



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/ RMA POLICY & PROCEDURE

#### LIFTGATE WARRANTY

Term of Warranty: 2 Years from Date of In-Service (In service date cannot exceed 3 months from ship date.) Type of Warranty: Full Parts and Labor

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**.)

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 on-line at **www.maxonlift.com**. On-line 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.

#### 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 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.

# TABLE OF CONTENTS

WARNINGS	6
LIFTGATE TERMINOLOGY	7
SERVICE TIME CHART	8
PERIODIC MAINTENANCE CHECKLIST	10
CHANGING HYDRAULIC FLUID	11
ADJUSTMENTS	13
PLATFORM ADJUSTMENT	14
SADDLE ADJUSTMENT	
REPLACING PLATFORM TORSION SPRING	17
PARTS BREAKDOWN	18
80 SERIES FINALASSEMBLY	19
80 SERIES MAIN FRAME & LIFTING FRAME	20
PLATFORM & FLIPOVER ASSY (NO CART STOP)	22
PLATFORM & FLIPOVER ASSY (SINGLE CART STOP)	23
FLIPOVER (SINGLE CART STOP)	
PLATFORM & FLIPOVER ASSY (DUAL CART STOP)	25
FLIPOVER (DUAL CART STOP)	
HYDRAULIC COMPONENTS - GRAVITY DOWN	
PUMP BOX ASSEMBLY - GRAVITY DOWN	29
HYDRAULIC COMPONENTS - POWER DOWN	30
PUMP BOX ASSEMBLY - POWER DOWN	31
CONTROL SWITCH AND POWER CABLE	32
DECALS	33

# **TABLE OF CONTENTS - Continued**

SCHEMATICS	36
HYDRAULIC SCHEMATIC - GRAVITY DOWN	37
ELECTRICAL SCHEMATIC - GRAVITY DOWN	38
HYDRAULIC SCHEMATIC - POWER DOWN	39
ELECTRICAL SCHEMATIC - POWER DOWN	40
TROUBLESHOOTING	41
PLATFORM WILL NOT RAISE	42
PLATFORM RAISES BUT LEAKS DOWN	43
PLATFORM RAISES PARTIALLY AND STOPS	44
LIFTGATE WILL NOT LIFT RATED CAPACITY	45
PLATFORM RAISES SLOWLY	46
PLATFORM WILL NOT LOWER, LOWERS TOO SLOWLY, OR LOWERS TOO QU	ICKLY 47

MAXON<sup>®</sup> 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

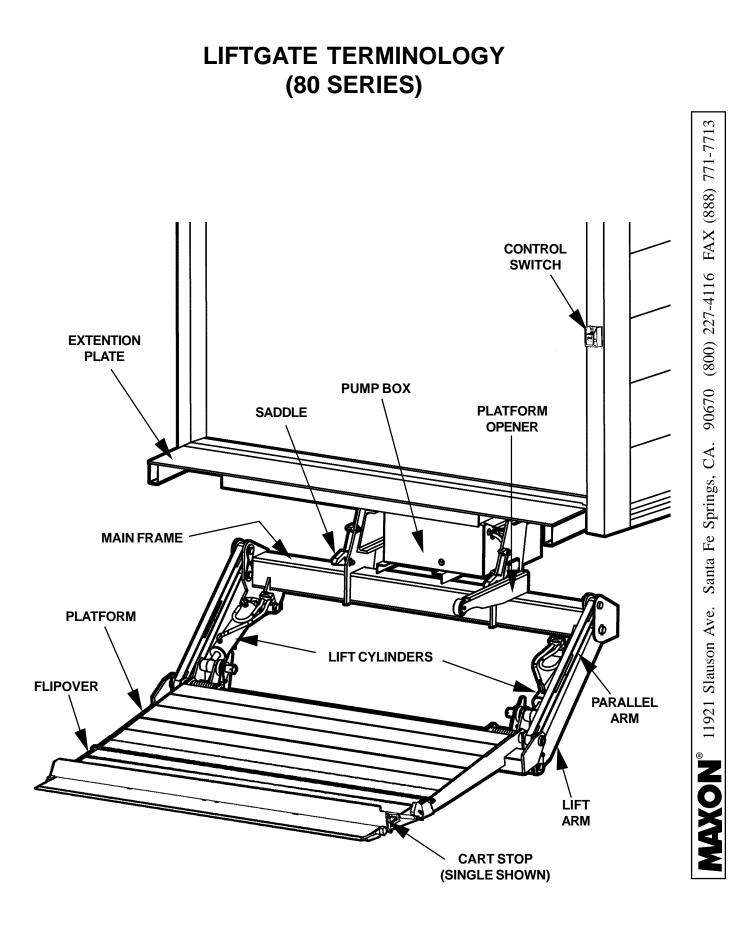
Comply with the following WARNINGS while maintaining Liftgates. See Operation Manual M-00-37 for operating safety requirements.

#### A WARNINGS

- 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-97-37.
- 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.



## SERVICE TIME CHART

STRUCTURAL SERVICE TO BE PERFORMED	TIME REQ'D. (HOURS)
CHANGE PLATFORM PINS (EACH)	.50
CHANGE ALL PINS	3.00
CHANGE GREASELESS BUSHINGS (EACH)	.25
CHANGE PLATFORM TORSION SPRING	1.00
CHANGE EXTENSION PLATE	1.50
CHANGE LIFTFRAME ASSEMBLY	1.00
CHANGE PARALLEL ARM (EACH)	.50
CHANGE SHACKLES (EACH)	.50
CHANGE PLATFORM OPENER	.50
CHANGE PLATFORM LOCKING LATCH	.50
CHANGE ENTIRE PLATFORM	2.00
CHANGE PLATFORM MAIN SECTION	1.50
CHANGE PLATFORM FOLDING SECTION (ALUMINUM)	1.00
REPLACE FOLDING SECTION HINGE PIN (ALUMINUM)	2.00
ADJUST PLATFORM SLOPE	.50

ELECTRICAL SERVICE TO BE PERFORMED	TIME REQ'D. (HOURS)
CHANGE MOTOR	1.00
CHANGE MOTOR SOLENOID	.50
CHANGE SOLENOID VALVE COIL (EACH)	.50
CHANGE POWER PACK, COMPLETE	1.00
CHANGE OUTSIDE SWITCH ASSEMBLY	.50
CHANGE CIRCUIT BREAKER	.50
CHANGE TOGGLE SWITCH (EACH)	.50
CHANGE WIRING HARNESS OUTSIDE	1.00

HYDRAULIC SERVICE TO BE PERFORMED	TIME REQ'D. (HOURS)
CHANGE PUMP ASSEMBLY	1.00
CHANGE PUMP RESERVOIR	1.00
CHANGE AUXILIARY HAND PUMP	1.00
RESET PUMP AND RELIEF VALVE PRESSURE	.50
ADJUST LOWERING SPEED	.25
CHANGE EXTERNAL FLOW CONTROL VALVE	.50
CHANGE/CLEAN CARTRIDGE VALVE	1.00
CHANGE LIFT CYLINDER (EACH)	1.00
CHANGE EXTERNAL HYDRAULIC HOSES (EACH)	.25
CHANGE RETURN LINE (EACH)	.50

# PERIODIC MAINTENANCE CHECKLIST

# WARNING

Never operate the Liftgate with parts loose or missing.

# 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.

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#### **GRAVITY DOWN LIFTGATES**

- 1. Place empty 5 Gallon Bucket 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. 1B), Refill reservoir with hydraulic fluid to the top of FILL LEVEL bar shown on decal (FIG.1B). 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).

