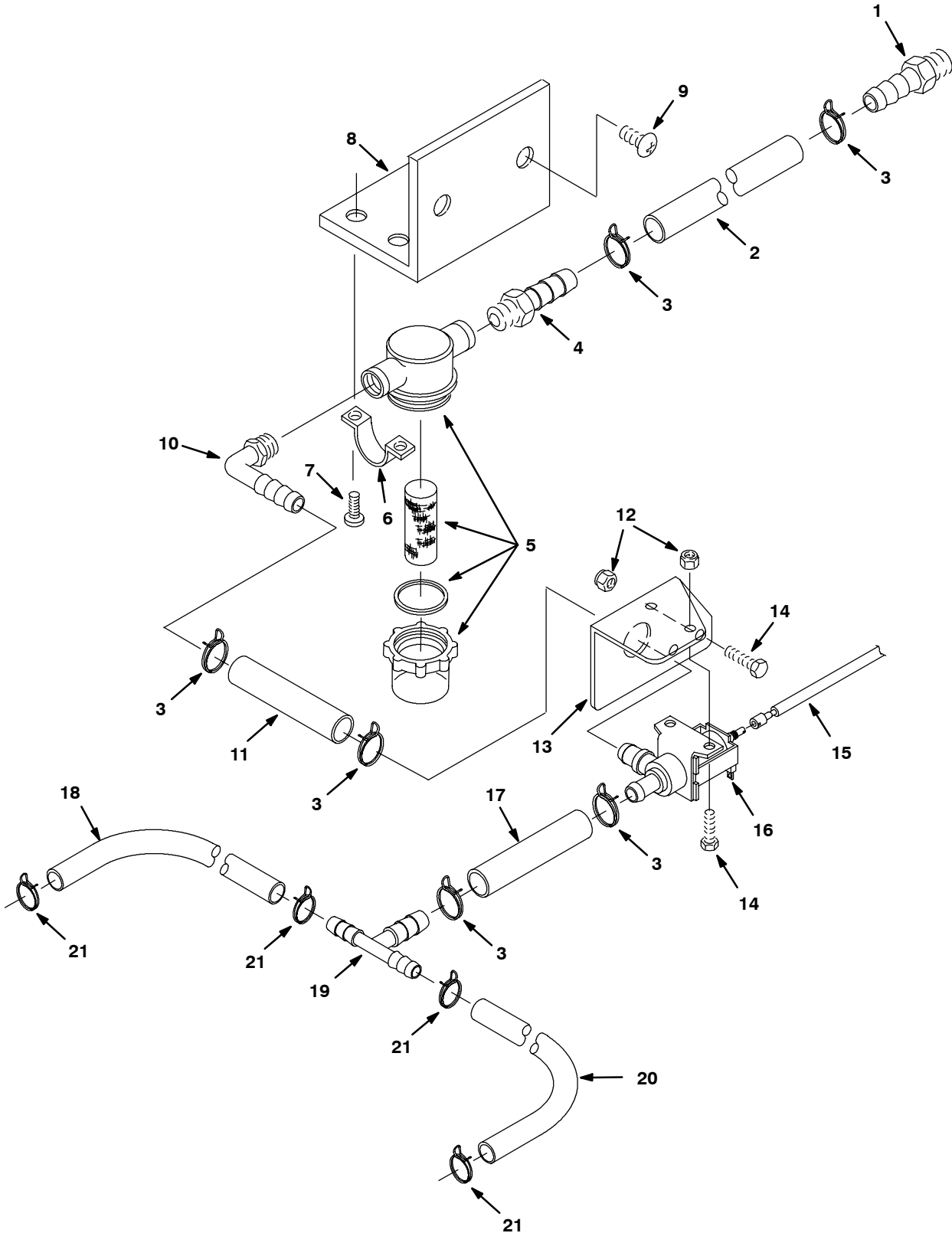


BRUSH LIFT GROUP

REF	PART #	DESCRIPTION	QTY.
1	604943	PANEL, REAR WELDMENT	1
2	230654	HANDLE, BRUSH PRESSURE	1
3	200816	GRIP, HANDLE .25 X 1 X 2.25	1
4	140144	SLEEVE, .496D, .318B, .33L	1
5	140028	WASHER, FLAT, 0.42B 1.00D .05 SS	1
6	140017	WASHER, LOCK, SPLIT, 0.38 SS	1
7	2949.7	SCREW, HEX, .38-16 X 0.88	1
8	140423	SPRING, BRUSH PRESSURE	2
9	102560	PAD, NON-SLIP	1
10	140202	SCREW, HEX, .38-16 X 1.00 SS	1
11	140017	WASHER, LOCK, SPLIT, 0.38 SS	1
12	140028	WASHER, FLAT, 0.42B 1.00D .05 SS	2
13	230775	LATCH, BRUSH LIFT PEDAL	1
14	140139	SLEEVE, .625D, .500B, .25L	1

REF	PART #	DESCRIPTION	QTY.
15	140045	WASHER, FLAT, 0.51B 1.25D .06 SS	2
16	140024	WASHER, LOCK, 0.50 SS	1
17	140237	SCREW, HEX, .50-13 X 1.00 SS	1
18	230940	PIN, LIFT ARM PIVOT	1
19	140003	WASHER, 1/4X1 FENDER SS	2
20	140016	WASHER, LOCK, 0.25 SS	2
21	15678	SCREW, HEX, M6X1.0X16 SS	2
22	230936	ARM, BRUSH LIFT WELDMENT	1
23	140235	SCREW, HEX, .50-13 X 2.00 SS	1
24	604646	SLEEVE, .625D, .501B, .66L	1
25	02931	NUT, HEX LOCK, .50-13 NL, SS	1
26	102560	PAD, NON-SLIP	1
27	140145	SLEEVE, .625D, .500B, .25L	1
28	140136	BUSHING, .38X.50X.28	1

