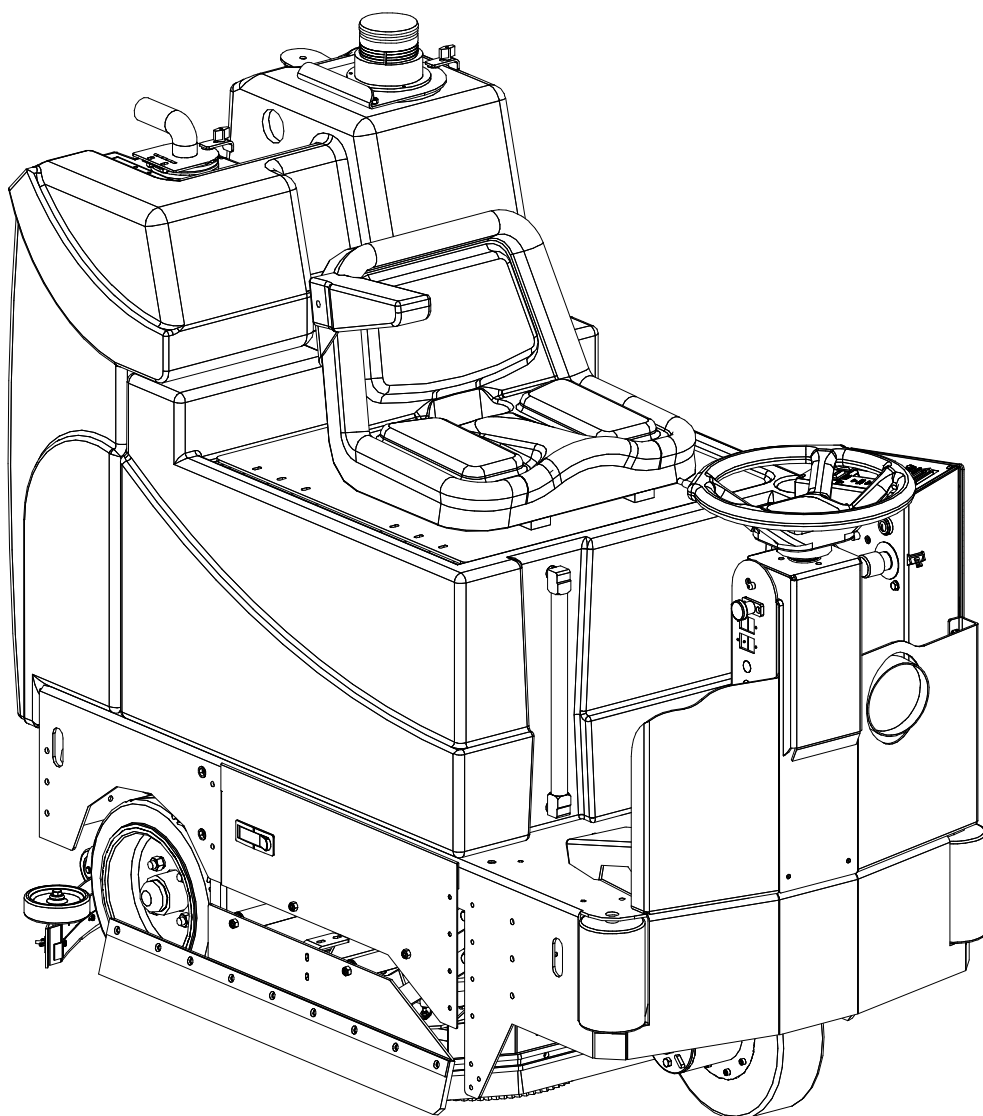




290/350 SERIES

Operating Instructions & Parts Manual (EN)



Read these Instructions before
using the machine.



Read these Safety Messages
before using the machine.

TABLE OF CONTENTS

Safety Messages	4
WARNING DECALS	6
MACHINE SPECS	7
COMMON WEAR PARTS	8
MACHINE CONTROLS AND FEATURES	9
MACHINE CONTROLS AND FEATURES	10
UN-CRATING MACHINE	11
CONNECTING BATTERIES	11
ATTACHING SQUEEGEE	11
ATTACHING DISK BRUSHES	12
ATTACHING CYLINDRICAL BRUSHES	12
OPERATION	13
PRE-CLEANING CHECK LIST	13
ONE PASS SCRUBBING	13
OPERATING HINTS	14
DRAINING RECOVERY TANK	14
DRAINING SOLUTION TANK	14
BATTERY CHARGING	15
CHARGER SPECIFICATIONS	15
MAINTENANCE	16
DAILY MAINTENANCE	16
WEEKLY MAINTENANCE	16
MONTHLY MAINTENANCE	16
YEARLY MAINTENANCE	16
STORING MACHINE	16
LCD SCREEN MENU DISPLAYS	17
TROUBLESHOOTING CENTRAL COMMAND	18
DIAGNOSTIC CODES	19
DIAGNOSTIC CODES	20
TROUBLE SHOOTING	21
TROUBLE SHOOTING	22
PREVENTATIVE MAINTENANCE	23
Machine Install / Warranty Registration	24
STANDARD WARRANTY POLICY (RPS Corporation)	25

Safety Messages

You will see four kinds of safety reminders in this manual:

 DANGER
DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING
WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to this machine or nearby objects. CAUTION also can be used to alert against unsafe practices.
NOTICE
NOTICE indicates information considered important, but not hazard-related. This safety message may be related to property damage or warranty warnings.

Your safety, and that of others, is very important. Operating this machine safely is an important responsibility.

DO NOT OPERATE THIS MACHINE UNLESS:

- You are trained and authorized to do so
- You have read and understood this Operator's Manual
- On surfaces with greater than a 2% grade unless this machine is equipped with a functional parking brake.

WHEN OPERATING THIS MACHINE:

- Remove loose objects from the floor that could be projected from the rotating brushes
- Keep your hands and feet away from the rotating brushes
- Do not operate this machine where flammable liquids are present
- Use caution when maneuvering

BEFORE LEAVING THE MACHINE:

- Park the machine on a level surface
- Turn the machine off

BEFORE SERVICING THE MACHINE:

- Disconnect the batteries

 DANGER Explosive hydrogen gas forms when batteries are charging. An open flame or spark can cause this gas to explode. Serious personal injury or property damage could occur. Only charge the batteries in this machine in a well ventilated area.	 DANGER Flammable materials can cause an explosion or fire. Do not use flammable materials in tank or pick up.
---	---

WARNING

The batteries in this machine produce hazardous voltage which can cause electrical shock, burns and/or electrocution. Always disconnect batteries before servicing this machine.

WARNING

When climbing or descending ramps, always drive machine forward. To avoid overturning the machine, Do not back down ramps. Do not drive across inclines. Do not turn while ascending or descending ramps. Overturning the machine can cause serious injury or death.

WARNING

Do not use water that exceeds 135°F / 57°C. If water is above said temperature, this will void the Tank Warranty.

WARNING

Do not park this machine on ramps or slopes. Always park this machine on a level, hard surface. Do not operate this machine outdoors or on uneven surfaces.

WARNING

The batteries in this machine contain sulfuric acid, which causes burns to skin. If battery acid contacts clothing or skin, rinse the effected area with cold water immediately. If battery acid gets on your face or in your eyes, flush the area immediately with cold water and seek medical attention.

WARNING

To avoid electrical shock, do not operate this machine over electrical floor outlets.

WARNING

Dress safely. Do not wear rings or metal wrist watches when servicing this machine, as they can cause an electrical short circuit which can cause serious burns.

WARNING

Do not remove, paint over or destroy warning decals. If warning decals become damaged, call 1-262-681-3583 for free replacements.

WARNING

Dress safely. Do not wear a neck tie, scarf, or any loose or dangling clothing while operating this machine. Loose or dangling clothing or neck-wear can tangle in rotating parts, causing serious injury or death.

WARNING

Always turn off this machine before leaving it unattended. Do not allow untrained persons to operate this machine.

WARNING

NO EXTRA RIDERS. Do not carry passengers on this machine. Do not use this machine as a stepladder or work platform.

WARNING

Understand the dynamic braking system before you operate the machine on ramps. Machine may coast.

CAUTION

To avoid damage to this machine, use only cleaning solutions and replacement parts recommended by the manufacturer.

CAUTION

Do not operate this machine if any parts have been damaged or removed.

CAUTION

Always use the automatic battery charger provided by the manufacturer of this machine to charge the batteries of this machine. It is designed to charge the batteries at the appropriate rate. If you must use a different charger, disconnect the batteries before charging to avoid damage to the electronic speed controller.

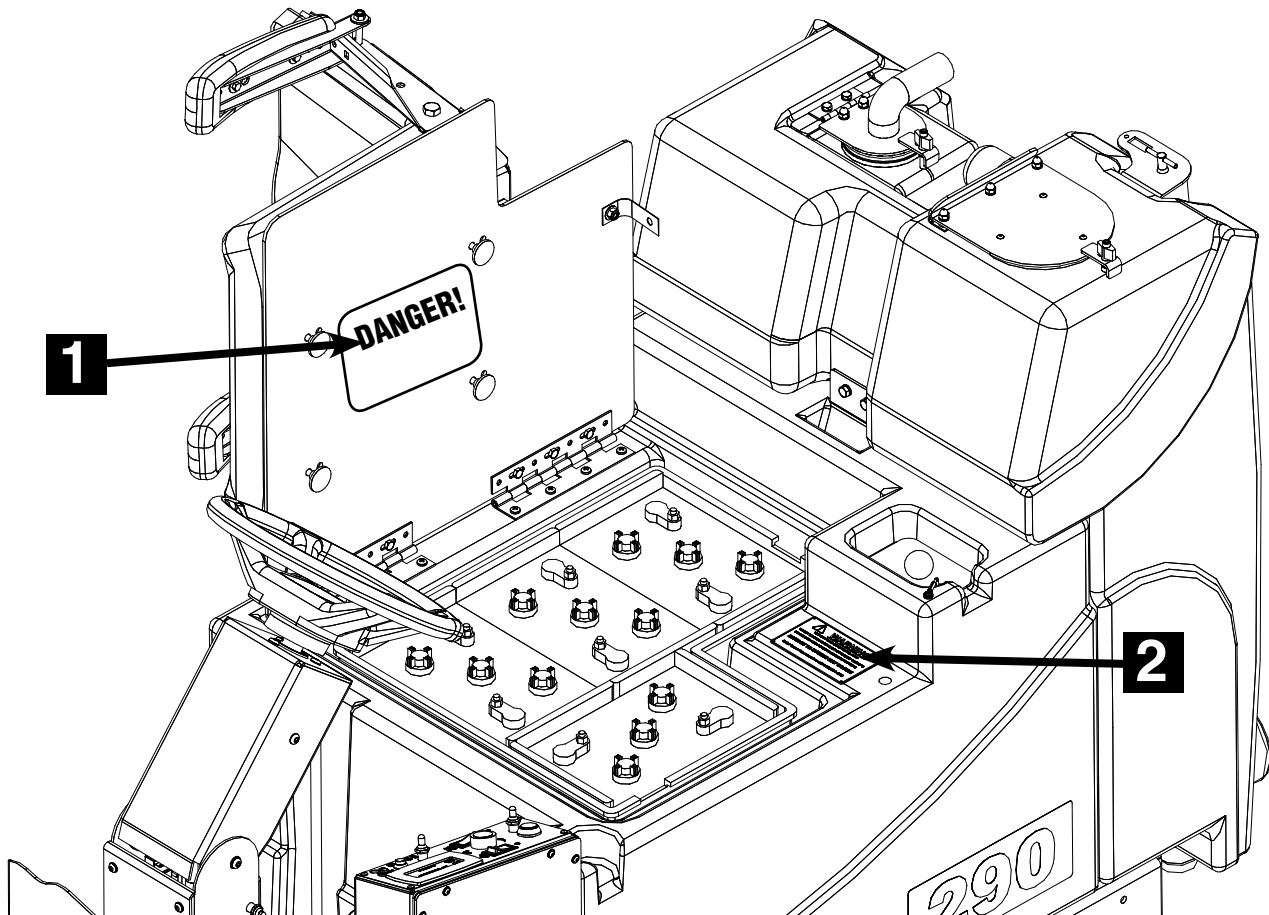
CAUTION

To avoid damage to the electronic control components of this machine, Do not store this machine outdoors. Do not pressure wash this machine.

WARNING DECALS

READ AND OBEY ALL WARNING DECALS ON YOUR RPS FLOOR SCRUBBER, FLOOR SWEEPER, OR FLOOR BURNISHER. IF YOU HAVE QUESTIONS ABOUT THESE WARNINGS, ASK YOUR SUPERVISOR.

IF A DECAL IS DAMAGED OR MISSING, REPORT IT TO YOUR SUPERVISOR. RPS WILL REPLACE IT WITHOUT CHARGE.



1. DANGER! : EXPLOSION RISK

2. DETERGENT IN SYSTEM CAUTION - ONLY USE APPROVED DETERGENTS

IF A DECAL IS DAMAGED OR MISSING, REPORT IT TO YOUR SUPERVISOR. RPS WILL REPLACE IT WITHOUT CHARGE.

1-262-681-3583

MACHINE SPECS

MODEL

290

350

BODY CONSTRUCTION/DIMENSIONS

TANK MATERIAL:	POLY	POLY
CHASSIS CONSTRUCTION:	$\frac{3}{16}$ " STEEL	$\frac{3}{16}$ " STEEL
REAR WHEELS:	12" x 5"	12" x 5"
FRONT WHEEL:	12" x 4"	12" x 4"
SIZE (L x W x H):	61" x 29"	61" x 35"
SQUEEGEE SIZE:	32", 35", OR 38"	35", 38", OR 45"
WEIGHT (WITHOUT BATTERIES):	750 LBS.	810 LBS.
WEIGHT (WITH BATTERIES):	1,260 LB.	1,320 LB.

BRUSH/PAD SYSTEM

BRUSH/PAD DIAMETER (DISK):	(2 x) 15.5"	(2 x) 18"
DRIVE TO BRUSH (DISK):	DIRECT	DIRECT
SCRUBBING PATH (DISK):	29"	35"
BRUSH MOTOR POWER (DISK):	(2 x) 1.0 HP	(2 x) 1.0 HP
BRUSH MOTOR SPEED (DISK):	350 RPM	350 RPM
BRUSH SPEED (DISK):	350 RPM	350 RPM
BRUSH SIZE (CYLINDRICAL):	(2 x) 26"	(2 x) 28" OR (2 x) 32"
DRIVE TO BRUSH (CYLINDRICAL):	CHAIN	CHAIN
SCRUBBING PATH (CYLINDRICAL):	26"	28" OR 32"
BRUSH MOTOR POWER (CYLINDRICAL):	2.0 HP	2.0 HP
BRUSH MOTOR POWER (CYLINDRICAL):	800 RPM	800 RPM
BRUSH MOTOR SPEED (CYLINDRICAL):	800 RPM	800 RPM
BRUSH DOWN PRESSURE:	0-200 LB.	0-250 LB.
BRUSH ADJUSTMENT:	(5 x) AUTOMATIC SETTINGS	(5 x) AUTOMATIC SETTINGS

SOLUTION SYSTEM

SOL. TANK CAPACITY:	38 GAL	38 GAL
SOLUTION FLOW RATE:	0-1.75 GPM	0-1.75 GPM

RECOVERY SYSTEM

REC. TANK CAPACITY:	40 GAL	40 GAL
VACUUM POWER (STANDARD):	1.0 HP	1.0 HP
VACUUM POWER (OPTIONAL):	2.0 HP	2.0 HP
DRAIN HOSE:	2"	2"
CLEAN OUT DOOR (OPTIONAL):	5"	5"
WATERLIFT:	70"	70"

BATTERY SYSTEM

BATTERY AH RATING:	(4 x) 396 Ah	(4 x) 396 Ah
BATTERY RUN TIME:	UP TO 6 HRS.	UP TO 6 HRS.
CHARGER (AUTOMATIC):	36 AMP, 110 VOLT	36 AMP, 110 VOLT

DRIVE SYSTEM

TRANSAXLE DESCRIPTION:	2.0 HP, SEALED	2.0 HP, SEALED
SPEED CONTROL:	0-5 MPH	0-5 MPH
BRAKING SYSTEM:	DYNAMIC BRAKING	DYNAMIC BRAKING

PRODUCTIVITY

SCRUBBING WIDTH:	29"	35"
SCRUBBING RATE/HOUR (NORMAL):	35,000 FT/HR	45,000 FT/HR
SCRUBBING RATE/HOUR (MAXIMUM):	47,000 FT/HR	58,000 FT/HR

WARRANTY

PARTS:	3 YEARS	3 YEARS
LABOR:	1 YEAR	1 YEAR
TANKS:	10 YEARS	10 YEARS

COMMON WEAR PARTS

<u>ITEM</u>	<u>MODEL 290-D</u>	<u>MODEL 290-C</u>	<u>MODEL 350-D</u>	<u>MODEL 350-C</u>
BRUSH TYPE	DISK	CYLINDRICAL	DISK	CYLINDRICAL
BRUSHES:				
SUPER-GRIT	15-421SS	N/A	18-421SS	N/A
TOUGH-GRIT	15-421S	25-521S	18-421S	32-521S
MIDI-GRIT	15-421S	25-521C	18-421C	32-521C
LIGHT-GRIT	15-421PS	25-521PS	18-421PS	32-521PS
POLY (.028)	15-421P	25-521P	18-421P	32-521P
NYLON (.016)	15-421N	25-521N	18-421N	32-521N
TAMPICO	15-421T	25-521T	18-421T	32-521T
PAD DRIVER	15-421D	N/A	18-421D	N/A

EXTRA PAD DRIVER RETAINING CLIP: 40-433

BRUSH REPAIR KIT: 40-423 REPLACEMENT LOCATING CLIP FOR ALL DISK BRUSHES

PADS:

SUPER BLACK	15-422BB	N/A	18-422BB	N/A
BLACK	15-422B	N/A	18-422B	N/A
BROWN	15-422BR	N/A	18-422BR	N/A
GREEN	15-422G	N/A	18-422G	N/A
BLUE	15-422B	N/A	18-422B	N/A
RED	15-422R	N/A	18-422R	N/A
WHITE	15-422W	N/A	18-422W	N/A

SQUEEGEE KITS

SIZE	GUM RUBBER	NEOPRENE	LINATEX
32"	22-770G	22-770N	22-770L
35"	25-770G	25-770N	25-770L
38"	28-770G	28-770N	28-770L
45"	290-770G	290-770N	290-770L

KIT INCLUDES: (1 ×) REAR BLADE, (1 ×) FRONT BLADE, AND (2 ×) BACKUP WHEELS WITH HARDWARE

NOTE: IT IS STAMPED INTO THE TOP OF THE SQUEEGEE BLANK, ON 32", 35", 38", AND 45" SQUEEGEES.

MODEL 290: HAS A 38" SQUEEGEE UNLESS OTHER SIZE IS SPECIFICALLY ORDERED AT TIME OF PURCHASE

MODEL 350: HAS A 45" SQUEEGEE UNLESS OTHER SIZE IS SPECIFICALLY ORDERED AT TIME OF PURCHASE

NOTE: THE 32" AND 35" SQUEEGEES ARE DESIGNED FOR NARROW ISLES AND MAY NOT HAVE THE SAME WATER CONTROL AROUND TIGHT TURNS AS THE LARGER SQUEEGEES.