#### **POWER DOWN LIFTGATES**

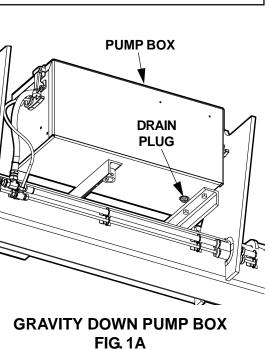
- 1. Place empty 5 Gallon Bucket under Drain Plug.
- 2. Open and raise Platform to vehicle bed height. Remove the Drain Plug (FIG. 1A). Drain hydraulic fluid.
- 3. Disconnect the White Wire (FIG. 1B) from Motor Solenoid. Lower the Platform while draining the remaining hydraulic fluid from system. Re-install Drain Plug. Reconnect the White Wire to Motor Solenoid.
- Remove Filler Cap (FIG. 1B). Refill reservoir with hydraulic fluid to the top of FILL LEVEL bar shown on decal (FIG.1B). 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. If needed, add more hydraulic fluid until level is at the top of the **FILL LEVEL** bar shown on decal **(FIG. 1B)**.
- 6. Re-install Filler Cap (FIG. 1B).

WHITE WIRE
FILLER CAP

WHITE WIRE
Image: Comparison of the com



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# ADJUSTMENTS

# PLATFORM ADJUSTMENT

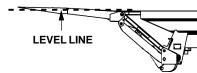
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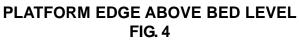
**NOTE:** Before doing the following procedure, make sure vehicle is parked on level ground.

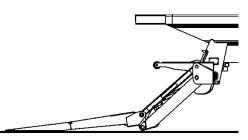
- Make sure Platform is at ground level. Unfold the Platform and Flipover. The Shackles and the outboard edge of Platform must touch the ground at the same time as shown in FIG. 5. If the Shackles and the outboard edge of Platform are touching the ground, RAISE Platform to bed height. Outboard edge of Platform should be above bed level (FIG. 4). If indications are correct (FIGS. 4 & 5), Liftgate is installed correctly and no adjustment is needed. If indications are incorrect, continue with instruction 2.
- If the platform is level at bed level (FIG. 6), if Shackles do not touch the ground (FIG. 7), or if edge of Platform does not touch the ground (FIG. 8), inspect each of the Hinge Pins for visible wear before adjusting the Platform. Replace Hinge Pins that are visibly worn. Refer to Parts Breakdown section of this manual for repair parts.
- 3. Check Liftgate for structural damage that may cause incorrect platform positioning. Repair structural damage.

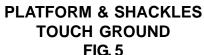
**NOTE:** If the Platform is like **FIG. 7** and there is no structural damage or damaged hinge pins, do instruction 4. If the Shackle touches and the Platform edge does not **(FIG. 8)**, skip 4 and do 5.

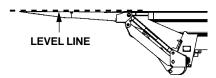
 Make sure Platform is still at ground level. If the Shackle is not touching the ground, measure and compare distance "A" (FIG. 7) with TABLE 1 to determine the correct shim. Make shims as needed (FIG. 9). Weld shim as shown in FIG. 10.



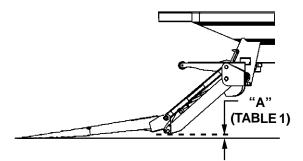




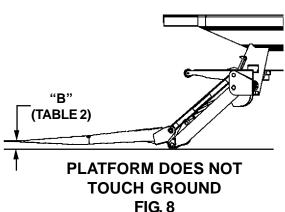




#### PLATFORM EDGE AT BED LEVEL FIG. 6



#### SHACKLES DO NOT TOUCH GROUND FIG. 7



 Make sure Platform is still at ground level. If edge of the Platform is not touching the round, measure and compare distance "B" (FIG. 8) with TABLE 2 to determine how much to grind from the Platform Stops (FIG. 11). Grind correct amount of metal (TABLE 2) from Platform Stop as shown in FIG.. 11.

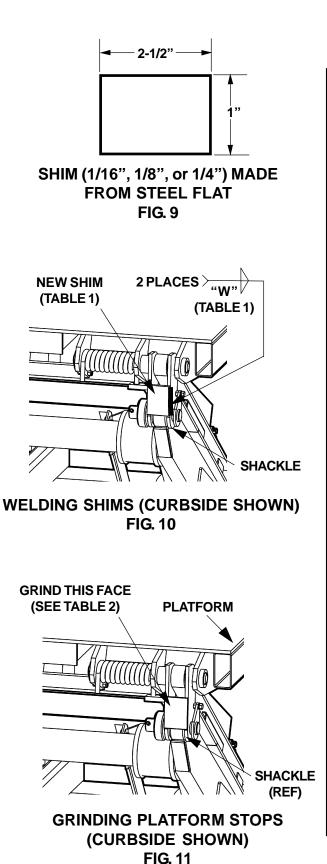
RAISE PLATFORM EDGE (OUTBOARD) THIS DISTANCE ("A")	REQUIRED SHIM THICKNESS	WELD SIZE "W"
1"	1/16"	1/16"
2"	1/8"	1/8"
3"	3/16"	3/16"
4"	1/4"	1/4"

TABLE 1

LOWER PLATFORM EDGE (OUTBOARD) THIS DISTANCE("B")	GRIND METAL FROM PLATFORM STOP
1"	1 <i>/</i> 16"
2"	1/8"
3"	3/16"
4"	1/4"

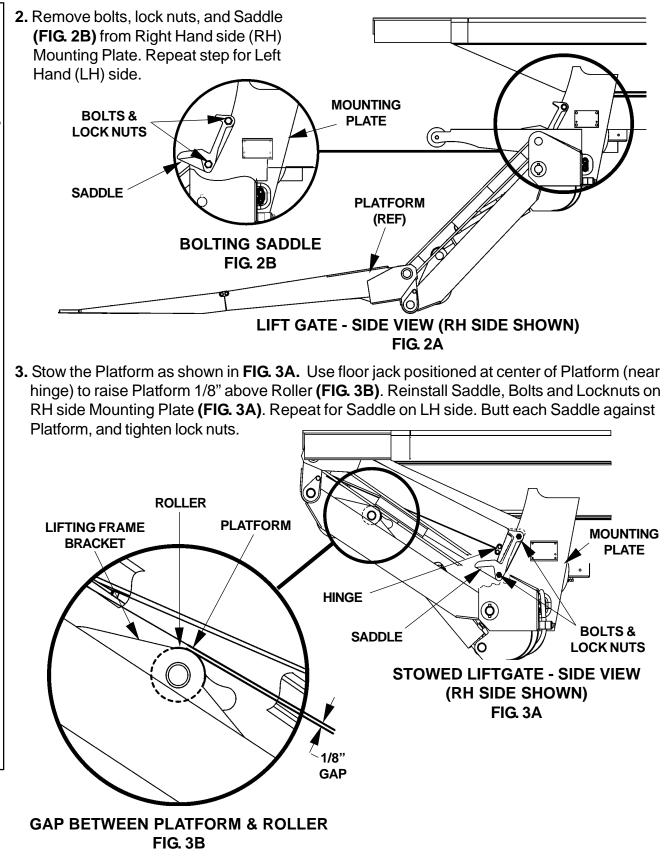
TABLE 2

6. RAISE the Platform, then LOWER it to the ground. Platform and Shackle should touch the ground at the same time as shown in FIG. 5.



#### SADDLE ADJUSTMENT

1. Lower Platform to ground level.



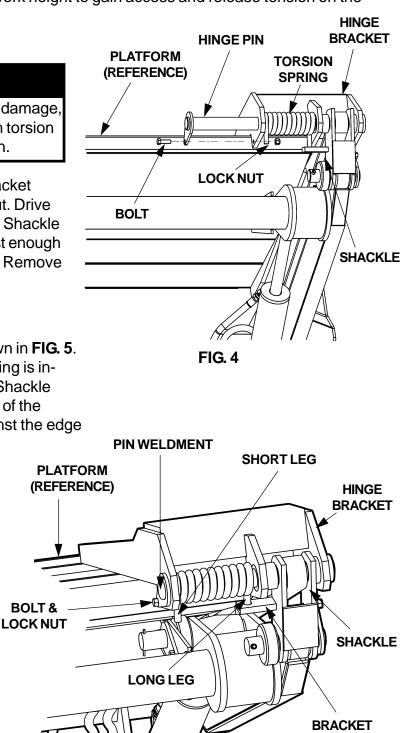
# **REPLACING PLATFORM TORSION SPRING**

- 1. Manually fold Flipover onto Platform.
- 2. Raise Platform to a convenient work height to gain access and release tension on the Torsion Spring.

