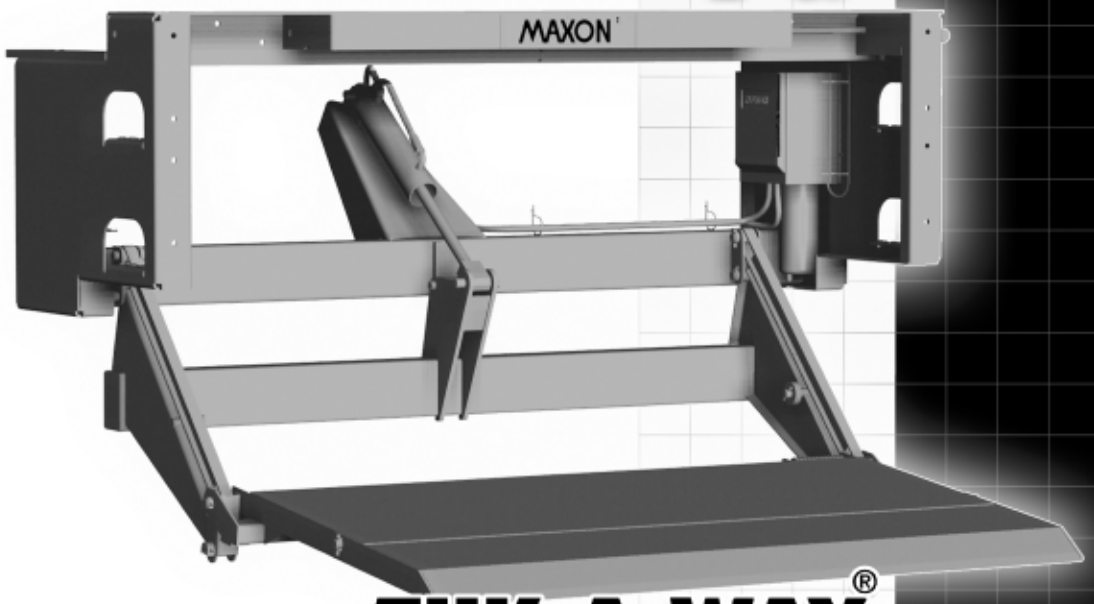
MAINTENANCE MANUAL

MAXON®



TUK-A-WAY® LIFTGATE SERIES

MTB

72-25C • 72-30C

M-00-41
REV. A
MARCH 2002

MAXON®
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 Manuals (and replacements), download Manuals from Maxon's website at www.maxonlift.com.

WARRANTY POLICY & PROCEDURE

NEW LIFTGATE WARRANTY
Term of Warranty: 2 Years from Date of In-Service
Type of Warranty: Full Parts and Labor

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 Labor Schedule. (Call MAXON Customer Service for a copy).

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

1. Liftgate Model Number
2. Liftgate Serial Number
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.

All warranty repairs must be performed by an authorized MAXON warranty station. For major repairs, MAXON Customer Service must be notified and an "Authorization Number" obtained. Major repairs would generally be considered repairs made to the structural assembly of the liftgate and/or repairs not outlined in the MAXON Liftgate Warranty Flat Rate Schedule.

Major components (i.e. hydraulic pumps, cylinders, valves, or failed structural parts) must be returned, freight pre-paid, prior to the claim being processed. To ensure timely processing of these warranty claims, an R.M.A. (Returned Merchandise Authorization) number must be obtained from MAXON Customer Service prior to the return of any defective part. Defective Parts must be returned within 60 days of the claim date for consideration to:

MAXON Lift Corp.
16205 Distribution Way, Cerritos, CA 90703
Attn: RMA#__

MAXON's warranty policy does not include the reimbursement for travel time, towing, vehicle rental, service calls, oil, batteries, defects due to misuse or abuse, or loss of income due to downtime. Fabrication of 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.

PURCHASE PART WARRANTY
Term of Warranty: 1 Year from Date of Purchase
Type of Warranty: Part Replacement

MAXON will guarantee all returned genuine replacement parts upon receipt and inspection of parts and invoice.

TABLE OF CONTENTS

TABLE OF CONTENTS - Continued

Comply with the following WARNINGS while maintaining Liftgates. See Operation Manual M-00-40 for operating safety requirements.

⚠ WARNING

- 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 M-00-40.
- Comply with all **WARNING** and instruction decals attached to the Liftgate.
- Keep decals clean and legible. If decals are defaced or missing, replace them. Free replacement decals are available from **Maxon Parts Department**.
- 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.
- Do not stand under, 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.
- Wear apppropriate 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 Toggle Switch and the Liftgate will stop.
- A correctly installed Liftgate operates smoothly and reasonably quiet. The only noticeable noise during operation comes from the pump unit while the platform is raised. Listen for scraping, grating and binding noises and correct the problem before continuing to operate 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 could be trapped between the platform and the Liftgate extension plate.
- Never perform unauthorized modifications on the Liftgate. Modifications may result in early failure of the Liftgate and may create hazards for Liftgate operators and maintainers.
- 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
Phone: (800) 227-4116

- To order parts by e-mail, submit orders to **partssales@maxonlift.com**.

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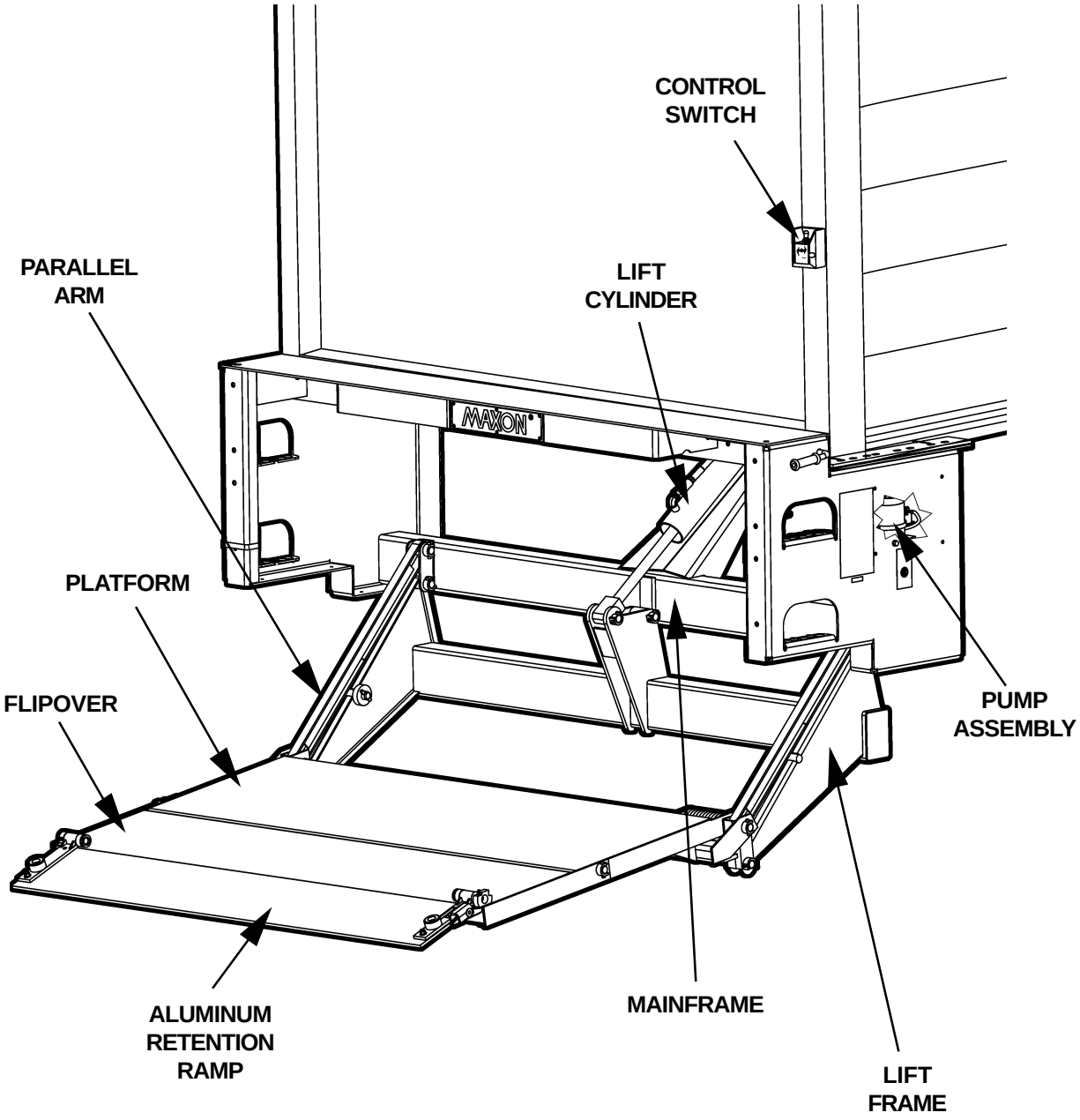
LIFTGATE TERMINOLOGY
(72-25C/30C) MTB



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PERIODIC MAINTENANCE CHECKLIST

⚠ WARNING

Never operate the Liftgate with parts loose or missing.

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Annually

Visually check the entire Liftgate for excessively worn parts and broken welds, especially the Hinge Pins. See **PARTS BREAKDOWN** section for replacement parts. Also, do the **Semi-annual** and **Quarterly Maintenance** checks.

Semi-annually

Visually check the Platform Hinge Pins for excessive wear and broken welds. See **PARTS BREAKDOWN** section for replacement parts. Also, do the **Quarterly Maintenance** checks.

Quarterly

Check the Hydraulic Fluid level in the Pump Reservoir. If hydraulic fluid must be added, select the correct grade of fluid to use at your location.

+20 to +150 Degrees F - Grade ISO 32
Below + 20 Degrees F - Grade ISO 15

If Hydraulic Fluid appears contaminated, refer to the **CHANGING HYDRAULIC FLUID** procedure on following page**.**

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 chaffing and fluid leaks. Replace if necessary.

Check electrical wiring for chaffing and make sure wiring connections are tight and free of corrosion.

Check that all **WARNING and instruction decals** are in place and legible.

Check that all roll pins are in place and protrude evenly from both sides of Hinge Pin collar. Replace roll pins if necessary.

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.

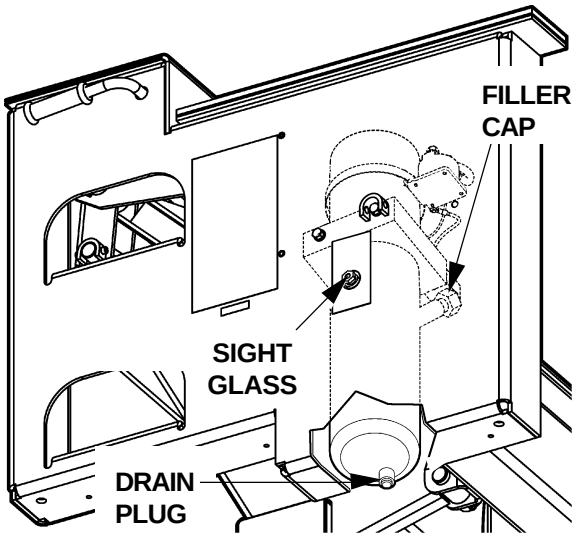
NOTE: To prevent spills, drain used hydraulic fluid through a funnel into waste fluid container.

GRAVITY DOWN LIFTGATES

1. Place empty 3 Gallon Container under Drain Plug.
2. Open and lower Platform to ground. Remove the Drain Plug **(FIG. 1A)**. Drain hydraulic fluid from system. Re-install Drain Plug.
3. Remove Filler Cap **(FIG. 1A)** and refill reservoir until Sight Glass **(FIG. 1A)** is half full. Use correct grade of hydraulic fluid for your location.

   +20 to +150 Degrees F - Grade ISO 32
   Below + 20 Degrees F - Grade ISO 15

4. Re-install Filler Cap **(FIG. 1A)**.



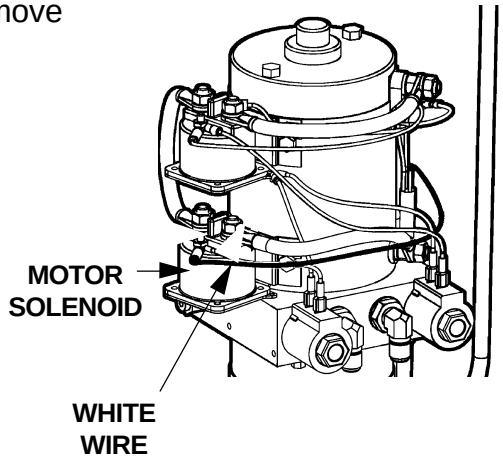
LIFTGATE SHOWN WITH GRAVITY DOWN PUMP& MOTOR FIG. 1A

POWER DOWN LIFTGATES

1. Place empty 3 Gallon Container under Drain Plug.
2. Open and raise Platform to vehicle bed height. Remove the Drain Plug **(FIG. 1A)**. Drain hydraulic fluid.
3. Disconnect the White Wire **(FIG. 1B)** from Motor Solenoid. Lower the Platform while draining the remaining hydraulic fluid from system. Re-install Drain Plug. Reconnect the White Wire to Motor Solenoid.
4. Remove Filler Cap and refill reservoir until Sight Glass **(FIG. 1A)** is half full. Use correct grade of hydraulic fluid for your location.

   +20 to +150 Degrees F - Grade ISO 32
   Below + 20 Degrees F - Grade ISO 15

5. Raise Platform to vehicle bed height. Check hydraulic fluid again and, if needed, add more hydraulic fluid until Sight Glass **(FIG. 1A)** is half full.
6. Re-install Filler Cap **(FIG. 1B)**.



POWER DOWN PUMP FIG. 1B

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PLATFORM ADJUSTMENT

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1. Open and **RAISE** Platform to bed level as shown in **Operation Manual M-00-40**. Platform should be pointing up at bed level and pointing down at ground level **(FIG. 2A and FIG. 2B)**.

2. If the platform is level at bed height **(FIG. 2C)** and sags at ground level **(FIG. 2D)**, inspect each of the Hinge Pins for visible wear before adjusting the Platform. Refer to Hinge Pin Location illustration in the Parts Breakdown section of this manual. Replace Hinge Pins that are visibly worn.

