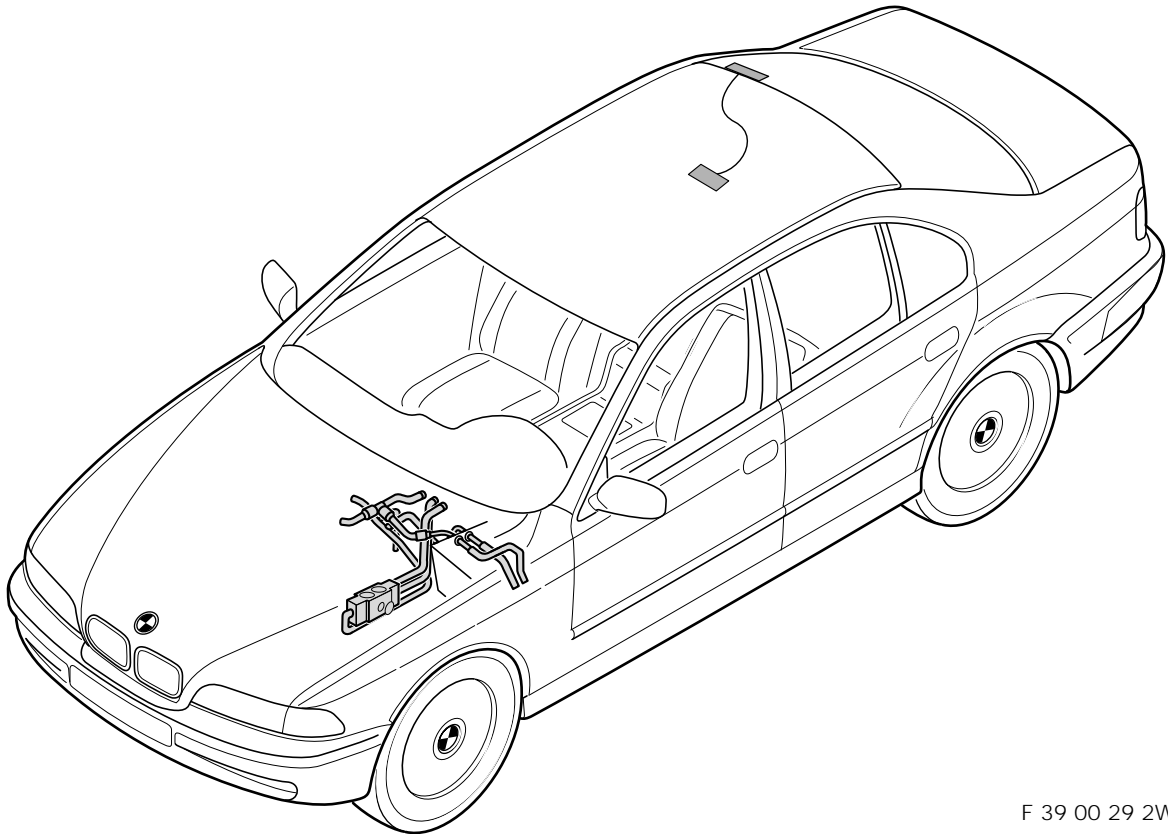




Teile und Zubehör - Einbauanleitung



F 39 00 29 2W

BMW Parts and Accessories - Installation Instruction

Auxiliary heating system

BMW 5 Series (E39) left-hand drive Saloon and touring
with M57 engine (diesel) from production date 03/99

Auxiliary heating system

BMW 5 Series (E 39) left-hand drive Saloon and touring with M57 engine (diesel) from production date 03/99

Specialist knowledge required. For use within the BMW dealer organisation only.
Installation time approx. 3 hours (3.5 hours for touring model), depending on the condition of the car and the equipment in it.

Please read the following notes

Read these installation instructions before installing the auxiliary heating system.

Before disconnecting the battery and after completing the installation work for the auxiliary heating system, conduct a short test.

On cars without a high on-board computer or on-board monitor, the auxiliary heating system can only be operated using the remote control.

After the auxiliary heating system has been installed, the system upgrade must be coded using the DIS or MoDiC via the upgrade path.

All hose lines and cables are to be installed in such a way that they cannot chafe or sag.
Ensure that all parts can move freely.
All hose clips are to be installed in such a way that they cannot touch or chafe on electrical cables.
Some of the work required to install the auxiliary heating system is not described in detail in these installation instructions. In these cases proceed as described in the relevant repair manual.
Deburr drilled holes, remove drill chippings and complete the usual BMW anti-corrosion work.
Cavities into which you drill must be treated with BMW-approved cavity preservative.

Refer to technical instructions and service information.



The auxiliary heating system must not be operated in enclosed areas such as garages or workshops without a fume extraction system (not even with the timer or using the remote control).
The auxiliary heating system must be switched off at filling stations. ◀

General notes on operation

The auxiliary heating system consumes approx. 0.2 litres of fuel every 30 minutes. The exhaust emissions generated by it are well below the statutory exhaust emission limits as a result of its uniform combustion process.

Operating the auxiliary heating system places extra strain on the car's battery. To avoid starting problems and to stabilise the car's electrical system, we recommend that the car is driven frequently during the cold weather when you use the auxiliary heating system so that the battery always has an adequate charge.
Recommendation: 30 minutes of auxiliary heating system operation = 30 minutes of driving.
When the auxiliary heating system is not in use, the

heater is to be run for 10 minutes every four weeks when the engine is cold to prevent starting difficulties when you next need it (see also BMW owner's manual).

Tools and equipment required

MoDiC or DIS
Philips screwdriver
Straight slot screwdriver
1/2 inch torque wrench
1/2 inch reversible ratchet
1/2 inch extension
1/2 inch socket, size 17 mm
1/2 inch Torx socket, T50
1/4 inch reversible ratchet
1/4 inch extension
1/4 inch sockets, sizes 6, 7, 8, 10 and 13 mm
Set of ring spanners
Set of open-ended spanners
Angle drill
Twist drill bits, sizes 3.5 mm and 9.1 mm
Drill
Blind rivet nut pliers
Water-soluble pen
Tester for pressure testing the coolant system
Goggles
Universal knife
Angle cutter
Cable lamp
Hammer
Centre punch
Tape measure

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1. Preparations

Before installing the auxiliary heating system conduct a short test and then disconnect the battery.

The following parts must be removed

- Footwell trim on the A pillar on the driver's side
- Pedals trim
- Side trims for heater/air conditioner
- Heating/air conditioning controller
- Glove box
- Footwell trim on the A pillar on the passenger's side
- Internal sill skirts on the passenger's side at the front and rear
- Rear seat bench and rear seat backrest
- Wheel arch trim at the front left
- C pillar trim on the right
- Double water valve (cars with IHKA only)
- Microfilter casing on the left
- Trim above the brake booster

2. Installation and cabling diagram

F 39 00 28 2W

Legend

1. Auxiliary heater
2. Double water valve with additional water pump*
3. Auxiliary heating system wiring harness
4. Remote control receiver**
5. Fuse holder
6. Adhesive aerial**

* Cars with IHKA only

** Saloon models only, on touring models the remote control receiver is in front of the spare wheel trough, the adhesive aerial is fitted on the right-hand rear side window.

