

## Repair Instructions for E46

**Vehicles concerned:** E46  
Manufacturing period: from start of series production to April 2002

**Procedure:**

- 1. Connect BMW diagnostic system (DISplus or GT1) to the vehicle**

- 2. Read off fault memory**

The following fault codes could be stored in the fault memory of the airbag control unit, depending on manufacturing period and model:

E46 Coupé US **to** March 1999

E46 **to** September 1999

"05 - Driver-side belt tensioner triggering circuit"

"06 - Passenger-side belt tensioner triggering circuit"

E46 Coupé US **from** March 1999

E46 **from** September 1999

"02 - Driver-side belt tensioner triggering circuit"

"03 - Passenger-side belt tensioner triggering circuit"

- 3. Disconnect the vehicle battery.**

- 4. Fit repair wiring harness**

**Important.**

**Comply with [safety instructions](#) when handling airbag modules and pyrotechnic belt tensioners.**

The minimum transition resistance must be achieved when the repair wiring harness is fitted. For this reason it is essential that the hotspots in the Repair Instructions are observed.

Service Information bulletin [SI 61 01 99 \(397\)](#) "Airbag, Repair Instructions for triggering circuits" remains valid for damaged or defective wires and connectors in the triggering circuits of the airbag system.

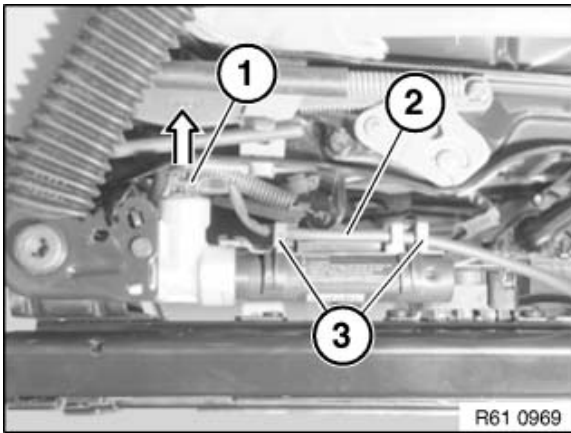
The following special tools from repair set IV for vehicle electrics (order no. 61 9 020) are needed for professional repairs on the wiring:

- **Hand-held stock (without die)** (order no. 61 9 041)
- **Die for hand-held stock** (order no. 61 9 042)
- **Insulation strippers** (order no. 61 9 043)

*Note:*

All instructions needed on using the special tools are described in the Operating instructions / volume 1 (order no. 61 9 029).

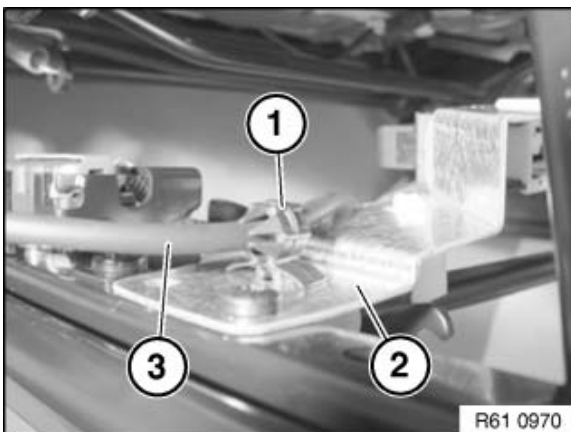
A conventional workshop hot-air blower is also required.



**Remove the front seat** concerned.

Unlock and separate connector (1) on the belt tensioner.

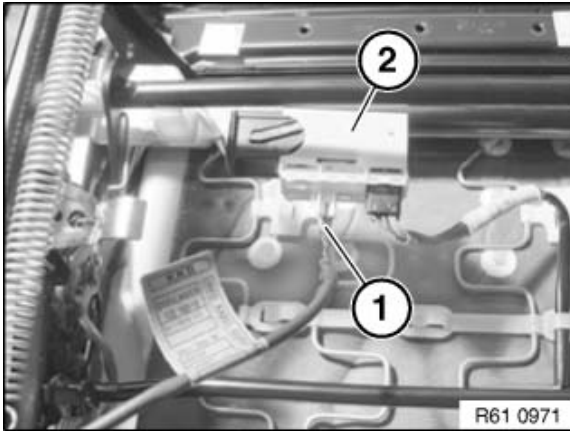
Pull seat wiring harness (2) from retainer (3).



