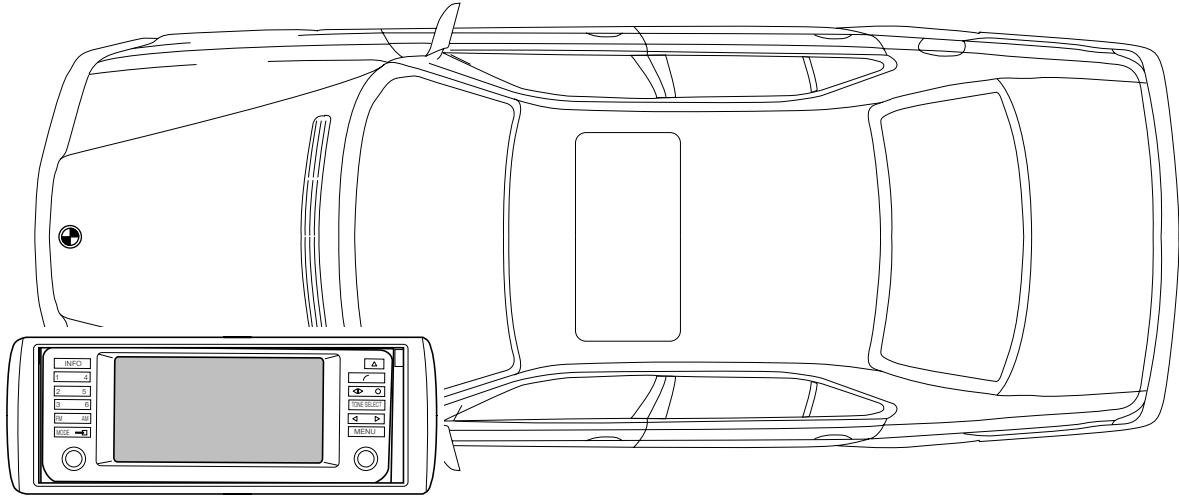




Parts and Accessories Installation Instructions



F 38 0393 B

Retrofit Kit On-board Monitor and Navigation System BMW 7 Series (E38)

These installation instructions are only valid for cars with **SA555** high on-board computer.

Technical and electrical knowledge required

The installation time is approx. 7 hours, which may vary depending on the condition of the car and the equipment in it.

Retrofit kit no.: 65 90 0 025 170
 65 90 0 027 762

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Important information on the installation of the on-board monitor and navigation system

Only for use in the BMW dealer organisation.

Installation of the on-board monitor and the navigation system may only be undertaken by a specialist workshop which has available the necessary special tools and the required manuals (maintenance, repair, diagnostic, etc.).

**When installing cables/leads ensure that they are not kinked or damaged.
Additionally installed cables/leads should where necessary be fastened with cable ties.**

Item numbers refer only to the overview drawings and to the texts next to the appropriate figure.

All the work is shown for a LHD car, the same procedure should be used as appropriate on RHD cars.

Electrical knowledge is required.



The module holder for the on-board monitor and the on-board monitor radio are equipment-dependent and must be ordered separately in accordance with the Electronics Parts Catalogue (EPC). The bracket for the video module does not form part of the installation kit and, for installation of a video module (TV function), must be ordered separately in accordance with the Electronic Parts Catalogue (EPC).

The on-board monitor radio / CD changer control cable is not supplied with the installation kit and must be ordered separately for cars with a CD changer without a DSP amplifier using the electronic parts catalogue (EPC).

The boot trim panels at rear left do not form part of the installation kit and must be ordered separately in accordance with the Electronic Parts Catalogue (EPC) only for vehicles without Top HiFi system and without CD changer (in vehicles with Top HiFi system or CD changer, the existing boot trim panels at rear left can be cut out). ◀



The existing aerial amplifier must be replaced with the aerial amplifier (part No. 65 25 6 906 082) for new generation on-board monitor radios.

The new aerial amplifier is not supplied with the installation kit and must be ordered separately using the electronic parts catalogue (EPC). ◀

Subject to technical modifications

Required tools and equipment

MoDIC III or DIS
1/4 inch socket set
Set of Philips screwdrivers
Cable lamp
Angle cutter
Silicone
Hot air blower
Set of Torx sockets
Set of flat screwdrivers
Universal knife
Set of Phillips screwdrivers, short

1. Preparations

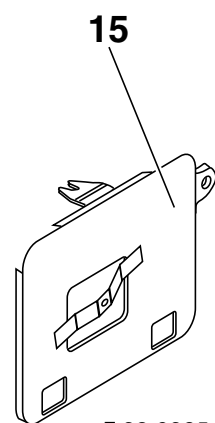
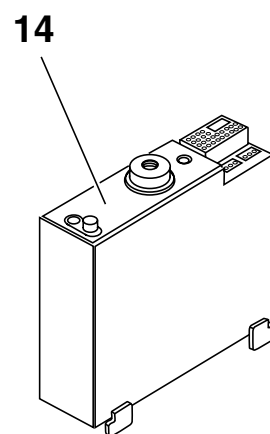
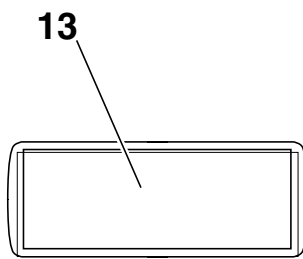
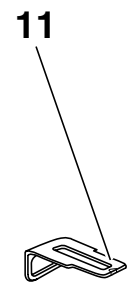
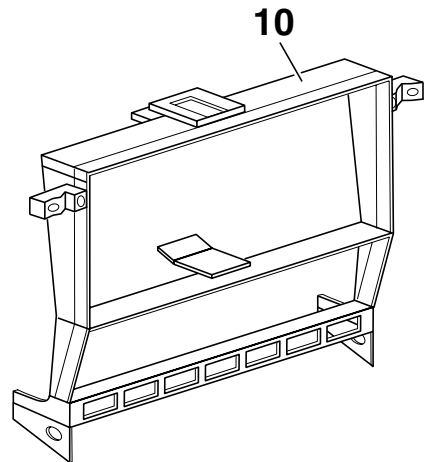
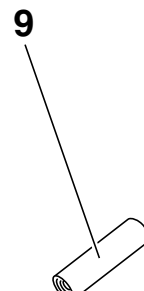
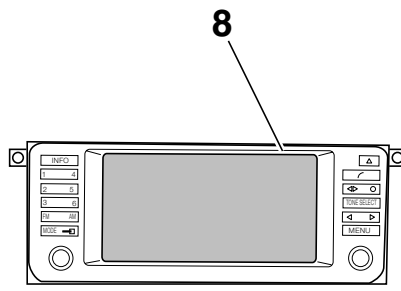
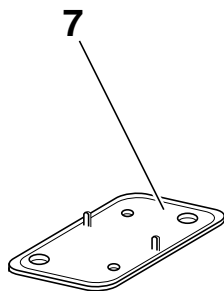
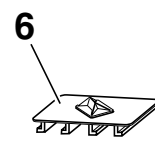
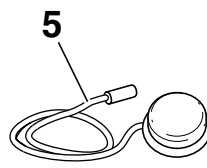
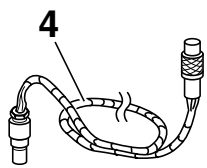
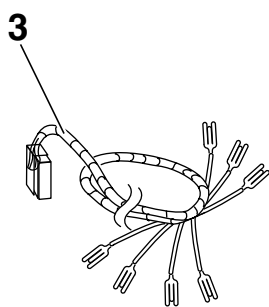
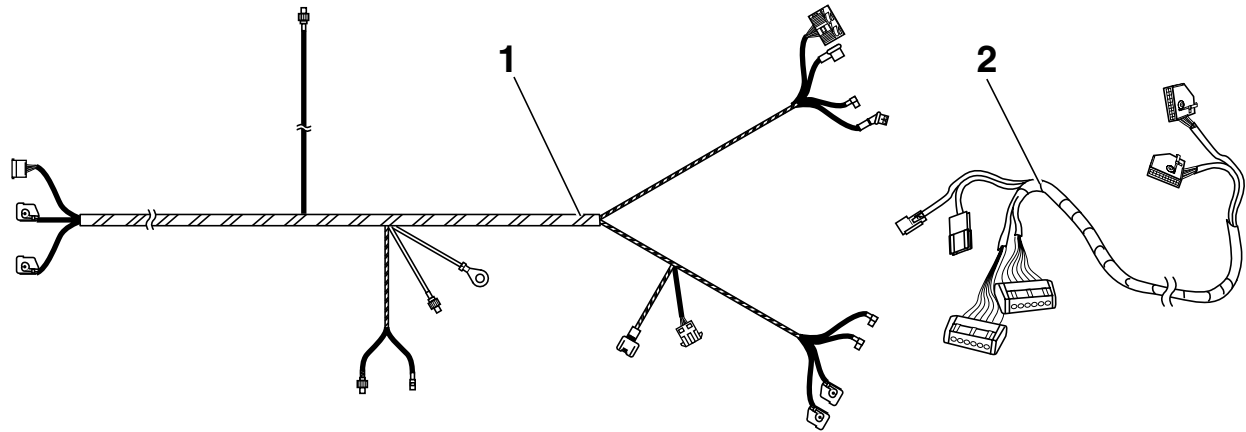
	TIS instruction No.
Print out error memory	–
Disconnect the battery	12 00 ...
Remove the central instrument panel décor trim on the left-hand side	51 45 030
Remove the instrument panel décor trim on the right-hand side	51 45 030
Remove the radio (no longer required)	65 11 030
Remove the control for the Top HiFi system or the coin pocket (no longer required)	65 12 040
Remove the multi information display (no longer required)	65 81 010
Remove the air conditioning control	64 11 750
Remove the individual control switch or switch strip in the module holder	64 11 750
Remove the radio module holder, it is replaced by the on-board monitor module holder	51 16 202
Refit the front cup holder	51 16 202
Remove the front left centre console	51 16 239
Undo the centre console at the front left at the bottom	51 16 239
Remove the left front seat	52 17 000
Remove the rear seat bench	52 24 005
Remove the rear seat backrest	52 24 015
Remove the door sill strip at the front and rear left	51 47 000/51 47 030
Remove the bottom section of the B pillar trim on the left	–
Raise the carpet at the left	–
Remove the C pillar covers on both sides	51 43 251
Remove the rear window shelf	51 46 000
Remove the boot floor	51 47 101
Remove the entire left side trim in the boot	51 47 151
Remove the rear side trim in the boot on the right	51 47 172
Remove the closing panel trim	51 46 050
Remove the door sill strip at the front and rear right	51 47 000/51 47 030
Remove the bottom section of the B pillar trim on the right	–
Remove the A pillar trim at the bottom right	–
Remove the glove compartment (LHD cars only)	51 16 360
Remove the footwell trim in front of the glove compartment (LHD cars only)	–
Fold up the carpet on the right	–
Remove the CD changer (if fitted)	65 11 070
Remove the holder for the CD changer (if fitted)	–
Remove the telephone components and holders (if fitted)	–
Remove the DSP amplifier holder (if fitted)	65 11 070
Remove the holder for the DSP amplifier (if fitted)	65 11 070

1. Preparations

Also on RHD cars

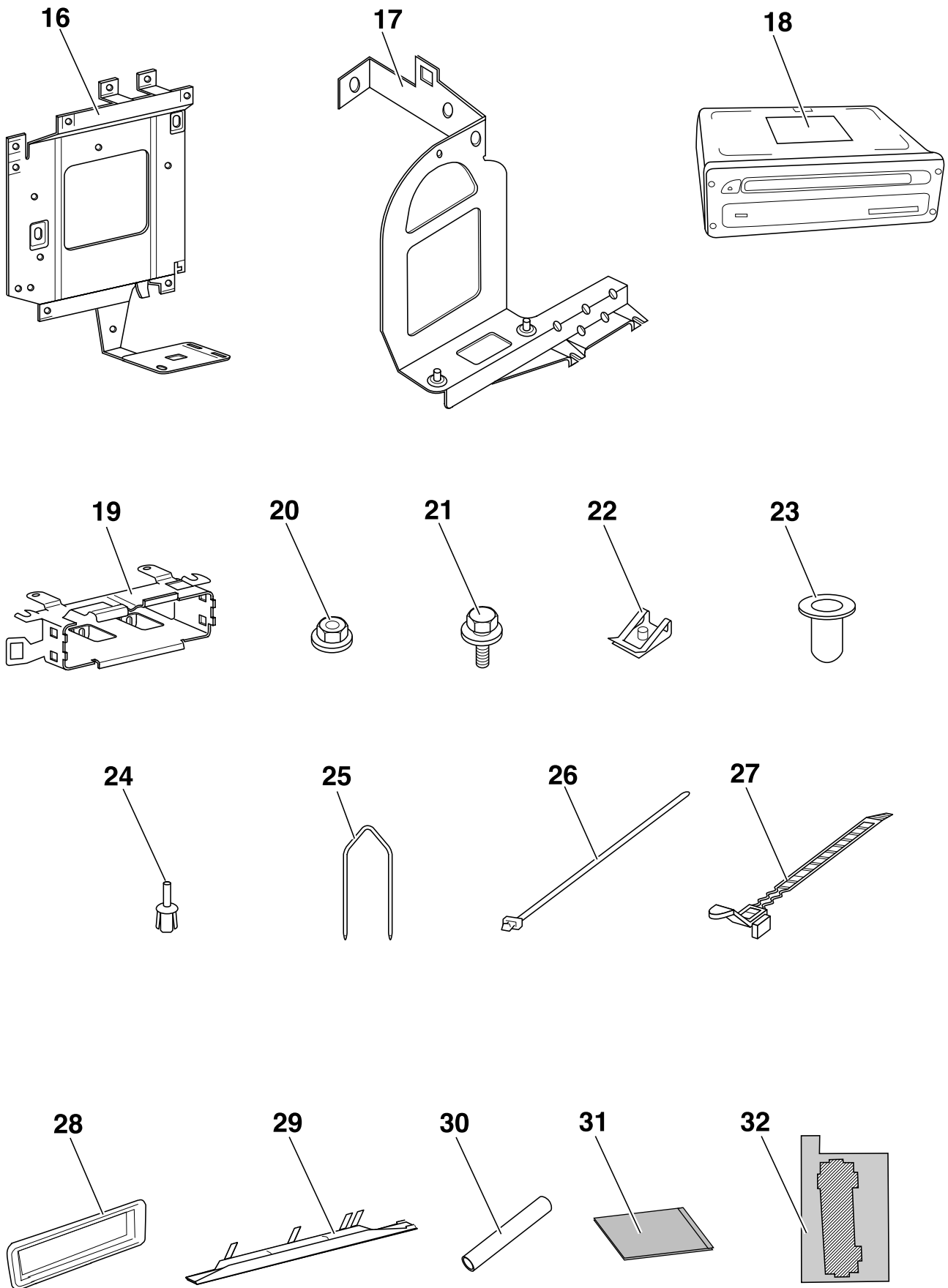
	TIS instruction No.
Remove the footwell trim below the steering column	-