3. Connection diagram for the auxiliary heating system wiring harness

F 39 00 40 2W

Item	Description	Cable colour	Cross-section	Installation location in the car
A	Additional water pump, X122	-----	-----	On the additional water pump M37*
A1	Additional water pump connector	blue/green	0.50 mm ²	On the additional water pump M37, black 2-pin plug, slot No. 1*
A2	Additional water pump connector	brown	0.50 mm ²	On the additional water pump M37, black 2-pin plug, slot No. 2*
B	Auxiliary heater, X764	white/green	0.35 mm ²	On the auxiliary heater A14, X764, black 6-pin plug, slot No. 1
C	IHKA control connector	blue/green	0.50 mm ²	On IHKA control A11, X610, 26-pin blue plug, slot No. 9
D	Remote control receiver, X18830	-----	-----	In the area below the C pillar on the right-hand side on the remote control receiver A128
E	Terminal 30 connector	red/yellow	2.5 mm ²	Fuse holder II at the rear right-hand side of the boot, fuse F47
F	Earth, X498	brown	0.75 mm ²	At the rear right-hand side of the boot below the light unit on ground post X498

* Cars with IHKA only

4. Overview of coolant lines

F 39 0005 2W

1. Coolant hose, auxiliary heating system return
 2. Coolant hose, auxiliary heating system supply
 3. Double non-return valve
 4. Coolant hose, auxiliary heating system return
 5. Coolant hose, auxiliary heating system return
 6. Double pipe 2 with coolant hose, auxiliary heating system supply
 7. Grommets
 8. Coolant hose, auxiliary heating system supply, with bleed valve
 9. Coolant hose, auxiliary heating system return
 10. Coolant hose, auxiliary heating system supply
- A Engine supply connector
B Engine return connector

5. To install the auxiliary heating system wiring harness

F39 00 60 2W

Thread branches **A1**, **A2** and **B** through the rubber grommet (1) to the outside.

F39 00 61 2W

Disconnect plug X764 (1) from the auxiliary heater (2). Lay branch **B** (3), white/green cable, to the auxiliary heater (2).

F 39 00 65 2W

Release plug X764 as follows:

- Step 1 Carefully press the detents to the outside.
- Step 2 Pull out the plug casing.

F 39 00 66 2W

Step 1 Press in the catch mechanism.
Step 2 Push the fastener to the side.
Connect branch **B**, white/green cable, to slot No. 1. Assemble the plug again and connect it to the auxiliary heater.

Cars with IHKA only



On cars with IHKR, branches **A1** and **A2** are not required. Tie back these branches and secure them to the vehicle wiring harness with cable ties. ◀

F 36 64 055 R

Lay branches **A1** and **A2** (1) along the vehicle wiring harness through the wheel arch and the brake cable shaft (2) into the engine compartment to the installation site of the double water valve.

F 46 00 62 2W

Install the double water valve (1).
Connect branch **A1**, red/yellow cable, to plug X122, slot No. 1.
Connect branch **A2**, blue/green cable, to plug X122, slot No. 2.

Connect plug X122 to the additional water pump (2).

F 39 00 63 2W

Lay branch **C**, blue/green cable, to the heating/air conditioning controller (1). Release plug X610 (2), 26-pin blue, and connect branch **C** to slot No. 9.



On cars with IHKR, branch **C** is not required. Tie back this branch and secure it to the vehicle wiring harness with cable ties. ◀

All cars

Lay the auxiliary heating system wiring harness (branches **D** – **F**) over the glove box and along the right-hand side sill skirt to the rear seat bench.

Saloon only

F 39 0010 2W

Remove the passage grommet (1) at the rear right-hand side of the boot. Install the auxiliary heating system wiring harness (3) in the boot using a wire (3).

F 38 0018 2W

Remove the hexagonal nuts (1). Remove the fuse holder (2).

touring only

F 39 0011 2W

Lay the auxiliary heating system wiring harness along the vehicle wiring harness to the fuse holder (2). Remove the hexagonal nuts (1) and remove the fuse holder (2).

All cars

F 39 0012 2W

Cut the red/yellow cable (2) from fuse F47 around 10 cm from the fuse and fit pin and socket contacts to the exposed ends. Install the casing and connect it to branch **E** (1), red/yellow cable, on the auxiliary heating system wiring harness.

F 39 0013 2W

Connect branch **F**, brown cable, to ground post X498 below the right-hand tail light.

6. To install the components for the remote control

Saloon only

F 39 00 26 2W



The minimum gluing temperature is 20°C. Clean the rear screen around the gluing area. Do not kink the aerial cable (2) as you install it. ◀

Affix the aerial (1) as shown. Lay the aerial cable (2) downwards along the C pillar.

F 39 00 25 2W

Secure the receiver (1) to the stud (2) using the plastic nut.



If there is no stud (2), drill a 9.1 mm hole at the position shown, rivet a blind rivet nut, M6, into it and secure the Teleststart receiver (1) using a hexagonal screw, M6 x 16 mm. ◀

Connect branch **D** (4) to the aerial cable (3).

touring only

F 39 00 38 2W



The minimum gluing temperature is 20°C. Clean the side window around the gluing area. ◀

Affix the aerial (1) as shown. Lay the aerial cable (2) downwards along the C pillar.

F 39 64 143 R

Secure the receiver (1) using the plastic nut (2).

F 39 64 145 R

Release the tied back section of branch **D** (1) on the auxiliary heating system wiring harness.

F 39 00 58 2W

Lay branch **D** and the aerial cable along the dotted line (1) to the installation site of the Teleststart receiver.

F 39 64 147 R

Connect the aerial cable (1) branch **H** (2) to the Teleststart receiver (3).

7. To install the coolant lines

F 39 0006 2W

Remove coolant hoses (1, 2 and 3).

F 39 64 089 R

Check whether there is a coarse thread bolt at this position (1). If there is no such bolt, proceed as follows. Lay the safety plate in front of the brake booster. Use a drill with a stop. Mark the position for the hole (1) on the bulkhead, centrepunch it and drill the hole with a 3.5 mm twist bit. Cut out the embossed areas (3) in the bulkhead (2).

F 39 0007 2W

Insert the double pipe 2 (1) with grommets (2) and secure it in the area shown (5) using a plastic nut or, if you had to drill a hole, with a hexagonal self-tapping screw 6.3 x 16 mm. Install the coolant hoses (3 and 4) and secure them with hose clips.

F 39 0008 2W

Connect the coolant hose (1) to the engine supply. Secure the coolant hose (3) to the connector (2), lay it to the water valve (using existing securing points) and connect it to that too. Secure the 90° bend in the double pipe 2 (4) to the connector (2).

F 39 0009 2W

Install the coolant hoses (1, 2 and 3) together with the double non-return valve (4). Please note the directions of the arrows (see also coolant hose overview).

8. To code the controllers

Connect the MoDiC or DIS to the diagnostics plug. Switch on the ignition.

- Select 1 ZCS coding
- Select Series E39
- Select Upgrade
- Select system Auxiliary heating system
- Start automatic coding (confirm by pressing "Y")
- Switch off the ignition, wait 10 seconds and switch it on again.

9. To operate the auxiliary heating system using the on-board computer or on-board monitor

The operating instructions for the auxiliary heating system using the on-board computer or on-board monitor are set out in the owner's handbook supplied with the car.

10. To operate the auxiliary heating system with Teleststart

F 39 00 45 2W



This section is described again separately on the last page. This last page must be issued to the customer. ◀

To program the Teleststart transmitter

- Take fuse F47 out of the fuse holder
- Wait for at least five seconds
- Fit fuse F47 again
- Within five seconds, press the **OFF** button (2) on the Teleststart transmitter for at least one second
- This completes the programming procedure



Up to three transmitters can be programmed to operate with the Teleststart receiver. ◀

To switch on the auxiliary heating system

- Press the **ON** button (1) on the transmitter for at least one second
- The LED (3) will light up briefly during the transmission process.

To switch off the auxiliary heating system

- Press the **OFF** button (2) on the transmitter for at least one second
- The LED (3) will light up briefly during the transmission process.



