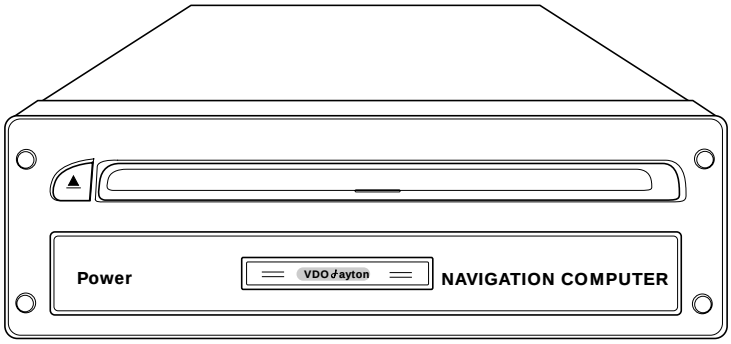
Parts and Accessories
Installation Instructions



F 46 1359 B

Upgrade kit Mark IIi to Mark III

(System with colour monitor and operation in the centre console)

BMW 3 Series (E 46)
BMW 5 Series (E 39)
BMW 7 Series (E 38)

Technical and electrical knowledge is required

Installation time 1-1.5 hours, which can vary according to the condition and fittings of the vehicle.

Retrofit/Installation Kit no. 65 90 0 136 831

Contents

1. Important notes on the installation of the upgrade kit Navigation System Mark III

Only for use within the BMW trading organisation.

Installation of the upgrade kit to Navigation System Mark III may only be undertaken by a specialist workshop which has available the necessary special tools and the required manuals (maintenance, repair, diagnostic, etc.).

Care should be taken when installing cables/leads that these do not become kinked or damaged.

Additionally installed cables/leads must be fastened with cable straps. Any excess lengths should be tied back.

Item numbers relate only to the overviews or to the text by the side of the illustration which is associated with it.

 These installation instructions are only valid for vehicles with installed accessory Navigation System Mark Ili.◄

Subject to technical modification

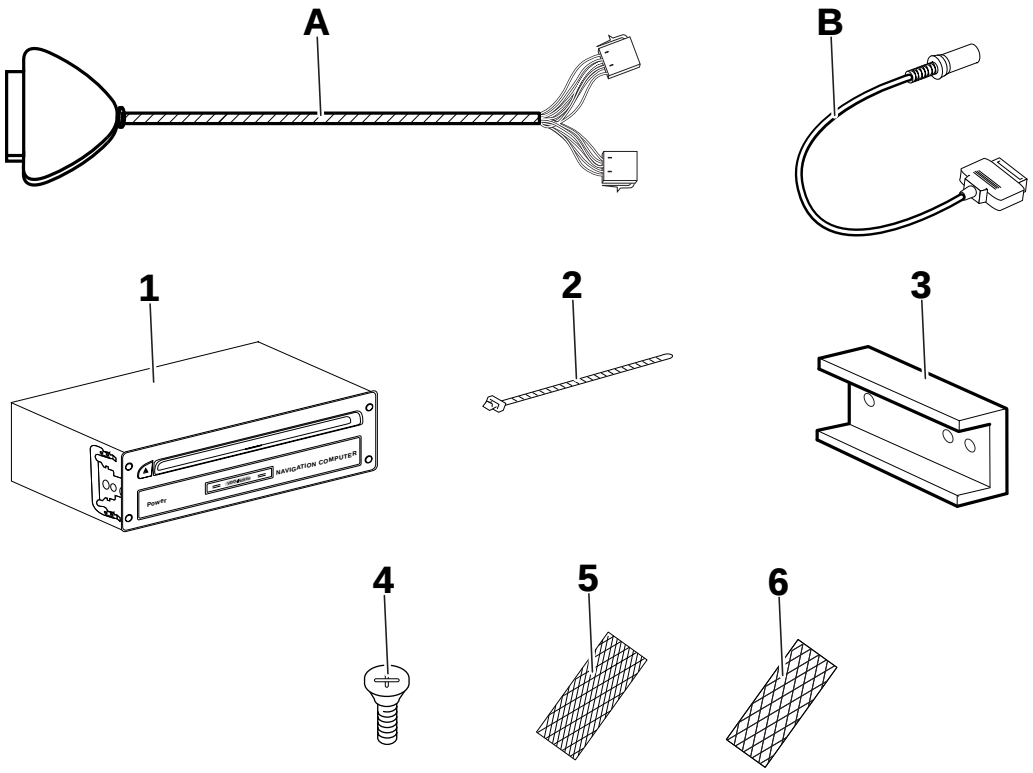
Required tools and auxiliary materials

Phillips screwdriver, short
Set of Phillips screwdrivers
Set of flat-tip screwdrivers
Set of Torx socket wrenches
Set of 1/4 inch socket-wrenches

2. Preparatory work

	TIS AW no.
Print out error memory	
Disconnect battery	12 00 . . .
Dismantle navigation computer in glove box (only E46/C, E39/2 and E39)	51 16 360
Dismantle navigation computer in audio unit carrier in boot, left (only E46/2, E46/4 and E46/3)	65 90 510
Dismantle navigation computer under rear window shelf in the boot (only E39 and E38)	-

