Fletcher® Product Newsletter

J. H. Fletcher & Co.

UNDERGROUND MINING EQUIPMENT
INDUSTRIAL MINERALS / ROCK DIVISION

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Technical and Environmental Improvements

For over seventy years J.H. Fletcher & Co. has been improving safety and productivity in underground mines with innovative equipment and reliable product support. Every machine in our product line is continuously upgraded for higher productivity, safety, and operator comfort to help you achieve top profitability.

Across the product line numerous technical and environmental improvements to cope with the demanding underground conditions include:

- Efficient and clean Tier III diesel engines with demand controlled throttle systems coupled with load sensing pumps provide for maximum fuel economy and minimum exhaust emissions. The marriage of these engines and load sensing hydraulic systems limit wasted energy bringing environmental benefits.

- Boom soft ride suspension systems allowing the boom to float at high tram speeds over rough ground. This reduces stress on the machine thereby increasing service life.

- Sealed, pressurized, heated and air conditioned cabs with HEPA filtration meet NIOSH recommendations in their publication #2008-10. This provides a clean, quiet working environment increasing operator comfort and reducing operator fatigue.

- Ergonomically placed, precise proportional drill controls increase operator comfort, efficiency and pinpoint accuracy.

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- Graphic operator display, giving the operator full graphics of the drill feed, programmed with your drill round and hole depths for precise drill rounds reduces boot legs and increases blast efficiency.

- Improved serviceability with more accessible service points, transverse mounted engines for easy access to high service items, in conjunction with interactive parts and service manuals define the what, where, when and how of maintaining your Fletcher equipment.

Operator Environmental Control System

Although the air in today's mines is much cleaner, there will always be some dust and pollution. To protect the machine operator from dust and air pollution, Fletcher provides a cab pressurization system. This system injects filtered air into the operator cab, thereby providing clean air and preventing dust and pollution from entering the cab. This system is available with or without air conditioning.

In order for the system to be effective, it must be properly maintained. J. H. Fletcher & Co. recommends the following schedule:

AFTER EVERY 40 OPERATING HOURS:

- CAB MUST BE CLEANED AND VACUUMED
- HOSING, CLAMPS AND FITTINGS MUST BE INSPECTED

AFTER EVERY 250 OPERATING HOURS:

- HEPA FILTER AND PRE FILTER ELEMENTS MUST BE REPLACED
- INLET AIR FILTER ELEMENT MUST BE REPLACED

EVERY SIX MONTHS:

- TEST SYSTEM TO MAKE SURE CAB IS BEING PROPERLY PRESSURIZED

Complete instructions for properly maintaining the Operator Environmental Control System are included in the machine Service Manual.

TEST SYSTEM (Required Every Six Months)

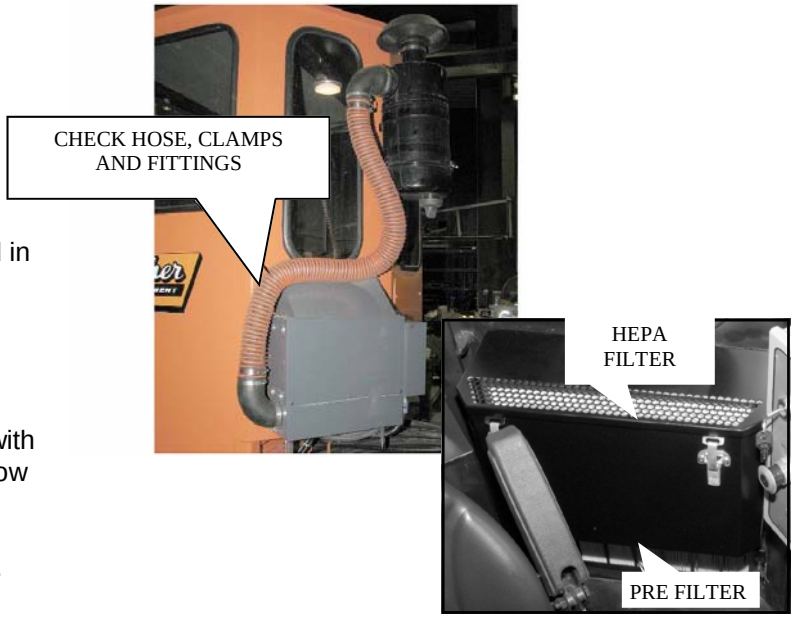
To test the operation of the cab pressurizer system:

1. Install a magnehelic differential pressure gauge, with the high pressure connection to the cab and the low pressure connection to atmosphere.
2. Close the cab door.
3. Start the machine and turn ON the air conditioner.
4. Check the reading on the differential manometer. If the reading is at least 0.03 inches of water, the cab pressurizer system is operating properly.

If the cab pressure is low:

1. Check the condition of the cab pressurizer system filter elements.
2. Check for air leaks from the cab.
3. Make sure the cab pressurizer blower motor is operating.

