



## Electronic Service Manuals

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# American-Lincoln Technology

**OPERATOR'S  
MANUAL &  
PARTS LIST**

**ATS 46/53 BATTERY  
SWEEPER/SCRUBBER**



**Beginning with Serial Number: 683100**

**READ THIS BOOK**

This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your machine could result in injury to you or to other personnel. Damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it.

All directions given in this book are as seen from the operator's position at the rear of the machine.



FILE#A2287

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**CLEANING PATH**

Scrubbing	46 Inches (116.84 cm) or 53" (134.62cm)
Sweeping	60 Inches (152.40 cm)
Edge Cleaning	6 Inches (15.24 cm) Right Side 53 Inches (134.62 cm) Only

**TRAVEL SPEED**

0 - 4.7 MPH

**STEERING**

Rack & Pinion 90°-90° Hydraulic Power Steering  
Adjustable Steering Column

**TURNING RADIUS**

Left	74.5 Inches (189.23 cm)
Right	74.5 Inches (189.23 cm)
Aisle "U" Turn	110.0 Inches (279.40 cm)

**DIMENSIONS**

Length	102.5 Inches (265.43 cm)
Width	55.0 Inches (132.08 cm)
Height	55.5 Inches (140.97 cm)
Height w/ Overhead Guard	78.75 Inches (197.49 cm)
Wheel Base	50.8 Inches (128.90 cm)

**WEIGHT**

Standard Machine 2600 lbs. (1170.0 Kg) Less Battery

**TIRES**

Type	Urethane (Front & Rear)
Front	Two (2) 16" (41cm) x 3.75" (8.26 cm)
Rear	One (1) 16" (41 cm) x 4.00" (10.16 cm)

**RAMP CLIMBING**

Sweeping	3 Degrees
Transporting	8 Degrees

**MAIN BROOM**

**One piece plastic core disposable type. Broom position can be set to "restricted down" or "free floating."**

Length	45 Inches (114 cm)
Diameter	14 Inches (35.6 cm)
Bristle Length	3.25 Inches (8.26 cm)
Optional Bristle Type	Nylon (Herringbone) Proex and Wire High Density Nylon Poly and Wire

Main Broom Lift	Hard Linkage
Main Broom Arms	Patented (No-Tool Broom Change)

**SIDE BROOM**

Side Broom Size	21-inch (53.34 cm) Diameter
Side Broom Bracket	Swing Away Shock Mount
Side Broom Lift	Cable

**INSTRUMENTS AND CONTROLS**

Main Broom Lever (Activates Immediately when lowered)	
Key Switch	Combination Battery Condition & Hour Meter
Headlight/Taillight Switch	Side Broom Lever (Activates Immediately when lowered)
Squeegee Switch	Recovery High Light
Scrub Deck Switch	Clogged Filter Light (OPTION)
Hopper Temperature Light (OPTION)	Solution Control
Solution Low Light	Filter Shaker Switch
Hopper Up/Down	Dust Control Switch
Dump Door Open/Closed	Horn Button

## SPECIFICATIONS

### SCRUBBING SYSTEM

Brush Size-46"	Three (3) 16" (40.64 cm) Diameter Brushes
Brush Size-53"	Three (3) 17.88" (45.42 cm) Diameter Brushes
Brush Drive	Electric Motors, Off in Neutral (after 2-second delay)
Brush Drive Lift	Actuator
Scrub Load	Ground Clearance 250 lbs. (112.50 Kg) or 400 lbs. (180.0 Kg)

### SQUEEGEE

Vacuum/Squeegee	55.5-inch (140.97 cm) Wide Swing, Gum Rubber Outer Blade
Side Squeegees (2)	Patented Configuration
Squeegee Lift	Actuator and Cable, Auto Lift in Reverse
Squeegee Hose	2-inch (5.08 cm) Diameter

### TANKS

Solution Tank	70 Gallon (264.96 Liters) Polyethylene
Recovery Tank	70 Gallon (264.96 Liters) Polyethylene
Solution Metering	Variable to 3.0 GPM

### HOPPER

Capacity	10 Cubic Feet (.2832 Cubic Meters), 700 lbs. (315 Kg)
Dump and Lift	Variable Dump with Dump Door
Filter	78 Sq. Ft. (72,464 Sq. Cm)
Dump Height	60 Inches (152.40 cm)
Reach Into Dumpster	11 Inches (27.94 cm)

### SYSTEM FLUID CAPACITIES

Fuel Tank	10.0 Gallons (37.95 Liters)
Hydraulic System	4.0 Gallons (15.16 Liters)


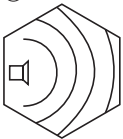

### OPTIONAL EQUIPMENT

Seat Belt	Back Up Alarm	Clogged Filter
Wet Sweep Bypass/Thermo-Sensor	Work Light	Roll-Out Battery
Amber Safety Light	Headlight/Taillight Switch	Fire Extinguisher
ESP & Autofil Recycling System	Overhead Guard	Vacuum Wand
Pad Drivers	Non-Marking Tires	Spray Wand
Scrub Brushes		

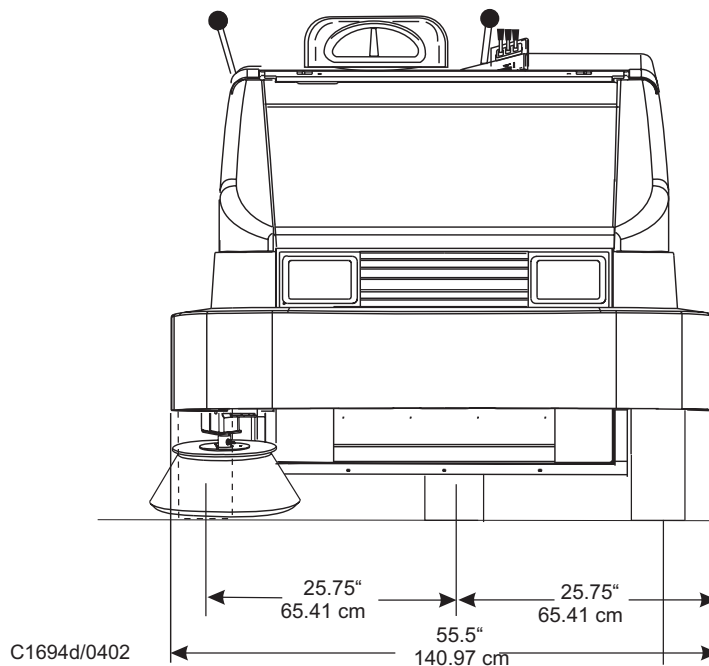
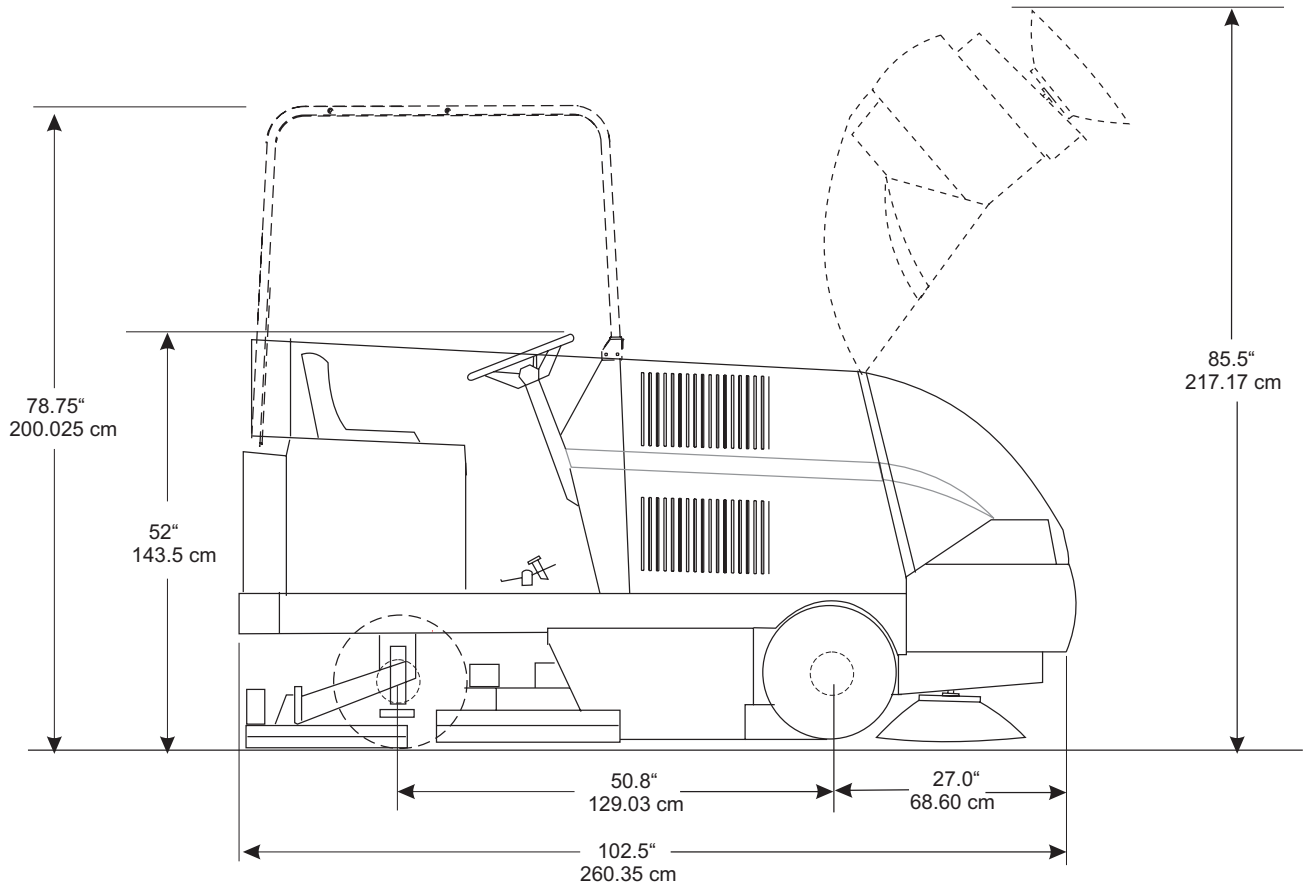
### WARRANTY

Our general conditions of business are applicable with regard to the guarantee. Subject to change as a result of technical advances. The guarantee is invalidated if the machine is not operated in accordance with these instructions or otherwise abused. The guarantee is invalidated if the machine is not serviced as described.

### MACHINE DATA

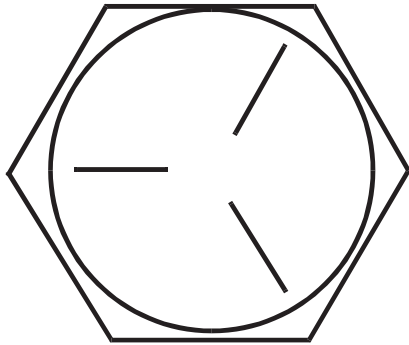
<b>ALTO®</b>		<input type="text"/>
		MACHINE NAME
<input type="text"/>	<input type="text"/>	
MODEL	DATE / SERIAL NUMBER	
<input type="text"/>	<input type="text"/>	RATED POWER
WEIGHT	<input type="text"/>	MAX OPERATING SLOPE
IP X3		
	LWA	
<input type="text"/>	dB	CE

# MACHINE DIMENSIONS

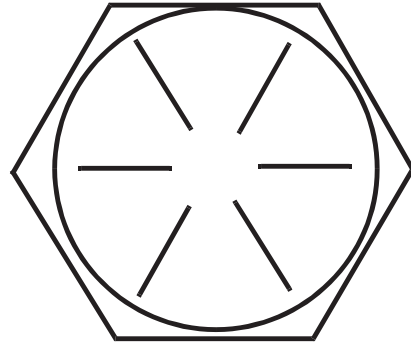




**BOLT IDENTIFICATION**



SAE - Grade 5



SAE - Grade 8

Screw Size	Grade 5 Plated		Grade 8 Plated		410H Stainless		Brass	Type F & T & BT		Type B, AB
	C	F	C	F	C	F		C	F	
*6	14	15	-	-	18	20	5	20	23	21
*8	27	28	-	-	33	35	9	37	41	34
*10	39	43	-	-	47	54	13	49	64	49
*1/4	86	108	130	151	114	132	32	120	156	120
5/16	15	17	22	24	19	22	6	-	-	-
3/8	28	31	40	44	34	39	10	-	-	-
7/16	44	49	63	70	55	62	16	-	-	-
1/2	68	76	95	108	85	95	-	-	-	-
9/16	98	110	138	155	-	-	-	-	-	-
5/8	135	153	191	216	-	-	-	-	-	-
3/4	239	267	338	378	-	-	-	-	-	-
7/8	387	-	545	-	-	-	-	-	-	-
1	579	-	818	-	-	-	-	-	-	-

C = Coarse Thread

F = Fine Thread

\* = Torque values for #6 through 1/4 are lb./in. All others are lb./ft.

**NOTE**

Decrease the torque by 20% when using thread lubricant  
The torque tolerance is  $\pm$  on torque values.

+

C2000/9905

## HYDRAULIC TORQUE REQUIREMENTS

### HYDRAULIC TORQUE REQUIREMENTS

Refer to the following chart for torque values on all hydraulic hoses and fittings.

Nominal SAE Dash Size	O-Ring Face Seal End		SAE O-Ring Boss End	
	Thread Size Inch	Swivel Nut Torque	Thread Size Inch	Str. Fitting or Locknut Torque
		LB-FT		LB-FT
-3	*	*	3/8-24	8-10
-4	9/16-18	10-12	7-16-20	14-16
-5	*	*	1/2-20	18-20
-6	11/16-16	18-20	9/16-18	24-25
-8	13/16-16	32-35	3/4-16	50-60
-10	1-14	46-50	7/8-14	72-80
-12	1 3/16-12	65-70	1 1/16-12	125-135
-14	1 3/16-12	65-70	1 3/16-12	160-180
-16	1 7-16-12	92-100	1 5/16-12	200-220
-20	1 11/16-12	125-140	1 5/8-12	210-280
-24	2-12	150-165	1 7/8-12	270-360

\* O-Ring face seal type end not defined for this tube size.

**NOTE**

**Parts must be lightly oiled with hydraulic fluid.**

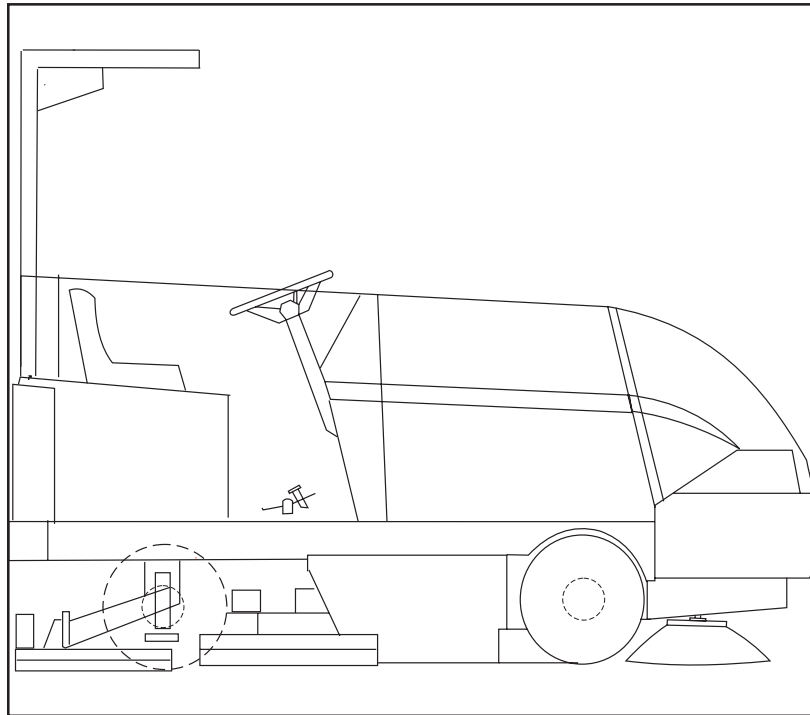
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# DECIMAL-METRIC CONVERSION TABLE

## DECIMAL-METRIC CONVERSION TABLE

Fraction	Decimal	Millimeter	Fraction	Decimal	Millimeter
$\frac{1}{64}$	0.015625	0.3969	$\frac{33}{64}$	0.515625	13.0969
$\frac{1}{32}$	0.03125	0.7938	$\frac{17}{32}$	0.53125	13.4938
$\frac{3}{64}$	0.046875	1.1906	$\frac{35}{64}$	0.546875	13.8906
$\frac{1}{16}$	0.0625	1.5875	$\frac{9}{16}$	0.5625	14.2875
$\frac{5}{64}$	0.078125	1.9844	$\frac{37}{64}$	0.578125	14.6844
$\frac{3}{32}$	0.09375	2.3813	$\frac{19}{32}$	0.59375	15.0813
$\frac{7}{64}$	0.109375	2.7781	$\frac{39}{64}$	0.609375	15.4781
$\frac{1}{8}$	0.125	3.1750	$\frac{5}{8}$	0.625	15.8750
$\frac{9}{64}$	0.140625	3.5719	$\frac{41}{64}$	0.640625	16.2719
$\frac{5}{32}$	0.15625	3.9688	$\frac{21}{32}$	0.65625	16.6688
$\frac{11}{64}$	0.171875	4.3656	$\frac{43}{64}$	0.671875	17.0656
$\frac{3}{16}$	0.1875	4.7625	$\frac{11}{16}$	0.6875	17.4625
$\frac{13}{64}$	0.203125	5.1594	$\frac{45}{64}$	0.703125	17.8594
$\frac{7}{32}$	0.21875	5.5563	$\frac{23}{32}$	0.71875	18.2563
$\frac{15}{64}$	0.234375	5.9531	$\frac{47}{64}$	0.734375	18.6531
$\frac{1}{4}$	0.25	6.3500	$\frac{3}{4}$	0.75	19.0500
$\frac{17}{64}$	0.265625	6.7469	$\frac{49}{64}$	0.765625	19.4469
$\frac{9}{32}$	0.28125	7.1438	$\frac{25}{32}$	0.78125	19.8438
$\frac{19}{64}$	0.296875	7.5406	$\frac{51}{64}$	0.796875	20.2406
$\frac{5}{16}$	0.3125	7.9375	$\frac{13}{16}$	0.8125	20.6375
$\frac{21}{64}$	0.328125	8.3344	$\frac{53}{64}$	0.828125	21.0344
$\frac{11}{32}$	0.34375	8.7313	$\frac{27}{32}$	0.84375	21.4313
$\frac{23}{64}$	0.359375	9.1281	$\frac{55}{64}$	0.859375	21.8281
$\frac{3}{8}$	0.375	9.5250	$\frac{7}{8}$	0.875	22.2250
$\frac{25}{64}$	0.390625	9.9219	$\frac{57}{64}$	0.890625	22.6219
$\frac{13}{32}$	0.40625	10.3188	$\frac{29}{32}$	0.90625	23.0188
$\frac{27}{64}$	0.421875	10.7156	$\frac{59}{64}$	0.921875	23.4156
$\frac{7}{16}$	0.4375	11.1125	$\frac{15}{16}$	0.9375	23.8125
$\frac{29}{64}$	0.453125	11.5094	$\frac{61}{64}$	0.953125	24.2094
$\frac{15}{32}$	0.46875	11.9063	$\frac{31}{32}$	0.96875	24.6063
$\frac{31}{64}$	0.484375	12.3031	$\frac{63}{64}$	0.984375	25.0031
$\frac{1}{2}$	0.5	12.7000	1	1.0000	25.4000

C-2001



C1694c

FIGURE 1

YOUR ATS 46/53 BATTERY MACHINE HAS BEEN SHIPPED COMPLETE, BUT DO NOT ATTEMPT TO OPERATE WITHOUT FOLLOWING THESE INSTRUCTIONS.

### PREPARING THE MACHINE FOR OPERATION

- \*Uncrate the machine and carefully remove from skid to prevent damage.
- \*The ATS 46/53 machines that are shipped without batteries have the (+) positive drive motor lead disconnected.
- \*Open the battery compartment and connect the (+) positive motor lead to the top terminal post (the wire "P" is also attached to it). Tighten the terminal nut.
- \*Install the scrub brushes.
- \*Check the oil level in the hydraulic reservoir
- \*Install batteries as follows (if not included):
  1. Turn the key to the "OFF" position.
  2. Raise the Solution Cover to the open position.
  3. Use a battery lifting device with a 2500 lbs. (1150 Kg) capacity hoist to lift the battery.
  4. Using the lifting device, lower the 36 volt battery into the battery compartment directly in front of the driver's compartment. Orient the cables & plug them in as required.
  5. Plug the polarized connector from the battery into the 36-volt plug provided.

### WARNING

Hydrogen gas is formed during the charging operation and is explosive! Only charge batteries in a well-ventilated area with the lid open. Avoid any open flame or electrical sparks. Pulling out the charger plug with the timer on will cause an arc and must be avoided.

## SAFETY INSTRUCTIONS

---

THE FOLLOWING STATEMENTS ARE USED THROUGHOUT THIS MANUAL AS INDICATED IN THEIR DESCRIPTIONS:

 **DANGER**

To warn of immediate hazards which will result in severe personal injury or death.

 **WARNING**

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

 **CAUTION**

To warn of hazards or unsafe practices which could result in minor personal injury.

 **ATTENTION**

To warn of unsafe practices which could result in extensive equipment damage.

**NOTE**

To give important information or to warn of unsafe practices which could result in equipment damage.

 **WARNING**

THE FOLLOWING INFORMATION SIGNALS POTENTIALLY DANGEROUS CONDITIONS TO THE OPERATOR OR EQUIPMENT. READ THIS MANUAL CAREFULLY. KNOW WHEN THESE CONDITIONS CAN EXIST. THEN, TAKE NECESSARY STEPS TO TRAIN MACHINE OPERATING PERSONNEL. FOR THE SAFE OPERATION OF THIS MACHINE, READ AND UNDERSTAND ALL WARNINGS, CAUTIONS AND NOTES.

 **WARNING**

Machines can ignite flammable materials and vapors. Do not use with or near flammables such as gasoline, grain dust, solvents, and thinners.

 **WARNING**

Heavy machinery. Improper use can cause personal injury.

 **WARNING**

Operate only when lids, doors, and access panels are securely closed.

 **WARNING**

Use care when reversing machine in confined area.

 **WARNING**

When servicing the machine, disconnect the batteries first to prevent possible injury.

 **WARNING**

When working on the machine, empty hopper, remove batteries, clear area of people and obstructions, use additional people and proper procedures when lifting the machine.

 **WARNING**

Always empty the hopper and disconnect the battery before doing maintenance.

 **WARNING**

You must have training in the operation of this machine before using it.  
**READ THE INSTRUCTION BOOK.**

 **WARNING**

Do not operate this machine unless it is completely assembled.

 **WARNING**

Do not use this machine as a step or furniture.

 **WARNING**

Stop and leave this machine on a level surface. When you stop the machine, put the power switch in the “OFF” position and engage the Wheel Lock.

 **WARNING**

To prevent injury and damage to the machine, do not lift the machine or move it to an edge of a stair or loading dock.

 **WARNING**

Lead acid batteries generate gases, which can cause an explosion. Keep sparks and flames away from batteries. **NO SMOKING.** Charge batteries only in areas with good ventilation.

 **WARNING**

Always wear eye protection and protective clothing when working near batteries. Remove all jewelry. Do not put tools or other metal objects across the battery terminals or across the tops of batteries.

 **WARNING**

Only authorized personnel should do maintenance and repairs. Tighten all fasteners. Maintain adjustments according to the specifications given in the service manual for the machine. Keep the electrical parts of the machine dry. For storage, keep the machine in a building.

 **WARNING**

Make sure all labels, decals, warnings, cautions and instructions are fastened to the machine. Purchase new labels and decals from American-Lincoln.

 **WARNING**

The operator must exhibit extreme caution when negotiating, turning, and traveling across grades or ramps. Start, stop, change direction, travel and brake smoothly. Slow down when turning.

 **WARNING**

Avoid uneven surfaces and loose materials. Watch for obstructions, especially overhead.

 **WARNING**

Operate only from the designated operator’s position. Stay inside the body of the machine. Keep hands and feet on the designated controls. Always operate in well-lighted areas.

 **WARNING**

Do not carry passengers on the machine. Set the Wheel Lock when leaving the machine. Chock (block) the wheels if the machine is parked on a grade (ramp), or is being prepared for maintenance.

 **WARNING**

Never leave the operator’s compartment when the machine is running.

 **WARNING**

Report damage or faulty operation immediately. Do not operate the machine until repairs have been completed. Only authorized personnel should do maintenance and repairs.

 **WARNING**

To maintain the stability of this machine in normal operation, the overhead guard, counterweights, rear bumper guard, or any similar equipment installed by the manufacturer, as original equipment should never be removed. If it becomes necessary to remove such equipment for repair or maintenance, this equipment must be reinstalled before the machine is placed back into operation.

 **WARNING**

Electrical hazard. Shocks can cause serious personal injury. Unplug the battery before cleaning or servicing. To avoid possible injury or property damage, read the Operator’s Manual before servicing the machine. Authorized personnel should do maintenance and repairs.

## SAFETY INSTRUCTIONS

---

### WARNING

Disconnecting the battery connector with the key switch in the “I” position will cause sparks that could ignite explosive hydrogen gas generated by the batteries. To prevent serious injury or possible property damage, turn Key Switch to “O” position before disconnecting the battery cable from the machine for charging or service.

**FOR SAFETY, OBSERVE THE FOLLOWING WARNINGS. FAILURE TO COMPLY MAY CREATE A SERIOUS RISK OF INJURY TO YOU AND OTHERS. THIS MACHINE SHOULD NOT BE USED IN HAZARDOUS LOCATIONS INCLUDING AREAS OF VOLATILE DUST OR VAPOR CONCENTRATIONS.**

Operators must be trained and qualified to operate this machine. They must also understand the operator’s manual before starting.

Use caution when mounting or dismounting the machine, particularly on wet/slippery surfaces.

Do not dump the hopper over an open pit or dock. Do not dump the hopper when positioned on a grade (ramp). The machine must be level (horizontal).

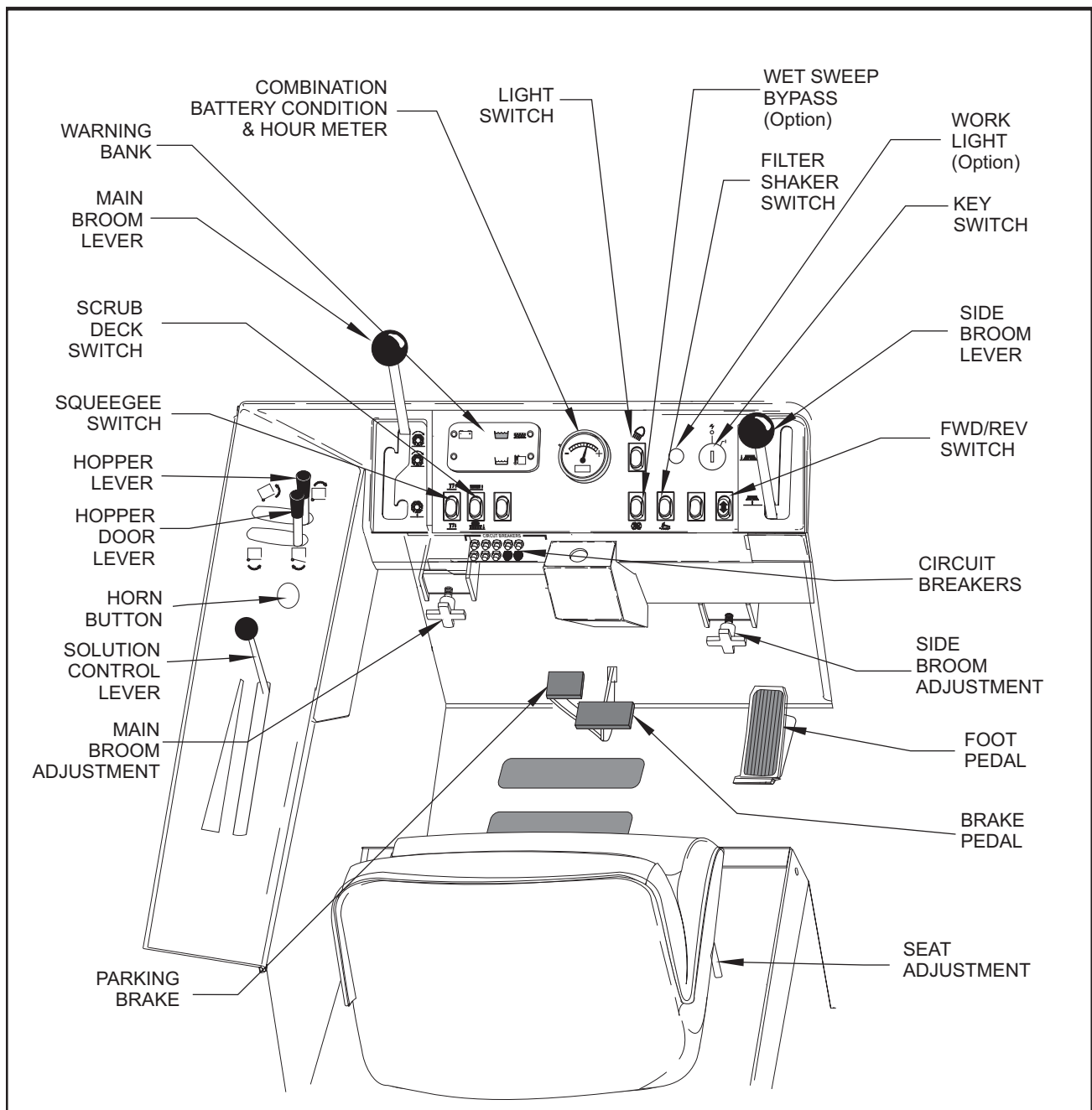
## WEEE Symbol Information

**ENGLISH** Correct Disposal of This Product (Waste Electrical & Electronic Equipment)  
(Applicable in the European Union and other European countries with separate collection systems)



This marking, shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

## OPERATION OF CONTROLS AND GAUGES



P5034b-1batt

FIGURE 2

### LIGHT SWITCH (See Figure 2)

The light switch is located on the instrument panel to the right of the battery condition/hour meter. It will work various light options available for this machine, such as:

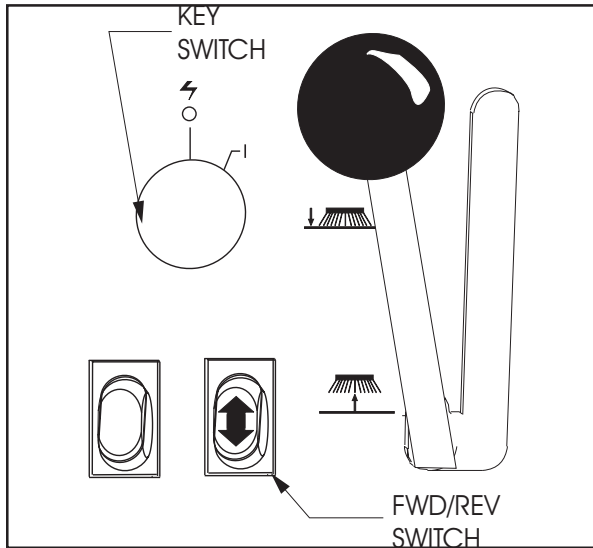
- \* HEAD LIGHTS
- \* TAIL LIGHTS
- \* INSTRUMENT LIGHTS

### HORN BUTTON (See Figure 2)

The horn button is located on the left side control panel. Push the button to sound the horn. The horn button is always active.



## OPERATION OF CONTROLS AND GAUGES



C1631A-batt FIGURE 3

### KEY SWITCH (See Figure 3)

The keyed ignition switch is located on the instrument panel to the left of the side broom lever. The key switch is a two-position switch that controls power to the machine systems and accessories. The “OFF” position (O position) will shut off the machine. The IGN/ON position (I position) provides power to the machine and all its systems and accessories.

#### NOTE

The operator should never leave the machine unattended while it is on.

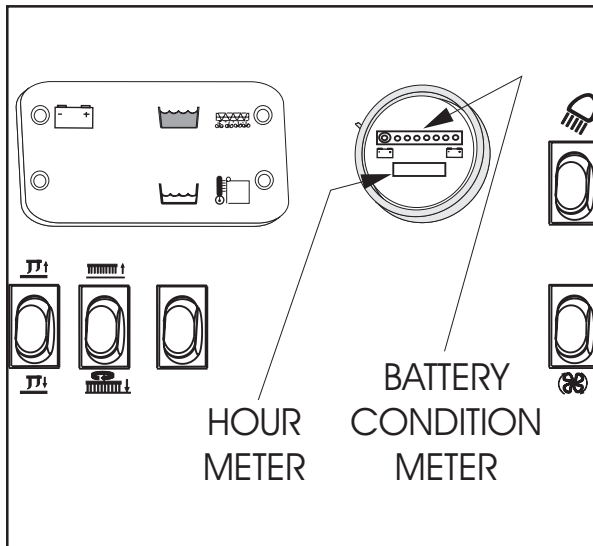
### FORWARD/REVERSE SWITCH (See Figure 3)

A two-position switch controls the machine’s direction and is located on the righthand side of the instrument panel directly below the key switch. Pushing the upper portion of the switch will provide forward motion when the foot pedal is pressed. Pushing the bottom portion of the switch will make the machine move in reverse when the foot pedal is pressed.

#### NOTE

The machine will not move if:

The operator is not seated properly in the operator’s compartment due to the Seat Switch Interlock safety feature; or if the foot pedal is depressed or depressed too quickly after turning the key switch on as a result of the High Pedal Disable safety feature. (See “MillipaK SEM Controller”)



C1633-batt FIGURE 4

### COMBINATION BATTERY CONDITION & HOUR METER (See Figure 4)

The combination battery condition and hour meter is located on the instrument panel next to the warning bank. The meter is activated when the key switch is placed in the ignition position. The hour meter indicates the actual “run” time of the machine and can be used to determine machine maintenance intervals.

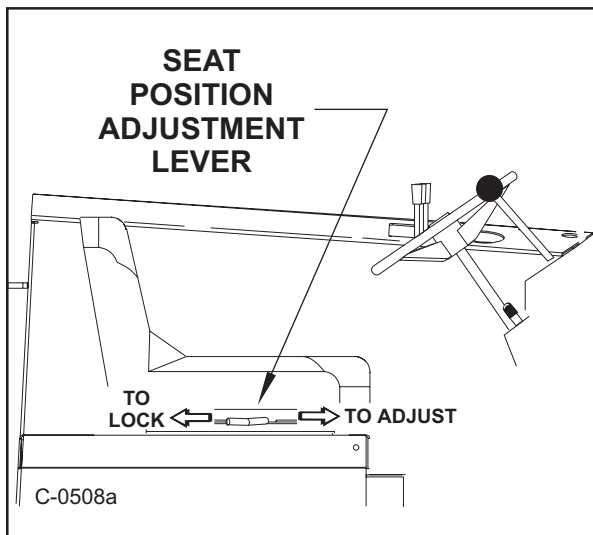
The battery condition meter indicates the charge level of the batteries. The batteries are sufficiently charged if all the amber LEDs are illuminated during the machine’s operation.

If the LED on the far left displays red while using the machine, the low voltage lockout safety feature will shut down the scrub deck’s operation. The batteries must now be **fully** charged in order to reset the low voltage lockout and continue the cleaning operation.

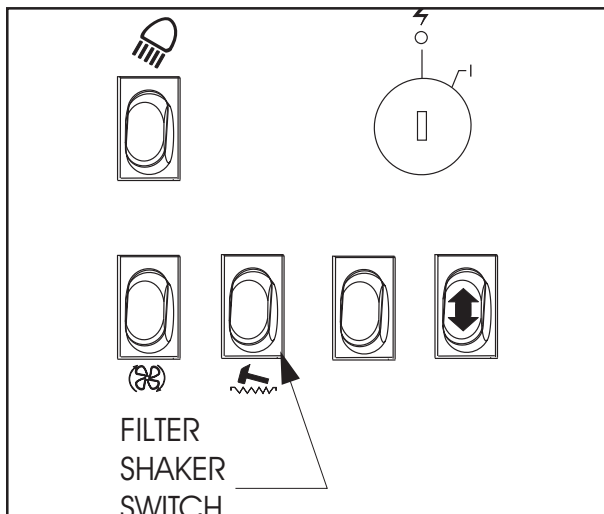
### SEAT POSITION ADJUSTMENT (See Figure 5)

The seat position adjustment lever is located on the right side of the seat base. The lever is spring loaded to the “LOCK” position.

To adjust the seat, push “FORWARD” on the lever and move the seat to the desired position. Then release the lever to “LOCK” the seat into place.



C0508A-2 FIGURE 5



C1640-2batt FIGURE 6

### FILTER SHAKER SWITCH (See Figure 6)

The filter shaker switch is located on the instrument panel below the ignition switch. This is a momentary switch that will activate the filter shaker motors for 20 to 30 seconds to clear the dust control filter. The Impeller fan will stop when the filter shaker has been activated. The filter shaker will only operate with the hopper in the "DOWN" position.

Use the filter shaker to clear the filter when the dust control light comes on (warning bank) and just before dumping the hopper.

### MillipaK SEM CONTROLLER (See Figure 7)

The controller is located in the seat compartment and includes a number of features designed to help the user track down operational faults, wiring faults or internal controller faults, including a flashing indicator light.

The Flash Codes are:

ON	No fault, normal condition
OFF	Internal controller fault
1 flash	Program Error
2 flashes	High Pedal Disable
3 flashes	MOSFET Short Circuit
4 flashes	Contact or Motor Open Circuit
5 flashes	Not used
6 flashes	Accelerator wire off fault
7 flashes	Low or High battery voltage
8 flashes	Over temperature or timed cutback

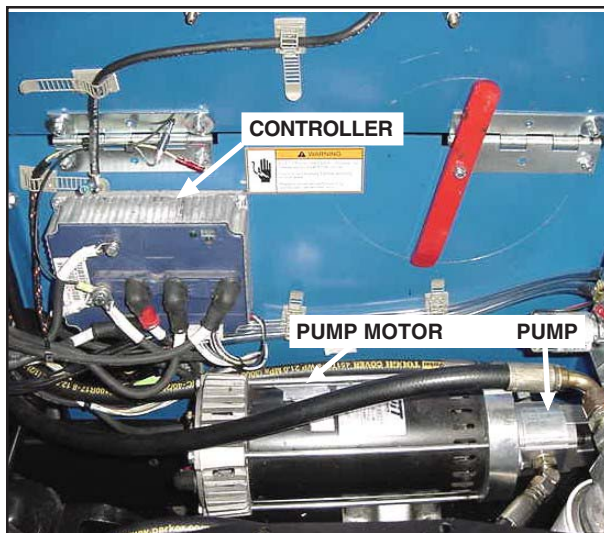
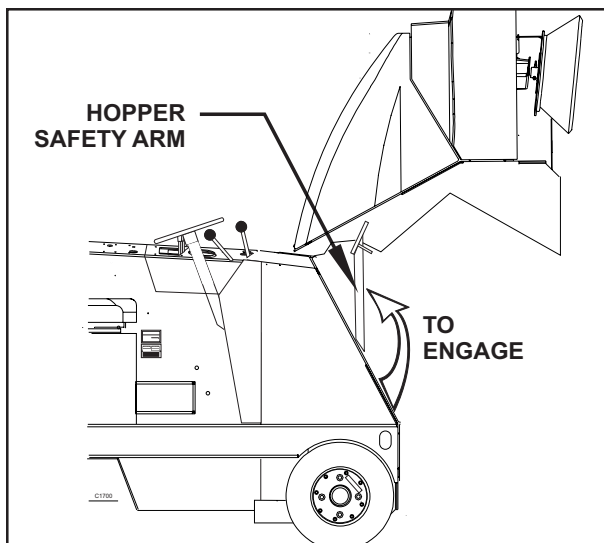


FIGURE 7

### HYDRAULIC PUMP (See Figure 7)

The pump is located in the seat compartment and is powered by a 45 amp circuit breaker (on the power panel) and a contact linked with the key switch. It functions at 1450 PSI and features 100 bar relief.



C1700 FIGURE 8

### HOPPER SAFETY LOCK ARM (See Figure 8)

The hopper safety arm is located near the right front wheel well. The safety arm will prevent the hopper from dropping unexpectedly during service/maintenance.

#### TO ENGAGE THE SAFETY ARM:

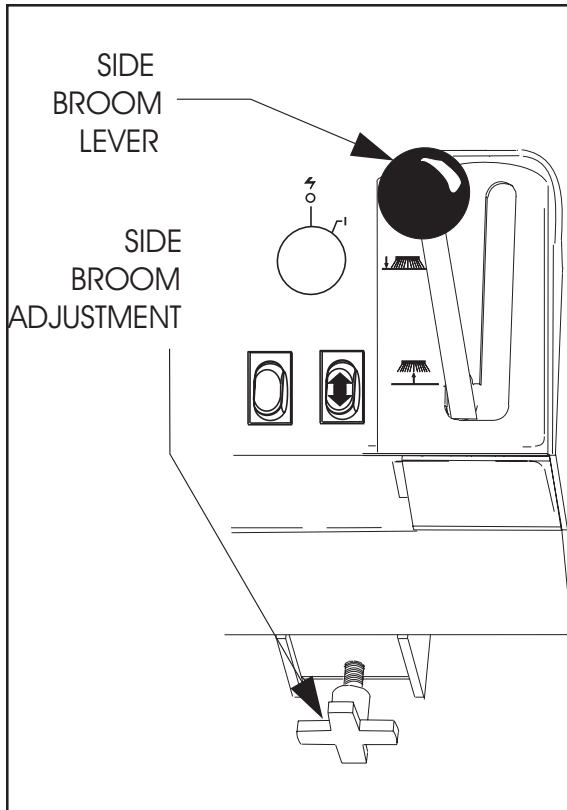
1. Empty hopper
2. Set the parking brake.
3. Raise the hopper.
4. Lift safety arm to engage the slot on the hopper frame.
5. When work has been completed, return the safety arm to the stowed position.



#### WARNING

When the hopper is raised the safety arm must be engaged before ANY work is done under the hopper.

## OPERATION OF CONTROLS AND GAUGES



C1641batt FIGURE 9

### SIDE BROOM LEVER (See Figure 9)

The Side Broom Lever is located to the right of the instrument console. The handle pulled back and turned to the left, will raise the side broom and lock it into position.

To raise the side broom pull the lever back into the "UP" position.

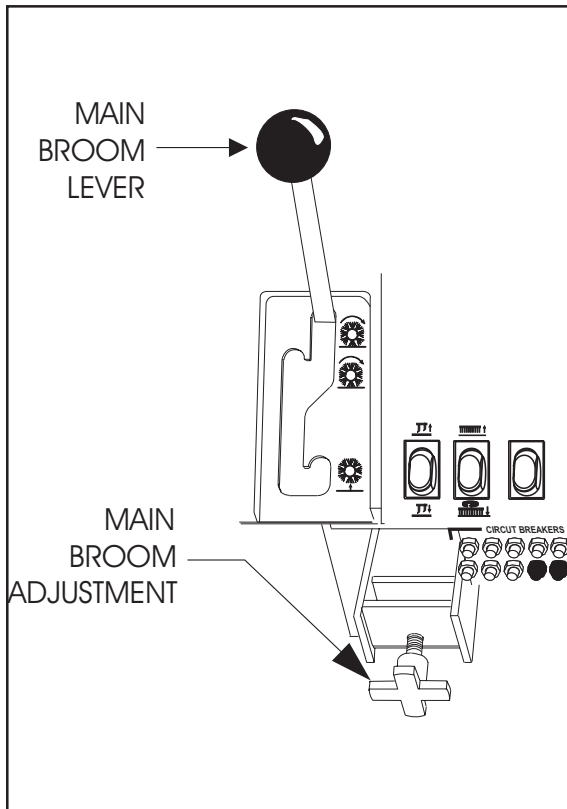
To lower the side broom, move the lever out of the "UP" position and move it forward to the "DOWN" position.

#### NOTE

**IF THE MAIN BROOM IS ENGAGED, THE SIDE BROOM WILL AUTOMATICALLY ENGAGE WHEN LOWERED.**

### SIDE BROOM ADJUSTMENT (See figure 9)

The side broom lever has an adjustment for changing the sweep height to compensate for broom wear. The side broom adjustment is located under the right side of the instrument panel.



C1642-1batt FIGURE 10

### MAIN BROOM LEVER (See figure 10)

The main broom lever is located on the left side of the instrument panel. The main broom lever has three positions and controls the main broom sweep height.

To lower the main broom, grasp the lever and move it to the left out of the "UP" position, and place it in the "SWEEP" or "FLOAT" position.

The "SWEEP" position is used for normal sweeping and should be used under most sweeping conditions (approximately 2" broom pattern).

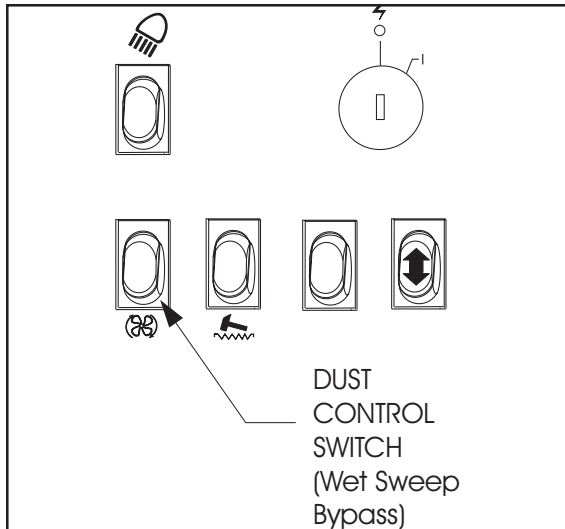
The "FLOAT" position is used for sweeping very uneven surfaces only. Using the float position will cause premature wear on the main broom if used under normal operating conditions for extended periods of time (approximately 4" broom pattern).

#### NOTE

**The Main Broom will automatically engage when lowered to the sweep position or the float position. The hopper must be completely closed.**

### MAIN BROOM ADJUSTMENT (See Figure 10)

The main broom lever has an adjustment for changing the sweep height to compensate for broom wear. The main broom adjustment is located under the left side of the instrument panel.

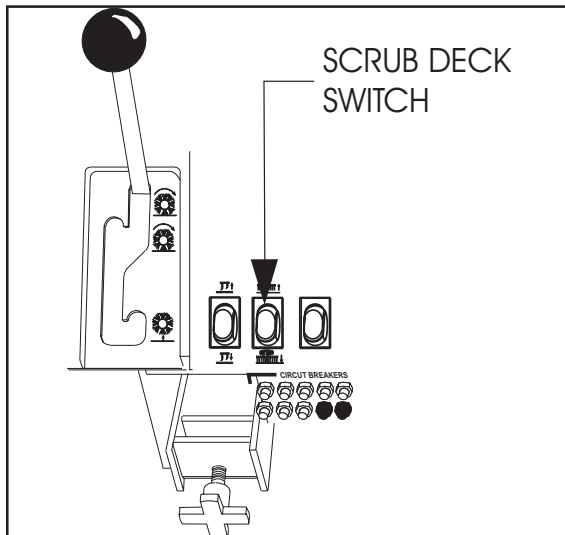


C1640-1batt FIGURE 11

**DUST CONTROL SWITCH (See Figure 11)**

The Dust Control Switch is a two position switch located on the instrument panel next to the filter shaker switch. The switch controls the vacuum fan in the dust control system.

To turn on the dust control system for “NORMAL” sweeping, press on the top portion of the switch. To turn off the dust control system for sweeping in wet conditions, press the lower portion of the switch. This will prevent the filter from being damaged by water pickup while sweeping.



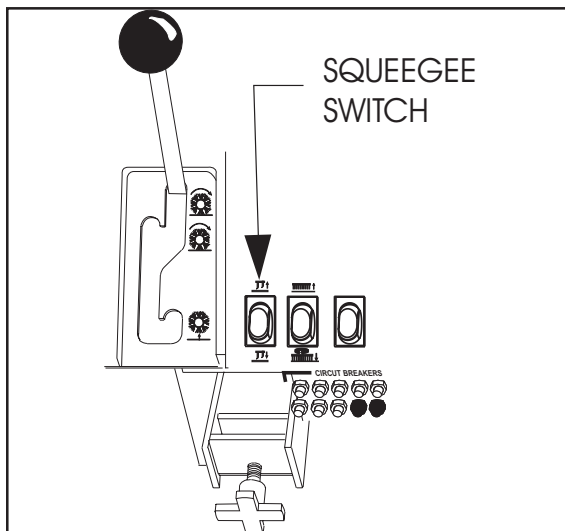
C1642A-batt FIGURE 12

**SCRUB DECK SWITCH (See Figure 12)**

The brushes switch is located on the console to the left of the steering wheel in the “SCRUBBING” section. This switch in the position marked “LOWER” will lower the scrub deck and activate the three scrub brushes. This switch in the “RAISE” position will stop the brushes from rotating and raise the scrub deck.

**NOTE**

**Lowering the scrub deck will not start the brushes rotating. The machine must be moving to engage the scrub brushes. If the machine stops moving for 2 seconds or more, the brushes will automatically stop rotating until the machine starts moving again.**



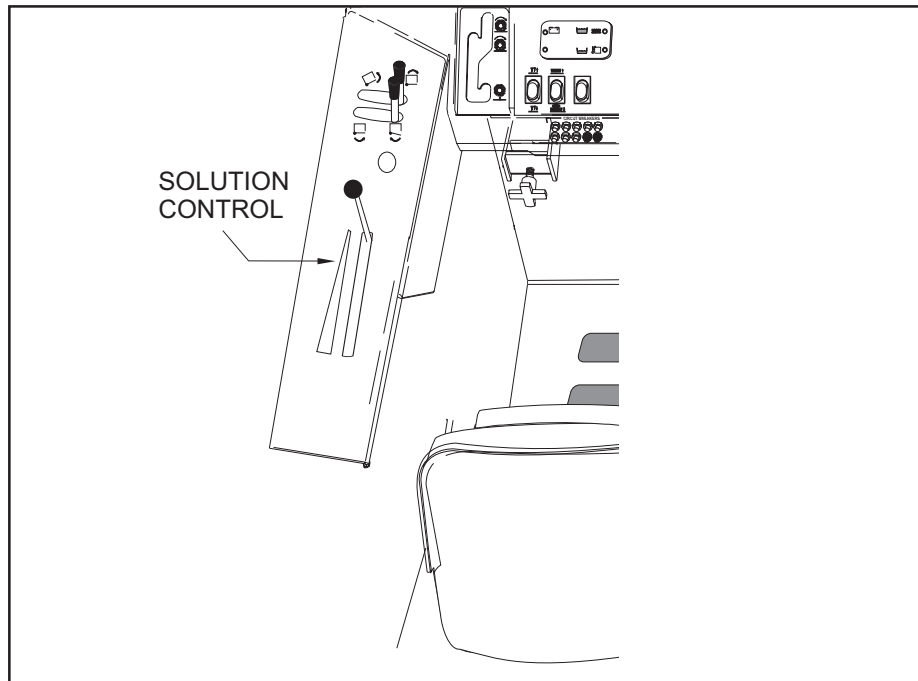
C1642B-batt FIGURE 13

**SQUEEGEE SWITCH (See Figure 13)**

The squeegee blade switch is located on the console to the left of the steering wheel in the “SCRUBBING” section. This switch in the position marked “LOWER” will lower the squeegee and activate the squeegee vacuum. This switch in the “RAISE” position will stop the squeegee vacuum and raise the squeegee. If the machine is put in reverse, a switch is automatically activated to raise the squeegee if in the lowered position as well as stop the vacuum.

The switch has a center position which will raise the squeegee but allows the vacuum to continue running, retrieving the water left in the squeegee recovery hose. This prevents water from dripping on the floor with the squeegee “UP.”

## OPERATION OF CONTROLS AND GAUGES



C1716batt

FIGURE 14

### **SOLUTION CONTROL (See Figure 14)**

To apply solution to the scrub brushes, pull the solution control lever back until the desired setting is reached. The solution rate is continuously variable from off to approximately 1-3/4 GPM at low and 3 GPM at high. To stop application of solution push forward on the lever until it stops at the "off" position. The solution warning light will illuminate when the solution tank is low, marking the end of the scrubbing cycle.

### **NOTE**

**For best results, discontinue application of solution 10 feet before stopping or making a 90° or 180° turn.**

### **NON-RECYCLING OR STANDARD SCRUBBING SYSTEM**

1. Make sure the solution control lever is in the "off" (FORWARD) position.
2. Open the solution tank cover (Vacuum Assembly)
3. Fill the tank with 70 gallons of water and the correct mixture of American-Lincoln #100 Industrial Cleaner for the job on hand.
4. Close the solution tank cover (Vacuum Assembly).

### **RECYCLING OR ESP & AUTOFIL SYSTEM**

1. Make sure the solution control lever is in the "off" position.
2. Connect hose to autofil coupling.
3. Turn the key switch to the "ACC" position.
4. Turn on the water hose valve.
5. Fill the detergent tank with American-Lincoln #100 Industrial Cleaner.
6. The system will fill the solution and recovery tank to proper levels and shut off the water flow.

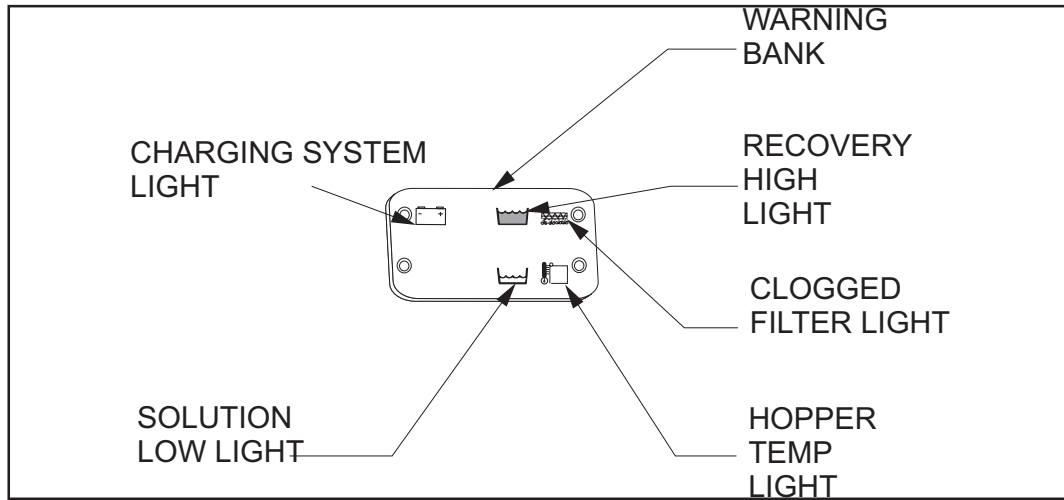
### **TO DISCONNECT WATER HOSE**

1. Leave ignition switch in the "on" position
2. Turn the water off at the source
3. "Tip" the float switch on the solution tank to depressurize the water hose before disconnecting



### **WARNING**

**To prevent oversudsing and machine damage, use only AMERICAN-LINCOLN Industrial Cleaner Solution #100. DO NOT put gasoline, combustibles or flammable material in the solution, detergent, or recovery tanks.**

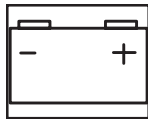


C1636batt

FIGURE 15

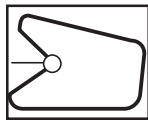
**WARNING BANK (See Figure 15)**

The Warning Bank is located on the instrument panel and provides the operator with fault/status indicators for engine and sweeper systems. The operator should monitor the indicators while sweeping. It is very important that the operator be familiar with the meaning of each indicator.



**CHARGING SYSTEM LIGHT**

The charging system light illuminates to indicate a charging system fault. When this occurs the machines charging system is not working properly, have the machine serviced by a qualified service technician.



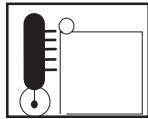
**CLOGGED FILTER LIGHT (Option)**

The clogged filter light illuminates to indicate that the dust control filter is clogged. When this occurs, stop the machine and use the filter shaker to clear the dirt and debris from the filter. After using the filter shaker, continue sweeping.



**HOPPER TEMPERATURE LIGHT (Option)**

When the temperature of the air moving through the hopper dust control system exceeds 140° F, an automatic protection feature shuts down the dust control fan and illuminates the hopper temperature light. When this occurs, shut down the machine and carefully investigate for a possible fire in the hopper, then manually reset the switch.



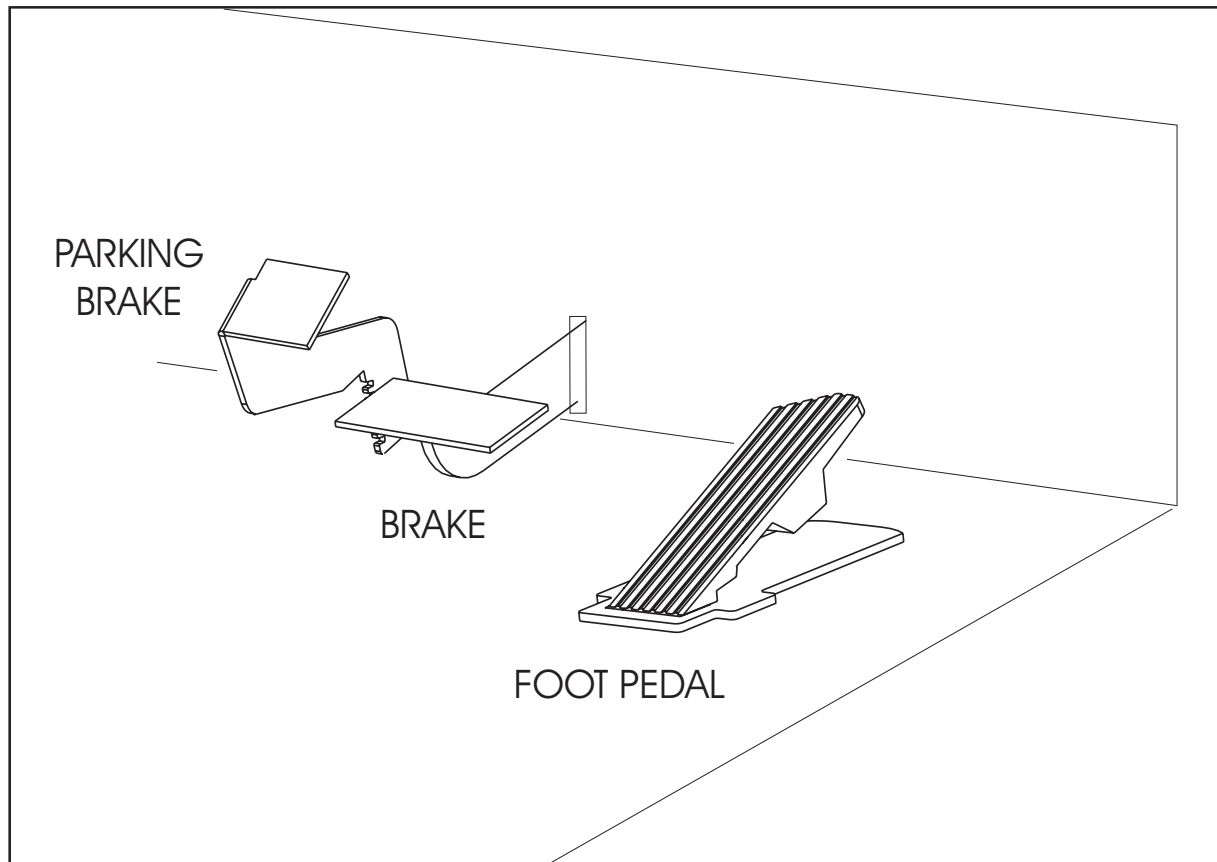
**SOLUTION LOW LIGHT**

The solution low warning light will illuminate when the solution tank is empty, indicating the end of the scrubbing cycle.



**RECOVERY HIGH LIGHT**

The recovery high warning light will illuminate approximately 5 minutes before the recovery tank is full, giving ample time to complete the scrubbing cycle, before the mechanical float shuts off the vacuum to the recovery tank.



C1789batt

FIGURE 18

### **FOOT PEDAL (ACCELERATOR)**

The foot pedal, or accelerator, is located on the right side of the operator compartment floor. The foot pedal provides speed control only. To set the machine in motion, push the forward/reverse switch up or down (see figure 3), then push down on the foot pedal. Smoothly releasing the pedal will help slow the machine before breaking.

### **BRAKE PEDAL**

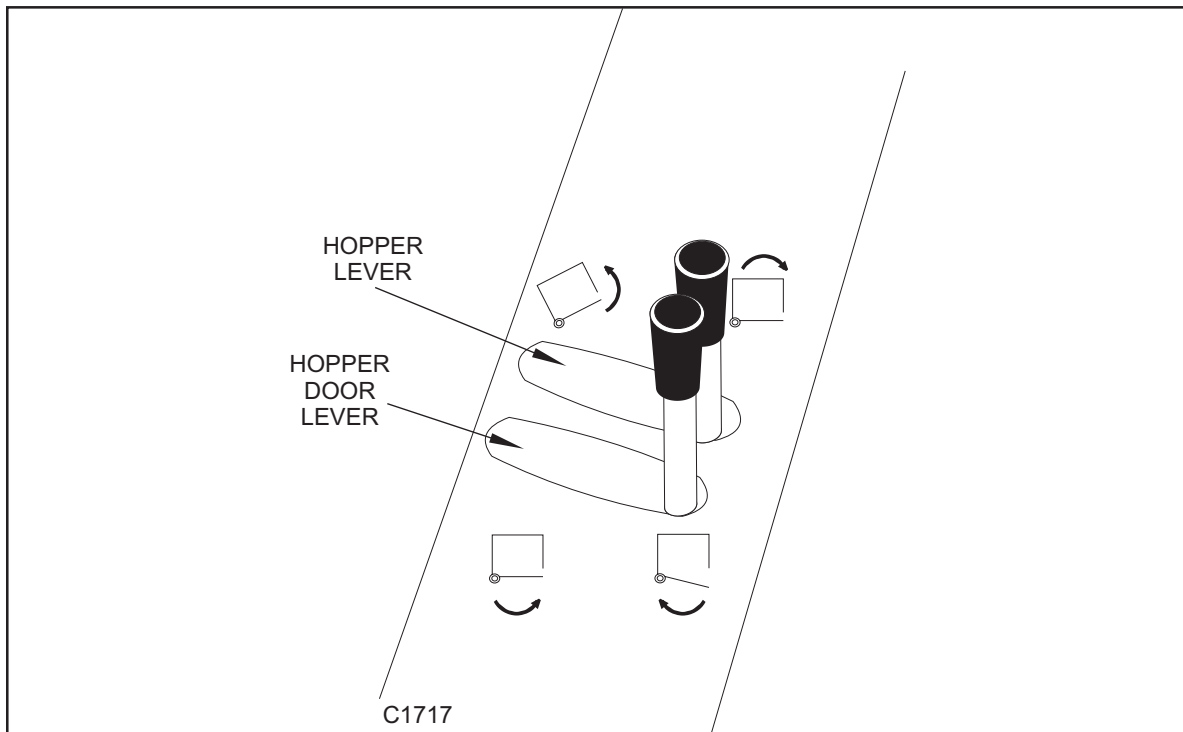
The foot brake is located on the floor of the operator's compartment to the left of the accelerator. To stop, remove foot from accelerator and apply pressure to the brake pedal.

### **PARKING BRAKE**

The parking brake is located just above and slightly left of the foot brake. When engaged, the parking brake "locks" the foot brake in the down position.

To engage the parking brake, press down on the parking brake pedal.

To release the parking brake, press down on the regular brake pedal.



C1717

FIGURE 19

### NOTE

The main broom, side broom, dust control and filter shaker turn off automatically when the hopper is dumping and/or the dump door is in a closed position. SEE HOPPER LIFT and HOPPER DUMP DOOR.

### HOPPER LIFT LEVER - (See Figure 19)

The hopper lift lever is located to the left of the steering wheel on the left side of the driver's compartment. This lever, which is marked "HOPPER", raises and lowers the debris hopper to ease unloading.



### WARNING

The hopper may drop unexpectedly and cause injury, always engage the safety arm before working under the hopper.

### HOPPER DUMP DOOR LEVER - (See Figure 19)

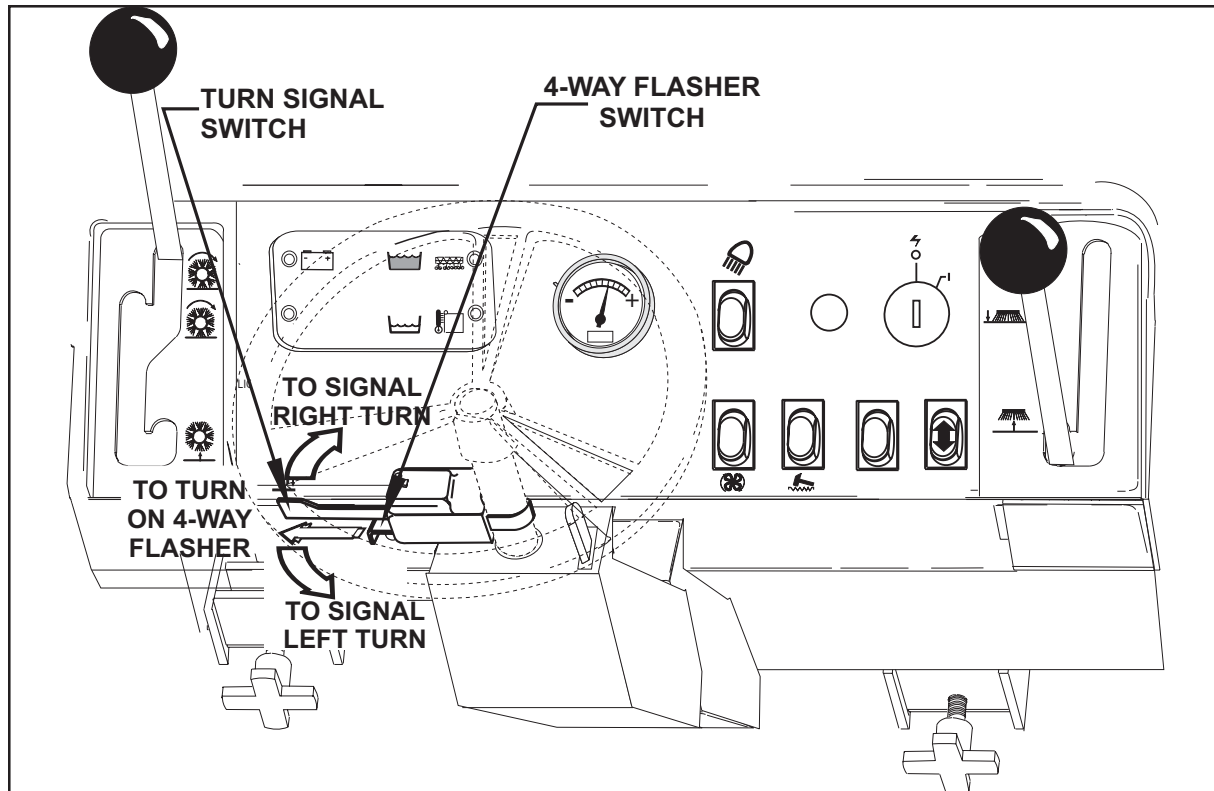
The hopper dump door lever is located to the left of the steering wheel on the left of the driver compartment. This lever opens and closes the hopper door. This lever is located below the hopper lift door and is marked "DUMP DOOR".

### NOTE

A switch triggered by the hopper and dump door's position control the sweeping functions, main broom, side broom, dust control, and filter shaker. The hopper must be down and the dump door open to allow these to operate.



## OPERATION OF CONTROLS AND GAUGES



C1702batt

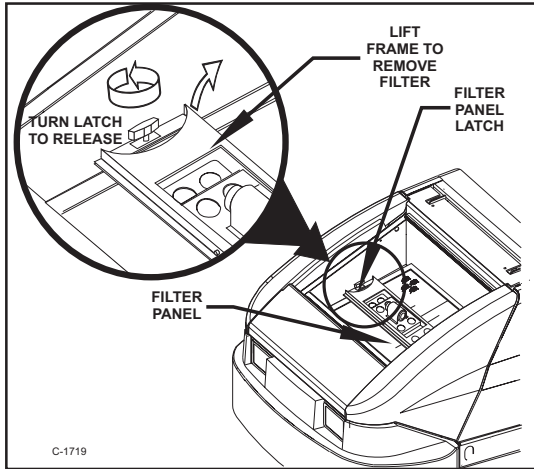
FIGURE 20

### **TURN SIGNAL - 4-Way (Option) (See Figure 20)**

The turn signal option is located on the steering column and works as automotive turn signals work, forward on the lever for right and back on the lever for left. The 4-way flasher will activate when the turn signal lever is pulled out.

### **BACK-UP ALARM SWITCH (Option) (See Figure 20)**

The back-up alarm is activated by a switch that is located under the lower section of the accelerator pedal and the forward/reverse switch. The alarm makes a loud audible noise when the machine is being driven in reverse.



C1719 **FIGURE 21**

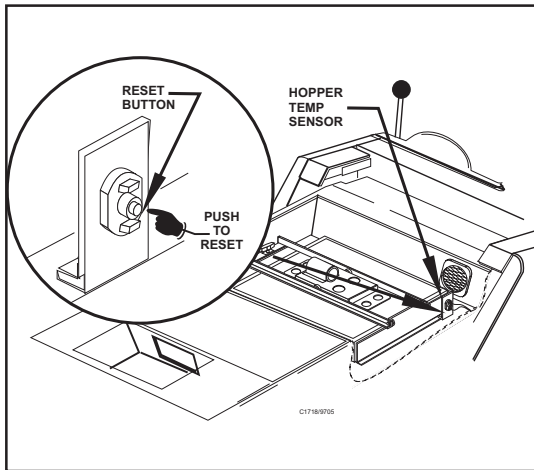
**FILTER PANEL LATCH (See Figure 21)**

The filter panel is located in the hopper filter compartment and will need to be removed periodically for cleaning or replacement. Removal of the filter panel requires no tools. The hopper cover must be opened to gain access to the filter compartment. The panel filter is held in place by a hinged frame and latch.

To remove the panel filter, turn the knob counterclockwise and lift the hinged frame.

The panel filter can now be lifted out and cleaned or replaced (see Filter Cleaning instructions in this manual).

To install the replacement panel filter, lower the frame and turn the knob clockwise to lock the filter in place.



C1718 **FIGURE 22**

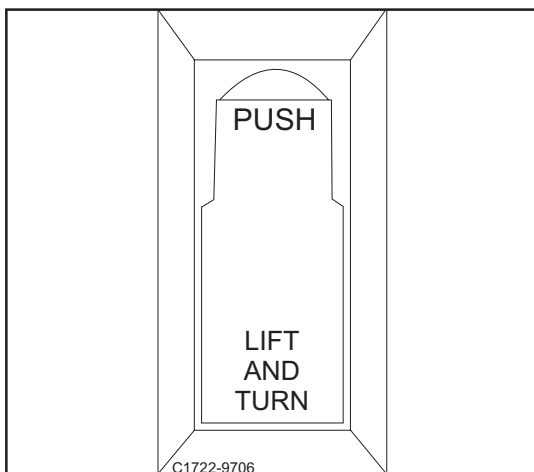
**HOPPER TEMP SENSOR (Option) (See Figure 22)**

The temp sensor switch monitors the hopper air temperature near the vac fan. When the temperature of the air moving through the hopper exceeds 140°F, the switch is tripped. It turns off the dust control fan and illuminates the hopper temp light on the warning bank.

The hopper temp sensor can be reset thermal switch which is located in the hopper filter compartment near the vacuum fan intake.

When the hopper temp light illuminates, carefully investigate for a possible fire in the hopper.

To reset the temp sensor, press the reset button.



C1722 **FIGURE 23**

**FRONT COVER LATCH (See Figure 23)**

The front cover encloses the power source. The cover can be lifted to allow easy access for service and inspection.



**WARNING**

**Operate Only When Lids, Doors, And Access Panels Are Securely Closed.**

To open the cover, lift the cover latch lever up and turn the latch ¼ turn. Lift the cover open.

**NOTE**

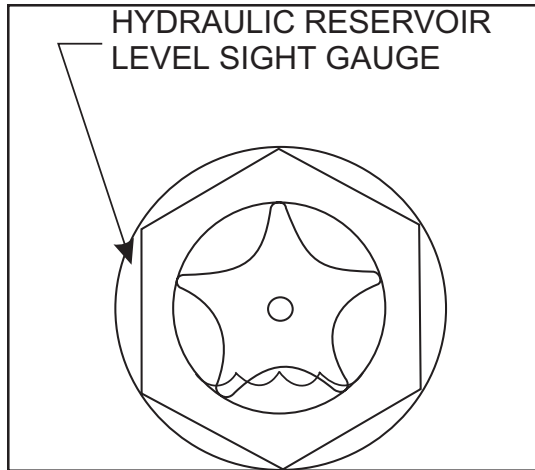
**The overhead guard option has a safety latch for storing open cover.**

After closing the cover, check it to be certain the latch has fully engaged and is latched.

**NOTE**

**Side covers can be removed for service.**

## OPERATION OF CONTROLS AND GAUGES



C1730

FIGURE 24

### HYDRAULIC RESERVOIR LEVEL SIGHT GAUGE

(See Figure 24)

The sight gauge is located on the inside of the hydraulic reservoir in the engine compartment. The sight gauge is used to indicate the level of fluid in the reservoir. The fluid level must be visible in the sight gauge when the hopper is in the down position.

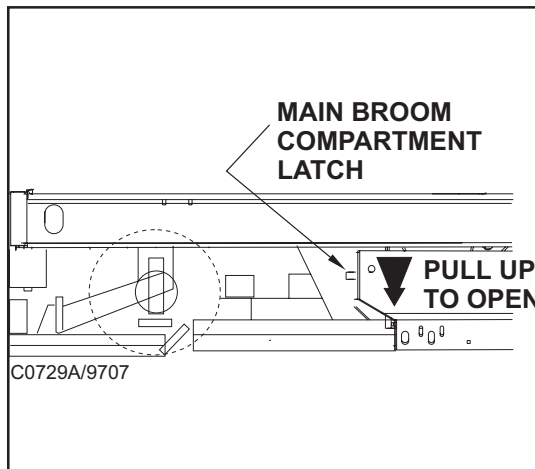
### MAIN BROOM COMPARTMENT DOORS (See Figure 25)

The main broom compartment doors are located behind the front tires on both sides of the machine. The doors provide access to the main broom for service or inspection.



#### WARNING

**Operate Only When Lids, Doors, And Access Panels Are Securely Closed.**



C0729A

FIGURE 25

Open the right side door to remove or replace the main broom. The right side door is an integral part of the main broom drive system and must be closed for operation.

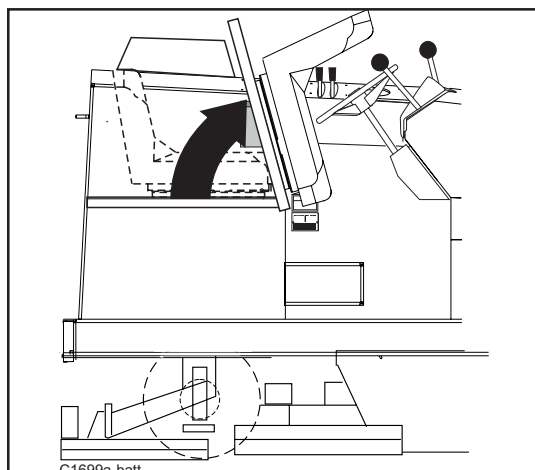
Open the left side broom door for inspection. Check the drive hub for banding and shrink-wrap which have a tendency to get tangled in the broom driver. To open the main broom door, reach inside the hole in the door and lift up on the latch handle. The door latch will automatically engage when the door is closed.

#### NOTE

**Side squeegees mount on doors and the scrub deck must be lowered to slide the doors and squeegees into place.**

#### NOTE

**For proper function of side squeegees, side squeegees must be positioned so the lift strap is above the scrub deck lift brackets. Damage to the side squeegees could occur if not in the correct position.**



C1699a-batt

FIGURE 26

### SEAT COMPARTMENT COVER & PROP LATCH

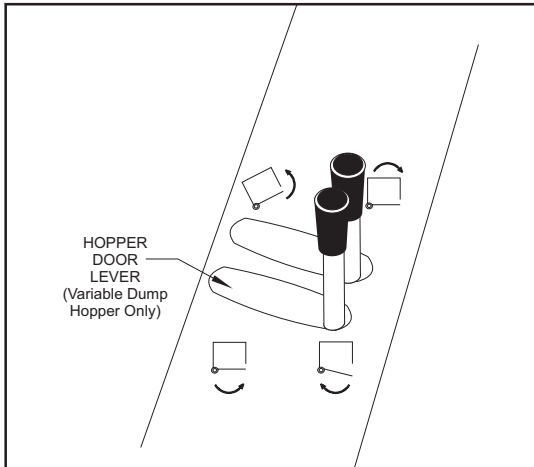
(See Figure 26)

The seat compartment cover opens to allow easy access to various components that will need to be inspected or serviced periodically. The cover opens forward and has a safety latch to hold the cover in the open position.

