



RTA Series Cord Reel Maintenance Manual



KH Industries

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SECTION 1 - SAFETY

Safety Information Responsibility

All owner, operator, and maintenance personnel must read and understand all manuals associated with this product before installation, operation, or maintenance.

The manual provides information on the recommended installation, operation, and maintenance of this product. Failure to read and follow the information provided could cause harm to yourself or others and/or cause product damage. No one should install, operate, or attempt maintenance of this product prior to familiarizing themselves with the information in this manual.

Safety Messages

Safety messages in this manual are preceded by the HAZARD SYMBOL and one of three words: CAUTION, DANGER, OR WARNING. These safety messages are intended to alert you to potential hazards that could cause harm to you or others and/or cause product damage.

CAUTION

- The HAZARD SYMBOL used with the word CAUTION indicates unsafe actions or situations that have the potential to cause injury, and/or minor equipment or property damage.

DANGER

- The HAZARD SYMBOL used with the word DANGER describes immediate hazards that have the potential to cause severe personal injury or death.

WARNING

- The HAZARD SYMBOL used with the word WARNING describes unsafe actions or situations that have the potential to cause severe injury, death, and/or major equipment or property damage.

NOTE

- The word NOTE is used to alert you to installation, operation, programming, or maintenance information that is important, but not hazard related.

SECTION 1 - SAFETY

Electrical Warnings

WARNING

- Properly ground this equipment before use in accordance with both the National Electric Code and local electrical codes and ordinances.
- Disconnect the electrical power from the cable reel before any service functions are performed.
- Do not use this cable reel for loads greater than the current rating listed on the label or voltage greater than 120V.
- Electrical wiring on the reel must be done by a qualified electrician.

Operational Warnings

WARNING

- Exercise care when handling the cable reel during normal operation. This cable reel has a rotating spool powered by springs under tension.
- For use in indoor, dry location only.
- Do not allow cable to retract without restricting the retraction speed.

Maintenance Warnings

WARNING

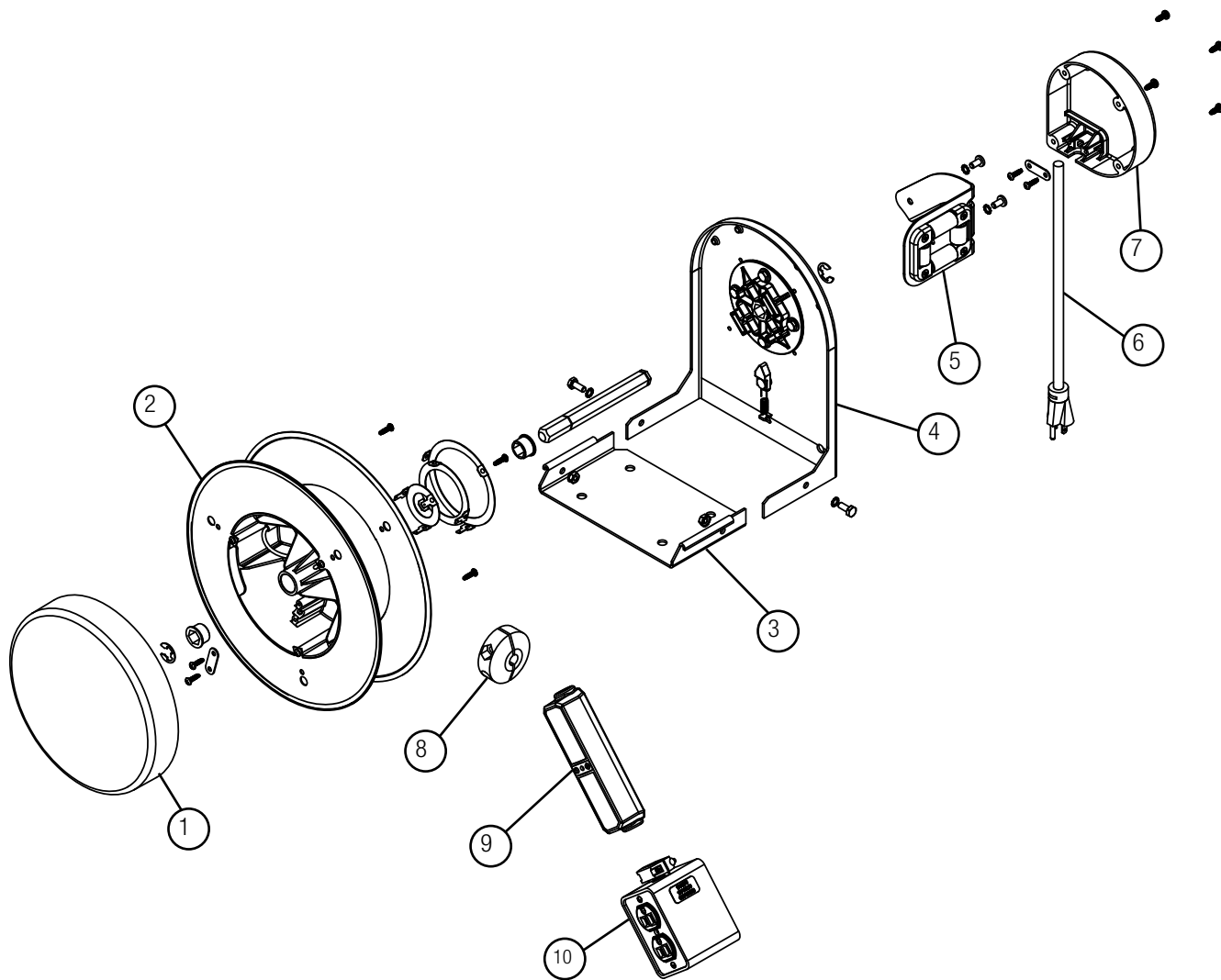
- Do not install cable different from that for which the reel is intended. Changes in diameter, weight per foot, length of cable, or flexibility will affect the operation of the reel.
- Mounting hardware and fasteners should be installed to maintain tightness under vibration and checked periodically to assure tightness.
- Overhead installation mountings should be such that the reel is not suspended by bolts in tension. A safety chain or cable is strongly recommended to minimize damage and/or possible injury in the event of mounting failure.
- Do not disassemble the spring motor for any reason. Serious personal injury could result. This cable reel is equipped with springs under tension. Contact the factory for assistance:

