

12/88

EFFECTIVE SERIAL NO. 50-EF-388

## Auto Crane Company

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## OWNER'S MANUAL

5005H

SERIAL NO. \_\_\_\_\_



## **WARNING:**

FEDERAL LAW (49 CFR PART 571) REQUIRES THAT THE FINAL STAGE MANUFACTURER OF A VEHICLE CERTIFY THAT THE VEHICLE COMPLIES WITH ALL APPLICABLE FEDERAL REGULATIONS. ANY MODIFICATIONS PERFORMED ON THE VEHICLE PRIOR TO THE FINAL STAGE ARE ALSO CONSIDERED INTERMEDIATE STAGE MANUFACTURING AND MUST BE CERTIFIED AS TO COMPLIANCE. THE INSTALLER OF THIS CRANE AND BODY IS CONSIDERED ONE OF THE MANUFACTURERS OF THE VEHICLE. AS SUCH A MANUFACTURER, THE INSTALLER IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS, AND IS REQUIRED TO CERTIFY THAT THE VEHICLE IS IN COMPLIANCE.

IT IS THE FURTHER RESPONSIBILITY OF THE INSTALLER OF THE CRANE TO COMPLY WITH THE OSHA TRUCK CRANE STABILITY REQUIREMENTS AS SPECIFIED BY 29 CFR PART 1910.180 (C) (1).



## 5005H SERIES - OWNER'S MANUAL

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## INTRODUCTION 5005H SERIES

Auto Crane products have been engineered to provide safe, trouble-free, dependable service for many years when these products are properly used and maintained.

To assist you in obtaining the best service from your crane and to avoid untimely failure of the unit and/or the vehicle on which it is mounted, the following operating and service instructions are herein published, and it is specifically recommended that all operating and service personnel consider this manual as mandatory material for reading and study before operating or servicing Auto Crane products. It is highly recommended that crane owners, equipment managers and supervisors also read this manual.

Auto Crane has incorporated several safety features in the 5005H series for your protection. The material and electrical systems were designed to minimize weight and lengthen durability. The hydraulic components are designed for a 4:1 safety factor. Holding valves are installed on the power versions to prevent the load from dropping if a hose should fail. A 10u filter is installed in the hydraulic system to remove dirt and grit that may cause premature failure. The reservoir is protected with a 15u filter in the filler cap, and a 40 mesh strainer in the suction line.

For your convenience the overall dimensions of the 5005H series are included on the General Dimension Drawing. Rotation and turning radius are also listed. See page 8-1-0.0.

Remember that the crane adds weight to the vehicle and may change the driving and riding characteristics of the vehicle on which it is mounted unless this weight is properly provided for with appropriate overload springs. The payload of the vehicle is also reduced by the amount that the crane weighs, and as the vehicle is loaded, care should be exercised not to overload the vehicle. Exercising care in distributing the payload on the vehicle will greatly improve the driving and riding characteristics of the vehicle. A minimum G.V.W. of 10,500 lbs. is recommended for mounting the 5005H series cranes.

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Auto Crane Company issues a limited warranty certificate with each unit sold. See last page for warranty policy.

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It has always been Auto Crane Company policy to handle all warranty claims we receive as promptly as possible. If material or workmanship is involved, immediate corrective action is taken. It is therefore, understandable that Auto Crane Company cannot

assume responsibility or liability when our products have obviously been abused, mis-used, overloaded or otherwise damaged by inexperienced persons trying to operate the equipment without even reading the manual. The Auto Crane is designed and built to be safe and efficient. Auto Crane will not assume responsibility or liability for any unit which has been modified, changed, or which has unauthorized or unapproved components installed.

Auto Crane maintains a strong distributor network and a knowledgeable Customer Service Department. In most cases an equipment problem can be solved through a telephone conversation with our Customer Service Department. The Customer Service Department also has the ability to bring a local distributor, a regional sales manager, or a factory serviceman into the solution of an equipment problem if necessary. If through no fault of Auto Crane Company it is necessary to send an experienced factory serviceman on a field service call, the rates stated in the Auto Crane, Distributor's Flat Rate Manual will apply.

Auto Crane Company's extensive Research and Development Program assures our customers of the best equipment on the market, and our Engineering Staff, as well as our knowledgeable sales people are always available to our customers in solving crane and winch-type application problems. When in doubt-call the the Auto Crane factory.

### DISTRIBUTOR ASSISTANCE:

Should you require any assistance not given in this manual, we recommend that you consult your nearest Auto Crane Distributor. Our distributors are stocked with authorized replacement parts and a service department that can solve almost any needed repair.

### NOTE: THIS MANUAL SHOULD REMAIN WITH THE CRANE AT ALL TIMES.

The material herein does not imply to cover all maintenance, instructions, operations, or variations pertinent to every possible situation. If additional information is required, please refer to the Auto Crane Company at the following telephone number: 918 - 438-2760. The information contained in the manual was in effect at the time of printing. Auto Crane Company reserves the right to update this material at any time without prior notice or obligation.

# **-IMPORTANT-**

## **SAFETY TIPS AND PRECAUTIONS**

1. Make certain the vehicle meets minimum chassis requirements. (These requirements do not guarantee unit stability.)
2. Make certain the crane is installed per factory specifications. Contact your local Distributor or the Auto Crane factory if any questions arise.
3. Keep the vehicle in as level a position as possible while loading or unloading.
4. ALWAYS set the vehicle emergency brake before beginning crane operations
5. ALWAYS use outriggers from vehicle to the ground during crane operation. Insure that they are firmly positioned on solid footings.
6. All load ratings are based on crane capacity, NOT unit stability.
7. ALWAYS comply with load chart capacities (centerline of rotation to hoist hook).
8. NEVER OPERATE THE CRANE NEAR ELECTRICAL POWER LINES. Auto Crane Company recommends that a crane never be moved any closer to a power line (including telephone lines) than 20 feet at any point.
9. Keep objects and personnel clear of crane path during operation.
10. Keep hoist cable pulled tight at all times.
11. WARNING NEVER un-reel last wrap of cable from drum.
12. WARNING NEVER wrap cable around load.
13. REMEMBER - in lifting a heavy load, the weight can create enough tipping moment to overturn the vehicle.
14. WARNING NEVER attempt to lift or drag a load from the side- the boom can fall far below its rated capacity.
15. Oil gears as required.
16. Periodic adjustment of hoist worm brake may be required (see automatic safety brake drawing, page4-4.0.0 ).
17. WARNING NEVER weld, modify, or use unauthorized components on any Auto Crane unit. This will void any warranty or liability. Also failure of the crane may result.
18. An important item which an operator should consider and use properly is the hoist hook. It should be checked on a 30-day basis for distortion or cracks.
19. WARNING NEVER place a chain link on the tip of the hook and try to lift a load with the hoist.
20. WARNING NEVER use a sling bar or anything larger than the hook throat which could prevent the hook from closing with the block, thus negating the safety feature.
21. WARNING In using a safety hook, ALWAYS insure that the hook throat is closed before lifting a load. Proper attention and common sense applied to the use of the hoist hook and various slings will prevent possible damage to material being hoisted and may prevent injury to personnel.
22. WARNING NEVER hold any pendant Select switch on that will negate safe operating conditions.
23. ALWAYS store outriggers before road travel.

## OPERATION OF UNIT

1. Make sure this manual has been thoroughly read by all crane operating personnel.
2. A routine inspection of the crane should be mandatory before each operating day. Any defects should be corrected immediately.
3. At a job site the vehicle should be positioned so that the crane can adequately reach the load within the rated capacity (centerline of rotation to hoist hook).
4. Keep the vehicle as level as possible during operation.
5. Engage emergency brake, block wheels, and turn ignition off with transmission left in gear or in park (for automatic transmissions). This is for Auto Crane units requiring only battery operation. For larger Auto Crane units requiring battery and hydraulic operation, engage emergency brake and place gear select in neutral; press clutch and pull PTO knob in gear; release clutch and set throttle control to proper engine speed.  
**WARNING: DO NOT EXCEED ENGINE SPEED NECESSARY TO MEET PUMP RPM REQUIREMENT - (see hydraulic section) POSSIBLE DAMAGE MAY RESULT.**
6. Always use outriggers from the truck to the ground. Be sure these are firm and adequately positioned.
7. Then remove pendant control from cab (on smaller units) and plug into receptacle on crane. Crane is now ready for operation. On Auto Crane's larger units,
8. Always boom up before rotating so that the boom will clear the required boom support.
9. When extending the boom always maintain clearance between the boom crown and the traveling block or hoist hook.
10. Always observe safe and practical operation to avoid possible accidents. Refer to Safety Tips and Precautions.
11. After completing lifting operations, return the boom to stowed position on the boom support. Avoid excess pressure on the boom support.
12. Store pendant control on proper location (in cab or on crane).
13. Return outriggers to stowed position. Make sure they are pinned in place or jacklegs are returned to compartment.
14. Check work area for any tools or equipment not stored.
15. Press clutch and disengage PTO. Release throttle control and emergency brake.
16. Report any unusual occurrence during crane operation that may indicate required maintenance or repair.

## OPERATION OF HYDRAULIC OUTRIGGERS

1. Prior to operating outriggers, detach crane hook from dead man.
2. Shift crane - outrigger selector valve to "outrigger" position.
3. While operating the outrigger control valves (located on the outrigger cylinders), simultaneously operate the boom-up control switch. This will allow hydraulic system to build pressure.
4. After outriggers are positioned, return crane-outrigger selector valve to "crane" position. Crane is now ready to operate.

## MOUNTING AND INSTALLATION 5005H

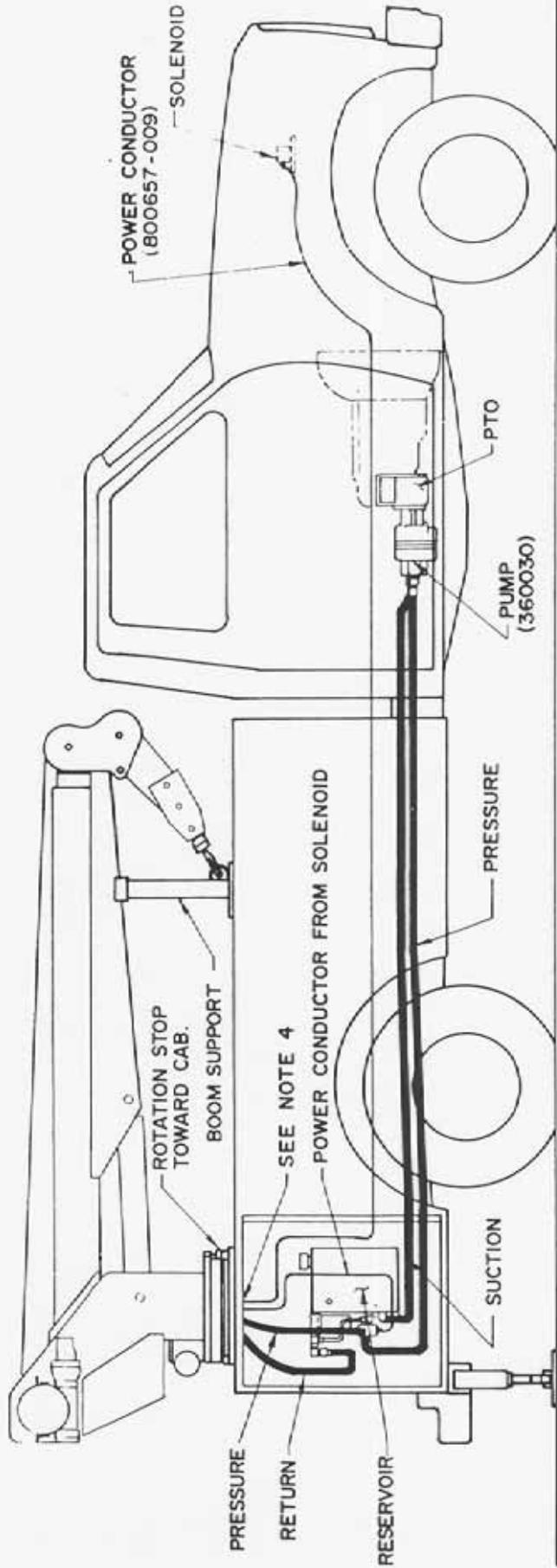
1. Vehicle should meet minimum GVW rating of 10,500
2. Make sure compartment or crane mount is adequately reinforced.
3. A 13 1/2" Dia. hole should be cut out of mounting location (centered with mounting bolts. Ref: ENG 168, page 8-1.0.0 for access of lower ring gear bolts and hydraulic connections.
4. Mounting bolts (015104 - Screw, Hx. 7/8 N.F. x 5" G5, 4 required) to be torqued to 440 ft. lbs. (dry).
5. Power conductor (Item 46, 800657-009, Drawing AW-360505, Page 4-1.0.0 and Item 46, Page 4-2.0.0) to be uncoiled from bottom of crane and routed to positive pole on starter solenoid(REF. Drawing AW-023, page 2-2.0.0).
6. Pressure and return hoses and fittings are not furnished with crane. These items are normally calculated, (length) at installation. Refer to reservoir ass'y, AW480150.
  - A) Return line from crane to reservoir  
hose - size 8 (SAE 100 R2 type AT) at desired length.  
Fittings - one - 10 JIC female swivel fitting, (reservoir end). One - 8 JIC female swivel fitting (crane end).
  - B) Pressure line from vented relief valve to crane  
Hose - size 8 (SAE 100 R2 type AT) at desired length.  
Fittings - two - 8 JIC female swivel fittings.
  - C) Suction hose from pump to reservoir.  
Hose size 16 (SAE 100 R4) at desired length.  
Fittings - one hose adapter - 16 JIC female swivel fitting (pump end).  
One - 16 straight adapter (reservoir end). Four hose clamps - 16 (two each end).
  - D) Pressure line from pump to vented relief valve  
Hose - size 12 (SAE 100 R2 type AT) at desired length.  
Fittings - two - 10 JIC female swivel fittings.

NOTE: If no pressure received at reservoir, alternate hose connections at pump.

7. When crane is not in operation, a boom support should always be used. Traveling block should be connected to hook loop. See illustration Drawing AW-023, page 2-2.0.0.
8. Always use cable loops on boom and pendant guard to store pendant assembly.
9. Crane operation requires 6 G.P.M. at 2350 p.s.i.
10. IT IS STRONGLY RECOMMENDED THE VEHICLE BE EQUIPPED WITH AN ENGINE SPEED CONTROL AND TACHOMETER.

Fixture No	Finish No
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CHG LTR	REVISIONS	DESCRIPTION	DATE	APP'D
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- NOTES:
1. SEE PAGE 4 FOR FURTHER INSTRUCTIONS.
  2. THE INSTALLATION ABOVE SHOWN IN SOLID LINE FORM FOR CLARITY.
  3. THE PRESSURE AND RETURN HOSES FROM THE RESERVOIR TO THE CRANE SHOULD BE AS LONG AS POSSIBLE TO ALLOW FOR ROTATION.
  4. AFTER POWER CONDUCTORS ARE INSERTED THROUGH HOLE IN BASE OF CRANE, SEAL ALL AROUND WITH SILICONE RUBBER OR EQUAL, TO PREVENT WIRE DAMAGE.

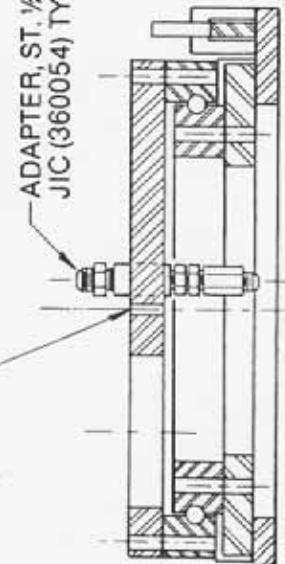
2-2.0.0

ITEM	QUANTITY	ITEM D/S	PART NO.	DESCRIPTION
<b>AUTO CRANE COMPANY</b>				
	UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED	DRAWN BY <i>2/20/87</i>	DATE <i>2-23-87</i>	
	ANGLES: * 1° XX * 40° FRACTIONAL: 1 1/2 XXX * 0/0	CHK'D BY <i>CHKD BY</i>	DATE <i>XX-XX-XX</i>	TITLE MOUNTING AND INSTALLATION
	REMOVE ALL BURRS AND SHARP EDGES DO NOT SCALE THIS DRAWING	ENG BY <i>ENG BY</i>	DATE <i>XX-XX-XX</i>	5005H
	TOLERANCES NOT SHOWN ABOVE ARE PER ANSI Y14.5-1973	SCALE <i>SCALE</i>	SIZE <i>B</i>	PRINTING NO <i>AW-023</i>
	THIS PRINT IS THE PROPERTY OF AUTO CRANE CO AND MUST NOT BE USED IN ANY MANNER DIFER- ENTIAL TO THEIR INTERESTS	WEIGHT <i>WEIGHT</i>	REV <i>2</i>	SECTION <i>2</i>

ITEM NO.	DESCRIPTION	REVISIONS		DATE	APPROVED BY
		CHG	CHG		
1	FINISH NO.				

- HOLE REQ'D FOR  
POWER CONDUCTOR

-ADAPTER, ST. 1/2 NPT. - 3/4 - 16  
JIC (360054) TYP. 2 PLC'S



SECTION A-A

The drawing shows a flange assembly with two concentric circles of holes. The outer circle has 16 holes, and the inner circle has 4 holes. Dimension lines indicate an overall diameter of 3 3/4 inches and a bore diameter of 1 5/8 inches. A horizontal line labeled "PRESSURE" extends from the top center through the flange. Callouts provide the following information:

- REF. (Reference)
- PRESSURE
- REDUCER 1/2", 14 NPT, 1/8" NPTF (750413)
- SWIVEL JOINT 8 (750412)
- TOWARD CAB (Arrow pointing right)
- Material specification: A-36

BOTTOM VIEW

ITEM	D/S	PART NO.	DESCRIPTION
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QUANTITY	DESCRIPTION OF MATERIAL	DRAWING	LIST OF MATERIAL
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AUTO CRANE COMPANY

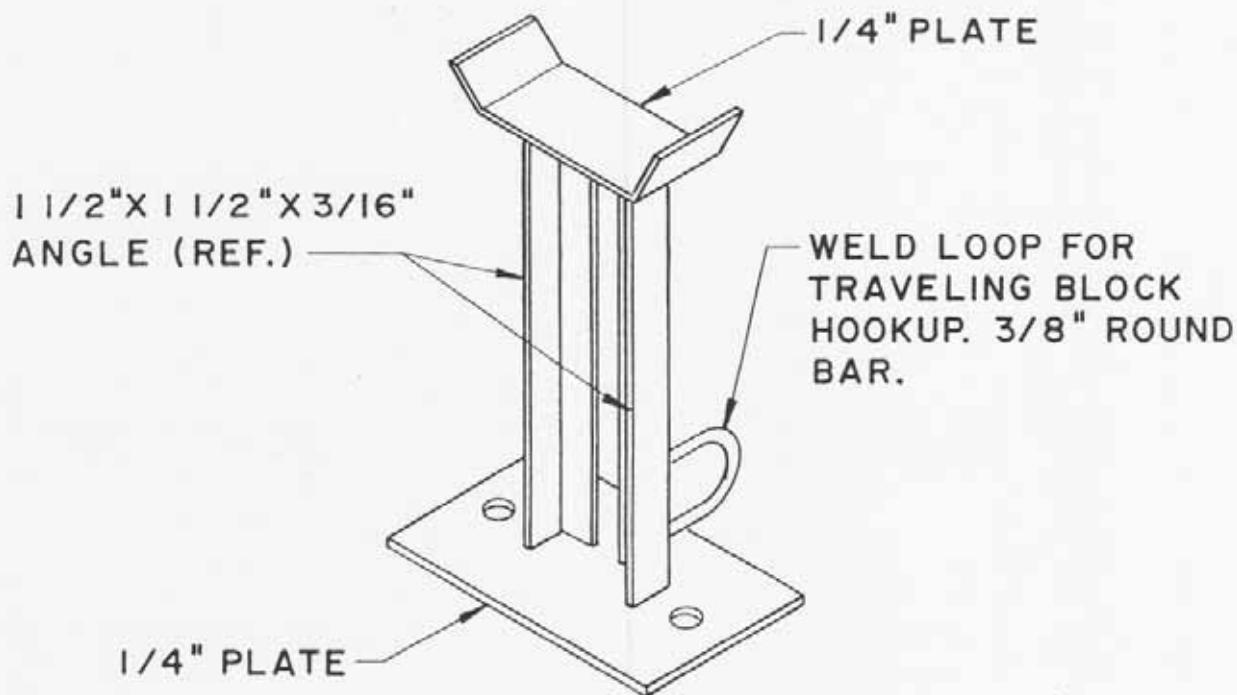
BASE ASSEMBLY - 5005H

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ITEM	D/S	PART NO.	DESCRIPTION
QUANTITY			LIST OF MATERIAL
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES. TOLERANCES UNLESS OTHERWISE SPECIFIED.	DRAWN BY <u>E. S.</u> DATE 7/10/86 CHK'D BY		<b>AUTO CRANE COMPANY</b>
ANGLES $\pm 1/2^\circ$	XX $\pm .40$		TITLE
FRACTIONAL * 1/16	XXX $\pm .010$		BASE ASSEMBLY - 5005H
REMOVE ALL BURRS AND SHARP EDGES. DO NOT SCALE THIS DRAWING.	ENG. BY		SCALE
TOLERANCES NOT SHOWN ABOVE ARE PER ANSI Y14.5-1973	DATE	SIZE	DRAWING NO.
		<u>B</u>	<u>ENG - 61</u>
NEXT ASS'Y	WEIGHT	SHEET <u>1</u> OF <u>1</u>	REVISION <u>C</u>

## AUTO CRANE'S SUGGESTED BOOM SUPPORT

LEAVE 3/4" CLEARANCE ON EACH SIDE OF BOOM



BOOM SUPPORT IS REQUIRED.

**AUTO CRANE COMPANY**

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4707 N. MINGO ROAD 918-836-0463

## WIRE LINE LUBRICATION

Lubrication of the wire line serves two important purposes: (1) helps to prevent corrosion; (2) lubricates the cable strands to reduce wear due to flexing and abrasion caused by contact with the sheaves, rollers, and cable on the drum.

### PREPARATION:

Remove rust and foreign matter with a wire brush and wipe clean. Be sure cable is dry.

### APPLICATION:

Two methods are illustrated in figures 1 and 2. A light weight motor oil may be used, as in figure 1; or a heavier lubricant such as grease gun lubricant, as in figure 2.

Illustrated in figure 1 is one easy and effective method of applying lubrication. Dip the brush into the lubricant and apply. In some cases a rag or piece of sheepskin is dipped in the lubricant and used to swab the lubricant on to the rope.

Another simple method is shown in figure 2. Leather gloves are preferred to canvas because of greater protection and less penetration of the grease.



Fig. 1



Fig. 2

## "LIFE OF WIRE LINE"

So many variable factors can cause the deterioration of wire line cable that it is not possible to determine a definite life expectancy.

Some of these factors are:

1. Load being handled.
2. Corrosive conditions.
3. Maintenance of the unit.
  - a. Keep the sheaves turning freely.
  - b. Maintain tension of cable to insure proper spooling.
  - c. Lubricate line (See above).
  - d. Avoid kinks in cable.
  - e. Avoid abrasive action and contact with sharp corners.
4. Frequency of use.

Auto Crane units, up to 5000 pound ratings, use 5/16 inch diameter galvanized preformed 7 x 19 aircraft cable which, when new, has a minimum strength of 9,800 pounds. It is recommended when 2500 pound loads are exceeded to use a two-part line with a traveling block. It can be seen that there is a safety factor of 3.9 to 1 when the cable is new.

Keeping the above factor of safety in mind and knowing the kind of loads that will be handled, the user can determine by inspection of the cable as to when it should be replaced.

Items to look for while inspecting the cables are:

1. Broken strands
2. Kinks and flattened sections.
3. Corrosion and abrasion.

## HYDRAULICS - 5005H

### VENTED RELIEF VALVE SETTING

REF: See reservoir assembly AW-360250, Page 6-5.0.0, and AW-092, Page 6-6.0.0

1. The crane must receive 6 GPM and 2350 PSI. to assure proper flow, install an in-line flow meter between the crane and the reservoir in the return hose, or confirm pump (360029) speed at 950 RPM. Proper pressure setting can be achieved by removing the pipe plug (P/N 000209, see AW-092) and installing a 0-2500 PSI pressure gauge. This should be done with the PTO disengaged, boom-up cylinder fully retracted, and boom properly supported.
2. Engage PTO and boom-up to 75° (Full extension) and note the pressure reading. If the pressure reading is not 2350 PSI, the vented relief valve needs adjustment (See AW-092, page 6-6.0.0). Loosen the adjustment nut and turn allen head screw to achieve 2350 PSI.
  - A. To increase pressure setting turn allen head screw clockwise
  - B. To decrease pressure setting turn allen head screw counter-clockwise
3. Verify this pressure setting by booming down to 60°, then booming up to full cylinder extension again and the pressure checked for 2350 PSI.
4. Return boom to a properly supported position, disengage PTO, remove pressure gauge and reinstall pipe plug.

## AW-093 HYDRAULICS - 5005H

### COUNTERBALANCE VALVE ADJUSTMENT

- REF: For more hydraulic assembly information see AW-360564, Page 6-1.0.0, or AW-360565, Page 6-2.0.0
1. (See Fig. 1) With PTO disengaged and boom properly supported, remove pipe plug P/N 000209 and install A 0-2500 P.S.I. pressure gauge into tee, P/N 360574.
  2. (See Fig. 3) Loosen locking set screw on flow regulator valve and turn adjustment knob all the way counter-clockwise for maximum flow.
  3. (See Fig. 4) Remove cap and loosen adjustment nut on relief valve, P/N 360566. Turn allen head adjustment screw all the way clockwise to raise the relief setting to maximum (DO NOT OVER TIGHTEN).
  4. Engage PTO (Requirements: pump speed setting 950 R.P.M., 6 G.P.M., 2350 P.S.I. to crane). with no load on boom, boom-up to 75° (Boom-up cylinder fully extended). Boom-down and note the pressure reading. If pressure reading is not 550-600 P.S.I., the counterbalance valve requires adjustment (See Fig. 2).
    - A. To increase the counterbalance setting, loosen adjustment nut, and turn allen head adjustment screw counter-clockwise.
    - B. To reduce counterbalance setting, turn adjustment screw clockwise.
  5. Tighten nut on adjustment screw, repeat procedure if needed to obtain proper pressure setting.
  6. With boom in properly supported position disengage PTO, remove pressure gauge and re-install pipe plug.

NOTE: If in an emergency situation it becomes necessary to lower the boom without flow being present, the counterbalance adjustment can be turned clockwise until the boom begins to descend. Caution, do not screw in adjustment screw too fast or too far, damage to valve may result.

### PRESSURE RELIEF VALVE SETTING

1. (See Fig. 4) With PTO disengaged and boom properly supported remove cap, P/N 330348 from pressure gauge fitting P/N 330176 and install a 0-2500 P.S.I. pressure gauge.
2. Close flow regulator valve by turning adjustment knob all the way clockwise (See Fig 3). CAUTION- DO NOT OVERTIGHTEN.
3. Engage PTO (Requirements: pump speed setting 950 R.P.M., 6 G.P.M., 2350 P.S.I. to crane). With no load on boom, boom-up to 75°, (Boom-up cylinder fully extended). Activate boom-down and note the pressure reading. If the pressure reading is not 750-800 P.S.I. the pressure relief valve requires adjustment.
  - A. With cap removed from allen head adjustment screw, loosen the adjustment nut.
  - B. To increase the pressure relief setting, turn the allen head adjustment screw clockwise.
  - C. To decrease the pressure relief setting, turn the allen head adjustment screw counter-clockwise.
4. Tighten nut on adjustment screw, and re-install cap. Repeat procedure if needed to obtain proper pressure setting. Disengage PTO and remove pressure gauge, reinstall cap.

