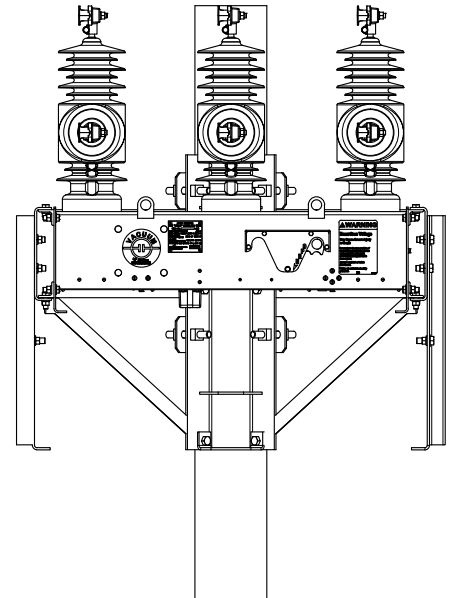
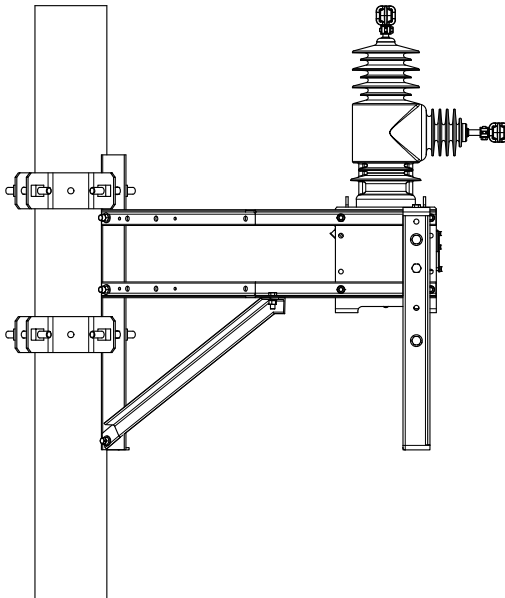
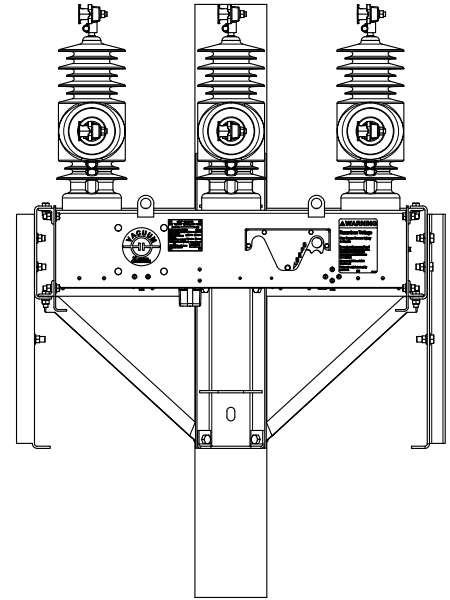
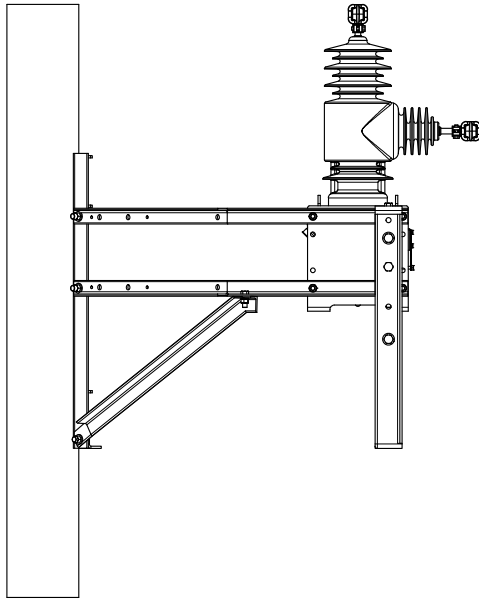


KNOVA957-10 pole-mounting hanger and KNOVA957-11 pole-mounting hanger assembly and installation instructions



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 MN280011EN provides assembly and installation instructions for the KNOVA957-10 and KNOVA957-11 pole-mounting hangers.

Before assembling the pole-mounting hanger, carefully read and understand the contents of this manual.

