

Original BMW Accessories. Installation Instructions.



Performance Steering Wheel Retrofit

BMW 1 Series (E81, E82, E87, E88)

BMW 3 Series (E90, E91, E92, E93)

Retrofit kit no.:	32 30 2 165 395	Performance steering wheel retrofit kit
	32 30 2 165 396	Performance steering wheel retrofit kit

Installation time

The installation time is **approx. 1.5 hours**. This may vary depending on the condition of the car and the equipment in it.

Cars without Sport steering wheel only

In general the car must be upgraded to the latest I-stage status by flashing before starting the work. Differing programming times may be necessary depending on the production age of the vehicle and on work previously performed on the vehicle.

The specified installation time does not include time required for programming/coding.

The calculation of the total costs for the programming time must be factored into the calculation of retrofitting costs (no invoicing via warranty).

Important information

In any event, the target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.

All work must be completed using the latest BMW repair manuals, wiring diagrams, servicing manuals and work instructions, in a rational order, using the prescribed tools (special tools) and observing current health and safety regulations.

If you experience installation or function problems, limit troubleshooting to approx. 0.5 hours for mechanical or 1.0 hour for electrical work.

In order to reduce costs and avoid any additional expense, send a query immediately to the Technical Parts Support via the Aftersales Assistance Portal (ASAP).

Specify the following information:

- Chassis number,
- Part number of the retrofit kit,
- A precise description of the problem,
- Work steps already carried out.

Do not archive the hard copy of these installation instructions since daily updates are made via ASAP!

Pictograms



Denotes instructions that draw your attention to dangers.



Denotes instructions that draw your attention to special features.



Denotes the end of the instruction or other text.

Installation information

Ensure that the cables and/or lines are not kinked or damaged as you install them in the car. Costs arising from this will not be reimbursed by BMW AG.

Additional cables/lines that you install must be secured with cable ties.



Route the cable for the optional measuring trigger using a cable tie behind the glove compartment or, if necessary, into the glove compartment. This must be agreed in advance with the customer. ◀

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

All pictures show LHD cars; proceed accordingly on RHD cars.

Once the installation work is complete, basic settings need to be carried out on the Performance steering wheel.

Cars without Sport steering wheel only

After the installation work, the retrofit must be programmed / coded using SSS (Software Service Station) via the –CIP– path.

Ordering instructions

The airbag module **H** is not included with the retrofit kit and must be ordered separately.
(See EPC for part number and details.)