2. Parts list



F 38 0395 B

2. Parts list



F 38 0394 B

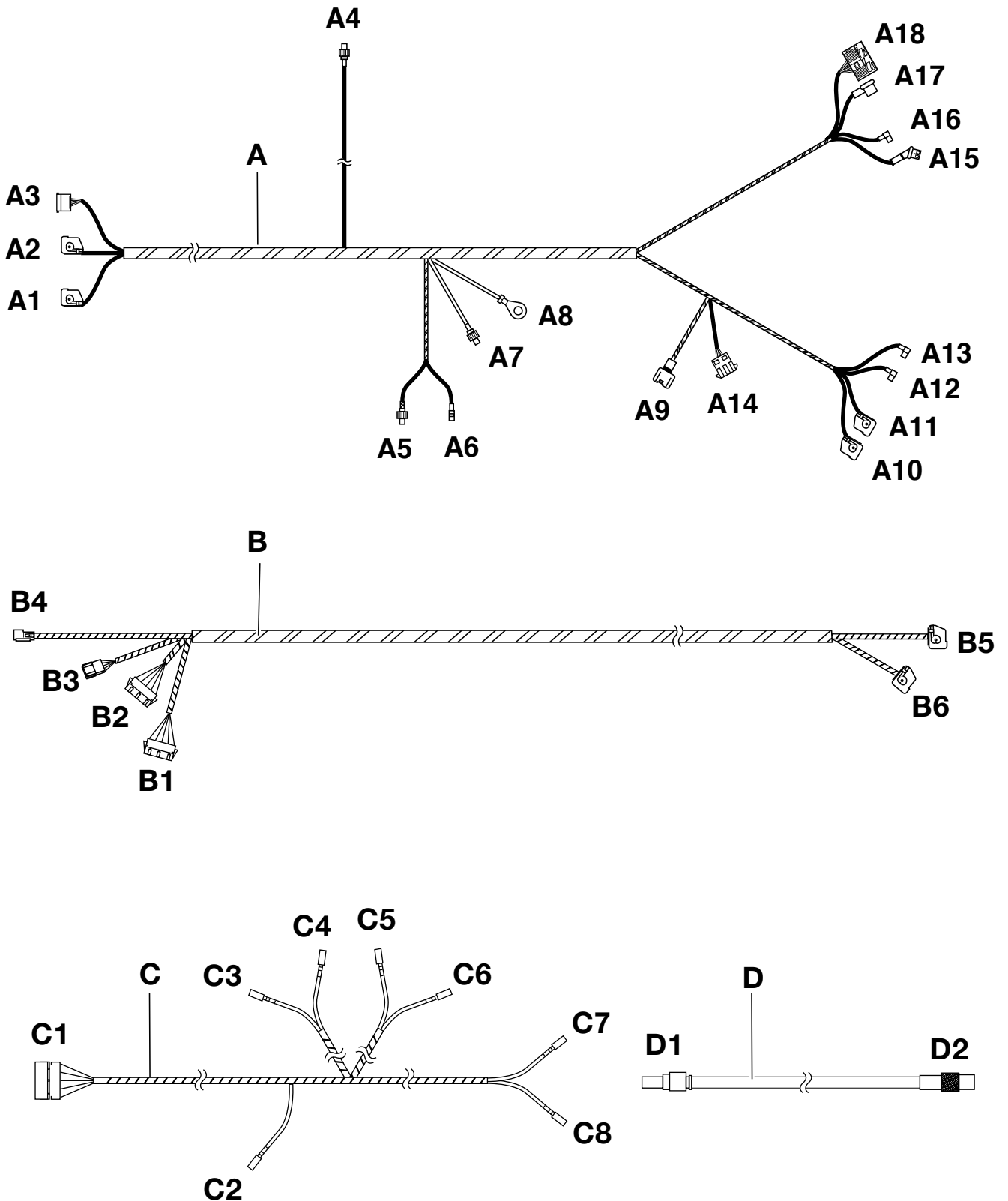
2. Parts list

Legend

- 1 On-board monitor wiring harness
- 2 Navigation system wiring harness
- 3 Supplementary wiring harness for the navigation system
- 4 Aerial extension for GPS aerial
- 5 GPS aerial
- 6 Securing clip
- 7 GPS aerial holder
- 8 On-board monitor, complete
- 9 On-board monitor holding pin (to support the on-board monitor)
- 10 On-board monitor module holder*
- 11 Holding bar for on-board monitor
- 12 Fillister head Philips screw M3x8 (x4)
- 13 Trim for on-board monitor
- 14 On-board monitor radio*
- 15 On-board monitor radio bracket
- 16 Base holder
- 17 Video module bracket
- 18 Navigation computer
- 19 Navigation computer holder
- 20 Hexagonal nut with washer M5
- 21 Hexagonal screw with washer M5x14 (x12)
- 22 Speed nut M5 (x9)
- 23 Grommet (for securing the GPS aerial holder) (x2)
- 24 Expanding rivet (for securing the GPS aerial) (x2)
- 25 Removal bar (x2)
- 26 Cable tie (x20)
- 27 AW cable tie (x2)
- 28 Cover frame
- 29 Cable duct
- 30 Shrink hose (included in pack for the supplementary navigation system wiring harness) (x4)
- 31 Protective strip (x2)
- 32 Template (for the installation of the navigation computer)

Parts marked with an asterisk (*) are not supplied with the kit and must be ordered separately to match the car's equipment using the electronic parts catalogue (EPC).

3. Connection diagram



F 38 0396 B

3. Connection diagram

Item	Description	Cable colour	Connection location in the car
A	On-board monitor wiring harness	---	---
A1	Blue 12-pin socket casing	---	To blue 12-pin plug casing on on-board monitor (8)
A2	White 12-pin socket casing	---	To white 12-pin plug casing on on-board monitor (8)
A3	Black 17-pin plug casing	---	To black 17-pin radio connection plug X18126
A4	Coaxial plug casing	black	To be laid to the installation location of the right TV amplifier in the right-hand C pillar and tied back
A5	Coaxial plug casing	black	To the coaxial socket casing on the aerial diversity
A6	Coaxial socket casing	black	To be tied back on the on-board monitor wiring harness A with a cable tie
A7	Coaxial plug casing	black	To be laid to the installation location of the left TV amplifier in the left-hand C pillar and tied back
A8	Cable eyelet, 6 mm in diameter	brown	To earth post connection X13016 on the left-hand C pillar
A9	10-pin black plug casing	---	To branch B4 , black 10-pin socket casing, of the navigation system wiring harness B
A10	White 18-pin socket casing	---	To be tied back on the on-board monitor wiring harness A with a cable tie
A11	Blue 18-pin socket casing	---	To blue 18-pin plug casing on navigation computer (18)
A12	Angled coaxial socket casing	black	To be tied back on the on-board monitor wiring harness A with a cable tie
A13	Angled coaxial socket casing	black	To be tied back on the on-board monitor wiring harness A with a cable tie
A14	White 6-pin plug casing	---	To branch B1 , white 6-pin socket casing, of the navigation system wiring harness B
A15	10-pin socket casing	---	To be clipped into the back 17-pin socket casing A18 of the on-board monitor wiring harness A and connected to the on-board monitor radio (14) using the black 17-pin socket casing A18
A16	Angled coaxial socket casing	black	To the coaxial plug casing on the on-board monitor (14)
A17	Black coaxial socket casing (aerial connector)	black	To the coaxial plug casing on the on-board monitor (14) (aerial connector)
A18	17-pin black socket casing	---	To the on-board monitor radio (14)

B	Navigation system wiring harness	---	
B1	White 6-pin socket casing	---	To branch A14 , white 6-pin plug casing, of the on-board monitor wiring harness A
B2	6-pin black socket casing	---	To branch C1 , black 6-pin plug casing, of the supplementary wiring harness for the navigation system C
B3	6-pin black plug casing	---	Insulate and tie back to the navigation system wiring harness B
B4	Black 10-pin socket casing	---	To branch A9 , black 10-pin plug casing, of the on-board monitor wiring harness A
B5	Blue 18-pin socket casing	---	To be tied back on the navigation system wiring harness B with a cable tie
B6	Bordeaux 18-pin socket casing	---	To Bordeaux 18-pin plug casing on navigation computer (18)

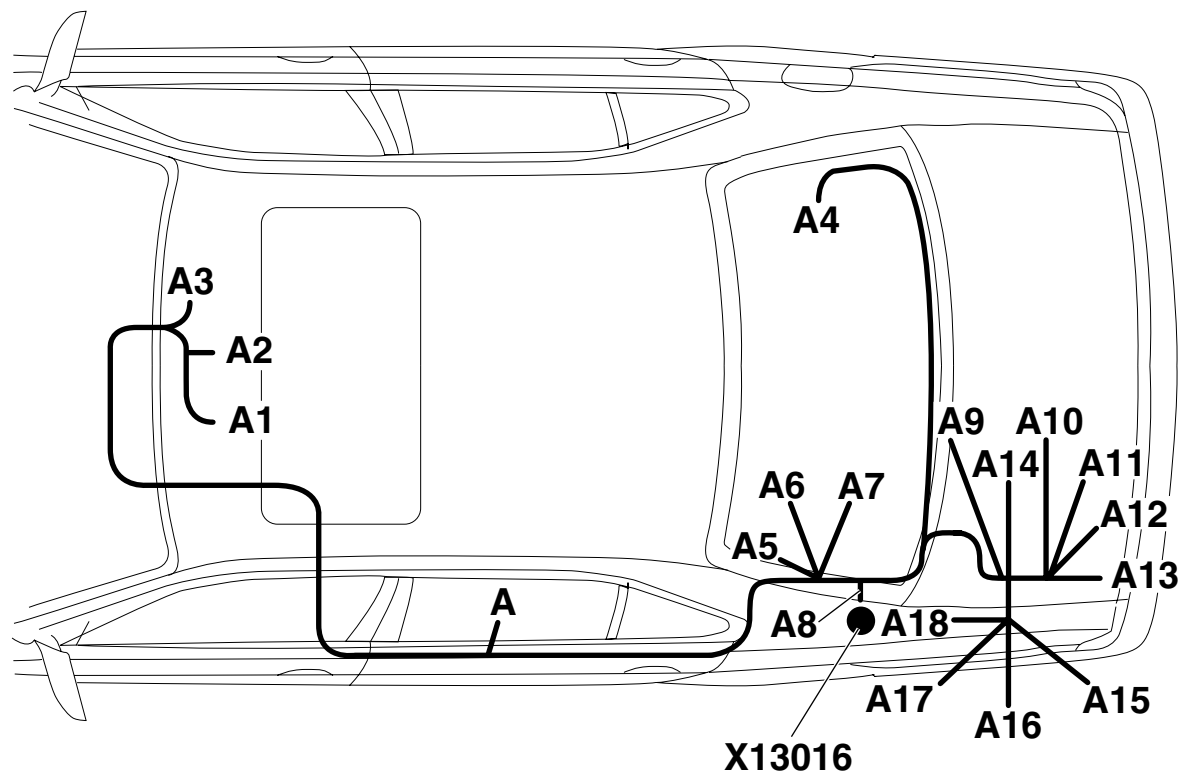
3. Connection diagram

Item	Description	Cable colour	Connection location in the car
C	Supplementary wiring harness for the navigation system	---	---
C1	6-pin black plug casing	---	To branch B2 , black 6-pin socket casing, of the navigation system wiring harness B
C2	1-pin blade terminal contact	white/yellow	To light module X10117 in black 54-pin socket casing, PIN 38
C3	1-pin blade terminal contact	red/yellow	<p>In cars with a production date prior to 9/98 Insulate and tie back with a shrink hose</p> <p>-----</p> <p>In cars with a production date after 9/98 To joint connector X10183 (yellow/red cable on joint connector), if C3 is not required, insulate and tie back with a shrink hose, tie back excess length</p>
C4	1-pin blade terminal contact	yellow/white	<p>In cars with a production date prior to 9/98 Insulate and tie back with a shrink hose</p> <p>-----</p> <p>In cars with a production date after 9/98 To joint connector X10184 (yellow/white cable on joint connector), if C4 is not required, insulate and tie back with a shrink hose, tie back excess length</p>
C5	1-pin blade terminal contact	red/yellow	<p>In cars with a production date prior to 9/98 To connection plug X1171 of the ABS control unit in PIN 9, tie back excess length</p> <p>-----</p> <p>In automatic cars with M62 B44 engine and DSC, from production date 9/97 to production date 9/98 To connection plug X1171 of the ABS control unit in PIN 72, tie back excess length</p> <p>-----</p> <p>In cars with a production date after 9/98 Insulate and tie back with a shrink hose</p>
C6	1-pin blade terminal contact	yellow/white	<p>In cars with a production date prior to 9/98 To connection plug X1171 of the ABS control unit in PIN 42, tie back excess length</p> <p>-----</p> <p>In automatic cars with M62 B44 engine and DSC, from production date 9/97 to production date 9/98 To connection plug X1171 of the ABS control unit in PIN 73, tie back excess length</p> <p>-----</p> <p>In cars with a production date after 9/98 Insulate and tie back with a shrink hose</p>
C7	1-pin blade terminal contact	red/yellow	<p>In cars with a production date prior to 9/98 Insulate and tie back with a shrink hose</p> <p>-----</p> <p>In cars with a production date after 9/98 To black 42-pin connection plug X1170 of the ABS hydraulic unit in PIN 35, if C7 is not required, insulate and tie back with shrink hose</p>
C8	1-pin blade terminal contact	yellow/white	<p>In cars with a production date prior to 9/98 Insulate and tie back with a shrink hose</p> <p>-----</p> <p>In cars with a production date after 9/98 To black 42-pin connection plug X1170 of the ABS hydraulic unit in PIN 18, if C8 is not required, insulate and tie back with shrink hose</p>

3. Connection diagram

Item	Description	Cable colour	Connection location in the car
D	Aerial extension for GPS aerial	---	---
D1	Coaxial plug casing	---	To GPS aerial (5)
D2	Coaxial socket casing	---	To the navigation computer (18)

4. Installation and cabling diagram of the on-board monitor wiring harness



F 38 0398 B

The on-board monitor wiring harness **A** is to be laid along the audio or main wiring harness and secured with cable ties as shown in the figure.

When installing the on-board monitor wiring harness A, start at the earth post X13016 near the C pillar at the rear left.

Screw branch **A8** to the earth post connection **X13016** near the C pillar at the rear left. The on-board monitor wiring harness **A** crosses behind the left front seat and is to be laid from there along the cardan tunnel behind the centre console to the installation site of the on-board monitor.

Route branch **A11** to the installation site for the right TV amplifier on the right-hand C pillar (only to be connected if you are also installing a video module and the TV amplifier)

Route branch **A5** and **A6** to the aerial amplifier on the left-hand C pillar

Route branch **A7** to the installation site for the left TV amplifier on the left-hand C pillar (only to be connected if you are also installing a video module and the TV amplifier)

Route branches **A1**, **A2** and **A3** along the standard audio wiring harness to the installation site of the on-board monitor in the instrument panel

Route branches **A9** to **A18** through the opening in the rear window shelf along the main cable loom into the boot

Route branch **A9** to the installation site of the video module bracket in the rear left side part and clip into branch **A14**

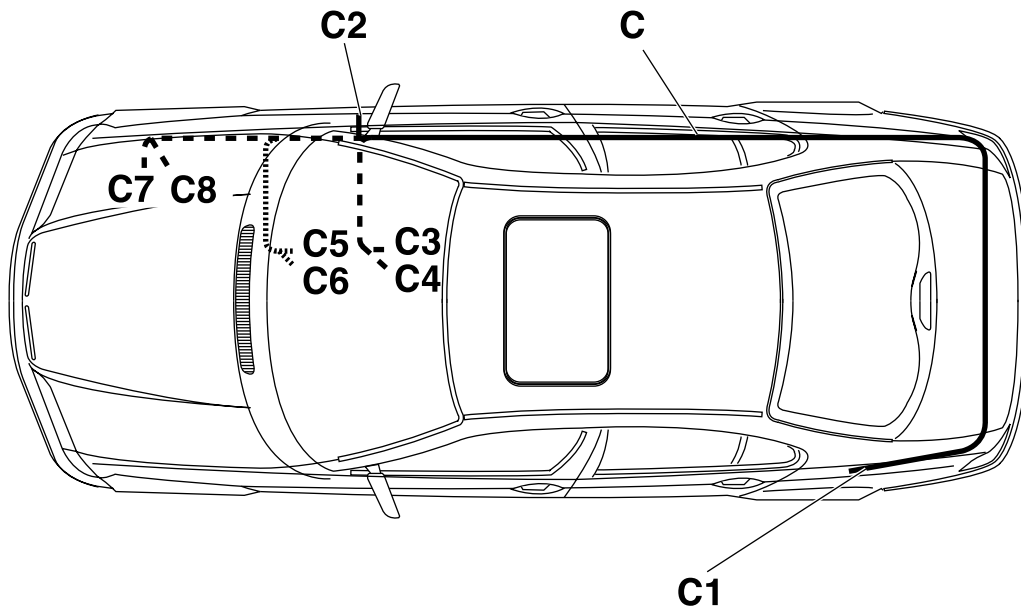
Route branches **A10** to **A13** to the installation location of the navigation computer in the rear left side part
Tie back branches **A10**, **A12** and **A13** (only to be connected if you are also installing a video module and TV amplifier)

Route branch **A14** to the installation site of the video module bracket in the rear left side part and clip into the securing clip on branch **A9** which has been clipped in

Route branches **A15** to **A18** to the installation location of the on-board monitor radio in the rear left side part

Tie back any excess lengths.

