

ACCURSHEAR
INSTRUCTION MANUAL
825010

ACCUR SHEAR OPERATORS MANUAL

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TECHNICAL SPECIFICATIONS

1. ACCURSHEAR DESCRIPTION:
 - Model 825010
 - Rated Capacity 1/4" mild steel plate x 10 ft.
 - Total Weight 16,500 pounds

2. SPECIFICATIONS & CAPACITIES:
 - Drive Motor 20 hp, 256T frame, 1800 rpm, 3 ph.
 - Backgauge Drive Motor 1 hp, 143TC frame, 1800 rpm, 3 ph.
 - Main Hydraulic Cylinders 4 inch dia. x 5 inch stroke
 - Hydraulic Reservoir Size 58 gallons (U.S.)
 - Hydraulic System Pressure 3,500 PSI
 - Control Voltage 24 volt AC
 - Backgauge Travel (std) 36 inch
 - Strokes/min (full length) 24
 - Hydraulic Pump Flow 15 gpm

3. HYDRAULIC FLUID:
 - Viscosity - grades 46-68cSt (215-315 SUS)@ 40 C (104 F)
 - running 13-54cSt (70-250 SUS)
 - max. start up 860cSt (4,000 SUS) Max.
 - Suggested Brand Gulf Harmony AW46 or equivalent
Antiwear Hydraulic Oil ISO 46

4. SHEAR BLADES:
 - Size 124 in. X 3 in. X 1 in.
 - Type Modified HCHC
 - Recommended Gap Setting .001 minimum

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2.- ACCURSHEAR INSTALLATION

2.1 PRE DELIVERY INSPECTION:

Inspect machine for shipping damage upon delivery and report to carrier immediately.

2.2 LIFTING:

The machine can be lifted using slings and spreader bar attached to lifting holes in side frame. Use of a forklift truck of sufficient capacity lifting under the bed and securing machine to mast of the lift truck is also acceptable.

2.3 MACHINE PLACEMENT:

The Accurshear should be placed on a level concrete floor suitable to support machine weight. Fastening the machine frame to the floor is optional. Fastening can be accomplished with a suitable masonry anchor, using the machine as a template for hole location. Prior to bolting or setting, the machine should be leveled and shimmed under the floor mounting pads as required.

2.4 MACHINE PREPARATION:

.1 Protective Coat Removal:

All unpainted machine surfaces are protected with a rust inhibitor and should be removed with solvent.

.2 Hydraulic System Oil Fill:

The Accurshear is shipped without oil. The tank should be filled per oil specifications and volume as outlined in the Technical Specifications section.

2.5 ELECTRICAL POWER CONNECTION:

Personnel connecting electrical power should confirm supply voltage corresponds to voltage indicated on machine nameplate. Prior to starting electric motor, check tank fluid level.

The "Jog/Man/Auto" selector switch on front console should be turned to "Jog" position prior to starting the hydraulic pump drive motor.

Jog start the pump motor to establish that motor rotation corresponds to directional arrow on main motor frame.

3.- ACCURSHEAR-GENERAL DESCRIPTION OF OPERATION

3.1 ACCURSHEAR SYSTEM:

The Accurshear is a hydraulically powered plate shear. The hydraulic cylinders generate the shearing force, which is transferred to the shear ram by mechanical linkage and is maintained constant throughout the full cut by the torque tube. Plate being sheared is held securely by holddown cylinders during the cutting action. The hydraulic circuit is designed so that shearing will not commence until the holddowns have clamped securely. The Accurshear is overload safeguarded by the hydraulic relief valve which will stop the shearing action when shearing of steel plate is attempted which is over strength or thickness for the rated capacity of the machine.

3.2 ACCURSHEAR POWERED BACKGAUGE:

The backgauge consists of a machined stop bar, the full length of the cut, which is suspended on ways behind the upper shear blade.

The backgauge is powered electrically and the position from the fixed blade is indicated by a range of the standard backstop is from 0.25 to 36.00 inches. The forward and reverse travel distance is protected by overtravel limits.

Positioning the backstop beyond 36.00 inches from the fixed blade will put the backstop bar in the "flipped up" position to allow shearing plates longer than 36 inches.

3.3 VARIABLE QUICK ADJUST BLADE CLEARANCE:

.1 Manual

The variable blade clearance permits the operator to adjust the blade gap quickly to suit the thickness or type of steel being sheared by simply moving a lever. (Refer to Fig. 1).

.2 Powered (optional):

The powered quick blade clearance adjust is similar to the "manual" model but is powered by an electric drive.

4.- OPERATING CONTROLS

4.1 DESCRIPTION OF CONTROLS - ELECTRICAL: (Refer to Fig. 2)

- .1 Main Electrical Power Disconnect at Electrical Cabinet:
Isolates power to machine at electrical cabinet.
- .2 Start button on front console:
Hydraulic pump drive motor start.
- .3 Stop button on front console:
Hydraulic Drive motor stop.
- .4 Footswitch:
Energizes shearing cycle when depressed.
- .5 Jog - Auto! - Manual selector switch on front console:
 - .1) "Jog" mode:
 - holddowns clamp and ram will lower when footswitch is depressed
 - holddowns release and ram will stop when footswitch released or lower limit switch contacted. Ram will not raise.
 - .2) "Auto" mode:
 - holddowns clamp and ram will lower when footswitch is depressed.
 - holddowns release and ram returns to "up" position when down limit is contacted or footswitch is released.
 - the shear will continue to cycle between up and down limit switches if footswitch is maintained depressed.
 - .3) "Manual" mode:
 - holddowns clamp and ram will lower when footswitch is depressed.
 - holddowns release and ram stops at "down" limit switch setting.
 - ram will return to "up" position whenever the footswitch is released at any time during the down stroke.

4.- OPERATING CONTROLS

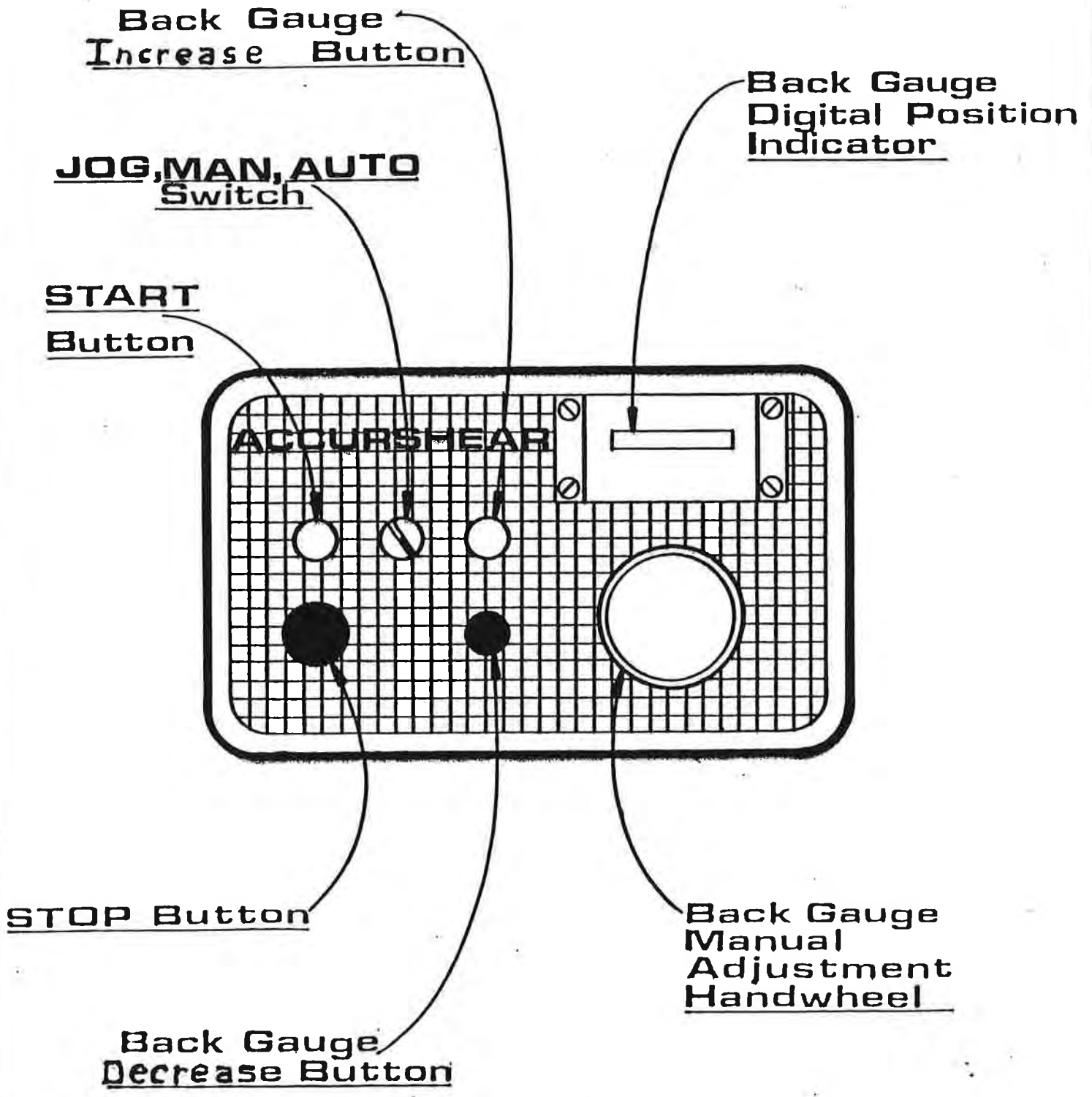
4.1 DESCRIPTION OF CONTROLS - ELECTRICAL (continued):

.6 Backgauge "decrease" button on front console:

Backgauge stop bar moves toward fixed shear blade when button is maintained depressed.
Backgauge stop bar will stop when front limit switch contacted or button released.

