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# Operating & Installation Instructions

## Manual Out / Hydraulic Down 25k ft.lbs. Outriggers

### **!ATTENTION!**

KEEP THIS MANUAL WITH THE CRANE. OPERATION INSTRUCTIONS ARE CONTAINED IN A SEPARATE MANUAL. NEW OPERATORS SHOULD READ AND BE FAMILIAR WITH THE OPERATING INSTRUCTIONS BEFORE OPERATING THIS CRANE.

ORDER PARTS USING PART NUMBER, CRANE MODEL NUMBER AND CRANE SERIAL NUMBER TO ASSURE ACCURACY OF ORDERS.

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P/N 20553**

**MANUAL OUT / HYDRAULIC DOWN  
25k ft.lbs. OUTRIGGER**

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## OPERATING INSTRUCTIONS

### MANUAL OUT / HYDRAULIC DOWN 25k ft.lbs. OUTRIGGER

Always keep the truck as level as possible when operating the crane. Set the outriggers on firm ground that will not yield under load.

Check for overhead obstructions and especially for electrical wires. The crane must always be more than 10 Feet away from any electrical wires.

Set the truck's parking brake before operating either the outrigger or crane. Insert wheel chocks under the front wheels before setting up the outrigger.

Start the engine and set the pump to supply fluid to the crane and outrigger.

To set the jack cylinder first pull it out from the body by raising the outrigger detent pin and pulling out on the outrigger extension until the pin can be engaged in the outer stop hole. Do not use the outrigger unless this pin is fully engaged. There are only two positions for the pull out section; either fully retracted or fully extended.

The outrigger jack cylinders are operated by setting the diverter valve to supply hydraulic power to the outriggers. Move the directional control valve levers to raise or lower the jack cylinders.

**WARNING:** The jack cylinders will crush anything underneath them. Check that everyone and everything is clear of the jacks before they are lowered.

Lower the jack cylinders until there is lifting of the truck bed. The higher the truck, the less the truck must tilt to counter-balance the crane and its load. Leave the truck wheels in contact with the ground.

The outrigger is set and the crane is ready for use. After setting the jack cylinders, shift the diverter valve to supply hydraulic power to the crane. Do not change the diverter valve until crane operation has ceased.

**NOTE:** At no time should the tire on the opposite side from the lifting side be raised off of the ground. If this occurs and you are sure the load is within the rating of the crane's load radius chart, relocate the truck closer to the load.

Do not move the truck with the jack cylinders extended. Bending and breakage may occur. Retract the jack cylinders completely before moving the truck.

Do not operate the crane until you have read and understand the crane's operation as explained in the crane's owner/operator manual.

To store the outrigger, raise the outrigger jack so that the hydraulic cylinder is fully retracted. Lift the detent pin and slide the outrigger pull-out section fully in. Make sure the detent pin engages into the hole in the outrigger pull-out section. Repeat this for both sides.



## INSTALLATION INSTRUCTIONS

### MANUAL OUT / HYDRAULIC DOWN 25k ft.lbs. OUTRIGGER

Read these instructions completely before starting installation.

This kit includes the outrigger center tube, with two manual pull-out sections, two hydraulic jack cylinders, one two-spool directional valve, a diverter valve, and hose and fittings needed to connect these items. Hose for the pump to outrigger connection is not included.

Before mounting the outrigger center tube, orient the outrigger so that the longer manual pull out section is on the same side of the truck as the crane. Also, plan the hose routing to the jack cylinders. A gap must be left to allow these hoses to flex whenever the manual pull-out sections of the outrigger are moved in or out from the body.

**IMPORTANT:** The outrigger center tube must be supported at the truck frame, at its outer end under the crane's structural support, and at the end opposite the crane. The center tube should not be supported by the body sheet metal.

After the center tube is mounted, position the hydraulic jack cylinders so that they will extend 4" to 6" below ground level when the truck is level. Stroke of the jack cylinders is 20 inches. Mount the jack cylinders to the pull-out sections using the four 1/2-13 x 4.0" Grade 8 Cap Screws supplied.

