CRYSTEEL'S

LO-BOY

LB407 & LB507

OWNERS MANUAL

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1902 Route 57 South
Fulton, NY 13069

DATE PURCHASED _____

BODY SERIAL NUMBER _____

HOIST SERIAL NUMBER _____

CYLINDER SERIAL NUMBER _____

DEALER _____

ADDRESS _____

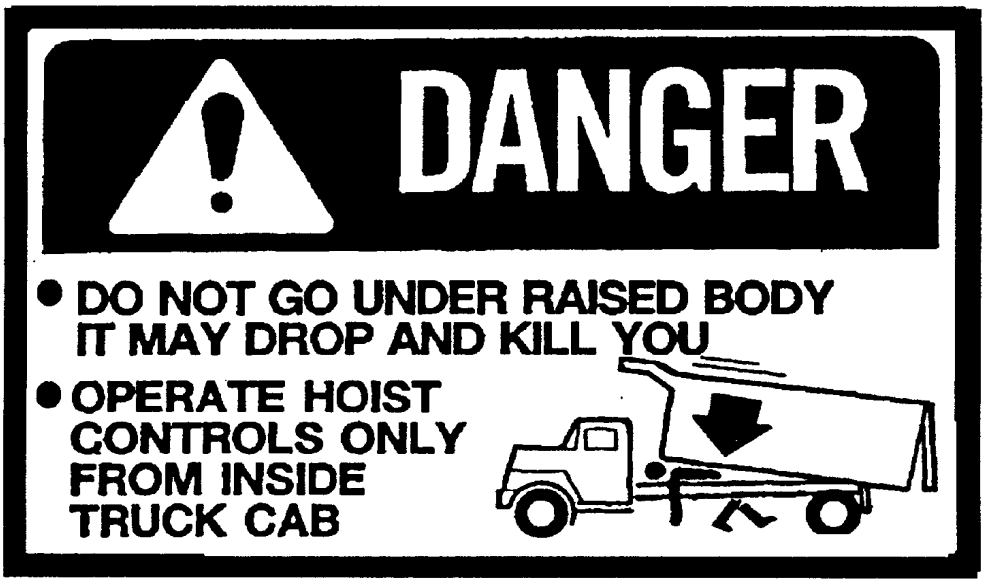
PHONE _____

FOREWORD

Crysteel's LB407 and LB507 Hoists are designed and intended for use on single−axle trucks with cab−to−axle dimensions of 60 to 132 inches and body lengths of 8 to 14 feet.

This manual contains information necessary for the proper installation and operation of Crysteel's Model LB407 and LB507 Hoists. Study it carefully before attempting to install or use the hoist. With proper installation and maintenance, your Crysteel LoBoy Hoist will give many years of trouble−free service.

When ordering parts, be sure to give serial number of hoist, pump, and cylinder. The serial number of the pump is found on the plate on the pump. The serial number of the cylinder is stamped on the barrel of the cylinder near the base. For future reference, copy these numbers NOW in the space provided above. Order parts by number and description as given in the parts listing in this manual.



OPERATION AND USE

1. Engage PTO from cab and adjust engine speed to fast idle.
2. The hoist should raise when the hoist control lever is pulled back, hold when the lever is in the center detent, and lower when the lever is pushed forward.
3. To raise the hoist, press down on the knob of the hoist control lever and pull the lever back. To hold the body in a raised position, place the control lever in its center detent position. To lower the hoist, press down on the knob of the hoist control lever and push the control lever forward.
4. ALWAYS return the hoist control lever to its center detent position after each use.
5. It is advisable to run the PTO to "power down", or lower, the hoist because this will act as a hydraulic lock to hold the hoist in the lowered position. It is not necessary to do this, however, because the reservoir has sufficient capacity whether or not the hoist is powered down. You will benefit from the advantages of the double acting hoist only if you power it down.
6. To make use of the hydraulic lock feature, place the hoist control lever in the center detent position after the hoist is powered down. This places the pressure on the valve, where it belongs, not on the pump.
7. DO NOT LEAVE THE PTO IN GEAR WHILE TRANSPORTING. THIS CAN CAUSE SEVERE DAMAGE TO THE PTO OR HYDRAULIC PUMP/VALVE.
8. The hydraulic system should be drained, flushed and refilled with proper hydraulic fluid at regular intervals. CAUTION: NEVER use hydraulic BRAKE FLUID in the hydraulic system.

SOME DO'S AND DON'TS FOR SAFE AND LONG SERVICE

1. Use the proper hydraulic fluid. KEEP IT CLEAN. Remember to change it regularly.
2. Lubricate all grease fittings at regular intervals.
3. ALWAYS carefully block up the body, using the body prop, before working under it.
4. Do not "race" the engine when unloading.
5. Do not load the hoist beyond its capacity.
6. Operate the hoist on level ground only.
7. Do not drive the truck with the hoist raised, always lower the hoist.
8. DO NOT tamper with the hydraulic relief valve. This will void the warranty. It can cause severe damage to the hoist and cylinder.
9. Never leave the PTO in gear while transporting. It could ruin the hydraulic pump, the PTO or the transmission.
10. Check all bolts and fittings regularly. Keep them tight.

TABLE OF CONTENTS

INSTALLATION INSTRUCTIONS

GENERAL INFORMATION

It is a good idea to look through these installation instructions before beginning to mount the hoist and hydraulic system.

When welding, protect the truck's electrical, air and brake systems by disconnecting, removing or covering. Tighten all nuts and bolts to a consistent level. Use the following table for torque values.

Size	Grade 2 Torque	Grade 5 Torque	Grade 8 Torque
			
1/4−20	3−4 lb−ft	6−7 lb−ft	10−11 lb−ft
1/4−28	4−5 lb−ft	8−9 lb−ft	11−12 lb−ft
5/16−18	8−9 lb−ft	14−15 lb−ft	21−22 lb−ft
5/16−24	9−10 lb−ft	15−16 lb−ft	21−22 lb−ft
3/8−16	17−18 lb−ft	24−26 lb−ft	37−40 lb−ft
3/8−24	19−20 lb−ft	28−30 lb−ft	40−43 lb−ft
1/2−13	38−42 lb−ft	60−65 lb−ft	90−100 lb−ft
1/2−20	43−47 lb−ft	70−75 lb−ft	95−105 lb−ft
5/8−11	75−80 lb−ft	122−130 lb−ft	180−190 lb−ft
5/8−18	85−90 lb−ft	145−150 lb−ft	200−210 lb−ft
3/4−10	132−140 lb−ft	220−230 lb−ft	315−330 lb−ft
3/4−16	152−160 lb−ft	250−260 lb−ft	355−370 lb−ft

LOCATE HOIST FRAME AND REAR HINGE

The rear hinge should be located as close behind the rear spring shackle as possible. Mark the truck as shown in Fig. 1. Notch the truck frame as marked. Place the rear hinge in the notch on the truck frame as shown in Figs. 1 and 2 and clamp it in place. Make sure the rear hinge is centered on and square with the truck frame. Securely weld the rear hinge to the truck frame. Place the truck frame gussets against the bottom of the rear hinge frame angle and against the end of the truck frame. Securely weld the gussets to the rear hinge angle and to the truck frame. Trim the bottom edge of the gusset as needed.

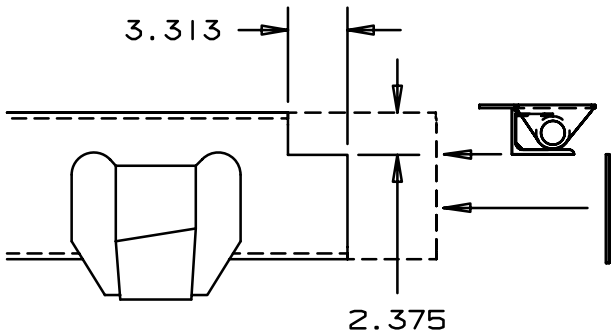


FIG. 1

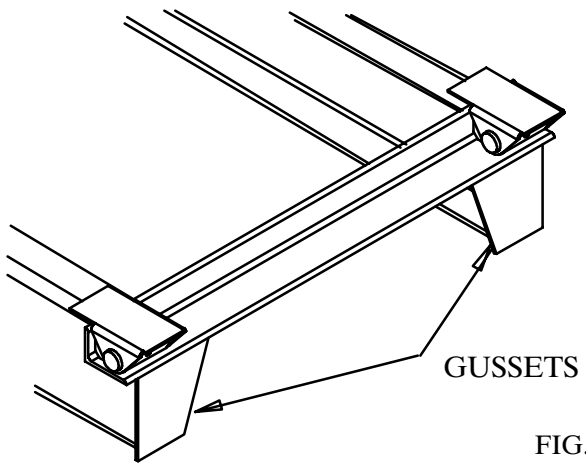


FIG. 2

elginThe rear hinge is designed to fit trucks with 34" frames; it needs to be narrowed when trucks with narrower frames are used. To make the rear hinge narrower, cut the rear hinge frame angle between the pivots as shown in Fig. 3, remove a section and weld the two halves together. Reinforce the welded joint with plates (not supplied.)