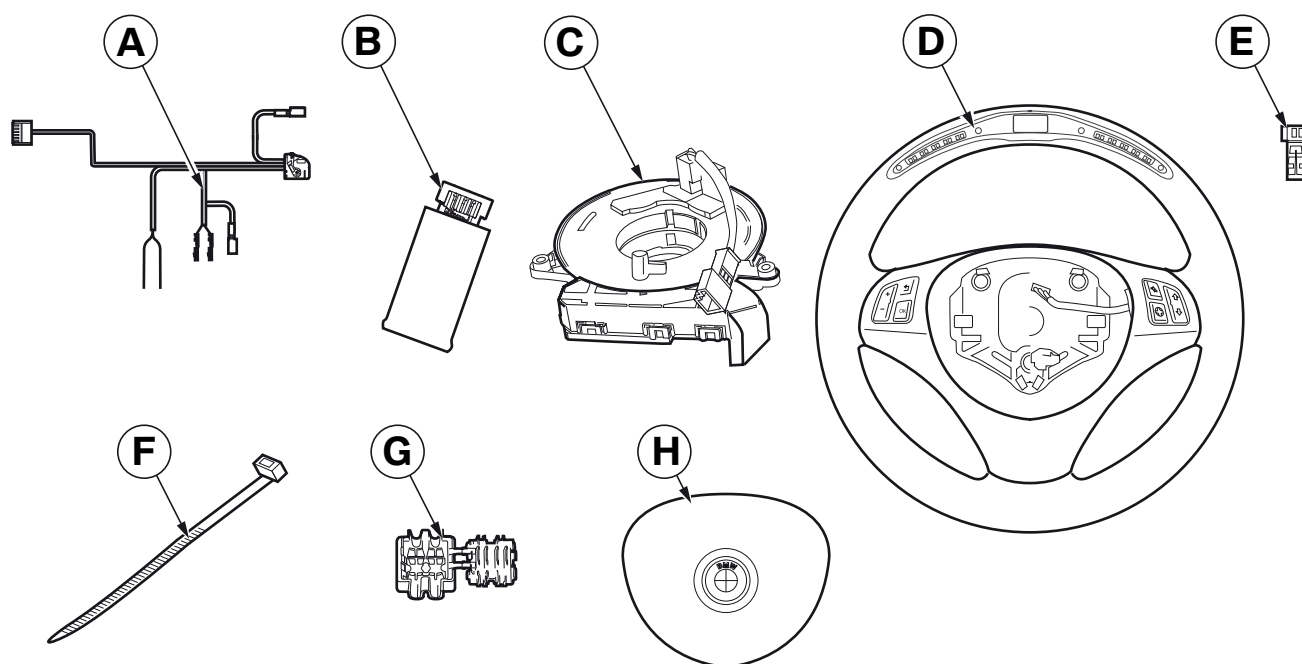
Special tools required

00 9 317, Trim wedge

Table of contents

Section	Page
1. Parts list	4
2. Preparatory work	5
3. Connection diagram	6
4. Installation and cabling diagram	7
5. Installing the retrofit kit	8
6. Concluding work, coding and basic settings	10
7. Wiring diagram	11

1. Parts list



090 0852 V

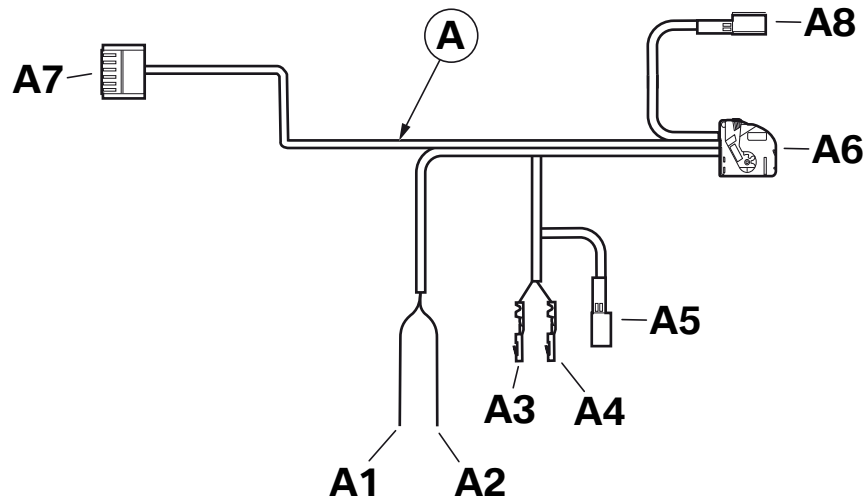
Legend

- A** Retrofit cable
- B** Control unit
- C** Coil spring cassette
- D** Performance steering wheel (with finisher)
- E** SW 2-pin socket casing
- F** Cable tie (15 x)
- G** Miniature connector (2 x)
- H** Airbag module (not supplied with the retrofit kit)

2. Preparatory work

	ISTA No.
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
The following components must be removed first of all	
Trim for door pillar at the bottom right	51 43 150
Bottom right dashboard trim	51 45 181
Pedal trim	51 45 185
Steering column trim, lower section	32 31 020
Steering column trim, upper section	32 31 003
Steering wheel	32 33 ...
Coil spring cassette	61 31 011