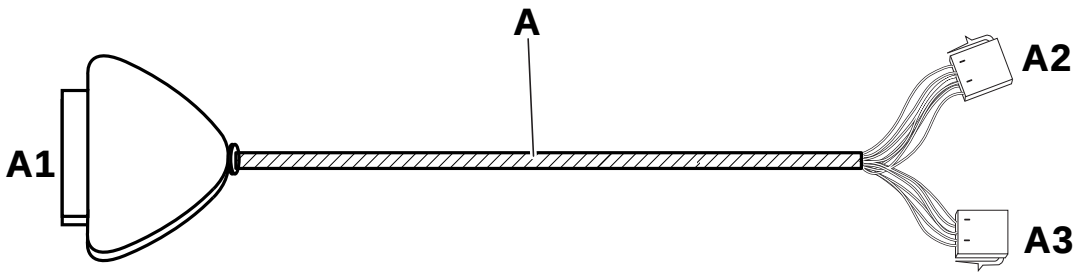
3. Parts overview



F 46 1360 B

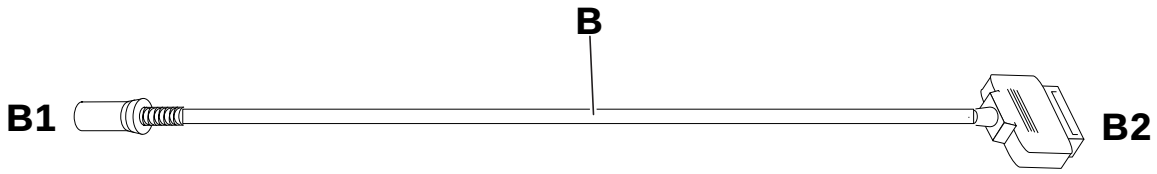
A Adapter cable, navigation computer
B Adapter cable, monitor
1 Navigation computer
2 Cable strap (6 items)
3 Adapter piece (2 items) (not necessary in E46/3)
4 Cross recess countersunk head screw M4x30 (2 items) (not necessary in E46/3)
5 Dual attachment strip, fine, (300mm) (2 items) (only necessary in E46/3)
6 Dual attachment strip, coarse, (300mm) (2 items) (only necessary in E46/3)

4. Connection overview of supplementary wiring harnesses



F 46 1361 B

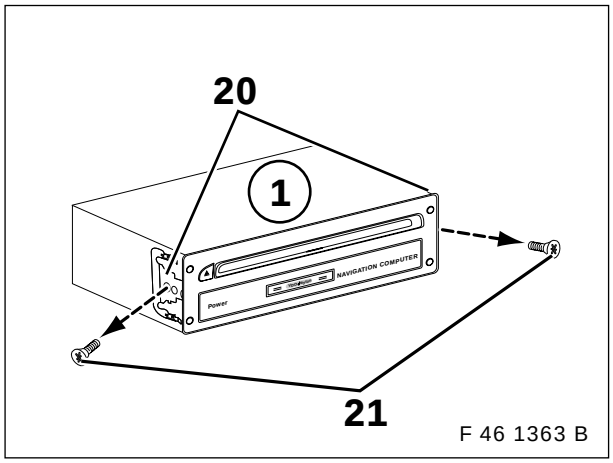
Item	Designation	Cable colour	Connection point in vehicle
A	**Adapter cable navigation computer**	-	-
A1	black 28-pole pin housing	-	connect together with black 16-pole socket housing and black 12-pole socket housing of the navigation wiring harness
A2	brown 8-pole socket housing	-	in space B of the navigation computer (1)
A3	black 8-pole socket housing	-	in space A of the navigation computer (1)



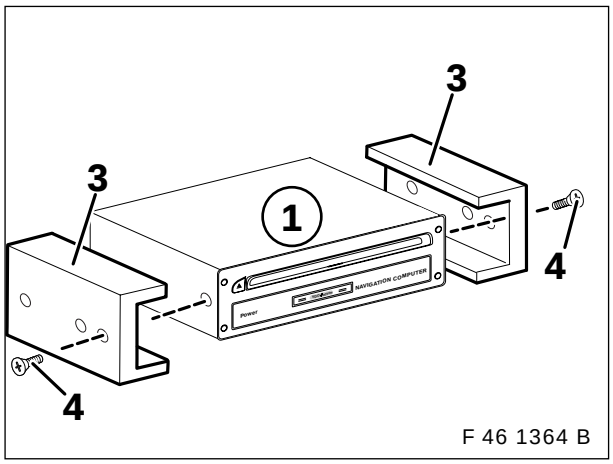
F 46 1362 B

Item	Designation	Cable colour	Connection point in vehicle
B	**Adapter cable, monitor**	black	-
B1	black 13-pole socket housing	-	at black 13-pole pin housing of the monitor wiring harness
B2	black 18-pole socket housing	-	in the central plug-in place of the navigation computer (1)

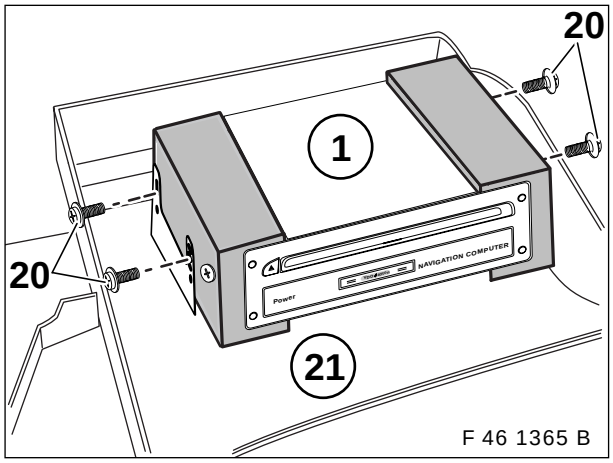
5. Prepare navigation computer and connect it (only vehicles with navigation computer in the glove box)



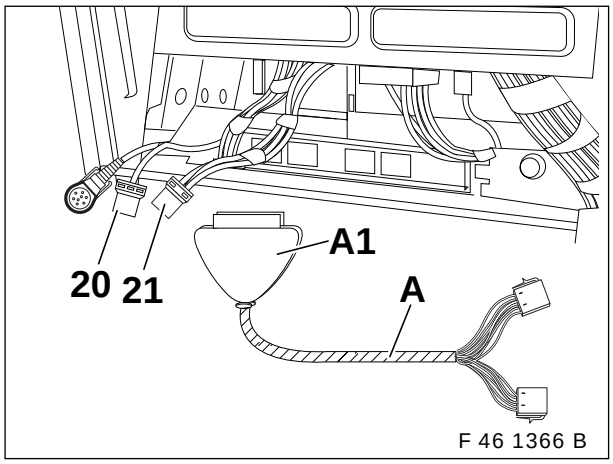
Screw off side tabs (20) by undoing the Torx screws (21) on both sides of the navigation computer (1).
Side tabs (20) and Torx screws (21) are no longer required.



