

PARTS & INSTALLATION MANUAL

SL-112



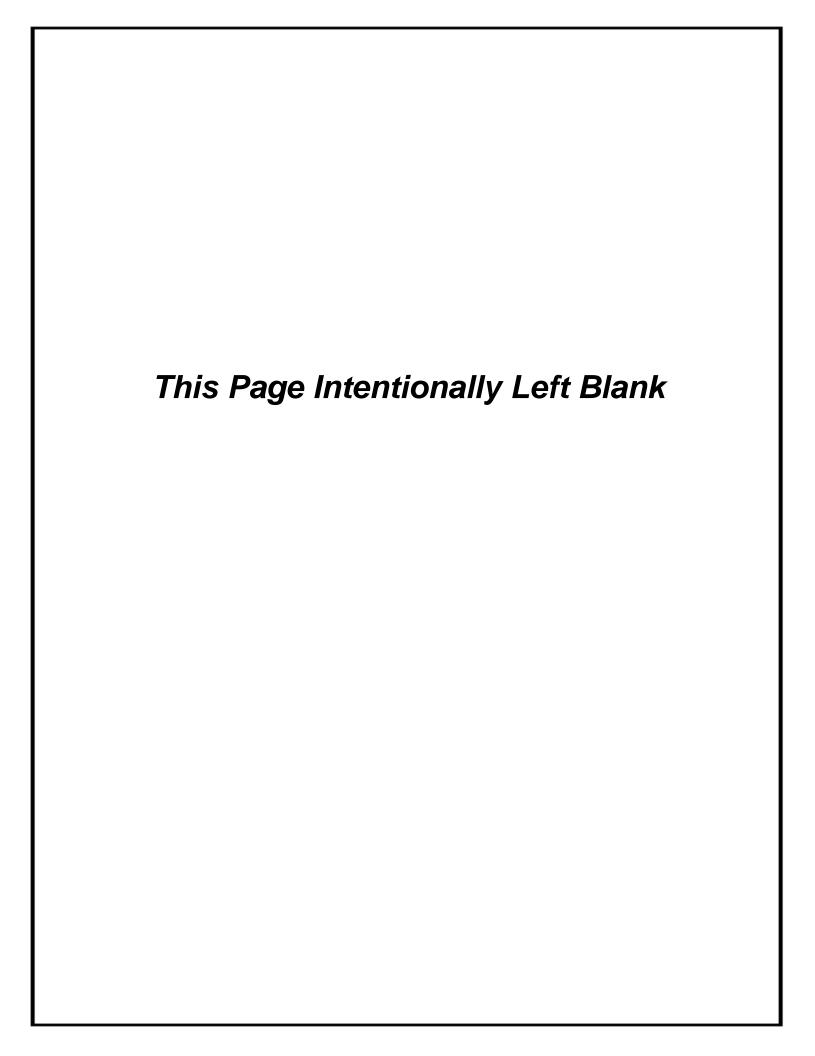
HOIST SERIAL NUMBER



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TO THE CUSTOMER:

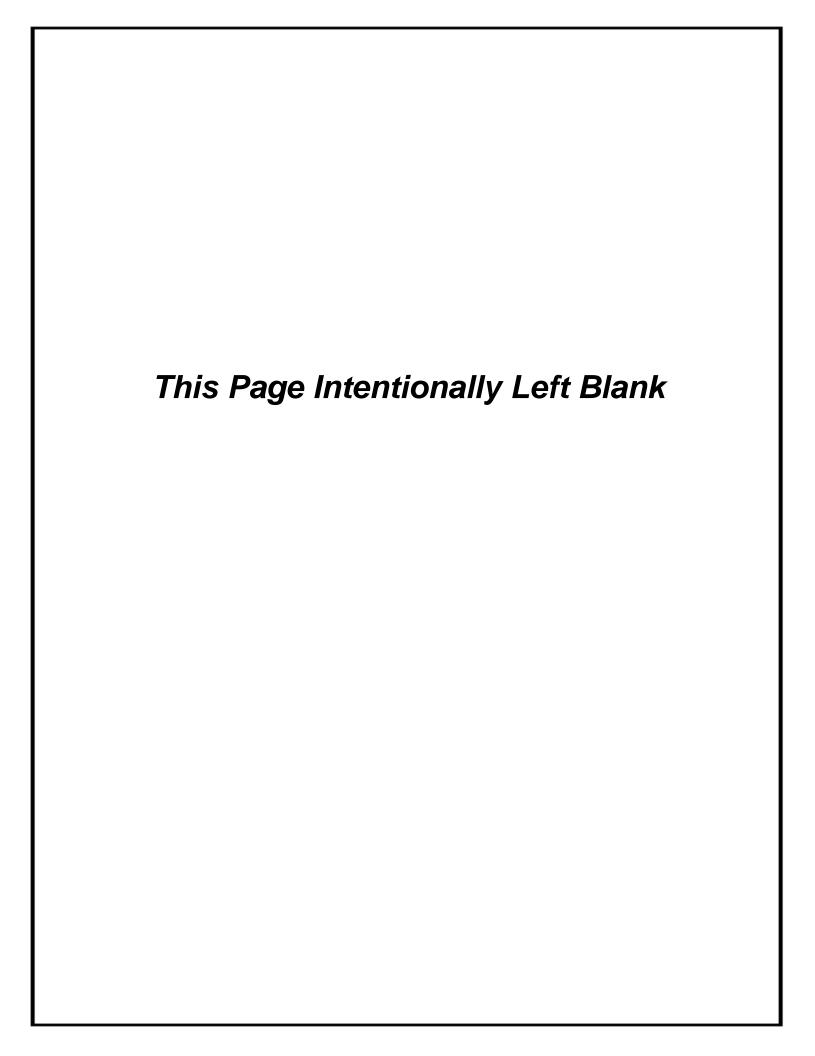
THIS MANUAL CONTAINS INSTALLATION INSTRUCTIONS TO THE TRUCK CHASSIS. ALL INSTRUCTIONS ARE RECOMMENDED PROCEDURES ONLY. THIS MANUAL ALSO PROVIDES BREAKDOWNS OF EACH SUB-ASSEMBLY APART OF THE HOIST THAT LISTS PART NUMBERS AND DESCRIPTIONS SHOULD ANYTHING NEED TO BE REPLACED ON THE HOIST. EACH SECTION IS CLEARLY IDENTIFIED SO YOU CAN EASILY FIND THE INFORMATION THAT YOU NEED. READ THE TABLE OF CONTENTS TO LEARN WHERE EACH SECTION IS LOCATED.

Throughout this manual you will come across "Dangers," "Warnings," or "Cautions" which will be carried out in bold type and preceded by the symbol as indicated to the left. Be certain to carefully read the message that follows to avoid the possibility of personal injury or machine damage.

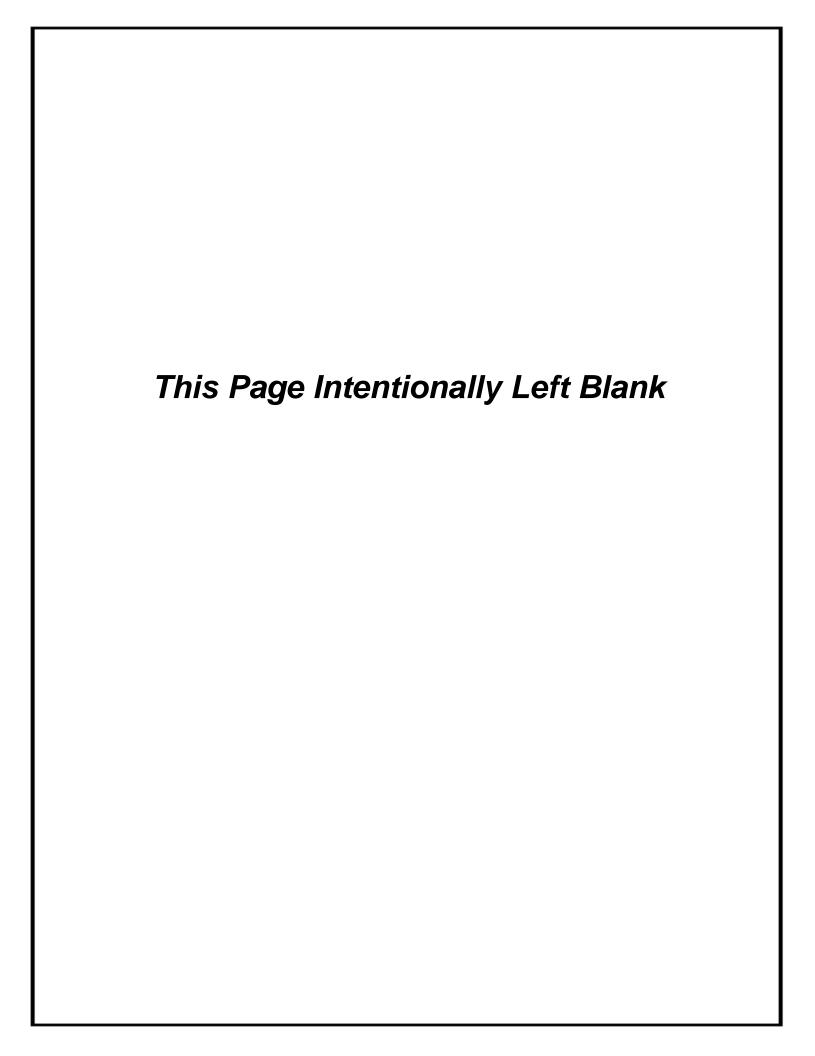
Record your SwapLoader Hoist serial number in the appropriate space provided on the title page. Your SwapLoader dealer needs this information to give prompt, efficient service when ordering parts. It pays to rely on an authorized SwapLoader Distributor for your service needs. For the location of the Distributor nearest you, contact SwapLoader.

Also, included with your hoist, is a Technical Guide. This guide provides safety suggestions, technical information, operation instructions, maintenance requirements, troubleshooting, and accessory installation instructions. Please refer to the Technical Guide for any questions you may have pertained to the above.

NOTE: It is SwapLoader's policy to constantly strive to improve SwapLoader products. The information, specifications, and illustrations in this publication are based on the information in effect at the time of approval for printing and publishing. SwapLoader therefore reserves the right to make changes in design and improvements whenever it is believed the efficiency of the unit will be improved without incurring any obligations to incorporate such improvements in any unit which has been shipped or is in service. It is recommended that users contact an authorized SwapLoader Distributor for the latest revisions.



INSTALLATION





INITIAL INSPECTION

When the hoist is installed and ready for delivery, it is your responsibility to fill out and submit the Product Registration Form. Visit Truck-Mounted Product Registration - Swaploader to complete this form.

When the SwapLoader hoist is received from the factory, you should inspect the hoist for damage, which may have occurred in shipment. If damage has occurred, you should contact the shipper immediately. Be sure to note any damage or missing items on bill of Lading.

When you receive your SwapLoader hoist, it is your responsibility to make sure you have received all the parts and pieces that were ordered, within 30 days of the invoice date of the hoist. Lay out all the options, loose parts and accessories on a table and compare the items received vs the Packing List and the Loose Parts Box List(s) shipped with the hoist order.

If you have any problems, shortages, or questions, please contact SwapLoader U.S.A., Ltd. immediately.

GENERAL INSTALLATION PROCEDURE

The installation of the SwapLoader on a truck chassis will generally follow these steps:

- 1. Install hoist assembly onto truck chassis.
- 2. Mount the hydraulic control valve or EHV system to the hoist and install the hydraulic plumbing from the control valve to the hydraulic cylinders. Then install the control levers in the cab and route the control cables to the hydraulic control value assembly.
- 3. Install the hydraulic tank, hydraulic filter, and hydraulic plumbing between the hydraulic tank and the control valve assembly.
- 4. Select and install the P.T.O. on the truck transmission. (Note: This can be done prior to hoist installation on the truck chassis.)
- 5. Install the hydraulic pump and the plumbing from the pump to the hydraulic tank and control valve assembly.
- 6. Fill the hydraulic tank with oil, bleed the air from the pump suction line, and start up the unit.

Although SwapLoader attempts to include the mounts and attaching fasteners with each hoist unit, your installation may require some additional mounts or modifications. If you have problems with your installation, please contact SwapLoader at 1-888-767-8000, as we may be aware of another customer who has installed a SwapLoader on a similar truck chassis.

HOIST INSTALLATION TO TRUCK CHASSIS

 Place the SL-112 hoist assembly on the truck chassis. The truck chassis mounting surface should be flat without any steps or protrusions. If necessary, shim bars need to be added to ensure a flat surface on which to support hoist. It is advised to clamp the main frame of the hoist to the truck chassis prior to installing the mount brackets.

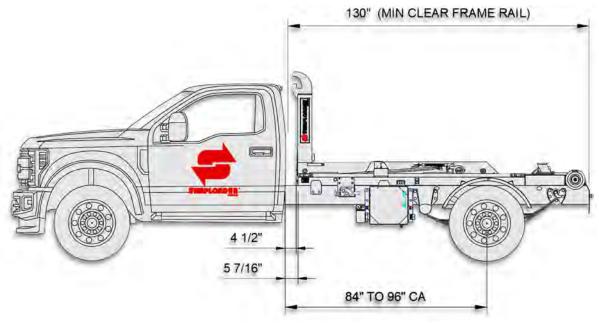


Figure A

The clear frame dimension indicated in *Fig. A* allows for the overall length of the hoist plus 5 inches for cab clearance and rear light bar mounting. Extra frame length may be needed to allow for mounting additional accessories (e.g., Cab Guard, Tarper, Light Kit, Stabilizer, etc.). For example, when mounting a light kit on a truck with a long CA, check that the hoist and the light kit are positioned far enough back to eliminate any interference between the fender and the light kit. You should also consider the final weight distribution regarding the bridge code when positioning the hoist.

NOTE:

THE ABOVE SPECIFICATIONS ARE A MINIMUM REQUIREMENT. IT IS THE RESPONSIBILITY OF THE OWNER/
OPERATOR TO ENSURE THE COMPLETED CHASSIS MEETS OR EXCEEDS ALL FEDERAL, STATE, AND LOCAL
REGULATIONS. ALSO, THE HOIST SHOULD NOT BE USED TO LIFT AND HAUL ANY LOAD THAT EXCEEDS THE LOAD
RATING OF ANY OF THE INDIVIDUAL COMPONENTS OF THE COMPLETED CHASSIS (TIRES, AXLES, SUSPENSION,
ETC.)

