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## Saab 9-3 M03-

## Navigation system

| Accessories Part No. | Group | Date | Instruction Part No. | Replaces |
| :---: | :---: | :---: | :---: | :---: |
| 12787151 |  |  |  |  |
| 12788472 |  |  |  |  |
| 12801752 | $9: 51-02$ | Jan 03 | 12801443 |  |
| 12801753 |  |  |  |  |




1 DVD player
2 Control panel
3 Fibre optic cable
(x 2 in kit 12787151 and 12788 472)
(x 1 in kit 12801752 and 12801 753)
4 Wiring harness
5 Anti-rattle tape
(only in kit 12787151 and 12788 472)
6 Optical cable connector, 2-pin
( $x 2$ in kit 12787151 and 12788 472)
(x 1 in kit 12801752 and 12801 753)
7 Optical cable connector, 2-pin
(x 3 in kit 12787151 and 12788 472)
(x 1 in kit 12801752 and 12801 753)
8 Wiring harness
(only in kit 12787151 and 12788 472)
9 Telematics unit
(only in kit 12787151 and 12788 472)
10 Bolt (x4)
(only in kit 12787151 and 12788 472)
11 Cable tie


## Bus Communication

Many parts of the car's electrical system communicate using a bus. There are three types of bus communication: P-bus (Powertrain Bus), I-bus (Instrument Bus) and O-bus (Optical bus). The audio system communicates via the O-bus together with the navigation system, the telephone system and others.
The O-bus is optical and is a ring bus. Two fibre optical cables are connected to each control module on the bus, one fibre optical cable for receiving and one for sending. Messages received are converted by each control module from a fibre optic signal to electrical and then converted back to optical for sending. The O-bus data transfer rate is $25 \mathrm{Mbit} / \mathrm{s}$.

## Important

It is very important that everything connected to the O-bus is connected in a specific order, see illustration, and that the ring is closed the whole time.
Connection in any other way than that described in these fitting instructions may result in several of the car's systems failing to work.

AMP1 is an amplifier below the left-hand front seat AMP2 is an amplifier by the rear fuse box CDC is a CD changer by the rear fuse box DVD is a DVD player by the rear fuse box


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When fitting new equipment to be connected to the O-bus it is important that it is connected into the correct side of the existing equipment.

## Important

Handle the fibre-optic cables with care or the signal may be distorted.

- It is very important that the two leads in the connector are not confused with one another.
- Do not splice the cables.
- Do not bend the cable in a radius smaller than 25 mm .
- Do not expose the cable to temperatures exceeding $85^{\circ} \mathrm{C}$.
- Keep the cable ends free from dirt and grime.
- Do not expose the cable to impact as this may cause the transparent plastic to whiten, thereby reducing the intensity of the light and causing possible communication interruptions.
- The cable should not lie against any sharp edges as this may cause increased signal reduction.


## Important

In cars where the left-hand front seat is electrically adjustable and there is no bracket at the rear fuse box, the left-hand front seat must be positioned in its most forward position and with the backrest folded forwards.

1 Connect the diagnostic tool and disconnect the infotainment system control panel from the car.

## Important

The control module is sensitive to electrostatic discharges. To avoid damaging the internal components in the control module, a replacement must be made with care in the following way:

- Never touch the pins on a control module with hands or clothes.
- Ground yourself by touching the car's body/ engine. Remove the connector on the car's control module.
- Ground yourself by touching the car's body/ engine. Connect the connector on the car's control module.
- Deposit the replaced control module in the returns packaging without touching its pin.
- Keep the new control module in its packaging as long as possible.

Go into the menu "Al" and choose the control module under "Add/Remove". Then choose "Remove" and follow the instructions. The ignition key must be in the ON position. TIS 2000 may need to be used. When the control module is separated from the car the ignition key must be turned to the OFF position. Following which the control module can be removed.
2 Open the hatchback.
3 Remove the battery's minus cable and take the key from the ignition.


