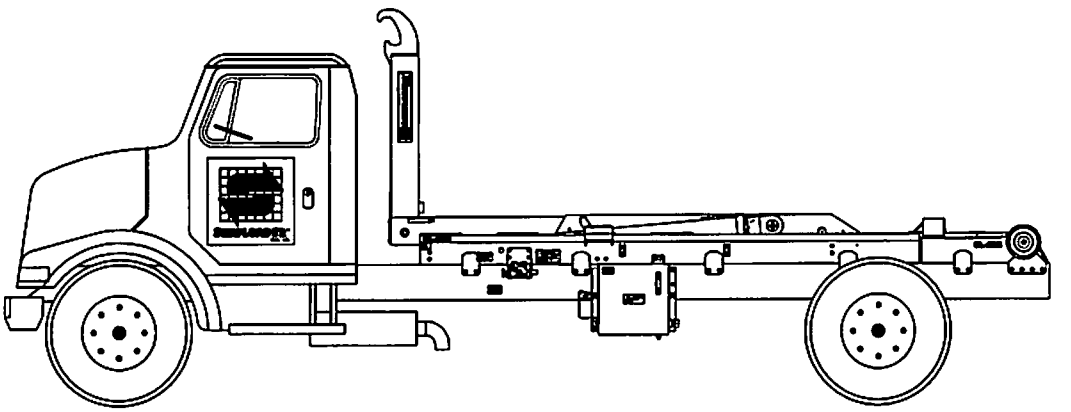
SWAPLOADER®
U.S.A. LTD.

Model SL-205

Parts and Operations Manual



Hoist Serial Number: _____

SWAPLOADER U.S.A., LTD.
1800 N.E. BROADWAY AVENUE
BOX D
DES MOINES, IA 50316-0386

WARRANTY REGISTRATION CARD

Model _____

Serial No. _____

MOUNTED ON VEHICLE:

Manufacturer _____

Model _____

Year _____

Wheel Base _____

Chassis Serial # _____

PTO Type _____

PTO Ratio _____

DISTRIBUTOR:

Name (print) _____

Address _____

City, State, Zip _____

The unit has been checked and serviced according to the Pre-delivery inspection report. The proper mechanical operation of the unit as described in the written operational instructions provided by SwapLoader U.S.A., Ltd. has been discussed with the customer.

_____
Customer Name

_____
Address

_____
City, State, Zip

_____
Customer Signature

Date Installed _____

Date Inspected _____

_____
Distributor Signature

PREDELIVERY CHECK LIST
SWAPLOADER MODEL SL-205 HOIST INSTALLATION

Conducted by: _____ **Date:** _____

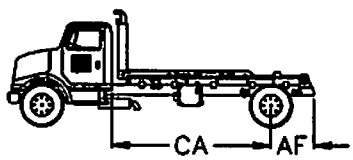
Dealer: _____

Customer: _____

I. COMPONENT INFORMATION

Hoist Serial No.: _____

Truck Chassis:
Identification No.: _____
GVW: _____
Distance from rear of cab to the Center Line of Rear Axle/Tandem (CA): _____
Distance From Center Line of Rear Axle/Tandem to Rear of Hoist (AF): _____



PTO:
Make: _____
Model: _____
Serial No.: _____
% of Engine RPM: _____

Hyd. Pump:
Make: _____
Model: _____
Serial No.: _____

II. INSTALLATION TO CHASSIS

Were there any problems installing the hoist to the truck chassis? _____ YES _____ NO

If yes, please describe _____

_____

_____

_____ All bolts checked for proper tightness.
_____ Please include photos of the hoist installed on the truck chassis. Be sure to include at least one photo from each side.

III. CONTROLS

_____ Controls easy to reach from driver's seat.
_____ Movement of controls correct per installation instructions.

PREDELIVERY CHECK LIST
SWAPLOADER MODEL SL-205 HOIST INSTALLATION

IV. HYDRAULICS INSTALLATION

_____ Correct hydraulic oil level in reservoir
_____ Check for leaks
Any abnormal noise during operation: _____ YES _____ NO
If yes, explain: _____

WITH ENGINE OPERATING @ 1000 RPM, RECORD THE FOLLOWING INFORMATION:

Cycle time for dump mode: Up _____ Sec. Down _____ Sec.
Cycle time for load/unload mode: Unload _____ Sec. Load _____ Sec.
Filter pressure _____ PSI.
Main pressure, controls in neutral _____ PSI.
Main relief pressure when extending jib cylinder (bottomed out)_____PSI.
Main relief pressure when extending lift cylinders (bottomed out)_____PSI.

NOTE: Connect pressure gauge to fitting provided on inlet section of Hyd. Control Valve (Ref. Pt. No. 10P37 fitting on Hyd. Pump Circuit Drawing No. 90H22).

V. OPERATION

_____ Jib operates freely in both directions.
_____ Jib cannot be extended or retracted when raised in dump position or when pivot joint is tilted in unload position. Both safety hooks are fully engaged when jib is extended.
_____ Parts and operators manual in cab.
_____ Lubricate sliding jib and all grease zerks per installation instructions.

VI. DECALS

_____ All safety decals and product decals installed per Drawing 50H45.

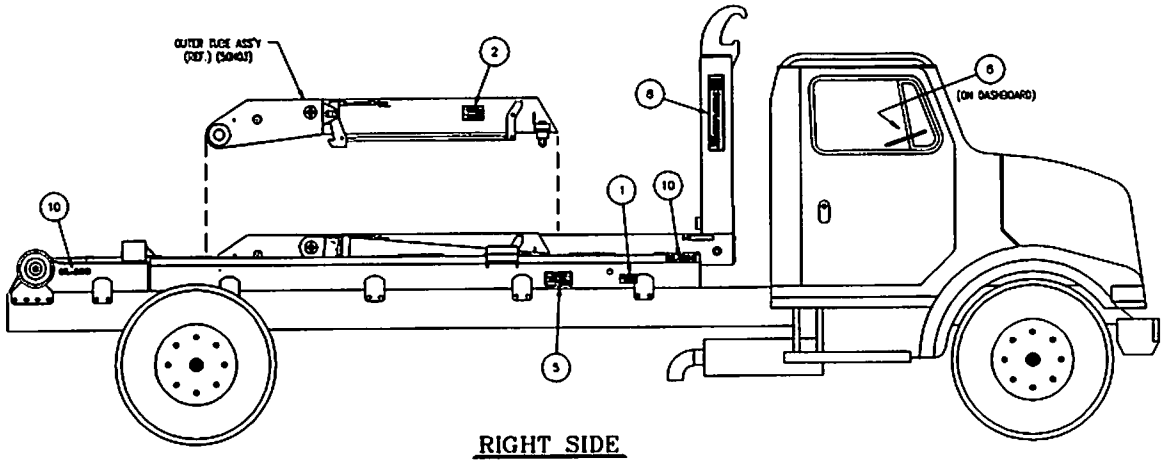
ADDITIONAL COMMENTS:

_____
_____
_____

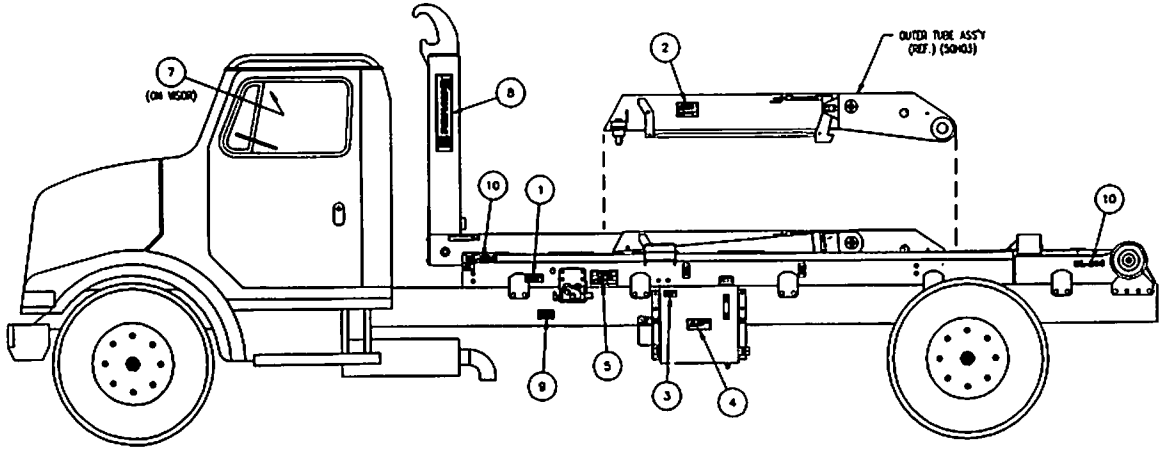
SEND COMPLETED FORM TO:

SWAPLOADER U.S.A., LTD.
1800 N.E. BROADWAY AVENUE, BOX D
DES MOINES, IOWA 50316-0386

RETAIN ONE COPY FOR YOUR FILE.



RIGHT SIDE



LEFT SIDE

MATERIAL LIST

ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	2	90P07	OPR. & SERV. MANUAL		
2	2	90P08	HOIST - BODY SPEC.		
3	ONE	90P09	HYD. OIL SPEC.		
4	ONE	90P10	HYD. OIL FLAMMABLE		
5	2	90P11	HOIST FAILING		
6	ONE	90P12	LEVER CONTROL		
7	ONE	90P13	SAFTY INSTRUCTIONS		
8	3	90P14	SWAPLOADER - JB		
9	ONE	90P18	RELIEF VALVE		
10	4	90P21	SL-205		
					TOTAL

NO.	REVISION	DATE	BY
A	CHANGED 90P21	8/17/92	R.S.

GENERAL NOTES

1. ANY ALTERATION OR REPAIR OF SWAPLOADER EQUIPMENT MUST BE AUTHORIZED IN WRITING BY SWAPLOADER USA, LTD AND MUST BE CARRIED OUT BY QUALIFIED PERSONNEL. ANY MODIFICATION OF EQUIPMENT OR USE OF THAT EQUIPMENT OTHER THAN AS SHOWN WITHOUT APPROVAL IN WRITING BY SWAPLOADER USA, LTD. WILL VOID ALL WARRANTIES.
2. THIS DRAWING IS THE PROPERTY OF SWAPLOADER USA, LTD. AND IS LOANED TO THE RECIPIENT IN CONFIDENCE.
3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

DETAILED BY: 2/25/92 R.S.
CHECKED BY: 8/17/92 T.W
PRINT DISTRIBUTION
DWG. NO.
DATE
SHOP
FILE
TOTAL

SWAPLOADER U.S.A. LTD.

TITLE: DECAL ASSEMBLY

CUSTOMER

SCALE: 3/8 = 12 | SIZE No. SL-205 | DRAWING No. 50445 A

TABLE OF CONTENTS

INTRODUCTION

SWAPLOADER U.S.A., LTD.

TO THE CUSTOMER

Your new SwapLoader Hoist was carefully designed and manufactured to give years of dependable service. To keep it operating efficiently, read the instructions in this manual thoroughly. It contains detailed descriptions and instructions for the efficient operation and maintenance of your SwapLoader. 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. All instructions are recommended procedures only.

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 you prompt, efficient service when you order parts. It pays to rely on an authorized SwapLoader Distributor for your service needs. For the location of the Distributor nearest you, contact SwapLoader.

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.

SWAPLOADER U.S.A., LTD.
1800 BROADWAY N. E.
DES MOINES, IA 50313

LIMITED WARRANTY STATEMENT

SwapLoader U.S.A., Ltd., (SwapLoader), warrants to the original purchaser of any new SwapLoader product shipped after October 1, 1999, for a period of thirty-six (36) months from the date of installation by an authorized SwapLoader distributor or service center, that such products are free of defects in material and workmanship. SwapLoader warrants to the original purchaser of any new product shipped before October 1, 1999, for a period of twenty-four (24) months from the date of installation by an authorized SwapLoader distributor or service center, that such products are free of defects in material and workmanship. SwapLoader will, at its discretion, either repair the defective parts or replace them with equivalent parts, subject to the conditions below.

- Replacement or repair of parts will be provided for 36 months on SwapLoader products shipped on or after October 1, 1999 or for 24 months on SwapLoader products shipped prior to October 1, 1999, F.O.B. SwapLoader plant, subject to any applicable federal, state or local taxes. Labor charges are covered for a period of 90 days, whether shipped before or after October 1, 1999, from the date of installation by an authorized SwapLoader distributor or service center.

- Defective parts must be reported to SwapLoader within 30 days of discovery on a SwapLoader warranty claim report form.

- Warranty is valid only if the Warranty Registration card is returned within 15 days of installation of the SwapLoader hoist to SwapLoader, Des Moines, Iowa.

- Warranty shall not apply if the equipment is operated at capacities in excess of factory recommendations.

- Warranty does not apply to defects caused by accident, misuse, alteration of design, improper installation or maintenance, repair, reinstallation, or any other cause beyond the control of SwapLoader.

- Warranty as provided herein shall be the purchaser's exclusive and limited remedy, and SwapLoader shall in no event be liable for consequential or other damages.

- SwapLoader is not responsible for the removal or replacement of accessories (fenders, toolbox, etc.).

- Warranty service must be performed by a distributor or service center authorized by SwapLoader to sell and/or service SwapLoader products, which will use only new or remanufactured parts or components furnished by SwapLoader U.S.A., Ltd.

- Warranty is expressly void if seal on the main relief control valve has been broken.

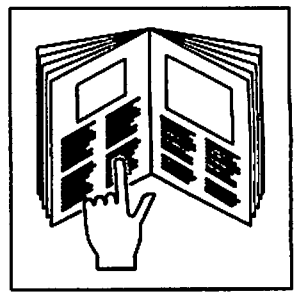
- Customer is responsible for any freight, labor (beyond 90 days), or transportation charges incurred to repair the unit.

- Warranty is expressly void if serial number plate or stamping is tampered with.

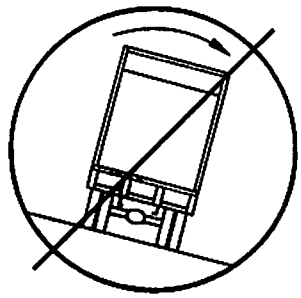
IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT THERE ARE NO WARRANTIES MADE BY THE MANUFACTURER OR ITS AGENTS, REPRESENTATIVES OR DISTRIBUTORS, EITHER EXPRESSED, IMPLIED, OR IMPLIED BY LAW, EXCEPT THOSE EXPRESSLY STATED ABOVE IN THIS STANDARD LIMITED WARRANTY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP. THE MANUFACTURER AND ITS AGENTS, REPRESENTATIVES AND DISTRIBUTORS SPECIFICALLY DISCLAIM ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

SAFETY SUGGESTIONS

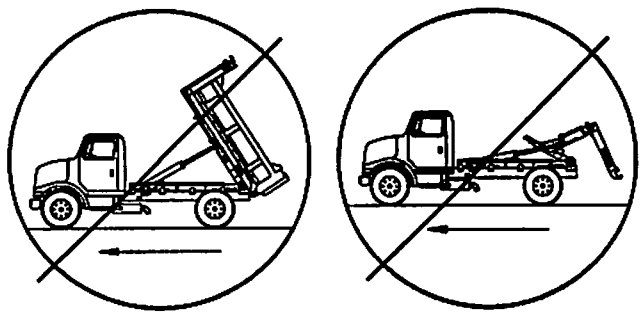
1. Do not operate or service this equipment until you have been properly trained and instructed in its use and have read the operation and service manual.



2. Do not operate this equipment on uneven ground.



3. Do not drive with the hoist in the dump position or with the hook to the rear.

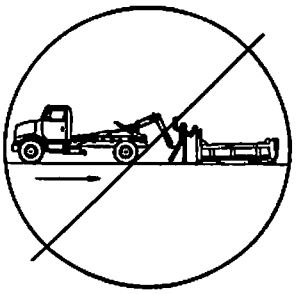


4. Do not exceed 1,500 Engine RPM when operating the Power Take Off (P.T.O.). Never leave the P.T.O. in gear while transporting.

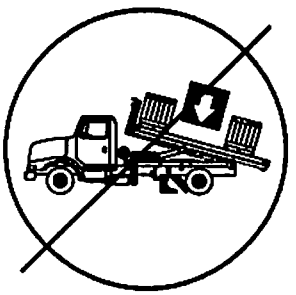
5. The hoist must be used with containers that properly fit the hook and rear holddowns. The container specifications must match the hoist specifications.

6. Keep the containers and hoist in good working order. **DO NOT** use if repairs are needed. Perform periodic inspections and maintenance as required by the maintenance section of the operator's manual.

7. Make sure work area is clear of people and obstacles prior to dumping or unloading containers. SwapLoader strongly recommends that a back up alarm be installed on the truck chassis. The operation of the hook hoist is that the truck is backed up to the body to pick it up and so there is a potential pinch point between the body and the hook.

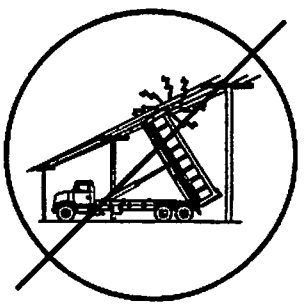


8. Any container, which is on the hoist, **MUST** be unloaded prior to performing any repairs or maintenance to the hoist. Also, **DO NOT** allow any person to work on or be under the hoist in a raised position without first installing adequate safety blocks to eliminate all possibility of the hoist accidentally lowering. SwapLoader strongly recommends that if possible the container should be dismounted from the hoist prior to performing any maintenance to the hoist.



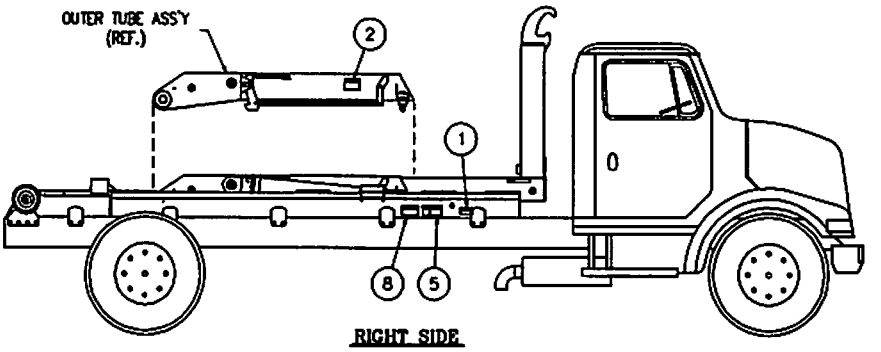
9. It is the responsibility of the owner and/or installer to insure that any additional safety devices required by state or local codes are installed on the SwapLoader Hoist and/or Truck Chassis.

10. Keep away from overhead power lines. Serious injury or death can result from contact with electrical lines. Use care when operating hoist near electrical lines to avoid contact.

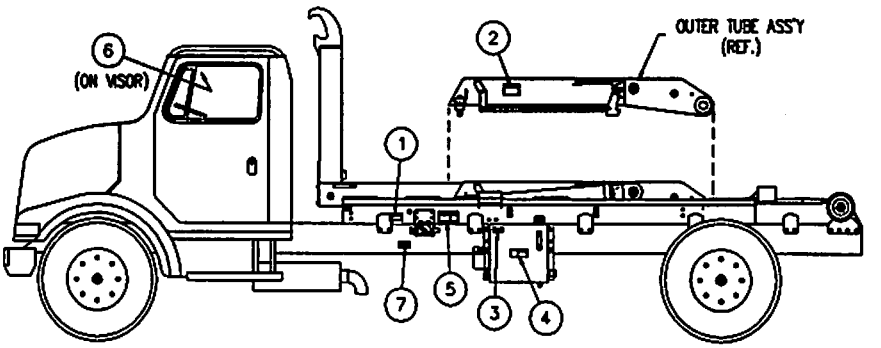


11. Avoid contact with high-pressure fluids. Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid hazardous conditions by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard, while protecting hands and body from the high-pressure fluids.

12. It is the responsibility of the owner to provide proper maintenance of the Safety Decals. Regular inspection and replacing of Safety Decals that have any fading or damage which would impair their function should be done (See the illustration on the following page for location of Safety Decals).



