

Parts and Accessories. Installation Instructions.



Retrofit - Headlight washer system BMW 1 Series (E81, E82, E87, E88)

Retrofit kit No.:	61 60 0 432 308	Retrofit kit - Headlight washer system
	61 60 0 391 645	Retrofit kit - Headlight washer system
	61 60 0 446 761	Retrofit kit - Headlight washer system

Installation time

The installation time is **approx. 3.0 hours**. The specified time may vary depending on the vehicle's condition and equipment.

The vehicle must be updated to the latest I-level status by flashing before installing the retrofit. Differing programming times may be necessary depending on the production age of the vehicle and on work previously performed on the vehicle.

The installation time given does not include time needed for programming/encoding.

The total costs for the programming time should be taken into account when calculating retrofitting costs (reimbursement through warranty is not permissible).

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 specified tools (special tools) and observing current health and safety regulations.

In the event of installation or functional problems, limit troubleshooting to 0.5 hours for mechanical jobs and 1.0 hours for electrical jobs.

To avoid unnecessary work and costs, send a corresponding enquiry via the Aftersales Assistance Portal (ASAP) using the technical parts support application.

Please quote the following:

- Vehicle identification number
- Part number of retrofit kit
- Exact description of the problem
- Work already carried out

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

Pictograms



Denotes instructions that draw your attention to special features.



Denotes the end of the instruction or other text.

Installation information

Ensure that the cables/lines are not kinked or damaged as you install them in the car. 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.

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

The installation instructions describe the procedure on the left-hand side of the vehicle only. The same procedure should be followed analogously on the right-hand side of the vehicle.

Covers **G** and **H** must be painted in the car colour.

Side identification letters L and R are imprinted on the covers **G** and **H**, washer nozzles **E** and **F** as well as the base pads **K** and **L**.

Following installation, the retrofit requires programming/encoding via the path - **Retrofit** -.

