

Voltage Regulators

Service Information

Quik-Drive T875 Tap Changer Main Stationary Contact Replacement Instructions

S225-50-13

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GENERAL

The purpose of this replacement kit is to provide the parts and installation instructions for replacing the main stationary contacts on the T875 Quik-Drive Tap Changer.

PARTS SUPPLIED

Item	Description	Qty
1	Main Stationary Contact	1*

* Quantity will depend on the quantity ordered.

TOOLS REQUIRED

Description	Qty
Ratchet Wrench	1
3/4 inch (20 mm) Deep Well Socket	1
14 inch (7 mm) Deep Well Socket	1
Torque Wrench lbs-in	1

PRODUCT INFORMATION

Introduction

Cooper Power Systems T875 Quik-Drive Tap Changer Main Stationary Contact and installation instructions gives customers the ability and guidance to replace the main stationary contact during maintenance cycles.

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. For additional information, contact your representative.

Acceptance and Initial Inspection

Each main stationary contact is in good condition when accepted by the carrier for shipment. Upon receipt, inspect the shipping container for signs of damage. Unpack the main stationary contact and inspect it thoroughly for damage incurred during shipment. If damaged is discovered, file a claim with the carrier immediately.

Handling and Storage

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

Standards

ISO 9001:2008 Certified Quality Management System



Figure 1.
Main Stationary Contact.



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 a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING:

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

CAUTION:

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

CAUTION: Indicates a hazardous situation which, if not avoided, could 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.

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.

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.

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.

INSTALLATION PROCEDURE

Contact Removal

- Using a 3/4 inch (20 mm) deep well socket, remove the contact mounting nuts. When the tap changer is on a regulator, the order of removal is as follows:

Loosen and remove two (2) steel jam nuts, two (2) brass nuts, tap lead, copper shunt (tap number is stamped on the shunt), two (2) brass nuts and two (2) steel flat washers. See Figure 2.

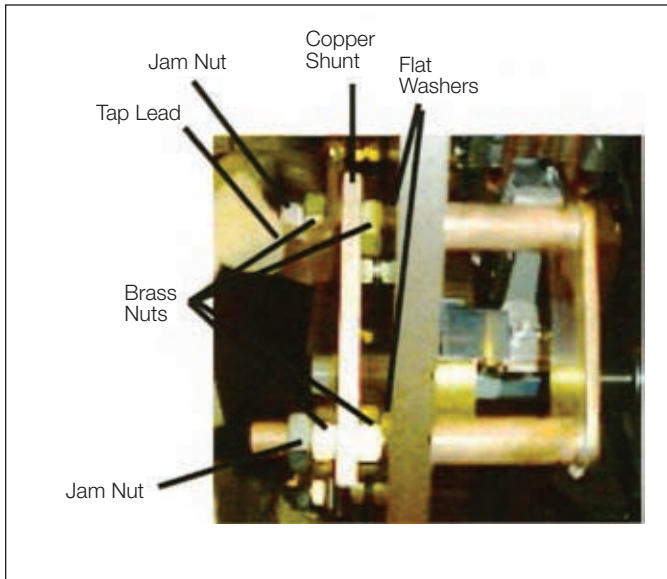


Figure 2.

- Remove the stationary contact from the insulating board. There are two (2) steel flat washers between the contact assembly and the insulating board. See Figure 3.

