



**Technical Service  
BULLETIN**

June 20, 2003

Title:  
**GAUGE VISIBILITY IMPROVEMENT**  
Models:  
**'03 4Runner**

# T S B

**ELECTRICAL**  
**EL010-03**

**Introduction** Some customers may complain that the speedometer numbers are difficult to read in certain lighting conditions on 2003 model year 4Runner vehicles. The following procedure was developed to improve instrumentation visibility.

**NOTE:**

Before performing any work explain the following to the customer:

- The instrument lights will illuminate every time the ignition switch is turned to the “on” position or when the engine is started.
- A/T shift indicator lamps will be slightly dimmer than before the procedure.

**Applicable Vehicles**

- **2003** model year **4Runner** vehicles.

**Required Tools & Material**

TOOLS & MATERIAL	LENGTH	GAUGE	QUANTITY
Electrical Wire	50 mm (1.97 in.)	20	1
	800 mm (31.5 in.)	20	1

TOOLS & MATERIAL	PART NUMBER	QUANTITY
Silicon Tape (or equivalent)	3M 06165	1
AMP Wire crimping tool (or equivalent)	AMP47100-1	1

**NOTE:**

AMP wire crimping tool may be ordered by calling SPX/OTC at 1-800-933-8335.

**Warranty Information**

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
BD3010	Modify Combination Meter Wiring	1.0	83800-3G##0	99	99

**Applicable Warranty\*:**

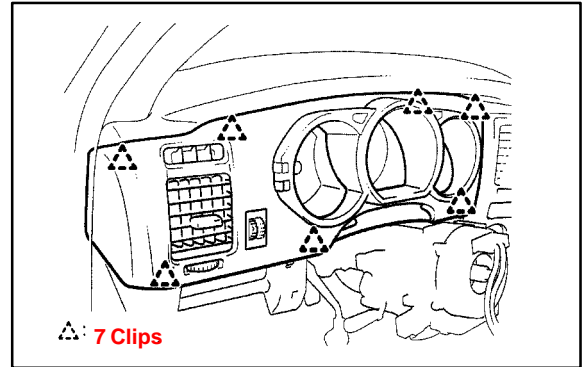
This repair is covered under the Toyota Comprehensive Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.

\* Warranty application is limited to correction of a problem based upon a customer's specific complaint.

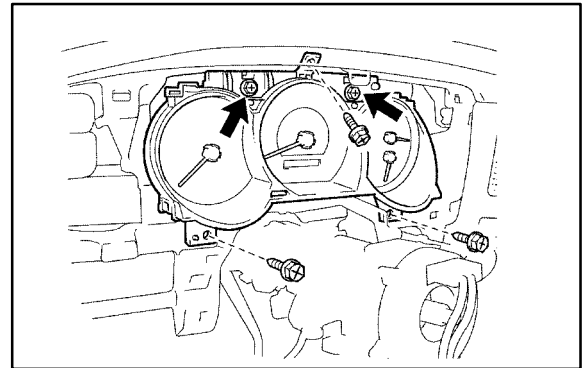


**Repair Procedure**

1. Remove the driver's side scuff plate, kick panel and lower instrument finish panel sub-assembly.
2. Remove instrument cluster finish panel sub-assembly.
  - A. Disengage the seven clips.
  - B. Disconnect the two connectors and remove the instrument cluster finish panel sub-assembly.



3. Remove combination meter assembly.
  - A. Remove the three screws.
  - B. Loosen the two bolts indicated by the arrows and remove the combination meter assembly.



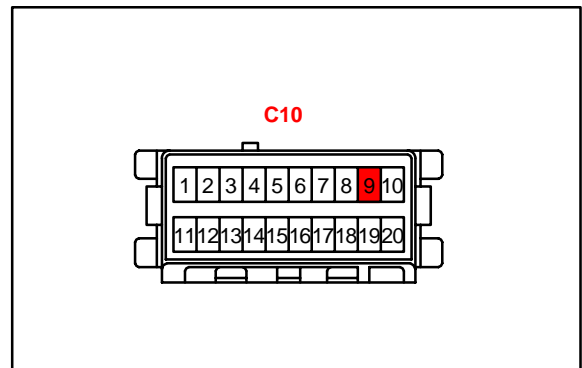
4. Prepare wire harness.
  - A. Pull out connector C10 from the instrument panel.