5. Installation and cabling diagram of the supplementary wiring harness for the navigation system



F 38 0399 B

Route the supplementary wiring harness for the navigation system **C** as shown in the figure and secure it with cable ties.

When routing the supplementary wiring harness for the navigation system **C, start with branch **C1**.**

Legend:

—————	Routing for all cars
- - - - -	Additional routing for cars with a production date after 9/98
.....	Additional routing for cars with a production date prior to 9/98

Branch **C1** to the tail light unit in the boot at the rear left

Branch **C2** to **C8** along the closing panel to the right side part, from there through the passage grommet in the rear window shelf into the vehicle interior and from there along the right main cable loom to the installation site of the light module

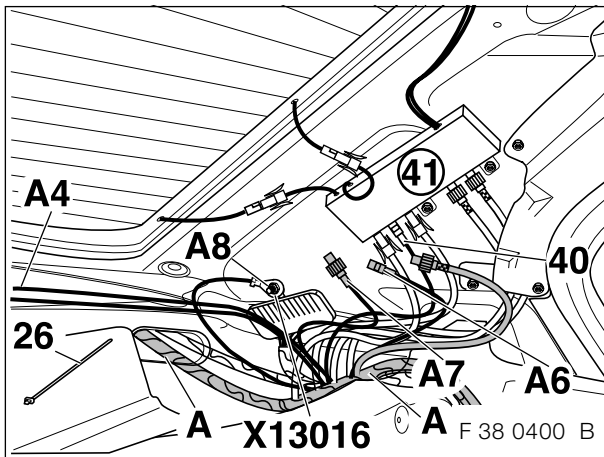
Branch **C3** and **C4** to the joint connector behind the glove compartment (LHD) or behind the steering column (RHD)

Branches **C5** and **C6** to the installation site of the ABS control unit behind the glove compartment (LHD) or behind the steering column (RHD)

Branches **C7** and **C8** through the passage grommet in the bulkhead into the engine compartment to the installation site of the ABS hydraulic unit

Tie back any excess lengths.

6. To install the on-board monitor wiring harness, on-board monitor and on-board monitor radio



Install branch **A4**, coaxial plug casing on the on-board monitor wiring harness **A**, on the rear window shelf along the rear window to the installation site of the right TV amplifier on the C-pillar on the right and tie it back with cable ties (26) (only to be connected if you are installing a video module).

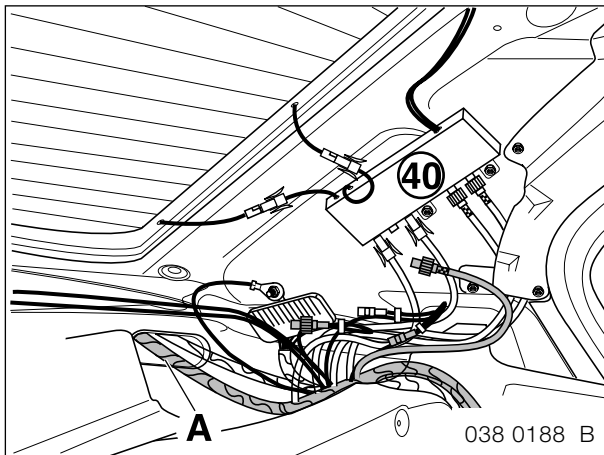
Tie back branch **A6**, coaxial socket casing on the on-board monitor wiring harness **A**, with a cable tie (26) (no longer required).

Tie back branch cable **A7**, coaxial plug casing on the on-board monitor wiring harness **A**, with a cable tie (26) (only to be connected if you are installing a video module).

Screw branch cable **A8**, 6 mm cable eyelet on the on-board monitor wiring harness **A**, to the ground post **X13016** on the C-pillar at the rear left.

Disconnect the existing coaxial socket casing (40) from the aerial amplifier (41) and tie it back (no longer required).

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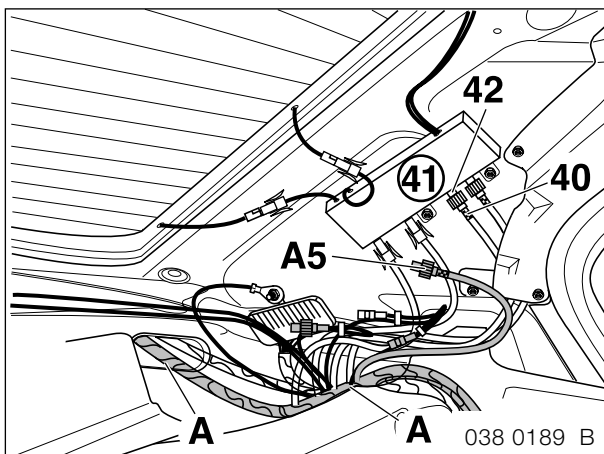


Disconnect the remaining connection cables from the aerial amplifier (40) and remove the aerial amplifier (40).

Then install the **new** aerial amplifier, which you ordered separately using the electronic parts catalogue (EPC) (part No. 65 25 6 906 082) and connect it following the procedure for the removal in reverse.



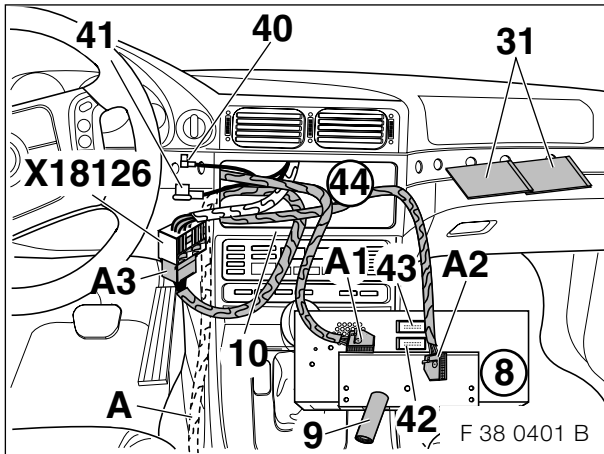
When connecting it, make sure that you do not confuse the slots. ◀



Unscrew the existing coaxial plug casing (40) from the new aerial amplifier (41) and tie it back (no longer required).

Screw branch **A5**, coaxial plug casing on the on-board monitor wiring harness **A**, to the released coaxial socket casing (42) on the new aerial amplifier (41).

6. To install the on-board monitor wiring harness, on-board monitor and on-board monitor radio



▶ Before the work steps are carried out as shown in the figure, the new module holder of the on-board monitor (10) must be fitted and equipped as described in the TIS. ◀

Connect branch **A3**, black 17-pin plug casing on the on-board monitor wiring harness **A**, to the existing black 17-pin socket casing **X18126**.

Stick a rattle guard (31) onto the second rattle guard (31) and then stick it onto the wiring harness in such a way that the existing angled coaxial socket casing (40), the black coaxial socket casing (41) (aerial connector), the connection plug of the multi information display and the control for the Top HiFi system (if present), and the plug connector **A3 + X18126** are enclosed.

The enclosed connections, as well as the enclosed plug connector **A3 + X18126** are no longer required and should be routed behind the heating control.

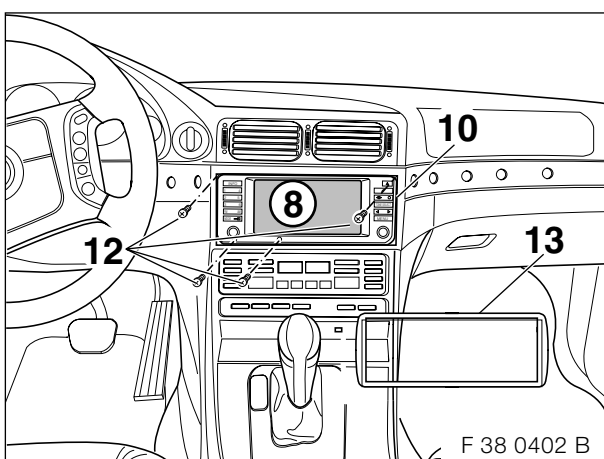
Screw the on-board monitor holding pin (9) onto the on-board monitor (8).

Connect branch **A1**, blue 12-pin socket casing, of the on-board monitor wiring harness **A** onto the blue 12-pin plug casing (42) of the on-board monitor (8).

Connect branch **A2**, white 12-pin socket casing, of the on-board monitor wiring harness **A** onto the white 12-pin plug casing (43) of the on-board monitor (8).

Then insert the cables into the on-board monitor slot (44) and carefully slide the on-board monitor (8) into position.

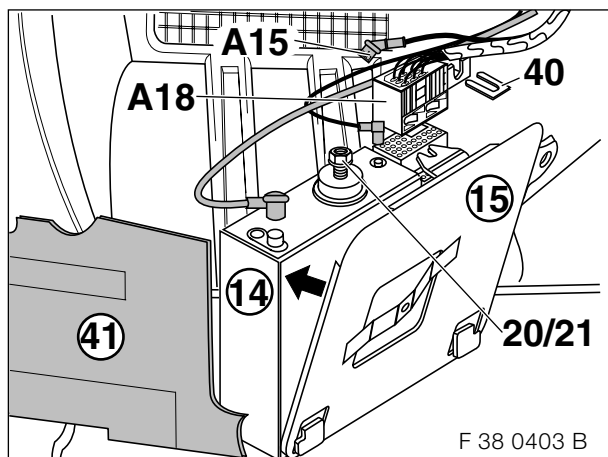
When pushing the on-board monitor in, take care to see that no cables get damaged.



Screw the on-board monitor (8) to the module holder of the on-board monitor (10) with four fillister head Philips screws M3x8 (12).

Then put the on-board monitor cover (13) onto the on-board monitor (8).

6. To install the on-board monitor wiring harness, on-board monitor and on-board monitor radio



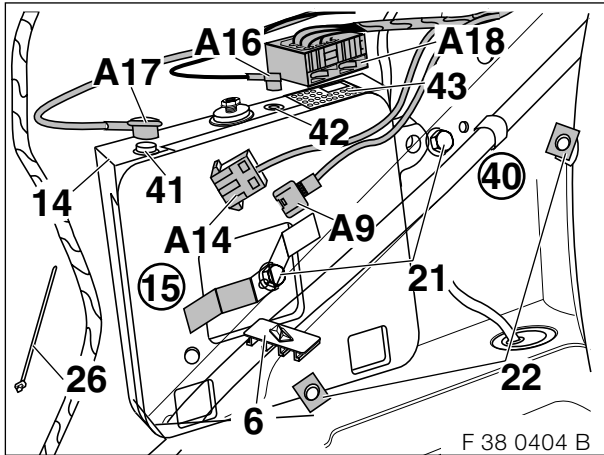
▶ The figure shows the boot at the rear left. ◀

Couple the on-board monitor radio bracket (15) into the on-board monitor radio (14) below and screw it on above with a hexagonal nut with washer M5 (20) or with a hexagonal screw with washer M5x14 (24), depending on the design of the on-board monitor radio (14). Remove the blue locking clip (40) from the black 17-pin socket casing **A18** and connect branch **A15**, 10-pin socket casing, of the on-board monitor wiring harness **A** to the place provided for it in the black 17-pin socket casing **A18**.

If the car has a CD changer without a DSP amplifier, the on-board monitor radio/CD changer control cable must also be fitted.

Secure branch **A15**, 10-pin socket casing, with the blue locking clip (40). Then detach the insulating mat (41) in the side part, inside rear left.

6. To install the on-board monitor wiring harness, on-board monitor and on-board monitor radio



Screw the on-board monitor radio bracket (15) with attached on-board monitor radio (14) onto the cross-brace (40) in the side part, rear left, with two hexagonal screws with washers M5x14 (21).

Plug branch **A17**, black coaxial socket casing (aerial connector) of the on-board monitor wiring harness **A**, onto the coaxial plug casing (41) on the on-board monitor radio (14).

Plug branch **A16**, offset coaxial socket casing, of the on-board monitor wiring harness **A** onto the coaxial plug casing (42) on the on-board monitor radio (14).

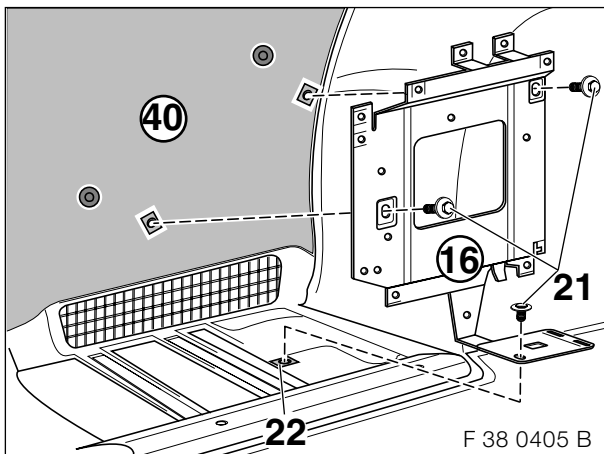
Connect branch **A18**, black 17-pin socket casing, of the on-board monitor wiring harness **A** onto the black 17-pin plug casing (43) on the on-board monitor radio (14).

Attach the cables of the plugged-in branches **A16**, **A17** and **A18** with cable ties (26).

Put two speed nuts M5 (22) onto the pre-punched holes in the cross-brace (40) in the side part, rear left and mount the detached insulating mat again in the side part, rear left.

Clip branch **A9**, black 10-pin plug casing, of the on-board monitor wiring harness **A** into branch **A14**, white 6-pin plug casing, of the on-board monitor wiring harness **A**.

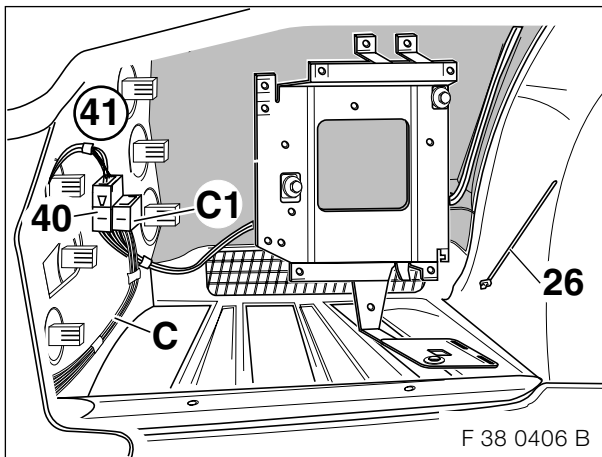
Then clip the securing clip (6) into branch **A14**, white 6-pin plug casing (is later snapped into the bracket of the video module).



