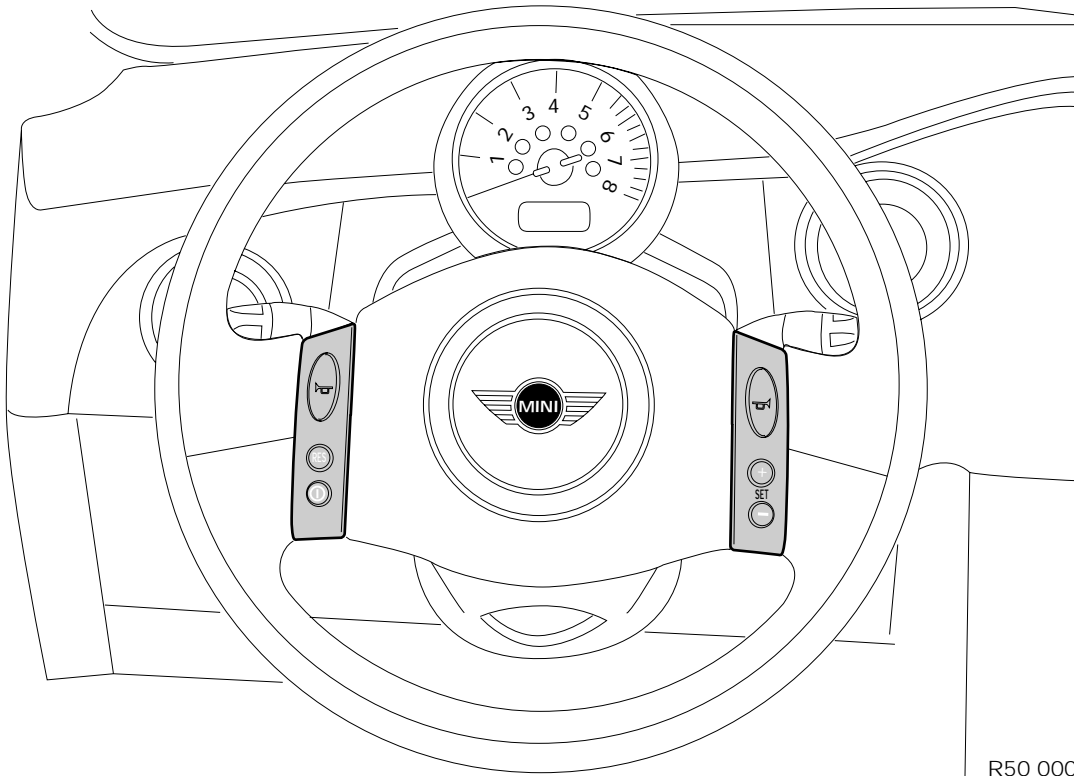




Parts and Accessories Installation Instructions



R50 0009 Z

Multi-functional steering wheel retrofit kit MINI (R50)

The installation time is approx. 3.5 hours, but this may vary depending on the condition of the car and the equipment in it.

Retrofit kit: 65 71 0 029 494

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Important information

The retrofit kit is only for use within the dealership organisation.

Do not kink or damage the cables during the installation work since otherwise they may cause faults that can later only be identified by extensive additional work. The costs incurred as a result of this will not be reimbursed.

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

Target group

The target group for these installation instructions is specialist personnel trained on MINI cars with specialist knowledge of vehicle electrical systems.

Work:

All servicing, repair and installation work on MINI cars is completed at your own risk.

All work is to be carried out using current MINI

- Repair manuals
- Circuit diagrams

in a rational order using the prescribed tools (special tools) and observing current health and safety regulations.