3. Connection diagram

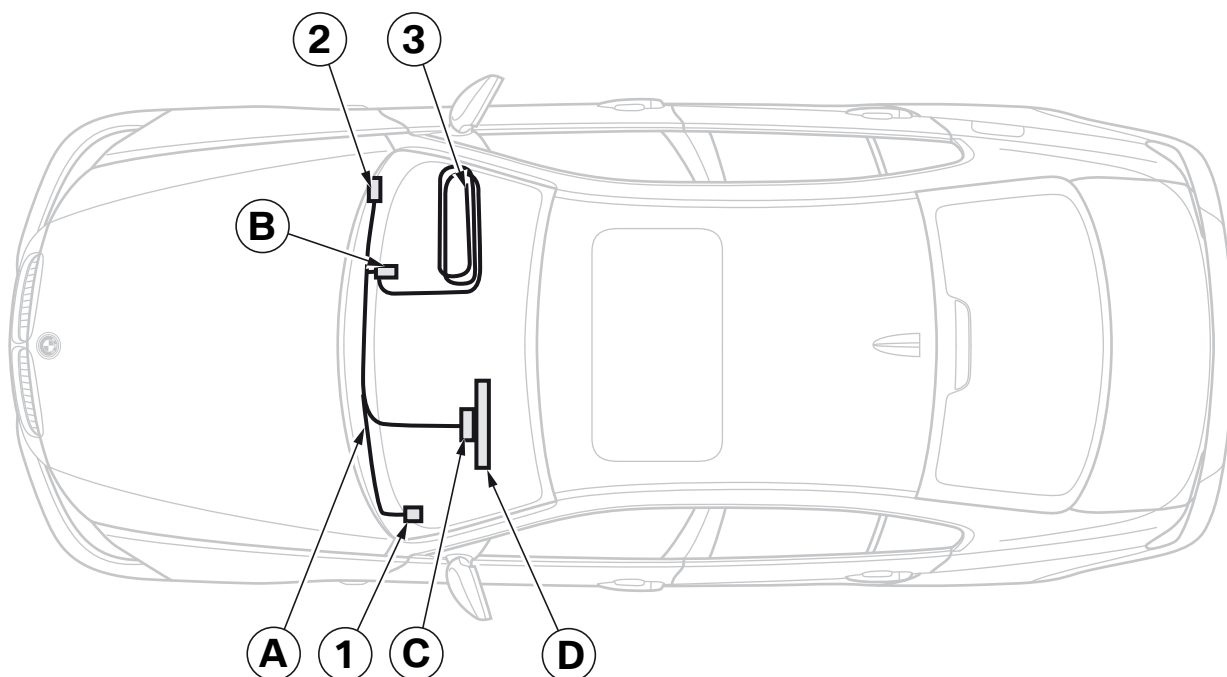


090 0849 V

Legend

Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Retrofit cable	---	---	---	---
A1	Cable open	Terminal 30g	GN/BR 0.5 mm ²	Using miniature connector G to the cable from the CAS control unit	X13376 PIN 1
A2	Cable open	Terminal 31	BR 0.5 mm ²	Using miniature connector G to the cable from the CAS control unit	X13376 PIN 12
A3	Socket contact	PT CAN High	BL/RT 0.35 mm ²	To junction box behind glove compartment	X14271 PIN 1
A4	Socket contact	PT CAN Low	RT 0.35 mm ²	To junction box behind glove compartment	X14271 PIN 2
A5	SW 2-pin pin housing	---	---	With socket casing E to the disconnected cables from plug X14271	---
A6	SW 12-pin socket casing	---	---	To control unit B	---
A7	WS 12-pin socket casing	---	---	To coil spring cassette C	X10170
A8	3-pin socket casing	---	---	Optionally to 2D measuring trigger	---

4. Installation and cabling diagram

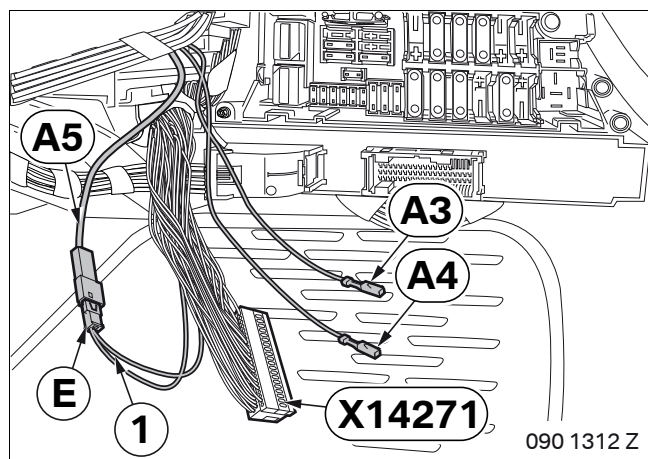


090 0850 V

Legend

- A** Retrofit cable
- B** Control unit
- C** Coil spring cassette
- D** Performance steering wheel
- 1** CAS control unit
- 2** Passenger junction box
- 3** Connecting cable for optional measuring trigger

5. Installing the retrofit kit



► Plug **X14271** can be installed in the junction box in the left or right-hand slot. ◀

Route branches **A3-A5** to the junction box.