The pole-mounting hangers referenced in these instructions are intended for Eaton's Cooper Power™ series NOVA™ reclosers. Refer to *Service Information S280-42-1 NOVA 15, NOVA 27, and NOVA 38 Three-Phase Microprocessor-Controlled Recloser Installation and Operation Instructions* and *Service Information S280-44-1 NOVA STS-15, NOVA STS-27, and NOVA STS-38 Single-Tank, Triple-Single, Electronically-Controlled Recloser Installation and Operation Instructions* for complete installation instructions.

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 provide directions for meeting every possible contingency during installation, operation, or maintenance. When additional information is desired to satisfy a problem not covered sufficiently for the user's purpose, please contact your Eaton representative.

Acceptance and initial inspection

All hanger parts are inspected at the factory. They are in good condition when accepted by the carrier for shipment.

Upon receipt, inspect the shipping container for signs of damage. Unpack and inspect 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 hanger to minimize the possibility of damage. If the hanger is to be stored for any length of time prior to assembly or installation, provide a clean, dry storage area.

Quality standards

ISO 9001 Certified Quality Management System

Description of frame

The pole-mounting frame referenced in these instructions are intended for the NOVA recloser.

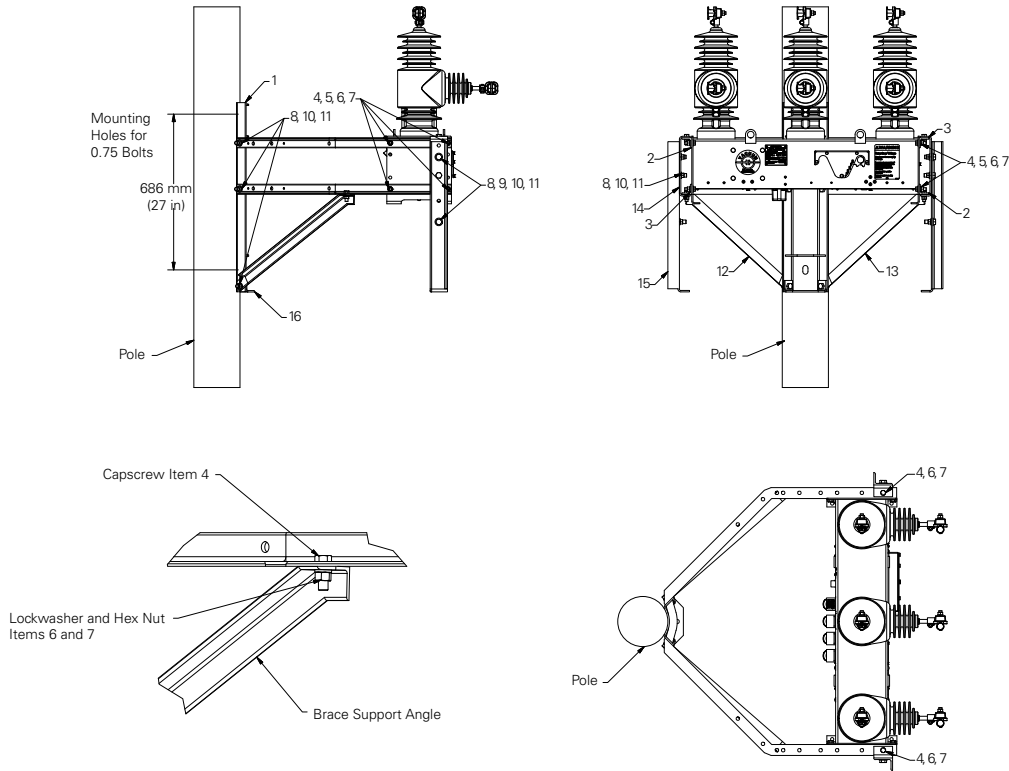
The galvanized frame is constructed of rigid structural or formed steel. The hardware is stainless steel. Practical, welded construction is used to provide a high degree of rigidity with minimum weight.

- The KNOVA957-10 hanger is designed for use on a wooden pole.
- The KNOVA957-11 hanger is designed for use on steel or concrete poles. The KNOVA957-11 hanger is acceptable for mounting on a round steel or concrete pole with a diameter from 178 mm–305 mm (7"–12") or a square steel or concrete pole 165 mm–298 mm (6.5"–11") square.