.7 Backgauge "increase" button on front console:

Backgauge stop bar moves away from fixed blade when button is maintained depressed.
The backgauge stop bar stops when button is released or rear limit is contacted when stop bar is in "flipped up" position,



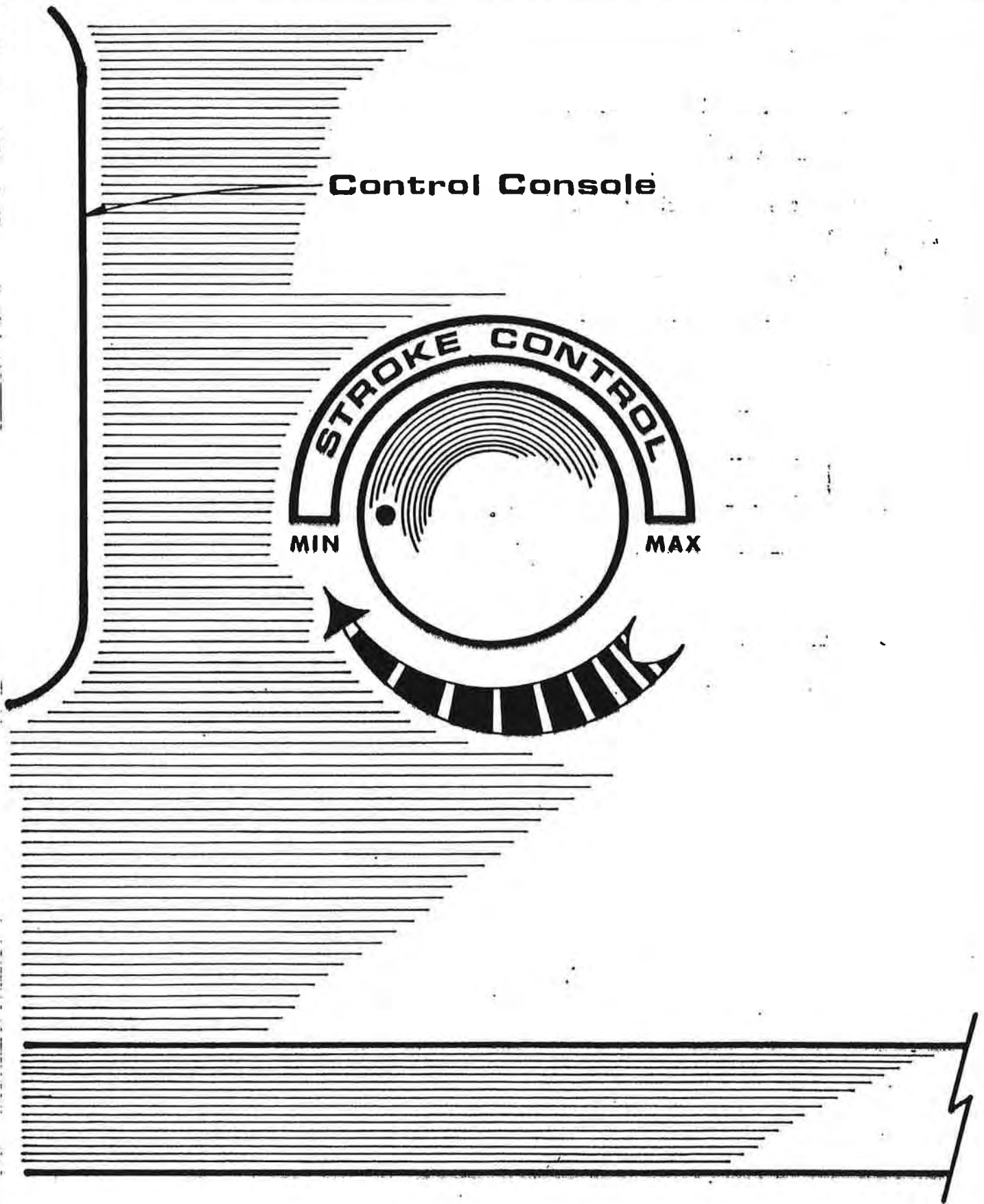
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4.- OPERATING CONTROLS

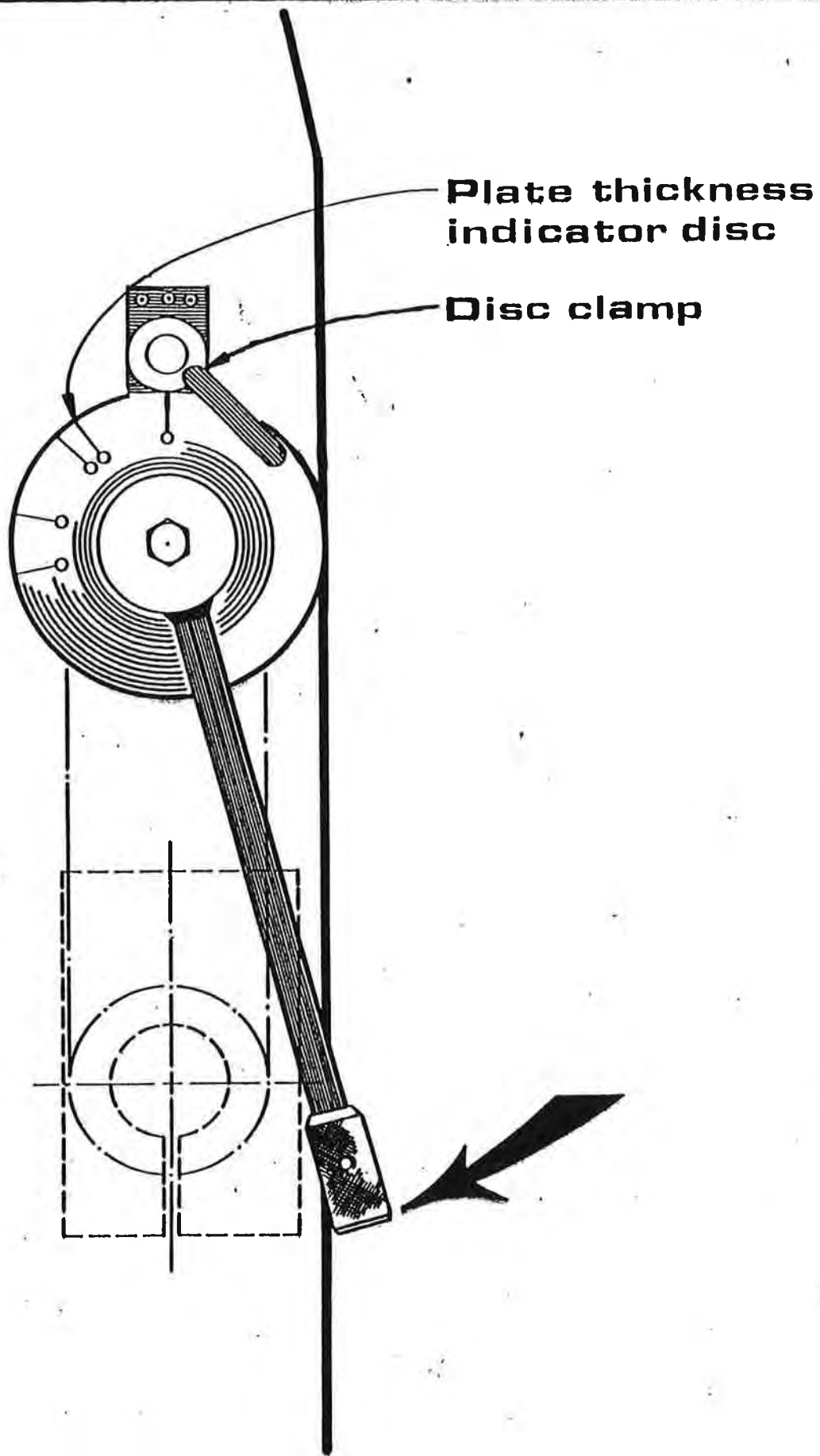
4.2 DESCRIPTION OF CONTROLS - MECHANICAL:

(Refer to Fig.2)

- .1 Handwheel knob on front console:
Manual "fine" setting for backstop bar position.
- .2 Digital indicator on front console:
Indicated distance to 1/100" (.01 in.) of stop bar position from fixed knife.
- .3 Ram stroke control:
 - .1) Type 1: The stroke control is located on the side of the electrical cabinet. The ram cutting stroke is determined by adjusting mechanical cams on a slide rod. (Refer to Fig. 3)
 - .2) Type 2: The stroke control is located adjacent to the front console. The ram cutting stroke is determined by adjusting the hand knob between minimum and maximum position. (Refer to Fig. 4).
- .4 Manual Blade Clearance Adjustment:
Loosen the clamp rotate the lever to desired gauge clearance. Lock the Disc clamp to maintain lever position.



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5.- ACCUR SHEAR START-UP PROCEDURE

5.1 OPERATOR TRAINING:

The equipment user shall be responsible for training operators to be familiar with all machine controls and safe operation of this equipment.

5.2 SAFETY GUARDS AND WARNING DECALS:

The Accurshear is equipped with safety guards and warning decals to prevent injury to operators. These safety features must not be removed.

5.3 SHEAR CYCLE - START-UP PROCEDURE:

- .1 Check that selector switch is in the "JOG" position
- .2 Start main hydraulic pump motor.
- .3 Check that no foreign objects interfere with shear ram motion.
- .4 Jog the ram upward by momentarily turning the selector switch to "MAN" and back to "JOG". Either visually or with a feeler gauge, check the blades to be certain they do not rub at the point where the blades cross.
The blades were adjusted at the factory, but may have moved during shipment. Insure no damage will occur to the blades during the first down stroke.
- .5 Refer to blade gap clearance adjustment, Section 6, and check the clearance along the full length.
- .6 Select steel plate within rated capacity and commence shearing. For most shearing place the selector switch on the "MAN" position.
- .7 THE SHEAR RAM SHOULD BE LOWERED TO THE DOWN POSITION AT THE END OF THE WORK DAY OR SHIFT!

6.- SHEAR BLADE GAP CLEARANCE ADJUSTMENT

6.1 GENERAL DESCRIPTION:

The shear blade clearance between the fixed blade which is fastened to the machine bed and movable blade, which is fastened to the ram, is achieved by adjusting the movable blade relative to the fixed blade with the adjustment screws and using a feeler gauge to set the clearance.

6.2 BLADE ADJUSTMENT PROCEDURE - STANDARD SHEARS:

- .1 Start hydraulic pump motor and start with ram in the "up" position.
- .2 Turn the selector switch at the shear console to "jog".
- .3 Jog the footswitch until the blades start to cross at the squaring arm end. With a feeler gauge check the gap clearance. (Blade surfaces must be clean!) Continue jogging upper blade past fixed blade at uniform intervals for full length of cut, checking blade gap.
- .4 If gap other than measured is required, loosen clamping bolt "a" approximately 1/4 turn and adjust hex nuts "b" and "c" with appropriate spanner type wrenches. Refer to Fig. 5. Upon completion tighten all fasteners "a", "b" and "c" which were loosened and recheck blade clearance again.
- .5 Recommended blade clearance is listed in Technical Specifications chapter.

6.3 NOTE:

Blade gap clearance, blade bolt torque and fasteners "a", "b" and "c" should be checked several times within the first two weeks after start-up, as the blades and blade holder assembly may loosen during initial start-up period.

Also, a regular check interval should be established for maintaining blade clearance per specification in order to realize maximum blade life and shearing performance.

6.- SHEAR BLADE GAP CLEARANCE ADJUSTMENT

6.4 SHEAR BLADE GAP ADJUSTMENT WITH MANUAL OR POWER OPERATED QUICK BLADE GAP CLEARANCE:

Accurshears equipped with this option are set as follows:

- .1 The plate thickness indicator should be set at 22ga plate thickness setting. Refer to Fig.1.
- .2 The blade gap is then checked with a feeler gauge as outlined in section 6.2.
- .3 Resetting initial blade gap is accomplished as outlined in section 6.2.
- .4 Prior to shearing plate check that the blade clearance gap increases as the plate cutting thickness indicator is rotated to indicate thicker plate to be cut.

.5 CAUTION:

Blade damage will result if the blade holder bar is adjusted for blade clearance with the Blade Clearance Adjusting Lever set at any other setting than 22, ga plate thickness setting.

