

612 Switches

GENERAL	612-1	DASHBOARD SWITCHES	612-8
Warnings and Cautions	612-2	Light switch, removing and installing	612-8
STEERING WHEEL SWITCHES	612-2	START STOP switch, removing and installing ..	612-8
Multifunction steering wheel switches	612-2	Hazard warning, central locking switch assembly, removing and installing	612-8
Sport steering wheel switches	612-3	OTHER SWITCHES	612-9
Steering wheel switches, removing and installing	612-3	Back-up light switch	612-9
STEERING COLUMN SWITCH CLUSTER (SZL)	612-5	Brake light switch, removing and installing ...	612-9
Steering column switch cluster (SZL) basics ..	612-5	Trunk lid or tailgate release button, replacing	612-10
Steering column switch cluster (SZL), removing and installing	612-6	iDrive controller, removing and installing ...	612-10
Airbag and horn contact spring, steering angle sensor, removing and installing	612-7	Driver door switch, removing and installing ..	612-10

GENERAL

This repair group covers replacement of electrical switches at the steering wheel, steering column, dashboard, pedal cluster, center console and door panels.

See also the following sections:

- **210 Clutch** for clutch switch
- **230 Manual Transmission** for manual transmission back-up light switch
- **240 Automatic Transmission** for automatic transmission back-up light switch function
- **250 Gearshift Linkage** for automatic shiftlock
- **320 Steering and Wheel Alignment** for steering wheel and steering column components
- **520 Seats** for seat position control switches
- **ECL Electrical Component Locations**
- **ELE Electrical Wiring Diagrams**

612-2 Switches

Warnings and Cautions

Warnings and Cautions

CAUTION—

- When working on electrical switches or lights, disconnect the negative (–) cable from the battery and insulate the cable end to prevent accidental reconnection.
- Prior to disconnecting the battery, read the battery disconnection cautions given in **001 Warning and Cautions**.
- To prevent marring interior trim, work with plastic prying tools or wrap the tips of screwdrivers and pliers with tape before prying out switches or trim.

WARNING—

- The steering wheel mounted airbag is an explosive device. Treat with extreme caution. Follow the airbag removal procedure in **721 Airbag System (SRS)**.
- Airbag removal may set SRS fault codes. The SRS indicator light remains ON until problems are corrected and fault memory cleared.

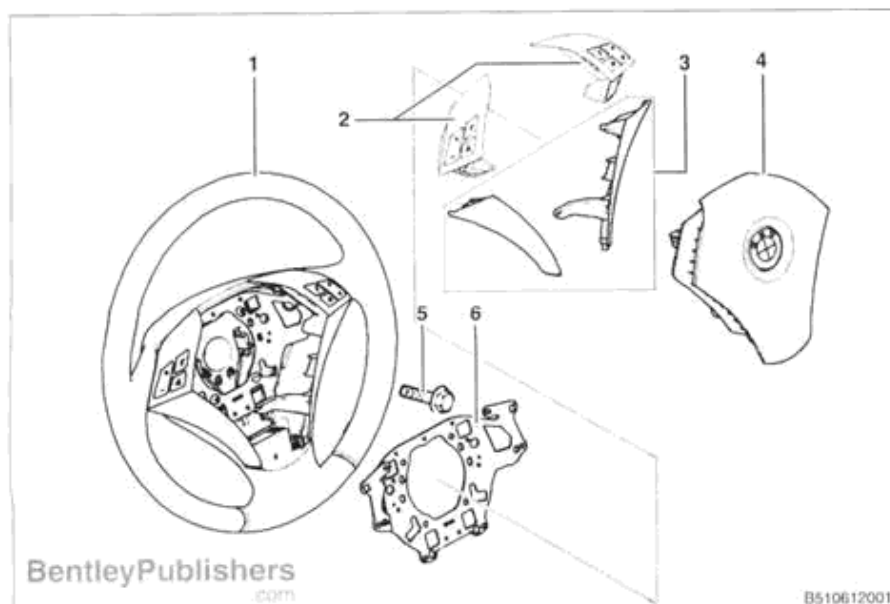
STEERING WHEEL SWITCHES

The steering wheel of vehicles covered by this manual are equipped with the following:

- SRS airbag and horn button
- Horn contact
- Cellular telephone controls
- Radio controls

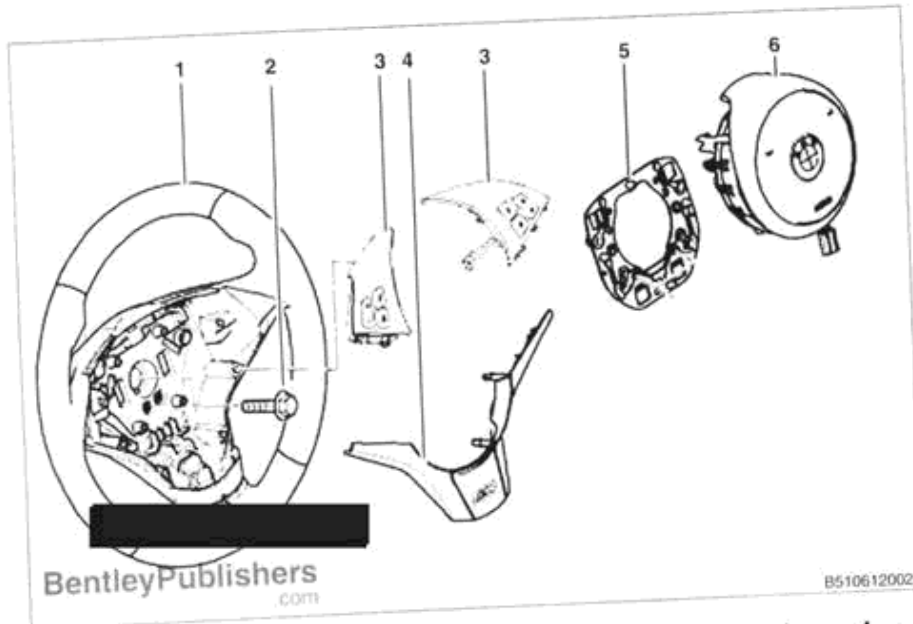
To replace the steering wheel switches and buttons, remove the airbag first. The horn button is integrated with the airbag and is not replaceable separately.

Multifunction steering wheel switches



1. Multifunction steering wheel
2. Multifunction switches
3. Steering wheel trim
4. Airbag unit and horn button
5. Mounting bolt (M12)
 - Tighten to 62.5 Nm (46 ft-lb)
6. Multifunction switch mounting plate

Sport steering wheel switches



1. Sport steering wheel
2. Mounting bolt (M12)
 - Tighten to 62.5 Nm (46 ft-lb)
3. Multifunction switches
4. Steering wheel trim
5. Multifunction switch mounting plate
6. Airbag unit and horn button

Steering wheel switches, removing and installing

- Disconnect negative (-) battery cable and cover battery terminal to keep cable from accidentally contacting terminal.

CAUTION—

- Prior to disconnecting the battery, read the battery disconnection cautions given in 001 Warnings and Cautions.

- Remove driver airbag in steering wheel. See 721 Airbag System (SRS).

WARNING—

- The steering wheel mounted airbag is an explosive device. Treat with extreme caution. Follow the airbag removal procedure in 721 Airbag System (SRS).
- Airbag removal may set SRS fault codes. The SRS indicator light remains ON until problems are corrected and fault memory cleared.

Multifunction steering wheel

- Remove multifunction switch mounting bracket fasteners (arrows).

