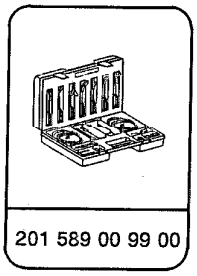
91–750 Test program, ETR (without airbag)

Special tool



201 589 00 99 00

Test instruments

Pocket digital multimeter	Avometer
Multimeter	e.g. Sun, DMM-5 e.g. Hermann, Avometer 2003

The following checks must be made for system actuation or function efficiency:

a) After an accident, with visible distortion of the:
retaining bar
inertia reel
belt buckle

b) After a ETR has been removed.

c) After the installation of a customer's option which could affect the proper functioning of the ETR system, mechanically or electrically.

The test program is subdivided into:

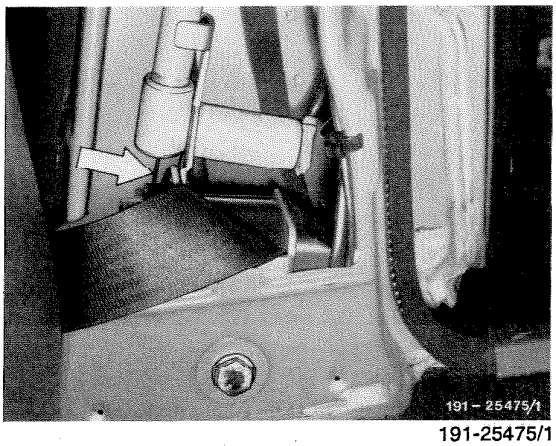
A. Mechanical function
B. Electrical function

A. Mechanical function

Test on ETRs for actuation (central pillar trim or ETR removed).

Type 1

1 Check whether the coloured marking on the wire cable (green or yellow) is still visible. If so, the ETR has not been actuated.
If no coloured marking can be seen, the ETR has been actuated and must be replaced.



191-25475/1

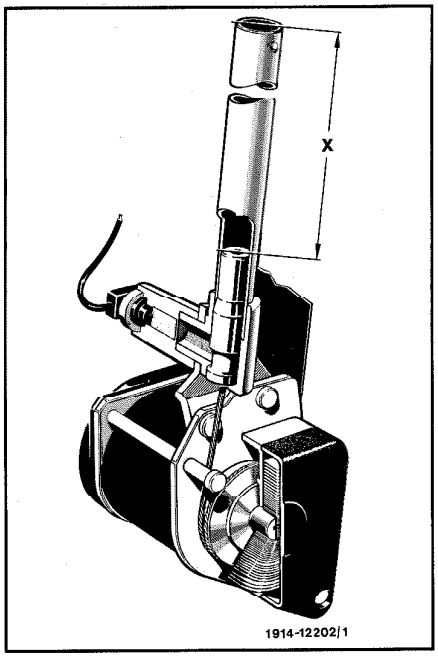
2 At the start of series production, some vehicles were built which did not incorporate the coloured marking on the ETR cable. These must be checked as follows:

Remove rubber cap from end of tube and check distance X.

For this purpose, insert a screwdriver or round rod of approx. 10 mm diameter and measure the depth to which it can be inserted.

Model	Distance „X"
126	170 mm ± 5 mm

If the resulting measurement is less than that specified in the table, the ETR has been actuated and must be replaced.



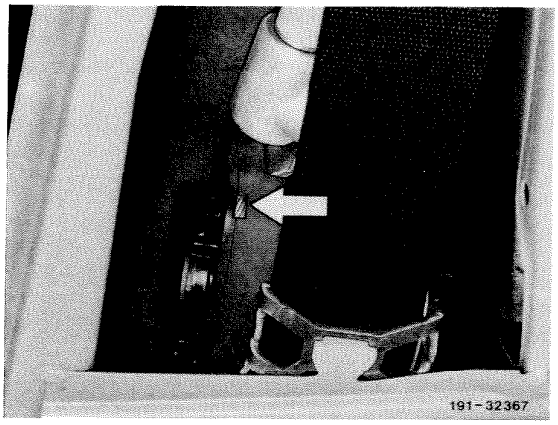
1914-12202/1

Type 2

Since 01/86 an inspection window has been incorporated in the ETR housing, through which the wire cable can be seen.