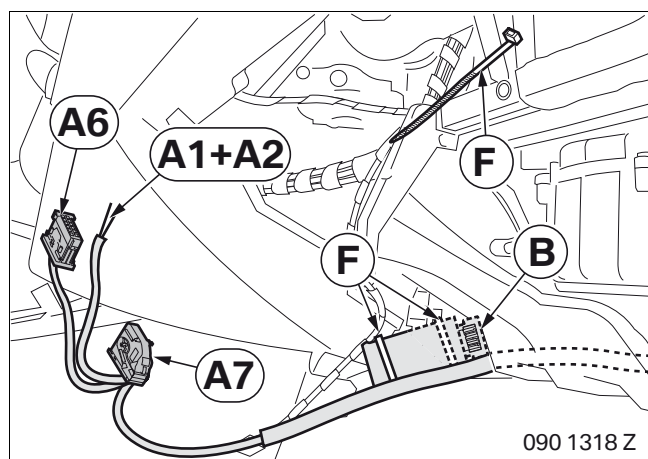
Disconnect cable (1) from PIN 1 and PIN 2 of plug **X14271**, BL 54-pin, and connect as follows to socket casing **E**:

- BL/RT cable from PIN 1 to PIN 1
- RT cable from PIN 2 to PIN 2

Connect branches **A3** and **A4** to plug **X14271** as follows:

- Branch **A3**, BL/RT cable, to PIN 1
- Branch **A4**, RT cable, to PIN 2

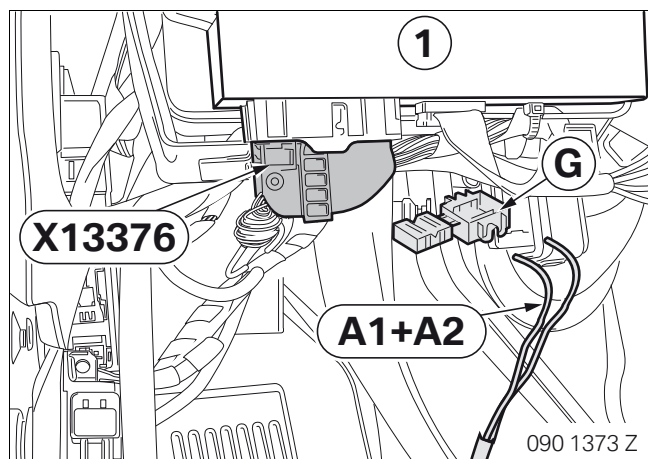
Connect branch **A5** to socket casing **E**.



Connect branch **A6**, SW 12-pin socket casing, to control unit **B**.

Secure control unit **B** using cable ties **F** to the standard wiring harness.

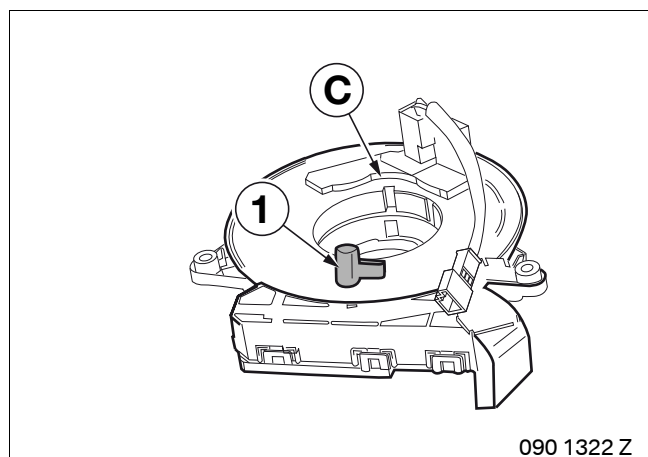
Route branch **A1+A2** to the CAS control unit and branch **A7** to the steering column.



Use miniature connectors **G** to connect branches **A1+A2** to socket casing **X13376**, SW 41-pin as follows:

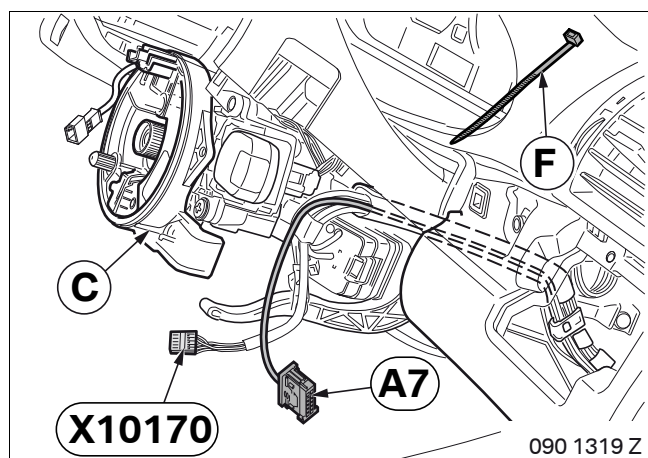
- Branch **A1**, GN/BR cable, to GN/BR cable from PIN 1 (30g)
- Branch **A2**, BR cable, to BR/SW cable from PIN 12

5. Installing the retrofit kit



Remove the transport safety device (1) from coil spring cassette **C**.