Unclip retainer (1) from carrier (2) and unthread seat wiring harness (3).

*Note:*

Retainer (1) can be reused.



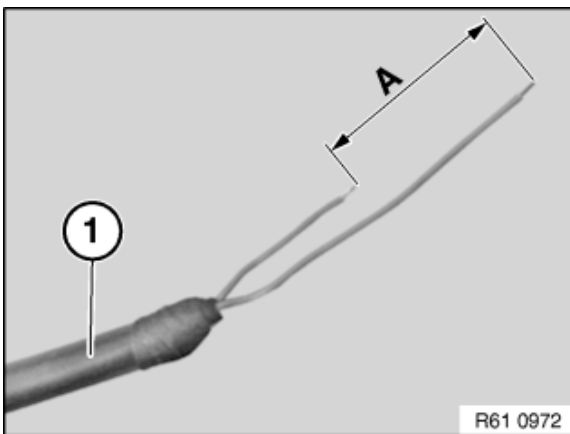
Pull the cover cap from the central seat connector.

Cut off the two belt tensioner triggering circuit wires (1) **yellow/brown** and **yellow/red** on the seat wiring harness at the yellow connector housing (2).

Refit the cover cap.

*Note:*

On seats without positioning motors and seat heating, the connector is not required.

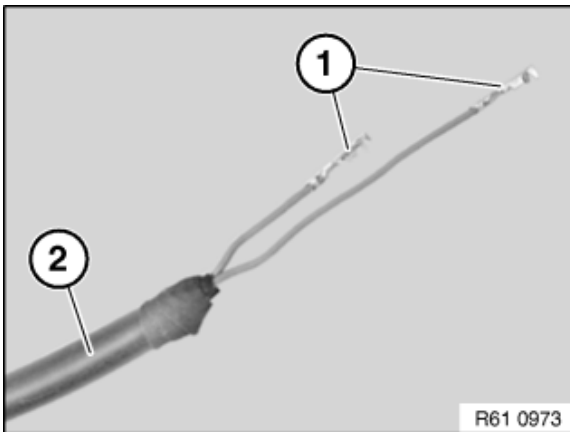


Prepare the repair wiring harness as follows:

Cut the **blue** wire on the repair wiring harness section (1) to different lengths (A = approximately 30 mm).

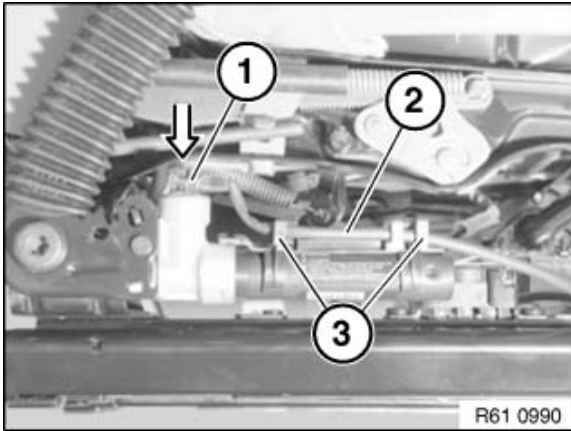
Strip 4 mm at the ends of the wires.

**Cutting and stripping wires**



Crimp-connect butt joint (1) for wire cross-sections of 0.35 to 0.50 mm<sup>2</sup> to the two stripped ends of repair wiring harness section (2).

