

**The Black Clawson Company**

ATTN:  
DAN  
Henne

Gentlemen:

This manual was prepared for general information and guidance only. For specific information concerning parts or items, please refer to the certified prints.

We would appreciate your seeing that operating and maintenance personnel are informed of this manual.

We trust this will be helpful to you in the operation and maintenance of your equipment.

THE BLACK CLAWSON COMPANY

SAFETY

Safety should be foremost in everyone's mind when installing, operating or performing maintenance on machinery. Following is a list of safety reminders or precautions to be observed when working on the Roll Splitter.

- \* Lock out the electrical power to the unit before performing any maintenance. Follow your own company's prescribed safety procedure.
- \* Never allow anyone to get beneath the cutter blade when it is raised.
- \* Blade should be guarded or shielded to prevent accidentally bumping into it. (Available from Black Clawson as an option.)
- \* Before starting the splitter downward, be sure everything is clear of the unit except the roll to be split.  
Example: If the splitter was loaded by a fork lift, be sure it is clear of the unit before splitting the roll.

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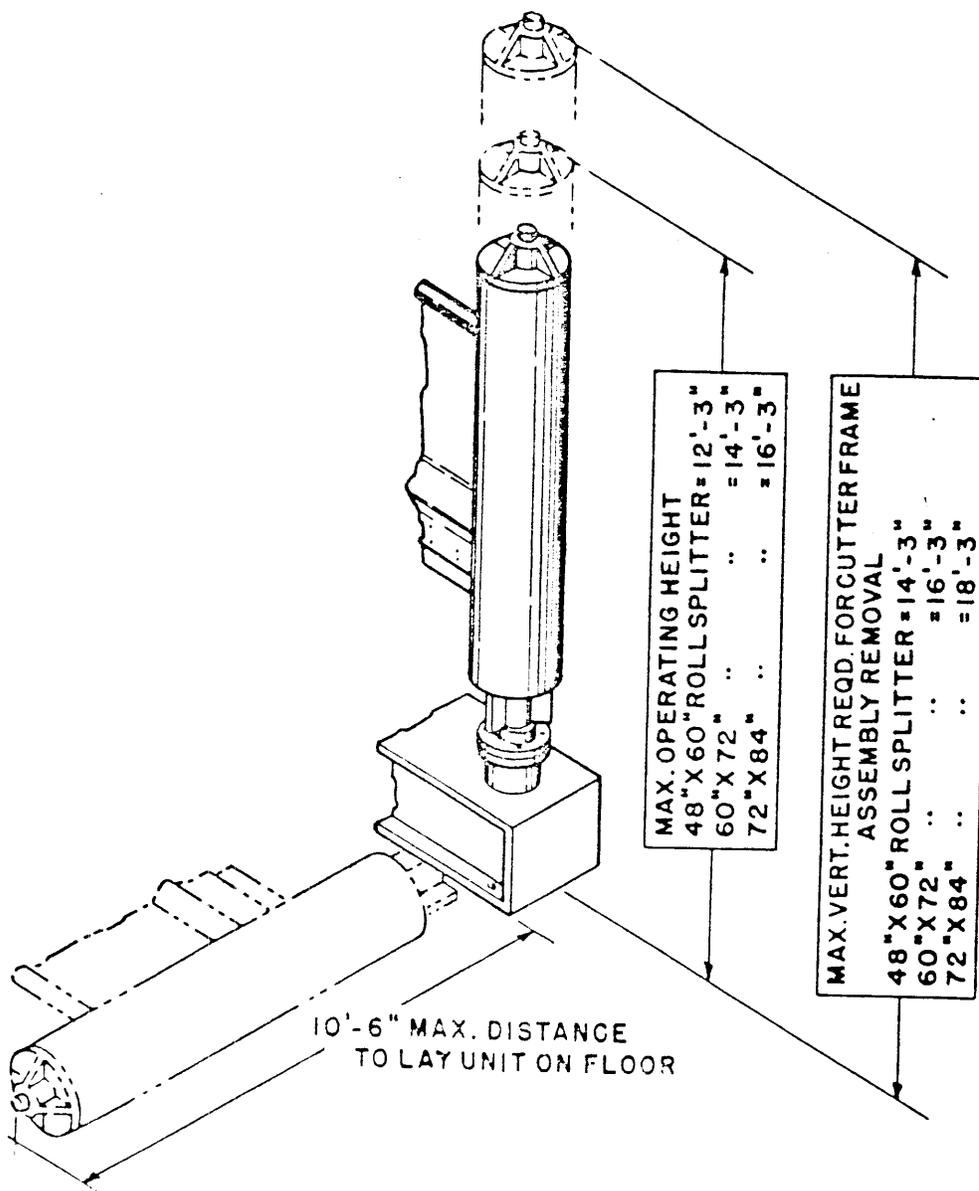
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PRE-INSTALLATION