Install coil spring cassette **C** into the car as per **ISTA RA: 61 31 011**.



For cars with SA 248 (heated steering wheel):

▶ The three heated steering wheel cables remain in the plug. The steering wheel heating then has no function. ◀

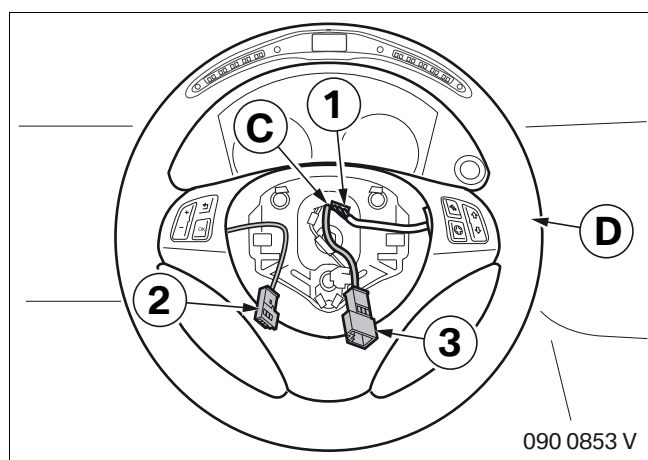
For all cars:

Disconnect the cables from plug **X10170** and connect as follows to branch **A7**:

- BR cable from PIN 1 to PIN 1
- BR/GE cable from PIN 2 to PIN 2
- GE/BR cable from PIN 3 to PIN 3
- GE/SW cable from PIN 4 to PIN 4
- GR/BR cable from PIN 5 to PIN 5
- GR/SW cable from PIN 6 to PIN 6

Connect branch **A7** to coil spring cassette **C**.

Secure the retrofit cable using cable ties **F** to the existing wiring harnesses.



Connect the plug (1) to coil spring cassette **C**.

Connect SW 3-pin socket casing (2) of Performance steering wheel **D** to SW 3-pin pin housing (3) of coil spring cassette **C**.

⚠ Observe the safety instructions when handling airbags. ◀

Install the steering wheel as per **ISTA RA: 32 33**

▶ Route the cable for the optional measuring trigger using a cable tie behind the glove compartment or, if necessary, into the glove compartment. This must be agreed in advance with the customer. ◀

6. Concluding work, coding and basic settings

Cars without Sport steering wheel only

This retrofit system requires coding.

- Connect the battery
- Encode the retrofit with SSS (Software Service Station) via the –**CIP**– path

Cars with Sport steering wheel only

This retrofit system does not require coding.

- Connect the battery

All cars

- Conduct a brief test
- Conduct a function test
- Re-fit the car components as required
- Make basic settings

Basic settings

To ensure correct functioning, two basic settings must be performed once installation is complete. To access the Basic settings menu, hold down the left button **L** while switching on the ignition and press the right button **R** on the Performance steering wheel simultaneously for at least two seconds. A menu then appears for a few seconds and displays the software version. The display then automatically skips to the first menu item.

- Use the **R** or **L** buttons to toggle between diesel and petrol cars (the box around the symbol means selected).
- Press the **R** button for a long press to switch to the "Speed correction factor" setting. With the engine running, you can compare the speed between the display on the steering wheel and the display on the dashboard. Keep the engine at a constant, easy-to-read speed (e.g. 3,000 rpm) and now press the **L** button to reduce or the **R** button to increase the correction factor until both values are identical.

Switch the ignition off. The settings are automatically saved.

Cars with heated steering wheel

The heating button on the steering wheel finisher of the steering column has no function once the Performance steering wheel has been installed.