2. The SL-112 hoist uses one type of bracket, 25H89. Locate the mount brackets on the side of the hoist as indicated in *Fig. B*. These dimensions are flexible because of possible

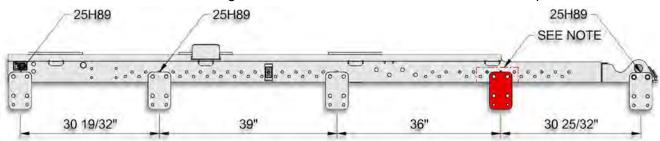


Figure B

interference with chassis components. **Note: Be sure to secure a bracket to one of the hole locations indicated in Fig. B.** Also allow space for mounting the control valve assembly and the hydraulic tank. You should consult the truck chassis supplier for any limitations regarding drilling mount holes in the truck chassis frame rails. Typically, the holes must be at least 2 3/4" from the top of the truck chassis rails (reference *Fig. C*). The included brackets will have more flexibility due to the additional row of holes in the Main Frame and allows for drilling into the truck chassis frame rails at 2 3/4", 3 3/4" or 4 3/4" (bolts are only required on two of the four lower mount bracket holes). Once the locations of the mount brackets have been determined, use the mount brackets as a template for marking the mounting holes in the truck chassis frame rails. Drill the 17/32" diameter holes required and

attach the brackets to the truck chassis with the 1/2" diameter bolts, washers, and locking hex nuts provided. Torque to 110 ft.lb.

3. Bolt the mount brackets to the hoist main frame as indicated in *Fig. C.* You may need to modify the mount brackets or add shim plates to allow for variances in the width of the truck chassis as well as to allow for top rivets, stepped channels, etc.

NOTE:

PRIOR TO ANY WELDING, CONSULT THE TRUCK MANUFACTURERFOR ANY SPECIAL PRECAUTIONS THAT MAY NEED TO BE TAKEN. TYPICALLY, THE BATTERIES MUST BE DISCONNECTED AND THE **GROUND LEAD FROM THE WELDER** SHOULD BE CONNECTED AS **CLOSE AS POSSIBLE TO THE PART BEING WELDED TO AVOID THE** POSSIBILITY OF ARCHING ACROSS BEARINGS, GEARS, ETC. THE HOIST MAIN FRAME IS MADE FROM HIGH STRENGTH LOW **ALLOY STEEL. USE AN** APPROPRIATE WELDING PROCESS.

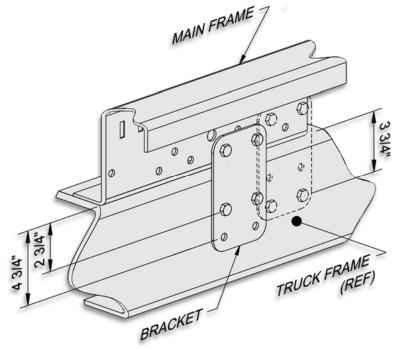
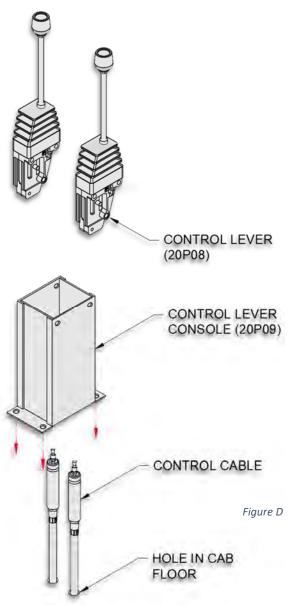


Figure C

CONTROLS INSTALLATION – MANUAL

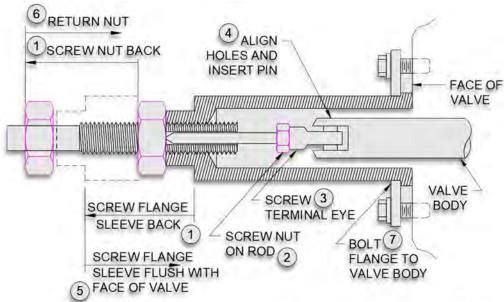
- 1. Attach the valve mount bracket (*Pt. No.* 10H51) to the main frame as indicated on *Pg.* 3-8 with the fasteners provided (see *Pg.* 3-8).
- 2. Mount the hydraulic control valve assembly (*Pt. No. 21P32*) to the valve mount bracket as shown on *Pg. 3-8* with the fasteners provided.
- 3. Install the hydraulic adapters, connect the hydraulic tubing & hoses (*Pt. Nos. 14P58, & 15P11*) to the control valve assembly as indicated on *Pg. 3-10.*
- 4. Determine the best location in the cab for the control levers (*Pt. No. 20P08*). The location should be such that the controls can be easily reached while operating the truck. A control lever console (*Pt. No. 20P09*) is provided to facilitate the mounting of the control levers (see *Pg. 3-12*).
- 5. Assemble and install the control lever console (see Fig. D). Typically, the console is fastened to the floor of the cab, and the control cables are routed through additional holes drilled in the floor. Your installation may require that additional brackets be fabricated, or other modifications made.
- 6. Attach the control cables to the control levers and route the cable through the holes in the cab. Install the control levers in the console. Levers should be installed such that when the levers are pushed forward the control cable is extended. See *Pg. 3-12* (Manual Control Assembly) for control lever orientation.
- 7. Route the cables to the control valve location and attach them to the control valve with the

bonnet connection kits provided (*Pt. No. 20P10*). See the following instruction sheet for installation procedures. The control cables supplied are 84 inches long. Your mounting may require different length control cables, which can be purchased locally or through SwapLoader. Take proper care when routing the control cables, as a good cable path is essential for a proper operating system. Keep bends in the cable path to a minimum and be as generous as possible. Under no circumstances should any bend be tighter than an 8" radius. Protect the cable from heat above 225 degrees F. and avoid hot areas such as exhaust pipes, etc. Protect the cable from physical damages such as pinching or crushing, and do not use cable supports, which may crush or deform the cable. Allow room for flexing where the cable is attached to moving parts of the equipment, so that the cable is neither kinked nor stretched.



INSTALLATION PROCEDURE FOR A HYDRAULIC CONTROL CABLE TO HYDRAULIC VALVE WITH BONNET CONNECTION KIT

- 1. Turn .750-16 UNF jam nut entire length of threaded hub back over the cable. Place Flange onto Sleeve (large end first) and flange onto sleeve and turn flange adaptor / flange / sleeve assembly entire length of threaded hub back over the cable.
- 2. Turn .250-28 UNF jam nut onto cable threaded rod until it bottoms.
- 3. Place clevis of threaded rod and bottom against jam nut. Turn other .250-28 UNF jam nut onto threaded rod until it bottoms against clevis. Align clevis so it will mate with spool terminal eye and secure jam nut against clevis.
- 4. Slide the clevis into the terminal eye on spool and align the holes. Insert clevis pin through yoke and terminal eye holes and secure clevis pin with retaining ring.
- 5. Now, with the cable attached to the valve and control head, turn the flange adapter / flange / sleeve assembly back onto the threaded hub until it is flush with the valve face. When turning on the flange adapter / flange / sleeve assembly, make sure that the control head remains in the neutral position.
- 6. Tighten the .750-16 UNF jam nut against the sleeve and lock in position.
- 7. Bring flange into position on bolt assembly to valve housing.



CABLE CONTROL INSTALLATION w/ U-LOCK (OPTION)

The Universal Body Lock (U-Lock) can be installed with a standard 3-section valve and operated from the cab (see *Pg. 4-4* for routing). A separate indicator light and harness will be provided to be installed in the truck cab. This will notify the operator when the U-Lock has been engaged or disengaged.

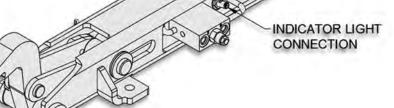
1. Review all directions and diagrams provided before starting installation.

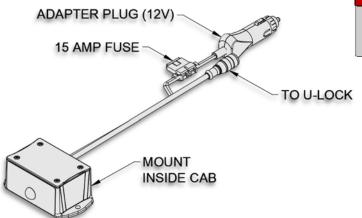
2. Mount valve to the hoist's Main Frame and attach all hoses, hose clamp assemblies and fittings as shown on *Pg. 4-7*.

Mount Indicator Light Box in the truck cab where it will be clearly visible to the operator.

 Route Indicator Light and Harness (Pt. No. 40P60) from the truck cab to the U-Lock cylinder.

Hardwire or plug in provided 12V adapter for indicator light.





NOTE:

AS A SAFETY MEASURE, THE JIB CYLINDER IS DISENGAGED WHENEVER THE U-LOCK IS ENGAGED.

EHV INSTALLATION (OPTION)

1. Review all directions and diagrams provided before starting the Electric over ${f H}{f y}$ draulic ${f V}{f a}$ lve

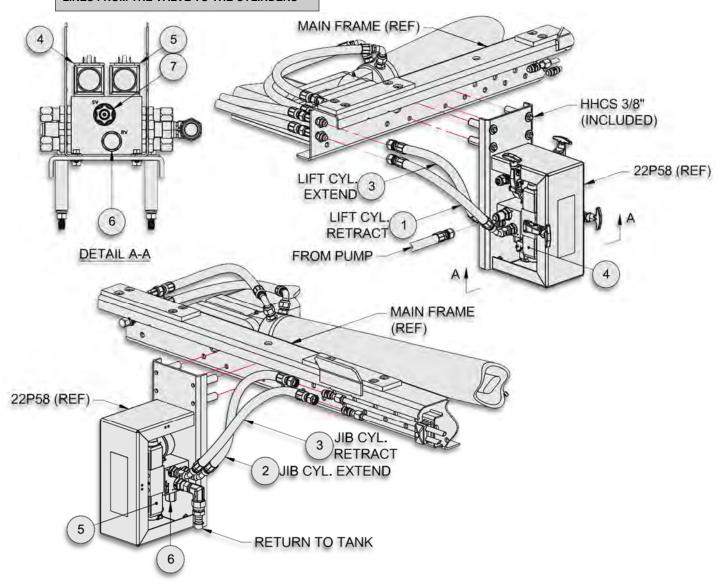
Installation.

 Mount the 22P58 EHV to the hoist's Main Frame and attach all hoses, hose clamp assemblies and fittings as shown on Pg. 4-10 (also see Illustrations).

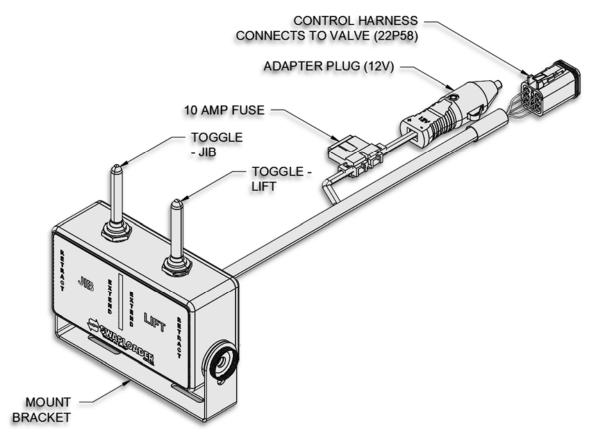
| Electri | Electric Over Hyd. Valve - SERVICE PARTS SL-112 | | | | |
|---------|---|-----|--------------------------------|--|--|
| ITEM | PART # | QTY | DESCRIPTION | | |
| 1 | 12P53 | 1 | Hose Assy 21 08-08FJ/08FJ45 | | |
| 2 | 12P54 | 1 | Hose Assy 17 08-08FJ/08FJ45 | | |
| 3 | 12P59 | 2 | Hose Assy 20 08-08FJ/08FJ45 | | |
| 4 | 22P82 | 1 | Solenoid Operated Valve, Mtr | | |
| 5 | 22P83 | 1 | Solenoid Operated Valve, Spool | | |
| 6 | 22P84 | 1 | Relief Valve Cartridge (3250) | | |
| 7 | 22P85 | 1 | Dump Valve | | |

NOTE:

THE FIGURES BELOW DO NOT NECESSARILY DEPICT YOUR HOIST AND ARE ONLY MEANT TO ILLUSTRATE ROUTING OF THE HYDRAULIC LINES FROM THE VALVE TO THE CYLINDERS



- 3. Route control harness from valve into the truck cab. Determine the best location in the cab for the control box location and install with mounting screws (included). The location should be such that the controls can be easily reached while operating the truck.
- 4. Hard wire or plug in provided 12V adapter for control box.



EHV INSTALLATION w/ U-LOCK (OPTION)

1. Review all directions and diagrams provided before starting the ${f E}$ lectric over ${f H}$ ydraulic ${f V}$ alve

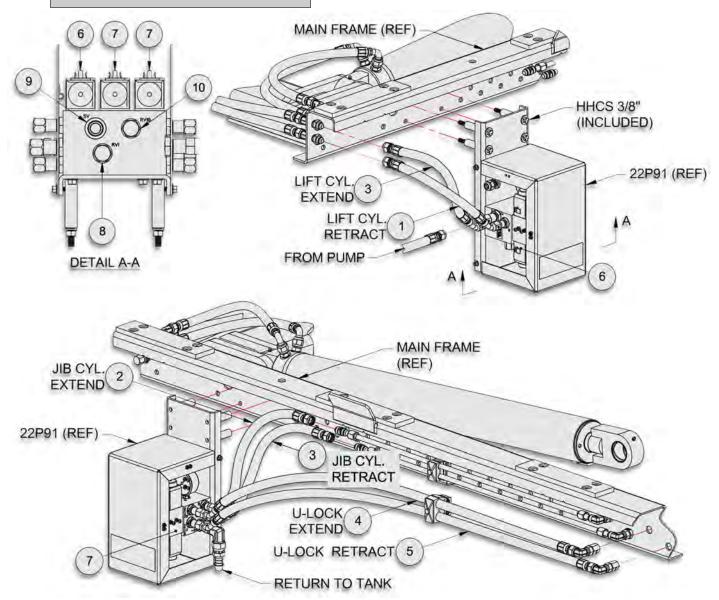
Installation.