Refer to Drawing No. 50502 for a hydraulic schematic of this installation. Mount the diverter valve and directional control valves for convenient operation. The diverter valve is used to send hydraulic fluid *either* to the crane *or* to the outrigger. Installation of this valve will prevent inadvertent operation of the jack cylinders when the crane is being used.

Note the "In" and "Out" ports on the directional control valve. Connect the valve "In" port to the pump pressure port. Connect the "Out" port to return flow to the reservoir through a 10-micron filter.

Make up hoses as needed using the hose and reusable hose ends supplied. Hoses may be switched at the valve bank to coordinate the valve lever movement and cylinder direction.

Hydraulic flow to the outriggers should be limited to 2.5 GPM. At this flow rate the jack cylinder will move its 20" stroke in approximately 15 seconds. Higher flows may result in noisy operation.

Fill with hydraulic oil and bleed air out by fully extending the cylinders. We use Chevron AW Hydraulic Oil 46 or equivalent. When operating for the first time, it is best to extend the cylinder completely without stopping. This will evacuate the air from the cylinder's rod end and less air will be trapped in the rod end if this is done.

Place labels on the jack cylinder warning of crushing injury. Check the outrigger for operation. Especially note that the detent pins for the pull out sections are fully engaged in both operating and stored positions. The outrigger is ready for use!



**OUTRIGGERS CENTER TUBE  
DIMENSIONS TABLE**

<i>Outrigger Model</i>	<i>Center Tube Size</i>
<i>Outrigger 10K</i>	<i>2.50" X 5.00" X 0.18" W</i>
<i>Outrigger 12K</i>	<i>2.50" X 5.00" X 0.18" W</i>
<i>Outrigger 18K</i>	<i>4.00" X 6.00" X 0.25" W</i>
<i>Outrigger 25K</i>	<i>5.00" X 7.00" X 0.18" W</i>
<i>Outrigger 36K</i>	<i>6.00" X 8.00" X 0.18" W</i>
<i>Outrigger 50K</i>	<i>7.00" X 9.00" X 0.18" W</i>
<i>Outrigger 72K</i>	<i>8.00" X 10.00" X 0.25" W</i>





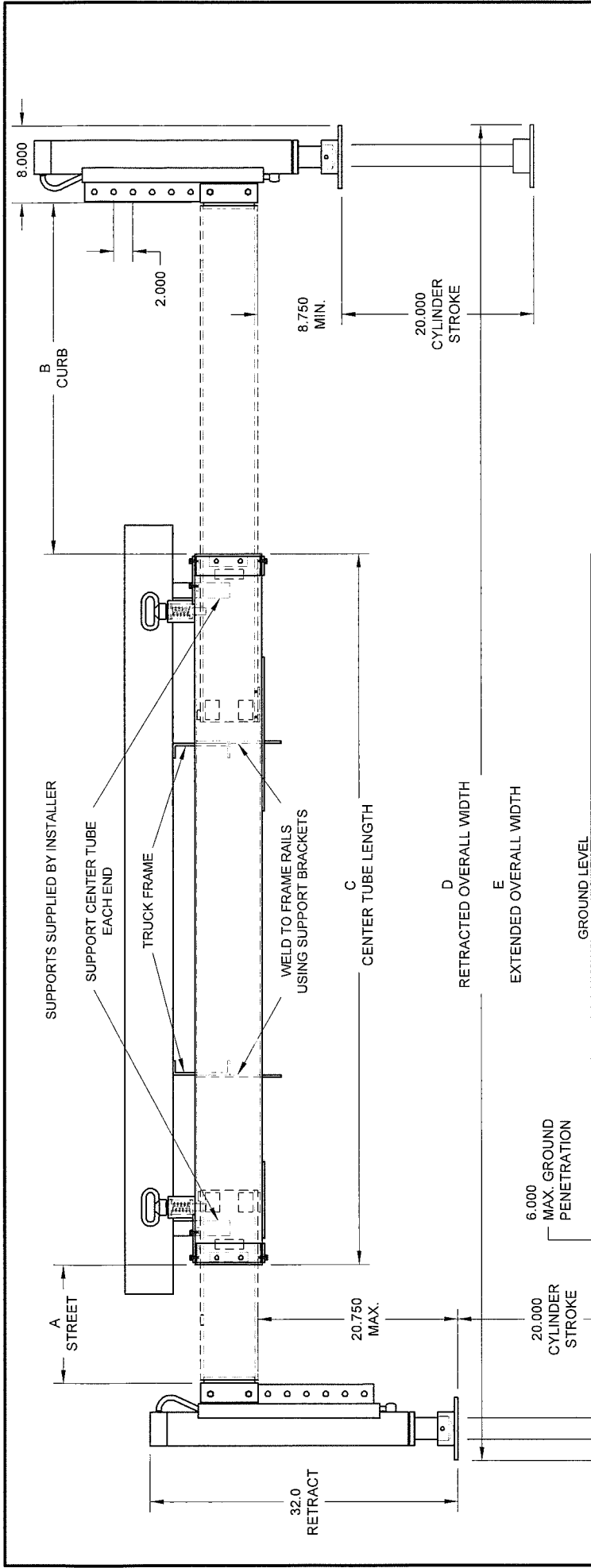
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DRWN BY: KSP  
DATE: 11/26/08

