

515 Central Locking and Anti-theft

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GENERAL

This section covers repair information for door, trunk and tailgate locks, central locking, electronic immobilization (EWS) and anti-theft alarm (DWA).

5 Series vehicles are equipped with sophisticated self-diagnostic electrical systems. When experiencing malfunctions relating to central locking or anti-theft systems, using a BMW scan tool can usually pinpoint electrical faults quickly and safely.

See also:

- **411 Doors** for inner door trim removal
- **513 Interior Trim** for tailgate trim removal
- **600 Electrical System-General**
- **ECL Electrical Component Locations**
- **ELE Electrical Wiring Diagrams**

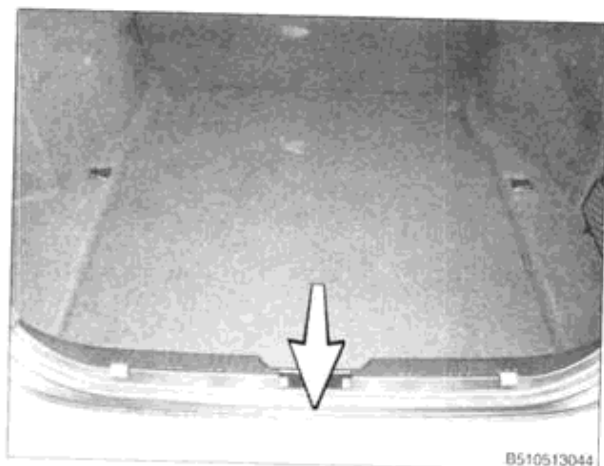
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Fuel filler flap emergency opening

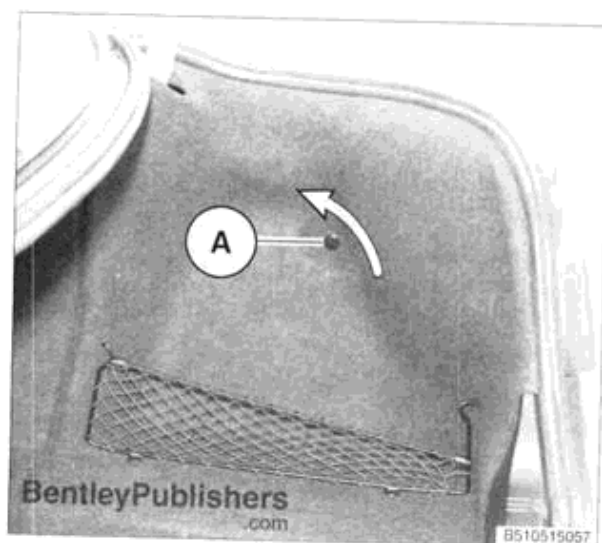
Fuel filler flap emergency opening

The fuel filler flap can be unlocked manually in the event of an electrical defect. The emergency release is located in the luggage compartment on the right behind luggage compartment trim.

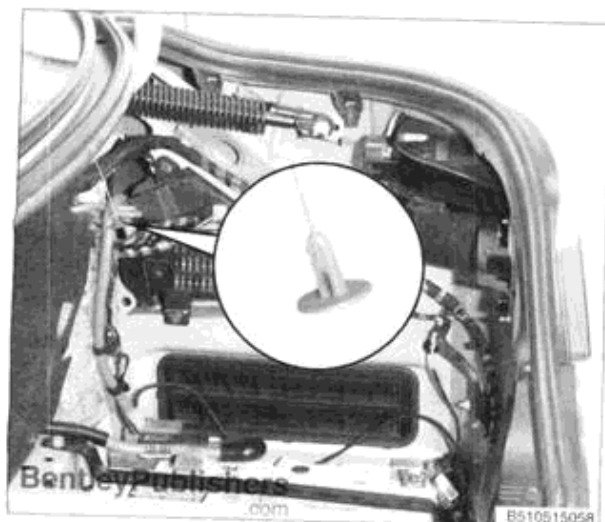
- Remove trunk floor trim panel in direction of **arrow**.



- Remove panel fastener (A) by rotating 90° with flat blade screwdriver and remove panel.



- Pull green knob (**inset**) with fuel pump symbol to release fuel filler flap.



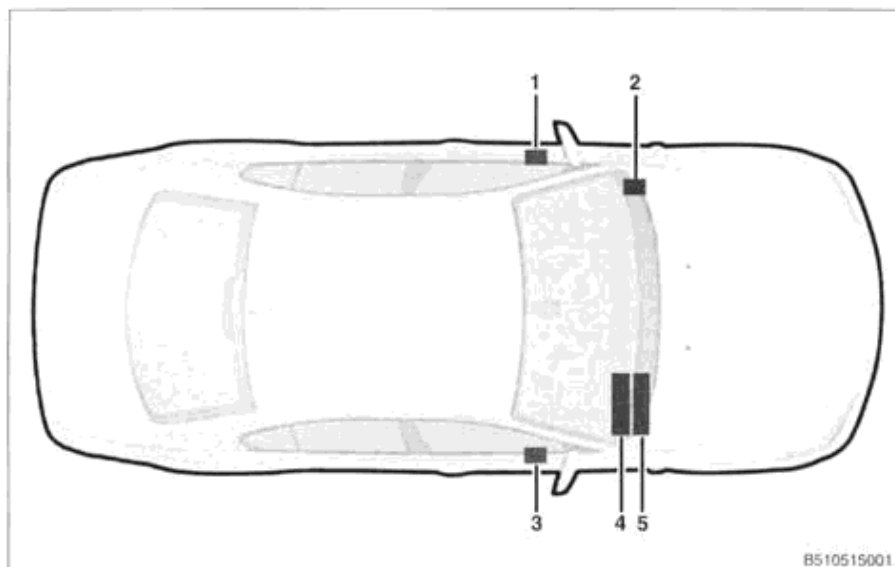
CENTRAL LOCKING

Central locking in 5 Series vehicles controls the door locks, trunk lid lock and fuel filler flap lock.

Central locking is distributed over several control modules. This offers the advantage that sensors and actuators are connected directly to a control module in the vicinity of their installed location, resulting in shorter cable connections. By interlinking the control modules, it is possible to exchange sensor data between them.

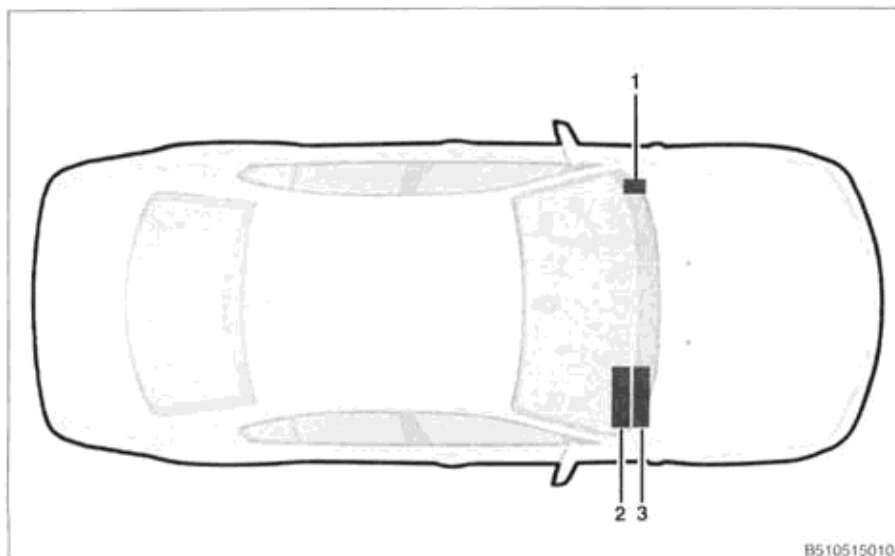
There are two different central locking systems in 5 Series models dependant on production date.

To 09 / 2005: The primary control modules for central locking in the 5 Series are:



1. Driver door module (TMFA)
2. Car access system (CAS)
3. Passenger door module (TMBF)
4. Basic body module (KBM)
5. Safety gateway module (SGM)

From 09 / 2005: The primary control modules for central locking in the 5 Series are:



1. Car access system (CAS)
2. Basic body module (KBM)
3. Body gateway module (KGM)

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Fuel filler flap emergency opening

Central locking can be operated via the following components:

- Remote control / remote key.
- Driver door lock barrel (door lock).
- Center-lock button.
- Electronic outer door handle module (TAGE) in connection with comfort access.