4 Fold the luggage compartment floor forwards.
5 In the luggage compartment, remove the hatch in the left-hand side trim and lower the hatch on the right-hand side.
6 Remove the clips for the left-hand side trim and fold the trim away. Do the same on the right-hand side.

7 Lower the rear seat backrest.
8 Detach the clips holding the parcel shelf trim.
9 Pull the parcel shelf trim straight out.
10 Check if there is an antenna cable connection at the hole in the centre of the parcel shelf and if there is an electronic unit fitted in the centre of the parcel shelf.
No antenna cable connection: Continue with step 11.

Antenna cable connection present but no telematics unit: Continue with step 29.

Antenna cable connection and telematics unit present: Continue with step 11.
11 Remove the cover washer from the C-pillar trim. Use removing tool 8293474.
12 Undo the screw from the C-pillar trim. Do not unscrew it completely as an expander is fitted to the screw which can be lost.

13 Remove the C-pillar trim by carefully pulling the trim forwards, together with the screw.


14 Remove the high-level brake light cover by carefully drawing the cover downwards and backwards.

15 Remove the clip at the rear edge of the headlining by turning it $90^{\circ}$.
16 Remove the end pieces on the rear courtesy handle. Use 8293474 Removal tool and prise outwards.

17 Draw the courtesy handle straight out.
18 Undo the ceiling trim from the weatherstrip by the rear doors.
19 Carefully lower the ceiling at the rear edge so that the antenna can be reached.


20 Remove any antenna cable from the roof antenna.
21 Remove the antenna.
22 Take the antenna kit, guide the antenna cables down through the hole in the roof and fit the antenna.
23 Tighten the antenna nut.
Tightening torque 2 Nm (1.5 lbf ft)
24 Cars without antenna cable: Connect the antenna cable from the kit and fit the clips on the cable in the holes in the rear edge of the roof.
Cars with antenna cable continuing forwards in the car: First connect the existing antenna cable and then the kit's antenna cable to the antenna. Guide the antenna cable alongside the existing antenna cable towards the right-hand
C-pillar. Affix both antenna cable and remaining connectors with cable ties.
Cars with antenna cable continuing to the parcel shelf: Connect the kit's antenna cable to the antenna. Guide the antenna cable alongside the existing antenna cable towards the right-hand C-pillar. Affix both antenna cable and remaining connectors with cable ties.
25 Guide down the antenna cable alongside the C-pillar to the centre of the parcel shelf. The cable must be secured in the existing cable clamps.
Cars with telematics unit in centre of parcel shelf: Connect the antenna cable to the telematics unit.


26 Fit the ceiling trim above the rear doors' weatherstrip.
27 Press and fasten the rear courtesy handle securely into the end pieces.
28 Fit the high-level brake light cover and press and fasten the headlining clip.



29 Cars without telematics unit in the centre of the parcel shelf: Remove the wiring harness from the parcel shelf and remove the connection in the rear fuse box.
30 Cars without telematics unit in the centre of the parcel shelf: Position the new wiring harness above the centre of the parcel shelf and connect it. If the car has no bass loudspeaker then the connectors must be fitted on the underside of the loudspeaker cover.
31 Cars without telematics unit in the centre of the parcel shelf: Guide down the fibre optic cable on the right-hand side of the car.

## Important

Handle the fibre-optic cables with care or the signal may be distorted.

- Do not bend the cable in a radius smaller than 25 mm .
- Do not expose the cable to impact as this may cause the transparent plastic to whiten, thereby reducing the intensity of the light and causing possible communication interruptions.
- The cable should not lie against any sharp edges as this may cause increased signal reduction.


32 Cars without telematics unit in the centre of the parcel shelf: Position the telematics unit on the parcel shelf and connect the cabling and the antenna cable (blue connector).
33 Cars without telematics unit in the centre of the parcel shelf: Fit the telematics unit and screw it securely in the parcel shelf.
Tightening torque 8 Nm ( 6 lbf ft )
34 Cars without telematics unit in the centre of the parcel shelf: Secure the wiring harness to the cable clamps on the parcel shelf.