**NOTE:**

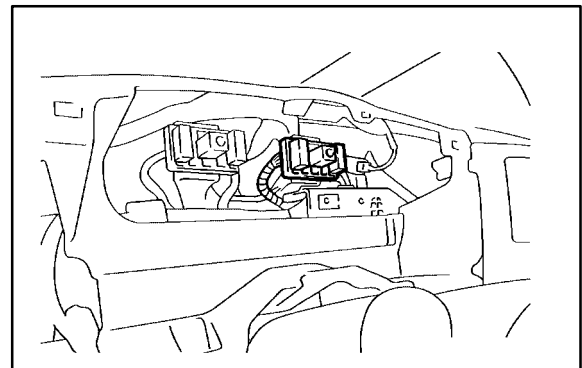
For further vehicle wiring illustration, please see 2003 4Runner Electrical Wiring Diagram (EWD), page 162, connector C10, pin 9.

**HINT:**

TIS Search Hint: 2003 4Runner Wiring Diagram Section: System Circuit Subsection: Tail Light and Illumination.

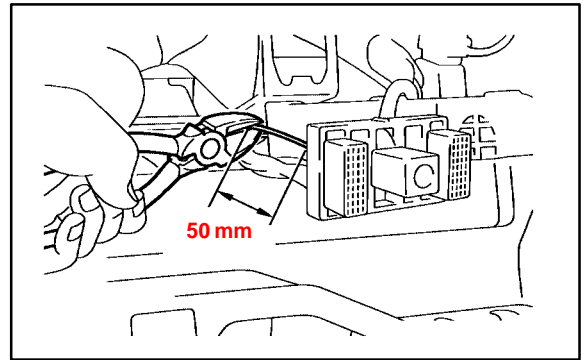


- B. Strip off the vinyl tape from the branch wire harness of the connector.

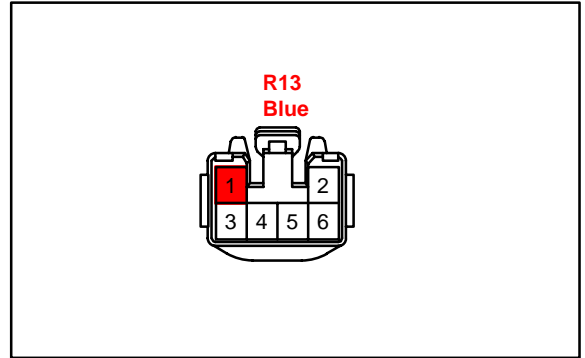


**Repair Procedure**  
(Continued)

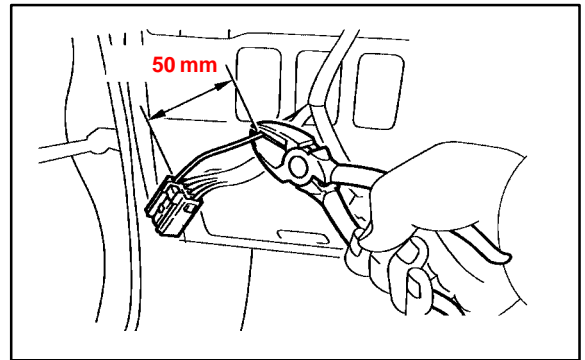
- C. Cut the green wire (connector C10, pin 9) approximately 50 mm (1.97 in.) from the connector.
- D. Strip off the vinyl tape from the blue rheostat wire harness connector R13 up to the clamp.