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

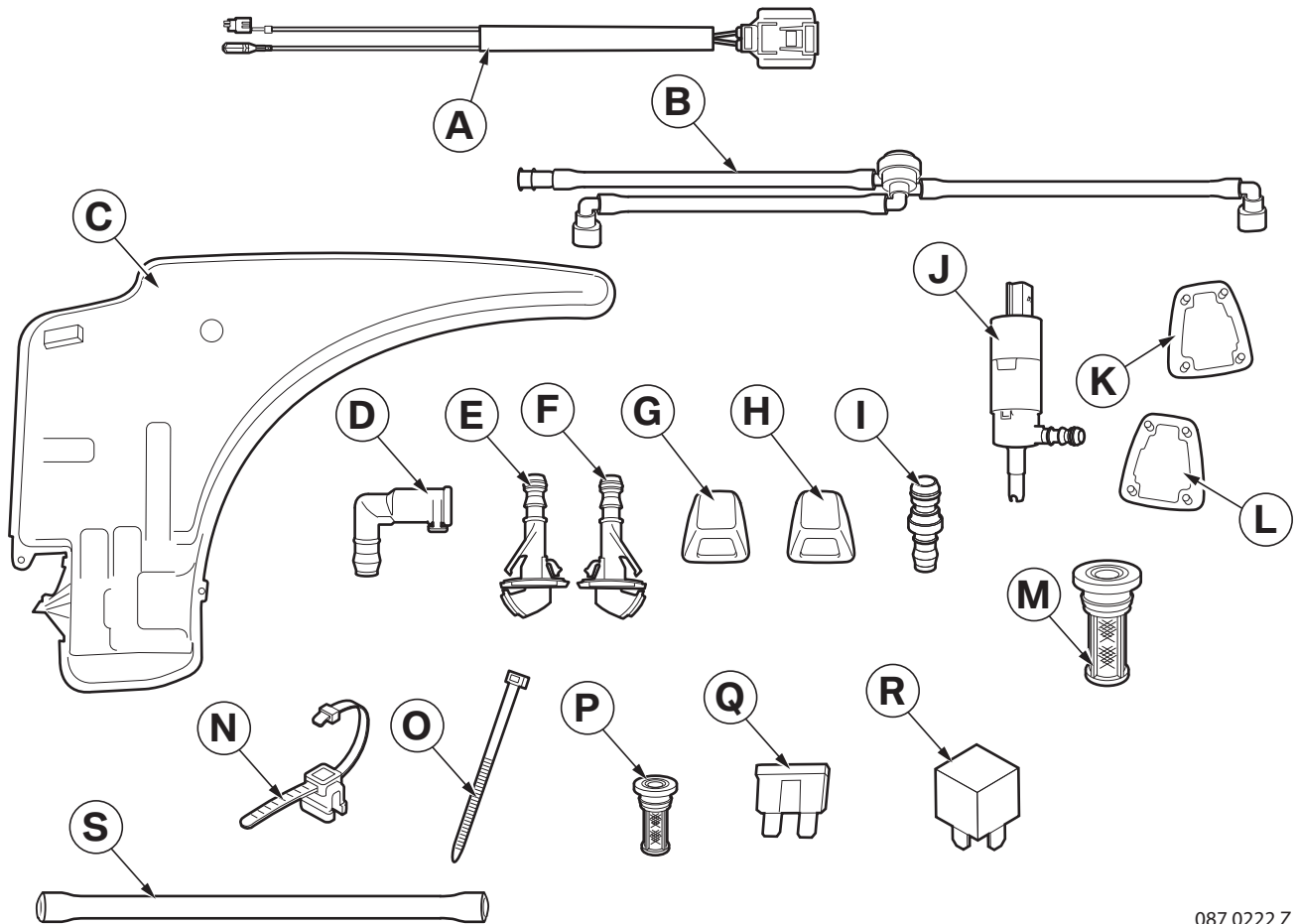
Special tools required

None

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1. Parts overview



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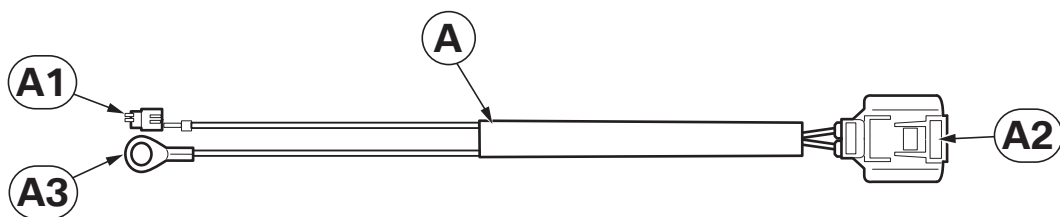
Legend

- A Retrofit wiring loom
- B Set of hoses
- C Reservoir for headlight washer system
- D Elbow
- E Washer nozzle, right
- F Washer nozzle, left
- G Cap cover, right
- H Cap cover, left
- I Connecting piece
- J Washer pump, headlight washer system
- K Base pad, right
- L Base pad, left
- M Filter for washer pump
- N Cable tie with holder
- O Cable tie (15x)
- P Filter for washer pump (2x)
- Q Fuse link 30 A
- R Relay (only for vehicles before 03/07)
- S Hose

2. Preparatory work

	ISTA No.
Perform quick test	---
Disconnect negative terminal of battery	12 00 ...
Remove the following components	
Bumper trim panel, front	51 11 156
Right wheel	36 10 300
Inner right wheel arch trim panel	51 71 040
Reservoir for windscreen washer system (no longer required)	61 71 061
Level switch from reservoir	61 31 492
E-box cover, right	---
A-pillar trim panel, bottom right	51 43 075
Instrument panel trim, bottom right	51 45 181
Glove compartment	51 16 366
Detach fuse box	61 13 ...