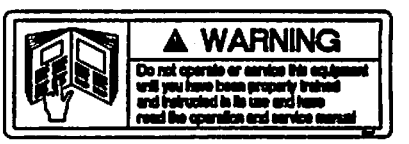
RIGHT SIDE

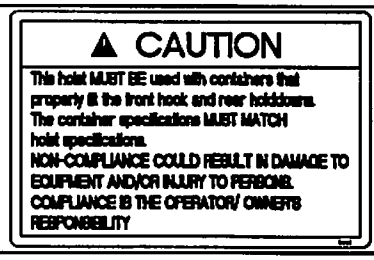
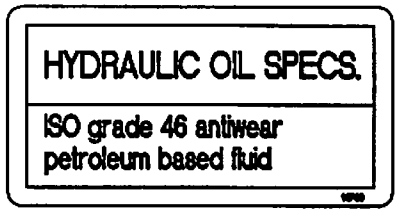
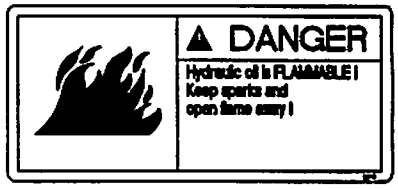
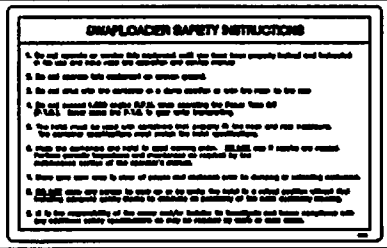
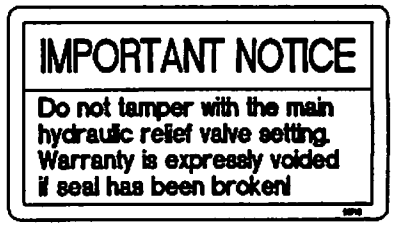
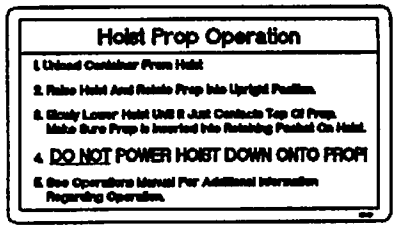


LEFT SIDE

ITEM	QTY	P/N	DESCRIPTION
1	2	90P07	OPERATION & SERVICE MANUAL
2	2	90P08	HOIST-BODY SPECIFICATIONS
3	ONE	90P09	HYDRAULIC OIL SPECIFICATIONS
4	ONE	90P10	HYDRAULIC OIL FLAMMABLE
5	2	90P11	HOIST FALLING
6	ONE	90P13	SAFETY INSTRUCTIONS
7	ONE	90P18	RELIEF VALVE
8	ONE	90P52	PROP DECAL

The following is a list of all the Swaploader Safety Decals, and their part numbers. Please use when reordering replacement decals.

90P07 – OPERATIONS & SERVICE MANUAL	

90P08 – HOIST-BODY SPECIFICATIONS	
90P09 – HYDRAULIC OIL SPECIFICATIONS	
90P10 – HYDRAULIC OIL FLAMMABLE	
90P11 – HOIST FALLING	
90P13 – SWAPLOADER SAFETY INSTRUCTIONS	
90P18 – RELIEF VALVE	
90P52 – PROP DECAL (OPTIONAL)	

INSTALLATION

INITIAL INSPECTION

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.

You should then check the hoist to insure you have received all the parts as indicated by the Packing List and the Ship Loose Box List.

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 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 (or air lines if you have air shift controls) 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 particular 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

1. Place the SL-205 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. The truck chassis should meet the following minimum specifications (See Figures A & B):

RBM for each frame channel: 900,000 in.-lb.
Total RBM: 1,800,000 in.-lb.
Minimum clear frame rail for mounting: 198" (See Fig. A&B)
Front Axle Cap: 12,000 lb. (Min)
Total Rear Axle Capacity: 20,000 lb. (Min)
CA Dim: 138" to 156" (156" preferred)
CT Dim: 132" to 144" (144" preferred)

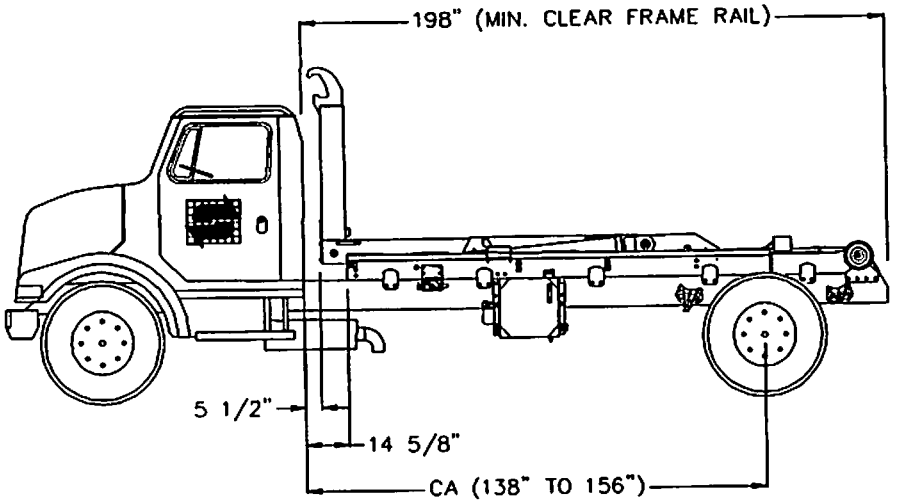


Figure A

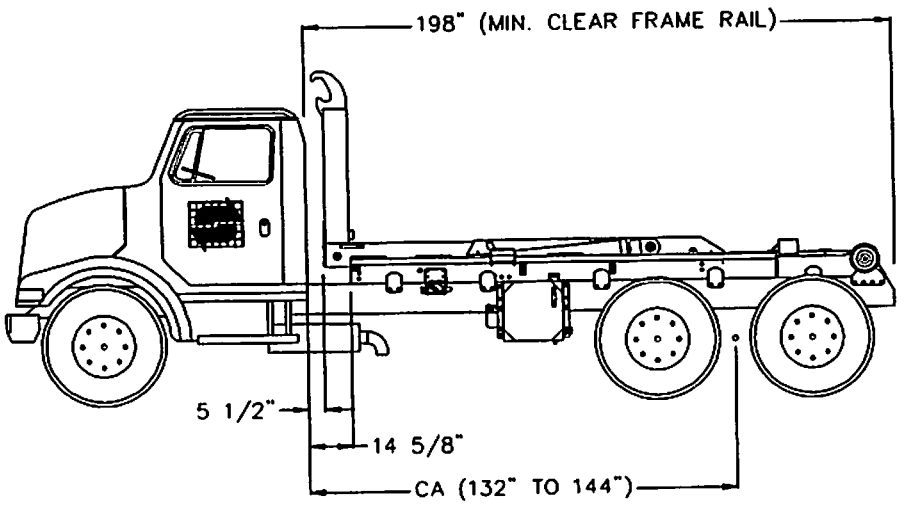


Figure B

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.)

The clear frame dimension indicated in the picture above 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, 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 with regard to the bridge code when positioning the hoist.

2. There are two types of mount brackets used on the Model SL-205 hoist as indicated in Figure C or Drawing No. 50H51. They are the front mount brackets (Pt. No. 60H60), and the rear mount brackets (Pt. No. 60H61).

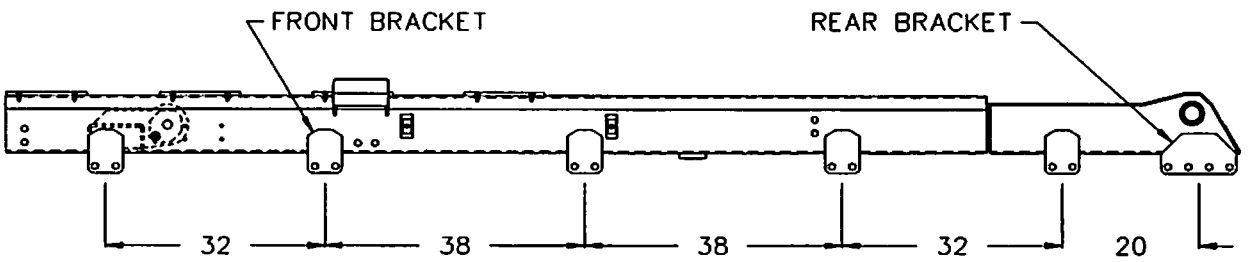


Figure C

Locate the mount brackets on the side of the hoist as indicated in Figure C. These dimensions are flexible because of possible interference with chassis components. Also allow 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 ¾" from the top of the truck chassis rails (Reference figure D & E).

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 21/32 diameter holes required and attach the brackets to the truck chassis with the 5/8-inch diameter bolts, washers, and locking hex nuts provided. Torque to 220 ft.lbs.

3. Weld the mount brackets to the hoist mainframe as indicated on Figures D thru E. 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.

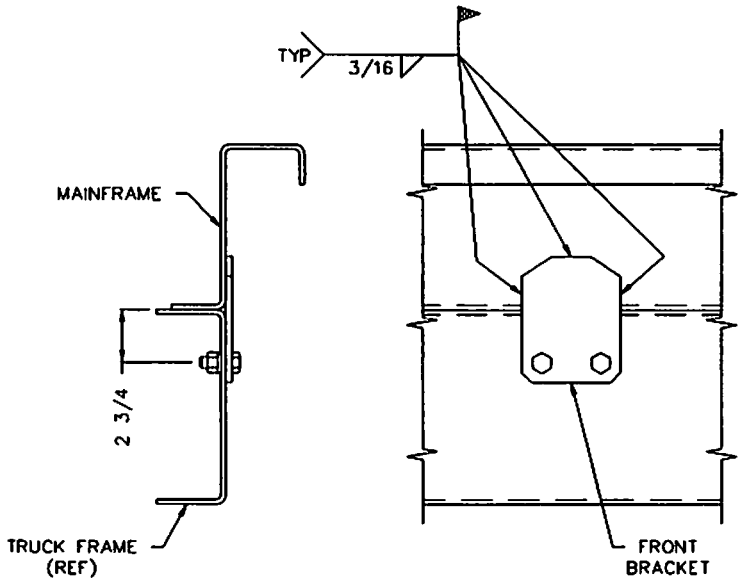


Figure D

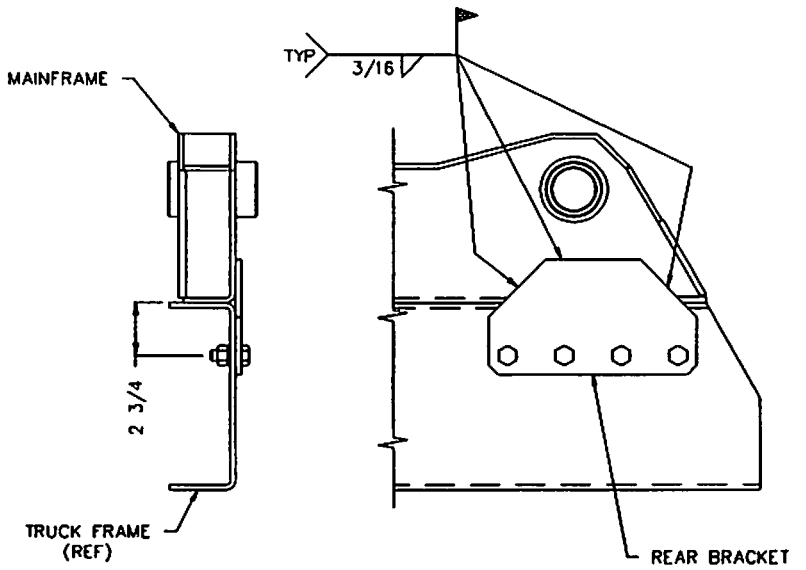
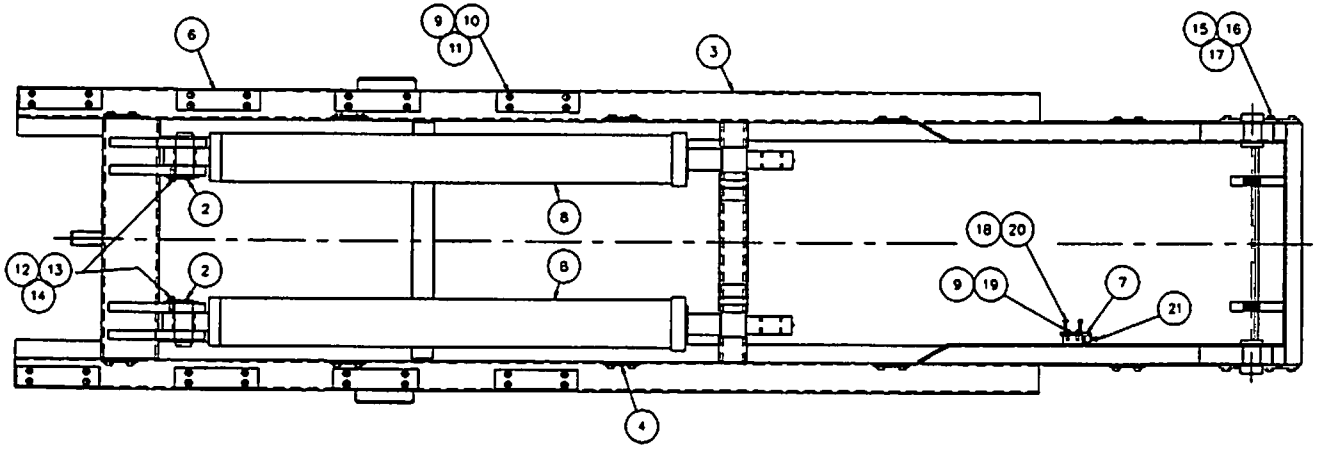
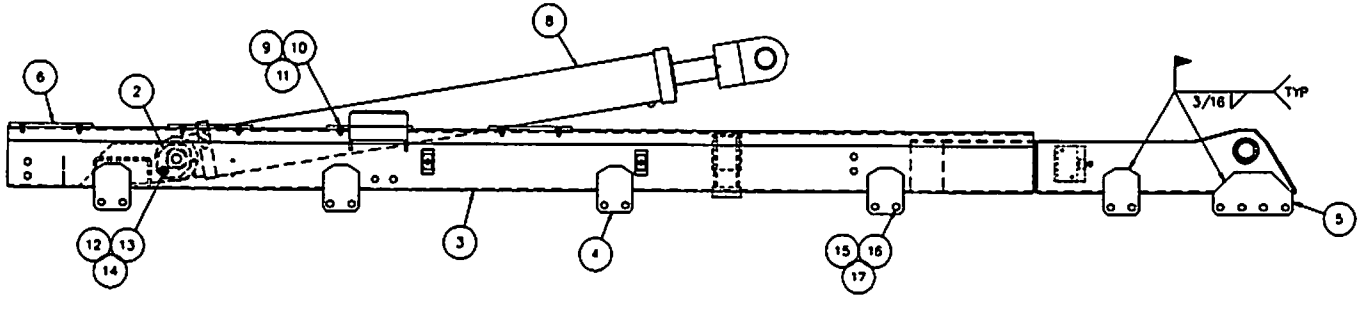


Figure E

Note: Prior to any welding, consult the truck manufacturer for 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.

Note: The hoist mainframe is made from high strength low alloy steel. Use an appropriate welding process.





MATERIAL LIST

ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1					
2	2	50H13	MAINFRAME PIN WDMT	9.98	
3	ONE	51H35	MAINFRAME WDMT	773.36	
4	10	60H60	FRONT BRACKET	1.88	
5	2	60H51	REAR BRACKET	5.68	
6	8	50P71	12" WEAR BLOCK	.71	
7	ONE	42H11	JB LOCKOUT VALVE WDMT	2.39	
8	2	20P33	HYD CYL 6Ø X 54	350.00	
9	34	00755	3/8Ø LOCK WASHER	.01	
10	32	00P14	3/8-16 HEX NUT	.02	GR-8
11	32	00P68	3/8-16 x 1 1/4 FL HD SCR	.03	BRASS
12	2	00760	1/2Ø LOCK WASHER	.02	
13	2	00784	1/2Ø FLAT WASHER HT	.02	F-436
14	2	00P01	1/2-13 x 1 1/2 HHCS	.13	GR-8
15	28	00785	5/8Ø FLAT WASHER HT	.04	F-436
16	28	00P69	5/8-11 x 2 HHCS	.27	GR-8
17	28	00P55	5/8Ø LOCKING HEX NUT	.11	IDR43B
18	2	00752	5/16Ø LOCK WASHER	.01	
19	2	00P13	3/8-16 x 1 1/4 HHCS	.06	GR-8
20	2	01P08	5/16-18 x 2 HHCS	.05	GR-8
21	ONE	01P20	3/8-16 x 1 3/4 SOC HD SCR	.07	GR-8
				1545.90	TOTAL

MAINFRAME SUB-ASSEMBLY
SL-205
DWG.-50H51 REV D

CONTROLS INSTALLATION - MANUAL

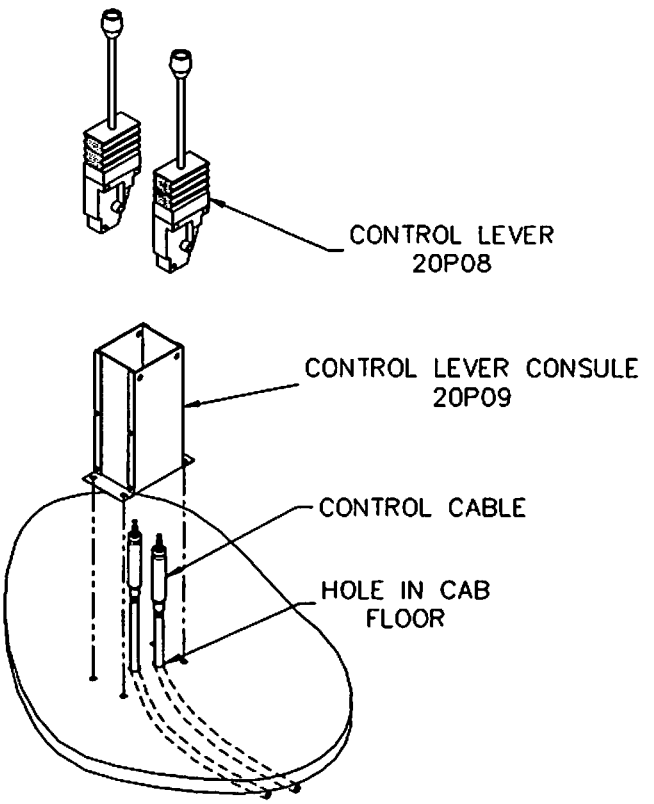
1. Attach the valve mount bracket (Pt. No. 10H51) to the mainframe as indicated on Dwg. No. 90H30 with the fasteners provided.

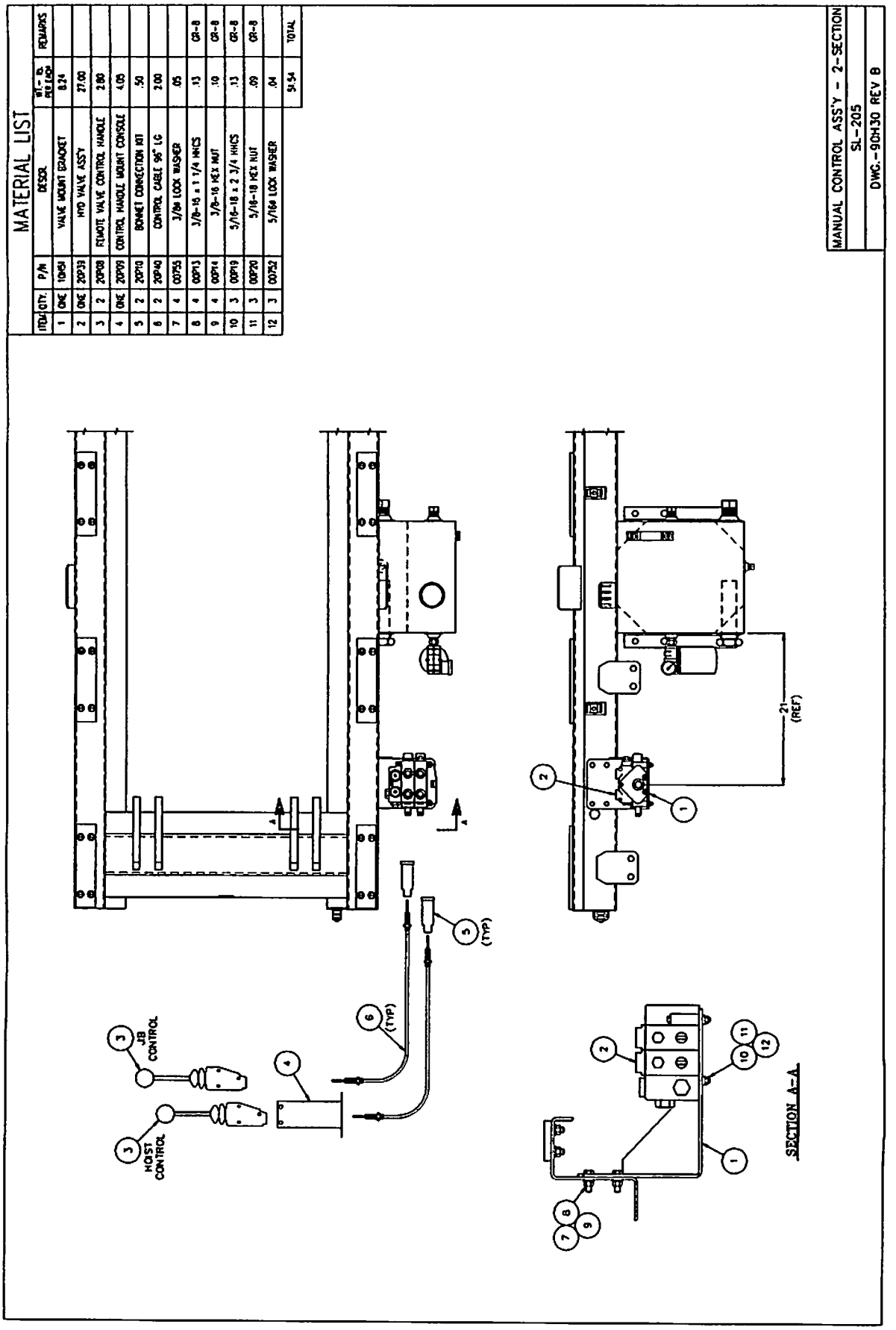
2. Mount the hydraulic control valve assembly (Pt. No. 20P39) to the valve mount bracket as shown on Drawing No. 90H30 with the fasteners provided.

