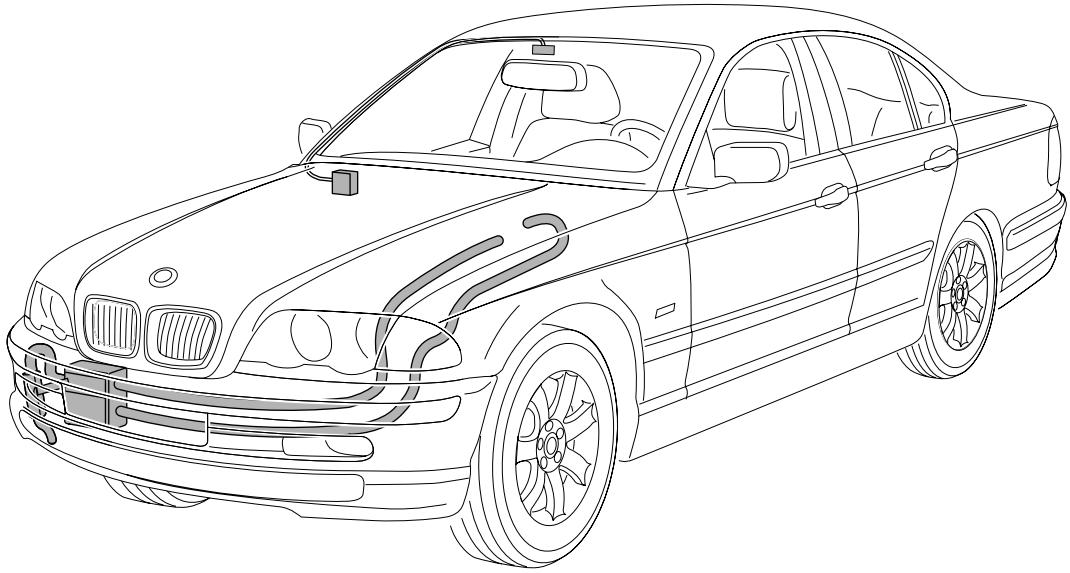
BMW Parts and Accessories
Installation Instructions
(Obligatory technical installation specifications)



F 46 0177 M

Parking Heater System, "Inline" type
BMW 3 Series (E46), left-hand drive Saloon and Touring models
Models with M47 and M57 engine

Technical skills required
(For use within the BMW dealership organization only).
Installation time: approx. 7 hours
Installation time may vary depending on vehicle condition and equipment configuration.

Retrofit / installation kit No. 82 30 0 008 789
64 50 0 021 245

Thermo Top Z/C Auxiliary Heating System
Test symbol: ~~~ S 289

Binding installation instructions for BMW cars with the following model code numbers:

	Official engine no.	Manual/automatic transmission
E46/4 saloon		**LL**
320d M47	20 4 D1	AL71
330d M57	30 6 D1	AL91
E46/3 tourer		**LL**
320d M47	20 4 D1	AX71
330d M57	30 6 D1	AP91

With the following engines:
M47 D20 92/95,4/100 kW
M57 D30 120/135 kW

With the following EC approvals:
EG: e1 * 97/27 * 0097 * .. 346L
EG: e1 * 98/14 * 0097 * .. 346L

⚠ Compliance with applicable type approval / registration requirements is mandatory!◂

For testing/inspection of the heater under sections 19, 20 and 21 of the German Motor Vehicle Registration Code, the following key regulations must be observed (section 22(a) of the German Motor Vehicle Registration Code):

▷ These provisions are binding wherever the German Motor Vehicle Registration Code is applicable and should likewise be observed in all countries where no specific regulations exist.◂

Installation of the heater must be performed in accordance with the Installation Instructions/Installation Specifications. For the purposes of
a) vehicle type testing under section 20 of the German Motor Vehicle Registration Code
b) testing of individual vehicles under section 21 of the German Motor Vehicle Registration Code
c) expert assessment under section 19 of the German Motor Vehicle Registration Code
the heating system must be inspected by an officially accredited motor vehicles expert/examiner, an certified automotive expert, or an employee of any of the foregoing per section 7.4(a) of Appendix VIII to the German Motor Vehicle Registration Code. In the case of c), the inspection shall be documented in the Approval Certificate section of the General Type Approval document, stating the following:
- vehicle manufacturer
- vehicle type
- vehicle identification number

The Type Approval document is valid only when these data are duly entered. Approval certificates must be carried aboard the vehicle at all times.

▷ The forms for approval under section 19 of the German Motor Vehicle Registration Ordinance can be found on the BMW Installation Instructions CD under order No. 01 20 0 026 043.

Contents

1. Important pre-installation notes

Target group
The present installation instructions are intended for use by skilled personnel trained to work on BMW passenger cars.

Task profile
Execution of all maintenance, repair, installation and adjustment work on passenger cars on installer's own responsibility.
All work is to be performed on the basis of valid BMW
- repair instructions
- circuit diagrams
- maintenance manuals
- job instructions
- diagnostic instructions

in a rational sequence using the prescribed tooling (special tools) and taking into account applicable health and safety regulations.

Drilling instructions

 Deburr all drilled holes and apply prescribed BMW anti-corrosion methods to hole areas. Remove all metal chips and shavings thoroughly.◂

Safety notes
Please read the following before starting installation work.

 Where the indicated terminals are already used, provide appropriate jumpers, double-crimped connections or parallel terminals. All steps are illustrated with reference to a vehicle with left-hand steering◂

 Install all hose lines and cables in such a way that kinking, chafing or crushing is effectively prevented.◂

Legal notes

 Installers are required by law to mark the commissioning year of the heater on its factory nameplate by permanently removing the non-applicable year numbers.
Fuel lines must be installed in compliance with sections 45 and 46 of the German Motor Vehicle Registration Code. In essence, these provisions stipulate the following:
Fuel lines shall be routed and installed in such a way that their service life is not adversely affected by vehicle distortions, engine movement, and the like.
They must be protected against mechanical damage. Fuel-carrying components have to be protected against performance-impairing heat loads. Their arrangement and layout must be selected such as to ensure that dripping or evaporating fuel can neither collect nor become ignited by hot surfaces or electrical devices.◂

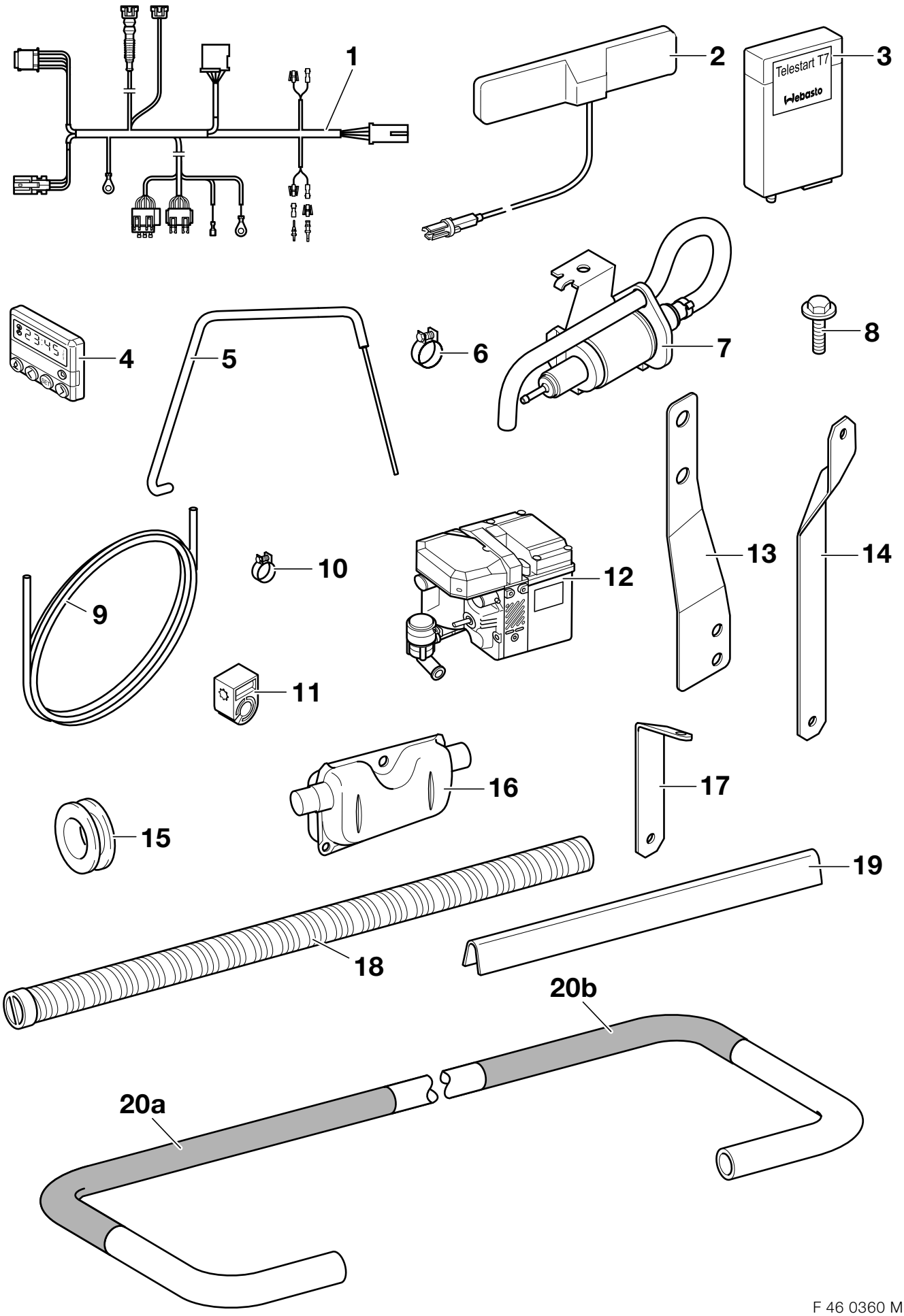
 Any unauthorized installation will void the general type approval of the heater and hence, invalidate the vehicle's general operating permit. The same applies to repairs carried out inexpertly or with non-authentic replacement parts.◂

2. Preparatory work

	TIS AW-Nr.
Carry out brief test	
Disconnect battery	12 00 ...
Remove RH side fuel tank cover	16 12 000 [1)]
Remove radio	65 11 030
Unclip heater and/or air conditioner operating unit	64 11 749
Remove RH side A pillar trim (only for installation with T70 remote control system)	51 43 201
Remove glove compartment	51 16 360
Remove RH side footwell trim	51 45 030 [1)]
Remove front impact absorber (bumper)	51 11 000
Remove RH and LH side headlight units	63 12 001
Remove RH side sun visor (only for installation with T70 remote control system)	51 16 080 [1)]
Remove entire front RH side wheel housing liner	

