



98-11, *Publication Date: JUNE 8, 1998*

<b>Wiring - Wire Harness Terminal Repair Kit And Wire Splice Procedure</b>	<b>Article No. 98-11-3</b>
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**FORD:**

1985-94 TEMPO  
1985-97 THUNDERBIRD  
1985-98 CROWN VICTORIA, ESCORT, MUSTANG  
1986-98 TAURUS  
1988-93 FESTIVA  
1993-97 PROBE  
1994-97 ASPIRE  
1995-98 CONTOUR

**LINCOLN-MERCURY:**

1985-92 MARK VII  
1985-94 TOPAZ  
1985-97 COUGAR  
1985-98 CONTINENTAL, GRAND MARQUIS, TOWN CAR  
1986-98 SABLE  
1991-98 TRACER  
1993-98 MARK VIII  
1995-98 MYSTIQUE  
1999 COUGAR

**LIGHT TRUCK:**

1985-90 BRONCO II  
1985-96 BRONCO  
1985-98 ECONOLINE, F-150-350 SERIES, RANGER  
1986-97 AEROSTAR  
1988-98 F SUPER DUTY  
1991-98 EXPLORER  
1995-98 WINDSTAR  
1997-98 EXPEDITION, MOUNTAINEER  
1998 NAVIGATOR  
1999 SUPER DUTY F SERIES

**MEDIUM/HEAVY TRUCK:**

1985-98 F & B SERIES, L SERIES  
1986-98 CARGO SERIES  
1996-98 AEROMAX, LOUISVILLE

This TSB article is being republished in its entirety to change the wiring kit supplier name and phone numbers.

**ISSUE:**

A wire harness terminal repair kit is available for repairing electrical wiring harnesses. This kit allows the dealer to repair broken or corroded terminals instead of replacing an entire harness.

**ACTION:**

If wiring repairs are required and you desire to purchase a kit, it can be obtained from the following source:

- **U.S.A. - THOMAS AND BETTS WIRING SYSTEMS AND COMPONENTS: (800) 466-1986 OR (810) 493-1221**
- **CANADA - JOBBORN MANUFACTURING LIMITED: (800) 337-0823**

### **REPAIR KIT BOX #1 AND #2 (PRICE: \$295.00)**

The kit consists of two (2) 60-drawer plastic cabinets with five (5) each of 96 different terminals.

- The terminals are machine crimped with a 102mm (4") "pigtail" wire that allows easy repair for the technician
- "Jiffy" splice seals are also included to provide a waterproof connection to protect the splice
- The kit comes with a unique, high compression crimping tool that ensures a solid connection

### **REPAIR KIT BOX #3 (PRICE: \$110.00)**

The kit provides electrical terminals for 1988 and newer Ford and Lincoln-Mercury vehicles which are not covered in Repair Box Kit #1 and #2.

- The kit consists of a 60-drawer plastic cabinet with five (5) each of 59 different terminals
- The terminals are machine crimped with a 102mm (4") pigtail wire that allows easy repair for the technician
- Adhesive-lined dual wall heat shrink tubing containing hot melt wax to provide a durable waterproof splice (\*recommended for warranty repairs)

#### **NOTE:**

THE WIRE HARNESS TERMINAL REPAIR KIT WAS ORIGINALLY RELEASED IN 1986. IT HAS BEEN DESCRIBED IN PREVIOUS ALL-DEALER LETTERS.

### **REPAIR KIT BOX #4 (PRICE: \$208.00)**

The kit consists of one (1) plastic cabinet containing five (5) each of 60 different terminals, each machine crimped to 102mm (4") of high temperature wire. It also consists of the following:

- 14 gold plated terminals for Electronic Engine Control (EEC), air bag and Anti-lock Brake System (ABS) wiring repairs
- 11 European-style (Contour/Mystique) terminals

### **WIRE SPLICE PROCEDURE**

#### **NOTE:**

AN ULTRA-TORCH (SELF-IGNITING) IS AVAILABLE THROUGH ROTUNDA (107-R0304). THE ULTRA-TORCH IS A CORDLESS SOLDERING IRON/HEAT GUN RECOMMENDED TO BE USED FOR SOLDERING, STEP 2, AND HEAT SHRINKING, STEP 5, PROCESSES.