3. Check Liftgate for structural damage that may cause incorrect platform positioning. Repair structural damage.

4. If the platform is level at bed height **(FIG. 2C)** and sags at ground level **(FIG. 2D)**, weld 1-1/2" x 3-1/2" shims in 1/16" increments to each lift arm Shackle (roadside and curbside) as shown in **FIG. 3**. Make sure bottom edge of shim is flush with bottom edge of shackle. Each shim raises up the outboard edge of the flipover as shown in **TABLE 1**.

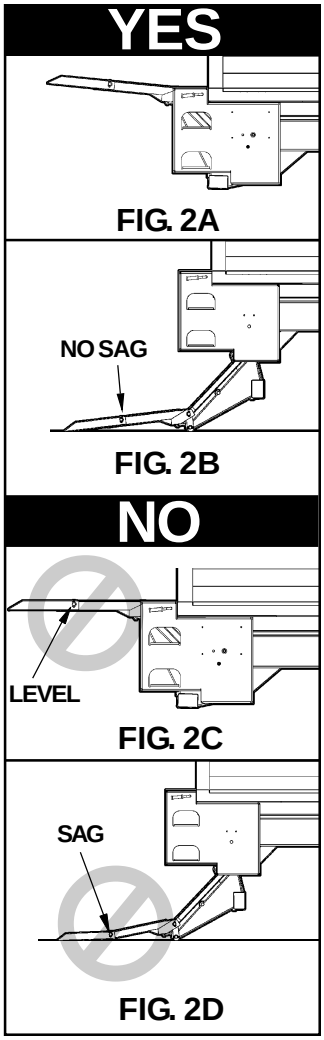

FIG. 2A

FIG. 2B

FIG. 2C

FIG. 2D

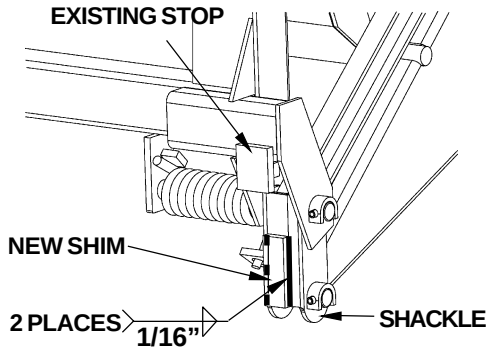

FIG. 3

NO. OF SHIMS (1/16") ADDED	RAISES FLIPOVER EDGE (OUTBOARD)
1	7/8"
2	1-3/4"
3	2-5/8"
4	3-1/2"

TABLE 1

5. If the outboard edge of the flipover will not reach level ground, grind off metal in 1/16" increments from the existing stop on the Platform (roadside and curbside) as shown in **FIG. 4**. Each 1/16" ground off the existing stop lowers the outboard edge of the flipover as shown in **TABLE 2**.

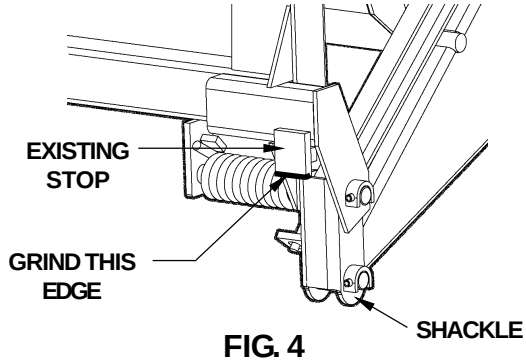

FIG. 4

GRIND OFF EXISTING SHIM	LOWERS FLIPOVER EDGE (OUTBOARD)
1/16"	7/8"
1/8"	1-3/4"
3/16"	2-5/8"
1/4"	3-1/2"

TABLE 2

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REPLACING PLATFORM TORSION SPRING

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1. Manually fold Flipover onto Platform as shown in **Operation Manual M-00-40**.

2. Raise Liftgate to a convenient work height to gain access and release tension on the Torsion Spring.

⚠ CAUTION

To prevent injury and equipment damage, make sure there is no tension on torsion spring before removing hinge pin.

3. Drive out the roll pin from pin collar on the Platform Hinge Bracket. Drive the platform Hinge Pin out of the Shackle with a hammer and pin punch, just enough to free the torsion spring **(FIG. 5)**. Remove spring from Shackle.

4. Install the Torsion Spring as shown in **(FIG. 6)**. Make sure the long leg of the spring is inserted in the bracket located on the Shackle. Make sure the short end of the spring is visible and resting against the block on the Platform Hinge Bracket **(FIG. 6)**.

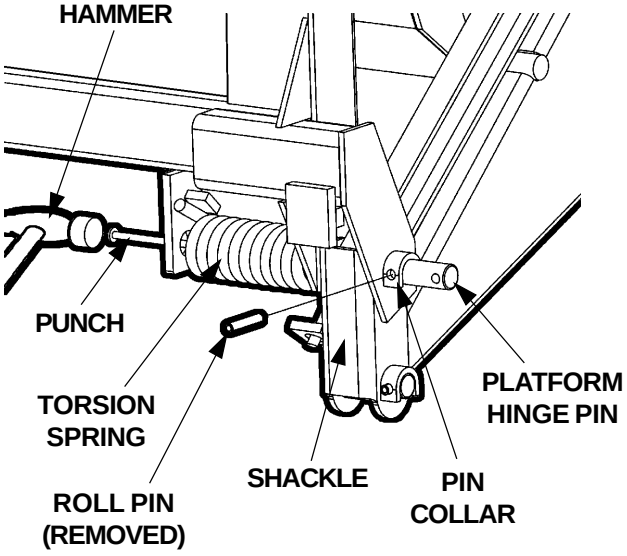

FIG. 5

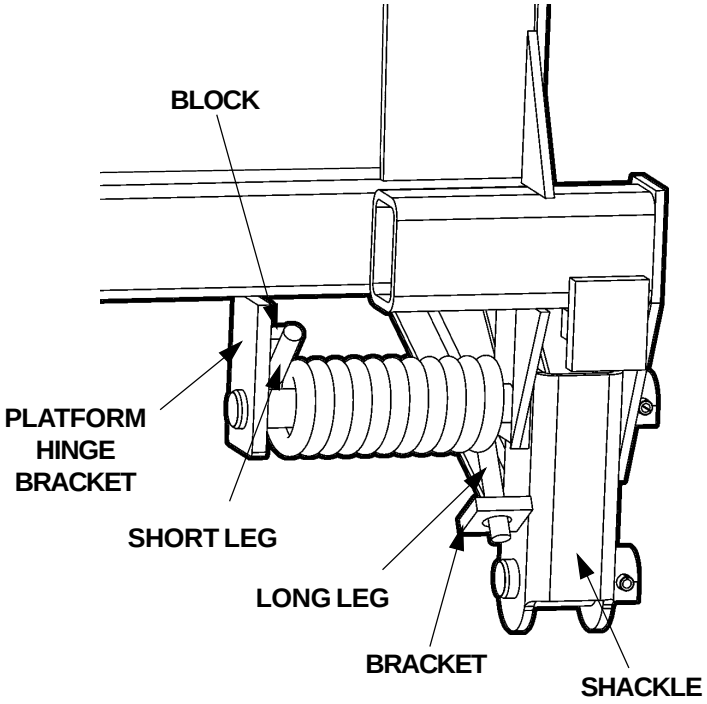

FIG. 6

5. Drive Platform Hinge Pin into correct position through the Platform Hinge Bracket with a hammer and pin punch as shown in **(FIG. 7)**. Line up the hole in the Platform Hinge Pin with the hole in the Pin Collar. Install the roll pin through the Pin Collar until roll pin protrudes equally from both sides of the collar **(FIG. 7**).

6. Operate the Liftgate according to instructions in **Operation Manual M-00-40** to make sure it operates correctly.

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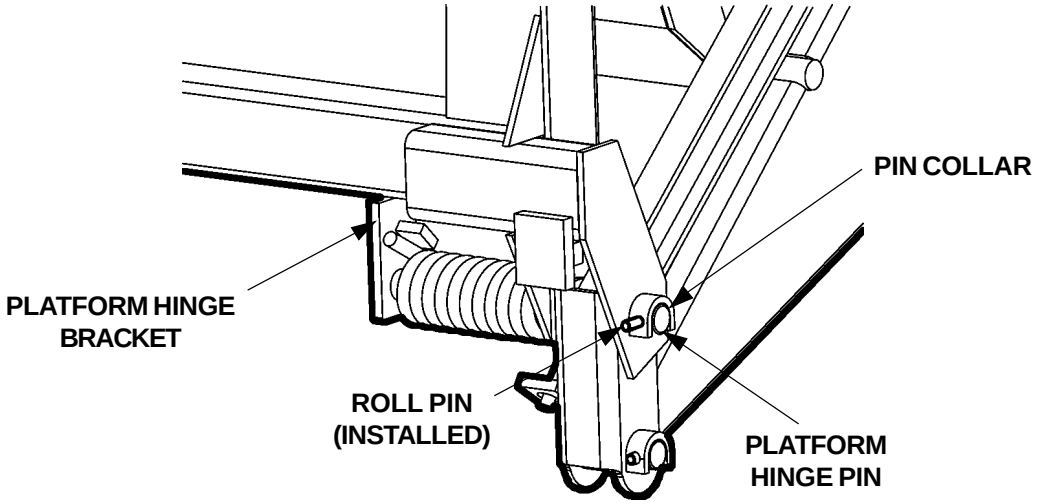

FIG. 7

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SAFETY HOOK MAINTENANCE

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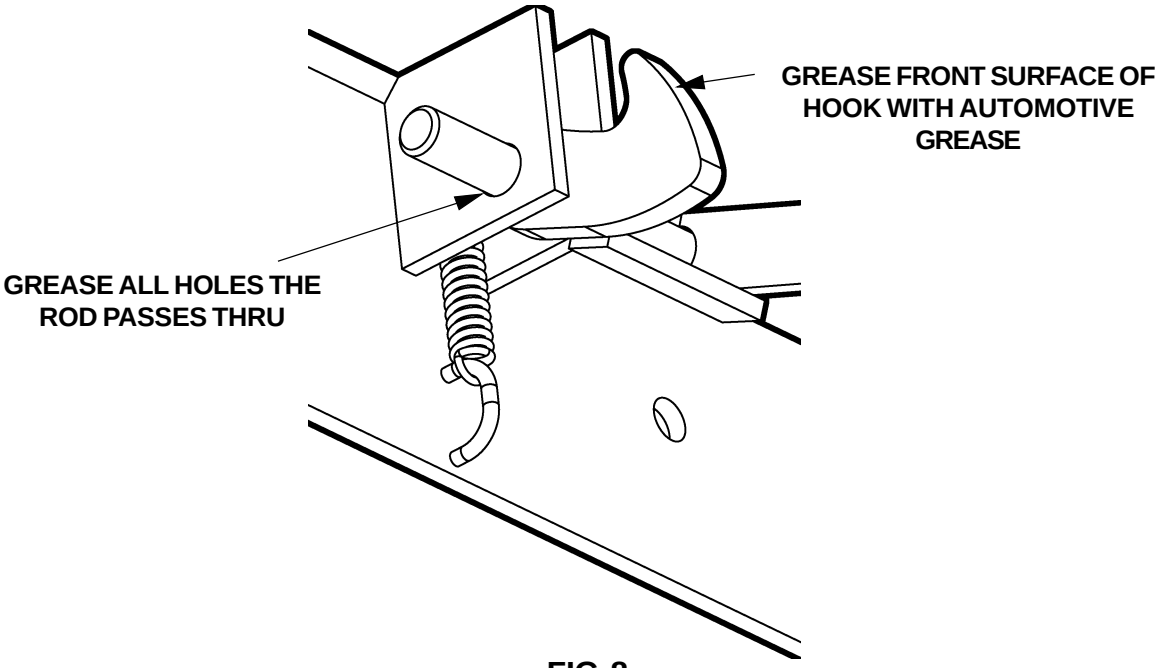

FIG. 8

CHECK SAFETY HOOK FUNCTION

1. When the Platform is raised to full "Stowed" position, listen for an audible snap when **Safety Hook** engages the **Platform Loop**.

2. Visually check if loop is fully engaged with the Safety Hook as shown in **FIG. 9**.

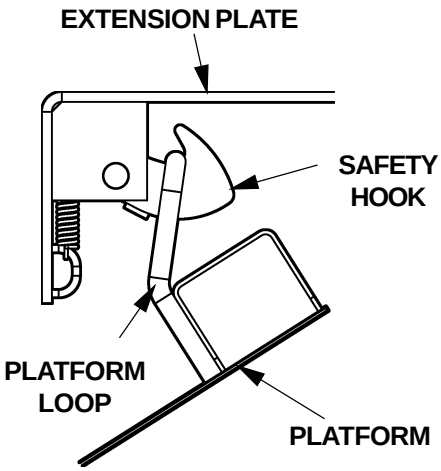

FIG. 9

LOOP ADJUSTMENT

1. If the Safety Hook is not seating correctly, **LOWER** Platform to ground level **(Operation Manual M-00-40)**.

2. Adjust by bending the Platform Loop as shown in **FIG. 10**.

3. **RAISE** Platform and check for correct Safety Hook engagement. Repeat adjustment if required.