Required tools and equipment

Set of flat screwdrivers

Set of Philips screwdrivers

Set of Torx screwdrivers

Torch

Set of 1/4 sockets


1/4 inch Torx socket set

Angle cutter

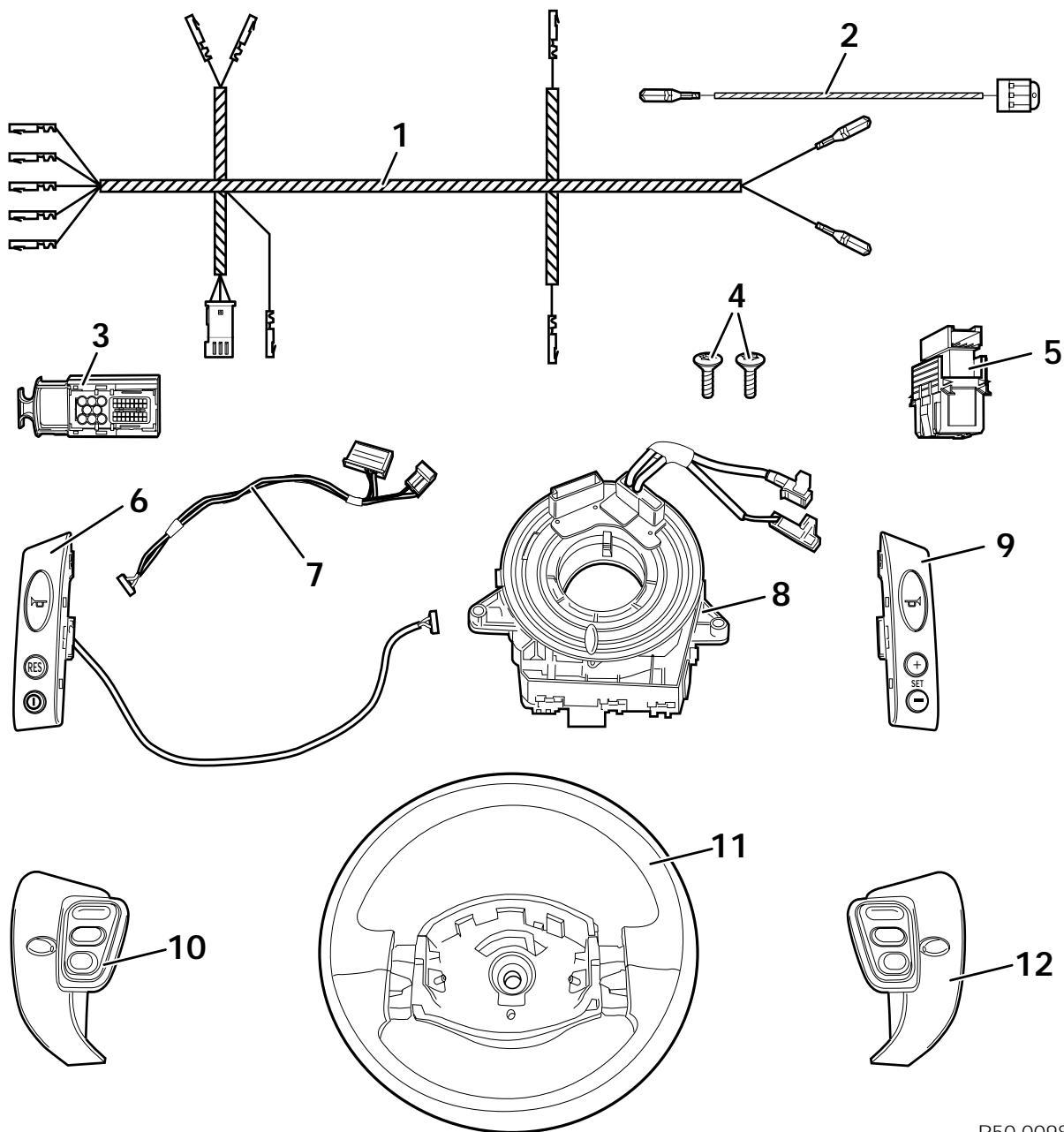
Combination pliers

Torch

1. Preparations

	TIS instruction No.
 Refer to the safety instructions for handling components of the airbag system. ◀	32 34 ...
Disconnect the negative pole of the battery	12 00 ...
The following components must be removed first of all:	
Oddments box on the driver's side	51 16 392
Oddments box on the passenger's side	51 16 390
Top instrument trim	51 45 051
Release the tachometer instrument panel	62 21 001
Steering wheel with airbag	32 33 000
Steering wheel slip ring	32 34 510
Door sill strips left and right	51 47 000
Release the fuse holder II	

2. Parts list

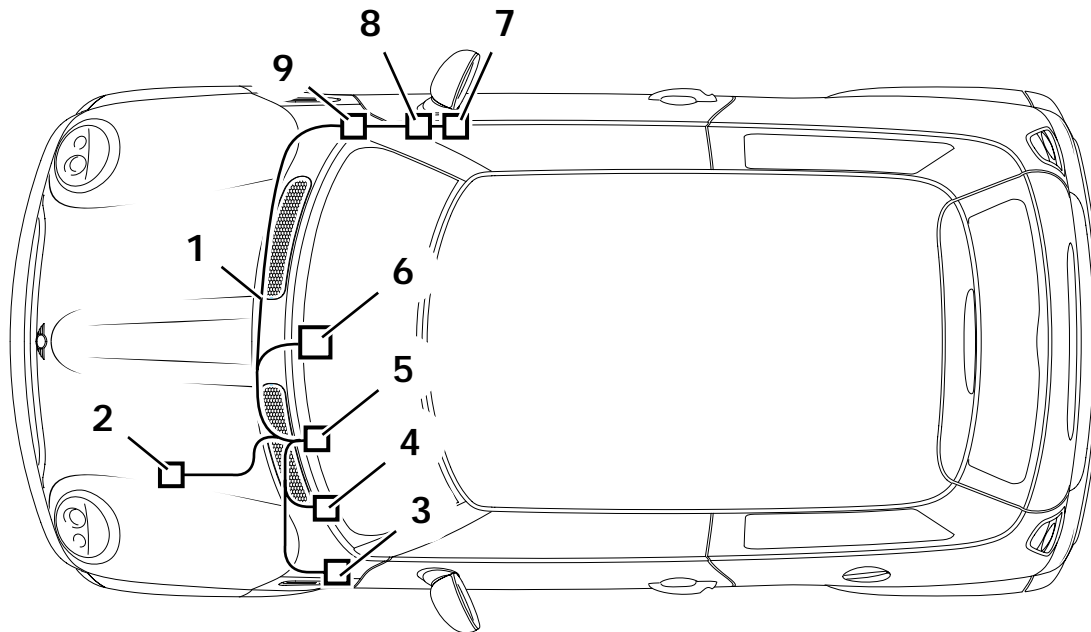


R50 0098 Z

Legend

- 1 Multi-functional steering wheel wiring harness **A**
- 2 Additional K bus cable
- 3 40-pin black plug **Z**
- 4 Torx screw for plastic (2x)
- 5 Clutch switch
- 6 Front left button block with connection cable
- 7 Steering wheel connection cable
- 8 Slip ring with airbag cable
- 9 Front right button block
- 10 Rear left button block
- 11 Steering wheel for multiple functions
- 12 Rear right button block