On battery-powered machines, the compartment below the seat contains the hydraulic pump motor and reservoir.

The seat compartment latch is located under the seat compartment cover and is used to hold the cover open.

To hold the seat compartment cover open, lift the cover and rotate the latch.



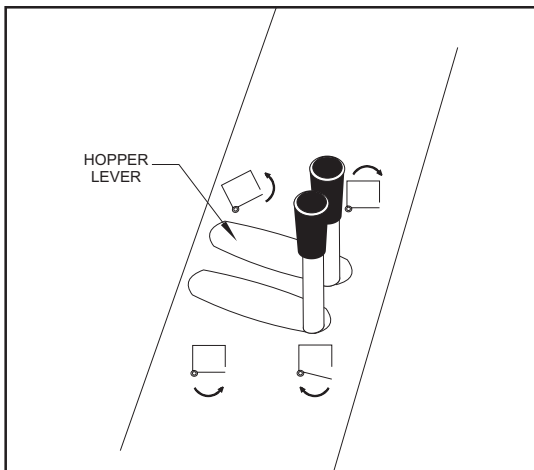
C1717A FIGURE 27

### HOPPER DOOR LEVER (See Figure 27)

The hopper door lever is located on the operator's compartment and is used to close and open the hopper dump door. The lever is a two position hydraulic valve that is spring loaded to the center position which "HOLDS" the hopper door in position.

To open the hopper dump door for sweeping or dumping, push the lever to the "OPEN" direction.

To close the hopper dump door for dumping or transporting, push the lever fully back in the "CLOSE" direction, and hold for 3 seconds or until you hear the door close.



C1717B FIGURE 28

### HOPPER LIFT LEVER (See Figure 28)

The hopper lift lever is located on the operator's compartment console. The lever is a two position hydraulic valve that controls the operation of the hopper lift system. The lever is spring loaded to the center position which stops hopper movement and "HOLDS" the hopper at the present position.

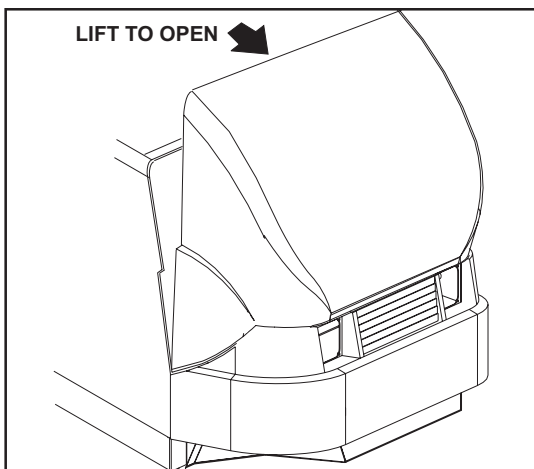
To raise the hopper for dumping, move the lever to the "RAISE" position and hold until the hopper reaches the desired height, then release.



#### WARNING

**The hopper may drop unexpectedly and cause injury, always engage the safety arm before working under the hopper.**

To lower the hopper after dumping, move the lever to the "LOWER" position until the hopper is fully lowered and seated in the machine, then release.



C1725A-batt FIGURE 29

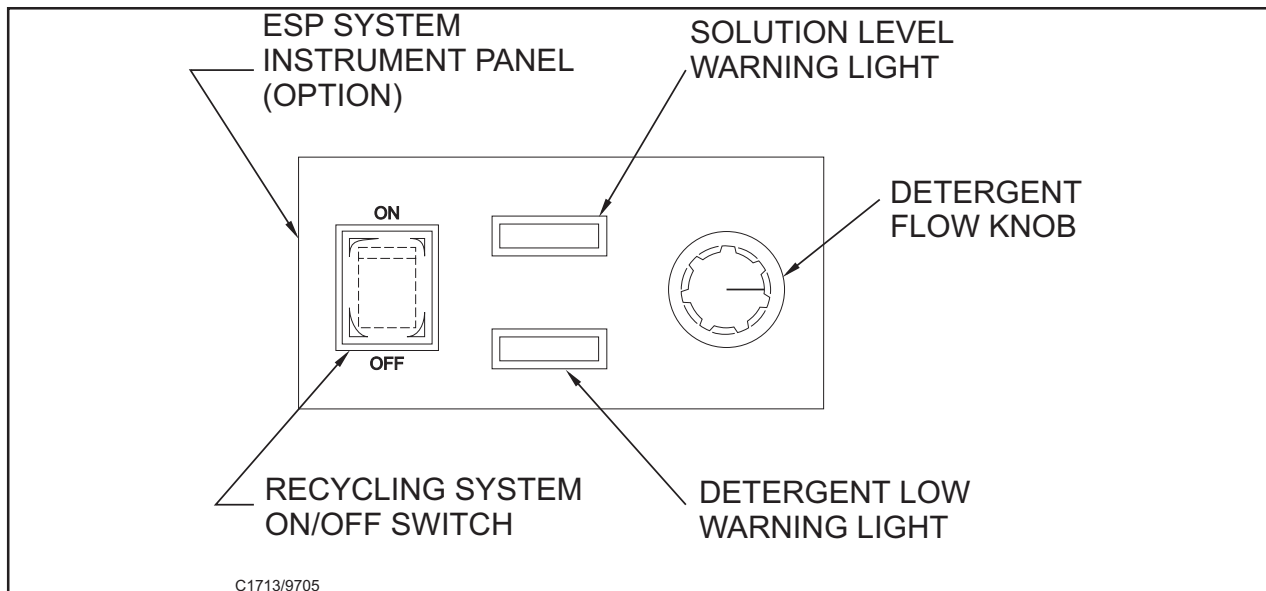
### HOPPER FILTER COVER

(See Figure 29)

The hopper filter cover is actually the front cover or "hood" of the machine. It opens forward by releasing latches to access the filter compartment for service/inspection of the dust control filter and optional hopper temp sensor.

Inspect gaskets daily. Replace any gaskets that show signs of deterioration. Failure to maintain the gaskets in serviceable condition will degrade dust control at the floor and will result in less than optimal sweeping performance.

## ESP SYSTEM OPERATING INSTRUCTIONS



C1713

FIGURE 30

### THE ESP RECYCLING CONTROL PANEL (See Figure 30)

#### THE ESP RECYCLING SYSTEM ON/OFF SWITCH

This switch turns the ESP recycling system on and off.

#### NOTE

The solution control lever must be on "FULL" for ESP operation.

#### SOLUTION LEVEL WARNING LIGHT

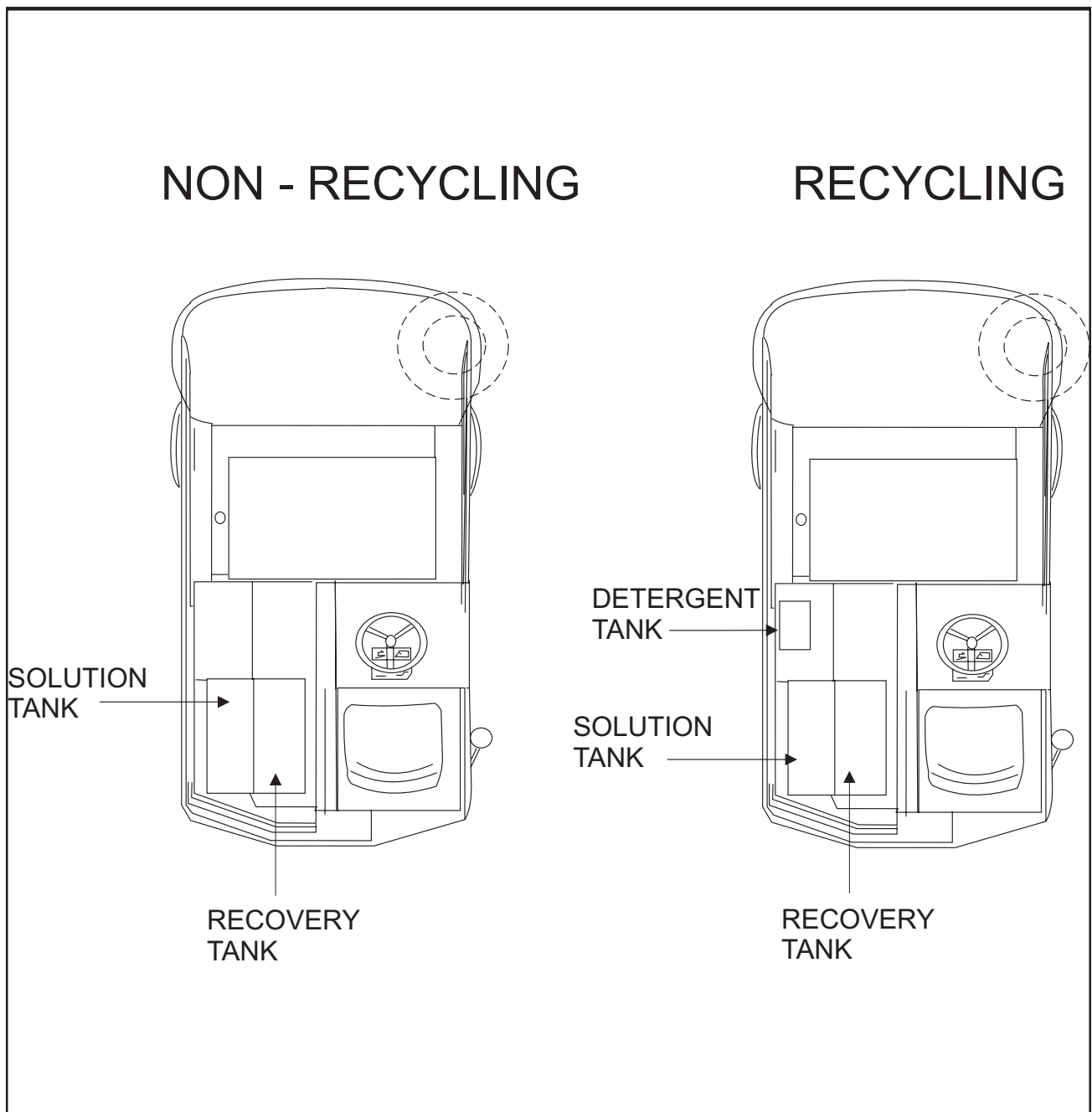
The solution level warning light will go out when the solution tank is empty. Some solution will remain in the recovery tank at the end.

#### DETERGENT LOW WARNING LIGHT

The detergent light will illuminate when the detergent tank is low, warning the operator to add detergent.

#### DETERGENT FLOW KNOB

This rotary knob controls the detergent flow into the scrubbing solution. The operator may choose from any detergent setting, for light to heavy cleaning applications. The detergent light will illuminate when the detergent tank is low, warning the operator to add detergent.



C1728

FIGURE 32

**THE SCRUBBING SYSTEM - HOW IT WORKS**

There are two scrubbing systems available for the ATS 46/53 machine, the non-recycling or standard scrubbing system and the recycling or ESP scrubbing system.

**THE NON-RECYCLING OR STANDARD SCRUBBING SYSTEM - HOW IT WORKS**

During the scrubbing process, detergent solution water from the solution tank is fed to the solution line. There it is fed to the floor where three disc scrubbing brushes work to dislodge soil.

After scrubbing, the dirty solution is vacuumed from the floor and discharged into the containment chamber in the forward portion of the recovery tank, where a system of baffles helps to clarify the solution.

Sensors in each tank will indicate, by lights on the control panel, when the water in the solution tank is too low or when the water in the recovery tank is too high.

# ESP SYSTEM OPERATING INSTRUCTIONS

## THE RECOVERY OR ESP AND AUTOFIL SYSTEM - HOW IT WORKS

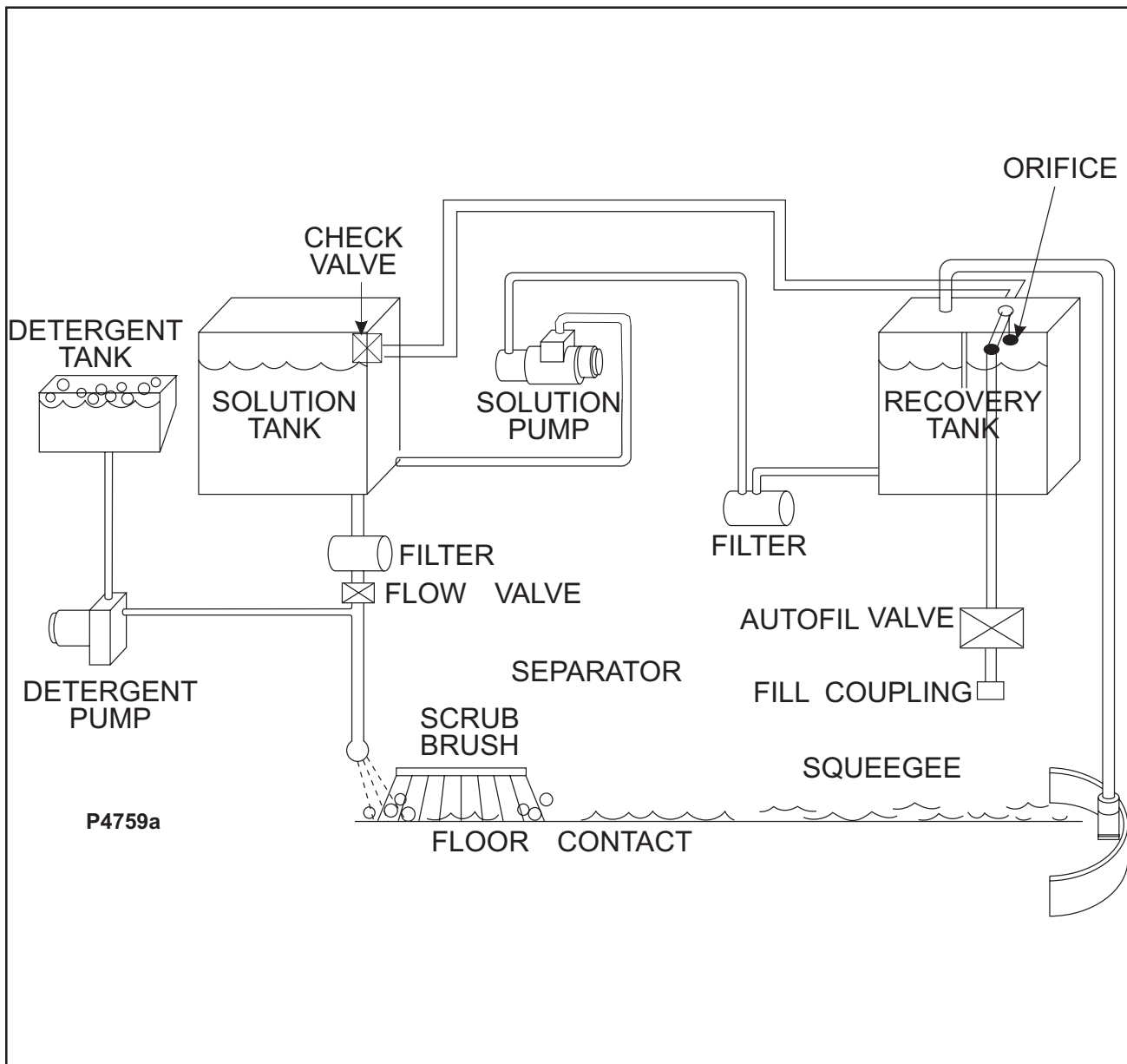
During the scrubbing process, filtered water from the solution tank is fed to the solution line, where it combines with detergent from the metering pump. This mixture is then fed to the floor where three disc scrubbing brushes work to dislodge soil.

After scrubbing, the dirty solution is vacuumed from the floor and discharged into the recovery tank. At intervals, a float switch activates the recycling pump, which sends filtered solution from the recovery tank to the solution tank. Detergent is added continuously to solution water from the flow valve.

The autofil system distributes water from the supply hose into the recovery and solution tanks. Then a solenoid valve is closed when the proper level in the solution tank is reached.

### NOTE

Both tanks must be drained and cleaned before filling.  
Tuck solution tank drain hose behind bumper during operation hose



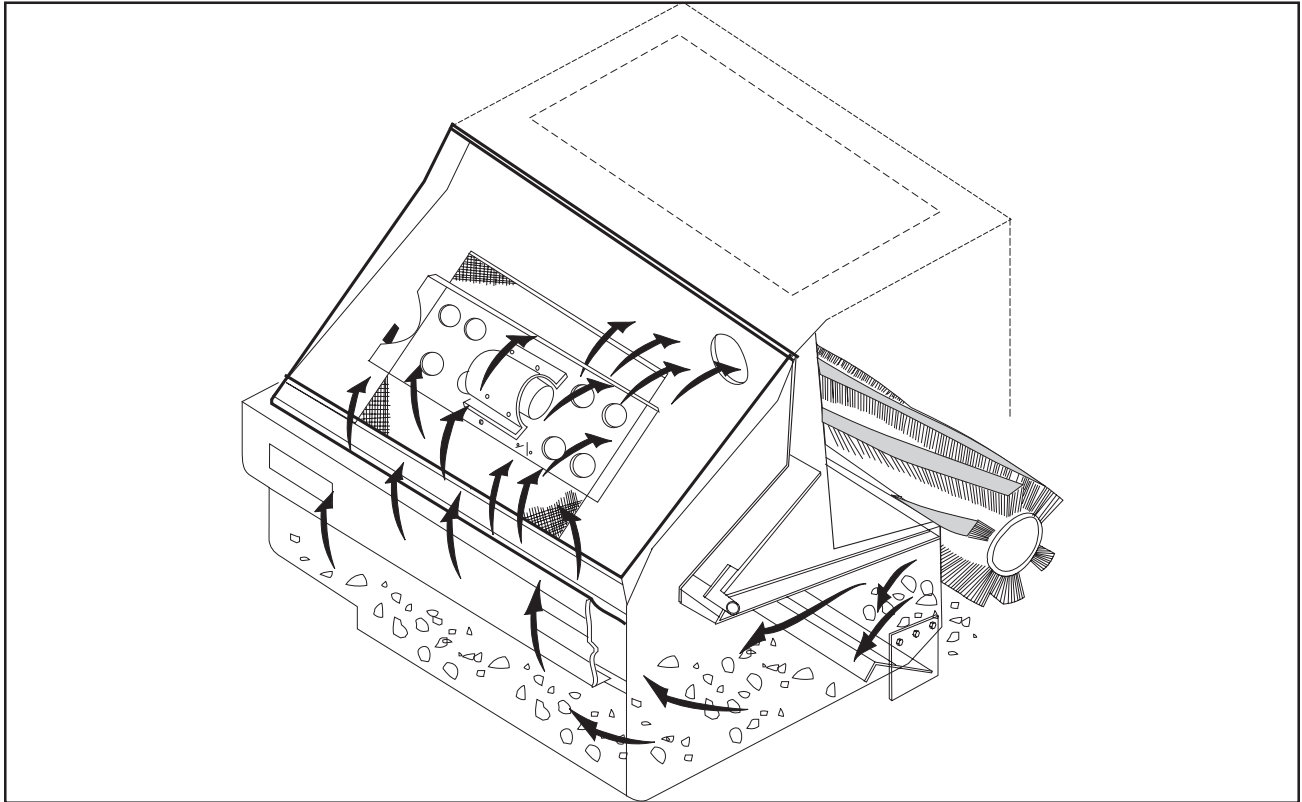
P4759A

FIGURE 33

## SWEEPING AND DUST CONTROL SYSTEMS-HOW THEY WORK

ATS 46/53 machines are equipped with a sweeping and dust control system. (See Figure 34)

### DUST CONTROL



C1731

FIGURE 34

### BEFORE STARTING THE MACHINE

1. Set parking brake.
2. Make sure all controls are in the "OFF" position.
3. Be sure the directional control switch is in the center position.
4. Ensure the batteries have been fully charged and serviced (see battery service instructions).

### NOTE

Before starting the machine, perform the pre-start checklist.

### PRE-START CHECKLIST

1. Check hydraulic fluid level.
2. Check all systems for leaks.
3. Check brakes and controls for proper operation.
4. Check broom patterns.
5. Check to ensure that all covers, panels and access doors are securely closed.

### STARTING BATTERY MACHINES

Starting the battery powered models is accomplished by turning the key switch to the "I" (on) position. It is important to note that the batteries should be fully charged and serviced prior to using the machine.



## OPERATING INSTRUCTIONS

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### EMPTYING THE DEBRIS HOPPER

1. Remove foot from accelerator and stop the machine.
2. Engage the parking brake.
3. Move the hopper dump door lever to the "CLOSE" position until the door is closed.
4. Move the hopper lift lever to the "RAISE" position until the hopper reaches the desired height.
5. Disengage the parking brake.
6. Drive forward slowly with hopper raised to clear the refuse container before opening hopper dump door.
7. Stop machine and engage the parking brake.
8. Push the hopper dump door lever forward to the "OPEN" position. This will allow debris in the hopper to fall out into the refuse container.
9. Move the hopper dump door lever to the "CLOSE" position until the door is closed.
10. Release the parking brake.
11. Drive slowly in reverse to clear the refuse container.
12. Stop machine and engage the parking brake.
13. Move the hopper lift lever forward to the "LOWER" position and hold until the hopper is closed.
14. Move the hopper dump door lever to the "OPEN" position until the dump door opens.



#### WARNING

**Do not turn off the machine with the hopper in the lifted position.**

#### NOTE

**After stopping the machine, perform these post-operation checks.**

### POST-OPERATION CHECKLIST

1. Clean the debris hopper.
2. Check sweeping brooms for wear or damage.
3. Check all flaps for wear, damage and adjustment.
4. Check all systems for leaks.
5. Charge and service motive power batteries (see battery charging instructions).
6. Check squeegees for damage.

### BATTERY CHARGING INSTRUCTIONS

Charge the batteries at the end of each day or when the battery condition meter indicates low battery voltage. The batteries need to be charged when the needle stays in the "red" zone while the machine is being operated. When charging the batteries, only use the quick disconnect provided to ensure correct polarity. Follow the instructions below.

Check the liquid level in the batteries at least once a week and add water when low. Use only distilled water. Fill the batteries after charging them to prevent electrolyte from spilling over onto the tops of the batteries during the charging process.



#### WARNING

**The use of an extension cord with the charger should be avoided. Risk of fire and electrical shock is possible if the wrong type or size extension cord is used. Locate all cords so they cannot be stepped on, tripped over, or otherwise subjected to damage or stress.**

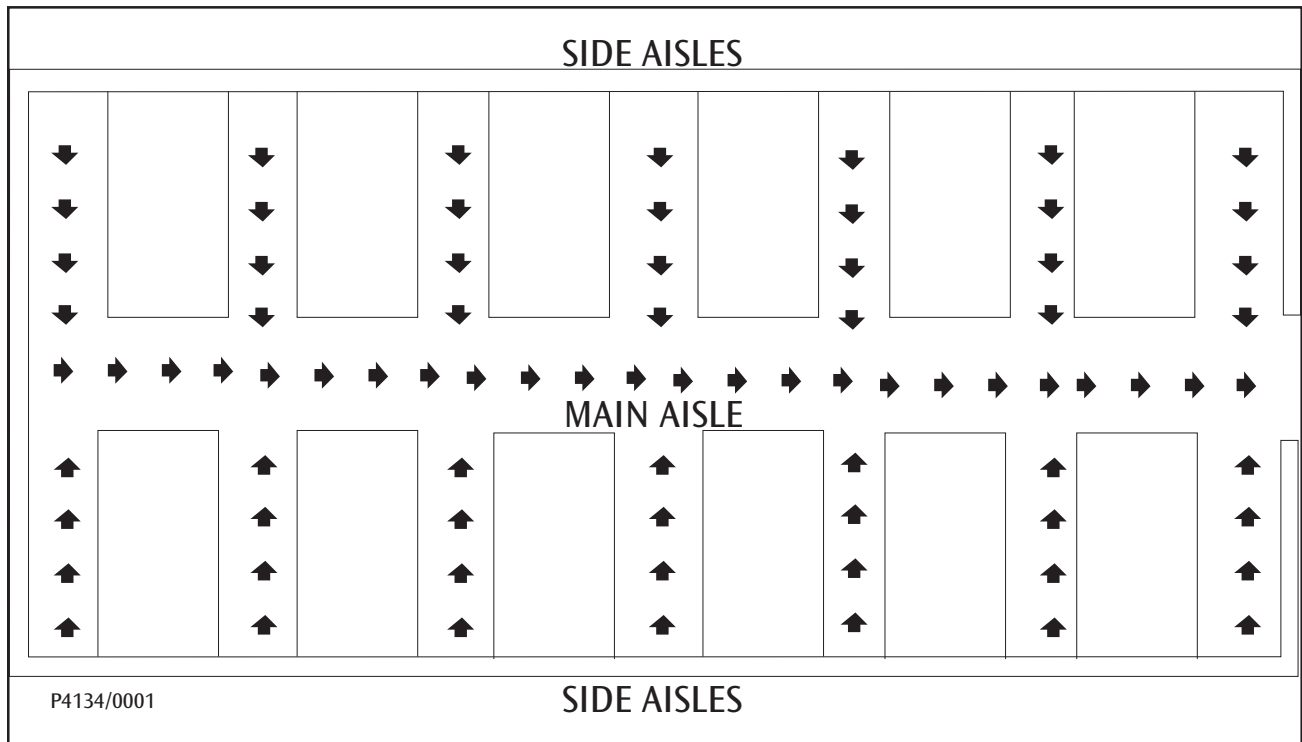
### STORAGE FOR BATTERY-POWERED MACHINES

When batteries are not in use, they will discharge much sooner in cooler temperatures than in warm temperatures. Recharging and storing is more efficient at room temperature.

Do not discharge the batteries excessively (do not go below 80%). Excessive discharge can cause polarity reversal of the individual cells in the battery. This will lead to complete failure of the batteries.

Use a hydrometer to monitor the specific gravity of the individual cells in the batteries. When checking the specific gravity of the batteries, you should not see a large difference between the individual cells. The batteries may need to be replaced if the battery shows a significant difference of specific gravity between the cells.

## HELPFUL HINTS FOR CLEANING OPERATION



P4134

FIGURE 35



### WARNING

**Do not turn the steering wheel sharply when the machine is in motion. The machine is very responsive to movement of the steering wheel. Do not make sudden turns. Scrub in straight paths. Do not bump posts. Do not scrape the sides of the machine.**

When the machine is in motion, do not push the foot pedal all the way down. This will put a strain on drive system.

1. Plan your sweeping and scrubbing in advance. Try to arrange long runs with minimum stopping and starting. Sweep debris from narrow aisles out into main aisles ahead of time. Do an entire floor or section at one time.
2. Pick up oversize debris before sweeping.
3. Allow a few inches of overlap of sweep and scrub paths. This will eliminate leaving dirty patches.
4. Do not turn steering wheel too sharply when the machine is in motion. The machine is very responsive to movement of the steering wheel, so avoid sudden turns.
5. Try to follow as straight a path as possible. Avoid bumping into posts or scraping the sides of the machine.
6. When placing the machine in motion, avoid slamming the directional control pedal all the way forward quickly. This is equivalent to starting in "High" and puts needless strain on the engine and drive system.
7. Always allow the machine to warm up before operating in cold temperatures.
8. Periodically turn the sweeping broom end-over-end to prevent the bristles from "setting" in one direction.

### NOTE

**Replace the sweeping broom when the bristles are worn to 3 inch (8cm) length. Replace disc brushes when bristles are reduced to ½ inch (1.3 cm) in length. Replace squeegee rubbers when all usable edges have become rounded with wear.**

## SERVICE CHART

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### SERVICE CHART

Check items for proper operation. If service is required, please contact an authorized American-Lincoln dealer. For best performance, replace worn parts with genuine American-Lincoln parts.

#### EVERY 8 HOURS or DAILY operation check and clean/adjust if necessary:

1. Inspect panel filters for damage and clean them.
2. Check hydraulic fluid level.
3. Check all flaps for wear or damage.
4. Check brooms for wear or damage, adjust as required.
5. Check panel filters (clean side) for leakage.
6. Check brake pedal and parking brake.
7. Check hydraulic oil filter.
8. Check battery electrolyte level (unless maintenance-free battery).
9. Check all fluid system components for leaks.

#### 50 HOUR (WEEKLY) MAINTENANCE CHECKLIST

10. Check solution tank (recycling or ESP system).
11. Check solution filter screen (recycling or ESP system).
12. Check recovery tank.
13. Check recovery tank screens and filters.
14. Inspect scrub brushes for wear or damage.
15. Inspect rear and side squeegees for wear or damage.
16. Check battery electrolyte level (unless maintenance-free battery).
17. Check all hydraulic hoses for wear or cuts.
18. Rotate main brush (end-over-end).
19. Clean or replace panel filters.
20. Lubricate dump system and drive wheel pivot points.

#### 100 HOUR MAINTENANCE CHECKLIST

21. Lubricate drive wheel, swivel wheel bearings, and steering rack guide.
22. Lubricate front wheel bearings.
23. Lubricate all moving joints.
24. Check brake shoes for wear and adjust accordingly.
25. Lubricate all 3 DANHOUSER bushings with NAPA #765-1363 or equivalent anti-seize lubricant. The bushings are located on the steering, scrub deck lift, squeegee lift, variable dump hopper door.

#### 250 HOUR MAINTENANCE CHECKLIST

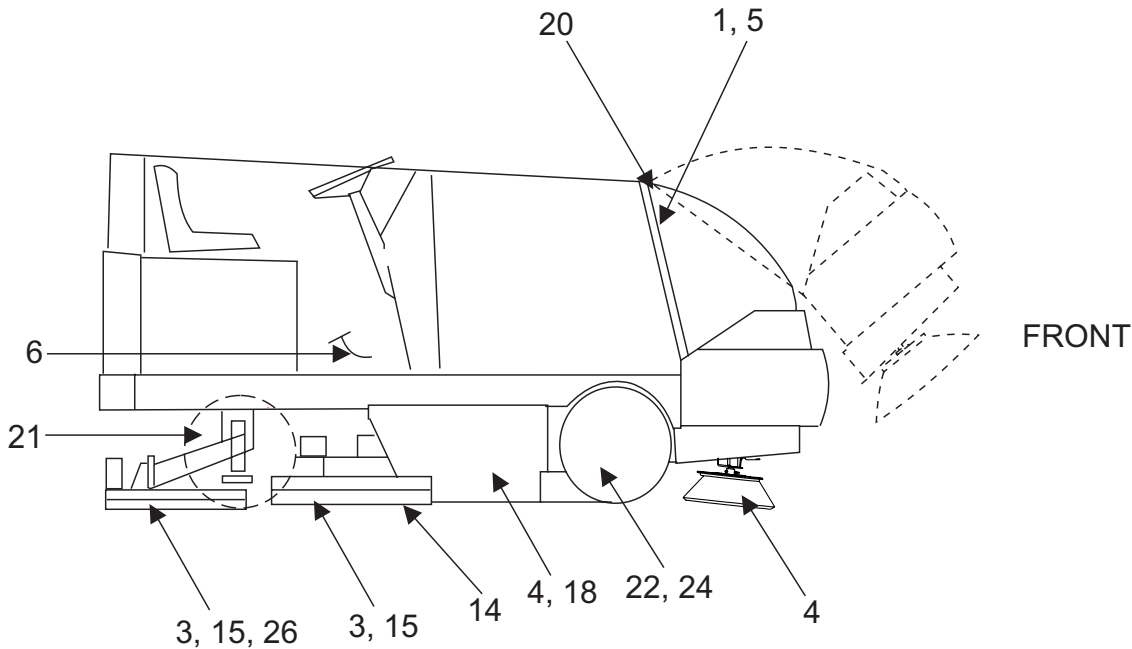
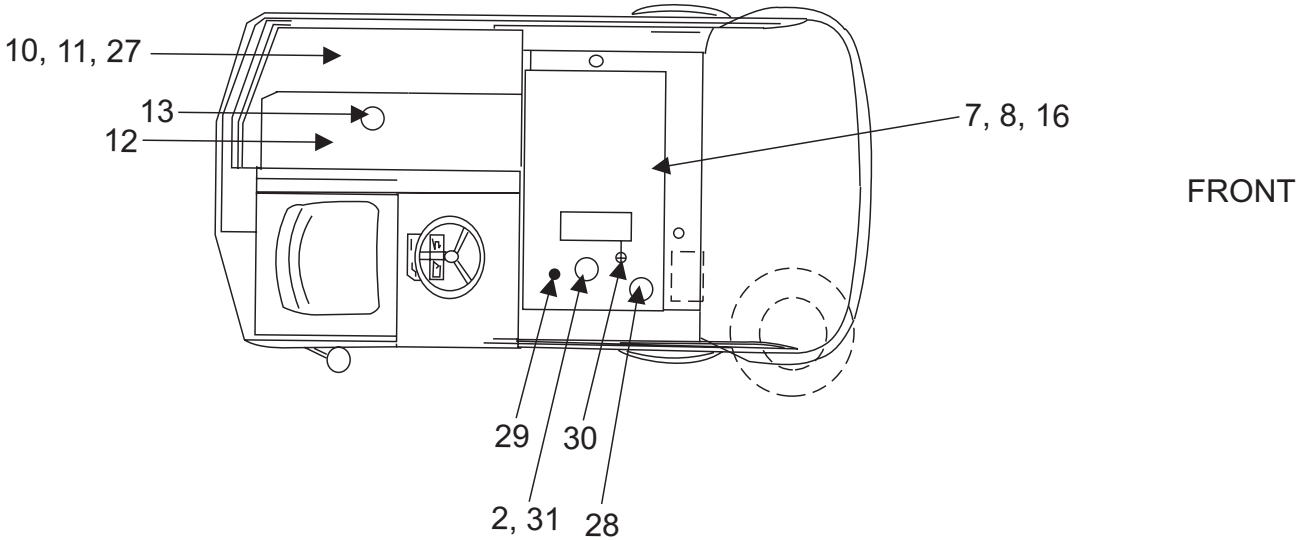
26. Lubricate squeegee casters.
27. Clean solution tank and filter screen.
28. Replace hydraulic filter element.

#### 400 HOUR MAINTENANCE CHECKLIST

29. Clean hydraulic reservoir.
30. Clean hydraulic intake strainer.
31. Change hydraulic fluid.

#### 500 HOUR MAINTENANCE CHECKLIST

32. Inspect brushes on pump and drive motors for wear. Replace as needed.
33. Inspect drive system cables for wear.



Service chart-batt

## SERVICE PRECAUTIONS

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### SERVICE PRECAUTIONS

For safety, read and follow the service precautions below. Know the hazards associated with the equipment you are working on to prevent personal injury or damage to equipment.

Refer all Maintenance and Service Requirements to Qualified Maintenance Personnel.

 **WARNING**

**Do not attempt to Service this Machine until you have read and understand all Safety Warnings associated with the equipment you are working on.**

 **WARNING**

**Only authorized personnel should do electrical repairs. Consult your American-Lincoln Authorized Distributor to perform service and/or repairs. Use only genuine American-Lincoln parts.**

 **WARNING**

**Unexpected movement could cause injury. Always park on a level surface, turn key off, and engage parking brake before working on the machine.**

 **WARNING**

**Always empty the hopper and disconnect the batteries before starting any maintenance work. Keep all fasteners tight. Keep adjustments within the specifications outlined for this machine.**

 **WARNING**

**Always wear eye protection and protective clothing when working near batteries. Do not put tools or other metal objects across the tops of the batteries. NO SMOKING.**

 **WARNING**

**The hopper could fall and cause serious injury. Always engage the hopper safety arm before working under the hopper.**

 **WARNING**

**Pinch points may cause injury. Stay clear of moving parts.**

 **WARNING**

**To maintain the stability of this machine in normal operation, the overhead guard or any similar equipment installed by the manufacturer as original equipment should not be removed. If it becomes necessary to remove such equipment for repair or maintenance, reinstalled before placing the machine back in operation.**

**SWEEPING SYSTEM SERVICE****MAIN BROOM**

To prevent the broom from “setting” in one direction and to provide the maximum life of the broom it is recommended that the broom be turned end over end periodically.

**CHECKING THE MAIN BROOM SWEEP PATTERN**

Check the main broom sweep pattern after changing the broom or when poor sweeping performance is encountered while sweeping.

1. While the machine is not moving, lower the main broom to the “SWEEP” position and let machine sweep in one spot for a short period of time.
2. Before moving the machine, raise main broom lever to the “UP” position and move the sweeper forward enough to see the pattern left by the main broom bristles on the floor.
3. Check the width of the pattern on the floor to determine if the main broom requires adjustment.

-A normal sweep pattern left on the floor will be between 1 and 2 inches wide.

-A pattern that is more than 2 inches wide indicates the broom linkage needs to be adjusted “UP.”

-A pattern that is less than 1 inch wide indicates the broom linkage needs to be adjusted “DOWN.”

**ADJUSTING THE MAIN BROOM HEIGHT**

When changing the sweep height adjustment it is recommended that the bolt be adjusted 1 turn at a time. After adjustment, recheck the sweep pattern to determine if further adjustment is necessary.

-Turn the adjustment knob counterclockwise to INCREASE the sweep pattern width.

-Turn the adjustment knob clockwise to DECREASE the sweep pattern width.

**REPLACING THE MAIN BROOM**

The Main Broom should be replaced when the bristles become worn to less than 2". The main broom is held in place by the right side broom door. This feature provides for easy removal and installation of the main broom without the need for special tools or equipment. Follow the instructions below for main broom removal & replacement.

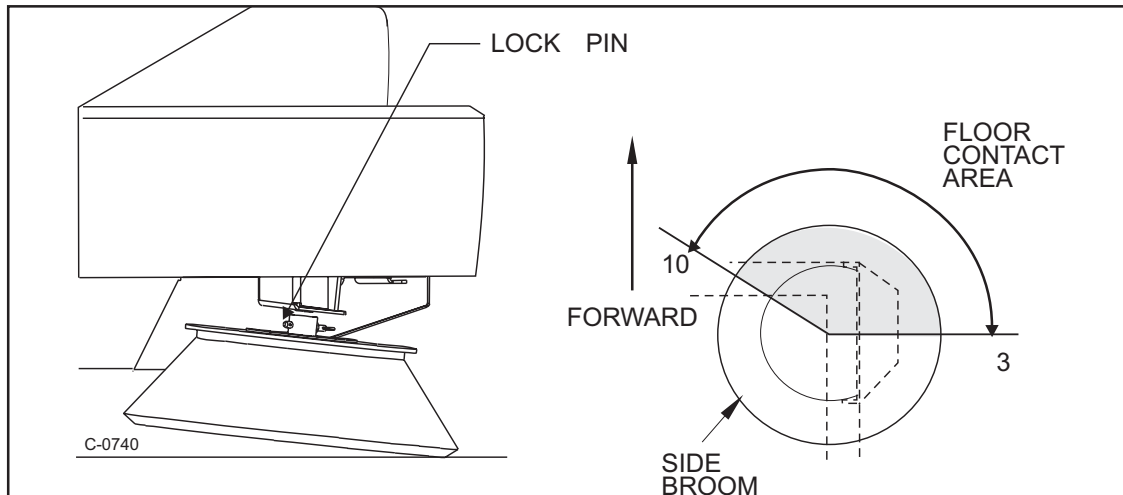
1. Park sweeper on a smooth level surface, engage parking brake, turn key switch to “O”, place the main broom lever in the “SWEEP” position.
2. Lift the door latch to open the right side broom door.
3. Swing the broom drive idler hub out to clear the main broom.
4. Remove the broom from the broom compartment.
5. Install the replacement broom. Pay special attention to the slots on the broom, it may be necessary to rotate the broom so the tabs on the drive hub align with the slots on the broom.
6. Swing the idler hub to engage the main broom and close the access door. Check the door latch for proper engagement when closed.
7. Check the Main Broom sweep pattern and adjust as necessary.

**MAIN BROOM LEVEL ADJUSTMENT**

The main broom level is factory set and should not need adjustment. If the level becomes out of adjustment and the broom bristle contact pattern is not an even 1" to 2" wide, the broom arm lift frame will need to be adjusted. The frame is supported by two plates located inside the broom doors. The carriage bolts that secure the plates to the frame will need to be loosened. The frame can then be leveled and the bolts re-tightened.

## SERVICE INSTRUCTIONS

### SIDE BROOM SERVICE



C0740

FIGURE 36

#### SIDE BROOM

The Side Broom sweeping angle is not adjustable. However, the height of the side brooms can be adjusted to compensate as the broom becomes worn from use. Always check and adjust the sweep pattern after changing the side broom.

#### CHECKING THE SIDE BROOM SWEEP PATTERN

##### ADJUSTING THE SIDE BROOM HEIGHT

Turn the side broom adjustment knob to change the side broom sweep height. Recheck for proper sweep pattern after adjustment.

- Turn the adjustment knob counterclockwise to INCREASE the sweep pattern width.
- Turn the adjustment knob clockwise to DECREASE the sweep pattern width.

#### SIDE BROOM SERVICE

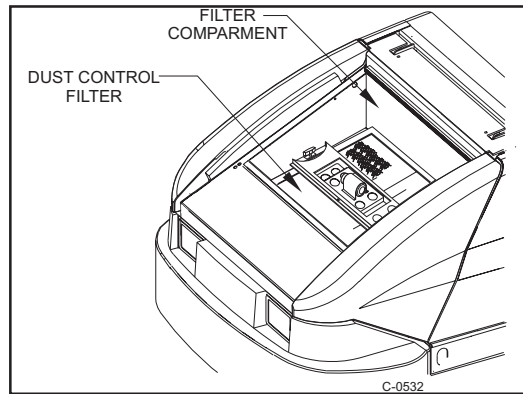
1. Park the machine on a smooth level surface.
2. Place the side broom lever in the "DOWN" position.
3. Move the brooms control lever to the "ON" position.
4. While staying in place allow the side broom to sweep for a short period of time. (Allow enough time for the side brooms to leave a clean footprint on the floor).
5. Place the side broom lever in the "UP" position.
6. Move the brooms control lever to the "OFF" position.
7. Back the sweeper away from the area where the pattern was left.
8. Turn the key switch to the "OFF" position and engage the parking brake.
9. Leave the operator's compartment and check the pattern to determine the floor contact area.
10. Determine if adjustment to the side brooms height is necessary by examining the floor contact area. The broom should contact the floor as shown in Figure 36. Adjust the side broom height if the contact area on the floor does not match the diagram.

#### REPLACING THE SIDE BROOM

Change the side brooms when the bristles become worn to less than 3 inches length.

1. Park the machine on a smooth level surface, turn key switch to "O" Position and engage parking brake.
2. Place the side brooms lever in the "UP" position.
3. Remove the lock pin that holds the broom flange to the motor shaft.
4. Disassemble the flange from the broom by removing the screws that hold the flange to the broom.
5. Assemble the flange to the replacement broom and fasten using the hardware removed.
6. Install the replacement broom on the shaft and insert the lockpin.

**HOPPER SERVICE**



c0532 **FIGURE 37**



**WARNING**

**The hopper could fall and cause serious injury.  
Always engage the hopper safety arm before working under the hopper.**

**HOPPER**

The hopper houses the debris compartment, the dust control filter and the removable dust baffle. For maximum performance and service life, keep the hopper clean and inspect the seals and flaps daily. Clean the hopper prior to parking the sweeper at the end of the day. A clean hopper will make inspecting the flaps and seals much easier and will prevent premature deterioration of hopper components. Do not leave the hopper full of debris while in storage or when parked for extended periods of time.

**CLEANING THE HOPPER**

Once the hopper has been emptied the inside of the hopper should be rinsed out with water.

**CHECKING THE HOPPER SEALS**

The hopper seals are important to positive dust control while sweeping. Damaged seals will reduce vacuum pressure at the broom. Inspect for cuts, tears and proper positioning of the seal material. Replace all seals that become damaged.

**DUST CONTROL FILTER**

The dust control filter should be checked daily for damage and cleaned if necessary. A damaged filter must be replaced to prevent damage to other dust control system components. Inspect the filter for tears in the filter media or excessive dirt lodged in the pleats. A tear in the filter media will allow dirt to pass through the filter and can be easily seen as a dirty patch on the top side on the filter. Cleaning of the filter is necessary when the filter shaker fails to adequately clean the pleats.

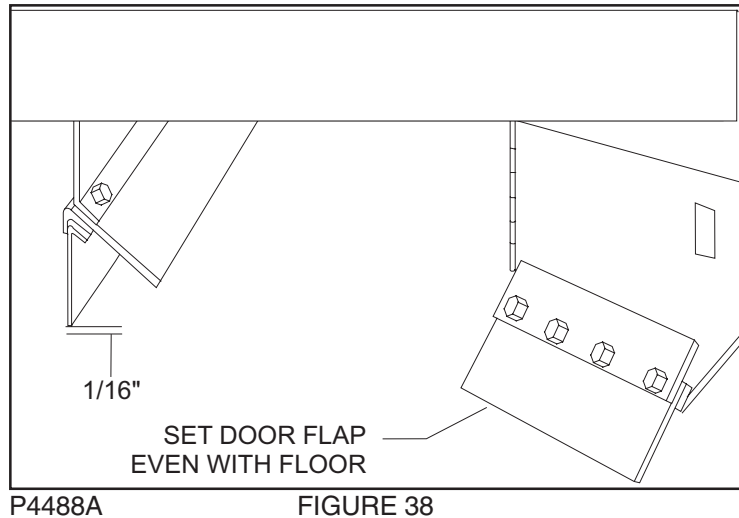
**CHECKING THE DUST CONTROL FILTER**

1. Park the machine on a smooth level surface, turn the key switch to the "O" position and engage the parking brake.
2. Raise the hopper lid for access to the filter compartment.
3. Turn the filter latch, lift the filter frame and remove the filter.
4. Inspect the panel filter for tears and clean or replace if necessary.
5. Reinstall the filter, lower the filter frame and engage the filter latch.
6. Close the hopper cover.

**CLEANING THE DUST CONTROL FILTER**

Clean the dust control filter when the shaker fails to adequately clear the filter. The filter can be cleaned with compressed air not to exceed 100 PSI. To clean the filter with compressed air, apply the compressed air to the topside of the panel to backflush the lodged dirt from the filter pleats. Be careful to not damage the filter media while cleaning. The filter can be cleaned with a solution of soap and water. If this cleaning method is used do not use the filter until it has completely dried.





### REPLACING THE DUST CONTROL FILTER

Change the filter panel when damage is evident.

1. Park the machine on a smooth level surface, turn the key switch to the "O" position and engage the parking brake.
2. Open the hopper compartment cover to gain access to the filter compartment.
3. Turn the latch on the hinged frame counterclockwise and lift the frame .
4. Remove the filter panel.
5. Install replacement filter, lower the hinged frame and engage the latch.
6. Lower the filter compartment cover.

### DUST FLAPS

The dust flaps are very important to sweeping and dust control and are susceptible to damage and should be inspected daily and maintained in good condition.

#### CHECKING THE DUST FLAPS

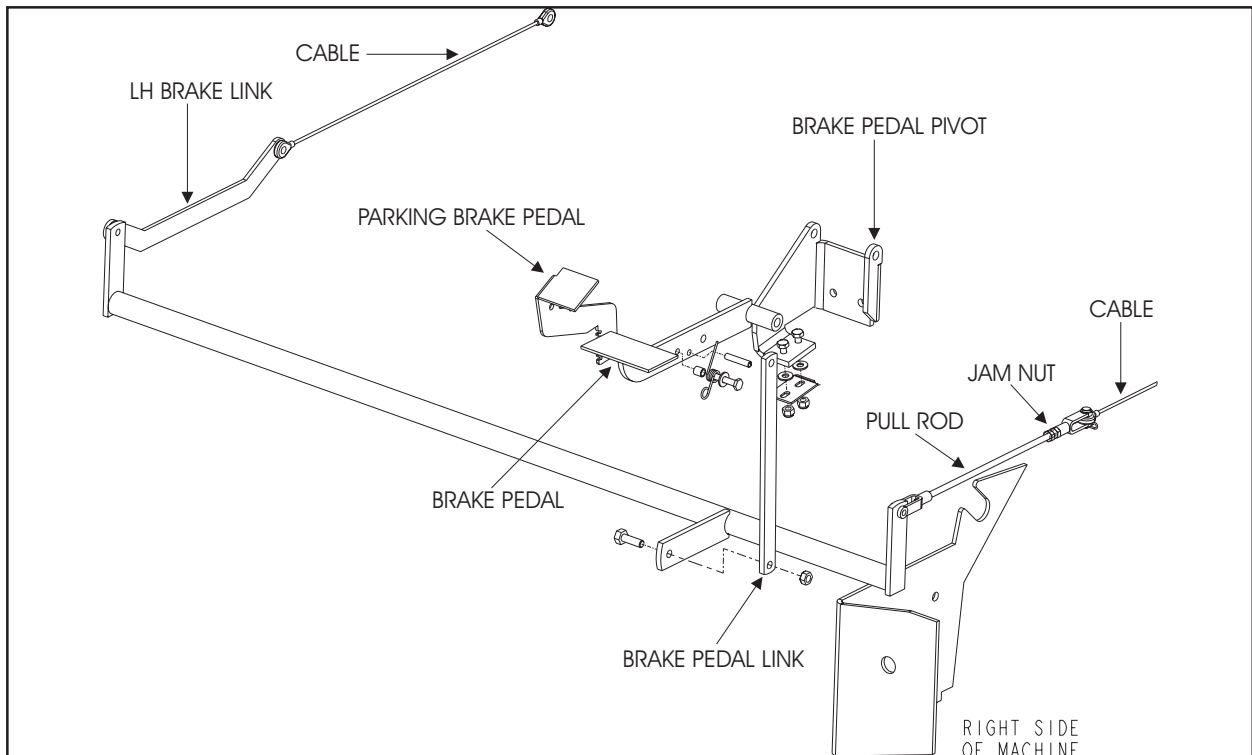
The dust flaps are used on the wheel well, broom chamber and broom door. Inspect the flaps daily and replace any flap that shows signs of wear or deterioration. All flaps should be replaced when worn or damaged to the point that they can no longer perform their normal function. The adjustable flaps have slotted mounting holes to facilitate adjustment.

#### ADJUSTING THE DUST FLAPS

Adjust the flaps so there is a 1/8" to 1/16" gap between the floor and the bottom edge of the flaps. The rear flap adjustment is 1/16" (16 cm.) above the floor.

1. Park the machine on a smooth level surface and engage the parking brake.
2. Loosen the flap retaining screws and adjust the flap to clear the floor and leave a 1/16" to 1/8" gap.
3. Tighten flap-retaining screws while holding flap in position.
4. Drive the machine on a smooth surface and recheck the flaps for proper floor clearance.

**BRAKE SERVICE**



C1720batt

FIGURE 39

**BRAKES**

The service brakes are located on the front wheels and are operated by the brake pedal and the parking brake. Check the brakes daily for proper operation and inspect the brake pads for wear every 100 hours of operation.

**ADJUSTING THE BRAKE PEDAL**

Perform this adjustment to ensure proper pedal height and linkage operation. The brakes are properly adjusted when the brakes hold the sweeper on an 8-degree ramp. The brakes need adjusted if the pedal travels closer than 1" to the floor of the operator's compartment when the brakes are fully engaged.



**WARNING**

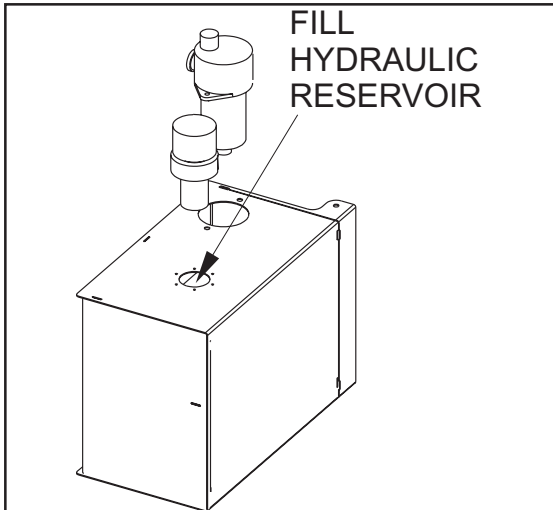
Always park on a level surface, chock tires and observe safety procedures when adjusting the brakes.

**ADJUSTING THE BRAKES**

When adjusting the brake clevis, follow these steps:

1. Right hand brake cable slack.
2. Adjust parking brake for maximum engagement.
3. With parking brake "off," check L.H. wheel which should rotate with minimum drag. (Not completely free)
4. Adjust R.H. brake to provide minimum drag when released.

## GENERAL MACHINE MAINTENANCE



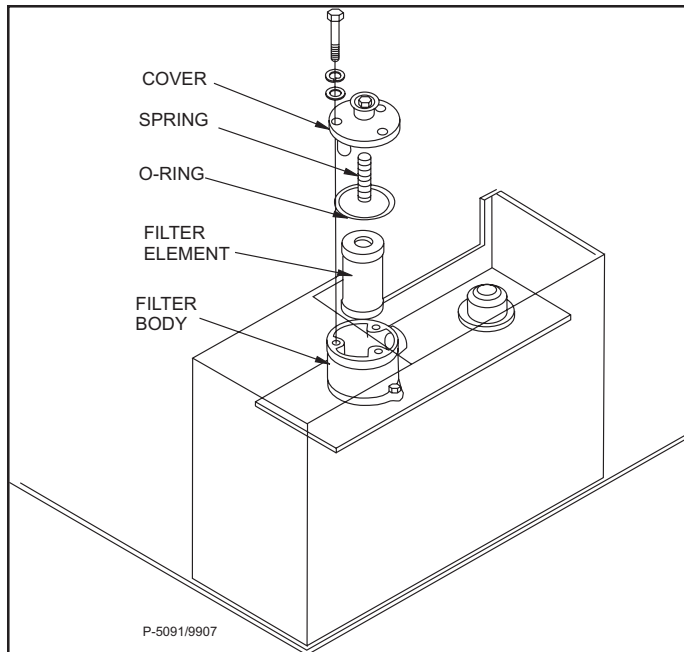
C1691A FIGURE 40

### FILLING THE HYDRAULIC RESERVOIR

1. Access to the hydraulic reservoir is located in the seat compartment.
2. Open the hydraulic reservoir breather filter cap.
3. Remove any debris that is in the breather filter cap screen.
4. Fill the reservoir until the fluid is at the "FULL" line on the hydraulic fluid sight gauge. The sight gauge is located on the center side of the hydraulic reservoir.
5. Close the hydraulic reservoir breather filter cap.
6. Close the seat compartment.

### CLEANING THE HYDRAULIC SYSTEM

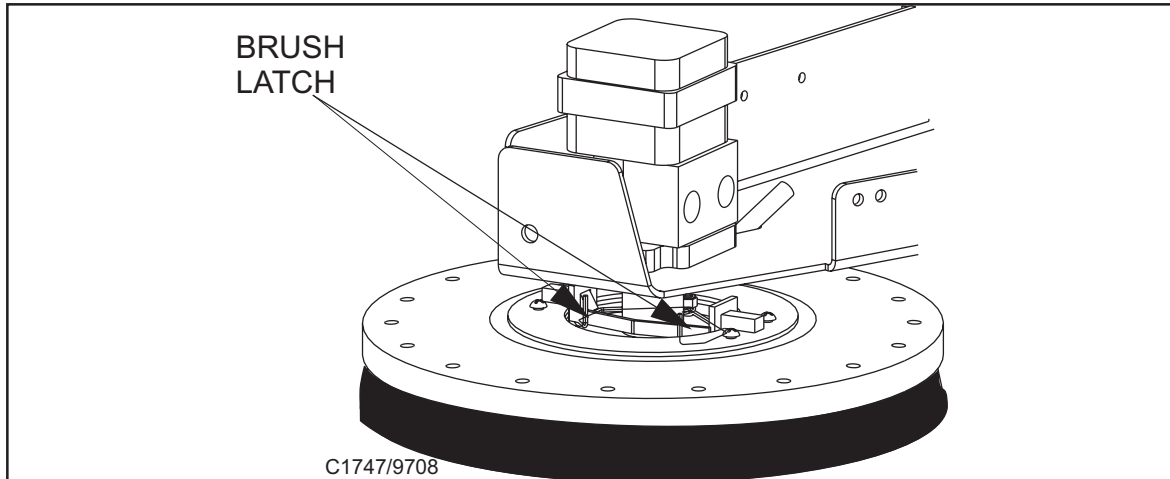
1. Put a drop cloth on the floor.
2. Drive the machine onto the drop cloth.
3. Set the parking brake.
4. Open the seat compartment.
5. Put a container under the reservoir drain to catch the reservoir fluid.
6. Remove the drain plug. The reservoir fluid will drain. Do not use the drained fluid to refill the hydraulic reservoir. Dispose of the used fluid.
7. Flush the interior of the hydraulic reservoir with clean fluid.
8. Put the reservoir plug (removed in Step 6) back in the hydraulic tank drain and tighten it. A pipe thread sealer is required on the plug.
9. Open the breather filter cap.
10. Fill the reservoir with new FORD type "F" automotive transmission fluid. The capacity of the tank is 10 gallons. Fill to the "FULL" line on the hydraulic fluid sight gauge.
11. Close the breather filter cap.
12. Close the seat compartment.



P5091 FIGURE 41

### REPLACING THE RETURN FILTER ELEMENT

1. Replace the return filter element after 250 hours of machine run time.
2. Unscrew the fasteners from the filter assembly cover and retain.
3. Remove the cover and the compression spring and retain.
4. Discard the old filter element.
5. Position the new filter element inside the filter body.
6. Put the compression spring in position. Wipe the cover magnet free of any metal filings or debris.
7. Place O-ring (moisten with clean hydraulic fluid) and cover into position.
8. Reattach fasteners to the filter cover.
9. Clean any hydraulic reservoir fluid spills. The fluid can damage painted surfaces on the machine.



C1747

FIGURE 42

**REPLACING THE SCRUB BRUSH**

1. Raise the scrub brush deck by pressing the “Scrub Brush” switch on the instrument panel.
2. Press the brush latches in to release the scrub brush.
3. Remove the old scrub brush.
4. Snap the new brush into place.

**COVERS AND LATCHES**

The covers have been designed to allow access, either by hinge or removal, to all areas of the machine. No maintenance is required.

**SOLUTION LOW WARNING LIGHT**

The solution low warning light will illuminate when the solution tank is low. This part of the level control system requires no maintenance. If the system fails to operate, consult the Electrical Troubleshooting Guide.

**RECOVERY HIGH WARNING LIGHT**

The recovery high warning will illuminate approximately 5 minutes before loss of vacuum to the recovery tank. This part of the level control system requires no maintenance, except for daily cleaning of the tank level switch. If the system fails to operate, consult the Electrical Troubleshooting Guide.

**SOLUTION CONTROL (Non-Recycling or Standard)**

The solution control lever controls the amount of solution applied to the scrubbing brushes.

The solution control should shut off completely with the lever in the (front) “off” position. If complete shut off does not occur, the control valve should be adjusted.

**SOLUTION CONTROL (Recycling or ESP System)**

In the recycling mode, the solution control lever is also used to activate the detergent pump. If the detergent pump fails to operate (engine running) when the solution control lever is moved into the low to high range, first check the circuit by manually activating the switch. If the detergent pump does not operate at this time, a further electrical or mechanical check is required (see Electrical Troubleshooting Guide or Detergent Pump Troubleshooting).

## GENERAL MACHINE MAINTENANCE

### RECYCLING PUMP ESP SYSTEM

The recycling pump is located under the seat. The pump is electric and except for daily cleaning of the pump intake screens, it requires no regular maintenance.

### RECYCLING PUMP STORAGE

Always drain pump for extended storage, especially when freezing temperatures may be encountered.

### REAR SQUEEGEE

The squeegee will require service when the inner edges of the blades become round with wear, impairing the wiping action or water pickup. To service the rear squeegee use the following steps:

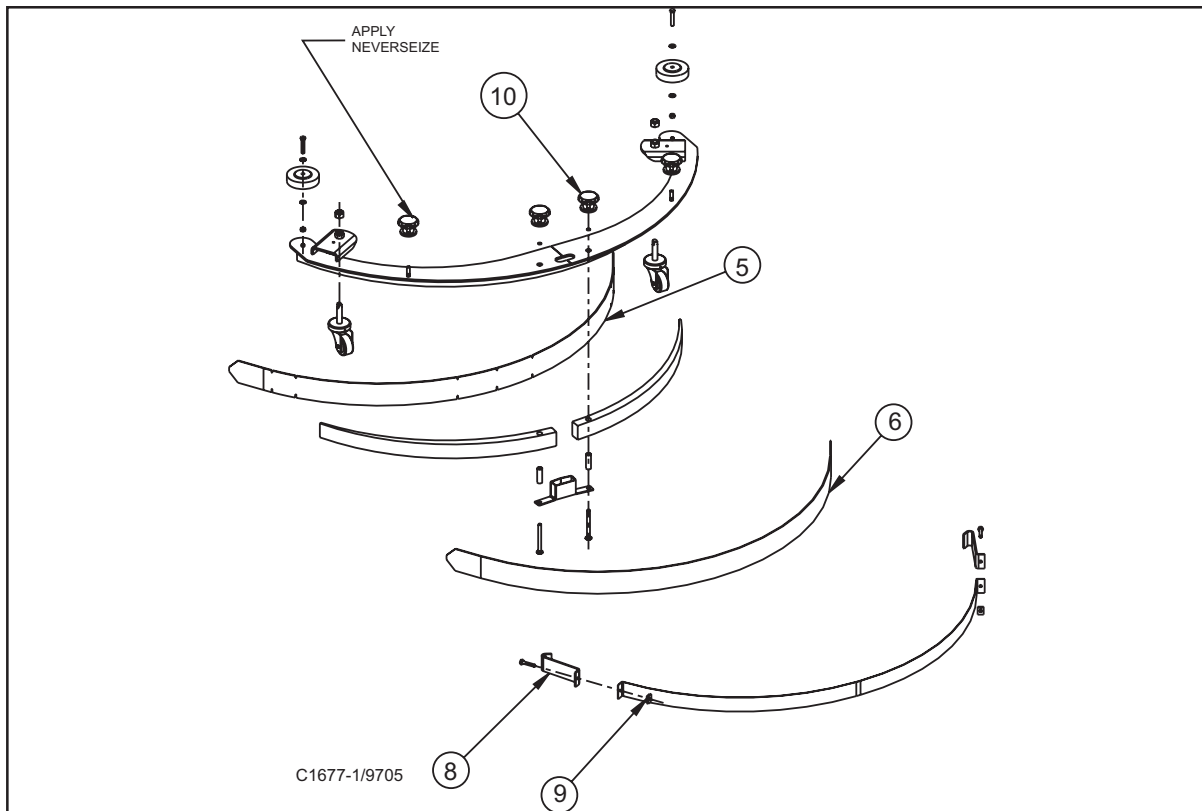
1. Loosen the four aluminum knobs (item 10, these hold the squeegee tool to the squeegee support).
2. Remove the squeegee tool and turn upside down to service the blades or caster wheels. The squeegee blades are designed to flip over and use another unworn edge (items 5 & 6).

#### To service the blades

1. Loosen the clamp bolts which clamp items 8 & 9 together.
2. Loosen far enough to slip the end clamp brackets off the squeegee tool. This will allow flipping the blades or installing new blades.
3. Install blades so that the outer blade is 3/16" longer than the inner blades. This is achieved by assembling the top edge of the blade against the squeegee tool weldment.
4. Re-install the squeegee clamp band and tighten the clamp bolt.

### SQUEEGEE CASTER WHEELS

There are 2 grease fittings on each caster wheel. The casters should be greased each time the blades are serviced.



C1677-1

FIGURE 43

### ADJUSTING CASTERS

Lower the squeegee on a flat surface, making sure the rear squeegee blade is perpendicular to the surface. Adjust the caster 3/16" above the flat surface. Lock the jam nuts.

### BATTERY

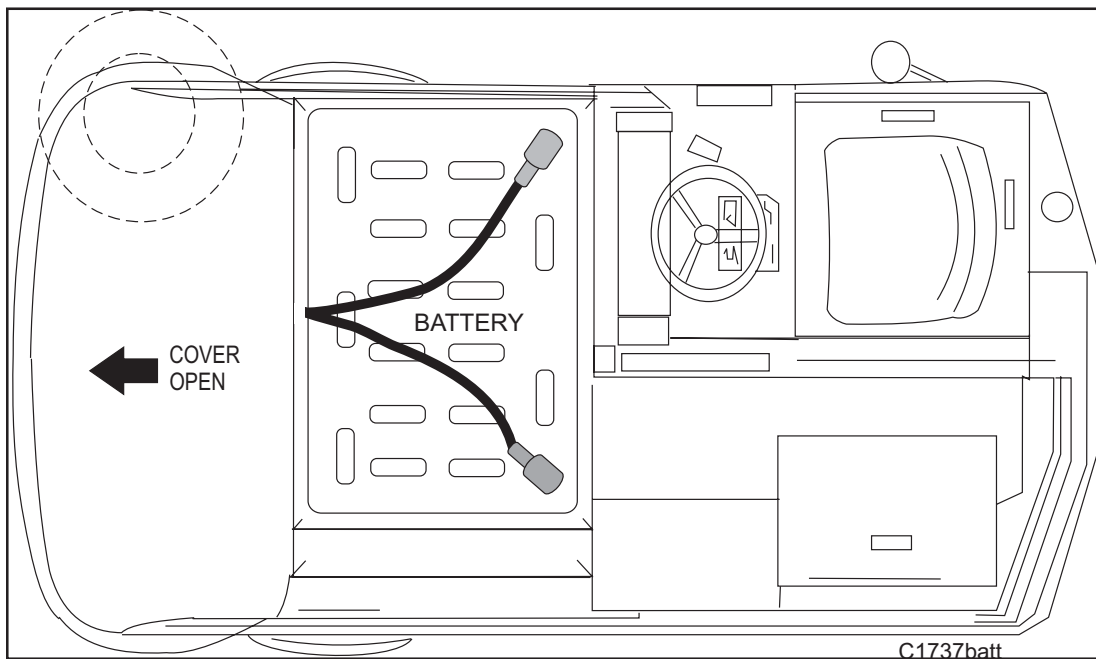
The battery is located in front of the operator's compartment with easy access through the hopper door.

Keep the top of the battery clean and dry. Keep the terminals and connectors clean. To clean the top of the battery, use a damp cloth with a weak solution of ammonia or bicarbonate of soda. To clean the terminals and connectors, use a terminal and connector-cleaning tool.



### WARNING

**NEVER** allow the soda solution to enter the cells.  
**This will permanently destroy the battery's recharging capabilities.**



C1737batt

FIGURE 50

C1737batt

## PARTS LIST LEGEND

---

### ABBREVIATIONS - SCREWS

ADJ	= Adjusting Screw
ADJ.SP	= Adjusting Plunger Screw
BHM	= Binding Head Machine Screw
BHS	= Button Head Socket Screw
CAPT.SL	= Captivated Slotted Screw
CAPT.WG	= Captivated Wing Screw
FHM	= Flat Head Machine Screw
FIL.HM	= Filister Head Machine Screw
HHC	= Hexagon Head Cap Screw
HHM	= Hexagon Head Machine Screw
HIHD	= 1/2 High Head Screw
HSHC	= Hexagonal Socket Head Cap Screw
HSHFC	= Hexagonal Socket Flat Head Cap Screw
KNH	= Knurled Head Screw
MHHC	= Metric Hexagon Head Cap Screw
PHM	= Pan Head Machine Screw
RHD	= Round Head Drive Screw
RHM	= Round Head Machine Screw
RHW	= Round Head Wood Screw
SHC	= Shiny Crown Cap Screw
SHTB	= Shoulder Thumb Screw
SQ	= Square Head Screw
TB	= Thumb Screw
THM	= Truss Head Machine Screw
WELD	= Weld Stud
WG	= Wing Screw

### ABBREVIATIONS - SETSCREWS

HS	= Hexagonal Socket Setscrew
S	= Slotted Setscrew
SH	= Square Head Setscrew
-KCP	= Knurled Cup Point Setscrew
-CP	= Cup Point Setscrew
-OP	= Oval Point Setscrew
-FDP	= Full Dog Point Setscrew
-HDP	= Half Dog Point Setscrew
-FP	= Flat Point Setscrew
-COP	= Cone Point Setscrew

## GENERAL TROUBLESHOOTING

<u>PROBLEM</u>	<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
Sweeping Does Not Function.	<ol style="list-style-type: none"> <li>1. Dump door open</li> <li>2. Hopper is raised</li> <li>3. Hopper switch out of adjustment</li> </ol>	<ol style="list-style-type: none"> <li>1. Close dump door.</li> <li>2. Lower hopper</li> <li>3. Adjust hopper switch</li> </ol>
Poor Water Pick-Up At Squeegee.	<ol style="list-style-type: none"> <li>1. Side or rear squeegee are worn or damaged.</li> <li>2. Clogging in water pick-up.</li> <li>3. Air leaks in suction hose and connection</li> <li>4. Air leaks at recovery tank cover and/or manifold gaskets.</li> <li>5. Poor vacuum</li> <li>6. Drain hose or drain plug leakage or not closed properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Examine squeegee rubber blade for cuts or worn spots. Replace if necessary.</li> <li>2. Repair or replace hose and connections.</li> <li>3. Repair or replace gaskets.</li> <li>4. Check vacuum motor.</li> <li>5. Check seal on recovery tank.</li> <li>6. Close, repair or replace drain plug in recovery tank.</li> </ol>
Water Spills From Squeegee.	<ol style="list-style-type: none"> <li>1. Side squeegee blades, poor contact with floor.</li> <li>2. Squeegee blades worn or damaged.</li> <li>3. Too much solution being applied before making turns.</li> <li>4. Brushes rotating opposite direction.</li> </ol>	<ol style="list-style-type: none"> <li>1. Readjust blades for proper contact.</li> <li>2. Replace and adjust</li> <li>3. Shut off solution flow 5 to 10 feet.</li> <li>4. Check position of switches</li> </ol>
Lack Of Suction At Rear.	<ol style="list-style-type: none"> <li>1. Clogged suction hose or pick-up tool.</li> <li>2. Loose connections between suction hose &amp; squeegee or between hoses of manifold inlet.</li> <li>3. Vacuum motor not operating.</li> <li>4. Vacuum float cage clogged.</li> <li>5. Vacuum float shut off</li> </ol>	<ol style="list-style-type: none"> <li>1. Disconnect suction hose from squeegee, flush squeegee &amp; hoses thoroughly.</li> <li>2. Check all hose connections for looseness or damage.</li> <li>3. Check hydraulic motor in recovery.</li> <li>4. Clean perforated metal thoroughly.</li> <li>5. Excessive solution in recovery drain tank. Excessive foam build up, change cleaning chemical mixture. Use A-L approved materials.</li> </ol>



## GENERAL TROUBLESHOOTING

<b><u>PROBLEM</u></b>	<b><u>PROBABLE CAUSE</u></b>	<b><u>REMEDY</u></b>
Poor Scrubbing	<ol style="list-style-type: none"> <li>1. Worn scrubbing brushes</li> <li>2. Incorrect method of operation</li> <li>3. Wrong cleaning agent or mixture</li> <li>4. Poor solution distribution</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect brushes. If they are worn to ½" (1.3 cm) or less, replace all 3 brushes</li> <li>2. Check scrubbing procedures, brush pressure, type of brush solution flow &amp; cleaning chemical used. For extreme conditions double scrubbing may be necessary.</li> <li>3. Use A-L recommended materials</li> <li>4. Clean out distribution tube &amp; metering holes to brushes. Check feed hose &amp; clean if necessary. Check valve &amp; cable control system.</li> </ol>
Machine Runs, But Will Not Move on Level Ground	<ol style="list-style-type: none"> <li>1. Foot pedal and/or linkage jammed or not adjusted.</li> <li>2. Front wheels jammed or brakes locked</li> <li>3. Hydraulic pump trouble.</li> <li>4. Rear wheel hydraulic motor, broken shaft key, broken shaft etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check pedal linkage</li> <li>2. Check wheels &amp; brakes</li> <li>3. Check &amp; repair pump, check tow valve.</li> <li>4. Check &amp; repair or replace.</li> </ol>
Machine Moves Slowly	<ol style="list-style-type: none"> <li>1. Low hydraulic oil level</li> <li>2. Brake dragging</li> <li>3. Hydraulic oil temperature too high</li> <li>4. Worn hydraulic pump or drive motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Add oil to the reservoir</li> <li>2. Check brakes</li> <li>3. Check oil level. Add SAE 5 ATF if required</li> <li>4. Check &amp; repair or replace.</li> </ol>
Hydraulic Pump Making Excessive Noise	<ol style="list-style-type: none"> <li>1. Clogged inlet strainer or suction line</li> <li>2. Air bubbles in hydraulic fluid</li> <li>3. Hydraulic pump is worn or damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean inlet strainer line. Drain &amp; flush reservoir if oil is dirty. Refill with clean SAE 5 ATF.</li> <li>2. Check for low hydraulic fluid level, leaking fitting or hoses</li> <li>3. Check &amp; repair or replace.</li> </ol>

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Fax: +1 704 971 1241  
E-mail: info@altocsi.com

1. Use the model number, catalog number, and serial number when ordering.
2. Give the part number, description, and quantity of parts needed.
3. Give shipping instructions for either freight, UPS, or parcel post.

