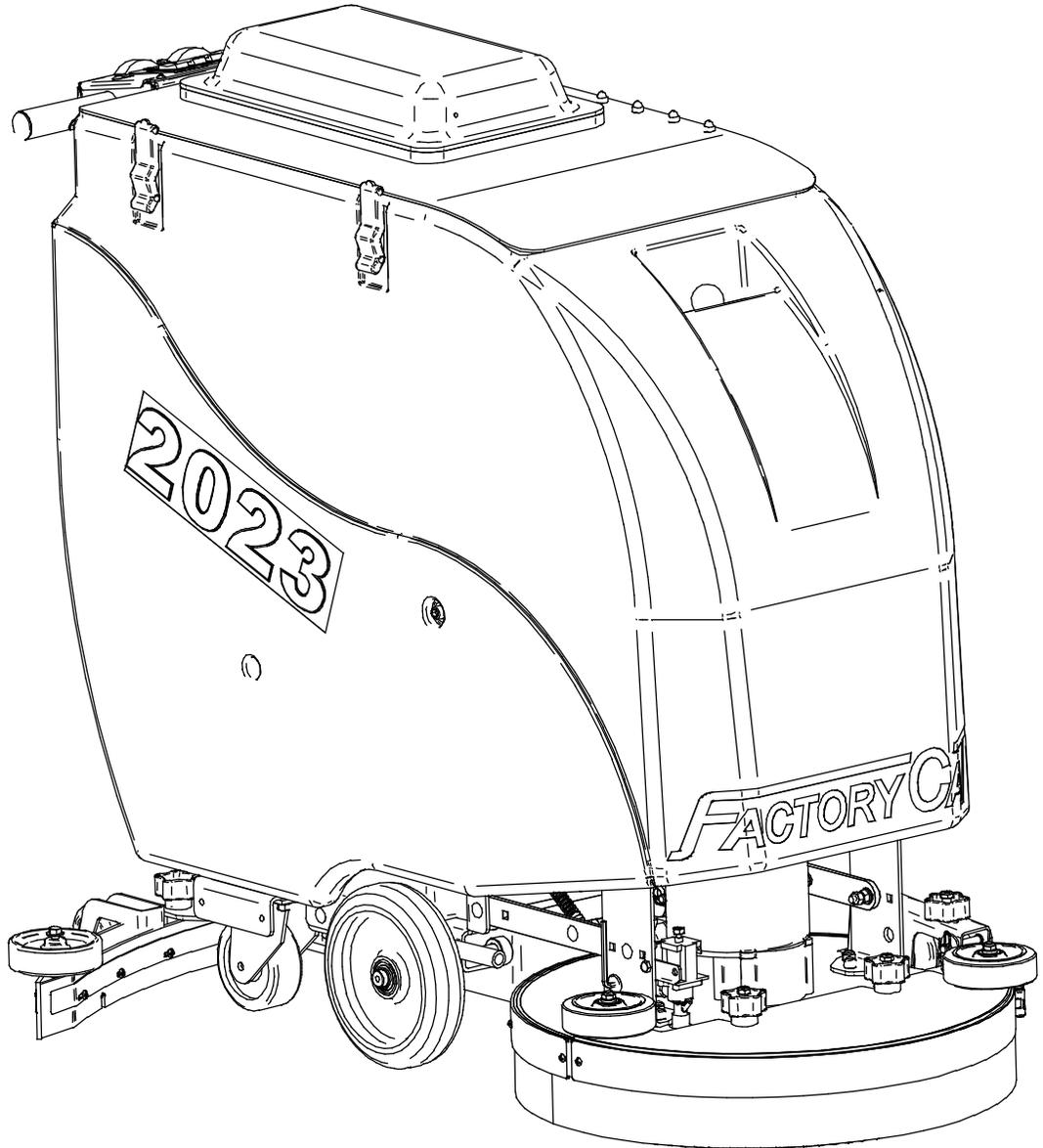


MODEL 2023/2017



VERSION 1.0



R.P.S. Corporation
P.O. Box 368
Racine, Wisconsin 53401

Phone: 1-800-634-4060
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www.factorycat.com

HOW TO USE THIS MANUAL

This manual contains the following sections:

- *HOW TO USE THIS MANUAL*
- *SAFETY*
- *OPERATIONS*
- *MAINTENANCE*
- *PARTS LIST*

The *HOW TO USE THIS MANUAL* section will tell you how to find important information for ordering the correct replacement parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and serial number are important.

Refer to *MACHINE INFORMATION* on page one of this manual, which is filled out during the installation of your machine.

The serial number of your machine is located on the lower half of the control panel of the machine. (See Picture Below)



The *SAFETY* section contains important information regarding hazard or unsafe practices of the machine.

Levels of hazards are identified that could result in product or personal injury, or severe injury resulting in death.

The *OPERATIONS* section is to familiarize the operator with the operation and function of the machine.

The *MAINTENANCE* section contains preventative maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Batteries
- Scrub Brushes
- Adjusting Squeegee
- Service Schedule
- Machine Trouble shooting

The *PARTS LIST* section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- *ITEM* - column refers to the reference number on the parts illustration.
- *PART NO.* - column lists the part number for the part.
- *QTY* - column lists the quantity of the part used in that area of the machine.
- *DESCRIPTION* - column is a brief description of the part.
- *COMMENTS* - column for information not noted by the other columns.

NOTE: If a service or option kit is installed on your machine, be sure to keep the *KIT INSTRUCTIONS* which came with the kit. It contains replacement part numbers needed for ordering future parts.

TABLE OF CONTENTS

PARTS BREAKDOWN ILLUSTRATION

| | | | |
|---|------------|--|------------|
| MACHINE INFORMATION FORM | PAGE 1 | ACTUATOR LIFT ASSEMBLY | PAGE 23-24 |
| WARRANTY REGISTRATION FORM | PAGE 2 | SQUEEGEE TRAIL ARM ASSEMBLY | PAGE 25-26 |
| MACHINE SPECIFICATIONS | PAGE 3 | AXLE SUPPORT ASSEMBLY | PAGE 27-28 |
| COMMON WEAR PARTS | PAGE 4 | SQUEEGEE SUSPENSION ASSEMBLY | PAGE 29-30 |
| SAFETY MESSAGES | PAGE 5 | MODEL 2023 FRAME ASSEMBLY FRONT | PAGE 31-32 |
| !!SAFETY PRECAUTIONS!! | PAGE 6 | MODEL 2023 FRAME ASSEMBLY MIDDLE | PAGE 33-34 |
| MACHINE CONTROLS AND FEATURES | PAGE 7-8 | MODEL 2023 FRAME ASSEMBLY REAR | PAGE 35-36 |
| MACHINE SETUP | PAGE 9 | SCRUB DECK WHEEL ASSEMBLY | PAGE 37-38 |
| ADJUSTING & REMOVING SQUEEGEE | PAGE 10 | 20" DISK DECK ASSEMBLY | PAGE 39-40 |
| INSTALLING PAD DRIVER OR BRUSH | PAGE 11 | 20" SHROUD ASSEMBLY | PAGE 41-42 |
| OPERATION | PAGE 12-13 | 23" DISK DECK ASSEMBLY | PAGE 43-44 |
| ADJ. SOLUTION FLOW & SHROUD CURTAIN | PAGE 14 | 23" SHROUD ASSEMBLY | PAGE 45-46 |
| ADJ. PAD ASSIST DRIVE, DRAIN & CLEAN TANKS | PAGE 14-15 | DISK DECK BRUSH ASSEMBLY | PAGE 47-48 |
| TIP TANK, RAISE & LOWER SQUEEGEE | PAGE 16 | VACUUM MOTOR ASSEMBLY | PAGE 49-50 |
| ADJ. DECK HEIGHT, VAC MOTOR & SOLUTION FILTER | PAGE 17 | MODEL 2023 TANK INSIDE ASSEMBLY | PAGE 51-52 |
| CHARGING BATTERIES | PAGE 18 | MODEL 2023 TANK OUTSIDE ASSEMBLY | PAGE 53-54 |
| MAINTENANCE & STORING MACHINE | PAGE 19 | TANK LID ASSEMBLY | PAGE 55-56 |
| PREVENTATIVE MAINTENANCE RECORDS | PAGE 20-21 | CONTROL PANEL | PAGE 57-58 |
| TROUBLESHOOTING | PAGE 22 | HANDLE BAR ASSEMBLY | PAGE 59-60 |
| MACHINE PARTS | PAGE 23-68 | 32 INCH SQUEEGEE ASSEMBLY | PAGE 61-62 |
| | | FRAME, SUSPENSION, SQUEEGEE ASSEMBLY | PAGE 63-64 |
| | | FRAME, SCRUB DECK ASSEMBLY | PAGE 65-66 |
| | | FRAME, BATTERY, TANK TANK LID, CONTROL- PANEL, HANDLE BAR ASS'Y | PAGE 67-68 |

MACHINE INFORMATION

PLEASE FILL THIS AREA OUT AT THE TIME OF INSTALLATION FOR FUTURE REFERENCE.

MODEL NUMBER _____

SERIAL NUMBER: _____

INSTALLATION DATE: _____

INSTALLING DEALER: _____

DEALER CONTACT: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

PHONE NUMBER: _____

THIS OPERATOR AND PARTS MANUAL SHOULD BE CONSIDERED A PERMANENT PART OF THE UNIT AND SHOULD REMAIN WITH THE UNIT AT ALL TIMES. THIS OPERATOR AND PARTS MANUAL COVERS ALL THE FACTORYCAT 2017 SERIES & 2023 SERIES SCRUBBERS. YOU MAY FIND DESCRIPTIONS AND FEATURES THAT ARE NOT ON YOUR PARTICULAR MODEL. THE INFORMATION AND SPECIFICATIONS INCLUDED IN THIS PUBLICATION WERE IN EFFECT AT THE TIME OF PRINTING. R.P.S. CORP. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT NOTICE OR INCURRING ANY OBLIGATION.

TO REGISTER FOR WARRANTY, FAX YOUR WARRANTY REGISTRATION FORM TODAY!

FAX # (886)-901-3335



R.P.S. CORPORATION
 P.O. BOX 368
 RACINE, WI 53401
 PHONE: 800-634-4060
 FAX 866-901-3335
 WWW.FACTORYCAT.COM

WARRANTY REGISTRATION FORM

COMPLETE FORM IMMEDIATELY AND FAX BACK TO (886)901-3335

DISTRIBUTOR: _____

SERIAL NUMBER: _____

LOCATION (CITY, STATE): _____

INSTALL DATE: _____

CUSTOMER: _____

HOURLY METER: _____

CONTACT: _____

INSTALLED BY: _____

ADDRESS: _____

CITY: _____ STATE _____ ZIP _____

PHONE: _____ FAX: _____

FACTORY CAT MODEL NUMBER: _____

OPTIONS: 1. _____

4. _____

2. _____

5. _____

3. _____

6. _____

PADS: _____

BRUSHES: _____

SQUEEGEE SIZE: _____

SIDE BROOMS: _____

BUYER'S REPRESENTATIVE HAS:

1. RECEIVED INSTRUCTION IN PROPER OPERATION OF THIS MACHINE.
2. RECEIVED OPERATOR'S MANUAL FOR THIS MACHINE.
3. BEEN MADE AWARE THAT ANY OPERATOR SHOULD READ THE MANUAL BEFORE OPERATING THIS MACHINE.

DISTRIBUTOR REP. PRINT: _____

SIGN: _____

CUSTOMER PRINT: _____

SIGN: _____

MACHINE SPECIFICATIONS

2017

2023

BODY CONSTRUCTION/DIMENSIONS

| | | |
|-----------------------|-------------------|-------------------|
| Tank Material: | Poly (3/8" thick) | Poly (3/8" thick) |
| Chassis Construction: | 3/16" Steel | 3/16" Steel |
| Front Wheels: | (2) 10" x 2" | (2) 10" x 2" |
| Rear Casters: | (2) 4" x 2" | (2) 4" x 2" |
| Size (L x W x H): | 42" x 18" x 40" | 48" x 18" x 40" |
| Squeegee Size: | 26" | 32" |
| Weight (w/batteries) | 334 lbs | 406 lbs |

BRUSH/PAD SYSTEM

| | | |
|---------------------------------------|--------------------------------------|------------------------------------|
| Brush/Pad Diameter: | 2017-17: (1) 17" 2017-20: (1) 20" | 2023-20: (1) 20 2023-23: (1) 23 |
| Standard Brush Motor (Power / Speed): | (1) 0.75 hp / 200 rpm | (1) 0.75 hp / 200 rpm |
| Brush Down Pressure: | 0 – 125 pounds | 0 - 125 pounds |

BATTERY SYSTEM:

| | | |
|--------------------------------|---------------|----------------|
| System Voltage | 24 volts | 24 volts |
| Standard Battery Rating: | 105 AH | 140 AH |
| Optional Battery Rating: | 140 AH | 210 AH |
| Battery Run Time: | Up to 3 hours | Up to 4 hours. |
| Charger (110-v / 60 Hz, auto): | 24-v / 15 amp | 24-v / 18 amp |

SOLUTION SYSTEM:

| | | |
|---------------------|--------------------|--------------------|
| Solution Tank Cap.: | 17 gallons | 18 gallons |
| Solution Flow Rate: | 0 – 1.5 gpm | 0-1.5 gpm |
| Solution Filter: | Stainless / Inline | Stainless / Inline |

RECOVERY SYSTEM:

| | | |
|--------------------------------------|-----------------|-----------------|
| Recovery Tank Cap.: | 17 gallons | 18 gallons |
| Vac. Power (standard) | 0.75 hp | 0.75 hp |
| Drain Hose: | 2.0" diameter | 2.0" Diameter |
| Vacuum Specs(water-lift / airflow): | 68" / 70 cfm | 68" / 70 cfm |
| Demisting Chamber: | 3 gallons | 3 gallons |
| Drain Saver: | 60 cubic inches | 60 cubic inches |

PRODUCTIVITY:

| | | |
|---------------------|--------------------------------------|------------------------------|
| Cleaning Width: | 2017-17: (1) 17" 2017-20: (1) 20" | 2023-20: 20" 2023-23: 23" |
| Cleaning Rate/Hour: | Up to | Up to 20,543 sq.ft/hr |

SOUND LEVEL

| | |
|--------------------------|------------------------------|
| 70 dBA @ Operator's Pos. | 72 dBA @ Operator's Position |
|--------------------------|------------------------------|

AUTHORIZED DISTRIBUTOR

R.P.S. CORPORATION

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Racine, WI 53401

Phone: (800) 634-4060

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COMMON WEAR PARTS

| <u>ITEM</u> | <u>MODEL</u> <u>2017-17</u> | <u>MODEL</u> <u>2017-20</u> | <u>MODEL</u> <u>2023-20</u> | <u>MODEL</u> <u>2023-23</u> |
|-------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <u>BRUSH TYPE</u> | <u>DISK</u> | <u>DISK</u> | <u>DISK</u> | <u>DISK</u> |
| <u>BRUSHES</u> | | | | |
| SUPER-GRIT | 17-421SS | 20-421SS | 20-421SS | 23-421SS |
| TOUGH-GRIT | 17-421S | 20-421S | 20-421S | 23-421S |
| MIDI-GRIT | 17-421C | 20-421C | 20-421C | 23-421C |
| LIGHT-GRIT | 17-421PS | 20-421PS | 20-421PS | 23-421PS |
| POLY (.028) | 17-421P | 20-421P | 20-421P | 23-421P |
| NYLON (.016) | 17-421N | 20-421N | 20-421N | 23-421N |
| TAMPICO | 17-421T | 20-421T | 20-421T | 23-421T |
| PAD DRIVER | 17-421D | 20-421D | 20-421D | 23-421D |

EXTRA PAD DRIVER RETAINING CLIP: 40-433

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

| <u>PADS</u> | | | | |
|-------------|----------|----------|----------|----------|
| SUPER BLACK | 17-422BB | 20-422BB | 20-422BB | 23-422BB |
| BLACK | 17-422B | 20-422B | 20-422B | 23-422B |
| BROWN | 17-422BR | 20-422BR | 20-422BR | 23-422BR |
| GREEN | 17-422G | 20-422G | 20-422G | 23-422G |
| BLUE | 17-422BL | 20-422BL | 20-422BL | 23-422BL |
| RED | 17-422R | 20-422R | 20-422R | 23-422R |
| WHITE | 17-422W | 20-422W | 20-422W | 23-422W |

| <u>SQUEEGEE KITS</u> | <u>SIZE</u> | <u>GUM RUBBER</u> | <u>LINATEX</u> |
|----------------------|-------------|-------------------|----------------|
| | 26" | 190-770G | 190-770L |
| | 32" | 22-770G | 22-770L |
| | 35" | 25-770G | 25-770L |

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

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

MODELS 2017-17:

HAVE A 26" SQUEEGEE UNLESS OTHER SIZE IS SPECIALLY ORDERED AT TIME OF PURCHASE

MODELS 2017-20 & 2023-20:

HAVE A 32" SQUEEGEE UNLESS OTHER SIZE IS SPECIALLY ORDERED AT TIME OF PURCHASE

MODELS 2023-23:

HAVE A 35" SQUEEGEE UNLESS OTHER SIZE IS SPECIALLY ORDERED AT TIME OF PURCHASE

NOTE: THE 26" SQUEEGEE IS DESIGNED FOR NARROW ISLES AND MAY NOT HAVE THE SAME WATER CONTROL AROUND TIGHT TURNS AS THE LARGER SQUEEGEES.

SAFETY MESSAGES

YOUR SAFETY, AND THE SAFETY OF OTHERS, IS VERY IMPORTANT, AND OPERATING THIS UNIT SAFELY IS AN IMPORTANT RESPONSIBILITY.

TO HELP YOU MAKE INFORMED DECISIONS ABOUT SAFETY, WE HAVE PROVIDED OPERATING PROCEDURES AND OTHER SAFETY INFORMATION IN THE MANUAL. THIS INFORMATION INFORMS YOU OF POTENTIAL HAZARDS THAT COULD HURT YOU OR OTHERS.

IT IS NOT PRACTICAL OR POSSIBLE TO WARN YOU OF ALL THE HAZARDS ASSOCIATED WITH OPERATING THIS UNIT. YOU MUST USE YOUR OWN GOOD JUDGEMENT.

THIS IS INTENDED FOR COMMERCIAL USE. IT IS DESIGNED TO BE USED ON HARD FLOORS IN AN INDOOR ENVIRONMENT, WITH THE RECOMMENDED PADS OR BRUSHES.

1. DO NOT OPERATE UNIT:

UNLESS TRAINED AND AUTHORIZED.
UNLESS OPERATOR MANUAL IS READ AND UNDERSTOOD.
IF UNIT IS NOT IN PROPER OPERATING CONDITION.

2. WHEN OPERATING UNIT:

REMOVE LOOSE OBJECTS FROM THE FLOOR THAT MAY BE PROJECTED FROM THE REVOLVING BRUSHES.
KEEP HANDS AND FEET AWAY FROM REVOLVING BRUSHES.
DO NOT OPERATE MACHINE WHERE FLAMMABLE LIQUIDS ARE PRESENT.
USE EXTREME CAUTION WHEN MANUEVERING.

3. BEFORE LEAVING:

MAKE SURE MACHINE IS TURNED OFF.
STOP ON LEVEL SURFACES.
DISCONNECT BATTERIES.

4. BEFORE SERVICING:

STOP ON LEVEL SURFACE, AND SECURE MACHINE.
DISCONNECT BATTERIES.

!! SAFETY PRECAUTIONS!!

WARNING: HAZARDOUS VOLTAGE. SHOCK, BURNS OR ELECTROCUTION CAN RESULT. ALWAYS DISCONNECT THE BATTERIES BEFORE SERVICING MACHINE.

WARNING: BATTERIES EMIT HYDROGEN GASES, EXPLOSION OR FIRE CAN RESULT. KEEP SPARKS AND OPEN FLAMES AWAY.

WARNING: CHARGE UNIT IN A WELL VENTILATED AREA, AND KEEP BATTERY COMPARTMENT OPEN WHEN CHARGING. EXPLOSION OR FIRE COULD RESULT.

WARNING: BATTERY ACID CAN CAUSE BURNS. WEAR PROTECTIVE EYE WEAR AND GLOVES WHEN SERVICING BATTERIES.

WARNING: DO NOT STORE OUTDOORS OR PRESSURE WASH. PREVENT FROM GETTING ELECTRONIC COMPONENTS WET.

WARNING: THE USE OF PARTS AND SOLUTIONS OTHER THAN RECOMMENDED BY THE MANUFACTURER MAY CAUSE DAMAGE OR ENDANGER PEOPLE.

WARNING: DRESS SAFELY. DO NOT WEAR RINGS OR METAL WRIST WATCHES WHILE WORKING ON THIS MACHINE. THEY CAN CAUSE AN ELECTRICAL SHORT, WHICH, CAN CAUSE SERIOUS BURNS. DO NOT WORK ON THIS MACHINE WHILE WEARING A TIE, SCARF OR OTHER LOOSE, DANGLING NECKWARE OR CLOTHING. THESE LOOSE ITEMS CAN TANGLE IN THE ROTATING PARTS AND CAUSE SERIOUS INJURY OR EVEN DEATH.

WARNING: DO NOT USE THE MACHINE AS A STEP LADDER OR CHAIR.

WARNING: ONLY OPERATE THIS MACHINE FROM THE OPERATORS POSITION. IT WAS NOT DESIGNED TO CARRY PASSENGERS.

WARNING: DO NOT OPERATE THIS MACHINE ON RAMPS OR UNEVEN SURFACES. WHEN CLIMBING A RAMP, ALWAYS DRIVE THE MACHINE IN FORWARD STRAIGHT UP OR DOWN THE RAMP. NEVER DRIVE ACROSS THE INCLINE. DO NOT BACK DOWN OR TURN ON RAMPS!

WARNING: ALWAYS USE THE CHARGER PROVIDED BY THE MAUFACTURER TO CHARGE THE MACHINE. IT IS AN AUTOMATIC CHARGER, SPECIFICALLY DESIGNED TO CHARGE AT THE APPROPRIATE RATE. IF YOU MUST USE A DIFFERENT CHARGER, DISCONNECT THE BATTERIES BEFORE CHARGING. THIS WILL PREVENT DAMAGE TO THE ELECTRONIC SPEED CONTROLLER.

WARNING: UNDERSTAND THE DYNAMIC BRAKING SYSTEM BEFORE YOU OPERATE THE MACHINE ON RAMPS. MACHINE DOES NOT COAST.

WARNING: DO NOT PARK THE MACHINE ON RAMPS OR SLOPES.

WARNING: DO NOT OPERATE THE MACHINE IF ANY PARTS HAVE BEEN REMOVED OR DAMAGED.

WARNING: DO NOT REMOVE, PAINT OVER, OR DESTROY WARNING DECALS. IF WARNING DECALS BECOME DAMAGED, THEY MUST BE REPLACED.

WARNING: DO NOT OPERATE MACHINE IN UNSAFE CONDITION. IF THE MACHINE IS IN NEED OF REPAIR OR IS IN ANY WAY UNSAFE TO OPERATE, THE MATTER SHOULD BE REPORTED IMMEDIATELY TO THE SHIFT SUPERVISOR. DO NOT OPERATE THE MACHINE UNTIL IT IS RETURNED TO PROPER OPERATING CONDITION.

WARNING: THIS MACHINE MUST ONLY BE OPERATED BY TRAINED OPERATOR. AS PART OF HIS OR HER TRAINING, THEY MUST READ THIS MANUAL THOROUGHLY. IF EXTRA COPIES ARE NEEDED, CONTACT YOUR LOCAL DEALER.

