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Crysteel's

LO - BOY

520

TRUCK HOIST

MOUNTING AND OPERATING INSTRUCTIONS

CRYSTEEL MANUFACTURING, INC.
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DATE PURCHASED _____
HOIST SERIAL NUMBER _____
CYLINDER SERIAL NUMBER _____
PUMP SERIAL NUMBER _____
DEALER _____
ADDRESS _____
PHONE _____

OPERATION AND USE

1. Engage PTO from cab and adjust engine speed to fast idle.
2. If the hydraulic hose connections are correct, the hoist should raise when the hoist control lever is pulled back, hold when the lever is in the detent, and lower when the lever is pushed forward.
3. Cycle the hoist several times to remove air from the cylinder and hydraulic lines.
4. 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.
5. 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.
6. ***DO NOT LEAVE THE PTO IN GEAR WHILE TRANSPORTING. THIS WILL CAUSE SEVERE DAMAGE TO THE HYDRAULIC PUMP AND/OR DRIVELINE.***
7. 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'T'S FOR SAFETY 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. **DO NOT** tamper with the hydraulic relief valve. This will void the warranty. It can cause severe damage to the hoist and cylinder.
7. Never leave the PTO in gear while transporting. It will ruin the hydraulic pump.
8. Check all bolts and set screws regularly. Keep them tight.

FOREWORD

Crysteel's LB520 Hoist has been designed and intended for use on single-axle trucks with cab-to-axle dimensions of 72 to 132 inches and body lengths of 9 to 16 feet.

This manual contains information necessary for the proper installation and operation of Crysteel's Model LB520 Hoist. Study it carefully before attempting to mount or use the hoist. With proper installation and maintenance, the Crysteel Model LB520 Hoist will give many years of trouble-free service.

When ordering parts, be sure to give the serial number of the hoist, pump, and cylinder. The serial number of the pump is found on the plate on the side of 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 on page 1. Order parts by number and description as given in the parts listing in this manual.

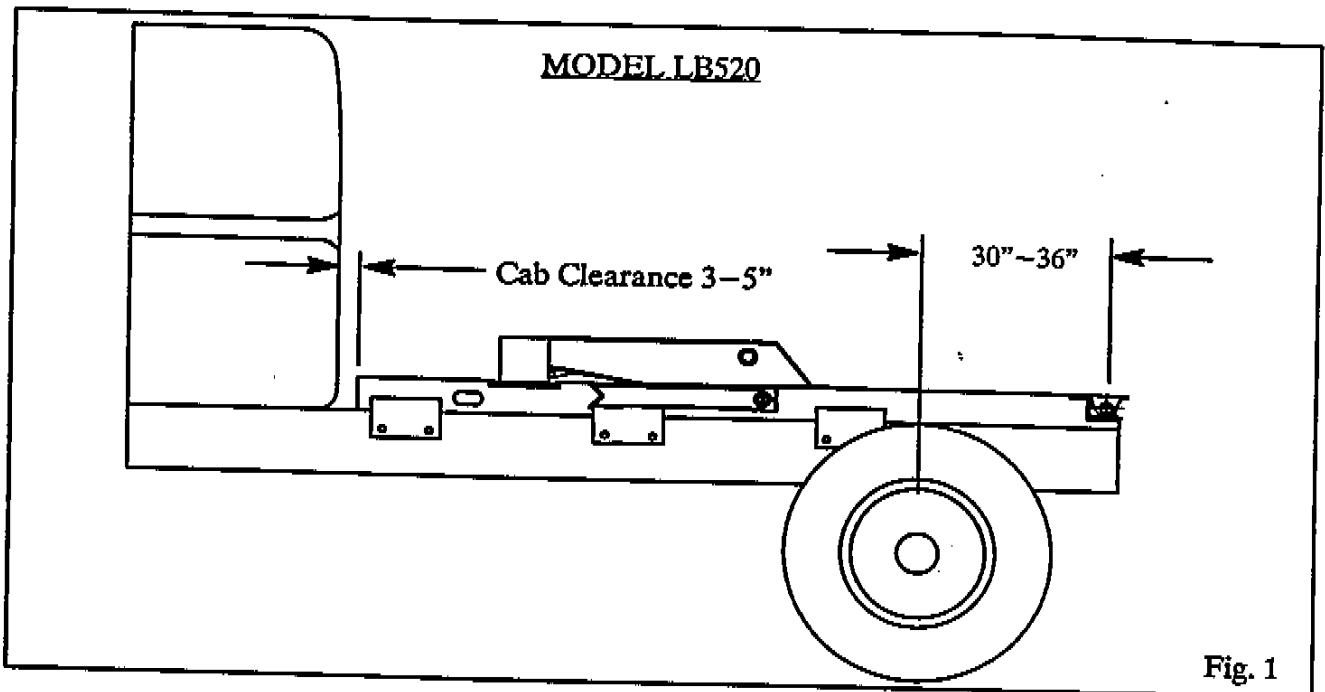
KEEP THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE

TABLE OF CONTENTS

Purchase Record	1
Operation and Use	1
Locate Hoist/Subframe Assembly	3
Locate Body/Hoist Assembly on Truck	3
Locate Mounting Plates	4
Drill Truck Frame	4
Weld Rear Hinge and Subframe	4
Hydraulic Pumps	5
Mount Gear Pump	5
Mount Reservoir/Valve Assembly	5
Install Remote Valve Control	6
Install 4 GPM Pump Hoses	7
Install 6 GPM Pump Hoses	7
Install Cylinder Hoses	8
Electric Pump Mounting - General	8
Electric Pump Installation - Single-Acting	9
Electric Pump Installation - Double - Acting	9
Power Hoist Down	9
Install Crysteel Tipper Body on Truck	10
Install Body on Truck	10
Install Body Prop Bracket on Body Longbeam	11
Install Body Guides	11
Grease Zerks and Lubricate Hoist	12
Install Decals	12-13
Parts Lists	14-18
Specifications	18
Warranty	on Back Page

LOCATE HOIST/SUBFRAME ASSEMBLY

Place the hoist-subframe assembly on the truck frame so the back edge of the rear hinge is 2 inches or more behind the back side of the spring shackle. This will place the rear hinge pivot 30 to 36 inches behind the center of the rear axle. Mark the rear of the truck frame and cut off, as shown in Fig. 13



NOTE: If the truck frame has rivets in the top flange, add spacers between the truck frame and subframe, or counter sink the rivet heads into the subframe by drilling holes in the subframe. Do not remove the rivet heads!

