

WDL US

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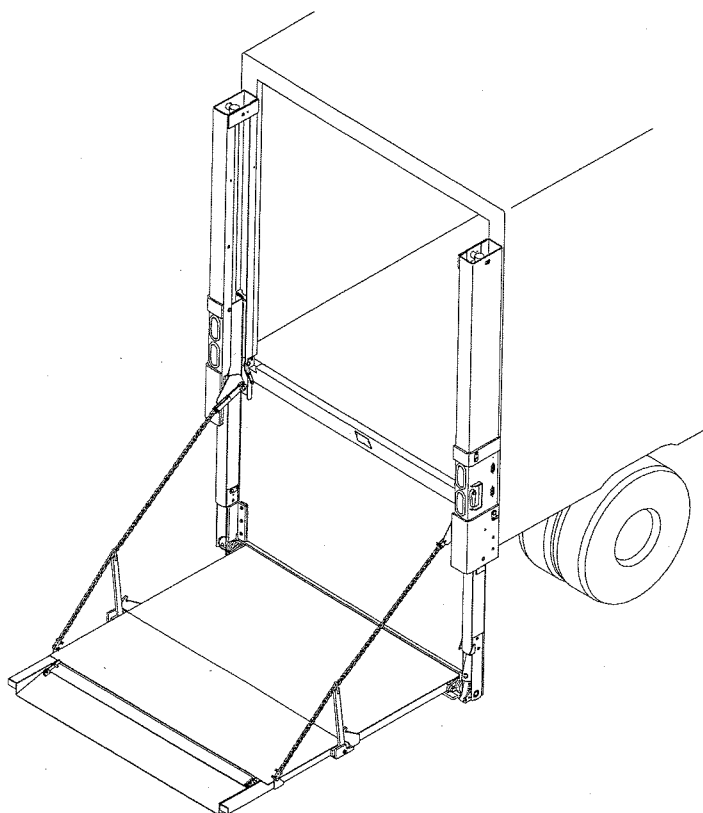
Owners Manual
3500 – 6600 lb. Capacity Rail Lift

IMPORTANT KEEP IN VEHICLE

ATTENTION

THE SUCCESS OR FAILURE OF THIS EQUIPMENT COULD VERY WELL DEPEND ON THOROUGH AND PROPER OPERATION AND MAINTENANCE OF THIS EQUIPMENT.

READ AND UNDERSTAND THE CONTENTS OF THIS MANUAL BEFORE OPERATING THIS EQUIPMENT



08-06

GR01544

OHIO

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Tallmadge, OH 44278
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FAX – (330) 633-1418

EO 5797 Rev.04

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80131702

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INTRODUCTION

If anyone observes improper installation, improper operation, or damage, they should immediately contact a qualified person for assistance and correction. We strongly urge anyone that has any questions or doubts as to the installation, condition, use, operation, maintenance or repair of the liftgate to contact us at Waltco where we have qualified personnel that will be happy to assist you. Telephone numbers and addresses of these locations are listed in the Owners Manual and Installation Instructions.

INSTALLATION

Waltco liftgates should only be installed by those with sufficient basic skills to understand the installation and operation of the liftgate, along with the equipment on which the liftgate is being installed. Waltco's installation instructions are not intended to give rationale for all the instructions that are given; however, it is the intent of these instructions to give the installer both the operations and what we believe to be the most desirable sequence of implementing these operations. These instructions can in no way expand into an area where they will replace a qualified person, or clear thinking and a basic knowledge that must be possessed by the installer.

It has been our experience that a knowledgeable journeyman following these instructions and observing the operation of the liftgate will have a sufficient comprehension of the liftgate to enable this person to troubleshoot and correct all normal problems that may be encountered.

Failure to follow the installation instructions, adjustments and mounting dimensions may result in improper and unsafe operation of the liftgate. Unauthorized alterations of the liftgate can cause an undesirable and dangerous condition.

OWNERS MANUAL

The Waltco Owners Manual is intended to act as a guide for operation and routine maintenance but is no way intended to encourage usage or repair of the liftgate by those who are not qualified to do so.

The contents of the owners manual include, but are not limited to general operation instructions, routine lubrication, parts lists, and an outline of things that should be checked but may not be obvious to those not technically qualified. This manual assumes the liftgate is properly installed, undamaged and operates correctly. Improper installation, improper operation, or damage should be immediately corrected by a qualified person.

INSPECTION

As part of the regular inspection of a liftgate and after damage or suspicion of an overload, inspect for wear or structural damage and make necessary repairs or replacements. Check all structural components and their attachment to the liftgate for cracked welds, wear and part deformation. Check cylinder and hose for leaks. Inspections and repairs should be made by a qualified mechanic.

REPLACEMENT PARTS

Use only Waltco original equipment replacement parts. Components of other liftgate manufacturers may outwardly appear to be the same but are not interchangeable with Waltco products. Waltco components are specifically designed for safety requirements, reliability and compatibility with our products. Refer to your Waltco parts manual when ordering parts. NOTE: When ordering, give model and serial number of liftgate.

DECALS

It is important that every vehicle that has a WALTCO Liftgate have legible DECALS clearly posted on the vehicle and an OWNER'S MANUAL in the vehicle at all times as a guide for proper operation and maintenance.

Additional DECALS and OWNER'S MANUALS can be obtained from WALTCO TRUCK EQUIPMENT COMPANY.

Chapter 1 Safety Information

The following safety information must be read before operating Waltco liftgates.

- Read and understand the Owner's Manual and all decals on liftgate before operating liftgate.
- Do not operate liftgate without a thorough knowledge and understanding of the operation of the liftgate.
- Liftgate hazards can result in crushing or falling
- This liftgate is designed for loading and unloading of cargo. If personnel are required to ride liftgate, observe and familiarize yourself with the liftgate operation, decals and manuals. Ensure stable footing at all times
- Do not ride liftgate with unstable loads.
- Keep hands and feet clear of all potential pinch points.
- Do not attempt any repairs unless you are qualified to do so. Care should be taken when work is performed on a disabled liftgate located near moving traffic. When possible the vehicle should be moved away from traffic areas for repair. Precautionary measures should be taken to ensure personal safety including those recommended in Federal Motor Vehicle Safety Standards 571.125.
- **NEVER OVERLOAD LIFTGATE**
Refer to the Explanation of Specification Tag in the Liftgate Terminology chapter for liftgate capacity rating.
- Never use liftgate if it makes any unusual noise, has unusual vibration, raises or lowers unevenly, or fails to operate smoothly.
- Never use liftgate if it shows any signs of structural damage such as cracked welds, bent or distorted members.
- For liftgates with Runners, never use liftgate if Runners do not travel freely and smoothly.
- All protective covers, guards, and safety devices must be in place and access doors closed before operating liftgate.
- Make certain the Platform area, including the area in which loads may fall, is clear before and at all times during the operation of the liftgate.
- For liftgates with Roller Lifting Chain, the Chain should be replaced every (5) five years or 15,000 cycles, whichever comes first. Replace only with Waltco approved Roller Chain.
- A Lock-Out device or Shut-Off Switch should always be used to prevent unauthorized use of liftgate.
- Never transfer loads which exceed lifting capacity on or over any part of the Platform unless the liftgate is equipped with a special reinforced Platform and Platform Support Bars for use when the Platform is used as loading ramp (dock board). Refer to the "Using Platform as a loading ramp" Chapter in the Operation Instructions of the BZ/RZ series Owner's Manual.
- Platform is always to be properly stored and secured for transit. See the Owner's Manual for details.
- For liftgates equipped with Trailer Hitches, never exceed the rated capacity of the hitch. Do not exceed the vehicle's weight rating. Refer to the vehicle's Owner's Manual.

Chapter 1 Safety Information

- Take care to retain cargo during transit for liftgate Platforms which function as the tailgate or door of the cargo area. Small objects can fall through the space between the vehicle and the folded Platform.
- Vehicle must comply with all state and federal standards.
- Follow the "Maintenance Guide" chapter in the Owner's Manual.

Liftgates with Tilt Function

- Proper use of the Control Switches is of extreme importance.
- Improper use of Tilt Switch could cause load to fall from the Platform or damage the liftgate.
- Platform should be in a generally horizontal position when raising or lowering with a load.
- In any tilt position, the Platform may vary from level while raising or lowering the Platform.

Liftgates equipped with spring operated Cam Closer

- Replace Cam Release Spring every five (5) years or 15,000 cycles, whichever comes first.

RGL

- Make certain Platform Brake mechanisms are operating properly.
- The Runners are always to remain powered up against the Upstops Pins when in transit.
- Inspect Cables every three (3) months or 750 cycles, whichever comes first. Cables must be replaced if they show signs of wear, distortion, kinking or if any broken wires are visible
- Replace cables every five (5) years or 10,000 cycles, whichever comes first.

SIGNAL WORDS

WARNING

Indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.
Black letters on an orange background

CAUTION

Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. May also be used to alert against unsafe practices.

Black letters on a yellow background.



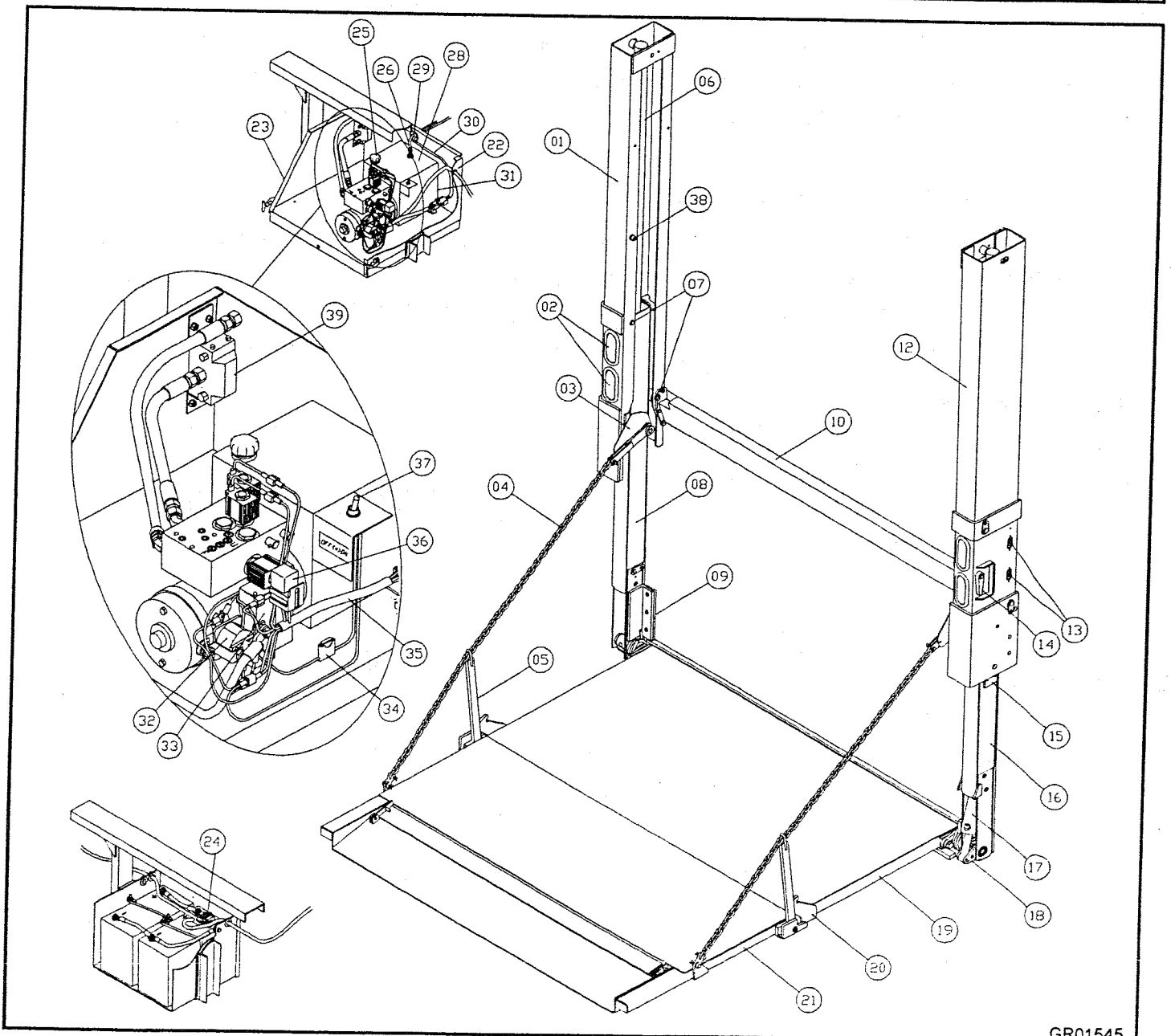
WARNING



CAUTION

Chapter 2 Liftgate Terminology

- | | | |
|------------------------|--------------------------------------|-------------------------------------|
| 1. Driver Side Upright | 14. Latch | 28. Hydraulic Reservoir |
| 2. Lights | 15. Runner Wear Pad | 29. Grommated Hole for Lines |
| 3. Linkage Guard | 16. Curb Side Runner | 30. Liftgate Wiring Harness |
| 4. Support Chain | 17. Closer Cylinder | 31. Pump or Hydraulic Unit |
| 5. Chain Linkage Bar | 18. Outer Hub | 32. Pump Starter Solenoid |
| 6. Lift Cylinder | 19. Main Deck | 33. Thermalpak® with Voltage Guard™ |
| 7. Rollers | 20. Bottom Stop | 34. 5 Amp Fuse |
| 8. Driver Side Runner | 21. Deck Extension | 35. Motor Wiring Harness |
| 9. Equalizer Beam | 22. Grommated Hole for Battery Cable | 36. Relay |
| 10. Sill Extension | 23. Hydraulic Enclosure | 37. ON - OFF Toggle Switch |
| 12. Curb Side Upright | 24. 150 Amp Circuit Breaker | 38. Up-stop bolt |
| 13. Control Switches | 25. Filler / Breather Cap | 39. Flow divider valve |
| | 26. Return Line | |

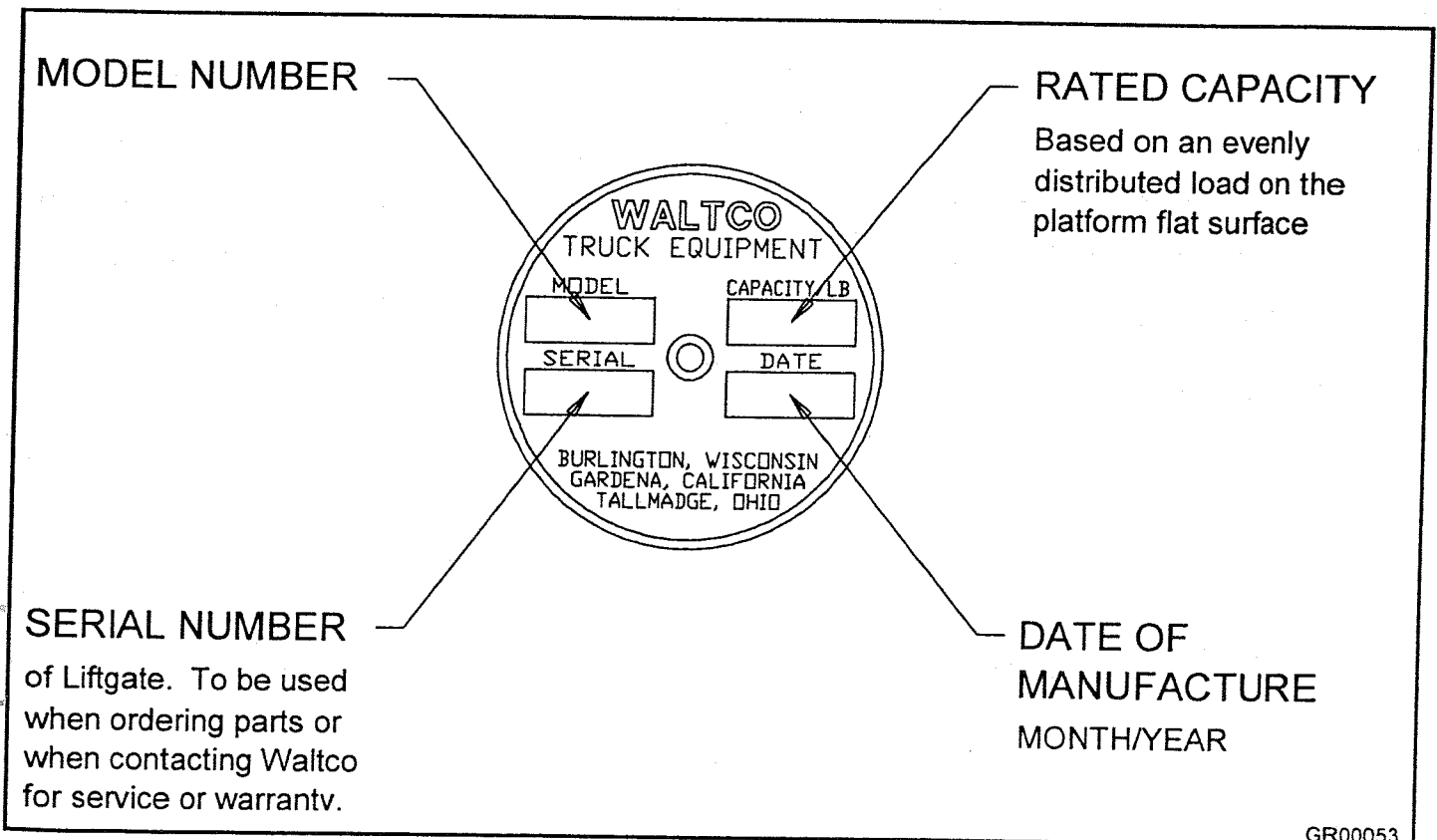


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Chapter 2 Liftgate Terminology