WARNING: ALWAYS TURN OFF THE MACHINE, BEFORE LEAVING IT UNATTENDED.

WARNING: DO NOT OPERATE OVER ELECTRICAL FLOOR OUTLETS. MAY RESULTS IN SERIOUS INJURY.

MACHINE CONTROLS AND FEATURES

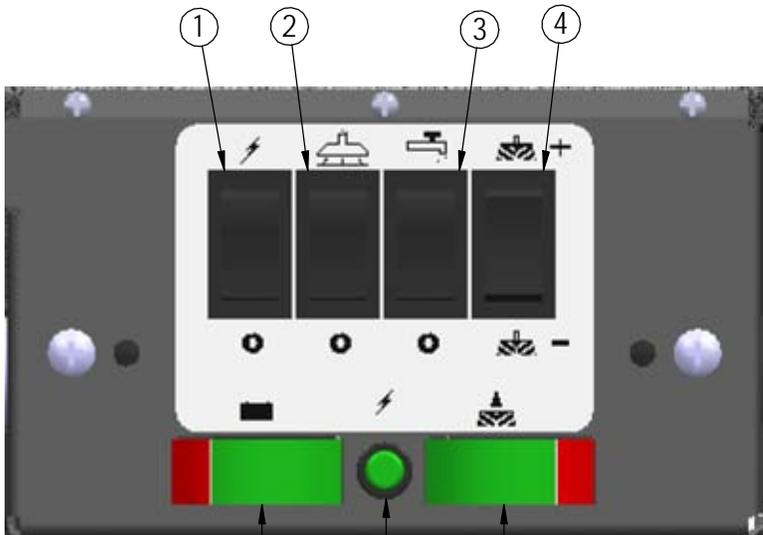


FIGURE 1.

5 6 7

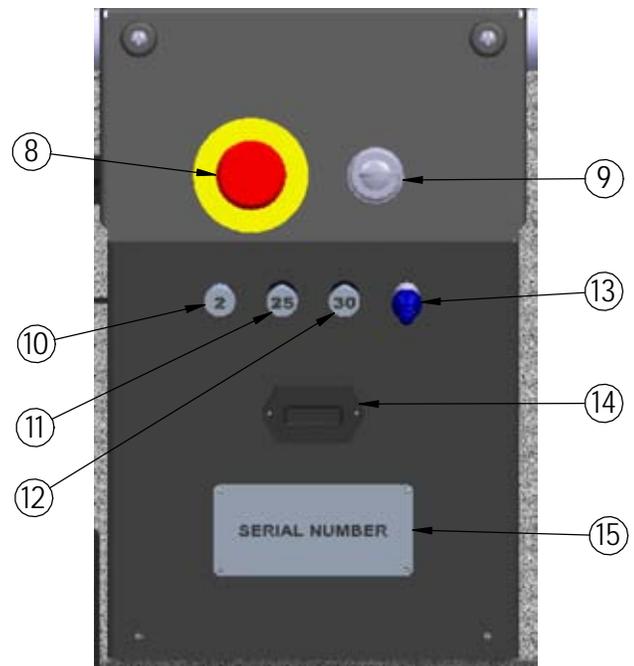


FIGURE 2.



FIGURE 3.



FIGURE 4.

CONTROLS AND FUNCTIONS

SEE FIGURES (1-4) ON PAGE 7

SEE FIGURE 1

1. MAIN POWER SWITCH: TURNS THE MACHINE ON AND OFF.
2. VACUUM SWITCH: TURNS VACUUM MOTOR ON.
3. SOLUTION SWITCH: OPENS AND CLOSES SOLUTION VALVE.
4. SCRUB DECK SWITCH: RAISES AND LOWERS SCRUB DECK (PROVIDES ADJUSTMENT +/- FOR PRESSURE).
5. BATTERY GAUGE: INDICATES AMOUNT OF BATTERY CHARGE .
6. POWER LIGHT (GREEN): INDICATES POWER "ON".
7. DOWN PRESSURE GAUGE: INDICATES AMOUNT OF PAD/BRUSH PRESSURE.

SEE FIGURE 2

8. EMERGENCY STOP (OPTIONAL): SHUTS OFF POWER TO THE MACHINE .
9. KEY SWITCH (OPTIONAL): TURNS POWER ON TO THE MACHINE.
10. CIRCUIT BREAKER: 2 AMP RESETABLE CIRCUIT BREAKER (ACTUATOR).
11. CIRCUIT BREAKER: 25 AMP RESETABLE CIRCUIT BREAKER (VACUUM MOTOR).
12. CIRCUIT BREAKER: 30 AMP RESETABLE CIRCUIT BREAKER (SCRUB MOTOR).
13. SPRAY JET (OPTIONAL): TURNS ON THE SPRAY JET PUMP (BLUE).
14. HOUR METER: INDICATES HOW MANY HOURS THE MACHINE HAS BEEN RUN.
15. SERIAL NUMBER PLATE: MACHINE IDENTIFICATION.

SEE FIGURE 3

16. RECOVERY LID: USED FOR FLUSHING OUT RECOVERY TANK AREA WITH FRESH WATER.
17. DRIVE BUTTON: DEPRESS TO DRIVE FORWARD, RELEASE TO STOP. (STARTS & STOPS THE SCRUB MOTOR)
18. "DRAIN SAVER" STRAINER: HELPS PREVENT CLOGGING OF DRAIN PORTS.
19. VAC SCREEN: PROTECTS VAC MOTOR FROM DEBRIS.
20. CASTER: TWIN CASTERS FOR STABILITY.
21. MAIN TIRE: NON-MARKING TIRES.
22. SOLUTION VALVE: CONTROLS SOLUTION FLOW RATE, WHEN SOLUTION SWITCH IS ON.
23. SPLASH CURTAIN: HELPS CONTAIN WATER INSIDE SCRUB AREA.
24. WALL ROLLERS: HELPS PROTECT MACHINE WHEN SCRUBBING NEAR WALLS.
25. "PAD ASSIST" DRIVE ADJUSTMENT KNOB: ADJUSTS AMOUNT OF OFFSET BEING APPLIED TO BRUSH.
26. TANK-IN-TANK: SOLUTION/RECOVERY TANK(18 GALLON CAPACITY EACH).
27. SOLUTION FILL LID: FILL PORT FOR FILLING SOLUTION TANK.

SEE FIGURE 4

28. CLEAR COVER: FOR VIEWING INSIDE RECOVERY TANK AREA.
29. CONTROL PANEL: MACHINE CONTROLS.
30. RECOVERY DRAIN HOSE: ALLOWS FOR CONTROLLED DRAINING OF RECOVERY TANK.
31. RECHARGE PLUG: RED 50 USED TO RECEIVE CHARGER INPUT. NOTE: ONLY USE CHARGER PROVIDED.
32. BATTERIES: YOUR MACHINE IS EQUIPPED WITH TWO (12 VOLT DEEP CYCLE 140 AMP HOUR BATTERIES).
33. SQUEEGEE BLADE: RECOVERS DIRTY WATER FROM FLOOR TO BE RECOVERED BY THE VACUUM HOSE.
34. VACUUM HOSE: VACUUMIZES SQUEEGEE. NOTE: KEEP FREE AND CLEAR OF BLOCKAGE.
35. SQUEEGEE PITCH ADJUSTMENT: ADJUSTS PITCH OF SQUEEGEE. DEFLECTION SHOULD BE EVEN ACROSS ENTIRE BLADE.
36. SQUEEGEE LIFT POST: LIFT TO RAISE SQUEEGEE AND PUSH DOWN TO LOWER SQUEEGEE.
37. SOLUTION FILTER: HELPS CLEAN WATER IN PREPERATION FOR SCRUBBING.
38. SOLUTION LEVEL INDICATOR & DRAIN TUBE: SHOWS PRECISE LEVEL OF CLEANING SOLUTION IN TANK & DRAIN PORT.

MACHINE SETUP

UNCRATING MACHINE

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

TO UNCRATE THE MACHINE, REMOVE BANDING FROM AROUND THE CRATE. TAKE OFF THE TOP AND SIDES AND DISPOSE OF PROPERLY. REMOVE BRACKETS (A) FROM MACHINE WHEELS. REMOVE BOLTS (B) FROM PALLET THEN REMOVE BOARD (C). CAREFULLY ROLL THE MACHINE OFF OF THE BASE. NOTIFY THE CARRIER IMMEDIATELY IF CONCEALED DAMAGE IS DISCOVERED. (SEE FIGURE 5.)

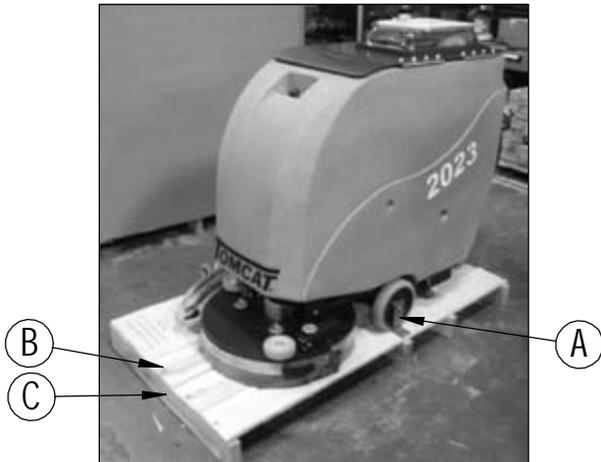


FIGURE 5.

ATTACHING SQUEEGEE

1. LOWER THE SQUEEGEE MOUNTING PLATE BY ROTATING THE LIFT LEVER COUNTER-CLOCKWISE. (SEE FIGURE 6.)

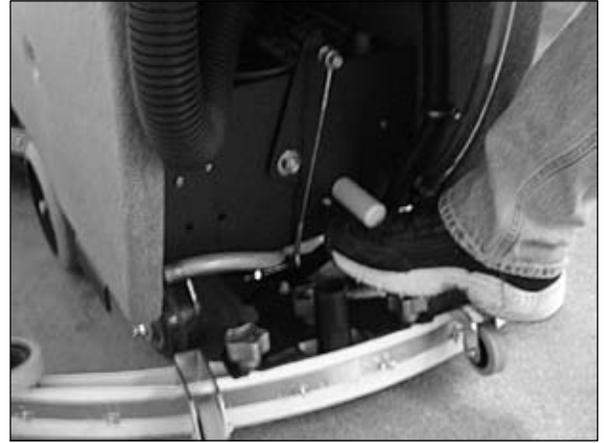


FIGURE 6.

2. LOOSEN THE TWO KNOBS ON THE SQUEEGEE AND SLIDE THEM INTO THE SLOTS IN THE SQUEEGEE MOUNTING PLATE. THE SQUEEGEE TRAIL WHEELS SHOULD FACE OUTWARD. (SEE FIGURE 7.)



FIGURE 7.

3. TIGHTEN THE TWO KNOBS, AND CONNECT VACUUM HOSE FROM THE MACHINE TO THE SQUEEGEE. (SEE FIGURE 8.)



FIGURE 8.

4. YOU MAY HAVE TO ADJUST THE SQUEEGEE PITCH. (SEE ADJUSTING SQUEEGEE NEXT PAGE).

CONNECTING BATTERIES

YOUR MACHINE IS EQUIPPED WITH (TWO) 12 VOLT, DEEP CYCLE, 140 OR 205 AMP HOURS BATTERIES, WHICH FORM A 24 VOLT SYSTEM. MAXIMUM BATTERY DIMENSIONS ARE 7" W X 15" L X 15" H. SEE PICTURE BELOW FOR CORRECT CABLE CONNECTIONS.

1. TURN ALL SWITCHES TO THE OFF POSITION AND REMOVE KEY (IF MACHINE IS EQUIPPED WITH OPTIONAL KEY SWITCH).
2. TURN ON MAIN POWER SWITCH AND CHECK THE BATTERY CONDITION METER TO ENSURE CORRECT INSTALLATION. CHARGE BATTERIES IF NEEDED. (SEE: BATTERY CHARGING)



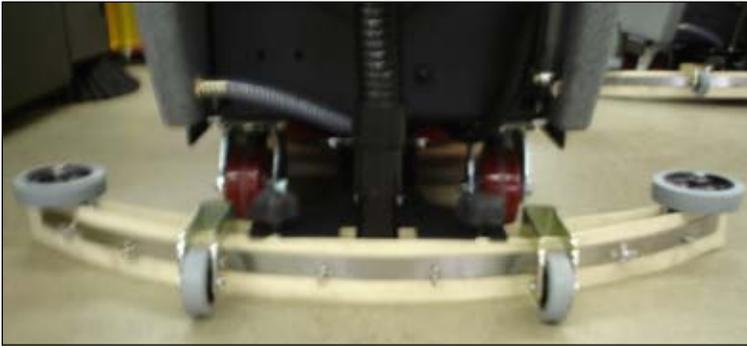
BATTERY CABLE CONNECTIONS

ADJUSTING SQUEEGEE

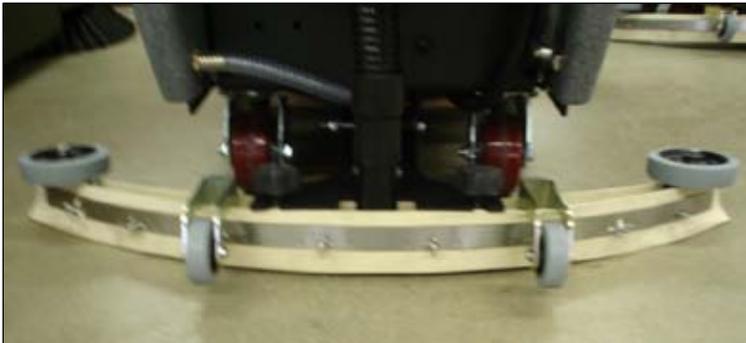
1. TURNING ADJUSTMENT KNOB CLOCK-WISE (TIGHTENING) WILL RAISE TIPS & LOWER CENTER. (SEE PICTURE BELOW)



2. THIS SQUEEGEE IS ADJUSTED TOO FAR BACK AND WILL NOT PICK UP ON THE CORNERS.
*NOTE TIPS OFF THE FLOOR. (SEE PICTURE BELOW)



3. THIS SQUEEGEE IS ADJUSTED TOO FAR FORWARD AND WILL NOT PICK UP IN THE CENTER.
*NOTE CENTER SPACED OFF THE FLOOR. (SEE PICTURE BELOW)



4. THIS SQUEEGEE IS ADJUSTED JUST RIGHT WITH GOOD DEFLECTION ACROSS THE ENTIRE REAR BLADE (SEE PICTURE BELOW)



REMOVING SQUEEGEE

1. WITH THE SQUEEGEE IN THE UP POSITION, TURN MACHINE POWER OFF.
2. DISCONNECT VACUUM HOSE FROM SQUEEGEE AND LOOSEN BOTH KNOBS. (SEE PICTURE BELOW)
3. PULL SQUEEGEE ASSEMBLY REARWARD FROM THE LIFTING CARRIER.
4. INSPECT OR REPAIR AS NEEDED AND REINSTALL.



REPLACING OR ROTATE SQUEEGEE BLADES

FOR SAFETY: BEFORE LEVEING OR SERVICING MACHINE STOP ON LEVEL SURFACE, TURN OFF MACHINE AND REMOVE KEY.

1. REMOVE THE SQUEEGEE ASSEMBLY FROM THE MACHINE. REMOVE BLADE RETAINER STRAP AND REMOVE SQUEEGEE BLADE
2. ROTATE THE SQUEEGEE TO NEW EDGE POSITION OR REPLACE AS REQUIRED.
3. INSTALL BLADE ON THE LOCATING PINS OF SQUEEGEE ASSEMBLY.
4. INSTALL SQUEEGEE RETAINER STRAP.
5. FASTEN AND LOCK KNOBS.

INSTALLING PAD DRIVER OR BRUSH

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.
3. THE MACHINE IS EQUIPPED WITH A SHROUD. UNSCREW THE TWO KNOBS ON TOP OF THE SCRUB DECK AND REMOVE THE SHROUD. (SEE FIGURE 9.)



FIGURE 9.

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.)



FIGURE 11.

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. CENTER CLIP SHOULD CLICK TWICE. (SEE FIGURE 10.)

7. WITH BRUSHES LOCKED IN PLACE, REPLACE SHROUD AND TIGHTEN THE TWO KNOBS ON TOP OF THE SHROUD. (SEE FIGURE 12.)

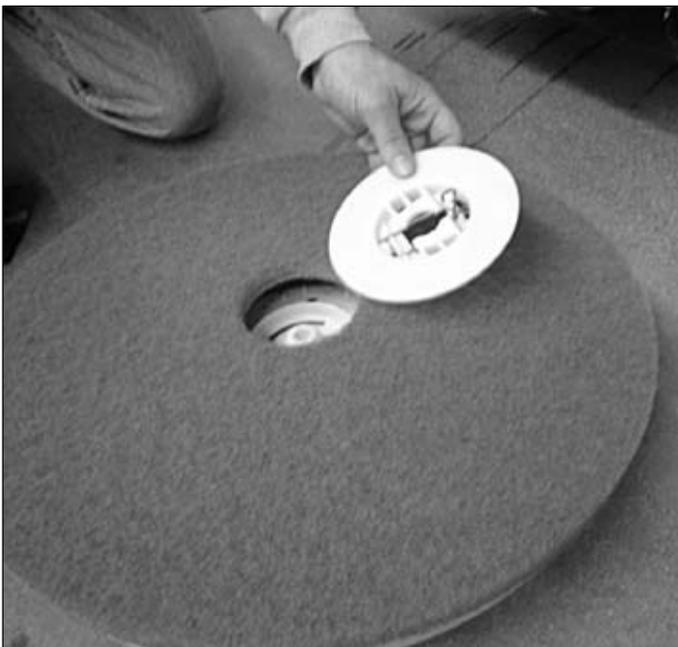


FIGURE 10.



FIGURE 12.

FOR CORRECT PAD APPLICATION, CALL YOUR LOCAL DEALER

OPERATION

PRE-CLEANING CHECK LIST

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

1. CHECK BATTERY CONDITION GAUGE ON THE CONTROL PANEL. MAKE SURE BATTERIES ARE FULLY CHARGED BEFORE USING.
2. CHECK THE CONDITION OF THE PADS OR BRUSHES.
3. CHECK THE CONDITION OF THE SQUEEGEE BLADES.
4. TRANSPORT THE MACHINE TO THE FILLING STATION. RAISE THE SCRUBHEAD AND SQUEEGEE WHEN TRANSPORTING.
5. TURN MACHINE OFF.
6. REMOVE THE SOLUTION FILL LID IN THE FRONT OF THE MACHINE AND FILL THE TANK WITH UP TO 18 GALLONS OF CLEAN WATER. (SEE FIGURE 13.)
- * THE CLEAR TUBE AT THE REAR OF THE MACHINE INDICATES THE AMOUNT OF WATER IN THE TANK. (SEE FIGURE 14.)
8. ADD CLEANING CHEMICAL. USE THE PROPER DILUTION RATIO INDICATED ON THE BOTTLE.

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



FIGURE 13.



FIGURE 14.

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, ROTATE THE SOLUTION CONTROL KNOB. TO SHUT THE SOLUTION OFF COMPLETELY, USE THE SWITCH, OR JUST RELEASE THE DRIVE BUTTON.
2. KEEP AN EYE ON THE CLEAR VACUUM COVER TO MAKE SURE THERE IS NOT ANY 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 PRESWEEP 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, PIES, 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 DRIVE BUTTON 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 THE MACHINE.

ONE PASS SCRUBBING

(SEE FIGURE'S 13 & 14.)

1. TURN ON MACHINE POWER SWITCH "A" , MAKE SURE THE "PAD ASSIST" ADJUSTMENT KNOB IS A LOW SETTING.
2. LOWER SQUEEGEE BY ROTATING THE LIFT LEVER "B" COUNTER-CLOCKWISE.
3. LOWER SCRUB HEAD TO THE FLOOR, USE THE TOP HALF (+) OF THE BRUSH SWITCH "C".
4. TURN ON THE SOLUTION SWITCH "D".
5. TURN ON THE VACUUM MOTOR SWITCH "E".
6. BEGIN SCRUBBING BY DEPRESSING THE GREEN CONTROL BUTTON "F". ADJUST THE "PAD ASSIST" ADJUSTMENT KNOB TO THE DESIRED SETTING.
7. ONCE THE MACHINE BEGINS TO MOVE, CHECK THE DOWN PRESSURE GAUGE "G". START SCRUBBING AT THE MIDDLE. DO NOT SCRUB IN THE RED, OR THE CIRCUIT BREAKER WILL BLOW.
8. TO STOP THE MACHINE, LET GO OF THE GREEN CONTROL BUTTON "F".



FIGURE 13.

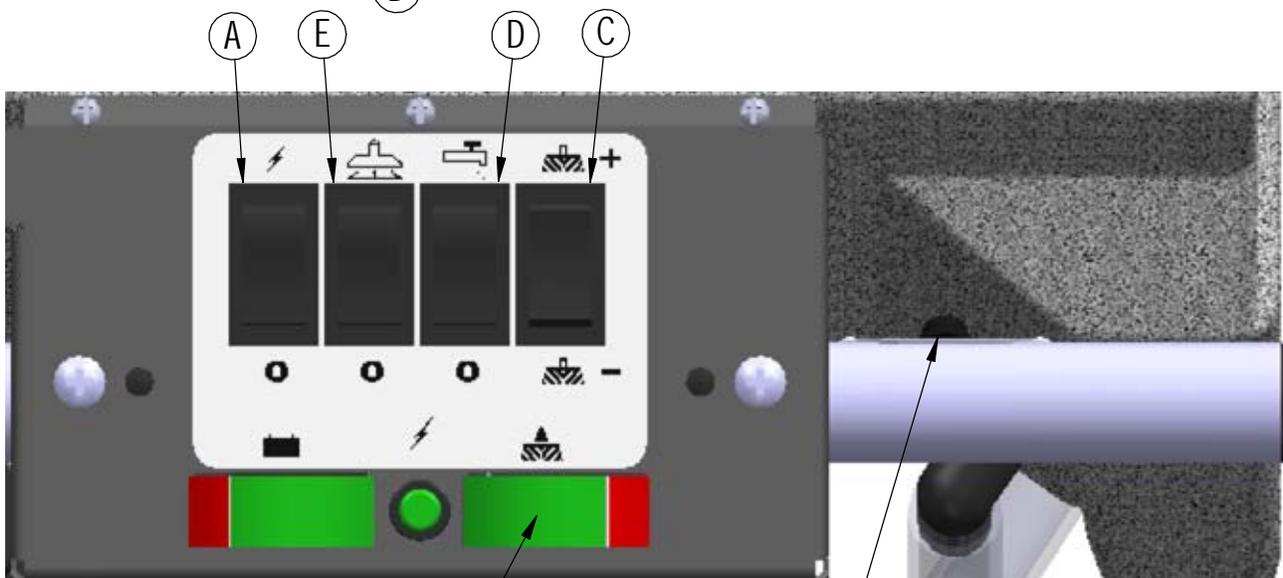


FIGURE 14.

SCRUB ONLY

(SEE FIGURE 14.)

1. TURN ON MACHINE POWER SWITCH "A", MAKE SURE THE "PAD ASSIST" ADJUSTMENT KNOB IS A LOW SETTING.
2. LOWER SCRUB HEAD TO THE FLOOR, USE THE TOP HALF (+) OF THE BRUSH SWITCH "C".
4. TURN ON THE SOLUTION SWITCH "D".
5. BEGIN SCRUBBING BY DEPRESSING THE GREEN CONTROL BUTTON "F". ADJUST THE "PAD ASSIST" ADJUSTMENT KNOB TO THE DESIRED SETTING.
6. ONCE THE MACHINE BEGINS TO MOVE, CHECK THE DOWN PRESSURE GAUGE "G". START SCRUBBING AT THE MIDDLE. DO NOT SCRUB IN THE RED, OR THE CIRCUIT BREAKER WILL BLOW.
7. TO STOP THE MACHINE, LET GO OF THE GREEN CONTROL BUTTON "F".