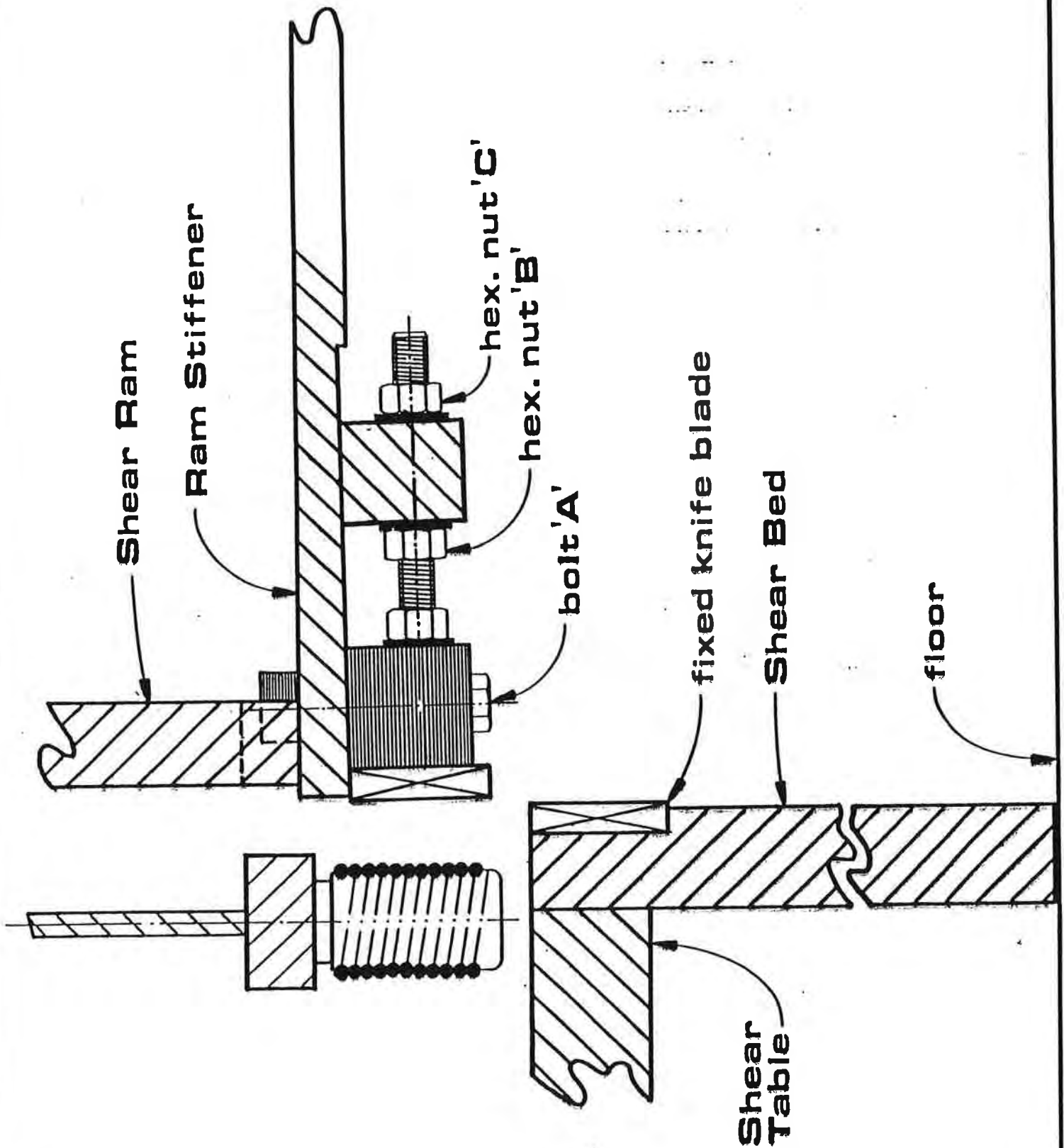
Blade clearance should be checked at all other settings of Blade Clearance Adjusting Lever positions to verify that actual blade clearance is increasing, prior to engaging the shear under auto cycle.

NOTE: Both link and eccentric bearings must be kept at zero clearance. If necessary tighten the bolts before adjusting the blade clearance.

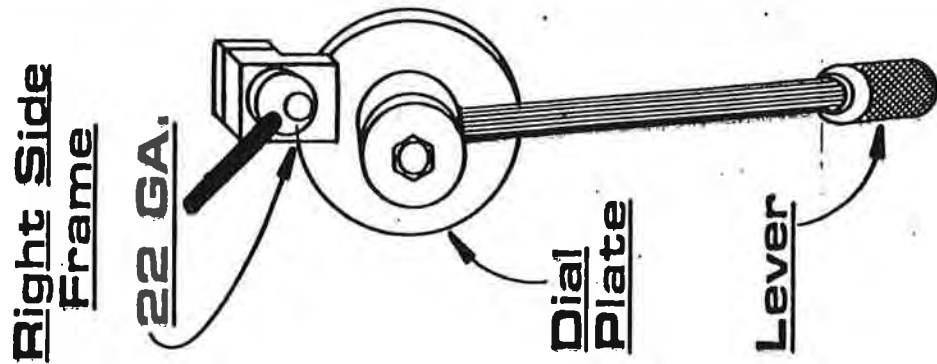
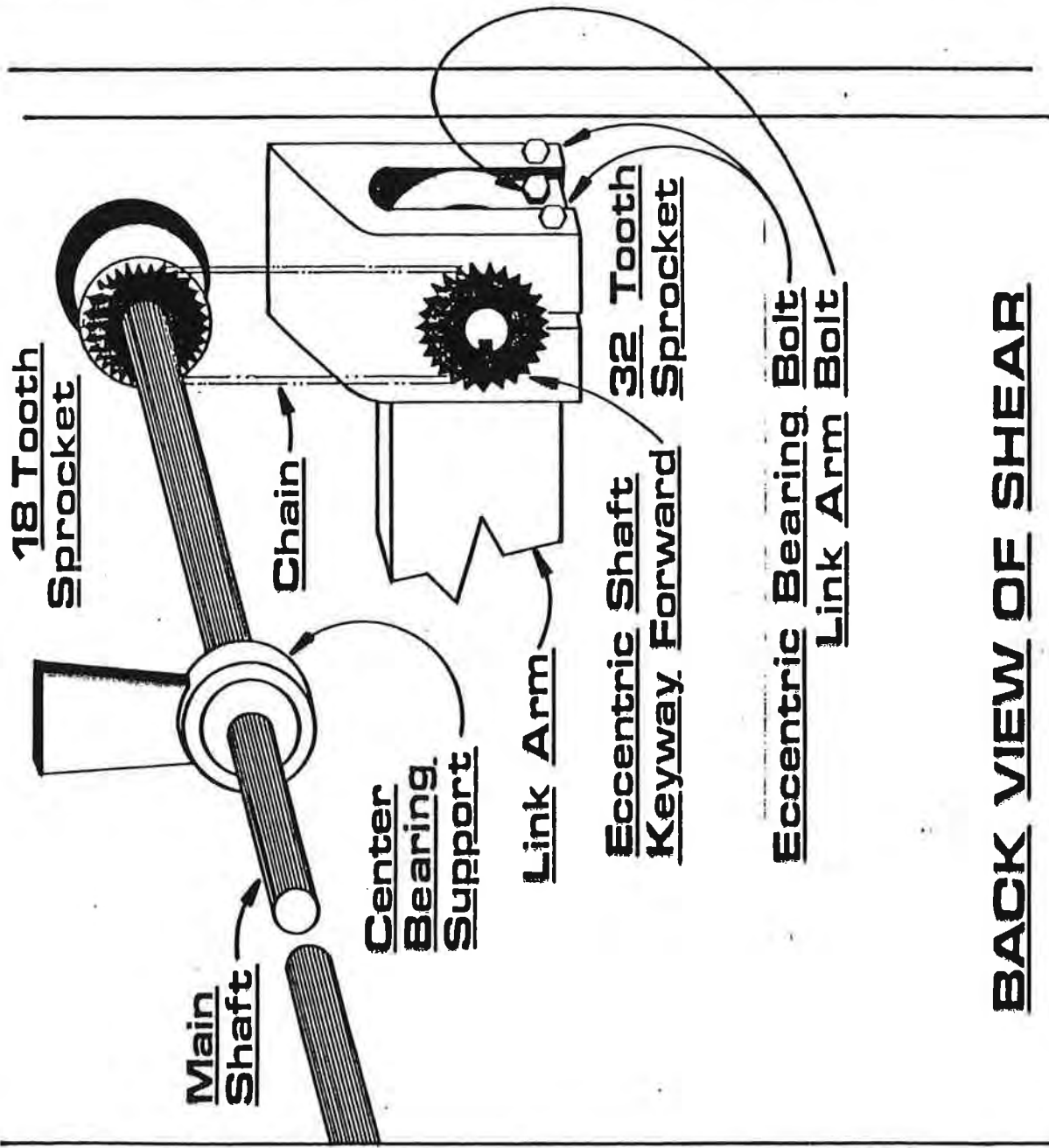
.6 CALIBRATING BLADE CLEARANCE ADJUSTER

If the adjustable blade clearance chains are removed for any reason, the eccentric shafts must be calibrated to the adjusting lever dial.

Start by rotating both eccentric shafts so the keyways for the sprockets are forward. Then rotate the lever dial to the 22 ga. position. Install the chains.



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BACK VIEW OF SHEAR

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6.- SHEAR BLADE GAP CLEARANCE ADJUSTMENT

6.5 SHEAR BLADE ROTATION:

Accurshear Plate Shears use four edge rectangular section blades which permit four cutting edges;

Blade rotation procedure is as follows:

.1 Lower (fixed) blade removal:

- .1 Loosen and remove all but one bolt in the center of the blade.
- .2 Support the blade against the knife seat and remove remaining bolt.
- .3 Slide the blade out of the side frame or lift it out the back. It is recommended that two people perform this operation to prevent dropping and damaging the blade.

.2 Upper (movable) blade removal:

- .1 Loosen all blade bolts and remove all but 2 bolts at approximately 3 feet from each end. The ram may require jogging downward to remove bolts at the high end.
- .2 Provide two support bars clamped to the shear table to support the blade when the two remaining bolts are removed.
- .3 Lower the blade into the fixed knife seat, and slide it out through the gap or lift it out the back.

.3 Upper blade installation:

- .1 Clean the blade and blade holder with a cleaning solvent.
- .2 Set upper blade into lower blade seat initially.
- .3 Tip blade up into supports used previously.
- .4 Lift blade up into position and install two blade bolts to support blade.

6.- SHEAR BLADE GAP CLEARANCE ADJUSTMENT

6.5 SHEAR BLADE ROTATION (Continued):

- .5 Install remaining bolts and tighten until nuts start to pull tight. Ensure that plow bolt tang engages slot of shear blade.
- .6 Using a pinch type bar and a resilient material against blade, hold blade tight against the ram and blade holder bar as the bolts are tightened. Blade bolt nuts should be torqued to 100 ft.-lbs, maximum.

