

Greer Company

Crane Systems

**BLR™-BOOM LENGTH REEL
ANTI TWO-BLOCK WIRE REPLACEMENT**

**BLR™-779, BLR™-800 (A240101), BLR™-801 (A240110)
BLR™-801A (A240120) and
A240150, A240160, A240161**

INSTALLATION MANUAL



Professional Service & Repair Inc.

Professional Service & Repair Inc. is a full-service mobile crane repair, inspection, and certification company. At Professional Service & Repair we understand the critical aspect of your crane being operational to your project schedule and budget. We will deliver world class service to have your crane operational in the minimum amount of time.

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INTRODUCTION

Fully retract the boom and lower the boom head as far as it will go.

Please read through the complete procedure before disassembly.

REQUIRED TOOLS AND EQUIPMENT

1 spray can of silicone oil

1 crimping pliers for electrical terminal lugs

screwdriver (3" blade) or a Phillips screwdriver for newer reels

Rags to clean the cables

REMOVING OLD WIRE

Refer to the Figure 1 on page 4.

1. Remove the cover from the extension reel (I).
2. Disconnect the extension reel cable (O) at the boom head. If the cable has not already been broken, allow it to rewind **slowly** onto the extension reel.

WARNING: If the cable is allowed to rewind uncontrolled, the end of the cable could fly around causing damage to the crane and equipment and danger to service personnel.

3. Move the triangular plate (L) out of the way, as follows, so that the extension reel cable can quickly be removed.
 - a. Remove the two cable clips (C) from the angle sensor cable (J) where it runs along the top of the of the triangular plate.
 - b. Remove the 3 truss head screws (A) and gently pull the triangular plate away from the reel. Swing the plate around so the corner can be reattached to the upper cover standoff (E) with one of the truss head screws.

NOTE: No wires need to be disconnected from the terminal block on the plate.

4. Remove the upper cable guard (D) nearest to you and set it aside. Set aside the screws.
5. Loosen the loops of extension reel cable around the reel and pull the cable over the side of the reel.
6. Disconnect the two conductors (Figure 2, S) where the extension cable is attached to the terminal block on the side of the reel. Dispose of the old cable.
7. On the triangle assembly, inspect the drive pin (1/8" x 1 1/4" hardened roll pin inserted in the hub of the reel) and the contact points. These parts are sometimes damaged when an uncontrolled reel cable recoils.



INSTALLING THE NEW CABLE

REFER TO FIGURES 1 AND 2.

1. Starting at the boom head, thread the end of the extension cable (O) from the anti Two-Block switch at the boom head through all cable guides and into the hole inside of the reel. Crimp a #6 ring terminal with core (U) on the center strand of the cable. Crimp a second ring terminal to the shield (T).

Put the cable under one pair of screws or in the “P” clip (H), as originally installed.

- a Crimp the ring terminal to shield (T), then to the mounting screw on the terminal block, or as originally installed.
- b Crimp the ring terminal to core (U), then to the remaining terminal.

NOTE: When disassembling these parts, note that on newer reels both ring terminals are isolated from ground/mounting screws.

3. Unroll the remaining coil of cable.

- a Lay the coil out as straight as possible as far as it will go.
- b Rotate the connector until there are no loops or twists in the cable all the way to the reel guide (Q).

NOTE: The cable must lay out straight and flat to ensure that it will wind evenly on the reel.

4. Turning the extension reel clockwise, wind the cable onto the reel.

- a Use the reel terminal block (R) as a handle to rotate the wheel. Rotate clockwise to spool the cable onto the reel.
- b Have a helper wipe the dust off of the cable as it winds onto the reel.
- c Guide the cable onto the reel so that it lays tightly and evenly side-by-side as the reel turns clockwise (about 12 or 13 turns).

5. When the first layer of cabling has spooled onto the reel, spray it heavily with silicone oil.

- a Spool on the second layer of cabling and spray it heavily with silicone oil.
- b When ready to wind on the third layer, tie the ends of a 10 foot string to the cable plug (N) and to the anti Two-Block switch plug (not shown).
- c Wind the cable on until the string is tight.

NOTE: This will provide 3 to 4 pre-tension turns and will ensure that the cable is always tight.

6. Slip a Tiller rope clamp (P) onto the cable at the reel guide (Q). Leave it loose enough so that the cable can slide through.

- a Pull about 12 feet of cable off the reel.
- b Hold the cable firmly and set the clamp at the reel guide (Q) to keep the cable from retracting.

- c Return to the boom head and anchor the cable exactly as it had been in the original installation.
-

NOTE: Ensure that there is enough slack (about a 6 inch loop) in the cable to connect the cable to the anti Two-Block switch.

7. Remove the clamp and spray the top layer of cabling with silicone oil.
8. At the boom head, pull out 6 to 12 feet of extension reel cable to ensure that it unwinds smoothly.
9. While a service assistant monitors the cable at the reel, slowly extend the boom to full length.

NOTE: A minimum of 2 full turns should still remain on the reel.