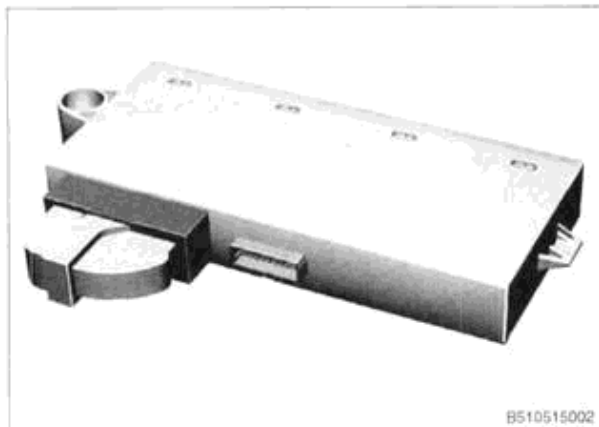
Car access system (CAS)

Car access system (CAS) is the master control module for central locking, it issues the enable signal to activate a lock / unlock function. When CAS receives a lock / unlock signal from the remote control receiver, it checks whether the remote key is valid and belongs to the vehicle. If the check / authentication is successful CAS will forward the request to activate central locking via body bus system (K-CAN) to:

- to 9 / 2005: SGM and KBM.
- from 9 / 2005: KGM and KBM

NOTE —

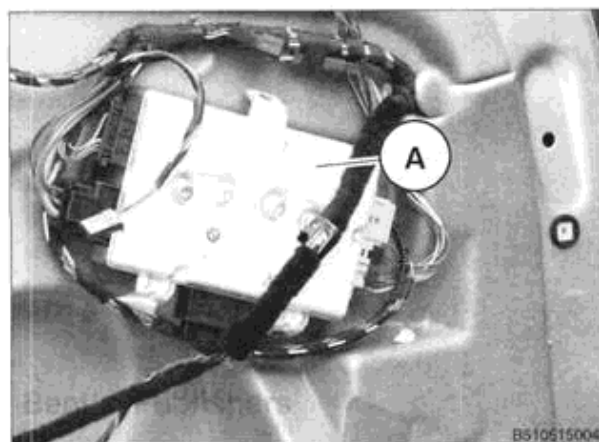
- For summary of CAS functions See 600 Electrical System—General.



To 9 / 2005: Front door module (TMFA, TMBF)

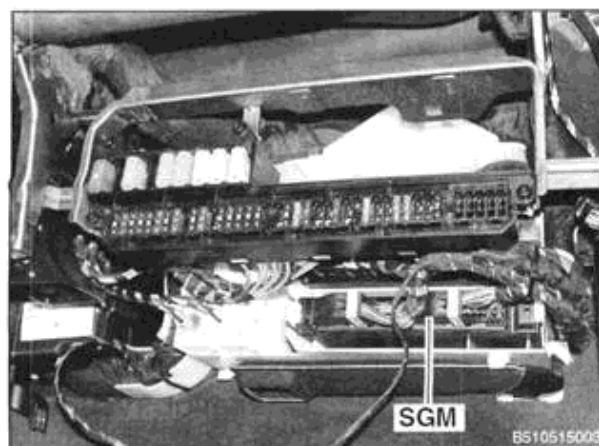
TMFA (A) is responsible for locking and unlocking driver front door. It contains relays which drive the respective lock / unlock motors.

TMBF is responsible for locking and unlocking passenger front door. It contains relays which drive the respective lock / unlock motors.



To 9 / 2005: Safety gateway module (SGM)

SGM converts and forwards messages to and from byteflight and K-CAN.

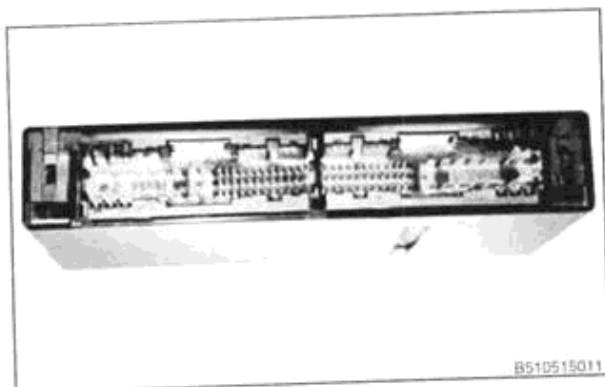


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Central locking features

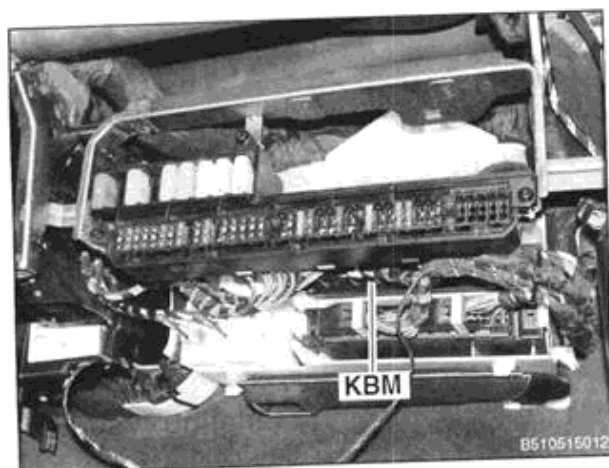
From 9 / 2005: Body gateway module (KGM)

- ◀ KGM is responsible for locking and unlocking the front doors. It contains relays which drive respective lock / unlock motors.



Basic body module (KBM)

- ◀ KBM is responsible for locking and unlocking passenger doors and trunk or tailgate of vehicle. It contains relays which drive the respective lock / unlock motors.



Central locking features

Central locking can be activated when driver door is closed.

Vehicle locking / unlocking is initiated by the following components:

- Remote control / remote key.
- Central locking button on center dashboard.
- Mechanical key / spare key.

Driver identification is incorporated within the remote key and is also used for the optional comfort access (CA) system. CA module activates the identification transmitter in the remote key by way of a radio signal. This makes it possible to unlock the vehicle without actively using the remote key.

The central locking system activates the following system components:

- Driver and front passenger door locks.
- Rear door locks.
- Fuel filler flap lock.
- Trunk lid or tailgate.

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Central locking features

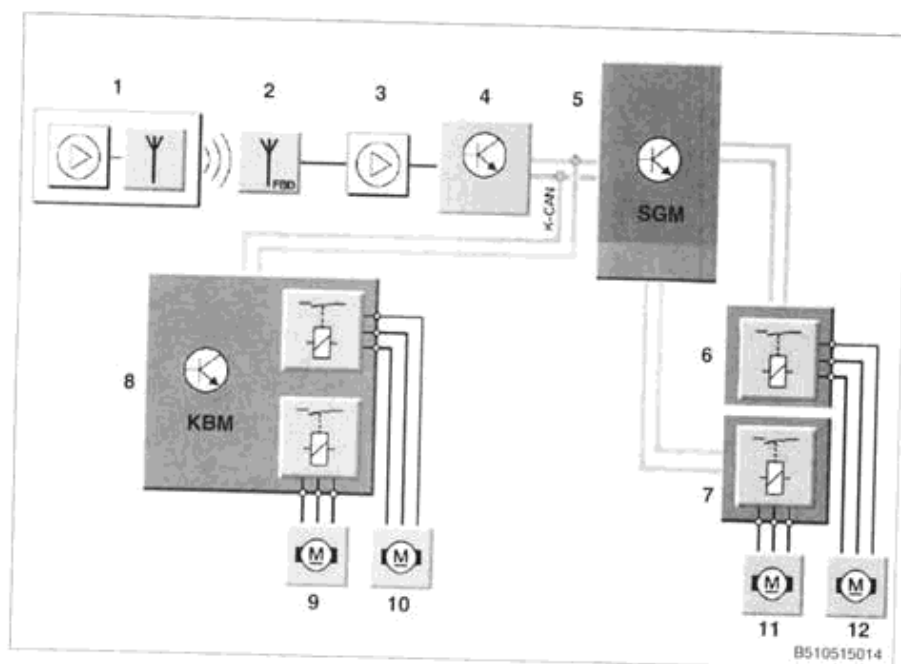
Unlocking / locking

When the remote key unlock button is pressed, the signal is received by the rear window antenna and forwarded to the remote control receiver. The remote control receiver forwards the signal to CAS.

The signal from the remote key is verified in CAS. If signal is valid:

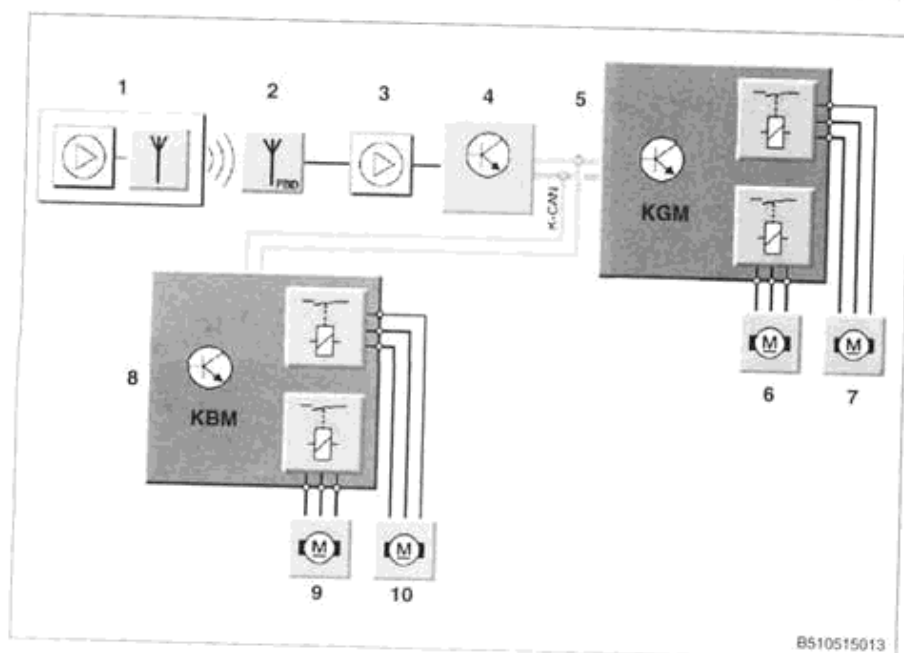
- **To 9 / 2005 SGM** and KBM are authorized to unlock vehicle.
- **From 9 / 2005 KGM** and KBM are authorized to unlock vehicle.