When the transmission power starts to fall, the batteries (type MN21) in the transmitter are to be replaced. ◀

11. Servicing work for the auxiliary heating system



Refer to the operating instructions. The charge held by the battery is to be checked at regular intervals if you only drive short distances, and the battery is to be recharged if and when necessary. ◀

12. Concluding work

F 39 64 096 R

Affix the duplicate factory sticker (2) on the left-hand Macpherson strut tower (1) as shown. Fill up the cooling system with water and bleed the cooling system as described in the repair manual. Complete a pressure test on the cooling system and check for leaks.



The date of installation must remain legible, in other words only the non-relevant data may be removed. ◀

Mark the installation date. Reinstall all the parts in the car in the reverse order to which you removed them.

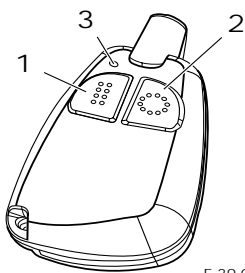
13. Legend / Circuit diagram for E39 M57

F 39 00 64 2W

A11	IHKR/IHKA controller
A14	Auxiliary heating system controller
A128	Remote control receiver
M37	Additional water pump*
X122	Additional water pump*
X498	Ground
X610	IHKR/IHKA controller
X764	Auxiliary heating system controller
X1234	Terminal 30 connector
X18830	Remote control receiver

* Cars with IHKA only

Telestart operating instructions



F 39 00 45 2W

To program the Telestart transmitter

- Take fuse F47 out of the fuse holder
- Wait for at least five seconds
- Fit fuse F47 again
- Within five seconds, press the **OFF** button (2) on the Telestart transmitter for at least one second
- This completes the programming procedure



Up to three transmitters can be programmed to operate with the Telestart receiver. ◀

To switch on the auxiliary heating system

- Press the **ON** button (1) on the transmitter for at least one second
- The LED (3) will light up briefly during the transmission process

To switch off the auxiliary heating system

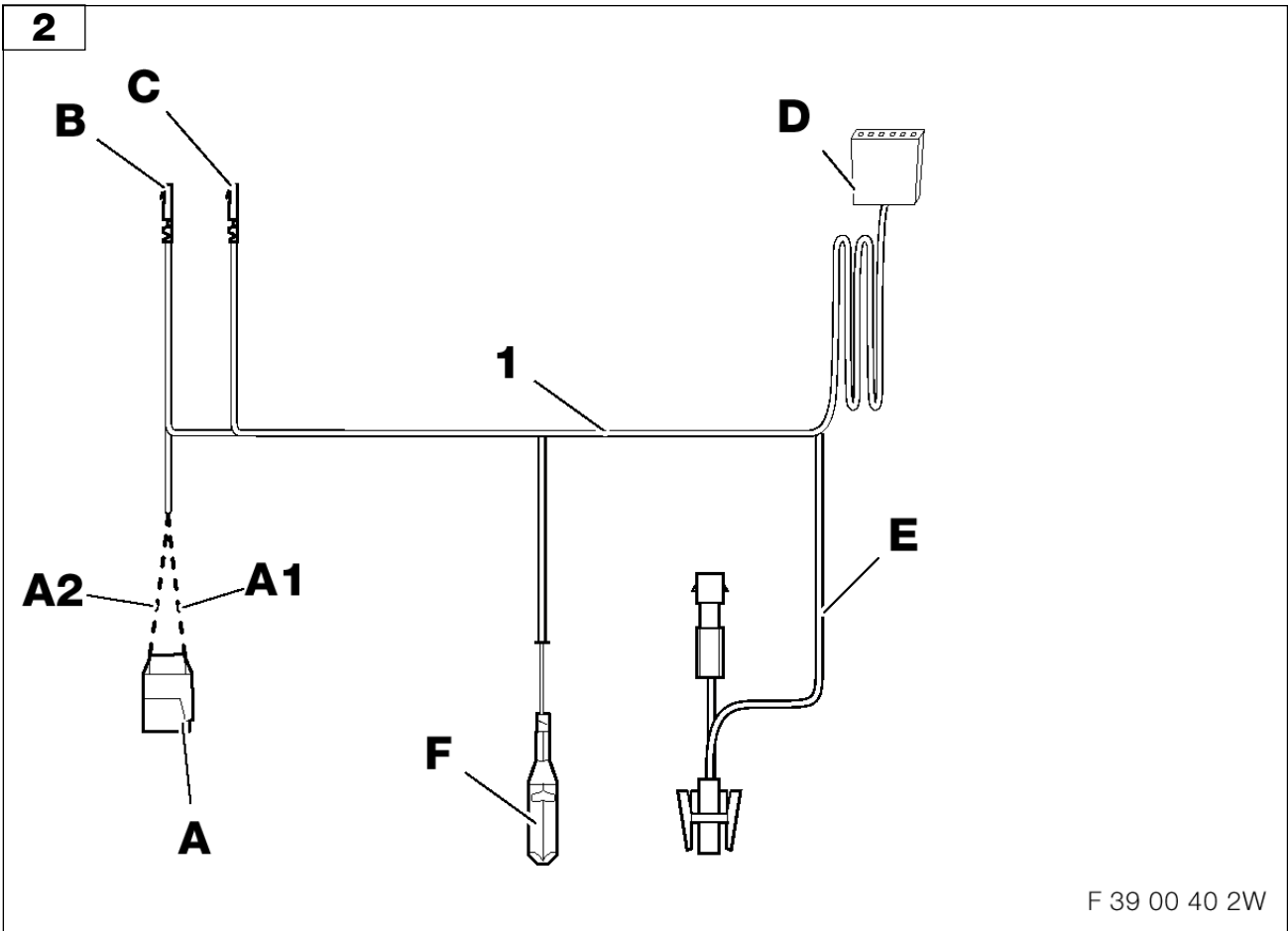
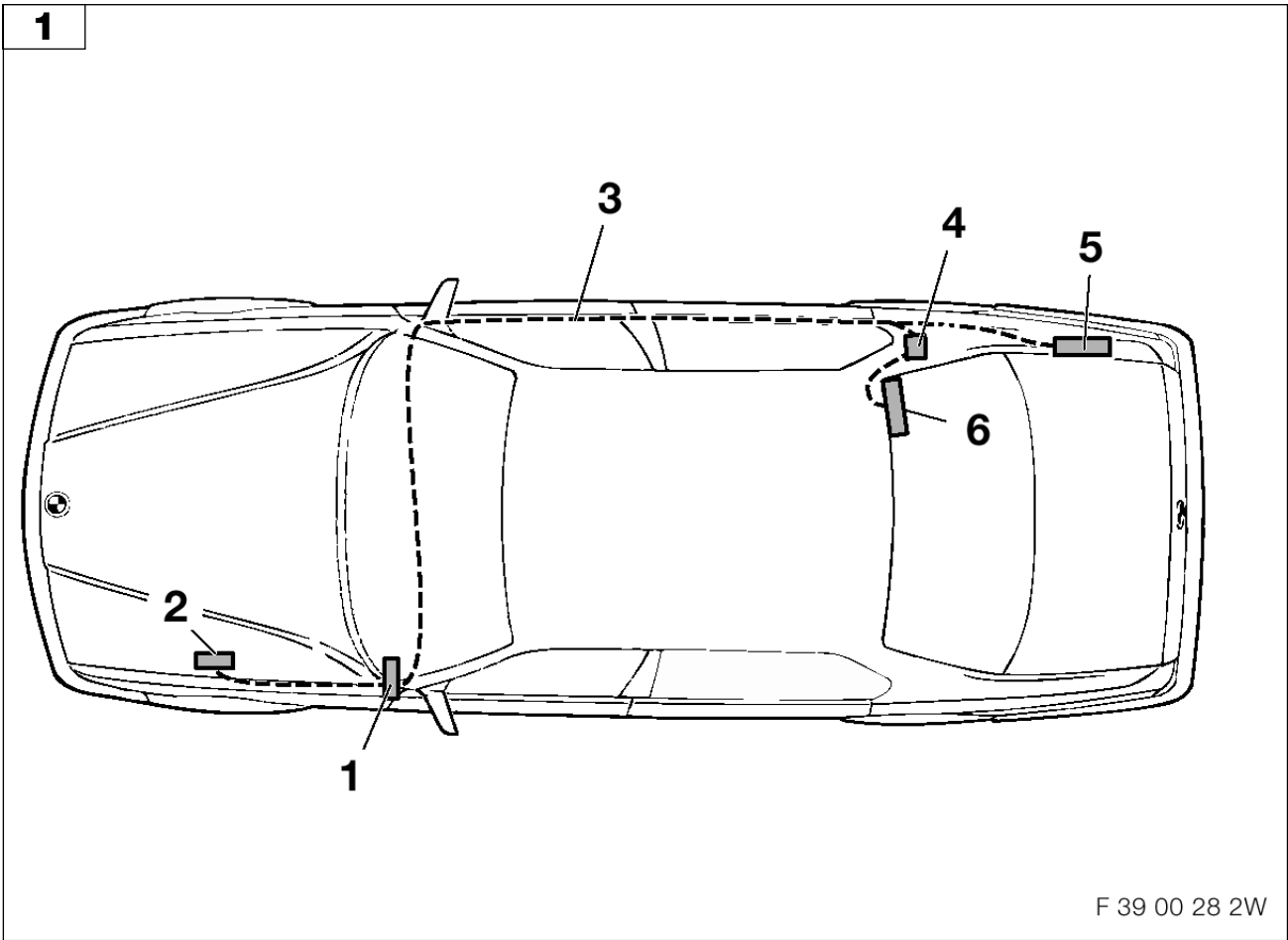
- Press the **OFF** button (2) on the transmitter for at least one second
- The LED (3) will light up briefly during the transmission process.