SOAP

HEAVY DUTY DE-GREASER

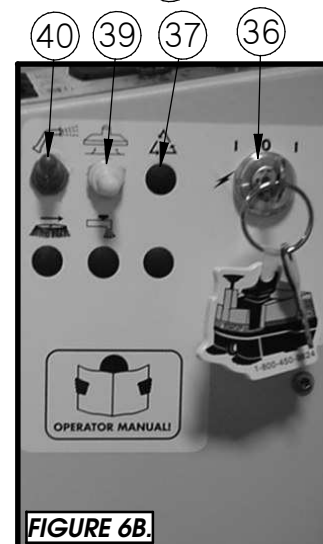
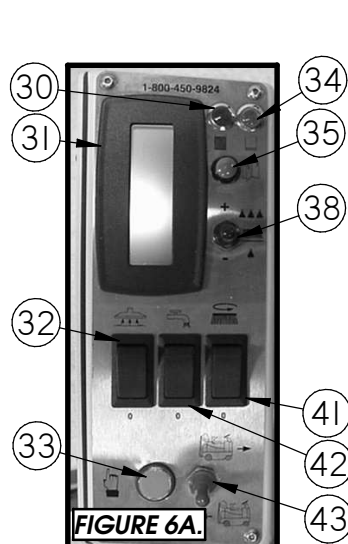
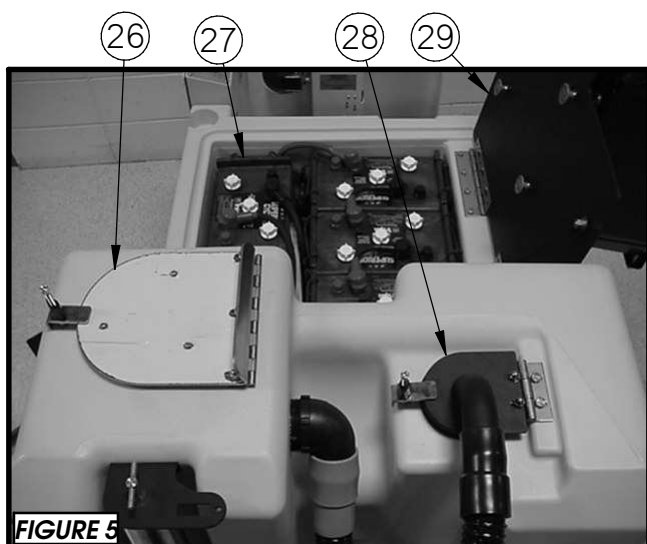
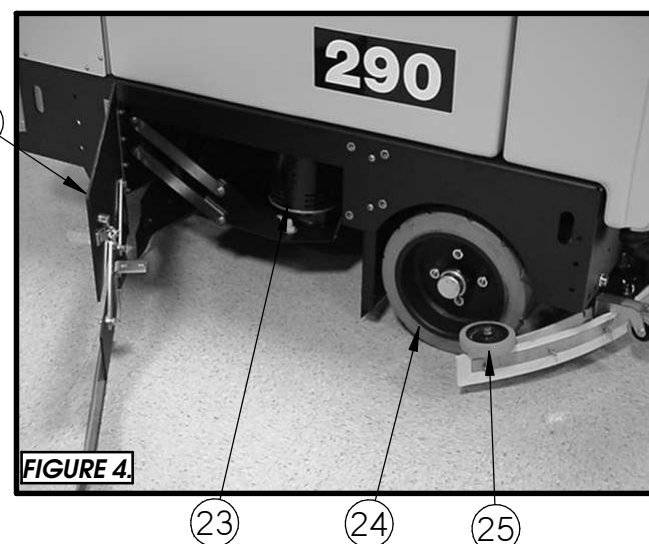
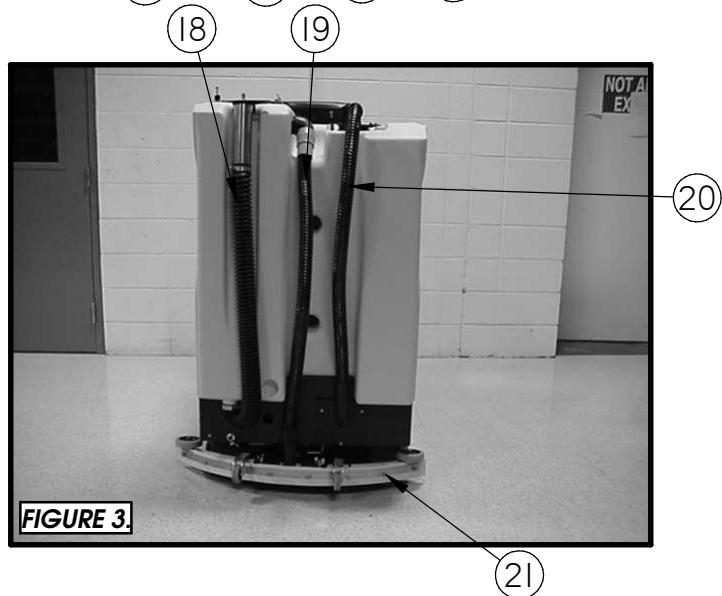
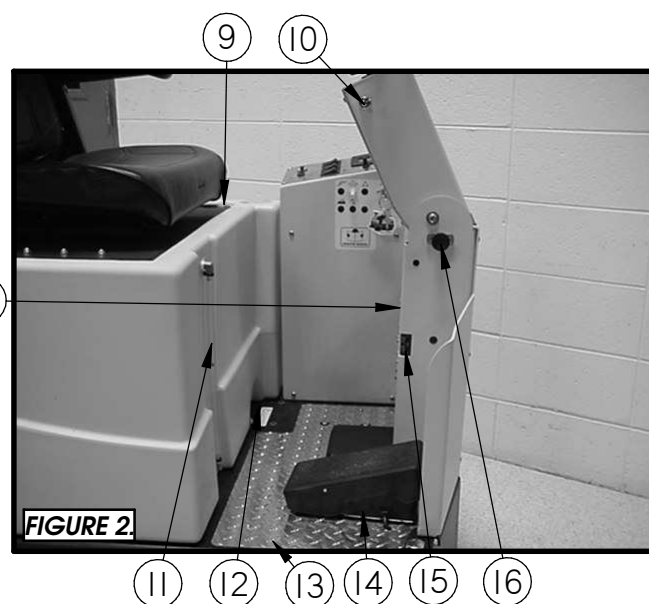
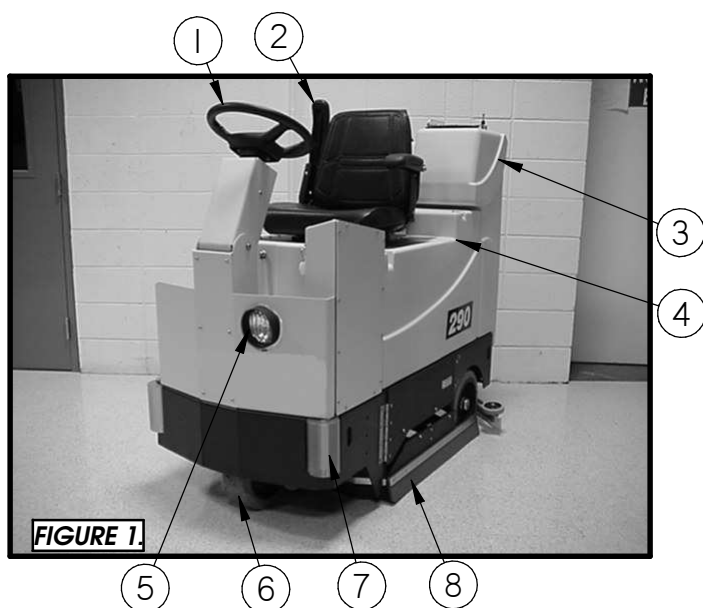
CITRUS

FREEZER

TIRE MARK REMOVER

CALL YOUR LOCAL DEALER FOR MORE SOAP INFORMATION

MACHINE CONTROLS AND FEATURES



MACHINE CONTROLS AND FEATURES

SEE FIGURE 1

1. STEERING WHEEL: STEERS THE MACHINE.
2. ADJUSTABLE SEAT WITH ARM RESTS: YOUR MACHINE IS EQUIPPED WITH AN ADJUSTABLE SEAT WITH ARM RESTS FOR COMFORT
3. RECOVERY TANK: HOLDS UP TO 40 GALLONS OF DIRTY WATER RECOVERED BY THE MACHINE.
4. SOLUTION TANK: HOLDS UP TO 38 GALLONS OF CLEAN WATER AND SOLUTION DETERGENT.
5. HEAD LIGHT: HELPS YOU SEE IN LOW LIGHT AREAS AND TO WARN ONCOMING TRAFFIC.
6. FRONT DRIVE WHEEL: DRIVES AND STEERS MACHINE.
7. BUMPER ROLLERS: HELPS PREVENT DAMAGE TO MACHINE AND OBJECTS THAT YOU MAY DRIVE CLOSE TO WHILE CLEANING.
8. DOOR WIPER: GOES UP AND DOWN WITH SCRUB DECK TO KEEP WATER FROM SPLASHING OUT OF MACHINE.

SEE FIGURE 2.

9. SEAT ADJUSTMENT: PERMITS THE SEAT TO BE ADJUSTED FORWARD AND BACKWARDS FOR OPERATORS COMFORT.
10. HORN BUTTON: SOUNDS THE HORN FOR WARNING ONCOMING TRAFFIC.
11. SOLUTION LEVEL INDICATOR: SHOWS OPERATOR THE PRECISE LEVEL OF CLEANING DETERGENT IN THE TANK.
12. SOLUTION FLOW CONTROL: USED TO MODULATE THE SOLUTION FLOW (GPM).
13. NON SLIP FLOOR PLATE: HELPS PREVENT SLIPPING WHILE GETTING ON AND OFF OF MACHINE.
14. FOOT PEDAL : CONTROLS THE ACCELERATION AND DECELERATION OF THE MACHINE.
15. CHARGER PORT: RED 50 USED TO RECEIVE CHARGER INPUT. NOTE: ONLY USE CHARGER PROVIDED.
16. ADJUSTABLE STEERING: FOUR SETTINGS FOR OPERATOR COMFORT AND EASE OF ENTRY.
17. CIRCUIT BREAKER: 50 AMP RESET-ABLE CIRCUIT BREAKER.

SEE FIGURE 3

18. RECOVERY DRAIN HOSE: ALLOWS FOR CONTROLLED DRAINING OF THE RECOVERY TANK.
19. VACUUM HOSE: VACUUMS SQUEEGEE . NOTE: KEEP FREE AND CLEAR OF BLOCKAGE.
20. VACUUM HOSE: MAIN VACUUM HOSE FROM VACUUM TO RECOVERY TANK.
21. SQUEEGEE BLADE: SQUEEGEES WATER TO BE RECOVERED BY THE VACUUM HOSE.

SEE FIGURE 4

22. SIDE DOOR: PROVIDES EASY ACCESS TO SCRUB DECK.
23. SCRUB DECK: MAIN COMPONENTS THAT SCRUB AND CLEAN FLOORS.
24. REAR WHEELS: NON MARKING REAR TIRES
25. SQUEEGEE BLADE PROTECTION WHEELS: HELP PROTECT THE SQUEEGEE WHEN CLEANING CLOSE TO OBJECTS.

SEE FIGURE 5

26. RECOVERY ACCESS DOOR: USED FOR FLUSHING OUT RECOVERY TANK WITH FRESH WATER.
27. BATTERIES: YOUR MACHINE IS EQUIPPED WITH FOUR (6 VOLT DEEP CYCLE 396 AMP HOUR BATTERIES)
28. FOAM PROTECTION SCREEN: USED TO PROTECT VACUUM MOTOR FROM DEBRIS.
29. BATTERY ACCESS LID: USED TO VENT BATTERIES DURING CHARGING, OR TO ACCESS BATTERIES FOR SERVICE.

SEE FIGURES 6A AND 6B

30. HIGH WATER RECOVERY LIGHT: INDICATES WHEN THE RECOVERY TANK IS NEARLY FULL.
31. LCD SCREEN: LISTS FUNCTIONS AND SETTING OF THE MACHINE. (SEE PAGES 17-19)
32. SQUEEGEE SWITCH: RAISES AND LOWERS THE SQUEEGEE.
33. ONE TOUCH BUTTON: ACTIVATES BRUSHES, SQUEEGEE, VACUUM SYSTEM, AND SOLUTION FLOW SIMULTANEOUSLY.
34. LOW WATER SOLUTION LIGHT: INDICATES WHEN THE SOLUTION TANK IS DOWN TO 5 GALLONS.
35. MENU CONTROL: SCROLLS THROUGH DIFFERENT OPTIONS ON THE LCD DISPLAY.
36. KEY SWITCH: TURNS THE MAIN POWER ON AND OFF.
37. OPTIONAL RECYCLING SWITCH: TURNS ON THE RECYCLING PUMP. (GREEN)
38. SCRUB DECK DOWN PRESSURE SWITCH: CONTROLS THE PRESSURE PUT ON THE SCRUB DECK.
39. VACUUM WAND SWITCH: TURNS ON THE VACUUM MOTOR. (WHITE)
40. OPTIONAL SPRAY JET: TURNS ON THE SPRAY JET PUMP. (BLUE)
41. SCRUB DECK SWITCH: RAISES AND LOWERS THE SCRUB DECK.
42. SOLUTION SWITCH: OPENS AND CLOSSES THE SOLUTION VALVE. GLOWS BLUE WHEN OPEN.
43. FORWARD/REVERSE SWITCH: CONTROLS THE DIRECTION OF THE TRACTION MOTOR. (RED)

UN-CRATING MACHINE

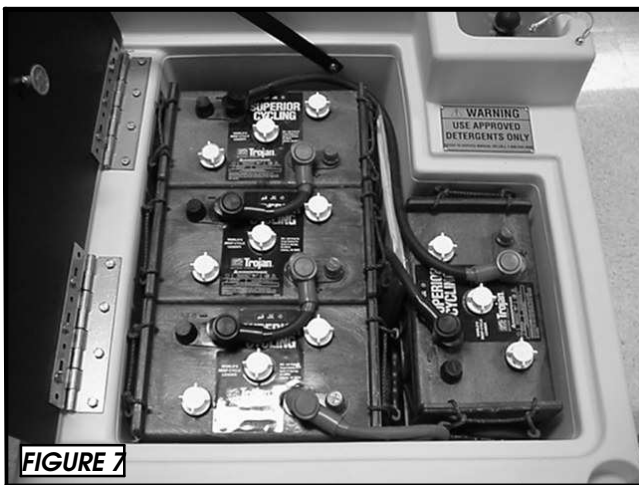
CAREFULLY CHECK THE CRATE FOR ANY SIGNS OF DAMAGE. BATTERIES ARE IN THE UNIT.

TO UN-CRATE THE MACHINE, REMOVE BANDING FROM AROUND THE CRATE. TAKE OFF THE TOP AND SIDES AND DISPOSE OF PROPERLY. REMOVE BANDING FROM MACHINE. REMOVE THE CHOCKS AROUND THE DRIVE WHEELS. FOLD DOWN RAMP, AND DRIVE MACHINE OFF OF THE BASE. NOTIFY THE CARRIER IMMEDIATELY IF CONCEALED DAMAGE IS DISCOVERED.

CONNECTING BATTERIES

YOUR MACHINE IS EQUIPPED WITH (FOUR) 6 VOLT, DEEP CYCLE, 396 AMP HOURS BATTERIES, WHICH FORM A 24 VOLT SYSTEM. MAXIMUM BATTERY DIMENSIONS ARE 7"W X 15"L X 15"H.

1. TURN ALL SWITCHES TO THE OFF POSITION AND REMOVE KEY.
2. HINGE OPEN THE BATTERY ACCESS LID TO ACCESS THE BATTERY COMPARTMENT.
3. ALL OF THE FOUR BATTERY CABLES ARE CONNECTED TO THE BATTERIES. LOCATE ANY LOOSE ONES AND CONNECT TO THE OPEN TERMINAL. TIGHTEN WITH 9/16" WRENCH. (SEE FIGURE 7.)
4. TURN ON MAIN POWER SWITCH AND CHECK THE BATTERY CONDITION METER TO ENSURE CORRECT INSTALLATION. CHARGE BATTERIES IF NEEDED. (SEE: **BATTERY CHARGING**)

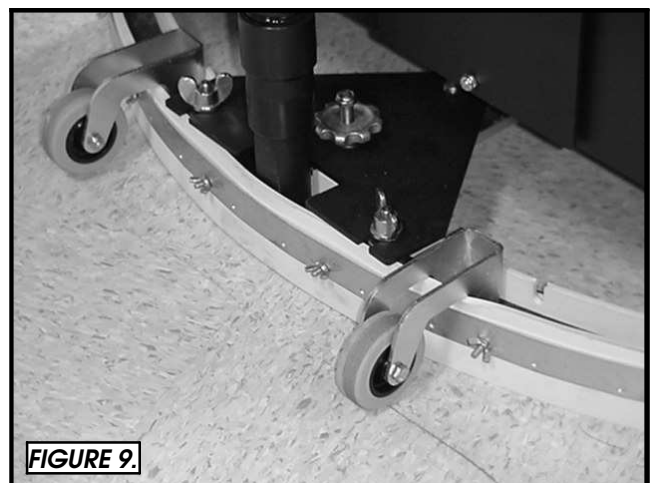


ATTACHING SQUEEGEE

1. LOWER THE SQUEEGEE MOUNTING PLATE BY DEPRESSING THE SQUEEGEE SWITCH TO THE DOWN POSITION. (SEE FIGURE 8.)



2. LOOSEN THE TWO WING NUTS ON THE SQUEEGEE AND SLIDE THEM INTO THE SLOTS IN THE SQUEEGEE MOUNTING PLATE. THE SQUEEGEE TRAIL WHEELS SHOULD FACE OUTWARD. (SEE FIGURE 9.)
3. TIGHTEN THE TWO WING-NUTS, AND CONNECT VACUUM HOSE FROM THE MACHINE TO THE SQUEEGEE. (SEE FIGURE 9.)
4. YOU MAY HAVE TO ADJUST THE SQUEEGEE PITCH, BY USING THE PITCH ADJUSTMENT. (SEE FIGURE 9.)

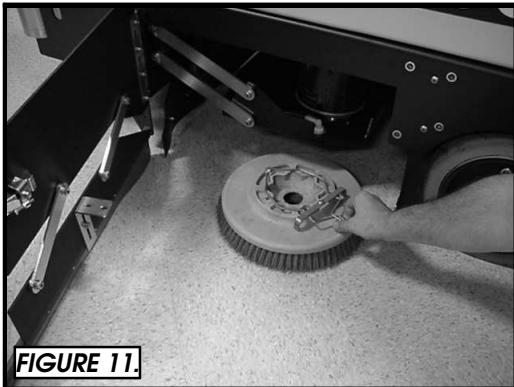


ATTACHING DISK BRUSHES

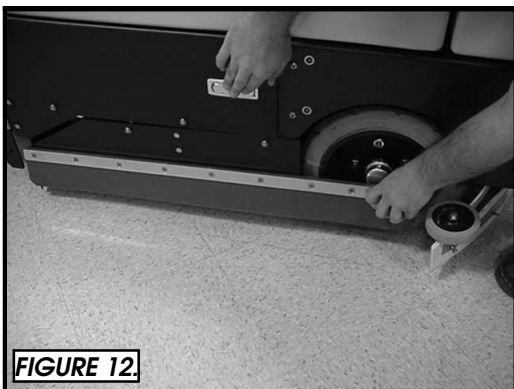
1. TURN ON MACHINE POWER
2. RAISE THE SCRUB DECK BY DEPRESSING THE BRUSH SWITCH TO THE UP AND OFF POSITION AND TURN MACHINE POWER BACK OFF. (SEE FIGURE 10.)



3. OPEN SIDE DOOR TO ACCESS SCRUB DECK
4. SELECT THE CORRECT PADS OR BRUSHES THAT BEST MEET YOUR CLEANING APPLICATION. CONSULT YOUR LOCAL DEALER FOR ASSISTANCE.
5. PAD INSTALLATION ATTACH PADS TO PAD DRIVERS BEFORE CONNECTING DRIVERS TO MOTOR HUB.
6. ATTACH BRUSHES OR PADS TO MOTOR HUBS. SQUEEZE THE SCISSOR LOCKING DEVICE AND LIFT BRUSH UP ON TO THE MOTOR DRIVE HUB. MAKE SURE THE SCISSORS CLOSE AND LOCK ONCE THE BRUSHES ARE ON. (SEE FIGURE 11.)

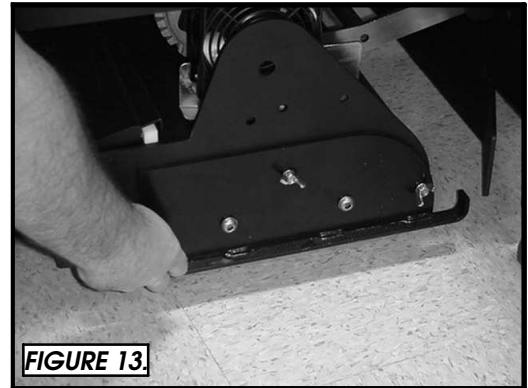


7. LIFT UP ON THE WIPERS FIRST TO CLOSE SIDE DOOR AND DEPRESS THE LATCH UNTIL THE DOOR IS SECURED. (SEE FIGURE 12.)



ATTACHING CYLINDRICAL BRUSHES

1. TURN ON MACHINE POWER
2. RAISE THE SCRUB DECK BY DEPRESSING THE BRUSH SWITCH TO THE UP AND OFF POSITION AND TURN MACHINE POWER BACK OFF. (SEE FIGURE 10.)
3. OPEN THE SIDE DOOR TO ACCESS CYLINDRICAL SCRUB DECK
4. UNSCREW THE THREE WING-NUTS ON THE BRUSH ACCESS DOOR AND REMOVE THE DOOR. (SEE FIGURE 13.)



5. SLIDE THE BRUSHES IN ONE AT A TIME. WHEN YOU GET THE BRUSH ON THE DRIVER SPIN IT WITH YOUR HAND UNTIL YOU FEEL IT ENGAGE AND DROP IN. (SEE FIGURE 14.)



6. WHEN BOTH BRUSHES ARE ENGAGED REPLACE THE BRUSH ACCESS DOOR AND TIGHTEN IT BACK DOWN WITH THE WING-NUTS. (SEE FIGURE 15.)



7. LIFT UP ON THE WIPERS FIRST TO CLOSE SIDE DOOR AND DEPRESS THE LATCH UNTIL THE DOOR IS SECURED. (SEE FIGURE 12.)

OPERATION

PRE-CLEANING CHECK LIST

READ AND UNDERSTAND THE SAFETY SECTION ON PAGE 5 AND 6 BEFORE OPERATING MACHINE.

1. CHECK BATTERY CONDITION GAUGE ON THE CENTRAL COMMAND II LCD SCREEN. TO CHECK GAUGE PUSH MENU CONTROL BUTTON UNTIL BATTERY GAUGE APPEARS. MAKE SURE BATTERIES ARE FULLY CHARGED BEFORE USING.
2. CHECK THE CONDITION OF PADS OR BRUSHES.
3. CHECK THE CONDITION OF THE SQUEEGEE BLADES.
4. TRANSPORT THE MACHINE TO THE FILLING STATION. RAISE THE SCRUB-HEAD AND SQUEEGEE WHEN TRANSPORTING.
5. TURN MACHINE OFF.
6. OPEN SOLUTION FILL DOOR AT THE SIDE OF THE MACHINE AND FILL THE TANK WITH UP TO 38 GALLONS OF CLEAN WATER. THE CLEAR TUBE AT THE FRONT OF THE MACHINE INDICATES THE AMOUNT OF WATER IN THE TANK.
7. ADD CLEANING CHEMICAL. USE THE PROPER DILUTION RATIO INDICATED ON THE BOTTLE.

NOTE: USE ONLY NONFLAMMABLE COMMERCIAL CLEANING CHEMICALS. YOUR AUTHORIZED DISTRIBUTOR CAN ASSIST YOU IN SELECTING A PROPER CHEMICAL.