LOCATE BODY/HOIST ASSEMBLY ON TRUCK

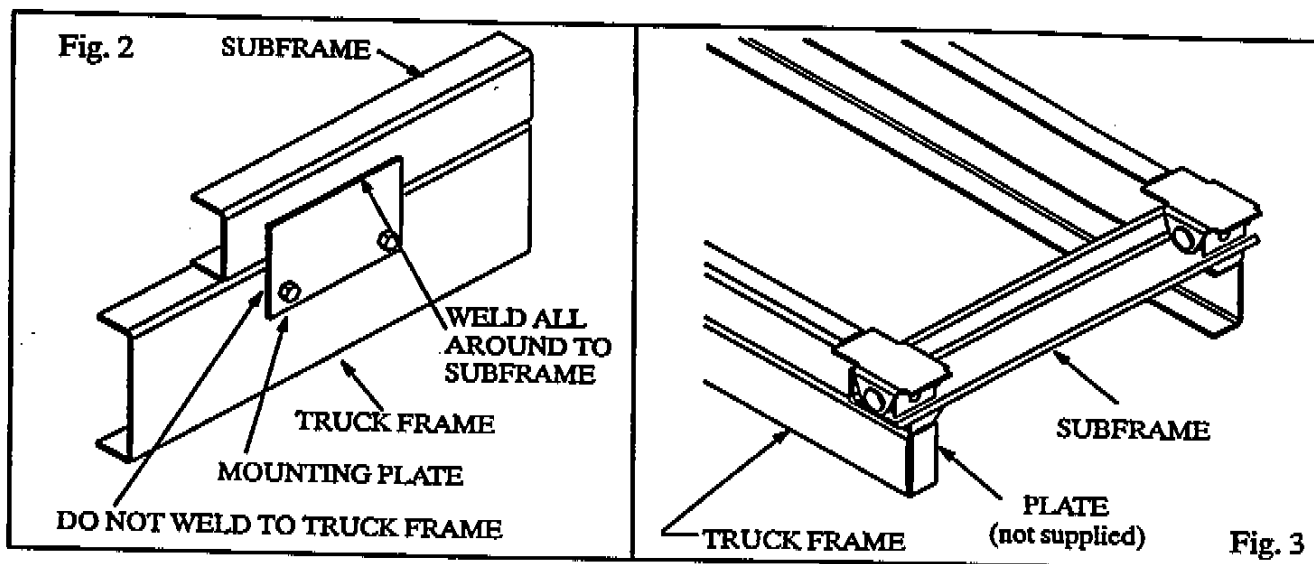
Use the following installation procedures when the body and hoist have been assembled at the factory. Place the body and hoist assembly on the truck frame so the back edge of the rear hinge is 2 inches or more behind the back side of the spring shackle. This should give 3 to 5 inches of cab clearance. Relocate the body and hoist, if necessary. The center of the rear hinge should never be more than 36 inches behind the center of the rear axle on single-axle trucks. The truck frame will need to be cut off even with the back end of the subframe rails, as shown in Fig. 3.

Block up the back end of the body/hoist assembly and cut the truck frame as marked.

NOTE: If the truck frame has rivets in the top flange, add spacers between the truck frame and subframe, or counter sink the rivet heads into the subframe by drilling holes in the subframe. Do not remove the rivet heads!

LOCATE MOUNTING PLATES

There are six mounting plates, three for each side – one at the front of the subframe, one at the hoist mount and one between the hoist mount and the rear hinge. Clamp the mounting plates to the truck frame and to the subframe as shown in Figures 1 and 2. If desired, locate the plates to use existing holes in the frame. Mark the mounting plates for drilling. Repeat this for the other side.



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

DRILL TRUCK FRAME

Drill 21/32" holes in the mounting plates and the truck frame. Bolt the mounting plates in place using 5/8 x 2 cap screws (grade 8) and hex lock nuts.

WELD REAR HINGE AND SUBFRAME

Make sure the body/hoist assembly or hoist/subframe assembly is correctly located, centered on and square with the truck frame. Securely weld the mounting plates to the subframe. Add a plate (not supplied) to the end of the truck frame rail. (See Fig. 3.) Securely weld the plates to the end of the truck frame rails and to the back end of the subframe. Do this on both sides.

HYDRAULIC PUMPS

Crysteel offers four different hydraulic systems for use with the Model LB520 Hoist. Mounting instructions can be found on the page shown:

Standard 4 GPM Gear Pump with Remote Reservoir/Valve	Page 5
Optional 6 GPM Gear Pump with Remote Reservoir/Valve	Page 5
Electric Pump—Single Acting	Page 8 & 9
Electric Pump—Double Acting	Page 8 & 9

MOUNT GEAR PUMP

The standard 4 GPM 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.

The optional 6 GPM gear pump has an SAE 'B' mounting configuration, a 13 tooth splined shaft and a four-bolt mounting flange, and is assembled for rotation in either direction. **NOTE:** This pump will mount directly to Chelsea's output type 'XK' or Muncie's output type 'D'. Crysteel Manufacturing recommends a PTO ratio of 100–120%. This assures a minimum pump operating speed of 600 RPM. Bolt the gear pump to the PTO output flange using 1/2 x 1 1/4 cap screws and lock washers.

MOUNT RESERVOIR/VALVE ASSEMBLY

The reservoir/valve assembly should be mounted on the same side of the truck as the pump and as high as possible for reliable pump performance. The slotted end of the valve spool should be towards the front of the truck so the valve control cable can be easily connected. The mounting brackets for the reservoir/valve assembly can be used to mount the reservoir/valve assembly outside the truck frame or inside between the truck frame rail and the driveshaft. Determine where to mount the reservoir/valve assembly and bolt the mounting brackets to the reservoir/valve assembly using 3/8 x 1 cap screws, flat washers and hex lock nuts. Locate the reservoir/valve assembly and clamp the mounting brackets to the truck frame. See Fig. 4. If inside the truck frame, make sure there is enough clearance for the drive line and hot exhaust pipes. **THE ENGINE EXHAUST MUST NEVER BLOW DIRECTLY ONTO THE RESERVOIR/VALVE ASSEMBLY.** Insert the spacers in the mounting brackets and mark the truck frame for drilling using the pump mounting brackets as guides.

