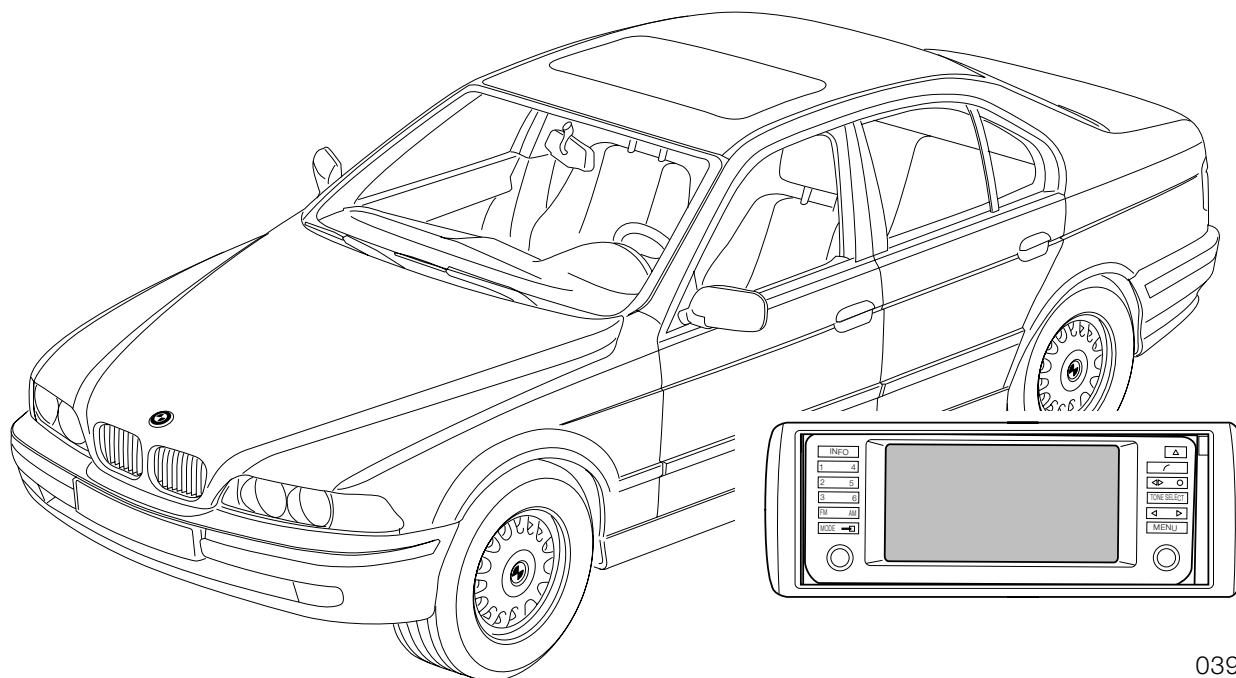




Parts and Accessories Installation Instructions



039 0524 B

Retrofit Kit On-board Monitor and Navigation System BMW 5 Series Saloon (E39)

These installation instructions are only valid for cars **with a production date prior to 9/00** 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 0 025 171
 65 90 0 027 764

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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.

The on-board monitor and navigation system may only be installed by a specialist workshop that has the required special tools and manuals (servicing, repair, diagnostics, etc.).

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

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 in RHD cars.

Electrical knowledge is required.



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 trim at the rear left of the boot in front of the navigation computer does not form part of the installation kit and must be ordered separately depending on the equipment in the car 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 short Philips screwdrivers

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 (no longer required)	65 12 040
Undo the bottom part of the instrument panel trim (according to TIS)	-
Remove the radio module holder, it is replaced by the on-board monitor module holder (installation is described in TIS)	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 trim on both sides	51 43 251
Remove the rear window shelf	51 46 000
Remove the left speaker under the rear window shelf	-
Remove the boot floor	51 47 101
Remove the rear left boot trim (it is replaced by a new trim)	51 47 151
Remove the left boot trim	-
Remove the rear right boot trim	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	51 16 360
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 video module bracket (if fitted)	-
Remove the DSP amplifier holder (if fitted)	65 11 070
Remove the holder for the DSP amplifier (if fitted)	65 11 070

Also in RHD cars

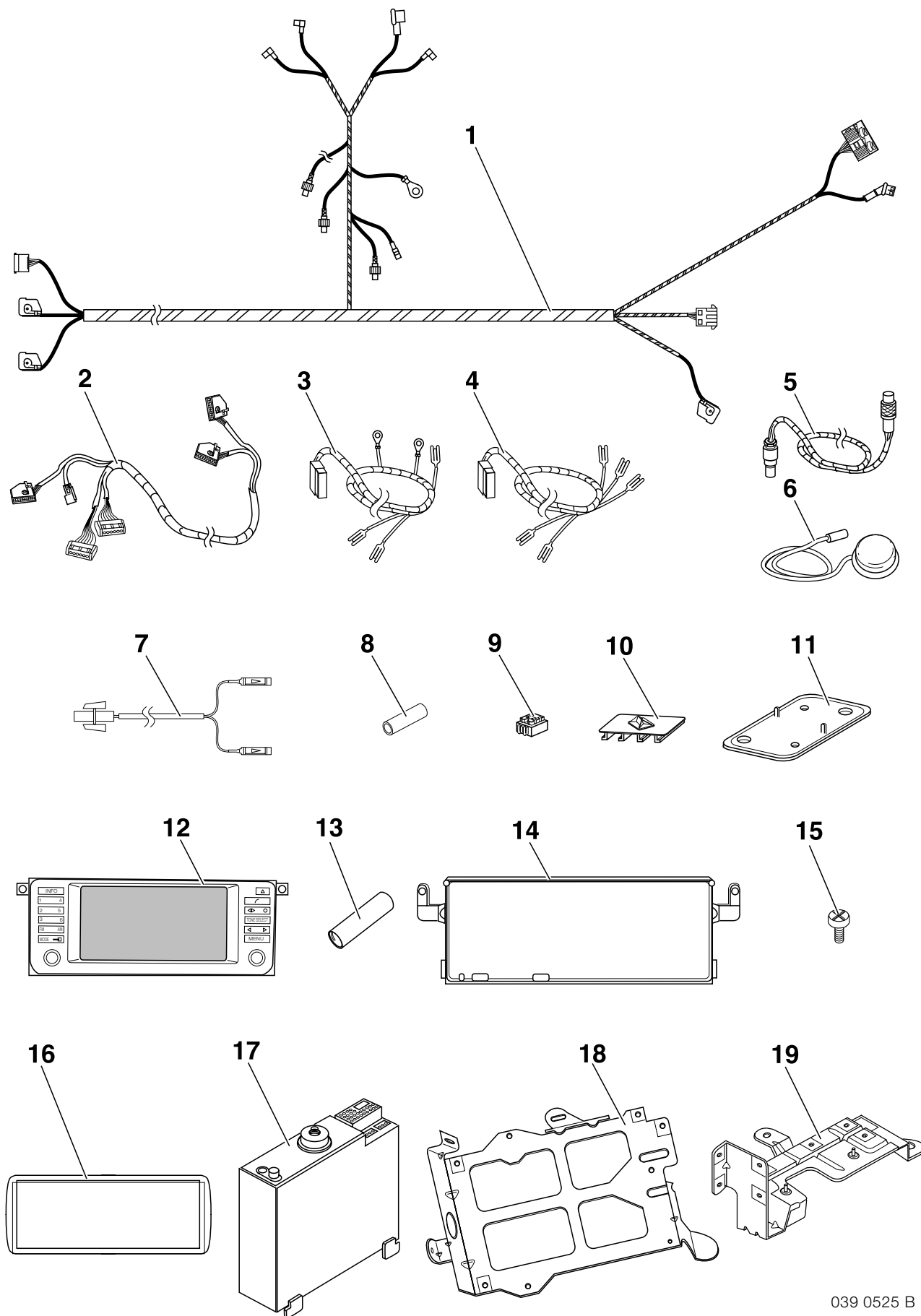
Remove the footwell trim below the steering column	-
--	---

1. Preparations

In addition, in cars with a production date after 9/99 without a tacho A signal on the radio connection plug X18126

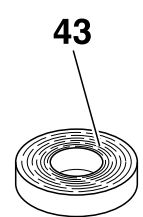
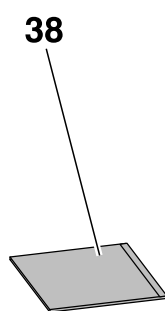
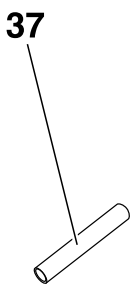
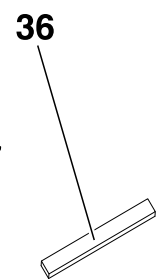
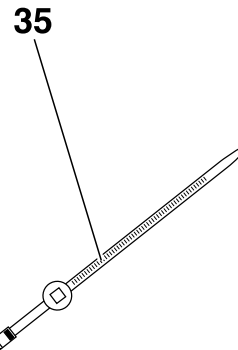
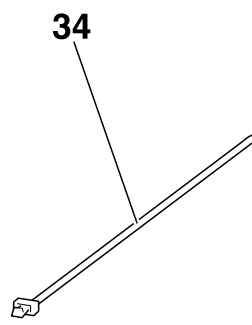
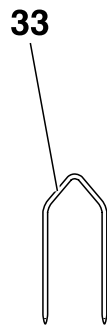
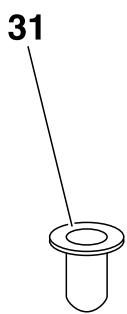
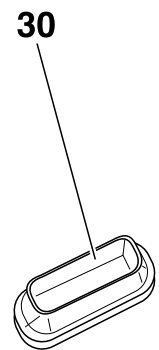
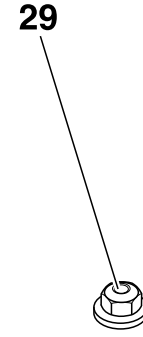
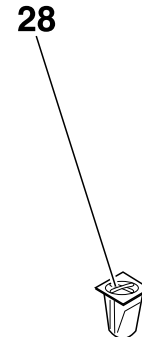
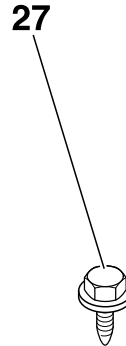
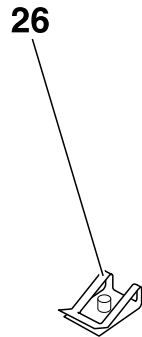
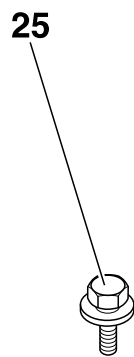
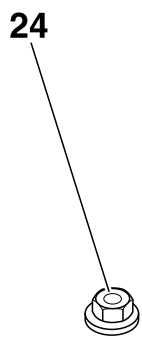
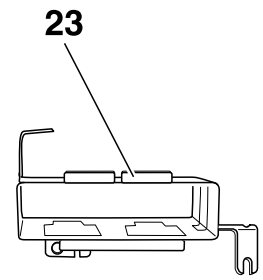
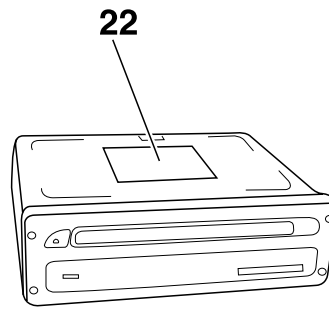
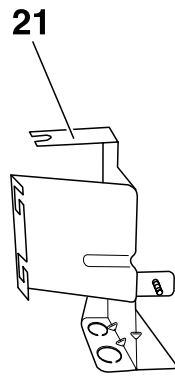
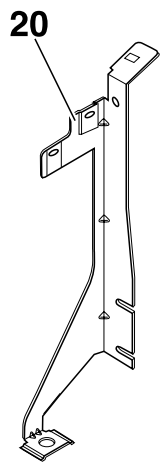
Remove the instrument cluster trim	62 21 000
Remove the instrument cluster	62 21 000

