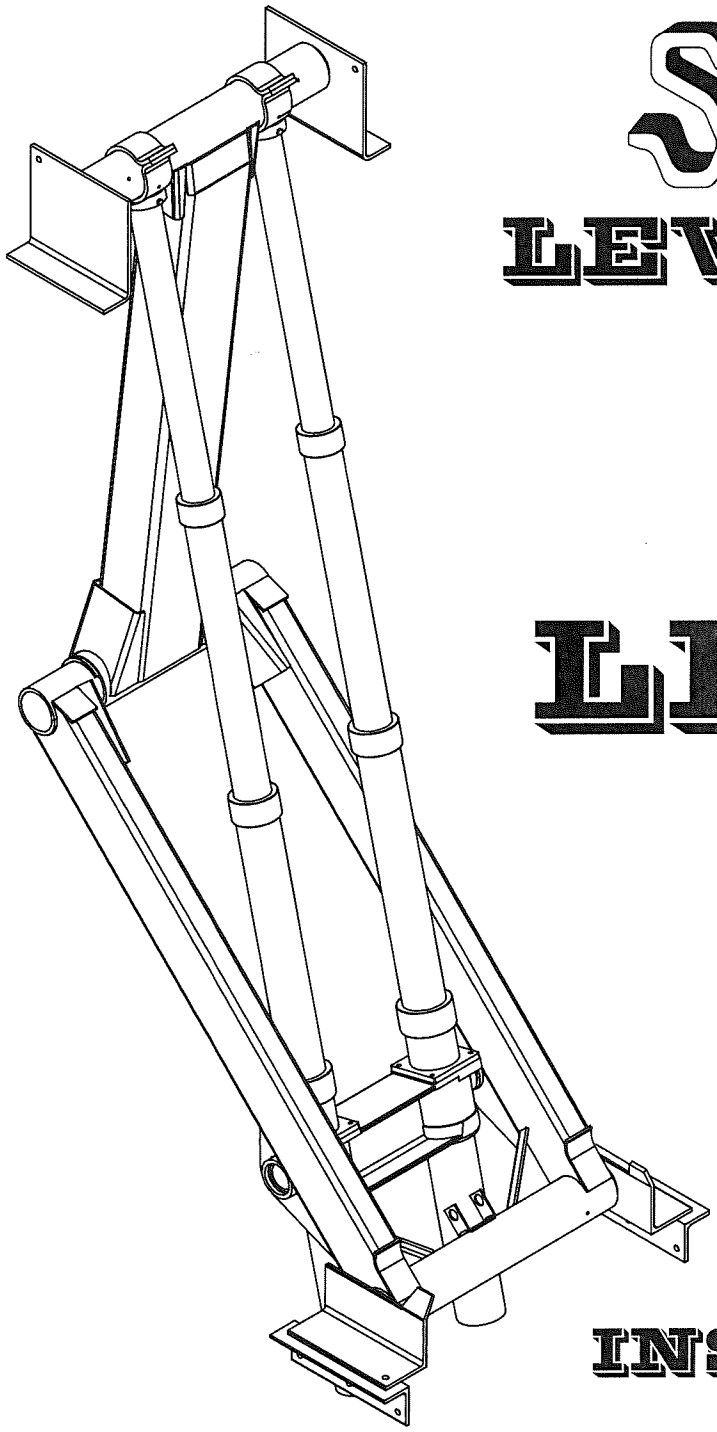


Scott™

LEVEL LIFT

LL-2500

INSTALLATION AND OPERATION

SPECIFICATIONS

CYLINDER STAGES.....3 7/8", 3 3/8", 2 7/8"

STROKE.....80 1/4"

PUMPS SET AT.....3500 PSI

FORM #125-488

IMPORTANT INFORMATION

Congratulations on your recent purchase of a Scott Hoist! This manual is only a small part of Tafco's continuing effort to serve our customers and bring the best products possible to you the customer. If you have any questions or experience any problems, contact your local Scott Hoist distributor.

This manual has been prepared to provide the owner and operator with the information required to properly install and operate the Scott Hoist and pump unit. It is important that you, the owner or operator, read this manual prior to installing, operating or performing any maintenance work on the unit.

For your convenience, we have provided this space for you to record your hoist and pump model and serial numbers and date of purchase as well as your dealership name and address.

Some of the information below is needed for ordering parts. Please fill in the information for faster service when ordering.

NOTE: Hoist serial number is located in the scissor hinge tube.

OWNERS NAME:_____

OWNERS ADDRESS:_____

HOIST MODEL NUMBER:_____

HOIST SERIAL NUMBER:_____

PUMP MODEL NUMBER:_____

PUMP SERIAL NUMBER:_____

PURCHASE DATE:_____

DEALER NAME:_____

DEALER ADDRESS:_____

DEALER TELEPHONE NUMBER:_____

CAPACITY CHART (TONS)

LL2500 HOIST (SCISSOR HINGE BACK)

BOX LENGTH (FEET)	CAB TO TRUNNION (INCHES)	OVER-HANG (INCHES)	DUMP ANGLE / MOUNTING LENGTH				
			35° / 169 1/4"	40° / 149"	45° / 133 3/8"	50° / 121"	55° / 110 7/8"
18	151	12	36.22	31.93	28.62	25.99	23.85
18	139	24	41.39	36.49	32.71	29.70	27.26
18	127	36	48.29	42.58	38.16	34.65	31.80
20	175	12	32.20	28.38	25.44	23.10	21.20
20	163	24	36.22	31.93	28.62	25.99	23.85
20	151	36	41.39	36.49	32.71	29.70	27.26
22	191	12	28.98	25.55	22.89	20.79	19.08
22	187	24	32.20	28.38	25.44	23.10	21.20
22	175	36	36.22	31.93	28.62	25.99	23.85
24	223	12	26.34	23.22	20.81	18.90	17.35
24	211	24	28.98	25.55	22.89	20.79	19.08
24	199	36	32.20	28.38	25.44	23.10	21.20

NOTE: CAPACITY IN TONS AT 3500 PSI.

NOTE: (1) OVERHANG BASED ON 55" FROM CENTER LINE OF TAIL HINGE PIN TO CENTER LINE OF TRUCK TRUNNION, WITH A 2" CLEARANCE BETWEEN CAB AND BODY.

NOTE: (2) CAPACITIES GIVEN INCLUDE BODY WEIGHT PLUS PAYLOAD WEIGHT, AND ASSUME PAYLOAD TO BE CENTERED IN BODY FRONT TO BACK.

MAXIMUM DUMP ANGLE CHART		
DUMP ANGLE	MAXIMUM OVERHANG*	
35 degrees	59 inches	(62 1/2 inches)
40 degrees	52 1/2 inches	(56 inches)
45 degrees	48 inches	(50 1/2 inches)
50 degrees	44 inches	(46 1/2 inches)
55 degrees	41 1/2"	(43 1/2 inches)

*Overhang is based upon 34 inches loaded frame height.
(36 inch loaded frame height shown in parenthesis.)

INSTALLATION TIPS

1. **The hoist can be mounted with the Scissor Hinge either fore or aft for mounting versatility.**

2. **Plan how the hoist, safety prop, and pump will fit on the truck. The mounting area of the hoist must allow for proper movement of the hoist/ pump without interfering with truck cross members, fuel or air tanks etc.**

3. **The hoist upper mounts are positioned up between the bed cross sills. It may be necessary to shift the hoist slightly to avoid cutting or moving the bed cross sills. Keep in mind that this will slightly effect the hoist dump angle and capacity.**

4. **Determine where the PTO and pump can be located. The pump/ reservoir position will determine how the hoist will be plumbed. Keep the cylinder, pump and reservoir away from heat sources such as exhaust pipes.**

5. **Tilt cabs may require greater cab to bed clearance. This is necessary to allow the truck cab (when tilted) to clear the bed. Also any other obstruction (air cleaner stack, exhaust pipes, etc.) must be 2 inches or more from the bed being installed.**

6. **Take time to become familiar with all hoist parts and how they are to be mounted.**

7. **All work should be performed by qualified personnel.**

8. **Insure that this manual along with the pump installation manual are forwarded to the end user.**

9. **Never modify the hoist in any way. Install the hoist according to the installation manual.**

10. **These instructions are for typical installations. If your requirements are different due to body and truck configuration, it is the responsibility of the installer to insure the installation is completed correctly.**

READ ALL PROVIDED MATERIAL AND SAFETY INSTRUCTIONS BEFORE INSTALLING HOIST!

LL-2500 HOIST INSTALLATION INSTRUCTIONS

1. Mount the tail hinge assembly. For a tandem axle truck the tail hinge is mounted as follows: The distance from the center of the pivot pin of the hinge assembly to the rear edge of the rear tire should be 0 to 2 inches. (see page 10) This placement will give a distance of approximately 44 inches from the center of the trunnion to the center of the tail hinge pin. (For single axle trucks, the distance from the front of the tail hinge to the rear spring hanger should be 1 to 6 inches). The tail hinge is placed close to the axle to avoid frame damage and to prevent severe weight transfer from the front of the rear wheels when dumping. After placement of the tail hinge is determined, cut out the top rear section of the frame, in which the tail hinge will set (see page 9). The hinge should be mounted flush with the top and end of the frame. It may be necessary to cut off the excess length of the truck frame. After the hinge assembly is in place, insure that the tail hinge is square with the truck frame. Weld the assembly securely to the frame.

2. Insert lower frame mounts and top hoist mounts into the hoist frame. Make sure the lower mount guide tabs are facing away from the scissor hinge. Insert cylinders into hoist saddle and bolt securely. Bolt cylinder top mounts to upper hoist tube. Note the proper orientation of the cylinder top mount ears as shown on page 10. After doing so, place the hoist on the truck frame in the position it is to be mounted. Refer to the mounting chart on page 3 for the mounting length (ML) at which the hoist is to be positioned. The mounting length is the distance from the center of the tail hinge hinge pin to the center of the hoist lower mount tube. The hoist can be mounted in the standard or reverse installation (shown on page 10) to allow for cylinder swing clearances.
IMPORTANT: SO NOT WELD OR FASTEN LOWER MOUNTS TO TRUCK FRAME AT THIS TIME !

3. Determine if the Bed cross members will interfere with hoist upper mount plates when the bed is positioned on the truck frame with 2-3 inch of clearance between the cab and bed. If necessary, slide the hoist either fore or aft to allow hoist upper mount plates fall between bed cross members. (Note that moving the hoist towards the truck cab will increase capacity but decrease the dump angle and opposite results occur when moving the hoist away from the truck cab.
IN THE EVENT THAT A CROSS MEMBER MUST BE NOTCHED TO ALLOW FOR THE PROPER POSITIONING OF THE HOIST, IT IS ADVISABLE TO INSERT A CROSS CHANNEL BETWEEN THE LONG BEAMS HUST TO THE FORE AND AFT OF THE HOIST. THE CROSS CHANNEL WILL BE 1" SMALLER THAN THE SIZE OF THE LONG BEAM. See page 9.

4. If the hoist hinging end in not supported by a truck frame cross member, install a support channel near the hinging end of the hoist frame. Hoist frame should run level along length of the truck frame. (see page 10).

5. Make sure that the hoist is square with the truck frame. Before attaching the lower mount angles, recheck for any possible interference (cylinder swing, etc.). Clamp the lower mount angles to the to the lower hoist mounts and weld the full length of the lower mount. Drill and bolt the lower mount angles to the side of the truck frame. DO NOT WELD THE LOWER MOUNTS TO THE TRUCK FRAME.

6. Mount the pump and reservoir at this time. Refer to the pump installation instructions in this manual (pages 15 & 17) and supplied with your pump and reservoir. Insure that proper clearance is provided with all hose, cable and PTO mounting.

7. Lower the truck bed onto the truck frame, positioning it exactly as it will be mounted when lowered. Recheck cab to bed clearance, bed cross member positioning and rear hinge positioning to insure proper location. Weld the vertical plate assembly of the tail hinge to the long beam of the bed. Refer to diagram on page 9 for proper mounting. Diagram also shows proper mounting on beds with aluminum long beams.

8. There are two methods to attach the upper hoist mounts to the bed long beams, shown on page 8. One method is to bolt the upper mount to the long beam and the other is to weld the upper mount to the long beam.
Both methods require a ¼ inch diagonal plate to be installed to the long beam, centered on the upper mount location. This will prevent the upper mount from rolling under. This plate is furnished by the installer due to the variety of long beam sizes.
   A. For bolt-on applications, a stringer plate must be welded to the upper mount. This allows for the upper mount to be bolted to the long beam. See page 8. Drill and bolt the stringer attachment plate to the long beam. It may be necessary to raise the bed to complete bolting of the upper mount. Be sure to properly block the bed when doing so.
   B. For applications in which the upper mount is welded, it can be welded in place as shown on page 8.