The Roll Splitter should, if possible, be located so any maintenance required can be performed with the least number of obstructions.

The Roll Splitter cutter frame assembly can be dismantled two ways depending on head room.

The following clearance dimension chart will enable the customer to locate Roll Splitter.

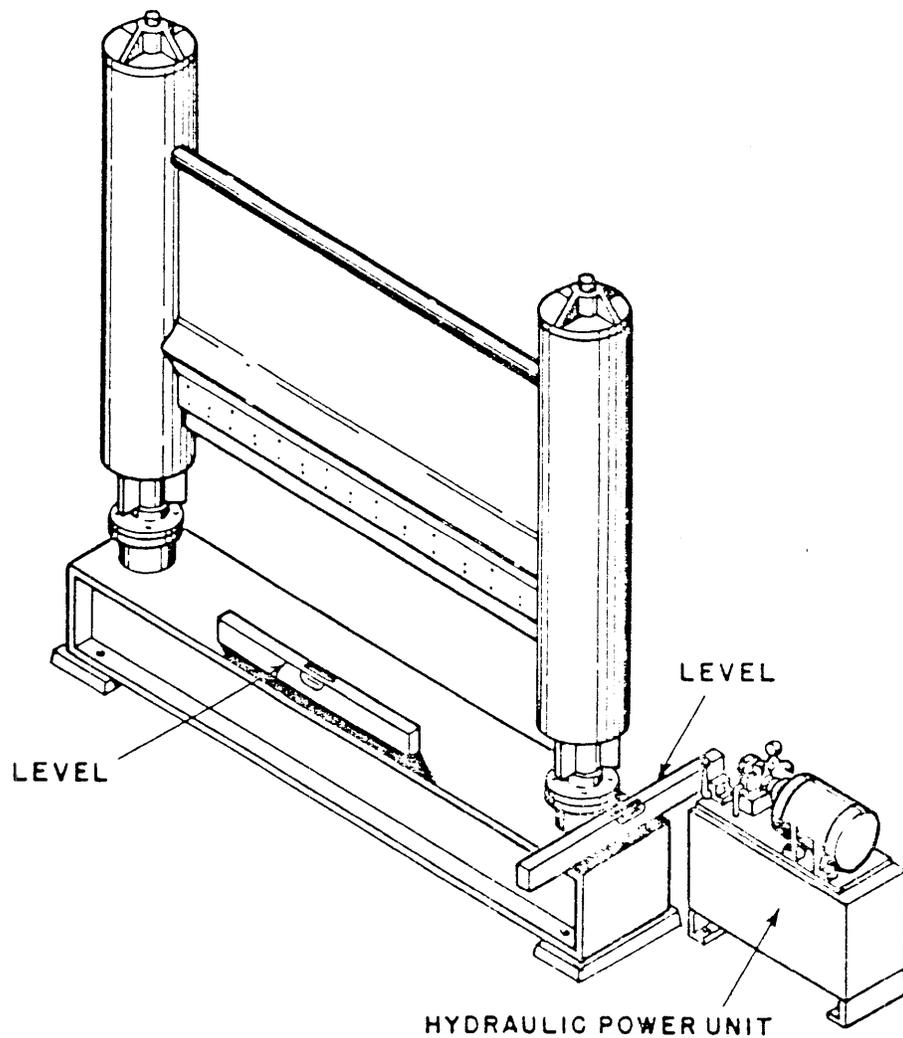


## INSTALLATION

Certified assembly drawings will give anchor bolt locations along with parts list.