As a result, it is not necessary to remove the ETR.

If no wire cable can be seen, the ETR has been actuated and must be replaced.



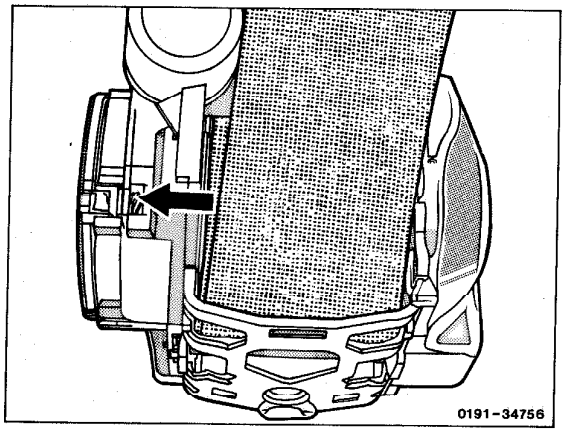
191-32367

Type 3

From 08/87 onwards, ETRs have been supplied by two manufacturers.

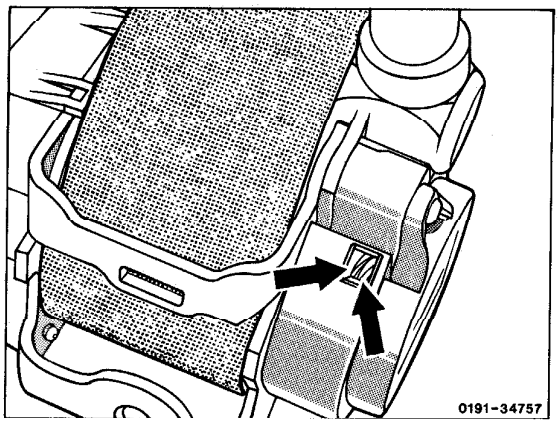
The housings of ETRs supplied by REPA, like type 2 housings, incorporate an inspection window, through which the wire cable can be seen. If no wire cable can be seen, the ETR has been actuated and must be replaced.

The type 3 ETR is distinguished by an approx. 80 mm shorter tube.



0191-34756

The housings of ETRs supplied by AUTOFLUG also incorporate an inspection window, through which **2 wire cables** can be seen. If **only 1 cable** can be seen in an AUTOFLUG ETR housing, **or none at all,** the ETR has been actuated and must be replaced.



0191-34757

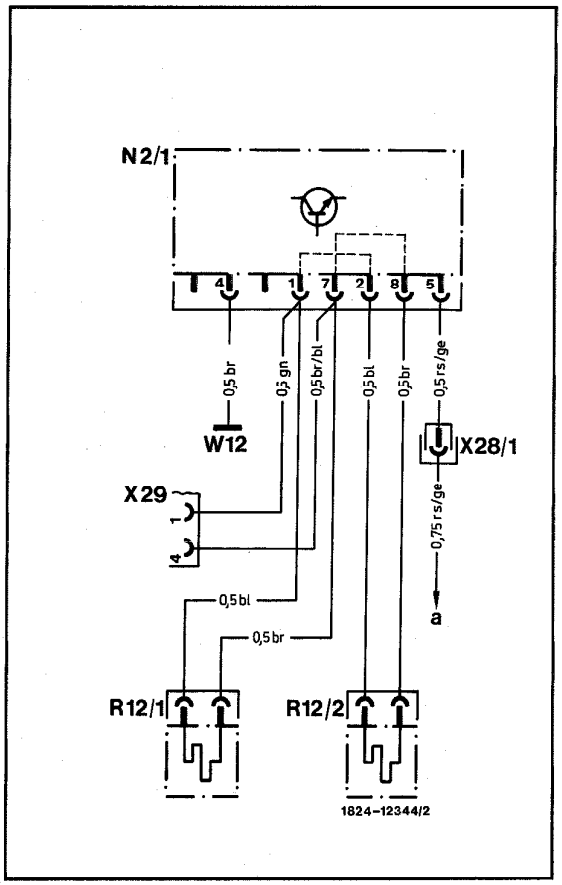
B. Electrical function

Checks on actuating circuit and squibs

1 Disconnect and insulate negative battery terminal.

2 Connect multimeter to 4-pole test connection (X29) (twin connections)

Note
The test connection (X29) is connected in parallel with the squibs.