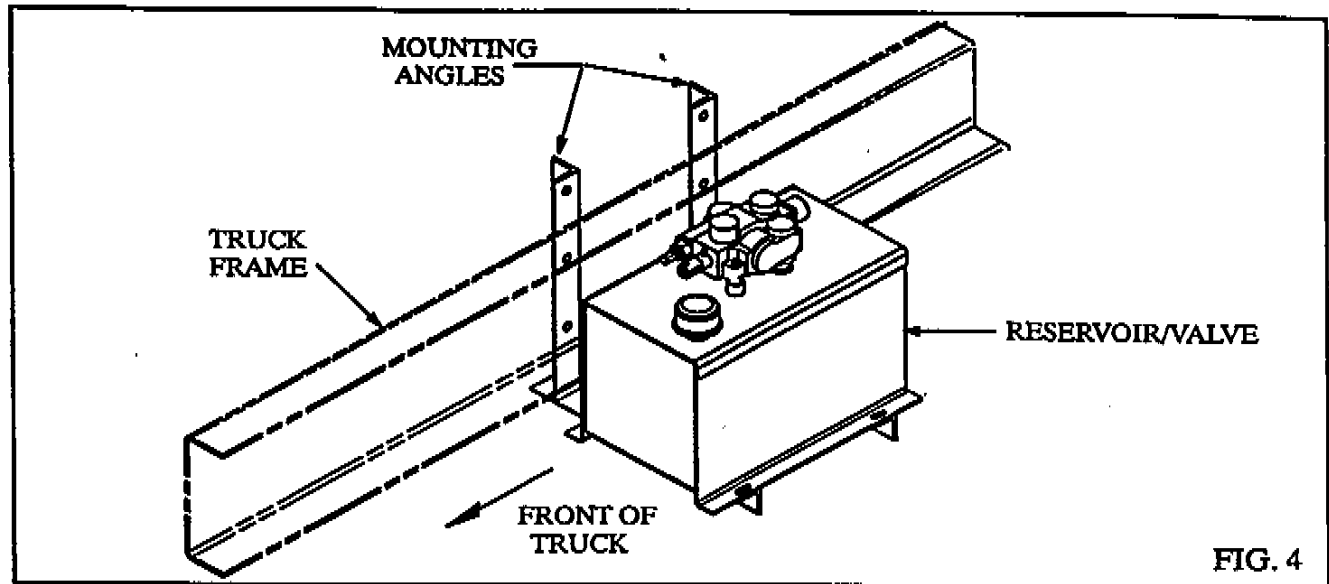


FIG. 4

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 $1/2 \times 2 3/4$ cap screws, flat washers and hex lock nuts.

INSTALL REMOTE VALVE CONTROL

Temporarily assemble the valve control head to the pedestal using $5/16 \times 2 1/4$ " machine screws and hex nuts. Place this assembly on the floor of the cab. Make sure there is enough room to operate the valve control and the 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 $1/4$ " 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 $5/16 \times 2 1/4$ " cap screws and hex lock nuts. Insert the control cable through the hole in the floor and mount the pedestal to the floor using $5/16 \times 1/2$ machine screws 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).

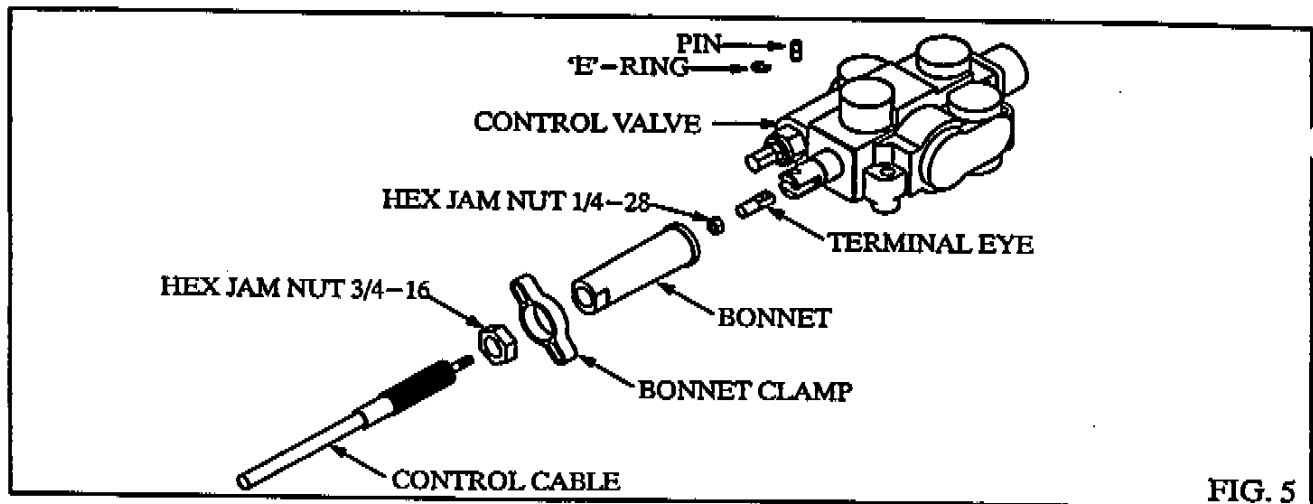


FIG. 5

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. 5.

INSTALL 4 GPM PUMP HOSES

Study Fig. 6 very carefully before connecting the hoses. Install a 3/4" 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 1/2 NPT 90° swivel adapter in the 'IN' port of the control valve and a 7/8 ORB x 1/2 NPT adapter in the pressure port of the pump. Connect a 72" long 1/2" ID hose between the pump and the valve.

INSTALL 6 GPM PUMP HOSES

Study Fig. 6 very carefully before connecting the hoses. Install a 3/4" 90° street elbow and a 3/4" hose barb in the suction port on the bottom of the reservoir. Install a 3/4"

hose barb in the suction port of the pump and install the suction hose. Secure the suction hose in place using hose clamps. Install a 1 1/16 ORB x 1/2 NPT 90° swivel adapter in the 'IN' port of the control valve and install a 3/4 x 1/2 hex reducer in the pressure port of the pump. Install a 72" long 1/2" ID hose from the pump to the valve.

INSTALL CYLINDER HOSES

Install 90° swivel adapters in the work ports of the control valve and in the ports on the cylinder. Connect the 36" long 1/2" ID hose with 7/8 JIC fittings, from the 'B' port on the control valve to the base end port on the cylinder. Connect the 60" long 1/2" ID hose with 7/8 JIC fittings, from the 'A' port on the control valve to the rod end port on the cylinder. This will raise the hoist when the control lever is pulled back and lower it when pushed forward.

