Fletcher

Product Newsletter

J. H. Fletcher & Co. Huntington, West Virginia

August 1996

Inside

National Mining Association

J. H. Fletcher & Co. will be heading to Las Vegas, Nevada to participate in the National Mining Association MINExpo International '96. The event is to be held September 9-12, 1996 in the Las Vegas Convention Center.

You can find us at booth number 3851 where we will have a display featuring the Fletcher CHDDR and MRS or Mobile Roof Support. One section of the booth will focus on our progress with Remotely Operated Roof Bolters. Photographs, videos and literature of our latest coal and hard rock mining equipment will also be displayed.

J. H. Fletcher & Co. is a leader in roof bolting technology. Please stop by to say hello, check out our equipment, and meet our representatives. Fletcher may have just what you're looking for.

Warning Tag Update

J. H. Fletcher & Co. has two new tags you may want to purchase. The first tag will replace the old notice of keeping your hands off the rotating drillsteel. The second tag identifies the hazard of placing any body part between the boom and canopy.

The new tags are shown below. J. H. Fletcher & Co. encourages you to maintain warning labels on your equipment at all times. For additional information about tags on your machine and the location of those tags, contact our Risk Management Department.

Hydraulic Oil

Keep It Clean Maximum Performance

Submitted By: Commercial Intertech

High quality hydraulic oils are essential for satisfactory performance and long life of any hydraulic system. Such oils are usually prepared from highly refined, turbine oil stocks with which select additives are compounded. At Commercial Intertech we suggest following the manufacturer's specification or the recommendations of a reputable oil supplier for the specific oil requirement on your machine.

A high viscosity oil will generally give better performance than a thin oil. Oil of around 100 SUS (20cst) will give optimum performance. Your selection should be as near to optimum as possible at operating temperature but not so heavy at start-up as to cause cavitation. Cold start-up procedures, which allow the use of heavier oils, should prove worthwhile by increasing pump life.

Inlet Vacuum

Vacuum measured at this inlet port of the pump generally should not exceed 4-5 inches (10-13 cm) Hg. Higher vacuum can result in cavitation that may severely damage the pump. A usually acceptable rule of thumb is that the inlet line velocity should not exceed 8 fps (2.5 m/s). A long inlet line or the use of several fittings may necessitate increasing the line size. We suggest that each inlet port of a tandem pump have its own line from the reservoir.

Operating Temperature

Oil operating temperature should not exceed 200° F (93° C) with a maximum of 180° F (82° C) generally recommended. 120° - 140° F (50° - 60° C) is generally considered optimum. High temperatures result in rapid oil deterioration and may point out the need for an oil cooler or a larger reservoir. The nearer to optimum temperature, the longer the service life of the oil, the pump and other components.

Reservoir

Reservoir capacity in gallons should at least equal total pump output in GPM. When filling the reservoir, oil should pass through a 100-mesh screen. Pour only clean oil from clean containers into the reservoir. A 100-mesh screen should generally be used in the suction line leading to the pump. It should be of sufficient size to handle twice the pump capacity. The screen must be cleaned and checked regularly to avoid pump and system damage.

Oil should be changed on a regular schedule and the system flushed in accordance with the manufacturer's recommendations.

Filtration

Good filtration assures improved service life at today's high operating pressures. With Commercial's roller bearing pumps operating at 2000 to 2500 psi (130-170 bar), we suggest 20-30 micron (nominal) filters and 10-20 micron at 2500 to 3000 psi (170-207 bar). Full-flow return line filters generally give satisfactory results. The specific filter recommendation should come from your equipment manufacturer or filter supplier.

Note: Finer filtration may be required by other components in the system.

With our sleeve bearing pumps, 10 micron (nominal) filtration is recommended for all normal operating conditions.

With petroleum oil, our roller bearing pumps are recommended up to a maximum pressure of 3000 psi; our sleeve bearing pumps up to a maximum of 2500 psi.

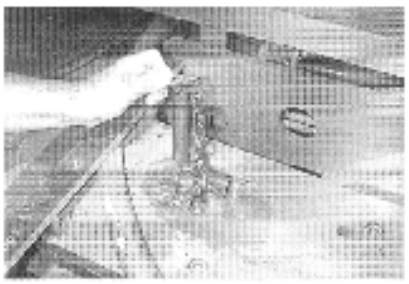
Filtration is not a substitute for practicing cleanliness and proper preventative maintenance.