SOLUTION CONTROL GROUP



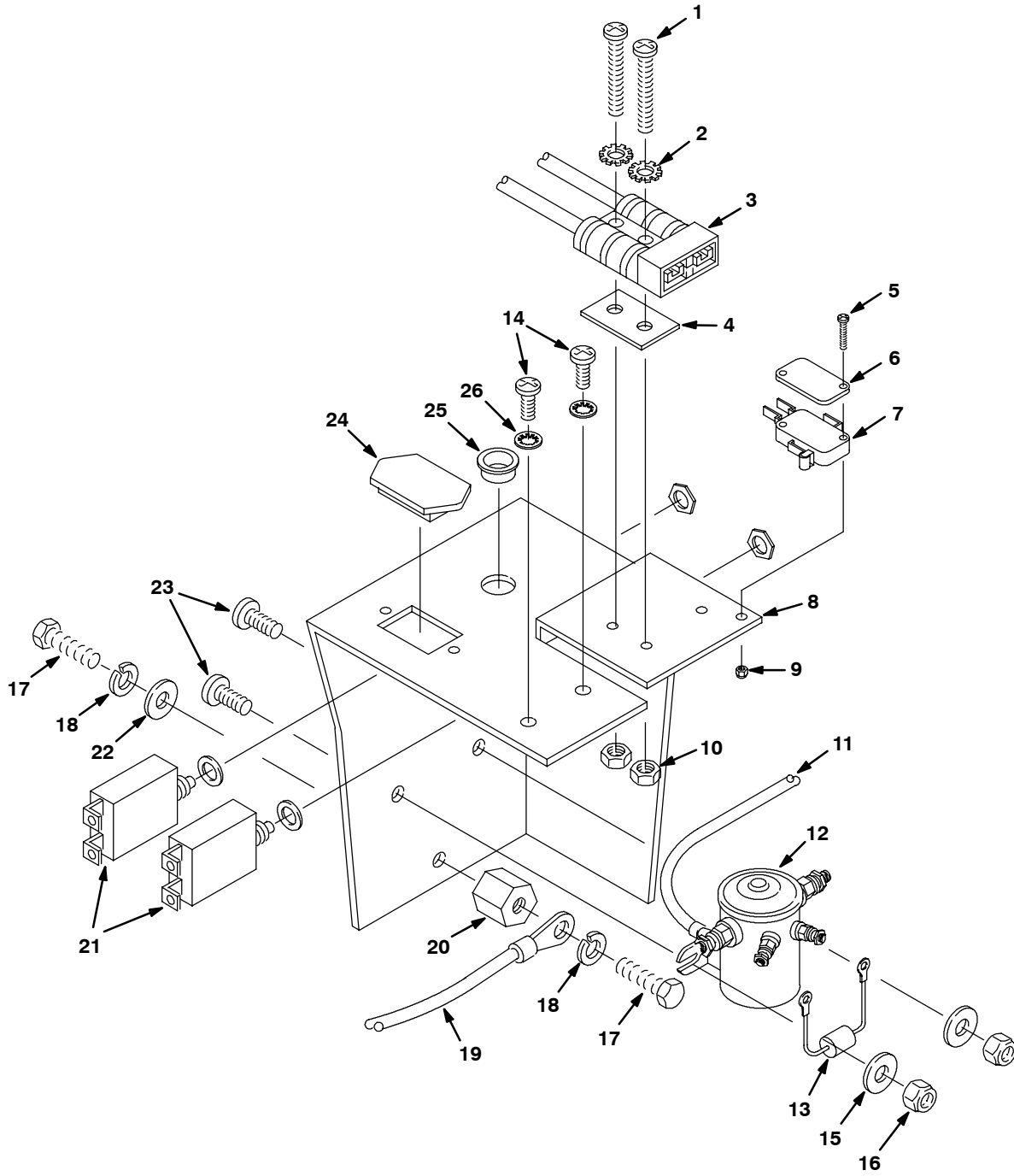
SOLUTION CONTROL GROUP

REF	PART #	DESCRIPTION	QTY.
1	069764592	FITTING, PLSTC, STR, PM08/BM08	1
2	613521	HOSE, 1/2ID X 12"	1
3	607776	CLAMP, HOSE .73-.77	6
4	14884	FITTING, STR, BM08/PM06	1
5	1005302	●FILTER, INLINE, PF06/PF06 80-MESH	1
6	605056	BRACKET, MOUNTING, FILTER	2
7	140197	SCREW, TRS, #10-24 X 0.38 PHL SS SEM	4
8	607140	BRACKET, FILTER BOWL	1
9	140197	SCREW, TRS, #10-24 X 0.38 PHL SS SEM	2
10	150425	FITTING, PLSTC, E90, PM06/BM08	1
11	613509	HOSE, 1/2ID X .160FT.	1

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
12	41169	NUT, HEX, LOCK, .25-20 NL, SS	4
13	604945	BRACKET, SOLUTION VALVE	1
14	24672	SCREW, HEX, .25-20 X 0.75 SS	4
15	604950	CABLE, SOLUTION CONTROL	1
16	603310	●VALVE, WATER, SOLENOID 24VDC 08BM/08BM	1
	614265	●KIT, VALVE REBUILD	1
17	613509	HOSE, 1/2ID X .160FT.	1
18	613440	HOSE, 3/8ID X 9"	1
19	612149000	FITTING, TEE, 0.38X.38X.50"	1
20	613439	HOSE, 3/8ID X 14.5"	1
21	607775	CLAMP, HOSE .63-.66	4

