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SUBJECT: Potential Hazard from Recalled Electrical Disconnect Switches

**Who needs this information?**

This Program Information Bulletin (PIB) is intended for mine operators, miners' representatives, independent contractors, Mine Safety and Health Administration (MSHA) enforcement personnel, Technical Support personnel, manufacturers, repair and rebuild shops, and other interested parties.

**Why is MSHA issuing this PIB?**

MSHA is issuing this PIB to inform the mining industry of a recall of potentially defective electrical disconnect switches manufactured in Finland by Ensto Control Oy, distributed by Ensto in the United States (US) to US manufacturers and distributors, and sold under other manufacturers' labels. The defective switches were identified as certain models for the Ensto Control Origin toggle and rotary switches.

### **What is the background for this PIB?**

MSHA became aware of a Product Safety Bulletin issued on January 15, 2008, by Eaton Corporation. The bulletin indicated a potential defect in Eaton/Cutler-Hammer Brand labeled rotary and toggle disconnect switches. However, potentially defective switches were also sold under several manufacturers' labels. A link to the US recall issued by Ensto Control Oy can be found at:

[http://www.ensto.com/www/english/index/enstogroup/Currenttopics/switch\\_in\\_usa.html](http://www.ensto.com/www/english/index/enstogroup/Currenttopics/switch_in_usa.html)

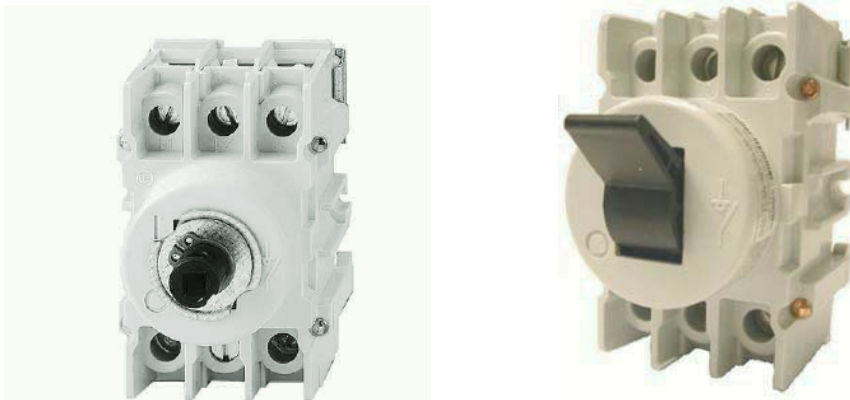
The disconnect switches are found in products distributed by and labeled as:

- Eaton/Cutler-Hammer
- Ensto
- Factorymation
- Ferraz Shawmut
- Kaltek Inc
- Siemens Automation
- Socomec

### **Information**

As shown below, the affected switches may be rotary or toggle configuration and have current ratings from 60 to 125 amperes. The switches are typically used in motor disconnect applications (such as HVAC units) and in electric distribution and control panel applications.

**MSHA has been informed that only those switches manufactured during weeks 1 through 50 of 2007 are potentially defective and must be replaced.**



MSHA has not been able to determine whether any of these defective switches are being used in the mining industry. The defect in the disconnect switch could cause one pole to remain energized when the switch is in the **OFF** position. This potential hazard could expose miners performing repair or maintenance work to energized circuits when the indicator is in the off position. The switch must be replaced to assure safe operation.

To determine if the disconnect switch was manufactured during weeks 1 through 50 of 2007, the date code on the back of the switch must be checked using the recommended procedures below:

Step 1: De-energize circuit by moving an upstream de-energizing device to the "OFF" position.

Step 2: Move the disconnect switch to the "OFF" position.

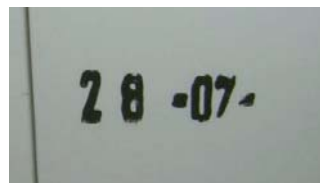
Step 3: Use a properly rated voltage-sensing device to verify that the line and load terminals of the circuit are de-energized.

Step 4: If the disconnect switch is installed in an enclosure, open cover and remove the switch. The date code is listed on the back of the switch at the bottom.

Step 5: If date code falls between Week 1 and Week 50 of 2007 (01 07 and 50 07) then the unit must be replaced as specified under Corrective Action. If the date does not fall in the stated time period, reinsert the switch. The unit can be operated normally and the circuit re-energized.