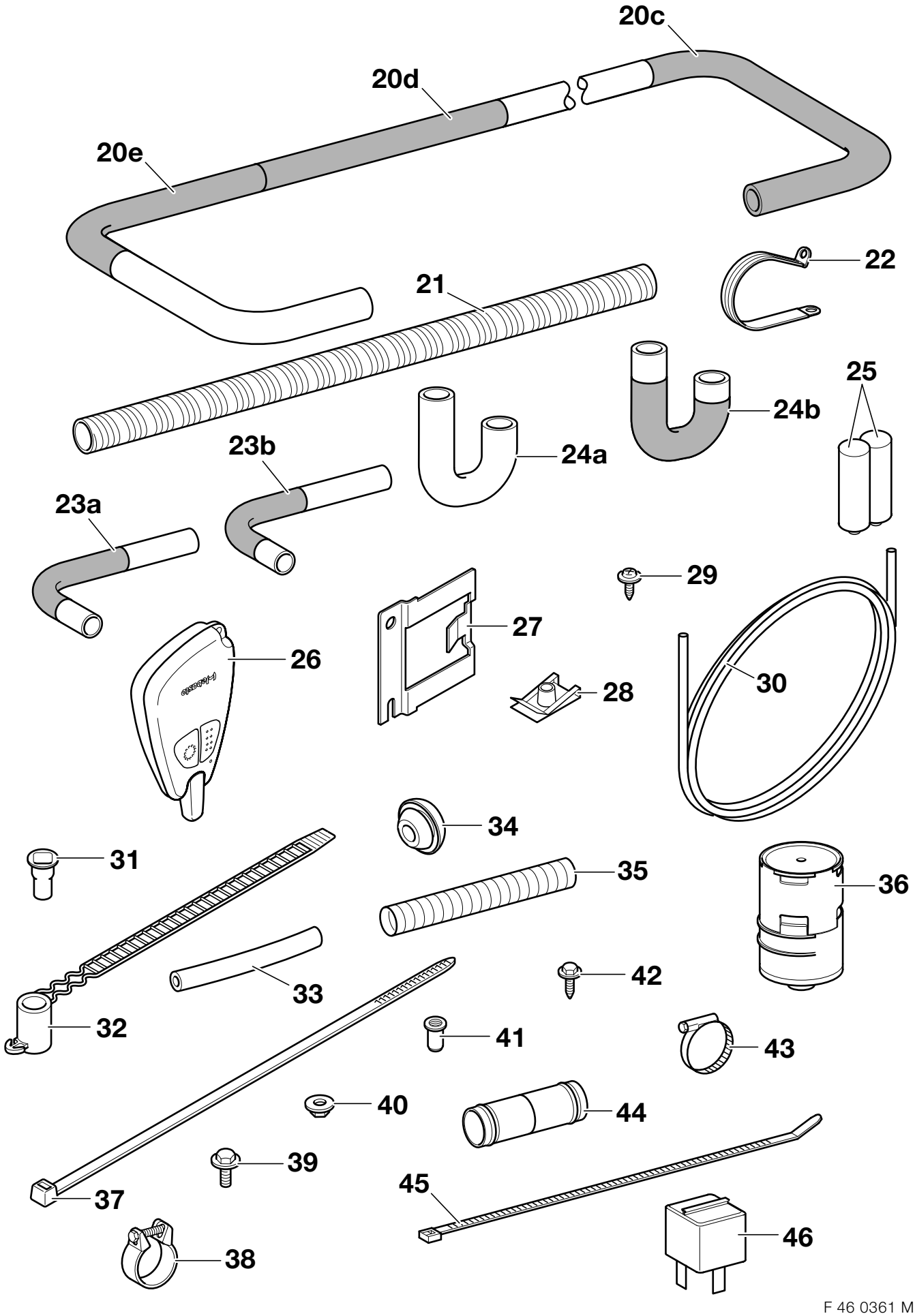
[1)] Work under this TIS item will involve only the steps required for the present disassembly purpose.

3. Installation kit



F 46 0360 M

3. Installation kit



F 46 0361 M

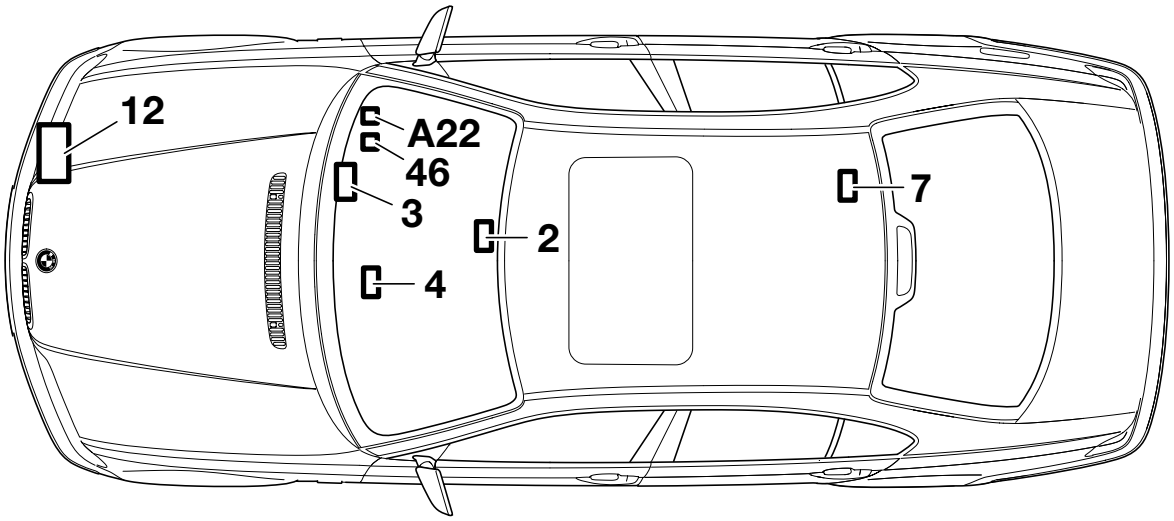
3. Installation kit

Item	Designation	Qty.
1	Parking heater wiring harness	1
2	Remote control aerial	1
3	Remote control receiver	1
4	Timer (optional - to be ordered separately)	1
5	Fuel intake assembly	1
6	Hose clip, 12 mm, for fuel intake assembly	1
7	Metering pump	1
8	Hexagon head screw with washer M6 x 18	3
9	Fuel line	1
10	Hose clip, 10 mm, for fuel line	5
11	Fuel line holder	4
12	Parking heater unit	1
13	Mounting bracket for parking heater unit	1
14	Mounting bracket for parking heater unit	1
15	Grommet for flexible exhaust tube	1
16	Silencer	1
17	Silencer mounting bracket	1
18	Flexible exhaust tube	1
19	Piping	3
20	Heater hose (20a - 20e)	2
21	Chafing guard	4
22	Pipe clip, rubberized	2
23	Heating hose (90-deg. bend) (23a and 23b)	3
24	Heating hose (180-deg. bend) (24a and 24b)	2
25	Battery for remote control transmitter (type MN12)	2
26	Remote control transmitter	1
27	Remote control receiver bracket	1

3. Installation kit

Item	Designation	Qty.
28	Speed nut 4.2	2
29	Fillister head self-tapping screw with washer ST4.2 x 16	2
30	Fuel hose, acting as chafing guard, 6x11	1
31	Rivet nut with square, M6	1
32	Cable support for fuel line	1
33	Fuel line connector	1
34	Rubber grommet for fuel line	1
35	Combustion air tube	1
36	Intake noise damper	1
37	Cable tie 7.6 x 400 mm	2
38	Pipe clips for flexible exhaust tube	3
39	Hexagon head screw with washer M6x12	2
40	Hexagon nut M6 with washer	3
41	Rivet nut M6	1
42	Parking heater mounting screws, self-tapping type	4
43	Hose clips 16 - 29 mm for heating hoses	20
44	Hose connector	7
45	Cable tie	30
46	Blower control relay	1
47	Duplicate factory nameplate (not shown)	1
48	Warranty card (not shown)	1
49	Installation instructions (not shown)	1
50	Sticker with fuse and relay installation instructions (not shown)	1
51	Supplementary owner's manual (not shown)	1
52	Form (not shown)	1
53	General type approval (not shown) (currently in preparation, to be supplied later)	1

4. Component installation sites

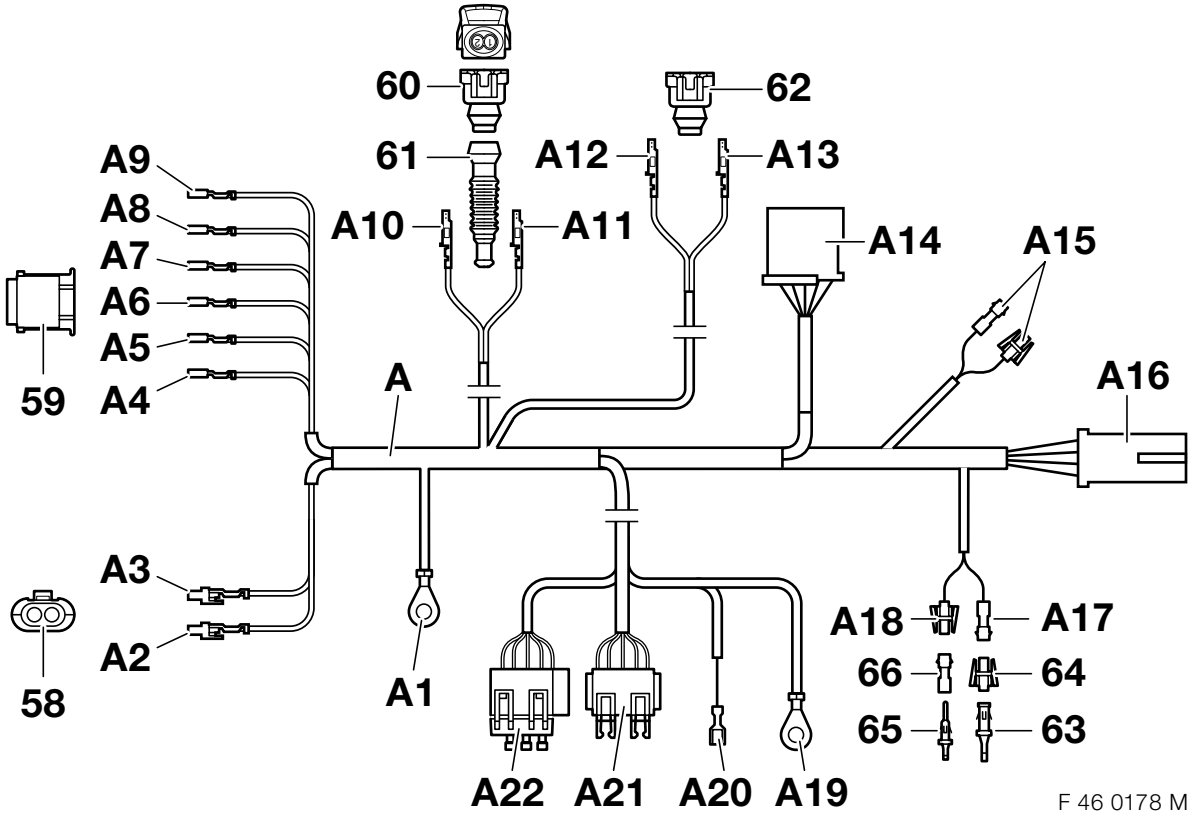


F 46 0387 M

Key

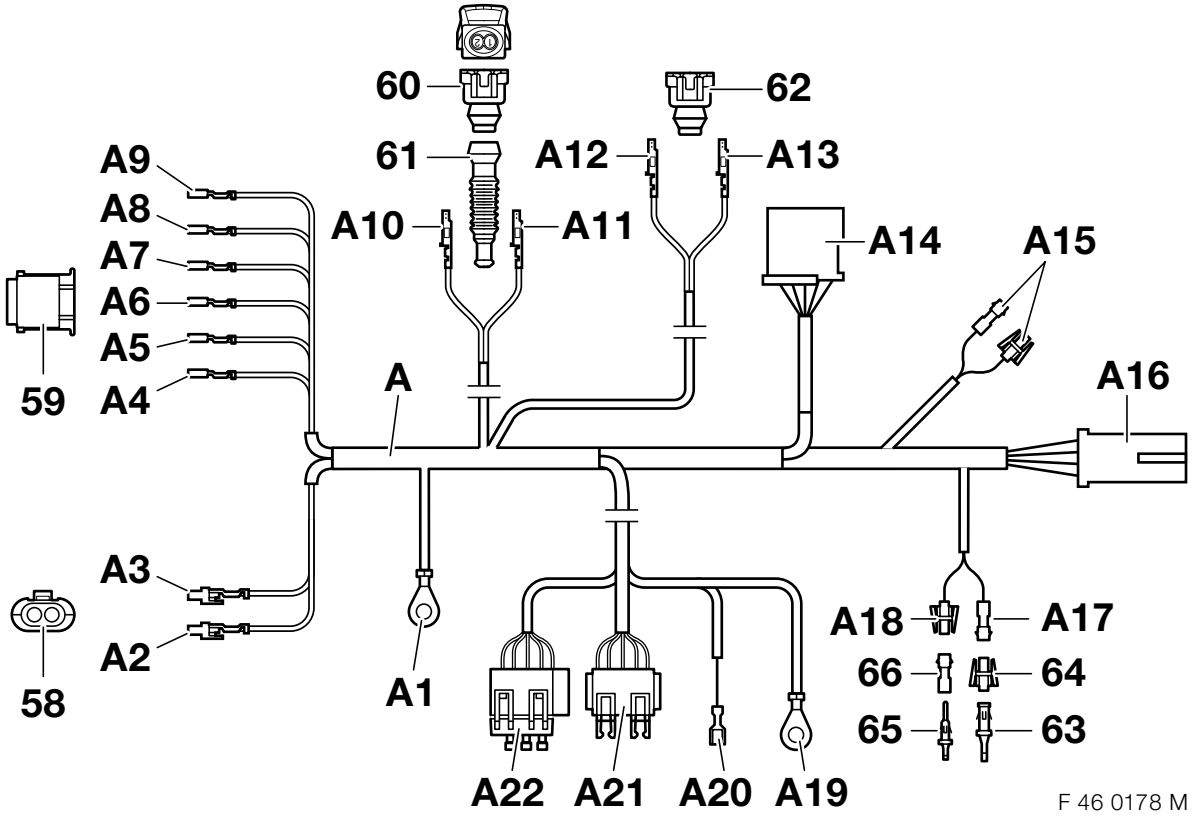
2 Remote control aerial (optional)
3 Remote control receiver (optional)
4 Timer (optional)
5 Metering pump
12 Parking heater unit
46 Blower control relay
A22 Fuse holder