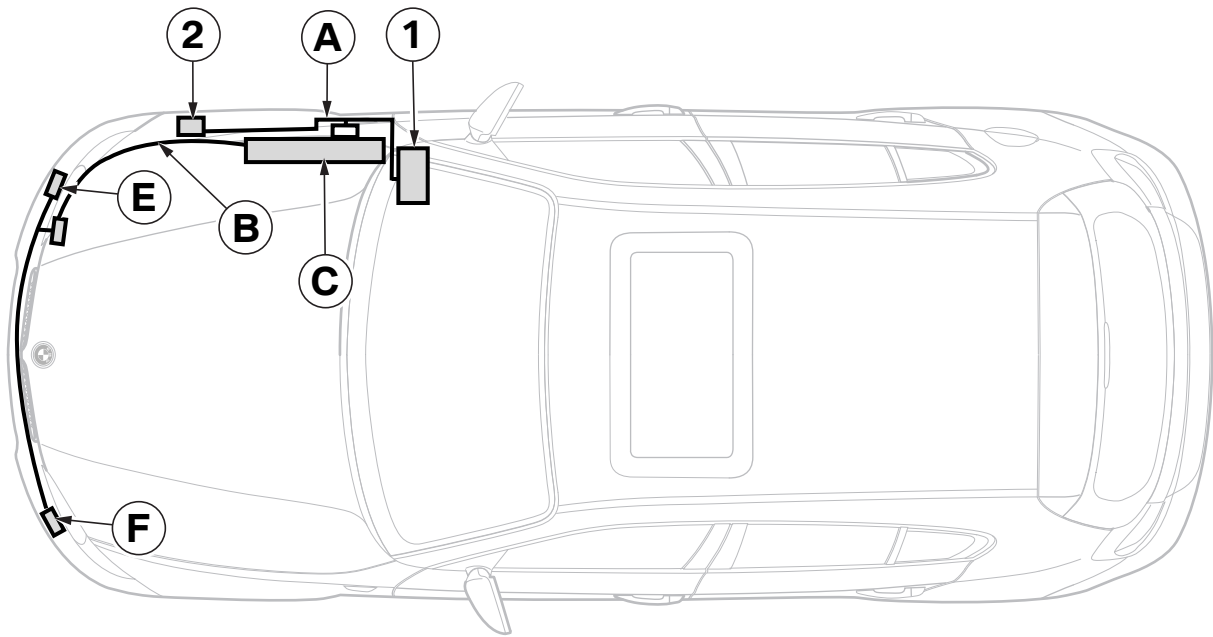
3. Connections diagram



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Item	Description	Signal	Cable colours/ cross section	Plug-in location in vehicle	Designation/ plug-in location
A	Retrofit wiring loom	---	---	---	---
A1	Socket contact	Control signal, positive	SW/BR 2.5 mm ²	Only vehicles produced before 03/07 on fuse holder Only vehicles produced after 03/07 on fuse holder	X11006 PIN 6 X11006 PIN 5
A2	SW 2-pin connector	---	---	At washer pump for headlight washer system J	X1011
A3	Strip connector contact	Kl. 31	BR 2.5 mm ²	At ground strip connector on right in engine compartment	X166