.4 Lower blade installation:

- .1 Clean the blade and blade seat with cleaning solvent.
- .2 Slide blade into lower blade seat.
- .3 Install one bolt to support blade.
- .4 Install remaining bolts. Plow bolts must engage blade slot.
- .5 Blade bolt nuts should be torqued to 100 ft. -lbs, maximum.

NOTE:

Prior to cycling the shear, the blade gap clearance must be checked and adjusted.

7.- SYSTEMS ADJUSTMENTS

7.1 BACKGAUGE:

.1 SCREW BEARINGS

The acme screws turn on tapered roller bearings. These bearings must be kept just tight enough to eliminate any end play. Tighten via the double adjusting nuts at the rear end of the screws. Grease the bearings monthly.

.2 WAYS

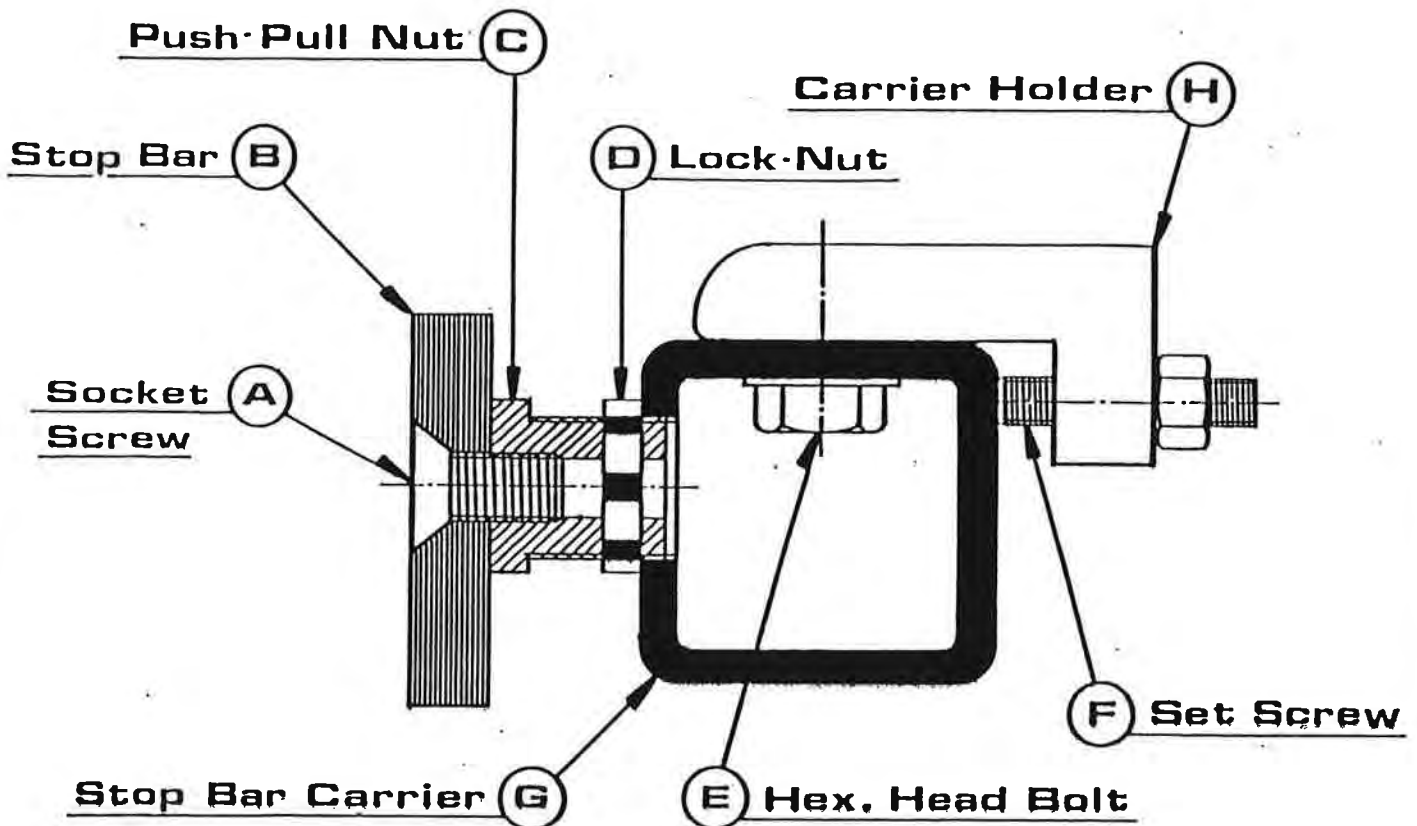
The back gauge slides on UHMW plastic. These should be kept just snug using the adjusting screws on the under side of the slides. Occasional light greasing will prolong the life of the plastic.

.3 OPERATING TECHNIQUES FOR CONSISTENT ACCURACY

The operator must consistently position the back gauge by moving it from a larger setting to the desired dimension. This will eliminate the effect of the backlash that occurs through normal wear.

All drive train components must be kept tight to prevent any slippage of the digital counter drive. This includes: sprockets, u-joints, set screws, and adjusting bolts.

7.1.4 STOP BAR FIELD STRAIGHTENING PROCEDURE:



The backgauge stop bar is modified to be field adjustable for straightness along the full length. The following procedure is suggested for service Personnel performing the adjustments.

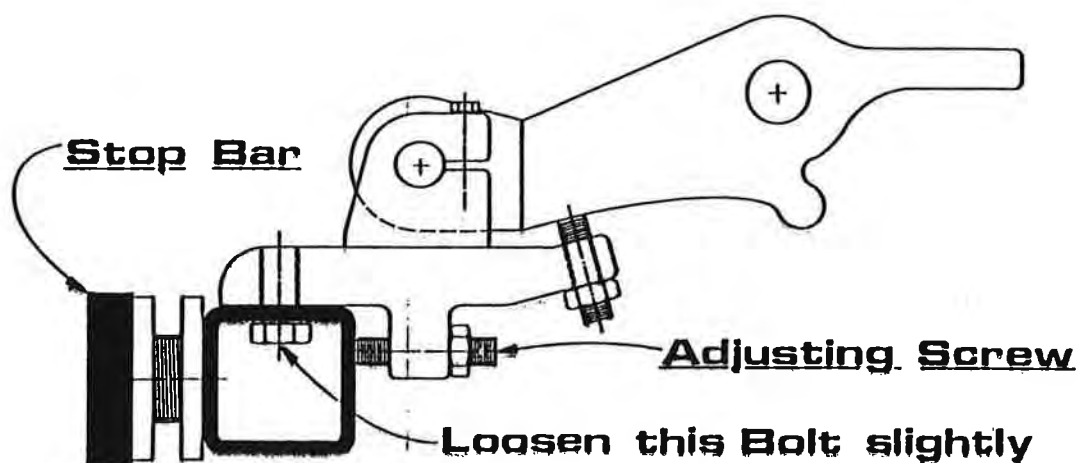
Socket screw "A" should be loosened, locknut "D" released, push/pull nut "C" turned with the hook wrench supplied to move stop bar "B" to correct for straightness relative to a reference wire pulled the length of the bar. Retorque Locknut "D" and socket screw "A" upon completion.

Adjusting the backstop bar parallel to the lower knife is accomplished by releasing fastener "E" and adjusting set screw "F" to permit movement of the back stop bar relative to the fixed knife at the suspension points.

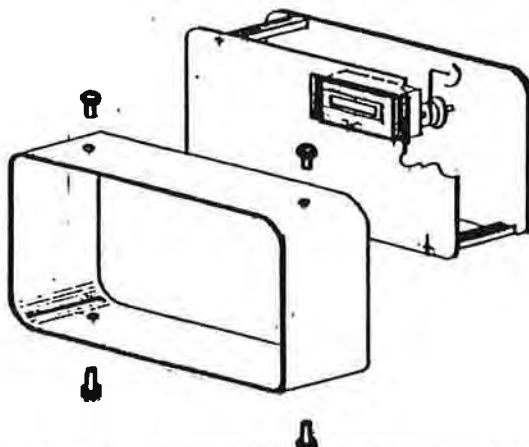
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7.1.5 CALIBRATION

To check that the stop bar is parallel to the blade, set the stop bar about 2" from the lower blade. Cut a test piece of light gauge (20 ga-14 ga) material near each end of the shear and compare. If they are not the same adjust the stop bar on one end as necessary.



Once the stop bar is parallel to the lower blade, measure the cut pieces accurately. Compare this measurement with the digital position readout on the front console. If the counter needs calibrating remove the yellow wrap around cover from the front console. Loosen the set screw in the sprocket on the back of the counter. Turn the counter to the correct setting and retighten set screw. Replace the cover.



The back gauge bar position is monitored by a rotary transducer coupled to the backgauge leadscrew. The electronic digital display at the front console interprets the backgauge bar position from the rotary transducer. The "personality" of the electronic display is factory programmed as follows:

Enter code 41	(1)	(E)
Enter code 43	(5)	(E)
Enter code 44	(1)	(E)
Enter code 45	(1)	(E)
Enter code 46	(4)	(E)
Enter code 51	(2)	(E)
Enter code 52	(3)	(E)
Enter code 61	(4)	(E)
Enter code 66	(-3)	(E)

Should the electronic display lose the factory programmed personality, or a change in personality is required, a keyed program switch on the front console must be turned to "enable". The program switch must be turned to "disable" upon completion of programming to prevent unauthorized tampering with the backgauge position display.

The digital display will indicate backgauge position in inches or centimeters. Selection of inch display or centimeter display requires programming data enter at the display keyboard panel. It is not necessary to turn the key switch to "enable".

Inch mode:

Programming to display inches:

Enter code S/F (1.000) (E)

The display will indicate backgauge position to 3 decimal accuracy.

Calibration of the backgauge in inch mode to the front display involves advancing the backgauge bar to within 2.000" of lower blade. Shear a sample piece and measure the drop piece.

Program the display as follows: First turn key switch to "enable"
 Enter code P (1)
 Enter the length of the sheared piece and push "E", then reset "R". This will calibrate backstop bar to the display.
 Turn key switch back to "disable".

Recalibration of the backgauge will depend on frequency of backgauge usage. Frequent recalibration will help maintain cut length accuracy.

Note 1: Prior calibration of backgauge bar in the inch mode requires that programming is executed to display in "inch mode" first.

Metric mode:

Programming to display centimeters:

Enter code S/F (2.54) (E)

The display will indicate backgauge position in centimeters to 2 decimal accuracy.

If the backgauge has already been calibrated in inch mode, the programming to metric will maintain the original calibration in inches and convert the display to read backgauge bar position in centimeters directly!

If calibration is required in the metric mode, move the back gauge stop bar to within 5 cm of the lower fixed knife. Shear a sample piece and measure the drop piece.

Program the display as follows: First turn key switch to "enable"

Enter code P (1)

Enter length of the sheared drop piece

and push "E", then reset "R". This will calibrate the backgauge stop bar to the display in centimeters.

Turn key switch back to "disable".