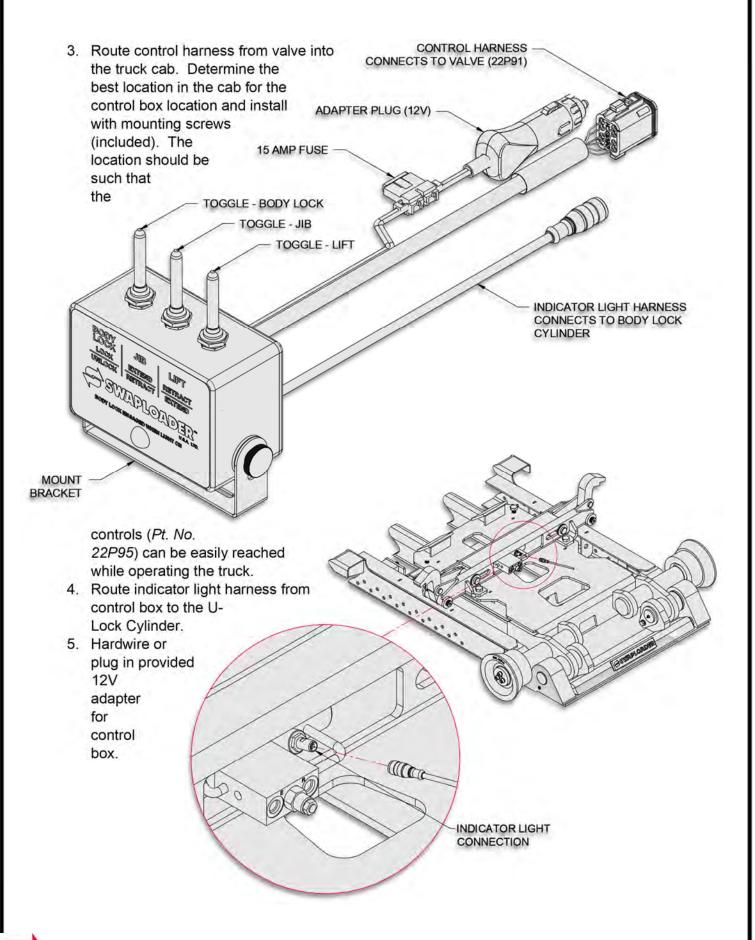
2. Mount the 22P91 EHV to the hoist's Main Frame and attach all hoses, hose clamp assemblies and fittings as shown on *Pg. 4-11* (also see Illustrations).

NOTE:

THE FIGURES BELOW DO NOT NECESSARILY DEPICT YOUR HOIST AND ARE ONLY MEANT TO ILLUSTRATE ROUTING OF THE HYDRAULIC LINES FROM THE VALVE TO THE CYLINDERS

| Electri | Electric Over Hyd. Valve - SERVICE PARTS SL-112 | | | | |
|---------|---|-----|-----------------------------------|--|--|
| ITEM | PART # | QTY | DESCRIPTION | | |
| 1 | 12P53 | 1 | Hose Assy 21 08-08FJ/08FJ45 | | |
| 2 | 12P54 | 1 | Hose Assy 17 08-08FJ/08FJ45 | | |
| 3 | 12P59 | 2 | Hose Assy 20 08-08FJ/08FJ45 | | |
| 4 | 13P34 | 1 | Hose Assy 66 08-08FJ/08FJ45 | | |
| 5 | 14P56 | 1 | Hose Assy 70 08-08FJ/08FJ45 | | |
| 6 | 22P82 | 1 | Solenoid Operated Valve, Motor | | |
| 7 | 22P83 | 2 | Solenoid Operated Valve, Cylinder | | |
| 8 | 22P84 | 1 | Relief Valve Cartridge, 3250 | | |
| 9 | 22P85 | 1 | Dump Valve | | |
| 10 | 23P93 | 1 | Relief Cartridge, EHV 2000 | | |





HYDRAULIC TANK INSTALLATION

- 1. Select a location to mount the hydraulic tank. Reference *Fig. F* or *Pg. 3-12* for the suggested location of the hydraulic tank to the rear of the control valve assembly on the left-hand side of the truck. The hydraulic hoses have been sized for the tank to be mounted in this general area. The tank can be located on the right-hand side or behind the cab, if necessary, which means longer hoses may be required.
- 2. Drill four (4) holes for 1/2" diameter bolts (provided) in the mount angle of the hydraulic tank (two per angle) and the frame rails of the truck chassis. Mount the hydraulic tank and install the hydraulic filter. Install the hydraulic return hose and the hose barb fitting between the filter and the control valve assembly as shown on *Pg. 3-10*. The hose length can be shortened if necessary. Secure the hose to the barb fittings with the hose clamps provided.

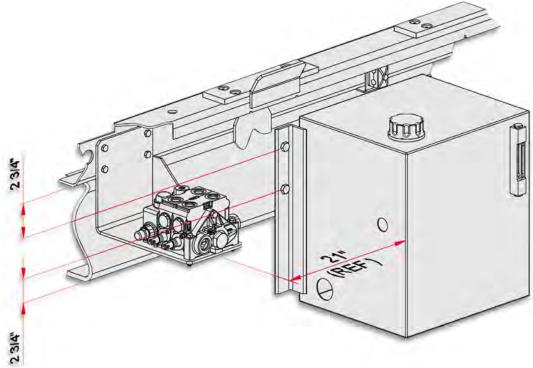


Figure F

PUMP INSTALLATION

- 1. Install the hydraulic pump to the P.T.O. (Bolts are not provided).
- 2. Install the hydraulic fittings into ports on the hydraulic pump as shown on Pg. 3-11.
- 3. Connect the suction hose assembly to the hydraulic tank (1" I.D. hose) and route to the hydraulic pump in as short and straight line as possible. Be sure to route the hose clear of exhaust components and of the drive shaft. Extra hose is provided so the hose can be shortened to an appropriate length. Install the hose on the hose barb fittings at the tank and at the pump and secure with the hose clamps provided.

NOTE: Prior to startup, this hose must be filled with oil.

4. Connect pressure hose assembly (1/2" I.D. hose) to control valve inlet and route to the pump the same as the suction line. This hose is provided with only one fitting, so the hose can be shortened to appropriate length. Remove the hose and shorten as required. After the hose has been shortened, lubricate the insert threads of the fitting and the I.D. of the

hose. Measure1-3/16" from the end of the hose and mark the hose for the socket depth. Screw hose into the socket (left-hand thread) to the depth marked on the hose. Screw insert in socket until insert touches the socket. Clean the inside of the hose assembly by either blowing clean compressed air through it or by flushing it. Install the completed hose assembly to the inlet port of the control valve assembly and the outlet port of the hydraulic pump.

5. Tie up the pressure and suction hoses as necessary. Again, be sure the hoses are routed to avoid exhaust components and to stay clear of the drive shaft.

START UP PROCEDURE

- 1. Fill the hydraulic tank with hydraulic oil (see oil specification in Section IV: Maintenance.)
- 2. Prime the pump by loosening the clamp on the suction hose at the pump. Pull the hose back off the fitting till the air is bled from the line. Push the hose back on the fitting and retighten the clamp.
- 3. Engage the P.T.O. and run the pump at idle (700 to 900 RPM). Operate the cylinders at full stroke five to ten times to bleed the air from the lines and cylinders. The cylinders were filled with oil during testing at the factory, but some seepage may have occurred during shipping and installation. Refill the hydraulic tank, if needed, during this sequence and do not let the pump run without oil.
- 4. Check for leaks and tighten fittings as necessary.
- Verify the movement of the control levers corresponds to the movement of the cylinders per the figure below.
- Install all safety decals and product decals per as shown on Pg. 3-13 after final installation and painting have been completed.
- 7. Fill out the Product Registration form online at <u>Truck-Mounted Product Registration</u> Swaploader.





NOTE:

FAILURE TO FILL OUT AND SUBMIT PRODUCT REGISTRATION WITHIN 15 DAYS OF INSTALLATION MAY POSSIBLY VOID THE WARRANTY.

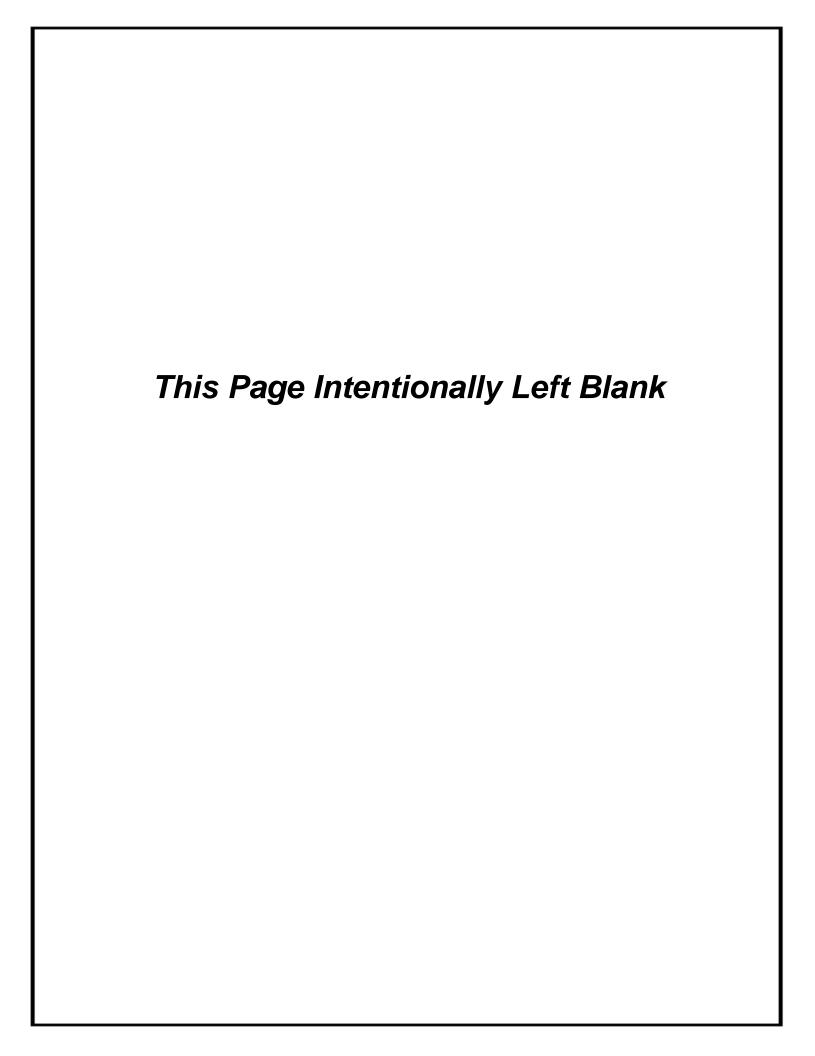


CAUTION

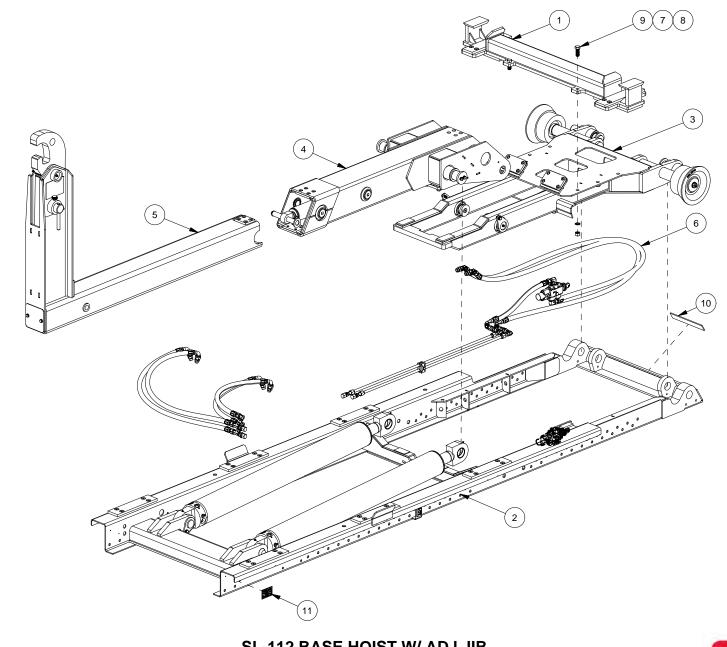
The SwapLoader hoist must be used with bodies or containers that properly fit the front hook and the rear hold-downs (see Subframe Critical Dimensions in the Technical Guide). If possible, pick up one of the containers that will be used with the SwapLoader hoist and verify the following:

- Outside dimensions of the long sills match the guiding rollers on the hoist.
- The front hook dimensions are correct for the hoist.
- The rear hold-downs of the container latch into the hold-downs on the hoist.
- Check for any interference between the container and any part of the hoist (i.e.: Hydraulic tank, hydraulic tubing or hose, hydraulic valve, etc.)

PARTS

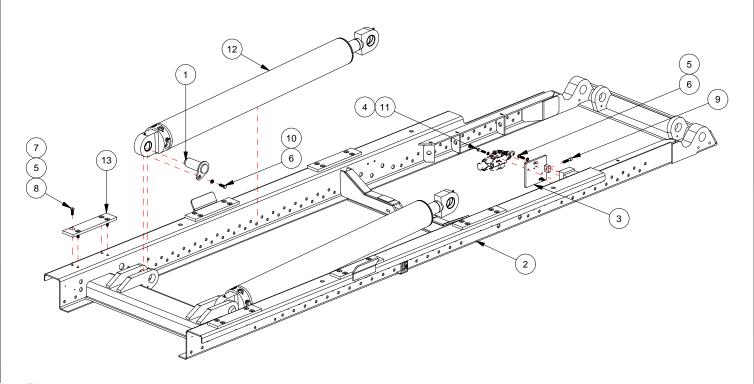


| | | | 14H12 - BASE HOIST ASSEMBLY | |
|------|-------|-----|------------------------------|----------|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea |
| 1 | 13H74 | 1 | BODY LOCK W/SHELF, 100S | 111.53 |
| 2 | 14H17 | 1 | MAIN FRAME SUB-ASSY, SL-112 | 804.12 |
| 3 | 14H22 | 1 | PIVOT JOINT SUB-ASSY, SL-112 | 347.62 |
| 4 | 14H29 | 1 | OUTER TUBE SUB-ASSY, SL-112 | 319.36 |
| 5 | 14H53 | 1 | ADJ JIB SUB-ASSY, 112 | 358.99 |
| 6 | 91H95 | 1 | BASE CYL CIRCUIT, 112 | 23.19 |
| 7 | 00767 | 4 | WASHER, LOCK 5/8 | 0.01 |
| 8 | 00P24 | 4 | NUT, HEX 5/8-11 UNC GR8 | 0.08 |
| 9 | 00P91 | 4 | HHCS 5/8-11 UNC x 1-3/4 GR8 | 0.21 |
| 10 | 90P90 | 1 | NAME PLATE INSERT | 0.09 |
| 11 | 91P76 | 1 | SERIAL TAG, SL-112 | 0.02 |