To 9 / 2005: Remote key signal path



1. Remote key
2. Rear window antenna
3. Remote key receiver
4. Car access system (CAS)
5. Safety gateway module (SGM)
6. Driver door module (TMFA)
7. Passenger door module (TMBF)
8. Body basic module (KBM)
9. Lock actuator, trunk or tailgate
10. Lock actuator, passenger door, rear doors and fuel filler flap
11. Lock actuator, front passenger door
12. Lock actuator, driver door

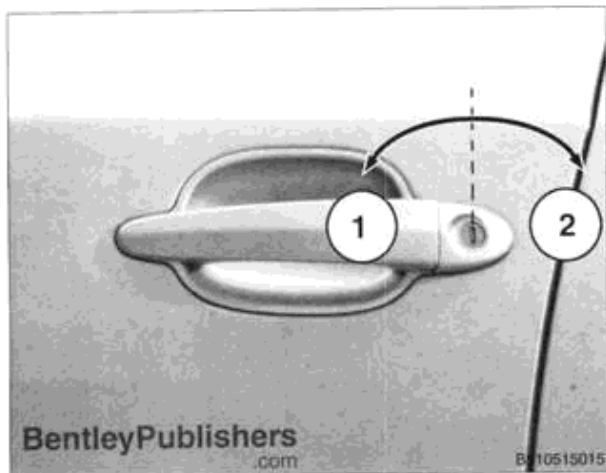
From 9 / 2005: Remote key signal path



1. Remote key
2. Rear window antenna
3. Remote key receiver
4. Car access system (CAS)
5. Body gateway module (KGM)
6. Lock actuator, front passenger door
7. Lock actuator, driver door
8. Body basic module (KBM)
9. Lock actuator, trunk / tailgate
10. Lock actuator, passenger door, rear doors and fuel filler flap

Mechanical key locking / unlocking

The vehicle can be locked / unlocked using a mechanical key in the driver door lock. Driver door module (TMFA) monitors the lock cylinder Hall sensor signal. When the lock is turned, a change in the Hall sensor state initiates locking / unlocking.



Door key positions for electrical / manual locking and unlocking are:

1. Turn once: Unlocks driver door
Turn twice: Unlocks remaining doors, trunk, tailgate, fuel filler
Turn and hold (door closed): Opens windows, sunroof
2. Turn once: Locks all doors, tailgate, fuel filler
Turn and hold (door closed): Closes windows, sunroof

Selective unlocking

When unlocking with the remote key, the first unlock request only unlocks the driver's door. A second unlock request unlocks remaining doors, tailgate and fuel flap.

Central locking button

Central locking button (**arrow**) is in the center of dashboard.

- Central locking button locks doors and tailgate. The fuel filler flap remains unlocked for refueling purposes.
- If a door is opened from inside while centrally locked, the remaining doors remain locked.

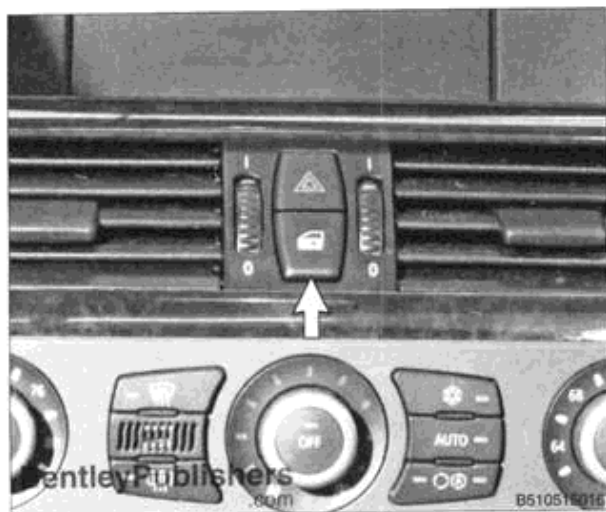
The open door can be relocked, when closed, by manually locking or pressing the central locking button twice. This synchronizes the door locks.

Single lock and double lock function

Each door lock actuator incorporates two lock positions.

Single lock controls the mechanical lock mechanism when the central lock switch is pressed. The lock mechanism is fully locked at this point but can still be opened from interior by pulling interior door handle twice or by pressing central lock switch again. When single lock function is activated, the fuel filler flap is not locked.

Double lock, also known as central arrest, is activated only when vehicle is locked from the outside at the driver's door lock with a key or when CAS receives a lock request from the remote key. In this case the double lock motor is activated, mechanically offsetting an internal rod in the lock actuator. This disables the actuator from unlocking the vehicle from the interior and prevents the doors from being unlocked by any means other than an unlock request at the driver's door or via the remote key.



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Car memory / key memory (personalization)

Vehicle accident unlocking

During a vehicle accident the airbag control module sends a signal to CAS to unlock the vehicle. The remote key and central locking button are disabled until ignition status (terminal R) is changed from ON to OFF back to ON.

Car memory / key memory (personalization)

A number of features and functions can be customized to the driver(s) preference. The identity of the vehicle user is provided by a signal from the remote key.

Car memory and key memory are two separate functions, although they are marketed as a combined feature.

Car memory

Prior to new vehicle delivery, the BMW factory scan tool is used to code driver preferences into the appropriate control modules. Thereafter these choices cannot be changed without recoding using a BMW factory scan tool or equivalent. Only one car memory setting per vehicle is possible.

The functions that can be set using car memory include:

- Audible confirmation (siren chirp) and visual confirmation (via turn signal lights) when alarm is armed. Siren chirp can be deactivated with BMW factory scan tool or equivalent.
- Daytime running lights ON or OFF.
- Pathway lighting allows use of the dimmer switch to turn on the headlights and interior lights for 40 seconds.
- Automatic locking of central locking system once vehicle reaches 10 mph.
- Selective unlocking. Unlocks only drivers door on first actuation of unlock button on remote key. Unlocks all doors, trunk and fuel filler door after second actuation of button on remote key.

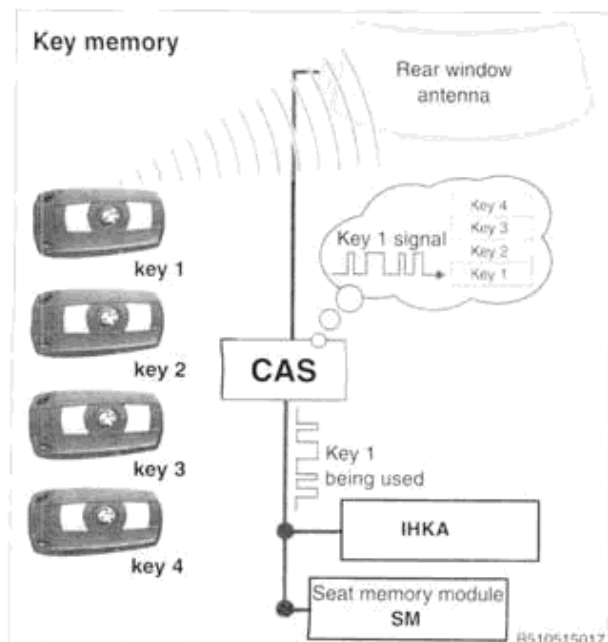
Key memory

- ▶ When a remote key (identification transmitter) is used to lock or unlock the car, the user is identified by CAS. Multiple keys can be programmed with the personalization feature. The use of a personalized key then triggers car memory functions such as heating and air-conditioning settings or memory seat position adjustment.

Most key memory options can be programmed using the iDrive menu. Some programming requires the use of BMW factory scan tool or equivalent.

Available key memory functions vary based on vehicle equipment. The functions that can be set include:

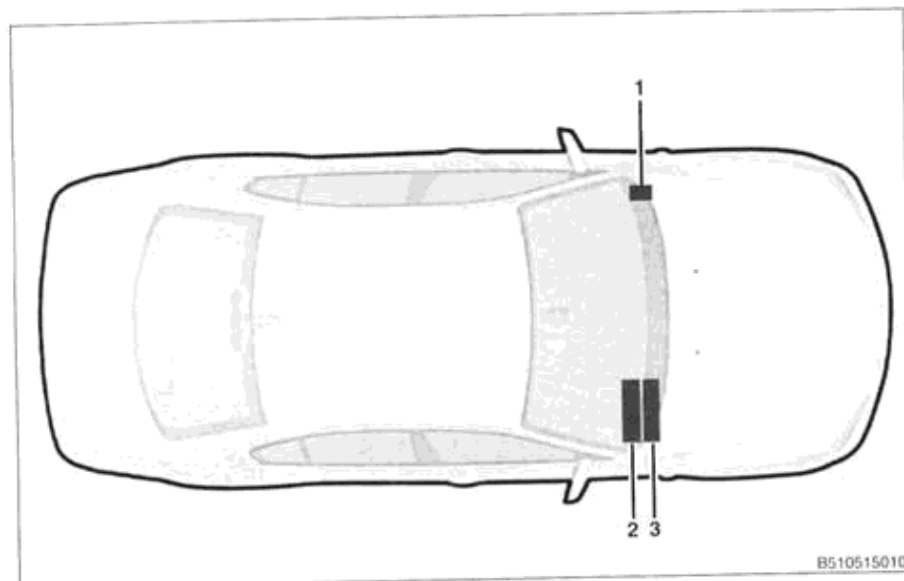
- Audio tone settings and radio presets.
- Language of displays and voice functions.
- Climate control temperature.
- Seat / mirror memory settings.
- Lighting preferences.