Put a speed nut M5 (22) on to the place provided in the side part, rear left. Screw the base holder (16) onto the three speed nuts M5 with three hexagonal screws with washers M5x14 (21), as shown in the figure.

▶ Take care to see that the insulating mat (40) is mounted first. ◀

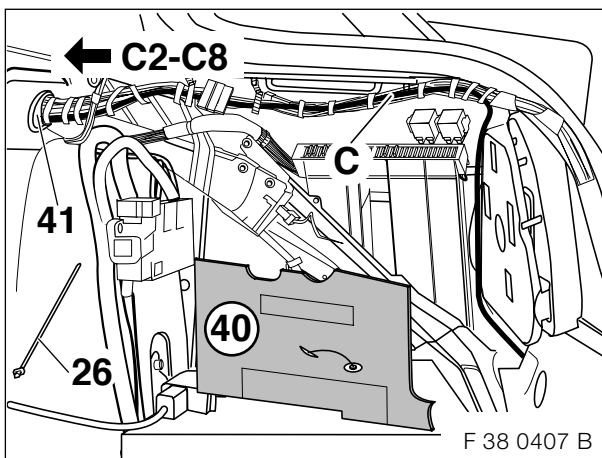
7. To install the supplementary wiring harness for navigation systems in cars with a production date prior to 9/98



Clip branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C** into the existing plug connector (40) on the tail light unit (41), rear left.

Install the supplementary wiring harness for the navigation system **C** along the closing panel to the right side part.

Secure the supplementary wiring harness for the navigation system **C** with cable ties (26).

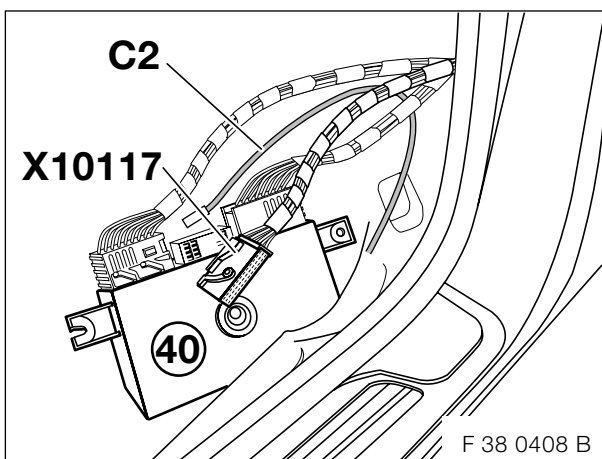


Remove the insulating mat (40) in the right side part, rear.

Route the supplementary wiring harness for the navigation system **C**, as shown, to the passage grommet (41) in the rear window shelf.

Then route branches **C2** to **C8** through the passage grommet (41) into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A-pillar on the right.

Fasten the supplementary wiring harness for the navigation system **C** with cable ties (26) and install the insulating mat (40) back into the right side part, rear.



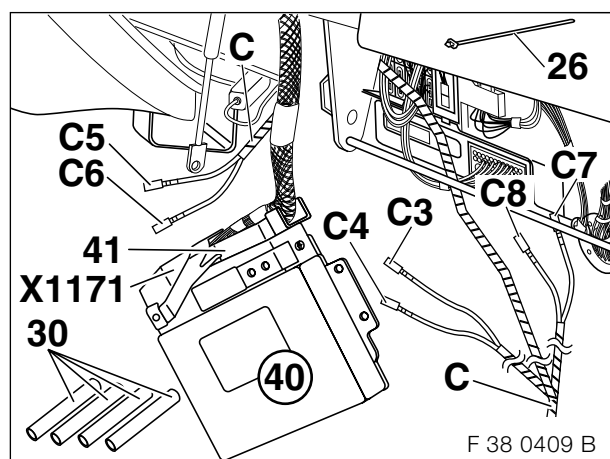
Remove the light module (40), unplug the black 54-pin socket casing **X10117** from the light module (40) and open it.


Connect branch **C2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Close the black socket casing **X10117**, plug it in and reinstall the light module (40).

Tie back any excess length on the supplementary wiring harness for the navigation system **C** before branch **C2**.

7. To install the supplementary wiring harness for navigation systems in cars with a production date prior to 9/98



 The figure shows the installation in a LHD car. Proceed in exactly the same way on a RHD car. ◀

Push a shrink hose (30) onto each branch **C3**, 1-pin blade terminal contact, yellow/red cable, branch **C4**, 1-pin blade terminal contact, yellow/white cable, branch **C7**, 1-pin blade terminal contact, yellow/red cable and branch **C8**, 1-pin blade terminal contact, yellow/white cable of the supplementary wiring harness for the navigation system **C**. Use a hot air blower to shrink-fit the insulation.

Then use cable ties (26) to tie back branches **C3**, **C4**, **C7** and **C8** in the area of the right front door sill.

Route branches **C5** and **C6** of the supplementary wiring harness for the navigation system **C** to the ABS control unit (40) on the left next to the glove compartment (LHD) or on the left next to the steering column (RHD). (Tie back any excess length.)

Remove the ABS control unit (40).

Disconnect and dismantle the control unit connector **X1171**.

Insert branches **C5** and **C6** into the plug-in guide (41).

 **Note instructions for automatic cars with M62 B44 engine and DSC, from production date 9/97 to production date 9/98 on the next page.** ◀

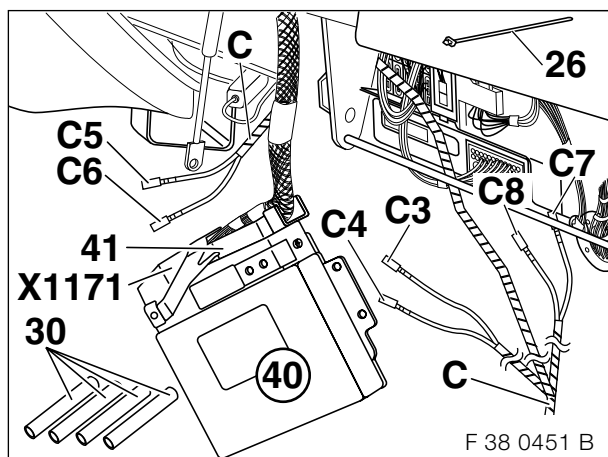
Connect branch **C5**, 1-pin blade terminal contact, yellow/red cable, to **PIN 9** of the control unit connector **X1171**. If **PIN 9** is already occupied, cut off the contact part from branch **C5** and solder the yellow/red cable onto the cable of **PIN 9** in the installation space of the ABS plug and insulate it.

Connect branch **C6**, 1-pin blade terminal contact, yellow/white cable, to **PIN 42** of the control unit connector **X1171**. If **PIN 42** is already occupied, cut off the contact part from branch **C6** and solder the yellow/white cable onto the cable of **PIN 42** in the installation space of the ABS plug and insulate it.

Assemble the control unit connector **X1171** again and connect it to the ABS control unit (40).

Install the ABS control unit (40) and fasten the supplementary wiring harness for the navigation system **C** with cable ties (26).

7. To install the supplementary wiring harness for navigation systems in cars with a production date prior to 9/98



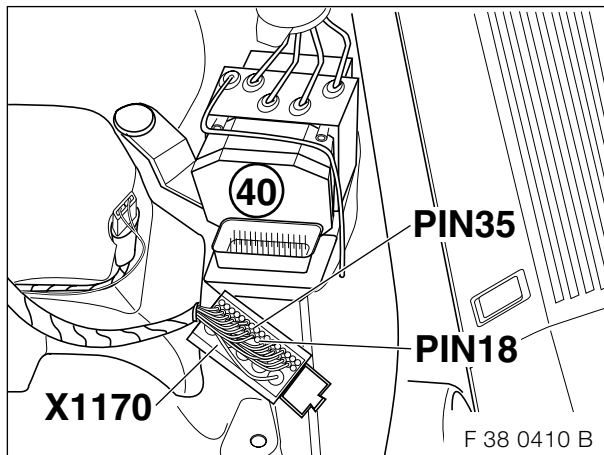
Only for automatic cars with M62 B44 engine and DSC, from production date 9/97 to production date 9/98

Connect branch **C5**, 1-pin blade terminal contact, yellow/red cable, to **PIN 72** of the control unit connector **X1171**. If **PIN 72** is already occupied, cut off the contact part from branch **C5** and solder the yellow/red cable onto the cable of **PIN 72** in the installation space of the ABS plug and insulate it.

Connect branch **C6**, 1-pin blade terminal contact, yellow/white cable, to **PIN 73** of the control unit connector **X1171**. If **PIN 73** is already occupied, cut off the contact part from branch **C6** and solder the yellow/white cable onto the cable of **PIN 73** in the installation space of the ABS plug and insulate it.

Assemble the control unit connector **X1171** again and connect it to the ABS control unit (40). Install the ABS control unit (40) and fasten the supplementary wiring harness for the navigation system **C** with cable ties (26).

8. To choose installation of the supplementary wiring harness for navigation systems in cars with a production date after 9/98



▶ The figure shows the engine compartment, front right. ◀

Disconnect the black 42-pin connection plug **X1170** from the ABS hydraulic unit (40) in the engine compartment at the front right, open it and check whether **PIN 18** and **PIN 35** are occupied.

If **PIN 18** and **PIN 35** are not occupied, install the supplementary wiring harness for the navigation system as described in **section 9**.

Section 9. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit not occupied).

If **PIN 18** and **PIN 35** are occupied, install the supplementary wiring harness for the navigation system as described in **section 10**.

Section 10. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit occupied).

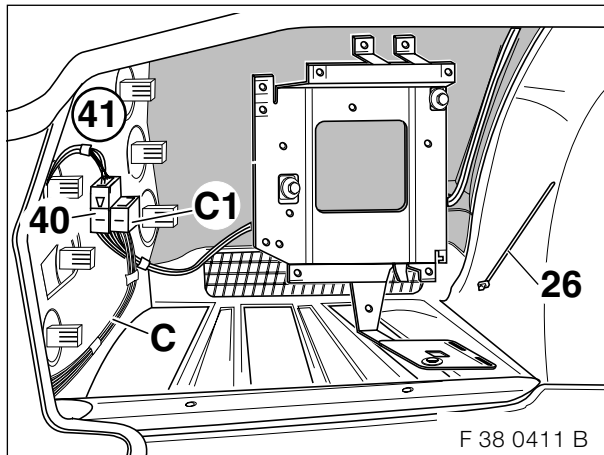
If **PIN 18** is occupied and **PIN 35** is not occupied, install the supplementary wiring harness for the navigation system as described in **section 11**.

Section 11. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 occupied and PIN 35 not occupied on the connection plug of the ABS hydraulic unit).

If **PIN 18** is not occupied and **PIN 35** is occupied, install the supplementary wiring harness for the navigation system as described in **section 12**.

Section 12. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 not occupied and PIN 35 occupied on the connection plug of the ABS hydraulic unit).

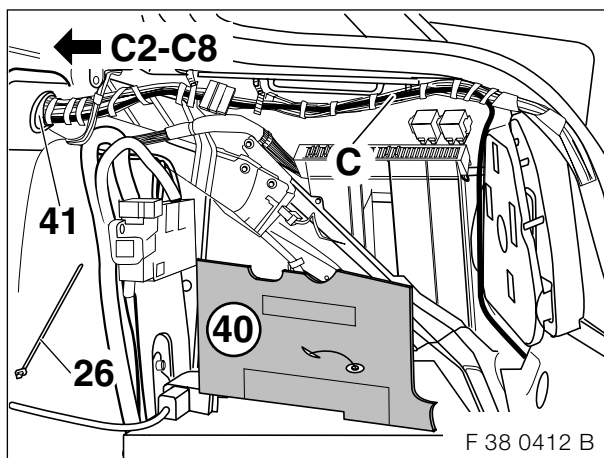
9. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit not occupied)



Clip branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C** into the existing plug connector (40) on the tail light unit (41), rear left.

Install the supplementary wiring harness for the navigation system **C** along the closing panel to the right side part.

Secure the supplementary wiring harness for the navigation system **C** with cable ties (26).

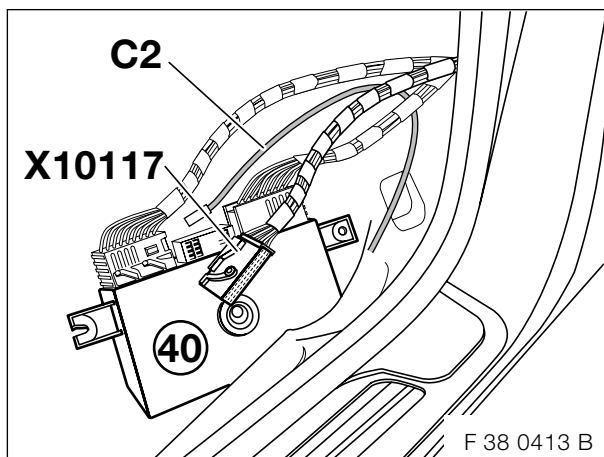


Remove the insulating mat (40) in the right side part, rear.

Route the supplementary wiring harness for the navigation system **C**, as shown, to the passage grommet (41) in the rear window shelf.

Then route branches **C2** to **C8** through the passage grommet (41) into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A-pillar on the right.

Fasten the supplementary wiring harness for the navigation system **C** with cable ties (26) and install the insulating mat (40) back into the right side part, rear.



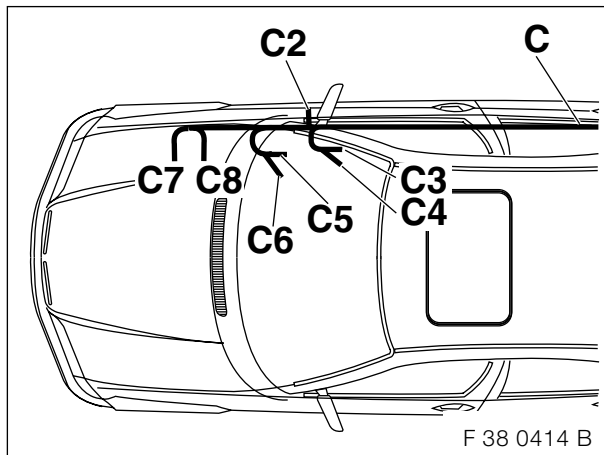
Remove the light module (40), unplug the black 54-pin socket casing **X10117** from the light module (40) and open it.

Connect branch **C2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Close the black socket casing **X10117**, plug it in and reinstall the light module (40).

Tie back any excess length on the supplementary wiring harness for the navigation system **C** before branch **C2**.

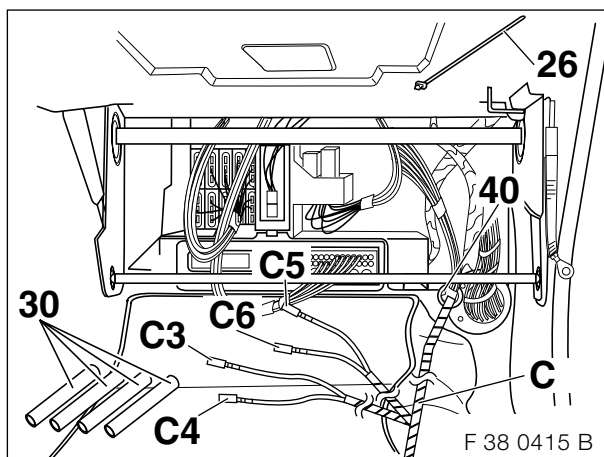
9. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit not occupied)



- ▶ Before further installation of the supplementary wiring harness for the navigation system, you should remove the cover for the control unit box in the engine compartment, right. ◀

Insulate branches **C3** to **C6** of the supplementary wiring harness for the navigation system **C** with shrink hose and tie back in the area of the right front door sill.