ELECTRICAL GROUP



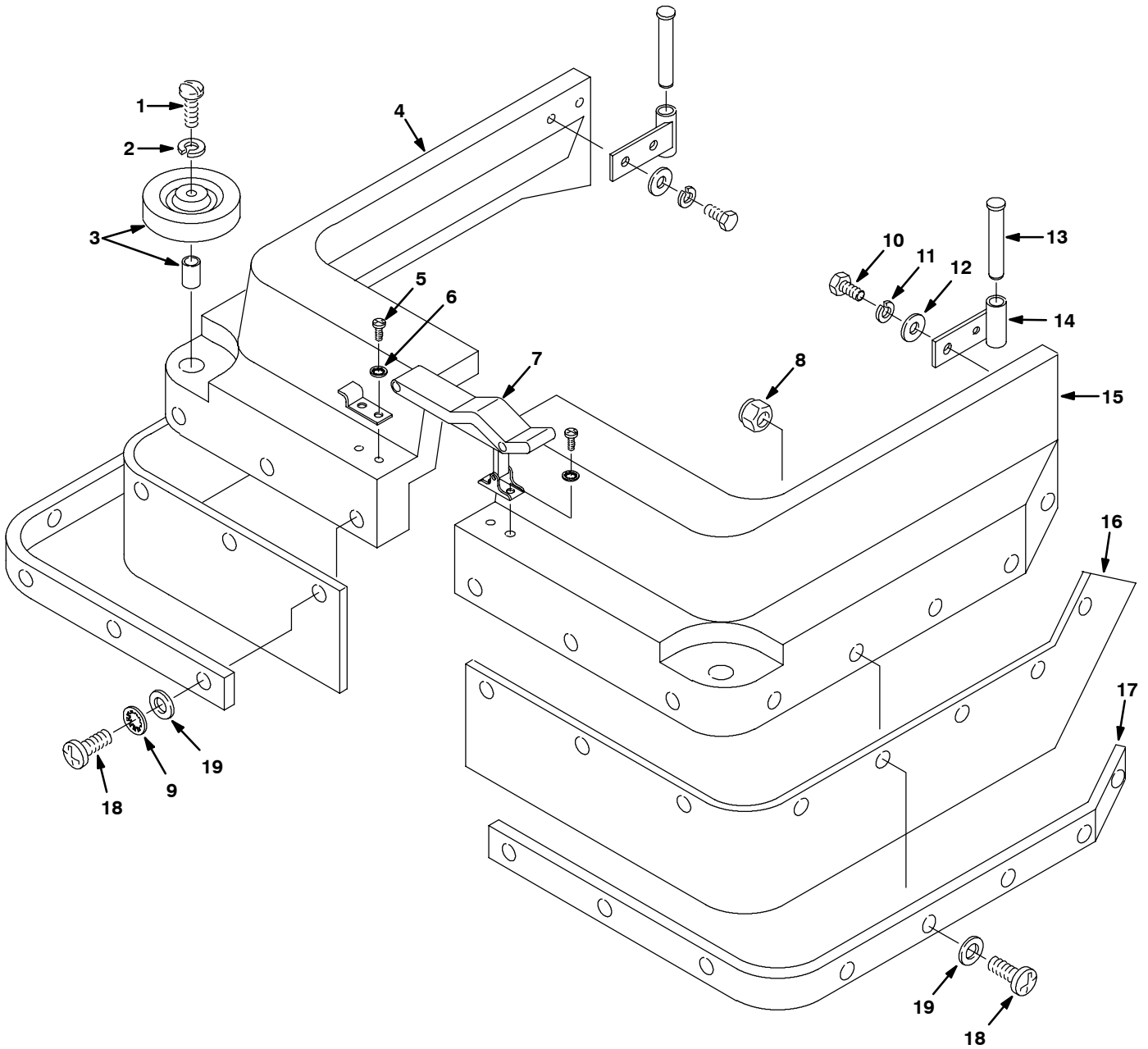
ELECTRICAL GROUP

REF	PART #	DESCRIPTION	QTY.
1	140829	SCREW, PAN, #06-32 X 1, PHL SS	2
2	140019	WASHER, LOCK, EXT, #06 ZN	2
3	605387	●CONNECTOR, RED 50A W/O CONTACTS	1
4	603331	SPACER, CHARGER PLUG	1
5	578403000	SCREW, M3X0.5X20 PANPHL	2
6	601359	PLATE, SWITCH BACKING	1
7	600437	●SWITCH, SNAP ACTION	1
8	602887	BRACKET, CHARGER PLUG	1
9	579211	NUT, M3 HEXLCK	2
10	140539	NUT, #6-32 KEP	2
11	602953	WIRE ASM., RED #6X26" BATTERY	1
12	605905	●SOLENOID, 24V	1
13	606404	●DIODE ASM, WITH RINGS	1

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
14	578141000	SCREW, M5X0.8X10 PANPHL	2
15	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	2
16	08712	NUT, HEX, LOCK, M6 X 1.00 SS, NL	2
17	01696	SCREW, HEX, .25-20 X 0.50 SS	2
18	140016	WASHER, LOCK, 0.25 SS	2
19	130390	WIRE ASM., BLACK #6X29" BATTERY	1
20	578427	STANDOFF, TERMINAL	1
21	602951	●BREAKER, CIRCUIT 35 AMP	2
22	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	1
23	608322	SCREW, TRS, M6X1.0X16 PHL SS	2
24	609969	PLUG, HOUR METER	1
25	130698	BUSHING, SNAP .50ID	1
26	140018	WASHER, LOCK, INT #10 SS	2