## 

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

- 3. Unbolt Hinge Pin from Hinge Bracket (FIG. 4). Remove bolt and lock nut. Drive the Hinge Pin inboard toward the Shackle with a hammer and pin punch, just enough to free the torsion spring (FIG. 4). Remove spring from Shackle.
- Install the Torsion Spring as shown in FIG. 5. Make sure the long leg of the spring is inserted in the bracket located on Shackle (FIG. 5). Make sure the short end of the spring is visible and resting against the edge of the Hinge Bracket (FIG. 5).
- 5. Drive the Hinge Pin into correct position through the Hinge Bracket with a hammer and pin punch as shown in **FIG. 5**. Line up the bolt hole in the Hinge Pin with the hole in the Hinge Bracket. Bolt the Hinge Pin to Hinge Bracket with bolt and lock nut **(FIG. 5**).
- 6. Operate the Liftgate to make sure it operates correctly.



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Springs, 6

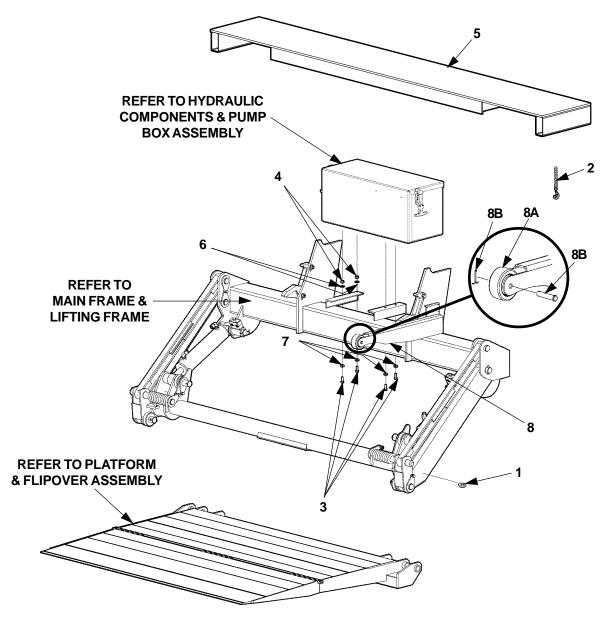
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11921

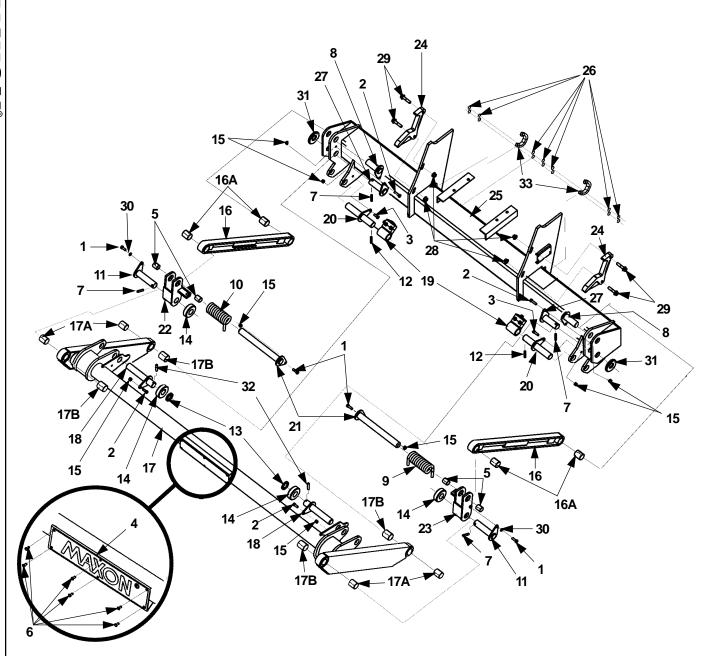
# PARTS BREAKDOWN

#### **80 SERIES FINAL ASSEMBLY**



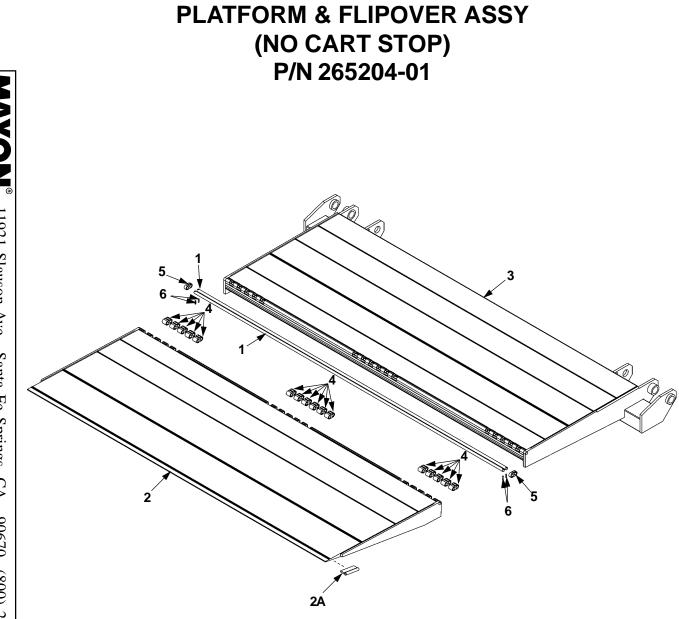
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	226938	EYE, DROP FORGED PAD 3/4" X 1-1/2"
2	1	227700	HOOK ASSEMBLY
3	4	900014-4	BOLT, HEX HEAD 3/8-16 X 1"
4	2	901011-5	NUT, HEX HEAD 3/8-16 UNC-2B
5	1	226355	EXTENSION PLATE
6	2	902001-2	WASHER, FLAT 3/8" X 1/16"
7	4	902011-4	WASHER, LOCK 3/8" X 15/16"
8	1	265994-01	OPENER ASSEMBLY
8A	1	030805	COTTER PIN 1/8" X 1"
8B	1	280082-01	ROLLER
8C	1	905202-03	PIN