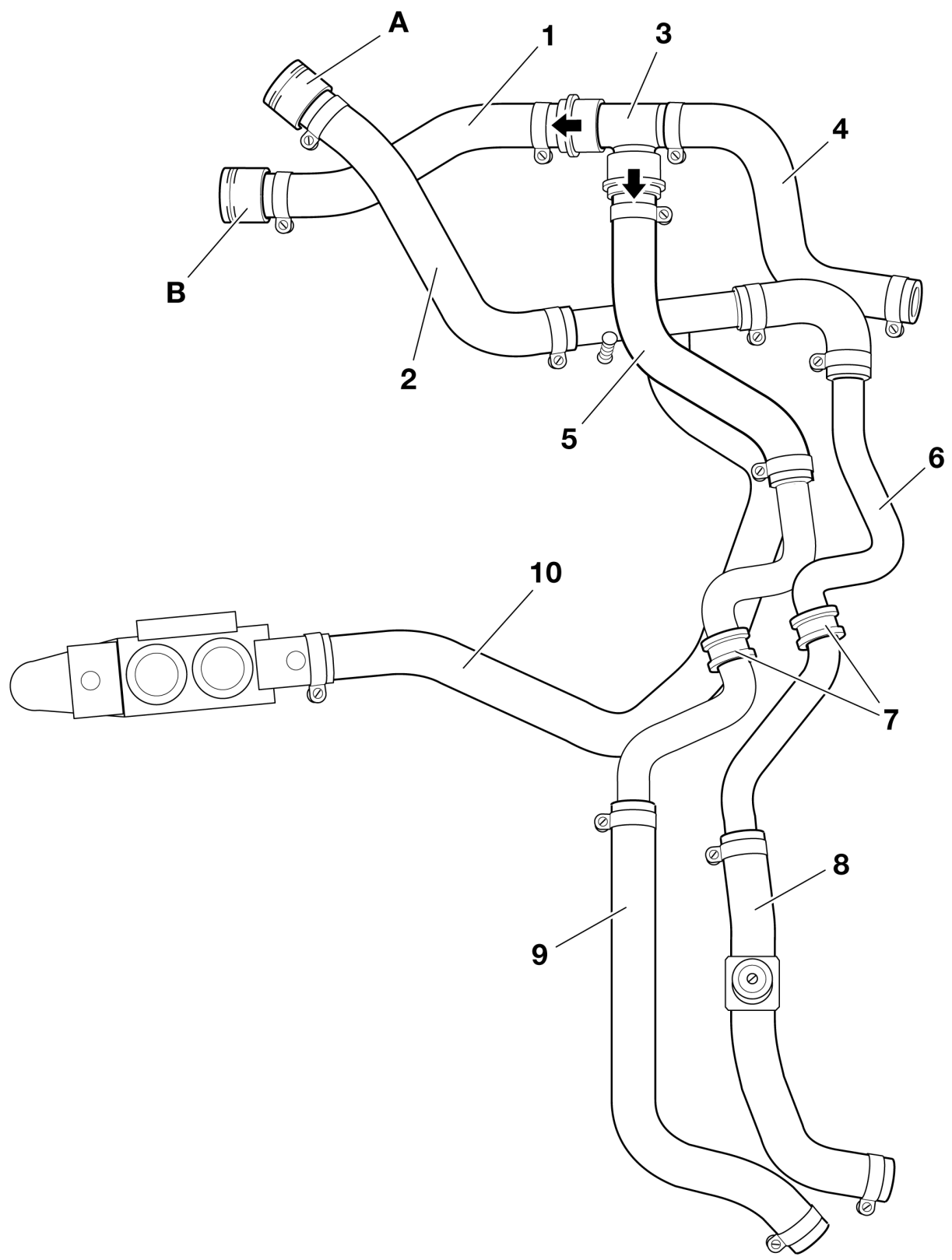
When the transmission power starts to fall, the batteries (type MN21) in the transmitter are to be replaced.