SKIRT GROUP

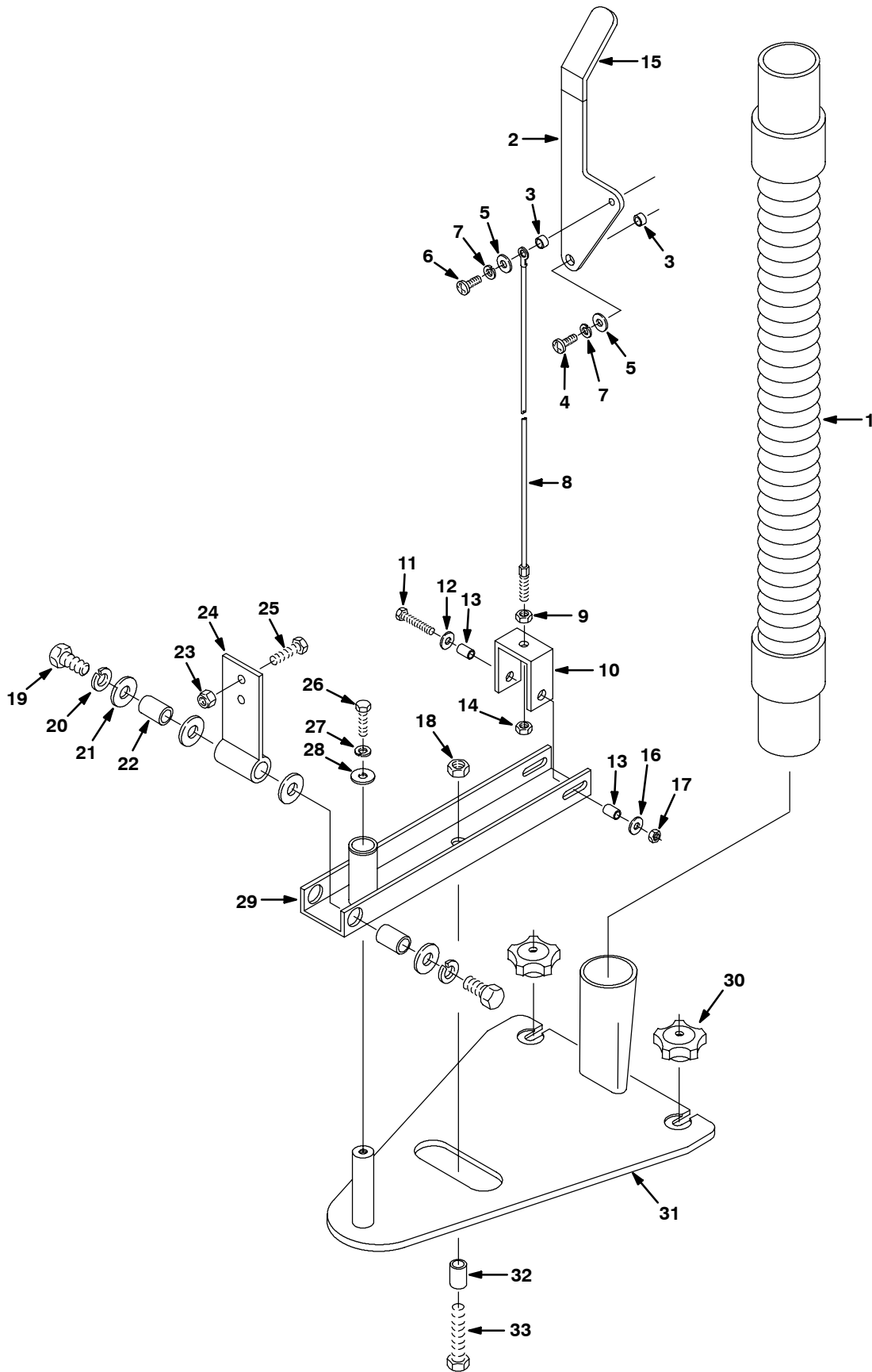


SKIRT GROUP

REF	PART #	DESCRIPTION	QTY.
1	603154	SCREW, PAN, M8X1.25X40 PHL, SS	2
2	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
3	1014918	WHEEL, 3.0D 1.00W, RUBBER	2
4	606945	SKIRT, RIGHT SIDE, BLUE (TS-2700)	1
	606807	SKIRT, RIGHT SIDE, BLUE (TS-3300)	1
5	200070340	SCREW, PAN, M4X0.7X8 PHL, ZN	4
6	140023	WASHER, LOCK, INT #8 SS	4
7	140932	LATCH, HOOD RBR W/ KEEPER	1
8	09739	NUT, M5X0.8 NYLOCK	6-12
9	140018	WASHER, LOCK, INT #10 SS	12-16
10	578237000	SCREW, HEX, M8X1.25X18 SS	4

REF	PART #	DESCRIPTION	QTY.
11	140015	WASHER, LOCK, SPLIT, 0.31 SS	4
12	140027	WASHER, FLAT, 0.35B 0.75D .04 SS	4
13	230943	PIN, SKIRT	2
14	230942	BRACKET, MOUNTING, SKIRT	2
15	606942	SKIRT, LEFT SIDE, BLUE (TS-2700)	1
	606804	SKIRT, LEFT SIDE, BLUE (TS-3300)	1
16	240277	SPLASH GUARD, (TS-2700)	2
	240276	SPLASH GUARD, (TS-3300)	2
17	230935.BK	STRAP, SPLASH GUARD, (TS-2700)	2
	230934.BK	STRAP, SPLASH GUARD, (TS-3300)	2
18	578144000	SCREW, PAN, M5X0.8X16, PHL	22-24
19	140011	WASHER, FLAT, 0.21B 0.45D .03 SS	22-24