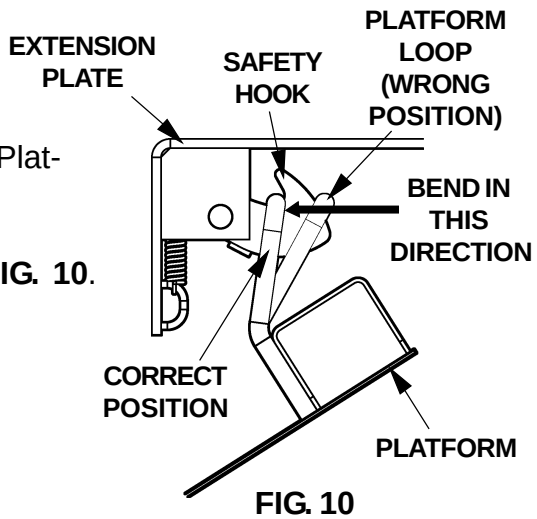

FIG. 10

PARTS BREAKDOWN

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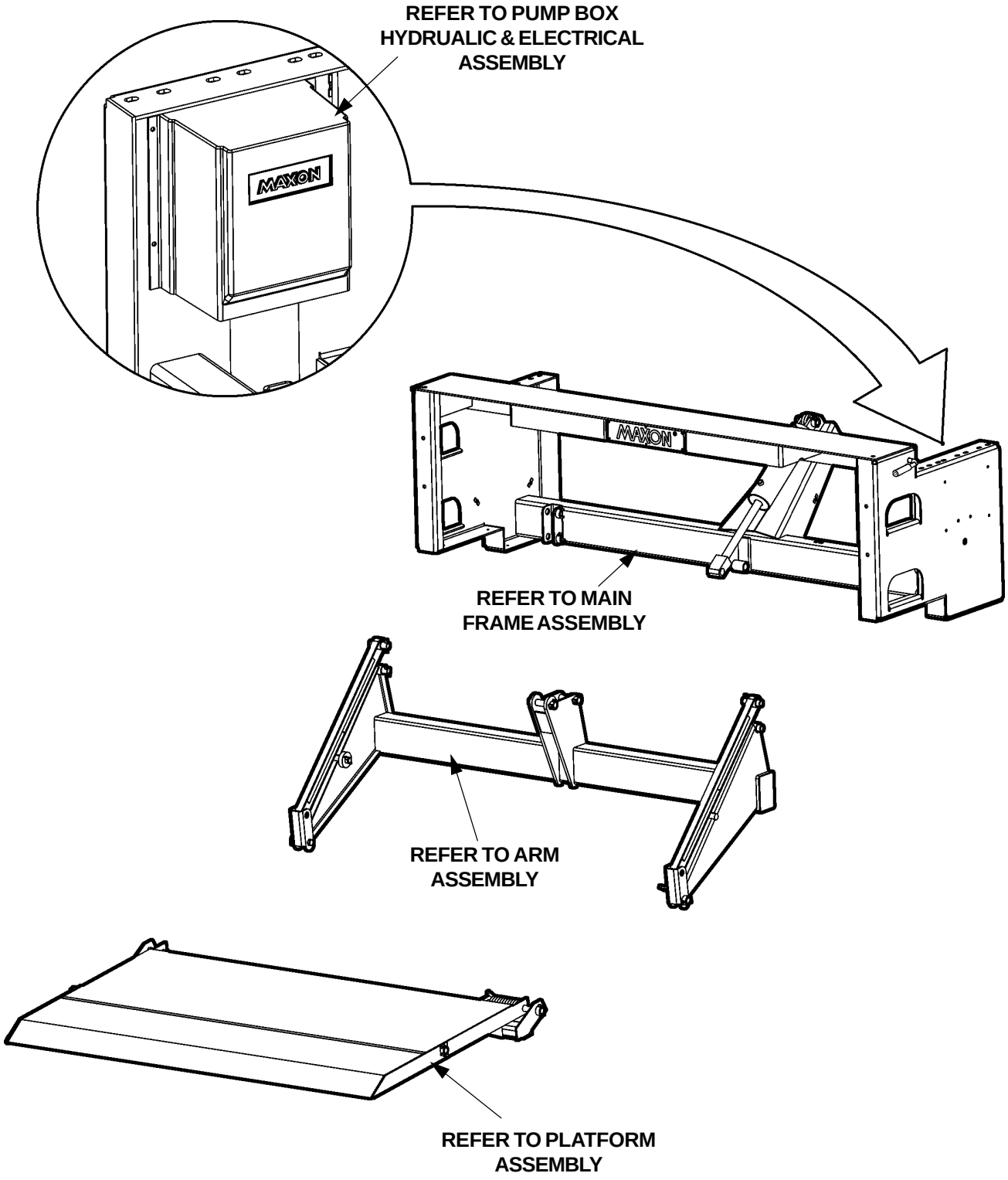
72-25C/30C ASSEMBLY



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MAIN FRAME ASSEMBLY

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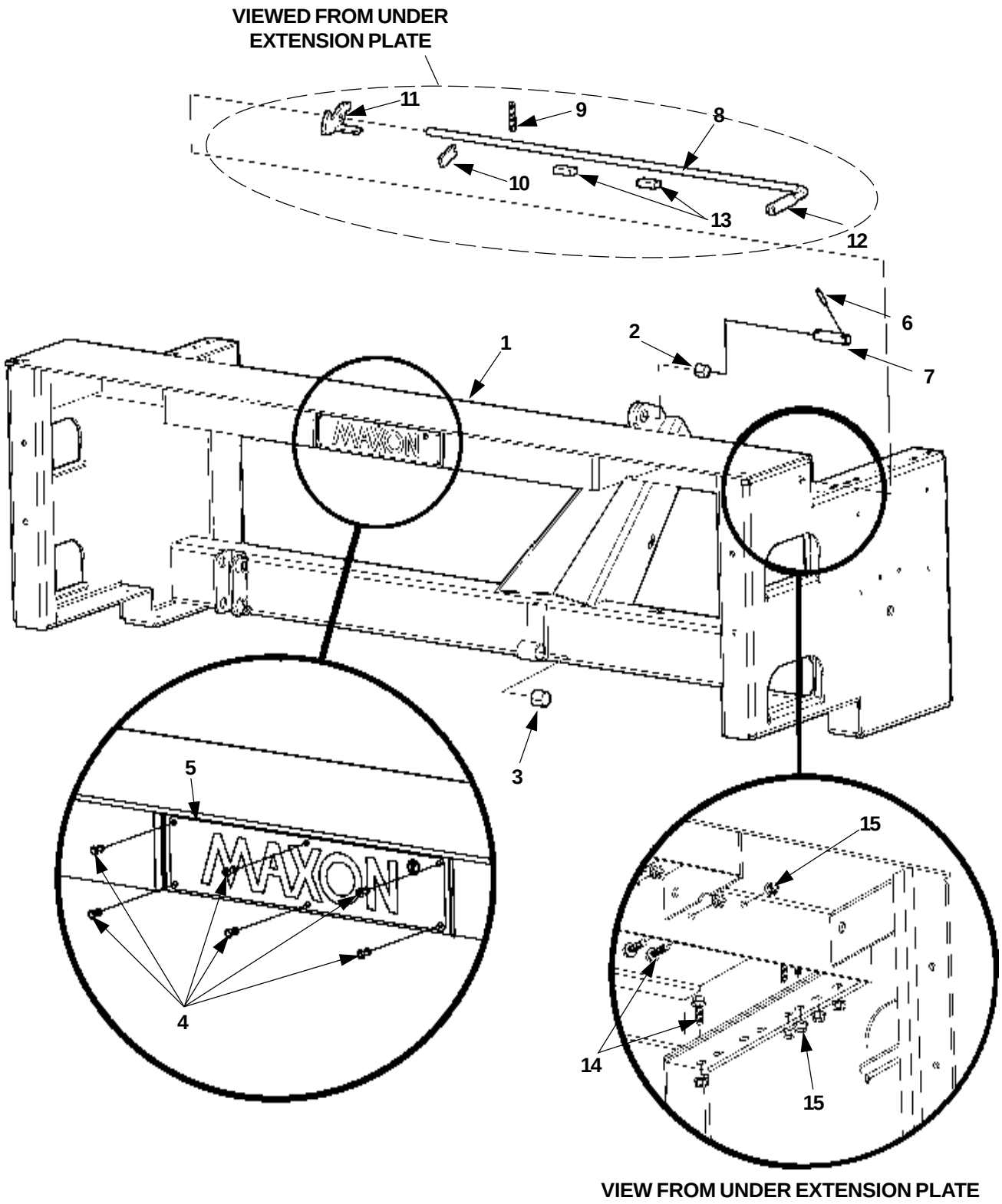

MAIN FRAME ASSEMBLY

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280386	MAIN FRAME
2	1	260916-06	BEARING, SELF LUBE
3	1	260369	BEARING, SELF LUBE
4	6	904005-2	RIVET
5	1	050175	MAXON PLATE
6	1	221416	ROLL PIN
7	1	260368-03	PIN, 3 1/2"
8	1	201606	HANDLE
9	1	215345	EXTENSION SPRING
10	1	215342	LEVER, SPRING
11	1	280409	SAFETY HOOK
12	1	055011	RUBBER HANDLE (GRIP)
13	2	201015	STOP BLOCK
14	21	901024-02	HEX HD FRAME BOLT, 1/2"-13 x 1-3/4" LG.
15	21	901023	FLANGED LOCK NUT, 1/2"-13

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ARM ASSEMBLY

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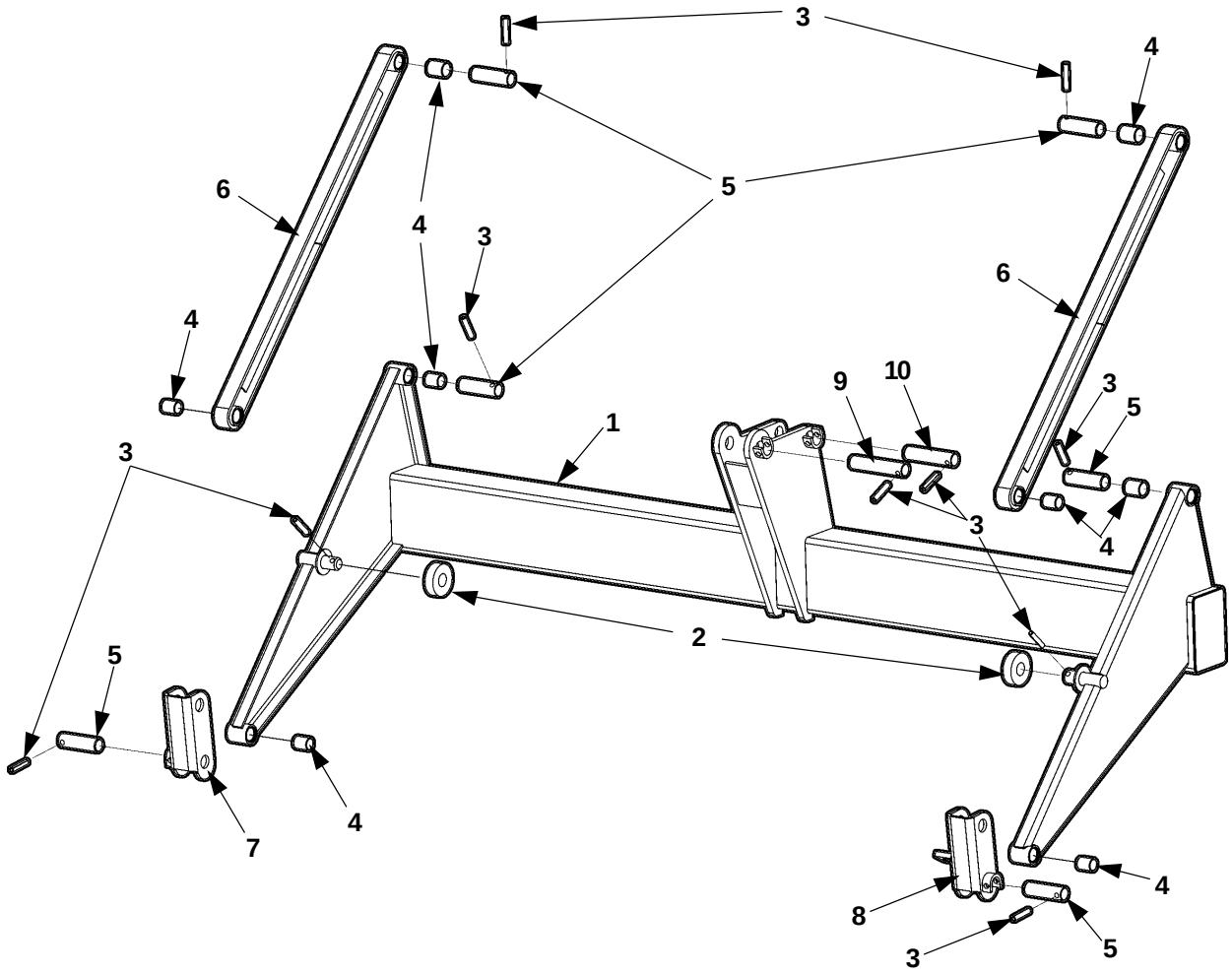
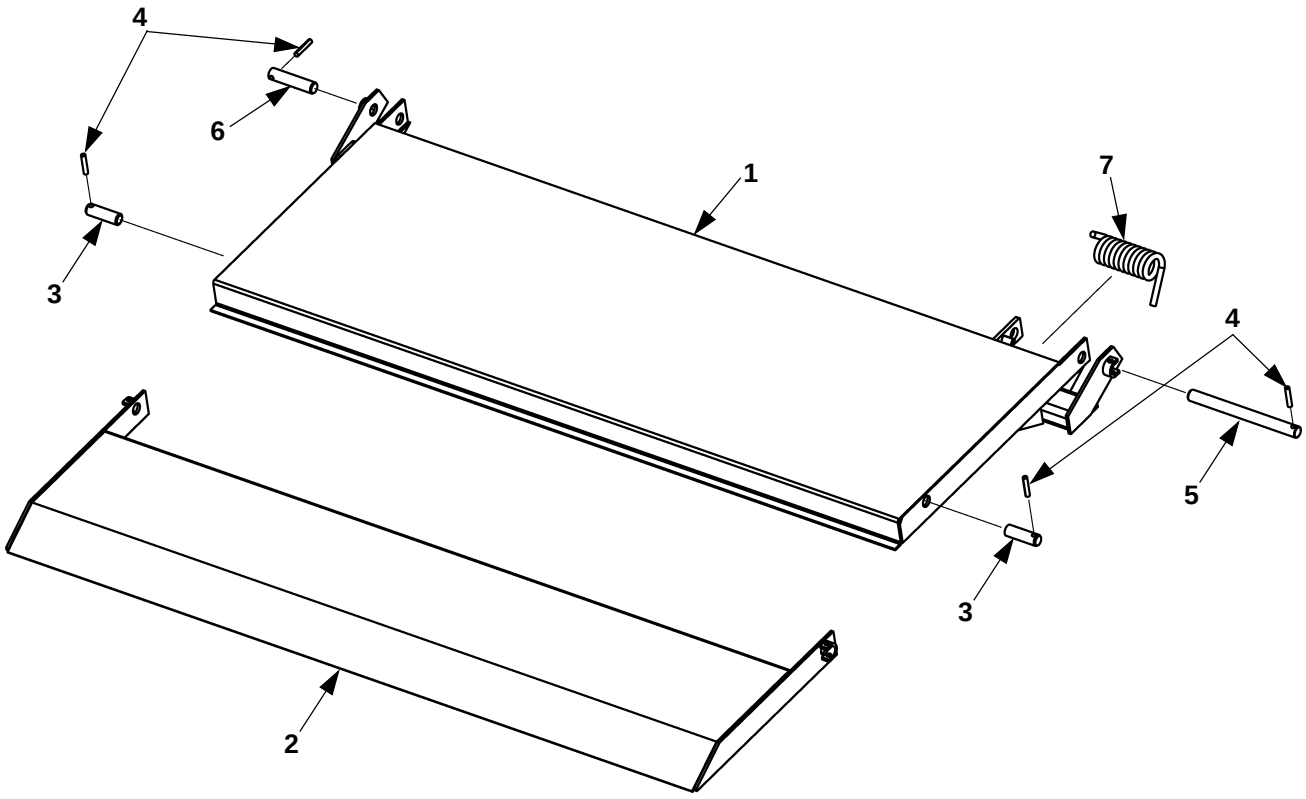


ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280264	LIFT FRAME
2	2	221867	ROLLER
3	10	221416	ROLL PIN
4	8	260363	BEARING, SELF LUBE
5	6	260368-03	PIN, 4-1/2" LG.
6	2	263325	PARALLEL ARM
7	1	280347-01	SHACKLE WELDMENT LH
8	1	280347-02	SHACKLE WELDMENT RH
9	1	260368-05	PIN, 5" LG.
10	1	260368-04	PIN, 4-1/2" LG.