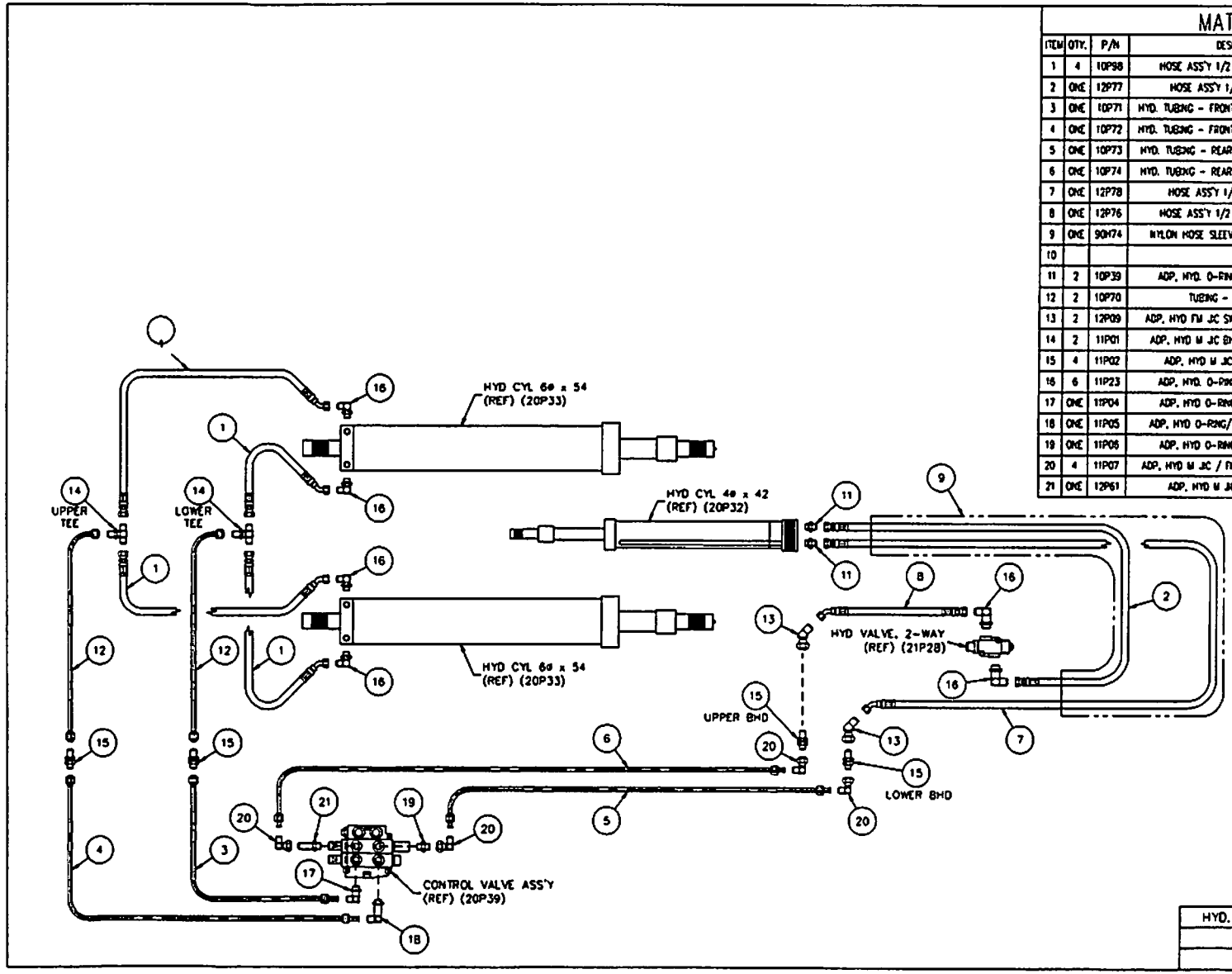
3. Install the hydraulic adapters and connect the hydraulic tubing (Pt. Nos. 10P71, 10P72, 10P73, and 10P74) to the control valve assembly as indicated on Drawing No. 90H23. The tubing should be supported by the clamp assemblies that are provided in the Loose Parts Box.

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.

5. Assemble and install the control lever console (See diagram below). 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 particular installation may require that additional brackets be fabricated or other modifications made.



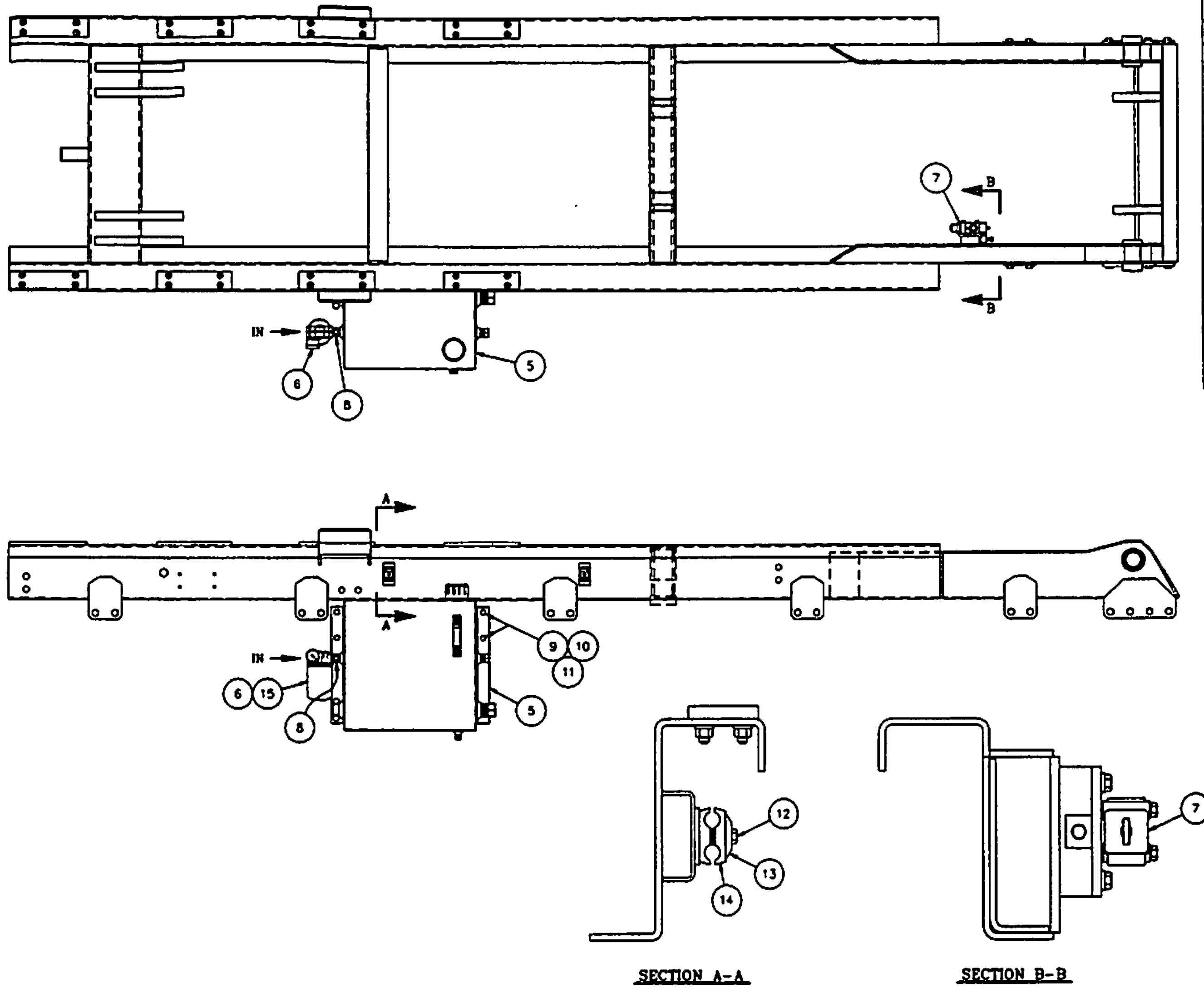

MATERIAL LIST
ITEM
QTY.
P/N
DESCR.
WT. - lb. PER ASSY
REMARKS
1 ONE 10451 VALVE MOUNT BRACKET 8.24
2 ONE 20P39 HYD VALVE ASSY 27.00
3 2 20P08 REMOTE VALVE CONTROL HANDLE 2.80
4 ONE 20P09 CONTROL HANDLE MOUNT CONSOLE 4.05
5 2 20P10 BONNET CONNECTION KIT .50
6 2 20P40 CONTROL CABLE 96" LG 2.00
7 4 00755 3/8# LOCK WASHER .05
8 4 00P13 3/8-16 x 1 1/4 HHCS .13 GR-8
9 4 00P14 3/8-16 HEX NUT .10 GR-8
10 3 00P19 5/16-18 x 2 3/4 HHCS .13 GR-8
11 3 00P20 5/16-18 HEX NUT .09 GR-8
12 3 00752 5/16# LOCK WASHER .04
TOTAL 51.54
MANUAL CONTROL ASS'Y - 2-SECTION
SL-205
DWG.-90H30 REV B
3 JIB CONTROL
3 HOIST CONTROL
4
6 (TYP)
5 (TYP)
21 (REF)
SECTION A-A



MATERIAL LIST

ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	4	10P98	HOSE ASS'Y 1/2 HP X 30 1/2	1.61	
2	ONE	12P77	HOSE ASS'Y 1/2 HP X 87	3.76	
3	ONE	10P71	HYD. TUBING - FRONT TO VALVE LOWER	1.66	
4	ONE	10P72	HYD. TUBING - FRONT TO VALVE UPPER	1.75	
5	ONE	10P73	HYD. TUBING - REAR TO VALVE LOWER	3.62	
6	ONE	10P74	HYD. TUBING - REAR TO VALVE UPPER	3.71	
7	ONE	12P78	HOSE ASS'Y 1/2 HP x 119	4.93	
8	ONE	12P76	HOSE ASS'Y 1/2 HP x 31 1/2	1.65	
9	ONE	90H74	NYLON HOSE SLEEVE, 1 1/2ø x 80	0.30	
10					
11	2	10P39	ADP, HYD. O-RING/ M JIC STR	0.30	6400-8
12	2	10P70	TUBING - FRONT	1.27	
13	2	12P09	ADP, HYD FM JIC SWIVEL/ M JIC 45°	0.30	6502-10
14	2	11P01	ADP, HYD M JIC BHD BRANCH TEE	0.40	2703-LN-10
15	4	11P02	ADP, HYD M JIC BHD UNION	0.40	2700-LN-10
16	6	11P23	ADP, HYD. O-RING/ M JIC 90°	0.30	6801-8
17	ONE	11P04	ADP, HYD O-RING/ M JIC 90°	0.40	6801-10
18	ONE	11P05	ADP, HYD O-RING/ M JIC 90° EXT	0.40	6801 LL-10
19	ONE	11P06	ADP, HYD O-RING/ M JIC 90°	0.40	6400-10
20	4	11P07	ADP, HYD M JIC / FM JIC SWIVEL 90°	0.40	6500-10
21	ONE	12P61	ADP, HYD M JIC / ORB L	0.40	6400-L-10
				38.96	TOTAL

HYD. SUB-ASS'Y - CYL. CIRCUIT
SL-205
DWG.-90H23 REV C



MATERIAL LIST					
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	90H23	HYD SUP-ASS'Y	38.96	NOT SHOWN
			CYL CIRCUIT		
2	ONE	90H22	HYD SUB-ASS'Y	15.29	NOT SHOWN
			PUMP CIRCUIT		
3	ONE	90H30	MANUAL CONTROL ASS'Y	51.54	NOT SHOWN
4	ONE	20P24	HYD PUMP, GEAR	55.00	NOT SHOWN
5	ONE	20P25	HYD TANK	63.00	
6	ONE	20P22	HYD FILTER	2.30	
7	ONE	21P28	HYD VALVE	2.20	
8	ONE	10P28	ADP, HYD PIPE NIPPLE	.70	
9	4	00P15	1/2-13 x 1 3/4 HHCS	.23	GR-8
10	4	00P35	1/2-13 LOCKING HEX NUT	.06	GR-C
11	4	00784	1/2Ø FLAT WASHER HT	.04	F-436
12	2	10P28	HEX BOLT 5/16Ø x 1 1/4	.03	HEX-T2
13	2	10P29	COVER PLATE	.10	TCP-T2
14	2	10P65	CLAMP HALF ASS'Y	.04	T2050
15	ONE	20P64	INDICATOR GAUGE	.01	
				230.62	TOTAL

FINAL HYDRAULIC ASSEMBLY
SL-205
DWG.-90H20 REV C

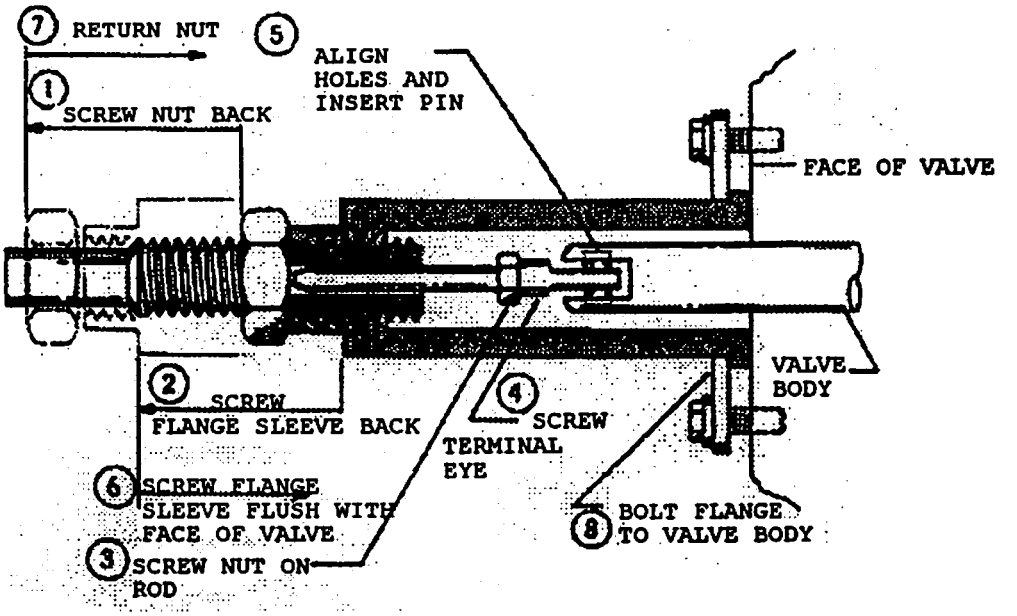
6. Attach the control cables to the control levers and route the cable through the holes in the cab. Install the control levers in the console. Levers should be installed such that when the levers are pushed forward the control cable is extended. See Drawing No. 90H30 (Manual Control Assembly) for control 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 96 inches long. Your particular 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.
2. Turn Flange/Sleeve Assembly entire length of Threaded Hub back over the Cable.
3. Turn .250-28 UNF Jam Nut onto Threaded Rod until it bottoms.
4. Turn Terminal Eye onto Treaded Rod until it bottoms against Jam Nut. (Minor adjustments may be necessary to align Terminal Eye with spool yoke.)
5. Slide the Terminal Eye into yoke on spool and align the holes. Insert Clevis Pin through yoke and Terminal Eye holes. Install Retaining Ring into groove between Terminal Eye and one side of the Yoke.
6. Now, with the Cable attached to the valve and control head, turn the Flange/Sleeve Assemble back onto the Threaded Hub until it is flush with the valve face. When turning on the Flange/Sleeve Assembly, make sure that the control head remains in neutral.
7. Thread the .750-16 UNF Jam Nut back over Threaded Hub and tighten against the Sleeve to lock in position.
8. Bring Flange into position on bolt assembly to valve housing.

NOTE: FOR WORK SECTION NEXT TO INLET COVER, USE SPACER KIT.



CONTROLS INSTALLATION - AIR SHIFT (OPTION)

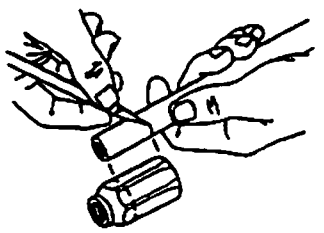
1. Attach the valve mount bracket (Pt. No. 10H51) to the mainframe as indicated on Drawing No. 90H61 with the fasteners provided.

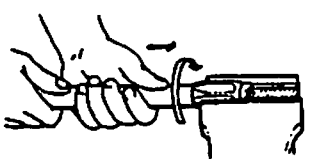
2. Mount the hydraulic control valve assembly (Pt. No. 90H62) to the valve mount bracket as shown on Drawing No. 90H61 with the fasteners provided.

3. Install the hydraulic adapters and connect the hydraulic tubing (Pt. Nos. 10P71, 10P72, 10P73, and 10P74) to the control valve assembly as indicated on Drawing No. 90H23. The tubing should be supported by the clamp assemblies that are provided in the Loose Parts Box.

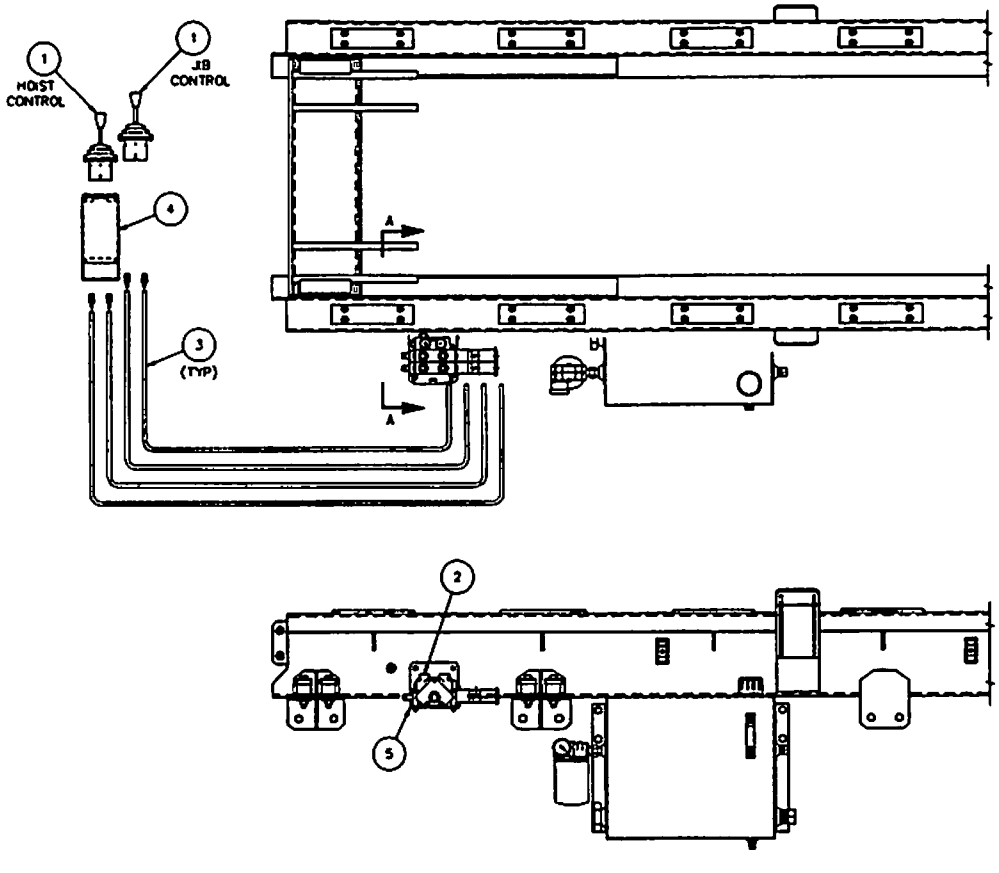
4. Mount the safety valve (Pt. No. 20P12) as shown on Dwg. No. 90H20. A mount bracket for the valve (Pt. No. 21H03) is provided in the Loose Parts Box and its recommended position is shown on Dwg. No. 50H51. Some modifications may be necessary due to possible interference with the truck chassis.

