

# Reclosers

## Types 3H and 6H Counter Replacement Kit KA701H3 Installation Instructions

Service Information

# S280-10-16

Type 3H for Serial Numbers 3H586 through 3H10059  
Type 6H for Serial Numbers 6H2651 and below

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**TABLE 1**  
**Counter Replacement Kit KA701H3 Parts List**

Item	Part Number	Description	Quantity
1	COA0028004	Counter Assembly	1
2	751515106062A	Round-head screw 32 x .625 stainless steel	2
3	900215006000A	Washer .38 OD, .05 thick stainless steel	2
4	KA20480276	S280-80-16 Instruction Manual	1
5	KA20480594	S280-10-16 Instruction Manual	1

## PRODUCT INFORMATION

### Introduction

*Service Information S280-10-16* provides installation instructions for Kit KA701H3. This kit contains replacement counters for Types 3H and 6H reclosers having serial numbers within the ranges as listed.

### 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, contact your Cooper Power Systems representative.

### Acceptance and Initial Inspection

This product is 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 this equipment to minimize the possibility of damage.

### ANSI Standards

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

### Quality Standards

The Quality System at the Cooper Power Systems, Kyle Distribution Switchgear plant is certified to the ISO 9001 standard.

### Description

Kit KA701H3 is used to replace the operations counter on Types 3H reclosers with serial numbers from 3H586 through 3H10059 and for Type 6H reclosers with serial numbers from 6H2651 and below. A modification is required of the counter mounting holes. This instruction manual is used with Item 4, *Service Information S280-80-16 Operation Counter Replacement Instructions*.



## SAFETY FOR LIFE



Cooper Power Systems products meet or exceed all applicable industry standards relating to product safety. 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 Cooper Power Systems 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 flash clothing, safety glasses, face shield, hard hat, rubber gloves, 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 high voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high and low voltage lines and equipment. G103.2

**⚠ 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 may result in death, severe personal injury and equipment damage. G102.1

**⚠ WARNING:** Power distribution 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 equipment can result in death, severe personal injury, and equipment damage. G122.2

# INSTALLATION

**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 counter replacement.

## Remove the Recloser from Service

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 Type 3H reclosers, refer to *Service Information S280-10-4*. For Type 6H reclosers, refer to *Service Information S280-10-5*.

**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:** 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. 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.

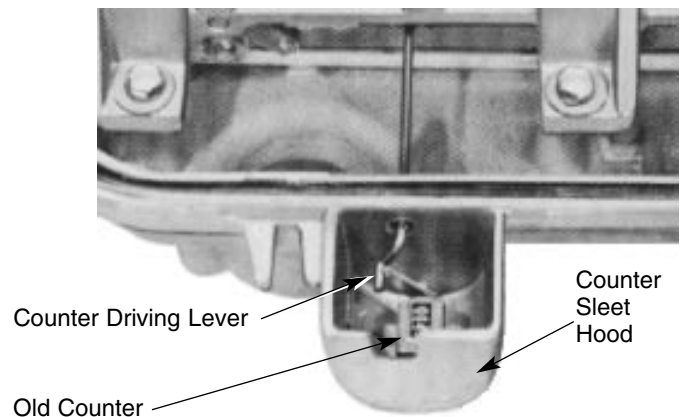
T238.0

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.

## Remove Old Counter

1. 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 lugs.
2. Unscrew and remove the old counter from the recloser. Refer to Figure 1.
3. Clear the counter sleet hood of any accumulated dirt or foreign matter.
4. Inspect the counter driving lever; it should move freely.

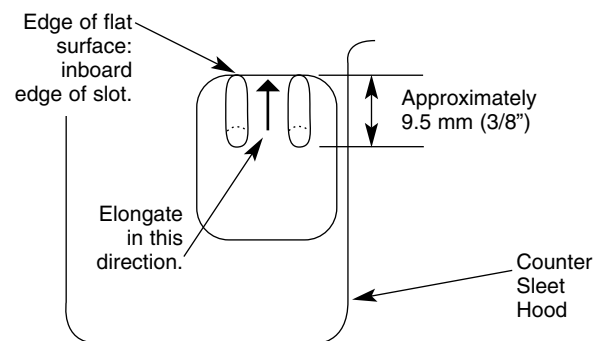


**Figure 1.**  
Recloser operations counter.

## Modify Mounting Holes

Two 4 mm (5/32") diameter holes exist in each of the three counter sleet hoods on the recloser head casting.

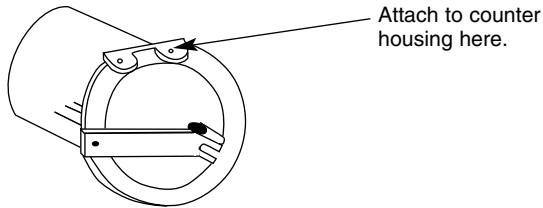
Elongate the three counter housing holes toward the main body of the casting. The slot should be elongated to approximately 9.5 mm (3/8") long. The inboard edge of the slot should be at the edge of the flat surface. See Figure 2.



**Figure 2.**  
Mounting holes.

## Install Counter

Using Item 2, two screws, and Item 3, two washers, secure Item 1, the new counter operations assembly, inside the counter sleet hood. Apply sufficient force to the screwdriver to cut a good thread with the self-tapping screws. See Figures 2 and 3.



**Figure 3.**  
**New Operations Counter Assembly.**

## Adjust Counter

Refer to Item 4, *Service Information S280-80-16 Operation Counter Replacement Instructions* for general guidance on adjustment. Also, check the following (see Figure 1):

1. Pull the counter driving lever, which projects through the casting wall, outward toward the counter body. Check that through its arc of travel it does not interfere with the counter body. If interference occurs, adjust the position of the counter or grind away some of the end of the driving lever.
2. With the driving lever retracted toward the main body of the casting, move it through its travel and confirm that the counter arm is engaged and is rotated to cause counter operation. If the driving lever missed the counter arm completely, adjust the position of the counter to overcome this.

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## TESTING

Test counter operation by operating the recloser. Make sure recloser operation causes digit change; if it does not, adjust counter arm as described in Item 4, *Service Information S280-80-16 Operation Counter Replacement Instructions*. Observe the precautions listed in that manual.