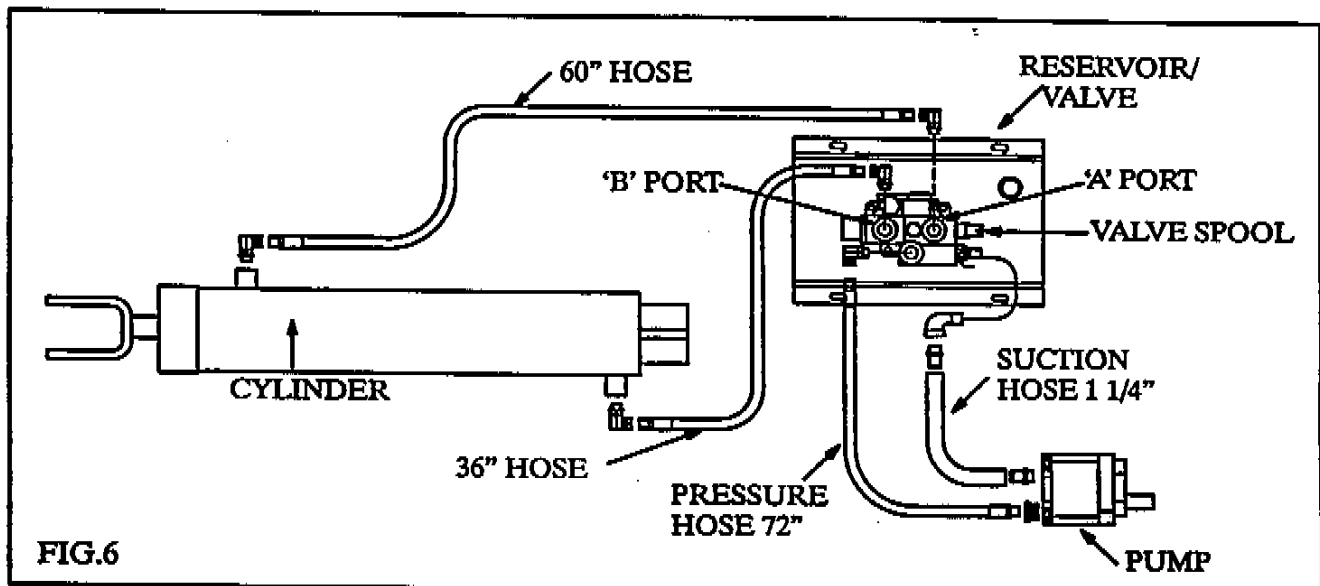


FIG.6

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.

ELECTRIC PUMP MOUNTING – GENERAL

Determine which side to mount the electric pump. Bolt the pump to the pump mounting angles using the 3/8 x 1 cap screws, flat washers and hex lock nuts. Clamp the pump mounting brackets to the truck frame, insert the spacers and mark the truck frame for drilling using the mounting angles as guides.

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

Drill 17/32 holes through the truck frame and bolt the mounting brackets to the truck frame with 1/2 x 2 3/4 cap screws, flat washers and hex lock nuts.

Connect the large terminal on the starter solenoid to the positive terminal on the battery, using a No. 0 Gauge or heavier cable. Install a heavy duty round cable from the negative terminal of the battery directly to the truck frame using a No. 0 Gauge or heavier cable. The light cable normally used for grounding the engine to the frame is not heavy enough.

Install the electric pump control inside the cab and route the cable out of the cab through a hole in the back of the cab. Connect the control to the pump using the instructions with the pump.

ELECTRIC PUMP INSTALLATION – SINGLE–ACTING

Install a 3/8 NPT x 3/4–16 JIC male elbow in the power port on the pump and connect the hose which is connected to the base end port on the cylinder. Install a 1/4 NPT x 3/4–16 JIC male elbow in the port on the top of the reservoir and connect the other hose, which is connected to the rod end port on the cylinder.

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 1 3/4 JIC x 3/4 JIC 90° swivel adapters to both of these adapters. Connect the 42" long 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 60" long 3/8" ID hose with 3/4 JIC fittings from the 'C2' port to the rod end port.

NOTE: The "C2" port is the power down port and has only 500 PSI maximum 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, or use Type A automatic transmission oil for improved performance in cold weather. Fill the hydraulic reservoir using the following table

Standard or Optional Gear Pump w/ Valve–Tank	4 Gals
Electric – Single–Acting	7 Qts
Electric – Double–Acting	7 Qts

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

POWER HOIST DOWN

Before mounting the body, the hoist must be completely closed to make certain that the hoist gives full lift height and performance. Make sure the lift angles are straight up and down. Start the truck engine, engage the PTO and power down the hoist to "bottom–

out" the hydraulic cylinder and the hoist frame. Place the hoist valve control in the "hold" position. Both the hoist frame and the hydraulic cylinder are now completely closed.

INSTALL CRYSTEEL TIPPER BODY ON TRUCK

Place the Tipper body on the subframe so the front of the body and the front end of the subframe are even. Make sure there is sufficient clearance between the body and the reservoir/valve assembly. Relocate the reservoir/valve assembly if necessary. Carefully align the body longbeams to the subframe rails. Securely weld the rear hinge bracket to the longbeams. Securely weld the hoist lift plates to the boxed-in sections of the longbeams.

INSTALL BODY ON TRUCK

Study the diagram in Fig. 7 before installing the body. Make sure there is enough clearance under the body for the hoist to fit. The inside of the longbeams should be boxed in to provide a flat surface for welding the body and hoist together. Carefully measure the location of the hoist lift plate and mark this location on the inside of the longbeams and box in the inside of the longbeams. Place the body on the truck with 3 to 5 inches of clearance behind the cab. Make sure there is sufficient clearance between the body and the reservoir/valve assembly. Relocate the reservoir/valve assembly if necessary. Carefully align the body longbeams to the subframe rails. Securely weld the rear hinge bracket to the longbeams. Securely weld the hoist lift plates to the boxed-in sections of the longbeams.