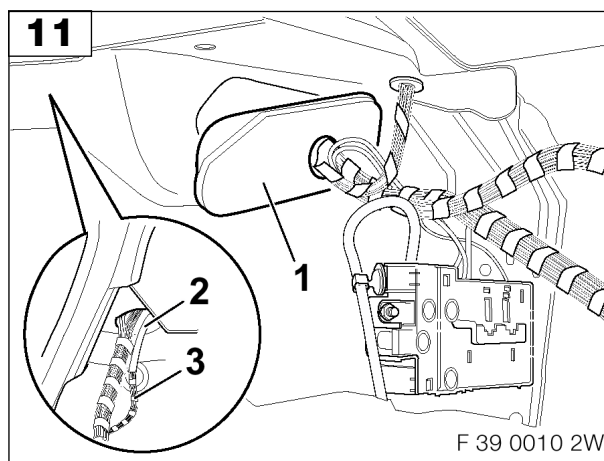
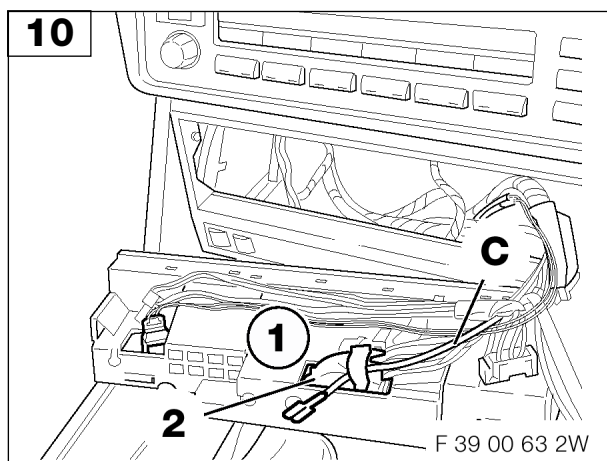
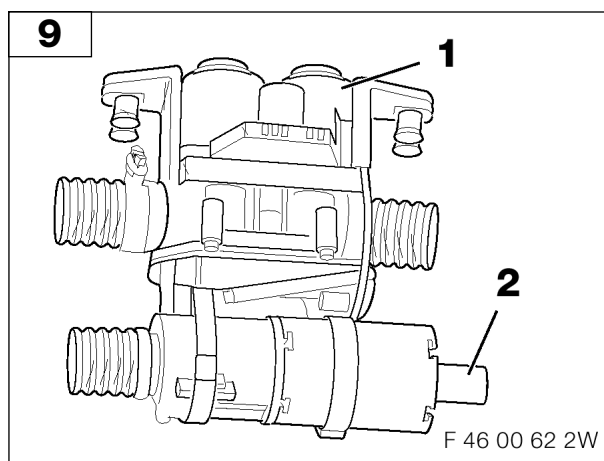
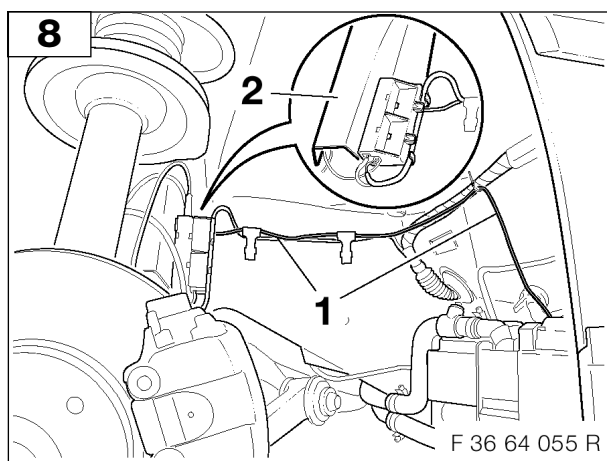
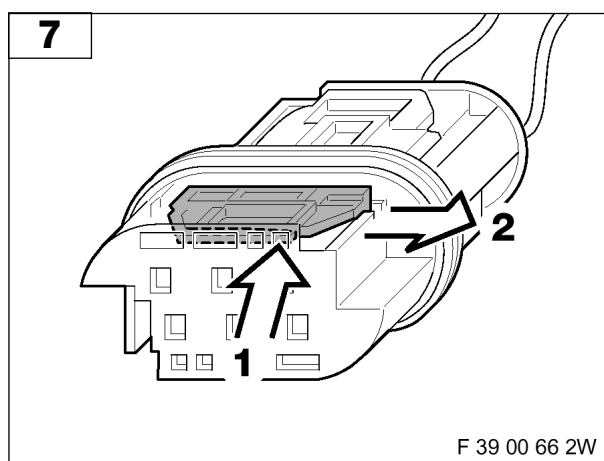
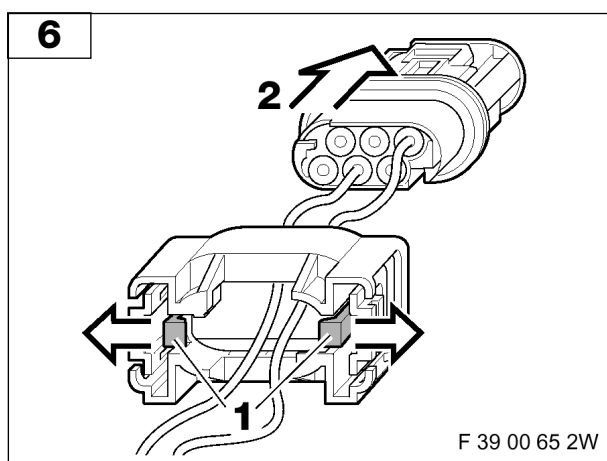
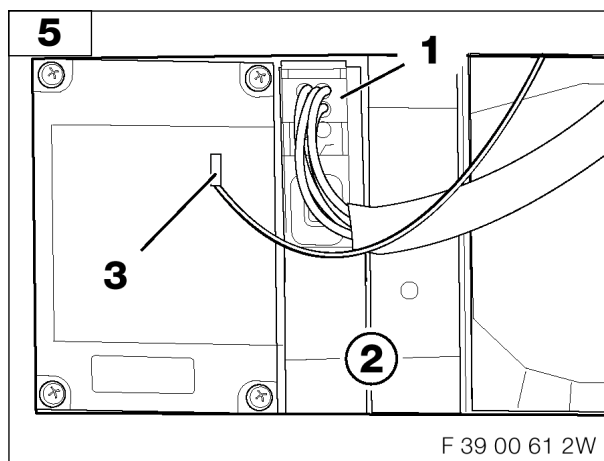
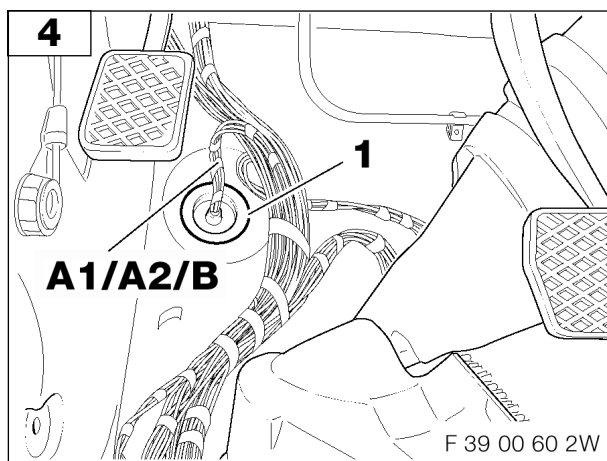
The operating instructions for the auxiliary heating system using the on-board computer or on-board monitor are set out in the owner's handbook supplied with the car. ◀

