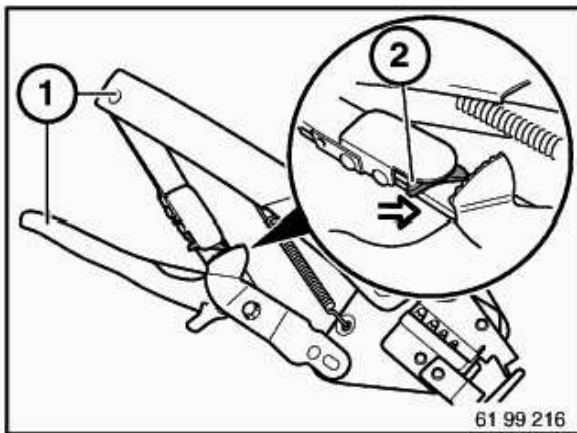


### 1. Crimping butt connectors and contact sleeves for fan connectors up to 2.5 mm<sup>2</sup>

The special tool 61 9 041 (crimping tool) in conjunction with 61 9 042 (matrix) are used for crimping stop parts (contacts).

*Refer to repair instructions:*

Special tools for wiring harness repairs

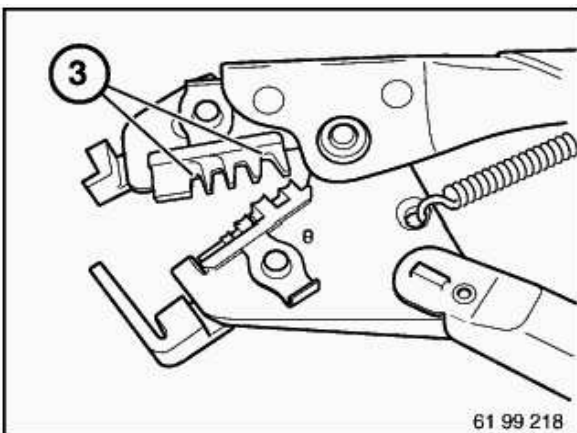


Unlock special tool 61 9 041:

Squeeze grips (1) lightly and push unlocking lever (2) in direction of arrow.

OR:

Compress handles as far as they will go, tool unlocks automatically.



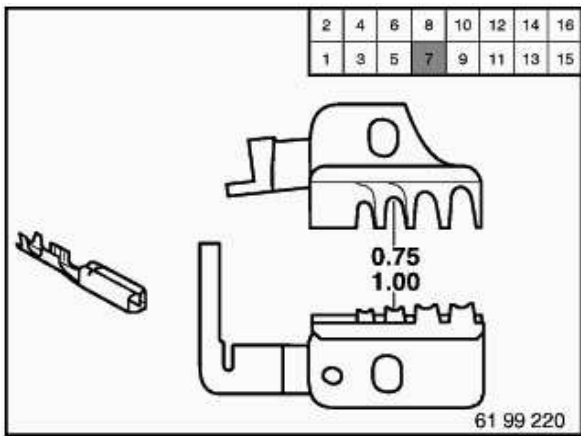
*Note:*

Designation on nests (3) of special tool 61 9 042 indicate which contacts can be used in which crimping nests.

The following wire cross-section sizes and their corresponding stops can be used:

NestWire cross-section size

- |   |                              |
|---|------------------------------|
| 1 | 0.35 ... 0.5 mm <sup>2</sup> |
| 2 | 0.75 ... 1.0 mm <sup>2</sup> |
| 3 | 1.5 mm <sup>3</sup>          |
| 4 | 2.5 mm <sup>2</sup>          |

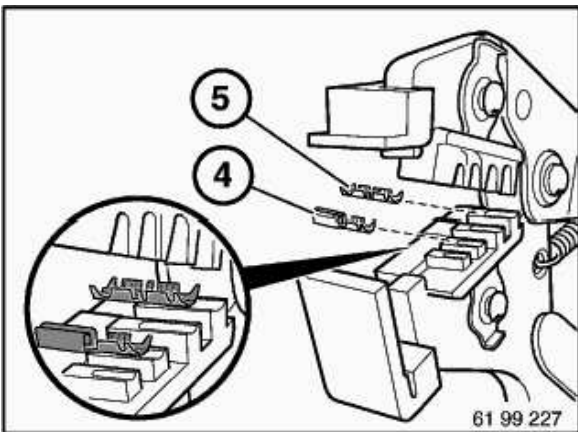


Example for choosing a nest:

Contact sleeve for fan connector      0.75 ... 1.0 mm<sup>2</sup>

Nest in matrix      2 / 0.75 ... 1.0 mm<sup>2</sup>

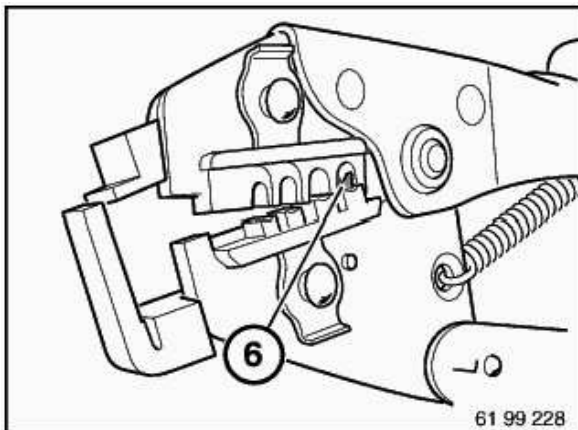
For further operating instructions, refer to operating instructions for repair range IV for vehicle electrical system 61 9 020.



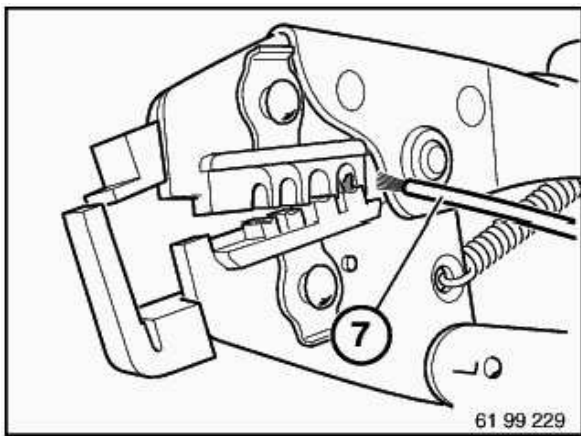
**Caution!**

The contacts must be inserted in the matrix nest with utmost care. In so doing, ensure wire crimp and insulation crimp are exactly positioned.

Insert contact section of contact sleeves (4) for comb connector or crimp connector (5) in predetermined nest.



Preload contact by squeezing matrix in crimping tool. Grip contact (6) firmly only, do not crimp.



*Note:*

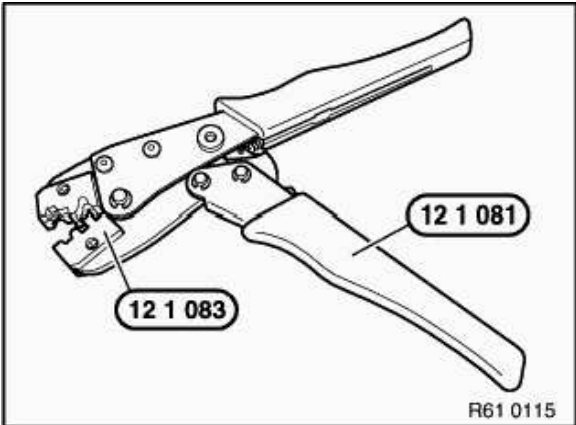
Follow procedure for cutting and stripping insulation from cable.

Insert stripped end of wire (7) in the contact. Ensure insulation and stripped wire end are correctly laid in contact.

Compress crimping tool as far as it will go.

Crimping tool unlocks automatically.

Take contact out of crimping tool.