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

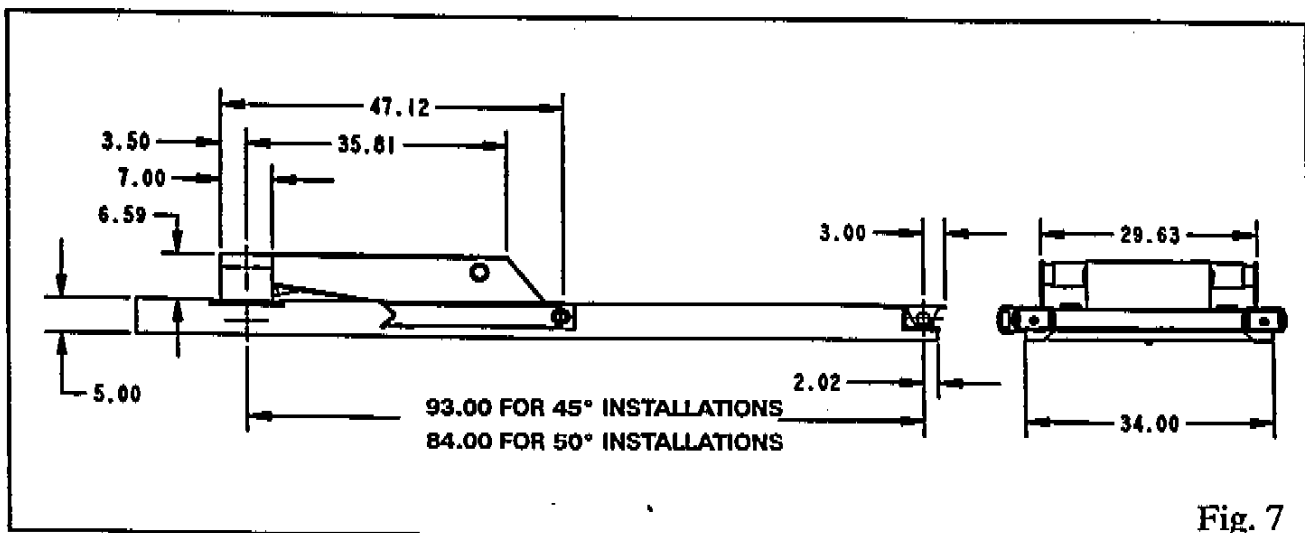
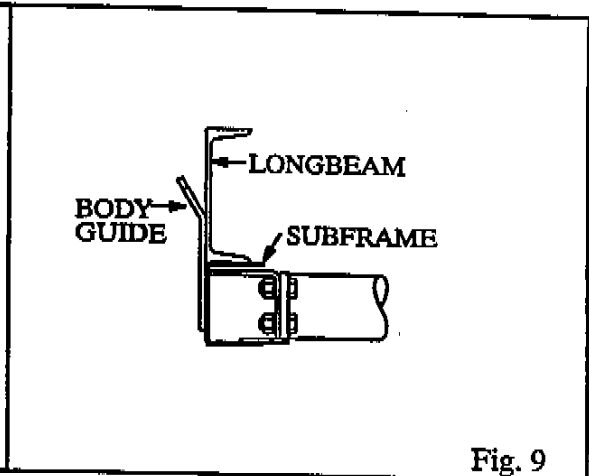
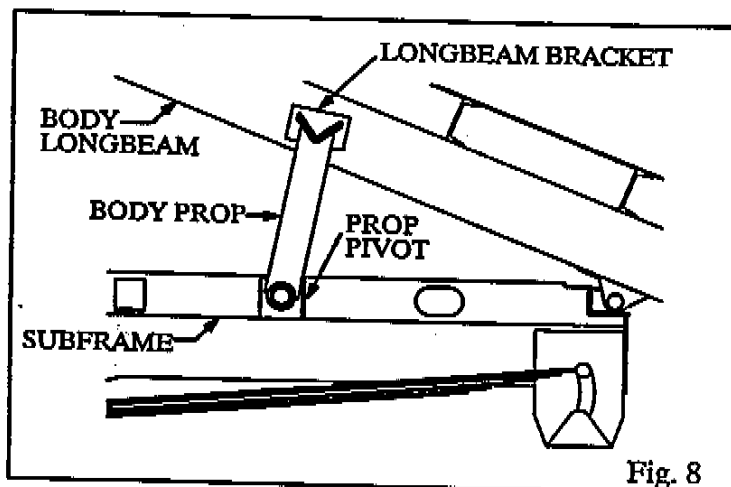


Fig. 7

INSTALL BODY PROP BRACKET ON BODY LONGBEAM

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

1. Raise the body to the desired height and brace it securely before beginning installation.
2. Raise the prop arm to a free standing position by allowing the prop arm to rest against the rear flange of the prop pivot.
3. Place the longbeam bracket assy in the body prop saddle. Raise or lower the body as needed to position the bracket on the outside of the longbeam where it will not interfere with the body prop when it is in the stored position and the body is down. Securely weld this bracket assy to the body. (See Fig. 8.)
4. 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 longbeam bracket contacts the prop arm saddle. **DO NOT POWER HOIST DOWN!**
5. 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.



INSTALL BODY GUIDES

Two body guides have been included and should be mounted near the front of the subframe. Clamp the body guides to the outside of the subframe as shown in Fig. 9. The body guide should be tight against the outside of the longbeams of the body. Securely weld the body guides to the subframe.

INSTALL GREASE ZERKS AND LUBRICATE HOIST

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

- Upper Crosstube 2 Fittings
- Lower Crosstube 2 Fittings
- Cylinder Base Pivot 1 Fitting
- Rear Hinge (already installed) 2 Fittings
- Body Prop (already installed) 1 Fitting

Lubricate all fittings at regular intervals, at least each time the truck chassis is lubricated. There are extremely high forces on the bearings surfaces within the hoist frame. 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.

INSTALL DECALS

After the hoist is installed and the body has been painted, install the decals in the following locations:

- 1. Decal 400640 Mount in the cab above the valve control.
- 2. Decal 400719 Mount on the body longbeam near the body prop.
(one on each side)
- 3. Decal 400661 Mount on the body prop arm.
- 4. Decal 401576 Mount on the outside of the body longbeams near the front of the body (one on each side).
- 5. Decal 400643 Mount on the body longbeam on the drivers side.
- 6. Decal 401577 Mount in the cab in a prominent location.
- 7. Decal 400642 Mount in the cab in a prominent location.

See the illustrations on the following page for decal identification.


! OPERATION OF BODY PROP !

1. Raise body to full height and shut off all power.
2. Raise prop to upright position.
3. Lower body slowly until body bracket contacts prop.
4. **DO NOT POWER HOIST DOWN.**

400719

! DANGER !

