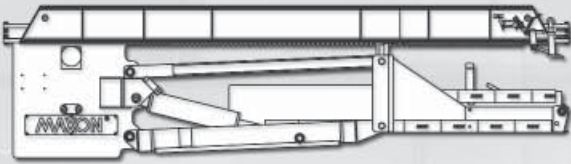


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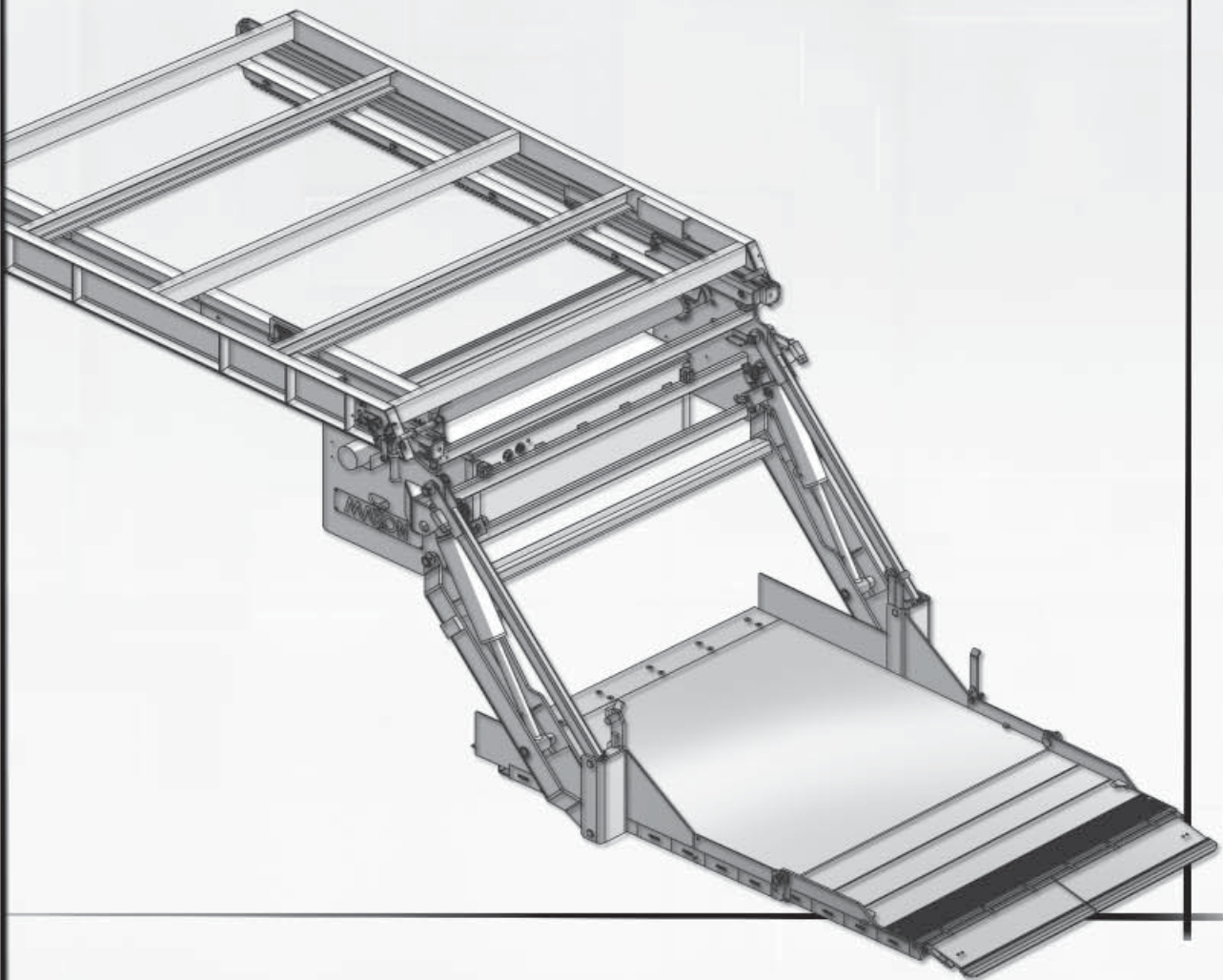


**MAXON®**

**RA Series**

## **MAINTENANCE MANUAL**

**RA-35 & RA-45**





# MAXON<sup>®</sup>

## LIFT CORP.

11921 Slauson Ave.  
Santa Fe Springs, CA. 90670

### CUSTOMER SERVICE:

TELEPHONE (562) 464-0099 TOLL FREE (800) 227-4116

FAX: (888) 771-7713

NOTE: For latest version of all Manuals (and replacements), download the  
Manuals from Maxon's website at [www.maxonlift.com](http://www.maxonlift.com).

## WARRANTY/ RMA POLICY & PROCEDURE

### LIFTGATE WARRANTY

Type of Warranty: Full Parts and Labor

Term of Warranty: Standard Liftgates - 2 years from ship date or 6,000 cycles  
Premium Liftgates - 2 years from ship date or 10,000 cycles

This warranty shall not apply unless the product is installed, operated and maintained in accordance with MAXON Lift's specifications as set forth in MAXON Lift's Installation, Operation and Maintenance manuals. This warranty does not cover normal wear, maintenance or adjustments, damage or malfunction caused by improper handling, installation, abuse, misuse, negligence, or carelessness of operation. In addition, this warranty does not cover equipment that has had unauthorized modifications or alterations made to the product.

MAXON agrees to replace any components which are found to be defective during the first 2 years of service, and will reimburse for labor based on MAXON's Liftgate Warranty Flat Rate Schedule. (Copy of the Flat Rate is available at [www.maxonlift.com](http://www.maxonlift.com).)

All warranty repairs must be performed by an authorized MAXON warranty facility. For any repairs that may exceed \$500, including parts and labor, MAXON's Technical Service Department must be notified and an "Authorization Number" obtained.

All claims for warranty must be received within 30 Days of the repair date, and include the following information:

1. Liftgate Model Number and Serial Number
2. The End User must be referenced on the claim
3. Detailed Description of Problem
4. Corrective Action Taken, and Date of Repair
5. Parts used for Repair, Including MAXON Part Number(s)
6. MAXON R.M.A. # and/or Authorization # if applicable (see below)
7. Person contacted at MAXON if applicable
8. Claim must show detailed information i.e. Labor rate and hours of work performed

Warranty claims can also be placed online at [www.maxonlift.com](http://www.maxonlift.com). Online claims will be given priority processing.

All claims for warranty will be denied if paperwork has not been received or claim submitted via Maxon website for processing by MAXON's Warranty Department within 30 days of repair date.

All components may be subject to return for inspection, prior to the claim being processed. MAXON products may not be returned without prior written approval from MAXON's Technical Service Department. Returns must be accompanied by a copy of the original invoice or reference with original invoice number and are subject to a credit deduction to cover handling charges and any necessary reconditioning costs. **Unauthorized returns will be refused and will become the responsibility of the returnee.**

Any goods being returned to MAXON Lift must be pre-approved for return, and have the R.M.A. number written on the outside of the package in plain view, and returned freight prepaid. All returns are subject to a 15% handling charge if not accompanied by a detailed packing list. Returned parts are subject to no credit and returned back to the customer. Defective parts requested for return must be returned within 30 days of the claim date for consideration to:

MAXON Lift Corp.  
10321 Greenleaf Ave., Santa Fe Springs, CA 90670  
Attn: RMA# \_\_\_\_\_

MAXON's warranty policy does not include the reimbursement for travel time, towing, vehicle rental, service calls, oil, batteries or loss of income due to downtime. Fabrication or use of non Maxon parts, which are available from MAXON, are also not covered.

MAXON's Flat Rate Labor Schedule takes into consideration the time required for diagnosis of a problem.

All Liftgates returned are subject to inspection and a 15% restocking fee. Any returned Liftgates or components that have been installed or not returned in new condition will be subject to an additional reworking charge, which will be based upon the labor and material cost required to return the Liftgate or component to new condition.

### PURCHASE PART WARRANTY

Term of Warranty: 1 Year from Date of Purchase.

Type of Warranty: Part replacement only. MAXON will guarantee all returned genuine MAXON replacement parts upon receipt and inspection of parts and original invoice.

All warranty replacements parts will be sent out via ground freight. If a rush shipment is requested, all freight charges will be billed to the requesting party.

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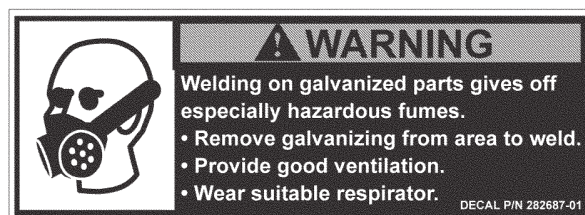
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Comply with the following **WARNINGS** and **SAFETY INSTRUCTIONS** while maintaining Liftgates. See Operation Manual for operating safety requirements.

## **⚠ WARNING**

- Do not stand, or allow obstructions, under the platform when lowering the Liftgate. **Be sure your feet are clear of the Liftgate.**
- Keep fingers, hands, arms, legs, and feet clear of moving Liftgate parts (and platform edges) when operating the Liftgate.
- Correctly stow platform when not in use. Extended platforms could create a hazard for people and vehicles passing by.
- **Disconnect Liftgate power cable from battery** before repairing or servicing Liftgate.
- If it is necessary to stand on the platform while maintaining the Liftgate, keep your feet and any objects clear of the inboard edge of the platform. Your feet or objects on the platform can become trapped between the platform and the Liftgate extension plate.
- Recommended practices for welding on steel parts are contained in the current **AWS (American Welding Society) D1.1 Structural Welding Code - Steel**. Damage to Liftgate and/or vehicle, and personal injury could result from welds that are done incorrectly.
- Recommended practices for welding on aluminum parts are contained in the current **AWS (American Welding Society) D1.2 Structural Welding Code - Aluminum**. Damage to Liftgate and/or vehicle, and personal injury could result from welds that are done incorrectly.
- Welding on galvanized parts gives off especially hazardous fumes. Comply with WARNING decal on the galvanized part (**FIG. 6-1**). To minimize hazard remove galvanizing from weld area, provide adequate ventilation, and wear suitable respirator.



**FIG. 6-1**

## SAFETY INSTRUCTIONS

- Read and understand the instructions in this **Maintenance Manual** before performing maintenance on the Liftgate.
- Before operating the Liftgate, read and understand the operating instructions in **Operation Manual**.
- Comply with all **WARNING** and instruction decals attached to the Liftgate.
- Keep decals clean and legible. If decals are illegible or missing, replace them. Free replacement decals are available from **Maxon Customer Service**.
- Consider the safety and location of bystanders and location of nearby objects when operating the Liftgate. Stand to one side of the platform while operating the Liftgate.
- Do not allow untrained persons to operate the Liftgate.
- Wear appropriate safety equipment such as protective eyeglasses, faceshield and clothing while performing maintenance on the Liftgate and handling the battery. Debris from drilling and contact with battery acid may injure unprotected eyes and skin.
- Be careful working by an automotive type battery. Make sure the work area is well ventilated and there are no flames or sparks near the battery. Never lay objects on the battery that can short the terminals together. If battery acid gets in your eyes, immediately seek first aid. If acid gets on your skin, immediately wash it off with soap and water.
- If an emergency situation arises (vehicle or Liftgate) while operating the Liftgate, release the control switch to stop the Liftgate.
- A correctly installed Liftgate operates smoothly and reasonably quiet. The only noticeable noise during operation comes from the power unit while the platform is raised. Listen for scraping, grating and binding noises and correct the problem before continuing to operate Liftgate.
- Use only **Maxon Authorized Parts** for replacement parts. Provide Liftgate model and serial number information with your parts order. Order replacement parts from:

**MAXON LIFT CORP. Customer Service**  
**11921 Slauson Ave., Santa Fe Springs, CA 90670**

**Online: [www.maxonlift.com](http://www.maxonlift.com)**  
**Express Parts Ordering: Phone (800) 227-4116 ext. 4345**  
**Email: Ask your Customer Service representative**

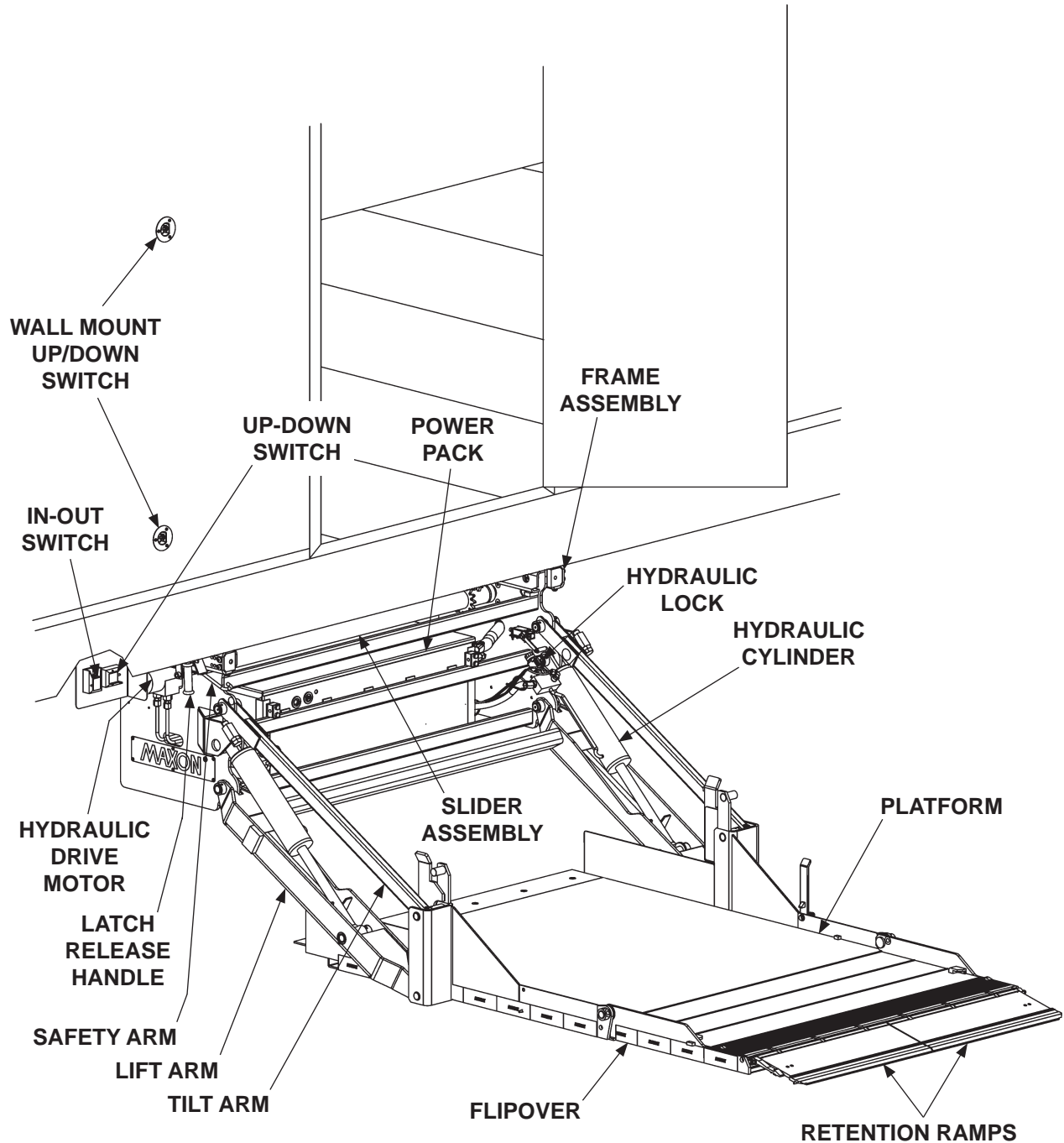
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# LIFTGATE TERMINOLOGY



## PERIODIC MAINTENANCE

### PERIODIC MAINTENANCE CHECKS

#### **WARNING**

**Never operate the Liftgate if parts are loose or missing.**

**NOTE:** Make sure vehicle is parked on level ground while performing the maintenance checks.

### **Quarterly or 1250 Cycles (whichever occurs first)**

Check the hydraulic fluid level in the pump reservoir. Refer to the **CHECKING HYDRAULIC FLUID** procedure in the **PERIODIC MAINTENANCE** section.

If hydraulic fluid appears contaminated, refer to the **CHANGING HYDRAULIC FLUID** procedure in the **PERIODIC MAINTENANCE** section.

Keep track of the grade of hydraulic fluid in the pump reservoir and never mix two different grades of fluid.

Check all hoses and fittings for chafing and fluid leaks. Tighten loose fittings or replace parts as required.

Check electrical wiring for chafing and make sure wiring connections are tight and free of corrosion. Use dielectric grease to protect electrical connections.

Check that all **WARNING and instruction decals** are in place. Also, make sure decals are legible, clean and undamaged.

Check that all bolts, nuts, and roll pins are in place. Make sure roll pins protrude evenly from both sides of hinge pin collar. Replace fasteners and roll pins if necessary.

Check for debris and dirt buildup on the slider rollers and rails. Clean out any buildup of dirt and debris.

#### **CAUTION**

**Damaged cylinder seals and contaminated hydraulic fluid can result from painting the polished portion of the cylinder rod. To prevent damage, protect the exposed polished portion of the cylinder rod while painting.**

Check for rust and oily surfaces on Liftgate. If there is rust or oil on Liftgate, clean it off. Touch up the paint where bare metal is showing. MAXON recommends using the aluminum primer touchup paint kit, P/N 908134-01.

### **Semi-annually or 2500 Cycles (whichever occurs first)**

Visually check the platform hinge pins for excessive wear and broken welds. See **PARTS BREAKDOWN** section for replacement parts. Also, do the **Quarterly or 1250 Cycles** maintenance checks.

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## PERIODIC MAINTENANCE CHECKLIST

**NOTE:** Make sure vehicle is parked on level ground while performing maintenance checks.

### Quarterly or 1250 Cycles (whichever occurs first)

- ☐ Check the level and condition of the hydraulic fluid.
- ☐ Visually check all hoses and fittings for chafing and fluid leaks. Tighten loose fittings or replace parts as required.
- ☐ Check electrical wiring for chafing and make sure wiring connections are tight and free of corrosion. Use dielectric grease to protect electrical connections.
- ☐ Check that all **WARNING and instruction decals** are in place. Also, make sure decals are legible, clean, and undamaged.
- ☐ Check that all bolts, nuts, and roll pins are in place. Make sure roll pins protrude evenly from both sides of hinge pin collar. Replace fasteners and roll pins if necessary.
- ☐ Check for debris and dirt buildup on the slider rollers and rails. Clean out any buildup of dirt and debris.
- ☐ Check for rust and oily surfaces on Liftgate. If there is rust or oil on Liftgate or if the Liftgate is dirty, clean it off. Touch up the paint where bare metal is showing. Refer to the paint system **CAUTION** and recommended touchup kit on the preceding page.

### Semi-annually or 2500 Cycles (whichever occurs first)

- ☐ Visually check the platform hinge pins for excessive wear and broken welds.
- ☐ Do the **Quarterly or 1250 Cycles Checks** on this checklist.

## PERIODIC MAINTENANCE CHECKING HYDRAULIC FLUID

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

**NOTE:** Use correct grade of hydraulic fluid for your location.

**+50 to +120 Degrees F - Grade ISO 32**

**Below + 70 Degrees F - Grade ISO 15 or MIL-H-5606**

See **TABLES 13-1 & 13-2** for recommended brands.

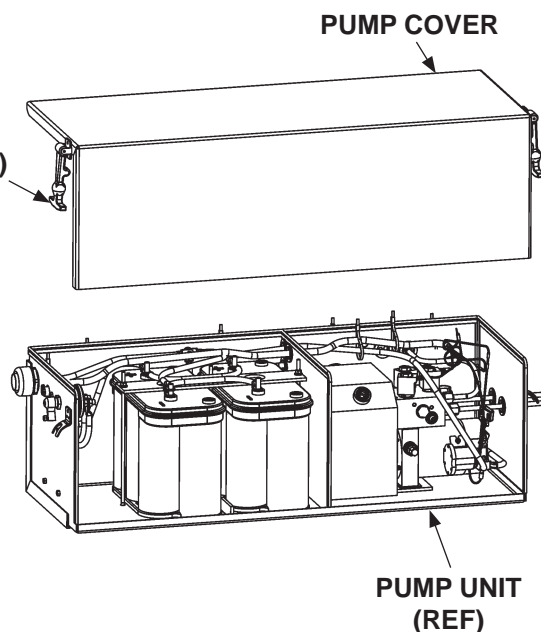
1. Unstow and lower Liftgate to ground.
2. Unlatch and remove pump cover (**FIG. 12-1**).
3. Check the hydraulic fluid level in reservoir as follows. With Liftgate on ground, level should be as shown in **FIG. 13-1**.

**NOTE:** If the hydraulic fluid in the reservoir is contaminated, do the **CHANGING HYDRAULIC FLUID** procedure in this section.

### CAUTION

Do not fill reservoir to the **FULL** mark on the dipstick. Hydraulic fluid can overflow from the reservoir.

LATCHES  
(2 PLACES)



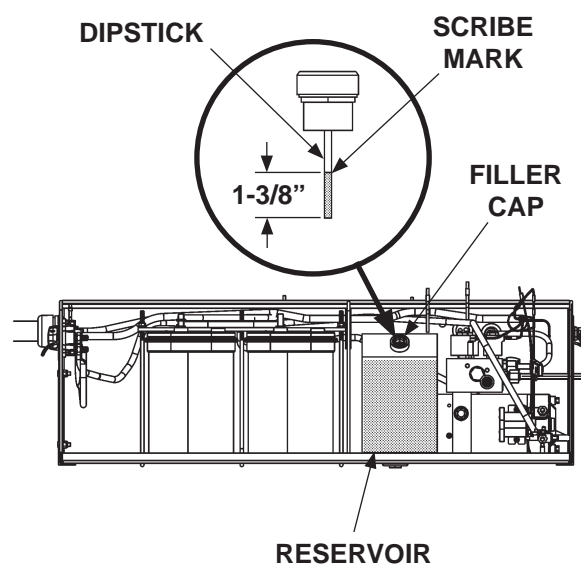
**REMOVE/REINSTALL PUMP COVER  
FIG. 12-1**

4. If needed, add fluid to the reservoir as follows. Remove filler cap (**FIG. 13-1**). Fill the reservoir with hydraulic fluid to the scribe mark 1-3/8" above bottom of dipstick (**FIG. 13-1**). Reinstall filler cap (**FIG. 13-1**).

## CAUTION

Pump cover must be correctly secured to prevent it from becoming a hazard. Ensure pump cover is latched to pump box.

5. Reinstall and latch the pump cover (**FIG. 12-1**).



**POWER UNIT FLUID LEVEL**  
**FIG. 13-1**

ISO 32 HYDRAULIC OIL	
RECOMMENDED BRANDS	PART NUMBER
AMSOIL	AWH-05
CHEVRON	HIPERSYN 32
KENDALL	GOLDEN MV
SHELL	TELLUS S2 V32
EXXON	UNIVIS N-32
MOBIL	DTE-13M, DTE-24, HYDRAULIC OIL-13

**TABLE 13-1**

ISO 15 OR MIL-H-5606 HYDRAULIC OIL	
RECOMMENDED BRANDS	PART NUMBER
AMSOIL	AWF-05
CHEVRON	FLUID A, AW-MV-15
KENDALL	GLACIAL BLU
SHELL	TELLUS S2 V15
EXXON	UNIVIS HVI-13
MOBIL	DTE-11M
ROSEMEAD	THS FLUID 17111

**TABLE 13-2**

## PERIODIC MAINTENANCE CHANGING HYDRAULIC FLUID

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

**NOTE:** Use correct grade of hydraulic fluid for your location.

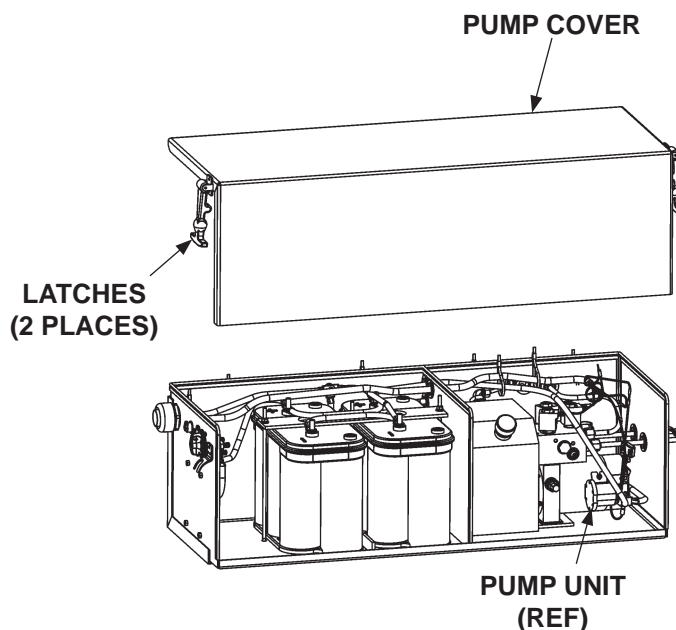
**+50 to +120 Degrees F - Grade ISO 32**

**Below + 70 Degrees F - Grade ISO 15 or MIL-H-5606**

See **TABLES 13-1 & 13-2** for recommended brands.