3. Installation and cabling diagram for retrofit wiring harness

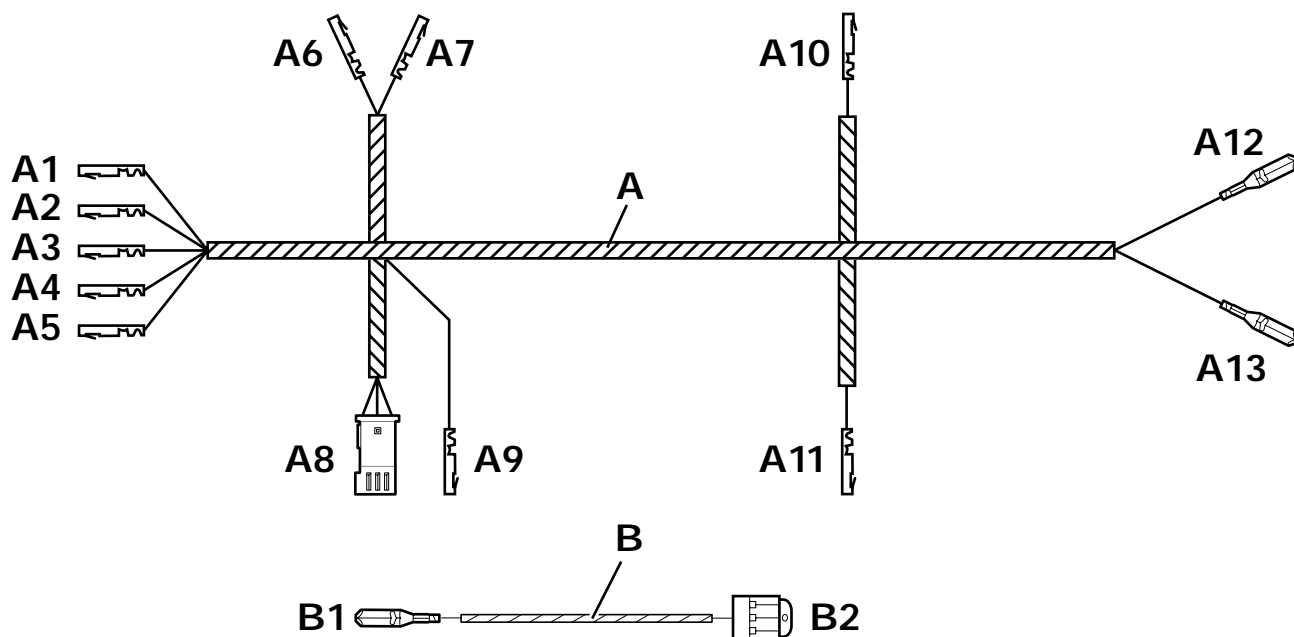


R50 0092 Z

Legend

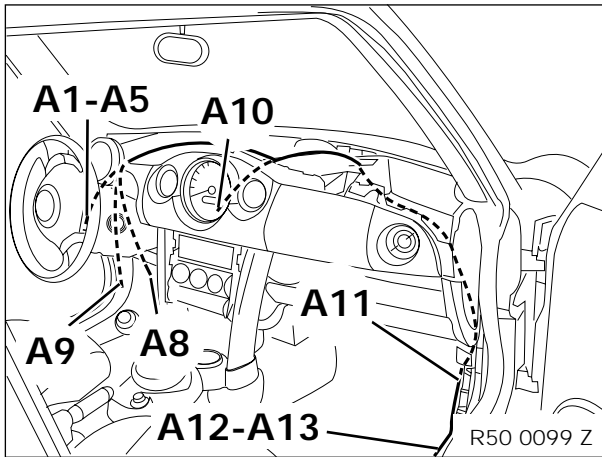
- 1 Multi-functional steering wheel wiring harness
- 2 DME control module
- 3 Fuse holder II
- 4 Clutch switch
- 5 Slip ring / Steering wheel
- 6 Tachometer instrument panel
- 7 Joint connector X151 (terminal 31)
- 8 Joint connector X10116 (K bus)
- 9 Base module D

4. Multi-functional steering wheel wiring harness connection diagram



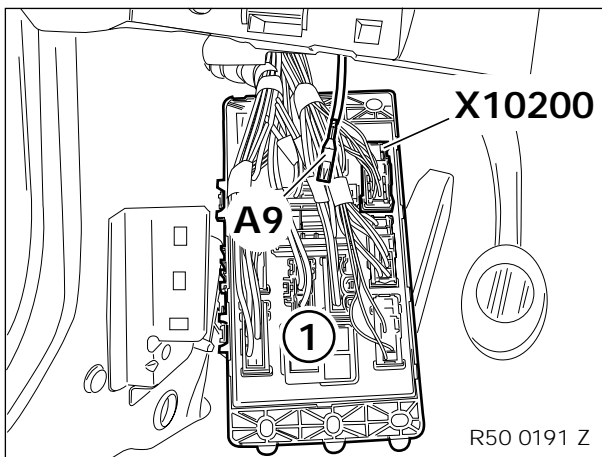
Item	Description	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Multi-functional steering wheel wiring harness A	---	---	---	---
A1	Socket contact	GESR_S	BL/VI0.5 mm in diameter	To white 12-pin plug on the slip ring	X10195 PIN 1
A2	Socket contact	K bus	WS/RT/GE0.35 mm in diameter	To white 12-pin plug on the slip ring	X10195 PIN 2
A3	Socket contact	GESR+	RT/BL 0.35 mm ²	To white 12-pin plug on the slip ring	X10195 PIN 8
A4	Socket contact	Terminal 31	BR0.5 mm in diameter	To white 12-pin plug on the slip ring	X10195 PIN 9
A5	Socket contact	DREHZ	GE/BR0.5 mm in diameter	To white 12-pin plug on the slip ring	X10195 PIN 10
A6	Socket contact	DREHZ	GE/BR0.5 mm in diameter	To black 40-pin plug on the DME control module	X60004 PIN 101
A7	Socket contact	Coupling	SW/RT0.5 mm in diameter	To black 40-pin plug on the DME control module	X60004 PIN 85
A8	SW 4-pin socket casing	---	---	To clutch switch	X121
A9	Socket contact	Terminal 15	VI/GR0.75 mm in diameter	To black 12-pin plug on the fuse holder II	X10200 PIN 3
A10	Socket contact	GESR_S	BL/VI0.5 mm in diameter	To black 12-pin plug on the tachometer instrument panel	X11175 PIN 10
A11	Socket contact	GESR+	RT/BL 0.35 mm ²	To blue 54-pin plug on base module D	X255 PIN 38
A12	Joint connector contact	K bus	WS/RT/GE0.35 mm in diameter	To the joint connector behind the right door sill strip	X10116
A13	Joint connector contact	Terminal 31	BR0.5 mm in diameter	To the joint connector behind the right door sill strip	X151
B	Additional K bus cable	---	---	Only required if the K bus joint connector X10116 is occupied	---
B1	Joint connector contact	K bus	WS/RT/GE 0.5 mm ²	If necessary to joint connector X10116	X10446
B2	3-pin joint connector casing	K bus	WS/RT/GE 0.5 mm ²	If necessary to multi-functional steering wheel wiring harness A9	X10659