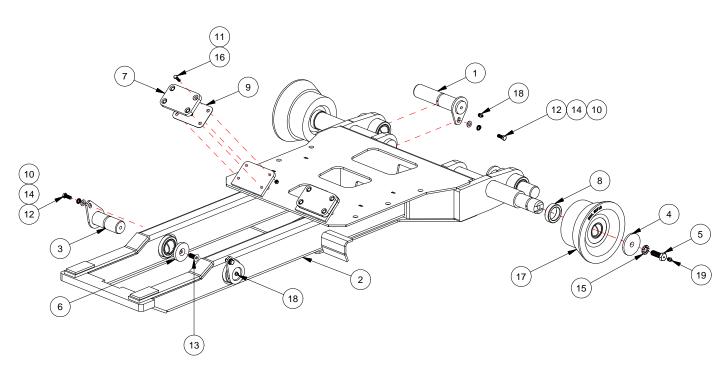
| DISC-LOCK WASHER TORQUE SPEC'S | | | |
|--|--------------------------------------|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | |
| 3/8 | 53 | | |
| 7/16 | 85 | | |
| 1/2 | 130 | | |
| 5/8 | 258 | | |
| 3/4 | 459 | | |
| 7/8 | 739 | | |
| 1 | 1108 | | |
| NOTE: LUBRICATE BOLT THREADS BEFORE TORQUING THE ASSEMBLY | | | |

| 14H17 - MAIN FRAME SUB-ASSEMBLY | | | | | |
|---------------------------------|-------|-----|--------------------------------|----------|--|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea | |
| 1 | 11H09 | 2 | PIN, MF/CYL 1-3/4 x 4-3/8 ZP | 3.55 | |
| 2 | 14H18 | 1 | MAIN FRAME WDMT, SL-112 | 432.50 | |
| 3 | 42H11 | 1 | JIB LOCKOUT MNT, 5 x 5 | 2.99 | |
| 4 | 00752 | 2 | WASHER, LOCK 5/16 | 0.03 | |
| 5 | 00755 | 26 | WASHER, LOCK 3/8 | 0.03 | |
| 6 | 00P13 | 4 | HHCS 3/8-16 UNC x 1-1/4 GR8 | 0.05 | |
| 7 | 00P14 | 24 | NUT, HEX 3/8-16 UNC GR8 | 0.02 | |
| 8 | 00P68 | 24 | FHCS 3/8-16 UNC x 1-1/4 SS | 0.04 | |
| 9 | 01P20 | 1 | SHCS 3/8-16 UNC x 1-3/4 GR8 | 0.07 | |
| 10 | 01P28 | 2 | WASHER, DISC LOCK 3/8 PR | 0.00 | |
| 11 | 10P63 | 2 | HHCS 5/16-18 UNC x 1-3/4 ZP | 0.04 | |
| 12 | 23P66 | 2 | HYD CYL, 4.5x2.25x44 | 177.55 | |
| 13 | 90P71 | 6 | WEAR PAD, 2-3/4 x 1/2 x 11-3/4 | 0.63 | |
| | | | | | |



| DISC-LOCK WASHER TORQUE SPEC'S | | | |
|--|--------------------------------------|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | |
| 3/8 | 53 | | |
| 7/16 | 85 | | |
| 1/2 | 130 | | |
| 5/8 | 258 | | |
| 3/4 | 459 | | |
| 7/8 | 739 | | |
| 1 | 1108 | | |
| NOTE: LUBRICATE BOLT THREADS BEFORE TORQUING THE ASSEMBLY | | | |

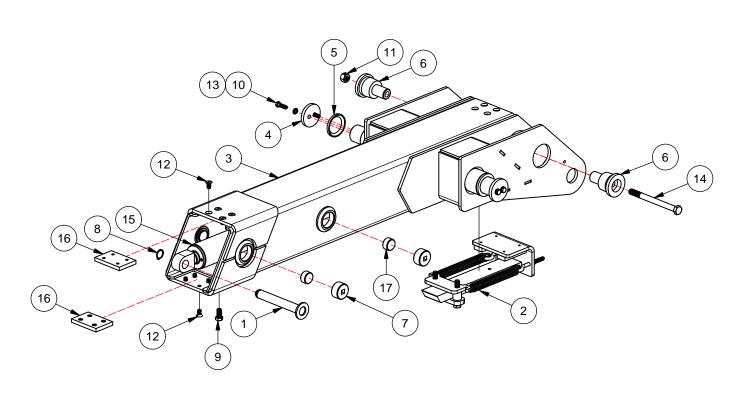
| | 14H22 - PIVOT JOINT SUB-ASSEMBLY | | | | | |
|------|----------------------------------|-----|--------------------------------|----------|--|--|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea | | |
| 1 | 14H13 | 2 | PIN, PJ/MF 1-3/4 x 7-1/2 ZP | 5.67 | | |
| 2 | 14H23 | 1 | PIVOT JOINT WDMT, SL-112 | 250.92 | | |
| 3 | 14H48 | 2 | PIN, PJ/OT 1-3/4 x 4-3/8 ZP | 3.31 | | |
| 4 | 22H35 | 2 | ROLLER RETAINER, 1/2 x 3 ZP | 0.53 | | |
| 5 | 22H36 | 2 | HHCS 5/8-11 UNC x 1-3/4 GZ | 0.20 | | |
| 6 | 22H37 | 2 | PIN CAP, 3/8 x 2-1/2 ZP | 0.48 | | |
| 7 | 27H70 | 2 | BOLT PLATE, TUBE STOP 105/112 | 2.34 | | |
| 8 | 28H08 | 2 | SPACER, ROLLER 11/16 x 1-25/32 | 0.46 | | |
| 9 | 77H06 | 2 | SHIM, 3 1/4 x 22GA x 5 1/2 | 0.14 | | |
| 10 | 00P36 | 4 | WASHER, FLAT 3/8 HT | 0.01 | | |
| 11 | 00P51 | 8 | NUT, LOCK 1/4-20 UNC GR8 | 0.01 | | |
| 12 | 00P62 | 4 | HHCS 3/8-16 UNC x 1 GR8 | 0.04 | | |
| 13 | 00P73 | 2 | FHCS 1/2-13 UNC x 1-1/4 GR8 | 0.07 | | |
| 14 | 01P28 | 4 | WASHER, DISC LOCK 3/8 PR | 0.00 | | |
| 15 | 01P31 | 2 | WASHER, DISC LOCK 5/8 PR | 0.03 | | |
| 16 | 01P56 | 8 | HHCS 1/4-20 UNC x 1 GR8 | 0.02 | | |
| 17 | 80P10 | 2 | ROLLER ASSY, 6-1/4x1-3/4ID ZP | 34.84 | | |
| 18 | 90P03 | 4 | GREASE ZERK, 1/8-27 NPT STR | 0.02 | | |
| 19 | 90P20 | 2 | GREASE ZERK, 1/4-28 NPT STR | 0.02 | | |





| | CK WASHER JE SPEC'S | | |
|--|--------------------------------------|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | |
| 3/8 | 53 | | |
| 7/16 | 85 | | |
| 1/2 | 130 | | |
| 5/8 | 258 | | |
| 3/4 | 459 | | |
| 7/8 | 739 | | |
| 1 | 1108 | | |
| NOTE: LUBRICATE BOLT THREADS BEFORE TORQUING THE ASSEMBLY | | | |
| | | | |

| 14H29 - OUTER TUBE SUB-ASSEMBLY | | | | |
|---------------------------------|-------|-----|------------------------------|----------|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea |
| 1 | 10H08 | 1 | PIN, JIB/CYL 1 x 6-3/4 ZP | 1.72 |
| 2 | 13H06 | 1 | PIVOT LOCK SUB-ASSY, 100S | 18.67 |
| 3 | 14H26 | 1 | OUTER TUBE WDMT, 110/112 | 220.57 |
| 4 | 20H19 | 2 | PIN CAP, 3/8 x 2-3/4 ZP | 0.60 |
| 5 | 20H21 | 2 | SPACER 1/4 x 2-3/4OD | 0.13 |
| 6 | 24H68 | 2 | PIN, OT/CYL 1-1/4 x 1-7/8 ZP | 2.36 |
| 7 | 28H33 | 4 | POCKETED PLUG 24MB ZP | 0.51 |
| 8 | 00P05 | 1 | SNAP RING, EXT 1.00 | 0.00 |
| 9 | 00P09 | 1 | HHCS 1/2-13 UNC x 1 GR8 | 0.09 |
| 10 | 00P13 | 4 | HHCS 3/8-16 UNC x 1-1/4 GR8 | 0.05 |
| 11 | 00P55 | 1 | NUT, LOCK 5/8-11 UNC GR8 | 0.08 |
| 12 | 00P79 | 8 | FHCS 3/8-16 UNC x 3/4 BR | 0.03 |
| 13 | 01P28 | 4 | WASHER, DISC LOCK 3/8 PR | 0.00 |
| 14 | 01P43 | 1 | HHCS 5/8-11 UNC x 7-12 GR8 | 0.71 |
| 15 | 23P67 | 1 | HYD CYL 2.5x1.375x28 | 68.33 |
| 16 | 91P75 | 2 | WEAR PAD, 2-3/4x7/16x4 | 0.19 |
| 17 | 92P08 | 4 | WEAR PAD, 1-3/8 DIA x 3/4 | 0.04 |

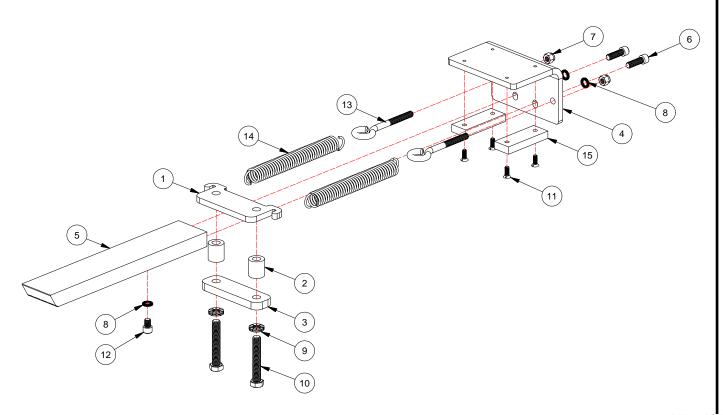




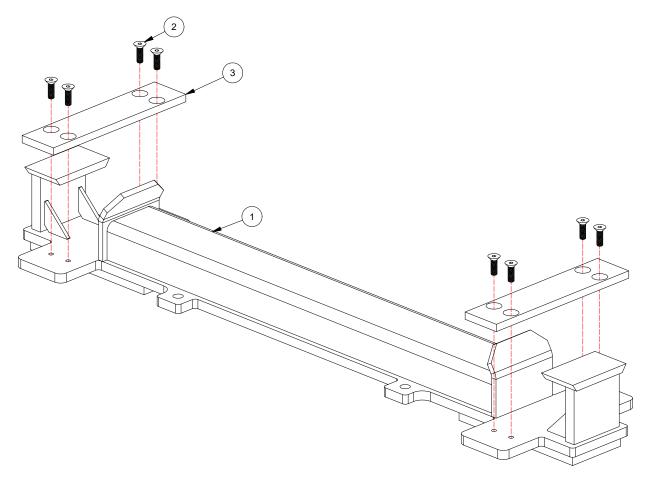
| DISC-LOCK WASHER TORQUE SPEC'S | | | | |
|-----------------------------------|--------------------------------------|--|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | | |
| 3/8 | 53 | | | |
| 7/16 | 85 | | | |
| 1/2 | 130 | | | |
| 5/8 | 258 | | | |
| 3/4 | 459 | | | |
| 7/8 | 739 | | | |
| 1 | 1108 | | | |
| NOTE: | | | | |

| NOTE: |
|-----------------------|
| UBRICATE BOLT THREADS |
| BEFORE TORQUING THE |
| A C C E M D I V |

| | 13H06 - PIVOT LOCK SUB-ASSEMBLY | | | | | | | | | |
|------|---------------------------------|-----|-----------------------------|----------|--|--|--|--|--|--|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea | | | | | | |
| 1 | 25H76 | 1 | SPRING PLATE, PL | 1.14 | | | | | | |
| 2 | 25H77 | 2 | SPACER, PIVOT LOCK 1-1/8 | 0.18 | | | | | | |
| 3 | 25H78 | 1 | CONNECTION BAR, 160/212/214 | 0.98 | | | | | | |
| 4 | 27H05 | 1 | SLIDE, PL 100S | 4.73 | | | | | | |
| 5 | 27H06 | 1 | PIVOT LOCK PRONG | 9.58 | | | | | | |
| 6 | 00P32 | 2 | SHCS 3/8-16 UNC x 1-1/4 GR8 | 0.05 | | | | | | |
| 7 | 00P43 | 2 | NUT, NYLOCK 3/8-16 UNC GR8 | 0.02 | | | | | | |
| 8 | 01P28 | 3 | WASHER, DISC LOCK 3/8 PR | 0.00 | | | | | | |
| 9 | 01P30 | 2 | WASHER, DISC LOCK 1/2 PR | 0.02 | | | | | | |
| 10 | 01P48 | 2 | HHCS 1/2-13 UNC x 3 GR8 | 0.18 | | | | | | |
| 11 | 01P67 | 4 | FHCS 1/4-20 UNC x 3/4 BR | 0.01 | | | | | | |
| 12 | 02P01 | 1 | SHCS 3/8-16 UNC x 1/2 ZP | 0.03 | | | | | | |
| 13 | 23P13 | 2 | EYEBOLT 3/8-16 UNC x 3 | 0.20 | | | | | | |
| 14 | 90P04 | 2 | SPRING, EXT 7/8 OD x 6 LG | 0.33 | | | | | | |
| 15 | 91P21 | 2 | WEAR PAD 1-1/4x1/2x3-1/2 | 0.08 | | | | | | |
| | | | | | | | | | | |



| 13H74 - BODY LOCK W/ SHELF ASSEMBLY | | | | | | | | |
|-------------------------------------|-------|-----|--------------------------------|----------|--|--|--|--|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea | | | | |
| 1 | 13H75 | 1 | BODY LOCK WDMT, SHELF 100S | 109.93 | | | | |
| 2 | 00P68 | 8 | FHCS 3/8-16 UNC x 1-1/4 SS | 0.04 | | | | |
| 3 | 90P71 | 2 | WEAR PAD, 2-3/4 x 1/2 x 11-3/4 | 0.63 | | | | |