**MACHINE CATALOG NUMBERS**

505-831 (46") BATTERY VARIABLE DUMP w/CE Kit  
505/832 (53") BATTERY VARIABLE DUMP w/CE Kit

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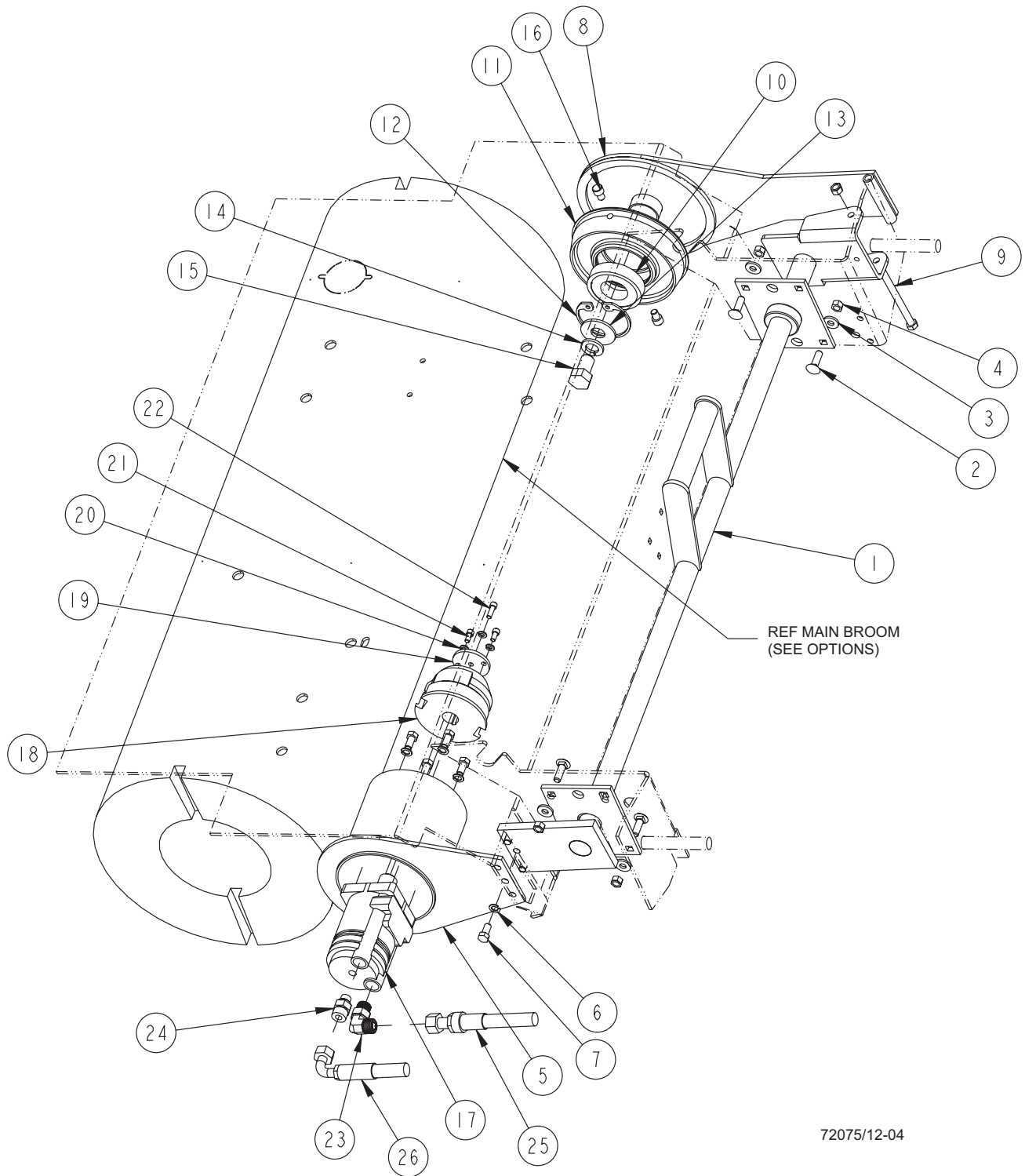
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## MAIN BROOM

---

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-03-04226	Lift Frame, Main Broom	1
2	2-00-05187	Carriage Bolt, 3/8-16 x 1.0	4
3	2-00-04801	Flat Washer, .875 x .375 x .125	4
4	2-00-04182	Nut, 3/8-16 Hex Stop	5
5	8-16-00041	Arm, Broom Drive	1
6	2-00-02310	Lock Washer, 3/8 Helical Spring	5
7	2-00-00232	Bolt, 3/8-16 x .750 Fin. Hex Head	5
8	7-03-04158	Arm, Main Broom Idler	1
9	2-00-02605	Bolt, 3/8-16 x 4.50 HHC	1
10	2-00-04889	Bearing, Main Broom Idler	1
11	8-33-09090	Idler, Main Broom (Machined)	1
12	2-00-04890	Retaining Ring, Main Broom Idler	1
13	8-75-01157	Thrust Washer	1
14	2-00-00522	Lock Washer, 3/4 Helical Spring	1
15	2-00-04887	Screw, 1/4-10 x 1.25 Hex Head	1
16	2-00-04886	Screw, 3/8-16 x 1/2 Allen Set	2
17	0882-037 0880-174	Hyd. Motor, Main Broom Motor Seal Kit (service part)	1
18	8-33-09046-1	Hub, Broom Driver	1
19	8-58-05160	Plate, Broom Driver Locking	1
20	2-00-00518	Lock Washer, 1/4 Helical Spring	3
21	2-00-03039	Set Screw, 1/4-20 x .625 HSHC	2
22	2-00-06352	Screw, 1/4-28 x 3/4 Socket Head	1
23	2-00-04885	Fitting, 90° Elbow (O-Ring)	1
24	2-00-04970	Fitting, 8 ORS - 6 SAE, Str.	1
25	7-33-02662	Hose, #8 Str. - Str. (74")	Ref.
26	7-33-02633	Hose, #8 Str. - 90° (73")	Ref.

72075revD/12-04



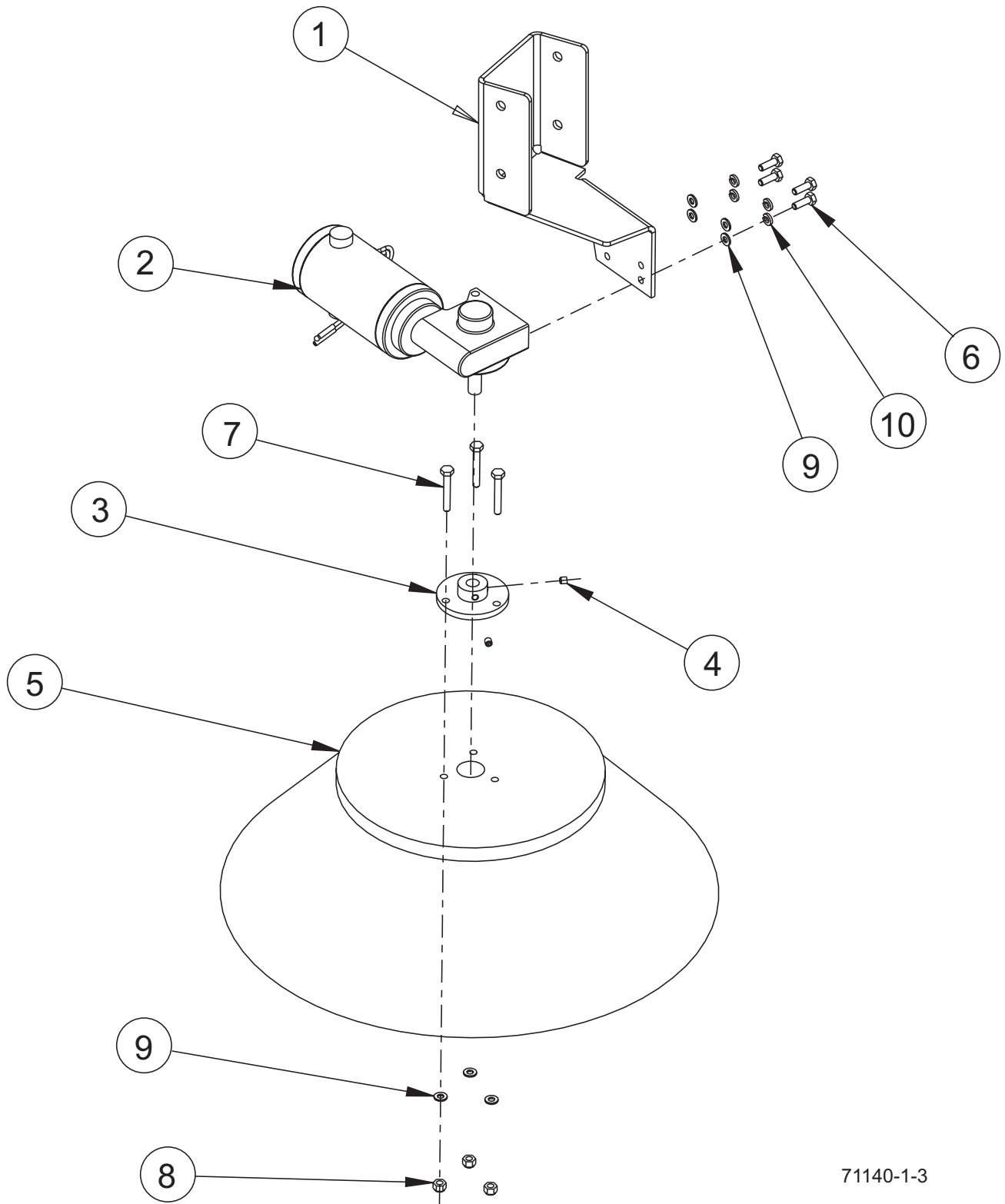
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## SIDE BROOM

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-08-00902	Bracket, Side Broom	Ref.
2	0885-082	Motor Gear Unit, Side Broom	1
3	7-25-06035	Flange, Broom Mount	1
4	2-00-00264	Set Screw, HS Knurled Cup Pt. #10-24 x 3/8	2
5	8-08-03140	Broom, Curb	1
6	2-00-00221	Screw, 1/4-20 x 3/4 HHC	4
7	2-00-01769	Screw, 1/4-20 x 1.75 HHC	3
8	2-00-00641	Nut, 1/4-20 Insert Fiber	3
9	2-00-03702	Washer, .625 x .281 x .063	7
10	2-00-00518	Lock Washer, Helical Spring	4

71140-1-3/5-98



71140-1-3

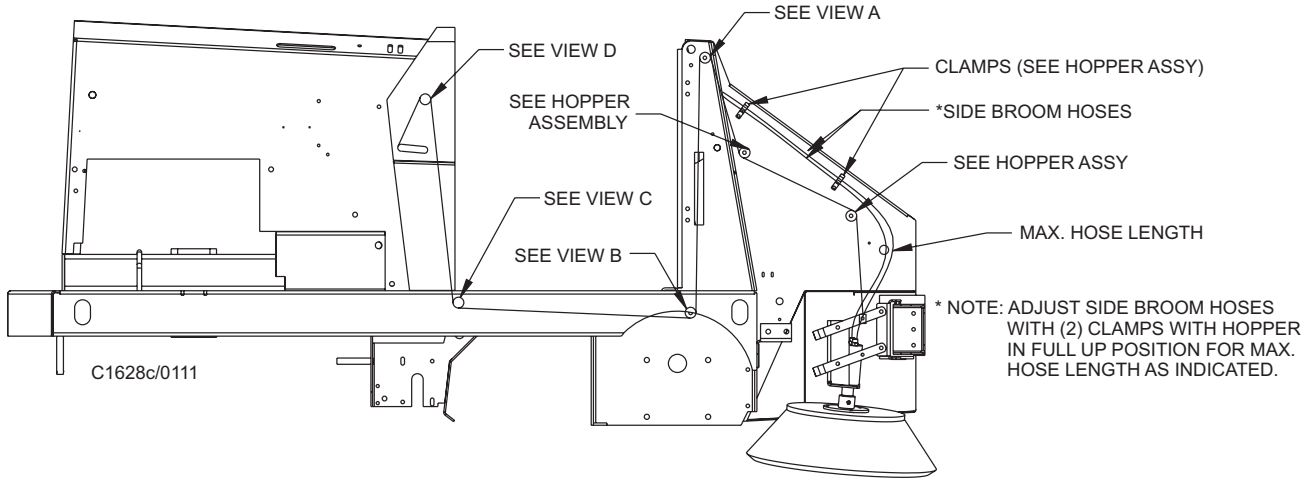
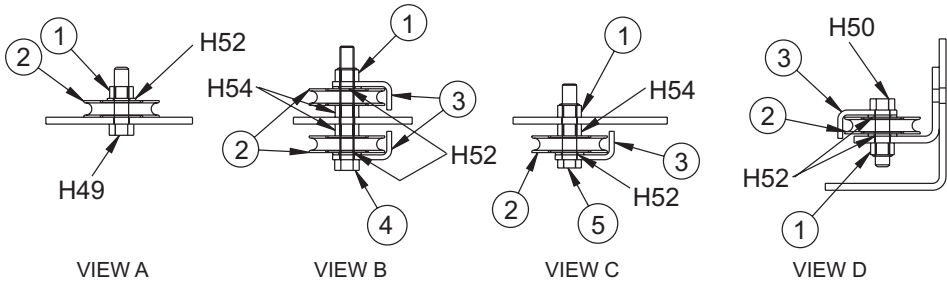
## SIDE BROOM PULLEY

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	2-95-04182	Nut, 3/8-16 Elastic Stop	4
2	7-60-00160	Pulley, Cable	Ref.
3	7-13-07130	Clip, Cable Retainer	Ref.
4	2-00-05384	Screw, 3/8-16 x 3.0 HHC	1
5	2-00-00235	Screw, 3/8-16 x 1.75 HHC	1
HARDWARE USED:			
H49	2-00-00209	Screw, 3/8-16 x 1.25 HHC	1
H50	2-00-00234	Screw, 3/8-16 x 1.50 HHC	1
H52	2-00-00402	Flat Washer, .750 x .390 x .094	4
H54	2-00-02360	Nut, 3/8-16 Hex	3

C1628c/0111





## SIDE BROOM LEVER

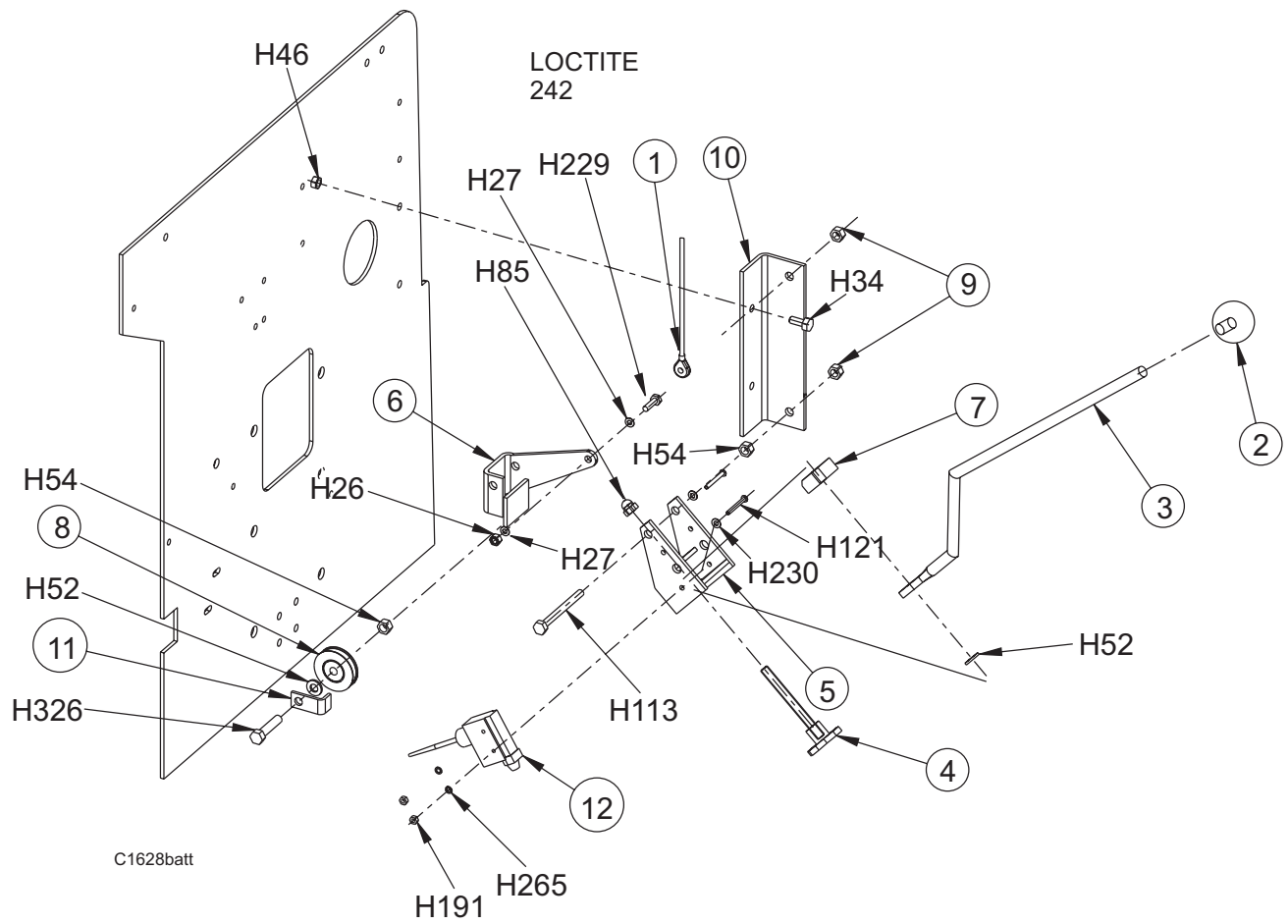
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-10-00030	Cable	Ref.
2	8-39-00003	Control Knob	1
3	7-66-00170	Lever Handle	1
4	8-39-00013	Knob Assembly	1
5	8-08-00773	Broom Lift	1
6	8-08-00866	Bracket , Angle Adjustment	1
7	8-50-03002	Block, Broom Adjustment	1
8	7-60-00160	Pulley, Cable	4
9	2-95-04182	Nut, 3/8-16 Elastic Stop	2
10	7-08-00851	Bracket , Angle Adjustment	1
11	7-13-07130	Clip, Cable Retainer	4
12	8-82-00058	Switch	1

### HARDWARE USED:

H26	2-00-00641	Nut, 1/4-20 Insert Fiber	1
H34	2-00-00208	Screw, 5/16-18 x .75 HHC	1
H46	2-00-00644	Nut, 5/16-18 Insert Fiber	1
H52	2-00-00402	Flat Washer, .750 x .390 x .094	1
H54	2-00-02360	Nut, Hex. 3/8-16	2
H85	2-00-00650	Nut, Cap 3/8-16 Low Crown	1
H113	2-00-03333	Screw, 3/8-16 x 3.75 HHC	1
H121	2-00-00090	Screw, #8-32 x 1.50 RHM	2
H191	2-00-00602	Nut, MSCA - Hex, 8-32	2
H229	2-00-01490	Screw, .25-20 x .875 HHC STL	2
H230	2-00-00466	Flat Washer, .625 x .203 x .031	2
H265	2-00-00506	Lock Washer, Int Tooth #8 Dia Screw	2
H326	2-00-00235	Screw HHC .375-16 x 1.75	1

C1628batt/9912



## SIDE BROOM LIFT SYSTEM

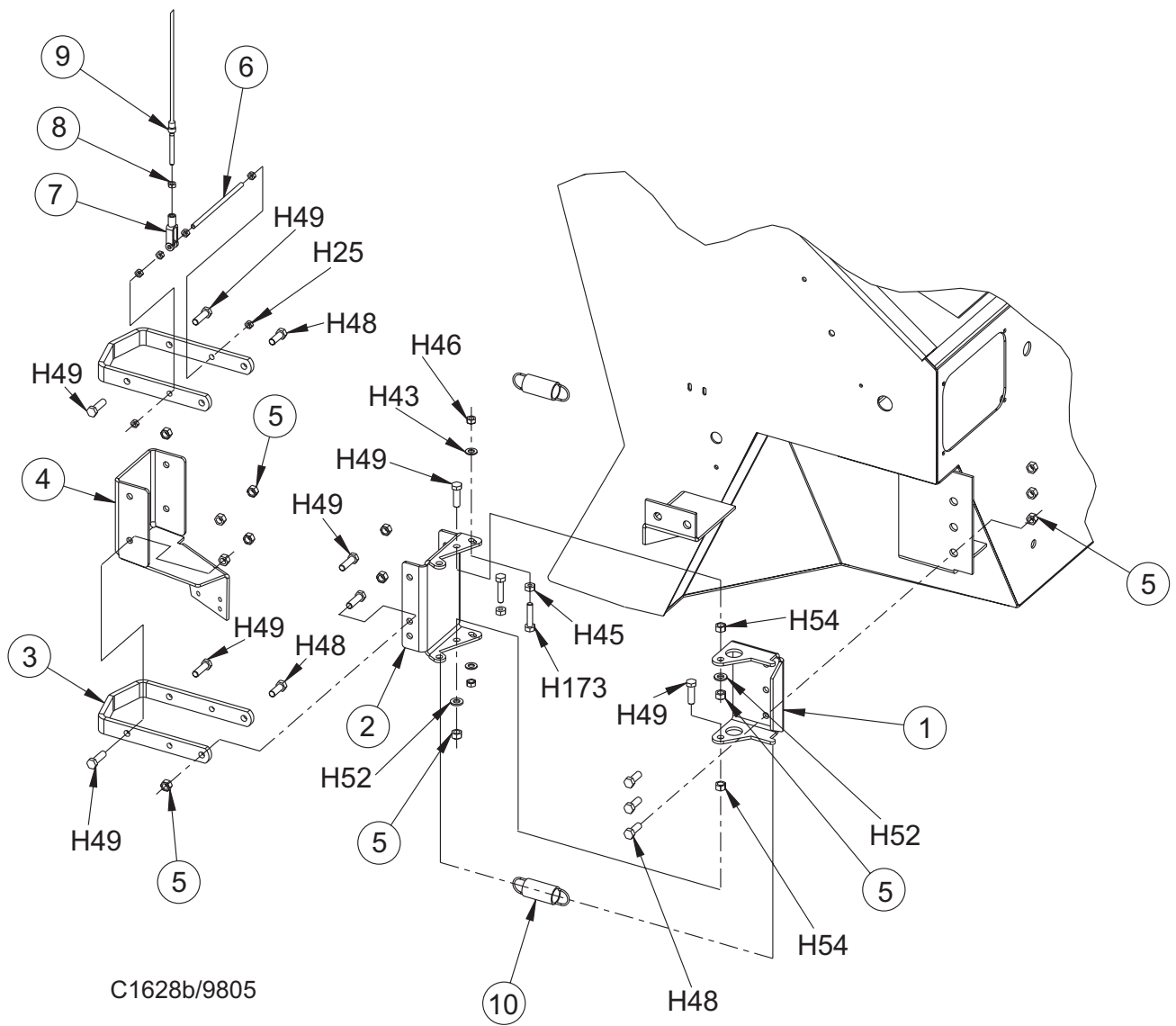
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-08-00790	Bracket, Side Broom	1
2	8-08-00846	Pivot Bracket, Side Broom	1
3	8-42-05136	Link, Side Broom Lift	2
4	7-08-00902	Bracket, Side Broom	1
5	2-95-04182	Nut, 3/8-16 Elastic Stop	13
6	7-66-00180	Rod, Threaded	1
7	8-14-01006	Clevis	1
8	2-95-01999	Nut, 1/4-28 Hex Jam	1
9	7-10-00030	Cable, Side Broom	Ref.
10	7-76-00101	Spring, Brush Load	2

### HARDWARE USED:

H25	2-00-00594	Nut, 1/4-20 x .437 x .218 Hex	6
H43	2-00-00409	Flat Washer, .687 x .344 x .062	2
H45	2-00-00585	Nut, 5/16-18 x .503 x .265 Hex	2
H46	2-00-00644	Nut, 5/16-18 Insert Fiber	2
H48	2-00-00233	Screw, 3/8-16 x 1.0 HHC	5
H49	2-00-00209	Screw, 3/8-16 x 1.25 HHC	8
H52	2-00-00402	Flat Washer, .750 x .390 x .094	4
H54	2-00-02360	Nut, 3/8-16 Hex	2
H173	2-00-02709	Screw, 5/16-18 x 1.50	2

C1628b/0203



C1628b/9805

## BROOM CHAMBER FLAPS & SEALS

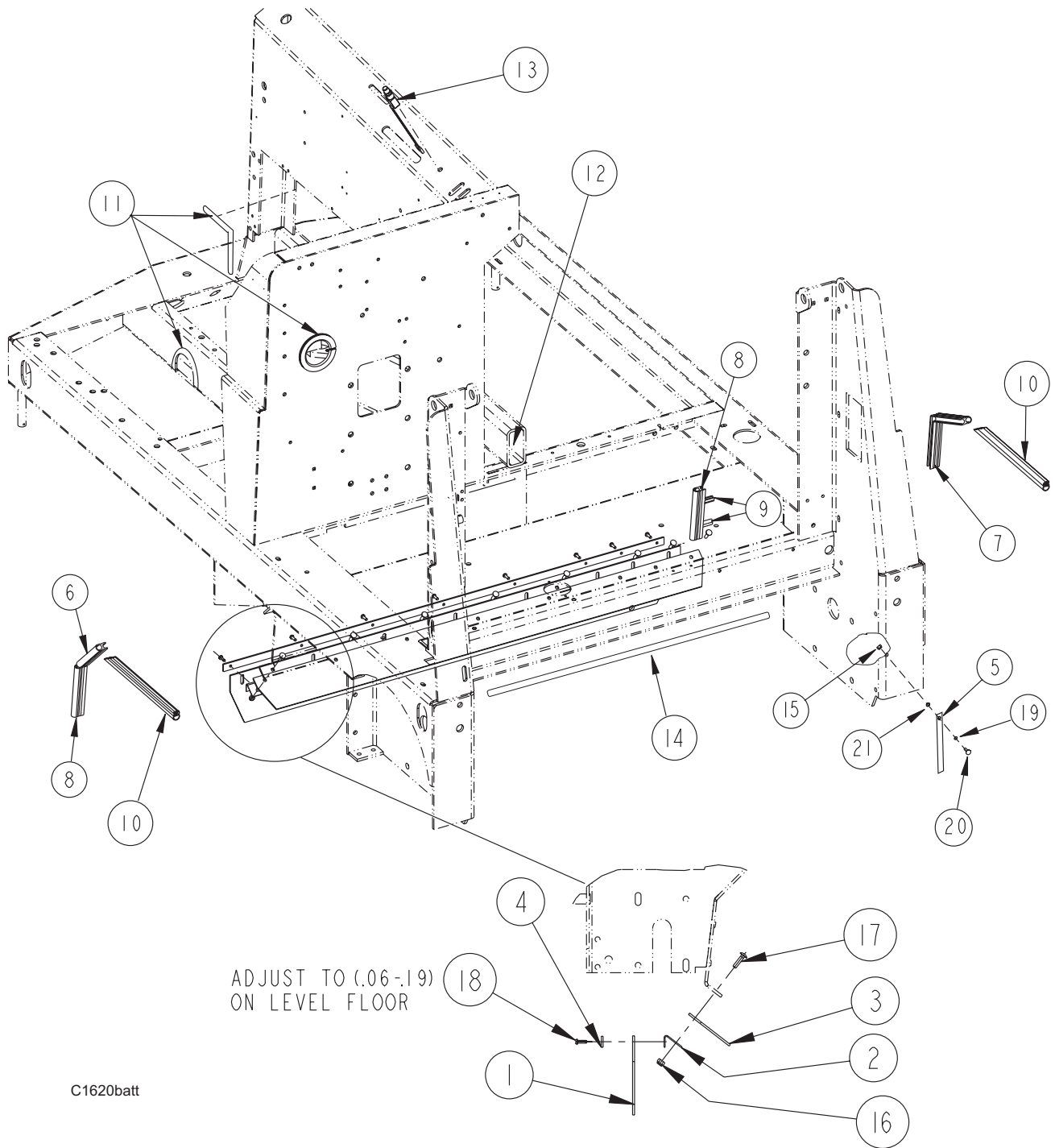
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1*	7-25-08071	Flap, Br. Ch. Outer	1
2	7-13-07167	Clamp, Br. Ch. Inner	1
3*	7-25-08072	Flap, Br. Ch. Inner	1
4	7-13-07168	Clamp, Br. Ch. Outer	1
5	8-79-00030	Static Strap	1
6	8-29-00232	Gasket	1
7	8-29-00234	Gasket	1
8	8-29-00233	Gasket	2
9	8-21-04048	Edging	2
10	8-29-00256	Gasket	1
11	7-21-03003	Edging	3
12	7-21-04031	Edging	2
13	8-82-00030	Horn Button	1
14	7-29-00240	Gasket	1
15	2-00-00644	Nut, .31-18 Fiber Insert	1
16	2-00-00641	Nut, 1/4 Fiber Insert	8
17	2-00-03575	Carriage Bolt, 1/4-20 x 3/4	8
18	2-00-03940	Screw, #10-24 x 1/2 T/C HH	8
19	2-00-01803	Washer, 1.063 x .031 x .063	1
20	2-00-02708	Screw, 5/16-18 X 1.0 HHC	1
21	2-00-03829	Lock Washer, Int/Ext Tooth	1

\*Assemble items 1 & 3 with the larger chamber to the left side of the machine.

C1620batt/9-03

# BROOM CHAMBER FLAPS & SEALS



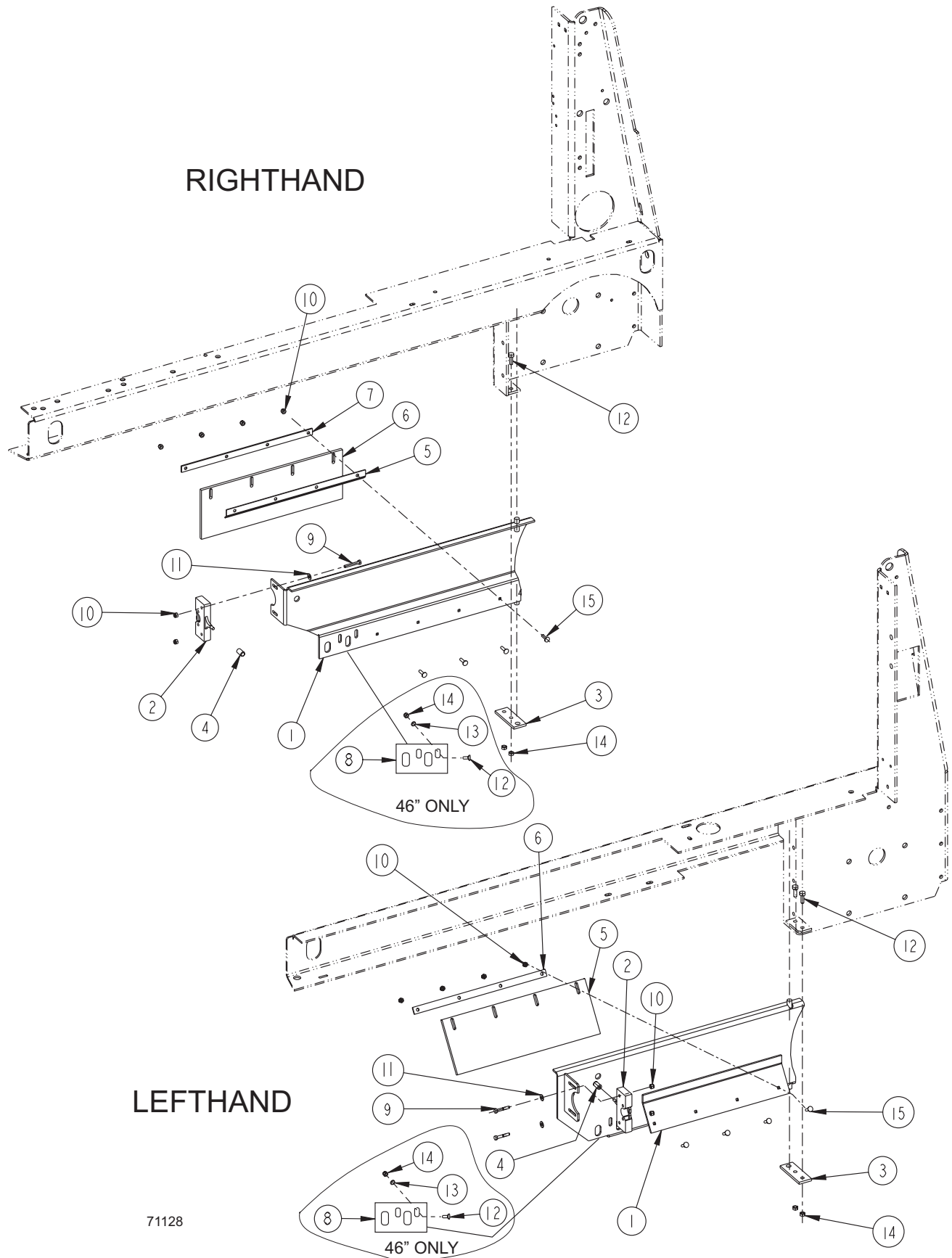
## BROOM CHAMBER DOORS

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-19-08057	Broom Door Weldment (RH)	1
1	7-19-08060	Broom Door Weldment (LH)	1
2	8-41-00052	Latch	2
3	7-57-05038	Pivot Retainer	2
4	8-39-00015	Latch Knob - Broom door	2
5	7-13-07171	Clamp	1
6	8-25-08212	Flap	2
7	8-13-07145	Clamp	2
8	7-57-05042	Pivot, Side Squeegee	2
9	2-00-00203	Screw, 1/4-20 x 1.50 HHC	4
10	2-00-00641	Nut, 1/4-20 Insert Fiber	12
11	2-00-03702	Washer, .625 x .281 x .063	4
12	2-00-02708	Screw, 5/16-18 x 1.0 HHM	4
13	2-00-00409	Flat Washer, .687 x .344 x .062	2
14	2-00-00644	Nut, 5/16-18 Insert Fiber	6
15	2-00-02196	Carriage Bolt, 1/4-20 x 1.0 RHM	8

71128/9-04





RIGHTHAND

LEFTHAND

71128

## HOPPER ASSEMBLY

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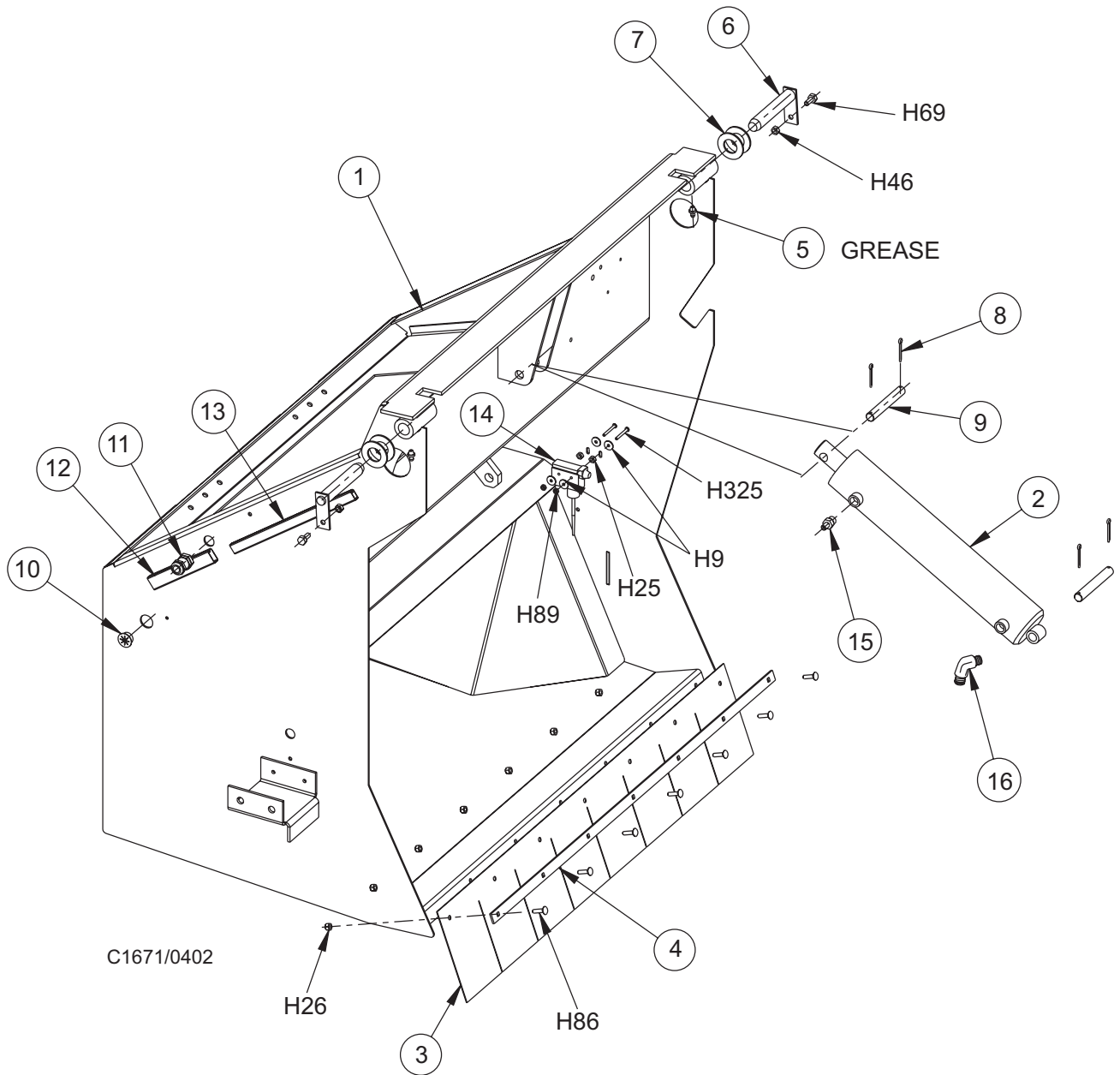
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-32-06018	Hopper	1
2	8-17-05022	Lift Cylinder	Ref.
3	7-25-08070	Hopper Flap	1
4	7-13-07173	Clamp - Hopper Flap	1
5	2-00-00566	Grease Zerk	2
6	7-55-08148	Pin - Hopper Pivot	2
7	2-00-05024	Washer	6
8	2-00-00776	Cotter Pin	4
9	8-55-08112	Pin - Cylinder	2
10	8-09-01082	Bushing - Star	1
11	8-09-01083	Bushing - Liquid Tight	1
12	7-20-06012	Duct 6"	Ref.
13	8-20-06036	Duct 12"	Ref.
14	8-82-00058	Switch	1
15	2-00-05054	Hyd Fitting	Ref.
16	2-00-04589	Hydraulic Fitting 90°	Ref.

### HARDWARE USED:

H9	2-00-00426	Flat Washer, .500 x .219 x .063	8
H25	2-00-00594	Nut, Hex. 1/4-20 x .437 x .218	8
H26	2-00-00641	Nut, 1/4-20 Insert Fiber	7
H46	2-00-00644	Nut, 5/16-18 Insert Fiber	2
H69	2-00-01255	Screw, 5/16-18 x .875 HHC	2
H86	2-00-03575	Carriage Bolt, 1/4-20 x .750	7
H89	2-00-01372	Nut, Fiber Insert #8-32 Steel	4
H325	2-00-00092	Screw, Ph.RHM #8-32 x 1.75 Zn.	4

C1671/0402

# HOPPER ASSEMBLY



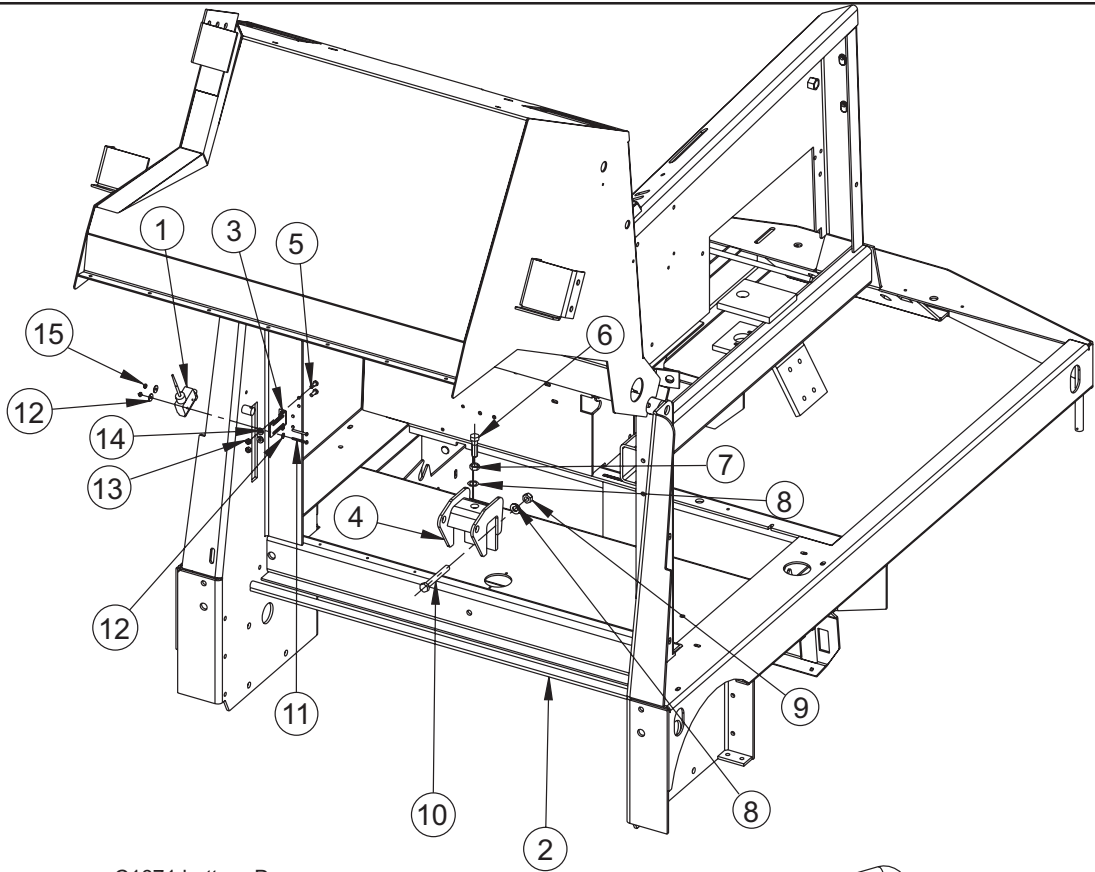
## HOPPER ASSEMBLY (cont.)

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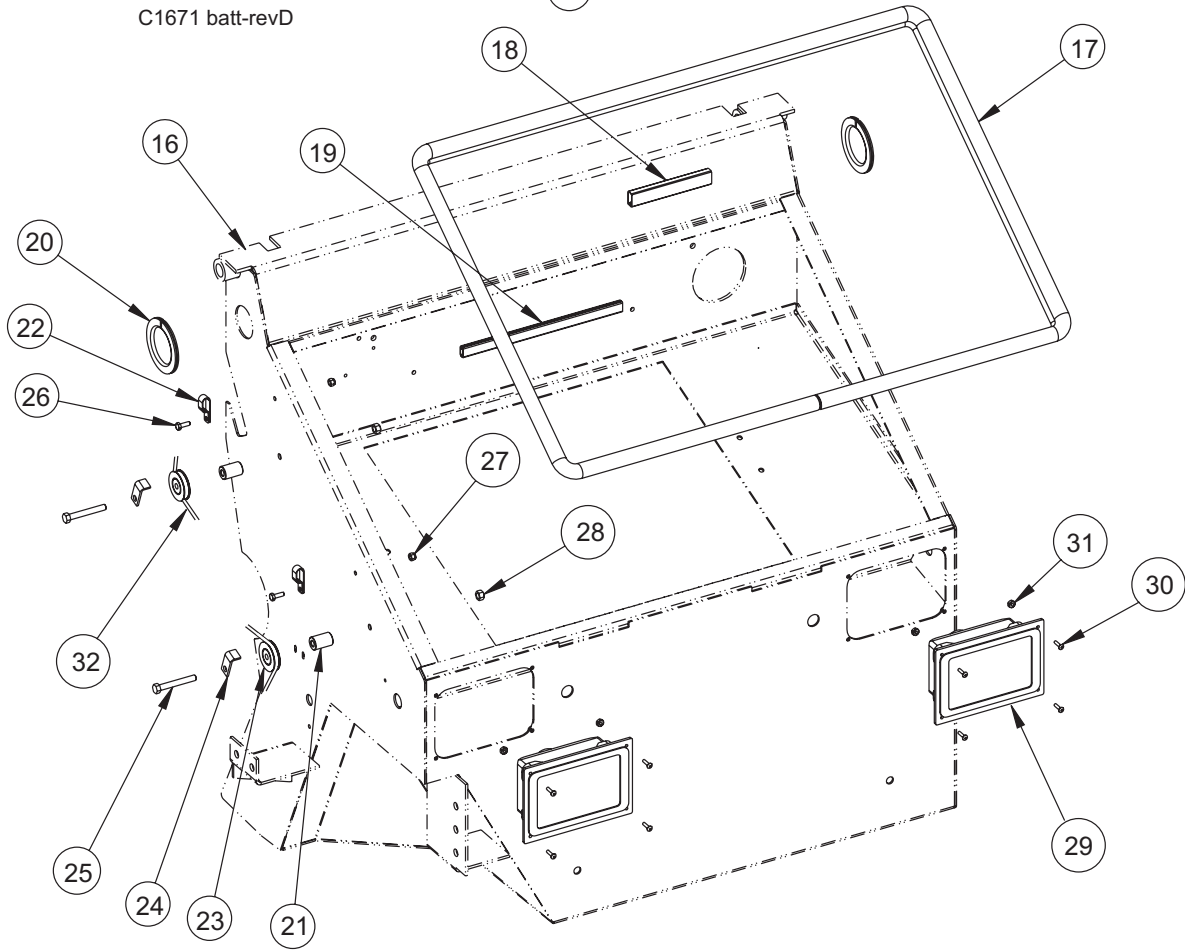
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-82-00058	Switch	1
2	7-29-00240	Gasket	1
3	7-08-02017	Bracket, Switch	1
4	7-81-00190	Support, Cylinder (Welded)	1
5	2-00-00221	Screw, 1/4-20 x .750 HHC	2
6	2-00-04967	Screw, 1/2-13 x 2.50 HHM	1
7	2-00-02371	Nut, 1/2-13 Steel Hex Jam	1
8	2-00-00405	Flat Washer, 1.063 x .531 x .094	1
9	2-00-04936	Nut, 1/2-13 Fiber Lock	1
10	2-00-02617	Screw, 1/2-13 x 3.50 HHC	1
11	2-00-00090	Screw, #8-32 x 1.50 RHM	2
12	2-00-00426	Flat Washer, .500 x .219 x .063	4
13	2-00-00594	Nut, 1/4-20 x .437 x .218	2
14	2-00-00518	Lock Washer, 1/4 Medium	2
15	2-00-01372	Nut, #8-32 Fiber Insert	2
16	7-32-06018	Hopper	1
17*	7-29-00333	Gasket, Hopper	1
18	7-20-06012	Duct, Wire (6")	1
19*	8-20-06036	Duct, Wire (12")	1
20	7-21-04022	Edging	2
21	7-75-01066	Spacer	2
22	2-00-04603	Clamp, 1/2 O.D. Double Hose	2
23	7-60-00160	Pulley, Cable	2
24	7-13-07130	Clip, Cable Retainer	2
25	2-00-02602	Screw, 3/8-16 x 3.25	2
26	2-00-00221	Bolt, 1/4-20 x .75 Fin. Hex Head	2
27	2-00-00641	Nut, 1/4-20 Insert Fiber	2
28	2-95-04182	Nut, 3/8-16 Hex Stop	2
29	8-40-05052	Headlight	2
30	2-00-04795	Screw, 10-24 x .75	8
31	2-00-00594	Nut, Hex. 1/4-20 x .437 x .218	4
32	7-10-00030	Cable, Side Broom	1

C1671batt-revD/6-05

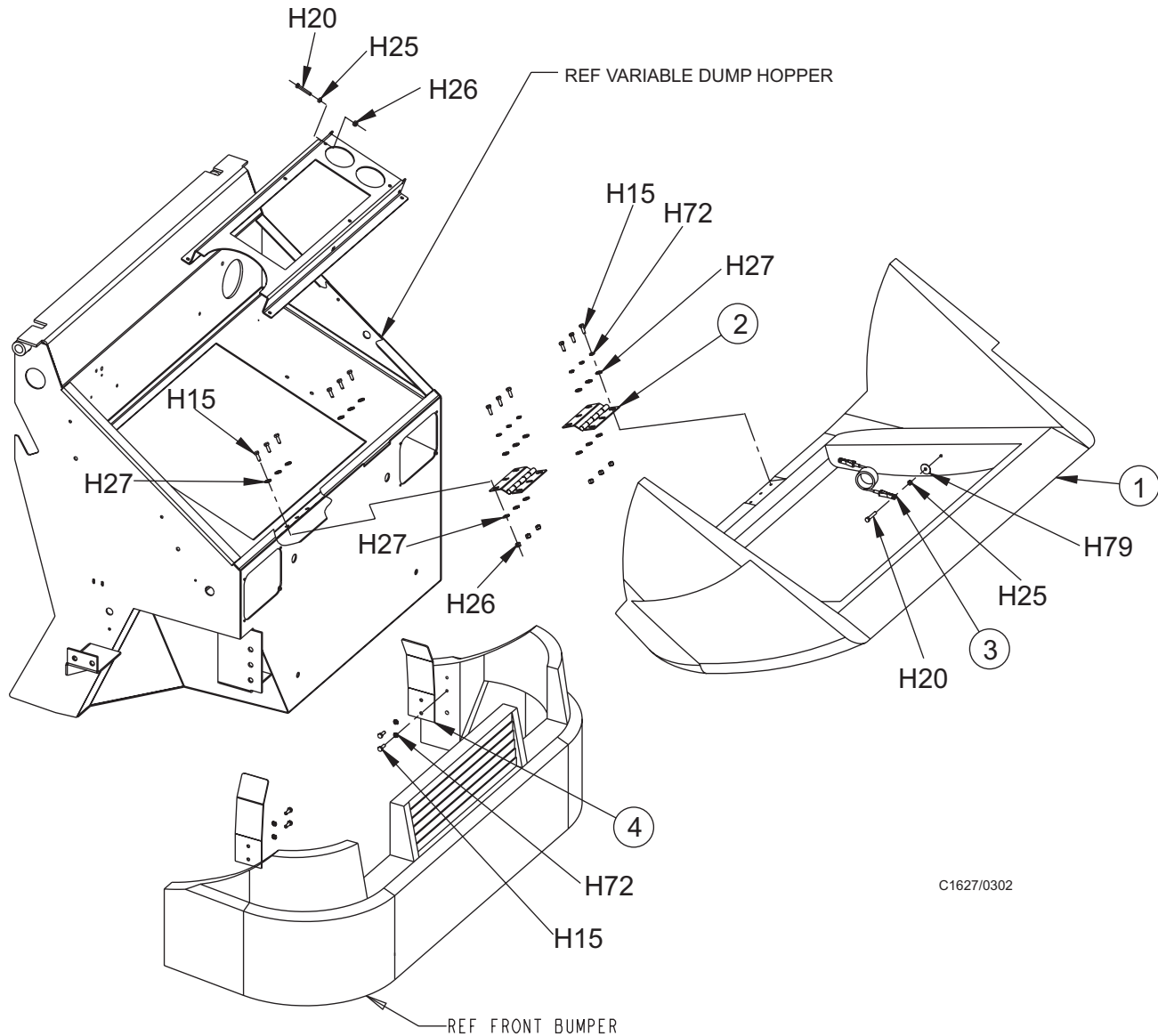
# HOPPER ASSEMBLY (cont.)



C1671 batt-revD



# HOPPER LID/COVER



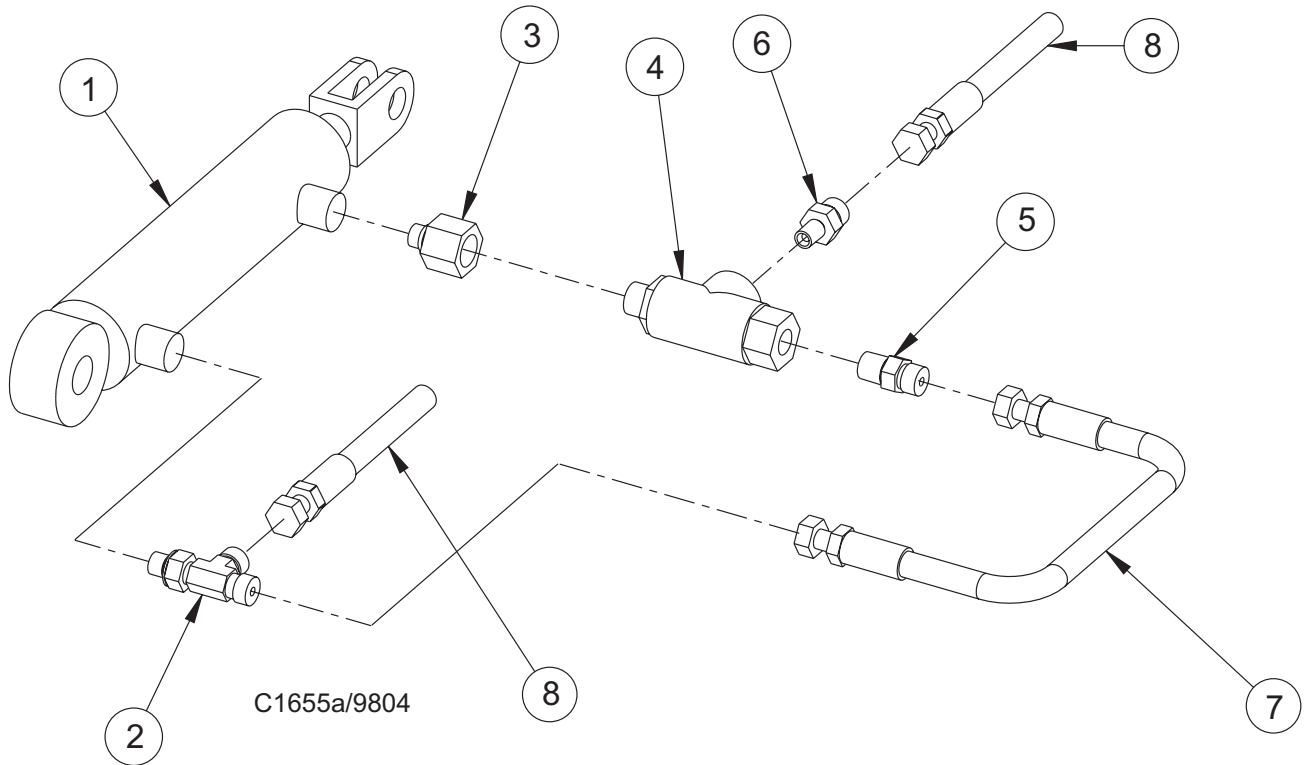
C1627/0302

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1*	7-16-07411	Cover, Hopper	1
2	7-32-00039	Hinge, Hopper	2
3	8-10-00027	Cable	1
4	7-41-00035	Latch, Hopper Cover	2
<b>HARDWARE USED:</b>			
H15	2-00-00221	Screw, 1/4-20 x .75 HHC	13
H20	2-00-00203	Screw, 1/4-20 x 1.50 HHC	2
H25	2-00-00594	Nut, Hex 1/4-20 x .437 x .218	2
H26	2-00-00641	Nut, 1/4-20 Insert Fiber	7
H27	2-00-03702	Washer, .625 x .218 x .063	18
H72	2-00-00518	Lock Washer, Helical Spring	10
H79	2-00-01676	Flat Washer, 1.062 x .265 x .062	1

\*If you are ordering a replacement cover, you must also order: 1 of 8-18-00528 (Alto decal)

C1627/0302

## HOPPER DUMP DOOR CYLINDER



<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-17-05011	Lift Cylinder	1
	7-70-00021	Cylinder Seal Kit (service part)	
2	2-00-04927	Fitting, 9/16-20 X 9/16-18 Tee	1
3	2-00-04994	Fitting, Male Connector	1
4	8-88-00045	Pilot Check	1
5	2-00-04997	Fitting, ORS NPT Adapter (#4-1/4)	1
6	2-00-05054	Fitting, 9/16-18 to 3/8-18 Adapter	1
7	8-33-02178	Hose, #4 ORS STR Ends (15")	Ref
8	8-33-02278	Hose, #4 ORS STR Ends (130")	Ref

C1655a/9804

## HOPPER DUMP DOOR

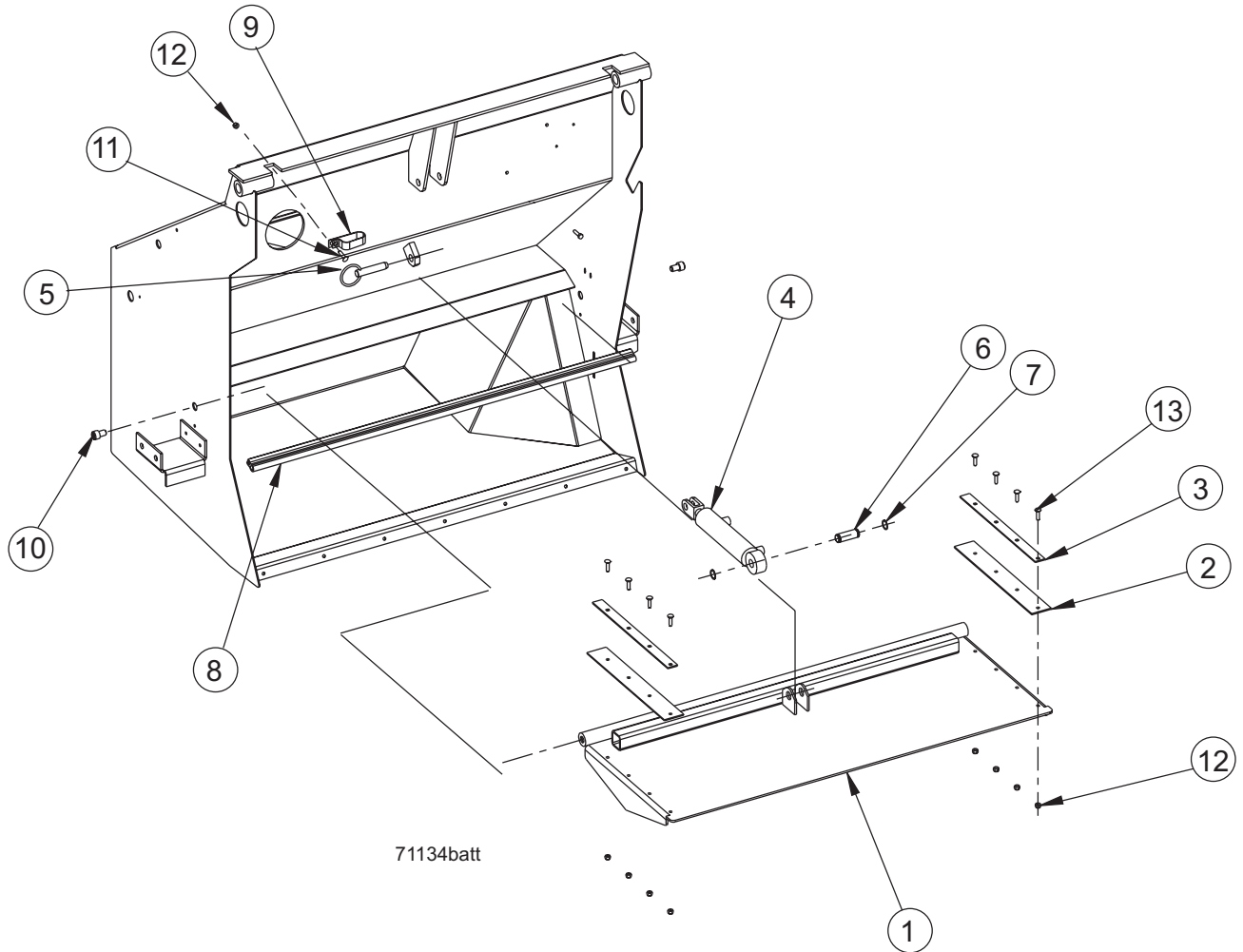
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-19-08056	Door , Hopper (Welded)	1
2	8-68-05087	Seal, Dump Door	2
3	8-13-07140	Clamp, Door Seal	2
4	7-17-05011	Cylinder	Ref.
5	7-55-08121	Pin, Door Cylinder	1
6	8-55-08123	Pin, 3/7 Dia.	1
7	2-00-00540	Retaining Ring, 3/4 Dia.	2
8	7-29-00237	Gasket, Dump Door	1
9	2-00-04603	Clamp	1
10	7-23-03116	Screw, Special	2
11	2-00-00205	Screw, 1/4-20 x 1.0 HHC	3
12	2-00-00641	Nut, 1/4-20 Fiber Insert	10
13	2-00-03575	Carriage Bolt, 1/4-20 x 3/4	8

71134batt/8-04



# HOPPER DUMP DOOR



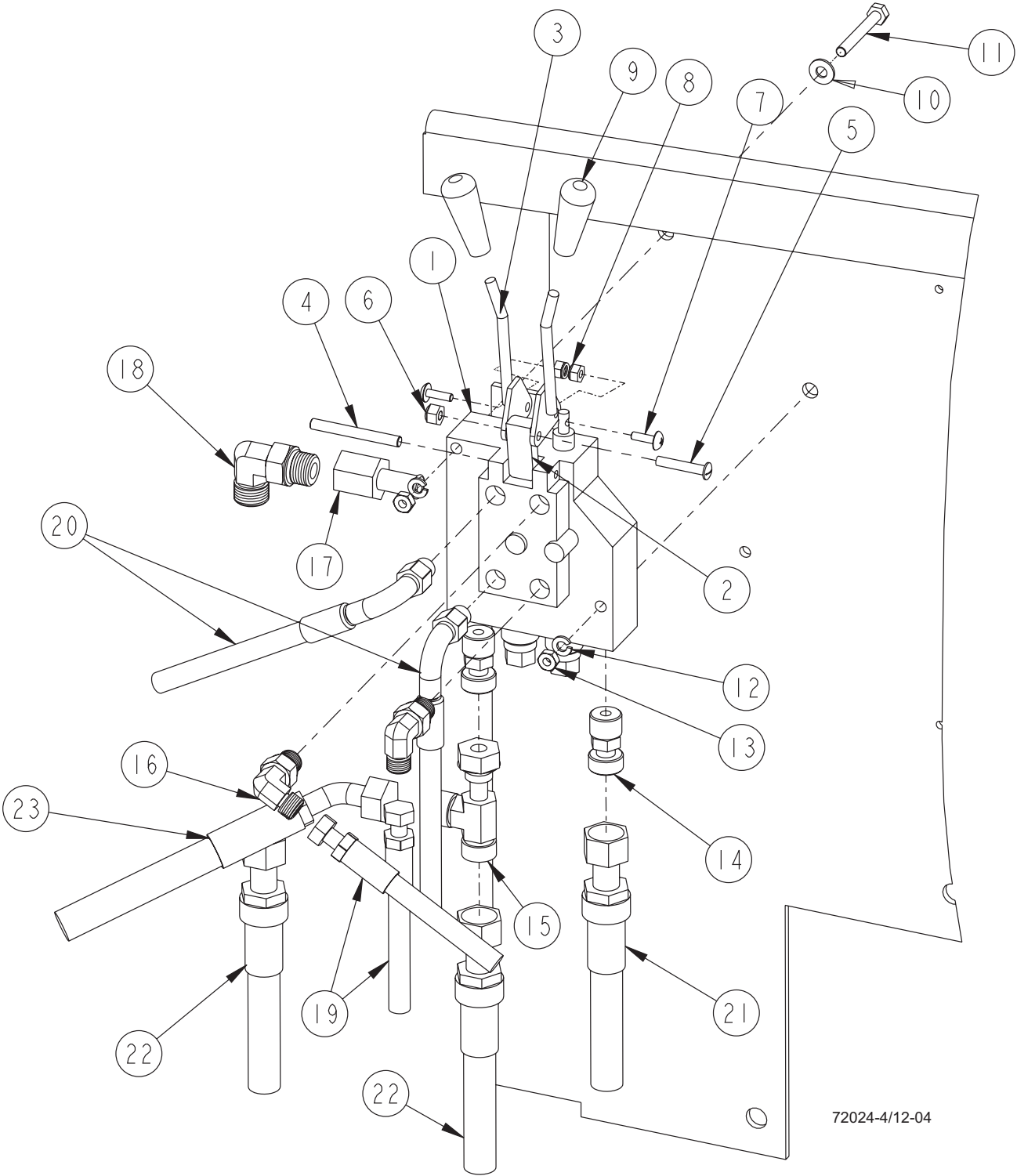
## HOPPER CONTROL VALVE

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-88-00053 0880-367	Control Valve Assy. Seal Kit (Service Part)	1
2	7-42-05127	Link, Valve Lever Pivot	1
3	7-41-05105	Lever (for valve 8-88-00053)	2
4	2-00-00868	Roll Pin (1/4 dia. x 7/8 lg.)	1
5	2-00-00074	Screw, #12-24. RH Philips, 1.25 LG	1
6	2-00-00637	Nut, #12-24 Fiber Insert Hex	1
7	2-00-03062	Screw, #10-24 x .625 THM	2
8	2-00-01246	Nut, #10-24 Elastic Stop	2
9	7-31-06059	Handle	2
10	2-00-03702	Washer, .625 x .281 x .063	2
11	2-00-02589	Bolt, 1/4-20 x 2.0 Fin. Hex Head	2
12	2-00-00518	Lock Washer, 1/4 Helical Spring	2
13	2-00-00594	Nut, 1/4-20 Hex	2
14	2-00-04970	Fitting, #8 ORS - #8 SAE Connector	2
15	2-00-04928	Fitting, 13/16-16 x 13/16-16 Tee	1
16	2-00-04926	Fitting, 9/16-18 x 9/16-18 Elbow	2
17	2-00-06353	Sleeve, Power Beyond	1
18	2-00-04885	Fitting, 90° Elbow (O-Ring)	1
19	8-33-02278	Hose, #4 STR - STR (130")	Ref
20	7-33-02495	Hose, #4 STR - 90° (76")	Ref
21	7-33-02667	Hose, #8 STR - STR (48")	Ref
22	7-33-02666	Hose, #8 STR - 90° (48")	Ref
23	7-33-02668	Hose, #6 STR #4 - 45° #8 (30")	Ref

72024-4revC/12-04

HOPPER CONTROL VALVE

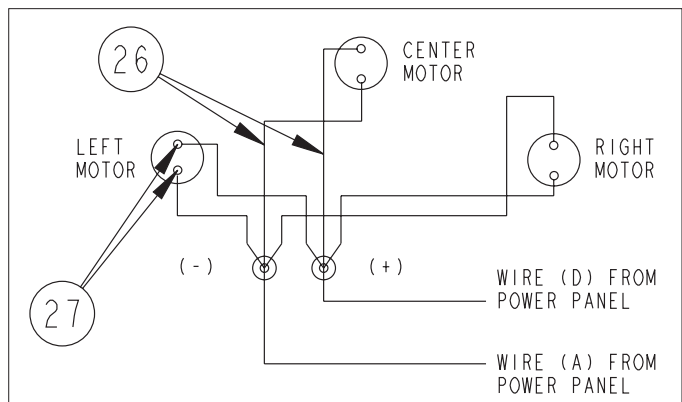
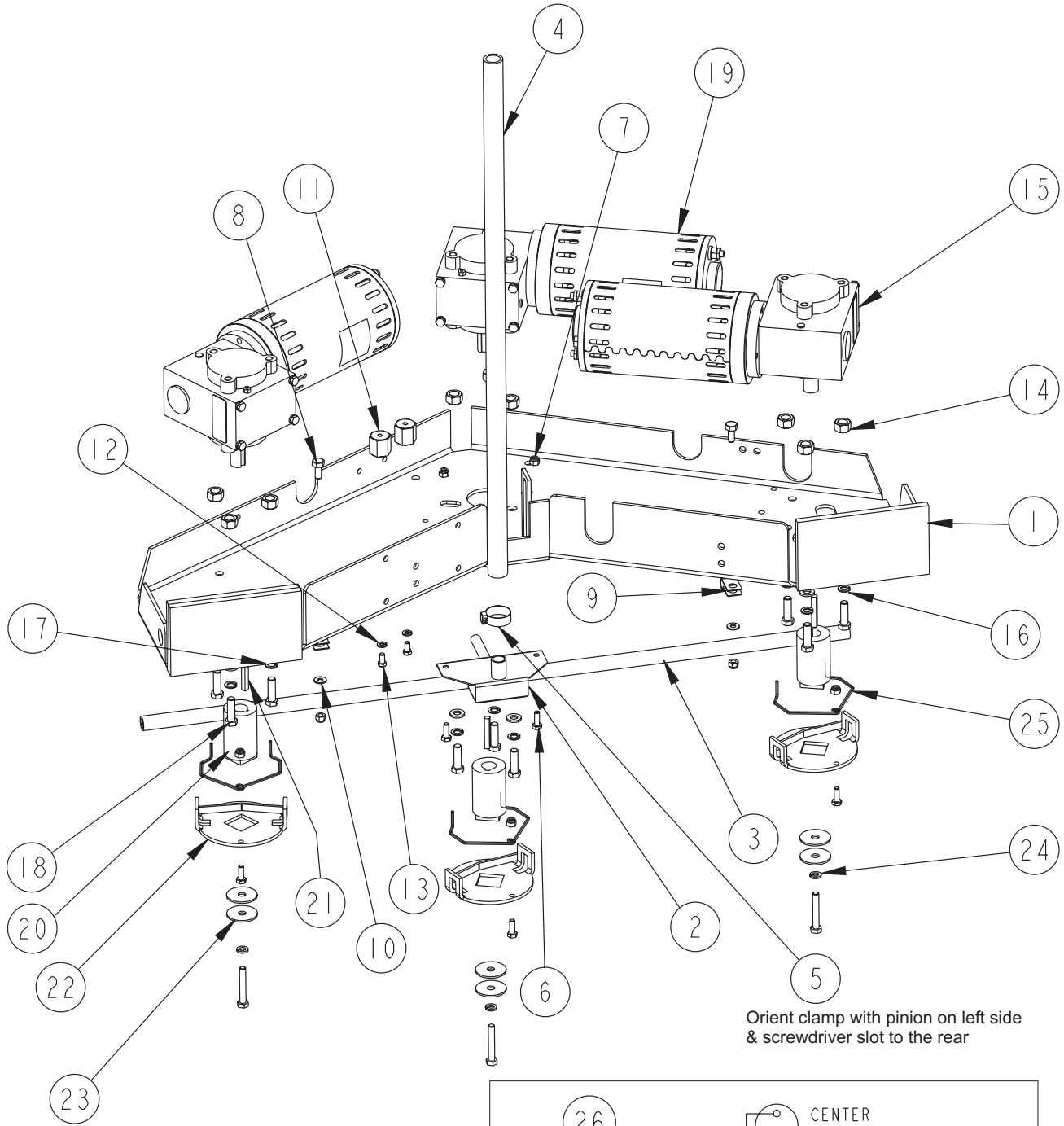


## SCRUB DECK (46")

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-27-07218	Brush Frame (46")	Ref.
2	7-48-00034	Manifold, Solution Feed	1
3	7-33-02361	Hose, Scrub Deck Water	2
4	7-33-02383	Hose, Solution Feed	1
5	2-00-02220	Clamp, Hose	1
6	2-00-00221	Screw, 1/4-20 x .75 HHC	5
7	2-00-00641	Nut, 1/4-20 Fiber Insert	7
8	2-00-00208	Screw, 5/16-18 x .75 HHC	2
9	2-00-04873	Clamp, Cable	2
10	2-00-03702	Washer, .625 x .281 x .063	2
11	8-35-00021	Isolator	2
12	2-00-00518	Lock Washer, 1/4 Helical Spring	2
13	2-00-00219	Bolt, 1/4-20 x 1/2 Fin. Hex Head	2
14	2-00-00596	Nut, 1/2-13 Hex	9
15	0785-089	Reducer Assy (36 VDC / Ratio 25 to 1)	3
16	2-00-00402	Flat Washer, .750 x .390 x .094	9
17	2-00-02310	Lock Washer, Helical Spring 3/8 Med	9
18	2-00-00209	Screw, 3/8-16 x 1.25 HHC	9
19	0782-144	Brush Motor	3
20	7-33-09042	Hub, Brush Drive	3
21	2-00-03761	Key-1/4 sq. x 1.75 Steel	3
22	7-03-04123	Arm, Brush Drive (Weldment)	3
23	2-00-04851	Washer, Engine Mount	6
24	2-00-00530	Lock Washer, 5/16 HS Med	3
25	7-41-00027	Latch, Brush Driver	3
26	7-90-07400-1	Wire, Interconnecting	6
27	2-00-04203	Terminal Boot	6

72077-1-2revB/9-04



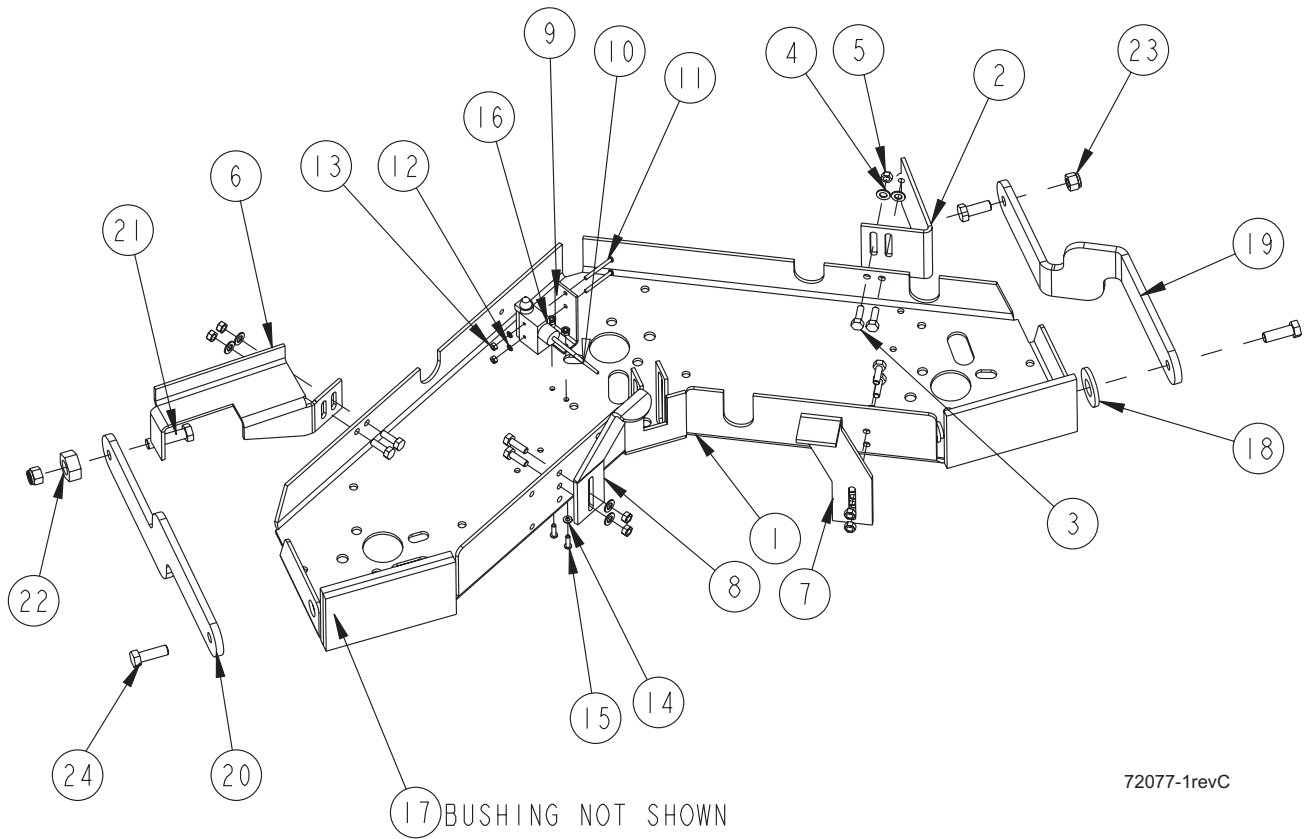
72077-1-2/9-04

**SCRUB DECK (46") - cont.**

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-27-07218	Brush Frame (46")	1
2	7-03-00053	Arm, Side Squeegee Lift (RH)	1
3	2-00-02708	Screw, 5/16-18 x 1.0 HHM	8
4	2-00-00409	Flat Washer, 687 x .344 x .062	8
5	2-00-00644	Nut, 5/16-18 Fiber Insert	8
6	7-03-00055	Arm, Side Squeegee Lift (LH)	1
7	7-78-05034	Stop, Scrub Deck (RH)	1
8	7-78-05025	Stop, Scrub Deck (LH)	1
9	7-08-00901	Bracket, Scrub Switch	1
10	8-82-00058	Switch	1
11	2-00-00092	Screw, #8-32 x 1.75 RHM	2
12	2-00-00506	Lock Washer, Int. Tooth	2
13	2-00-00602	Nut, 8-32 Hex	2
14	2-00-00426	Flat Washer, .500 x .219 x .063	2
15	2-00-00056	Screw, #10-24 x .75 RHM	2
16	2-00-01246	Nut, #10-24 Fiber Insert Hex	2
17	7-09-01144	Bushing, Scrub Deck	2
18	2-00-05460	Flat Washer, 2.0 OD x .88 ID	1
19	7-42-05143	Link, RH Brush Frame	1
20	7-42-05174	Link, LH Brush Frame	1
21	2-00-01778	Screw, 1/2-13 x 2.0 HHC	1
22	2-00-00617	Nut, 3/4-16 Fin. Hex	1
23	2-00-04936	Nut, 1/2-13 Elastic Lock	4
24	2-00-01254	Screw, 1/2-13 x 1.50 Hex Head	2

72077-1-1revC/1-05



## SIDE SQUEEGEES (46")

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-86-08035	Weldment, LH Bracket	1
2	7-77-00111	Squeegee, Rubber Side	1
3	7-13-07165	Strap	1
4	2-00-05320	Hair Pin	1
5	7-77-00114	Squeegee, Rubber Side	1
6	7-57-05042	Pivot, Side Squeegee	2
7	7-55-08151	Lock Up Pin	1
8	7-86-08036	Weldment, RH Bracket	1