PLATFORM ASSEMBLY



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280369	PLATFORM
2	1	201629	FLIPOVER, RAMP TYPE
3	2	203405-05	PIN, 3-1/4" LG.
4	4	221416	ROLL PIN
5	1	260368-02	PIN, 11" LG.
6	1	260368-04	PIN, 4-1/2" LG.
7	1	201640	SPRING, TORSION

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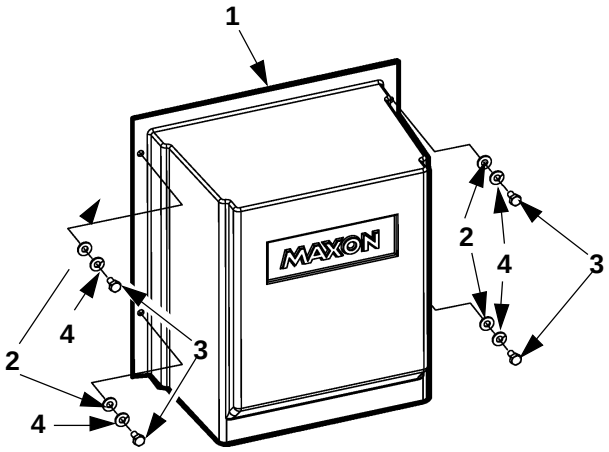
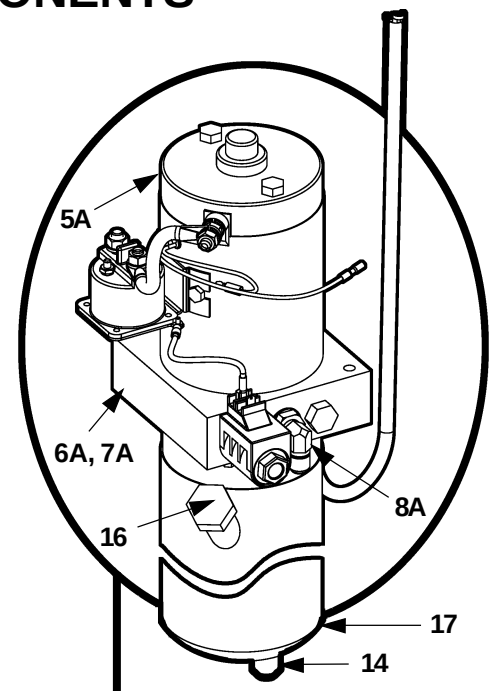
HYDRAULIC COMPONENTS

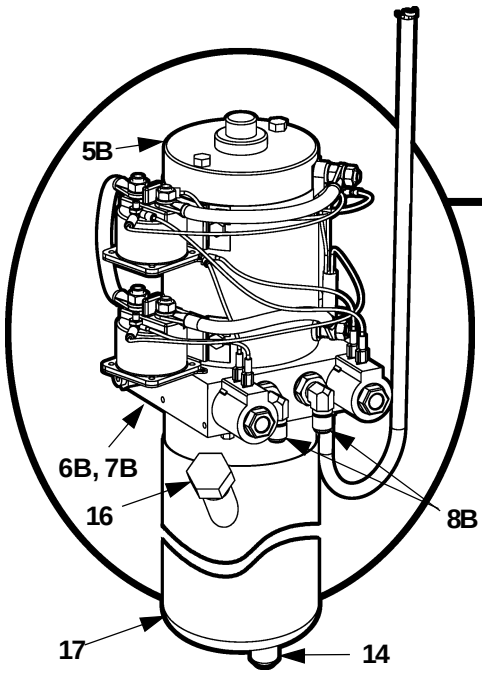


PUMP BOX COVER

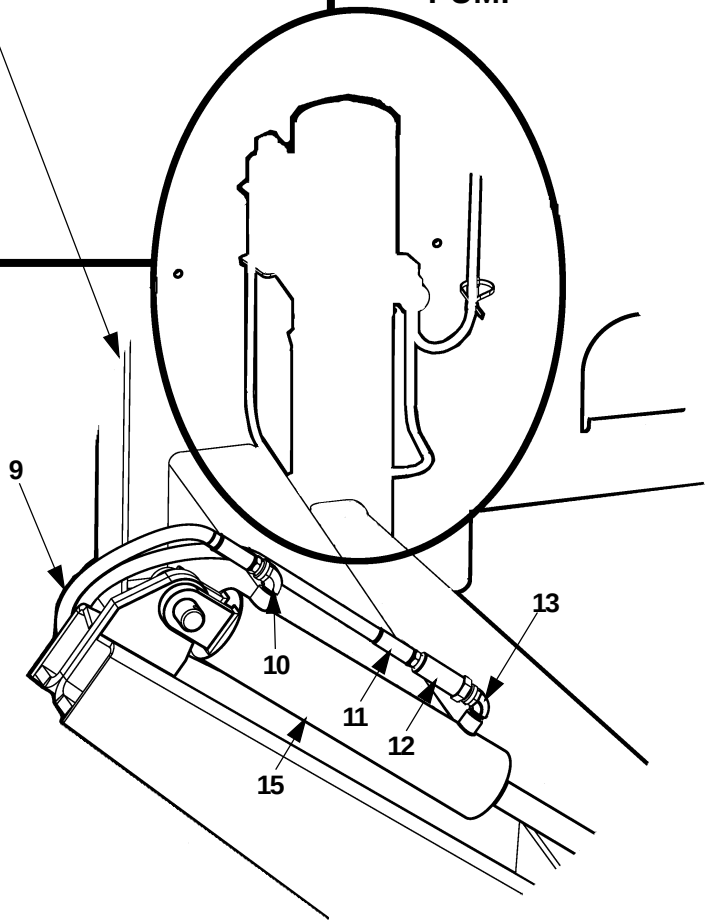


GRAVITYDOWN PUMP

RIGHT HAND SIDE PLATE
(CURB SIDE) -REFERENCE



POWERDOWN PUMP



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HYDRAULIC COMPONENTS

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280408	PUMP COVER
2	4	902013-09	FLAT WASHER, 1/4"
3	4	900000-2	HEX BOLT, 1/4"-20 X 1/2"
4	4	902011-2	LOCK WASHER, 1/4"
5A	1	REF	MOTOR (SEE GRAVITY DOWN ELECTRICAL COMPONENTS)
5B	1		MOTOR (SEE POWER DOWN ELECTRICAL COMPONENTS)
6A	1	280466	VERTICAL PUMP (GRAVITY DOWN)
6B	1	280468	VERTICAL PUMP, BI-ROTATIONAL (POWER DOWN)
7A	1	280467	BLOCK, VERTICAL PUMP MOUNT, GRAVITY DOWN
7B	1	280463	BLOCK, VERTICAL PUMP MOUNT, POWER DOWN
8A	1	905152	ELBOW 90° SAE #6 x JIC37 #6 (GRAVITY DOWN)
8B	2		ELBOW 90° SAE #6 x JIC37 #6 (POWER DOWN)
9	1	224370-19	PLASTIC HOSE, 78"
10	2	264349	ELBOW 90° MALE, 1/4" NPT
11	1	280417-01	HOSE, 3/8HP JIC#6 x 3/8 NPTF, 81.5" LG.
12	1	251739	FLOW CONTROL VALVE
13	1	227004	ELBOW 3/8 M-F 90° ST
14	1	280464	DRAIN PLUG
15	1	260372	CYLINDER (72-25C)
	1	260372-SK	SEAL KIT
	1	260392	CYLINDER (72-30)
	1	260392-SK	SEAL KIT
16	1	229193	FILLER CAP
17	1	280376	2-1/2 QT. RESERVOIR

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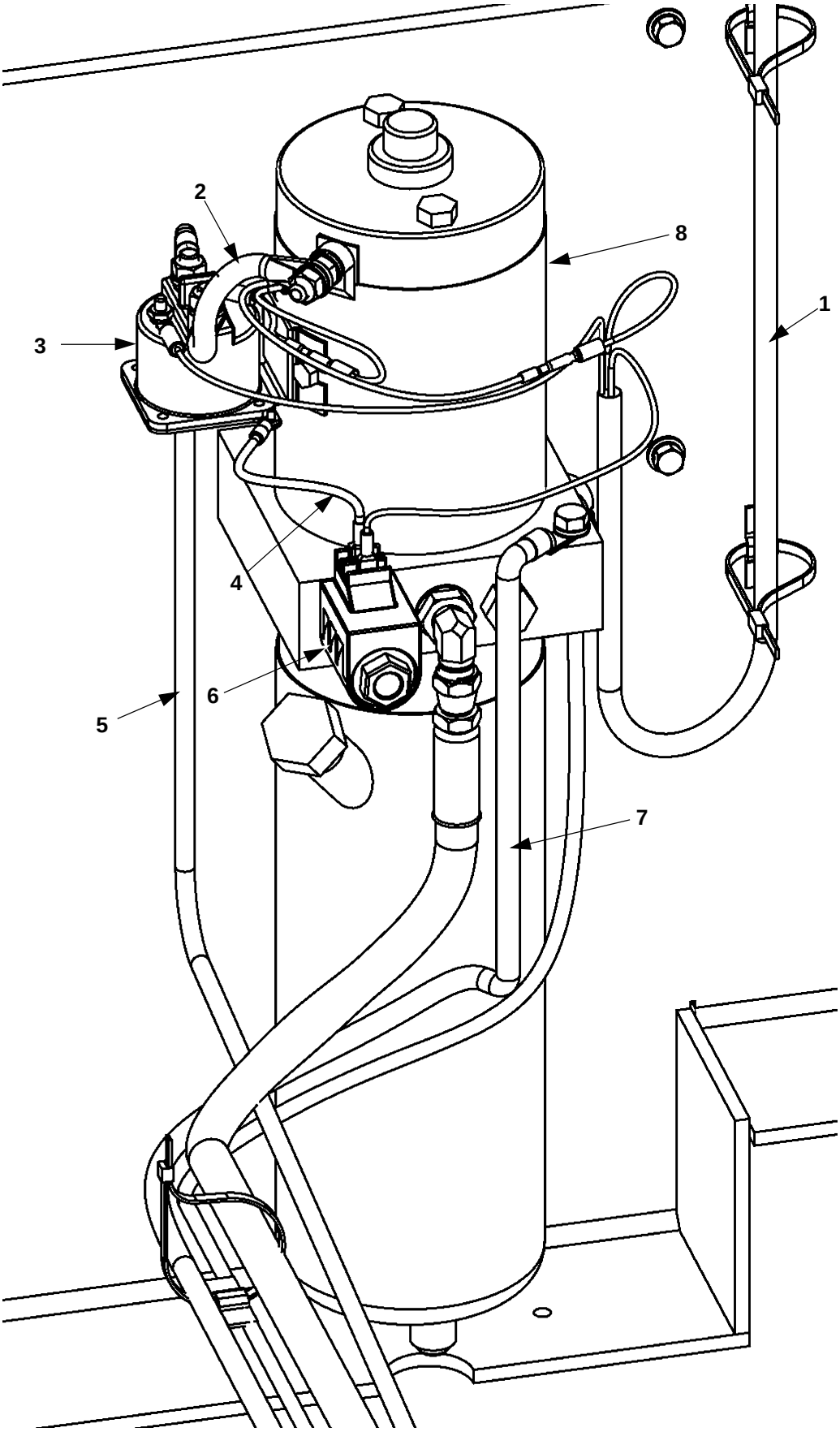
GRAVITY DOWN ELECTRIC COMPONENTS



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GRAVITY DOWN ELECTRIC COMPONENTS

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280420	CABLE ASSEMBLY (SWITCH) NOTE: FOR GRAVITY DOWN LVTS ELECTRICAL HARNESS , REFER TO OPTIONS SECTION OF MANUAL.
2	1	280404	CABLE ASSEMBLY (STARTER)
3	1	280394	MOTOR STARTER SOLENOID, 12 VOLTS DC
4	1	280416	WIRE ASSEMBLY
5	1	251871-19	POWER CABLE
6	1	280372	SOLENOID VALVE, 12 VOLTS DC
7	1	251871-06	GROUND CABLE
8	1	280374	MOTOR, 12 VOLTS DC

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POWER DOWN ELECTRIC COMPONENTS