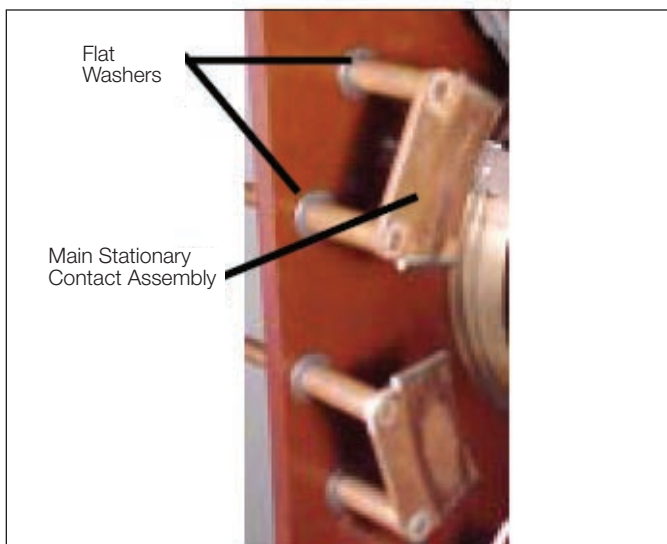


Figure 3.

- The main movable contacts will have to be relocated to another position in order to remove and replace at least one stationary contact.
- To relocate the main movable contacts use a 1/4 inch (7 mm) deep well socket and ratchet. Place the socket on the hex output shaft at the rear of the motor. See Figures 4 and 5.

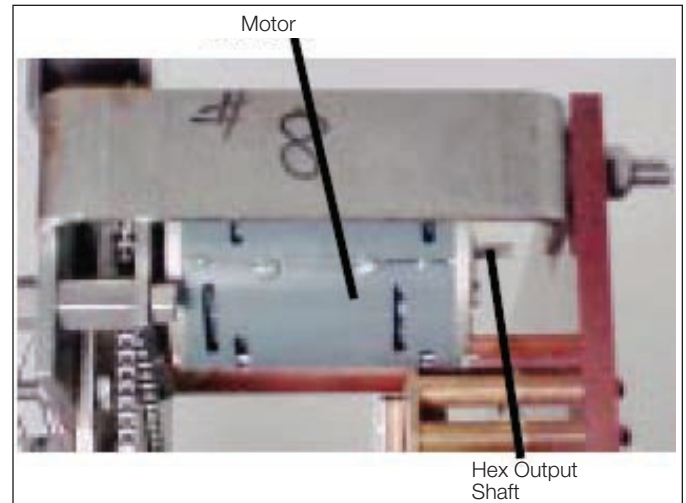


Figure 4.

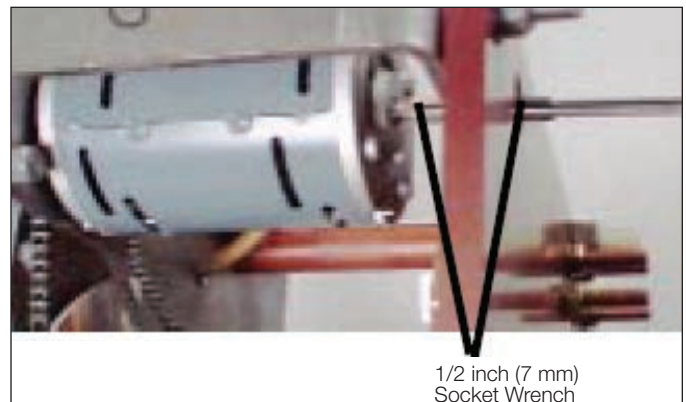


Figure 5.

- Turn the motor shaft either clockwise or counter clockwise until the main movable contacts are off of the stationary contacts.