Level Roll Splitter two ways and anchor to floor. Grout in both ends. NOTE: Do not pour grout all the way across under base, at least  $\frac{1}{4}$ " minimum clearance should be maintained under center of base. This clearance will permit base to give a little.

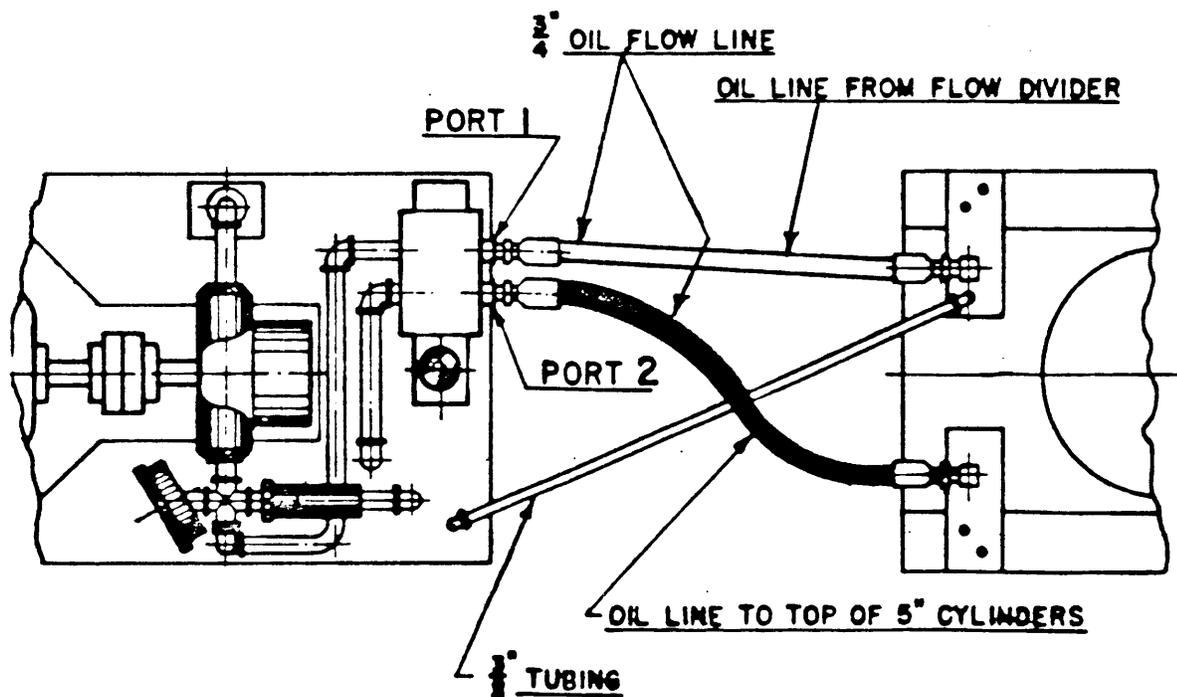
Level Hydraulic Power Unit and anchor to floor.



1. Connect the two ends of the 3/8" tubing.
2. Connect the two 3/4" oil flow lines to the four-way valve as shown.

NOTE: OIL LINE FROM TOP OF 5" CYLINDERS MUST CONNECT TO PORT 2 OF 4 WAY CONTROL VALVE OR KNIFE WILL FLOAT DOWN WHILE 4 WAY VALVE IS IN NEUTRAL.

3. Fill power unit with 45 gallons of good grade of hydraulic oil. Hydraulic Cylinders will hold an additional 10 to 15 gallons. See Lubrication Sheet.
4. Lubricate Motor.
5. Assemble Pressure Gauge and Gauge Cock.
6. CHECK COUPLING ALIGNMENT. Alignment by the manufacturer is no assurance of correct alignment after shipping.
7. Connect motor. Make sure voltage and frequency are correct for motor. Check rotating arrow on oil pump and bump motor.