5. Schedule of connecting points



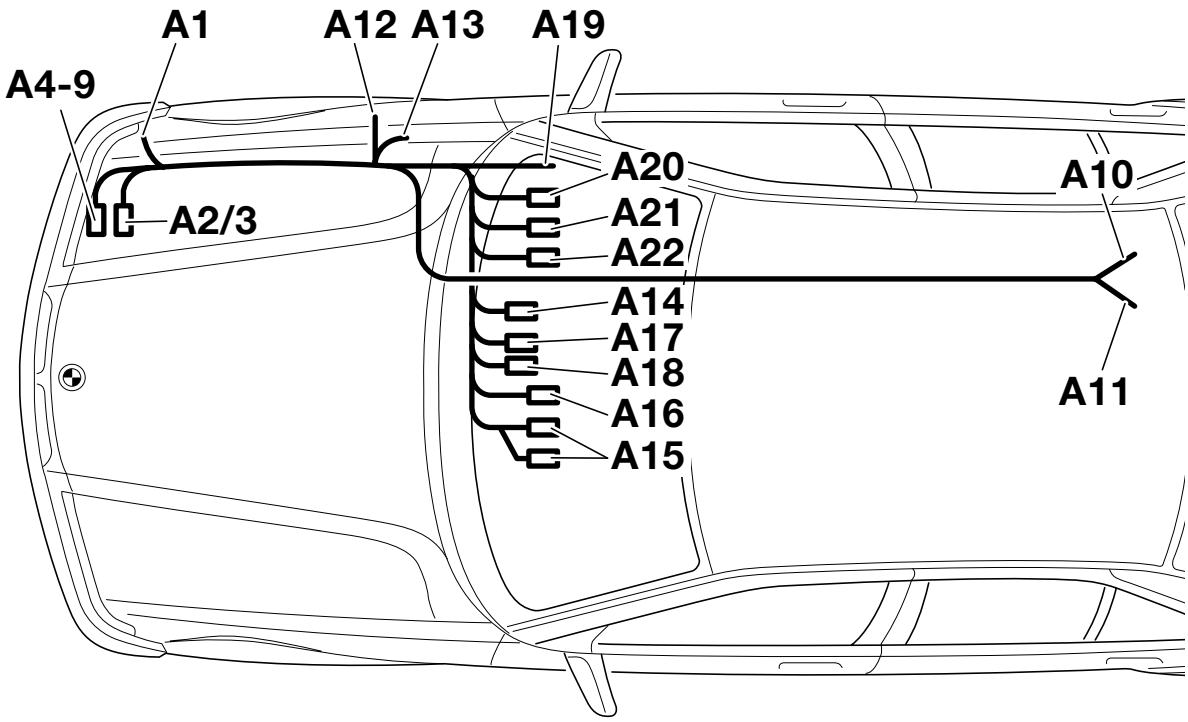
Item	Designation	Signal	Cable colour / cross section	Connecting location on vehicle
A	Parking heater wiring harness	–	–	
58	2-pole female connector	–	–	Parking heater male connector (branches **A2** & **A3**)
59	6-pole female connector	–	–	Parking heater male connector (branches **A4** - **A9**)
60	2-pole female connector	–	–	Metering pump male connector (branches **A10** and **A11**)
61	Grommet	–	–	For metering pump male connector (60)
62	2-pole female connector	–	–	Not used, tie back on wiring harness (branches **A12** and **A13**)
63	Female contact	–	–	For female connector (64)
64	1-pole female connector	–	–	Mating male connector for **A17**
65	Male contact	–	–	For male connector (66)
66	1-pole male connector	–	–	Mating male connector for **A18**
A1	Lug 6 mm, X166	Terminal 31	brown / 6.0 mm^2	Ground distribution post X166 behind headlight unit on RH side
A2	Female contact, X642/1	Terminal 30	red / 2.5 mm^2	Female connector 57, X642, pin 1
A3	Female contact, X642/2	Terminal 31	brown / 2.5 mm^2	Female connector 58, X642, pin 2
A4	Female contact, X764/1	–	black / 0.5 mm^2	Female connector 59, X764, pin 1
A5	Female contact, X764/2	–	yellow / 0.5 mm^2	Female connector 59, X764, pin 2
A6	Female contact, X764/3	–	green-yellow / 0.5 mm^2	Female connector 59, X764, pin 3
A7	Female contact, X764/4	–	green-white / 0.5 mm^2	Female connector 59, X764, pin 4
A8	Female contact, X764/5	–	violet / 0.5 mm^2	Female connector 59, X764, pin 5
A9	Female contact, X764/6	–	blue / 0.75 mm^2	Female connector 59, X764, pin 6
A10	Female contact, X997/1	–	blue / 0.75 mm^2	Female connector 60, X997, pin 1

5. Schedule of connecting points



Item	Designation	Signal	Cable colour / cross section	Connecting location on vehicle
A11	Female contact, X997/2	Terminal 31	brown / 0.75 mm²	Female connector 60, X997, pin 2
A12	Female contact, X6235/1	–	green-yellow / 0.5 mm²	Female connector 62, X6235, pin 1
A13	Female contact, X6235/2	Terminal 61	blue / 0.35 mm²	Female connector 62, X6235, pin 2
A14	6-pole female connector, X18830	–	–	Receiver in RH side footwell
A15	Link made with 1-pole made and female connector	Terminal 61	blue / 0.35 mm²	Not used, to be tied back to wiring harness.
A16	4-pole female connector, X10130	–	–	Timer (optional)
A17	1-pole male connector, X681	Blower control	green-red / 1.0 mm²	Connect to outgoing green/yellow cable coming from fuse F28.
A18	1-pole female connector, X18209	Blower control	green-yellow / 1.0 mm²	Connect to outgoing green/yellow cable coming from heater and/or air conditioner operating unit **A11**, connector X608, pin 2
A19	Lug, X13020	Terminal 30	red / 4.0 mm²	Connect to terminal 30 distribution post (X13020) near fuse holder.
A20	1-pole female connector, X2021	Diagnostic	yellow / 0.5 mm²	Tied back at relay base **A21**.
A21	Relay base, X6263	–	–	Insert into spare slot in control module holder behind glove compartment.
A22	Fuse holder, X2798	–	–	Insert into spare slot in control module holder behind glove compartment.

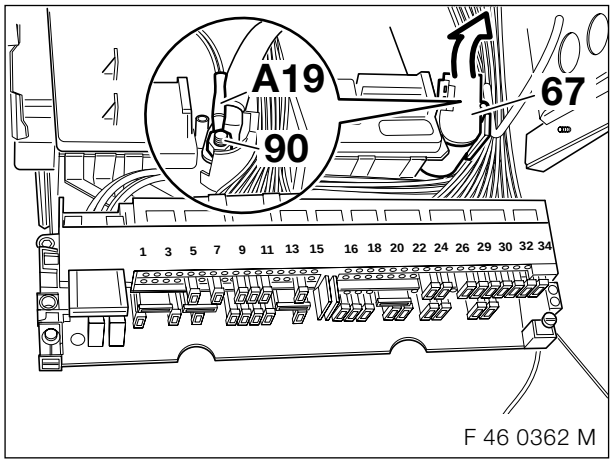
6. Fitting / connecting the parking heater wiring harness



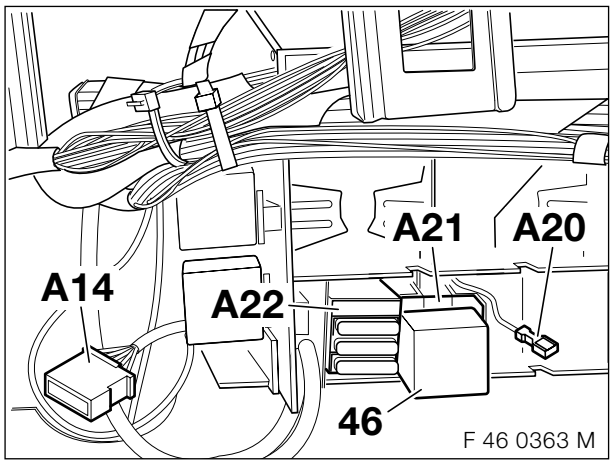
F 46 0368 M

Insert branch **A21** and **A22** in free slot on control module holder behind the glove compartment.
Tie back branch **A20**, yellow cable, at the relay base **A21**.
Connect branch **A19**, red cable, to the terminal 30 distribution post X13020 near the fuse holder behind the glove compartment.
Run branches **A17**, green/red cable, and branch **A18**, green/yellow cable, to the heater / air conditioner operating unit.
Run branch **A16** to the timer mounting location next to the radio.
Leave branch **A15**, blue cable, tied back on the wiring harness.
Run branch **A14** to the receiver mounting location in the RH side footwell.
Run branches **A1** through **A13** into the engine compartment.
Insert branch **A12**, green/yellow, cable and branch **A13**, blue cable, into the 2-pole female connector and tie both cables back to the wiring harness (will not be used).
Run branch **A10**, blue cable, and branch **A11**, brown cable, to the metering pump installation site before the fuel tank on RH side, following the parking heater fuel supply line.
Run branch **A1**, brown cable, to the ground distribution post X166 behind the RH side headlight unit and connect it there.
Run branches **A2** through **A9** to the installation site of the parking heater unit under the RH side headlight unit.

6. Fitting / connecting the parking heater wiring harness

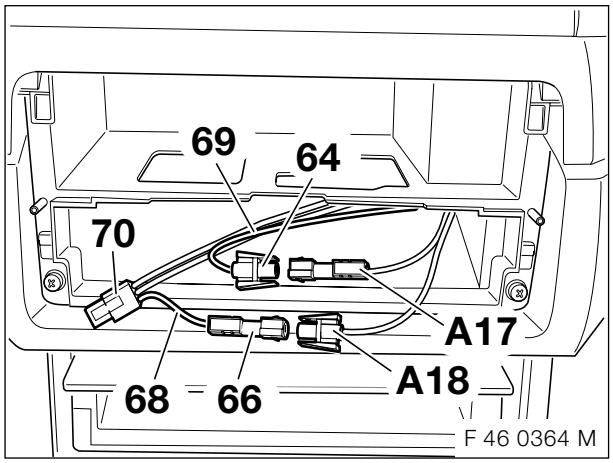


Fold down the fuse holder, take the cover (67) off the terminal 30 distribution post X13020 (90), and connect branch **A19** (red cable) to the terminal 30 post X13020.
Run branches **A1** to **A13** into the engine compartment, passing them through the grommet.



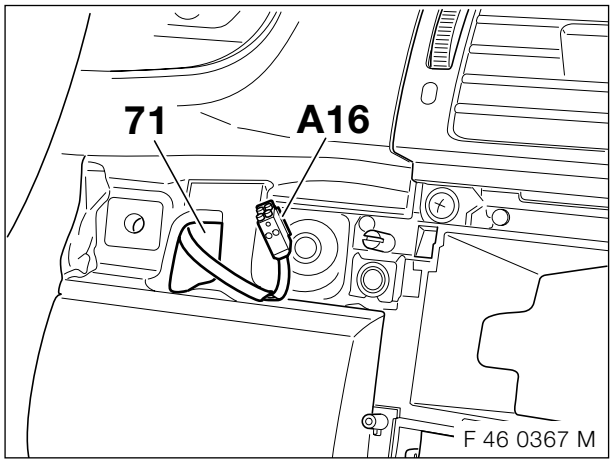
If all the slots in the control module holder are occupied, branches **A21** and **A22** must be tied back with cable ties.
Branch **A20** (diagnostics) is tied back on branch **A21**.
Branch 15 is tied back on the wiring harness.◂

Connect the relay (46) to branch **A21** and insert branches **A21** and **A22** into the terminals of a free slot in the control module holder behind the glove compartment.
Route branches **A15** - **A18** to the installation site of the heating and/or air conditioner control unit.
Route branch **A14** to the installation site of the remote control receiver in the right footwell next to the center console.