EXPLANATION OF SPECIFICATION TAG

MODEL NO.	MODEL NAME	DESCRIPTION	CAPACITY
313 U	WDL-35 US	WDL-35 US Series (96" Wide)	3500 lb.
314 U	WDL-45 US	WDL-45 US Series (96" Wide)	4500 lb.
315 U	WDL-55 US	WDL-55 US Series (96" Wide)	5500 lb.
316 U	WDL-66 US	WDL-66 US Series (96" Wide)	6600 lb.
323 U	WDL-35 US	WDL-35 US Series (102" Wide)	3500 lb.
324 U	WDL-45 US	WDL-45 US Series (102" Wide)	4500 lb.
325 U	WDL-55 US	WDL-55 US Series (102" Wide)	5500 lb.
326 U	WDL-66 US	WDL-66 US Series (102" Wide)	6600 lb.



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Chapter 3 Operation Instructions

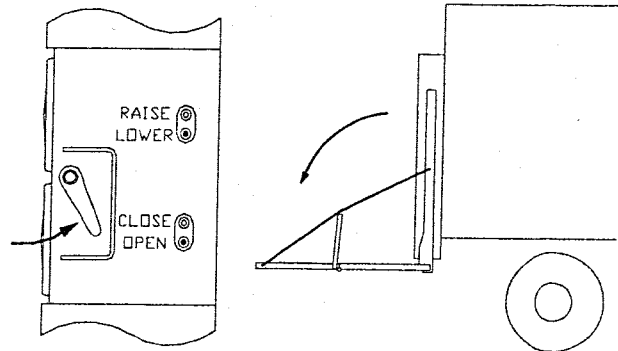
OPENING PLATFORM FOR LOADING

Assure toggle switch in power unit is in "ON" position.

Hold latch in the unlatch position.

Lower platform until arrow on runner is below arrow on upright, (or approximately 8") before releasing latch.

Push and hold open button. Press lower button simultaneously to open platform.

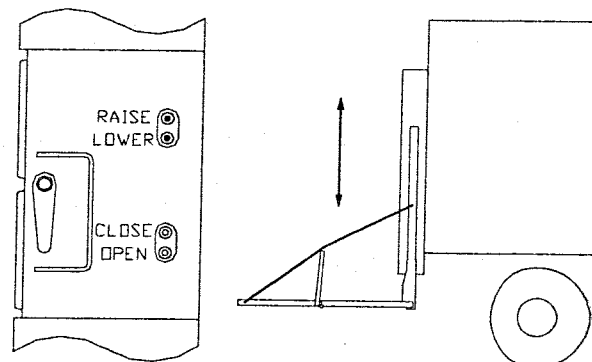


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RAISING AND LOWERING PLATFORM

Press lower button to lower platform.

Press raise button to raise platform.



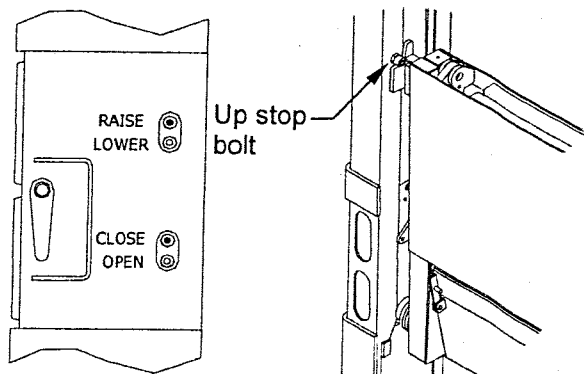
GR01549

CLOSING PLATFORM FOR TRANSIT

Assure platform is at least 8" below bed level.

Push and hold close button. Press raise button simultaneously to close platform.

Raise folded platform up until platform powers into the up-stop bolts on the columns.



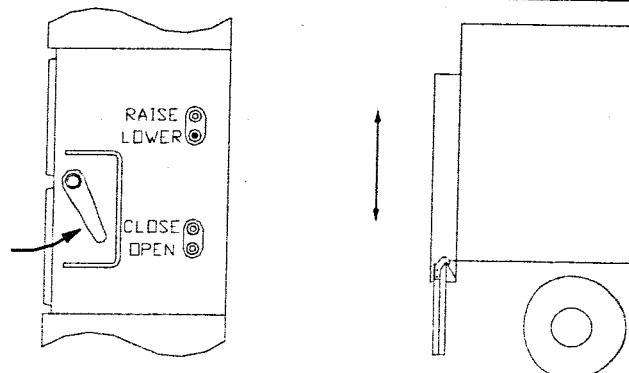
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LOWERING PLATFORM FOR DOCK LOADING

Assure platform is in transit position.

Hold latch in the unlatch position.

Lower platform until bottom stop hooks engage sill extension.



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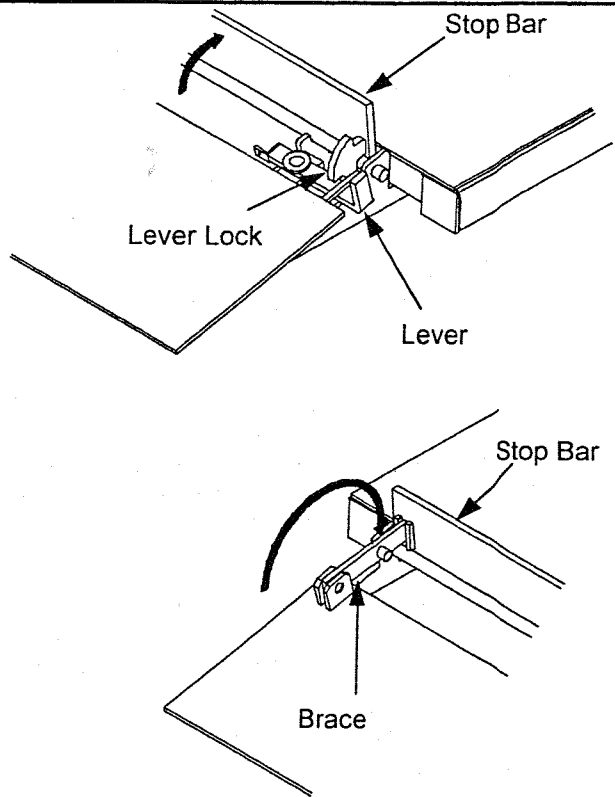
Chapter 3 Operation Instructions

CART STOP OPTION OPERATION INSTRUCTIONS

Push lever away from platform to release stop bar.

Rotate stop bar to lock in vertical position.

Rotate brace to engage stop bar.



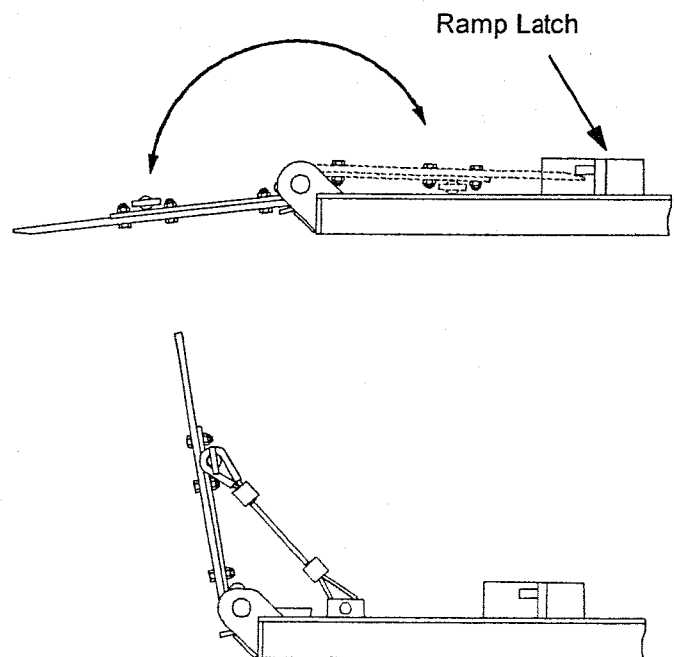
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FOLDING RAMP OPTION OPERATION INSTRUCTIONS

Unlatch ramp and unfold to loading position.

Use cables for cart stop application.

Assure ramp is latched when in transit position.



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Chapter 4 Inspection

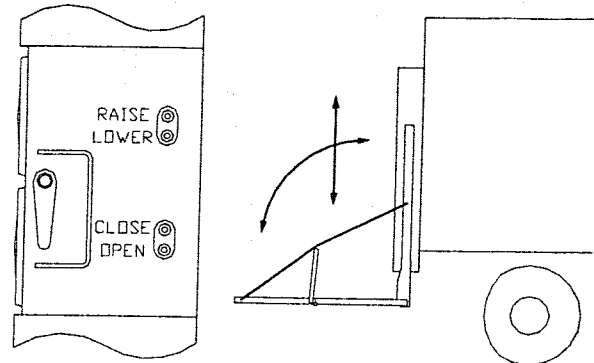
MONTHLY INSPECTION

Check that all controls operate correctly per operation instructions.

Check that toggle switch in power unit works properly in "ON" and "OFF" positions.

Check that liftgate operates freely and smoothly through operational cycle without unusual noise or vibration.

Check that platform opens and closes at a safe rate.



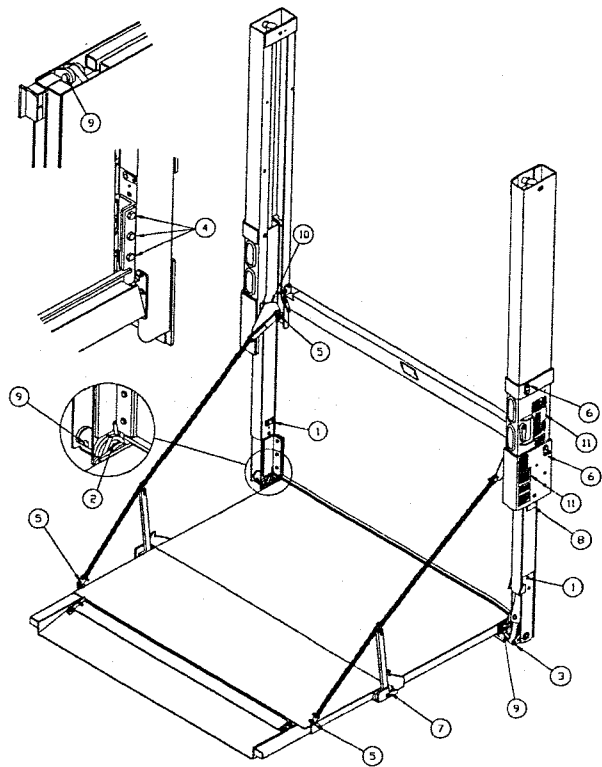
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Check for apparent damage to the lifting structure such as bent or distorted members or cracked welds, which may have resulted from overloading or abuse.

Check that transit latch automatically latches when platform is stored, is free to unlatch when manually rotated, and springs back to position when released.

Check that the following are in place & properly secured:

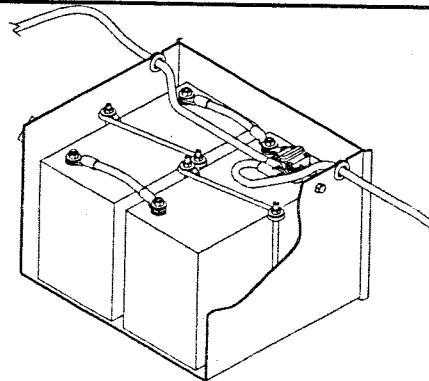
- 1 All cylinder pins & bolts
- 2 All hubs and hub clevis bolts
- 3 Lower closer cylinder clevis bolt
- 4 Equalizer beam bolts
- 5 Support chain attachment bolts
- 6 Rollers, roller pins and bolts
- 7 Chain linkage bar pivot bolts
- 8 Wear pads
- 9 Platform pins and bolts
- 10 All protective covers
- 11 All decals



GR01555

Check electrolyte level of batteries

Check that all wiring and battery cable connections are tight and free of corrosion



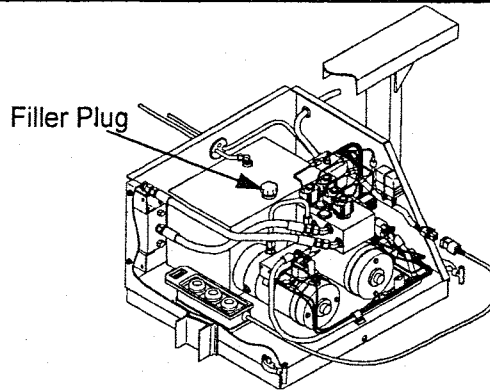
GR01471B

Chapter 4 Inspection

CHECK OIL LEVEL

Lower platform to ground in open position.

Fill hydraulic reservoir to within 1/2" of top of reservoir.



GR01557

Recommended Fluids

Temperature Range	Acceptable Fluids
32 to 150° F	Exxon Unavis J-26 Mobil DTE 13 Chevron AW 32 Shell Tellus 23
-10 to 110° F	Exxon Unavis J-13 Mobil DTE 11
-40 to 80° F	Mobil DTE 11 MIL-H-5606

A good quality SAE 10W motor oil may also be used

Fill reservoir

- Fill with recommended fluid or equivalent.
- With the platform on the ground, fill the reservoir to within 1/2" from the top.

IMPORTANT

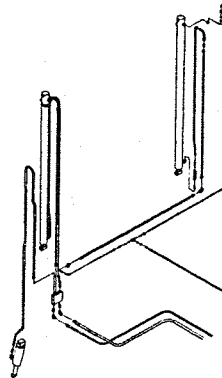
Do not use the following fluids:

- Brake Fluid**
- Power Steering Fluid**
- Automatic Transmission Fluid (ATF)**

Inspect for oil leaks in:

- All three hydraulic cylinders
- Hydraulic hoses. Replace hoses if they show signs of excessive abrasion.
- Hydraulic fittings and valves.
- Hydraulic components – repair or replace all components required to stop oil leakage.

Lubricate liftgate per lubrication instructions



GR01586

Chapter 4 Inspection

BLEEDING LIFT CYLINDERS

Place liftgate within 8" of bed level and place platform in folded position.

Locate bleeder on cylinder. Attach ¼" ID hose to divert oil to a waste oil container. Loosen nut. **DO NOT** remove bleeder.

IMPORTANT: PLATFORM MUST BE IN STORED/TRANSIT POSITION FOR BLEEDING.