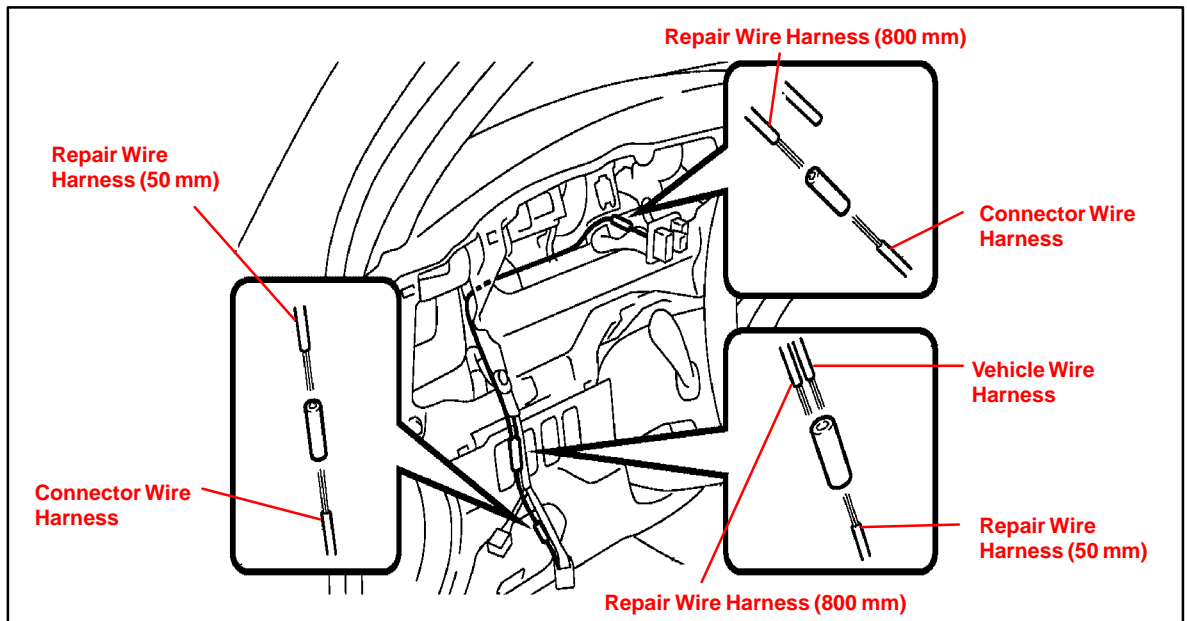
**NOTE:**  
For further vehicle wiring illustration, please see 2003 4Runner Electrical Wiring Diagram (EWD) page 162, connector C10, pin 9 and R13, pin 1.



- E. Cut the yellow–red wire approximately 50 mm (1.97 in.) from the connector (connector R13, pin 1).



5. Wire harness connections.



**Repair Procedure**  
(Continued)

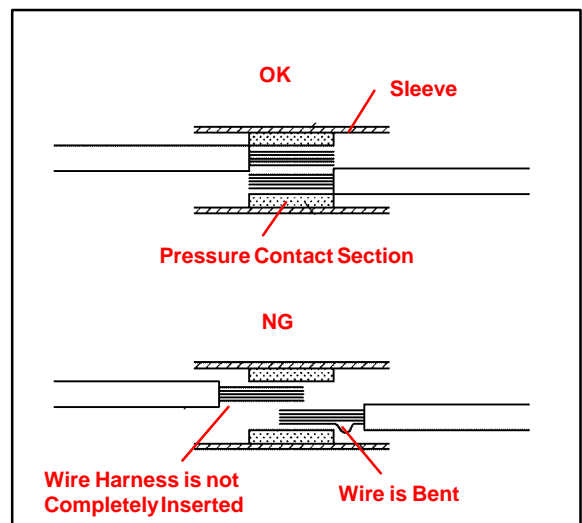
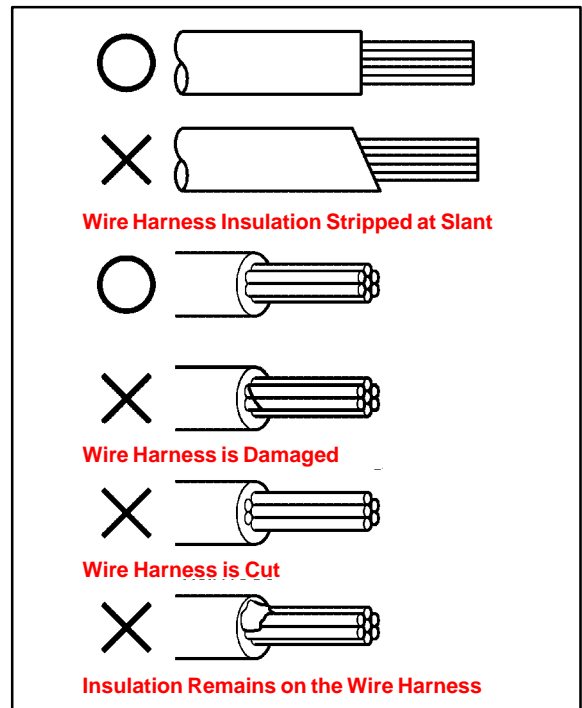
- A. Connect the 50 mm (1.97 in.) strand of previously prepared wire to the yellow–red wire on the connector side of the blue rheostat wire harness (connector R13, pin 1).
  - a. Strip 8 to 11 mm (0.31 to 0.43 in.) of wire insulation from the ends of both the yellow–red wire on the connector side of blue rheostat wire harness and from the end of the previously prepared 50 mm (1.97 in.) strand of wire.