FIGURE 16.

ONE PASS SCRUBBING

STEPS: (SEE FIGURE 17.)

1. TURN MACHINE ON WITH THE KEY SWITCH.
2. LOWER SQUEEGEE BY PRESSING THE SWITCH.
3. LOWER SCRUB HEAD TO THE FLOOR, USE THE TOP HALF (+) OF THE BRUSH SWITCH.
4. TURN ON THE SOLUTION SWITCH AND ADJUST THE SOLUTION LEVER TO THE DESIRED SETTING.
5. BEGIN SCRUBBING BY DEPRESSING THE FOOT PEDAL SLOWLY AND THEN TO THE SPEED REQUIRED, THE HEADLIGHT SHOULD ILLUMINATE.
6. ONCE THE MACHINE BEGINS TO MOVE, CHECK THE DOWN PRESSURE GAUGE. START SCRUBBING AT THE #1 OR #2 MARKS, DO NOT USE THE #4 OR #5 MARKS WITHOUT MANAGER'S APPROVAL.
7. TO OPERATE MACHINE IN REVERSE, SIMPLY SWITCH THE REVERSE SWITCH TO THE REVERSE POSITION, BACK UP ALARM MAY SOUND AND YOUR REV SPEED IS SET TO ROUGHLY 50% OF FORWARD.
8. TO STOP THE MACHINE, LET OFF OF THE FOOT PEDAL, AND THE MACHINE WILL STOP AUTOMATICALLY.

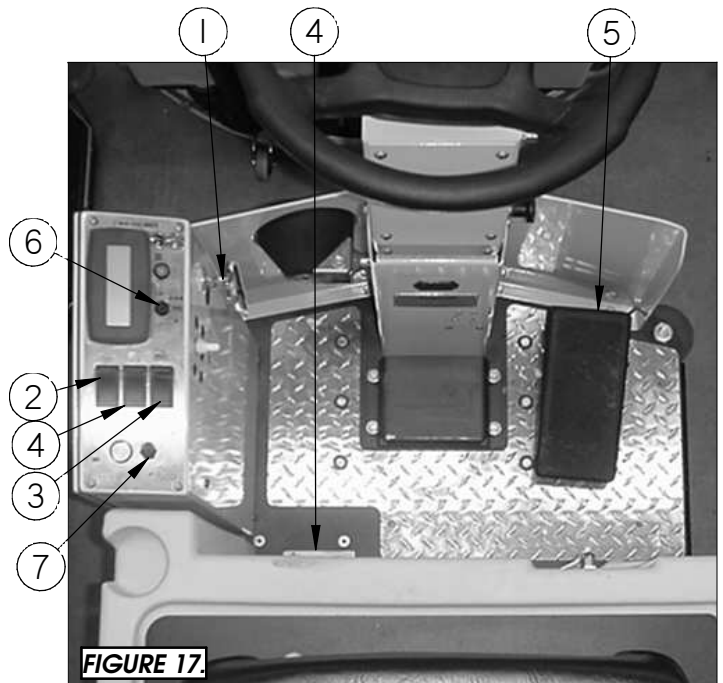


FIGURE 17.

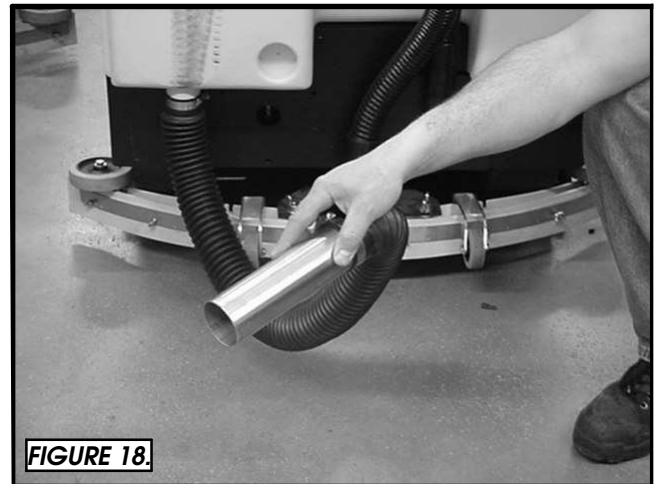
OPERATING HINTS

1. OBSERVE THE AMOUNT OF SOLUTION THE MACHINE IS DISPENSING ON THE FLOOR AND ADJUST TO THE DESIRED FLOW. TO INCREASE THE SOLUTION FLOW RATE, MOVE THE SOLUTION LEVER TO THE OPERATORS RIGHT. TO SHUT THE SOLUTION OFF COMPLETELY, USE THE SWITCH, OR JUST RELEASE THE FOOT PEDAL.
2. KEEP AN EYE ON THE REC FULL LIGHT TO MAKE SURE THERE IS NOT FOAMY BUILDUP IN THE RECOVERY TANK. IF EXCESS FOAM BEGINS TO DEVELOP, POUR A RECOMMENDED FOAM CONTROL SOLUTION INTO THE RECOVERY TANK. FOAM IS USUALLY AN INDICATION OF EXCESSIVE SOAP.
3. ALWAYS OPERATE AT LOWER SPEEDS WHEN SCRUBBING AROUND WALLS AND OBJECTS. YOU SHOULD REDUCE THE SPEED, TO MAINTAIN CONTROL WHEN TURNING.
4. IF SQUEEGEE STARTS TO STREAK, RAISE AND WIPE THE BLADES WITH A CLEAN CLOTH. IF THE PROBLEM CONTINUES, CHECK THE BLADES FOR WEAR OR DAMAGE, AND ROTATE IF NEEDED. YOU NEED TO PRE-SWEEP BEFORE SCRUBBING.
5. CHANGE OR TURN OVER PADS WHEN DIRTY. ROTATE THE SCRUB BRUSHES EVERY WEEK.
6. STAY CLEAR OF OBJECTS PROTRUDING FROM THE FLOOR, SUCH AS SOCKETS, GRATES, DIES, FOR THEY WILL DAMAGE THE PADS AND SQUEEGEE BLADES.
7. DURING BRIEF STOPS YOU DO NOT HAVE TO TURN ANYTHING OFF, THE BRUSHES AND SOLUTION WILL AUTOMATICALLY STOP WHEN THE FOOT PEDAL IS RELEASED.
8. ALWAYS KEEP AN EYE ON YOUR GAUGES. THEY LET YOU KNOW THE STATUS OF A PARTICULAR SYSTEM AT A GLANCE. IF YOUR BATTERY GAUGE IS READING LOW, YOU MUST STOP IMMEDIATELY, AND RECHARGE. RUNNING THE BATTERIES DEAD, WILL RESULT IN DAMAGE TO THE BATTERIES. EXCESSIVE SCRUBBING PRESSURE WILL BLOW A BREAKER.
9. WHEN YOU RUN OUT OF SOLUTION, RAISE THE BRUSHES, AND CONTINUE TO VACUUM THE REMAINING WATER UNTIL IT IS CONSUMED. THE SOLUTION SIGHT HOSE IS USED TO INDICATE THE LEVEL OF DETERGENT REMAINING IN THE TANK.
10. WHEN YOU ARE READY TO STOP, PICK UP THE BRUSHES, TURN OFF THE SOLUTION SWITCH, PICK UP THE SQUEEGEE, AND DRIVE THE MACHINE BACK TO THE CHARGING AREA. BE SURE TO DRAIN BOTH TANKS BEFORE STORING MACHINE.

DRAINING RECOVERY TANK

ALWAYS EMPTY RECOVERY TANK WHEN REFILLING THE SOLUTION TANK. TO DRAIN THE RECOVERY TANK, PERFORM THE FOLLOWING STEPS.

1. REMOVE DRAIN HOSE FROM THE EXPANSION PLUG HOLDER BY TUNING THE T-HANDLE COUNTER CLOCKWISE. OPEN THE TOP "RECOVERY ACCESS LID" AND FLUSH OUT WITH WATER TO KEEP TANK CLEAN. (SEE FIGURE 18.)

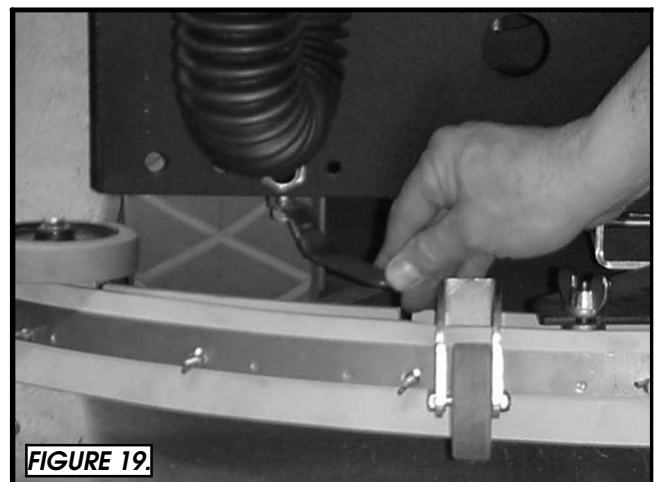


2. RINSE THE RECOVERY TANK AFTER EVERY USE. THIS WILL PREVENT HEAVY BUILDUP ON THE BOTTOM OF THE TANK, FOUL ODORS, AND CLOGGING OF THE DRAIN HOSE.
3. ONCE TANK IS EMPTY, PUT DRAIN HOSE BACK ON THE PLUG AND TIGHTEN BY TURNING THE T-HANDLE CLOCK WISE.

DRAINING SOLUTION TANK

TO DRAIN LEFT OVER CLEANING SOLUTION FROM THE SOLUTION TANK, PERFORM THE FOLLOWING STEPS. (SEE FIGURE 19.)

1. ROTATE THE BLUE SOLUTION TANK DRAIN VALVE OUTWARDS.



BATTERY CHARGING

! CAUTION

Always use the automatic battery charger provided by the manufacturer of this machine to charge the batteries of this machine. It is designed to charge the batteries at the appropriate rate. If you must use a different charger, disconnect the batteries before charging to avoid damage to the electronic speed controller.

CHARGER SPECIFICATIONS

OUTPUT VOLTAGE OF 24 VOLTS.
OUTPUT CURRENT OF 36 AMPS MAX.
INPUT VOLTAGE OF 110 VOLTS/60 HZ.
AUTOMATIC SHUT OFF CIRCUIT.
MADE FOR DEEP CYCLE BATTERIES.

! WARNING

Explosive hydrogen gas forms when batteries are charging. An open flame or spark can cause this gas to explode. Serious personal injury or property damage could occur. Only charge the batteries in this machine in a well ventilated area. Leave access panel open when charging!

1. TRANSPORT MACHINE TO A WELL VENTILATED AREA FOR CHARGING.
2. TURN THE MACHINE OFF.
3. HINGE OPEN THE BATTERY ACCESS PANEL TO EXPOSE THE BATTERIES. (SEE FIGURE 20.)

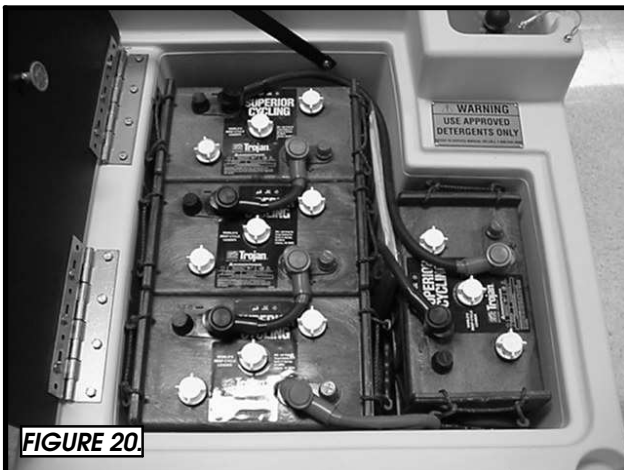


FIGURE 20.

! WARNING

The batteries in this machine contain sulfuric acid, which causes burns to skin. If battery acid contacts clothing or skin, rinse the effected area with cold water immediately. If battery acid gets on your face or in your eyes, flush the area immediately with cold water and seek medical attention.

4. CHECK THE WATER LEVEL IN EACH BATTERY. DO NOT CHARGE THE MACHINE UNLESS THE WATER IS SLIGHTLY HIGHER THAN THE PLATES. IF NEEDED, ADD ENOUGH DISTILLED WATER TO JUST SLIGHTLY COVER THE PLATES. DO NOT OVER FILL. BATTERIES CAN OVERFLOW DURING CHARGING. REPLACE CAPS BEFORE CHARGING.
5. WITH THE RED CHARGER PLUG DISCONNECTED FROM THE MACHINE, PLUG THE CHARGER POWER CORD INTO A GROUNDED 110 VOLT STANDARD WALL OUTLET. (SEE FIGURE 21.)
6. CONNECT THE RED CHARGER PLUG INTO THE BATTERY CHARGING PORT LOCATED ON THE LOWER PORTION OF THE STEERING TOWER.

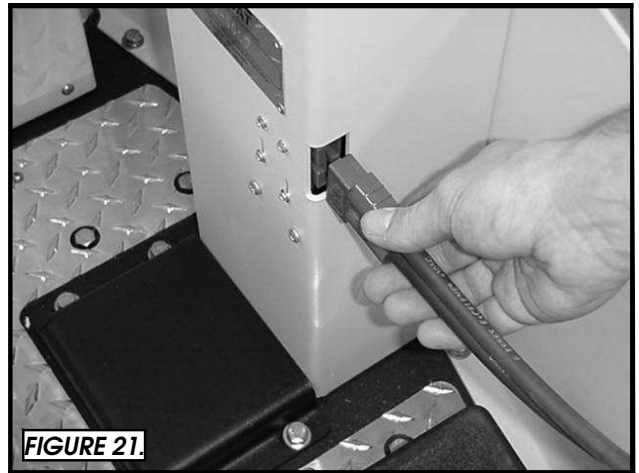


FIGURE 21.

7. THE CHARGER WILL AUTOMATICALLY BEGIN CHARGING, AND AUTOMATICALLY SHUT OFF WHEN FULLY CHARGED (**CHECK GAUGE**)
8. AFTER THE CHARGER HAS TURNED OFF, UNPLUG THE RED CHARGER PLUG FROM THE MACHINE AND DISCONNECT THE CHARGER FROM THE WALL OUTLET.
9. RECHECK THE CELL LEVEL AFTER CHARGING. IF NEEDED, ADD DISTILLED WATER UP TO THE CORRECT LEVEL. BE CERTAIN TO REPLACE THE CAPS SECURELY AND TO WIPE OFF THE TOP OF THE BATTERIES WITH A CLEAN CLOTH.

MAINTENANCE

DAILY MAINTENANCE

1. REMOVE AND CLEAN PADS OR BRUSHES. NEVER USE SOILED PADS WHEN CLEANING. REPLACE PADS WHEN THEY BECOME PACKED WITH RESIDUE.
2. REMOVE AND CLEAN DEBRIS FROM THE FLOAT SHUT-OFF SCREEN LOCATED INSIDE THE RECOVERY TANK.
3. DRAIN AND RINSE TANKS THOROUGHLY INSPECT VACUUM HOSE FOR ANY OBJECTS OBSTRUCTING THE AIR FLOW.
4. RAISE SQUEEGEE AND WIPE BLADES WITH A CLEAN CLOTH. STORE SQUEEGEE IN THE RAISED POSITION TO PREVENT DAMAGE OR SETTING OF THE BLADES.
5. WIPE DOWN MACHINE IF NEEDED. USE A NONABRASIVE, NON SOLVENT CLEANER, OR A CLEAN DAMP CLOTH.
6. RECHARGE THE BATTERIES IF NEEDED.

WEEKLY MAINTENANCE

1. CHECK BATTERY WATER LEVEL IN EACH CELL OF THE BATTERIES, AND FILL AS NEEDED. ALWAYS USE DISTILLED WATER TO REFILL BATTERIES. BATTERIES SHOULD BE FILLED APPROXIMATELY 3/4" TO 1" ABOVE THE PLATES. OVERFILLING WILL CAUSE THE BATTERIES TO LEAK DURING CHARGING. THE CHARGING PROCESS CREATES GAS BUBBLES INSIDE THE BATTERY, WHICH EFFECTIVELY INCREASES THE VOLUME OF THE ELECTROLYTE.
2. CLEAN BATTERY TOPS TO PREVENT CORROSION.
3. ROTATE BRUSHES. ROTATE THE LEFT TO THE RIGHT AND RIGHT TO LEFT. ON CYLINDRICAL MODELS FROM FRONT TO BACK, OR END TO END IF USING DIFFERENT MATERIALS.

MONTHLY MAINTENANCE

1. CHECK SCRUB HEAD AND SQUEEGEE LIFTING CABLES FOR WEAR AND SPRING TENSION.
2. CHECK MACHINE FOR WATER LEAKS AND LOOSE NUTS AND BOLTS.
3. CHECK TO SEE IF BATTERY CABLES ARE TIGHTENED. (TIGHTEN IF NEEDED)
4. CHECK PARKING BRAKE
5. CHECK CONDITION OF SCRUB DECK LIFTING CABLE.

YEARLY MAINTENANCE

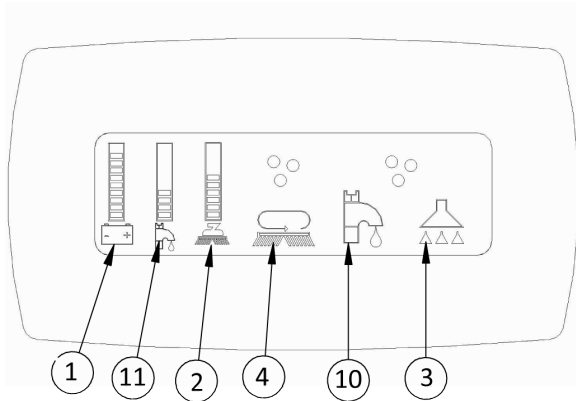
1. CALL YOUR LOCAL DEALER FOR YEARLY MAINTENANCE

STORING MACHINE

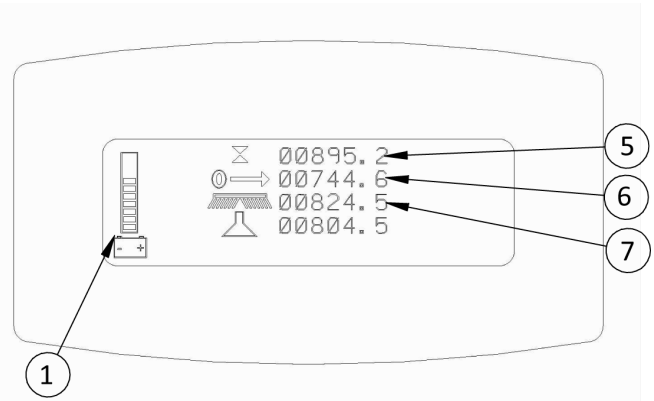
1. BE SURE TO FLUSH THE TANKS OUT COMPLETELY, AND TO DRAIN ALL WATER FROM THE MACHINE.
2. REMOVE THE RECOVERY TANK LID TO PROMOTE AIR CIRCULATION.
3. RAISE BRUSHES AND SQUEEGEE.

LCD SCREEN MENU DISPLAYS

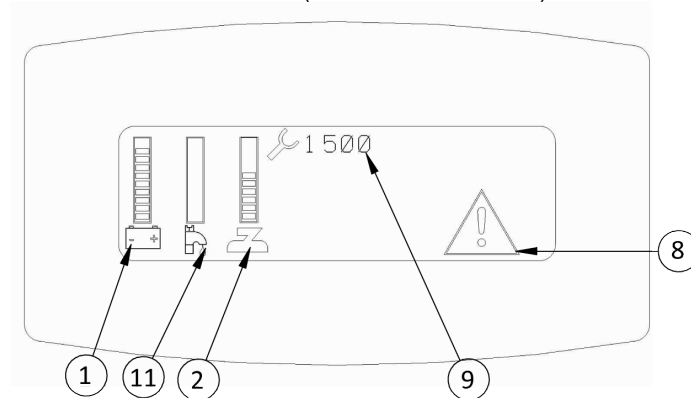
SCREEN #1 (OPERATOR)



SCREEN #2 (MAINTENANCE)



SCREEN #3 (WITH ERROR CODE)



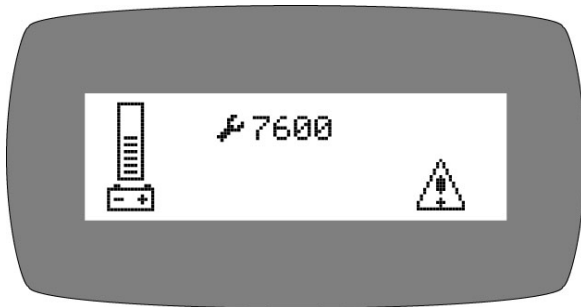
**** USE GREEN MENU SELECTION BUTTON ON CONTROL PANEL TO CHANGE SCREENS ****

- 1. BATTERY LEVEL INDICATOR** - INDICATES THE ENERGY LEVEL REMAINING IN THE BATTERIES. (SHOWN ON ALL MENU DISPLAYS)
- 2. SCRUB-DECK DOWN PRESSURE GAUGE** - SETS THE DOWN PRESSURE ON THE BRUSHES.
- 3. VACUUM ON** - INDICATES THE VACUUM IS "ON".
- 4. SCRUB MOTORS ON** - INDICATES THE BRUSH MOTORS ARE "RUNNING".
- 5. KEY SWITCH HOUR METER** - INDICATES THE TOTAL NUMBER OF HOURS THAT THE MACHINE HAS BEEN ON.
- 6. SCRUB BRUSH HOUR METER** - INDICATES THE TOTAL NUMBER OF HOURS THAT THE BRUSH MOTORS HAVE BEEN USED.
- 7. TRANSPORT HOUR METER** - INDICATES THE TOTAL NUMBER OF HOURS THE DRIVE SYSTEM HAS BEEN USED.
- 8. ERROR WARNING SYMBOL** - INDICATES WHEN THERE HAS BEEN A DIAGNOSTIC CODE ERROR.
- 9. DIAGNOSTIC CODE** - WHEN THE MACHINE HAS DETECTED AN ERROR, IT WILL DISPLAY THE WARNING SYMBOL AND A DIAGNOSTIC CODE WHICH TELLS YOU WHAT'S WRONG.
- 10. WATER ON** - INDICATES THE SOLUTION FLOW IS "ON".
- 11. SOLUTION LEVEL** - INDICATES THE GALLONS PER MINUTE (GPM) 0 - 1.0.