# OUTRIGGER 25K MOHD INST

DRAWING NO.

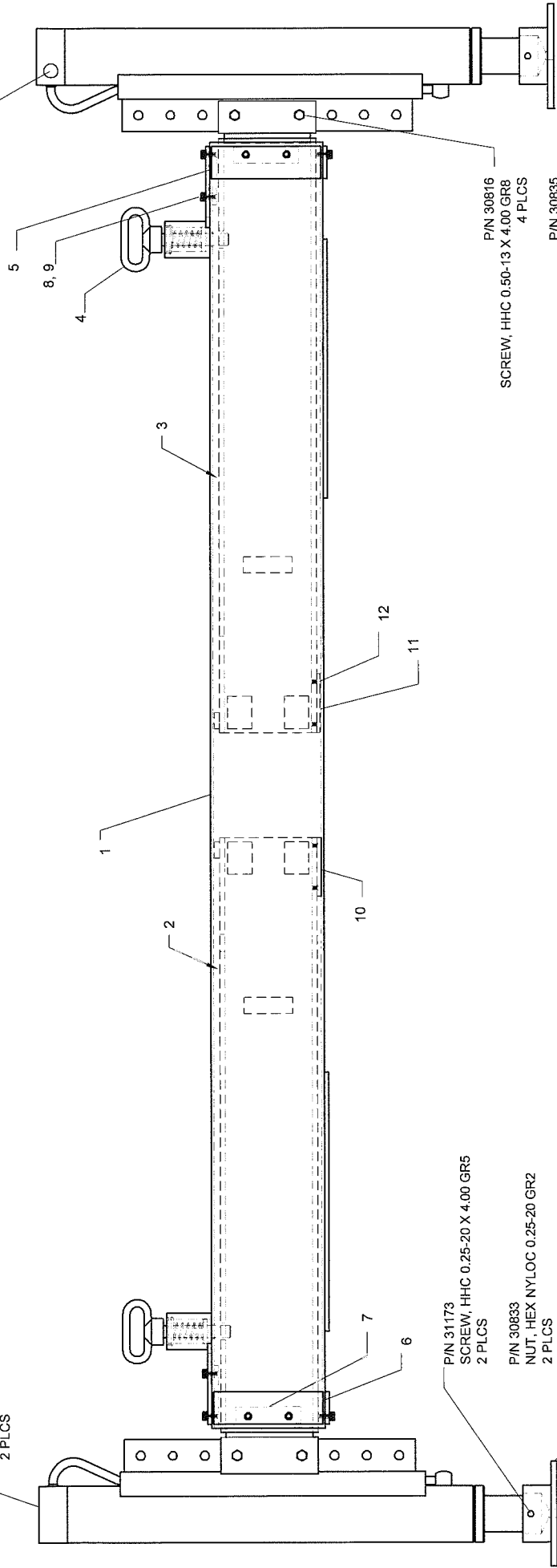
## 50508-B



MODEL	DESCRIPTION	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	DIMENSION E
MODEL 38429	36CMOHD-12SMOHD	12"	36"	79.5"	96.5"	144.5"
MODEL 38430	36CMOHD-12SMOHD	12"	36"	74"	91"	139"
MODEL 38443	24CMOHD-24SMOHD	24"	24"	79.5"	96.5"	144.5"
MODEL 38461	36CMOHD-12SMOHD	12"	36"	79.5"	96.5"	144.5"
MODEL 38583	36CMOHD-12SMOHD	12"	36"	79.5"	96.5"	144.5"
MODEL 38622	36CMOHD-SFXHD	0"	36"	79.5"	96.25"	132.25"
MODEL 38665	36CMOHD-12SMOHD	12"	36"	79.5"	96.5"	144.5"
MODEL 38728	36CMOHD-12SMOHD	12"	36"	79.5"	96.5"	144.5"
MODEL 38782	36CMOHD-12SMOHD	12"	36"	74"	91"	139"
MODEL 38944	SFXHD-CFXHD	N/A	N/A	78.870"	95.5"	95.5"

P/N 17621  
CYLINDER, 3.0 X 20.0 X 2.25 JS  
2 PLCS

P/N 31591  
VALVE, P.O. CHECK CARTRIDGE



P/N 31173  
SCREW, HHC 0.25-20 X 4.00 GR5  
2 PLCS

P/N 30833  
NUT, HEX NYLOC 0.25-20 GR2  
2 PLCS

P/N 31110  
WASHER, FLAT 0.25 GR5 PLATED  
4 PLCS

P/N 17931  
BASE, JACK HYD., 25K OUTRIGGER  
2 PLCS

P/N 30816  
SCREW, HHC 0.50-13 X 4.00 GR8  
4 PLCS

P/N 30835  
