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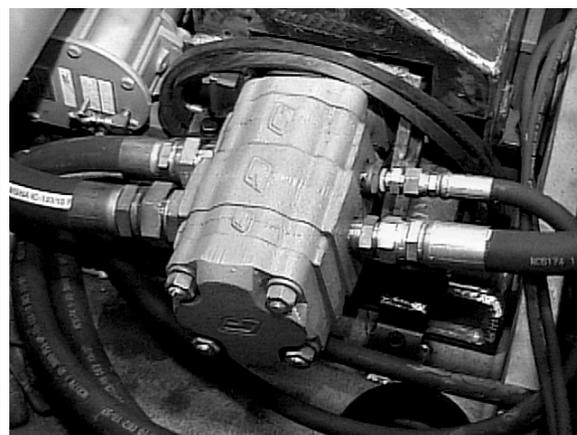
Bulletin Notice

## Should We Change the Pumps?

Given the current state of the coal market, productivity and economic survival are closely linked. In an effort to increase productivity, some of our customers have changed the hydraulic pumps on their roof bolters. At first glance, this would appear to be a quick and easy way of increasing production. However, there are other aspects related to increasing pump output which must be carefully considered and addressed.

Currently Fletcher utilizes three standard pump sizes: 9 and 27 GPM, 9 and 31 GPM and 9 and 36 GPM. Since we utilize the same 50 HP electric motor in all of these applications, many customers assume there is not a problem in changing the high volume pump circuit from 27 GPM to 31, or even 36 GPM. This is a bad assumption since there are several technical and safety reasons that govern the selection of pump size for a particular machine design.

For instance, the design of a low profile (low seam application) machine always presents a problem with regard to component size. One of the larger components in the hydraulic system is the tank. To provide cooling of the hydraulic oil, the tank must be sized to provide a minimum detention time. In other words, oil must remain in the tank for a minimum amount of time in order to liberate heat before returning to the system. Obviously, if the size of the tank is limited due to the limited height of the machine, the pump output must be reduced to prevent overheating of the hydraulic system. This pump output is then utilized in the design of the machine - this is where the safety concern begins. For instance,



**Typical Pump**

the tram speed would be increased in the same proportion as the increase in pump output. Given the close conditions in a low seam mine, this could create a serious safety hazard. Also, other machine functions may experience an increase in operating speed, which could present potential hazards.

Before making any modifications to your machine, contact your local Fletcher sales or service representative. There may be alternative methods of increasing production and efficiency (especially on older units) which could prove to be safer, as well as less expensive to implement and maintain in the long run, than changing the pumps.

Remember, unauthorized modifications to the machine may not only void warranties and certifications, but also endanger the operator and damage the machine. Never make unauthorized modifications.

# Proper Towing Procedures

Sometimes it becomes necessary to tow a roof bolter. To avoid injury and damage to the machine, proper towing procedures should be followed. Several methods are available and as always you should consult your Fletcher representative for the best method for your machine.