- DO NOT GO UNDER RAISED BODY IT MAY DROP AND KILL YOU
- OPERATE HOIST CONTROLS ONLY FROM INSIDE TRUCK CAB



401576

! 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.

400643

! DANGER !

- DO NOT GO UNDER RAISED BODY IT MAY DROP AND KILL YOU
- OPERATE HOIST CONTROLS ONLY FROM INSIDE TRUCK CAB



401577

! 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.

400642

DOUBLE ACTING VALVE
OUT - RAISE; CENTER - HOLD; IN - LOWER
TO USE HYDRAULIC LOCK-DOWN

CONTINUE POWER DOWN UNTIL RELIEF VALVE BY-PASSES; THEN SET IN "HOLD" POSITION.

400640

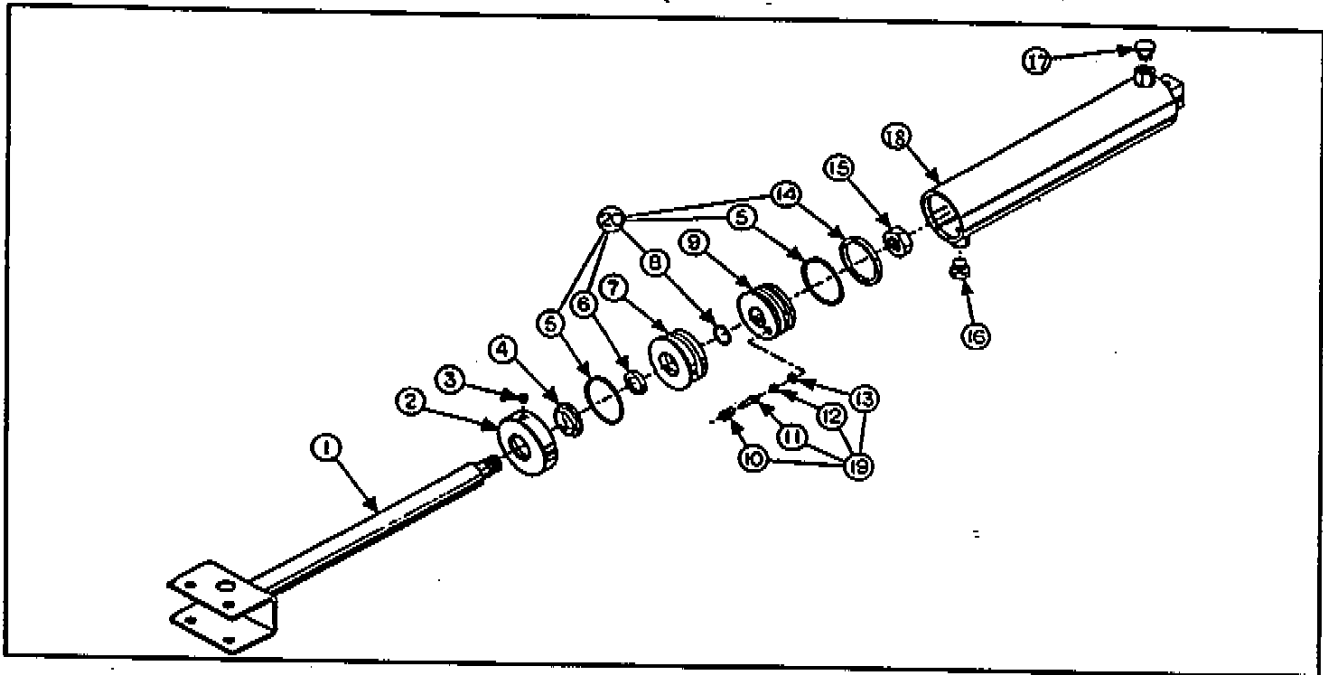
! CAUTION !

UNLOAD BODY BEFORE USING BODY PROP.

400661

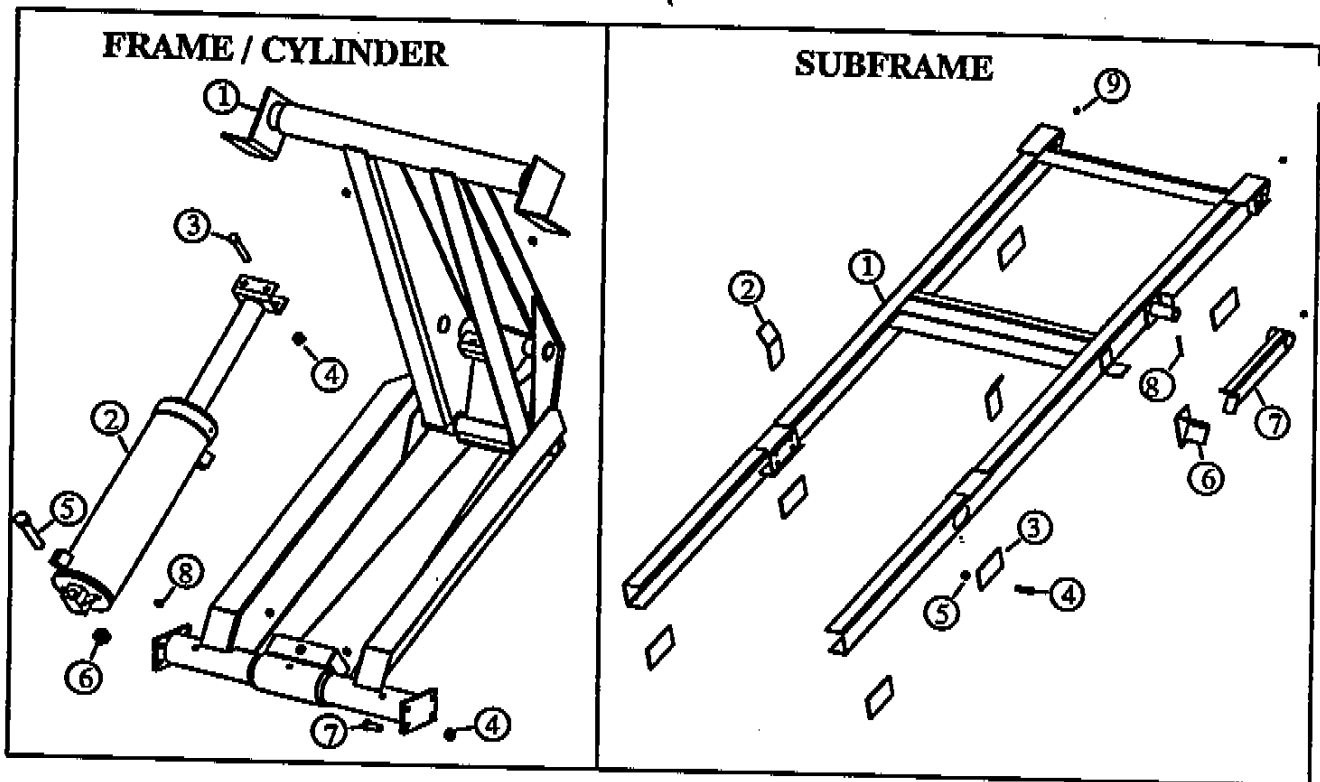
Fig. 12

PARTS LIST



CYLINDER DESCRIPTION LIST LB520 (RC540)