35 Position the C-pillar trim. Make sure that the screw with expander is in the correct position.

## $\triangle$ warning

Be careful that the inflatable curtain is not damaged. Damage can result in the inflatable curtain not providing the intended protection to the occupants in the event of a collision.

36 Tighten the screw.
Tightening torque 2 Nm ( 1.5 lbf ft )
37 Fit the cover washer to the C-pillar trim.
38 Slide in the parcel shelf trim. Make sure the lugs fully engage the mountings in the parcel shelf plate.
39 Fit the clips to the parcel shelf trim.
40 Raise the backrest. Check that the backrest is locked.


41 Fit the connector for the fibre optic cable which runs down from the parcel shelf on the right-hand side of the luggage compartment in one of the kit's connectors.

42 Locate the fibre optic cable attached to the righthand side of the luggage compartment and remove the protective cover.
43 Fit the connection on the fibre optic cable, in the position in the connector which is on the corresponding side to the fibre optic cable from the parcel shelf and where the arrow points outwards, to the fibre optic cable.
44 Fit the lock tab.
45 Fit the anti-rattle tape around the connector.

## Cars where there is no bracket at the rear

fuse box: Continue with step 46.
Cars where the bracket at the rear fuse box is fitted: Continue with step 64.


46 Cars where there is no bracket at the rear fuse box: Remove the front scuff plate on the lefthand side of the car.
47 Cars where there is no bracket at the rear fuse box: Position the left-hand front seat in its most forward position and fold the backrest forwards if not done already.
48 Cars where there is no bracket at the rear fuse box: Remove the two rear retaining screws from the seat.
49 Cars where there is no bracket at the rear fuse box: Angle the seat forwards.
50 Cars where there is no bracket at the rear fuse box: Draw the seat backwards so that the fitting hooks loosen from their positions. Fold the whole seat backwards.
51 Cars where there is no bracket at the rear fuse box: Remove the amplifier.


52 Cars where there is no bracket at the rear fuse box: Locate the green marked fibre optic cable at the amplifier.
If there is no colour marking: Follow the instructions in points 78 and 79 in these fitting instructions, shine a light onto the fibre optic cable at the amplifier and look at the fibre optic cables in the luggage compartment in order to identify the relevant fibre optic cable. Mark it with a piece of tape.

## Important

Handle the fibre-optic cables with care or the signal may be distorted.

- It is very important that the two leads in the connector are not confused with one another.
- Do not bend the cable in a radius smaller than 25 mm .
- Keep the cable ends free from dirt and grime.
- Do not expose the cable to impact as this may cause the transparent plastic to whiten, thereby reducing the intensity of the light and causing possible communication interruptions.
- The cable should not lie against any sharp edges as this may cause increased signal reduction.

53 Cars where there is no bracket at the rear fuse box: Remove the fibre optic cable connector (the small connector) from the amplifier connector.
54 Cars where there is no bracket at the rear fuse box: Remove the fibre optic cable connected to position 1 by opening the lock in the connector and carefully lifting the hook.
55 Cars where there is no bracket at the rear fuse box: Remove the protective cover from the connection on the extra fibre optic cable.
56 Cars where there is no bracket at the rear fuse box: Fit the protective cover to the removed fibre optic cable connection and carefully guide the fibre optic cable away so that it is not damaged.


57 Cars where there is no bracket at the rear fuse box: Remove the cover on the cable duct, check that the fibre optic cable cannot bend and fit the connection on the fibre optic cable in position 1 in the small connector for the amplifier. Fit the lock.

## Important

Handle the fibre-optic cables with care or the signal may be distorted.

- It is very important that the two leads in the connector are not confused with one another.
- Do not bend the cable in a radius smaller than 25 mm .
- Keep the cable ends free from dirt and grime.
- Do not expose the cable to impact as this may cause the transparent plastic to whiten, thereby reducing the intensity of the light and causing possible communication interruptions.
- The cable should not lie against any sharp edges as this may cause increased signal reduction.


