

## Repair Guide for Splicing Weigh Bar Cable

### Preparing Wires

1. Cut away damaged section of weigh bar cord to leave cut ends clean.
2. Strip away approximately 3" of rubber jacket from one cable end and 1½" from the other to expose the braided wire shield.
3. Cut away shield to leave 1" exposed beyond rubber jacket.
4. Using a scribe or pick, unbraid the exposed wire shield and twist it together to form a wire on each cable.
5. Strip away approximately 5/8" of insulation from the ends of the wires on each cable.
6. The section of cord terminated by the pin connector should be checked for wire continuity and possible connector damage. Using the volt/ohm meter and the pin connector diagram below, check for open wires or shorts between wires and the braided shield. Readings should be 0 ohms between each stripped wire end and its corresponding connector pin. An infinite ohms reading will indicate a broken wire or connection. Also measure between each wire and the other two wires and shield. An infinite reading indicates none of the wires are shorted together.

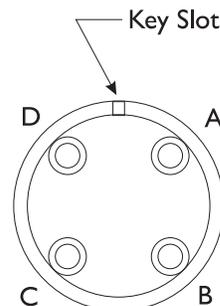
### Testing the Weigh Bar

*The resistance checks must be accurate within the tolerance of your volt/ohm meter. If any of the readings are not correct, and no other cable defects are found, the weigh bar must be replaced.*

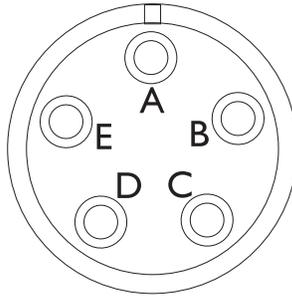
### Four Pin Connector

1. At this time, using a volt/ohm meter, it is advisable to test the weigh bar for the extent of damage. With the meter on the appropriate ohms scale, check for the following values between the color-coded wires on the section of cord connected to the weigh bar:

240 ohms between black and white wires (C to D)  
240 ohms between black and red wires (C to B)  
480 ohms between white and red wires (B to D)  
Infinite ohms between braided shield and all three wires  
Infinite ohms between the weigh bar and all three wires



Pin A to Wire Braid  
Pin B to Red Wire  
Pin C to Black Wire  
Pin D to White Wire



Pin A to Red Wire  
 Pin B to Green Wire  
 Pin C to White Wire  
 Pin D to Black Wire  
 Pin E to Shield

### Five Pin Connector

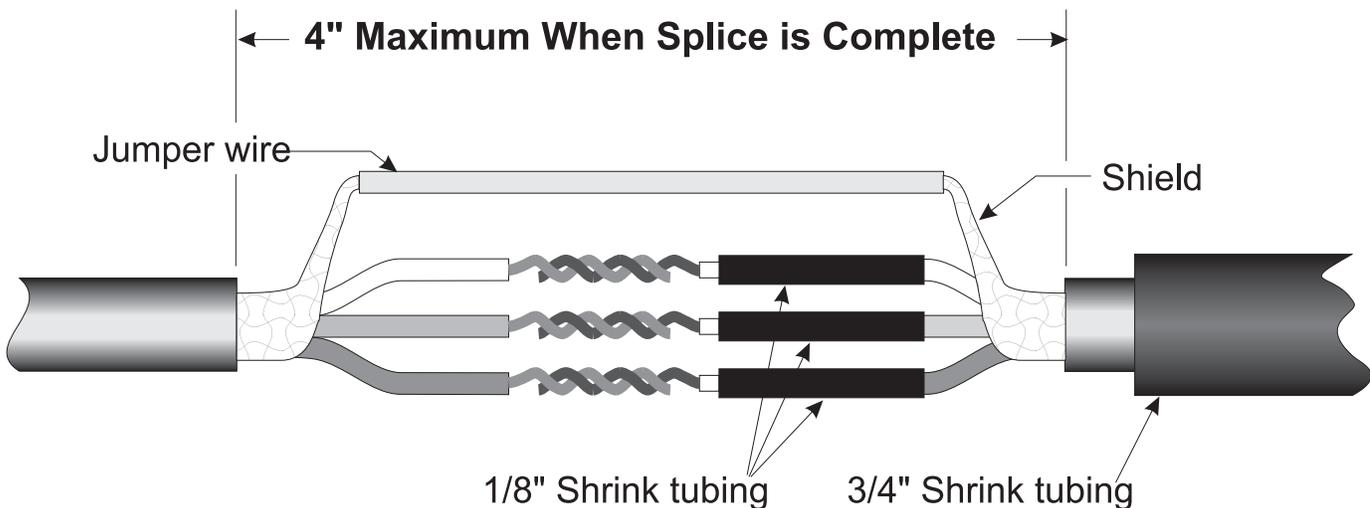
The electrical connections of the Weigh Bar with a five pin connector, shown above, can be verified by measuring the resistances listed below:

- 350 ohms between red and white wires (A to C)
- 350 ohms between green and black wires (B to D)
- Infinite ohms between shield and all wires
- 262 ohms between red and green wires (A to B)
- 262 ohms between green and white wires (B to C)
- 262 ohms between white and black wires (C to D)
- 262 ohms between red and black wires (A to D)

### Splicing the Wires

*The sample shown is a three conductor, shielded cable but the same splicing principles apply to cables with more than three conductors.*

1. Slide the 6" length of 3/4" shrink tubing down one section of cord.
2. Cut the length of 1/8" shrink tubing into 1 1/2" lengths. Slide one piece onto each of the three or four longer stripped wires on one cord section.
3. Align the two sections of cable together and twist the same color-coded wires together as shown below.
4. Solder each coupling using the rosin core solder supplied. **Be sure junctions are smooth with no bumps or sharp edges.** A good solder junction will look shiny and not have a dull or cracked surface.



*Do not apply too much heat or the heat shrink tubing will scorch or burn.*

5. After the junctions are soldered and cooled, slide the pieces of 1/8" shrink tubing over each junction. Be sure that only the wire insulation is visible out of each end of the tubing. Use an electric hair dryer to apply heat to the tubing and seal it over the wire junctions.
6. Couple the wire shields together using the length of copper wire provided. This is necessary so both sections of cable will be guarded against radio frequency interference which can affect weigh bar operation.

## Checking Resistance

Use the volt/ohm meter and the diagram of the pin connector to check for resistance values:

## Finishing the Repair

1. Slide the piece of 3/4" shrink tubing across the junction and be sure that only the rubber cord jacket is visible at both ends of the shrink tubing.
2. Use a torch or heat gun to shrink the 3/4" tubing so it forms a watertight seal across the repaired area. The 3/4" tubing is very thick so heat must be applied long enough to ensure adequate shrinkage. Apply the heat evenly to avoid scorching or burning the tubing.

PARTS LIST		
Part No.	Part Name	Required
19741-0012	Cord Repair Kit (includes:)	
14486-0046	1/8" shrink tubing	6"
17764-0091	6" piece of 3/4" shrink tubing	1
16171-0033	Rosin core solder	12"
15299-0016	24 ga. wire	6"
16776-0016	Instructions	1

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