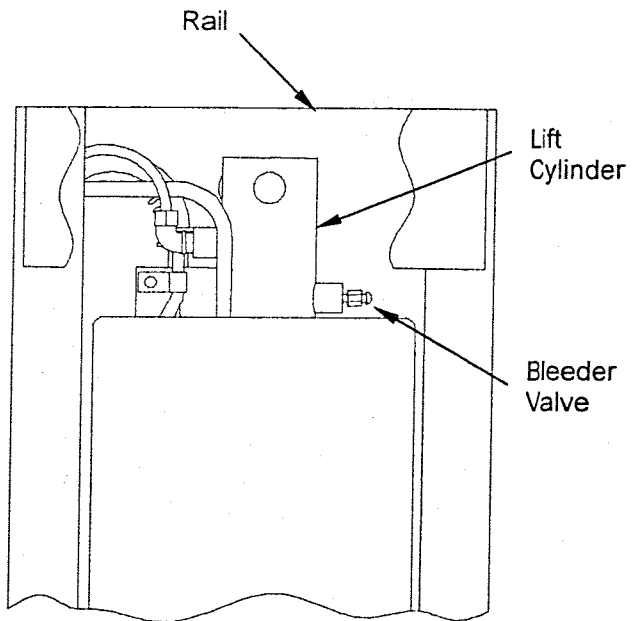
Press raise button to raise liftgate to its fully up **Stored/Transit** position and hold until a clear, air free oil stream comes from bleeder port. Hold for an additional 15 seconds. Release switch for 30 seconds and press raise switch for another 15 seconds. Repeat sequence until no air is observed in oil.

NOTE: Upstop bolts may need to be temporarily removed if air free stream is not observed after completing above procedure.

Tighten bleeder & Repeat above steps to other cylinder.

Run liftgate through several cycles and check operation.

Note: Before, during and after the bleeding procedure, be certain there is sufficient oil in pump reservoir.



GR01558

BLEEDING CLOSER CYLINDER

Open platform and lower to ground.

Remove nut and bolt from closer cylinder shaft.

Disconnect closer hose from cylinder.

Manually pull closer cylinder to fully extended position.

Press raise and close buttons simultaneously until a clear, air free oil stream comes from hose.

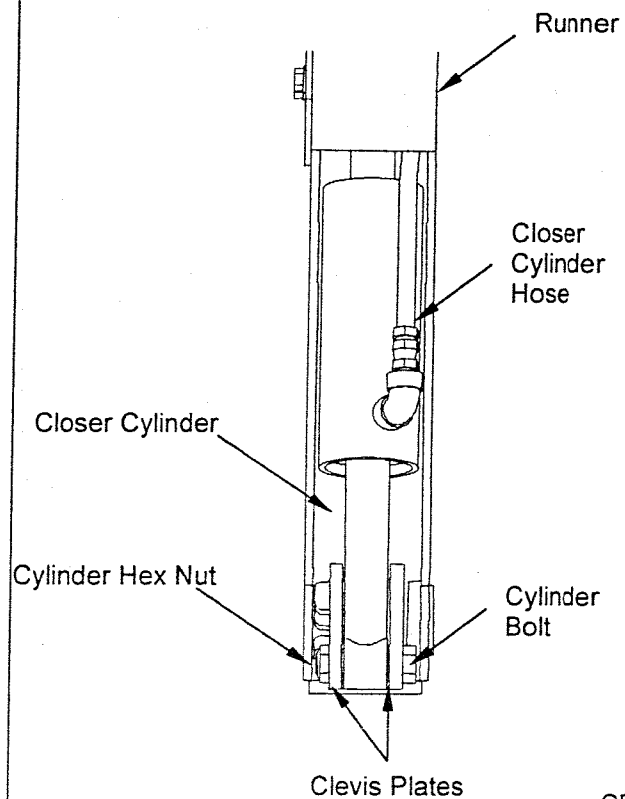
Reconnect closer hose to cylinder.

Align cylinder shaft with hub clevis using control switches.

Reassemble bolt and nut.

Run liftgate through several cycles and check operation.

IMPORTANT: Do not over tighten cylinder hex nut, as it may cause binding or cracking between the clevis plates and the cylinder shaft.



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Chapter 4 Inspection

SEMI ANNUAL INSPECTION

Perform procedures outlined in monthly inspection

Check for excessive wear in the following areas:

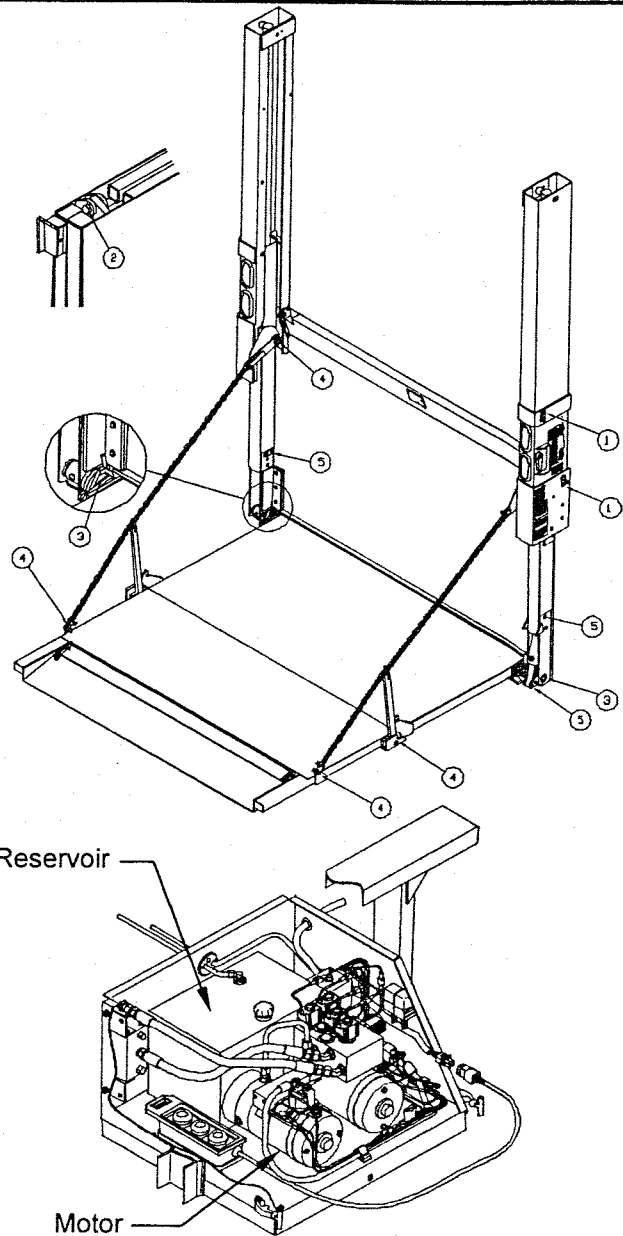
- 1 Roller and pin assemblies
- 2 Platform hinge pins and hinge plates
- 3 Platform inner and outer hubs
- 4 Platform support chain and attachment points
- 5 All cylinder pins and bolts

Inspect pump motor:

- Disconnect battery cables.
- Remove motor end cover.
- Examine armature brushes for wear. Brushes should be replaced if they are less than 1/8" long.
- Clean residue from inside motor housing.
- Apply several drops of light weight machine oil to armature shaft bearing in motor end cover and reassemble motor end cover.

If hydraulic oil in reservoir is dirty:

- Open platform and lower to ground.
- Drain oil from hydraulic system using drain port located on bottom of reservoir and flush entire system.
- Fill reservoir to within 1/2" of top of reservoir.
- Bleed cylinders.



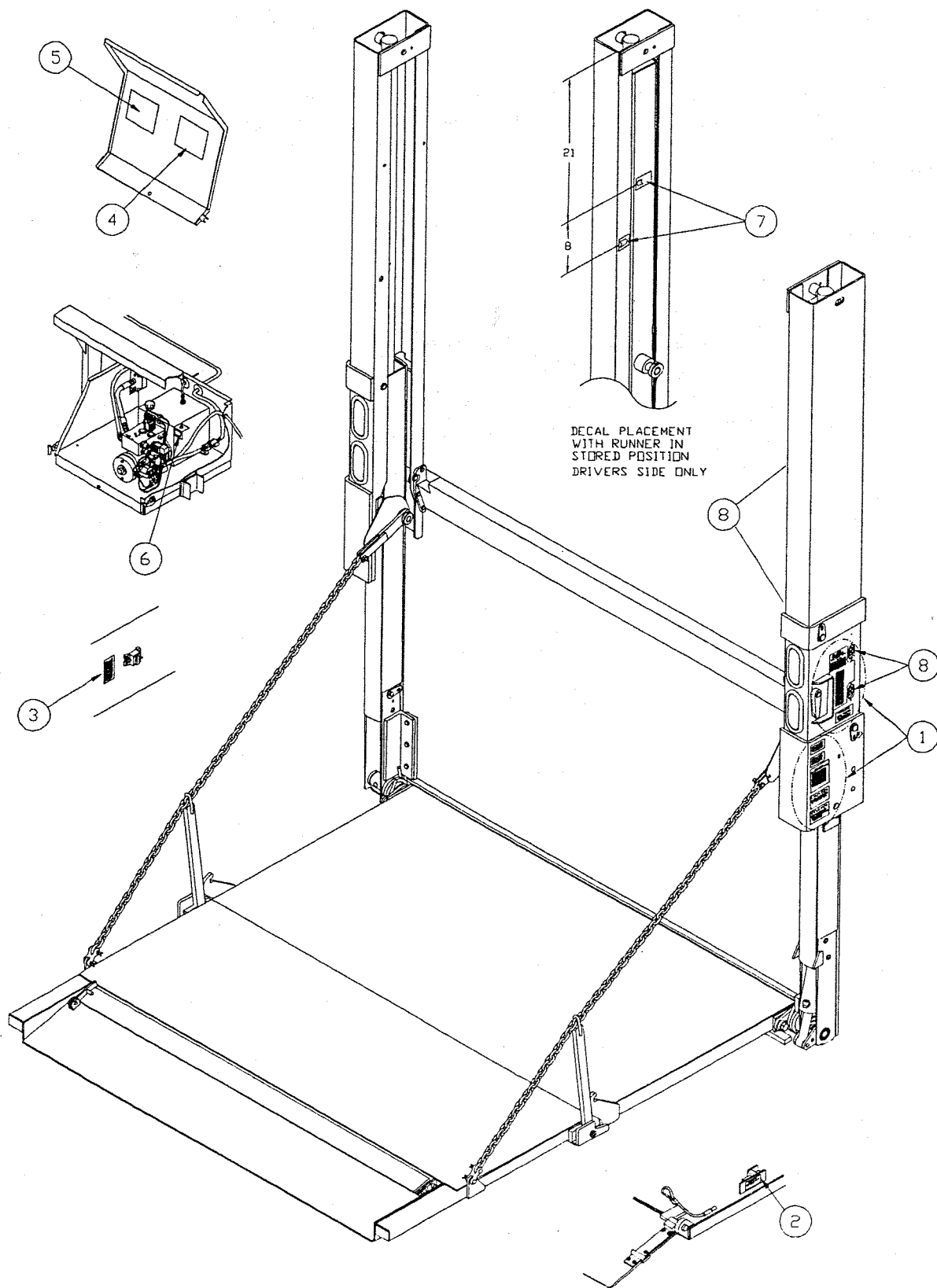
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Chapter 5 Placement of Decals

All decals must be in place and legible or all warranties are void.

ITEM	DECAL	QTY	PART NO.	LOCATION
1	Safety Instructions	1	80100850	Locate in a conspicuous place near controls.
	Operation	1	80101435	
	3500 # Capacity Decal	1	80100586	
	4500 # Capacity Decal	1	80100261	
	5500 # Capacity Decal	1	80101308	
	6600 # Capacity Decal	1	80101309	
	Important Decal	1	80100828	
	Thermalpak Decal	1	80101156	
	Hazard Decal	1	80101370	
	Caution Decal	2	75089296	Locate one in a conspicuous place near controls. Locate one in a conspicuous place on driver side upright.
2	Folding Ramp Decal	2	80100482	Locate on side of ramp latch
3	Warning Decal	1	80100829	Locate next to liftgate circuit breaker. In applications where multiple circuit breakers are used, place in all locations.
4	Dual Pump Decal	1	80101021	Locate decal inside hydraulic enclosure cover for dual pump.
	Hand Pump Decal	1	80101456	Locate decal inside hydraulic enclosure cover for hand pump.
5	Single Pump Valve Block Decal	1	80101372	Locate appropriate decal inside hydraulic enclosure cover.
	Dual Pump Valve Block Decal	1	80101373	
6	Current Switch Decal, Single Pump Only	1	80101371	Locate appropriate decal on pump unit
	Selector Switch Decal, Dual Pump Only	1	80101380	
7	Alignment arrow	1	80115006	Decal 80115006 is placed on up-right at dimension shown
	Open or close when arrows align	1	80115007	Decal 80115007 is placed on runner at dimension shown
8	Reflective Decal	4	80101455	Locate on face of all switches

Chapter 5 Placement of Decals



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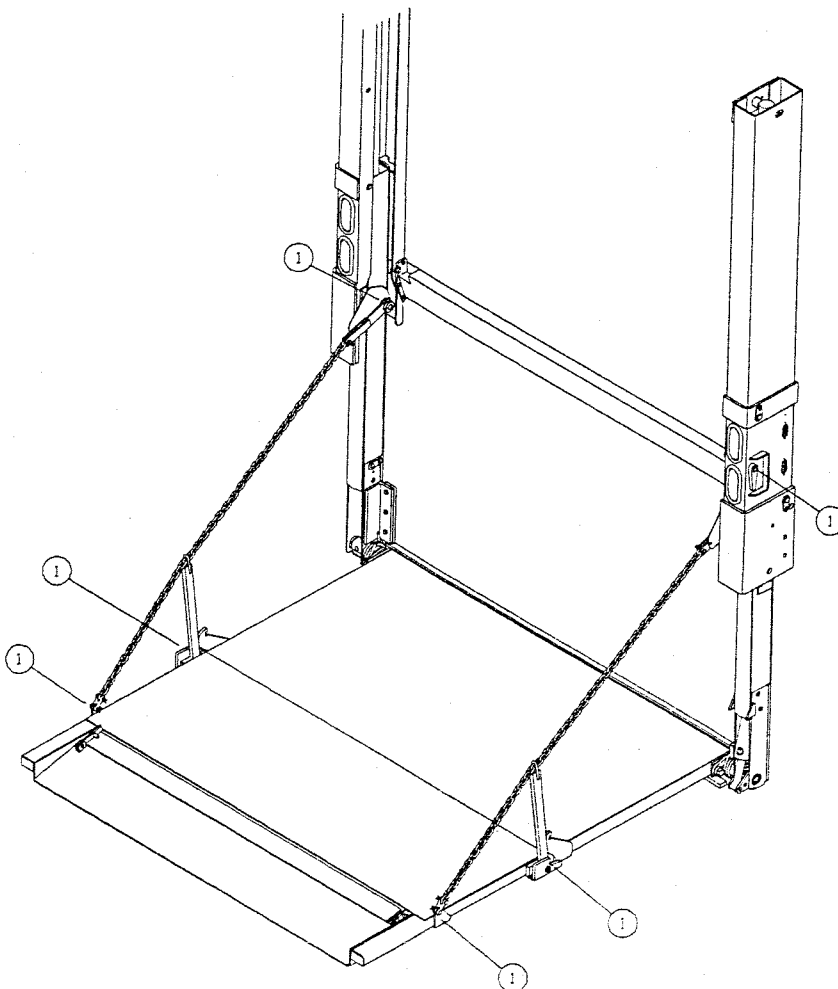
Chapter 6 Lubrication

LUBRICATION INSTRUCTIONS

This liftgate is equipped with Teflon™ bearings on all major pivot points and does not require any regular lubrication, except as outlined below. The points indicated should be lubricated approximately once every three (3) months, or as outlined in the lubrication schedule for heavier usage. If not sure of duty or cycles, always lubricate more frequently.

- 1) Use a light weight machine oil to lubricate chain connecting link areas and latch.