NUT, HEX NYLOC 0.50-13 GRADE 5  
4 PLCS

P/N 19323  
WASHER, FLAT 0.50 SAE GR8  
8 PLCS

\*SEE INSTALLATION DRAWING FOR OUTRIGGER MODEL NUMBER DESCRIPTION

ITEM	DESCRIPTION	OUTRIGGER											
		38429 QTY	38430 QTY	38443 QTY	38461 QTY	38583 QTY	38622 QTY	38665 QTY	38728 QTY	38782 QTY	38944 QTY		
1	CENTER OUTR.	17844	17841	18063	17844	17844	19729	17844	17844	17841	22894		
2	STREET SIDE OUTR.	17852	17852	18066	17852	17852	NONE	17852	17852	17852	NONE		
3	CURB SIDE OUTR.	17848	17848	18065	17848	17848	17848	17848	17848	17848	NONE		
4	DETENT ASSY	32492	32492	2	32492	2	32492	2	32492	2	NONE		
5	TOP SPACER	33292	33292	2	33292	2	33292	2	33292	2	NONE		
6	BOTTOM SPACER	33951	33951	2	33951	2	33951	2	33951	2	NONE		
7	SIDE SPACER	16820	16820	2	16820	2	16820	2	16820	2	NONE		
8	SCREW	30457	30457	16	30457	16	30457	8	30457	16	NONE		
9	LOCK WASHER	30889	30889	16	30889	16	30889	8	30889	16	NONE		
10	STREET NYLON PAD	NONE	NONE	33950	NONE	NONE	NONE	NONE	NONE	NONE	NONE		
11	CURB NYLON PAD	34032	34032	1	34032	1	34032	1	34032	1	NONE		
12	SCREW	33614	33614	4	33614	4	33614	4	33614	4	NONE		