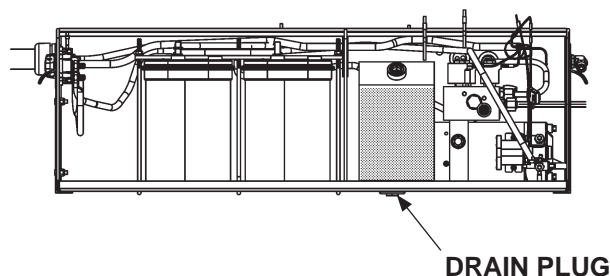
1. Unstow and lower Liftgate to ground.

2. Unlatch and remove the pump cover  
(**FIG. 14-1**).



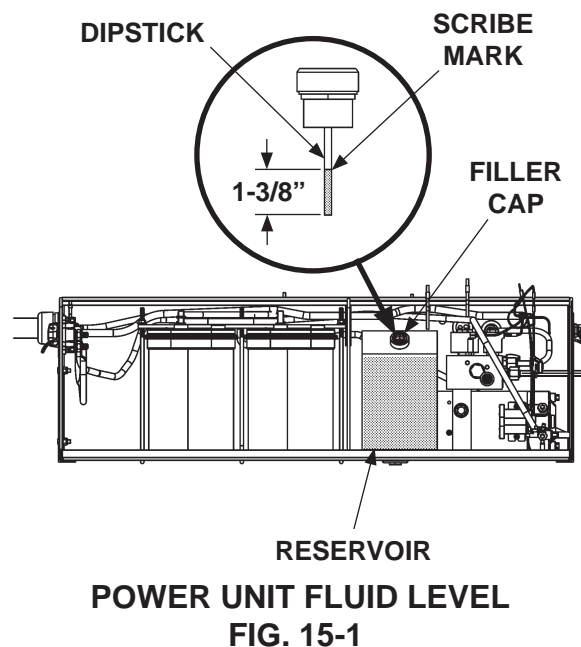
**REMOVE PUMP COVER  
FIG. 14-1**

3. Place empty 5 gallon bucket under drain plug (**FIG. 14-2**). Remove drain plug (**FIG. 14-2**). Drain hydraulic fluid. Re-install drain plug (**FIG. 14-2**).



**POWER UNIT  
FIG. 14-2**

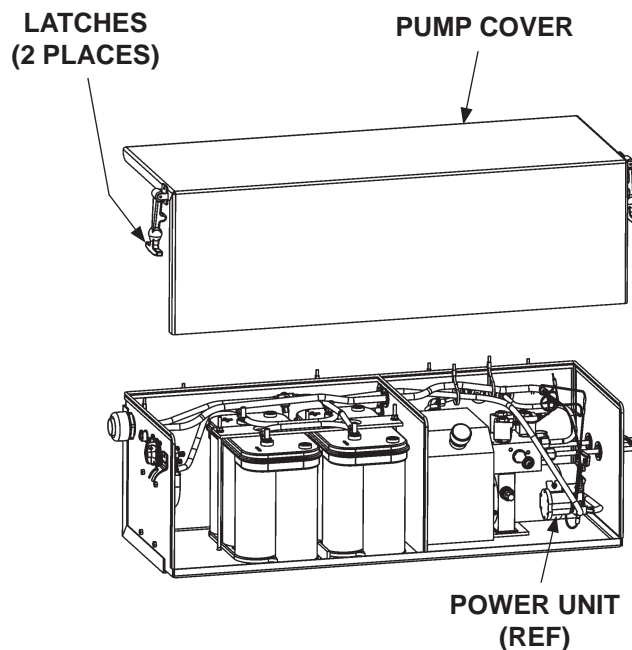
4. Remove filler cap (**FIG. 15-1**). Add 1.85 gallons (7.4 qt) of hydraulic fluid to reservoir. Hydraulic fluid should be at the scribe mark  $1\frac{3}{8}$ " above the bottom of dipstick (**FIG. 15-1**). Reinstall filler cap (**FIG. 15-1**).
5. Stow the lift and do the **CHECKING HYDRAULIC FLUID** procedure in this section of the manual.



## CAUTION

Pump cover must be correctly secured to prevent it from becoming a hazard. Ensure pump cover is latched to pump box.

6. Reinstall and latch the pump cover (**FIG. 15-2**).

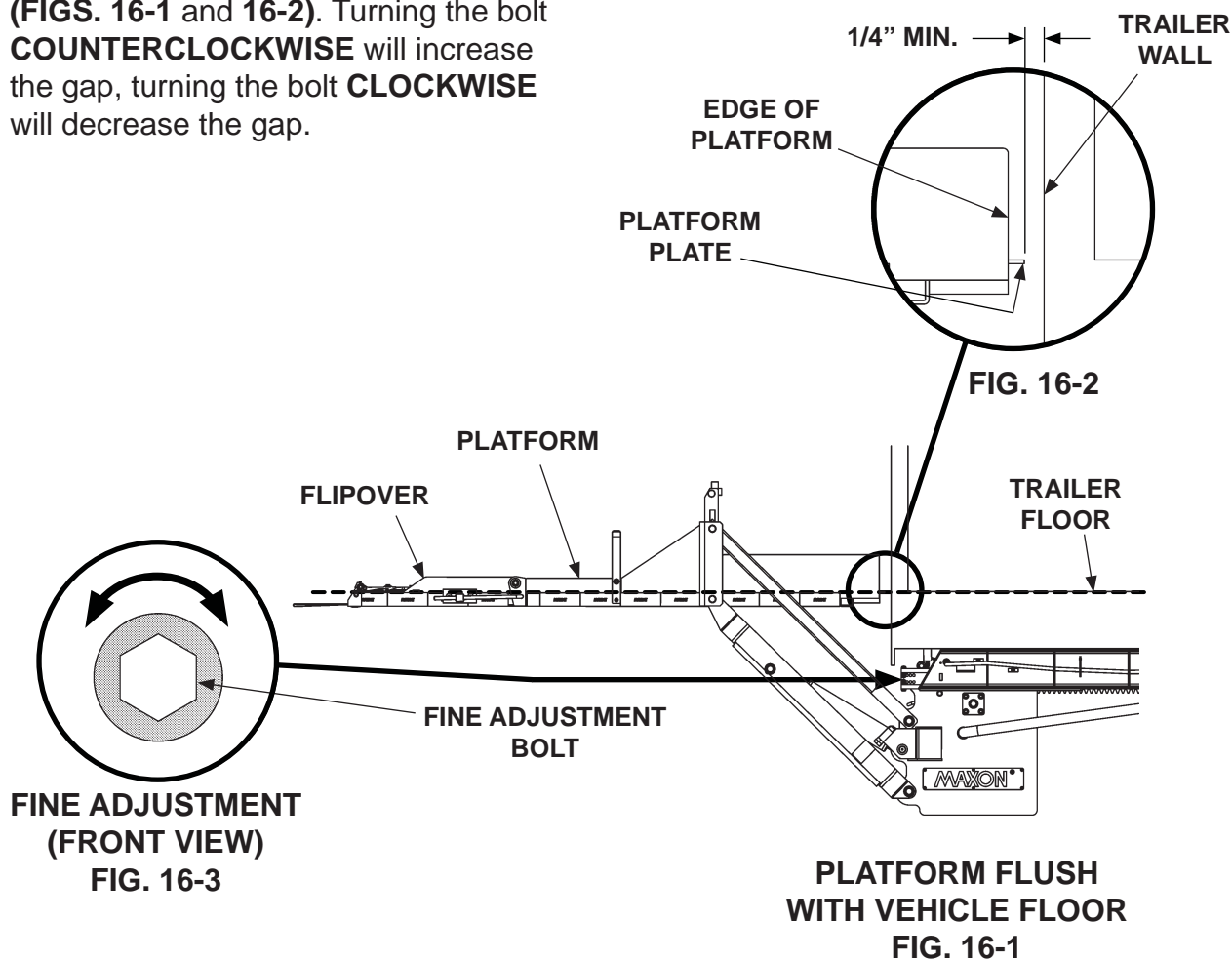


## PLATFORM GAP & STOP ADJUSTMENT

**NOTE:** Refer to **Operating Instructions** decal and applicable **WARNING & CAUTION** decals.

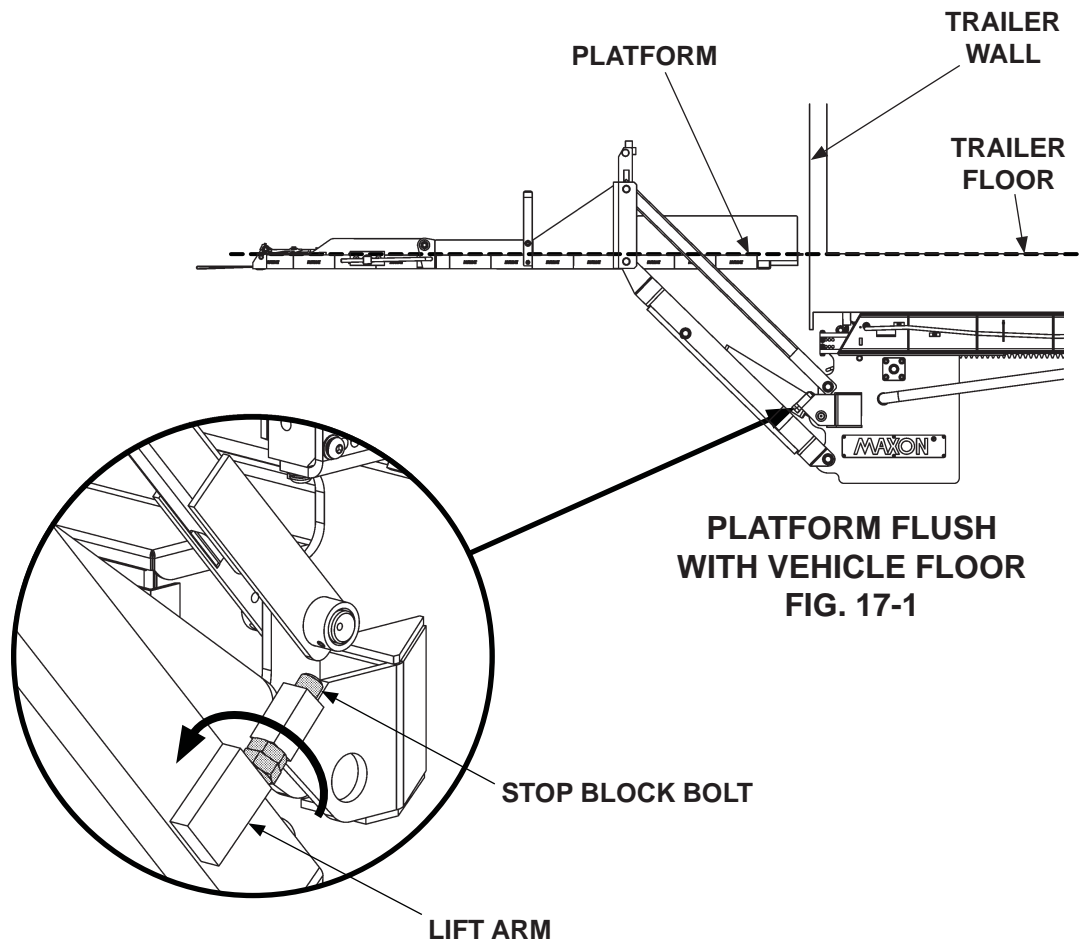
**NOTE:** Park vehicle on level ground and unload vehicle before doing this procedure.

1. Run slide assembly out and unfold the flipover. Then, raise platform to floor level making sure not to hit trailer wall (**FIG. 16-1**). If necessary, trim platform plate (**FIG. 16-2**).
2. Turn the fine adjustment bolt (**FIG. 16-3**) to get the minimum 1/4" distance from edge of platform to trailer wall (**FIGS. 16-1 and 16-2**). Turning the bolt **COUNTERCLOCKWISE** will increase the gap, turning the bolt **CLOCKWISE** will decrease the gap.





3. With platform at floor level, turn stop block bolts **COUNTERCLOCKWISE** until butted against each lift arm as shown in **FIG. 17-1**. This will prevent the platform from hitting the trailer wall.

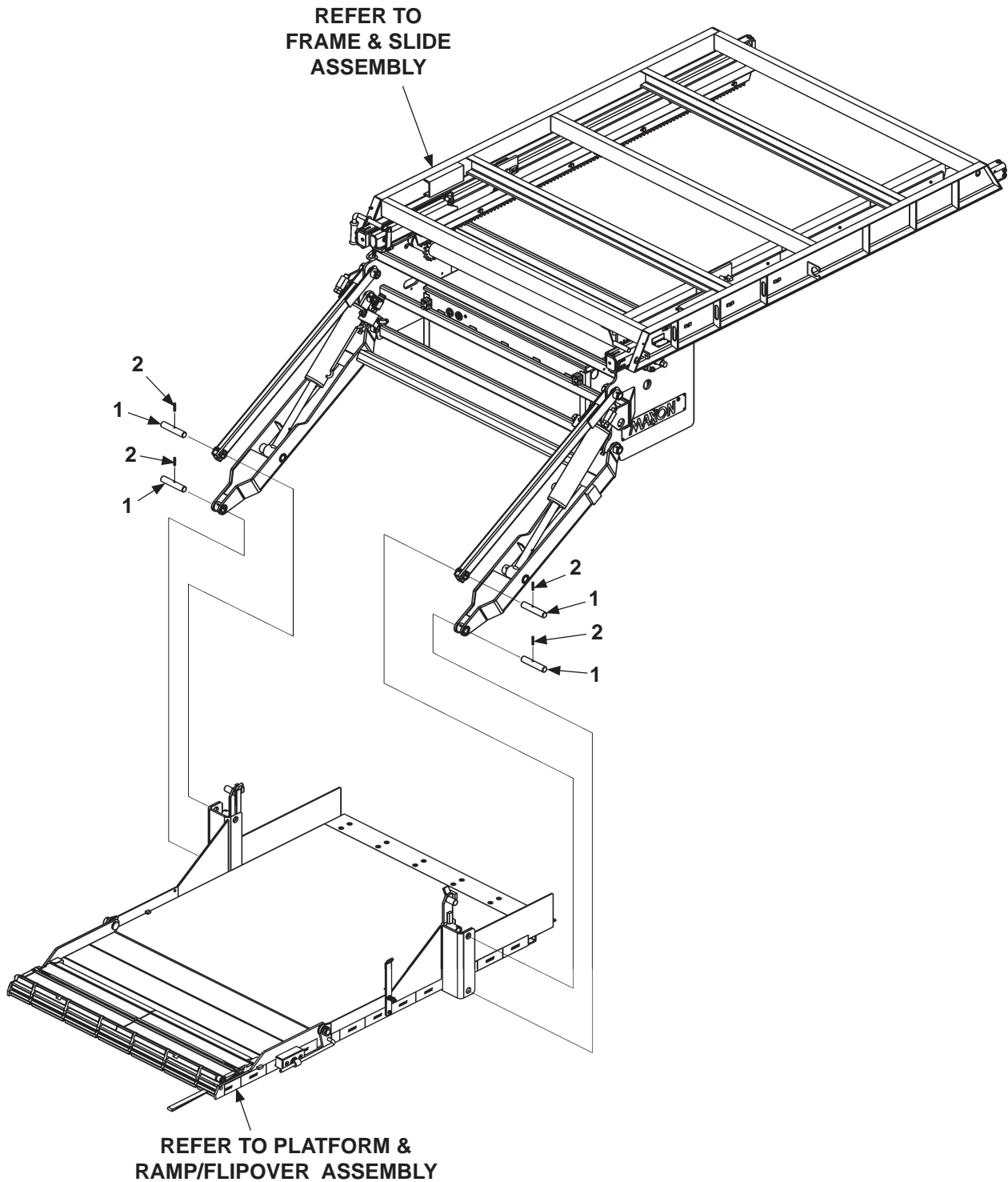


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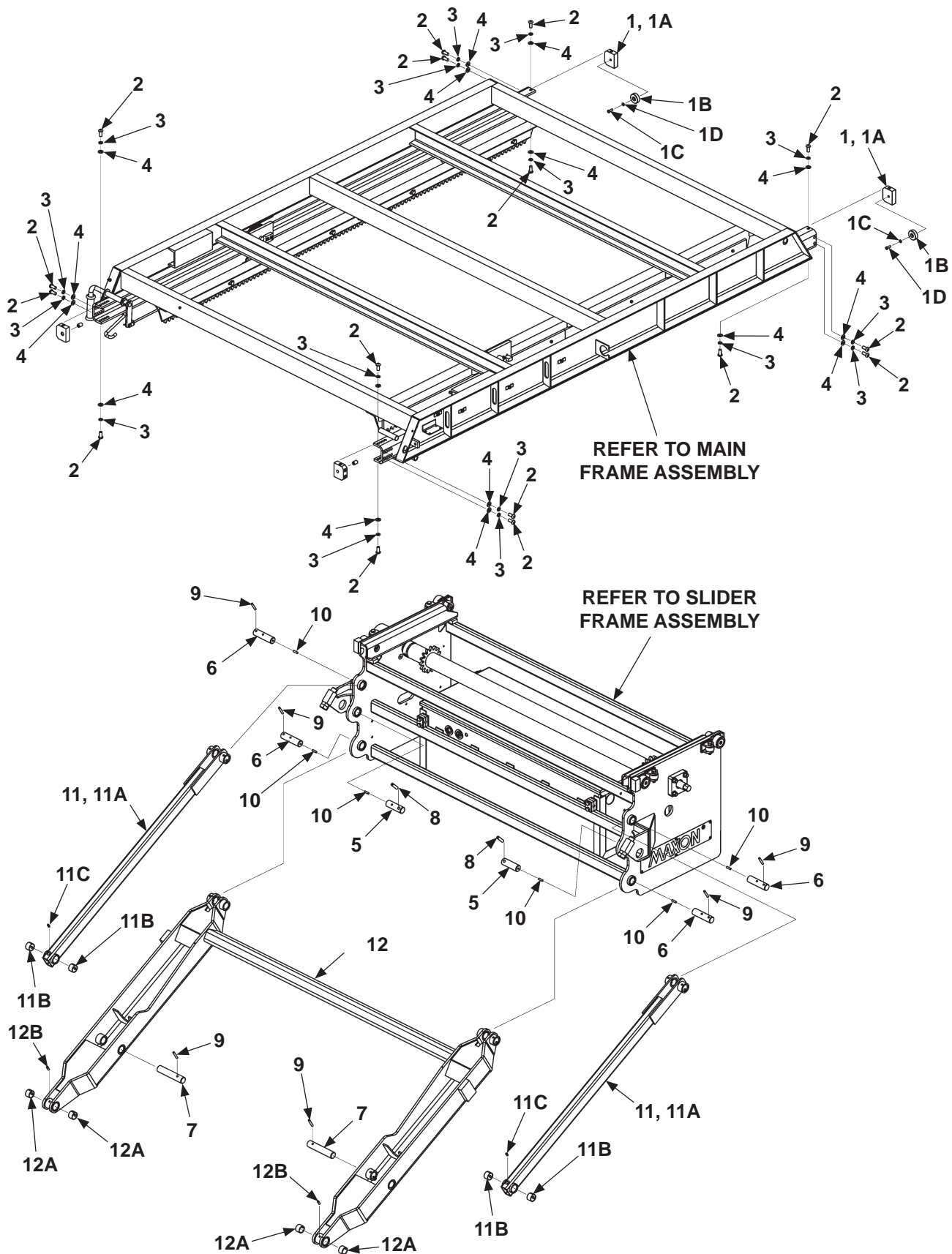
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# PARTS BREAKDOWN MAIN ASSEMBLY



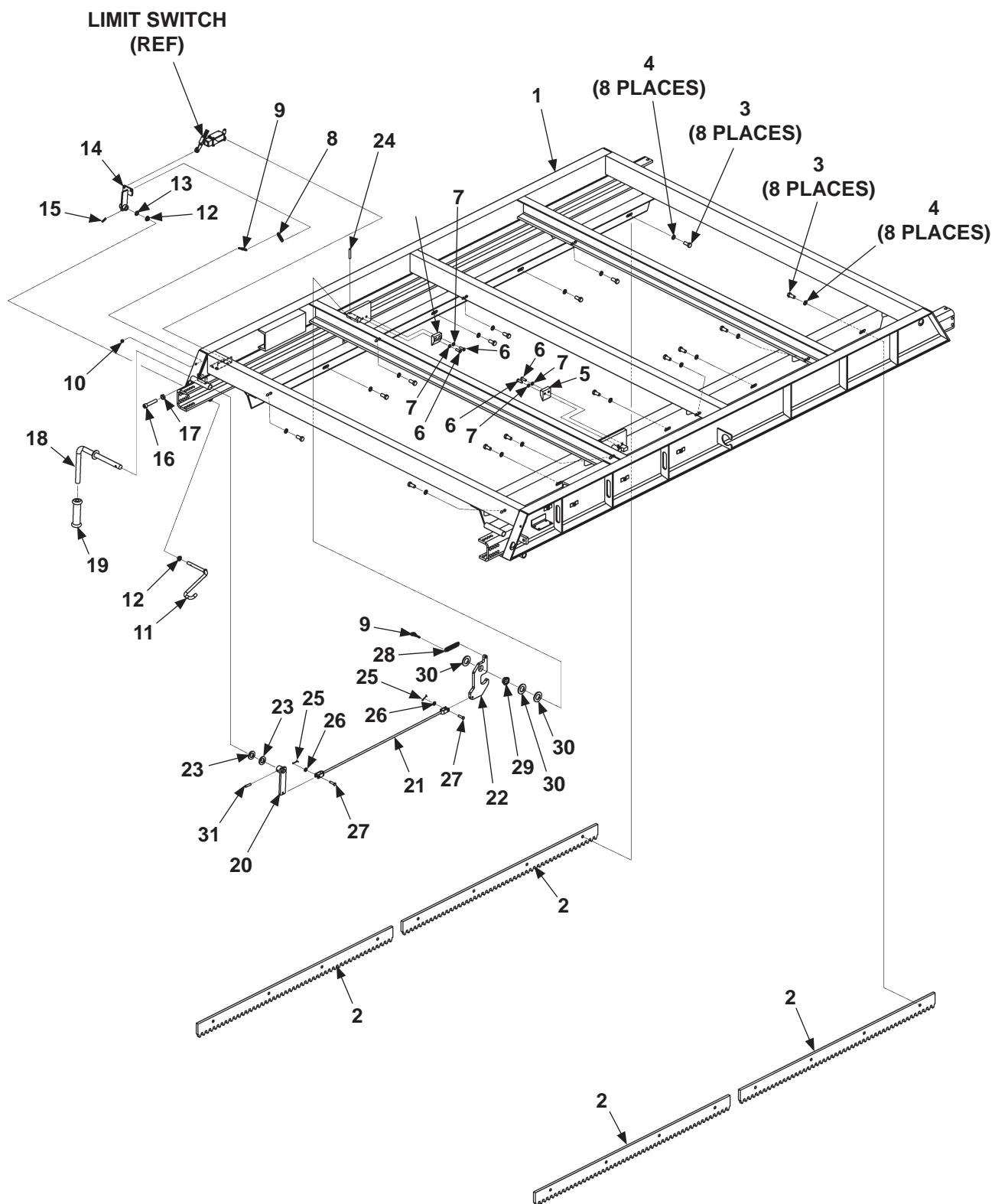
ITEM	QTY.	PART NO.	DESCRIPTION
1	4	283730-04	PIN, 5-1/8" LG.
2	4	905033-1	ROLL PIN, 1/4" X 1-1/2" LG.