4. Installation and cabling diagram

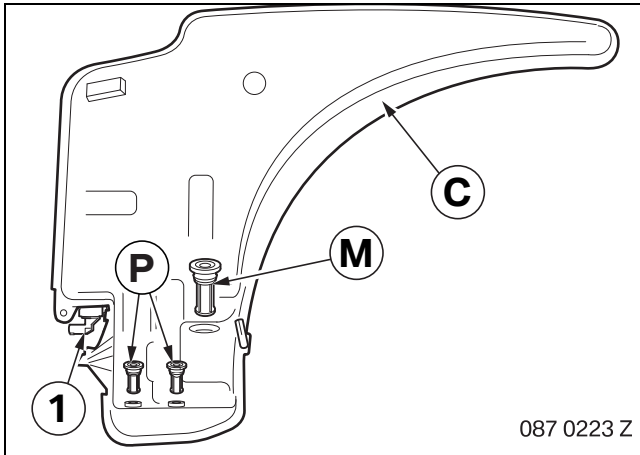


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Legend

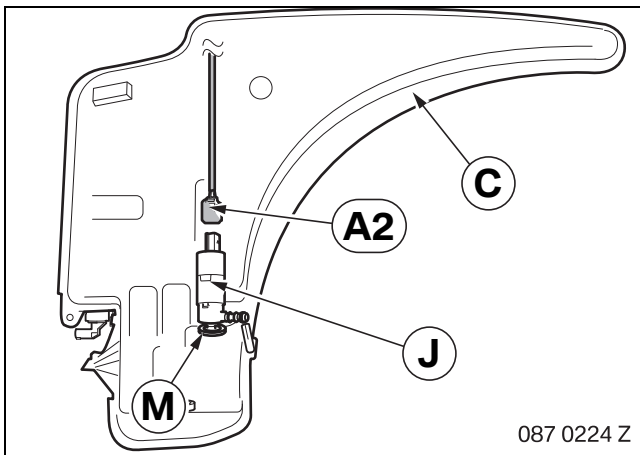
- A Retrofit wiring loom
- B Set of hoses
- C Reservoir for headlight washer system
- E Washer nozzle, right
- F Washer nozzle, left
- 1 Fuse holder, connector **X11006**
- 2 Ground terminal **X166**

5. Installing reservoir for headlight washer system



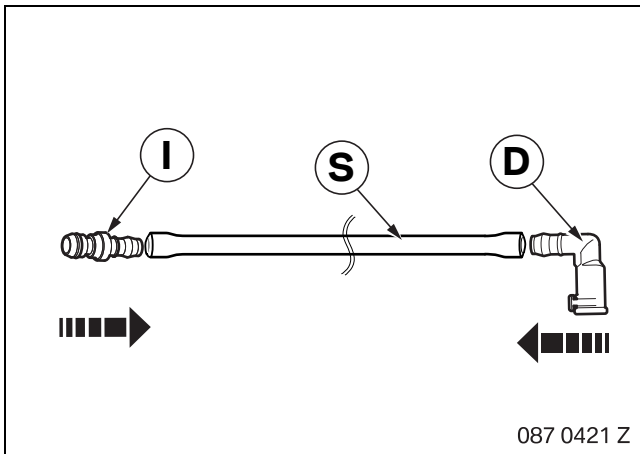
Fit removed level switch (1) in reservoir for headlight washer system **C**.

Fit filters for washer pumps **M** and **P** in reservoir for headlight washer system **C**.

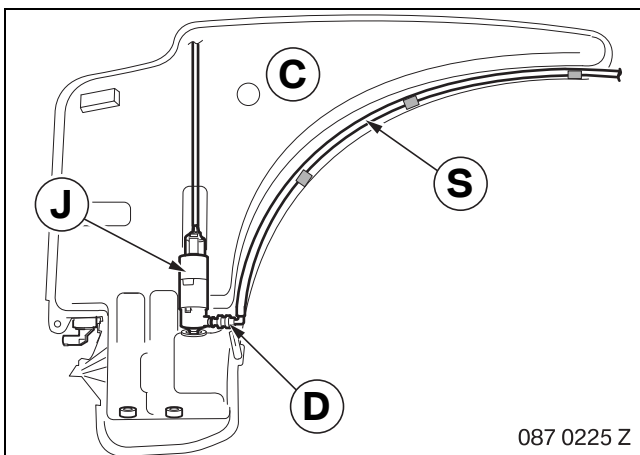


Fit washer pump of headlight washer system **J** in filter for washer pump **M** and snap into reservoir for headlight washer system **C**.

Connect branch **A2** to washer pump of headlight washer system **J**.



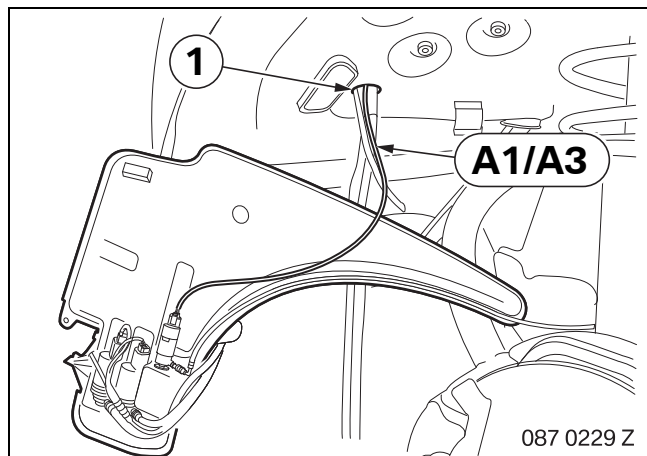
Fit connecting piece **I** and elbow **D** in hose **S**.