**NOTE:**  
Be careful not to damage the wire when stripping off the insulation. Visually inspect the wire. If there is any damage, perform the operation again.

- b. Insert the two stripped wire ends into the sleeve so that they overlap.

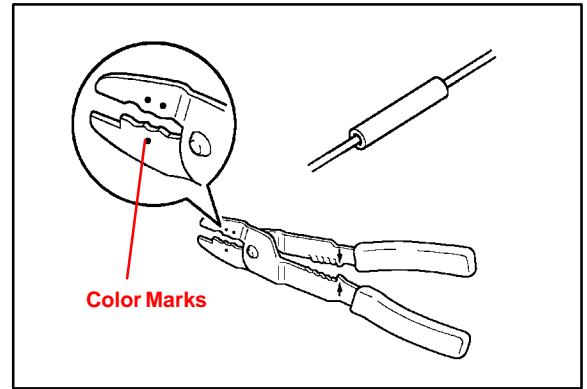
**NOTE:**

- The stripped area of both wires being spliced must overlap completely in the crimp section.
- Do not insert insulated portions of the wire into the sleeve to be crimped.



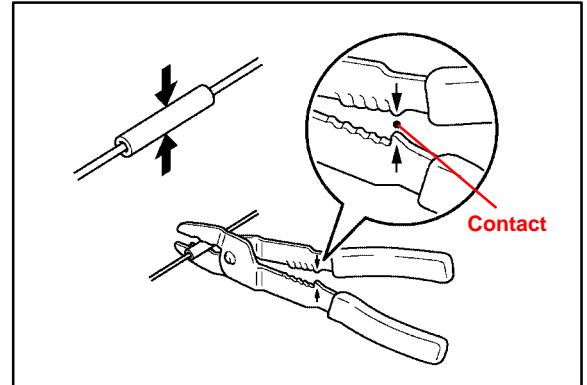
**Repair  
Procedure**  
(Continued)

- c. Place the sleeve into the corresponding color of the crimping tool jaws (P/N AMP47100-1 or equivalent).
- d. With the center of the sleeve correctly centered between the crimping jaws of the tool, squeeze the crimping tool handles until both halves make contact at the position marked by arrows.

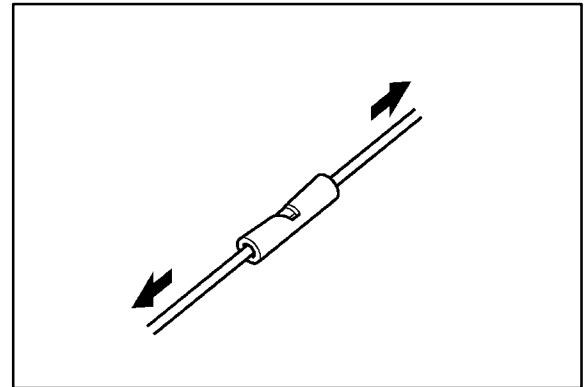


**HINT:**

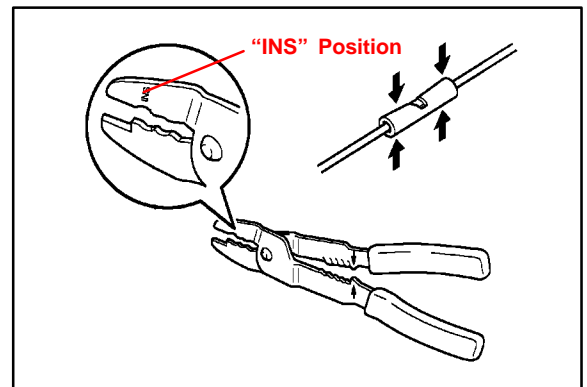
Check that the sleeve and wires are in the correct position before closing the crimping tool with steady pressure.



- e. Pull on the joined wires to ensure that they are joined firmly in the sleeve.



- f. Crimp both ends of the sleeve with the crimping tool at the "INS" position.
- g. Prepare approximately 100 mm (3.94 in.) of silicon tape (P/N 3M 06165 or equivalent).



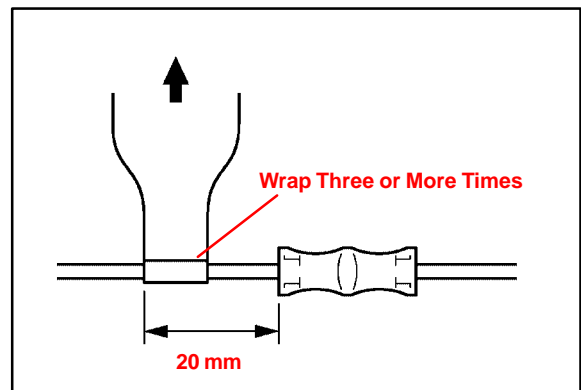
**Repair  
Procedure**  
(Continued)

- h. Stretch the silicone tape until its width becomes approximately half.