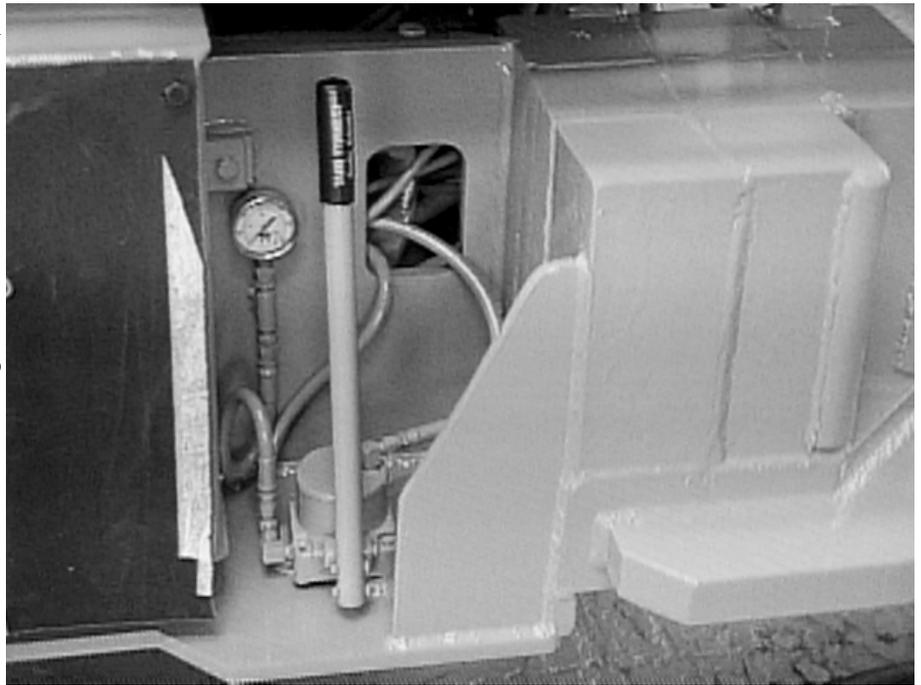
No matter which towing method is used, the first step should be to block the wheels and firmly attach the bolter to the towing vehicle. This will keep the machine from rolling once the wheels are free.

The first towing method is to break the final drive tram chains.

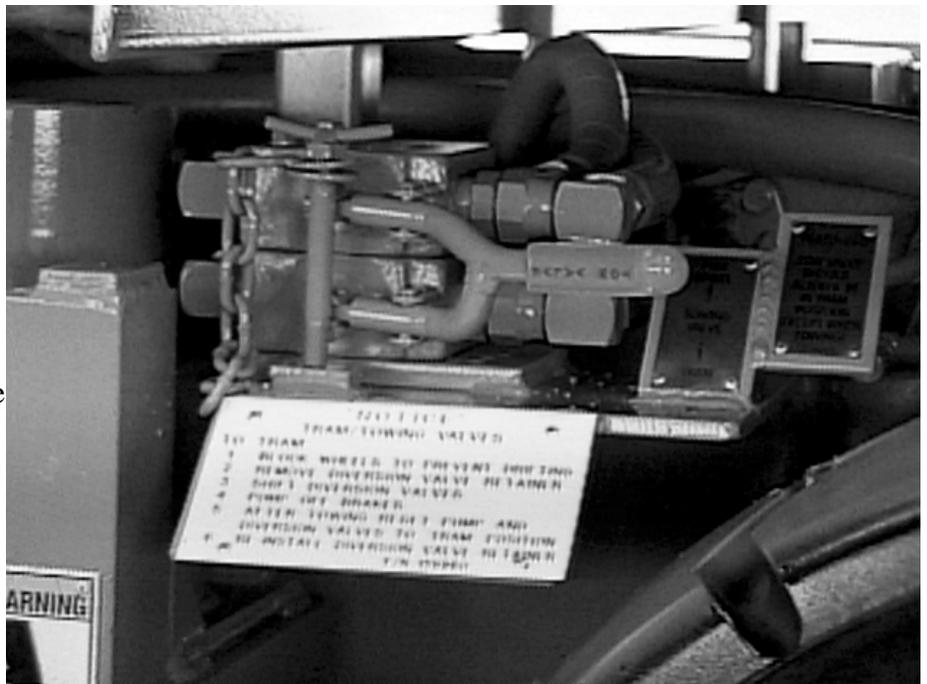
The second method requires you to defeat the brakes by using the brake release washers supplied with the machine. Also, the motion control valves need to be defeated by replacing the cartridges with blank cartridges. Before doing this, make sure to actuate the tram handles (power off) in both directions to relieve any residual pressure in the tram system.

The third method utilizes an optional towing package. Using a hand pump the brakes are pressurized causing them to release. Then, a set of diversion valves are actuated to provide a loop for the tram motor hydraulic oil allowing the wheels to roll.

When using any of these methods, the recommended maximum towing speed is 1.5 mph. There are variations on towing packages and towing methods so it is always advisable to talk with your Fletcher representative before towing a bolter to find out the best method.