9. Connect the hydraulic hoses and fittings supplied with your hoist and pump. Use Loctite Hydraulic Sealant on all threaded NPT pipe joints. Fill the reservoir with a recommended fluid, as listed in the maintenance portion of this manual.

10. Grease all hoist, tail hinge and drive line grease fittings. This will prevent damage and insure smooth operation.

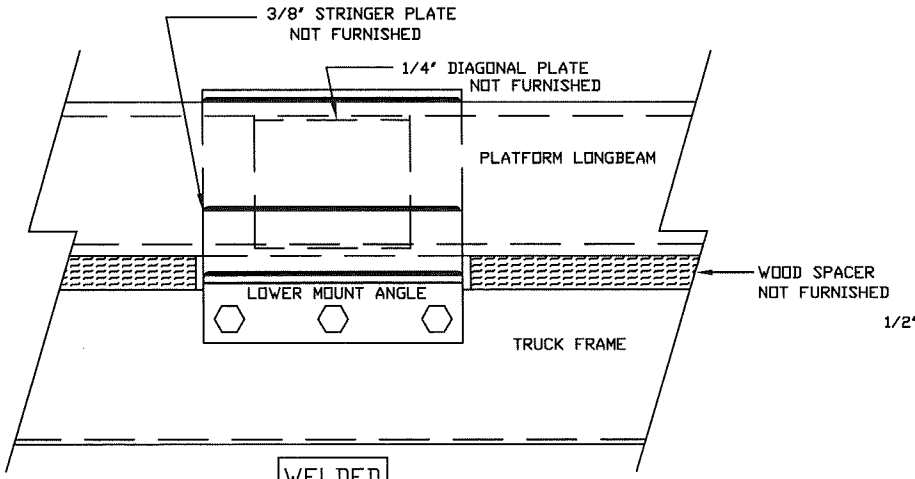
11. **Slowly raise the bed in steps, checking for clearance of all hoist and drive line components. Raising the hoist and stopping it in several positions to check for clearance will help prevent damage to the truck and hoist.**

12. **If the hoist is operation with no clearance problems, then raise the hoist to half the dump angle. SUPPORT THE BED WITH A SUITABLE OVERHEAD HOIST TO PREVENT LOWERING OT THE TRUCK BED. Fill the reservoir tank ¾ full of the recommended fluid. Continue to raise the hoist fully. Unhook the overhead hoist and lower the truck bed.**

13. **Raise and lower the hoist several times. Check the fluid in the reservoir according to the pump installation instructions.**

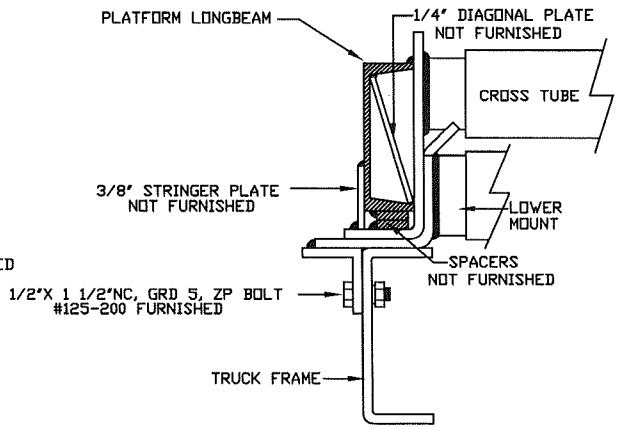
14. **ALL INSTALLATIONS MUST INCLUDE A SAFETY PROP. THE SAFETY PROP IS ONLY INTENDED TO SUPPORT AN EMPTY BODY AND IS NOT INTENDED TO BE USED WITH A LOADED BODY. Refer to page 14 in this manual for the safety prop mounting instructions.**

NOTE: INSTALL AND OBSERVE ALL SAFETY AND WARNING DECALS SHOWN ON PAGE 11.



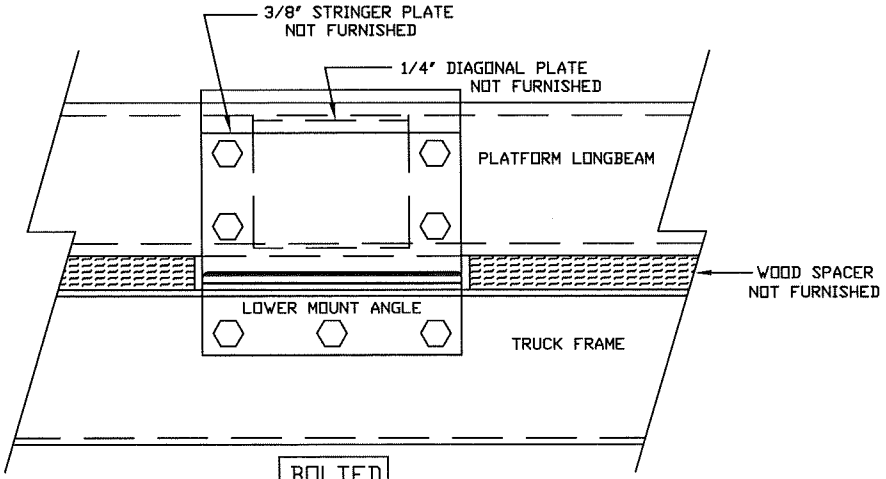
WELDED

SIDE VIEW



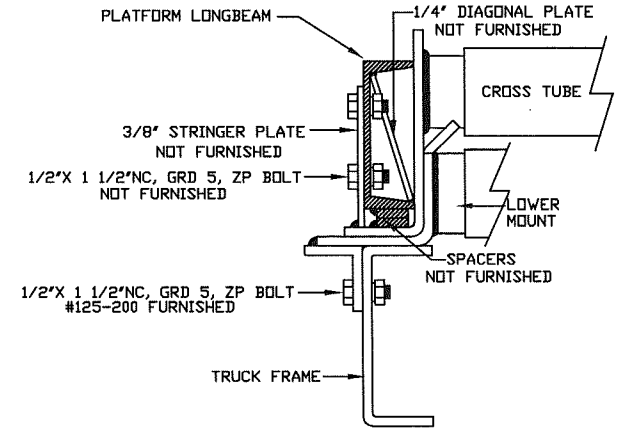
WELDED

END VIEW



BOLTED

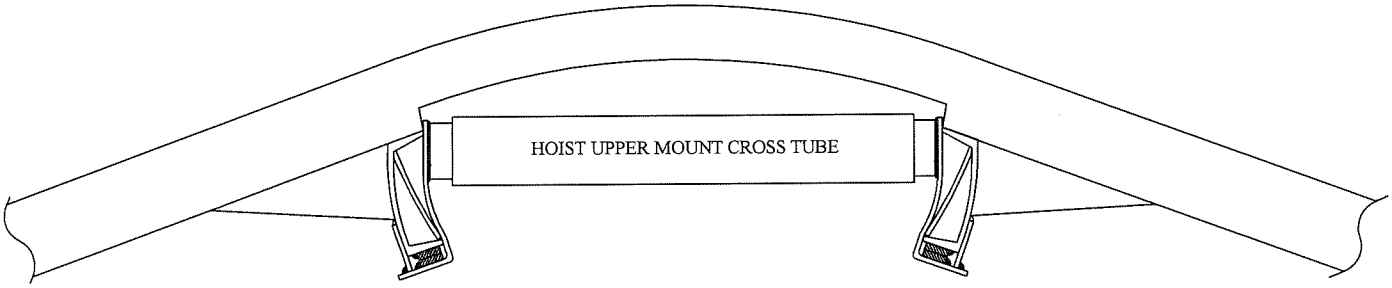
SIDE VIEW



BOLTED

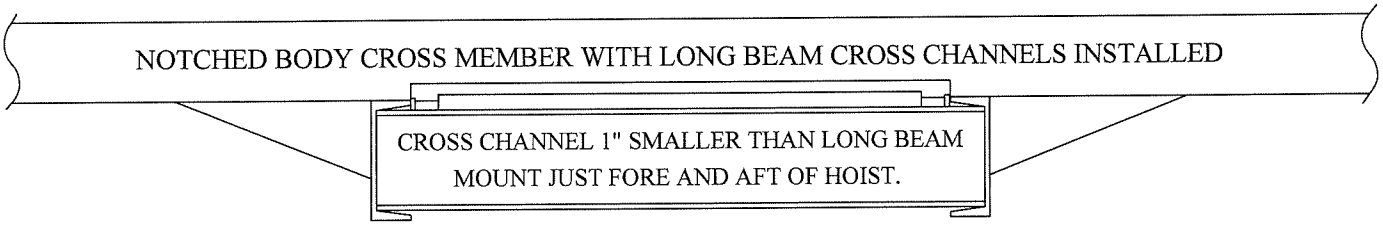
END VIEW

ON GRAIN BODIES, IT IS RECOMMENDED THAT CROSS CHANNELS BE INSTALLED BETWEEN THE BODY LONG BEAMS. MOUNT ONE CROSS CHANNEL DIRECTLY IN FRONT OF HOIST UPPER MOUNT PLATES AND ONE DIRECTLY BEHIND HOIST AS SHOWN BELOW. WELD CROSS CHANNELS SECURELY TO BODY LONG BEAMS.