VACUUM ONLY

(SEE FIGURE'S 13 & 14.)

1. TURN ON MACHINE POWER SWITCH "A".
2. LOWER SQUEEGEE BY ROTATING THE LIFT LEVER "B" COUNTER-CLOCKWISE.
3. TURN ON VACUUM SWITCH "E".
4. PUSH MACHINE FORWARD OVER SOLUTION.

ADJUST SOLUTION FLOW

1. TURN SOLUTION VALVE ADJUSTMENT LEVER (A) CLOCK-WISE TO INCREASE SOLUTION FLOW, COUNTER-CLOCKWISE TO DECREASE SOLUTION FLOW. (SEE FIGURE 15.)

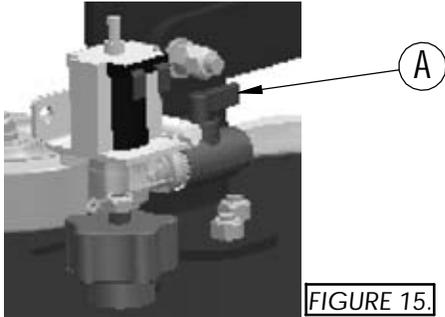


FIGURE 15.

ADJUST SHROUD CURTAIN

1. RELEASE LATCH ON SIDE OF SCRUBDECK SHROUD TO LOOSEN CURTAIN BANDS. (SEE FIGURE 16.)
2. RAISE OR LOWER CURTAIN TO DESIRED HEIGHT.
3. RECONNECT LATCH AND SNAP SHUT TO TIGHTEN BANDS.



FIGURE 16.

ADJUST "PAD ASSIST" DRIVE

1. TURN ADJUSTMENT KNOB CLOCK-WISE TO INCREASE DRIVE SPEED. (SEE FIGURE 17.)
2. TURN KNOB COUNTER-CLOCKWISE TO DECREASE DRIVE SPEED.



FIGURE 17.

DRAINING SOLUTION TANK

TO DRAIN LEFT OVER CLEANING SOLUTION FROM THE SOLUTION TANK, PERFORM THE FOLLOWING STEPS. (SEE FIGURE 18.)

1. PULL THE CLEAR SIGHT TUBE/DRAIN HOSE OFF BARBED ELBOW.
2. RINSE OUT TANK AND SOLUTION FLOW SYSTEM WITH CLEAN WATER.



FIGURE 18.

DRAINING RECOVERY TANK

ALWAYS EMPTY RECOVERY TANK WHEN REFILLING THE SOLUTION TANK. YOU CAN REFILL THE SOLUTION TANK WHILE THE RECOVERY TANK IS DRAINING. TO DRAIN THE RECOVERY TANK, PERFORM THE FOLLOWING STEPS.

1. REMOVE DRAIN HOSE FROM THE J-HOOK AND REMOVE THE CAP. (SEE FIGURE 19.)



FIGURE 19.

OPEN RECOVERY LID

1. RELEASE BOTH LATCHES ON RECOVERY TANK LID. (SEE FIGURE 20.)
2. ROTATE LID FULLY OPEN.



FIGURE 20.

FLUSH RECOVERY TANK

1. 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. (SEE FIGURE 21.)



FIGURE 21.

2. ONCE THE TANK IS EMPTY, PUT DRAIN HOSE CAP ON AND TIGHTEN BY TURNING CLOCK WISE. REINSTALL ON J-HOOK. (SEE FIGURE 22.)



FIGURE 22.

CLEAN "DRAIN SAVER"

WITH RECOVERY LID OPEN & TANK FULLY DRAINED

1. REMOVE 2" SQUEEGEE INTAKE HOSE FROM "DRAIN SAVER" STRAINER. (SEE FIGURE 23.)
2. REMOVE STAINLESS SCREEN, DISPOSE OF DEBRIS.
3. RINSE SCREEN WITH FRESH WATER FROM THE OUTSIDE TO THE INSIDE HOLDING SCREEN UPSIDE DOWN. THIS WILL ALLOW FOR BETTER CLEANING.
4. REPLACE THE SCREEN INTO THE BRACKET.
5. REPLACE 2" SQUEEGEE INTAKE HOSE.



FIGURE 23.

CLEAN VAC SCREEN

WITH RECOVERY LID OPEN & TANK FULLY DRAINED

1. REMOVE VAC SCREEN RETAINING CLIP "A". (SEE FIGURE 24.)
2. PULL VAC SCREEN AND FLOAT BALL ASSEMBLY OFF THE VAC BOX.
3. RINSE WITH HOT WATER.
4. DRY THOROUGHLY.
5. REPLACE VAC SCREEN ONTO BOX.
6. REPLACE AND TIGHTEN RETAINING CLIP.

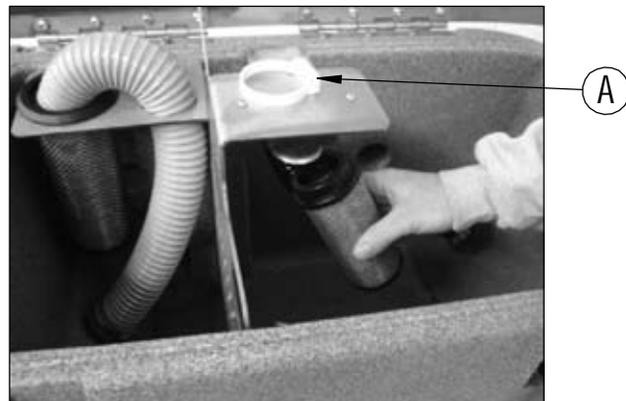


FIGURE 24.

TIP TANK

1. FULLY DRAIN SOLUTION TANK.
2. FULLY DRAIN RECOVERY TANK.
3. TO REMOVE TANK BOLTS, USE 3/16" ALLEN WRENCH "A" PROVIDED WITH MACHINE, LOCATED ON SIDE OF SCRUBDECK LIFTING BRACKET. (SEE FIGURE 25.)
4. REMOVE BOLTS ON SIDES OF TANK. (SEE FIGURE 26.)
5. REMOVE SQUEEGEE.
6. TIP BACK TANK CAREFULLY UNTIL ON THE GROUND. (SEE FIGURE 27.)

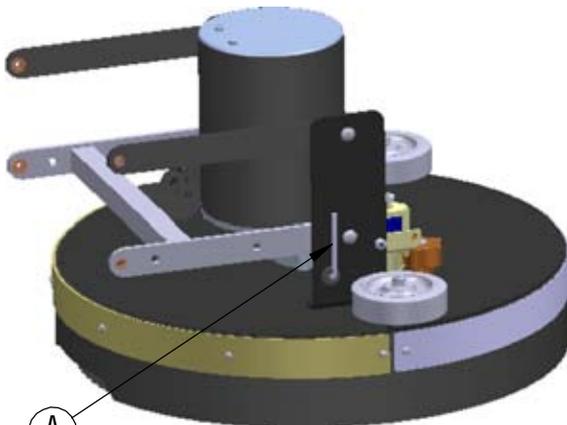


FIGURE 25.

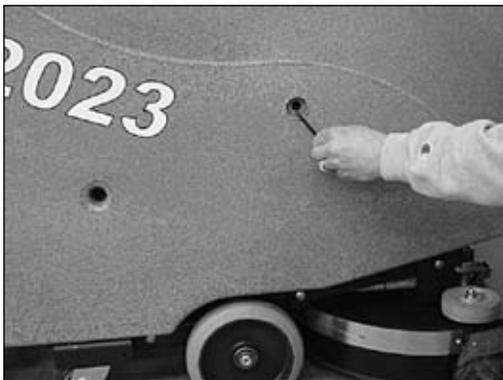


FIGURE 26.



FIGURE 27.

SQUEEGEE UP

1. PLACE BOTH HANDS ON THE HANDLE BAR.
2. USE RIGHT FOOT TO PRESS DOWN ON SQUEEGEE LIFT POST (YELLOW SLEEVE). (SEE FIGURE 28.)
3. PRESS DOWN COMPLETELY AND SQUEEGEE WILL LOCK INTO "UP" POSITION.



FIGURE 28.

SQUEEGEE DOWN

1. PLACE BOTH HANDS ON THE HANDLE BAR.
2. USE RIGHT FOOT TO LIFT UP ON SQUEEGEE LIFT POST (YELLOW SLEEVE). (SEE FIGURE 29.)



FIGURE 29.

DECK HEIGHT ADJUSTMENT

1. TO ADJUST DECK HEIGHT FOR BRUSH CLEARANCE, TURN ADJUSTMENT BOLT "A" CLOCK-WISE TO RAISE DECK, COUNTER-CLOCKWISE TO LOWER DECK. (SEE FIGURE 33.)

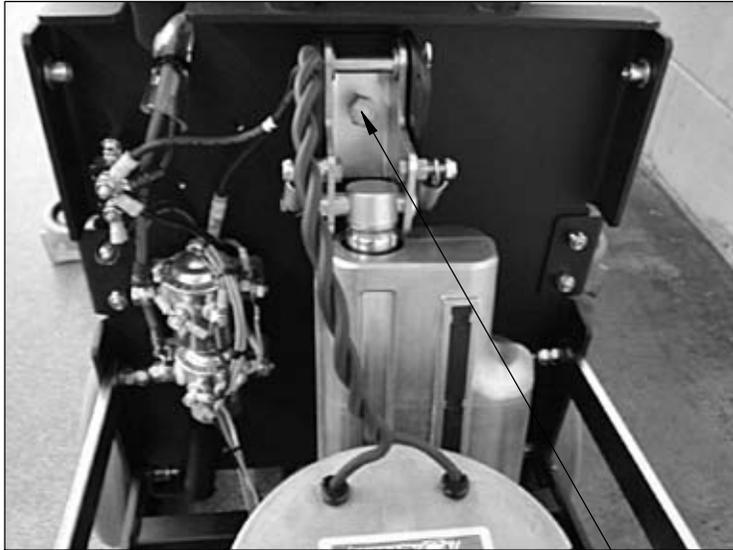


FIGURE 33.

A

VAC MOTOR

(SEE FIGURE 34.)

1. THE MACHINE IS EQUIPPED WITH A 24 VOLT, 3HP, VAC MOTOR (A).
2. IF FOAM OR WATER GETS PAST THE RECOVERY TANK'S VAC SCREEN/BALL SYSTEM THE "UNLOADER VALVE" (B) WILL DRAIN IT FROM THE "VAC BOX" (C).
3. THE VAC MOTOR HAS A "FOAM MUFFLER" (D) ATTACHED FOR QUIET MACHINE OPERATION.

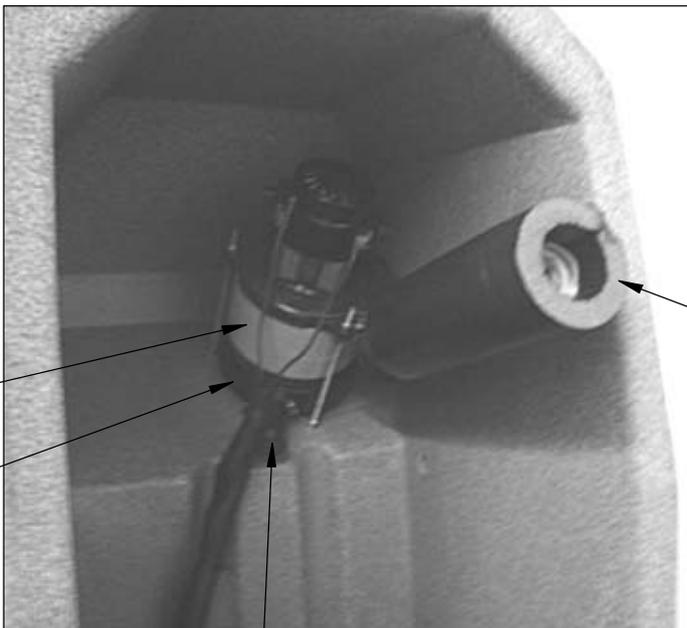


FIGURE 34.

B

PAGE 17

SOLUTION FILTER

1. THE SOLUTION SYSTEM HAS A "INLINE FILTER" (A) TO FILTER OUT CLEANING SOLUTION PRIOR TO SCRUBBING. (SEE FIGURE 35.)



FIGURE 35.

A

CLEANING SOLUTION FILTER

(SEE FIGURE 36.)

1. TO CLEAN THE "SOLUTION FILTER" UNSCREW THE CLEAR CAP (A) FROM HOUSING (B) AND REMOVE THE "STAINLESS STEEL" SCREEN (C).
2. RINSE ANY DEBRIS FROM THE SCREEN WITH CLEAN WATER.
3. REINSTALL SCREEN AND SCREW CAP BACK ON TIGHTLY.

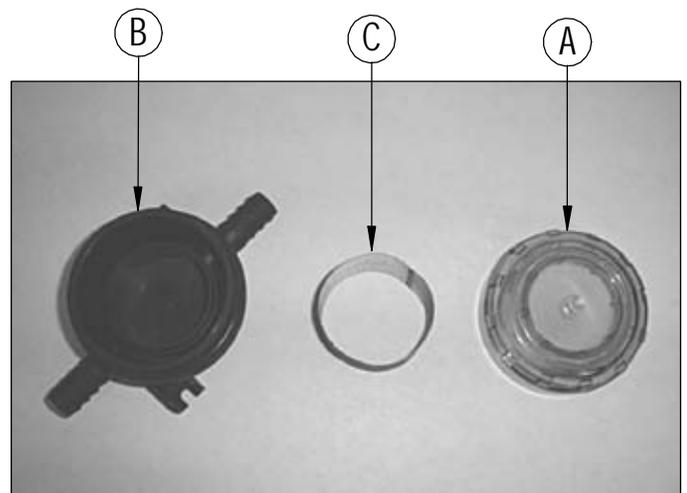


FIGURE 36.

BATTERY CHARGING

CAUTION: THE FOLLOWING INSTRUCTIONS ARE INTENDED FOR THE 24V CHARGER SUPPLIED WITH THE MACHINE.
DO NOT USE ANY OTHER CHARGER WITH THIS MACHINE.

CHARGER SPECIFICATIONS

- * OUTPUT VOLTAGE OF 24 VOLTS.
- * OUTPUT CURRENT OF 18 AMPS MAX.
- * INPUT VOLTAGE OF 110 VOLTS/60 HZ.
- * AUTOMATIC SHUT OFF CIRCUIT.
- * MADE FOR DEEP CYCLE BATTERIES.

DANGER: ALWAYS CHARGE BATTERIES IN A WELL VENTILATED AREA. BATTERIES EMIT HYDROGEN GAS. EXPLOSION OR FIRE CAN RESULT. KEEP SPARKS AND FLAME AWAY. SHIELD EYES WHEN SERVICING BATTERIES AND AVOID CONTACT WITH BATTERY ACID.

1. TRANSPORT MACHINE TO A WELL VENTILATED AREA FOR CHARGING.
2. TURN THE MACHINE OFF.
3. CAUTION ALWAYS WEAR EYE PROTECTION WHEN BATTERIES ARE EXPOSED.
4. CHECK THE WATER LEVEL THROUGH "PRO-EYE" WINDOW IN EACH BATTERY. (SEE FIGURE 30.) 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 50 CHARGER PLUG DISCONNECTED FROM THE MACHINE, PLUG THE CHARGER POWER CORD INTO A GROUNDED 110 VOLT STANDARD WALL OUTLET. (SEE FIGURE 31.)
6. CONNECT THE RED 50 CHARGER PLUG INTO THE BATTERY CHARGING PORT LOCATED AT THE REAR OF THE MACHINE. (SEE FIGURE 32.)
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 CHARGER FROM THE WALL OUTLET FIRST, THEN UNPLUG THE RED 50 CHARGER PLUG FROM THE MACHINE SECOND.
9. RECHECK THE CELL LEVEL AFTER CHARGING. IF NEEDED, ADD DISTILED 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.



FIGURE 30.

4



FIGURE 31.



FIGURE 32.

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 ELECTROLITE.
2. CLEAN BATTERY TOPS TO PREVENT CORROSION.

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 CABELS 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.

PREVENTATIVE MAINTENANCE RECORDS

USE THIS FORM TO MAKE COPIES FOR YOUR INTERNAL RECORDS

PREVENTATIVE MAINTENANCE

CHECKED

NOTE

| | | |
|----------------------------|-------|-------|
| ROTATE BRUSHES | _____ | _____ |
| 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: _____

MANAGER SIGNATURE: _____

DATE: _____

DATE: _____

PREVENTATIVE MAINTENANCE RECORDS

USE THIS FORM TO MAKE COPIES FOR YOUR INTERNAL RECORDS

PREVENTATIVE MAINTENANCE

CHECKED

NOTE

| | | |
|----------------------------|-------|-------|
| ROTATE BRUSHES | _____ | _____ |
| 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: _____

MANAGER SIGNATURE: _____

DATE: _____

DATE: _____

TROUBLE SHOOTING

| <u>PROBLEM</u> | <u>CAUSE</u> | <u>SOLUTION</u> |
|-------------------------------|--|--|
| NO POWER, NOTHING OPERATES | FAULTY POWER SWITCH BATTERIES NEED CHARGING FAULTY BATTERY LOOSE BATTERY CABLE MAIN CIRCUIT BREAKER TRIPPED | CONTACT LOCAL SERVICING DEALER SEE CHARGING BATTERIES REPLACE BATTERY TIGHTEN LOOSE CABLE WAIT 5 MINUTES FOR AUTO RESET DETERMINE CAUSE AND CORRECT |
| BRUSH MOTOR(S) DO NOT OPERATE | GREEN BUTTON IS NOT DEPRESSED 30 AMP CIRCUIT BREAKER TRIPPED CARBON BRUSHES WORN FAULTY BRUSH MOTOR OR WIRES | DEPRESS BUTTON ON HANDLE BAR RESET & REDUCE PRESSURE DETERMINE CAUSE AND CORRECT CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER |
| VACUUM MOTOR DOES NOT OPERATE | FAULTY VACUUM SWITCH 25 AMP CIRCUIT BREAKER TRIPPED FAULTY VACUUM MOTOR CARBON BRUSHES WORN | REPLACE SWITCH RESET & CHECK HOSE DETERMINE CAUSE AND CORRECT CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER |
| INSUFFICIENT SOLUTION FLOW | SOLUTION TANK LOW FLOW KNOB TURNED DOWN SOLUTION FILTER CLOGGED SOLUTION LINE CLOGGED SOLUTION VALVE CLOGGED | REFILL SOLUTION TANK TURN KNOB MORE OPEN REMOVE COVER AND CLEAN REMOVE AND BLOW OUT WITH COMPRESSED AIR REMOVE COVER AND CLEAN |

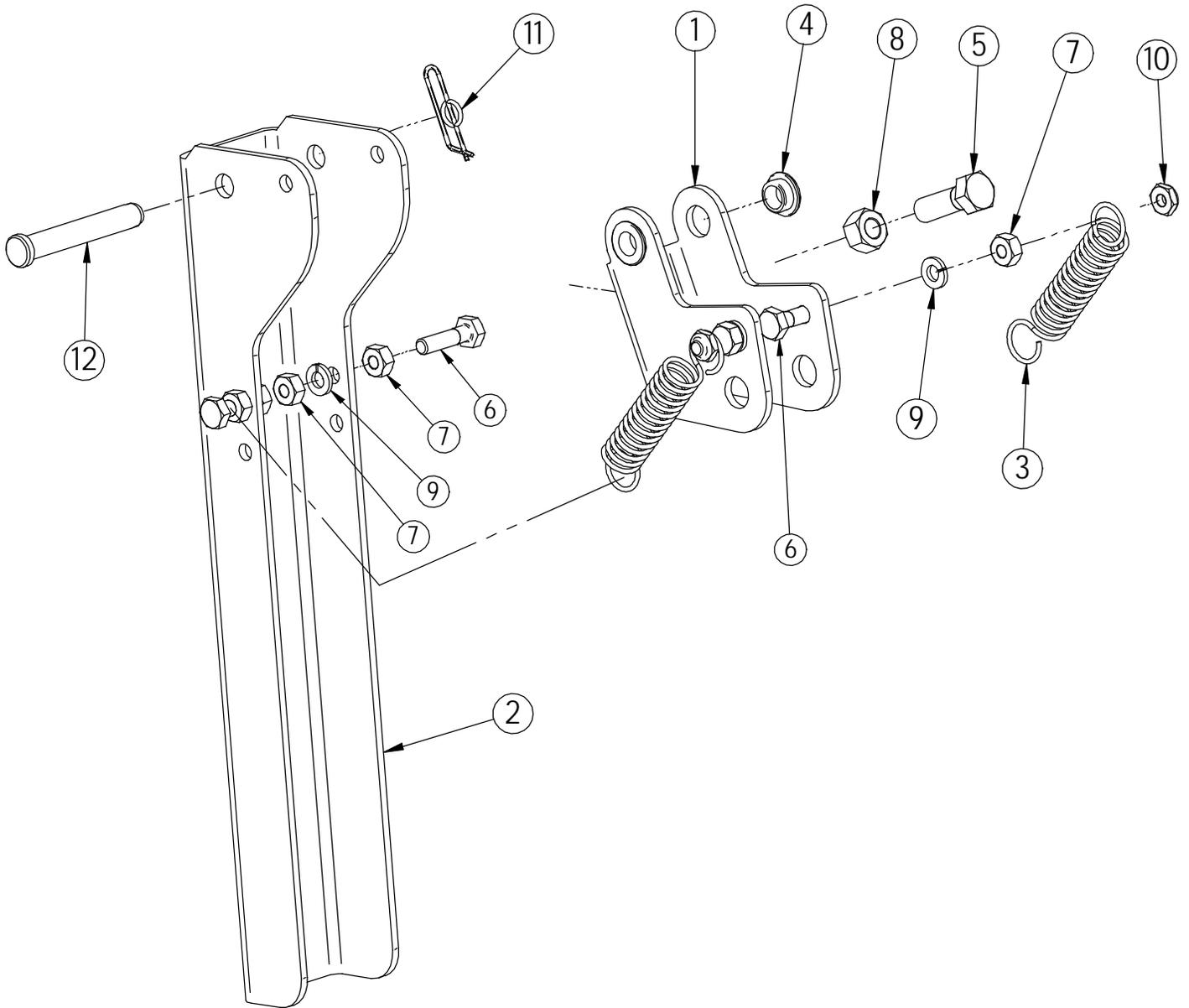
TROUBLE SHOOTING

| <u>PROBLEM</u> | <u>CAUSE</u> | <u>SOLUTION</u> |
|------------------------------|--|---|
| NO SOLUTION FLOW | NO SOLUTION IN TANK SOLUTION SWITCH OFF SOLUTION SCREEN CLOGGED FAULTY SOLUTION SOLENOID FAULTY SOLUTION SWITCH | FILL SOLUTION TANK 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 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 ROTATE OR REPLACE BLADES CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER TIGHTEN 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 MATERIAL TIGHTEN PIVOT POINTS CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER |
| 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 REPLACE TIRES CONTACT LOCAL SERVICING DEALER |
| SHORT RUN TIME | BATTERIES RUN DOWN BATTERIES STILL DOWN BATTERIES LOW ON WATER BATERIES OVER CYCLED | CHARGE BATTERIES TWICE CONTACT LOCAL SERVICING DEALER FILL WITH DISTILLED WATER TO 3/4" ABOVE THE LEAD PLATES CONTACT LOCAL SERVICING DEALER |