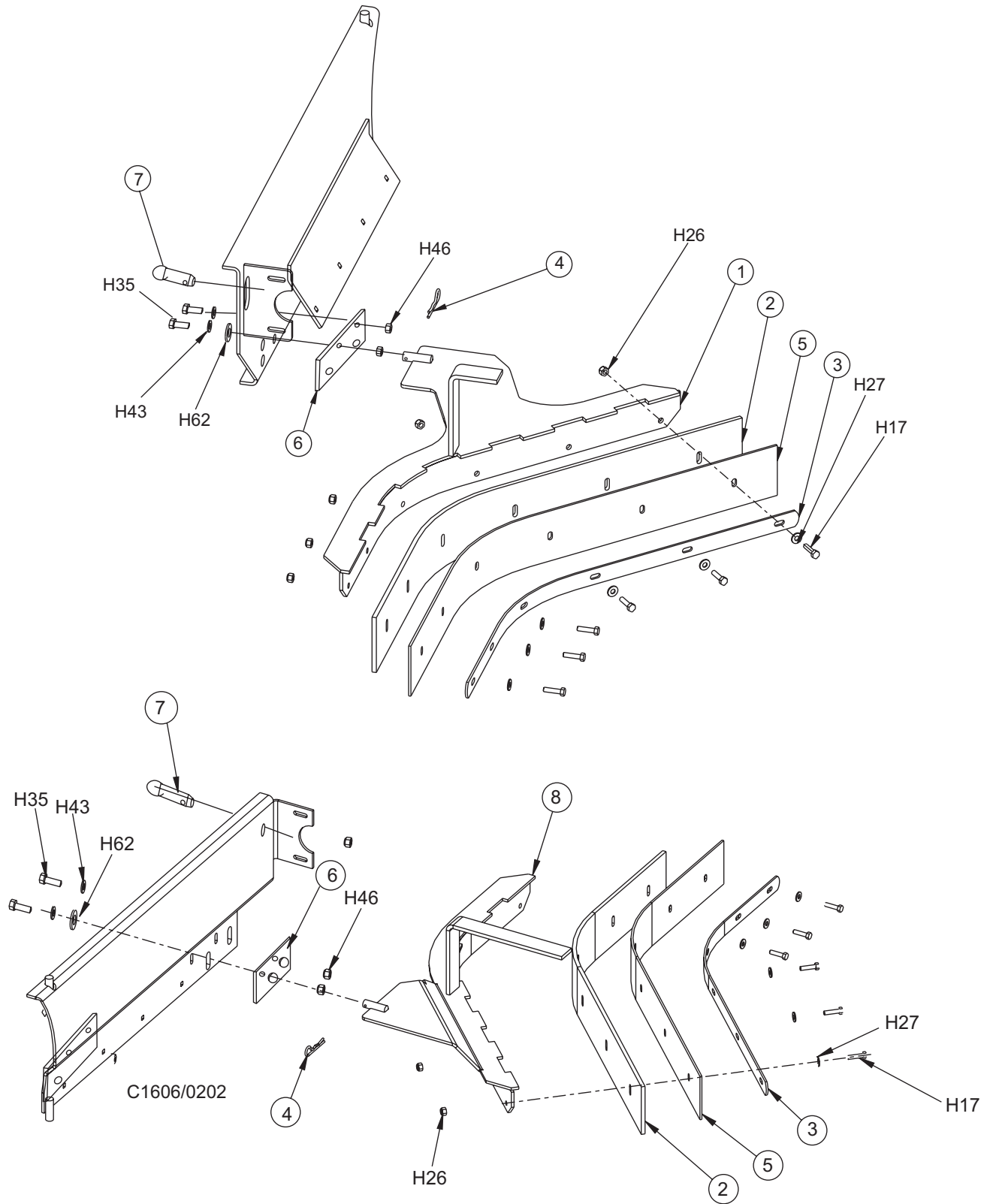
### HARDWARE USED:

H17	2-00-00205	Screw, 1/4-20 x 1.25 HHC	12
H26	2-00-00641	Nut, 1/4-20 Fiber Insert	12
H27	2-00-03702	Washer, .625 x .281 x .063	12
H35	2-00-02708	Screw, 5/16 - 18 x 1.0 HHM	4
H43	2-00-00409	Flat Washer, .687 x .344 x .062	4
H46	2-00-00644	Nut, 5/16-18 Fiber Insert	4
H62	2-00-00405	Flat Washer, 1.063 x .531 x .094	2

C1606/0202



# SIDE SQUEEGEES (46")



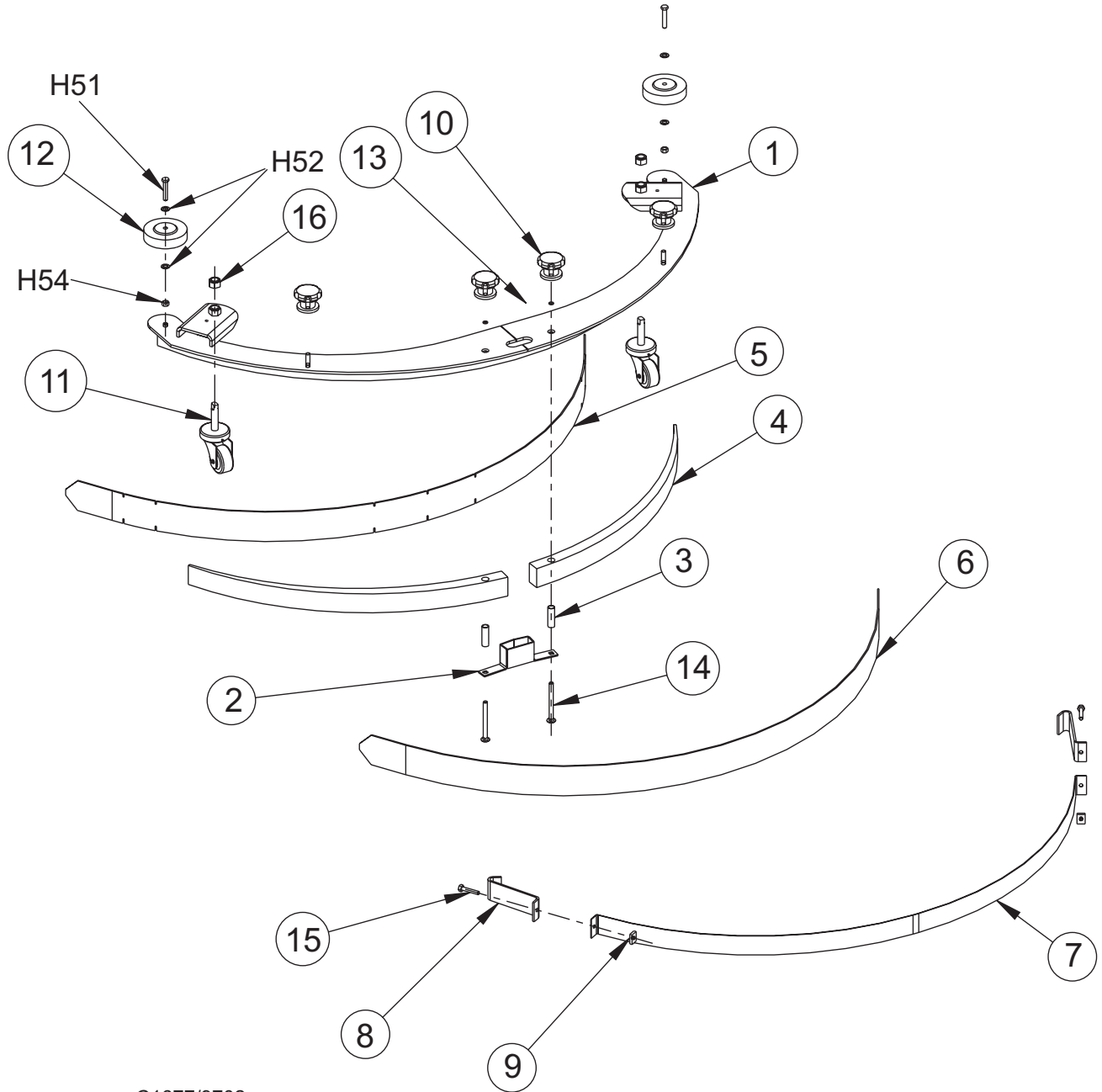
## REAR SQUEEGEE (46")

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-86-08038	Squeegee Weldment	1
2	7-20-06010	Duct, Squeegee Inlet	1
3	7-75-01164	Spacer, Bushing	2
4	7-75-01169	Spacer, Squeegee	2
5	7-77-00110	Squeegee, Rubber Inner	1
6	7-77-00109	Squeegee, Rubber Outer	1
7	7-79-00088	Strap, Squeegee Clamp	1
8	7-13-07157	Clamp, Squeegee End	2
9	7-13-07156	Clamp, Nut	2
10	7-39-00026	Knob, Squeegee	4
11	7-89-08073	Caster Assy.	2
12	2-14-00184	Wheel	2
13	2-00-04962	O-Ring	2
14	2-00-05343	Carriage Bolt, 3/8-16 x 3.0STL.	2
15	2-00-05344	Tap Bolt, 5/16-18 x 1.75 SS Hex	2
16	2-00-00615	Nut, .625-11 Fin. Hex	2
HARDWARE USED:			
H51	2-00-00216	Screw, 3/8-16 x 2.0 HHC	2
H52	2-00-00402	Flat Washer, .750 x .390 x .094	4
H54	2-00-02360	Nut, 3/4-16 STL. Hex	2

C1677/9802

# REAR SQUEEGEE (46")



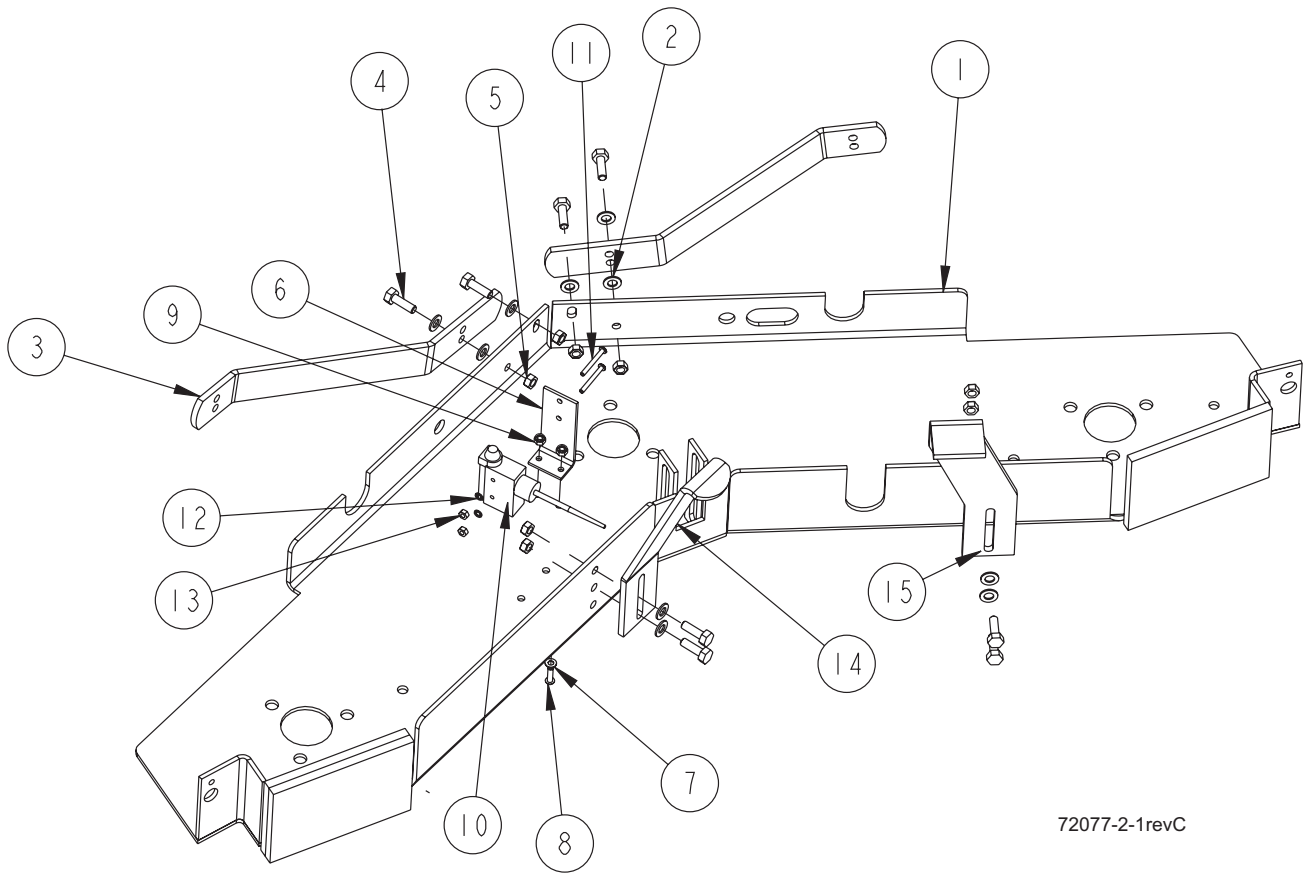
C1677/9702

## SCRUB DECK (53")

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-27-07219	Brush Frame (53")	1
2	2-00-00409	Flat Washer, .687 x .344 x .062	10
3	7-42-05132	Link, Side Squeegee (53")	2
4	2-00-02708	Screw, 5/16-18 x 1.0 HHM	8
5	2-00-00644	Nut, 5/16-18 Fiber Insert Hex	8
6	7-08-00901	Bracket, Scrub Switch	1
7	2-00-00426	Flat Washer, .500 x .219 x .063	2
8	2-00-00056	Screw, #10-24 x .75 RHM	2
9	2-00-01246	Nut, #10-24 Elastic Stop	2
10	8-82-00058	Switch	1
11	2-00-00090	Screw, #8-32 x 1.50 RHM	2
12	2-00-00506	Lock Washer, Int. Tooth	2
13	2-00-00602	Nut, 8-32 MSCR Hex	2
14	7-78-05033	Stop, Scrub Deck (LH)	1
15	7-78-05034	Stop, Scrub Deck (RH)	1

72077-2-1revD/2-05



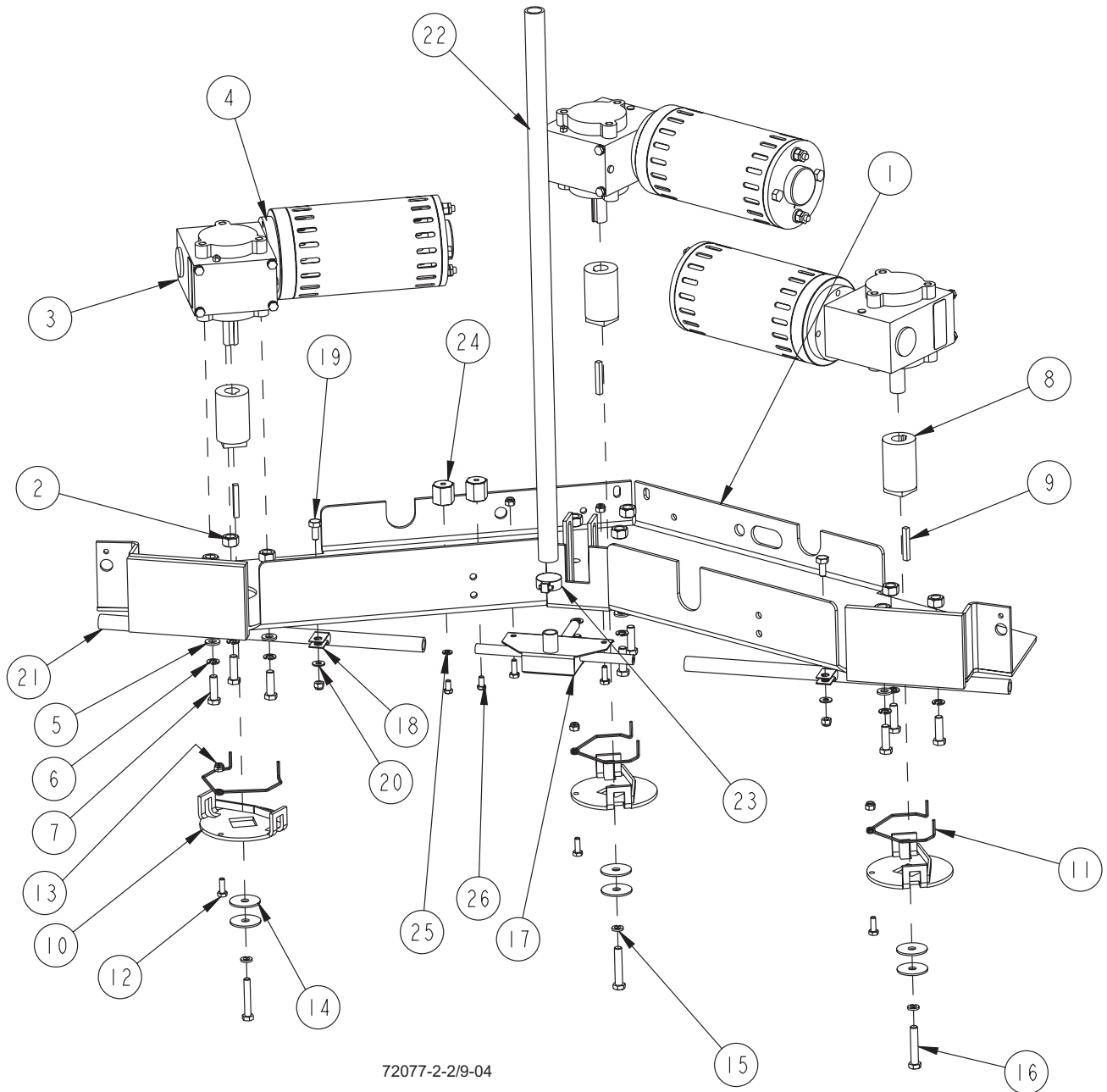
72077-2-1revC

**SCRUB DECK (53") - cont.**

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-27-07219	Brush Frame (53")	Ref.
2	2-00-00596	Nut, 1/2-13 Hex	9
3	0785-089	Reducer Assy (36 VDC / Ratio 25 to 1)	3
4	0782-144	Brush Motor	3
5	2-00-00402	Flat Washer, .750 x .390 x .094	9
6	2-00-02310	Lock Washer, Helical Spring 3/8 Med	9
7	2-00-00209	Screw, 3/8-16 x 1.25 HHC	9
8	7-33-09042	Hub, Brush Drive	3
9	2-00-03761	Key-1/4 sq. x 1.75 Steel	3
10	7-03-04123	Arm, Brush Drive (Weldment)	3
11	7-41-00027	Latch, Brush Driver	3
12	2-00-00221	Screw, 1/4-20 x .75 HHC	5
13	2-00-00641	Nut, 1/4-20 Fiber Insert	7
14	2-00-04851	Washer, Engine Mount	6
15	2-00-00530	Lock Washer, 5/16 HS Med	3
16	2-00-00216	Screw, 3/8-16 x 2.0 HHC	2
17	7-48-00034	Manifold, Solution Feed	1
18	2-00-04873	Clamp, Cable	2
19	2-00-00208	Screw, 5/16-18 x .75 HHC	2
20	2-00-03702	Washer, .625 x .281 x .063	2
21	7-33-02361	Hose, Scrub Deck Water	2
22	7-33-02383	Hose, Solution Feed	1
23	2-00-02220	Clamp, Hose	1
24	8-35-00021	Isolator	2
25	2-00-00518	Lock Washer, 1/4 Helical Spring	2
26	2-00-00219	Bolt, 1/4-20 x 1/2 Fin. Hex Head	2
27	7-90-07400-1	Wire, Interconnecting	6
28	2-00-04203	Terminal Boot	6

72077-2-2revB/9-04



72077-2-2/9-04

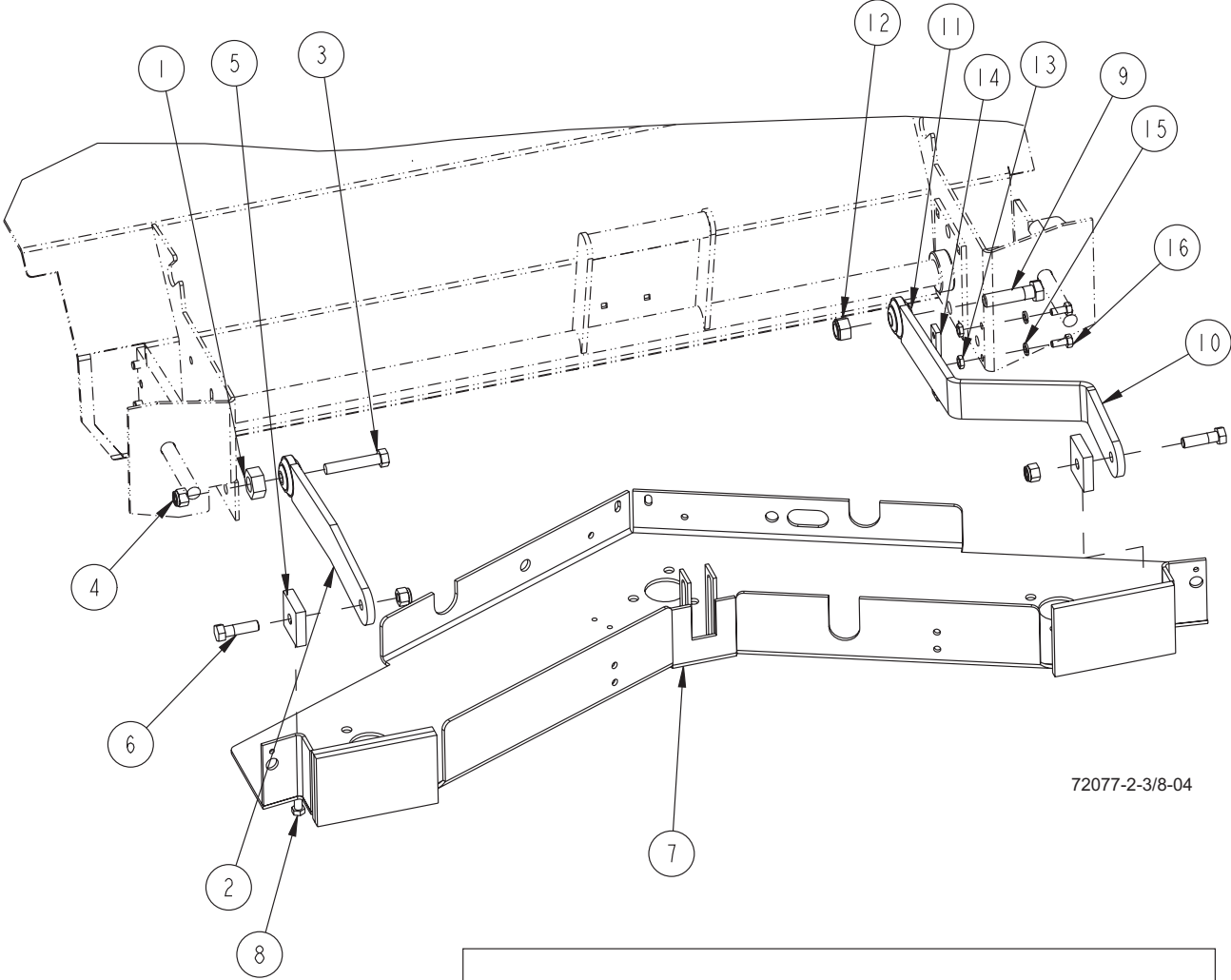
**SCRUB DECK (53") - cont.**

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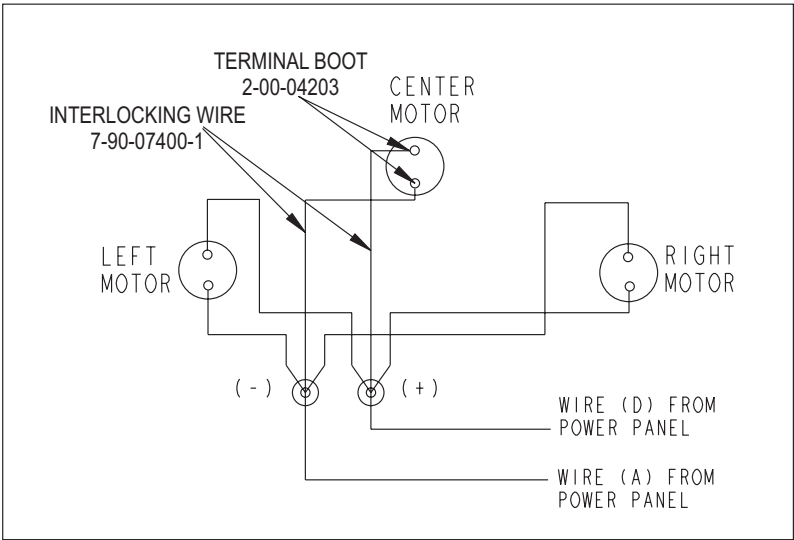
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	2-00-00617	Nut, 3/4-16 Hex	1
2	7-42-05147	Link, LH Brush Frame (53")	1
3	2-00-02682	Screw, 1/2-13 x 2.75 HHC	1
4	2-00-04936	Nut, 1/2-13 Elastic Lock	3
5	7-57-05039	Pivot, Brush Drive Side (53")	2
6	2-00-00241	Screw, 1/2-13 x 1.75 HHC	2
7	7-27-07219	Brush Frame (53")	Ref.
8	2-00-00233	Screw, 3/8-16 x 1.0 HHC	2
9	2-00-02622	Screw, 5/16-18 x 1.0 HHM	1
10	7-42-05135	Link, Brush Frame	1
11	2-00-02313	Lock Washer, 3/4 Helical Spring	1
12	2-00-00615	Nut, 5/8-11 Hex	1
13	2-00-02369	Nut, 3/8-16 Hex Jam	2
14	7-30-08016	Guide, Brush Frame (53")	1
15	2-00-00530	Lock Washer, 5/16 HS Med	2
16	2-00-00208	Screw, 5/16-18 x .75 HHC	2

72077-2-3/8-04





72077-2-3/8-04



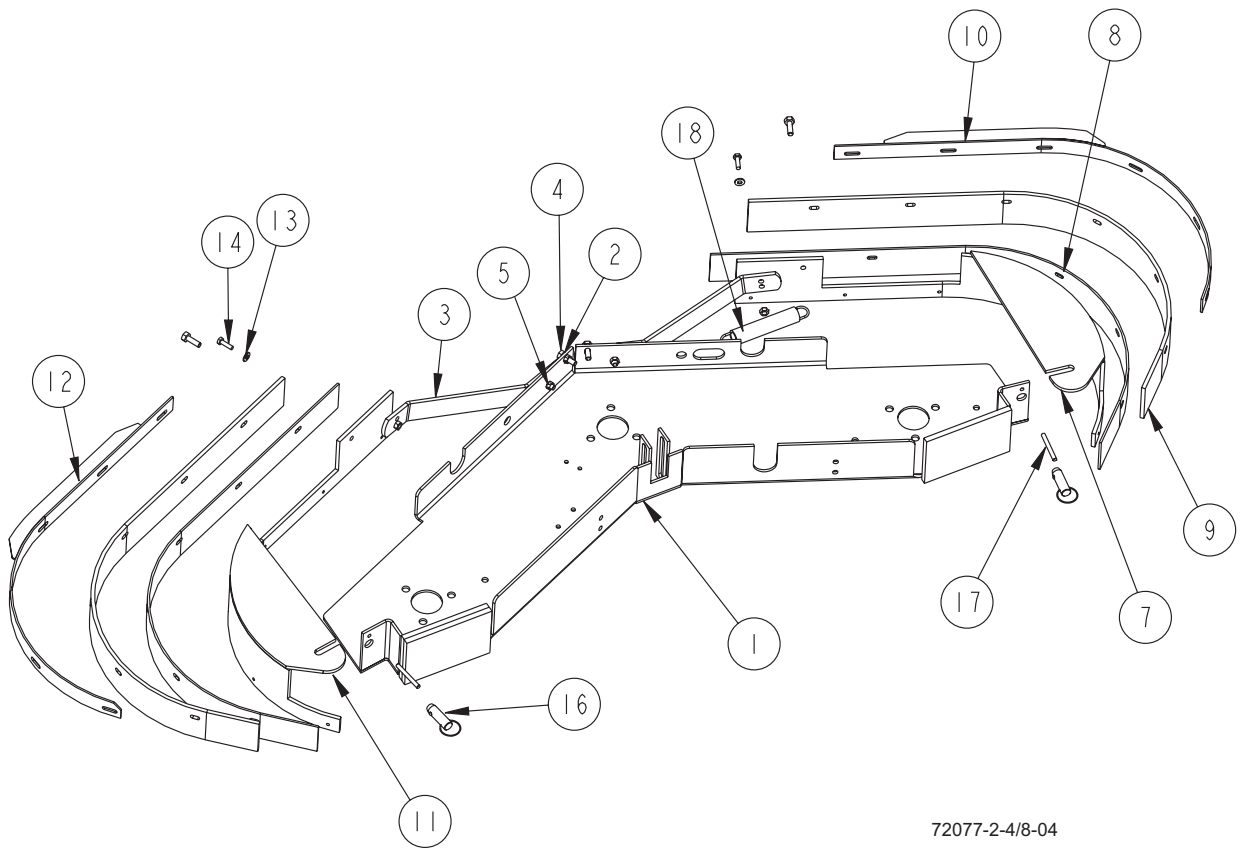
## SIDE SQUEEGEES (53")

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	7-27-07219	Brush Frame (53")	Ref.
2	2-00-00409	Flat Washer, .687 x .344 x .062	Ref.
3	7-42-05132	Link-Side Squeegee (53")	Ref.
4	2-00-02708	Screw, 5/16-18 x 1.0 Hex Head	Ref.
5	2-00-00644	Nut, 5/16-18 x 1.0 HHM	Ref.
6	2-00-00090	Screw, #8-32 x 1.50 RHM	2
7	7-86-08043	Tool, RH Side Squeegee (53")	2
8	7-77-00113	Rubber-Side Squeegee (Inner)	2
9	7-77-00112	Rubber-Side Squeegee (Outer)	2
10	7-13-07174	Clamp, RH Side Squeegee (53")	1
11	7-86-08042	Tool, LH Side Squeegee (53")	1
12	7-13-07175	Clamp, LH Side Squeegee (53")	1
13	2-00-03702	Washer, .625 x .281 x .063	2
14	2-00-01490	Screw, 1/4-20 x .875 HHC STL	2
15	2-00-00206	Screw, 5/16-18 x 1.0 HHC	2
16	7-55-08151	Pin, Lock Up	2
17	2-00-00868	Roll Pin (1/4 Dia x 7/8 Lg)	2
18	7-76-00114	Spring	1

72077-2-4/8-04

# SIDE SQUEEGEES (53")



72077-2-4/8-04

## REAR SQUEEGEE (53")

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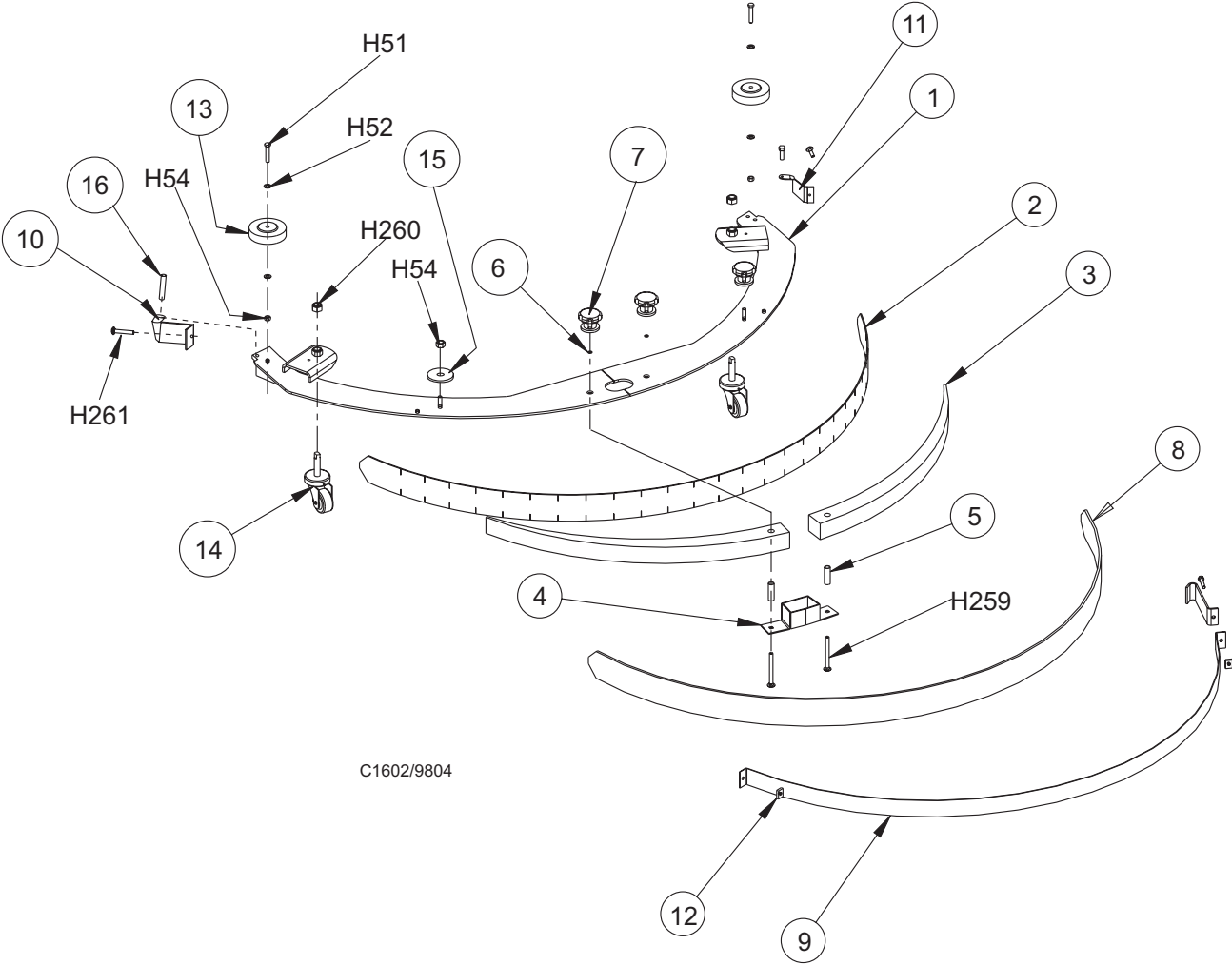
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-86-08049	Weldment, Squeegee	1
2	7-77-00115	Squeegee, Inner Rubber	1
3	7-75-01165	Spacer, Squeegee	2
4	7-20-06009	Duct, Squeegee	1
5	7-75-01164	Spacer, Bushing	2
6	2-00-04962	O-Ring	2
7	7-39-00026	Knob, Squeegee	2
8	7-77-00105	Squeegee, Outer Rubber	1
9	7-79-00098	Strap, Squeegee Clamp	1
10	7-13-07188	Clamp, LH Squeegee End	1
11	7-13-07187	Clamp, RH Squeegee End	1
12	7-13-07156	Clamp, Nut	2
13	2-14-00184	Wheel	2
14	7-89-08073	Caster	2
15	2-95-04689	Washer, Axle	2
16	2-00-03842	Pin, 1/4 x 1.0 Roll	2

### HARDWARE USED:

H51	2-00-00216	Screw, 3/8-16 x 2.0 HHC	2
H52	2-00-00402	Flat Washer, .75 x .39 x .94	2
H54	2-00-02360	Nut, 3/8-16 Hex	4
H259	2-00-05343	CarriageBolt, .38-16 x 3.5 SS	2
H260	2-00-00615	Nut, .63-22 Fin. Hex	2
H261	2-00-05344	Screw, HHM .313 - 18 x 1.75 SS	2

C1602/9804

REAR SQUEEGEE (53")



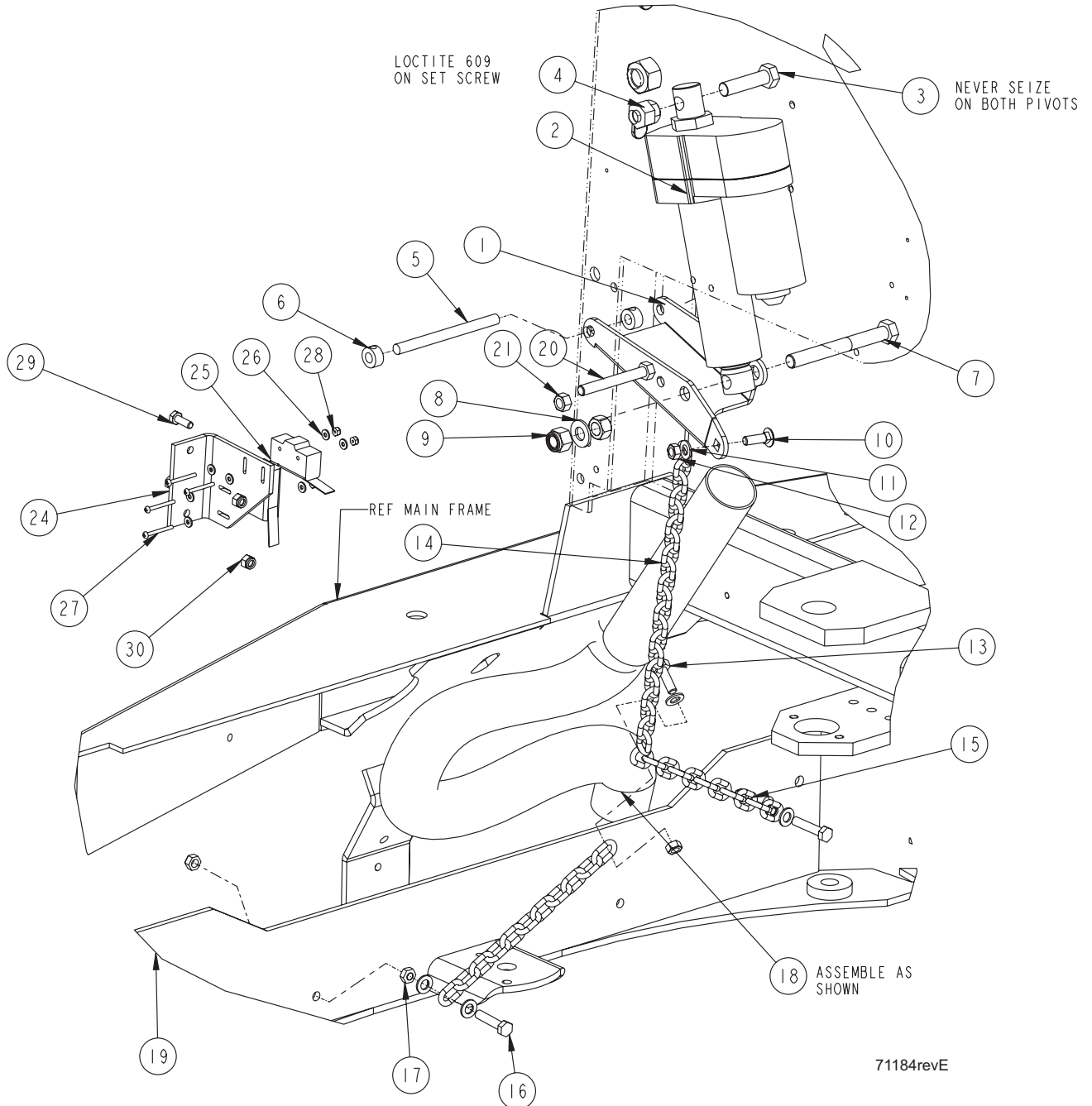
C1602/9804

## SQUEEGEE LIFT

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-41-05122	Lever, Squeegee Lift	1
2	0782-106	Actuator, Squeegee Lift (36V)	1
3	2-00-01778	Screw, 1/2-13 x 2.0 HHC	1
4	2-00-00596	Nut, Hex 1/2-13 x .750 x .437	2
5	7-66-00179	Rod	1
6	7-15-01022	Collar, Setscrew	2
7	2-00-04914	Screw, HHC 1/2-13 x 4.50	1
8	2-00-00405	Flat Washer, 1.063 x .531 x .094	1
9	2-00-04936	Nut, 1/2-13 Fiber Lock	1
10	2-00-00196	Carriage Bolt, 5/16-18 x 1.00	1
11	2-00-00409	Flat Washer, .687 x .344 x .062	6
12	2-00-00644	Nut, 5/16-18, Insert Fiber	4
13	2-00-02708	Screw, 5/16-18 x 1.00 HHM	1
14	7-13-05082	Chain, Squeegee Lift	1
15	7-13-05076	Chain, Squeegee Lift	2
16	2-00-00225	Screw, 5/16-18 x 1.50 HHC	2
17	2-00-00585	Nut, 5/16-18 Hex	2
18	7-33-02599	Hose, Squeegee	1
19	7-86-08068	Squeegee Support	REF
20	2-00-05384	Screw, 3/8-16 x 3.0 LG	1
21	2-95-04182	Nut, 3/8-16 Hex Stop	1
22	8-08-00834	Bracket	1
23	7-33-09062	Housing, Seat & Fuel	1
24	7-08-01315	Bracket	1
25	7-82-00008	Switch	2
26	2-00-00455	Flat Washer, .375 x .156 x .047	8
27	2-00-05060	Screw, #6-32 x 1.25 RHM	4
28	2-00-00645	Nut, Hex Fiber Insert #6-32	4
29	2-00-00221	Bolt, 1/4-20 x 3/4 Fin. Hex Head	2
30	2-00-00641	Nut, 1/4-20 Fiber Insert	2

71184revE/1-05



## SWING SQUEEGEE SUPPORT

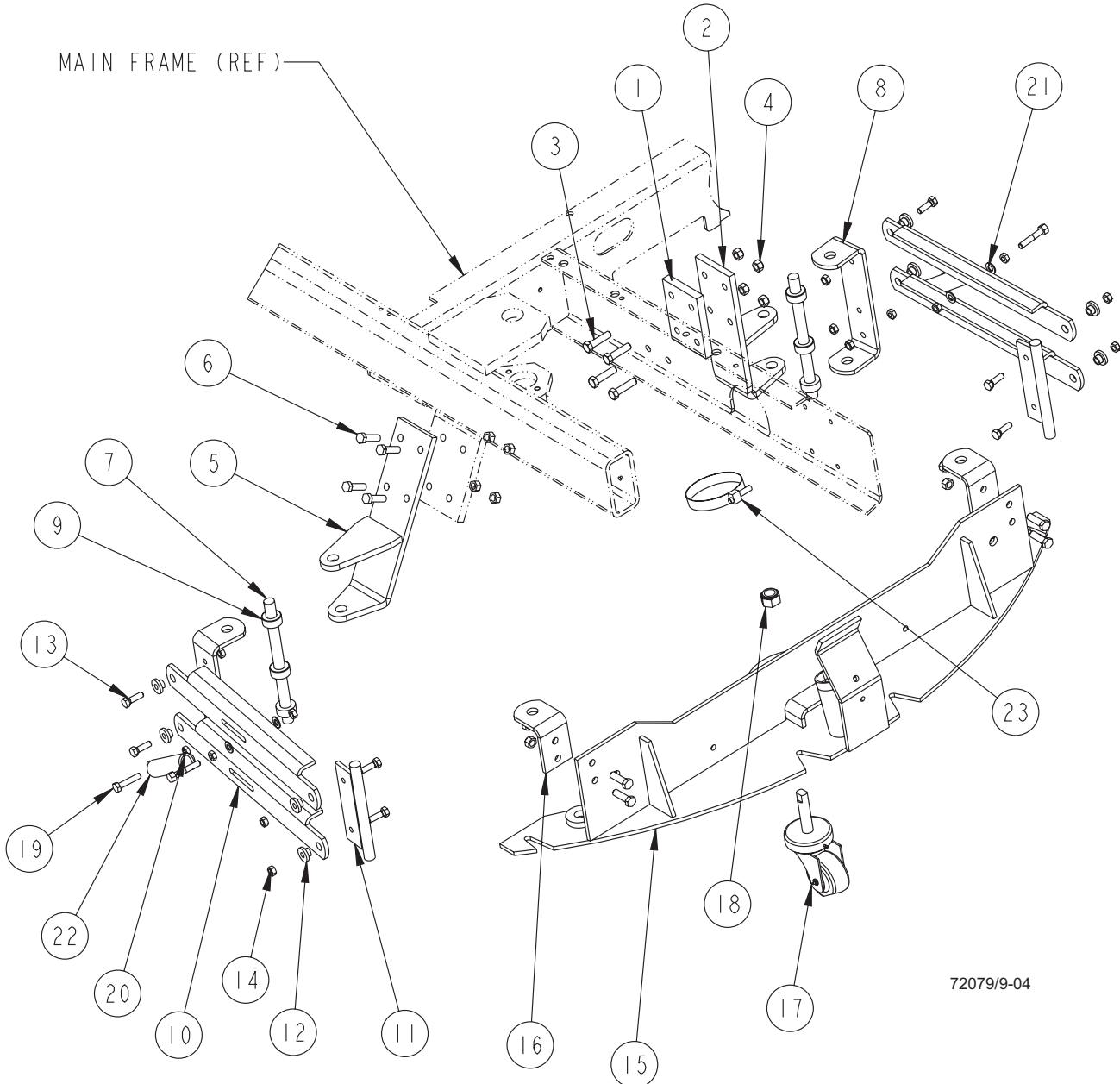
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-81-00288	Shim Plate	1
2	7-08-00853	Bracket, RH Assembly	1
3	2-00-00235	Screw, 3/8-16 x 1.75 HHC	4
4	2-95-04182	Nut, 3/8-16 Hex Stop	12
5	7-08-01102	Bracket, LH (welded assy.)	1
6	2-00-00209	Screw, 3/8-16 x 1.25 HHC	8
7	7-70-05174	Shaft	2
8	7-81-00185	Support, Squeegee	2
9	8-15-01002	Collar (w/Setscrew)	6
10	7-03-04156-1	Arm, Squeegee	4
11	7-55-08144	Rear Pin Assembly	2
12	7-09-01057	Bushing, Brush Lift	8
13	2-00-05356	Screw, 5/16-18 x 1.25 Hex Head	8
14	2-00-00644	Nut, 5/16-18, Fiber Insert Hex	8
15	7-86-08068	Support, Squeegee	1
16	7-08-00839	Bracket, Angle	2
17	7-89-08073	Caster	1
18	2-00-00615	Nut, 5/8-11 Hex	1
19	2-00-00225	Screw, 5/16-18 x 1.50 HHC	2
20	2-00-00585	Hex Nut, 5/16-18 x .500 x .265	4
21	2-00-00409	Flat Washer, .687 x .344 x .062	4
22	7-76-00114	Spring	2
23	7-13-07104	Clamp, Hose	1

72079revB/9-04



SWING SQUEEGEE SUPPORT



72079/9-04

## SOLUTION TANK

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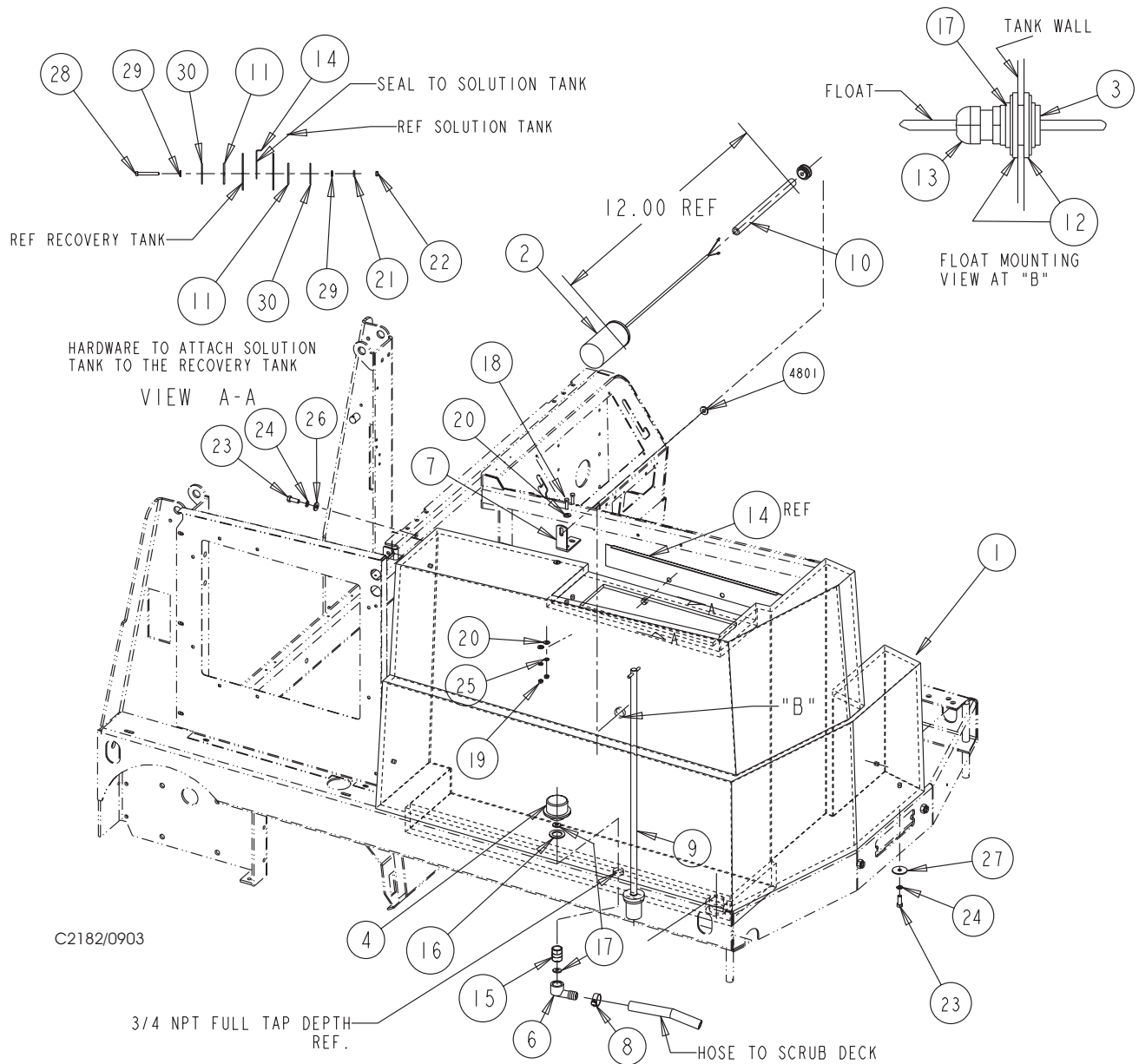
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1*	7-83-04206	Solution Tank	1
2	0775-217	Solution Float (Yellow)	1
3	7-09-01124	Bulk Head Fitting	1
4	7-24-04034	Strainer	1
5	2-95-03047	Washer	1
6	2-00-05132	Fitting, 90° Barb	1
7	7-57-05037	Bracket	1
8	2-00-02220	Hose Clamp	1
9	7-25-02095	Drain Plug	1
10	7-87-02188	Tube, Float Switch	1
11	2-00-05028	Gasket	2
12	7-29-00225	Gasket	2
13	7-09-01122	Bushing	1
14	7-30-05099	Guard, Solution Tank	1
15	2-95-02518	Pipe Nipple, Close 3/4 NPT	1
16	7-29-00225	Gasket	1
17	2-95-03047	Washer	3
18	2-00-00222	Screw, 1/4-20 x 1.25 HHM	2
19	2-00-00594	Nut, Hex 1/4-20 x .437 x .218	2
20	2-00-03702	Washer, .625 x .281 x .063	4
21	2-00-04687	Lock Washer, Helical Spring ¼ Med.	1
22	2-00-04688	Nut, 1/4-20 Hex	1
23	2-00-00232	Screw, .375-16 x .75 HHC	2
24	2-00-02310	Lock Washer, Helical Spring 3/8 Med.	2
25	2-00-00518	Lock Washer, Helical Spring	2
26	2-00-00402 (if needed)	Flat Washer, .750 x .391 x .093	1
27	2-00-04851	Washer, Engine Mount	1
28	2-00-05122	Screw-HHC, 1/4-20 x 2.0	1
29	2-00-04590	Washer	2
30	2-00-05236	Flat Washer, 2.00 x .281 x .063	2

\*If you are ordering a replacement tank, you must also order the following:

1 of 8-18-00540 (ATS 46/53 decal)(provides 2)

1 of 8-18-00548 (American-Lincoln Technology decal)(provides 2)

C2182/0903

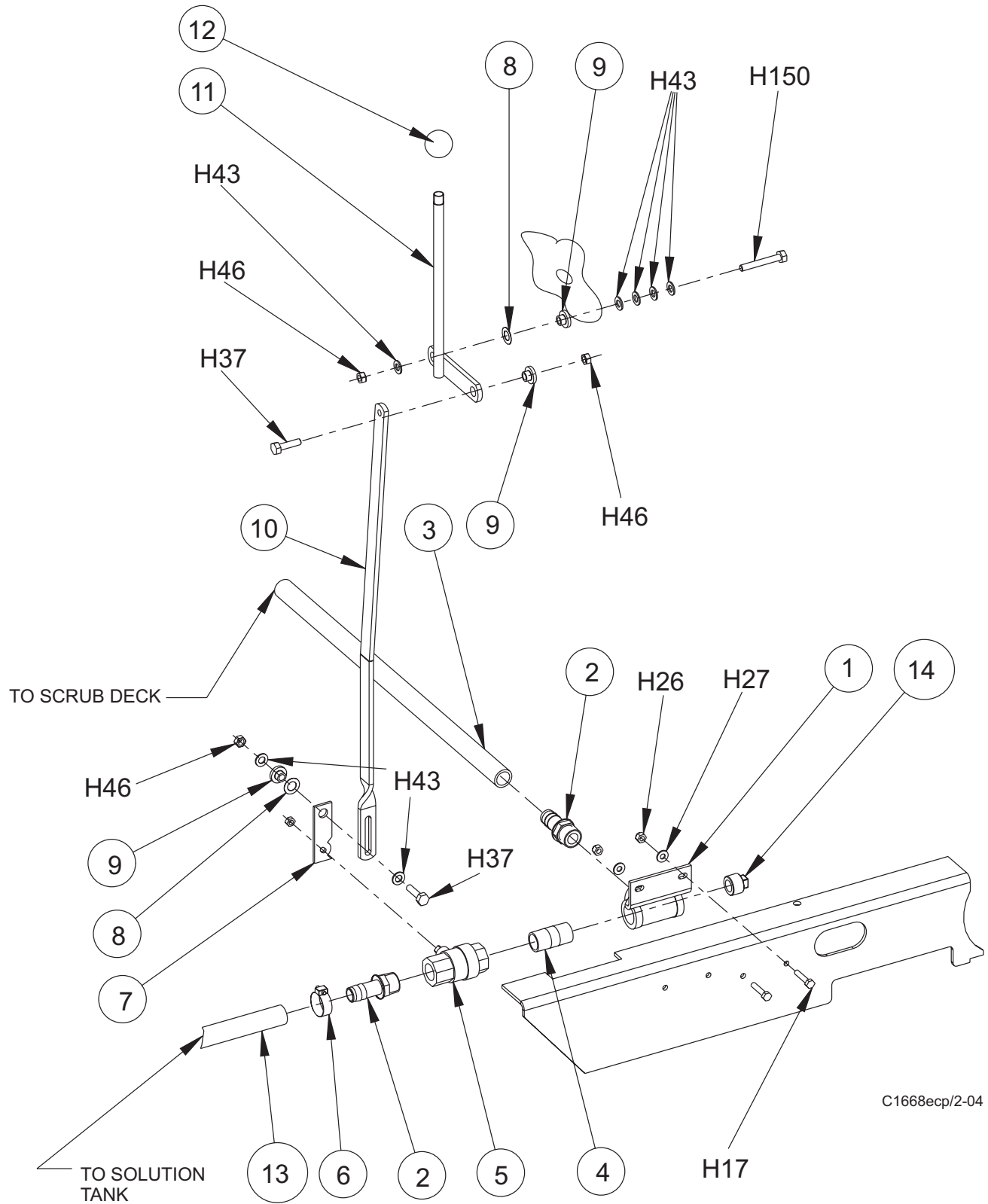


## SOLUTION FEED

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-08-00922	Bracket, Solution Pipe	1
2	7-25-02012	Fitting, Hose to ¾ - 14 NPT	2
3	7-33-02383	Hose, Solution Feed	1
4	2-00-03586	Pipe Nipple ¾ NPT x 2.00	1
5	7-88-00027	Ball Valve	1
6	2-00-02220	Hose Clamp	1
7	7-41-05085	Lever	1
8	2-00-03382	Spring Washer	2
9	7-09-01057	Bushing	3
10	7-42-05128	Link	1
11	7-41-05108	Lever Assembly	1
12	8-39-00002	Knob	1
13	7-33-02339	Hose, Solution Feed	1
14	2-00-02475	Plug	1
HARDWARE USED:			
H17	2-00-00205	Screw, ¼ - 20 x 1.0 HHC	2
H26	2-00-00641	Nut, ¼ -20 Insert Fiber	2
H27	2-00-03702	Washer, .625 x .281 x .063	2
H37	2-00-00207	Screw, 5/16 -18 x 1.25 HHC	2
H43	2-00-00409	Flat Washer, .687 x .344 x .062	7
H46	2-00-00644	Nut, 5/16-18 Insert Fiber	3
H150	2-00-00211	Screw, 5/16 - 20 x 1.75 HHC	1

C1668ecp/2-04



## RECOVERY TANK

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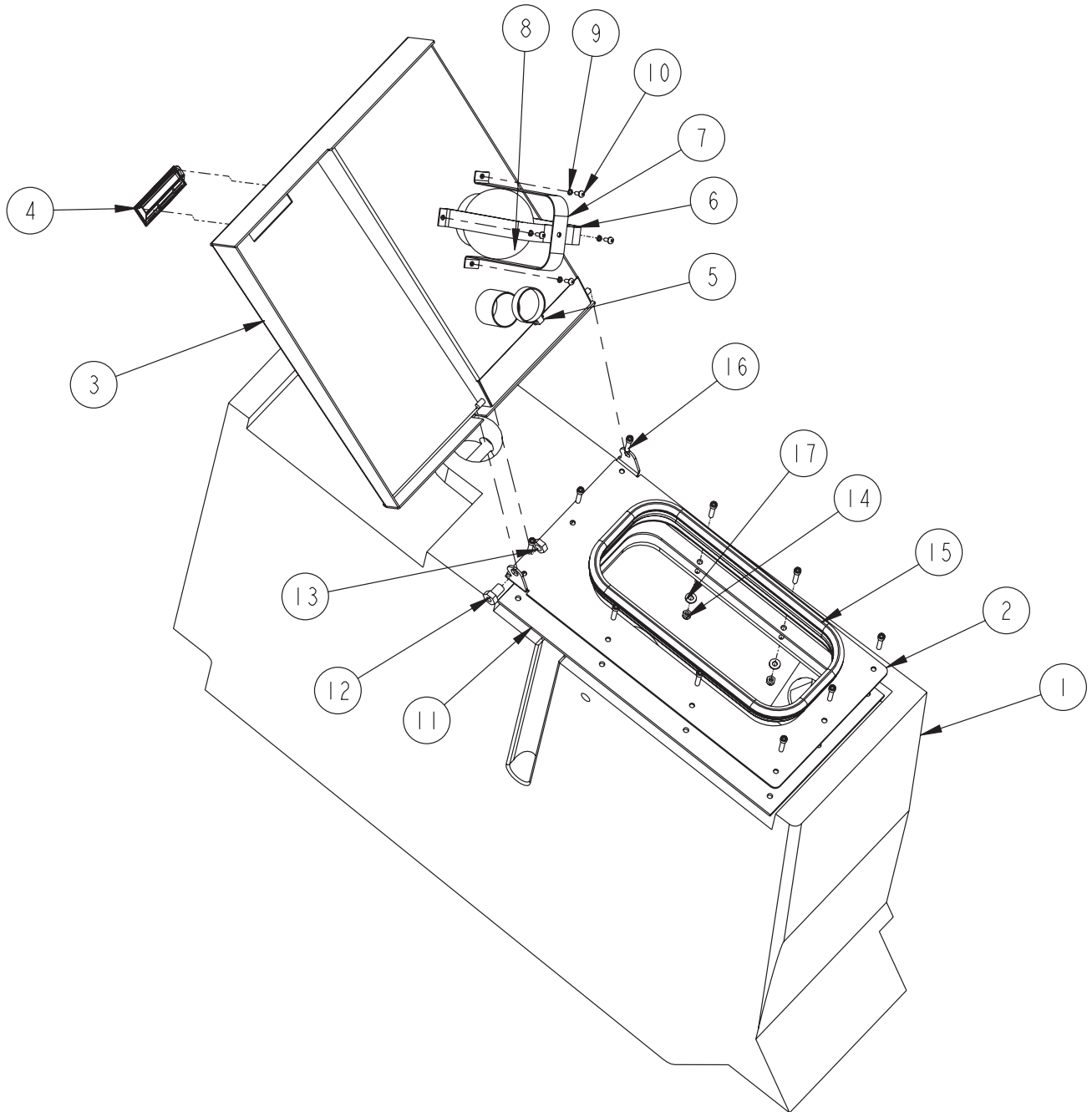
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1*	7-83-04223	Recovery Tank	1
2	7-32-00048	Hinge, Tank Lid	1
3	7-48-00048	Lid, Vacuum	1
4	7-31-06082	Handle, Cover	1
5	2-00-02216	Clamp, Hose	1
6	7-62-05119	Cage, 4" Float	1
7	7-62-05120	Cage, 4" Float	1
8	7-26-04010	Ball, 4" Float	1
9	2-00-00519	Lock Washer, #10-24 Helical Spring	4
10	2-00-00049	Screw, 10-24 x .50 ZN PL	4
11	7-29-00297	Gasket, Tank Lid	1
12	7-09-01155	Bushing, Hinge Pivot	1
13	2-00-00591	Nut, 1/2-20 Hex Jam	1
14	2-00-00641	Nut, 1/4-20 Fiber Insert	10
15	7-29-00298	Gasket, Recovery Tank	1
16	2-00-03041	Screw, HSHC, 1/4-20 x 1.25 LG	10
17	2-00-03702	Washer, .625 x .281 x .063	10

\*If you are ordering a replacement tank, you must also order the following:

1 of 8-18-00540 (ATS 46/53 decal)(provides 2)

1 of 8-18-00548 (American-Lincoln Technology decal)(provides 2)

C1670h/0803



## RECOVERY TANK (CON'T)

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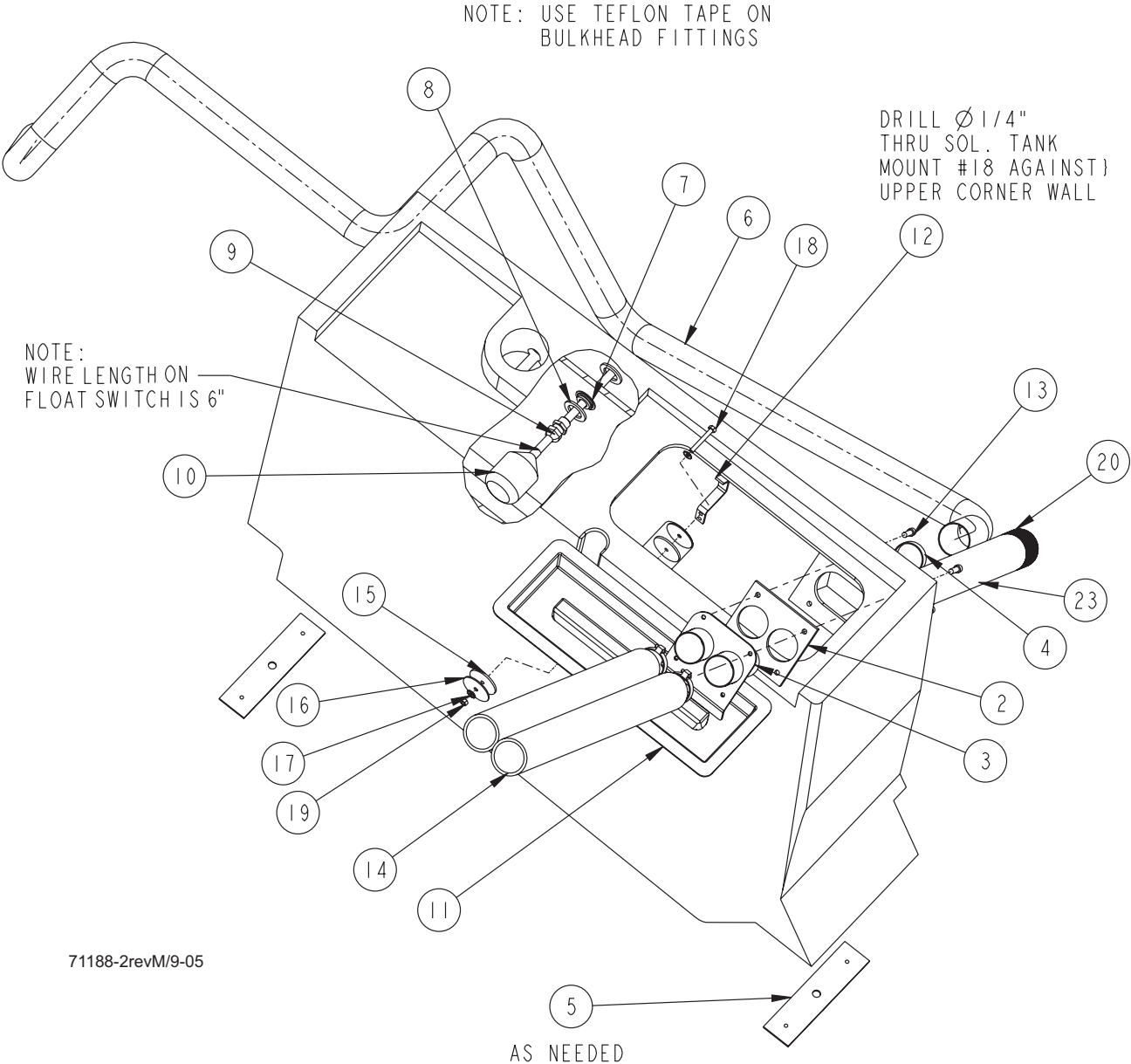
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1*	7-83-04223	Recovery Tank	REF
2	7-29-00276	Gasket, Tank Drain Dual	1
3	7-25-02101	Fitting, Recovery Tank Dual Port	1
4	2-00-02216	Clamp, Hose	4
5	7-71-00010	Shim, Tank Spacer	2
6	7-33-02461	Hose, Vacuum Recovery	1
7	7-09-01124	Bulkhead Fitting	1
8	7-29-00225	Gasket, Black Neoprene	2
9	7-09-01122	Bushing	1
10	0775-164	Float Switch (gray)	1
11	7-16-07454	Cover, Solution Tank Lid	1
12	7-08-01131	Bracket, Hose	1
13	2-00-00809	Screw, HSHC, .31-18 x 1.00	4
14	7-33-02397	Hose, Squeegee	2
15	2-00-05028	Washer, Flat, 2.00 OD x .281 x .125	2
16	2-00-05236	Washer, Flat, 2.00 OD x .28 x .08	2
17	2-00-04590	Washer, Sealing	2
18	2-00-05122	Screw, 1/4-20 x 2.00 LG SS	1
19	2-00-04688	Nut, 1/4-20 Hex	1
20	7-33-02705	Hose, Vacuum	1

\*If you are ordering a replacement tank, you must also order the following:

- 1 of 8-18-00540 (ATS 46/53 decal)(provides 2)
- 1 of 8-18-00548 (American-Lincoln Technology decal)(provides 2)

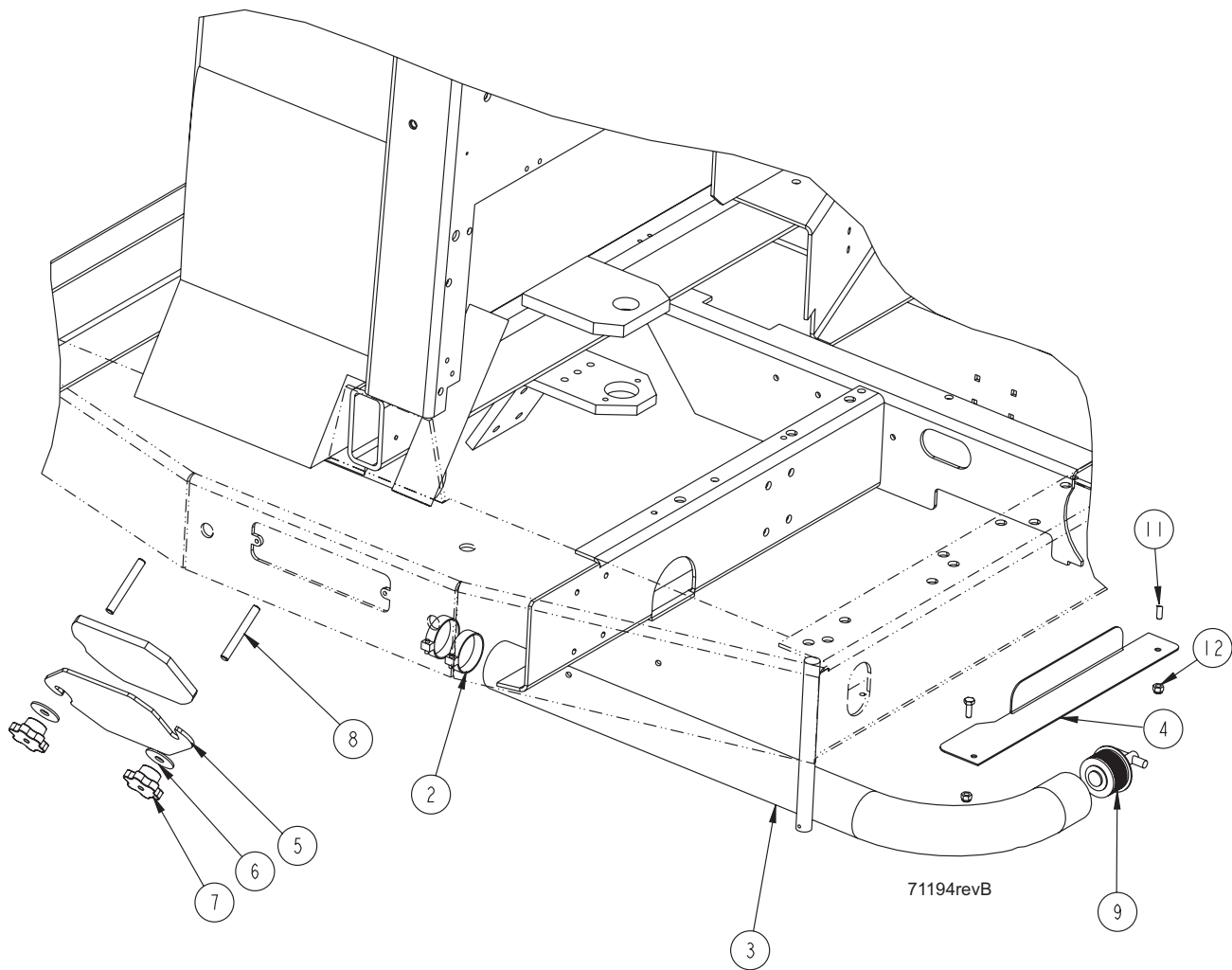
71188-2revM/9-05





71188-2revM/9-05

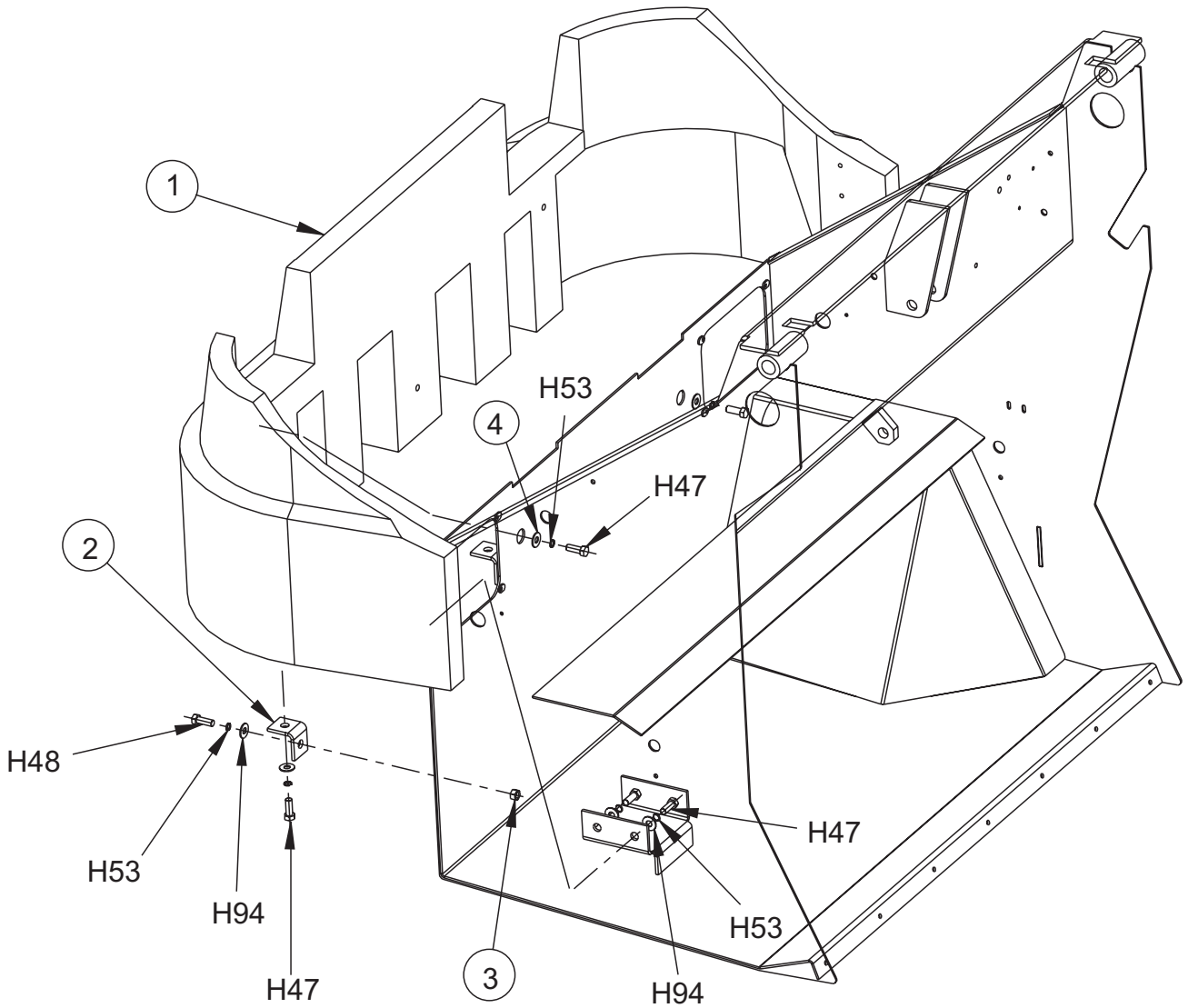
# RECOVERY TANK DRAIN SYSTEM



<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-83-04223	Recovery Tank	REF
2	2-00-02216	Clamp, Hose	2
3	7-33-02696	Hose, Drain	1
4	7-08-07107	Bracket, Drain Hose	1
5	7-19-08089	Door, Recovery Drain	1
6	2-95-04012	Washer, 1.50 OD x .468 x .093	2
7	25201A	Knob	2
8	7-80-05086	Stud, Clean-Out Door	2
9	7-25-02110	Plug, Drain	1
10	7-29-00318	Gasket, Recovery Tank Drain	1
11	2-00-00221	Bolt, 1/4-20 x 3/4 Fin. Hex Head	2
12	2-00-00641	Nut, 1/4-20 Fiber Insert	2