Cold Weather Operation

Oils for use in cold weather should have a viscosity not exceeding 7500 SUS (1620 cst) at the

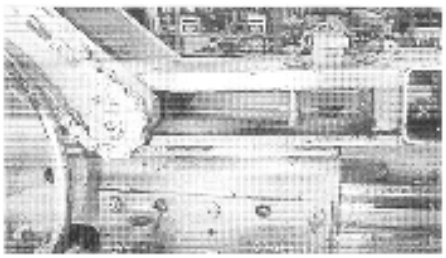
Block That Boom

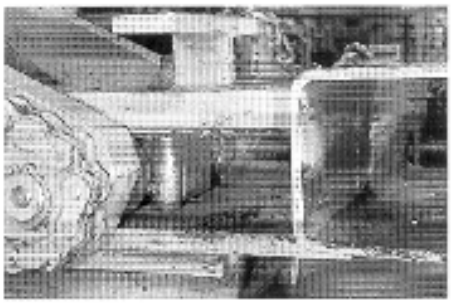
In order to perform maintenance on J. H. Fletcher & Co. arm feed booms, it is sometimes necessary to block the boom before performing maintenance. Since 1993, J. H. Fletcher & Co. has modified the boom so that a pin could be inserted into a specified location (see photo). The pin prevents the boom from moving while maintenance is being performed.



Remove pin from holder and insert in hole.

Pin inserted in hole





Rest boom roller assembly shaft against blocking pin.

Blocking the Boom

1. Raise the boom so the boom roller assembly shaft is in front of the hole.
2. Insert the pin (a specific pin is provided by Fletcher Part Number 280366).
3. Relax feed pressure to allow boom roller assembly shaft to rest against blocking pin.
4. Make sure pin extends through both top and bottom plates and is secure.
5. Turn off machine at breaker box and lock out power at main power center.
6. Perform maintenance task.
7. Reverse procedure to re-energize boom.
8. Check the machine function to ensure proper boom operation.

If you have any questions concerning this procedure, please contact our engineering department or your Fletcher field representative.

WARNING

If boom does not stop when pin is inserted, boom is not securely blocked.

Consult your company regarding their procedures to block the boom

Failure to block boom securely can lead to serious injury or death.

NOTICE

This pin and hole arrangement was not available to block arm feed roof drills before 1993

If your machine does not have this option, you must secure the boom according to company requirements.

Failure to block boom can lead to serious injury or death.

All users of Mobile Roof Supports

J. H. Fletcher & Co. has become aware of unsafe conditions that may occur during the use of Mobile Roof Support systems. J. H. Fletcher & Co. has developed new literature to warn users of this equipment about potential hazards. If you have not received this bulletin or if you are planning to purchase this equipment, we encourage you to contact our Risk Management Department for a copy of Bulletin No. 64.

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minimum start up temperature and a pour point of at least 20° F (11o C) below that temperature. Experience on the Alaskan North Slope has been satisfactory without using special oils for fluids. Start-up procedures must allow for a gradual warm-up and equipment should not be operated at full pressure until the oil reaches a reasonably fluid state.

Using Oils Other Than Discussed

Anti-Wear Oils: The use of such oils is optional with our components.

Automatic Transmission Fluid: General experience here has been satisfactory; however, ATF oils are sometimes too expensive for normal use in hydraulic systems.

Diesel Fuel, Kerosene, Coal Oil: Although sometimes used as a dilutant for cold weather operations, their use is not recommended because they are insufficiently refined products.

Transformer Oil: Sometimes used for extremely cold weather operation. It is not generally recommended as it becomes too thin at normal operating temperatures. Oil to U. S. Military Spec MIL-N-5606 is in this category.

Maintaining your machine according to OEM specifications insures that your Fletcher equipment will perform as required. Using non-OEM components or contaminated oil can be detrimental to the life expectancy of motors, pumps, valves, subcomponents and cylinders. Further, serious safety hazards such as sticking valves can result from the use of incorrect or contaminated hydraulic fluid. Sticking valves can cause erratic machine operation creating a hazard resulting in serious injury or death.

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Currently we are only sending the Fletcher Newsletter to a selective readership. If you know of someone in your company who wishes to be placed on our mailing list, please let us know. Below is a form for a free subscription to the newsletter. Just fill out the form and return it to J. H. Fletcher & Co., Risk Management, Box 2187, Huntington WV 25722-2187.

FREE SUBSCRIPTION FORM

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J. H. Fletcher & Co.

J. H. Fletcher & Co.
Box 2187
Huntington, WV 25722-2187
(304) 525-7811