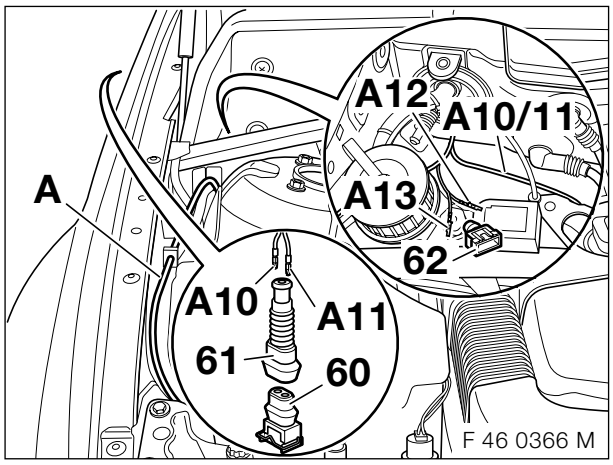
Cut the green/yellow cable from connector X608 (70), pin 2.
Fit the green/yellow cable end (69) coming from fuse holder A47, fuse F28, with a female contact and connector housing (64) and connect it to branch **A17**, green/red cable.
Fit the green/yellow cable end (68) coming from connector X608 (70), pin 2, with a male contact and connector housing (66) and connect it to branch **A18**, green/yellow cable.

6. Fitting / connecting the parking heater wiring harness

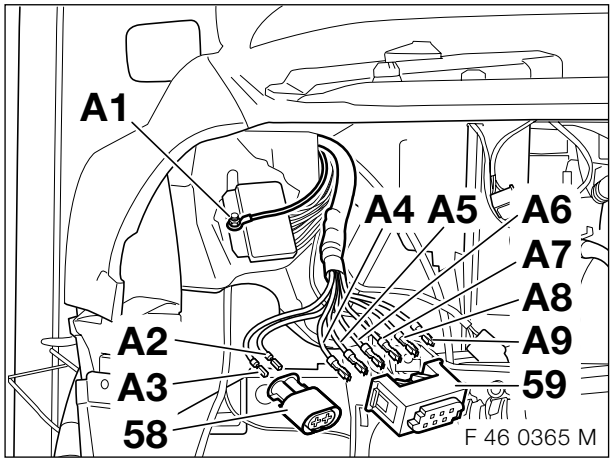


▷If you are not going to fit a timer, tie back branch **A16** on the wiring harness.◁

Pass branch **A16** through the cut-out (71) to the timer installation site.

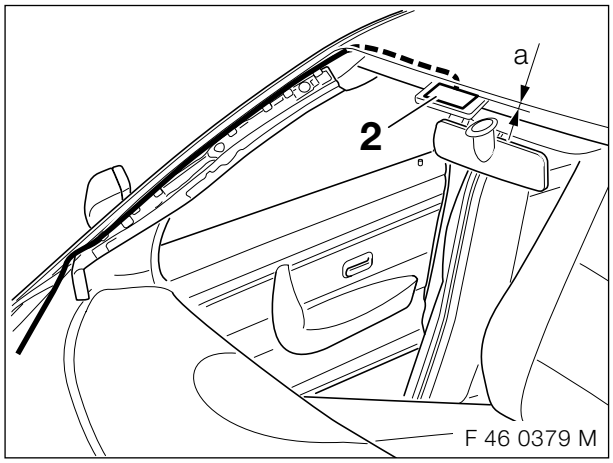


Run branches **A10** and **A11** (blue and brown cables) to the metering pump installation site on the RH side of the fuel tank. These cables must later be secured to the parking heater fuel line with cable ties.
Pass branches **A10** and **A11** through the grommet (61) and insert them into the female connector housing (60) as follows:
Branch **A10**, blue cable, to pin 1.
Branch **A11**, brown cable, to pin 2.
Insert branches **A12** and **A13** into the female connector housing (62) as follows.
Branch **A12**, green/yellow cable, to pin 1.
Branch **A13**, blue cable, to pin 2.
Tie back branches **A12** and **A13** on the wiring harness; these will not be used.



Run branches **A1** through **A9** to the installation site of the parking heater below the right headlight unit.
Connect branch **A1**, brown cable, to the vehicle ground distribution post X166 behind the right headlight unit.
Insert branches **A2** and **A3** into the female connector (58) as follows:
Branch **A2**, red cable, to pin 1.
Branch **A3**, brown cable, to pin 2.
Insert branches **A4** through **A9** into the female connector (59) as follows:
Branch **A4**, black cable, to pin 1.
Branch **A5**, yellow cable, to pin 2.
Branch **A6**, green/yellow cable, to pin 3.
Branch **A7**, green/white cable, to pin 4.
Branch **A8**, violet cable, to pin 5.
Branch **A9**, blue cable, to pin 6.

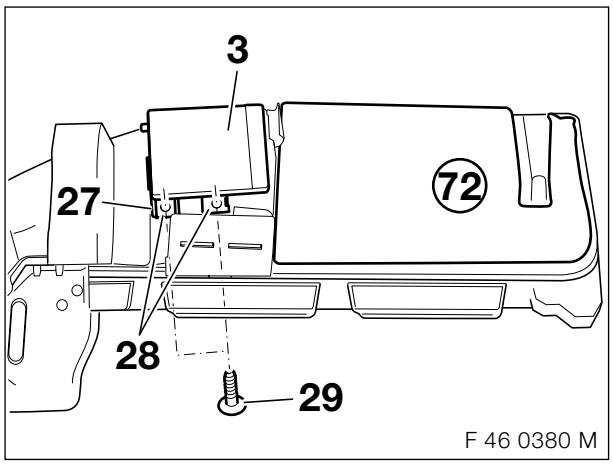
7. Fitting / connecting the remote control receiver (optional)



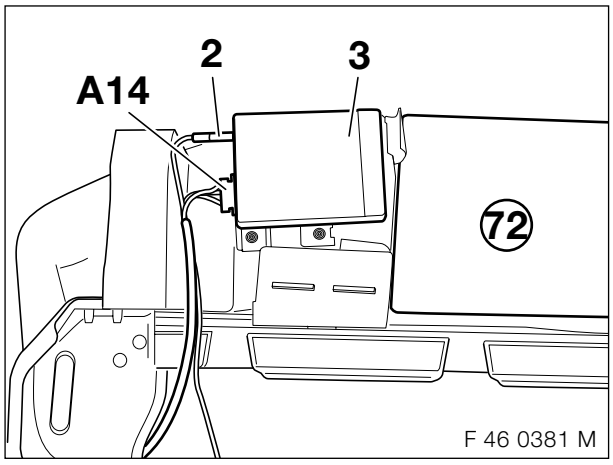
Clean the windscreen in the area where the aerial is to be affixed. When affixing the aerial, the windscreen should be at a temperature of at least 20*C. The aerial must not be fitted in an area where it may interfere with the driver's vision.◂

UTo avoid problems with the ITS head airbag, the aerial cable must be secured to the factory-fitted cables, using cable ties.◂

Affix the aerial (2) to the windscreen at a distance a = max. 25 mm from the windscreen frame. Run the aerial cable under the roof liner to the A pillar, then along the A pillar and into the right footwell.

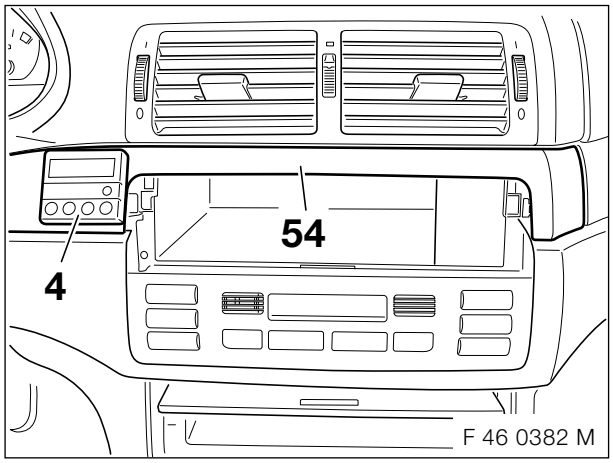


Attach the bracket (27) to the remote control receiver (3) and place it on the footwell lining (72) as illustrated.
Mark the drilling points for the holes and drill them with a 5 mm drill bit.
Place speed nuts (28) on the bracket (27) and secure the receiver (3) with the fillister head self-tapping screws, size 4.2x16 (29).



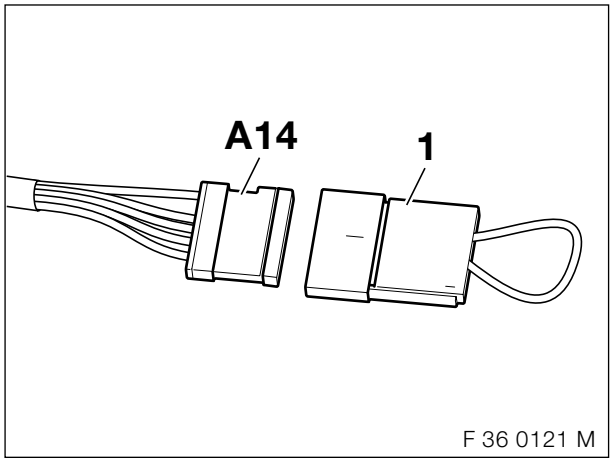
Connect the aerial cable (2) and branch **A14** of the parking heater wiring harness **A** to the receiver (3), then refit the footwell liner (72).

8. Fitting / connecting the timer (optional)



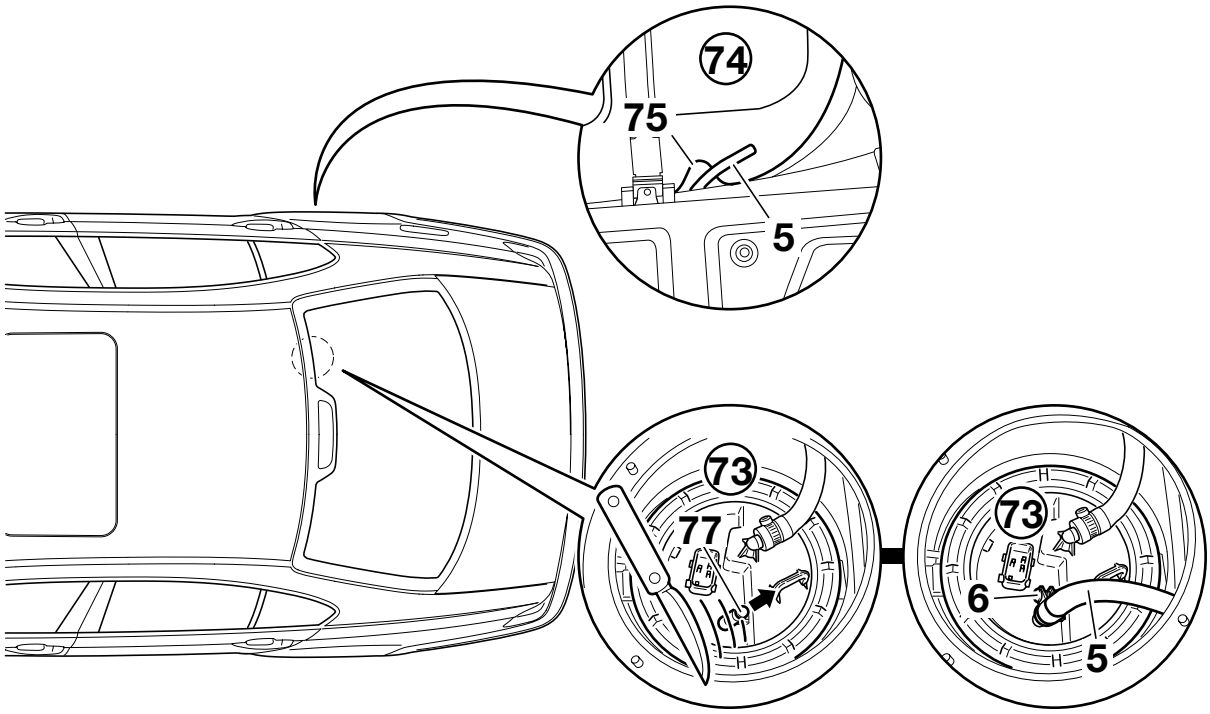
⚠ While installing the timer, take care not to exert pressure on its display. ◂

Place the enclosed self-adhesive drilling template on the trim panel (54). Drill the holes as shown on the template.
Secure the receptacle for the timer (4) with the enclosed screw and snap-fit the timer (4) to the trim panel (54). Connect branch **A16** to the timer (4) as you install the trim panel (54).



Only when installing the timer without T70 remote control system:
Place the coding connector (1) on branch **A14**, then tie branch **A14** back on the wiring harness.