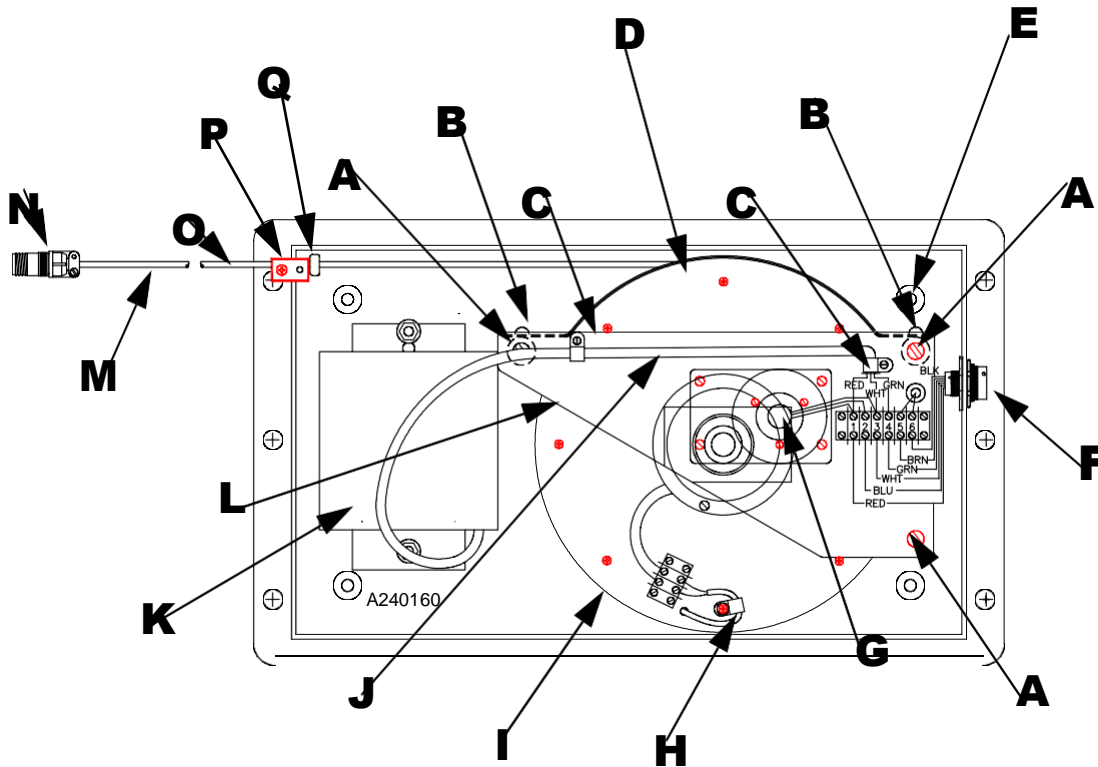
10. Slowly retract the boom. Watch the cable closely as it rewinds to ensure that the layering is smooth, uniform, and level. Spray more oil on the cable as it retracts.

NOTE: If it is necessary to help the rewinding process so that the cable wire is level, slowly, fully extend and retract the boom several times. If all twists were removed before winding the cable on the reel, the cable should rewind smoothly.

11. If there is excess cable (there can be 3 full layers) on the reel when the boom is retracted, wrap the excess cable on the wire anchor post at the boom head.
12. For reels with extension sensors, the potentiometer (G) must be reset as follows:
 - a. Fully retract the boom.
 - b. Turn the gear that is attached to the blue extension potentiometer fully counterclockwise.
 - c. Turn the gear clockwise 3 “clicks” (approximately 1/4 turn). Check the indicator on the display for the correct boom length. If no length is displayed after 3 clicks clockwise, turn the gear one more click and check the display. If there is still no response after a total of 6 clicks, the potentiometer may be damaged.



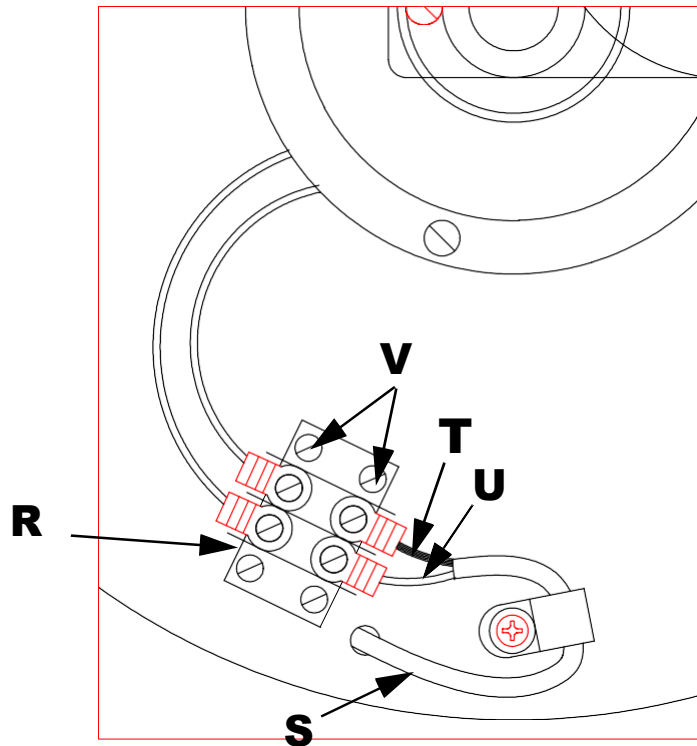
EXTENSION REEL ASSEMBLY



- | | |
|--|---|
| A Truss Head Screws (3) | I Extension Reel |
| B Upper Cable Guard Screw | J Angle Sensor Cable |
| C Cable Clips (2) | K Angle Sensor |
| D Upper Cable Guard
(behind extension reel) | L Triangular Plate |
| E Upper Cover Standoff | M Cable to Anti Two-Block Switch |
| F Connector (to indicator) | N Cable Plug |
| G Potentiometer | O Extension Reel Cable |
| H "P" Clip (cable anchor) | P Tiller Rope Clamp |
| | Q Reel Guide |

Figure 1.

TERMINAL BLOCK CONNECTIONS



R Terminal Block

S Conductors (2)

T Ring Terminal with Shield

U Ring Terminal with Core

V Mounting Screws

Figure 2.