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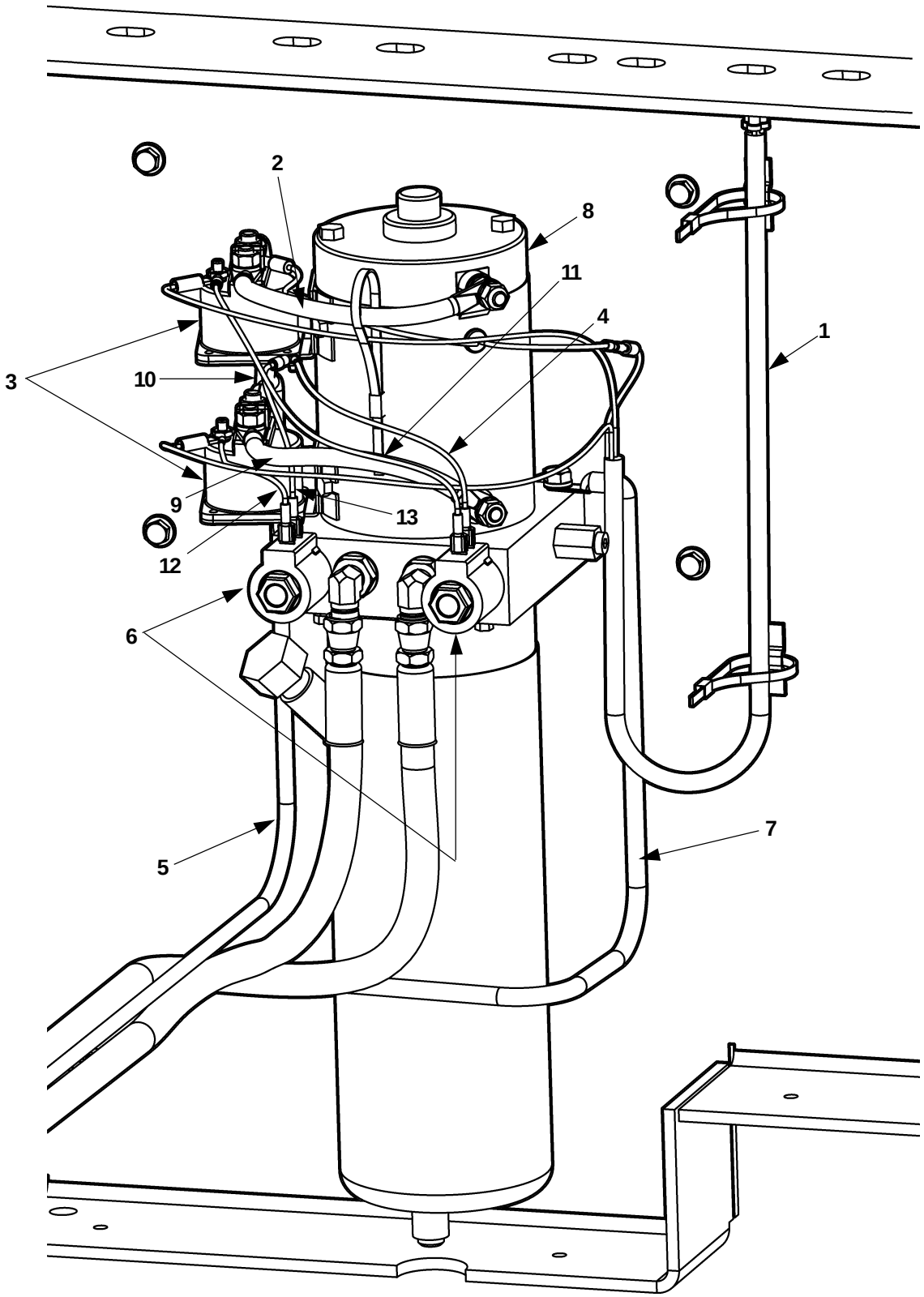

POWER DOWN ELECTRIC COMPONENTS

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280420	CABLE ASSEMBLY (SWITCH) NOTE: FOR POWER DOWN LVTS ELECTRICAL HARNESS, REFER TO OPTIONS SECTION OF MANUAL.
2	1	280402	CABLE ASSEMBLY (STARTER)
3	2	280394	MOTOR STARTER SOLENOID, 12 VOLTS DC
4	1	280399	WIRE ASSEMBLY
5	1	251871-19	POWER CABLE
6	2	280372	SOLENOID VALVE, 12 VOLTS DC
7	1	251871-06	GROUND CABLE
8	1	280381	MOTOR, 12 VOLTS DC
9	1	280413	CABLE ASSEMBLY (STARTER)
10	1	280543	CABLE ASSEMBLY (STARTER)
11	1	280415	WIRE ASSEMBLY
12	1	280401	WIRE ASSEMBLY
13	1	280414	WIRE ASSEMBLY

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DECALS

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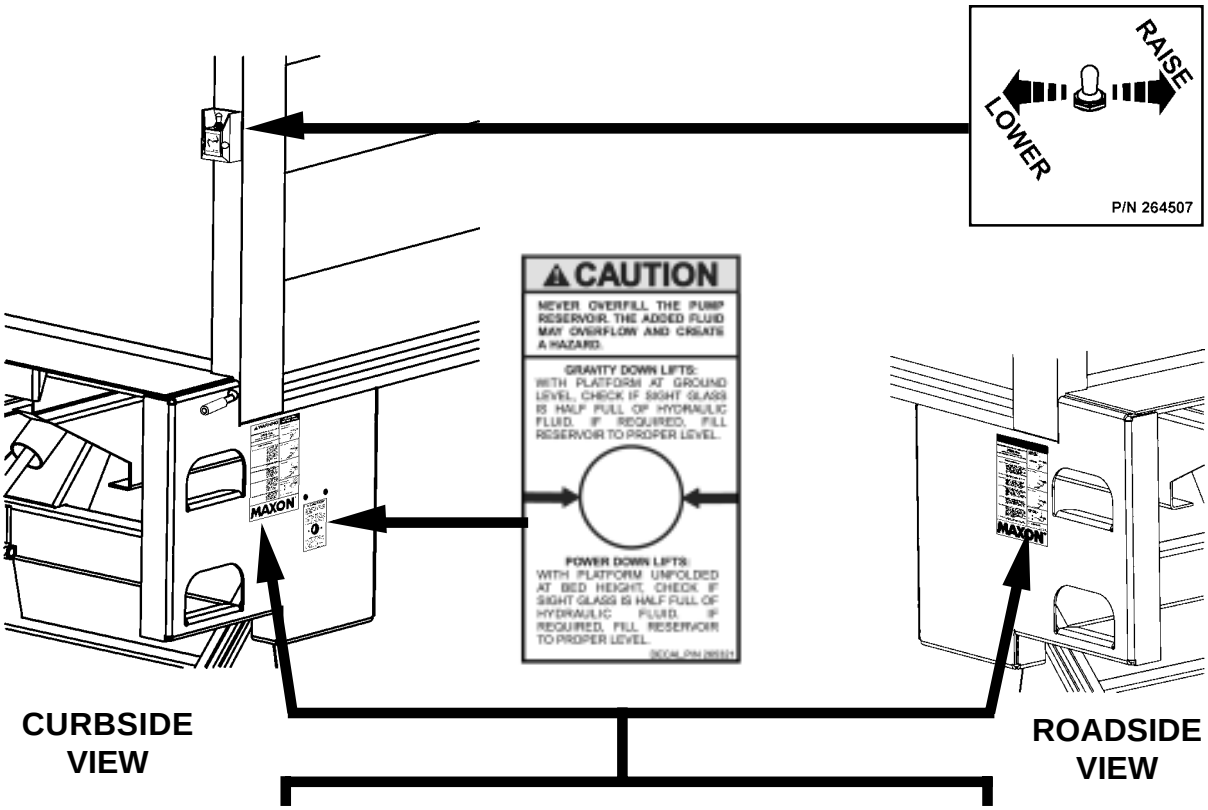
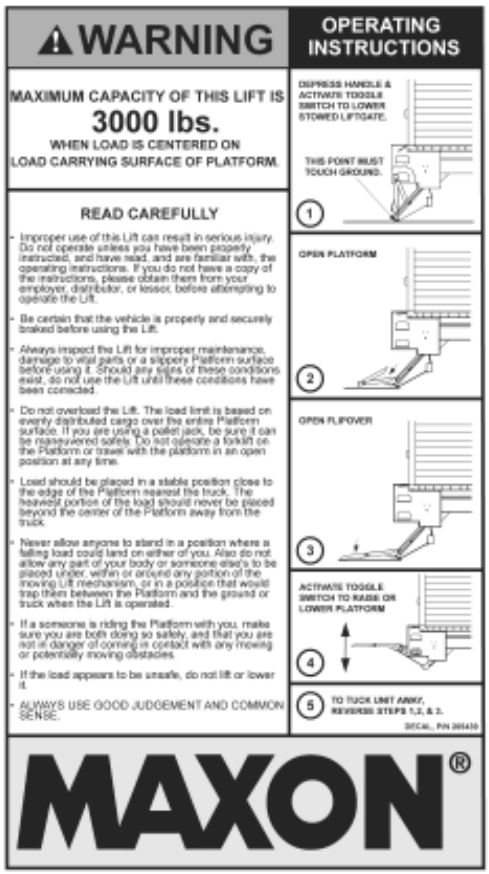
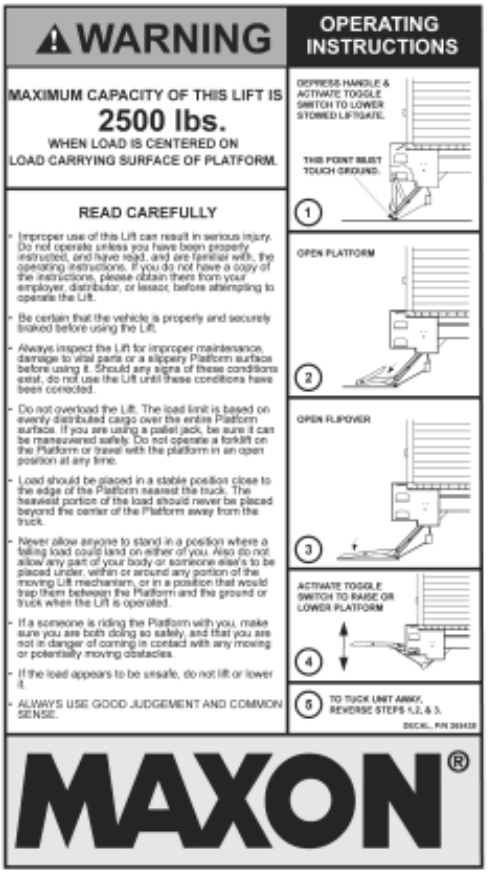




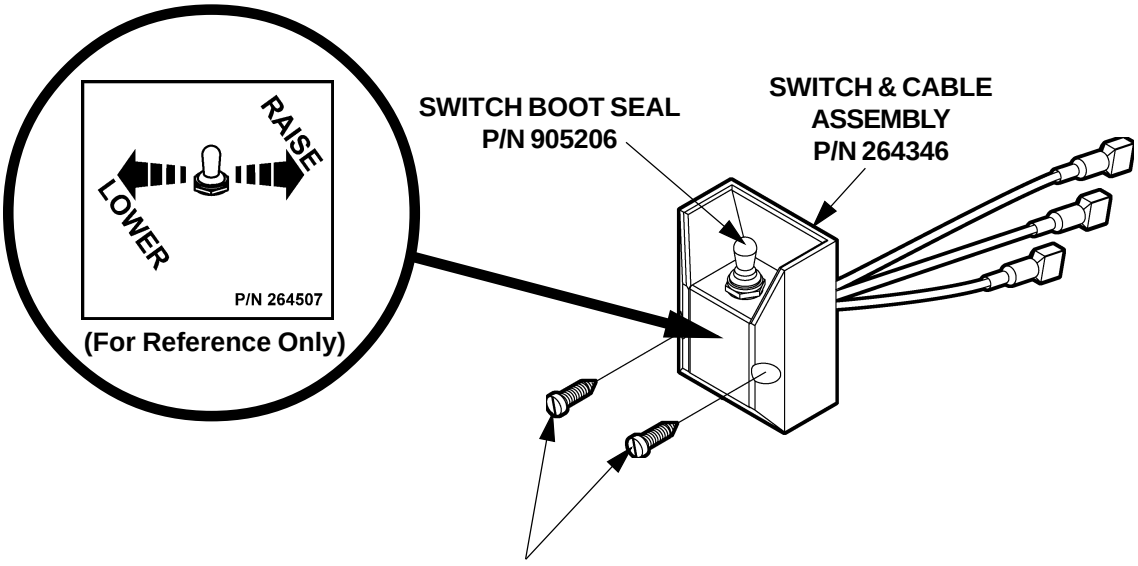
DECAL
P/N 265439

OR

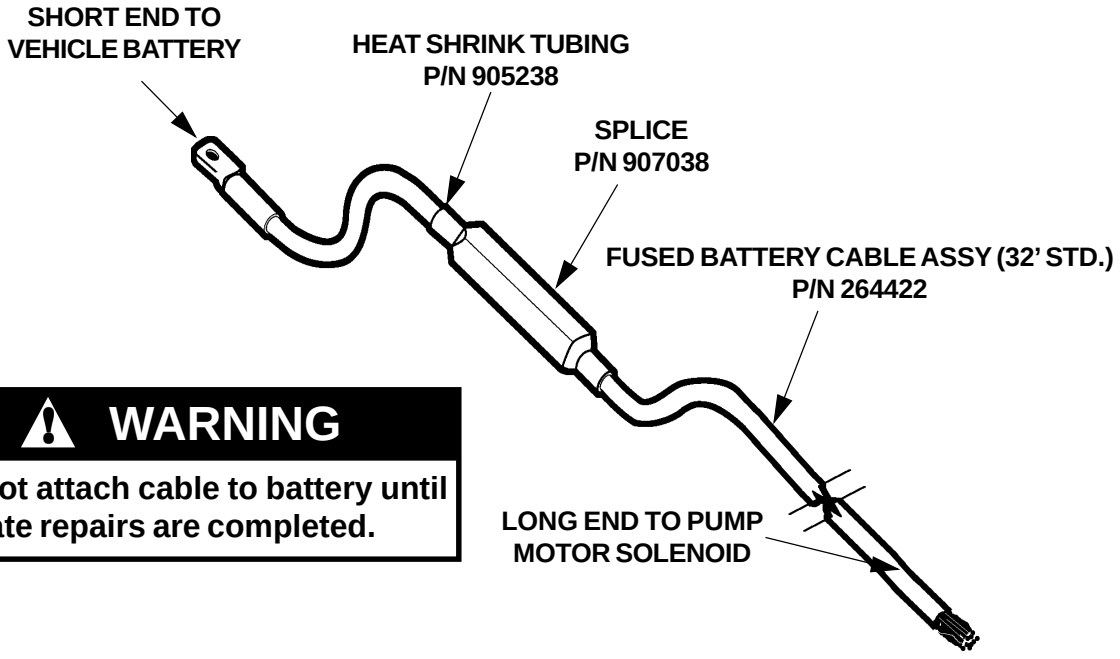


DECAL
P/N 265438

CONTROL SWITCH AND POWER CABLE



NOTE: Use Switch to **RAISE** and **LOWER** Liftgate to make sure Switch operates as shown on the decal.