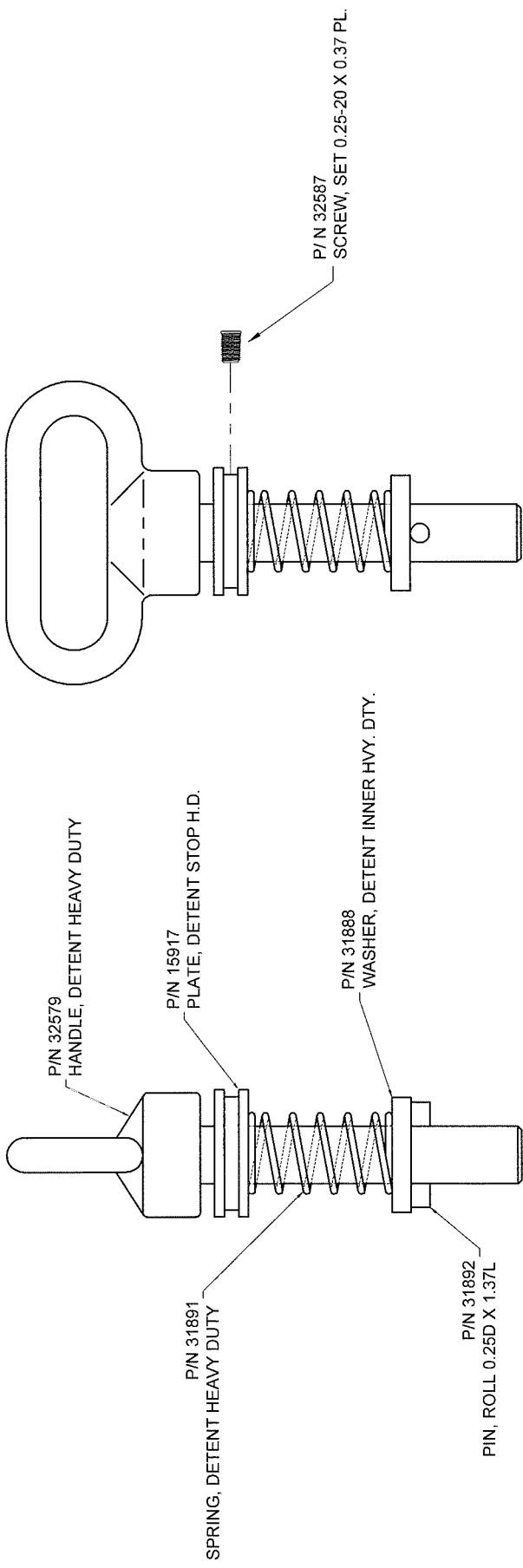
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DATE: 11/26/08

OUTRIGGER 25K MOHD PARTS

DRAWING NO.

50445-B



P/N 32579  
HANDLE, DETENT HEAVY DUTY

P/N 15917  
PLATE, DETENT STOP H.D.

P/N 31888  
WASHER, DETENT INNER HVY. DTY.

P/N 31891  
SPRING, DETENT HEAVY DUTY

P/N 31892  
PIN, ROLL 0.25D X 1.37L

P/N 32587  
SCREW, SET 0.25-20 X 0.37 PL.

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DRWN BY: JC  
DATE: 01/24/07

DETENT, INNER ASSEMBLY H.D.