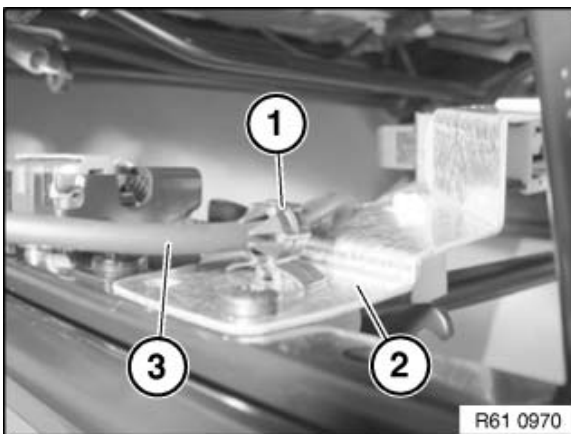
**Crimping buffer pieces**



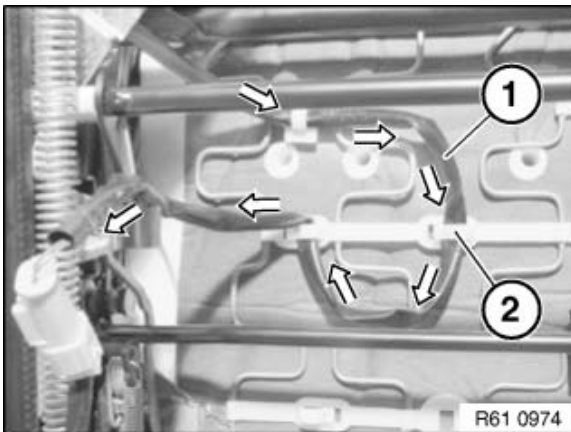
Connect the repair wiring harness sections with the connector.

Plug angled connector (1) onto the belt tensioner and lock.

Press repair wiring harness section (2) into retainer (3).



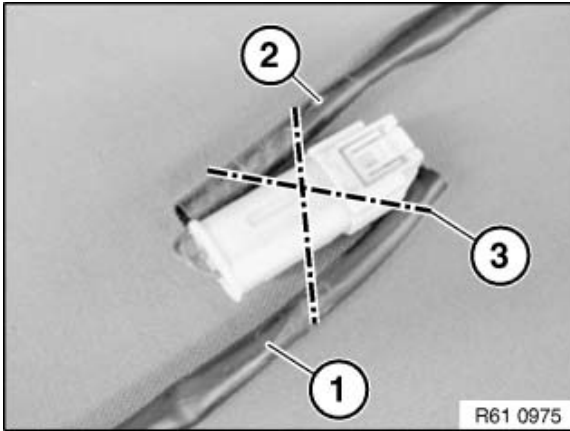
Clip repair wiring harness section (3) into carrier (2) with retainer (1).



**Important.**

Repair wiring harness section (1) must be routed and secured so that it is **free of tension**.

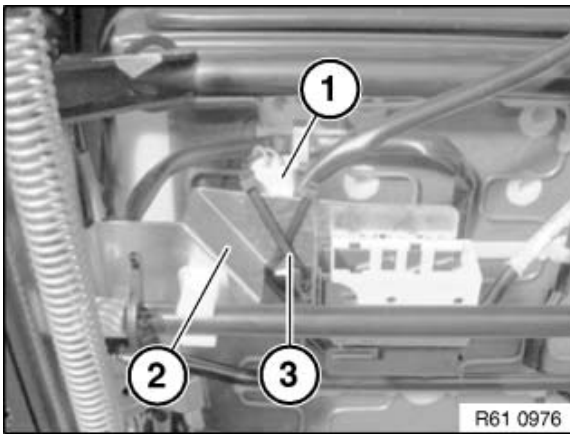
Route repair wiring harness section (1) under the seat and into the plastic clips (2) in the order shown.



Fold repair wiring harness sections (1) and (2) at the connector to form an "S" shape.

*Note:*

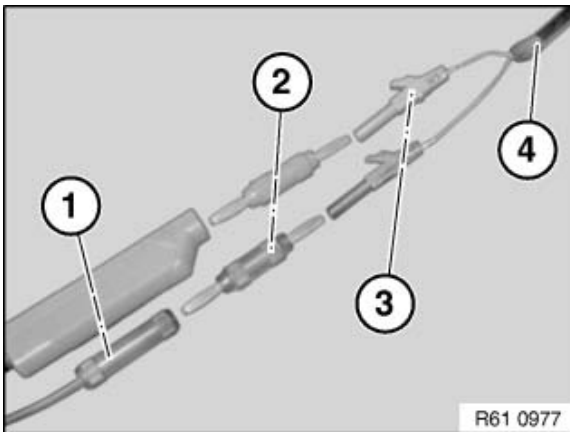
The position of the cable ties (3) on the "S" shape section is determined by subsequent fastening to the carrier.



Secure "S" shape (1) on carrier (2) of central seat connector with two crossed cable ties (3).

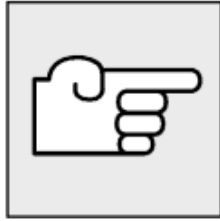
*Note:*

When securing the "S" shape, the crossed cable ties (3) should securely connect the repair wiring harness sections to the connector housing.