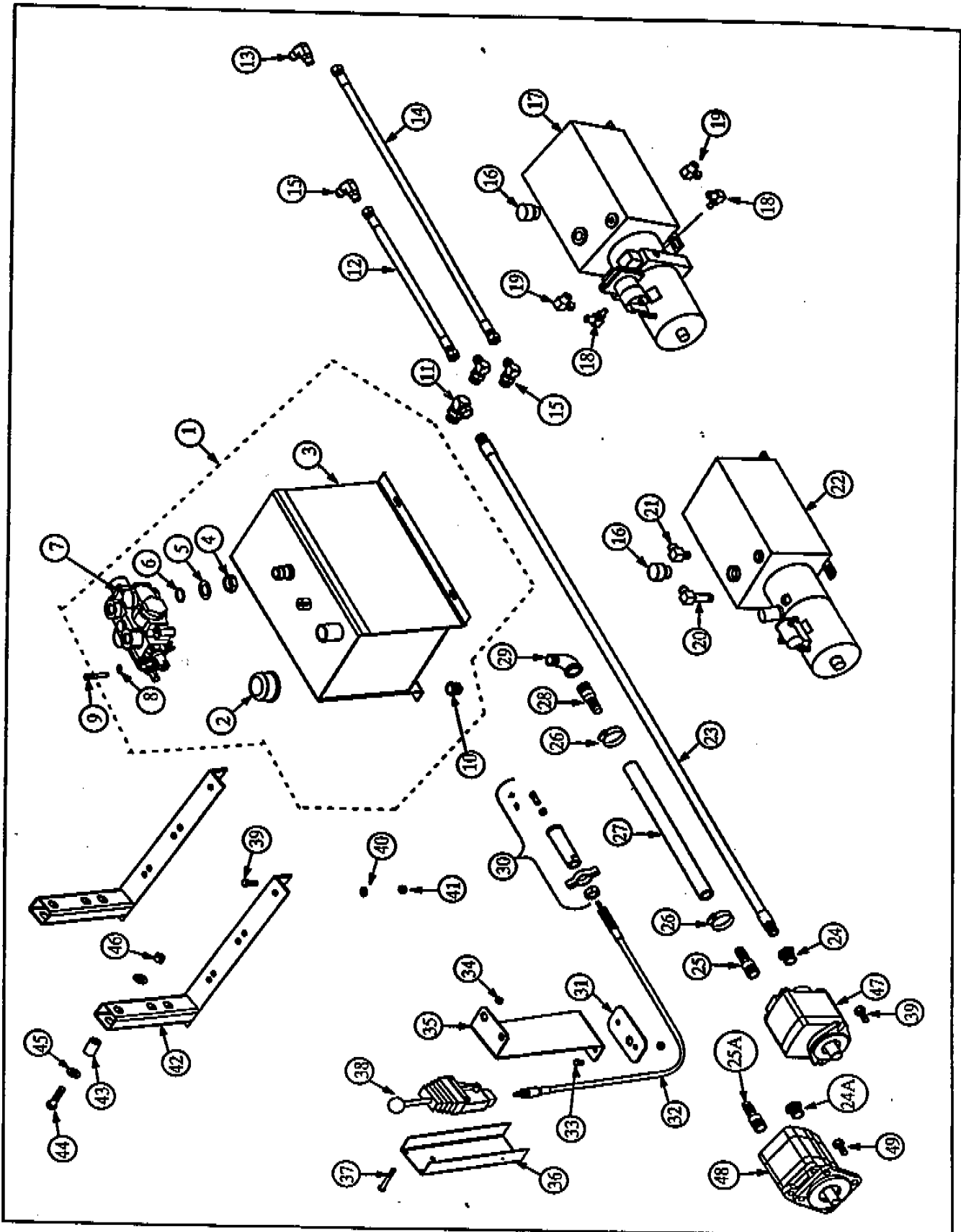
KEY	PART NO.	DESCRIPTION	QUANTITY
1.	104321	Shaft Assembly	1
2.	104293	Cap Assembly	1
3.	400149	Set Screw, Nylon Tip 1/4 x 3/16	1
4.	400913	Wiper Seal *	1
5.	400254	O-Ring *	2
6.	400253	Poly Seal *	1
7.	202469	Head	1
8.	400255	O-Ring *	1
9.	202461	Piston	1
10.	400978	Valve Plug +	1
11.	400979	Valve Plug +	1
12.	400013	Steel Ball 3/8 +	1
13.	401017	O-Ring 1/16 x 7/16 +	1
14.	400252	Poly Seal *	1
15.	401370	Hex Jam Nut 1 1/2-12 Grade 8	1
16.	401389	Plug 3/4 ORB	1
17.	401390	Plug 7/8 ORB	1
19.	104316	Cylinder Tube Assembly	1
20.	105185	Bypass Valve Kit (includes items with +)	1
21.	107960	Seal Kit (includes items with *)	1
22.	104242	Complete Cylinder	1

PARTS LIST**LB520 FRAME/CYLINDER PARTS**

ITEM	PART NO.	DESCRIPTION	QTY.
1.	134574	Assy Frame	1
2.	104242	Assy Cylinder	1
3.	400138	Cap Screw 1/2 x 3 3/4	1
4.	401316	Hex Lock Nut 1/2-13	2
5.	401225	Cap Screw 3/4 x 4 1/2	10
6.	401226	Hex Lock Nut 3/4-10	1
7.	400153	Cap Screw 1/2 x 1 1/4	1
8.	400103	Grease Zerk 1/8 NPT	8
9.	134573	Frame & Cylinder	5
			1