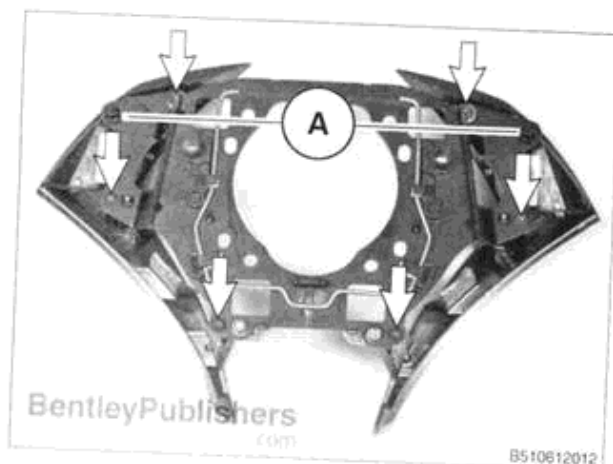


612-4 Switches

Steering wheel switches, removing and installing



Disconnect electrical connectors (**arrows**).



Remove multifunction switch fasteners (**arrows**). Unclip multifunction switch in area **A** and remove from bracket.

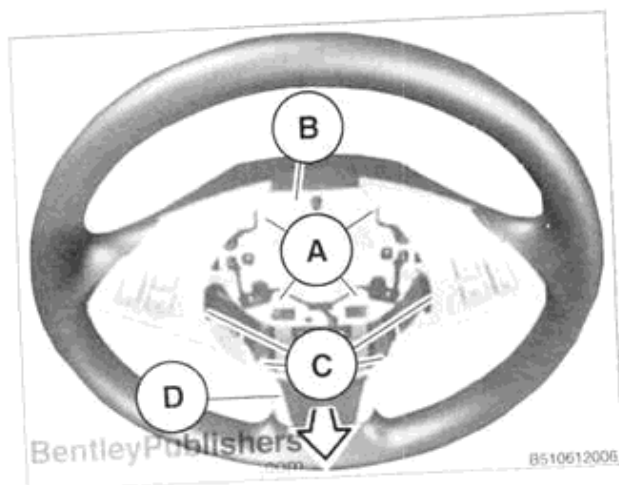


Unclip (**A**) multifunction switch from steering wheel trim and remove in direction of **arrow**.

Installation is reverse of removal.

Tightening torques

Mounting plate to steering wheel	6 Nm (4.4 ft-lb)
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**Sport steering wheel**

- Remove multifunction switch mounting plate fasteners (A).
- Remove mounting plate (B), multifunction switches and trim panel (D) from mounts (C) in direction of arrow.
- Disconnect electrical connectors and remove from steering wheel.
- Remove multifunction switch fasteners and separate switches from mounting plate.
- Installation is reverse of removal.

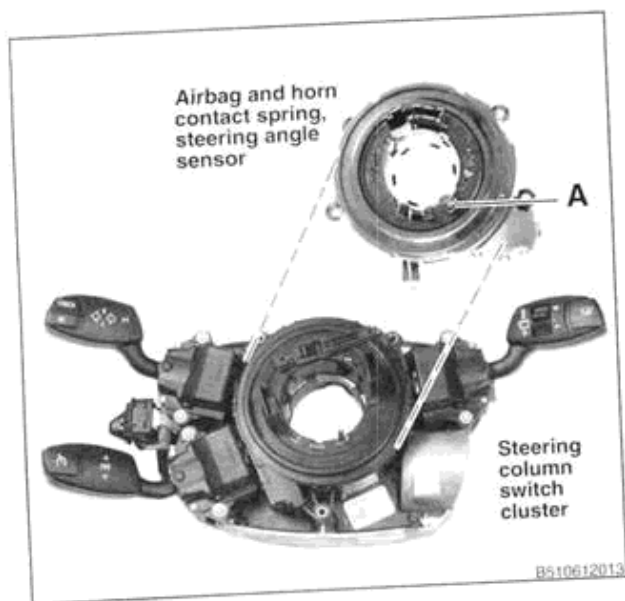
Tightening torques

Mounting plate to steering wheel	6 Nm (4.4 ft-lb)
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STEERING COLUMN SWITCH CLUSTER (SZL)**Steering column switch cluster (SZL) basics**

- The steering column switch cluster (SZL) integrates the following functions:
 - Wiper and washer switch
 - Headlight beam switch
 - Turn signal switch
 - Cruise control
 - Airbag and horn contact spring, steering angle sensor with stop pin (A)
 - On-board computer (BC) switch

SZL switches are optical devices.