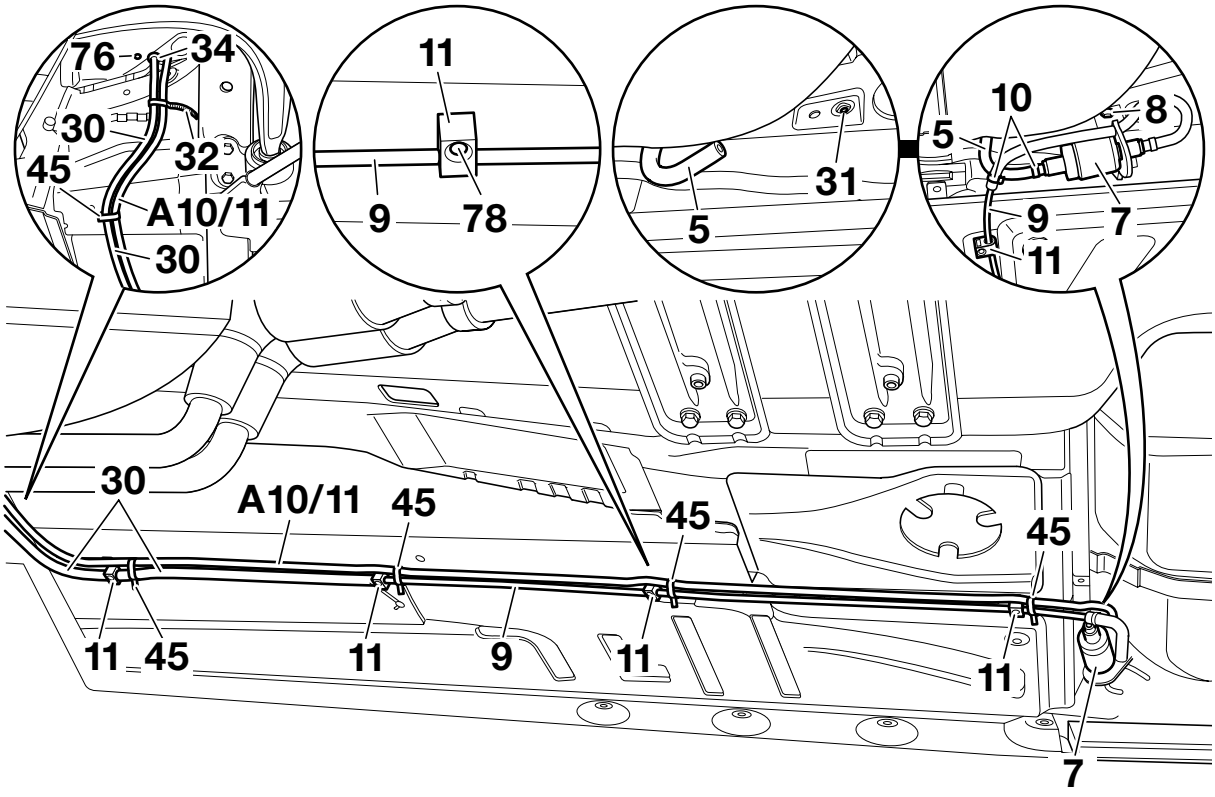
9. Fitting / connecting the metering pump



F 46 0383 M

Cut the top section of the fuel port (77) on the RH side fuel tank fitting (73) with a sharp knife. Insert the fuel intake assembly (5) into the RH side fuel tank fitting (73), secure it with a hose clip (6), and run it downwards to the metering pump site through the recess (75) in the fuel tank.

9. Fitting / connecting the metering pump



F 46 0384 M

Only use a sharp knife to cut the fuel line (9) since otherwise its cross-section could be reduced.
On vehicles equipped with DSC, the hole (76) next to the standard hole must be enlarged to 11.5 mm to fit the rubber grommet (34) since the standard hole will be obstructed by the DSC holder.◂

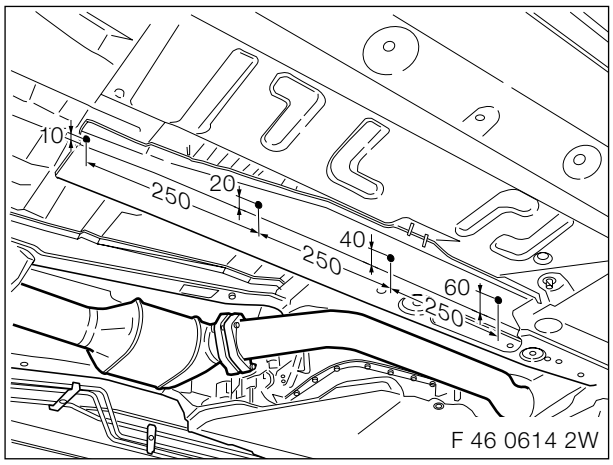
Insert and secure the rivet nut (31).
Insert the metering pump (7) and secure it using the hexagon head screw M6x18 with washer (8).
Connect the hose of the fuel intake assembly (5) as well as the fuel supply line (9) to the metering pump (7) and secure them with the hose clips (10).

If the coarse-thread studs (78) described below are not provided on the vehicle, refer to the next page.◂

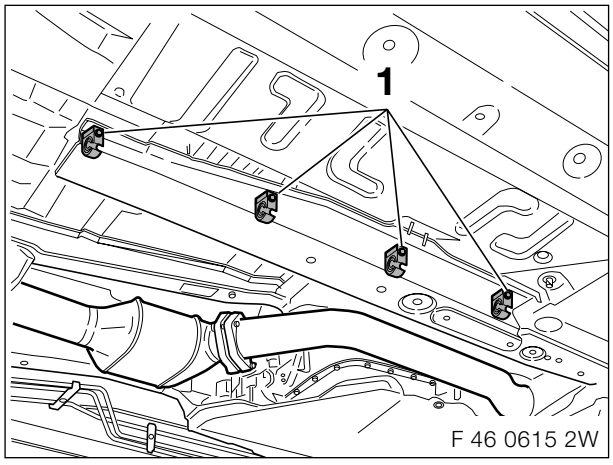
Place the holders (11 and 32) on the threaded pins (78) and insert the rubber grommet (34).
Cut the fuel hose (30) to length, slide it over the fuel line (9) and press the fuel line (9) into its holder (11), then run it into the engine compartment through the rubber grommet (34) and secure it with the holder (32).
Lay the fuel line (9) along the vehicle wiring harness to the installation site of the parking heater unit.
Secure branch **A10/11** to the fuel line (9) with cable ties (45) and connect it to the metering pump (7).
Refit the rear section of the wheel housing liner.

9. Fitting / connecting the metering pump

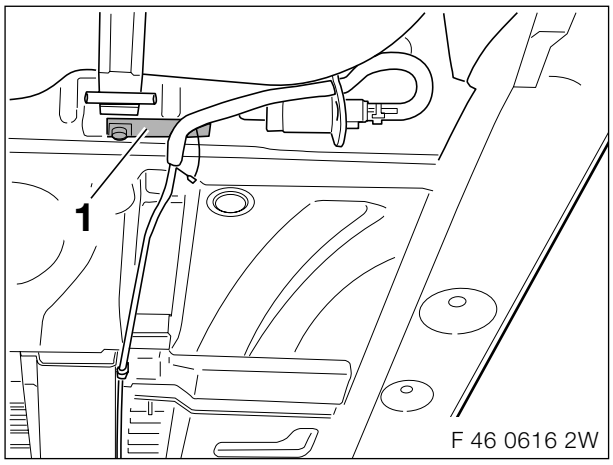
▷ The following steps are necessary only if the vehicle is not equipped with coarse-thread studs for attachment of the fuel line. ◂



Drill four 6mm holes into the longitudinal member as shown.
Fit an M4 rivet-nut in each hole.

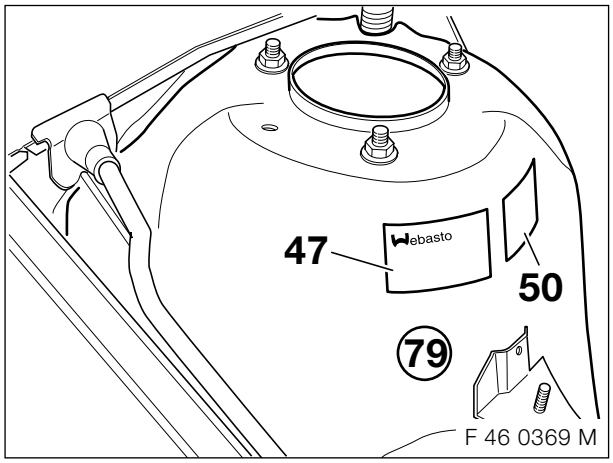


Mount the enclosed holders (1) using M4 x 25 mm hex screws.



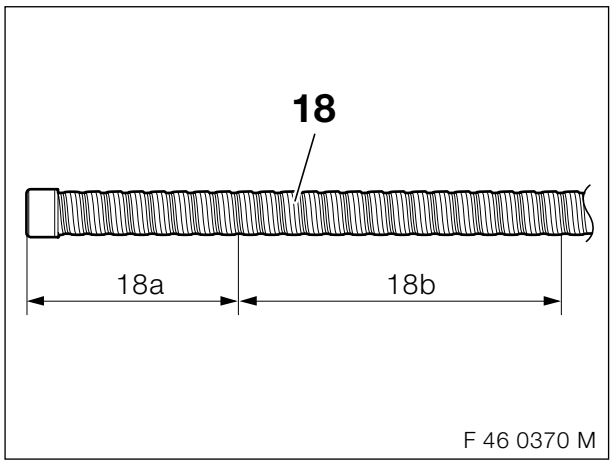
Attach the bracket (1) to the bodywork using an M6 x 10 mm self-tapping hex screw with M6 flanged nut.
Snap-fit the fuel line into the previously mounted holders.
Secure branches A10/11 to the fuel line using cable ties and connect them to the metering pump.

10. Fitting / connecting the parking heater unit

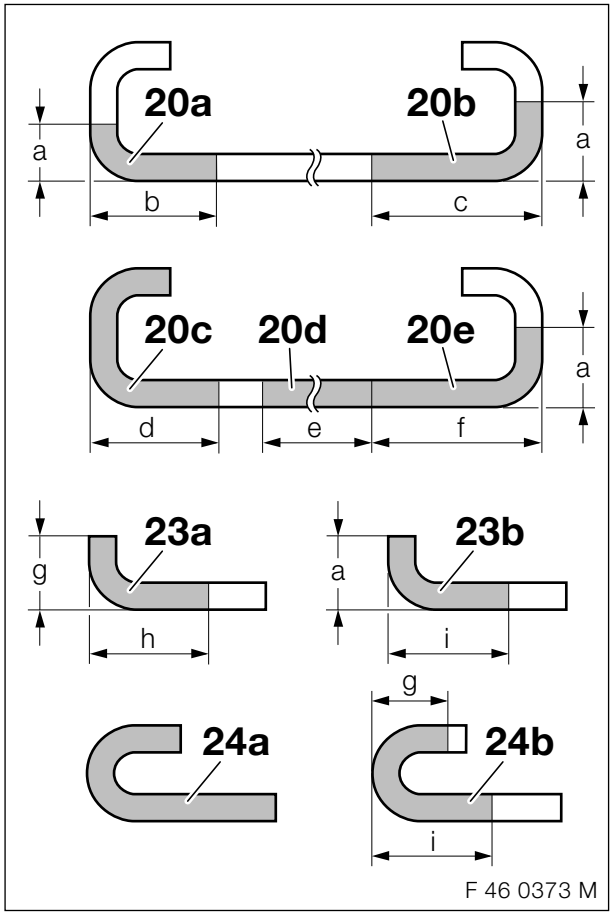


When marking the installation date, ensure that you remove only the year numbers which do not correspond to the installation date, i.e., the year of installation must remain legible.◂

Affix the duplicate factory nameplate (47) to the LD side strut tower (79) and mark the installation date.
Place the sticker (50) with relay, fuse and diagnostics connector installation notes on the LH side strut tower (79) as shown.