2. Parts list



039 0525 B

2. Parts list

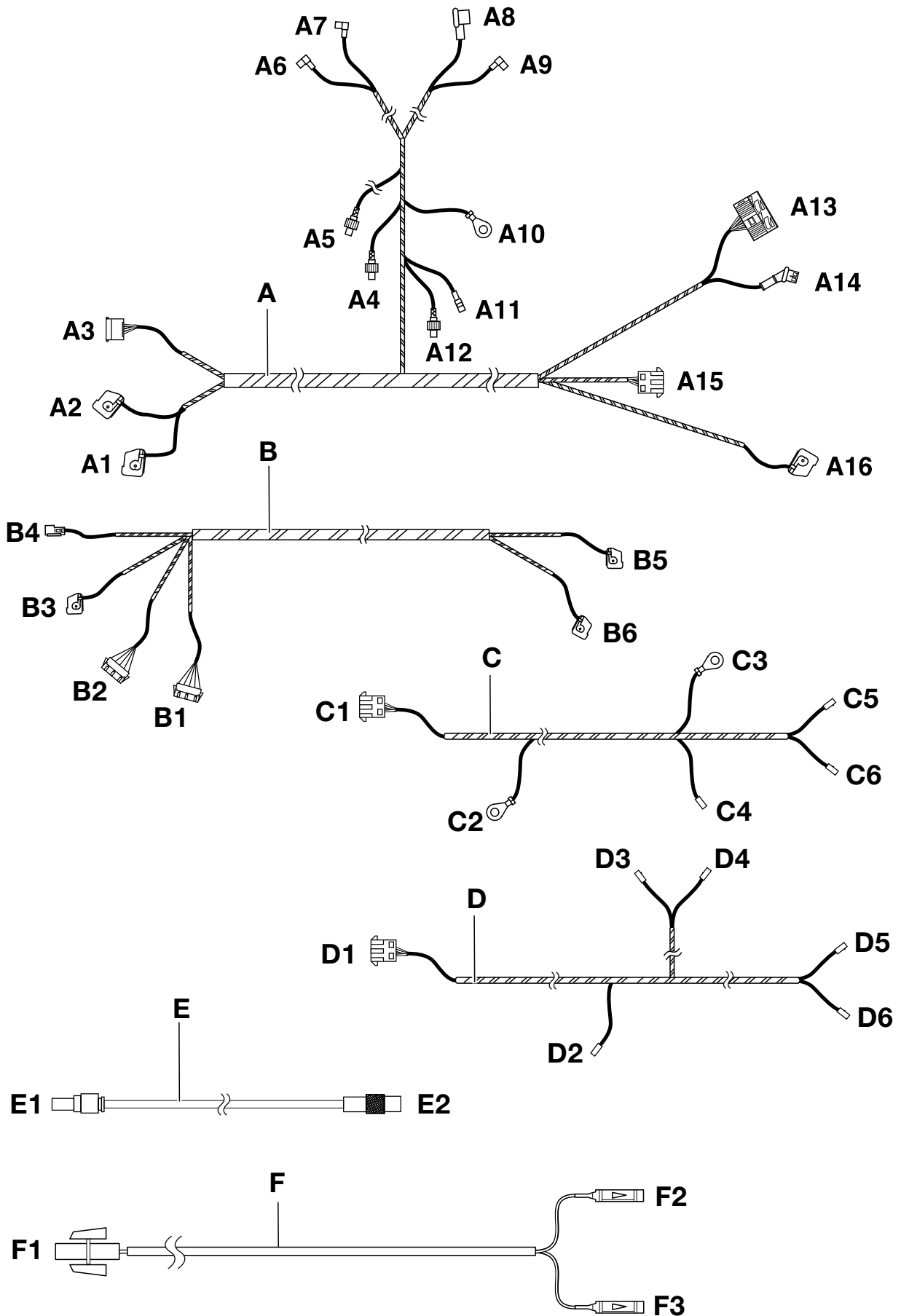


039 0526 B

2. Parts list

- 1 On-board monitor wiring harness
- 2 Navigation system wiring harness
- 3 Supplementary wiring harness for navigation systems in cars with a production date prior to 9/98
- 4 Supplementary wiring harness for navigation systems in cars with a production date after 9/98
- 5 Aerial extension for the GPS aerial
- 6 GPS aerial
- 7 Additional tacho A signal cable
- 8 Shrink hose (included in additional cable pack containing additional tacho A signal cable)
- 9 2-way insulation-piercing connector (included in additional cable pack containing additional tacho A signal cable)
- 10 Securing clip
- 11 Holder for the GPS aerial
- 12 On-board monitor, complete
- 13 On-board monitor holding pin (to support the on-board monitor)
- 14 On-board monitor module holder
- 15 Fillister head Philips screw M3x8 (4x)
- 16 Trim for on-board monitor
- 17 On-board monitor radio
- 18 Holder for DSP amplifier
- 19 Base holder
- 20 Front video module bracket
- 21 Holder for on-board monitor radio and CD changer
- 22 Navigation computer
- 23 Navigation computer holder
- 24 Hexagonal nut with washer M5
- 25 Hexagonal screw with washer M5x14 (8x)
- 26 Speed nut M5 (7x)
- 27 Hexagonal self-tapping screw with washer 4.8x16 (3x)
- 28 Plastic expanding nut 4.8 (3x)
- 29 Plastic cap nut (3x)
- 30 Rubber grommet (2x)
- 31 Fastening grommet (GPS aerial holder) (2x)
- 32 Expanding rivet for securing the GPS aerial (2x)
- 33 Removal bar (2x)
- 34 Cable tie (20x)
- 35 Cable holder (2x)
- 36 Sealing strip
- 37 Shrink hose (included in pack for the supplementary navigation system wiring harness) (2x)
- 38 Protective strip (2x)
- 39 Butt-joint connector (7x) * (for cable cross-section 0.2 – 0.5 mm²)
- 40 Butt-joint connector (10x) * (for cable cross-section 0.75 – 1.0 mm²)
- 41 Butt-joint connector (4x) * (for cable cross-section 1.5 – 2.5 mm²)
- 42 Hose (20x) *
- 43 Fabric tape *

3. Connection diagram



039 0527 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 (12)
A2	White 12-pin socket casing	-	To white 12-pin plug casing on on-board monitor (12)
A3	Black 17-pin plug casing	-	To radio connection plug X18126
A4	Coaxial plug casing	black	To be laid to the installation site of the left TV amplifier in the left-hand C pillar and tied back
A5	Coaxial plug casing	black	To be laid to the installation site of the right TV amplifier in the right-hand C pillar and tied back
A6	Angled coaxial socket casing	black	To be tied back on the on-board monitor wiring harness A with a cable tie
A7	Angled coaxial socket casing	black	To be tied back on the on-board monitor wiring harness A with a cable tie
A8	Black coaxial socket casing (aerial connector)	black	To the coaxial plug casing on the on-board monitor (17) (aerial connector)
A9	Angled coaxial socket casing	black	To the coaxial plug casing on the on-board monitor (17)
A10	Cable eyelet, 6 mm in diameter	brown	To earth post connection X13016 on the left-hand C pillar
A11	Coaxial socket casing	black	To the coaxial plug casing on the aerial diversity
A12	Coaxial plug casing	black	To the coaxial socket casing on the aerial diversity
A13	Black 17-pin socket casing	-	To the on-board monitor radio (17)
A14	10-pin socket casing	-	To be clipped into the black 17-pin socket casing A13 of the on-board monitor wiring harness A and connected to the on-board monitor radio (17) using the black 17-pin socket casing A13
A15	White 6-pin plug casing	-	To branch B1 , white 6-pin socket casing, of the navigation system wiring harness B
A16	Blue 18-pin socket casing	-	To blue 18-pin plug casing on navigation computer (22)

B	Navigation system wiring harness	-	-
B1	White 6-pin socket casing	-	To branch A15 , white 6-pin plug casing, of the on-board monitor wiring harness A
B2	Black 6-pin socket casing	-	<p>In cars with a production date prior to 9/98</p> <p>To branch C1, black 6-pin plug casing, of the supplementary wiring harness for the navigation system C</p> <p>-----</p> <p>In cars with a production date after 9/98</p> <p>To branch D1, black 6-pin plug casing, of the supplementary wiring harness for the navigation system D</p>
B3	White 18-pin socket casing	-	To be tied back on the navigation system wiring harness B with a cable tie
B4	Black 6-pin plug casing	-	To be tied back on the navigation system wiring harness B with a cable tie
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 (22)

3. Connection diagram

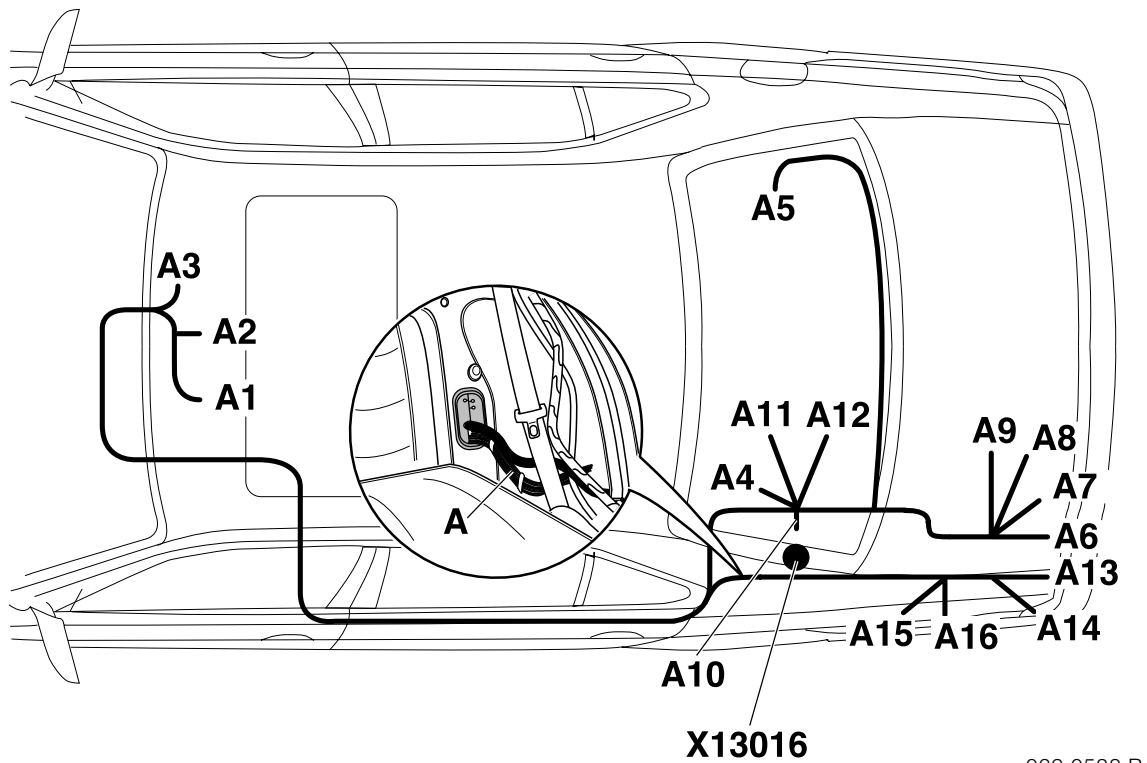
Item	Description	Cable colour	Connection location in the car
C	Supplementary wiring harness for navigation systems in cars with a production date prior to 9/98	-	-
C1	Black 6-pin plug casing	-	To branch B2 , black 6-pin socket casing, of the navigation system wiring harness B
C2	Cable eyelet, 6 mm in diameter	brown	To earth post connection X10305 below the left tail light
C3	Cable eyelet, 6 mm in diameter	brown	To earth post connection X10012 in the front area of the right-hand door sill
C4	1-pin blade terminal contact	white/yellow	To light module X10117 in black 54-pin socket casing, PIN 38
C5	1-pin blade terminal contact	black	To connection plug X1171 of the ABS control unit, PIN 9 , tie back excess length in LHD cars ----- 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 in LHD cars
C6	1-pin blade terminal contact	yellow	To connection plug X1171 of the ABS control unit, PIN 42 , tie back excess length in LHD cars ----- 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, PIN 73 , tie back excess length in LHD cars

D	Supplementary wiring harness for navigation systems in cars with a production date after 9/98	-	-
D1	Black 6-pin plug casing	-	To branch B2 , black 6-pin socket casing, of the navigation system wiring harness B
D2	1-pin blade terminal contact	white/yellow	To light module X10117 in black 54-pin socket casing, PIN 38
D3	1-pin blade terminal contact	red/yellow	To joint connector X10183 (yellow/red cable on joint connector), if D3 is not required, insulate with a shrink hose and tie back, tie back excess length in LHD cars
D4	1-pin blade terminal contact	yellow/white	To joint connector X10184 (yellow/white cable on joint connector), if D4 is not required, insulate with a shrink hose and tie back, tie back excess length in LHD cars
D5	1-pin blade terminal contact	red/yellow	To black 42-pin connection plug X1170 of the ABS hydraulic unit in PIN 35 , if D5 is not required, insulate and tie back with shrink hose
D6	1-pin blade terminal contact	yellow/white	To black 42-pin connection plug X1170 of the ABS hydraulic unit in PIN 18 , if D6 is not required, insulate and tie back with shrink hose

E	Aerial extension for the GPS aerial	-	-
E1	Coaxial plug casing	-	To GPS aerial (6)
E2	Coaxial socket casing	-	To the navigation computer (22)

F	Additional tacho A signal cable	-	-
F1	Black 1-pin socket casing	black/white	With 2-way insulation-piercing connector to tacho A signal, black/white cable, PIN 10 of branch A3 , black 17-pin plug casing of the on-board monitor wiring harness A
F2	1-pin blade terminal contact Terminal TAA	black/white	Connect to white 18-pin instrument cluster connection plug X10113 in PIN 3
F3	1-pin blade terminal contact Terminal TAA	white	Insulate with a shrink hose and tie back

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



039 0528 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 **A10** to the earth post connection **X13016** near the C pillar at the rear left.

Route branch **A4** to the installation site for the left TV amplifier on the left-hand C pillar and tie back (only to be connected if you are also installing a video module and the TV amplifier)

Route branches **A11** and **A12** to the aerial amplifier on the left-hand C pillar

Route branch **A5** to the installation site for the right TV amplifier on the right-hand C pillar and tie back (only to be connected if you are also installing a video module and the TV amplifier)

Route branches **A6** to **A9** through the passage grommet in the rear window shelf into the boot to the installation site for the on-board monitor radio in the rear left side part

Tie back branches **A6** to **A17** (only to be connected if you are also installing a video module and TV amplifier)

Route branches **A13** to **A16** through the passage grommet behind the rear seat backrest along the main cable loom into the boot

Route branches **A13** and **A14** to the installation site of the on-board monitor radio in the rear left side part

Route branch **A15** to the installation site of the video module bracket at the front in the rear left side part and clip onto the securing clip

Branch **A16** to the installation site of the navigation computer in the rear left side part

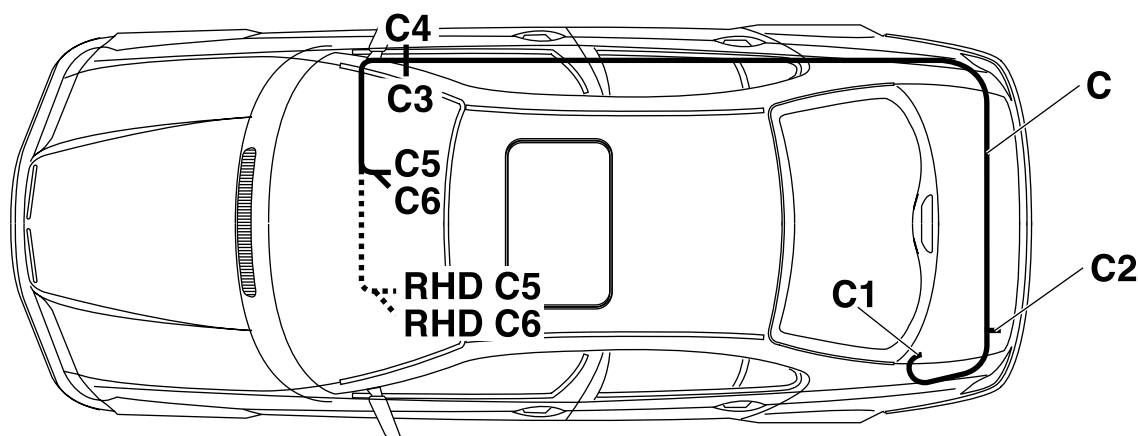


The on-board monitor wiring harness **A** crosses behind the left front seat and is to be routed from there along the cardan tunnel behind the centre console to the installation site of the on-board monitor. ◀

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

Tie back any excess lengths.

5. Installation and cabling diagram of the supplementary wiring harness for the navigation system in cars with a production date prior to 9/98



039 0530 B

The supplementary wiring harness for the navigation system **C** is to be installed in cars with a production date prior to 9/98 as shown in the figure and secured with cable ties.

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

Branch **C1** to the installation site of the video module bracket at the front in the rear left of the boot

Branch **C2** to the earth post connection **X10305** below the left tail light

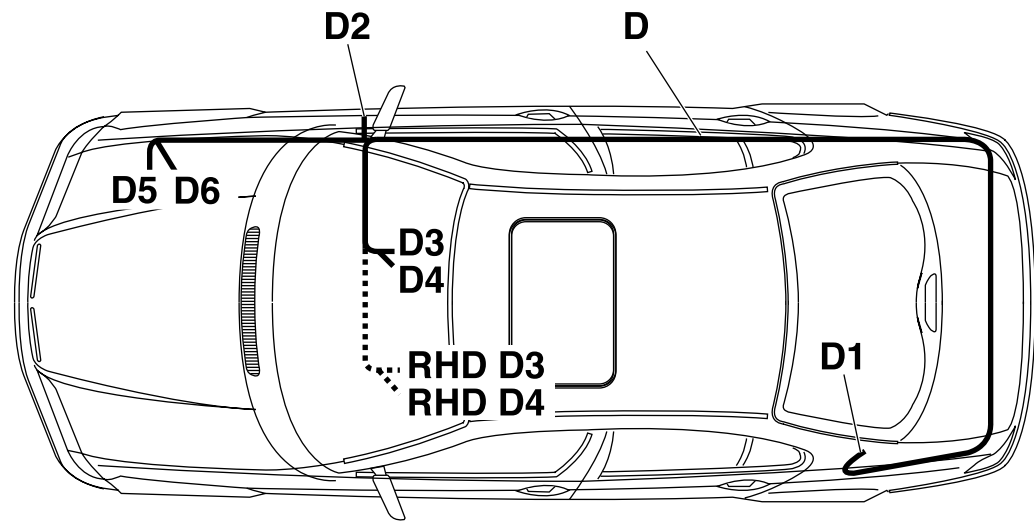
Branches **C3** to **C6** along the closing panel to the right side part, from there through the passage grommet in the rear window shelf into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A pillar on the right

Branch **C3** to the earth post connection **X10012** in the front of the right door sill

Branches **C5** and **C6** to the installation site of the ABS control unit on the left next to the glove compartment or in RHD cars behind the heating box to the left to the ABS control unit on the right next to the glove compartment

Tie back any excess lengths.