**Steering column switch cluster (SZL), removing and installing**

- Disconnect negative (-) battery cable and cover battery terminal to keep cable from accidentally contacting terminal.

CAUTION—

- Prior to disconnecting the battery, read the battery disconnection cautions given in 001 Warnings and Cautions.

612-6 Switches

Steering column switch cluster (SZL), removing and installing

- Remove driver airbag in steering wheel. See **721 Airbag System (SRS)**.

WARNING—

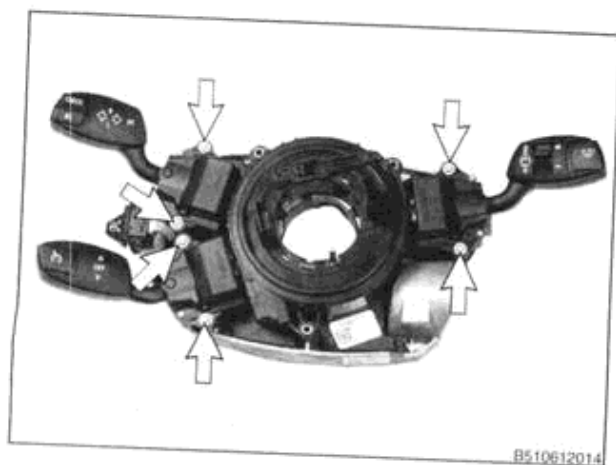
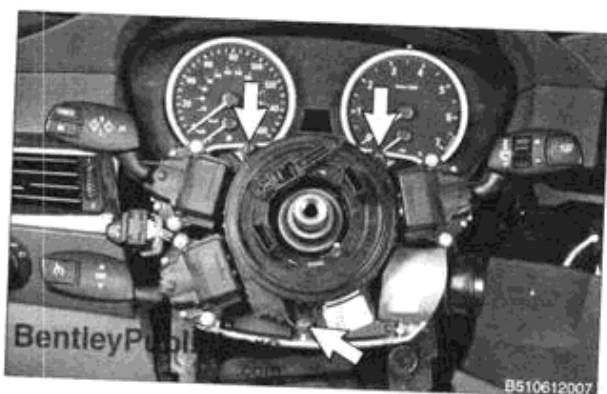
- The steering wheel mounted airbag is an explosive device. Treat with extreme caution. Follow the airbag removal procedure in **721 Airbag System (SRS)**.
- Airbag removal may set **SRS** fault codes. The **SRS** indicator light remains **ON** until problems are corrected and fault memory cleared.

- Extend steering column as far back and as low as possible.
- Remove steering wheel. See **320 Steering and Wheel Alignment**.

CAUTION—

- Do not move front wheels from straight-ahead position while steering wheel is off.
- While steering wheel is off, do not turn or twist the airbag and horn contact spring.

- Remove steering column trim. See **513 Interior Trim**.
- Remove SZL mounting fasteners (**arrows**) and pull cluster back.
- Detach electrical connectors and remove SZL.



- If replacing SZL remember to:
 - Remove turn signal, cruise control and windshield wiper stalk fasteners (**arrows**) and swap stalks to new part.
 - Remove airbag and horn contact spring. See **Airbag and horn contact spring, steering angle sensor, removing and installing** in this repair group.
- Installation is reverse of removal. Use BMW scan tool to code, program and carry out steering angle sensor adjustment.