## FRAME & SLIDE ASSEMBLY



ITEM	QTY.	PART NO.	DESCRIPTION
<b>1</b>	REF.	284919-01	STOP BUMPER ASSEMBLY
<b>1A</b>	2	284510-02	SLIDING STOP BLOCK, BACK
<b>1B</b>	2	269051-01	ROLLER, 1-1/2" DIA.
<b>1C</b>	2	900719-05	BUTTON SCREW, 1/4"-20 X 3/4" LG.
<b>1D</b>	2	903448-01	NORD-LOCK WASHER, 1/4"/M6
<b>2</b>	16	900769-04	BUTTON SCREW, 3/8"-16 X 7/8" LG.
<b>3</b>	16	902019-5	LOCK WASHER, 3/8"
<b>4</b>	16	903409-03	FENDER WASHER, 13/32" I.D. X .7/8" O.D.
<b>5</b>	2	283730-01	GREASED PIN, 3" LG.
<b>6</b>	4	283730-02	GREASE PIN, 3-3/4" LG.
<b>7</b>	2	283730-03	PIN, 5" LG.
<b>8</b>	2	904717-04	ROLL PIN, 3/8" X 1-1/2" LG.
<b>9</b>	6	905033-1	ROLL PIN, 1/4" X 1-1/2" LG.
<b>10</b>	6	224342	GREASE FITTING, 1/4" SELF DRILLING
<b>11</b>	REF.	284384-01G	PARALLEL ARM ASSEMBLY, GALVANIZED
<b>11A</b>	2	284380-01G	PARALLEL ARM, GALVANIZED
<b>11B</b>	4	284347-01	BEARING, 1" X 3/4" LG.
<b>11C</b>	2	224342	FITTING, GREASE 1/4"SELF DRILL
<b>12</b>	REF.	284356-01G	LIFTFRAME ASSEMBLY 48", GALVANIZED
		284356-02G	LIFTFRAME ASSEMBLY 60", GALVANIZED
		284356-03G	LIFTFRAME ASSEMBLY 82", GALVANIZED
<b>12A</b>	4	284347-01	BEARING, 1" X 3/4" LG.
<b>12B</b>	2	224342	GREASE FITTING, 1/4" SELF DRILLING

## MAIN FRAME ASSEMBLY

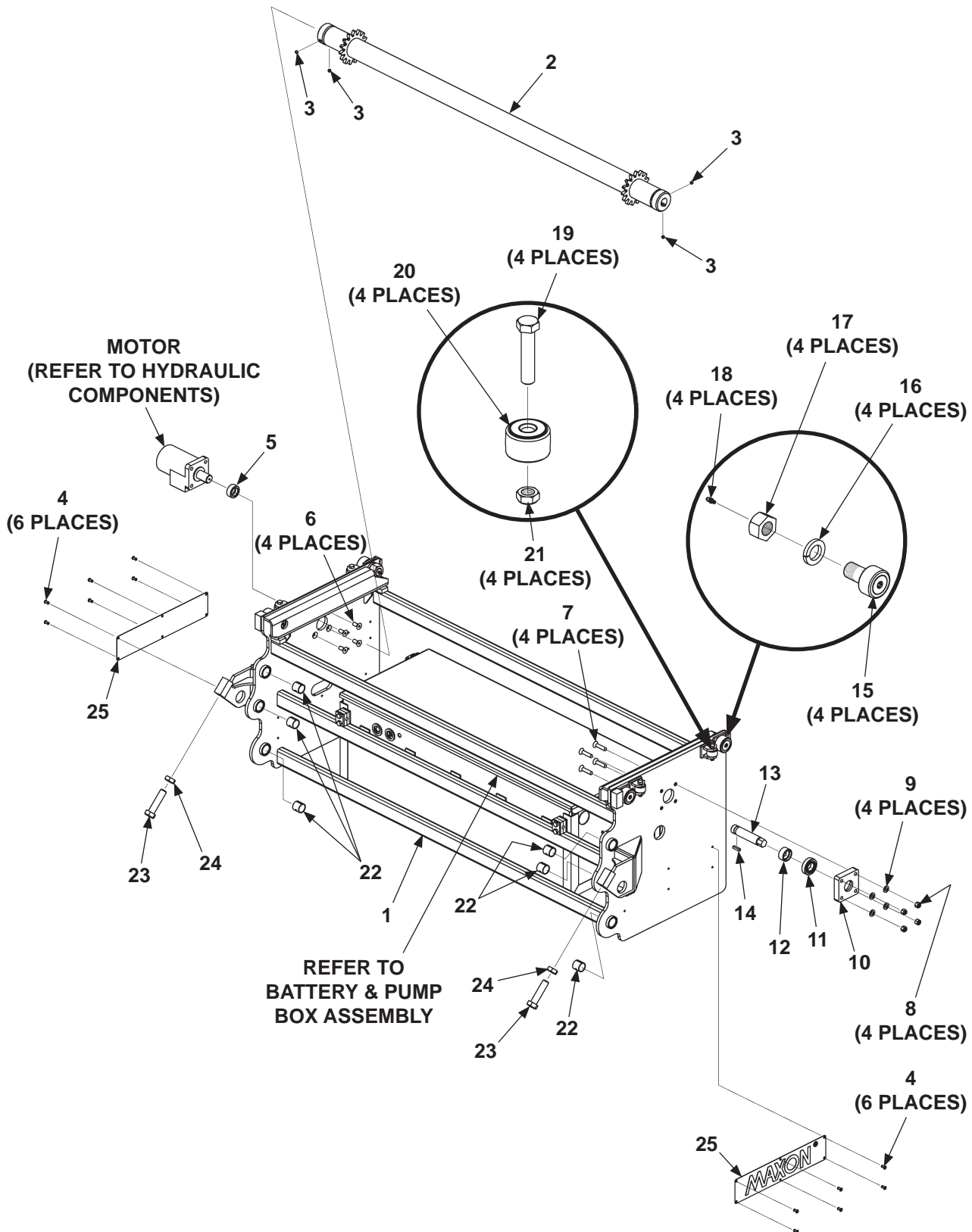


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ITEM	QTY.	PART NO.	DESCRIPTION
1	1	284528-01	MAINFRAME WELDMENT, 48"
		284528-02	MAINFRAME WELDMENT, 60"
		284528-03	MAINFRAME WELDMENT, 82"
2	4	286996-01	TOOTHED RACK
3	16	900764-05	HEX CAP SCREW, 3/8"-16 X 7/8" LG.
4	16	903448-02	NORD-LOCK WASHER, 3/8"/M10
5	2	284539-01	WEAR PAD
6	4	900719-05	BUTTON SCREW, 1/4"-20 X 3/4" LG.
7	4	902019-3	LOCK WASHER, 1/4" I.D. X 1/2" O.D.
8	1	908176-02	EXTENSION SPRING, 3/8" X 2" LG.
9	2	285151-01	EYE BOLT, #10-24
10	1	903129-01	LOCK NUT, #10-24
11	1	284924-01	LEVER ROD WELDMENT
12	2	908062-01	BEARING, SELF LUBE, 3/8" X 1/4" LG.
13	1	902000-10	FLAT WASHER, 3/8" YELLOW
14	1	284925-01	PROTECTOR ARM, LEVER WELDMENT
15	1	904719-06	ROLL PIN, 3/16" X 3/4" LG.
16	1	900065-08	SCREW, 3/8"-16
17	1	903107-02	HEX NUT, 3/8"-16
18	1	285369-02	ROD HANDLE WELDMENT
19	1	055011	HANDLE
20	1	285367-02	HANDLE LEVER WELDMENT
21	1	285370-02	LINK BAR WELDMENT
22	1	285368-02	LATCH HOOK
23	2	903434-13	FLAT WASHER, M16
24	1	905033-1	ROLL PIN 1/4" X 1-1/2" LG.
25	2	904725-01	COTTER PIN, 1/16" X 1/2" LG.
26	2	902000-1	FLAT WASHER, 1/4"
27	2	904724-01	CLEVIS PIN, 1/4" X 7/8" LG.
28	1	215345	EXTENTION SPRING, 2-1/2" LG.
29	1	265072	BEARING, SELF LUBE, 3/4" X 3/8" LG.
30	3	903434-15	FLAT WASHER, M20
31	3	905033	ROLL PIN 1/4" X 1" LG.

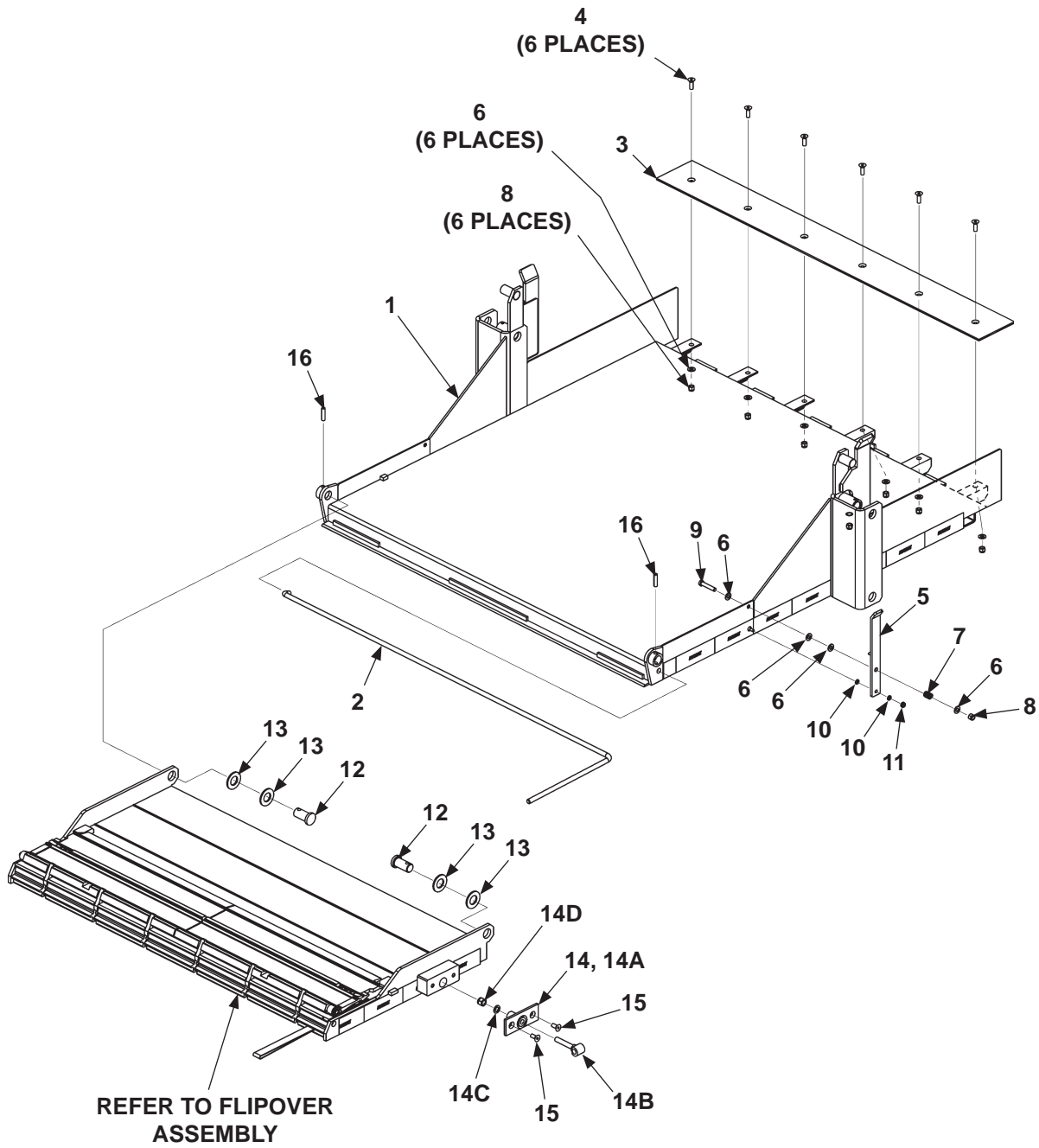
# SLIDER FRAME ASSEMBLY





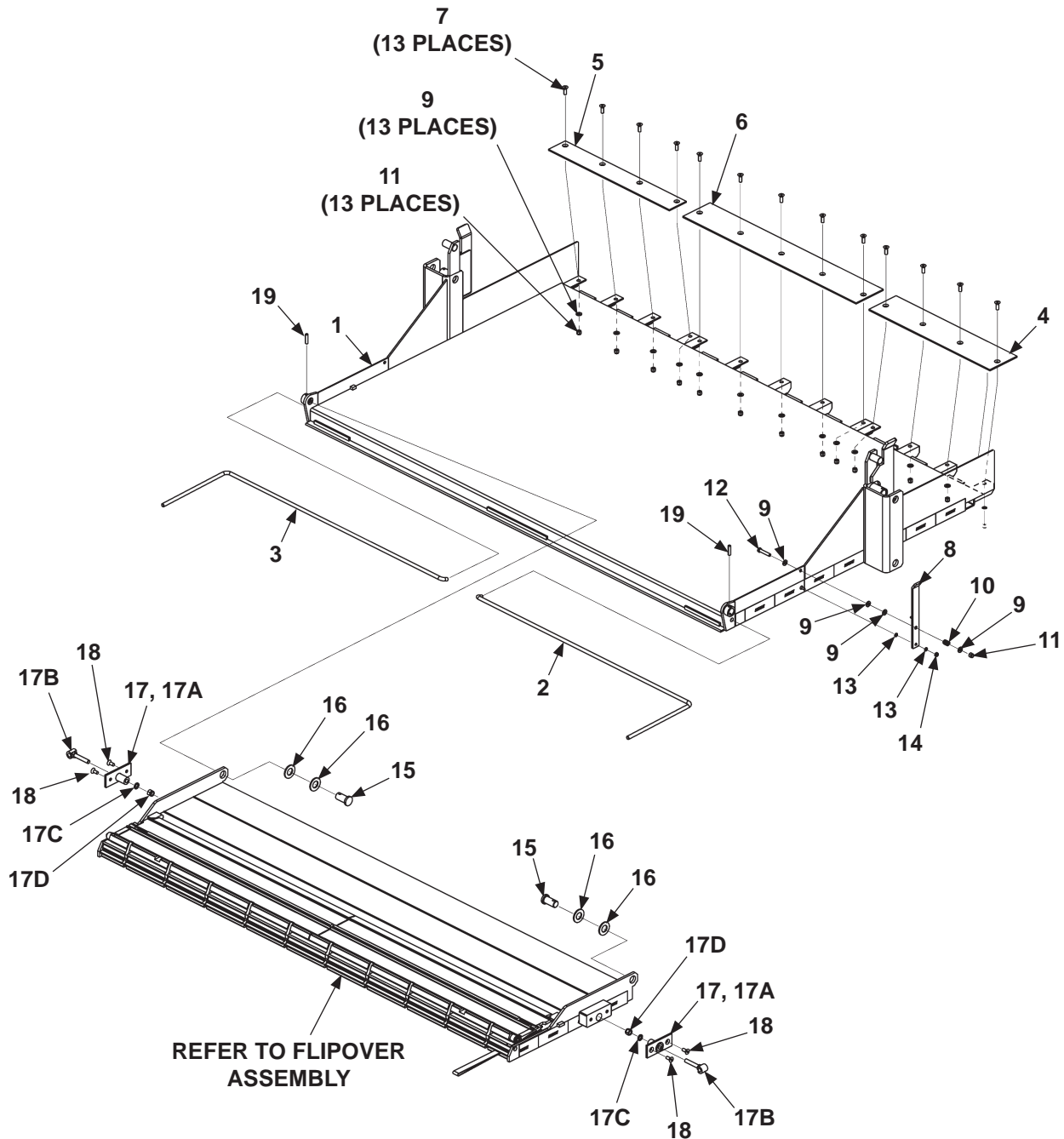
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	284522-01	SLIDER FRAME WELDMENT, 48"
		284522-02	SLIDER FRAME WELDMENT, 60"
		284522-03	SLIDER FRAME WELDMENT, 82"
2	1	284526-01	DRIVE TUBE/ PINION WELDMENT, 56-1/8" LG
		284526-02	DRIVE TUBE/ PINION WELDMENT, 68-1/8" LG
		284526-03	DRIVE TUBE/ PINION WELDMENT, 90-1/8" LG
3	4	903006-2	SET SCREW, 5/16-18 X 1/4" LG.
4	12	904002-1	BLIND RIVET 3/16" X 11/16" LG.
5	1	268561-01	BUSHING, 1-1/2" X 11/16" LG
6	4	900061-4	SCREW, 3/8"-16 X 1" LG.
7	4	900061-7	SCREW, 3/8"-16 X 1-3/4" LG.
8	4	903147-01	LOCK NUT, 3/8-16
9	4	903434-10	FLAT WASHER, M10
10	1	RSM0107	BEARING HOUSING
11	1	268265-01	RADIAL BALL BEARING
12	1	268561-02	BUSHING, 1-1/2" X 3/4" LG
13	1	268294-01	DRIVE SHAFT
14	1	285803-01	BLOCK
15	4	284525-01	ROLLER, CAM FOLLOWER, 1-7/8" X 3-1/16" LG.
16	4	903450-01	LOCK WASHER, 1"
17	4	903143-01	HEX NUT, 1"-14
18	4	268264-02	GREASE FITTING, 3/16" X 1/2" LG.
19	4	900764-12	HEX CAP SCREW, 3/8"-16 X 1-3/4" LG.
20	4	201966	ROLLER, 1-1/4"
21	4	903152-01	LOCK NUT, 3/8"-16
22	6	284347-02	BEARING, 1" I.D. X 1" LG.
23	2	900032-4	HEX SCREW, 3/4"-10 X 3" LG.
24	2	251288	LOCK NUT, 3/4"-10
25	2	050175	MAXON PLATE

## PLATFORM & FLIPOVER ASSEMBLY (WITH RETENTION RAMP AND SINGLE TORSION BAR)



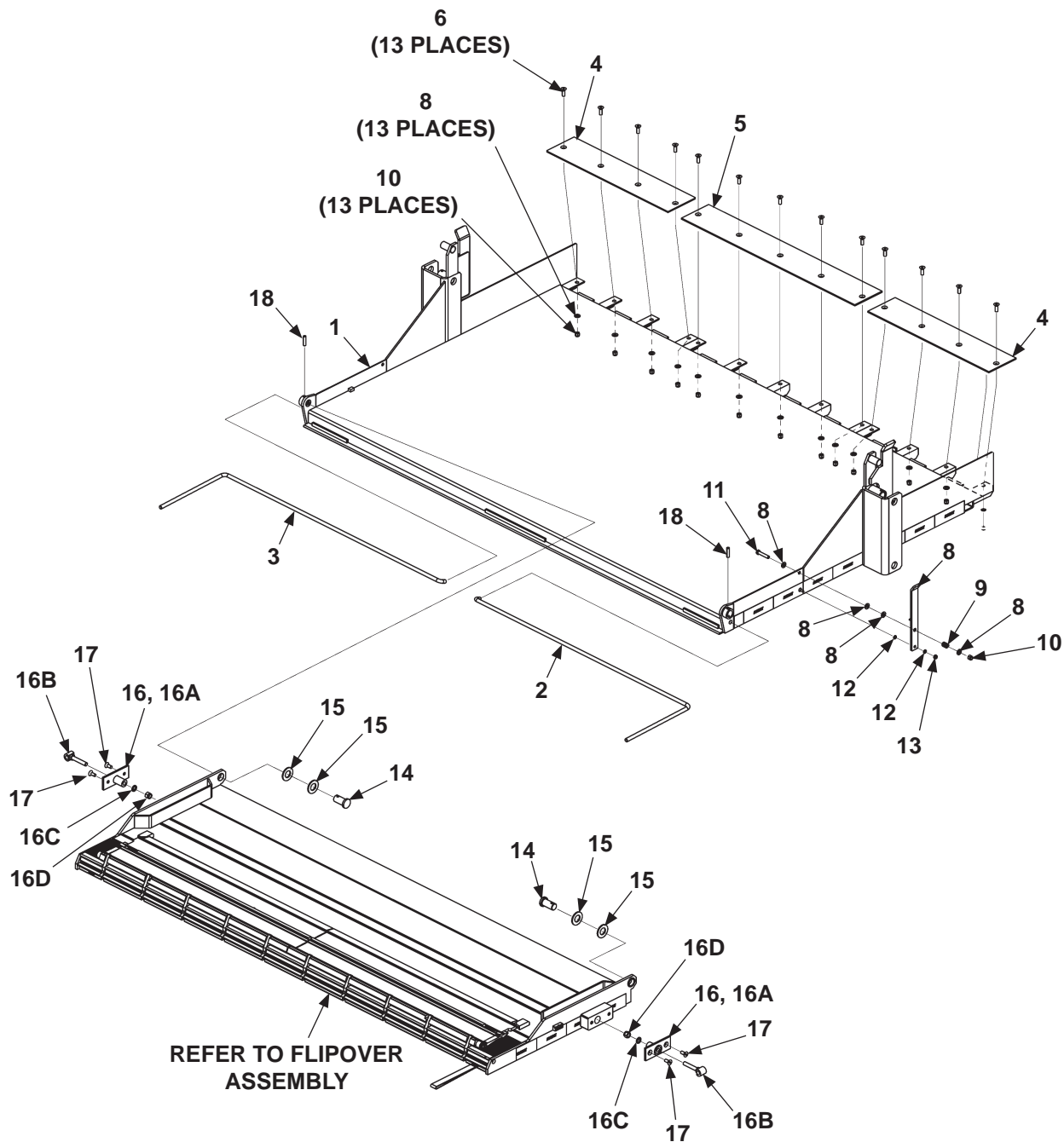
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	286598-01	PLATFORM WELDMENT, 48"
		286598-02	PLATFORM WELDMENT, 60"
2	1	286445-02	TORSION BAR
3	1	287520-08	PLATFORM PLATE, 50" LG.
		287520-09	PLATFORM PLATE, 62" LG.
4	10	900061-5	FLATHEAD SCREW, 3/8"-16 X 1-1/4" LG.
5	1	281862-02	LATCH HANDLE WELDMENT
6	16	902000-10	FLAT WASHER, 3/8"
7	1	262624	COMPRESSION SPRING, 5/8" X 3/4" LG.
8	7	901002	LOCK NUT, 3/8"-16
9	1	900014-10	HEX CAP SCREW, 3/8"-16 X 2-1/2" LG. GR8
10	2	902000-1	FLAT WASHER, 1/4"
11	1	901016-2	HEX NUT, THIN 1/4"-20
12	2	284405-01	PIN RIVET, 2" LG.
13	4	903443-15	FLAT WASHER, 1"
14	REF.	285595-02	TORSION BAR BRACKET ASSEMBLY
14A	1	285594-02	TORSION BAR BRACKET WELDMENT
14B	1	267206-01	ANCHOR BOLT WELDMENT
14C	1	902000-14	FLAT WASHER, 1/2"
14D	1	901010	LOCK NUT, 1/2"-13
15	2	900061-4	FLATHEAD SCREW, 3/8"-16 X 1" LG.
16	2	904717-04	ROLL PIN, 3/8" X 1-1/2" LG.

## PLATFORM & FLIPOVER ASSEMBLY (WITH RETENTION RAMP AND DUAL TORSION BARS)



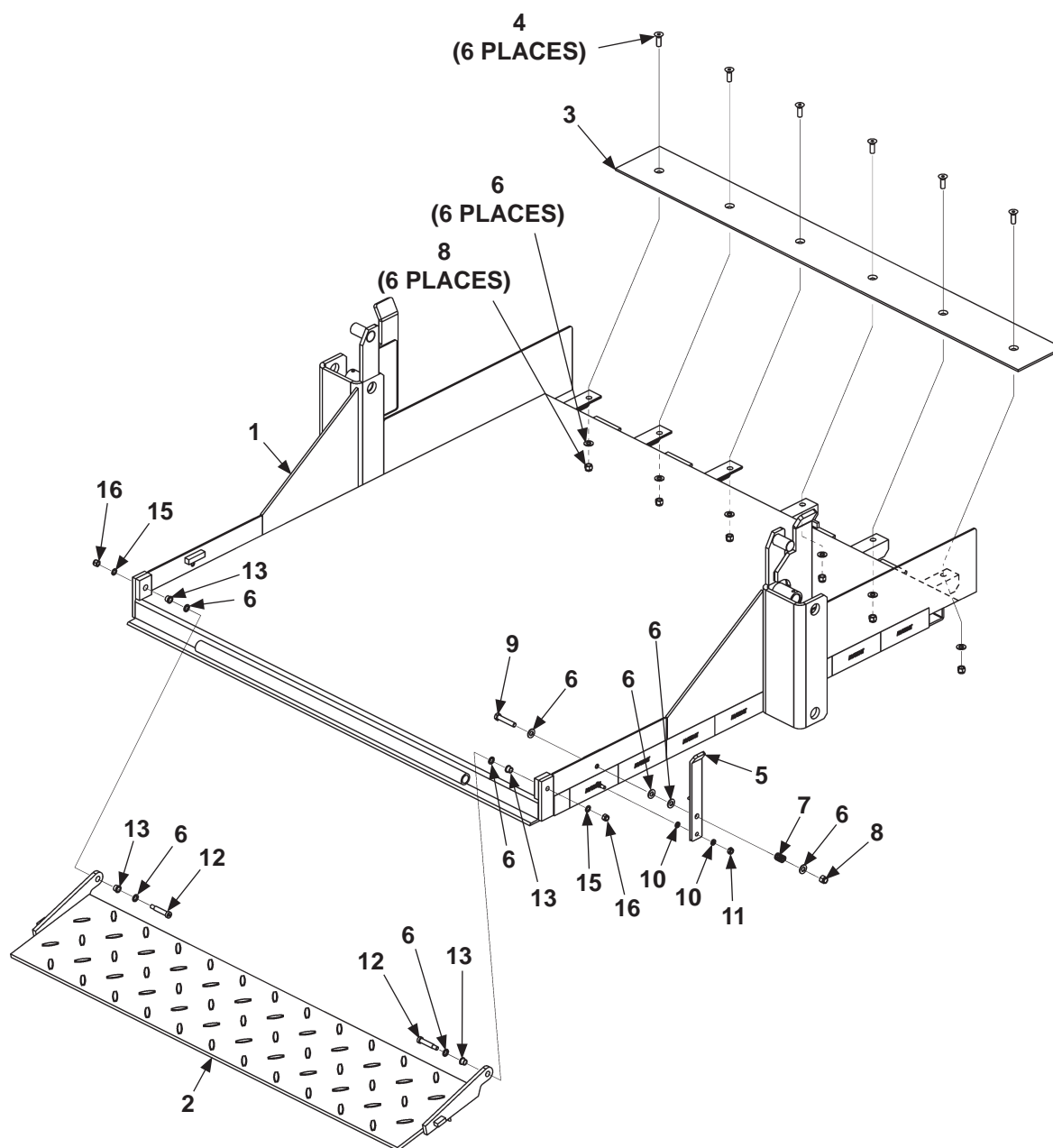
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	286598-03	PLATFORM WELDMENT, 82" LG.
2	1	286445-01	TORSION BAR, LH
3	1	286445-03	TORSION BAR, RH
4	1	287520-06	PLATFORM PLATE, 24-7/16" LG.
5	1	287520-04	PLATFORM PLATE, 24-7/16" LG. CUT
6	1	287520-07	PLATFORM PLATE, 35"
7	13	900061-5	FLATHEAD SCREW, 3/8"-16 X 1-1/4" LG.
8	1	281862-02	LATCH HANDLE WELDMENT
9	17	902000-10	FLAT WASHER, 3/8"
10	1	262624	COMPRESSION SPRING, 5/8" X 3/4" LG.
11	14	901002	LOCK NUT, 3/8"-16
12	1	900014-10	HEX CAP SCREW, 3/8"-16 X 2-1/2" LG. GR8
13	2	902000-1	FLAT WASHER, 1/4"
14	1	901016-2	HEX NUT, THIN 1/4"-20
15	2	284405-01	PIN RIVET, 2" LG.
16	4	903443-15	FLAT WASHER, 1"
17	REF.	285595-02	TORSION BAR BRACKET ASSEMBLY
17A	2	285594-02	TORSION BAR BRACKET WELDMENT
17B	2	267206-01	ANCHOR BOLT WELDMENT
17C	2	902000-14	FLAT WASHER, 1/2"
17D	2	901010	LOCK NUT, 1/2"-13
18	4	900061-4	FLATHEAD SCREW, 3/8"-16 X 1" LG.
19	2	904717-04	ROLL PIN, 3/8" X 1-1/2" LG.