Call: 1-716-312-0088

Labels and Marking

Every cable reel is marked with a label which includes the KH Industries name and logo, the product catalog number, the individual product serial number, NEMA rating, amps, volts, watts, and cable footage.

SECTION 2 - OVERVIEW



1. Spring Motor
2. Spool
3. Base
4. Frame
5. Guide Arm

6. Feed Cord
7. Feed Cord Cover
8. Ball Stop
9. GFCI
10. End Accessory

SECTION 3 - REPLACING PARTS

Quick Mount Base

Tools needed: 7/16 wrench (2).

1. Remove hardware from both sides of the frame. See **Figure 7-1**.
2. Remove reel away from base.

CAUTION

- Reel weight requires care to be taken when removing reel from base.

3. Mount new quick mount base to structure using hardware.
4. Secure reel frame to quick mount base using mounting hardware. Torque to 50 inch lbs See **Figure 7-1**.

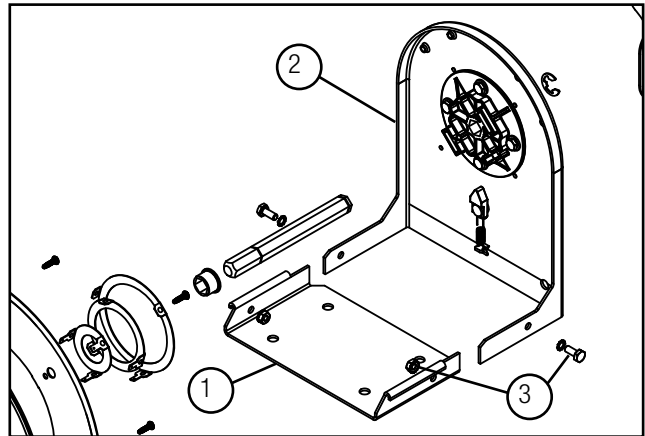


Figure 7-1 1. Quick Mount Base
2. Frame
3. Hardware

Guide Arm

Tools needed: Phillips or Torx head screwdriver.

1. Keep reel from spinning by locking in place on ratchet. Remove ball stop. Remove guide arm. See **Figure 7-2**.
2. Remove any cable end accessory and GFCI if installed on cable. See cable end accessory and GFCI replacement instructions.
3. Install new guide arm by inserting cable through cable opening. See **Figure 7-3**.
4. Re-attach arm to reel using the same screws and tighten down. Torque to 50 inch lbs. See **Figure 7-2**.
5. Re-attach ball stop, cable accessory and GFCI if needed. See cable end accessory and GFCI replacement instructions.