Screw on the two adapter pieces (3) with two cross recess countersunk head screws (4) to the navigation computer (1).

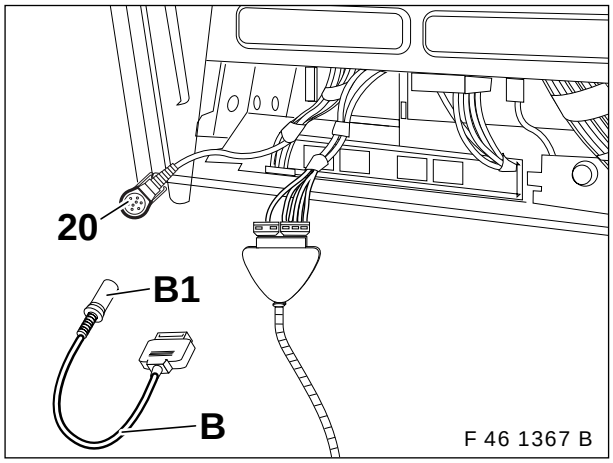


Push navigation computer (1) in and screw it into glove box (21) with existing Phillips screws M4x8 (20).

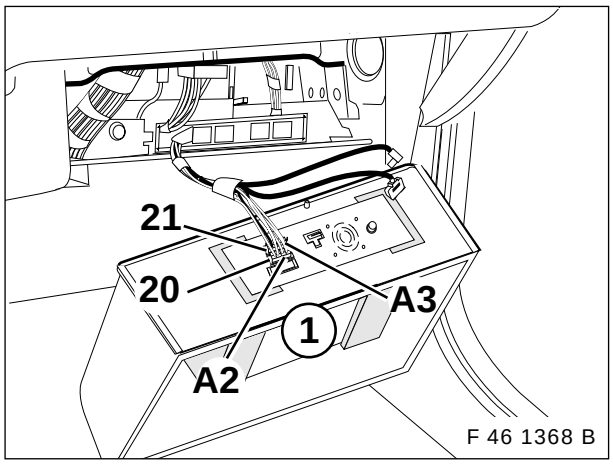


Connect together branch cable **A1**, black 28-pole pin housing, of the adapter cable navigation computer **A**, with black 16-pole socket housing (20) and the black 12-pole socket housing (21) of the existing power supply cable.

5. Prepare navigation computer and connect it
(only vehicles with navigation computer in the glove box)

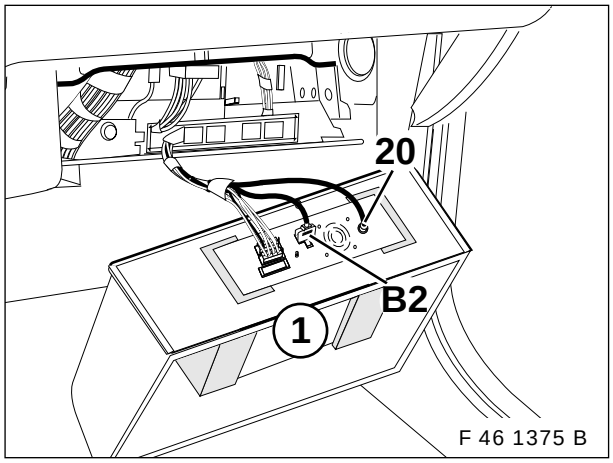


Connect together branch cable **B1**, black 13-pole socket housing, of the adapter cable monitor **B**, with black 13-pole pin housing (20) of the monitor wiring harness.



Insert branch cable **A2**, brown 8-pole socket housing, of the adapter cable navigation computer **A**, in space **B** (20) of the navigation computer (1).
Insert branch cable **A3**, black 8-pole socket housing, in space **A** (20) of the navigation computer (1).

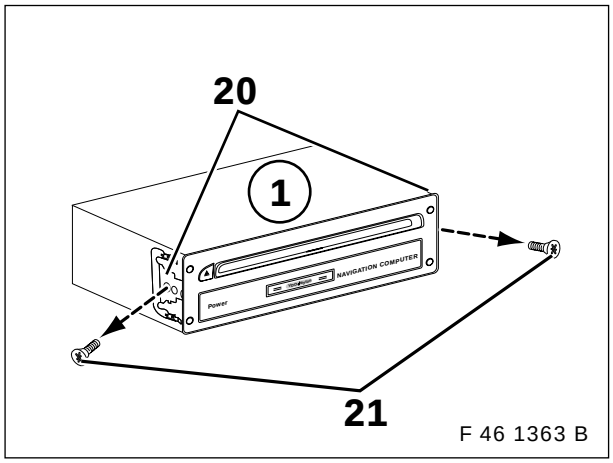
It may be necessary to enlarge the aperture in the glove box for the lead-through of the cables/leads.◂



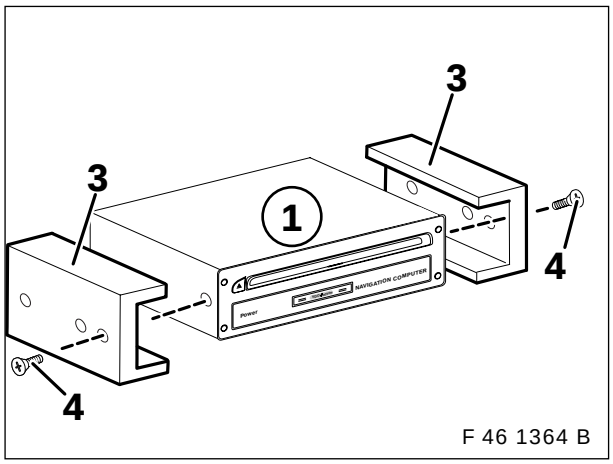
Insert branch cable **B2**, black 18-pole socket housing, of the adapter cable navigation computer **B**, in the central plug-in place of the navigation computer (1).
Insert angled coaxial socket housing (20) of the GPS antenna in the coaxial pin housing on the navigation computer (1).