Route branches **C7** and **C8** of the supplementary wiring harness for the navigation system **C** through the passage grommet in the bulkhead, front right, into the control unit box and from there on to the ABS hydraulic unit. Connect it to the black 42-pin connection plug **X1170** of the ABS hydraulic unit.



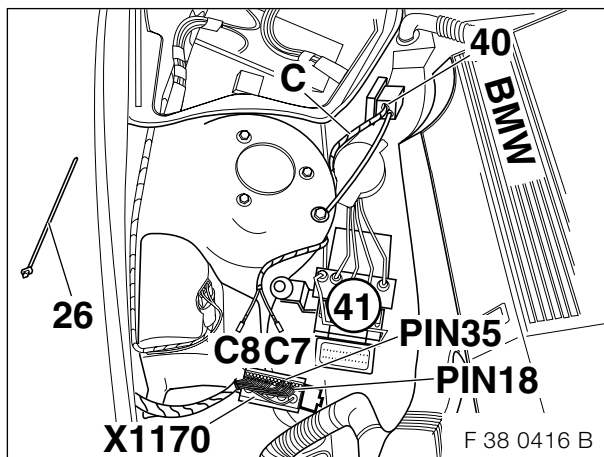
- ▶ The figure shows the area behind the glove compartment in a left-hand drive car. Proceed in exactly the same way in right-hand drive cars.

Feed the supplementary wiring harness for the navigation system **C** with branches **C7** and **C8** through the passage grommet (40) in the bulkhead, front right, to the control unit box in the engine compartment and fasten with cable ties (26).

Push a shrink hose (30) onto each branch **C3**, 1-pin blade terminal contact, yellow/red cable, branch **C4**, 1-pin blade terminal contact, yellow/white cable, branch **C5**, 1-pin blade terminal contact, yellow/red cable and branch **C6**, 1-pin blade terminal contact, yellow/white cable of the supplementary wiring harness for the navigation system **C**. Use a hot air blower to shrink-fit the insulation.

Then tie back branches **C3** to **C6** in the area of the right front door sill with cable ties (26).

9. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit not occupied)



Carefully push the supplementary wiring harness for the navigation system **C** with branches **C7** and **C8** through the rubber grommet (40) and route to the ABS hydraulic unit (41).



Seal the rubber grommet (40) with silicone (splash-water protection) after installation of the supplementary wiring harness for the navigation system **C**. ◀

Unfasten the black 42-pin connection plug **X1170** of the ABS hydraulic unit and connect branches **C7** and **C8** as follows:

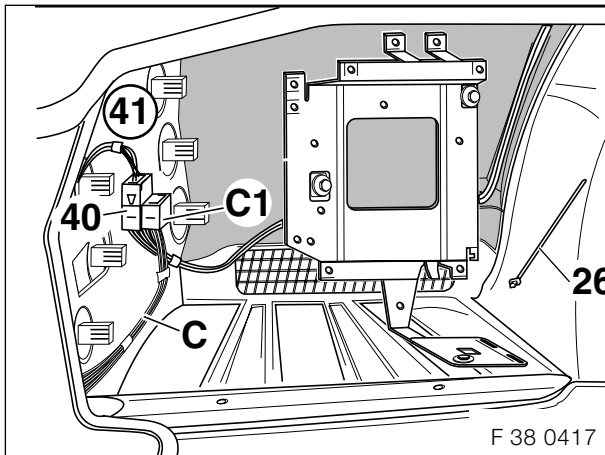
Connect branch **C7**, 1-pin blade terminal contact, yellow/red cable, to the black 42-pin connection plug **X1170** of the ABS hydraulic unit, slot **PIN 35**.

Connect branch **C8**, 1-pin blade terminal contact, yellow/white cable, to the black 42-pin connection plug **X1170** of the ABS hydraulic unit, slot **PIN 18**.

Couple the black 42-pin connection plug **X1170** again and plug it onto the ABS hydraulic unit.

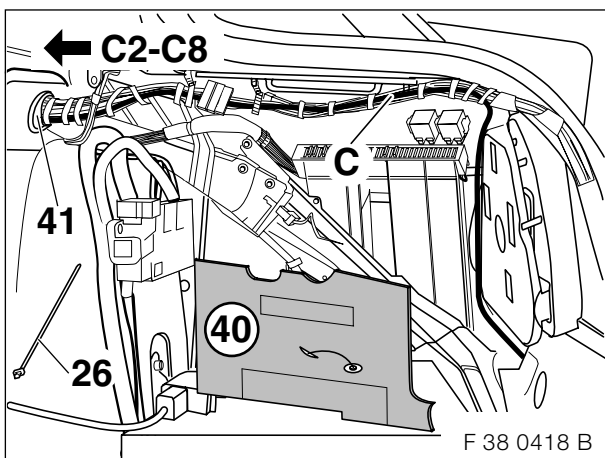
Then use cable ties (26) to fasten the supplementary wiring harness for the navigation system **C** in the area of the engine compartment.

10. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit occupied)



Clip branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C** into the existing plug connector (40) on the tail light unit (41), rear left.

Install the supplementary wiring harness for the navigation system **C** along the closing panel to the right side part. Secure the supplementary wiring harness for the navigation system **C** with cable ties (26).

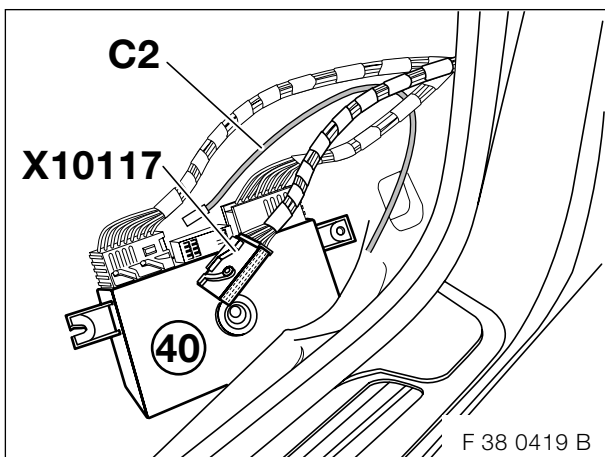


Remove the insulating mat (40) in the right side part, rear.

Route the supplementary wiring harness for the navigation system **C**, as shown, to the passage grommet (41) in the rear window shelf.

Then route branches **C2** to **C8** through the passage grommet (41) into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A-pillar on the right.

Fasten the supplementary wiring harness for the navigation system **C** with cable ties (26) and install the insulating mat (40) back into the right side part, rear.



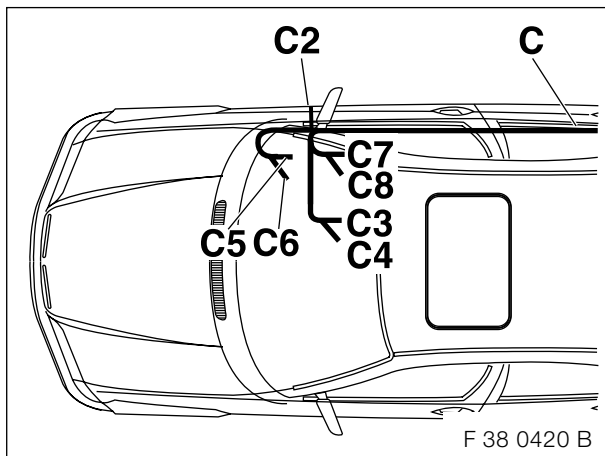
Remove the light module (40), unplug the black 54-pin socket casing **X10117** from the light module (40) and open it.

Connect branch **C2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Close the black socket casing **X10117**, plug it in and reinstall the light module (40).

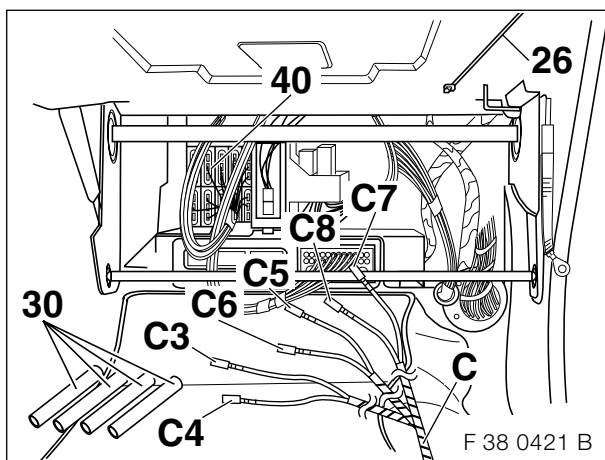
Tie back any excess length on the supplementary wiring harness for the navigation system **C** before branch **C2**.

10. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 and PIN 35 on the connection plug of the ABS hydraulic unit occupied)



Insulate branches **C5** to **C8** of the supplementary wiring harness for the navigation system **C** with shrink hose and tie back in the area of the right front door sill.

Route branches **C3** and **C4** of the supplementary wiring harness for the navigation system **C** to the joint connector behind the glove compartment (LHD) or behind the steering column (RHD) (ties back any excess length) and connect to the joint connectors **X10183** and **X10184**.



☐ The figure shows the area behind the glove compartment in a left-hand drive vehicle. You should proceed in the identical sequence for right-hand drive vehicles. ◀

Push a shrink hose (30) onto each branch **C5**, 1-pin blade terminal contact, yellow/red cable, branch **C6**, 1-pin blade terminal contact, yellow/white cable, branch **C7**, 1-pin blade terminal contact, yellow/red cable and branch **C8**, 1-pin blade terminal contact, yellow/white cable of the supplementary wiring harness for the navigation system **C**. Use a hot air blower to shrink-fit the insulation.

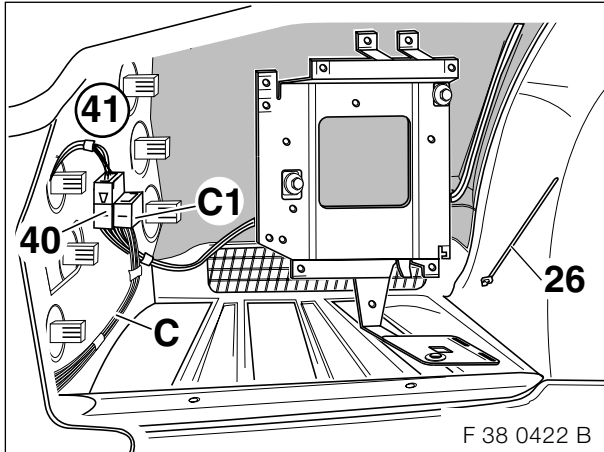
Then tie back branches **C5** to **C8** in the area of the right front door sill with cable ties (26).

Connect branch **C3**, 1-pin blade terminal contact, yellow/red cable, to the joint connector **X10183** (yellow/red cable on the joint connector) in the joint connector (40) behind the glove compartment (LHD) or behind the steering column (RHD).

Connect branch **C4**, 1-pin blade terminal contact, yellow/white cable, to the joint connector **X10184** (yellow/white cable on the joint connector) in the joint connector (40) behind the glove compartment (LHD) or behind the steering column (RHD).

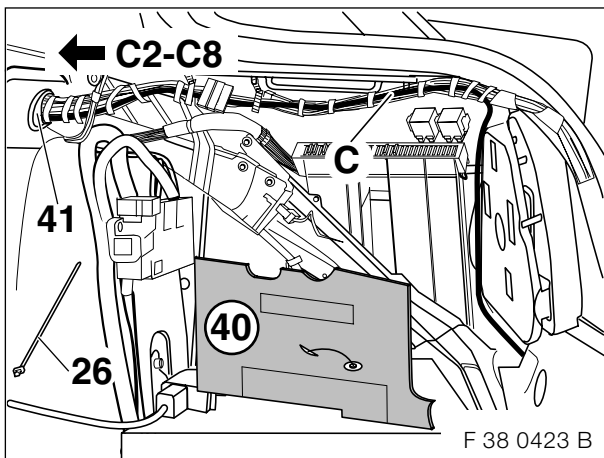
Any excessive lengths of branches **C3** and **C4** should be tied back with cable ties (26).

11. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 occupied and PIN 35 not occupied on the connection plug of the ABS hydraulic unit)



Clip branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C** into the existing plug connector (40) on the tail light unit (41), rear left.

Install supplementary wiring harness for the navigation system **C** along the closing panel to the right side part. Secure the supplementary wiring harness for the navigation system **C** with cable ties (26).

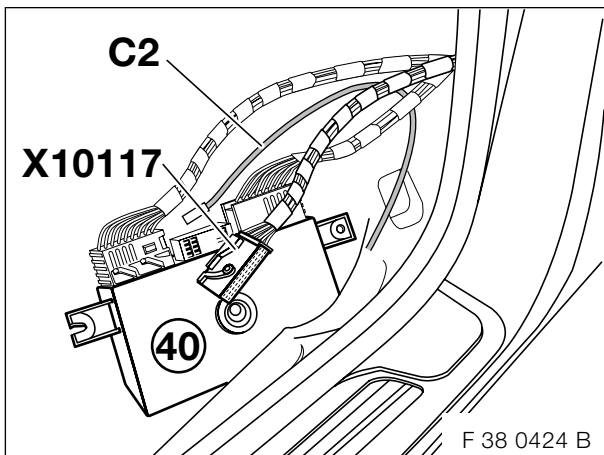


Remove the insulating mat (40) in the right side part, rear.

Route the supplementary wiring harness for the navigation system **C**, as shown, to the passage grommet (41) in the rear window shelf.

Then route branches **C2** to **C8** through the passage grommet (41) into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A-pillar on the right.

Fasten the supplementary wiring harness for the navigation system **C** with cable ties (26) and install the insulating mat (40) back into the right side part, rear.



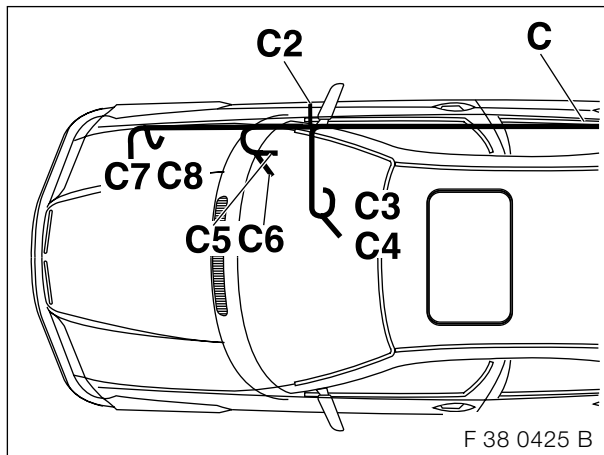
Remove the light module (40), unplug the black 54-pin socket casing **X10117** from the light module (40) and open it.

Connect branch **C2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Close the black socket casing **X10117**, plug it in and reinstall the light module (40).

Tie back any excess length on the supplementary wiring harness for the navigation system **C** before branch **C2**.

11. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 occupied and PIN 35 not occupied on the connection plug of the ABS hydraulic unit)



▶ Before further installation of the supplementary wiring harness for the navigation system, you should remove the cover for the control unit box in the engine compartment, right.

Route branches **C7** and **C8** of the supplementary wiring harness for the navigation system **C** through the passage grommet in the bulkhead, front right, into the control unit box and from there onwards to the ABS hydraulic unit.