Note 2: Calibration in the metric mode requires that all programming is executed to the display in metric mode first.

NOTE: The electronic display remembers the last position it showed when the power is turned off. If the backgauge is moved while the power is off the display will no longer be accurately calibrated.

7.- SYSTEMS ADJUSTMENTS

7.2.1 HYDRAULIC RAM COUNTERBALANCE VALVE

The Accurpress hydraulic circuit incorporates a hydraulic counter balance valve to prevent the shear ram lowering due to the weight of the ram.

During the normal shearing cycle correct adjustment will permit the holddowns to fully clamp the plate before the ram begins the cut.

1 ADJUSTMENT PROCEDURE

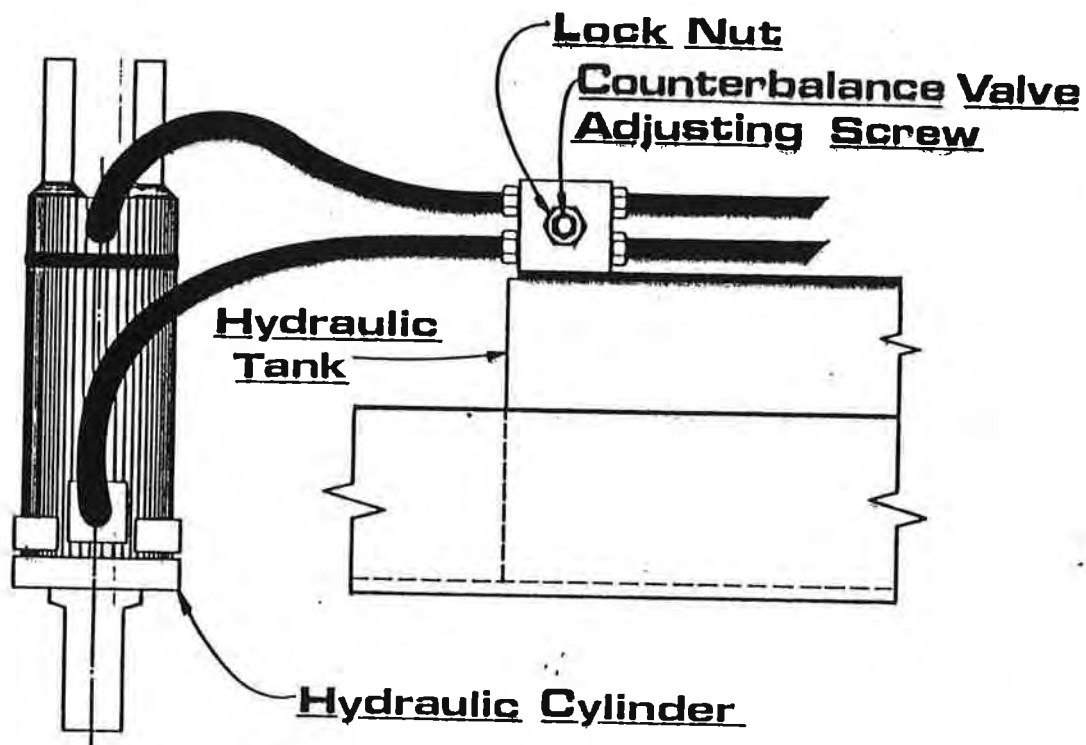
Turn adjusting screw "in" (clockwise) to release counterbalance pressure.

Turn adjusting screw "out" (counter clockwise) to increase counterbalance pressure,

Excessive counterbalance pressure can cause the hydraulic system to heat up during continuous cycling.

WARNING

DO NOT turn the adjusting screw to full "out", This will cause excessive counterbalance pressure resulting hydraulic cylinder failure,

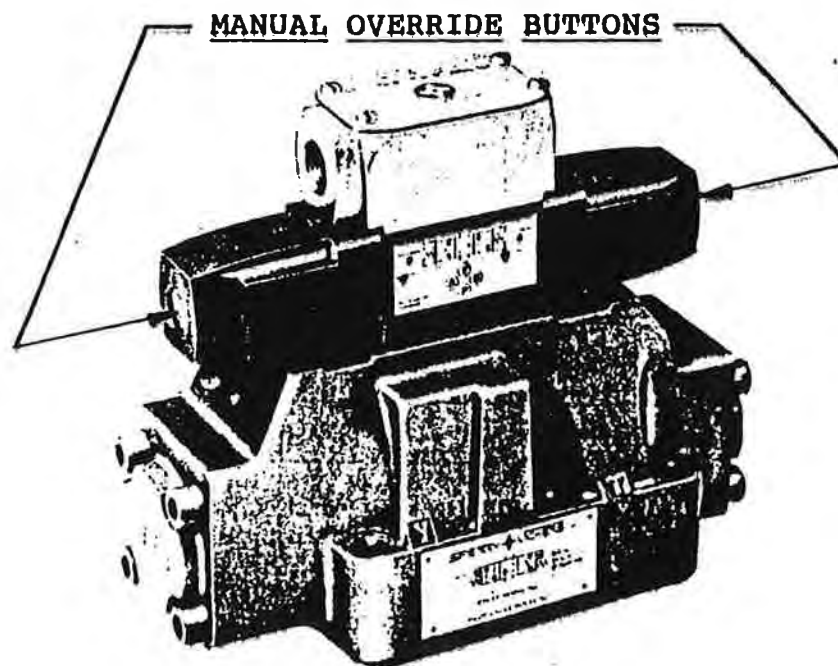


7.- SYSTEM ADJUSTMENT.

7.2.2 MAIN DIRECTIONAL VALVE:

The main valve (right valve on manifold) controls the up and down movement of the ram. This valve is normally in the centre position which holds the ram from moving. When the foot switch is in the "up" position the front solenoid is energized shifting the spool to raise the ram. When the "down" position is selected the hold down cylinders first clamp the plate. The sequence valve senses the hold down pressure and opens oil to flow to the main cylinders lowering the ram,

If the ram fails to move up or down the valve operation can be checked by manually overriding the appropriate solenoid while operating the foot switch. Use a small screw driver or similar tool to push in the small pin in the center of the end of the solenoid. If the ram can be made to move by pushing the correct pin you know the valve and hydraulics are functioning properly. Then procede to check the electrics,



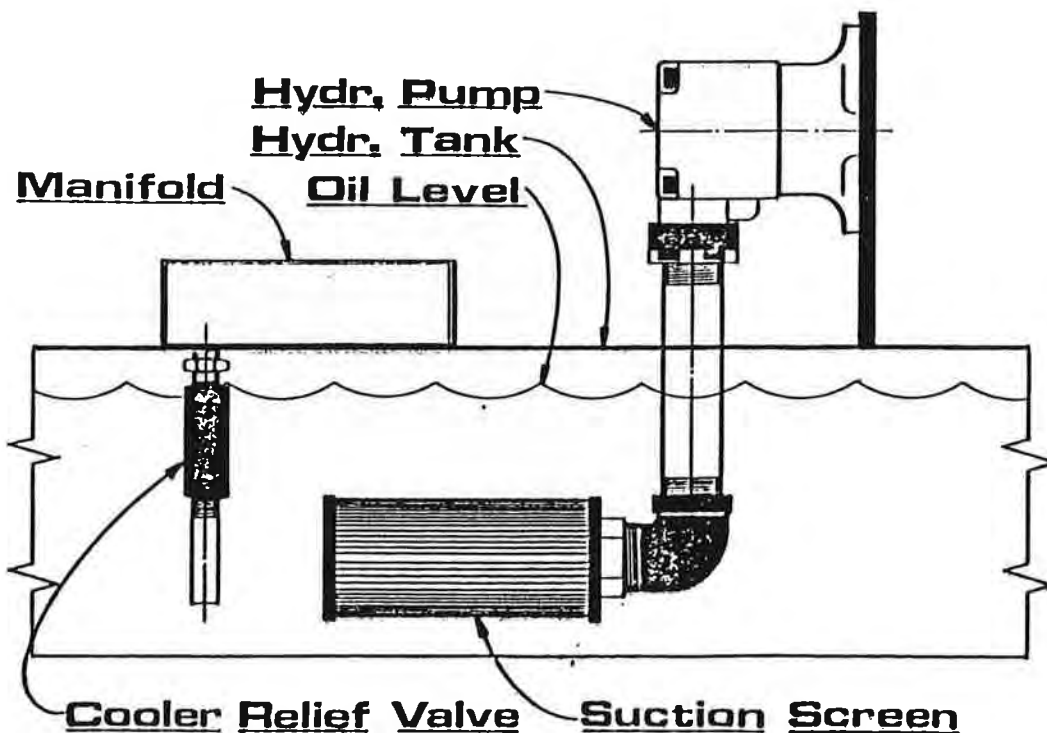
7.- SYSTEM ADJUSTMENT

7.2.3 PUMP

The hydraulic pump is a fixed displacement vane type pump that requires little maintenance. The suction (inlet) line is fitted with a screen that is submerged in the oil tank. This screen rarely requires servicing.

Pump performance can be tested by checking the relief valve. (See relief valve) If normal relief pressure can be obtained the pump is in good condition.

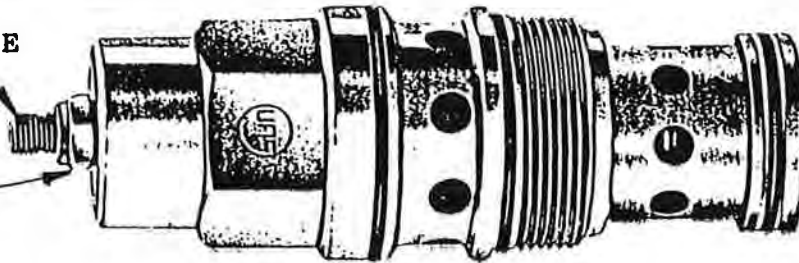
If the pump seem abnormally noisy, first check the oil level. It should be within 2" of the top of the tank, Next check the coupling between the electric motor and the pump. A worn or misaligned coupling can transmit extra noise. Lastly the suction screen inside the tank may be partially plugged and restricting the flow of oil to the pump. This screen normally collects little dirt if care is taken when filling the tank. To clean, Drain the oil from the tank. Loosen and lift the manifold and unscrew the suction screen. Wash in solvent and replace.