Hand Pump



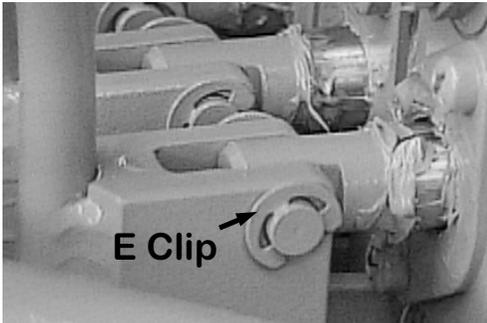
Diversion Valve

## Correct E-Clip Installation Critical

In late 1993 J. H. Fletcher & Co. changed the handle retention components from a cotter key retainer to an E clip (part number 124035) retainer system.

The E clip has provided a consistent method to secure the handle arrangement to the valve section. Recently, some of our customers have requested that we sell the tool that is used to install E Clips. If you are using the standard handle arrangement and are using E clips, purchasing this tool could reduce the time it takes to reinstall missing clips and make installation easier.

To order the tool from J. H. Fletcher & Co. please call our service department and request part number 151301.



**E Clip**



**Tool for Installing E Clip**



## Auxiliary Canopy & Boom Swing Control

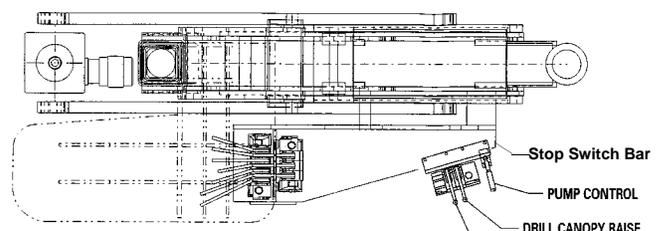
On May 27, 1994 MSHA wrote a program policy letter (P94-V-3) that clarifies MSHA policy regarding cabs and canopies over certain roof bolting machine controls. In the letter MSHA had determined that certain controls on roof bolting machines are not subject to the requirement of 30CFR 75.1710 1(a). Controls that position and set the Automated Temporary Roof Support (ATRS) system (including "inch tram" controls) are not required to be located under a canopy support. Now, according to this letter, controls that position the drill station canopy, such as canopy raise, canopy lower, boom swing levers, etc., are not required to be located under a canopy provided these controls are located on the machine in such a manner that they are operable from under supported roof.

J. H. Fletcher & Co. can now provide the BOOM SWING and CANOPY function on the rear of the boom on a straight boom arm feed style roof drill to facilitate setting the canopy position. This system (Part Number 293421 for left hand boom and 293422 for right hand boom), installed as shown in the drawing below, provides the operator the advantage of swinging the boom and raising the canopy before he goes to the drill control station to begin bolting. At this control location there is a diversion valve which must be actuated before the auxiliary boom swing and driller canopy controls can be operated. An emergency stop switch is also provided at the auxiliary controls station.

This system has the greatest advantage on straight boom dual head roof drills that are working in heights of 50" or less. It may allow the effective use of canopy protection not possible before the policy clarification.

J. H. Fletcher & Co. believes that those companies that want the advantage of positioning the canopy before the operator positions himself under the canopy should evaluate their need for this system.

For further information on the MSHA program policy letter or questions concerning this kit, please call the Risk Management Department.





J. H. Fletcher & Co. has recently mailed out two retrofit notices. Bulletin Number 76 deals with the Hydraulic Disconnect Bar on HDDR roof drills and Bulletin Number 77 pertains to the tram enable pedal. If you have not received your copy of these bulletins, please call the Risk Management Department at J. H. Fletcher & Co. today... (304) 525-7811

The information contained in this newsletter has been obtained from sources believed to be reliable, and the editors have exercised reasonable care to assure its accuracy. However, J. H. Fletcher & Co. does not guarantee that contents of this publication are correct and statements attributed to other sources do not necessarily reflect the opinion or position of J. H. Fletcher & Co.

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