71194revB/1-05

**FRONT BUMPER**

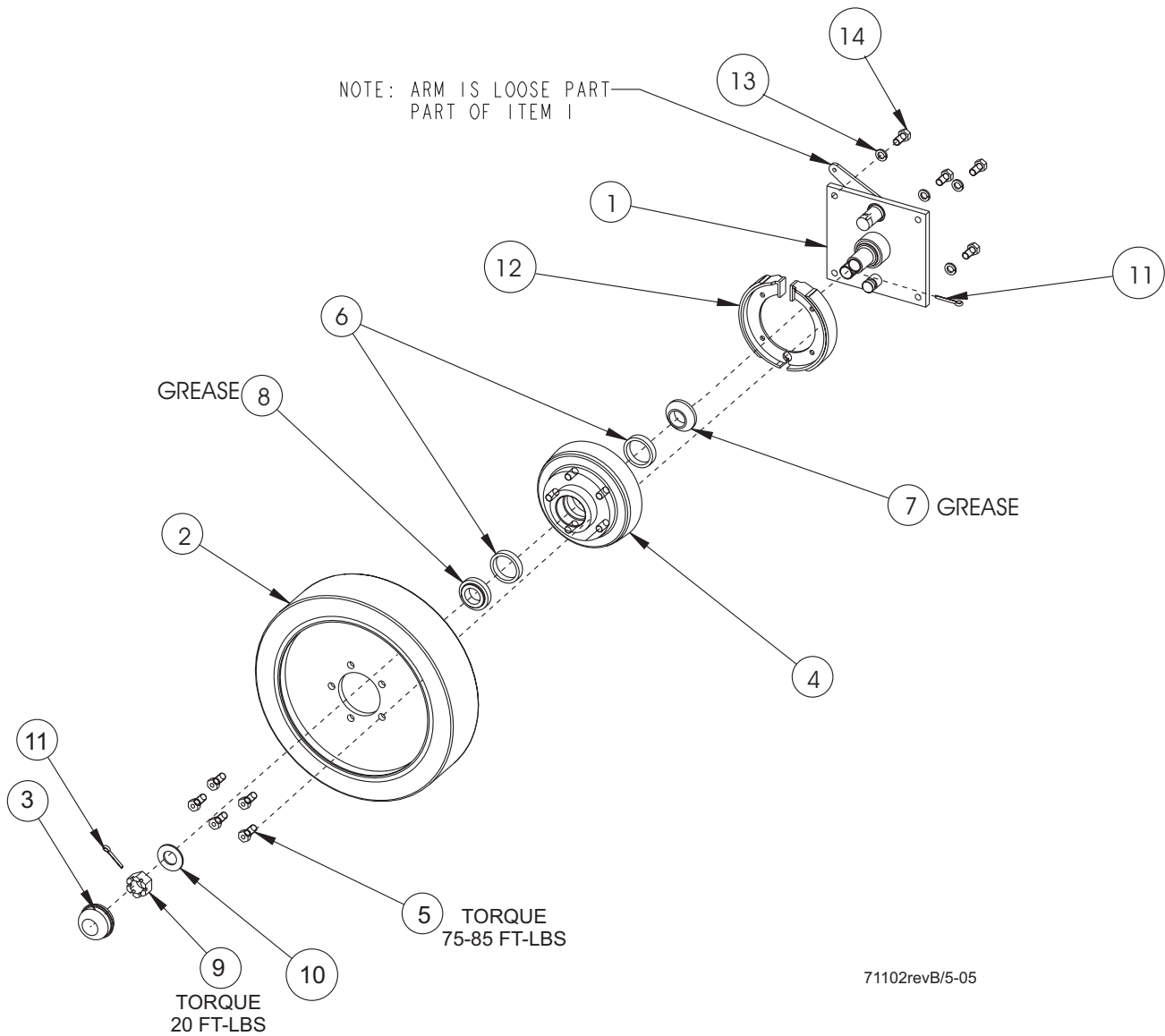


C1675/9702

<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	7-08-07075	Front Bumper	1
2	7-08-00863	Bracket, Bumper	2
3	2-00-05347	Insert, 3/8-16 Threaded	2
4	2-00-04851	Washer, Engine Mount	2
<b>HARDWARE USED:</b>			
H47	2-00-00232	Screw, 3/8-16 x .75 HHC	8
H48	2-00-00233	Screw, 3/8-16 x 1.0 HHC	10
H53	2-00-02310	Lock Washer, 3/8 Helical Spring	10
H94	2-00-00410	Flat Washer, .875 x .375 x .060	12

C1675/9702

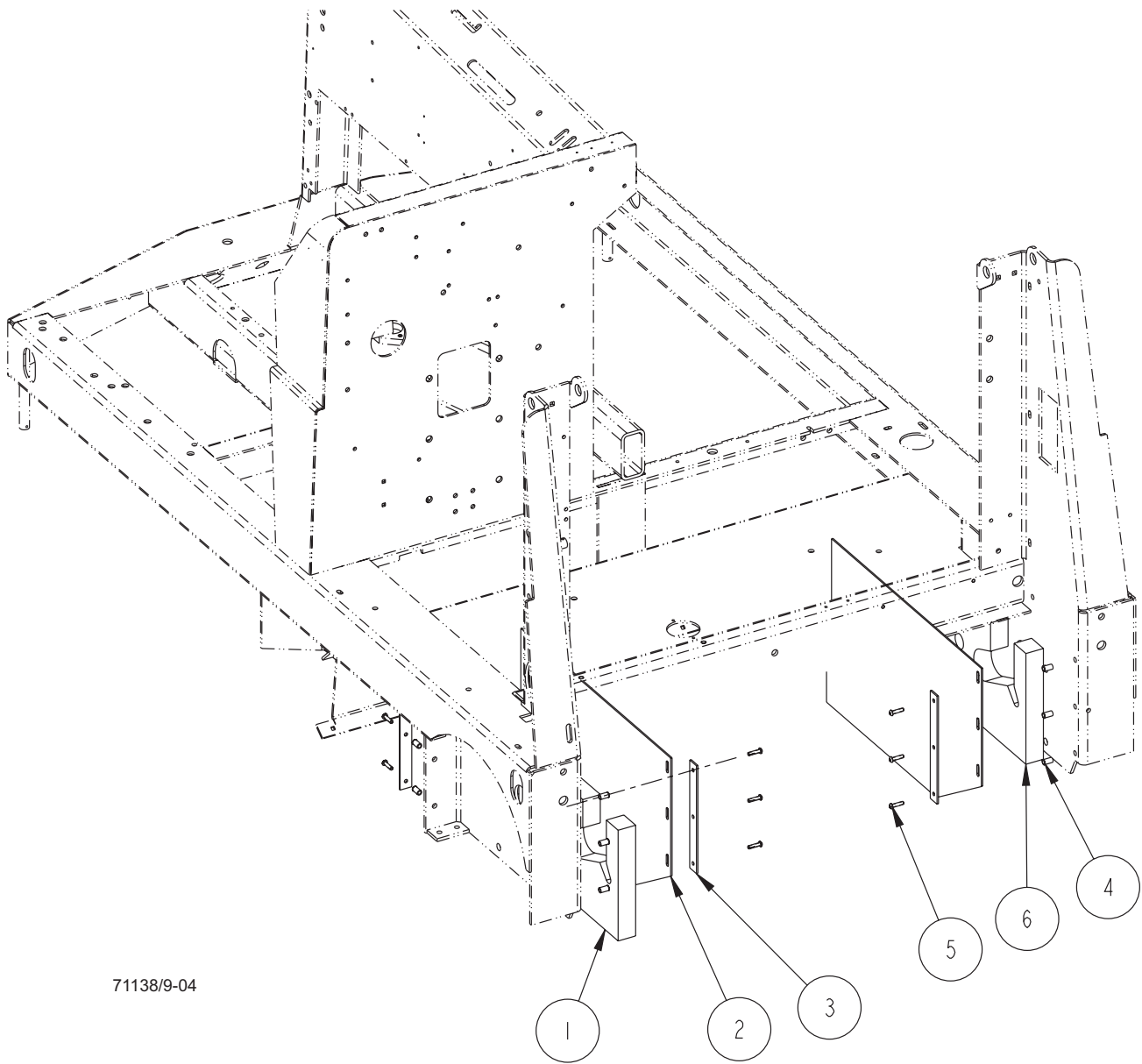
# FRONT WHEEL



<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0860-571	Knott Brake	2
2	7-89-08098	Molded Wheel	2
3	8-11-00030	Grease Cap	2
4	8-33-09089	Hub and Drum	2
5	8-80-05035	Stud	10
6	2-00-04621	Bearing Cup	4
7	2-00-02079	Bearing Cone (Sealed)	2
8	2-00-04622	Bearing Cone	2
9	2-00-05026	Nut	2
10	2-00-05024	Flat Washer	2
11	2-00-02436	Cotter Pin	2
12	8-71-05007	Brake Shoe	2
13	2-00-02312	Lock Washer, 1/2 HS Med.	8
14	2-00-02689	Screw, 1/2-20 x 1.0 HHC	8

71102revB/5-05

**WHEEL WELL FLAP**



71138/9-04

<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	7-68-05016	Seal, RH Wheel Well	1
2	7-25-08074	Flap, Wheel Well	2
3	8-13-07148	Clamp, Wheel Well Flap	4
4	2-00-05261	Insert, 1/4-20 Threaded	12
5	2-00-04877	Screw, 1/4-20 x 1.0 BHS w/Nylok	12
6	7-68-05017	Seal, LH Wheel Well	1

71138/9-04

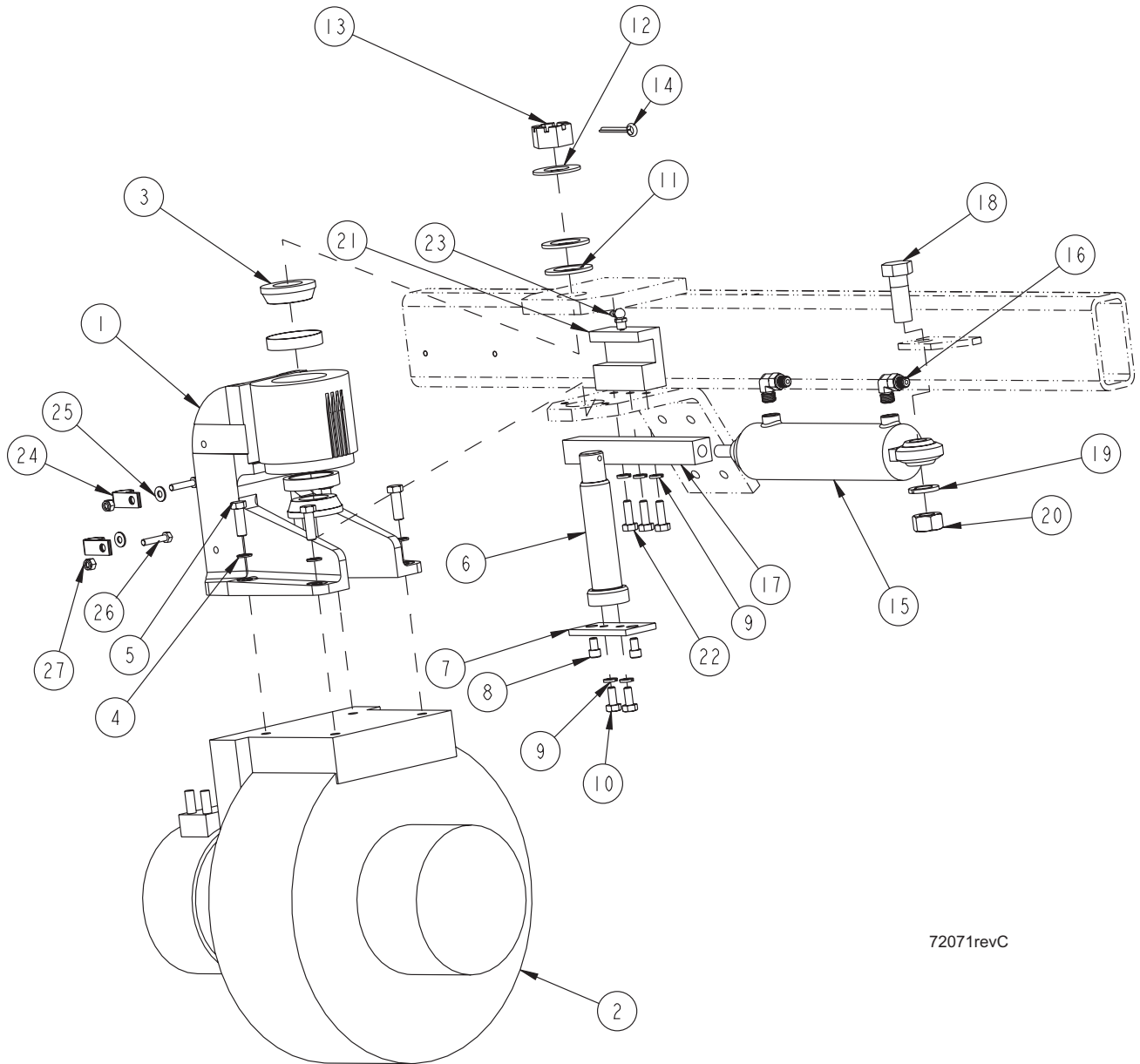
## REAR (DRIVE) WHEEL ASSEMBLY

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-81-00263	Support, Wheel	1
2	0785-105	Drive Wheel Assembly	1
	7-85-06018	Tire ONLY (service part)	1
	0780-643	Motor Brush Kit (service part)	1
3	2-00-02079	Roller Bearing	2
4	2-00-02311	Lock Washer, 7/16 Med.	4
5	2-00-05922	Bolt, M10-1.5 x 30mm lg Fin. Hex Head	4
6	8-55-08131	Pivot Pin, Rear Wheel	1
7	7-13-07176	Clamp, Pivot Pin	1
8	2-00-03335	Screw, 5/16-18 x .50 SHCS	2
9	2-00-00530	Lock Washer, 5/16 HS Med.	5
10	2-00-00208	Screw, 5/16-18 x .75 HHC	2
11	8-75-01136	Thrust Washer	2
12	2-00-05024	Flat Washer	1
13	2-00-05026	Nut, (Slotted Head)	1
14	2-00-02436	Cotter Pin (.18 Dia.)	1
15	7-17-05010-1	Cylinder, Power Steering	1
16	2-00-04892	Fitting, 90° Elbow (O-Ring)	2
17	7-62-00006	Rack	1
18	2-00-05341	Screw, 1/4-10 x 2.0 HHC	1
19	2-00-00522	Lock Washer, 3/4 Helical Spring	1
20	2-00-03293	Nut, 3/4-10 Fin. Hex	1
21	7-30-08015	Guide, Rack	1
22	2-00-02708	Screw, 5/16 - 18 x 1.0 HHM	3
23	2-00-02557	Grease Fitting, 1/8 PTF x 90°	1
24	2-00-04564	Clamp, Cable	2
25	2-00-03702	Washer, .625 x .281 x .063	2
26	2-00-00222	Bolt, 1/4-20 x 1.25 Hex Head	2
27	2-00-00641	Nut, 1/4-20 Fiber Insert	2

72071revC/12-04

# REAR (DRIVE) WHEEL ASSEMBLY



72071revC

## BRAKE PEDAL

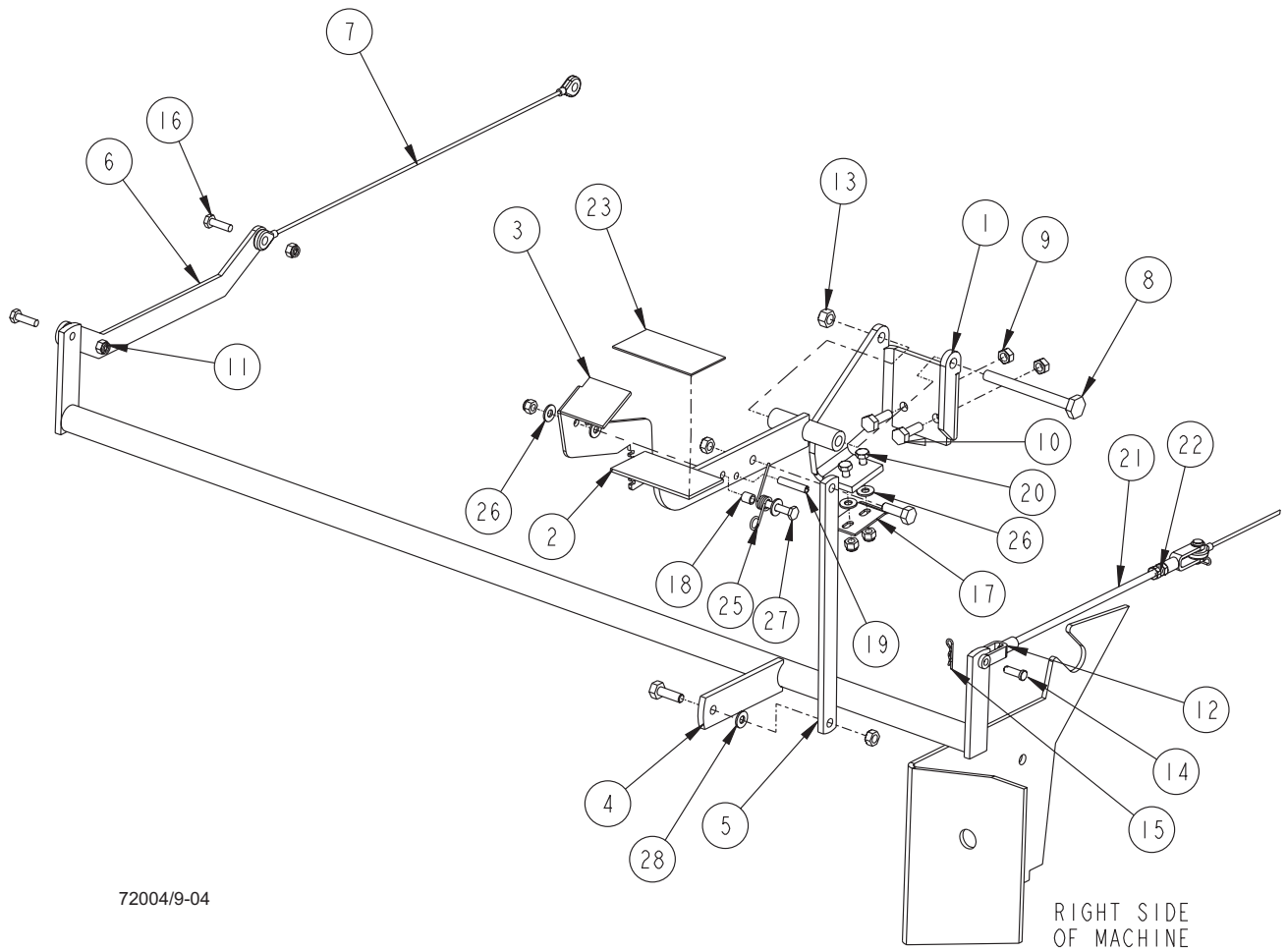
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-57-05079	Pivot, Brake Pedal	1
2	7-55-00047	Pedal, Brake	1
3	7-55-00046	Arm, Brake Pedal	1
4	7-17-00014	Crank, Brake	1
5	7-42-05126	Link, Brake Pedal	1
6	7-42-05131	Link, L.H. Brake	1
7	8-10-00043	Cable	2
8	2-00-03296	Screw, 3/8-16 x 4.0 HHC	1
9	2-00-00644	Nut, 5/16 - 18 Fiber Insert	4
10	2-00-02708	Screw, 5/16-18 x 1.0 HHM	4
11	2-00-00641	Nut, 1/4-20 Fiber Insert	5
12	8-14-01006	Clevis	4
13	2-95-04182	Nut, 3/8-16 Elastic Stop	1
14	2-00-04909	Pin, 1/4 x 3/4 long	4
15	2-00-05249	Hair Pin (Cotter)	4
16	2-00-01490	Screw, 1/4-20 x .875 Hex Head	2
17	7-13-07226	Clip, Parking Brake	1
18	8-09-01069	Spacer, .259 x .355 x .375	1
19	2-00-03635	Roll Pin	1
20	2-00-00221	Screw, 1/4-20 x .75 HHC	2
21	8-66-00162	Rod, Brake Pull	2
22	2-95-01999	Nut, 1/4-28 Hex Jam	4
23	8-50-05063	Pad, Brake Pedal	1
24	0860-071	Brake Assembly	1
25	7-76-00013	Spring, Pedal Release	1
26	2-00-03702	Washer, .625 x .281 x .063	5
27	2-00-04966	Screw, 1/4-20 x 1.50 HHM	1
28	2-00-00402	Washer, 25/64 ID x 3/4 OD	2

72004/9-04



# BRAKE PEDAL



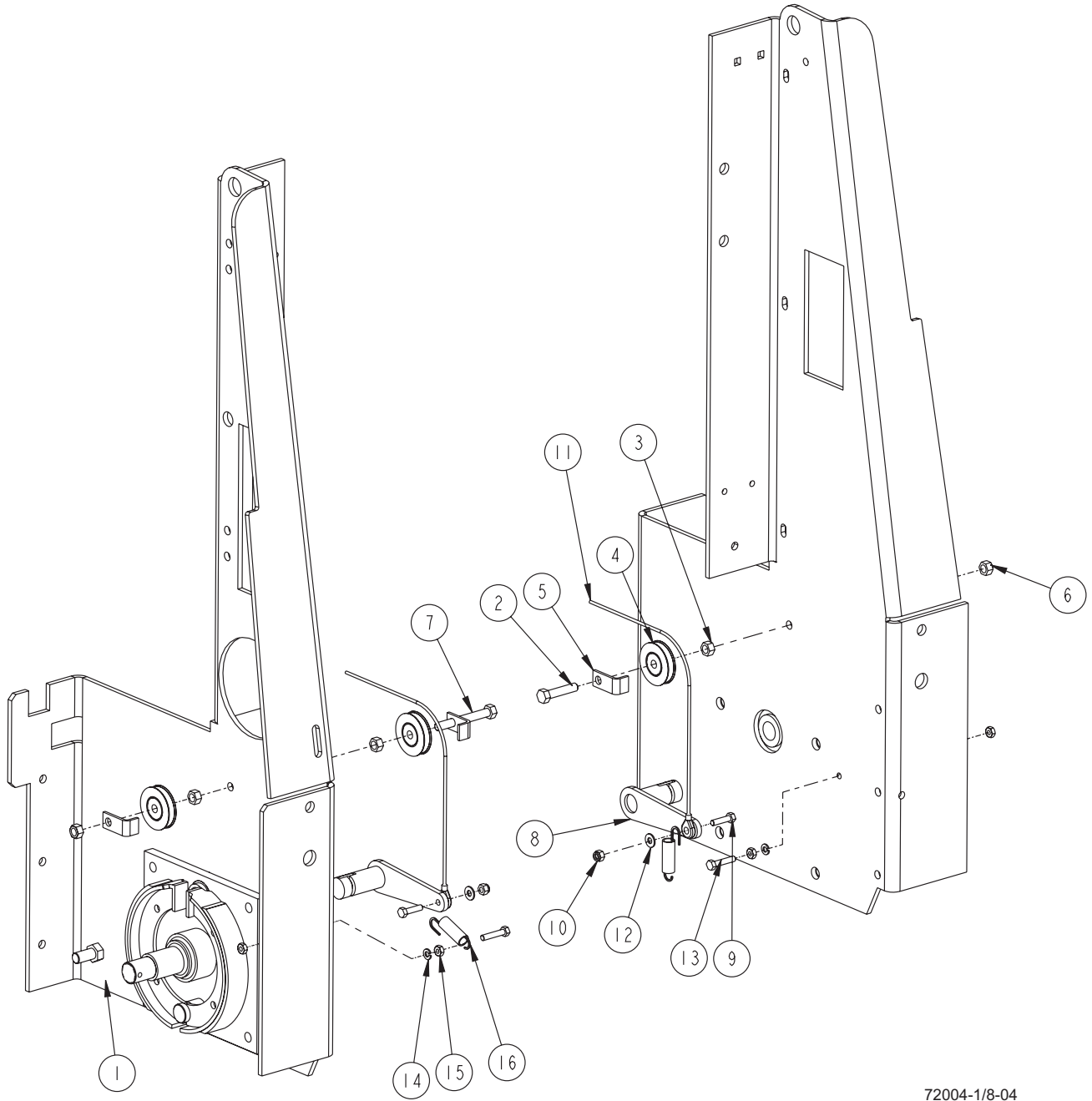
72004/9-04

## BRAKE PEDAL (CON'T)

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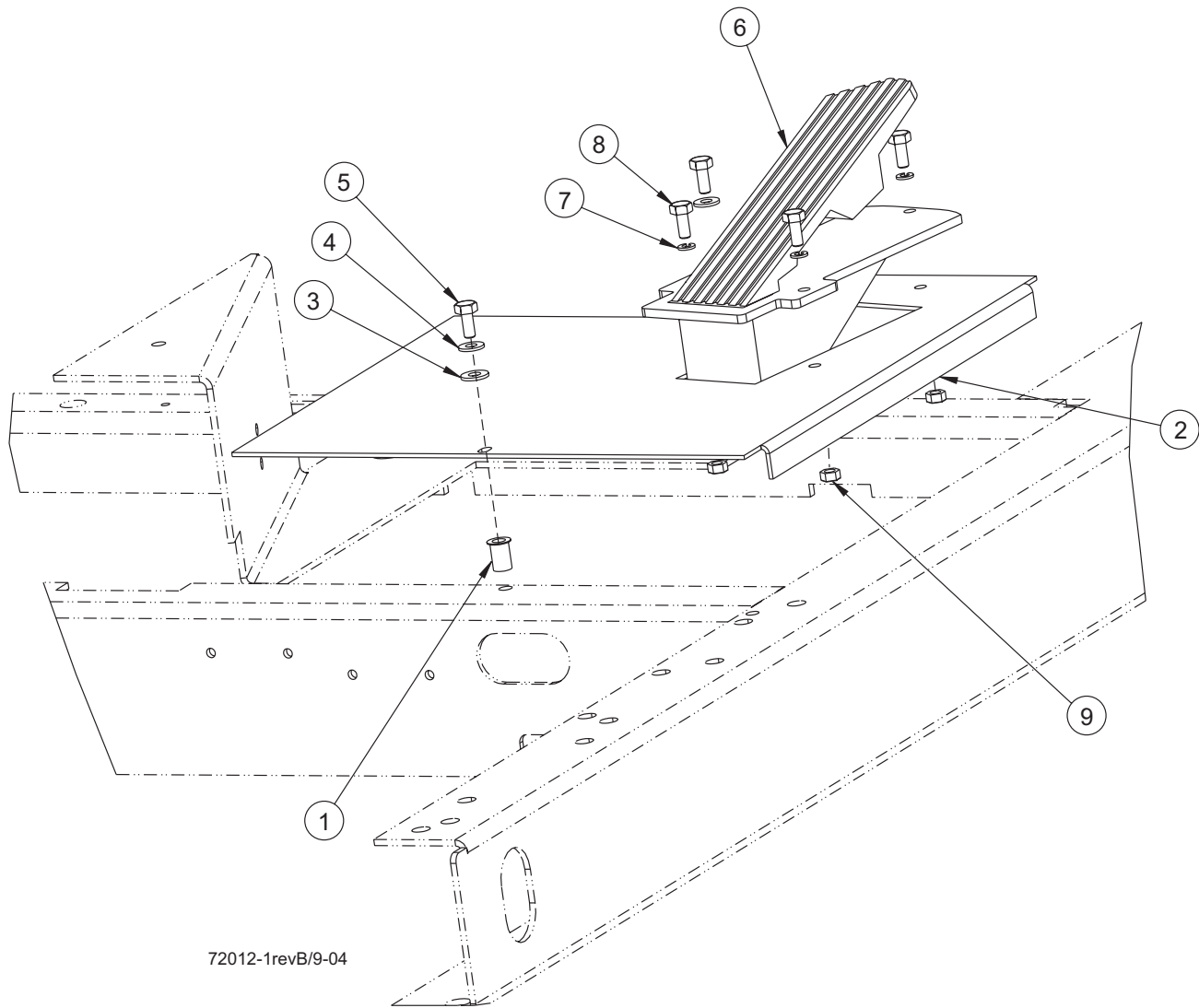
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-27-07241	Main Frame	REF
2	2-00-05385	Screw - HHM .375-16 x 1.75	1
3	2-00-02360	Nut, 3/8-16 Hex	3
4	7-60-00160	Pulley	3
5	7-13-07130	Clip, Cable Retainer	3
6	2-95-04182	Nut, 3/8-16 Hex Stop	2
7	2-00-05384	Screw, 3/8-16 x 3.0	1
8	0860-071	Brake Assembly	REF
9	2-00-00205	Screw, 1/4-20 x 1.0 HHC	2
10	2-00-00641	Nut, 1/4-20 Fiber Insert	2
11	8-10-00043	Cable	REF
12	2-00-03702	Washer, .625 x .281 x .063	2
13	2-00-02587	Cap Screw, 1/4-20 x 1.25 Hex Head	2
14	2-00-00518	Lock Washer, 1/4 Helical Spring	2
15	2-00-00594	Nut, 1/4-20 Hex	4
16	7-76-00051	Spring	2

72004-1/9-04



72004-1/8-04

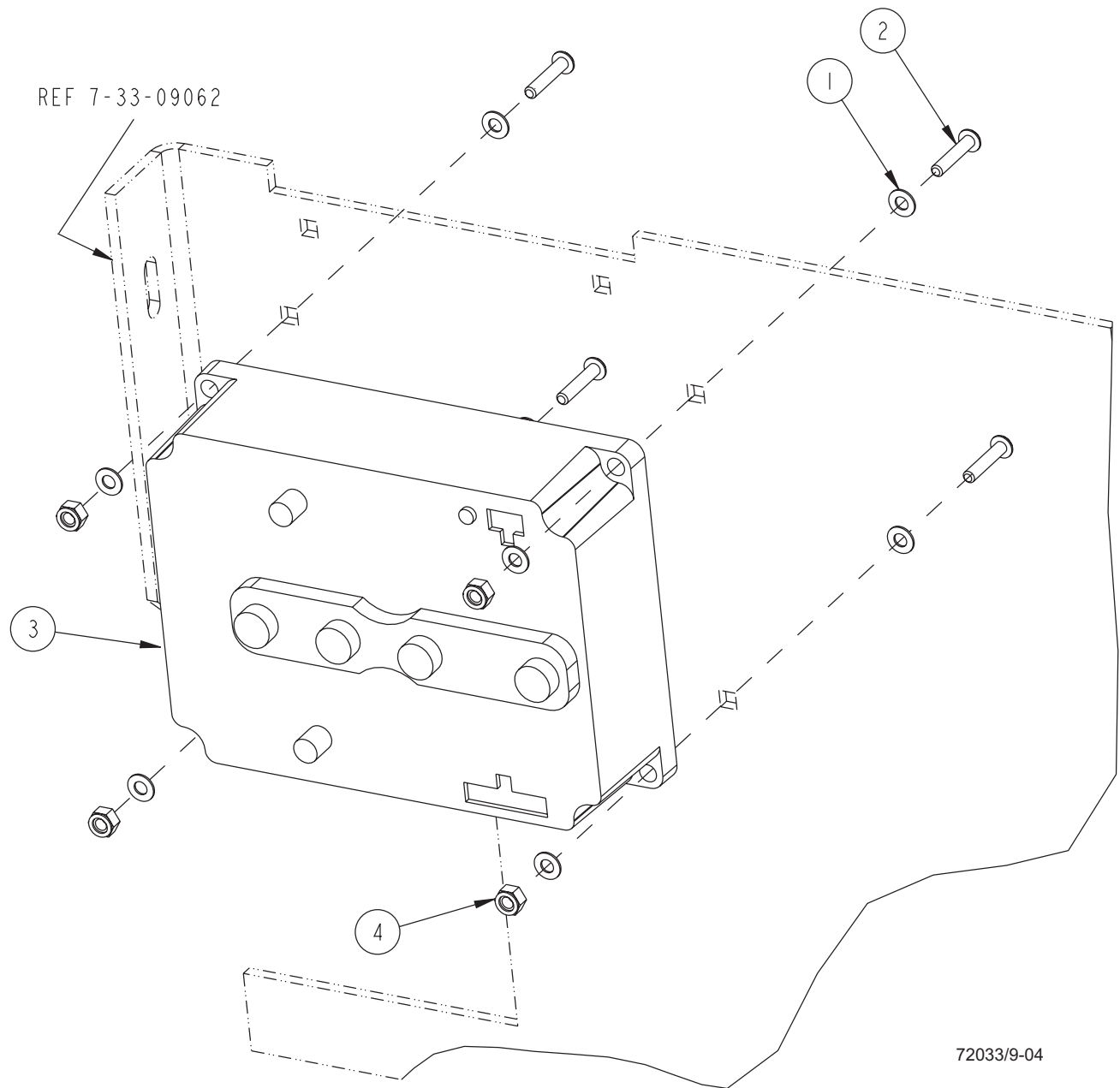
# ACCELERATOR/FLOOR PANEL



72012-1revB/9-04

<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	2-00-05261	Insert, 1/4-20 Threaded	2
2	7-81-00284	Plate, Floor	1
3	2-00-03702	Washer, .625 x .281 x .063	2
4	2-00-00518	Lock Washer, 1/4 Helical Spring	2
5	2-00-00221	Bolt, 1/4-20 x 3/4 Fin. Hex Head	2
6	7-55-00038	Pedal, Forward/Reverse	1
7	2-00-00530	Lock Washer, 5/16	3
8	2-00-00208	Screw, 5/16-18 x .75	3
9	2-00-00644	Nut, 5/16-18 Fiber Insert Hex	3

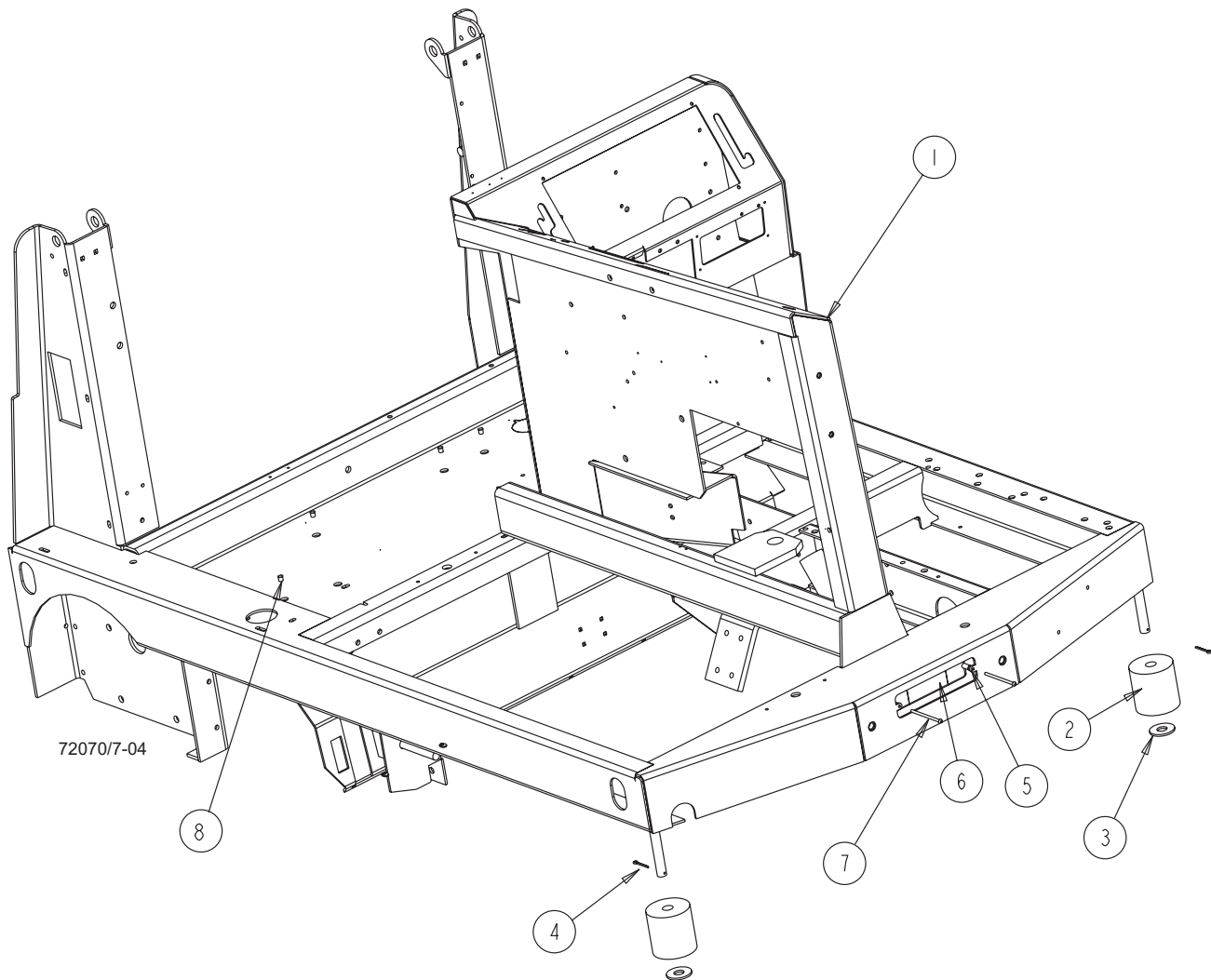
72012-1/7-04



<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	2-00-00426	Flat Washer, .500 x .219 x .063	8
2	2-00-00039	Screw, #10-24 x 1.0 RHM	4
3	0785-106	Controller, Traction Drive	1
4	2-00-02196	Carriage Bolt, 1/4-20 x 1.0 lg	4

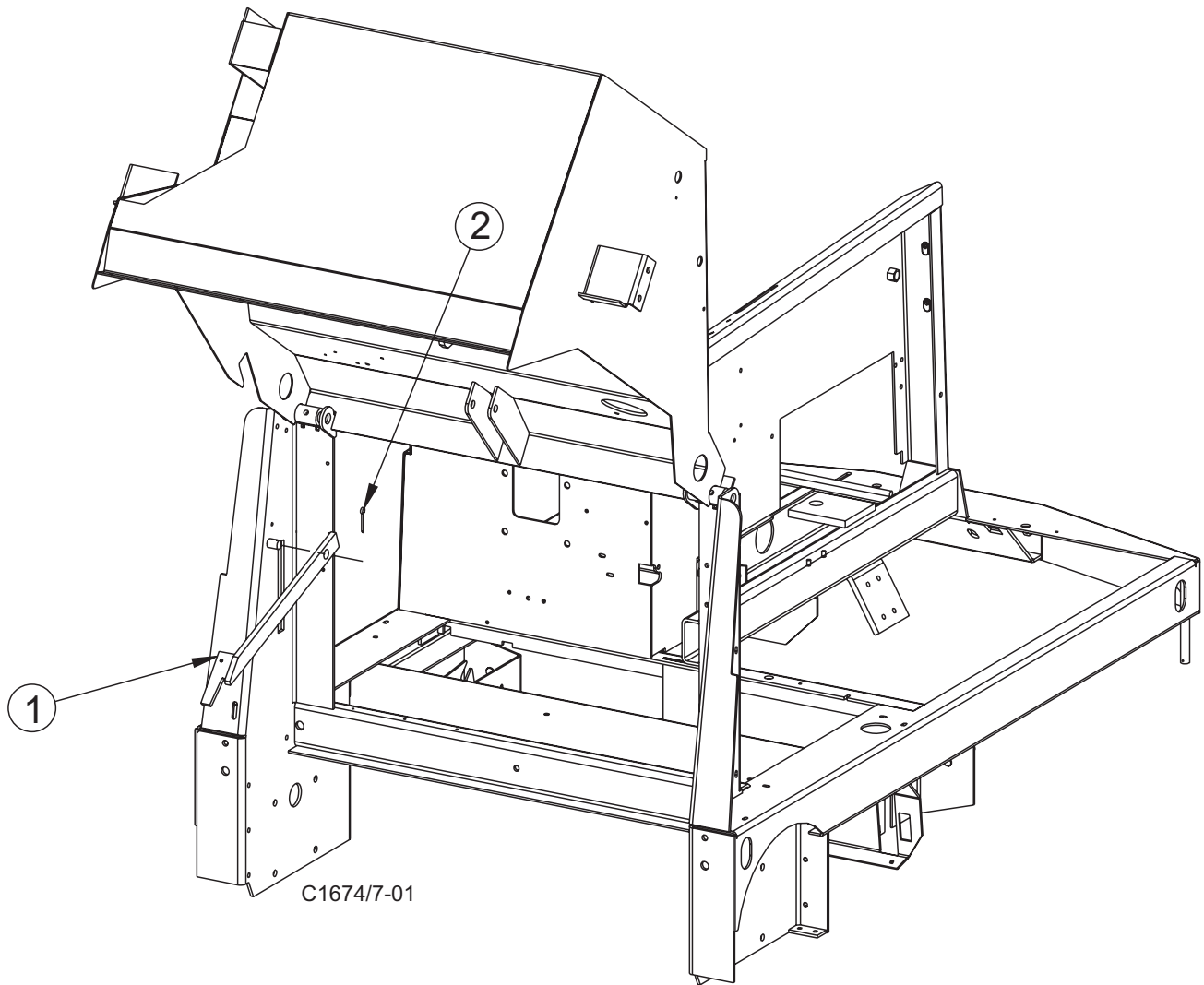
72033revB/9-04

# MAIN FRAME



<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-27-07241	Main Frame	1
2	7-66-05009	Roller Bumper	2
3	8-75-01157	Thrust Washer, 2.0 x .812 x .157	2
4	2-00-02436	Cotter Pin, 1/8 dia. x 1.50 lg.	2
5	8-75-01207	Spacer, Tail Light Mounting	2
6	8-40-05053	Tail Light	1
7	2-00-02933	Screw, #10-24 x 3.50	2
8	2-00-04757	Plug Button	Ref

72070/7-04



<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	7-81-00198	Safety Arm Weldment	1
2	2-00-02436	Cotter Pin	1

C1674/7-01

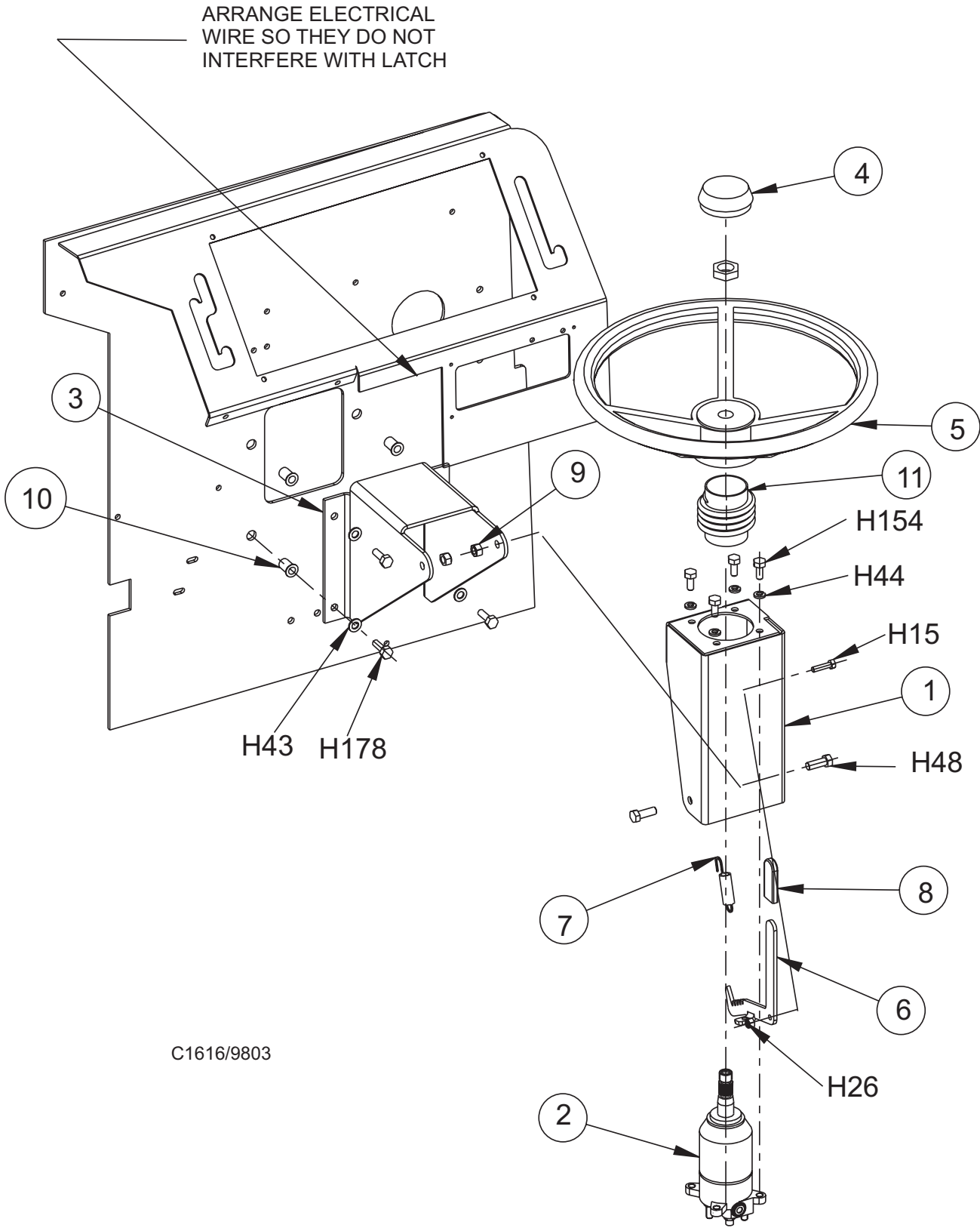
## STEERING COLUMN

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-33-05124	Housing, Steering Control Valve	1
2	8-60-05034	Steering Control Unit (4.88 CIR/1100 PSI)	Ref.
3	7-81-00202	Support, Steering	1
4	8-11-00022	Cap, Steering Wheel	1
5	8-89-08016	Steering Wheel	1
6	7-41-00038	Latch	1
7	7-76-00051	Spring	1
8	8-31-06083	Grip Latch	1
9	2-95-04182	3/8-16 Lock Nut	2
10	2-00-05330	5/16-18 THD Insert	4
11	8-33-02360	Hose, Heat Shield	1
HARDWARE USED:			
H15	2-00-00221	Screw, 1/4 - 20 x .75 HHC	1
H26	2-00-00641	Nut, 1/4-20 Insert Fiber	1
H44	2-00-00530	Lock Washer, 5/16 Helical Spring Med.	4
H48	2-00-00233	Screw, 3/8-16 x 1.0 HHC	2
H154	2-00-04363	ScrewScrew, M8-1.25 x .75	4
H178	2-00-00206	Screw, 5/16 - 18 x 1.0 HHC	2

C1616/0402





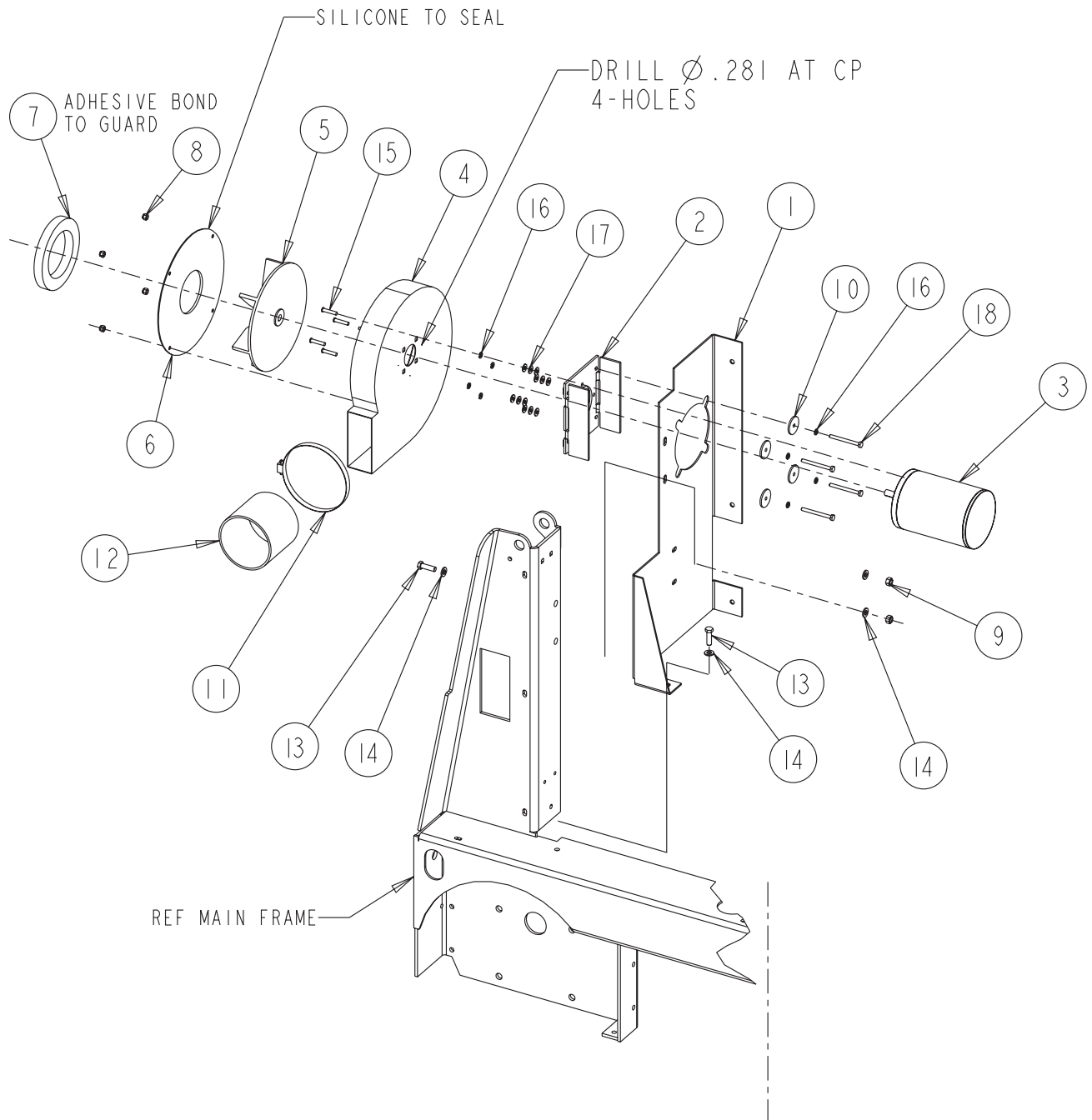
C1616/9803

## VAC FAN

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-81-00197	Support, Motor	1
2	7-08-00868	Bracket, IMP. Motor	1
3	0882-062	Motor, Impeller	1
4	8-72-00005	Shroud, Impeller	1
5	8-23-00013	Impeller	1
6	8-30-05169	Weldment, Guard Plate	1
7	8-29-00183	Gasket, Blower	1
8	2-00-00641	Nut, 1/4-20 Fiber Insert	4
9	2-95-04182	Nut, 3/8-16 Elastic Stop	3
10	7-23-03092	Washer	4
11	2-00-03454	Clamp, Hose	1
12	8-33-02271	Hose, Blower Exhaust	1
13	2-00-00209	Screw, 3/8-16 x 1.25 HHC	3
14	2-00-00402	Flat Washer, .750 x .390 x .094	6
15	2-00-00060	Screw, 1/4-20 x 1.25 RHM	4
16	2-00-00518	Lock Washer, Helical Spring	8
17	2-00-03702	Washer, .625 x .281 x .063	12
18	2-00-02637	Screw, 1/4-20 x 2.75 HHC	4

C1767/0206



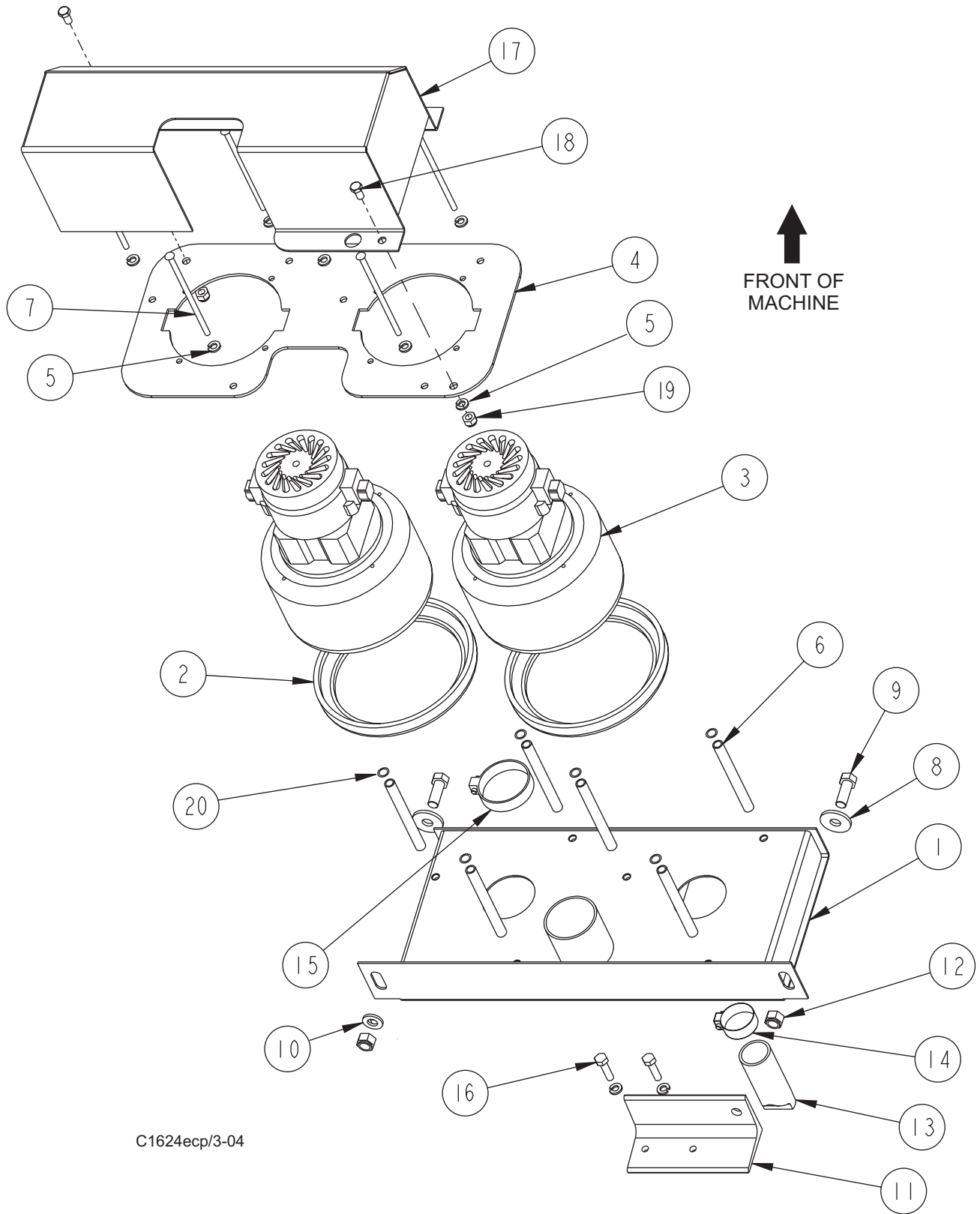
## VAC MOTOR MANIFOLD

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-48-00045	Manifold, Vac Motor (Weldment)	1
2	2-22-00003	Ring, Motor Mounting	2
3	0782-163	Motor, Vacuum Fan, 36V w/Connections	2
4	7-08-01109	Bracket, Vac Fan	1
5	2-00-00518	Lock Washer, 1/4 Helical Spring	12
6	7-75-01128	Spacer	6
7	2-00-04986	Screw, 1/4-20 x 4.5	6
8	2-00-03266	Washer	2
9	2-00-00233	Bolt, 3/8-16 Fin. Hex Head	2
10	2-00-00402	Washer, 25/64 ID x 3/4 OD	2
11	7-81-00249	Support, Vacuum Manifold	1
12	2-00-03407	Clamp, 10P Witteck	3
13	8-88-00016	Valve, Dust Unloader	1
14	2-00-02220	Clamp, Hose	1
15	2-00-02216	Clamp, Hose	1
16	2-00-00221	Bolt, 1/4-20 x .75 Fin. Hex Head	2
17	7-72-00019	Shroud, Vac Fan	1
18	2-00-00219	Bolt, 1/4-20 x .50 Fin. Hex Head	2
19	2-00-00594	Nut, 1/4-20 Hex	2
20	2-00-00407	Flat Washer, .563 x .266 x .063	6

C1624ecp/3-04

# VAC MOTOR MANIFOLD



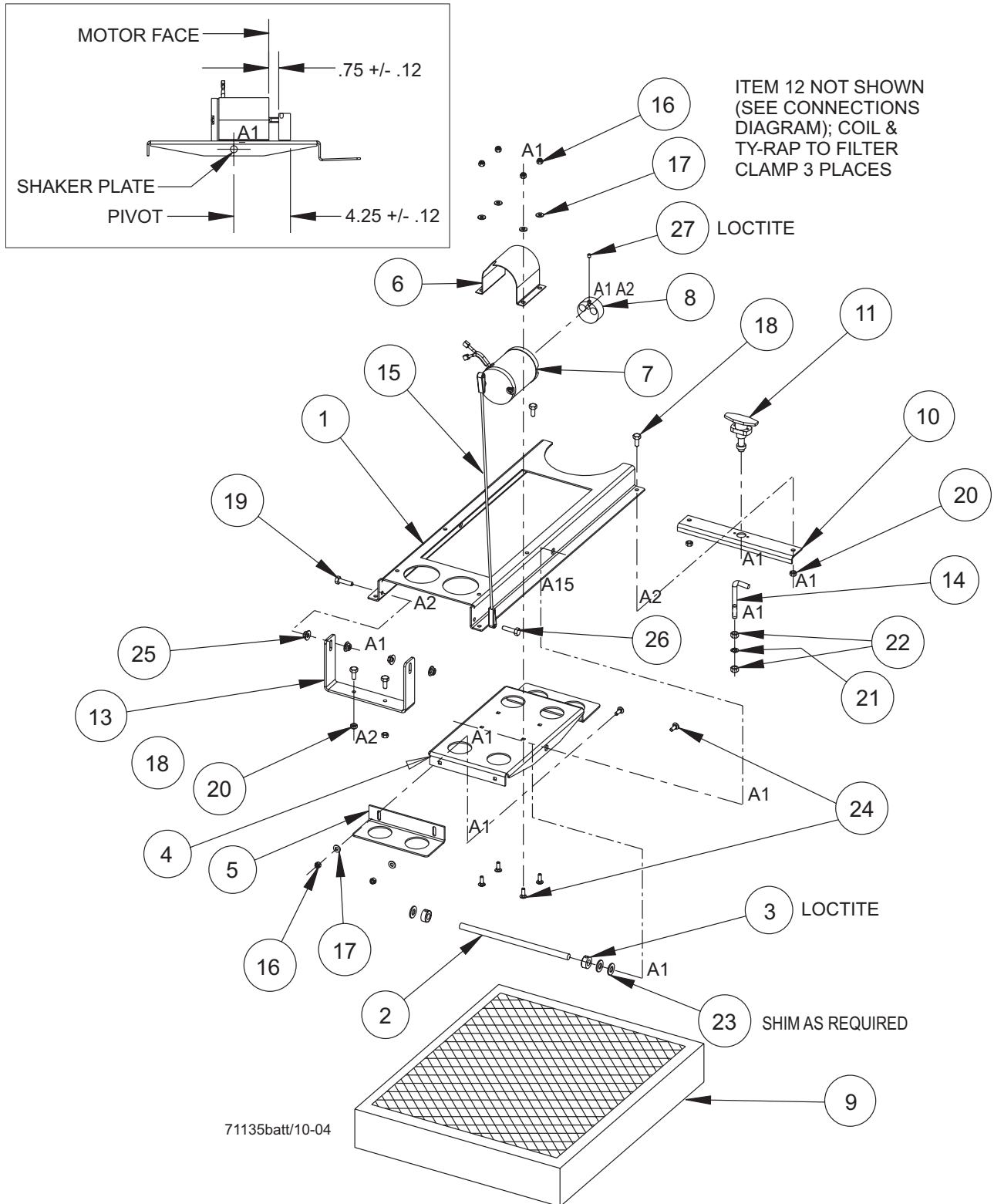
C1624ecp/3-04

## FILTER SHAKER

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-13-07139	Clamp, Filter	1
2	8-55-08119	Pin, Shaker Pod	1
3	2-00-03589	½" Stop Collar	2
4	8-58-05284	Plate, Shaker	1
5	8-03-04302	Arm, Shaker	1
6	8-16-07406	Cover, Filter Shaker Motor	1
7	0860-624	Motor, Filter Shaker (36 VDC)	1
8	8-89-04019	Weight	1
9	8-24-04148	Filter	1
	8-24-04148-2	POLY Filter Option	
10	8-13-07121	Mounting, Shaker Angle	1
11	8-41-00053	Latch	1
12	8-90-07433	Wire, Hopper Shaker	1
13	8-08-00826	Mounting, Shaker Angle	1
14	7-80-05080	Stud, Latch	1
15	8-10-00027	Cable, Hopper	1
16	2-00-00641	Nut, 1/4-20 Fiber Insert	6
17	2-00-03702	Washer, .625 x .281 x .063	6
18	2-00-00208	Screw, 5/16-18 x .75 HHC	4
19	2-00-00207	Screw, 5/16-18 x 1.25 HHC	1
20	2-00-00644	Nut, 5/16-18 Fiber Insert	4
21	2-00-02310	Lock Washer, 3/8 Helical Spring	1
22	2-00-02360	Nut, 3/8-16 Hex	2
23	2-00-00405	Flat Washer, 1.063 x .531 x .094	3
24	2-00-03575	Carriage Bolt, 1/4-20 d .750	6
25	2-00-05359	Nut, 5/16-18 Serrated Flange	4
26	2-00-00203	Screw, 1/4-20 x 1.5 HHC	1
27	2-00-00263	Set Screw, 1/4-20 x 1/4	1

71135batt/10-04



**FRAME & SHAKER ADJUSTMENT INSTRUCTIONS:**

1. ADJUST FRAME TO FILTER: ADJUST FILTER FRAME PIVOT BOLTS PAWL OF FILTER FRAME LATCH SUCH THAT FILTER GASKET COMPRESSES APPROXIMATELY 1/8"
2. ADJUST SHAKER TO FILTER: ADJUST SHAKER SHAKER ARM SUCH THAT IT & SHAKER PLATE FORCE FILTER SCREEN TO CONTACT FILTER MEDIA. (NOTE - DO NOT COMPRESS FILTER MEDIA WITH SHAKER)

## SEAT ASSEMBLY

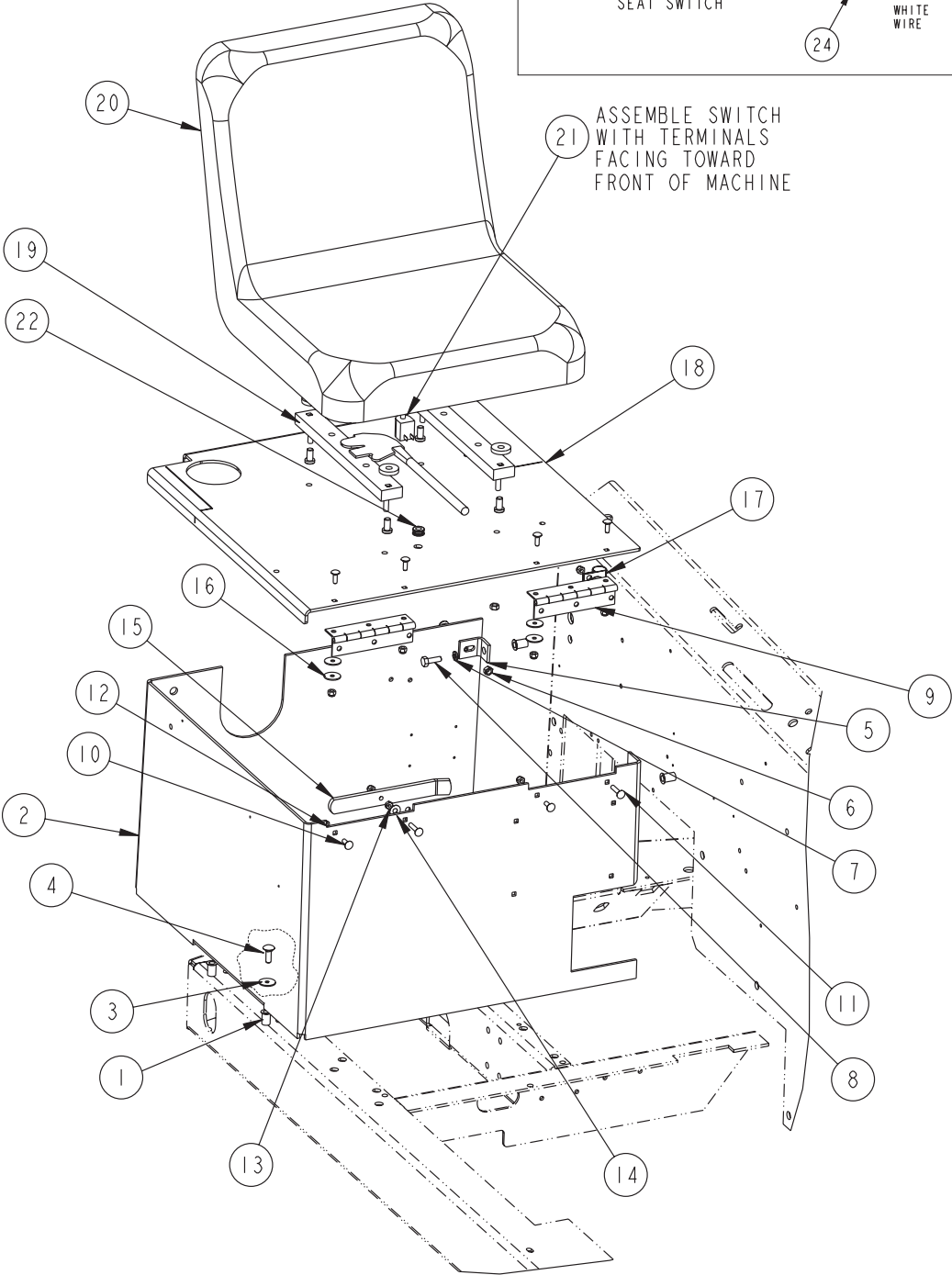
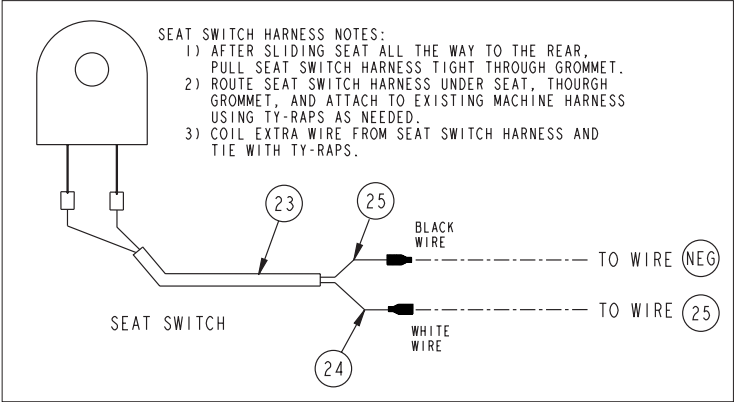
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	2-00-05330	Threaded Insert, 5/16-18	4
2	7-33-09062	Housing, Seat & Fuel	1
3	2-00-00409	Flat Washer, .687 x .344 x .062	3
4	2-00-00206	Bolt, 5/16-18 x .75 lg	2
5	8-08-00834	Bracket	1
6	2-00-00644	Nut, 5/16-18 Insert Fiber	5
7	2-00-00530	Lock Washer, 5/16 HS Med	2
8	2-00-02708	Screw, 5/16-18 x 1.0 HHM	2
9	8-32-00044	Hinge, Door	2
10	2-00-03575	Carriage Bolt, 1/4-20 x .75	6
11	2-00-01951	Carriage Bolt, 1/4-20 x 1.25	2
12	2-00-00641	Nut, 1/4-20 Insert Fiber	8
13	2-00-00594	Nut, Hex 1/4-20 x .437 x .218	1
14	7-23-03048	Washer-Spring-Shakeproof	1
15	8-41-00064	Latch, Seat Panel	1
16	2-00-01676	Flat Washer, 1.062 x .265 x .062	6
17	2-00-04564	Clamp, Cable	1
18	8-52-00186	Panel, Seat Mounting	1
19	7-72-05005	Seat (Slide) Adjuster Kit	1
20	7-69-00008	Seat	1
21	7-82-00050	Switch, Seat	1
22	2-00-00491	Grommet	1
23	0785-126	Wire Assy., Seat Switch	1
24	2-00-04626	Terminal, .156 Female Bullett	1
25	2-00-04578	Terminal, .156 Male Bullett	1
26	2-00-04345	Ty-Rap (not shown)	10

72072revC/10-04

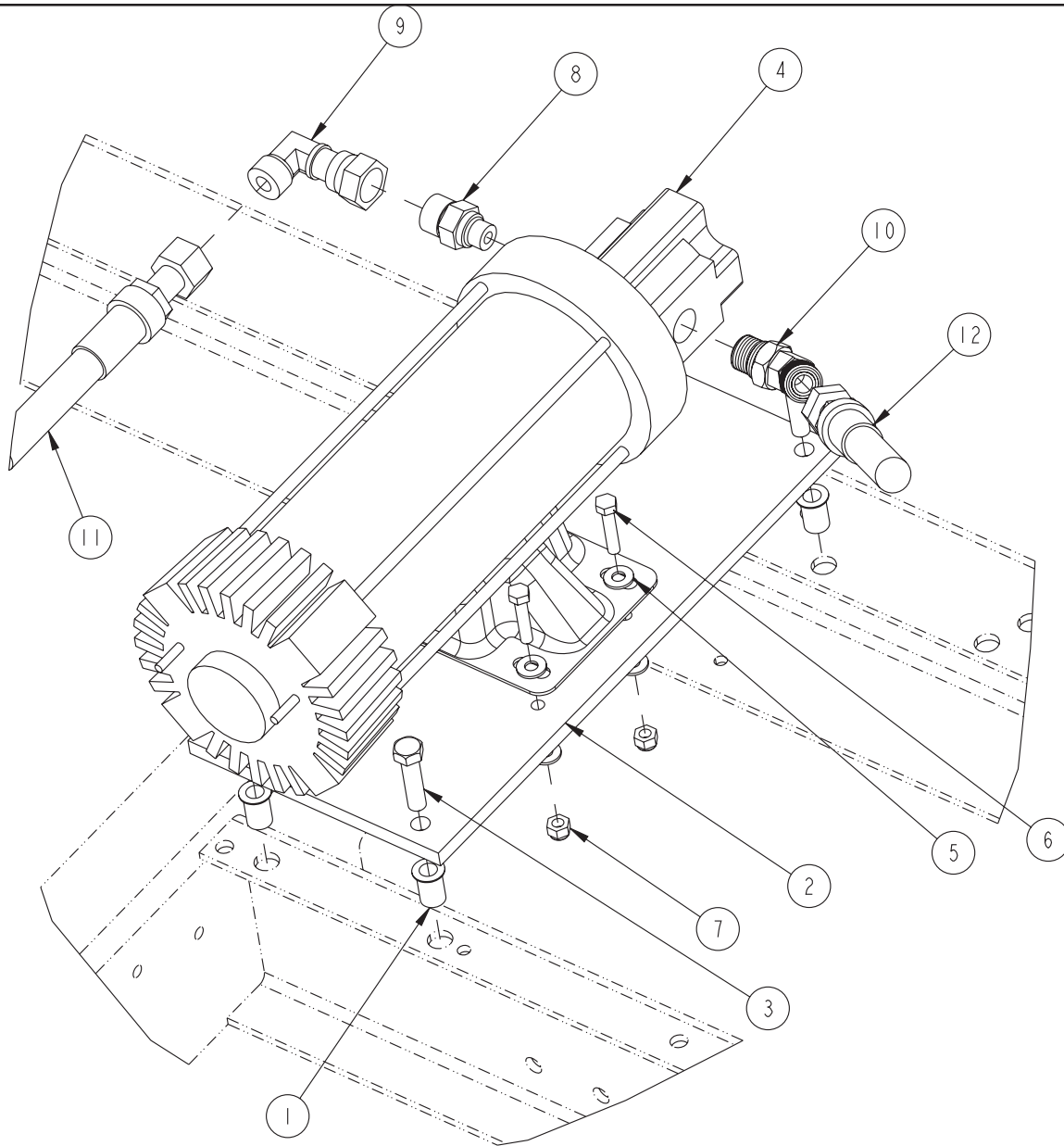


# SEAT ASSEMBLY



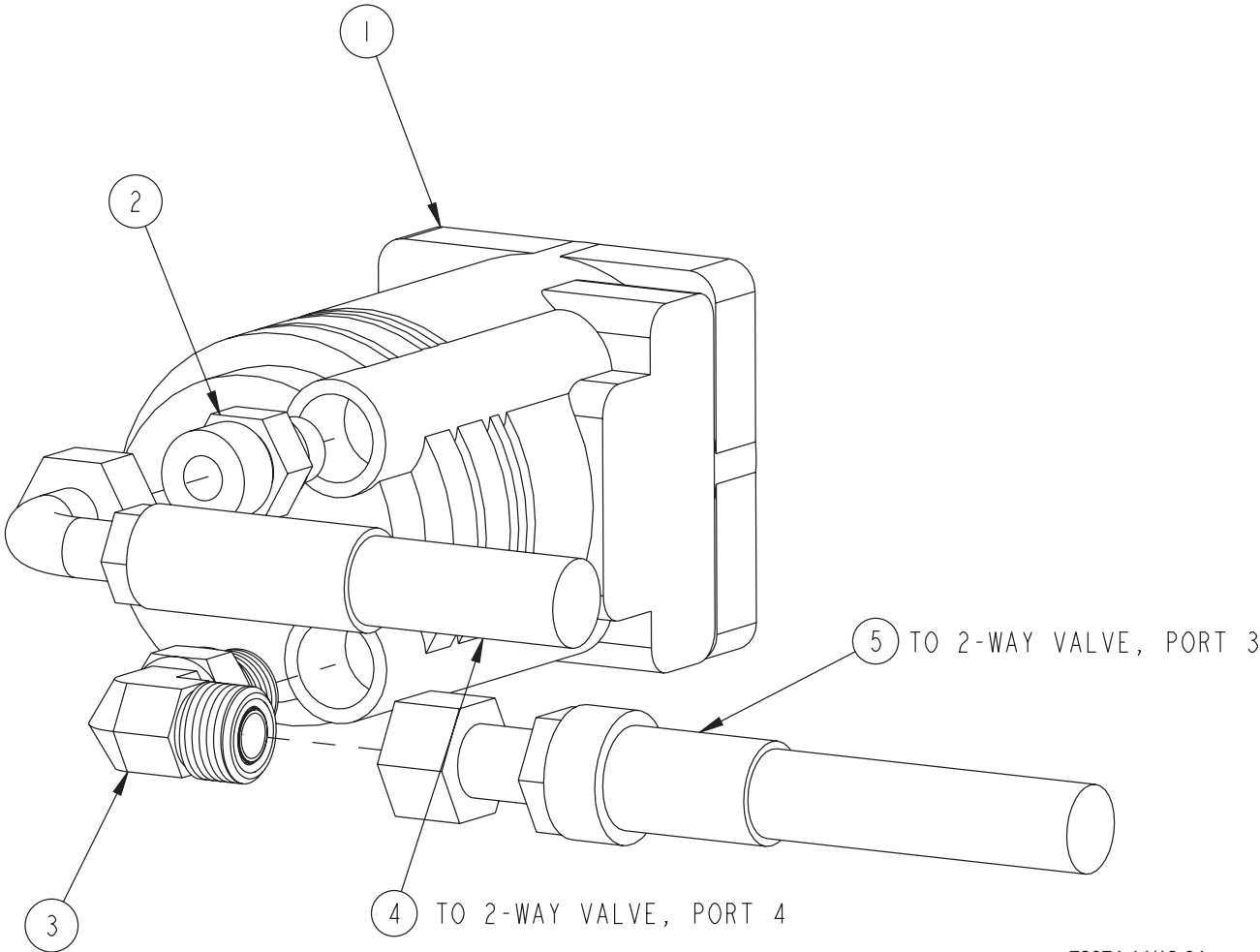
72072revC/10-04

# HYDRAULIC PUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	2-00-05347	Insert, 3/8-16 Threaded	4
2	7-81-00285	Plate, Pump Motor Mounting	1
3	2-00-00234	Screw, 3/8-16 x 1.50 HHC	4
1	0882-071	Pump Motor	1
	0780-644	Motor Brush Kit (service part)	1
	0780-645	Motor Seal Kit (service part)	1
1	2-00-00409	Flat Washer, .687 x .344 x .062	4
7	2-00-00644	Nut, 5/16-18 Fiber Insert Hex	8
8	2-00-04977	Fitting, -8 ORS - 6 SAE, STR.	1
9	2-00-05046	Fitting, -8 ORS Swivel 90° Elbow	1
10	2-00-04975	Fitting, -8 SAE 45° Elbow	1
11	7-33-02667	Hose, #8 STR. - STR. (42")	Ref
12	7-33-02665	Hose, #8 STR. - STR. (24")	Ref