SQUEEGEE CONTROL GROUP



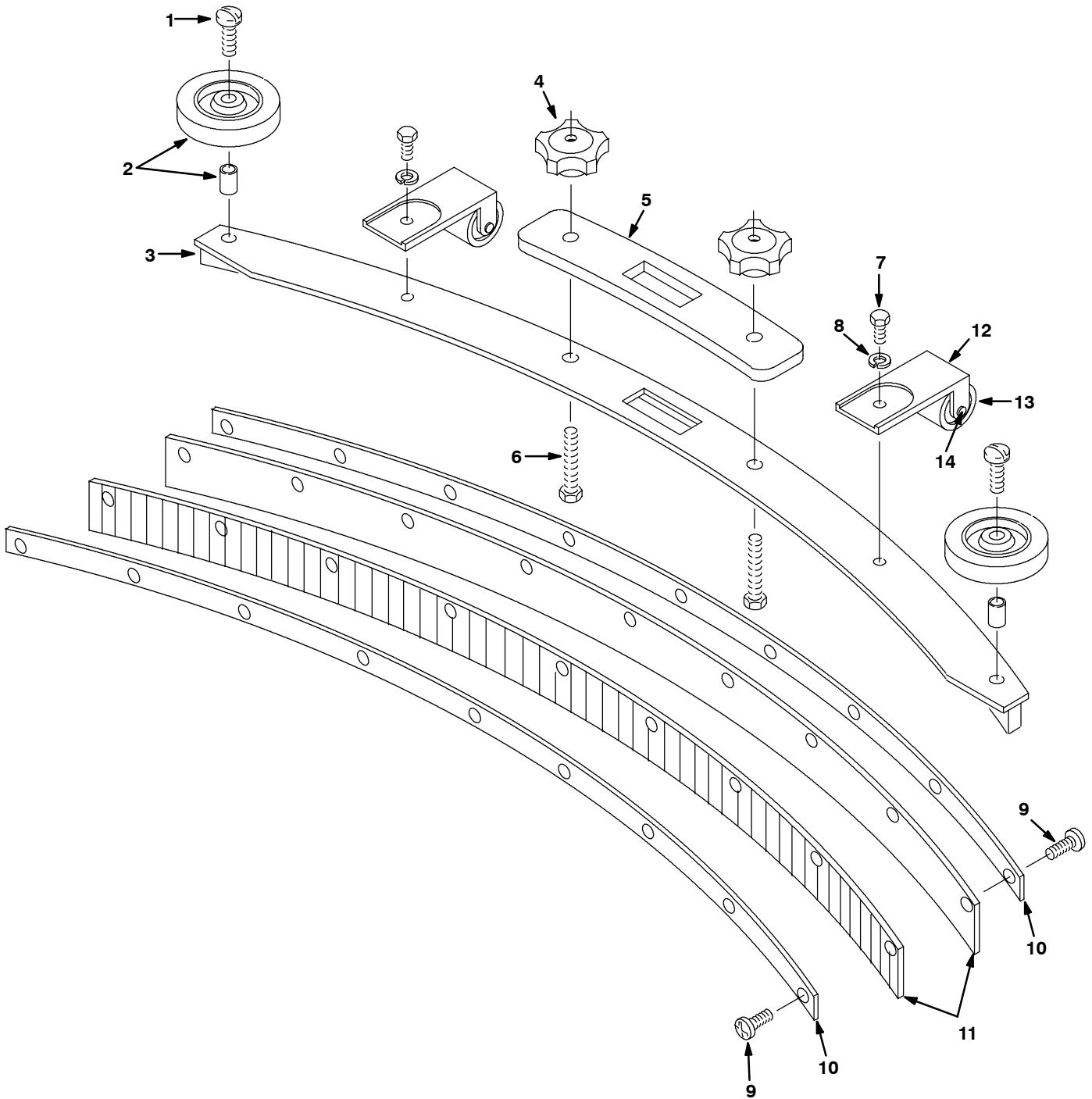
SQUEEGEE CONTROL GROUP

REF	PART #	DESCRIPTION	QTY.
1	160613	●HOSE, VAC 1.5 X 30" W/ CUFFS	1
2	604947	HANDLE, SQUEEGEE LIFT	1
3	140134	SLEEVE, .376D, .253B, .28L	2
4	08716	SCREW, HEX, M6X1.0X20 SS	1
5	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	2
6	15678	SCREW, HEX, M6X1.0X16 SS	1
7	140016	WASHER, LOCK, 0.25 SS	2
8	604949	CABLE, SQUEEGEE LIFT	1
9	41169	NUT, HEX, LOCK, .25-20 NL, SS	1
10	604946	BRACKET, SQUEEGEE LIFT	1
11	140209	SCREW, HEX, .25-20X2.50 ZN	1
12	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	1
13	575542000	BEARING, .25IDX.38OD	2
14	41169	NUT, HEX, LOCK, .25-20 NL, SS	1
15	200816	GRIP, HANDLE 1/4 X 1 X 2-1/4	1
16	140000	WASHER, FLAT, 0.28B 0.62D .04 SS	1
17	41169	NUT, HEX, LOCK, .25-20 NL, SS	1

REF	PART #	DESCRIPTION	QTY.
18	140509	NUT, 1/2-13 HEXJAM	1
19	140237	SCREW, HEX, .50-13 X 1.00 SS	2
20	140024	WASHER, LOCK, 0.50 SS	2
21	3148.816	WASHER, FLT, 0.52B 0.88D .06 STL	4
22	140139	SLEEVE, .625D, .500B, .25L	2
23	140546	NUT, 5/16-18 NYLOCK	2
24	230442	BRACKET, SQUEEGEE MOUNT	1
25	02991	SCREW, HEX, .31-18 X 0.75 SS	2
26	140824	SCREW, 1/4-20X5/8 TRSPHL	1
27	140016	WASHER, LOCK, 0.25 SS	1
28	140003	WASHER, 1/4X1 FENDER SS	1
29	230440.BK	BRACKET, SQUEEGEE PIVOT	1
30	1011094	●KNOB	2