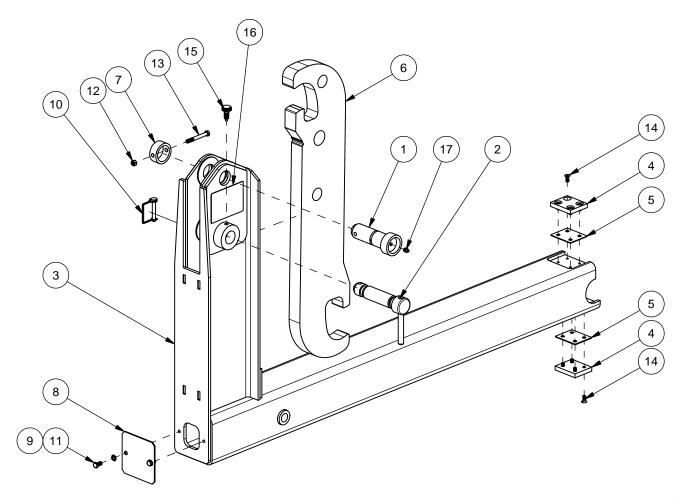


BODY LOCK W/SHELF, 100S



| DISC-LOCK WASHER TORQUE SPEC'S | | | | | |
|--|--------------------------------------|--|--|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | | | |
| 3/8 | 53 | | | | |
| 7/16 | 85 | | | | |
| 1/2 | 130 | | | | |
| 5/8 | 258 | | | | |
| 3/4 | 459 | | | | |
| 7/8 | 739 | | | | |
| 1 | 1108 | | | | |
| NOTE: LUBRICATE BOLT THREADS BEFORE TORQUING THE ASSEMBLY | | | | | |

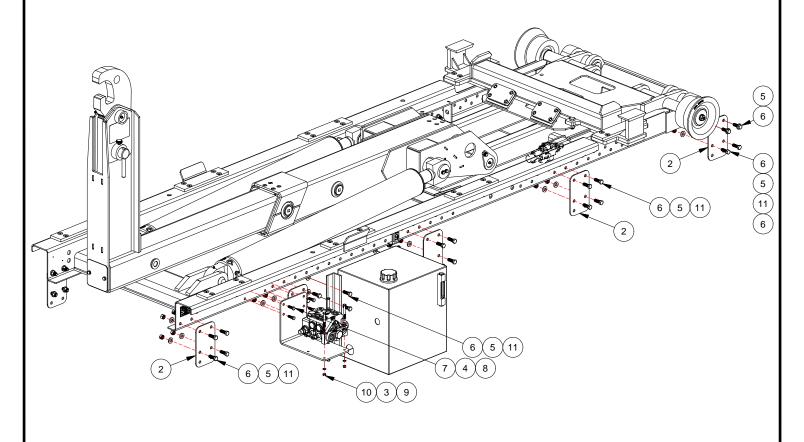
| 14H53 - ADJUSTABLE JIB SUB-ASSEMBLY | | | | | |
|-------------------------------------|-------|-----|---------------------------------|----------|--|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea | |
| 1 | 12H35 | 1 | PIN, HK PVT 1-3/4 x 4-1/2 ZP | 4.36 | |
| 2 | 14H08 | 1 | PIN, HOOK LOCK 1-1/2 x 6-5/8 ZP | 4.35 | |
| 3 | 14H54 | 1 | ADJ JIB WDMT 36/54, 112 | 230.48 | |
| 4 | 23H54 | 2 | WEAR PAD, 2-3/4 x 1/2 x 3-1/4 | 0.16 | |
| 5 | 24H67 | 2 | SHIM, WP 2-3/4 x 14GA x 3-1/4 | 0.18 | |
| 6 | 24H80 | 1 | HOOK, ADJ JIB 36/54 | 116.93 | |
| 7 | 24H83 | 1 | LOCK TUBE, JIB 2-1/20Dx1 | 0.53 | |
| 8 | 62H11 | 1 | COVER, JIB 5-1/4x11GAx5-1/4 | 0.92 | |
| 9 | 00755 | 2 | WASHER, LOCK 3/8 | 0.03 | |
| 10 | 53586 | 1 | SAFETY SNAP PIN, 3/8 x 2-1/2 | 0.14 | |
| 11 | 00P03 | 2 | HHCS 3/8-16 UNC x 3/4 GR8 | 0.04 | |
| 12 | 00P34 | 1 | NUT, LOCK 3/8-16 UNC GRC | 0.02 | |
| 13 | 01P01 | 1 | HHCS 3/8-16 UNC x 3-1/4 GR8 | 0.11 | |
| 14 | 01P50 | 8 | FHCS 5/16-18 UNC x 3/4 ZP | 0.02 | |
| 15 | 23P40 | 1 | SPRING PLUNGER, 1/2-13 | 0.14 | |
| 16 | 90P91 | 2 | DECAL, ADJ JIB OP 36/54 | 0.00 | |
| 17 | 90P03 | 1 | GREASE ZERK, 1/8-27 NPT STR | 0.02 | |



| DISC-LOCK WASHER TORQUE SPEC'S | | | | | |
|-----------------------------------|--------------------------------------|--|--|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | | | |
| 3/8 | 53 | | | | |
| 7/16 | 85 | | | | |
| 1/2 | 130 | | | | |
| 5/8 | 258 | | | | |
| 3/4 | 459 | | | | |
| 7/8 | 739 | | | | |
| 1 | 1108 | | | | |
| | BOLT THREADS RQUING THE | | | | |

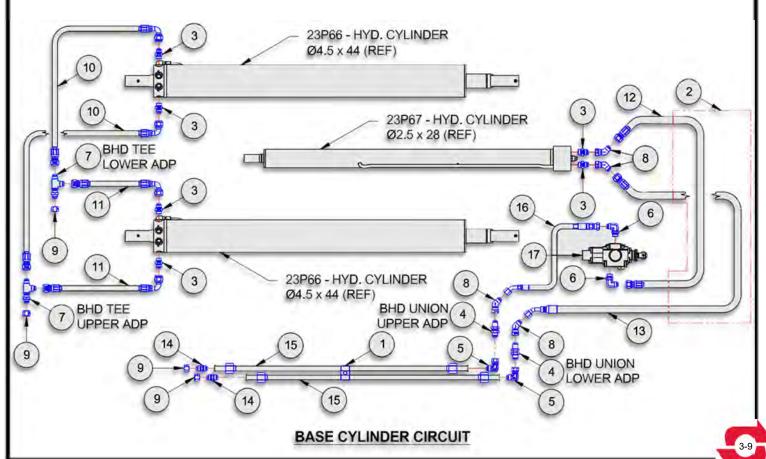
| 14H46 - HOIST INSTALLATION KIT | | | | | | | |
|--------------------------------|-------|-----|------------------------------|----------|--|--|--|
| ITEM | PART# | QTY | DESCRIPTION | WT-lb/ea | | | |
| 1 | 14H42 | 1 | DECAL ASSEMBLY, SL-112 | 0.38 | | | |
| 2 | 25H89 | 10 | MNT BKT, 5x3/16x8-1/4 | 2.08 | | | |
| 3 | 00752 | 3 | WASHER, LOCK 5/16 | 0.03 | | | |
| 4 | 00755 | 4 | WASHER, LOCK 3/8 | 0.03 | | | |
| 5 | 00784 | 44 | WASHER, FLAT 1/2 ZP | 0.03 | | | |
| 6 | 00P01 | 44 | HHCS 1/2-13 UNC x 1-1/2 GR8 | 0.11 | | | |
| 7 | 00P13 | 4 | HHCS 3/8-16 UNC x 1-1/4 GR8 | 0.05 | | | |
| 8 | 00P14 | 4 | NUT, HEX 3/8-16 UNC GR8 | 0.02 | | | |
| 9 | 00P19 | 3 | HHCS 5/16-18 UNC x 2-3/4 GR8 | 0.07 | | | |
| 10 | 00P20 | 3 | NUT, HEX 5/16-18 UNC GR8 | 0.01 | | | |
| 11 | 00P35 | 40 | NUT, LOCK 1/2-13 UNC GRC | 0.04 | | | |
| 12 | 91P79 | 1 | ALL MODEL TECH GUIDE | 0.50 | | | |
| 13 | 91P88 | 1 | PARTS MANUAL, SL-112 | 0.50 | | | |

^{*} ITEM NOT SHOWN



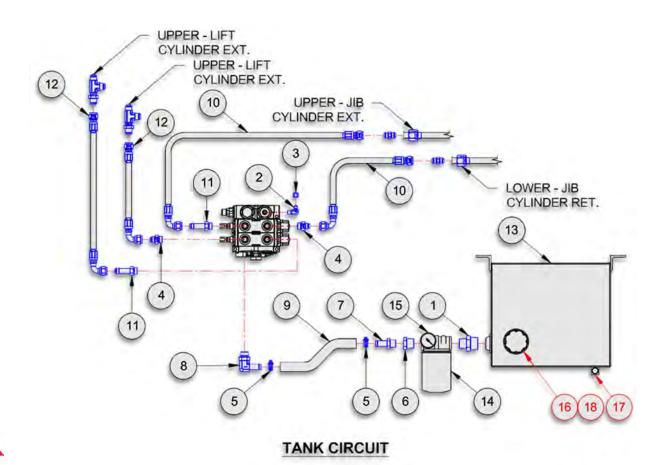
| 91H95 – | 91H95 – BASE CYLINDER CIRCUIT SL-112 | | | | | | | |
|---------|--------------------------------------|-----|------------------------------|---------------|-----------|--|--|--|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all | | | |
| 1 | 90H17 | 1 | Hose Clamp Assy, 1/2 | 0.16 | 0.16 | | | |
| 2 | 90H74 | 1 | Nylon Hose Sleeve x 60" | 0.25 | 0.25 | | | |
| 3 | 10P39 | 6 | Adp Hyd 08MJ/08MB | 0.10 | 0.60 | | | |
| 4 | 10P43 | 2 | Adp Hyd 08MJ/08MJ BHD | 0.30 | 0.60 | | | |
| 5 | 10P44 | 2 | Adp Hyd 08MJ/08FJ 90 | 0.23 | 0.46 | | | |
| 6 | 11P23 | 2 | Adp Hyd 08MJ/08MB 90 | 0.30 | 0.60 | | | |
| 7 | 12P58 | 2 | Adp Hyd 08MJ/08MJ/08MJ BHD | 0.30 | 0.60 | | | |
| 8 | 12P85 | 4 | Adp Hyd 08MJ/08FJ 45 | 0.20 | 0.80 | | | |
| 9 | 13P14 | 4 | Adp Hyd 08FJ Cap | 0.32 | 1.28 | | | |
| 10 | 14P57 | 2 | Hose Assy 43 08-08FJ/08FJ90 | 3.50 | 7.00 | | | |
| 11 | 14P58 | 2 | Hose Assy 19 08-08FJ/08FJ90 | 1.50 | 3.00 | | | |
| 12 | 14P59 | 1 | Hose Assy 102 08-08FJ/08FJ45 | 9.00 | 9.00 | | | |
| 13 | 14P60 | 1 | Hose Assy 120 08-08FJ/08FJ45 | 10.00 | 10.00 | | | |
| 14 | 14P61 | 2 | Adp Hyd 08MJ/08MJ | 0.13 | 0.26 | | | |
| 15 | 14P64 | 2 | Hyd Tube, 1/2 x 44 | 1.27 | 2.54 | | | |
| 16 | 14P66 | 1 | Hose Assy 24 08-08FJ/08FJ45 | 2.00 | 2.00 | | | |
| 17 | 23P04 | 1 | Hyd Valve, 2-Way 08FB | 5.20 | 5.20 | | | |

If U-Lock is installed, Items 9 and 11 do not apply. See $\it Cyl Circuit, BL \ 112 \ STD$ in the Options section.

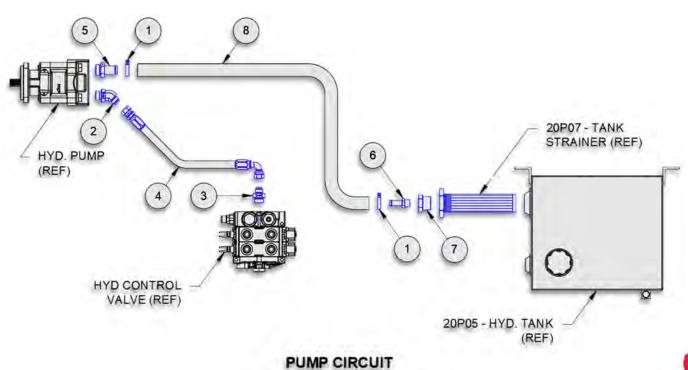


| 92H01 – | 92H01 – TANK CIRCUIT SL-112 | | | | | | | | |
|---------|-----------------------------|-----|-----------------------------|---------------|-----------|--|--|--|--|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all | | | | |
| 1 | 10P26 | 1 | Adp Hyd 20MP/16MP | 0.70 | 0.70 | | | | |
| 2 | 10P37 | 1 | Adp Hyd 04MJ/04MP 90 | 0.30 | 0.30 | | | | |
| 3 | 10P38 | 1 | Adp Hyd 04FJ Cap | 0.10 | 0.10 | | | | |
| 4 | 11P08 | 2 | Adp Hyd 08MJ/10MB | 0.30 | 0.60 | | | | |
| 5 | 11P20 | 2 | Clamp, WG 11/16 - 1-1/2 | 0.10 | 0.20 | | | | |
| 6 | 12P21 | 1 | Adp Hyd 16MP/12FP | 0.20 | 0.20 | | | | |
| 7 | 12P22 | 1 | Adp Hyd 12HB/12MP | 0.30 | 0.30 | | | | |
| 8 | 12P23 | 1 | Adp Hyd 12HB/12MB 90 | 0.60 | 0.60 | | | | |
| 9 | 12P29 | 1 | Hose 3/4 x 24 LP | 0.88 | 0.88 | | | | |
| 10 | 14P58 | 2 | Hose Assy 19 08-08FJ/08FJ90 | 1.50 | 3.00 | | | | |
| 11 | 14P62 | 2 | Adp Hyd 08MJ/10MB L | 0.30 | 0.60 | | | | |
| 12 | 15P11 | 2 | Hose Assy 23 08-08FJ/08FJ90 | 0.89 | 1.78 | | | | |
| 13 | 20P05 | 1 | Hyd Tank, 15 Gallon | 54.20 | 54.20 | | | | |
| 14 | 20P22 | 1 | Hyd Filter Assy, 25 GPM | 2.30 | 2.30 | | | | |
| 15 | 20P64 | 1 | Hyd Filter Indicator Gauge | 0.01 | 0.01 | | | | |
| TANK S | TANK SERVICE PARTS | | | | | | | | |
| 16 | 20P07 | 1 | Hyd Strainer, 25 GPM | | | | | | |
| 17 | 20P96 | 1 | Sight Gauge, Hyd Tank | | | | | | |
| 18 | 20P97 | 1 | Breather Cap Assy, Hyd Tank | | | | | | |

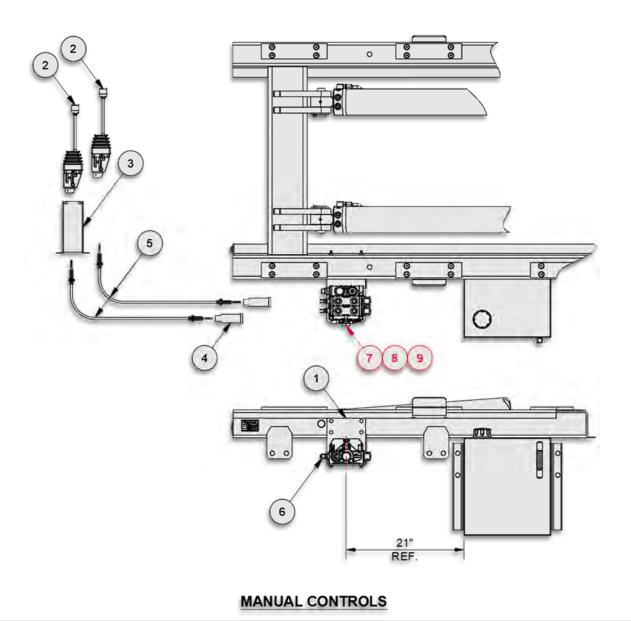
Note: Tank consists of tank weldment, tank mounted strainer, sight gauge, filler/breather cap, magnetic drain plug and port plugs.