Connect the butt connector on the repair wiring harness section (4) to the BMW diagnostic system through multifunction cable 1 (MFK 1):

- (1) MFK 1 from BMW diagnostic system
- (2) Double-ended banana plug
- (3) SAGK4 tapping clips, black and red (DIS measuring probe set 61 1 410)
- (4) Repair wiring harness section



On the BMW diagnostic system, select "Multimeter" measuring method with resistance/ohms submenu.

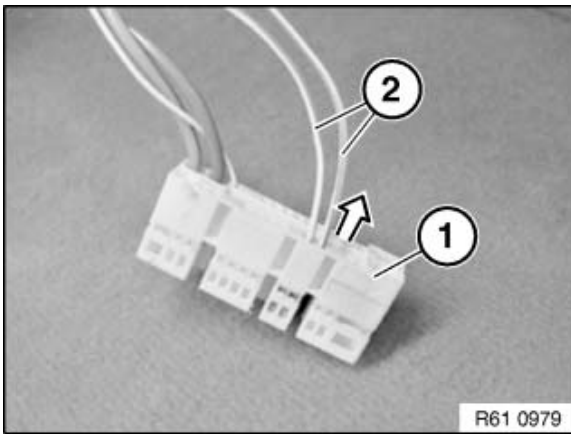
Read off measured value.

**Setpoint value: 1 to 6 ohms**

*Note:*

If the setpoint value is not achieved, replace the belt tensioner and return the removed part together with the tester printout.

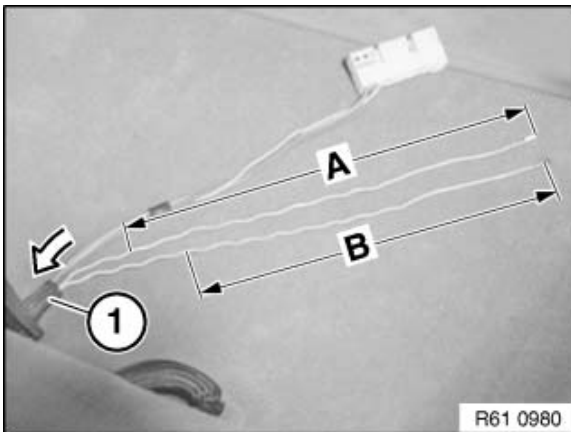
Continue fitting the repair wiring harness.



Place the front seat in the vehicle and tilt it back to the rear seat.

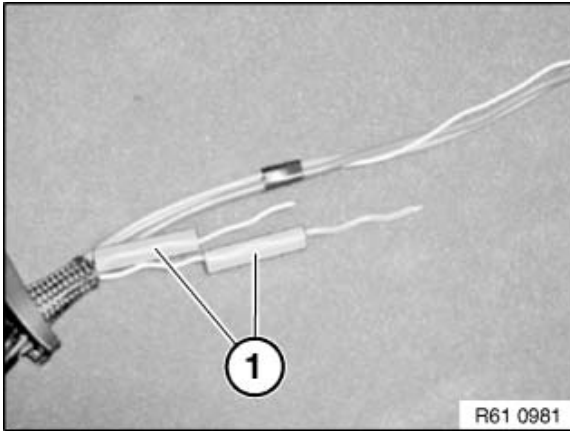
Remove the cover cap from connector housing (1) on the vehicle wiring harness and remove the twisted belt tensioner triggering circuit wires (2) **yellow/brown** and **yellow/red** from the connector housing.

Close connector housing (1) again with the cover cap.



Remove the fabric adhesive tape from the vehicle wiring harness and slide back insulating sleeve (1) approximately 300 mm.

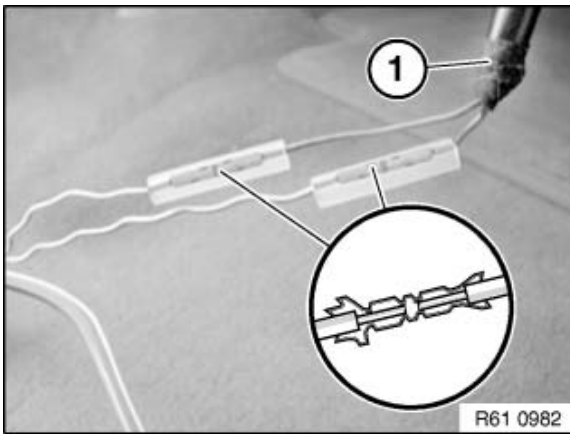
Shorten **yellow/brown** triggering circuit wire by **A = 250 mm** and **yellow/red** triggering circuit wire by **B = 220 mm**.