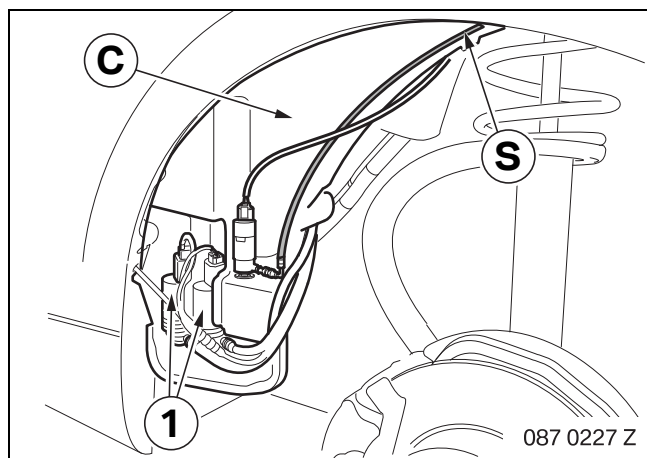
Connect elbow **D** to hose **S** at washer pump of headlight washer system **J**.

Clip hose **S** into reservoir of headlight washer system **C**.

5. Installing reservoir for headlight washer system



Pass branches **A1** and **A3** through opening (1) into engine compartment.



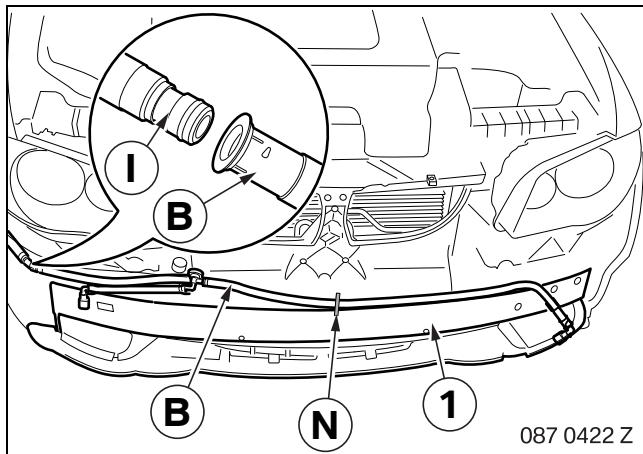
Place reservoir of headlight washer system **C** in front side panel.

Install washer pumps for windscreen washer system (1) in reservoir for headlight washer system **C**.

Install reservoir of headlight washer system **C** as per ISTA No. 61 71 061.

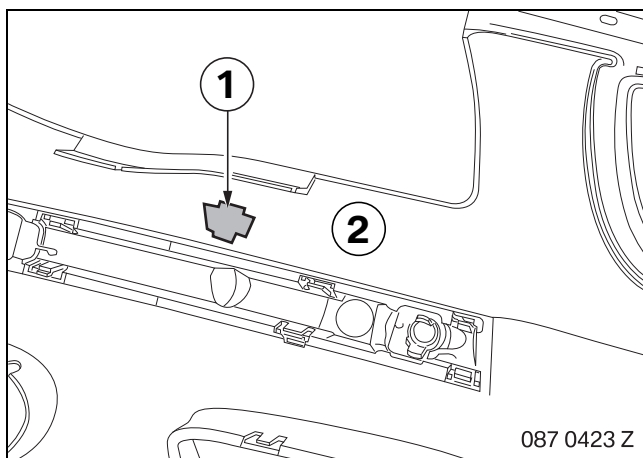
Route hose **S** to right-hand headlight.