MODEL 2023/2017 SERIES

MACHINE PARTS SECTION

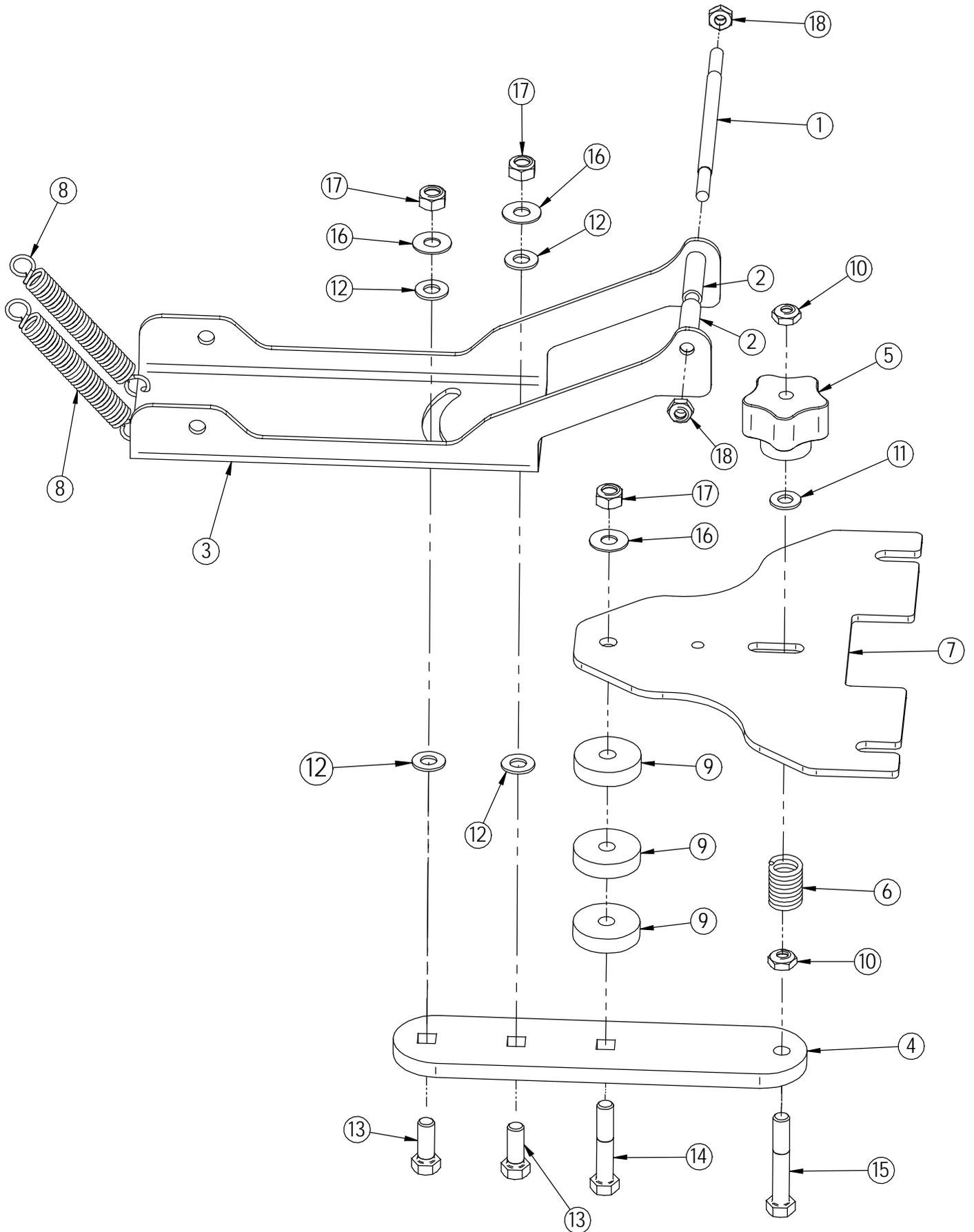
ACTUATOR LIFT ASSEMBLY



ACTUATOR LIFT ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|-----------------------------------|-----|
| 1 | 190-1150 | ACTUATOR ARM | 1 |
| 2 | 190-1155 | ACTUATOR ANCHOR | 1 |
| 3 | 21-6000 | DOWN PRESSURE SPRING | 2 |
| 4 | 290-1233 | 3/8" ID, 1/2" OD, 1/4" LG BEARING | 2 |
| 5 | H-01219 | HCS 3/8"- 24 X 1 1/8" SS | 1 |
| 6 | H-70005 | HCS 1/4"- 20 X 1" SS | 4 |
| 7 | H-70710 | HN 1/4"- 20 SS | 6 |
| 8 | H-70732 | HN 3/8"- 24 SS | 1 |
| 9 | H-71063 | LW 1/4" SS | 4 |
| 10 | H-NJ04C | JNYL 1/4" - 20 SS | 2 |
| 11 | H-RUE14 | 3/8" RUE RING COTTER | 1 |
| 12 | H-ZCP170 | CLEVIS PIN 3/8" x 2.50" | 1 |

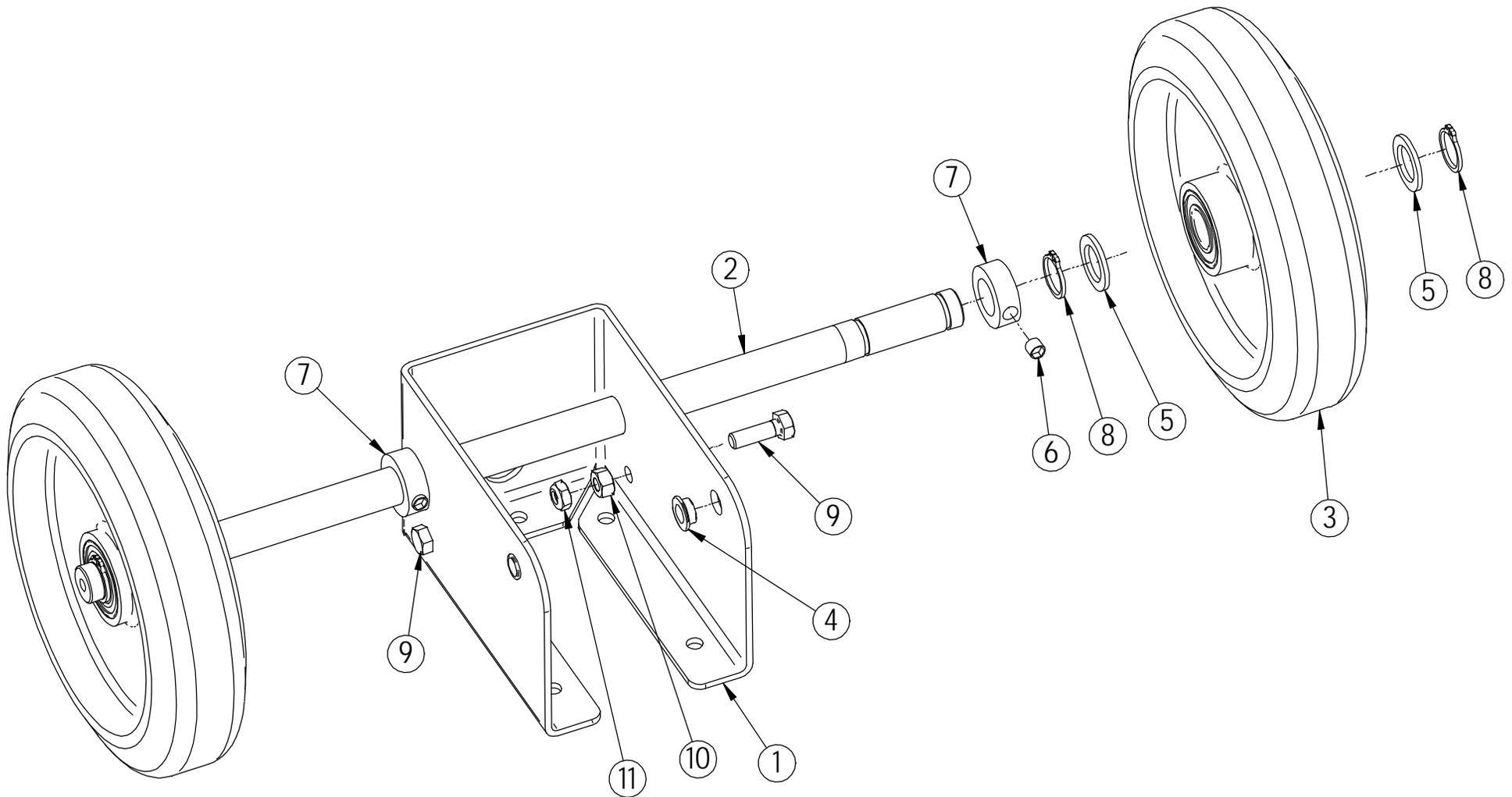
SQUEEGEE TRAIL ARM ASSEMBLY



SQUEEGEE TRAIL ARM ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|--|-----|
| 1 | 10055418 | 5/16-18 X 5-1/2" DOUBLE ENDED STUD S/S | 1 |
| 2 | 190-1055 | TUBE, 5/16" ID X 7/16" OD X 1-5/8" LG | 2 |
| 3 | 190-7140 | SQUEEGEE SWING PLATE | 1 |
| 4 | 190-7150 | SQUEEGEE TRAIL ARM | 1 |
| 5 | 21-7205 | STAR KNOB | 1 |
| 6 | 21-7240 | SPRING, 1/2" ID X 1-3/4" LG | 1 |
| 7 | 21-7610 | SQUEEGEE TRIANGLE PLATE | 1 |
| 8 | 390-7712 | COMPRESSION SPRING | 2 |
| 9 | 4-446 | GROMMET-3/8 ID X 1-1/2 OD X .375 | 3 |
| 10 | H-0171004 | JNYL 3/8- 24 SS | 2 |
| 11 | H-33080 | FW 5/16" SAE | 1 |
| 12 | H-4440024 | FW 3/8" X 3/4" NYLON | 4 |
| 13 | H-70105 | HCS 3/8"- 16 X 1" SS | 2 |
| 14 | H-70111 | HCS 3/8"- 16 X 2" SS | 1 |
| 15 | H-70136 | HCS 3/8"- 24 X 2 1/4" SS | 1 |
| 16 | H-71017 | FW 3/8" X 7/8" SS | 3 |
| 17 | H-77862 | NYLOK 3/8"- 16 SS | 3 |
| 18 | H-NJ05C | JNYL 5/16"- 18 SS | 2 |

AXLE SUPPORT ASSEMBLY



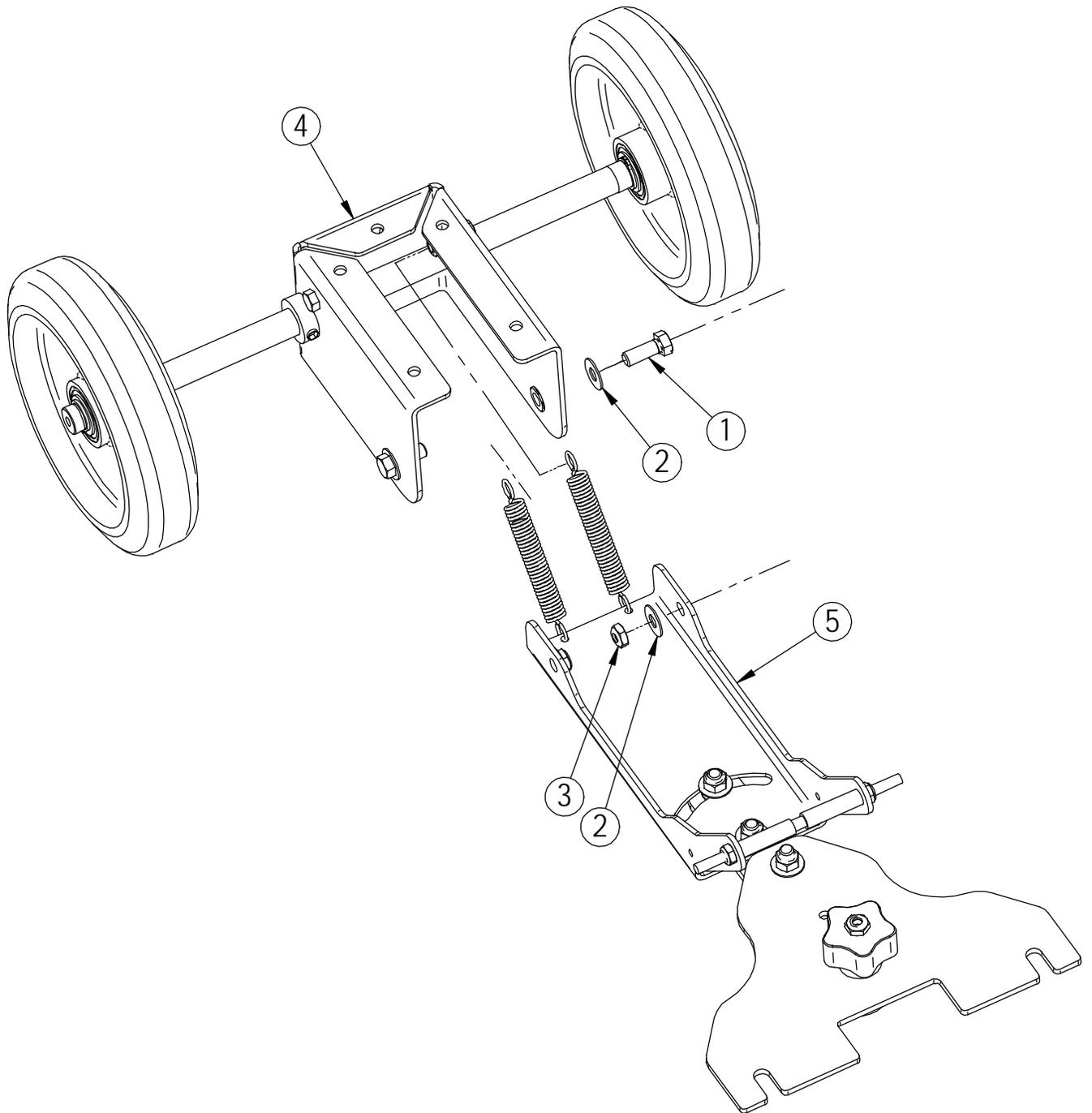
NOTE: LEAVE JAM NYLOK NUT ITEM #11 AT END OF BOLT THREADS ITEM #9.
SPRINGS FROM TRAIL ARM ASSEMBLY WILL GO BETWEEN THE TWO NUTS.

AXLE SUPPORT ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|---|-----|
| 1 | 190-1020 | AXLE SUPPORT | 1 |
| 2 | 190-1170 | AXLE | 1 |
| 3 | 190-6175 | DRIVE TIRE 8" x 2" (GREY) | 2 |
| 4 | 290-1233 | 3/8" ID, 1/2" OD, 1/4" LG BEARING | 2 |
| 5 | H-00222 | FW 3/4 X 1 1/8 X 3/32 SS | 4 |
| 6 | H-25435 | SSS CP 5/16" X 1/4" | 2 |
| 7 | H-33376 | SET SCREW SHAFT COLLAR, 3/4" ID X 9/16 LG | 2 |
| 8 | H-68015 | SNAPRING 3/4" | 4 |
| 9 | H-70055 | HCS 5/16"- 18 X 1" SS | 2 |
| 10 | H-70711 | HN 5/16"- 18 SS | 2 |
| 11 | H-NJ05C | JNYL 5/16"- 18 SS | 2 |

SQUEEGEE SUSPENSION

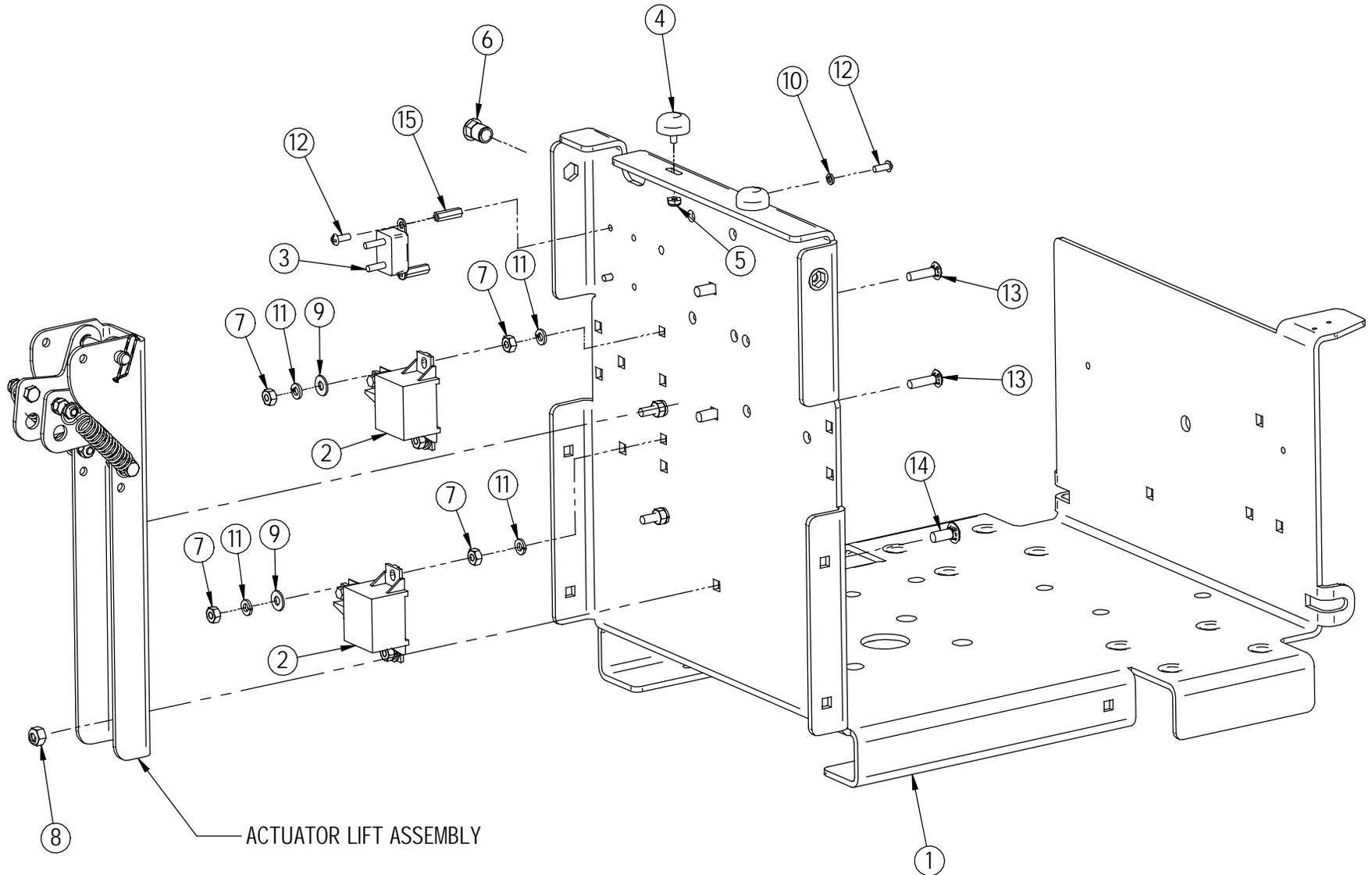
NOTE: ATTACH SPRINGS BETWEEN NUTS ITEMS 10 & 11 ON AXLE SUPPORT ASSEMBLY.



SQUEEGEE SUSPENSION

| Item | Part Number | Part Description | Qty |
|------|-------------|-----------------------------|-----|
| 1 | H-70105 | HCS 3/8"- 16 X 1" SS | 2 |
| 2 | H-71017 | FW 3/8" X 7/8" SS | 4 |
| 3 | H-NJ06C | JNYL 3/8- 16 SS | 2 |
| 4 | N/A | AXLE SUPPORT ASSEMBLY | 1 |
| 5 | N/A | SQUEEGEE TRAIL ARM ASSEMBLY | 1 |

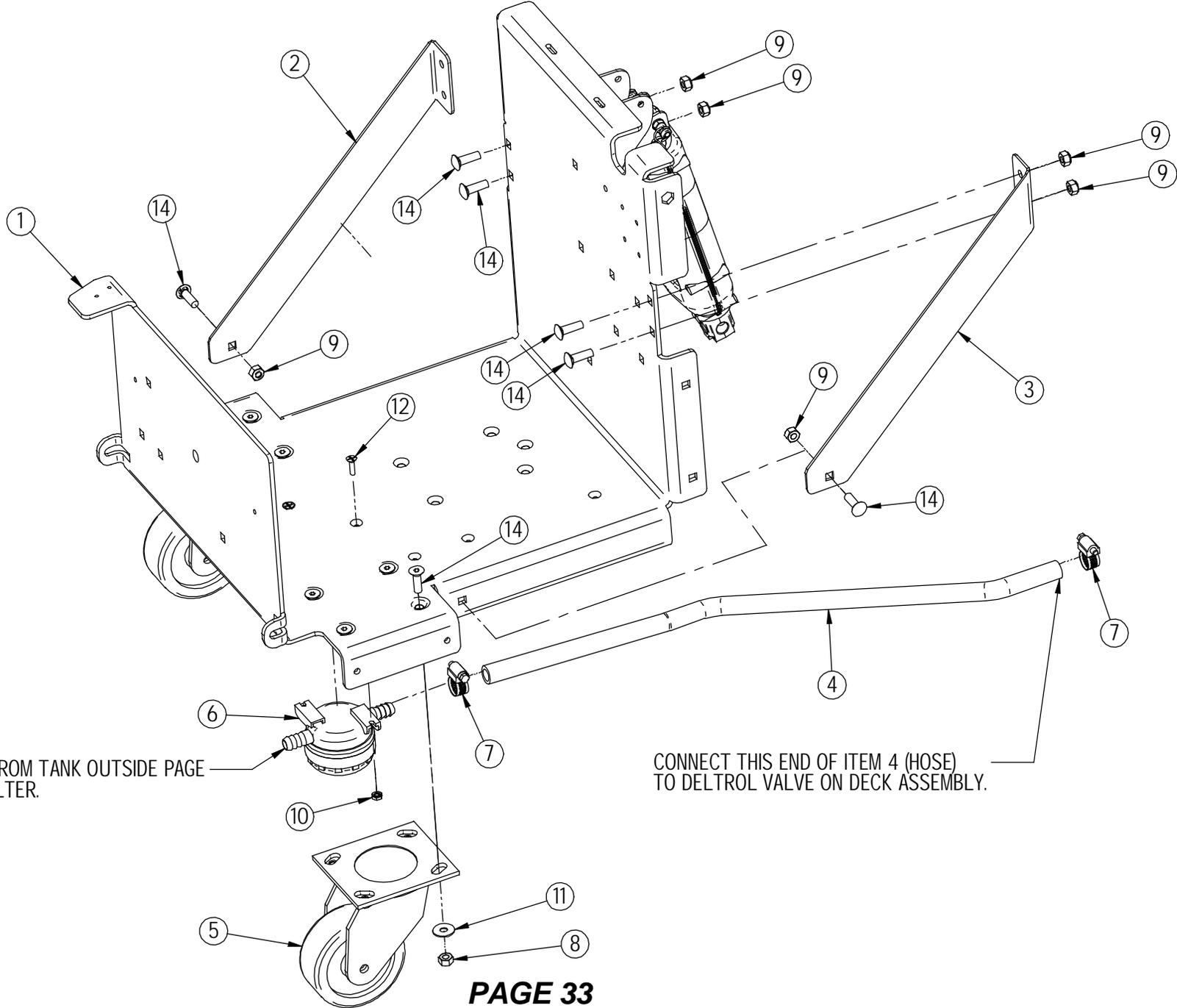
2023 FRAME FRONT



2023 FRAME FRONT

| Item | Part Number | Part Description | Qty |
|------|-------------|-------------------------|-----|
| 1 | 190-1000 | MAINFRAME | 1 |
| 2 | 190-8283 | RELAY, 24V, 50 AMP | 2 |
| 3 | 290-2815 | CIR. BREAKER - 15A, 24V | 1 |
| 4 | H-01201 | GROMMET | 2 |
| 5 | H-0129155 | JNYL #10-32, 18-8 S/S | 2 |
| 6 | H-375HCN | HCN 3/8" - 16 | 2 |
| 7 | H-70710 | HN 1/4" - 20 SS | 8 |
| 8 | H-70861 | NYLOK 5/16" - 18 SS | 3 |
| 9 | H-71013 | FNW 1/4" X 5/8" SS | 4 |
| 10 | H-71059 | LW #10, SS | 2 |
| 11 | H-71063 | LW 1/4" SS | 8 |
| 12 | H-72563 | RPH #10-32 X 1/2" SS | 4 |
| 13 | H-74420 | CB 1/4" - 20 X 1.0" SS | 4 |
| 14 | H-74429 | CB 5/16" - 18 X 3/4" SS | 3 |
| 15 | H-90308 | 10-32 X 7/8" STANDOFF | 2 |