Suggested Minimum Lubrication Schedule (In Days)			
Monthly Cycles	Light Duty	Med. Duty	Heavy Duty
250 Or Less	45	30	21
250-350	30	21	14
350-450	21	14	7
More Than 450	Contact Factory for Instructions		



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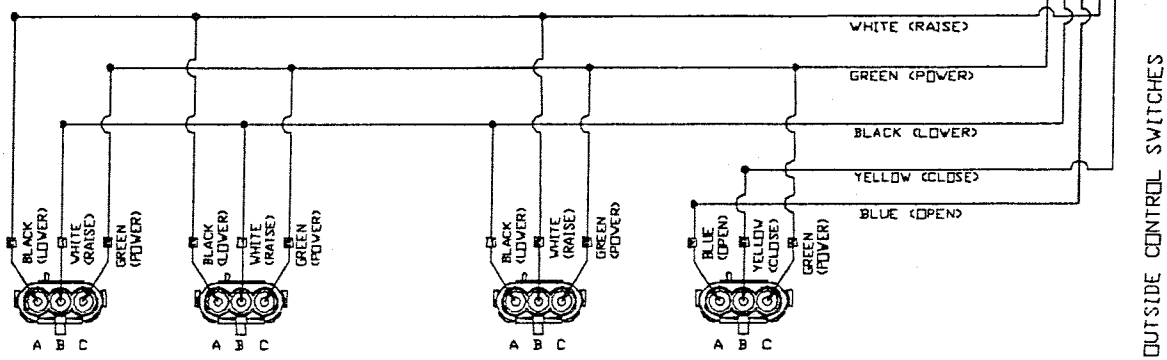
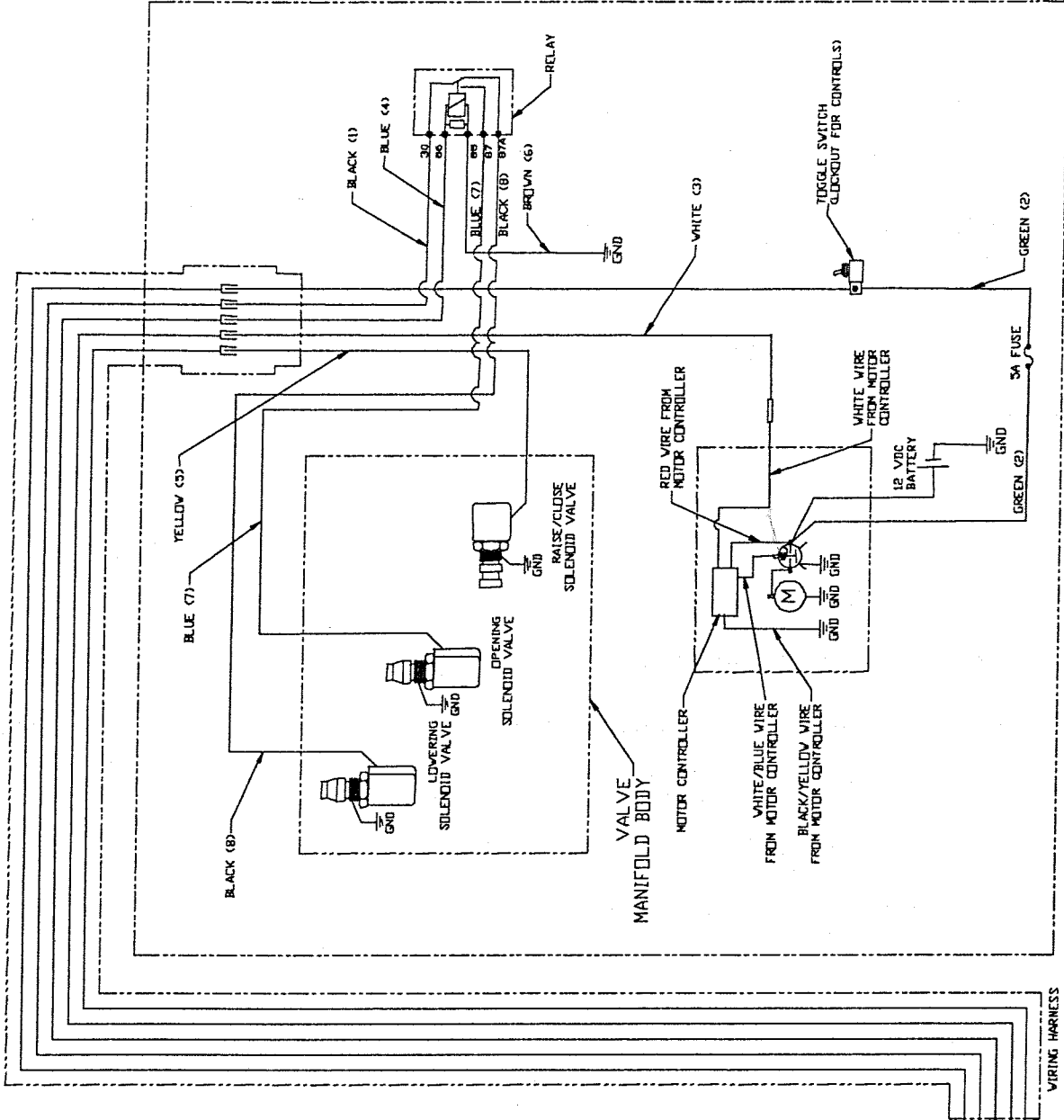
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WDL US Steel Platform & Linkage Assembly	PM-692A
WDL US Aluminum Platform & Linkage Assembly	PM-693A
WDL US Liftgate Hydraulic and Electrical Layout	PM-694B
WDL US Single Pump Hydraulic and Electrical Layout.....	PM-695C
WDL US Dual Pump Hydraulic and Electrical Layout.....	PM-696B

Chapter 7 PMs & Schematics

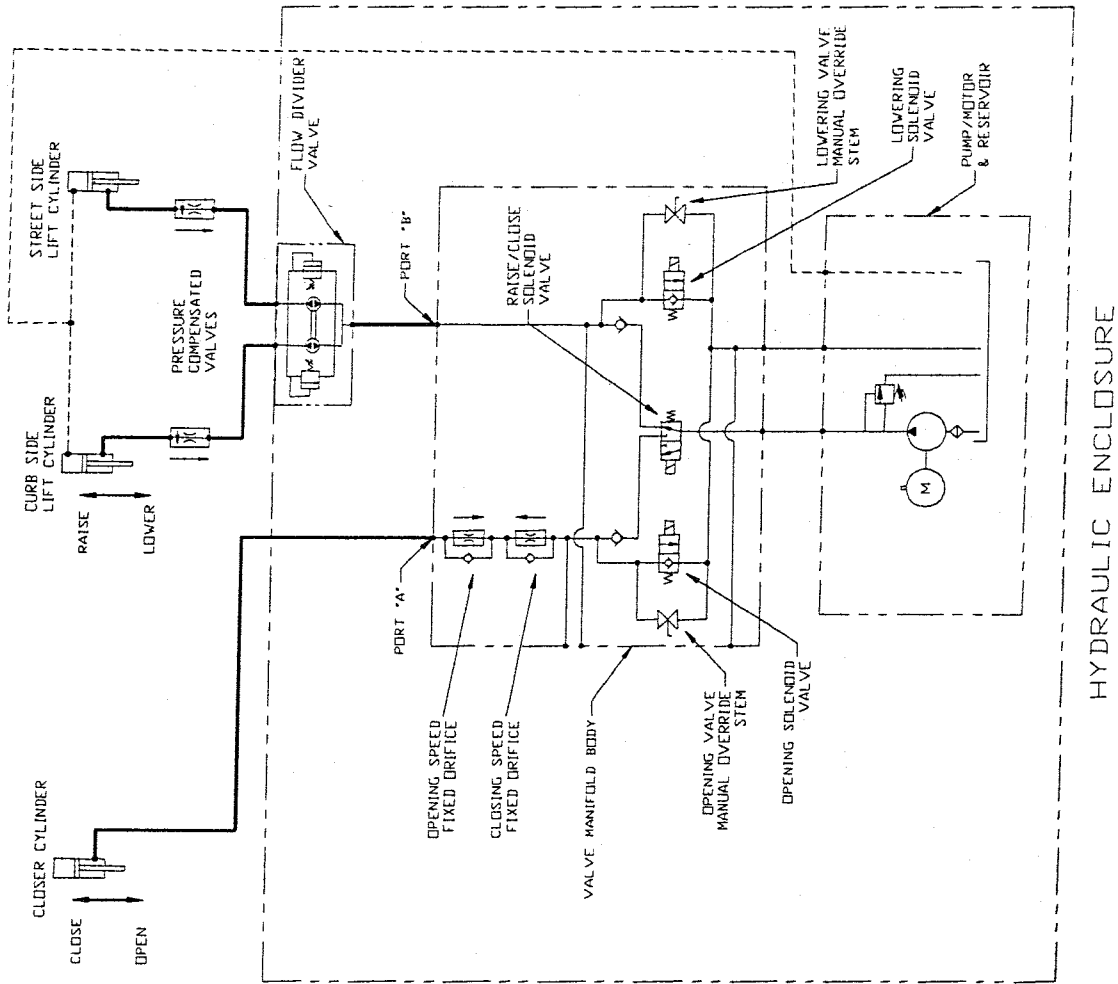
SINGLE PUMP ELECTRICAL SCHEMATIC



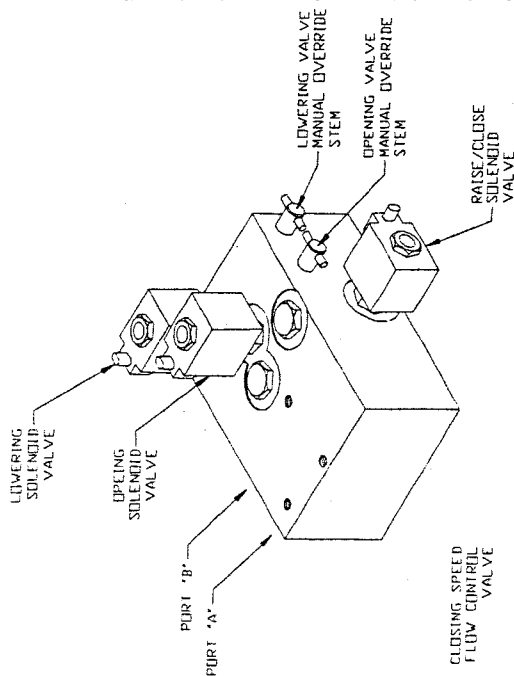
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Chapter 7 PMs & Schematics

SINGLE PUMP HYDRAULIC SCHEMATIC



HYDRAULIC ENCLOSURE

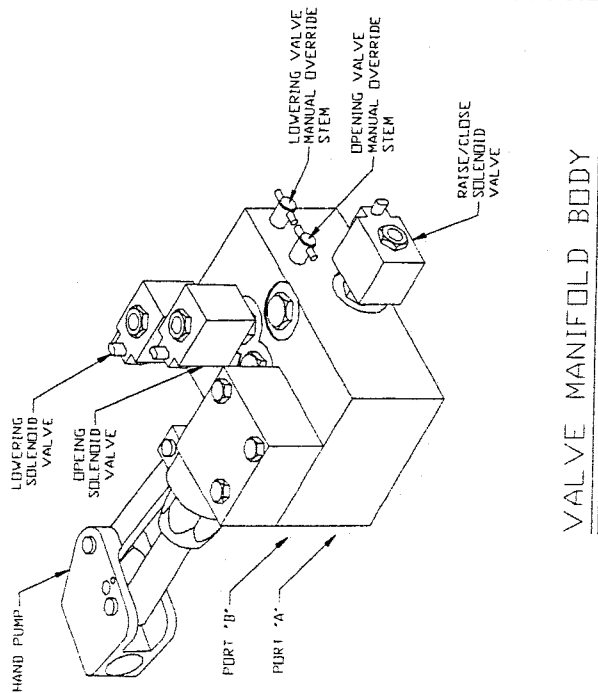
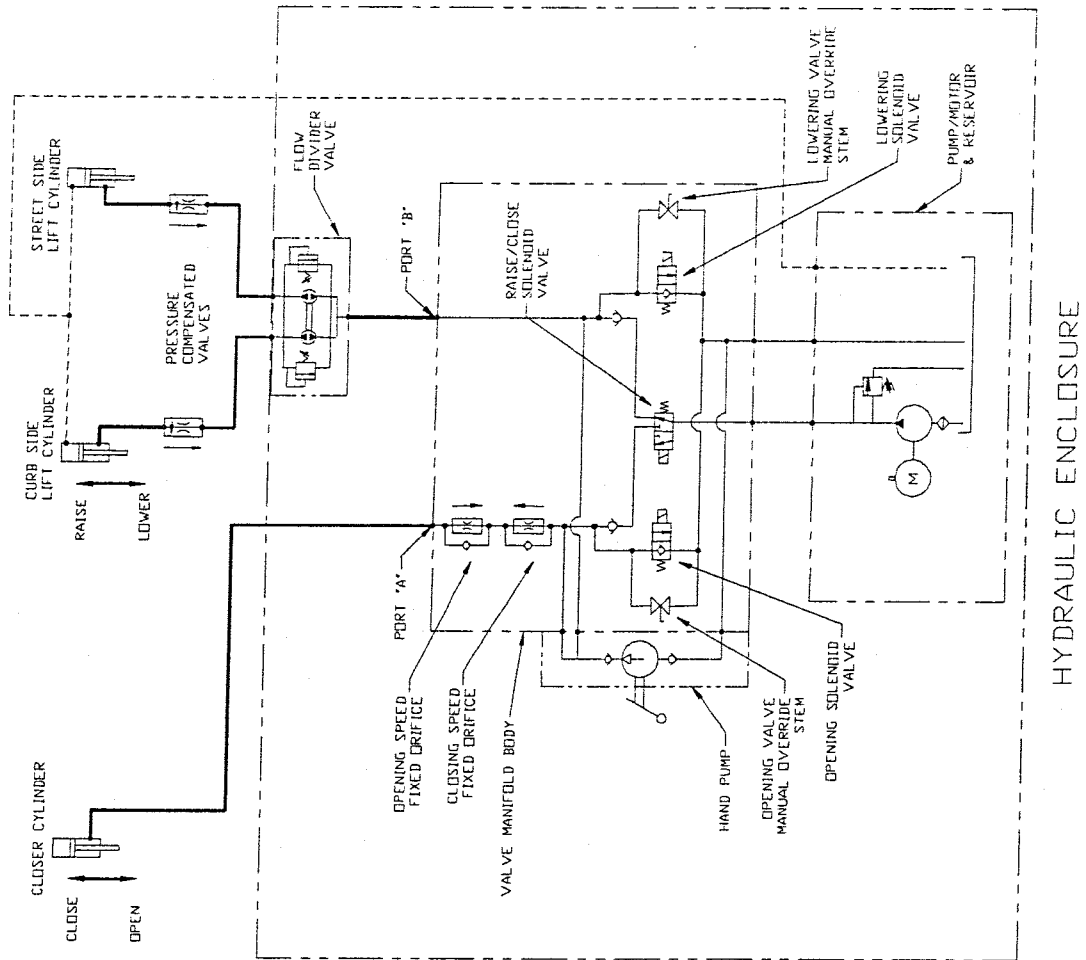