Airbag and horn contact spring, steering angle sensor, removing and installing

Airbag and horn contact spring, steering angle sensor, removing and installing

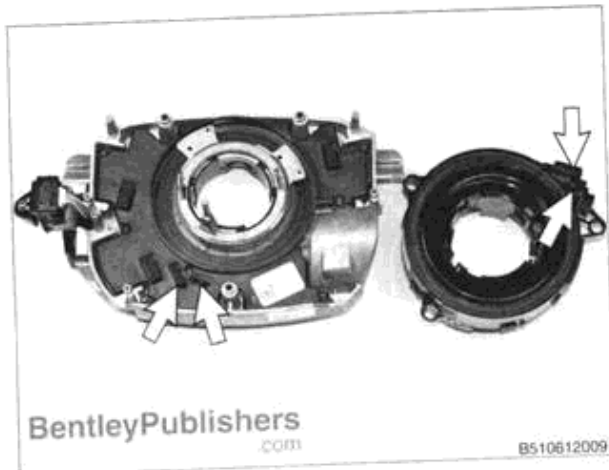
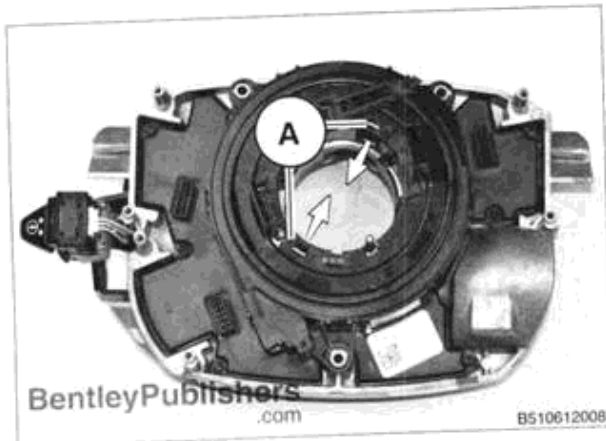
- Remove SZL. See **Steering column switch cluster (SZL), removing and installing** in this repair group.

Working at contact spring module:

- Unlock catches **A** in direction of **arrows**.
- Lift contact spring off SZL.

CAUTION—

- Do not rotate inner ring of contact spring. If necessary, secure ring using adhesive tape.

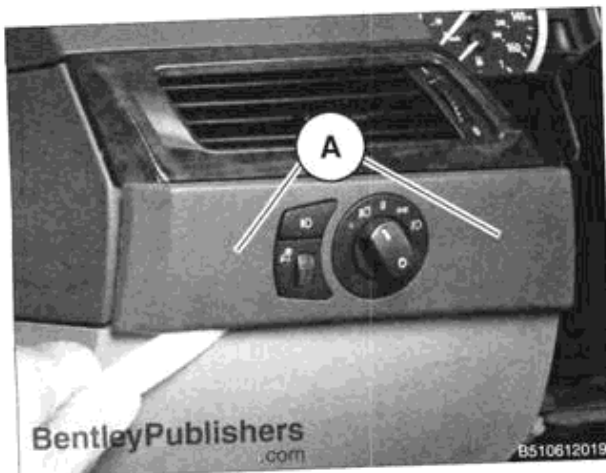


- When installing contact spring, make sure electrical connectors (**arrows**) are properly aligned.

DASHBOARD SWITCHES

Light switch, removing and installing

- Use plastic prying tool to lever out light switch bezel with switch.
 - Note that switch bezel snaps into dashboard using lug in areas **A**.
 - Unclip switch electrical connector.
- Detach switch from bezel and replace.
- Installation is reverse of removal.