Week - Year



If the switch is enclosed in an Air Conditioning (A/C) Type Disconnect Enclosure manufactured by Eaton, the date is listed on the upper right corner inside the enclosure. To determine the date code of the A/C disconnect switch the operator should use the recommended procedures below:

Step 1: De-energize the circuit by moving an upstream de-energizing device to the "OFF" position.

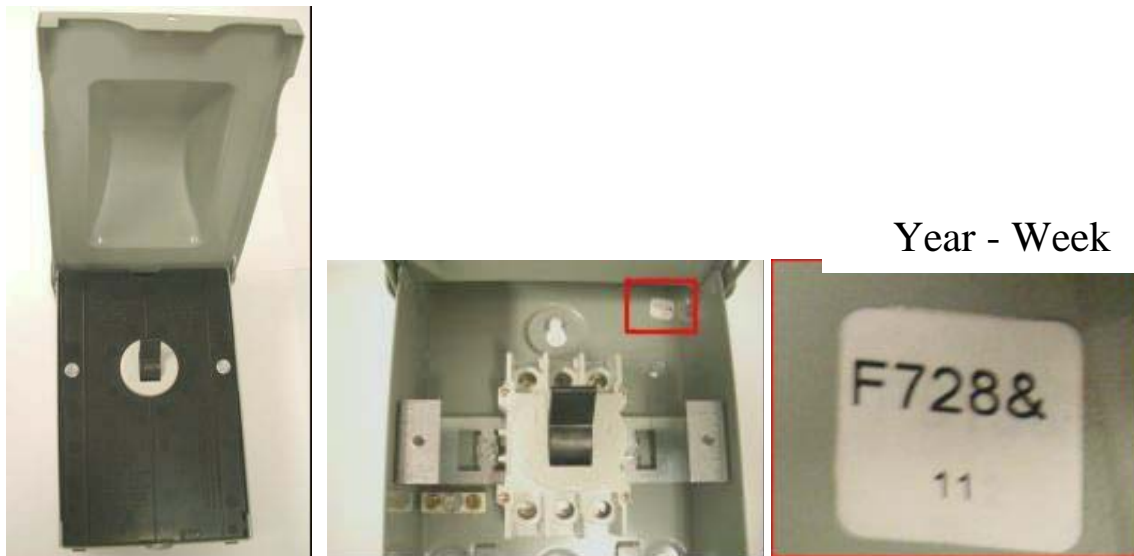
Step 2: Move the disconnect switch to the "OFF" position.

Step 3: Remove the plastic inner cover. Use a properly rated voltage-sensing device to verify that the line and load terminals of the circuit are de-energized.

Step 4: Locate the date code listed on the upper right corner inside the case.

Step 5: If the A/C disconnect enclosure date code falls between Week 1 and Week 50 of 2007 (01 07 and 50 07) then the date code of the switch must be checked (continue to Step 6). If the A/C disconnect date code does not fall into the stated time period, the unit can be operated normally. The circuit can be re-energized.

Step 6: Remove the switch using the din rail release tab mechanism located on the line side of the switch. Inspect the date code located on the back of the switch as outlined previously. If the date code falls between Week 1 and Week 50 of 2007, the switch must be replaced as specified under Corrective Action. If the date does not fall in the stated time period, reinsert the switch and cover plate. The unit can be operated normally and the circuit re-energized.



### **Corrective Action**

1. If it is determined that the switch was manufactured during weeks 1 through 50 of 2007, the switch should be tested to determine whether it is, in fact, defective.
2. If it is determined the switch is defective, the switch must be removed from service immediately to assure safe operation.
3. If the switch was manufactured within the recall dates but not defective, the switch can remain in service until replaced as soon as possible. This switch will need to be marked to indicate the potential defect and appropriate safety procedures should be

implemented to verify that load terminals are de-energized when the switch is in the “off” position until the switch is replaced.

4. To have the switch replaced, contact your supplier and ask for a replacement for the recalled product. Your distributor or original equipment manufacturer will make necessary arrangements for replacement parts.

**What is MSHA’s authority for this PIB?**

The Federal Mine Safety and Health Act of 1977, as amended, 30 U.S.C. § 801 et seq; 30 C.F.R. § 56.12030, 56.12002, 56.12041, 57.12030, 57.12002, 57.12041, 75.512, 75.520, 77.502, and 77.507.

**Internet Availability**

The PIB may be viewed on the Internet by accessing MSHA’s home page at <http://www.MSHA.gov> and then choosing ‘Compliance Information’ under Compliance Assistance, and then ‘Program Information Bulletins.’

**Who are the MSHA contact persons for this PIB?**

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