KNOVA957-10 pole-mounting hanger instructions

Table 1. KNOVA957-10 Assembly Parts List

Item	Description	Part Number	Quantity
1	Channel	6A00095601	1
2	Bracket, right hand	6A00395701	2
3	Bracket, left hand	6A00395702	2
4	Hex head capscrew, 1/2 - 13	730115150150A	14
5	Washer, 1/2	900215050000A	8
6	Split lockwasher, 1/2	900815050000A	14
7	Hex nut, 1/2-13	880215113050A	14
8	Hex head capscrew, 5/8-11	730115162150A	12
9	Washer, 5/8	900215062000A	4
10	Split lockwasher, 5/8-11	900815062000A	12
11	Hex nut, 5/8-11	880215111062A	12
12	Brace support angle, right hand	6A00391201	1
13	Brace support angle, left hand	6A00391202	1
14	Bracket, PT mount	6A00424902	2
15	Bracket, leg	6A00424909	2
16	Bracket, pallet mounting	6A00395705	1
-	Anti-seize compound	KA23640017	1



Note: All dimensions are mm (inches).
Dimensions shown are approximate.

Figure 1. KNOVA957-10 pole-mounting hanger.

Hanger Assembly Instructions

The hanger is shipped unassembled. Assemble the hanger using the following procedures. Refer to Table 1.

1. Coat all threaded hardware with anti-seize compound prior to assembly.

CAUTION

Personal injury. Sheds on epoxy encapsulation have sharp edges. Wear protective gloves when handling the unit. Failure to do so can result in cuts and abrasions. T258.1

2. Orient the brackets as illustrated in Figure 1.
3. Attach the four brackets (Items 2 and 3) to the recloser using eight 1/2-13 hex head capscrews, split lockwashers, and hex nuts (Items 4, 6, and 7). Install Item 5 (washer) between capscrew and recloser housing.
4. Finger-tighten hardware.
5. Attach the channel (Item 1) to the ends of the four brackets using four 5/8-11 hex head capscrews, split lockwashers, and hex nuts (Items 8, 10, and 11).
6. Finger-tighten hardware.
7. Attach the brace support angles (Items 12 and 13) to the bottom of the two brackets (using holes closest to recloser) using two 1/2-13 hex head capscrews, split lockwashers and hex nuts (Items 4, 6, and 7). Refer to Figure 1 for proper orientation.
8. Finger-tighten hardware.
9. Attach the brace support angles to the channel using two 5/8-11 hex head capscrews, split lockwashers, and hex nuts (Items 8, 10, and 11).
10. Attach all remaining components and secure with hardware as detailed in Figure 1.
11. Completely tighten all hardware to 68 Nm (50 ft-lbs) for 1/2 hardware and 136 Nm (100 ft-lbs) for 5/8 hardware.

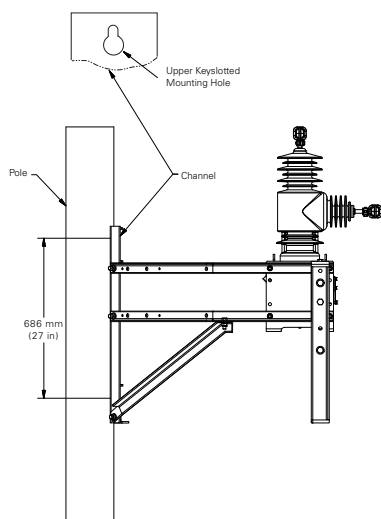


Figure 2. Proper orientation of upper keyslotted mounting hole for KNOVA957-10 pole-mounting hanger.

Hanger Installation Instructions

The hanger is mounted to the pole on 686 mm (27 inch) centers. The upper keyslotted mounting hole allows for some variation in the mounting centers dimension. (See Figure 3.)

WARNING

Falling equipment. Use the lifting lugs provided and follow all locally approved safety practices when lifting and mounting the equipment. Lift the unit smoothly and do not allow the unit to shift. Improper lifting can result in severe personal injury, death, and/or equipment damage. G106.3

1. Lift the entire assembly. See Figure 3 for lifting instructions.
2. Attach the frame to the pole with 19 mm (3/4 inch) pole-mounting hardware (to be provided by the customer).

Moving the Recloser

NOVA reclosers are shipped palletized (bolted onto a pallet). When moving with a fork truck/lift, the recloser must remain bolted to the pallet to avoid damage to the OPEN/CLOSE contact position indicator, UNBOLT RECLOSER ASSEMBLY FROM PALLET PRIOR TO LIFTING.

Lifting the Recloser

Follow all approved safety practices when making hitches and lifting the equipment. Lift the unit smoothly and do not allow the unit to shift. Stabilize the unit with a strap attached to the frame as needed.