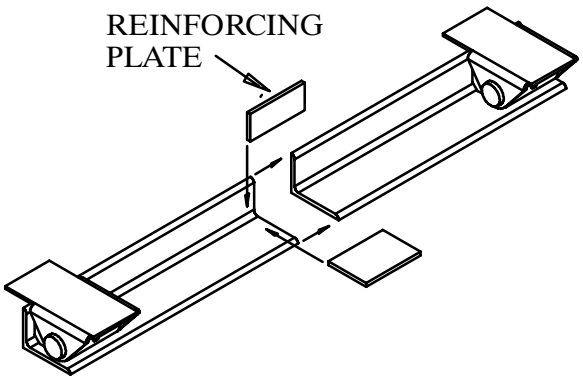


Fig. 3

INSTALL HOIST PIVOT PADS

The LB407 and LB507 hoists have separate hoist pivot pads to allow the hoist to be installed on trucks with narrower frames (down to 29 inches). Centering collars are supplied with these hoists to center the hoist on the truck frame. These collars and pivot pads will need to be added to the hoist frame before installing the hoist on the truck frame. Place a centering collar on the shaft of each of the hoist pivot pads and insert the hoist pivot pads into the hoist cross tubes as shown in Fig. 4. Measure the truck frame width, subtract 5" and adjust the hoist pivot pads to fit. For example, if the truck frame measures 34", subtract 5" and set the hoist pivot pads at 29". (See Fig. 5.) Be sure the hoist is centered between the pivot pads. Securely weld the centering collars to the hoist pivot pad shafts.

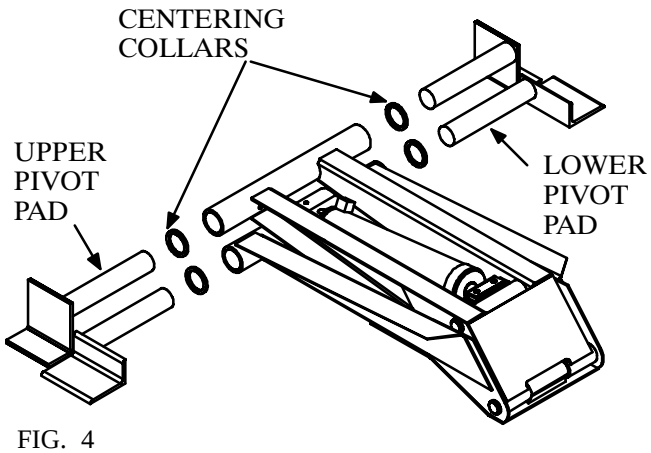


FIG. 4

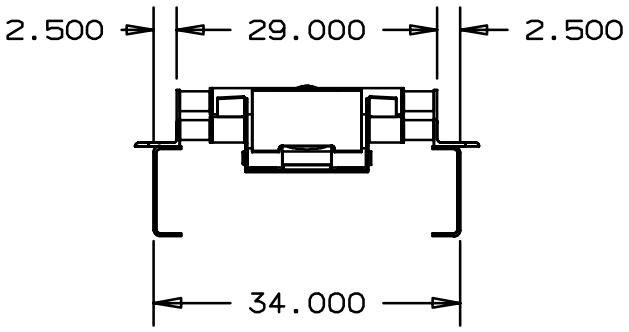
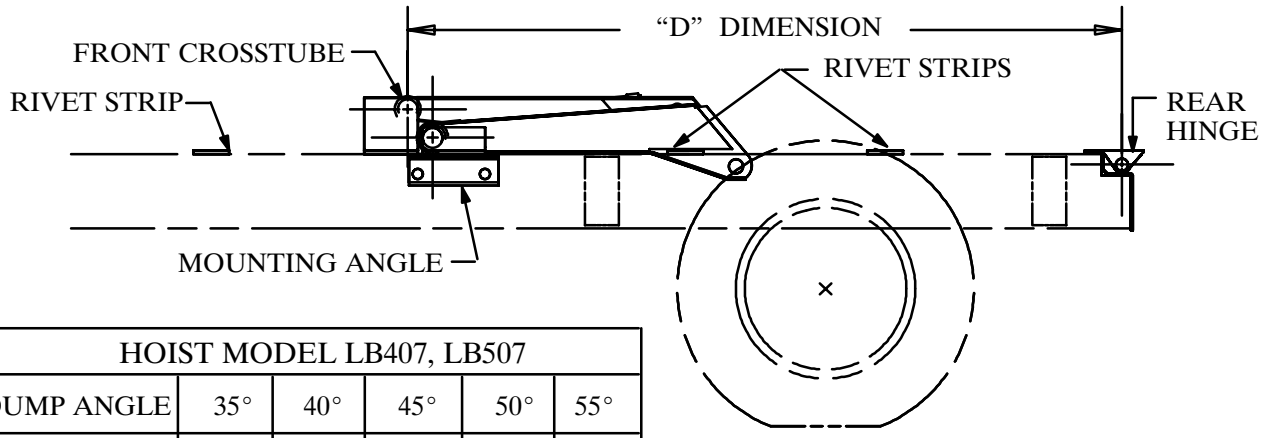


FIG. 5

LOCATE AND MOUNT HOIST

Determine where to mount the hoist on the truck frame. Please refer to the chart in Fig. 6 for the relationship between dump angle and "D" dimension. Measure forward from the center of the rear hinge pin and mark, on the truck frame, the location of the front crosstube of the hoist frame. Place the hoist on the truck frame and clamp the hoist pivot pads to the truck frame. The hoist should be level with the truck frame. If the center hinge end of the hoist is too high, relocate the hoist. If the center hinge end of the hoist is too low, install spacers (not supplied) on the crossmember in the truck frame under the hoist. Make sure the hoist frame is centered on and square with the truck frame. Clamp a hoist mounting angle to the lower hoist pivot pad and to the outside of the truck frame (one on each side) and mark the truck frame for drilling.



HOIST MODEL LB407, LB507					
DUMP ANGLE	35°	40°	45°	50°	55°
"D" DIM.	101	89	79 1/2	72 1/2	66 1/2

Fig. 6

CAUTION: BE CAREFUL OF BRAKELINES, WIRING, ETC. INSIDE THE TRUCK FRAME WHEN DRILLING THE TRUCK FRAME.

Drill 21/32 diameter holes in the truck frame using the hoist mounting angles as guides. Bolt the mounting angles to the truck frame using 5/8 x 2 cap screws and hex lock nuts. Securely weld the lower hoist pivot pads to the mounting angles. Remove the clamps.

INSTALL PUMP

The gear pump has an SAE 'A' mounting configuration, a 9 tooth splined shaft and a two−bolt mounting flange, and is assembled for counterclockwise rotation. Note: This pump will mount directly to Chelsea's output type 'XE' or Muncie's output type 'R'. Crysteel Manufacturing recommends a PTO ratio of 100−120%. This assures a minimum pump operating speed of 600 RPM. ***CHECK THE ROTATION OF THE PTO!*** If it is opposite of the engine, then the pump can be used as it is. If the PTO rotation is the same as the engine, then the pump will need to be reversed. (See instructions included with the pump.) Bolt the gear pump to the PTO output flange using 3/8 x 1" cap screws and lock washers.

INSTALL RESERVOIR / VALVE

Determine which side of the truck to mount the reservoir/valve assembly. The same side as the PTO opening on the transmission would be ideal. Using 3/8 x 1" cap screws, flat washers and hex lock nuts, bolt the reservoir mounting angles to the reservoir/valve assembly so the exposed end of the valve spool is toward the cab (See Fig. 7). This makes it much easier to connect the valve control cable to the valve. Place this assembly against the outside of the truck frame on the same side as the pump. Mark the truck frame for drilling using the mounting angles as guides. Make sure there is enough clearance for hot exhaust pipes. *THE ENGINE EXHAUST MUST NEVER BLOW DIRECTLY ONTO THE RESERVOIR/VALVE ASSEMBLY.*

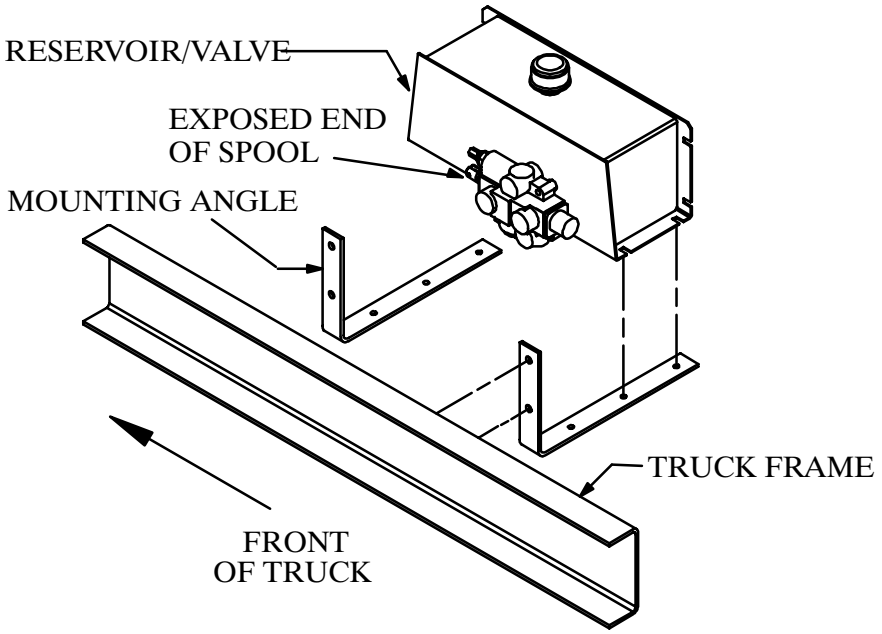


Fig.7

CAUTION: BE CAREFUL OF BRAKELINES, WIRING, ETC. INSIDE THE TRUCK FRAME WHEN DRILLING THE TRUCK FRAME.