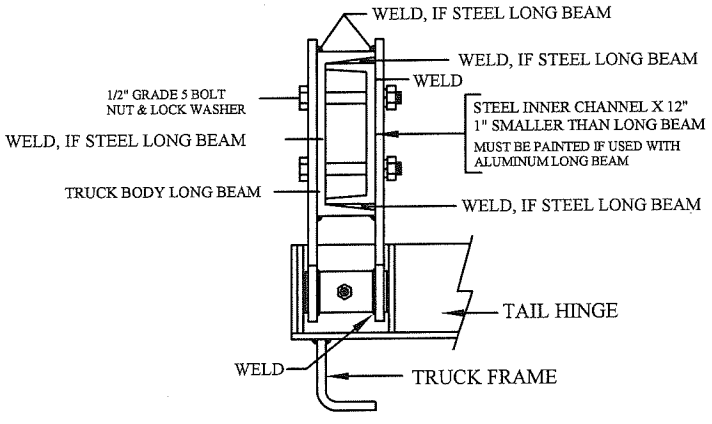
NOTCHED BODY CROSS MEMBER WITHOUT LONG BEAM CROSS CHANNELS INSTALLED

END VIEW

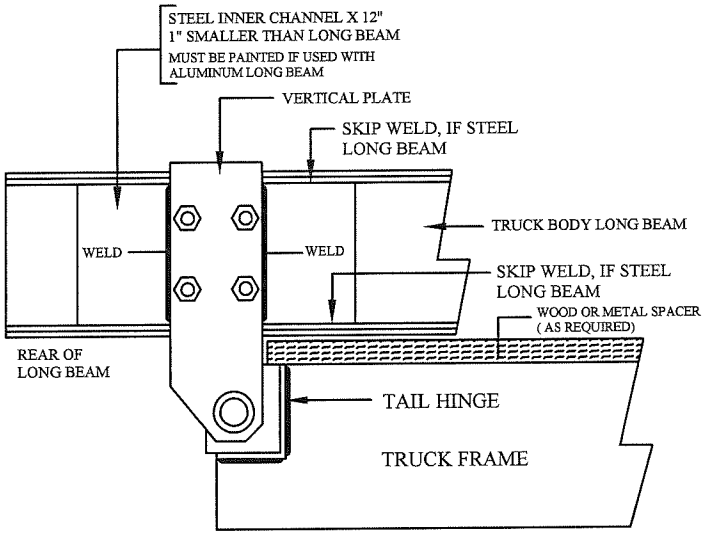


CROSS CHANNELS NOT FURNISHED

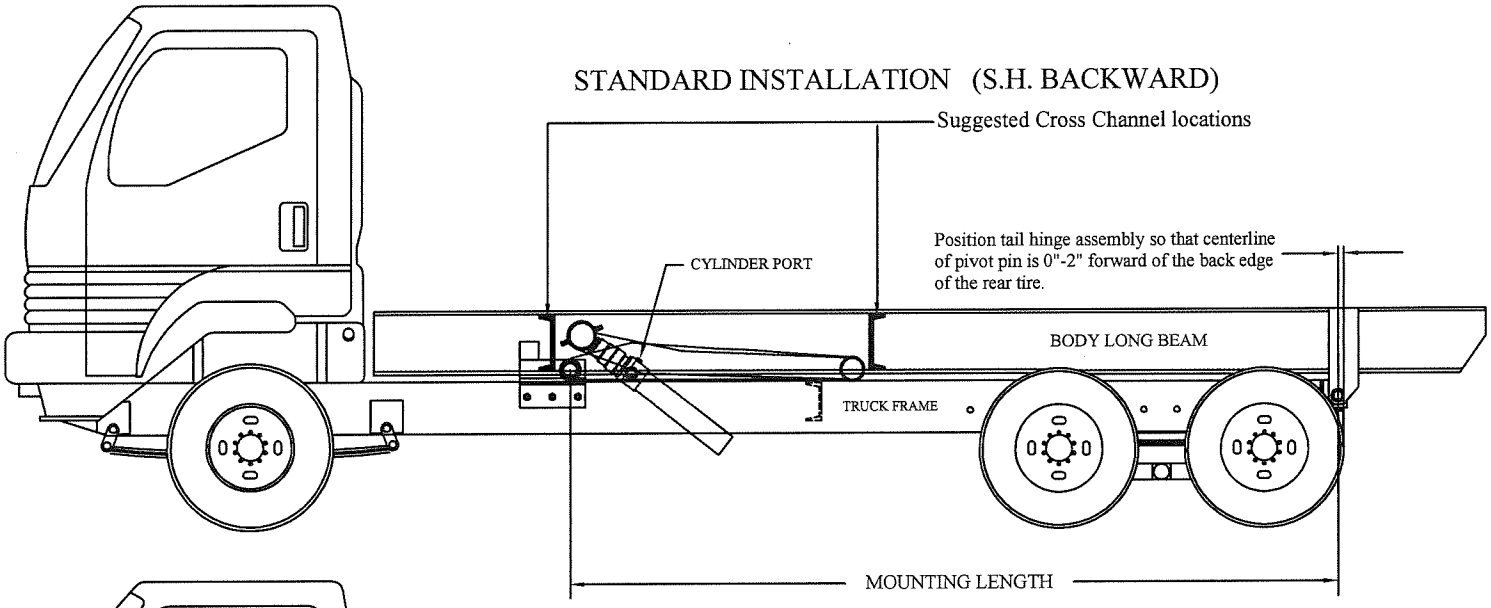
FAILURE TO PROPERLY MOUNT AND REINFORCE THE TRUCK BODY AND HOIST COULD VOID THE BODY AND HOIST WARRANTY!!



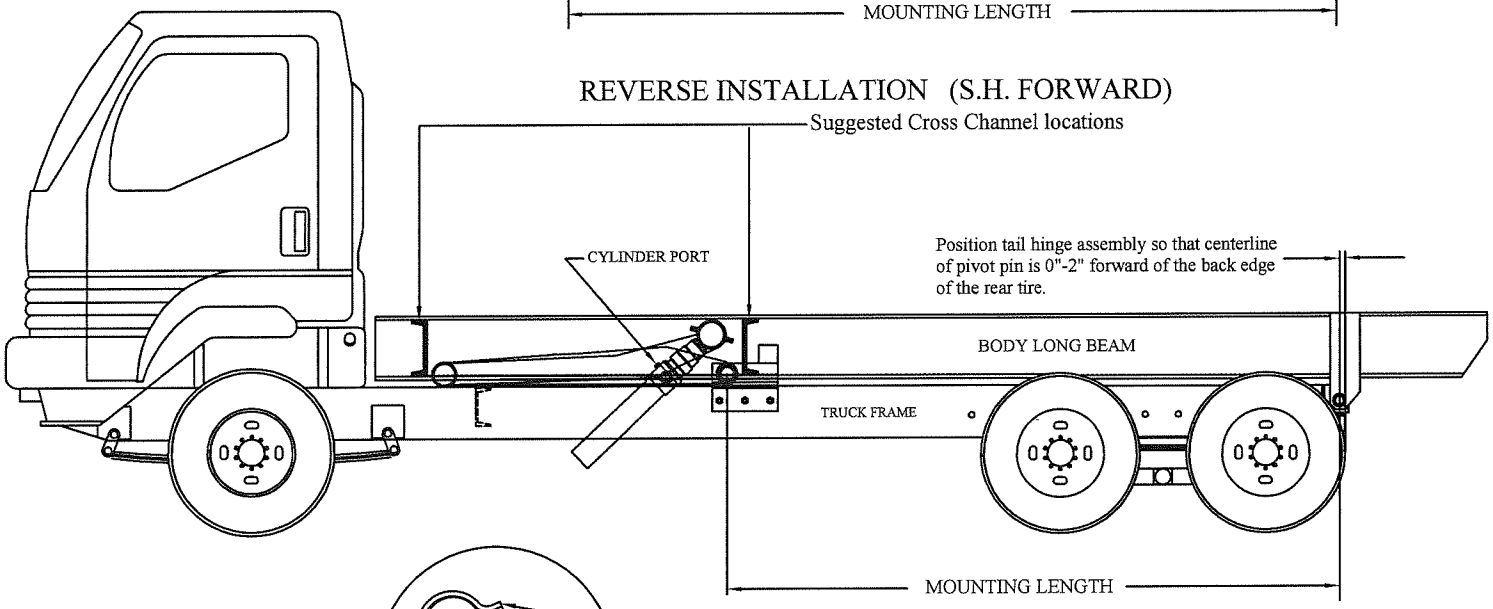
REAR VIEW (DRIVERS SIDE) BODY HINGE

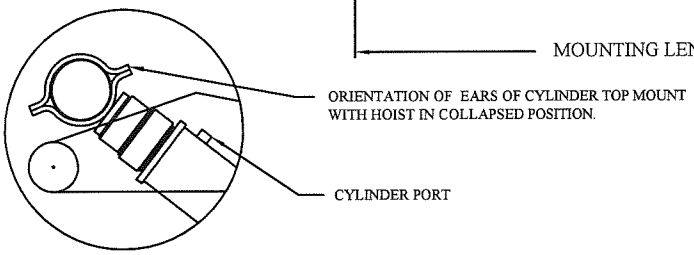


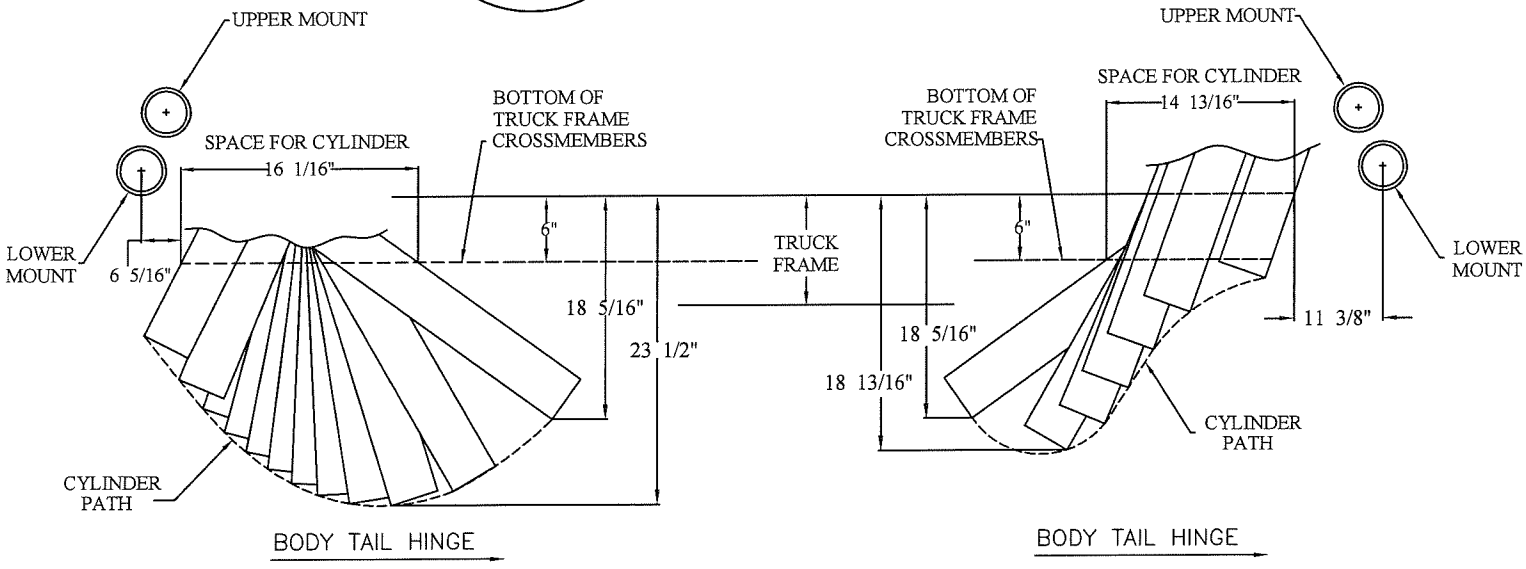
STANDARD INSTALLATION (S.H. BACKWARD)



REVERSE INSTALLATION (S.H. FORWARD)







LL2500 HOIST- STANDARD INSTALLATION

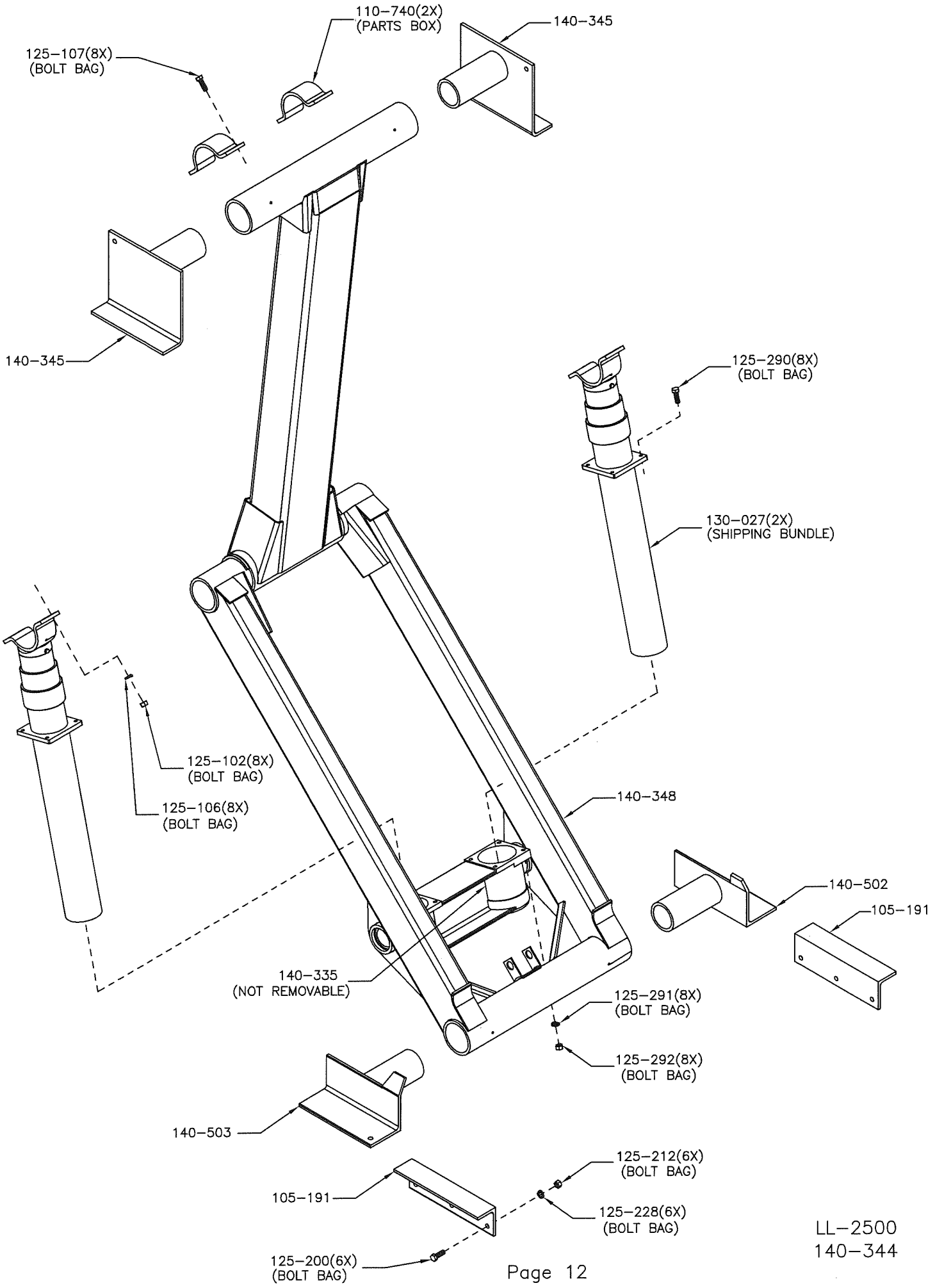
LL2500 HOIST- REVERSE INSTALLATION

Apply on dashboard as near as possible to Hoist controls.

