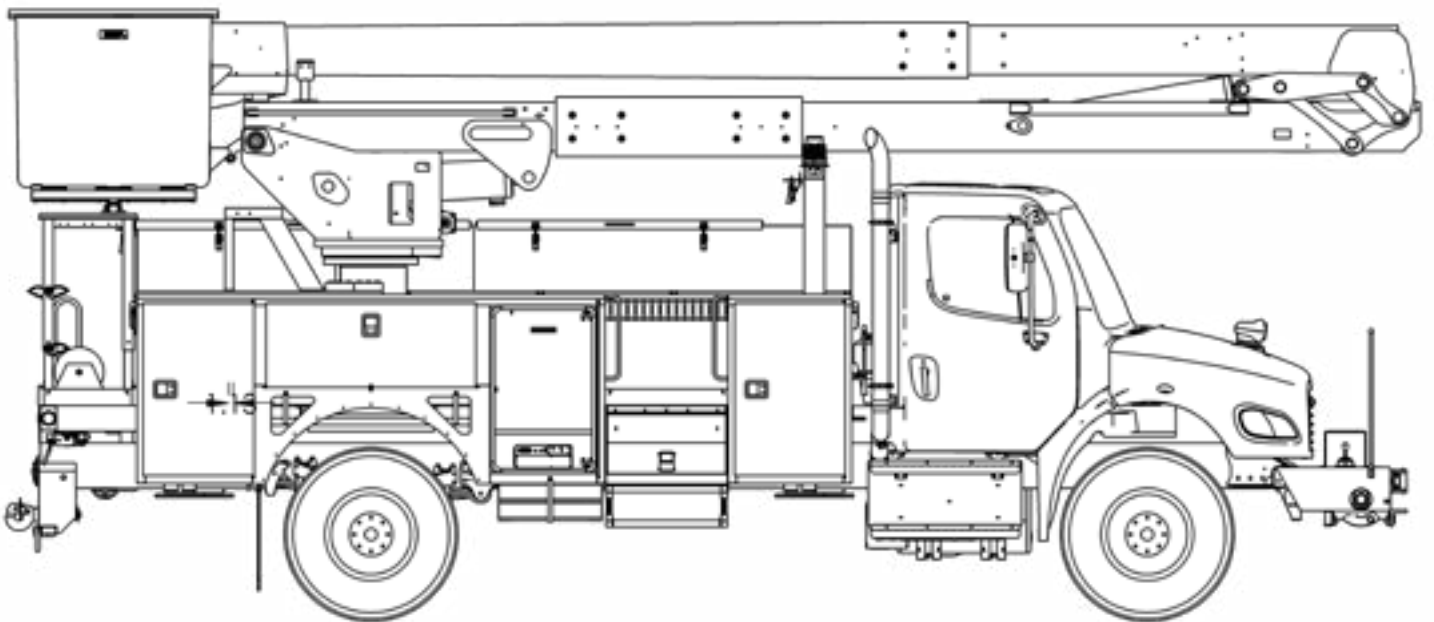




TECH TIPS

INSTALLING COAXIAL CABLE FOR AERIAL UNITS

NO. 106



SERVICE CALL:
INSTALLING COAXIAL CABLE FOR
AERIAL UNITS



MODEL(S):
OPTIMA, XML, RMX, HRM, TC, OM



TOOLS NEEDED:
SIMPLE HAND TOOLS
SOLDER GUN

TEREX UTILITIES TECHNICAL SUPPORT TEAM

PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: UTILITIES.SERVICE@TEREX.COM



DANGER

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury.

Many of the hazards identified in the Operator's Manual are also safety hazards when maintenance and repair procedures are performed.

DO NOT PERFORM MAINTENANCE UNLESS:

- ✓ You are trained and qualified to perform maintenance on this machine.
- ✓ You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- ✓ You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this Tech Tip is a supplement to the Service Manual. Consult the appropriate Service Manual of your machine for safety rules and hazards.



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INTRODUCTION

This procedure outlines the installation, routing, and placement of coaxial cable used for dielectric testing on Category A and B aerial units.

Consult the unit maintenance manual for more information on testing of the leakage monitoring circuit.

Note: Only use flex core stranded and braided coaxial cable (RG58) for this application. Solid core coaxial cable is too rigid, causing it to fatigue and fracture.

STEP 1

Before installing the coax in the boom run it through a protective sleeve. (P/N 631615)

STEP 2

Run sleeved coax cable from the upper boom bulkhead to the receptacle at the lower boom. To do this follow the non-conductive hoses from the bulkhead around the knuckle and to the connector at the lower boom.

Note: When installing coax through the boom, do not wrap it around the hydraulic hoses. The coax cannot make direct contact with any hose.

STEP 3

Connect 1/4" eyelet on coax end that will connect to the upper boom bulkhead.