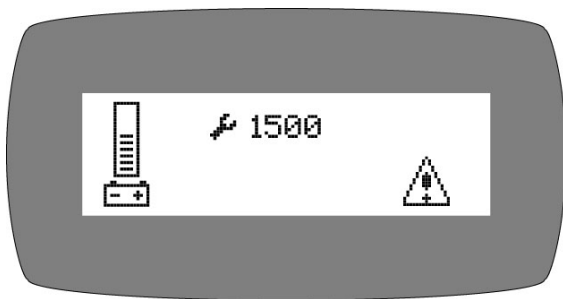
TROUBLESHOOTING CENTRAL COMMAND

NOTE: THIS MACHINE IS OPERATED BY A SOPHISTICATED ELECTRONIC “CONTROLLER” THAT HAS MANY FAIL SAFES WITHIN IT. IT SELF-ANALYZES PROBLEMS AND FLASHES A FOUR-DIGIT ALPHA-NUMERIC CODE OF WHAT IS WRONG IN THE LCD WINDOW.

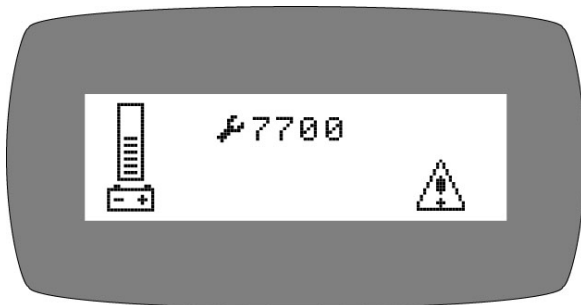
MOST OF THESE CODES REQUIRE A TECHNICIAN ATTENTION. YOU SHOULD NOT ATTEMPT REPAIRS YOU ARE UNFAMILIAR WITH, ESPECIALLY IF YOU ARE NOT AUTHORIZED TO WORK ON THIS EQUIPMENT.



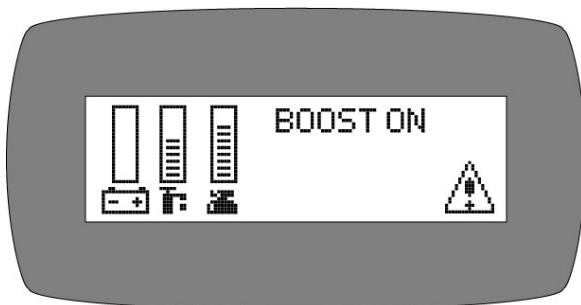
1. 7601 AND 7602 ERROR: SCRUB DECK CURRENT OVER LOAD. THIS CAN OCCUR WHEN DRIVING OVER A BUMP IN THE FLOOR. TO RESTART, TURN OFF THE KEY AND TURN IT ON AGAIN. TO AVOID THIS ERROR, EITHER SLOW DOWN ON BUMPY PARTS OF THE FLOOR, OR REDUCE DOWN PRESSURE ON THE PADS.



2. 1500 ERROR: THERE IS AN OPEN IN THE PARKING BRAKE CIRCUIT. CHECK THE PARKING BRAKE WIRING AND THE PARKING BRAKE COIL TO FIND THE OPEN CIRCUIT.



3. 770, 7701, 7702, AND 7703 ERROR: THE VACUUM MOTOR HAS EXCEEDED THEIR AUTHORIZED POWER LIMITS. TURN OFF KEY AND TURN ON AGAIN TO CLEAR.



4. BOOST ON: ALLOWS FRONT WHEEL DRIVE TO DRAW MORE POWER WHEN NEEDED TO CLIMB RAMPS FOR 30 SECONDS.

DIAGNOSTIC CODES

Code	Probable Cause	Service Action
0003	Memory corrupt	Replace Controller if not cleared by disconnecting batteries for 1 min
0100		
0204		
0705	All 070x codes -Wiring short circuit between Tiller Hi and Lo Ref	Check for wiring short circuits on the 20 way connector on the Trio, the 16 way connector on the LCD (if used) and the wiring to the front panel switches & controls and those switches & controls themselves.
0706		
0810	All 081x codes – Throttle wiring short or open circuits. 0816 and 0817 can be caused by incorrect programming of the ISO test parameter	Check for wiring short circuits or broken wires on the 20 way connector on the Trio, the 5 way connector on the LCD (if used) and the wiring to the front panel speed / throttle control and the speed / throttle control itself.
0811		
0812		
0813		
0814		
0815		
0816		
0817		
0818		
0A01	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
0B0B	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
1310	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
1500	All 150x codes - Check brake & wiring for open or short circuit	Check the Traction motor connection on the Trio and check the wiring from this connector down to the Traction motor and checking connections all the way. Otherwise possible fault in electro brake on traction motor or possible Controller fault.
1501		
1507		
1600	Voltage exceeds maximum	Can be caused by poor or corroded connections to the batteries or a battery charger being connected.
1704	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
1705		
1706		
1800		
1802		
1B20		
1B21		
1D02	Tiller settings updated in programming	Cycle the power via the keyswitch
1E03	Inhibit inputs - Exact usage dependent on programming	Remove or correct what is causing the inhibit. Otherwise check for wiring short circuits or broken wires on the 20 way connector on the Trio and the wiring elsewhere on the machine. Otherwise incorrect programming or operation of machine.
1E04		
2102	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
2103		
2C00	Low voltage warning	Recharge batteries immediately
2C01		
2C02	Dependent on programming	Recharge batteries immediately
2D01	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
2F01	Throttle in drive position during switch on	Incorrect operation of machine. Otherwise check the mechanical condition of the throttle mechanism. Otherwise check for wiring short circuits on the 20 way connector on the Trio, the 16 way connector on the LCD (if used) and the wiring to the front panel switches & controls and those switches & controls themselves.
3100	All 310x codes - Probable short circuit of output device or wiring - can sometimes cause permanent Controller fault.	Check the Traction, Brush and Vac motor connections on the Trio and check the wiring from these connectors down to the Traction, Brush and Vac motors checking connections all the way and also checking for short circuits. Check for wiring short circuits or broken wires on the 14 way connector on the Trio and the wiring elsewhere on the machine. Otherwise replace Controller.
3101		
3102		
3103		
3104		
3105		
3201	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
3210		
3211		
3212		
3213		
3214		
3601	Possible Controller fault	Replace Controller if not cleared by disconnecting batteries for 1 min
3602		
3603		
3608		
3609		
360A		
360B		
360C		
360D		
360E		

DIAGNOSTIC CODES

Code	Probable Cause	Service Action
7000	All 70xx codes – Check wiring of brake and freewheel switch	Check for wiring short circuits on the 20 way connector on the Trio, the 16 way connector on the LCD (if used) and the wiring to the freewheel switch and the switch itself.. Check the Traction motor connection on the Trio and check the wiring from this connector down to the electromagnetic brake on the Traction motor and check connections all the way. Can be caused by excessive pushing or rolling down a slope or incorrect operation of the machine.
7001		
7500	Wiring fault on 6-way serial link between Trio and LCD	Check the wiring and connectors on the 6 way connections on the Trio and LCD
7501	LCD memory corrupt	Disconnect batteries and wait for 1 min before re-applying power
7600	Open circuit on brush motors or brush motor wiring	Check the Brush motor connection on the Trio and check the wiring from this connector down to the Brush motor and checking connections all the way. Otherwise possible Brush motor fault.
7601	Brush current overload ("thermal" trip)	Incorrect programming, incorrectly specified Brush motor, Brush motor developing a fault, excessive resistance on brushes or brushes pushing down too hard on floor.
7602	Brush current overload ("magnetic" trip)	Incorrectly specified Brush motor, Brush motor developing a fault
7603	Possible short circuit on brush motors or wiring	Check the Brush motor connection on the Trio and check the wiring from this connector down to the Brush motor and checking connections all the way. Otherwise possible Brush motor fault.
7604	Dependent on programming	Incorrect software program - check program, otherwise possible controller fault.
7700	Open circuit on vac motors or vac motor wiring	Check the Vac motor connection on the Trio and check the wiring from this connector down to the Vac motor and checking connections all the way. Otherwise possible Vac motor fault.
7701	Vacuum current overload ("thermal" trip)	Incorrect programming, incorrectly specified Vac motor, Vac motor developing a fault, debris in Vac motor or airways blocked by debris
7702	Vacuum current overload ("magnetic" trip)	Incorrectly specified Vac motor, Vac motor developing a fault
7703	Possible short circuit on vacuum motors or wiring	Check the Vac motor connection on the Trio and check the wiring from this connector down to the Vac motor and checking connections all the way. Otherwise possible Vac motor fault.
7800	Open circuit on traction motor or traction motor wiring	Check the Traction motor connection on the Trio and check the wiring from this connector down to the Traction motor and checking connections all the way. Otherwise possible Traction motor fault.
7801	Possible short circuit on Traction motor or wiring	Check the Traction motor connection on the Trio and check the wiring from this connector down to the Traction motor and checking connections all the way. Otherwise possible Traction motor fault.
7802	Traction motor current has exceeded current limit for the foldback time	Excessive driving up an incline, or machine driven up against an obstacle or step.
7900	E-stop input active or wiring fault	Check for wiring short circuits on the 20 way connector on the Trio, the 16 way connector on the LCD (if used) and the wiring to the emergency stop switch and the emergency stop switch itself. Otherwise incorrect operation of machine.
7901	E-stop input active or wiring fault (programmed as belly button)	Check for wiring short circuits on the 20 way connector on the Trio, the 16 way connector on the LCD (if used) and the wiring to the belly button stop switch and the belly button switch itself. Otherwise incorrect operation of machine.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
NO POWER, NOTHING OPERATES	FAULTY KEY SWITCH	CONTACT LOCAL SERVICING DEALER
	BATTERIES NEED CHARGING	SEE CHARGING BATTERIES
	FAULTY BATTERY	REPLACE BATTERY
	LOOSE BATTERY CABLE	TIGHTEN LOOSE CABLE
	MAIN CIRCUIT BREAKER TRIPPED	WAIT 5 MINUTES FOR AUTO RESET - DETERMINE CAUSE AND CORRECT
BRUSH MOTOR (S) DO NOT OPERATE	BRUSH DESK IS NOT DOWN	PUT BRUSH DESK DOWN
	FOOTPEDAL IS NOT DEPRESSED	ENGAGE FOOT PEDAL
	BRUSH CIRCUIT BREAKER TRIPPED	WAIT 5 MINUTES FOR AUTO RESET - DETERMINE CAUSE AND CORRECT
	CARBON BRUSHES WORN	CONTACT LOCAL SERVICING DEALER
	FAULTY BRUSH MOTOR OR WIRES	CONTACT LOCAL SERVICING DEALER
DRIVE MOTOR DOES NOT OPERATE	RECHARGE SWITCH MISADJUSTED	CONTACT LOCAL SERVICING DEALER
	FAULTY SPEED CONTROLLER OR WIRES	CONTACT LOCAL SERVICING DEALER
	FAULTY DRIVE MOTOR	CONTACT LOCAL SERVICING DEALER
	FAULTY WIRING	CONTACT LOCAL SERVICING DEALER
	CARBON BRUSHES WORN	CONTACT LOCAL SERVICING DEALER
VACUUM MOTOR DOES NOT OPERATE	SQUEEGEE IS IN THE UP POSITION	ROTATE SQUEEGEE LIFT LEVER DOWN
	FAULTY VACUUM SWITCH	TRY OPERATING "WHITE" TOGGLE
	VACUUM CIRCUIT BREAKER TRIPPED	WAIT 5 MINUTES FOR AUTO RESET - DETERMINE CAUSE AND CORRECT
	FAULTY VACUUM MOTOR	CONTACT LOCAL SERVICING DEALER
	CARBON BRUSHES WORN	CONTACT LOCAL SERVICING DEALER
DRIVE MOTOR RUNS INCORRECTLY	FAULTY SPEED CONTROLLER OR WIRES	CONTACT LOCAL SERVICING DEALER
	FAULTY POTENTIOMETER	CONTACT LOCAL SERVICING DEALER
	LOOSE WIRES	CONTACT LOCAL SERVICING DEALER
INSUFFICIENTLY SOLUTION FLOW	SOLUTION TANK LOW	REFILL SOLUTION TANK - DRAIN RECOVERY TANK
	FLOW KNOB TURNED DOWN	MOVE LEVER TO ON
	SOLUTION FILTER CLOGGED	REMOVE COVER AND CLEAN
	SOLUTION LINE CLOGGED	REMOVE AND BLOW OUT WITH COMPRESSED AIR
	SOLUTION VALVE CLOGGED	REMOVE COVER AND CLEAN

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
NO SOLUTION FLOW	NO SOLUTION IN TANK SOLUTION VALVE OFF SOLUTION SWITCH OFF SOLUTION SCREEN CLOGGED FAULTY SOLUTION SOLENOID FAULTY SOLUTION SWITCH	FILL SOLUTION TANK ROTATE LEVER TO ON TURN SOLUTION SWITCH ON REMOVE AND CLEAN SCREEN CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
POOR WATER RECOVERY	RECOVERY TANK IS FULL BALL/SCREEN IN RECOVERY TANK IS CLOGGED VACUUM HOSE IS CLOGGED SQUEEGEE IS CLOGGED SQUEEGEE BLADE IS WORN FAULTY VACUUM HOSE VACUUM MOTOR GASKET TORN TANK GASKET FAULTY DRAIN PLUG LOOSE VAC MOTOR FAULTY BATTERY CHARGE LOW	EMPTY RECOVERY TANK REMOVE SCREEN AND CLEAN REMOVE DEBRIS REMOVE DEBRIS REMOVE DEBRIS ROTATE OR REPLACE PARTS CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER TIGHTEN LID CONTACT LOCAL SERVICING DEALER CHARGE BATTERIES OVERNIGHT
POOR WATER RECOVERY ON TURNS	WIPERS WORN WIPERS CHATTER SQUEEGEE SWING IS BINDING INCORRECT SQUEEGEE SIZE	REPLACE WIPER MATERIALS TIGHTEN PIVOT POINTS CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
REAR TIRES NOISY	BEARING DRY FAULTY HUBS	GREASE BEARINGS CONTACT LOCAL SERVICING DEALER
POOR TRACTION	EXCESSIVE BRUSH PRESSURE WORN DRIVE TIRE HEAVY SOAP CONCENTRATION	REDUCE PRESSURE WITH SWITCH CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
SHORT RUN TIME	BATTERIES RUN DOWN BATTERIES RUN DOWN BATTERIES LOW ON WATER BATTERIES OVER CYCLED	CHARGE BATTERIES TWICE CONTACT LOCAL SERVICING DEALER FILL WITH DISTILLED WATER TO ¾" ABOVE THE LEAD PLATES CONTACT LOCAL SERVICING DEALER

PREVENTATIVE MAINTENANCE

USE THIS FORM TO MAKE COPIES FOR YOUR INTERNAL RECORDS

PREVENTATIVE MAINTENANCE	CHECKED	NOTE
ROTATE BRUSHES		
ROTATE SIDE BROOMS		
DRAIN SOLUTION TANK		
FLUSH SOLUTION SYSTEM		
CLEAN SOLUTION SCREEN		
DRAIN RECOVERY TANK		
FLUSH RECOVERY TANK		
CLEAN VACUUM SCREEN		
ROTATE REAR SQUEEGEE BLADE		
CHECK BATTERY WATER LEVEL		
CHECK BATTERY VOLTAGE		
CHECK CHARGER CONDITION		
CHECK BATTERY CONNECTIONS		
CHECK CHEMICAL LEVEL		
CHECK MACHINE PERFORMANCE		
SCRUBBING POWER		
VACUUM POWER		
CONTROLS WATER ON TURNS		
GAUGES AND CONTROLS		
CHECK WHEEL TRACTION		
OTHER:		
OTHER:		

PAST HOUR METER READING: _____

CURRENT HOUR METER READING: _____

AVERAGE WEEKLY USAGE: _____

TECHNICIAN PRINT: _____

TECHNICIAN SIGNATURE: _____ DATE: _____

MANAGER SIGNATURE: _____ DATE: _____

Installing Dealer: _____ Installed By: _____

Location: (City, State): _____ Install Date: _____

End-User Company Name: _____ End-User Contact: _____

Address: _____ City/State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Model: _____ Serial #: _____ Hour Meter: _____

BUYER'S REPRESENTATIVE HAS RECEIVED INSTRUCTION IN PROPER OPERATION OF THE FOLLOWING CONTROLS AND FEATURES:**SCRUBBERS:**

- ☐ - Filling solution tank, Solution tank sight tube, Solution drain hose or valve for flushing and freezing conditions
- ☐ - Adjusting controls & operation, Double scrubbing, Squeegee lift delay, High Recovery RED Light, vacuum switch (horn honking) and vacuum timer
- ☐ - Recovery tank draining & cleaning, Common Squeegee hose clog points, vacuum screen removal and cleaning, drain saver basket emptied.
- ☐ - Shroud and pad/brush removal and installation
- ☐ - Side Wiper and Curtain adjustment and maintenance for water control
- ☐ - Solution valve and filter operation (removal and cleaning)
- ☐ - LCD display operation, 4 hour meters (key switch, brush, traction drive, vacuum)
- ☐ - Tank tilt back feature, only when both tanks are fully drained
- ☐ - Squeegee hose removal and checking for clogs

BURNISHERS

- ☐ - Train and have customer demonstrate proper removal and replacement of burnishing pad
- ☐ - Pad pressure gauge and proper operating range to avoid tripping the circuit breaker

SWEEPERS

- ☐ - Demonstrate proper removal and replacement of main broom and side brooms
- ☐ - Method for cleaning the dust filter, emptying out the debris hopper and correct installation
- ☐ - Correct operation of the main broom and side broom levers, and understands to park with brushes in UP position
- ☐ - Trained on the "Wet-Sweep" bypass door and not to operate through standing water

EDGE MACHINES

- ☐ - EDGE scrubbers must have their isolators & deck hour meter replaced every 250 hours of use.
- ☐ - Customer understands the Grip Face is not warranted against damage from improper use or direct contact with the floor.

ALL MACHINES

- ☐ - Checking for proper battery electrolyte level, electrolyte condition monthly, and check that battery terminals are properly torqued to 10ft/lbs.
- ☐ - Parking brake override
- ☐ - Charging operation and customer understands batteries have limited "cycles" and recharging = 1 cycle
- ☐ - Seat and steering wheel adjustment
- ☐ - Customer has read and understands the list of WARNINGS/CAUTIONS in the Operator manual
- ☐ - Battery and Machine Maintenance Guide posters hung up and reviewed
- ☐ - Manufacturer's website is a good source of information (Videos, PM Sheets) and sign up for quarterly newsletters
- ☐ - Operators and Parts manuals were delivered, reviewed, understood, and confirmation preventive maintenance is done every 100 hours of use and recorded on PM Sheets provided online or in manuals.

Installed By (print) _____ Signature _____

Buyers Representative (print) _____ Signature _____

Buyer agrees to pay for any repairs, adjustments, or secondary training that manufacturer determines is excluded from the warranty.

Complete and Fax form to 1-866-632-6961 or Online at www.rpscorporation.com

STANDARD WARRANTY POLICY (RPS Corporation)

RPS Corporation warrants its machines, parts and accessories to be free of manufacturer's defects for the periods specified below. Warranty will be granted at the sole discretion of RPS Corporation and is subject to final claim and parts review by R.P.S. Corporation and its vendors. This policy is effective January 1, 2013 and is subject to change on production units at a future date.

COVERAGE, EXCLUSIONS AND LIMITATIONS:

Coverage: All Models sold (Except Floor Machines: 1 Year Parts / 6 Months Labor / No Travel)

Parts: 36 months / 1,500 hours on "Power On" hour meter

Labor: 12 months

Travel: 3 months (150 mile maximum)

Poly Tanks: 7 Years (Water must not exceed 135°F/57°C) / 3,000 Hours

OEM Parts: 90 Day New Part Warranty

Validity: Fully completed Machine Delivery Form (online or fax) is on record at RPS and machine is serviced by Factory Authorized Personnel.

Limitation: Warranty will begin on date of machine installation to end-user or 6 months after shipment from RPS Corp. to the distributor if unsold at that time.

This warranty includes all parts on the machine except normal wear parts. Some of these exceptions are:

- EDGE / ORBITZ isolators (250 hours on average)
- Squeegee Blades, Wiper Blades, Skirts and Curtains.
- Caster Wheels, Squeegee Wheels and Bumpers.
- Lights (Strobe, Headlights, or Bulbs).
- Chains and Belts.
- Filters, Screens, and Vacuum Bags.
- Motor Brushes and commutator wear.
- Brooms, Brushes, Pads and Pad Retainers.
- Hoses and Tubing.
- Drive Tires, Pneumatic Wheels and Tubes.
- Rubber Floor Seals and Gaskets.
- Vacuum motors with evidence of moisture or debris intrusion or > 400 hours.
- The Batteries (see below).
- **NOT COVERED:** Routine maintenance, adjustments or parts damaged from abuse, neglect, improper use of the machine, or lack of scheduled "daily, weekly, monthly" maintenance in accordance with our published PM Sheets.