7.- HYDRAULIC SYSTEM

7.2.4 RELIEF VALVE ADJUSTING SCREW

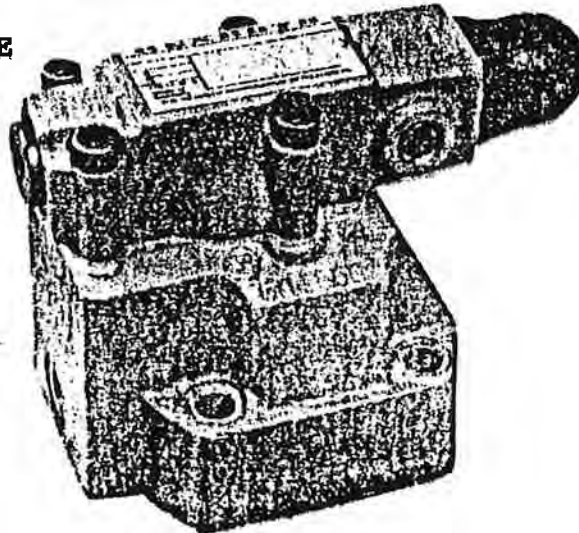
LOCKNUT



The relief valve controls the maximum pressure the system will develop. It protects against damage should an overload occur. The valve is normally factory set, however should adjustment be necessary, remove the cap nut to expose the adjusting screw. Turn the screw in to increase pressure, or out to decrease the pressure,

To check relief pressure, place selector switch in "JOG" position and lower the ram to the bottom position. Simultaneously manually override both the hold down valve and the rear solenoid of the main valve. Observe the relief valve pressure setting on the pressure gauge. The correct setting is on the nameplate on the side of the shear,

7.2.5 SEQUENCE VALVE

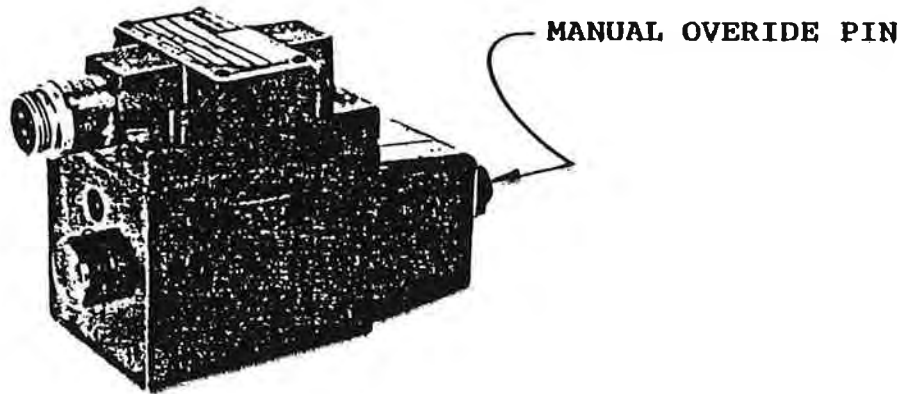


ADJUSTING SCREW

The sequence valve sets the initial hold down pressure. When it senses the presence of the proper hold down pressure, it opens and allows oil to flow to the main cylinders, allowing the ram to lower. To adjust the initial hold down pressure, remove the plastic cap to expose the adjusting screw. Turn the screw "in" clockwise to increase pressure, or "out" counter-clockwise to reduce pressure.

7.- HYDRAULIC SYSTEM

7.2.6 HOLD DOWN VALVE



The holddown valve is a single solenoid, spring return valve. It is normally held by the spring in an offset position. The solenoid is energized whenever the foot switch is in the "down" position and the ram not at the bottom of its stroke. Oil then flows to the holddown cylinders clamping the plate for shearing. An inline type check valve locks the oil into these cylinders until the ram has stopped its downward movement. At the bottom of the ram stroke the hold down cylinders are immediately released.

This valve has a manual override pin in the end of the solenoid for testing and troubleshooting.

7.2.7 ADJUSTING THE HYDRAULIC SYSTEM

- A. First check the relief valve setting, Adjust if necessary.
- B. Follow this order when setting the valves;
 1. Turn counter balance adjusting screw all the way in.
 2. Turn needle valve adjusting screw out several times.
 3. Adjust sequence valve to about 800-1000 psi. This will be the momentary pressure seen on the gauge at the beginning of each cycle.
 4. Turn needle valve in until the initial pressure is 1200 psi. This setting is quite sensitive near the correct setting.
 5. Turn the counter balance valve out just enough to prevent the ram from freefalling. You should see 200-300 psi on the pressure gauge while the ram is moving down.

8.- MAINTENANCE

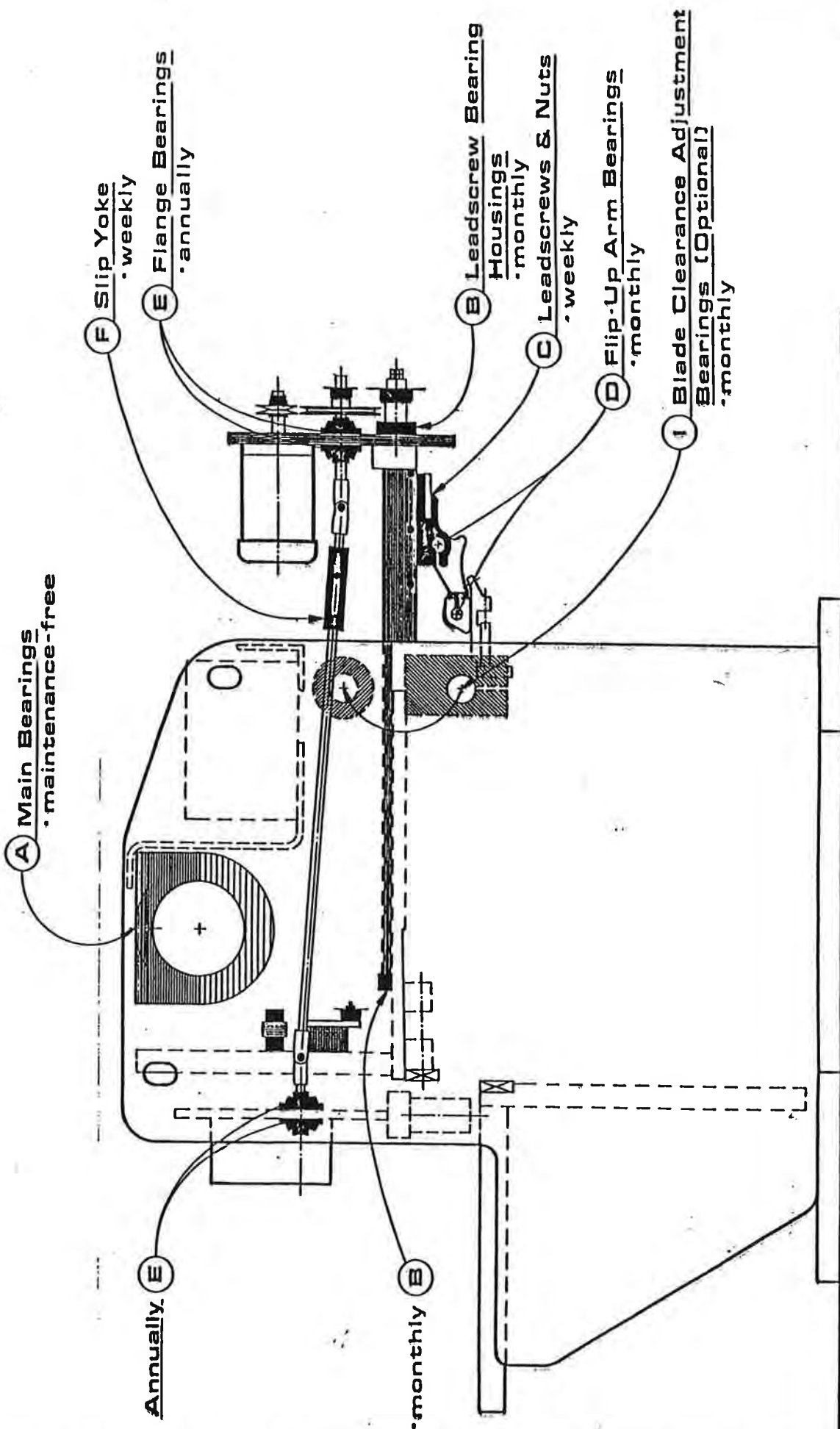
8.1 HYDRAULIC SYSTEM:

.1 HYDRAULIC SYSTEM:

Periodically check the hydraulic reservoir fluid level. Fluid level should be maintained approximately 2 inches from the top of the tank. The hydraulic fluid change interval is dependant on equipment usage and ambient conditions. This interval can be based on an oil analysis or suitable time interval according to users general practise,

.2 MECHANICAL DRIVE AND LINKAGE LUBRICATION:

A suitable industrial grease with an extreme pressure (E.P.) rating is recommended, Gulf Bentone RM2 is a suggested grease lubricant. Some of the bearings are maintenance free and require no lubrication. The following illustration details the lubrication schedule;



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9.- TROUBLE SHOOTING GUIDE

9.1 Shear will not cut rated capacity:

- .a Check material hardness. Try cutting a difference plate.
- .b Check relief valve setting, If necessary, adjust to setting on nameplate.
- .c Check the blade clearance. A setting closer than normal raises the cutting tonnage.
- .d Check the blade edges. Turn the blades before they are badly worn as it makes resharpener much easier.
- .e Observe the pressure on the gauge while attempting to make a cut. If it's significantly less than the relief setting the oil is bypassing internally.

To check the main cylinder seals, disconnect the hose from the rod end of one of the main cylinders. Place the selector switch in the jog position and attempt the cut using a pail to catch the oil. If more than a trickle flows from either open connection, replace the seals in the cylinder from which the oil flows.

9.2 Ram will not lower - with machine empty-no pressure on the gauge:

- .a Side gauge stroke control cams are improperly positioned
- .b Be sure the lower limit switch works properly. Jump switch to test.
- .c Check the foot switch and its cord.
- .d Check relay. Jump terminal 1 to 4 to test.
- .e Manually override the main valve (rear solenoid) by pressing the rubber boot. If the ram lowers, check all the electrical connections to that valve.

9.3 Ram will not lower - with machine empty-pressure at relief setting

- .a Check for any obstruction blocking ram travel.
- .b Reduce the hold down pressure setting at the sequence valve.
- .c Open the needle valve slightly (turn screw out) to be sure it's not blocked.
- .d Reduce the pressure setting on the ram holding (counter-balance) valve by turning the adjusting screw in.

9.- TROUBLE SHOOTING GUIDE

9.4 Hold downs do not clamp down before ram lowers:

- .a Increase the hold down pressure setting at the sequence valve.
- .b Increase the ram holding (counterbalance) valve setting by turning the adjusting screw out.

9.5 Ram will not raise:

- .a Place selector switch in the "man" position,
- .b Check upper limit switch. Jump switch to test,
- .c Manually actuate the main solenoid valve (front solenoid). If ram raises, check all electrical connections to that valve.
- .d Check the foot switch and its cord.
- .e Check cylinders for internal leakage.

9.6 Main motor does not start:

- .a Check the incoming power supply.
- .b Check the glass fuse inside the electrical cabinet.
- .c Reset the overload circuit breakers inside the electrical cabinet.

9.7 Back gauge motor will not run:

- .a Check glass fuse inside electrical cabinet.
- .b Reset overload circuit breaker,
- .c Check limit switches on the backgauge ways.
- .d Be sure backgauge is not obstructed or binding,

9.8 Backgauge sluggish or will not flip up:

- .a Tighten drive belt.

10.- SUGGESTED SPARE PARTS

10.1 SPARE PARTS REQUIREMENT

The following spare parts list itemizes components which are not manufactured by Accurpress but are used in the assembly of the Accurshear hydraulic plate shear.