Heat shrink tubing provided with Repair Kit #3 may be used for 16, 18 or 20 gauge wire only. For wire gauges larger than 16, a Deutsch Jiffy Splice must be used (available in Repair Kit #1 and #2).

Heat shrink tubing containing hot melt wax is included with Repair Kit #3 and offers a Ford-approved method for joining two (2) circuits. When properly used with a soldered circuit joint, this Ford-approved heat shrink

tubing will provide a stable, low electrical resistance connection for years of service in any Ford or Lincoln/Mercury vehicle.

If an unreliable splicing method is used, the circuit joint may be unstable, resulting in variable resistance or a short circuit. A short circuit (signal leakage) is caused by moisture on the circuit joint, while high resistance is a result of oxidation (corrosion) caused by air within the circuit joint. Either situation may cause electrical systems to malfunction.

It is important to use heat shrink tubing containing hot melt wax over a soldered circuit joint to create a waterproof and airtight connection.

The following 5 Steps should be used when joining two (2) circuits using solder and heat shrink tubing containing hot melt wax:

1. Strip 38mm (1.5") of insulation from Wire #1 and 19mm (0.75") of insulation from Wire #2 (Figure 1). Pull wire straight from stripper. If wire is pulled at an angle, wire strands may be cut off. If more than one (1) strand is cut off during stripping, cut off end and restrip.