# **PLATFORM & FLIPOVER ASSEMBLY (WITH BARRIER, RETENTION RAMP WITH AND DUAL TORSION BARS)**



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	286598-03	PLATFORM WELDMENT, 82" LG.
2	1	286445-01	TORSION BAR, LH
3	1	286445-03	TORSION BAR, RH
4	2	287520-06	PLATFORM PLATE, 24-7/16" LG.
5	1	287520-07	PLATFORM PLATE, 35"
6	13	900061-5	FLATHEAD SCREW, 3/8"-16 X 1-1/4" LG.
7	1	281862-02	LATCH HANDLE WELDMENT
8	17	902000-10	FLAT WASHER, 3/8"
9	1	262624	COMPRESSION SPRING, 5/8" X 3/4" LG.
10	14	901002	LOCK NUT, 3/8"-16
11	1	900014-10	HEX CAP SCREW, 3/8"-16 X 2-1/2" LG. GR8
12	2	902000-1	FLAT WASHER, 1/4"
13	1	901016-2	HEX NUT, THIN 1/4"-20
14	2	284405-01	PIN RIVET, 2" LG.
15	4	903443-15	FLAT WASHER, 1"
16	REF.	285595-02	TORSION BAR BRACKET ASSEMBLY
16A	2	285594-02	TORSION BAR BRACKET WELDMENT
16B	2	267206-01	ANCHOR BOLT WELDMENT
16C	2	902000-14	FLAT WASHER, 1/2"
16D	2	901010	LOCK NUT, 1/2"-13
17	4	900061-4	FLATHEAD SCREW, 3/8"-16 X 1" LG.
18	2	904717-04	ROLL PIN, 3/8" X 1-1/2" LG.

# **PLATFORM & RAMP ASSEMBLY** **(48" AND 60" PLATFORMS WITH FLIP RAMP)**



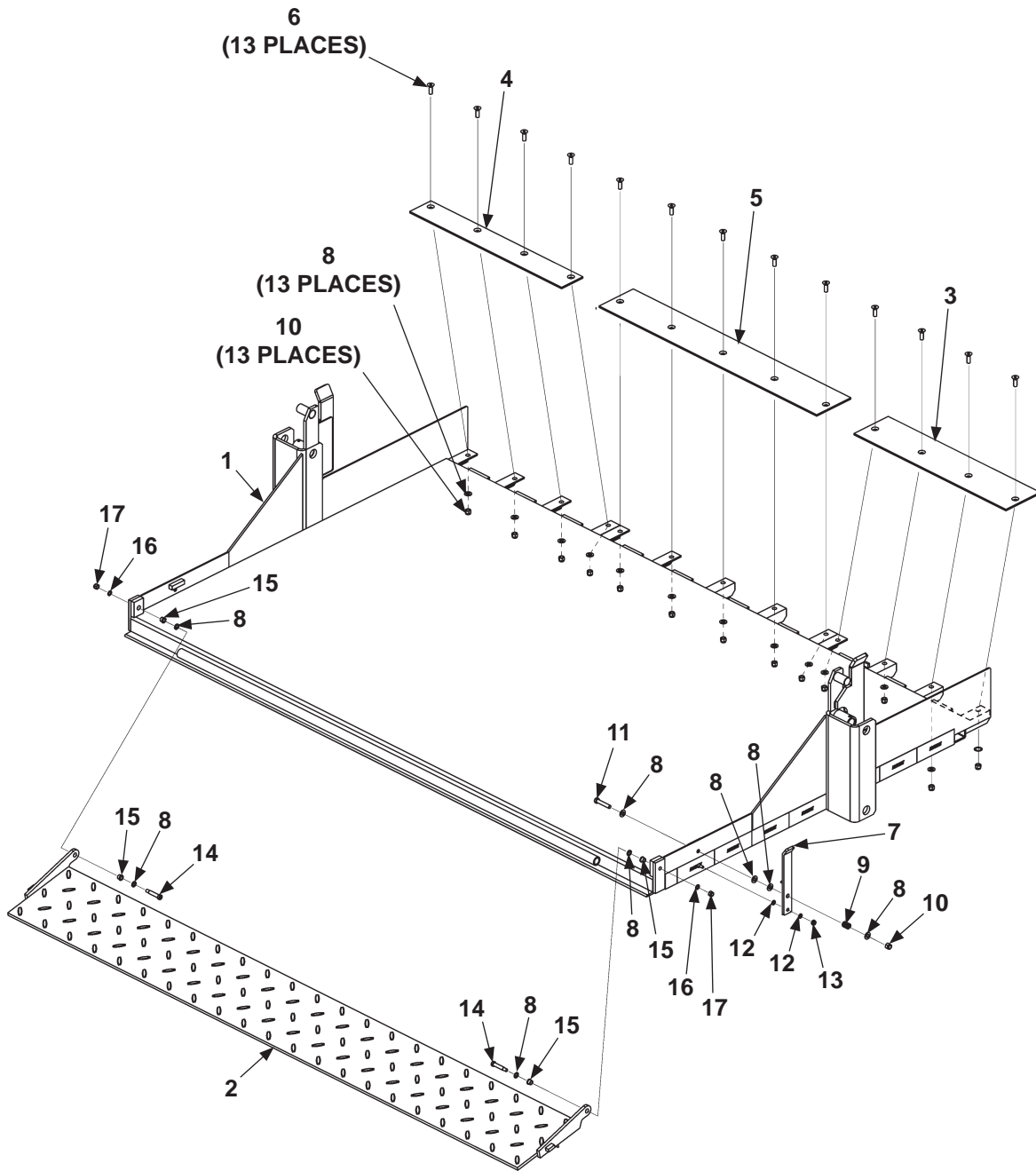
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ITEM	QTY.	PART NO.	DESCRIPTION
1	1	287156-01	PLATFORM WELDMENT, 48" LG.
		287156-02	PLATFORM WELDMENT, 60" LG.
2	1	285158-01	ALUMINUM RAMP, 48-1/16" LG.
		285158-02	ALUMINUM RAMP, 60-1/16" LG.
3	1	287520-08	PLATFORM PLATE, 50" LG.
		287520-09	PLATFORM PLATE, 62" LG.
4	12	900061-5	FLATHEAD SCREW, 3/8"-16 X 1-1/4" LG.
5	1	281862-01	LATCH HANDLE WELDMENT
6	10	902000-10	FLAT WASHER, 3/8"
7	1	262624	COMPRESSION SPRING, 5/8" X 3/4" LG.
8	7	901002	LOCK NUT, 3/8"-16
9	1	900014-8	HEX CAP SCREW, 3/8"-16 X 2" LG. GR8
10	2	902000-1	FLAT WASHER, 1/4"
11	6	901016-2	HEX NUT, THIN 1/4"-20
12	2	900723-08	SHOULDER SCREW, 3/8" X 1-1/2" LG.
13	4	905343-01	FLANGED SLEEVE BEARING, 1/2" O.D. X 3/8" I.D. X 3/8" LG.
15	2	902000-7	FLAT WASHER, 5/16"
16	2	901001	LOCK NUT, 5/16"-18

# **PLATFORM & RAMP ASSEMBLY (82" PLATFORM WITH FLIP RAMP)**

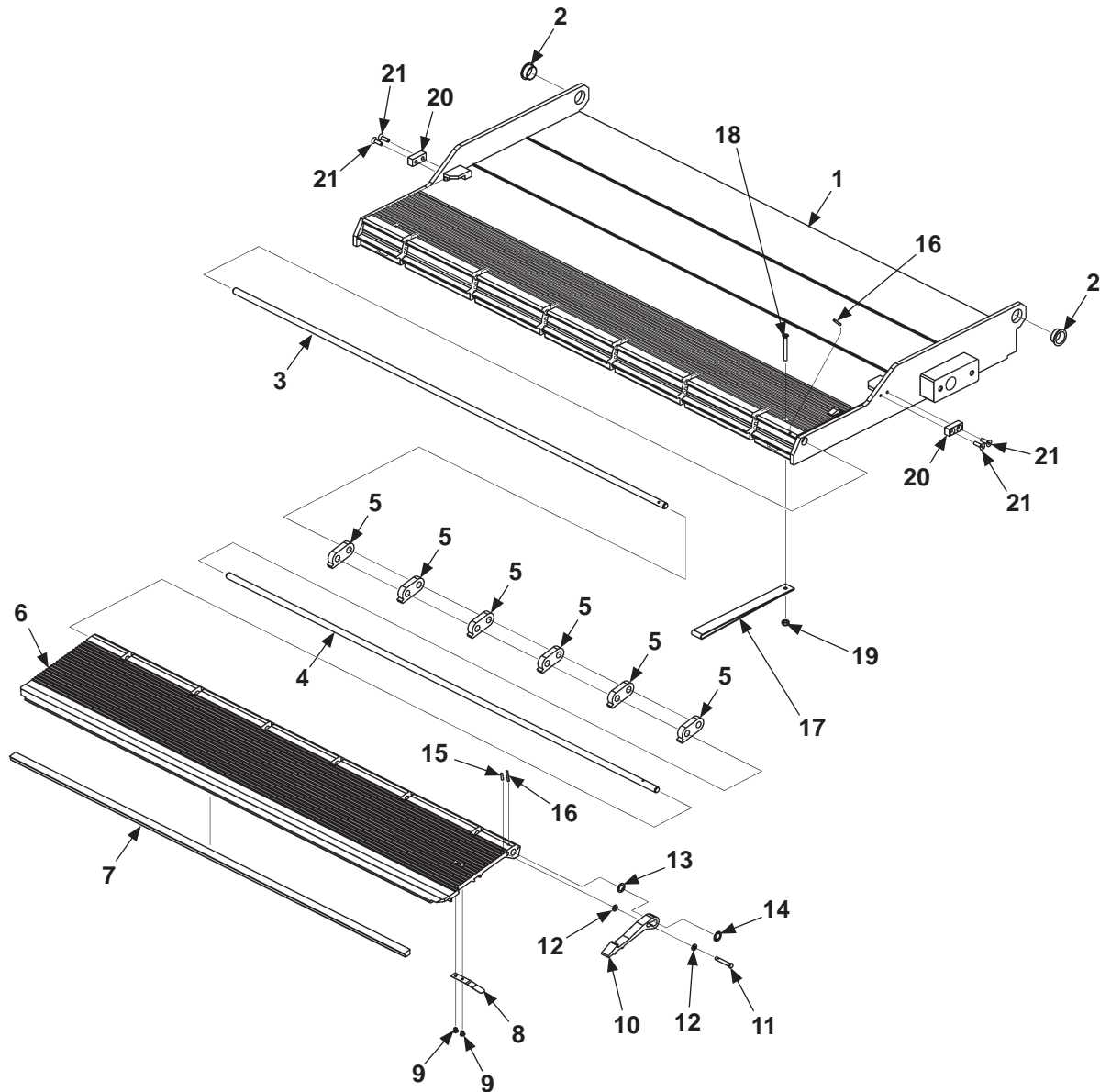


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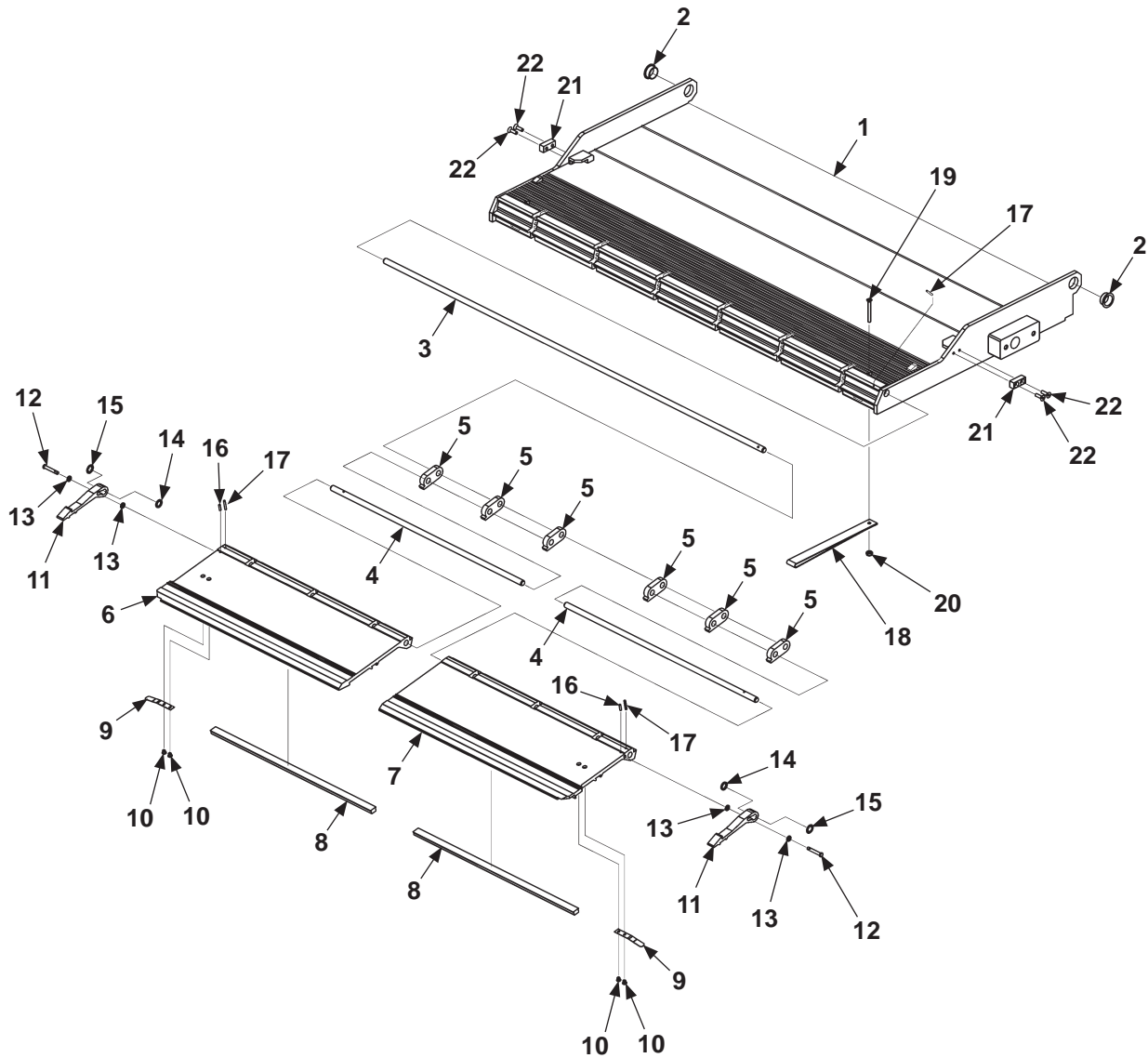
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	287156-03	PLATFORM WELDMENT, 82"
2	1	285158-03	ALUMINUM RAMP, 82-1/16" LG.
3	1	287520-06	PLATFORM PLATE, 24-7/16" LG.
4	1	287520-04	PLATFORM PLATE, 24-7/16" LG. CUT
5	1	287520-07	PLATFORM PLATE, 35"
6	13	900061-5	FLATHEAD SCREW, 3/8"-16 X 1-1/4" LG.
7	1	281862-01	LATCH HANDLE WELDMENT
8	17	902000-10	FLAT WASHER, 3/8"
9	1	262624	COMPRESSION SPRING, 5/8" X 3/4" LG.
10	14	901002	LOCK NUT, 3/8"-16
11	1	900014-8	HEX CAP SCREW, 3/8"-16 X 2" LG. GR8
12	2	902000-1	FLAT WASHER, 1/4"
13	1	901016-2	HEX NUT, THIN 1/4"-20
14	2	900723-08	SHOULDER SCREW, 3/8" X 1-1/2" LG.
15	4	905343-01	FLANGED SLEEVE BEARING, 1/2" O.D. X 3/8" I.D. X 3/8" LG.
16	2	902000-7	FLAT WASHER, 5/16"
17	2	901001	LOCK NUT, 5/16"-18

## FLIPOVER ASSEMBLY (SINGLE RETENTION RAMP)



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	285951-09	FLIPOVER WELDMENT, 24" X 48-1/2" LG. (SINGLE RR)
		285951-08	FLIPOVER WELDMENT, 24" X 60-1/2" LG. (SINGLE RR)
		285951-07	FLIPOVER WELDMENT, 24" X 82-1/2" LG. (SINGLE RR)
2	2	261837-01	FLANGED BUSHING, 1" I.D. X 1/2" LG.
3	1	267045-14	HINGE ROD, 1/2" X 48-1/4" LG.
		267045-12	HINGE ROD, 1/2" X 60-1/4" LG.
		267045-10	HINGE ROD, 1/2" X 82-1/4" LG.
4	1	267045-27	HINGE ROD, 1/2" X 48-1/16" LG.
		267045-26	HINGE ROD, 1/2" X 60-1/16" LG..
		267045-25	HINGE ROD, 1/2" X 82-1/16" LG.
5	6	311022-10	HINGE, 1/2" LG. (FOR 48-1/2" FLIPOVER)
	8		HINGE, 1/2" LG. (FOR 60-1/2" FLIPOVER)
	10		HINGE, 1/2" LG. (FOR 82-1/2" FLIPOVER)
6	1	267041-24	RETENTION RAMP, 47-3/8" LG.
		267041-23	RETENTION RAMP, 59-3/8" LG.
		267041-22	RETENTION RAMP, 81-3/8" LG.
7	1	905318-16	BUMPER, 9/16" X 44-1/8" LG.
		905318-15	BUMPER, 9/16" X 56-1/8" LG.
		905318-14	BUMPER, 9/16" X 78-1/8" LG.
8	1	267326-01	HOOKE SPRING
9	2	904005-1	BLIND RIVET, 3/16" X 7/16" LG.
10	1	311038-11	HOOKE
11	1	283951-01	CLEVIS PIN, 1/4" X 1-5/8" LG.
12	2	903421-02	NYLON WASHER, 1/4"
13	1	903413-02	NYLON WASHER, 1/2"
14	1	903420-01	RETAINING RING, 1/2"
15	1	905007-03	ROLL PIN, 5/32" X 5/8" LG.
16	2	905007-07	ROLL PIN, 5/32" X 1" LG.
17	1	908095-02	STRAP HANDLE
18	1	900715-15	SCREW, 1/4"-20 X 2-1/4" LG.
19	1	901016-2	HEX NUT, 1/4"-20
20	2	287473-01	STOP LATCH
21	4	900711-04	SCREW, 1/4"-20 X 7/8" LG.

## FLIPOVER ASSEMBLY (DUAL RETENTION RAMP)



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ITEM	QTY.	PART NO.	DESCRIPTION
1	1	285951-06	FLIPOVER WELDMENT, 24" X 48-1/2" LG.
		285951-05	FLIPOVER WELDMENT, 24" X 60-1/2" LG.
		285951-04	FLIPOVER WELDMENT, 24" X 82-1/2" LG.
		285951-04	FLIPOVER WELDMENT, 24" X 82-1/2" LG. (WITH BARRIER)
2	2	261837-01	FLANGED BUSHING, 1" I.D. X 1/2" LG.
3	1	267045-14	ROD, HINGE .50 DIA X 48.25"LG
		267045-12	ROD, HINGE .50 DIA X 60.25"LG
		267045-10	ROD, HINGE .50 DIA X 82.25"LG
4	2	267045-15	ROD, HINGE .50 DIA X 24-5/16" LG.
		267045-13	ROD, HINGE .50 DIA X 30-5/16" LG.
		267045-11	ROD, HINGE .50 DIA X 41-5/16" LG.
		267045-28	ROD, HINGE .50 DIA X 38-3/4" LG. (WITH BARRIER)
5	6	311022-10	HINGE, 1/2" LG. (FOR 48-1/2" FLIPOVER)
	8		HINGE, 1/2" LG. (FOR 60-1/2" FLIPOVER)
	10		HINGE, 1/2" LG. (FOR 82-1/2" FLIPOVER)
6	1	267041-11	RETENTION RAMP, DUAL LH, 23-5/8" LG.
		267041-09	RETENTION RAMP, DUAL LH, 29-5/8" LG.
		267041-07	RETENTION RAMP, DUAL LH, 40-5/8" LG.
		267041-31	RETENTION RAMP, DUAL LH, 38-1/16" LG. (WITH BARRIER)
7	1	267041-12	RETENTION RAMP, DUAL RH, 23-5/8" LG.
		267041-10	RETENTION RAMP, DUAL RH, 29-5/8" LG.
		267041-08	RETENTION RAMP, DUAL RH, 40-5/8" LG.
		267041-32	RETENTION RAMP, DUAL RH, 38-1/16" LG. (WITH BARRIER)
8	2	905318-07	BUMPER, 9/16" X 20-3/8" LG.
		905318-06	BUMPER, 9/16" X 26-3/8" LG.
		905318-05	BUMPER, 9/16" X 37-3/8" LG.
		905318-23	BUMPER, 9/16" X 34-13/16" LG. (WITH BARRIER)
9	2	267326-01	HOOKE SPRING
10	4	904005-1	BLIND RIVET, 3/16" X 7/16" LG.
11	2	311038-11	HOOKE
12	2	283951-01	CLEVIS PIN, 1/4" X 1-5/8" LG.
13	4	903421-02	NYLON WASHER, 1/4"
14	2	903413-02	NYLON WASHER, 1/2"

## FLIPOVER ASSEMBLY (DUAL RETENTION RAMP) -Continued

ITEM	QTY.	PART NO.	DESCRIPTION
15	2	903420-01	RETAINING RING, 1/2"
16	2	905007-03	ROLL PIN, 5/32" X 5/8" LG.
17	3	905007-07	ROLL PIN, 5/32" X 1" LG.
18	1	908095-02	STRAP HANDLE
19	1	900715-15	SCREW, 1/4"-20 X 2-1/4" LG.
20	1	901016-2	HEX NUT, 1/4"-20
21	2	287473-01	STOP LATCH
22	4	900711-04	SCREW, 1/4"-20 X 7/8" LG.