Comfort access (CA)

Comfort access (CA), optional in 5 Series models, is a passive access system which allows the vehicle to be unlocked by grasping the outer door handle, provided the remote key is located within a radius of no more than approx. 0.5 - 1.5 m (1½ - 4½ ft) from the vehicle. With CA it is sufficient for the driver to carry the remote key on his or her person in order to open or start the vehicle.

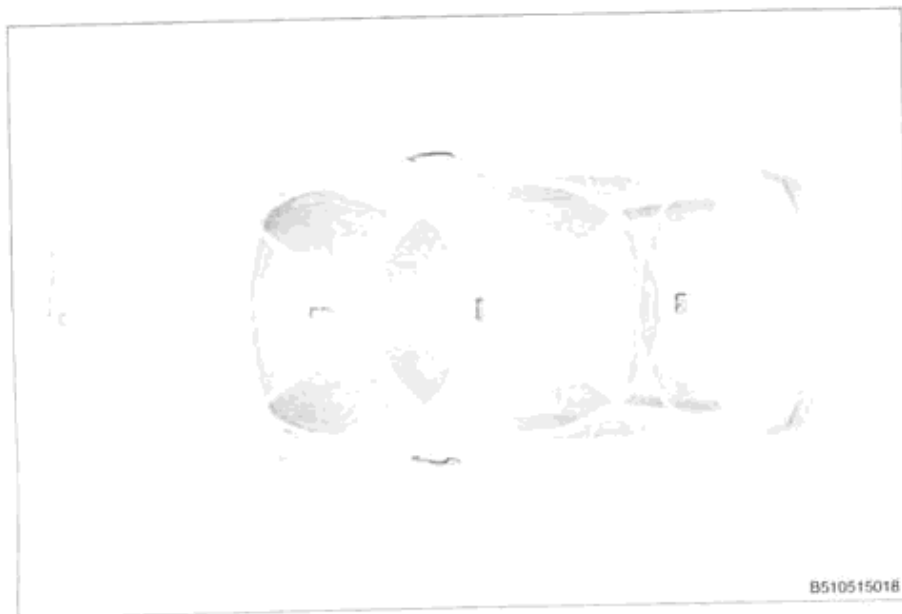
Modules and other components which control and operate CA:



1. Car access system (CAS)
2. Basic body module (KBM)
3. Body gateway module (KGM)

When a remote key comes into range of the CA antennas, the signal is sent to CAS to be verified. If seen as valid the lock / unlock function is granted.

Comfort access antennas



- Driver door handle
- Passenger door handle
- Rear bumper
- Luggage compartment
- Interior front
- Interior center

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Comfort access features

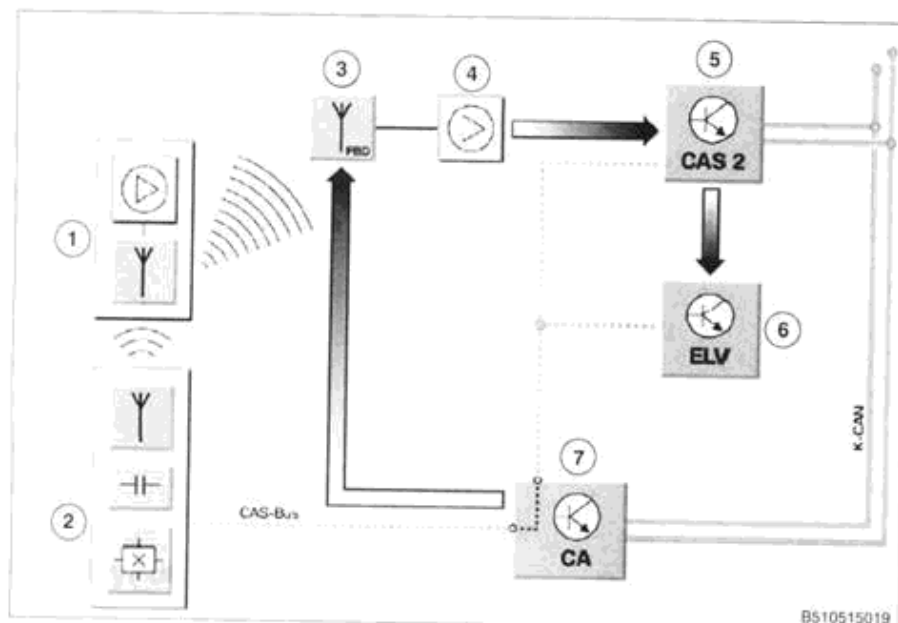
Comfort access features

Passive entry

Passive entry enables access to vehicle without operating the remote key. The vehicle recognizes the presence of a valid remote key and access is granted by grasping the outer door handle.

Unlocking

A capacitive sensor in door handle module (TAGE) recognizes that the handle has been grasped and activates the transmit antenna. The transmit antenna sends a signal to the remote key. In turn, the identification transmitter sends a 315 MHz high frequency signal to the remote control receiver, which contains the authentication request. CAS checks the remote key authentication code. Following successful authentication, CAS issues an enable signal to unlock vehicle and initiates vehicle unlocking. KGM and KBM executes the unlocking procedure. The electronic steering lock (ELV) is not yet unlocked (if equipped).



1. Door handle module (TAGE)
2. Remote key
3. Rear window antenna
4. Remote key receiver
5. Car access system (CAS)
6. Electronic steering lock (ELV)
7. Comfort access (CA) module

Trunk lid / tailgate unlocking

An authentication check takes place when a remote key is located within the rear area of the vehicle. After successful authentication, the trunk lid or tailgate can be unlocked and opened with the outer trunk lid or tailgate button.

Passive go

When a valid remote key is located within the vehicle interior, the passive go function makes it possible to start the vehicle without the remote key inserted in the key slot.

When a door is opened, after 3 seconds CAS checks to see whether a valid remote key is in the vehicle. The remote replies with data for the electronic vehicle immobilizer. CAS enables engine start by sending a signal to the ECM. If equipped, the electric steering lock (ELV) is unlocked.

Passive exit

Passive exit makes it possible to lock the vehicle without using a remote key. After a door is closed, the locking procedure is started by touching the recognition area on the outer door handle. The door handle module (TAGE) sends the request to CAS to lock the vehicle.

If a valid remote key is detected in the interior of the vehicle during locking with another valid remote key from the exterior, the key left in the vehicle is deactivated until the vehicle is unlocked again.

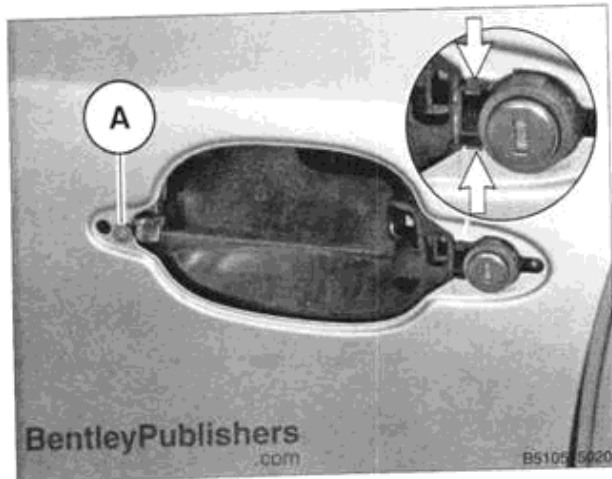
DOOR HANDLES AND LOCKS

In the procedures that follow, door handle removal, door lock cylinder removal and door latch removal are covered for left front door. Other doors are similar although simpler, due to the lack of lock cylinder.

Inner door panel removal is covered in **411 Doors**.