VALVE MANIFOLD BODY

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Chapter 7 PMs & Schematics

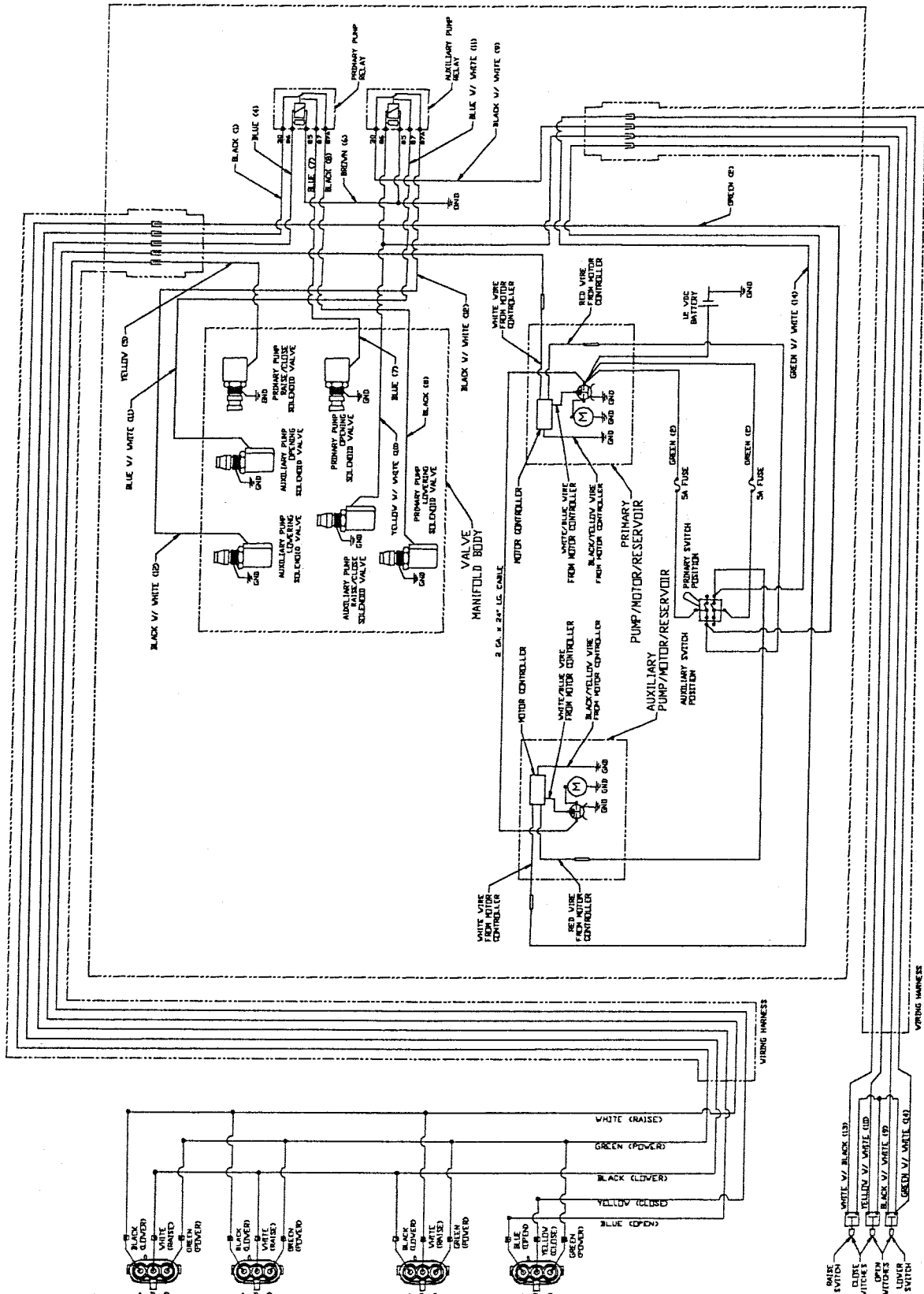
SINGLE PUMP WITH HAND PUMP HYDRAULIC SCHEMATIC



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Chapter 7 PMs & Schematics

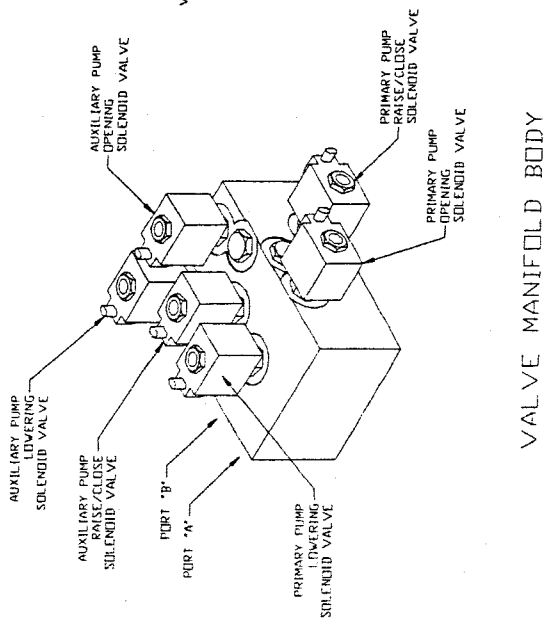
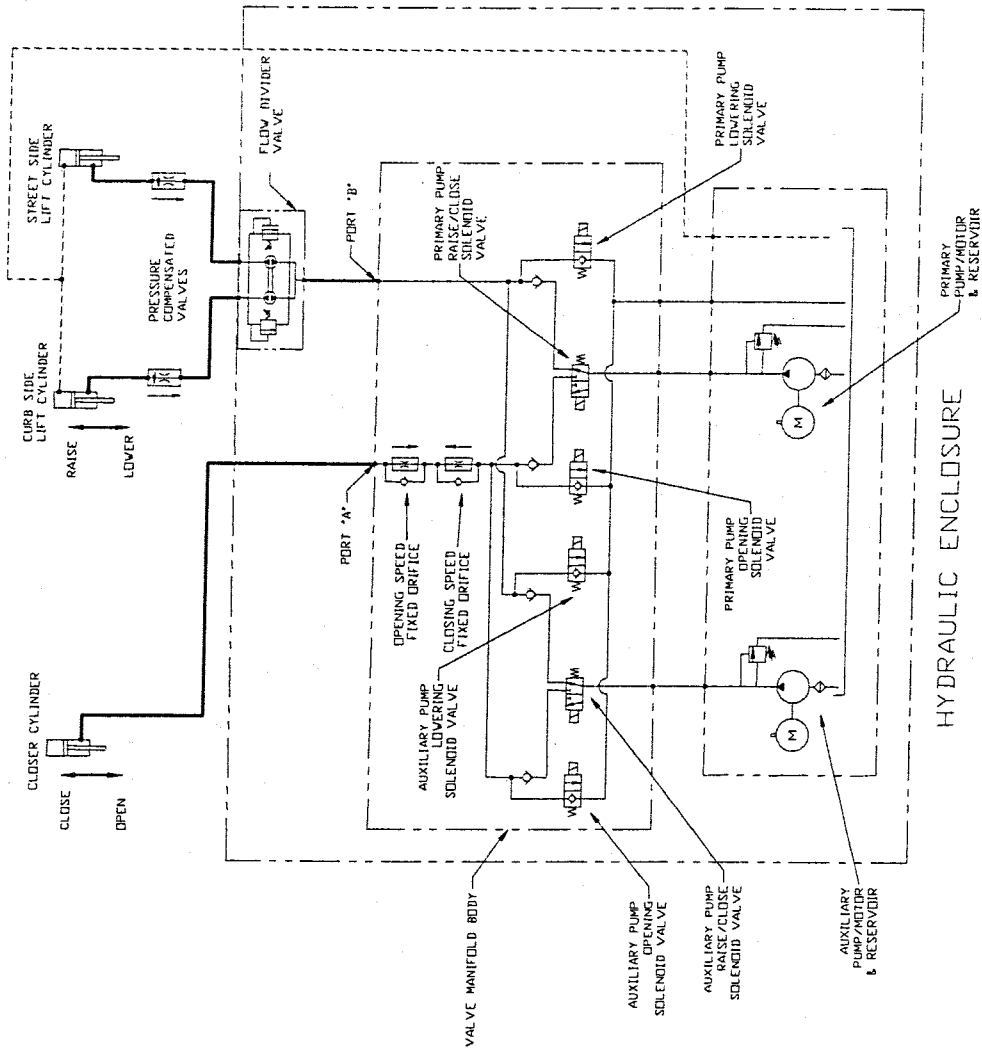
DUAL PUMP ELECTRICAL SCHEMATIC



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Chapter 7 PMs & Schematics

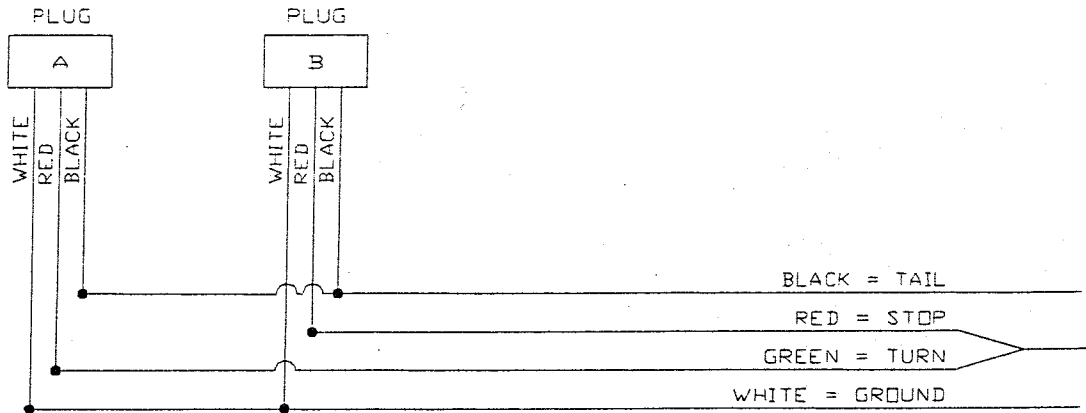
DUAL PUMP HYDRAULIC SCHEMATIC



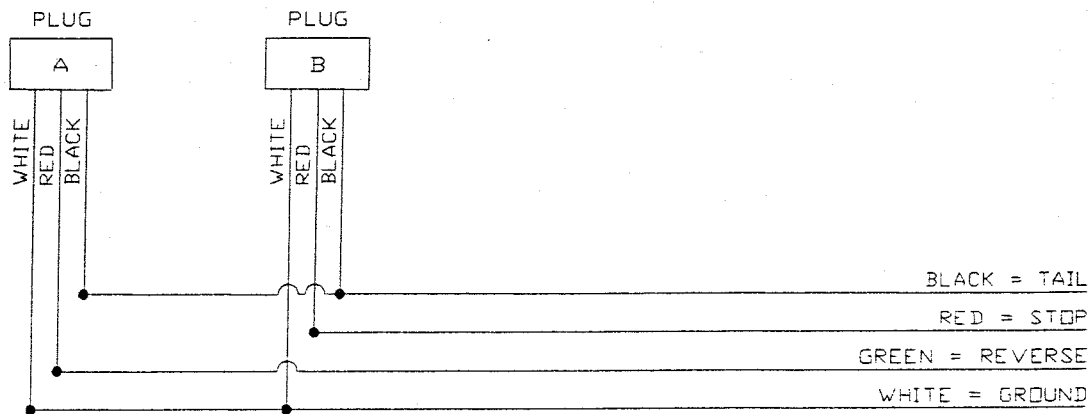
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Chapter 7 PMs & Schematics

TRUCK AND TRAILER LIGHT SCHEMATICS



TRAILER WIRING DIAGRAM



TRUCK WIRING DIAGRAM

GR01666

ITEM	PART NUMBER	QTY	DESCRIPTION
1	31726000	1	Sill Extension, 96" OAW
	31726050		Sill Extension, 102" OAW
4	31765000	1	Equalizer Beam, 96" OAW
	31765050		Equalizer Beam, 102" OAW
*5	75085198	6	3/4"-16 Lock Nut (Grade 5)
*6	75086193	6	3/4"-16 x 2" Hex Bolt (Grade 5)
7	75088158	6	Washer, 3/4" I.D. x 2" O.D. x 0.156" Thick
8	31451001	1	Outer Closer Hub, Curb Side
9	31451102	1	Inner Hub, Curb Side
10	31451301	1	Hub, Driver Side
11	31737101	1	Opening Spring, Curb Side
12	31737151	1	Opening Spring, Driver Side
13	31751000	2	Collar
*14	75086233	2	3/4"-10 x 2-3/4" Hex Bolt (Grade 8)
15	75088087	2	Lock Washer, 3/4" I.D.
*16	85803465	2	1/2"-13 x 1-3/4" Socket Head (Grade 8)
17	31724014	3	Upper Bearing
18	31725010	2	Lower Roller Guard
19	31725011	2	Upper Roller Guard
20	31729000	4	Roller
21	31729005	4	Roller Pin Assembly
22	75086707	8	#10-32 x 5/8" Round Head Screw
23	75085000	8	#10-32, Serrated Hex Nut
24	10010165	2	Bearing, 2-1/4" I.D. x 2-1/2" O.D. x 2" Lg.
25	10010166	2	Bearing, 1-1/4" I.D. x 1-1/2" O.D. x 5/8" Lg
26	31724018	2	Up-Stop Rail Brace
27	31730000	1	Runner, Curb Side
28	75086862	8	1/4"-20 x 3/8" Self Tapping Screw
29	85803340	4	Runner Wear pad
30	31733000 ^A	1	Latch Assembly (Includes Spring)
31	31733008	1	Latch Spring
32	31730009	2	Linkage Guard
33	75086021	1	1/4"-20 x 1/2" Hex Bolt
34	31733005 ^A	1	Latch Pin
35	31733010 ^A	1	Outer Latch Handle
36	75085161 ^A	1	1/4"-20 Locknut
37	75085995 ^A	1	1/4"-20 x 1" Socket Head Screw

^A Included in latch assembly 31773300

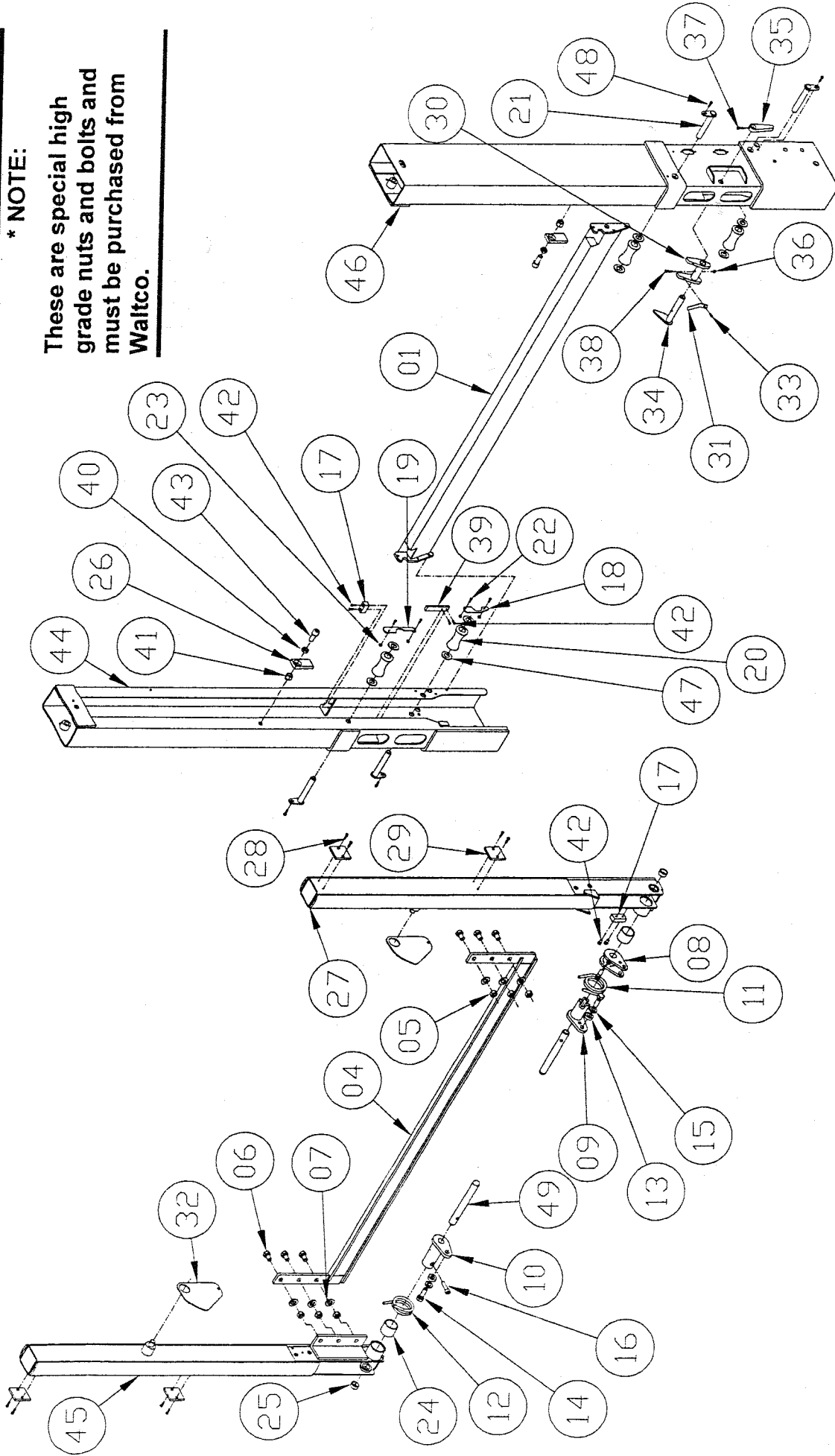
ITEM	PART NUMBER	QTY	DESCRIPTION
38	75086013 ^A	1	1/4"-20 x 1-1/2" Hex Bolt (Grade 2)
39	39035700	2	Lower Bearing
40	75085015	2	3/4"-10 Jam Hex Nut (for steel platforms)
	75085014		3/4"-10 Full Hex Nut (for alum platforms)
41	75085186	2	3/4"-10 Locknut
42	75086854	10	1/4"-20 x 5/8" Self Tapping Screw
*43	75087581	2	3/4" x 2-1/2" Socket Head Screw (Grade 5)
44	31724050	1	Upright, Driver Side
45	31730050	1	Runner, Driver Side
46	31724000	1	Upright, Curb Side
47	75088261	8	1" I.D. Bronze Thrust Washer
48	75086846	4	3/8"-16 x 3/4" Thread Rolling Screw
49	31411201	2	Deck Pivot Pin