LB520 SUBFRAME PARTS

ITEM	PART NO.	DESCRIPTION	QTY.
1.	134449	Assy Subframe - 9° - 50°	1
	134450	Assy Subframe - 10° - 50°	1
	134451	Assy Subframe - 11° - 50°	1
	134452	Assy Subframe - 10° - 45°	1
2.	222812	Body Guide	1
3.	227988	Plate Mounting	2
4.	402374	Cap Screw 5/8 x 2	6
5.	401582	Hex Lock Nut 15/8-11	12
6.	125259	Assy Prop Bracket	12
7.	111574	Assy Prop Arm	1
8.	400220	Spring Pin 1/4 x 3	1
9.	400103	Grease Zerk 1/8 NPT	1
			3



HYDRAULIC SYSTEMS PARTS

ITEM	PART NO.	DESCRIPTION	QTY.
1.	116651	Reservoir/Valve Carton (Includes Items 2 through 10)	1
2.	400764	Breather Cap	1
3.	116361	Reservoir Assembly	1
4.	402092	Hex Jam Nut 1 1/16-12	1
5.	402093	Washer 1 1/16 Cone	1
6.	401094	O-Ring .924 ID x .116 CS	1
7.	402065	Control Valve	1
8.	400165	Lock Washer 5/16	1
9.	402115	Cap Screw 5/16-18 x 2 Socket Head	1
10.	400405	Magnetic Pipe Plug 3/4"	1
11.	401285	Swivel Adapter 1 1/16 ORBM x 1/2 NPTF 90°	1
12.	404403	Hose 7/8 JICF x 36" Long, 1/2" ID	1
13.	404415	Adapter 3/4 ORBM x 7/8 JICM 90°	1
14.	404404	Hose 7/8 JICF x 60" Long, 1/2" ID	1
15.	404414	Adapter 7/8 ORBM x 7/8 JICM 90°	1
16.	400776	Breather Cap, Electric Pumps	3
17.	401426	Pump Electric P/B D/A 13 Qt	1
18.	403447	Adapter 9/16 ORBM x 3/4 JICM 90°	1
19.	403448	Swivel Adapter 3/4 JICF x 3/4 JICM 90°	2
20.	402509	Adapter 3/8 NPTM X 3/4 JICM 90°, Extra Long	2
21.	402510	Adapter 1/4 NPTM X 3/4 JICM 90°	1
22.	401842	Pump Electric P/B S/A 13 Qt	1
23.	401445	Hose 1/2 NPTM x 60" Long, 1/2" ID	1
24.	400473	Adapter 7/8 ORBM x 1/2 NPTF	1
24A.	401091	Hex Bushing 3/4 NPT x 1/2 NPT	1
25.	402146	Hose Barb 1 1/16 ORBM x 3/4	1
25A.	401447	Hose Barb 3/4 NPTM x 3/4	1
26.	401441	Hose Clamp #24 1 1/16 - 2"	2
27.	210604	Suction Hose 3/4" ID x 72" Long	1
28.	401447	Hose Barb 3/4 NPTM x 3/4	1
29.	402144	Street Elbow 3/4 NPT 90°	1
30.	402127	Valve Connection Kit	1
31.	225127	Plate, Pedestal Clamping	1
32.	402129	Cable, Valve Control - 84"	1
33.	402415	Cap Screw 5/16-18 x 1/2	1
34.	401240	Hex Lock Nut 5/16-18	2
35.	223143	Pedestal Bracket - Wescon, Short	5
	223396	Pedestal Bracket - Wescon, Tall	1
36.	223144	Pedestal Cover - Wescon, Short	1
	223397	Pedestal Cover - Wescon, Tall	1
37.	402154	Machine Screw 5/16-18 x 2 1/2, Round Head	3
38.	402120	Remote Valve Control with Center Detent	1
39.	400121	Cap Screw 3/8-16 x 1 Hex Head	6
40.	400164	Flat Washer 3/8	4
41.	402038	Hex Lock Nut 3/8-16	4
42.	135087	Valve/Tank Mounting Assembly	2

43.	253499	Spacer, VT Mounting	4
44.	404426	Cap Screw 1/2-13 x 2 3/4 Hex Head	4
45.	400176	Flat Washer 1/2	4
46.	401316	Hex Lock Nut 1/2-13	4
47.	402071	Gear Pump - 4 GPM	1
48.	400394	Gear Pump - 6 GPM	1
49.	400153	Cap Screw 1/2-13 x 1 1/4 Hex Head	4

LB520 LOAD CAPACITY IN TONS

BODY LENGTH	9'		10'			12'			14'			16'
Rear Overhang	6	18	6	18	30	6	18	30	6	18	30	30
Hoist Model LB520	12.1	16.0	10.8	13.8	19.0	8.9	10.8	13.8	7.6	8.9	10.8	8.9
Cab to Axle	72	60	84	72	60	108	96	84	132	120	108	132

N/R = Not Recommended

*Capacities at 45°, water level load, includes body weight.

CAUTION: The combined weights of truck, body, hoist and load must not exceed the Gross Vehicle Weight rating of the truck.

SPECIFICATIONS

NTEA Class	Hoist Model	Cylinder Bore-Stroke Shaft	Operating Pressure PSI	Power Down PSI	Mounting Height	Minimum Longbeam Height	Subframe Height	Approx. Weight Pounds	Body Length Feet
C/40	LB520	5"-21.5/8"-2"	3250	800	12"	7"	5"	635	9 to 16

NOTES

SPECIALLY DESIGNED - WITH QUALITY IN MIND

WARRANTY

- Crysteel Manufacturing, Inc. warrants its products for a period of one year from date of purchase.
- The warranty provides that our products must perform satisfactorily or we will repair, replace or refund the purchase price at the option of the purchaser. Hydraulic pumps, valves, hoses and other purchased parts are covered by the warranties of their respective manufacturers.
- Any parts returned to Crysteel Manufacturing, Inc. shall be shipped prepaid, and will be returned F.O.B. Lake Crystal, Minnesota.
- We will not assume responsibility for shipping, labor, travel, loss of use or downtime expenses.
- The warranty is void if the product has been obviously abused, or subjected to other than normal usage.
- We reserve the right to make improvements without notice or obligation regarding models previously sold.

! 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.

CRYSTEEL MANUFACTURING, INC.

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