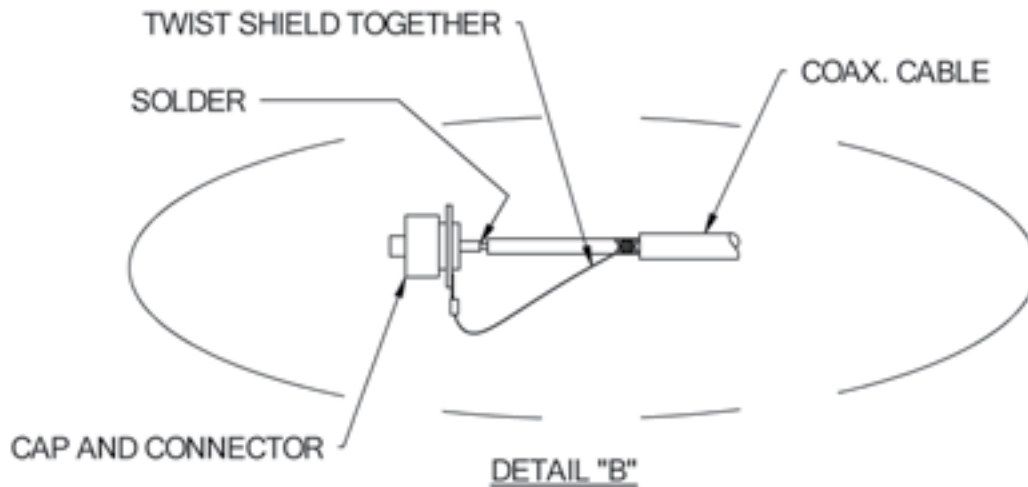
Note: Do not terminate the shield wires on the bulkhead. When terminating the wire, push the shield wires down and put heat shrink over them.



STEP 4

Terminate the coax cable to the lower boom connector. The diagram below shows how to solder to the connector at the lower boom. Leave enough cable to form a service loop at the connector.

Note: When install Coax through the boom do not wrap it around the hydraulic hoses. The coax cannot make direct contact with any hose.



STEP 5 (IF EQUIPPED WITH LEVELING RODS)

Run retractable wire (445895) from the bulkhead to each leveling rod. Secure to the leveling rod using a hose clamp.



STEP 6

Run a 14-gauge jumper wire from the conductor strap to the upper boom bulkhead. One end will need to be a 1/4" eyelet (351287), the other a 3/8" eyelet.



FIGURE 5 - Jumper Wire



FIGURE 6 - Jumper to Conductor Strap

STEP 6 (CONTINUED)

Note: All wires/coax will connect to the same bolt at the bulkhead in the upper boom. Below is the location.

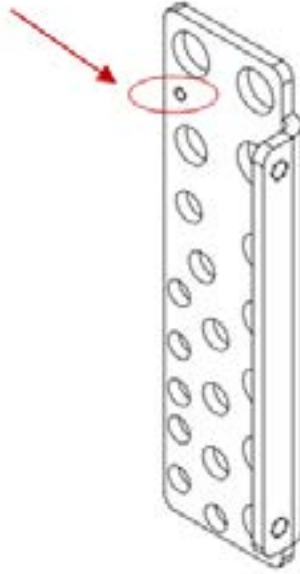


FIGURE 7 - Bolt location for leakage system at upper boom bulkhead



FIGURE 8 - Upper boom bulkhead

STEP 7

When complete test for continuity and insulation as described in the unit specific maintenance manual.

STEP 8

Some RMX units with lifts will have coaxial cable running from the unit to the console box. A coaxial cable will run along with the hydraulic hoses, but not in contact with the hoses, from the console box to the pedestal. It will usually run inside a non-conductive hose for protection. At the back of the mast a mounting plate (9154233) and receptacle (481653) are needed.

Run a coaxial cable up to the fiberglass insert at the lower boom. Soldering instructions to receptacle can be found in **STEP 1**.

Meter jumper connections are located on the console box. Wire for the leakage meter runs from here to the pedestal. Reference solder information in **STEP 1**.

Leakage ports at the back of pedestal connecting to the console box. Reference solder information in **STEP 1**.

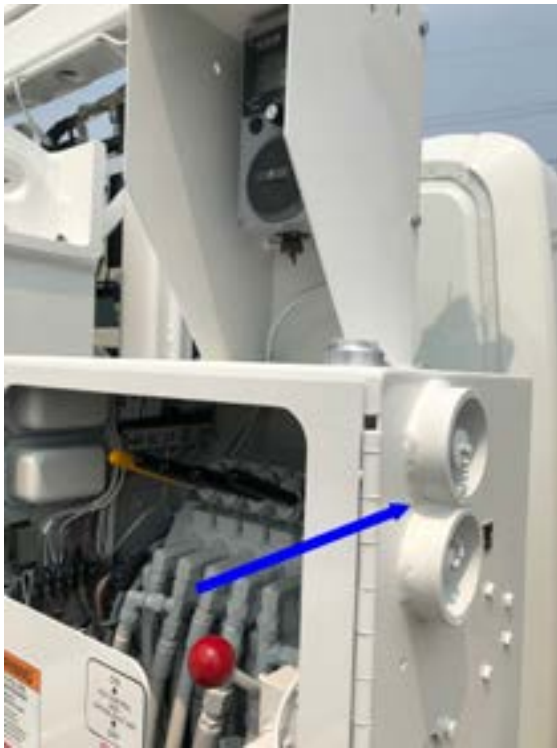


FIGURE 9 - Test port (console box)



FIGURE 10 - Test port (pedestal)

Leakage port on the back on the mast. This wire connects with the terminal at the lower boom fiberglass insert. Reference solder information in **STEP 1**.

Jumpers are required for testing across the lower boom insert and from the turntable to the pedestal. Category A units will end the coax cable at the turntable.

Note: For further instruction on this step you can contact Terex Utilities Technical Support at 1-844-TEREX4U (1-844-837-3948) to request drawing 611955. This drawing can also be accessed through our **Customer Portal**.



FIGURE 11 - Test port (turntable)



FIGURE 12 - Test port (lower boom insert)

STEP 9

Consult the Dielectric Section in the unit specific maintenance manual for additional information on how to properly test the unit for leakage.

Note: Lower boom insert must be jumped to use the meter at the console or at the turntable. It must only be jumped when the unit is used for bare hand work and the bonding jumper bar is across the insert. If used for gloving or stick work the insert must not be jumped.



FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM
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