72074revC/10-04

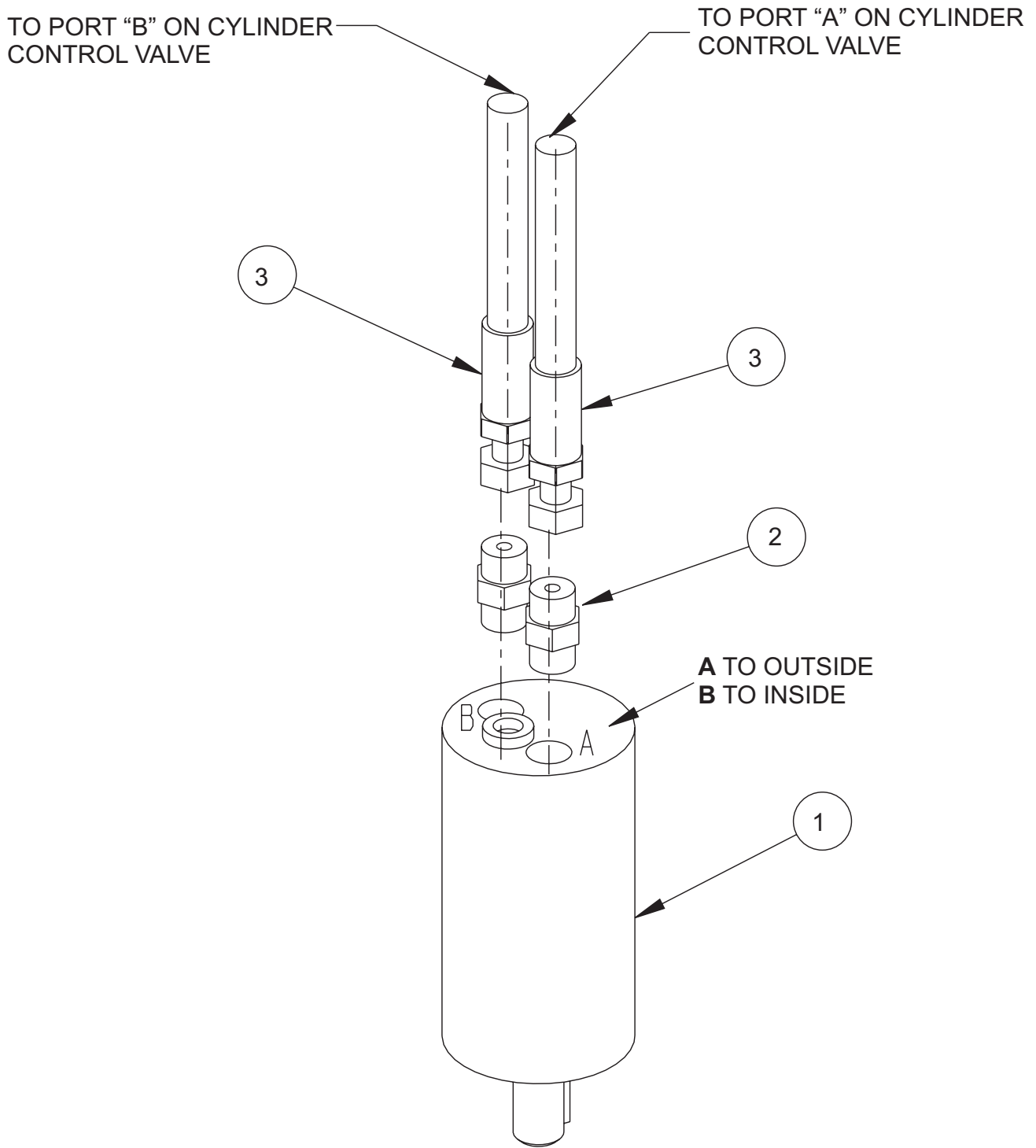


72074-14/12-04

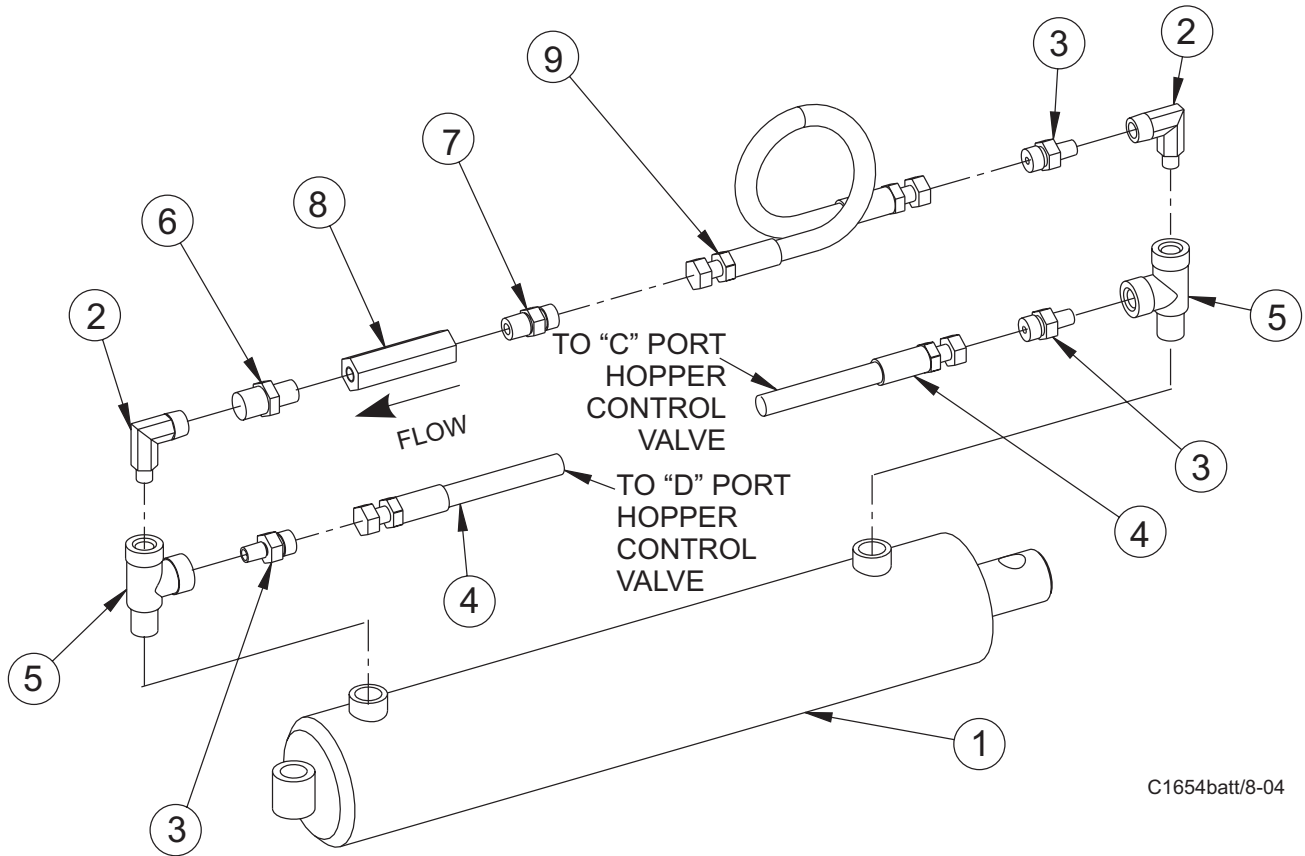
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0885-061	Motor, Main Broom	Ref
2	2-00-04977	Fitting, 8 ORS - 6 SAE, STR.	Ref
3	2-00-04885	Fitting, 90° Elbow (O-Ring)	Ref
4	7-33-02662	Hose, #8 ORS, STR. x 90° (74")	Ref
5	7-33-02663	Hose, #8 ORS, STR. x 90° (73")	Ref

72074-14revD/12-04

# SIDE BROOM HYDRAULICS



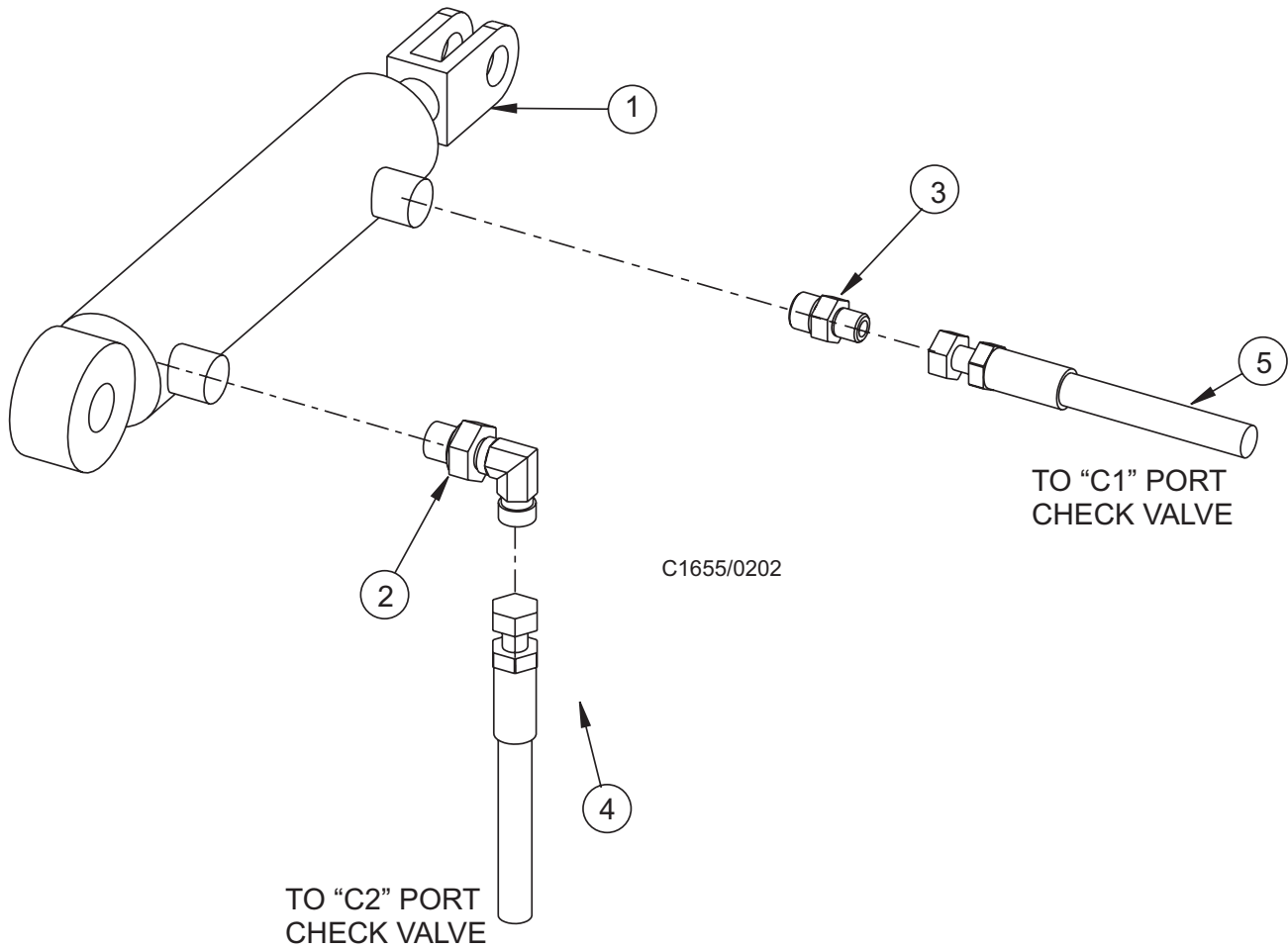
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0885-061	Hyd. Motor	1
	0780-144	Motor Seal Kit (service part)	
2	2-00-04918	Straight Fitting	2
3	7-33-02353	Hose, 98.5"	Ref



C1654batt/8-04

<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	8-17-05022 0880-183-1	Cylinder, Rotation Seal Kit (Service Part)	1
2	2-00-04589	Fitting, 3/8 to 3/8 90° Street Elbow	1
3	2-00-05054	Fitting, 9/16-18 to 3/8-18 Adapter	3
4	7-33-02352	Hose, #4 ORS 0-90° Swivel 71"	Ref
5	2-00-04462	Fitting Street Tee (3/8)	2
6	2-00-04628	Fitting, STR 3/8 to 1/4	1
7	2-00-04997	Fitting ORS NPT Adapter (#4-1/4)	1
8	8-88-00014	Valve, Ball Check	1
9	8-33-02178	Hose, .25" ID 15.0"	1

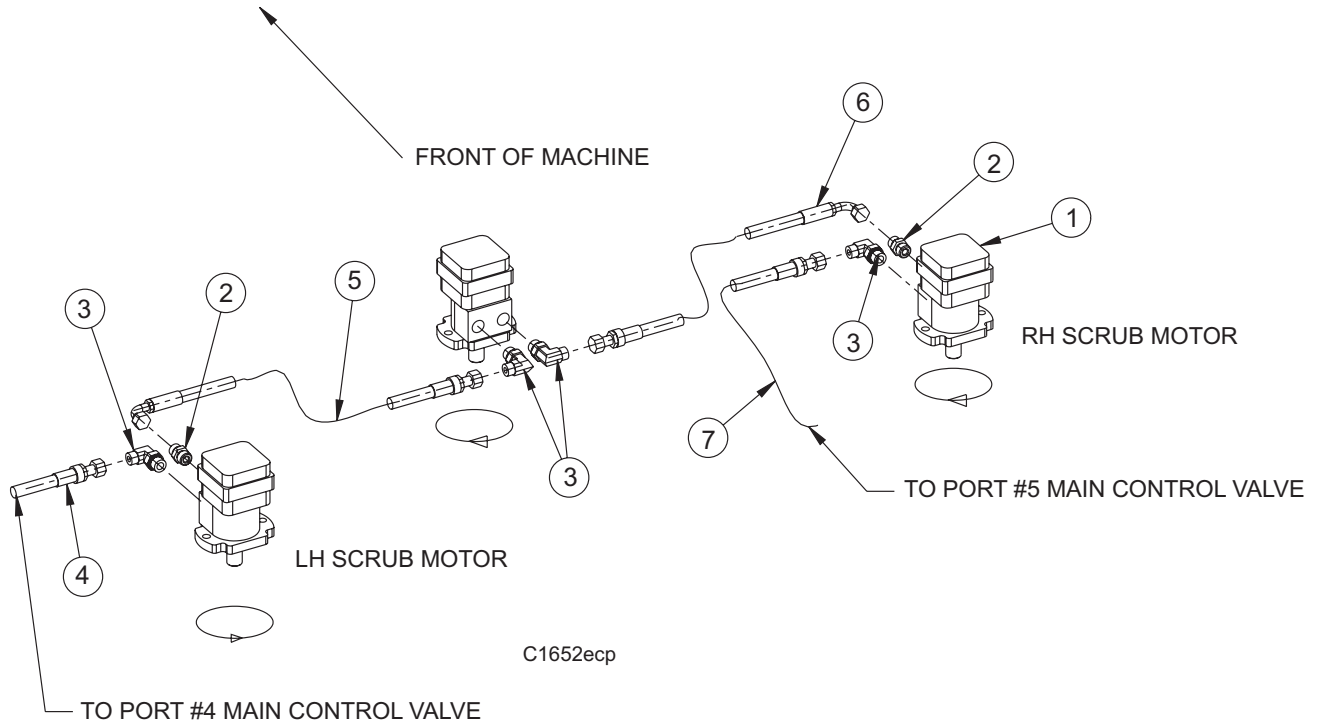
# HOPPER DUMP DOOR HYDRAULICS



<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-17-05011	Cylinder	1
	7-70-00021	Seal Kit (Service Part)	
2	2-00-04926	#4 SAE to #4 ORS 90°	1
3	2-00-04895	#4 SAE to #4 ORS	1
4	7-33-02342	#4 Hose STR 92.5"	Ref
5	8-33-02216	#4 Hose STR 88.0"	Ref

C1655/0402

# SCRUB DECK HYDRAULICS

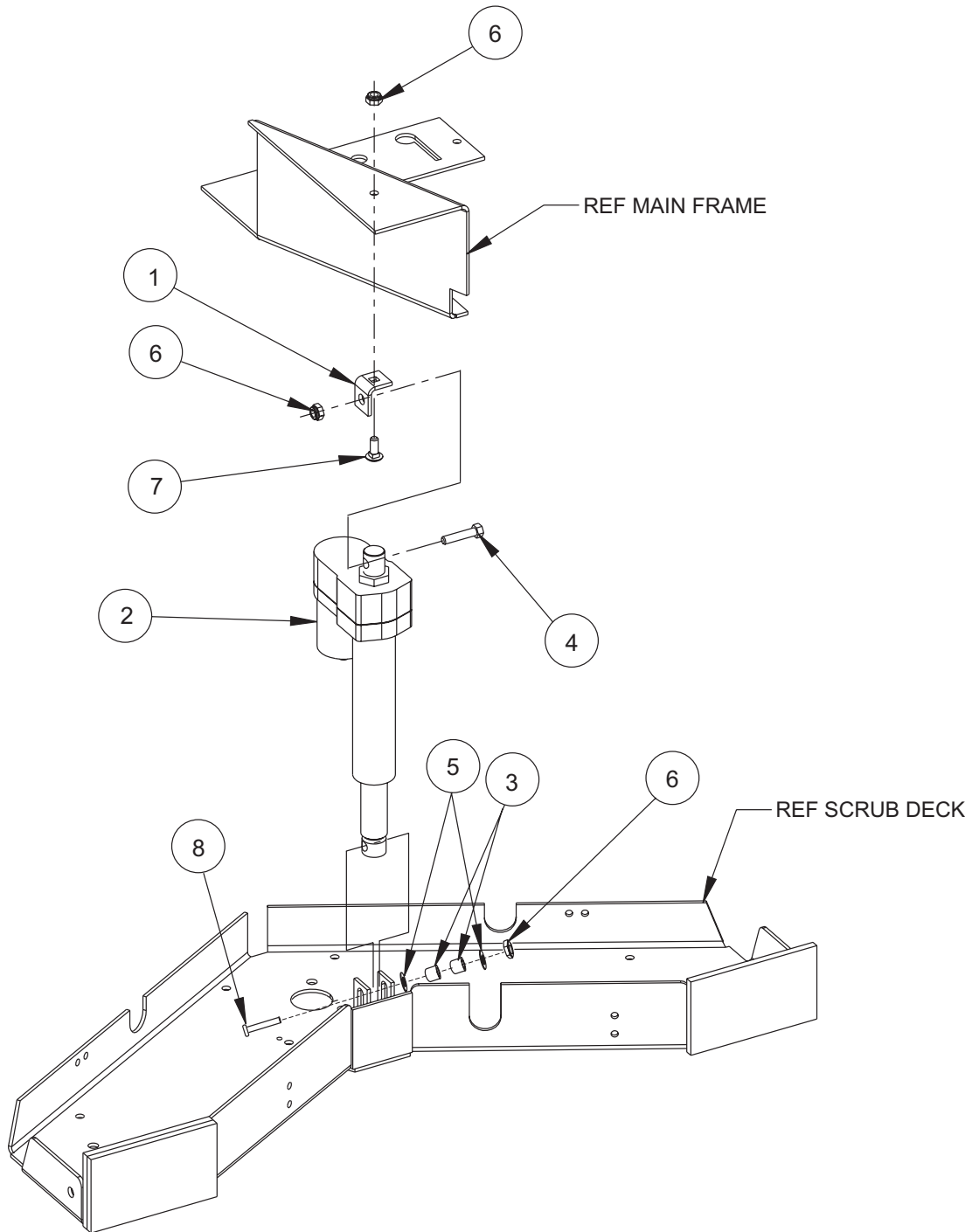


KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	0782-111 0780-070	Hydraulic Motor Seal Kit (Service Part)	3
2	2-00-04974	#10 SAE to #8 ORS	2
3	2-00-04921	#10 SAE to #8 ORS, 90°	4
4	7-33-02347	#8 Hose STR - 90° 49.0"	Ref.
5	7-33-02354	#8 Hose STR - 90° 13.5"	Ref.
5*	7-33-02327	#8 Hose STR - 90° 15.25"	Ref.
6	7-33-02327	#8 Hose STR - 90° 15.25"	Ref.
6*	7-33-02326	#8 Hose STR - 90° 15.25"	Ref.
7	7-33-02428	#8 Hose STR - 90° 57"	Ref.

\* These hoses are for 53" Scrub Deck

C1652ecp/3-04

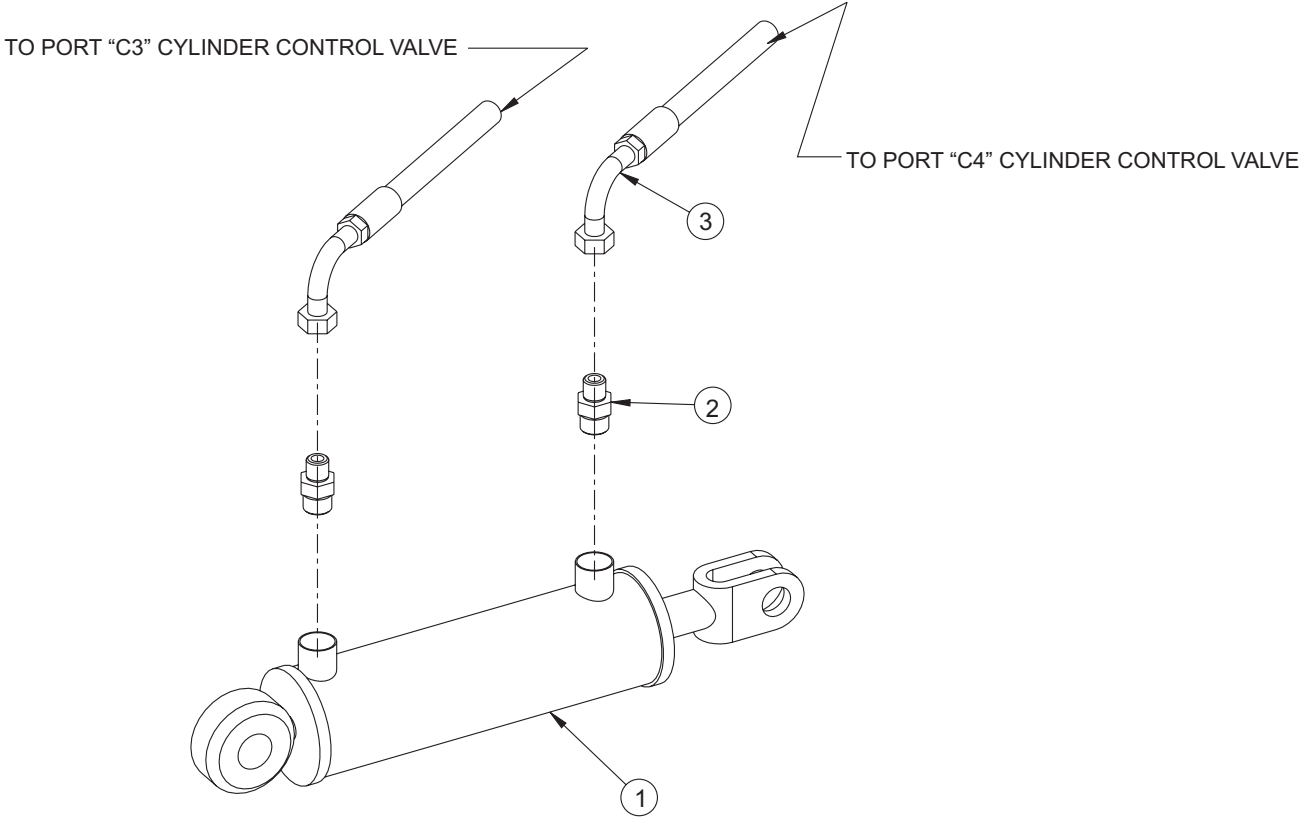
# SCRUB DECK LIFT HYDRAULICS



<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1	7-31-07025	Hanger, Brush Lift	1
2	0782-130	Actuator (36V)	1
3	2-00-03151	Spacer, 1/2 ID x 3/4 OD x 5/8 LG	2
4	2-00-00242	Screw, 1/2-13 x 2.25 HHC	1
5	2-00-00405	Flat Washer, 1.063 x .531 x .094	2
6	2-00-04936	Nut, 1/2-13 Fiber Lock	3
7	2-00-05187	Carriage Bolt, 3/8-16 x 1.25	1
8	2-00-04618	Screw, 1/2-13 x 3.50 HHC	1

C1769batt/4-03





C1656/0402

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-17-05019 0780-402	Cylinder Seal Kit (Service Part)	1
2	2-00-04895	Fitting, #4 SAE to #4 ORS	2
3	7-33-02190	Hose, #4 ORS STR-90 (67")	Ref

C1656/0402

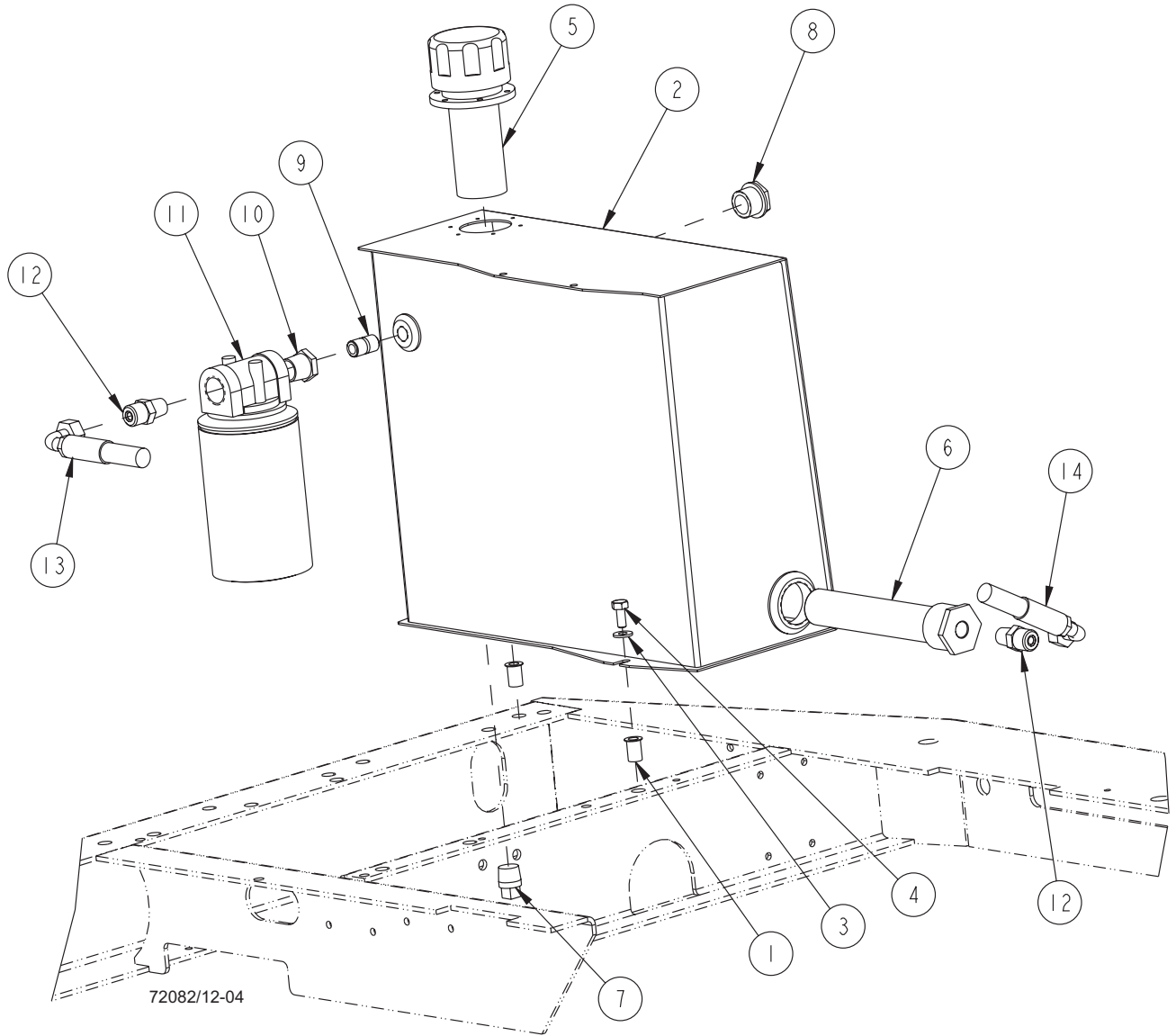
## HYDRAULIC RESERVOIR

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	2-00-05330	Insert, 5/16-18 Threaded	2
2	7-83-08004	Hydraulic Reservoir	1
3	2-00-00451	Flat Washer, .750 X .312 X .065 Stl Zn	2
4	2-00-00208	Screw, 5/16-18 X .75 HHC	2
5	8-11-00026	Filter, Cap Reservoir	1
6	8-24-04115	Strainer, Hyd. Reservoir	1
7	2-00-02474	Plug, 1/2 NPT	1
8	8-48-05033	Sight Glass, Hyd. Fluid	1
9	2-95-02516	1/2 Pipe Nipple Close	1
10	2-00-04474	Reducer, 3/4-14 x 1/2-14	1
11	7-24-04013	Return Filter Assy.	1
12	2-00-05436	Fitting, ORFS M to NPTF M 08 x 12	2
13	7-33-02666	Hose, #8 STR - 90° (48")	Ref
14	7-33-02665	Hose, #8 STR - 90° (28")	Ref

72082revC/12-04

# HYDRAULIC RESERVOIR



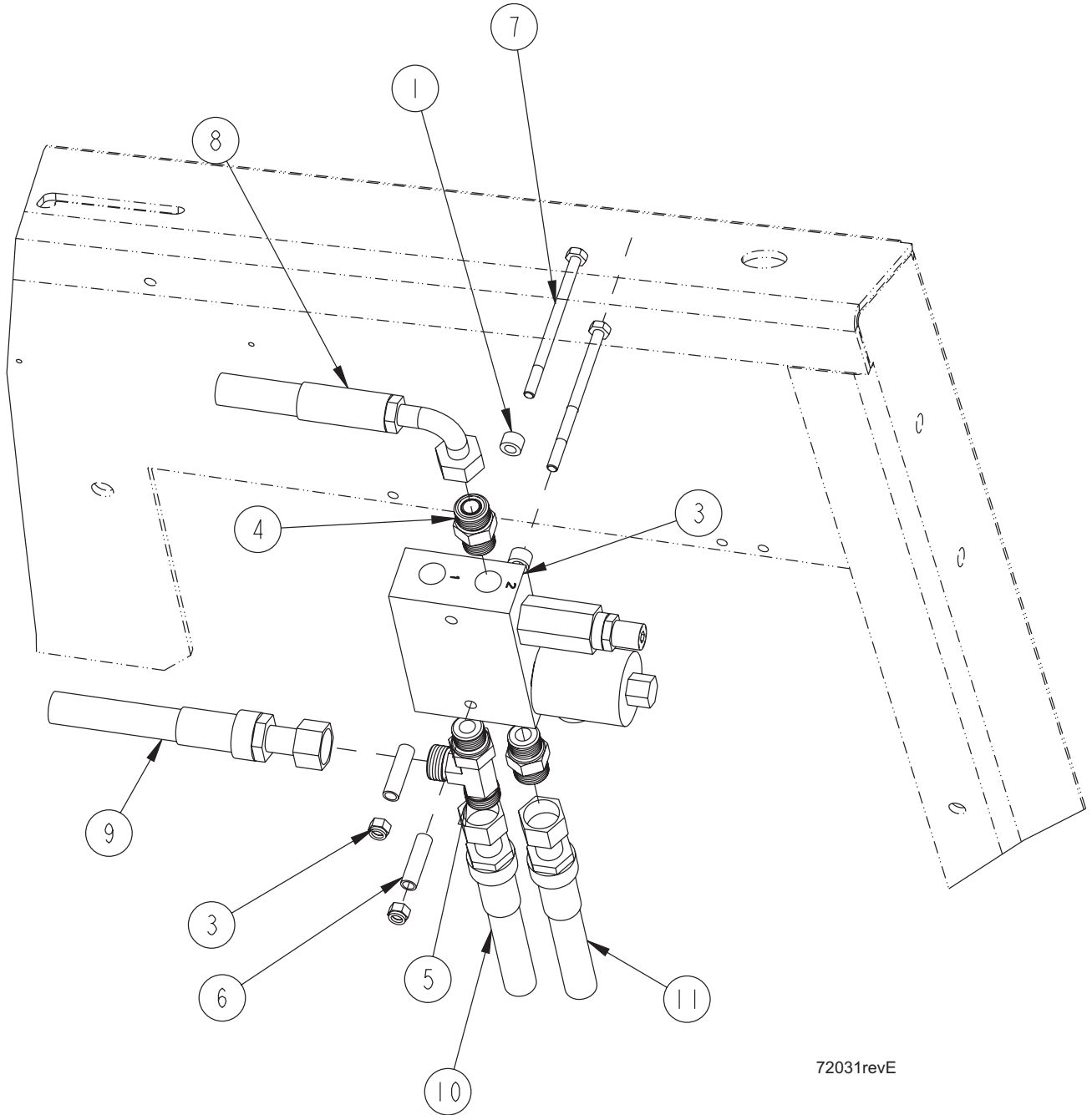
## 2-WAY HYDRAULIC VALVE

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1.	7-75-01234	Spacer, Vac	2
2.	7-88-00123	Valve, 2-way Pressure Relief	1
	7-12-02023	Valve Cartridge (service part)	
	7-14-07010	Valve Coil (service part)	
3.	2-00-00641	Nut, 1/4-20 Fiber Insert	2
4.	2-00-04970	Fitting, STR -8 ORS x -8 SAE	2
5.	2-00-04924	Fitting,3/4-16 x 13/16-16 Tee	1
6.	8-75-01207	Spacer, Taillight Mounting	2
7.	2-00-05485	Bolt, 1/4-20 x 4.0	2
8.	7-33-02666	Hose, #8 STR - 90° (48")	Ref
9.	7-33-02664	Hose, #6 STR #4 - STR #8 (64")	Ref
10.	7-33-02663	Hose, #8 STR - 90° (73")	Ref
11.	7-33-02662	Hose, #8 STR - STR (74")	Ref

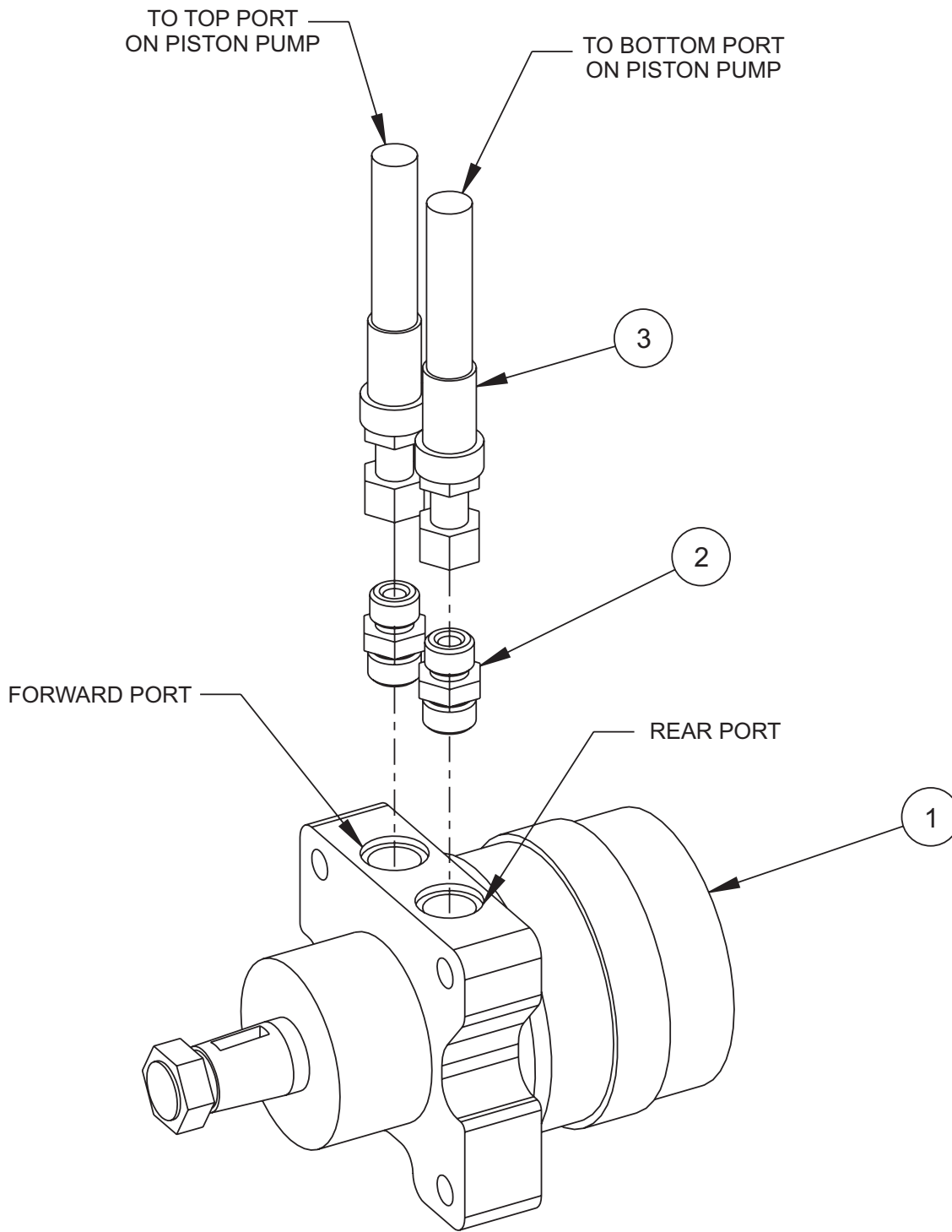
72031revE/12-04

# 2-WAY HYDRAULIC VALVE



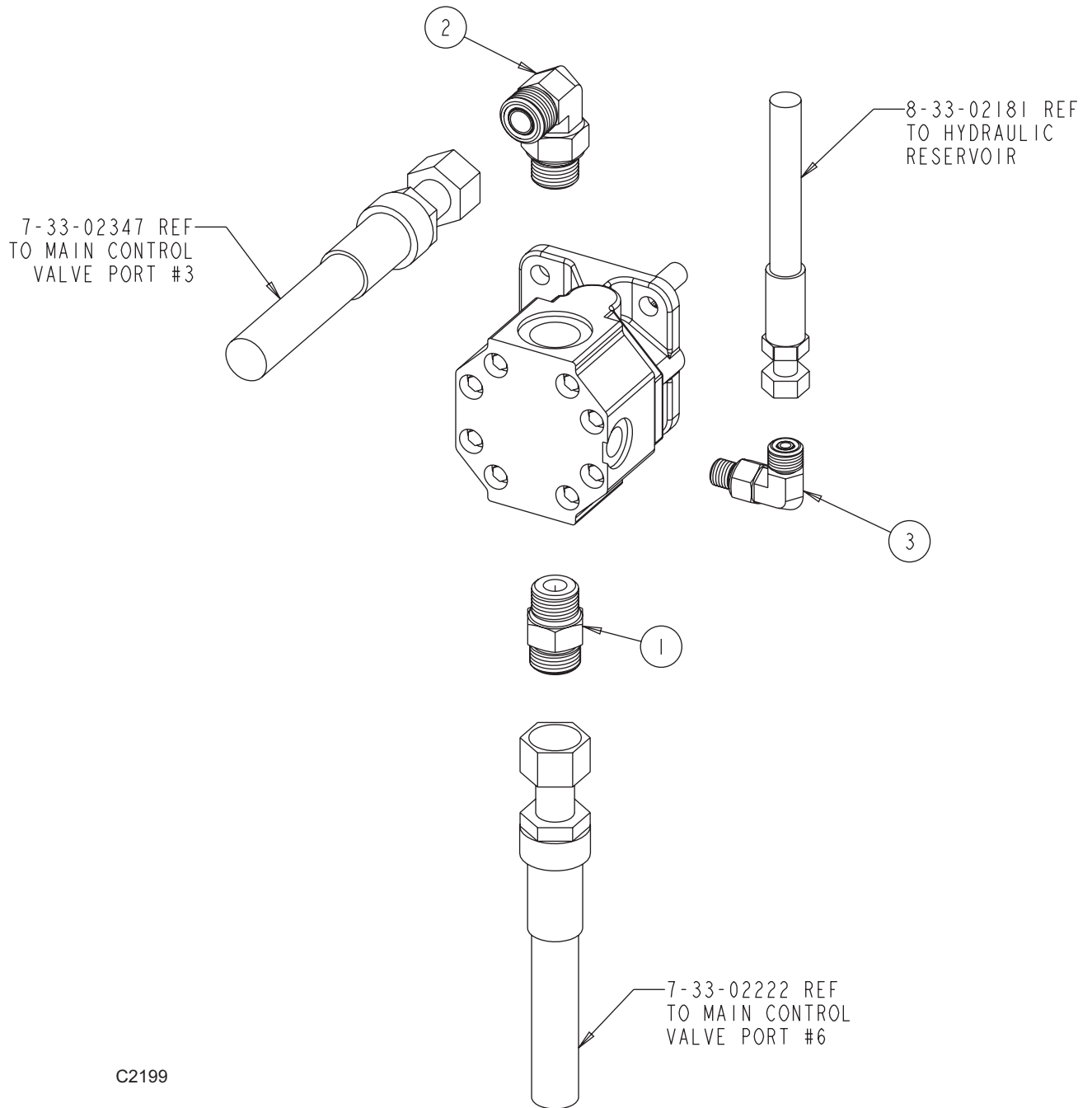
72031revE

# DRIVE WHEEL HYDRAULICS



<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0785-087	Hydraulic Motor	1
2	2-00-04974	Fitting #8 ORS to #10 SAE Connector	2
3	7-33-02382	Hose - #8 ORS STR Ends 43.25"	Ref.

C1661/9804

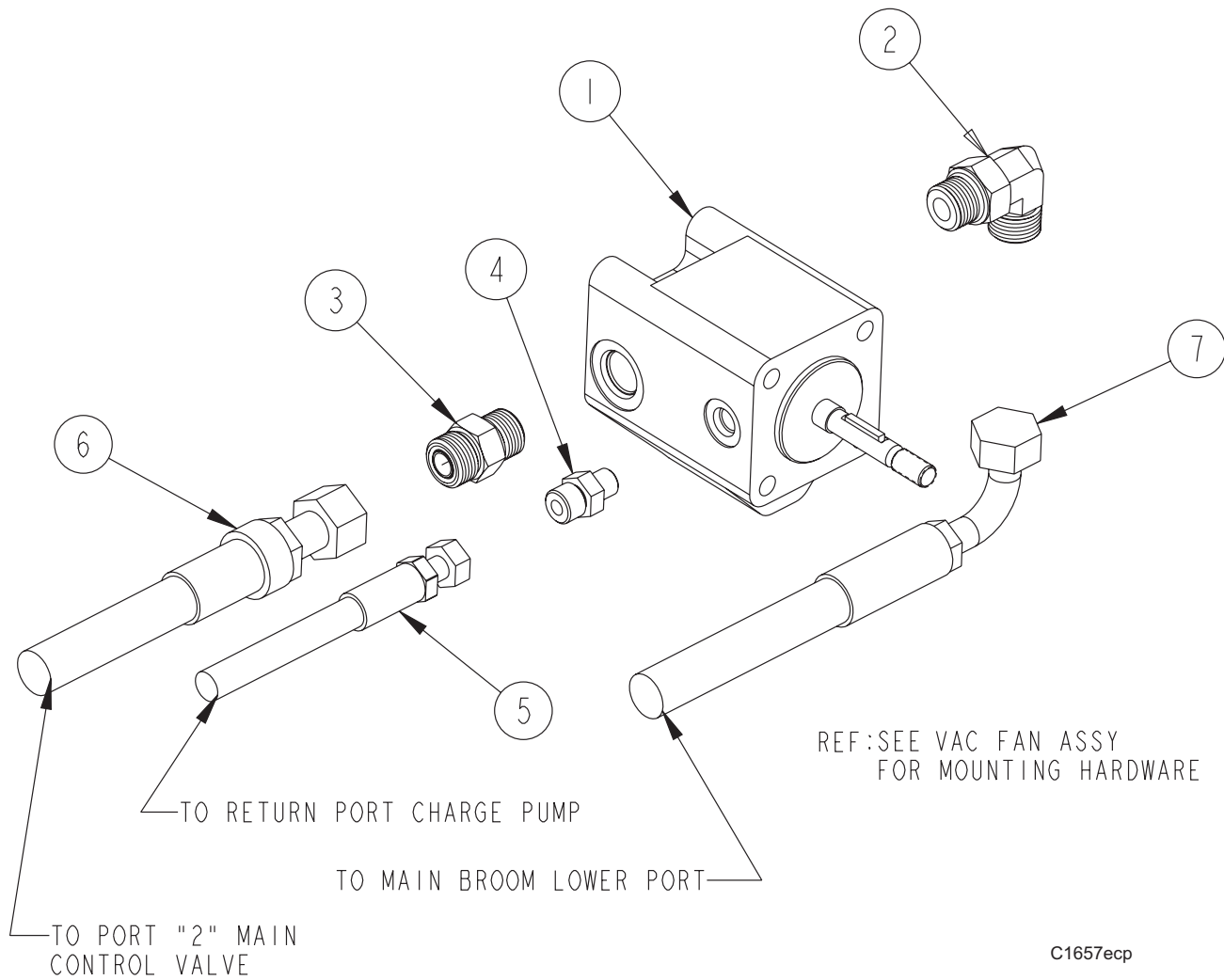


C2199

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	2-00-04970	Fitting, Str. -8 ORS x -8 SAE	1
2	2-00-04885	Fitting, 90° Elbow (O-Ring)	1
3	2-00-04892	Fitting, 90° Elbow (O-Ring)	1

C2199/3-04

# VAC FAN HOPPER HYDRAULICS

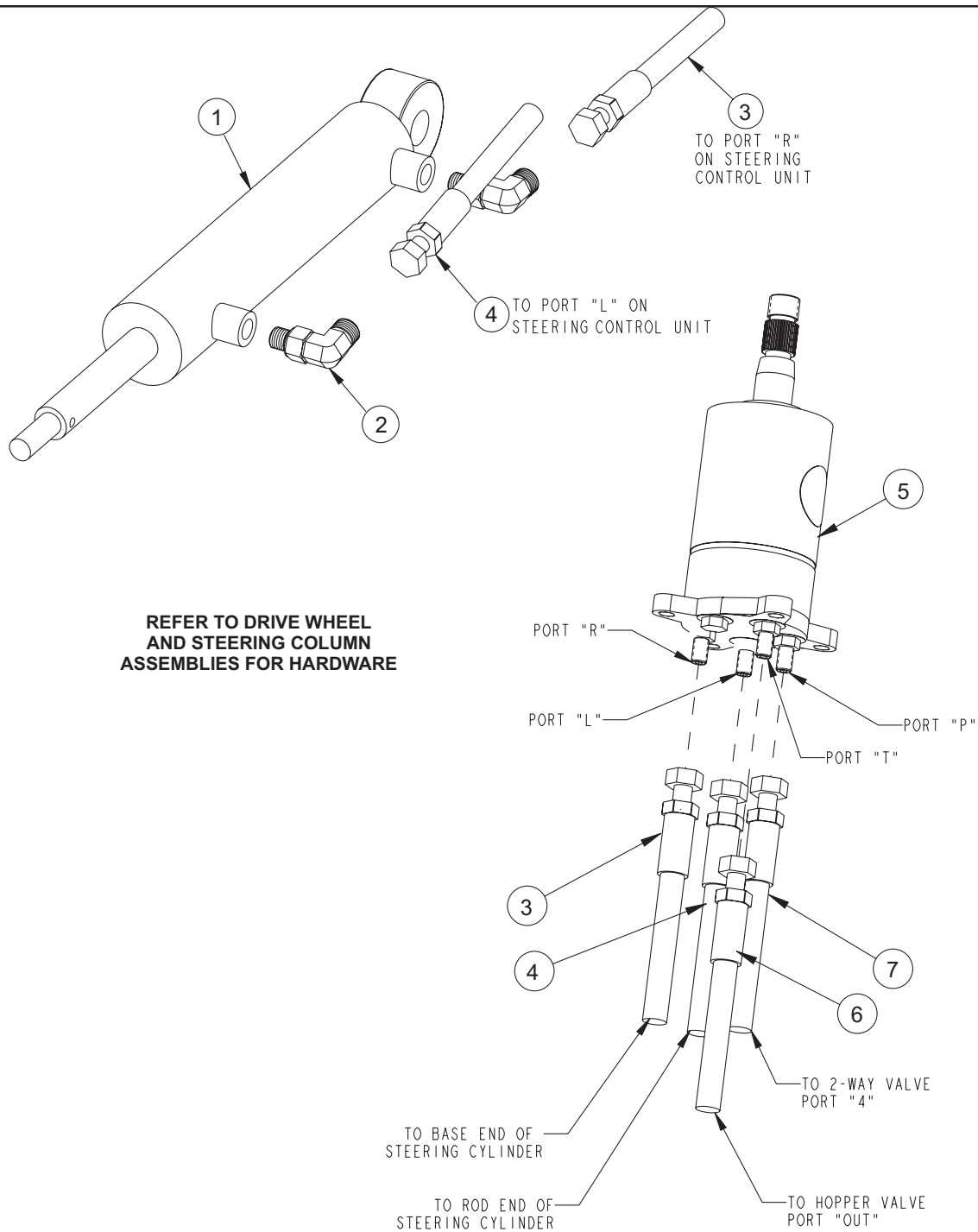


KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	0882-048 7-70-00020	Motor, Hydraulic Vacuum Motor Seal Kit (service part)	1
2	2-00-04885	Fitting, 90° Elbow (O-Ring)	1
3	2-00-04970	Fitting, Str., -8 ORS x -8 SAE	1
4	2-00-04895	Fitting, Straight Connector	1
5	7-33-02190	Hose, #4 ORS STR Ends, 66.0"	Ref
6	7-33-02323	Hose, #8 0-90°, 55.0"	Ref
7	7-33-02332	Hose, #8 ORS 0-90° Ends, 102.0"	Ref

C1657ecp/6-04



# STEERING 90° - 90° HYDRAULICS



REFER TO DRIVE WHEEL AND STEERING COLUMN ASSEMBLIES FOR HARDWARE

72024-12revD

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	7-17-05010	Cylinder, Power Steering	1
	7-70-00021	Cylinder Seal Kit (service part)	
2	2-00-04892	Fitting, 90° Elbow (O-Ring)	2
3	8-33-02183	Hose #4, STR - STR, 49" LG	Ref
4	8-33-02185	Hose #4, STR - STR, 56" LG	Ref
5	8-60-05034	Steering Control Unit	1
6	7-33-02668	Hose #6, STR #4 - 45° #8, 30" LG	Ref
7	7-33-02664	Hose #6, STR #4 - STR #8, 64" LG	Ref

72024-12revD/12-04

## COVERS

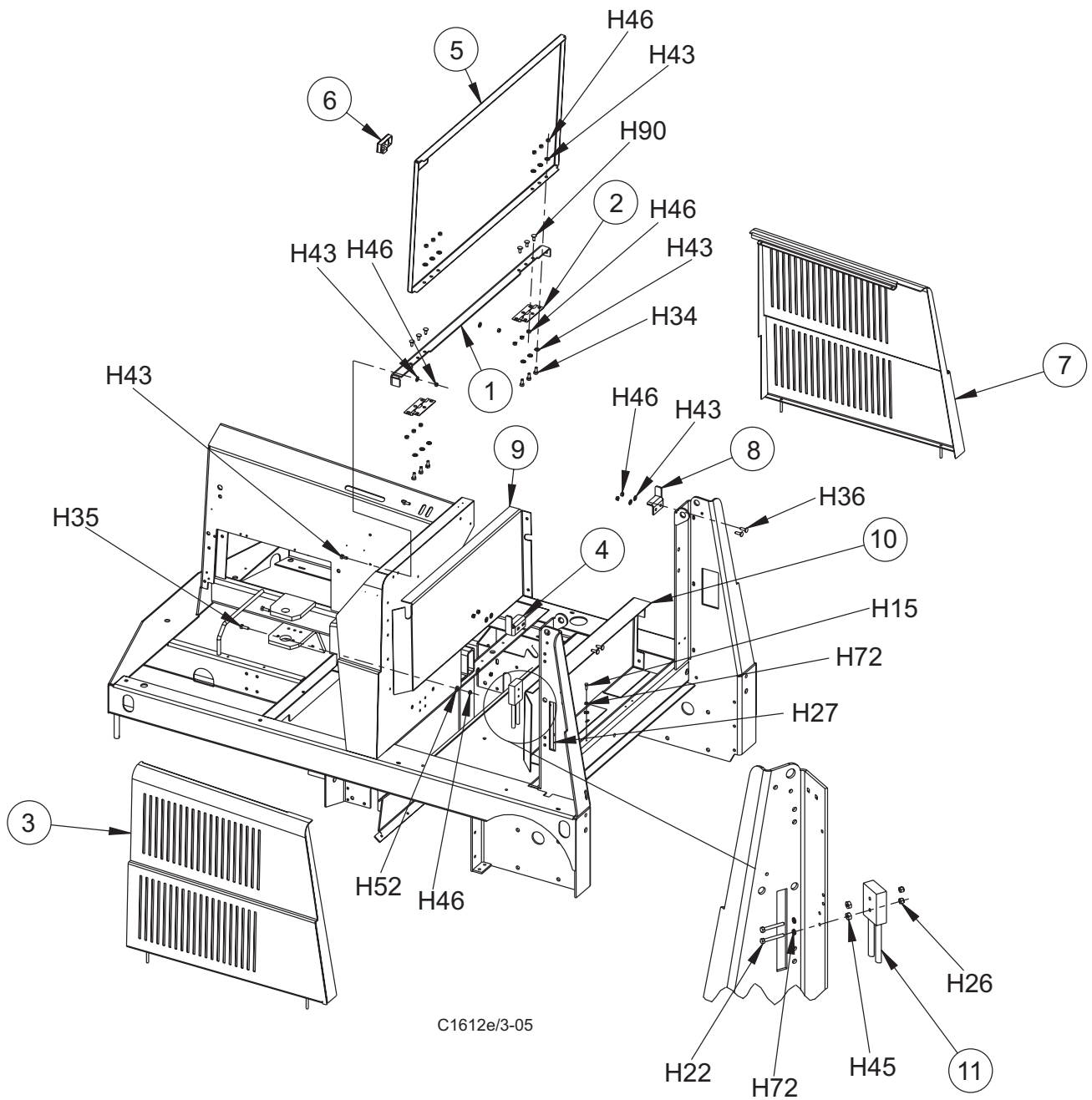
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-81-00192	Support , Top Cover	1
2	8-32-00046	Hinge	2
3	7-16-07385	Cover, RH Side	1
4	7-41-00062	Latch, RH Side Cover	1
5	7-16-07383	Cover, Engine	1
6	8-41-00040	Latch	1
7	7-16-07384	Cover, LH Side	1
8	7-41-00034	Latch, LH Side Cover	1
9	7-62-05108	Rail, Battery Guide (Rear)	1
10	7-62-05109	Rail, Battery Guide (Front)	1
11	0775-166	Connection Assembly	1

### HARDWARE USED:

H15	2-00-00221	Screw, ¼ - 20 x .75 HHC	3
H22	2-00-02589	Screw, 1/4-20 x 2.0 HHC	2
H26	2-00-00641	Nut, 1/4-20 Fiber Insert	2
H27	2-00-03702	Washer, .625 x .281 x .063	4
H34	2-00-00208	Screw, 5/16-18 x .75 HHC	6
H35	2-00-02708	Screw, 5/16-18 x 1.0 HHM	4
H36	2-00-00196	Carriage Bolt, 5/16-18 x 1.0	4
H43	2-00-00409	Flat Washer, .687 x .344 x .062	18
H45	2-00-00585	Nut, Hex. 5/16-18 x .500 x .265	2
H46	2-00-00644	Nut, 5/16-18 Fiber Insert	20
H52	2-00-00402	Flat Washer, .750 x .390 x .094	2
H72	2-00-00518	Lock Washer, Helical Spring	5
H90	2-00-03569	Carriage Bolt, 5/16 - 18 x .75	6

C1612e/3-05



C1612e/3-05

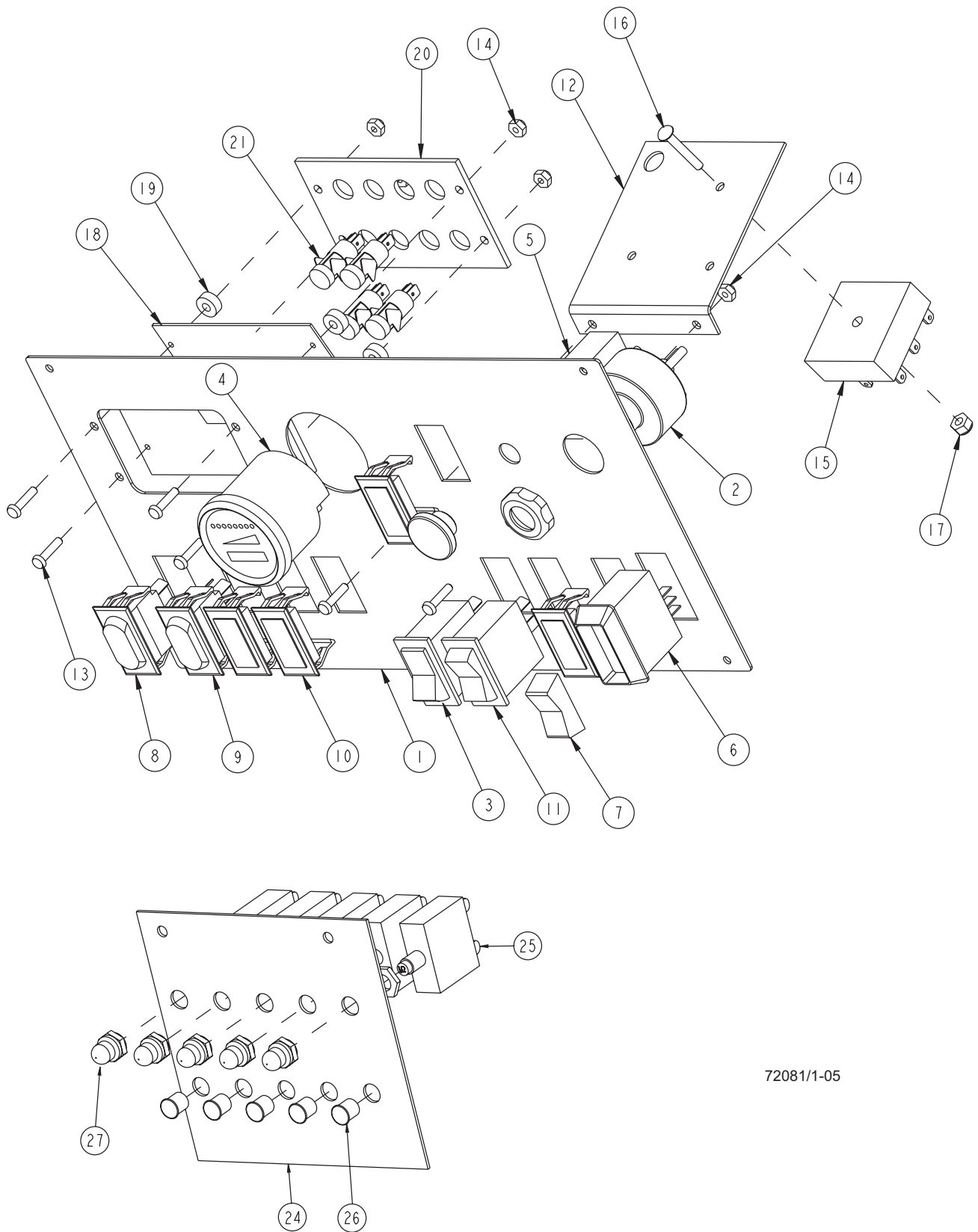
## INSTRUMENT PANEL

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-52-00208	Instrument Panel	1
2	8-82-00041	Key Switch (Ignition)	1
3	8-82-00059	Rocker Switch (SPST)	1
4	0785-095	Hobbsmeter	1
5	8-82-00027	Light Switch	1
6	2-00-05827	Switch Body	1
7	2-00-05834	Actuator, Forward/Reverse	1
8	7-82-00041	Switch, Double Pole, Triple Throw (On-On-On)	1
9	7-82-00042	Switch, Motor Reversing	1
10	2-00-05375	Blank, McGill Switch	4
11	8-82-00062	Switch, Rocker (SPST)	1
12	8-08-00838	Panel, Relay	1
13	2-00-05337	Screw, #8-32 x 3/4 BHSC	6
14	2-00-01372	Nut, #8-32 Fiber Lock Hex	6
15	8-64-00020	Relay, 20-Second Time Delay	1
16	2-00-04897	Screw, #10-24 x 1.25 lg	1
17	2-00-01246	Nut, #10-24 Elastic Stop	1
18	7-41-08007	Panel, Warning Light	1
19	8-75-01223	Spacer, Panel	4
20	7-52-00209	Panel, Warning Light	1
21	7-40-05038	Amber Light	4
22	8-18-00567	Decal, Instrument Panel	1
23	0795-216	Harness, Wiring (not shown)	1
24	7-52-00179	Panel, Circuit Breaker	1
25	8-64-00008	Circuit Breaker, 15 amp	5
26	2-00-04757	Plug Button (.375 dia.)	5
27	8-11-00044	Boot	5

72081revC/1-05

# INSTRUMENT PANEL



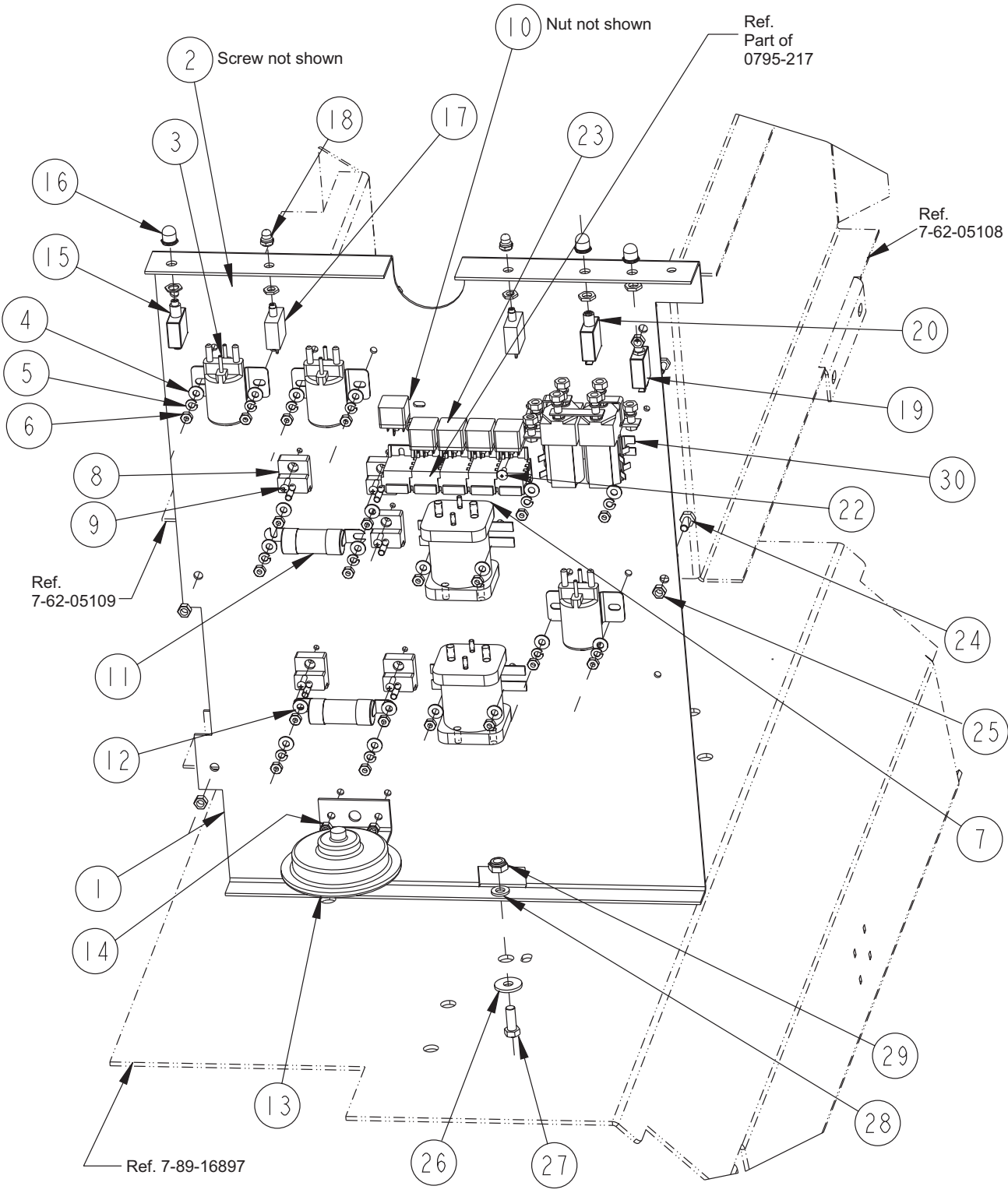
72081/1-05

## POWER PANEL #2

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-52-00207	Power Panel	1
2	2-00-00220	Screw, 1/4-20 x .625 HHC	14
3	41801A	Solenoid	3
4	2-00-03702	Washer, .625 x .281 x .063	20
5	2-00-00518	Lock Washer, Helical Spring	12
6	2-00-00594	Nut, 1/4-20 x .437 x .218 Hex	20
7	7-15-08005	Contactora	2
8	8-06-05004	Terminal Block	5
9	2-00-00056	Screw, #10-24 x .75 RHM	5
10	2-00-01246	Nut, #10-24 Fiber Insert Hex	5
11	7-28-00002	Fuse - 80 AMP	1
12	8-28-05014	Fuse - 140 AMP	1
13	8-32-09008	Horn	1
14	2-00-00641	Nut, 1/4-20 Fiber Insert	2
15	7-64-00025	Circuit Breaker - 25 AMP	1
16	8-11-00051	Cap-Clear Boot	3
17	8-64-00008	Circuit Breaker - 15 AMP	2
18	8-11-00044	Boot	2
19	7-64-00020	Circuit Breaker - 45 AMP	1
20	7-64-00032	Circuit Breaker - 50 AMP	1
21	2-00-05262	Insert, 10-24 Threaded	2
22	2-00-03061	Screw, #10-24 x 1.0 Truss Head	2
23	7-64-00037	Relay - 36V w/Diode Assy.	7
24	2-00-00208	Screw, 5/16-18 x 3/4 HHC	4
25	2-00-00644	Nut, 5/16-18 Fiber Insert Hex	4
26	2-00-01803	Flat Washer, 1.063 x .328 x .063	1
27	2-00-00233	Bolt, 3/8-16 x 1.0 Fin. Hex Head	1
28	2-00-00402	Washer, 25/64 ID x 3/4 OD	1
29	2-00-00643	Locknut, 3/8-16 Elastic	1
30	8-74-00014	Solenoid, Power Panel	1

72080revC/3-05



72080/3-05

## DECALS

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-18-00567	Instrument Panel	1
2	8-18-00520	Left Side Panel	1
3	8-18-00506	Main Broom	1
4	8-18-00507	Side Broom	1
5*<	REF	ATF/Dextron Fluid Only	1
6*<	REF	Battery Charging Warning	1
7~	8-18-00487	Blank Square - Option Covers	1
8*<	REF	Do Not Use with Flammables	1
9*<	REF	Electrical Hazard	1
10*<	REF	No Gasoline or Combustibles	1
11*<	REF	Patent/Patents Pending	1
12*<	REF	Turn Off-Lock Wheel	1
13*<	REF	Cover/Hopper Could Close	3
14*<	REF	No Step	4
15*<	REF	Pinch Point-Stay Clear	9
16	8-18-00540	ATS 46/53	1
17	8-18-00549	A-L Technology (small)	2
18	8-18-00548	A-L Technology (large)	1
19	8-18-00528	Alto	1
20	REF	Serial Plate	1
21	7-50-05136	Non Skid	3
22	8-50-05055	Non Skid	2
23	2-00-04115	Rivet	2

<ATS 46/53 No-text and English Text warning decals contained in kit 0760-892

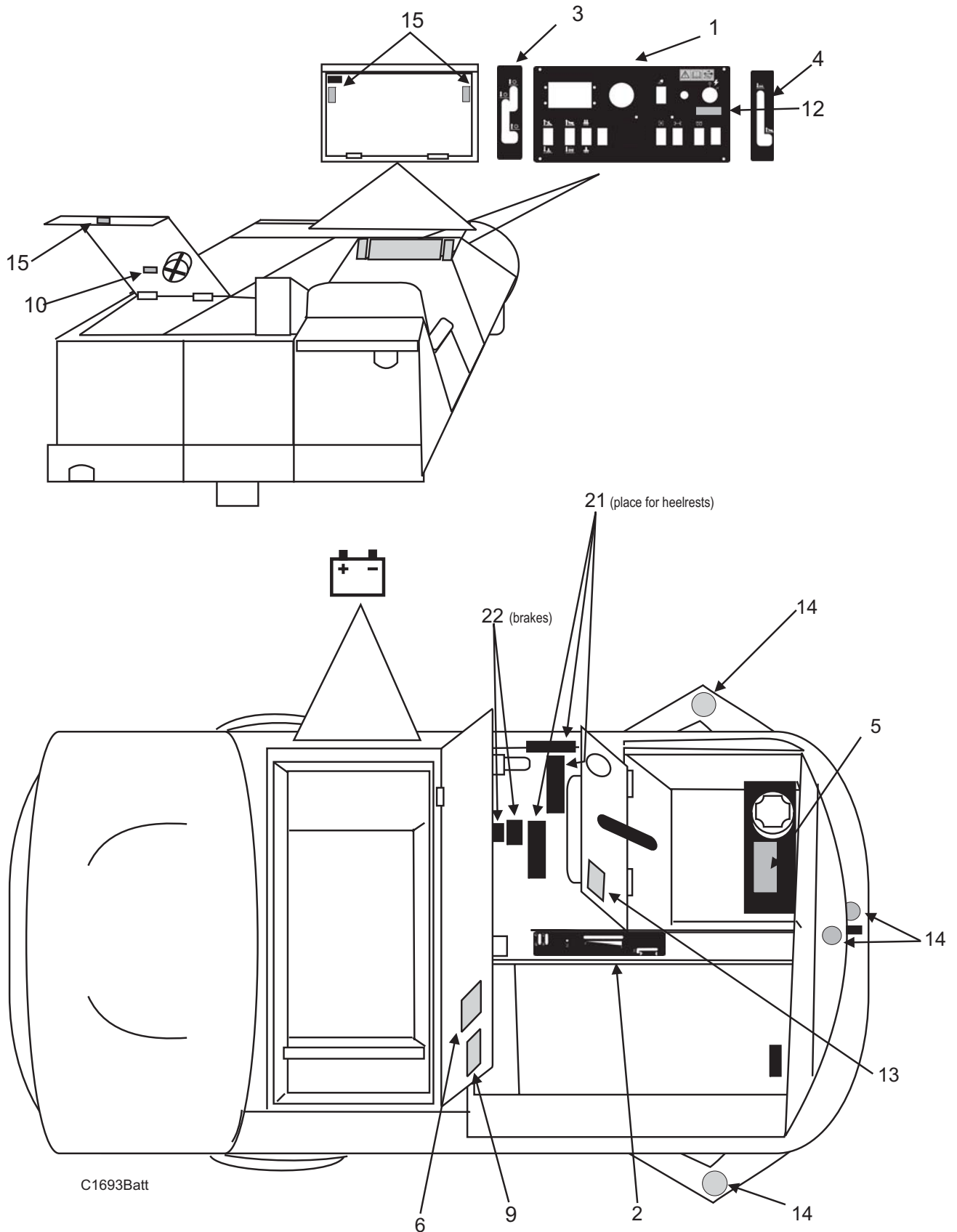
\*ALL WARNING/SAFETY DECALS with TEXT SOLD IN A KIT BY LANGUAGE:

DANISH	0760-850	ITALIAN	0760-851
DUTCH	0760-849	FRENCH	0760-847
NORWEGIAN	0760-852	SPANISH	0760-846
SWEDISH	0760-853	PORTUGUESE	0760-854
GERMAN	0760-848		

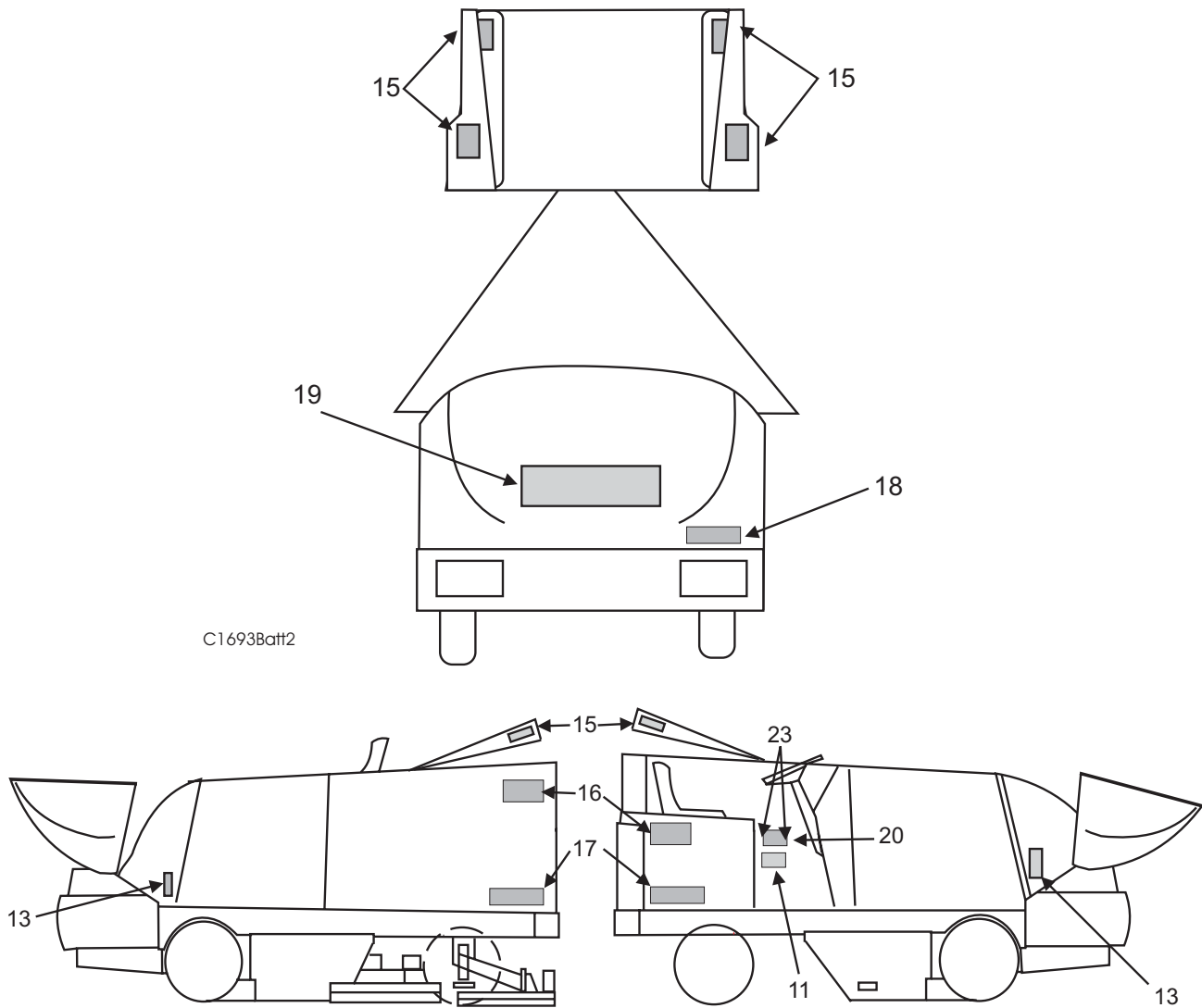
~Can be ordered separately but is also included in 0760-892