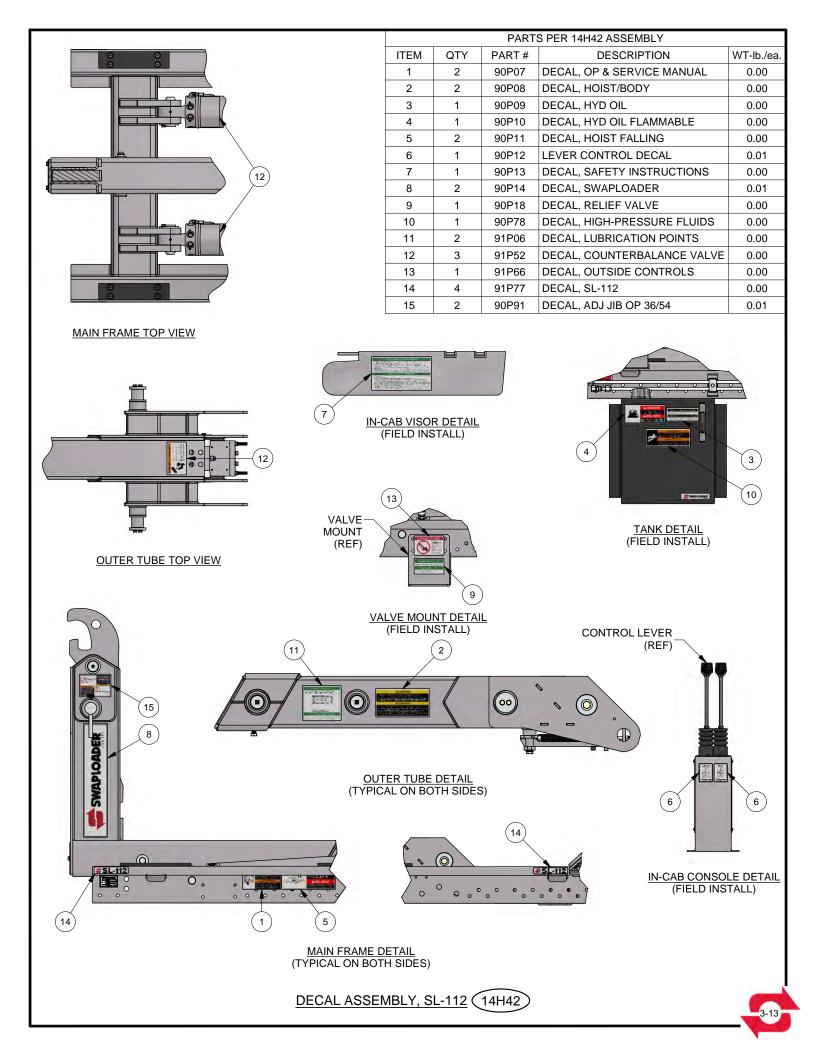


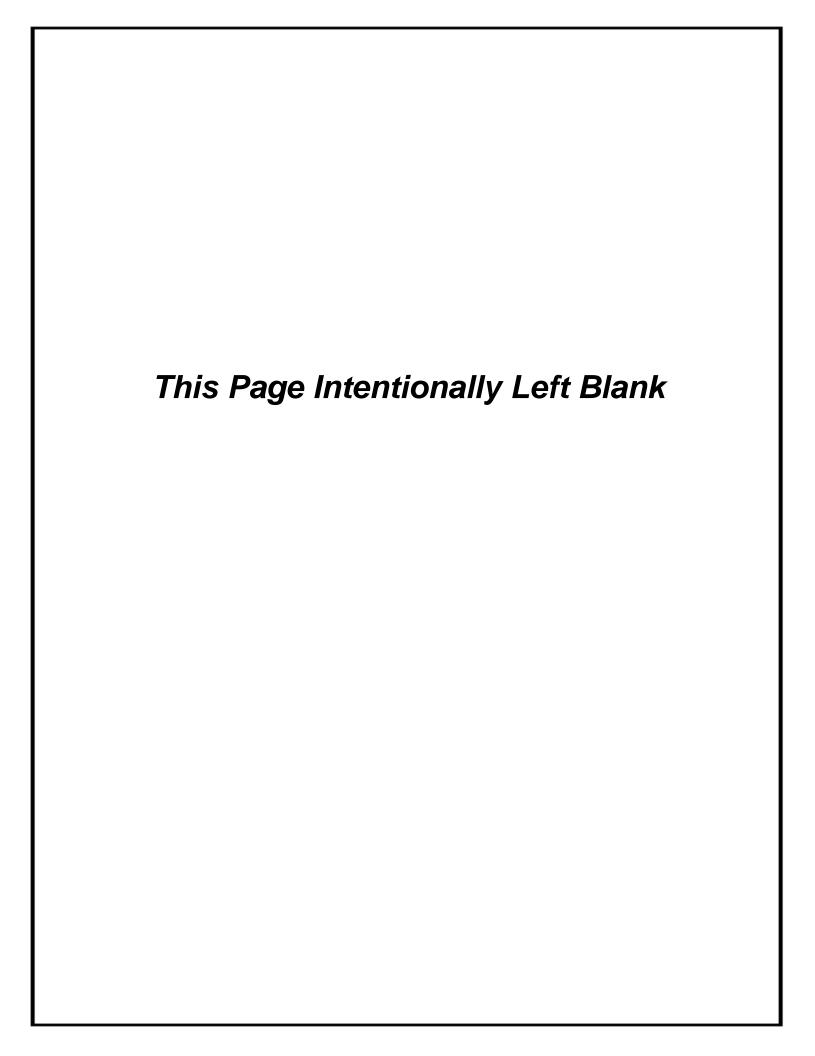
| 90H91 – | 90H91 – PUMP CIRCUIT SL-214 | | | | | | | | |
|---------|-----------------------------|-----|------------------------------|---------------|-----------|--|--|--|--|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all | | | | |
| 1 | 10P21 | 2 | T-Bolt Clamp - 1-1/2 Dia | 0.10 | 0.20 | | | | |
| 2 | 10P32 | 1 | Adp Hyd 10MJ/12MB 45 | 0.30 | 0.30 | | | | |
| 3 | 10P35 | 1 | Adp Hyd 10MJ/12MB | 0.30 | 0.30 | | | | |
| 4 | 10P61 | 1 | Hose Assy 106 08-10FJ/10FJ90 | 3.80 | 3.80 | | | | |
| 5 | 12P18 | 1 | Adp Hyd 16HB/16MB | 0.40 | 0.40 | | | | |
| 6 | 12P19 | 1 | Adp Hyd 10HB/10MP | 0.3 | 0.30 | | | | |
| 7 | 12P20 | 1 | Adp Hyd 20MP/16FP | 0.30 | 0.30 | | | | |
| 8 | 12P28 | 1 | Hose 1 X 120 LP | 6.60 | 6.60 | | | | |



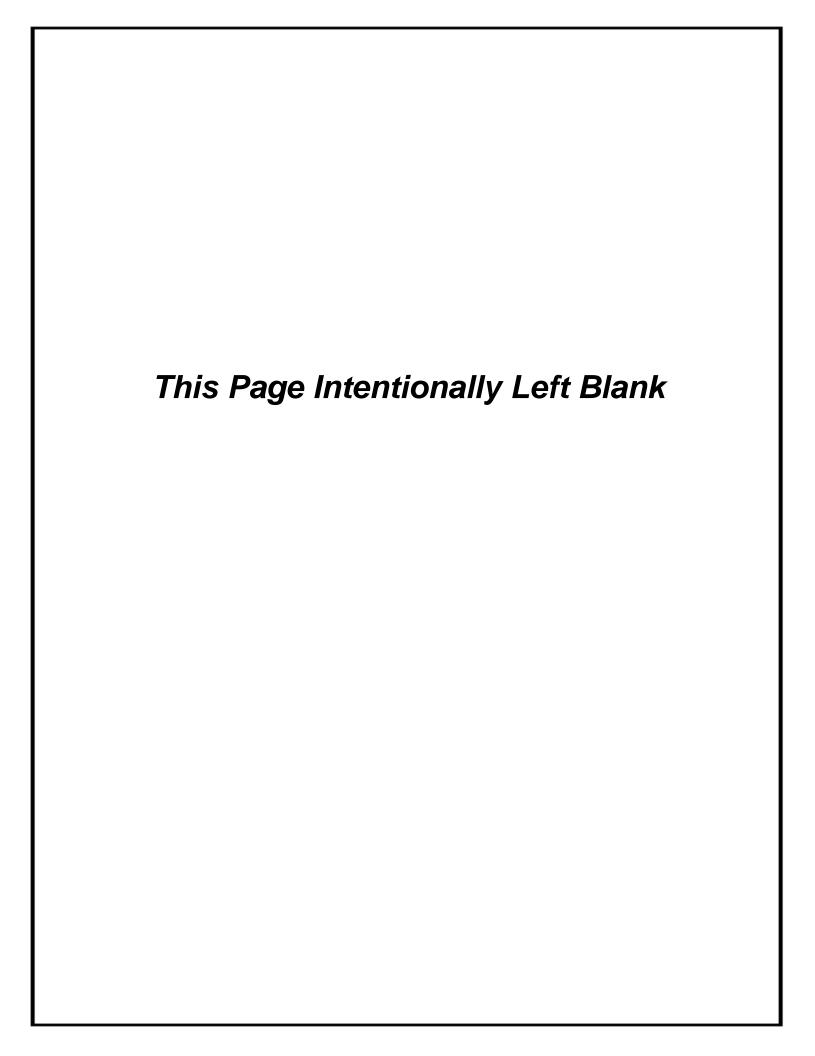
| 90H72 – MANUAL CONTROLS, 2-SECTION SL-214 | | | | | | | | |
|---|-----------|-----|-----------------------------|---------------|-----------|--|--|--|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all | | | |
| 1 | 10H51 | 1 | Valve Mount Bracket | 8.20 | 8.20 | | | |
| 2 | 20P08 | 2 | Control Handle, Cable | 2.80 | 5.60 | | | |
| 3 | 20P09 | 1 | Control Console, 2 Sect | 4.10 | 4.10 | | | |
| 4 | 20P10 | 2 | Bonnet Kit, V20 | 0.50 | 1.00 | | | |
| 5 | 20P15 | 2 | Control Cable Assy, 84" Std | 1.83 | 3.66 | | | |
| 6 | 21P32 | 1 | Hyd Valve, V20, 2 Sect 3250 | 27.00 | 27.00 | | | |
| VALVE SERVICE PARTS | | | | | | | | |
| 7 | 20P17 | 1 | Relief Valve Cart, 3250 V20 | | | | | |
| 8 | 22P20 | 2 | Seal Kit, Sect V20 | | | | | |
| 9 | 22P21 | 2 | Seal Kit, Sect & Spool V20 | | | | | |





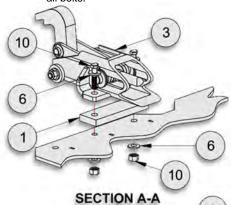


OPTIONS

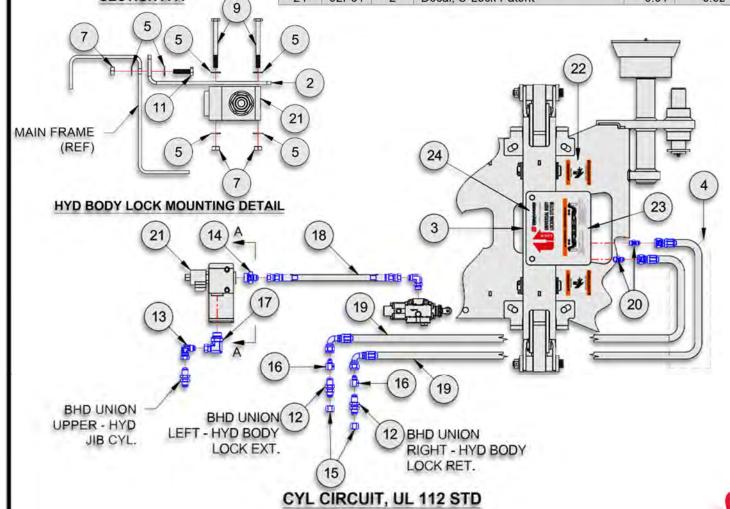


| HEX HEAD CAP SCREW TORQUE SPECS | | | | | |
|----------------------------------|------|--|--|--|--|
| SAE GR 8 W/ LOCK WASHER (FT-LBS) | | | | | |
| 3/8 53 | | | | | |
| 7/16 | 85 | | | | |
| 1/2 | 130 | | | | |
| 5/8 | 258 | | | | |
| 3/4 | 459 | | | | |
| 7/8 | 739 | | | | |
| 1 | 1108 | | | | |

Note: Apply Loctite 243 (Blue) to all bolts.