Drill 17/32" holes in the truck frame and bolt the reservoir/valve assembly in place using 1/2 x 2" cap screws and hex lock nuts, tightening to 90 to 100 lb−ft.

INSTALL HOIST CONTROL

Mount the Hoist Control decal on the pedestal taking care to align the holes for the PTO cable and indicator light. Temporarily assemble the valve control head to the pedestal using 5/16 x 2 1/2 machine screws and hex nuts. Place this assembly on the floor of the cab. The pedestal and valve control should angle forward. This makes it convenient for the operator to pull the hoist control lever back to raise the hoist. Make sure there is enough room to operate the valve control and gear shift lever and to adjust the seat. Check below the floor for obstructions and cable routing. Relocate the valve control if necessary. Mark the floor using the pedestal as a template and drill 11/32" holes for the mounting screws and a 3/4" hole for the control cable. Assemble the control cable to the valve control head and assemble the valve control head and cover to the pedestal using 5/16 x 2 1/2 machine screws and hex lock nuts. Insert the control cable through the hole in the floor and mount the pedestal to the floor using 5/16 x 1/2 hex head cap screws, clamping plate (under the floor) and hex lock nuts. Make sure the valve control lever is in its center detent position. Keep the control cable away from hot exhaust pipes and rotating drive shafts. The control cable should not have any sharp bends or kinks in it (these will make the control harder to operate).

Install the 3/4" hex jam nut onto the valve end of the control cable and turn it past the threads. Insert the end of the cable through the bonnet clamp. Install the bonnet onto the control cable and turn it past the threads also. Install the 1/4" hex jam nut and terminal eye on the core rod of the cable; lock the terminal eye to the core rod of the cable using the hex jam nut. Place the terminal eye in the slot of the valve spool; insert the short pin through the valve spool and terminal eye and secure it in place with the 'E' ring. Thread the bonnet onto the end of the cable so it firmly touches the end of the valve. (Do not over− or under−tighten the bonnet as either would move the valve spool out of its neutral position.) Remove two cap screws from opposite corners of the seal retainer plate. Slide the bonnet clamp onto the bonnet and secure it to the valve using the 1/4 x 1 1/4 cap screws, lock washers and flat washers. Lock the bonnet to the cable using the 3/4" hex jam nut. (See Fig. 8.)

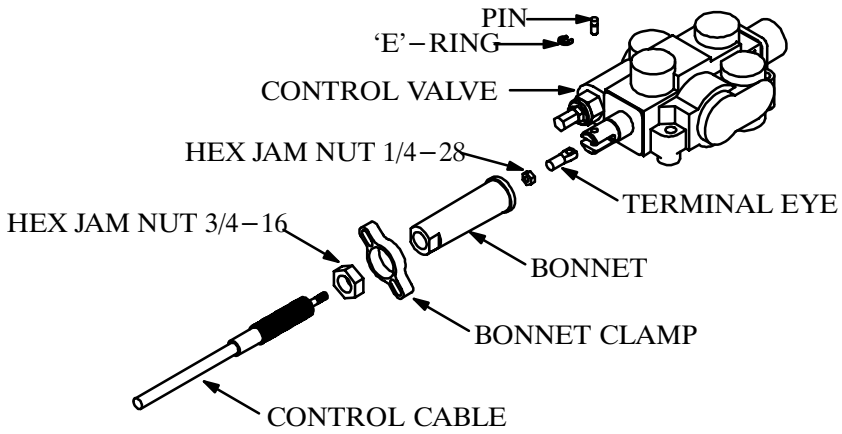


Fig. 8

INSTALL HOSES

Study Fig. 9 very carefully before connecting hoses. Install a 90° street elbow and a 3/4" hose barb in the suction port on the bottom of the reservoir. Install a 1 1/16 ORB x 3/4" hose barb in the suction port of the pump and install a 3/4" ID suction hose. Secure the suction hose in place using hose clamps. Install a 1 1/16 ORB x 3/8 NPT adapter and a 3/8 NPT 90° swivel adapter in the 'IN' port of the control valve and a 7/8 ORB x 3/8 NPT adapter in the pressure port of the pump. Connect a 72" long 3/8" hose between the pump and the valve.

Install 90° adapters in the work ports of the control valve and straight adapters in the ports on the cylinder. Connect the shorter 3/8" hose from the 'B' port on the control valve to the base end port on the cylinder; connect the longer 3/8" hose from the 'A' port to the rod end port. This will raise the hoist when the control lever is pulled back and lower it when pushed forward.

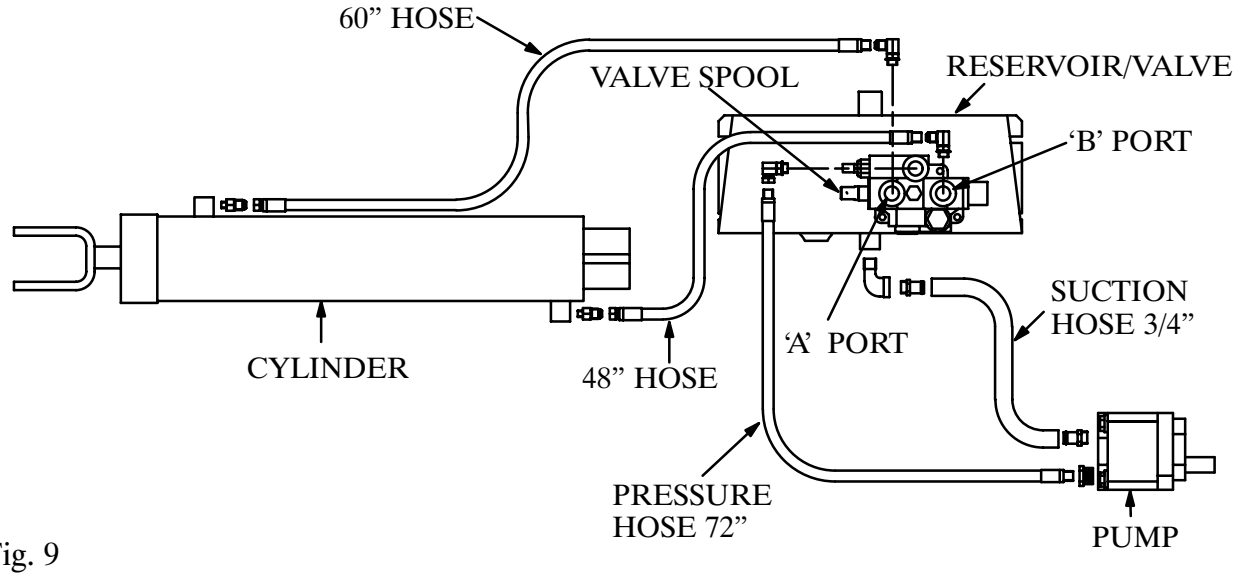


Fig. 9

NOTE: The 'A' port is the 'power–down' port and has a pressure of only 500–1000 PSI; the 'B' port has full system pressure.

ADD HYDRAULIC OIL

Use a quality hydraulic fluid of 150 SSU @ 100°F which contains corrosion and oxidation inhibitors and a foam depressant. This is approximately the equivalent of SAE 10W or lighter weight oil. Initially fill the reservoir with 10 quarts of hydraulic fluid. DO NOT OVERFILL THE RESERVOIR!

KEEP THE OIL CLEAN! USE CLEAN CONTAINERS, FUNNELS AND OTHER EQUIPMENT!

With normal use and working conditions the hydraulic oil should be changed annually. The breather cap should be cleaned every time the hydraulic oil is changed. With heavy use or very dusty working conditions the hydraulic oil should be changed more often.

NOTE: If the pump does not pump oil, pressurize the reservoir and engage the pump with the engine at slow idle. Once the pump is working, release the pressure and install the breather cap.

DO NOT WORK UNDER A RAISED BODY UNLESS THE BODY IS SECURELY BLOCKED OR PROPPED IN THE RAISED POSITION.