6. Installation and cabling diagram of the supplementary wiring harness for the navigation system in cars with a production date after 9/98



039 0531 B

The supplementary wiring harness for the navigation system **D** is to be installed in cars with a production date after 9/98 as shown in the figure and secured with cable ties.

When installing the supplementary wiring harness for the navigation system **D, start with branch **D1**.**

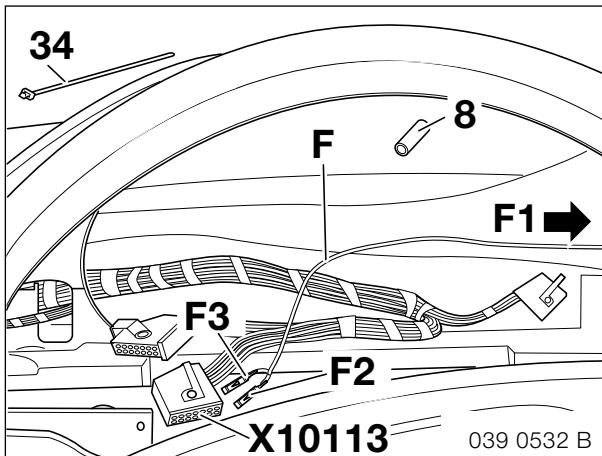
Branch **D1** to the installation site of the video module bracket at the front in the rear left of the boot
Branches **D2** to **D6** along the closing panel to the right side part, from there through the passage grommet in the rear window shelf into the vehicle interior and from there along the right main cable loom to the installation site of the light module in the A pillar on the right
Branches **D3** and **D4** to the joint connectors behind the glove compartment or, in RHD cars, behind the heating box and to the left to the joint connectors behind the glove compartment
Branches **D5** and **D6** through the passage grommet in the bulkhead into the engine compartment to the right to the installation site of the ABS hydraulic unit

Tie back any excess lengths.

7. To install the additional tachometer A signal cable in cars with a production date after 9/99, without tachometer A signal on the radio connection plug X18126



On cars with a **production date after 9/99**, check whether there is still a tachometer A signal at the radio connection plug **X18126**, **PIN 10**, black/white cable, in the instrument panel. If there is no tachometer A signal, the following work must be completed in addition. ◀



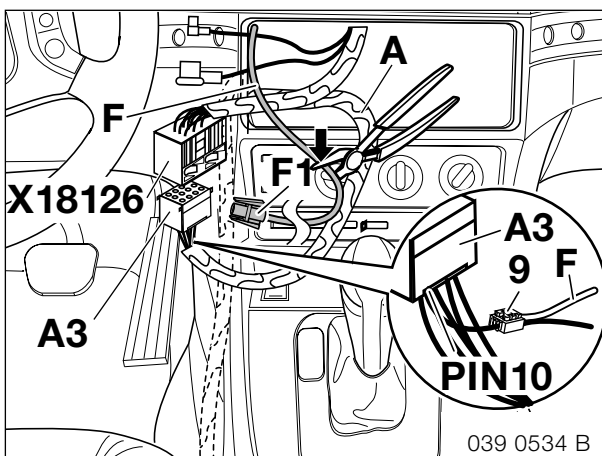
The figure shows the installation site of the instrument cluster in a LHD car. Proceed in exactly the same way in RHD cars. ◀

Open and release the white 18-pin instrument cluster connection plug **X10113**.

Connect branch **F2**, 1-pin socket contact, black/white cable on the additional tachometer A signal cable **F**, to the free slot **PIN3** on the connection plug **X10113**.

Insulate and tie back branch **F3**, 1-pin socket contact, white cable, with a shrink hose (8).

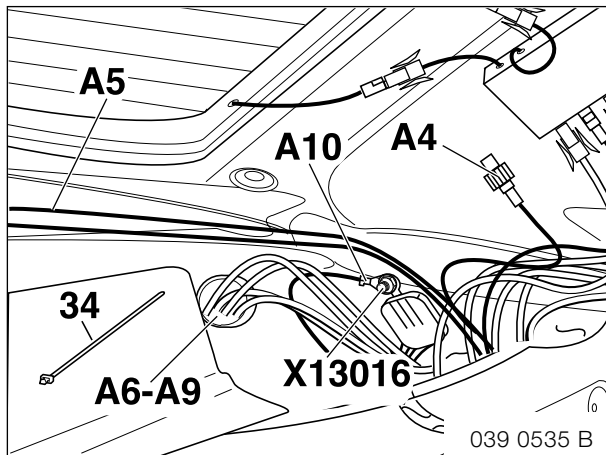
Then lock and close connection plug **X10113** again. Route branch **F1**, black 1-pin socket casing, black/white cable, to the radio connection plug **X18126** in the instrument panel and secure it with cable ties (34).



Cut off the excess length of the additional tachometer A signal cable **F**, black/white cable, near branch **F1**.

Then use a 2-way insulation-piercing connector (9) to connect the free cable end to the tachometer A signal, black/white cable, **PIN 10** of branch **A3**, black 17-pin plug casing of the on-board monitor wiring harness **A**.

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



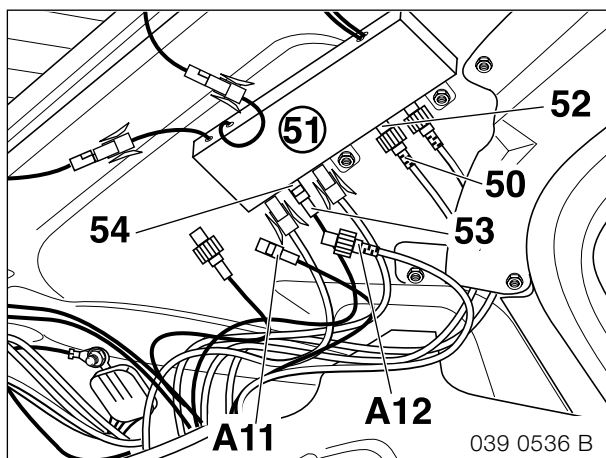
 The figure shows the left C pillar from the inside. ◀

Screw branch **A10**, 6 mm cable eyelet, of the on-board monitor wiring harness **A** onto earth post connection **X13016** on the C pillar at the rear left.

Tie back branch **A4**, coaxial plug casing, of the on-board monitor wiring harness **A** using a cable tie (34) (only to be connected if you are also installing a video module and the TV amplifier).

Route branch **A5**, coaxial plug casing, of 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 to the C pillar on the right and tie it back with cable ties (34) (only to be connected if you are also installing a video module and the TV amplifier).

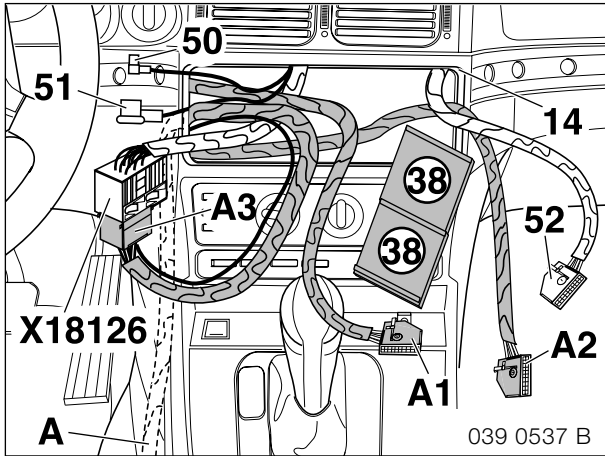
Route branches **A6** to **A9** through the passage grommet in the rear window shelf into the boot to the installation site for the on-board monitor radio in the rear left side part.



Unscrew the existing coaxial plug casing (50) from the aerial amplifier (51) and tie it back (no longer required). Screw branch **A12**, coaxial plug casing, of the on-board monitor wiring harness **A** to the released coaxial socket casing (52) of the aerial amplifier (51).

Unplug the existing coaxial socket casing (53) from the aerial amplifier (51) and tie it back (no longer required). Connect branch **A11**, coaxial socket casing, of the on-board monitor wiring harness **A** onto the released coaxial plug casing (54) of the aerial amplifier (51).

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

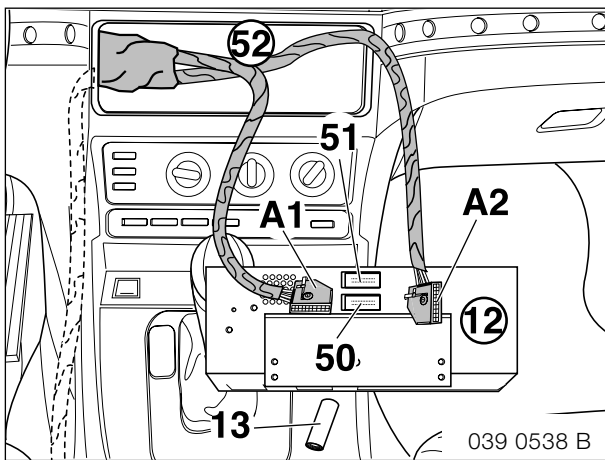


▶ Before the work steps are carried out as shown in the figure, the new module holder of the on-board monitor (14) must be equipped as described in the TIS. ◀

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

Affix a rattle guard (38) to the second rattle guard (38) and then affix them to the wiring harness so that they enclose the existing angled coaxial socket casing (50), the black coaxial socket casing (51) (aerial connection), the connection plug for the receiver (52) and the plug connection **A3+X18126**.

The enclosed connections (50, 51, 52) and the wrapped plug connection **A3+X18126** are no longer required and are to be placed behind the heating control.



Screw the on-board monitor holding pin (13) onto the on-board monitor (12).

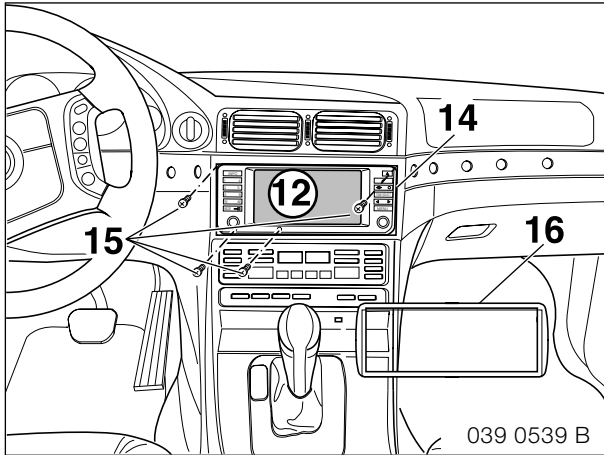
Connect branch **A1**, blue 12-pin socket casing, of the on-board monitor wiring harness **A** to the blue plug casing (50) on the on-board monitor (12).

Connect branch **A2**, white 12-pin socket casing, of the on-board monitor wiring harness **A** to the white plug casing (51) on the on-board monitor (12).

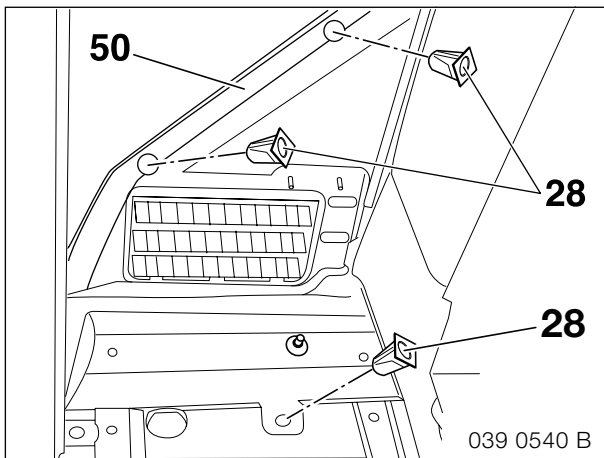
Then insert the cables into the on-board monitor slot (52) and carefully slide the on-board monitor (12) into position.

▶ As you insert the holder ensure that no cables/leads are damaged. ◀

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



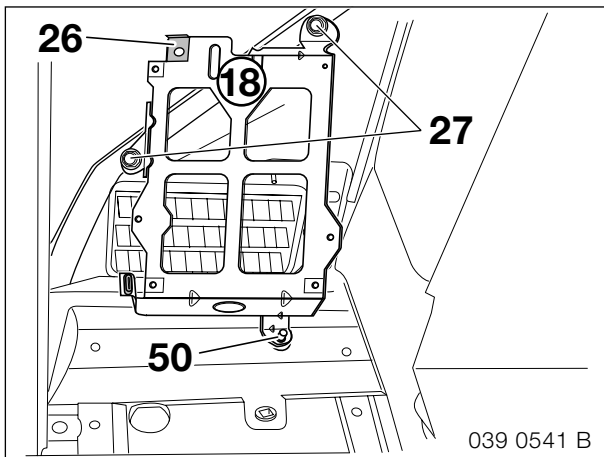
Screw the on-board monitor (12) to the module holder of the on-board monitor (14) with four Phillips screws M3x8 (15). Then put the on-board monitor cover (16) onto the on-board monitor (12).



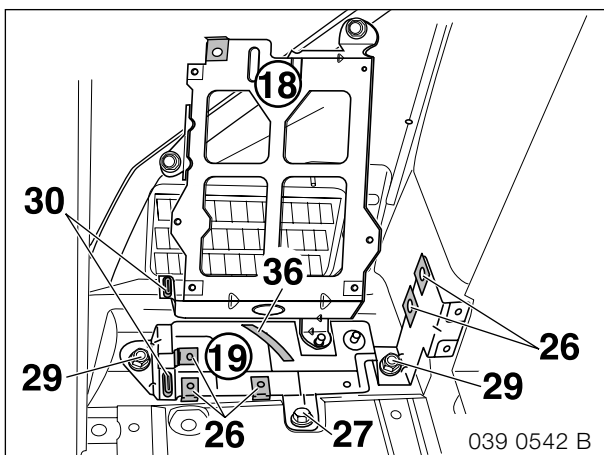
 The figure shows the boot at the rear left. ◀

Insert plastic expanding nuts 4.8 (28) into the cross strut (50) in the side part at the rear left.

Place another plastic expanding nut 4.8 (28) into the frame part at the rear left.



Place the DSP amplifier holder (18) in the boot at the rear left onto the mounting bolt (50) and secure it with two hexagonal self-tapping screws and washers 4.8x16 (27). Place a speed nut M5 (26) onto the DSP amplifier holder (18).

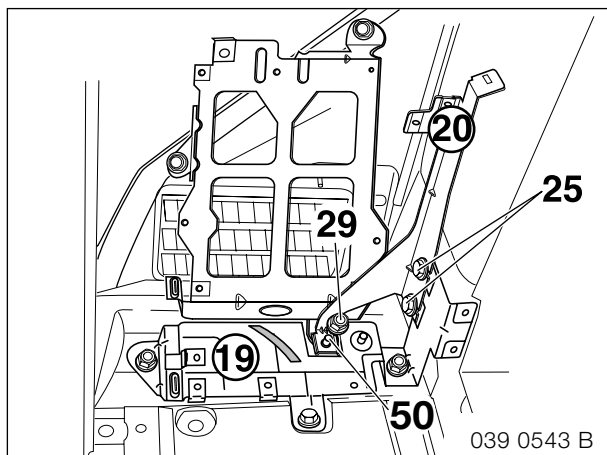


Affix the sealing strip (36) to the base holder (19).