## 58 Cars where there is no bracket at the rear

fuse box: Fit the small connector in the large connector.
59 Cars where there is no bracket at the rear fuse
box: Fit the cover on the cable duct, fold back the carpet and guide the connector and the cables out through the hole in the carpet.


60 Cars where there is no bracket at the rear fuse box: Connect and fit the amplifier.


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61 Cars where there is no bracket at the rear fuse box: Position the seat in its correct position, be careful that the fitting hooks locate correctly in their brackets, and fit the rear retaining screws.
Tightening torque 30 Nm (22 lbf ft)
62 Cars where there is no bracket at the rear fuse box: Move the seat backwards and reset the position of the backrest.
63 Cars where there is no bracket at the rear fuse box: Fit the scuff plate.


64 Remove the front scuff plate on the right-hand side of the car.
65 Remove the lower section of the A-pillar trim on the right-hand side.
66 Locate the fibre optic cables at the right-hand A-pillar.
67 Remove the protective cover from the fibre optic cables' connections.
68 Fit the connection on one fibre optic cable in position 1 in the kit's connector. Fit the lock.
69 Fit the small connector in one of the kit's connector's.
70 Fit the connection on the other fibre optic cable in the position in the connector which is on the corresponding side to the previous fibre optic cable and where the arrow points outwards, to the fibre optic cable. Fit the lock tab.
71 Secure the connector in front of the large connector.
72 Fit the A-pillar trim.
73 Fit the scuff plate.
74 Cars where there is no bracket at the rear fuse box: Continue with step 75.

Cars where the bracket at the rear fuse box is fitted: Continue with step 82.


75 Cars where there is no bracket at the rear fuse box: Fit the clip nut in the square hole at the rear fuse box and position the bracket in the luggage compartment.
76 Locate the connector for the DVD player at the rear fuse box.
77 Connect the kit's wiring harness to the connector.
78 No bracket fitted at the rear fuse box: Locate the fibre optic cables at the rear fuse box.
79 No bracket fitted at the rear fuse box: Remove the protective covers from the fibre optic cable connections.

## $\triangle$ WARNING

The visible red light is a class 1 laser. Do not look directly into the optical fibre or the control module connector at close range. A distance of less than 20 mm between your eyes and the light source may cause eye injury.


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80 No bracket fitted at the rear fuse box: Fit the unmarked connection on the fibre optic cable in position 2 in the small connector.

## Important

For cars without green marked fibre optic cable, the fibre optic cable marked earlier with tape is the one to be fitted in position 2.

Fit the lock.
81 No bracket fitted at the rear fuse box: Fit the small connector in the large connector.
Proceed to step 92.


82 Cars where the bracket at the rear fuse box is
fitted: Remove the bracket and take it out in order to facilitate access.
83 Locate the connector for the DVD player at the rear fuse box.

84 Connect the kit's wiring harness to the connector.


85 Bracket with amplifier or CD changer is fitted at the rear fuse box: Remove the amplifier or CD changer connector and remove the small connector from the large connector.
Bracket with amplifier or CD changer is fitted at the rear fuse box: Remove the CD changer connector and remove the small connector from the large connector.
86 Amplifier and/or CD changer is fitted: Remove the fibre optic cable connected to position 1 in the removed connector by opening the lock in the connector and carefully lifting the hook. Carefully guide the fibre optic cable away so that it is not damaged.
87 Amplifier and/or CD changer is fitted: Remove the protective covers from the connections on the accessory kit's fibre optic cable.
88 Amplifier and/or CD changer is fitted: Fit one connection on one of the kit's fibre optic cables in position 2 in the kit's connector.