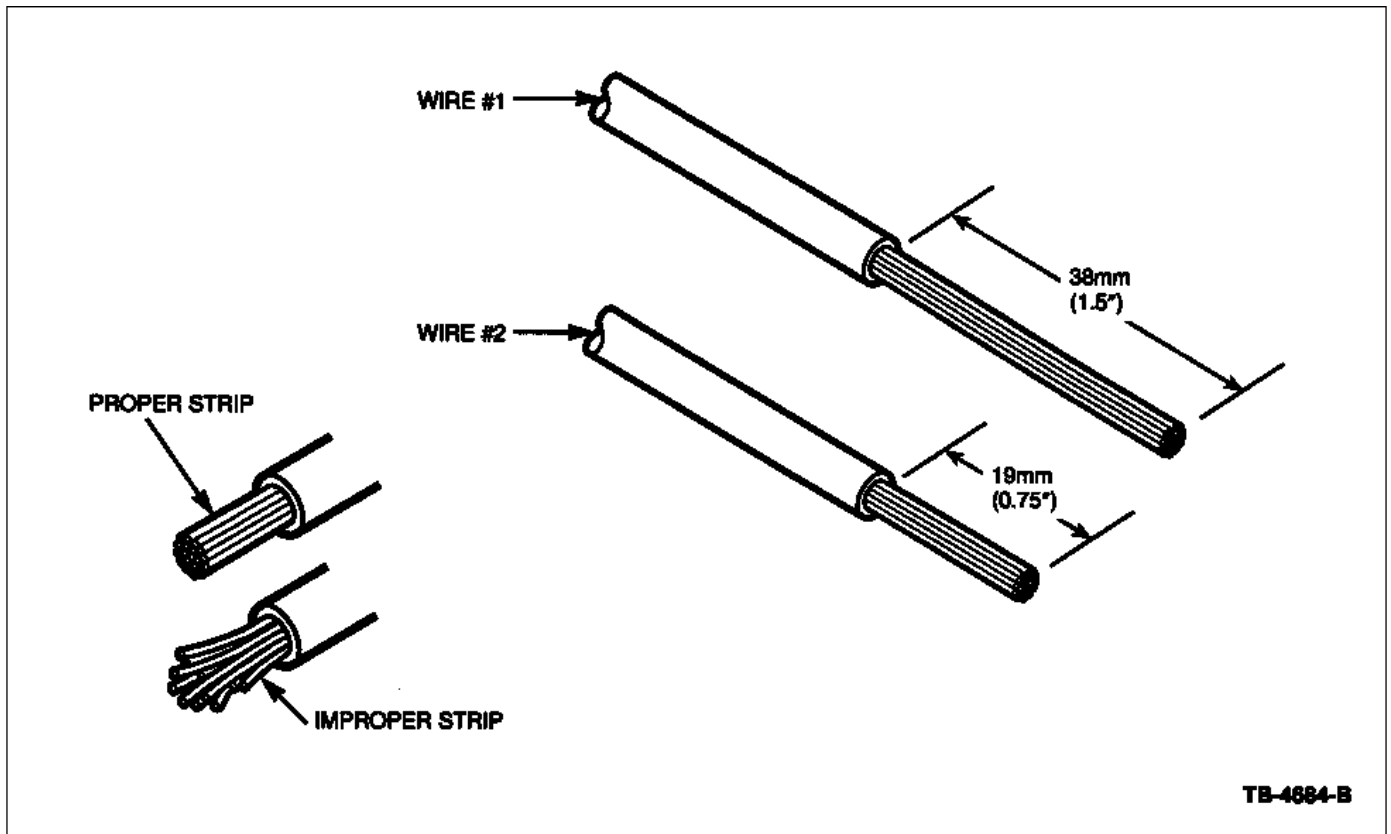


Figure 1 - Article 98-11-3

2. Twist and solder the wires (do not forget to install the heat shrink tubing first) (Figure 