

Types MACX675A-26 and MACX450-26 Field Kits for Inner Conductors for MACXLine[®] Rigid Coaxial Transmission Lines



Type MACX675A-26 for 6-1/8" Line

Description

Type MACX675B-26 Rigid Field Kits are used for field trimming inner conductors to a non-standard length between 5 and 20 feet. Type MACX675B-26 Inner Conductors are supplied as an entire 20 foot inner conductor section with bellows, insulators, captive inner connector, and hardware kit. The inner conductor must be field cut to the desired length to mate with the corresponding outer conductor.

The inner conductor is marked with black ink to designate specific areas where cutting requires a special procedure and an additional part. ERI Tool Kit, Type Number MACX675A-TK, includes the additional part required. The outer lengths requiring the special procedure are 169–162 inches and 89–83 inches. Outer conductor lengths outside of these two ranges do not require special trimming.

Insulator Installation

1. Slide disk insulators to groove locations in inner conductor.
2. Slip collar insulators in grooves with tapered ends toward bellows.
3. Push disk insulator over tapered end of collar insulator until it locks in place.

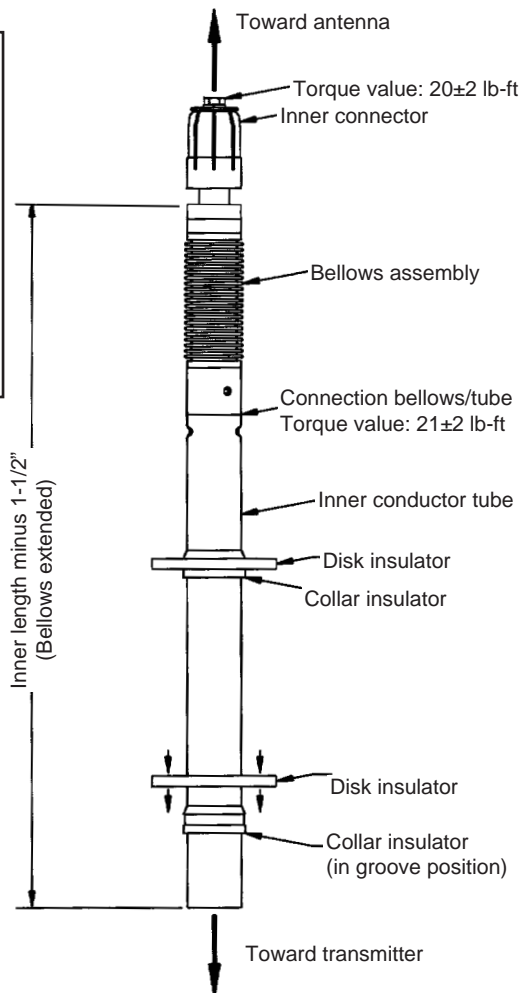


Figure 1

Installation Procedure

- 1 Measure length of outer conductor from flange face to flange face, in inches.
- 2 Subtract 1.5" (for inner cutback) from outer conductor measured length. This is the required length of the inner conductor. Refer to Figure 1.
- 3 Mark the inner conductor where it should be cut with the **bellows fully extended** to its mechanical stop position. If the mark falls within a "...do not cut..." zone, refer to "Special Cut Procedure" Figure 2, before proceeding with step 4.
- 4 Cut the inner conductor at the marked position using a miter box and hacksaw. Remove all burrs from where the inner has been cut.
- 5 Install insulators as shown in Figure 1.
- 6 Carefully insert the trimmed inner conductor into the outer conductor with the bellows toward the antenna end of the outer conductor. Push the inner conductor back into the outer so the insulator is fully inserted into the flange.

Special Cut Procedure

Note: If more than one special cut is required in a system, purchase one Type MACX675B-TK-2 for each additional cut.

- a. Remove inner conductor tube from the bellows assembly using spanner wrench at bellows and special pliers, both included in tool kit Type MACX675A-TK.
- b. With inner conductor tube removed, measure and mark 57.5" from brass plug end of inner conductor.
- c. Cut inner conductor at marked position using a miter box and hacksaw. Remove all burrs from where inner conductor has been cut.
- d. Install copper replacement stub into inner conductor tube and solder all around.
- e. Reinstall modified inner conductor to the bellows and torque connection to 21±2 lb-ft using tools included in the tool kit.
- f. Continue with step 3 in the "Installation Procedure" section.