Cut the flexible exhaust tube (18) to length as follows:
18a = 80 mm
18b = 220 mm

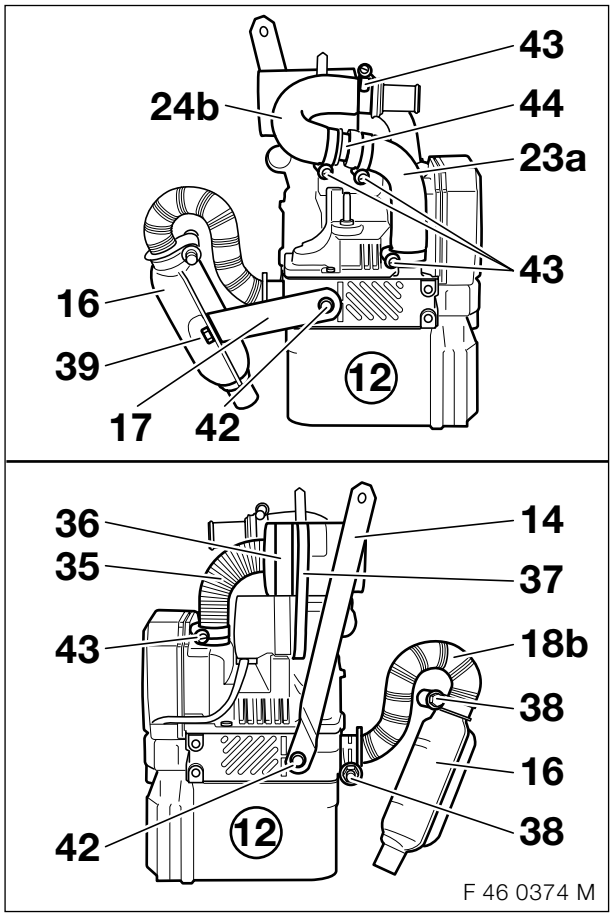


20a = Feed hose 1 (from feed hose 2 to circulating pump)
20b = Feed hose 2 (from feed hose 1 to feed hose 3 (M57) or to the coolant hose coming from the cylinder (M47)
20c = M57 (six-cylinder) only: supply hose 5 (from supply hose 4 to the car's additional water pump)
20d = Supply hose 3 (from supply hose 2 to supply hose 4)
20e = Supply hose 4 (from supply hose 3 to supply hose 5)
23a = Supply hose 1 (from supply hose 2 to the parking heater unit)
23b = M57 (six-cylinder) only: supply hoses 3 and 4 (from feed hose 2 to the coolant hose coming from the cylinder)
24a = M47 (four-cylinder) only: supply hose 5 (from supply hose 4 to the car's additional water pump).
24b = Supply hose 2 (from supply hose 1 to supply hose 3)

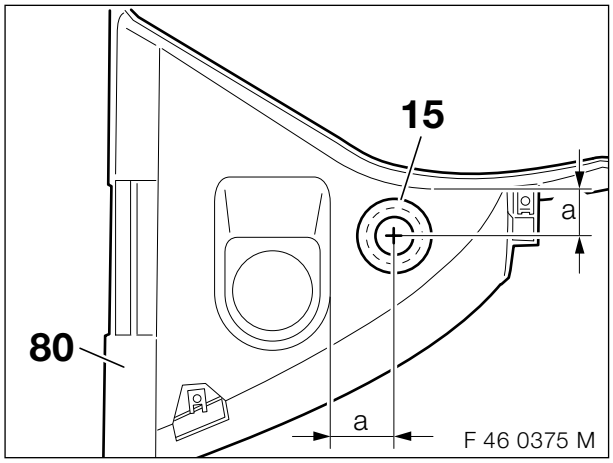
Cut the heating hoses (20, 23 and 24) to size as follows:

Dimension	**M47 (four-cylinder)**	**M57 (six-cylinder)**
a	60 mm	60 mm
b	1120 mm	1120 mm
c	600 mm	660 mm
d		140 mm
e	1110 mm	1110 mm
f	600 mm	720 mm
g	55 mm	55 mm
h	100 mm	100 mm
i	80 mm	80 mm

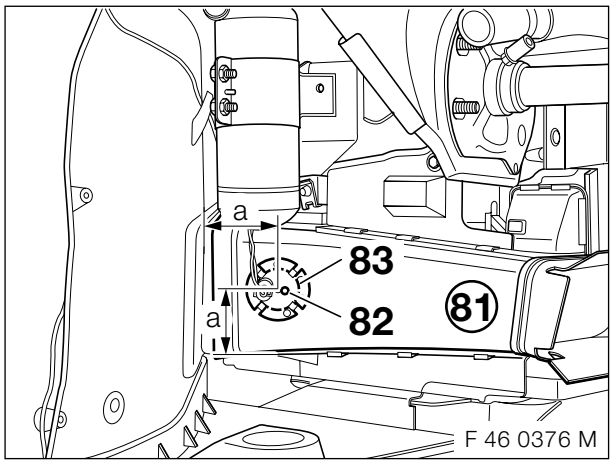
The remaining hose ends can be discarded.



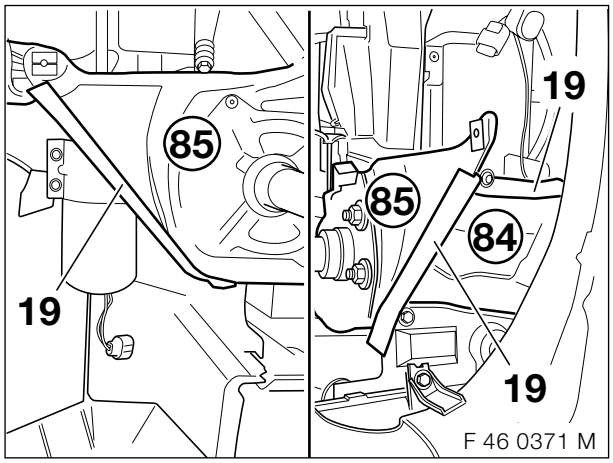
Connect the heating hoses (23a and 24b) to the parking heater unit (12) as shown using the hose connectors (44) and hose clips (43).
Secure the silencer (16) with bracket (17) to the parking heater unit (12) with the M6x12 hexagon head screws (39), the M6 hexagon nut, and the self-tapping screw (42).
Connect the flexible exhaust tube (18b) to the parking heater unit (12) and to the silencer (16) using pipe clips (38).
Cut the flexible combustion air tube (35) to a length of 110 mm and connect it to the intake noise damper (36) and the parking heater unit (12) using a hose clip (43).
Secure the intake noise damper (36) to the circulating pump of the parking heater unit (12) with a cable tie (37).
Secure the bracket (14) to the parking heater unit (12) with a self-tapping screw (42).



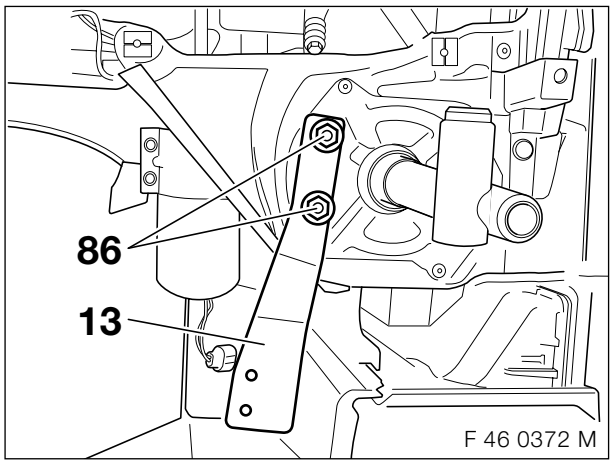
Mark the position of the lead-through grommet (15) on the front wheel housing liner (80), observing the dimension
a = 35 mm,
then drill the hole with a 40mm step drill and insert the lead-through grommet.



Mark the hole (83) for installing the temperature sensor (82) on the ventilation duct (81), observing the dimension
a = 50 mm,
then drill the hole with a 45mm step drill and insert the temperature sensor (82).
Refit the wheel housing liner.

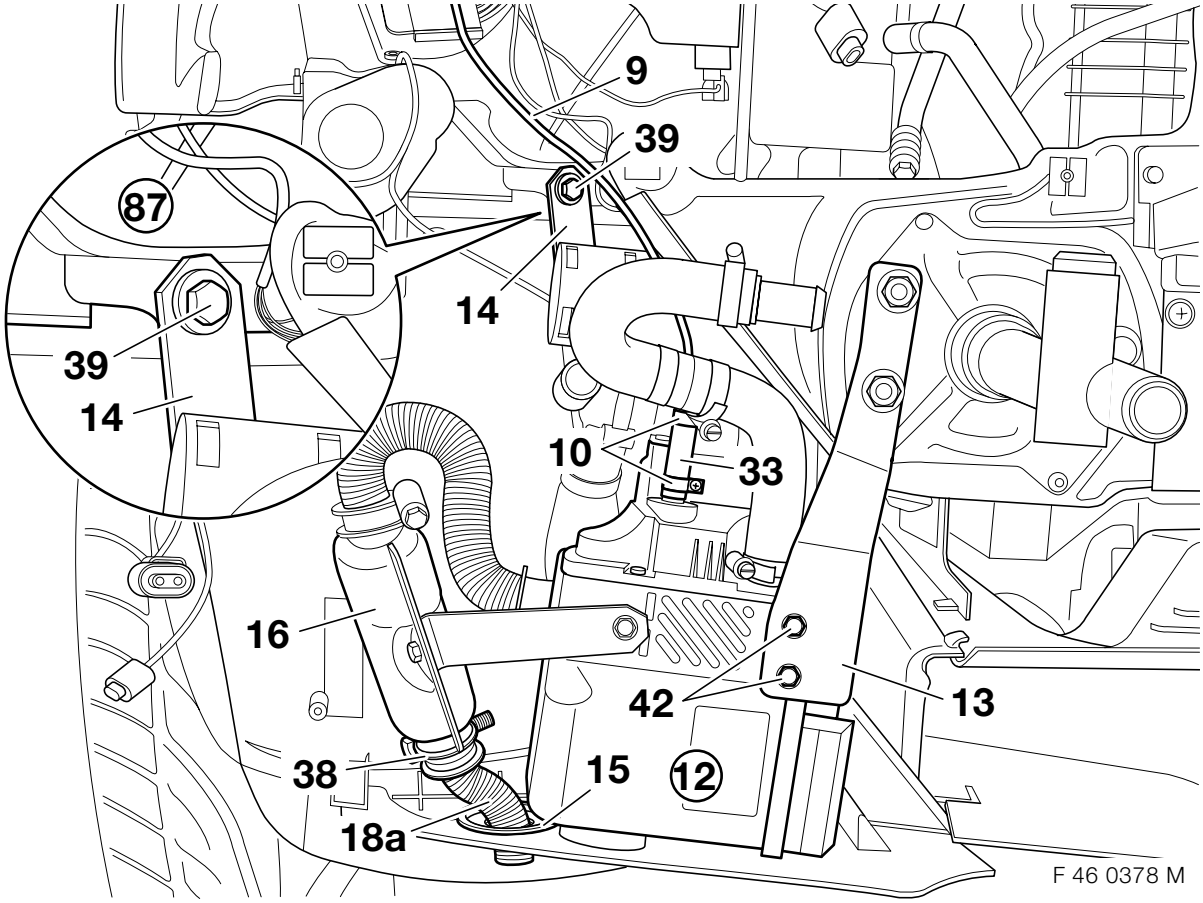


Fit the piping (19) to act as a chafing guard on the bracket (85) below the LH and RH side headlight units and on the LH side longitudinal member (84) as shown.