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1-691B

MAIN FRAME & RUNNER ASSEMBLY



*** NOTE:**

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ITEM	PART NUMBER	QTY	DESCRIPTION
1	31711000	1	Deck, 96" OAW, 72"+15"&86" B.E. Platform
	31711005		Deck, 96" OAW, 60"+15"&72" B.E. Platform
	31711010		Deck, 96" OAW, 60" B.E. Platform
	31711050		Deck, 102" OAW 72"+15"&86" B.E. Platform
	31711055		Deck, 102" OAW 60"+15"&72" B.E. Platform
	31711060		Deck, 102" OAW 60" B.E. Platform
2	31713000	1	Extension, 96" OAW 72" + 15" Platform
	31713005		Extension, 96" OAW 72" + 15" Cart Stop Platform
	31713020		Extension, 96" OAW 60" + 15" Platform
	31713025		Extension, 96" OAW 60" + 15" Cart Stop Platform
	31713050		Extension, 102" OAW 72" + 15" Platform
	31713055		Extension, 102" OAW 72" + 15" Cart Stop Platform
	31713070		Extension, 102" OAW 60" + 15" Platform
	31713075		Extension, 102" OAW 60" + 15" Cart Stop Platform
3	31713010	1	Extension, 96" OAW 86" B.E. Platform
	31713030		Extension, 96" OAW 72" B.E. Platform
	31713040		Extension, 96" OAW 60" B.E. Platform
	31713060		Extension, 102" OAW 86" B.E. Platform
	31713080		Extension, 102" OAW 72" B.E. Platform
	31713090		Extension, 102" OAW 60" B.E. Platform
4	23370800	2	Extension Hinge Pin
5	75086055	2	3/8"-16 x 3/4" Lg. Gr. 5 Hex Bolt
6	75088081	2	3/8" Lock Washer
7	85803391	2	1-1/4" O.D. x 1" I.D. x 1" Lg. Bearing
8	85803456	2	Double Clevis Link Assembly
9	31713440	2	Linkage Bar (72"+15" & 86" B.E. Platforms)
	31713442		Linkage Bar (60"+15" & 72" B.E. Platforms)
	31713444		Linkage Bar (60" B.E. Platforms)
10	75088082	2	7/16" Lock Washer
11	85803462	4	7/16"-20 x 1-1/2" Hex Bolt (Grade 8)
12	85803444	2	Connecting Link

ITEM	PART NUMBER	QTY	DESCRIPTION
13	75088064	1	5/8" Plain Washer
*14	85803464	2	7/16"-20 Lock Nut
15	75085161	1	1/4"-20 Lock Nut
16	85803550	2	Linkage Retainer Collar
*17	75086215	2	1/4"-20 x 2-1/2" Hex Bolt
18	31713597	2	Chain Linkage Assy. (86" B.E, 72" B.E & 60"+15" & 72"+15")
	31713593		Chain Linkage Assembly (60" B.E.)
19	35442501	1	Cart Stop Brace Assembly
20	75089752	5	Extension Spring
21	85803192	1	80" Cart Stop (Cart Stop Platforms Only)
	85803419		86" Cart Stop (Cart Stop Platforms Only)
22	35440502	1	Pin Assembly (Cart Stop Platforms Only)
23	35442002	1	Lever Assembly (Cart Stop Platform Only)
24	75088056	1	1/2" Plain Washer
25	75084052	1	5/32" x 1" Cotter Pin
26	75089547	1	3/16" x 1" Coiled Pin
27	85803187	1	16" Aluminum Ramp (96" O.A.W.)
	85803151		16" Aluminum Ramp (102" O.A.W.)
	31416501		12" Steel Ramp (96" O.A.W.)
	32416501		12" Steel Ramp (102" O.A.W.)
28	37415551	1	Hinge Plate, Driver Side (Aluminum Only)
29	37414801	2	Ramp Hinge Clevis
30	37419502	2	Retention Cable Assembly
31	37415401	2	Ramp Brace Bar
32	75085193	10	3/8"-16 Hex Lock Nut (Aluminum Only)
33	75086057	10	3/8"-16 x 1-1/4" Bolt (Aluminum Only)
34	37415501	1	Hinge Plate, Curb Side (Aluminum Only)
35	75084053	2	3/32" x 1" Lg. Cotter Pin
36	27310303	2	1/2" Dia. Clevis Pin
37	37414501	1	Ramp Latch Assembly

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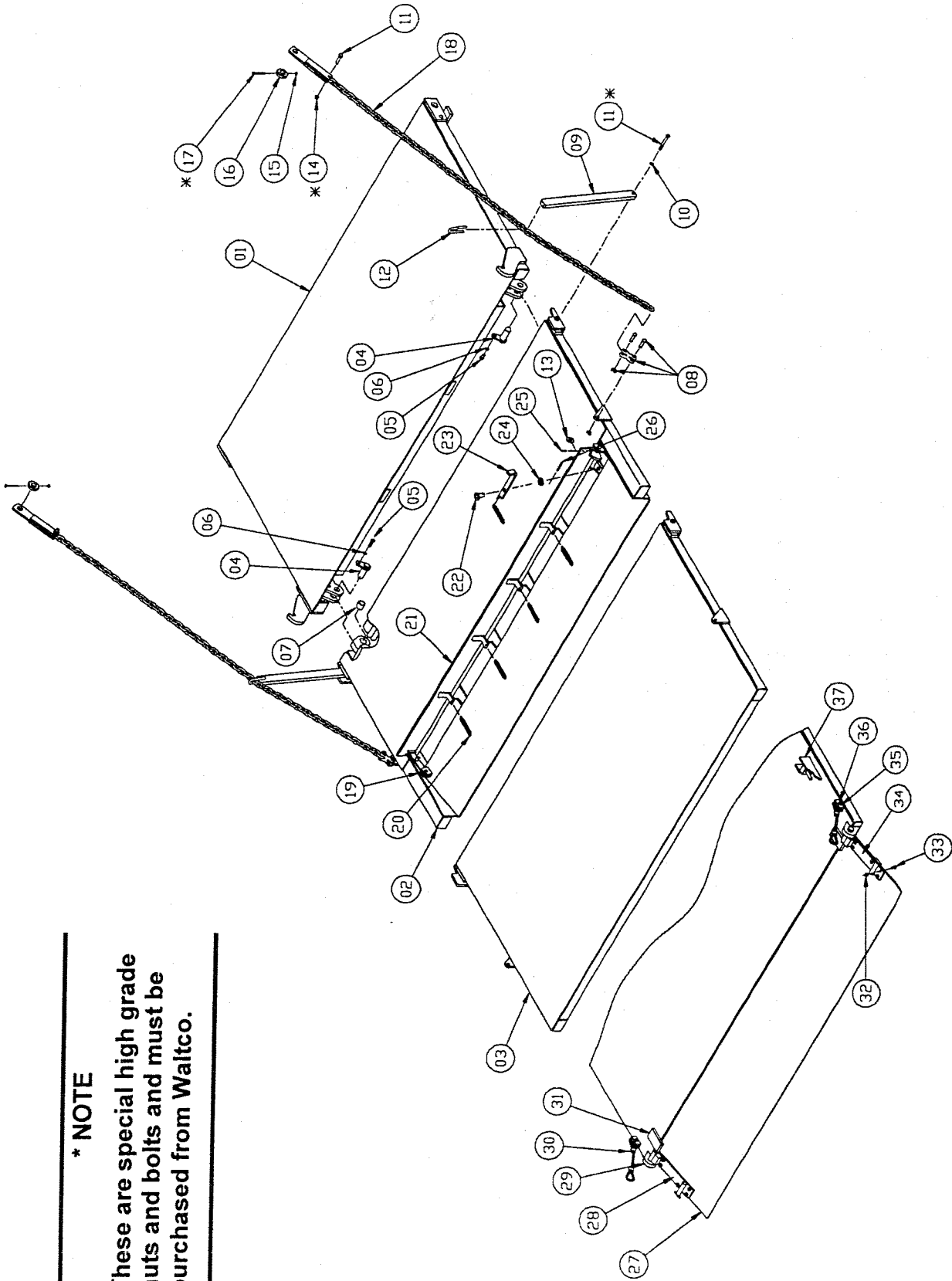
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M-692A

PLATFORM ASSEMBLY

*** NOTE**

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ITEM	PART NUMBER	QTY	DESCRIPTION
1	31711100	1	Deck, 96" OAW, 72"+15"&86" B.E. Platform
	31711105		Deck, 96" OAW, 60"+15"&72" B.E. Platform
	31711110		Deck, 96" OAW, 60" B.E. Platform
	31711150		Deck, 102" OAW 72"+15"&86" B.E. Platform
	31711155		Deck, 102" OAW 60"+15"&72" B.E. Platform
	31711160		Deck, 102" OAW 60" B.E. Platform
2	31713100	1	Extension, 96" OAW 72" + 15" Platform
	31713105		Extension, 96" OAW 72" + 15" C/S Platform
	31713120		Extension, 96" OAW 60" + 15" Platform
	31713125		Extension, 96" OAW 60" + 15" C/S Platform
	31713150		Extension, 102" OAW 72" + 15" Platform
	31713155		Extension, 102" OAW 72" + 15" C/S Platform
	31713170		Extension, 102" OAW 60" + 15" Platform
	31713175		Extension, 102" OAW 60" + 15" C/S Platform
3	31713110	1	Extension, 96" OAW 86" B.E. Platform
	31713130		Extension, 96" OAW 72" B.E. Platform
	31713140		Extension, 96" OAW 60" B.E. Platform
	31713160		Extension, 102" OAW 86" B.E. Platform
	31713180		Extension, 102" OAW 72" B.E. Platform
	31713190		Extension, 102" OAW 60" B.E. Platform
4	31712000	1	Pivot Tube Assy, 96" OAW
	31712050		Pivot Tube Assy, 102" OAW
5	31713211	1	Linkage Pivot Assembly, Curb Side
*6	75086237	12	1/2"-20 x 1-3/4" Hex Bolt (Grade 8)
*7	75085199	4	3/4"-10 Locknut (Grade 5)
8	31711171	2	Bottom Stop Hook
9	31713440	2	Linkage Bar (72"+15" & 86" B.E. Platforms)
	31713442		Linkage Bar (60"+15" & 72" B.E. Platforms)
	31713444		Linkage Bar (60" B.E. Platforms)
10	75088082	2	7/16" Lock Washer
11	85803462	4	7/16"-20 x 1-1/2" Hex Bolt (Grade 8)
12	75084052	6	Cotter Pin, 5/32" x 1"
13	75088258	9	Washer, 5/8", Stainless Steel
*14	85803464	10	7/16"-20 Lock Nut
15	75085161	1	1/4"-20 Lock Nut

ITEM	PART NUMBER	QTY	DESCRIPTION
16	85803350	2	Linkage Retainer Collar
*17	75086215	2	1/4"-20 x 2-1/2" Hex Bolt
18	31713597	2	Chain Linkage Assy. (72" B.E. & 60"+15")
	31713593		Chain Linkage Assy. (60" B.E.)
	31713599		Chain Linkage Assy. (86" B.E., & 72"+15")
19	31517500	3	Extension Hinge Pin
20	10010174	18	Fiber Bushing, 5/8" I.D. x 3/4" O.D. x 2" Lg.
*21	75086182	4	3/4"-10 x 2-1/2" Lg. Hex Bolt (Grade 5)
22	31713261	1	Linkage Pivot Assembly, Driver Side
23	22515100	2	Spring Bar
24	75085005	4	3/8"-16 Serrated Hex Nut
25	75087478	4	3/8"-16 x 1-1/2" Hex Bolt
26	31715550	1	16" Aluminum Ramp (96" O.A.W.)
	31714100		16" Aluminum Ramp (102" O.A.W.)
27	31715550	1	Hinge Plate, Driver Side
28	31714800	2	Ramp Hinge Clevis
29	37419502	2	Retention Cable Assembly
30	31715400	1	Ramp Brace Bar
31	75085193	14	3/8"-16 Hex Lock Nut
32	75086058	8	3/8"-16 x 1-1/2" Bolt
33	31715500	1	Hinge Plate, Curb Side
34	75086110	2	1/2"-13 x 2-1/2" Lg. Hex Bolt (Grade 5)
35	75085279	2	1/2"-13 Lock Nut
36	31714500	1	Latch Assembly
37	75086924	4	1/4"-20 x 1" Hex Self Tapping Screw
38	22515500	2	Cart Stop Retainer
39	22515300	1	Torsion Spring, Curb Side
	22515200		Torsion Spring, Driver Side
40	22513803	1	Cart Stop Pivot, 96" OAW
	32518700		Cart Stop Pivot, 102" OAW
41	22515403	1	Cart Stop, Curb Side, 96" OAW
	32518500		Cart Stop, Curb Side, 102" OAW
	22515453		Cart Stop, Driver Side, 96" OAW
	32518550		Cart Stop, Driver Side, 102" OAW
42	75088131	3	Washer, 7/8" O.D. x 1/2" I.D. x 0.078" Thick