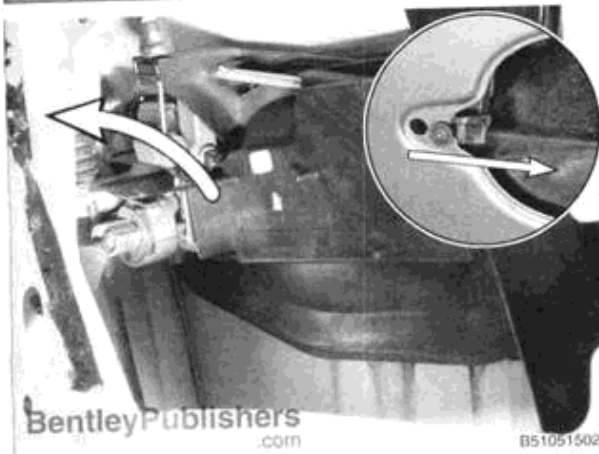
Door lock cylinder, removing and installing

- Remove door latch. See **Door latch, removing and installing** in this repair group.
- Remove door handle. See **Door handle, removing and installing** in this repair group.
- ◀ Loosen carrier fastener (A), but do not remove. Release carrier catches (arrows in inset) while pressing lock cylinder into door.
- Working inside door, disconnect comfort access connector, if equipped.



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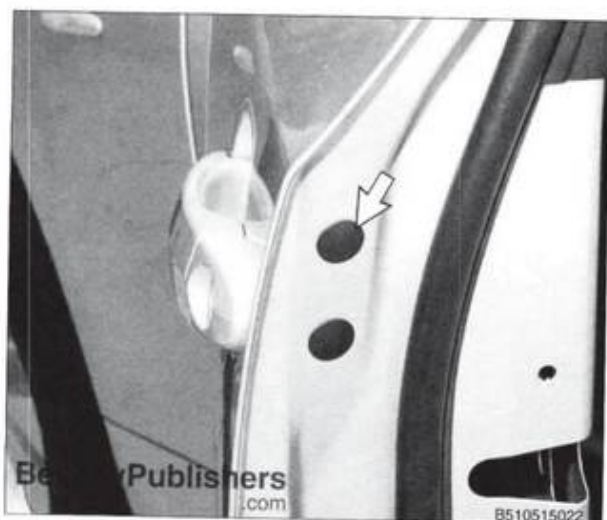
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- ◀ Working inside door, pull carrier in direction of **arrow** while sliding fastener out of slot (inset).
- Remove carrier from door.
- Installation is reverse of removal.
 - Replace door handle gaskets if damaged.
 - Reset comfort access (CA) using BMW scan tool. See **600 Electrical System-General**.

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Door handle, removing and installing

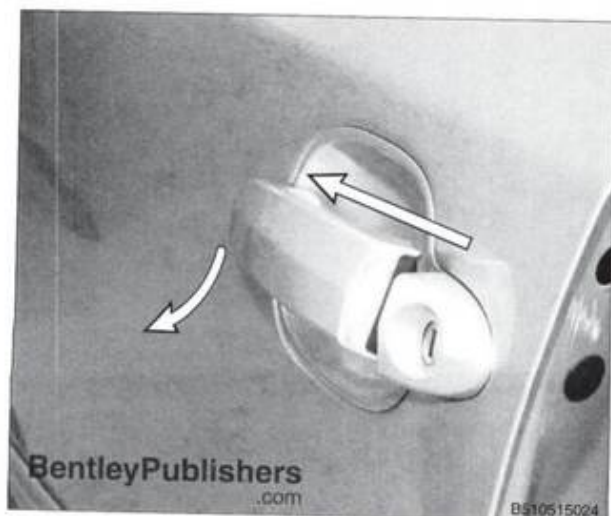


Door handle, removing and installing

- Remove rubber plug (**arrow**).



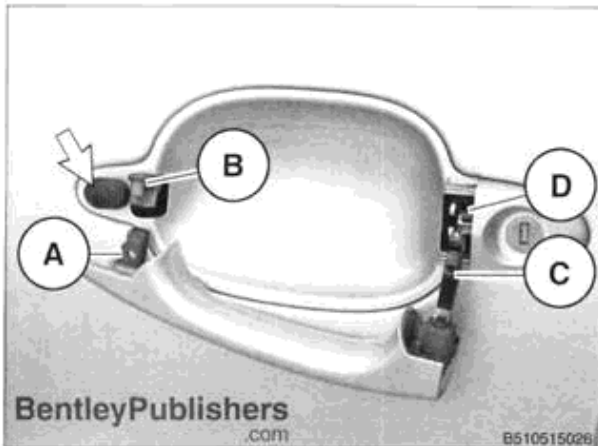
- Pull outside handle up until fastener (**inset**) is accessible and hold in place.
- Turn fastener (**inset**) counterclockwise to secure handle and lock actuator in position. If lock actuator is not properly secured in position, lock actuator lever may return into latch and door panel removal will be required to reset.



- Pull outside handle out of rear lock actuator in direction of **arrow**.
- Pull outside handle downward (**curved arrow**) from front of lock actuator.

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Door handle trim, removing and installing



Installation is reverse of removal.

- Check that stop pad (**arrow**) is in place.
- Insert outside handle bore (**A**) correctly in mounting (**B**).
- Engage outside handle (**C**) correctly in lock actuator (**D**).
- Replace door handle gaskets if damaged.
- Reset comfort access (CA) module using BMW scan tool. See **600 Electrical System-General**.

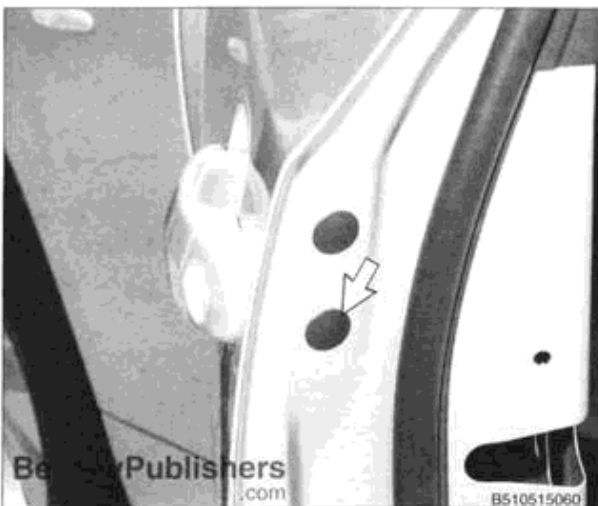
Tightening torque

Handle to lock actuator	3 Nm (26.5 in-lb)
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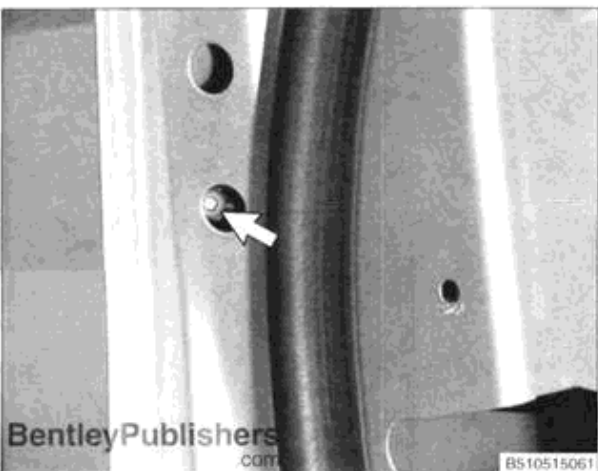
Door handle trim, removing and installing

- Remove door handle. See **Door handle, removing and installing** in this repair group.

Remove rubber plug (**arrow**).

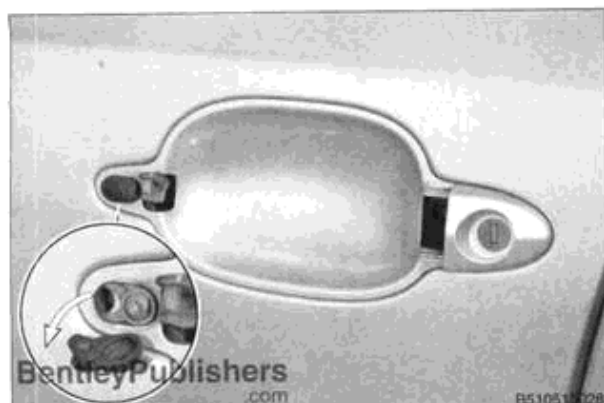


Remove trim fastener (**arrow**).

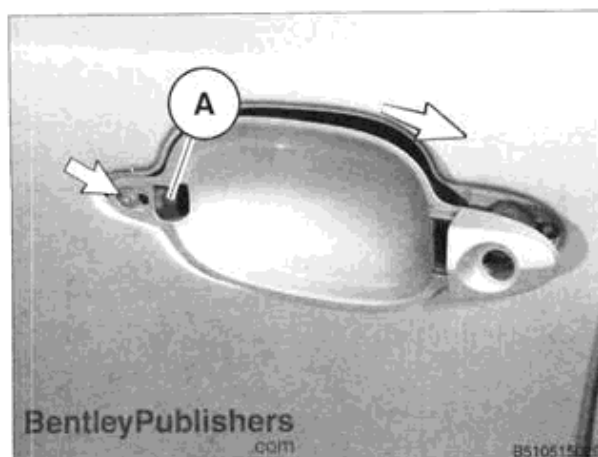


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Door latch, removing and installing



Remove door handle stop pad by pulling off in direction of **arrow**.



Remove fastener (**arrow**). Press handle mount (**A**) into door.

- Slide trim out, towards rear of vehicle and remove in direction of **arrow**.
- Installation is reverse of removal.
 - Replace door handle gaskets if damaged.
 - Reset comfort access (CA) using BMW scan tool. See **600 Electrical System-General**.