Only connect branch **C7**, 1-pin blade terminal contact, to the black 42-pin connection plug **X1170, PIN 35**, of the ABS hydraulic unit.

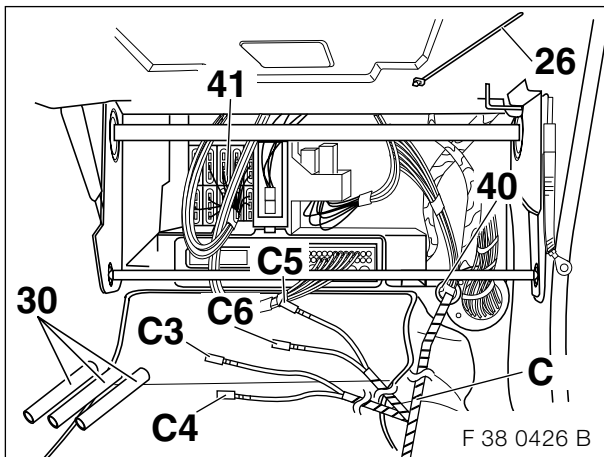
Insulate branch **C8**, 1-pin blade terminal contact, with shrink hose and tie it back.

Route branches **C3** and **C4** of the supplementary wiring harness for the navigation system **C** to the joint connector behind the glove compartment (LHD) or behind the steering column (RHD).

Insulate branch **C3**, 1-pin blade terminal contact, with shrink hose and tie it back. Only connect branch **C4**, 1-pin blade terminal contact, to the joint connector **X10184**.

Insulate branches **C5** and **C6** of the supplementary wiring harness for the navigation system **C** with shrink hose and tie back in the area of the right front door sill.

11. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 occupied and PIN 35 not occupied on the connection plug of the ABS hydraulic unit)



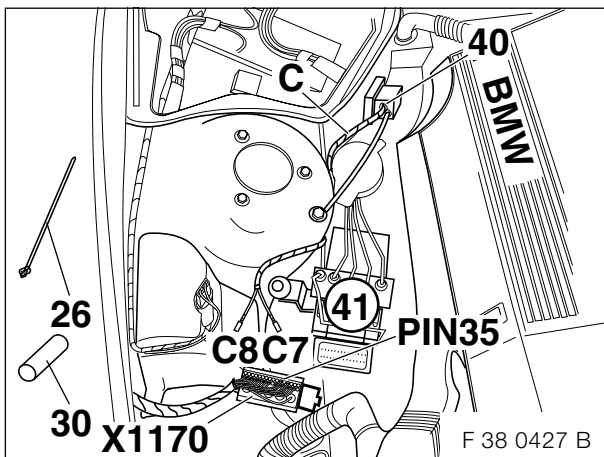
▶ The figure shows the area behind the glove compartment in a left-hand drive vehicle. You should proceed in the identical sequence for right-hand drive vehicles. ◀

Feed the supplementary wiring harness for the navigation system **C** with branches **C7** and **C8** through the passage grommet (40) in the bulkhead, front right, to the control unit box in the engine compartment and fasten with cable ties (26).

Push a shrink hose (30) onto each branch **C3**, 1-pin blade terminal contact, yellow/red cable, branch **C5**, 1-pin blade terminal contact, yellow/red cable and branch **C6**, 1-pin blade terminal contact, yellow/white cable of the supplementary wiring harness for the navigation system **C**. Use a hot air blower to shrink-fit the insulation.

Connect branch **C4**, 1-pin blade terminal contact, yellow/white cable, to the joint connector **X10184** (yellow/white cable on the joint connector) in the joint connector (41) behind the glove compartment (LHD) or behind the steering column (RHD).

Then tie back branches **C3**, **C5**, and **C6** in the area of the right front door sill with cable ties (26).



Carefully push the supplementary wiring harness for the navigation system **C** with branches **C7** and **C8** through the rubber grommet (40) and route to the ABS hydraulic unit (41).

▶ Seal the rubber grommet (40) with silicone (splash-water protection) after installation of the supplementary wiring harness for the navigation system **C**. ◀

Unfasten the black 42-pin connection plug **X1170** of the ABS hydraulic unit and connect branch **C7** as follows:

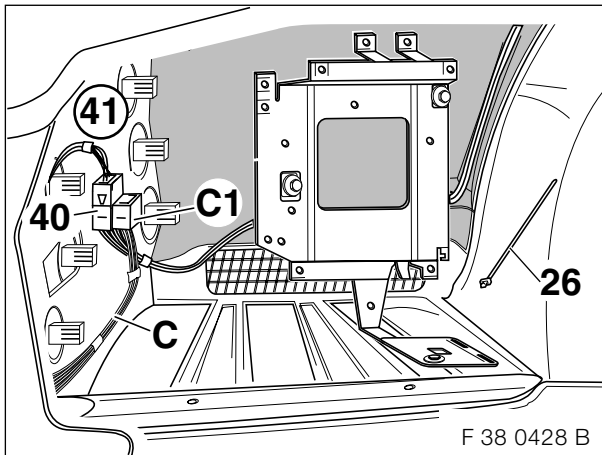
Connect branch **C7**, 1-pin blade terminal contact, yellow/red cable, to the black 42-pin connection plug **X1170** of the ABS hydraulic unit, slot **PIN 35**.

Push a shrink hose (30) onto branch **C8**, 1-pin blade terminal contact, yellow/white cable. Use a hot air blower to shrink the insulation.

Couple the black 42-pin connection plug **X1170** again and plug it onto the ABS hydraulic unit.

Then use cable ties (26) to fasten the supplementary wiring harness for the navigation system **C** in the area of the engine compartment.

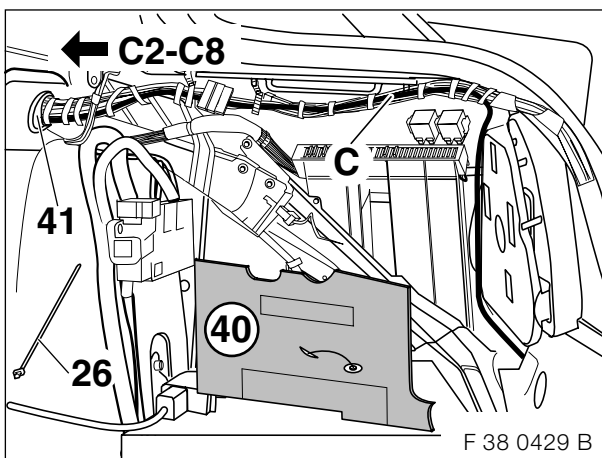
12. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 not occupied and PIN 35 occupied on the connection plug of the ABS hydraulic unit)



Clip branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C** into the existing plug connector (40) on the tail light unit (41), rear left.

Install the supplementary wiring harness for the navigation system **C** along the closing panel to the right side part.

Secure the supplementary wiring harness for the navigation system **C** with cable ties (26).

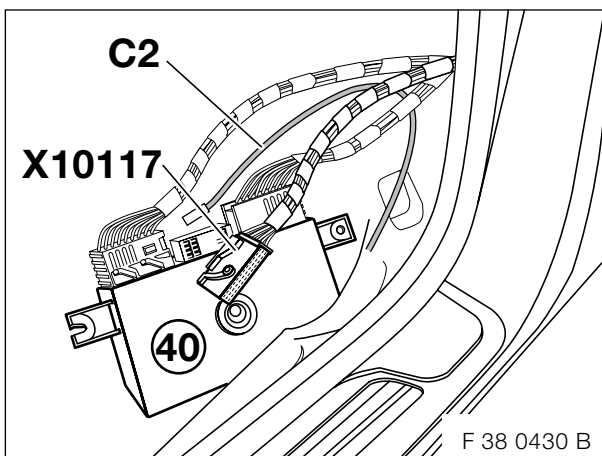


Remove the insulating mat (40) in the right side part, rear.

Route the supplementary wiring harness for the navigation system **C**, as shown, to the passage grommet (41) in the rear window shelf.

Then route branches **C2** to **C8** through the passage grommet (41) into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A-pillar on the right.

Fasten the supplementary wiring harness for the navigation system **C** with cable ties (26) and install the insulating mat (40) back into the right side part, rear.



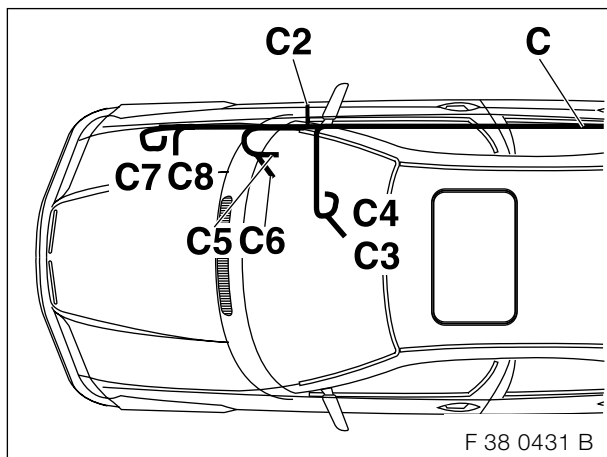
Remove the light module (40), unplug the black 54-pin socket casing **X10117** from the light module (40) and open it.

Connect branch **C2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Close the black socket casing **X10117**, plug it in and reinstall the light module (40).

Tie back any excess length on the supplementary wiring harness for the navigation system **C** before branch **C2**.

12. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 not occupied and PIN 35 occupied on the connection plug of the ABS hydraulic unit)



▶ Before further installation of the supplementary wiring harness for the navigation system, you should remove the cover for the control unit box in the engine compartment, right. ◀

Route branches **C7** and **C8** of the supplementary wiring harness for the navigation system **C** through the passage grommet in the bulkhead, front right, into the control unit box and from there onwards to the ABS hydraulic unit.

Insulate branch **C7**, 1-pin blade terminal contact, with shrink hose and tie it back.

Only connect branch **C8**, 1-pin blade terminal contact, to the black 42-pin connection plug **X1170, PIN 18**, of the ABS hydraulic unit.

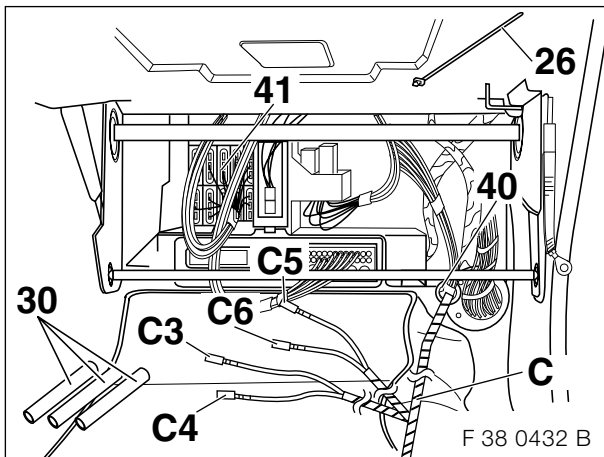
Route branches **C3** and **C4** of the supplementary wiring harness for the navigation system **C** to the joint connector behind the glove compartment (LHD) or behind the steering column (RHD).

Only connect branch **C3**, 1-pin blade terminal contact, to the joint connector **X10183**.

Insulate branch **C4**, 1-pin blade terminal contact, with shrink hose and tie it back.

Insulate branches **C5** and **C6** of the supplementary wiring harness for the navigation system **C** with shrink hose and tie back in the area of the right front door sill.

12. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 not occupied and PIN 35 occupied on the connection plug of the ABS hydraulic unit)



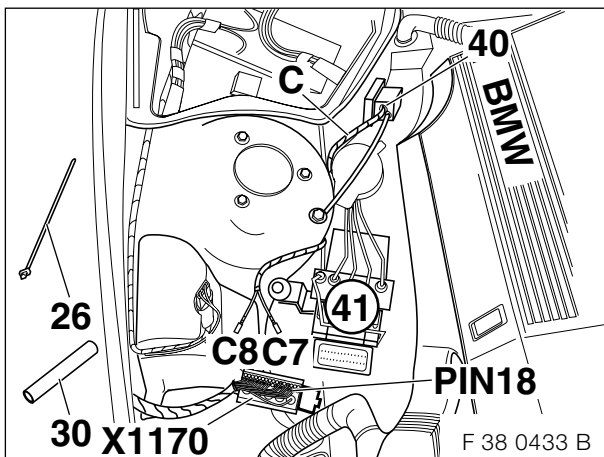
- ▶ The figure shows the area behind the glove compartment in a left-hand drive vehicle. You should proceed in the identical sequence for right-hand drive vehicles. ◀

Feed the supplementary wiring harness for the navigation system **C** with branches **C7** and **C8** through the passage grommet (40) in the bulkhead, front right, to the control unit box in the engine compartment and fasten with cable ties (26).

Push a shrink hose (30) onto each branch **C4**, 1-pin blade terminal contact, yellow/white cable, branch **C5**, 1-pin blade terminal contact, yellow/red cable and branch **C6**, 1-pin blade terminal contact, yellow/white cable of the supplementary wiring harness for the navigation system **C**. Use a hot air blower to shrink-fit the insulation.

Connect branch **C3**, 1-pin blade terminal contact, yellow/red cable, to the joint connector **X10183** (yellow/red cable on the joint connector) in the joint connector (41) behind the glove compartment (LHD) or behind the steering column (RHD).

Then tie back branches **C4**, **C5**, and **C6** in the area of the right front door sill with cable ties (26).



Carefully push the supplementary wiring harness for the navigation system **C** with branches **C7** and **C8** through the rubber grommet (40) and route to the ABS hydraulic unit (41).

- ▶ Seal the rubber grommet (40) with silicone (splash-water protection) after installation of the supplementary wiring harness for the navigation system **C**. ◀

Unfasten the black 42-pin connection plug **X1170** of the ABS hydraulic unit and connect branch **C8** as follows:

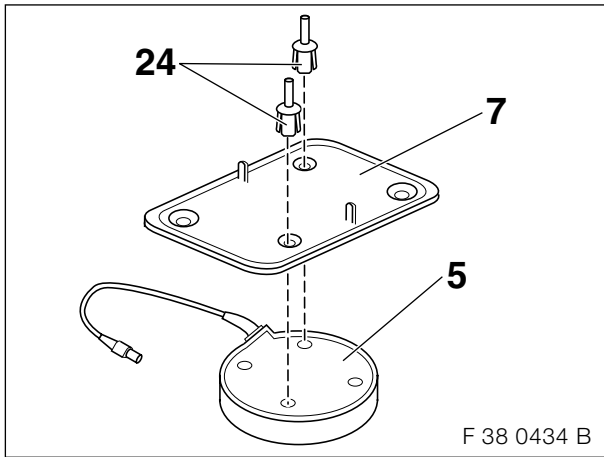
Connect branch **C8**, 1-pin blade terminal contact, yellow/white cable, to the black 42-pin connection plug **X1170** of the ABS hydraulic unit, slot **PIN 18**.

Push a shrink hose (30) onto branch **C7**, 1-pin blade terminal contact, yellow/red cable. Use a hot air blower to shrink the insulation.

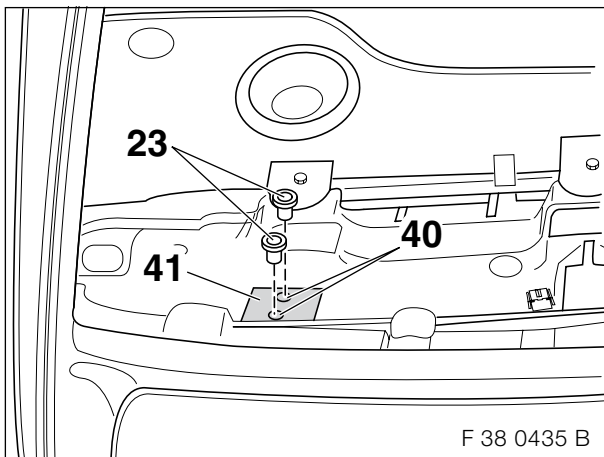
Couple the black 42-pin connection plug **X1170** again and plug it onto the ABS hydraulic unit.