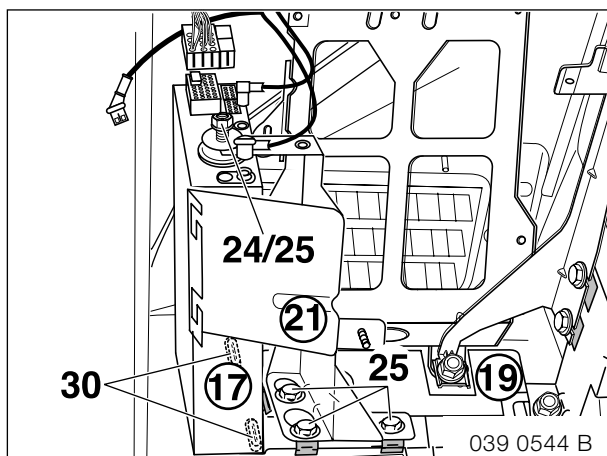
Place five speed nuts M5 (26) onto the base holder (19) and screw the base holder (19) onto the boot floor at the rear left using two plastic cap nuts (29) and an hexagonal self-tapping screw with washer 4.8x16 (27).

Then insert two rubber grommets (30) into the recesses provided in the holder for the DSP amplifier (18) and in the base holder (19).

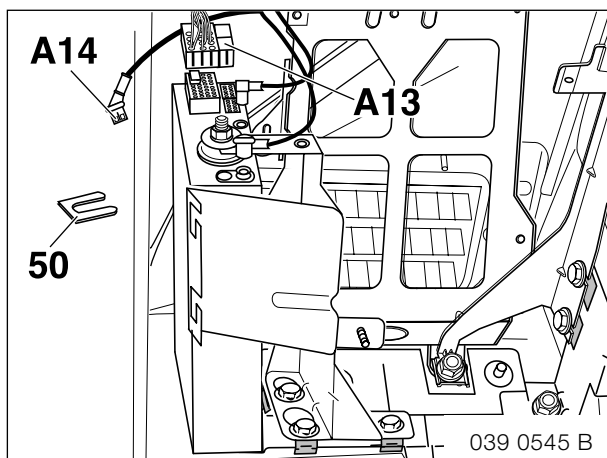
8. To install the on-board monitor wiring harness, on-board monitor and on-board monitor radio



Secure the front video module bracket (20) to the base holder (19) with two hexagonal screws and washers M5x14 (25) and to the mounting bolt (50) using a plastic cap nut (29).



Push the on-board monitor radio (17) into the rubber grommets (30) inserted previously. Insert the holder for the on-board monitor radio and CD changer (21) and screw onto the base holder (19) using three hexagonal screws and washers M5x14 (25). Screw the on-board monitor radio (17) onto the holder for the on-board monitor radio and CD changer (21) using a hexagonal nut and washer M5 (24) or with a hexagonal screw and washer M5x14 (25), depending on the design of the on-board monitor radio.

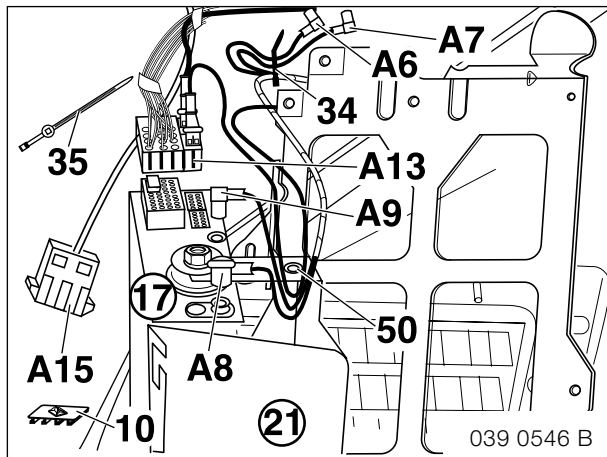


Remove the blue locking clip (50) from branch **A13**, black 17-pin socket casing, of the on-board monitor wiring harness **A** and connect branch **A14**, 10-pin socket casing, of the on-board monitor wiring harness **A** to branch **A13**.

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 **A14** with the blue locking clip (50).

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



Connect branch **A8**, black coaxial socket casing (aerial connection), of the on-board monitor wiring harness **A** to the on-board monitor radio (17).

Connect branch **A9**, angled coaxial socket casing, of the on-board monitor wiring harness **A** to the on-board monitor radio (17).

Connect branch **A13**, black 17-pin socket casing, of the on-board monitor wiring harness **A** to the on-board monitor radio (17).

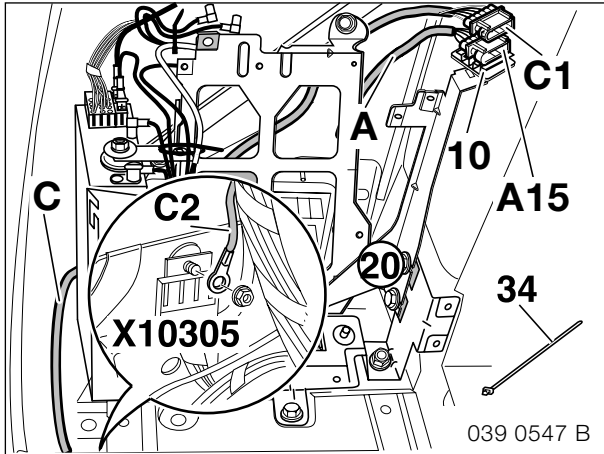
Insert the cable holder (35) into the hole (50) in the holder for the on-board monitor radio and CD changer (21).

Secure the cables of the connected branches **A8** and **A9** and, if present, the control cable for the on-board monitor radio/CD changer using the cable holder (35).

Clip branch **A15**, white 6-pin plug casing, of the on-board monitor wiring harness **A** into the securing clip (10) (it is subsequently clipped onto the front video module bracket).

Tie back branches **A6** and **A7**, angled coaxial socket casing, of the on-board monitor wiring harness **A** to the on-board monitor wiring harness **A** using cable tie (34).

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

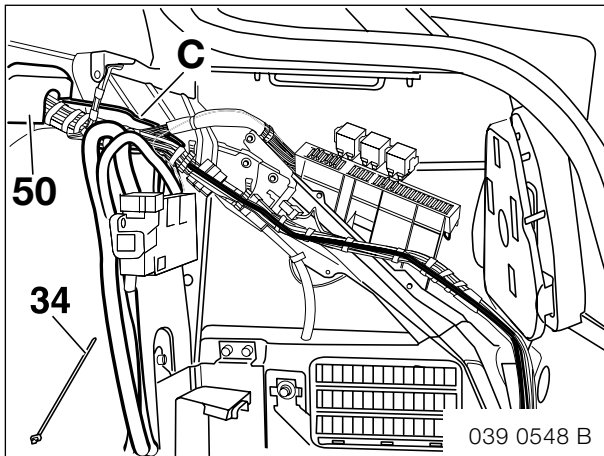


Clip the securing clip (10) with the clipped in branch **A15** of the on-board monitor wiring harness **A** into the front video module bracket (20).

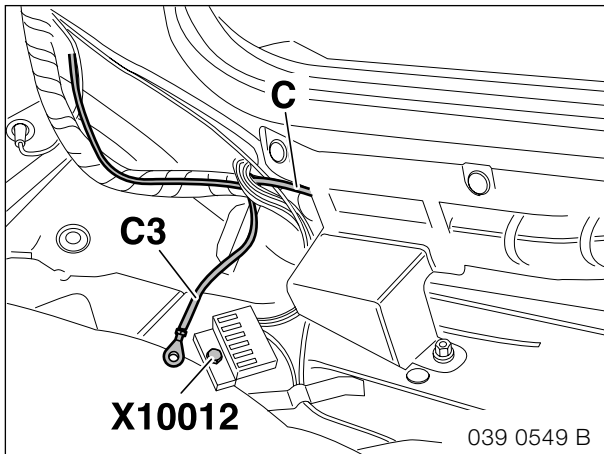
Clip branch **C1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C** onto branch **A15**.

Screw branch **C2**, 6 mm cable eyelet, onto the earth post connection **X10305** below the left tail light.

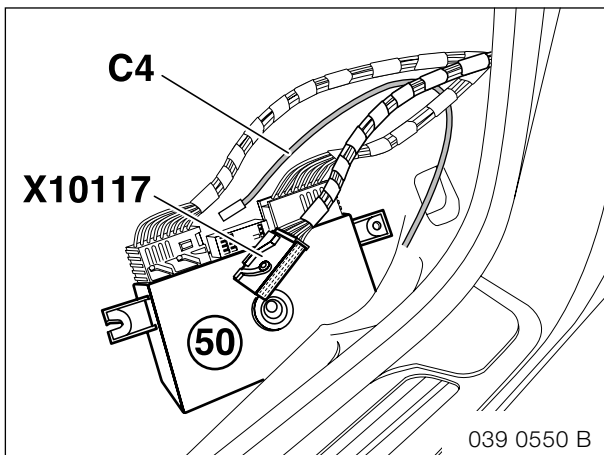
Route the supplementary wiring harness for the navigation system **C** along the closing panel to the right side part and from there to the passage grommet in the boot at the top right and attach using cable ties (34).



Route the supplementary wiring harness for the navigation system **C** with branches **C3**, **C4**, **C5** and **C6** through the passage grommet (50) into the vehicle interior and along the right main cable loom to the installation site of the light module in the A pillar on the right and secure with cable ties (34).



Screw branch **C3**, 6 mm cable eyelet, onto the earth post connection **X10012** in the front area of the right-hand door sill.



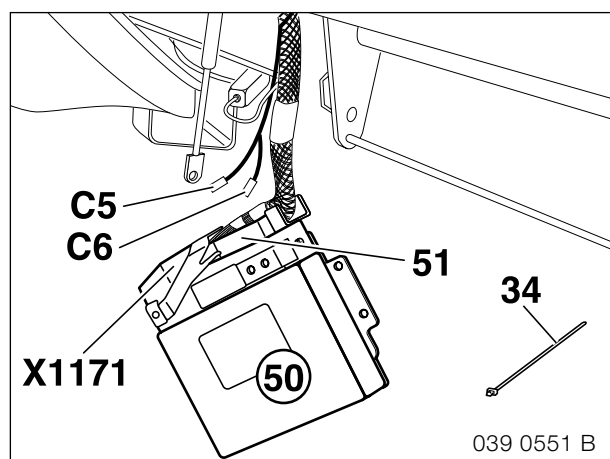
Remove the light module (50), unplug the black 54-pin socket casing **X10117** from the light module (50) and open it.

Connect branch **C4**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Then close the black socket casing **X10117**, plug it in and reinstall the light module (50).

Tie back any excess length on the supplementary wiring harness for the navigation system **C** before branch **C4**.

9. 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. ◀

In left-hand drive cars, route branches **C5** and **C6** of the supplementary wiring harness for the navigation system **C** to the ABS control unit (50) on the left by the side of the glove compartment (excess length must be tied back). In RHD cars, route branches **C5** and **C6** of the supplementary wiring harness for the navigation system **C** behind the heating box to the left to the ABS control unit on the right next to the glove compartment. Remove the ABS control unit (50).

Disconnect and dismantle the control unit connector **X1171**. Insert branches **C5** and **C6** into the plug-in guide (51).

Connect branch **C5**, 1-pin blade terminal contact, black 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 black 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 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 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 (50).

Install the ABS control unit (50) and fasten the supplementary wiring harness for the navigation system **C** with cable ties (34).

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

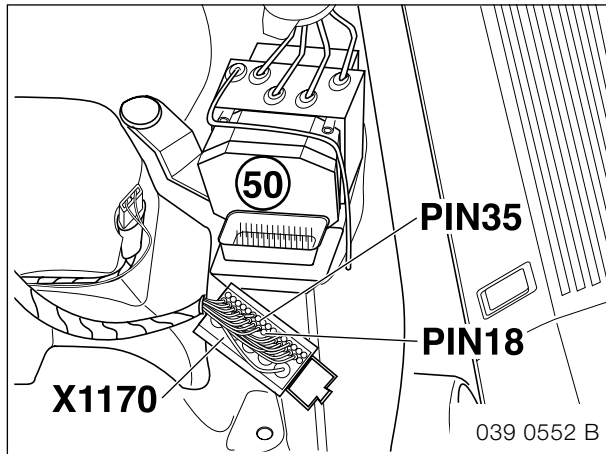
Connect branch **C5**, 1-pin blade terminal contact, black cable, to **PIN 72** of the control unit connector **X1171**. If **PIN 72** is already occupied, cut off the contact part from branch **C5** and solder the black cable onto the cable of **PIN 72** in the installation space of the ABS plug and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

Connect branch **C6**, 1-pin blade terminal contact, yellow 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 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 (50).

Install the ABS control unit (50) and fasten the supplementary wiring harness for the navigation system **C** with cable ties (34).

10. 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 (50) 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 11**.

Section 11. 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 12**.

Section 12. 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).

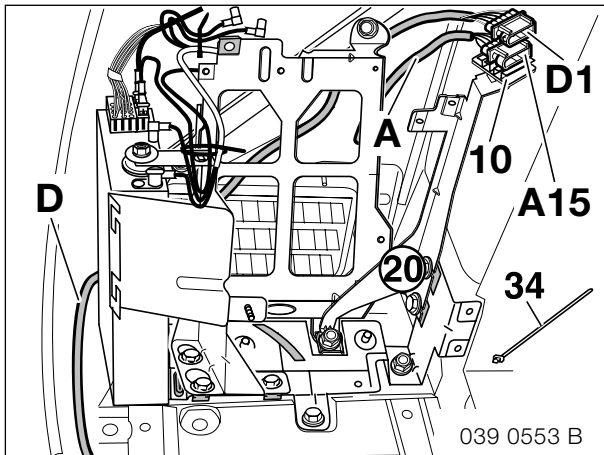
If **PIN 18** is occupied and **PIN 35** is not occupied, install the supplementary wiring harness for the navigation system as described in **section 13**.

Section 13. 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 14**.

Section 14. 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).

11. 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)

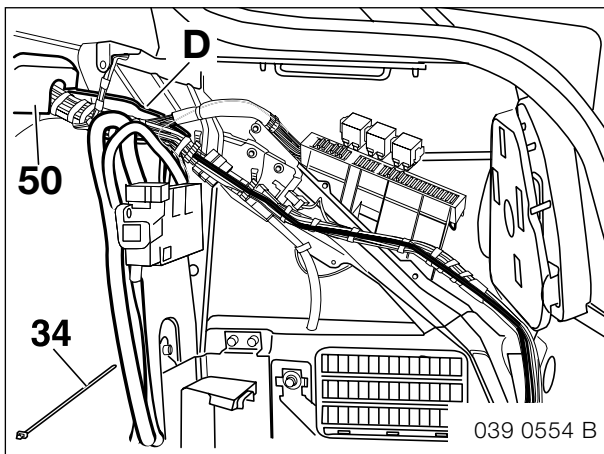


▶ The figure shows the engine compartment at the rear left. ◀

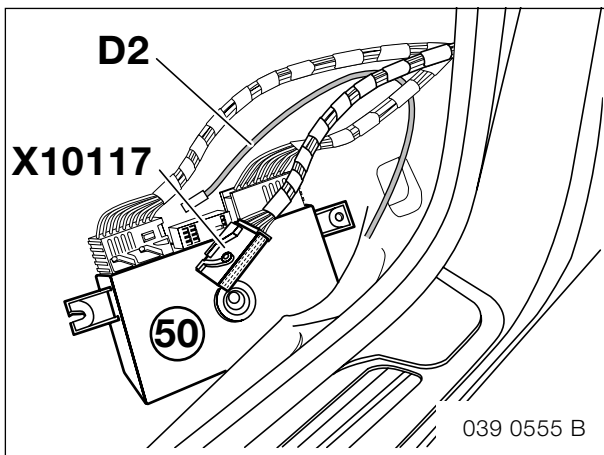
Clip the securing clip (10) with the clipped in branch **A15** of the on-board monitor wiring harness **A** into the front video module bracket (20).