612-8 Switches

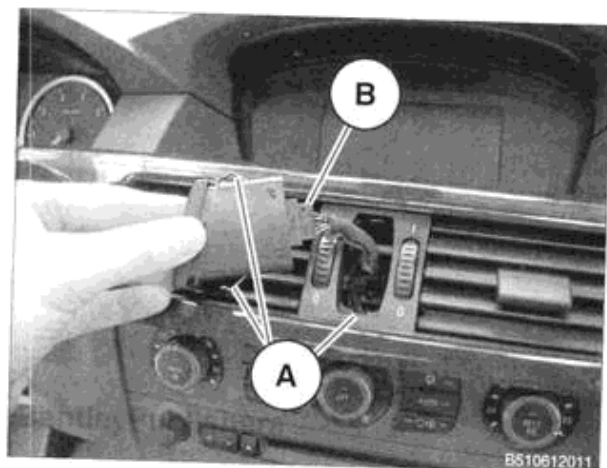
START STOP switch, removing and installing



START STOP switch, removing and installing

- Using a plastic prying tool, lever START STOP switch out of dashboard in direction of **arrow**.
- Disconnect electrical connector and remove.
- Installation is reverse of removal.

Hazard warning, central locking switch assembly, removing and installing



- Using a plastic prying tool, release hazard warning switch retaining tabs (A) and pull switch out of dashboard. Disconnect electrical connector (B) and remove switch.
- Installation is reverse of removal.

OTHER SWITCHES

Back-up light switch

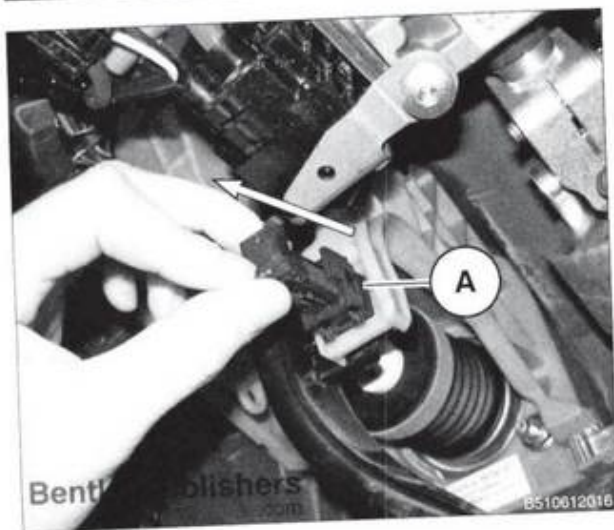
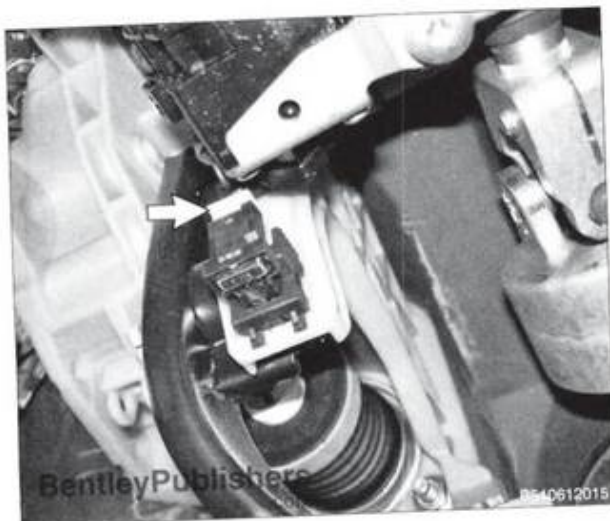
For manual transmission back-up light switch replacement, see **230 Manual Transmission**.

Automatic transmission electronics combines the following functions:

- Neutral safety switch.
- Back-up light switch.

Brake light switch, removing and installing

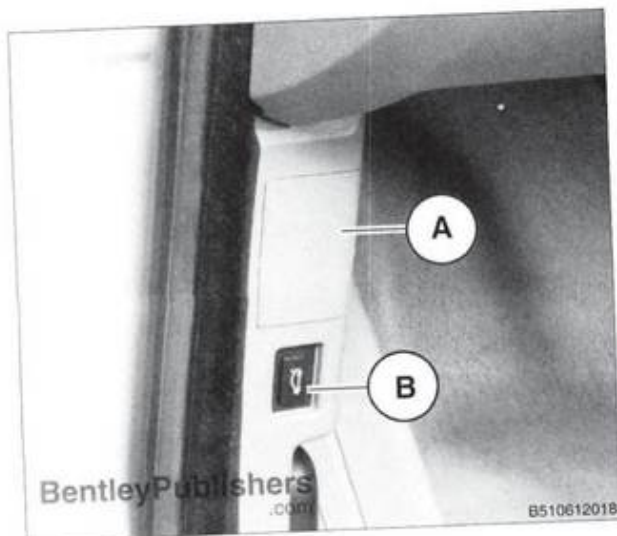
- Remove left lower dashboard trim (above pedals). See **513 Interior Trim**.
- ◀ Working at pedal cluster, disconnect electrical connector (arrow) from brake light switch.