5. Install the hydraulic adapters into the safety valve (Pt. No. 20P12) as shown on Dwg. No. 90H23. Connect the hydraulic hoses (Pt. Nos. 10P96 and 10P97) to the safety valve and route the hoses to their proper location as shown on Dwg. No. 90H23. These hoses have reusable fittings and are provided with only one fitting installed so the hoses can be shortened to the appropriate length. After hoses have been routed, mark the correct length, remove hoses and shorten. Lubricate the I.D. of the hose for approximately 2 inches from end as well as the insert thread of the fitting. Measure 1 3/16 inches from the end of the hose and mark the hose for socket depth. Screw hose into the socket (left-hand thread) to the depth marked on the hose. Screw the insert into the socket until the insert touches the socket. Clean the inside of the hose assembly by either blowing clean compressed air through it or by flushing it. Finally, install the hoses as shown on Dwg. No. 90H23.



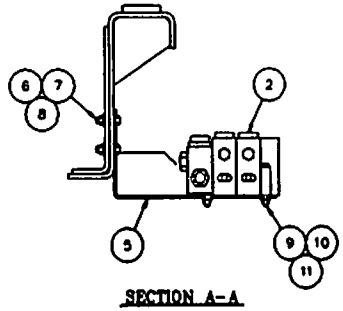


6. Determine the best location in the cab for the control handle assembly (Pt. No. 20P72). The location should be such that the controls can be easily reached while operating the truck. A control handle console (Pt. No. 51H27) is provided to facilitate the mounting of the control handles (See diagram on page 2-14).



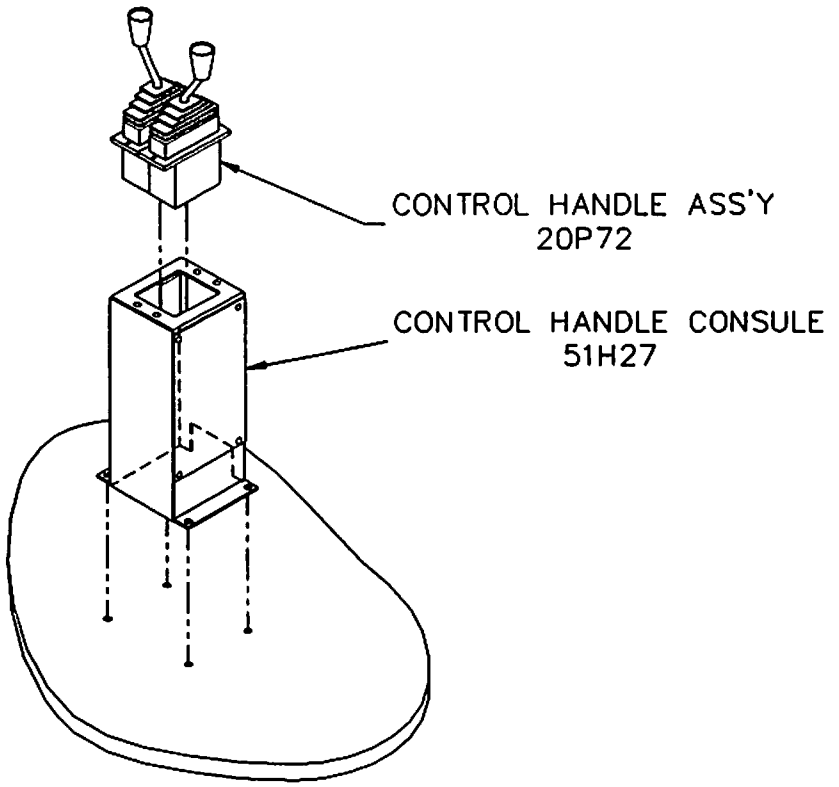
MATERIAL LIST

ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	20P72	CONTROL HANDLE ASS'Y	1.60	
2	ONE	90H82	HYD VALVE ASS'Y	29.84	
3	ONE	90H80	AIR CIRCUIT, CONTROL VALVE	6.60	
4	ONE	51H27	AIR CONTROL CONSOLE ASS'Y	6.23	
5	ONE	10H51	VALVE MOUNT BRACKET	8.24	
6	4	00755	3/8# LOCK WASHER	.05	
7	4	00P13	3/8-16 x 1 1/4 HHCS	.13	GR-8
8	4	00P14	3/8-16 HEX NUT	.10	GR-8
9	3	00P19	5/16-18 x 2 3/4 HHCS	.13	GR-8
10	3	00P20	5/16-18 HEX NUT	.09	GR-8
11	3	00752	5/16# LOCK WASHER	.04	
				54.81	TOTAL



SECTION A-A

AIR CONTROL ASS'Y - 2-SECTION
SL-205
DWG.-90H61



7. Install the air fittings and hose as shown on Drawing No. 90H60 (Air Circuit, Control Valve). An air pressure protection valve (Pt. No. 20P74) is provided so you can tap into the truck's air supply without jeopardizing the integrity of the air system. The air hose is provided in a bulk length, which you can cut to length as required for running the air lines. Take care in routing the air lines and avoid hot areas such as exhaust pipes, etc.

HYDRAULIC TANK INSTALLATION

1. Select a location to mount the hydraulic tank. Reference Figure F or Drawing No. 90H20 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 5/8-inch 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 Drawing No. 90H22. The hose length can be shortened if necessary. Secure the hose to the barb fittings with the hose clamps provided.

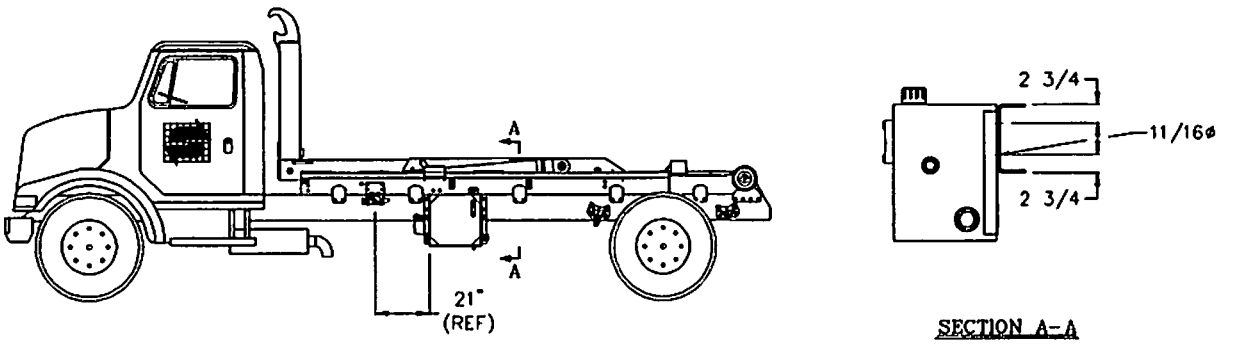
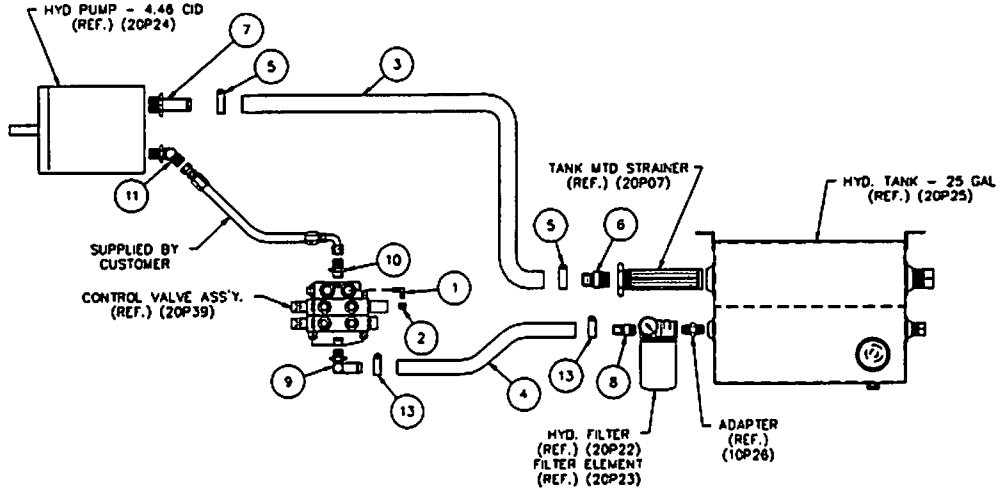


Figure F

MATERIAL LIST

ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	10P37	ADP, HYD MJIC / MP 90°	.30	2501-4-4
2	ONE	10P38	ADP, HYD JIC CAP	.10	304-C-4
3	ONE	12P30	HOSE 1 1/4 LP X 148	9.74	
4	ONE	12P31	HOSE 1 LP X 30	1.65	
5	2	10P78	T-BOLT CLAMP, 1 3/4#	.15	TBC-175
6	ONE	12P25	ADP, HYD HOSE INSERT/ MP	.60	ST15
7	ONE	12P24	ADP, HYD HOSE INS./ O-RING	.60	4604-20
8	ONE	12P19	ADP, HYD HOSE INSERT/ MP	.30	ST10
9	ONE	12P26	ADP, HYD HOSE INS./ ORB 90°	.60	4601-16-12
10	ONE	10P90	ADP, HYD MJIC / O-RING STR	.40	6400-12
11	ONE	10P91	ADP, HYD MJIC / O-RING 45°	.50	6802-12-16
12					
13	2	10P21	T-BOLT CLAMP, 1 1/2#	.10	TBC-150
				15.29	TOTAL



HYD. SUB-ASS'Y - PUMP CIRCUIT
SL-205
DWG.-90H22 REV C

P.T.O. SELECTION

The next step is to select and install a direct drive type P.T.O. to the transmission. Please contact your local truck equipment representative for the correct unit sized on the following criteria:

P.T.O. Torque Rating:	200 ft.-lbs. (See Note 1)
Power at 1500 RPM:	47 H.P. (See Note 1)
Output Flange:	SAE B 4 Bolt
Hydraulic Pump Spined Shaft Specifications:	7/8 – 13T 16/32 D.P.
Hydraulic Pump Rotation:	L.H. As provided (See Note 2). The hydraulic pump rotation can be reversed to R.H. by a qualified hydraulic technician or it can be sourced through Swaploader.
Ratio of Pump RPM to Engine RPM:	80% to 100%

NOTE 1: P.T.O. torque and power requirements are based on the unit operating at main relief pressure. Normal operating pressure will be less.

NOTE 2: P.T.O. output rotation will need to be R.H. (clockwise) as viewed looking at output flange of P.T.O. for a L.H. Pump.

NOTE 3: Do not operate pump at speeds over 1500 R.P.M.

NOTE 4: Always disengage the P.T.O. after each operating cycle.

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 Drawing No. 90H22.

3. Connect the suction hose assembly to the hydraulic tank (1 1/4" 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. The pressure hose from the hydraulic pump to the control valve assembly is not supplied with the hoist as it must be made to the proper length. This hose must be purchased from a local hydraulic hose assembly supplier per the following specification:

Hose I.D.:	3/4 inch
Working Pressure:	3000 PSI
Hose Fitting Threads:	SAE 37° (JIC) 1 1/16-12

5. Install the pressure hose as indicated. 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 Maintenance Section.)

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.

5. Verify the movement of the control levers corresponds to the movement of the cylinders per Figure A.

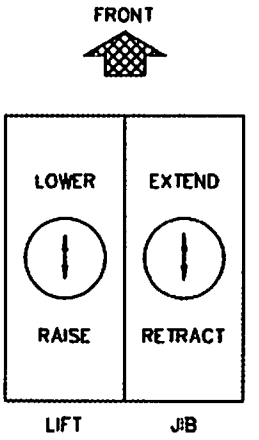


FIG A

6. Install all safety decals and product decals per Drawing No. 50H45 after final installation and painting have been completed. The factory prior to shipment of a hoist, will install some decals that have a premask layer. The premask will need to be removed after painting the hoist. It is very important when removing the premask not to pull the premask out and away from the decal at a 90° angle, but instead pull the premask straight down at a 180° angle to the decal surface. Should problems occur with the premask pulling the decal loose, wet the tack side of the premask with water via a spray bottle to weaken the adhesive bond, while pulling straight down on the premask.

7. Fill out pre-delivery checklist and warranty card and mail to SwapLoader U.S.A., Ltd.

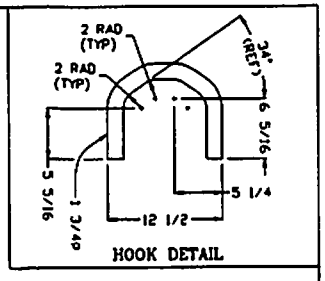
NOTE: **Failure to fill out and return warranty card within 15 days of installation may possibly void the warranty.**

CAUTION: **The SwapLoader hoist must be used with bodies or containers that properly fit the front hook and the rear hold-downs (See figure S054). If possible, pick up one of the containers that will actually be used with the SwapLoader hoist and verify the following:**

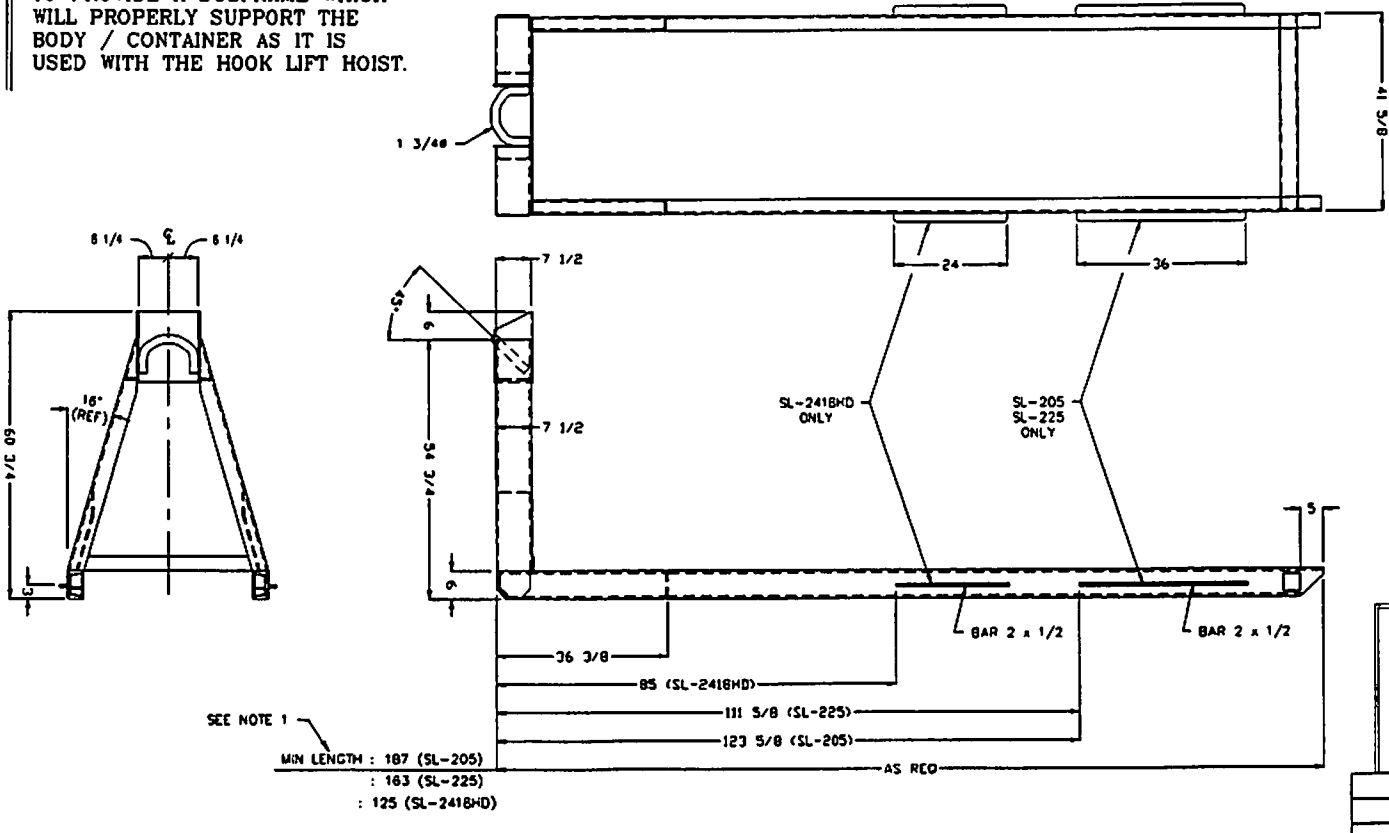
- **Outside dimensions of the long sills match the guiding rollers on the hoist.**
- **The front hook dimensions are correct for the hoist.**
- **The rear hold-downs of the container latch into the hold-downs on the hoist.**
- **Check for any interference between the container and any part of the hoist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

NOTE:

THE INTENT OF THIS DRAWING IS TO PROVIDE THE CRITICAL SUBFRAME DIMENSIONS TO ENSURE PROPER COMPATIBILITY WITH THE SWAPLOADER HOOK LIFT HOIST. IT IS THE RESPONSIBILITY OF THE SUBFRAME SUPPLIER TO PROVIDE A SUBFRAME WHICH WILL PROPERLY SUPPORT THE BODY / CONTAINER AS IT IS USED WITH THE HOOK LIFT HOIST.



HOOK DETAIL



NOTE

1. MIN LENGTH FOR JIB FULLY EXTENDED
2. SERIES 200 SUBFRAMES FIT THE FOLLOWING SWAPLOADER MODELS :
   - SL-205
   - SL-225
   - SL-2418HD

SUB-FRAME DIMENSIONS
SERIES 200
DWG. S-054 REV B

PREDELIVERY CHECK LIST
SWAPLOADER MODEL SL-205 HOIST INSTALLATION

Conducted by: _____ **Date:** _____

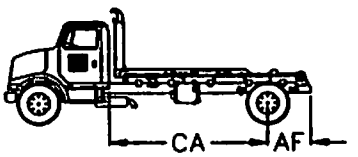
Dealer: _____

Customer: _____

I. COMPONENT INFORMATION

Hoist Serial No.: _____

Truck Chassis: Identification No.: _____
GVW: _____
Distance from rear of cab to the Center Line of Rear Axle/Tandem (CA): _____
Distance From Center Line of Rear Axle/Tandem to Rear of Hoist (AF): _____



PTO: Make: _____
Model: _____
Serial No.: _____
% of Engine RPM: _____

Hyd. Pump: Make: _____
Model: _____
Serial No.: _____

II. INSTALLATION TO CHASSIS

Were there any problems installing the hoist to the truck chassis? _____ YES _____ NO

If yes, please describe _____

_____

_____

_____ All bolts checked for proper tightness.
_____ Please include photos of the hoist installed on the truck chassis. Be sure to include at least one photo from each side.

III. CONTROLS

_____ Controls easy to reach from driver's seat.
_____ Movement of controls correct per installation instructions.

PREDELIVERY CHECK LIST
SWAPLOADER MODEL SL-205 HOIST INSTALLATION

IV. HYDRAULICS INSTALLATION

_____ Correct hydraulic oil level in reservoir
_____ Check for leaks
Any abnormal noise during operation: _____ YES _____ NO
If yes, explain: _____

WITH ENGINE OPERATING @ 1000 RPM, RECORD THE FOLLOWING INFORMATION:

Cycle time for dump mode: Up _____ Sec. Down _____ Sec.
Cycle time for load/unload mode: Unload _____ Sec. Load _____ Sec.
Filter pressure _____ PSI.
Main pressure, controls in neutral _____ PSI.
Main relief pressure when extending jib cylinder (bottomed out)_____PSI.
Main relief pressure when extending lift cylinders (bottomed out)_____PSI.

NOTE: Connect pressure gauge to fitting provided on inlet section of Hyd. Control Valve (Ref. Pt. No. 10P37 fitting on Hyd. Pump Circuit Drawing No. 90H22).

V. OPERATION

_____ Jib operates freely in both directions.
_____ Jib cannot be extended or retracted when raised in dump position or when pivot joint is tilted in unload position. Both safety hooks are fully engaged when jib is extended.
_____ Parts and operators manual in cab.
_____ Lubricate sliding jib and all grease zerks per installation instructions.

VI. DECALS

_____ All safety decals and product decals installed per Drawing 50H45.

ADDITIONAL COMMENTS:

_____

_____

_____

SEND COMPLETED FORM TO: **SWAPLOADER U.S.A., LTD.**
1800 N.E. BROADWAY AVENUE, BOX D
DES MOINES, IOWA 50316-0386

RETAIN ONE COPY FOR YOUR FILE.

OPERATION

OPERATING INSTRUCTIONS

During all operations of the SwapLoader, the speed of the engine should be maintained at 1,000 to 1,200 RPM, assuming the ratio of the Power Take Off is about 100%.