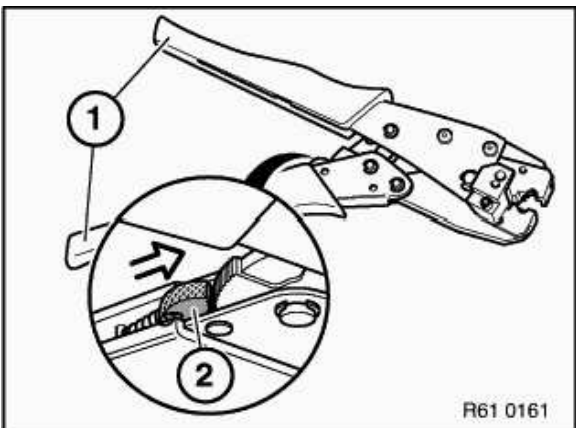


## 2. Crimping contact sleeves for fan connectors 4 mm<sup>2</sup> and ignition cable contacts

The special tool 12 1 081 (crimping tool) in conjunction with 12 1 083 (matrix) are used to attach the ignition cable contacts and to crimp the contact sleeves 4 mm<sup>2</sup> for fan connectors.

*Refer to repair instructions:*

Special tools for wiring harness repairs

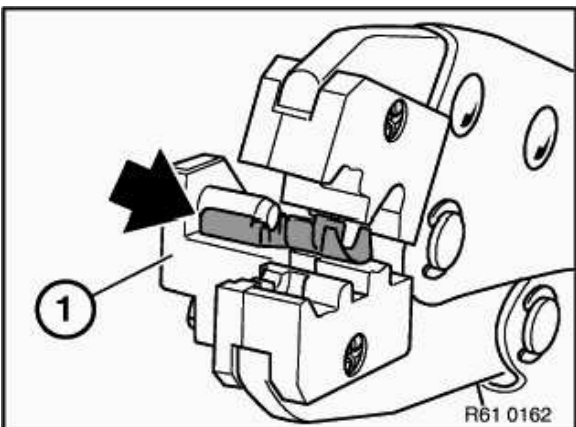


Releasing special tool 12 1 081:

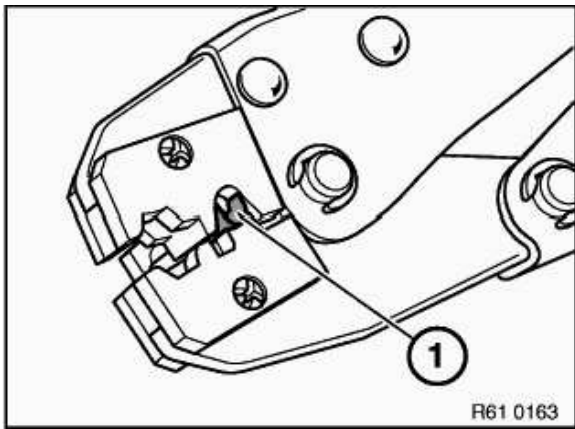
Squeeze grips (1) lightly and push unlocking lever (2) in direction of arrow.

OR:

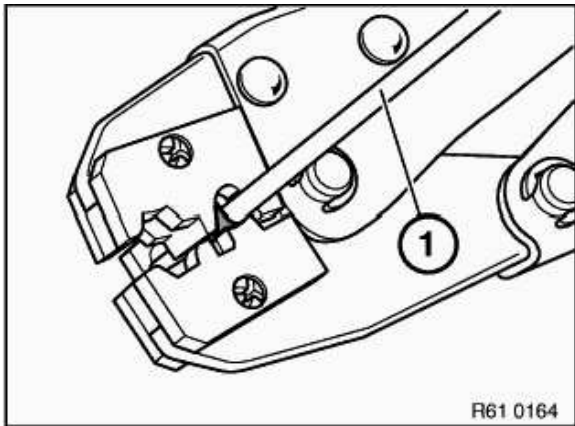
Compress handles as far as they will go, tool unlocks automatically.



Insert contact sleeve 4 mm<sup>2</sup> in nest with lock (1) as far as it will go.



Preload contact by squeezing matrix in crimping tool. Grip contact (1) firmly only, do not crimp.