POLY TANKS: 7 Years Coverage against leakage due to manufacturer's defect in materials or workmanship. Tank warranty void if water used exceeds 135°F/57°C

NOTE: Freight coverage for 3 Years under the parts section of warranty.

BATTERIES: Warranted through battery manufacturer for **One (1) Year** (pro-rated) from the date of delivery. The battery manufacturer approves or denies the warranty coverage after analysis. We rely on solely on their review.

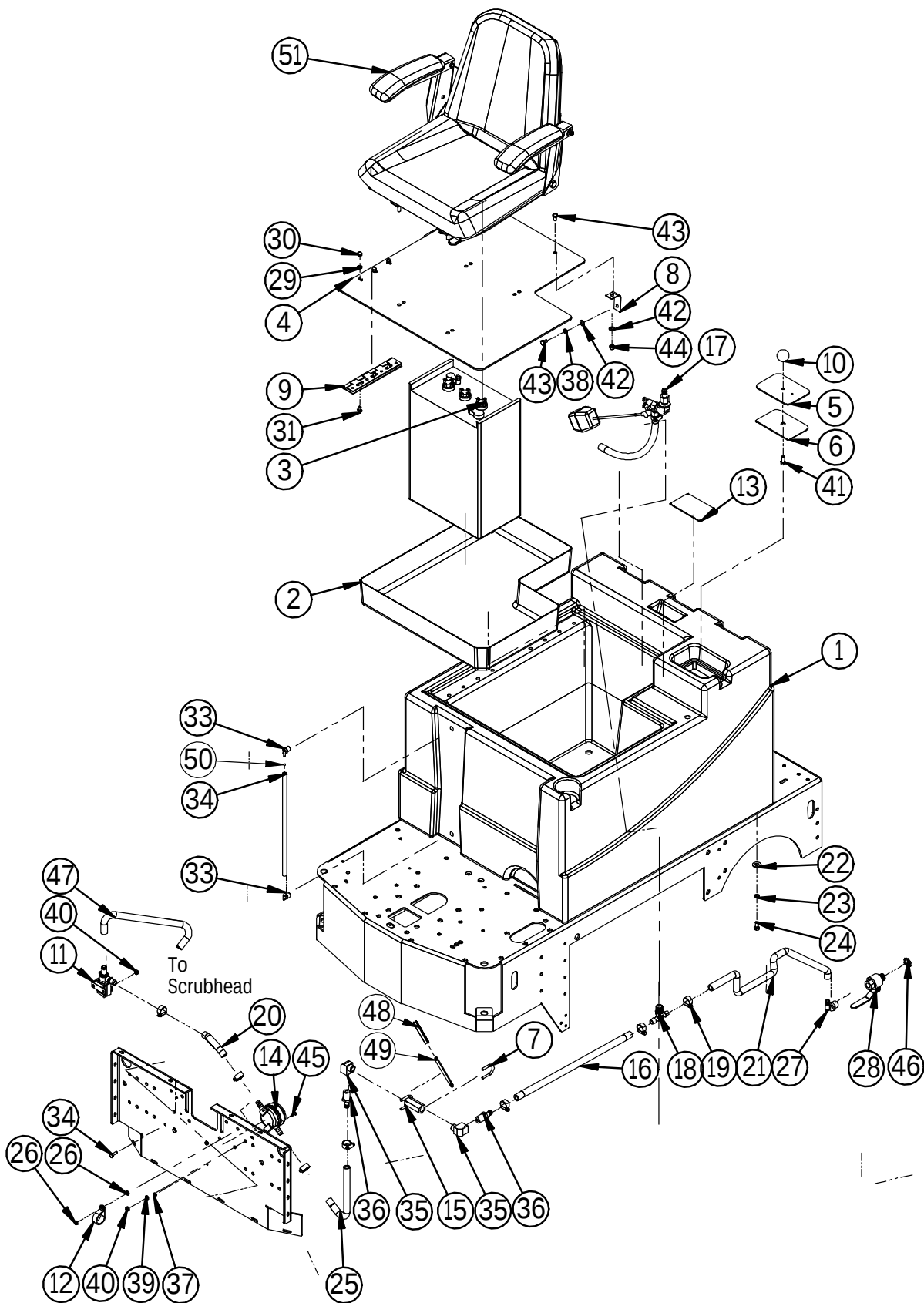
NOTE NOT COVERED: Damage from lack of water, failure to use OEM charger, or non-distilled water. Battery terminals – Battery terminals and cable connections are covered for 30 days from the shipment of the machine. (Battery terminals tightness should be inspected every 30 days.)

MODEL 290/350

MACHINE PARTS SECTION

SOME PARTS ARE MADE IN RED AND YELLOW. IF YOU NEED YELLOW PARTS USE THE ALTERNATE PART NUMBER WHICH WILL START WITH (291-XXXX). IF YOU NEED RED PARTS, USE THE NORMAL PART NUMBER THAT WILL START WITH (290-XXXX). IF THERE IS ONLY ONE PART NUMBER, THAT IS THE ONLY COLOR THAT PART COMES IN.

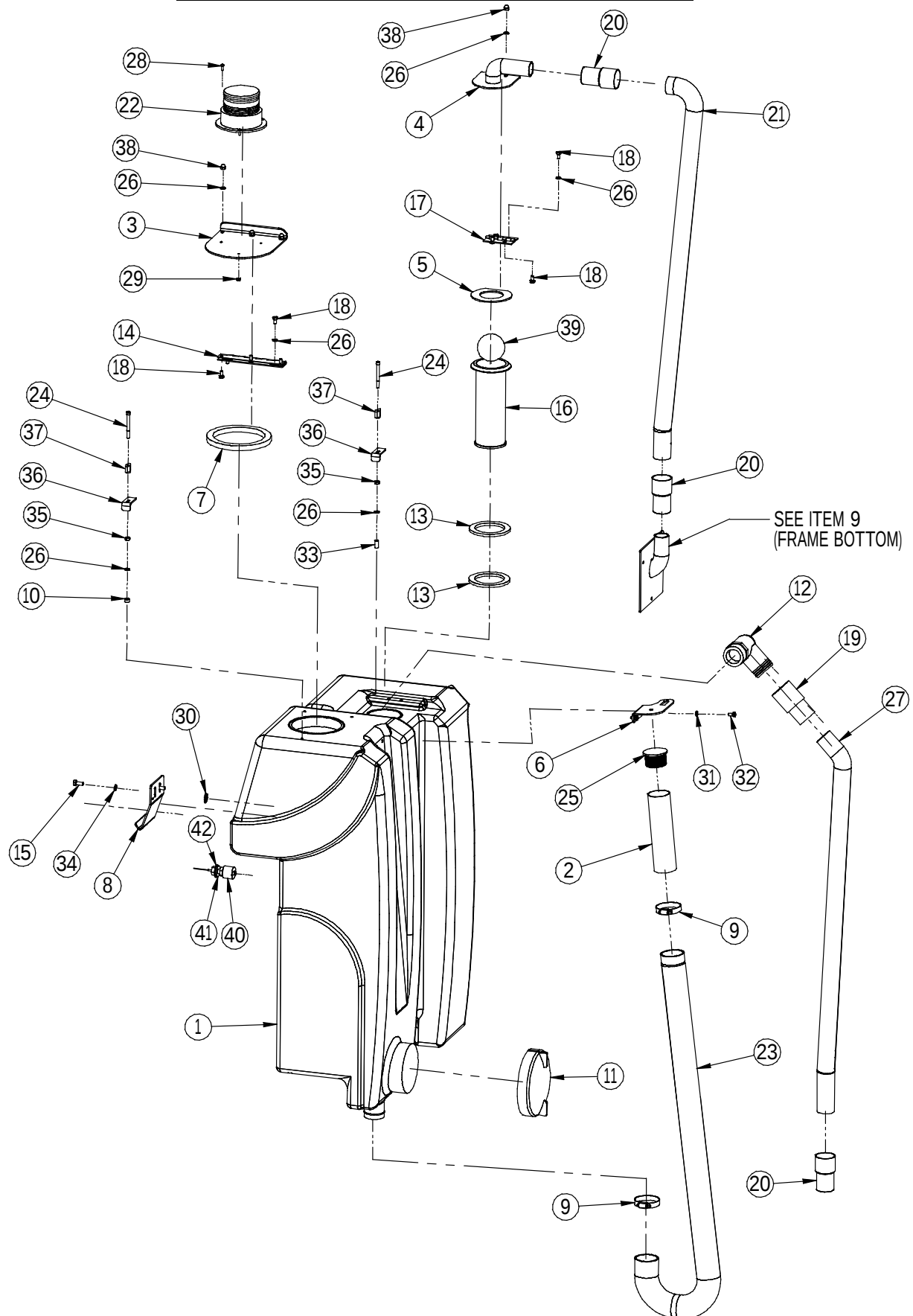
SOLUTION SYSTEM



SOLUTION SYSTEM

Item	Part No.	Alt. Part No.	Part Description	Qty
1	290-4140	291-4140	SOLUTION TANK	1
2	290-1480		BATTERY TRAY	1
3	290-2110		BATTERY 6 VOLT 395 AH	4
4	290-1300		BATTERY COMP'T COVER	1
5	290-4152		SOLUTION TANK LID	1
6	290-4153		SOL TANK LID GASKET	1
7	H-01519		1/4-20 X 1.75 " U BOLT	2
8	290-4151		LID STRAP	1
9	5-122		HINGE 8" SS	2
10	21-7101		LIFT KNOB	1
11	21-4500		ADJUSTABLE SOLUTION FLOW VALVE	1
12	H-3225T5		RUBBER LOOP CLAMP	1
13	5-728		DETERGENT WARNING PLATE	1
14	5-913		INLINE FILTER	1
15	290-4158		1/2" NPT BALL VALVE	1
16	290-4175		1/2" ID X 3/4" OD X 28.0" LG CLEAR TUBE	1
17	290-8520		FLOAT VALVE ASSEMBLY	1
18	290-4155		1/2" NPT X 1/2" BARBED TEE	1
19	H-081		CLAMP 7/16"- 25/32" SS	7
20	290-4160		1/2" ID X 3/4" OD X 5.0" LG CLEAR TUBE	1
21	290-4164		1/2" ID X 3/4" OD X 24.0" LG CLEAR TUBE	1
22	H-99001		FW 3/8" SS	6
23	H-71065		LW 5/16" SS	6
24	H-70053		HCS 5/16"- 18 X 3/4" SS	6
25	290-4159		1/2" ID X 3/4" OD X 15.0" LG CLEAR TUBE	1
26	H-NJ04C		JNYL 1/4" - 20 SS	2
27	5-447		1/2" NPT TO 1/2" BARBED ELBOW	1
28	290-4550		1/2" NPT BALL VALVE	1
29	H-33618		LW 1/4"	4
30	H-37708		1/4-20 LC ACORN NUT	4
31	H-13001		HCS 1/4"- 20 X 1/2"	3
32	290-4150		1/4" ID X 1/2" OD X 14" LG CLEAR TUBE	1
33	290-4149		1/4" NPT X 1/4" BARB X 90 DEG	2
34	H-70003		HCS 1/4"- 20 X 3/4" SS	2
35	21-4042		1/2" NPT X 90 DEG ST ELBOW	2
36	290-4176		.50 NPT X .50 BARB	2
37	H-70858		NYLOK #10-32 SS	2
38	H-33620		LW 5/16"	1
39	H-71063		LW 1/4" SS	1
40	H-70710		HN 1/4"- 20 SS	3
41	H-13053		HCS 5/16"-18 X 3/4"	1
42	H-33080		FW 5/16" SAE	2
43	H-13051		HCS 5/16"- 18 X 1/2"	2
44	H-37021		NYLOK 5/16"-18	1
45	H-72563		RPH #10-32 X 1/2" SS	2
46	H-07005		1/2" NPT LOCKNUT	1
47	290-4174		1/2" ID X 3/4" OD X 19.0" LG CLEAR TUBE	1
48	290-7721		LEVER GRIP	1
49	290-7720		BALL VALVE LEVER	1
50	290-4148		7/32" POLYPROPYLENE BALL	1
51	8-143		SEAT WITH ARM RESTS	1

RECOVERY SYSTEM

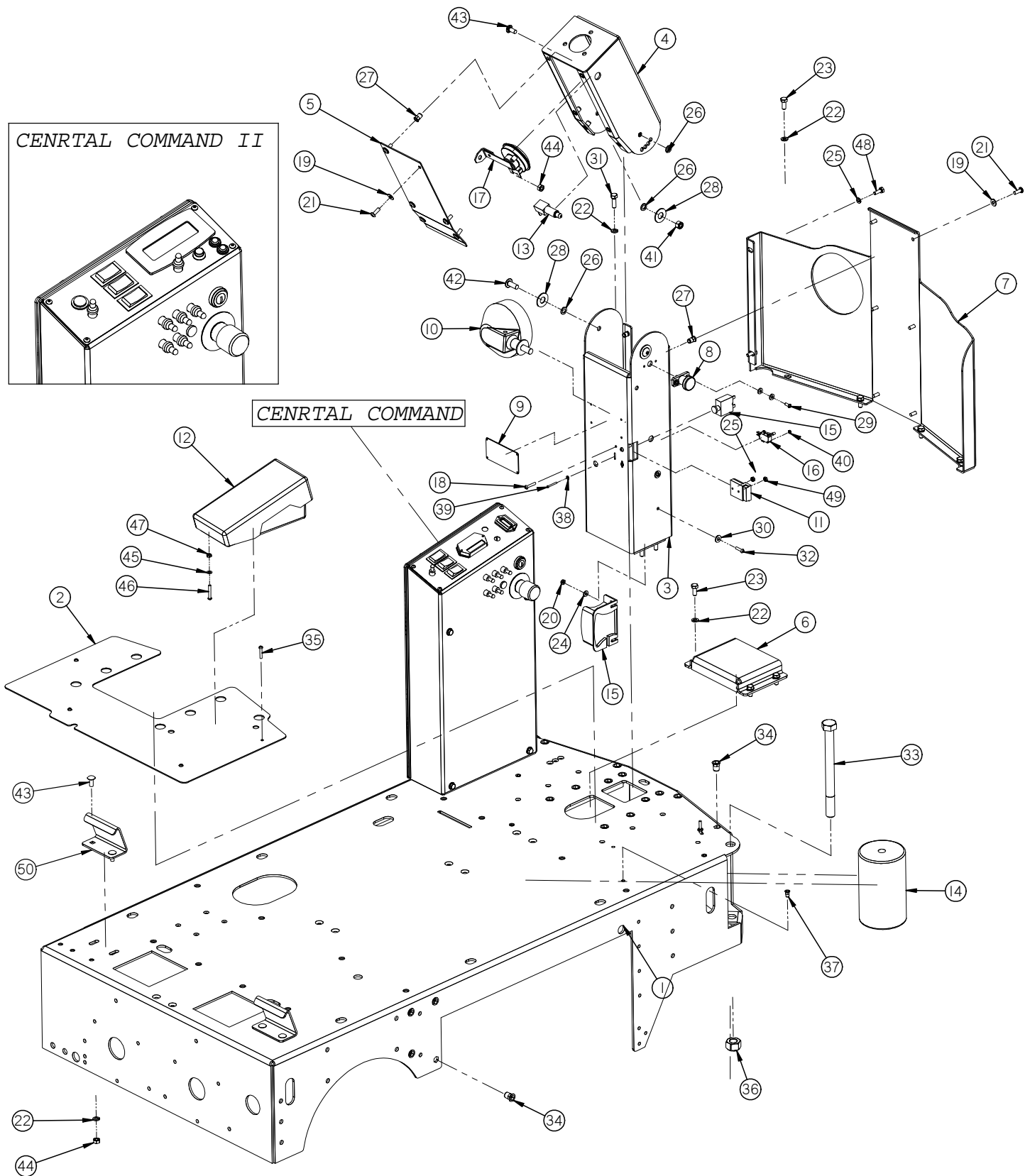


RECOVERY SYSTEM

Item	Part No.	Alt. Part No.	Part Description	Comments	Qty
1	290-7010	291-7010	RECOVERY TANK		1
2	5-920		DRAIN HOSE END TUBE		1
3	290-4112		RECOVERY TANK LID		1
4	290-4110		VAC SCREEN INLET		1
5	290-7390		VAC INLET GASKET		1
6	5-7180		DRAIN HOSE BRACKET		1
7	290-7420		REC TANK LID GASKET		1
8	290-1120		FRONT TANK SUPPORT		1
9	5-719		CLAMP 1 9/16 - 2 1/2 " SS		2
10	21-2211		SPACER 1/2 OD X 1/4"		1
11	7-415		CLEANOUT DOOR W/GASKET & DISC		1
12	290-7040		RECOVERY TANK ELBOW		1
13	38-738		STRAINER GASKET		2
14	8-180		6-7/8" SS HINGE		1
15	H-13053		HCS 5/16"-18 X 3/4"		2
16	8-911		SCREEN STRAINER		1
17	290-4115		VAC INLET HINGE		1
18	H-13001		HCS 1/4"- 20 X 1/2"		9
19	290-7212		1-1/2" - 2" HOSE CUFF		1
20	21-4072		HOSE CUFF, 1 1/2"		3
21	290-7213		VAC HOSE 37" LG		1
22	8-293		STROBE LIGHT		1
23	290-7210		DRAIN HOSE		1
24	H-23213		SHCS 1/4"- 20 X 2 1/2"		2
25	5-727		DRAIN HOSE PLUG		1
26	H-33618		LW 1/4"		11
27	290-7214		VAC HOSE 40" LG		1
28	H-73743		BHSCS 10-32 X 1/2" SS		3
29	H-70858		NYLOK #10-32 SS		3
30	H-33761		5/16" INT/EXT STAR WASHER		1
31	H-71063		LW 1/4" SS		2
32	H-70001		HCS 1/4"-20 X 1/2 SS"		2
33	5-822		Spacer, 1/4" ID, 3/8" OD, 11/16" Long		1
34	H-33620		LW 5/16"		2
35	H-36102		HN 1/4"-20		2
36	5-417		DOOR CLIP		2
37	5-418A		CLAMPING KNOB		2
38	H-37708		1/4-20 LC ACORN NUT		5
39	38-712		OVERFILL SHUTOFF BALL		1
40	5-226		FLOAT VALVE SWITCH		1
41	H-4440040		.375 ID X 1.125 OD RUBBER WASHER		1
42	H-95611		FW 1/2" PVC		1