CHECKING OUT ROLL SPLITTER

1. Remove roll support blocks and base cover plate so all fittings can be checked for possible oil leaks during checkout.
2. Make sure pressure gauge cock is open (located next to pressure gauge).
3. Start Motor
4. 4-Way Control Valve Handle has three operating positions.
  - A. PUSH CONTROL HANDLE - raises cutter frame assembly  
STRAIGHT UP - Neutral  
PULL CONTROL HANDLE - lowers cutter from assembly
  - B. Pull control handle to dead-head system and note pressure gauge reading. By pulling control handle, oil system will be dead-headed as maximum oil pressure cannot be read with cutter frame in motion. Pressure gauge should not read over 2000# maximum dead-headed. Relief Valve preset to dead-head system at approximately 1500# and 2000#.

NOTE: UNIT SHOULD NOT BE OPERATED IF DEAD-HEAD PRESSURE IS OVER 2000# AS EXCESSIVE PRESSURE WILL DAMAGE UNIT.

5. Close gauge cock so gauge will not be subject to unnecessary surges and fluctuations.
6. Open Equalizing Valve - Refer to Equalizing Valve Page
7. Jog control handle running the cutter from assembly up a few inches and then lowering to stop point. Repeat this operation raising the cutter frame assembly a couple of inches higher each time until cutter assembly reaches the maximum operating height. Normally, this will bleed off all the unwanted air in the system. There is no petcock on the cutter for bleeding the system. We have found by jogging the cutter frame assembly up and down, the air will work its way out.
8. Close Equalizing Valve. (MUST OPERATE "CLOSED")
9. Open gauge cock, pull control handle (same as to lower cutter). System again will be dead-headed and note pressure gauge reading.

NOTE: Dead-heading the unit or system is when the cutter is raised wide open or closed completely and the control handle has not been released to the neutral position. The oil pump will then build up maximum pressure and hold this pressure until control handle has been returned to neutral. Dead-heading the system for short periods of time will not damage the unit. It will cause a slight motor overload and cause the motor to heat up if dead-headed too long.

CHECKING OUT ROLL SPLITTER (continued)

10. Raise the cutter assembly all the way up and apply a little cup grease to the three ribs on each cylinder before lowering.
11. Check reservoir oil sight guage and fill to operating mark.

## OPERATION

There is no side motion or rake of the knife edge. Cutting is accomplished primarily by increasing the tension in each rap progressively until it snaps at the point of compression at the knife edge.

### TO SPLIT ROLL

Adjust roll support blocks so forks of lift truck will fit between blocks. Adjust outer blocks to support outer edge of roll. Roll should be roughly centered in cutter so that both hydraulic cylinders will be equally loaded.

Raise cutter and place roll in support blocks.

Back lift truck (if used) out about 2 feet.

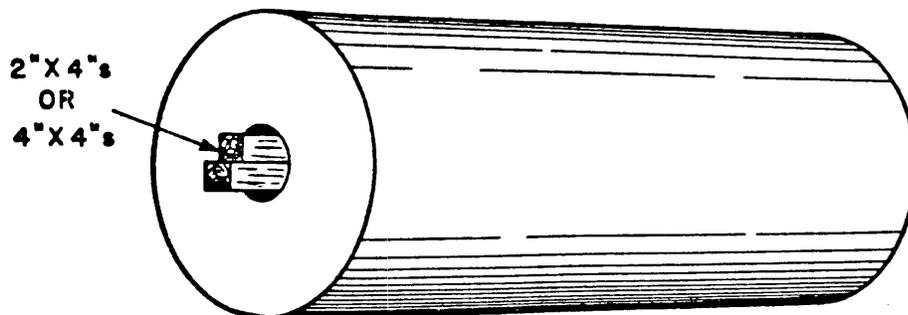
Start Cutter, when the desired cut is reached, the control lever is reversed, and the knife is raised to a position so that the split roll can be removed.