### BOOM DOWN SPEED SETTING

1. (See Fig. 3) Engage PTO (requirements: pump speed setting, 950 R.P.M., 6 G.P.M., 2350 P.S.I. to crane). With no load on boom, boom-up to 75° (Boom-up cylinder fully extended). Activate boom-down and adjust the flow regulator adjustment knob to achieve a boom-down time of 37 seconds from 75° to 0°.
  - A. To increase boom-down speed, turn adjustment knob counter-clockwise.
  - B. To decrease boom-down speed, turn adjustment knob clockwise.
  - C. Use locking set screw on adjustment knob to hold desired position.

TEE, P/N 360574

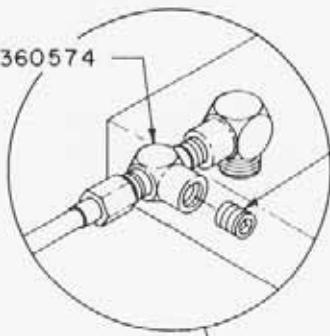
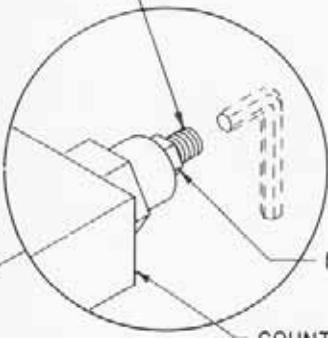


FIG. 1

**DANGER**

HIGH TEMPERATURE,  
HIGH PRESSURE OIL.  
PTO MUST BE  
DISENGAGED AND  
BOOM PROPERLY  
SUPPORTED BEFORE  
REMOVING PLUG,  
P/N 000209.

ALLEN HEAD ADJUSTMENT SCREW



COUNTERBALANCE VALVE, P/N 360568

FIG. 2

RELIEF VALVE  
P/N 360566

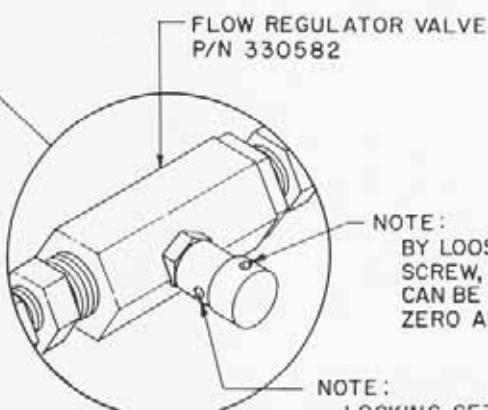


FIG. 3

ELL, P/N 330176  
CAP, P/N 330348

ADJUSTMENT NUT

ALLEN HEAD ADJUSTMENT SCREW  
CAP

FIG. 4

AW-093  
COUNTERBALANCE VALVE  
ADJUSTMENT, 5005H

## 5005H SERIES HYDRAULICS TROUBLESHOOTING

**CAUTION:** Never check for hydraulic leaks by feeling around hoses, fittings, or any other components. High pressure oil can be injected through the skin causing sever injury, or death.

The hydraulic system of the 5005H power version is electrically operated and requires a minimum of 12v for satisfactory performance. The hydraulic pump is bi-rotational with a pressure relief setting of 2350 p.s.i. (REF). Standard pump speed is 950 R.P.M. (Ref. Pump P/N 360029). This pump is for direct flange mounting only, not to be shaft driven.

### PROBLEM

#### FLOW PRESENT BUT FUNCTION WILL NOT WORK

### SOLUTION

Remove valve cover (P/N 360544, Item 15, Page 4-1.0.0) to gain access to the manual override on the end of the valve cartridge. With pump operating, operate pendant switch to supply flow to the crane and twist/pull the manual override knob out. If function does not operate, check pump pressure and relief valve setting. If the function does operate, check for loose wire, low voltage or bad ground. If the above items check out all right, replace valve cartridge. If the problem is traced to no voltage at the valve cartridge, remove pendant and with the switch engaged check for an open circuit with an ohmmeter. if the circuit is open, check for broken wiring or bad switch.

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#### HYDRAULIC "CHATTER"

When a hydraulic function is engaged and causes the crane to "chatter", check for loose wire, low voltage at valve cartridge, low pump pressure, or air in the system.

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#### NO FLOW OR LIMITED FLOW TO CRANE

Check for adequate oil supply in reservoir. Check operation of vented relief valve by pressing manual over-ride on solenoid of relief valve while operating crane. If crane functions, check for 12V at solenoid when operating crane. If voltage present-check solenoid on relief for continuity and ground. If low flow condition continues to exist when relief valve vent manual over ride is operated, remove relief valve cartridge and check for dirt. Other possible causes for a low flow condition are:

1. Engine speed to slow.
2. Blocked pressure hose from pump. This condition can be identified by excessive luging of engine and rapid overheating of oil.
3. Collapsed or blocked suction hose to pump. This condition is usually identified by pump cavitation noise.
4. Bad pumps - a bad pump will usually have some flow but the flow will drop off rapidly as pressure increases. This condition will cause overheating of the system.

Progressively disconnect fittings at test points to verify existence of flow. Rule: Pumps pump flow only, systems and their loads-resistances produce pressure, up to that limit imposed by lowest pressure limiting exposed to pressure.

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#### NO PRESSURE OR TOO LOW PRESSURE

Check to maintain adequate oil in reservoir (approx. 5 gal.) by means of sight gauge. Make sure pressure gauge is functioning correctly. Possible relief hung open. Check for excessive leakage and correct. Check to insure that pressure limit switch is correctly set.

Progressively test circuit points to determine pressure existence.

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#### TOO HIGH FLOW

Make sure pump size is correct and pump speed is not too fast (950 R.P.M.). Check or replace flow control. Check components for flow displacements.

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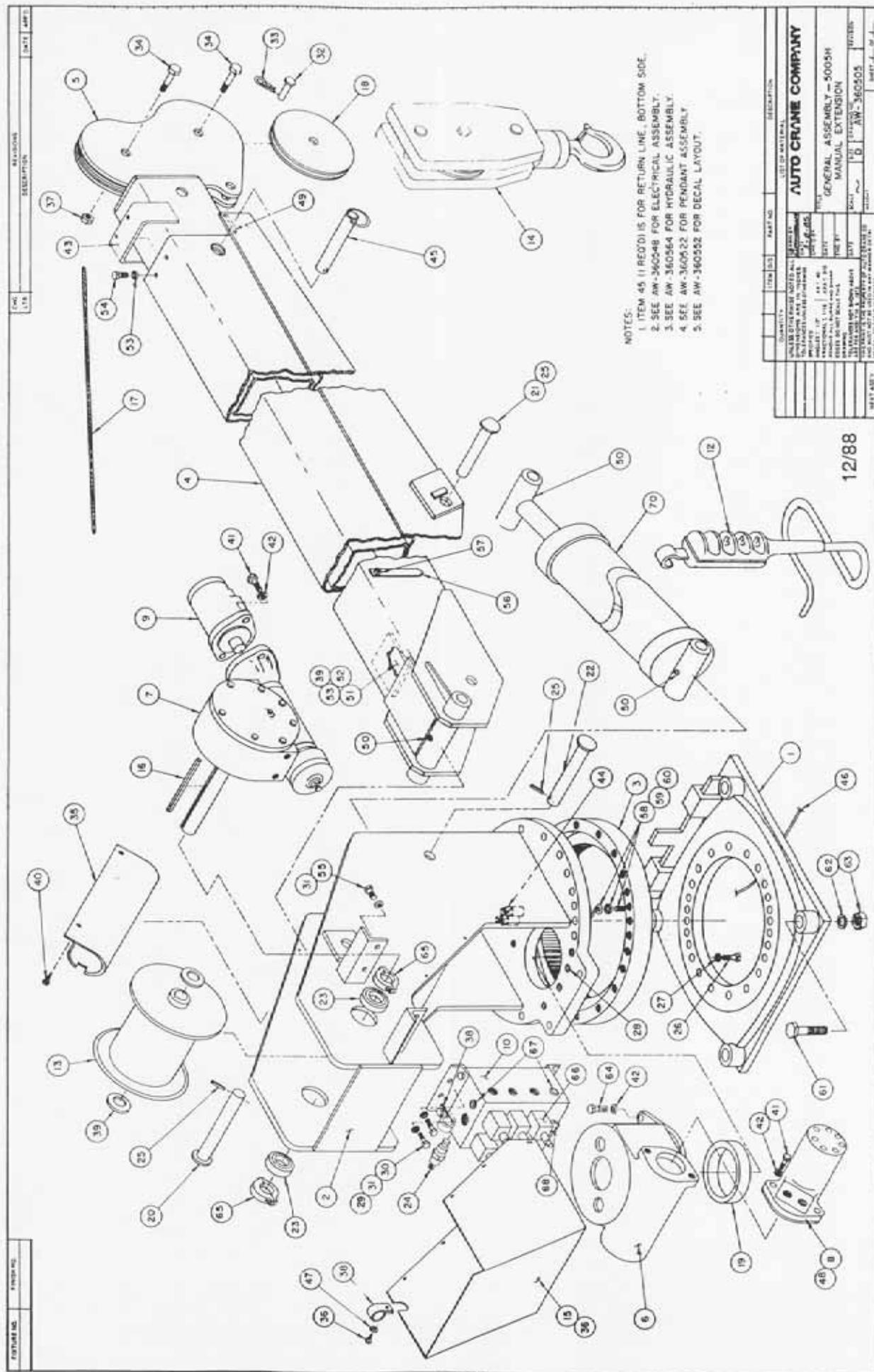
#### TOO HIGH PRESSURE

Make sure pressure relief valve is correctly set.

### CAUTION

The Auto Crane 5005H Series cranes are manufactured with a standard overload protection system to prevent structural damage to the crane. When the crane load rating is exceeded, main boom down, extend out, and hoist up will not function. These operations cannot be used again until the load on the crane is reduced. Also, the main boom elevation will be limited in its operation as the crane becomes overload. Attempting to raise the main boom with a load exceeding the crane rating will open the main relief valve resulting in no boom movement. This problem can be resolved by moving the load closer to the crane pedestal.



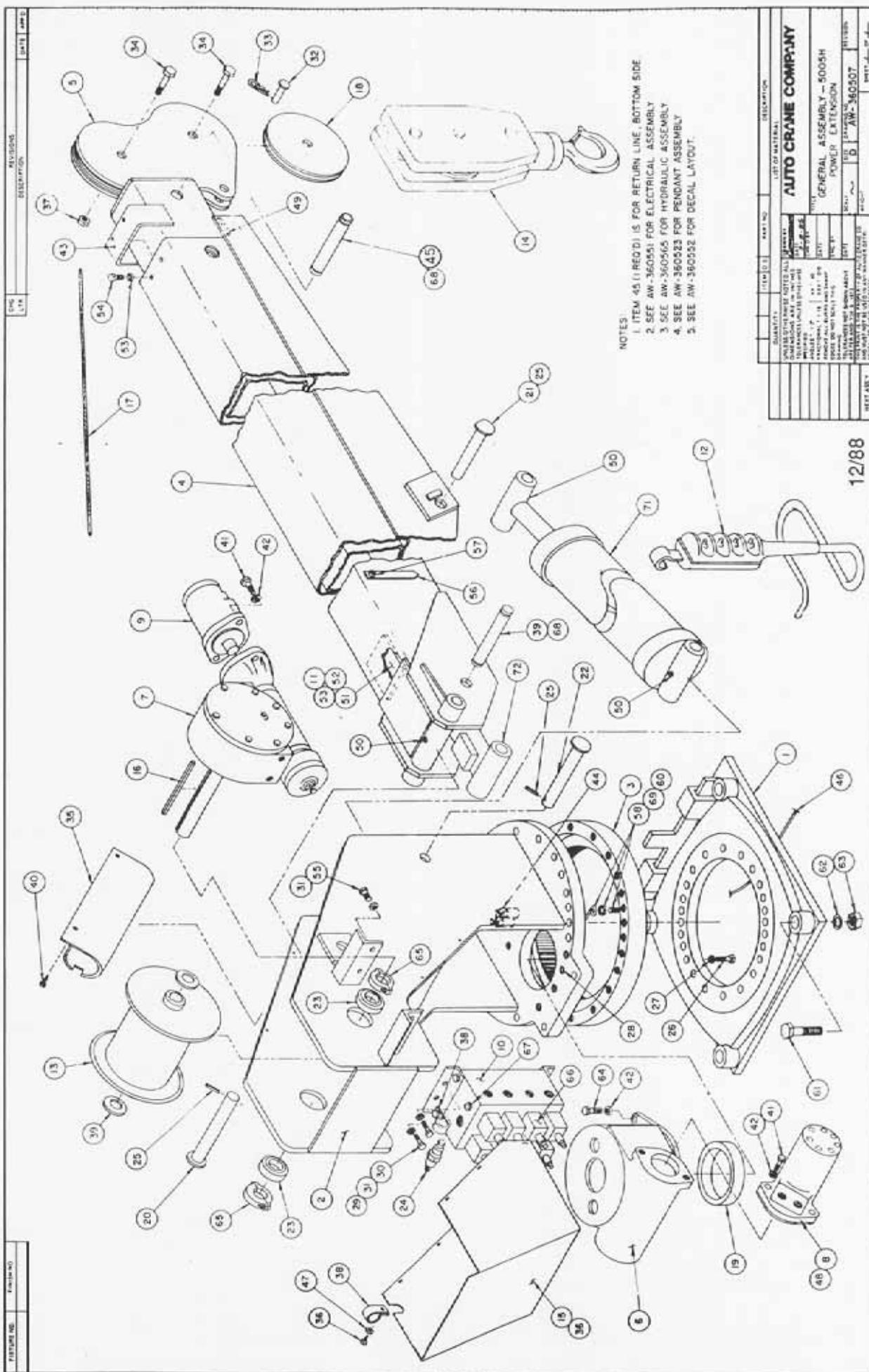


## GENERAL ASSEMBLY - 5005H - AW-360505 MANUAL EXTENSION

ITEM	QTY	PART NO.	DESCRIPTION
1	1	360536	BASE PLATE ASSEMBLY
2	1	360530	PEDESTAL WELDMENT ASSEMBLY
3	1	480023	BEARING, ROTATION
4	1	360515	BOOM, LOWER
5	1	360525	BOOM, INNER
6	1	480028	GEAR BOX, ROTATION
7	1	360555	ACTUATOR, HOIST
8	1	480027	MOTOR, HYD. (ROTATION)
9	1	360199	MOTOR, HYD. (HOIST)
10	1	480182	MANIFOLD, CARTRIDGE
11	1	360552	DECAL LAYOUT
12	1	360522	PENDANT
13	1	360543	DRUM, HOIST
14	1	360602	BLOCK, TRAVELING
15	1	360544	COVER, VALVE
16	1	360557	KEY, 5/16 X 8-1/8" LG.
17	1	360155	CABLE, HOIST 5/16"
18	2	360205	SHEAVE ASSEMBLY
19	1	360162	RING, ECCENTRIC
20	1	360541	PIN, PEDESTAL/BOOM
21	1	360117	PIN, BOOM/CYLINDER
22	1	360539	PIN, PEDESTAL/CYLINDER
23	2	400500	BEARING
24	1	480183	CARTRIDGE, FLOW REGULATOR (SEAL KIT 480183-001)
25	3	360123	PIN, SPRING
26	38	012198	SCREW, HX. HD. 5/8 NC X 1-3/4 G8
27	38	023902	WASHER, FL. 5/8 HARDENED
28	4	006205	SCREW, SC. HD. 5/8 NC X 1-1/4 G8
29	4	008701	SCREW, HX.HD. 3/8 NC X 1" LG
30	4	017100	NUT, HX 3/8 NC CP
31	8	021100	WASHER, SPLK 3/8
32	1	360126	PIN, CROWN
33	1	360124	PIN, HITCH
34	2	013506	SCREW, HX. HD. 5/8 NF X 2-1/4 G5
35	1	634000	GUARD, PENDANT
36	6	002608	SCREW, 1/4-20 x 3/4 S.T. TYPE F
37	2	018300	NUT, HX-LK 5/8 NF
38	2	480024	MOUNT, PENDANT RETAINER
39	2	480033	SHIM, LARGE
40	2	002615	SCREW, 1/4-20 x 3/8 S.T. TYPE F
41	4	012197	SCREW, SC.HD. 1/2 NC X 1-1/2 G5
42	8	012500	WASHER, SPLK 1/2
43	1	360545	RETAINER, INNER BOOM
44	2	360054	ADAPTER, ST. 1/2 NPT / 3/4 JIC
45	1	360112	PIN, MANUAL BOOM
46	1	800657-009	CONDUCTOR, POWER
47	1	020901	WASHER, FL. 5/16
48	1	480019	GASKET, MOTOR
49	1	360167	PAD, RETAINER - LOWER
50	3	239000	ZERK, GREASE
51	1	480032	PAD, BOOM

## GENERAL ASSEMBLY - 5005H - AW-360505 MANUAL EXTENSION

ITEM	QTY.	PART NO.	DESCRIPTION
52	4	005406	SCREW, HX.HD. 1/4 NF X 1/2" LG CP
53	6	020200	WASHER, SPLK 1/4
54	2	005901	SCREW, HX.HD. 1/4 NC X 1/2" LG
55	4	008601	SCREW, HX.HD. 3/8 NC X 7/8" LG G5
56	2	360038	INDICATOR, ANGLE
57	2	016300	NUT, HX-LK 1/4 NC
58	1	360207	RETAINER, ECCENTRIC RING
59	1	020600	WASHER, SPLK 5/16
60	1	007402	SCREW, HX.HD. 5/16 NC X 5/8" LG G5
61	4	015104	SCREW, HX. 7/8 NF X 5" G5
62	4	022200	LOCKWASHER, 7/8"
63	4	018900	NUT, HX. 7/8 NF
64	4	011608	SCREW, HX. HD. 1/2 NC X 2" G5
65	2	330468	COLLAR, SPLIT-LOCK
66	6	480184	VALVE, CARTRIDGE
67	3	000109	PLUG, PIPE 3/8-18
68	2	330072	PLUG, HX.HD. 7/8-14 "O"-RING
69	1	360031	KIT, SHIP LOOSE
70	1	360158	CYLINDER BOOM UP (COMPLETE)
	1	360158-001	CASE ASSEMBLY
	1	360158-002	SHAFT ASSEMBLY
	1	360158-003	HEAD GLAND
	1	360158-004	PISTON
	1	330604	SEAL KIT

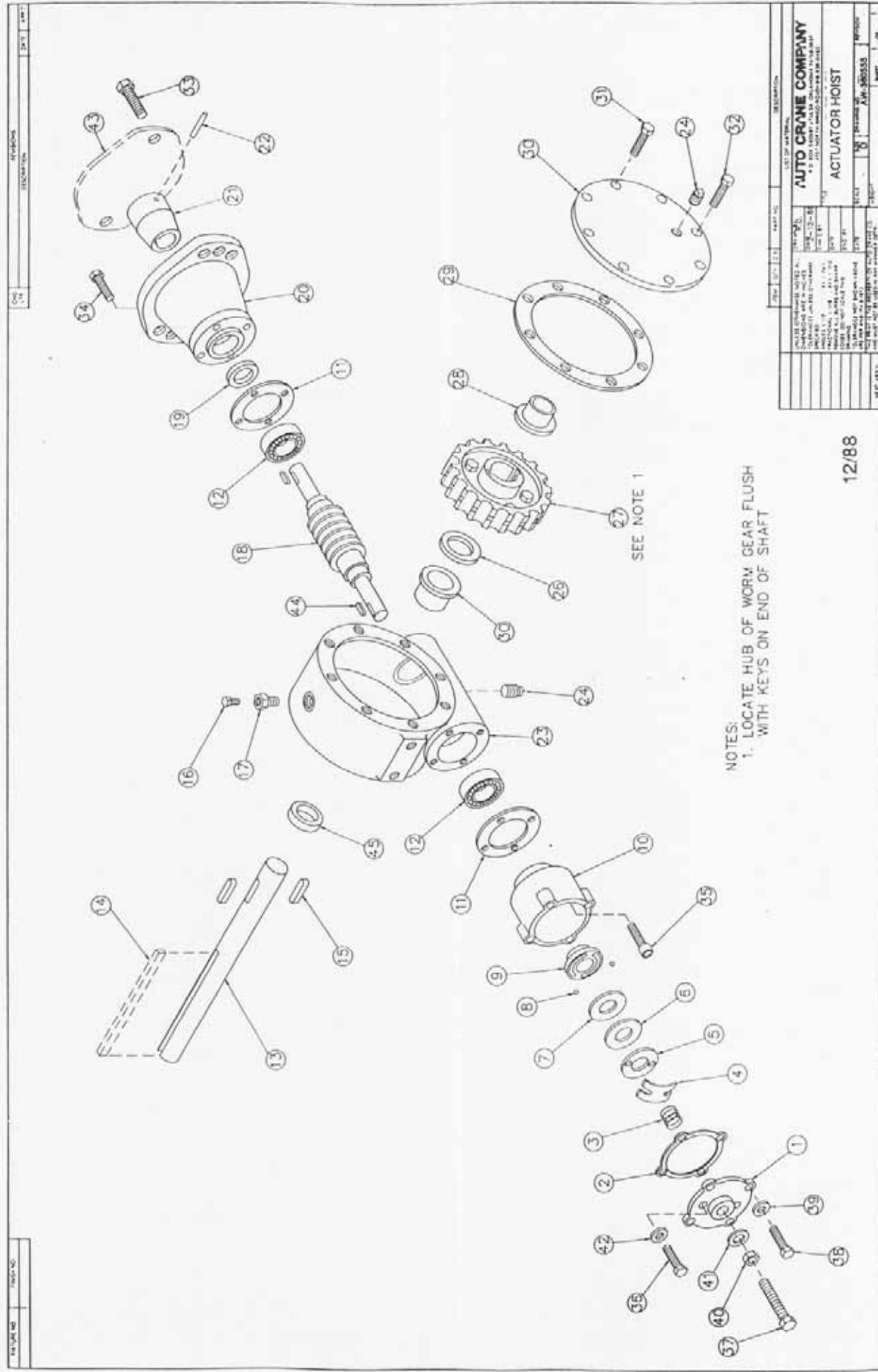


## GENERAL ASSEMBLY - 5005H - AW-360507 POWER EXTENSION

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	360536	BASE PLATE ASSEMBLY
2	1	360530	PEDESTAL WELDMENT ASSEMBLY
3	1	480023	BEARING, ROTATION
4	1	360515	BOOM, LOWER
5	1	360528	BOOM, INNER
6	1	480028	GEAR BOX, ROTATION
7	1	360555	ACTUATOR, HOIST
8	1	480027	MOTOR, HYD. (ROTATION)
9	1	360199	MOTOR, HYD. (HOIST)
10	1	480182	MANIFOLD, CARTRIDGE
11	2	480033	SHIM, LARGE
12	1	360523	PENDANT
13	1	360543	DRUM, HOIST
14	1	360602	BLOCK, TRAVELING
15	1	360544	COVER, VALVE
16	1	360557	KEY, 5/16 X 8-1/8" LG.
17	1	360155	CABLE, HOIST 5/16"
18	2	360205	SHEAVE ASSEMBLY
19	1	360162	RING, ECCENTRIC
20	1	360541	PIN, PEDESTAL/BOOM
21	1	360117	PIN, BOOM/CYLINDER
22	1	360539	PIN, PEDESTAL/CYLINDER
23	2	400500	BEARING
24	1	480183	CARTRIDGE, FLOW REGULATOR (SEAL KIT 480183-001)
25	3	360123	PIN, SPRING
26	38	012198	SCREW, HX.HD. 5/8 NC X 1-3/4 G8
27	38	023902	WASHER, FL. 5/8 HARDENED
28	4	006205	SCREW, SC.HD. 5/8 NC X 1-1/4 G8
29	4	008701	SCREW, HX.HD. 3/8 NC X 1" LG
30	4	017100	NUT, HX. 3/8 NC CP
31	8	021100	WASHER, SPLK 3/8
32	1	360126	PIN, CROWN
33	1	360124	PIN, HITCH
34	2	013506	SCREW, HX.HD. 5/8 NF X 2-1/4 G5
35	1	634000	GUARD, PENDANT
36	6	002608	SCREW, 1/4-20 X 3/4 S.T. TYPE F
37	2	018300	NUT, HX-LK 5/8 NF
38	2	480024	MOUNT, PENDANT RETAINER
39	1	360120	PIN, EXT. CYL. LOWER
40	2	002615	SCREW, 1/4-20 X 3/8 S.T. TYPE F
41	4	012197	SCREW, SC.HD. 1/2 NC X 1-1/2 G5
42	8	012500	WASHER, SPLK 1/2
43	1	360545	RETAINER, INNER BOOM
44	2	360054	ADAPTER, ST. 1/2 NPT / 3/4 JIC
45	1	360121	PIN, EXT. CYL. UPPER BOOM
46	1	800657-009	CONDUCTOR, POWER
47	1	020901	WASHER, FL. 5/16
48	1	480019	GASKET, MOTOR
49	1	360167	PAD, RETAINER - LOWER
50	3	239000	ZERK, GREASE
51	1	480032	PAD, BOOM

## GENERAL ASSEMBLY - 5005H - AW-360507 POWER EXTENSION

ITEM	QTY	PART NO	DESCRIPTION
52	4	005406	SCREW, HX.HD. 1/4 NF X 1/2" LG CP
53	6	020200	WASHER,SPLK 1/4
54	2	005901	SCREW, HX.HD. 1/4 NC X 1/2" LG
55	4	008601	SCREW, HX.HD. 3/8 NC X 7/8" LG G5
56	2	360038	INDICATOR, ANGLE
57	2	016300	NUT, HX-LK 1/4 NC
58	1	360207	RETAINER, ECCENTRIC RING
59	1	020600	WASHER, SPLK 5/16
60	1	007402	SCREW, HX.HD' 5/16 NC X 5/8" LG G5
61	4	015104	SCREW, HX. 7/8 NF X 5" G5
62	4	022200	LOCKWASHER, 7/8"
63	4	018900	NUT, HX. 7/8 NF
64	4	011608	SCREW, HX.HD. 1/2 NC X 2" G5
65	2	330468	COLLAR, SPLIT-LOCK
66	8	480184	VALVE, CARTRIDGE
67	1	000109	PLUG, PIPE 3/8-18
68	4	360122	RING, RETAINING
69	1	360031	KIT, SHIP LOOSE
70	1	360552	DECAL LAYOUT
71	1	360158	CYLINDER, BOOM UP (COMPLETE)
	1	360158-001	CASE ASSEMBLY
	1	360158-002	SHAFT ASSEMBLY
	1	360158-003	HEAD GLAND
	1	360158-004	PISTON
	1	330604	SEAL KIT
72	1	360152	CYLINDER, BOOM EXT. (COMPLETE)
	1	360152-001	CASE ASSEMBLY
	1	360152-002	SHAFT ASSEMBLY
	1	360152-003	HEAD GLAND
	1	360152-004	PISTON
	1	330603	SEAL KIT