LOADING A CONTAINER

1. Engage the P.T.O. (Refer to P.T.O. manual for operation).

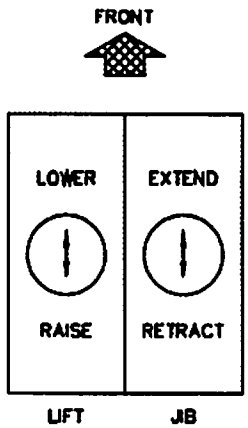
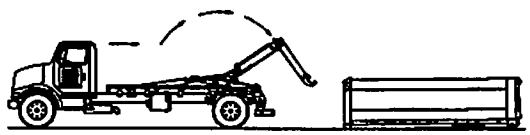
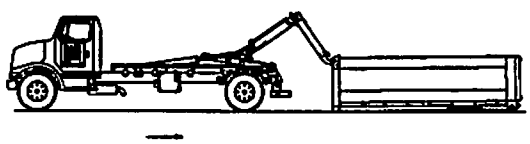


FIG A

2. Retract the jib (right control lever backward). Then, tilt the arm backward (left control lever backward.) See Fig. A.

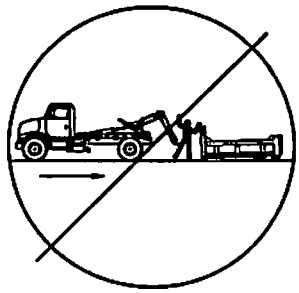


3. Make sure the work area in front of the container is clear of people and obstacles. Move the truck backwards until the hook engages the curved lifting bar of the container. **NEVER EXTEND THE JIB** to reach the proper catching height, rather tilt the arm.

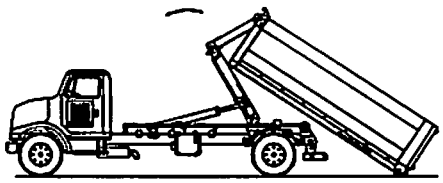


WARNING:

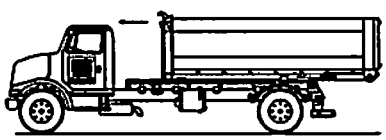
Make sure work area is clear of people and obstacles prior to dumping or unloading containers. SwapLoader strongly recommends that a back up alarm be installed on the truck chassis. The operation of the hook hoist is that the truck is backed up to the body to pick it up and so there is a potential pinch point between the body and the hook.



4. Cycle the arm forward (left control lever forward), making sure the curved lifting bar is securely attached to the hook. Release the brakes of the truck and steer to correctly align the truck with the container. Watch the container rails to see that they come to rest centered on the rear rollers. Do not extend the jib during lifting.



5. When the container is resting on the frame, move the jib forward all the way to ensure the container is held in the body locks (right control lever forward).



DUMPING

1. Move the jib forward (right control forward) to ensure that the container is locked.

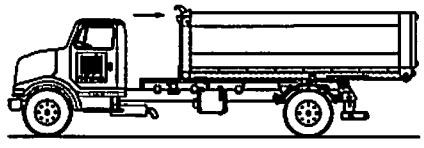
2. Extend the main lift cylinders (left control backward).

CAUTION:

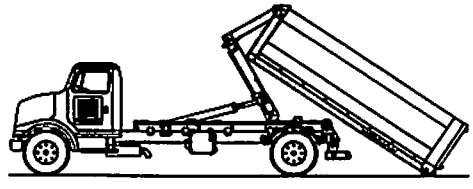
DO NOT RETRACT THE JIB WHILE DUMPING. Retracting the jib during dumping may unlock the mechanical jib latches which could allow the container to crash down onto the hoist and/or abruptly unload.

PLACING A CONTAINER ON THE GROUND

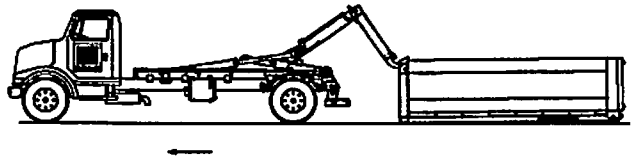
1. Move the sliding jib all the way back (right control backward) until mechanical jib latches unlock.



2. Tilt the arm backwards (left control backward). When the container touches the ground, release the brakes to free the truck for forward movement caused by the container.



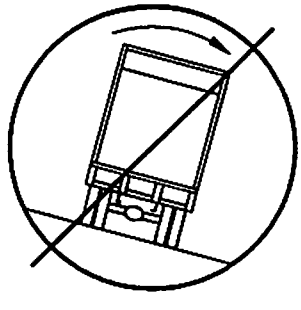
3. Rotate jib all the way till the container touches the ground. Pull away from container and rotate jib back into the transport position.



WARNING:

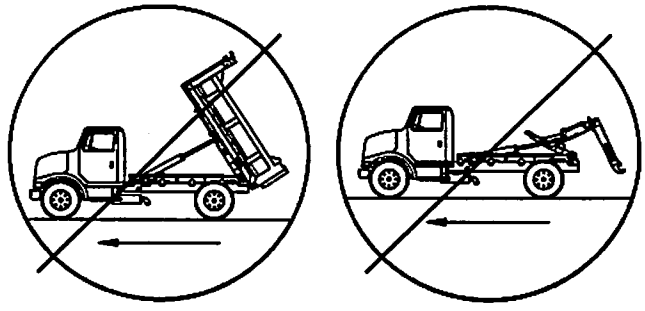
1. **DON'T OVER SPEED THE PUMP 1,500 RPM MAXIMUM.**

2. **DON'T DUMP ON UNEVEN GROUND.**



WARNING:
(CONTINUED)

3. **DON'T DRIVE WITH THE HOIST IN THE DUMP POSITION OR WITH THE HOOK TILTED BACK.**



HOIST PROP OPERATING INSTRUCTIONS

RAISING PROP

1. Unload all cargo from the body.
2. Raise hoist and stand prop in upright position.
3. Lower hoist until rests on top of prop.

WARNING:

1. **DO NOT power hoist down onto prop.**
2. **Make sure prop is inserted into retaining pocket on hoist (See Figure B).**
3. **DO NOT attempt to use prop to support the hoist with a loaded container.**

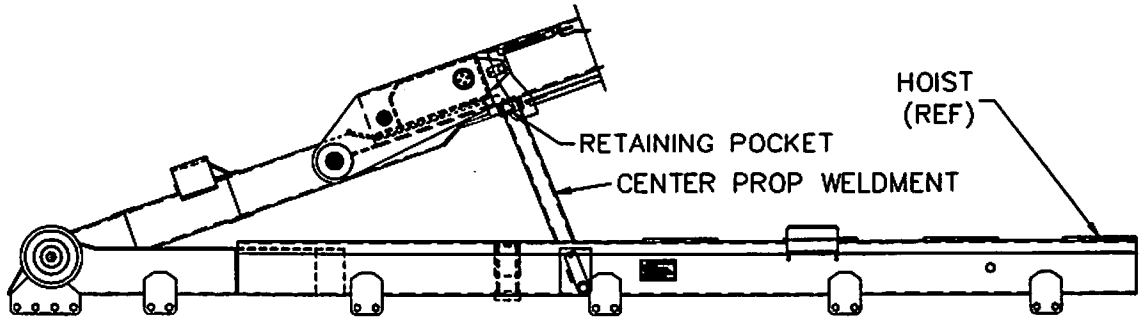


Figure B

LOWERING PROP

1. Raise hoist and lower prop until it sets on the prop rest.

WARNING:

If the prop is not in perfect working order, it must be repaired before using.

MAINTENANCE

MAINTENANCE INSTRUCTIONS

WEEKLY SERVICE - (50 OPERATIONS)

1. Lubricate with grease (Refer to Lubrication Diagram)
   - Lifting hook on jib
   - Jib slide - top, bottom, and side guides
2. Check hydraulic oil level
3. Check hydraulic hose and fittings for leaks. Also check hydraulic hose for wear. Repair and/or retighten as necessary.

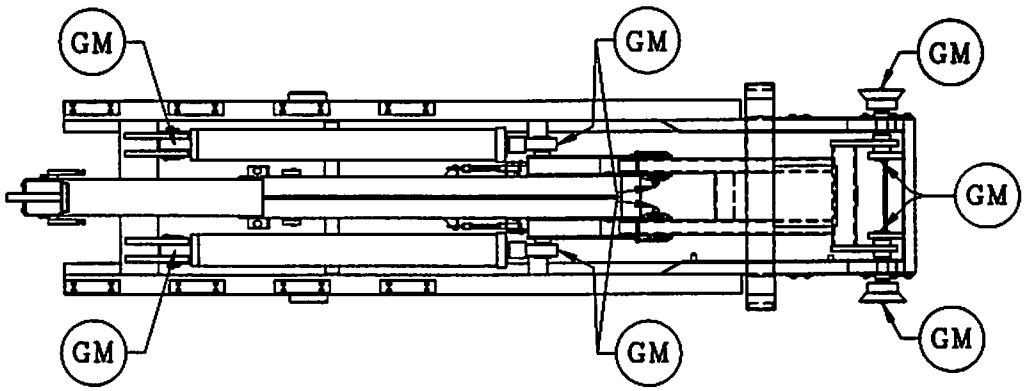
MONTHLY SERVICE - (200 OPERATIONS)

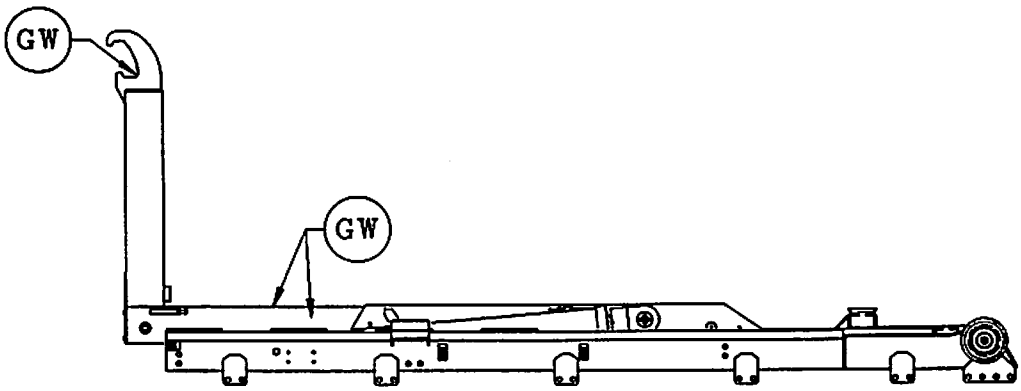
1. Lubricate with grease (Refer to Lubrication Diagram)
   - Fittings on lift cylinders (quantity: 4)
   - Front pins on rear pivot joint weldment (quantity: 2)
   - Fittings on rear pivot pins, and rollers (quantity: 4)
2. Check all bolts and retighten as required.
3. Check adjustments on safety lock mechanism.

YEARLY SERVICE

1. Change hydraulic oil, replace hydraulic filter element, and wash out suction strainer.
2. Check main relief valve setting. (Should be 2,800 PSI minimum)

LUBRICATION DIAGRAM





LEGEND
GM = GREASE MONTHLY
GW = GREASE WEEKLY

HYDRAULIC OIL SPECIFICATIONS

Type: High Pressure (Anti-Wear) Hydraulic
ISO Viscosity Grade: 46 Viscosity,
SUS at 100 Degree F: 194-236

AMOCO
AMOCO AW 46

ARCO
Duro AW 46

Chevron
AW Hydraulic Oil 46

Cities Service
AW Hydraulic Oil 46

Conoco
Super Hydraulic Oil 46

Exxon
Nuto H 46

Gulf
Harmony 46 AW

Kendall
Kenoil R & O AW-46

Keystone
KLC-5

Lubriplate
HO-1

Mobil
DTE 25

Phillips
Magnus A Oil 46

Shell
Tellus 46

Sun
Sun Vis 747 (821 WR)

Texaco
Rando Oil HD 46

Union
Unax AW 46

GENERAL MAINTENANCE PARTS LIST

PT. NO.	DESCRIPTION
20P33	**HYDRAULIC CYLINDER 6ϕ X 54 (Lift/Dump)**
20P38	SEAL KIT, HYDRAULIC CYLINDER
20P28	HYDRAULIC VALVE CARTRIDGE, COUNTERBALANCE
	* * * * * * * *
20P32	**HYDRAULIC CYLINDER 4ϕ X 42 (Jib)**
20P34	SEAL KIT, HYDRAULIC CYLINDER
20P28	HYDRAULIC VALVE CARTRIDGE, COUNTERBALANCE
	* * * * * * * *
20P24	**HYDRAULIC PUMP, GEAR (4.46 CID, L.H. ROT.) - Standard**
20P43	**HYDRAULIC PUMP, GEAR (4.46 CID, R.H. ROT.) - Optional**
20P41	SEAL KIT, HYDRAULIC PUMP
	* * * * * * * *
20P22	**HYDRAULIC FILTER, 25 GPM**
20P23	HYDRAULIC FILTER ELEMENT
20P64	INDICATOR GAUGE, FILTER
21P36	HYDRAULIC FILTER HEAD ASS'Y
	* * * * * * * *
20P25	**HYDRAULIC TANK, 25 GALLON**
20P07	STRAINER, TANK MOUNTED - 25 GPM
20P96	SIGHT GAUGE, HYDRAULIC TANK
20P97	BREATHER CAP ASSEMBY, HYDRAULIC TANK
	* * * * * * * *

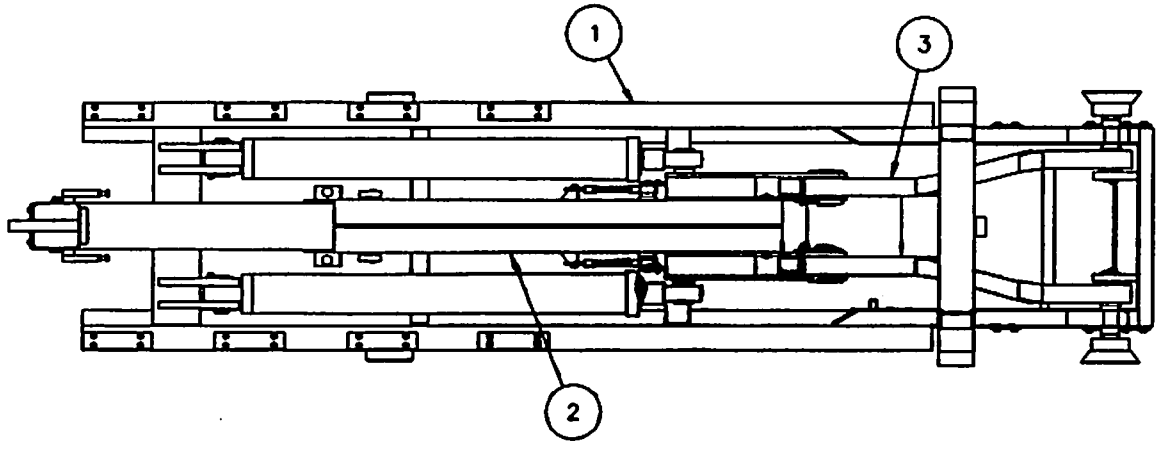
20P39	**HYDRAULIC CONTROL VALVE, 2 SECT.**
20P42	HYDRAULIC RELIEF VALVE CARTRIDGE (2800 PSI)

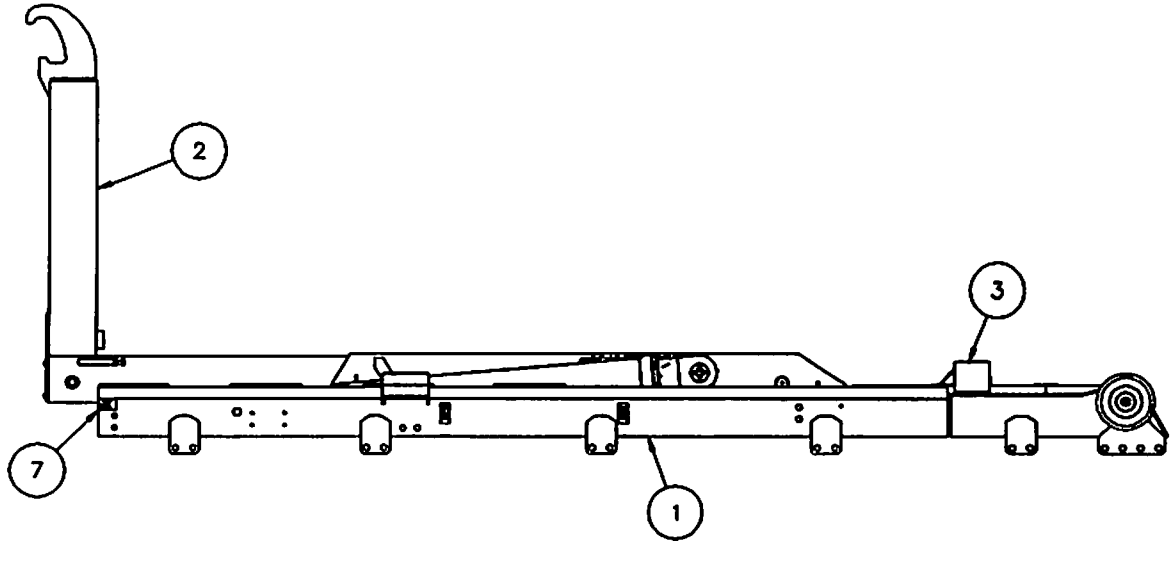
* * * * * * * *

20P12	**HYDRAULIC VALVE, 2-WAY**
20P81	SEAL KIT FOR 20P12

* * * * * * * *

PARTS LIST

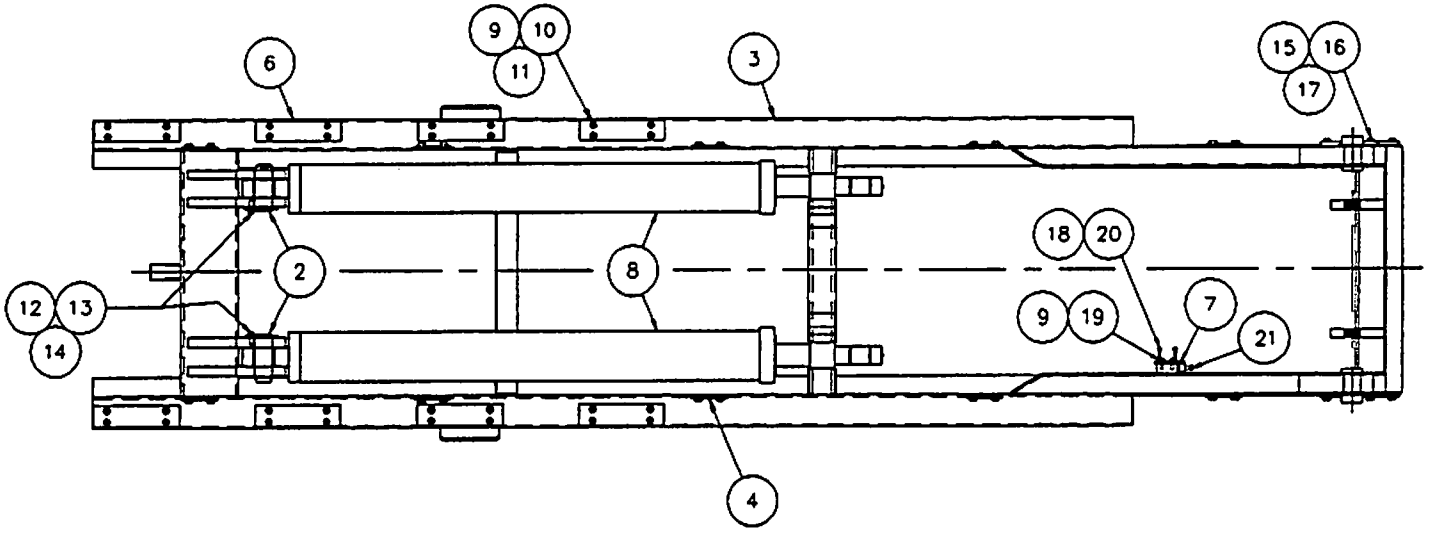


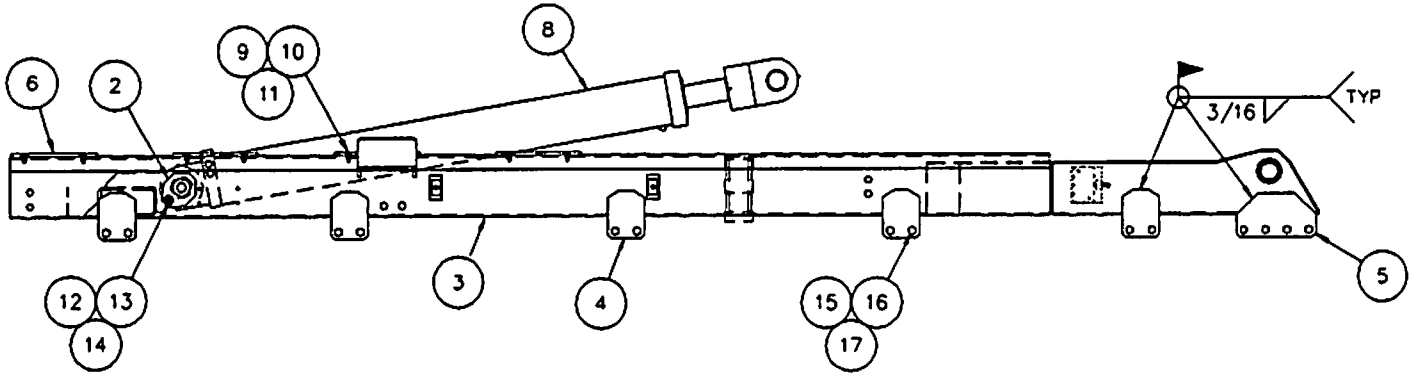


SL-205 HOIST FINAL ASSEMBLY
SL-205
DWG.-50H52 ~ REV D

		SL-205 HOIST FINAL ASSEMBLY DWG.-50H52			REVISION D
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	50H51	MAINFRAME SUB-ASS'Y	1538.06	
2	ONE	50H26	TELESCOPIC JIB SUB-ASS'Y	1257.10	
3	ONE	50H39	PIVOT JOINT SUB-ASS'Y	538.89	
4	ONE	90H20	FINAL HYDRAUIC ASS'Y	234.89	NOT SHOWN
5	ONE	50H45	DECAL ASS'Y	-	NOT SHOWN
6	ONE	50H46	PARTS & OPER. MANUAL	-	
7	ONE	90P43	SERIAL TAG	.01	
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
				3568.95	TOTAL