31	230443.BK	WELDMENT, SQUEEGEE MOUNT PLATE	1
32	140911	SLEEVE, P/M, .622D, .505B, .68L	1
33	140204	SCREW, HEX, .50-13X1.50 SS	1

● RECOMMENDED STOCK ITEMS

SQUEEGEE GROUP



SQUEEGEE GROUP

REF	PART #	DESCRIPTION	QTY.
∇	603263	ASM, SQUEEGEE, CURVED TS-2700	1
	603264	ASM, SQUEEGEE, CURVED TS-3300	1
▲ 1	140799	SCREW, TRS, .31-18X1.50 PHL, SS	2
▲ 2	1014918	WHEEL, 3.0D 1.00W, RUBBER	2
▲ 3	602960	SQUEEGEE WELDMENT, TS-2700	1
	603247	SQUEEGEE WELDMENT, TS-3300	1
▲ 4	1011094	●KNOB	2
▲ 5	603260	GASKET, SQUEEGEE CURVED	1
▲ 6	140221	SCREW, HEX, .31-18X1.25 SS	2
▲ 7	140226	SCREW, HEX, .31-18X0.62 SS	2
▲ 8	140015	WASHER, LOCK, SPLIT, 0.31 SS	2
▲ 9	605975	SCREW, TRS, 10-24X0.50, PHL, SS	24-28
▲ 10	602963	PLATE, SQUEEGEE RETAINING TS-2700	2
	603248	PLATE, SQUEEGEE RETAINING TS-3300	2

∇ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
▲ 11	603661	●BLADE, SQUEEGEE 34" STANDARD (TS-2700)	2
	603662	●BLADE, SQUEEGEE 40" STANDARD (TS-3300)	2
OPTIONAL BLADES			
	606680	●BLADE, SQUEEGEE REAR, GUM RUBBER (TS-2700)	2
	607467	●BLADE, SQUEEGEE REAR, LINATEX (TS-2700)	2
	606682	●BLADE, SQUEEGEE REAR, GUM RUBBER (TS-3300)	2
	607468	●BLADE, SQUEEGEE REAR, LINATEX (TS-3300)	2
▲∇	700844	●ASM., SQUEEGEE ROLLER	2
▲▲ 12	230474	BRACKET, SQUEEGEE ROLLER	2
▲▲ 13	605317	ROLLER	2
▲▲ 14	140710	RIVET, AXLE .38D X 1.6	2