

# Types H, 3H, 4H, V4H, 6H, and V6H series trip coil kit KA83H installation instructions



*Powering Business Worldwide*

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## Safety for life



Eaton meets or exceeds all applicable industry standards relating to product safety in its Cooper Power™ series products. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Eaton employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally approved safety procedures and safety instructions when working around high voltage lines and equipment, and support our “Safety For Life” mission.

## Safety information

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians who are familiar with this equipment should install, operate, and service it.

A competent technician has these qualifications:

- Is thoroughly familiar with these instructions.
- Is trained in industry-accepted high and low-voltage safe operating practices and procedures.
- Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment.
- Is trained in the care and use of protective equipment such as arc flash clothing, safety glasses, face shield, hard hat, rubber gloves, clampstick, hotstick, etc.

Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

### Hazard Statement Definitions

This manual may contain four types of hazard statements:

#### DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

#### WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

#### CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

#### CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in equipment damage only.

### Safety instructions

Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

#### DANGER

**Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment.**

G103.3

#### WARNING

**Before installing, operating, maintaining, or testing this equipment, carefully read and understand the contents of this manual. Improper operation, handling or maintenance can result in death, severe personal injury, and equipment damage.**

G101.0

#### WARNING

**This equipment is not intended to protect human life. Follow all locally approved procedures and safety practices when installing or operating this equipment. Failure to comply can result in death, severe personal injury and equipment damage.**

G102.1

#### WARNING

**Power distribution and transmission equipment must be properly selected for the intended application. It must be installed and serviced by competent personnel who have been trained and understand proper safety procedures. These instructions are written for such personnel and are not a substitute for adequate training and experience in safety procedures. Failure to properly select, install or maintain power distribution and transmission equipment can result in death, severe personal injury, and equipment damage.**

G122.3

## Product information

### Introduction

*Service Information MN280018EN* provides installation instructions for the series trip coil kit KA83H for Eaton's Cooper Power™ series Types H, 3H, 4H, V4H, 6H, and V6H reclosers. Each kit is based on the continuous current rating of the coil.

- KA83H5 5 A Rating
- KA83H10 10 A Rating
- KA83H15 15 A Rating
- KA83H25 25 A Rating
- KA83H35 35 A Rating
- KA83H50 50 A Rating

### Read this manual first

Read and understand the contents of this manual and follow all locally approved procedures and safety practices before installing or operating this equipment.

### Additional information

These instructions cannot cover all details or variations in the equipment, procedures, or process described nor to provide directions for meeting every possible contingency during installation, operation, or maintenance. For additional information, please contact your Eaton representative.

### Acceptance and initial inspection

Each kit is completely assembled, tested, and inspected at the factory. It is carefully calibrated, adjusted, and in good condition when accepted by the carrier for shipment.

Upon receipt, inspect the carton for signs of damage. Unpack the kit and inspect it thoroughly for damage incurred during shipment. If damage is discovered, file a claim with the carrier immediately.

### Handling and storage

Be careful during handling and storage of the kit to minimize the possibility of damage. If the valve is to be stored for any length of time prior to installation, provide a clean, dry storage area.

### ANSI standards

Eaton reclosers are designed and tested in accordance with ANSI® standards C37.60 and C37.85 and ANSI® guideline C37.61.

### Quality standards

ISO 9001 Certified Quality Management System

### Description

Electrical operation is accomplished by the series trip solenoid whose coil is connected in series with the line and protected by an air bypass gap. When fault current approaches twice normal line current, the increased magnetic field pulls a plunger down into the coil. As the plunger moves downward, it trips open the recloser contacts.

Type H, 3H, 4H, V4H, 6H, and V6H reclosers are constructed so that solenoid coils of different ampere ratings are interchangeable.

## Installation

### WARNING

**Hazardous voltage. De-energize the switchgear before installing this kit. Follow all locally approved safety practices and procedures when working around high voltage lines and equipment. Failure to comply can result in contact with high voltage, which will cause death or severe personal injury.**

T232.3

### CAUTION

**Equipment damage. Refer to the specific switchgear unit maintenance manual for tanking/untanking procedures and related instructions. Failure to follow these instructions could result in equipment damage or personal injury.**

T238.0

### CAUTION

**Follow all locally approved safety practices when lifting and mounting the equipment. Use the tapped lifting provisions provided. Lift the load smoothly and do not allow the load to shift. Improper lifting can result in equipment damage.**

G126.0

### CAUTION

**Equipment damage. Recloser must be open (yellow operating handle, under sleet hood, down) before untanking. Tripping the mechanism out of oil will cause excessive mechanical shock to the operating mechanism, which will cause accelerated wear and/or damage to the mechanism.**

T202.0

### CAUTION

**Equipment damage. Keep work areas clean to prevent debris from accumulating on or in the hydraulic mechanism during disassembly and reassembly procedures. Failure to comply can result in hydraulic failure and recloser misoperation.**

T254.0

### IMPORTANT

When installing this kit, use a clean, lint free cloth to prevent contamination of the hydraulic mechanism during series trip coil replacement.

Refer to the appropriate maintenance manual for the step-by-step procedures to remove the recloser from service and for specific disassembly and reassembly procedures.

For Types H, 4H and V4H reclosers, refer to *Service Information S280-10-9: Types H, 4H and V4H Maintenance Instructions*.

For Types 6H and V6H reclosers, refer to *Service Information S280-10-5: Types 6H and V6H Maintenance Instructions*.

The entire installation process should be conducted in a clean environment, such as a repair shop.

1. Bypass, trip, and de-energize the recloser.
2. Carefully transport the unit to a suitable service facility.
3. With the recloser in the open position, untank the recloser by loosening the head bolts and washers on the head casting. Carefully lift the head assembly out of the tank using the lifting lug(s).
4. Remove the solenoid coil from the mechanism per the instructions in the appropriate maintenance manual referenced above.
5. Install the new solenoid coil per the instructions in the appropriate maintenance manual referenced above.

### CAUTION

**Equipment failure. Kit may contain more than one data plate. Install data plate that matches the recloser type. An incorrect data plate can result in misapplication of the recloser beyond its capability.**

T301.0

6. Replace the coil data plate. Refer to Table 1 to determine the coil data plate ratings that must be noted for various coil applications.

### IMPORTANT

The coil data plate must be replaced when replacing the series trip coil. The coil data plate must reflect the same maximum interrupting current rating of the series trip coil used in the recloser.

**Table 1. Coil Data Plate Ratings for Various Coil Applications**

Coil Rating	H & 3H Reclosers		4H, 6H, V4H, and V6H Reclosers	
	Minimum Trip Current	Maximum Interrupting Current	Minimum Trip Current	Maximum Interrupting Current
5	10	125	10	200
10	20	250	20	400
15	30	375	30	600
25	50	625	50	1000
35	70	875	70	1400
50	100	1250	100	2000

## Testing

To test the recloser after the appropriate series trip coil kit and data plate have been installed, refer to the appropriate instruction manual for further information:

- *Service Information S280-10-5, Types 6H and V6H Maintenance Instructions*
- *Service Information S280-10-9, Types H, 4H, and V4H Maintenance Instructions*



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