The cab pressurizer system must be tested at six month intervals. This test must verify that the cab is being maintained at a pressure higher than atmospheric pressure so that it will prevent the operator from being exposed to harmful dust.



ANSUL CHECKFIRE Systems-SC-N FM Approved or MP-N MSHA Approved

Both the CHECKFIRE SC-N Electric Detection and Actuation System and MP-N SYSTEM furnish fire detection for equipment hazard areas. Their unique actuator allows activation of a pneumatically-triggered fire suppression system either manually or automatically.

The CHECKFIRE SC-N system and MP-N system are typically used with an ANSUL A-101 Vehicle Fire Suppression System for 24-hour protection of equipment. The system is particularly suited for protection of equipment that is subjected to extreme environmental and physical conditions such as vehicles used in mining (both underground and surface), forestry, agriculture, construction, public transportation, public utilities, land fill and waste disposal.

The CHECKFIRE SC-N:

The control module can be utilized as a self contained system, powered by its own internal Lithium battery. This allows the detection system to operate around-the-clock without use of external power. Optionally, external power can be connected to the control module. With external power connected, the internal power source provides battery back-up. When connected to an external 12/24 VDC supply with the internal battery also connected, the external power source becomes the primary supply, while the internal source is maintained in a standby mode of operation.

The control module may be installed where the ambient temperature is between -40 degrees F to 140 degrees F (-40 degrees C to 60 degrees C).

The complete CHECKFIRE SC-N system is composed of components which are combined to provide automatic fire detection and actuation. The electric detection and actuation system is designed for use with the ANSUL fire suppression systems that use pneumatic actuation as a means of system actuation.

The first of two initiating circuits is the supervised detection circuit designed to be connected to linear (wire) and/or spot type thermal detectors that provide a contact closure input to initiate a fire detected condition. The second initiating circuit is designed to accept a contact closure type of actuating device such as a manual electric pull station input or a pressure switch to initiate the module when the system is actuated with the pneumatic/manual actuator or a manual/electric pull station device. The initiating circuits are low impedance and designed to eliminate nuisance alarms associated with contact bounce.

A pneumatic actuation device is used on the system now in place of the squib and its' components, which were used until late 2009.

For more information on the above system request Form F-98131-4 SC-N Data/Specification Sheet.

CHECKFIRE MP-N:

The CHECKFIRE MP-N ANSUL fire detection/suppression package is designed and approved for use in mining vehicles, including those that operate in an explosive methane/air atmosphere.

THE CHECKFIRE MP-N Electric Detection and Actuation System is a modified version of the FM approved SC-N Electric Detection and Actuation System described above. The modification has been done to meet the intrinsically safe requirements of MSHA.

This system is approved by MSHA for permissible applications in an explosive methane/air atmosphere.

Modification includes the addition of intrinsically safe circuitry to the battery assembly and the main control board.

Due to the inability to make intrinsically safe wiring connections, trouble and alarm relay contacts that are normally provided with the CHECKFIRE SC-N control module have been removed on the CHECKFIRE MP-N control module.

A gas motor is used instead of the pneumatic actuation device that is used on the the SC-N system.

For more detailed information request a copy of Form F-2001001 MP-N Data/Specification sheet.

- They are used along with the ANSUL manual fire suppression system **not** in place of it.
- These systems are used to save lives, save equipment, lower insurance costs.
- This information is just a brief description of and about the systems. For more information contact us.
- All systems should be serviced and re-inspected every six months minimum, and more often in hostile environments and where severe conditions exist or when a system has been discharged.

This information has been extracted from the Ansul Forms referenced above.

Fletcher Service Inc.
Service • Inspection • Engineering

It is extremely important when you purchase a piece of production equipment that unexpected “down time” is limited. However, required maintenance on your Fletcher equipment does not have to interrupt your production objectives. J.H. Fletcher & Co. now provides maintenance services through Fletcher Service, Inc. This company’s purpose is to provide timely audits on Fletcher equipment to identify areas that require attention and prevent un-scheduled down time. Fletcher Service Inc. can provide you a cost effective audit program on your Fletcher equipment and perform needed repairs before a problem turns into lost productivity. Through a planned audit program, you can always keep ahead of required maintenance issues on your equipment. If you are interested in this service, please call Mike O’ Leary, Sales Manager in our Industrial Minerals Department. You can email Mike at moleary@jhfletcher.com.

TAG REPLACEMENT

Fletcher wants to make sure operators and maintenance personnel stay informed of potential dangers and hazards associated with roof bolting equipment. Not only do we evaluate the machines themselves but we also look at ways to make warnings clear and concise. Fletcher now has available tag number 359162 as a replacement for 159538. This danger notice alerts maintenance personnel to securely block all moving parts and lock-out power before performing maintenance. If you would like to receive this tag, contact the Fletcher service department.

Fletcher reminds all personnel, operating or working on Fletcher equipment, that maintaining warning, caution and danger tags is just as important as maintaining the machine. Keep tags clean and legible and order replacements from Fletcher when necessary.

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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