2). Use rosin core mildly activated (RMA) solder. DO NOT use acid core solder.

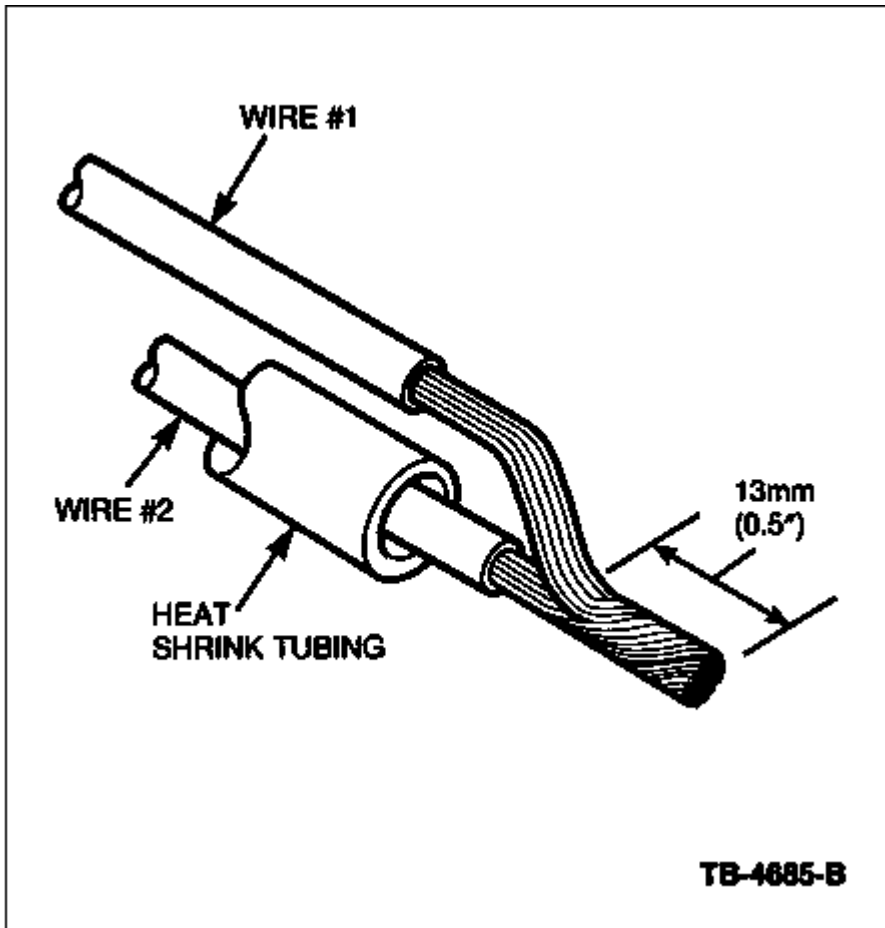
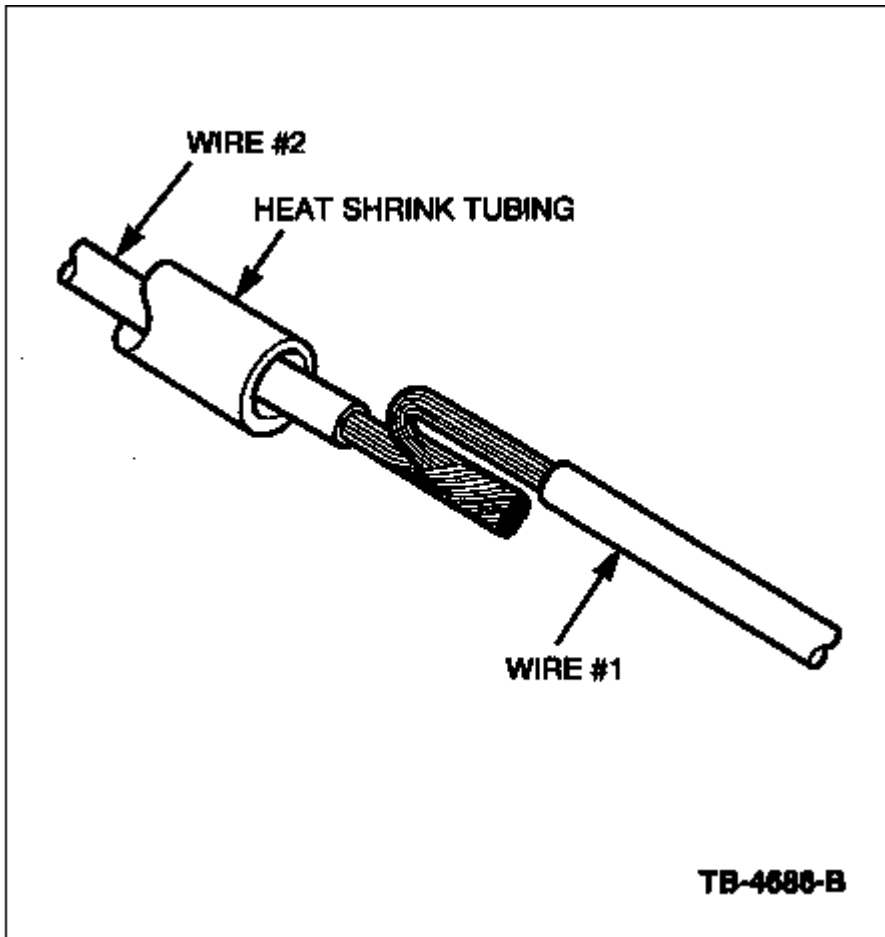