Clip branch **D1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **D** onto branch **A15**.

Route the supplementary wiring harness for the navigation system **D** along the closing panel to the right side part and from there to the passage grommet in the boot at the top right. Secure the supplementary wiring harness for the navigation system **D** with cable ties (34).



Route the supplementary wiring harness for the navigation system **D** with branches **D2**, **D3**, **D4**, **D5** and **D6** through the passage grommet (50) into the vehicle interior and along the right main cable loom to the installation site of the light module in the A pillar on the right and secure with cable ties (34).



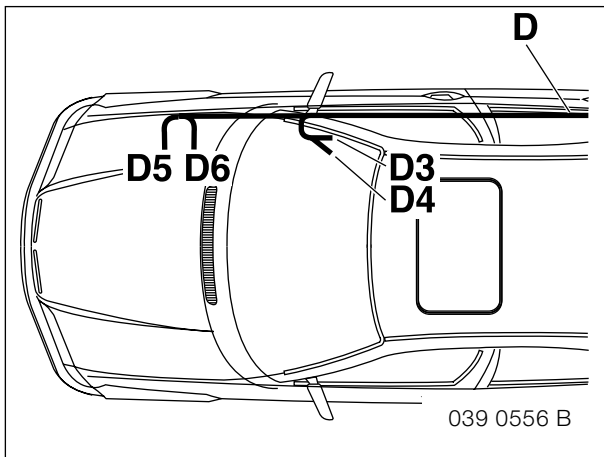
Remove the light module (50), unplug the black 54-pin socket casing **X10117** from the light module (50) and open it.

Connect branch **D2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Then close the black socket casing **X10117**, plug it in and reinstall the light module (50).

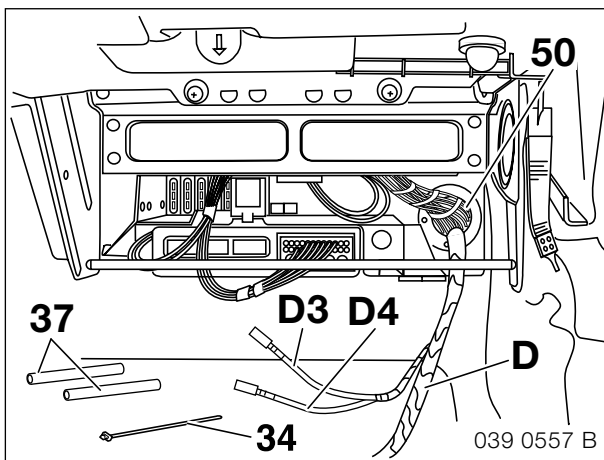
Tie back any excess length on the supplementary wiring harness for the navigation system **D** before branch **D2**.

11. 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)



▶ Remove the cover from the control unit box in the right of the engine compartment before routing the supplementary wiring harness for the navigation system any further. ◀

Insulate branches **D3** and **D4** of the supplementary wiring harness for the navigation system **D** with shrink hose and tie back in the area of the right front door sill. Route branches **D5** and **D6** of the supplementary wiring harness for the navigation system **D** 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 connection plug **X1170** of the ABS hydraulic unit.

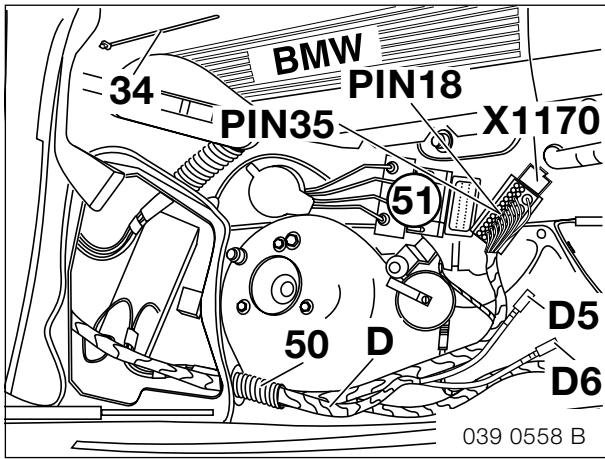


▶ The figure shows the area behind the glove compartment in a left-hand drive car. You should proceed in the identical sequence for right-hand drive cars. ◀

Feed the supplementary wiring harness for the navigation system **D** with branches **D5** and **D6** through the passage grommet (50) in the bulkhead, front right, to the control unit box in the engine compartment and fasten with cable ties (34).

Push a shrink hose (37) onto branch **D3**, 1-pin blade terminal contact, yellow/red cable, and onto branch **D4**, 1-pin blade terminal contact, yellow/white cable, of the supplementary wiring harness for the navigation system **D** to insulate them and shrink the hoses with a hot air blower.

Then tie back branches **D3** and **D4** near the front right door sill with cable ties (34).



Carefully cut the rubber grommet (50) on the control unit box at the front and carefully push the supplementary wiring harness for the navigation system **D** with branches **D5** and **D6** through the opening in the rubber grommet (50) and route them to the ABS hydraulic unit (51).



Seal the opening in the rubber grommet (50) with silicone (splash-water protection) after installation of the supplementary wiring harness for the navigation system **D**. ◀

Unfasten the black 42-pin connection plug **X1170** of the ABS hydraulic unit and connect branches **D5** and **D6** as follows:

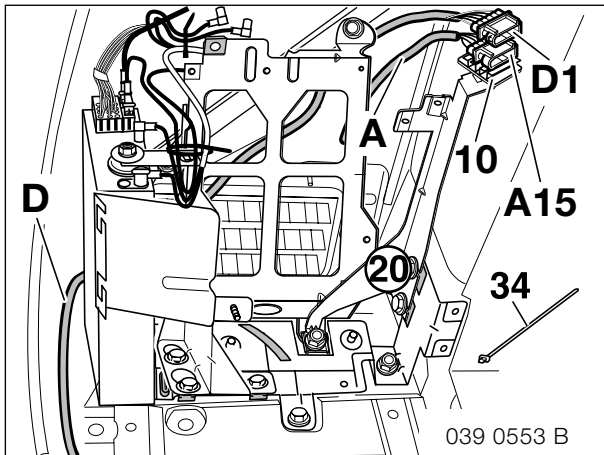
Connect branch **D5**, 1-pin blade terminal contact, yellow/red cable, to the connection plug **X1170** of the ABS hydraulic unit, slot **PIN 35**.


Connect branch **D6**, 1-pin blade terminal contact, yellow/white cable, to the connection plug **X1170** of the ABS hydraulic unit, slot **PIN 18**.

Close the connection plug **X1170** again and connect it to the ABS hydraulic unit.

Then use cable ties (34) to fasten the supplementary wiring harness for the navigation system **D** 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 and PIN 35 on the connection plug of the ABS hydraulic unit occupied)

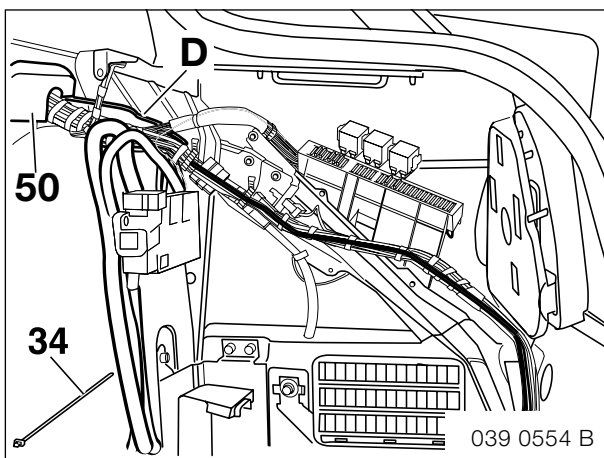


 The figure shows the boot at the rear left. ◀

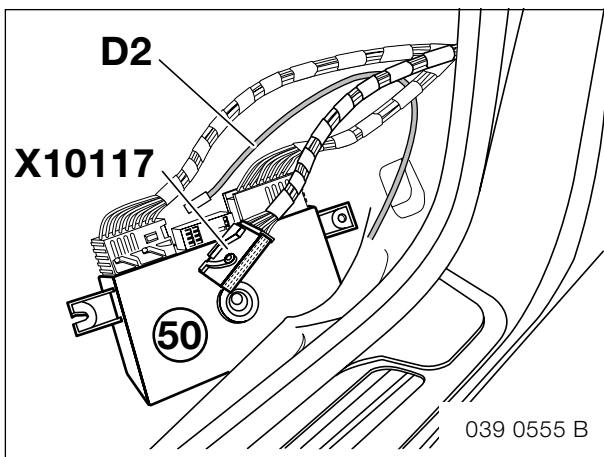
Clip the securing clip (10) with the clipped in branch **A15** of the on-board monitor wiring harness **A** into the front video module bracket (20).

Clip branch **D1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **D** onto branch **A15**.

Route the supplementary wiring harness for the navigation system **D** along the closing panel to the right side part and from there to the passage grommet in the boot at the top right. Secure the supplementary wiring harness for the navigation system **D** with cable ties (34).



Route the supplementary wiring harness for the navigation system **D** with branches **D2, D3, D4, D5** and **D6** through the passage grommet (50) into the vehicle interior and along the right main cable loom to the installation site of the light module in the A pillar on the right and secure with cable ties (34).



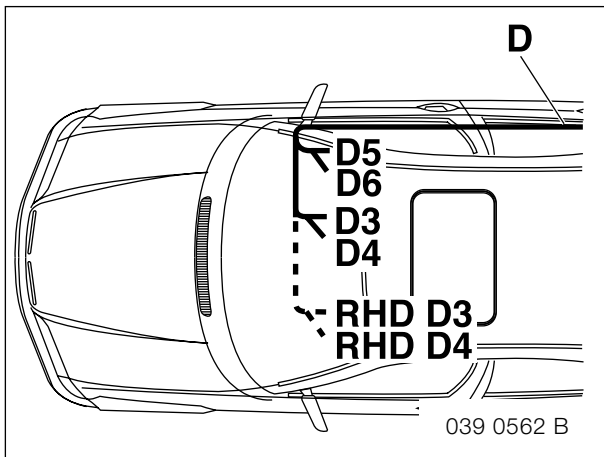
Remove the light module (50), unplug the black 54-pin socket casing **X10117** from the light module (50) and open it.

Connect branch **D2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Then close the black socket casing **X10117**, plug it in and reinstall the light module (50).

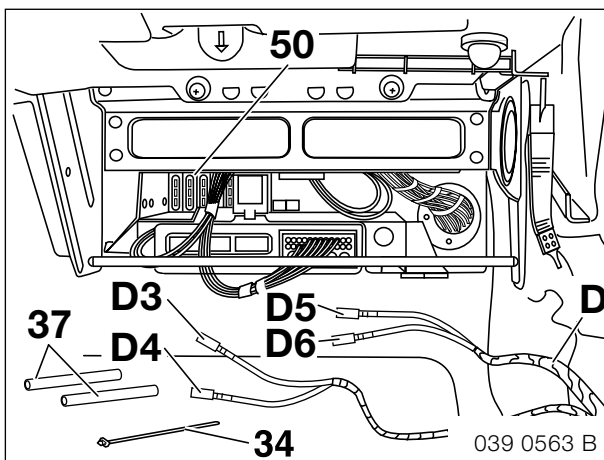
Tie back any excess length on the supplementary wiring harness for the navigation system **D** before branch **D2**.

12. 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 **D5** and **D6** of the supplementary wiring harness for the navigation system **D** with shrink hose and tie back in the area of the right front door sill. In LHD cars, route branches **D3** and **D4** of the supplementary wiring harness for the navigation system **D** to the joint connector box behind the glove compartment (tie back excess length) and connect to the joint connectors **X10183** and **X10184**.

In RHD cars, route branches **D3** and **D4** of the supplementary wiring harness for the navigation system **D** behind the heating box left to the joint connector box behind the glove compartment and connect it to the joint connectors **X10183** and **X10184**.

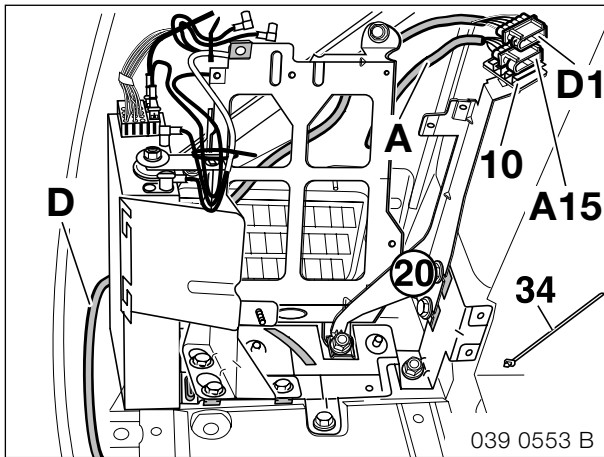



▶ The figure shows the area behind the glove compartment in a left-hand drive car. You should proceed in the identical sequence for right-hand drive cars. ◀

Push a shrink hose (37) onto branch **D5**, 1-pin blade terminal contact, yellow/red cable, and onto branch **D6**, 1-pin blade terminal contact, yellow/white cable on the supplementary wiring harness for the navigation system **D** to insulate them and shrink the hoses with a hot air blower.

Then tie back branches **D5** and **D6** near the front right door sill with cable ties (34). Connect branch **D3**, 1-pin blade terminal contact, yellow/red cable, onto the joint connector **X10183** (yellow/red cable on the joint connector) in the joint connector box (50) behind the glove compartment. Connect branch **D4**, 1-pin blade terminal contact, yellow/white cable, onto the joint connector **X10184** (yellow/white cable on the joint connector) in the joint connector box (50) behind the glove compartment. Tie back excess lengths of branches **D3** and **D4** with cable ties (34).