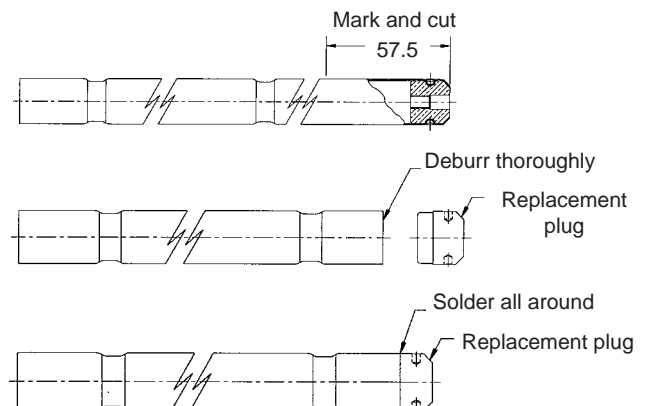


Figure 2

Type MACX450-26 for 4-1/16" Line

Description

Type MACX450-26 Rigid Field Kits are used for field trimming inner conductors to a non-standard length between 5 and 20 feet. Type MACX450-26 Inner Conductors are supplied as an entire 20 foot inner conductor section with bellows, insulators, inner connector, and hardware kit. The inner conductor must be field cut to the desired length to mate with the corresponding outer conductor.

The inner conductor is marked with black ink to designate specific areas where cutting requires a special procedure and an additional part. ERI Tool Kit, Type Number MACX450-TK, includes the additional part required. The outer lengths requiring the special procedure are 53–57 inches, 128–132 inches and 211–215 inches. Outer conductor lengths outside of these two ranges do not require special trimming.

Installation Procedure

- 1 Determine required flange-to-flange outer conductor length, Figure 3.

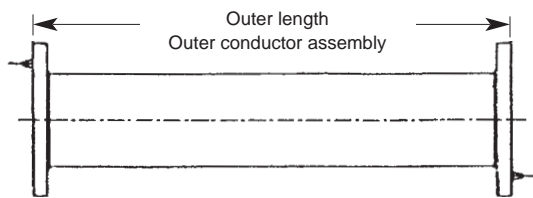


Figure 3

- 2 Subtract 1-9/32" from outer conductor length to obtain inner conductor length, Figure 4.

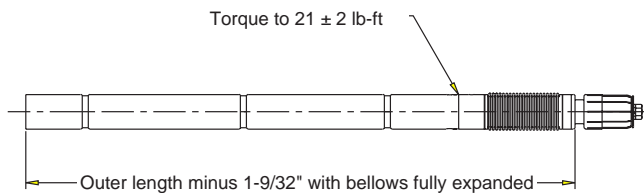


Figure 4

- 3 Remove intermediate and flange insulators for an accurate measurement. Be careful not to damage bellows during handling.

- 4 Use tape measure to mark inner conductor at required length making sure bellows is in relaxed position (fully expanded) prior to marking.

Note: If mark falls within the "Do Not Cut" area, refer to the Special Cut Procedure, below, before proceeding to next step.

- 5 Wrap piece of straight edged paper around outside of inner conductor as cutting guide. Scribe line along paper edge all the way around inner conductor. Cut inner conductor at marked position using miter box and hacksaw. Remove burrs from inside and outside of conductor. Remove chips from inside of inner conductor.

- 6 Reinstall intermediate and flange insulators.

- 7 Carefully insert trimmed inner conductor into outer conductor with bellows toward antenna end of outer conductor. Push inner conductor back into outer conductor to fully seat flange insulator.

Special Cut Procedure

Note: If more than one special cut is required in a system, purchase one Type MACX450-TK-2 for each additional cut.

- a. Remove inner conductor tube from bellows assembly using spanner wrench and adjustable connector pliers.
- b. With inner conductor tube removed, measure and mark 24-1/2" from brass plug, Figure 5.



Figure 5

- c. Cut inner conductor at marked position using miter box and hacksaw. Remove burrs from inside and outside of conductor, Figure 6.

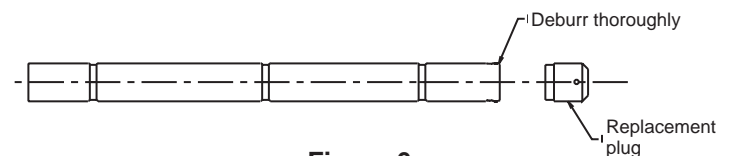


Figure 6

- d. Install copper replacement plug into inner conductor and solder all around. Make sure no gaps or voids are visible between mating copper surfaces, Figure 7.

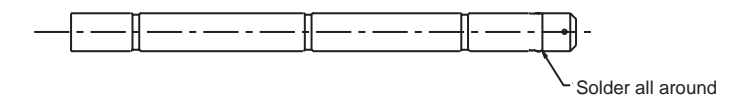


Figure 7

- e. Reinstall modified inner conductor in bellows and torque connection to 21 ± 2 lb-ft.
- f. Continue with step 4 in the "Installation Procedure" section.

Notice

The installation, maintenance, or removal of antenna systems requires qualified, experienced personnel. ERI installation instructions have been written for such personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment.

ERI disclaims any liability or responsibility for the results of improper or unsafe installation practices.



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