2023 FRAME MIDDLE



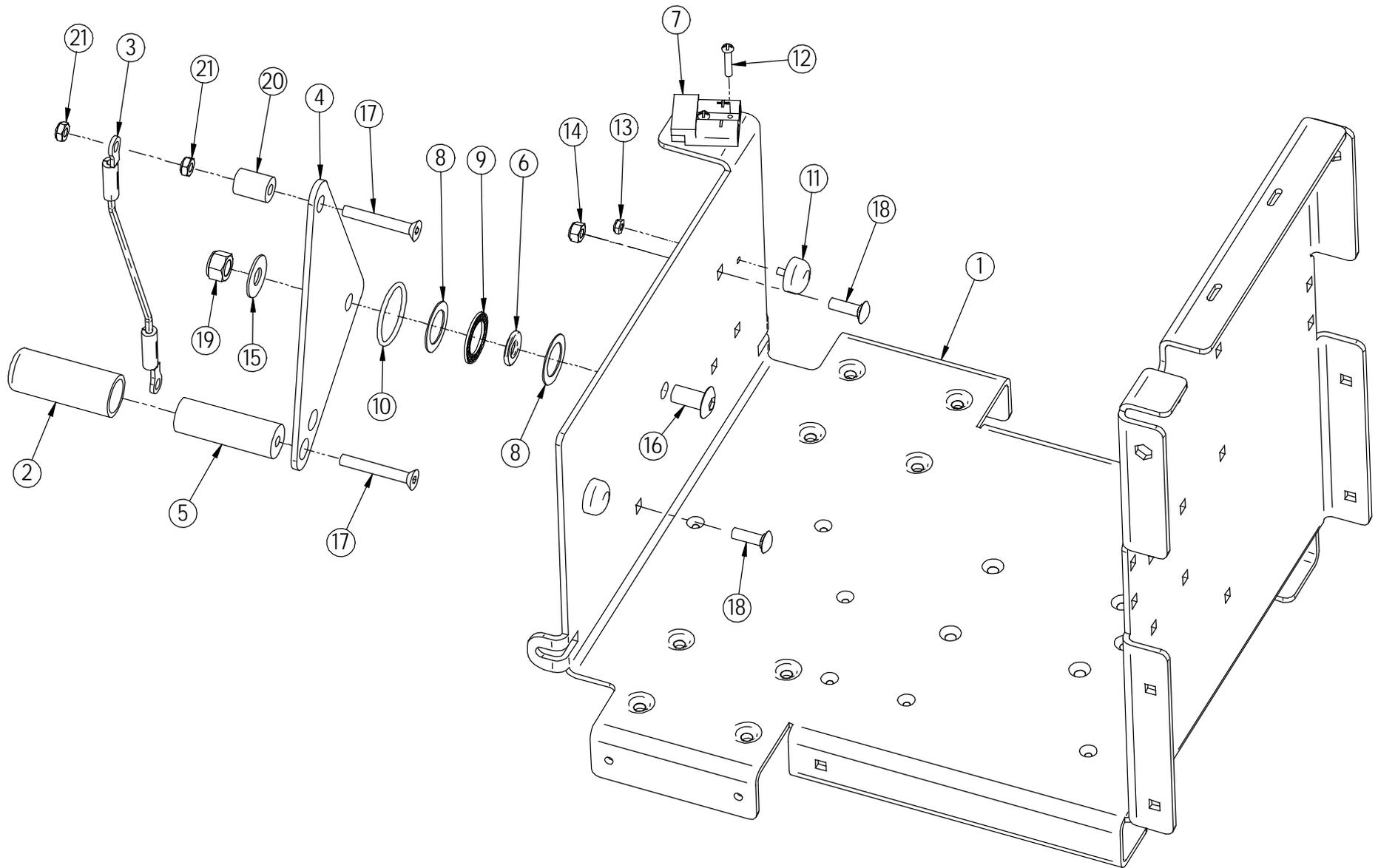
CONNECT ITEM 7 (HOSE) FROM TANK OUTSIDE PAGE TO THIS END OF INLINE FILTER.

CONNECT THIS END OF ITEM 4 (HOSE) TO DELTROL VALVE ON DECK ASSEMBLY.

2023 FRAME MIDDLE

| Item | Part Number | Part Description | Qty |
|------|-------------|--|-----|
| 1 | 190-1000 | MAINFRAME | 1 |
| 2 | 190-1005 | FRAME SUPPORT - LH | 1 |
| 3 | 190-1006 | FRAME SUPPORT - RH | 1 |
| 4 | 190-1271 | CLEAR TUBE, WIRE REINF. 1/2" ID X 27" LG | 1 |
| 5 | 190-3035 | CASTER, NON-MARKING (RED) | 2 |
| 6 | 5-913 | INLINE FILTER | 1 |
| 7 | H-62005 | HOSE CLAMP 5/8"- 1-1/2" SS | 2 |
| 8 | H-70711 | HN 5/16"- 18 SS | 4 |
| 9 | H-70861 | NYLOK 5/16" - 18 SS | 6 |
| 10 | H-70923 | KN #10-32 SS | 2 |
| 11 | H-71016 | FW 5/16" X 7/8" USS | 4 |
| 12 | H-72684 | FHP 10-32 X 3/4" SS | 2 |
| 13 | H-73908 | FHSCS 5/16"- 18 X 1-1/4" SS | 8 |
| 14 | H-74430 | CB 5/16"- 18 X 1" SS | 6 |

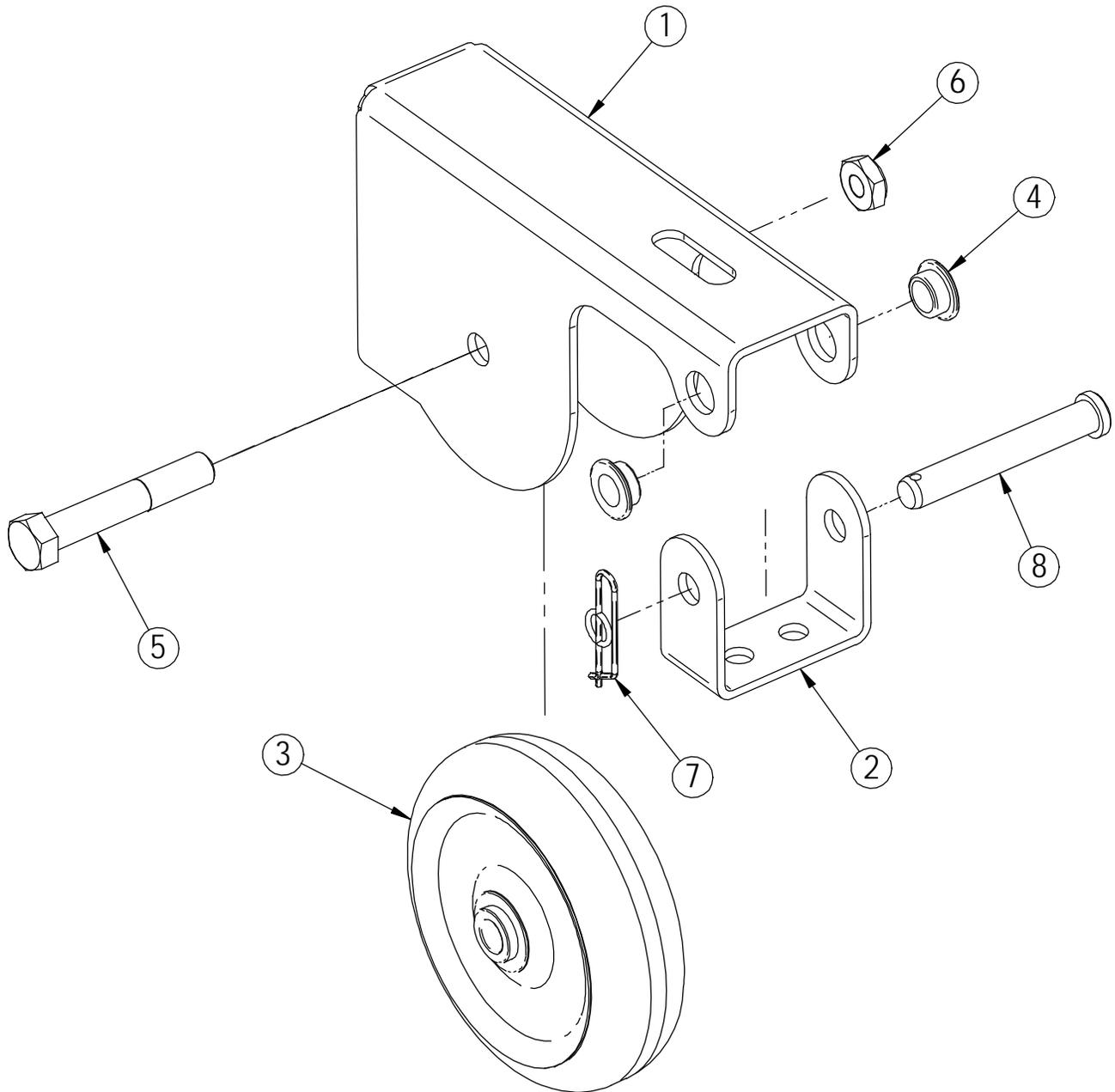
2023 FRAME REAR



2023 FRAME REAR

| Item | Part Number | Part Description | Qty |
|------|-------------|--|-----|
| 1 | 190-1000 | MAINFRAME | 1 |
| 2 | 190-1280 | 1" ID x 3" LG RUBBER COVER - YELLOW | 1 |
| 3 | 190-1350 | SQUEEGEE LIFT CABLE | 1 |
| 4 | 190-7100 | SQUEEGEE PIVOT PLATE | 1 |
| 5 | 22-9812 | 3/8-16 X 1.0" OD X 3.0" LG STANDOFF | 1 |
| 6 | 290-1248 | FW BRONZE .500 ID X 1.00 OD X .125 THK | 1 |
| 7 | 4-257 | CONNECTOR, RED 50 | 1 |
| 8 | 8-713 | 1 1/2" THRUST WASHER | 2 |
| 9 | 8-714 | THRUST BEARING | 1 |
| 10 | 8-715 | O-RING | 1 |
| 11 | H-01201 | GROMMET | 2 |
| 12 | H-28902 | RPH #8-32 X 1" | 2 |
| 13 | H-70858 | NYLOK #10-32 SS | 2 |
| 14 | H-70861 | NYLOK 5/16" - 18 SS | 1 |
| 15 | H-71021 | FNW 1/2 ID X 1-1/4 OD | 1 |
| 16 | H-71889 | BHSCS 1/2- 13 X 1" SS | 1 |
| 17 | H-73913 | FHSCS 5/16"- 18 X 2-1/4" S/S | 2 |
| 18 | H-74430 | CB 5/16"- 18 X 1" SS | 2 |
| 19 | H-77864 | NYLOK 1/2"-13 SS | 1 |
| 20 | H-92510 | SPACER, .312 ID X .75 OD X 1.0" ALUMINUM | 1 |
| 21 | H-NJ05C | JNYL 5/16"- 18 SS | 2 |

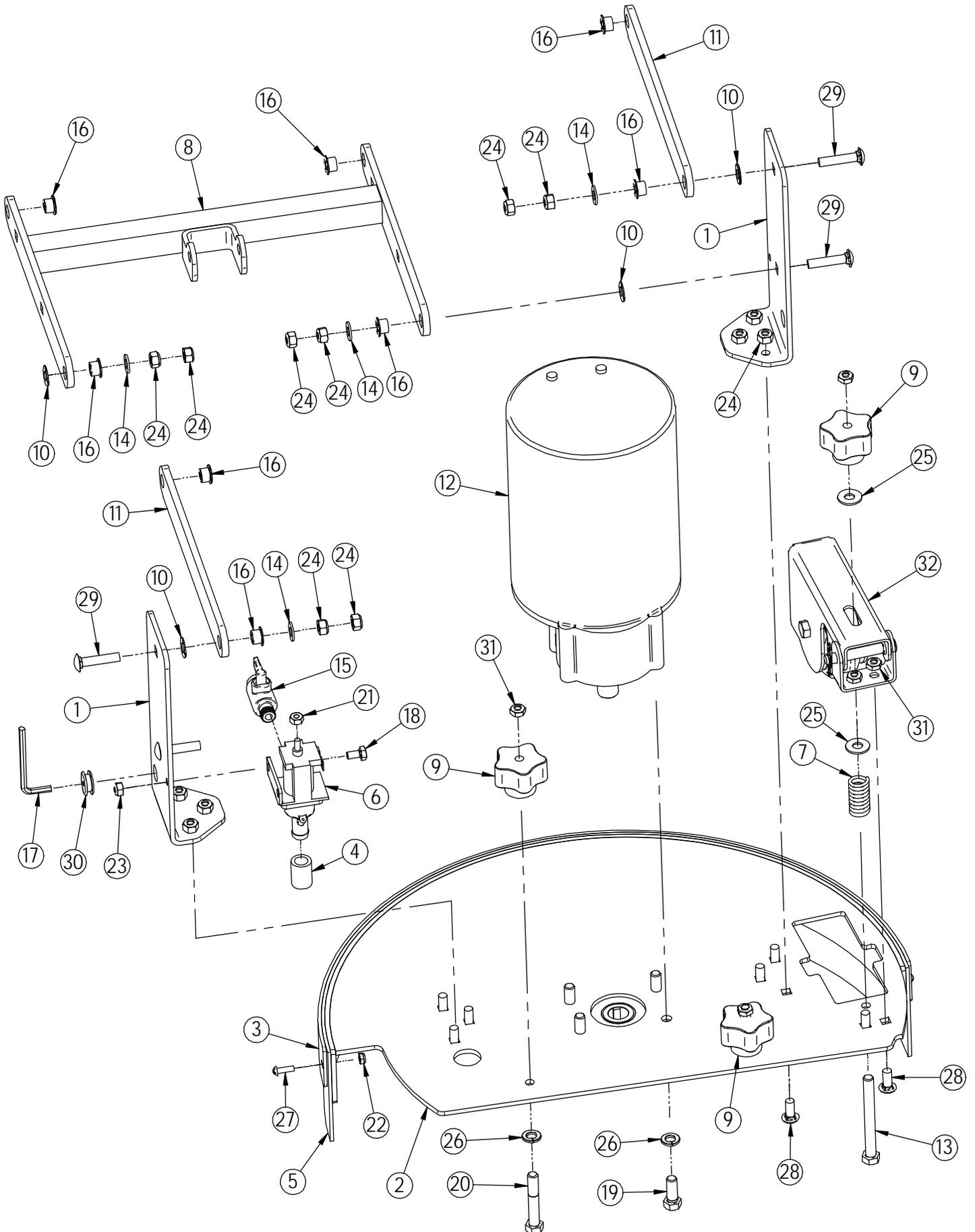
SCRUB DECK WHEEL ASS'Y



SCRUB DECK WHEEL ASS'Y

| Item | Part Number | Part Description | Qty |
|------|-------------|-----------------------------------|-----|
| 1 | 190-1030 | DECK WHEEL PIVOT BRACKET | 1 |
| 2 | 190-1035 | DECK WHEEL PIVOT SUPPORT | 1 |
| 3 | 190-3020 | 4.0" WHEEL (RED) | 1 |
| 4 | 290-1233 | 3/8" ID, 1/2" OD, 1/4" LG BEARING | 2 |
| 5 | H-70112 | HCS 3/8"- 16 X 2-1/4" SS | 1 |
| 6 | H-NJ06C | JNYL 3/8- 16 SS | 1 |
| 7 | H-RUE14 | 3/8" RUE RING COTTER | 1 |
| 8 | H-ZCP170 | CLEVIS PIN 3/8" x 2.50" | 1 |

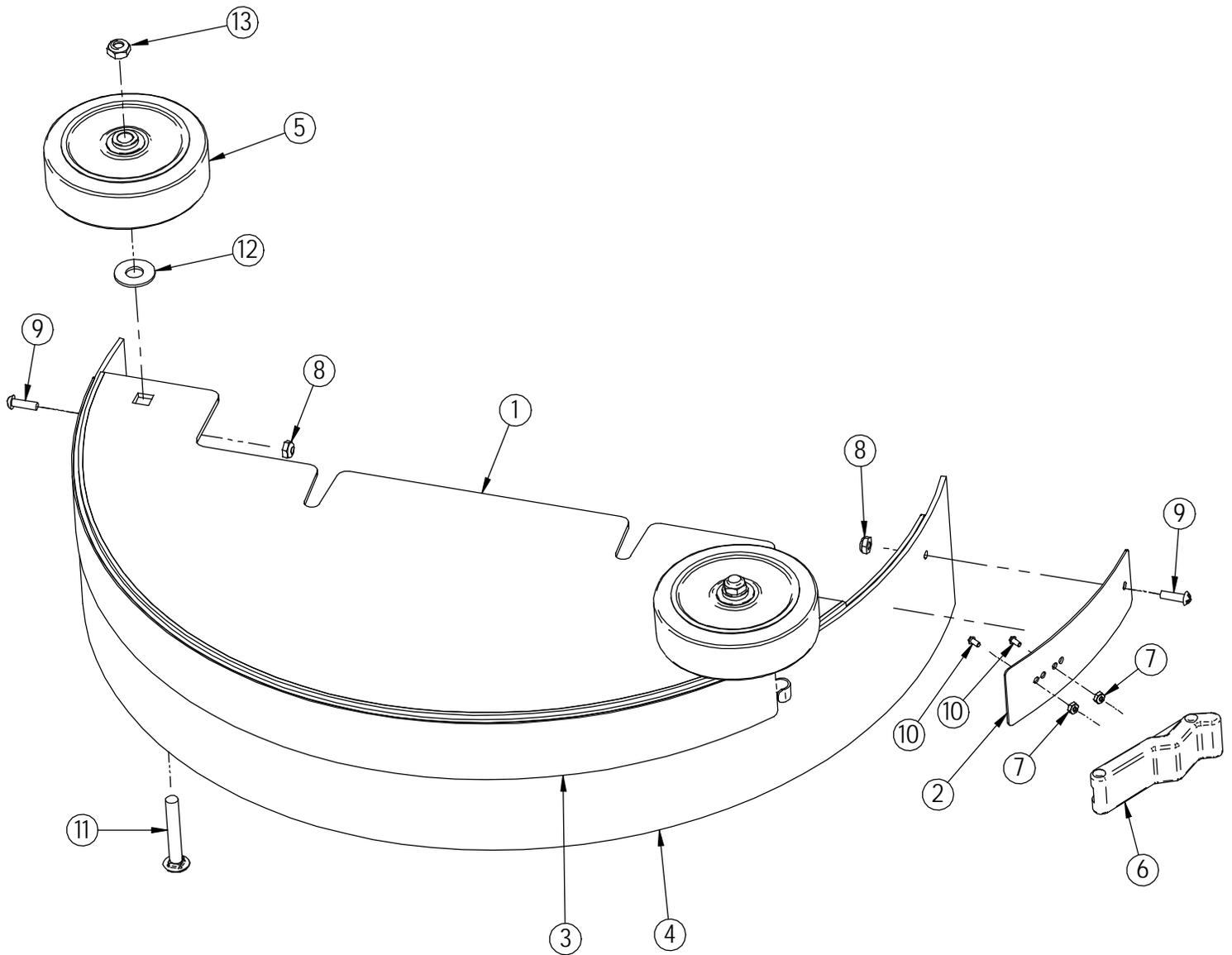
20" DISK DECK ASSEMBLY



20" DISK DECK ASSEMBLY

| Item | Part Number | Keywords | Qty |
|------|-------------|--|-----|
| 1 | 190-1115 | 20" LIFT BRACKET | 2 |
| 2 | 190-1120 | 20" DISK DECK | 1 |
| 3 | 190-1142 | 20" DECK CURTAIN BAND | 1 |
| 4 | 190-1145 | CLEAR TUBE, 1/2" ID X 1.0" OD X 1.0" LG | 1 |
| 5 | 190-1166 | 20" DECK CURTAIN, REAR | 1 |
| 6 | 190-4500 | ADJUSTABLE SOLUTION FLOW VALVE, WITH 1/4" NPTF | 1 |
| 7 | 190-7240 | SPRING 2.0" LG | 1 |
| 8 | 190-9586 | LATERAL ARM | 1 |
| 9 | 21-7205 | STAR KNOB | 3 |
| 10 | 290-1247 | FW BRONZE .75 OD X .375 ID X .0625 THK | 4 |
| 11 | 5-124 | LATERAL ARM | 2 |
| 12 | 7-222 | 3/4 HP X 200 RPM MOTOR | 1 |
| 13 | H-10055 | HCS 3/8" - 24 X 3.5" SS | 1 |
| 14 | H-33080 | FW 5/16" SAE | 4 |
| 15 | H-4796 | BALL VALVE, 1/4" | 1 |
| 16 | H-5012 | 5/16" ID, 1/2" OD, 3/8" LG, FLANGE BEARING | 8 |
| 17 | H-53425 | HEX L-KEY, 3/16, NICKEL PLATED | 1 |
| 18 | H-70001 | HCS 1/4" - 20 X 1/2 SS" | 1 |
| 19 | H-70105 | HCS 3/8" - 16 X 1" SS | 4 |
| 20 | H-70136 | HCS 3/8" - 24 X 2 1/4" SS | 2 |
| 21 | H-70710 | HN 1/4" - 20 SS | 1 |
| 22 | H-70858 | NYLOK #10-32 SS | 6 |
| 23 | H-70860 | NYLOK 1/4" - 20 SS | 1 |
| 24 | H-70861 | NYLOK 5/16" - 18 SS | 14 |
| 25 | H-71017 | FW 3/8" X 7/8" SS | 2 |
| 26 | H-71067 | LW 3/8" SS | 6 |
| 27 | H-71614 | RPH #10-32 X 5/8" SS | 6 |
| 28 | H-74429 | CB 5/16" - 18 X 3/4" SS | 8 |
| 29 | H-74432 | CB 5/16" - 18 X 1-1/2" SS | 4 |
| 30 | H-9307 | GROMMET | 1 |
| 31 | H-NJ05C | JNYL 5/16" - 18 SS | 5 |
| 32 | N/A | SCRUB DECK WHEEL ASSEMBLY | 1 |