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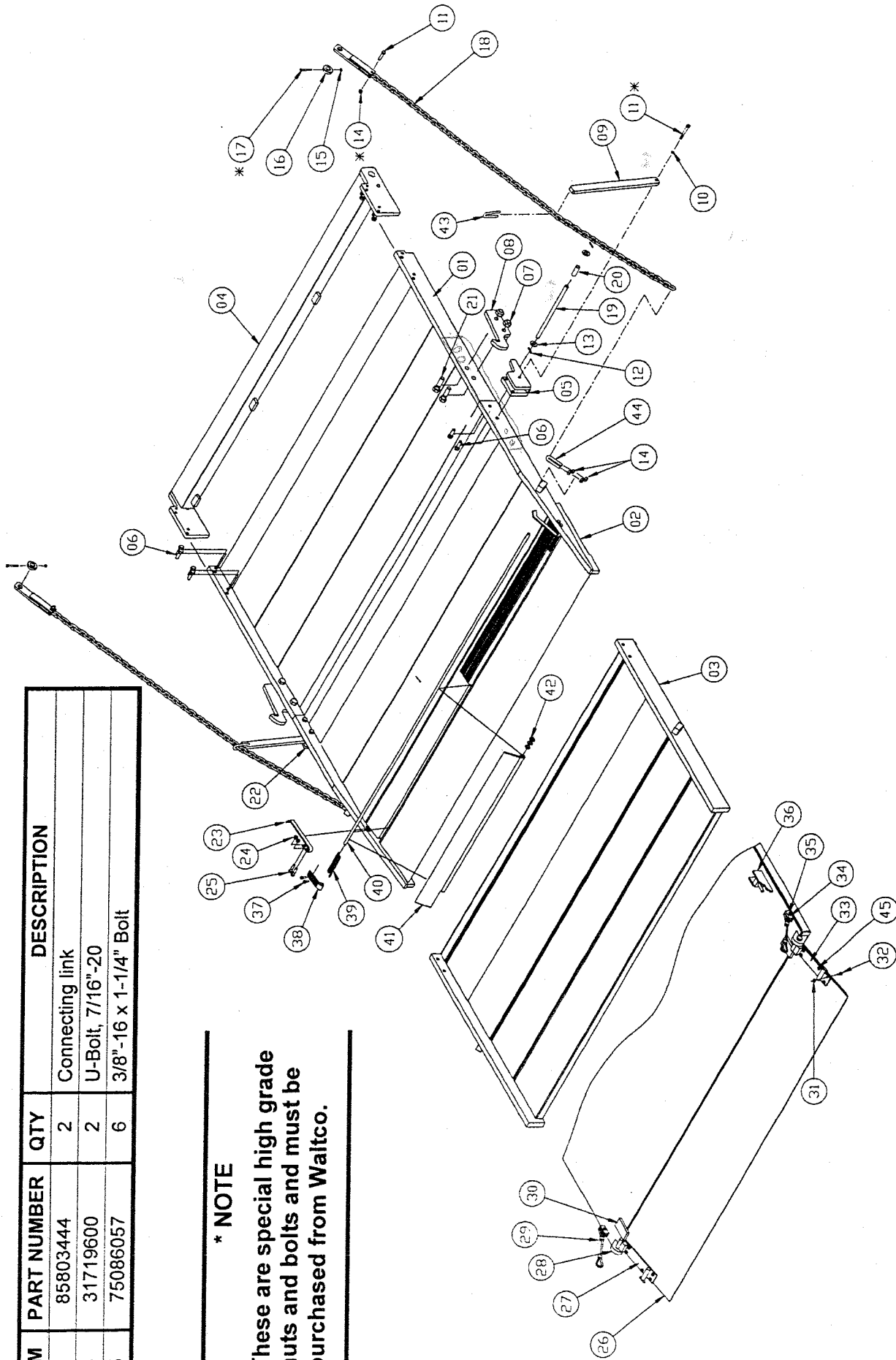
M-693A

ALUMINUM PLATFORM ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION
43	85803444	2	Connecting link
*44	31719600	2	U-Bolt, 7/16"-20
45	75086057	6	3/8"-16 x 1-1/4" Bolt

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ITEM	PART NUMBER	QTY	DESCRIPTION
01	31780050	2	Lift Cylinder
02	31470501	2	Upper Lift Cylinder Pin
03	31471501	3	Lower Lift Cylinder Pin
04	75082877	2	1/4" NPT x 1/4" Compression 90° Elbow
05	32480012	1	Closer Cylinder
06	75086236	1	Lower Closer Cylinder Bolt (Special 5/8" - 18UNF x 2-1/2" Lg. Grade 8)
07	75085183	1	5/8"-18 Lock Nut (Grade 8)
08	10099360	4	Switch W/ decal applied
09	31791002	1	Control Wiring Harness
10	85803806	2	Pressure Compensated Flow Control Valve
11	31793011	2	Fluid Line Assembly
12	75082614	2	1/4" NPT x 1/4" BPT Male Pipe Nipple
13	75086055	2	3/8"-16 x 3/4" Hex Head Screw
14	75086846	3	3/8"-16 x 3/4" Hex Thread Rolling Screw
15	75088081	2	3/8" Lock Washer
16	75086062	14	1/4"-20 x 3/4" Lg. Hex Bolt (Grade 5)
17	75082881	8	Hose Clamp Insulated 3/8" I.D.
18	75082879	4	Hose Clamp Insulated 1/4" I.D.
19	31793022	2	Fluid Line Assembly
22	75085161	10	1/4"-20 Hex Locknut
23	75082874	5	Brass Insert (For Compression Fittings)
24	75082873	5	Brass Insert (For Compression Fittings)
25	31493101	2	1/4" O.D. x 192" Lg. Nylon Tubing
26	75083335	3	Male Adapter, 11/16"-16 ORS x 1/4" NPT
28	75083333	3	Bulkhead Union, 11/16"-16 ORS
29	75083334	3	90° Elbow Swivel, 11/16"-16 ORS
30	82021039	1	1/4" O.D. x 14 ft. Nylon Tubing (for Trucks)
	82021039	1	1/4" O.D. x 31 ft. Nylon Tubing (for Trailers)
31	75082876	1	1/4" Compression Tee
32	31793028	1	Hard line for closer hose

ITEM	PART NUMBER	QTY	DESCRIPTION
33	75083605	1	11/16"-16 ORS Female x 1/4" I.D. x 76" Lg. Hose Assembly (Truck Kit Only)
	75083601		11/16"-16 ORS Female x 1/4" I.D. x 372" Lg. Hose Assembly (Long Trailer Kit Only)
34	75083602	1	11/16"-16 ORS Female x 3/8" I.D. x 76" Lg. Hose Assembly (Truck Kit Only)
	75083600		11/16"-16 ORS Female x 3/8" I.D. x 372" Lg. Hose Assembly (Long Trailer Kit Only)
35	75085997	8	10-24 x 5/8" Lg. Flat Socket Head Screw
36	75089315	1	Breather
37	32481715	1	3/4" O.D. x 5/8" I.D. x 1-1/4" Lg. Bearing
38	75089299	2	Cable Tie
39	75083338	2	Union, 11/16"-16 ORS
40	75083603	1	11/16"-16 ORS Female x 3/8" I.D. x 153" Lg. Hose Assembly (Truck Kit Only)
	75083600		11/16"-16 ORS Female x 3/8" I.D. x 372" Lg. Hose Assembly (Long Trailer Kit Only)
43	75089376	4	Light Grommet
44	75089374	2	Back Up Light (Truck)
	75089428		Stop / Turn / Tail L.E.D. Light (Trailer)
45	75089428	2	Stop / Turn / Tail L.E.D. Light (Trailer)
	75089428		Stop / Turn / Tail L.E.D. Light (Trailer)
46	31791550	2	Harness (Truck)
	31791500		Harness (Trailer)
47	31793030	1	Short Closer Hose 14"
48	80001119	1	Long Closer Hose 96-1/4" KIT.
49	75083047	1	Hose Clamp Insulated 3/4" I.D.
50	75086702	1	1/4"-20 x 5/8" Lg. Pan Head Screw
51	75085001	2	1/4"-20 Serrated Hex Nut
52	75086000	1	1/4"-20 x 5/8" Lg. Flat Head Socket Screw
53	31793601	2	3/8-24 UNF Bleeder Valve

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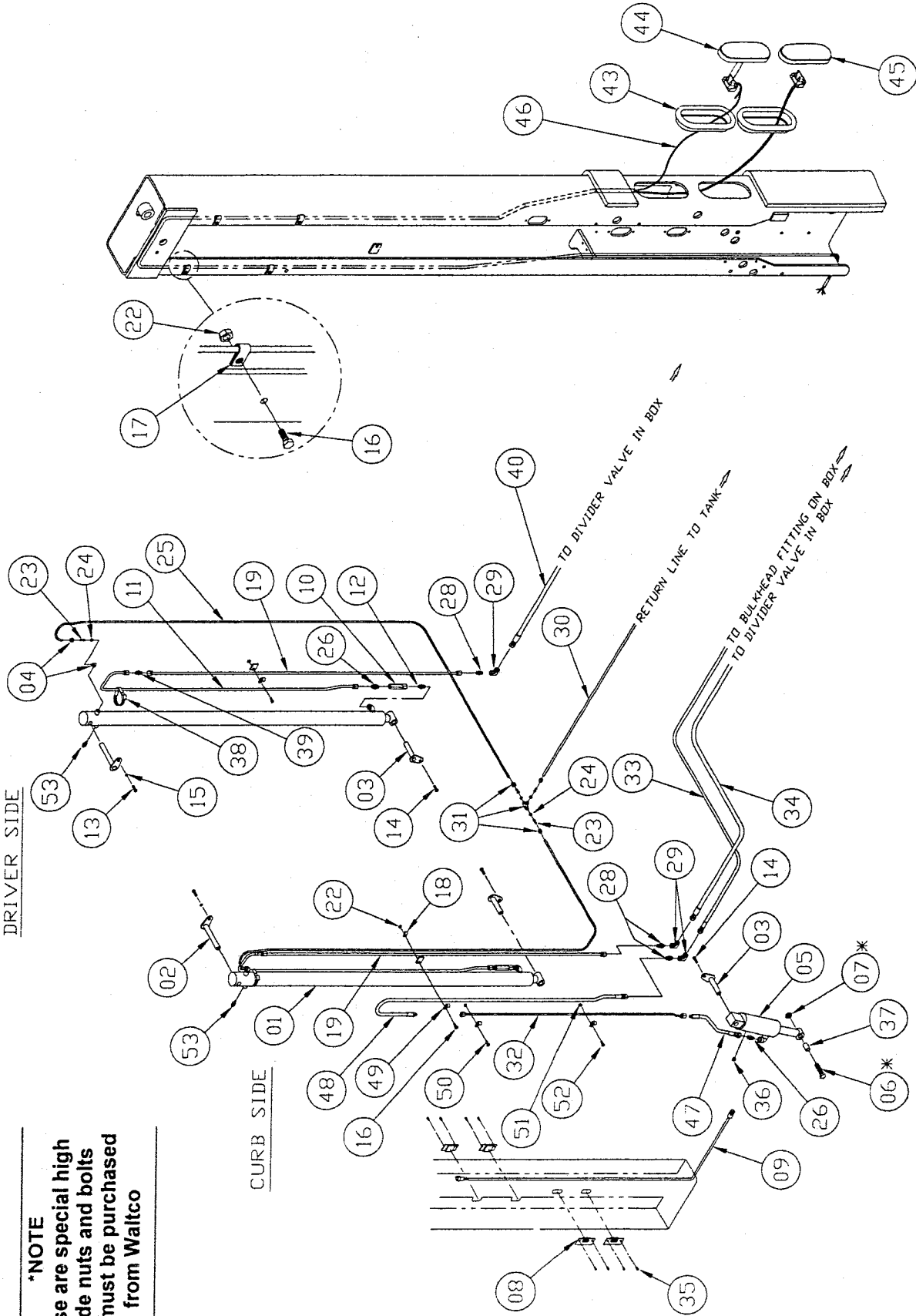
M-694B

LIFTGATE HYDRAULIC AND ELECTRICAL LAYOUT

DRIVER SIDE

***NOTE**

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ITEM	PART NUMBER	QTY	DESCRIPTION
1	31590102	1	Hydraulic Enclosure, Base
3	31790900	1	Gasket
5	75089309	1	Grommet, Control Harness/Return Line
7	75089313	1	Grommet, Battery Cable
9	10195518	1	Ground Cable, 2 Ga. X 18" Lg.
10	75088081	4	Lock Washer, 3/8"
11	70401650	1	Hand Pump Kit (Optional)
12	31590902	1	Hydraulic Enclosure Cover
13	75089572	1	Plastic Plug, 1-3/8" Hole
14	75083604	2	Hose Assy, 3/8" ID x 18-1/2" x 11/16"-16 Female
15	75086055	4	Hex Bolt, 3/8"-16 x 3/4", Grade 5
16	75082874	1	Brass Insert (For Compression Adapter)
18	80000557	1	25 ft. Battery Cable Kit
	80000555		30 ft. Battery Cable Kit
	80000549		38 ft. Battery Cable Kit
19	10099500	1	Terminal Strip
20	75085003	3	Hex Nut, 5/16"-18, Serrated
21	75086217	2	Hex Bolt, 5/16"-18 x 1-1/4" Lg.
22	75089807	1	Toggle switch
23	31491402	1	Wire, Switch Control
24	75082873	1	Delrin Sleeve (For Compression Adapter)
25	75086707	3	Screw, #10-32 x 5/8" Lg.
26	85803482	2	Holder, Spring Clip (Hand Pump Option Only)
27	75085000	3	Hex Nut, #10-32, Serrated
28	31491501	1	Wire, Switch Control
29	75089853	1	Fuse, 5 Amp
32	70092313 ^A	1	Motor
33	75089833 ^A	1	Starter Solenoid
34	75089834 ^A	1	Bus Bar
35	10099403 ^A	1	Controller

ITEM	PART NUMBER	QTY	DESCRIPTION
36	70401501	1	Reservoir
37	70092503	2	Valve Assembly 2-Way/ 2-Position Solenoid Coil Valve
38	70092501	1	Valve Assembly 3-Way/ 2-Position Solenoid Coil Valve
39	70402085	1	Hydraulic Pump Unit - Single Pump
40	85803921	1	Relay
41	31791002	1	Liftgate Wiring Harness
	31494601		Long Trailer Extension Harness
	31494602		Short Trailer Extension Harness
42	31491803	1	Motor Wiring Harness
43	75082877	1	Elbow, 90°, 1/4" NPT x 1/4" Compression
44	75083337	1	45° Bulkhead Union, 11/16-16 ORS Male
45	70401651	1	Hand Pump Handle (Included with Hand Pump Kit)
46	75085020	1	Hex Jam Nut, 5/16"-24
47	70161000	1	Flow Divider Valve
48	75083332	1	Connector, 3/4"-16 SAE x 11/16"-16 ORS
49	75086036	4	Hex Bolt, 5/16"-18 x 1"
50	75085003	4	Hex Nut, 5/16"-18, Serrated
51	75083330	2	45° Elbow, 9/16"-18 SAE x 11/16"-16 ORS
52	75083331	2	45° Elbow, 3/4"-16 SAE x 11/16-16 ORS

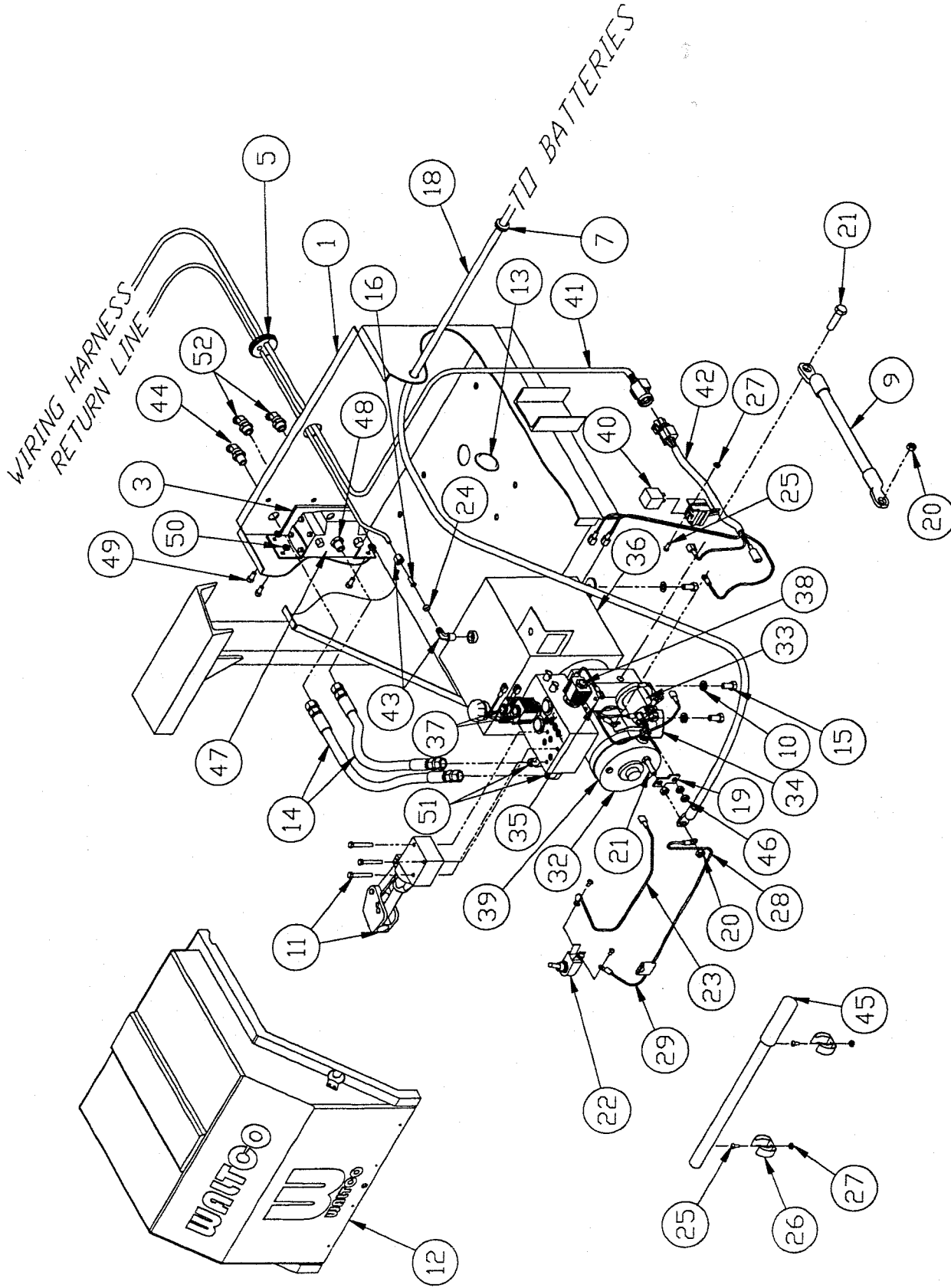
^A Included in Motor/Solenoid Assembly 70400858