Then use cable ties (26) to fasten the supplementary wiring harness for the navigation system **C** in the area of the engine compartment.

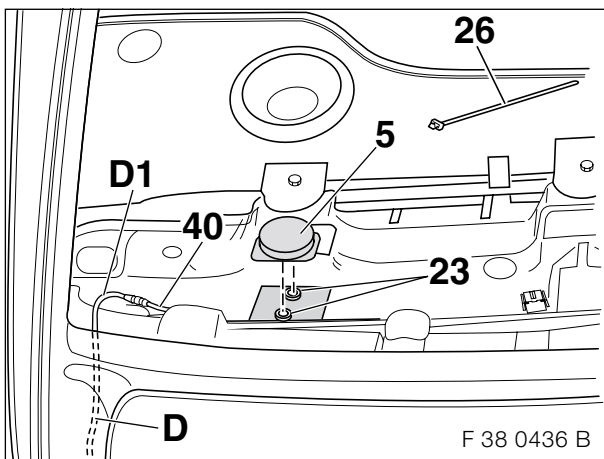
13. To install the navigation system



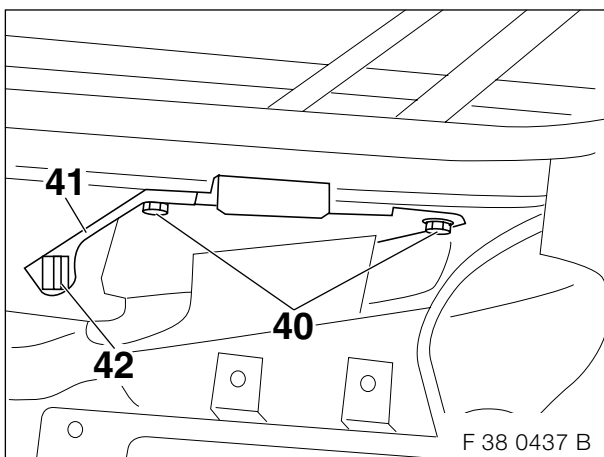
Place retaining plate (7) on the GPS aerial (5) and attach it with expanding rivets (24).



▶ The figure shows rear window shelf on the left. ◀
 Check that existing attachments points (40) are Ø 8 mm. Drill out the attachment points to 8 mm if necessary.
 Take out pre-punched cut-out (41) under the rear window shelf and press in attachment grommets (23) into the attachment points (40).

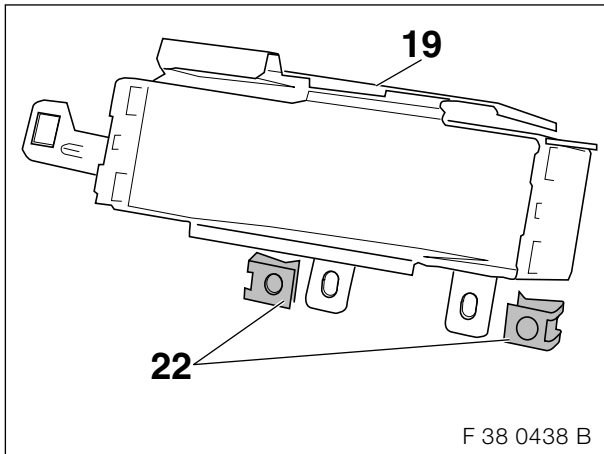


Plug together branches **D1**, coaxial plug casing, of the aerial extension for GPS aerial **D** with the aerial cable (40) of the GPS aerial (5).
 Insert the retaining plate with the mounted GPS aerial into the attachment grommets (23) and route the aerial extension for the GPS aerial **D** along the original wiring harness to the designated installation site of the navigation computer (in the boot at the top rear left) and fasten with cable ties (26).

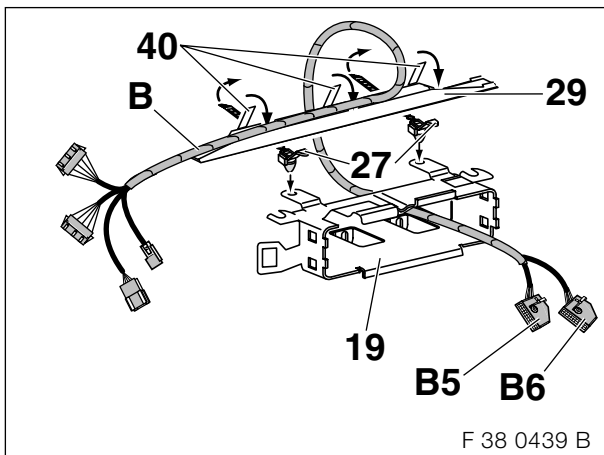


▶ The figure shows the boot at the top rear left. ◀
 Remove retaining nuts M6 (40) and dismantle installed trim-panel bracket (41) (is no longer required).
 Remove retaining clip (42) from the trim-panel bracket (41).
 The retaining nuts M6 (40) and retaining clip (42) are re-used when the navigation computer holder is installed.

13. To install the navigation system



Put speed nuts M5 (22) on to the holder for the navigation computer (19).



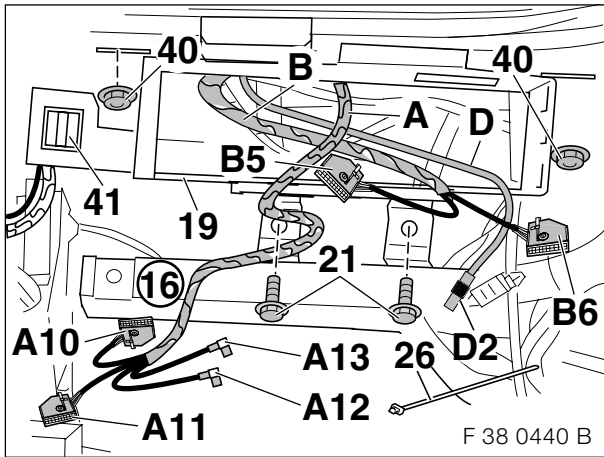
Place navigation system wiring harness **B**, as shown, into the supplied cable duct (29) and close all lugs (40).

Insert both AW cable ties (27) into the holder for navigation computer (19).

Place cable duct (29), as shown, into the AW cable ties (27) and close the AW cable ties (27).

Push branch **B5**, blue 18-pin socket casing, and branch **B6**, Bordeaux 18-pin socket casing, of the navigation system wiring harness **B** through the navigation computer holder (19).

13. To install the navigation system



▶ The figure shows the boot at the top rear left. ◀

Separate off the pre-punched cut-out in the insulating mat in the side part, rear left.

Loosen the base holder (16) somewhat in order to be able to install the navigation computer holder (19).

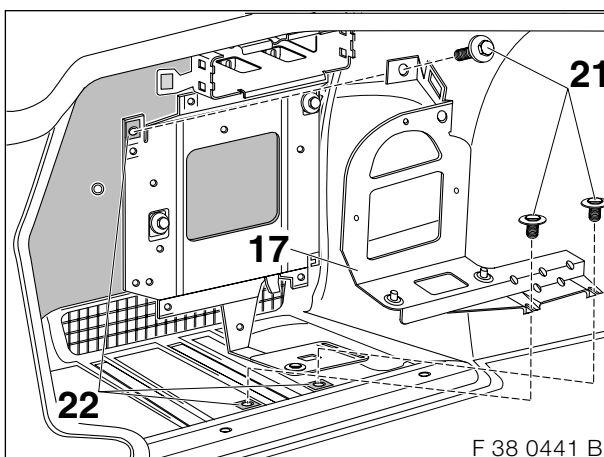
Slide in the navigation computer holder (19) with its pre-mounted navigation system wiring harness **B** and screw it on with the existing nuts M6 (40) and the hexagonal screws with washer M5x14 (21).

Insert the existing removed retaining clip (41) into the navigation computer holder (19).

Then push branches **A10** to **A13** of the on-board monitor wiring harness **A** and branch **D2**, coaxial socket casing, of the aerial extension for the GPS aerial **D** through the navigation computer holder (19).

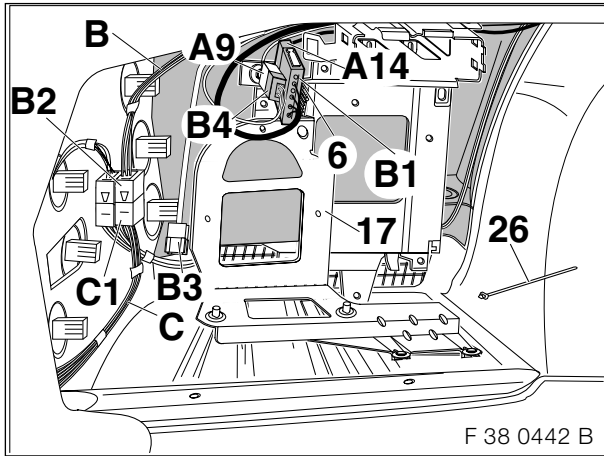
▶ Use cable ties (26) to tie back branch **A10**, white 18-pin socket casing, branch **A12**, offset coaxial socket casing, and branch **A13**, offset coaxial socket casing, of the on-board monitor wiring harness **A** onto the on-board monitor wiring harness **A**.

Also use cable tie (26) to tie back branch **B5**, blue 18-pin socket casing, of the navigation system wiring harness **B** onto the navigation system wiring harness **B**. ◀



Put three speed nuts M5 (22) onto the designated places and screw the video module bracket (17) onto the speed nuts M5 (22) with three hexagonal screws and washers M5x14 (21).

13. To install the navigation system




Clip the securing clip (6) onto the clipped in branches **A9**, black 10-pin plug casing, and **A14**, white 6-pin plug casing, of the on-board monitor wiring harness **A** on the video module bracket (17).

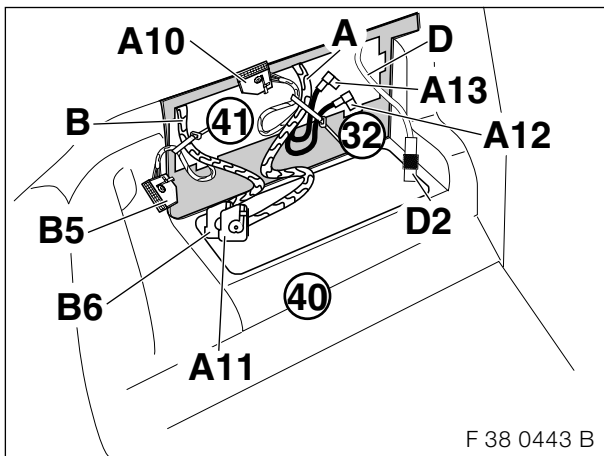
Connect branch **B2**, black 6-pin socket casing, of the navigation system wiring harness **B** to branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C**.

Connect branch **B1**, white 6-pin socket casing, of the navigation system wiring harness **B** to branch **A14**, white 6-pin plug casing, of the on-board monitor wiring harness **A**.

Connect branch **B4**, black 10-pin socket casing, of the navigation system wiring harness **B** to branch **A9**, black 10-pin plug casing, of the on-board monitor wiring harness **A**.

Insulate branch **B3**, black 6-pin plug casing, of the navigation system wiring harness **B** and tie it back.


 Additionally installed wiring harnesses should be fastened to the original wiring harness using cable ties (26).



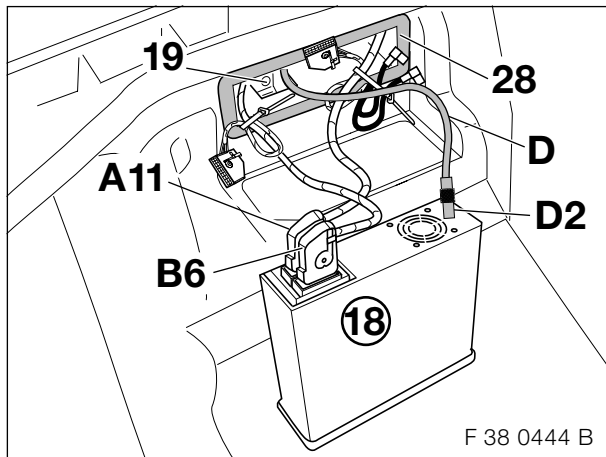
Cut out supplied template (32) and place it on the boot trim panel, left (40).

Mark the cut-out for navigation computer (41) and make a cut-out in the boot trim panel, left (40).

Then install boot trim panel, left (40).

 Take branch **A11**, blue 18-pin socket casing, of the on-board monitor wiring harness **A** with the tied back branches **A10**, **A12** and **A13** as well as branch **B6**, Bordeaux 18-pin socket casing, of the navigation system wiring harness **B** with the tied back branch **B5** and branch **D2**, coaxial socket casing, of the aerial extension for the GPS aerial **D** and thread them out through the cut-out for the navigation computer (41). ◀

13. To install the navigation system



Push cover frame (28) into the cut-out until all detents in the navigation computer holder (19) have engaged.

Connect branch **A11**, blue 18-pin socket casing, of the on-board monitor wiring harness **A** into the blue 18-pin plug casing of the navigation computer (18).

Connect branch **B6**, Bordeaux 18-pin socket casing, of the navigation system wiring harness **B** into the Bordeaux 18-pin plug casing of the navigation computer (18).

Connect branch **D2**, coaxial socket housing, of the aerial extension for the GPS aerial **D** into coaxial plug casing of the navigation computer (18).



Make sure that the cables or leads behind the navigation computer are not jammed or damaged. ◀

Then insert the navigation computer (18) into the cover frame (28) and clip it in.

14. Coding and concluding work



If you also wish to install the video module and TV amplifiers for TV function, the **coding** and the **concluding work** should not be completed until after the video module and TV amplifiers for TV function have been installed (connection description for the TV function, see section 15). ◀

Coding

This system requires coding.

To ensure that the retrofit system

- is fully functional and
- prevents malfunctions and errors when combined with other electrical systems in the car, this retrofit system and, possibly, other components must be coded and saved in the central code of the IKE.

This coding process is automatic using the current coding program in the **“Retrofit”** path.

The procedure is user-guided, simply follow the text instructions to complete the various steps.

Procedure

- Connect DIS/MoDIC to the car
- Switch the ignition **“ON”**
- Select **“Coding ZCS”**
- Series: **“E38”**
- Path: **“2 Retrofit”**
- System: **“8 Navigation”**



The **“Navigation operating software V16”** CD ROM is required to load the operating system.
Caution! Do not insert the **“Operating software”** CD ROM into the CD drive yet. Do not insert the **“Operating software”** CD ROM until asked to do so by the instructions on the on-board monitor. At the same time, this **“Operating software”** CD ROM also encodes the language. ◀

- Start automatic coding (confirm with **“Y”**)
- Follow the instructions on the on-board monitor
- Print out the new central label for the amended coding key and affix it to the car on the right-hand side of the boot near the battery.
- After the message **“Coding complete”** appears on the monitor of the DIS/MoDIC, switch the ignition **“OFF”**, wait for at least 10 seconds and then switch the ignition **“ON”** again.
- Print out error memory
- Insert the **“Road map”** CD ROM into the navigation computer
- Conduct a function test

14. Coding and concluding work



In vehicles with DSP amplifier, the DSP amplifier must be re-coded in addition. ◀

Procedure

- Connect DIS/MoDIC to the car
- Switch the ignition **“ON”**
- Select **“Coding ZCS”**
- Series: **“E38”**
- Path: **“1 Recoding”**
- System: **“82 DSP”**
- Start automatic coding (confirm with **“Y”**)
- After the message “Coding complete” appears on the monitor of the DIS/MoDIC, switch the ignition **“OFF”**, wait for at least 10 seconds and then switch the ignition **“ON”** again.
- Print out error memory
- Conduct a function test

Language coding

The language coding can be repeated using the **“Navigation CD-ROM operating software V16”**.