NOTE: FOR ITEM 21 MACHINE SERIAL NUMBER 40657 AND GREATER USE P/N 290-0115

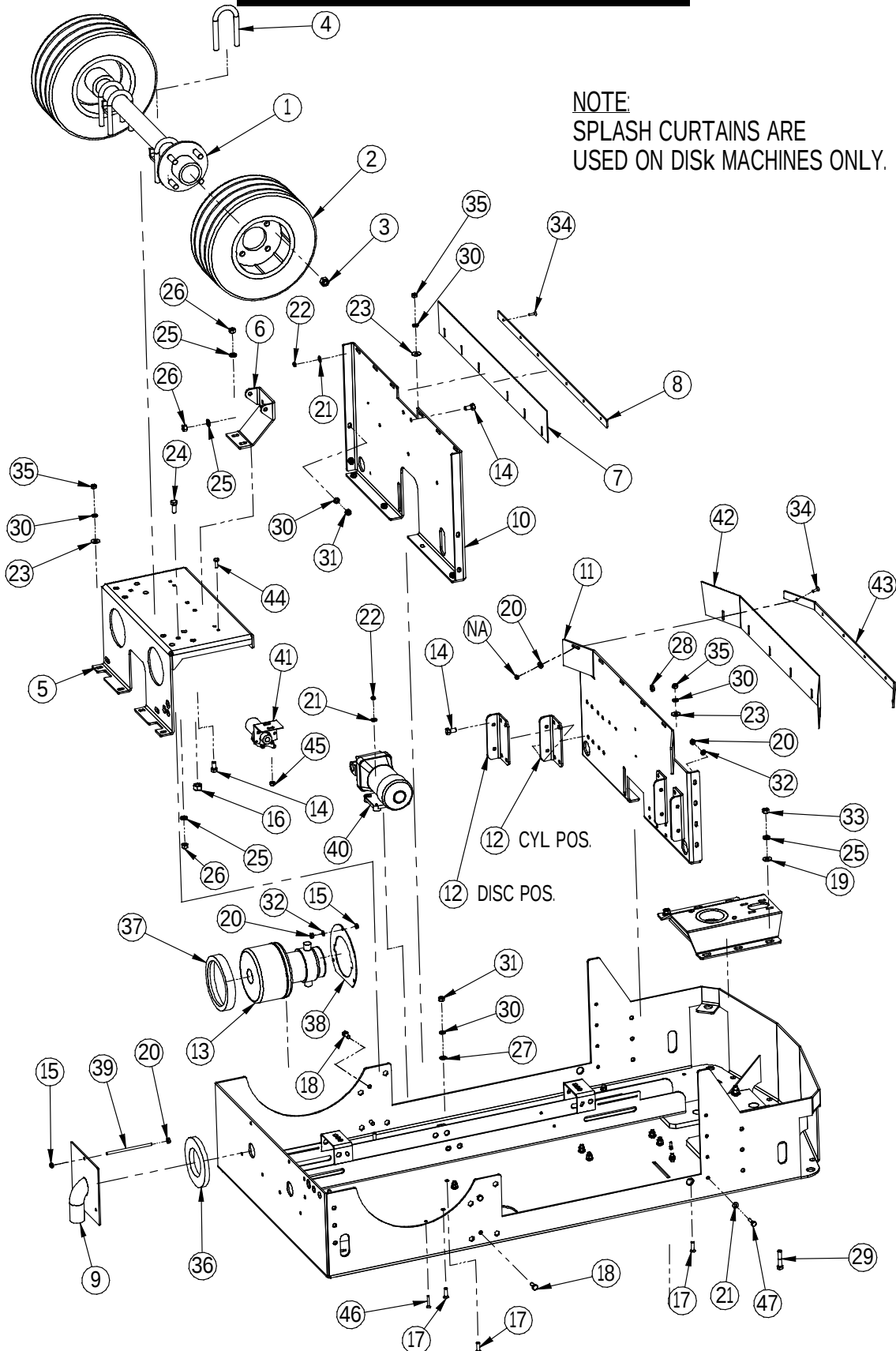
FRAME TOP



FRAME TOP

Item	Part No.	Alt. Part No.	Part Description	Qty
1	290-1100		FRAME WELDMENT	1
2	290-1610		NON SKID FLOOR PLATE	1
3	290-1170	291-1170	LOWER STEERING TOWER	1
4	290-1171	291-1171	UPPER STEERING TOWER	1
5	290-1172	291-1172	COVER	1
6	290-1173		DRIVE COVER	1
7	290-1180	291-1180	FRONT APRON	1
8	290-7050		INDEX PLUNGER	1
9	4-101		SERIAL NUMBER PLATE	1
10	8-291		HEADLIGHT	1
11	4-257		CONNECTOR, RED 50, WITH CONTACTS	1
12	8-290		FOOT PEDAL	1
13	8-294B		PUSH BUTTON SWITCH, SILVER	1
14	7-125A		ROLLER	2
15	8-292		BACKUP ALARM	1
16	21-2230		MICRO SWITCH	1
17	8-294		HORN	1
18	H-28902		RPH #8-32 X 1"	2
19	H-76061		FW 1/4" NYLON	12
20	H-37015		NYLOK #10-32	2
21	H-73754		BHSCS 1/4 - 20 X 3/4" SS	12
22	H-33620		LW 5/16"	16
23	H-13053		HCS 5/16"-18 X 3/4"	8
24	H-33074		FW #10 SAE	6
25	H-71063		LW 1/4" SS	2
26	H-76063		FW 3/8" NYLON	6
27	H-250HCN		HCN 1/4"-20	8
28				4
29	H-29048		RPH #10-32 X 1/2"	2
30	H-71009		FW #10 SS	2
31	H-13055		HCS 5/16"-18 X 1"	4
32	H-72565		RPH #10-32 X 3/4" SS	2
33	H-11380		HCS 3/4-10 X 8-1/2	2
34	H-312HCN		HCN 5/16"-18	25
35	H-29072		RPH #10-32 X 1"	4
36	H-37039		NYLOK 3/4"- 10	2
37	H-1032HCN		HCN #10-32	4
38	H-33066		FW #4 SAE	2
39	H-28678		RPH #4-40 X 1"	2
40	H-37006		NYLOK #4-40	2
41	H-37024		NYLOK 3/8"-16	2
42	H-73815		BHSCS 3/8"- 16 X 1" SS	2
43	H-21253		CB 5/16"- 18 X 3/4"	5
44	H-36104		HN 5/16"-18	5
45	H-71009		FW 3/16" X 7/16" SS	2
46	H-73747		RPH #10-32 X 1 1/4" SS	2
47	H-70858		NYLOK #10-32 SS	2
48	H-70003		HCS 1/4"- 20 X 3/4" SS	2
49	H-37406		KN #8-32	2
50	290-1115		BOTTOM LATERAL TANK LOCATOR	2

FRAME BOTTOM

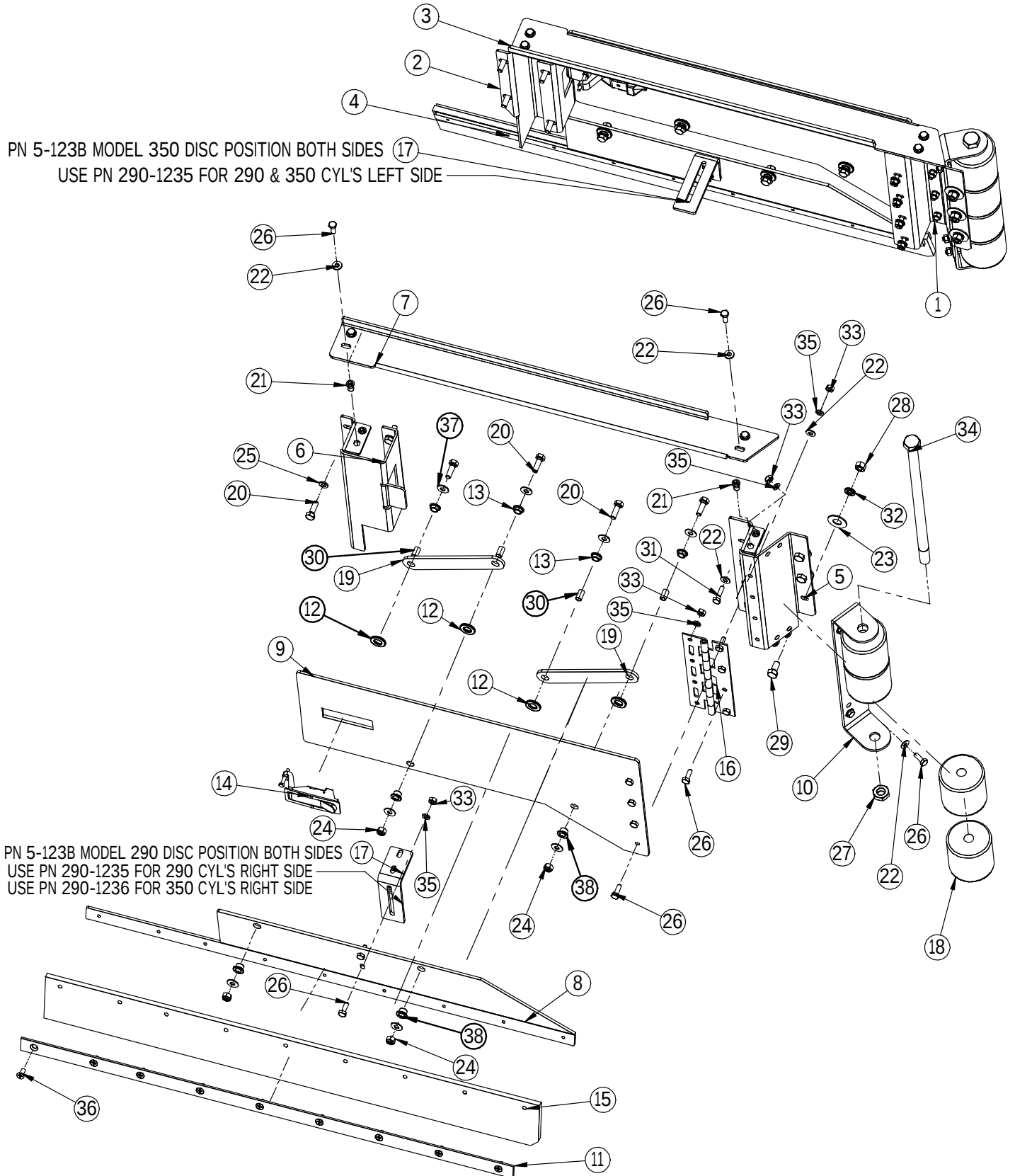


FRAME BOTTOM

Item	Part No.	Alt. Part No.	Part Description	Qty
1	290-6040		REAR AXLE	1
2	290-6180	290-6185	REAR WHEEL (GREY STD.) (BLACK OPT.)	2
3	290-6187		LUG NUT, 1/2" - 20	1
4	290-6186		1/2-13 X 1-1/4 " U BOLT	4
5	290-5000		AXLE MOUNT	1
6	290-5001		SQUEEGEE DRAG BRACE	1
7	290-1253		REAR SPLASH CURTAIN	1
8	290-1254		REAR CURTAIN MTG STRIP	1
9	290-3003		VAC INLET ASSY	1
10	290-1250		REAR SPLASH GUARD	1
11	290-1260		FRONT SPLASH GUARD	1
12	290-1265		SCRUB ARM BRACKET	4
13	5-225	SEE NOTE BELOW	VAC MOTOR	1
14	H-70103		HCS 3/8"-16 X 3/4" SS	20
15	H-NJ04C		JNYL 1/4" - 20 SS	9
16	H-37130		NYLOK NUT, 1/2" - 20	8
17	H-29598		FPH 5/16" - 18 X 1"	17
18	H-13053		HCS 5/16"-18 X 3/4"	4
19	H-71017		FW 3/8" X 7/8" SS	3
20	H-70710		HN 1/4"- 20 SS	20
21	H-71013		FW 1/4" X 5/8" SS	12
22	H-70858		NYLOK #10-32 SS	8
23	H-71016		FW 5/16" X 7/8" USS	12
24	H-70105		HCS 3/8"- 16 X 1" SS	2
25	H-71067		LW 3/8" SS	10
26	H-70712		HN 3/8"-16 SS	6
27	H-33080		FW 5/16" SAE	8
28	H-NJ06C		JNYL 3/8- 16 SS	16
29	H-70145		HCS 3/8"- 24 X 1 3/4" SS	4
30	H-33620		LW 5/16"	21
31	H-70861		NYLOK 5/16" - 18 SS	9
32	H-71063		LW 1/4" SS	14
33	H-70732		HN 3/8"- 24 SS	4
34	H-72684		FHP 10-32 X 3/4" SS	12
35	H-NJ05C		JNYL 5/16"- 18 SS	12
36	290-3001		VAC BOX GASKET	1
37	5-708A		VAC MOTOR GASKET	1
38	38-734		BLOWER RING	1
39	H-00221		FTS 1/4"- 20 X 5" SS	1
40	5-891		PUMP, WATER JET, (INCLUDES MTG BRACKET & GROMMETS)	1
41	290-8500		PUMP 24V DC (OPTIONAL)	1
42	290-1310		FR. SPLASH CURTAIN - SHORT	FR. 1
	290-1315		SPLASH CURTAIN - LONG	
43	290-1320		CURTAIN MTG STRIP - SHORT	1
	290-1325		CURTAIN MTG STRIP - LONG	
44	H-70003		HCS 1/4"- 20 X 3/4" SS	8
45	H-70860		NYLOK 1/4"- 20 SS	4
46	H-72686		FHP 10-32 X 1-1/4" SS	4
47	H-70005		HCS 1/4"- 20 X 1" SS	4
48	H-71009		FW #10 SS	6

NOTE: FOR ITEM 13 MACHINE SERIAL NUMBER 40657 AND GREATER USE P/N 290-250

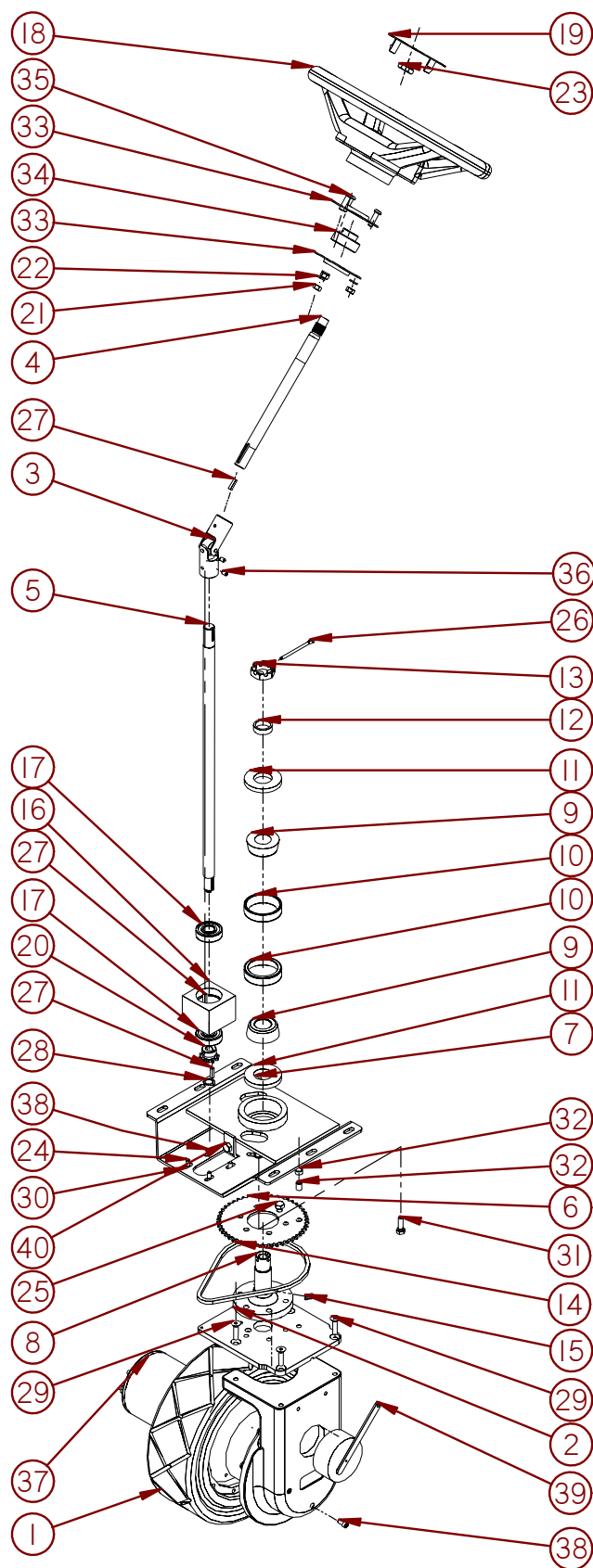
DOOR/WIPER/ROLLER ASSEMBLY



DOOR/WIPER/ROLLER ASSEMBLY

Item	Part No.	Part Description	Qty
1	290-1270	FRONT LH POD	1
2	290-1280	REAR LH POD	1
3	290-1290	LH POD TOP SUPPORT	1
4	290-1230	LEFT WIPER	1
5	290-1271	FRONT RH POD	1
6	290-1281	REAR RH POD	1
7	290-1291	RH POD TOP SUPPORT	1
8	290-1231	RIGHT WIPER	1
9	290-1220	DOOR	2
10	290-1126	ROLLER BRACKET	2
11	290-4030	WIPER BAND	2
12	290-1248	FW BRONZE .500 ID X 1.00 OD X .125 THK	8
13	290-1243	3/8" ID, 1/2" OD, 1/4" LG BEARING	8
14	5-130	DOOR LATCH	2
15	5-402LA	WIPER BLADE	2
16	5-122	8" SS HINGE	2
17	5-123B 290-1235	WIPER LIFTING BRACKET	2
18	21-1127	ROLLER	8
19	21-1050	PARALLEL LINK	4
20	H-70055	HCS 5/16"- 18 X 1" SS	16
21	H-250HCN	HCN 1/4"-20	8
22	H-71013	FW 1/4" X 5/8" SS	36
23	H-71021	FW 3/8" X 7/8" SS	6
24	H-70861	NYLOK 5/16" - 18 SS	8
25	H-71065	LW 5/16" SS	8
26	H-70003	HCS 1/4"- 20 X 3/4" SS	36
27	H-37038	JNYL 5/8"- 11	2
28	H-70712	HN 3/8"-16 SS	6
29	H-70103	HCS 3/8"-16 X 3/4" SS	6
30	290-1234	.375 OD. X .31 ID. X .625 LG	4
31	H-70005	HCS 1/4"- 20 X 1" SS	8
32	H-71067	LW 3/8" SS	6
33	H-70710	HN 1/4"- 20 SS	36
34	H-13337	HB 5/8"- 11 X 13"	2
35	H-71063	LW 1/4" SS	36
36	H-72706	FHP 1/4"- 20 X 5/8" SS	18
37	H-78015	FW 5/16" X 3/4" SS	13
38	290-1245	3/8" ID, 1/2" OD, 3/8" LG, FLANGE BEARING	8

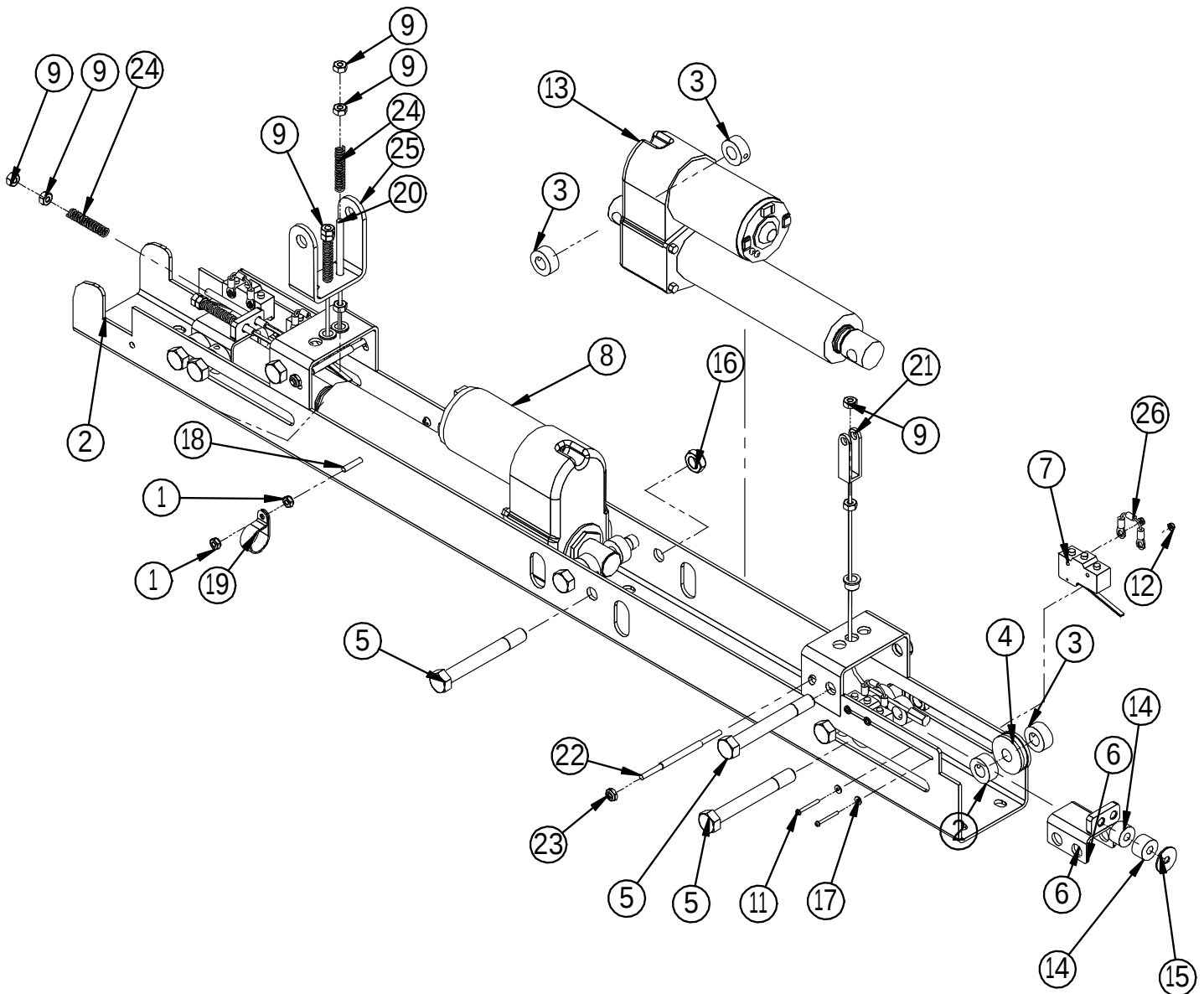
STEERING/TRACTION ASSEMBLY



STEERING/TRACTION ASSEMBLY

Item	Part No.	Part Description	Qty
1	290-7315	BLACK TIRE	1
2	290-7326	PIVOT PLATE	1
3	290-7110	U-JOINT	1
4	290-7090	STEERING SHAFT, UPPER	1
5	290-7120	STEERING SHAFT, LOWER	1
6	37-7314	LARGE STEERING SPROCKET	1
7	37-7315	DROP PLATE	1
8	290-7332	STEERING SHAFT	1
9	37-7317	TAPERED ROLLER BEARING	2
10	37-7318	BEARING CAP	2
11	37-7319	STEERING SHAFT SEAL	2
12	37-7320	PRE LOAD SLEEVE	1
13	37-7321	SLOTTED NUT, 2.0 - 12	1
14	290-7327	STEERING CHAIN	1
15	5-831	MASTER LINK	1
16	8-723	BEARING BLOCK	1
17	8-723B	BEARING	2
18	8-703	STEERING WHEEL	1
19	8-701A	STEERING COVER	1
20	5-826	10 TOOTH SPROCKET	1
21	H-70711	HN 5/16"- 18 SS	6
22	H-71065	LW 5/16" SS	5
23	H-37038	JNYL 5/8"- 11	1
24	H-70003	HCS 1/4"-20 X 5/8" SS	2
25	H-70142	HCS 3/8"- 24 X 1" S/S	1
26	H-65129	3/16" X 2-1/2" COTTER PIN	1
27	H-0953152	3/16" X 3/4" KEY	3
28	H-68013	SNAPRING 5/8"	1
29	H-73932	FHSCS 3/8 - 16 X 1-1/4" S/S	4
30	H-71063	LW 1/4" SS	2
31	H-70055	HCS 5/16"- 18 X 1" SS	2
32	H-05233	PVC TUBING	1
33	4-364A	FLANGE, 1.75" ID	2
34	4-352	BEARING	1
35	H-73780	BHSCS 5/16-18 X 1	3
36	H-25328	SSS CP 1/4"-20 X 3/8"	2
37	290-7313	24V, 2HP, MOTOR	1
38	H-73459	SHCS 1/4-20 X 1/2 SS	5
39	290-7323	24 VOLT ELECTRIC BRAKE	1
40		HCS 3/8"-16 X 1/2" SS	1
41	H-25595	SS CP 3/8"- 24 X 1/2"	1