Tie back excess lengths of the cables/leads behind the glove box with cable straps. Install glove box and check for freedom of movement.◂

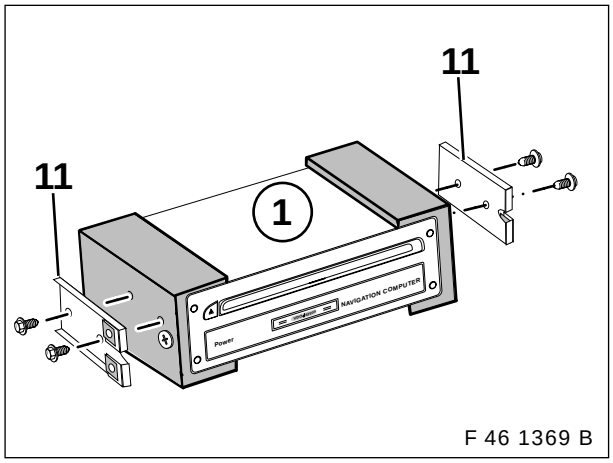
6. Prepare navigation computer and connect it (only vehicles with navigation computer in the audio unit carrier in the boot, left, E46/4 and E/46/2)



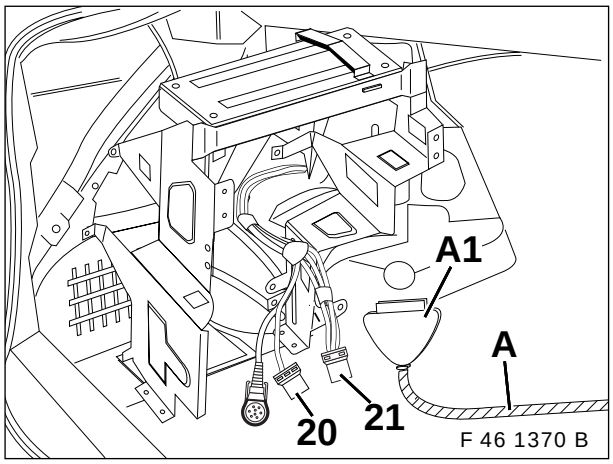
Screw off side tabs (20) by undoing the Torx screws (21) on both sides of the navigation computer (1).
Side tabs (20) and Torx screws (21) are no longer required.



Screw on the two adapter pieces (3) with two cross recess countersunk head screws (4) to the navigation computer (1).

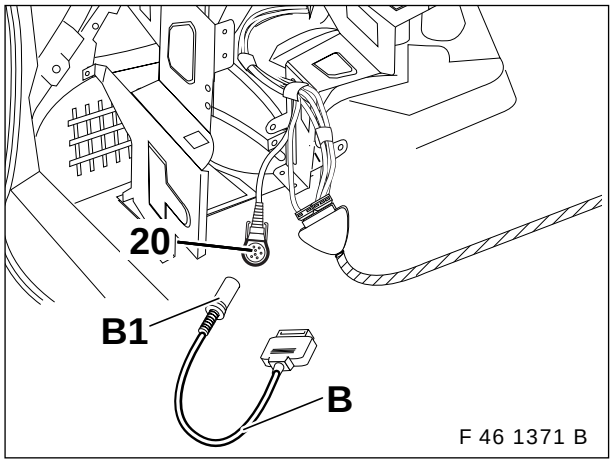


Screw brackets (11) for navigation computer with Phillips screws M4x8 on to the navigation computer (1).

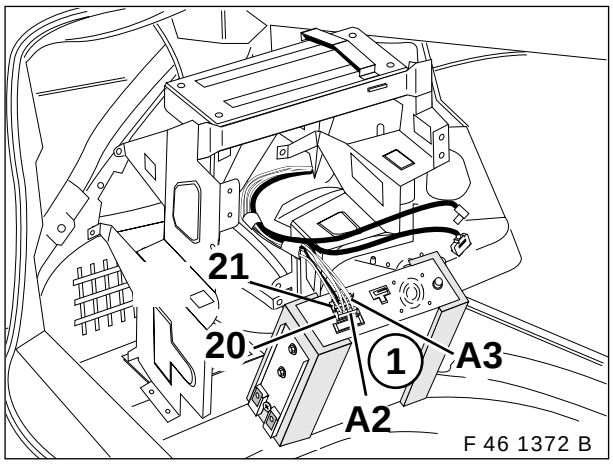


Connect together branch cable **A1**, black 28-pole pin housing, of the adapter cable navigation computer **A,** with black 16-pole socket housing (20) and the black 12-pole socket housing (21) of the existing power supply cable.

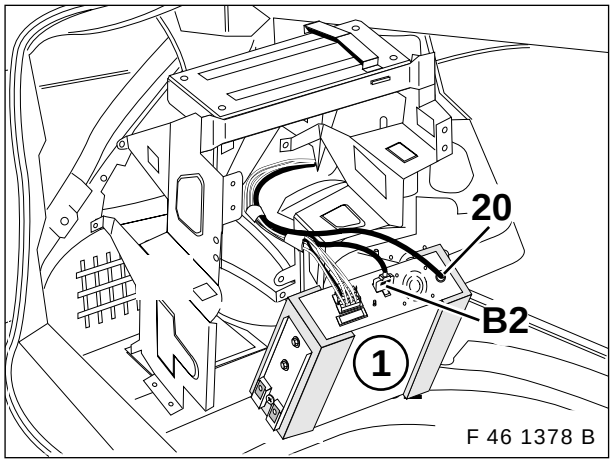
6. Prepare navigation computer and connect it (only vehicles with navigation computer in the audio unit carrier in the boot, left, E46/4 and E/46/2)



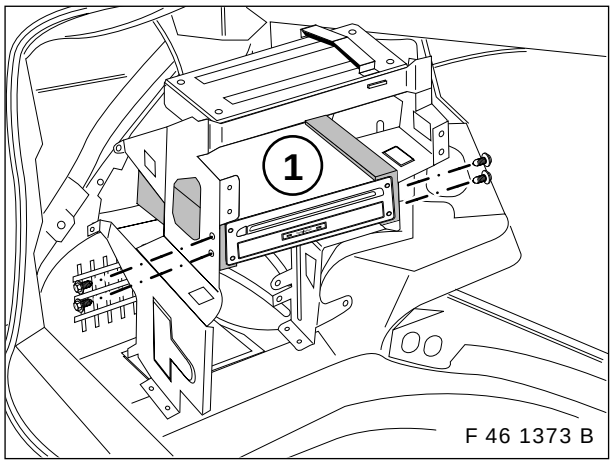
Connect together branch cable **B1**, black 13-pole socket housing, of the adapter cable monitor **B,** with black 13-pole pin housing (20) of the monitor wiring harness.