C:\2-CURRENT\PT-50H51 06/16/00 07:52

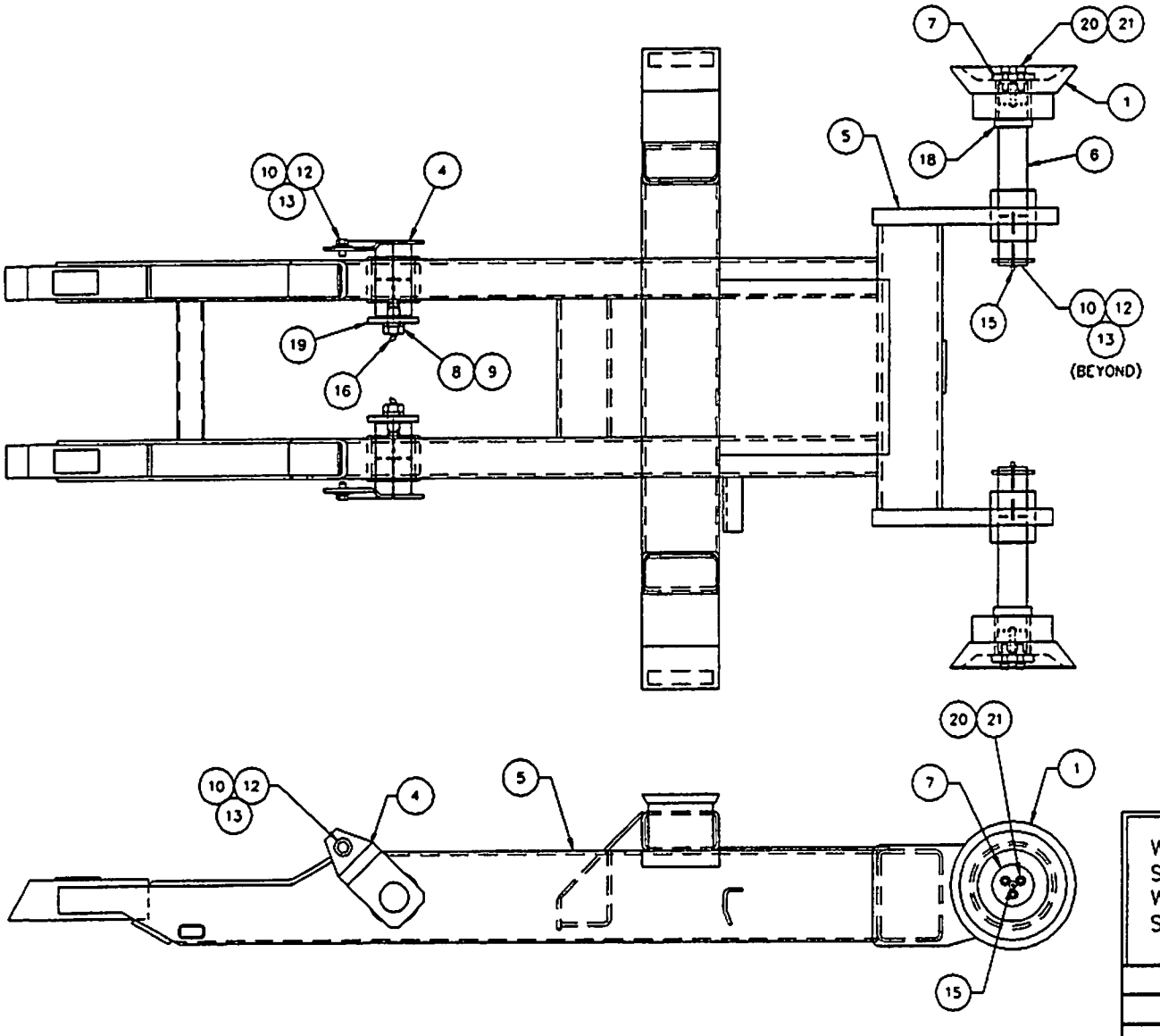




MAINFRAME SUB-ASSEMBLY
SL-205
DWG.-50H51 ~ REV D

		MAINFRAME SUB-ASSEMBLY DWG.-50H51			REVISION D
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1					
2	2	50H13	MAINFRAME PIN WDMT	9.98	
3	ONE	51H35	MAINFRAME WDMT	767.46	
4	10	60H60	FRONT BRACKET	1.88	
5	2	60H61	REAR BRACKET	5.68	
6	8	90P71	12" WEAR BLOCK	.71	
7	ONE	42H11	JIB LOCKOUT VALVE WDMT	2.39	
8	2	20P33	HYD CYL 6ø X 54	350.00	
9	34	00755	3/8ø LOCK WASHER	.01	
10	32	00P14	3/8-16 HEX NUT	.02	GR-8
11	32	00P68	3/8-16 x 1 1/4 FL HD SCR	.03	BRASS
12	2	00760	1/2ø LOCK WASHER	.02	
13	2	00784	1/2ø FLAT WASHER HT	.02	F-436
14	2	00P01	1/2-13 x 1 1/2 HHCS	.13	GR-8
15	28	00785	5/8ø FLAT WASHER HT	.04	F-436
16	28	00P69	5/8-11 x 2 HHCS	.27	GR-8
17	28	00P55	5/8ø LOCKING HEX NUT	.11	GR-C
18	2	00752	5/16ø LOCK WASHER	0.01	X
19	2	00P13	3/8-16 x 1 1/4 HHCS	0.06	GR-8
20	2	01P08	5/16-18 x 2 HHCS	0.05	GR-8
21	ONE	01P20	3/8-16 x 1 3/4 SOC HD SCR	0.07	GR-8
22					
				1545.90	TOTAL

C:\2-CURRENT\pl-50H39 06/12/00 11:17



NOTE:

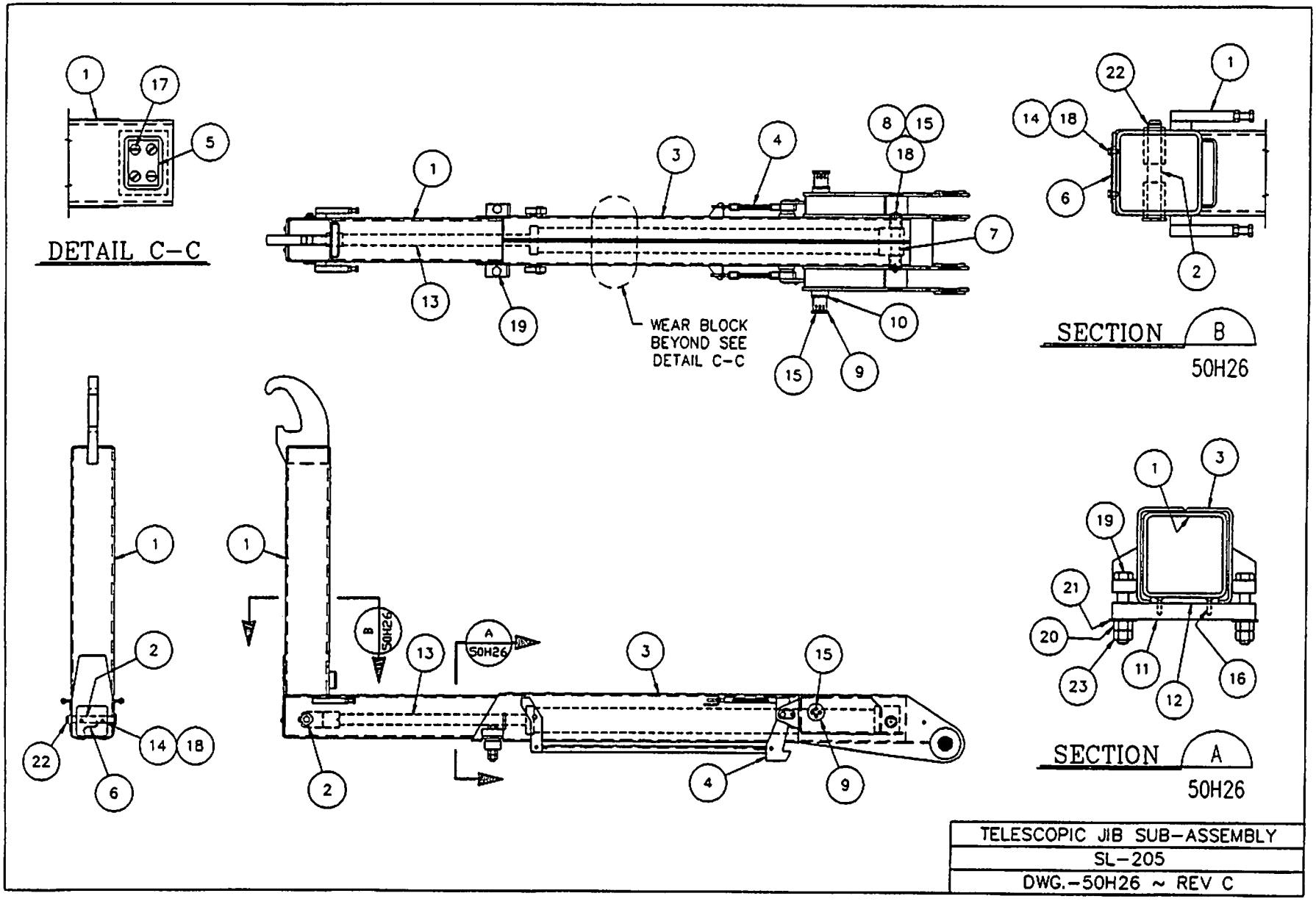
WDMT 51H71 TO BE USED WITH S/N C00531 OR D00441 & HIGHER.
WDMT 51H39 TO BE USED WITH S/N C00530 OR D00440 & LOWER.

PIVOT JOINT SUB-ASSEMBLY

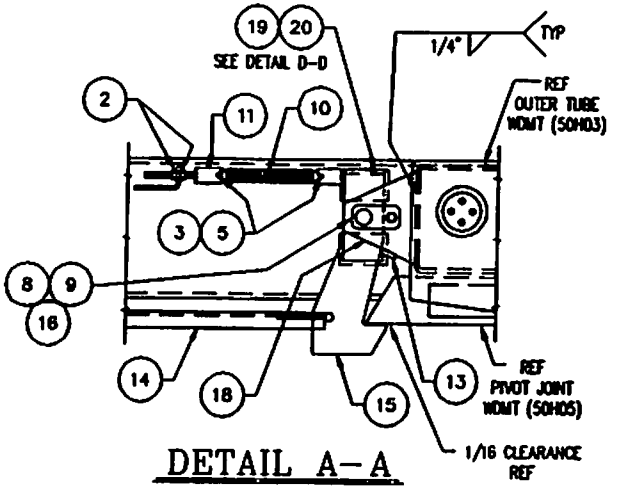
SL-205 & SL-225

DWG.-50H39 ~ REV. D

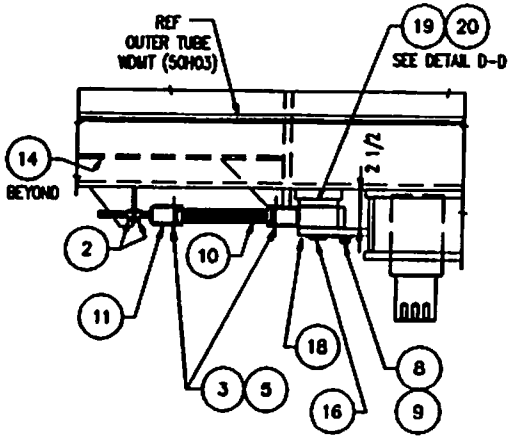
		PIVOT JOINT SUB–ASSEMBLY DWG.–50H39			REVISION D
ITEM	QTY.	P/N	DESCR.	WT.– lb. PER EACH	REMARKS
1	2	10H10	ROLLER ASS'Y	35.06	
2					
3					
4	2	50H78	PIVOT PIN WDMT	11.12	
5	ONE	51H71	PIVOT JOINT WDMT	481.22	
6	2	51H70	MAIN PIVOT PIN WDMT	16.90	
7	2	85H21	ROLLER RETAINER	1.04	
8	2	61H42	ROLLER RETAINER BOLT	.33	
9	2	00P66	7/8ø LOCK WASHER	.11	
10	4	00P09	1/2–13 x 1 HHCS	.15	GR–8
11					
12	4	00772	1/2ø FLAT WASHER	.07	
13	4	00760	1/2ø LOCK WASHER	.04	
14					
15	4	90P03	1/8 NPT ZERK STR	.01	
16	2	90P28	1/4–28 ZERK 45°	.01	
17					
18	2	61H94	ROLLER SPACER	.60	
19	2	61H93	PIVOT PIN CAP	1.18	
20	6	01P25	7/16–14 x 1 1/2 SOC HD SCR	0.05	
21	6	01P26	7/16ø LOCK WASHER	0.01	
22					
				614.84	TOTAL


DETAIL C-C
WEAR BLOCK BEYOND SEE DETAIL C-C
SECTION B
50H26
SECTION A
50H26
TELESCOPIC JIB SUB-ASSEMBLY
SL-205
DWG.-50H26 ~ REV C

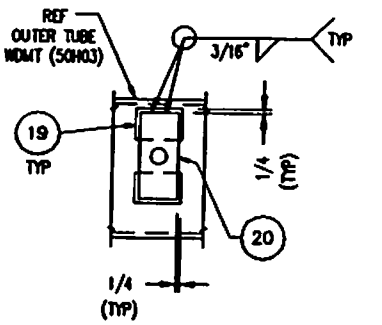
TELESCOPIC JIB SUB–ASSEMBLY DWG.–50H26					REVISION C
ITEM	QTY.	P/N	DESCR.	WT.– lb. PER EACH	REMARKS
1	ONE	50H01	JIB WDMT	511.37	
2	ONE	50H02	1 1/4ø CYL PIN WDMT	3.53	
3	ONE	50H03	OUTER TUBE WDMT	468.90	
4	ONE	50H16	SAFTY LATCH ASS'Y	72.28	
5	ONE	60H11	WEAR BLOCK	.26	
6	ONE	62H11	JIB COVER PLATE	1.13	
7	ONE	60H26	1 1/2ø CYL PIN	5.01	
8	2	60H27	1 1/2ø PIN WASHER	.16	
9	2	60H28	CYL RETAINER	.78	
10	2	60H29	SPACER	.15	
11	ONE	60H30	CLAMP BAR	16.30	
12	ONE	60H31	CLAMP LINER	.39	
13	ONE	20P32	HYD CYL 4ø X 42	178.00	
14	2	00P03	3/8–16 x 3/4 HHCS	.11	GR–8
15	10	00P32	3/8–16 x 1 1/4 SOC HD SCR	.19	GR–8
16	4	00P58	3/8–16 x 1 1/2 FL HD SCR	.12	BRASS
17	4	00P79	3/8–16 x 3/4 FL HD SCR	.09	BRASS
18	4	00755	3/8ø LOCK WASHER	.05	
19	2	00P59	1–8 x 6 HHCS	1.59	GR–8
20	2	00P60	1–8 HEX NUT	.29	GR–8
21	2	00787	1ø FLAT WASHER HT	.13	F–436
22	ONE	00P46	EXT RET RING FOR 1 1/4ø	–	
23	2	00P67	1–8 LOCKING HEX NUT	.29	GR–C
				1267.11	TOTAL



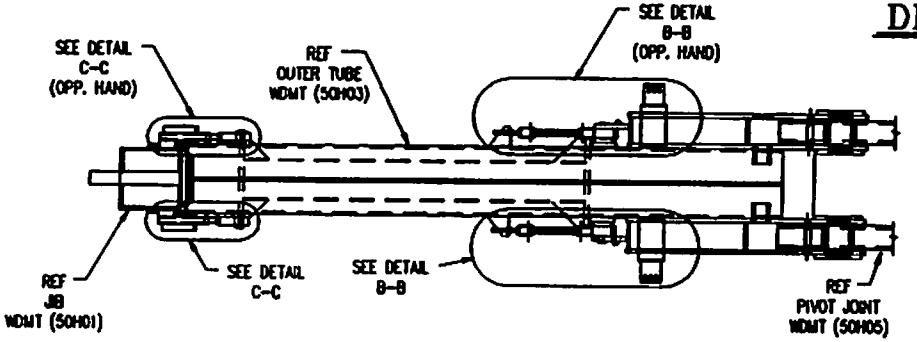
DETAIL A–A

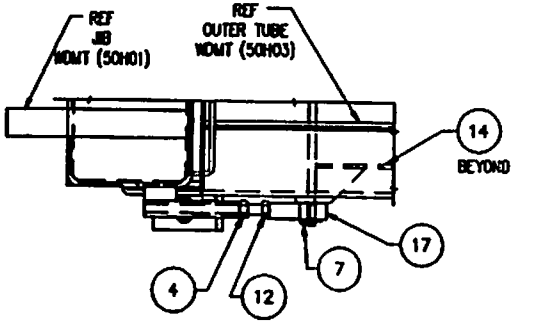


DETAIL B–B

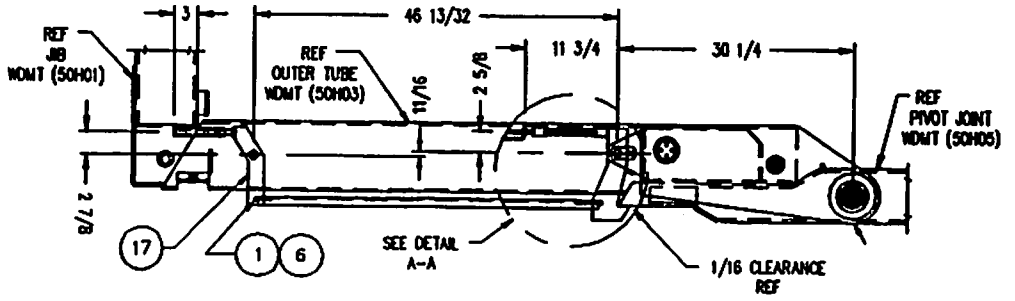


DETAIL D–D



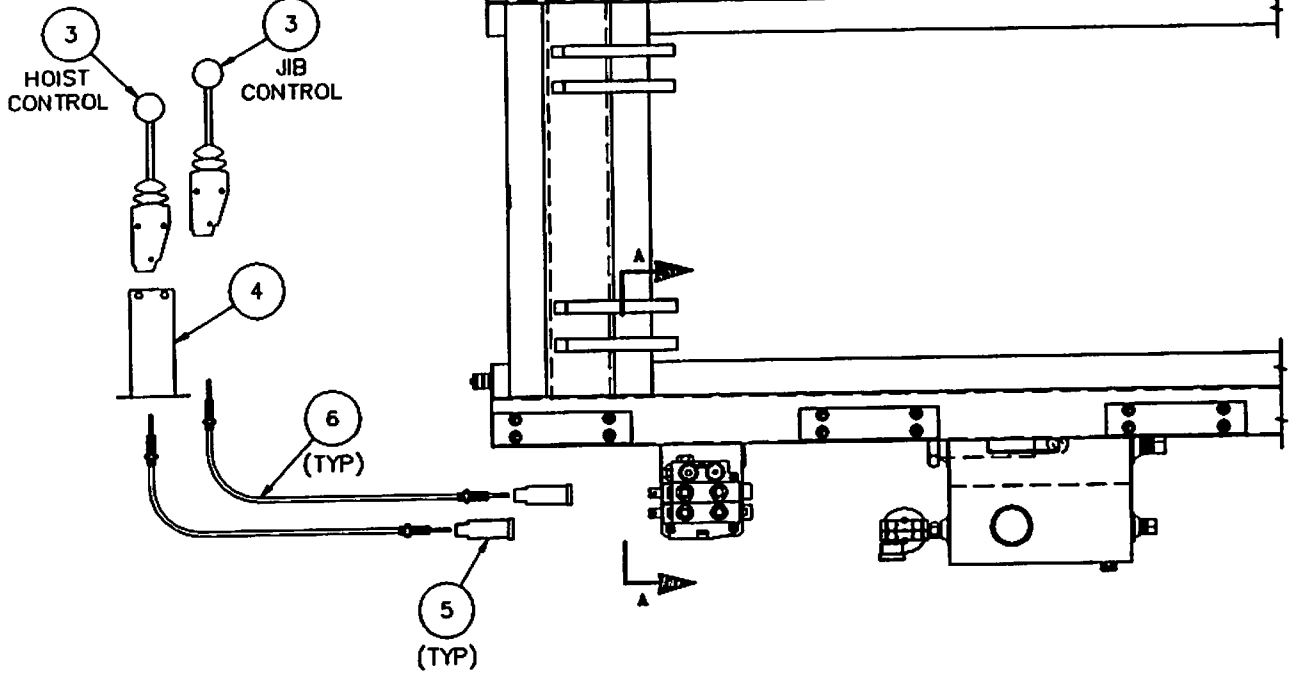


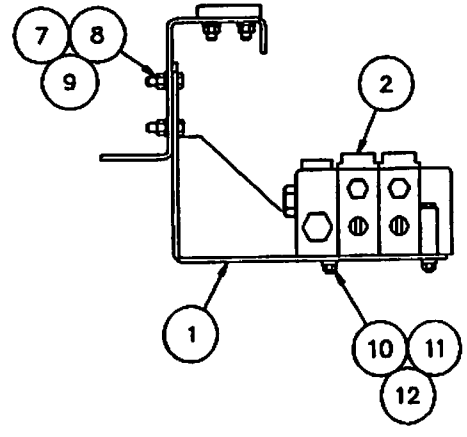
DETAIL C–C



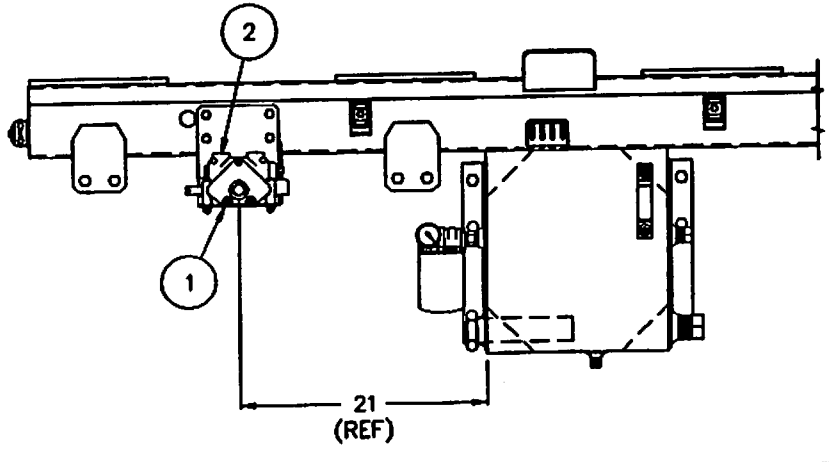
SAFETY LATCH ASSEMBLY
SL–205
DWG.–50H16 ~ REV C