Tightening torque

Cover to handle mount	2.5 Nm (22.1 in-lb)
Handle to lock actuator	3 Nm (26.5 in-lb)

Door latch, removing and installing

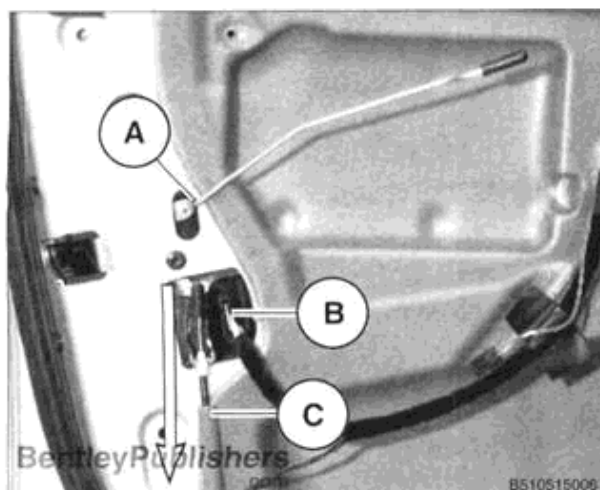
CAUTION—

- Do not use silicone lubricant on door latch. Latch faults have been traced to silicone contamination.

- Remove door trim panel. See **411 Doors**.

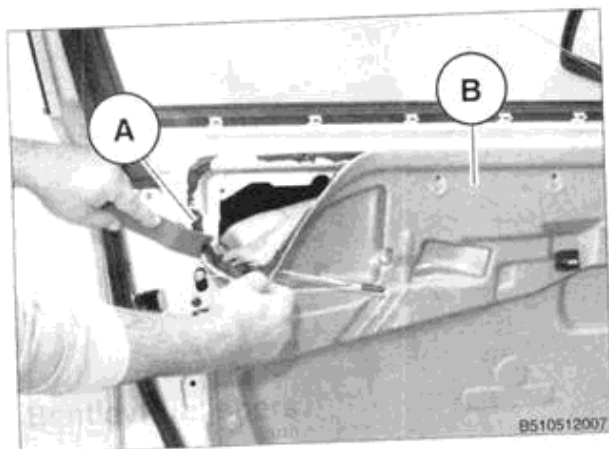
Working at corner of door at door latch assembly:

- Detach electrical connector (**A**) from latch assembly.
- Detach door lock rod (**B**) from latch assembly.
- Pull Bowden cable (**C**) down (**arrow**) to detach from latch assembly.



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Door latch, removing and installing

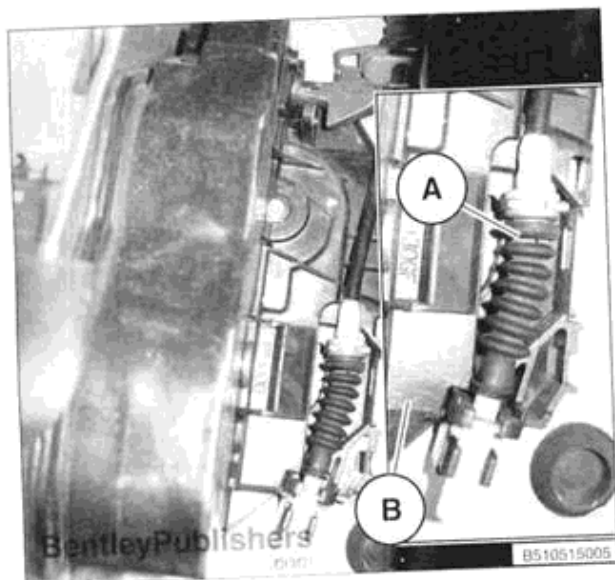


- Using a sharp plastic scraper, lever sealing bead (A) off vapor barrier (B).

CAUTION—

- Use care when peeling back vapor barrier. A damaged vapor barrier should be replaced to prevent possible airbag malfunction and water leaks.

- Partially remove window regulator to gain access to door latch. See **512 Door Windows**.
- Remove door lock cylinder. See **Door lock cylinder, removing and installing** in this repair group.



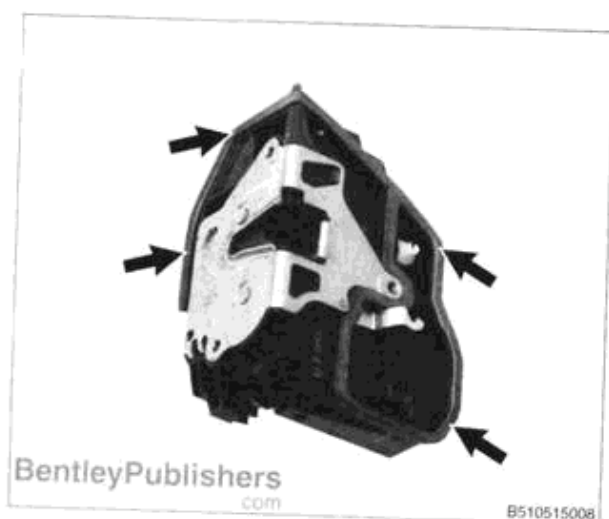
- Working inside door, disconnect Bowden cable (A) from latch (B).



- Remove latch fasteners (arrows).
- Remove latch assembly from inside door.

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Trunk lock cylinder



- Installation is reverse of removal, keeping in mind the following:
- Do not bend door lock button metal rod when inserting through door skin opening.
 - Hand tighten fasteners to properly seat door latch seal (**arrows**) before tightening.
 - Replace latch mounting screws and use threadlock compound.
 - Make sure seal on latch is not damaged.
 - Make sure inner door cavity vapor barrier is installed intact and leak-proof.

Tightening torque

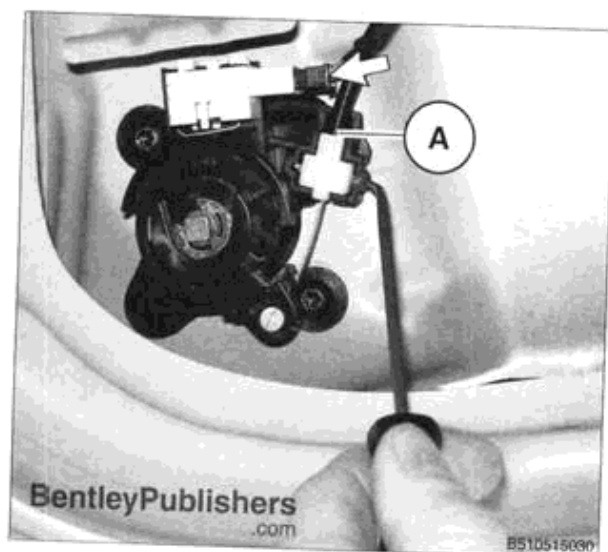
Latch assembly to door (replace screws)	9.5 Nm (7 ft-lb)
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TRUNK AND TAILGATE LOCKS

Trunk lock cylinder

- Remove trunk lid trim panel. See 513 Interior Trim.

- Disconnect electrical connector (**arrow**). Unclip bowden cable (**A**) from holder and remove from lock cylinder using a small pick.

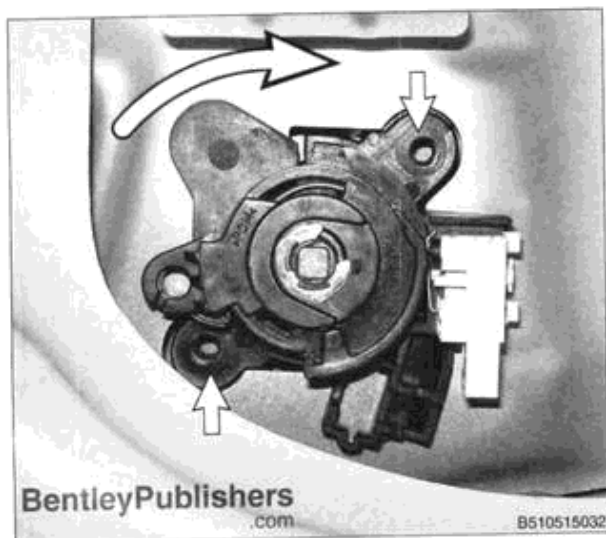


- Remove lock cylinder fasteners (**arrows**).