20" SHROUD ASSEMBLY



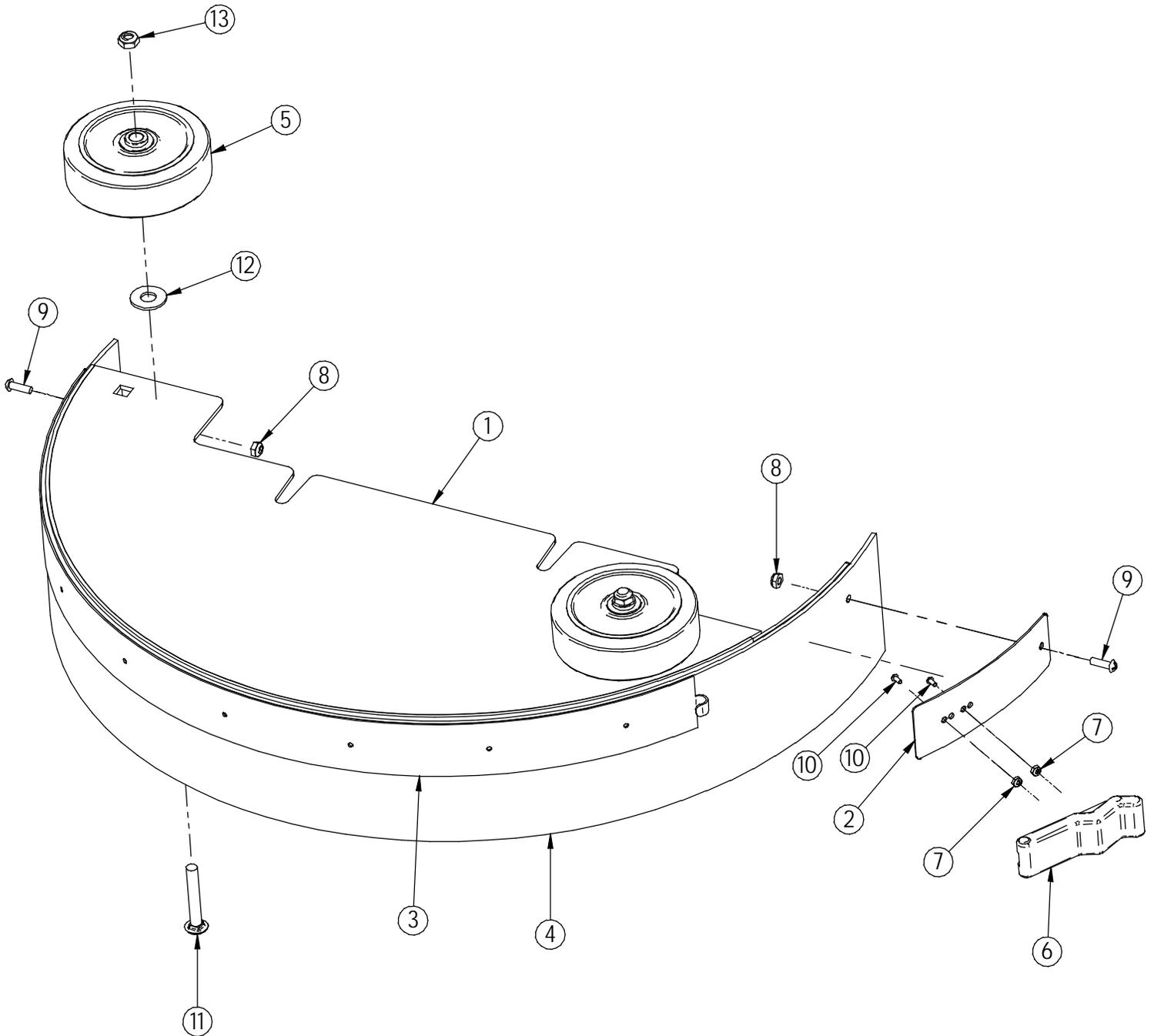
20" SHROUD ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|-------------------------------|-----|
| 1 | 190-1101 | 20" FRONT SHROUD | 1 |
| 2 | 190-1140 | 20" & 23" SHROUD CURTAIN BAND | 1 |
| 3 | 190-1141 | 20" SHROUD CURTAIN BAND | 1 |
| 4 | 190-1165 | 20" SHROUD CURTAIN, FRONT | 1 |
| 5 | 190-3030 | 4.0" WHEEL (GRAY) | 2 |
| 6 | 4-124 | LATCH | 1 |
| 7 | H-70854 | NYLOK #4-40 SS | 2 |
| 8 | H-70858 | NYLOK #10-32 SS | 2 |
| 9 | H-71614 | RPH #10-32 X 5/8" SS | 2 |
| 10 | H-72478 | RPH #4-40 X 1/4" | 2 |
| 11 | H-74433 | CB 5/16"- 18 X 2" SS | 2 |
| 12 | H-99001 | FW 3/8" SS | 2 |
| 13 | H-NJ05C | JNYL 5/16"- 18 SS | 2 |

23" DISK DECK ASSEMBLY

| Item | Part Number | Keywords | Qty |
|------|-------------|--|-----|
| 1 | 190-1110 | 23" LIFT BRACKET | 2 |
| 2 | 190-1125 | 23.0" DISK DECK | 1 |
| 3 | 190-1145 | CLEAR TUBE, 1/2" ID X 1.0" OD X 1.0" LG | 1 |
| 4 | 190-1152 | 23" CURTAIN BAND | 1 |
| 5 | 190-1176 | 23" DECK CURTAIN, REAR | 1 |
| 6 | 190-4500 | ADJUSTABLE SOLUTION FLOW VALVE, WITH 1/4" NPTF | 1 |
| 7 | 190-7240 | SPRING 2.0" LG | 1 |
| 8 | 190-9586 | LATERAL ARM | 1 |
| 9 | 21-7205 | STAR KNOB | 3 |
| 10 | 290-1247 | FW BRONZE .75 OD X .375 ID X .0625 THK | 4 |
| 11 | 5-124 | LATERAL ARM | 2 |
| 12 | 7-222 | 3/4 HP X 200 RPM MOTOR | 1 |
| 13 | H-10055 | HCS 3/8"- 24 X 3.5" SS | 1 |
| 14 | H-33080 | FW 5/16" SAE | 4 |
| 15 | H-4796 | BALL VALVE, 1/4" | 1 |
| 16 | H-5012 | 5/16" ID, 1/2" OD, 3/8" LG, FLANGE BEARING | 8 |
| 17 | H-53425 | HEX L-KEY, 3/16, NICKEL PLATED | 1 |
| 18 | H-70001 | HCS 1/4"-20 X 1/2 SS" | 1 |
| 19 | H-70105 | HCS 3/8"- 16 X 1" SS | 4 |
| 20 | H-70136 | HCS 3/8"- 24 X 2 1/4" SS | 2 |
| 21 | H-70710 | HN 1/4"- 20 SS | 1 |
| 22 | H-70858 | NYLOK #10-32 SS | 7 |
| 23 | H-70860 | NYLOK 1/4"- 20 SS | 1 |
| 24 | H-70861 | NYLOK 5/16" - 18 SS | 14 |
| 25 | H-71017 | FW 3/8" X 7/8" SS | 2 |
| 26 | H-71067 | LW 3/8" SS | 6 |
| 27 | H-71614 | RPH #10-32 X 5/8" SS | 7 |
| 28 | H-74429 | CB 5/16"- 18 X 3/4" SS | 8 |
| 29 | H-74432 | CB 5/16"- 18 X 1-1/2" SS | 4 |
| 30 | H-9307 | GROMMET | 1 |
| 31 | H-NJ05C | JNYL 5/16"- 18 SS | 5 |
| 32 | N/A | SCRUB DECK WHEEL ASSEMBLY | 1 |

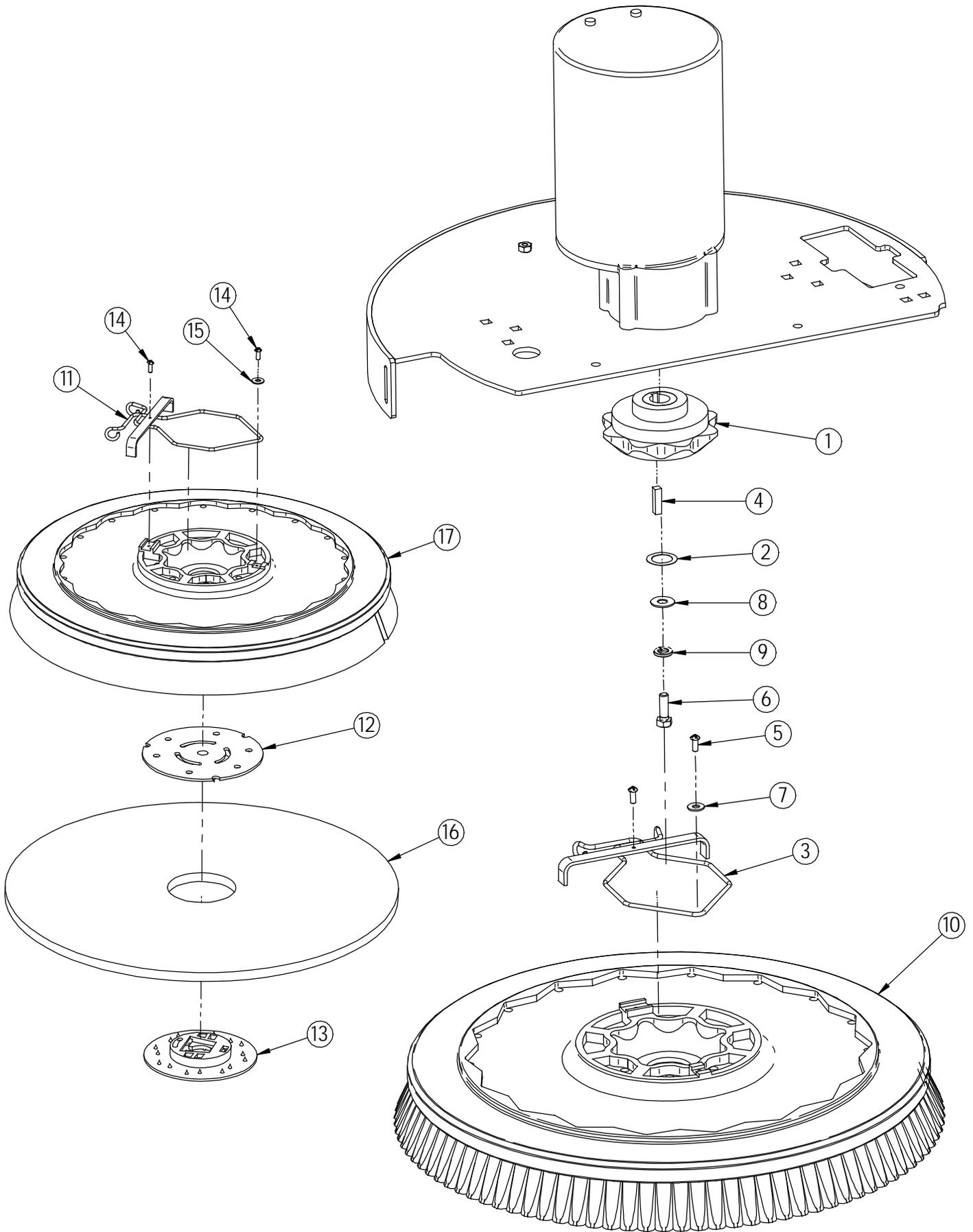
23" SHROUD ASSEMBLY



23" SHROUD ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|-------------------------------|-----|
| 1 | 190-1105 | 23" FRONT SHROUD | 1 |
| 2 | 190-1140 | 20" & 23" SHROUD CURTAIN BAND | 1 |
| 3 | 190-1151 | 23" CURTAIN BAND | 1 |
| 4 | 190-1175 | SHROUD CURTAIN, FRONT | 1 |
| 5 | 190-3030 | 4.0" WHEEL (GRAY) | 2 |
| 6 | 4-124 | LATCH | 1 |
| 7 | H-70854 | NYLOK #4-40 SS | 2 |
| 8 | H-70858 | NYLOK #10-32 SS | 2 |
| 9 | H-71614 | RPH #10-32 X 5/8" SS | 2 |
| 10 | H-72478 | RPH #4-40 X 1/4" | 2 |
| 11 | H-74433 | CB 5/16"- 18 X 2" SS | 2 |
| 12 | H-99001 | FW 3/8" SS | 2 |
| 13 | H-NJ05C | JNYL 5/16"- 18 SS | 2 |

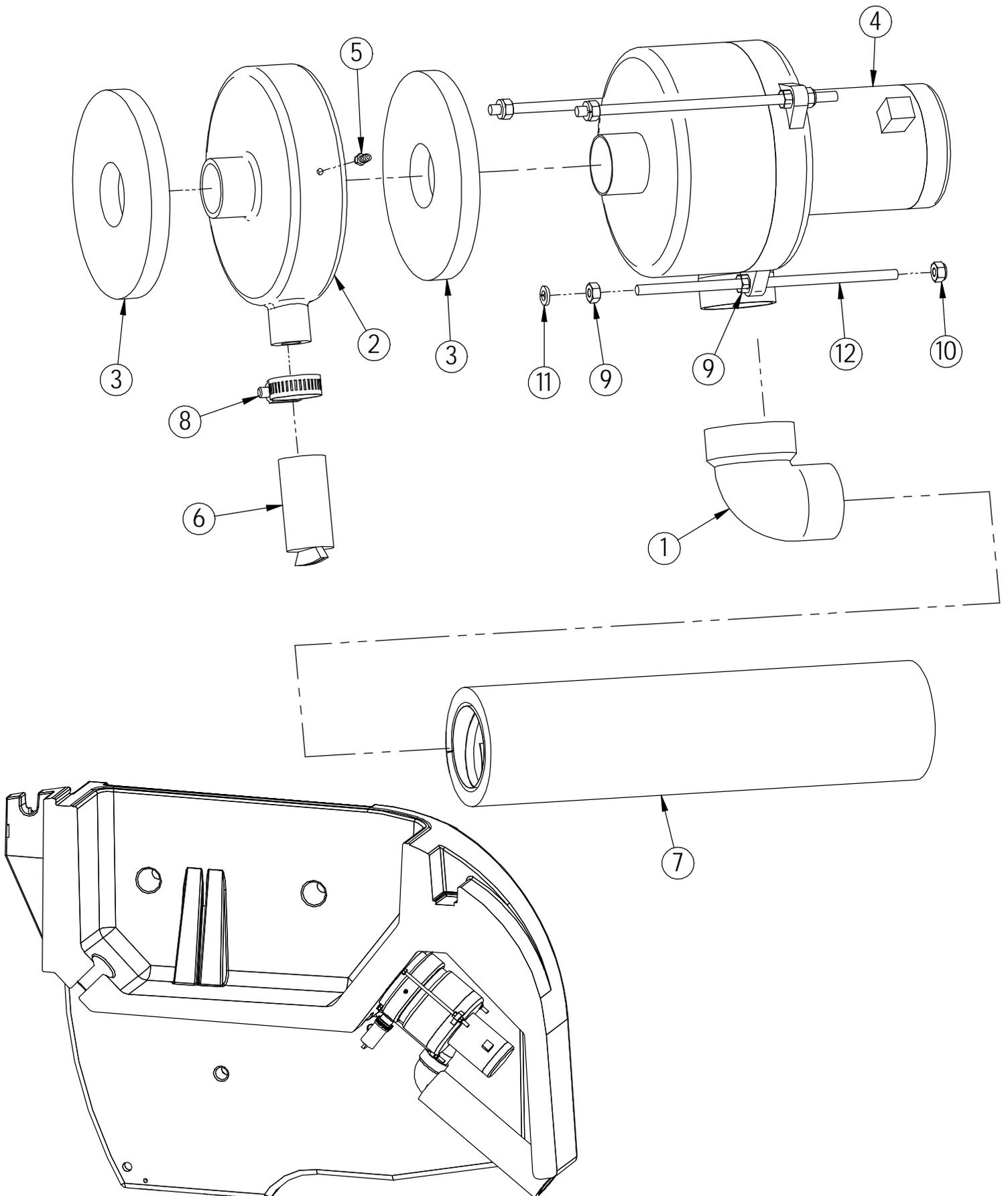
DISK DECK BRUSH ASSEMBLY



DISK DECK BRUSH ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-----------------------|---------------------------|-----|
| 1 | 21-5000 | BRUSH DRIVER | 1 |
| 2 | 32-3044 | FW .75 ID X 1.13 OD X .01 | 1 |
| 3 | 40-423 | BRUSH REPAIR KIT | 1 |
| 4 | 5-431A | 1/4" X 1" KEY | 1 |
| 5 | H-29048 | RPH #10-32 X 1/2" | 2 |
| 6 | H-70055 | HCS 5/16"- 18 X 1" SS | 1 |
| 7 | H-71013 | FW 1/4" X 5/8" SS | 1 |
| 8 | H-71017 | FW 3/8" X 7/8" SS | 1 |
| 9 | H-71067 | LW 3/8" SS | 1 |
| 10 | SEE COMMON WEAR PARTS | DISK BRUSH | 1 |
| 11 | 40-423 | BRUSH REPAIR KIT | 1 |
| 12 | 40-433 | DRIVER LOCK | 1 |
| 13 | 40-433 | DRIVER LOCK | 1 |
| 14 | H-29048 | RPH #10-32 X 1/2" | 2 |
| 15 | H-71013 | FW 1/4" X 5/8" SS | 1 |
| 16 | SEE COMMON WEAR PARTS | BURNISHER PAD | 1 |
| 17 | SEE COMMON WEAR PARTS | PAD DRIVER | 1 |

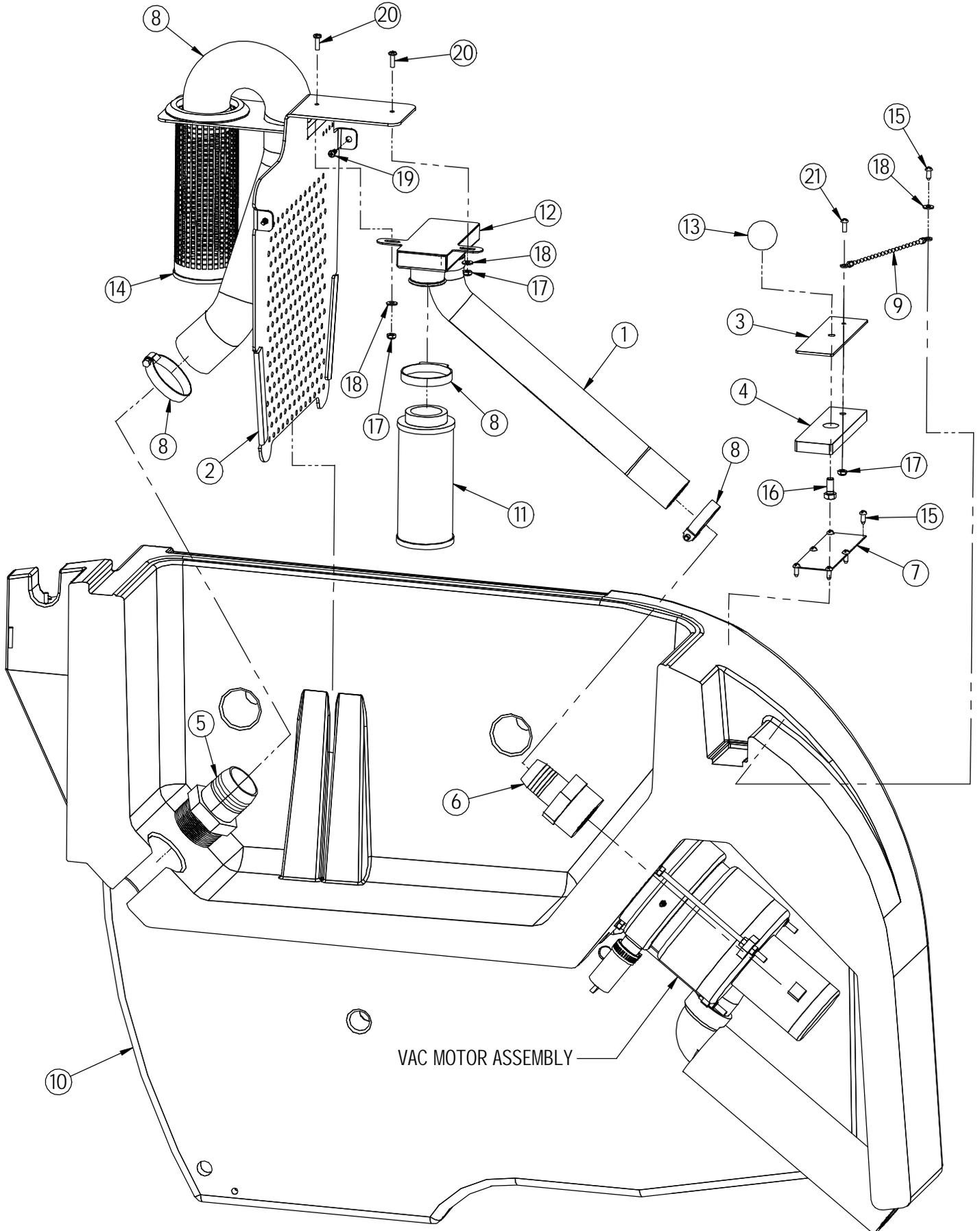
VAC MOTOR ASSEMBLY



VAC MOTOR ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|----------------------------|-----|
| 1 | 190-1225 | 1.50 X 90 DEG STREET ELBOW | 1 |
| 2 | 190-1450 | VAC BOX | 1 |
| 3 | 190-3002 | VAC MOTOR GASKET | 2 |
| 4 | 290-250 | VAC MOTOR, 3 HP, TANGENTAL | 1 |
| 5 | 390-2328A | VACUUM SWITCH BARB | 1 |
| 6 | 390-3010 | LOADER VALVE | 1 |
| 7 | 430-2502 | VACUUM FAN MUFFLER | 1 |
| 8 | H-62005 | CLAMP 5/8"- 1-1/2" SS | 1 |
| 9 | H-70710 | HN 1/4"- 20 SS | 6 |
| 10 | H-70860 | NYLOK 1/4"- 20 SS | 3 |
| 11 | H-71063 | LW 1/4" SS | 3 |
| 12 | H-W1579194 | 1/4-20 X 7" FT STUD S/S | 3 |