5. To install and connect the multi-functional steering wheel wiring harness

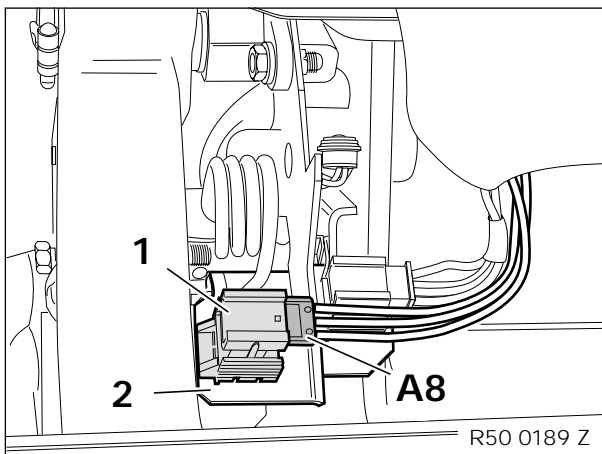


Lay wiring harness **A** as follows and secure it with cable ties:

- Branch **A9** to the black 12-pin plug **X10200** on the fuse holder II
- Branch **A8** to the clutch switch
- Branches **A1 - A5** to the white 12-pin plug **X10195** on the steering wheel slip ring
- Branch **A10** to the black 12-pin plug **X11175** on the tachometer instrument panel
- Branch **A11** to the blue 54-pin plug **X255** on base module D
- Branches **A12** and **A13** to joint connectors **X10116** and **X151** behind the right door sill strip



Connect branch **A9**, VI/GR cable, to **PIN 3** of the black 12-pin plug **X10200** on the fuse holder II (1).



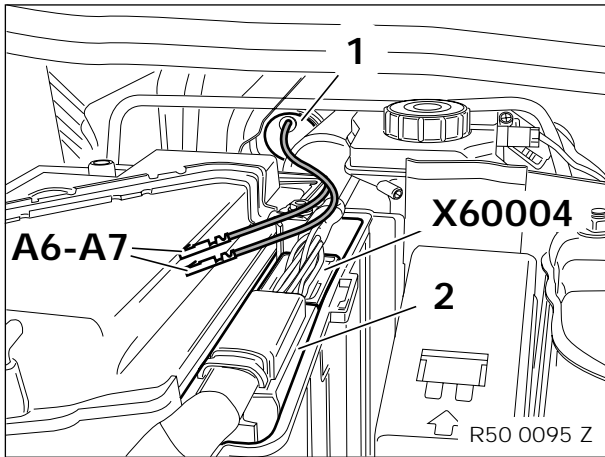
Vehicles with manual gearbox only

Connect the enclosed clutch switch (1) into the mounting (2) and connect branch **A8**.

Cars with automatic transmission only

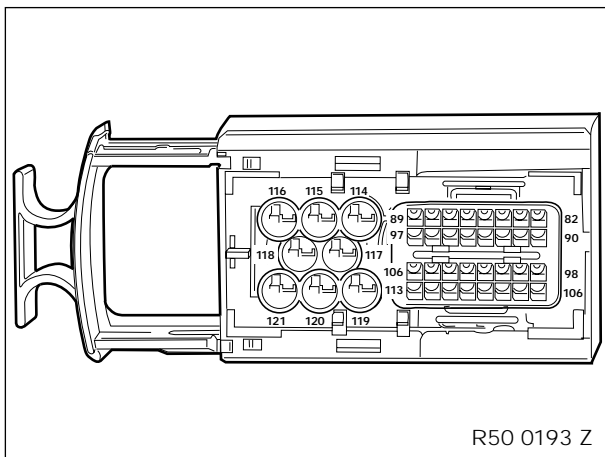
Tie back and insulate branch **A8**.

5. To install and connect the multi-functional steering wheel wiring harness



Lay branch **A6**, GE/BR cable, and branch **A7**, SW/RT cable, through the rubber grommet (1) to the black 40-pin plug **X60004** on the DME control module (2).