C1693Batt/9-04





# DECALS (CON'T)

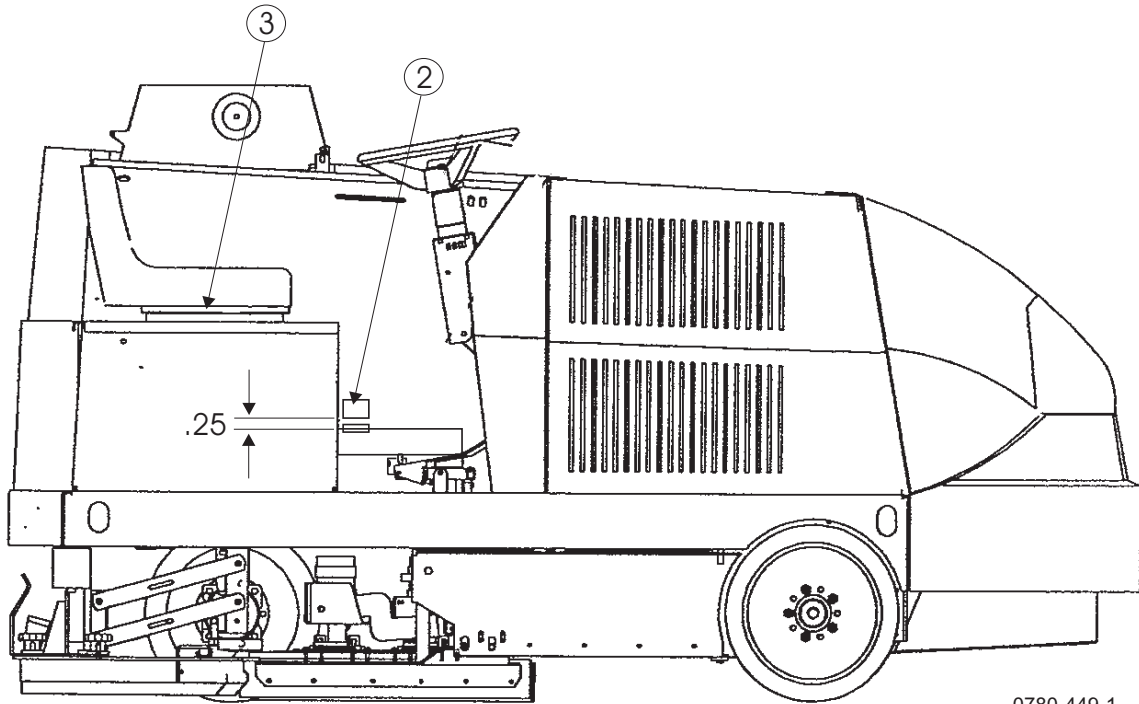


C1693Batt2

<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
12*	REF	Turn Off-Lock Wheel	1
13*	REF	Cover/Hopper Could Close	3
14*	REF	Decal, No Step	4
15*	REF	Pinch Point-Stay Clear	9
16	8-18-00540	ATS 46/53	1
17	8-18-00549	A-L Technology (small)	2
18	8-18-00548	A-L Technology (large)	1
19	REF	Serial Plate	1
20	7-50-05136	Non Skid (Edge)	3
21	8-50-05055	Non Skid	1
22	2-00-04115	Rivet	2

\*Contained in Warning Decal Kit 0760-892

C1693Batt2/9-04



0780-449-1

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1*	0780-439	Back-Up Alarm (not shown)	1
2	REF	Serial Number Plate	1
3	0780-471	Seat Switch (see Seat Assy.)	1

\*See Chapter 3 - Options - for parts list & assembly diagram

0780-449-1/7-04

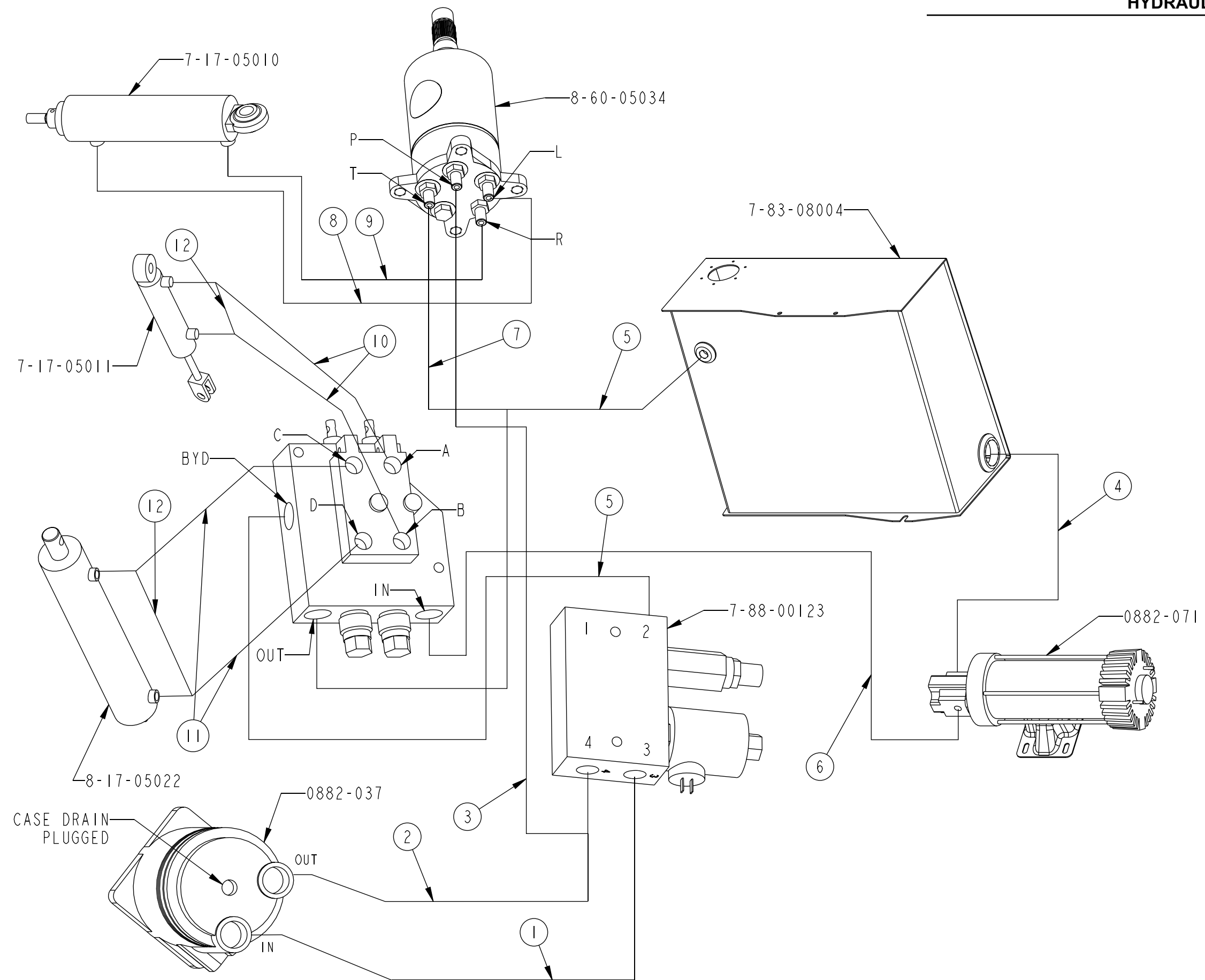
## HYDRAULIC HOSE DIAGRAM

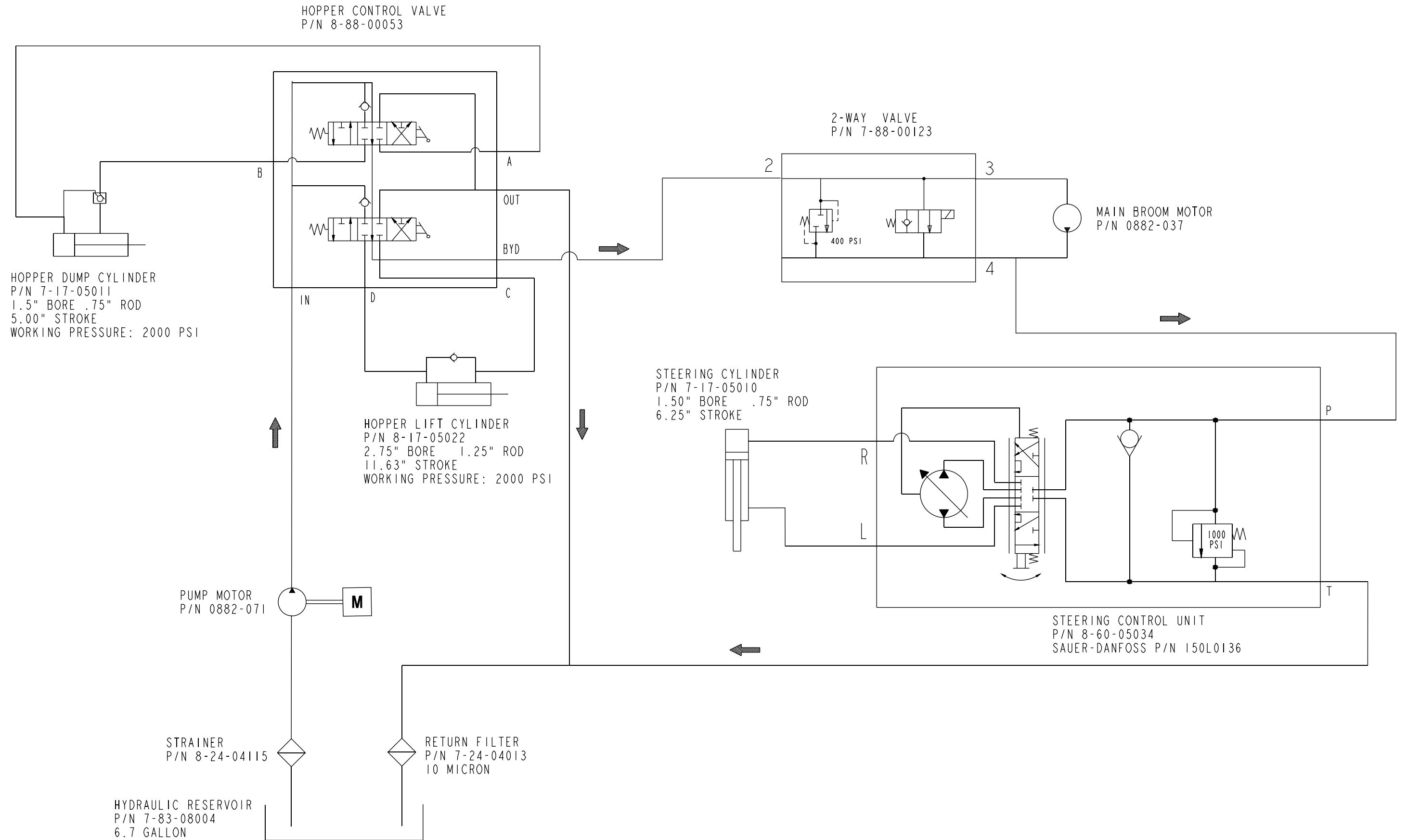
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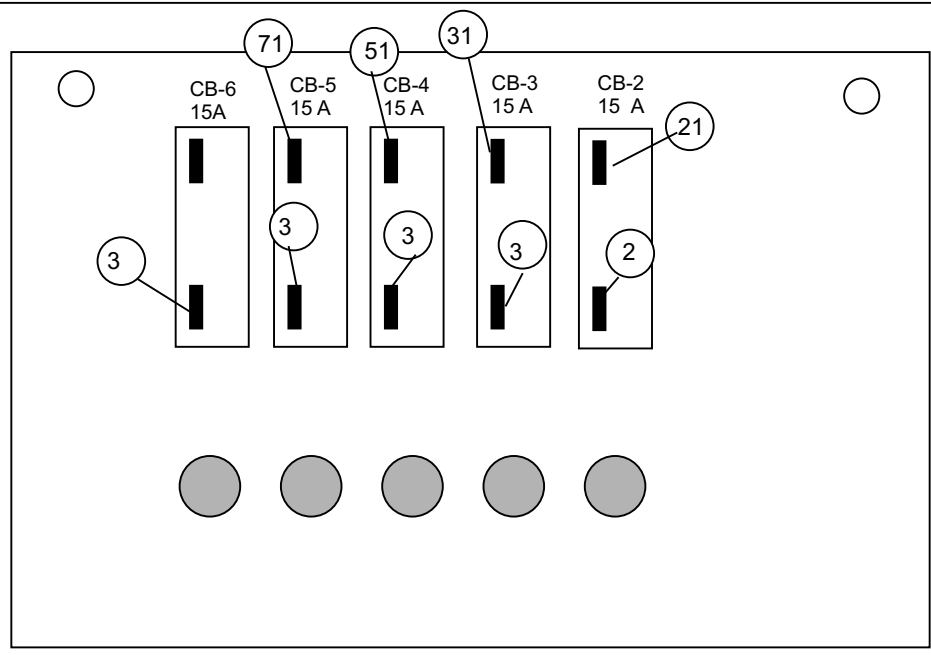
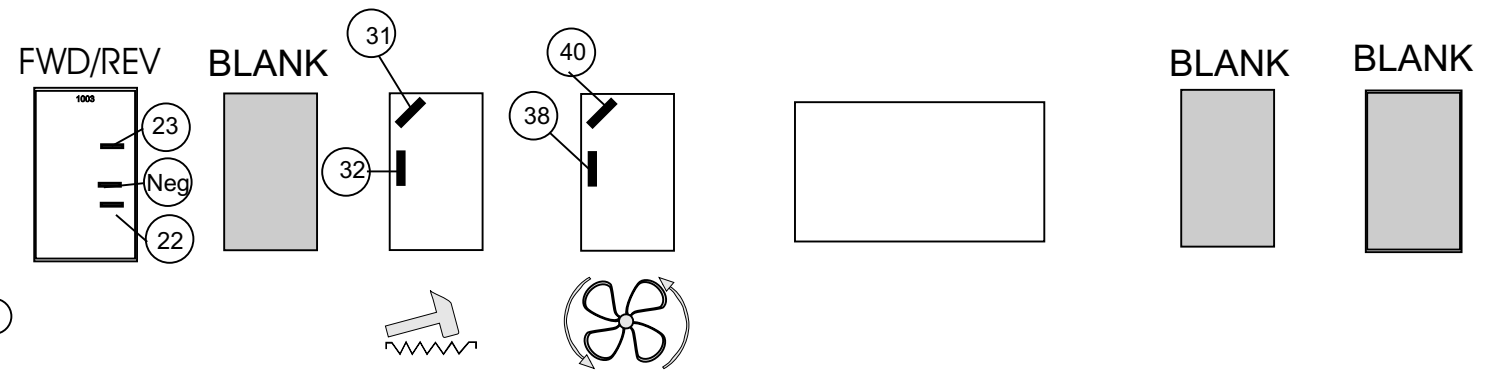
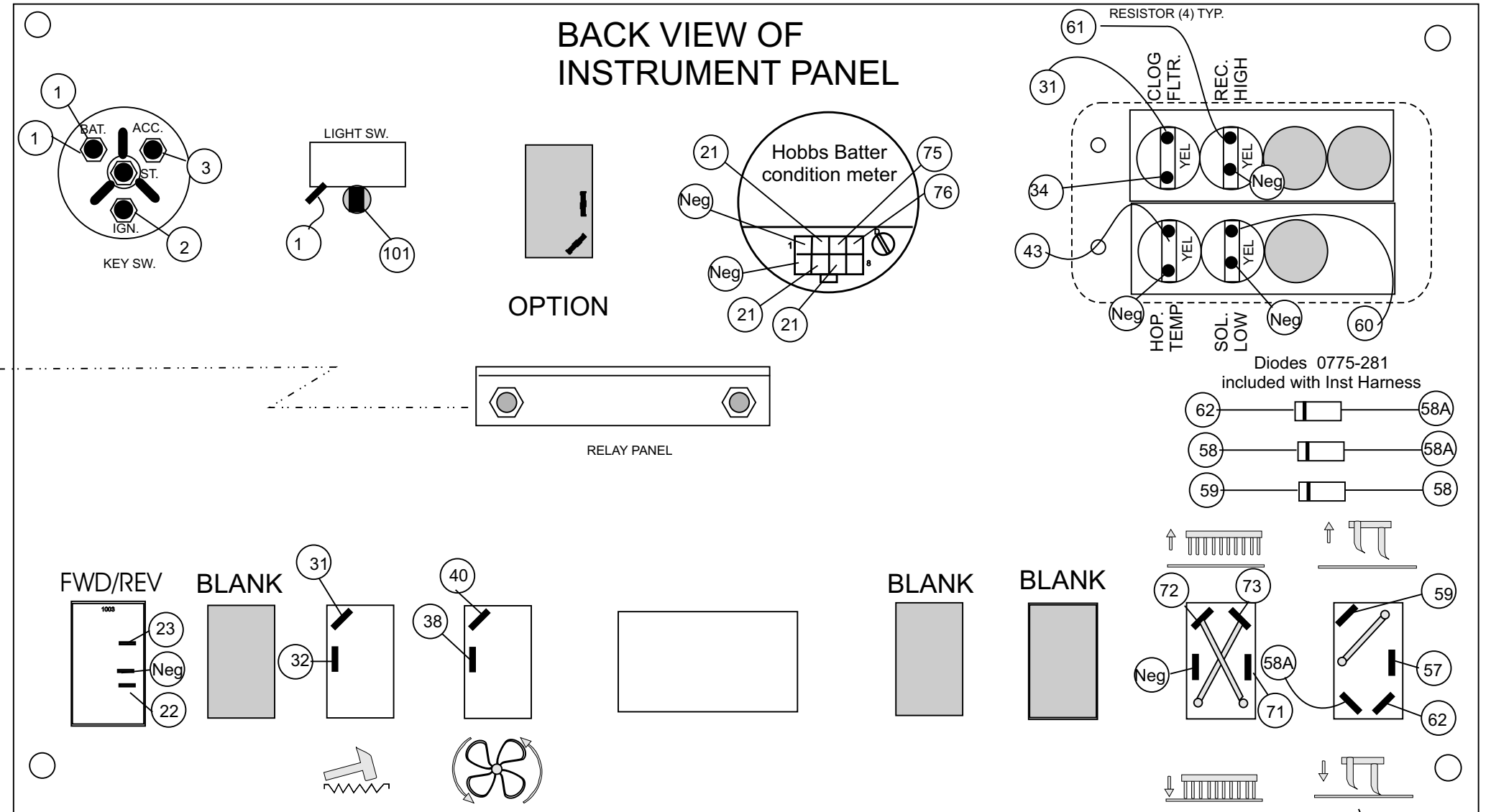
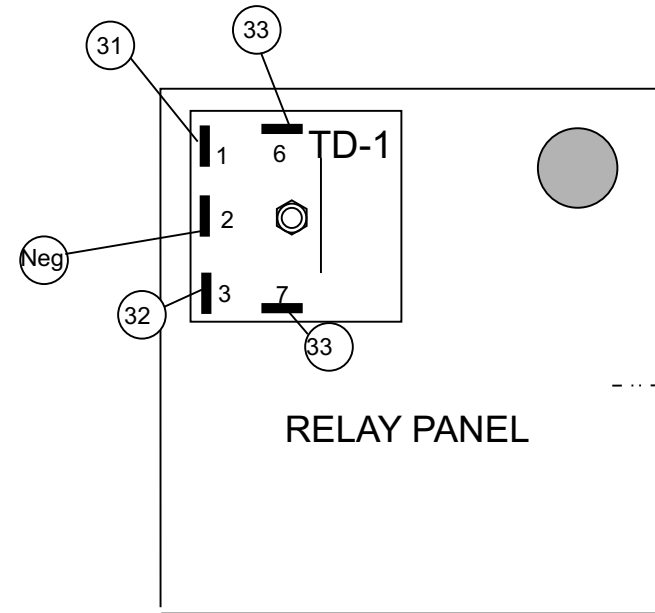
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-33-02662	Hose #8, STR x STR, 74" LG	1
2	7-33-02663	Hose #8, STR x 90°, 73" LG	1
3	7-33-02664	Hose #6, STR #4 - STR #8, 64" LG	1
4	7-33-02665	Hose #8, STR x 90°, 28" LG	1
5	7-33-02666	Hose #8, STR x 90°, 48" LG	2
6	7-33-02667	Hose #8, STR - STR, 48" LG	1
7	7-33-02668	Hose #6, STR #4 x 45° #8, 30" LG	1
8	8-33-02185	Hose #4, STR - STR, 56" LG	1
9	8-33-02183	Hose #4, STR - STR, 49" LG	1
10	8-33-02278	Hose #4, STR - STR 130" LG	2
11	7-33-02495	Hose #4, STR x 90°, 76" LG	2
12	8-33-02178	Hose #4, STR - STR, 15" LG	2

All are part of hose kit #0760-934

PG106/12-04



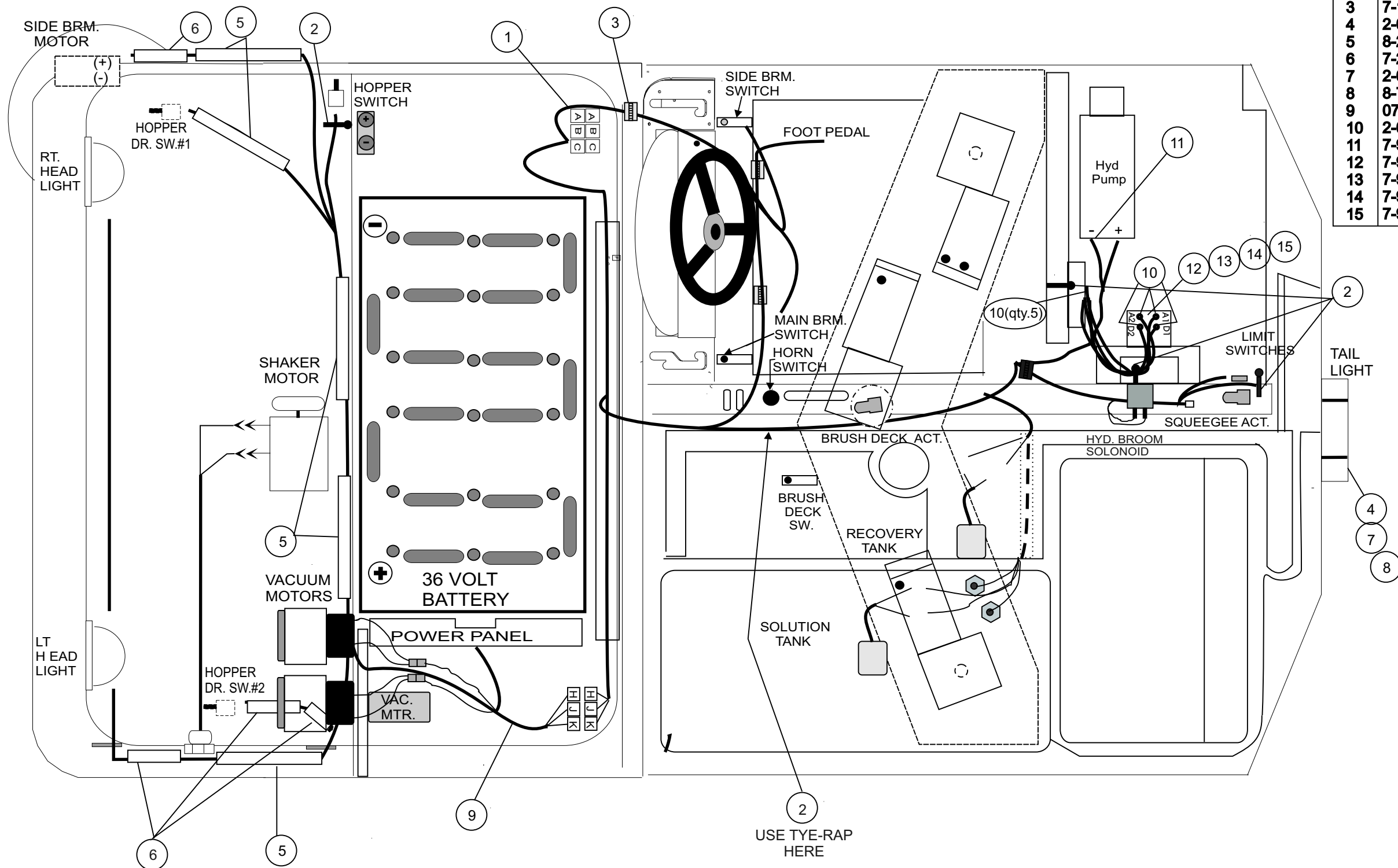




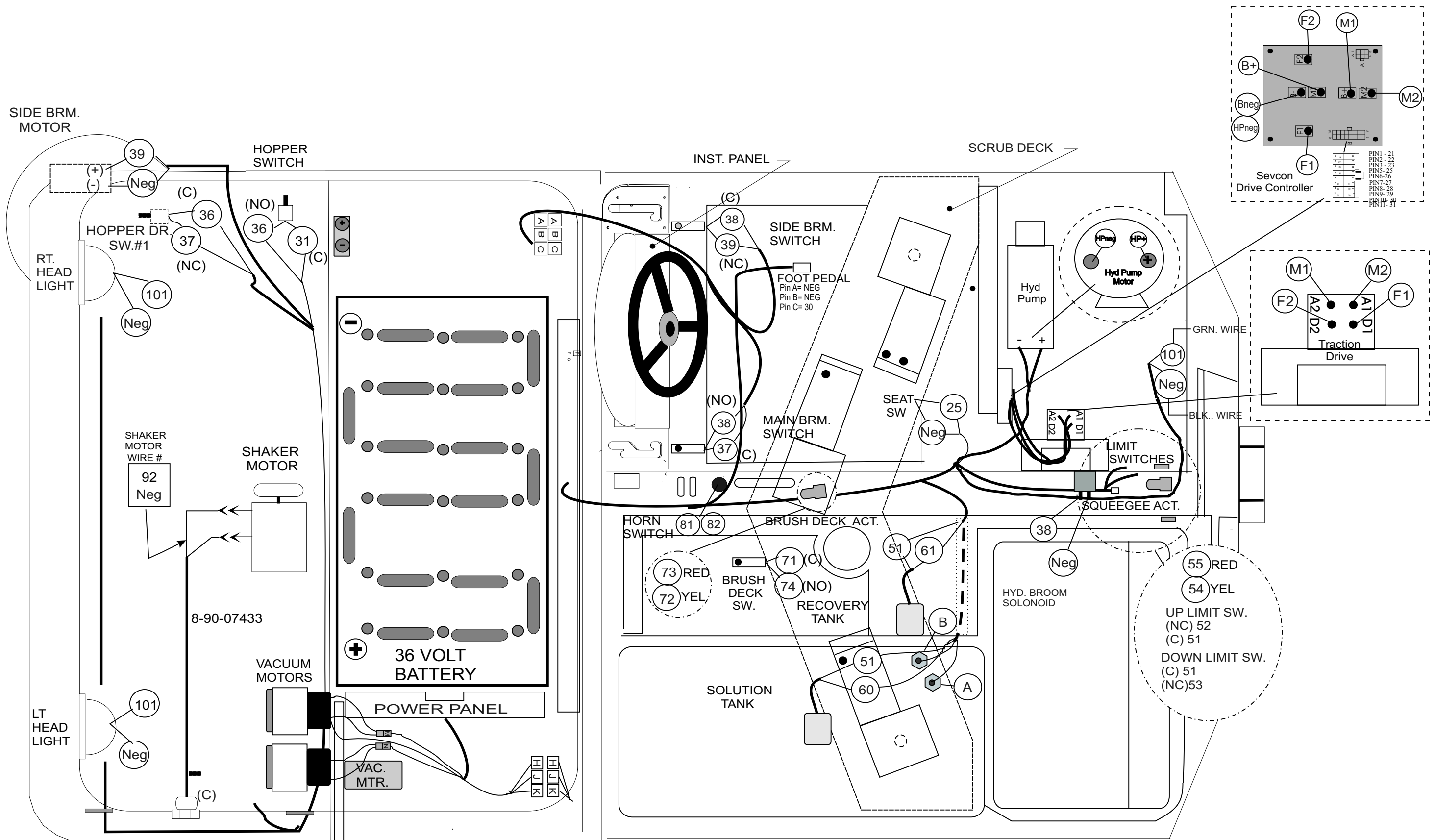
NOTE: SYMBOLS ARE ON FRONT OF PANEL (SHOWN FOR REF. ONLY)

HARNES ROUTING DIAGRAM

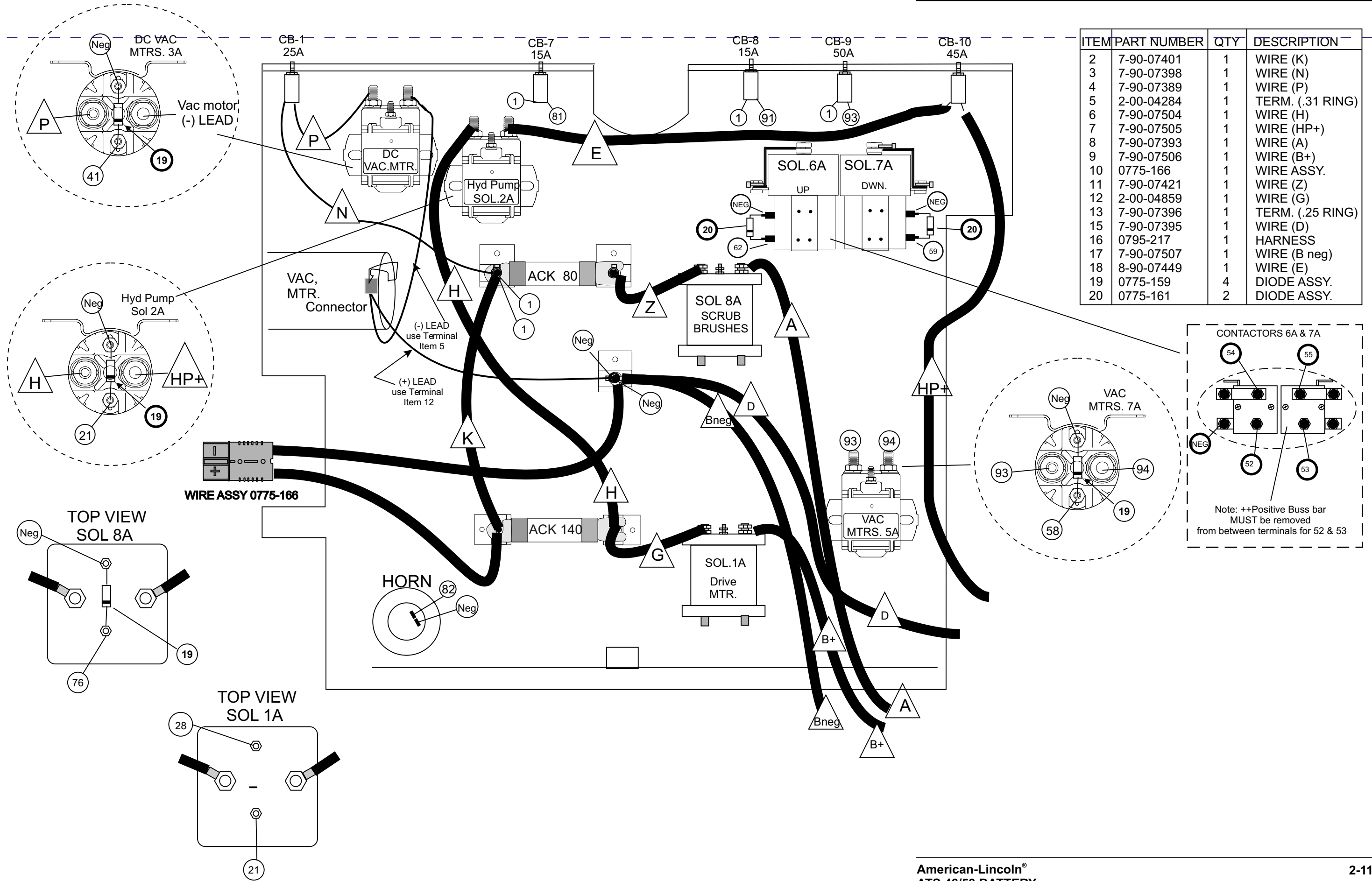
ITEM	PART NO.	DESCRIPTION	QTY.
1	0795-215	Mach. Harness	1
2	2-00-04345	Tye-Rap	6
3	7-13-07096	Clamp	8
4	2-00-01246	10-24 Lock Nut	1
5	8-20-06036	12" Duct	6
6	7-20-06012	6" Duct	4
7	2-00-02933	Screw, 10-24 x 3.5	2
8	8-75-01207	Spacer	2
9	0795-217	Power Panel Harm.	REF
10	2-00-04203	Black Boot	11
11	7-90-07508	Wire (H neg.)	1
12	7-90-07509	Wire (M1)	1
13	7-90-07210	Wire (M2)	1
14	7-90-07511	Wire (F1)	1
15	7-90-07512	Wire (F2)	1



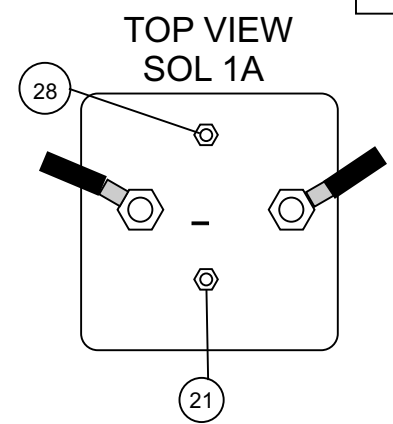
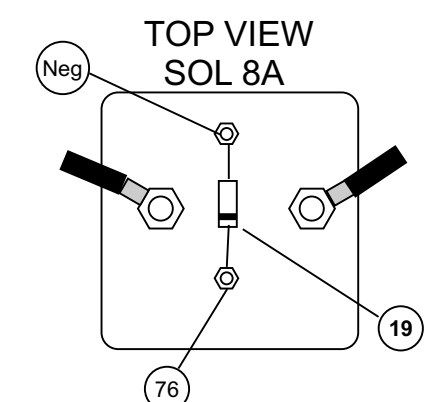
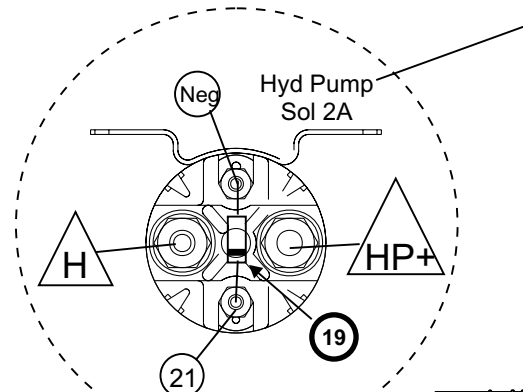
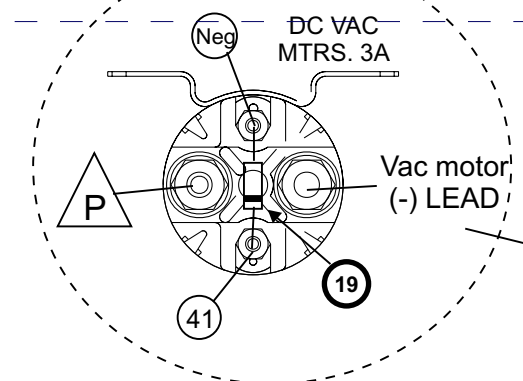
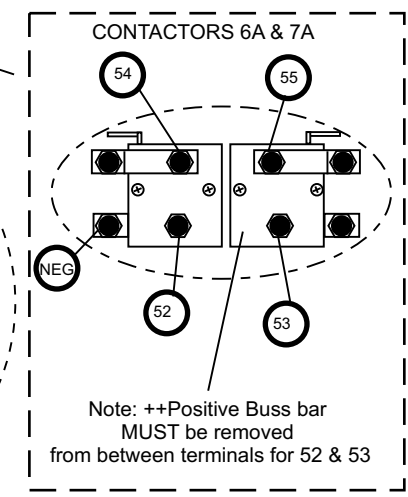


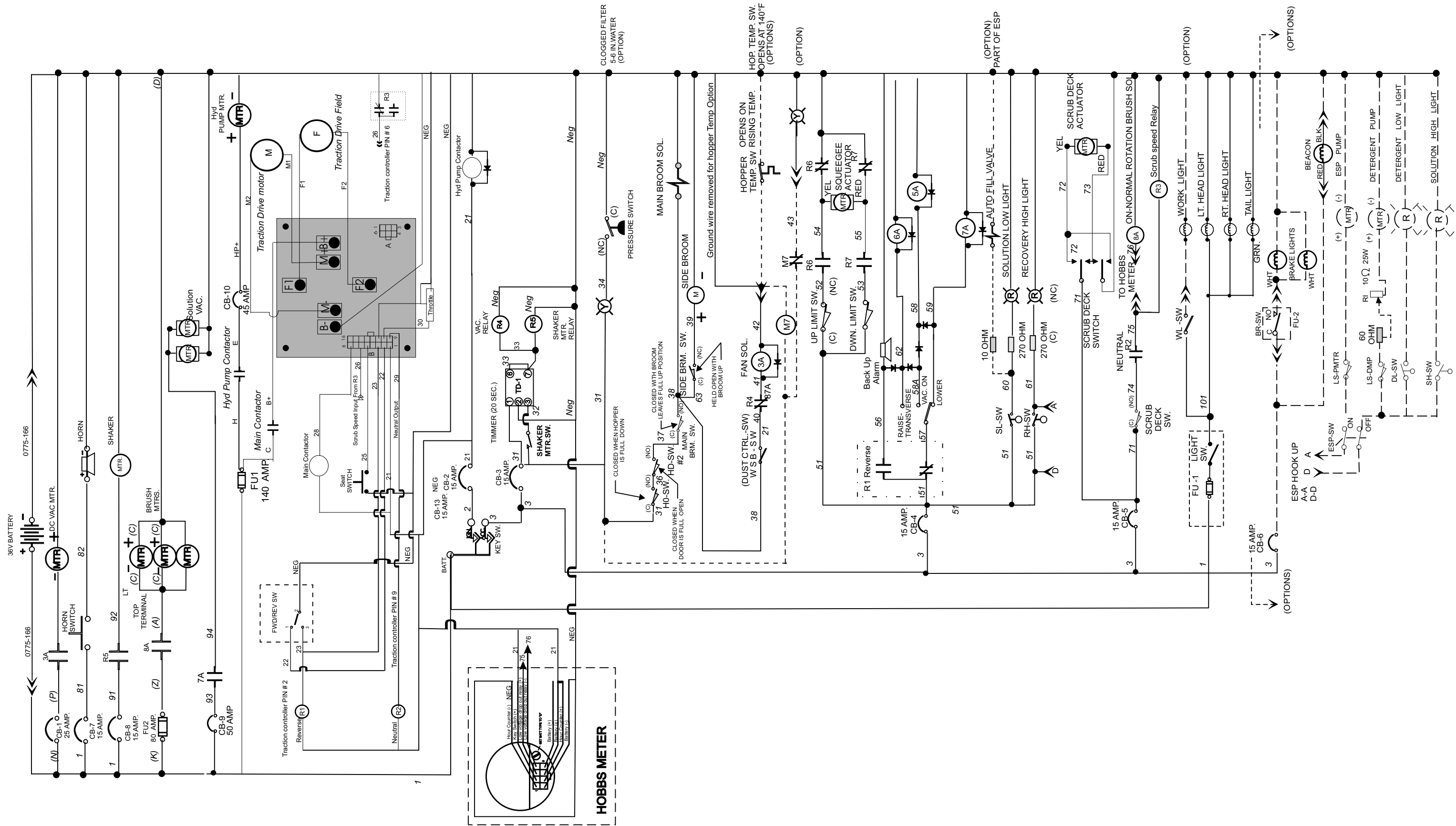


**POWER PANEL CONNECTION DIAGRAM**



ITEM	PART NUMBER	QTY	DESCRIPTION
2	7-90-07401	1	WIRE (K)
3	7-90-07398	1	WIRE (N)
4	7-90-07389	1	WIRE (P)
5	2-00-04284	1	TERM. (.31 RING)
6	7-90-07504	1	WIRE (H)
7	7-90-07505	1	WIRE (HP+)
8	7-90-07393	1	WIRE (A)
9	7-90-07506	1	WIRE (B+)
10	0775-166	1	WIRE ASSY.
11	7-90-07421	1	WIRE (Z)
12	2-00-04859	1	WIRE (G)
13	7-90-07396	1	TERM. (.25 RING)
15	7-90-07395	1	WIRE (D)
16	0795-217	1	HARNESS
17	7-90-07507	1	WIRE (B neg)
18	8-90-07449	1	WIRE (E)
19	0775-159	4	DIODE ASSY.
20	0775-161	2	DIODE ASSY.





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## ROLL-OUT BATTERY (800 AH)

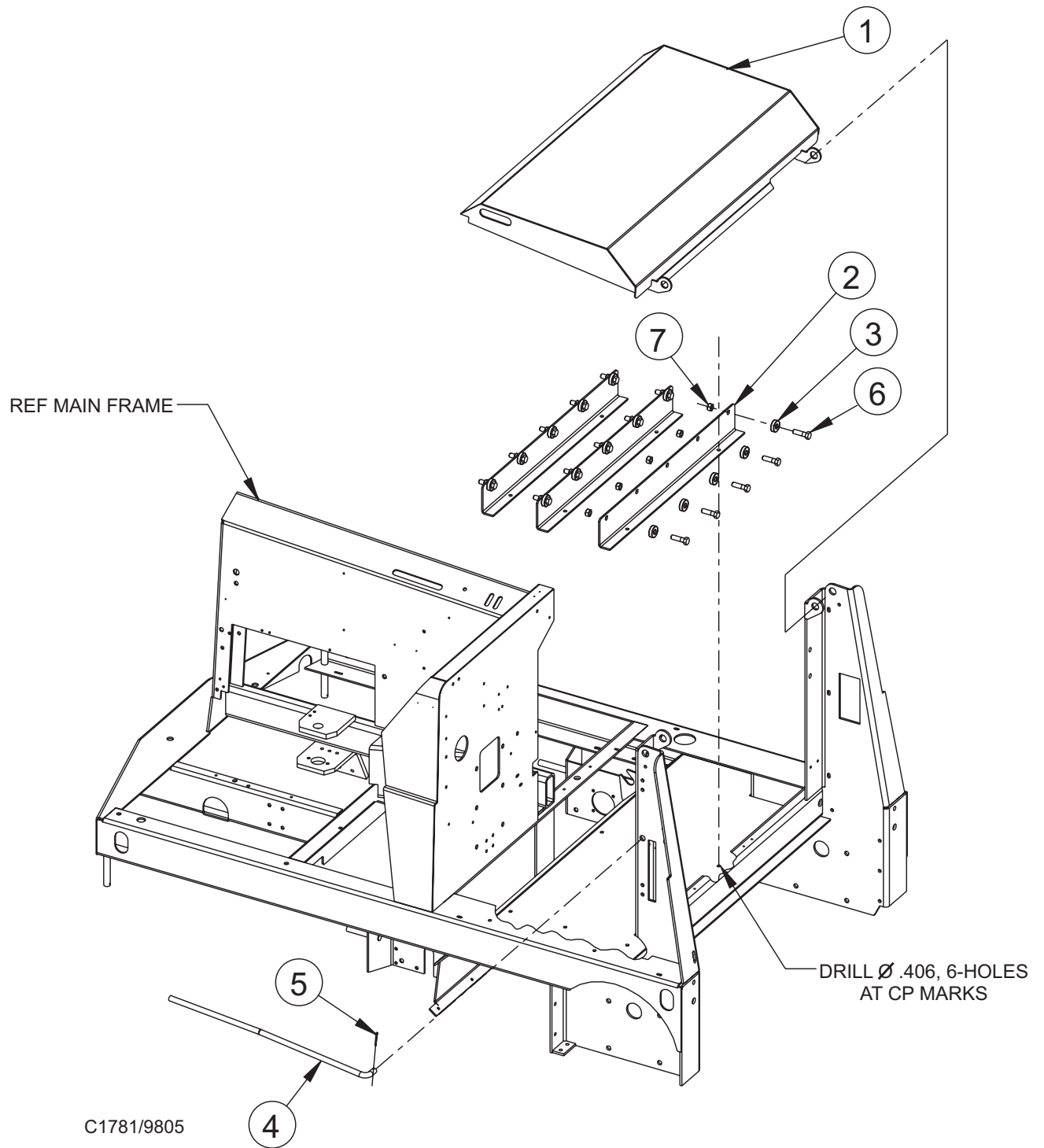
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### OPTION 0780-452

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	7-16-07391	Cover-Battery (800 AH Option)	1
2	7-62-05110	Rail-Battery Roller	3
3	2-00-03306	Bearing-Ball	15
4	7-05-07175	Bar-Battery Retainer	1
5	2-00-00776	Cotter Pin (1/8 Dia. X 1 1/2 Lg)	1
6	2-00-00241	Screw, 1/2-13 x 1.750 HHC	15
7	2-00-04936	Nut, 1/2-13 Fiber Lock	15

C1781/9805

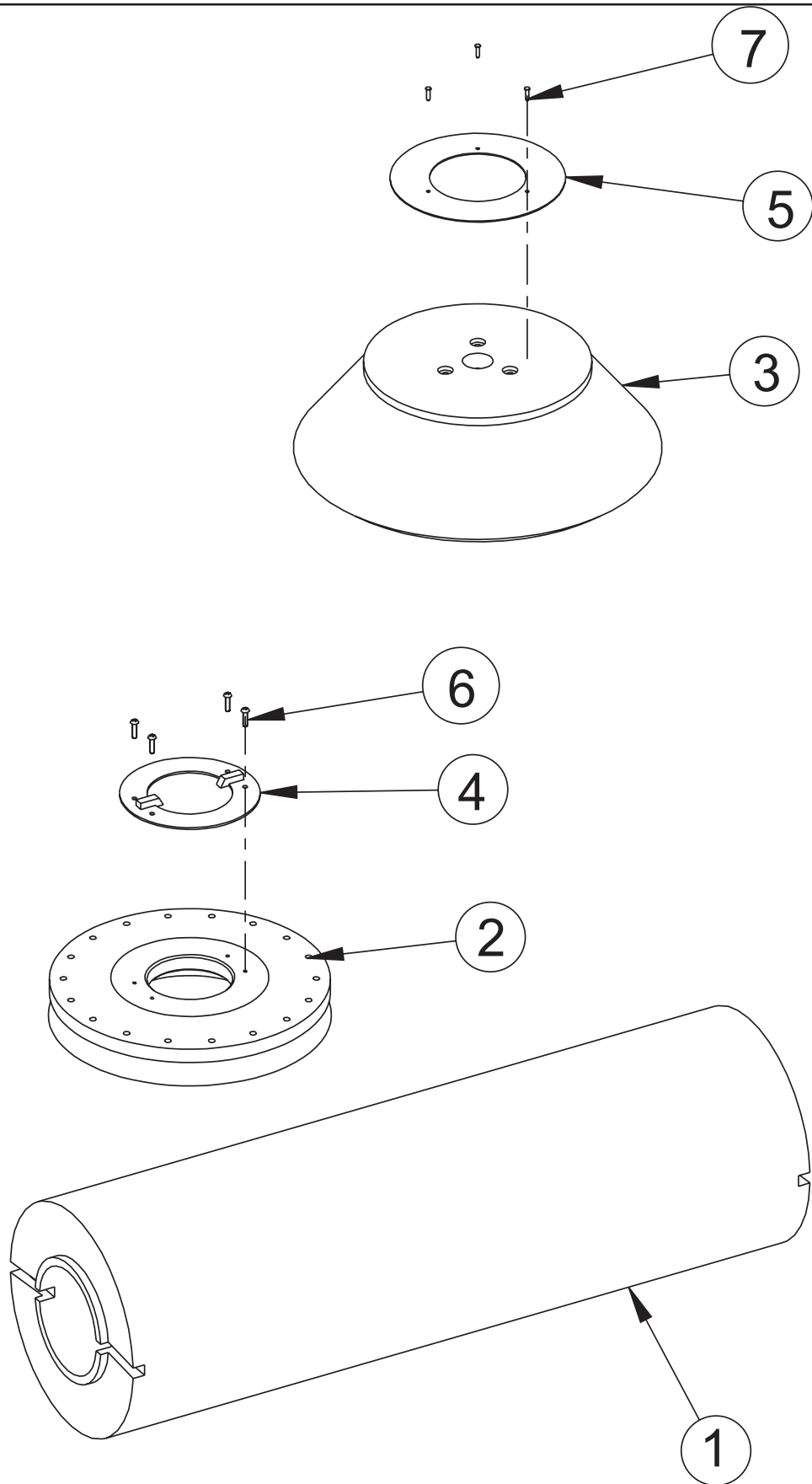
# ROLL-OUT BATTERY (800 AH)



## BROOMS & BRUSHES

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-08-03217	Main Broom, Proex & Wire	1
1	8-08-03218	Main Broom, Poly & Wire (8-Row)	1
1	8-08-03219	Main Broom, Nylon (8-Row)	1
1	8-08-03220	Main Broom, High Density Nylon	1
1	8-08-03221	Main Broom, High Density Wire & Fiber	1
2	0765-256	Scrub Brush Assy, 16" Black Nylon	3
	7-08-03261-1	Brush Only	3
2	0765-257	Scrub Brush Assy, 16" Amerfil	3
	7-08-03264-1	Brush Only	3
2	0765-258	Scrub Brush Assy, 16" Supergrit	3
	7-08-03265-1	Brush Only	3
2	0765-259	Scrub Brush Assy, 16" Soft Nylon	3
	7-08-03266-1	Brush Only	3
2	0765-260	Scrub Brush Assy, 18" Black Nylon	3
	7-08-03170-1	Brush Only	3
2	0765-265	Scrub Brush Assy., 16" Clean Grit	3
	7-08-03271	Brush Only	3
2	0765-261	Scrub Brush Assy, Amerfil 18"	3
	7-08-03172-1	Brush Only	3
2	0765-262	Scrub Brush Assy, Supergrit 18"	3
	7-08-03205-1	Brush Only	3
2	0765-263	Scrub Brush Assy, Soft Nylon 18"	3
	7-08-03262-1	Brush Only	3
2	0765-266	Scrub Brush Assy, 18" Clean Grit	3
	7-08-03269	Brush Only	3
3	0880-439	Wire Side Broom Assy.	1
	8-08-03199	Broom Only	1
3	8-08-03211	Side Broom, Nylon	1
3	8-08-03140	Side Broom, Polypropylene	1
4	7-19-02034	Disc, 18" Brush Driver	1
4	7-19-02035	Disc, 16" & 18" Brush Driver	1
5	8-58-05248	Plate, Side Broom Retainer	1
6	2-00-00081	Screw, 1/4-20 x 1.0 RHM	4
7	2-00-04121	Screw, 10-13 x .75 Pan Head Wood	3

C1710/9805



C1710/9712



# HOPPER THERMO-SENSOR SHUTDOWN

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## OPTION 0780-451

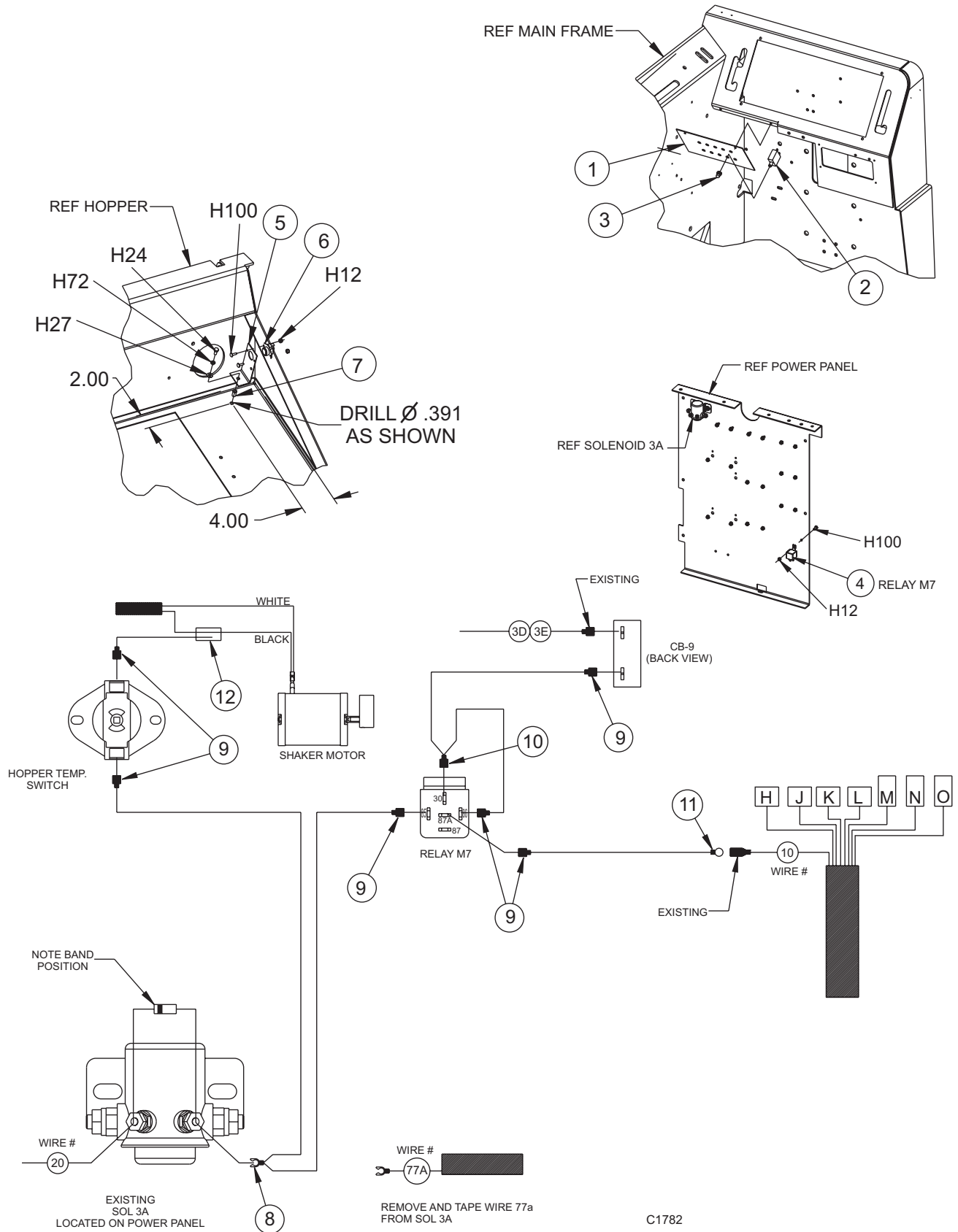
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	7-52-00148	Panel-Circuit Breaker	Ref.
2	8-64-00008	Circuit Breaker- 15 AMP	1
3	8-11-00044	Boot	1
4	8-64-00019	Relay- 36V	1
5	8-08-00803	Bracket-Temperature Switch	1
6	8-82-00056	Switch-Thermostat	1
7	2-00-05261	Threaded Insert-1/4-20	1
8	2-00-04716	Terminal- #10 SS	1
9	2-00-03418	Terminal- .25 FISO Female	6
10	2-00-04708	Terminal- .25 FISO Female	1
11	2-00-04578	Terminal- .156 Male Bullet	1
12	2-00-04479	Connector- 3 Way	1
13	3-61-00189	Wire- 16 AWG, Black	35'

### HARDWARE USED:

H12	2-00-01246	Nut, Hex Fiber Insert #10-24	3
H24	2-00-00220	Screw, 1/4-20 x .625 HHC	1
H27	2-00-03702	Washer, .625 x .281 x .063	1
H72	2-00-00518	Lock Washer, Helical Spring	1
H100	2-00-03062	Screw, #10-24 x .625 THM	3

C1782/9805

# HOPPER THERMO-SENSOR SHUTDOWN



# CLOGGED FILTER SENSOR

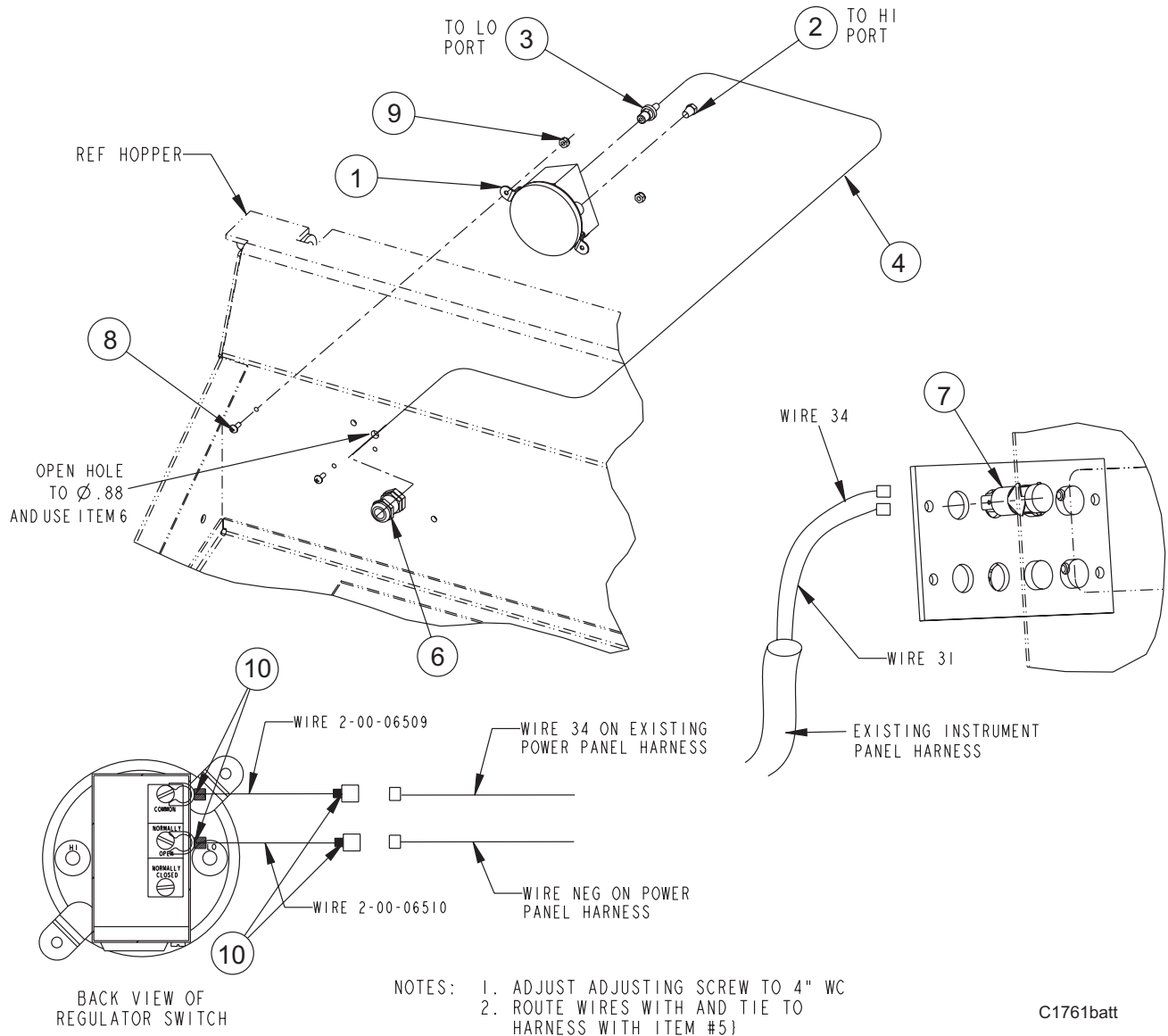
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## OPTION 0780-651

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-63-05008	Switch, Pressure Dif.	1
2	8-24-04075	Filter Plug	1
3	2-00-04518	Fitting, 1/8 NPT - 1/4 Tube	1
4	7-87-02155	Hose, 3/8 (9")	1
5	2-00-04345	Tye-Raps (not shown)	10
6	8-09-01083	Grommet	1
7	7-40-05038	Amber Light (36V)	1
8	2-00-00049	Screw, #10-24 x 1/2 RHM	2
9	2-00-01246	Nut, #10-24 Fiber Insert Hex	2
10	2-00-04708	Terminal, Male Spade	4

C1761-batt/11-04

# CLOGGED FILTER SENSOR



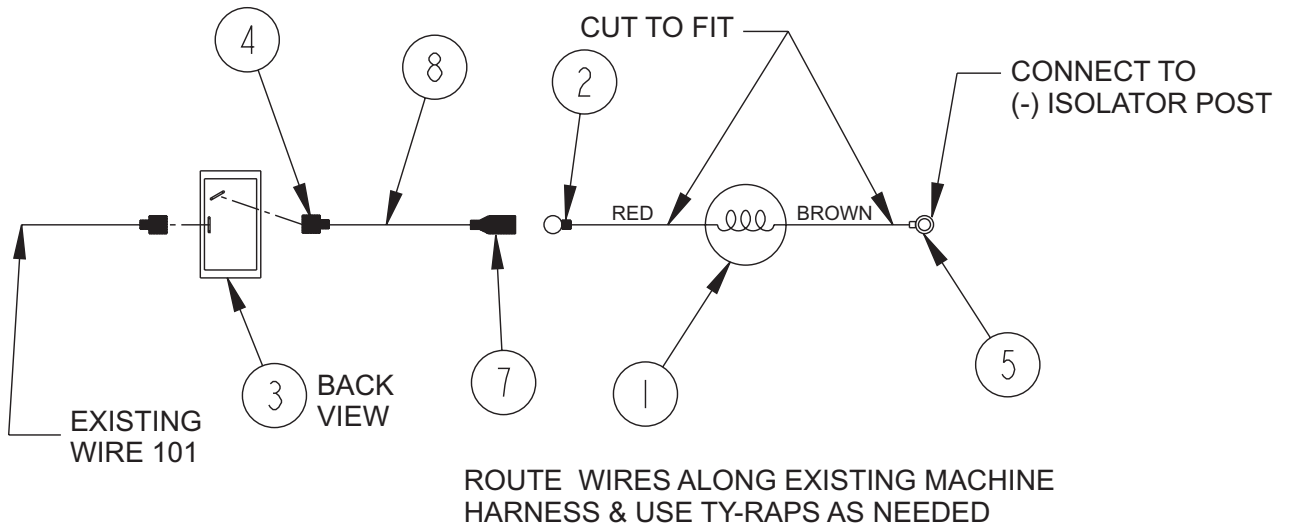
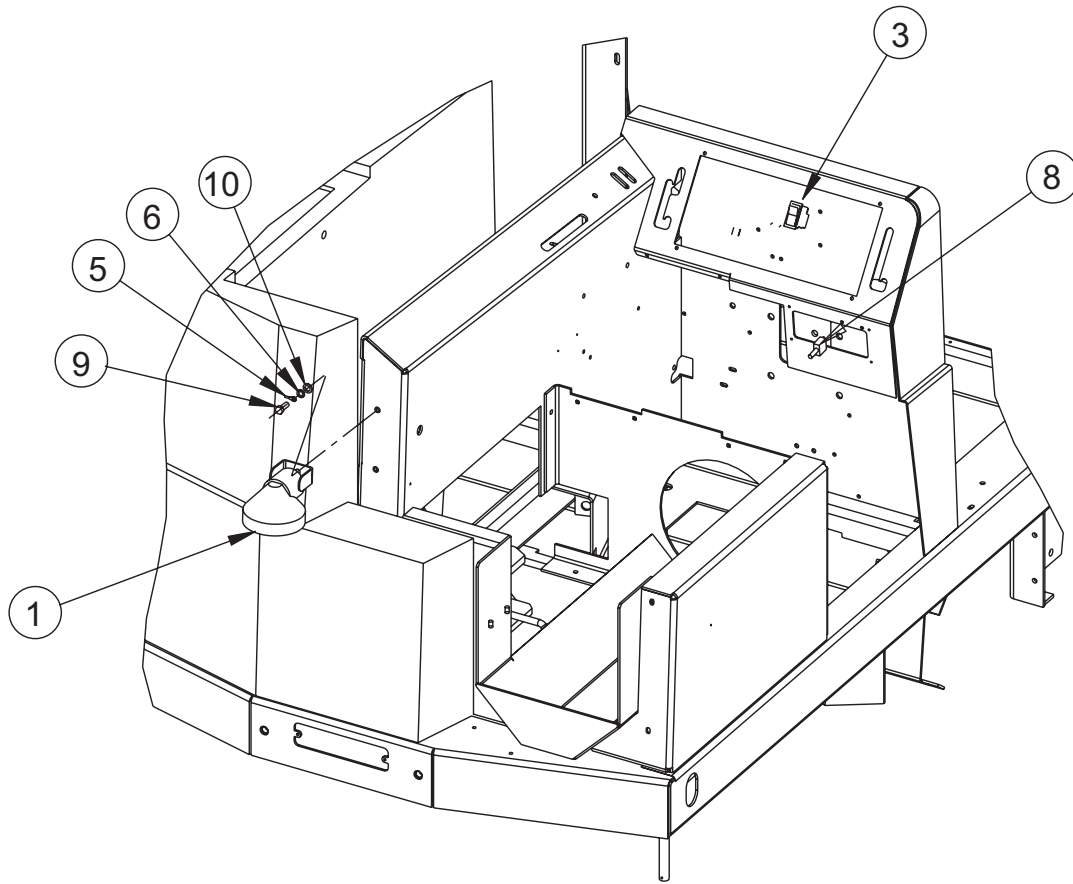
## REAR WORK LIGHT

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### OPTION 0780-648

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-40-05024	Light (36V)	1
2	2-00-04578	Terminal	1
3	8-82-00059	Switch	1
4	2-00-03418	Terminal, .25 FISO	1
5	2-00-06476	Terminal, .25 Ring	1
6	2-00-02303	Washer, Internal Lock	1
7	2-00-04626	Terminal, .156 Female Bullet	1
8	2-00-06507	Wire, 16-Gauge Red	-
9	2-00-00233	Screw, 3/8-16 x 1.0 HHC	1
10	2-00-00402	Flat Washer, .750 x .390 x .094	1

C1744a/11-04



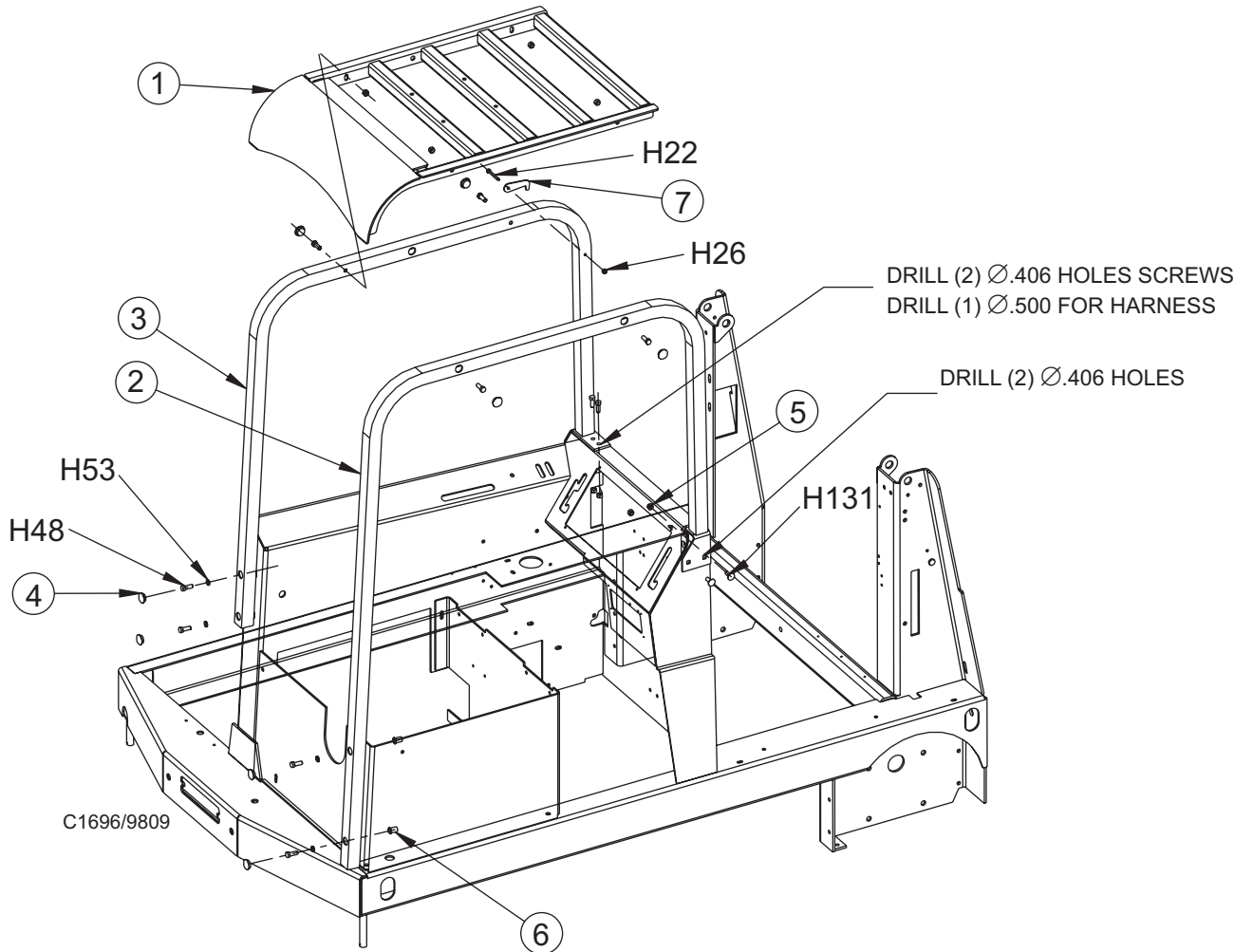
# OVERHEAD GUARD

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## OPTION 0780-417

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-30-05174	Top Weld	1
2	7-81-00200	RH Leg Weld	1
3	7-81-00199	LH Leg Weld	1
4	2-00-05134	Plug Button	8
5	2-95-04182	Fibre Nut	8
6	2-00-05347	Insert, 3/8 Threaded	2
7	7-41-00037	Latch, Engine Cover	1
HARDWARE USED:			
H22	2-00-02589	Screw, 1/4-20 x 2.0 HHC	1
H26	2-00-00641	Nut, 1/4-20 Fiber Insert	1
H48	2-00-00233	Screw, 3/8-16 x 1.0 HHC	10
H53	2-00-02310	Lock Washer, Helical Spring 3/8 Med.	4
H131	2-00-03855	Carriage Bolt, 3/8-16 x 1.0	2

C1696/9809





# AMBER SAFETY LIGHT WITH OVERHEAD GUARD

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## OPTION 0780-646

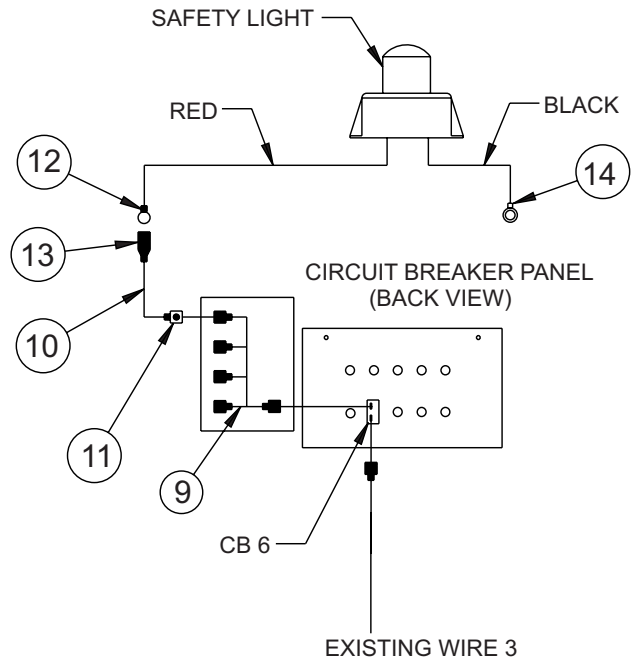
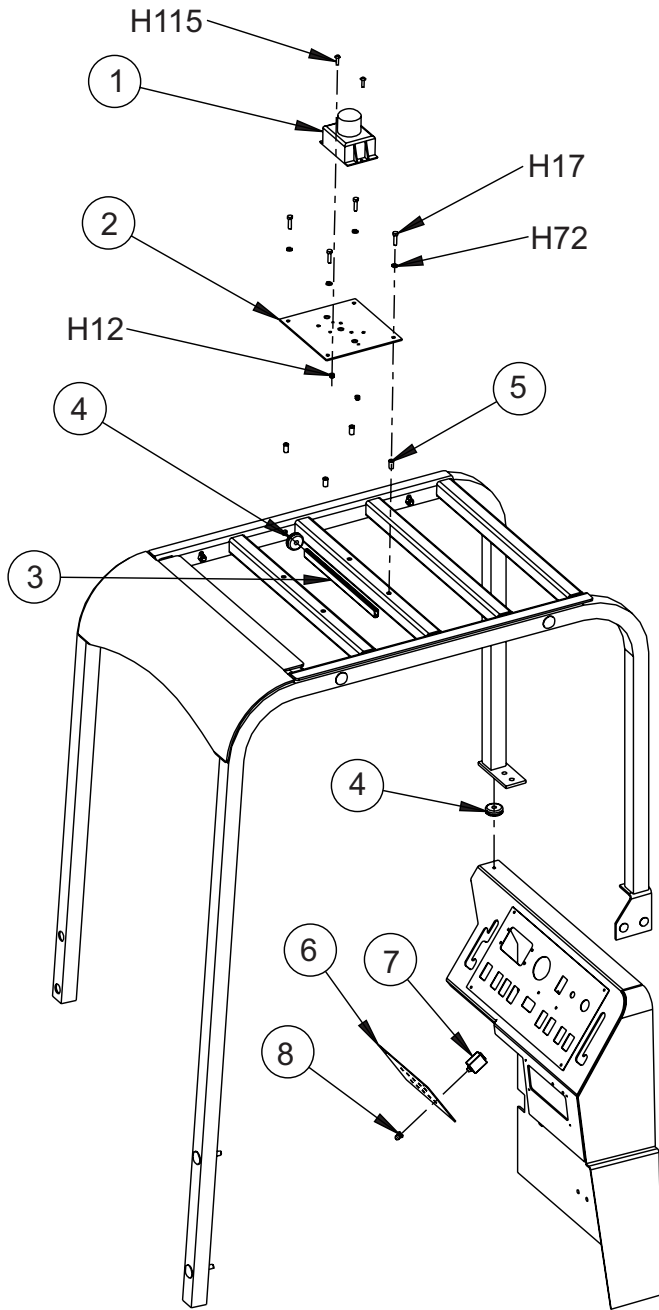
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-40-05036	Amber Strobe	1
	8-40-05020	Red Strobe	1
2	8-58-05228	Panel, Light support	1
3	8-20-06036	Duct, Wire	1
4	2-00-01915	Grommet	2
5	2-00-05261	Threaded Insert	4
6	7-52-00148	Panel, Circuit Breaker	Ref.
7	8-64-00008	Circuit Breaker, 15 AMP	1
8	8-11-00044	Cap, Boot	1
9	8-90-07434	Wing Wire Assy.	1
10	2-00-06507	Wire, 16 AWG Red	7.5'
11	8-11-00015	Terminal	1
12	2-00-04578	Terminal (.156 bullet)	1
13	2-00-04626	Terminal	1
14	2-00-04281	Terminal (#10 ring)	1

### HARDWARE USED:

H12	2-00-01246	Nut, #10-24 Fiber Insert Hex	2
H17	2-00-00205	Screw, 1/4-20 x 1.0 HHC	4
H72	2-00-00518	Lock Washer, Helical Spring	4
H115	2-00-03063	Screw, #10-24 x .75 THM	2

C1750batt/11-04

# AMBER SAFETY LIGHT WITH OVERHEAD GUARD



C1750-batt/9-04

# AMBER SAFETY LIGHT *WITHOUT* OVERHEAD GUARD

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## OPTION 0780-647

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-40-05036	Amber Strobe, 12 - 48 VDC	1
2	7-81-00204	Support, Warning Light	1
3	2-00-00491	Grommet	1
4	2-00-04200	Grommet	1
5	2-00-05134	Plug Button	2
6	7-52-00148	Panel, Circuit Breaker	Ref.
7	8-64-00008	Circuit Breaker, 15 AMP	1
8	8-11-00044	Cap, Instrument Panel Boot	1
9	8-90-07434	Wing Wire	1
10	8-11-00015	Terminal	1
11	2-00-04626	Terminal	1
12	2-00-04578	Terminal (.156 bullet)	1
13	2-00-04281	Terminal (#10 ring)	1
14	2-00-06507	Wire, 16 AWG Red.	15'
15	2-00-04345	Tye-Rap	*