*Note:*

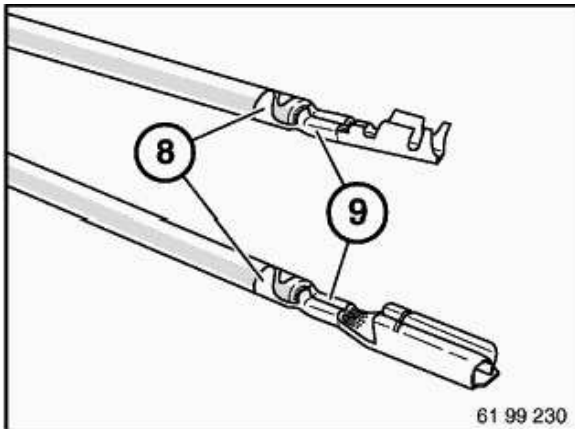
Follow procedure for cutting and stripping insulation from cables.

Insert stripped end of wire (7) in the contact. Ensure insulation and stripped wire end are correctly laid in contact.

Compress crimping tool as far as it will go.

Crimping tool unlocks automatically.

Take contact out of crimping tool.

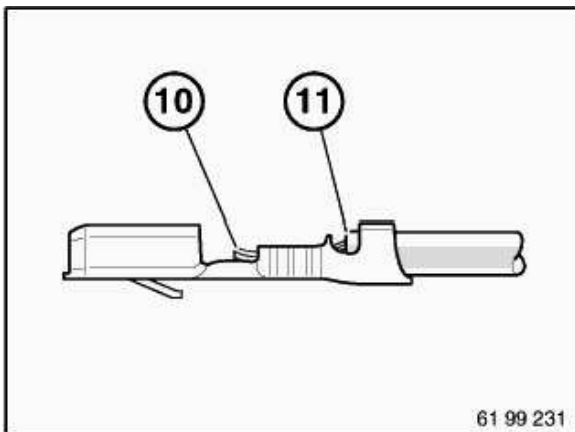


### 3. Checking crimping

Check insulation crimp (8) and wire crimp (9) against following illustrations to ensure crimps are correctly located.

*Note:*

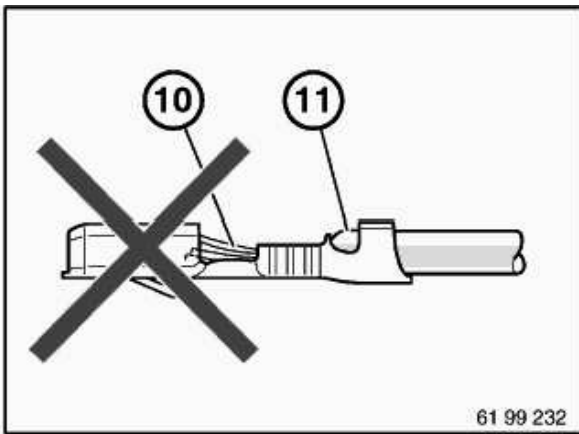
Illustration shows butt connectors and contact sleeves for fan connectors knocked on one side. The crimping procedure is identical here.



Correct crimping:

Visible conductor end (10).

Visible insulation end (11).

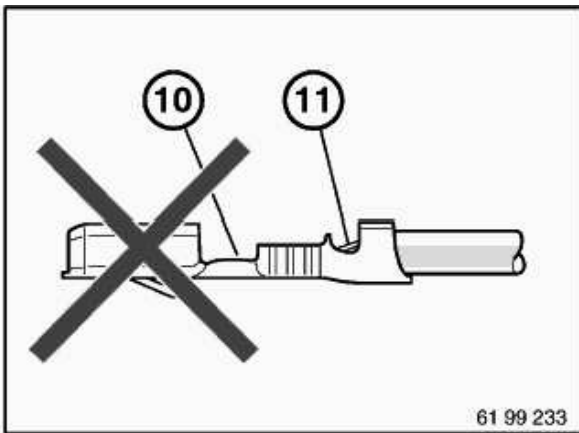


Incorrect crimping:

Conductor end (10) inserted too far.

Insulation end (11) in wire crimp.

If necessary, repeat crimping with a new contact.



Incorrect crimping:

Conductor end (10) not visible.

Insulation end (11) not visible.

If necessary, repeat crimping with a new contact.

For further handling instructions, refer to operating instructions for repair range IV for vehicle electrical system 61 9 020.