Most of these items are available from other sources should they be required in the event of a failure or maintenance purposes.

It is suggested that the user establish his own list of spares or determine a readily available source.

10.2 MECHANICAL COMPONENTS PARTS LIST:

<u>PART</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
Torque Tube Main Bearing	2	Elges GE 100UK2RS
Upper Rocker Bearing	2	Elges GE 50UK2RS
Swing Link Bearing	4	Elges GE 50UK2RS
Top Cylinder Bearing	2	Elges GE 50UK2RS
Backgauge Drive Flange Bearing	4	RCJY10
Hydraulic Cylinder Rod Bushing	2	Garlock GF 2428
Ram Guide Bearing	2	McGill CYR-2-S
Blade Clearance Bearing	2 2	McGill MR28/MI24 McGill MR32/MI26
Main Motor Coupling	2	Browning CHJS6
Backgauge Lead Screw Bearing	2 2 2 2	Timkin cone L44643 Timkin cup L44610 Timkin cone 23100 Timkin cup 23256
Backgauge Drive Belt	1	Browning A26

10.- SPARE PARTS

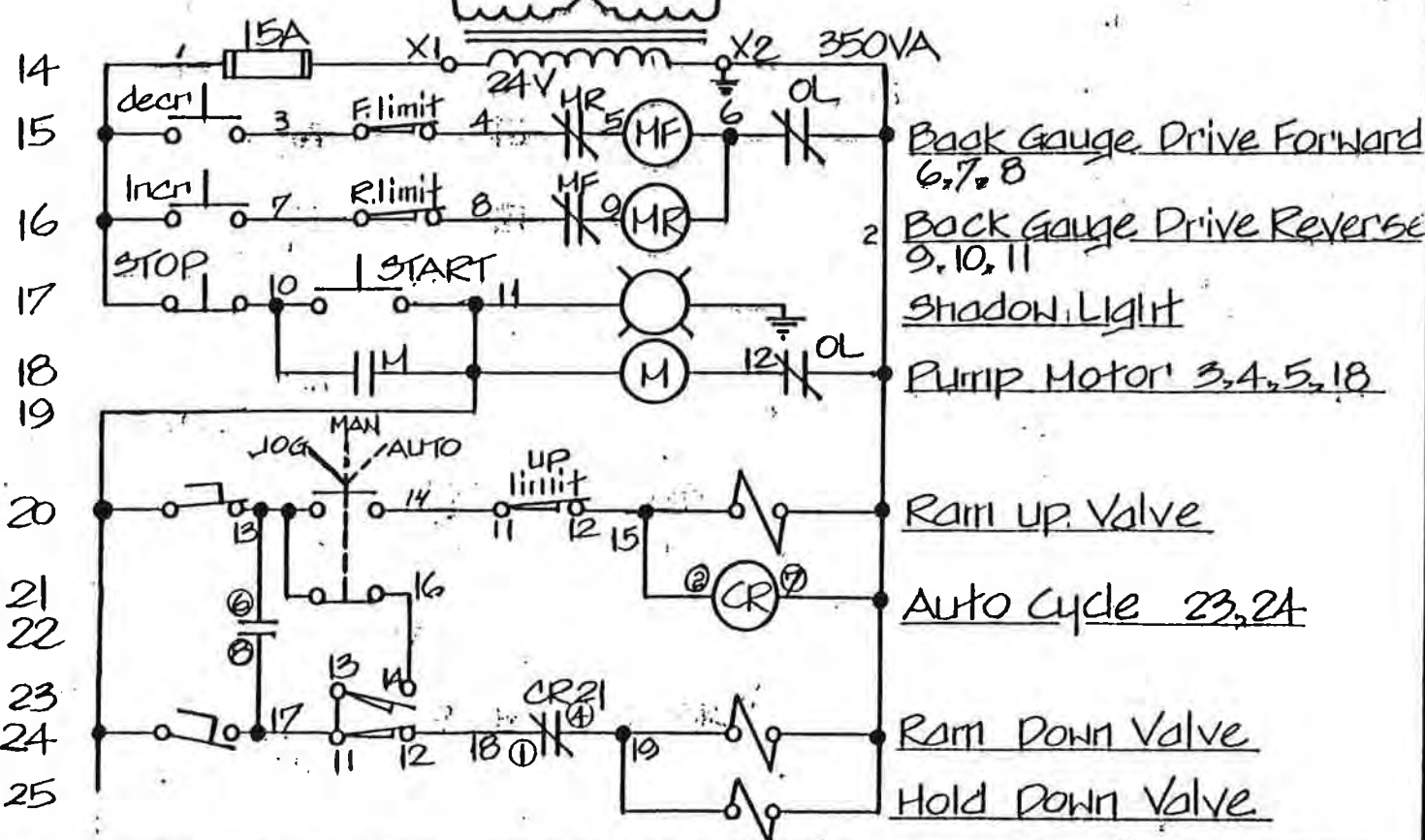
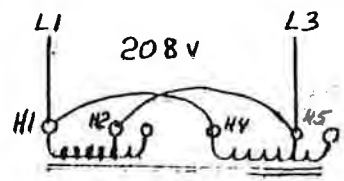
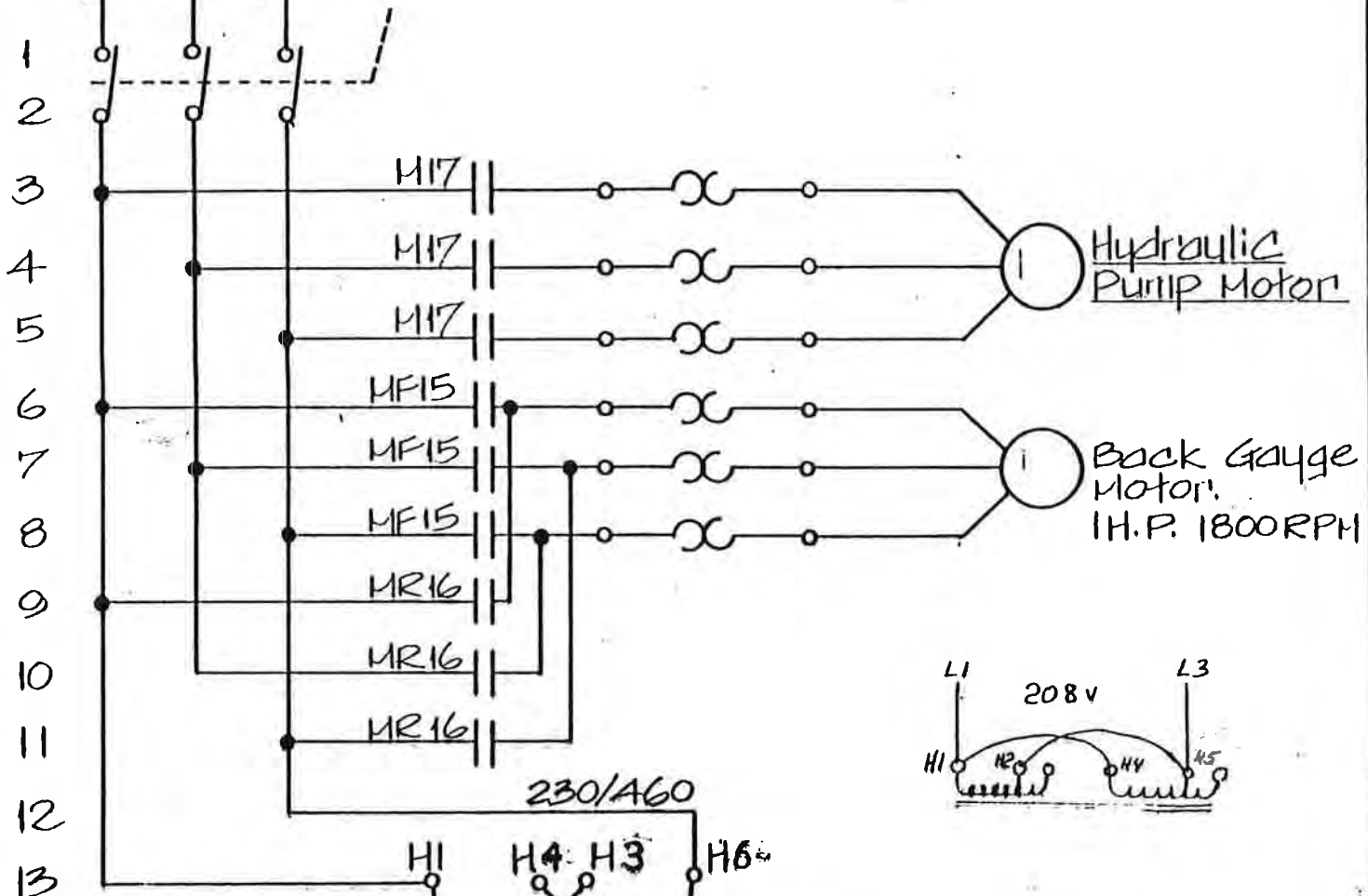
10.3 ELECTRICAL COMPONENTS

Shear Model 825010LP

Transformer		GE 9T50B3174
Disc. Switch		Amalgamated 26361
Fuse		AGC15
Main Contactor	#1	Gould 2200EBA630EA
Reversing Contactor	#2	TE LC2-E009B.
Overload	#1	LR1-D63359 (230 volt) LR1-D40353 (460 volt)
Overload	#2	LR3-E008 (230 volt) LR3-E007 (460 volt)
Start Button		SQ.D 9001-KR1U
Stop Button		SQ.D 9001-KR4R
Selector Switch		SQ.D 9001-KS42B
Relay		Eagle 20Q2CA24
Limit Switch		T/E XCK-L115
Shadow Lights		Osram 64155
Main Electric Motor;		Baldor 20 hp/256T
Backgauge Motor;		Baldor 1 hp/143TC