89 Amplifier and/or CD changer is fitted: Fit the other connection on the same fibre optic cable in position 1 in the removed connector. Fit the lock.
90 Amplifier and/or CD changer is fitted: Fit the small connector in the large connector for the amplifier or CD changer.
91 Amplifier and/or CD changer is fitted:
Connect the amplifier or CD changer connector.
Proceed to step 92.
92 Take the extra fibre optic cable from the kit, remove the protective covers and fit the one fibre optic cable connection in position 1 in the kit's connector where a fibre optic cable is already connected to position 2. Fit the lock.
93 Fit the small connector in the DVD player's connector.



98 Fit the DVD player in the bracket, a clicking sound should be heard, connect the DVD player and fit the bracket.

## Important

Handle the fibre-optic cables with care or the signal may be distorted.

- It is very important that the two leads in the connector are not confused with one another.
- Do not bend the cable in a radius smaller than 25 mm .
- Keep the cable ends free from dirt and grime.
- The cable should not lie against any sharp edges as this may cause increased signal reduction.

99 Fit the bracket. Tighten the nut on the bracket's top side.
100Secure the kit's wiring harness to the car's wiring harness.
101Fit the side trims.
102Fit the hatch in the luggage compartment lefthand side trim and raise the hatch on the righthand side.
If the bracket for the DVD player was not fitted earlier then the new hatch must be fitted.

103Lower the luggage compartment floor.


104Remove the centre air vent in the dashboard by carefully bending in the hooks accessible through the grille.

## Note

Take care to bend the correct hooks. Hooks holding together the air outlet are also visible behind the grille.

105Remove the retaining screws for the infotainment control panel.
106Remove the control panel and remove the connector.

## $\triangle$ WARNING

The visible red light is a class 1 laser. Do not look directly into the optical fibre or the control module connector at close range. A distance of less than 20 mm between your eyes and the light source may cause eye injury.


107Remove the fibre optic cable connector (the small connector) from the control panel connector.
108Remove the fibre optic cable which is connected to position 2 by opening the connector locking clip and carefully lifting the hook.
109Locate the third fibre optic cable and remove the protective cover from the fibre optic cable connection.
110 Fit the protective cover onto the removed fibre optic cable connection and carefully move the fibre optic cable aside in order to prevent damage.
111 Fit the blue marked fibre optic cable (which was not connected) behind the control panel to position 2. Fit the lock.
112 Fit the small connector to the large connector.


113 Connect the connector to the kit's control panel.
114 Fit the control panel.
115Position and fit the air vent.


116 Cars without integrated telephone: Remove the rear, centre and front sections of the roof lighting cover. Tool 8293474 is recommended.

## Important

The centre section is fitted with two screws.
117 Cars without either telephone or telephone installation fittings: Locate the unmarked connector with two cables. Connect the connector to the microphone. Fit the microphone on the lefthand side (LHD) or the right-hand side (RHD). Remove the piece of tape covering the opening for the microphone.
118 Cars with handsfree kit for mobile telephone: Locate the unmarked connector with two cables. Connect the connector to the microphone. Fit the microphone on the right-hand side (LHD) or the left-hand side (RHD). Remove the piece of tape covering the opening for the microphone.


119 Cars without integrated telephone: Fit the centre section of the roof lighting cover.
120Cars without integrated telephone: Fit the front section of the roof lighting cover.
121Cars without integrated telephone: Fit the rear section of the roof lighting cover.
122Connect the negative battery cable.
123Adjust the time and date.
124Synchronise remote control code by inserting the key into the ignition.

## Important

Repeat this procedure with all keys. Otherwise, the remote controls will not function.

125Activate window lift pinch protection function by operating the side windows up and down twice. An audible confirmation will sound when activation is complete.
126Cars where the left-hand front seat is electrically adjustable: Reset the position of the seat if it has been changed.

127Connect the diagnostic tool, select car and model year, select "All", select "Add/Remove", select the accessory and then "Add"

## Note

The diagnostic tool will on some occasions need to retrieve a security code in TIS. Information on what to do will be displayed on the diagnostic tool display.

128Place the map disc in the DVD player, check the system by test driving the car until the navigation system makes contact with the satellites. The map should display on the screen.