ELECTRIC PUMP MOUNTING – GENERAL

The electric power unit should be mounted close behind the cab, either inside or outside the truck frame. After determining where to mount the power unit, bolt one mounting angle to the power unit using the 3/8 x 1 hex head cap screws, tightening to 24 to 26 lb−ft. Clamp the mounting bracket to the truck frame. Clamp the second mounting angle to the truck frame so it supports the far end of the reservoir. Mark the truck frame for drilling using the pump mounting angles as guides.

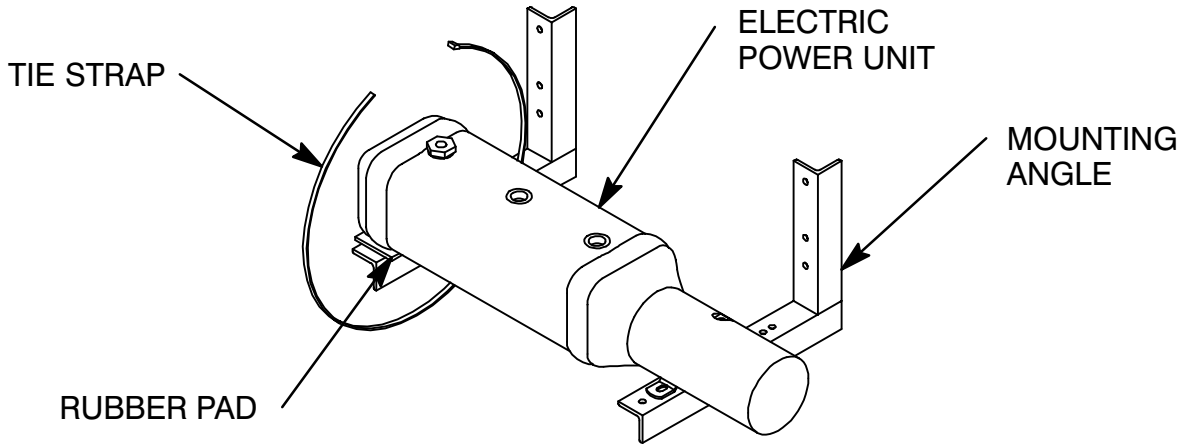


FIG. 9

CAUTION: BE CAREFUL OF BRAKELINES, WIRING, ETC. INSIDE THE TRUCK FRAME WHEN DRILLING THE TRUCK FRAME.

Drill 17/32" holes in the truck frame and bolt the reservoir/valve assembly in place using 1/2 x 2 cap screws and hex lock nuts, tightening to 90 to 100 lb−ft.

Connect the large terminal on the motor start solenoid to the positive terminal on the battery with a #0 gauge battery cable. Connect the negative terminal on the battery to one of the mounting screws on the power unit using a #0 gauge battery cable, or equivalent size ground strap.

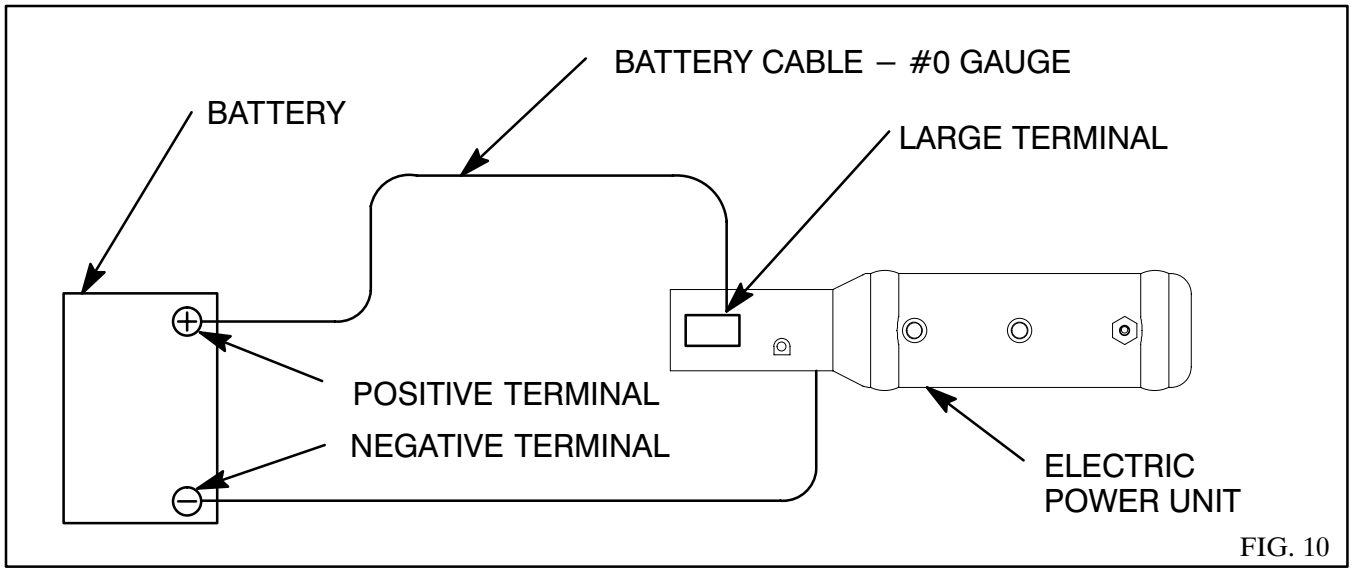


FIG. 10

Locate the push–button control in the cab and route the cable out of the cab through a hole in the back of the cab. Connect the push–button control to the electric power unit using the 3–pin connector set.

ELECTRIC PUMP INSTALLATION – SINGLE–ACTING

Install a 3/8 NPT x 3/4–16 JIC male elbow in the power port on the electric pump and install a 1/4 NPT x 3/4–16 JIC male elbow in the port on the top of the reservoir.

Connect the shorter 3/8" hose to the hydraulic line assembly in the hoist frame on the same side of the truck as the electric pump. Connect the longer 3/8" hose to the other side. Connect the hose that is connected to the base end port of the cylinder to the power port on the electric pump. Connect the other 3/8" hose to the port on the reservoir.

ELECTRIC PUMP INSTALLATION – DOUBLE–ACTING

Install 9/16 ORB x 3/4 JIC 90° swivel adapters in both work ports on the electric pump. If needed, for good hose routing, install 3/4 JIC x 3/4 JIC 90° swivel adapters to both of these adapters. Connect the shorter 3/8 ID hose with 3/4 JIC fittings from the 'C1' port on the pump to the base end port on the cylinder. Connect the longer 3/8" ID hose with 3/4 JIC fittings from the 'C2' port to the rod end port.

Connect the shorter 3/8" hose to the hydraulic line assembly in the hoist frame on the same side of the truck as the electric pump. Connect the longer 3/8" hose to the other side. Connect the hose that is connected to the base end port of the cylinder to the 'C1' port on the electric pump. Connect the other 3/8" hose to the 'C2' port.

NOTE: The 'C2' port is the power down port and has only 500 PSI maximum pressure.

ADD AUTOMATIC TRANSMISSION FLUID

Initially fill the reservoir with 7 quarts of DEXRON II automatic transmission fluid. DO NOT OVERFILL THE RESERVOIR! Raise and lower the hoist several times and check the fluid level in the reservoir. Add fluid as needed.

MOUNT BODY

It is recommended that the body be painted before it is mounted on the truck. Place the body in position on the truck with three inches of clearance behind the cab. Use the rivet strip mounting pads between the longbeams and the truck frame. Use three on each side, spaced as shown in Fig. 6 on Page 5. Weld them to the longbeams. Align the body longbeams carefully with the truck frame. Securely weld the longbeams to the rear hinge brackets and to the upper hoist pivot pads. On the inside of the longbeams, securely weld the longbeam fillers to the top of the upper hoist pivot pads and to the top flange of the longbeam channels as shown in Fig 11.

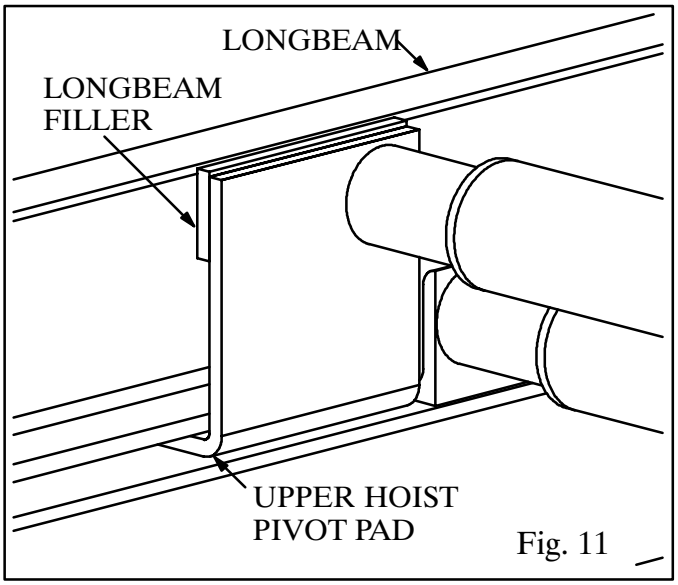


Fig. 11

INSTALL BODY GUIDES

The four body guides are all identical. Weld one to each longbeam as shown in Fig. 12, with the wide end of the body guide at the top and centered over the truck mounting brackets. Now weld the other pair of body guides to the truck mounting brackets, and tight against the first body guides as shown in Fig. 13. There should be NO sideplay between body guides when the truck body is in the lowered position.

