

Rib Replacement

ALWAYS DISCONNECT ANY ELECTRICAL APPLIANCE BEFORE ATTEMPTING ANY REPAIRS



1A



1B

STEP 1: PREP

- Tools needed: (1) Phillips screwdriver, (1) flat screwdriver, 3' of fishing line or string [1A]
- Lay the umbrella frame on its side with the damaged rib facing up [1B]



2

STEP 2

- Remove the damaged rib from the return arm by removing the two (2) 4mm x 12mm screws from the rib connector [2]



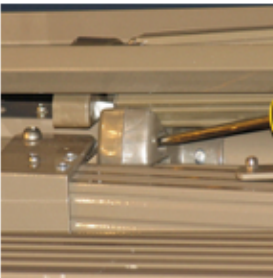
3A



3B

STEP 3

- Remove the electrical box from the upper center hub [3A]
- Locate the two (2) wires from the damaged rib. Disconnect the **red** wire from the outside ring and the **white** wire from the inside ring [3B]
- Attach a 3' piece of fishing line or string to the two (2) wires before removing the rib.



4A



4B

STEP 4

- Remove one (1) of the hub bolts on each side of the damaged rib [4A]
- Insert a flat screwdriver between the two (2) sections of the hub and pry it open enough to remove the damaged rib and pin - **USE CAUTION with the electrical wires** [4B]



5A



5B

STEP 5

- Attach the fishing line/string to the new wires. Pull the wires through the hub and into the electrical box [5A]
- Pry open the hub and insert the new rib and pin into the hub. Verify that the rib pin is set firmly into the slot. Re-tighten all the hub bolts [5B]



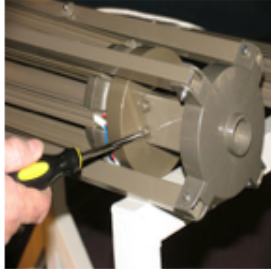
6

STEP 6

- Connect the new rib to the return arm by screwing the two (2) 4mm x 12mm screws into the rib connector [6]



7A



7B

STEP 7

- Connect the **red** wire to the outside ring and the **white** wire to the inside ring [7A]
- Place the cover on the electrical box and secure [7B]

STEP 8

- Place the umbrella into its base. Slowly open and close the umbrella to test the rib
- Plug the transformer in and test the lights while the canopy is fully opened

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150 W 88th St #114
Bloomington MN 55420



952.884.0326
vriendenoutdoor@gmail.com

Rope Repair/Replacement

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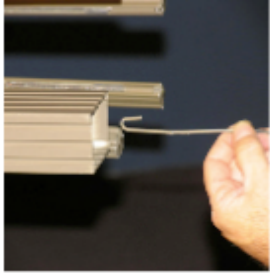
1A



1B

STEP 1: PREP

- Tools needed: (1) Phillips screwdriver, (1) flat screwdriver, (1) 10' heavy-gauge wire, (2) pliers, duct tape [1A]
- Lay the umbrella frame on its side with the crank handle facing up [1B]



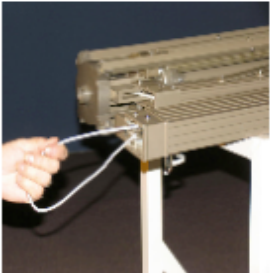
2A



2B

STEP 2

- Remove the rope wrapped around the crank shaft by inserting the wire into the bottom of the frame post, hooking it onto the rope, and pulling as you unwind the crank [2A]
- Unscrew the (2) M5*83 bolts and remove the crank assembly from the main post. Wiggle the crank as you pull, so the knot moves away from the crank shaft [2B]



3A



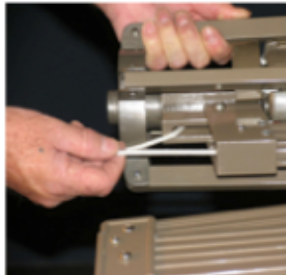
3B

STEP 3

- Remove the top cap from the frame post. Pull the rope out to locate the broken end [3A]
- Connect the broken end to the new rope using a 5-6" piece of duct tape. DO NOT tie a knot [3B]



4A



4B

STEP 4

- Use the old rope to pull the new rope through the system, starting at the bottom of the upper support arm [4A]
- Pull the new rope out of the top of the lower support arm [4B]



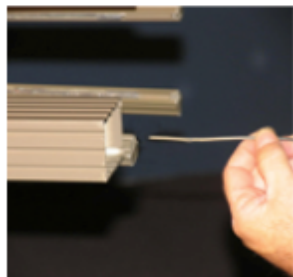
5A



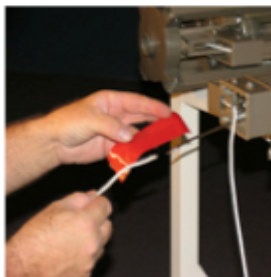
5B

STEP 5

- Disconnect the ground wire and remove the light globe and the globe holder [5A]
- Pull the old rope until the new rope appears. Discard the old rope and tie a knot in the new rope. Reattach the globe holder, making sure to connect the ground wire [5B]



6A



6B

STEP 6

- Insert the wire into the bottom of the main post until it appears out of the top of the main post [6A]
- Connect the new rope to the wire, using a 5-6" piece of duct tape. Use the wire to pull the new rope down to the crank [6B]



7A



7B

STEP 7

- Use a small wire to hook and pull the first wire out of the main post. Insert the rope into the crank shaft and tie a knot [7A]
- Insert the knot into the main post, then insert the crank shaft into the main post. Reattach the crank assembly using the (2) M5*83 bolts [7B]



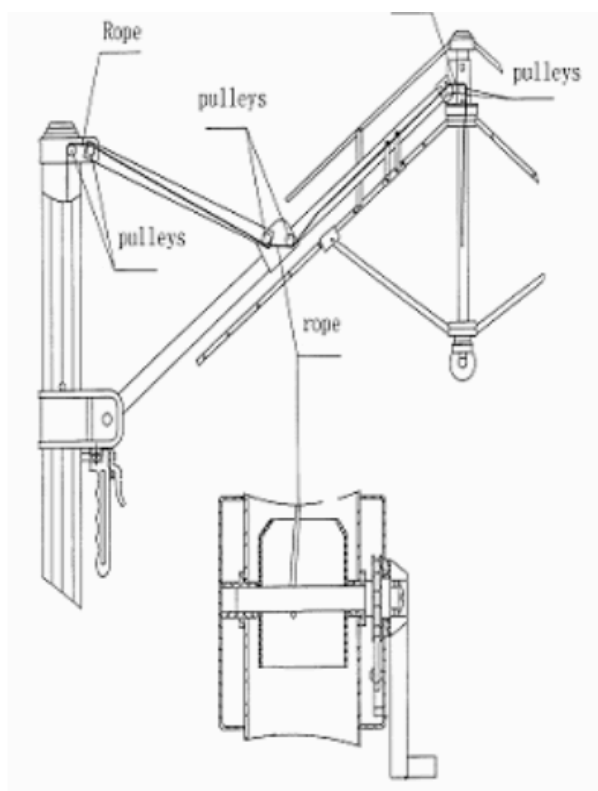
8A



8B

STEP 8

- Grab and pull the rope from the top of the main post to get the knot tight against the crank shaft [7A]
- Put the top cap back on the main post and spin the crank counter-clockwise to take in the slack [7B]
- Test the rope by opening and closing the canopy



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