13. 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)

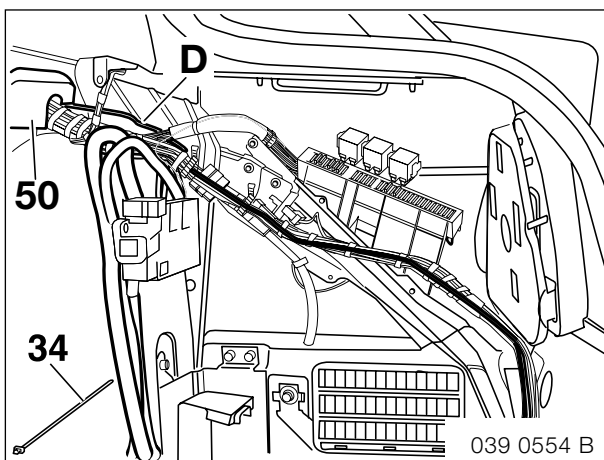


 The figure shows the boot at the rear left. ◀

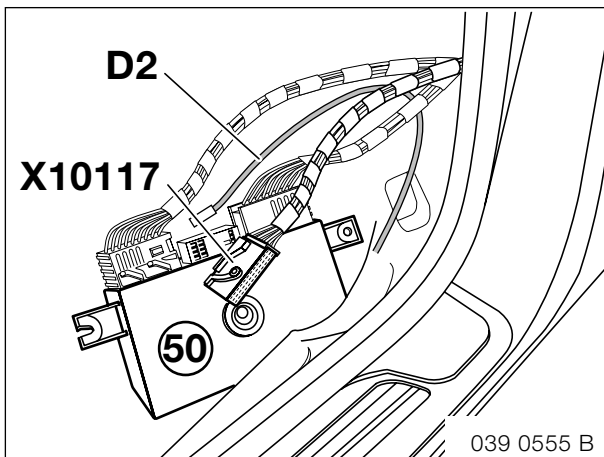
Clip the securing clip (10) with the clipped in branch **A15** of the on-board monitor wiring harness **A** into the front video module bracket (20).

Clip branch **D1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **D** onto branch **A15**.

Route the supplementary wiring harness for the navigation system **D** along the closing panel to the right side part and from there to the passage grommet in the boot at the top right. Secure the supplementary wiring harness for the navigation system **D** with cable ties (34).



Route the supplementary wiring harness for the navigation system **D** with branches **D2**, **D3**, **D4**, **D5** and **D6** through the passage grommet (50) into the vehicle interior and along the right main cable loom to the installation site of the light module in the A pillar on the right and secure with cable ties (34).



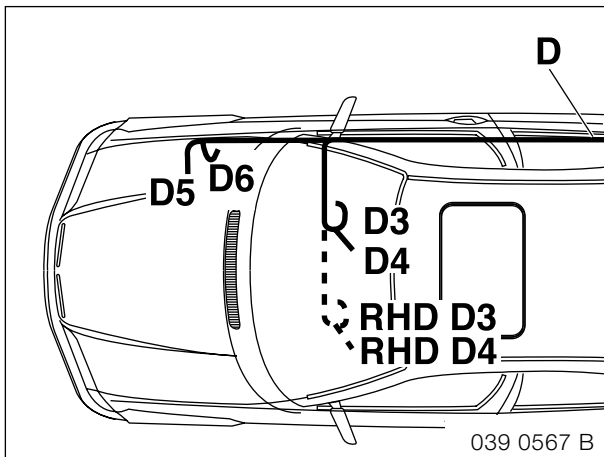
Remove the light module (50), unplug the black 54-pin socket casing **X10117** from the light module (50) and open it.

Connect branch **D2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Then close the black socket casing **X10117**, plug it in and reinstall the light module (50).

Tie back any excess length on the supplementary wiring harness for the navigation system **D** before branch **D2**.

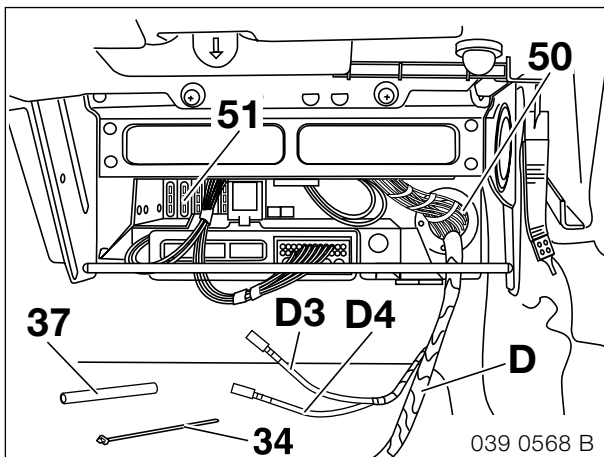
13. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 occupied and PIN 35 not occupied on the connection plug of the ABS hydraulic unit)



- ▶ 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 on the right. ◀

Route branches **D5** and **D6** of the supplementary wiring harness for the navigation system **D** 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 **D5** to connection plug **X1170** on the ABS hydraulic unit.

Insulate branch **D6** with a shrink hose and tie it back. In LHD cars, route branches **D3** and **D4** of the supplementary wiring harness for the navigation system **D** to the joint connector box behind the glove compartment (the excess length must be tied back). In RHD cars, route branches **D3** and **D4** behind the heating box left to the joint connector box behind the glove compartment and secure them with cable ties. Insulate branch **D3** with a shrink hose and tie it back. Only connect branch **D4** to the joint connector **X10184**.



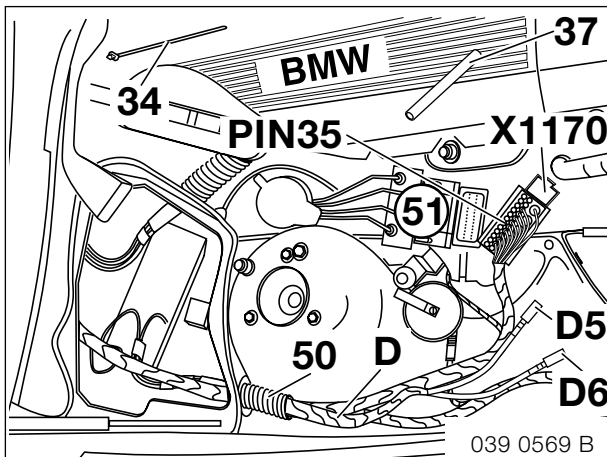
- ▶ The figure shows the area behind the glove compartment in a left-hand drive car. You should proceed in the identical sequence for right-hand drive cars. ◀

Feed the supplementary wiring harness for the navigation system **D** with branches **D5** and **D6** through the passage grommet (50) in the bulkhead, front right, to the control unit box in the engine compartment and fasten with cable ties (34).

Push a shrink hose (37) onto branch **D3**, 1-pin blade terminal contact, yellow/red cable. Use a hot air blower to shrink the insulation and tie it back.

Then connect branch **D4**, 1-pin blade terminal contact, yellow/white cable, onto the joint connector **X10184** (yellow/white cable on the joint connector) in the joint connector box (51) behind the glove compartment. Tie back excess lengths of branches **D3** and **D4** with cable ties (34).

13. 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)



Carefully cut the rubber grommet (50) on the control unit box at the front and carefully push the supplementary wiring harness for the navigation system **D** with branches **D5** and **D6** through the opening in the rubber grommet (50) and route them to the ABS hydraulic unit (51).



Seal the opening in the rubber grommet (50) with silicone (splash-water protection) after installation of the supplementary wiring harness for the navigation system **D**. ◀

Unfasten the black 42-pin connection plug **X1170** of the ABS hydraulic unit and connect branch **D5** as follows:

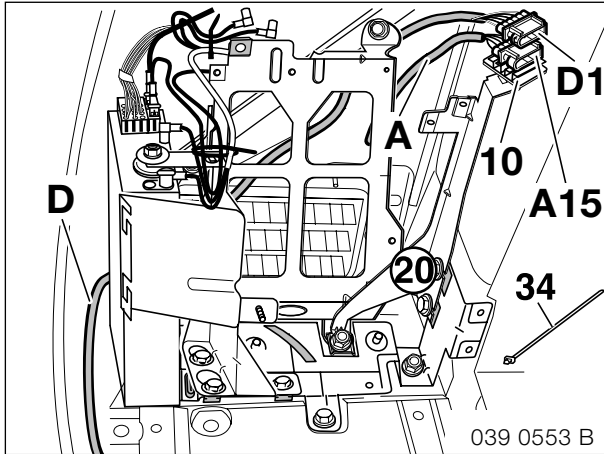
Connect branch **D5**, 1-pin blade terminal contact, yellow/red cable, to the connection plug **X1170** of the ABS hydraulic unit, slot **PIN 35**.


Push a shrink hose (37) onto branch **D6**, 1-pin blade terminal contact, yellow/white cable. Use a hot air blower to shrink the insulation and tie it back.

Close the connection plug **X1170** again and connect it to the ABS hydraulic unit.

Then use cable ties (34) to fasten the supplementary wiring harness for the navigation system **D** in the area of the engine compartment.

14. 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)

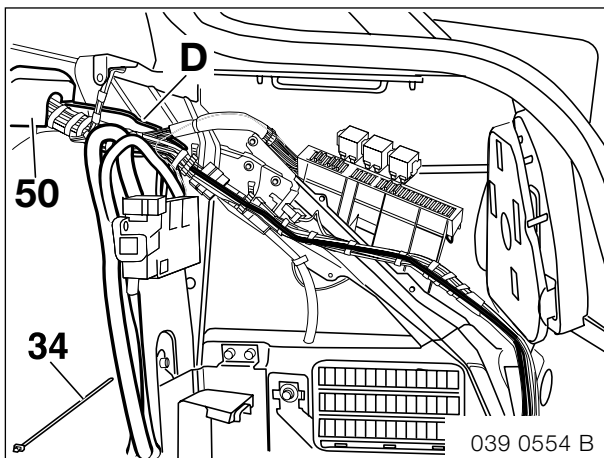


 The figure shows the boot at the rear left. ◀

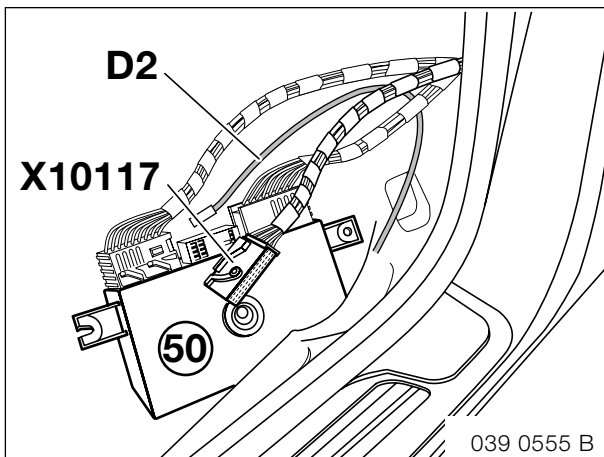
Clip the securing clip (10) with the clipped in branch **A15** of the on-board monitor wiring harness **A** into the front video module bracket (20).

Clip branch **D1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **D** onto branch **A15**.

Route the supplementary wiring harness for the navigation system **D** along the closing panel to the right side part and from there to the passage grommet in the boot at the top right. Secure the supplementary wiring harness for the navigation system **D** with cable ties (34).



Route the supplementary wiring harness for the navigation system **D** with branches **D2**, **D3**, **D4**, **D5** and **D6** through the passage grommet (50) into the vehicle interior and along the right main cable loom to the installation site of the light module in the A pillar on the right and secure with cable ties (34).



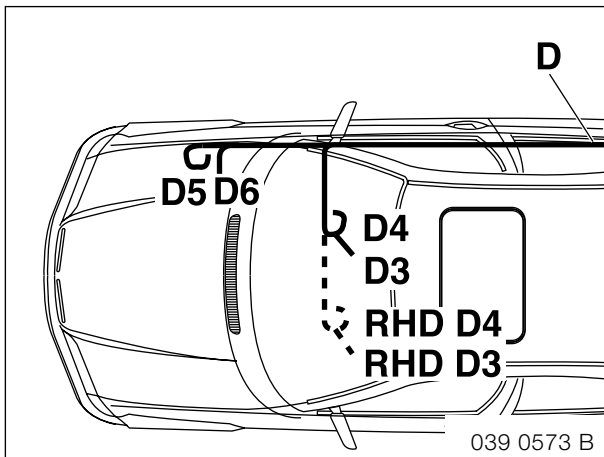
Remove the light module (50), unplug the black 54-pin socket casing **X10117** from the light module (50) and open it.

Connect branch **D2**, 1-pin blade terminal contact, white/yellow cable, to **PIN 38** of the black 54-pin socket casing **X10117**.

Then close the black socket casing **X10117**, plug it in and reinstall the light module (50).

Tie back any excess length on the supplementary wiring harness for the navigation system **D** before branch **D2**.

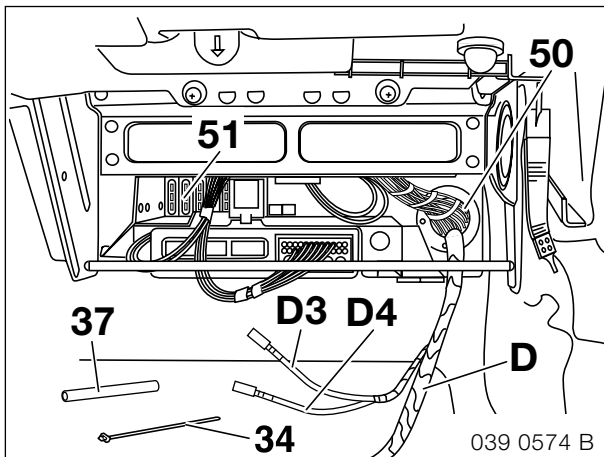
14. To install the supplementary wiring harness for navigation systems in cars with a production date after 9/98 (PIN 18 not occupied and PIN 35 occupied on the connection plug of the ABS hydraulic unit)



- ▶ Remove the cover from the control unit box in the right of the engine compartment before routing the supplementary wiring harness for the navigation system any further.. ◀

Route branches **D5** and **D6** of the supplementary wiring harness for the navigation system **D** 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 **D5** with a shrink hose and tie it back. Only connect branch **D6** to connection plug **X1170** on the ABS hydraulic unit.

In LHD cars, route branches **D3** and **D4** of the supplementary wiring harness for the navigation system **D** to the joint connector box behind the glove compartment (the excess length must be tied back). In RHD cars, route branches **D3** and **D4** behind the heating box left to the joint connector box behind the glove compartment and secure them with cable ties. Only connect branch **D3** to the joint connector **X10183**. Insulate branch **D4** with a shrink hose and tie it back.



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

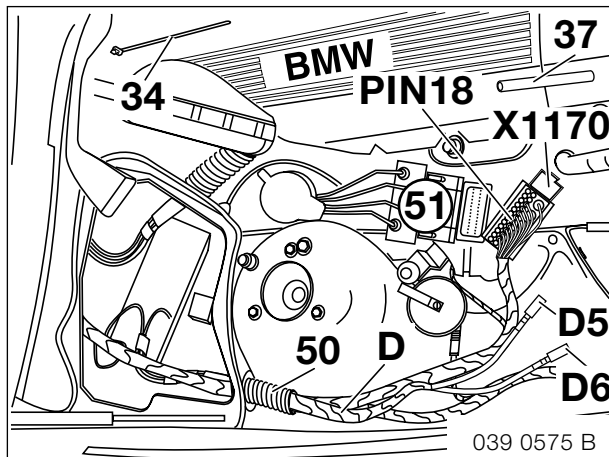
Feed the supplementary wiring harness for the navigation system **D** with branches **D5** and **D6** through the passage grommet (50) in the bulkhead, front right, to the control unit box in the engine compartment and fasten with cable ties (34).

Push a shrink hose (37) onto branch **D4**, 1-pin blade terminal contact, yellow/white cable. Use a hot air blower to shrink the insulation and tie it back.

Connect branch **D3**, 1-pin blade terminal contact, yellow/red cable, onto the joint connector **X10183** (yellow/red cable on the joint connector) in the joint connector box (51) behind the glove compartment.

Tie back excess lengths of branches **D3** and **D4** with cable ties (34).

14. 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)



Carefully cut the rubber grommet (50) on the control unit box at the front and carefully push the supplementary wiring harness for the navigation system **D** with branches **D5** and **D6** through the opening in the rubber grommet (50) and route them to the ABS hydraulic unit (51).