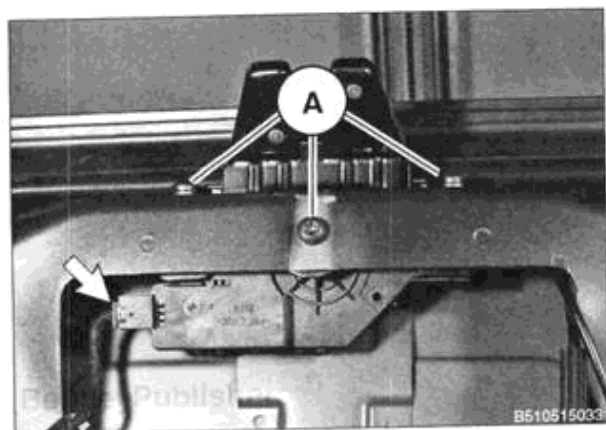
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Trunk lock assembly

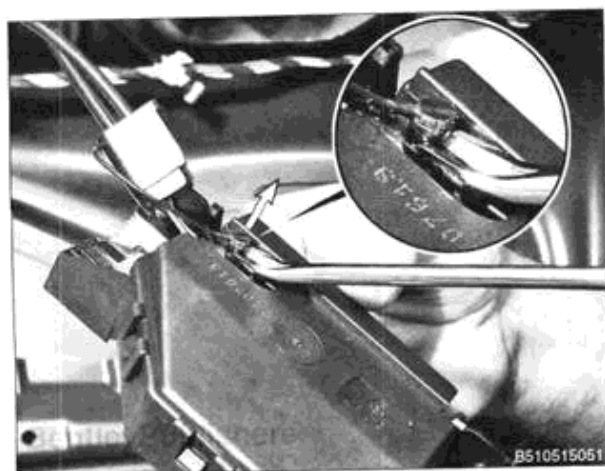


- Rotate lock cylinder until tabs (**arrows**) are visible through slots in trunk lid and remove lock cylinder from trunk lid.
- Installation is reverse of removal. Remember to inspect and replace lock cylinder seal if necessary.

Trunk lock assembly



- Remove trunk lid trim panel. See 513 Interior Trim.
- Disconnect electrical connector (**arrow**) from trunk lock assembly.
- Remove fasteners (**A**) and pull latch assembly out of trunk lid.



- Lever out locking pin (**inset**) in direction of **arrow** and remove bowden cable from lock assembly.
- Installation is reverse of removal.

Tightening torque

Lock assembly to trunk lid	10 Nm (7.3 ft-lb)
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Trunk lock striker, removing and installing



Trunk lock striker, removing and installing

- Remove lower trunk trim panel. See **513 Interior**.
- Remove trunk lock striker fasteners (**arrows**) then remove striker.
- Installation is reverse of removal. Adjust striker if necessary. See **Trunk lock striker, adjusting** in this repair group.

Tightening torque

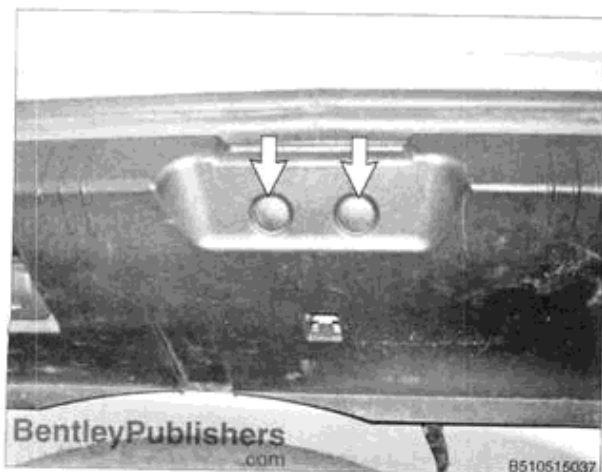
Trunk lock striker to body	10 Nm (7.3 ft-lb)
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Trunk lock striker, adjusting

- Completely screw in trunk detent buffers (**arrows**).

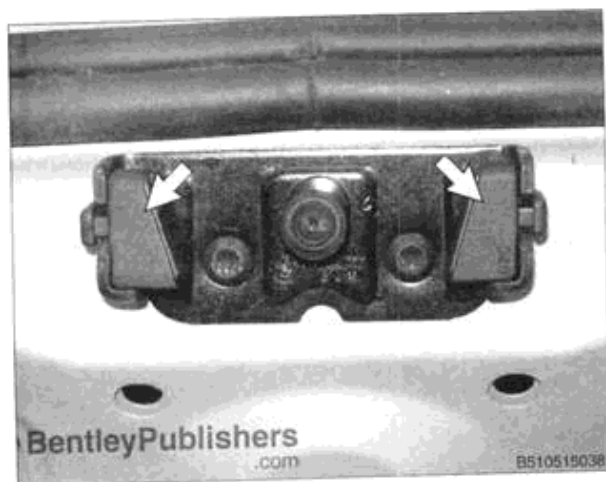


- Remove trunk lock striker fastener access covers (**arrows**).

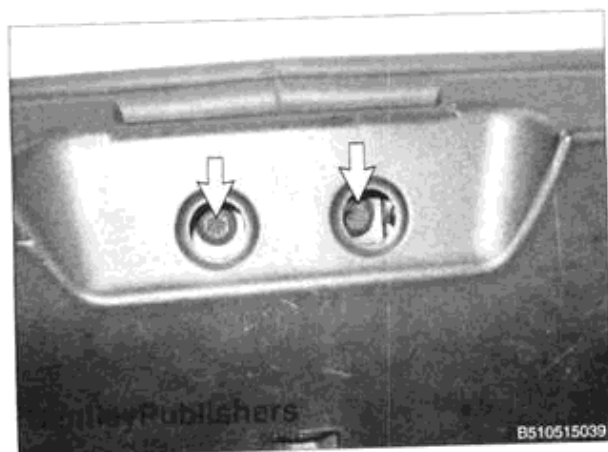


Central Locking and Anti-theft 515-19

Trunk lock striker, adjusting



- Inspect fulcrum pads (**arrows**) for wear or damage, replace if necessary. Interior trim panel removed for clarity.



- Loosen trunk lock striker fasteners (**A**) slightly, just enough so it is able to move and center itself.
- Close trunk lid. This allows for the trunk lock striker to adjust itself.
 - Open trunk and tighten fasteners. Check adjustment and repeat procedure if necessary.

Tightening torque

Trunk lock striker to body	10 Nm (7.3 ft-lb)
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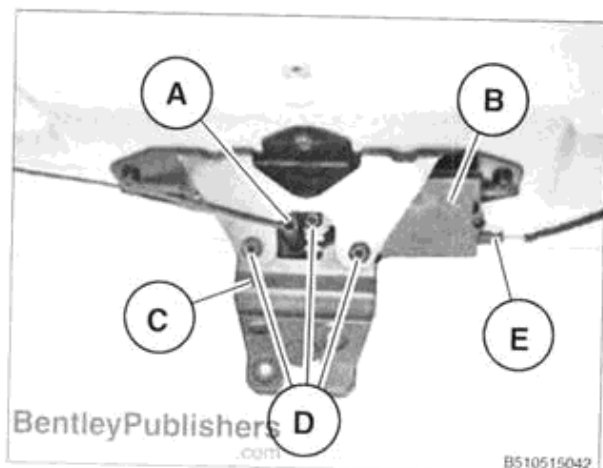
- Reassemble trunk interior trim.



- Unscrew trunk lid detent buffers (**arrows**) until closed rear trunk lid left and right detent buffers make contact with body panels. Trunk lid should be even with rear body panels.

515-20 Central Locking and Anti-theft

Tailgate lock



Tailgate lock

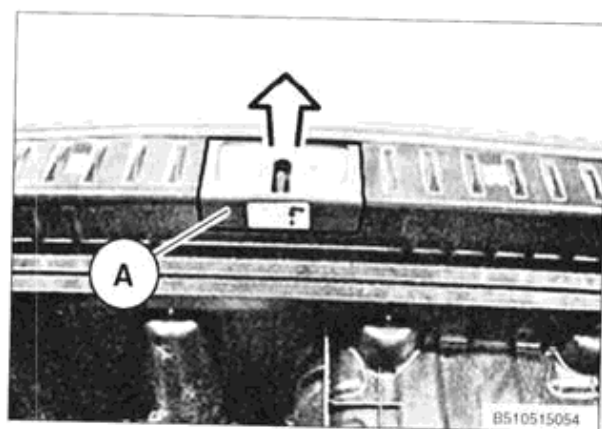
To gain access to tailgate locking mechanism, remove tailgate trim. See **513 Interior Trim**.

Tailgate lock assembly, removing and installing

- Open upper tailgate and remove trim. See **513 Interior Trim**.
- Remove emergency release cable from latch (A).
- Disconnect lock actuator (B) electrical connector (E).
- Remove tailgate lock fasteners (D) and remove lock (C) from tailgate.
- Installation is reverse of removal.

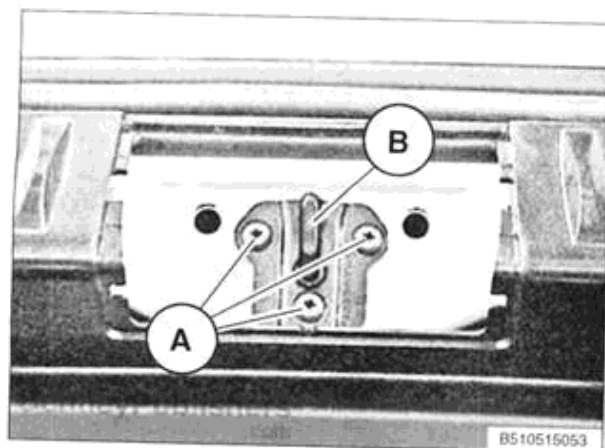
Tightening torque

Lock to tailgate lid	10 Nm (7.3 ft-lb)
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Tailgate striker assembly, removing and installing

- Snap out cover (A) in direction of arrow and remove.



