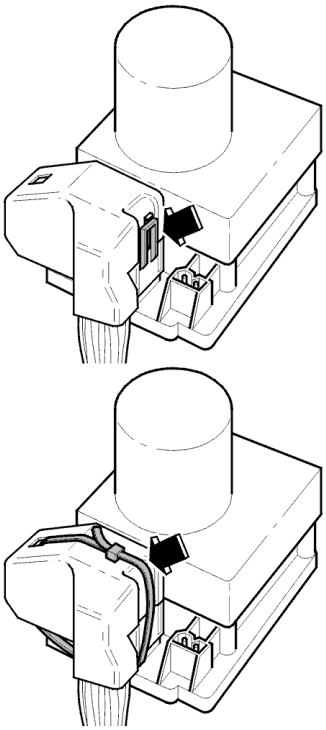
Repairing ABS connector

The following ABS connector components can be damaged by rough handling:

- **A.** The striker plate may break off. Secure using a tie strap if this happens
- **B.** The cover hinges may break. The cover must be replaced in this case
- **C.** The connector housing may be damaged. If this is case replace the complete connector. When the connector has been replaced, check the wiring terminals according to Checking wiring and terminals in connector
- **D.** One or more cable terminals may be damaged. To replace cable terminals, see D. Replacing cable terminals .

Repairs

A. Repairing the striker plate



Secure the cover using a tie strap as illustrated.
Otherwise the cover may shake loose which will stop the ABS system working and store a diagnostic trouble code (DTC).

B. Repairing the cover hinges

The small lugs on the sides may break off if handled roughly.

- Install new cover.

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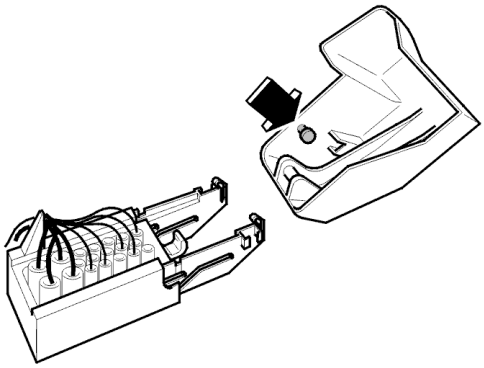
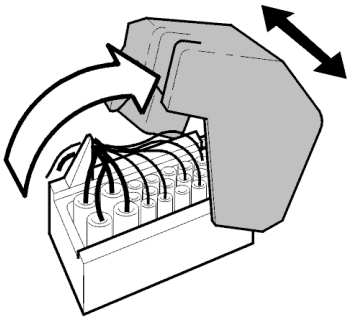


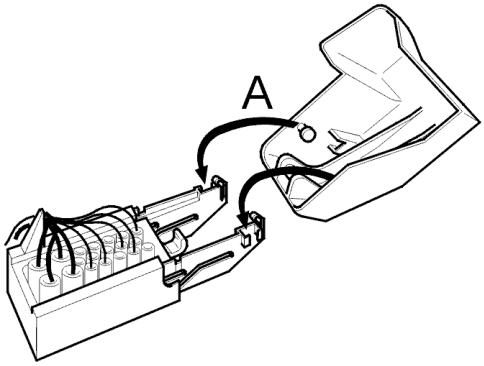
Open the cover

Open the cover approximately 45°. Then pry the cover sideways to release it from the hinge mount.
If the cover is opened too far, the rear edge of the cover will go around the hinge mounting preventing the cover being releasing from the mounting.



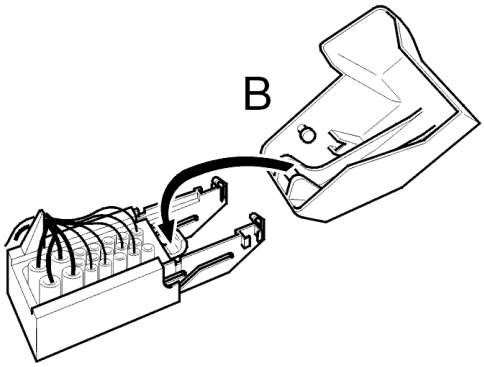
Install the new cover

Align the lugs at (A) first.



Then locate hinge (B)

Close the cover over the connector housing. Ensure that the cover locks into the hinge catch properly.