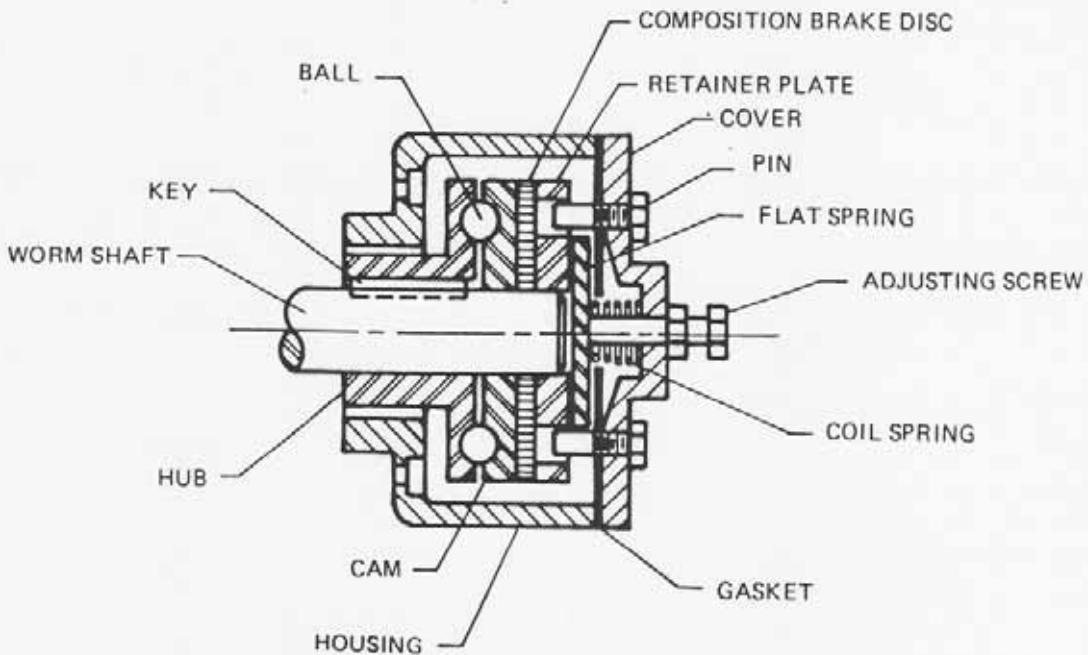


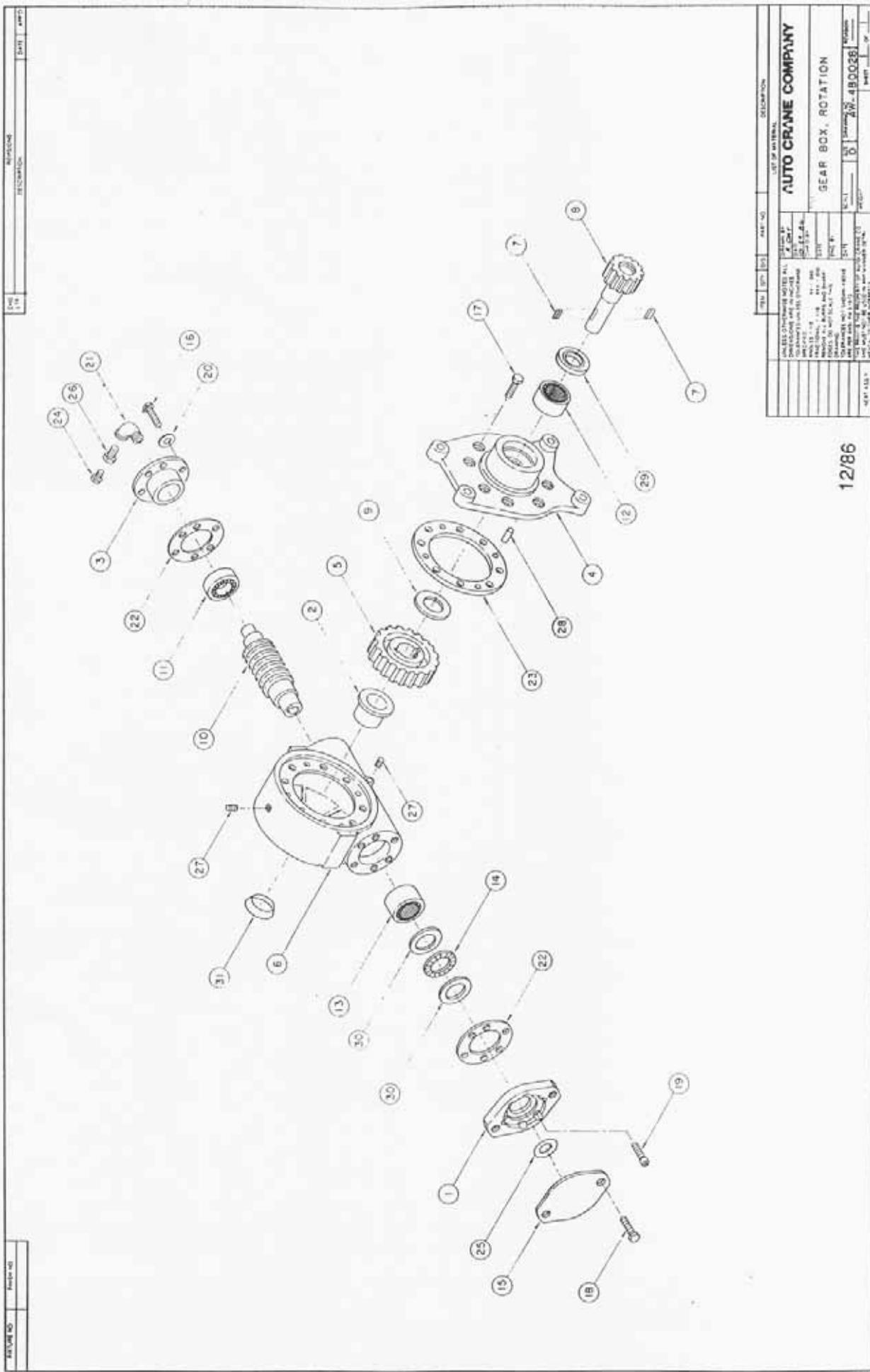
## HOIST ACTUATOR - AW-360555

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	360450	COVER, WORM BRAKE
2	1	360359	GASKET
3	1	360368	SPRING
4	1	360367	SPRING, FLAT
5	1	360342	PLATE RETAINER
6	1	360364	PLATE, THRUST
7	1	360331	CAM PLATE
8	2	360345	BALL, BRAKE
9	1	360339	HUB-BRAKE
10	1	360336	HOUSING, BRAKE
11	2	360358	GASKET
12	2	360346	BEARING
13	1	360356	SHAFT-OUTPUT
14	1	480094	KEY 5/16 (REF. FOR DRUM)
15	2	360340	KEY
16	1	360360	FITTING-RELIEF
17	1	360361	REDUCER
18	1	360344	WORM-R.H.
19	1	360365	OIL SEAL
20	1	360330	ADAPTER
21	1	360332	COUPLING
22	1	360363	SPIROL PIN
23	1	360451	HOUSING - GEAR
24	2	360362	PIPE PLUG
25	1	360348	BUSHING
26	1	360369	THRUST WASHER
27	1	360457	GEAR/HUB ASSEMBLY R.H. 46:1
28	1	360347	BUSHING
29	1	360357	GASKET
30	1	360333	COVER
31	7	360350	CAPSCREW 1/4 - 20 NC X 3/4 HX. HD. GR.5
32	1	360452	CAPSCREW 1/4 - 20 NC X 3/4 HX. HD. NYLOK HVY PATCH GR.5
33	2	010202	CAPSCREW 1/2 - 13 NC X 1 HX. HD.
34	4	360352	CAPSCREW 1/4 - 20 NC X 1 3/4 SOC. HD. LOC.-WEL
35	4	360454	CAPSCREW 1/4 - 20 NC X 7/8 SOC. HD. BUTTON GR.5
36	2	360453	CAPSCREW 1/4 - 20 NC X 1 HX. HD. GR.5 ALL THRD. NYLOC HVY. PATCH
37	1	360456	CAPSCREW 3/8 - 16 NC X 1 1/2 HX. HD. ALL THRD. GR.5
38	4	005604	CAPSCREW 1/4 - 20 NC X 1 HX. HD. GR.5
39	4	360354	LOCKWASHER 1/4 MED. SECT. C.P.
40	1	360353	NUT 3/8 - 16 NC HX. JAM
41	1	360371	SEAL
42	2	360455	WASHER - FLAT 1/4 ALUM.
43	1	360349	COVER - HYD. ADAPTER
44	2	360341	KEY
45	1	360366	OIL SEAL
46	1	480289	SEAL AND GASKET KIT

## AUTOMATIC SAFETY BRAKE ASSEMBLY (OIL COOLED) HOIST

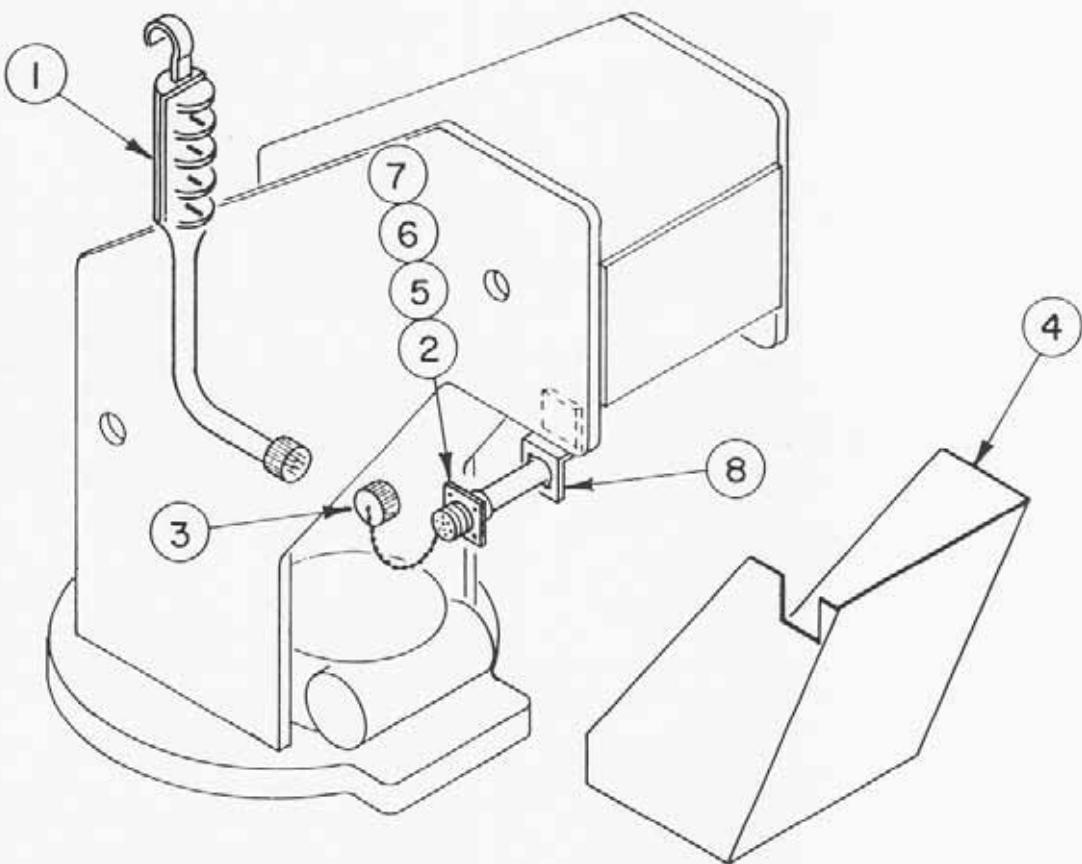
1. Winch has right hand worm and gear and spools over drum; use number one slots for brake balls.
2. Install brake hub on winch worm with key.
3. Assemble balls in cam using hard grease to hold balls in place.
4. Install cam and balls, fitting balls in slots on hub.
5. Install brake disc.
6. Install retainer.
7. Install flat spring in brake housing cover (arch down).
8. Install brake housing cover, fitting pins in slots on spring and holes in retainer.
9. Test brake by shifting winch to UP then DOWN to see if brake is working in proper rotation. If not, remove brake and locate brake balls in opposite set of slots.
10. Adjust to suit by tightening or loosening screw on outside of cover. When proper adjustment is obtained, secure screw with jam nut.





## GEAR BOX, ROTATION AW-480028

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480240	ADAPTER
2	1	480241	BUSHING
3	1	480242	CAP, BEARING
4	1	480243	COVER
5	1	480244	GEAR - R.H.
6	1	480237	HOUSING-GEAR
7	2	480246	KEY
8	1	480247	SHAFT-OUTPUT
9	1	480248	WASHER-THRUST
10	1	480249	WORM, R.H.
11	1	480251	BEARING-BALL
12	1	480252	BEARING-NEEDLE
13	1	480253	BEARING-NEEDLE
14	1	480254	BEARING-THRUST
15	1	480255	COVER
16	6	007400	CAPSCREW, 5/16 - 18 NC X 1" LG. HX. HD.
17	8	480238	CAPSCREW, 5/16 - 18 NC X 1 1/4 LG. HX. NYLOC HVY PATCH
18	2	011508	CAPSCREW, 1/2 - 13 NC X 3/4 LG. HX. HD.
19	6	480256	CAPSCREW, 5/16 - 18 NC X 1" LG. SOC. HD. LOC.-WEL
20	6	480258	LOCKWASHER, 5/16 MED. SECT. C.P.
21	1	480259	ELBOW, 90°
22	2	480260	GASKET
23	1	480250	GASKET
24	1	480262	FITTING, RELIEF
25	1	480239	O-RING
26	1	480263	REDUCER
27	2	480264	PLUG, PIPE
28	4	480265	PIN-DOWEL
29	1	480266	SEAL-OIL
30	2	480268	WASHER-THRUST
31	1	480269	PLUG, EXPANSION

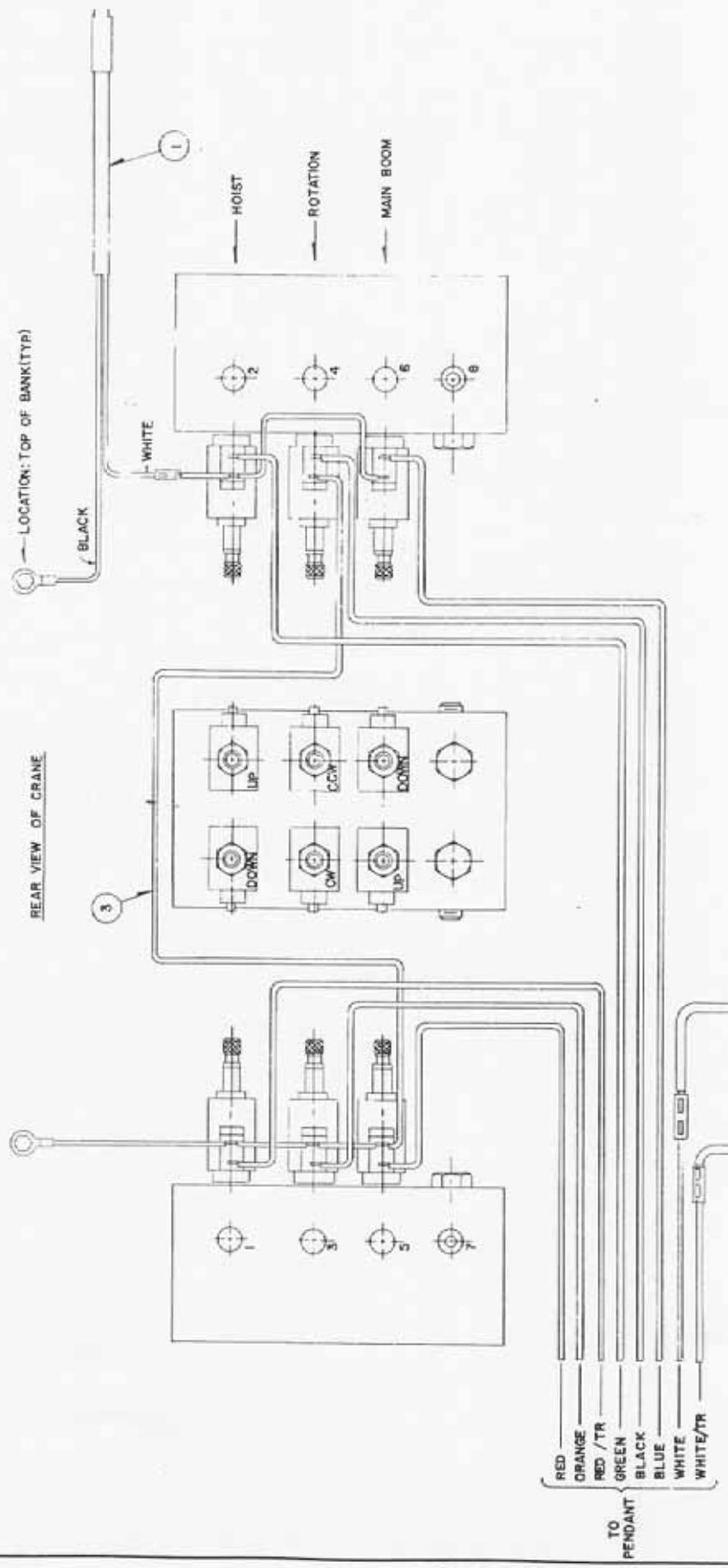


<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	480400	PENDANT (3 FUNCTION)
	1	480800	PENDANT (4 FUNCTION)
2	1	480802	RECEPTACLE ASSEMBLY
3	1	300413	CAP RECEPTACLE
4	1	480403	VALVE COVER
5	2	000404	SCREW #6-32 X 5/8"
6	2	019600	WASHER SP. LK. #6
7	2	015400	NUT HX. #6-32
8	1	480801	BRACKET

AW-091, GENERAL ASSEMBLY 5005H  
(REMOVABLE PENDANT)

Fixture No.	Finish No.

CHG	REVISIONS
LTR	DATE APR'D



ITEM	DIS	PART NO.	DESCRIPTION
1	3	A 360546	CONDUCTOR ASSEMBLY
1	2	A 800857-009	CONDUCTOR, POWER (REF)
1	1	B 360547	LOAD SENSOR ASSEMBLY

LIST OF MATERIAL

ITEM	DIS	PART NO.	DESCRIPTION
1	3	A 360546	SHAWNEE
1	2	A 800857-009	SHAWNEE
1	1	B 360547	SHAWNEE

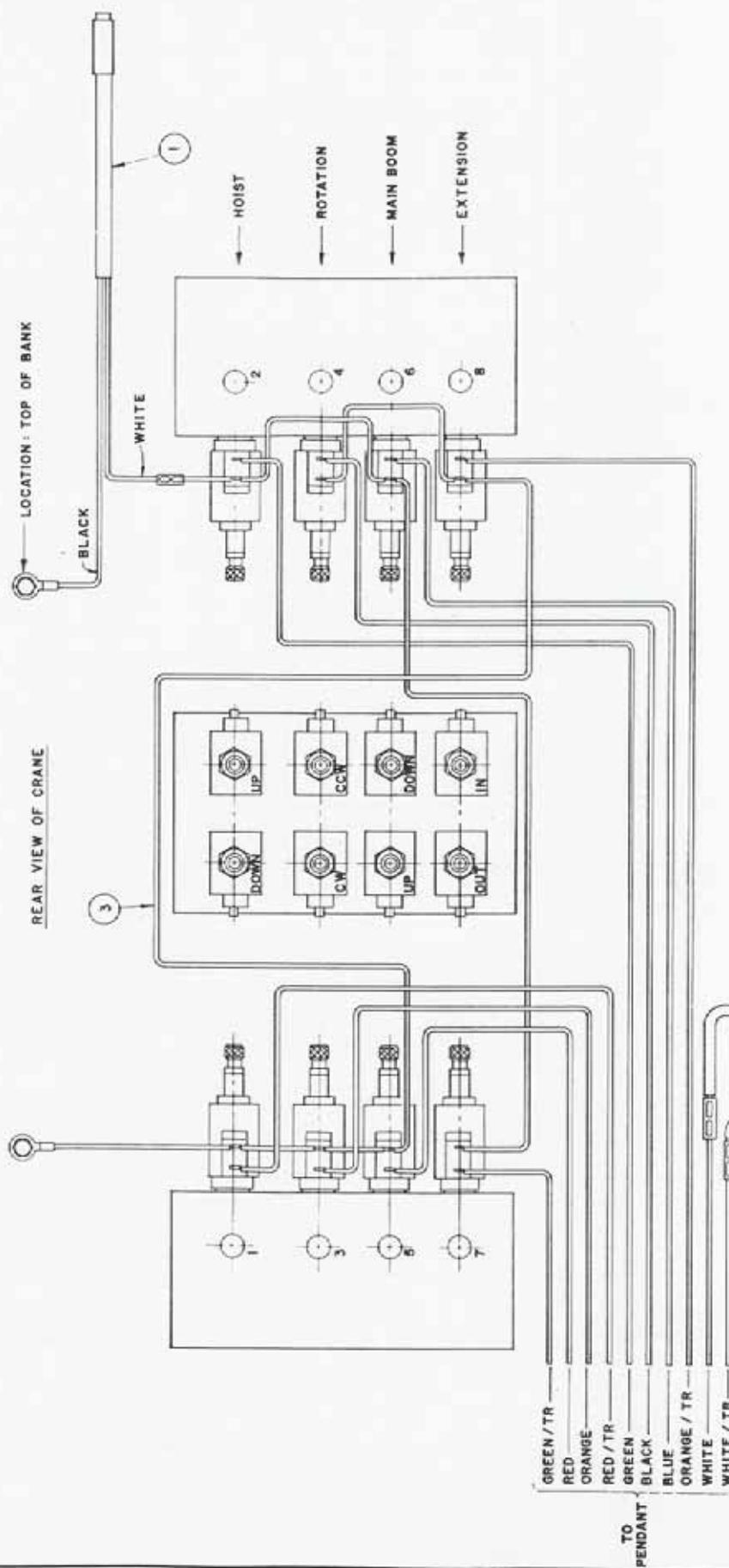
**AUTO CRANE COMPANY**

TITLE ELECTRICAL ASSEMBLY - 5005H  
MANUAL EXTENSION  
DATE  
ENGR BY  
DRAWING NO.  
SCALE  
WEIGHT  
HEFT 1 OF 1

Fixture No.	Finish No.
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Chg Ltr	Revisions

Description	Date
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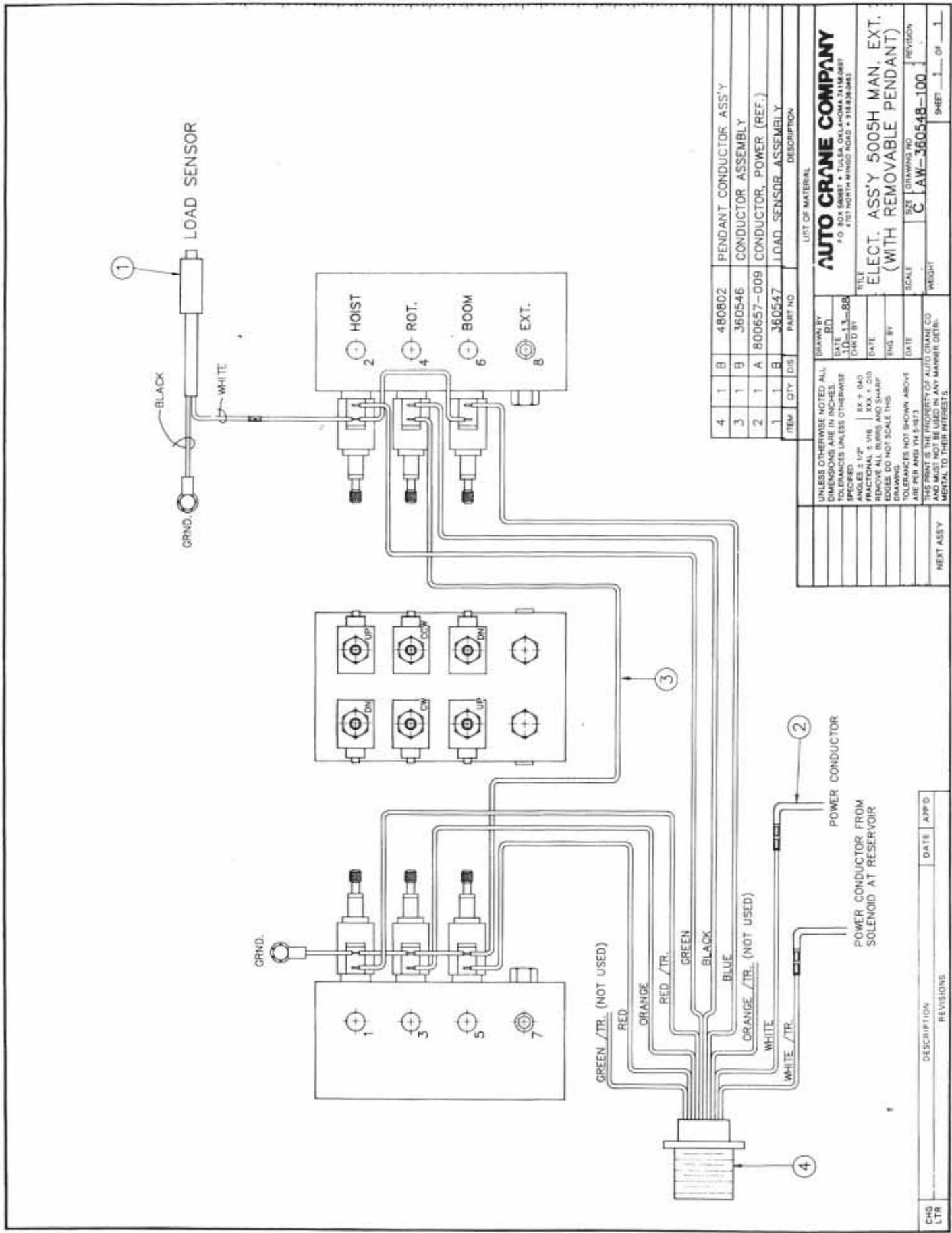
5-2.0.0