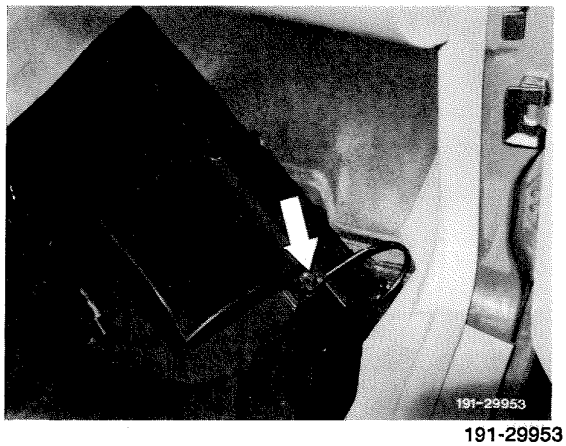


1824-12344/2

Circuit diagram, ETRs

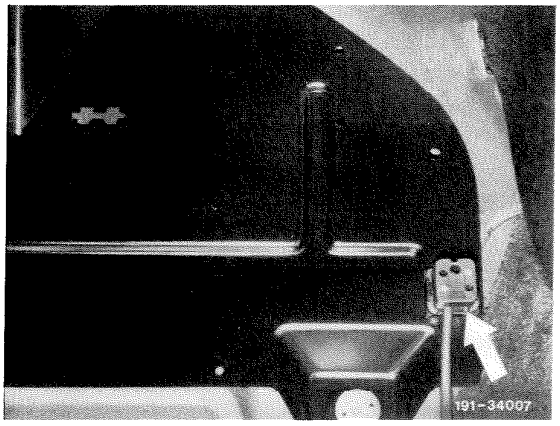
N2/1	Control module, ETRs
R12/1	Squib, ETR, front left
R12/2	Squib, ETR, front right
X28/1	Plug connector, power supply, ETRs
X29	Test connection, ETRs
W12	Main earth, centre console
a	To fusebox, terminal 15 R

Location of X29 test connection in vehicle
Model 126, type 1
Under footrest in front passenger's footwell



191-29953

Model 126, type 2
On panel below footrest in front passenger's footwell.



191-34007

Test insulation resistance at both connected poles of 4-pole test connection (X29) against ground.
Specified value: ≥ 20 kΩ EEE ∞

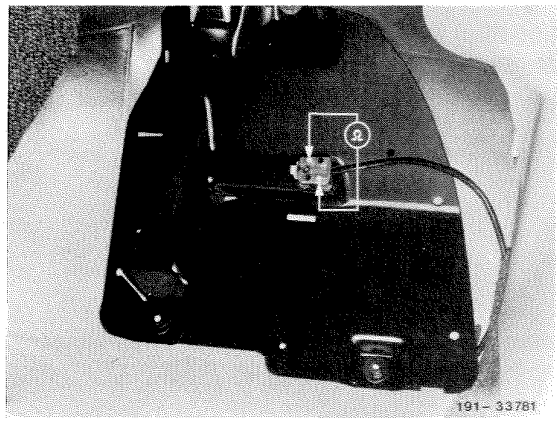
Specified value obtained	Specified value not obtained

Check cable harness for damage, replace it necessary.