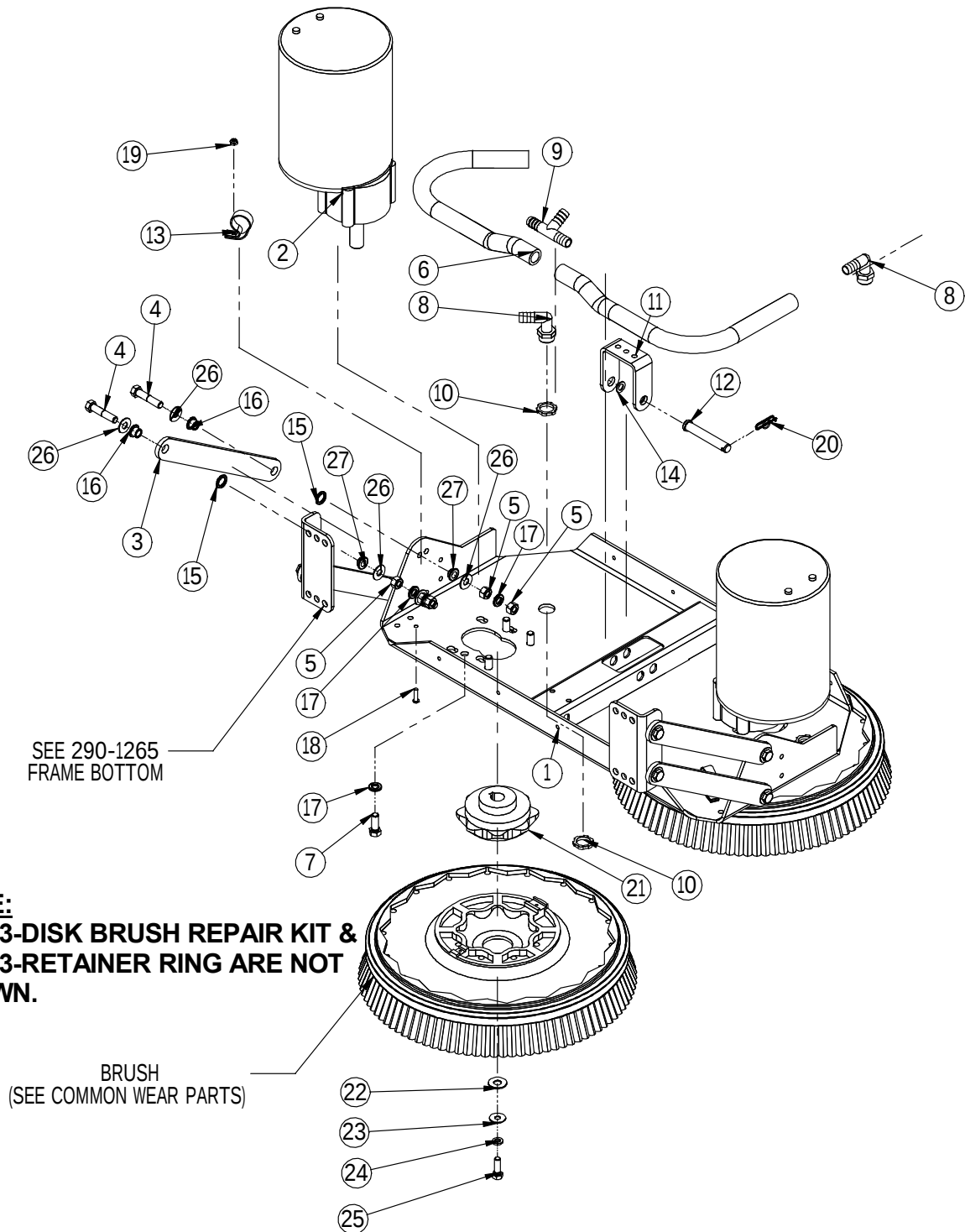
ACTUATOR SLIDE ASSEMBLY



ACTUATOR SLIDE ASSEMBLY

Item	Part No.	Part Description	Qty
1	H-37408	KN #10-32	4
2	290-7660	ACTUATOR CHANNEL	1
3	H-33374	SHAFT COLLAR, 1/2" ID	16
4	5-772	PULLEY, NYLON	3
5	H-11219	HCS 1/2"- 13 X 4.0"	8
6	290-7710	CABLE TROLLEY	2
7	5-223	LIMIT SWITCH	4
8	290-2210	ACTUATOR, 1000 LB. LOAD (20:1)	1
9	H-36152	HN 1/4"- 28	18
10	H-6389	FLANGED BUSHING 3/8" ID X 5/8" OD, NYLON	3
11	H-28679	PPH #4-40 X 1"	8
12	H-37006	NYLOK #4-40	6
13	5-221	ACTUATOR, 1000 LB. LOAD (10:1)	1
14	21-7690	POLYURETHANE SPRING	2
15	H-33207	FW 1/4" X 1"	1
16	H-37032	JAM NYLOK NUT, 1/2"- 13	8
17	H-33066	FW #4 SAE	8
18	H-72566	RPH #10-32 X 1" SS	2
19	H-78LC	7/8" NYLON LOOP CLAMP	2
20	290-7713	SCRUBHEAD LIFT CABLE 12.25"	2
21	290-7890	SQUEEGEE LIFT CABLE	1
22	H-01321	DOUBLE ENDED STUD, 1/4-20 X 4" SS	2
23	H-NJ04C	JNYL 1/4" - 20 SS	4
24	290-7712	COMPRESSION SPRING	6
25	290-4010	LIFT BRACKET	1
26	5-270	EMF SUPP DIODE	4
27	H-01320	FW 1/2" ID X 1/8" THICK NYLON	2

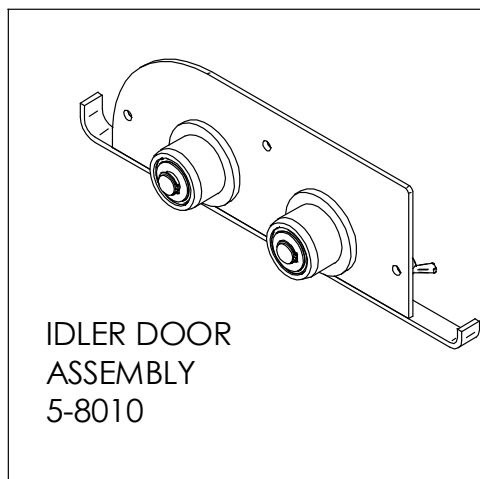
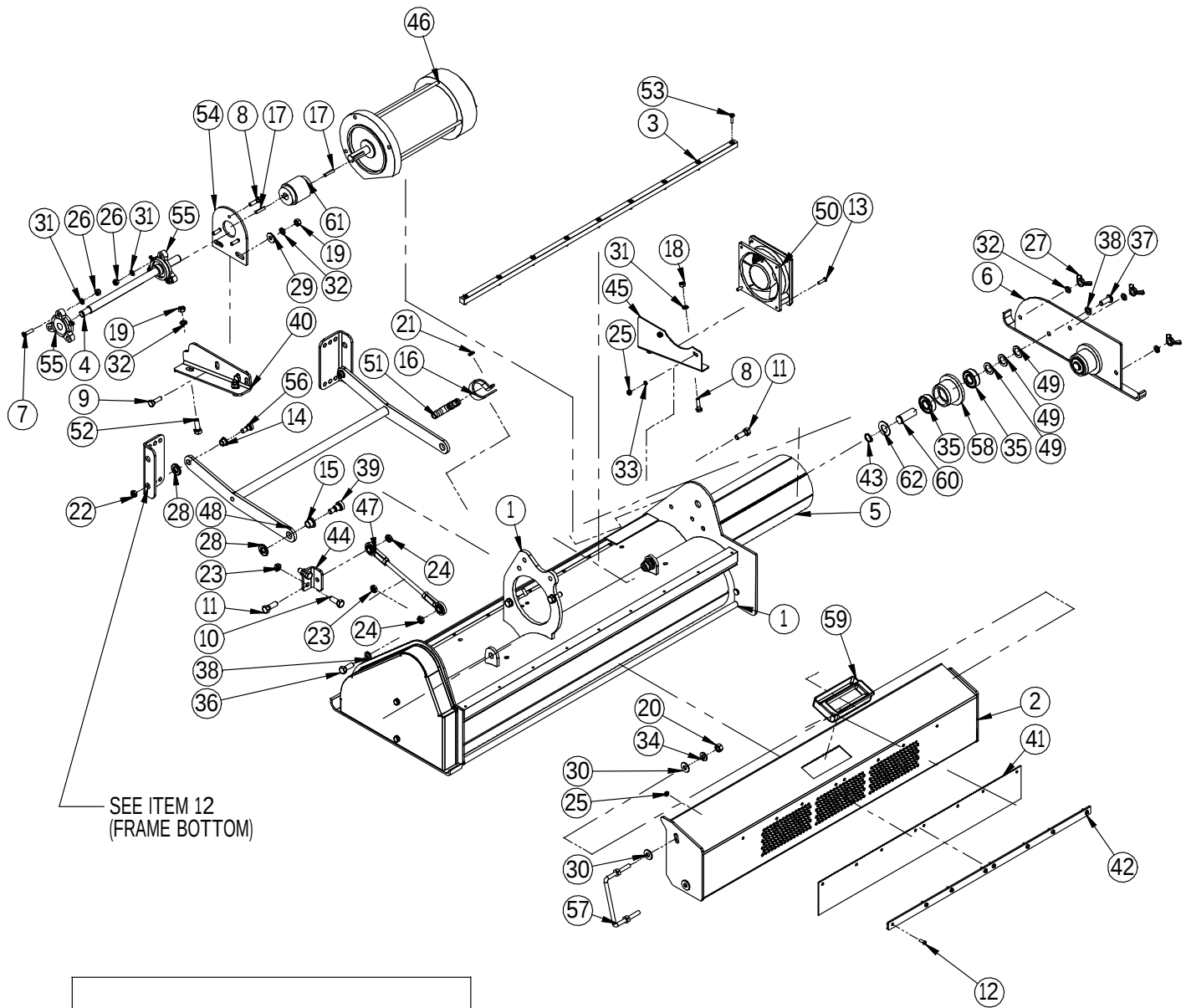
DISK SCRUBHEAD ASSEMBLY



DISK SCRUBHEAD ASSEMBLY

Item	Part No.	Part Description	Qty
1	7-402	SCRUB HEAD PLATFORM	1
2	38-222	MOTOR 1 HP X 350 RPM	2
3	5-124	LATERAL ARM	4
4	H-70110	HCS 3/8"- 16 X 1-3/4" SS	8
5	H-70712	HN 3/8"-16 SS	11
6	7-4034	REINF. HOSE 5/8 ID X 18" LG	1
7	H-70105	HCS 3/8"- 16 X 1" SS	7
8	5-447	1/2 NPT X 1/2" BARB ELBOW	2
9	5-446	1/2 " PLASTIC BARB TEE	1
10	H-07005	1/2" NPT LOCKNUT	4
11	290-4010	LIFT BRACKET	1
12	H-CP238	1/2" X 3" CLEVIS PIN	1
13	H-78LC	7/8 LOOP CLAMP	2
14	H-76063	FW 3/8" NYLON	2
15	290-1247	FW BRONZE .50" ID X 1.0" OD X .062	5
16	290-1245	3/8" ID, 1/2" OD, 3/8" LG, FLANGE BEARING	3
17	H-71067	LW 3/8" SS	11
18	H-72565	RPH #10-32 X 3/4" SS	1
19	H-70858	NYLOK #10-32 SS	1
20	H-RUE22	1/2" RUE RING COTTER	1
21	21-5000	BRUSH DRIVER	2
22	H-99001	FW 3/8" SS	2
23	H-71016	FW 5/16" X 7/8" USS	2
24	H-71065	LW 5/16" SS	2
25	H-70055	HCS 5/16"- 18 X 1" SS	2
26	H-71017	FW 3/8" SS	10
27	290-1243	3/8" ID, 1/2" OD, 1/4" LG BEARING	2

CYLINDRICAL-DECK

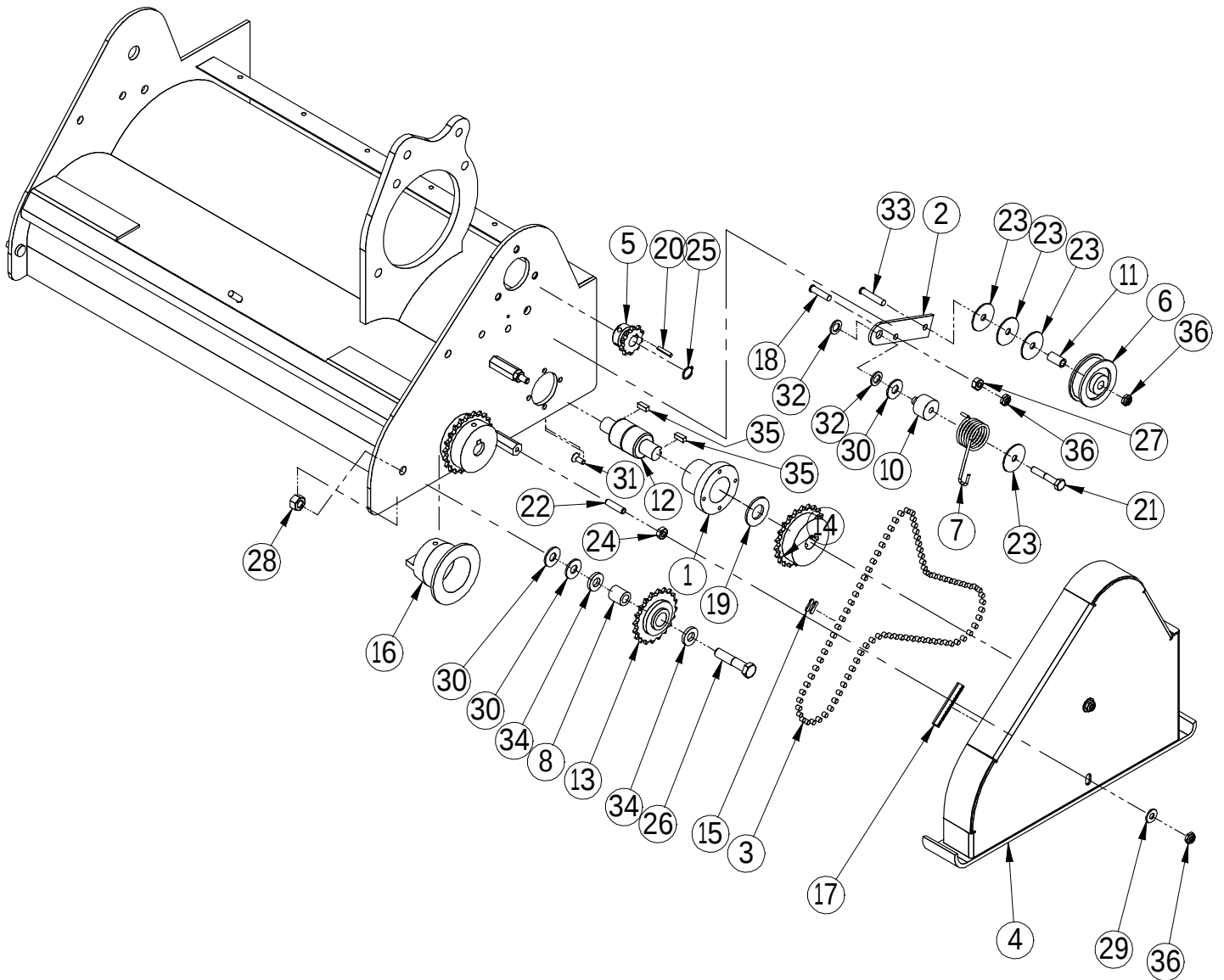


CYLINDRICAL-DECK

Item	Part No.	Part Description	Qty
1	32-9000	32" CYL BRUSH HEAD	1
2	25-9050 28-9050 7-811	25" HOPPER 28" HOPPER 32" HOPPER	1
3	25-8320 28-8320 5-832	HOPPER RAIL, 25" HOPPER RAIL, 28" HOPPER RAIL, 32"	1
4	290-8355 290-8360 290-8365	DRIVE SHAFT, 25" CYL DRIVE SHAFT, 28" CYL DRIVE SHAFT, 32" CLY	1
5	SEE PAGE 4	CYLINDRICAL BRUSH	2
6	5-801	IDLER DOOR	1
7	H-72710	FHP 1/4"- 20 X 1" SS	3
8	H-70005	HCS 1/4"- 20 X 1" SS	5
9	H-70055	HCS 5/16"- 18 X 1" SS	2
10	H-70105	HCS 3/8"- 16 X 1" SS	2
11	H-01219	HCS 3/8"- 24 X 1 1/8" SS	2
12	H-72563	RPH #10-32 X 1/2" SS	8
13	H-72565	RPH #10-32 X 3/4" SS	2
14	290-1245	3/8" ID, 1/2" OD, 3/8" LG, FLANGE BEARING	2
15	290-1246	1/2" ID X 5/8" OD X 1/2" LG FLANGED BEARING	2
16	H-3225T5	RUBBER LOOP CLAMP	1
17	H-01125	3/16" X 1" KEY	2
18	H-70710	HN 1/4"- 20 SS	2
19	H-70711	HN 5/16"- 18 SS	4
20	H-36106	HN 3/8"-16	2
21	H-NJ04C	JNYL 1/4" - 20 SS	1
22	H-NJ05C	JNYL 5/16"- 18 SS	2
23	H-0129158	JNYL 3/8- 16 SS	4
24	H-00531	JNYL 3/8- 24 SS	2
25	H-70858	NYLOK #10-32 SS	10
26	H-70860	NYLOK 1/4"- 20 SS	6
27	H-70911	WINGNUT 5/16"- 18 SS	3
28	290-1248	FW BRONZE .500 ID X 1.00 OD X .125 THK	4

Item	Part No.	Part Description	Qty
29	H-71016	FW 5/16" X 7/8" USS	2
30	H-33008	FW 3/8" USS	4
31	H-71063	LW 1/4" SS	8
32	H-71065	LW 5/16" SS	7
33	H-33614	LW #10	2
34	H-33622	LW 3/8"	2
35	1-421	IDLER BEARING	4
36	H-70105	HCS 3/8-16 X 1" SS	3
37	H-73815	BH SCHS 3/8-16 X 1" SS	1
38	H-71067	LOCKWASHER 3/8 SS	4
39	H-25452	SB 1/2" X 1/2" SS	2
40	28-9005	FAN PLATE MOUNT	1
41	28-9060	HOPPER SPLASH SHIELD	1
42	28-9070	SPLASH SHIELD HOPPER STRIP	1
43	H-35313	17mm SNAP RING	2
44	290-1350	CYL SUPPORT BRACKET	1
45	290-8100	FAN MTG BRACKET	1
46	22-2110	2 HP MOTOR	1
47	7-843	ADJ LATERAL ARM	1
48	290-9020	CYLINDRICAL LIFT ARM	1
49	H-17002	FW 17mm NYLON	6
50	5-212	COOLING FAN	1
51	5-446	1/2 " PLASTIC BARB TEE	1
52	H-70055	HB 5/16"- 18 X 1" SS	2
53	H-72684	FHP 10-32 X 3/4" SS	9
54	5-8102	BEARING PLATE	1
55	5-829	FLANGE BEARING	2
56	H-25444	SB 3/8" X 3/8" SS	2
57	5-834	HOPPER HANDLE	1
58	5-838	BRUSH IDLER	2
59	5-849	RECESSED HANDLE	1
60	5-858	IDLER SHAFT	2
61	8-613	FLEXIBLE COUPLER	1
62	H-00797	FW 17.3mm X 33.2mm X 1.6mm	2