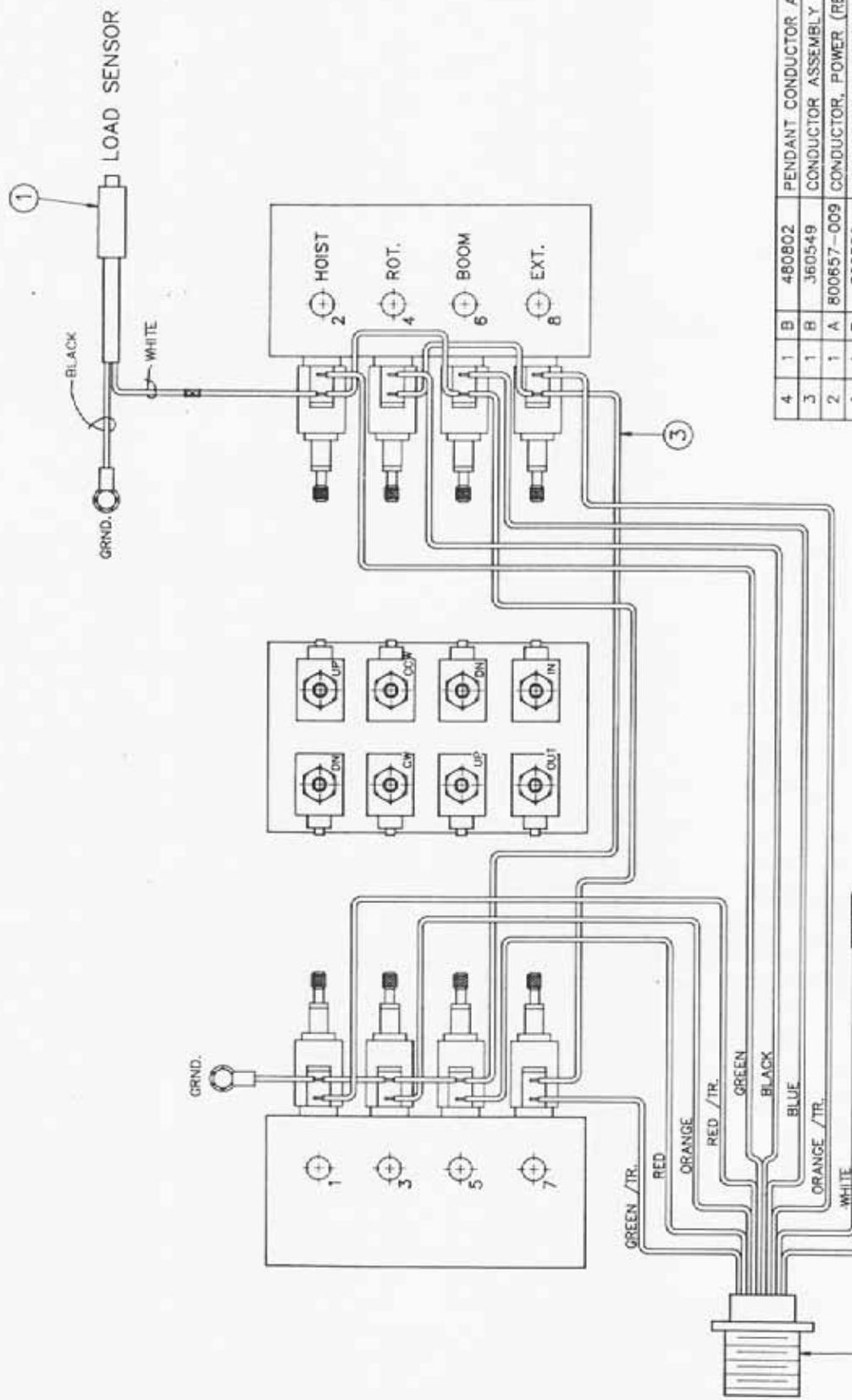
LIST OF MATERIAL					
ITEM	DIS	PART NO.	DESCRIPTION	QUANTITY	UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES. TOLERANCES UNLESS OTHERWISE SPECIFIED
1	3	B 360549	CONDUCTOR ASSEMBLY	1	DRAWING NO. 2.1 DATE 7/15/85 BY 8/14
1	2	A 800657-009	CONDUCTOR, POWER (REF.)	1	CHD BY XX = .40 DATE XX = .010
1	1	B 360550	LOAD SENSOR	1	FRACTIONAL 5/16 DRAWING NO. 2.1 ENG. DO NOT SCALE THIS TOLERANCES NOT SHOWN ABOVE ARE PER ANSI Y14.5 1973
					REMOVED BY 8/14
					THIS PRINT IS THE PROPERTY OF AUTO CRANE CO. AND MUST NOT BE USED IN ANY MANUFACTURE DRAFTING MENTAL TO TRADE INFECTE.
					12/86

**AUTO CRANE COMPANY**

ELECTRICAL ASSEMBLY - 2005H  
POWER EXTENSION

DRAWING NO. AW-360551  
SCALE C SIZE C WEIGHT \_\_\_\_\_  
REVISION \_\_\_\_\_  
SHEET 1 OF 1

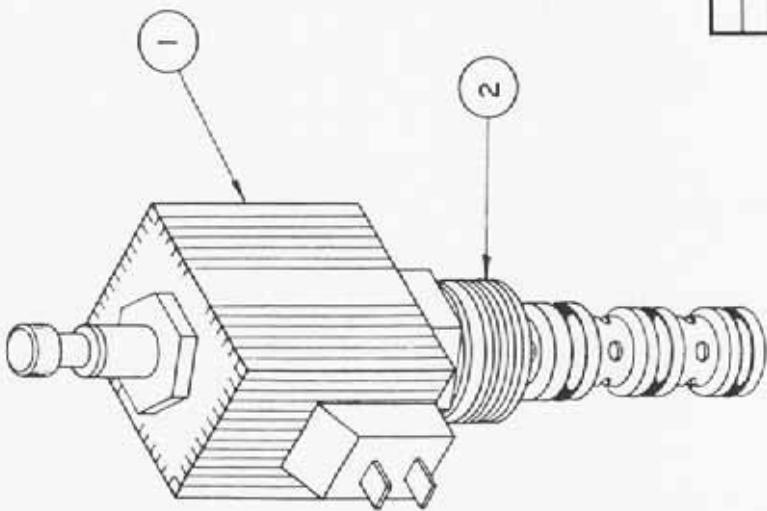




LIST OF MATERIAL		AUTO CRANE COMPANY	
PO BOX 2007 • TULSA, OKLAHOMA 74156-0207	ATTN: NORTH MINDED ROAD • 818 N 26TH STREET	TITLE	ELECT. ASS'Y. 5005H PWR. EXT. (WITH REMOVABLE PENDANT)
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES.	DRAWN BY	DATE	SCALE
TOLERANCES UNLESS OTHERWISE SPECIFIED	RD	10-1-87	GRAPHIC NO
ANGLES $\pm 1^\circ$	CHK'D BY	XX-2-00	C
FRACTIONAL: $\pm 1/16$	DATE	ENCL BY	AW-360551-100
FRACTIONAL: $\pm 1/32$	DRAWING	DATE	WEIGHT
EDGES DO NOT SCALE THIS DRAWING	NOT SHOWN ABOVE	NOTE	SHEET <u>1</u> OF <u>1</u>
TOLERANCES NOT SHOWN ABOVE	ANT. PER ANSIA M4.1-1973	THIS PRINT IS THE PROPERTY OF AUTO CRANE CO.	
AND MUST NOT BE USED IN ANY MANUFACTUREMENT TO THEIR INTEREST.	REVISIONS:	PRINTED	
		CHG	
		LTR	

Fixture No.	Finish No.

REVISIONS		DATE APP'D	
CHG	LTR	DESCRIPTION	



NOTE:  
FOR SEAL KIT, ORDER PART NO. 480184.001

2	1	-	480186	SPOOL ASSEMBLY
1	1	-	480185	COIL, CARTRIDGE

ITEM	QTY	D/S	PART NO.	DESCRIPTION

LIST OF MATERIAL

QUANTITY	UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES.	DRAWN BY
	TOLERANCES UNLESS OTHERWISE SPECIFIED	DATE
	ANGLES ± 1°	CHKD BY
	FRACTIONAL ± 1/16	XX 2.40
	REMOVE ALL BURRS AND SHARP EDGES. DO NOT SCALE THIS DRAWING.	XXX + .010
	TOLERANCES NOT SHOWN ABOVE ARE PER ANSI Y14.5 M73	TMIC BY
	THIS PRINT IS THE PROPERTY OF AUTO CRANE CO.	DATE
	AND MUST NOT BE USED IN ANY MANNER DETERMINAL TO THEIR INTERESTS.	REF. NO.
NEXT ASSY		AW - 480184

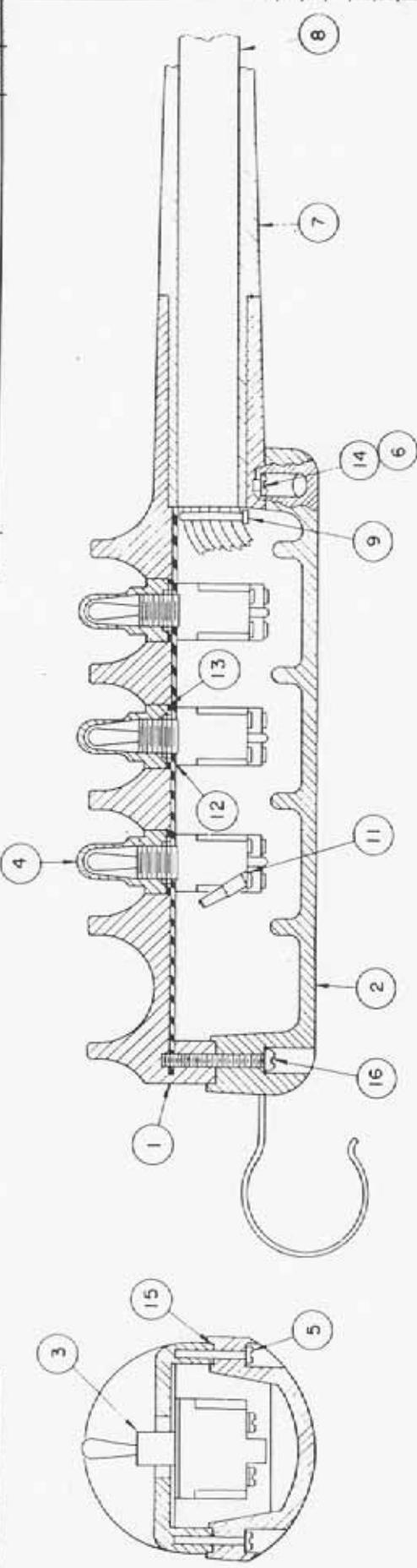
**AUTO CRANE COMPANY**

TITLE	VALVE CARTRIDGE
SCALE	~
SIZE	B
DRAWING NO.	AW - 480184

Fixture No. \_\_\_\_\_

Finish No. \_\_\_\_\_

CHG LTR REVISIONS

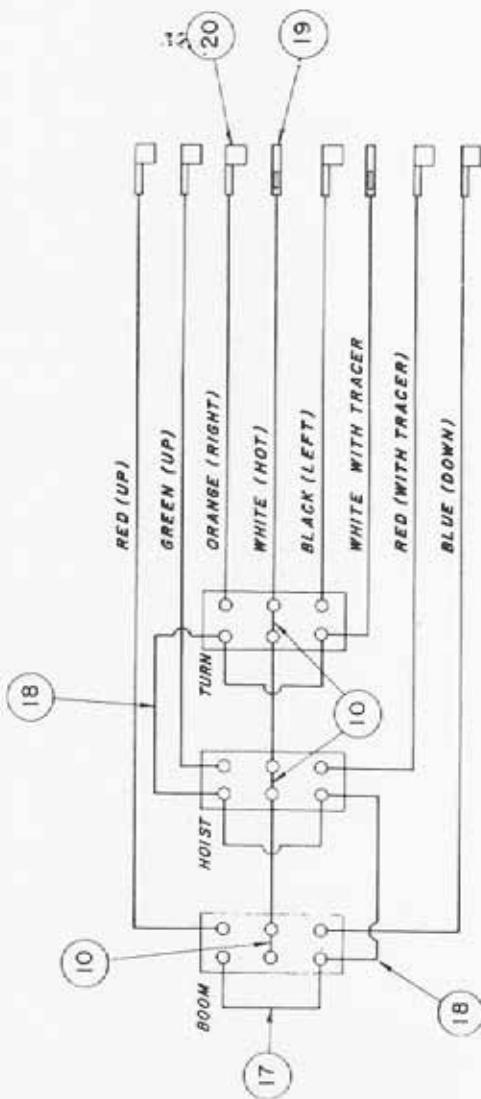


ITEM NO.	PART NO.	DESCRIPTION
20	6 000405	TERMINAL, FLAG (REF.) *
19	2 001002	SPLICE, BUTT (REF.) *
18	2 622346-002	CONDUCTOR ASSY 3 3/8" LG.
17	3 622346-001	CONDUCTOR ASSY 2 1/8" LG.
16	1 004700	SCREW, SLT. PAN HD. ST#BX1 1/2"
15	21" 800580	3/4" WIDTH OKONITE RUBBER TAPE
14	4 019700	WASHER, SPLIT LOCK#8 PLATED
13	3 642100	O-RING
12	3 675271	NUT, TERMINALS TAB
11	22 000101	JUMPER
10	3 636600	TY-RAP CABLE TIE
9	2 634401	CONDUCTOR CABLE (23') *
8	1 360281	CABLE ADAPTER
7	1 633801	SCREW, S.T.-SLT. PAN HD#BX 1/4
6	2 005101	SCREW, S.T.-SLT. PAN HD#BX 3/4
5	10 005001	SCREW, S.T.-SLT. PAN HD#BX 3/4
4	3 640302	BOOT, TOGGLE SWITCH
3	3 634200	TOGGLE SWITCH
2	1 631700	BOTTOM COVER
1	1 631602	PENDANT HOUSING

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY	LIST OF MATERIAL
18	1	TERMINAL, FLAG (REF.) *	1	AUTO CRANE COMPANY
19	1	SPLICE, BUTT (REF.) *	1	UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES. TOLERANCES UNLESS OTHERWISE SPECIFIED ANGLES: 1/2° - 45° FRACTIONAL: 1/16" - 1/2" XX - .40 REMOVE ALL BURRS AND SHARP EDGES. DO NOT SCALE THIS DRAWING. TOLENCES NOT SHOWN ABOVE ARE PER ANSI Y14.5, 1973 THIS PRINT IS THE PROPERTY OF AUTO CRANE CO AND MUST NOT BE USED IN ANY MANNER OTHER THAN FOR THE INTERESTS
20	1	TERMINAL, FLAG (REF.) *	1	DATE 7-1-86 BY SPK D BY TITLE
18	1	TERMINAL, FLAG (REF.) *	1	PENDANT ASSEMBLY 3-FUNCTION 5005H
17	1	TERMINAL, FLAG (REF.) *	1	SCALE C SIZE C DRAWING NO. AW-360522
16	1	SCREW, SLT. PAN HD. ST#BX1 1/2"	1	WEIGHT

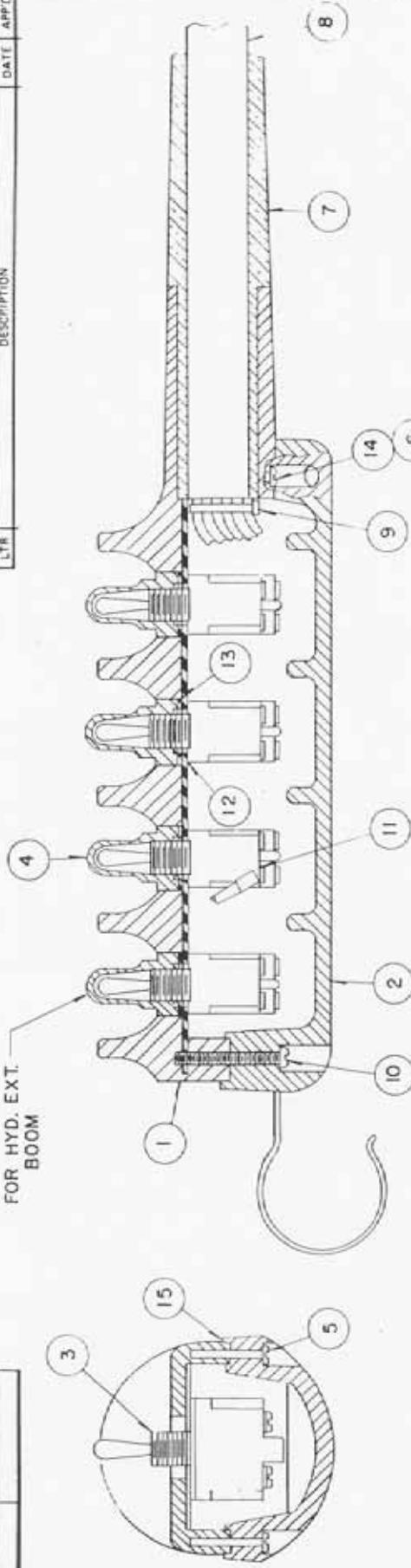
\* NOTE:  
WHEN ORDERING ITEM 8 (P/N 360081)  
ITEMS 19 AND 20 ARE INCLUDED.

12/86



Fixture No.	Finish No.
-------------	------------

CHG	REVISIONS	DESCRIPTION	DATE APPRO
-----	-----------	-------------	------------



GREEN WITH TRACER (EXT.)

RED (UP)

GREEN (UP)

WHITE WITH TRACER

WHITE (RIGHT)

WHITE (HOT)

BLACK (LEFT)

BLACK (RIGHT)

RED WITH TRACER (DOWN)

BLUE (DOWN)

ORANGE WITH TRACER (RET.)

FOR HYD. EXT. BOOM

VIEW FROM BOTTOM

ITEM 18

\* NOTE:

WHEN ORDERING ITEM 8 (P/N 360280)  
 ITEMS 19 AND 20 ARE INCLUDED.

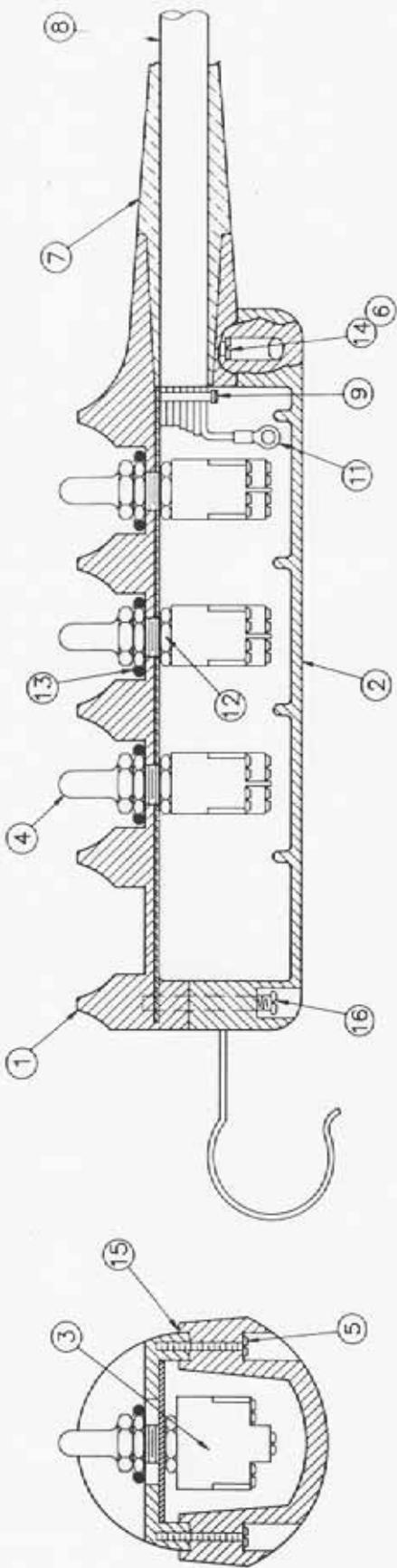
ITEM #	QUANTITY	ITEM QTY	PART NO.	DESCRIPTION
LIST OF MATERIAL				
20	8	000405	TERMINAL, FLAG (REF.) *	
19	2	00102	SPLICER, BUTT (REF.) *	
18	3	622347	CONDUCTOR ASSY 3 1/8" LG.	
17	4	622346	CONDUCTOR ASSY 2 1/8" LG.	
16	4	6366600	JUMPER	
15	2"	800580	3/4" WIDTH OKONITE RUBBER TAPE	
14	4	019700	WASHER, SPLIT LOCK #8 PLATED	
13	4	642100	O-RING	
12	4	675271	NUT	
11	10	000101	TERMINALS T-BB	
10	1	004700	SCREW, SLT. PAN HD. ST. #BX 1 1/2	
9	2	634401	TY-RAP CABLE TIE	
8	1	360280	CONDUCTOR CABLE (23') *	
7	1	633801	CABLE ADAPTER	
6	2	005101	SCREW, ST-SLT PAN HD. #BX 1 1/4	
5	10	005001	SCREW, ST-SLT. PAN HD. # BX 3/4	
4	4	640302	BOOT, TOGGLE SWITCH	
3	4	634200	TOGGLE SWITCH	
2	1	631700	BOTTOM COVER	
1	1	631601	PENDANT HOUSING	

ITEM #	QUANTITY	ITEM QTY	PART NO.	DESCRIPTION
LIST OF MATERIAL				
20	8	000405	TERMINAL, FLAG (REF.) *	
19	2	00102	SPLICER, BUTT (REF.) *	
18	3	622347	CONDUCTOR ASSY 3 1/8" LG.	
17	4	622346	CONDUCTOR ASSY 2 1/8" LG.	
16	4	6366600	JUMPER	
15	2"	800580	3/4" WIDTH OKONITE RUBBER TAPE	
14	4	019700	WASHER, SPLIT LOCK #8 PLATED	
13	4	642100	O-RING	
12	4	675271	NUT	
11	10	000101	TERMINALS T-BB	
10	1	004700	SCREW, SLT. PAN HD. ST. #BX 1 1/2	
9	2	634401	TY-RAP CABLE TIE	
8	1	360280	CONDUCTOR CABLE (23') *	
7	1	633801	CABLE ADAPTER	
6	2	005101	SCREW, ST-SLT PAN HD. #BX 1 1/4	
5	10	005001	SCREW, ST-SLT. PAN HD. # BX 3/4	
4	4	640302	BOOT, TOGGLE SWITCH	
3	4	634200	TOGGLE SWITCH	
2	1	631700	BOTTOM COVER	
1	1	631601	PENDANT HOUSING	

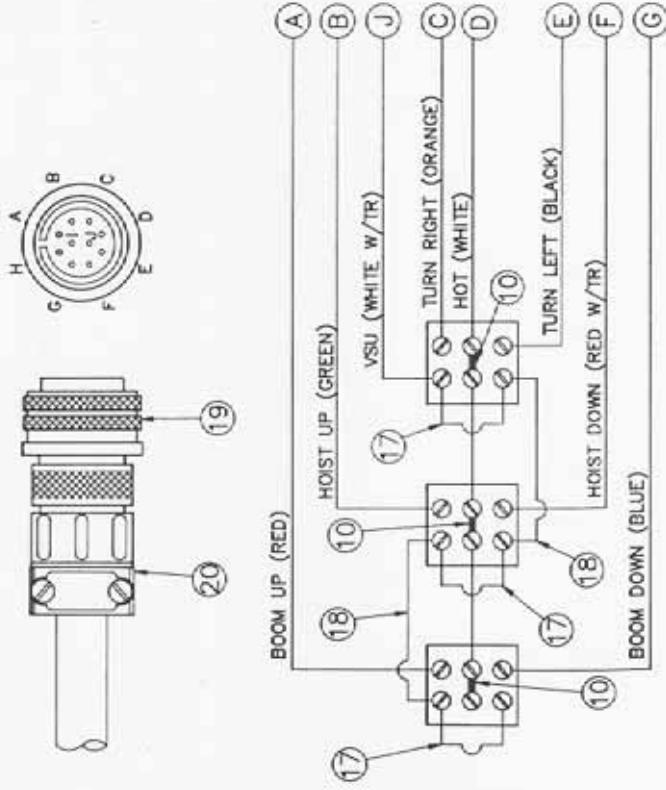
ITEM 18

**AUTO CRANE COMPANY**

DRAWN BY	CHADMAN
DATE DRAWN	7-2-86
SPECIFIED ANGLES: 1/2" X X = 40°	
FRACTIONAL: 1 1/16 X X = 1/16	
REMOVE ALL BURRS AND SHARP EDGES DO NOT SCALE THIS DRAWING	
TOLERANCES NOT SHOWN ABOVE ARE PER ANSI Y14.5M-1972	
THIS PRINT IS THE PROPERTY OF AUTO CRANE COMPANY AND MUST NOT BE USED IN ANY MANNER DETERMINED TO THEIR INTERESTS	
NEXT ASSY	12/86



ITEM	QTY	PART NO.	DESCRIPTION
20	1	300412	CLAMP,CABLE
19	1	300411	PLUG,ELECTRICAL
18	2	622347	CONDUCTOR ASSY 3 1/8 LG.
17	3	622346	CONDUCTOR ASSY 2 1/8 LG
16	1	004700	SCREW ST. SLT. PAN HD 8 X 1 1/2
15	21"	800580	3/4" WDE OKONITE RUBBER TAPE
14	3	019700	WASHER SPLIT LOCK B PLATED
13	3	642100	O-RING
12	3	675271	NUT
11	8	000101	TERMINALS T & B
10	3	636600	JUMPER
9	2	634401	TY-RAP CABLE TIE
8	1	800630	CONDUCTOR CABLE (23) STD
7	1	633801	CABLE ADAPTER
6	2	005101	SCREW ST. SLT. PAN HD 8 x 1 1/4
5	10	005001	SCREW ST. SLT. PAN HD 8 x 3/4
4	3	640302	BOOT-TOGGLE SWITCH
3	3	634200	TOGGLE SWITCH
2	1	631700	BOTTOM COVER
1	1	631602	PENDANT HOUSING



VIEW FROM BOTTOM

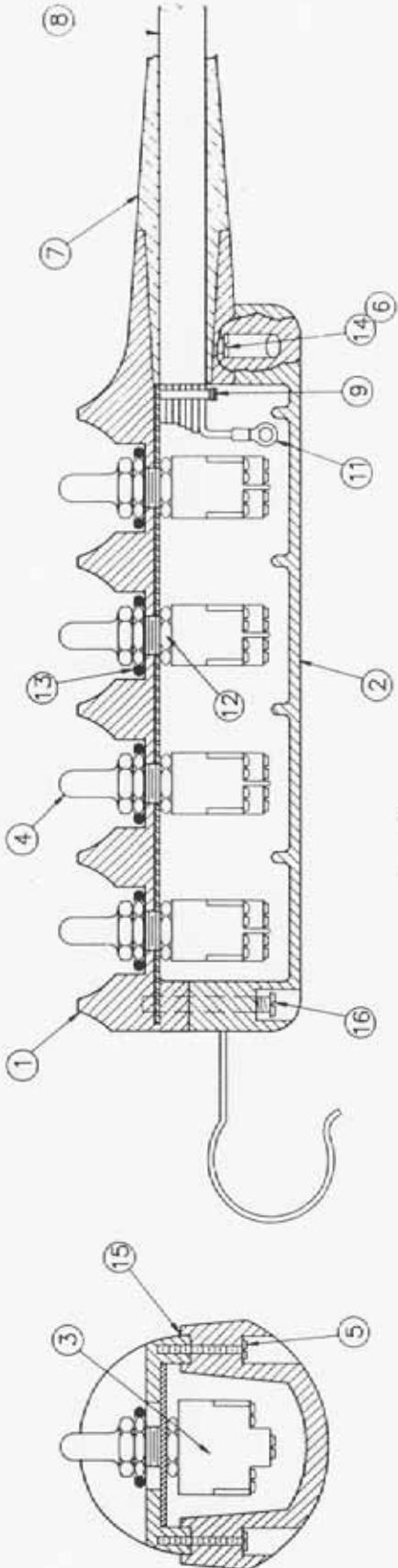
ITEM	DESCRIPTION	DATE	APPROVED	REVISIONS
CHG LTR				SHEET 1 OF 1

### AUTO CRANE COMPANY

P.O. BOX 3097 • TULSA, OKLAHOMA 74109-0097  
4307 NORTH MINO ROAD • 816-826-0463

TITLE: PENDANT ASSEMBLY  
( 3 FUNCTION REMOVABLE )

UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES  
TOLERANCES UNLESS OTHERWISE SPECIFIED: .005-.02-.08  
ANGLES: 1-1/2° ± 1/2° DIA: XXX ± 0.01  
FRACTIONAL: 2-1/8" REMOVE ALL BURRS AND SHARP  
EDGES DO NOT SCALE THIS DRAWING  
DRAFTING DATE: ENGR BY:  
TOLERANCES NOT SHOWN ABOVE  
ARE PER ANSI Y14.5-1973  
THIS PRINT IS THE PROPERTY OF AUTO CRANE CO.  
AND MUST NOT BE COPIED OR MAILED TO THIRD PARTIES.