#### **80 SERIES MAIN FRAME & LIFTING FRAME**

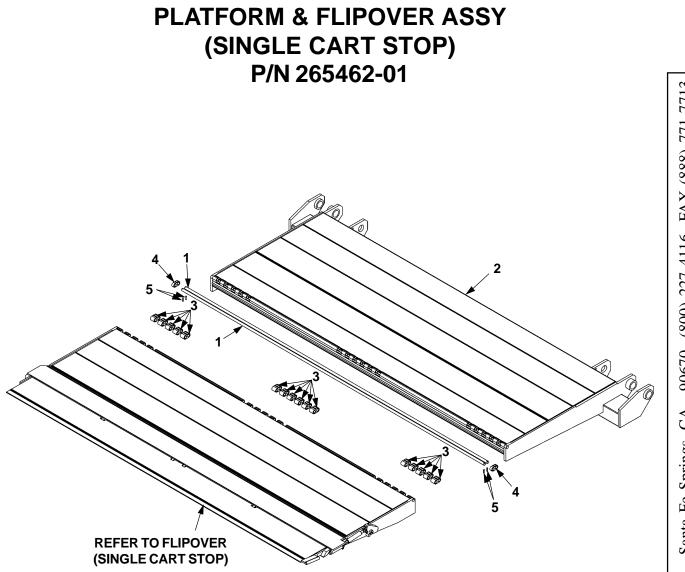


#### **80 SERIES MAIN FRAME & LIFTING FRAME**

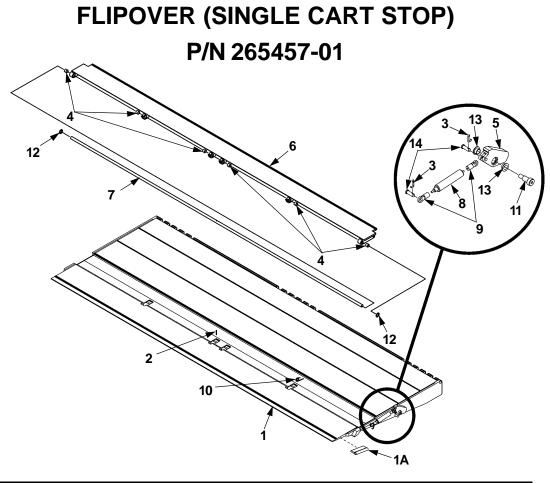
ITEM	QUANTITY	PART NO.	DESCRIPTION
1	4	030034	BOLT, 3/8"-24 X 1" LG. GR8
2	4	030035	BOLT 3/8"-24 X 1-1/4" LG. GR8
3	2	030038	BOLT, 3/8"-24X1-1/2" LG. GR8
4	1	050175	PLATE, MAXON HORIZONTAL
5	4	905112-06	BEARING, SELF LUBE, 1-3/8" X 3/8" LG.
6	6	207644	POP RIVET, 3/16" X 25/64" LG.
7	4	221416	ROLL PIN, 3/8" X 2" LG.
8	2	226358	PIN WELDMENT
9	1	226363-01	TORSION SPRING, 1/2" X 5-3/4" LG. RH
10	1	226363-02	SPRING, TORSION, 1/2" X 5-3/4" LG. LH
11	2	226365	PIN WELDMENT, SHACKLE
12	2	907026	ROLL PIN, 3/16 X 2-1/4" LG.
13	2	226372	ROUND TUBE, 1/4" (2" X 5/16"W)
14	4	226375	ROLLER, 1"
15	8	226941	NYLON LOCK NUT, 3/8"-24 THIN
16	2	261785-01	PARALLEL ARM WELDMENT (WITH BEARINGS)
16A	8	905112-07	BEARING, SELF-LUBE, 1-3/8" X 1-3/4" LG.
17	1	261800-01	LIFT FRAME WELDMENT
17A	4	915112-01	BEARING, SELF-LUBE, 1-3/8" X 3/4" LG.
17B	4	915112-02	BEARING, SELF-LUBE, 1-3/8" X 1" LG.
18	2	262435	PIN WELDMENT, CYLINDER 1-3/8" DIA
19	2	262437	BUSHING WELDMENT-CYL HOSE CLAMP
20	2	262462	PIN WELDMENT, CYL. 1-3/8" DIA
21	2	265807-01	PIN WELDMENT, PLATFORM 1-3/8" X 13-1/8" LG.
22	1	265811-01	SHACKLE ASSY, LEFT HAND (WITH BEARINGS)
23	1	265811-02	SHACKLE ASSY, RIGHT HAND (WITH BEARINGS)
24	2	265849-01	SADDLE, LOW PROFILE HINGE
25	1	265866-01	MAIN FRAME WELDMENT
26	14	205780	PLASTIC TIE, 7" LG
27	2	266033-01	PIN WELDMENT, UNDERRIDE
28	4	901023	FLANGE LOCK NUT
29	4	901024-3	BOLT, HEX HEAD, 1/2"-13 X 2-1/4" LG.
30	2	902001-2	FLAT WASHER, 3/8"
31	2	902013-21	FLAT WASHER, 1-3/8"
32	2	905128-07	ROLL PIN 1/8" X 2-1/4" LG
33	2	040103-5	LOOM, SPLIT 1/2" X 5" LG



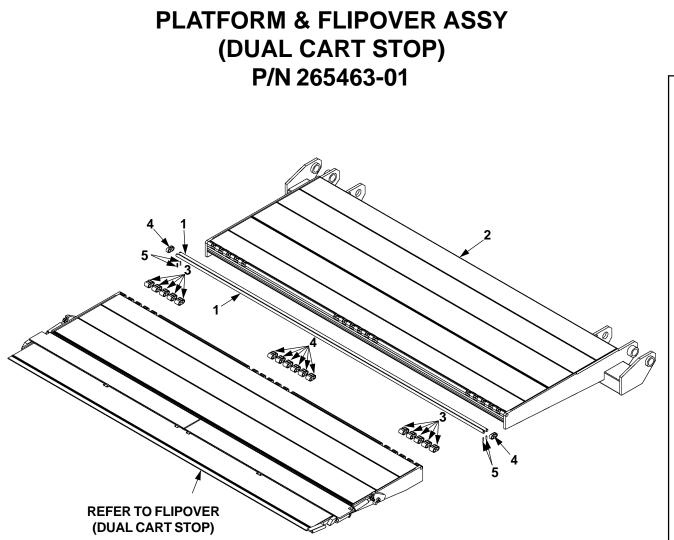
ITEM	QTY.	PART NO.	DESCRIPTION
1	2	263456-04	HINGE ROD 1/2" DIA X 80-13/16" LG
2	1	263665-01	FLIPOVER WELDMENT, ALUMINUM, 30"
2A	1	265819-01	HANDLE WELDMENT
3	1	265203-01	PLATFORM WELDMENT, ALUMINUM, 30"
4	16	280109	HINGE ASSEMBLY
5	2	280110	HINGE ASSEMBLY
6	4	905015-1	ROLL PIN, 3/16" X 3/4"



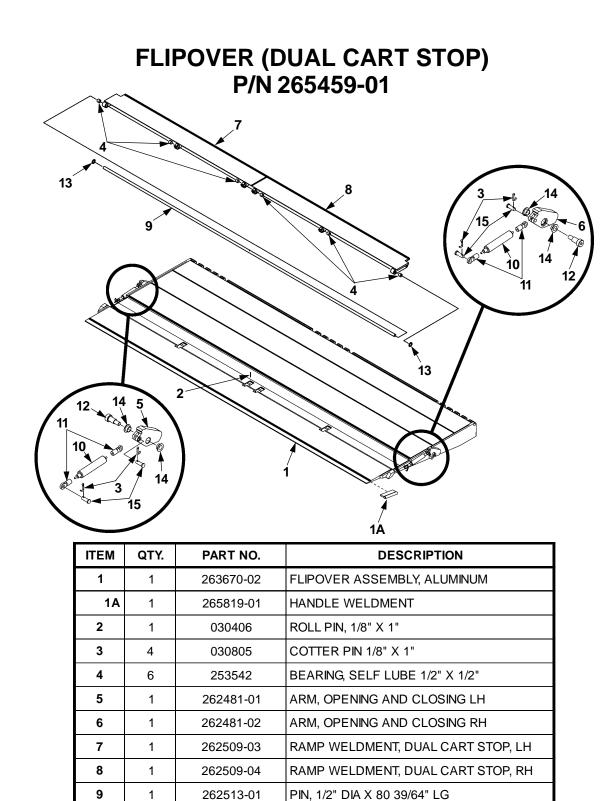
ITEM	QTY.	PART NO.	DESCRIPTION
1	2	263456-04	HINGE ROD 1/2" DIA X 80-13/16" LG
2	1	265203-01	PLATFORM WELDMENT, ALUMINUM, 30"
3	16	280109	HINGE ASSEMBLY
4	2	280110	HINGE ASSEMBLY
5	4	905015-1	ROLL PIN, 3/16" X 3/4"