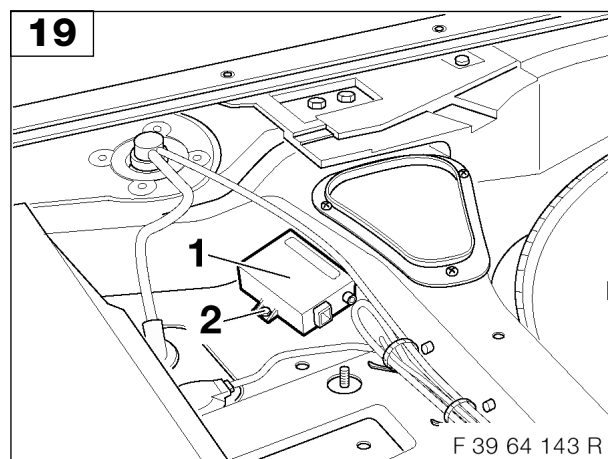
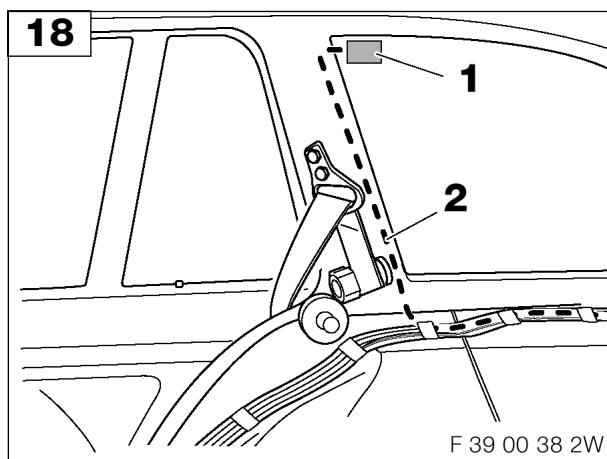
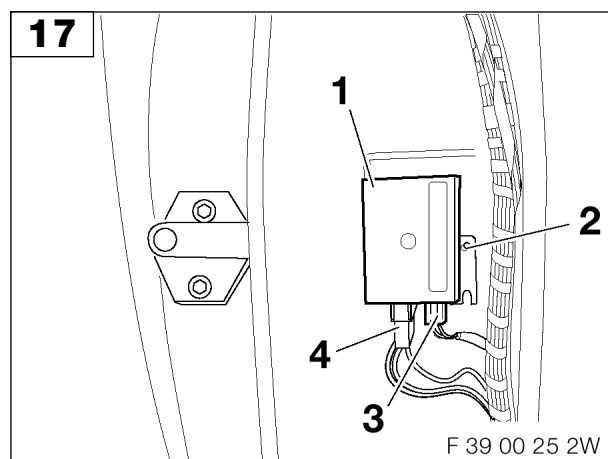
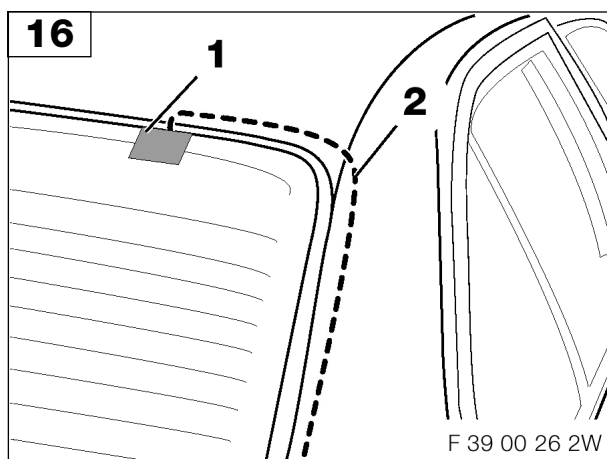
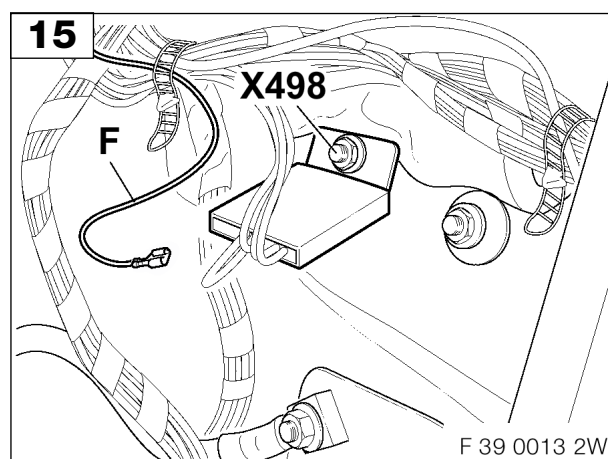
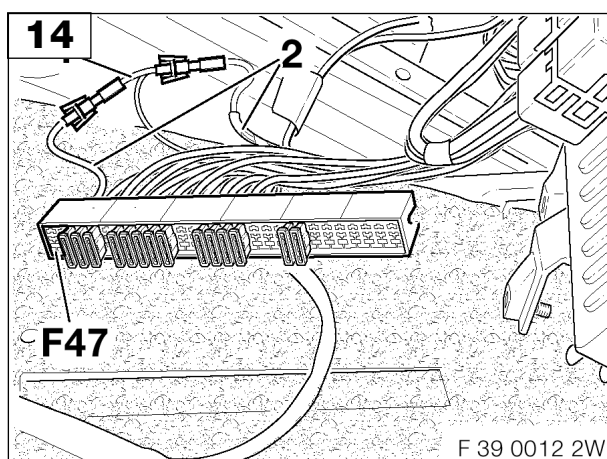
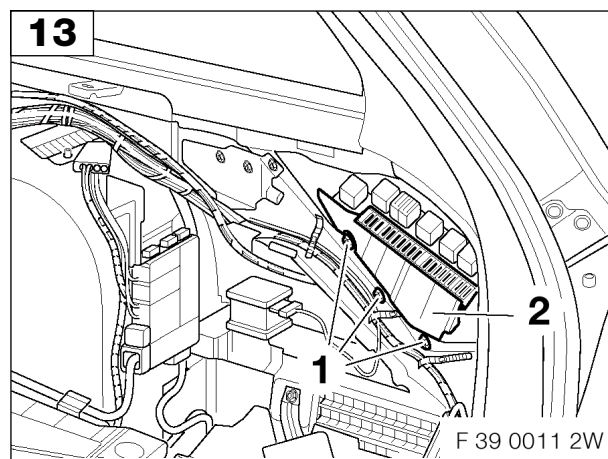
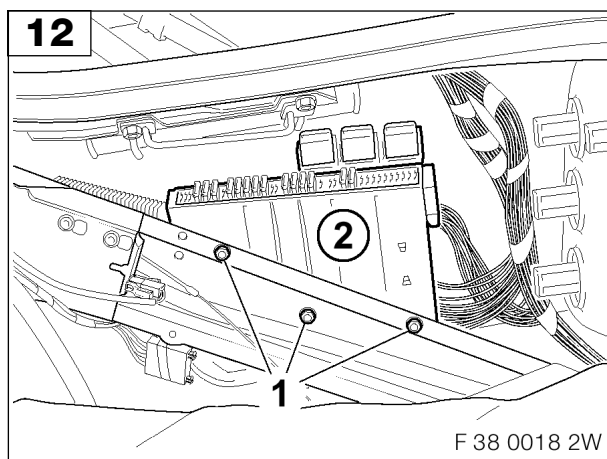