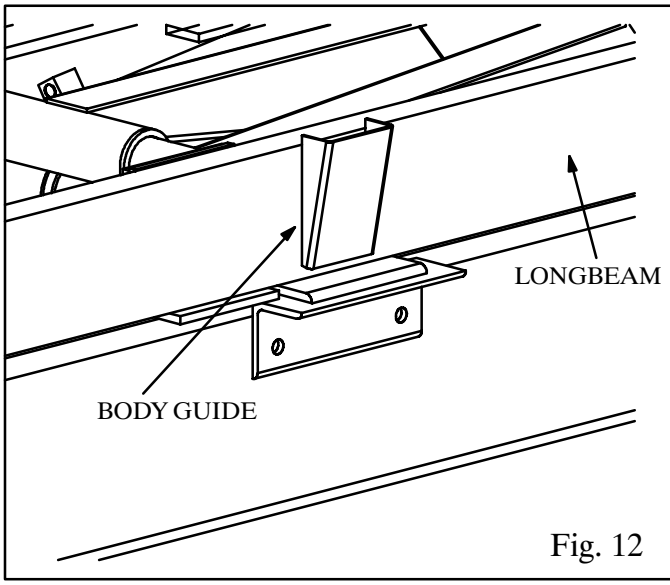


Fig. 12

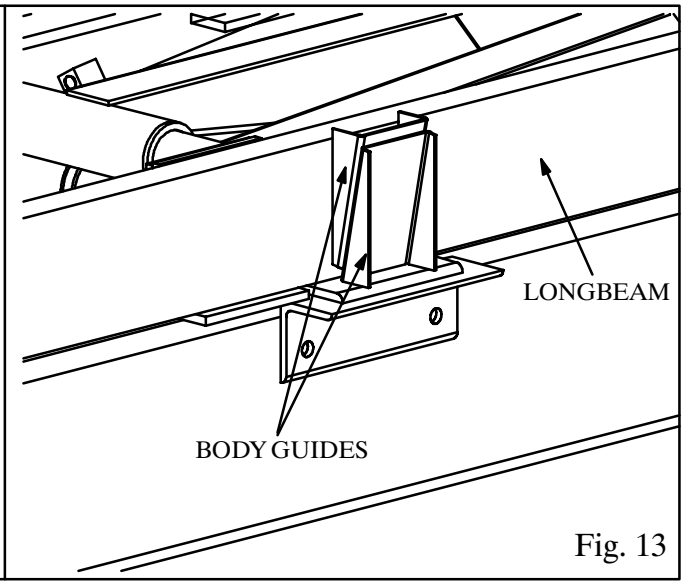


Fig. 13

INSTALL BODY PROPS

The body prop is designed and intended to support an EMPTY truck body in the raised position. Use of the body prop permits service to be performed safely beneath a raised body. It is mounted on the outside of the truck frame on the drivers side.

1. Raise the body to a 30˚ to 35˚ angle and brace it securely before beginning installation.
2. Assemble the prop arm to the prop pivot mount with a 1/4 x 3 roll pin. Clamp the prop pivot mount against the outside of the truck frame just behind the rear axle. Raise the body prop arm to a free standing position. Place the body prop bracket in the prop arm saddle. Reposition if needed to locate the prop bracket on the longbeam. It may be necessary to raise or lower the body to get the best location for the prop pivot mount. Using the prop pivot mount as a guide, mark the location of holes on the truck frame and drill 17/32 inch holes. Assemble the prop pivot mount to the frame using 1/2 x 2 cap screws, and hex lock nuts, tightening to 90 to 100 lb–ft. Raise the prop arm to a free standing position, place the body prop bracket in the saddle and securely weld the bracket to the longbeam.
3. To operate the body prop, raise the body to the desired height, shut off all power, raise the prop arm to a free standing position. Lower the body slowly until the body prop bracket contacts the prop arm saddle.
4. To place the body prop in the storage position, raise the body to clear the body prop saddle, lower the body prop to the storage position and lower the body.

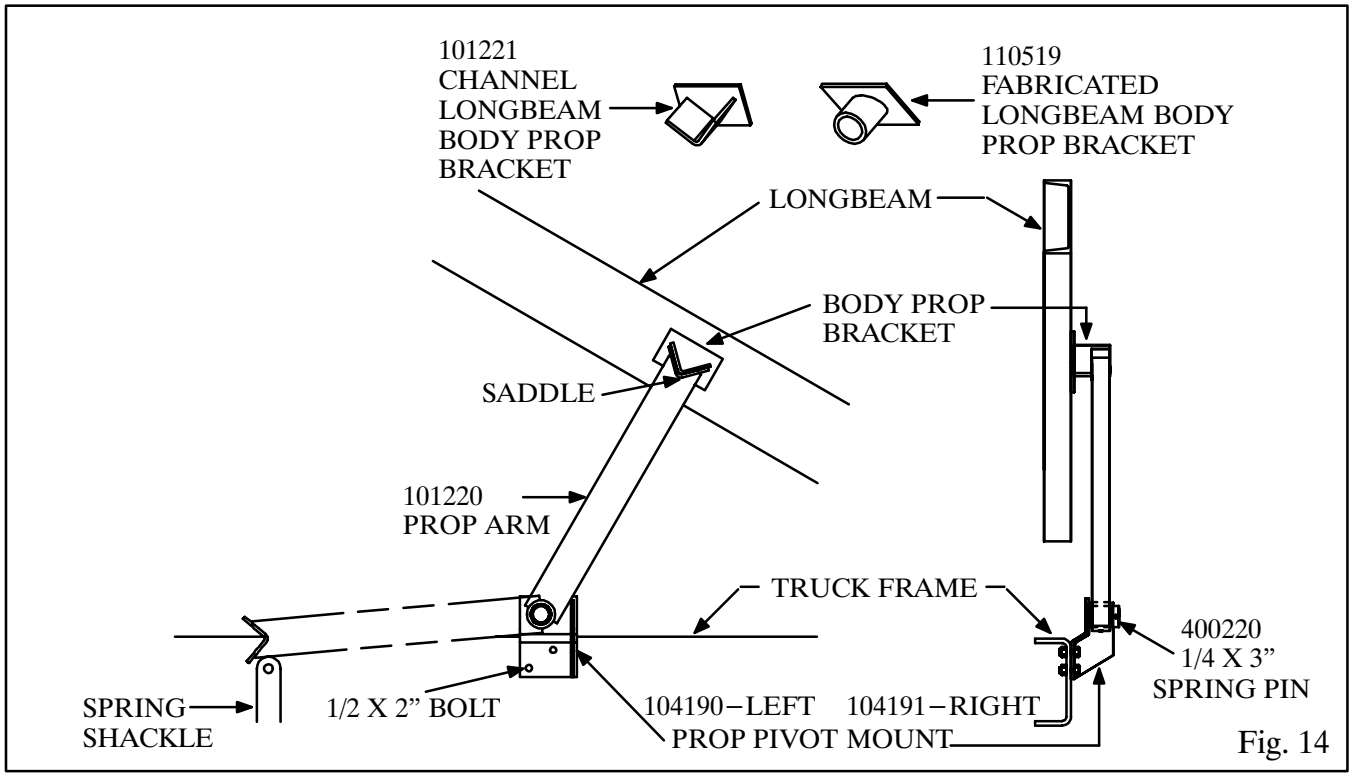


Fig. 14

INSTALL GREASE ZERKS AND LUBRICATE

Install grease zerks on the hoist and lubricate the hoist in the following locations:

A. Upper Crosstube . . . . . 2 fittings
B. Lower Crosstube . . . . . 2 fittings
C. Cylinder Base Pivot Tube . . . . . 1 fitting
D. Body Prop . . . . . 1 fitting
E. Rear Hinge . . . . . 2 fittings

Lubricate all fittings and the control cable at regular intervals, at least each time the truck chassis is lubricated. There are extremely highforces on the bearings surfaces within the hoistframe. It pays to be generous in lubricating the hoist to insure proper operation and long life.

The center hinge and the cylinder crosshead do not need to be greased. These pivot points are equipped with self lubricating composite bearings that do not need lubrication.

ONE OF THE MOST COMMON REASONS FOR HOIST PROBLEMS IS FAILURE BY THE OPERATOR TO LUBRICATE THE HOIST.