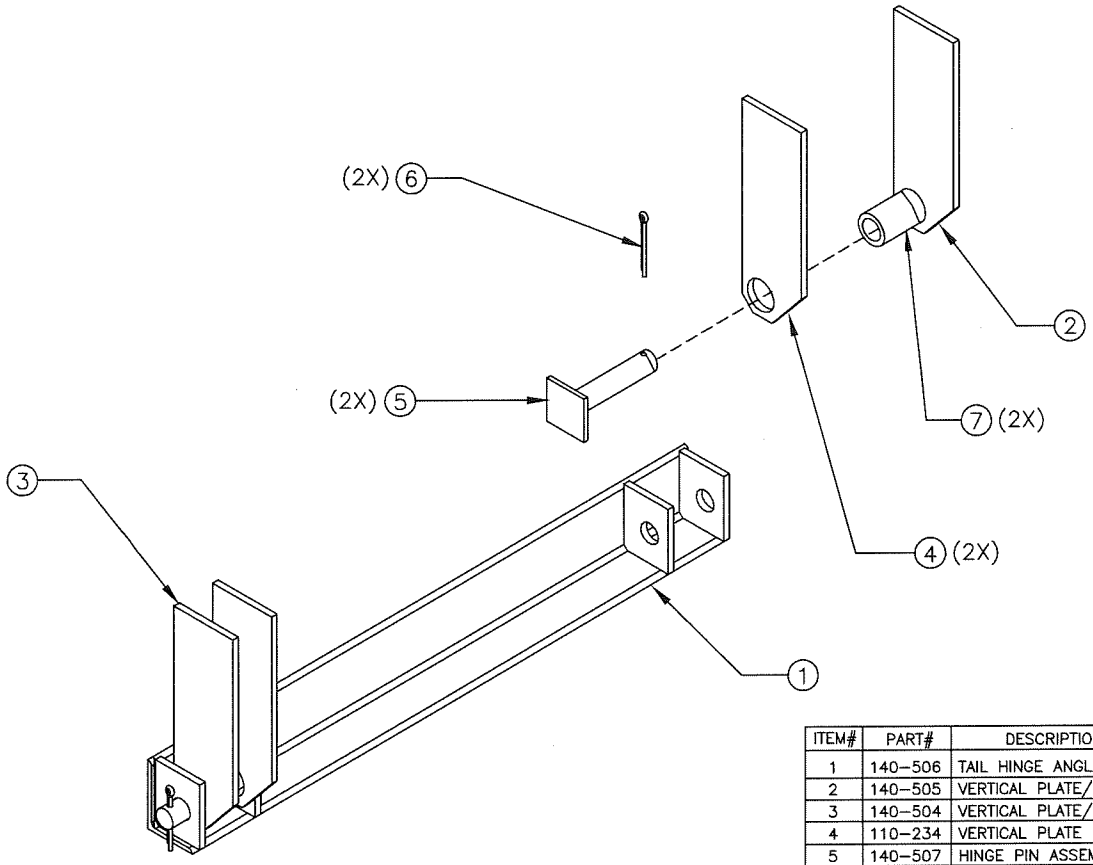
CAUTION:

Improper positioning of hoist could cause damage to cylinders and truck chassis cross-members. See mounting instructions for cylinder motion.

130-334



LL–2500
140–344

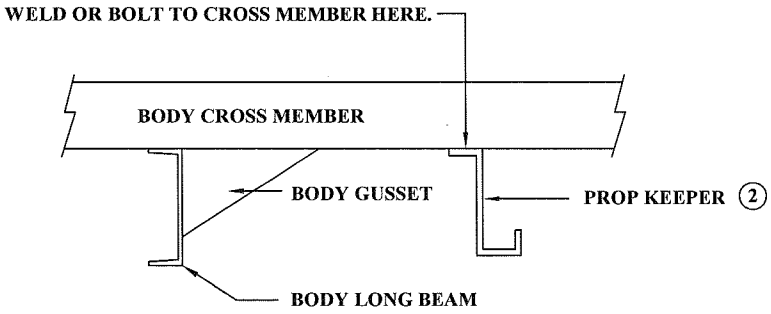


ITEM#	PART#	DESCRIPTION	QTY
1	140-506	TAIL HINGE ANGLE ASSEMBLY	1
2	140-505	VERTICAL PLATE/BUSHING ASSEMBLY(R.H)	1
3	140-504	VERTICAL PLATE/BUSHING ASSEMBLY(L.H)	1
4	110-234	VERTICAL PLATE	2
5	140-507	HINGE PIN ASSEMBLY	2
6	125-318	3/8" X 2 1/2" COTTER PIN	2
7	125-285	1/4" DRIVE ZERKS	2

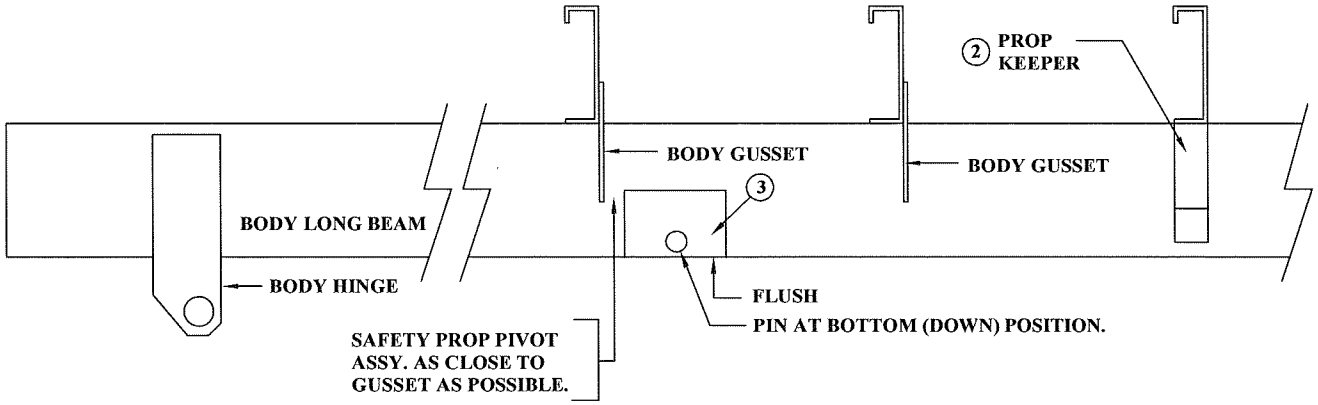
LL-2500 TAIL HINGE ASSEMBLY
PART# 140-525

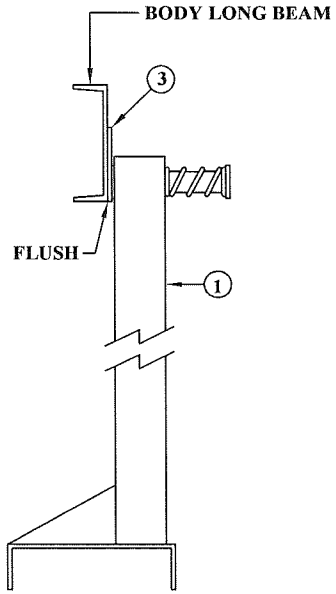
NOTES:

SAFETY PROP MOUNTING INSTRUCTIONS



ITEM#	PART#	DESCRIPTION	QTY
1	140-416	SAFETY PROP LEG & PIVOT ASSY	1
2	110-953	SAFETY PROP KEEPER	1





1. Raise & brace up the empty body.
2. Locate leg/pivot assembly(plate (3)), an appropriate distance forward of body hinge and as close to body gusset as possible. Pivot assembly mounting plate should be flush at the bottom with the bottom of the long beam, with the pin in the down position as shown.
3. Clamp the pivot plate to the long beam and weld all around with a 3/8" fillet weld.
   NOTE: To protect the compression spring from weld splatter, wrap with a wet paper towel.
4. Swing base of leg assembly forward into storage position. Slip prop keeper onto leg assembly and locate keeper to the most suitable crossmember. Clamp keeper to crossmember and weld or bolt permanantly. On shorter truck bodies it may be necessary to store safety prop backward. If this is the case- then the pivot assembly should be welded directly behind body gusset.
5. Apply "DANGER" safety prop decals to outside surface of both bed long beams.

CAUTION: THE SAFETY PROP IS NOT DESIGNED TO SUPPORT LOADED BODY!

TAFCO DIRECT MOUNT PUMP INSTALLATION

The direct mount pump that Tafco supplies is a BI-ROTATIONAL pump with a 7/8" diameter-13 tooth splined shaft and a 2 bolt SAE "B" flange. The pump mounts directly to the PTO and should be positioned so you can use the side and / or end ports. It is recommended that you use the Tafco supplied tank and valve option with this pump. If you are not using the Tafco tank and valve, then you must insure the system you use meets all the requirements of the Scott Hoist you are installing.

The direct mount pump is BI-ROTATIONAL* and will rotate either direction. You must insure that you have the inlet hose (from the front of the tank to the pump) in the correct pump port that will allow oil to enter the pump and flow around the gear teeth. The oil does NOT flow between the teeth. The inlet line should be as close to the size of the inlet fitting as possible and should be a suction hose with crimp fittings. The pump hoses are supplied by the INSTALLER. The pressure hose from the pump to the control valve must have a working pressure rating equal to or exceeding the hoist maximum pressure setting.

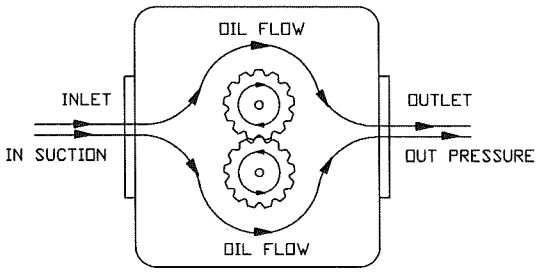
NOTE: ALWAYS DOUBLE CHECK THE PTO ROTATION AND PUMP ROTATION TO INSURE YOU HAVE THE INLET AND OUTLET PROPERLY PLUMBED. SEE PAGE 16 FOR MORE INFORMATION.

***BI-ROTATIONAL means that you do not need to take the pump apart to reverse the rotation. You simply need to insure that the hose from your oil supply tank attaches to the port that allows the oil to flow around the two gears when the PTO is operating.**

1. **Measure and determine the location and desired height of the valve/ reservoir. The valve/ reservoir should be mounted to insure the valve to cylinder hoses will reach.**
2. **Bolt the mounting brackets to the valve/ reservoir and clamp the brackets to the truck frame in the desired location. Remove the valve/reservoir.**
3. **Drill and bolt the brackets to the frame and remount the valve/reservoir. Be careful of brake lines, fuel tank, fuel lines and wiring located inside the truck frame when drilling through the frame.**
4. **Refer to the CONTROL CABLE INSTALLATION INSTRUCTIONS (page 20). This will give you detailed instructions on the installation and adjustments of the control cable.**
5. **See page 16 for the proper plumbing of the direct mount pump and valve/reservoir assembly. Note the valve lifting port (labeled 1 or B) is connected to the bottom of the cylinder to raise the hoist. The other port is the lowering port. For power up and power down hoists, this valve port is connected to the rod end of the hoist cylinder. For power up only hoists, this valve port is plugged off.**

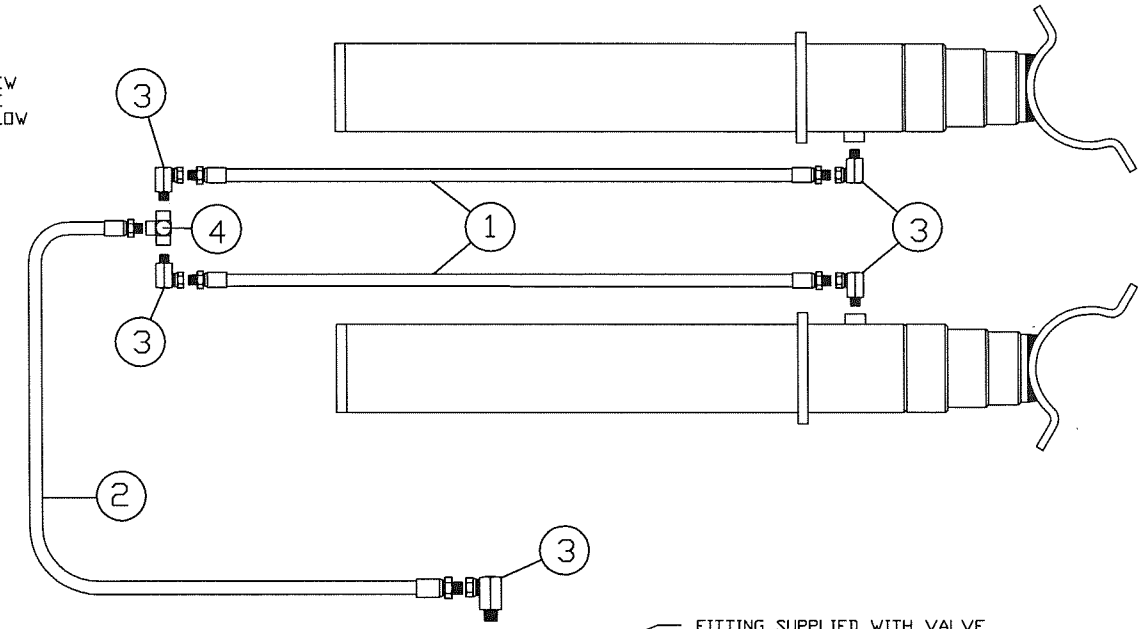
   WARNING: HOISTS WHICH ARE POWER UP AND POWER DOWN MUST NOT BE MADE INTO POWER UP ONLY HOISTS !!