C. Repairing connector housing

Remove the connector from the ABS module and open the cover.
Cut the tie straps at the connector. Remove the protective sleeve and slide back as far as necessary to expose the cables. Tape back the protective sleeve.
(In some cases the protective sleeve may have

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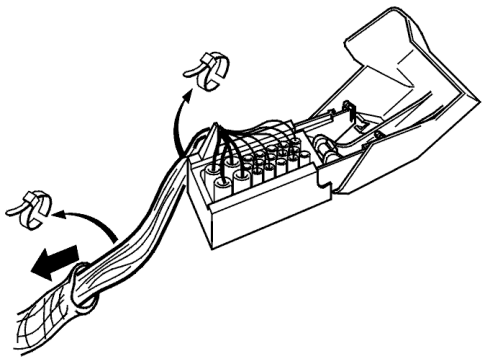
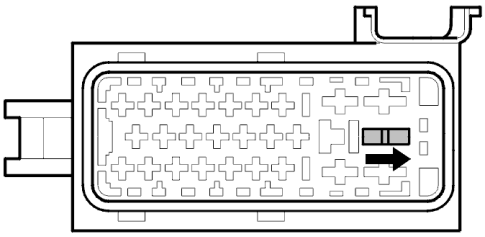
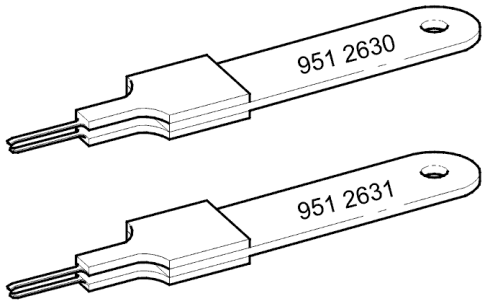


been replaced by a corrugated, split plastic protective tube. If this is the case, cut the tape and remove the protective tube.)

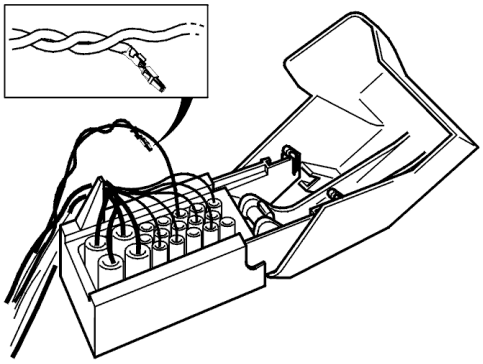


Disconnect the secondary lock for the cable terminal by pushing the catch (in the shaded area) in the direction of the arrow using a screwdriver.



Disconnect and transfer the cables to the new connector **one at a time**.
It is important to disconnect one cable at a time so as not to mix them up.
Use terminal removal tool **951 2630** for the small cavities and **951 2631** for the large ones.

Caution! To disconnect a cable push it in towards the connector while pressing the terminal removal tool in from the other side to release the locking tabs on the cable terminal.



Note! Wheel sensor cables are twisted pair (positive and negative signal) cables for each wheel. It is important that paired cables are twinned in the same way when they are reinstalled in the connector. The cables must be twisted 3 times per 100 mm.

The numbering of the connector terminals is illustrated opposite

The first and last terminals in the outer smaller rows are marked 1 and 7 and 17 and 23.
The first terminal in the middle row is marked 10.
The large terminals are marked 8 and 9 and 24 and 25.
The diagram below shows where in the connector each wheel sensor should be connected:

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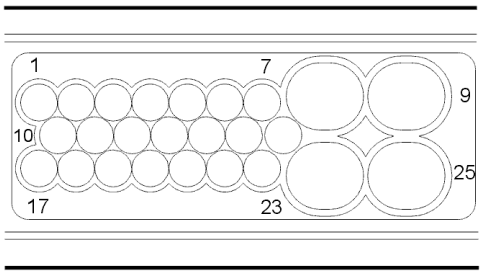
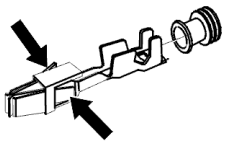


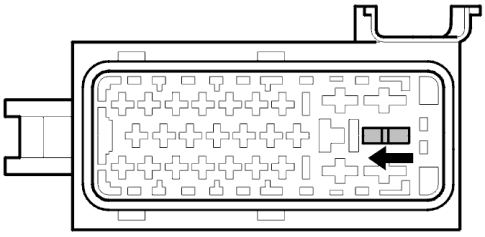
Wheel:	Positive signal:	Negative signal:
Right rear	# 17	# 1
Left rear	# 10	# 2
Right front	# 3	# 18
Left front	# 4	# 11

For cable terminal type identification, see the table on Page 10.