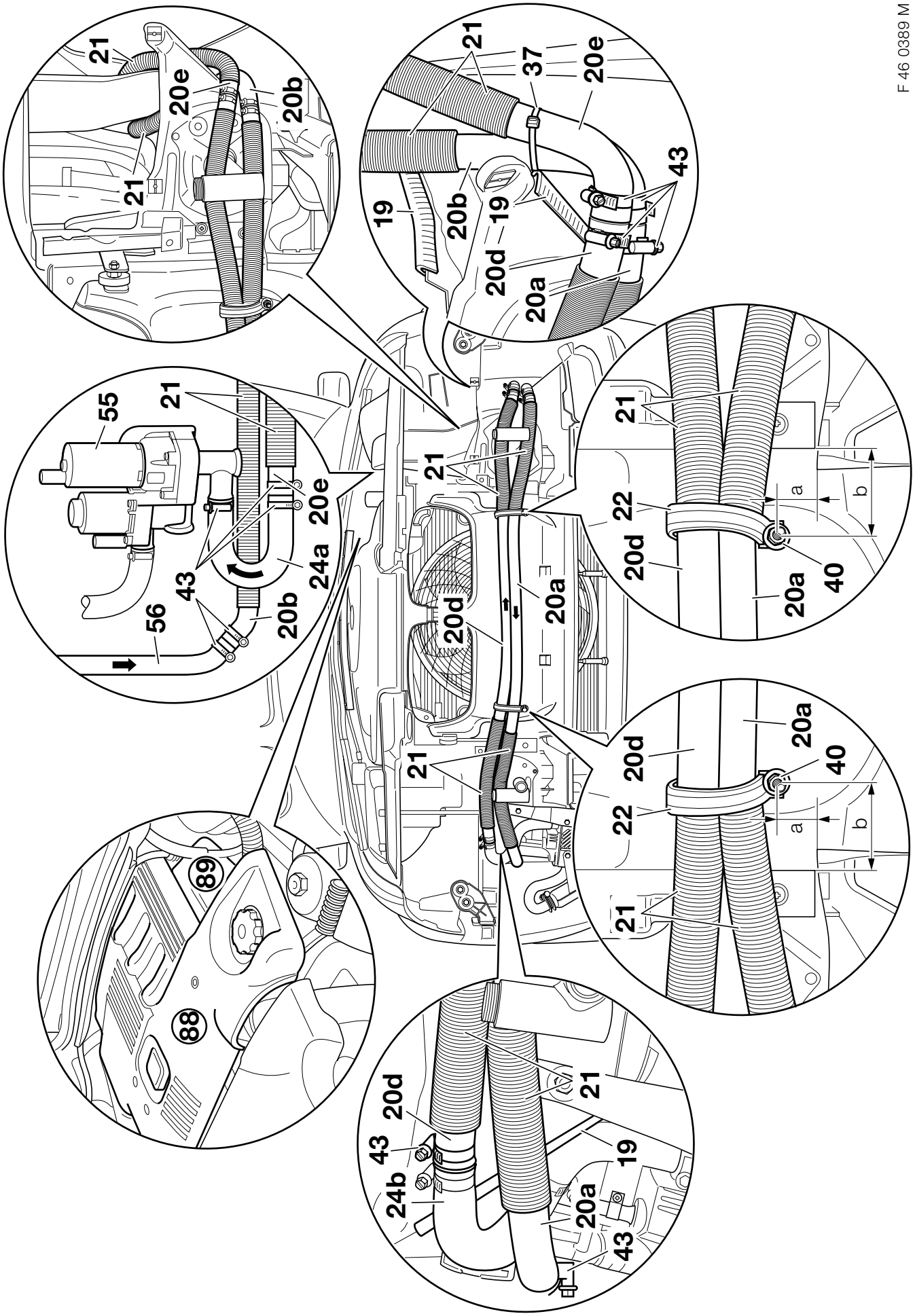
Remove the nuts (86) and washers, position the bracket (13), and secure it with the nuts (86) and washers.

10. Fitting / connecting the parking heater unit



Connect the parking heater wiring harness **A** to the pre-assembled parking heater unit (12), position the parking heater unit (12), and secure it to the bracket (13) using the self-tapping screws (42).
Align the bracket (14), mark the hole for the rivet nut (41) on the wheel housing (87), drill the hole with a 9 mm drill bit, and fit the rivet nut (41).
Secure the bracket (14) to the wheel housing (87) using the M6x12 hexagon head screw (39) and tighten the self-tapping screw to secure the bracket (14) to the parking heater unit (12).
Connect the flexible exhaust tube (18a) to the silencer (16) using the pipe clip (38) and pass the tube to the outside through the lead-through grommet (15).
Connect the fuel line (9) to the parking heater unit (12) using the connector (33) and hose clips (10).

11. Fitting / connecting the heating hoses on vehicles with M47 (four-cylinder) engine

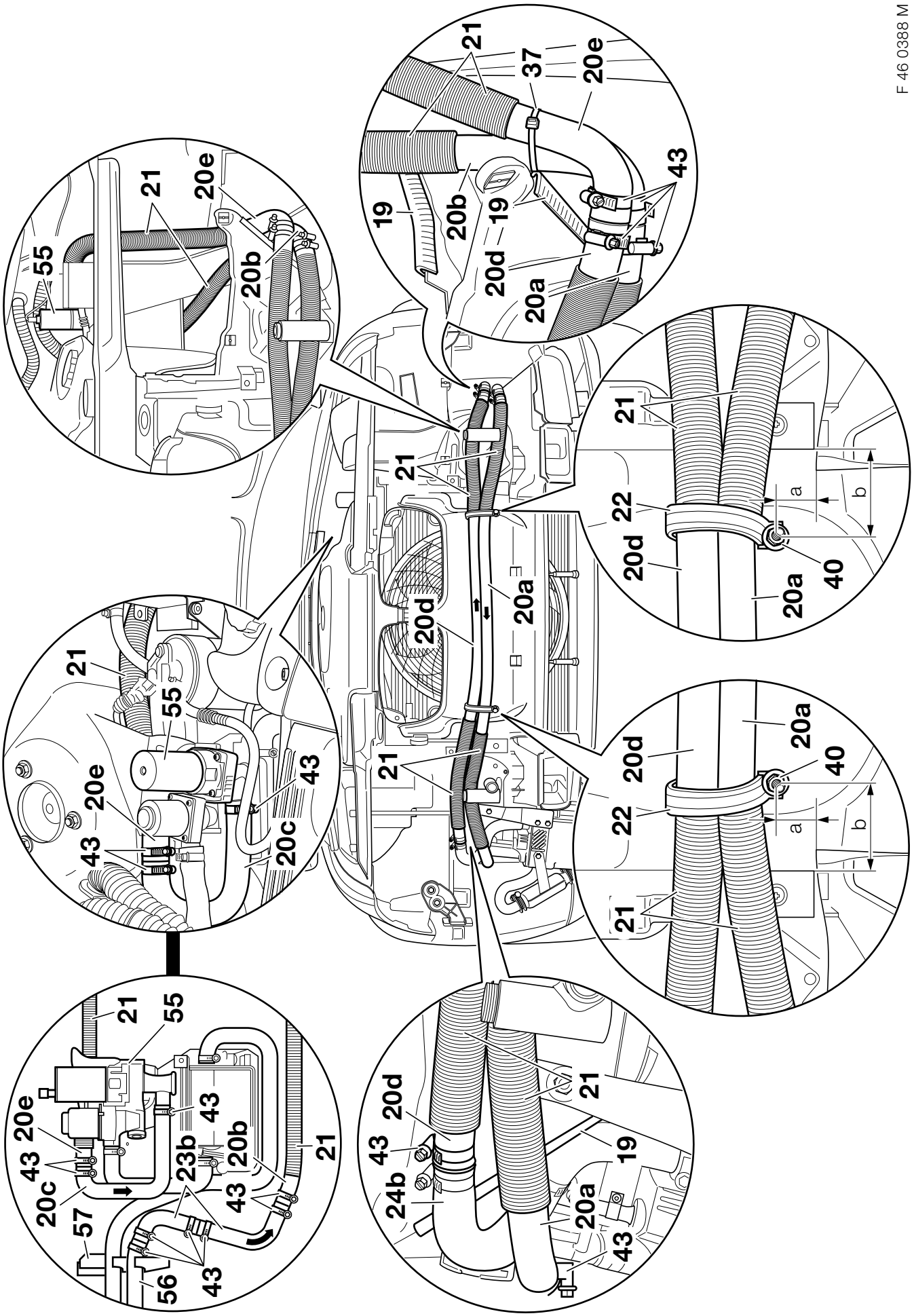


11. Fitting / connecting the heating hoses on vehicles with M47 (four-cylinder engine)

⚠Ensure that the piping (19) is fitted on the LH side longitudinal member and on the bracket below the headlights to act as a chafing guard.Check that the heating hoses are secured with cable ties in such a way that they cannot chafe or become jammed.◂

Remove the front engine cover (88) and LH side engine cover (89).
Cut four sections 300 mm in length from the chafing guard (21) and push them on to the heating hoses (20a and 20d).
Connect the feed heating hose (20a) to the circulating pump on the parking heater unit using hose clips (43).
Connect the supply heating hose (20d) to the heating hose (24b) of the parking heater unit, again with hose clips (43).
Mark the hole for securing the pipe clips (22), noting the dimensions
a = 30 mm
b = 70 mm
and drill the hole with a 6 mm drill bit. Insert the M6x18 hexagon head screw with washer (8) from the rear.
Secure the heating hoses (20a and 20d) with the pipe clips (22) and hexagon head nuts M6 (40) as shown.
Close off the coolant hoses of the additional water pump (55) with clamp pliers.
Push the chafing guard (600 mm) (21) on to the heating hoses (20b and 20e).
Connect the feed heating hose (20b) to the heating hose (20a) and route it to the additional water pump (55) as shown.
Disconnect the coolant hose (56) from the additional water pump (55) and connect it to the heating hose (20b) using a hose connector and hose clips (43).
Connect the supply heating hose (20e) to the heating hose (20d) and run it to the additional water pump (55) as shown.
Fill the heating hoses and parking heater with coolant.
Connect the heating hose (20e) to the additional water pump (55) with a hose connector, hose clips (43) and heating hose (24a).
Secure the heating hoses (20b and 20e) with a cable tie (37) and attach them to existing lines with cable ties.
Remove the clamp pliers from the coolant hoses.

12. Fitting / connecting the heating hoses on vehicles with M57 (six-cylinder) engine

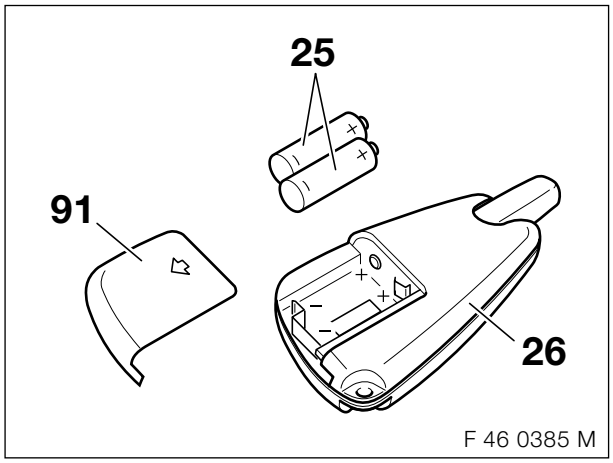


12. Fitting / connecting the heating hoses on vehicles with M57 (six-cylinder) engine

⚠ Ensure that the piping (19) is fitted on the LH side longitudinal member and on the bracket below the headlights to act as a chafing guard.
Check that the heating hoses are secured with cable ties in such a way that they cannot chafe or become jammed.◂

Cut four sections 300 mm in length from the chafing guard (21) and push them on to the heating hoses (20a and 20d).
Connect the feed heating hose (20a) to the circulating pump on the parking heater unit using hose clips (43).
Connect the supply heating hose (20d) to the heating hose (24b) of the parking heater unit, again with hose clips (43).
Mark the hole for securing the pipe clips (22), noting the dimensions
a = 30 mm
b = 70 mm
and drill the hole with a 6 mm drill bit. Insert the hexagon head screw M6x18 with washer (8) from the rear.
Secure the heating hoses (20a and 20d) with the pipe clips (22) and M6 hexagon nuts (40) as shown.
Close off the coolant hoses of the additional water pump (55) with clamp pliers.
Push the chafing guard (600 mm) (21) on to the heating hoses (20b and 20e).
Connect the feed heating hose (20b) to the heating hose (20a) and route it to the additional water pump (55) as shown.
Disconnect the coolant hose (56) from the additional water pump (55), cut it near the hose holder (57), and connect it to the heating hose (20b) using a hose connector, hose clips (43) and heating hoses (23b).
Connect the supply heating hose (20e) to the heating hose (20d) and run it to the additional water pump (55) as shown.
Fill the heating hoses and parking heater with coolant.
Connect the heating hose (20e) to the additional water pump (55) with a hose connector, hose clips (43) and heating hose (20c).
Secure the heating hoses (20b and 20e) with a cable tie (37) and attach them to existing lines with cable ties.
Remove the clamp pliers from the coolant hoses.

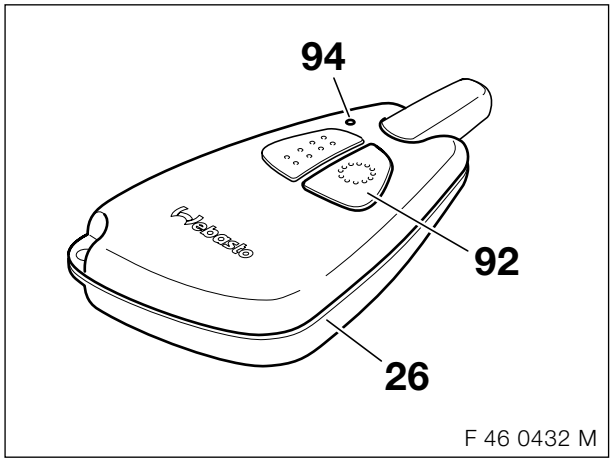
13. Starting-up the remote control transmitter



To insert batteries in the remote control transmitter

Open the battery compartment cover (91) in the direction indicated by the arrow.
Insert two conventional batteries (Type MN12) (25) into the remote control transmitter (26) as shown, then close the battery compartment again.