⚠ WARNING

Do not attach cable to battery until liftgate repairs are completed.

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LIQUID SEALANT APPLICATION

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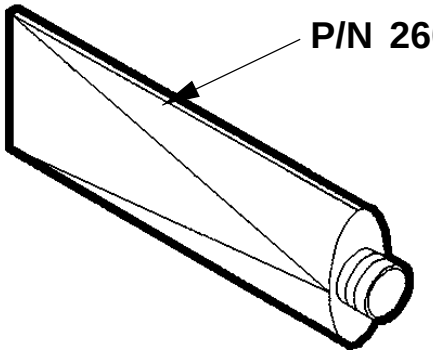
NOTE: Apply Sealant to NPT threads for cylinder and flow control valve only!

1. Clean all threads with a soft brush and a suitable cleaning solvent.
2. Dry threads thoroughly with compressed air or shop towel.
3. Apply the Liquid Sealant (Compound PLS 2), to the external threads of the Male Connector.
4. Assemble the fitting and torque it to the prescribed value.
5. Check for leakage. If leakage exists, remove the fitting and return to Step # 1.
6. If fitting is loosened or removed, return to Step # 1.



OPTIONS

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PLATFORM ASSEMBLY (72” x 40” + 10”)
- RETENTION RAMP OPTION

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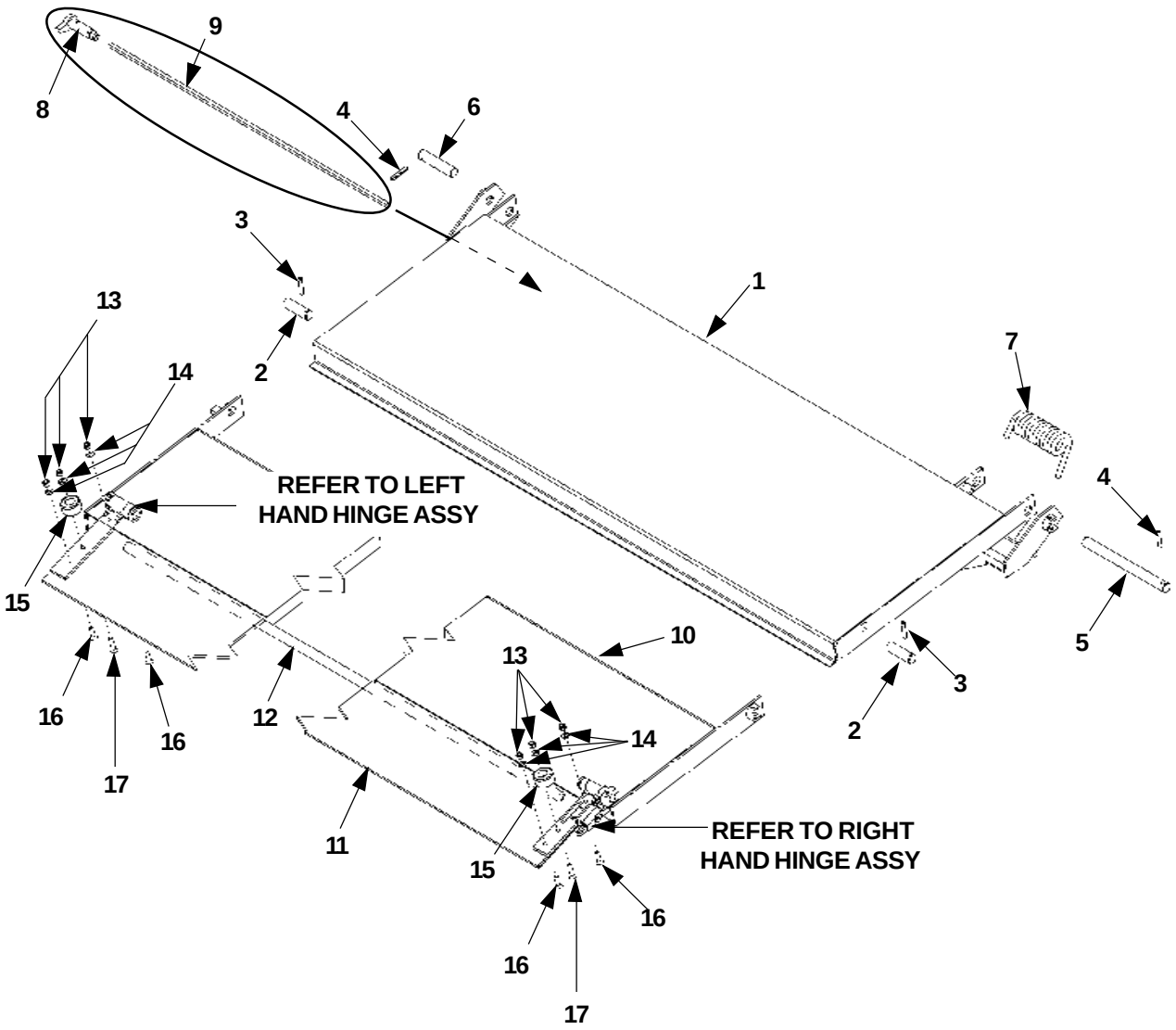

PLATFORM ASSEMBLY (72” x 40” + 10”)
- RETENTION RAMP OPTION

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280369	PLATFORM
2	2	253805	PIN WELDMENT
3	2	905033-1	ROLL PIN
4	2	221416	ROLL PIN
5	1	260368-02	PIN, 11" LG.
6	1	260368-04	PIN, 4-1/2" LG.
7	1	201640	SPRING, TORSION
8	1	253806	COLLAR
9	1	253173	TORSION BAR
10	1	201680-01	FLIPOVER
11	1	253875	RAMP, ALUMINUM 3/8"x 10"x 69" LG.
12	1	225985	PIPE, SCH - 80, 3/4" x 60" LG.
13	6	030955	NUT, SELF-LOCKING, 3/8"-16
14	6	030556	FLAT WASHER, 3/8"
15	2	253516	BUMPER, 2-1/16" x 1"
16	4	900061-5	SCREW, FLAT HEAD 3/8"-16 x 1-1/4" LG.
17	2	900061-6	SCREW, FLAT HEAD 3/8"-16 x 1-1/2" LG.

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HINGE ASSEMBLY, RIGHT HAND
P/N 253877

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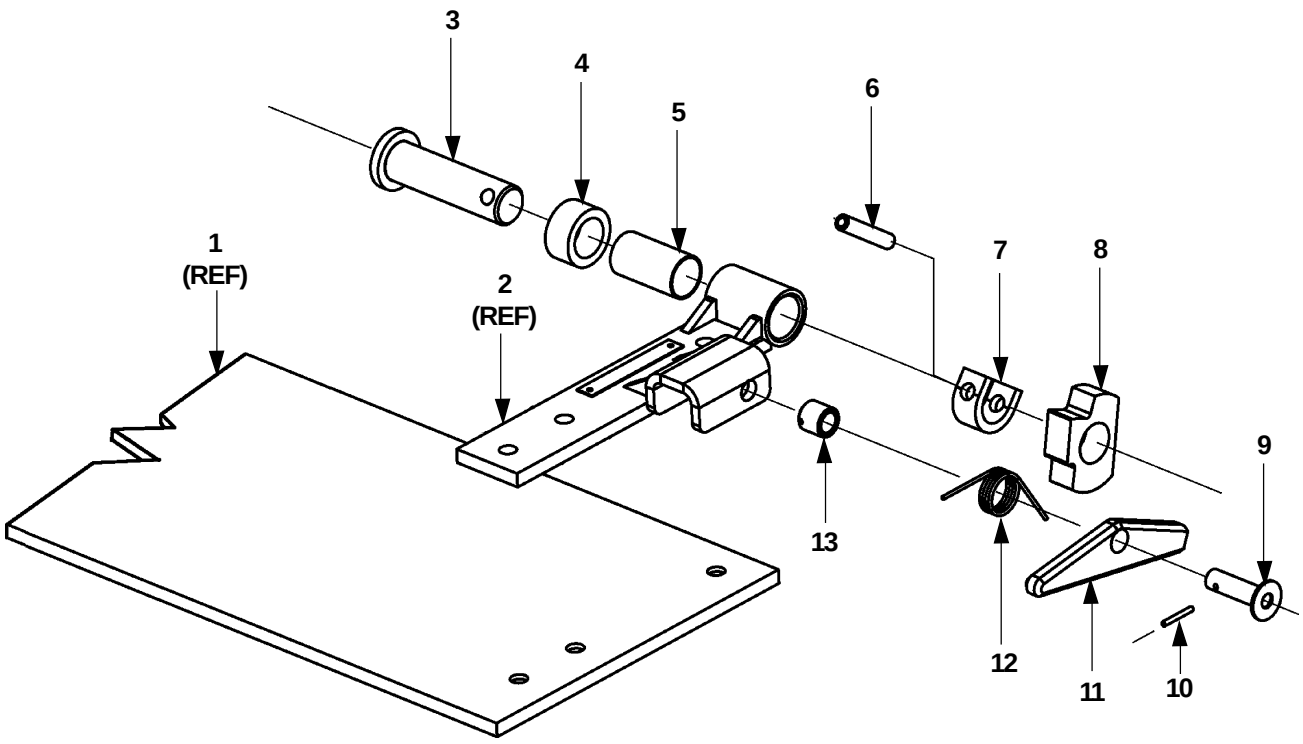
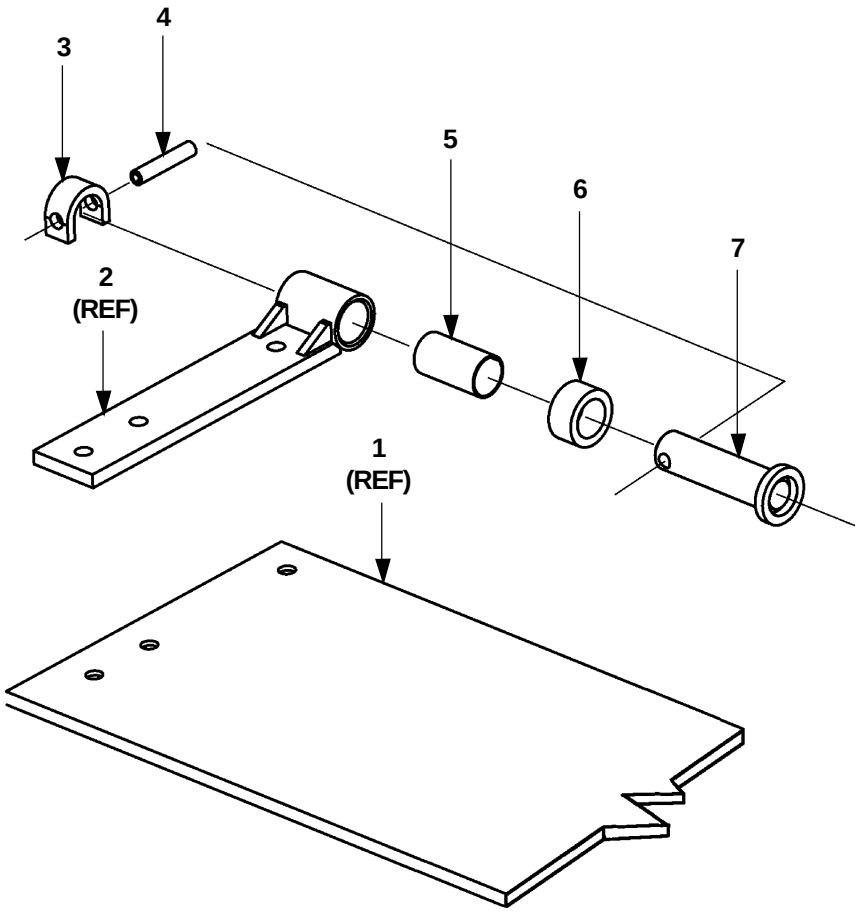


ITEM	QTY.	PART NO.	DESCRIPTION
1	1	REF	RAMP, ALUMINUM 3/8" x 10" x 69" LG.
2	1	REF	HINGE ARM WELDMENT, RIGHT HAND
3	1	253528	PIN WELDMENT
4	1	253517	BUSHING, 3/4" LG.
5	1	253541	BEARING, SELF LUBE
6	1	221416	ROLL PIN
7	1	078202	PIN COLLAR
8	1	253533	LOCKING CAM
9	1	253538	PIN WELDMENT
10	1	030406	ROLL PIN
11	1	253537	LOCKING ARM WELDMENT
12	1	252460	SPRING, TORSION
13	1	253542	BEARING, SELF LUBE

HINGE ASSEMBLY, LEFT HAND
P/N 253876



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	REF	RAMP, ALUMINUM 3/8" x 10" x 69" LG.
2	1	REF	HINGE ARM WELDMENT, LEFT HAND
3	1	078202	PIN COLLAR
4	1	221416	ROLL PIN
5	1	253541	BEARING, SELF LUBE
6	1	253517	BUSHING, 3/4" LG.
7	1	253528	PIN WELDMENT

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PLATFORM ASSEMBLY - WEDGE FLIPOVER OPTION