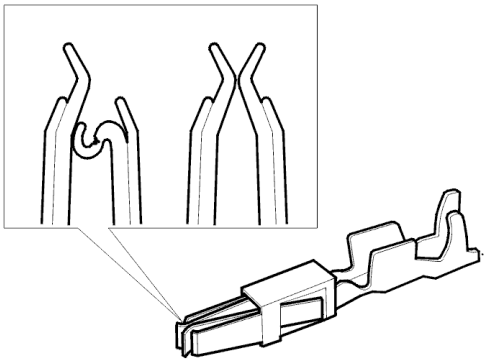
Before the cable terminal is installed in the connector, carefully poke out the locking tabs a little with a sharp tool. They may have been pushed in by the terminal removal tool during removal.

Caution! Handle cable terminals carefully!





When all cables are in place, lock the secondary lock by pushing the catch in the direction of the arrow using a screwdriver.
Before the control module is connected, check the wiring connections according to Checking wiring and terminals in connector **.**



D. Replacing cable terminals

Check:

Disconnect the connector from the control module.
Inspect the cable terminals in cavities.
Cable terminals may have been damaged when the connector was installed.
A damaged cable terminal is easily spotted.
Both the cable terminal "lips" must be clearly visible.
The illustration shows the cable terminals out of the connector, from the side and magnified.
The left is damaged and the right is normal.
Replace damaged cable terminals as follows.

Repair kit

Tools for crimping cable terminals to the ABS connector are available to order.
The tools and components necessary for repairing ABS wiring can also be ordered as a kit.

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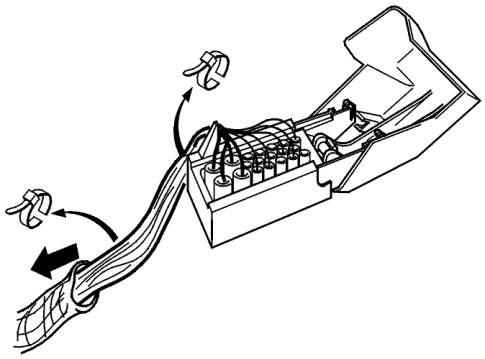
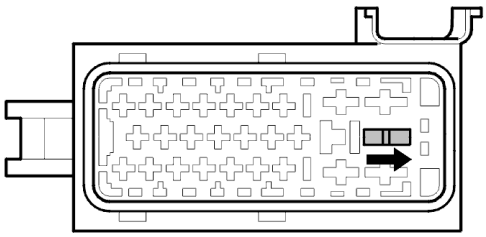


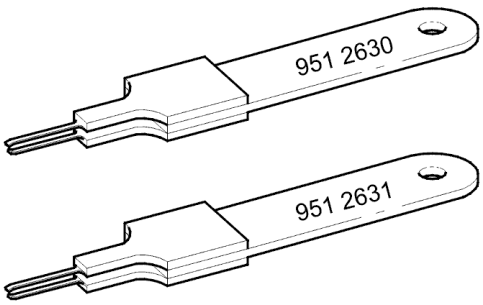
See also WB 202.

Replacing cable terminals

Open the connector cover.
Cut off the tie straps at the connector.



Disconnect the secondary lock for the cable terminal by pushing the catch (in the shaded area) in the direction of the arrow using a screwdriver.



Remove the cable terminal that is being replaced using the terminal removal tool (see page 3).

Note! Disconnect one cable terminal at a time to prevent them being mixed up! The cable terminal must be repaired and reconnected before the next cable terminal is disconnected!