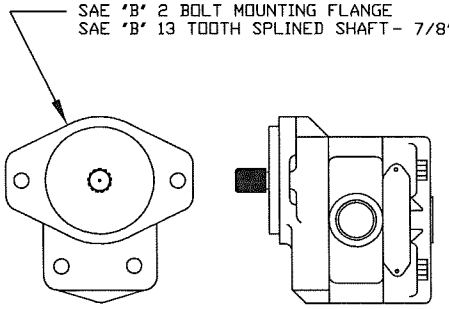
Always insure the proper routing of the cable so you pull the cable knob out to raise and push the cable knob in to lower.



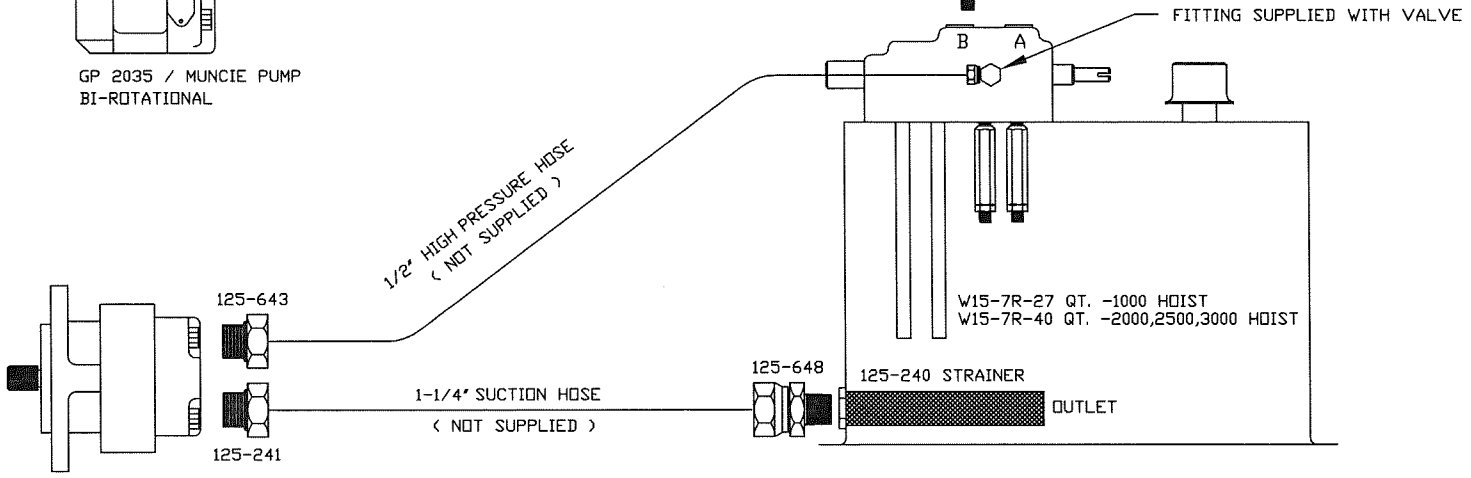
CHECK THE PTO AND PUMP ROTATION. THE GEARS MUST PULL THE OIL IN THROUGH THE INLET PORT, AROUND THE OUTSIDE OF THE GEARS, AND PUSH IT OUT THE PRESSURE PORT. IF YOUR ROTATION IS OPOSITE THE ABOVE VIEW THEN THE GEARS WILL TURN THE OTHER DIRECTION AND THE INLET AND THE OUTLET PORTS WILL BE REVERSED KEEPING IN MIND THAT THE OIL MUST FLOW AROUND THE GEARS AND NOT BETWEEN THEM.

1	130-015 30" X 1/2" HP HOSE
2	130-333 84" X 1/2" HP HOSE
3	125-141 90 DEG. MALE-FEMALE PIPE SWIVEL 1/2"
4	125-139 FEMALE 1/2" PIPE TEE.

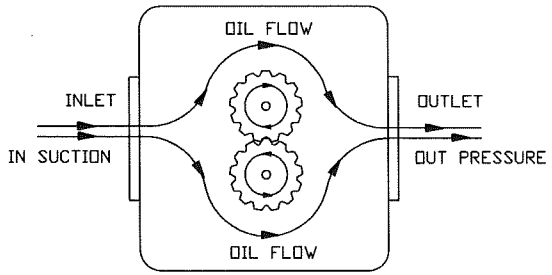




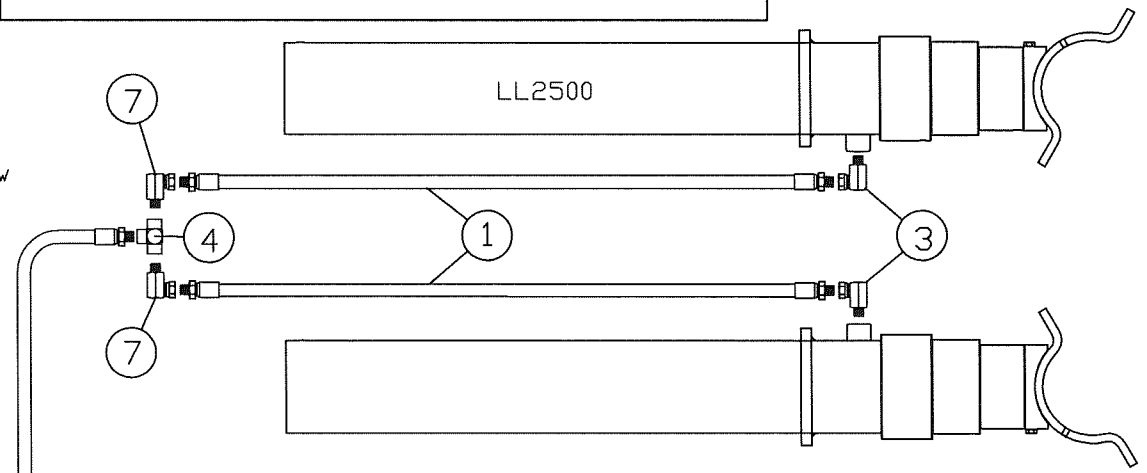
GP 2035 / MUNCIE PUMP
BI-ROTATIONAL

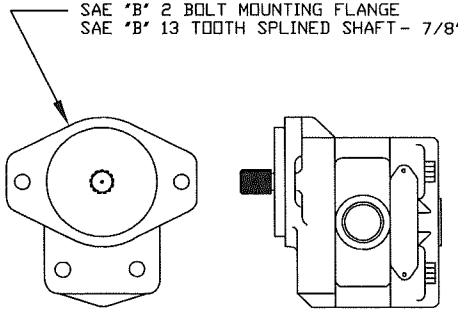


1	125-247 40" x 1/2" HP HOSE
2	125-770 84" X 3/4" HP HOSE
3	125-141 90 DEG. MALE-FEMALE PIPE SWIVEL 1/2"
4	125-773 FEMALE 3/4" PIPE TEE.
5	126-621 6901-12-12 90 DEG FITTING.
6	126-622 6901-10-12 90 DEG FITTING.
7	125-771 90 DEGREE MALE-FEMALE SWIVEL.

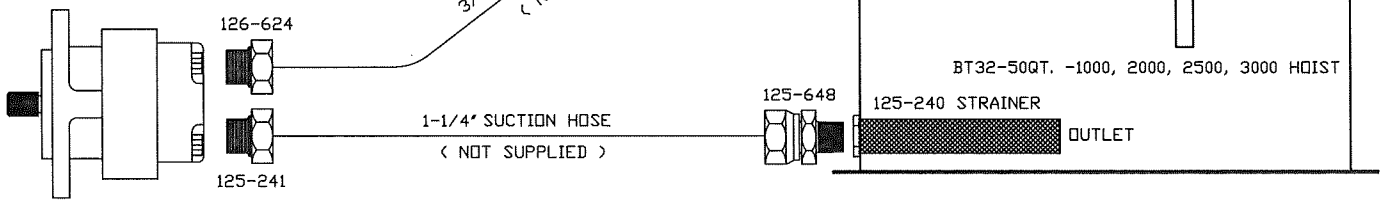


CHECK THE PTO AND PUMP ROTATION. THE GEARS MUST PULL THE OIL IN THROUGH THE INLET PORT, AROUND THE OUTSIDE OF THE GEARS, AND PUSH IT OUT THE PRESSURE PORT. IF YOUR ROTATION IS OPOSITE THE ABOVE VIEW THEN THE GEARS WILL TURN THE OTHER DIRECTION AND THE INLET AND THE OUTLET PORTS WILL BE REVERSED KEEPING IN MIND THAT THE OIL MUST FLOW AROUND THE GEARS AND NOT BETWEEN THEM.





GP 2035/ DAK PUMP
BI-ROTATIONAL



PTO DRIVE-LINE PUMP / RESERVOIR INSTALLATION

1. **Measure and determine the location and desired height of the pump/ reservoir.**

2. **Bolt the pump brackets to the pump/ reservoir and clamp the brackets to the truck frame in the desired location.**

3. FOR STEP 3, REFER TO PAGE 19.
   Check the pump shaft to insure it is parallel to the PTO output shaft and also with the truck frame rail. Determine the drive line angle. The ideal drive line angle is 1 to 7 degrees. If this angle is greater than 15 degrees, relocate the pump/ reservoir to achieve a drive line angle less than 15 degrees. Determine the exact length of hex shaft "B".
   It is of great importance that dimension "A" (of drive shaft illustration on page 19) of 1/8" is maintained on the drive shaft when installing to slip joint. This will prevent the fall out of drive line due to loosening of set-screws and will prevent the shaft from slipping out of the PTO joint.

   NOTE: An improperly installed drive line will cause excessive noise and vibration and may result in pump and/or PTO failure.

4. **Remove the pump/ Reservoir.**
   Drill and bolt the brackets to the frame and remount the pump/reservoir. Be careful of brake lines, fuel tank, fuel lines and wiring inside the truck frame when drilling through the frame. Install the drive shaft insuring that the drive line yokes are in line. (see page 19).

5. **Refer to the control cable installation instructions (page 20). This will give you detailed instructions on the installation and adjustments of the control cable.**

6. **See page 19 for the proper plumbing of the PTO pump to the hoist cylinder. Note the valve lifting port (labeled 1 or B) is connected to the bottom of the cylinder to raise the hoist. The other port is the lowering port. For power up and power down hoists, this valve port is connected to the rod end of the hoist cylinder. For power up only hoists, this valve port is plugged off.**
   WARNING: HOISTS WHICH ARE POWER UP AND POWER DOWN MUST NOT BE MADE INTO POWER UP ONLY HOISTS !!
   Always insure the proper routing of the cable so you pull the cable knob out to raise and push the cable knob in to lower.

CAUTION: Read all safety and operation information provided by the PTO manufacturer. Observe these and all safety instructions.

CAUTION !!