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	263670-01	FLIPOVER WELDMENT, ALUMINUM
1A	1	265819-01	HANDLE WELDMENT
2	1	030406	ROLL PIN, 1/8" X 1"
3	2	030805	COTTER PIN 1/8" X 1"
4	6	253542	BEARING, SELF LUBE 1/2" X 1/2"
5	1	262481-02	ARM, OPENING AND CLOSING, RH
6	1	262508-01	RAMP WELDMENT, SINGLE CART STOP
7	1	262513-01	PIN, 1/2" DIA X 80-39/64" LG
8	1	262514	GAS SPRING
9	2	262515	METAL EYELET END FITING
10	1	262536	SPRING, TORSION, 1/8"
11	1	900047	SCREW,SHOULDER, 1/2" X 3/4" LG
12	2	902022	FLAT WASHER, 1/2"
13	2	905122-02	BEARING, SELF LUBE 1/2" X 5/16"
14	2	905135	PIN, CLEVIS 5/16" X 7/8"



ITEM	QTY.	PART NO.	DESCRIPTION
1	2	263456-04	HINGE ROD, 1/2" DIA X 80-13/16" LG
2	1	265203-01	PLATFORM WELDMENT, ALUMINUM, 30"
3	16	280109	HINGE ASSEMBLY
4	2	280110	HINGE ASSEMBLY
5	4	905015-1	ROLL PIN, 3/16" X 3/4"



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11921
11921 Slauson Ave. Santa Fe Springs, CA. 90670
Santa
Fe
Springs,
CA.
90670
(800)
(800) 227-4116
FAX
(888)
(888) 771-7713

905122-02

GAS SPRING

METAL EYELET END FITING

FLAT WASHER, 1/2"

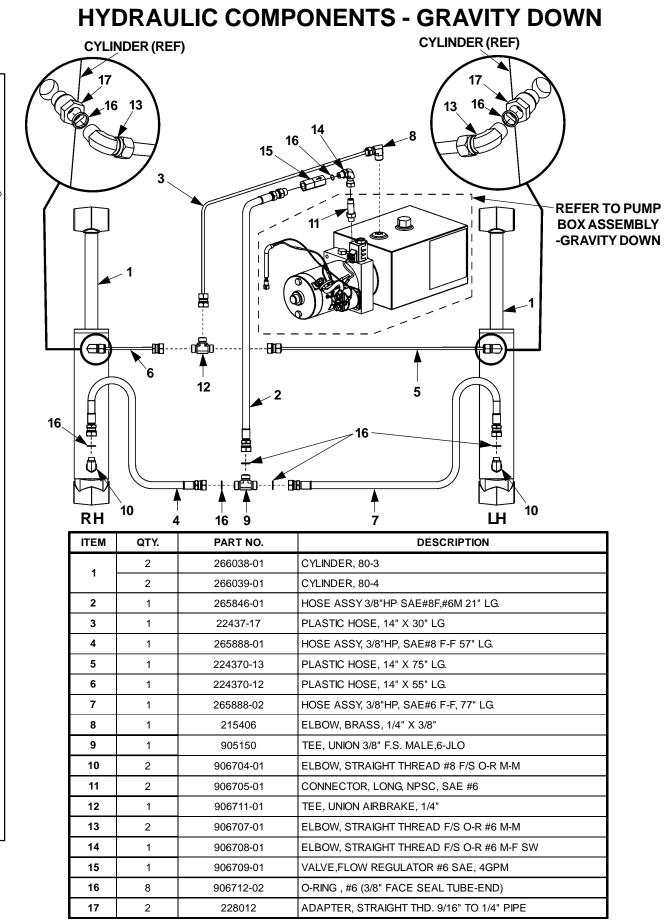
PIN, CLEVIS 5/16" X 7/8"

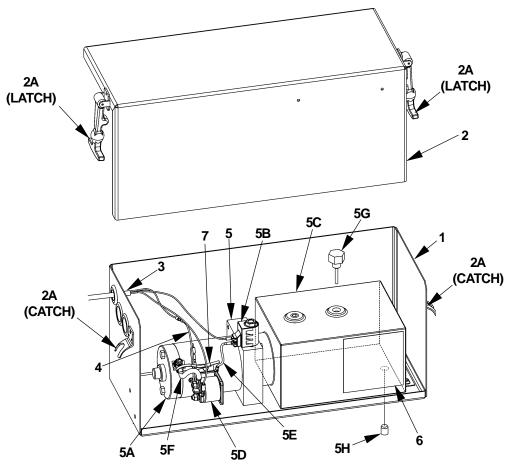
SCREW, SHOULDER, 1/2" X 3/4" LG

BEARING, SELF LUBE 1/2" X 5/16"

# (800) 227-4116 FAX (888) 771-7713 90670 Santa Fe Springs, CA. MAXON<sup>®</sup> 11921 Slauson Ave.

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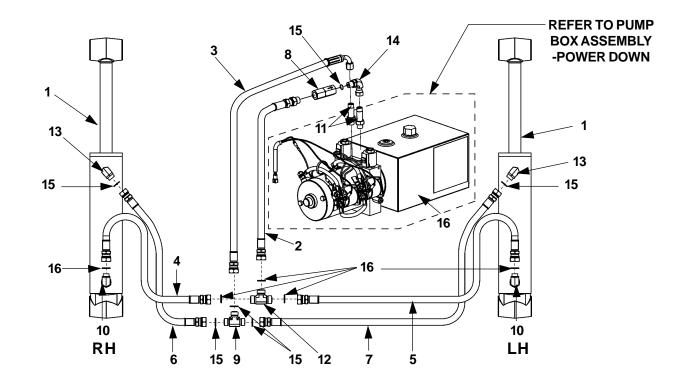




ITEM	QTY.	PART NO.	DESCRIPTION
1	1	266016-01	PUMP BOX WELDMENT
2	1	229383	PUMP BOX COVER
2A	2	215139	CATCH & FASTENER
3	1	266032-01	CABLE ASSEMBLY, 16GA/3-WIRE
4	1	280566-01	GREEN WIRE ASSEMBLY, 16GA
5	1	266014-01	PUMP ASSEMBLY, GRAVITY DOWN
5A	1	280374	MOTOR, 12 VOLTS DC
5B	1	280372	SOLENOID VALVE, 12 VOLTS DC
5C	1	906721-01	RESERVOIR
5D	1	280394	MOTOR STARTER SOLENOID, 12 VOLTS DC
5E	1	280416	WIRE ASSEMBLY (16GA)
5F	1	280404	CABLE ASSEMBLY (2GA)
5G	1	229193	FILLER, BREATHER
5H	1	266030-01	DRAIN PLUG
6	1	REF	DECAL (SEE DECAL SECTION)
7	1	205780	PLASTIC TIE

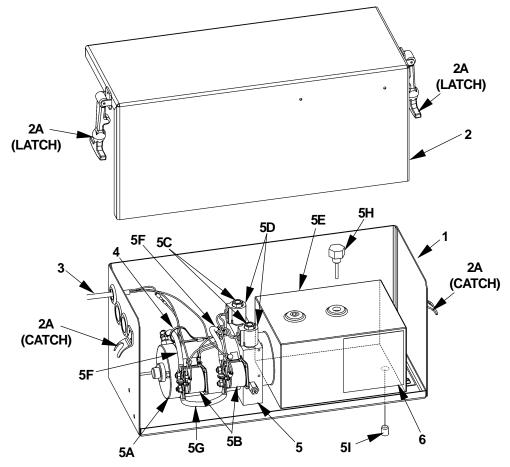
FAX (888) 771-7713 (800) 227-4116 90670 CA. Santa Fe Springs, 11921 Slauson Ave. 