Concluding work

Connect battery

Conduct a function test

Print out the error memory

Assemble the car again following the instructions for dismantling it in reverse order

15. Connection description for TV function



This chapter should only be taken note of if the vehicle is to be additionally equipped with TV function. ◀

To complete the upgrade the required parts (video module, TV amplifier and small parts) must be ordered separately using the electronic parts catalogue (EPC) and installed.

The relevant branches of the wiring harnesses also have to be connected as follows:

Undo the tied-back branch **A4**, angled coaxial socket casing, of the on-board monitor wiring harness **A** and plug it on to the previously mounted left TV amplifier in the left C-pillar.

Undo the tied-back branch **A13**, angled coaxial socket casing, of the on-board monitor wiring harness **A** and plug it on to the previously mounted right TV amplifier in the right C-pillar.

Disconnect branch **A11**, blue 18-pin socket casing, of the on-board monitor wiring harness **A** from the navigation computer.

Undo branch **B5**, blue 18-pin socket casing, which is tied back on the navigation system wiring harness **B** and connect it to the blue 18-pin socket casing on the navigation computer:

Undo branches **A10**, white 18-pin socket casing, **A12**, offset coaxial socket casing, and **A13**, offset coaxial socket casing, which are tied back on the on-board monitor wiring harness **A**.

Then route branches **A10** to **A13** to the video module and connect them to the video module as follows.

Branch **A10**, white 18-pin socket casing, to the white 18-pin plug casing of the video module.

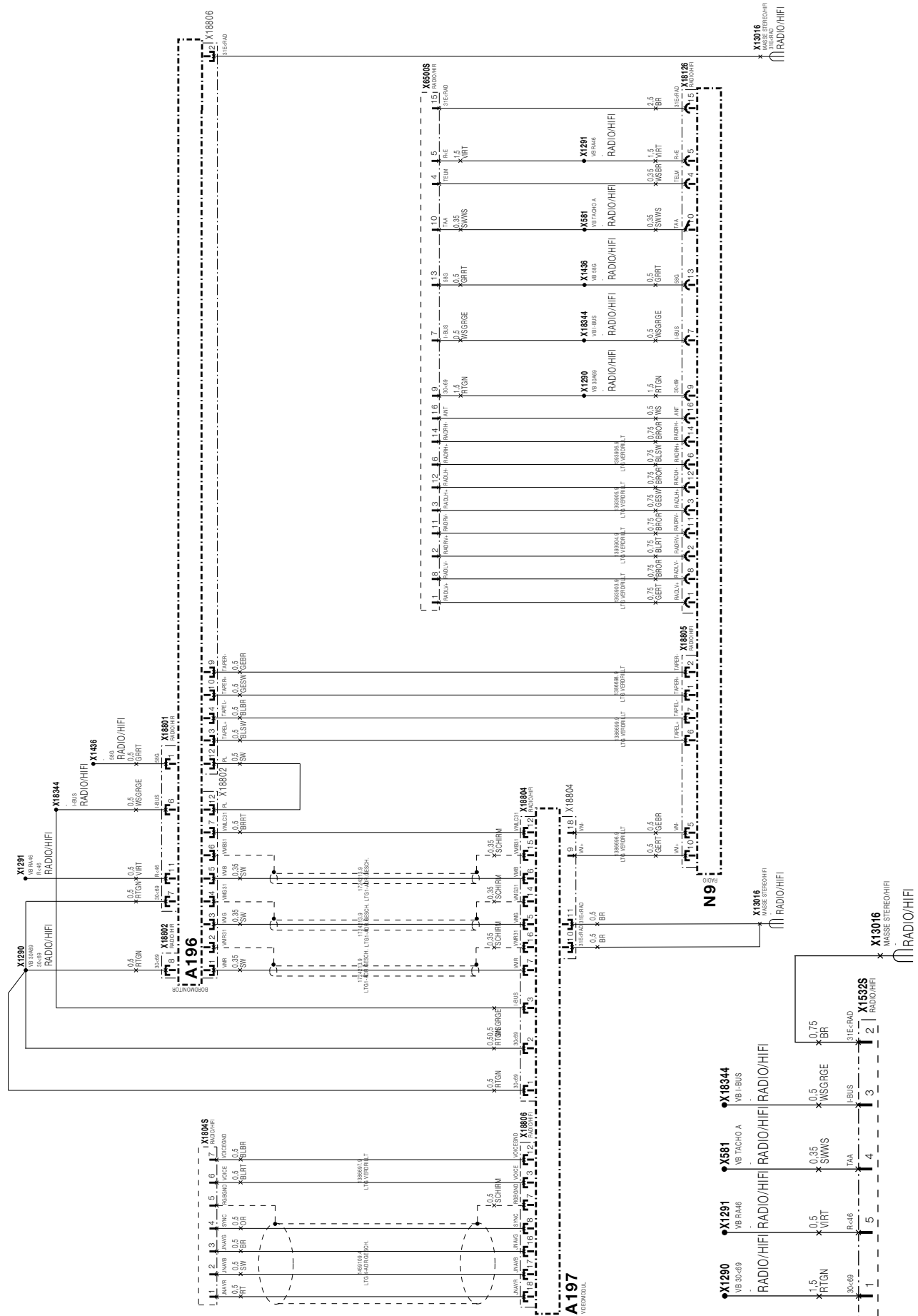
Branch **A11**, blue 18-pin socket casing, to the blue 18-pin plug casing of the video module.

Connect branches **A12** and **A13**, offset coaxial socket casings, to the two coaxial plug casings on the video module.



Should the vehicle be equipped at a later date with TV function, the system must be re-coded. For further details refer to section **“14. Coding and concluding work”**. ◀

16. Circuit diagram for on-board monitor wiring harness



16. Circuit diagram for on-board monitor wiring harness

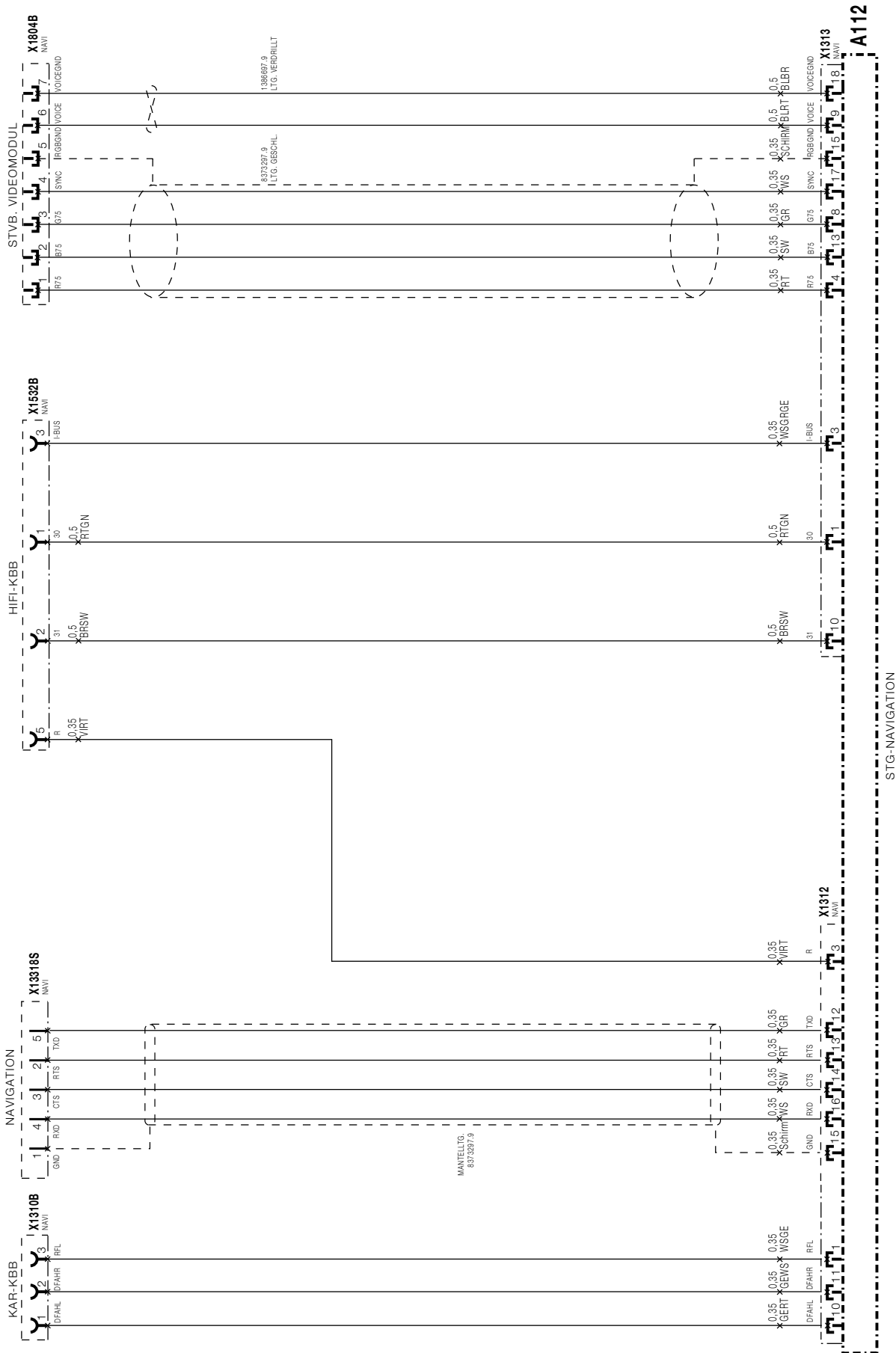
Legend

A196	On-board monitor
A197	Video module
N9	Radio
X581	Speedo connector A
X1290	Connector 30A69
X1291	Connector RA46
X1436	Connector 58g
X1532	Radio/HiFi navigation
X1804	Plug connector, navigation video module
X6500	Plug connector, adapter
X13016	Earth, stereo/HiFi
X18126	Radio A
X18344	I bus connector
X18801	On-board monitor control
X18802	On-board monitor
X18804	Video module A
X18805	Radio B
X18806	Video module B

Colour abbreviations

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

17. Circuit diagram for the navigation system wiring harness



17. Circuit diagram for the navigation system wiring harness

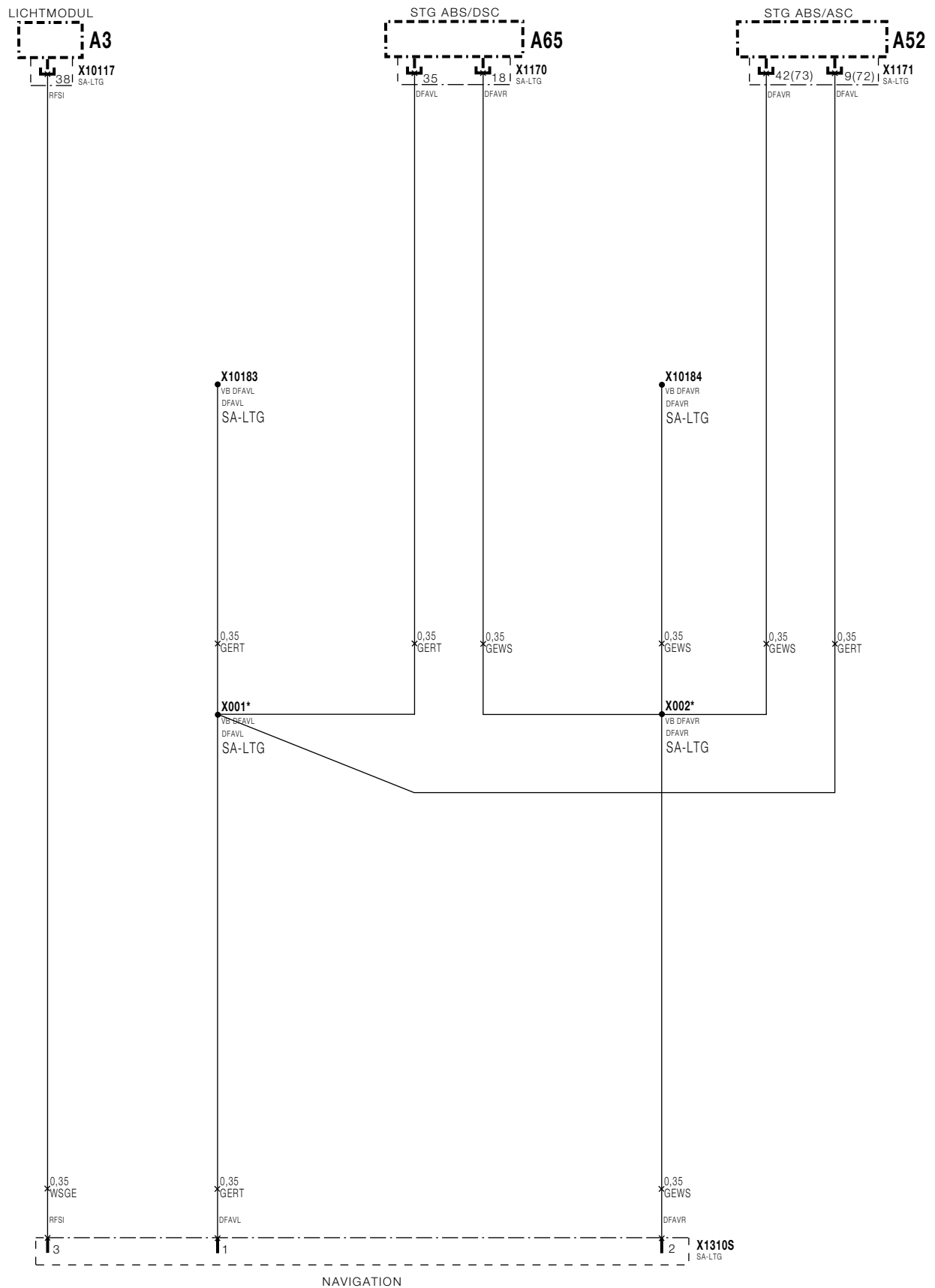
Legend

A112	Plug connector, navigation
X1310	KAR navigation
X1312	Navigation A
X1313	Navigation B
X1532	Radio/HiFi navigation
X1804	Plug connector, navigation video module
X13318	Navigation/telephone

Colour abbreviations

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

18. Circuit diagram for the navigation system supplementary wiring harness



F 38 0449 B

18. Circuit diagram for the navigation system supplementary wiring harness

Legend

A3	Light module
A52	ABS hydraulic unit/ASC
A65	ABS hydraulic unit/DSC
X001*	DFAVL connector
X002*	DFAVR connector
X1170	ABS/DSC
X1171	ABS/ASC
X1310	KAR navigation
X10117	Black 54-pin socket casing of the light module
X10183	DFAVL joint connector
X10184	DFAVR joint connector

In automatic cars with the M62 B44 engine and DSC from production date 9/97 to production date 9/98, the DFAVL signal is at PIN 72 and the DFAVR signal is at PIN 73 of the ABS/ASC control unit connector X1171.

The items marked with an asterisk (*) are only valid for this circuit diagram. All the other items and X designations correspond to BMW after-sales circuit diagrams

Colour abbreviations

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