Dispose of exhausted batteries in an appropriate manner.

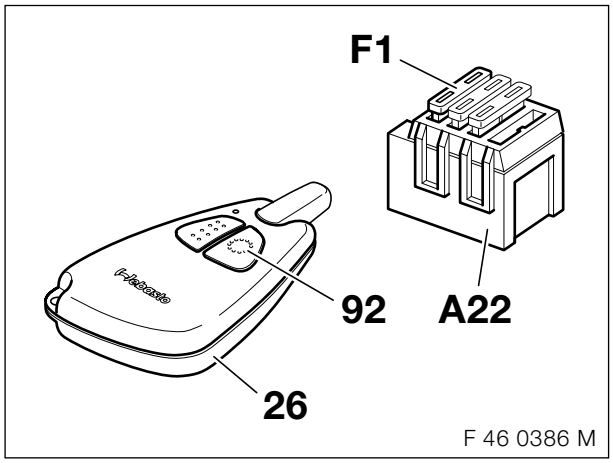


To check the batteries in the remote control transmitter

- Press the OFF button (92).
  – The indicator light (94) flashes for 0.5 seconds
  = batteries OK

  – The indicator light (94) flashes orange for 3 seconds after a delay of 1 second
  = batteries weak
    – Replace batteries at the earliest opportunity.

  – The indicator light (94) flashes orange for 5 seconds after a delay of 1 second
  = batteries are dead, or battery temperature is lower than 0*C
  (warm up batteries if applicable)
    – Replace batteries.



To program the remote control transmitter

Ensure that the parking heater is switched off for the programming procedure.
The parking heater fuse holder **A22** is mounted in the control module behind the glove compartment.
Up to three remote control transmitters (26) can be programmed to operate with one receiver.◂

- Insert batteries into the battery compartment of the remote control transmitter (26).
- Remove the 1A fuse (F1) from the fuser holder **A22** on the parking heater wiring harness.
- Wait for at least 5 seconds.
- Insert the 1A fuse (F1) into the fuse holder **A22** and within 5 seconds press the OFF button (92) on the remote control transmitter (26) for at least 1 second.
- This completes the programming procedure.

You can program a second or third remote control transmitter (26) using the same method.
For parking heater presettings and operating steps please refer to the **Customer Information** document enclosed with the installation kit.◂

14. Coding, final steps

No DIS or MoDIC encoding is required for retrofitting this system.
Reinstall all parts in the car in the reverse order to which you removed then.
Fill up the cooling system, then vent it and check for leaks according to BMW instructions.
Print out the error memory contents.
Conduct a functional test.

15. Troubleshooting

If a fault occurs, check the fuses and plug connections to ensure that they are in perfect condition and secure.

Parking heater cuts out automatically (fault cut-out):
Possible cause: No combustion occurs after a start and repeat start. Flame goes out during operation
Remedy: Switch the parking heater off, then on again.

Parking heater fails to start:
Possible cause: No power supply to starting heater system.
Remedy: Check the power supply to the parking heater and all associated grounding points (refer to circuit diagram)

Parking heater starts up briefly, then cuts out:
Possible cause: Fuel proportioning pump does not start, insufficient voltage.
Remedy: Check the power supply to the fuel metering pump and to the fuel metering pump (refer to circuit diagram); replace the fuel metering pump if necessary.

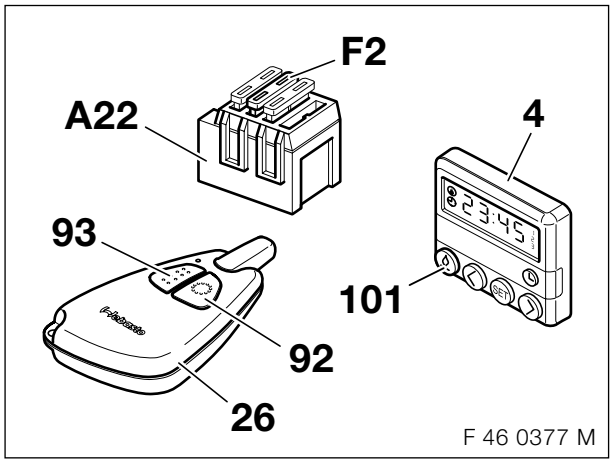
Parking heater fails to ignite:
Possible cause: Defective glow plug or entrapped air in the fuel supply line.
Remedy: Check the power supply to the glow plug, replace the glow plug if necessary. Bleed the fuel line.

Starting heater cuts out during heating cycle (fault cut-out):
Possible cause: Parking heater system is overheated due to a lack of coolant.
Remedy: Add coolant and bleed cooling circuit as described in the repair manual. Eliminate any leaks, reset the parking heater.

Blower does not start:
Possible cause: Blower control circuit or blower is defective.
Remedy: Check blower control connecting points (refer to circuit diagram), check blower function.

If you have any further problems, continue troubleshooting with the diagnostic adapter (order No. 64 50 0 004 238) or contact the Webasto hotline (phone 01805/932278, fax 0395/5592353).◂

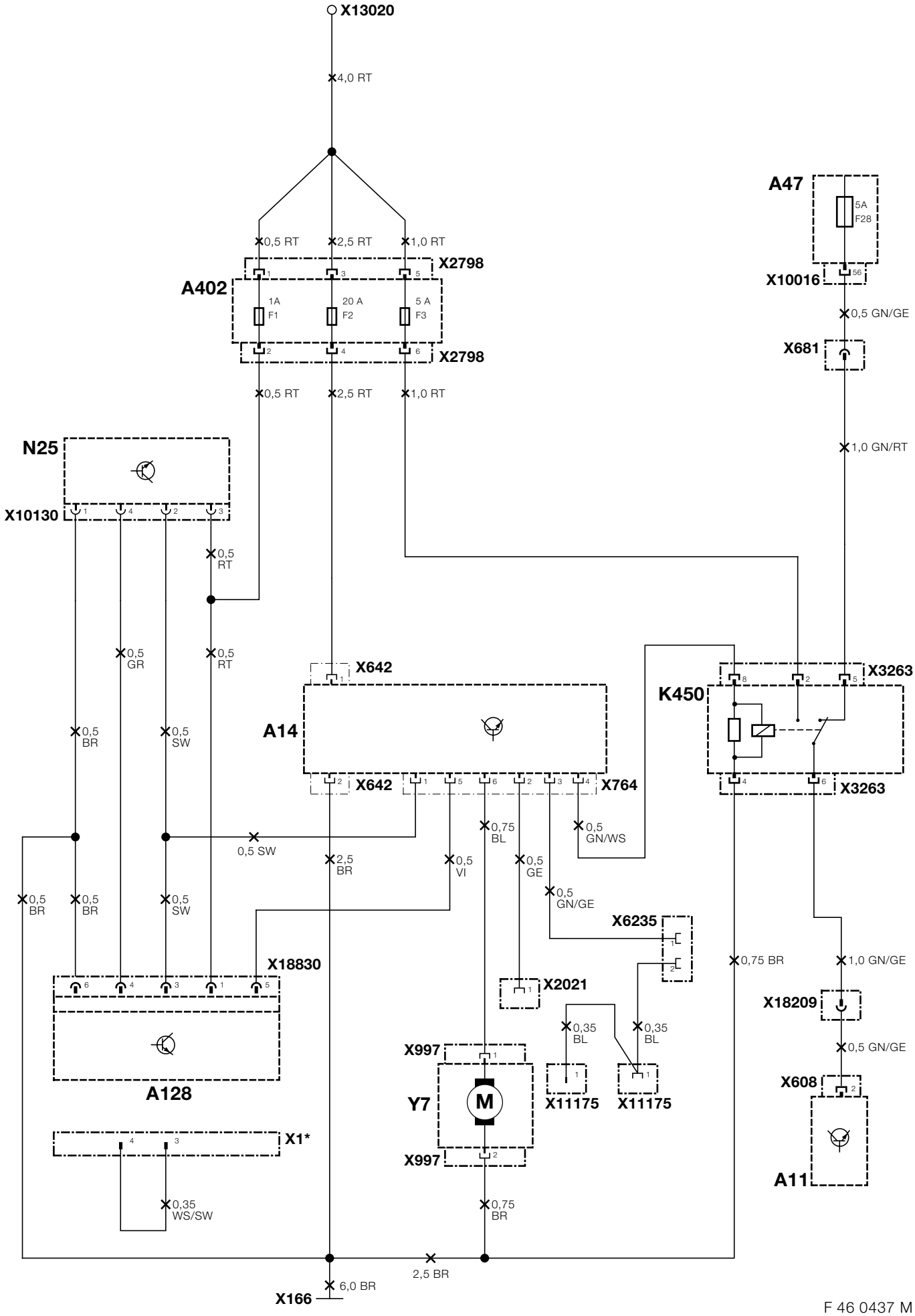
16. Resetting after a system fault



If the steps described in chapter 15 fail to eliminate the fault, reset the system as described below.
The fuse holder **A22** for the parking heater system is located behind the glove compartment. ◂

- Remove the 20A fuse (F2) from the fuse holder **A22** and refit it after waiting for at least 10 seconds.
- After waiting for at least 10 seconds switch on the parking heater using the timer (4) or remote control transmitter (26) by pressing the button (101 or 93).
- Wait for 3 - 10 seconds, then take the 20A fuse (F2) out of the fuse holder **A22**.
- Wait for at least 30 seconds, then switch off the parking heater using the timer (4) or remote control transmitter (26) by pressing the button (101 or 92).
- Refit the 20A fuse (F2) in the fuse holder **A22**.
- After waiting for at least 10 seconds switch on the parking heater using the timer (4) or remote control transmitter (26) by pressing the button (101 or 93).

17. Circuit diagram



F 46 0437 M

17. Circuit diagram

Key to the circuit diagram

A11	Heating / air conditioner operating unit
A14	Parking heater control unit
A47	Fuse holder II
A128	Remote control transmitter (optional)
A402	Parking heater fuse holder behind glove compartment
K450	Parking heater relay behind glove compartment
N25	Timer (optional)
X1*	Coding plug for installation without T70 remote control system
X166	Grounding post behind RH side headlight
X608	6-pole connector of the heating / air conditioner operating unit
X642	2-pole parking heater connector
X681	1-pole blower control connector
X764	6-pole parking heater connector
X997	2-pole metering pump connector
X2021	Diagnostic contact (female connector) (Webasto)
X2798	8-pole connector for fuse holder A402
X3263	Relay base for parking heater relay
X6235	2-pole temperature switch connector (not required)
X100156	68-pole connector for fuse holder A47
X10130	4-pole timer connector
X11175	Jumper connection to terminal 61 (not required)
X13020	Terminal 30 post for fuse holder behind glove compartment
X18209	1-pole blower control connector
X18830	6-pole receiver connector
Y7	Metering pump

Cable colours:

BL	=	blue
BR	=	brown
GE	=	yellow
GN	=	green
GR	=	grey
OR	=	orange
RT	=	red
SW	=	black
VI	=	violet
WS	=	white

Parts and Accessories
Installation Instructions

Supplementary sheet to the "Inline" auxiliary heating system installation instructions

BMW 3 Series, Saloon (E46/4), LHD with M47 and M57 engines
Order no. 01 29 0 008 799

The above installation instructions have been supplemented with the E46/3 touring model with M47 and M57 engines. The installation work for this car is identical to that described in the installation instructions. The type code numbers are to be supplemented or replaced with the following cars:

	Official engine code	Manual/automatic transmission
E46/4 Saloon		**LHD**
320d M47	20 4 D1	AL71
330d M57	30 6 D1	AL91
E46/3 touring		**LHD**
320d M47	20 4 D1	AX71
330d M57	30 6 D1	AP91

With the following engines
M47 D20 95 kW
M57 D20 135 kW
M57 D30 120 kW

With the following EC licences:

EG: e1 * 97/27 * 0097 * .. 346L

Compliance with the licensing regulations is required. ◂

In the Federal Republic of Germany retrofitting the Thermo Top C as set out in these installation instructions does not require an approval test since there is a special supplement in the general operating licence (ABG) for this system.
Exemption from the obligation to subject the installation to an approval procedure pursuant to § 19 of the Road Traffic Act only applies if this installation work is completed as set out in the following binding installation instructions in every respect. If the work is not completed precisely as set out in these installation instructions, the system must undergo an approval procedure pursuant to § 19 of the Road Traffic Act. In addition to these installation instructions the regulations set out in the supplementary owner's handbook also apply. The ABG supplied with these installation instructions and the supplementary owner's handbook are to be kept in the car.

Order No. 01 29 0 017 652 XII/99 Printed in Germany