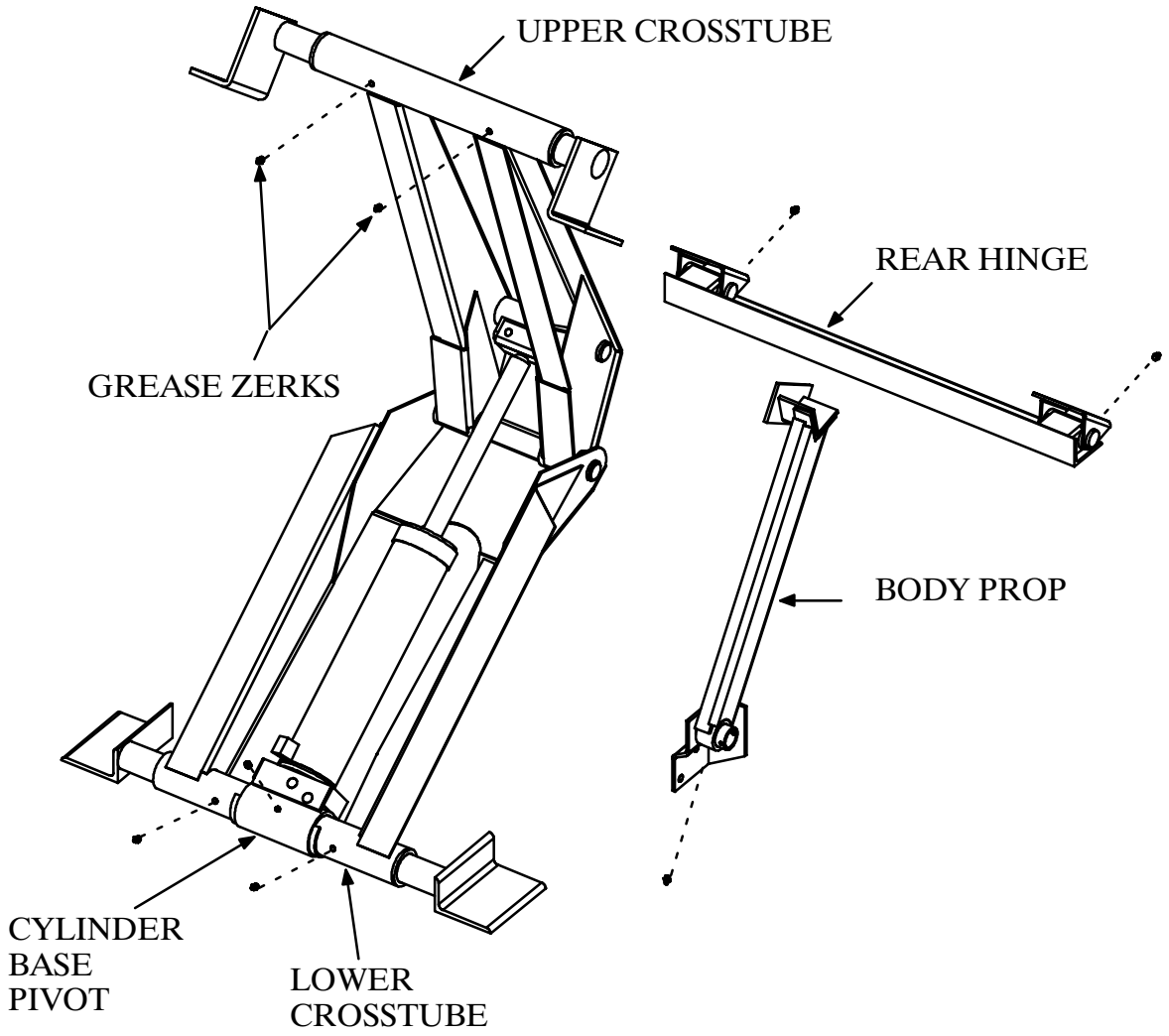


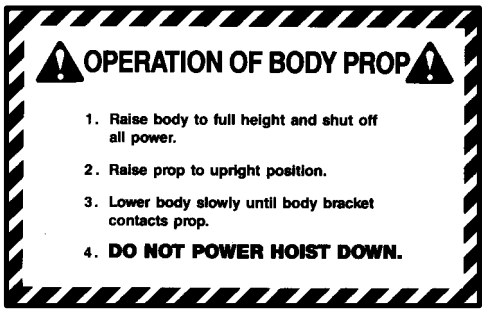
Fig. 15

INSTALL DECALS

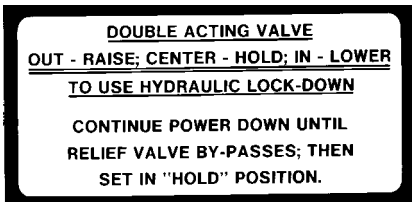
After the hoist and body have been mounted, install the decals in the following locations:

1. 400640 – Mount in cab near the hoist control.
2. 400719 – Mount on the body longbeam near the body prop.
3. 400661 – Mount on the body prop arm.
4. 401576 – Mount on the out side of the body longbeam, near the front (one on each side).
5. 400643 – Mount on the body longbeam on the driver's side.
6. 401577 – Mount in the cab in a prominent location.
7. 400642 – Mount in the cab in a prominent location.

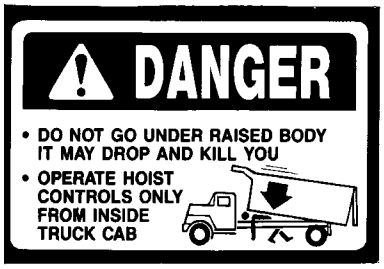
See the following illustrations for decal identification.



400719

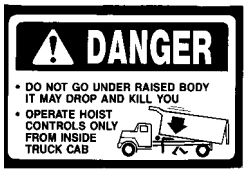


400640



401576

400643



401577

400642

400661

Fig. 16

LB407 & LB507 HOIST PARTS

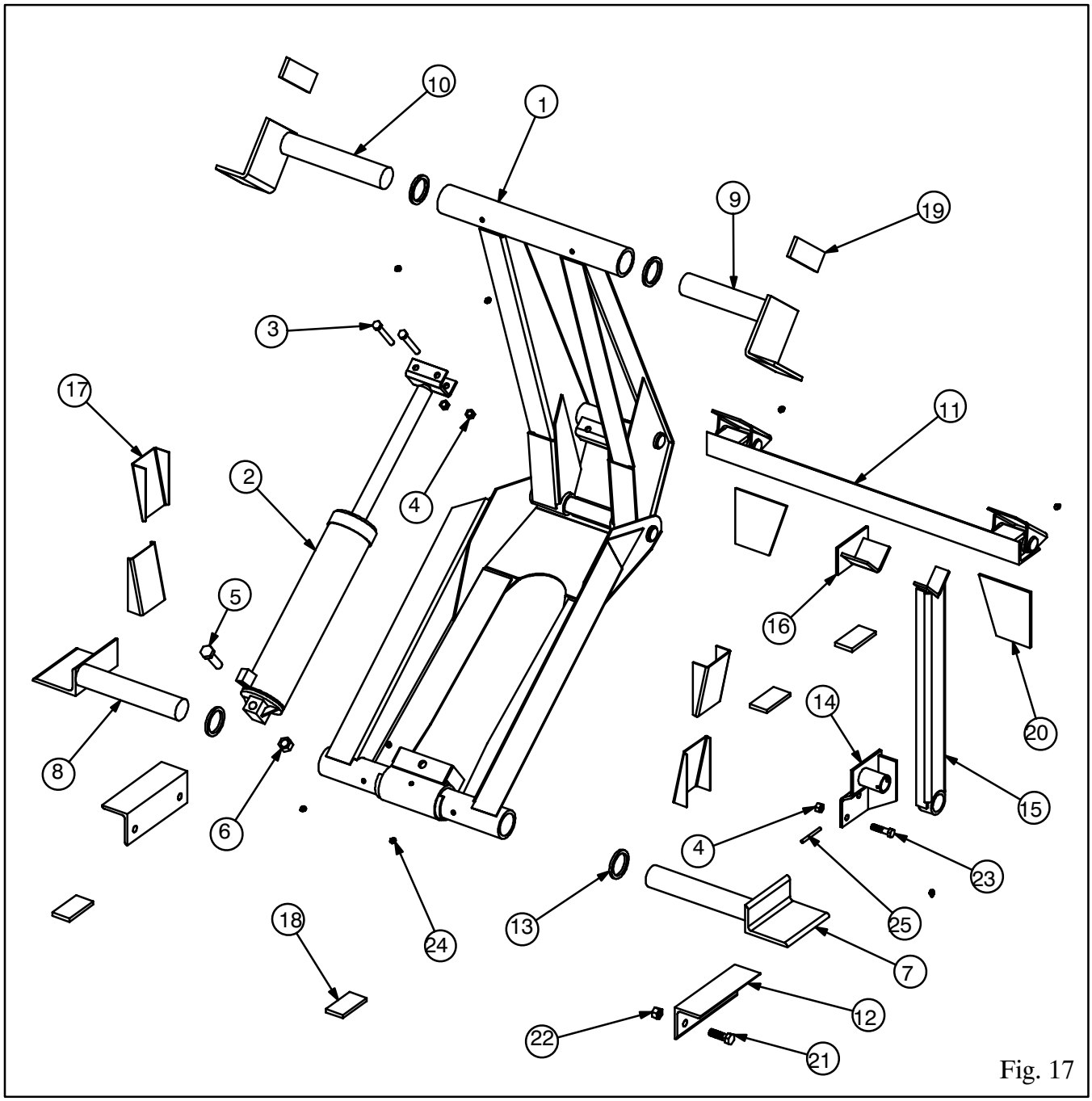


Fig. 17

ITEM	DESCRIPTION	MODEL	PART NO.	QTY.
1.	Assy Hoist Frame	LB407	118370	1
	Assy Hoist Frame	LB507	120459	1
2.	Assy Cylinder	LB407	105528	1
	Assy Cylinder	LB507	110304	1
3.	Hex Head Cap Screw 1/2−13 x 3 1/4 Gr 8	Both	401140	2
4.	Hex Lock Nut 1/2−13	Both	401316	6
5.	Hex Head Cap Screw 3/4−10 x 4 Gr 8	Both	401237	1
6.	Hex Lock Nut 3/4−10	Both	401226	1