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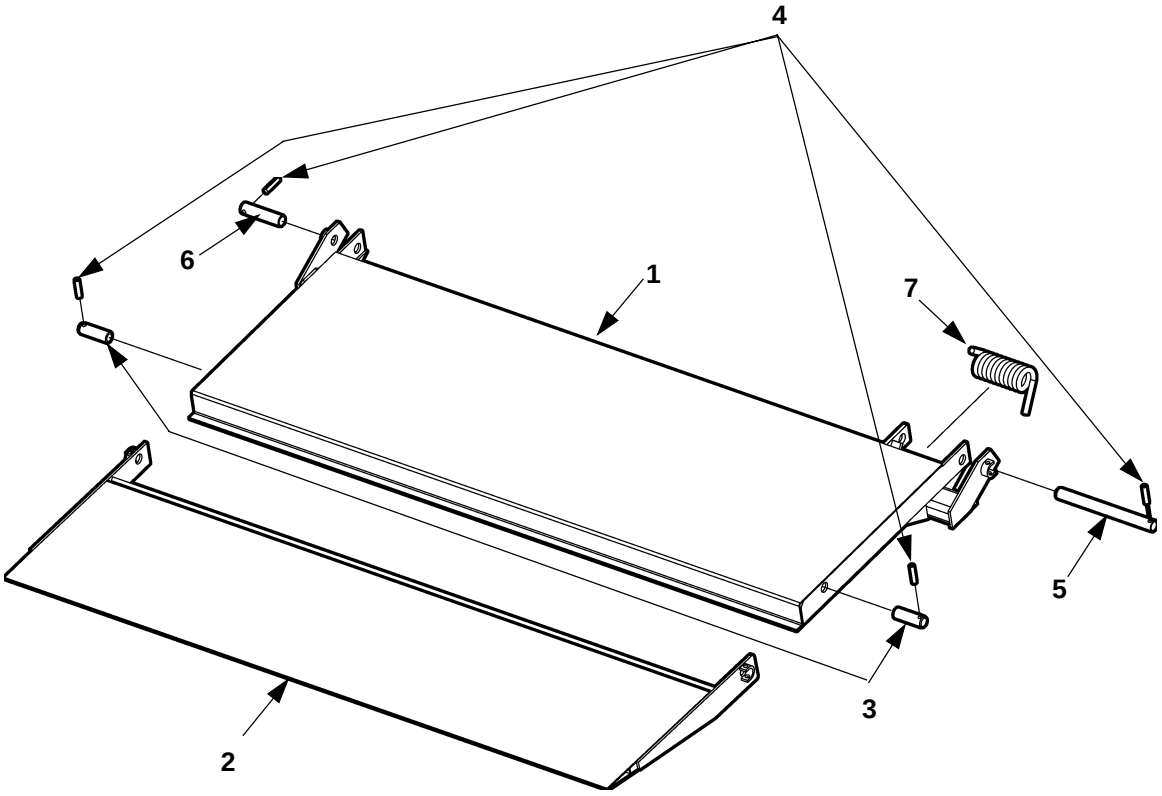
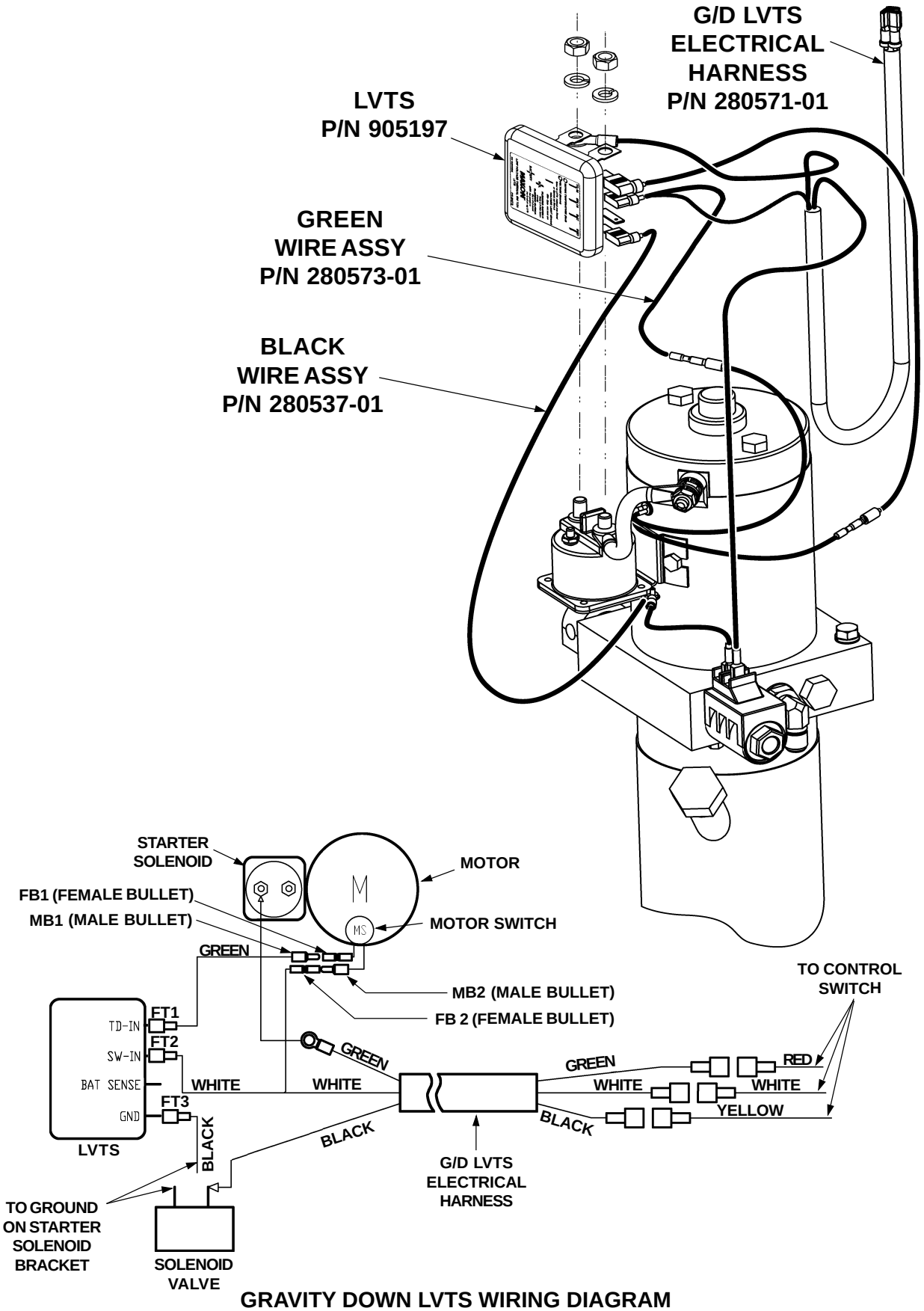


ITEM	QTY.	PART NO.	DESCRIPTION
1	1	280369	PLATFORM
2	1	213085	FLIPOVER, WEDGE TYPE
3	2	203405-05	PIN, 3-1/4" LG.
4	4	221416	ROLL PIN
5	1	260368-02	PIN, 11" LG.
6	1	260368-04	PIN, 4-1/2" LG.
7	1	201640	SPRING, TORSION

GRAVITY DOWN LOW VOLTAGE SWITCH (LVTS)



GRAVITY DOWN LVTS WIRING DIAGRAM

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POWER DOWN LOW VOLTAGE SWITCH (LVTS)

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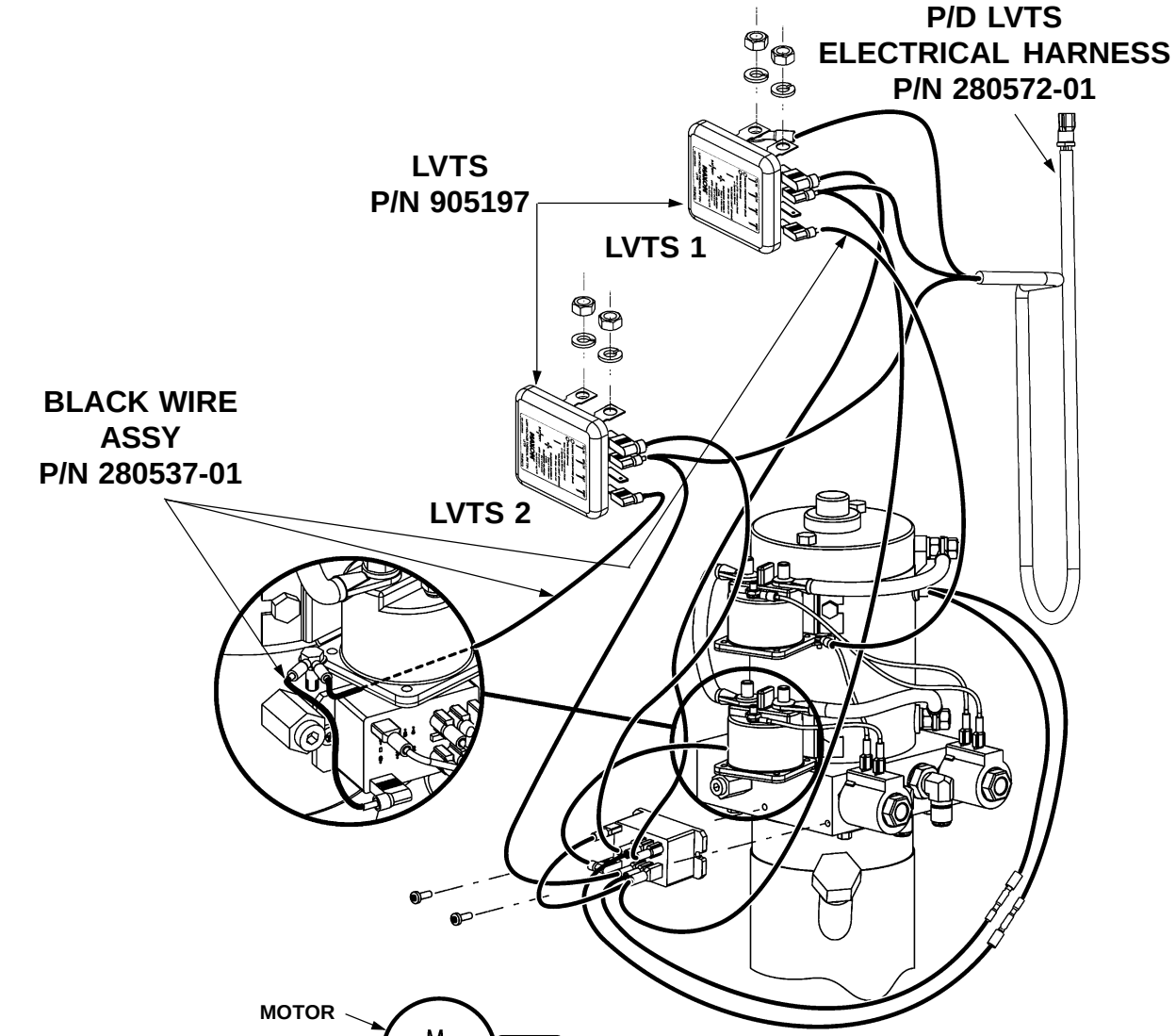

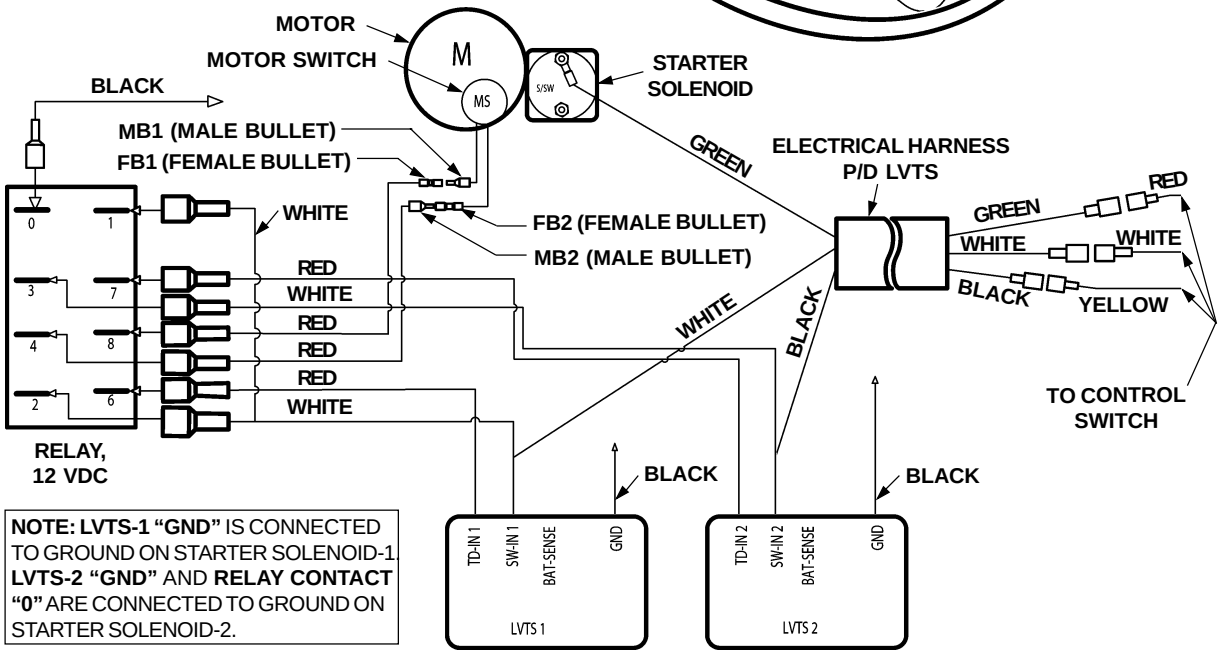

NOTE: LVTS-1 "GND" IS CONNECTED TO GROUND ON STARTER SOLENOID-1. **LVTS-2 "GND"** AND **RELAY CONTACT "0"** ARE CONNECTED TO GROUND ON STARTER SOLENOID-2.

POWER DOWN LVTS WIRING DIAGRAM

TROUBLESHOOTING

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PLATFORM WILL NOT RAISE

1. Use voltmeter to verify that power is being supplied to Solenoid Terminal “A”. Recharge the battery if less than 12.6 volts.

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. Fill Reservoir to within 1/2” below the top with the hydraulic fluid recommended in the Periodic Maintenance Checklist.

3. Touch a jumper wire to terminals “A” & “C”. If motor runs check Switch, switch connections, and White wire. Check and correct wiring connections or replace the Switch.