		SAFETY LATCH ASSEMBLY DWG.–50H16			REVISION C
ITEM	QTY.	P/N	DESCR.	WT.– lb. PER EACH	REMARKS
1	2	00772	1/2ø FLAT WASHER	.07	
2	4	00P14	3/8–16 HEX NUT	.10	GR–8
3	4	00P23	1/4ø X 1 3/4 CLV PIN	.03	
4	2	00P24	5/8–11 HEX NUT	.18	GR–8
5	4	00P25	1/16ø X 3/4 COTTER PIN	–	
6	2	00P26	1/8ø X 1 COTTER PIN	.01	
7	2	00P28	EXT RET RING FOR 3/4ø	.01	
8	2	00P49	5/16–18 x 1/2 HHCS	.09	GR–8
9	2	00752	5/16ø LOCK WASHER	.04	
10	2	90P04	7/8ø X 6 SPRING	.38	
11	2	10H35	TAKE UP WDMT	.25	
12	2	00P85	5/8–11 x 3 1/2 HHCS	.46	GR–8
13	2	20H93	LATCH STOP	.10	
14	ONE	50H17	CONN BAR WDMT	17.96	
15	2	50H18	SAFETY LATCH WDMT	12.30	
16	2	50H19	LATCH PIN WDMT	.76	
17	2	60H89	RELEASE LEVER	5.88	
18	2	60H90	PIVOT SUPPORT	2.35	
19	4	60H93	EXTENTION BLOCK	1.07	
20	2	60H94	SUPPORT PLATE	1.88	
21					
22					
				72.28	TOTAL





SECTION A-A



MANUAL CONTROL ASSEMBLY

DWG.-90H30 ~ REV B

MANUAL CONTROL ASSEMBLY DWG.-90H30					REVISION B
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	10H51	VALVE MOUNT BRACKET	8.24	
2	ONE	20P39	HYD VALVE ASS'Y	27.00	
3	2	20P08	REMOTE VALVE CONTROL HANDLE	2.80	
4	ONE	20P09	CONTROL HANDLE MOUNT CONSOLE	4.05	
5	2	20P10	BONNET CONNECTION KIT	.50	
6	2	20P40	CONTROL CABLE 96" LG	2.00	
7	4	00755	3/8ø LOCK WASHER	.05	
8	4	00P13	3/8-16 x 1 1/4 HHCS	.13	GR-8
9	4	00P14	3/8-16 HEX NUT	.10	GR-8
10	3	00P19	5/16-18 x 2 3/4 HHCS	.13	GR-8
11	3	00P20	5/16-18 HEX NUT	.09	GR-8
12	3	00752	5/16ø LOCK WASHER	.04	
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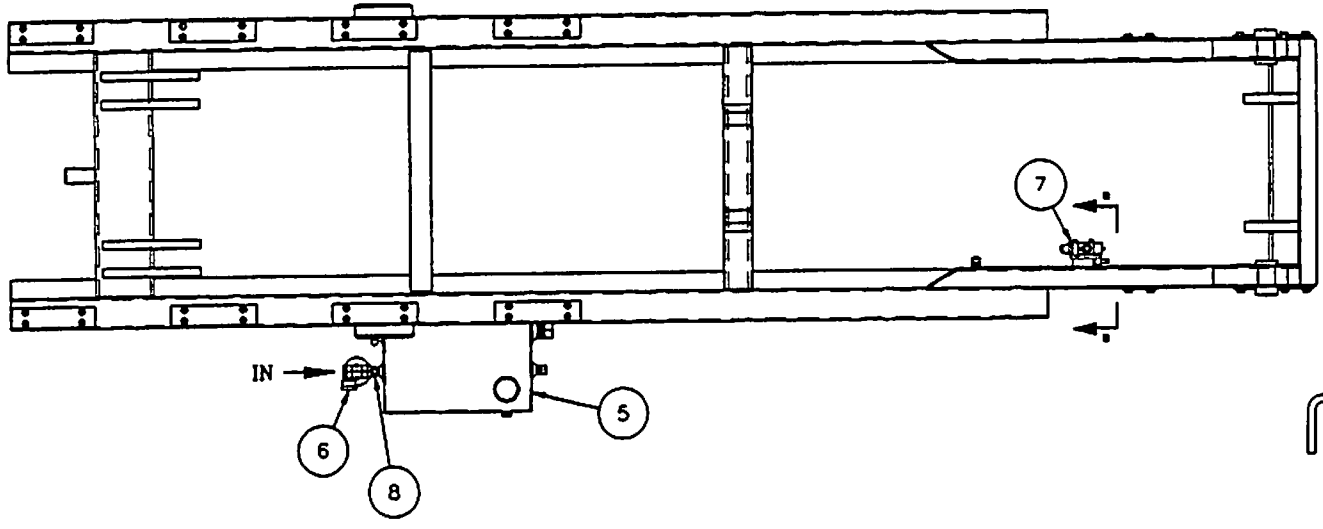
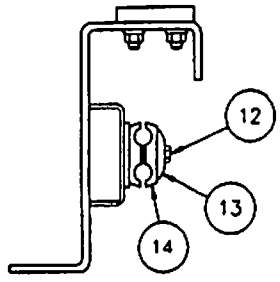
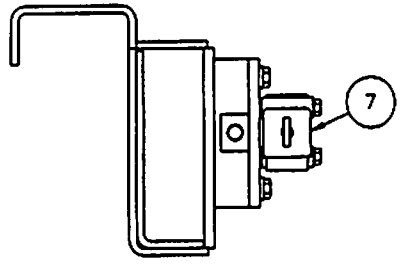
22					
				51.54	TOTAL

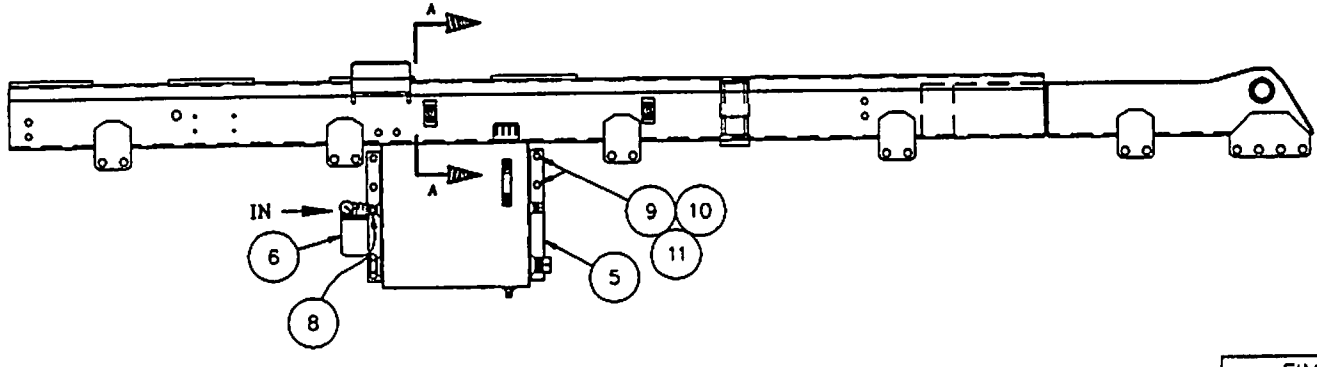




SECTION A-A



SECTION B-B



FINAL HYDRAULIC ASSEMBLY
SL-205
DWG.-90H20 ~ REV. C

		FINAL HYDRAULIC ASSEMBLY DWG.-90H20			REVISION C
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	90H23	HYD SUB-ASS'Y	38.96	NOT SHOWN
			CYL CIRCUIT		
2	ONE	90H22	HYD SUB-ASS'Y	15.29	NOT SHOWN
			PUMP CIRCUIT		
3	ONE	90H30	MANUAL CONTROL ASS'Y	51.54	NOT SHOWN
4	ONE	20P24	HYD PUMP, GEAR	55.00	NOT SHOWN
5	ONE	20P25	HYD TANK	63.00	
6	ONE	20P22	HYD FILTER	2.30	
7	ONE	21P28	HYD VALVE	2.20	
8	ONE	10P26	ADP, HYD PIPE NIPPLE	0.70	5404-20-16
9	4	00P15	1/2-13 x 1 3/4 HHCS	0.23	GR-8
10	4	00P35	1/2-13 LOCKING HEX NUT	0.05	GR-C
11	4	00784	1/2ø FLAT WASHER HT	0.04	F-436
12	2	10P28	HEX BOLT 5/16ø x 1 1/4	0.03	HEX-T2
13	2	10P29	COVER PLATE	0.10	TCP-T2
14	2	10P66	CLAMP HALF ASS'Y	0.04	T2050
15	ONE	20P64	INDICATOR GAUGE	0.01	T2050
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20					
				230.62	TOTAL

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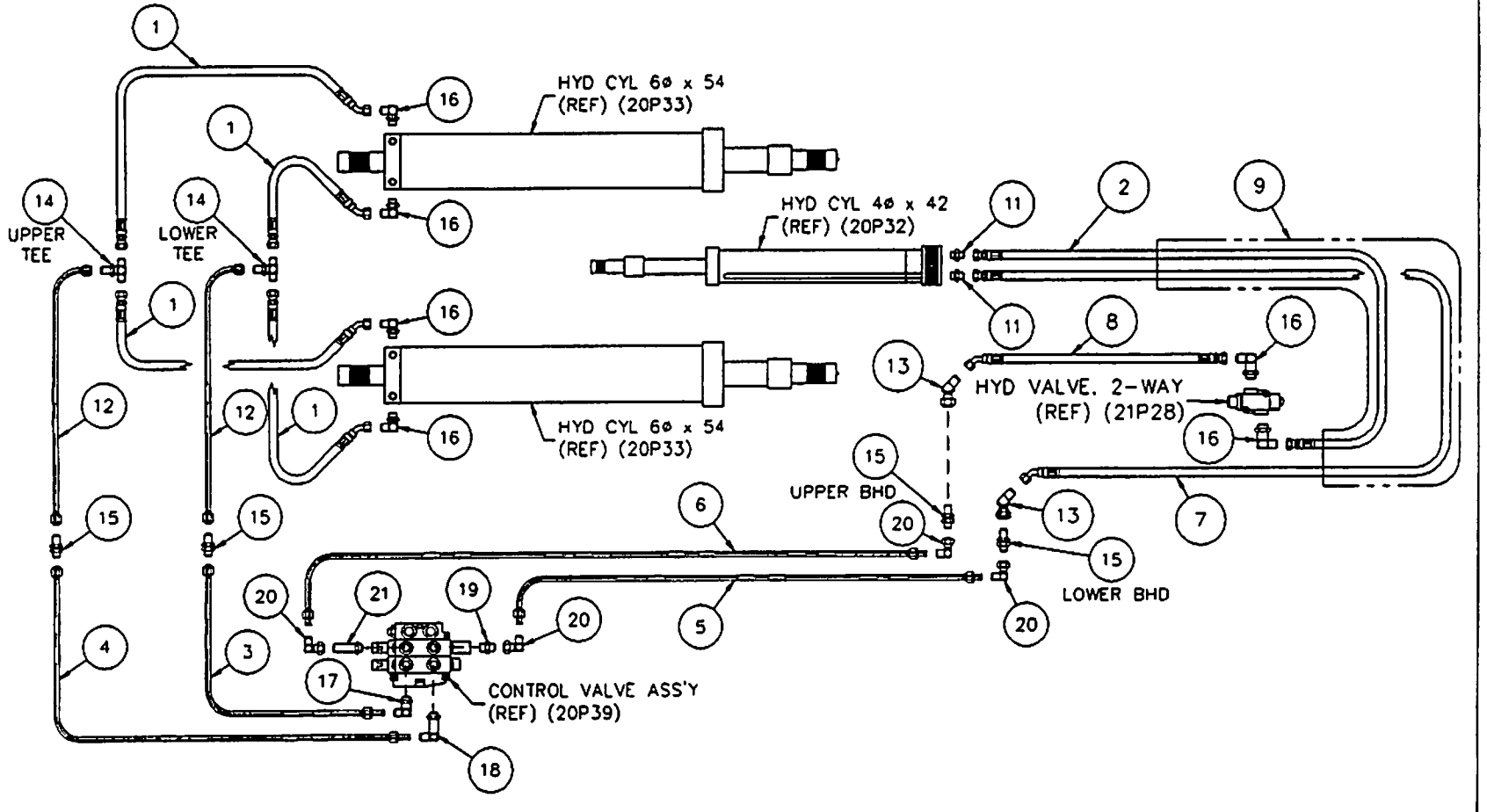
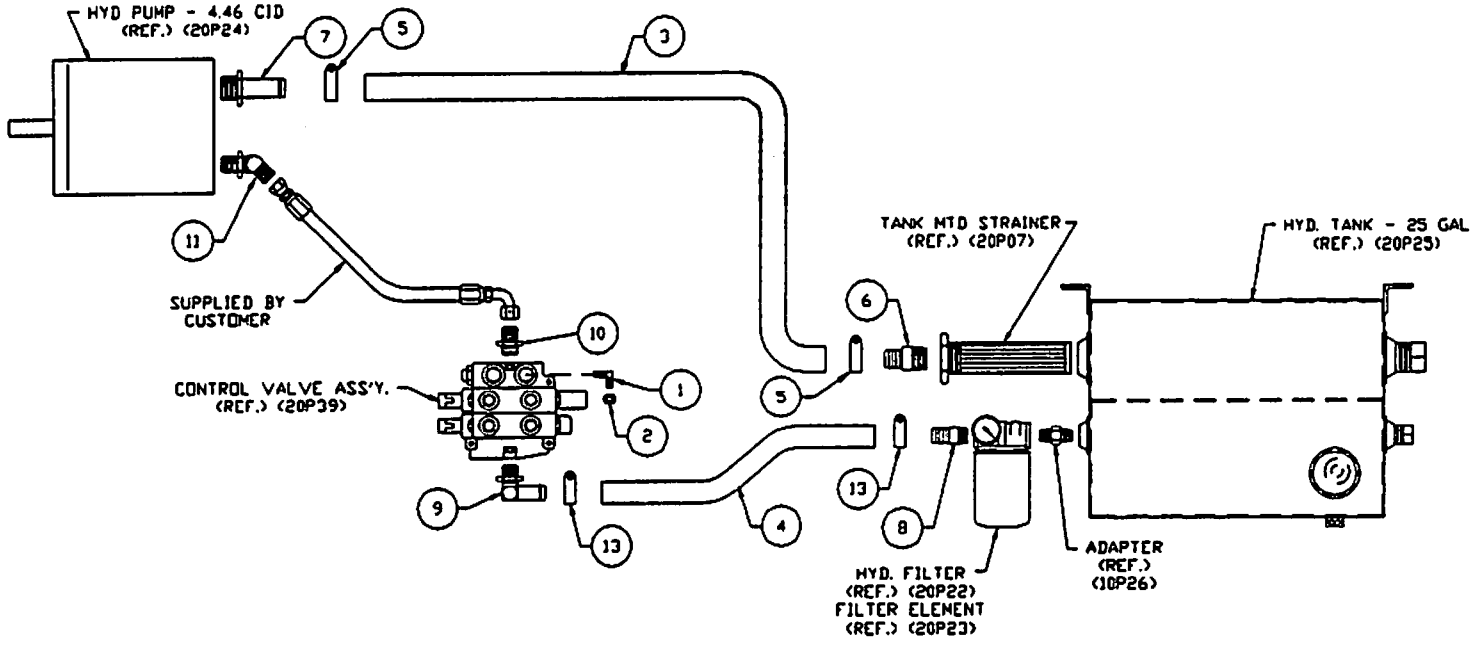


HYD SUB-ASS'Y - CYL CIRCUIT
SL-205
DWG.-90H23 ~ REV G

HYD SUB-ASS'Y - CYL CIRCUIT DWG.-90H23					REVISION G
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	4	10P98	HOSE ASS'Y 1/2 HP X 30 1/2	1.61	
2	ONE	12P77	HOSE ASS'Y 1/2 HP X 87	3.76	
3	ONE	10P71	HYD. TUBING - FRONT TO VALVE LOWER	1.66	
4	ONE	10P72	HYD. TUBING - FRONT TO VALVE UPPER	1.75	
5	ONE	10P73	HYD. TUBING - REAR TO VALVE LOWER	3.62	
6	ONE	10P74	HYD. TUBING - REAR TO VALVE UPPER	3.71	
7	ONE	12P78	HOSE ASS'Y 1/2 HP x 119	4.93	
8	ONE	12P76	HOSE ASS'Y 1/2 HP x 31 1/2	1.65	
9	ONE	90H74	NYLON HOSE SLEEVE, 1 1/2ø x 60	0.30	
10					
11	2	10P39	ADP, HYD. O-RING/ M JIC STR	0.30	6400-8
12	2	10P70	TUBING - FRONT	1.27	
13	2	12P09	ADP, HYD FM JIC SWIVEL / MJIC 45°	0.30	6502-10
14	2	11P01	ADP, HYD M JIC BHD BRANCH TEE	0.40	2703-LN-10
15	4	11P02	ADP, HYD M JIC BHD UNION	0.40	2700-LN-10
16	6	11P23	ADP, HYD. O-RING/ M JIC 90°	0.30	6801-8
17	ONE	11P04	ADP, HYD O-RING/ M JIC 90°	0.40	6801-10
18	ONE	11P05	ADP, HYD O-RING/ M JIC 90° EXT	0.40	6801 LL-10
19	ONE	11P06	ADP, HYD O-RING/ M JIC 90°	0.40	6400-10
20	4	11P07	ADP, HYD M JIC / FM JIC SWIVEL 90°	0.40	6500-10
21	ONE	12P61	ADP, HYD M JIC / ORB L	0.40	6400-L-10
22					
				38.96	TOTAL