### CUTTING TIME

Actual cutting time is accomplished in seconds on most rolls. A soft roll may compress somewhat and take a little longer to split. Normally, on a soft roll, the cutter will cut 1" to 2" deep and then stop. The cutter then should be raised about 1" allowing the cut sheets to fall away. The cut should then be continued as long as the cutter is traveling. By jogging the cutter up and down, soft rolls can be split. A silicone lubricant sprayed on the knife will aid greatly in cutting soft rolls.

### ROLLS WITH LARGE CORES

Some difficulty may be encountered if core collapses from pressure of knife, this can be eliminated by inserting one or two 2 . 4's of 4 . 4's in core until knife reaches center.



IMPORTANT - DO NOT CUT TWO ROLLS SIMULTANEOUSLY

ROLLS WITH METAL CORES

Cutter should be stopped when knife is approximately 1 to 2 inches from metal core and core removed so as not to damage knife blade. As a safety precaution, care should be taken when cutter nears the metal core as a roll may shift slightly and tend to flip the metal core.

NOTE: We have not incorporated a positive lock to keep the knife blade up while the Roll Splitter is being loaded as we feel no one, at any time, should have any part of their body under the knife blade with or without a safety lock.

THE BEST SAFETY PRECAUTION IS TO KEEP KNIFE BLADE DOWN WHEN NOT IN USE

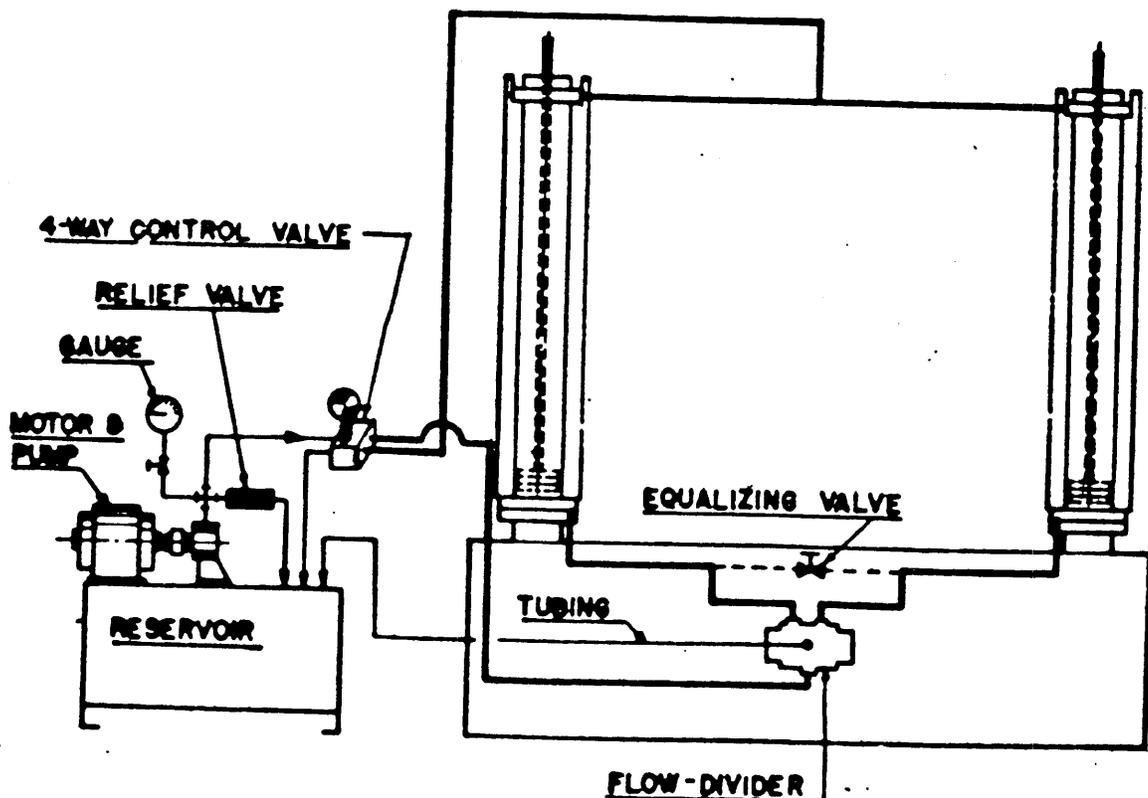
## OPERATION

### EQUALIZING VALVE

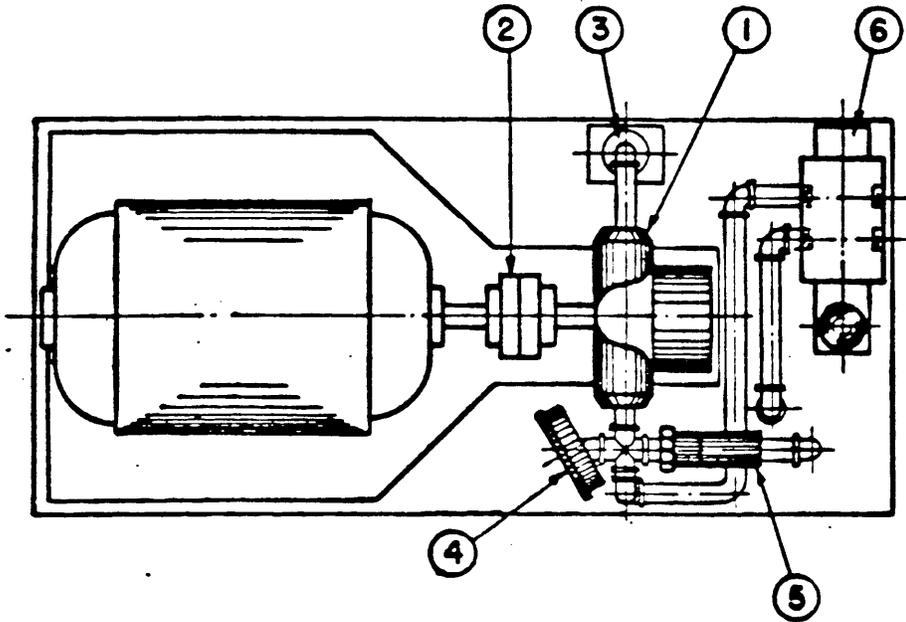
The cylinders which power the Roll Splitter are forced to operate in unison by a dual flow divider. The hydraulic circuit is divided into two loops with each loop passing through one motor to operate a cylinder. In this way, the flow divider acts as meter. During normal operation internal leakage in the fluid motors will permit slight misalignment of the two cylinders. However, dead-heading at either end of the stroke will take care of this. For extreme cases of misalignment, there is provided an auxiliary line with an EQUALIZING VALVE to by-pass the metering motors. This valve should only be opened when one cylinder is dead-headed.

NOTE: No provision has been made in base to reach valve in case of trouble while splitting a roll for SAFETY OF OPERATORS. Cut roll down by hand and remove base cover to open valve. With valve open, jog cutter up and down several times and run cutter to bottom of stroke until unit dead-heads, close valve and replace cover. If trouble continues, check out flow divider and both cylinders for cause.