CAUTION

Tip-over Hazard. High center of gravity. Use a 4-point hitch to prevent switchgear from overturning during lifting operations. Improper lifting can result in personal injury or equipment damage. T297.0

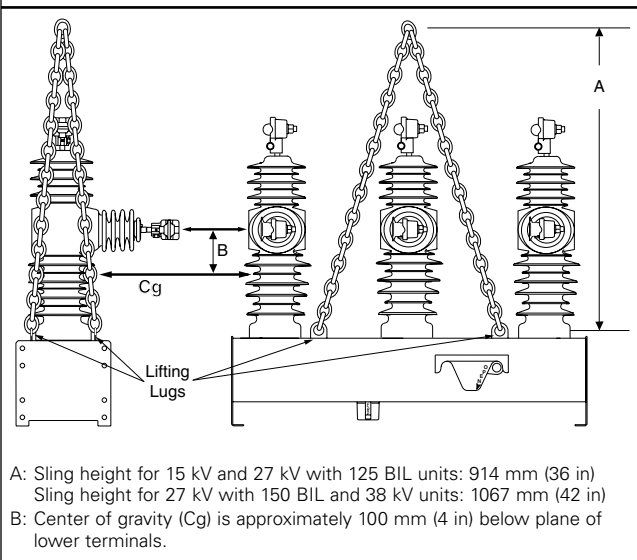
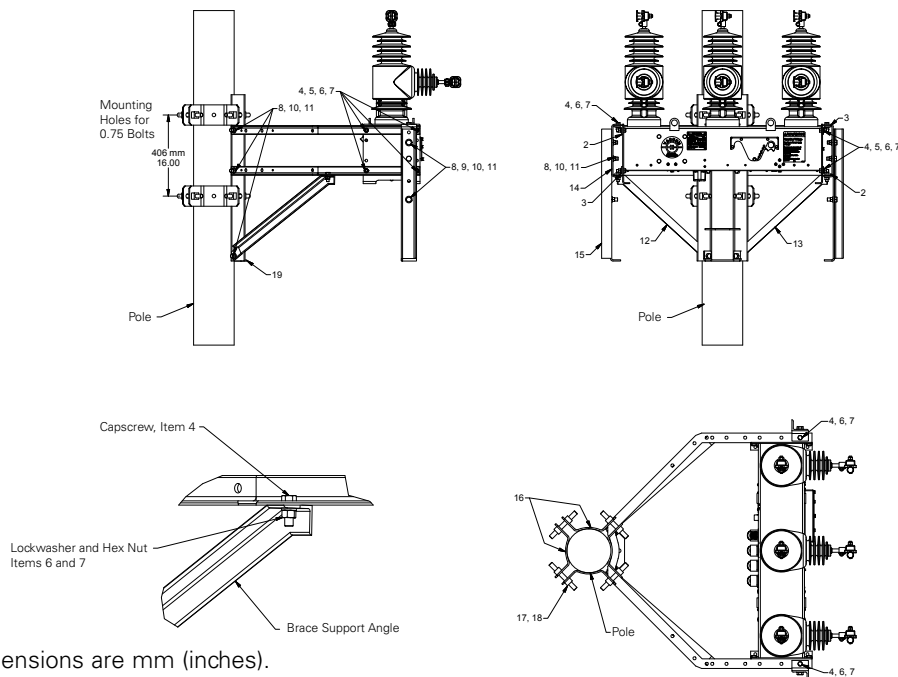


Figure 3. Moving and lifting the recloser.

KNOVA957-11 pole-mounting hanger instructions

Table 2. KNOVA957-11 Assembly Parts List

Item	Description	Part Number	Quantity
1	Channel	6A00301001	1
2	Bracket, right hand	6A00395701	2
3	Bracket, left hand	6A00395702	2
4	Hex head capscrew, 1/2 - 13	730115150150A	14
5	Washer, 1/2	900215050000A	8
6	Split lockwasher, 1/2	900815050000A	14
7	Hex nut, 1/2-13	880215113050A	14
8	Hex head capscrew, 5/8-11	730115162150A	12
9	Washer, 5/8	900215062000A	4
10	Split lockwasher, 5/8-11	900815062000A	12
11	Hex nut, 5/8-11	880215111062A	12
12	Brace support angle, right hand	6A00391201	1
13	Brace support angle, left hand	6A00391202	1
14	Bracket, PT mount	6A00424902	2
15	Bracket, leg	6A00424909	2
16	Spacer plate	L000383	6
17	Bolt, 3/4 x 7-1/4	DZ05D18	8
18	Square nut, 3/4	DF1N6	16
19	Bracket, pallet mounting	6A00395705	1
–	Anti-seize compound	KA23640017	1



Note: All dimensions are mm (inches).
Dimensions shown are approximate.