6. Installing and connecting washer nozzles



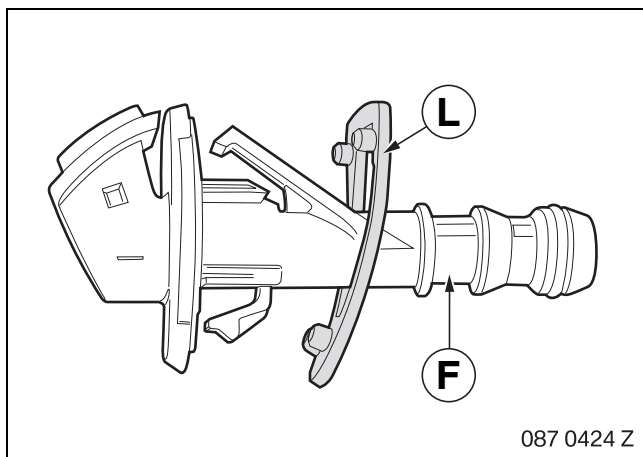
Connect hose line **B** to connector **I** below right-hand headlight.

Route hose line **B** along bumper (1) to left side of vehicle and secure with cable tie with holder **N**.



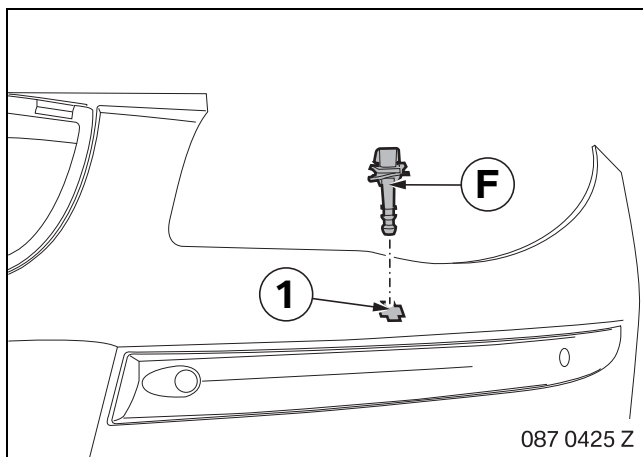
▶ The illustration shows the left side of the vehicle. Proceed analogously on the right-hand side. Take care not to damage the paintwork when cutting out the aperture. ◀

Cut along perforation (1) on inside of bumper panel (2).



▶ The illustration shows the left side of the vehicle. Proceed analogously on the right-hand side. Pay attention to the side identification letters on the components. ◀

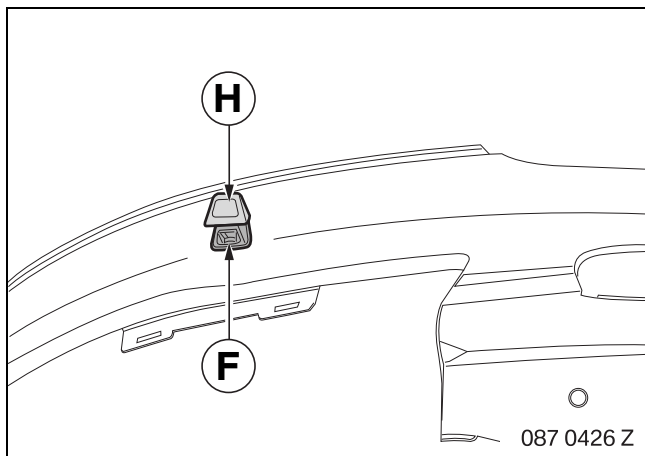
Fit base pad **L** onto washer nozzle **F**.