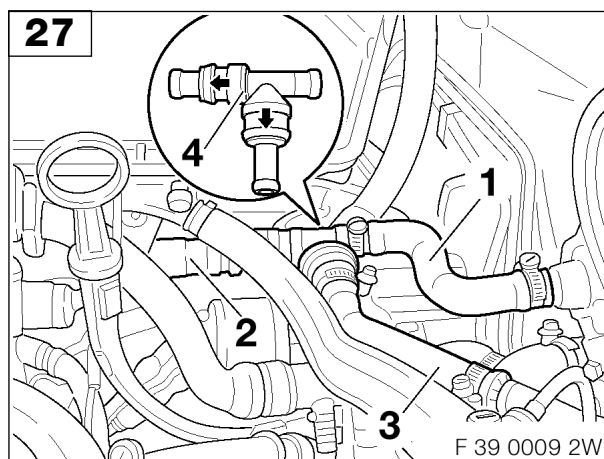
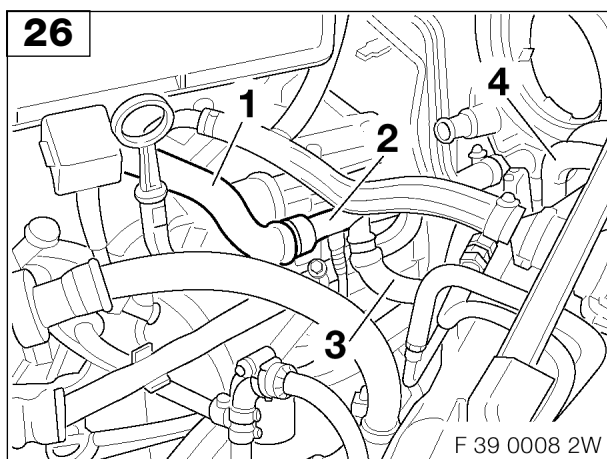
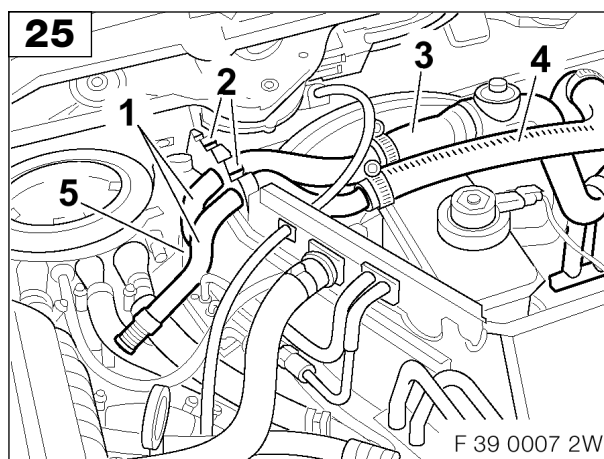
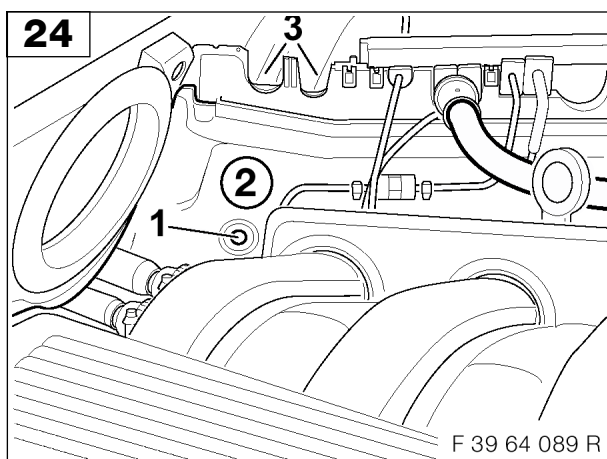
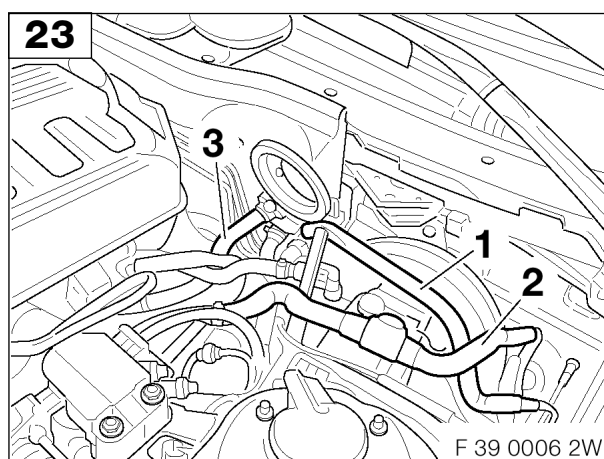
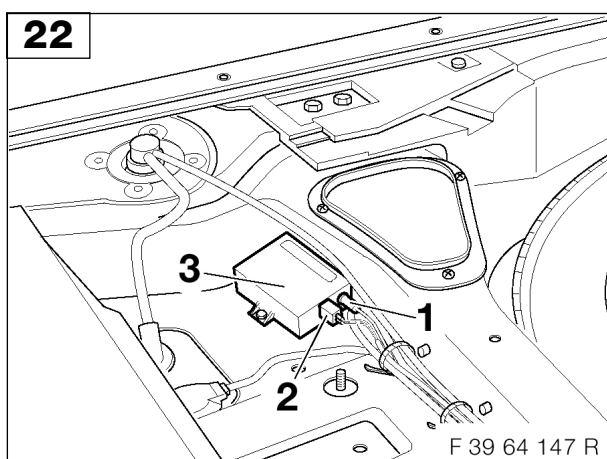
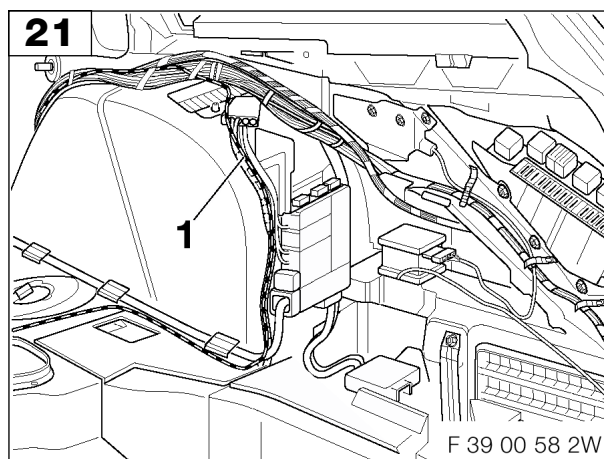
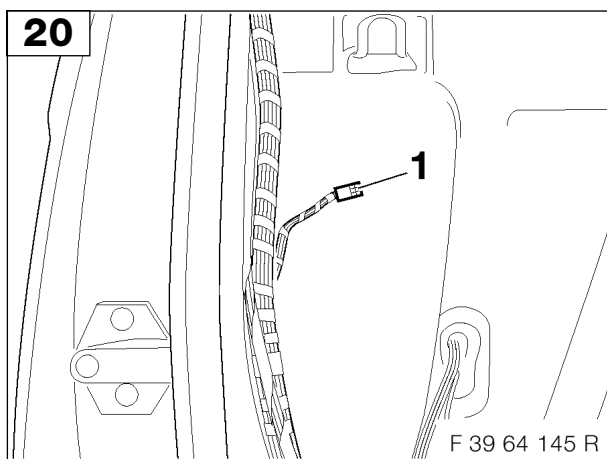