Figure 4. KNOVA957-11 pole-mounting hanger.

Hanger Assembly Instructions

The hanger is shipped unassembled. Assemble the hanger using the following procedures. Refer to Table 4.

1. Coat all threaded hardware with anti-seize compound prior to assembly.

CAUTION

Personal injury. Sheds on epoxy encapsulation have sharp edges. Wear protective gloves when handling the unit. Failure to do so can result in cuts and abrasions. T258.1

2. Orient the brackets as illustrated in Figure 4.
3. Attach the four brackets (Items 2 and 3) to the recloser using eight 1/2-13 hex head capscrews, split lockwashers, and hex nuts (Items 4, 6, and 7). Install Item 5 (washer) between capscrew and recloser housing.
4. Finger-tighten hardware.
5. Attach the channel (Item 1) to the ends of the four brackets using four 5/8-11 hex head capscrews, split lockwashers, and hex nuts (Items 8, 10, and 11).
6. Finger-tighten hardware.
7. Attach the brace support angles (Items 12 and 13) to the bottom of the two brackets (using holes closest to recloser) using two 1/2-13 hex head capscrews, split lockwashers and hex nuts (Items 4, 6, and 7). Refer to Figure 4 for proper orientation.
8. Finger-tighten hardware.
9. Attach the brace support angles to the channel using two 5/8-11 hex head capscrews, split lockwashers, and hex nuts (Items 8, 10, and 11).
10. Attach all remaining components and secure with hardware as detailed in Figure 4.
11. Tighten all hardware to 68 Nm (50 ft-lbs) for 1/2 hardware, 136 Nm (100 ft-lbs) for 5/8 hardware and 271 Nm (200 ft-lbs) for 3/4 hardware provided.

Hanger Installation Instructions

The hanger is mounted to the pole on 406 mm (16 inch) centers. (See Figure 4.)

WARNING

Falling equipment. Use the lifting lugs provided and follow all locally approved safety practices when lifting and mounting the equipment. Lift the unit smoothly and do not allow the unit to shift. Improper lifting can result in severe personal injury, death, and/or equipment damage. G106.3

1. Lift the entire assembly. See Figure 5 for lifting instructions.
2. Attach the spacer plates (Item 16) to the channel and each other to encircle the pole using two 3/4x6-1/2 bolts and square nuts (Items 17 and 18). Place two nuts on each bolt, one nut on either side of the spacer plate. See Figure 4.
3. Tighten all hardware to 68 Nm (50 ft-lbs) for 1/2 hardware, 136 Nm (100 ft-lbs) for 5/8 hardware and 271 Nm (200 ft-lbs) for 3/4 hardware provided.

Moving the Recloser

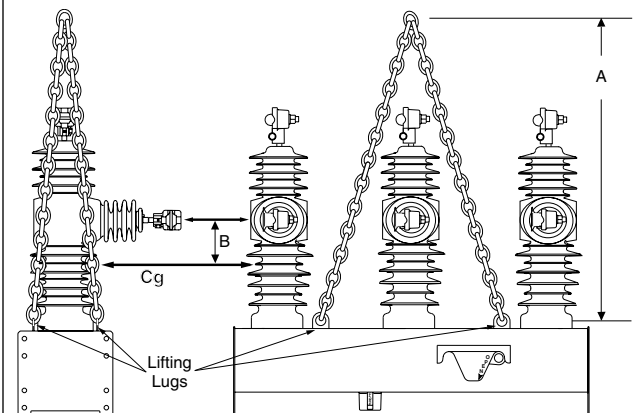
NOVA reclosers are shipped palletized (bolted onto a pallet). When moving with a fork truck/lift, the recloser must remain bolted to the pallet to avoid damage to the OPEN/CLOSE contact position indicator, UNBOLT RECLOSER ASSEMBLY FROM PALLET PRIOR TO LIFTING.

Lifting the Recloser

Follow all approved safety practices when making hitches and lifting the equipment. Lift the unit smoothly and do not allow the unit to shift. Stabilize the unit with a strap attached to the frame as needed.

CAUTION

Tip-over Hazard. High center of gravity. Use a 4-point hitch to prevent switchgear from overturning during lifting operations. Improper lifting can result in personal injury or equipment damage. T297.0



A: Sling height for 15 kV and 27 kV with 125 BIL units: 914 mm (36 in)
Sling height for 27 kV with 150 BIL and 38 kV units: 1067 mm (42 in)
B: Center of gravity (Cg) is approximately 100 mm (4 in) below plane of lower terminals.

Figure 5. Moving and lifting the recloser.

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