7.	Assy Lower Pivot – Left	Both	118383	1
8.	Assy Lower Pivot – Right	Both	118384	1
9.	Assy Upper Pivot – Left	Both	118385	1
10.	Assy Upper Pivot – Right	Both	118386	1
11.	Assy Rear Hinge	Both	108129	1
12.	Mounting Angle	Both	201422	2
13.	Collar, Hoist Mount	Both	224415	4
14.	Assy Body Prop Pivot	Both	104190	1
15.	Assy Body Prop Arm	Both	101220	1
16.	Assy Body Prop Bracket	Both	125259	1
17.	Guide Body	Both	201415	4
18.	Spacer Longbeam	Both	200892	6
19.	Filler Longbeam	Both	200900	2
20.	Support Rear Hinge	Both	206768	2
21.	Hex Head Cap Screw 5/8–11 x 2 Gr 8	Both	402374	4
22.	Hex Lock Nut 5/8–11	Both	401582	4
23.	Hex Head Cap Screw 1/2–13 x 2 Gr 8	Both	400105	2
24.	Grease Zerk 1/8 NPT	Both	400103	6
25.	Roll Pin 1/4 x 3	Both	400220	1
	Frame & Cylinder	LB407	118369	1
	Frame & Cylinder	LB507	120458	1

HYDRAULIC SYSTEM PARTS

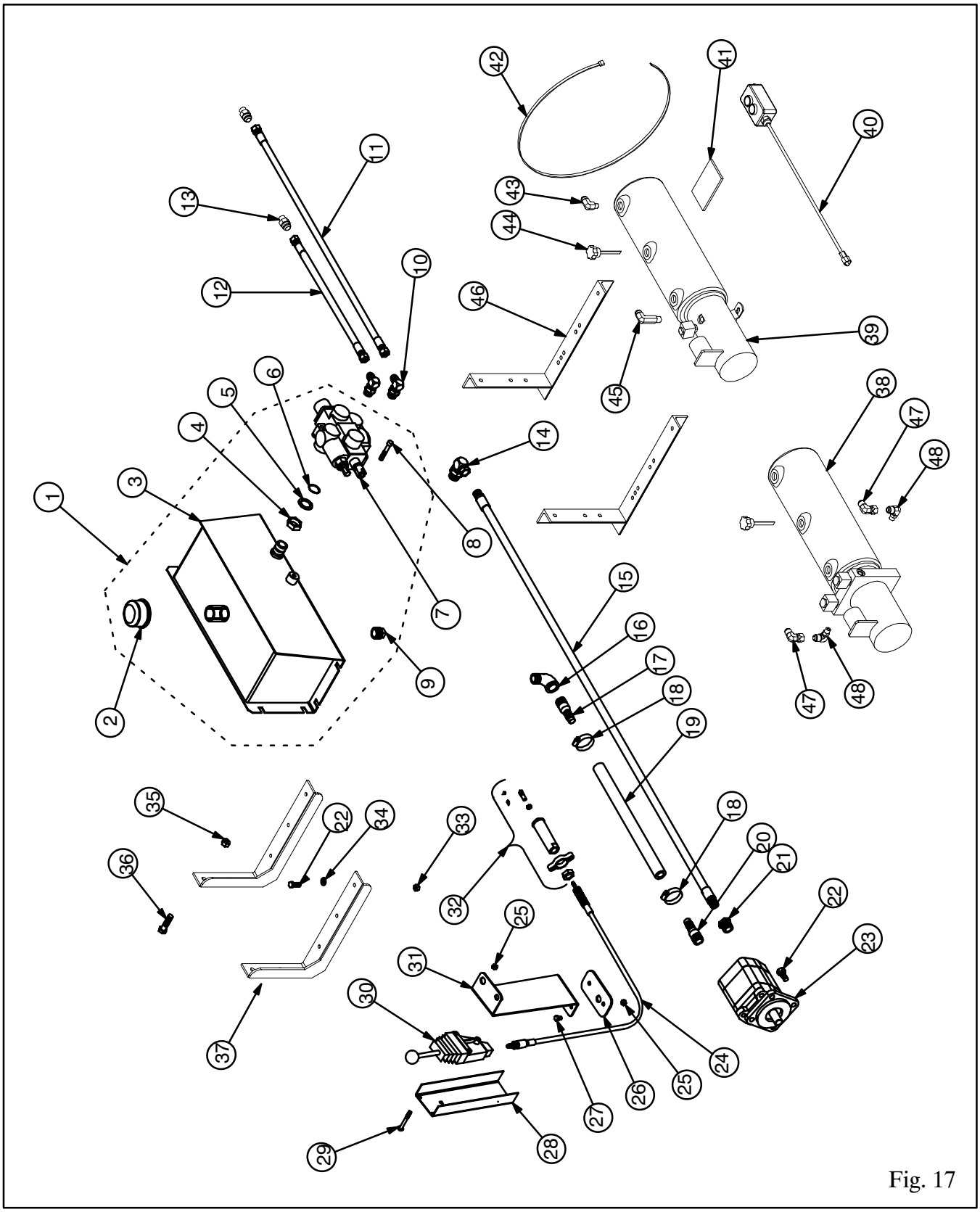


Fig. 17

ITEM	DESCRIPTION	MODEL	PART NO.	QTY.
1.	Assy Reservoir/Valve 15 Qt 3250 DA	Both	125803	1
2.	Breather Cap	Both	400764	1
3.	Assy Reservoir	Both	124998	1
4.	Hex Jam Nut 7/8−14	Both	402094	1
5.	Cone Washer 7/8	Both	402095	1
6.	O−Ring .755 ID x .097 CS	Both	402096	1
7.	Control Valve 12 GPM 3250 DA	Both	402813	1
8.	Hex Head Cap Screw 1/4−20 x 1 3/4 Gr 5	Both	401546	1
9.	Pipe Plug 3/4 Magnetic	Both	400405	1
10.	Adapter 3/4 ORBM x 3/4 JICM 90°	Both	402487	2
11.	Hose 3/4 JIC x 60 SF/SF 4000	Both	402517	1
12.	Hose 3/4 JIC x 48 SF/SF 4000	Both	402490	1
13.	Adapter 9/16 ORBM x 3/4 JICM	Both	402516	2
14.	Adapter 7/8 ORBM x 3/8 NPTF 90°	Both	401200	1
15.	Hose 3/8 NPT x 72 RM?RM 4000	Both	401444	1
16.	Pipe Street Elbow 3/4	Both	402144	1
17.	Hose Barb 3/4 NPT x 3/4	Both	401447	1
18.	Hose Clamp #24	Both	401441	2
19.	Suction Hose 3/4 ID x 72”	Both	404911	1
20.	Hose Barb 1 1/16 ORBM x 3/4	Both	402146	1
21.	Adapter 7/8 ORBM x 3/8 NPTF	Both	400478	1
22.	Hex Head Cap Screw 3/8−16 x 1 Gr 5	Both	400121	8
23.	Gear Pump 4 GPM P11	Both	402071	1
24.	Cable, Valve Control − 96”	Both	402122	1
25.	Hex Lock Nut 5/16−18	Both	401240	5
26.	Clamp Plate − Pedestal	Both	225127	1
27.	Hex Head Cap Screw 5/16−18 x 1/2 Gr 2	Both	402415	2
28.	Channel Pedestal	Both	223144	1
29.	Machine Screw 5/16−18 x 2 1/2 RH	Both	402154	3
30.	Remote Valve Control w/ Center Detent	Both	402120	1
31.	Pedestal	Both	223143	1
32.	Valve Connection Kit − Prince 4100	Both	403171	1
33.	Hex Lock Nut 3/8−16	Both	402038	4
34.	Flat Washer 3/8	Both	400164	4
35.	Hex Lock Nut 1/2−13	Both	401316	4
36.	Hex Head Cap Screw 1/2−13 x 2 Gr 8	Both	400105	4
37.	Assy Reservoir/Valve Mount	Both	120031	2
38.	Electric Pump − DA	Both	405287	1