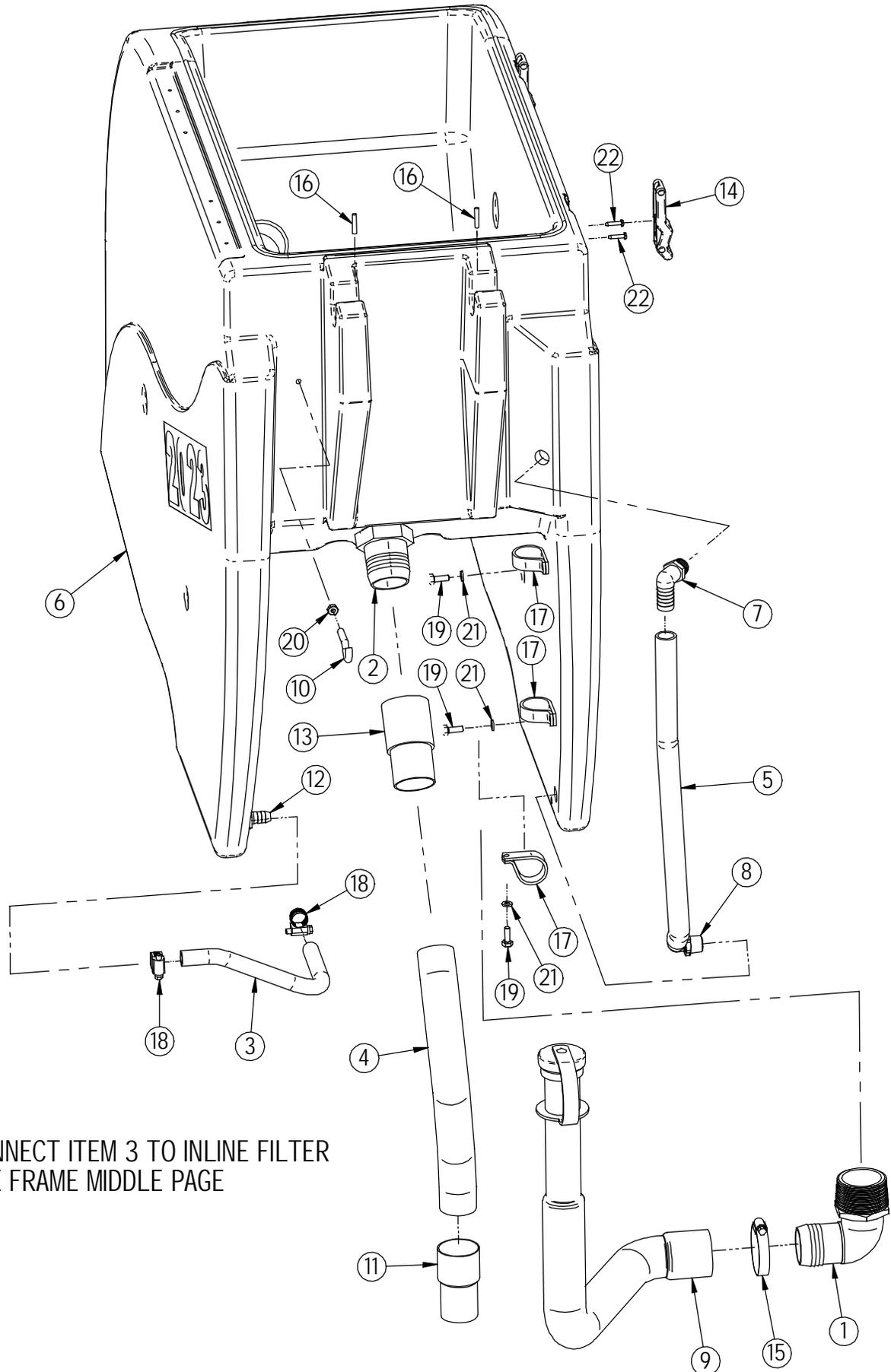
2023 TANK INSIDE



2023 TANK INSIDE

| Item | Part Number | Part Description | Qty |
|------|-------------|---|-----|
| 1 | 190-1025 | 1-1/2" ID X 18" LG WIRE REINF BLACK HOSE | 1 |
| 2 | 190-1130 | BAFFLE | 1 |
| 3 | 190-1180 | SOLUTION FILL LID | 1 |
| 4 | 190-1190 | SOLUTION FILL LID GASKET | 1 |
| 5 | 190-1210 | 2.0" MNPT X 2.0" BARB, NYLON | 1 |
| 6 | 190-1215 | 2.0" MNPT X 1.50" BARB, NYLON | 1 |
| 7 | 190-1220 | SCREEN | 1 |
| 8 | 190-1272 | 2.0" ID X 24.0" LG WIRE REINF HOSE (GRAY) | 1 |
| 9 | 190-4060 | 6" S/S CHAIN LANYARD | 1 |
| 10 | 190-4140 | SOLUTION / RECOVERY TANK | 1 |
| 11 | 21-4085 | VAC SCREEN | 1 |
| 12 | 21-7060 | BOX ASM | 1 |
| 13 | 21-7101 | LIFT KNOB | 1 |
| 14 | 250-8911 | SCREEN STRAINER | 1 |
| 15 | H-28878 | RPH #8-32 X 1/2" SMS | 7 |
| 16 | H-70053 | HCS 5/16" - 18 X 3/4" SS | 1 |
| 17 | H-70858 | NYLOK #10-32 SS | 3 |
| 18 | H-71009 | FW #10 SS | 3 |
| 19 | H-71889 | SMS #14 x 1/2" S/S | 2 |
| 20 | H-72517 | PPH #10-32 X 5/8" SS | 2 |
| 21 | H-72563 | RPH #10-32 X 1/2" SS | 1 |

2023 TANK OUTSIDE

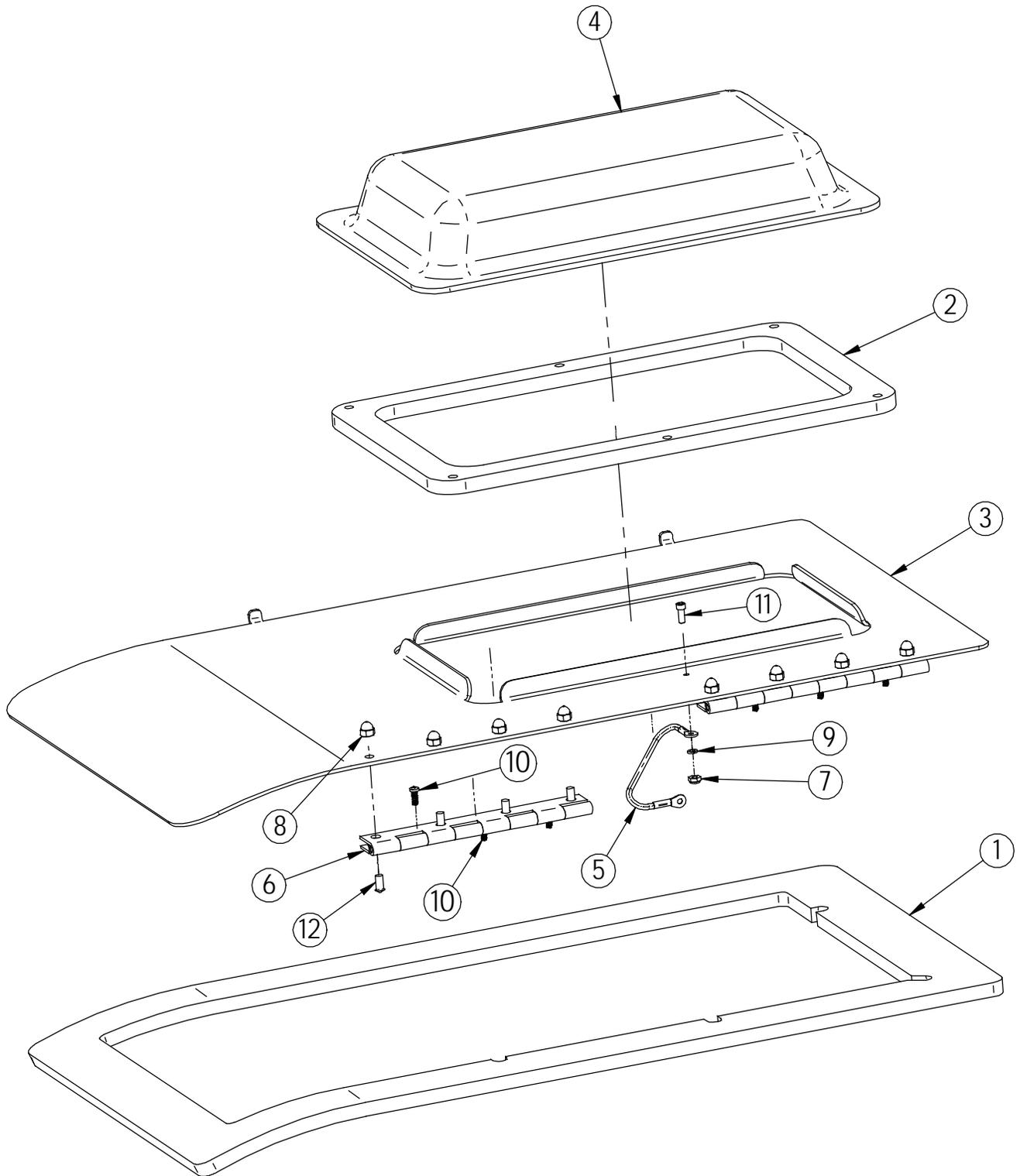


NOTE: CONNECT ITEM 3 TO INLINE FILTER
SEE FRAME MIDDLE PAGE

2023 TANK OUTSIDE

| Item | Part Number | Part Description | Qty |
|------|-------------|---|-----|
| 1 | 190-1205 | ELBOW, 90 DEG, 2.0" MALE NPT X 2.0" BARB | 1 |
| 2 | 190-1210 | 2.0" MNPT X 2.0" BARB, NYLON | 1 |
| 3 | 190-1270 | 1/2" ID X 11" LG WIRE REINF. CLEAR HOSE | 1 |
| 4 | 190-1300 | 1-1/2" ID X 31" LG WIRE REINF BLACK HOSE | 1 |
| 5 | 190-1370 | CLEAR HOSE, 3/4" ID X 1.0" OD X 21" LG | 1 |
| 6 | 190-4140 | SOLUTION / RECOVERY TANK | 1 |
| 7 | 190-5463 | ELBOW, 1/2" MALE NPT X 3/4" BARB | 1 |
| 8 | 190-5779 | ELBOW, MALE 1/2" NPT X 1/2" TUBE OD, GLASS FILLED NYLON | 1 |
| 9 | 190-7210 | 1-1/2" ID X 32" LG DRAIN HOSE | 1 |
| 10 | 190-9491 | 1/4-20 J-HOOK | 1 |
| 11 | 21-4072 | HOSE CUFF, 1 1/2" | 1 |
| 12 | 21-4146 | 1/2" Male NPT X 1/2" BARB, BRASS | 1 |
| 13 | 290-7212 | 1-1/2" - 2" HOSE CUFF | 1 |
| 14 | 4-124 | LATCH | 2 |
| 15 | 5-719 | CLAMP 1 9/16 - 2 1/2 " SS | 1 |
| 16 | H-26740 | PIN, 3/16 DIA X 1.0" LG | 2 |
| 17 | H-3225T5 | RUBBER LOOP CLAMP | 3 |
| 18 | H-62005 | HOSE CLAMP 5/8"- 1-1/2" SS | 2 |
| 19 | H-70003 | HCS 1/4"- 20 X 3/4" SS | 3 |
| 20 | H-70710 | HN 1/4"- 20 SS | 1 |
| 21 | H-71063 | LW 1/4" SS | 3 |
| 22 | H-72916 | PPH SMS #8 X 3/4" SS | 4 |

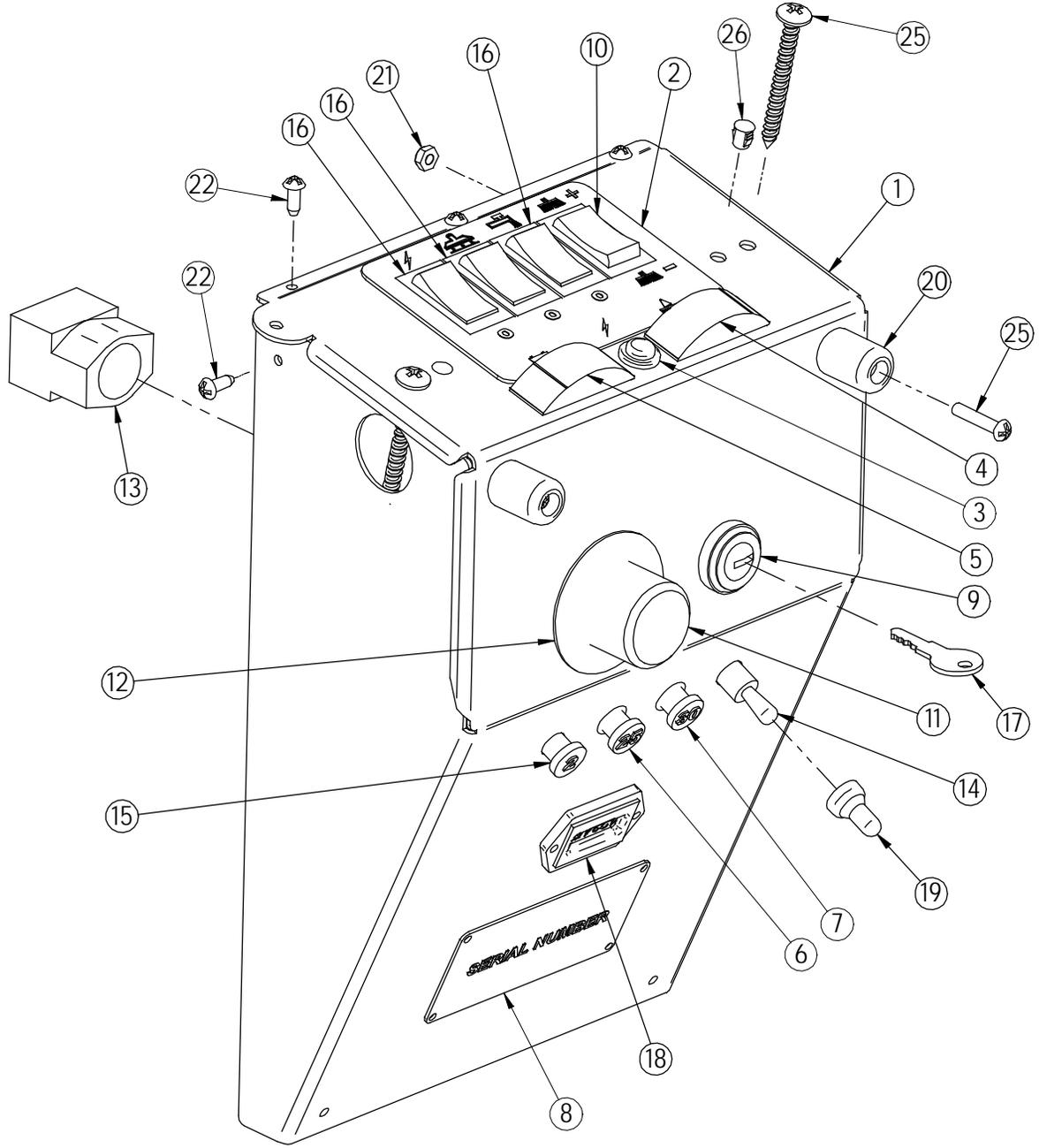
TANK LID ASSEMBLY



TANK LID ASSEMBLY

| Item | Part Number Model 2023 | Part Number Model 2017 | Part Description | Qty |
|------|---------------------------|---------------------------|-------------------------|-----|
| 1 | 190-1070 | 170-1070 | TANK LID GASKET | 1 |
| 2 | 190-1075 | | TANK CLEAR COVER GASKET | 1 |
| 3 | 190-1400 | 170-1400 | TANK LID | 1 |
| 4 | 190-1410 | | VAC FORMED CLEAR COVER | 1 |
| 5 | 21-4060 | | LANYARD | 1 |
| 6 | 32-8000 | | 8" CONTINUOUS HINGE | 2 |
| 7 | H-37015 | | NYLOK #10-32 | 1 |
| 8 | H-37708 | | 1/4-20 LC ACORN NUT | 8 |
| 9 | H-71059 | | LW #10, SS | 1 |
| 10 | H-71889 | | SMS #14 x 1/2" S/S | 6 |
| 11 | H-73448 | | SHCS #10-32 X 1/2" S/S | 1 |
| 12 | H-73752 | | BHSCS 1/4-20 X 1/2" | 8 |

CONTROL PANEL

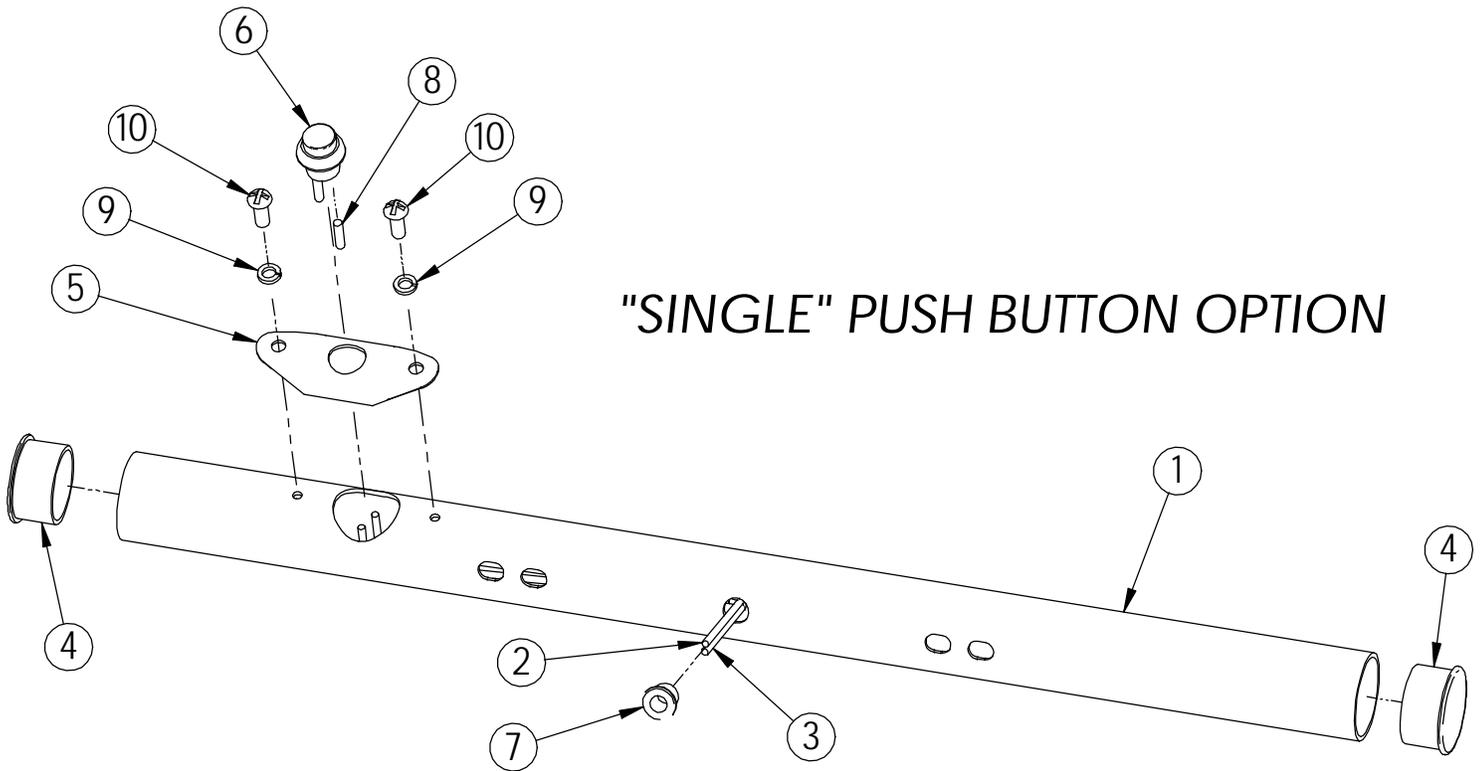


CONTROL PANEL

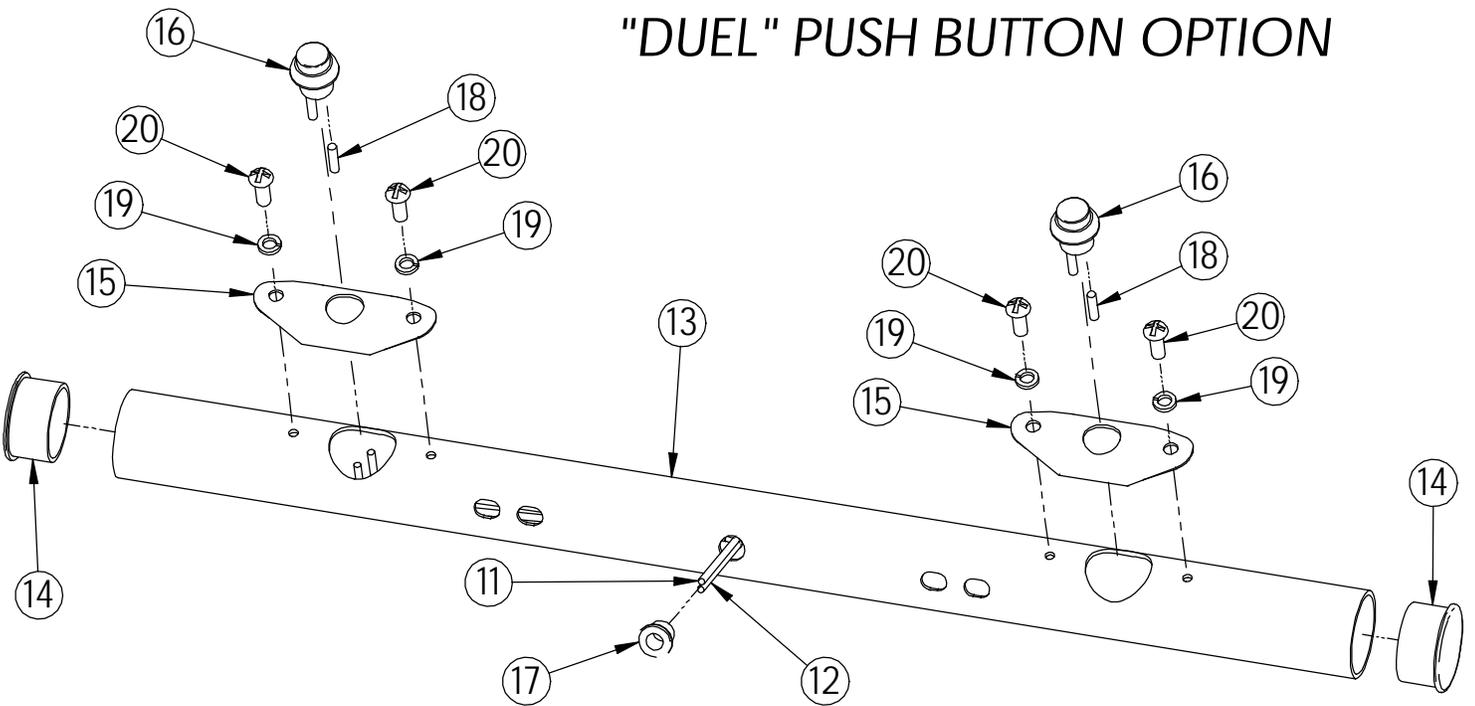
| Item | Part Number | Part Description | Keywords | Qty |
|------|-------------|--|------------|-----|
| 1 | 190-1090 | CONTROL PANEL | | 1 |
| 2 | 190-1501 | 2023 CONTROL PANEL DECAL | | 1 |
| 3 | 190-2310 | POWER (GREEN) | | 1 |
| 4 | 190-3851 | DOWN PRESSURE GAUGE | | 1 |
| 5 | 190-5431 | BATTERY GAUGE | | 1 |
| 6 | 190-8370 | FUSE RESETTABLE 25 AMP | | 1 |
| 7 | 290-9609 | FUSE, RESETTABLE, 30 AMP | | 1 |
| 8 | 4-101 | SERIAL NUMBER PLATE | | 1 |
| 9 | 4-234 | KEY SWITCH | (OPTIONAL) | 1 |
| 10 | 5-233 | MOM-OFF-MOM DPDT | | 1 |
| 11 | 5-300 | EMERGENCY SHUT OFF | (OPTIONAL) | 1 |
| 12 | 5-301 | EMERGENCY LEGEND PLATE | (OPTIONAL) | 1 |
| 13 | 5-302 | EMERGENCY CONTACT BLACK | (OPTIONAL) | 1 |
| 14 | 5-892 | TOGGLE, ON-OFF SPST | (OPTIONAL) | 1 |
| 15 | 7-837 | FUSE RESETTABLE 2 AMP | | 1 |
| 16 | 8-231 | SWITCH, ON-OFF ROCKER SPST | | 3 |
| 17 | 8-235 | KEY SET (REPLACE) | (OPTIONAL) | 1 |
| 18 | 8-262 | HOUR METER | | 1 |
| 19 | H-01199 | PROTECTIVE BOOT, TOGGLE SWITCH, (BLUE) | OPTIONAL | 1 |
| 20 | H-01201 | GROMMET | | 2 |
| 21 | H-0129155 | JNYL #10-32, 18-8 S/S | | 2 |
| 22 | H-28878 | RPH #8-32 X 1/2" SMS | | 5 |
| 23* | H-70888 | HOLE PLUG 3/4" | | 1 |
| 24* | H-70889 | HOLE PLUG 7/8" | | 1 |
| 25 | H-72976 | SMS #14 X 2-1/2" S/S | | 2 |
| 26 | H-85981 | HOLE PLUG, 1/4" | | 2 |
| 27* | H-85985 | HOLE PLUG 1/2" | | 2 |