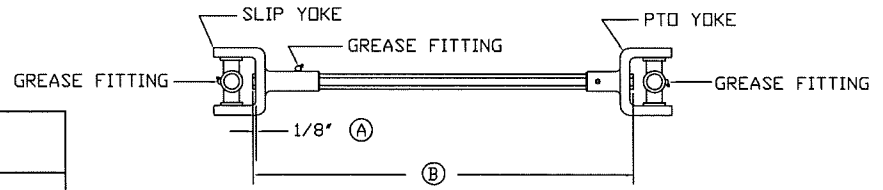
1. **DO NOT go under vehicle when the engine is running.**

2. **DO NOT work on a PTO or shaft while engine is running.**

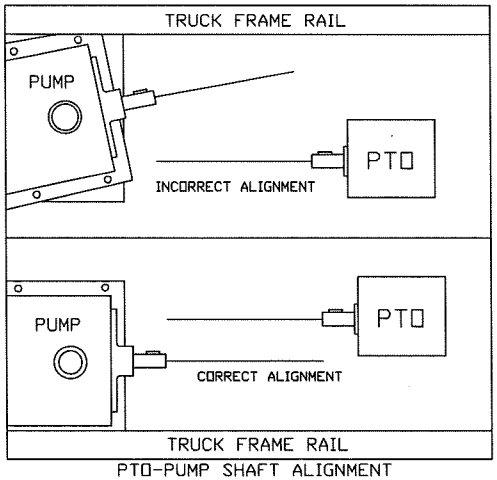
3. **DO NOT engage or disengage the PTO or driven equipment by hand from under the vehicle when the engine is running.**

4. **ALWAYS shut the engine off before working on or near the PTO system.**

1	125-247 40" x 1/2" HP HOSE
2	130-333 84" X 1/2" HP HOSE
3	125-141 90 DEG. MALE-FEMALE PIPE SWIVEL 1/2"
4	125-139 FEMALE 1/2" PIPE TEE.

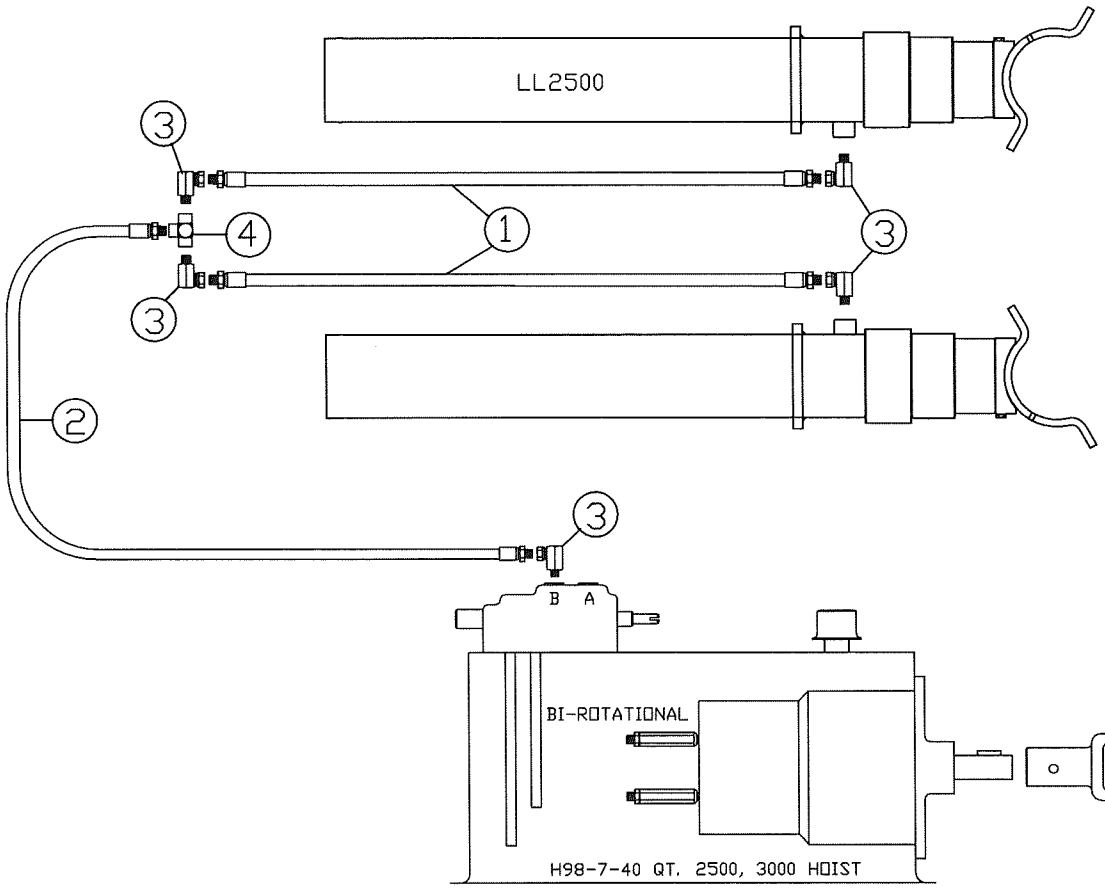


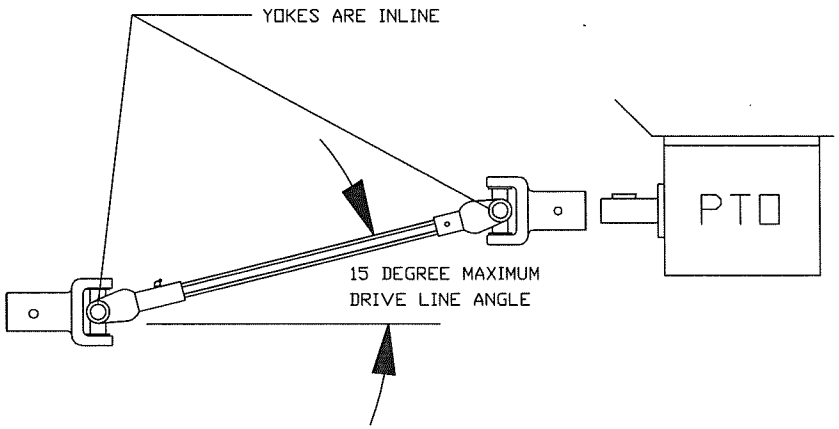
DRIVE SHAFT ILLUSTRATION



PTO-PUMP SHAFT ALIGNMENT

PUMP SHAFT AND PTO SHAFT MUST BE PARALLEL WITH EACH OTHER AND WITH THE TRUCK FRAME RAIL.





WILLIAMS MACHINE & TOOL CO.

MANUFACTURERS OF HYDRAULIC PISTON PUMPS

NEUTRAL LOCK–CONTROL CABLE INSTALLATION INSTRUCTIONS

DANGER DO NOT ALLOW ANY PART OF YOUR BODY UNDER THE TRUCK BOX UNTIL THE TRUCK BOX IS PROPERLY BLOCKED. SERIOUS INJURY OR DEATH WILL RESULT FROM TRUCK BOX FALLING IN 1 SECOND OR LESS.

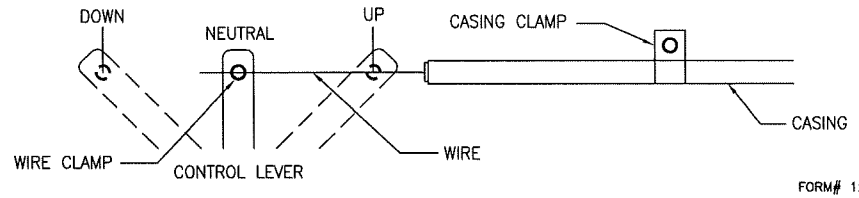
BEFORE BEGINNING ANY CONTROL CABLE INSTALLATION, PERFORM THE 3 STEPS BELOW:

1. MAKE SURE THE TRUCK BOX IS EMPTY – EMPTY THE LOAD.
2. THE TRUCK BOX MUST BE PROPERLY BLOCKED BY USING THE BODY PROPS ON THE TRUCK HOIST AND BY USING BLOCKS UNDER THE HOIST FRAME.
3. READ AND UNDERSTAND THESE INSTRUCTIONS SO PROPER INSTALLATION OF THE CABLE CAN BE ACCOMPLISHED.

INSTALLATION INSTRUCTIONS

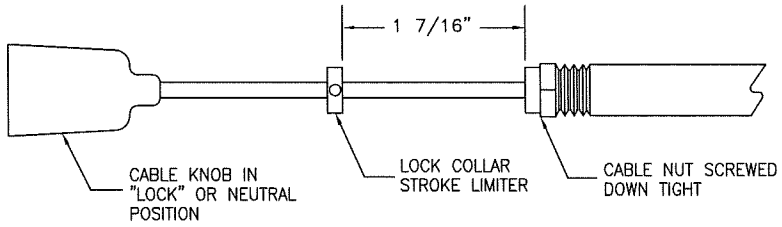
1. MOUNT THE CONTROL CABLE TO THE VEHICLE WITH SPECIAL ATTENTION THAT NO BENDS ARE SHARPER THAN A 10" RADIUS.
2. ROUTE THE CONTROL CABLE CASING AWAY FROM ALL HAZARDS WHICH MAY DAMAGE THE CABLE. KEEP THE CONTROL CABLE AWAY FROM CATALYTIC CONVERTERS, TAIL PIPES, EXHAUST PIPES, ETC. MAKE CERTAIN THE CONTROL CABLE IS NOT CRUSHED OR ROUTED WHERE MOVING PARTS MAY CRUSH IT.
3. A STROKE LIMITER(LOCK COLLAR) HAS BEEN INSTALLED ON THE CABLE HEAD. THIS LIMITER IS NECESSARY TO PREVENT OVER TRAVEL OF THE CABLE WHEN THE CABLE IS PUSHED IN, CAUSING THE CABLE WIRE TO KINK.
4. INSTALL CABLE TO THE CONTROL VALVE AND TIGHTEN THE CLAMPS PER DRAWING INSTRUCTIONS BELOW. SEE INSTRUCTION SHEET INCLUDED INSIDE THE CABLE CLAMP KIT FOR FURTHER DETAILS.

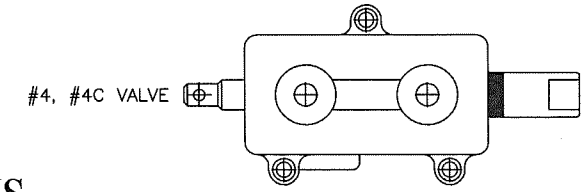
NOTE: WHEN INSTALLING CABLE ON AN EXISTING UNIT WITH HYDRAULIC LINES ALREADY CONNECTED, THE TRUCK BOX MUST BE PROPERLY BLOCKED TO PREVENT THE TRUCK BOX FROM FALLING. MOVING THE LEVER ON THE VALVE CAN CAUSE THE TRUCK BOX TO FALL IN ONE SECOND OR LESS. DEATH OR SERIOUS INJURY WILL RESULT IF THE LEVER IS MOVED WHILE SOMEONE IS UNDER THE TRUCK BOX.



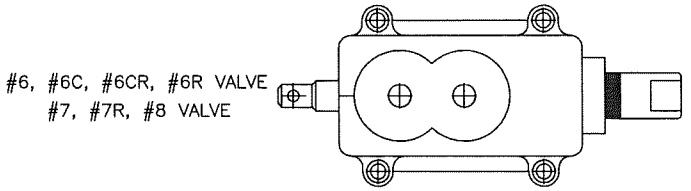
FORM# 125–932

TO PREVENT CABLE WIRE FROM BEING OVER COMPRESSED IN CABLE PUSHED IN POSITION.