Figure 2 - Article 98-11-3

3. Form (bend) the circuit into a shape for sealing (Figure 3).



*Figure 3 - Article 98-11-3*

4. Reposition heat shrink tubing over splice (Figure 4).

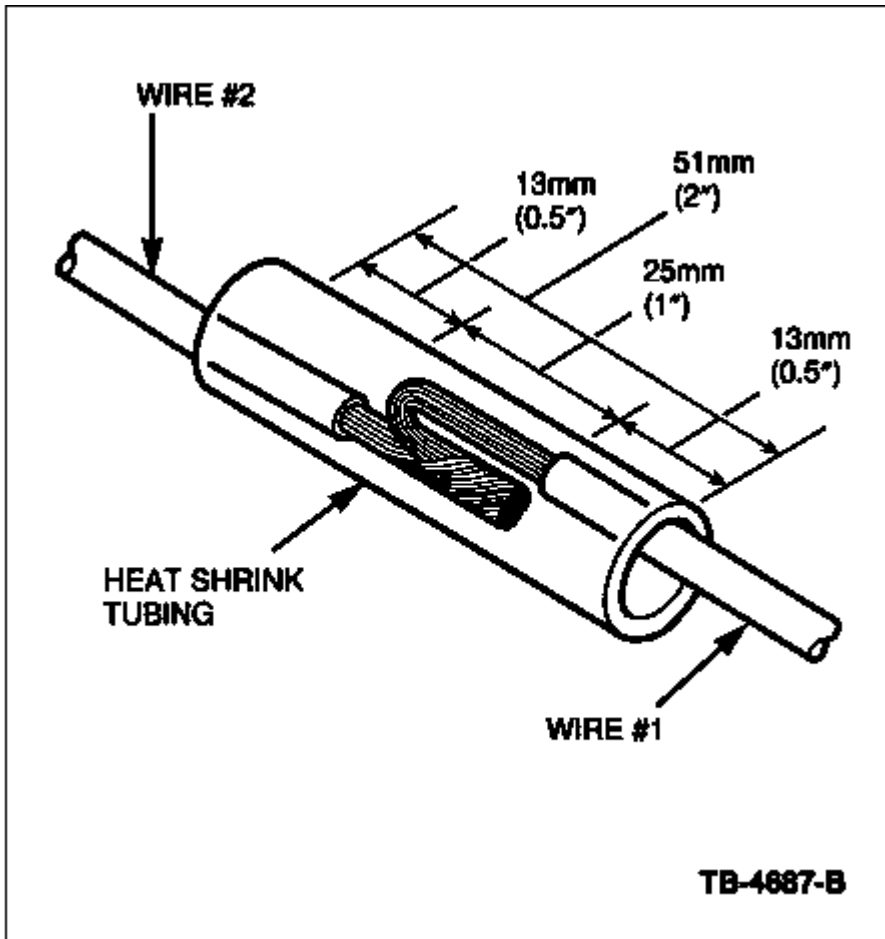
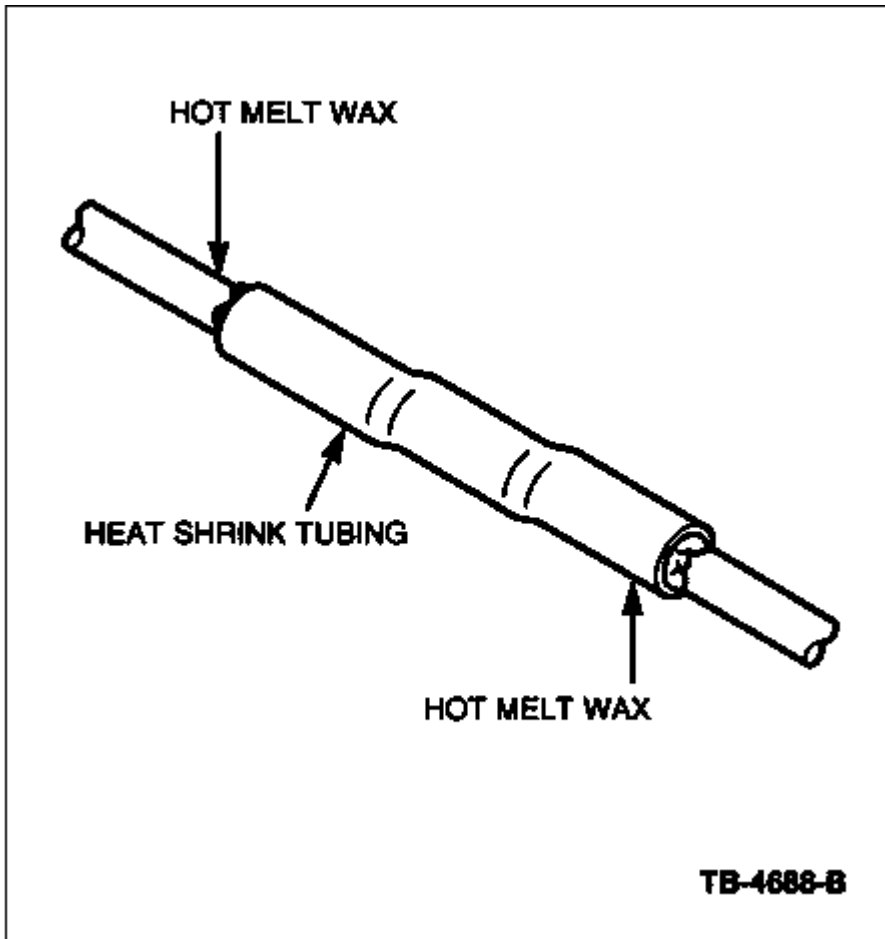


Figure 4 - Article 98-11-3

**NOTE:**

DURABILITY OF A HEAT SHRINK TUBING SPLICE IS DEPENDENT ON THE HOT MELT WAX THAT WILL APPEAR FROM BOTH ENDS OF THE TUBE. THE HOT MELT WAX FORMS AN ADHESIVE SEAL BETWEEN THE WIRE INSULATION AND THE HEAT SHRINK TUBING WHICH PREVENTS AIR AND MOISTURE FROM ENTERING THE SOLDER POINT.

5. Heat the entire length of the heat shrink tubing until the hot melt wax appears from both ends of the tubing (Figure 5).



*Figure 5 - Article 98-11-3*

**OTHER APPLICABLE ARTICLES:** NONE

**SUPERSEDES:** 97-24-14

**WARRANTY STATUS:** INFORMATION ONLY

**OASIS CODES:** 203000, 203200, 209000

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