BOOM EXT. (GREEN W/TR.)

BOOM UP (RED)

HOIST UP (GREEN)

VSU (WHITE W/TR)

BOOM

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

20 1 . 300412 CLAMP, CABLE  
 19 1 . 300411 PLUG, ELECTRICAL  
 18 3 . 622347 CONDUCTOR ASSY 3 1/8 LG.  
 17 4 . 622346 CONDUCTOR ASSY 2 1/8 LG.  
 16 1 . 004700 SCREW ST. SLT. PAN HD 8 X 1 1/2  
 15 21" . 800580 3/4" WIDE OKONITE RUBBER TAPE  
 14 4 . 019700 WASHER SPLIT LOCK B PLATED  
 13 4 . 642100 O-RING  
 12 4 . 675271 NUT

11 10 . 000101 TERMINALS T & B  
 10 4 . 636600 JUMPER  
 9 2 . 634401 TY-RAP CABLE TIE  
 8 1 . 800632-004 CONDUCTOR CABLE (27')  
 7 1 . 633801 CABLE ADAPTER

6 2 . 005101 SCREW ST. SLT. PAN HD 8 X 1 1/4  
 5 10 . 005001 SCREW ST. SLT. PAN HD 8 X 3/4  
 4 4 . 640302 BOOT-TOGGLE SWITCH  
 3 4 . 634200 TOGGLE SWITCH  
 2 1 . 631700 BOTTOM COVER  
 1 1 . 631601 PENDANT HOUSING

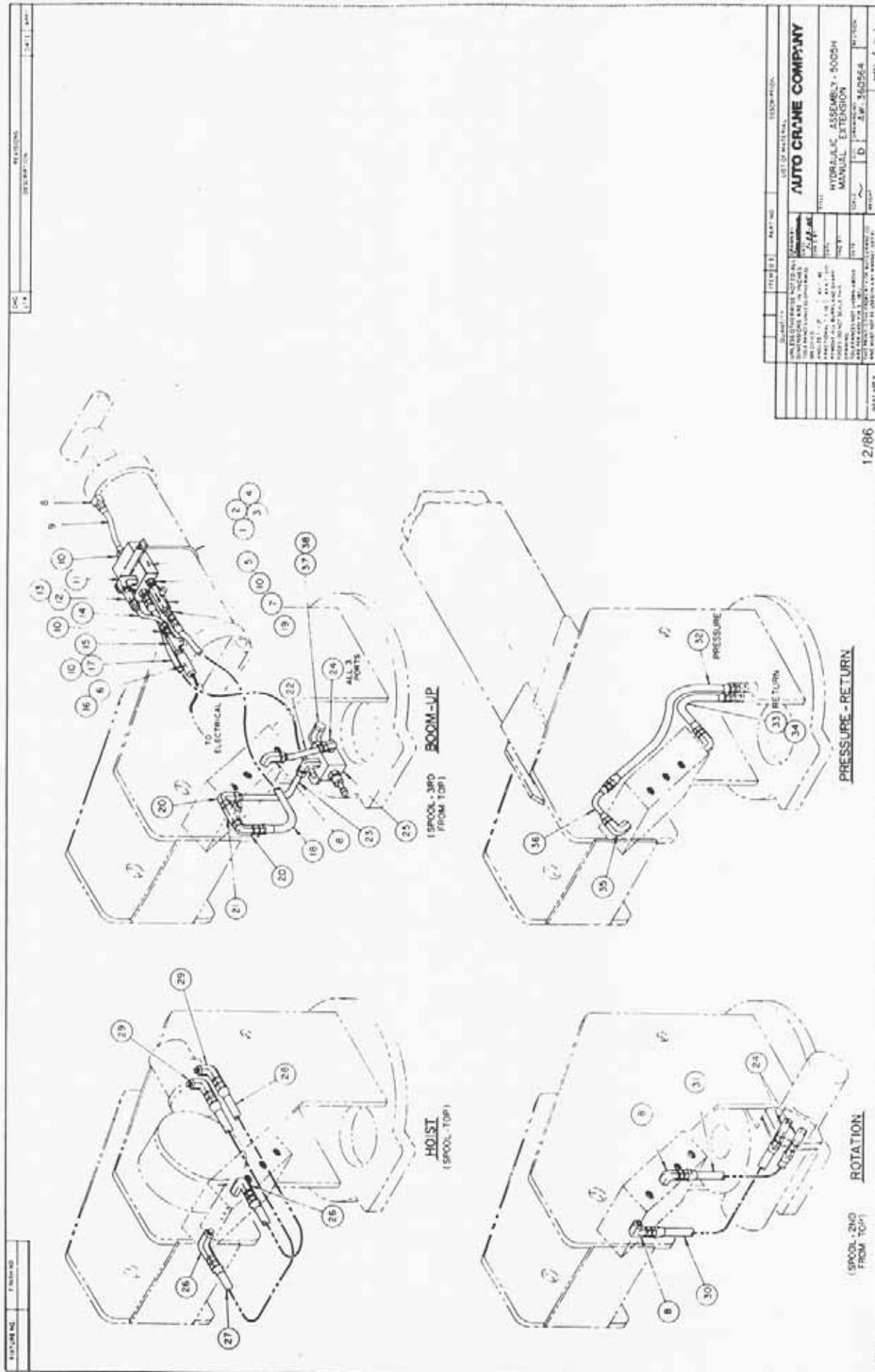
## LIST OF MATERIAL

**AUTO CRANE COMPANY**PO BOX 5000 • TULSA, OKLAHOMA 74102  
101 NORTH MINOR ROAD • 918/664-0453PENDANT ASSEMBLY  
4 FUNCTION, REMOVABLE

CHG DATE APP'D  
LTR REVISIONS  
NEXT ASSY

DESCRIPTION DATE APP'D  
REVISIONS

DRAWING NO. AW-480800  
SHEET 1 OF 1

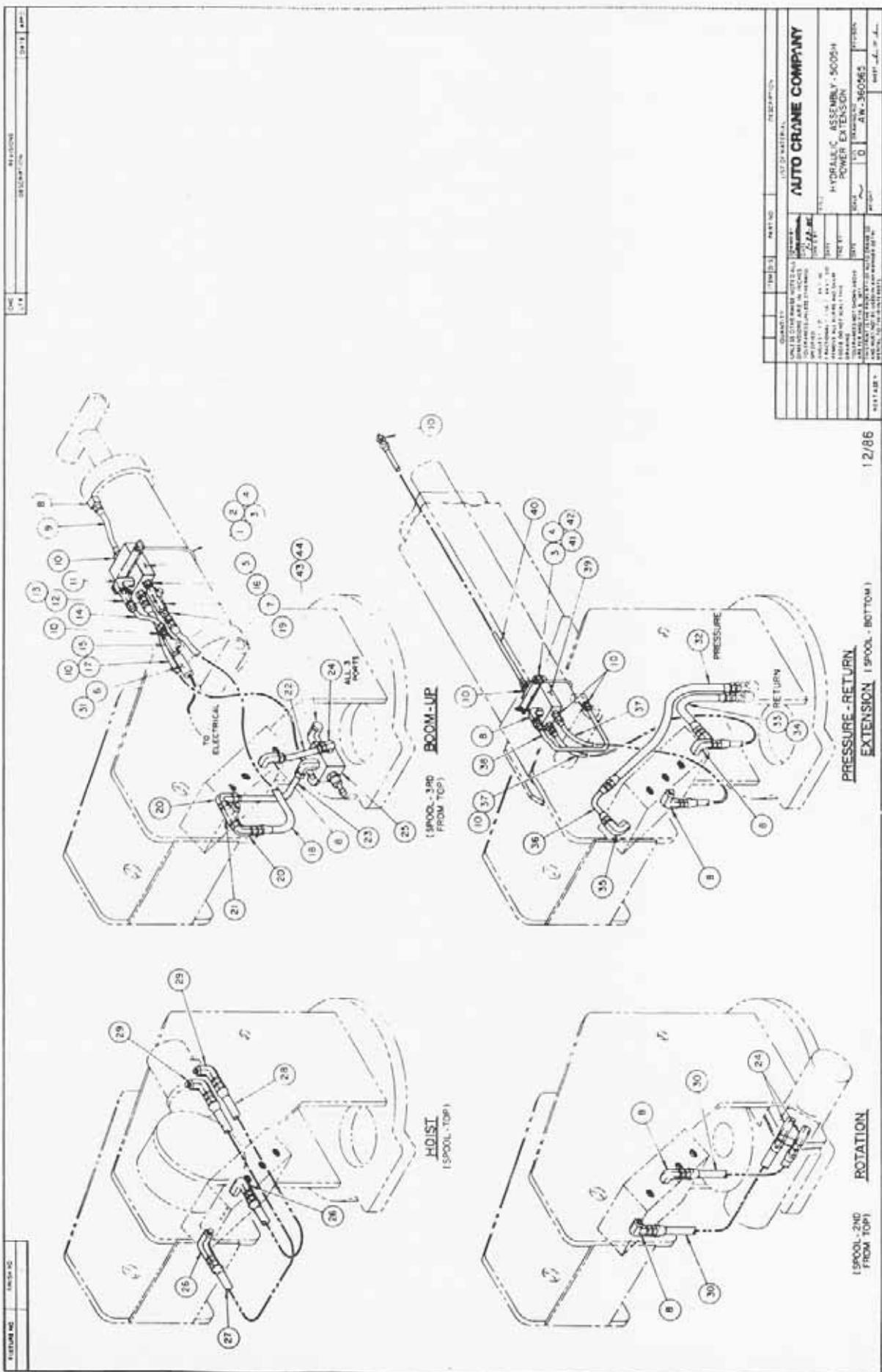


## HYDRAULIC ASSEMBLY - MANUAL EXTENSION - 5005H - AW-360564

ITEM	QTY	PART NO	DESCRIPTION
1	1	360581	U-BOLT
2	1	360582	CLAMP
3	2	020200	LOCKWASHER 1/4
4	2	015900	NUT, HX.1/4 NC
5	1	360568	VALVE, COUNTERBALANCE
6	1	360567	LOAD SENSOR SWITCH (SEE NOTE 1)
7	1	330582	FLOW REGULATOR
8	4	200892	ELL, 90° 3/8 P.M. / 9/16-18 JIC
9	1	360098	HOSE ASSEMBLY (8-1/2")
10	3	360042	ADAPTER, 3/8 P.M. / 9/16-18 JIC
11	1	360047	ELL, 90° 3/8 P.M. / 1/4 P.F.
12	1	360574	TEE, BRANCH 9/16 JIC / 1/4 EXT / 1/4 INT
13	2	000209	PLUG, PIPE 1/4-18
14	1	360575	TUBE ASSEMBLY
15	1	360053	TEE, 3/8 P.M. / 3/8 P.F.
16	1	360576	ADAPTER, 3/8 P.M. / 1/4 P.M.
17	1	360573	HOSE ASSEMBLY (23")
18	1	360572	HOSE ASSEMBLY (27")
19	1	360041	ADAPTER, 1/4 P.M. / 9/16-18 JIC
20	2	480194	ELL, 90° SWIVEL 9/16-18 JIC
21	1	360577	TEE, 3/8 P.M. / 9/16-18 JIC RUN
22	1	360571	TUBE ASSEMBLY
23	1	360570	TUBE ASSEMBLY
24	5	202759	ELL, 90° 1/2 P.M. / 9/16-18 JIC
25	1	360566	VALVE, RELIEF
26	2	360044	ELL, 90° 3/8 P.M. / 3/4-16 JIC
27	1	480203	HOSE ASSEMBLY (24-3/4")
28	1	480202	HOSE ASSEMBLY (21-1/2")
29	2	360043	ELL, 90° 1/2 P.M. / 3/4-16 JIC
30	2	480204	HOSE ASSEMBLY (17-1/2")
31	1	200880	ADAPTER, 3/8 P.M. / 1/4 P.F.
32	1	360578	HOSE ASSEMBLY (22-1/4")
33	1	360579	HOSE ASSEMBLY (15-1/2")
34	1	480191	ELL, 45° 3/8 P.M. / 3/4-16 JIC
35	1	480213	ELL, 90° 3/8 P.M. / 3/4-16 JIC LONG
36	1	480211	TUBE ASSEMBLY
37	1	330348	CAP. 7/16 JIC
38	1	330176	ELL, 90° 1/4 NPT / 7/16 JIC 37

## NOTES:

- PART NUMBER 360567 IS FOR THE LOAD SENSOR SWITCH ONLY, IF THE COMPLETE LOAD SENSOR SWITCH ASSEMBLY, (SWITCH, WIRE AND TERMINALS), IS DESIRED ORDER PART NUMBER 360547. REFER TO AW-360548 OR AW-360548-100 ELECTRICAL ASSEMBLIES FOR CORRECT HOOK UP.



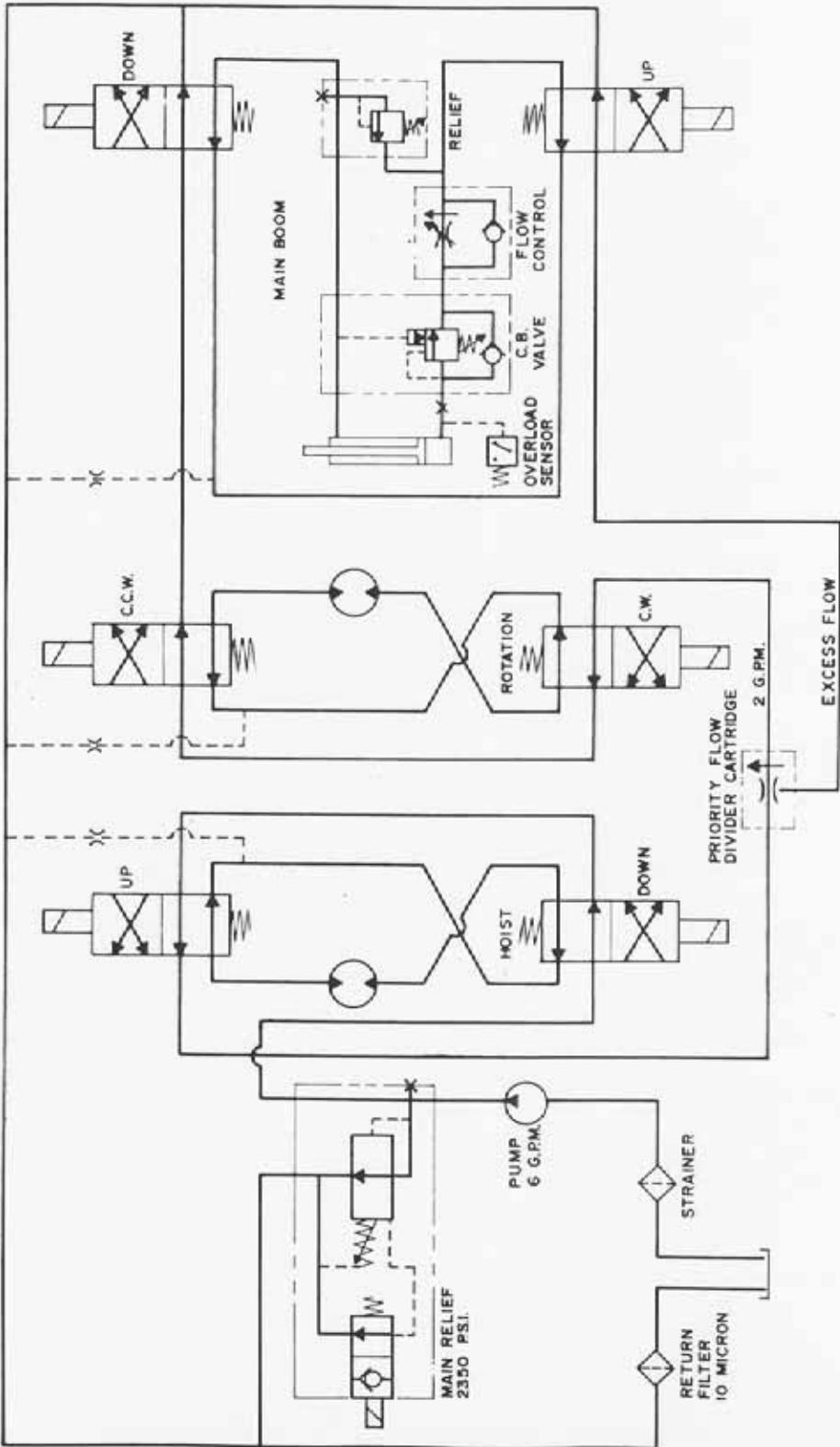
## HYDRAULIC ASSEMBLY - POWER EXTENSION - 5005H - AW-360565

ITEM	QTY	PART NO	DESCRIPTION
1	1	360581	U-BOLT
2	1	360582	CLAMP
3	4	020200	LOCKWASHER 1/4
4	4	015900	NUT, HX. 1/4 NC
5	1	360568	VALVE, COUNTERBALANCE
6	1	360567	LOAD SENSOR SWITCH (SEE NOTE 1)
7	1	330582	FLOW REGULATOR
8	7	200892	ELL, 90° 3/8 P.M. / 9/16-18 JIC
9	1	360098	HOSE ASSEMBLY (8-1/2")
10	8	360042	ADAPTER, 3/8 P.M. / 9/16-18 JIC
11	1	360047	ELL, 90° 3/8 P.M. / 1/4 P.F.
12	1	360574	TEE, BRANCH 9/16 JIC / 1/4 EXT / 1/4 INT
13	2	000209	PLUG, PIPE 1/4-18
14	1	360575	TUBE ASSEMBLY
15	1	360053	TEE, 3/8 P.M. / 3/8 P.F.
16	1	360576	ADAPTER, 3/8 P.M. / 1/4 P.M.
17	1	360573	HOSE ASSEMBLY (23")
18	1	360572	HOSE ASSEMBLY (27")
19	1	360041	ADAPTER, 1/4 P.M. / 9/16-18 JIC
20	2	480194	ELL, 90° SWIVEL 9/16-18 JIC
21	1	360577	TEE, 3/8 P.M. / 9/16-18 JIC RUN
22	1	360571	TUBE ASSEMBLY
23	1	360570	TUBE ASSEMBLY
24	5	202759	ELL, 90° 1/2 P.M. / 9/16-18 JIC
25	1	360566	VALVE, RELIEF
26	2	360044	ELL, 90° 3/8 P.M. / 3/4-16 JIC
27	2	480203	HOSE ASSEMBLY (24-3/4")
28	1	480202	HOSE ASSEMBLY (21-1/2")
29	2	360043	ELL, 90° 1/2 P.M. / 3/4-16 JIC
30	2	480204	HOSE ASSEMBLY (17-1/2")
31	1	200880	ADAPTER, 3/8 P.M. / 1/4 P.F.
32	1	360578	HOSE ASSEMBLY (22-1/4")
33	1	360579	HOSE ASSEMBLY (15-1/2")
34	1	480191	ELL, 45° 3/8 P.M. / 3/4-16 JIC
35	1	480213	ELL, 90° 3/8 P.M. / 3/4-16 JIC LONG
36	1	480211	TUBE ASSEMBLY
37	2	360075	HOSE ASSEMBLY (30-3/4")
38	1	360069	TUBE ASSEMBLY
39	1	360153	VALVE, COUNTERBALANCE
40	1	360070	TUBE ASSEMBLY
41	1	360091	U-BOLT
42	1	360092	CLAMP
43	1	330348	CAP, 7/16 JIC
44	1	330176	ELL, 90° 1/4 NPT / 7/16 JIC 37

## NOTES:

- PART NUMBER 360567 IS FOR THE LOAD SENSOR SWITCH ONLY, IF THE COMPLETE LOAD SENSOR SWITCH ASSEMBLY, (SWITCH, WIRE AND TERMINALS), IS DESIRED ORDER PART NUMBER 360550. REFER TO AW-360551 OR AW-360551-100 FOR CORRECT ELECTRICAL HOOK UP.

ITEM NO.	DESCRIPTION	REVISIONS
DATE	APPROD	
1	FINISH HD.	C-ING LTM



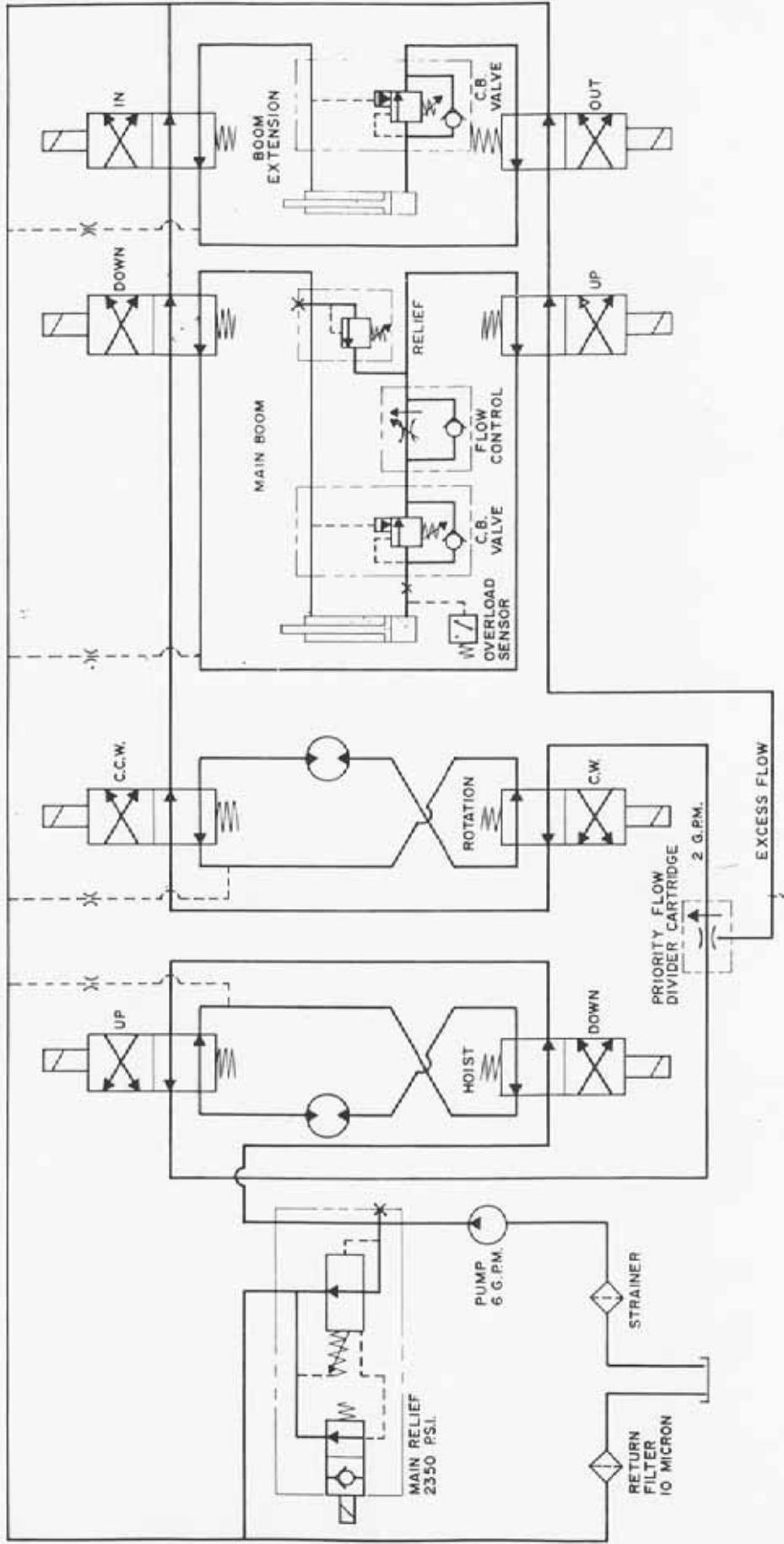
QUANTITY	ITEM D.S.	PART NO.	DESCRIPTION
<b>AUTO CRANE COMPANY</b>			
			LIST OF MATERIAL
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED	DATE 7/16/66 THEORY		
ANGLES 1 1/2" X 1 1/2" X 1/8"	DATE THIS BY	TITLE HYDRAULIC SCHEMATIC	
FRACTIONAL - 1 1/2"	DATE THIS BY	DRAWING NO. 5005H (WITHOUT POWER EXTENSION)	
REMOVE ALL BURRS AND SHARP EDGES DO NOT SCALE THIS DRAWING TOLERANCES NOT SHOWN ABOVE ARE PER AND 1912	DATE THIS BY	SCALE SHEET C	REVISION AW 360655 SHEET 1 OF 1
THIS DRAWING IS THE PROPERTY OF AUTO CRANE CO AND MUST NOT BE USED IN ANY MANNER DEEMED HARMFUL TO THEIR INTERESTS			
NEXT ASSY			WEIGHT

#### RELIEF VALVE SHOWN WITH SOLENOID ENERGIZED

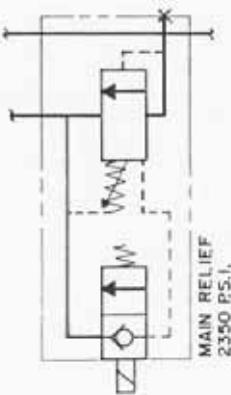
FIXTURE NO.	FINISH NO.
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CHG	REVISIONS
LTH	DESCRIPTION

DATE APPRO



6-4.0.0



RELIEF VALVE SHOWN WITH SOLENOID ENERGIZED

MAIN RELIEF  
2350 PSI.**AUTO CRANE COMPANY**

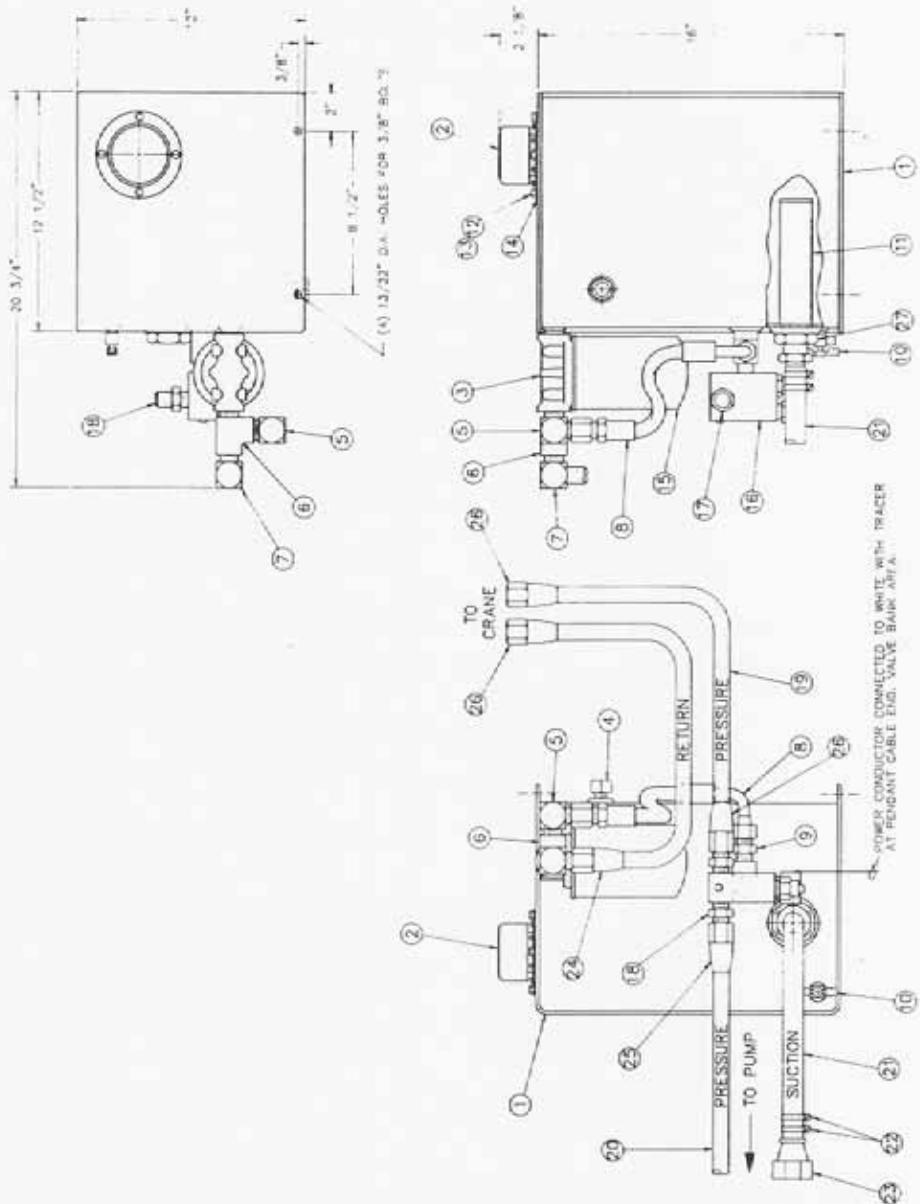
## LIST OF MATERIAL

C

HYDRAULIC SCHEMATIC  
5005H  
(WITH POWER EXTENSION)TITLE  
DRAWING NO.  
REV. CREVISION  
NUMBER  
1

C

DATE  
SCALE  
SIZE  
WEIGHT12/86  
C  
AW-360654PRINTED BY THE AUTO CRANE CO.  
AND OWNED BY THE UNION OF PRIMARY  
MATERIAL TO THEIR INTERESTS