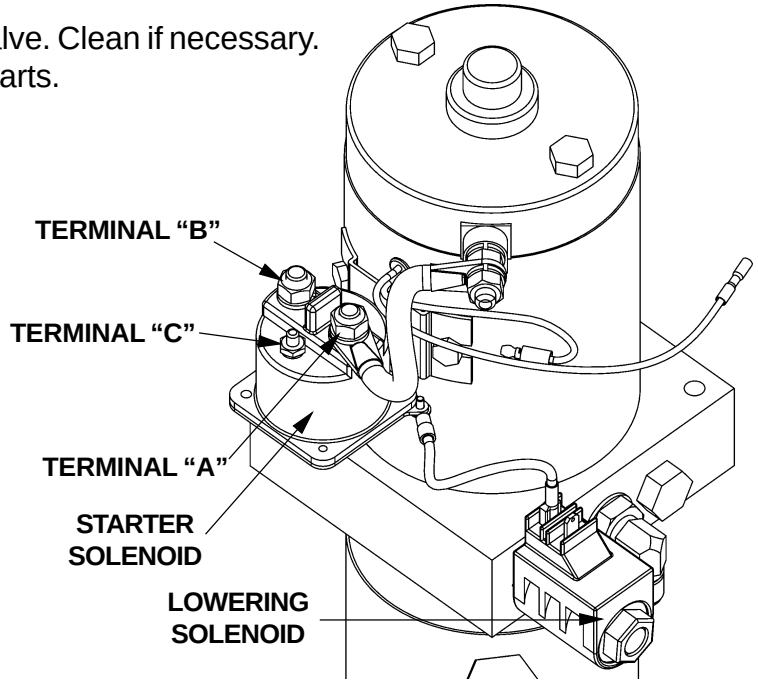
4. Touch heavy jumper cables to terminals “A” & “B”.
   a. If motor runs, replace the motor solenoid.
   b. If motor does not run, repair or replace the pump motor.

NOTE: In most cases, you can avoid having to bleed the hydraulic system by correctly positioning Liftgate Platform before opening hydraulic lines. Refer to following procedure. Save time on the job and prevent accidental fluid spills and hazards.

5. Check for structural damage and replace worn parts.

6. Check filter in the pump Reservoir. Replace filter if necessary.

7. Check for dirty pump motor relief valve. Clean if necessary. Replace any worn out relief valve parts.



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PLATFORM RAISES BUT LEAKS DOWN

1. Check if Solenoid Valves are constantly energized by touching a screwdriver to the top nut of the Solenoid **(FIG. 1)**. Try pulling the screwdriver away from the solenoid. If the solenoid nut attracts the screwdriver (magnetically) without pushing the toggle switch, the control circuit is operating incorrectly. Check if toggle switch, wiring or coil are faulty.

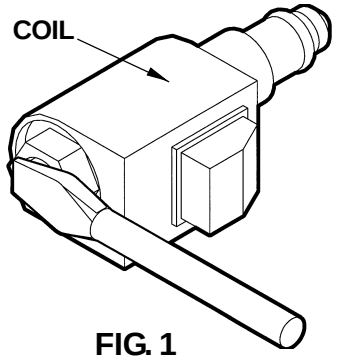

FIG. 1

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.

NOTE: In most cases, you can avoid having to bleed the hydraulic system by correctly positioning Liftgate Platform before opening hydraulic lines. Refer to following procedure. Save time on the job and prevent accidental fluid spills and hazards.

2. Check the Valve Stem by removing the Coil Assembly **(Item 1, FIG. 2)**. With platform on ground, unscrew the Valve Stem, **(Item 2, FIG. 2)** from the Pump. Push on the plunger that is located inside the Valve Stem by inserting a paper clip in the end. If the Plunger does not move freely (approximately 1/8") replace the Valve Stem. **When re-installing valve stem, torque hex nut to 30 lbs-in.**

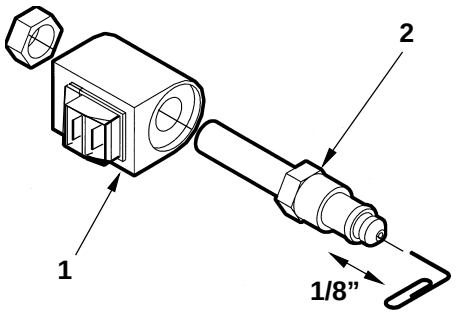

FIG. 2

3. Check the Hydraulic Cylinder. With the Platform on the ground, remove the Breather Plug or Vent Line from the Vent Port of the Cylinder **(FIG. 3)**. Raise the Platform even with the bed. Allow pump motor to run two seconds more while you watch for hydraulic fluid at the Vent Port. A few drops of hydraulic fluid escaping the Vent Port is normal; however, if it streams from the Vent Port, Piston Seals are worn. Replace Seals.

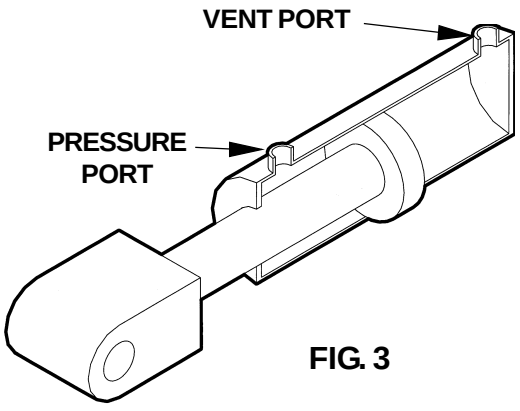

FIG. 3

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PLATFORM RAISES PARTIALLY AND STOPS

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.

1. Lower the opened Platform to the ground. Fill the Pump Reservoir on Gravity-Down Liftgates to within 1/2" below the top with hydraulic fluid recommended in Periodic Maintenance Checklist.

2. Use voltmeter to verify that the Battery shows 12.6 volts or more.

3. Check for Structural damage, or poor lubrication. Replace worn parts.

NOTE: In most cases, you can avoid having to bleed the hydraulic system by correctly positioning Liftgate Platform before opening hydraulic lines. Refer to following procedure. Save time on the job and prevent accidental fluid spills and hazards.

4. Check the Hydraulic Cylinder. With the Platform on the ground, remove the Breather Plug or Vent Line from the Vent Port of the Cylinder **(FIG. 3)**. Raise the Platform even with the bed. Allow pump motor to run two seconds more while you watch for hydraulic fluid at the Vent Port. A few drops of hydraulic fluid escaping the Vent Port is normal; however, if it streams from the Vent Port, Piston Seals are worn. Replace Seals.

5. Check Filter in the Pump Reservoir. Replace filter if necessary.

6. Check for dirty pump motor relief valve. Clean if necessary. Replace any worn out relief valve parts.

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LIFTGATE WILL NOT LIFT RATED CAPACITY

1. Use voltmeter to verify that the Battery shows 12.6 volts or more under load from pump motor.

2. Check for Structural damage or lack of lubrication.Replace worn parts.

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.

NOTE: In most cases, you can avoid having to bleed the hydraulic system by correctly positioning Liftgate Platform before opening hydraulic lines. Refer to following procedure. Save time on the job and prevent accidental fluid spills and hazards.

3. With Platform on the ground, remove the pressure hose and fitting from the Pump and replace it with a 0-3000 PSI Pressure Gauge. Hold the switch in the "UP" position. Adjust the Relief Valve on the side of the Pump until the gauge shows 2800 to 3000 PSI **(FIG. 5)**. Remove guage and re-install pressure hose.

4. Check for dirty pump motor relief valve. Clean if necessary. Replace any worn out relief valve parts.

5. Check the Hydraulic Cylinder. With the Platform on the ground, remove the Breather Plug or Vent Line from the Vent Port of the Cylinder **(FIG. 4)**. Raise the Platform even with the bed. Allow pump motor to run two seconds more while you watch for hydraulic fluid at the Vent Port. A few drops of hydraulic fluid escaping the Vent Port is normal; however, if it streams from the Vent Port, Piston Seals are worn. Replace Seals.

6. If Pump cannot produce 2800-3000 PSI with a minimum of 12.6 Volts available, the Pump is worn and needs to be replaced.

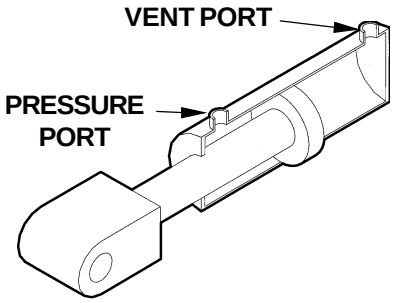

FIG. 4

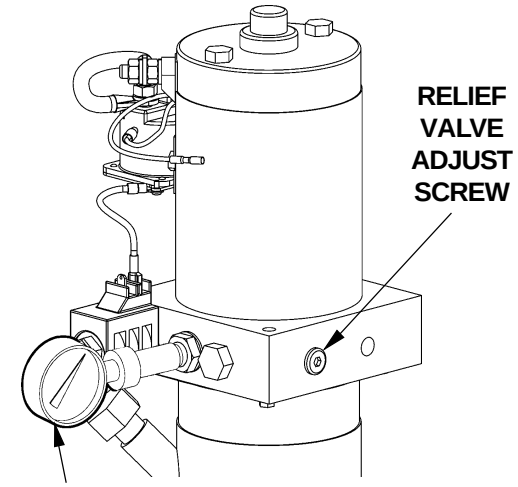

FIG. 5

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PLATFORM RAISES SLOWLY

1. Use voltmeter to verify that power is being supplied to Solenoid Terminal "A". Recharge the battery if voltmeter indicates less than 12.6 Volts **(FIG. 6)**.

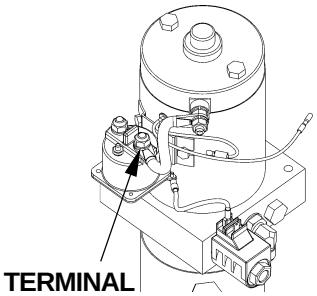

FIG. 6

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. Check the Hydraulic Cylinder. With the Platform on the ground, remove the Breather Plug or Vent Line from the Vent Port of the Cylinder **(FIG. 8)**. Raise the Platform even with the bed. Allow pump motor to run two seconds more while you watch for hydraulic fluid at the Vent Port. A few drops of hydraulic fluid escaping the Vent Port is normal; however, if it streams from the Vent Port, Piston Seals are worn. Replace Seals.

NOTE: In most cases, you can avoid having to bleed the hydraulic system by correctly positioning Liftgate Platform before opening hydraulic lines. Refer to following procedure. Save time on the job and prevent accidental fluid spills and hazards.

3. Check and clean Flow Control Valve in high pressure hydraulic line attached to Cylinder. When installing Flow Control Valve make sure arrow on valve is oriented as shown in **(FIG. 8)**.

4. Lower the opened Platform to the ground. Fill the Pump Reservoir on Gravity-Down Liftgates to within 1/2" below the top with hydraulic fluid recommended in Periodic Maintenance Checklist.

5. Verify the Pump Motor is grounded to the vehicle frame.

6. Check for leaking hoses and fittings. Tighten or replace as required.

7. Check for structural damage or poor lubrication. Replace worn parts.

8. Check the Filter in the Pump Reservoir. Replace if necessary.

9. With Platform on the ground, remove the pressure hose and fitting from the Pump and replace it with a 0-3000 PSI Pressure Gauge. Hold the Control switch in the "RAISE" position. Adjust the Relief Valve on the side of the Pump until the gauge shows 2800 to 3000 PSI **(FIG. 7)**. Remove guage and re-install pressure hose.

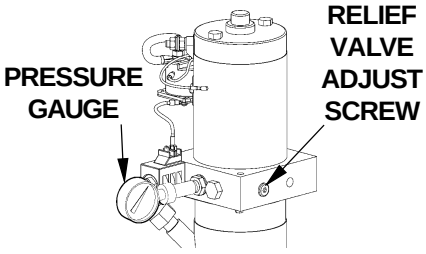

FIG. 7

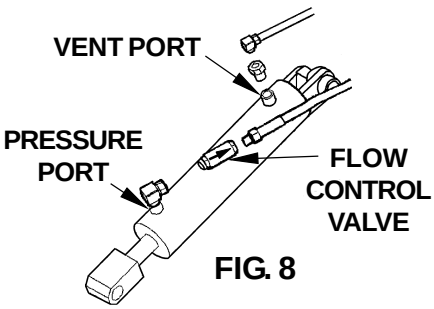

FIG. 8

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

1. Use voltmeter to verify that power is being supplied to Solenoid Terminal “A”. Recharge the battery if voltmeter indicates less than 12.6 Volts **(FIG. 9)**.

2. Check for structural damage or poor lubrication. Replace worn parts.

3. Check if Solenoid Valve is getting power by holding a screwdriver against the top nut of the Solenoid. Push Control Switch to **“LOWER”** position to energize solenoid **(FIG. 10)**. A good solenoid will attract (magnetically) the screwdriver to the nut and make it difficult to pull the screwdriver away from the nut.

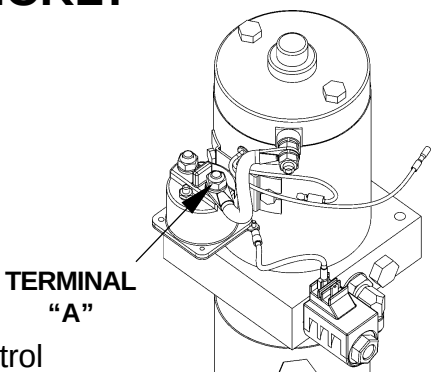

FIG. 9

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.

NOTE: In most cases, you can avoid having to bleed the hydraulic system by correctly positioning Liftgate Platform before opening hydraulic lines. Refer to following procedure. Save time on the job and prevent accidental fluid spills and hazards.

4. Check the Valve Stem by removing the Coil Assembly **(Item 1, FIG. 11)**. With platform supported, unscrew the Valve Stem **(Item 2, FIG. 11)** from the Pump. Push on the plunger located inside the Valve Stem by inserting a paper clip in the end. If the Plunger does not move freely (approximately 1/8”) replace the Valve Stem.

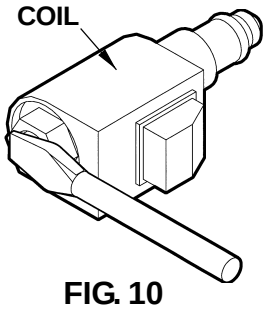

FIG. 10

5. Check if filtering screen on solenoid valve is plugged. Clean carefully if required.

6. Check and clean Flow Control Valve in high pressure hydraulic line attached to Cylinder.

7. Check if Flow Control Valve must point in the direction of restricted fluid flow (back toward pump). If required, remove Flow Control Valve and install it correctly.

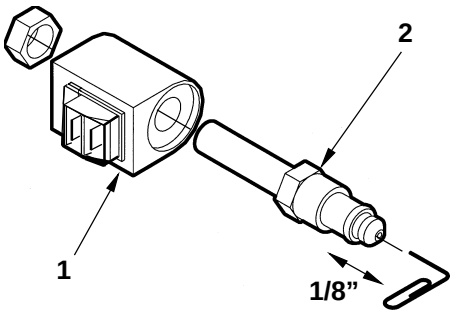

FIG. 11

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