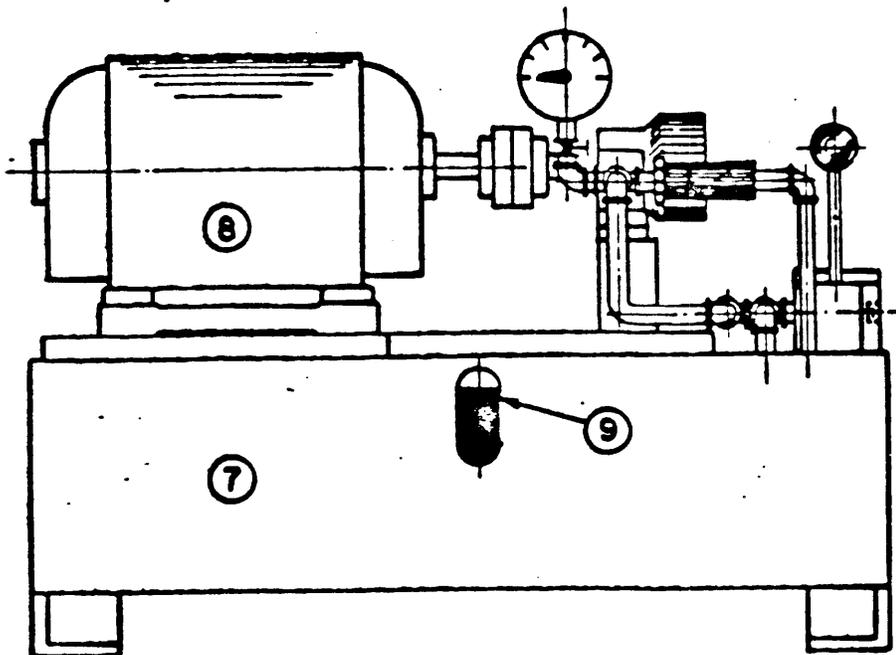
CAUTION: UNIT MUST OPERATE WITH THIS VALVE "CLOSED"