ITEM	DESCRIPTION	SIZE	QUANTITY	UNIT	REMARKS
1	RESERVOIR ASSY. 8 GALLON	1	1	GAL	
2	SWING CHECK VALVE	1	1	PC	
3	SWING CHECK VALVE	1	1	PC	
4	SWING CHECK VALVE	1	1	PC	
5	SWING CHECK VALVE	1	1	PC	
6	SWING CHECK VALVE	1	1	PC	
7	SWING CHECK VALVE	1	1	PC	
8	SWING CHECK VALVE	1	1	PC	
9	SWING CHECK VALVE	1	1	PC	
10	SWING CHECK VALVE	1	1	PC	
11	SWING CHECK VALVE	1	1	PC	
12	SWING CHECK VALVE	1	1	PC	
13	SWING CHECK VALVE	1	1	PC	
14	SWING CHECK VALVE	1	1	PC	
15	SWING CHECK VALVE	1	1	PC	
16	SWING CHECK VALVE	1	1	PC	
17	SWING CHECK VALVE	1	1	PC	
18	SWING CHECK VALVE	1	1	PC	
19	SWING CHECK VALVE	1	1	PC	
20	SWING CHECK VALVE	1	1	PC	
21	SWING CHECK VALVE	1	1	PC	
22	SWING CHECK VALVE	1	1	PC	
23	SWING CHECK VALVE	1	1	PC	
24	SWING CHECK VALVE	1	1	PC	
25	SWING CHECK VALVE	1	1	PC	
26	SWING CHECK VALVE	1	1	PC	
27	SWING CHECK VALVE	1	1	PC	
28	SWING CHECK VALVE	1	1	PC	
29	SWING CHECK VALVE	1	1	PC	
30	SWING CHECK VALVE	1	1	PC	

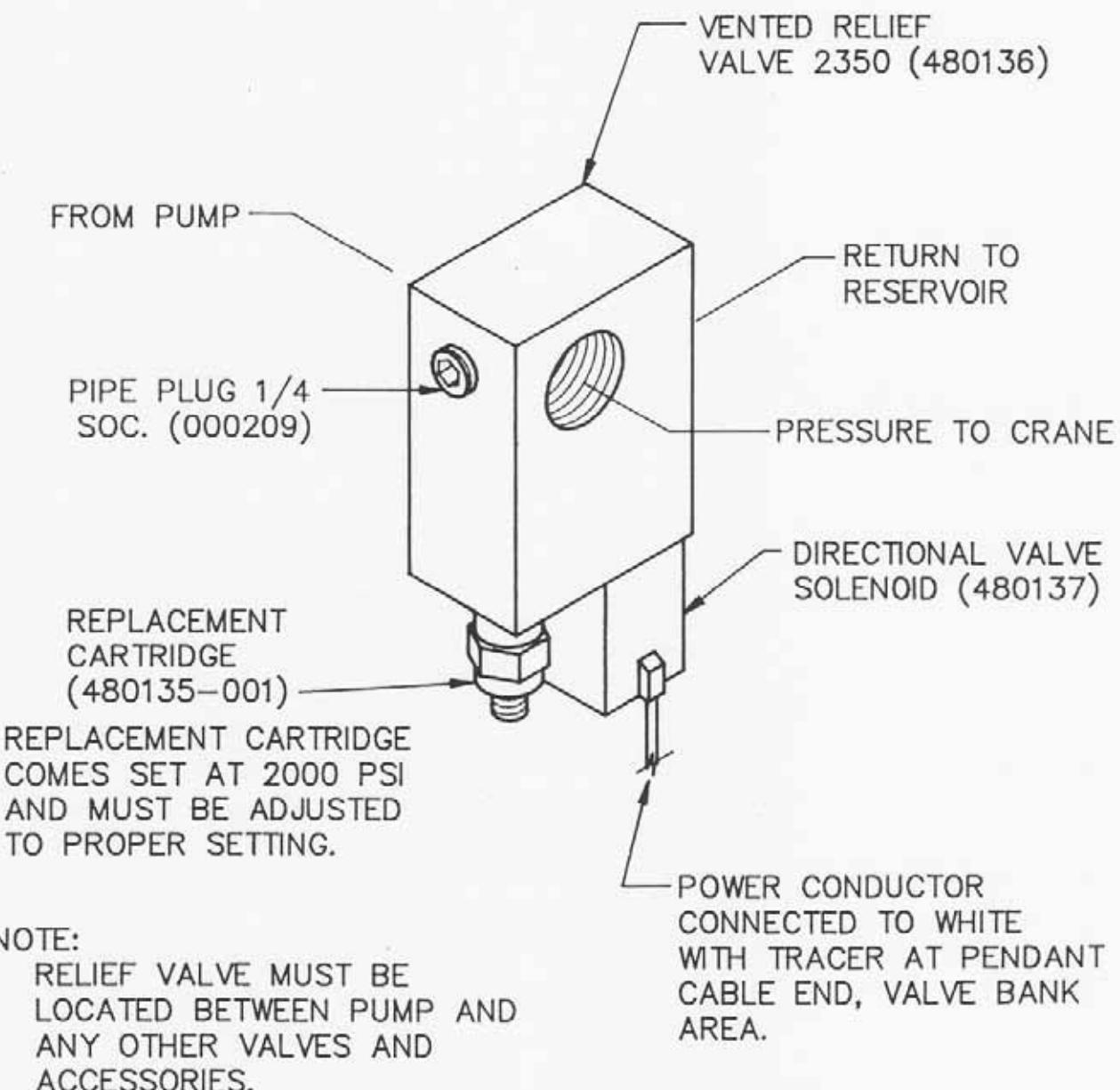
Sheet 1 of 1  
Revision A  
Date: 10/10/00  
Drawing No.: 6-500.0

**RESERVOIR ASSEMBLY, 5005H, AW-480150**

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480151	RESERVOIR WELDMENT
2	1	360151	FILLER ASSEMBLY
3	1	360156	FILTER ASSEMBLY
4	1	360150	SIGHT PLUG
5	1	551222	ELL
6	1	360262	TEE
7	1	360263	ELL
8	1	360284	HOSE ASSEMBLY
9	1	360054	ADAPTER, STRAIGHT
10	1	750715	DRAIN VALVE
11	1	360282	STRAINER, SUCTION
12	4	005500	SCREW, HX. 1/4-20 X 3/4"
13	4	020200	WASHER, 1/4 SP. LK.
14	1	360249	COVER, CLEAN OUT
15	1	360277	SPIN ON FILTER (FOR REPLACEMENT)
16	1	REF.	VENTED RELIEF VALVE ASSEMBLY (360247)
17	1	REF.	ADAPTER, STRAIGHT (360054)
18	1	REF.	ADAPTER, STRAIGHT (551215)
19	1	REF.	HOSE, -8 (551228-001)
20	1	REF.	HOSE, -12 (360274-001)
21	1	REF.	HOSE, -16 (360275-001)
22	4	REF.	HOSE CLAMP, -16 (360268)
23	1	REF.	HOSE ADAPTER (360273)
24	1	REF.	FITTING, REUSABLE 10-8 (551227)
25	2	REF.	FITTING, REUSABLE 10-12 (360269)
26	3	REF.	FITTING, REUSABLE 8-8 (360266)
27	1	REF.	ADAPTER, STRAIGHT (360270)

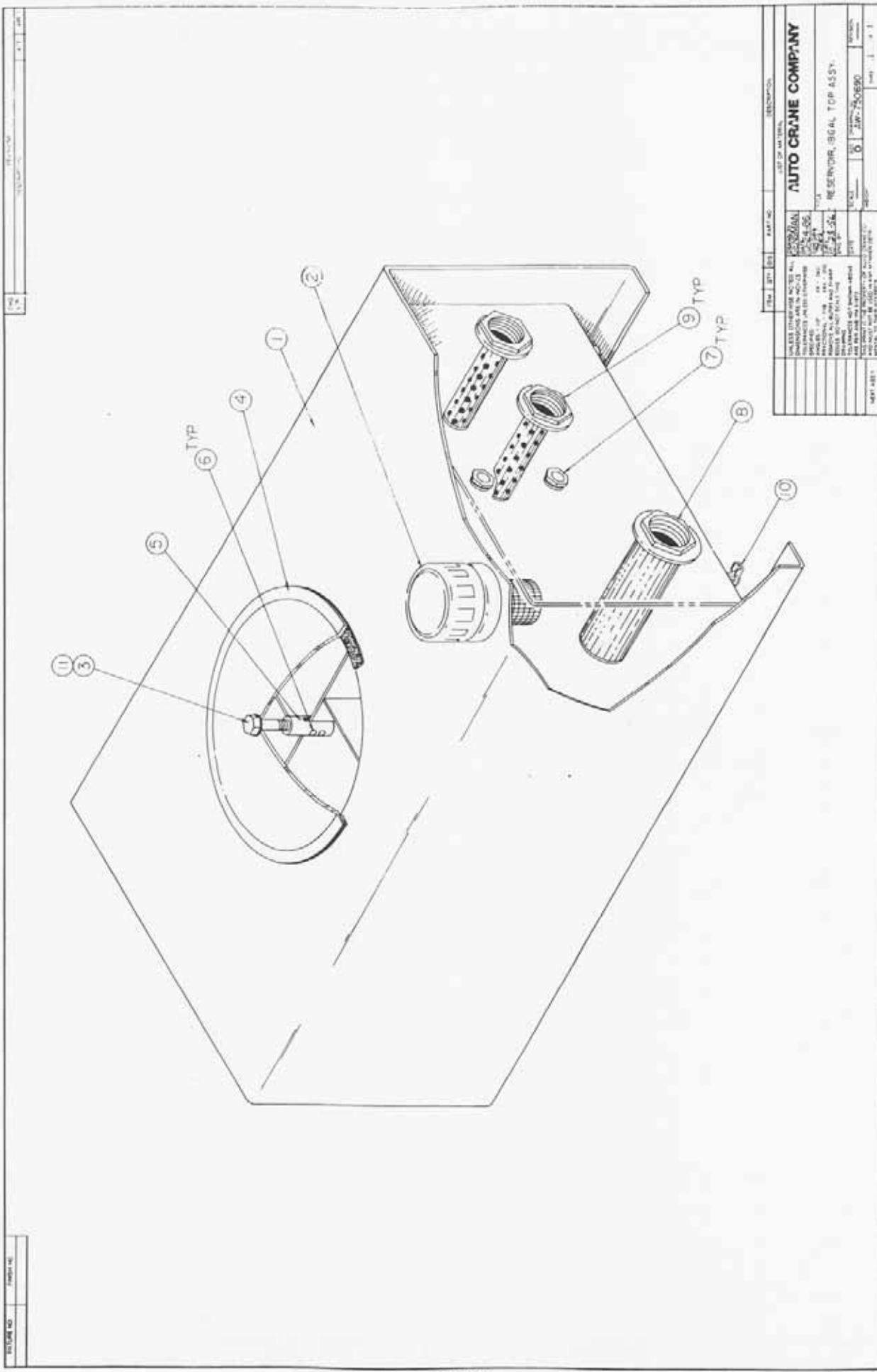
**NOTES:**

1. ITEMS 17 THRU 27 ARE AVAILABLE AS A KIT, PART NO. 480159



AW-092  
VENTED RELIEF VALVE  
ASSEMBLY, WITH SOLENOID

PART NO. 360247

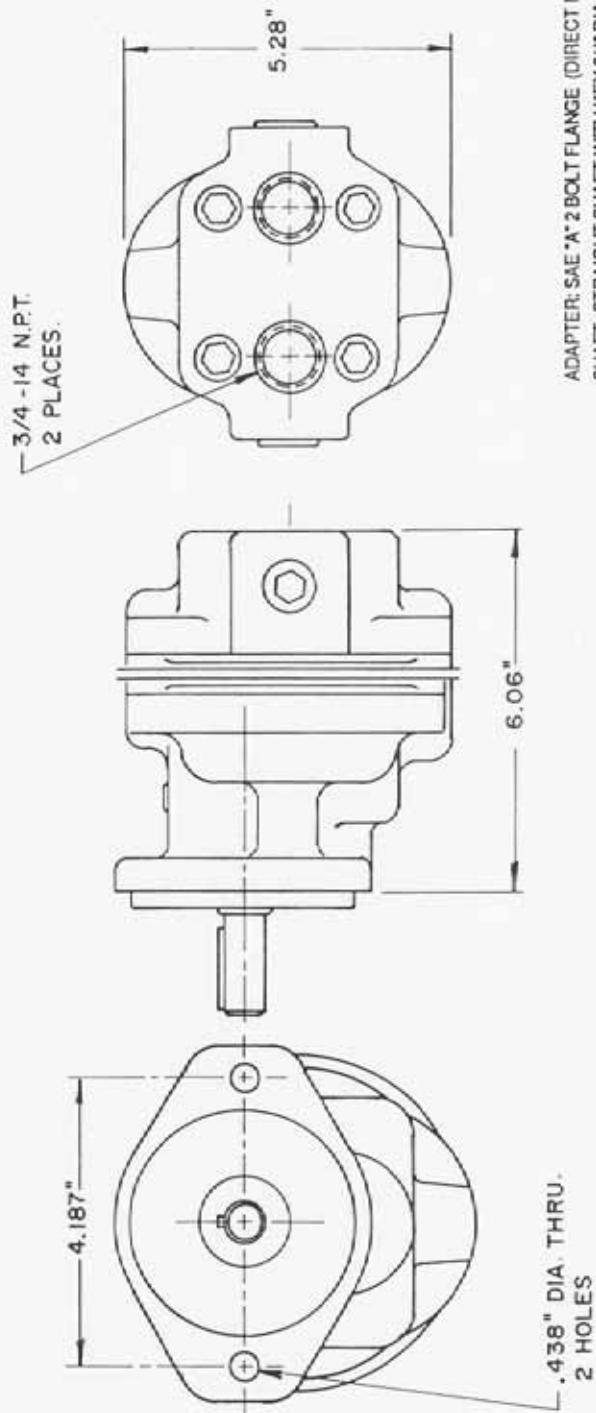


**RESERVOIR, 18 GALLON TOP ASSEMBLY -AW-750690**

ITEM	QTY	PART NO	DESCRIPTION
1	1	750691	RESERVOIR, WELD ASS'Y.
2	1	360151	FILLER ASS'Y RESERVOIR
3	1	750711	BOLT, (END COVER)
4	1	750712	END COVER
5	1	750709	ADAPTER, BAFFLE
6	2	750710	PIN, END COVER
7	2	360150	PLUG, RESERVOIR
8	1	750707	STRAINER, SUCTION
9	2	750708	STRAINER, DIFFUSER
10	1	750715	VALVE, DRAIN
11	1	750716	CRUSH WASHER

Fixture No.	Finish No.
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CHG LTR	REVISIONS	DESCRIPTION	DATE	APPROD
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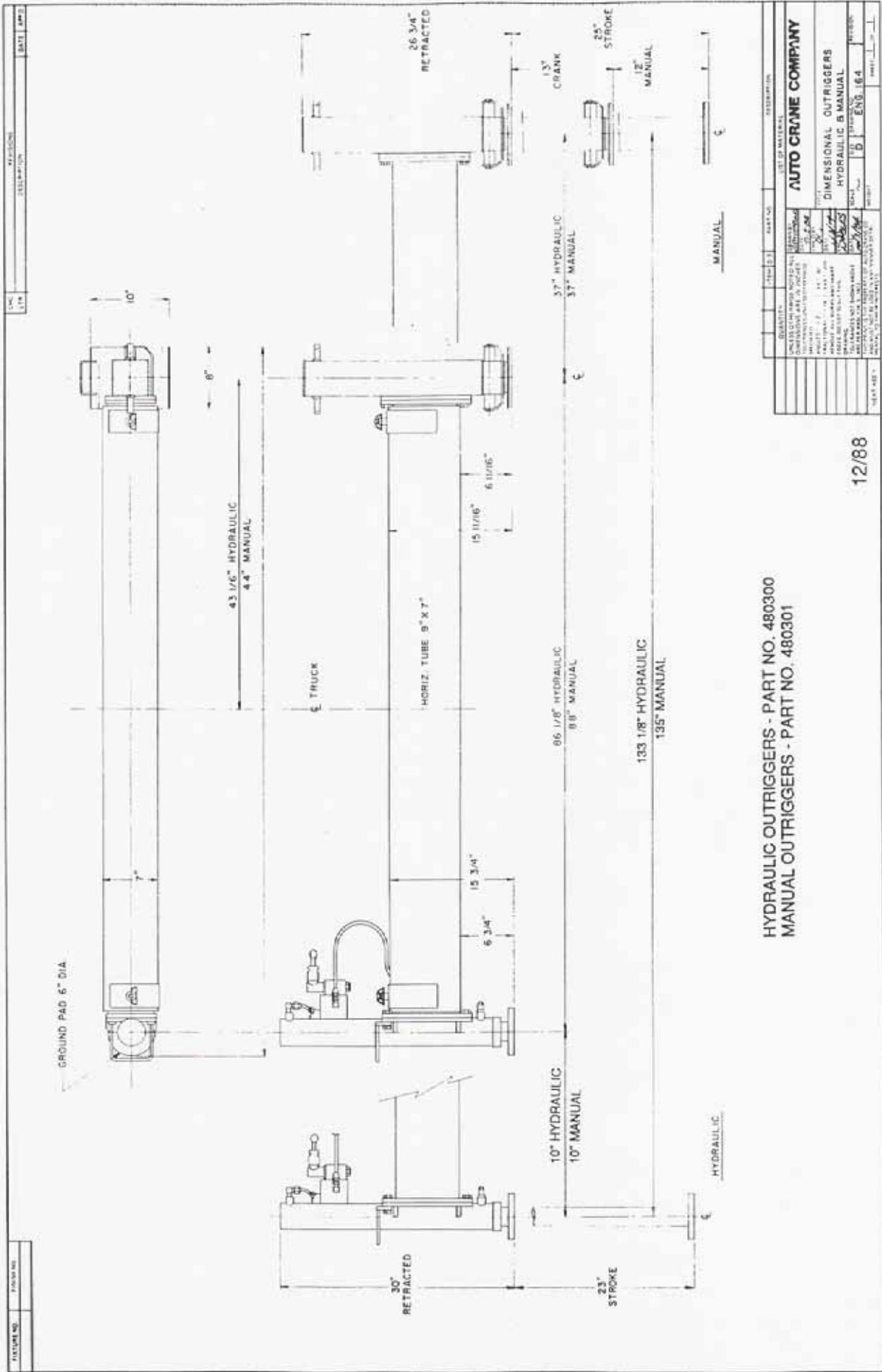
ADAPTER: SAE "A" 2 BOLT FLANGE (DIRECT MOUNT ONLY).  
SHAFT: STRAIGHT SHAFT WITH KEY 3/4" DIA. 2-3/4" LONG  
3/16" SQ. KEY 1-5/8" LONG

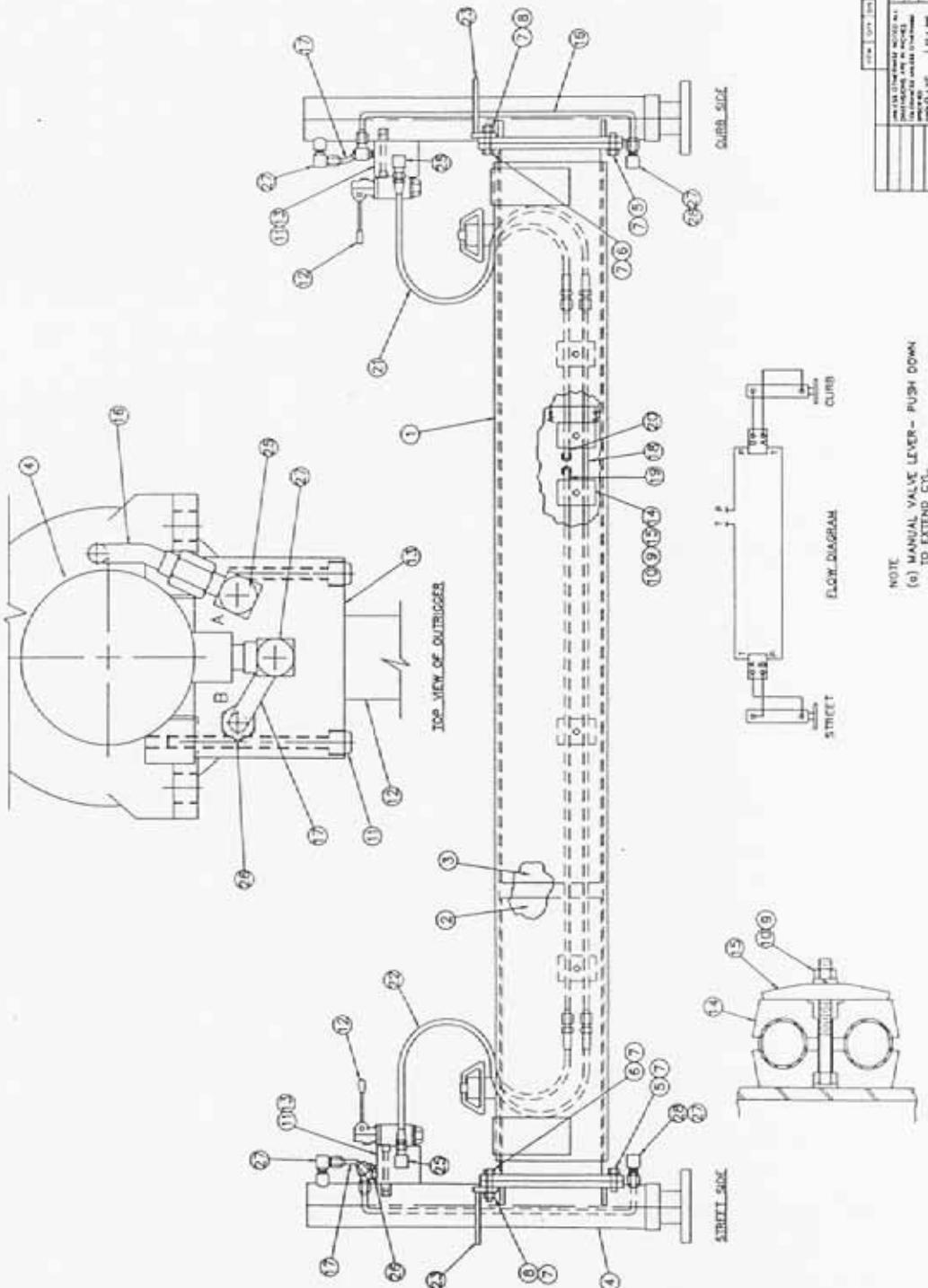
NOTE:  
PUMP SPEED - 950 R.P.M. (STANDARD)

QUANTITY	ITEM D/S	PART NO.	DESCRIPTION
<b>AUTO CRANE COMPANY</b>			
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES			
TOLERANCES UNLESS OTHERWISE SPECIFIED			
ANGLES: 1° XX * 40° XX * 10° XX * 40° XX * 10°			
FRACTIONAL: 1/16" 1/32" 1/64" 1/128"			
REMOVE ALL BURRS AND SHARP EDGES. DO NOT SCALE THIS DRAWING.			
TOLERANCES NOT SHOWN ABOVE ARE PER ANSI Y14.5, 1973.			
THIS PRINT IS THE PROPERTY OF AUTO CRANE CO. AND MUST NOT BE USED IN ANY MANNER DEEMED TO THREATEN INTERESTS.			
12/86	NEXT ASSY	SCALE	SIZE
		B	INCHES (INCHES)
		WEIGHT	AW - 360029
			4 FT. 11 1/2 IN.
			SHEET / OF 1

NOTES:

1. TO ORDER HYD. PUMP ASSEMBLY USE PART NO. 3600030, WHICH CONSISTS OF HYD. PUMP (3600029), 3/4-14NPT(1-5/16-12 JIC ADAPTER (3600055) SUCTION AND 3/4-14 NPT/1-1/16-12 JIC (750399) PRESSURE
2. FOR SEAL KIT USE PART NO. 4800018-001.
3. FOR SERVICE KIT USE PART NO. 4800018-002.