Test resistance of squibs
Specified value: 1,0–1,7 Ω

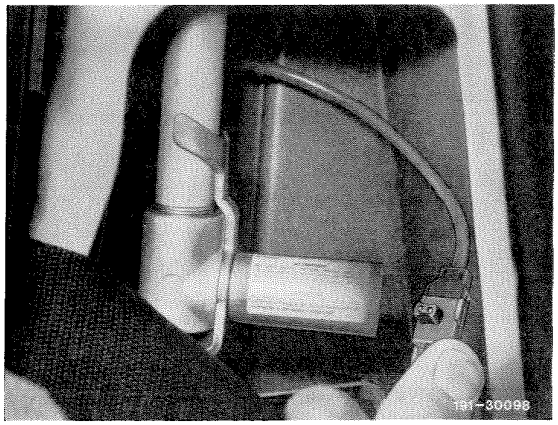
Specified value obtained	Specified value not obtained

End of test



191-33781

Check squib and ETR cable harness, left side.
Remove trim from central pillar, right side.
Disconnect electrical connection from ETR squib (R12/2), right side.
Test resistance at test connection (X29).
Specified value: (as only 1 squib) 2,0–5,0 Ω

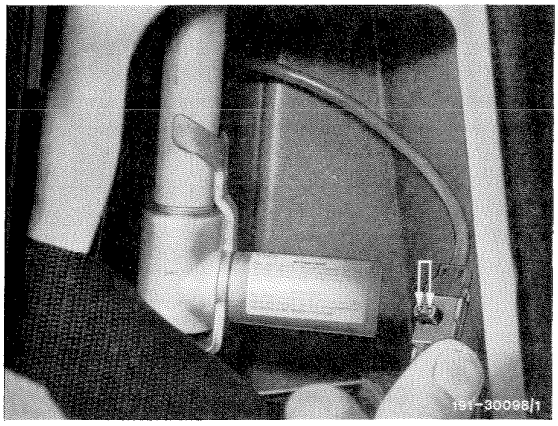


191-30098

Specified value obtained	Specified value not obtained

Check cable harness for interruption
Remove trims from central pillar, left side.
Disconnect electrical connection from belt tensioner squib (R12/1), left side, and bridge contacts.
Test resistance at test connection (X29)
Specified value: < 1 Ω

Specified value obtained	Specified value not obtained



191-30098/1

Replace cable harness

Replace left-side ETR unit.

Reconnect ETR squibs, left (R12/1) and right (R12/2), and test resistance of squibs at test connection (X29).

Specified value: (due to parallel connection)1,0–1,7 Ω.

End of test

Reconnect ETR squib (R12/2), right side.

Check squib and ETR cable harness, right side.
Remove trim from central pillar, left side.
Disconnect electrical connection from ETR squib (R12/1) left side.
Test resistance at test connection (X29).
Specified value: (as only 1 squib) approx. 2,0–5,0 Ω

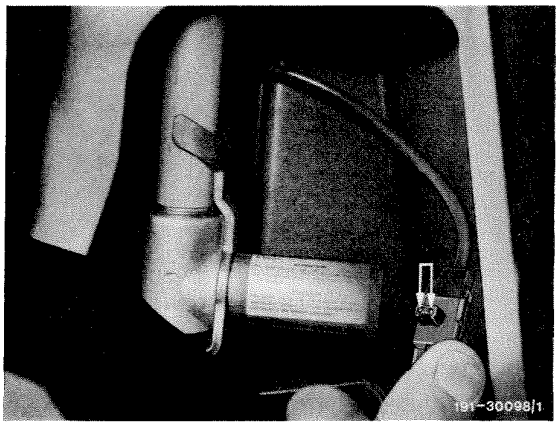
Specified value obtained	Specified value not obtained

Check cable harness for interruption.
Remove trims from central pillar, left side.
Disconnect electrical connection from ETR squib (R12/2), right side, and bridge contacts.
Test resistance at test connection (X29).
Specified value: < 1 Ω

Specified value obtained	Specified value not obtained

Replace cable harness

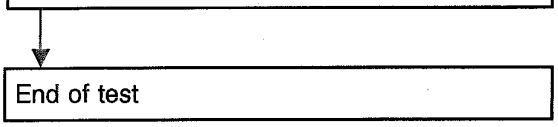
Replace right-side ETR unit



191-30098/1

Reconnect ETR squibs, left (R12/1) and right (R12/2), and test resistance of squibs at test connection (X29).

Specified value: (due to parallel connection) 1,0–1,7 Ω



End of test

Note

If the vehicle is badly damaged, the control module (N2/1) on the transmission tunnel must be checked for visible distortion or damage to the housing. Control modules with damaged housings must also be replaced.