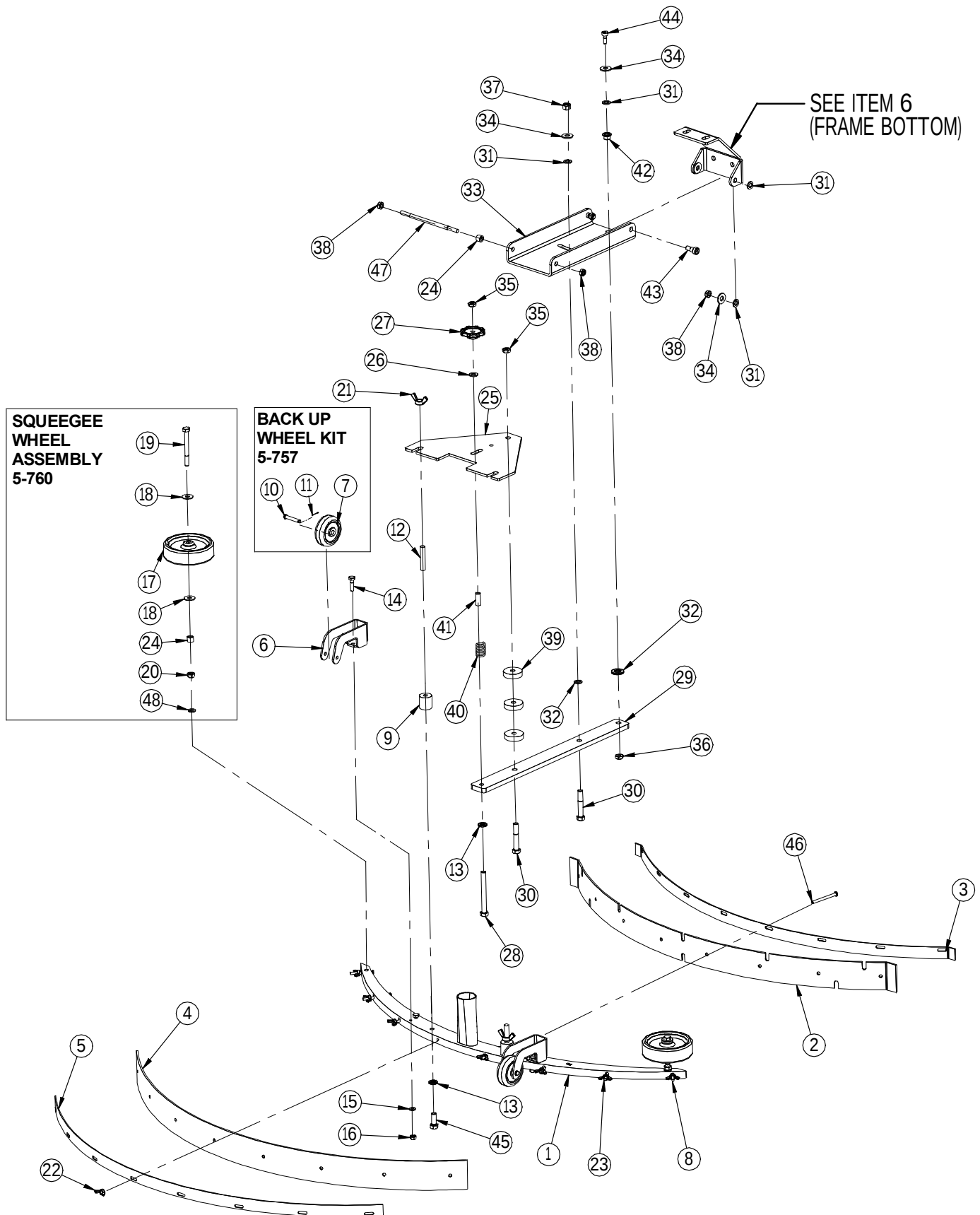
CYLINDRICAL-MECHANICAL



CYLINDRICAL-MECHANICAL

Item	Part #	Description	Qty
1	1-305	BEARING HOUSING	2
2	22-7970	MOVABLE IDLER ARM	1
3	22-8300	DRIVE CHAIN	1
4	22-9021	CHAIN GUARD	1
5	290-8260	10 TOOTH SPROCKET	1
6	4-317	IDLER PULLEY	1
7	4-319	TENSION SPRING	1
8	5-793	IDLER SPACER	1
9	5-796	GREASE (USE ONLY OEM GREASE - NOT SHOWN)	1
10	5-798	SPRING PIVOT	1
11	5-822	Spacer, 1/4" ID, 3/8" OD, 11/16" Long	1
12	5-824	DRIVE BEARING	2
13	5-827	20 TOOTH SPROCKET	1
14	5-828	22 TOOTH SPROCKET	2
15	5-831	MASTER LINK	1
16	5-837	BROOM DRIVER	2
17	5-845A	WINDLACING - (WEATHER STRIPPING)	1
18	H-00272	SCS 1/4"- 20 X 1.0"	1
19	H-00279	WASHER 5/8 TEFLON	1
20	H-01343	1/8" X 1/8" X 3/4" KEY	1
21	H-15009	HCS 1/4"- 20 X 1-1/2" GRADE 8	1
22	H-255HD	STUD 1/4"- 20 X 1"	2
23	H-33208	F W 1/4" X 1 1/4"	4
24	H-36202	JN 1/4"- 20	2
25	H-68011	SNAPRING .5"	1
26	H-70145	HCS 3/8-24 X 1 3/4" SS	1
27	H-70710	HN 1/4"- 20 SS	1
28	H-70732	HN 3/8"- 24 SS	1
29	H-71013	FW 1/4" X 5/8" SS	2
30	H-71017	FW 3/8" SS	3
31	H-72682	FHP 10-32 X 1/2" SS	1
32	H-76063	FW 3/8" NYLON	2
33	H-93580	SCS 1/4"- 20 X 1 1/4"	1
34	H-98025	WASHER 3/8 GRADE 8	2
35	H-K1432	3/16" X 1/2" KEY	4
36	H-NJ04C	JNYL 1/4" - 20 SS	4

SQUEEGEE ASSEMBLY



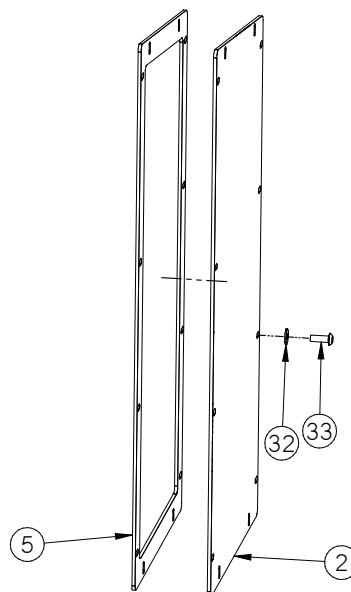
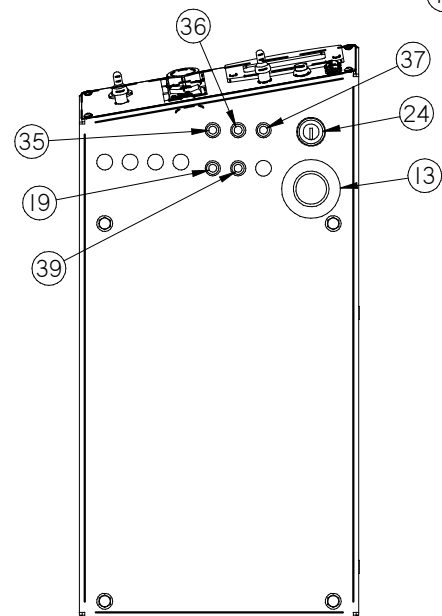
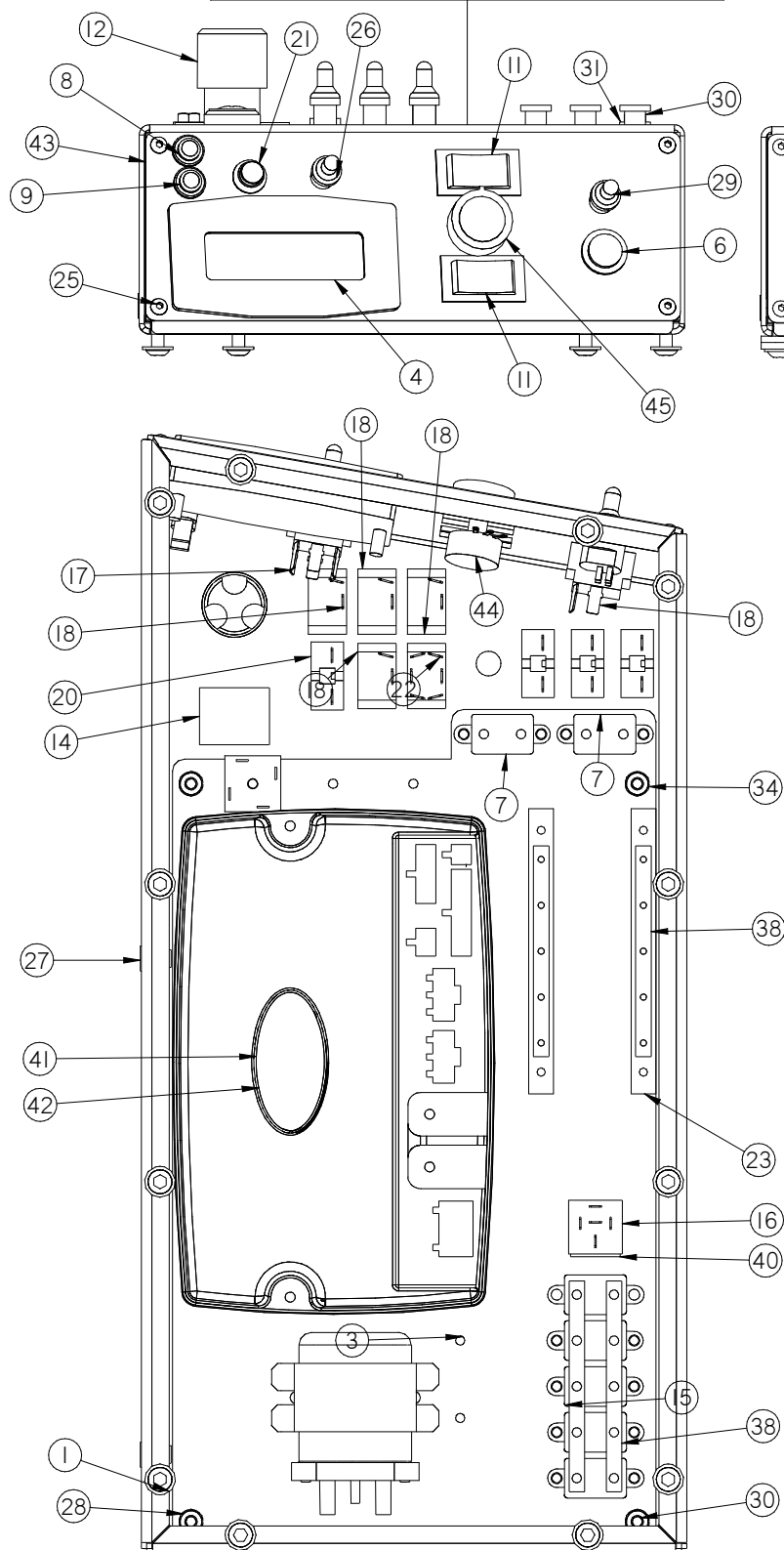
SQUEEGEE ASSEMBLY

Item	Part No.	Part Description	Qty	Item	Part No.	Part Description	Qty
1	22-7181 25-7181 28-7181 290-7181	30" SQUEEGEE WELDMENT 35" SQUEEGEE WELDMENT 38" SQUEEGEE WELDMENT 45" SQUEEGEE WELDMENT	1	20	H-70711	HN 5/16"- 18 SS	2
2	22-755G 25-755G 28-755G 290-756G	30" SQUEEGEE BLADE, FRONT 35" SQUEEGEE BLADE, FRONT 38" SQUEEGEE BLADE, FRONT 45" SQUEEGEE BLADE, FRONT	1	21	5-786	WINGNUT 3/8"-16 NICKEL	2
3	22-7170 25-7170 28-7170 290-7170	30" SQUEEGEE BAND, FRONT 35" SQUEEGEE BAND, FRONT 38" SQUEEGEE BAND, FRONT 45" SQUEEGEE BAND, FRONT	1	22	H-70908	WINGNUT 10-32 SS	8
4	22-754G 25-754G 28-754G 7-753G	30" SQUEEGEE BLADE, REAR 35" SQUEEGEE BAND, REAR 38" SQUEEGEE BLADE, REAR 45" SQUEEGEE BLADE, REAR	1	23	H-00249	PPH #10-32 X 2 1/4" SS	4
5	22-7160 25-7160 28-7160 290-7160	30" SQUEEGEE BAND, REAR 35" SQUEEGEE BAND, REAR 38" SQUEEGEE BAND, REAR 45" SQUEEGEE BAND, REAR	1	24	H-33371	5/16" ID SHAFT COLLAR	3
6	21-7220	SQUEEGEE TRAIL MOUNTS	2	25	21-7610	SQUEEGEE TRIANGLE PLATE	1
7	21-7570	BACK UP WHEEL (GREY)	2	26	H-33080	FW 5/16" SAE	1
8	H-72555	PPH #10-32 X 1 3/4" SS	2	27	21-7205	PALM GRIP KNOB, 3/8-24	1
9	5-846	PIVOT SHAFT	2	28	H-10055	HCS 3/8"- 24 X 3.5" SS	1
10	HZCP44	CLEVIS PIN 1/4 X 1 1/2"	2	29	290-7150	SQUEEGEE TRAIL ARM	1
11	H-RUE8	1/4" RUE RING COTTER	2	30	H-70136	HCS 3/8"- 24 X 2 1/4" SS	2
12	H-S1060	STUD 3/8-16 X 1 1/2" SS	2	31	H-76063	FW 3/8" NYLON	7
13	H-71067	LW 3/8" SS	3	32	290-1248	FW BRONZE .500 ID X 1.00 OD X .125 THK	1
14	H-70005	HCS 1/4"- 20 X 1" SS	4	33	290-7130	SQUEEGEE SWING PLATE	1
15	H-71063	LW 1/4" SS	4	34	H-71017	FW 3/8" SS	4
16	H-70710	HN 1/4"- 20 SS	4	35	H-00531	JNYL 3/8- 24 SS	2
17	5-760B	SIDE WHEEL (GREY)	2	36	H-0129158	JNYL 3/8- 16 SS	1
18	H-71016	FW 5/16" X 7/8" USS	4	37	H-77862	NYLOK 3/8"- 16 SS	1
19	H-70065	HCS 5/16"- 18 X 3" SS	2	38	H-NJ05C	JNYL 5/16"- 18 SS	4
				39	4-446	GROMMET-3/8 ID X 1-1/2 OD X .375	3
				40	21-7240	SPRING	1
				41	7-782C	5/16 CLEAR TUBING	1
				42	290-1245	3/8" ID, 1/2" OD, 3/8" LG, FLANGE BEARING	1
				43	H-2S444	SB 5/16" X 3/8" SS	2
				44	H-79054	SHCS 5/16-18 X 3/4 SS	1
				45	H-70105	HCS 3/8"- 16 X 1" SS	2
				46	H-00288	PPH #10-32 X 2 1/2" SS	2
				47	H-90281	1/4-20 X 6" DOUBLE ENDED STUD	1
				48	H-71065	LW 5/16" SS	2

CENTRAL COMMAND II

SERIAL # 290 OR 291-2901 OR GREATER

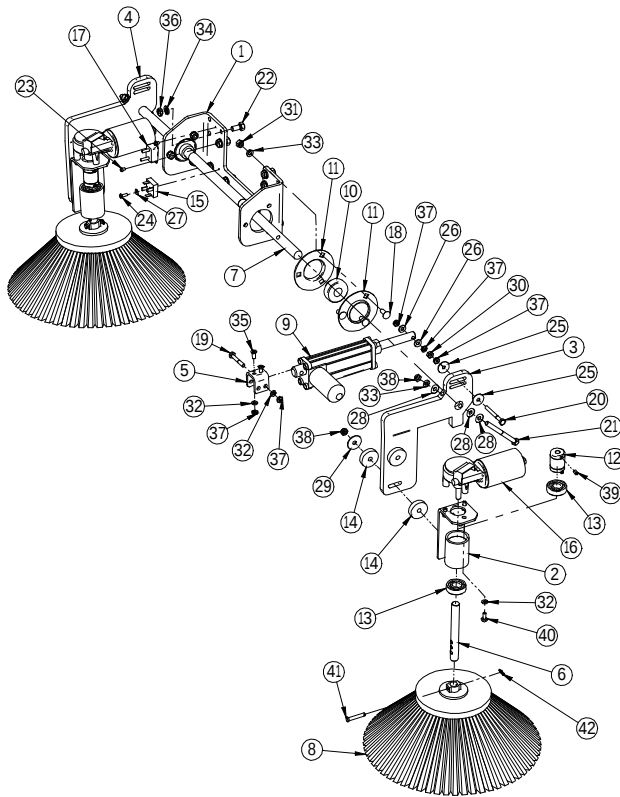
SERIAL # 290 OR 291-2900 OR LOWER



CENTRAL COMMAND II

Item	Part No.	Part Description	Comments	Qty
1	290-2010	CONTROL PANEL		1
2	290-2001	ACCESS COVER		1
3	290-2006	HARDWARE PANEL		1
4	290-2891	LCD SCREEN		1
5	290-2004	ACCESS COVER GASKET		1
6	290-2015	ONE TOUCH BUTTON		1
7	290-2815	CIR. BREAKER - 15A, 24V		2
8	290-2300	LOW SOLUTION (AMBER)	LOW SOLUTION	1
9	290-2310	FULL RECOVERY (RED)	HIGH RECOVERY	1
10	290-2013	CONT PANEL TOP PLATE		1
11	5-234	SWITCH, ROCKER, DPDT, ON/ON		2
12	5-300	EMERGENCY SHUT OFF (OPT)		1
13	5-301	EMERG LEGEND PLATE (OPT)		1
14	5-302	EMERG CONTACT BLK (OPT)		1
15	5-289	CIR BREAKER 24V 50A		4
16	5-293	15 AMP RELAY		1
17	7-283	SWITCH, TOGGLE, MOM/OFF/MOM (DPDT)	DOWN PRESSURE	1
18	5-892	TOGGLE, ON-OFF SPST		5
19	5-892A	PROTECTIVE BOOT, TOGGLE SWITCH, (GRAY)	WATER TO SIDE BROOMS	1
20	7-837	FUSE RESETTABLE 2 AMP		1
21	7-229	PUSH BUTTON SWITCH		1
22	7-821	SWITCH, TOGGLE, ON/ON (DPDT)	SIDE BROOMS	1
23	7-287	BUSS BAR UHMW		2
24	4-234	KEY SWITCH		1
25	H-73743	BHSCS 10-32 X 1/2" SS		4
26	H-01200	PROTECTIVE BOOT, TOGGLE SWITCH, (BLACK)	DOWN PRESSURE	1
27	H-250HCN	HCN 1/4"-20		2
28	H-36102	HN 1/4"-20		12
29	H-01196	PROTECTIVE BOOT, TOGGLE SWITCH, (RED)	FORWARD/REVERSE	1
30	H-13005	HCS 1/4"-20 X 1"		4
31	H-33078	FW 1/4" SAE		4
32	H-71013	FW 1/4" X 5/8" SS		12
33	H-73754	BHSCS 1/4 - 20 X 3/4 SS		12
34	H-33618	LW 1/4"		4
35	H-01199	PROTECTIVE BOOT, TOGGLE SWITCH, (BLUE)	SPRAY HOSE	1
36	H-01195	PROTECTIVE BOOT, TOGGLE SWITCH, (WHITE)	VAC MOTOR	1
37	H-01198	PROTECTIVE BOOT, TOGGLE SWITCH, (GREEN)	RECYCLING	1
38	E-5HBB	5 HOLE BUSS BAR		4
39	H-01197	PROTECTIVE BOOT, TOGGLE SWITCH, (YELLOW)	SIDE BROOMS	1
40	290-2020	BRACKET		1
41	290-2899	COMPUTER CONTROL V3	USED ON MACHINES W/ SERIAL # 290 OR 291-2901 OR GREATER	1
42	290-2890	COMPUTER CONTROL V2	USED ON MACHINES W/ SERIAL # 290 OR 291-2900 OR LOWER	1
43	390-2013	CONTROL PANEL TOP PLATE		1
44	7-292	5K POTENTIOMETER		1
45	21-4510	SOLUTION CONTROL KNOB, BLUE		1

DUAL SIDE BROOM ASSY



Item	Part No.	Part Description	Qty	Item	Part No.	Part Description	Qty
1	290-4630	AXLE SUPPORT BRACKET	1	22	H-70103	HCS 3/8"- 16 X 3/4" SS	8
2	290-8750	SIDE BROOM MOTOR MOUNT	2	23	H-72501	RPH #6-32 X 1/4" SS	2
3	290-4420	SIDE BROOM LIFT ARM (LH)	1	24	H-72516	PPH #6-32 X 1/2" SS	1
4	290-4421	SIDE BROOM LIFT ARM (RH)	1	25	H-	FNW 1/4" X 1" SS	2
5	290-4435	SIDE BROOM ACTUATOR SUPT BRKT	1	26	H-76061	FW 1/4" NYLON	2
6	290-4450	SIDE BROOM DRIVE SHAFT	2	27	H-78009	FW 3/16" X 7/16" SS	1
7	290-4620	SIDE BROOM SUSPENSION AXLE SHAFT	1	28	H-78015	FW 5/16" X 3/4" SS	6
8	1-402	SIDE BROOM POLYPROPYLENE	2	29	H-	FNW 5/16" X 1 1/4" SS	4
9	290-2220	ACTUATOR	1	30	H-70710	HN 1/4"- 20 SS	1
10	4-352	BEARING	2	31	H-70711	HN 5/16"- 18 SS	6
11	4-364A	FLANGE, 175" ID	4	32	H-71063	LW 1/4" SS	9
12	4-444	SIDE BROOM SAFETY DRIVE COUPLING	2	33	H-71065	LW 5/16" SS	8
13	4-445C	DRIVE TUBE BEARING	4	34	H-71067	LW 3/8" SS	8
14	4-446	GROMMET - 3/8" ID X 1-1/2" OD X .375	8	35	H-72706	FHP 1/4"- 20 X 5/8" SS	2
15	5-296	DIODE BRIDGE	1	36	H-0129158	JNYL 3/8- 16 SS	8
16	8-220	SIDE BROOM MOTOR	2	37	H-NJ04C	JNYL 1/4"- 20 SS	6
17	8-284	CIR. BREAKER - 6A, 24V	1	38	H-NJ05C	JNYL 5/16"- 18 SS	6
18	H-74429	CB 5/16"- 18 X 3/4" SS	6	39	H-25328	SSS CP 1/4"- 20 X 3/8"	4
19	H-77010	HCS 1/4"- 20 X 1.75" SS	1	40	H-82550	HCS M6-10 X 14 SS	6
20	H-77013	HCS 1/4"- 20 X 2.5" SS	1	41	H-ZCP44	1/4" X 1 1/2" CLEVIS PIN	2
21	H-77067	HCS 5/16"- 18 X 3.5" SS	2	42	H-RUE8	RUE RING COTTER	2