Seal the opening in the rubber grommet (50) with silicone (splash-water protection) after installation of the supplementary wiring harness for the navigation system **D**. ◀

Unfasten the black 42-pin connection plug **X1170** of the ABS hydraulic unit and connect branch **D6** as follows:

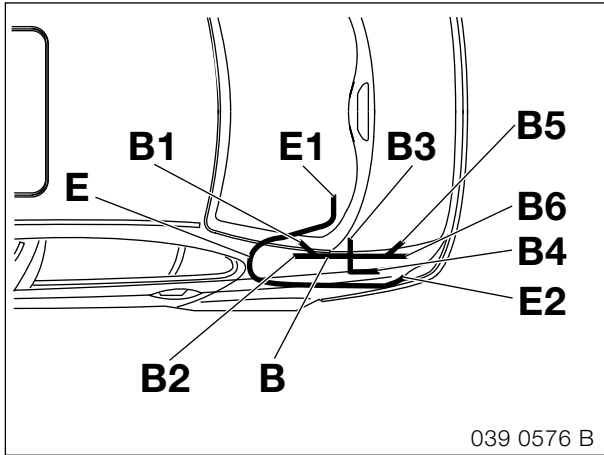
Connect branch **D6**, 1-pin blade terminal contact, yellow/white cable, to the connection plug **X1170** of the ABS hydraulic unit, slot **PIN 18**.

Push a shrink hose (37) onto branch **D5**, 1-pin blade terminal contact, yellow/red cable. Use a hot air blower to shrink the insulation and tie it back.

Close the connection plug **X1170** again and connect it to the ABS hydraulic unit.

Then use cable ties (34) to fasten the supplementary wiring harness for the navigation system **D** in the area of the engine compartment.

15. To install the navigation system



Overview drawing for installation of the navigation system wiring harness **B** and the aerial extension for the GPS aerial **E**.

Navigation system wiring harness **B**

Branch **B1** to the free branch **A15** of the on-board monitor wiring harness **A** on the front video module bracket

Branch **B2** to the free branch **C1/D1** of the supplementary wiring harness for the navigation system **C/D** on the front video module bracket

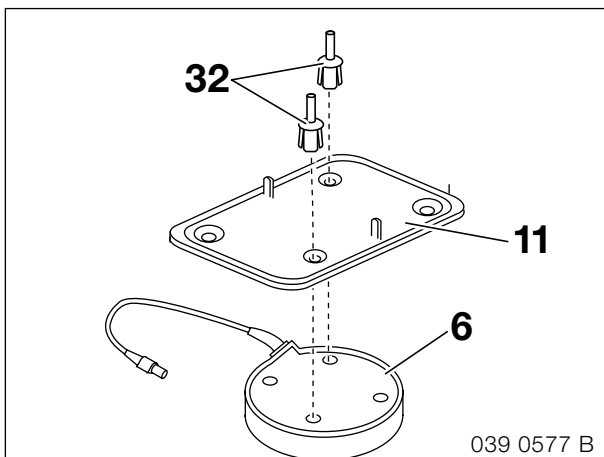
Tie back branches **B3** and **B4** to the navigation system wiring harness **B**

Branches **B5** and **B6** to the installation site of the navigation computer

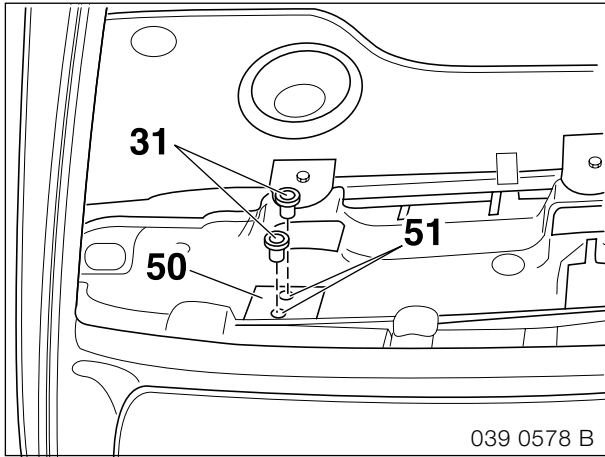
Aerial extension for the GPS aerial **E**

Branch **E1** to the installation site of the GPS aerial under the rear window shelf

Branch **E2** to the installation site of the navigation computer

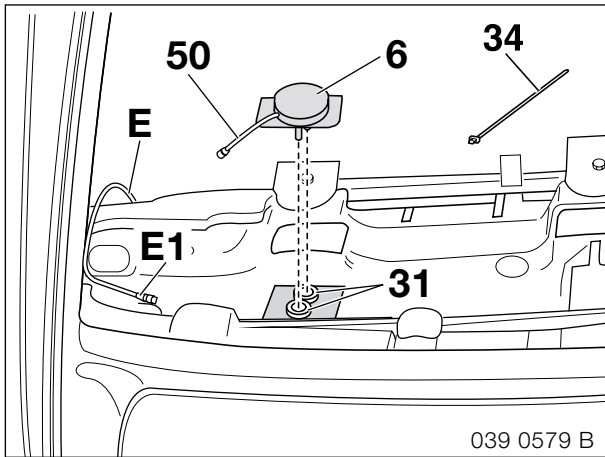


Place the GPS aerial holder (11) on the GPS aerial holder (6) and secure it with two expanding rivets (32).

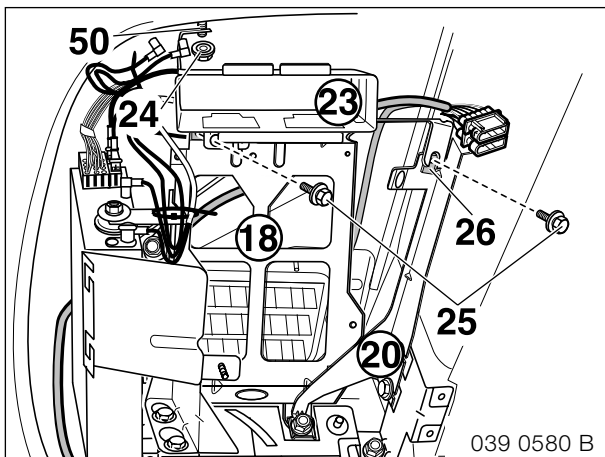


▶ The figure shows rear window shelf on the left. ◀
Remove the prepunched cut-out (50) under the rear window shelf.
Check the existing attachment points (51) are 8 mm in diameter; if necessary, drill out the attachment points to 8 mm diameter.
Press attachment grommets (31) into the attachment points (51).

15. To install the navigation system

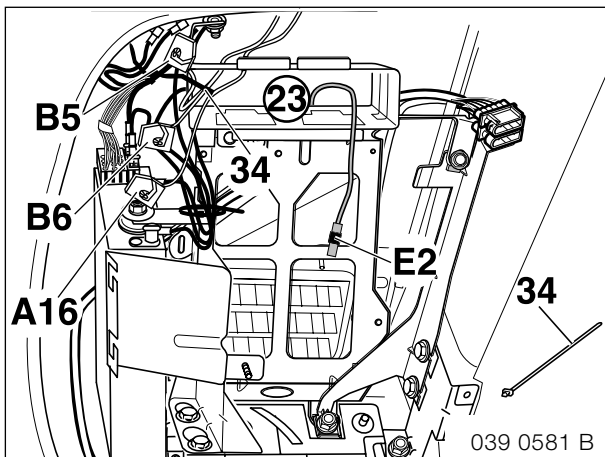


Fit the GPS aerial holder with the mounted GPS aerial into the attachment grommets (31). Plug together branches **E1**, coaxial plug casing, of the aerial extension for the GPS aerial **E** with the aerial cable (50) of the GPS aerial (6). Route the aerial extension for the GPS aerial **F** along the audio wiring harness through the passage grommet behind the rear seat backrest to the installation site of the navigation computer in the boot at the rear left and secure it with cable ties (34).



Place a speed nut M5 (26) onto the front video module bracket (20). Insert the navigation computer holder (23) and secure it to the stud bolt (50) on the gutter reinforcement with the hexagonal nut and washer M5 (24) and to the DSP amplifier holder and the front video module bracket (20) with two hexagonal screws with washers M5x14 (25).

▶ If the car is equipped with a car phone or mobile phone, use the existing hexagonal nut and washer M5 from the telephone holder. ◀



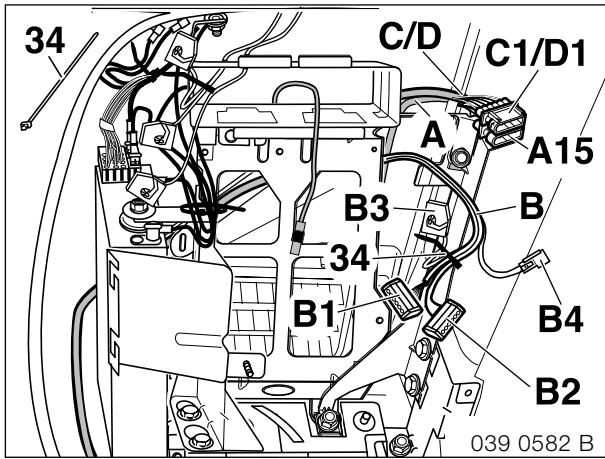
Push branch **A16**, blue 18-pin socket casing, of the on-board monitor wiring harness **A** through the navigation computer holder (23).

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 (23).

Then tie back branch **B5** on the navigation system wiring harness **B** with a cable tie (34).

Push branch **E2**, coaxial socket casing, of the aerial extension for the GPS aerial **E** through the navigation computer holder (23).

15. To install the navigation system

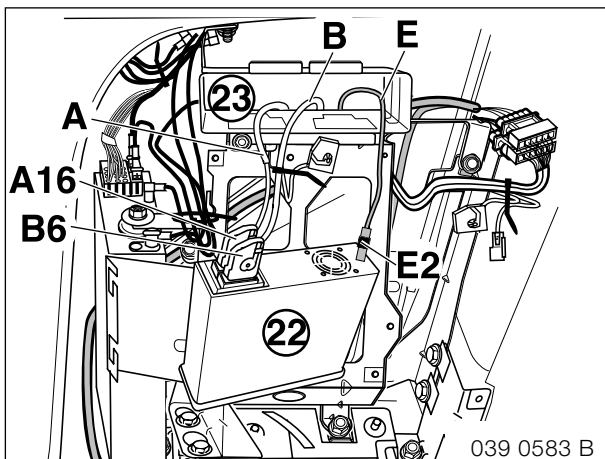


Tie back branch **B3**, white 18-pin socket casing and branch **B4**, black 6-pin plug casing, of the navigation system wiring harness **B** to the navigation system wiring harness **B** using cable tie (34).

Connect branch **B2**, black 6-pin socket casing, of the navigation system wiring harness **B** to branch **C1/D1**, black 6-pin plug casing, of the supplementary wiring harness for the navigation system **C/D**.

Connect branch **B1**, white 6-pin socket casing, of the navigation system wiring harness **B** to branch **A15**, white 6-pin plug casing, of the on-board monitor wiring harness **A**.

Then attach the navigation system wiring harness **B**, on-board monitor wiring harness **A** and supplementary wiring harness for the navigation system **C/D** using cable ties (34).



Connect branch **A16**, blue 18-pin socket casing, of the on-board monitor wiring harness **A** onto the navigation computer (22).

Connect branch **B6**, Bordeaux 18-pin socket casing with tied back branch **B5**, of the navigation system wiring harness **B** to the navigation computer (22).

Connect branch **E2**, coaxial socket casing, of the aerial extension for the GPS aerial **E** to the navigation computer (22).



When inserting the navigation computer ensure that you do not jam or damage any cables or lines (including behind the navigation computer). ◀

Slide the navigation computer (22) into the navigation computer holder (23) until it engages.

Then install the **new** boot trim for the rear left, which you ordered separately using the Electronic Parts Catalogue (EPC).

16. 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, see section 18). ◀

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, follow the text instructions for completing each individual step.

Procedure

- Connect DIS/MoDIC to the car
- Ignition **“ON”**
- Select **“Coding ZCS”**
- Series: **“E39”**
- Path: **“2 Retrofit”**
- System: **“7 Navigation”**



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

16. Coding and concluding work



In cars with a DSP amplifier, the DSP amplifier also has to be recoded. ◀

Procedure

- Connect DIS/MoDIC to the car
- Ignition **“ON”**
- Select **“Coding ZCS”**
- Series: **“E39”**
- 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

17. Connection description for TV function



This chapter is only applicable if the car is also to be upgraded with the 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**, coaxial plug casing, of the on-board monitor wiring harness **A** and plug it onto the previously mounted left TV amplifier in the left C pillar.

Undo the tied-back branch **A5**, coaxial plug casing, of the on-board monitor wiring harness **A** and plug it onto the previously mounted right TV amplifier in the right C pillar.

Disconnect branch **A16**, 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 plug casing on the navigation computer.

Undo branches **A6**, angled coaxial socket casing, and **A7**, angled coaxial socket casing, which are tied back on the on-board monitor wiring harness **A** and undo branch **B3**, white 18-pin socket casing, which is tied back on the navigation system wiring harness **B**.

The route branches **A6**, **A7**, **A16** and **B3** to the video module and connect them to the video module as follows:

Connect branches **A6** and **A7**, angled coaxial socket casing, to the two coaxial plug casings on the video module.

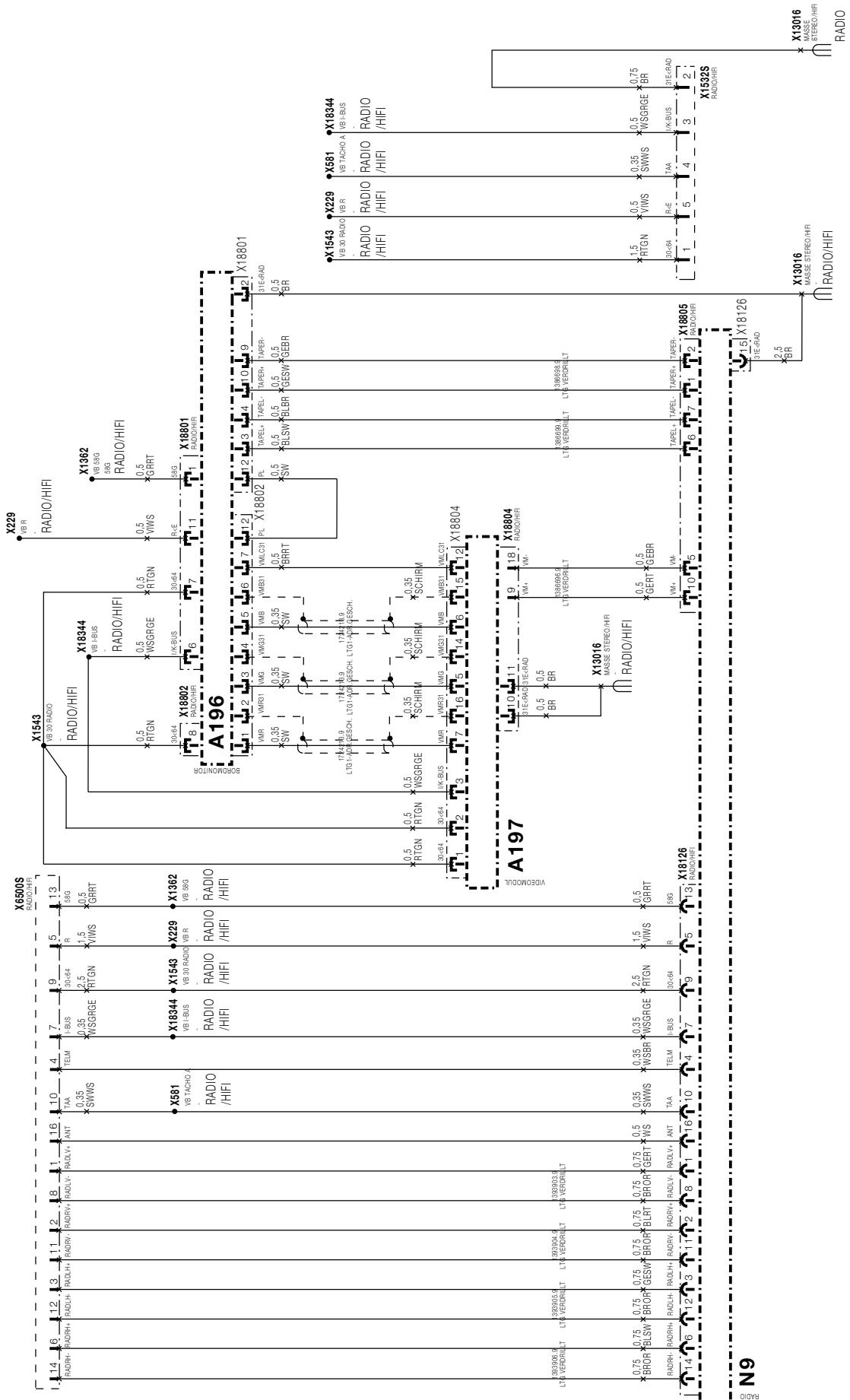
Connect branch **A16**, blue 18-pin socket casing, to the blue 18-pin plug casing of the video module.