- ◀ Pull brake light switch (A) from bracket mounting in direction of arrow.
- To install, depress brake pedal and hold down with brake pedal prop tool.
- Slide brake light switch as far as it will go into brake light switch holder.
- Attach harness connector.
- Grip brake light switch holder, slowly return brake pedal to rest position and pull switch back to stop.
- Check function of brake light switch with assistant.

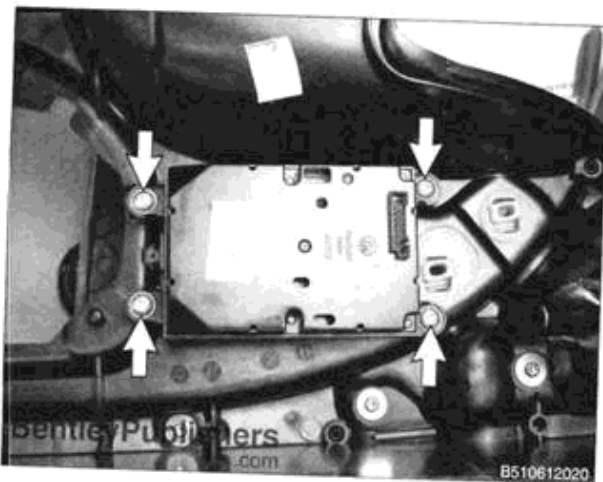
Trunk lid or tailgate release button, replacing

- ◀ Working at left door jamb:
 - Open OBD II plug cover (A).
 - Reach through opening and push out trunk lid or tailgate switch (B).
 - Detach electrical connector.
- Installation is reverse of removal.



612-10 Switches

iDrive controller, removing and installing

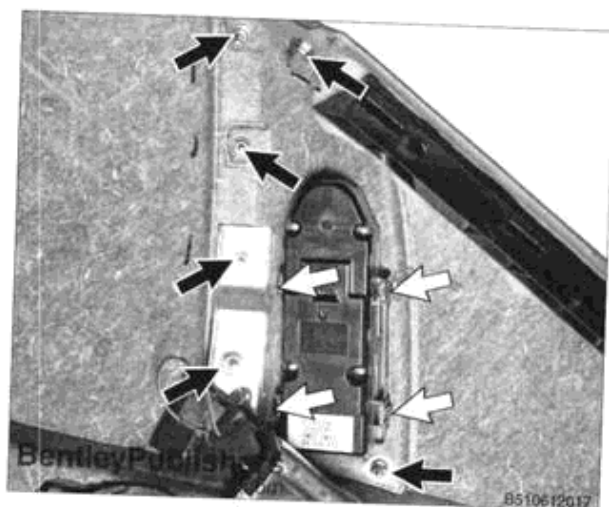


iDrive controller, removing and installing

- Remove center console. See **513 Interior Trim**.
- Remove iDrive controller fasteners (**arrows**) and remove from center console.
- If installing new controller use BMW scan tool to code and program new unit.

Driver door switch, removing and installing

The master front and rear window switches are ganged with child safety switch and outside mirror control switch on the driver door arm rest.



- Remove door trim panel. See **513 Interior Trim**.
- Remove fasteners (**black arrows**). Unlock retaining clips (**white arrows**) and remove switch from door panel.
- Installation is reverse of removal.