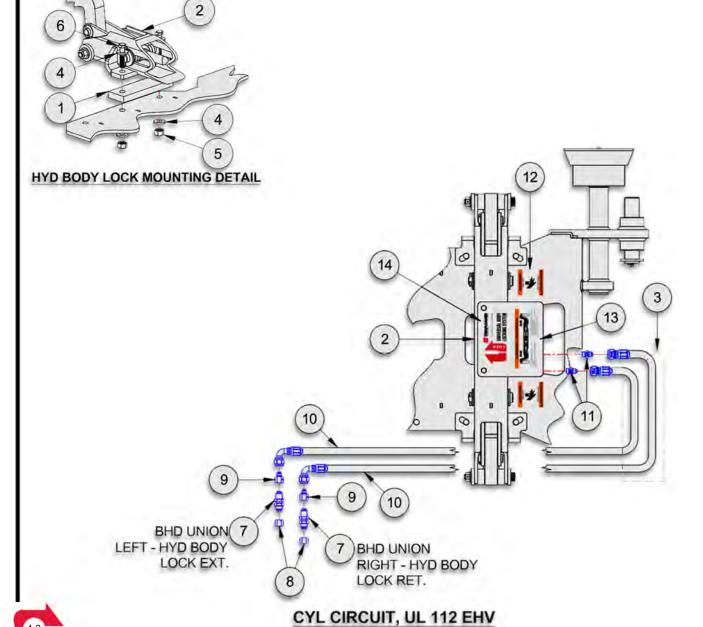
| 92H13 | 92H13- CYLINDER CIRCUIT, UL 214 STD | | | | |
|-------|-------------------------------------|-----|------------------------------|---------------|---------------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT- lb/all |
| 1 | 27H14 | 2 | Spacer, BL Mnt 3/4 100S | 4.11 | 8.22 |
| 2 | 27H22 | 1 | Valve Mnt Bkt, Solenoid 100S | 1.22 | 1.22 |
| 3 | 44H76 | 1 | U-Lock Assy, 100/200S | 86.33 | 86.33 |
| 4 | 90H74 | 1 | Nylon Hose Sleeve x 60" | 0.25 | 0.25 |
| 5 | 00770 | 8 | Washer, Flat 1/4 | 0.01 | 0.08 |
| 6 | 00785 | 8 | Washer, Flat 5/8 ZP | 0.07 | 0.56 |
| 7 | 00P51 | 4 | Nut, Lock 1/4-20 UNC Gr8 | 0.01 | 0.04 |
| 8 | 00P55 | 4 | Nut, Lock 5/8-11 UNC Gr8 | 0.13 | 0.52 |
| 9 | 01P41 | 2 | HHCS 1/4-20 UNC x 2-3/4 Gr8 | 0.04 | 0.08 |
| 10 | 01P49 | 4 | HHCS 5/8-11 UNC x 2-3/4 Gr8 | 0.27 | 1.08 |
| 11 | 01P56 | 2 | HHCS 1/4-20 UNC x 1 Gr8 | 0.02 | 0.04 |
| 12 | 10P43 | 2 | Adp Hyd 08MJ/08MJ BHD | 0.30 | 0.60 |
| 13 | 10P44 | 1 | Adp Hyd 08MJ/08FJ 90 | 0.23 | 0.23 |
| 14 | 11P83 | 1 | Adp Hyd 08MJ/12MB | 0.40 | 0.40 |
| 15 | 13P14 | 2 | Adp Hyd 08FJ Cap | 0.32 | 0.64 |
| 16 | 13P87 | 2 | Adp Hyd 06MJ/08FJ | 0.30 | 0.60 |
| 17 | 13P98 | 1 | Adp Hyd 12MB/08FJ 90 | 0.65 | 0.65 |
| 18 | 14P03 | 1 | Hose Assy 19 06-08FJ/08FJ | 0.71 | 0.71 |
| 19 | 14P55 | 2 | Hose Assy 69 06-06FJ/06FJ90 | 6.00 | 12.00 |
| 20 | 14P77 | 2 | Adp Hyd 06MJ/06MB .141 Rstr. | 0.08 | 0.16 |
| 21 | 23P02 | 1 | Solenoid Valve, U-Lock | 2.85 | 2.85 |
| 22 | 91P50 | 2 | Decal, Pinch Point | 0.01 | 0.02 |
| 23 | 91P51 | 3 | Decal, U-Lock Engagement | 0.01 | 0.03 |
| 24 | 92P31 | 2 | Decal, U-Lock Patent | 0.01 | 0.02 |



| HEX HEAD CAP SCREW TORQUE SPECS | | | | |
|------------------------------------|----------------------------|--|--|--|
| BOLT | SAE GR 8 W/ LOCK WASHER | | | |
| SIZE | (FT-LBS) | | | |
| 3/8 | 3/8 53 | | | |
| 7/16 | 85 | | | |
| 1/2 | 130 | | | |
| 5/8 | 258 | | | |
| 3/4 | 459 | | | |
| 7/8 | 739 | | | |
| 1 | 1108 | | | |

Note: Apply Loctite 243 (Blue) to all bolts.

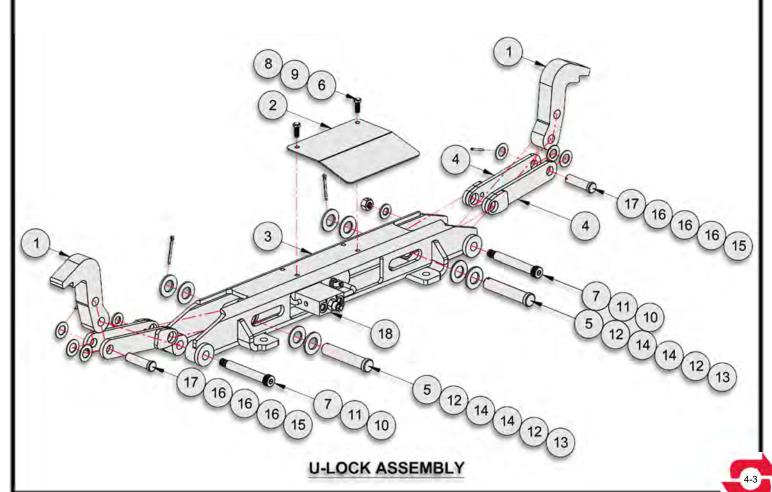
| 92H14 | - CYLIN | | SL-112 | | |
|-------|-----------|-----|------------------------------|---------------|---------------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT- lb/all |
| 1 | 27H14 | 2 | Spacer, BL Mnt 3/4 100S | 4.11 | 8.22 |
| 2 | 44H76 | 1 | U-Lock Assy, 100/200S | 86.33 | 86.33 |
| 3 | 90H74 | 1 | Nylon Hose Sleeve x 60" | 0.25 | 0.25 |
| 4 | 00785 | 8 | Washer, Flat 5/8 ZP | 0.07 | 0.56 |
| 5 | 00P55 | 4 | Nut, Lock 5/8-11 UNC Gr8 | 0.13 | 0.52 |
| 6 | 01P49 | 4 | HHCS 5/8-11 UNC x 2-3/4 Gr8 | 0.27 | 1.08 |
| 7 | 10P43 | 2 | Adp Hyd 08MJ/08MJ BHD | 0.30 | 0.60 |
| 8 | 13P14 | 2 | Adp Hyd 08FJ Cap | 0.32 | 0.64 |
| 9 | 13P87 | 2 | Adp Hyd 06MJ/08FJ | 0.30 | 0.60 |
| 10 | 14P55 | 2 | Hose Assy 69 06-06FJ/06FJ90 | 6.00 | 12.00 |
| 11 | 14P77 | 2 | Adp Hyd 06MJ/06MB .141 Rstr. | 0.08 | 0.16 |
| 12 | 91P50 | 2 | Decal, Pinch Point | 0.01 | 0.02 |
| 13 | 91P51 | 3 | Decal, U-Lock Engagement | 0.01 | 0.03 |
| 14 | 92P31 | 2 | Decal, U-Lock Patent | 0.01 | 0.02 |



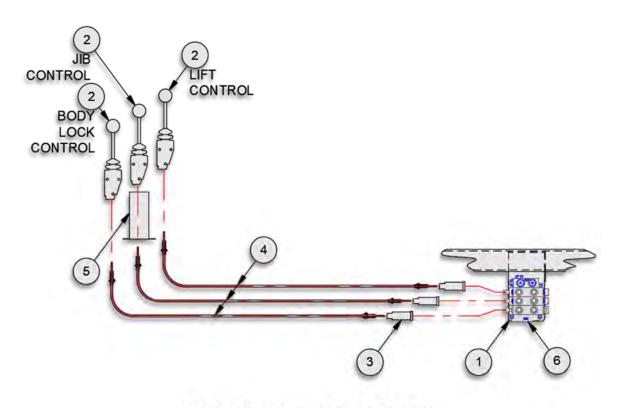
| HEX HEAD CAP SCREW TORQUE SPECS | | | | |
|------------------------------------|----------------------------|--|--|--|
| BOLT SAE GR 8 | | | | |
| SIZE | W/ LOCK WASHER (FT-LBS) | | | |
| 3/8 53 | | | | |
| | | | | |
| 7/16 | 85 | | | |
| 1/2 | 130 | | | |
| 5/8 | 258 | | | |
| 3/4 | 459 | | | |
| 7/8 | 739 | | | |
| 1 | 1108 | | | |

Note: Apply Loctite 243 (Blue) to all bolts.

| 44H76 | 44H76 – U-LOCK ASSEMBLY | | | | SL-112 |
|-------|-------------------------|-----|-------------------------------|--------|--------|
| ITEM | PART | QTY | DESCRIPTION | WT- | WT- |
| | # | | | lb/ea. | lb/all |
| 1 | 26H97 | 2 | Prong, U-Lock 100/200S | 6.58 | 13.16 |
| 2 | 27H26 | 1 | Cover Plate, Hyd Lock | 1.90 | 1.90 |
| 3 | 44H77 | 1 | U-Lock Wdmt, 100/200S | 43.14 | 43.14 |
| 4 | 44H78 | 4 | Linkage Wdmt, U-Lock 100/200S | 1.74 | 6.96 |
| 5 | 00837 | 2 | Pin, Cotter 3/16 Dia x 2 | 0.02 | 0.04 |
| 6 | 00P14 | 2 | Nut, Hex 3/8-16 UNC Gr8 | 0.02 | 0.04 |
| 7 | 00P55 | 2 | Nut, Lock 5/8-11 UNC Gr8 | 0.13 | 0.26 |
| 8 | 00P62 | 2 | HHCS 3/8-16 UNC x 1 Gr8 | 0.05 | 0.10 |
| 9 | 01P28 | 2 | Washer, Disc Lock 3/8 Pr | 0.01 | 0.02 |
| 10 | 01P85 | 2 | SS 5/8-11 UNC x 4-3/4 | 0.75 | 1.50 |
| 11 | 01P86 | 2 | Washer, Flat 5/8 ZP | 0.06 | 0.12 |
| 12 | 01P87 | 4 | Washer, Flat 1 ZP | 0.10 | 0.40 |
| 13 | 01P88 | 2 | Pin, Clevis 1 x 4-11/16 | 1.21 | 2.42 |
| 14 | 01P89 | 4 | Washer, Flat 1 Nylon | 0.01 | 0.04 |
| 15 | 01P90 | 2 | Pin, Clevis 3/4 x 2-1/2 ZP | 0.39 | 0.78 |
| 16 | 01P91 | 6 | Washer, Flat 3/4 SS | 0.02 | 0.12 |
| 17 | 01P92 | 2 | Pin, Sltd Spg 5/32 x 1-1/2 ZP | 0.01 | 0.02 |
| 18 | 22P90 | 1 | Hyd Cyl 2x1x6 | 14.86 | 14.86 |

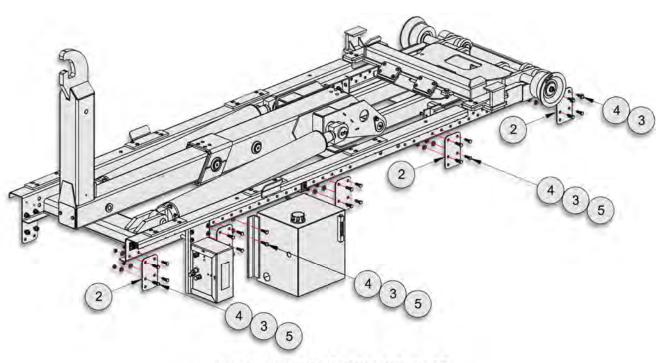


| 91H48 | 91H48 - MANUAL CONTROLS, 3-SECTION | | | | |
|-------|------------------------------------|-----|----------------------------|--------|--------|
| ITEM | PART | QTY | DESCRIPTION | WT- | WT- |
| | # | α | Becomminder | lb/ea. | lb/all |
| 1 | 13H76 | 1 | Valve Mount Bkt, 3-Sect | 11.47 | 11.47 |
| 2 | 20P08 | 3 | Control Handle, Cable | 2.80 | 8.40 |
| 3 | 20P10 | 3 | Bonnet Kit, V20 | 0.50 | 1.50 |
| 4 | 20P15 | 3 | Control Cable Assy, 84 STD | 1.83 | 5.49 |
| 5 | 20P78 | 1 | Control Console, 3-Sect | 0.60 | 0.60 |
| 6 | 22P94 | 1 | Hyd Valve, 3-Sect 3250 V20 | 45.00 | 45.00 |



| DISC-LOCK WASHER TORQUE SPECS | | | | |
|----------------------------------|--------------------------------------|--|--|--|
| BOLT SIZE | SAE GR 8 ASS'Y TORQUE (FT-LBS) | | | |
| 3/8 | 53 | | | |
| 7/16 | 85 | | | |
| 1/2 | 130 | | | |
| 5/8 | 258 | | | |
| 3/4 | 459 | | | |
| 7/8 | 739 | | | |
| 1 | 1108 | | | |