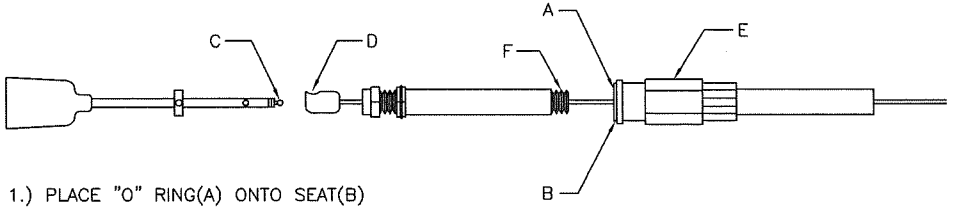




WILLIAMS



ASSEMBLY INSTRUCTIONS FOR CABLE AND CABLE HEAD

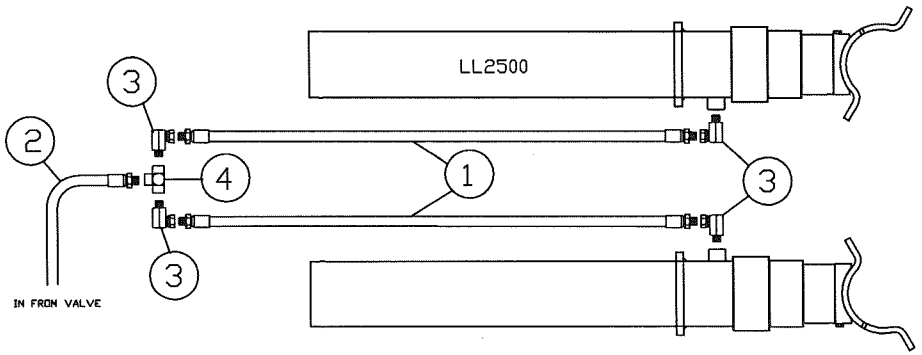


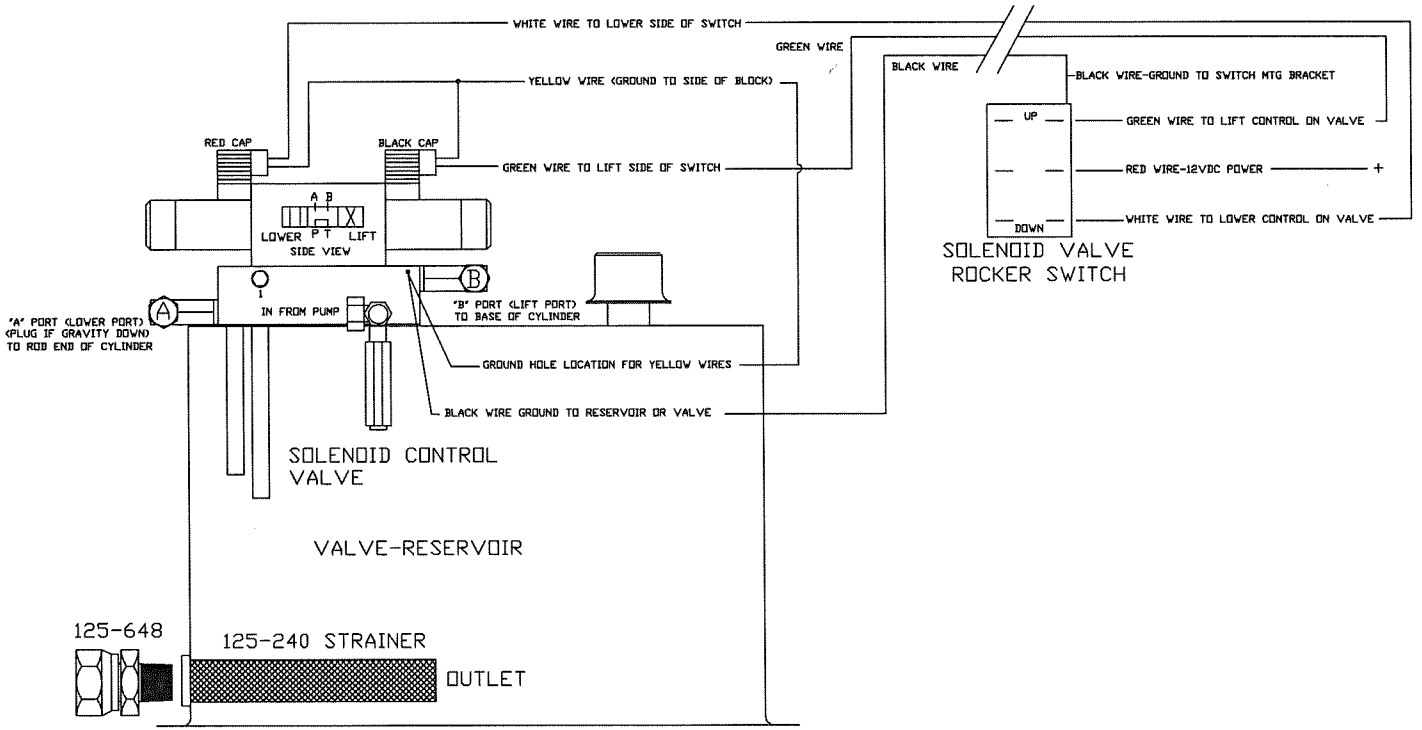
1.) PLACE "O" RING(A) ONTO SEAT(B)
2.) SLIDE BALL(C) INTO SLOT(D)
3.) PUSH NUT(E) ONTO THREADS(F) AND TIGHTEN SECURELY.

FORM# 125–932

ELECTRIC SHIFT HOIST CONTROL OPTION - WILLIAMS VALVE ONLY

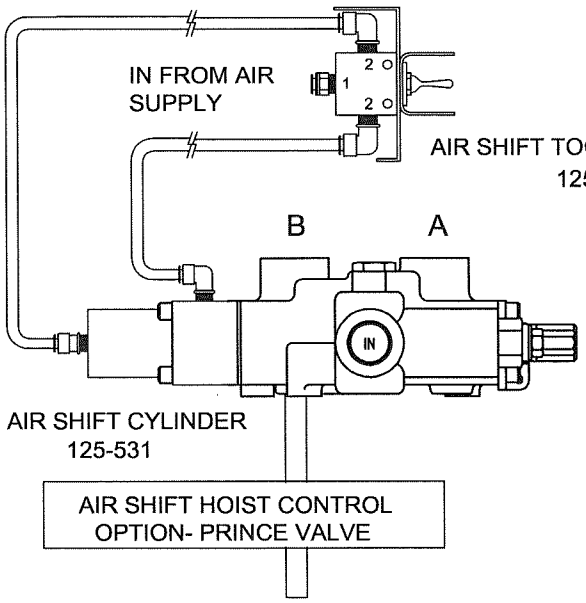
1	125-247 40" x 1/2" HP HOSE
2	130-333 84" X 1/2" HP HOSE
3	125-141 90 DEG. MALE-FEMALE PIPE SWIVEL 1/2"
4	125-139 FEMALE 1/2" PIPE TEE.

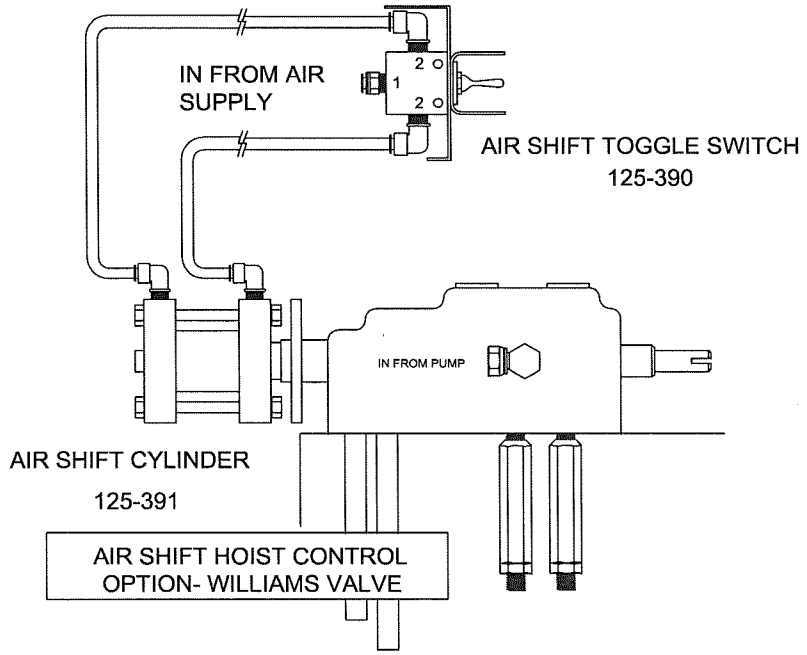




SOLENOID OPERATED HOIST CONTROL OPTION

AIR SHIFT HOIST CONTROL OPTION





SAFETY INSTRUCTIONS

1. **Always insure the Hoist Control in the cab works freely and is in good operating order. The controls must be clearly marked for function and operation.**

2. **Always check for overhead wires, obstructions, and people before raising the hoist.**

3. **Dump with the truck at rest, on level ground and with a balanced load. The hoist design gives added stability in normal dumping operations. The hoist is not designed to operate in extreme conditions.**

4. **The operator must stay in the cab, at the controls during the duration of the dumping cycle. If there are bystanders around the dumping area, the operator must have an outside observer present to insure that all bystanders are a safe distance away.**

5. **Never permit anyone under a loaded dump bed.**

6. **Bring a loaded dump body down slowly by easing the control knob inward. On double acting cylinders, make sure the pump is running when doing so or the reservoir may over flow, resulting in the loss of fluid and allowing air into the system.**

7. **Always use the safety prop to secure a raised dump bed before any maintenance or inspection is performed under the empty dump body as specified by the safety decals provided by Tafco Equipment Co. The safety prop is not designed or intended to support a loaded body. If repairs or maintenance is needed, you must unload the body before attempting any repairs.**

8. **Observe all PTO safety instructions provided by the PTO manufacturer as well as those listed in the hoist information.**

   A. **Do not go under the vehicle when the engine is running.**
   B. **Do not work on PTO or shaft when the engine is running.**
   C. **Do not engage or disengage the PTO or driven equipment by hand from under the vehicle when the engine is running.**

OPERATION INSTRUCTIONS

OPERATION WARNINGS !

A. **Do not operate hoist while truck is moving.**
B. **Make sure all loads are level in the truck bed.**
C. **Do not dump loads while on uneven or unstable ground.**
D. **Never operate PTO pump over the rated speed. (check with pump manufacturer for maximum speeds).**
E. **Disengage PTO while driving truck to prevent damage.**
F. **Do not increase pump pressure. Serious damage could occur if increased above the rated setting.**
G. **If the hoist is a power down hoist (double acting cylinders) do not continue to send power to lower the hoist after the body is fully lowered. Damage to the truck and the hoist could occur.**
H. **Never allow the hoist to bounce or jerk when stopping the hoist movement.**

1. **TO RAISE OR LOWER A CONTROL CABLE HOIST.**
   A. **Set the emergency / parking brake.**
   B. **Put the truck in neutral. Check area around truck for clearance.**
   C. **Push the clutch in. Engage the PTO while the truck is at idle. Release the clutch.**
   D. **To raise the hoist- depress the RED neutral release button on the end of the control knob. Pull control knob out rapidly.**
   E. **To hold the hoist in any position- move control knob to center (neutral) position.**
   F. **Stopping the hoist just before the cylinder(s) are fully extended will help increase the life of the hoist and pump.**
   G. **To lower the hoist- depress the RED neutral release button. Push the pump control knob all the way in and hold the knob in until the box is down.**
   H. **To stop the hoist from lowering, slowly return the control to the center position.**
   I. **Disengage the PTO while driving truck.**
   J. **Always make sure that the cable is centered when the box is fully lowered.**
   K. **Never allow the hoist to bounce or jerk when stopping hoist movement. This could cause serious damage to the truck frame and the hoist. This could also void the warranty due to misuse of the hoist.**

SAFETY PROP OPERATION

WARNING!!

USE THE SAFETY PROP ONLY WITH AN EMPTY BOX. THE SAFETY PROP IS NOT DESIGNED TO SUPPORT A LOADED BOX. IF IT IS NECESSARY TO WORK ON A BOX OR HOIST, THE BOX MUST BE UNLOADED FIRST.

A. **Slowly raise the truck body until the base of the Safety Prop will clear the truck frame.**
B. **The Safety Prop should be unlatched from the prop keeper. Once unlatched, The Safety Prop will hang down.**
C. **Slowly lower the body back down until the Safety Prop base rests firmly on the truck frame. DO NOT POWER HOIST DOWN !**
D. **To release the Safety Prop, raise the body until the base of the prop clears the truck frame. Swing the Safety Prop up and latch into the prop keeper. The body can then be lowered completely down to the truck frame.**

MAINTENANCE INSTRUCTIONS

1. **Periodic maintenance and inspection will increase hoist life. Check all bolts, cotter pins, hydraulic lines, hydraulic reservoir levels, scissor assembly, universal joints, and drive line components every 50 cycles or weekly, whichever comes first.**

2. **Lubricate all grease fittings before using the hoist the first time and every 50 hoist cycles there after. Greasing the hoist will prevent hoist damage and help to maintain lifting capacity. Severe conditions may require more frequent servicing.**
   The grease fittings on the LL3000 hoist are in the following locations:
   - **A. UPPER CROSS TUBE.....2 FITTINGS**
   - **B. LOWER CROSS TUBE.....2 FITTINGS**
   - **C. CENTER HINGE.....3 FITTINGS**
   - **D. UPPER CYLINDER PIVOT.....1 FITTING PER CYL.**
   - **E. LOWER CYLINDER PIVOT.....1 FITTING PER CYL.**
   - **F. TAIL HINGE.....2 FITTINGS**

   IF EQUIPED WITH A RESERVOIR MOUNTED PTO PUMP, THERE WILL BE 3 FITTINGS ON THE PTO DRIVE SHAFT. ONE ON THE SLIP YOKE AND 1 ON EACH UNIVERSAL JOINT.