Pull the cable and cable terminal to be replaced as far out of the cable harness as possible.
If the cable is twisted together with another cable it must be twisted in the same way with the same cable when the new cable is connected.
Cut off the cable terminal as close to the damaged cable terminal as possible.
Take out a suitable blade socket terminal (cable terminal) and seal according to the table below:

Cable terminal type	P/N	Cable area mm^2	P/N, colour code, crimper slots
Blade socket	914 8135 - 8	0.35 - 1.0	951 2608 -5 Light blue (A)
Seal	914 8107 - 4	0.35 - 1.0	
Blade socket	914 8103 - 6	1.5 - 2.5	951 2608 -5 Light blue (B)
Seal	914 8109 - 3	1.5 - 2.0	

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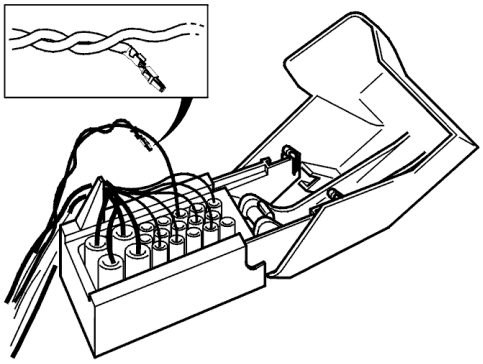
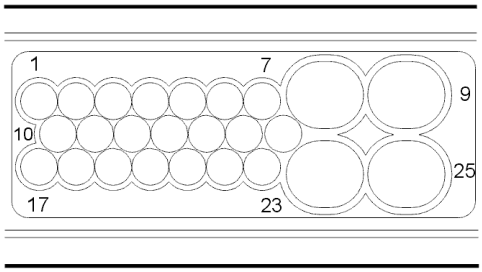
Seal	914 8110 - 1	2.0 - 3.0



Install the seal on the cable.
Strip the cable.
Crimp according to: Seal sws and plug and Stripping the cable .

Note! Wheel sensor cables are twinned pair (positive and negative signal) cables for each wheel. It is important that paired cables are twinned in the same way when they are reinstalled in the connector. The cables must be twisted 3 times per 100 mm.



Connector terminal numbering is illustrated opposite.
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The diagram below shows where in the connector each wheel sensor should be connected:

Wheel:	Positive signal:	Negative signal:
Right rear	# 17	# 1
Left rear	# 10	# 2
Right front	# 3	# 18
Left front	# 4	# 11

To identify the cables, see table Checking wiring and terminals in connector .

When splicing is complete

Install the cable terminal in the connector.
Remove the next cable terminal **if** several are being replaced and proceed as above.

Note! (Only one at a time!)

When all damaged cable terminals have been replaced, secure the cable harness as before using new tie straps.

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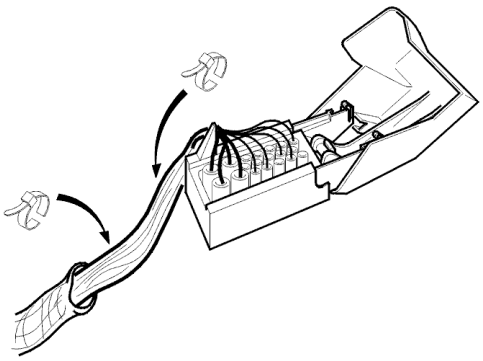
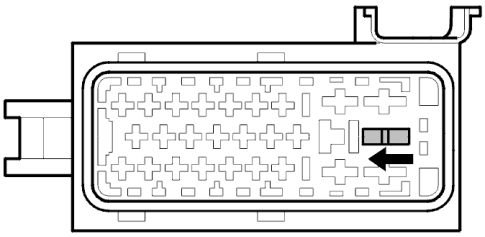
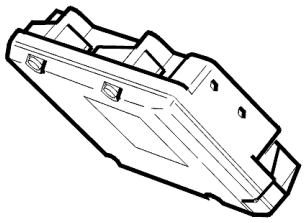




Lock the secondary lock of the cable terminal by pushing the catch (in the shaded area) in the direction of the arrow using a screwdriver.



Checking wiring and terminals in connector

When replacing the connector it is important that cables are properly connected in the new connector. Check the cable connections before connecting the control module.

- Ignition off
- Connect adapter 951 1354 to the control module connector (cable side). (See the illustration)
- Connect breakout box 981 3190 to the adapter
- The control module must be disconnected
- Take readings according to table Signal specification, ABS control module .

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