▶ The illustration shows the left side of the vehicle. Proceed analogously on the right-hand side. Pay attention to the side identification letters on the components. ◀

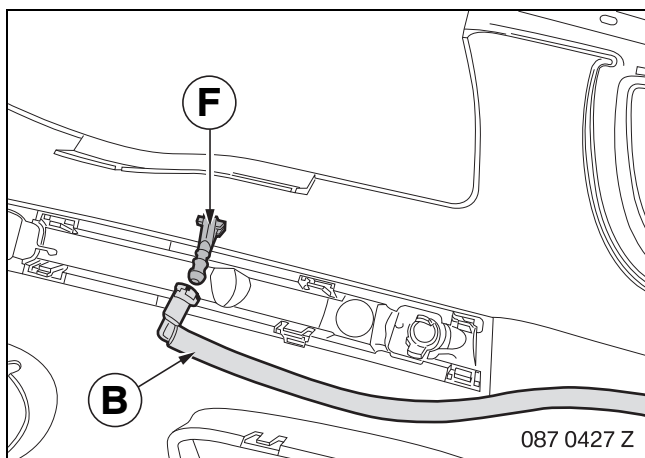
Clip washer nozzle **F** into cut-out (1).

6. Installing and connecting washer nozzles



▶ The illustration shows the left side of the vehicle. Proceed analogously on the right-hand side. Pay attention to the side identification letters on the components. ◀

Fit cover **H** onto washer nozzle **F**.

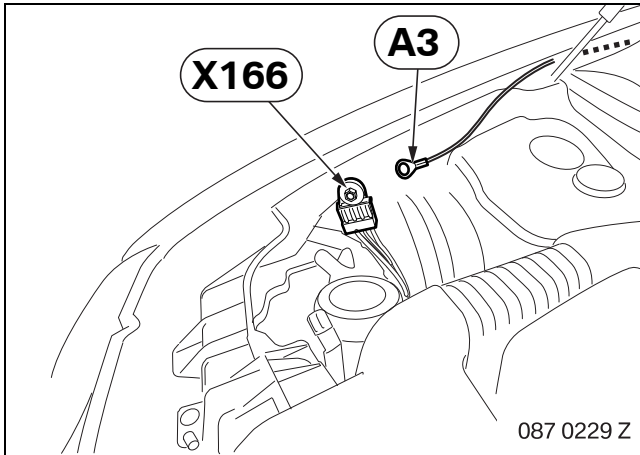


▶ The illustration shows the left side of the vehicle. Proceed analogously on the right-hand side. ◀

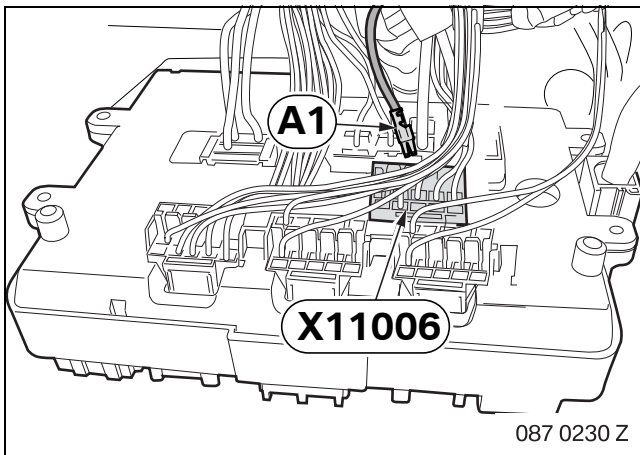
Connect hose line **B** to washer nozzle **F**.

Reinstall bumper panel (1) as per ISTA No. 51 11 156.

7. Connecting retrofit wiring loom



Route branch **A3** BR wire, along vehicle wiring harness and connect to ground strip connector **X166**.



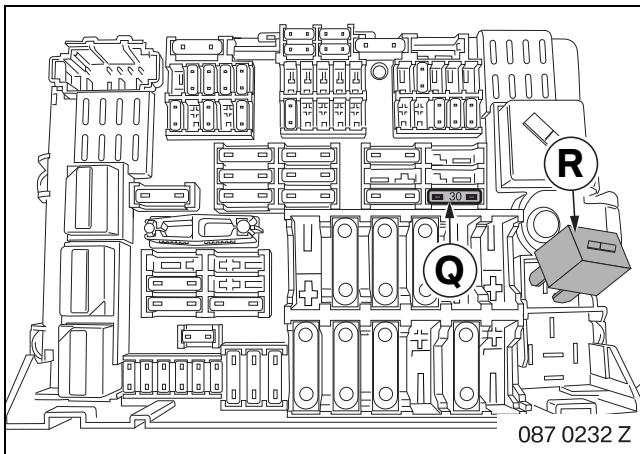
Route branch **A1**, SW/BR wire, into vehicle interior behind the glove compartment.