Insert branch cable **A2**, brown 8-pole socket housing, of the adapter cable navigation computer **A**, in space **B** (20) of the navigation computer (1).
Insert branch cable **A3**, black 8-pole socket housing, in space **A** (21) of the navigation computer (1).



Insert branch cable **B2**, black 18-pole socket housing, of the adapter cable monitor **B**, in the central plug-in place of the navigation computer (1).
Insert angled coaxial socket housing (20) of the GPS antenna in the coaxial pin housing on the navigation computer (1).

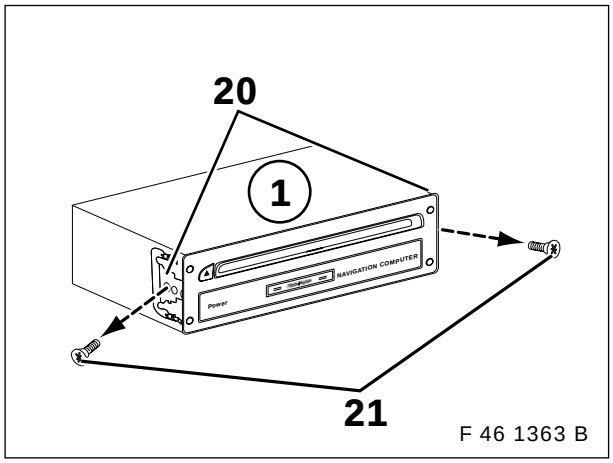


Push connected navigation computer (1) into the audio unit carrier and screw it in with hexagon-head screws M5x10.

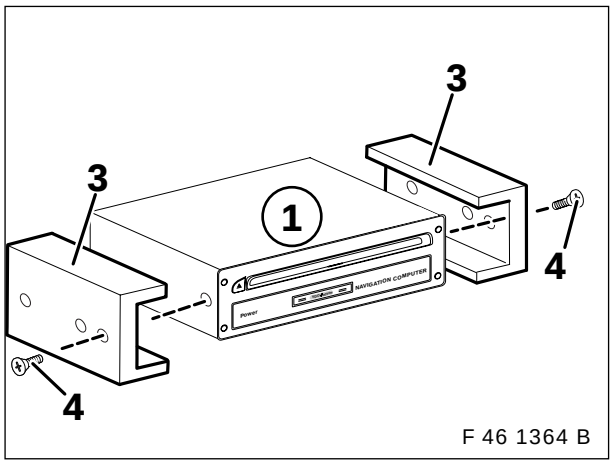
Tie back excess lengths of the cables/leads with cable straps.◂

When pushing in the navigation computer (1), take care to see that no cables get jammed.◂

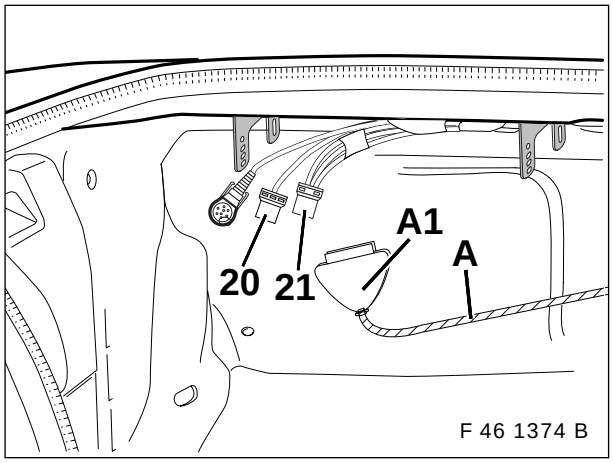
7. Prepare navigation computer and connect it (only vehicles with navigation computer under the rear window shelf in the boot, E39 and E38)



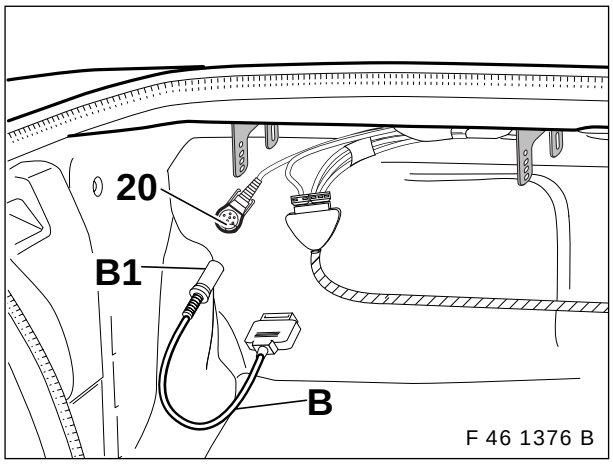
Screw off side tabs (20) by undoing the Torx screws (21) on both sides of the navigation computer (1).
Side tabs (20) and Torx screws (21) are no longer required.



Screw on the two adapter pieces (3) with two cross recess countersunk head screws (4) to the navigation computer (1).