Disconnect plug **X60004** from the DME control module (2).



! Make sure that you connect all disconnected lines back into the same slots in the plug **Z**. ◀

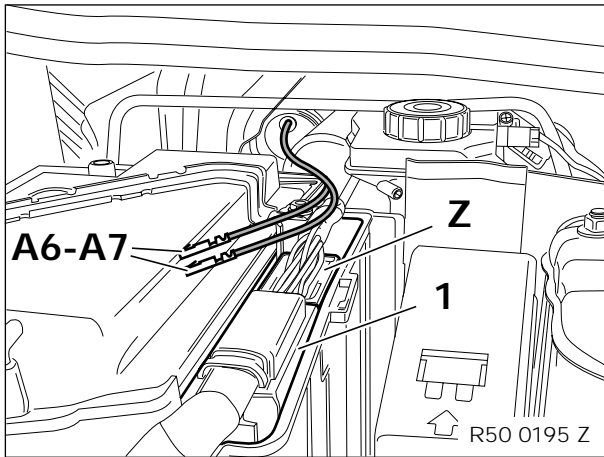
Disconnect all lines from plug **X60004** and connect them to the enclosed plug **Z**.

▶ The following table describes the pin assignment when the car is fully equipped. ◀

Slot	Cable colour / Cross-section
PIN 82	GE, 0.50 mm ²
PIN 83	GR/SW, 0.50 mm ²
PIN 84	Not occupied
PIN 85	SW/RT or BL/BR, 0.50 mm ²
PIN 86	BR/GN, 0.50 mm ²
PIN 87	BR, 0.50 mm ²
PIN 88	BR/GE, 0.75 mm ²
PIN 89	Not occupied
PIN 90	SW/GR, 0.35 mm ²
PIN 91	SW/GN, 0.35 mm ²
PIN 92	Not occupied
PIN 93	SW/GN, 0.50 mm ²
PIN 94	BR/SW/GE, 0.50 mm ²
PIN 95	BR/GN, 0.50 mm ²
PIN 96	BR/OR, 0.75 mm ²
PIN 97	BR/RT, 0.50 mm ²
PIN 98	BL/RT, 0.35 mm ²
PIN 99	BR/GR, 0.50 mm ²
PIN 100	BR/SW, 0.50 mm ²
PIN 101	GE/BR, 0.50 mm ²

Slot	Cable colour / Cross-section
PIN 102	Not occupied
PIN 103	Not occupied
PIN 104	Not occupied
PIN 105	SW/VI, 0.75 mm ²
PIN 106	SW/VI, 0.50 mm ²
PIN 107	GR/GE, 0.50 mm ²
PIN 108	WS, 0.50 mm ²
PIN 109	BL/GE mm ²
PIN 110	GE/SW, 0.50 mm ²
PIN 111	GE/BR, 0.50 mm ²
PIN 112	BL/GN, 0.50 mm ²
PIN 113	WS/RT, 0.50 mm ²
PIN 114	BR, 1.50 mm ²
PIN 115	BR, 1.50 mm ²
PIN 116	Not occupied
PIN 117	VI/WS, 0.75 mm ²
PIN 118	GN/BL, 0.75 mm ²
PIN 119	Not occupied
PIN 120	GN/RT, 2.50 mm ²
PIN 121	RT/WS, 1.50 mm ²

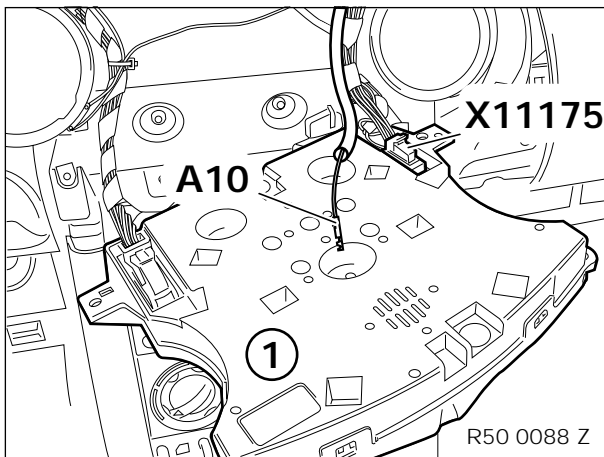
5. To install and connect the multi-functional steering wheel wiring harness



Connect branch **A6**, GE/BR cable, to **PIN 101** on plug **Z**.

Connect branch **A7**, SW/RT cable, to **PIN 85** on plug **Z**.

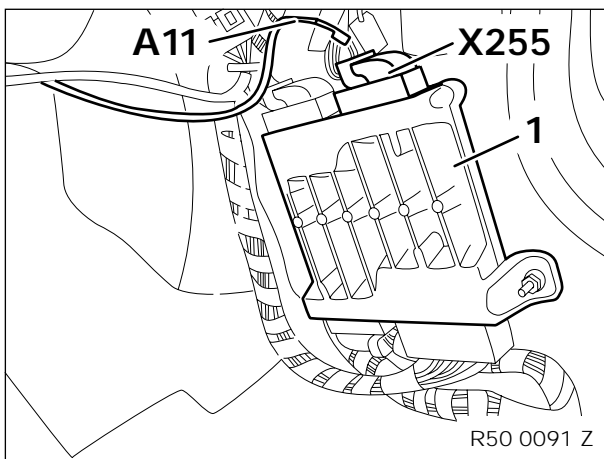
Reconnect plug **Z** to the DME control module (1).



Disconnect plug **X11175** from the tachometer instrument panel (1).

Connect branch **A10**, BL/VI cable, to **PIN 10** on the black 12-pin plug **X11175**.