HYD. SUB-ASS'Y - PUMP CIRCUIT
SL-205 & SL-225
DWG.-90H22 ~ REV C

		HYDRAULIC SUB-ASSEMBLY – PUMP CIRCUIT DWG.-90H22			REVISION C
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	10P37	ADP. HYD MJC / MP 90°	.30	2501-4-4
2	ONE	10P38	ADP. HYD JIC CAP	.10	304-C-4
3	ONE	12P30	HOSE 1 1/4 LP X 148	9.74	
4	ONE	12P31	HOSE 1 LP X 30	1.65	
5	2	10P78	T-BOLT CLAMP, 1 3/4ø	.15	TBC-175
6	ONE	12P25	ADP. HYD HOSE INSERT/ MP	.60	ST15
7	ONE	12P24	ADP. HYD HOSE INS./ O-RING	.60	4604-20
8	ONE	12P19	ADP. HYD HOSE INSERT/ MP	.30	ST10
9	ONE	12P26	ADP. HYD HOSE INS./ ORB 90°	.60	4601-16-12
10	ONE	10P90	ADP. HYD MJC / O-RING STR	.40	6400-12
11	ONE	10P91	ADP. HYD MJC / O-RING 45°	.50	6802-12-16
12					
13	2	10P21	T-BOLT CLAMP, 1 1/2ø	.10	TBC-150
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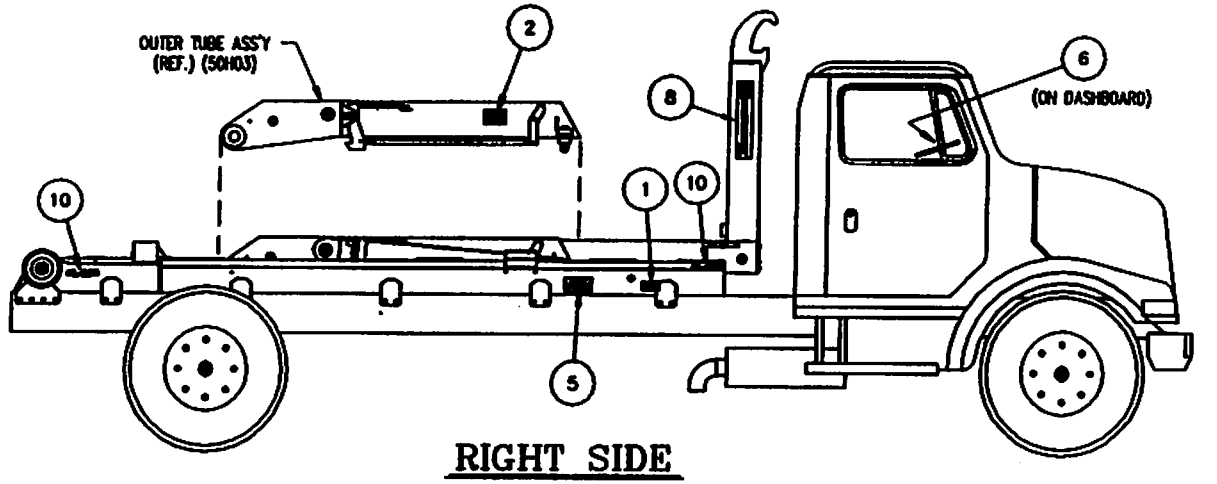
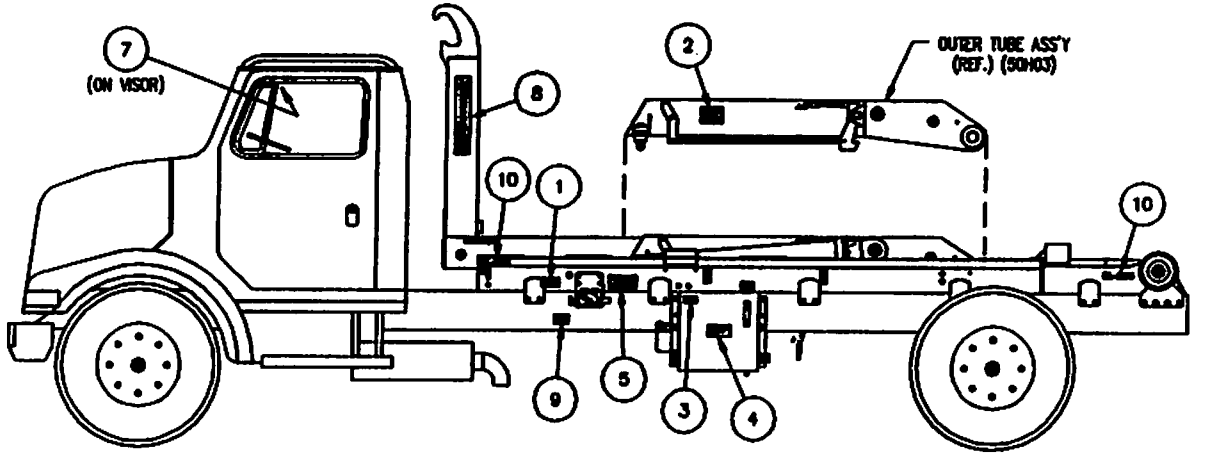
				15.29	TOTAL



RIGHT SIDE



LEFT SIDE

DECAL ASSEMBLY
SL-205
DWG.-50H45 ~ REV A

		DECAL ASSEMBLY DWG.–50H45			REVISION A
ITEM	QTY.	P/N	DESCR.	WT.– lb. PER EACH	REMARKS
1	2	90P07	OPR. & SERV. MANUAL		
2	2	90P08	HOIST – BODY SPEC.		
3	ONE	90P09	HYD. OIL SPEC.		
4	ONE	90P10	HYD. OIL FLAMMABLE		
5	2	90P11	HOIST FALLING		
6	ONE	90P12	LEVER CONTROL		
7	ONE	90P13	SAFTY INSTRUCTIONS		
8	3	90P14	SWAPLOADER – JIB		
9	ONE	90P18	RELIEF VALVE		
10	4	90P21	SL–205		
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					TOTAL

OPTIONS

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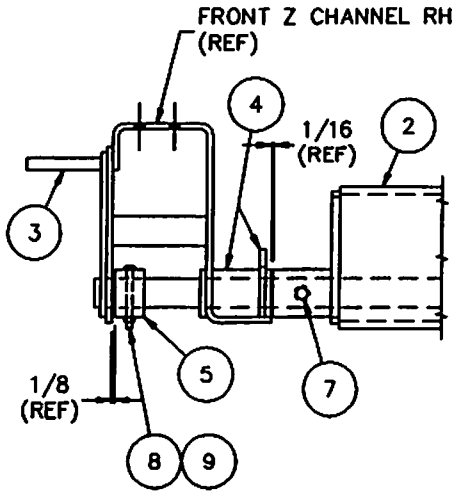
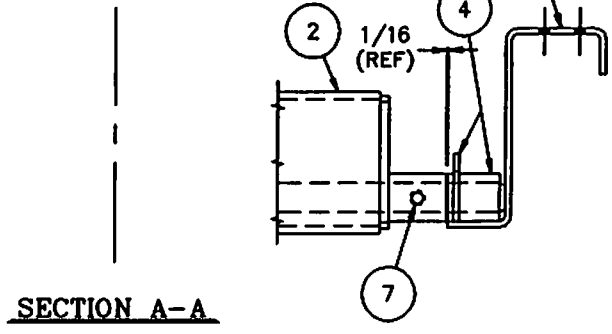
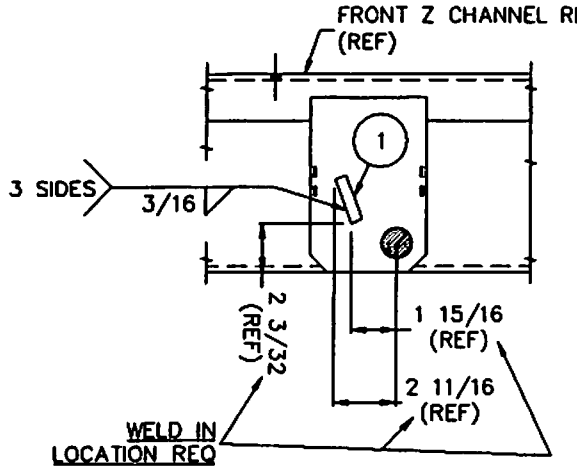
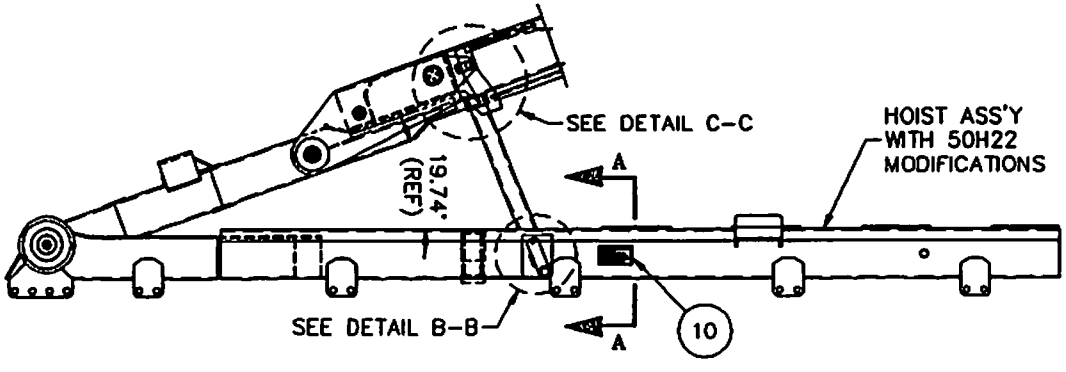


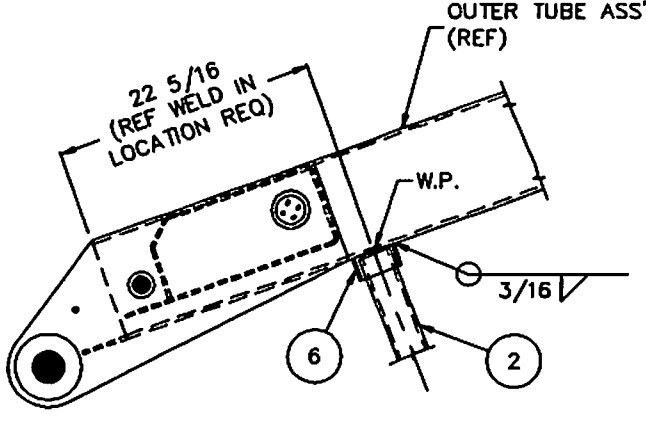


SECTION A-A



DETAIL B-B





DETAIL C-C

PROP FINAL ASSEMBLY
SL-205 & SL-225
DWG.-50H23 ~ REV A

PROP FINAL ASSEMBLY DWG.-50H23					REVISION A
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	21H57	CRANK STOP	.14	
2	ONE	50H20	CENTER PROP WDMT	56.73	
3	ONE	50H21	PROP SHAFT WDMT	14.46	
4	ONE	50H22	PROP MOD. WDMT	6.56	
5	ONE	61H08	BUSHING	.63	
6	ONE	61H10	PROP CRADLE	1.52	
7	2	00P52	1/2-13 x 3/4 SQ HD SET SCR	.04	
8	ONE	00P51	1/4-20 LOCKING HEX NUT	.01	GR-C
9	ONE	00P50	1/4-20 x 2 1/2 HHCS	.05	GR-8
10	ONE	90P52	PROP DECAL	-	
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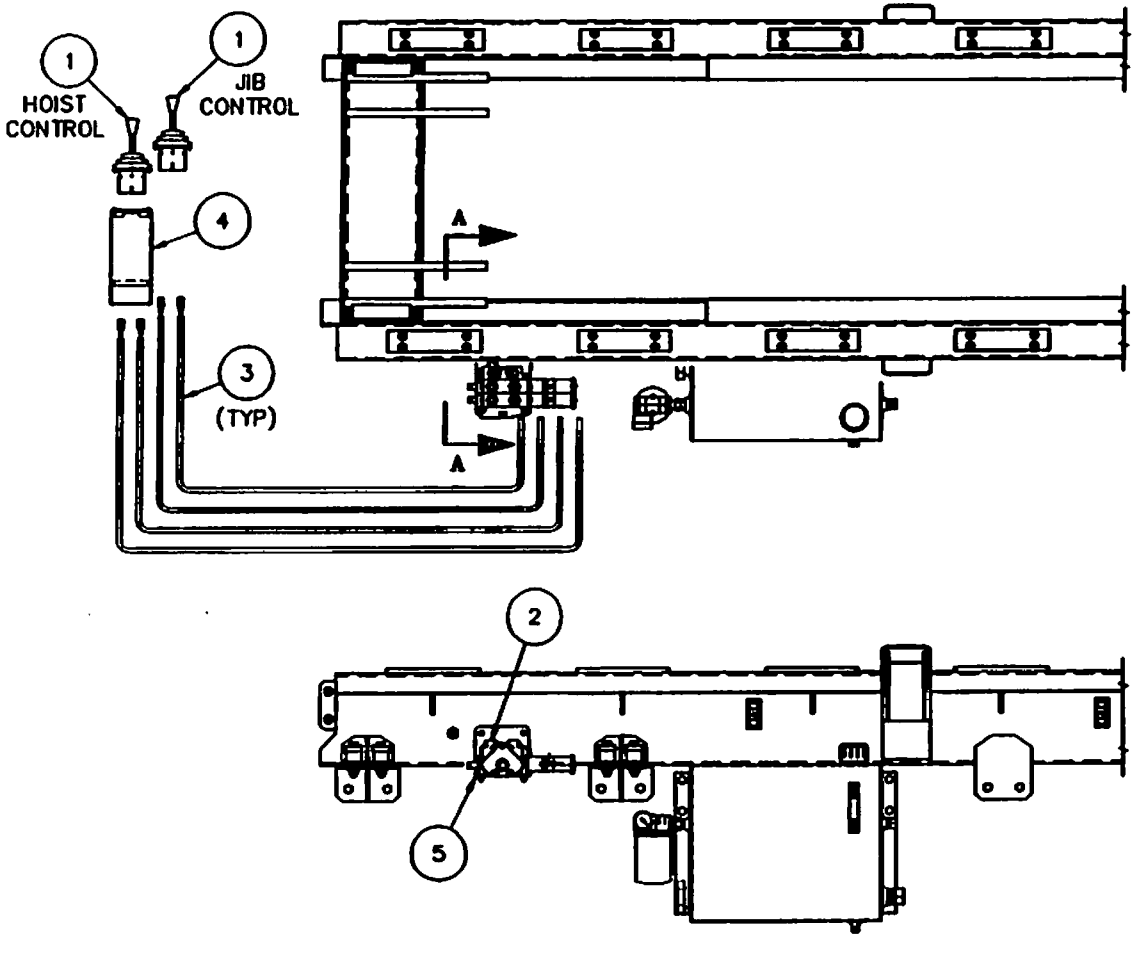
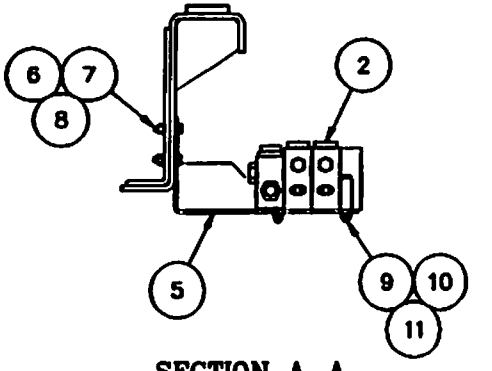
				80.18	TOTAL





SECTION A–A

AIR CONTROL ASS'Y 2 SECTION
DWG.–90H61

AIR CONTROL ASS'Y 2 SECTION DWG.-90H61					REVISION .
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	ONE	20P72	CONTROL HANDLE ASS'Y	1.60	
2	ONE	90H62	HYD VALVE ASS'Y	29.84	
3	ONE	90H60	AIR CIRCUIT, CONTROL VALVE	6.80	
4	ONE	51H27	AIR CONTROL CONSOLE ASS'Y	6.23	
5	ONE	10H51	VALVE MOUNT BRACKET	8.24	
6	4	00755	3/8ø LOCK WASHER	.05	
7	4	00P13	3/8-16 x 1 1/4 HHCS	.13	GR-8
8	4	00P14	3/8-16 HEX NUT	.10	GR-8
9	3	00P19	5/16-18 x 2 3/4 HHCS	.13	GR-8
10	3	00P20	5/16-18 HEX NUT	.09	GR-8
11	3	00752	5/16ø LOCK WASHER	.04	
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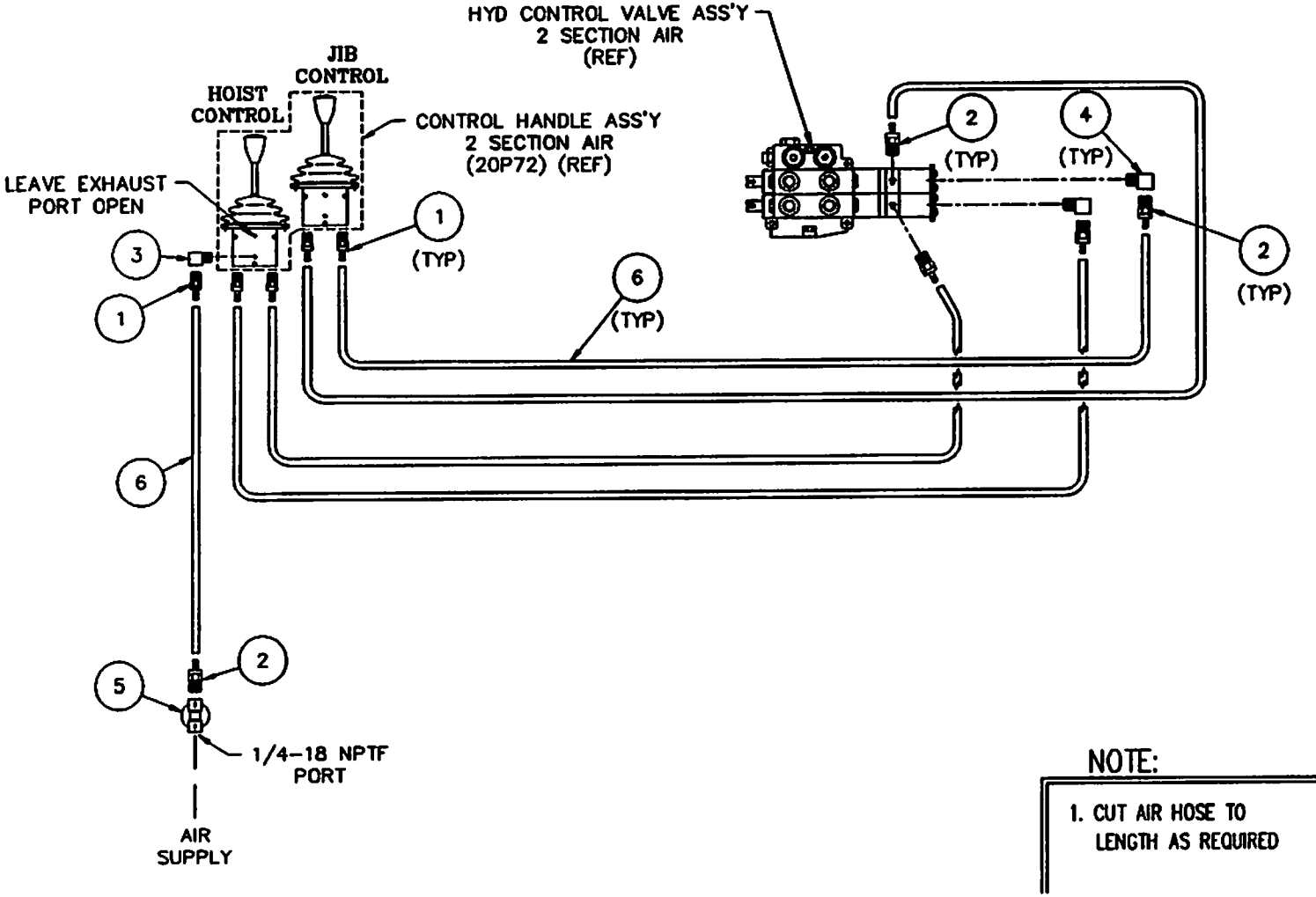
				54.61	TOTAL



NOTE:

1. CUT AIR HOSE TO LENGTH AS REQUIRED

AIR CIRCUIT, CONTROL 2 SECTION

DWG.-90H60

		AIR CIRCUIT, CONTROL 2 SECTION DWG.-90H60			REVISION
ITEM	QTY.	P/N	DESCR.	WT.- lb. PER EACH	REMARKS
1	5	11P80	FITTING, AIR 1/8-27 NPT	.01	10004B-102
2	5	11P81	FITTING, AIR 1/4-18 NPT	.01	10004B-104
3	ONE	11P82	ADP, AIR MP/FP 90° BRASS	.01	3400-2
4	2	12P11	ADP, AIR MP/FP 90° BRASS	.05	3400-4
5	ONE	20P74	AIR PRESSURE PROTECTION VALVE	.59	WM778A
6	ONE	90H43	AIR HOSE, 1/4ø x 75 ft	6.00	H20104
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22					
				6.80	TOTAL

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