HYDRAULIC POWER UNIT

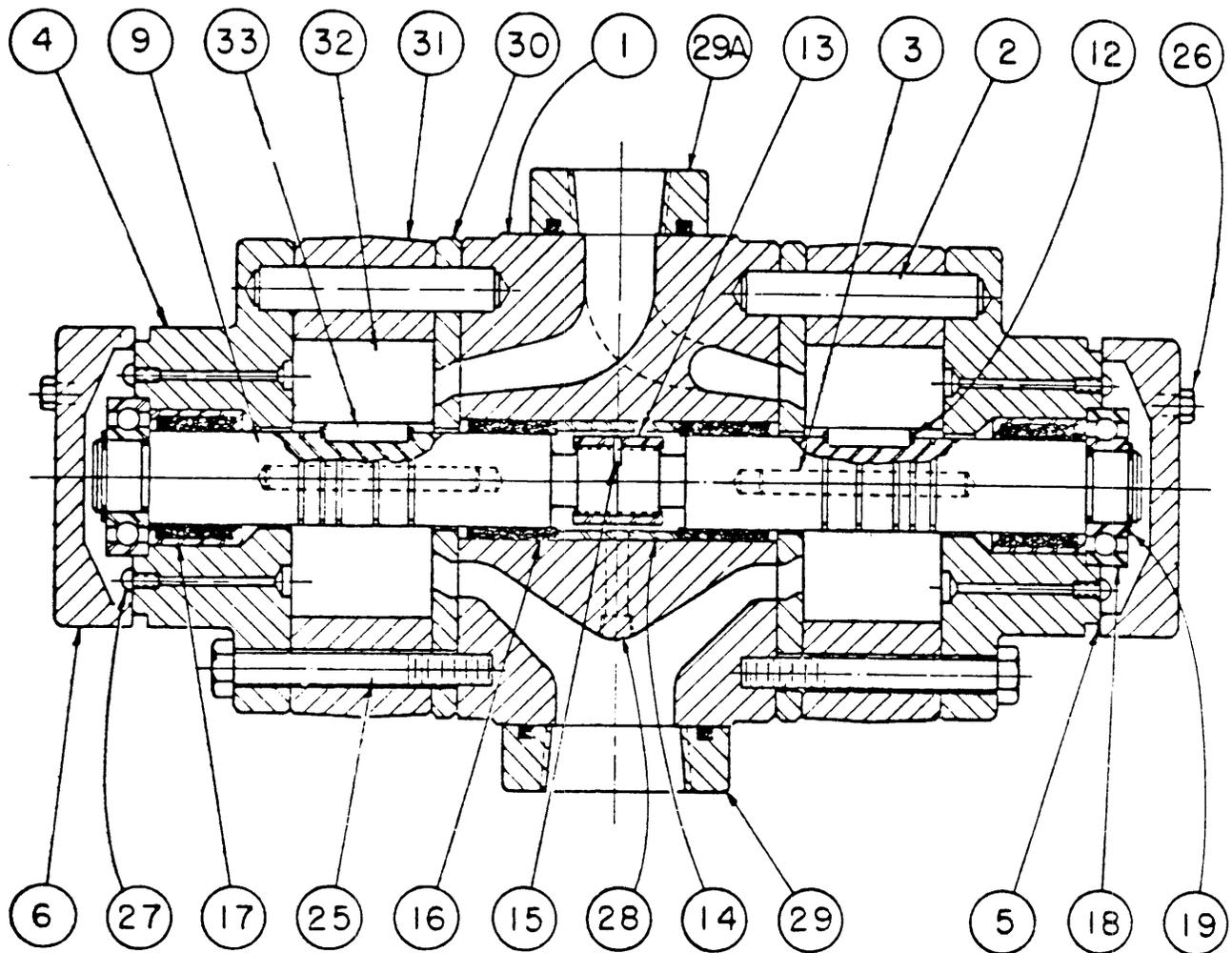


- 1. Hydraulic Pump
- 2. Coupling
- 3. Filter
- 4. Hydraulic Gauge
- 5. Relief Valve
- 6. 4-Way Hand Operated Control Valve
- 7. Hydraulic Reservoir
- 8. Motor
- 9. Oil Level Sight Gauge



CROSS SECTION GEROTOR FLOW DIVIDER

MODEL H8-H8-P-100-A1



RECOMMENDED OILS

<u>MANUFACTURER</u>	<u>ITEM 1 HYDRAULIC OIL</u>	<u>ITEM 2* HYDRAULIC FLUSHING OIL</u>
American Oil Company	Stanoil Industrial Oil #15	Indoil Industrial Oil #7
Atlantic Refining Company	Atlantic Hytherm C	Coprol Oil B
Cities Service Oil Company	Pacemaker Oil 150-T	North Star Oil #0
Gulf Oil Corporation	Gulf Harmony 44	No. 561 Oil
E. F. Houghton & Company	Hydro-Drive MIH	Cosmolubric 1000
Humble Oil & Refining Co.	Teresstic 43	Necton 37
Kendall Refining Company	Kenoil 040 R & O	Kenoil 036
Mobil Oil Company	D. T. E. Light Oil	Flowrex 1000
The Ohio Oil Company	600 Endurance Motor Oil SAE 10W	287-H & F Oil
Pennzoil, South Penn Oil Co.	Pennbell Light	Pennzoil Flushing Oil
Phillips Petroleum Company	Magnus Oil, Grade Light	Baltic Lubricating Oil, Grade 100
The Pure Oil Company	Puropale RX, Light	Klondyke, Light
Shell Oil Company	Tellus Oil 27	Cassis Fluid A.
Sinclair Refining Company	Duro Oil 150	Alwether Oil
Standard Oil Div. of American Oil Co.	Stanoil Industrial Oil #15	Indoil Industrial Oil #7
Standard Oil Co. of California	Chevron OC Turbine Oil 9	Chevron Utility Oil 100
Standard Oil Co. (OHIO)	Sohivis 43	Polar 37
Sun Oil Company	Sunvis 916	Circo XX, Light
Texaco, Inc.	Texaco 800 Regal Oil A (R & O)	Texaco 679 Flushing Oil (R & O)
Tidewater Oil Company	Veedol Atrubrio 50	Veedol Andarin 46

GENERAL INFORMATION

- Item 1 Hydraulic Roll Splitter, Intermittent Service  
Requires an oil of 100 to 150 SSU at 100 degrees F.
- \*Item 2 Hydraulic Roll Splitter Flushing Oil  
Requires a napthese base oil of a viscosity of 70 to 100 at  
degrees F.

Unless all flushing oil is removed it will contaminate the high grade operating oil. We have listed flushing oils for your convenience, however, it appears using regular Hydraulic oil is simpler and as efficient.

This is a partial list and is intended only as a guide. If your lubricant source is not listed, consult your local oil representative or The Black Clawson Company, Shartle Division, Middletown, Ohio.