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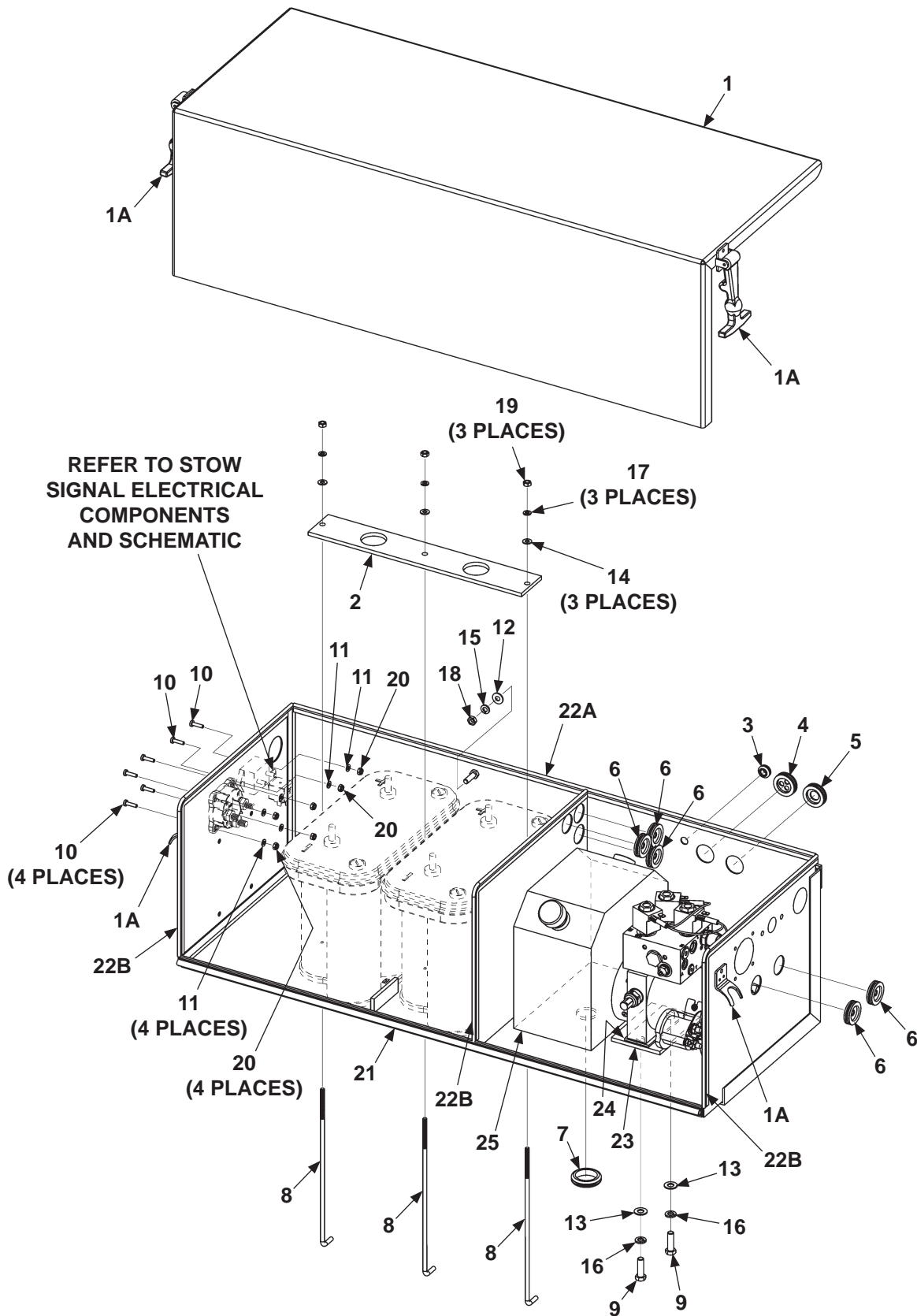


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# BATTERY & PUMP BOX ASSEMBLY (2 BATTERY BOX)

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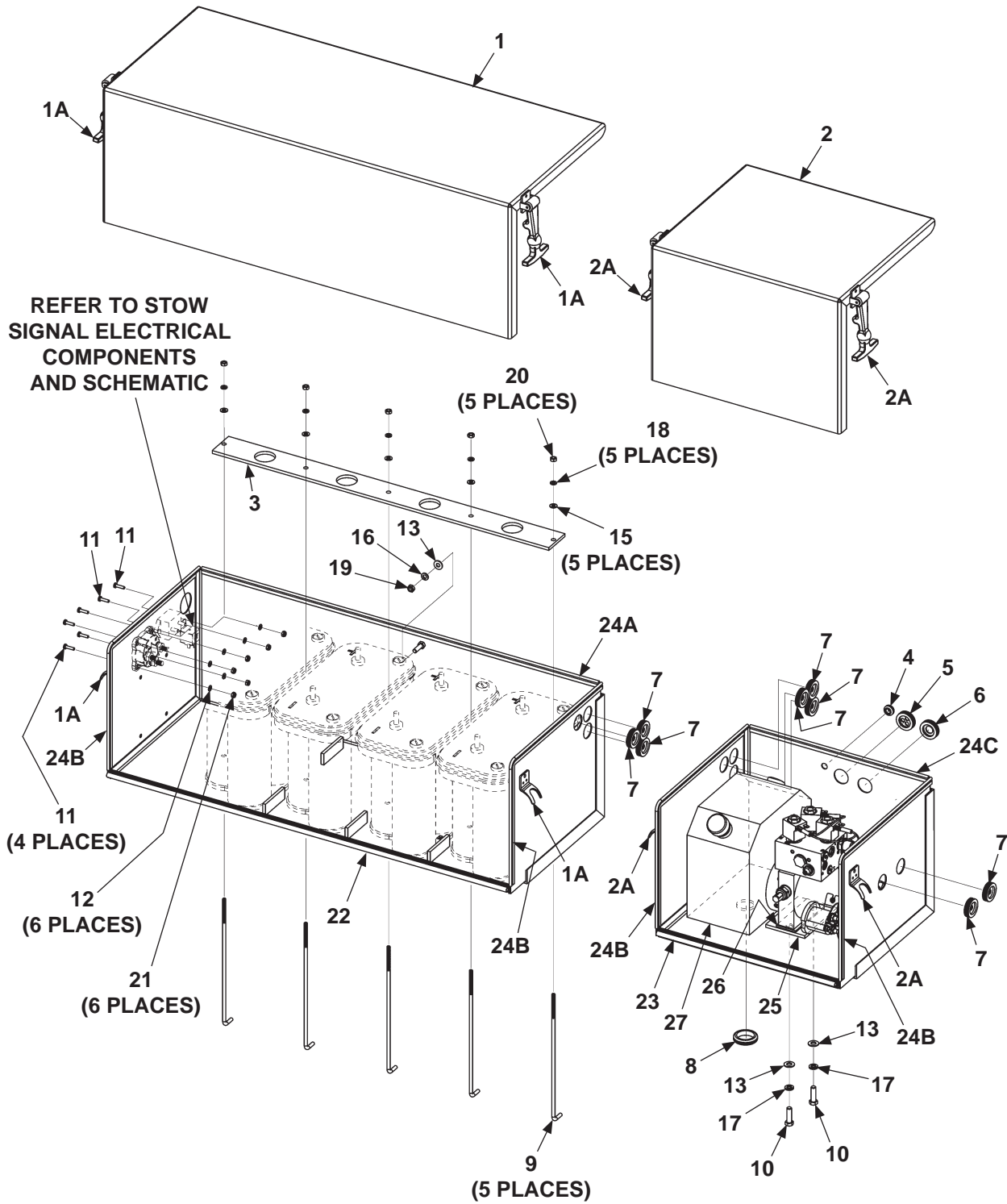


ITEM	QTY.	PART NO.	DESCRIPTION
1	REF.	284343-01	PUMP COVER ASSEMBLY
1A	2	215139-01	CATCH & FASTENER, 5-1/8" LG.
2	1	250479	BATTERY BRACKET, 15-3/8" LG.
3	1	263795	GROMMET, 1/2" O.D, 3/8" I.D. HOLE
4	1	266428-13	GROMMET, 1" I.D, (3) 5/16" HOLES
5	1	266428-07	GROMMET, 1" I.D, (1) 5/8" HOLE
6	5	266428-04	GROMMET, 1" I.D, (1) 3/8" HOLE
7	1	269354	GROMMET, 1-5/8" O.D, 1-3/8" I.D. HOLE
8	3	227722	BATTERY HOLD DOWN ROD, L-SHAPE 1/4" X 11.5" LG.
9	2	900014-5	HEX CAP SCREW, 3/8"-16 X 1-1/4" LG, GR8
10	6	900753-07	PAN HEAD SCREW, #10-24 X 3/4" LG.
11	6	903444-01	FLAT WASHER, #10
12	1	902002-1	FLAT WASHER, 5/16"
13	2	902001-2	FLAT WASHER, 3/8"
14	3	903412-01	FLAT WASHER, 1/4"
15	1	902011-3	LOCK WASHER, 5/16", GR8
16	2	902011-4	LOCK WASHER, 3/8"
17	3	902011-2	LOCK WASHER, 1/4"
18	1	030347	HEX NUT, 5/16"-18
19	3	903107-03	LOCK NUT, 1/4"-20
20	6	901003	LOCK NUT, #10-24
21	1	093203-12	BULB TRIM SEAL, 37-5/8" LG.
22	REF.	093212	EDGE TRIM SEAL, 9.2'
22A	1		EDGE TRIM SEAL, 37.6"
22B	3		EDGE TRIM SEAL, 24"
23	1	269355-01	PUMP SUPPORT PLATE
24	1	269358-01	RUBBER PLATE
25	1	269321-01	PUMP ASSEMBLY, 12V

# BATTERY & PUMP BOX ASSEMBLY (4 BATTERY BOX)

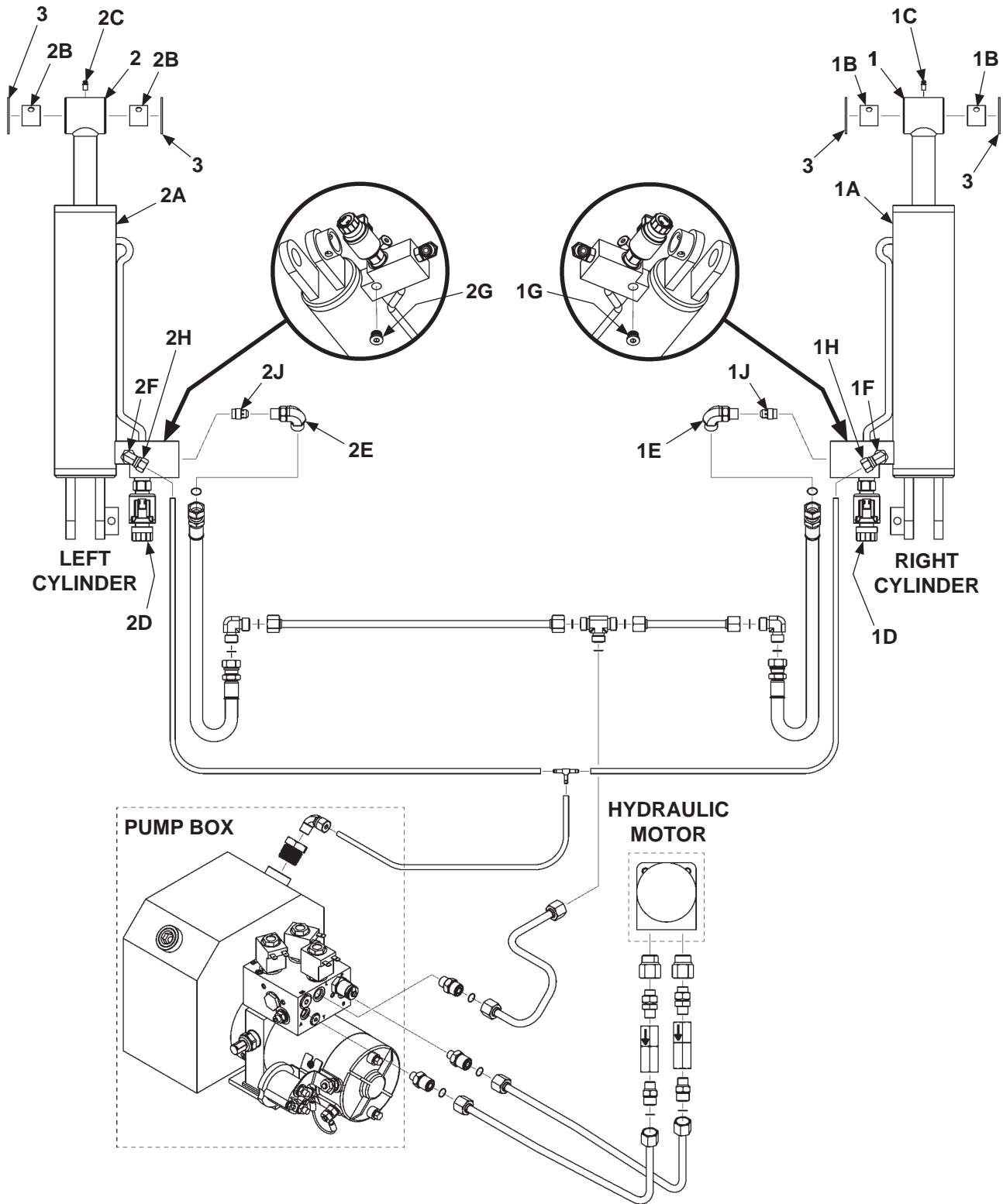
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ITEM	QTY.	PART NO.	DESCRIPTION
1	REF.	284345-03	4 BATTERY COVER ASSEMBLY
1A	2	215139-01	CATCH & FASTENER, 5-1/8" LG.
2	REF.	284343-02	PUMP COVER ASSEMBLY
2A	2	215139-01	CATCH & FASTENER, 5-1/8" LG.
3	1	250479-01	BATTERY BRACKET, 30-1/8" LG.
4	1	263795	GROMMET, 1/2" O.D, 3/8" I.D. HOLE
5	1	266428-13	GROMMET, 1" I.D, (3) 5/16" HOLES
6	1	266428-07	GROMMET, 1" I.D, (1) 5/8" HOLE
7	8	266428-04	GROMMET, 1" I.D, (1) 3/8" HOLE
8	1	269354	GROMMET, 1-5/8" O.D, 1-3/8" I.D. HOLE
9	5	227722	BATTERY HOLD DOWN ROD, L-SHAPE 1/4" X 11.5" LG.
10	2	900014-5	HEX CAP SCREW, 3/8"-16 X 1-1/4" LG, GR8
11	6	900753-07	PAN HEAD SCREW, #10-24 X 3/4" LG.
12	6	903444-01	FLAT WASHER, #10
13	1	902002-1	FLAT WASHER, 5/16"
14	2	902001-2	FLAT WASHER, 3/8"
15	5	903412-01	FLAT WASHER, 1/4"
16	1	902011-3	LOCK WASHER, 5/16", GR8
17	2	902011-4	LOCK WASHER, 3/8"
18	5	902011-2	LOCK WASHER, 1/4"
19	1	030347	HEX NUT, 5/16"-18
20	5	903107-03	LOCK NUT, 1/4"-20
21	6	901003	LOCK NUT, #10-24
22	1	093203-14	BULB TRIM SEAL, 16" LG.
23	1	093203-15	BULB TRIM SEAL, 35-3/4" LG.
24	REF.	093212	EDGE TRIM SEAL, 11-3/8'
24A	1		EDGE TRIM SEAL, 35-5/16"
24B	4		EDGE TRIM SEAL, 24"
24C	2		EDGE TRIM SEAL, 16"
25	1	269355-01	PUMP SUPPORT PLATE
26	1	269358-01	RUBBER PLATE
27	1	269321-01	PUMP ASSEMBLY, 12V

## HYDRAULIC COMPONENTS



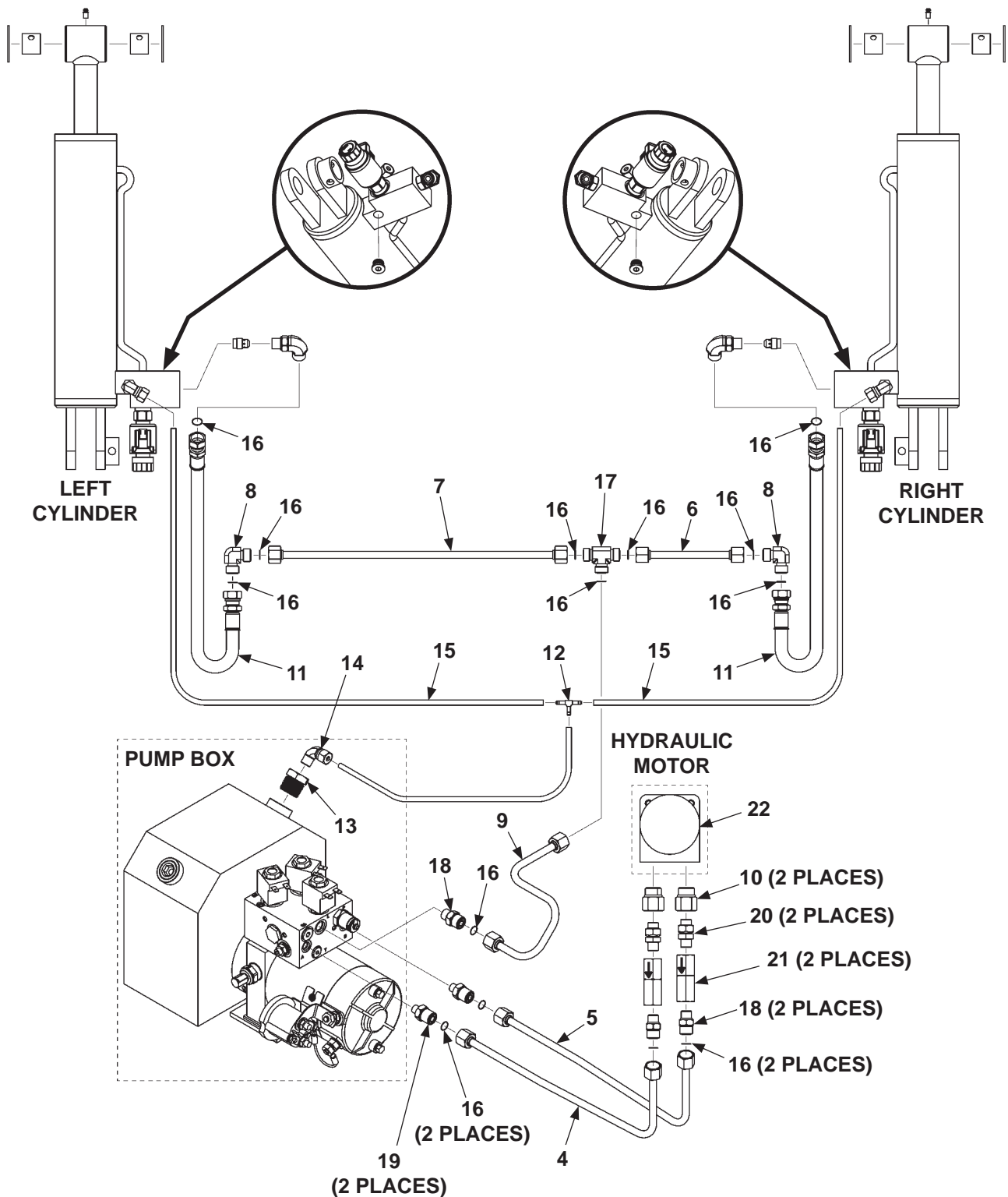
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ITEM	QTY.	PART NO.	DESCRIPTION
REF.	1	284409-01	HYDRAULIC ASSEMBLY KIT, 48" RA
		284409-02	HYDRAULIC ASSEMBLY KIT, 60" RA
		284409-03	HYDRAULIC ASSEMBLY KIT, 82" RA
1	1	284197-01	CYLINDER ASSEMBLY, RH, 3" DIA. (RA-35)
		284197-03	CYLINDER ASSEMBLY, RH, 3-1/2" DIA. (RA-45)
1A	1	284196-01	CYLINDER, 3" DIA. (RA-35)
		284196-02	CYLINDER, 3.5" DIA. (RA-45)
1B	2	284347-02	BEARING, 1" X 1" LG.
1C	1	224342	GREASE FITTING, 1/4"
1D	1	906831-01	VALVE
1E	1	906707-01	ELBOW #6M-M, 3/8" O-RING FACE SEAL
1F	1	228012	ADAPTER, 9/16"-18M-1/4"F
1G	1	284859-01	CYLINDER PLUG
1H	1	202406	ELBOW BRASS, 1/4" X 1/4"
1J	1	906717-02	FLOW CONTROL VALVE
2	1	284196-01	CYLINDER ASSEMBLY, LH, 3" DIA. (RA-35)
		284197-04	CYLINDER ASSEMBLY, LH, 3-1/2" DIA. (RA-45)
2A	1	284196-01	CYLINDER, 3" DIA. (RA-35)
		284196-02	CYLINDER, 3.5" DIA. (RA-45)
2B	2	284347-02	BEARING, 1" X 1" LG.
2C	1	224342	GREASE FITTING, 1/4"
2D	1	906831-01	VALVE
2E	1	906707-01	ELBOW #6M-M, 3/8" O-RING FACE SEAL
2F	1	228012	ADAPTER, 9/16"-18M-1/4"F
2G	1	284859-01	CYLINDER PLUG
2H	1	202406	ELBOW BRASS, 1/4" X 1/4"
2J	1	906717-02	FLOW CONTROL VALVE
3	4	903443-15	FLAT WASHER, 1"

## HYDRAULIC COMPONENTS - Continued

**NOTE:** Replacement face seal fittings come with required O-rings.



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## CAUTION

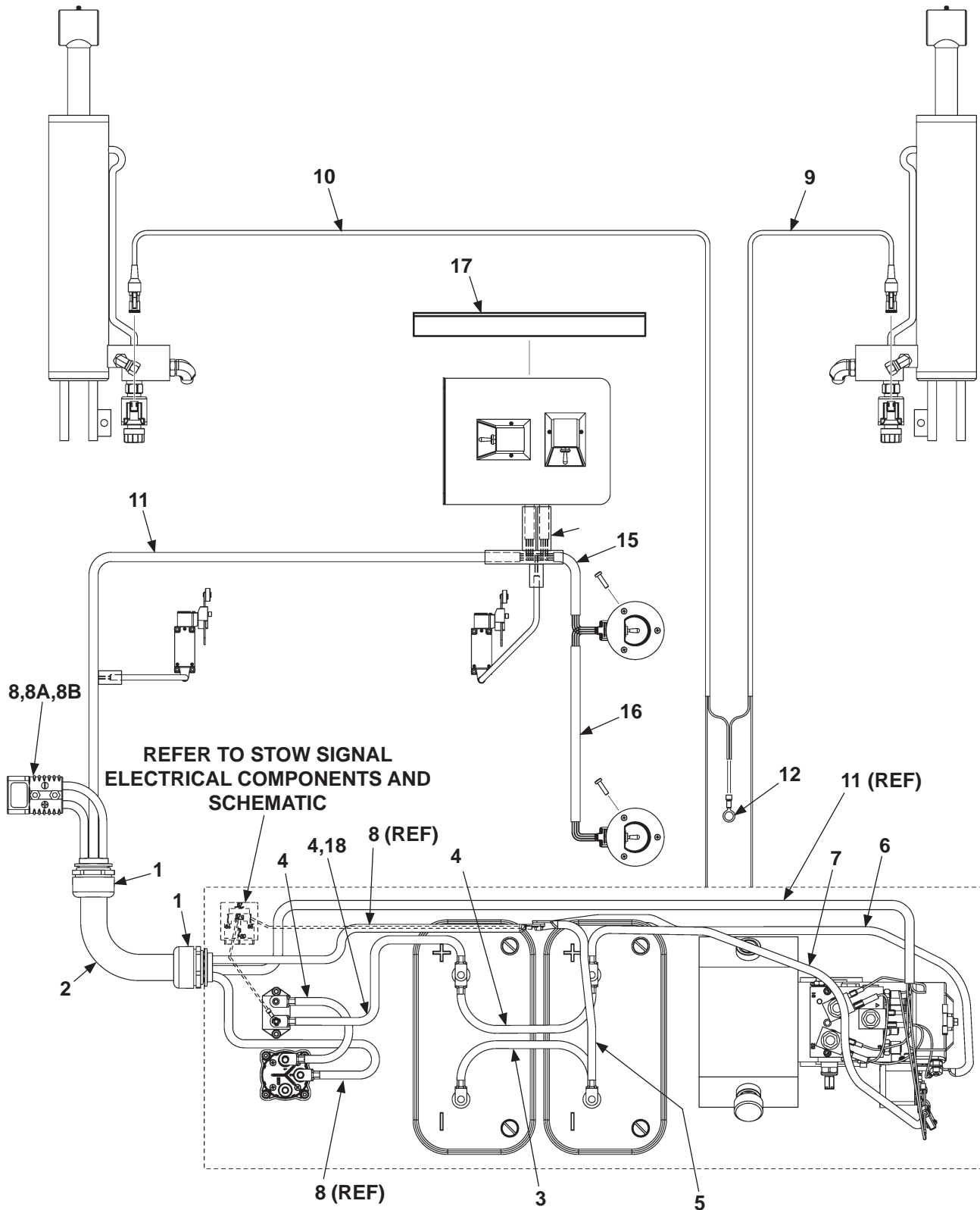
**To prevent hydraulic lock from being damaged, torque replacement valve cartridge to 25 lbs.-ft. & coil nut to 4-6 lbs.-ft.**