230/460/3/60

L1 L2 L3



Back Gauge Drive Forward
6, 7, 8

Back Gauge Drive Reverse
9, 10, 11

Shadow Light

Pump Motor 3, 4, 5, 18

Ram Up Valve

Auto Cycle 23, 24

Ram Down Valve

Hold Down Valve

SHEAR ELECTRICAL SCHEMATIC LOW PROFILE

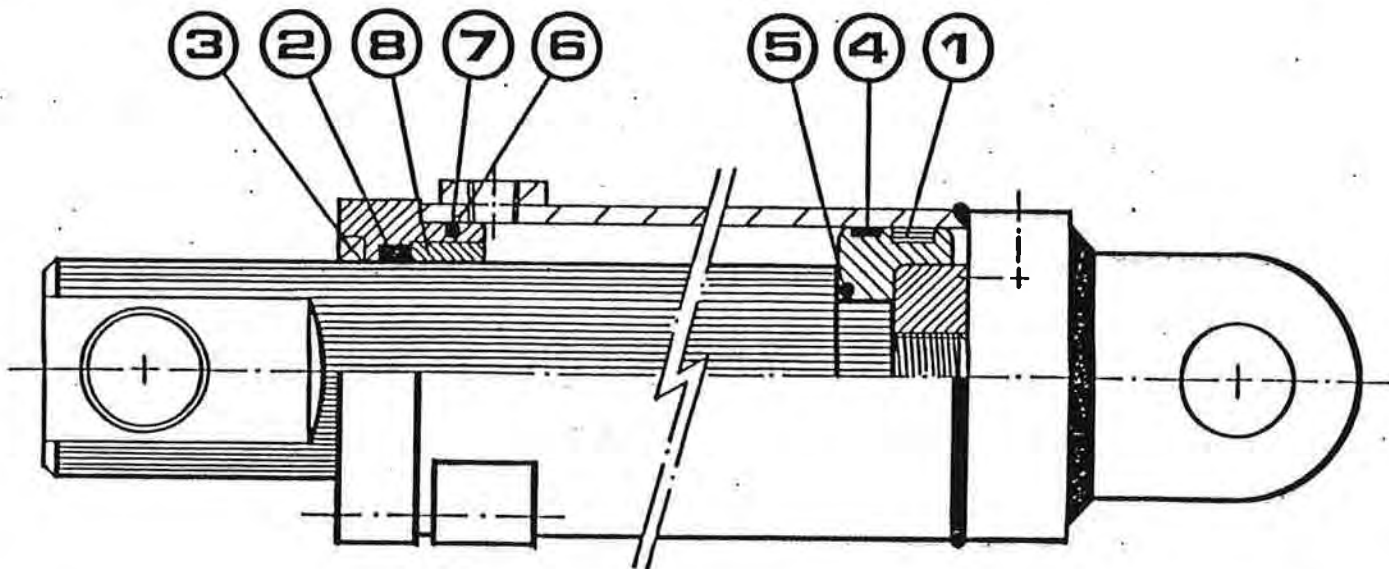
AUTO CYCLE - SEQUENCE VALVE

10.- SPARE PARTS

10.4 HYDRAULIC COMPONENTS

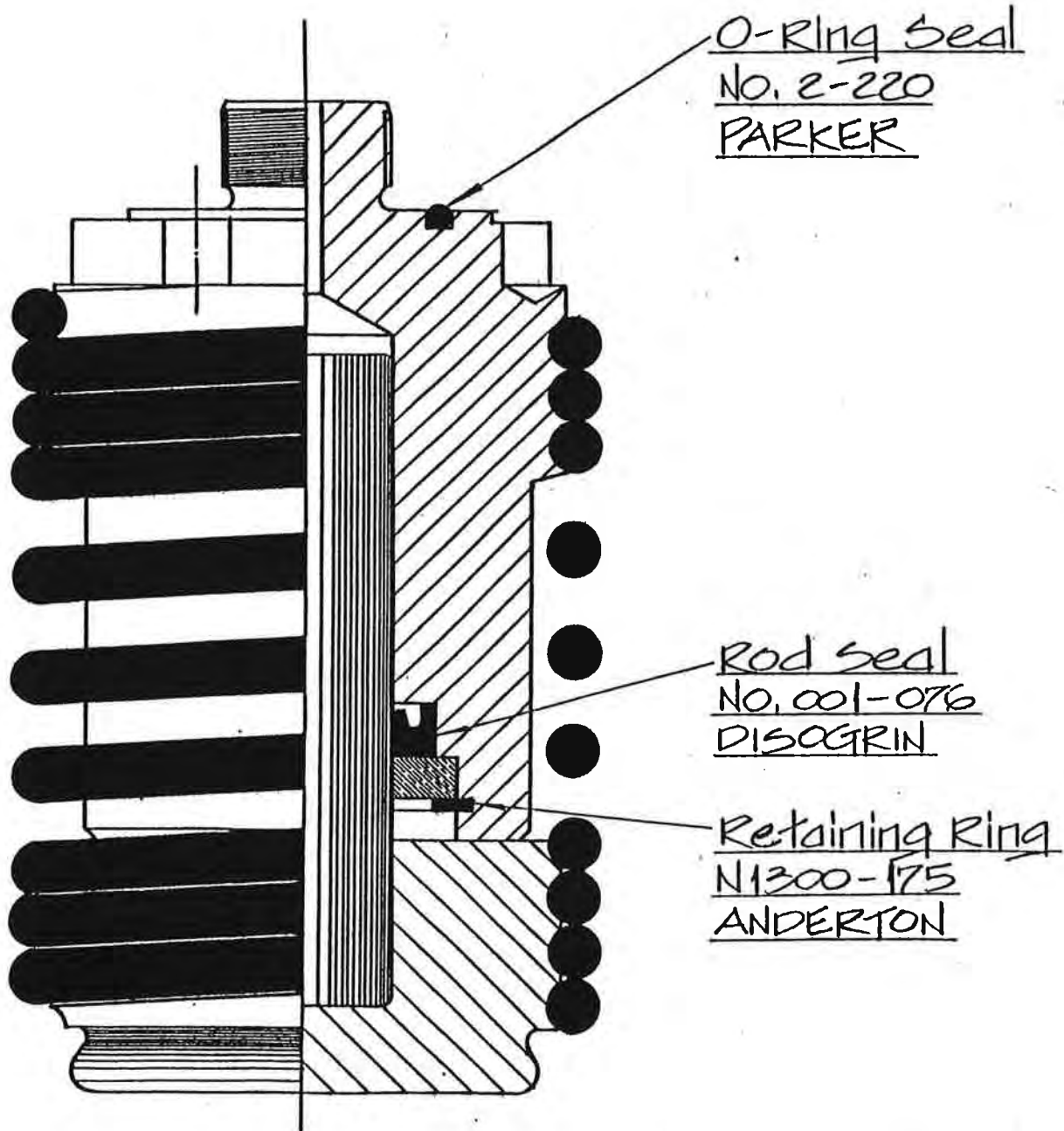
<u>Component</u>	<u>Manufacturer</u>	<u>Model</u>
Pump	Denison	T6C-010-2 R03 A1
Relief Valve Cartridge	Fluid Controls Snaptite	1A30F60S RAC050T-50A
Main Valve	Rexroth Parker	4WEH22T6X/6AW24-60N/5 D61VW8C2E
Hold Down Valve	Rexroth Parker	4WE10C10/AW24-60N/5 D3W1BE
Check Valve	Parker Rexroth	C1200S-20 S15A2X/5
Needle Valve	Deltrol	F20S
Sequence Valve	Rexroth	DZ20-2-3X/210XY/5
Counterbalance Valve	Sun	CBEG-LAN
Filter Element	Donaldson	P16-1413
Cooler	Thermal Transfer	M-10
Main Cylinders	Accurpress	4"
Hold Down Cylinders	Accurpress	1.0"

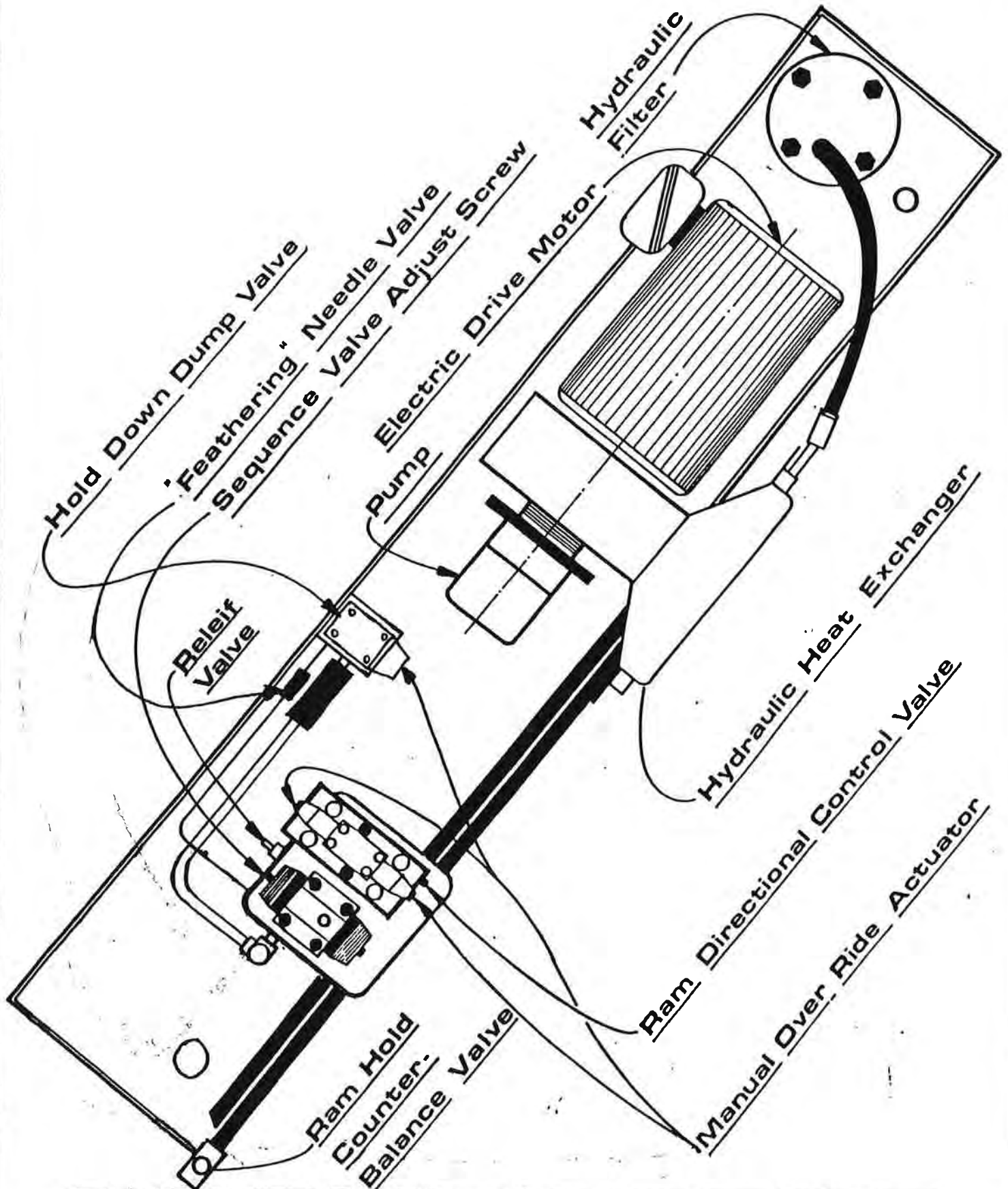
4φ Hydraulic Cylinder Seals



Description	Part Number	Qty.
① <u>Piston Seal</u>	PARKER 2500-3500-375BPR	1
② <u>Rod Seal</u>	DISOGRIN 001 - 191	1
③ <u>Rod Wiper</u>	DISOGRIN 110 - 047	1
④ <u>Wear Ring</u>	DISOGRIN 577-037-000Y	1
⑤ <u>O-Ring</u>	PARKER 2 - 224	1
⑥ <u>O-Ring</u>	PARKER 2 - 154	1
⑦ <u>Back-Up Ring</u>	PARKER 8 - 154	1
⑧ <u>Wear Ring</u>	BRONZE	

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