Reconnect plug **X11175** to the tachometer instrument panel (1).

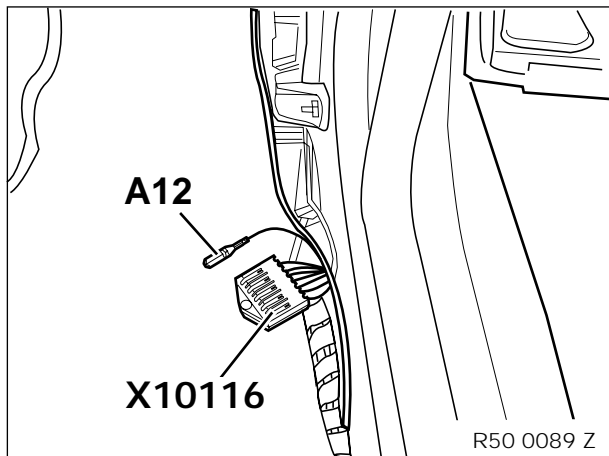


Disconnect the blue 54-pin plug **X255** from the base module D (1).

Connect branch **A11**, RT/BL cable to **PIN 38** in plug **X255**.

Reconnect plug **X255** to the base module D (1).

5. To install and connect the multi-functional steering wheel wiring harness



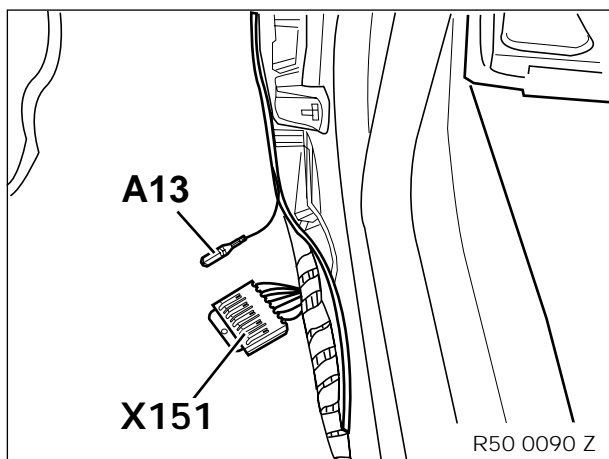
Connect branch **A12**, WS/RT/GE cable to joint connector **X10116**.

▶ If all the slots on joint connector **X10116** are occupied, proceed as follows:

-Connect branch **A12** to the enclosed 3-pin joint connector casing **B2**.

-Disconnect any WS/RT/GE cable from the joint connector **X10116** and connect it to the enclosed joint connector **B2**.

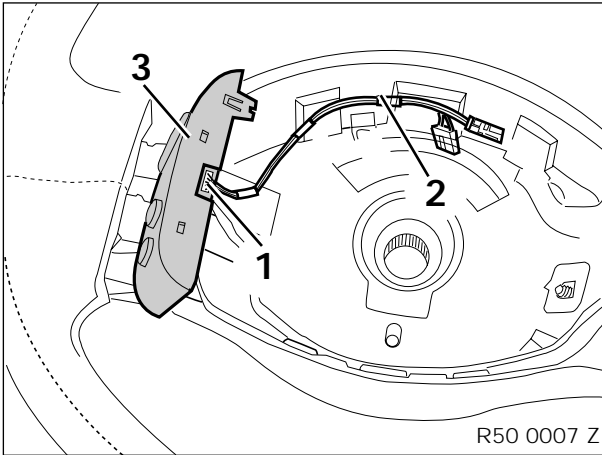
-Connect branch **B1** to the cleared slot in joint connector **X10116**. ◀



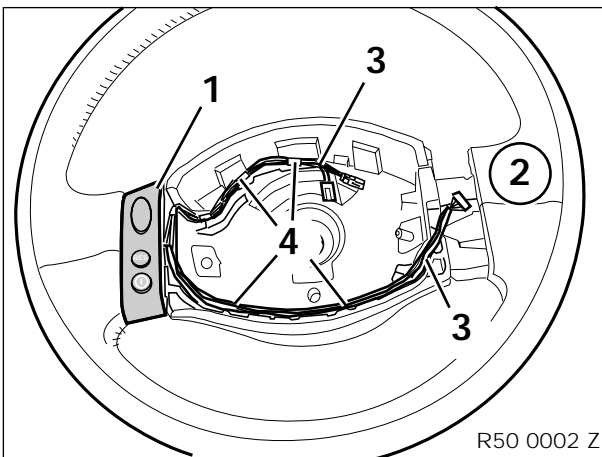
Connect branch **A13**, BR cable, to joint connector **X151**.

▶ If all the slots in joint connector **X151** are occupied, branch **A13** must be connected using the enclosed miniature connector. ◀

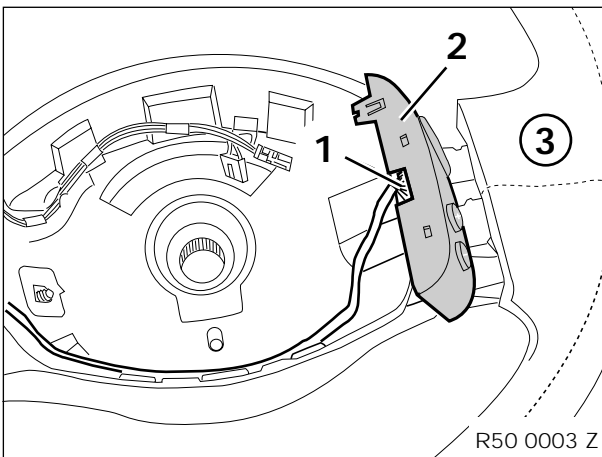
6. To install and connect the button blocks



Connect the white 7-pin plug (1) on the steering wheel connection cable (2) to the front left button block (3).