ITEM	QTY.	PART NO.	DESCRIPTION
4	1	284412-01	IN/OUT TUBE ASSEMBLY, 16-1/8" LG.
		284412-02	IN/OUT TUBE ASSEMBLY, 22-1/8" LG.
		284412-03	IN/OUT TUBE ASSEMBLY, 21-3/4" LG.
5	1	284392-01	IN/OUT TUBE ASSEMBLY, 16-1/8" LG.
		284392-02	IN/OUT TUBE ASSEMBLY, 22-1/8" LG.
		284392-03	IN/OUT TUBE ASSEMBLY, 21-3/4" LG.
6	1	284417-01	TUBE ASSEMBLY, 48", LH
		284417-02	TUBE ASSEMBLY, 60", LH
		284417-03	TUBE ASSEMBLY, 82", LH
7	1	284417-04	TUBE ASSEMBLY, 48", RH
		284417-05	TUBE ASSEMBLY, 60", RH
		284417-06	TUBE ASSEMBLY, 82", RH
8	2	906829-01	UNION, ELBOW, FACE SEAL, #6M-#6M, 90°
9	1	284414-01	TUBE TEE ASSEMBLY
10	2	906812-01	REDUCER STRAIGHT THREAD
11	2	284418-01	HOSE ASSEMBLY, 3/8", SAE #6 F-F, 28" LG.
12	1	906749-01	UNION TEE, 1/4"
13	1	906900-01	ADAPTER, 3/4"-14M X 1/4"F
14	1	202406	ELBOW, 1/4" X 1/4", BRASS
15	1	224370	PLASTIC HOSE, 108" LG.
			PLASTIC HOSE, 120" LG.
			PLASTIC HOSE, 144" LG.
16	14	906712-02	O-RING, #6 (3/8" FACE SEAL TUBE-END)
17	1	905150	UNION, TEE, FACE SEAL, 3/8" M, 6-JLO
18	3	905173	CONNECTOR, FACE SEAL #6 & O-RING #6, M-M
19	2	906759-01	CONNECTOR, FACE SEAL #6, O-RING #4, M-M
20	2	906786-01	UNION, STRAIGHT, O-RING #6, M-M
21	2	906709-07	VALVE, FLOW REGULATOR, #6, 1.25 GAL/MIN
22	1	268272-03	MOTOR, HYDRAULIC

## ELECTRICAL COMPONENTS (2 BATTERY BOX)

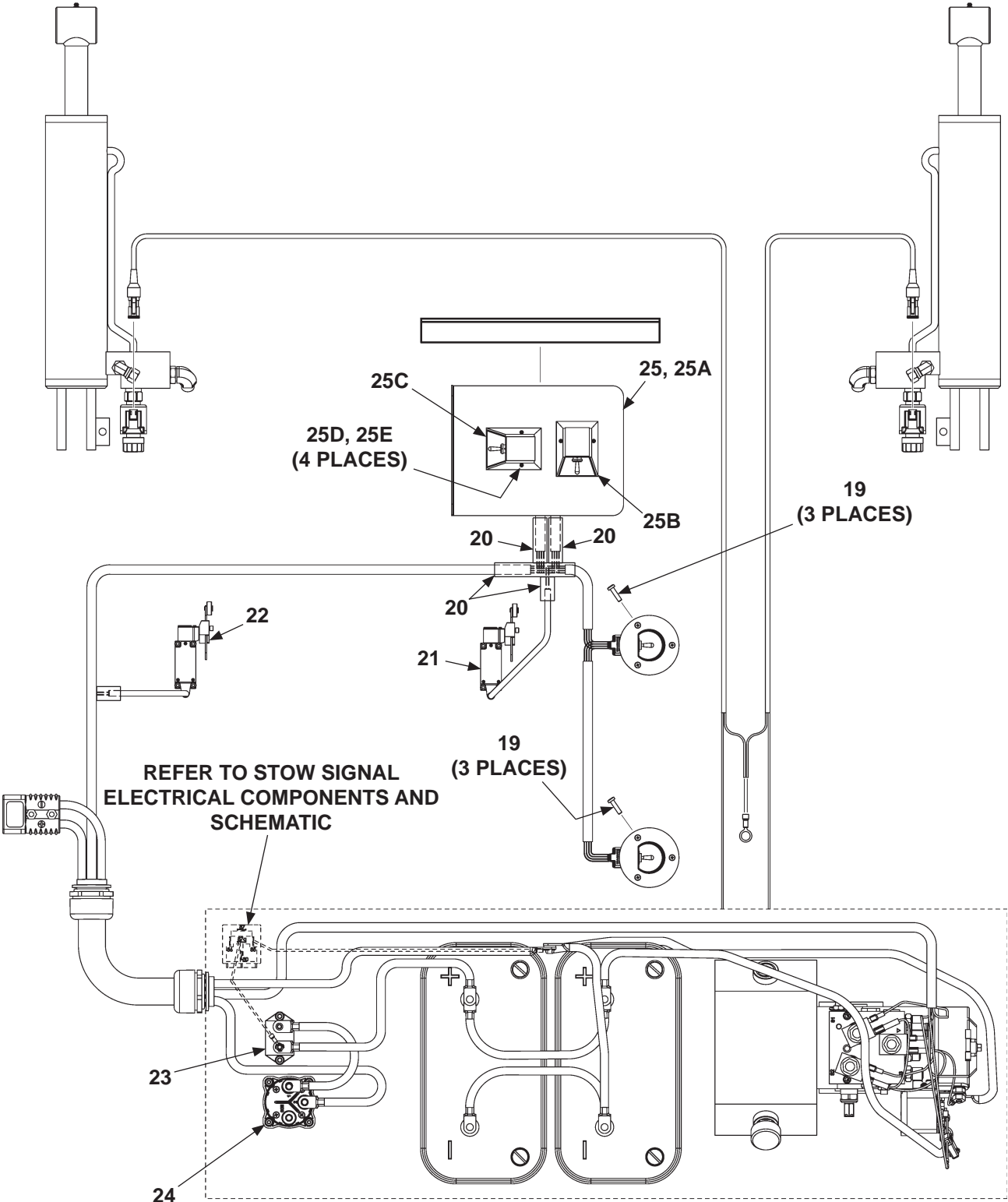
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ITEM	QTY.	PART NO.	DESCRIPTION
1	2	906559-01	FITTING, STRAIGHT CONNECTOR
2	1	906560-78	CONDUIT, SUPER FLEX
3	1	288210-01	CABLE ASSEMBLY, 2 GA, 3/8"-3/8" RING, 10-1/2" LG.
4	3	288211-01	CABLE ASSEMBLY, 2 GA, 3/8"-3/8" RING, 10-1/2" LG.
5	1	268226-07	CABLE ASSEMBLY, 2 GA, 5/16"-3/8" RING, 18" LG.
6	1	268226-10	CABLE ASSEMBLY, 2 GA, 5/16"-3/8" RING, 37-3/4" LG. (48" & 60" LIFTGATES)
		268226-11	CABLE ASSEMBLY, 2 GA, 5/16"-3/8" RING, 45-3/4" LG. (82" LIFTGATE)
7	1	285506-03	CABLE ASSEMBLY, 2 GA, RED, 5/16"-3/8" RING, 29-1/2" LG. (48" & 60" LIFTGATES)
		285506-06	CABLE ASSEMBLY, 2 GA, RED, 5/16"-3/8" RING, 37" LG. (82" LIFTGATE)
8	1	285504-01	POWER CABLE ASSY, 2 GA, 119" LG. (48" & 60" LIFTGATES)
		285504-02	POWER CABLE ASSEMBLY, 2 GA, 131" LG. (82" LIFTGATE)
8A	1	906555-01	CONNECTOR, 175 AMP, 2-POLE, 2 GA (WITH CONTACTS)
8B	2	REF	HEAT SHRINK TUBING, 3/4" X 1-1/2" LG. (FOR CONTACTS)
9	1	268274-03	CABLE, RIGHT SIDE, 18GA, 72" LG. (48" & 60" LIFTGATES)
		268274-05	CABLE, RIGHT SIDE 73" LG, 16GA (82" LIFTGATE)
10		268274-04	CABLE, LEFT SIDE, 18GA, 96" LG. (48" & 60" LIFTGATES)
		268274-06	CABLE, LEFT SIDE, 16GA, 120" LG. (82" LIFTGATE)
11	1	285505-01	CONTROL CABLE ASSEMBLY, 250" LG. (48" & 60" LIFTGATES)
		285505-02	CONTROL CABLE ASSEMBLY, 302" LG. (82" LIFTGATE)
12	1	278472-01	CABLE, JUMPER
13	18	205780	PLASTIC TIE, 7" LG. (NOT SHOWN) (48" & 60" LIFTGATES)
	20		PLASTIC TIE, 7" LG. (NOT SHOWN) (82" LIFTGATE)
14	13	EH13176	CABLE TIE (NOT SHOWN) (48" & 60" LIFTGATES)
	14		CABLE TIE (NOT SHOWN) (82" LIFTGATE)
15	1	285508-01	WALL SWITCH CABLE ASSEMBLY (LOWER)
16	1	285508-02	WALL SWITCH ASSEMBLY CABLE (UPPER)
17	1	285510-01	BRACKET SUPPORT
18	1	288211-02	CABLE ASSY, 2 GA, 3/8"-3/8" RING, 37" LG. (82" LIFTGATE)

# ELECTRICAL COMPONENTS (2 BATTERY BOX) - Continued



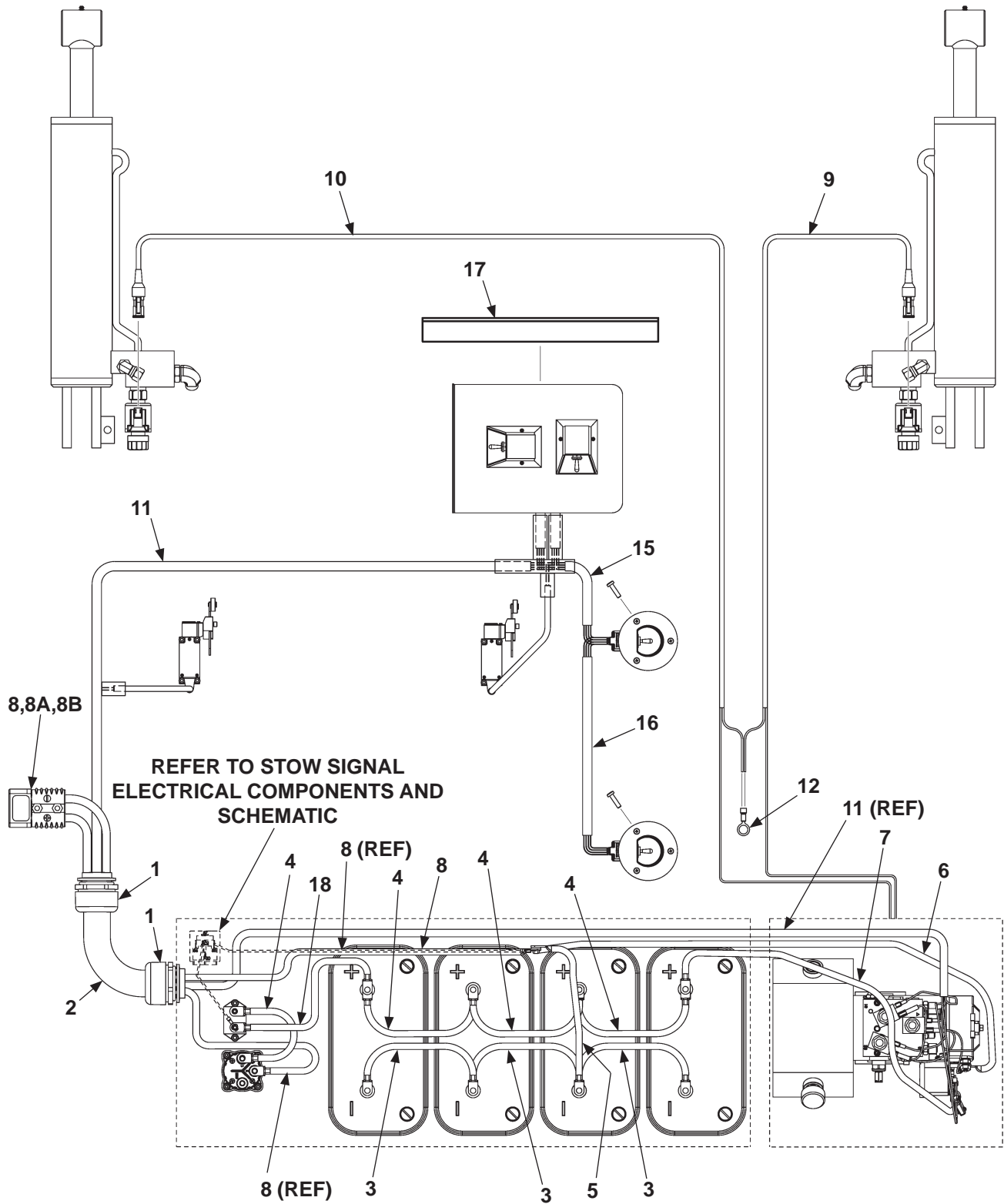
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ITEM	QTY.	PART NO.	DESCRIPTION
19	6	900767-01	SCREW, #8-18, SELF DRILL
20	1	905189-03	HEAT SHRINK TUBING, 1" X 12" LG.
21	1	286133-01	LIMIT SWITCH ASSEMBLY
22	1	286133-02	LIMIT SWITCH ASSEMBLY
23	1	221736	CIRCUIT BREAKER, 150 AMP
24	1	284536	CHARGE LINE DISCONNECT SWITCH
25	REF.	285511-01	BRACKET SWITCH ASSEMBLY
25A	1	285507-01	SWITCH BRACKET
25B	1	285512-02	IN-OUT SWITCH
25C	1	285512-01	UP-DOWN SWITCH
25D	4	900007-6	PAN HEAD SCREW, #10-24 X 3/4" LG.
25E	4	901003	LOCK NUT, #10-24

## ELECTRICAL COMPONENTS (4 BATTERY BOX)

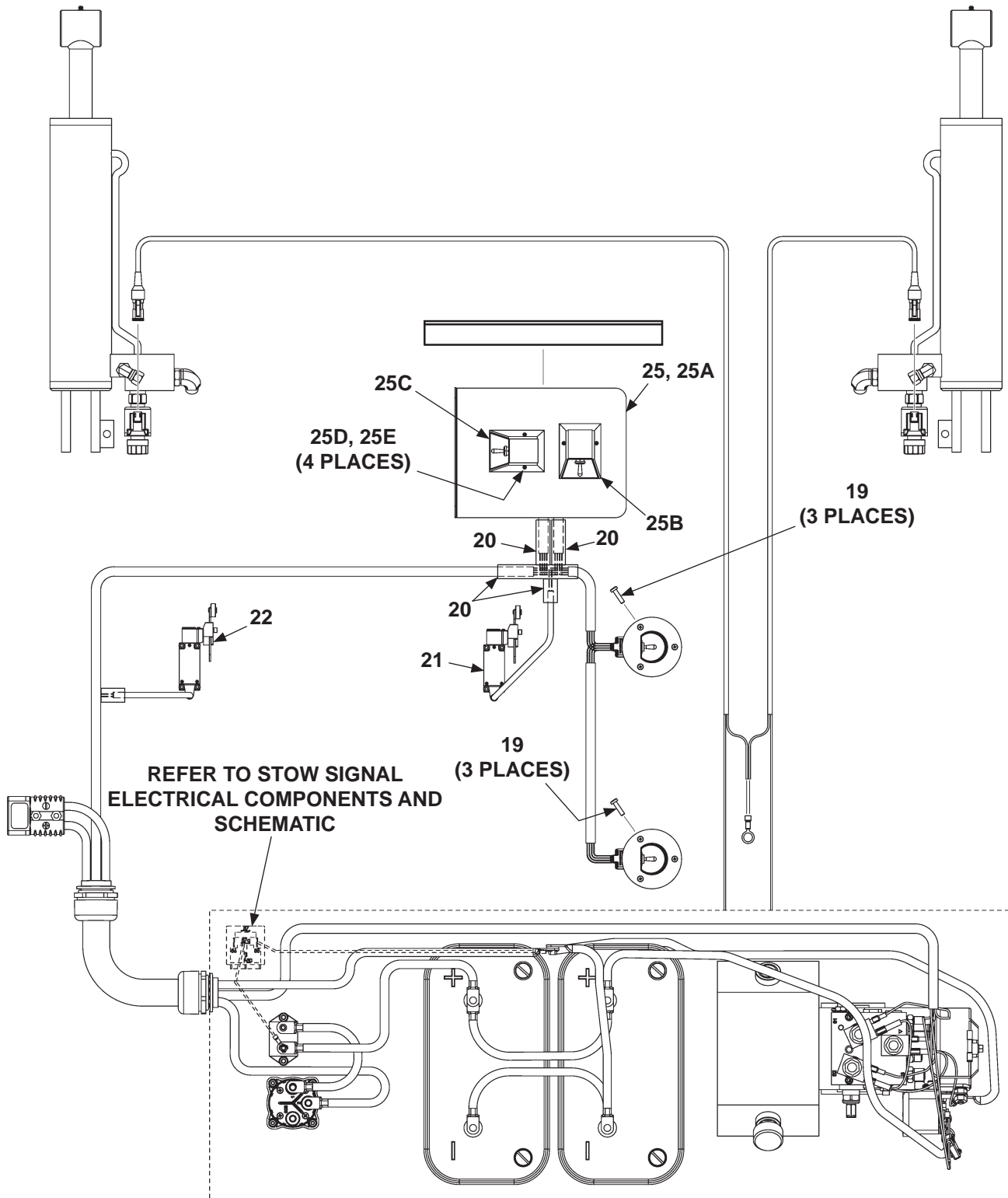
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ITEM	QTY.	PART NO.	DESCRIPTION
1	2	906559-01	FITTING, STRAIGHT CONNECTOR
2	1	906560-78	CONDUIT, SUPER FLEX
3	3	288210-01	CABLE ASSEMBLY, 2 GA, 3/8"-3/8" RING, 10-1/2" LG.
4	4	288211-01	CABLE ASSEMBLY, 2 GA, 5/16"-3/8" RING, 10-1/2" LG.
5	1	268226-07	CABLE ASSEMBLY, 2 GA, 5/16"-3/8" RING, 18" LG.
6	1	268226-11	CABLE ASSEMBLY, 2 GA, 5/16"-3/8" RING, 45-3/4" LG. (82" LIFTGATE)
7	1	285506-03	CABLE ASSEMBLY, 2 GA, RED, 5/16"-3/8" RING, 29-1/2" LG. (48" & 60" LIFTGATES)
		285506-06	CABLE ASSEMBLY, 2 GA, RED, 5/16"-3/8" RING, 37" LG. (82" LIFTGATE)
8	1	285504-01	POWER CABLE ASSEMBLY, 2 GA, 119" LG. (48" & 60" LIFTGATES)
		285504-02	POWER CABLE ASSEMBLY, 2 GA, 131" LG. (82" LIFTGATE)
8A	1	906555-01	CONNECTOR, 175 AMP, 2-POLE, 2 GA (WITH CONTACTS)
8B	2	REF	HEAT SHRINK TUBING, 3/4" X 1-1/2" LG. (FOR CONTACTS)
9	1	268274-03	CABLE, RIGHT SIDE, 18GA, 72" LG. (48" & 60" LIFTGATES)
		268274-05	CABLE, RIGHT SIDE 73" LG, 16GA (82" LIFTGATE)
10		268274-04	CABLE, LEFT SIDE, 18GA, 96" LG. (48" & 60" LIFTGATES)
		268274-06	CABLE, LEFT SIDE, 16GA, 120" LG. (82" LIFTGATE)
11	1	285505-01	CONTROL CABLE ASSEMBLY, 250" LG. (48" & 60" LIFTGATES)
		285505-02	CONTROL CABLE ASSEMBLY, 302" LG. (82" LIFTGATE)
12	1	278472-01	CABLE, JUMPER
13	18	205780	PLASTIC TIE, 7" LG. (NOT SHOWN) (48" & 60" LIFTGATES)
	20		PLASTIC TIE, 7" LG. (NOT SHOWN) (82" LIFTGATE)
14	13	EH13176	CABLE TIE (NOT SHOWN) (48" & 60" LIFTGATES)
	14		CABLE TIE (NOT SHOWN) (82" LIFTGATE)
15	1	285508-01	WALL SWITCH CABLE ASSEMBLY (LOWER)
16	1	285508-02	WALL SWITCH ASSEMBLY CABLE (UPPER)
17	1	285510-01	BRACKET SUPPORT
18	1	288211-02	CABLE ASSEMBLY, 2 GA, 3/8"-3/8" RING, 37" LG.

## ELECTRICAL COMPONENTS (4 BATTERY BOX) - Continued



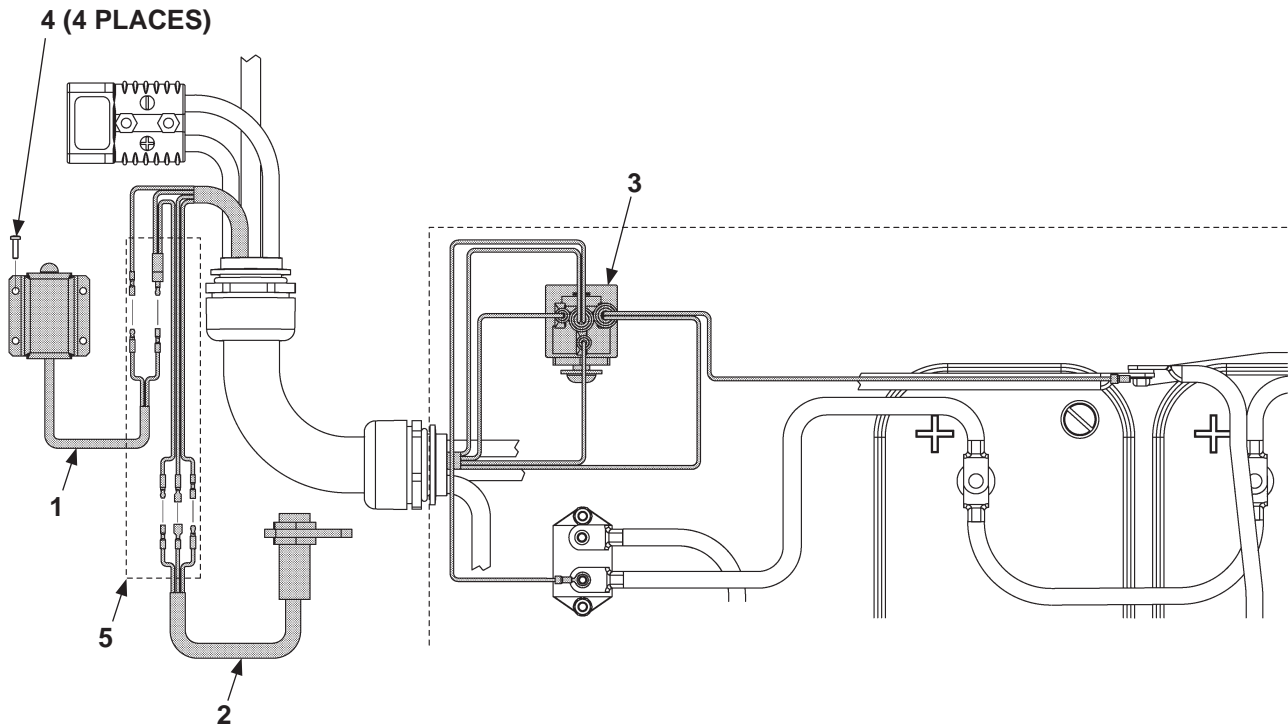
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ITEM	QTY.	PART NO.	DESCRIPTION
19	6	900767-01	SCREW, #8-18, SELF DRILL
20	1	905189-03	HEAT SHRINK TUBING, 1" X 12" LG.
21	1	286133-01	LIMIT SWITCH ASSEMBLY
22	1	286133-02	LIMIT SWITCH ASSEMBLY
23	1	221736	CIRCUIT BREAKER, 150 AMP
24	1	284536	CHARGE LINE DISCONNECT SWITCH
25	REF.	285511-01	BRACKET SWITCH ASSEMBLY
25A	1	285507-01	SWITCH BRACKET
25B	1	285512-02	IN-OUT SWITCH
25C	1	285512-01	UP-DOWN SWITCH
25D	4	900007-6	PAN HEAD SCREW, #10-24 X 3/4" LG.
25E	4	901003	LOCK NUT, #10-24

## ELECTRICAL COMPONENTS - STOW SIGNAL



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	287862-01	STOW SIGNAL CABLE ASSEMBLY
2	1	287524-01	PROXIMITY SENSOR CABLE ASSEMBLY
3	1	287863-01	SIGNAL RELAY CABLE ASSEMBLY
4	4	900767-01	SCREW, #8-18, SELF DRILL
5	1	905189-01	HEAT SHRINK TUBING, 1" X 6" LG.