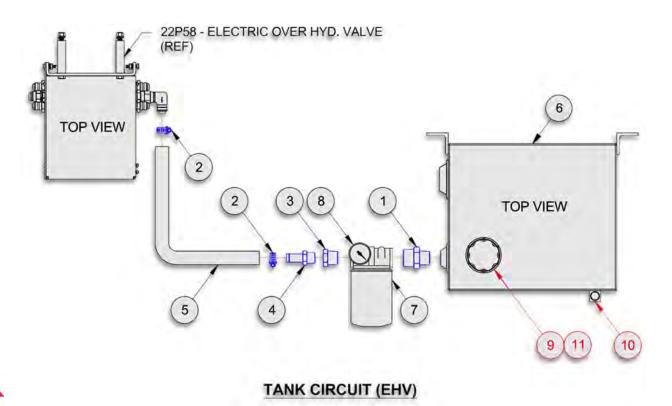
| – HOIST | INSTAI | LLATION KIT (EHV) | | SL-112 |
|-----------|---|--|--|---|
| PART # | QTY | DESCRIPTION | WT- lb/ea. | WT- lb/all |
| 14H42 | 1 | Decal Assembly, SL-112 | 0.38 | 0.38 |
| 25H89 | 10 | Mnt Bkt, 5x3/16x8-1/4 | 2.08 | 20.80 |
| 00784 | 44 | Washer, Flat 1/2 ZP | 0.01 | 0.44 |
| 00P01 | 44 | HHCS 1/2-13 UNC x 1-1/2 Gr8 | 0.21 | 9.24 |
| 00P35 | 40 | Nut, Lock 1/2-13 UNC GrC | 0.05 | 2.00 |
| 91P79 | 1 | All Model Tech Guide | 0.50 | 0.50 |
| 91P88 | 1 | Parts Manual, SL-112 | 0.01 | 0.01 |
| | PART # 14H42 25H89 00784 00P01 00P35 91P79 | PART # QTY 14H42 1 25H89 10 00784 44 00P01 44 00P35 40 91P79 1 | # QTY DESCRIPTION 14H42 1 Decal Assembly, SL-112 25H89 10 Mnt Bkt, 5x3/16x8-1/4 00784 44 Washer, Flat 1/2 ZP 00P01 44 HHCS 1/2-13 UNC x 1-1/2 Gr8 00P35 40 Nut, Lock 1/2-13 UNC GrC 91P79 1 All Model Tech Guide | PART # QTY DESCRIPTION WT-lb/ea. 14H42 1 Decal Assembly, SL-112 0.38 25H89 10 Mnt Bkt, 5x3/16x8-1/4 2.08 00784 44 Washer, Flat 1/2 ZP 0.01 00P01 44 HHCS 1/2-13 UNC x 1-1/2 Gr8 0.21 00P35 40 Nut, Lock 1/2-13 UNC GrC 0.05 91P79 1 All Model Tech Guide 0.50 |



NOTE:

TANK CONSISTS OF TANK
WELDMENT, TANK MOUNTED
STRAINER, SIGHT GAUGE,
FILLER/BREATHER CAP, MAGNETIC
DRAIN PLUG AND PORT PLUGS.

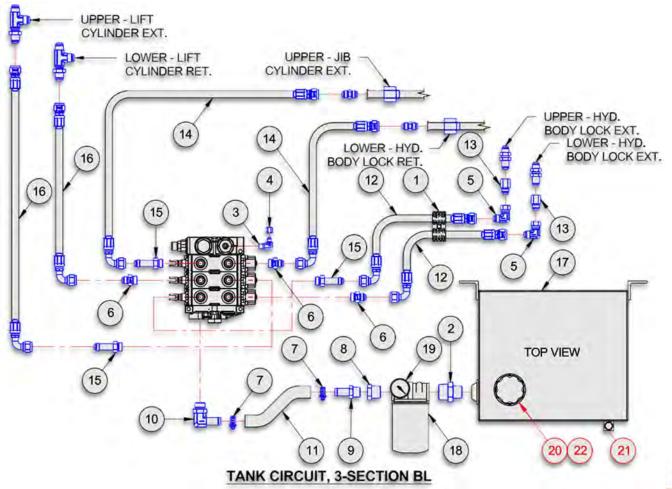
| 91H23 | 91H23 – TANK CIRCUIT (EHV) | | | | |
|-------|----------------------------|-------|-----------------------------|---------------|---------------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT- lb/all |
| 1 | 10P26 | 1 | Adp Hyd 20MP/16MP | 0.70 | 0.70 |
| 2 | 11P20 | 2 | Worm Gear Clamp (HSS16) | 0.10 | 0.20 |
| 3 | 12P21 | 1 | Adp Hyd 16MP/12FP | 0.20 | 0.20 |
| 4 | 12P22 | 1 | Adp Hyd 12HB/12MP | 0.30 | 0.30 |
| 5 | 12P29 | 1 | Hose 3/4 x 24 LP | 0.88 | 0.88 |
| 6 | 20P05 | 1 | Hyd. Tank, 15 Gallon | 54.20 | 54.20 |
| 7 | 20P22 | 1 | Hyd. Filter Assy - 25 GPM | 2.30 | 2.30 |
| 8 | 20P64 | 1 | Hyd Filter Indicator Gauge | 0.01 | 0.01 |
| SERVI | CE PART | S FOR | TANK | | |
| 9 | 20P07 | 1 | Hyd Strainer, 25 GPM | 1.20 | |
| 10 | 20P96 | 1 | Sight Gauge, Hyd Tank | 0.70 | |
| 11 | 20P97 | 1 | Breather Cap Assy, Hyd Tank | 0.60 | |



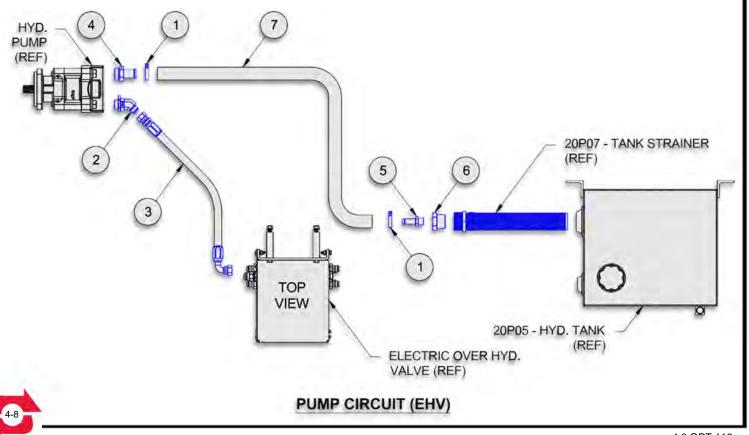
NOTE:

TANK CONSISTS OF TANK
WELDMENT, TANK MOUNTED
STRAINER, SIGHT GAUGE,
FILLER/BREATHER CAP, MAGNETIC
DRAIN PLUG AND PORT PLUGS.

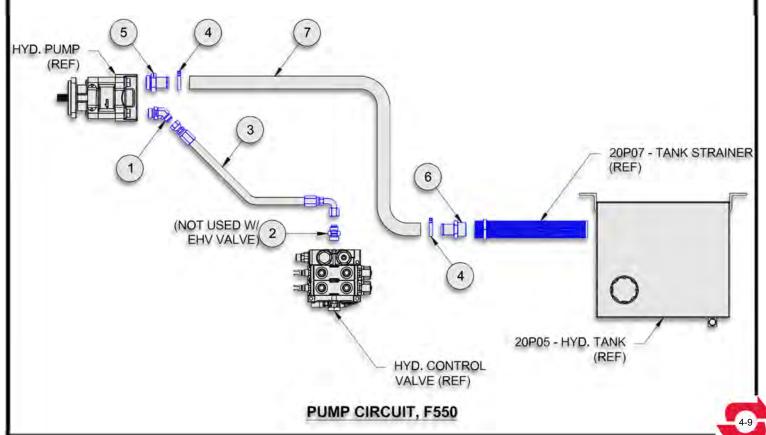
| 92H02 | – TANK | | SL-112 | | |
|-------|-----------|-------|-----------------------------|---------------|---------------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT- lb/all |
| 1 | 91H76 | 1 | Twin Clamp Assy, 1/2-7/8 | 0.29 | 0.29 |
| 2 | 10P26 | 1 | Adp Hyd 20MP/16MP | 0.70 | 0.70 |
| 3 | 10P37 | 1 | Adp Hyd 04MJ/04MP 90 | 0.30 | 0.30 |
| 4 | 10P38 | 1 | Adp Hyd 04FJ Cap | 0.10 | 0.10 |
| 5 | 10P44 | 2 | Adp Hyd 08MJ/08FJ 90 | 0.23 | 0.46 |
| 6 | 11P08 | 3 | Adp Hyd 08MJ/10MB | 0.30 | 0.90 |
| 7 | 11P20 | 2 | Clamp, WG 11/16 - 1-1/2 | 0.10 | 0.20 |
| 8 | 12P21 | 1 | Adp Hyd 16MP/12FP | 0.20 | 0.20 |
| 9 | 12P22 | 1 | Adp Hyd 12HB/12MP | 0.30 | 0.30 |
| 10 | 12P23 | 1 | Adp Hyd 12HB/12MB 90 | 0.60 | 0.60 |
| 11 | 12P29 | 1 | Hose 3/4 x 24 LP | 0.88 | 0.88 |
| 12 | 13P71 | 2 | Hose Assy 70 08-08FJ/08FJ90 | 3.12 | 6.24 |
| 13 | 13P99 | 2 | Adp Hyd 08MJ/08FJ | 0.15 | 0.30 |
| 14 | 14P58 | 2 | Hose Assy 19 08-08FJ/08FJ90 | 1.50 | 3.00 |
| 15 | 14P62 | 3 | Adp Hyd 08MJ/10MB L | 0.30 | 0.90 |
| 16 | 15P11 | 2 | Hose Assy 23 08-08FJ/08FJ90 | 0.89 | 1.78 |
| 17 | 20P05 | 1 | Hyd Tank, 15 Gallon | 54.20 | 54.20 |
| 18 | 20P22 | 1 | Hyd Filter Assy, 25 GPM | 2.30 | 2.30 |
| 19 | 20P64 | 1 | Hyd Filter Indicator Gauge | 0.01 | 0.01 |
| SERVI | CE PART | S FOR | | | |
| 20 | 20P07 | 1 | Hyd Strainer, 25 GPM | | |
| 21 | 20P96 | 1 | Sight Gauge, Hyd Tank | | |
| 22 | 20P97 | 1 | Breather Cap Assy, Hyd Tank | | |



| 91H22 – | 91H22 – PUMP CIRCUIT (EHV) SL-214 | | | | | |
|---------|-----------------------------------|-----|------------------------------|---------------|-----------|--|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all | |
| 1 | 10P21 | 2 | T-Bolt Clamp - 1-1/2 Dia | 0.10 | 0.20 | |
| 2 | 10P32 | 1 | Adp Hyd 10MJ/12MB 45 | 0.30 | 0.30 | |
| 3 | 10P61 | 1 | Hose Assy 106 08-10FJ/10FJ90 | 3.80 | 3.80 | |
| 4 | 12P18 | 1 | Adp Hyd 16HB/16MB | 0.40 | 0.40 | |
| 5 | 12P19 | 1 | Adp Hyd 10HB/10MP | 0.30 | 0.30 | |
| 6 | 12P20 | 1 | Adp Hyd 20MP/16FP | 0.30 | 0.30 | |
| 7 | 12P28 | 1 | Hose 1 x 120 LP | 6.60 | 6.60 | |

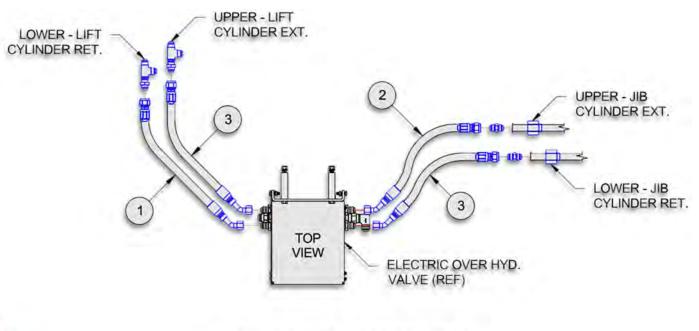


| 91H93 – PUMP CIRCUIT, F550 SL-112 | | | | | |
|-----------------------------------|-----------|-----|------------------------------|---------------|-----------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all |
| 1 | 10P32 | 1 | Adp Hyd 10MJ/12MB 45 | 0.30 | 0.30 |
| 2 | 10P35 | 1 | Adp Hyd 10MJ/12MB | 0.30 | 0.30 |
| 3 | 10P61 | 1 | Hose Assy 106 08-10FJ/10FJ90 | 3.80 | 3.80 |
| 4 | 10P78 | 2 | Clamp, T-Bolt Ø1-3/4 | 0.12 | 0.23 |
| 5 | 12P24 | 1 | Adp Hyd 20HB/20MB | 0.40 | 0.40 |
| 6 | 12P25 | 1 | Adp Hyd 20HB/20MP | 0.40 | 0.40 |
| 7 | 12P30 | 1 | Hose 1-1/4 x 148 LP | 9.74 | 9.74 |



VI: Options

| 92H03 – HOSE CIRCUIT, 2-SECTION (EHV) SL-112 | | | | | |
|--|-----------|-----|-----------------------------|---------------|-----------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all |
| 1 | 12P53 | 1 | Hose Assy 21 08-08FJ/08FJ45 | 0.84 | 0.84 |
| 2 | 12P54 | 1 | Hose Assy 17 08-08FJ/08FJ45 | 1.11 | 1.11 |
| 3 | 12P59 | 2 | Hose Assy 20 08-08FJ/08FJ45 | 0.86 | 1.72 |



HOSE CIRCUIT, 2-SECTION (EHV)

| 92H04 – HOSE CIRCUIT, 3-SECTION (EHV) SL-112 | | | | | |
|--|-----------|-----|-----------------------------|---------------|-----------|
| ITEM | PART # | QTY | DESCRIPTION | WT- lb/ea. | WT-lb/all |
| 1 | 91H76 | 1 | Twin Clamp Assy, 1/2-7/8 | 0.29 | 0.29 |
| 2 | 10P44 | 2 | Adp Hyd 08MJ/08FJ 90 | 0.23 | 0.46 |
| 3 | 12P53 | 1 | Hose Assy 21 08-08FJ/08FJ45 | 0.84 | 0.84 |
| 4 | 12P54 | 1 | Hose Assy 17 08-08FJ/08FJ45 | 1.11 | 1.11 |
| 5 | 12P59 | 2 | Hose Assy 20 08-08FJ/08FJ45 | 0.86 | 1.72 |
| 6 | 13P34 | 1 | Hose Assy 66 08-08FJ/08FJ45 | 2.20 | 2.20 |
| 7 | 13P99 | 2 | Adp Hyd 08MJ/08FJ | 0.15 | 0.30 |
| 8 | 14P56 | 1 | Hose Assy 70 08-08FJ/08FJ45 | 1.55 | 1.55 |