3. **Under normal use and working conditions, the hydraulic oil should be changed annually. The breather cap should be cleaned regularly. With heavy use or very dusty conditions, the hydraulic oil should be changed more often. KEEP THE OIL CLEAN. USE CLEAN CONTAINERS, FUNNELS AND AVOID ADDING IN DUSTY CONDITIONS!**

   Use a quality hydraulic fluid SAE 10W or equivalent in normal conditions. Use Type A (Dextron) automatic transmission fluid in cold weather conditions.

4. **Field repair of hydraulic components should not be attempted. This would include hydraulic cylinders, valves and pumps. These should be sent to a Tafco dealer/ distributor. Seals and o-rings on hydraulic cylinders should only be installed by a qualified hydraulic specialist. New parts can be obtained from your Tafco dealer/ distributor. Insure that the complete hydraulic system is flushed after any component failure.**

TROUBLESHOOTING GUIDE

1. THE HOIST WILL NOT RAISE SMOOTHLY:
   A: Air in the cylinder. (Refer to installation instructions-pages 5-7).
   B: Lubricate hoist and tail hinge.
   C: Check cylinder top cap orientation. (Refer to page 10).

2. THE HOIST RAISES VERY SLOW:
   A: The oil is too thick for cold weather.
   B: A hydraulic line is partially blocked or pinched.
   C: The filter screen is dirty.
   D: The pump is worn or defective.
   E: The control valve is not moving the full stroke.

3. FAILURE TO RAISE THE HOIST FULLY:
   A: Check the hydraulic oil level in the reservoir.
   B: Air in the cylinder. (Refer to installation instructions-pages 5-7).
   C: Lubricate the hoist components.

4. FAILURE TO RAISE LOAD:
   A: Release bed tie downs.
   B: Hoist capacity has been exceeded.
   C: Check for blocked or pinched hydraulic line.
   D: Control valve not moving the full stroke- check cable adjustment.
   E: The pump intake is blocked from dirty oil or the oil is too thick from cold weather.
   F: Check pump for proper operation.

5. FAILURE TO LOWER HOIST:
   A: Control valve is not moving the full stroke. Check cable adjustment.
   B: Check for blocked or pinched lines.

6. OIL SPILLAGE OUT OF RESERVOIR:
   A: Too much oil in reservoir.
   B: Too thick of oil causing oil to foam or air in the hydraulic lines. Cycle the hoist several times to bleed system.
   C: Pump not engaged during lowering.
   D: The body weight is too great, causing the hoist to lower too rapidly. A flow control valve must be installed in this situation.

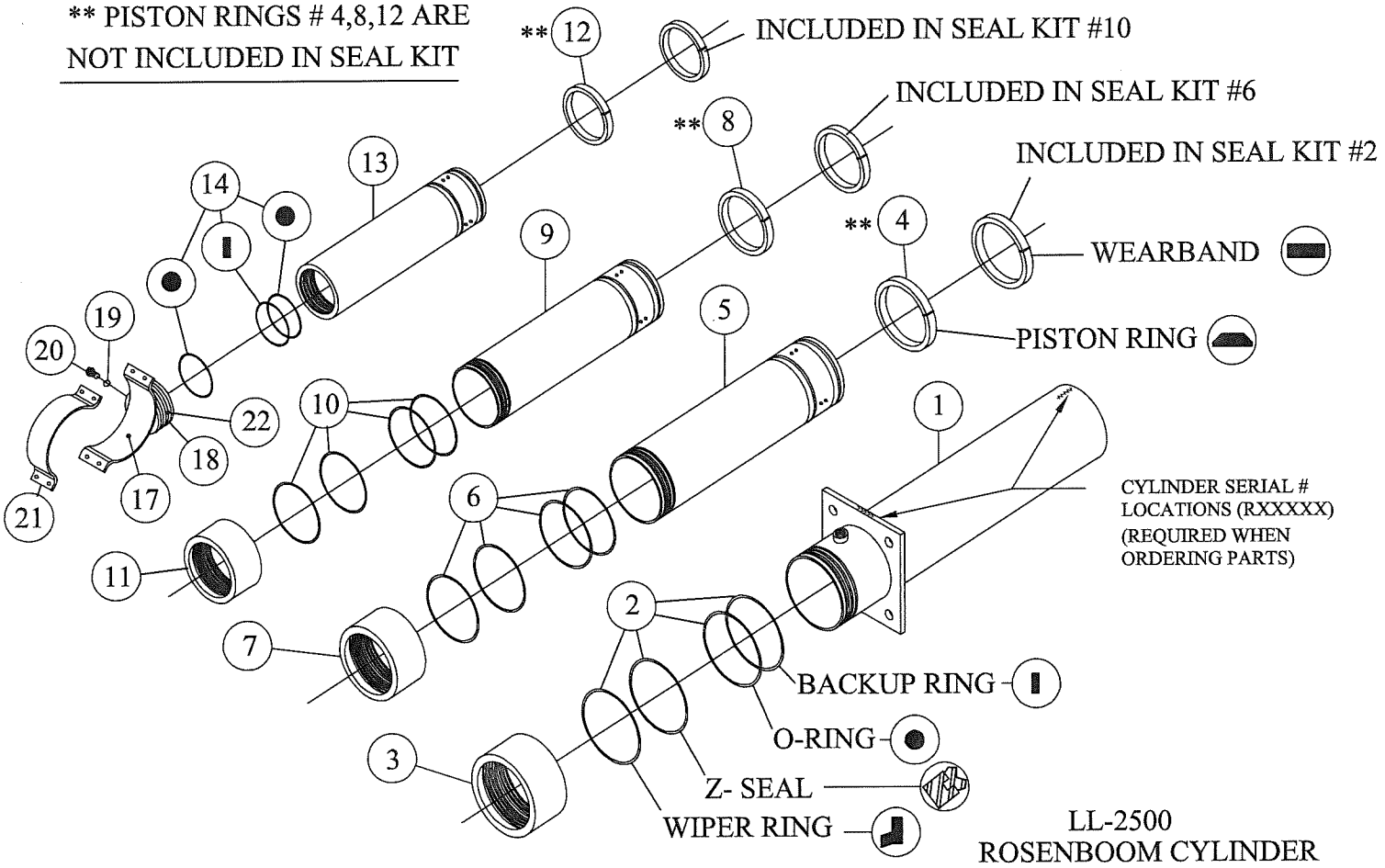
7. OIL LEAKAGE:
   A: Make sure all fittings are properly sealed and tight.
   B: Check all hoses. Use only fittings and hoses supplied by Tafco.
   C. Gland nut leaking , may require cylinder repair. Contact your local Tafco dealer.

CYLINDER REWORK INSTRUCTIONS

1. SPECIAL EQUIPMENT REQUIRED:
   - A. Bronze coated or brass vise inserts.
   - B. Hydraulic pressure available.
   - C. Gland nut and piston spanner wrenches.

2. GENERAL:
   - A. Whenever clamping on a surface that moves past an o-ring or seal, extra care must be taken to prevent nicks, scratches, and deformation.
   - B. All parts that have scores or nicks on moving surfaces should be replaced with new parts.
   - C. Keep the cylinder parts very clean when reassembling.

3. DISASSEMBLY:
   - A. Extend cylinder stages either manually or with hydraulic pressure. WARNING: NEVER USE AIR PRESSURE TO EXTEND STAGES OR CYLINDERS.
   - B. Clamp on the cylinder body with a vise and unscrew the gland nut on the cylinder body.
   - C. Remove the gland nut with the cylinder rod or tube.
   - D. For telescopic or multiple stage cylinders, continue loosening gland nuts and removing smaller stages one at a time. WARNING: DO NOT USE PIPE WRENCHES OR OTHER TOOLS THAT WILL DAMAGE OR SCRATCH CYLINDER RODS AND TUBES.
   - E. Remove the gland nut(s) from the cylinder rod or tubes.
   - F. Remove all o-rings, backup rings, stop rings, and wear rings. HINT: Keeping all parts to a gland nut, piston, or cylinder tube together will help to identify parts. This will make the re-assembly of the cylinder easier.
   - G. Clean all the metal parts and dry them thoroughly.
   - H. Install all o-rings, backup rings, stop rings, and wear rings using clean grease to hold parts in place if necessary. Grease all o-rings before installing them. Be sure to have all parts fully seated in their respective grooves before attempting final assembly.
   - I. Oil all moving parts: piston, cylinder rod, cylinder tubes, etc.
   - J. Assemble all gland nuts on their respective cylinder tubes.
   - K. Reassemble cylinder in the reverse order that it was disassembled. Tighten and Loctite all gland nuts as you go. When reassembling the cylinder top mount to the cylinder rod, use Loctite 222. CAUTION: MAKE SURE NOT TO DAMAGE O-RINGS, SEALS, ETC. WHEN ASSEMBLING CYLINDER.
   - L. The cylinder is now ready to install in the hoist assembly.



ITEM	PART NUMBER	DESCRIPTION	NO. REQ'D.
1	130-203	Cylinder Body Assembly (015JB0088)	1
2	130-145	Seal Kit (093JA0009)	1
3	126-370	Gland Nut (060JW0011)	1
4	126-344	Piston ring (first stage) (050JZ0007)	1
5	126-347	Cylinder Tube (first moving stage) (071HB0004)	1
6	130-144	Seal Kit (093HA0005)	1
7	126-371	Gland Nut (060HV0013)	1
8	126-345	Piston ring (second stage) (050HZ0010)	1
9	126-348	Cylinder Tube (second moving stage) (071GB0002)	1
10	130-143	Seal Kit (093GA0004)	1
11	126-372	Gland Nut (060GT0017)	1
12	126-346	Piston ring (third stage) (050GZ0015)	1
13	126-349	Cylinder Tube (third moving stage) (071FB0003)	1
14	126-154	Stem Seal Kit	1
15			1
16			1
17	125-286	Grease Zerk	1
18	130-204	Top Mount & Stem Assembly (013ZZ0089)	1
19	126-088	Bonded Seal (108CE0002)	1
20	126-373	Bleeder Screw (016ZZ0863)	1
21	110-740	Cylinder Top Cap	1
22	126-343	Locking insert (174CZ0002)	1
Not shown	130-146	Complete seal kit (093JC0001)	2 per hoist
Not shown	130-027	LL-2500 Cylinder - Complete (less top cap)	2 per hoist

NOTES:

HOIST WARRANTY

Tafco Equipment Co. warrants each new SCOTT Hydraulic Hoist frame to be free from defects in material and workmanship for a period of three years from the date of installation. This warranty does not extend to any hoist unit, or part thereof, which has been subjected to misuse, neglect, accident, improper installation, unequal-loading or loading over and above the recommended weight range. This warranty does not extend to such hoist units or parts which have been repaired or altered outside of our factory or to which any accessories other than SCOTT have been affixed, or to any hoist not installed by an authorized SCOTT dealer or distributor. Tafco's obligation under this warranty is limited to replacement or repair of any part or parts thereof, which within the warranty period shall be returned to our factory, Blue Earth, Minnesota, transportation charges prepaid, for inspection. If such inspection reveals that a defect in the material or manufacturing actually exists, then TAFCO, at its' option, may repair or replace the defective part. All purchase assemblies (such as the hydraulic pump) will be warrantied as per original manufacturer's policy. Pumps and cylinders carry a one year warranty as authorized by the manufacturer.

This warranty will not take effect until the application and registration form, which is provided at the time of the purchase and installation, is completed by the purchaser and returned to TAFCO. TAFCO does not assign to any of its' dealers, distributors or agents the right of warranty on its' behalf. If said dealer or distributor in performing a service or repair, returns to our factory on behalf of the purchaser such parts or hoist, the existence, validity or applicability of this warranty regarding such part or hoist remains solely the prerogative of TAFCO and not its' aforementioned agents.

All warranties must have a transaction number and approval prior to work being performed. TAFCO's policy is that a profit should not be made on warranty work, since this is part of a distributor or dealer function. Repair parts will be provided or replaced at TAFCO's discretion.

TAFCO
EQUIPMENT COMPANY
Highway 16 West- P.O. Box 339
Blue Earth, Mn. 56013
Phone (507) 526-3247

WARRANTY VALIDATION CERTIFICATE

No. _____

TO VALIDATE YOUR WARRANTY:
Complete this form and return it to the factory.

Note: Failure to complete and return this form as prescribed invalidates any warranty obligation by Tafco Equipment Co.

_____
Your name or business name

_____
Dealers name

_____
Your address

_____
Dealer's address

Hoist model _____ Serial number _____
Date installed _____ Installed by _____

I have read and fully understand the provisions and limitations of the warranty.

_____ Date _____
Customer's signature