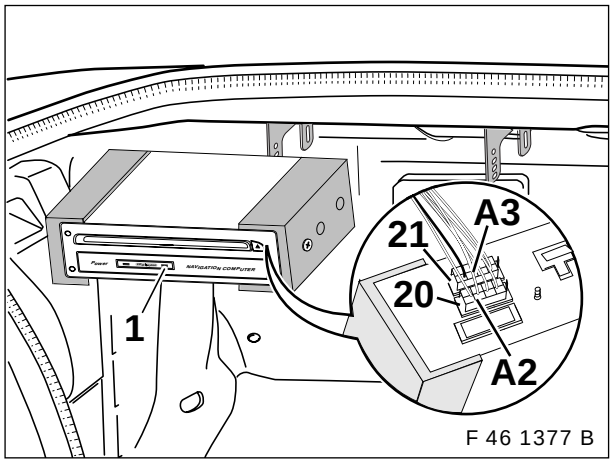


Connect together branch cable **A1**, black 28-pole pin housing, of the adapter cable navigation computer **A**, with black 16-pole socket housing (20) and the black 12-pole socket housing (21) of the existing power supply cable.

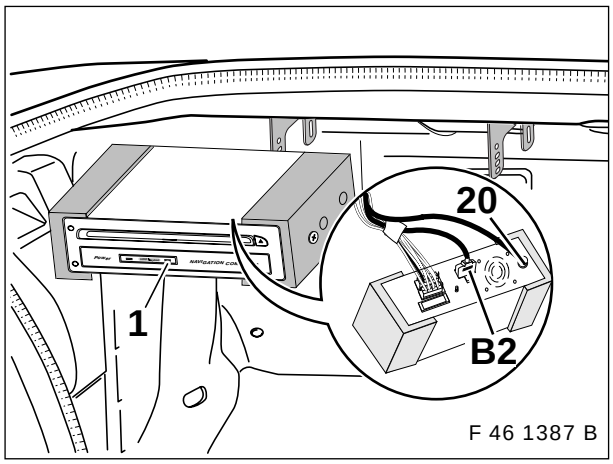


Connect together branch cable **B1**, black 13-pole socket housing, of the adapter cable monitor **B**, with black 13-pole pin housing (20) of the monitor wiring harness.

7. Prepare navigation computer and connect it (only vehicles with navigation computer under the rear window shelf in the boot, E39 and E38)

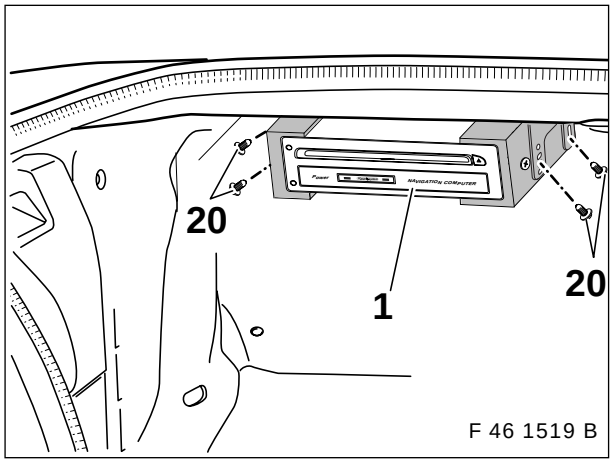


Insert branch cable **A2**, brown 8-pole socket housing, of the adapter cable navigation computer **A**, in space **B** (20) of the navigation computer (1).
Insert branch cable **A3**, black 8-pole socket housing, in space **A** (21) of the navigation computer (1).



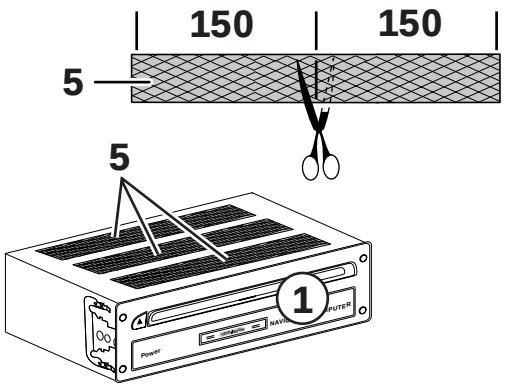
Insert branch cable **B2**, black 18-pole socket housing, of the adapter cable navigation wiring harness **B,** in the central plug-in place of the navigation computer (1).
Insert angled coaxial socket housing (20) of the GPS antenna in the coaxial pin housing on the navigation computer (1).

Tie back excess lengths of cables/leads with cable straps behind the left side trim panel.◂



Fasten navigation computer (1) with four Phillips screws M4x10 (20).

8. Prepare navigation computer and connect it (navigation computer in the audio unit carrier in the boot, left, E46/3)

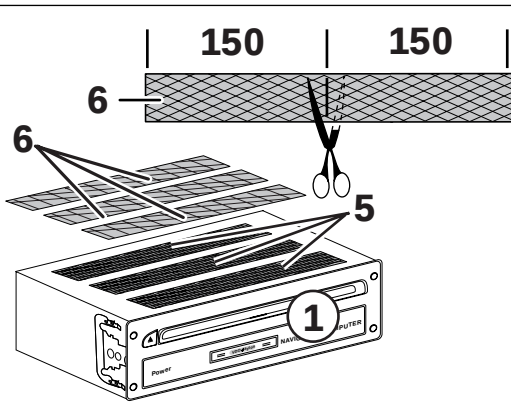


Clean (degrease) navigation computer (1) before sticking on the dual attachment strips.

Cut in half the two 300mm long dual attachment strips, fine, (5).

Stick three attachment strips (5), as shown, onto the navigation computer (1).

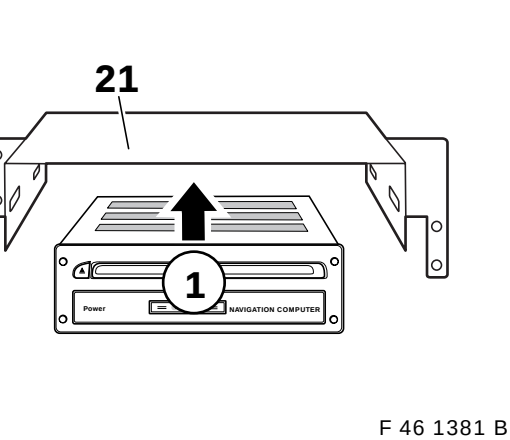
The fourth attachment strip is not required.



Cut in half the two 300mm long dual attachment strips, coarse (6).