**HINT:**

- If the adhesive surfaces of the silicone tape contact each other, they will adhere together and separating them will degrade the adhesive qualities of the tape. Thus, do not remove the tape backing until ready to apply.
- Prevent oil, dust etc. from contaminating the adhesive surface of the tape.

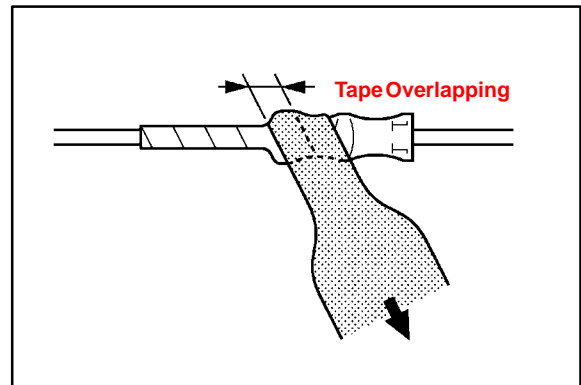
- i. Remove the backing from the prepared piece of silicone tape and apply approximately 20 mm (0.79 in.) from the end of the sleeve wrapping the tape around the wire three or more times while stretching the tape.



**HINT:**

Before beginning the operation, thoroughly wipe grease and dirt from the sections to be joined.

- j. Wrap the silicone tape toward the sleeve.



**NOTE:**

- Overlap tape about half width while keeping the tape stretched.
- Be careful not to tear the tape on the sharp edge of the sleeve.

- k. Firmly wrap the tape approximately 20 mm (0.79 in.) past the opposite end of the sleeve, then wrap the tape back towards the starting point and securely finish wrapping the tape at approximately the center of the sleeve.

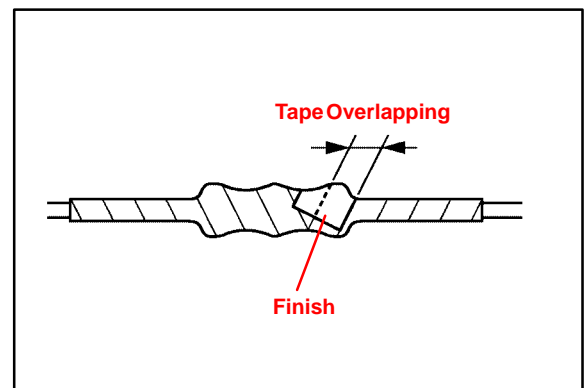
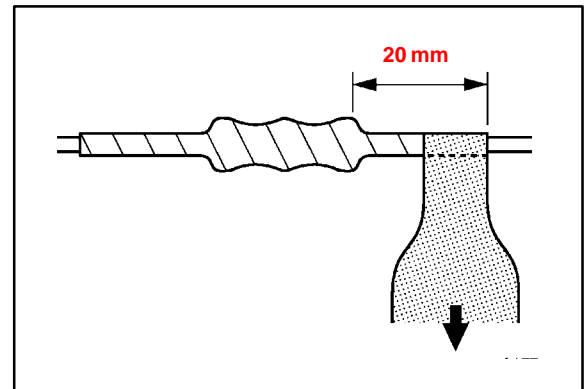
**Repair  
Procedure**  
(Continued)

- B. Connect the 800 mm (31.5 in.) strand of previously prepared wire harness to the green wire in the connector side of the right hand connector (connector C10, pin 9) by following previous steps “a” through “k”.
- C. In the same manner, connect the other end of the 800 mm (31.5 in.) previously prepared wire and the 50 mm (1.97 in.) previously prepared wire (previously joined to the yellow–red wire of the blue rheostat connector R13, pin 1) to the cut yellow–red wire on the vehicle side.
- D. Wrap vinyl tape around the meter connector wire and the rheostat connector wire respectively.

**NOTE:**

**Overlap tape approximately half width.**

- E. Affix the 800 mm (31.5 in.) of jumper wire to the vehicle wire harness at 2 or 3 points with vinyl tape.



6. Re–install components removed in steps 1 through 3 in reverse order.