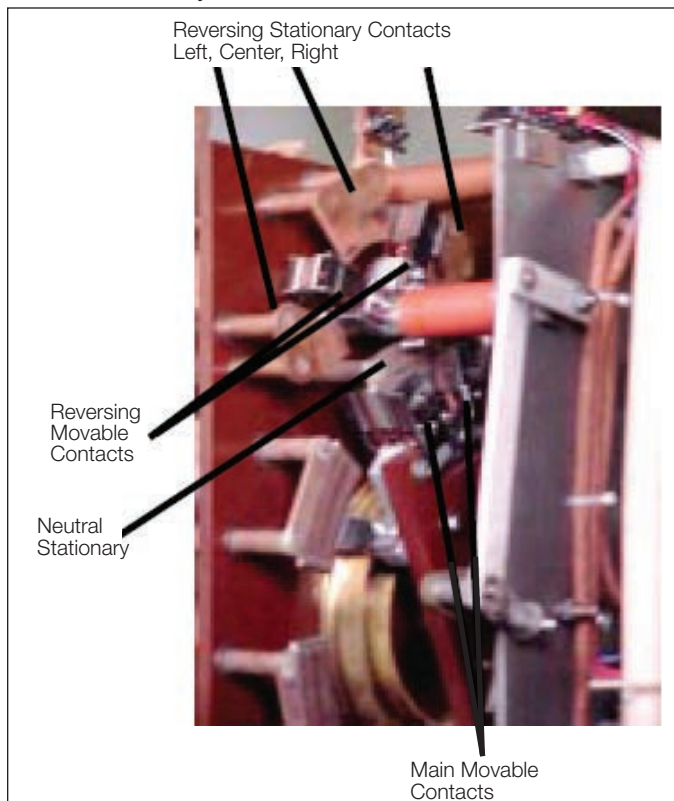


Figure 6.

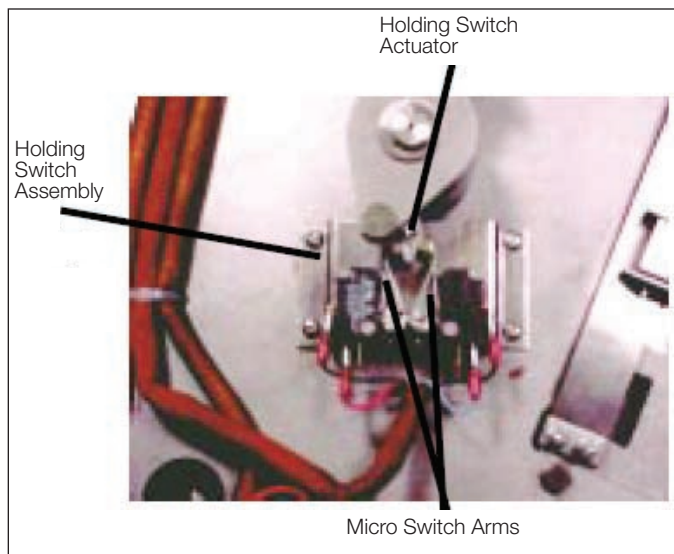


Figure 7.

- Repeat Steps 1 and 2 if needed.

Installing Contacts

- Place two (2) flat steel washers one on each post of the main stationary contact assembly.
- Place the contact assembly into the contact holes in the insulating board.
- Once the contact is through the mounting holes, place two (2) flat steel washers over the studs, then two (2) brass 3/4 inch nuts. Using a torque wrench tighten and torque the nuts to 180-192 inch/pounds (metric; 6.804 -7.257 kg/force).
- Place the copper shunt over the contact studs.
- Place the tap lead onto one of the contact studs. Make sure that the tap lead number matches the number stamped on the copper shunt.
- Place two (2) more 2/3 inch brass nuts onto the contact studs and torque to 180-192 inch/pounds (6.804-7.257 kg/force).
- Place two (2) steel jam nuts on the studs and torque to 180-192 inch/pounds. Remember when tightening and torquing the outer sets of nuts always hold the previous nuts with a wrench, in this case a 3/4 inch open end wrench.
- If required to move the movable contacts refer back to Steps 4 and 5 and move the contacts in the direction you need in order to replace the necessary contacts.

Setting the Tap Changer in Neutral

- For the tap changer to be in neutral, the following must be true.
 - The reversing movable contacts are not making contact with either of the three reversing stationary contacts (Right, Center, Left). See Figure 6.
 - The main movable contacts are to be located at 11:00 o'clock on the neutral contact. The neutral contact has two (2) copper shunts stamped with an "N" connecting the neutral contact to the center reversing stationary contact. See Figure 6.
 - The holding switches are open. See Figure 7.



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