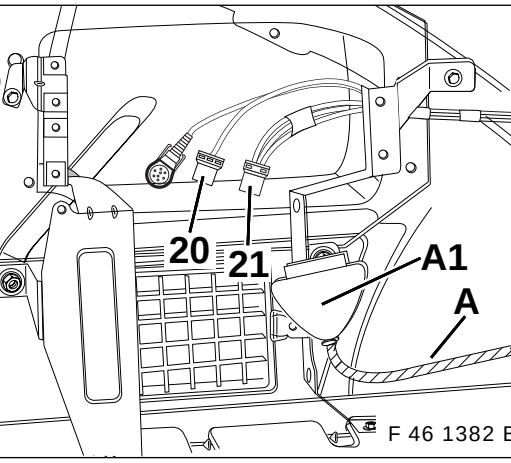
Press three attachment strips (6) onto the stuck-on attachment strips (5).

The fourth attachment strip is not required.



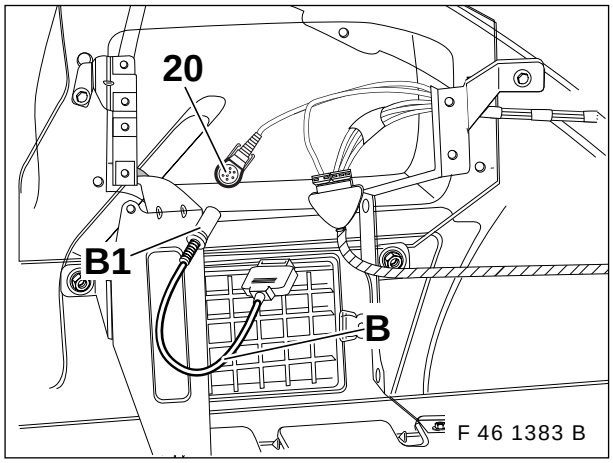
Clean (degrease) the painted surface of the bracket of the navigation computer (21).
Pull off the protective film from the dual attachment strips, coarse, on the navigation computer (1) and stick centrally in the audio unit carrier.

Insert the front edge of the navigation computer (1) flush and centrally in the bracket of the navigation computer (21).

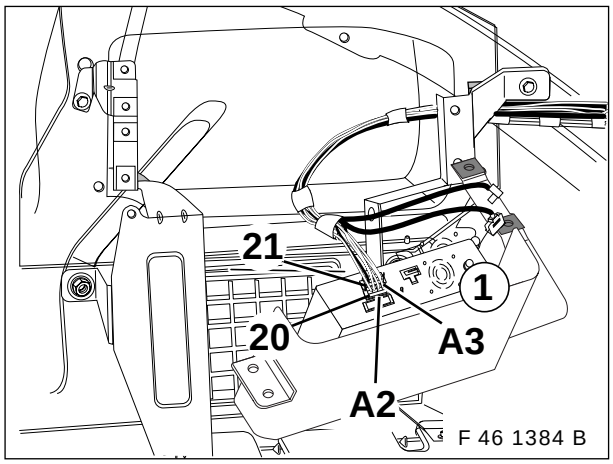


Connect together branch cable **A1**, black 28-pole pin housing, of the adapter cable navigation computer **A**, with black 16-pole socket housing (20) and the black 12-pole socket housing (21) of the existing power supply cable.

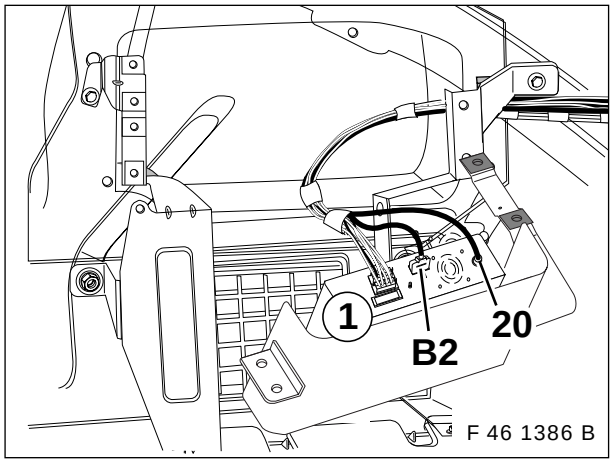
8. Prepare navigation computer and connect it (navigation computer in the audio unit carrier in the boot, left, E46/3)



Connect together branch cable **B1**, black 13-pole socket housing, of the adapter cable monitor **B**, with black 13-pole pin housing (20) of the monitor wiring harness.



Insert branch cable **A2**, brown 8-pole socket housing, of the adapter cable navigation computer **A**, in space **B** (20) of the navigation computer (1).
Insert branch cable **A3**, black 8-pole socket housing, in space **A** (21) of the navigation computer (1).



Insert branch cable **B2**, black 18-pole socket housing, of the adapter cable navigation computer **B**, in the central plug-in place of the navigation computer (1).
Insert angled coaxial socket housing (20) of the GPS antenna in the coaxial pin housing on the navigation computer (1).

Tie back excess lengths of cables/leads with cable straps.◂

9. Finalising operations, coding, function test

Finalising operations

Connect battery
Print out error memory
Carry out function test
Reassemble vehicle in reverse sequence of disassembly.

Coding

This system is not coding relevant.

Function test of the navigation system

Test the following functions with a standing vehicle and ignition switched on:

- Insert navigation CD (must be ordered separately in accordance with Electronics Parts Catalogue (EPC) into navigation computer
- Buttons in the operating unit in the monitor console must light up
- Switch on side lights: the monitor must change from daylight to night-time colours.

When the system is completely separated from the on-board network, an approx. 15 minute starting phase has to be expected when commissioning the system.
Place the vehicle in the open air so that contact between the GPS antenna and the satellite is ensured.
Thereafter the navigation system may need up to 10 minutes before the signal is received from the satellite.
For automatic calibration, carry out a short test run (approx. 10 minutes) on digitalised streets.
Confirm user instructions with the OK button on the remote control.
Change direction several times.