#### **HYDRAULIC COMPONENTS - POWER DOWN**



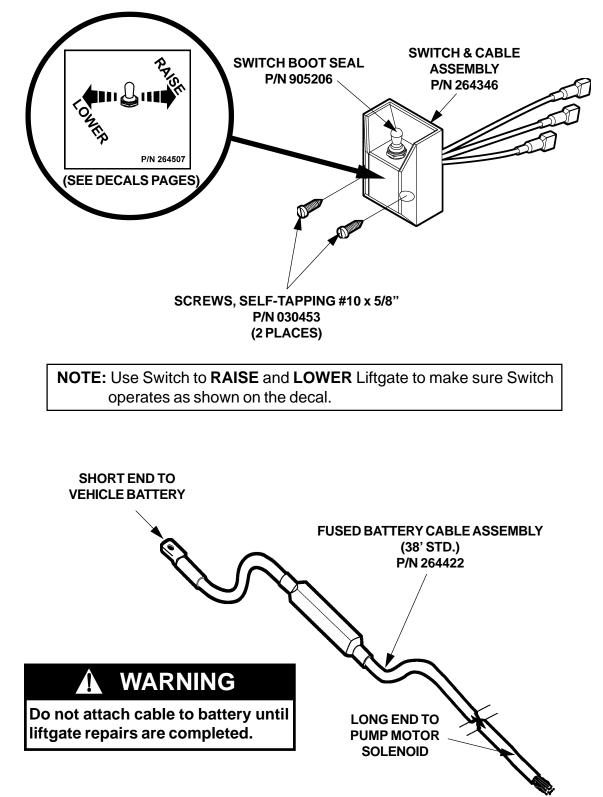
ITEM	QTY.	PART NO.	DESCRIPTION
1	2	266038-01	CYLINDER, 80-3
	2	266039-01	CYLINDER, 80-4
2	1	265846-01	HOSE ASSY, 3/8"HP SAE#8F,#6M, 21" LG
3	1	265847-01	HOSE ASSY, 3/8"HP SAE#6 F-F, 28" LG
4	1	265888-01	HOSE ASSY, 3/8"HP SAE#8 F-F, 57" LG
5	1	265888-02	HOSE ASSY, 3/8"HP SAE#8 F-F, 83" LG
6	1	265889-01	HOSE ASSY, 3/8"HP SAE#6 F-F, 55" LG
7	1	265889-02	HOSE ASSY, 3/8"HP SAE#6 F-F, 77" LG
8	1	906709-01	VALVE, FLOW REGULATOR #6 SAE, 4GPM
9	1	905150	TEE, UNION, 3/8" F/S MALE,6-JLO
10	2	906704-01	ELBOW, STRAIGHT THR. #8F/S O-RING M-M
11	2	906705-01	CONNECTOR, LONG STR, THD SAE #6
12	1	906706-01	TEE, UNION SAE#8 F/S M-M
13	2	906707-01	ELBOW, STRAIGHT THD. #6F/S O-RING M-M
14	1	906708-01	ELBOW, STRAIGHT THD F/S O-RING #6M-F SW
15	6	906712-02	O-RING #6 (3/8" FACE SEAL TUBE-END)
16	5	906712-03	O-RING #8 (1/2" FACE SEAL TUBE-END)

**PUMP BOX ASSEMBLY - POWER DOWN** 

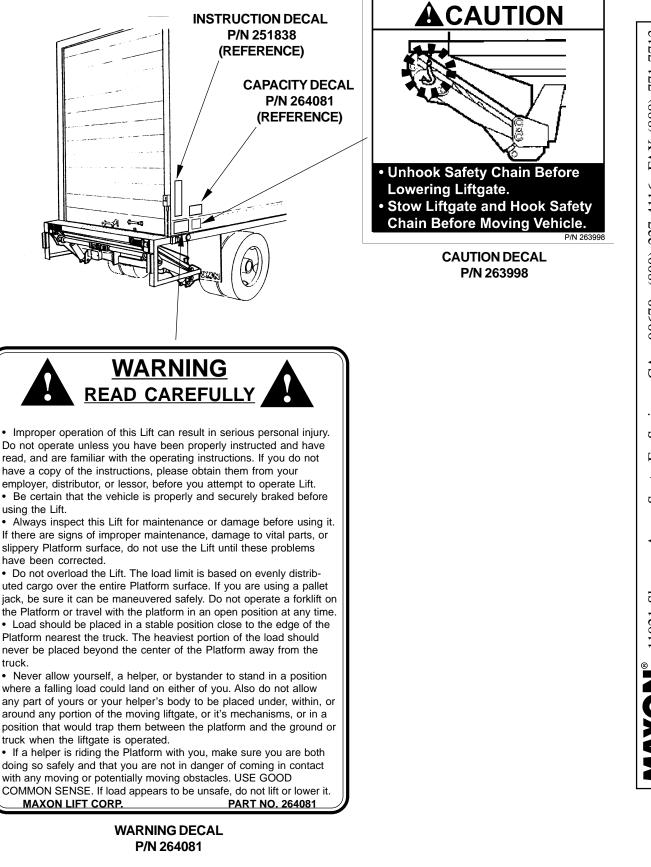


ITEM	QTY.	PART NO.	DESCRIPTION
1	1	266016-01	PUMP BOX WELDMENT
2	1	229383	PUMP BOX COVER
2A	2	215139	CATCH & FASTENER
3	1	266032-01	CABLE ASSEMBLY, 16 GA/3-WIRE
4	1	205780	PLASTIC TIE
5	1	266030-01	PUMP ASSEMBLY, POWER DOWN
5A	1	280381	MOTOR, 12 VOLTS DC
5B	2	280394	MOTOR STARTER SOLENOID, 12 VOLTS DC
5C	2	906719-01	VALVE
5D	2	906720-01	10 VDC COIL
5E	1	906721-01	RESERVOIR
5F	2	280402	CABLE ASSEMBLY (2 GA)
5G	1	280543	CABLE ASSEMBLY (2 GA)
5H	1	229193	FILLER-BREATHER
51	1	REF	DRAIN PLUG, 3/8"-18 NPTF
6	1	REF	DECAL (SEE DECAL SECTION)