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## 60

ITEM	QTY.	PART NO.	DESCRIPTION
REF.	1	269321-01	PUMP ASSEMBLY, 12V
1	1	269323	BASE ASSEMBLY, M3498
2	1	269324	O-RING, UP100 & UP110
3	1	269325	PUMP
4	1	269356	SHAFT
5	1	269326	REAR COVER O-RING
6	4	269327	DOWEL PIN, 5 MM X 7 MM
7	1	269328	REAR COVER
8	4	269329	SOCKET CAP SCREW, M8 X 80MM
9	1	269546	SUCTION TUBE, 3/8"
10	1	269331	SCREEN FILTER
11	1	269348	NIPPLE, 3/8" X 3-1/2" LG.
12	1	269349	90 DEG. ELBOW, 3/8" X 3/8"
13	1	269350	SUCTION TUBE, 3/8", NYLON
14	1	269332	RESERVOIR
15	6	269333	SCREW, #10-24 X 3/8" LG, SELF TAPPING
16	1	269334	DC MOTOR
17	1	269547	WASHER SEAL, 1/2"
18	1	269335	DRAIN PLUG, 1/2"-14
19	1	269549	RESERVOIR CAP WITH DIPSTICK
20	1	269337	BREATHING PLUG, 3/4"-14
21	1	269338	RELIEF VALVE, GREEN SPRING
22	1	269339	STARTER SWITCH, 12 VOLT
23	2	269340	PAN HEAD SCREW, #10-32 X 5/16" LG.
24	1	269341	MOTOR-SOLENOID CONNECTING STRAP
25	1	269342	VALVE WIRE ASSEMBLY
26	1	269343	O-RING, 1/16" X 3/4" X 1/16-016
27	1	269344	VALVE ASSEMBLY, 12 VOLT
28	1	269345	SOCKET CAP SCREW, 1/4"-20 X 2-3/4" LG
29	1	269346	POPPET ASSEMBLY
30	1	269347	TEST PORT FITTING
31	1	269548	STARTER SWITCH WIRE ASSEMBLY

## DECALS

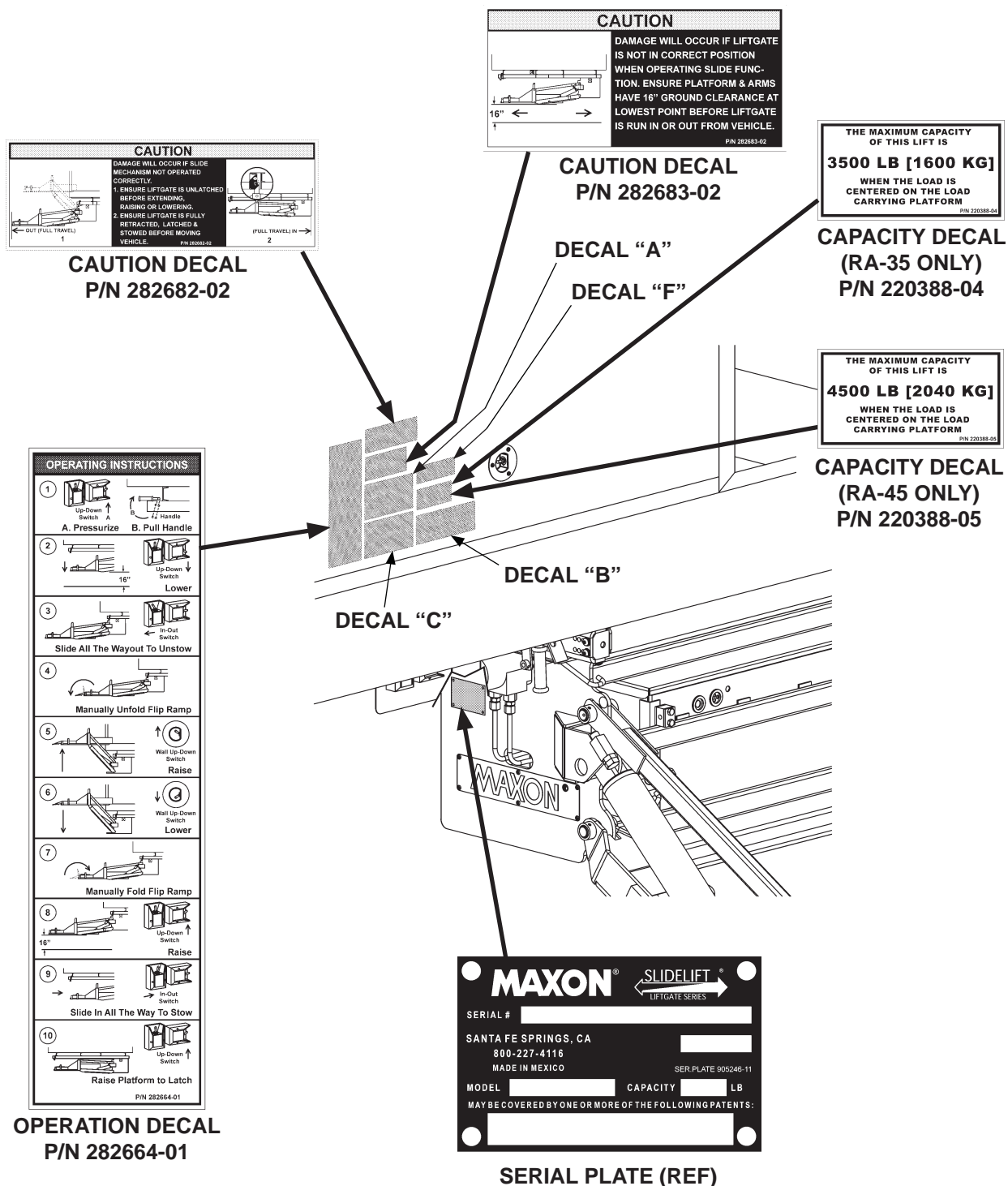


FIG. 62-1

**CAUTION**

**Always stand clear of platform area.**

P/N 282522-01 **F**

**WARNING**

**Read this information carefully.**

- Improper operation of this Liftgate can result in serious personal injury. If you do not have a copy of the operating instructions, please obtain them from your employer, distributor, or lessor before you attempt to operate Liftgate.
- If there are signs of improper maintenance, damage to vital parts, or slippery platform surface, do not use the Liftgate until these problems have been corrected.
- If you are using a pallet jack, be sure it can be maneuvered safely.
- Do not operate a forklift on the platform.
- Do not allow any part of yours or your helper's body to be placed under, within, or around any portion of the moving Liftgate, or its mechanisms, or in a position that would trap them between the platform and the ground or truck when the Liftgate is operated.
- If a helper is riding the platform with you, make sure you are both doing so safely and that you are not in danger of coming in contact with any moving or potentially moving obstacles.

**• USE GOOD COMMON SENSE**

- If load appears to be unsafe, do not lift or lower it.

For a free copy of other manuals that pertain to this model Liftgate, please visit our website at [www.maxonlift.com](http://www.maxonlift.com) or call Customer Service at (800) 227-4116.

P/N 282522-01 **C**

**SAFETY INSTRUCTIONS**

**Read all decals and operation manual before operating liftgate.**

- Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.
- Be certain vehicle is properly and securely braked before using the liftgate.
- Always inspect this liftgate for maintenance or damage before using it. Do not use liftgate if it shows any sign of damage or improper maintenance.
- Do not overload
- Make certain the area in which the platform will open and close is clear before opening or closing the platform.
- Make certain platform area, including the area in which loads may fall from platform, is clear before and at all times during operation of liftgate.
- This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use.

P/N 282522-01 **A**

**WARNING**

**Liftgate hazards can result in crushing or falling.**

**Keep hands and feet clear of pinch points.**

**If riding liftgate, make sure load is stable and footing is solid.**

P/N 282522-01 **B**

**Read and understand all instructions and WARNINGS before use.**

**DECAL SHEET**  
**P/N 282522-01**  
**FIG. 63-1**

## DECALS - Continued

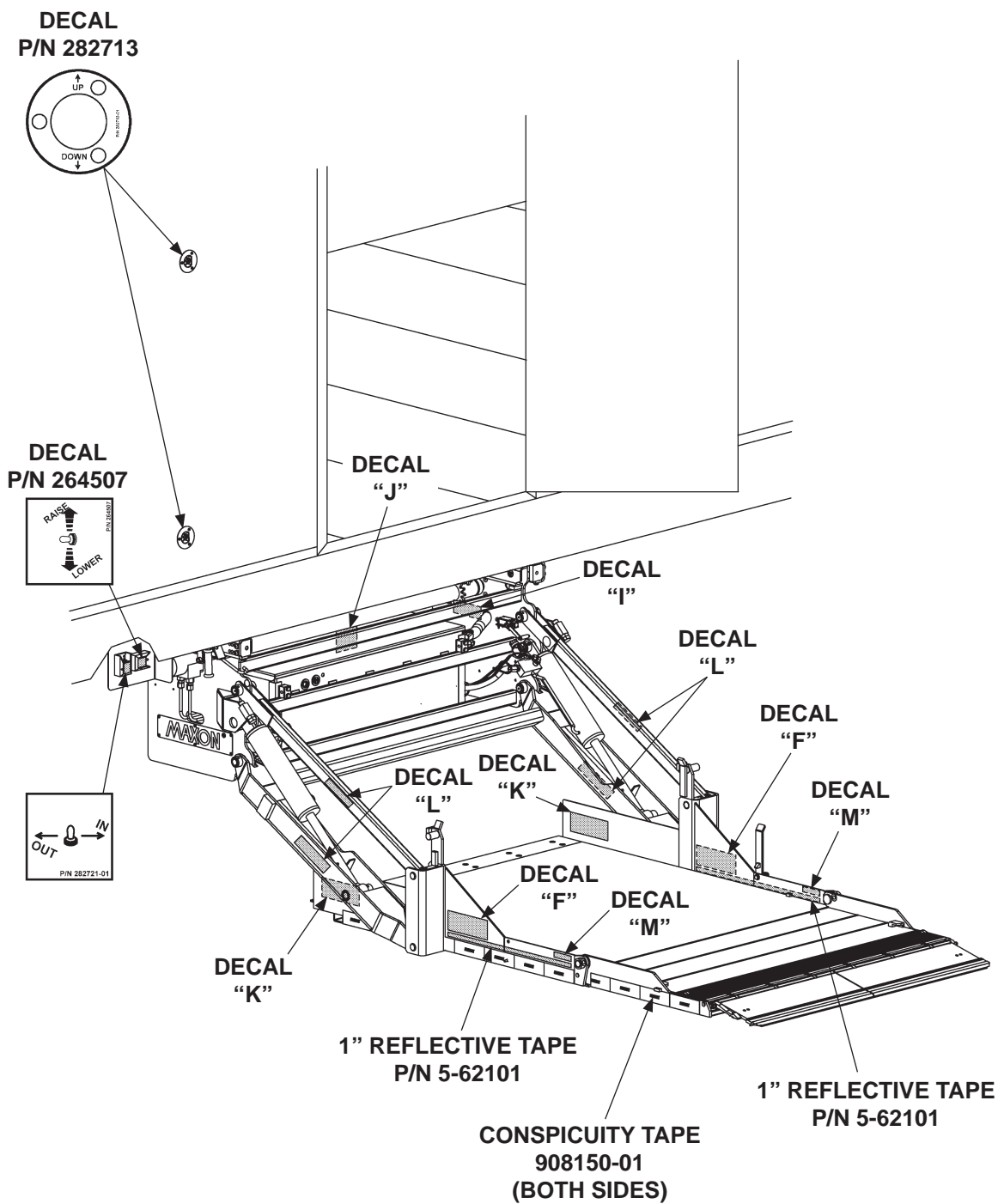


FIG. 64-1



**⚠ WARNING**

To prevent personal injury & equipment damage, avoid working on liftgate and power unit while platform is raised off the ground. Refer to Maintenance Manual for additional safety instructions.

P/N 267432-01 **F**

**MANUAL SLIDER OPERATION & ACCESS INSTRUCTIONS**

**OUT ONLY. NO UP & DOWN.**

**IN ONLY. NO STOW.**

P/N 267432-01 **I**

**⚠ WARNING**

Avoid possible injury & damage to equipment if slider moves under power. Ensure battery is disconnected from liftgate before operating the slider manually.

P/N 267432-01 **J**

**⚠ WARNING**

To avoid possible injury and damage to equipment, never stand on lift arms, parallel arms, or bottom side of platform.

P/N 267432-01 **K**

**⚠ WARNING**

Keep hands & feet clear of lifting arms.

P/N 267432-01 **L**

**⚠ WARNING**

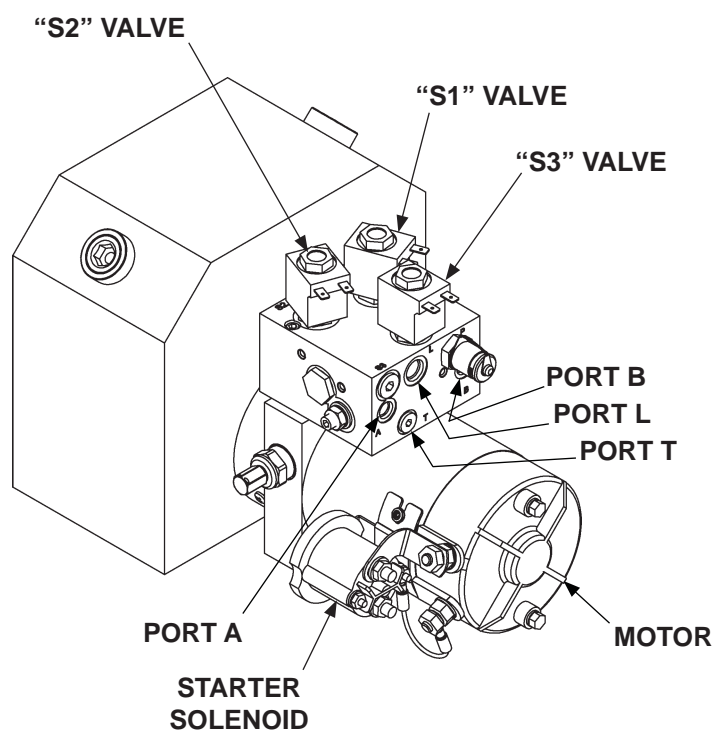
Keep hands clear of pinch points when folding flipover.

**M**

DECAL SHEET  
P/N 282724-01  
FIG. 65-1

# SYSTEM DIAGRAMS

## PUMP & MOTOR SOLENOID OPERATION

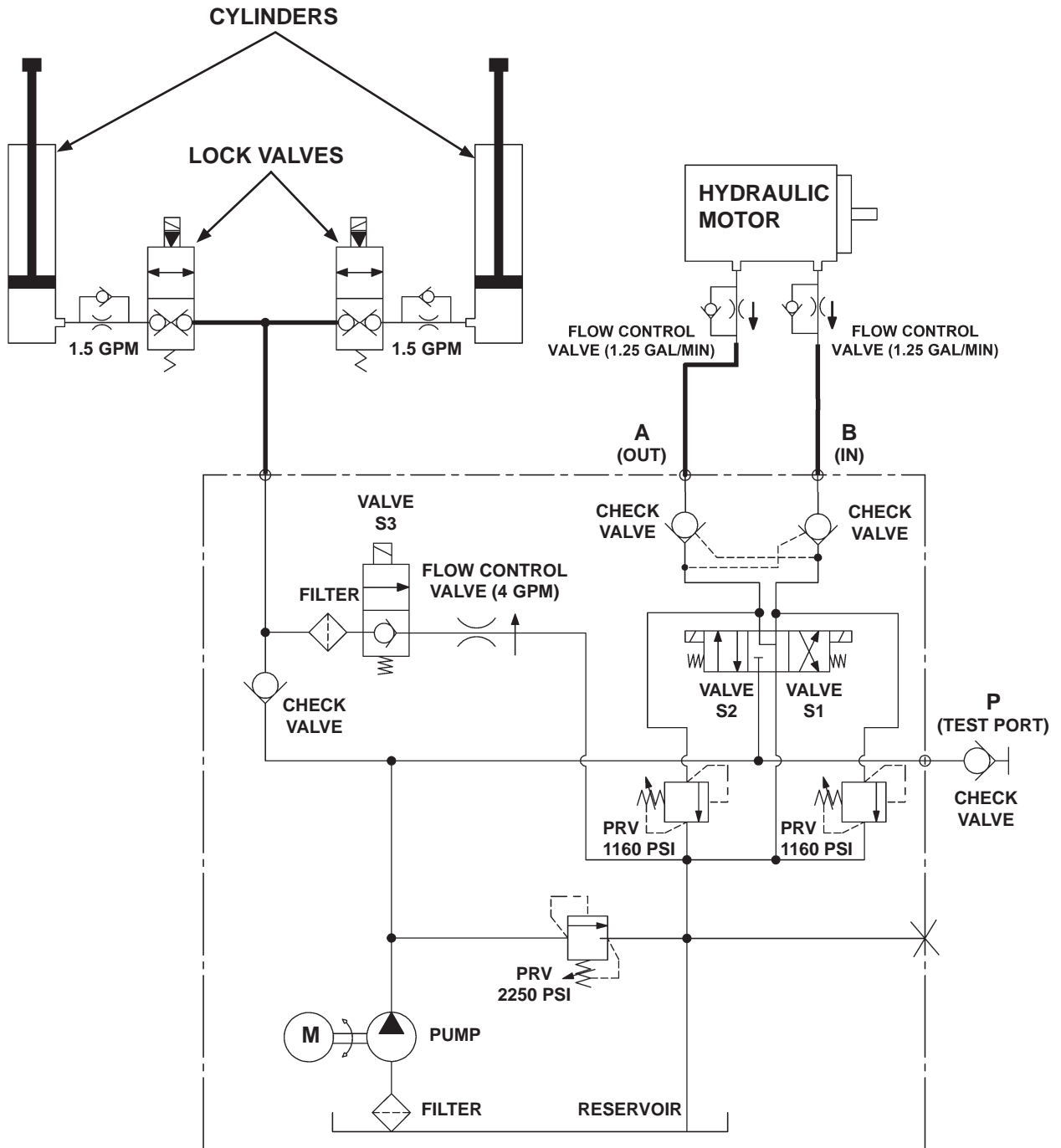


**PUMP AND MOTOR**  
**FIG. 66-1**

POWER UNIT MOTOR & SOLENOID OPERATION						
LIFTGATE FUNCTION	PORT	SOLENOID OPERATION (✓ MEANS ENERGIZED)				
		MOTOR	VALVE "S1"	VALVE "S2"	VALVE "S3"	LOCK VALVE
RAISE	L	✓	-	-	-	✓
LOWER	T	-	-	-	✓	✓
SLIDE OUT	A	✓	-	✓	-	-
SLIDE IN	B	✓	✓	-	-	-
REFER TO VALVES SHOWN ON HYDRAULIC SCHEMATIC						

**TABLE 66-1**

# HYDRAULIC SCHEMATIC



NOTE: PRV (PRESSURE RELIEF VALVE)

FIG. 67-1

**MAXON®**

This diagram illustrates the electrical wiring for a trailer, showing the connection between various components and a power source.

**Power Source:** The system is powered by two 12V batteries connected in parallel. A 150 AMP circuit breaker and a charge line disconnect switch are connected to the positive terminal of the batteries. The negative terminal is connected to ground.

**Wiring Components and Connections:**

- WALL SWITCH CABLE (P/N 285508-01):** This cable connects the batteries to the trailer wall switches. It includes a GREEN wire connected to the positive terminal and a RED wire connected to the negative terminal.
- TRAILER WALL & CHASSIS SWITCH CONNECTORS (ON RH SIDE OF DOOR):** These connectors receive signals from the wall switch cable and route them to the appropriate switches.
- EXTERNAL HAND CONTROL CABLE (P/N 285505-01 OR -02):** This cable provides an alternative control method for the trailer's operation.
- UP-DOWN SWITCH (TRAILER WALL):** Two switches are shown, one for HIGH-MOUNT and one for LOW-MOUNT. Each has six terminals labeled 1 UP, 2 B+, 3 DN, 4, 5, and 6. The wiring connects these terminals to the trailer's electrical system.
- UP-DOWN SWITCH (TRAILER CHASSIS):** A switch with six terminals labeled 1, 2, 3, 4, 5 B+, and 6. It is connected to the trailer's electrical system.
- IN-OUT SWITCH (TRAILER CHASSIS):** A switch with six terminals labeled 1, 2, 3, 4, 5 B+, and 6. It is connected to the trailer's electrical system.
- SAFETY ARM SWITCH:** Two switches are shown, each with four terminals labeled NO 3, NO 4, NC 1, and NC 2. They are connected to the trailer's electrical system.
- LOCK CABLES:** Two cables are shown, one for the RH CYL LOCK CABLE (P/N 268274-03 OR -05) and one for the LH CYL LOCK CABLE (P/N 268274-04 OR -06). They are connected to the trailer's electrical system.
- Motor (M):** The motor is connected to the trailer's electrical system via a series of relays (S1, S2, S3) and switches.

**Wiring Details:**

- The GREEN wire from the wall switch cable is connected to the positive terminal of the batteries.
- The RED wire from the wall switch cable is connected to the negative terminal of the batteries.
- The B+ terminal of the UP-DOWN SWITCH (TRAILER WALL) is connected to the positive terminal of the batteries.
- The DN terminal of the UP-DOWN SWITCH (TRAILER WALL) is connected to the negative terminal of the batteries.
- The B+ terminal of the UP-DOWN SWITCH (TRAILER CHASSIS) is connected to the positive terminal of the batteries.
- The DN terminal of the UP-DOWN SWITCH (TRAILER CHASSIS) is connected to the negative terminal of the batteries.
- The B+ terminal of the IN-OUT SWITCH (TRAILER CHASSIS) is connected to the positive terminal of the batteries.
- The OUT terminal of the IN-OUT SWITCH (TRAILER CHASSIS) is connected to the negative terminal of the batteries.
- The NO 3 and NO 4 terminals of the SAFETY ARM SWITCH are connected to the positive terminal of the batteries.
- The NC 1 and NC 2 terminals of the SAFETY ARM SWITCH are connected to the negative terminal of the batteries.
- The motor (M) is connected to the trailer's electrical system via a series of relays (S1, S2, S3) and switches.