Only vehicles produced before 03/07

Plug in branch **A1** at PIN 6 of connector **X11006**.

Only vehicles produced after 03/07

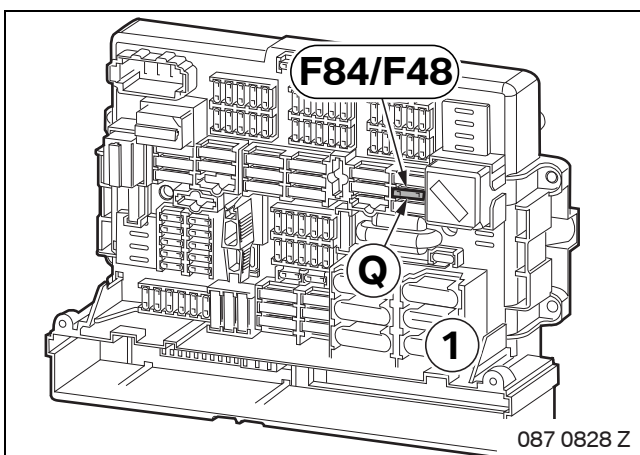
Plug in branch **A1** at PIN 5 of connector **X11006**.



Only vehicles produced before 03/07

Insert fuse **Q** in plug-in location 43.

Plug in relay **R** at plug-in location SRA.



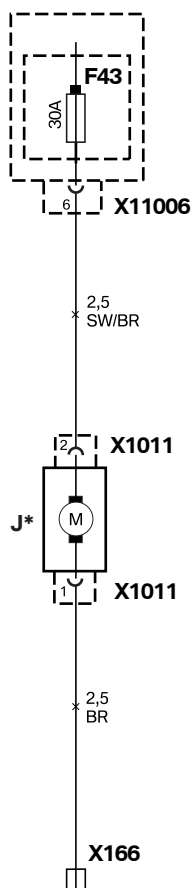
Only vehicles produced after 03/07

On vehicles built from 03/07 to 09/07 plug in fuse **Q** at plug-in location F84 and on vehicles built after 09/07 at plug-in location F48 of fuse holder (1).

8. Concluding work and coding

- Reconnect vehicle battery
- Encode/program retrofit via the path - **Retrofit/CIP** -
- Perform quick test
- Perform function test
- Reassemble vehicle in reverse order of removal

9. Circuit diagram (only vehicles produced before 03/07)



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Legend

F43 Fuse link 30 A
J* Washer pump, headlight washer system

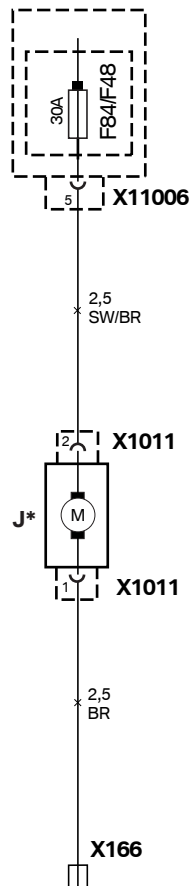
X166 Ground strip connector on right in engine compartment
X1011 SW 2-pin connector
X11006 Black socket housing

All designations marked * only apply to these installation instructions or this circuit diagram

Cable colours

BR Brown
SW Black

10. Circuit diagram (only vehicles produced after 03/07)



087 0829 Z

Legend

F84/F48	Fuse link 30 A
J*	Washer pump, headlight washer system
X166	Ground strip connector on right in engine compartment
X1011	SW 2-pin connector
X11006	Black socket housing

All designations marked * only apply to these installation instructions or this circuit diagram

Cable colours

BR	Brown
SW	Black