#### **CONTROL SWITCH AND POWER CABLE**

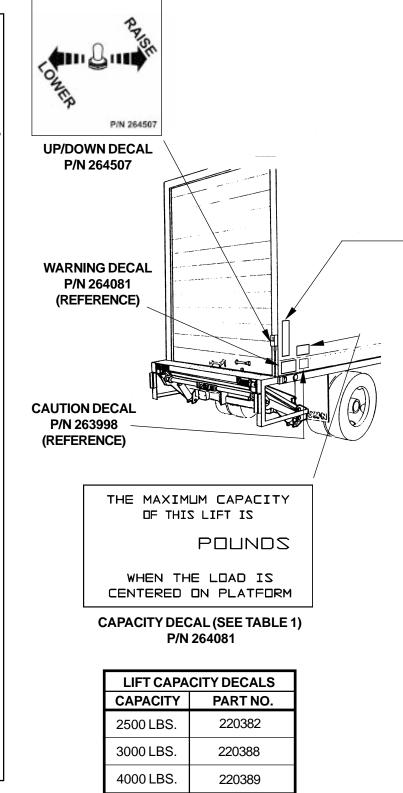


# DECALS



FAX (888) 771-7713 (800) 227-4116 90670 CA. Springs, Бе Santa Slauson Ave. 11921

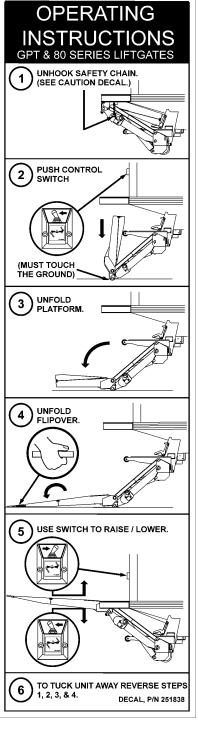
#### **DECALS - CONTINUED**



5000 LBS.

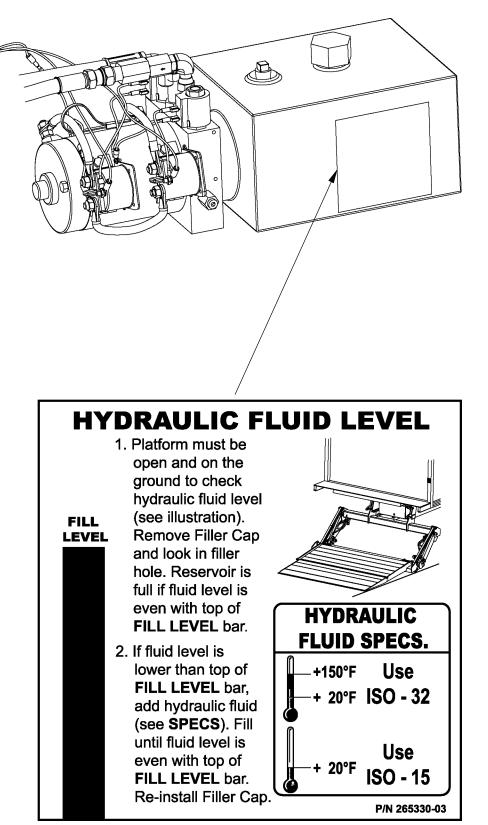
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TABLE 1



#### INSTRUCTION DECAL P/N 251838

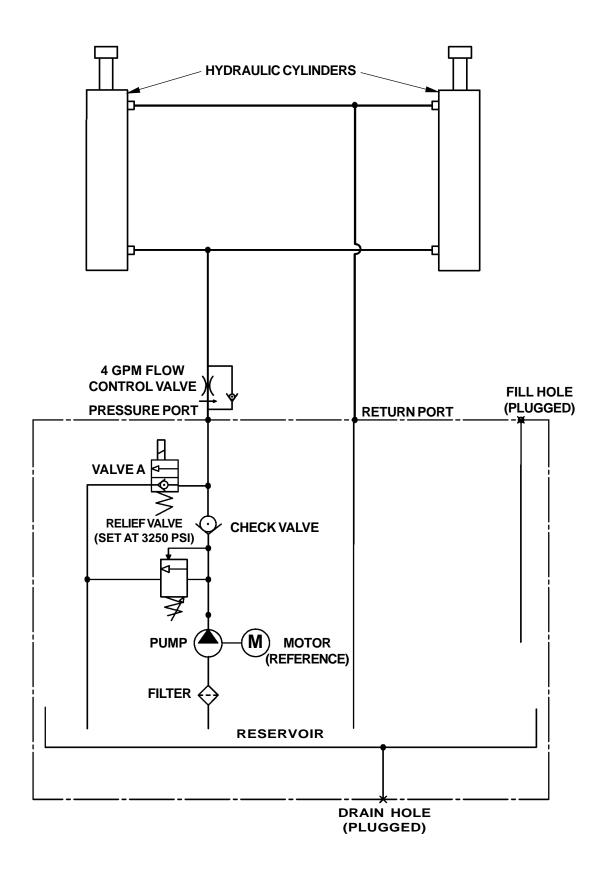
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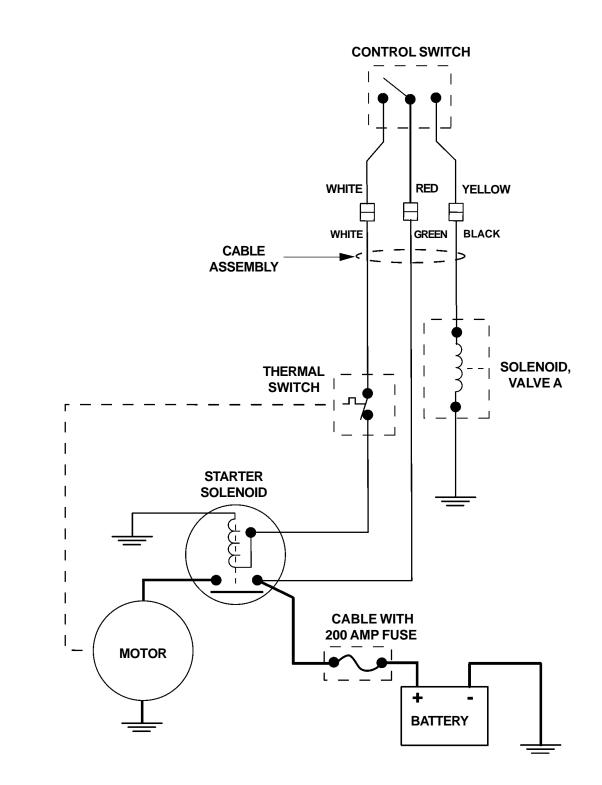
FLUID LEVEL DECAL P/N 265330-03

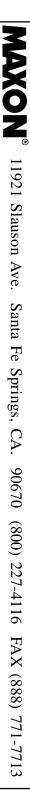
# SCHEMATICS

#### **HYDRAULIC SCHEMATIC - GRAVITY DOWN**

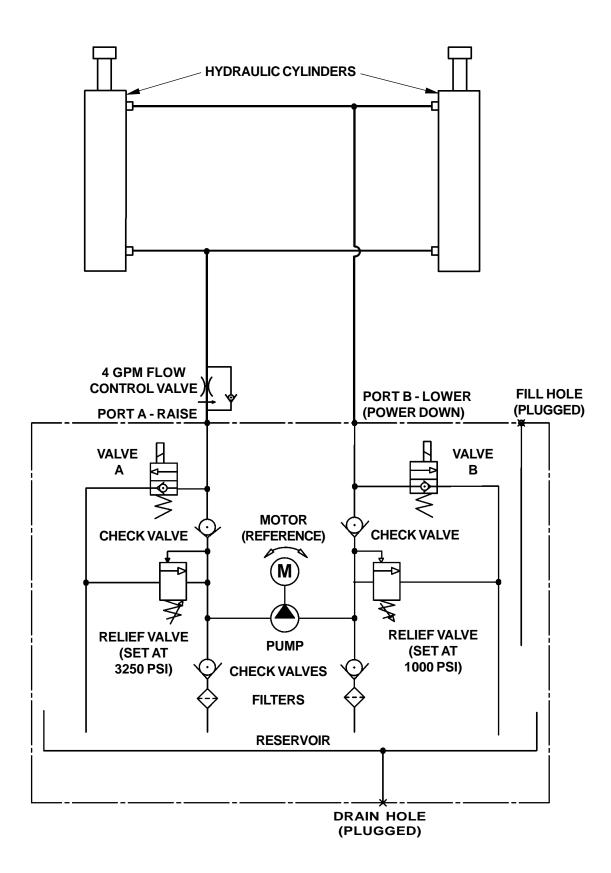


#### **ELECTRICAL SCHEMATIC - GRAVITY DOWN**

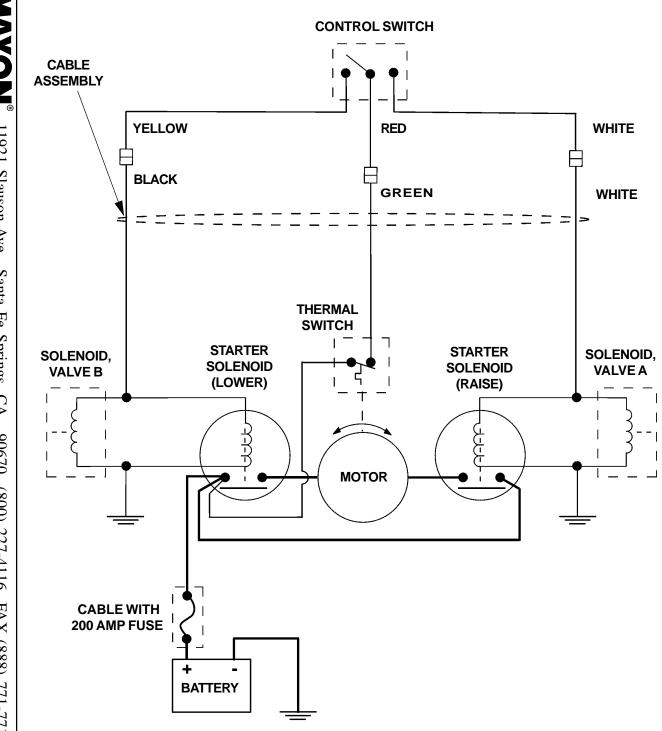




#### **HYDRAULIC SCHEMATIC - POWER DOWN**



#### **ELECTRICAL SCHEMATIC - POWER DOWN**



# TROUBLESHOOTING

# PLATFORM WILL NOT RAISE

1. Connect voltmeter between Motor Solenoid Terminal "A" and Bracket (FIG. 1) to verify that battery power is getting to "A". Recharge the battery if voltmeter indicates less than 12.6 Volts DC.