- Approach an intersection: the distance indicator on the monitor must react correctly.
- Drive in reverse for a short distance: The position indicator on the monitor must correctly indicate the travelling motion.

Operating method

The operating method of the navigation system is described in the accompanying instruction manual.

10. Language setting

Using the option "Language" in the menu "Settings", you can select the language used for acoustic messages.
Two languages (voices) can be stored in the system.
If the customer so wishes, one of the two languages can be replaced by another language from the accompanying system software CD.

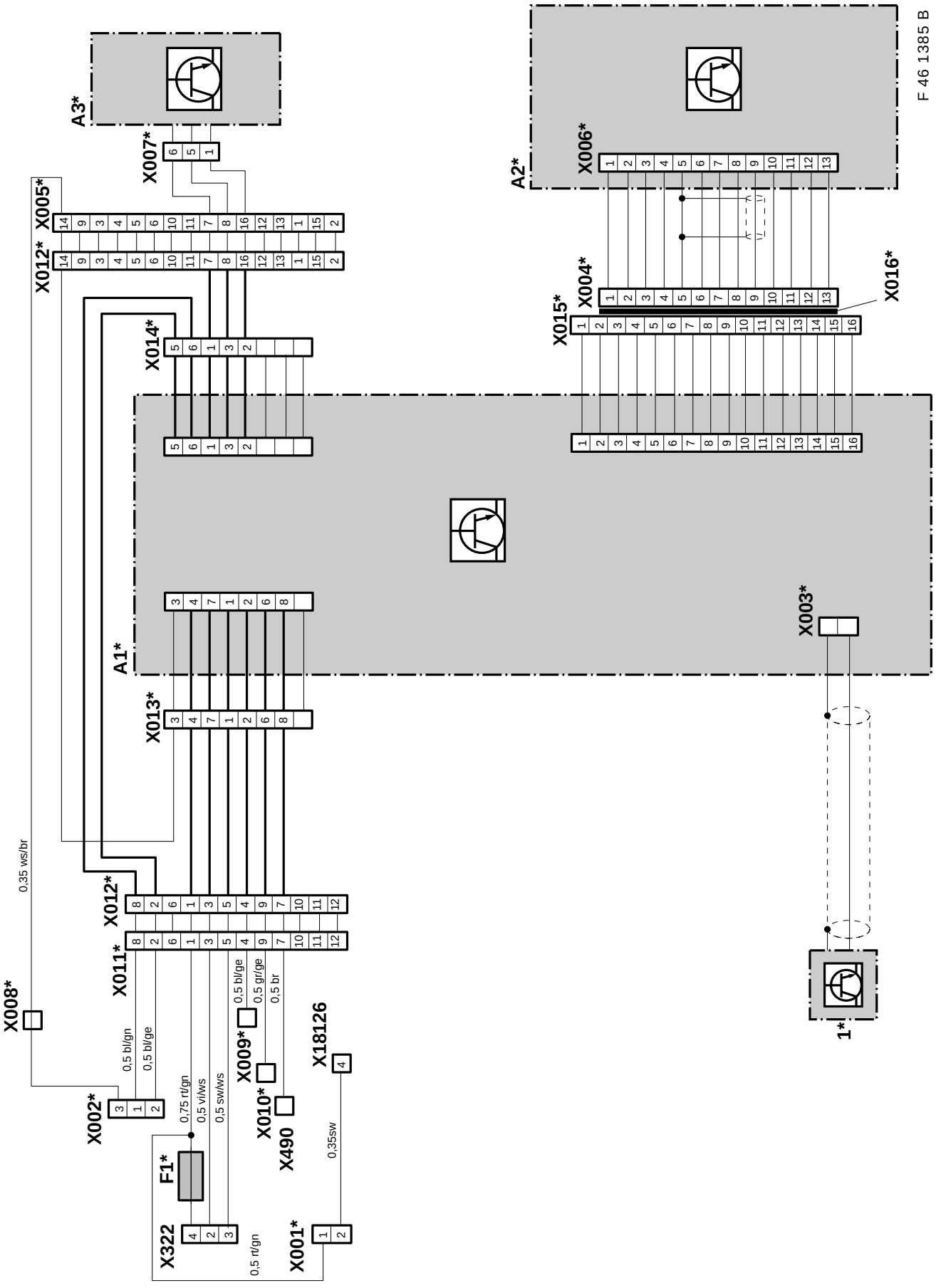
Load the language

- Switch on the ignition
- Select the option "Language" from the "Settings" menu
- Select "Other language" in the list which appears
- Now follow the instructions on the monitor.

A "Software update" follows, progress during the loading procedure is shown on the monitor.

When the loading procedure has been completed, the system software CD is ejected.
When the system software CD has been removed and confirmation has been given with the OK button, the navigation system is started again.

11. Circuit diagram



11 Circuit diagram

A1* navigation computer

A2* monitor

A3* operating unit

F1* floating fuse 7.5A
behind monitor console

1* GPS antenna

X001* black 2-pole plug-in connector, switch-over module

X002* black 3-pole plug-in connector, switch-over module

X003* GPS antenna connector

X004* black 13-pole pin housing, adapter cable monitor

X005* black 16-pole socket housing, adapter cable navigation computer

X006* black 13-pole pin housing, monitor

X007* black 6-pole plug-in connector, operating unit

X008* 1-pole plug-in connector

X009* 1-pole cable end, open (insulation piercing method)

X010* 1-pole cable end, open (insulation piercing method)

X011* black 12-pole socket housing, adapter cable navigation computer

X012* black 28-pole pin housing, adapter cable navigation computer

X013* black 8-pole socket housing, navigation computer

X014* brown 8-pole socket housing, navigation computer

X015* black 16-pole socket housing, adapter cable monitor

X016* adapter cable, monitor

X322 black 8-pole retrofitted plug-in connector

X490 ground post, sill front right

X18126 black 17-pole socket housing, radio connector

The items shown with * relate only to this circuit diagram; all other items correspond to the BMW Customer Service circuit diagrams

Colour codes

BR = brown

RT = red

VI = violet

WS = white

GR = grey

SW = black

GN = green

GE = yellow

BL = blue