Figure 7-2



Figure 7-3

SECTION 3 - REPLACING PARTS

Feed Cord

Tools needed: T20 Torx head screwdriver.

1. Remove cover. See **Figure 8-1**.
2. Remove strain relief plate. See **Figure 8-2**.
3. Disconnect wago connectors. See **Figure 8-3**.
4. Using the old feed cord, cut and strip the new feed wires to match the old feed cord. See **Figure 8-4**.
5. Install new feed cord into strain relief reusing the strain relief plate.
6. Connect feed cord to wago connectors.
7. Re-attach the cover and make sure no wires are pinched or bound under the cover. See **Figure 8-2**.



Figure 8-1



Figure 8-2

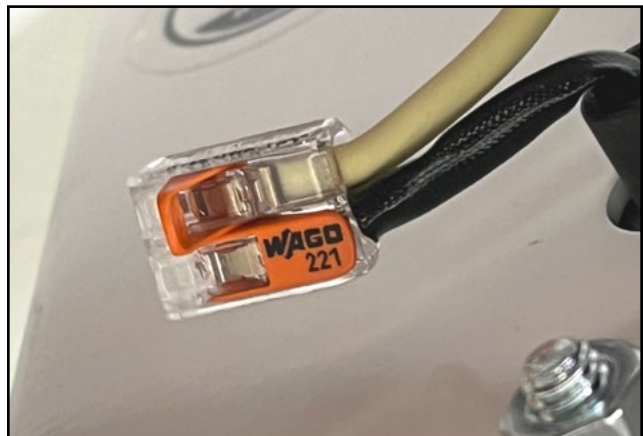


Figure 8-3



Figure 8-4

SECTION 3 - REPLACING PARTS

Ball Stop

Tools needed: Phillips screwdriver.

1. Keep reel from spinning by locking in place on ratchet.
2. Attach new ball stop on cable in location for application. See **Figure 9-1** and **Figure 9-2**.
 - A. Remove screws completely to replace ball stop.
 - B. Loosen and move ball stop along cable to adjust hanging length.

NOTE

- Donut-style ball clamp used on reels using 12/3 cable, clamp style used on reels with 16/3 cable.



Figure 9-1



Figure 9-2

SECTION 3 - REPLACING PARTS

Spring Motor

Tools needed: Phillips or Torx head screwdriver.

1. **Remove all tension on spring** by removing guide arm and having a controlled spool retraction. Let reel retract completely while holding on to guide arm and cable accessory to prevent damage to reel.
2. Remove cable off spool by lifting over and off of flange. Remove enough cable to expose spring motor screws. See **Figure 10-1**.
3. Remove spring motor by removing the 3 screws attaching it to the flange. See **Figure 10-2**.



WARNING

- Never take apart spring motor assembly.

4. Re-attach new spring motor to shaft. See **Figure 10-3**. **NOTE: Ensure hex shaft is properly inserted into spring arbor of the motor.**
5. Attach new spring motor to flange with screws. Tighten 3 screws down properly. Torque to 20 inch lbs. See **Figure 10-2**.
6. Hand wind cable back on spool. Make sure cable is spooled on tightly and evenly preventing uneven and loose stack up. See **Figure 10-4**.
7. Place 6 pre turns in reel by winding reel forward 6 full revolutions. Keep a hold of reel during pre-turning to prevent retraction. See **Figure 10-5**
8. Once pre-turns are placed tensioning the reel, lock the reel out on ratchet to prevent retraction.
9. Re-attach guide arm. Torque screws to 50 inch lbs.