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P- 695C

SINGLE PUMP HYDRAULIC AND ELECTRICAL LAYOUT



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 5797
 02

PM-695C

ITEM	PART NUMBER	QTY	DESCRIPTION
1	31590102	1	Hydraulic Enclosure Assy
2	75089309	1	Grommet, Control Harness/Return Line
3	75083337	1	45° Bulkhead Union, 11/16-16 ORS Male
4	75082877	1	Elbow, 90°, 1/4" NPT x 1/4" Compression
5	75082874	1	Brass Insert (For Compression Adapter)
6	75082873	1	Delrin Sleeve (For Compression Adapter)
7	75089572	1	Plastic Plug, 1-3/8" Hole
8	75083604	2	Hose Assy, 3/8" ID x 18-1/2" x 11/16"-16 Female
9	31590902	1	Hydraulic Enclosure Cover
10	10195536	1	Battery Cable Assy, 36"
11	75080062	1	Wire Clip
12	75086217	1	Hex Bolt, 5/16"-18 x 1-1/4" lg.
13	75089853	2	Fuse, 5 Amp
14	75085003	2	Hex Nut, 5/16"-18, Serrated
15	10099500	1	Terminal Strip
16	31491501	2	Wire, w/Fuse Holder
17	75088081	4	Lock Washer, 3/8"
18	75086055	5	Hex Bolt, 3/8"-16 x 3/4", Grade 5
19	85803921	2	Relay
20	75089832	1	Toggle Switch
21	31491601	1	Motor Wiring Harness
22	75086707	5	Screw, #10-32 x 5/8" lg.
23	75085000	5	Hex nut, #10-32, Serrated
24	31791002	1	Liftgate Wiring Harness
	31494601		Long Trailer Extension Harness
	31494602		Short Trailer Extension Harness
25	70092313 ^A	2	Motor
26	75089833 ^A	2	Starter Solenoid
27	75089834 ^A	2	Bus Bar
28	10099403 ^A	2	Controller
29	70401501	1	Reservoir
30	70402280	1	Hydraulic Pump Unit - Dual Pump
31	70092503	4	Valve Assembly 2-Way/ 2-Position Solenoid Coil Valve

ITEM	PART NUMBER	QTY	DESCRIPTION
32	70092501	2	Valve Assembly 3-Way/ 2-Position Solenoid Coil Valve
33	85803975	1	Auxiliary Push Button Control
34	85803946	1	Auxiliary Control Extension Harness (Trailer Kits Only)
35	31492201	2	Wire, Control
36	75085020	1	Hex Jam Nut, 5/16"-24
37	70161000	1	Flow Divider Valve
38	75083332	1	Connector, 3/4"-16 SAE x 11/16"-16 ORS
39	75086036	4	Hex Bolt, 5/16"-18 x 1"
40	75085003	4	Hex Nut, 5/16"-18, Serrated
41	75083330	2	45° Elbow, 9/16"-18 SAE x 11/16"-16 ORS
42	75083331	2	45° Elbow, 3/4"-16 SAE x 11/16"-16 ORS
43	75089313	1	Grommet, Battery Cable

^A Included in Motor/Solenoid Assembly 70400858

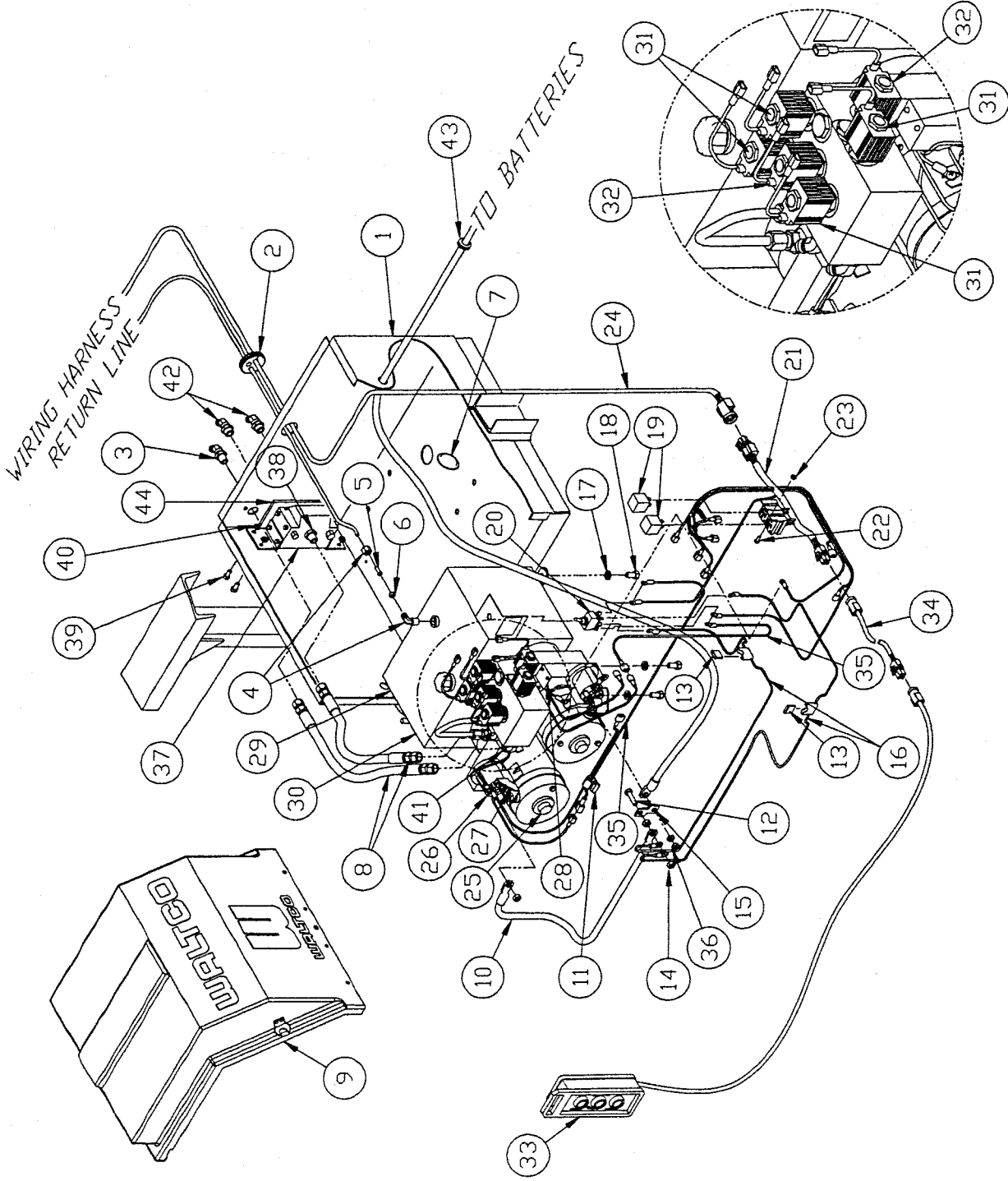
PUMP AND ENCLOSURE ASSEMBLIES COMPLETE	
PART NUMBER	DESCRIPTION
31798505	Dual Pump and Enclosure Complete

WALTCO
TRUCK EQUIPMENT CO.
WDL US SERIES

REVISED: 7-28-06
E.O. 5797
REV. 01

VI-696B

DUAL PUMP HYDRAULIC AND ELECTRICAL LAYOUT



WALTCO
 TRUCK EQUIPMENT CO.
 WDL US SERIES

REVISED: 7-28-06
 E.O. 5797
 REV. 01

PM-696B

Chapter 8 – How To Order Parts

Repairs should be made only by authorized mechanics using WALTCO Replacement parts.

When ordering repair or replacement parts, please include all the information asked for below. If this information is not available, a complete written description or sketch of the required part will help WALTCO identify and deliver the needed part to you.

THE FOLLOWING INFORMATION MUST BE INCLUDED:

1. SERIAL NUMBER - [WALTCO liftgate serial numbers can be found on the Specification Tag attached to the mount frame. (On older units the Specification Tag is located on the side or bottom of the platform.)]
2. MODEL NUMBER - [Or capacity]
3. PLATFORM SIZE

THEN INCLUDE THE FOLLOWING INFORMATION:

4. PART NUMBERS
5. DESCRIPTION
6. QUANTITY REQUIRED

MAIL, E-MAIL OR PHONE YOUR REQUEST TO:

Waltco Truck Equipment Co.
285 Northeast Avenue
Tallmadge, OH 44278
1-800-411-5685
FAX: 1-800-411-5684
E-MAIL: parts@waltco.com

ALL PARTS ARE F.O.B. FROM THE SHIPPING FACTORY

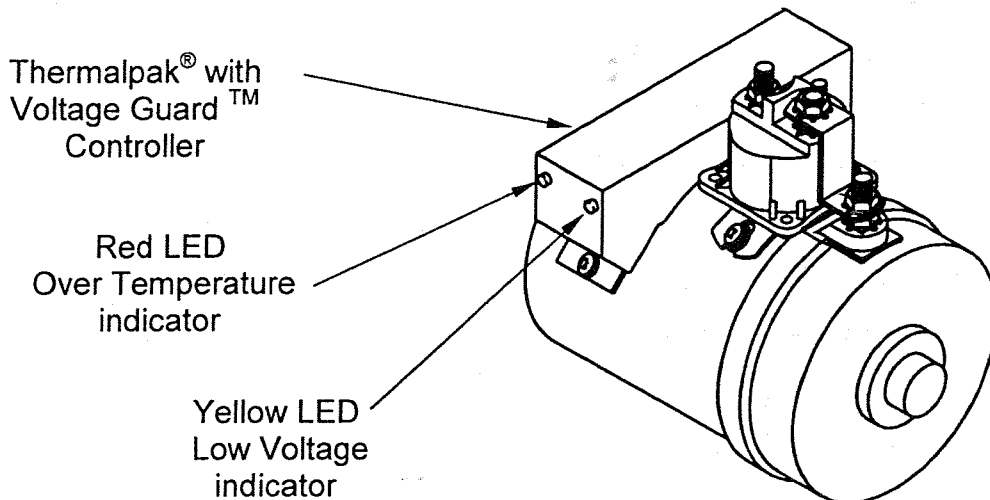
PLEASE NOTE:

To assure you of continuing and effective quality control, our warranty policy permits replacement of hydraulic cylinders, valves and motor pump units when their factory seals are intact. Parts under warranty will be exchanged promptly after careful inspection of the returned assemblies.

TROUBLESHOOTING

WALTCO'S Thermalpak[®] with Voltage Guard[™]

This liftgate is equipped with Waltco's Thermalpak[®] with Voltage Guard[™] hydraulic unit. This feature protects the liftgate motor(s) and solenoid(s) from damage due to overheating and low voltage.



The following conditions will cause the Thermalpak[®] With Voltage Guard[™] controller unit to temporarily disable the liftgate motor:

Condition: Over temperature

When the Thermalpak[®] with Voltage Guard[™] controller detects a liftgate motor overheating condition, the following occurs:

- The red LED on the controller lights.
- The liftgate motor is temporarily disabled.
- An alarm will sound intermittently each time the Raise function of the liftgate is activated.

Solution:

- Allow motor to cool until red LED on controller turns off and that the alarm no longer sounds when activating the Raise function of the liftgate.
- Hold Raise Switch for five (5) seconds to reset controller. Liftgate motor will then activate and normal operation will be restored.
- During the shut down period the liftgate may still be lowered or unfolded.

Troubleshooting (Why did liftgate motor overheat?):

Some conditions that may have caused the motor to overheat are:

- Overuse: Liftgate is being operated too many times within a short period of time.
- Battery cables are not securely connected or cable ends are corroded.
- Bad or insufficient ground.
- Insufficiently charged or bad batteries.

Condition: Low Voltage

When the Thermalpak® with Voltage Guard™ controller senses long term battery voltage falling to a level that would prevent the vehicle from starting or when it senses a short term severe drop in voltage that would cause solenoid "door belling" (rapid chattering of solenoid), the following occurs:

- The yellow LED on the controller lights.
- The liftgate motor is temporarily disabled.
- A steady alarm will sound each time the Raise function of the liftgate is activated.

Solution:

- Run vehicle motor to charge batteries.
- If the Thermalpak® with Voltage Guard™ does not automatically reset, turn off the vehicle. Disconnect the (+) positive battery cable from the battery(s) operating the lift gate for approx. (1) minute. Reconnect the battery cable.
- During the shut down period the liftgate may still be lowered or unfolded.

Troubleshooting (Why did liftgate motor stop working?):

Some conditions that may have caused a low voltage condition are:

- Overuse: Liftgate is being operated too many times with the vehicle engine not running.
- Battery cables are not securely connected or cable ends are corroded.
- Bad or insufficient ground.
- Insufficiently charged or bad batteries.
- If liftgate is mounted on a trailer, the tractor/trailer plug supplying charging power to the liftgate batteries is unplugged.



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IMPORTANT

TO BE KEPT IN VEHICLE

CAUTION:

**STAND CLEAR AND KEEP CLEAR OF PLATFORM
AREA WHILE OPERATING LIFTGATE.**

FOR OPERATION OF THIS UNIT, REFER TO THE "OPERATION INSTRUCTIONS" INSIDE THE OWNER'S MANUAL AND THE OPERATION INSTRUCTIONS DECAL.

LUBRICATION INSTRUCTIONS

Refer to the lubrication chart in this manual.

DO'S AND DON'TS

- DO:** Make certain area in which the platform will open and close is clear before opening or closing platform.
- DO:** Make certain platform is properly latched when in transit.
- DO:** Make certain platform area, including the area in which loads may fall from platform, is clear before and at all times during operation of the liftgate.
- DO:** Operate the liftgate with the control switches only.
- DO:** Check oil level monthly and change oil yearly.
- DO:** Use hydraulic fluids listed on the HYDRAULIC FLUID CHART (found inside this manual) or equivalent.
- DO:** Lubricate as per the LUBRICATION INSTRUCTIONS AND LUBRICATION SCHEDULE found in this book.
- DO:** Read and follow WARNING DECALS, OPERATION DECALS and OWNER'S MANUAL.
- DO:** Visually inspect the liftgate frequently and keep it in adjustment.
- DO:** Be certain vehicle is properly and securely braked before using the liftgate.
- DO:** Repair the liftgate when it is found to be faulty to prevent accidents.
- DO:** Keep all decals in place and legible and retain the Owner's Manual in the vehicle or ALL WARRANTIES ARE VOID.
- DON'T:** Allow the liftgate to be used by persons not familiar with its operation.
- DON'T:** Use the liftgate if unit shows signs of abuse or fails to operate freely.
- DON'T:** Permit the motor to run after the liftgate is raised to bed level.
- DON'T:** Overload the liftgate (Refer to Manual for proper capacity of liftgate).
- DON'T:** Use brake fluid.