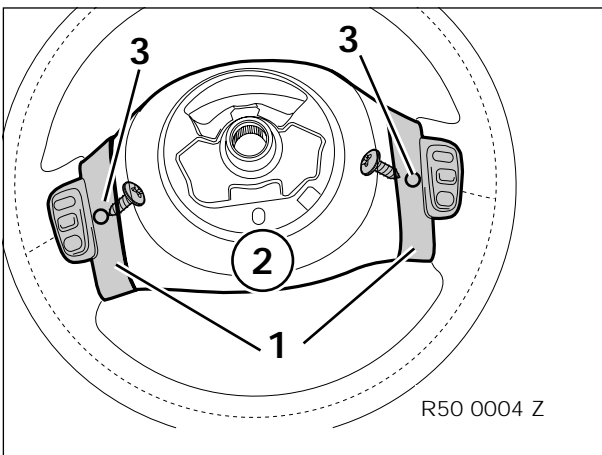


Insert the front left button block (1) into the enclosed steering wheel (2).
Clip the cables (3) into the holders (4).



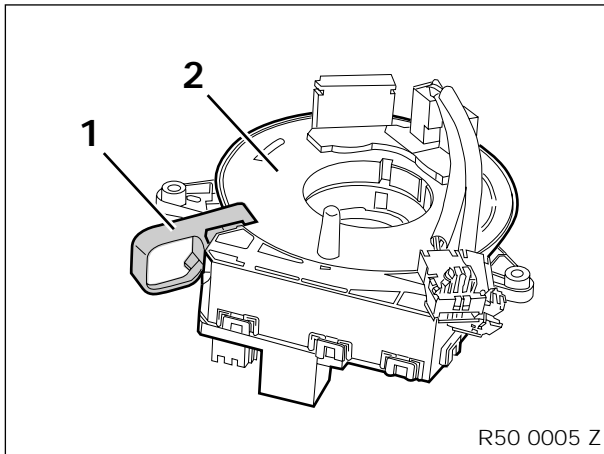
Connect the white 9-pin plug (1) to the front right button block (2).

Insert the front right button block (2) into the enclosed steering wheel (3).

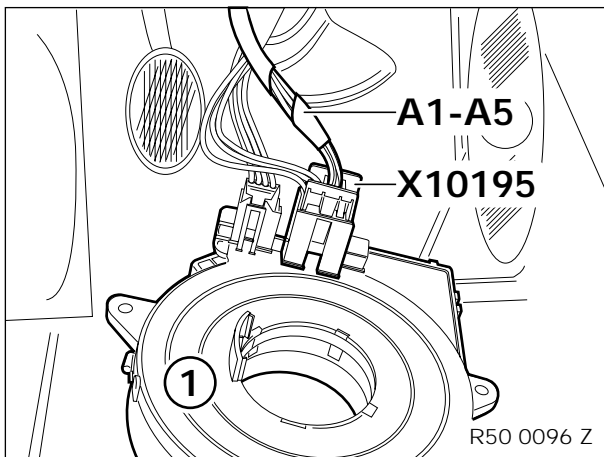


Insert the rear left and right button blocks (1) into the steering wheel (2) and secure them with the enclosed Torx screws (3).

6. To install and connect the button blocks



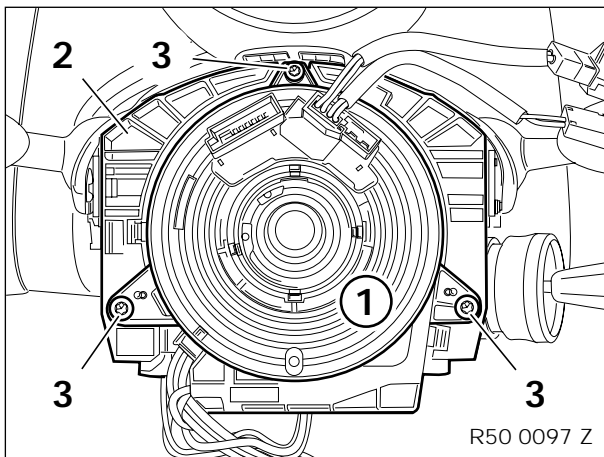
Remove the transport guard (1) from the enclosed slip ring (2).



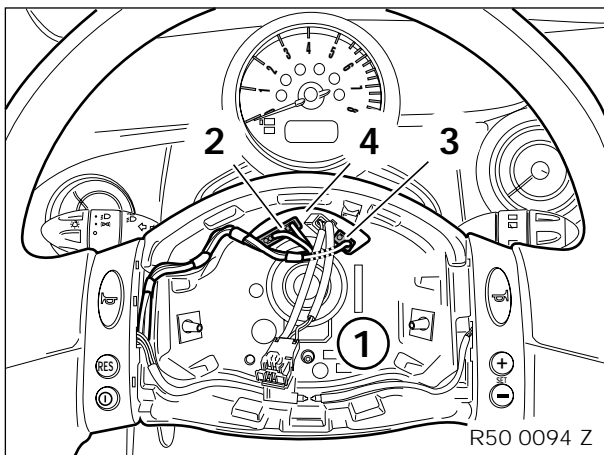
Connect branches **A1 - A5** as follows to plug **X10195** :

A1	BL/VI cable	PIN 1
A2	WS/RT/GE cable,	PIN 2
A3	RT/BL cable,	PIN 8
A4	BR cable,	PIN 9
A5	GE/BR cable,	PIN 10

Connect plug **X10195** to the enclosed slip ring (1).