39.	Electric Pump – SA	Both	405286	1
40.	Control Push–Button – Electric Pump 10’	Both	405289	1
	Control Push–Button – Electric Pump 15’	Both	405290	
41.	Rubber Pad 3 x 5	Both	405319	1
42.	Cable Tie 33”	Both	404956	1
43.	Adapter 3/4 JICM x 1/4 NPTM 90°	Both	402510	1
44.	Breather Cap w/ Dipstick	Both	405384	1
45.	Adapter 3/4 JICM x 3/8 NPTM Long 90°	Both	402509	1
46.	Assy Pump Mounting Angle	Both	100174	2
47.	Adapter 3/4 JICM x 3/4 JICF 90°	Both	403448	2
48.	Adapter 9/16 ORBM x 3/4 JICM 90°	Both	403447	2

CYLINDER PARTS

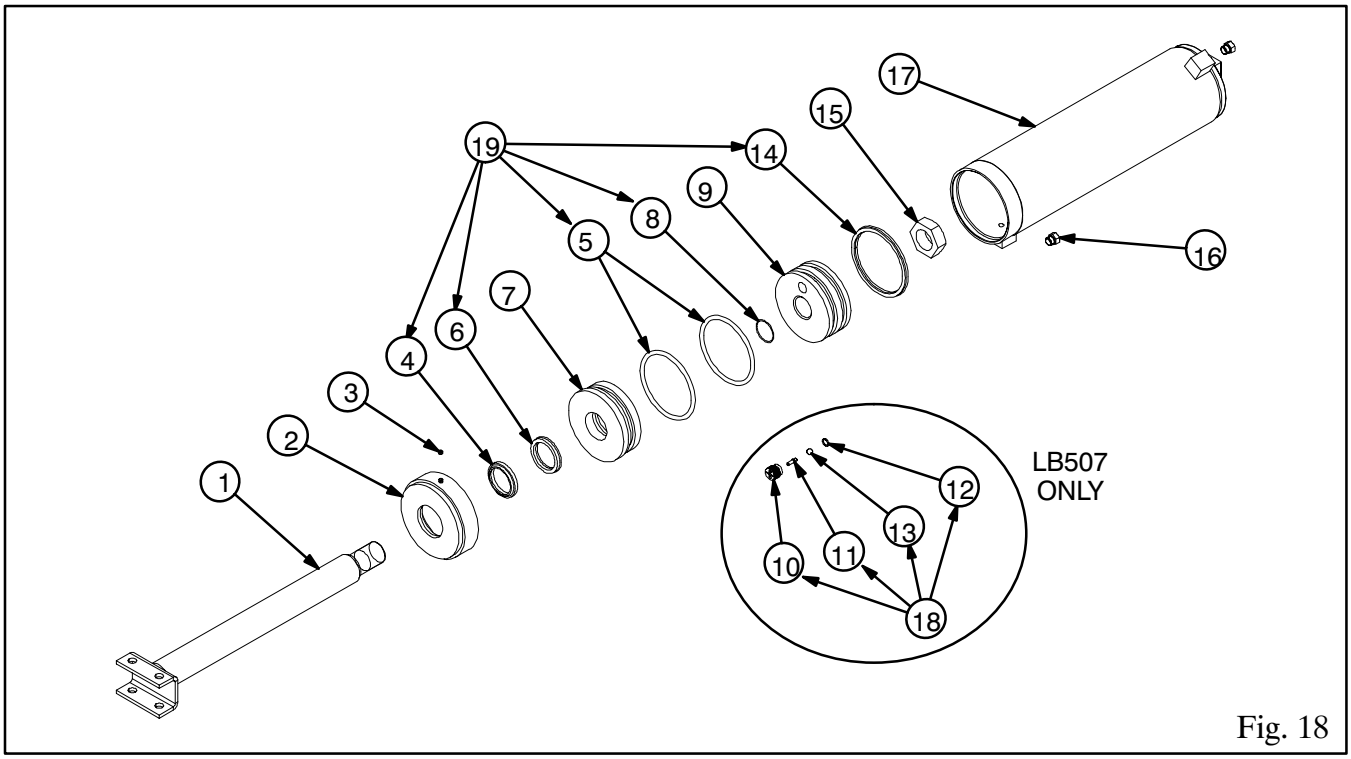


Fig. 18

ITEM	DESCRIPTION	LB407 PART NO	LB507 PART NO.	QTY.
1.	Shaft Assy	105540	110306	1
2.	Cylinder Cap Assy	105541	104293	1
3.	Set Screw 1/4 x 3/16 Nylon Tip	400149	400149	1
4.	Wiper	401133	400913	1
5.	O−Ring	400263	400254	2
6.	Poly Seal	401132	400253	1
7.	Cylinder Head	406279	402469	1
8.	O−Ring	401131	400255	1
9.	Cylinder Piston	206755	202461	1
10.	Bypass Valve Body		400978	1
11.	Bypass Valve Pin		400979	1
12.	O−Ring 7/16		401017	1
13.	Steel Ball 3/8 Dia		400013	1
14.	Poly Seal	400262	400252	1
15.	Hex Jam Nut		401370	1
16.	Plug 9/16 Nylon	403395	403395	2
17.	Cylinder Tube Assy	105539	110305	1
18.	Bypass Valve Kit		105185	1
19.	Seal Kit	107958	107960	1

SPECIFICATIONS

Hoist Model	NTEA Class	Cylinder Bore−Stroke−Shaft	Operating Pressure	Mounting Height	Minimum Longbeam Height	Body Lengths
LB407	B	4”−15 1/4”−1 1/2”	3250 PSI	6 3/8”	6”	8’−12’
LB507	C	5”−15 1/4”−2”	3250 PSI	6 3/8”	6”	8’−14’

CAPACITY CHART

Body Length	Cab−to−Axle	Overhang	Hoist Model					
			LB407			LB507		
			40°	45°	50°	40°	45°	50°
8’	60”	6”	8.0	7.1	6.4	12.6	11.1	10.1
9’	60”	18”	9.4	8.3	7.5	14.7	13.0	11.8
	72”	6”	7.0	6.2	5.6	11.0	9.7	8.8
10’	72”	18”	8.0	7.1	6.4	12.6	11.1	10.1
	84”	6”	6.2	5.5	5.0	9.8	8.7	7.8
12”	84”	30”	8.0	7.1	6.4	12.6	11.1	10.1
	96”	18”	6.2	5.5	5.0	9.8	8.7	7.8
	108”	6”	5.1	4.5	4.1	8.0	7.1	6.4
14”	108”	30”	N/A	N/A	N/A	9.8	8.7	7.8
	120“	18”	N/A	N/A	N/A	8.0	7.1	6.4
	132”	6”	N/A	N/A	N/A	6.8	6.0	5.4

NOTE: Capacity is based on water−level load and includes body weight.

CAPACITY FORMULA

To calculate the capcity of the LB407 or the LB507 hoist for applications not shown in the capacity chart, use the following formula:

1. Measure the distance in inches fron the center of the rear hinge pin to the center of the body. Call this dimension “A”.
2. Measure the distance in inches from the center of the rear hinge pin to the center of the front hoist pivot, (See Fig. 6 on page 5.) Call this dimension “D”.
3. For the LB407: multiply “D” by 7.57 and divide by “A”.
   For the LB507: multiply “D” by 11.8 and divide by “A”.
4. The result is the water−level load capacity in thousands of pounds and includes the body weight.

NOTES

SPECIALLY DESIGNED – WITH QUALITY IN MIND

WARRANTY

- Crysteel Manufacturing, Inc. warrants its products for a period of five (5) years from date of purchase.
- This warranty covers our products for defective material and/or workmanship at a rate of 100% for the first (3) years and at a rate of 50% for years (4) and (5).
- This warranty is all encompassing and covers all areas of our product including: Crysteel manufactured product, OEM products purchased by Crysteel, the repair of the warranted product, the replacement of warranted product, the labor to replace the warranted product, and both in and outbound freight for the replacement of the warranted product. This warranty is limited to products supplied under the Crysteel Mfg. name and does not cover distributor modifications. Primer warranty is limited to adherence to metal surfaces only and does not include the inside or understructure of the dump body or hoist.
- We will not assume responsibility for travel, loss of use, or downtime expenses.
- This warranty is void if the product has been obviously abused, or subjected to usage it was not designed for.
- Please contact your Crysteel Distributor for additional details.

! CAUTION !

- **BODY MUST BE BRACED BEFORE SERVICING HOIST OR WORKING IN AREA WITH BODY IN RAISED POSITION**
- **LUBRICATE HOIST GREASE FITTINGS OFTEN – AT LEAST EACH TIME TRUCK IS SERVICED**
- **TRUCK MUST BE LEVEL FOR DUMPING**
- **DO NOT OVERLOAD**

CRYSTEEL MFG, INC.

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