**Legend:**

- GREEN: Wire color
- RED: Wire color
- WHITE: Wire color
- BLACK: Wire color
- BLUE: Wire color
- ORANGE: Wire color
- RED & BLACK: Wire color
- WHITE: Wire color
- GRN: Ground
- ORN: Orange
- RED: Red
- BLU: Blue
- UP: Up
- DN: Down
- B+: Battery positive
- IN: In
- OUT: Out
- NO 3: Normally open 3
- NO 4: Normally open 4
- NC 1: Normally closed 1
- NC 2: Normally closed 2
- S1, S2, S3: Relays
- M: Motor

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## STOW SIGNAL ELECTRICAL SCHEMATIC

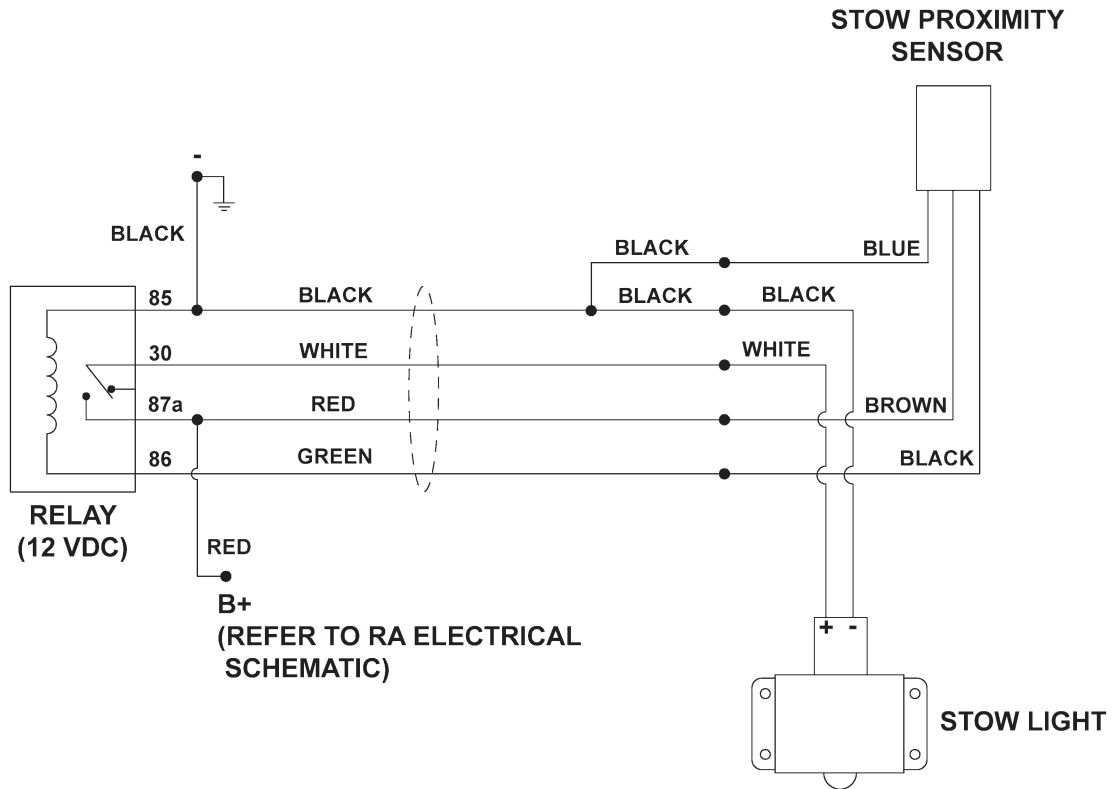
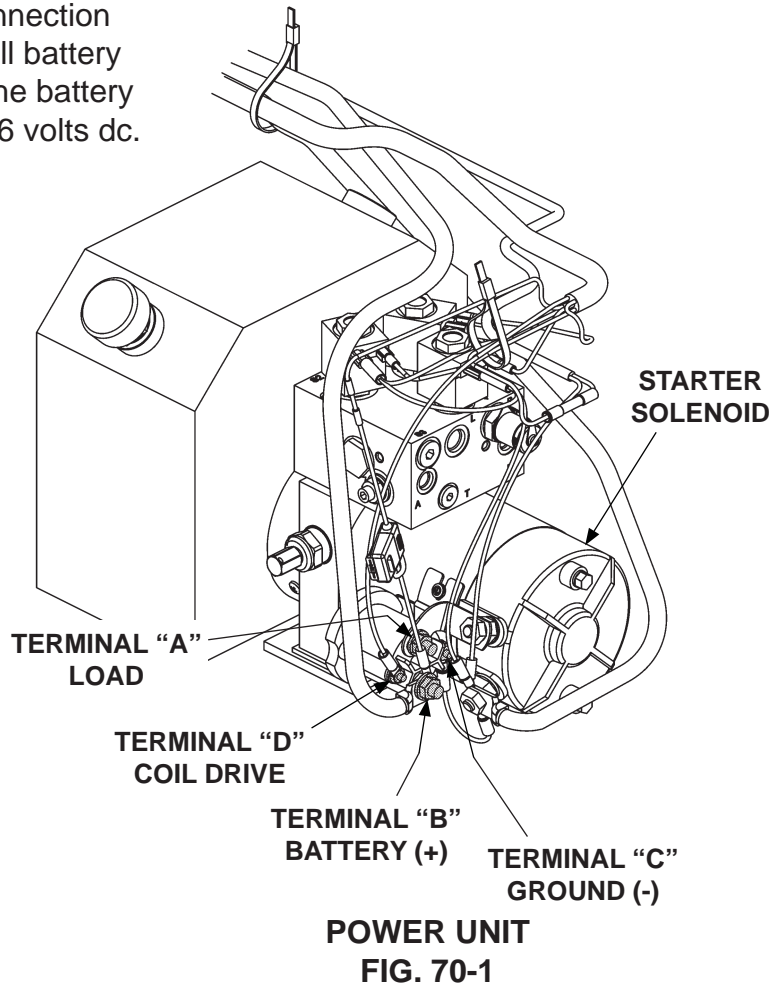


FIG. 69-1

# TROUBLESHOOTING

## PLATFORM WILL NOT RAISE & MOTOR WILL NOT RUN

1. Connect voltmeter between motor solenoid terminal “B” and ground wires connection on pump (**FIG. 70-1**). Verify that full battery voltage is at is at “B”. Recharge the battery if voltmeter indicates less than 12.6 volts dc.



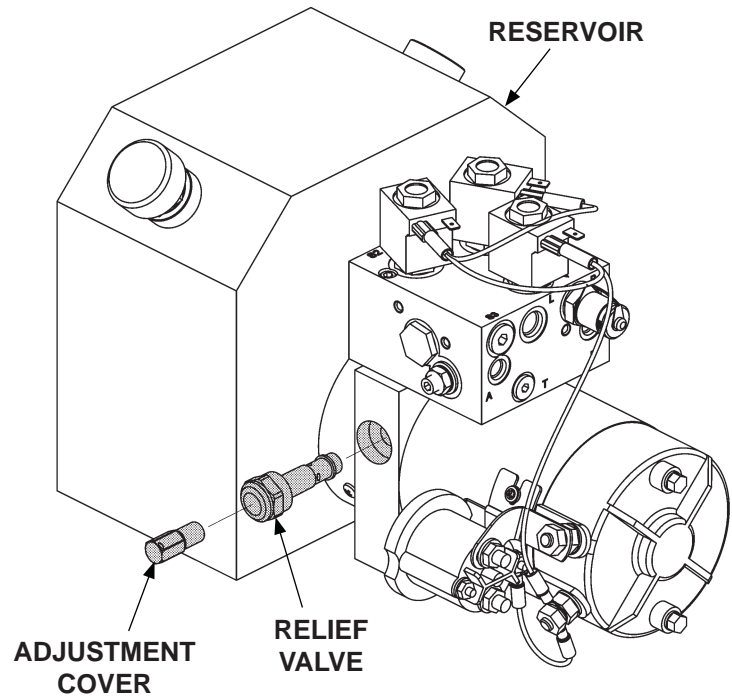
2. Touch a jumper wire to terminals “B” & “D” (**FIG. 70-1**). If motor runs, check control switch, switch connections, and fuse on red wire. The, check and correct wiring connections, replace fuse, or replace the control switch.
3. Touch heavy jumper cables to terminals “A” & “B” (**FIG. 70-1**).
  - a. If motor runs, replace the motor solenoid.
  - b. If motor does not run, repair or replace the pump motor.

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## PLATFORM WILL NOT RAISE, BUT MOTOR RUNS

1. Do the **CHECKING HYDRAULIC FLUID** procedure in this manual. If necessary, add hydraulic fluid.
2. Check for structural damages and replace worn parts.



**CHECKING THE RAISING RELIEF VALVE**  
**FIG. 71-1**

### CAUTION

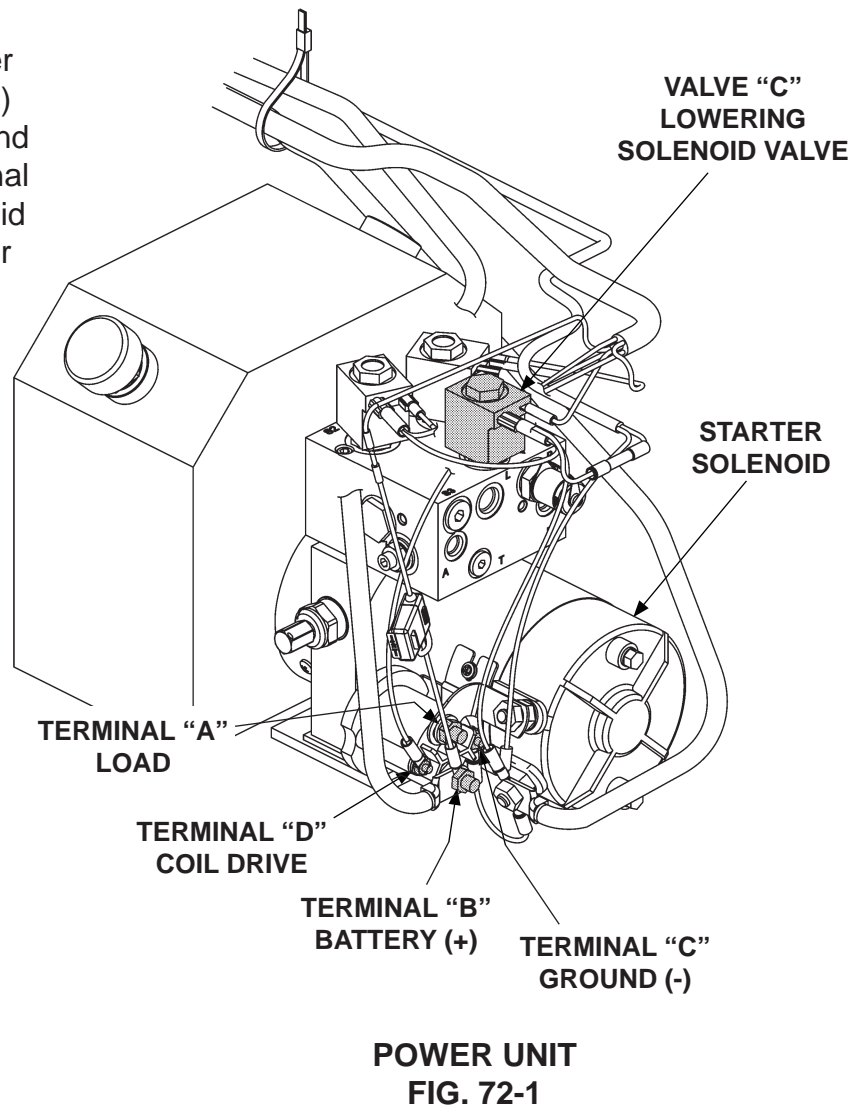
Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

3. Check pump oil filter in the reservoir (**FIG. 71-1**). Clean or replace filter if necessary.
4. Check for dirty raising relief valve (**FIG. 71-1**). Clean or replace valve if necessary.

# TROUBLESHOOTING

## PLATFORM RAISES BUT LEAKS DOWN

1. Check if the “A” (lowering) solenoid valve is constantly energized. Connect voltmeter negative (-) lead to ground (-) wires connection on pump and positive (+) lead to (+) terminal on the “A” (lowering) solenoid valve (**FIG. 72-1**). If voltmeter reads battery voltage, check for faulty wiring or toggle switch.



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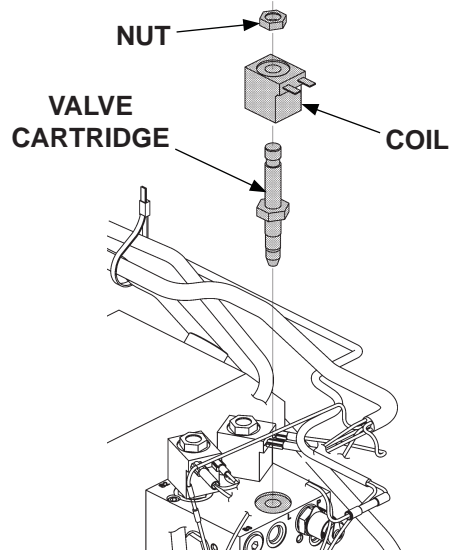
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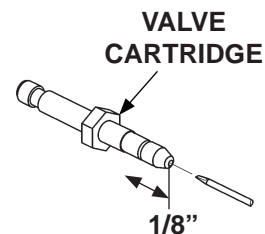
## CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

2. Make sure platform is on the ground. Remove lowering solenoid valve (**FIG. 73-1**). Push on the plunger in the valve by inserting small screwdriver in the open end (**FIG. 73-2**). If the plunger does not move with a smooth, spring-loaded action (approximately 1/8"), replace the valve cartridge. **Reinstall lowering valve. Torque valve cartridge to 30 lbs.-ft. and hex nut to 30 lbs.-in.**

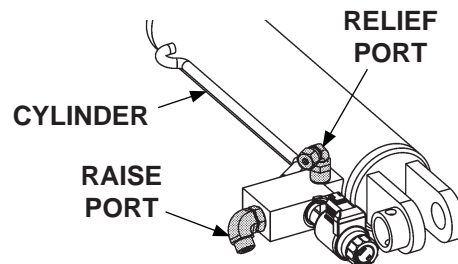


**REMOVING SOLENOID VALVE  
FIG. 73-1**



**CHECKING SOLENOID VALVE  
FIG. 73-2**

3. Check the hydraulic cylinder. With platform at vehicle floor level, remove the hydraulic line from the **RELIEF** port on the cylinder (**FIG. 73-3**). Hold the control switch in the **RAISE** position for two seconds while you watch for hydraulic fluid at the **RELIEF** port. A few drops of hydraulic fluid escaping the port is normal. However, if fluid streams out, piston seals are worn, Replace seals.

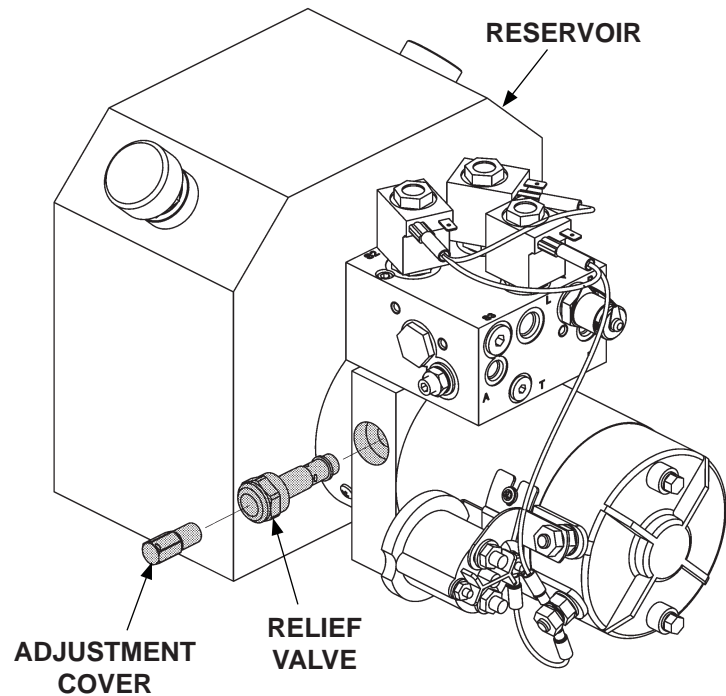


**CHECKING SOLENOID VALVE  
FIG. 73-3**

# TROUBLESHOOTING

## PLATFORM RAISES PARTIALLY THEN STOPS

1. Lower the open platform to the ground. Do the **CHECKING HYDRAULIC FLUID** procedure in this manual. If necessary, add hydraulic fluid.
2. Use voltmeter to verify the battery voltage is 12.6 volts or more under load from pump motor.
3. Check for structural damage and poor lubrication. Replace worn parts.



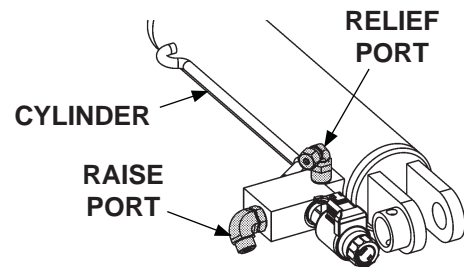
CHECKING THE RAISING RELIEF VALVE  
FIG. 74-1

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

4. Check for dirty raising relief valve (**FIG. 74-1**). Clean or replace relief valve, if necessary.

5. Check the hydraulic cylinder. With platform at vehicle floor level, remove the hydraulic line from the **RELIEF** port on the cylinder (**FIG. 75-1**). Hold the control switch in the **RAISE** position for two seconds while you watch for hydraulic fluid at the **RELIEF** port. A few drops of hydraulic fluid escaping the port is normal. However, if fluid streams out, piston seals are worn. Replace seals.
6. Check pump oil filter in the reservoir line (**FIG. 75-1**). Clean or replace filter, if necessary.

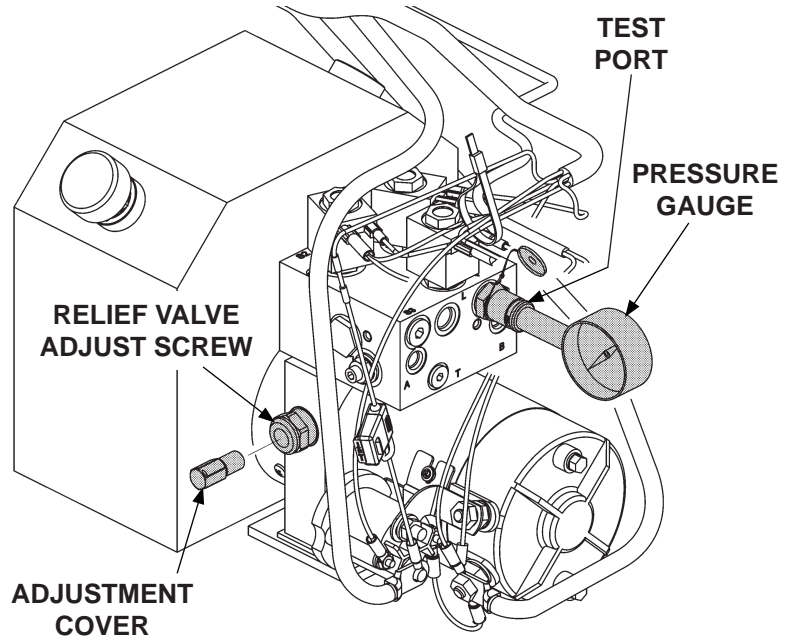


**CHECKING SOLENOID VALVE**  
**FIG. 75-1**

# TROUBLESHOOTING

## LIFTGATE WILL NOT LIFT RATED CAPACITY

1. Use voltmeter to verify the battery voltage is 12.6 volts or more under load from pump motor.
2. Check for structural damage or lack of lubrication. Replace worn parts.



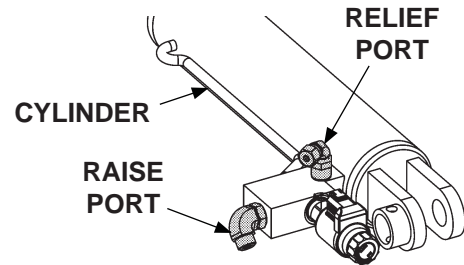
ADJUSTING RAISING RELIEF VALVE  
FIG. 76-1

### CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

3. Check the 3200 PSI relief valve as follows. With platform on the ground, remove plug from test port port (**FIG. 76-1**). Install 0-4000 PSI pressure gauge in the test port (**FIG. 76-1**). Hold the control switch in the "RAISE" position. Adjust the relief valve until the gauge reads 3200 PSI (**FIGS. 76-1**). Remove guage and reinstall plug in the port. Then, reinstall reliev valve cover.
4. Check if pump relief valve is dirty. Clean or replace relief valve, if necessary.

5. Check the hydraulic cylinder. With the platform at vehicle floor level, remove the hydraulic line from the **RELIEF** port on the cylinder (**FIG. 77-1**). Hold the control switch in the “**RAISE**” position for two seconds while you watch for hydraulic fluid at the **RELIEF** port. A few drops of hydraulic fluid escaping the port is normal. However, if fluid streams out, piston seals are worn. Replace seals.
6. If pump cannot produce 3200 PSI or lift the load capacity with a minimum of 12.6 volts available, the pump is worn and needs to be replaced.

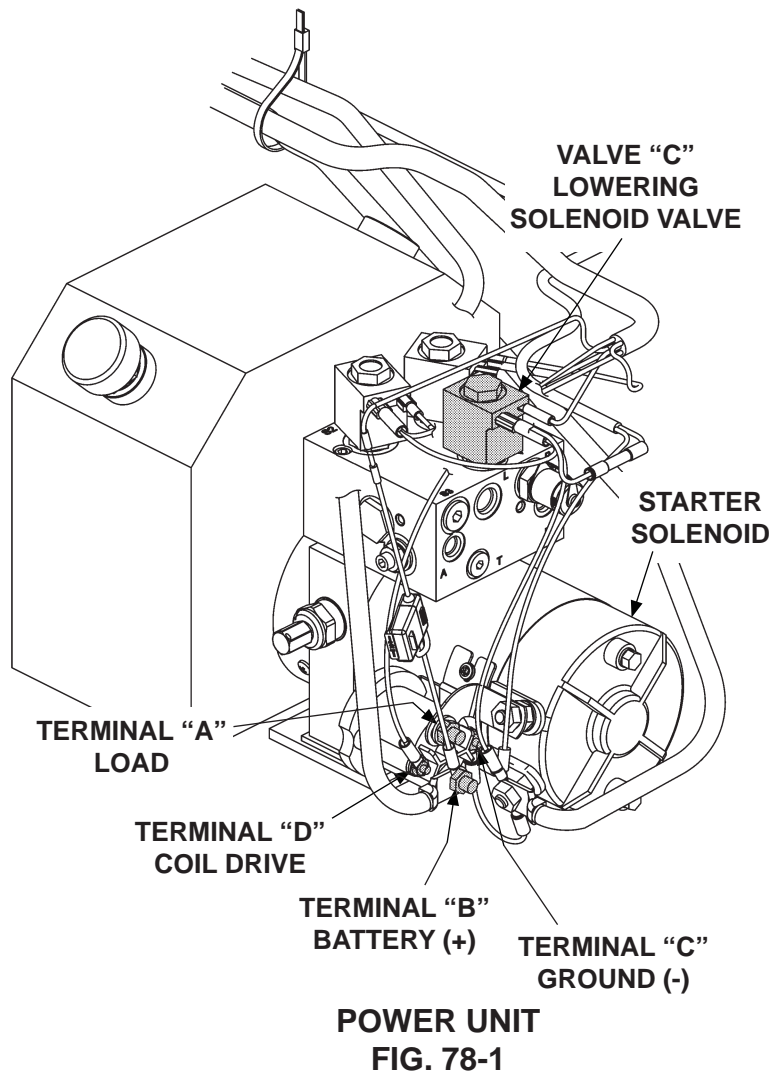


**FIG. 77-1**

# TROUBLESHOOTING

## PLATFORM WILL NOT LOWER, LOWERS TOO SLOWLY, OR TOO QUICKLY

1. Connect voltmeter (+) lead to motor solenoid terminal “B” and the (-) lead to the ground wires connection on pump (**FIG. 78-1**). Verify that full battery voltage is at “B”. Recharge the battery if voltmeter indicates less than 12.6 volts dc.
2. Check for structural damage or poor lubrication. Replace worn parts.
3. Check if the “D” terminal and “A” (lowering) solenoid valve are getting battery voltage (**FIG. 78-1**). Connect voltmeter negative (-) lead to ground (-) wires connection on pump and positive (+) lead to the “D” terminal (**FIG. 78-2**). Hold control switch in the “LOWER” position. Then, connect voltmeter (+) lead to (+) terminal on the “A” (lowering) solenoid valve (**FIG. 78-2**). If voltmeter shows a much lower reading than +12.6 volts dc or a reading of 0 volts, check for faulty control switch and wiring, battery cable, ground wire connections in pump assembly, and pump motor.



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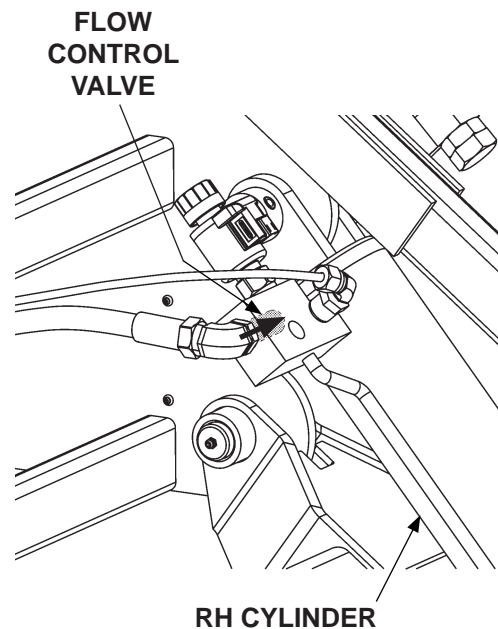
## CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination during maintenance.

## CAUTION

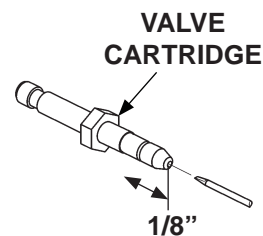
To prevent damage to flow control valve, do not disassemble the valve.

4. Make sure platform is on the ground. Check the RH flow control valve as follows. Remove flow control valve (**FIG. 79-1**). Ensure the flow control valve operates with a smooth spring-loaded action. Check for debris inside the valve. Clean or replace the flow control valve, if necessary. Reinstall flow control valve (if good) or a replacement. Do the same for the LH flow control valve.



FLOW CONTROL VALVE ON RH CYLINDER  
FIG. 79-1

5. Check the lowering solenoid valve as follows. Check if filtering screen is plugged. Clean carefully if required. Push on the plunger in the valve by inserting small screwdriver in the open end (**FIG. 79-2**). If the plunger does not move with a smooth, spring-loaded action (approximately 1/8"), replace the valve cartridge. **Reinstall lowering solenoid valve** (if good) or a replacement. **Torque valve cartridge to 30 lbs.-ft. and hex nut to 30 lbs.-in.**



CHECKING SOLENOID VALVE  
FIG. 79-2