SECTION-A-A

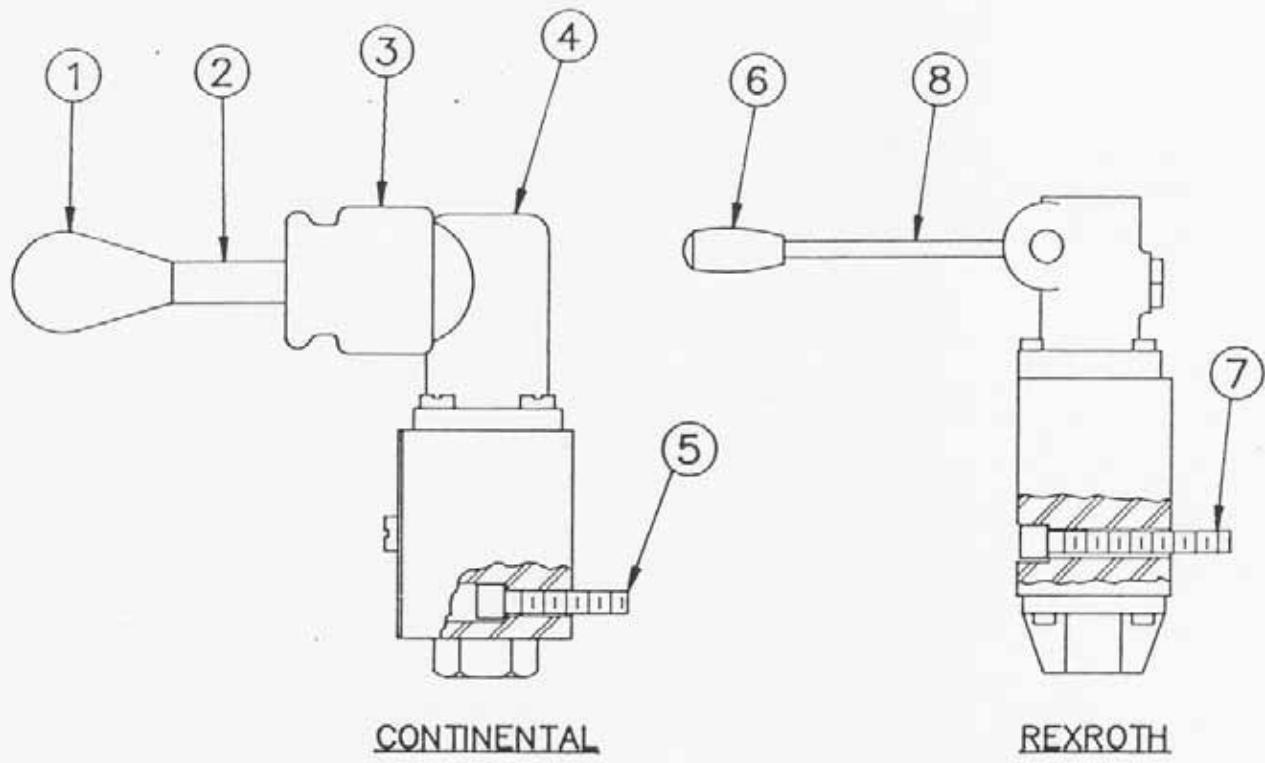
SECTION-A-A

ITEM NO. OR REF.		DESCRIPTION	ITEM NO. OR REF.	DESCRIPTION
1	1	MANUAL VALVE ASSEMBLY	2	HYD. CYL. OUTRIGGER
3	2	VALVE	4	VALVE
5	3	VALVE	6	VALVE
7	4	VALVE	8	VALVE
9	5	VALVE	10	VALVE
11	6	VALVE	12	VALVE
13	7	VALVE	14	VALVE
14	8	VALVE	15	VALVE
15	9	VALVE	16	VALVE
16	10	VALVE	17	VALVE
17	11	VALVE	18	VALVE
18	12	VALVE	19	VALVE

- AUTO CRANE COMPANY**  
A Division of Manitowoc, Inc.  
1000 North 10th Street • Milwaukee, WI 53204-3795  
Toll Free: 1-800-558-5585 • Fax: 414-765-1111  
E-mail: [info@auto-crane.com](mailto:info@auto-crane.com)  
Web: [www.auto-crane.com](http://www.auto-crane.com)
- HID. OUTRIGGER ASS'Y

## HYD. OUTRIGGER ASS'Y, AW-480300

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	750899	MAIN CROSS TUBE
2	1	750893	SLIDE, STREET SIDE
3	1	750894	SLIDE, CURB SIDE
4	2	480017	CYLINDER, VERTICAL
5	4	012203	SCREW, HX. HD. 5/8 - NF X 1 1/4
6	4	013506	SCREW, HX. HD. 5/8 - NF X 2 1/4
7	12	023800	WASHER, SP. LK. 5/8
8	4	018302	NUT, HX. 5/8 - NF
9	5	016500	NUT, HX. 5/16 - NC
10	5	020600	WASHER, SP. LK. 5/16
11	4	003906	SCREW SOC. HD. 5/16 - 18 NC X 3 1/4
12	2	480230	VALVE MANUAL, OUTRIGGER (VERTICAL)
13	2	480231	MANIFOLD, OUTRIGGER
14	5	480232	CLAMP, HALVES
15	5	480233	PLATE, TWIN COVER
16	2	480220	TUBE ASS'Y (LEG)
17	2	480221	TUBE ASS'Y (LEG)
18	1	480222	TUBE ASS'Y
19	1	480223	TUBE ASS'Y
20	1	480224	TUBE ASS'Y
21	2	480225	HOSE ASS'Y O.R. (CURB SIDE)
22	2	480226	HOSE ASS'Y O.R. (STREET SIDE)
23	2	480227	HANDLE ASS'Y
24	1	480235	KIT, OUTRIGGER INSTALLATION
25	6	241175	ELL, 90°, -6 ORB/ -6 JIC
26	2	480195	ELL, 45°, -6 ORB/ -6 JIC
27	4	200892	ELL, 90°, 3/8 NP/ -6 JIC
28	2	360048	ELL, 90°, -6 NPT/ -6 NPTF
29	1	480014	SEAL KIT (FOR CYL. 480017)



SEAL KIT (CONTINENTAL)  
480230-009

SEAL KITS (REXROTH)  
480230-010, BUNA (LOW TEMP.)  
480230-011, VITA (HIGH TEMP.)

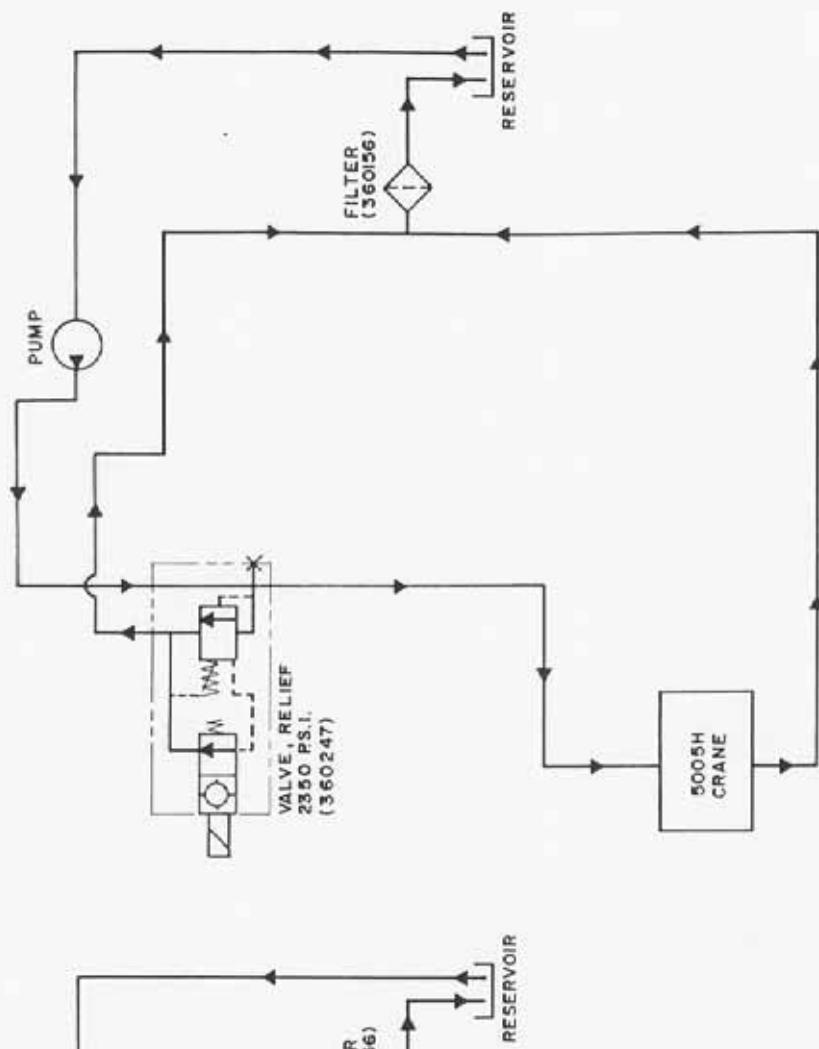
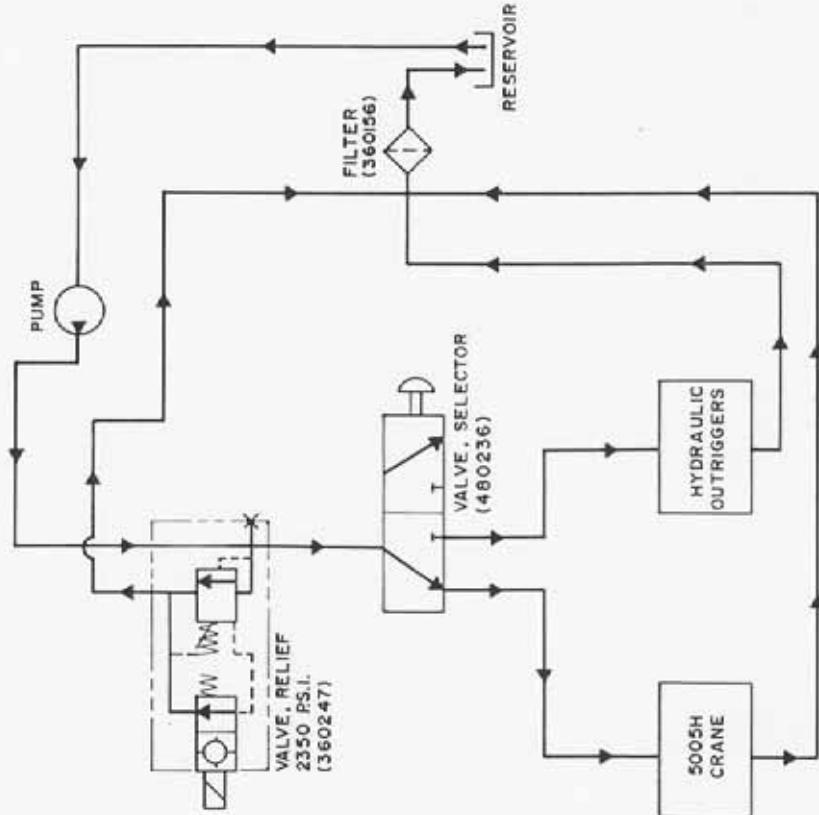
AW-073. OUTRIGGER VALVE (PART NO. 480230)

OUTRIGGER VALVE, AW-073

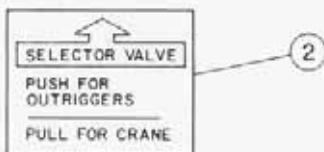
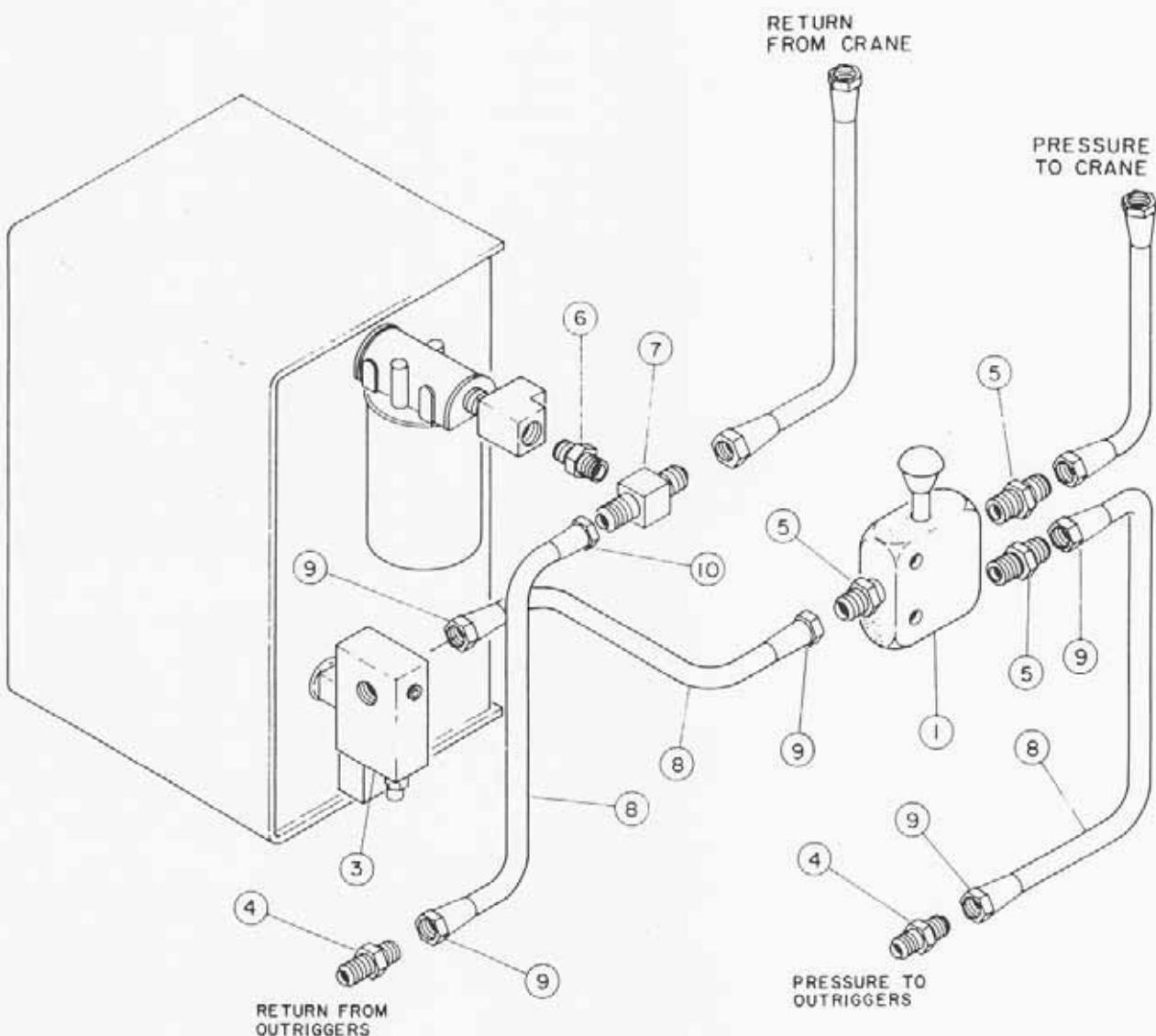
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480230-001	KNOB
2	1	480230-002	LEVER ASS'Y
3	1	480230-003	BOOT
4	1	480230-004	HOUSING, ASS'Y
5	1	480230-005	BOLT KIT (4 SOC. HD. SCREWS #10 - 24 X 7/8)
6	1	480230-006	KNOB
7	1	480230-007	BOLT KIT(4, SOC. HD. SCREWS #10 - 24 X 2" LG)
8	1	480230-008	LEVER ASS'Y

Fixture No.	Finish No.
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CHG	REVISIONS	DATE	APPROV'D
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ITEM	DIS	PART NO.	DESCRIPTION
<b>AUTO CRANE COMPANY</b>			
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED ANGLES ± 1° FRACTIONAL ± 1/16 INCHES REMOVE ALL BURRS AND SHARP EDGES DO NOT SCALE THIS DRAWING. TOLERANCES NOT SHOWN ABOVE ARE PER AND 14.5.9(3) THIS PRINT IS THE PROPERTY OF AUTO CRANE CO. AND MUST NOT BE USED IN ANY MANNER DIFERENT TO THEIR INTENTS			



ITEM	QTY.	PART NO.	DESCRIPTION
1	1	480236	SELECTOR VALVE
2	1	750271	DECAL, SELECTOR VALVE
3	1	REF.	DUMP VALVE ASS'Y
4	2	REF.	ADAPTER ST. -8 JIC / -8 JIC
5	3	REF.	ADAPTER ST. -8 NPT / -8 JIC
6	1	REF.	ADAPTER ST. -8NPT / -12 NPT
7	1	REF.	TEE, -10 JIC RUN / -8 NPT FEM.
8	12'	REF.	HOSE, -8
9	5	REF.	HOSE FITTING, -8 JIC / -8 HOSE
10	1	REF.	HOSE FITTING, -8 JIC / -10 HOSE

#### NOTES

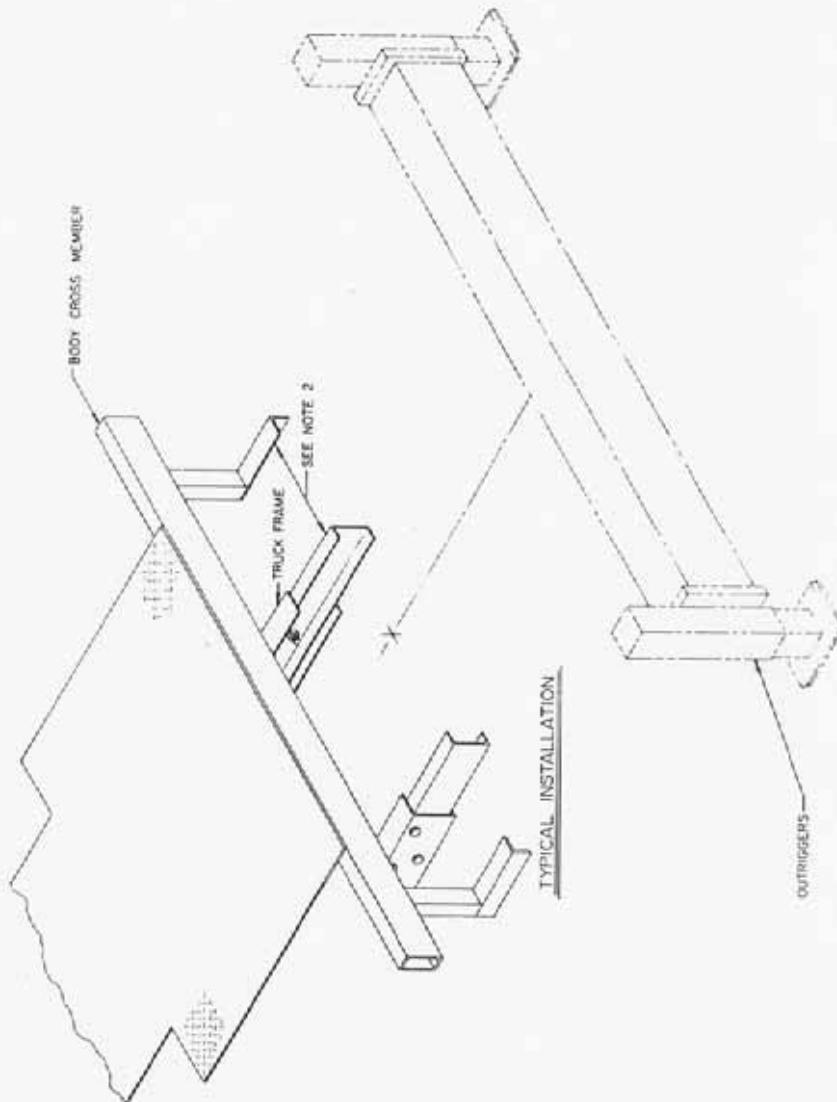
1. ITEMS 4 THROUGH 10 MAY BE PURCHASED AS A KIT WITH PART NUMBER 480234.
2. FOR ADDITIONAL INFORMATION, SEE AW-480150 AND 366212.

#### OUTRIGGER INSTALLATION KIT

PART NO. 480235

FIGURE NO.	50000000
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REVISED	REVISION
1.0	SEE PAGE 2



- NOTES:
1. WELD MAIN CROSS TUBE TO FRAME EXTENSIONS AND CROSS MEMBER EXTENSIONS.
  2. CAUTION ON HYDRAULIC OUTRUGGERS (REF P/N - 4B0101), POSITION SO THAT THE WELD OR BRACKET DOES NOT INTERFERE WITH HYDRAULIC TUBING OR HOSE HOOK-UP.

ITEM #	QTY	PART NO.	LIST OF MATERIALS	
			DESCRIPTION	QUANTITY
<b>AUTO CRANE COMPANY</b>				
1	1	4B0101	MAIN CROSS MEMBER	1
2	1	4B0102	OUTRIGGER	1
3	1	4B0103	OUTRIGGER	1
4	1	4B0104	OUTRIGGER	1
5	1	4B0105	OUTRIGGER	1
6	1	4B0106	OUTRIGGER	1
7	1	4B0107	OUTRIGGER	1
8	1	4B0108	OUTRIGGER	1
9	1	4B0109	OUTRIGGER	1
10	1	4B0110	OUTRIGGER	1
11	1	4B0111	OUTRIGGER	1
12	1	4B0112	OUTRIGGER	1
13	1	4B0113	OUTRIGGER	1
14	1	4B0114	OUTRIGGER	1
15	1	4B0115	OUTRIGGER	1
16	1	4B0116	OUTRIGGER	1
17	1	4B0117	OUTRIGGER	1
18	1	4B0118	OUTRIGGER	1
19	1	4B0119	OUTRIGGER	1
20	1	4B0120	OUTRIGGER	1
21	1	4B0121	OUTRIGGER	1
22	1	4B0122	OUTRIGGER	1
23	1	4B0123	OUTRIGGER	1
24	1	4B0124	OUTRIGGER	1
25	1	4B0125	OUTRIGGER	1
26	1	4B0126	OUTRIGGER	1
27	1	4B0127	OUTRIGGER	1
28	1	4B0128	OUTRIGGER	1
29	1	4B0129	OUTRIGGER	1
30	1	4B0130	OUTRIGGER	1
31	1	4B0131	OUTRIGGER	1
32	1	4B0132	OUTRIGGER	1
33	1	4B0133	OUTRIGGER	1
34	1	4B0134	OUTRIGGER	1
35	1	4B0135	OUTRIGGER	1
36	1	4B0136	OUTRIGGER	1
37	1	4B0137	OUTRIGGER	1
38	1	4B0138	OUTRIGGER	1
39	1	4B0139	OUTRIGGER	1
40	1	4B0140	OUTRIGGER	1
41	1	4B0141	OUTRIGGER	1
42	1	4B0142	OUTRIGGER	1
43	1	4B0143	OUTRIGGER	1
44	1	4B0144	OUTRIGGER	1
45	1	4B0145	OUTRIGGER	1
46	1	4B0146	OUTRIGGER	1
47	1	4B0147	OUTRIGGER	1
48	1	4B0148	OUTRIGGER	1
49	1	4B0149	OUTRIGGER	1
50	1	4B0150	OUTRIGGER	1
51	1	4B0151	OUTRIGGER	1
52	1	4B0152	OUTRIGGER	1
53	1	4B0153	OUTRIGGER	1
54	1	4B0154	OUTRIGGER	1
55	1	4B0155	OUTRIGGER	1
56	1	4B0156	OUTRIGGER	1
57	1	4B0157	OUTRIGGER	1
58	1	4B0158	OUTRIGGER	1
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60	1	4B0160	OUTRIGGER	1
61	1	4B0161	OUTRIGGER	1
62	1	4B0162	OUTRIGGER	1
63	1	4B0163	OUTRIGGER	1
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65	1	4B0165	OUTRIGGER	1
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67	1	4B0167	OUTRIGGER	1
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77	1	4B0177	OUTRIGGER	1
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87	1	4B0187	OUTRIGGER	1
88	1	4B0188	OUTRIGGER	1
89	1	4B0189	OUTRIGGER	1
90	1	4B0190	OUTRIGGER	1
91	1	4B0191	OUTRIGGER	1
92	1	4B0192	OUTRIGGER	1
93	1	4B0193	OUTRIGGER	1
94	1	4B0194	OUTRIGGER	1
95	1	4B0195	OUTRIGGER	1
96	1	4B0196	OUTRIGGER	1
97	1	4B0197	OUTRIGGER	1
98	1	4B0198	OUTRIGGER	1
99	1	4B0199	OUTRIGGER	1
100	1	4B0100	OUTRIGGER	1

Fixture No.	Finish No.
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ITEM	QTY	DESCRIPTION	REVISIONS	DATE	APPROVED

ITEM NO.	ITEM DIS.	PART NO.	DESCRIPTION
			LIST OF MATERIAL

**AUTO CRANE COMPANY**

P.O. BOX 8300 • TULSA, OKLAHOMA 74165  
VIA AIR MAIL • TEL: 918/661-5475

TITLE: OUTRIGGER ASSEMBLY (MANUAL)

DRAWING NO. AW-480301 REVISION -

NEXT ASSY 12/88 WEIGHT 1 OR 1

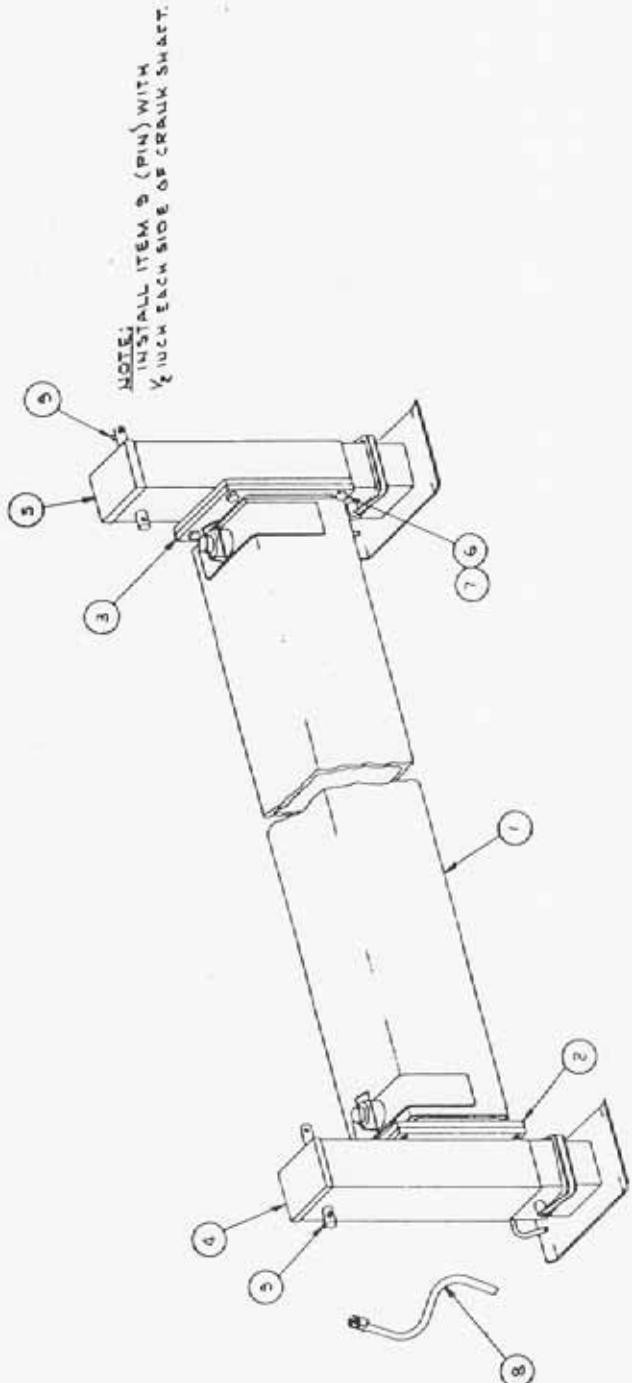
PRINTED 11-1989

UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES.  
TOLERANCES UNLESS OTHERWISE SPECIFIED: ANGLES - 1°  
FRACTIONAL: .001-.005  
REMOVE ALL BURRS AND SHARP EDGES. DO NOT SCALE THIS DRAWING.  
TOLERANCES NOT SHOWN ABOVE  
ARE THE PROPERTY OF AUTO CRANE CO.  
THIS PART IS TO BE USED IN ANY MANNER OTHER THAN INTENDED.