Connect branch **B3**, white 18-pin socket casing, to the white 18-pin plug casing of the video module.



Should the car be equipped at a later date with TV function, the system must be re-coded. For further details refer to section “**16. Coding and concluding work**”. ◀

18. Circuit diagram for on-board monitor wiring harness



039 0584 B

18. Circuit diagram for on-board monitor wiring harness

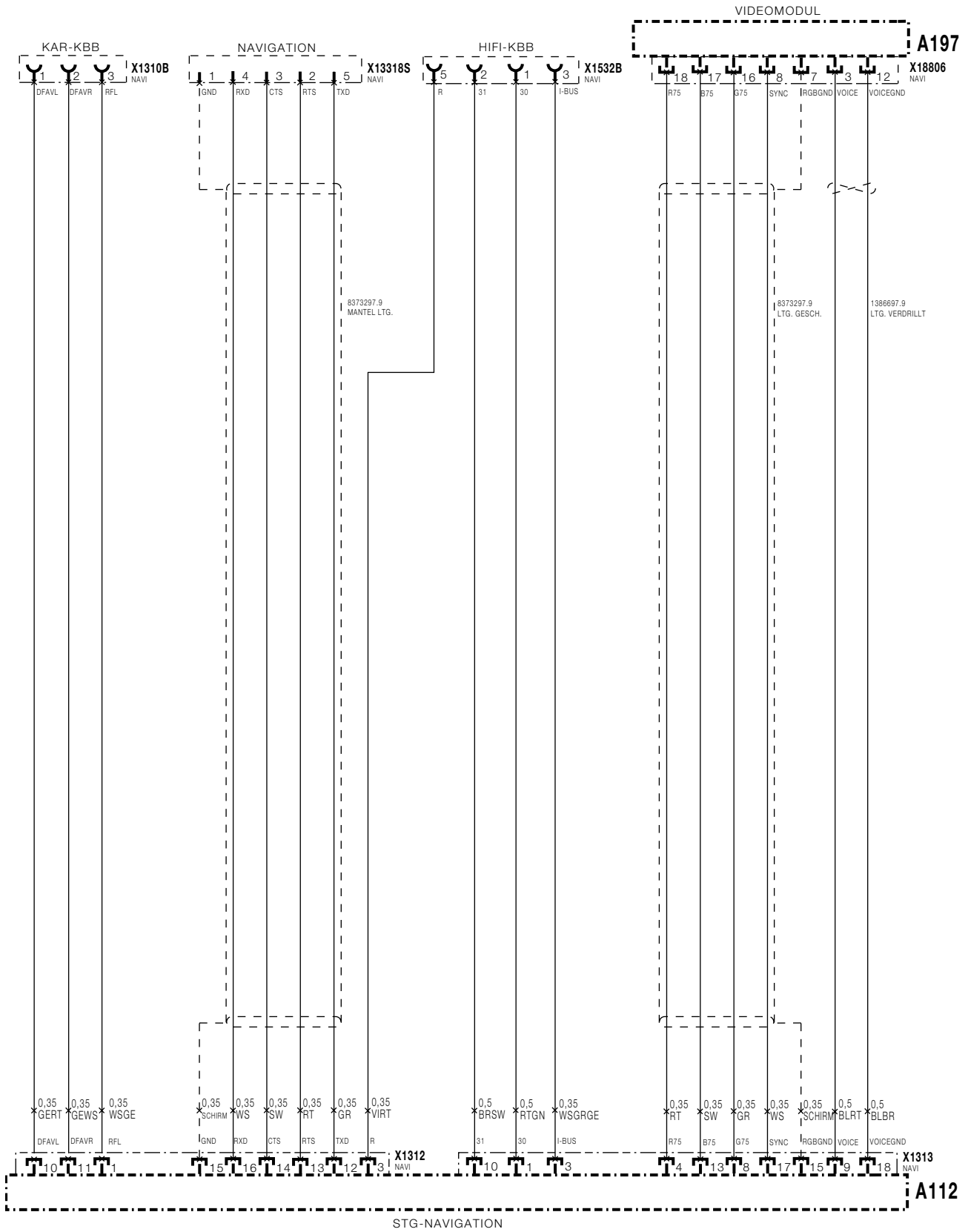
Legend

A196	On-board monitor
A197	Video module
N9	Radio
X229	Connector R
X581	Tacho A connector
X1362	58g connector
X1532	Radio/HiFi navigation
X1543	Connector 30 radio
X6500	Plug connector, adapter
X13016	Earth, stereo/Hi Fi
X18126	Radio A
X18344	I bus connector
X18801	On-board monitor control
X18802	On-board monitor
X18804	Video module A
X18805	Radio B

Colour abbreviations

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

19. Circuit diagram for the navigation system wiring harness



039 0585 B

19. Circuit diagram for the navigation system wiring harness

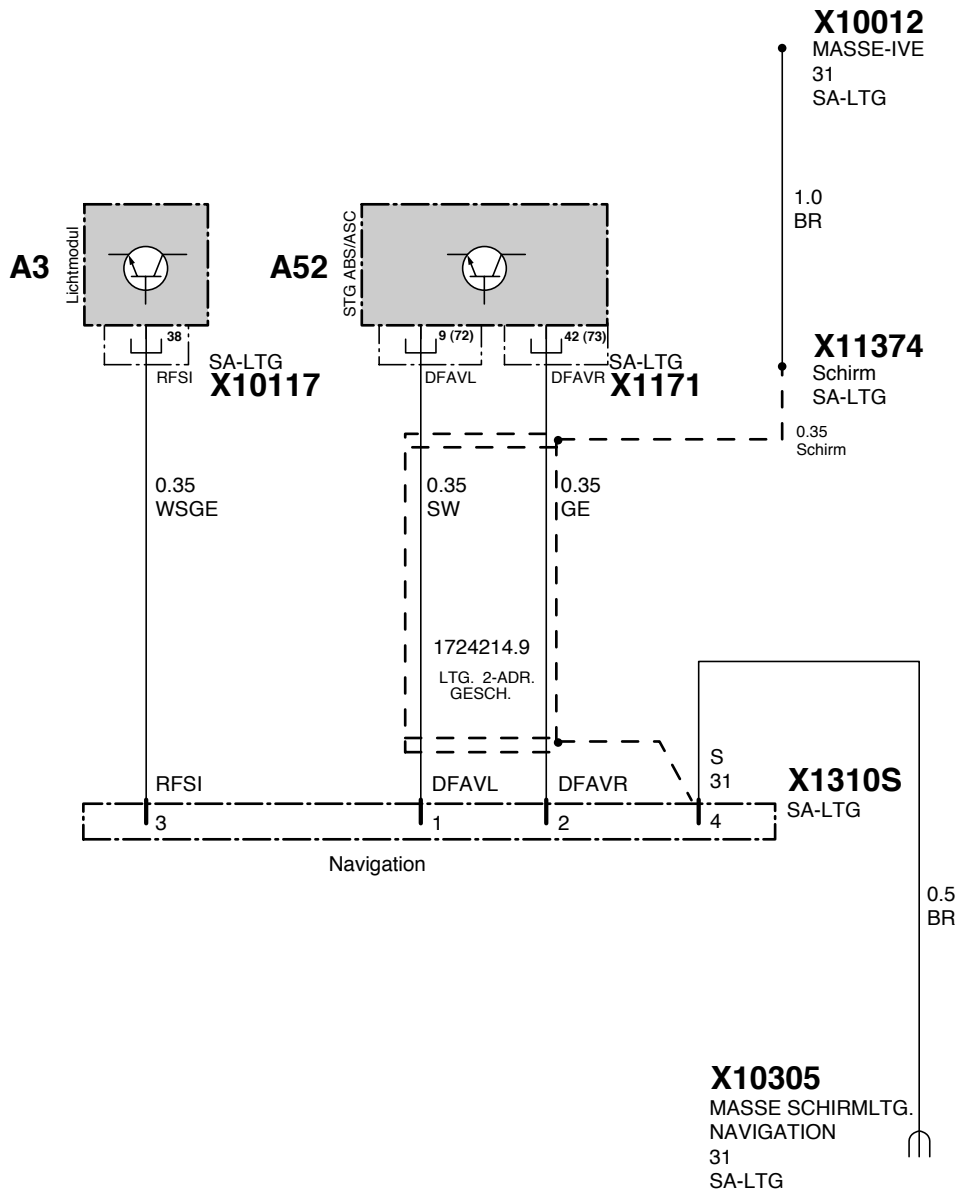
Legend

A112	Navigation plug casing
A197	Video module
X1310	KAR navigation
X1312	Navigation A
X1313	Navigation B
X1532	Radio/HiFi navigation
X18806	Video module A
X13318	Navigation/telephone

Colour abbreviations

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

20. Circuit diagram for supplementary wiring harness for navigation systems in cars with a production date prior to 9/98



039 0587 B

20. Circuit diagram for supplementary wiring harness for navigation systems in cars with a production date prior to 9/98

Legend

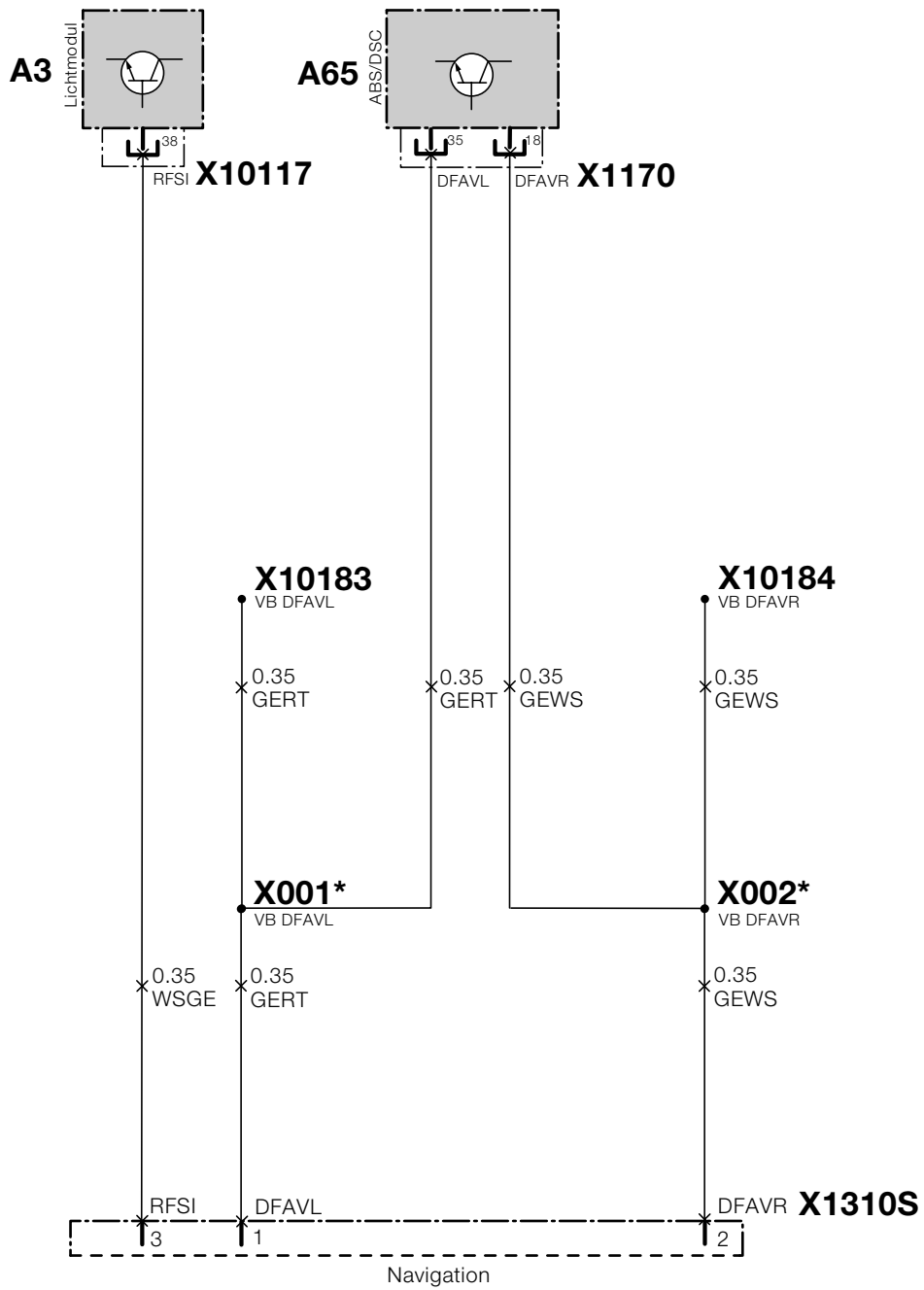
A3	Light module
A52	ABS hydraulic unit/ASC
X1171	ABS/ASC
X1310	KAR navigation
X10012	Earth IVE
X0117	Black 54-pin socket casing of the light module
X10305	Navigation earth shield cable
X11374	Shield connector

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

Colour abbreviations

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

21. Circuit diagram for supplementary wiring harness for navigation systems in cars with a production date after 9/98



039 0586 B

21. Circuit diagram for supplementary wiring harness for navigation systems in cars with a production date after 9/98

Legend

A3	Light module
A65	ABS hydraulic unit/DSC
X001*	DFAVL connector
X002*	DFAVR connector
X1170	Black 42-pin connection plug of ABS/DSC hydraulic unit
X1310S	Black 6-pin plug casing
X10117	Black 54-pin socket casing of the light module
X10183	DFAVL joint connector
X10184	DFAVR joint connector

The components marked with an asterisk (*) and X designations are only valid for this circuit diagram, all other components and X designations comply with the BMW after-sales circuit diagrams.

Colour abbreviations

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