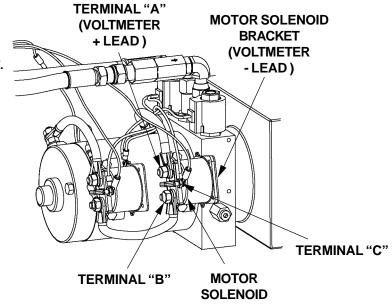
### CAUTION

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" (FIG. 1). 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" (FIG. 1).
  - a. If motor runs, replace the motor solenoid.
  - b. If motor does not run, repair or replace the pump motor.

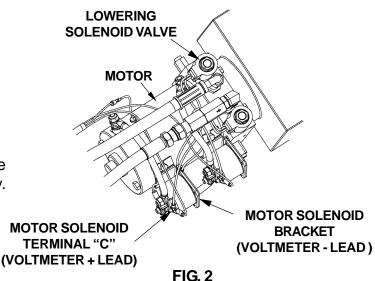
**NOTE:** In most cases, you can avoid having to manually bleed Hydraulic System by correctly positioning Liftgate Platform before disconnecting any Lifting Cylinder high pressure Hydraulic Lines. The following procedure can save t ime and prevent accidental fluid spills and hazards.

- 5. Check for structural damage and replace worn parts.
- 6. Check filter in the pump Reservoir. Replace filter if necessary.
- Check for dirty pump motor relief valve. Clean if necessary. Replace any worn out relief valve parts.



# PLATFORM RAISES BUT LEAKS DOWN

 Check if Lowering Solenoid Valve is constantly energized. Connect voltmeter negative (-) lead to Motor Solenoid bracket and positive (+) lead to Motor Solenoid terminal "C" (FIG. 2). If voltmeter reads battery voltage (+12.6 Volts DC minimum) without pushing the toggle switch, the control circuit is operating incorrectly. Check if toggle switch, wiring or coil are faulty.



#### 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 manually bleed Hydraulic System by correctly positioning Liftgate Platform before disconnecting any Lifting Cylinder high pressure Hydraulic Lines. The following procedure can save t ime and prevent accidental fluid spills and hazards.

- Check the Valve Stem by removing the Coil Assembly (FIG. 3, Item 1). With platform supported, unscrew the Valve Stem (FIG. 3, Item 2) from the Pump. Push on the plunger located inside the Valve Stem with a small screwdriver. If the Plunger does not move freely (approximately 1/8") replace the Valve Stem.
- 3. Check the Hydraulic Cylinder. With the Platform on the ground, remove the Breather Plug or Line from the Down 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 Down Port. A few drops of hydraulic fluid escaping the Down Port is normal; however, if it streams from the Down Port, Piston Seals are worn. Replace Seals.

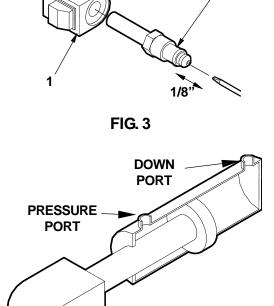


FIG. 4

2

#### 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.

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

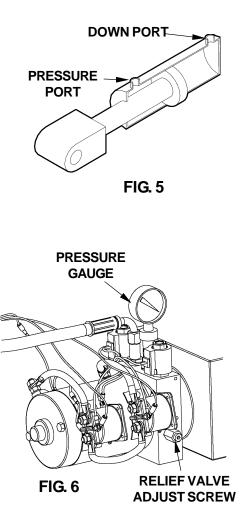
#### LIFTGATE WILL NOT LIFT RATED CAPACITY

- 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.

- 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. 6). 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 Line from the Down Port of the Cylinder (FIG. 5). Raise the Platform even with the bed. Allow pump motor to run two seconds more while you watch for hydraulic fluid at the Down Port. A few drops of hydraulic fluid escaping the Down Port is normal; however, if it streams from the Down 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.

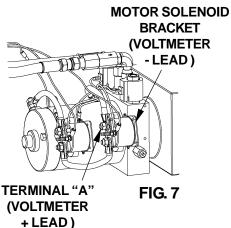


# PLATFORM RAISES SLOWLY

1. Connect voltmeter between Motor Solenoid Terminal "A" and Bracket **(FIG. 7)** to verify that battery power is getting to "A". Recharge the battery if voltmeter indicates less than 12.6 Volts DC.

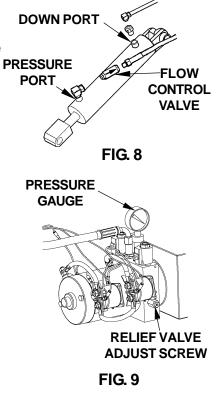
#### CAUTION

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.



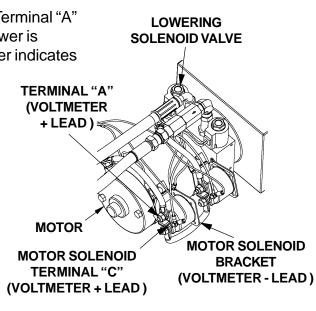
2. Check the Hydraulic Cylinder. With the Platform on the ground, remove the Breather Plug or Line from the Down Port of the Cylinder (FIG. 9). Raise the Platform even with the bed. Allow pump motor to run two seconds more while you watch for hydraulic fluid at the Down Port. A few drops of hydraulic fluid escaping the Down Port is normal; however, if it streams from the Down Port, Piston Seals are worn. Replace Seals.

- 3. Check and clean Flow Control Valve (FIG. 8) 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.
- 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.
- 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. 9). Remove guage and re-install pressure hose.



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

- 1. Connect voltmeter between Motor Solenoid Terminal "A" and Bracket **(FIG. 10)** to verify that battery power is getting to "A". Recharge the battery if voltmeter indicates less than 12.6 Volts DC.
- 2. Check for structural damage or poor lubrication. Replace worn parts.
- Check if Lowering Solenoid Valve is getting power . Connect voltmeter between Motor Solenoid Bracket and Motor Solenoid terminal "C" (FIG. 10). Push Control Switch to "LOWER" position to energize Lowering Solenoid. If voltmeter reads battery voltage (+12.6 Volts DC minimum), control circuit is operating correctly (replace Lowering Solenoid). If voltmeter reads 0 Volts, check if toggle switch and wiring are faulty.





## 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 the Valve Stem by removing the Coil Assembly (FIG. 11, Item 1). With platform supported, unscrew the Valve Stem (FIG. 11, Item 2) from the Pump. Push on the plunger located inside the Valve Stem with a small screwdriver. If the Plunger does not move freely (approximately 1/8") replace the Valve Stem.
- 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.
- Check if Flow Control Valve (FIG. 12) is pointing to the direction of restricted fluid flow (back toward pump). If required, remove Flow Control Valve and install it correctly (FIG. 12).