* = NOT SHOWN

HANDLE BAR



"SINGLE" PUSH BUTTON OPTION



"DUEL" PUSH BUTTON OPTION

HANDLE BAR

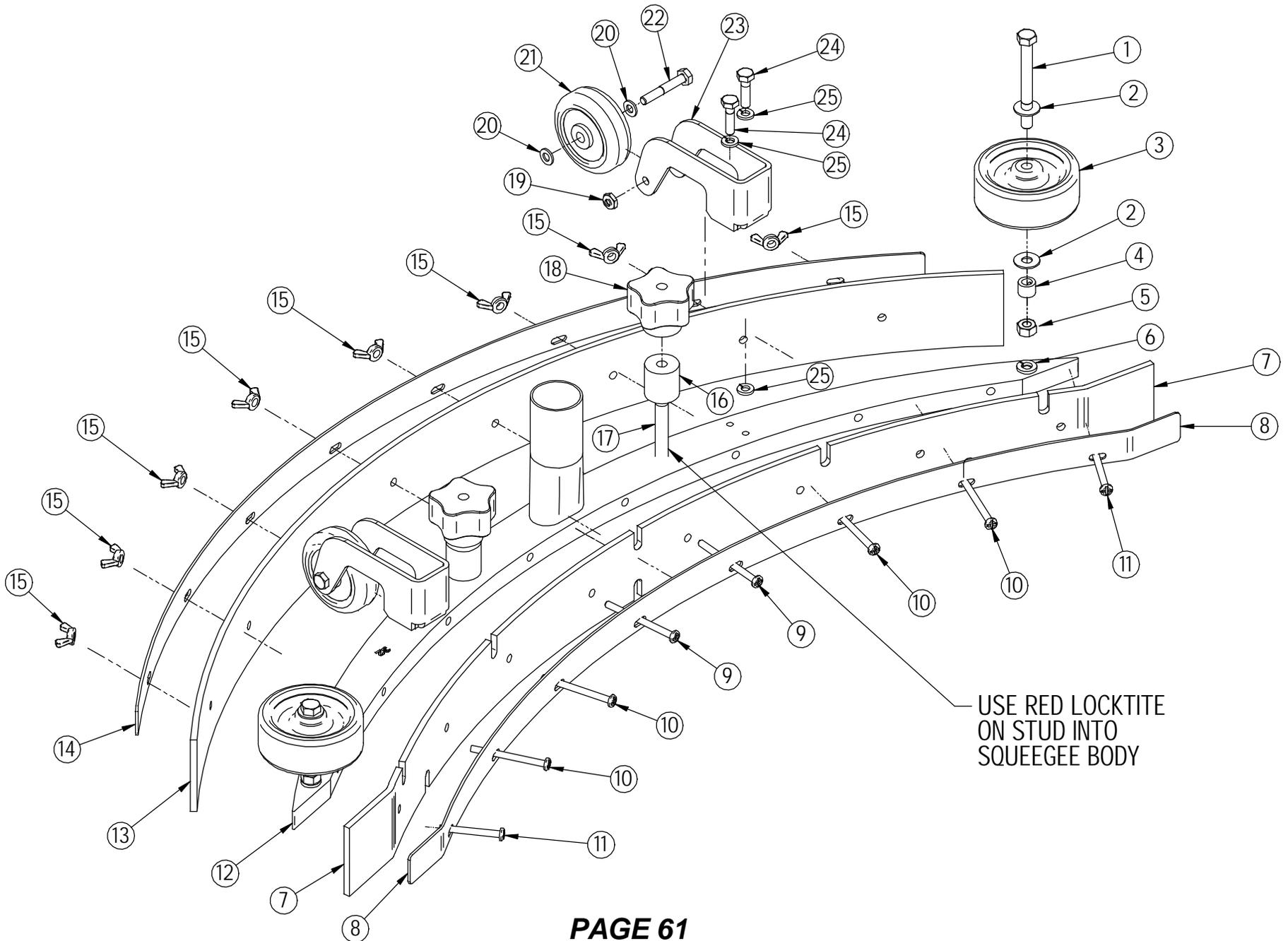
"SINGLE" PUSH BUTTON OPTION

| Item | Part Number | Part Description | Qty |
|------|-------------|--|-----|
| 1 | 190-1040 | HANDLE BAR | 1 |
| 2 | 190-1041 | RED WIRE, 16 GAGE | 1 |
| 3 | 190-1042 | YELLOW WIRE, 16 GAGE | 1 |
| 4 | 190-1390 | END CAP | 2 |
| 5 | 7-228 | SWITCH MOUNT PLATE | 1 |
| 6 | 7-229 | PUSH BUTTON SWITCH | 1 |
| 7 | H-03124 | 1/4" ID, 3/8" OD, 3/8" LG FLANGED BEARING, NYLON | 1 |
| 8 | H-108 | HEAT SHRINK | 2 |
| 9 | H-71059 | LW #10, SS | 2 |
| 10 | H-72398 | PPHMS #8-32 X 1/2" SS | 2 |

"DUEL" PUSH BUTTON OPTION

| Item | Part Number | Part Description | Qty |
|------|-------------|--|-----|
| 11 | 190-1041 | RED WIRE, 16 GAGE | 2 |
| 12 | 190-1042 | YELLOW WIRE, 16 GAGE | 2 |
| 13 | 190-1045 | HANDLE BAR | 1 |
| 14 | 190-1390 | END CAP | 2 |
| 15 | 7-228 | SWITCH MOUNT PLATE | 2 |
| 16 | 7-229 | PUSH BUTTON SWITCH | 2 |
| 17 | H-03124 | 1/4" ID, 3/8" OD, 3/8" LG FLANGED BEARING, NYLON | 1 |
| 18 | H-108 | HEAT SHRINK | 4 |
| 19 | H-71059 | LW #10, SS | 4 |
| 20 | H-72398 | PPHMS #8-32 X 1/2" SS | 4 |

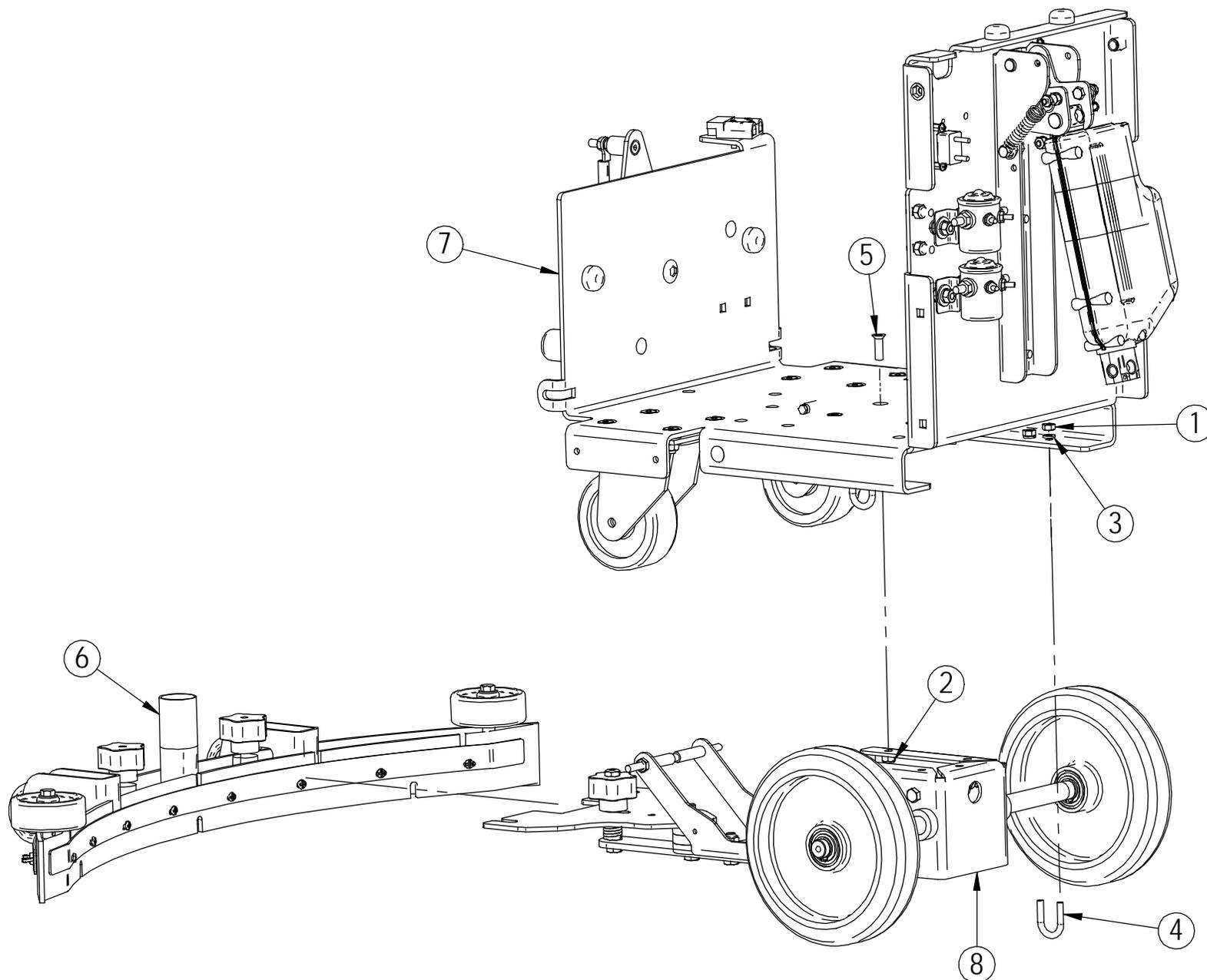
32 INCH SQUEEGEE ASSEMBLY



32 INCH SQUEEGEE ASSEMBLY

| Item | Part Number | Part Description | Qty |
|------|-------------|---------------------------|-----|
| 1 | H-70065 | HCS 5/16"- 18 X 3" SS | 2 |
| 2 | H-71015 | FW 5/16" X 3/4" SAE SS | 4 |
| 3 | 21-7600 | SIDE WHEEL (GREY) | 2 |
| 4 | H-33371 | 5/16" ID SHAFT COLLAR | 2 |
| 5 | H-70711 | HN 5/16"- 18 SS | 2 |
| 6 | H-71065 | LW 5/16" SS | 2 |
| 7 | 22-755G | FRONT SQUEEGEE BLADE | 1 |
| 8 | 23-7170 | SQUEEGEE BAND, FRONT | 1 |
| 9 | H-00288 | PPH #10-32 X 2 1/2" SS | 2 |
| 10 | H-00249 | PPH #10-32 X 2 1/4" SS | 4 |
| 11 | H-72555 | PPH #10-32 X 1 3/4" SS | 2 |
| 12 | 23-7181 | 32" SQUEEGEE BODY | 1 |
| 13 | 22-754G | REAR SQUEEGEE BLADE | 1 |
| 14 | 23-7160 | SQUEEGEE BAND, REAR | 1 |
| 15 | H-70908 | WINGNUT 10-32 SS | 8 |
| 16 | 5-846 | PIVOT SHAFT | 2 |
| 17 | H-00568 | STUD 3/8"- 16 X 2 1/2" SS | 2 |
| 18 | 290-5786 | STAR KNOB | 2 |
| 19 | H-NJ04C | JNYL 1/4" - 20 SS | 2 |
| 20 | H-00283 | FW 1/4" NYLON | 4 |
| 21 | 21-7570 | BACK UP WHEEL (GREY) | 2 |
| 22 | H-0172248 | HCS 1/4"- 20 X 1.625" SS | 2 |
| 23 | 21-7220 | SQUEEGEE TRAIL MOUNTS | 2 |
| 24 | H-70005 | HCS 1/4"- 20 X 1" SS | 4 |
| 25 | H-71063 | LW 1/4" SS | 6 |

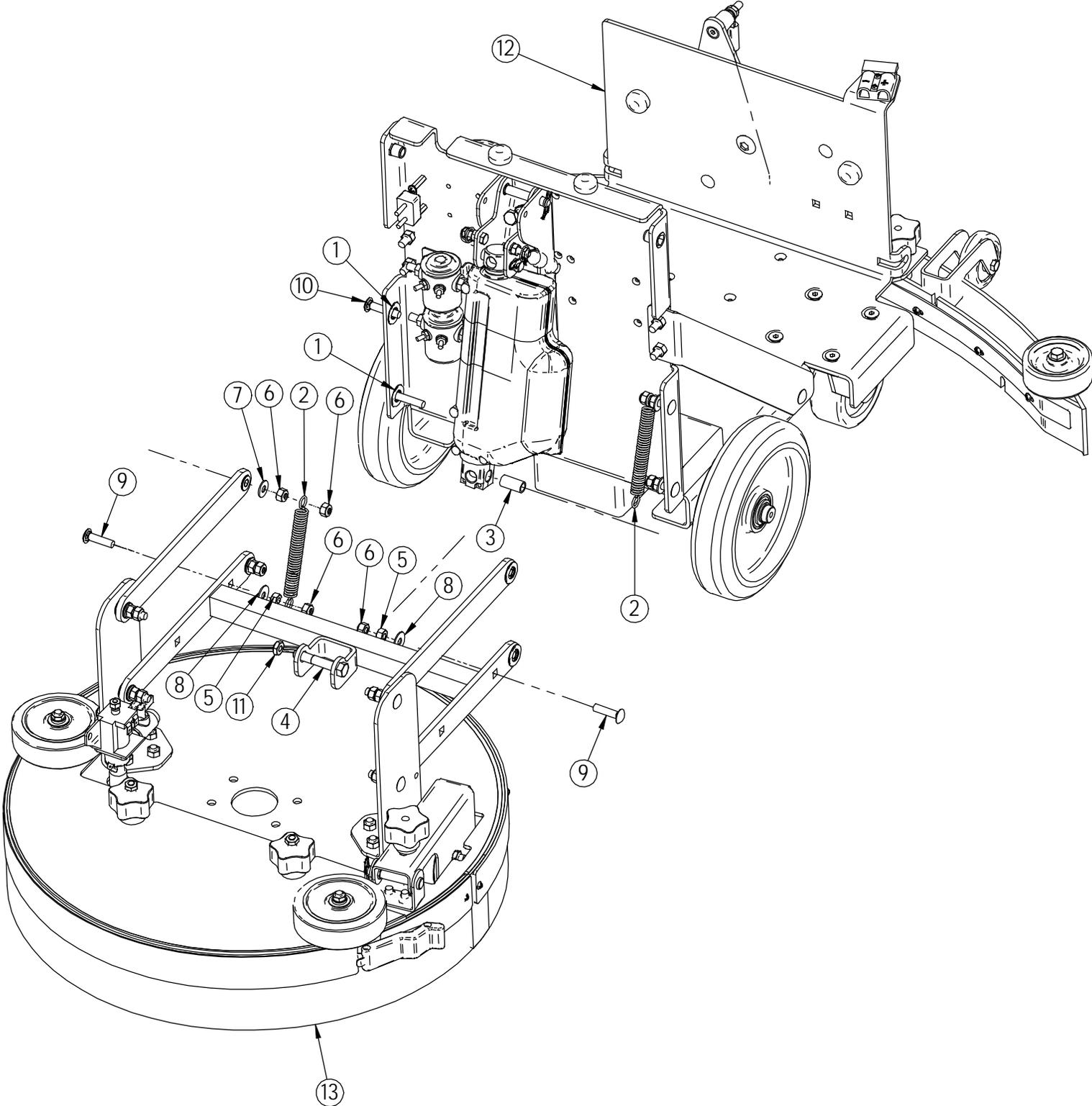
FRAME, SUSPENSION & SQUEEGEE



FRAME, SUSPENSION & SQUEEGEE

| Item | Part Number | Part Description | Qty |
|------|-------------|------------------------------|-----|
| 1 | H-70710 | HN 1/4" - 20 SS | 4 |
| 2 | H-70861 | NYLOK 5/16" - 18 SS | 5 |
| 3 | H-71063 | LW 1/4" SS | 4 |
| 4 | H-74620 | 1/4-20 X 3/4" U-BOLT | 2 |
| 5 | H-75661 | FPH 5/16" - 18 X 1" SS | 5 |
| 6 | N/A | 32 INCH SQUEEGEE ASSEMBLY | 1 |
| 7 | N/A | MODEL 2023 FRAME ASSEMBLY | 1 |
| 8 | N/A | SQUEEGEE SUSPENSION ASSEMBLY | 1 |

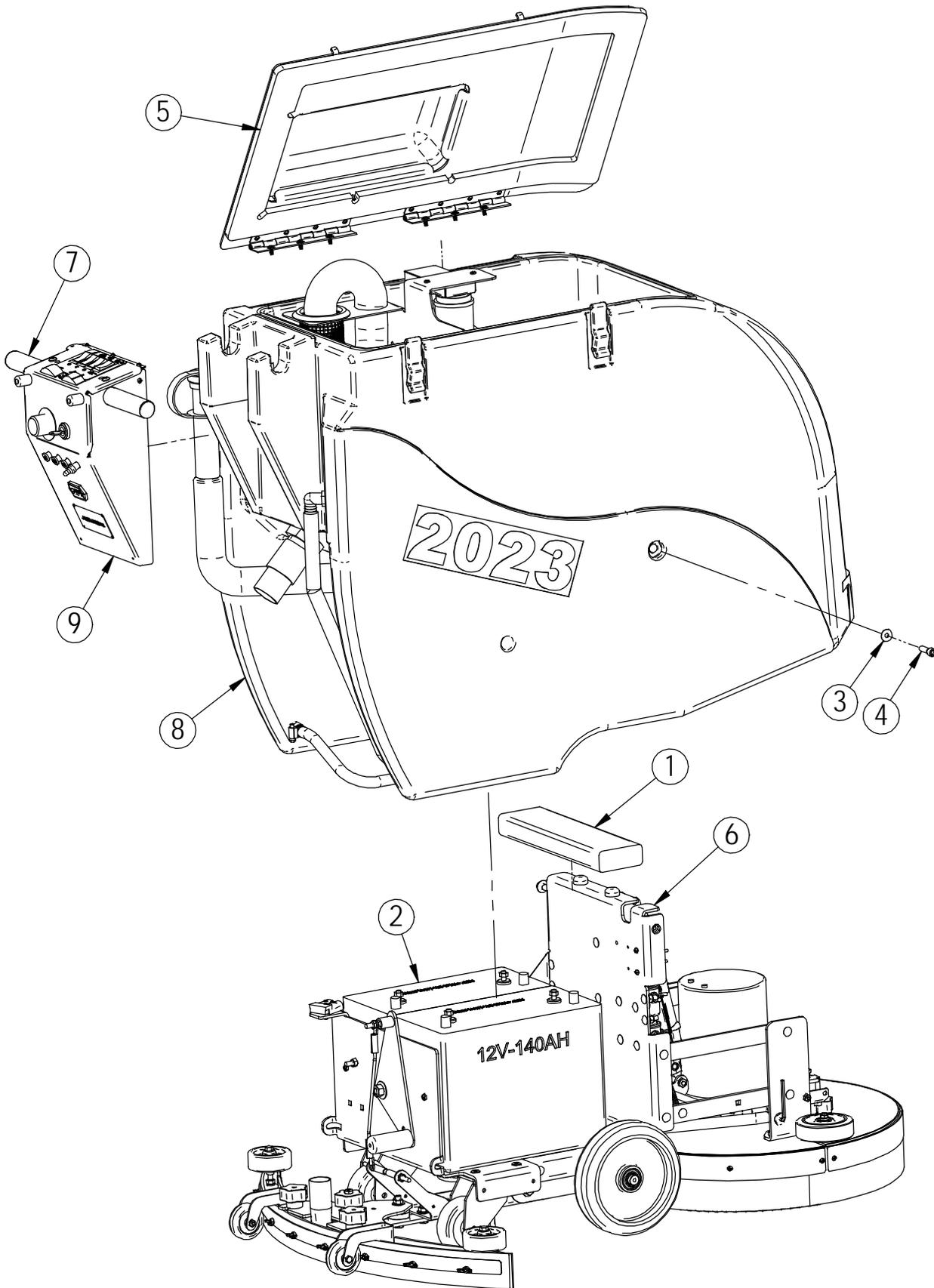
FRAME & SCRUB DECK



FRAME & SCRUB DECK

| Item | Part Number | Part Description | Qty |
|------|-------------|------------------------------------|-----|
| 1 | 290-1247 | FW BRONZE .50" ID X 1.0" OD X .062 | 2 |
| 2 | 390-7712 | COMPRESSION SPRING | 2 |
| 3 | H-63917 | SLEEVE, .50 OD X .375 ID X 1.0 LG | 1 |
| 4 | H-70112 | HCS 3/8"- 16 X 2-1/4" SS | 1 |
| 5 | H-70711 | HN 5/16"- 18 SS | 2 |
| 6 | H-70861 | NYLOK 5/16" - 18 SS | 4 |
| 7 | H-71015 | FW 5/16" X 3/4" SAE SS | 1 |
| 8 | H-71016 | FW 5/16" X 7/8" SS | 2 |
| 9 | H-74431 | CB 5/16"- 18 X 1-1/4" SS | 2 |
| 10 | H-74432 | CB 5/16"- 18 X 1-1/2" SS | 1 |
| 11 | H-NJ06C | JNYL 3/8- 16 SS | 1 |
| 12 | N/A | MODEL 2023 FRAME ASSEMBLY | 1 |
| 13 | N/A | SCRUB DECK ASSEMBLY | 1 |

FRAME, BATTERIES, TANK, TANK LID, CONTROL PANEL, HANDLE BAR



FRAME, BATTERIES, TANK, TANK LID, CONTROL PANEL, HANDLE BAR

| Item | Part Number | Part Description | Qty |
|------|-------------|--------------------------------|-----|
| 1 | 190-1095 | 2 X 4 X 13-1/2" LG | 1 |
| 2 | 190-2110 | BATTERY, 12 V, 140 AH, 230 RC | 1 |
| 3 | H-71016 | FW 5/16" X 7/8" SS | 1 |
| 4 | H-73541 | SHCS 3/8"- 16 X 1 1/4" SS | 1 |
| 5 | N/A | MODEL 2023 TANK LID ASSEMBLY | 1 |
| 6 | N/A | MODEL 2023 FRAME ASSEMBLY | 1 |
| 7 | N/A | MODEL 2023 HANDLE BAR ASSEMBLY | 1 |
| 8 | N/A | MODEL 2023 TANK ASSEMBLY | 1 |
| 9 | N/A | CONTROL PANEL ASSEMBLY | 1 |