Strip 4 mm of the triggering circuit wires.

### Cutting and stripping wires

Slide heat-shrink sleeves (1) over the triggering circuit wires.

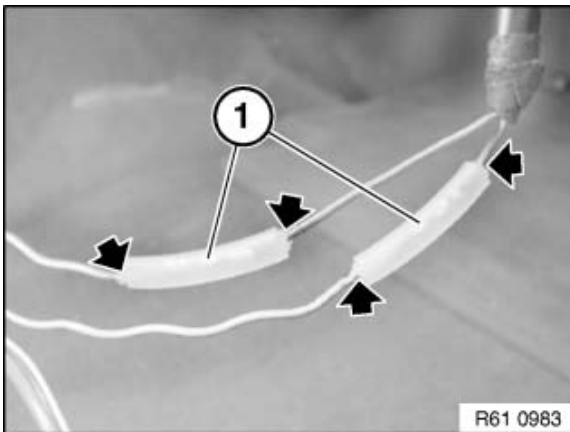


Crimp butt connector on repair wiring harness section (1) with triggering circuit wires.

**Brown wire with yellow/brown**

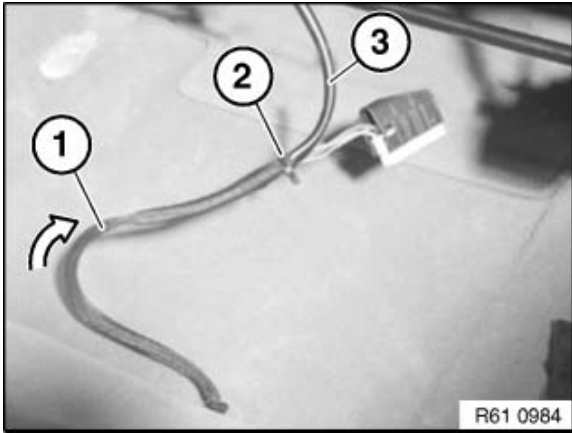
**Blue wire with yellow/red**

### Crimping buffer pieces

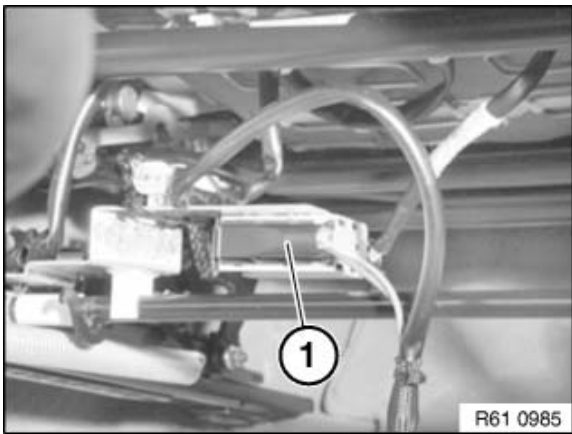


Slide heat-shrink sleeves (1) over the crimped connections and heat with hot-air blower until glue escapes onto the wires.

### Butt connector for repairing connector



Slide insulating sleeve (1) over the repair and fix to the vehicle wiring harness (3) with a cable tie (2).



Connect seat connector (1).

**Install the front seat** concerned.



**5. Connect vehicle battery**

**6. Clear the fault memory**

<b>Parts:</b>	<b>Description</b>	<b>Part number</b>	<b>Quantity*</b>
	Cable tie	61 13 1 367 599	3
	Butt connector	61 13 8 353 746	2
	Heat-shrink sleeves	61 13 1 379 833	2
	Repair wiring harness	61 12 6 908 850	1

\* All quantities refer to the repair of a single seat

**Reimbursement:** Material and labour costs incurred can be claimed through the usual warranty channels subject to current warranty terms.

**Defect code:**

**61 12 91 79 00**

This defect code is not contained in the official Defect Code Catalogue but has been included in the system, thus enabling warranty claims to be processed, as follows: