

# Original BMW Accessories.

## Installation instructions.



### BMW Performance Power Kit Retrofit

**BMW 1 Series (E82, E88)**

**BMW 3 Series (E90, E91, E92, E93)**

**These installation instructions are only valid for 135i and 335i automobiles.**

#### Retrofit kit number

11 12 2 157 663	BMW Performance Power Kit Retrofit Kit
11 12 2 157 664	BMW Performance Power Kit Retrofit Kit

#### Installation time

The installation time is **approx. 3.5 hours**. This may vary depending on the condition of the automobile and the equipment in it.

In general the automobile must be upgraded to the latest I stage status by flashing before starting the work. Depending on the production age of the automobile, or work that has already been carried out on the automobile, different programming times will be needed.

The installation time specified does not include the time spent on programming / coding.

The calculation of the total costs for the programming time must be factored into the calculation of retrofitting costs (no invoicing via warranty).

The installation time does not include any time for programming/encoding, as this depends on the age of the automobile and the equipment in it.

#### Important information

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

In any event, the target group for these installation instructions is specialist personnel trained on BMW automobiles 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 safety regulations.

**If you experience installation or function problems, restrict troubleshooting to approx. 0.5 hours for mechanical work and 1.0 hour for electrical work.**

To avoid unnecessary extra work and/or costs, an inquiry is to be sent straight away to the technical parts support via the Aftersales Assistance Portal (ASAP).

Quote the following information:

- Chassis number,
- Retrofit kit part number,
- Detailed description of the problem,
- Any work already carried out.

Do not archive the hard copy of these installation instructions since daily updates are provided via ASAP!

## Pictograms



Denotes instructions that draw your attention to dangers.



Denotes instructions that draw your attention to special features.

◀ Denotes the end of the instruction or other text.

## Installation information

Ensure that the cables and/or lines are not kinked or damaged as you install them in the automobile. Costs arising from this will not be reimbursed by BMW AG.

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

All pictures show LHD automobiles; proceed accordingly on RHD automobiles.

## Ordering instructions

Air guides **AG** to **AT** are not included in the retrofit kit and must be ordered separately depending on the automobile (see EPC for part number and documentation).

Up to about 10/09, the release code is included on CD **AD** in the retrofit kit. From about 10/09 onwards, the release code will be available for download via ASAP.

## Workshop confirmation

Print out the “Workshop confirmation” section at the end of the installation instructions, fill it in and give it to the customer.

## Parts reports (for German-speaking countries only)

Print out the “Parts reports” section at the end of the installation instructions and give it to the customer.

## Special tools required

00 9 310 Trim wedge

00 9 340 Removal tool

13 3 010 Hose clip

12 1 172 Spark plug tool

12 1 220 Spark plug wrench 14mm bihexagon

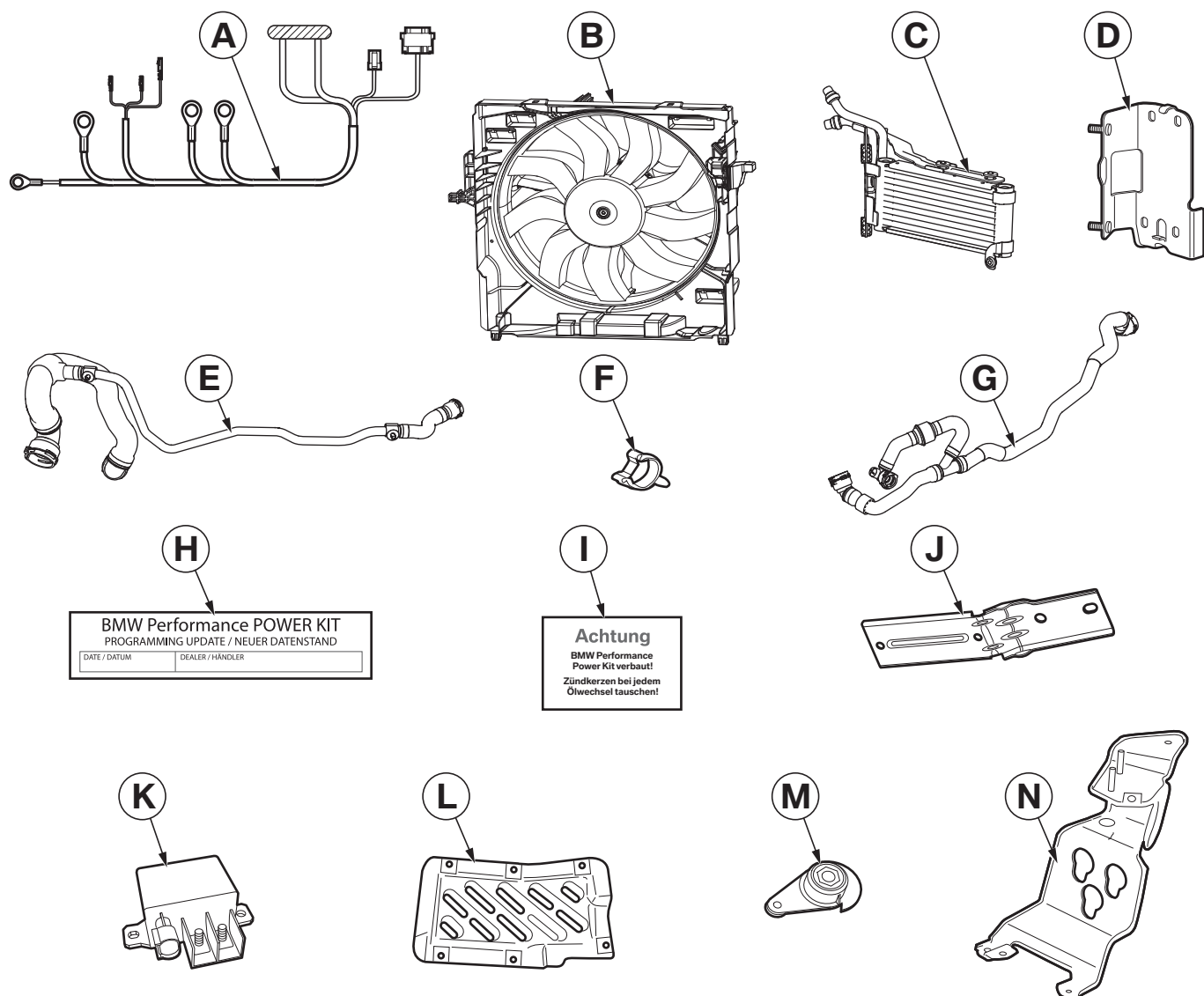
12 1 230 Installation aid

61 6 210 Wiper arm puller

## Table of contents

Section	Page
1 Parts list for retrofit kit .....	4
2 Parts list for air guides (not included in the retrofit kit) .....	6
3 Preparatory work .....	7
4 Connection diagram .....	8
5 Installation and cabling diagram .....	9
6 Modifying the horn (E82/E88 automobiles only) .....	10
7 Installing the retrofit wiring harness .....	11
8 Installing the additional radiator and air guides .....	12
9 Modifying the wheel arch cover .....	14
10 Installing water hoses .....	15
11 Installing the fan relay .....	16
12 Affixing the sticker .....	17
13 Modifying the front bumper trim .....	18
14 Concluding work .....	20
15 System circuit diagram .....	21
16 Workshop confirmation .....	22

# 1. Parts list for retrofit kit

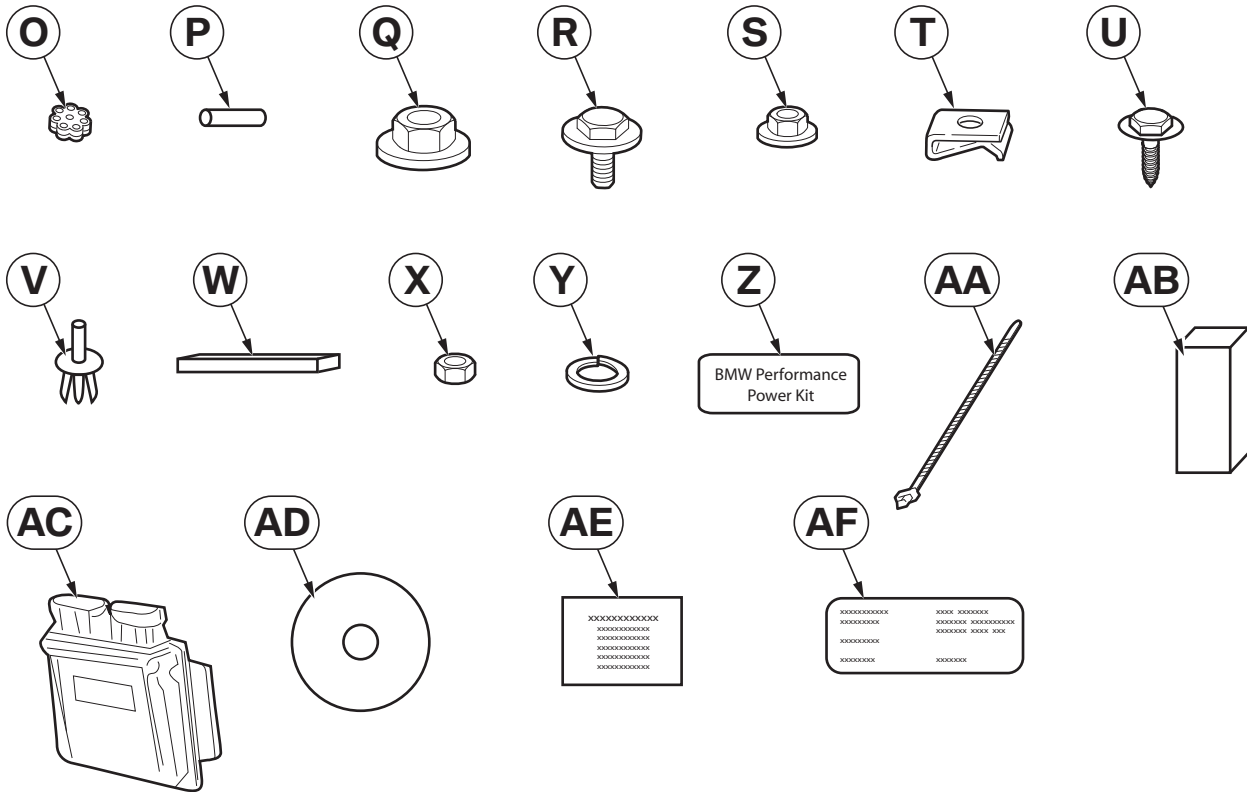


090 1452 Z

## Legend

- A** Retrofit wiring harness
- B** Electric fan
- C** Additional radiator
- D** Additional radiator holder
- E** Return hose
- F** Hose holder (2x)
- G** Supply hose
- H** Engine control unit sticker
- I** Service sticker (for cars built before 3/09 only)
- J** Relay holder
- K** Fan relay
- L** Radiator grille
- M** Thread plate
- N** Servo oil tank holder

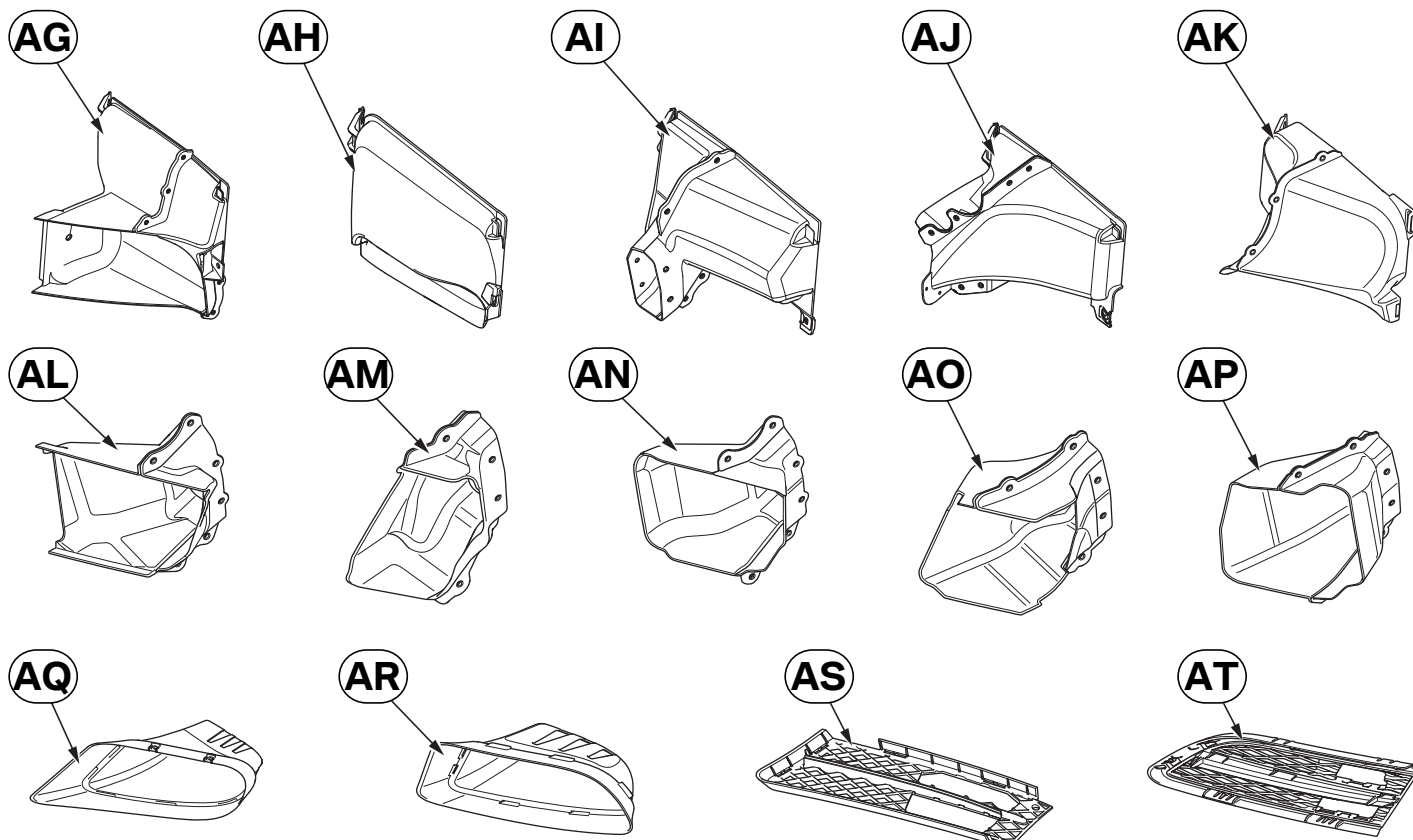
## 1. Parts list for retrofit kit



090 1454 Z

- O** Rubber bearing (3x)
- P** Shrink hose (2x)
- Q** Hexagon nut M8 (2x)
- R** Hexagon screw with washer M6 x 20 mm (3x)
- S** Hexagon nut with collar M6 (2x)
- T** Sheet metal nut (8x)
- U** Hex-head self-tapping screw (8x)
- V** Expanding rivet (6x)
- W** Sealing strips
- X** Hexagon nut M6 (2x)
- Y** Spring washer A6 (2x)
- Z** BMW Performance emblem
- AA** Cable tie 200 x 3.6 mm (20 x)
- AB** Spark plugs (6x, only for automobiles built before 3/09 or with more than 60,000 km / 45,000 miles on the clock)
- AC** Engine control unit (automobiles with MSD80 only)
- AD** Activation code on CD (only up to about 10/09)
- AE** Information label regarding aluminum screws
- AF** ARB EO# label (for US automobiles only, not included in the retrofit kit)

## 2. Parts list for air guides (not included in the retrofit kit)



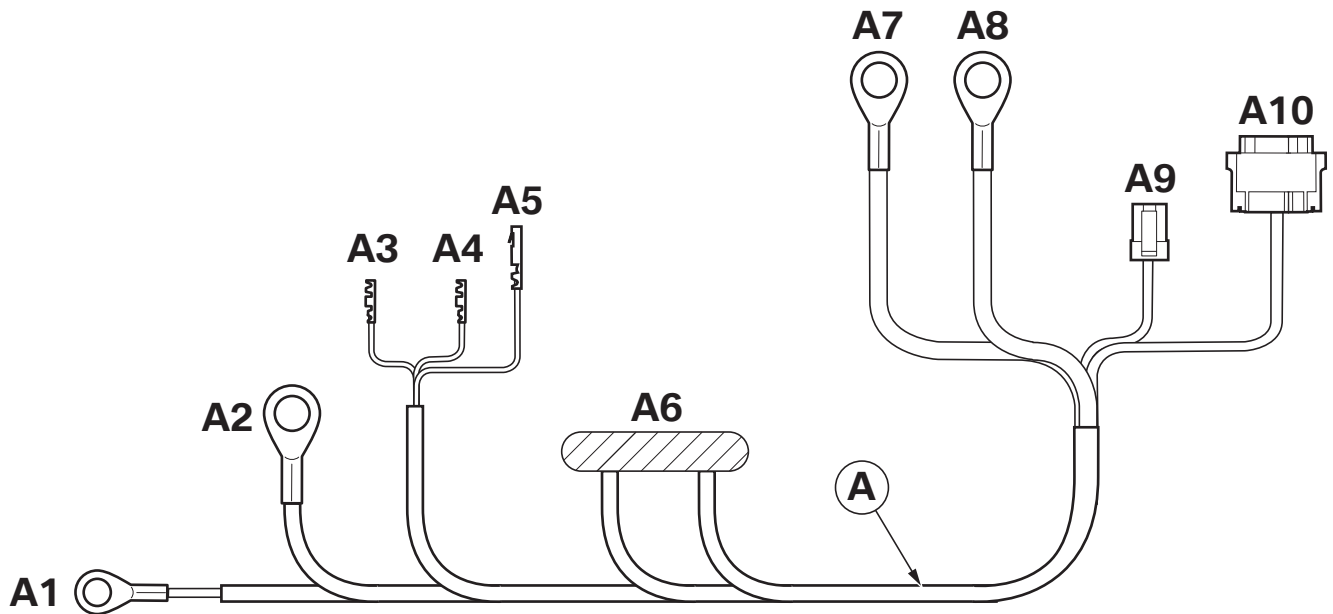
090 1463 Z

- AG** Rear air guide, for E82/E88 with standard or M bumper
- AH** Rear air guide, for E82/E88 with Performance bumper
- AI** Rear air guide, for all E90/E91/E92/E93 except E90/E91 LCI with M or Performance bumper
- AJ** Rear air guide, for E90/E91 LCI with M bumper
- AK** Rear air guide, for E90/E91 LCI with Performance bumper
- AL** Front air guide, for E90/E91 with standard bumper
- AM** Front air guide, for E90/E91 LCI with standard bumper
- AN** Front air guide, for E90/E91 with M bumper
- AO** Front air guide, for E92/E93 with standard bumper
- AP** Front air guide, for E92/E93 with M bumper
- AQ** Left air guide, for E82/E88 with Performance bumper
- AR** Left air guide, for E90/E91 LCI with Performance bumper
- AS** Left grille, for E90/E91 with standard bumper
- AT** Left grille, for E90/E91 LCI with standard bumper

### 3. Preparatory work

	ISTA No.
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
<b>The following components must be removed first</b>	
Front bumper trim	51 11 156
Power unit bottom guard, front	51 47 490
High-pressure jet of headlight cleaning system, left or right	61 67 083
Left headlight with support	63 12 010
Release front panel	41 33 040
Fan frame with electric fan (no longer required)	17 11 035
Wheel arch cover, front left	51 71 038
Cowl panel cover	51 13 116
Servo oil tank holder (no longer required)	---
Release E-Box cover	12 90 ...
Renew spark plugs (only for automobiles built before 3/09 or with more than 60,000 km / 45,000 miles on the clock)	12 12 011
<b>Also for automobiles with MSD80</b>	
Renew engine control unit	12 14 550
<b>Also for automobiles E82/E88</b>	
Horn mounting plate (no longer required)	---

## 4. Connection diagram

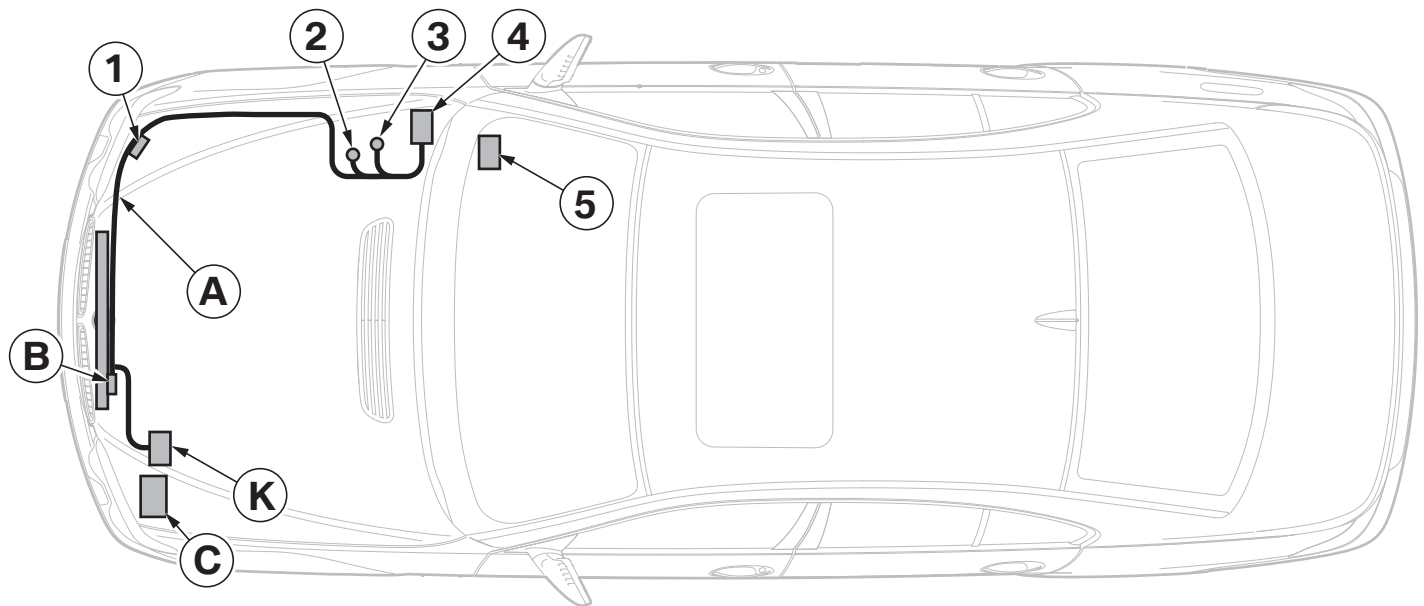


090 1451 Z

Item	Designation	Signal	Cable color / cross-section	Connection location in the automobile	Abbreviation / slot
A	Retrofit wiring harness	---	---	---	---
A1	Eyelet, diameter 6 mm	Terminal 30	RT 12.0 mm <sup>2</sup>	To B+ post, rear right suspension strut	X2219
A2	Eyelet, diameter 6 mm	Terminal 31L<2	BR 10.0 mm <sup>2</sup>	To earth pin, right on suspension strut	X175
A3	Butt-joint connector	Terminal 31	BR 0.5 mm <sup>2</sup>	To cable of same color from original fan relay in E-Box	---
A4	Butt-joint connector	Terminal 30g	RT/GN 0.5 mm <sup>2</sup>	To cable of same color from original fan relay in E-Box	---
A5	Socket contact	T_ELUE	SW/BL 0.5 mm <sup>2</sup>	To DME control unit <b>A6020</b>	X60101 Pin 8
A6	Fuse holder 125 A (wrapped in retrofit wiring harness)	Terminal 30	RT 12.0 mm <sup>2</sup>	Behind right headlight	---
A7	Eyelet, diameter 6 mm	Terminal 30	RT 12.0 mm <sup>2</sup>	To fan relay <b>K</b>	X17278
A8	Eyelet, diameter 6 mm	Terminal 30	RT 12.0 mm <sup>2</sup>	To fan relay <b>K</b>	X17279
A9	SW 2-pin socket casing	---	---	To fan relay <b>K</b>	X1798
A10	SW 4-pin socket casing	---	---	To electric fan <b>B</b>	X18193



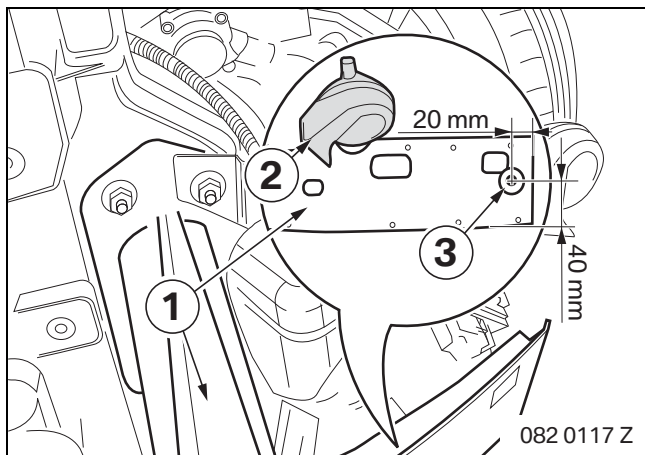
## 5. Installation and cabling diagram



090 1453 Z

- A** Retrofit wiring harness
- B** Electric fan, plug **X18193**
- C** Additional radiator
- K** Fan relay, plugs **X17278**, **X17279** and **X1798**
- 1** Fuse holder **A6**
- 2** Strut tower earth support point **X175**
- 3** B+ post **X2219**
- 4** E-Box (DME control unit **A6020** and original fan relay)
- 5** Fuse holder front, fuse **F92**

## 6. Modifying the horn (E82/E88 automobiles only)

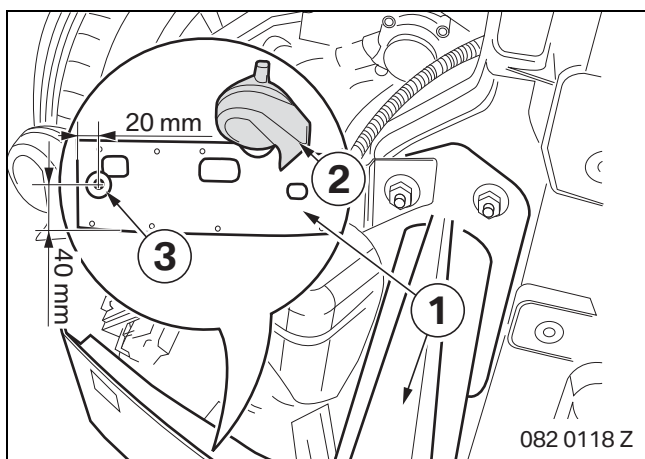


Make a drill hole (3), diameter 8.5 mm, on the bumper support (1) as per the dimensions shown.

Drill the hole (3) to 22 mm only on the outer panel of the bumper support (1) using a step drill bit.

Treat the drill holes (3) with anti-corrosion agent.

Screw the horn (2) using the original nut and washer onto the bumper support (1).



Route the connecting cable for the second horn along the bumper support (1) on the right.

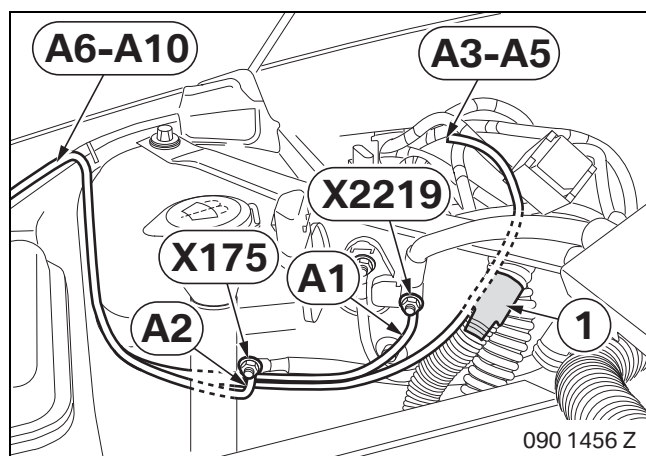
Make a drill hole (3), diameter 8.5 mm, on the bumper support (1) as per the dimensions shown.

Drill the hole (3) to 22 mm only on the outer panel of the bumper support (1) using a step drill bit.

Treat the drill holes (3) with anti-corrosion agent.

Screw the horn (2) using the original nut and washer onto the bumper support (1).

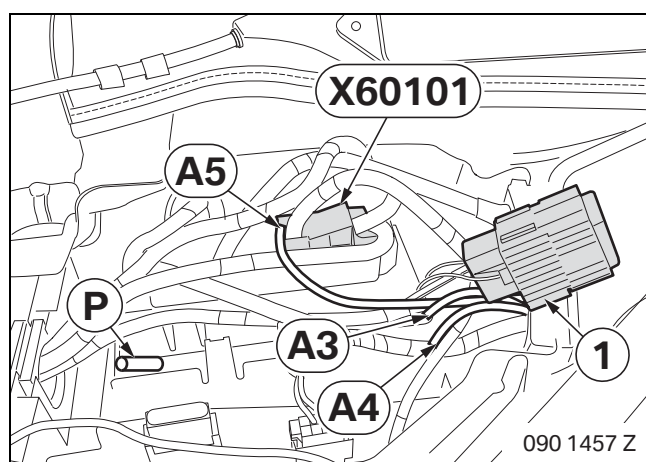
## 7. Installing the retrofit wiring harness



Screw branch **A1** onto B+ post **X2219** and branch **A2** onto earth pin **X175**.

Route branches **A6 – A10** to the right-hand side panel.

Route branches **A3 – A5** through the rubber grommet (1) into the E-Box.



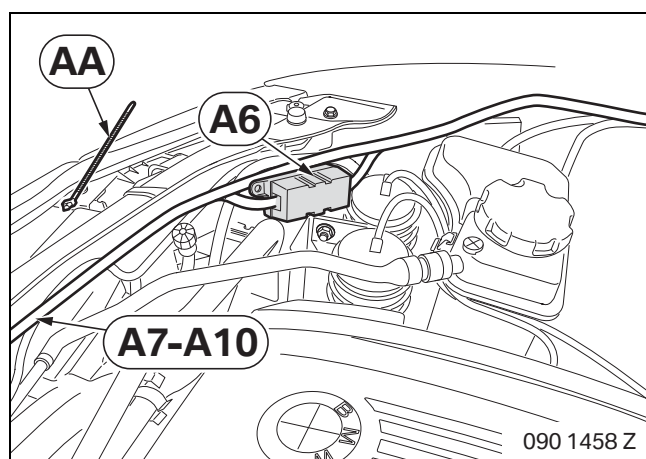
Push shrink hoses **P** over branches **A3**, BR cable, and **A4**, RT/GN cable.

Disconnect BR and RT/GN cables from fan relay (1) and crimp onto the same-colored branches **A3** and **A4**.

Insulate the connections with shrink hoses **P**.

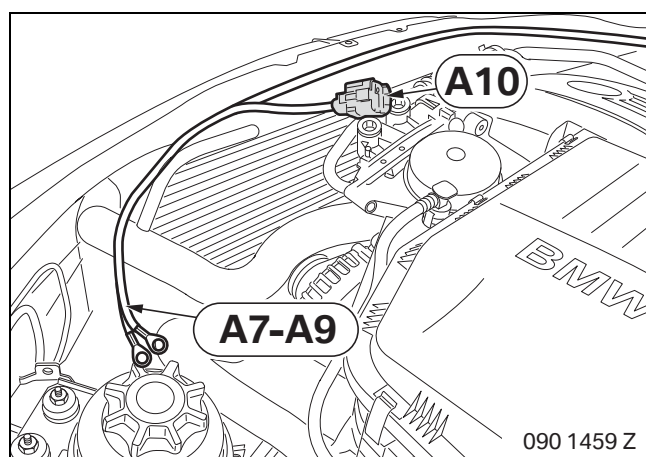
Disconnect SW/BL cable from pin 8 of plug **X60101** (GR 26-pin) on DME control unit, insulate it and tie it back.

Connect branch **A5**, SW/BL cable, to pin 8 of plug **X60101**.



Secure fuse holder **A6** onto the standard wiring harness using cable ties **AA** behind the right headlight.

Route branches **A7 – A10** along the standard wiring harness to the left side of the automobile.

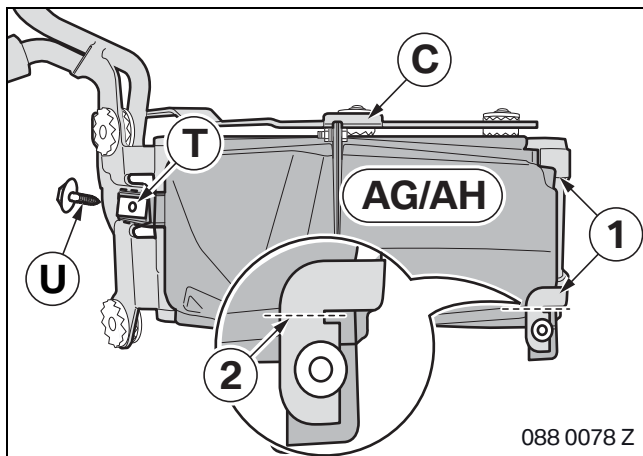


Route branches **A7 – A10** along the front panel.

Tie back the original plug of the electric fan in the area of the right headlight.

## 8. Installing the additional radiator and air guides

- ▶ Installation of air guides is shown by way of example on E93 with M bumper.  
Proceed similarly in all other automobiles and variants. ◀



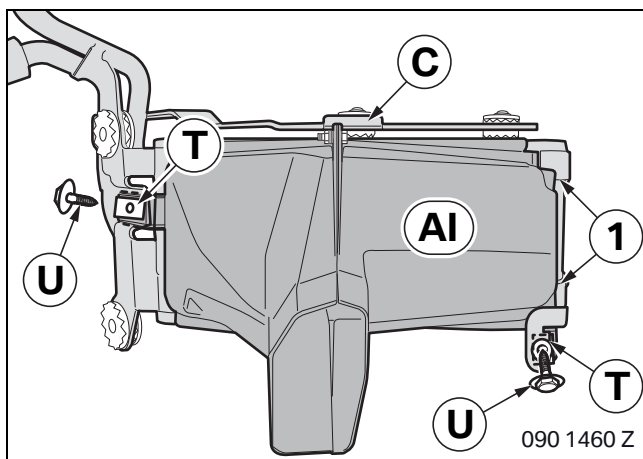
### E82/E88 automobiles only

Disconnect lower screw-on lug (2) on additional radiator **C** at the edge.

Insert sheet metal nut **T** in rear air guide **AG/AH**.

- ▶ Make sure that rear air guide **AG/AH** is inserted in the guides (1) of additional radiator **C**. ◀

Put rear air guide **AG/AH** onto additional radiator **C** and screw on with hex-head self-tapping screw **U**.

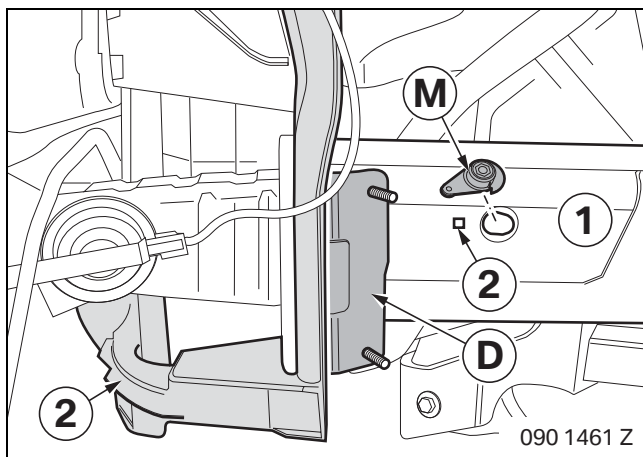


### E90/E91/E92/E93 automobiles only

Insert sheet metal nuts **T** in rear air guide **AI**.

- ▶ Make sure that rear air guide **AI** is inserted in the guides (1) of additional radiator **C**. ◀

Put rear air guide **AI** onto additional radiator **C** and screw on with hex-head self-tapping screws **U**.

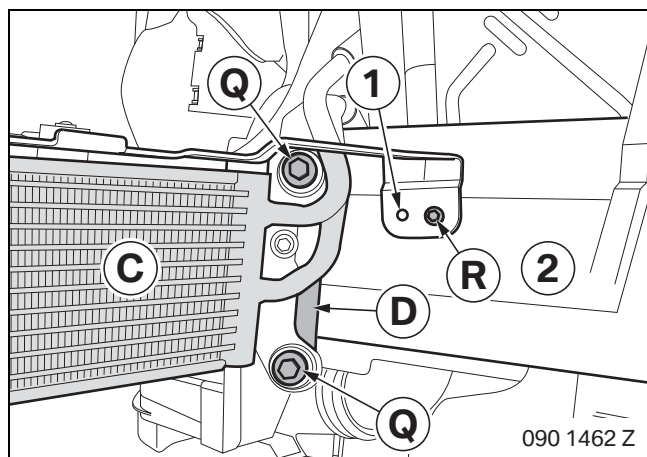


### All automobiles

Swap the mounting plate between the side member (1) and front panel (2) for additional radiator holder **D**.

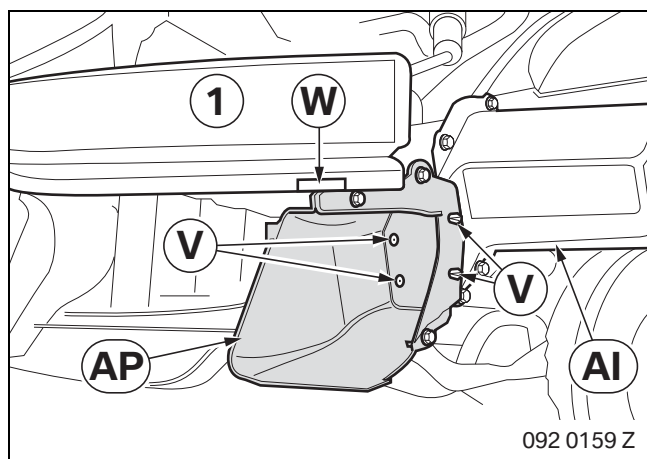
Insert thread plate **M** into side member (1), rotate it around 90° and engage it in the centering drill hole (2).

## 8. Installing the additional radiator and air guides



Place additional radiator **C** on holder **D** and insert centering pin (1) in side member (2).

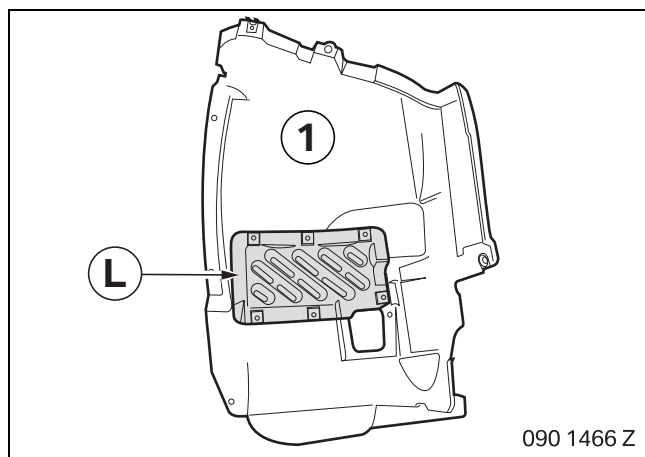
Screw additional radiator **C** onto holder **D** using hexagon nuts **Q** and onto side member (2) using hexagon screw **R**.



Place front air guide **AP** on rear air guide **AI** and secure from the inside using expanding rivets **V**.

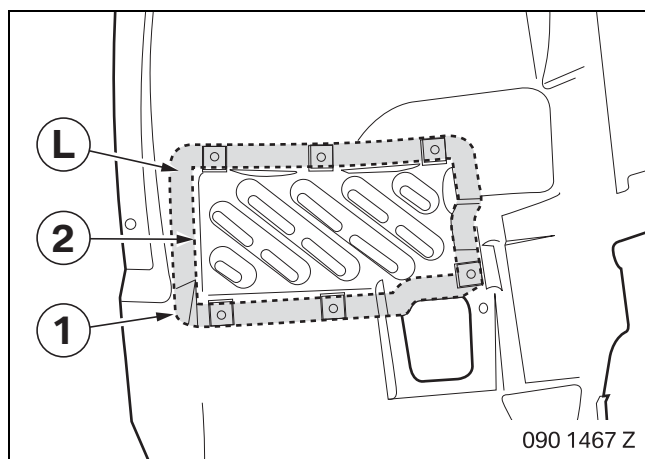
Place sealing strip **W** on bumper trim support (1).

## 9. Modifying the wheel arch cover

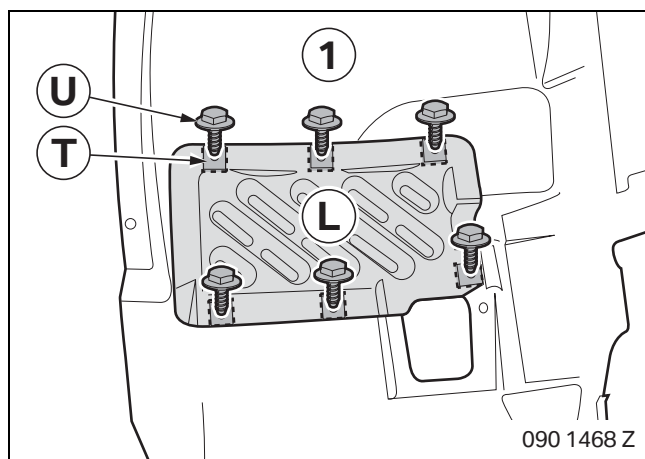


Place radiator grille **L** from outside onto wheel arch cover (1).

Transfer the contours and holes of radiator grille **L**.  
Make drill holes of diameter 5 mm.



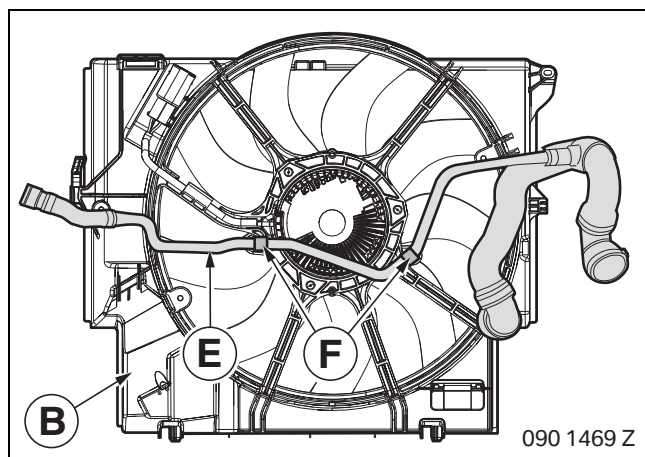
Mark cut-out (1) 20 mm inside contour (2) of radiator grille **L** and cut out.



Push sheet metal nuts **T** onto the wheel arch cover (1).

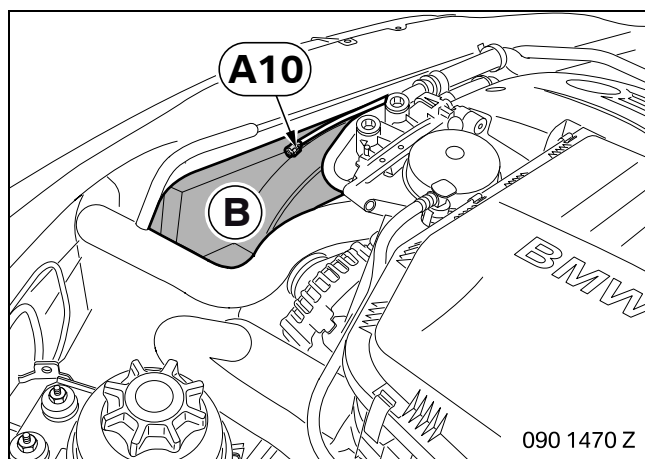
Screw on radiator grille **L** using hex-head self-tapping screws **U**.

## 10. Installing water hoses

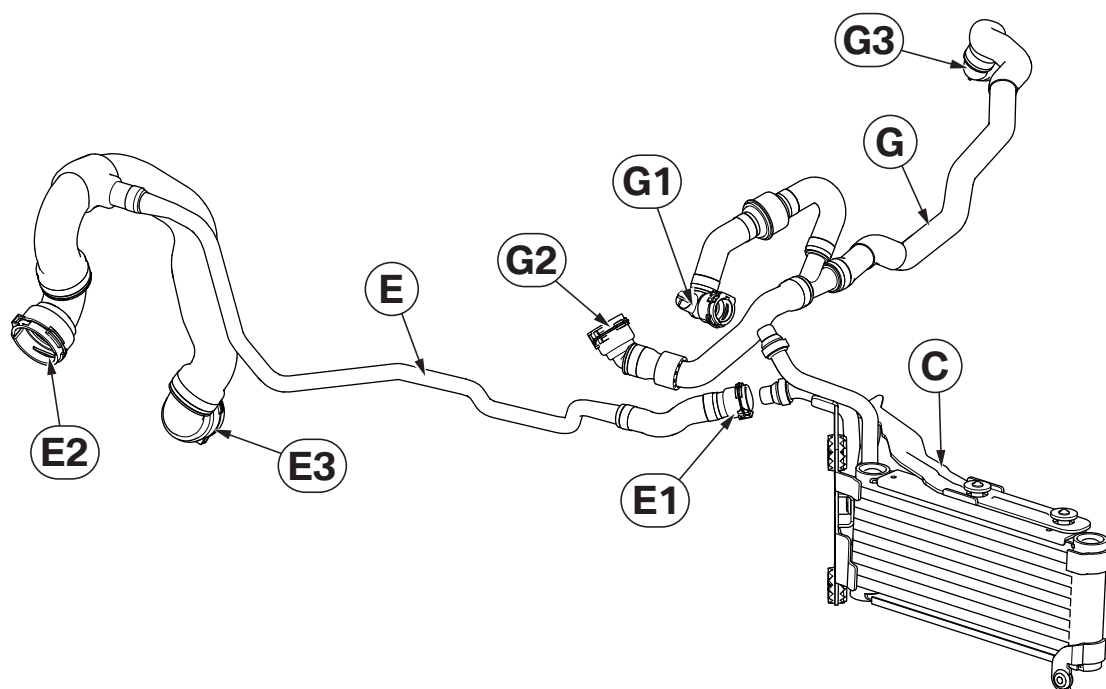


▶ If there is no hose holder already mounted on return hose **E**, use hose holder **F**. ◀

Clip return hose **E** into electric fan **B** as shown.



Install electric fan **B** (see ISTA 17 11 035) and connect branch **A10**.

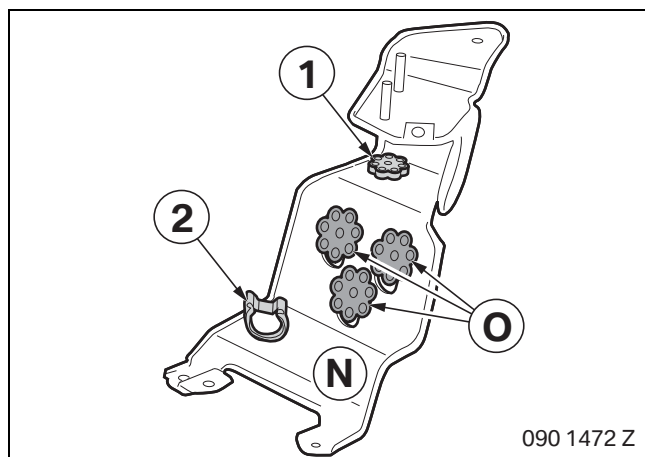


Incorporate return hose **E** and supply hose **G** into the cooling circuit as follows:

- **E1** and **G1** to additional radiator **C**
- **E2** and **G2** to engine radiator
- **E3** to engine block
- **G3** to heating heat exchanger on the bulkhead



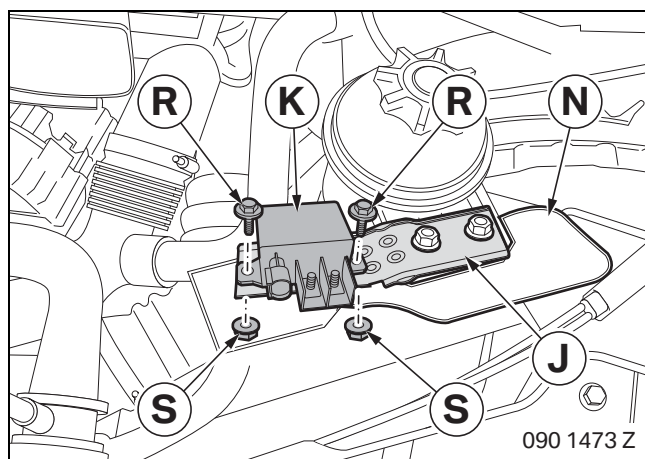
## 11. Installing the fan relay



Transfer existing rubber bearing (1) and hose holder (2) of the removed servo oil tank holder to servo oil tank holder **N**.

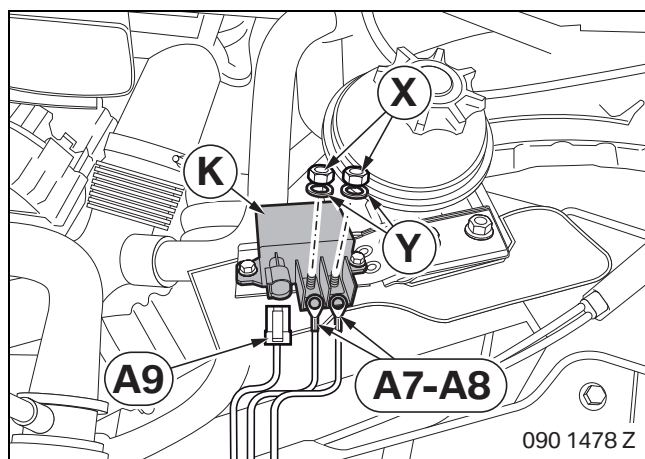
Insert rubber bearing **O** in servo oil tank holder **N**.

Install servo oil tank holder **N** using the original nuts and original screw.



Using the original nuts, screw fan relay holder **J** onto servo oil tank holder **N**.

Use hexagon screws **R** and hexagon nuts with collar **S** to secure fan relay **K** to fan relay holder **J**.

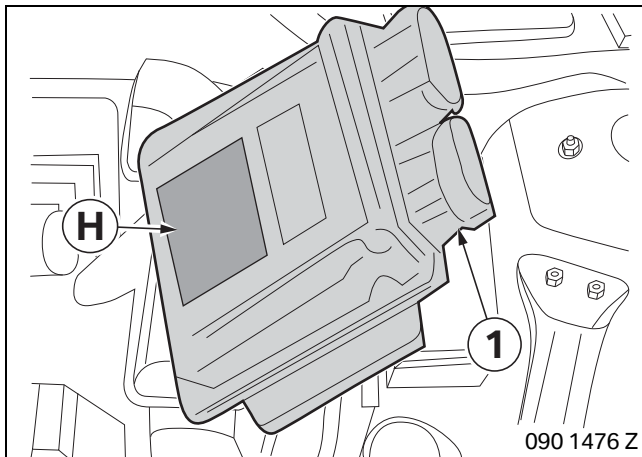


Connect branches **A7** – **A8** using hexagon nuts **X** and spring circlips **Y** to fan relay **K**.

Connect branch **A9** to fan relay **K**.



## 12. Affixing the sticker



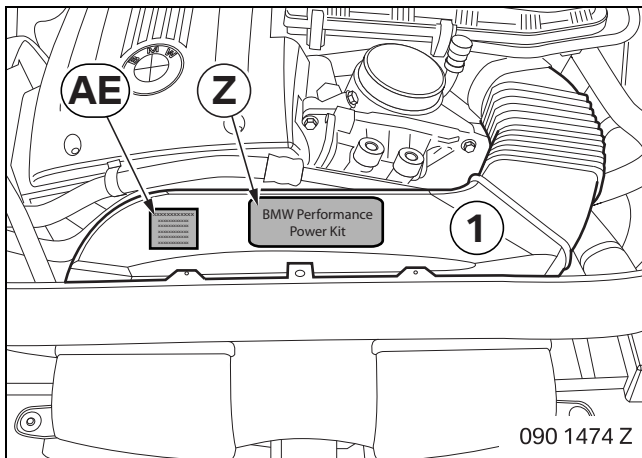
▶ Clean the surface to be glued. ◀

Release engine control unit (1) without disconnecting the plug (see ISTA 12 14 550).

Enter the dealership and date on the engine control unit sticker **H**.

Stick engine control unit sticker **H** onto the engine control unit (1).

Install the engine control unit (1).

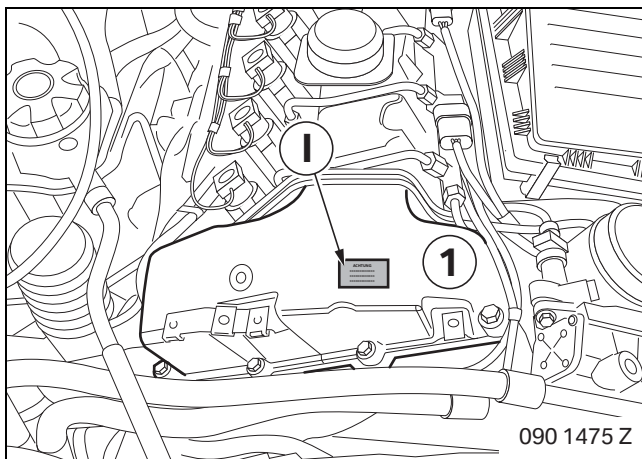


▶ Clean all the surfaces to be glued. ◀

Remove the existing information label regarding aluminum screws from the air guide (1) (it is no longer needed).

Stick emblem **Z** in the middle of the air guide (1).

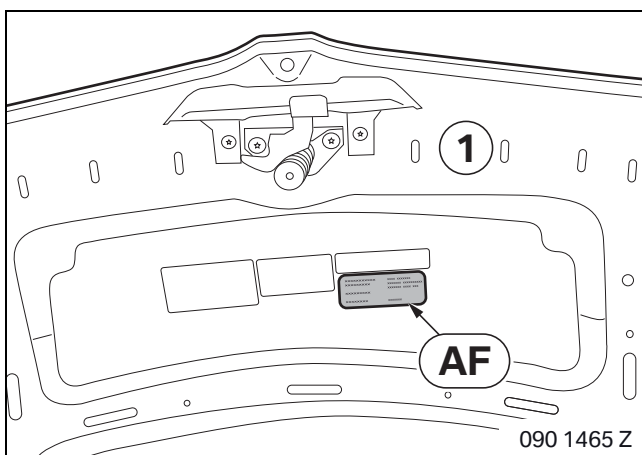
Stick the new information label regarding aluminum screws **AE** on left next to emblem **Z**.



### For automobiles built before 3/09 only

▶ Clean the surface to be glued. ◀

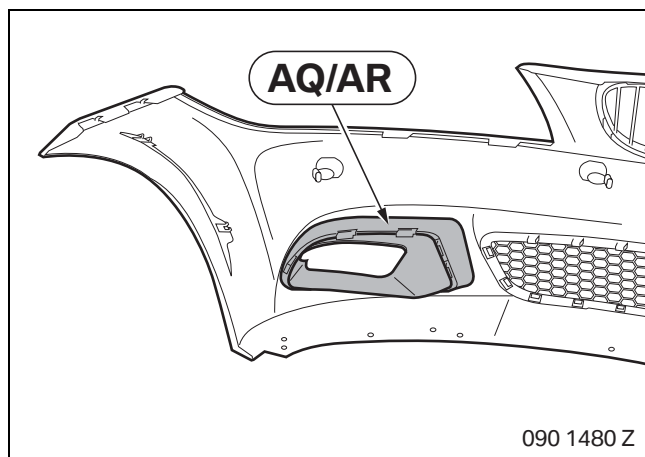
Stick service sticker **I** on cylinder head cover (1).



### For US automobiles only

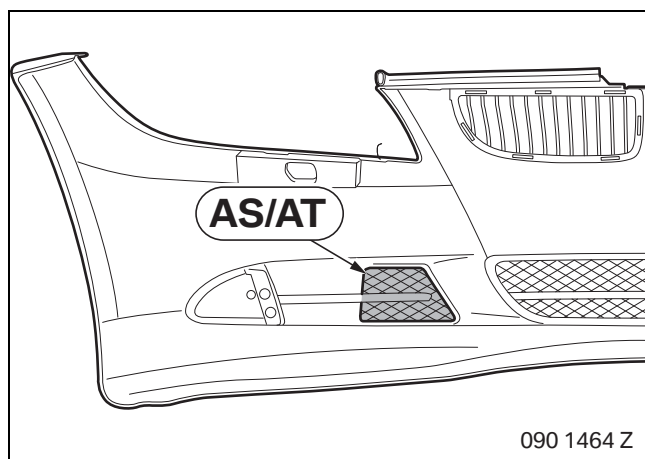
Stick ARB EO# label **AF** onto the hood (1) as shown.

### 13. Modifying the front bumper trims

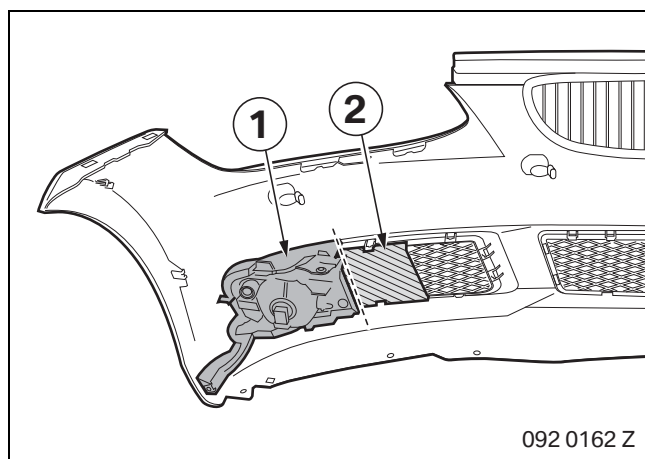


**E82/E88 and E90/E91 LCI automobiles with Performance bumper only**  
Swap original left air guide for left air guide **AQ/AR**.

**E82/E88 automobiles with standard or M bumper only**  
No modification necessary.

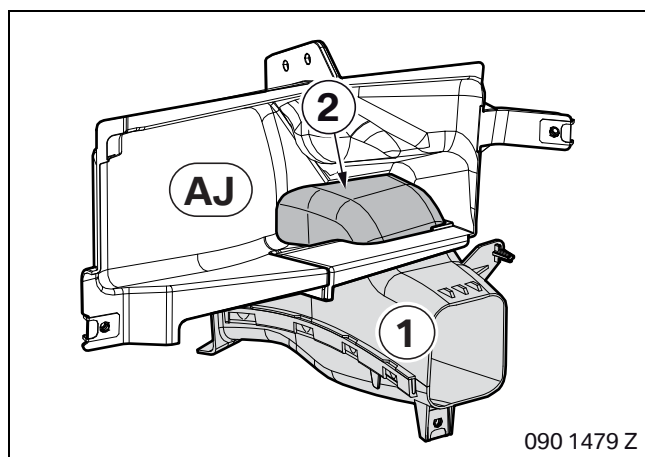


**E90/E91 and E90/E91 LCI automobiles with standard bumper only**  
Swap original left grille for left grille **AS/AT**.



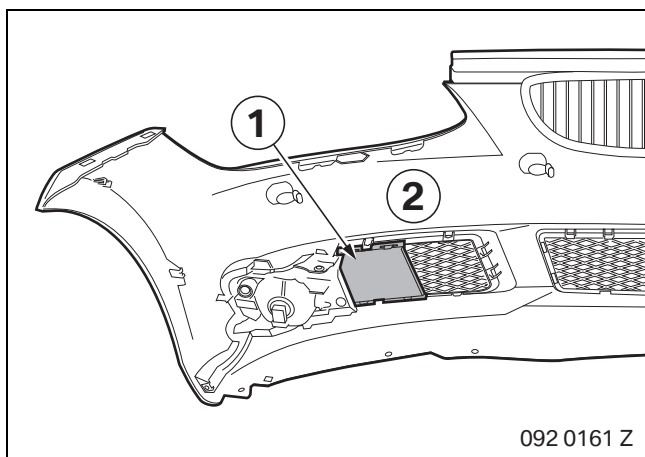
**E90/E91 automobiles with M bumper and E92/E93 automobiles with standard bumper only**  
Remove fog light holder (1) and disconnect marked area (2).

Install fog light holder (1).



**E90/E91 LCI automobiles with M bumper only**  
Place left brake air duct (1) against air guide **AJ** as shown, transfer inner contour (2) and cut out.

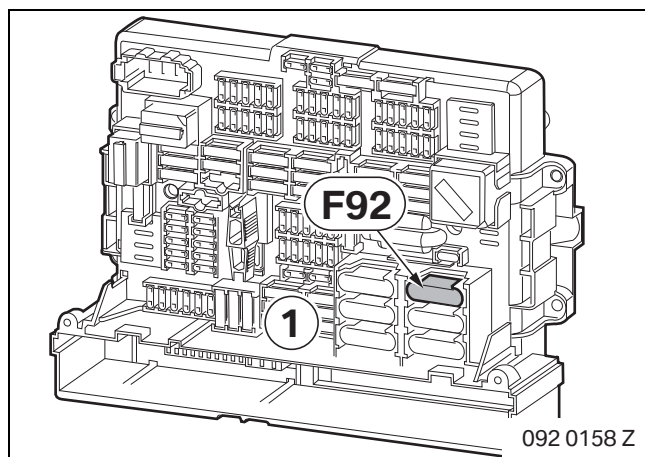
### 13. Modifying the front bumper trims



#### **E92/E93 automobiles with M bumper only**

Unclip left cover (1) behind grille from bumper (2) (it is no longer needed).

## 14. Concluding work



Remove fuse **F92** from front fuse holder (1) (it is no longer needed).

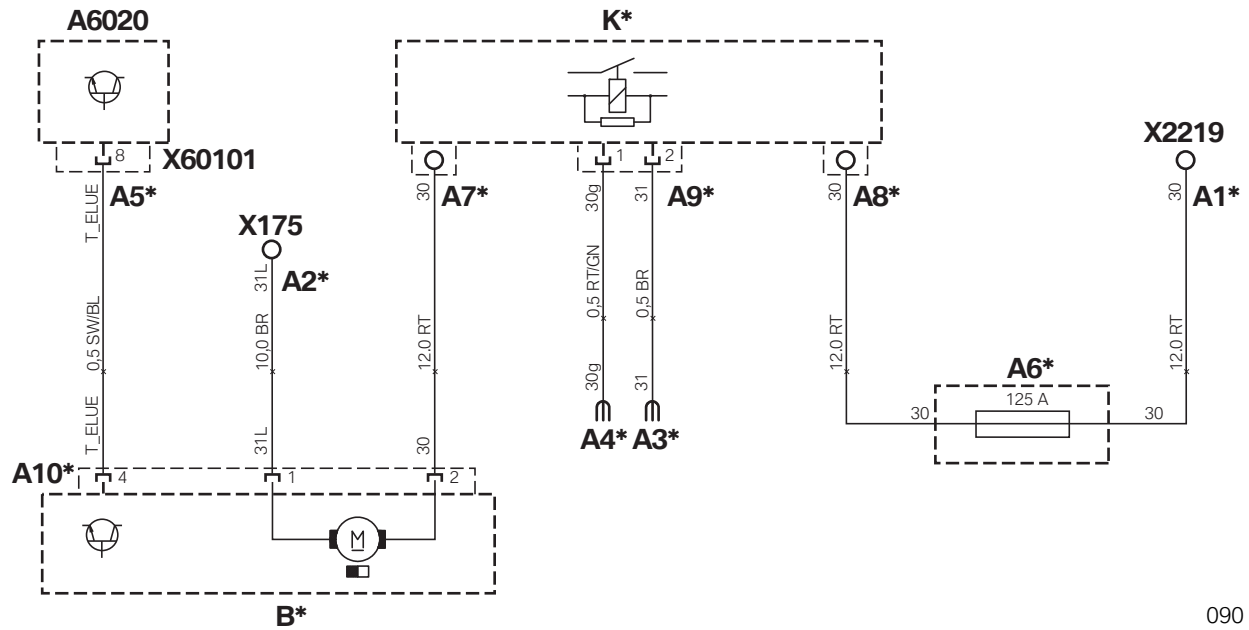
The retrofit system requires coding.

- Connect the battery
- Conduct a brief test
- Fill and bleed the coolant system as directed and check the coolant system for leaks (see ISTA 17 00 005)
- Program/encode the retrofit with SSS (software Service Station) via the – **CIP, Power-Kit** – path.

▶ If the action "Disable DME/DDE" action should appear in the concluding report, always change the terminals. After changing the terminals, continue with the standard diagnostic process (continue with the automobile test) and delete any error memory entries. You must ensure that no error memory entries are still present. ◀

- Re-assemble the automobile

## 15. System circuit diagram



090 1455 Z

### Legend

- A1\*** Eyelet, on B+ post **X2219**
- A2\*** Ring eyelet, on earth pin **X175**
- A3\*** Butt-joint connector, on cable with same color of original fan relay
- A4\*** Butt-joint connector, on cable with same color of original fan relay
- A5\*** Socket contact, on DME control unit **A6020**, plug **X60101**
- A6\*** Fuse holder 125 A
- A7\*** Eyelet, on fan relay **K\***
- A8\*** Eyelet, on fan relay **K\***
- A9\*** SW 2-pin socket casing, on fan relay **K\***
- A10\*** SW 4-pin socket casing, on electric fan **B\***

All the designations marked with an asterisk (\*) apply only to these installation instructions or this system circuit diagram.

### Cable colors

BL	Blue
BR	Brown
GN	Green
RT	Red
SW	Black

# BMW Performance Power Kit

This is to confirm that the BMW Performance Power Kit  
11 12 2 157 663 or  
11 12 2 157 664  
has been completely installed on the automobile identified below.

Specifically, the following components have been modified and/or retrofitted:

- 1. Additional radiator with holder
- 2. Air guides on additional radiator
- 3. Cooling water supply hose
- 4. Cooling water return hose
- 5. Electric fan
- 6. Fan relay with holder
- 7. Electric fan wiring harness with 125 A fuse
- 8. Spark plugs

Automobile type:       BMW 135i (E82/E88)  
                              BMW 335i (E90/E91/E92/E93)

Vehicle identification no.:.....

Vehicle owner  
Name and address: .....  
.....  
.....  
.....  
.....

.....  
Place, date

.....  
Signature of person responsible

Dealership (company name / stamp)