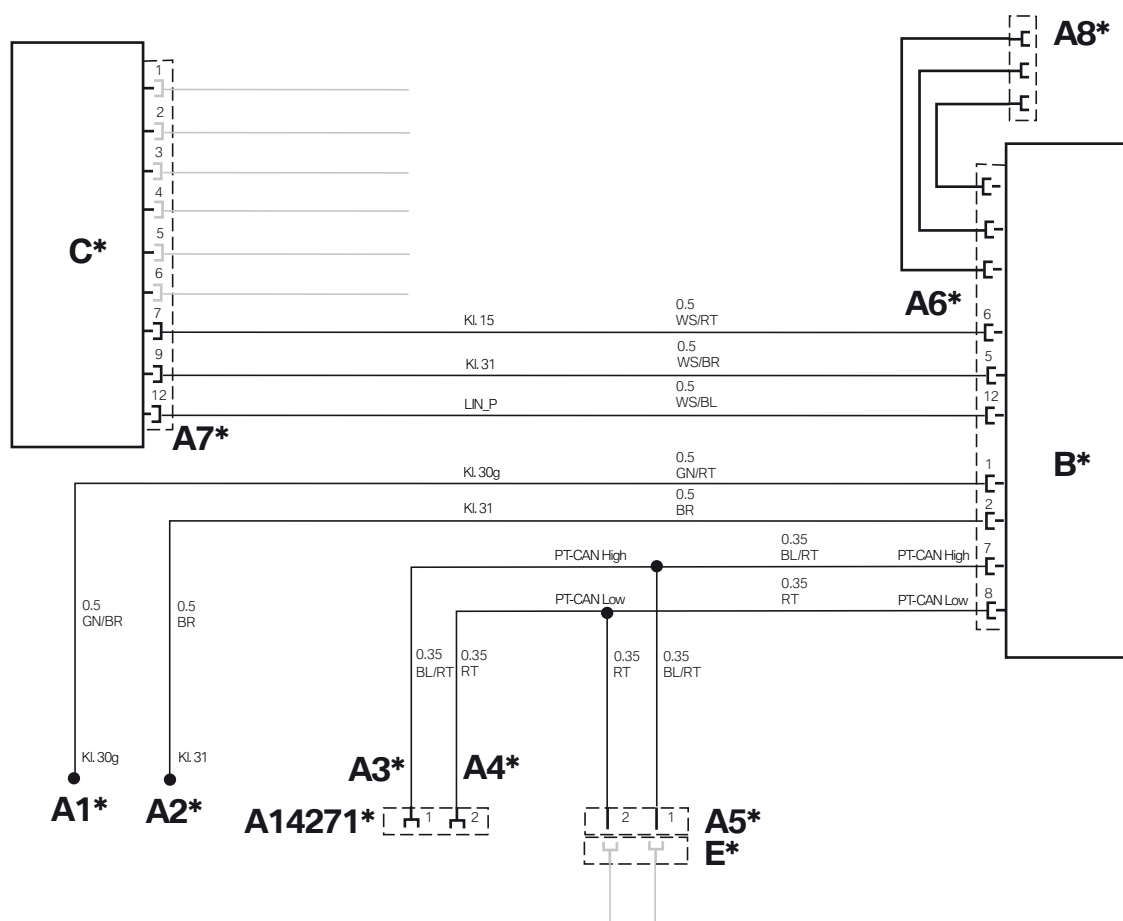
Demo mode

To provide an overview of the functions of the Performance steering wheel, a demo mode of around 110 seconds can be enabled in an endless loop. The functional menus of the four modes (ED MODE, SPORT MODE, RACE MODE and SETUP MODE) are played through briefly and driving situations simulated.

Demo mode is started in the Basic settings menu by pressing the **L** and **R** buttons simultaneously for at least two seconds.

To end demo mode, simply switch off the ignition.

7. Wiring diagram



090 0851 V

Legend

- A1*** Cable open, with miniature connector to the cable on plug **X13376**, PIN 1
- A2*** Cable open, with miniature connector to the cable on plug **X13376**, PIN 12
- A3*** Socket contact, to junction box, BL 54-pin plug **X14271**
- A4*** Socket contact, to junction box, BL 54-pin plug **X14271**
- A5*** SW 2-pin pin housing, to socket casing **E***
- A6*** SW 12-pin socket casing, to control unit **B***
- A7*** WS 12-pin pin housing, to coil spring cassette **C*/X10170**
- A8*** 3-pin socket casing for optional LAP trigger measuring sensor

All the designations marked with an asterisk (*) apply only to these installation instructions or this wiring diagram.

Cable colours

BL	Blue
BR	Brown
GN	Green
GR	Grey
RT	Red
SW	Black
WS	White