Place the slip ring (1) on to the steering column (2) and secure it with the Torx screws (3) you removed earlier.



Fit the steering wheel (1) back on to the steering column.

 Use the specified torque. ◀

Connect the black 8-pin plug (2) and black 4-pin plug (3) to the slip ring (4) as shown.

7. Concluding work

- Connect the battery
- Complete the coding work (see section entitled "Coding")
- Conduct a function test
- Assemble the car again following the instructions to dismantle it in reverse order.

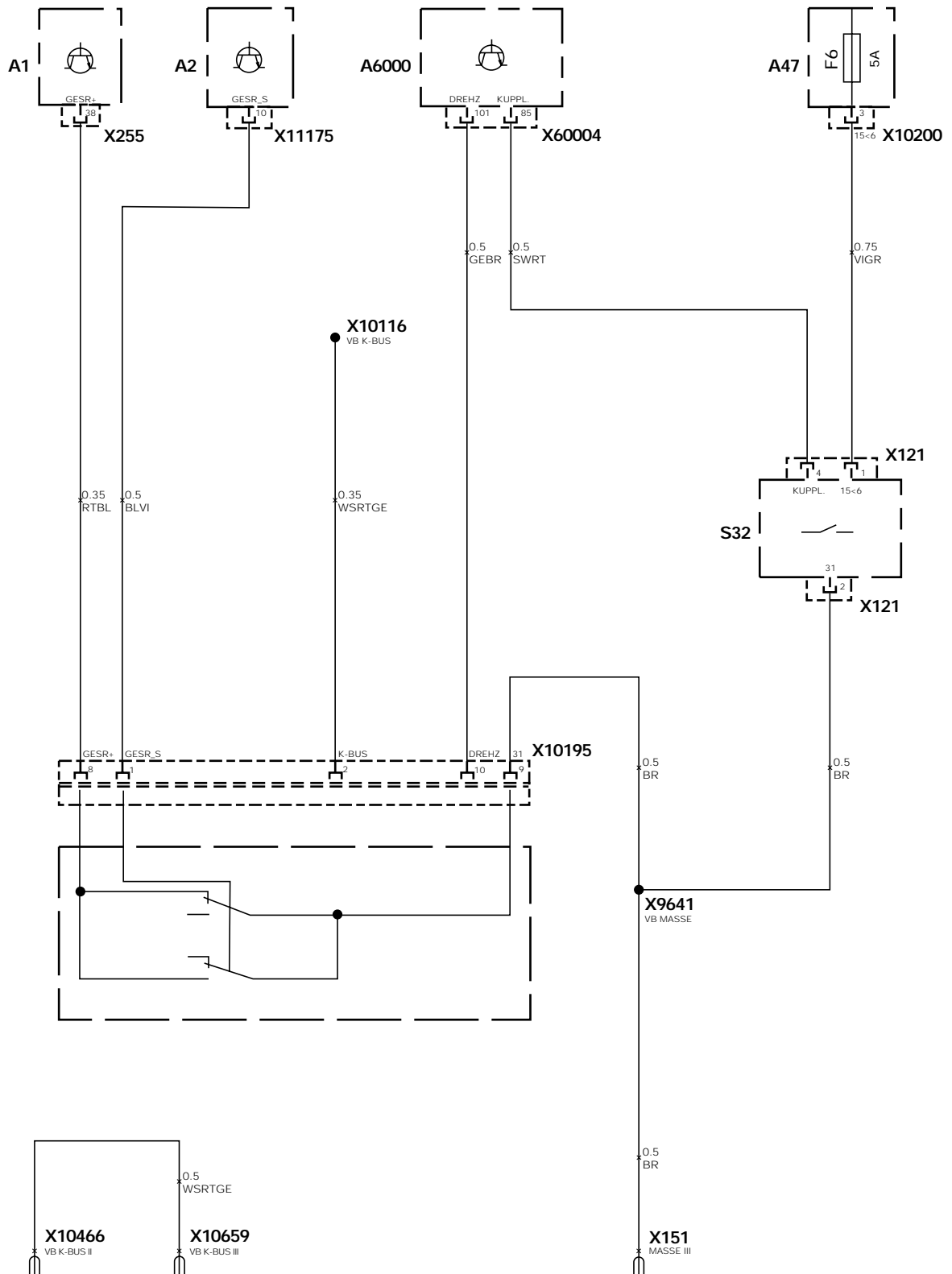
8. Coding

Retrofitting the multi-functional steering wheel requires coding and must be coded using the "Retrofit on-board computer" path using the MoDiC/DIS.

The coding work must be completed using CD version **27.0** (or higher).

After the coding procedure disconnect the car's battery for at least 10 seconds, then reconnect it and conduct a function test.

9. Multi-functional steering wheel circuit diagram



R50 0087 Z

9. Multi-functional steering wheel circuit diagram

Legend

A1	Base module D
A2	Tachometer instrument panel
A47	Fuse holder II
A6000	DME control module
S32	Clutch switch
X121	Clutch switch
X151	Joint connector earth III
X255	Base module D
X9641	Earth connector
X10116	K bus joint connector
X10195	Steering wheel slip ring
X10200	Fuse holder II, input X
X10466	K bus II connector
X10659	K bus III connector
X11175	Tachometer instrument panel
X60004	DME control module

Cable colours

BR	brown
GE	yellow
WS	white
RT	red
BL	blue
VI	violet
GR	grey
SW	black