



Parts and Accessories. Installation Instructions.

High on-board computer retrofit BMW 5 Series (E39) BMW X5 (E53)

Retrofit kit No. 65 90 0 308 455

Installation time

The installation time is approx 1,0 -1,5 hours, but this may vary depending on the condition of the car and the equipment in it.

Important information

These installation instructions are primarily designed for use within the BMW dealership organisation and by authorised BMW service companies.

In any event the target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.

All work must be completed using the latest BMW repair manuals, circuit diagrams, servicing manuals and work instructions in a rational order using the prescribed tools (special tools) and observing current health and safety regulations.

Ensure that the cables/lines are not kinked or damaged as you install them in the car. The costs incurred as a result of this will not be reimbursed by BMW AG.

Additional cables/lines that you install must be secured with cable ties.

All the figures show LHD cars, proceed in exactly the same way on RHD cars.

Pictograms



denotes instructions that draw your attention to special features.

◀ denotes the end of the instruction or other text.

See the EBA CD or Aftersales Portal for explanations of the pictograms.

Do not archive the hard copy of these installation instructions since daily updates are made by Aftersales Portal.

Subject to technical modifications.

Ordering instructions

The instrument cluster and coolant level switch are not part of the retrofit kit and must be ordered separately (see EPC for part number and further details).

For cars with an M51 engine built before 01/99, the expansion tank must be replaced (see EPC for part number and further details).

Special tools required

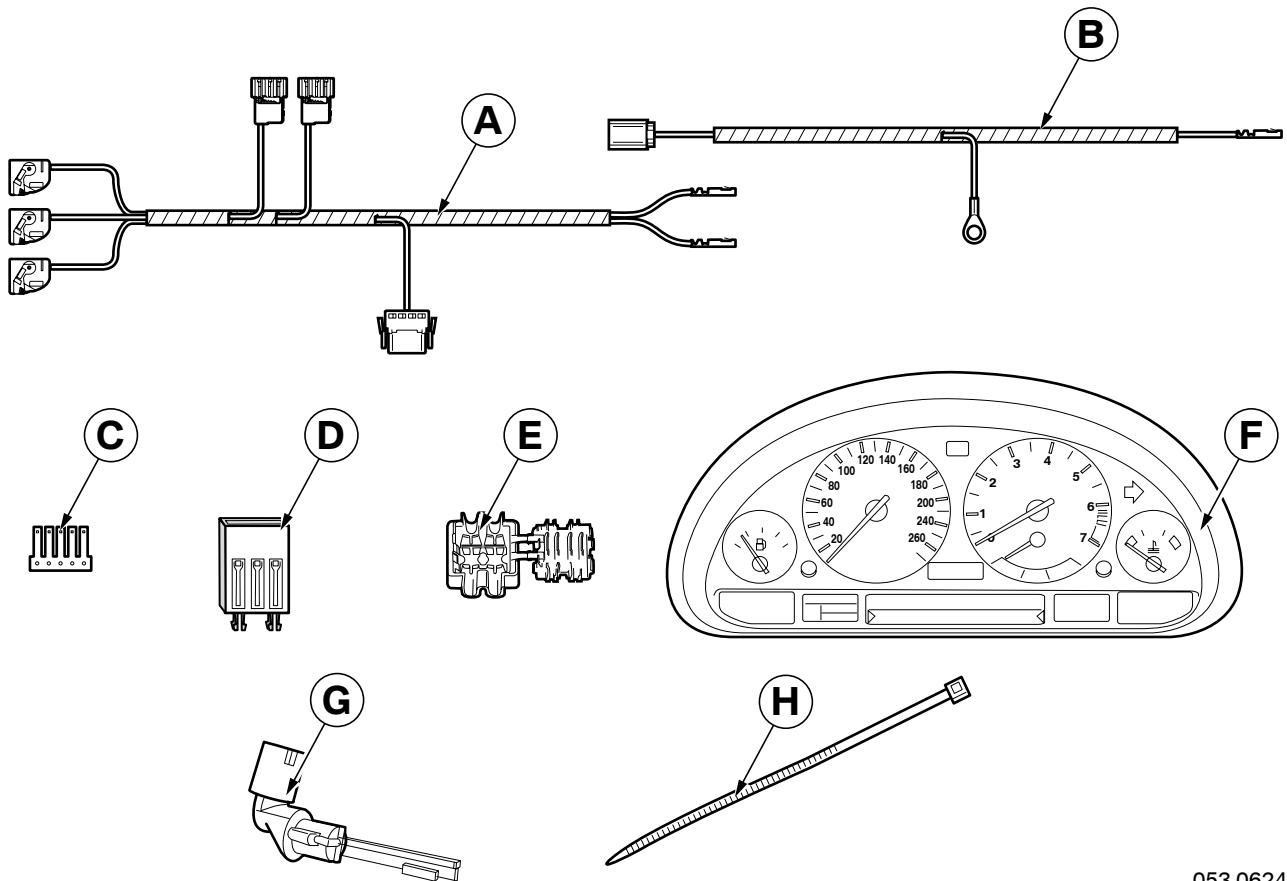
None

Contents

Section

1. Parts list	3
2. Preparations.....	4
3. Connection diagram.....	5
4. Installation and cabling diagram for M51, M52 and M54 engines	6
5. Installation and cabling diagram for M57 engine	7
6. To install and connect the connection cable	8
7. To install and connect the coolant level switch	10
8. Concluding work	12
9. Circuit diagram	13

1. Parts list



053 0624 Z

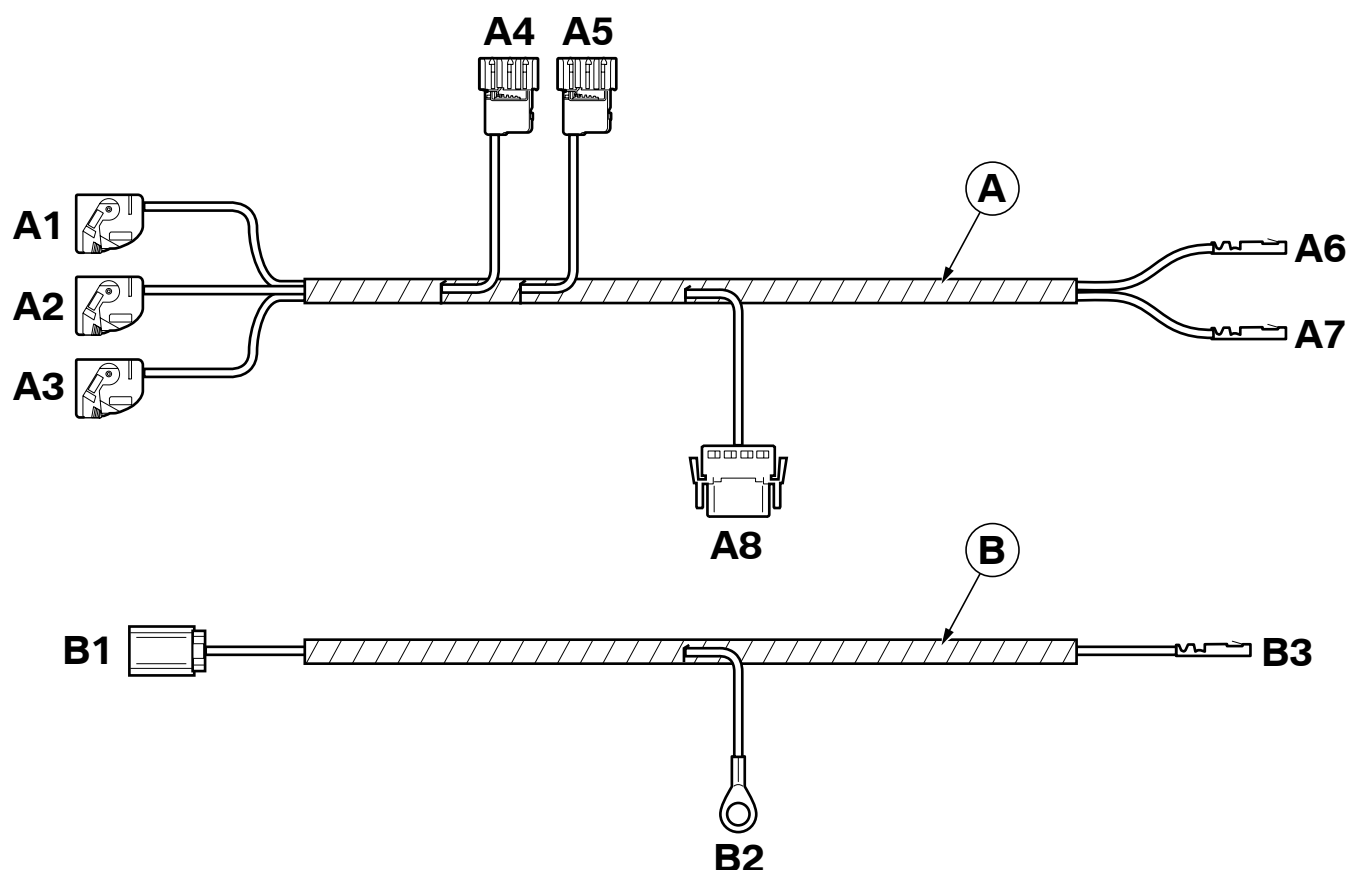
Legend

- A Connection cable
- B Connection cable
- C Joint connector
- D Casing
- E Insulation-piercing connector
- F Instrument cluster (not supplied with the retrofit kit)
- G Coolant level switch (not supplied with the retrofit kit)
- H Cable tie (20x)

2. Preparations

	TIS No.
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00...
The following components must be removed first of all	
Instrument cluster	62 21 000
Pedal trim	51 45 185
Footwell trim on the right	---
Glove compartment	51 16 360
Engine compartment protection tray (cars with an N57 engine only)	---
Coolant expansion tank (E39 cars with M51 engines built before 01/99 only)	17 11 100
Electrics box cover	---
Microfilter (E39 cars only)	64 31 010

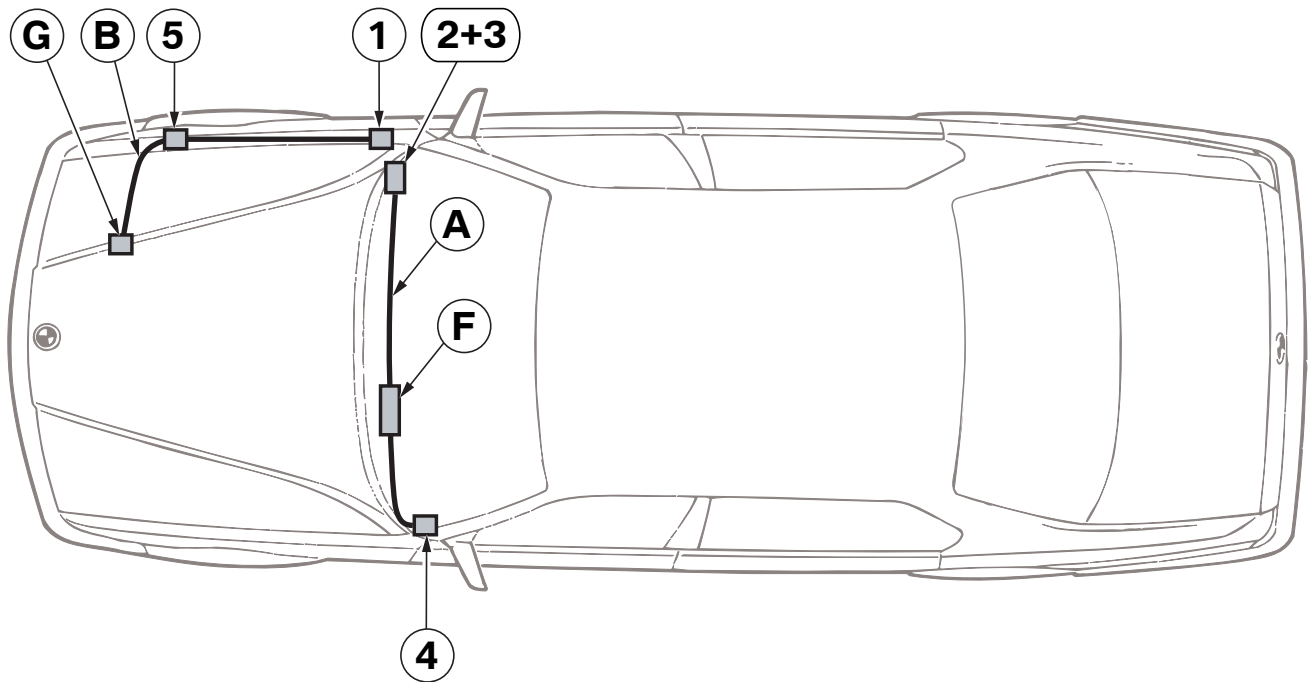
3. Connection diagram



053 0625 Z

Branch /Item	Description	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Connection cable	---	---	---	---
A1	SW 18-pin socket casing	---	---	To instrument cluster F	X16
A2	18-pin socket casing, natural colour	---	---	To instrument cluster F	X10113
A3	BL 26-pin socket casing	---	---	To instrument cluster F	X10114
A4	26-pin SW plug casing	---	---	To standard wiring harness	X11175
A5	26-pin plug casing, natural colour	---	---	To standard wiring harness	X11176
A6	Connection plug	---	BR	To joint connector behind the glove compartment	X219
A7	Connection plug	---	WS/GR/GE	To joint connector behind the glove compartment	I bus
A8	SW 4-pin socket casing	---	---	To gong in the footwell on the driver's side	X518
B	Connection cable	---	---	---	---
B1	SW 2-pin socket casing	---	---	To coolant level switch	X112
B2	Cable eyelet M8	---	BR	Cars with M57 engine only To earth post on the left-hand side of the engine compartment Cars with M51, M52 and M54 engines only To earth post on the right-hand side of the engine compartment	X165 X166
B3	Connection plug	---	---	To lamp control module	X10117 Pin 24

4. Installation and cabling diagram for M51, M52 and M54 engines

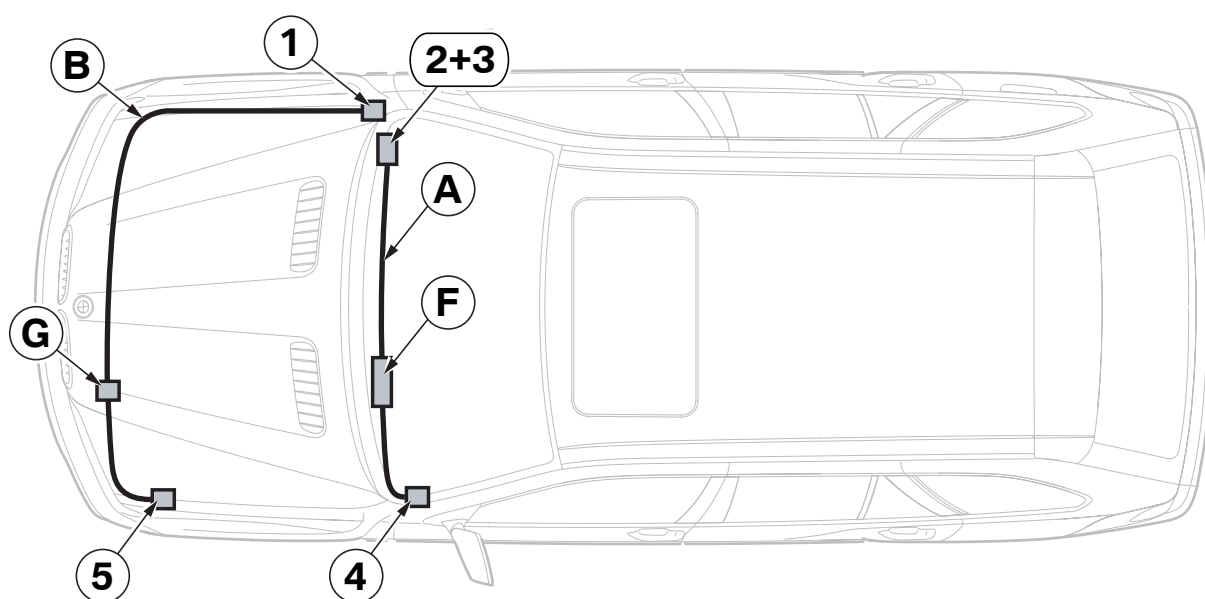


039 0706 Z

Legend

- A Connection cable
- B Connection cable
- F Instrument cluster
- G Coolant level switch
- 1 Lamp control module
- 2 Joint connector **X939**
- 3 Joint connector **X219**
- 4 Gong
- 5 Earth post connection **X166**

5. Installation and cabling diagram for M57 engine



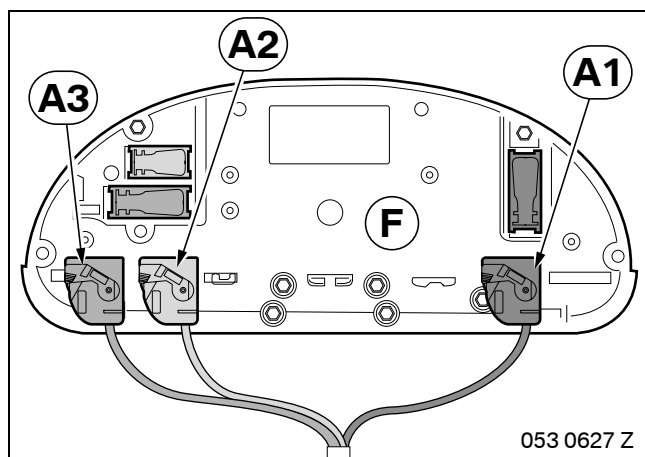
053 0626 Z

Legend

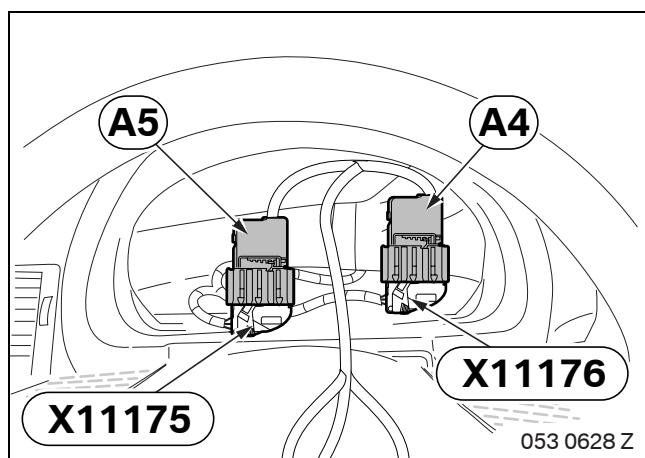
- A Connection cable
- B Connection cable
- F Instrument cluster
- G Coolant level switch

- 1 Lamp control module
- 2 Joint connector **X939**
- 3 Joint connector **X219**
- 4 Gong
- 5 Earth post **X165**

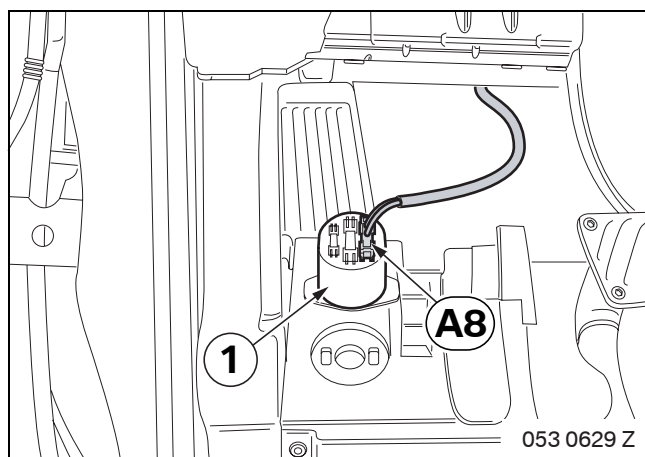
6. To install and connect the connection cable



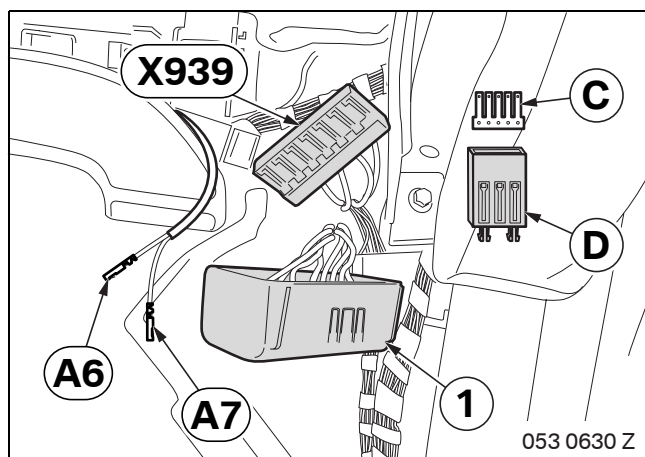
Connect branches **A1-A3** to the cables of the same colours on the instrument cluster **F**.



Connect branches **A4** and **A5** to the same coloured socket casings **X11175** and **X11176** on the standard wiring harness.



Route branch **A8** into the driver's footwell.
Connect branch **A8** to the gong (1).



E53 only

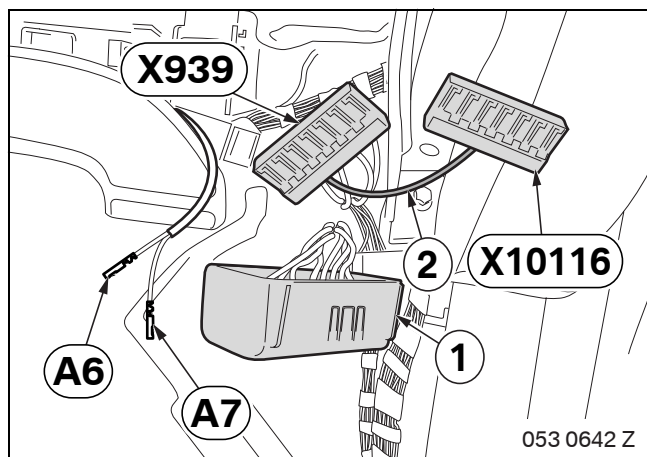
Route branches **A6** and **A7** to the joint connector box (1).

Release joint connector **X939** (WS/RT/GE and WS/GR/GE cables) from the joint connector box (1).

Disconnect all the WS/GR/GE cables from joint connector **X939** and connect them with branch **A7** to joint connector **C**.

Connect joint connector **C** to the casing **D** and then to the joint connector box (1).

6. To install and connect the connection cable



E39 cars only

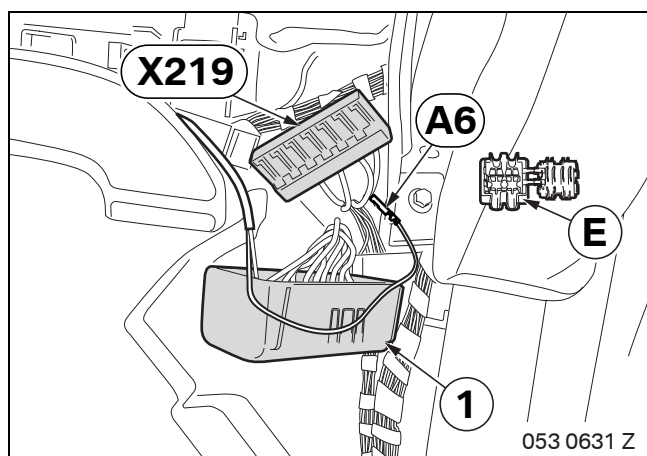
Route branches **A6** and **A7** to the joint connector box (1).

Release joint connector **X939**, WS/GR/GE cable and joint connector and **X10116**, WS/RT/GE cable from the joint connector box (1).

Disconnect the connection cable (2) between joint connector **X939** and joint connector **X10116** (no longer required).

Connect branch **A7** to joint connector **X939**, WS/GR/GE cable.


Connect joint connector **X939** to the joint connector box (1).



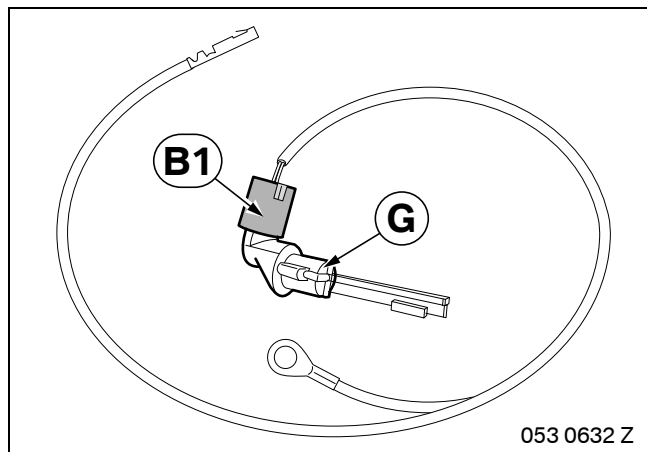
All cars

Release joint connector **X219** from the joint connector box (1).

Connect branch **A6** to joint connector **X219**.

 If joint connector **X219** is fully occupied, connect branch **A6** using insulation-piercing connectors **E**. ◀

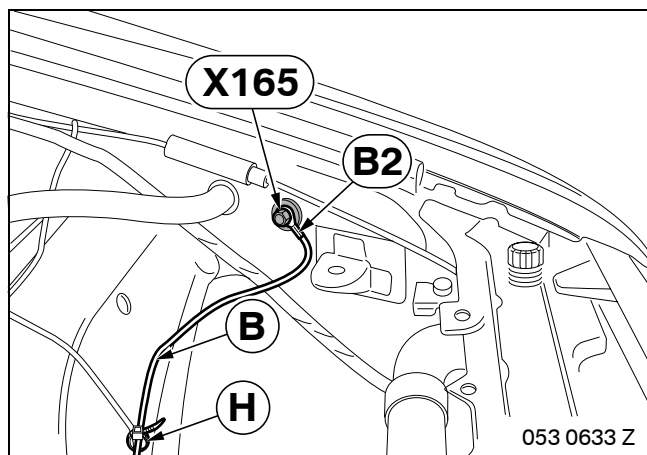
7. To install and connect the coolant level switch



The expansion tank must be replaced on cars with M51 engines built before 01/99.

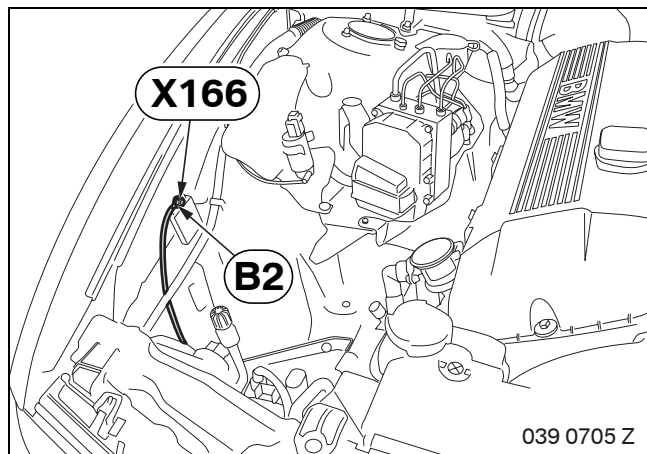
Connect branch **B1** to the coolant level sensor **G**.

Install the coolant level sensor **G** on the expansion tank.



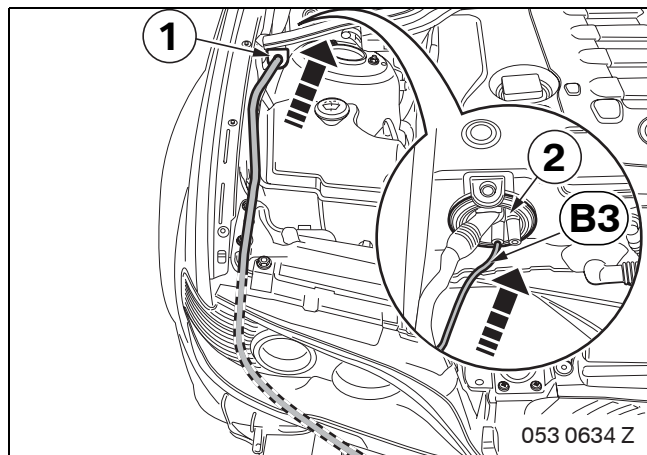
Cars with M57 engine only

Route branch **B2** to earth post **X165** in the engine compartment and secure it there.



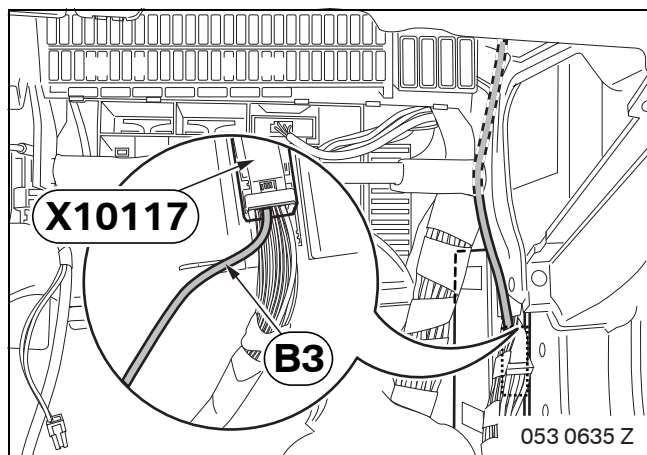
Cars with M51, M52 and M54 engines only

Route branch **B2** to earth post **X166** in the engine compartment and secure it there.



Route branch **B3** through the grommets (1) and (2) into the interior.

7. To install and connect the coolant level switch



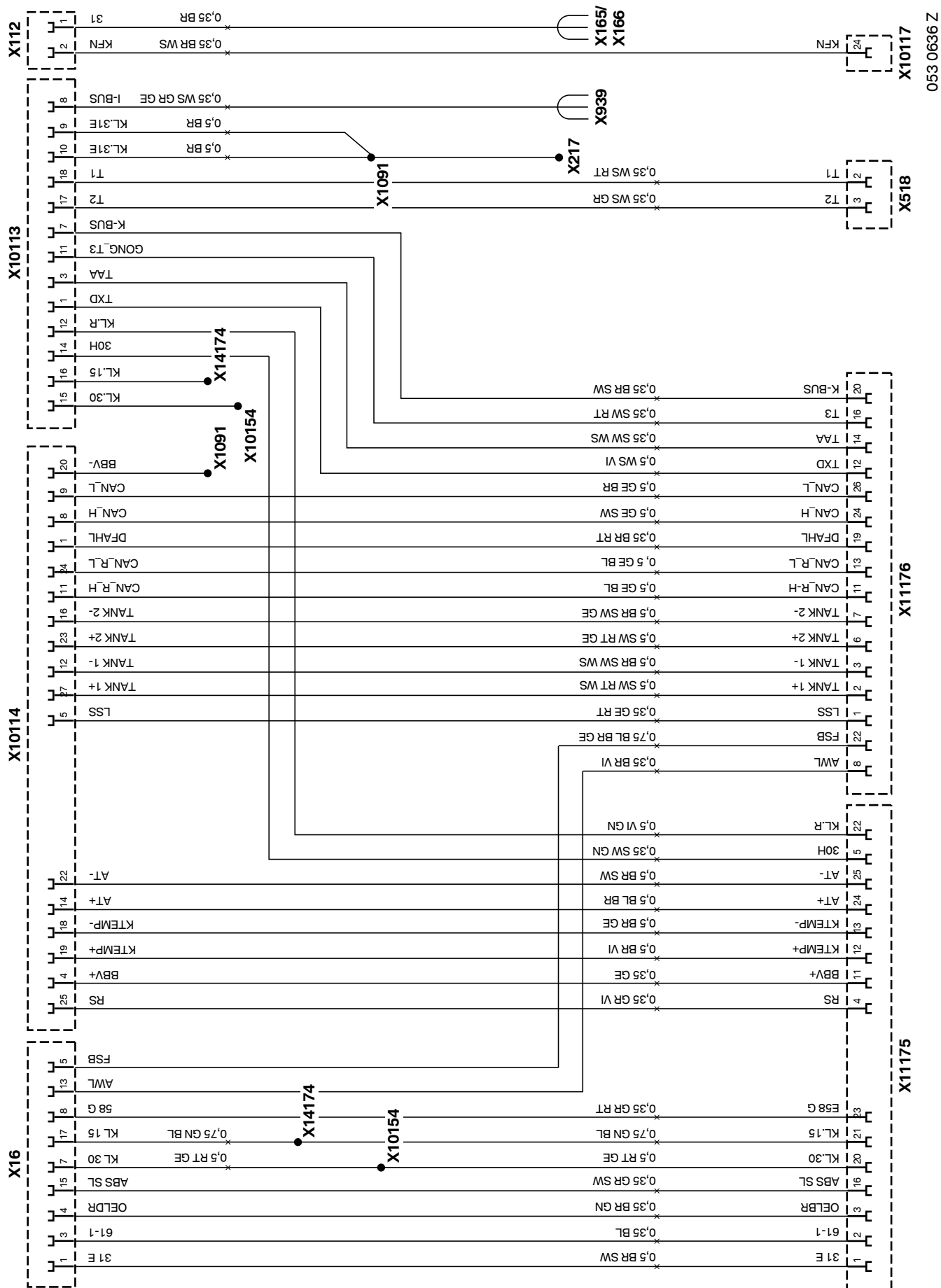
Route branch **B3** to the lamp control module and connect it to the 54-pin SW plug **X10117**, Pin 24.

8. Concluding work

This retrofit system requires coding.

- Connect the battery
- Code the retrofit using DISPlus or GT-1 via path **Retrofit**
- Conduct a brief test
- Conduct a function test
- Re-assemble the car

9. Circuit diagram



9. Circuit diagram

Legend

X16	SW 18-pin plug
X112	SW 2-pin plug
X165	Terminal 31 cable eyelet
X166	Terminal 31 cable eyelet
X217	Terminal 31 joint connector contact
X518	SW 4-pin plug
X939	I bus joint connector contact
X1091	Terminal 31 connector
X10113	WS 18-pin plug
X10114	BL 26-pin plug
X10117	SW 54-pin plug
X10154	Terminal 30 connector
X11175	SW 26-pin plug
X11176	WS 26-pin plug
X14174	Terminal 15 connector

Cable colours

BL	Blue
BR	Brown
GE	Yellow
GN	Green
GR	Grey
RT	Red
SW	Black
VI	Violet
WS	White