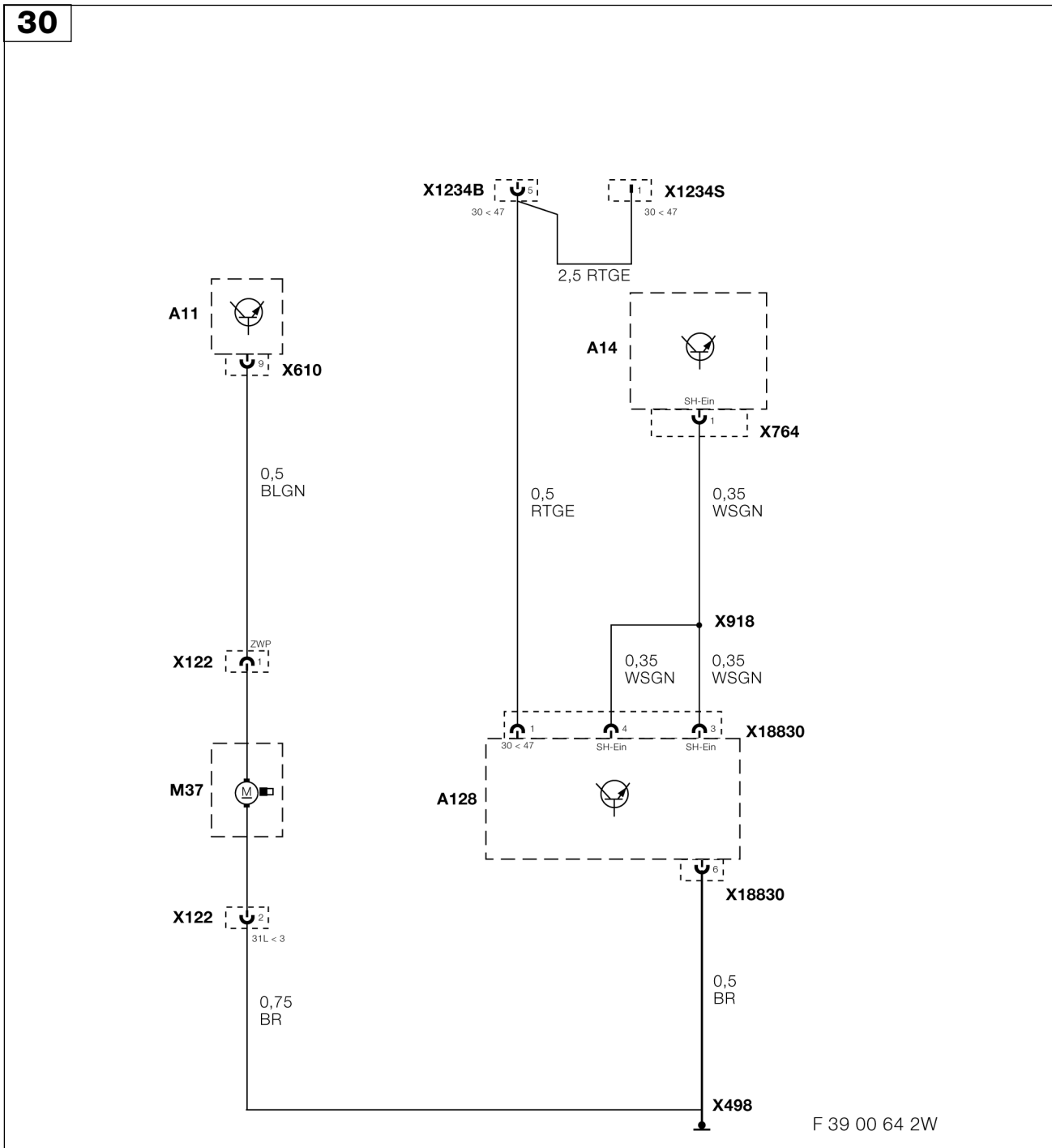
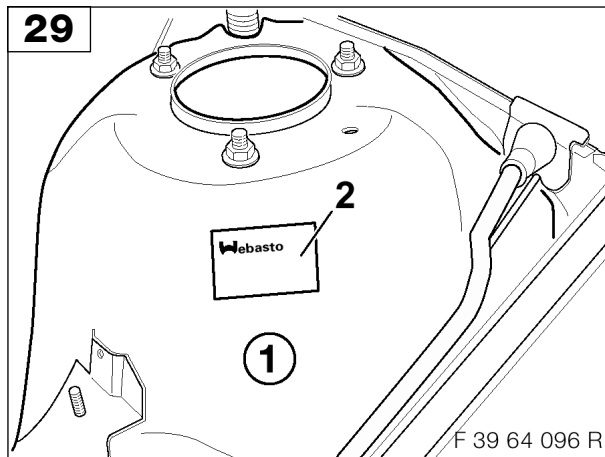
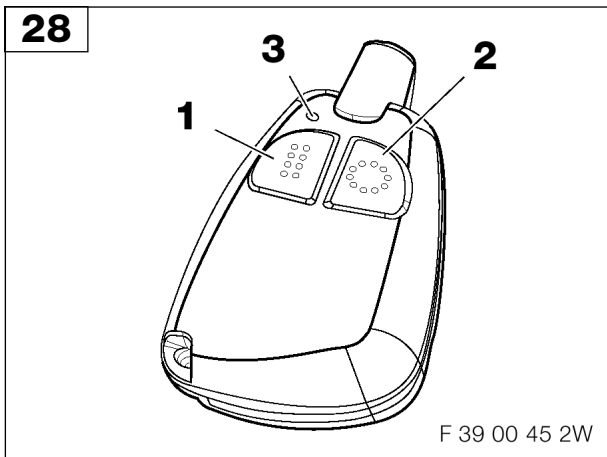
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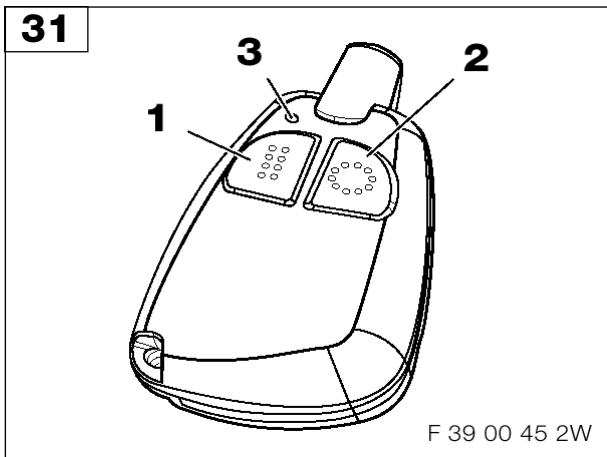




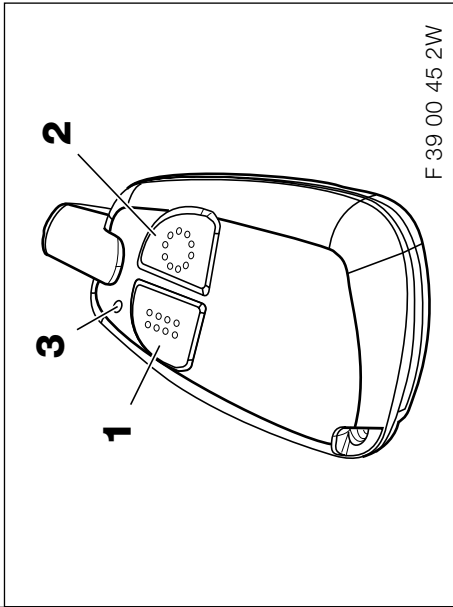








To operating the auxiliary heating system with remote control T70 (blue control keys)



To program the hand-held transmitter

- Pull fuse F47 out of the fuse holder
- Wait for at least 5 seconds
- Insert fuse F47 again
- Press the OFF key (2) on the hand-held transmitter for at least 1 second within 5 seconds.

This completes the programming procedure.



Up to three hand-held transmitters can be programmed to operate with one receiver. ◀

To switch on the auxiliary heating system

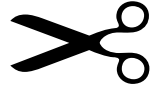
- Press the ON key (1) on the hand-held transmitter for at least 1 second.
- The LED (3) lights up briefly during the transmission process and then flashes during the switch on procedure.

To switch off the auxiliary heating system

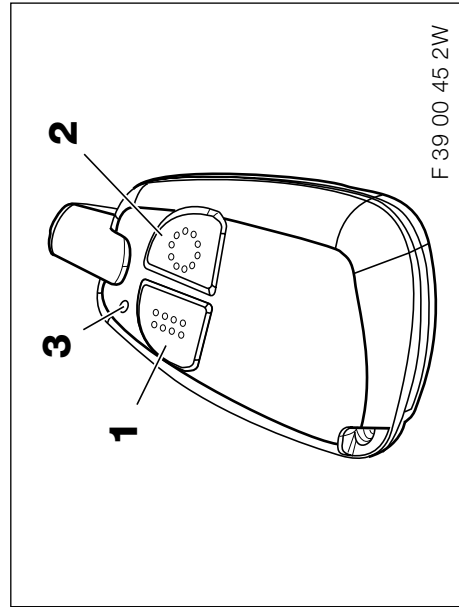
- Press the OFF key (2) on the hand-held transmitter for at least 1 second.
- The LED (3) will light up briefly during the transmission procedure.



If the range becomes less, change the batteries (type MN21) in the hand-held transmitter. ◀



To operating the auxiliary heating system with remote control T80 (wine red control keys)



To program the hand-held transmitter

- Pull fuse F47 out of the fuse holder
- Wait for at least 5 seconds
- Insert fuse F47 again
- Press the OFF key (2) on the hand-held transmitter for at least 1 second within 5 seconds.

This completes the programming procedure.



Up to three hand-held transmitters can be programmed to operate with one receiver. ◀

Response after transmission

- LED (3) flashes for 2 seconds after transmission
- LED (3) flashes for 2 seconds after transmission

Meaning

- Signal not received, change position and retransmit
- Signal received

To switch on the auxiliary heating system

- Press the ON key (1) on the hand-held transmitter for at least 1 second.
- The LED (3) lights up briefly during the transmission process and then flashes during the switch on procedure.

To switch off the auxiliary heating system

- Press the OFF key (2) on the hand-held transmitter for at least 1 second.
- The LED (3) will light up briefly during the transmission procedure.



If the range becomes less, change the batteries (type MN21) in the hand-held transmitter. ◀