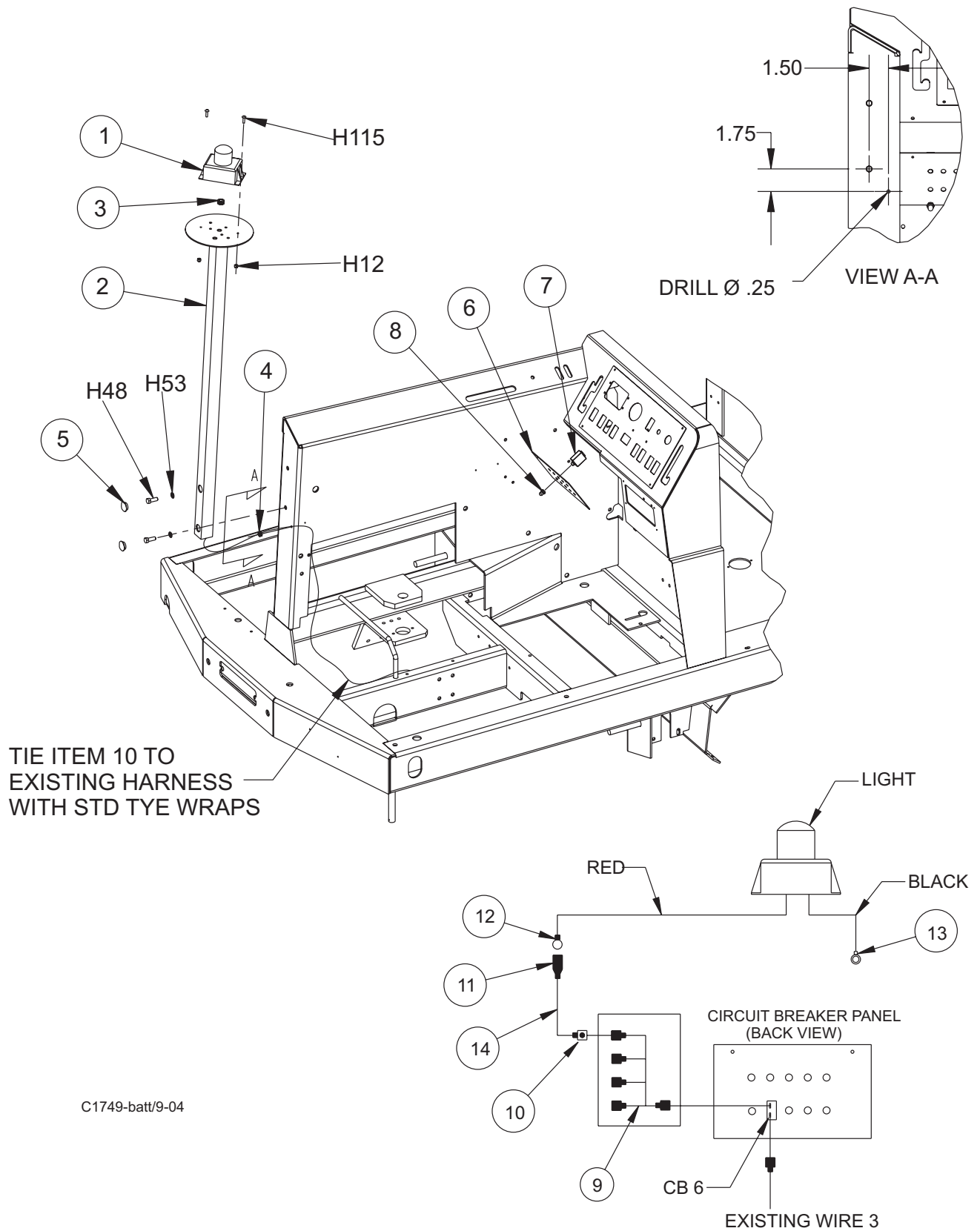
\*As Needed

### HARDWARE USED:

H12	2-00-01246	Nut, #10-24 Fiber Insert Hex	2
H48	2-00-00233	Screw, 3/8-15 x 1.0 HHC	2
H53	2-00-02310	Lock Washer, Helical Spring 3/8 Med.	2
H115	2-00-03063	Screw, #10-24 x .75 THM	2

C1749batt/9-04

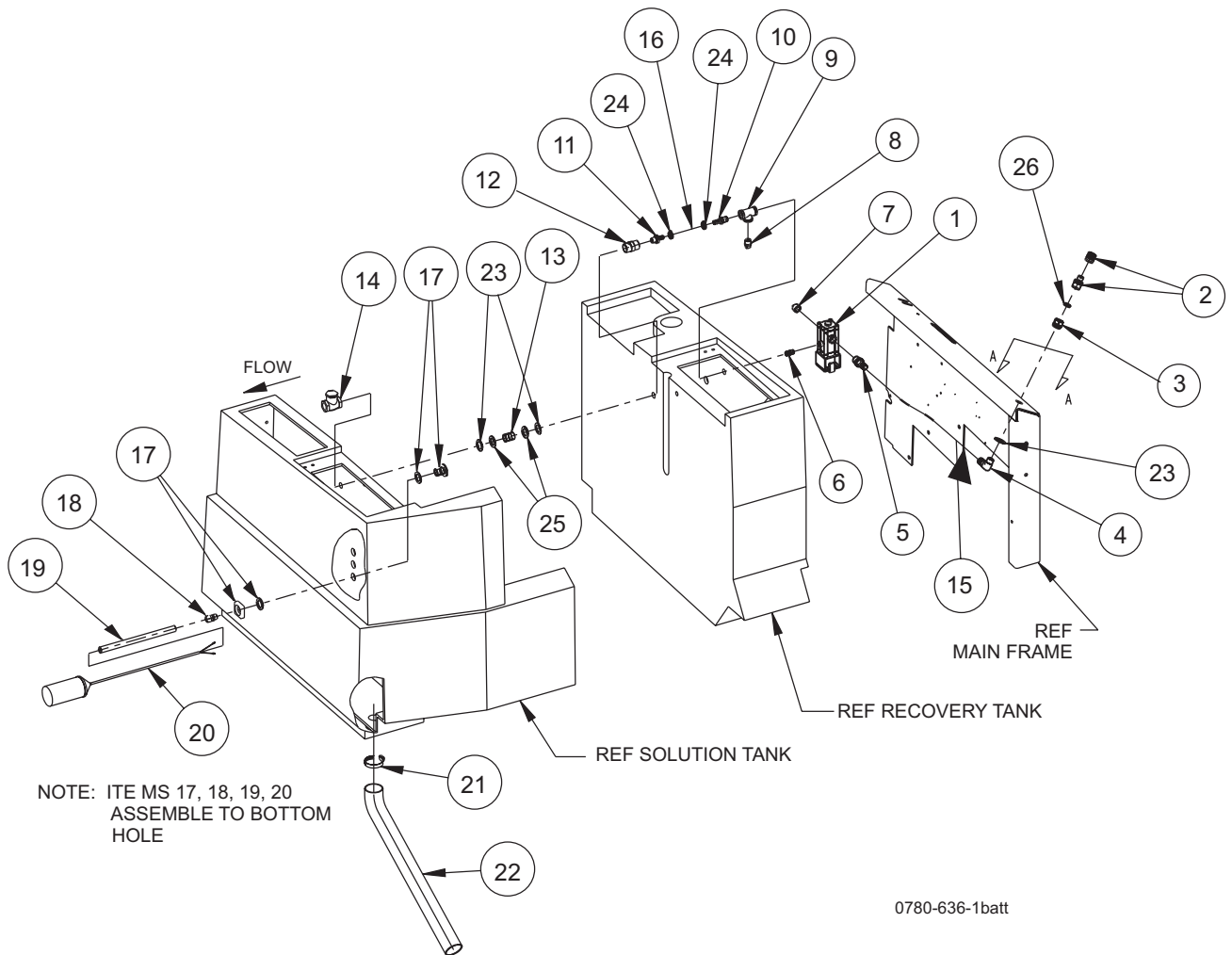
# AMBER SAFETY LIGHT *WITHOUT* OVERHEAD GUARD



OPTION 0780-463

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-88-00078	Valve , Autofil (12VDC)	1
2	7-25-02087	Connector, Quick Disconnect	1
3	7-25-02088	Coupling	1
4	7-25-02053	Fitting, 90° ¾ Tube	1
5	7-25-02012	Fitting, Hose to ¾-14 NPT	1
6	2-95-02516	Nipple, ½ NPT Close	1
7	2-00-02475	Plug, ¾ NPT	1
8	7-25-02090	Plug, Oriface	1
9	2-95-02537	Fitting, Tee ½ NPT	1
10	2-00-04722	Fitting, ½ NPT - ½ Hose	1
11	2-00-05342	Fitting, ¾ NPT - ½ Hose	1
12	2-00-04736	Coupling, ¾ NPT	1
13	2-95-02518	Nipple, ¾ Close	1
14	7-88-00031	Check Valve	1
15	7-33-02339	Hose, ¾ x 22" LG	1
16	7-33-02360	Hose, ½ x 8" LG	1
17	7-09-01124	Bushing, Bulkhead Fitting	Ref.
18	7-09-01122	Bushing	Ref.
19	7-87-02188	Tube, Float Switch	Ref.
20	0775-217	Solution Float (Yellow)	Ref.
21	2-00-02217	Clamp, Hose	1
22	7-87-02153	Tube, Drain	1
23	2-95-03047	Washer	3
24	2-00-04345	Tye-Rap	2
25	7-29-00225	Gasket	2
26	2-00-05388	Sealing Washer	1

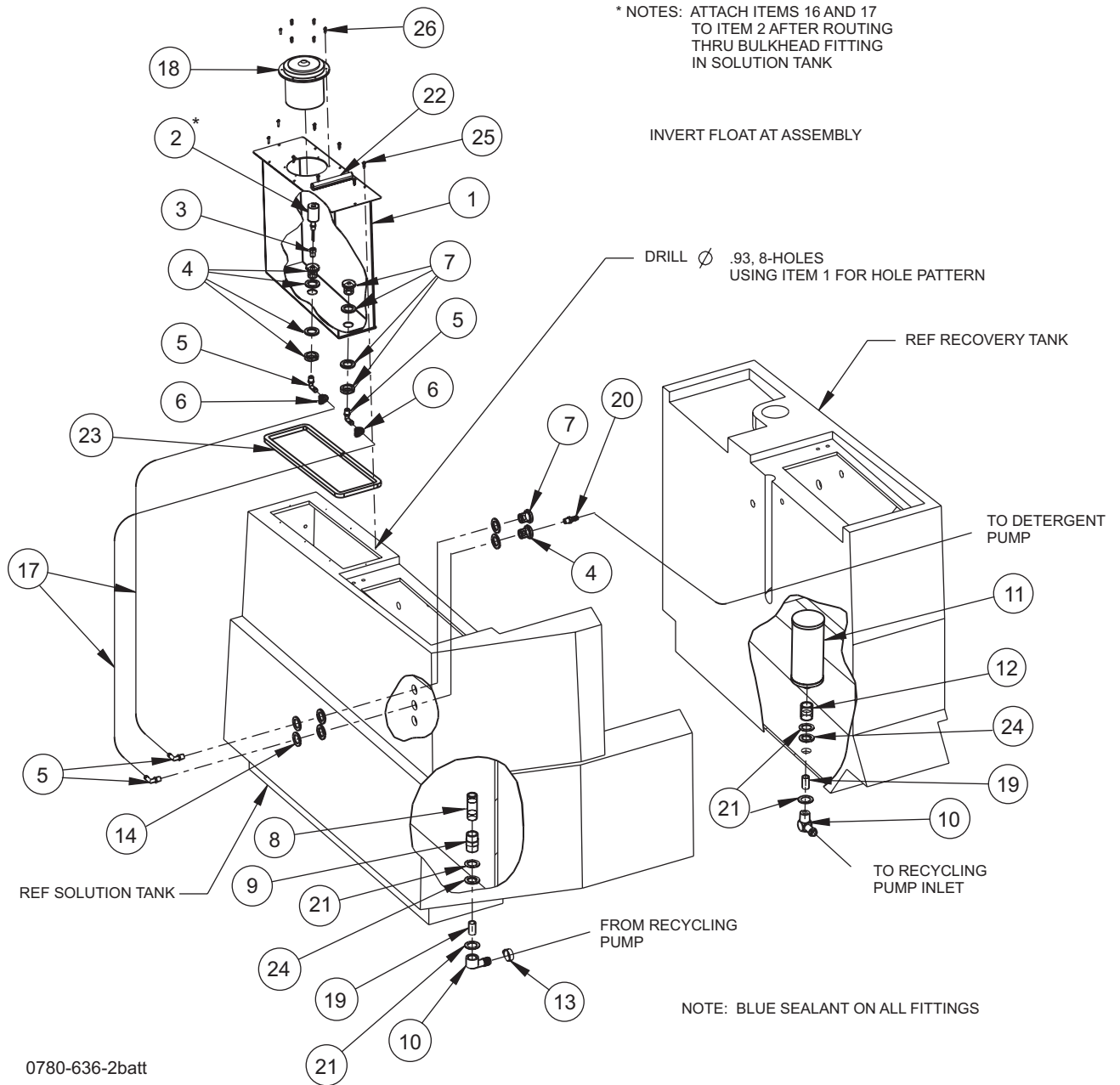
0780-636-1batt/8-04



**ESP/AUTOFIL (cont.)**

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-83-04172	Tank, Detergent	1
2	7-82-00017	Float	1
3	2-00-05003	Fitting, Reducer	1
4	7-25-02080	Fitting, Bulkhead (Det. Float)	2
5	2-00-04654	Fitting, 90°	4
6	7-13-07084	Clamp, Hose	2
7	2-00-05346	Fitting, Bulkhead (Det. Tank)	2
8	2-95-04267	Nipple, 3/4 NPT x 3.0" LG	1
9	2-00-04736	Coupling, 3/4 NPT	1
10	2-00-05132	Fitting, 90°, 3/4 NPT 1/4 Tube	2
11	7-24-04027	Filter	1
12	7-25-02089	Coupling, 3/4 NPT (PVC)	1
13	2-00-02220	Clamp, Hose	1
14	2-00-05346	Fitting, 1/4 NPT Bulkhead	10
15	2-00-04551	Terminal, .156 Male Bullet (not shown)	1
16	2-00-04584	Terminal, .156 Female Bullet (not shown)	1
17	7-33-02372	Hose, 3/8 ID x18" LG (not shown)	2
18	7-11-00031	Filter Assembly	1
19	2-00-05131	Fitting, Nipple	1
20	2-74-00001	Fitting, Straight	1
21	2-95-03047	Washer	1
22	3-73-00060	Bumper	5"
23	3-73-00065	Gasket	4 ft.
24	7-29-00225	Gasket	2
25	2-00-02968	Screw, T/FRH, #10-16 x 3/4	8
26	2-00-01081	Screw, T/C PHRH, #8-32 x 1/2	6

0780-636-2batt/8-04

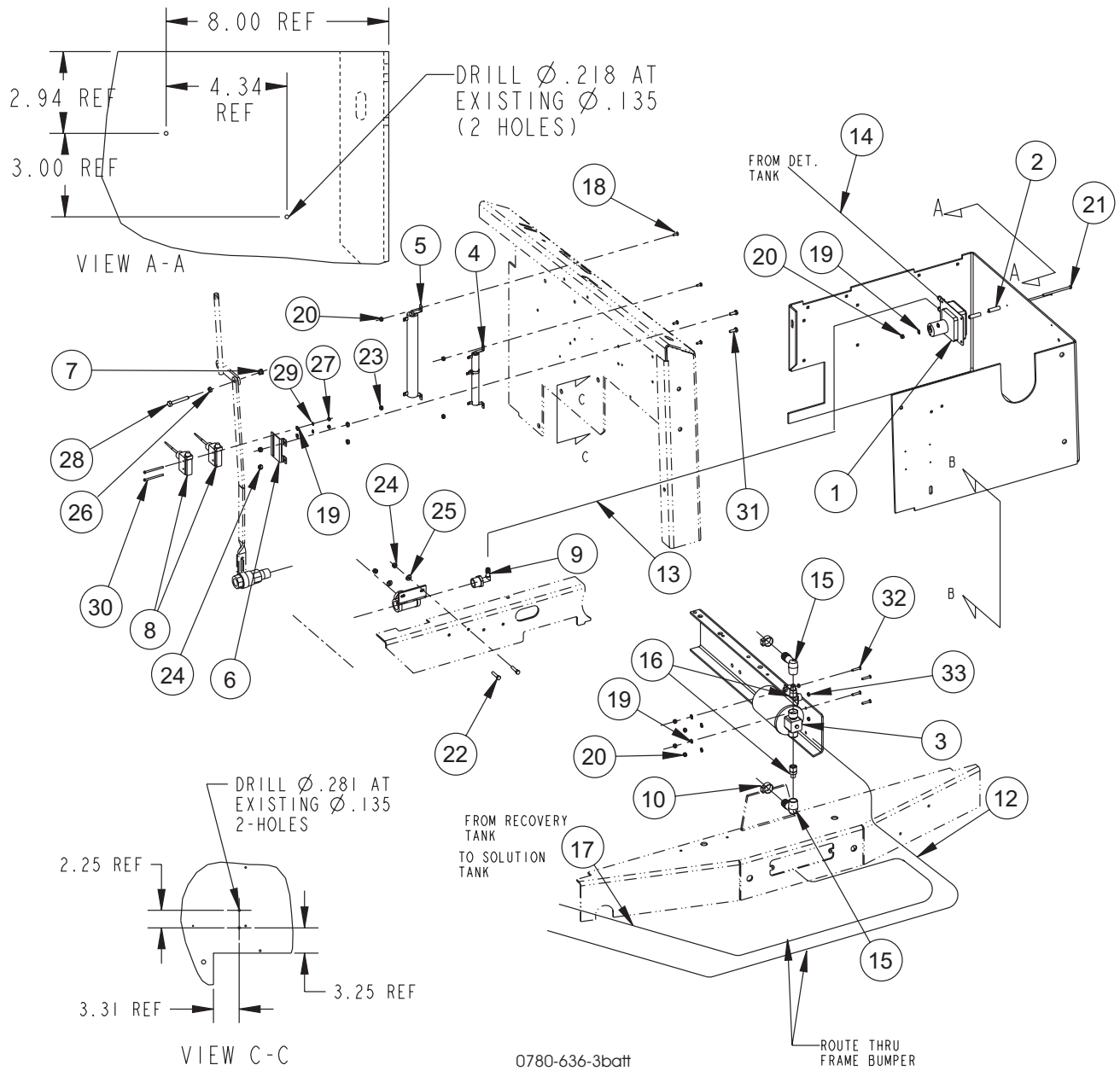




**ESP/AUTOFIL (cont.)**

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-60-05031	Detergent Pump (12VDC)	1
2	8-75-01207	Spacer	2
3	7-60-05013	Recycling Pump (36VDC)	1
4	0775-222	Resistor Assy.	Ref
5	0775-223	Resistor Assy.	Ref
6	8-08-00845	Bracket	1
7	7-23-03056	Nut	1
8	8-82-00058	Switch	2
9	2-00-04655	Fitting, 90° Elbow	1
10	2-00-02220	Clamp, Hose	2
11	2-00-05412	Reducer Connector	2
12	7-33-02370	Hose, .75 ID x 50" LG	2
13	7-33-02367	Hose, .25 ID x 30" LG	1
14	7-33-02683	Hose, .25 ID x 56" LG	1
15	2-00-05132	Fitting, L	2
16	7-25-02062	Fitting, Reducer Nipple	2
17	7-33-02387	Hose, .75 ID x 72" LG	1
18	2-00-00049	Screw, #10-24 x 1.50 RHM	4
19	2-00-00426	Flat Washer, .500 x .219 x .063	8
20	2-00-01246	Nut, Hex Fiber Insert #10-24	10
22	2-00-02587	Screw, 1/4-20 x 1.250 HHC	2
23	2-00-00594	Nut, Hex 1/4-20 x .437 x .218	2
24	2-00-00641	Nut, 1/4-20 Insert Fiber	4
25	2-00-03702	Washer, .625 x .281 x .063	2
26	2-00-00585	Nut, Hex 5/16-18 x 1/2 x .265	1
27	2-00-00602	Nut, 8-32 MSCR Hex	2
21	2-00-02933	Screw, Mach. 10-24 x 3.50	2
28	2-00-00227	Screw, HHC .313-18 x 2.25	1
29	2-00-00506	Lock Washer, Int Tooth #8 Dia Screw	2
30	2-00-05371	Screw, RHM #8-32 x 2.38	2
31	2-00-00221	Screw, 1/4-20 x 3/4 HHC	2
32	2-00-00039	Screw, #10-24 x 1.0 RHM	4
33	2-00-00605	Nut, 10-24 Hex	4

0780-636-3batt/8-04

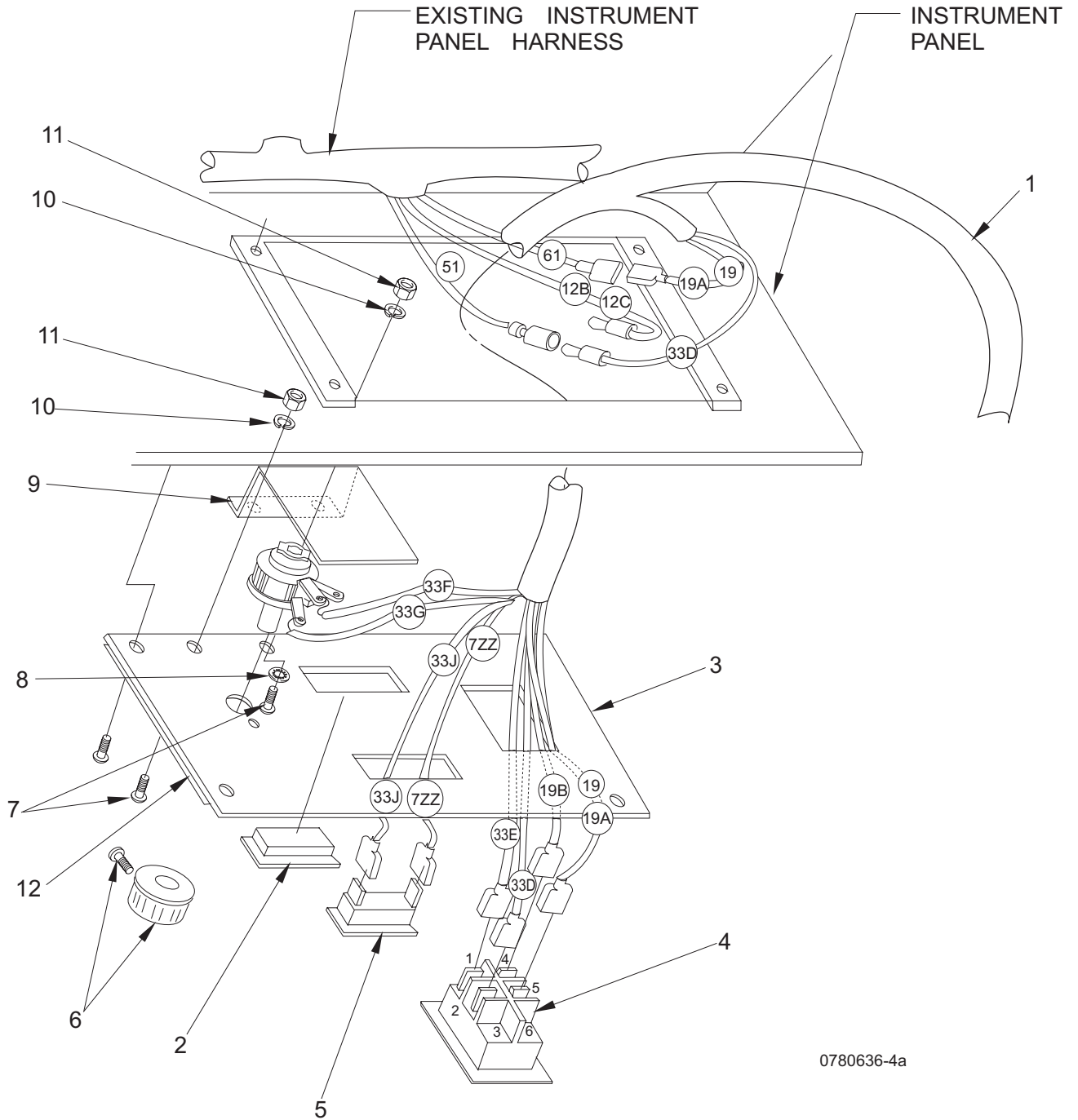


## ESP/AUTOFIL WIRING

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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0795-122	ESP Wiring Harness	1
2	Ref.	Hole Plug	1
3	7-52-00082	ESP Instrument Panel	1
4	7-82-00022	Switch, On/Off DPS	1
5	7-40-05030	Light-32V	1
6	7-39-00021	Knob	1
7	2-00-03062	Screw, #10-24 x .625 RHM	2
8	2-00-02296	Lock Washer, #10 Ext	2
9	7-30-05057	Guard, Rheostat	1
10	2-00-00529	Lock Washer, Helical Spring #8 Med	2
11	2-00-00605	Nut, Hex MS #10-24 THDS	2
12	7-18-00136	Decal, Detergent Flow	1
13	2-00-04479	Terminal, 3-Way	2
14	2-00-03418	Terminal, .25 FISO Female	2
15	2-00-05048	Terminal, .25 Ring	2
16	3-61-00189	Wire, 16 AWG. Black	10 ft.
17	0775-223	Resistor Assy.	1
18	0775-222	Resistor Assy.	1
19	2-00-04626	Terminal, .156 Female Bullet	4
20	2-00-04584	Terminal, .156 Male Bullet	4

0780-636-4a/8-04



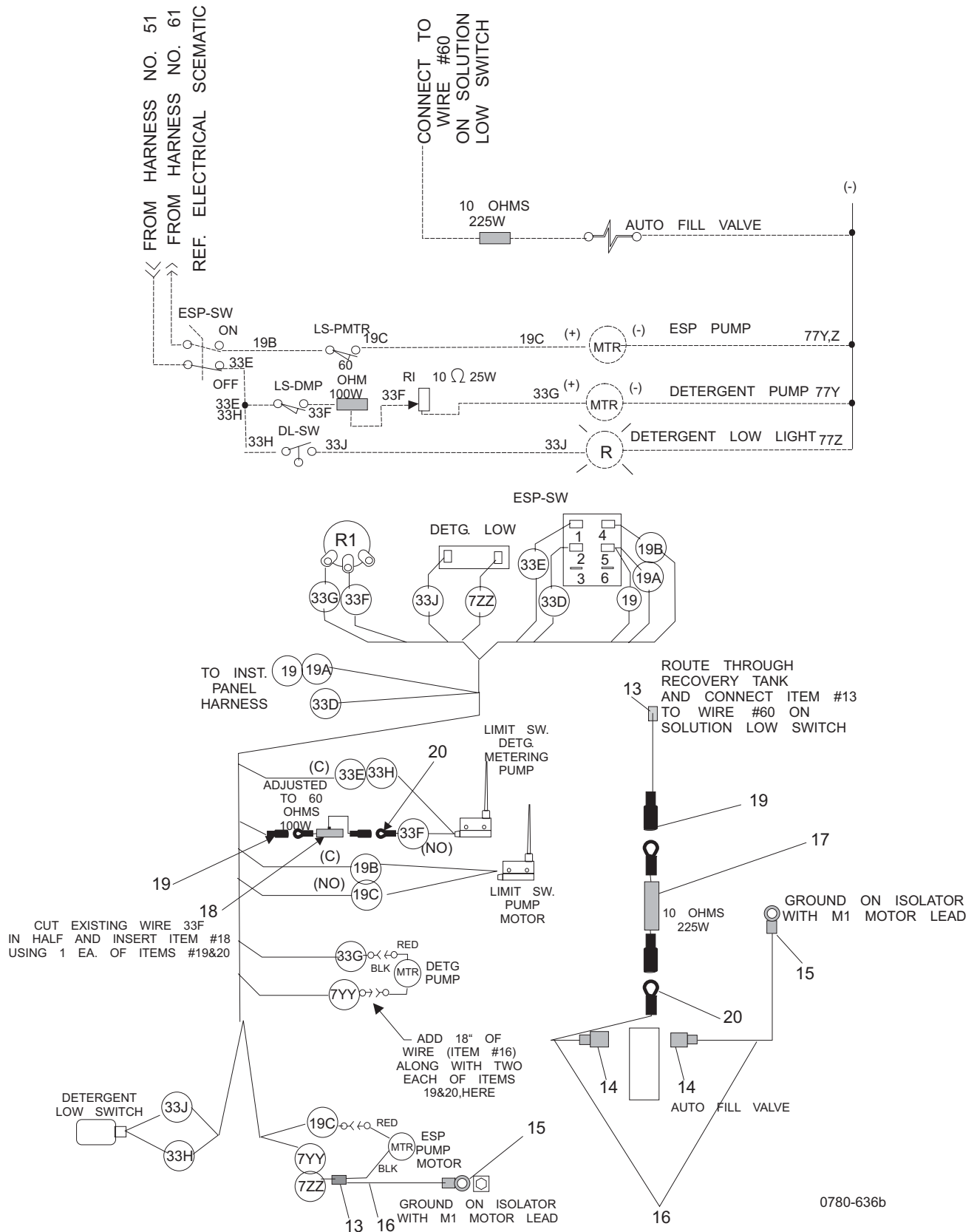
0780636-4a

## ESP/AUTOFIL WIRING (CON'T)

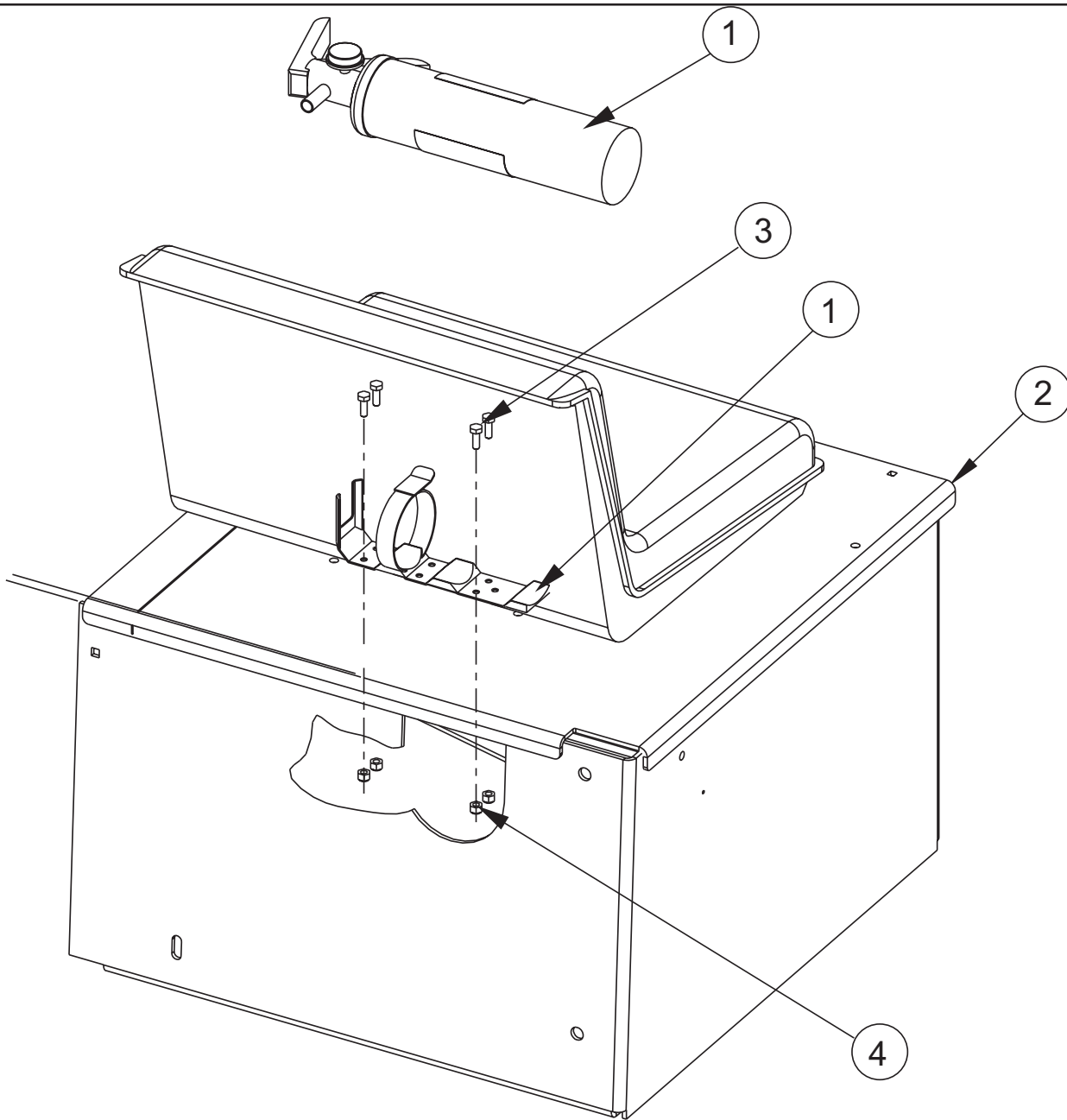
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<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0795-122	ESP Wiring Harness	1
2		Hole Plug	1
3	7-52-00082	ESP Instrument Panel	1
4	7-82-00022	Switch, On/Off DPS	1
5	7-40-05030	Light-32V	1
6	7-39-00021	Knob	1
7	2-00-03059	Screw, #10-24 x .375 RHM	2
8	2-00-02296	Lock Washer, #10 Ext	2
9	7-30-05057	Guard, Rheostat	1
10	2-00-00529	Lock Washer, Helical Spring #8 Med	2
11	2-00-00605	Nut, Hex MS #10-24 THDS	2
12	7-18-00136	Decal, Detergent Flow	1
13	2-00-04479	Terminal-3-Way	2
14	2-00-03418	Terminal-.25 FISO Fem	2
15	2-00-05048	Terminal-.25 Ring	2
16	3-61-00189	Wire-16 AWG. Black	10'
17	0775-223	Assy. Resistor	1
18	0775-222	Assy. Resistor	1
19	2-00-04626	Terminal, .156 Female Bullet	4
20	2-00-04584	Terminal, .156 Male Bullet	4

0780-636-4b/8-04



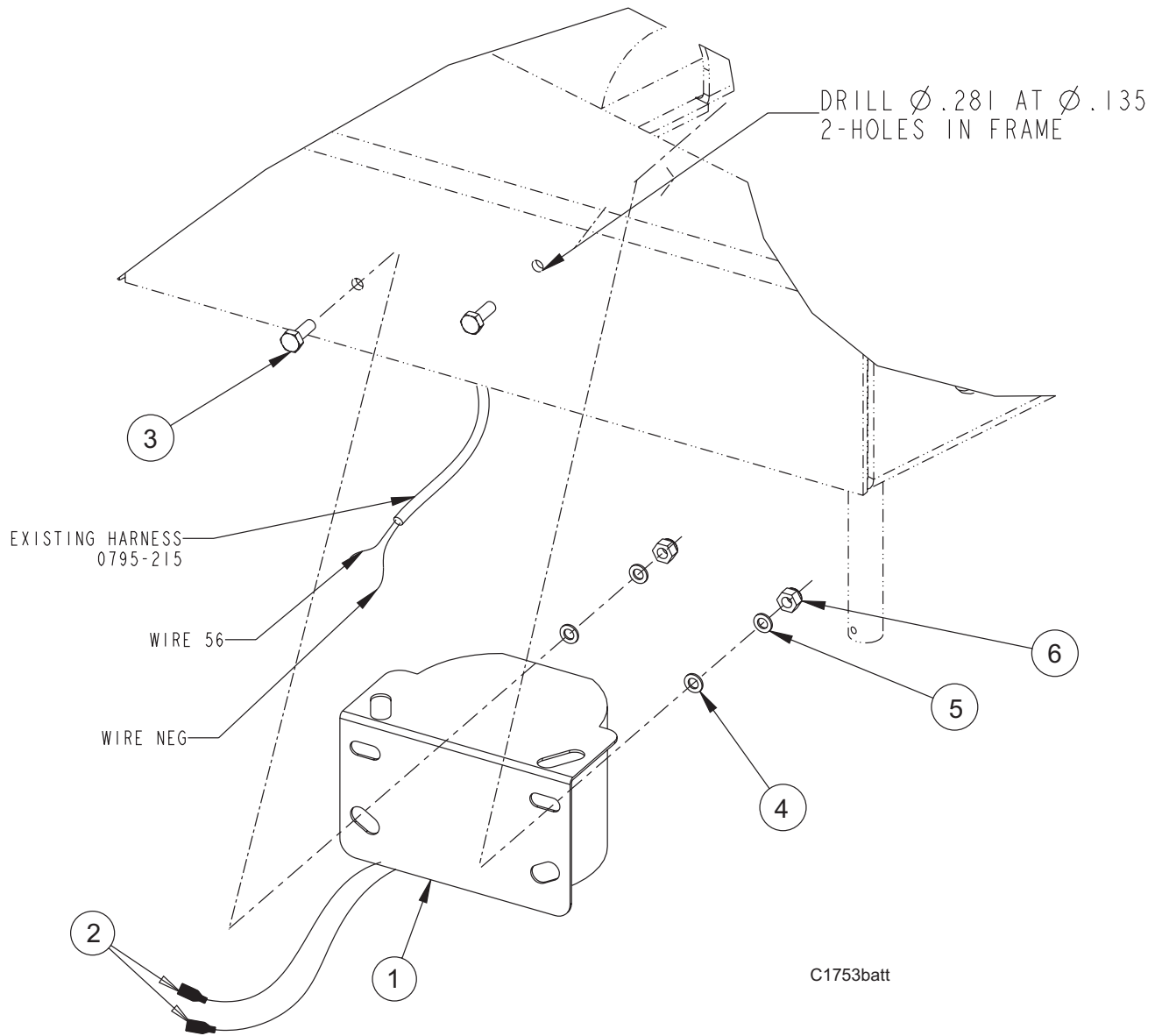
# FIRE EXTINGUISHER



## OPTION 0780-453

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	8-83-04033	Fire Extinguisher & Mounting Bracket	1
2	8-52-00186	Panel, Seat Mounting	1
3	2-00-00221	Screw, 1/4-20 X .75 HHC	4
4	2-00-00641	Nut, 1/4-20 Fiber Insert	4

C1766/9711



**OPTION 0780-650**

<b><u>KEY NO.</u></b>	<b><u>PART NUMBER</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>QTY.</u></b>
1	8-32-09009	Back-Up Alarm	1
2	2-00-04708	Male Terminal	2
3	2-00-00221	Screw, 1/4-20 x .750 HHC	2
4	2-00-00409	Flat Washer, .687 x .344 x .062	2
5	2-00-00501	Washer, Internal Lock	2
6	2-00-00641	Nut, 1/4-20 Insert Fiber	2

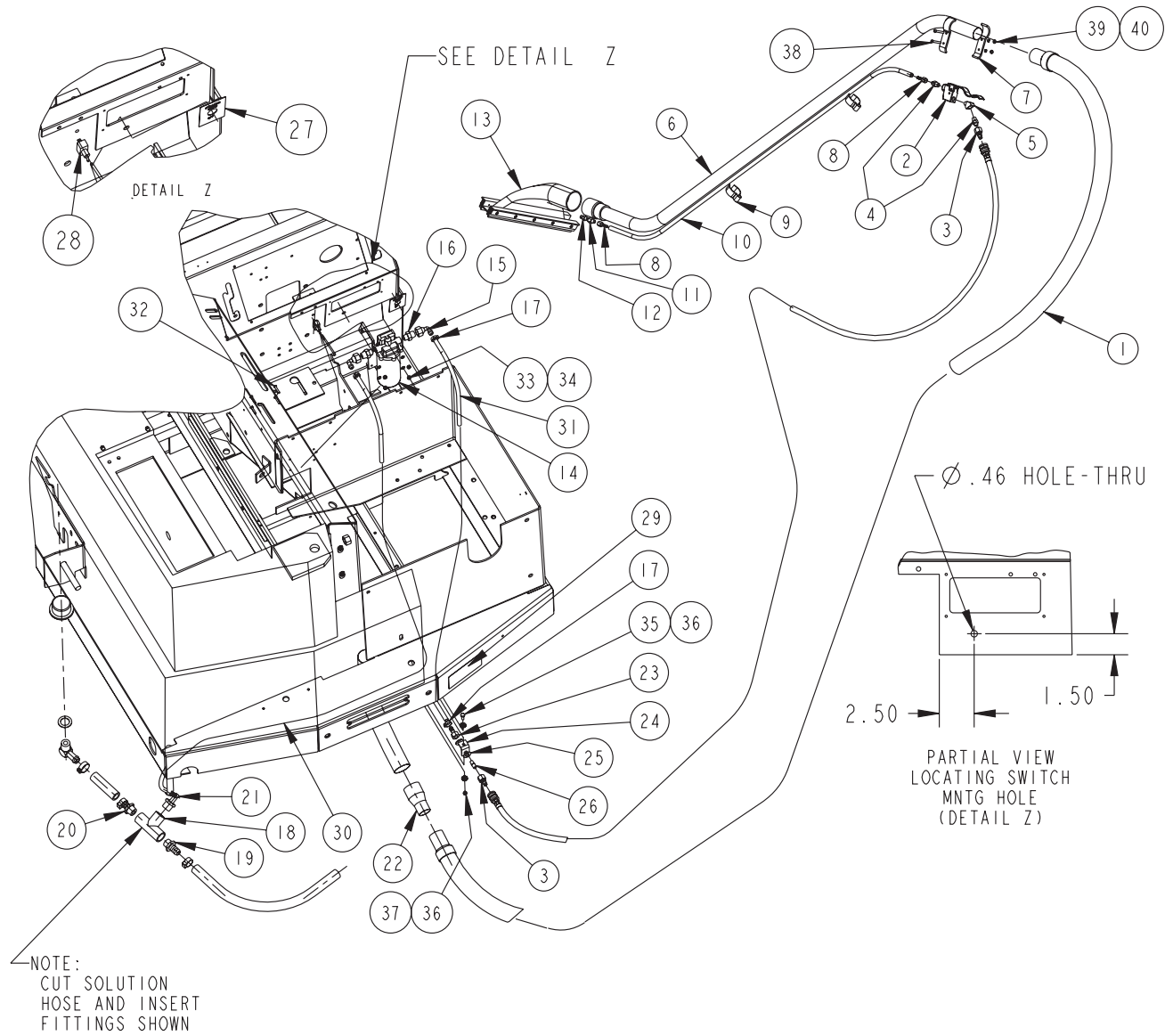


## SPRAY WAND

### OPTION 0780-464

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	0261-029	Hose Assembly	1
2	7-88-00058	Valve, Solution (1/4 NPT)	1
3	7-16-05028	Coupling, Quick Disconnect	2
4	2-00-05206	Reducer	2
5	8-56-05026	Elbow, 45° Street	1
6	639804	Wand Assembly	1
7	7-13-07139	Clamp, Valve	2
8	2-00-05207	Adapter	2
9	7-13-07140	Clamp, Hose	5
10	7-33-02306	Hose, Solution Feed	1
11	2-00-05208	Adapter	1
12	7-50-01002	Spray Nozzle	1
13	638828	Squeegee Tool Assembly	1
14	7-60-05017	Water Pump (36 VDC)	1
15	7-25-02073	Fitting, 90° Elbow	2
16	7-03-00047	Adapter	2
17	2-95-04388	Hose Clamp	5
18	7-25-02037	Fitting, 3/4 Tee	1
19	7-25-02052	Fitting, Straight	2
20	2-00-03407	Hose Clamp	3
21	2-00-04655	Fitting, 90° Elbow	1
22	7-03-00044	Adapter, Hose	1
23	2-00-05211	Adapter, Hose	1
24	7-08-00769	Bracket, Hose Connection	1
25	2-00-00415	Washer	2
26	2-00-03875	Fitting, Closed Nipple	1
27	7-18-00217	Decal	1
28	2-00-03499	Switch	1
29	7-18-00121	Decal, Warning	1
30	3-71-03025	Hose, 3/8" Clear	3'
31	3-71-00081	Hose, Fiber Braid	5'
32	2-00-00039	Screw, 10-24 x 1.0 RHM	4
33	2-00-00460	Flat Washer, .437 x .192 x .031	4
34	2-00-01246	Nut, #10-24 Fiber Insert Hex	4
35	2-00-00221	Screw, 1/4-20 x .75 HHC	1
36	2-00-00503	Lock Washer, 1/4 Ext	2
37	2-00-00594	Nut, 1/4-20 x .437 x .218 Hex	1
38	2-00-00089	Screw, 10-24 x 1.50 RHM	2
39	2-00-04686	Lock Washer, #10 Helical	2
40	2-00-00605	Nut, #10-24 x .375 x .125 Hex	2

C1760/0206

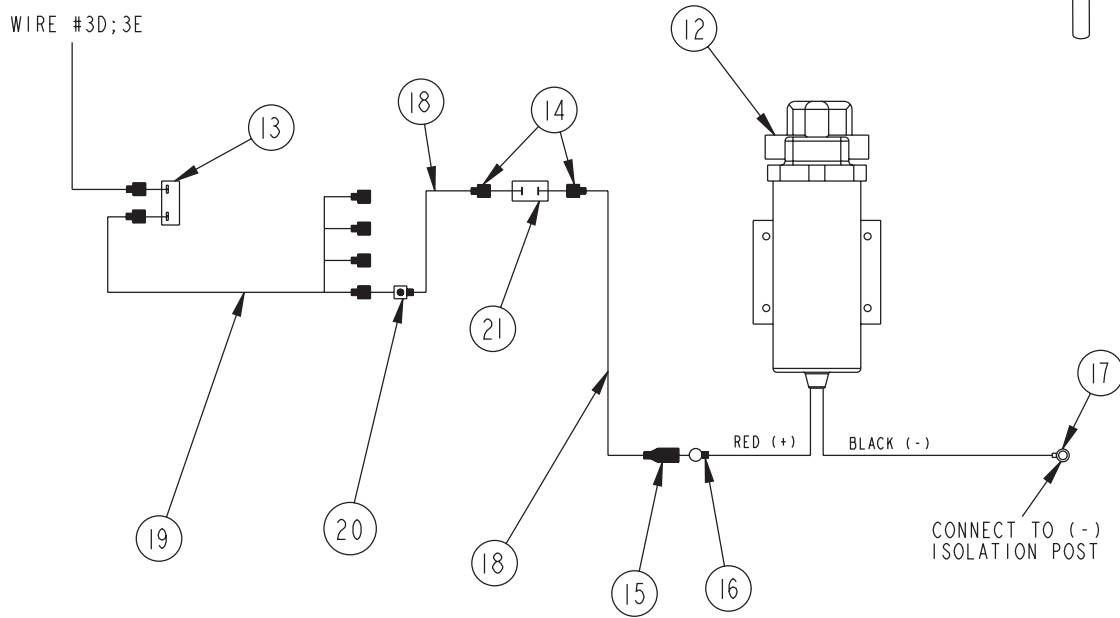
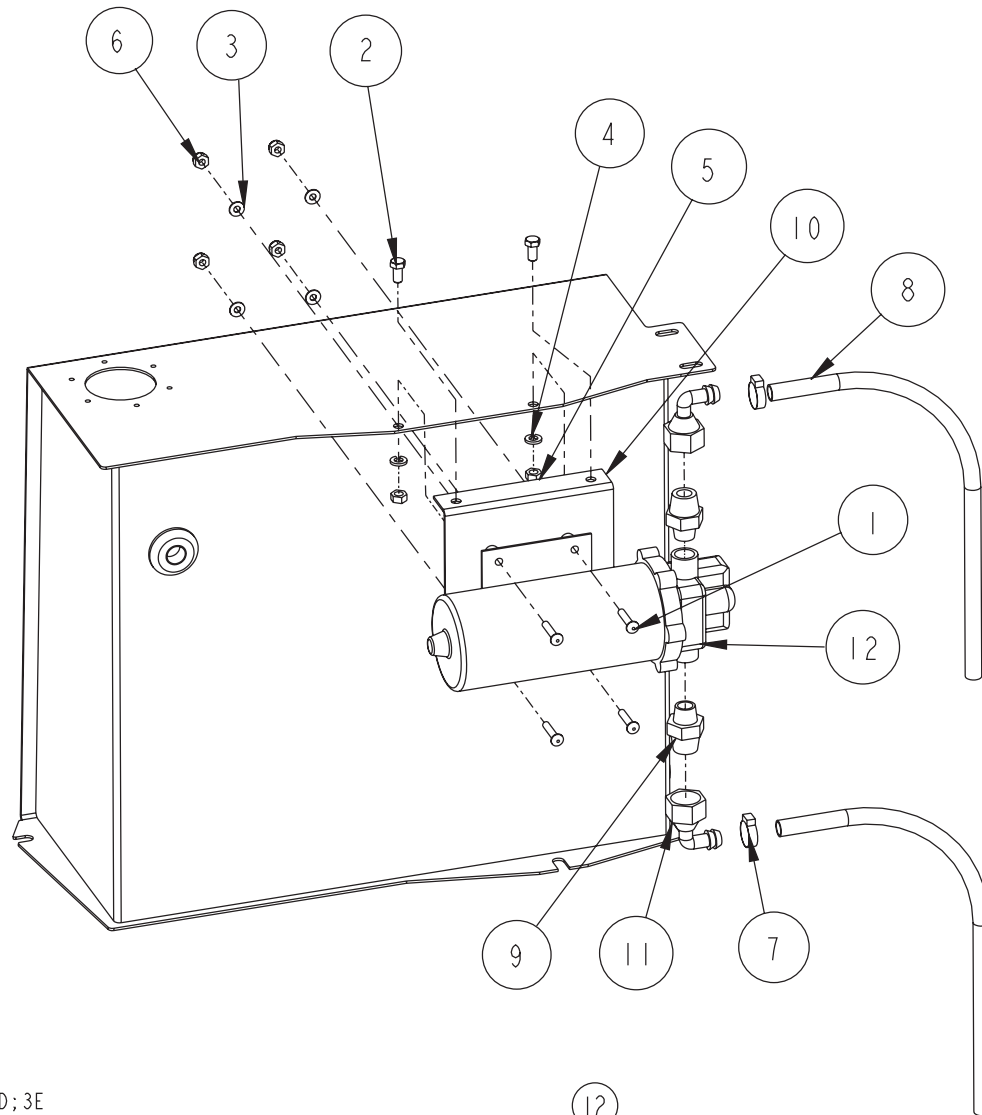


## SPRAY WAND (con't)

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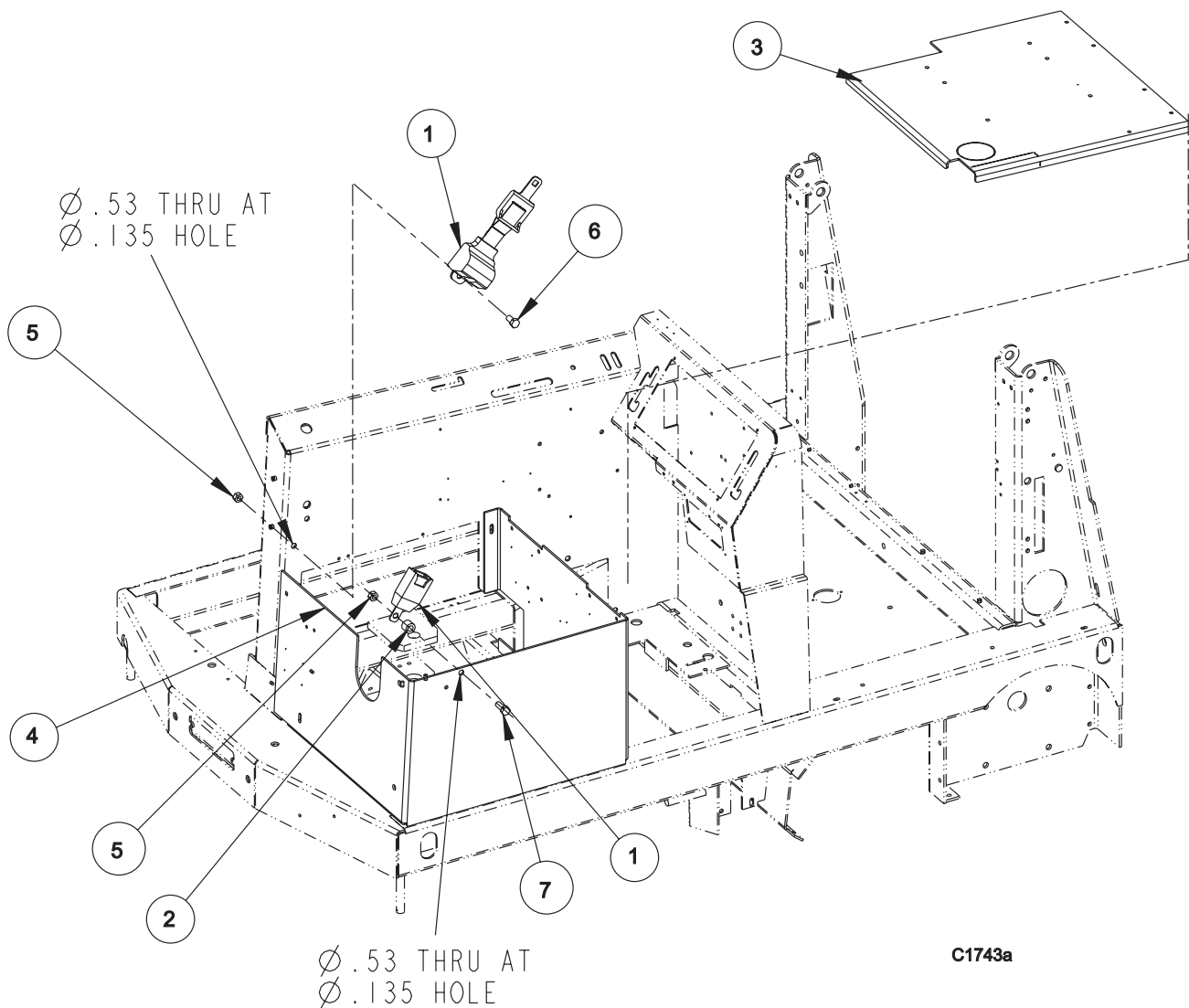
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	2-00-00039	Screw, 10-24 x 1.0 RHM	4
2	2-00-00219	Bolt, 1/4-20 Fin. Hex Head	2
3	2-00-00460	Flat Washer, .437 x .192 x .031	4
4	2-00-00518	Lock Washer, 1/4" Helical Spring	2
5	2-00-00594	Nut, 1/4-20 x .437 x .218 Hex	1
6	2-00-01246	Nut, #10-24 Fiber Insert Hex	8
7	2-95-04388	Clamp, Hose	2
8	3-71-00081	Hose, Fiber Braid	8'
9	7-03-00047	Adapter, 3/8-1/2 NPT Plastic	2
10	7-08-01119	Bracket, Spray Pump	1
11	7-25-02073	Fitting, 90° Elbow, 1/2 NPT x 3/8 Barb	2
12	7-60-05017	Water Pump, 36VDC	1
13	8-64-00008	Circuit Breaker	1
14	2-00-03418	Terminal, .25 FISO	3
15	2-00-04626	Terminal, .156 Fem. Bullet	1
16	2-00-04578	Terminal, .156 Male Bullet	1
17	2-00-00828	Terminal, .25 Ring	1
18	3-61-00189	Wire, 16 AWG	-
19	8-90-07434	Wing Wire	1
20	8-11-00015	Terminal, .25 FISO Male	1
21	2-00-03499	Switch, Toggle	Ref.

C1762-batt/9-04



NOTE: ROUTE WITH EXISTING HARNESS USING TYE-RAPS WHEN NEEDED

# RETRACTABLE SEATBELT

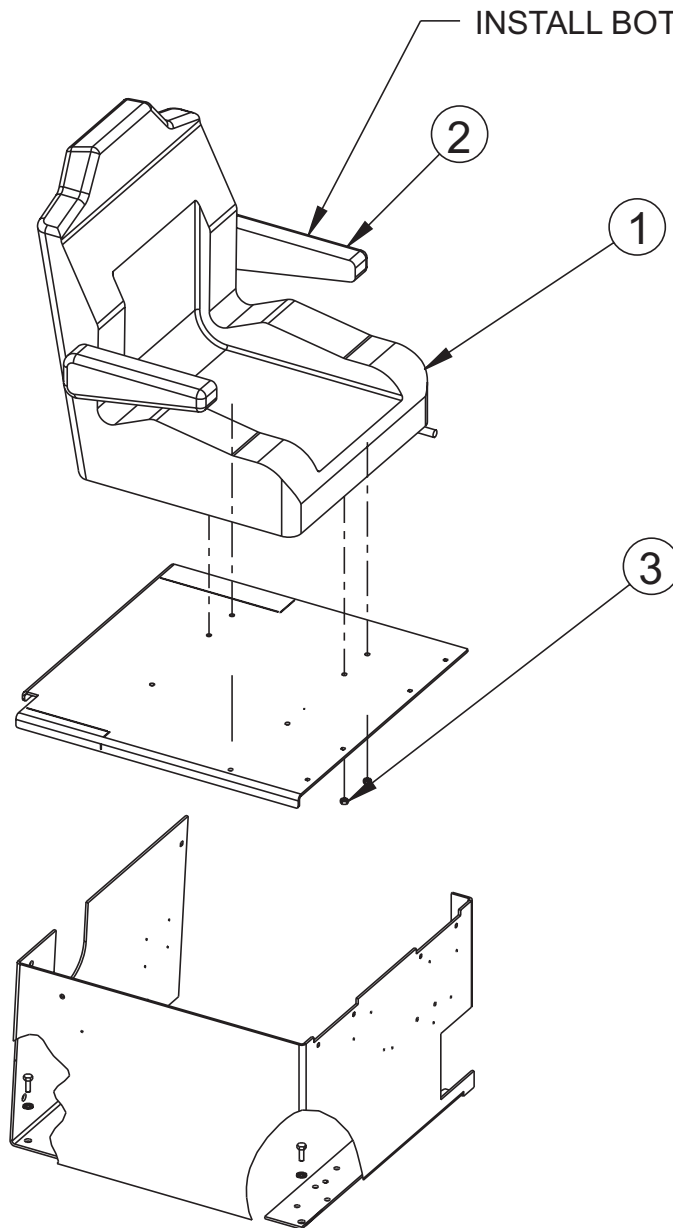


## OPTION 0780-430

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	2-00-05391	Retractable Seat Belt	1
2	2-00-00405	Set Collar	1
3	8-52-00186	Panel, Seat Mounting	Ref.
4	8-33-05124	Housing, Seat and Panel	Ref.
5	2-00-04936	Nut, 1/2-13 Fiber Insert	2
6	2-00-00239	Screw, 1/2-13 x 1.0 HHC	1
7	2-00-00240	Screw, 1/2-13 x 1.25 HHC	1

C1743a/3-99

# SUSPENSION SEAT



NOTE: DO NOT USE SEAT MOUNTED SEATBELT ON THIS MACHINE

## OPTION 0780-456

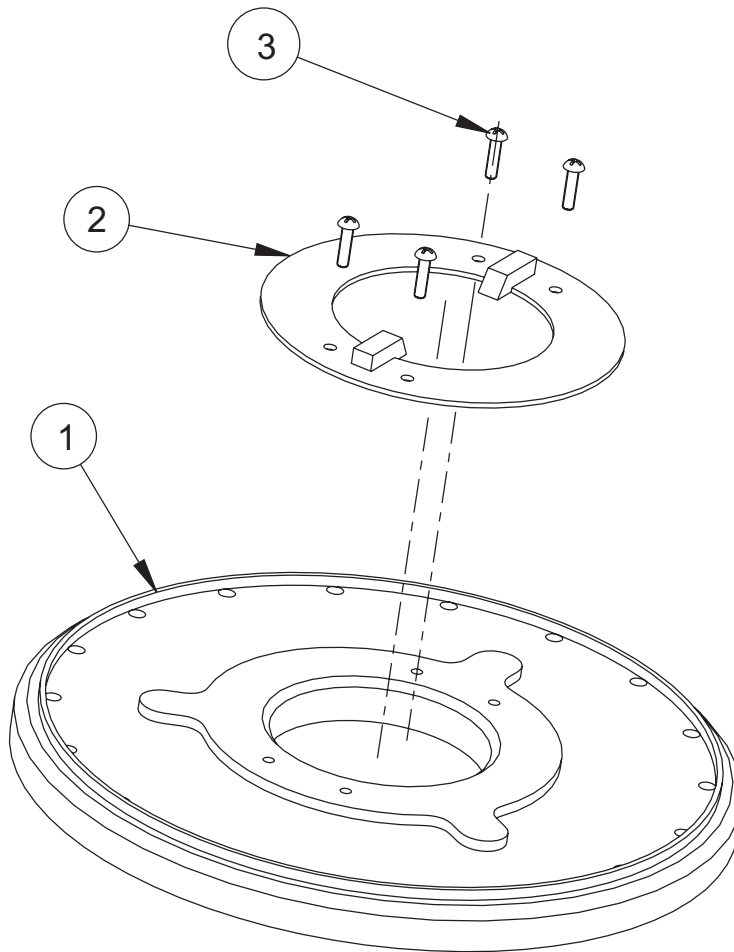
<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	8-69-00019	Seat - Suspension	1
2	8-03-04320	Kit - Arm Rest	1
3	2-00-00644	Nut, 5/16-18, Insert Fiber	4

C1791/0007

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3-35

# PAD DRIVER (16")



C1741/9707

### OPTION NO. 0780-434

<u>KEY NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	7-19-02035	Disc - Driver	1
2	7-20-00010	Pad Driver - 16" Diameter	1
3	2-00-00081	Screw, 1/4-20 x 1.000 RHM	4

### PAD HOLDERS FOR THIS OPTION

- 4 Lefthand (complete) 7-32-03013
- 4a Lefthand (lower piece only) 7-32-03014

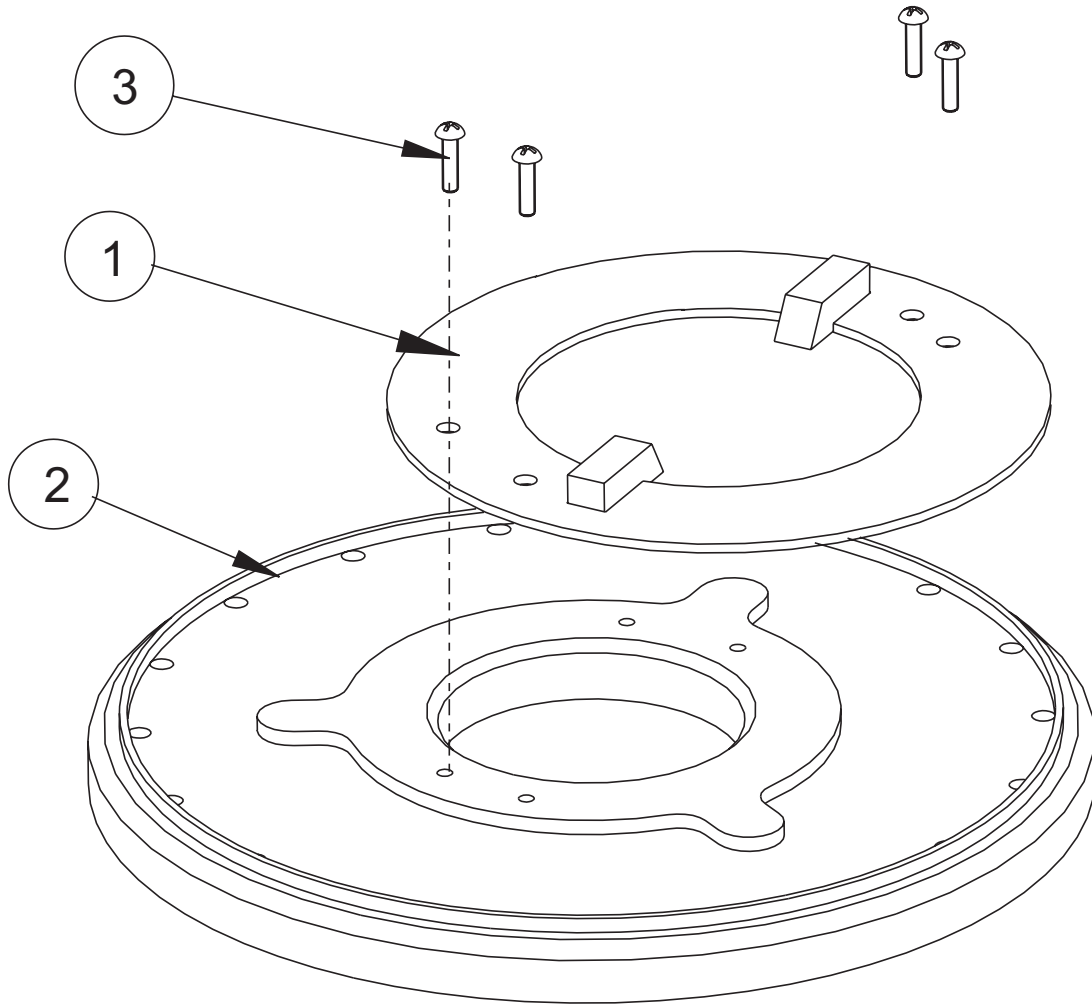


- 5 Righthand (complete) 7-32-03015
- 5a Righthand (lower piece only) 7-32-03016



C1741/9707

**PAD DRIVER (18")**



C1741b/9707

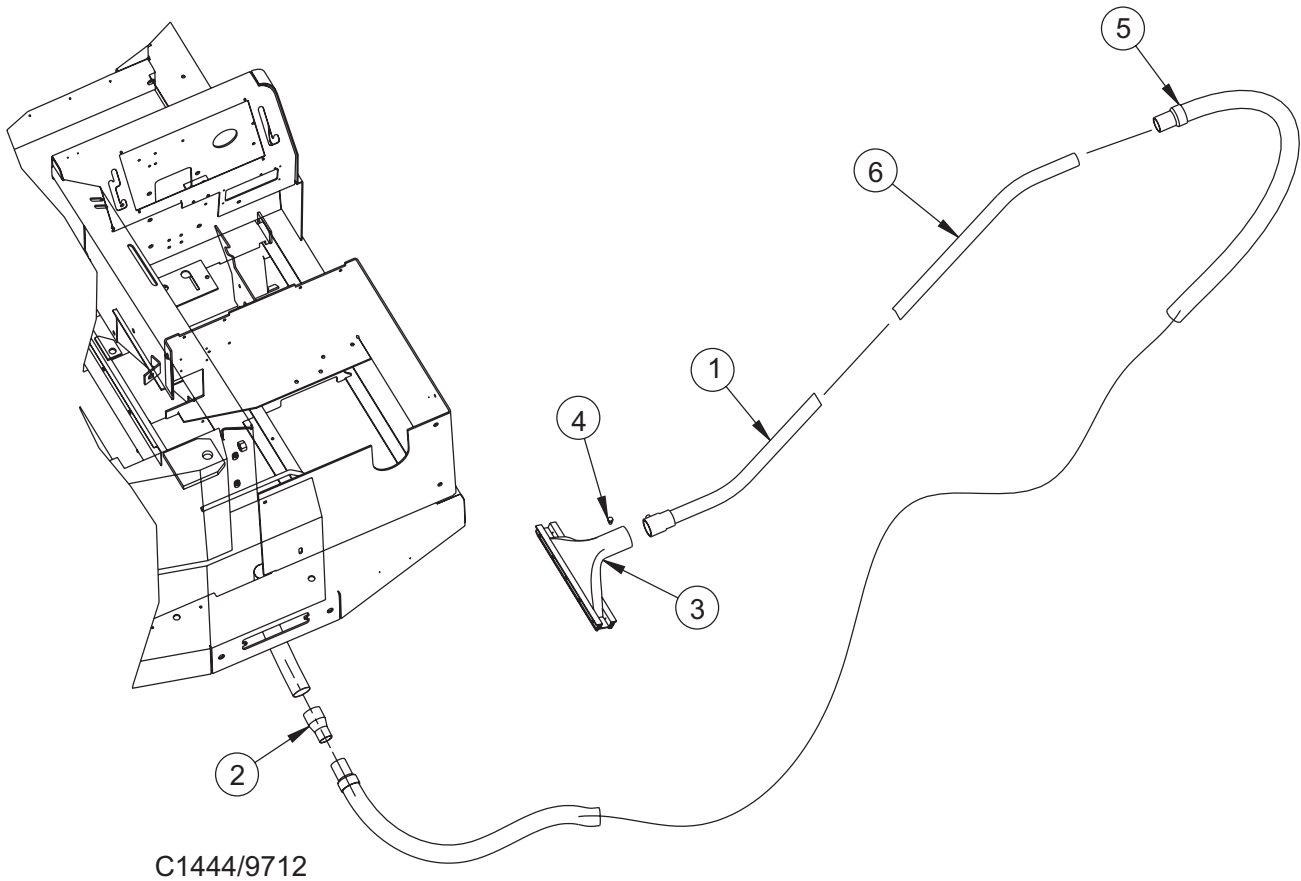
**OPTION 0780-445**

<b><u>KEY NO.</u></b>	<b><u>PART NUMBER</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>QTY.</u></b>
1	7-19-02035	Disc - Driver 18"	1
2	7-20-00012	Pad Driver - 18"	1
3	2-00-00081	Screw, 1/4-20 x 1.0 HHC	4

C1741b/9712



# VACUUM WAND

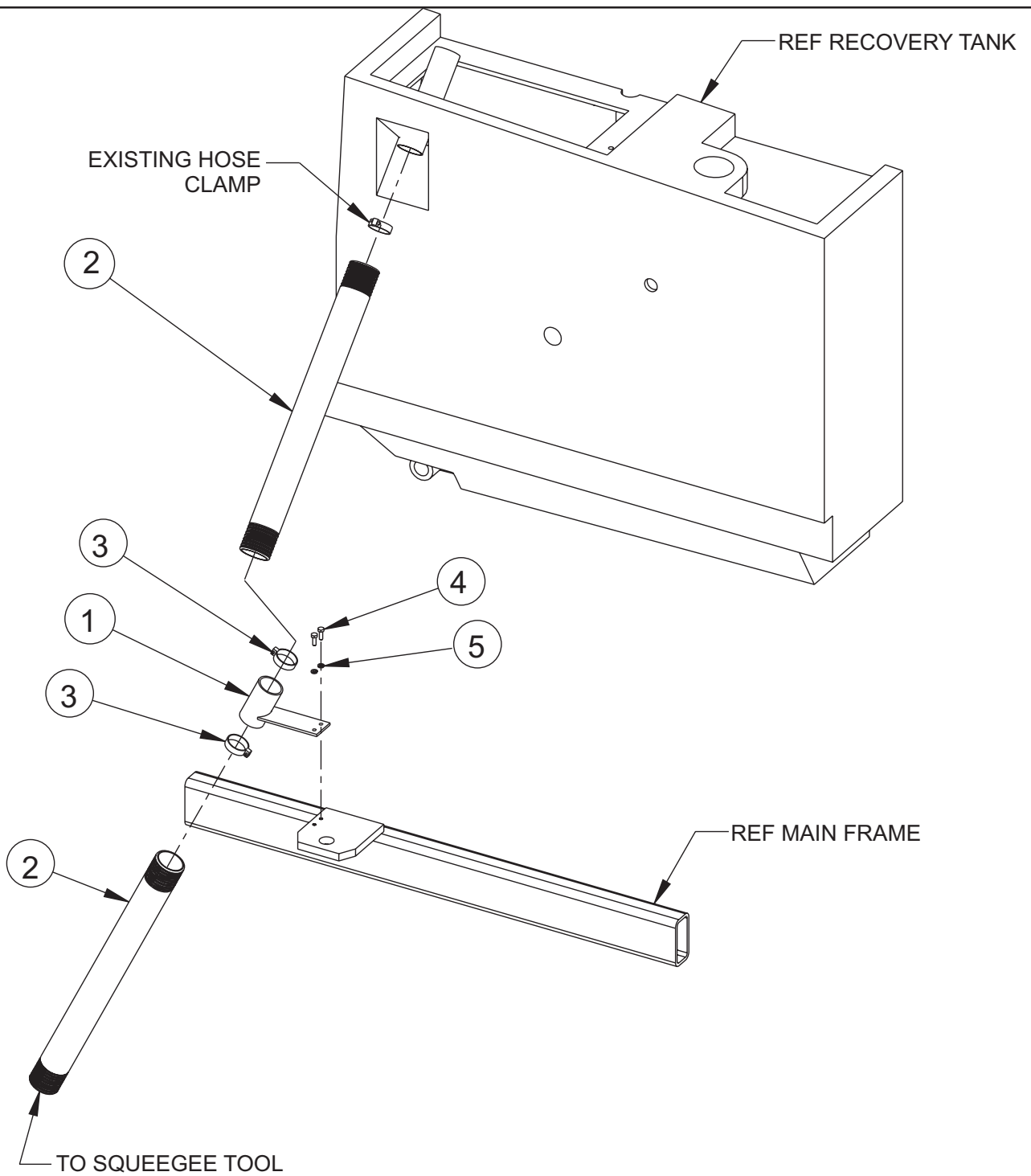


## OPTION 0780-457

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	0261-026	Lower Wand (includes Key #6)	1
2	7-03-00044	Hose Adapter	1
3	0261-028	Squeegee Tool	1
4	7-55-08128	Pin	Ref.
5	7-33-02213	Hose, 1 1/2 x 15'	1
6	0261-027	Lower Wand	1

C1444/9804

# VAC HOSE SERVICE KIT



<b>KEY NO.</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	7-25-02097	Fitting, Vac. Hose Coupling (Welded)	1
2	7-33-02386	Hose, Vacuum	2
3	2-00-02216	Clamp, Hose	2
4	2-00-00221	Screw, 1/4-20 x .75 HHC	2
5	2-00-00518	Lock Washer, 1/4 Helical Spring	2

C1788/9807

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## SPARE PARTS LISTS

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### OPTION 0760-514 46" MACHINE

#### BROOM & HOPPER CHAMBER COMPONENTS

7-25-08070	Hopper Flap	1
7-25-08071	Flap - BC Outer	1
7-25-08072	Flap - BC Inner	1
8-29-00257	Gasket	1
8-29-00232	Gasket	1
8-29-00234	Gasket	1
8-29-00233	Gasket	3
8-21-04048	Edging	2
8-29-00256	Gasket	1
7-21-03003	Edging	3
7-21-04031	Edging	1
8-25-08212	Flap Door	2
8-24-04148	Dust Filter Element	1

#### SQUEEGEE COMPONENTS

7-77-00109	Outer Rubber	1
7-77-00110	Inner Rubber	1
7-77-00111	Side Sq. Outer Rubber	2
7-77-00114	Side Sq. Inner Rubber	2

### OPTION 0760-515 53" MACHINE

#### BROOM & HOPPER CHAMBER COMPONENTS

7-25-08070	Hopper Flap	1
7-25-08071	Flap - BC Outer	1
7-25-08072	Flap - BC Inner	1
8-29-00257	Gasket	1
8-29-00232	Gasket	1
8-29-00234	Gasket	1
8-29-00233	Gasket	3
8-21-04048	Edging	2
8-29-00256	Gasket	1
7-21-03003	Edging	3
7-21-04031	Edging	1
8-25-08212	Flap Door	2
8-24-04148	Dust Filter Element	1

#### SQUEEGEE COMPONENTS

7-77-00105	Outer Swing Squeegee Rubber	1
7-77-00115	Inner Swing Squeegee Rubber	1
7-77-00112	Outer Side Squeegee Rubber	2
7-77-00113	Inner Side Squeegee Rubber	2

**OPTION 0780-418  
53" SCRUB DECK & SQUEEGEE**

7-86-08041	Squeegee-Weldment	1	7-33-02359	Hose-6"	1
7-20-06010	Duct-Squeegee Inlet	1	7-33-02361	Hose - 17"	1
7-75-01164	Spacer-Bushing	2	7-42-05132	Link - Side Squeegee	2
7-75-01169	Spacer-Squeegee	2	7-30-08016	Guide - Brush Frame Arm	1
7-77-00110	Squeegee-Rubber-Inner	1	7-76-00114	Spring	1
7-77-00109	Squeegee-Rubber-Outer	1	7-33-00360	Hose - 8"	2
7-79-00088	Strap-Squeegee Clamp	1	7-33-09031	Hub-Brush Drive	3
7-13-07157	Clamp-End Squeegee	2	7-03-04123	Arm-Brush Drive	3
7-13-07156	Clamp-Nut	2	7-78-05026	Stop-Scrub Frame RH	1
7-39-00026	Knob-Squeegee	4	7-78-05025	Stop-Scrub Frame LH	1
7-89-08073	Wheel-Caster	2	7-08-00437	Welding Tee	1
7-27-07181	Brush Deck Weldment	1	7-33-02339	Hose-22"	1
7-42-05135	Link - Brush RH	1	7-86-08042	LH Side Squeegee Tool	1
0782-111	Motor-Hyd	1	7-86-08043	RH Side Squeegee Tool	1
7-57-05039	Pivot Brush Drive	2	7-77-00113	Rubber Inner Side Squ.	2
7-42-05134	Link - Brush Frame LH	1	7-77-00112	Rubber Outer Side Squ.	2
7-41-00027	Latch-Brush Drive	3	7-13-07175	Clamp RH Side Squeegee	1
7-25-02012	Fitting - Straight Barb	1	7-13-07174	Clamp RH Side Squeegee	1
7-55-08151	Pin-Lock	2			

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