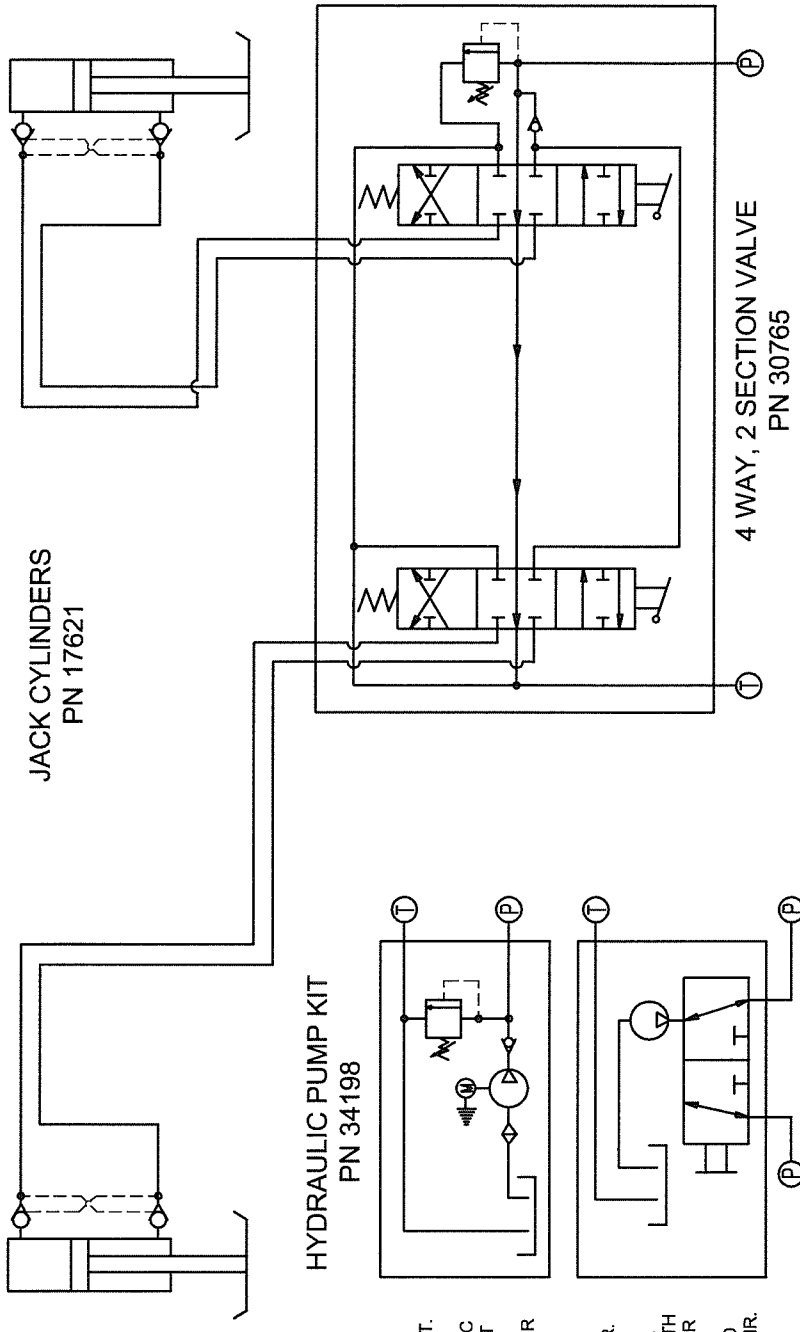
DRAWING NO.

32492-C



STREET SIDE

CURB SIDE



OPTION 2:  
FOR ELECT.  
CRANES;  
HYDRAULIC  
PUMP UNIT  
WITH  
RESERVOIR

OPTION 1:  
FOR HYDR.  
CRANES;  
DIVERTER  
VALVE WITH  
CUSTOMER  
SUPPLIED  
PUMP AND  
RESERVOIR.

NOTES: PLUMB "P" PORTS AND "T" PORTS BETWEEN  
OUTRIGGER SYSTEM AND FLUID POWER SOURCE.



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DRWN BY: SJN  
DATE: 8/12/02

SCHEM, HYD. OUTRIG MOHD

DRAWING NO.  
50502-0