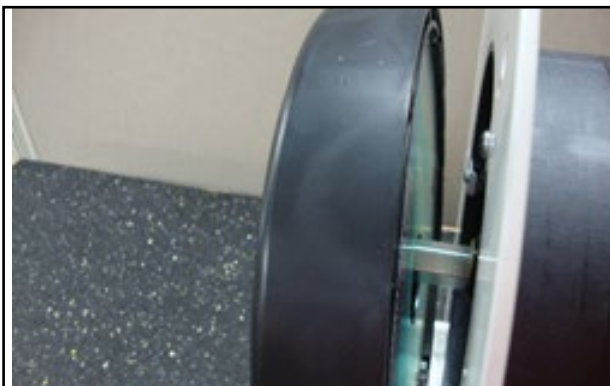


Figure 10-3



Figure 10-1



Figure 10-2



Figure 10-4

Adding Spring Tension

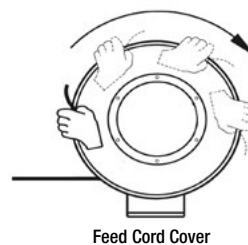


Figure 10-5

SECTION 3 - REPLACING PARTS

Cable and Tri-Tap

Tools needed: Phillips screw driver, electrical wire crimpers, proper wire connectors.

1. Remove Spring Motor (see Page 10.)
2. Remove strain relief bracket. See **Figure 11-1**.
3. Remove cable wires from quick connector. See **Figure 11-1**.
4. Install new cable or cable with tri-tap through slot in drum. See **Figure 11-2**.
 - For Tri-Tap without GFCI, install cable through guide arm before wiring.

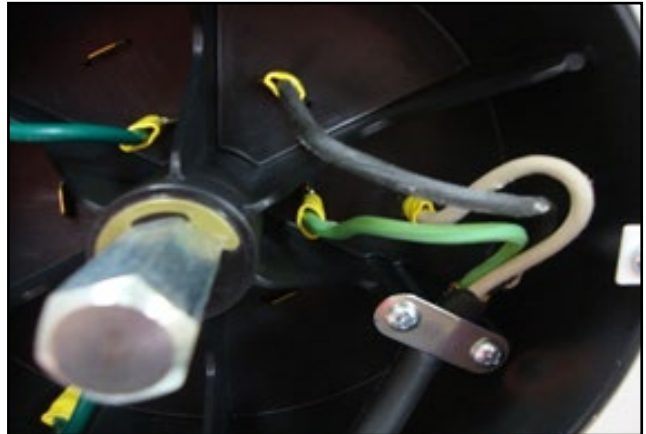


Figure 11-1



Figure 11-2

SECTION 3 - REPLACING PARTS

5. Strip cable properly and install proper cable connector to each wire with crimper. See **Figure 12-1**.
6. Attach connector to correct corresponding quick connector inside drum. See **Figure 12-2** and **Figure 12-3**.
 - Black wire connected to wire from #2 hole.
 - White wire connected to wire from #3 hole.
 - Green wire connected to #GRD hole. See **Figure 12-4**.
7. Re-attach strain relief bracket. See **Figure 12-2**.
8. Re-attach spring motor. See **Page 10 Spring Motor Replacement**.
9. Attach ball stop in proper location.
10. Attach GFCI if applicable. See GFCI installation instructions
11. Attach desired end accessory. See cable end accessory instructions



Figure 12-1



Figure 12-2



Figure 12-3



Figure 12-4

SECTION 3 - REPLACING PARTS

Ground Fault Interrupter (GFCI)

Tools needed: Phillips head screwdriver.

1. Remove existing GFCI by removing each end cover. See **Figure 13-1**.
2. On both sides, remove strain relief bracket, cable gasket and disconnect wires from connectors. See **Figure 13-2**.
3. Install new GFCI 5 from cable accessory in the same location as the old GFCI. See **Figure 13-3**.
4. Install cable gaskets to both sections of cable before connecting the new GFCI. See **Figure 13-2**.

NOTE

- Make sure GFCI is installed in correct orientation of the line and load labeled on GFCI: "Line" towards the spool side and "load" towards the end accessory side
5. Connect wires to connector on both ends and install strain relief. See **Figure 13-2**.
 - White wire to silver screw.
 - Green wire to green screw.
 - Black wire to brass screw.
 6. Re-attach GFCI covers. Make sure gasket has proper placement in case. See **Figure 13-2**.



Figure 13-1



Figure 13-2

Cable End Accessory

7. Remove existing accessory.
8. Install desired end accessory.
9. Follow proper wiring instructions for type and style of accessory:
 - A. If required, strip cable jacket and wires to correct length.
 - B. Attach black, white and green wire to correct accessory connection.
 - C. Correctly install any strain relief plates or nuts included with accessory.



Figure 13-3

www.KHIndustries.com

KH Industries

160 Elmview Avenue
Hamburg, NY 14075 USA

Phone: 716-312-0088

Fax: 716-312-0028

info@khindustries.com

sales@khindustries.com