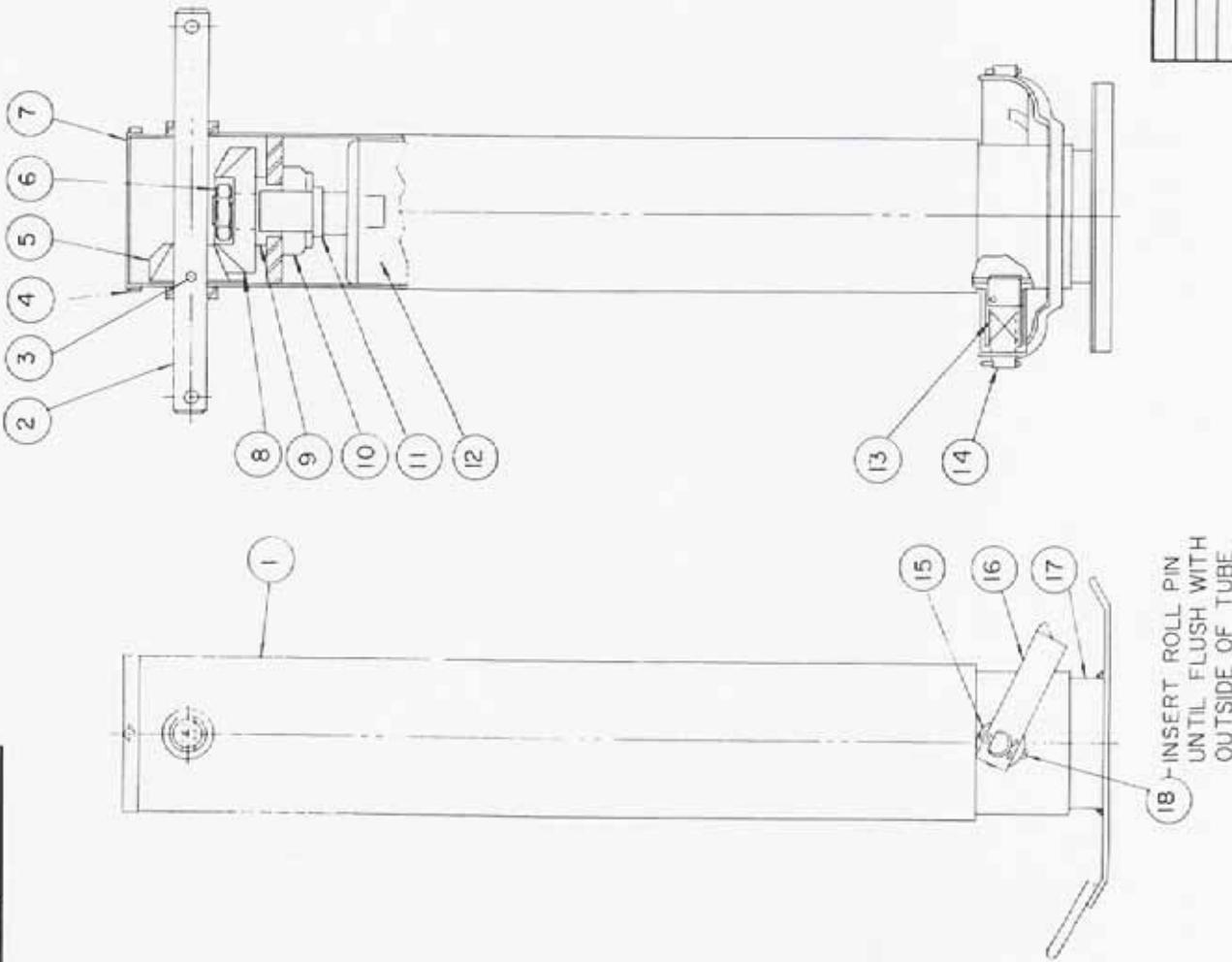
QUANTITY

2 3 A 4B0162 PIN, ROLL 3/8 X 2" L.G.  
1 8 A 4B0164 HANDLE CRANK  
8 7 A Q22800 WASHER, SPRK 5/8  
8 6 A Q12203 SCREW 4X 1/2 S/S NF X 1/8" L.G.  
1 5 B 4B0169 OUTRIGGER, MANUAL WELDMENT (R)  
1 4 B 4B0168 OUTRIGGER, MANUAL WELDMENT (L)  
1 3 B 750894 SLIDE, CURB SIDE  
1 2 B 750893 SLIDE, STREET SIDE  
1 1 B 750891 MAIN CROSS TUBE ASSY



FINISH NO.

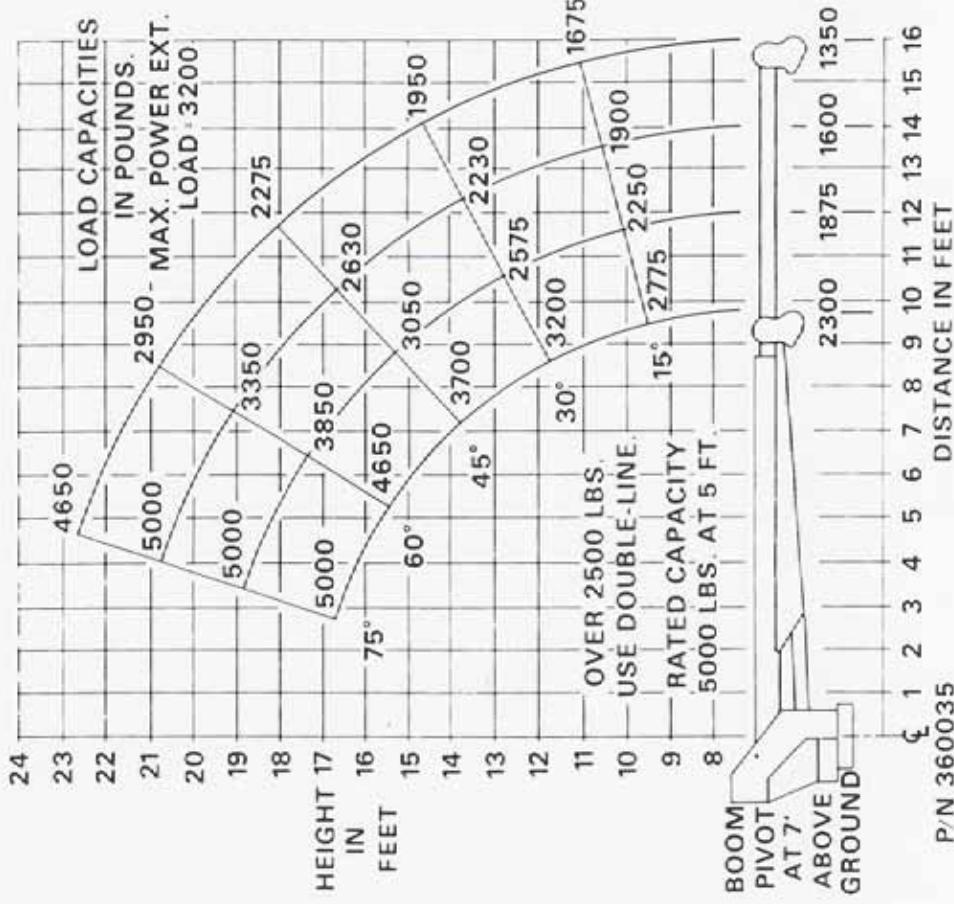
REVISION	DESCRIPTION	DATE	APPROVED
CHG L/R			



3 INSERT ROLL PIN  
UNTIL FLUSH WITH  
OUTSIDE OF TUBE

ITEM #	QTY	DESCRIPTION	REVISION
ITEM #/S	PART NO.	DESCRIPTION	
2	18	A 480287 ROLL PIN	
1	17	A 480286 DROP LEG S/A	
1	16	A 480285 SHOT PIN HANDLE	
2	15	A 480284 COTTER PIN	
2	14	A 480283 SHOT PIN	
2	13	A 480282 COMP SPRING	
1	12	A 480281 INNER LEG S/A	
1	11	A 480280 SPECIAL WASHER	
1	10	A 480279 THRUST BEARING	
1	9	A 480278 BUSHING	
1	8	A 480277 BEVEL GEAR	
1	7	A 480276 COVER	
1	6	A 480275 JAM NUT	
1	5	A 480274 BEVEL PINION GEAR	
2	4	A 480273 SELF TAPPING SCR.	
1	3	A 480272 SPIRAL PIN	
1	2	A 480271 CRANK SHAFT	
1	1	A 480270 OUTER LEG S/A	

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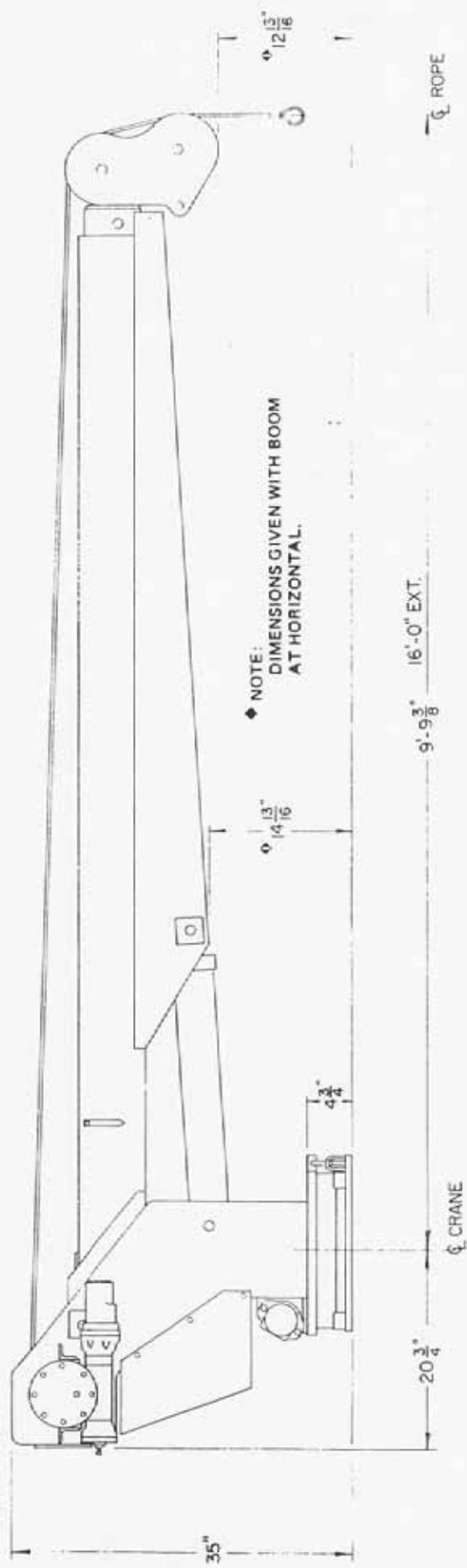
## AUTO CRANE COMPANY

TITLE	LOAD CHART-5005H	DWG. NO.
		AW - 360035

12/86

Fixture No.	Finish No.
-------------	------------

CHG LTR	REVISIONS	DESCRIPTION	DATE APPD
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#### SPECIFICATIONS.

BOOM LENGTH=9'9 3/8" (RETRACTED) TO 16'-0"  
(FULLY EXTENDED).

CRANE WEIGHT= APPX. 890 LBS.  
POWER SOURCE=HYDRAULIC

REMOTE MOUNTED RESERVOIR  
370° ROTATION

MAX. TURNING RADIUS (FROM CENTER OF CRANE)  
@ HOIST ACTUATOR = 23' 3 1/16".

MAX. TURNING RADIUS (FROM CENTER OF CRANE)  
@ ROTATION MOTOR=13' 17 3/32".

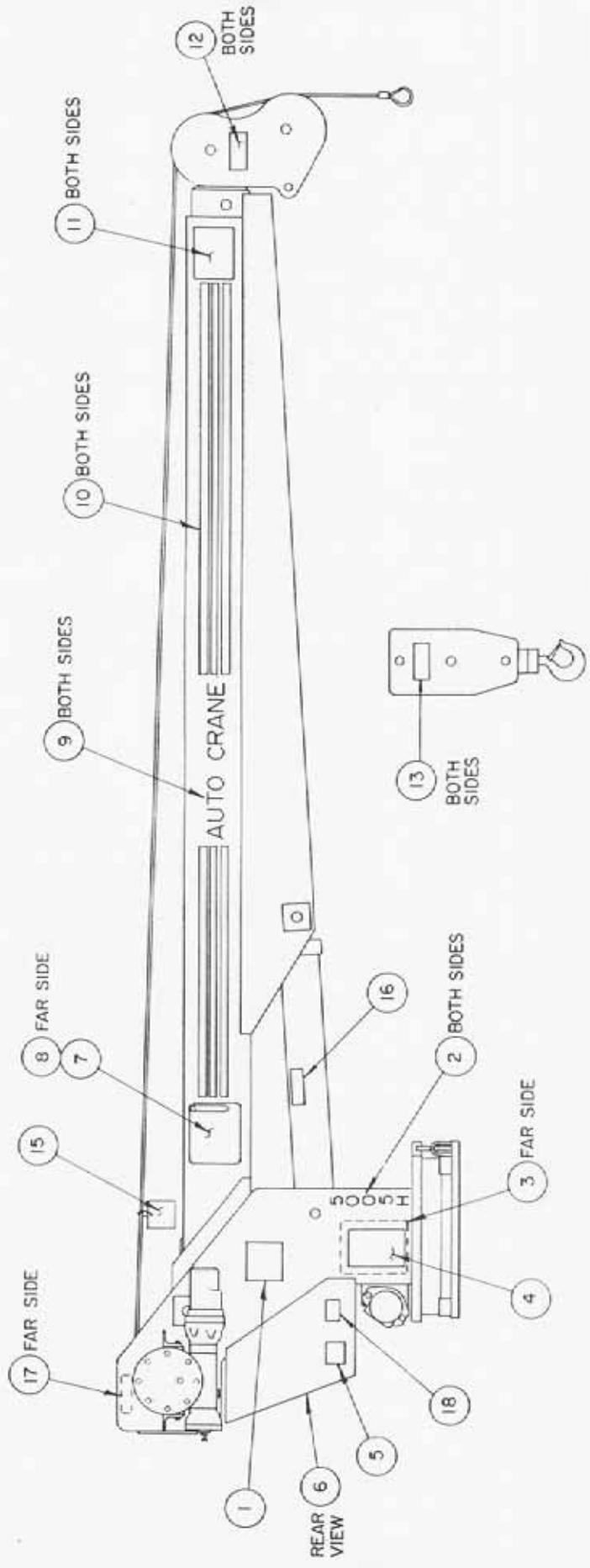
OPERATING PRESSURE 2350 PSI  
OIL FLOW 6 GPM

NOTE:  
ALL DIMENSIONS IN INCHES  
UNLESS OTHERWISE NOTED.

QUANTITY	ITEM DS	PART NO	DESCRIPTION
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES. TO BRANCHES UNLESS OTHERWISE SPECIFIED ANGLES: X = 12° K = 40° F = 14.5° FRACTIONAL = 1/16" KAR = 0.01 ENG. B/P REMOVE ALL BURRS AND SHARP EDGES DO NOT SEAL THRU DRAWING			
1			AUTO CRANE COMPANY
1			5005H DIMENSIONAL W/ SPEC'S
1			ENG. 168
1			WEIGHT
1			REVISION
1			14 1/4" ← → 19 1/2"

FIXTURE NO.	FINISH NO.
-------------	------------

CHG	REVISIONS
LTR	DATE APPRO

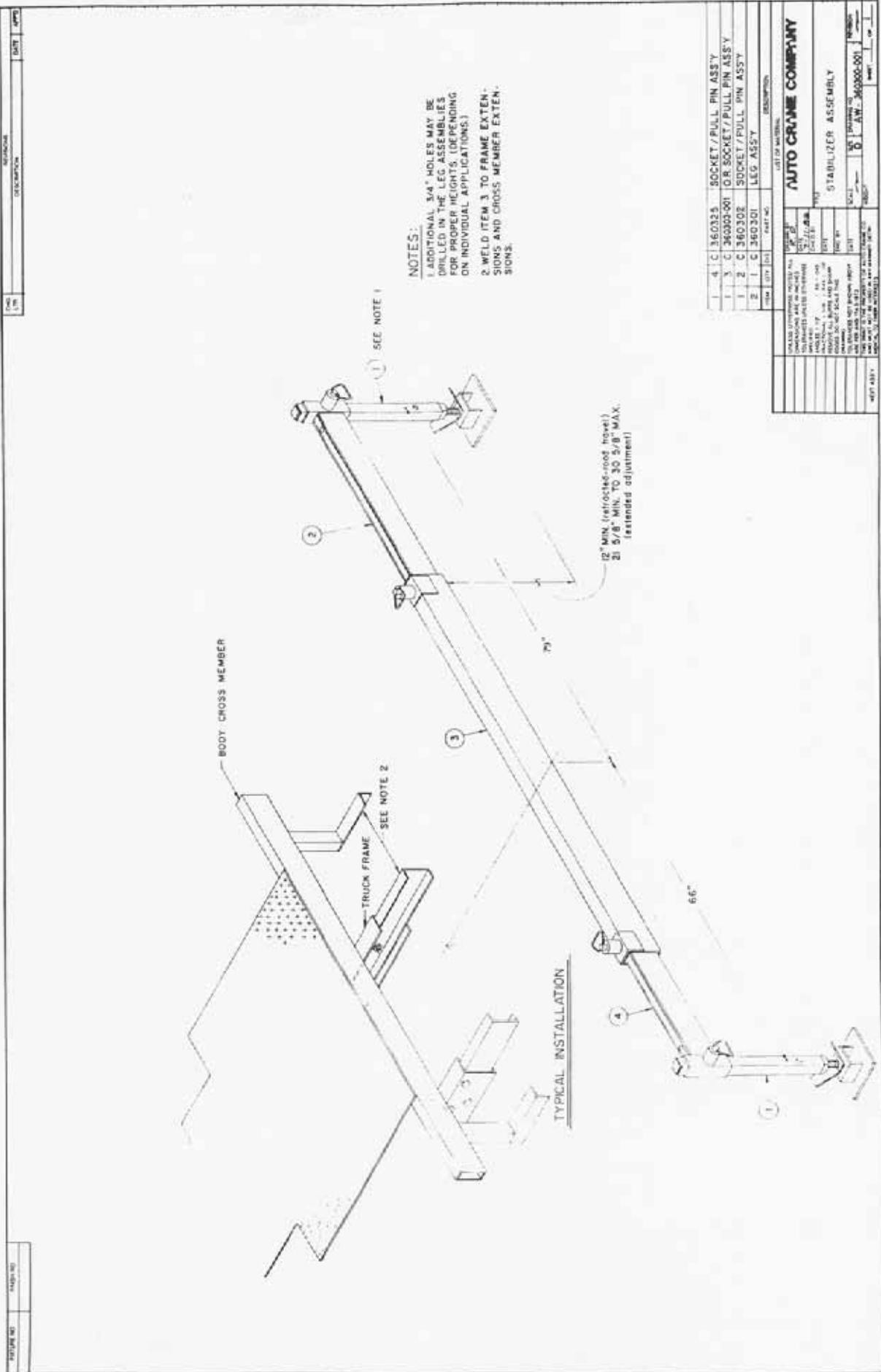


8-2.0.0

ITEM	DIS.	PART NO.	DESCRIPTION
<b>AUTO CRANE COMPANY</b>			
QUANTITY _____			
LINEAR	NOTED ALL	DRAWN BY	LIST OF MATERIAL
LESS OTHERWISE	DIMENSIONS	CHIEF DESIGNER	
DIMENSIONS	ARE IN INCHES	DATE	
TO LENGTHS	UNLESS OTHERWISE	2-25-85	
SPECIFIED	SHOWN	CHIEF	
ANGLES 2. 1/2"	XXXX. 1.44	END BY	
FRACTIONAL 1/16	XXXX. 010	DATE	
REMOVE ALL BURRS AND SHARP		TITLE	
EDGES. DO NOT SCALE THIS		DECAL LAYOUT - 5005H	
DRAWING.			
TOLERANCES NOT SHOWN ARE IN			
ARE PER ANSI Y14.5-1973			
THIS PRINT IS THE PROPERTY OF AUTO CRANE CO			REVISION
AND MUST NOT BE USED IN ANY MANNER DIFER-			
MENTAL TO THEIR INTERESTS			
NEXT ASS'Y			
REF'Y			

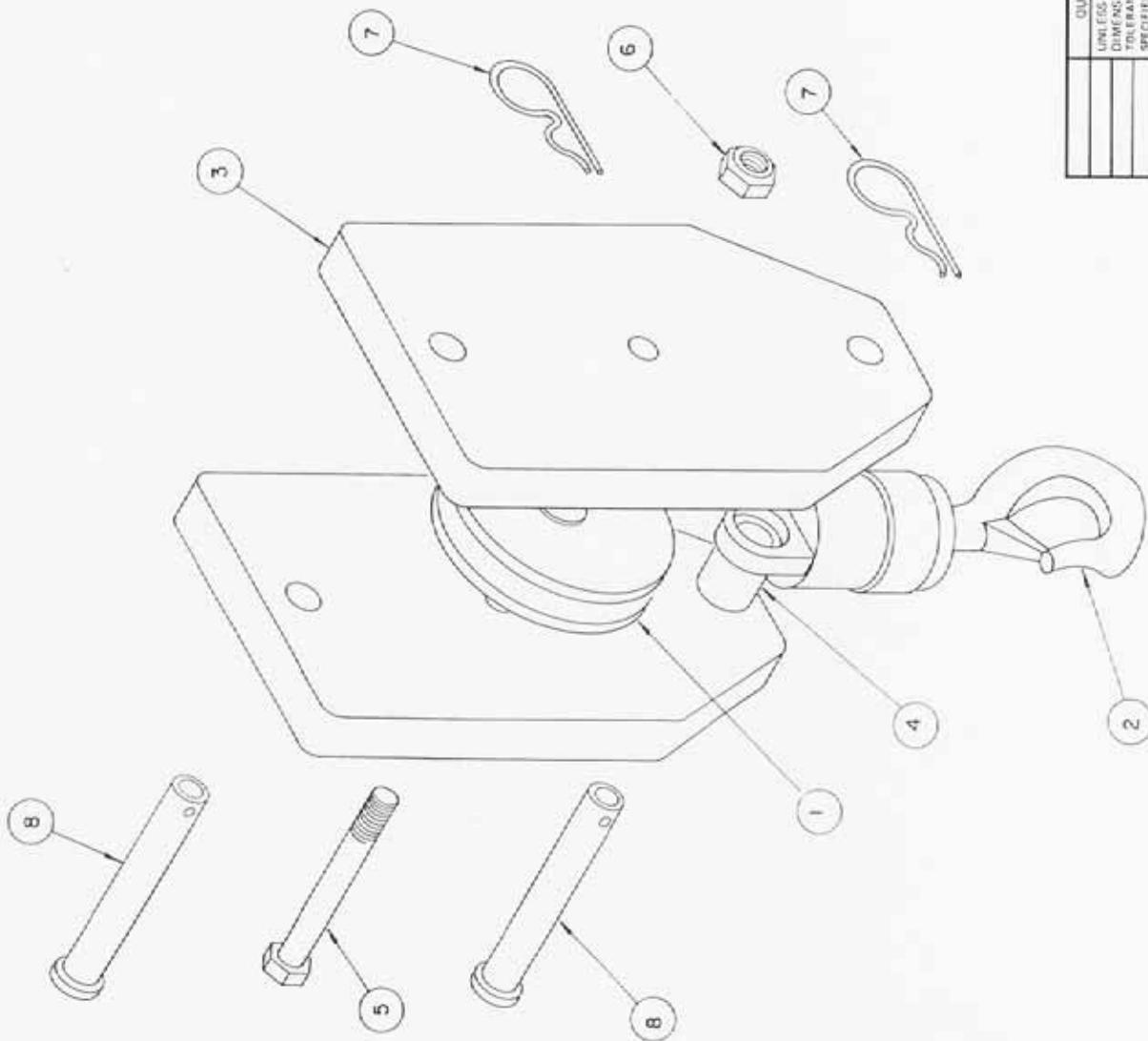
## DECAL LAYOUT 5005H - AW-360552

ITEM	QTY	PART NO	DESCRIPTION
1	1	040579	DECAL - WORK RULES
2	2	360033	DECAL - 3M - 5005H
3	1	360035	LOAD CHART
4	1	040580	DECAL - MUST NOT OPERATE UNLESS...
5	1	040632	DECAL - WARNING CYCLS. INOP.
6	1	360034	DECAL - 3M - LOGO
7	1	360036	DECAL - ANGLE INDICATOR RIGHT
8	1	360037	DECAL - ANGLE INDICATOR LEFT
9	2	040624	DECAL - AUTO CRANE
10	13'	040620	STRIPING
11	2	040529	DECAL - WARNING - BOOM SHOCK
12	2	040517	DECAL - STAY CLEAR OF BOOM
13	2	040630	DECAL - STAY CLEAR OF LOAD
14	1	040633	CAUTION - 6 GPM...
15	1	999943	INST. CHECKLIST
16	1	040587	DECAL - LOAD SENSOR
17	1	330622	DECAL - SERIAL NO.
18	1	330633	DECAL - OPTI-FLOW



Fixture No.	Finish No.

CHG LTR	REVISIONS	DESCRIPTION	DATE APP'D



NOTES  
1. FOR BEARING ONLY.  
ORDER PART NUMBER 240234

ITEM NO.	PART NO.	DESCRIPTION
LIST OF MATERIAL		
8	2	360605 PIN, BLOCK
7	2	360124 HITCH, PIN (HAIR PIN)
6	1	017800 NUT, HEX.-LOC 1/2 - 20
5	1	006801 SCREW, HX.-HD 1/2 - 20 X 4" LG
4	1	240237 SPACER, BUSHING 1" O.D.
3	2	360601 BLOCK SIDE PLATE
2	1	200197 HOOK, SWIVEL
1	1	240236 SHEAVE ASSEMBLY

QUANTITY	DRAWN BY
	DATE 2-24-82
	CHE D IV
	TITLE TRAVELING BLOCK ASSEMBLY
	5005H
	SIZE DRAWN NO C AW = 360602
	WEIGHT
	REVISON 1
	Sheet 1 of 1
	NEXT ASSY



**AUTO CRANE COMPANY**

P. O. BOX 581510 • TULSA, OKLAHOMA 74158

## Limited Warranty

Auto Crane will warranty to consumer for a period of twelve months from date of purchase that each new Auto Crane product it sells will be free under normal use and service, from defects in material and workmanship. Date of purchase will be honored as either date of purchase by distributor or his date of sale of the product as substantiated by Distributor Delivery Report.

Obligation of Auto Crane under this warranty is limited to replacement or repair of parts that appear to manufacturer after review and / or inspection to be defective. This warranty does not obligate Auto Crane to bear the cost of labor or transportation charges in connection with the replacement or repair of defective parts. Responsibility for customer's claims arising from misapplication, abuse, misuse or alteration of equipment or parts lies with the distributor or user and no warranty obligation is assumed in the circumstances by Auto Crane.

Auto Crane will in no event be liable for any consequential damages or contingent liabilities arising out of the failure of any Auto Crane product or parts to operate properly.

Auto Crane makes no warranty in respect to component accessories, same being subject to the warranties of their respective manufacturers.

If field service, at the request of buyer, is rendered and fault is found not to be with Auto Crane's product, the buyer shall pay the time and expense of the field representative. Claims for service labor or other expenses that have been incurred by the buyer without approval or authorization of Auto Crane will not be accepted.

**AUTO CRANE COMPANY IS UNDER NO OBLIGATION TO EXTEND THIS WARRANTY TO ANY CUSTOMER FOR WHICH AN AUTO CRANE WARRANTY REGISTRATION CARD HAS NOT BEEN COMPLETED AND MAILED TO AUTO CRANE COMPANY WITHIN FIFTEEN (15) DAYS AFTER DATE OF PURCHASE.**