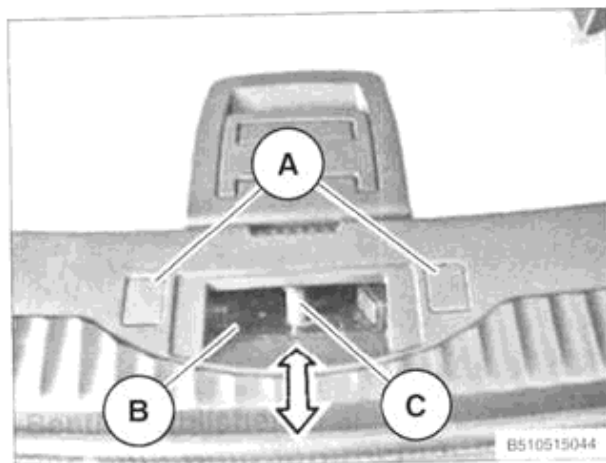
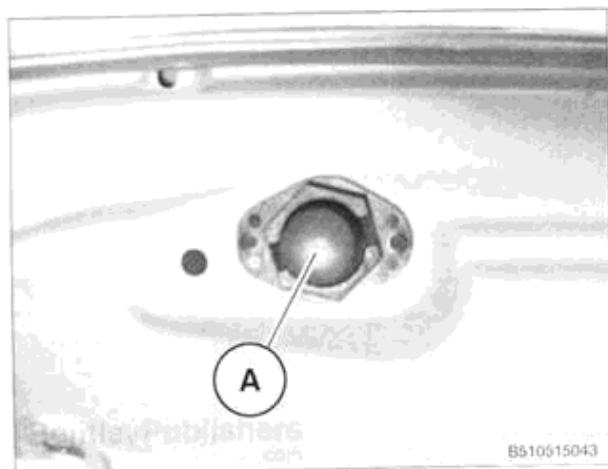
- Remove fasteners (A) and remove striker (B).
- Installation is reverse of removal.

Tightening torque

Lock to tailgate lid	10 Nm (7.3 ft-lb)
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Tailgate striker assembly, adjusting

- Fully screw in left and right side bump stops (A). See 412 Trunk Lid, Tailgate.



- Snap out covers (A) and remove. Loosen fasteners beneath covers slightly, just enough so striker it is able to move and center itself.

CAUTION—

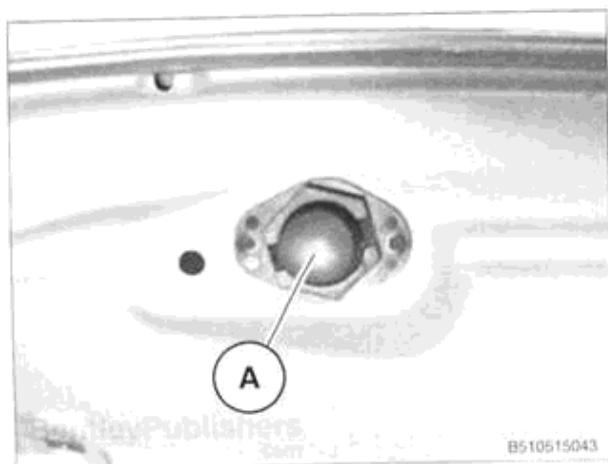
- Check that tailgate fasteners do not strike tailgate during adjustment.

- Close rear lid. Tailgate will center itself.
- Open lid and tighten tailgate striker fasteners (A).

Tightening torque

Striker to body	10 Nm (7.3 ft-lb)
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- Install striker trim panel.
- Unscrew and adjust bump stops (A) until tailgate is flush with side body panel.
- Check for proper adjustment and tailgate operation. Repeat adjustment if necessary.



515-22 Central Locking and Anti-theft

Rear window lock assembly

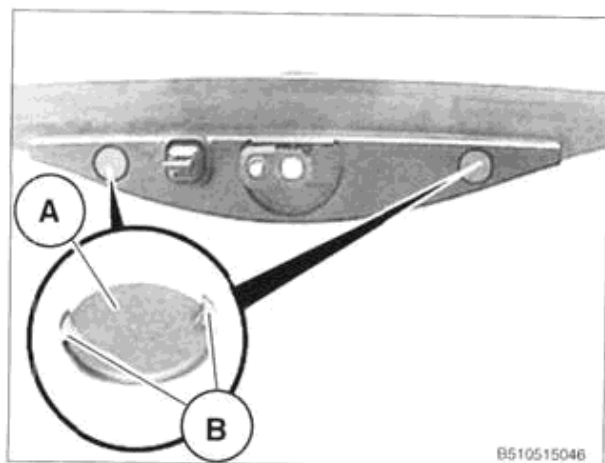
Rear window lock assembly

The rear window (tailgate glass) lock assembly is part of the rear wiper motor. For removing and installing see **611 Wipers and Washers**.

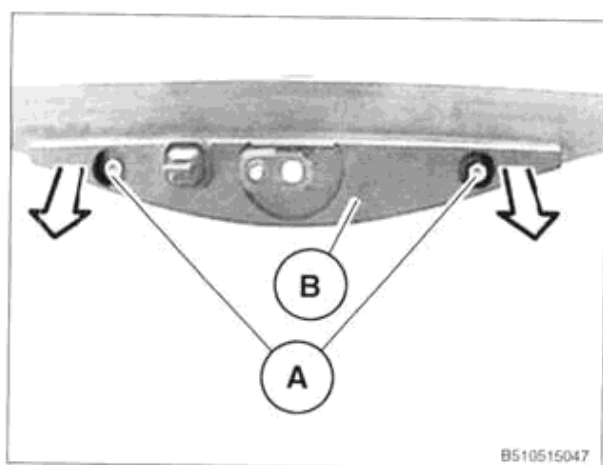
Rear window lock, adjusting

- Check that tailgate is adjusted properly.

➤ Remove plastic covers (A). Be careful not to break catches (B).

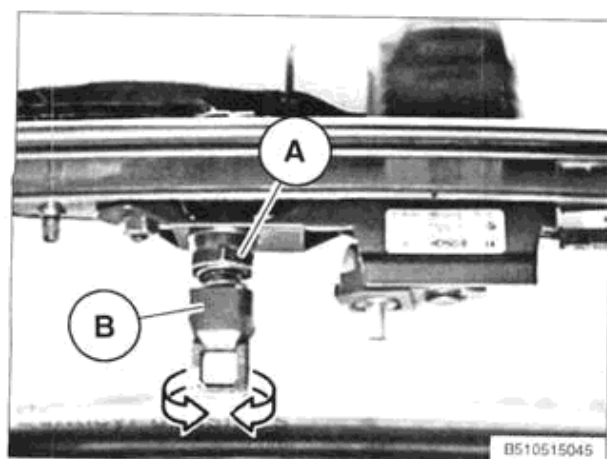


➤ Remove fasteners (A) then trim panel (B).



➤ Loosen nut (A). Adjust striker by turning in or out (B).

- Tighten nut and recheck adjustment.
- Install tailgate trim panels.

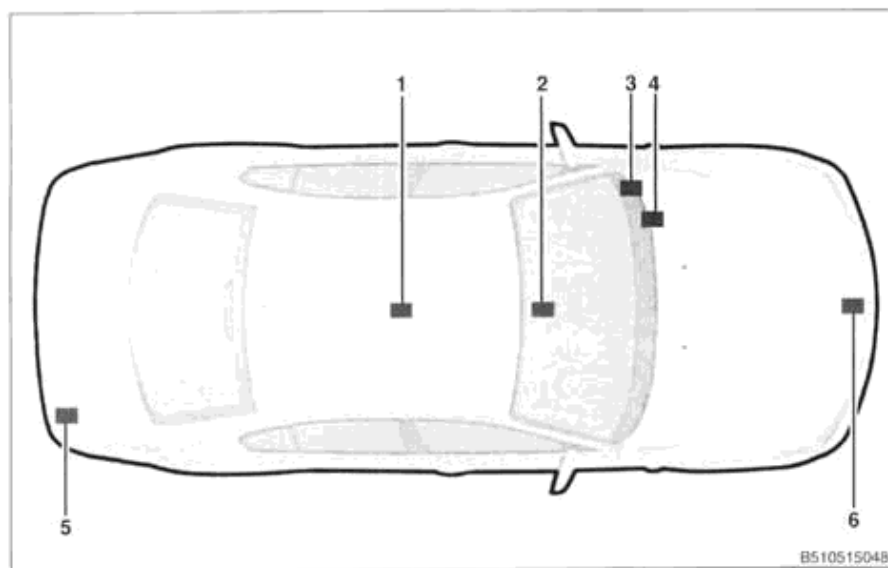


ELECTRONIC IMMOBILIZER (EWS)

EWS is a shared system between car access system (CAS) and digital motor electronics (DME). If an authorized key is recognized by CAS a start signal is authorized and sent to the DME. Troubleshooting is performed with a BMW factory scan tool or equivalent.

ANTI-THEFT SYSTEM (DWA)

DWA components



1. Ultra sonic sensor (USIS)
2. DWA LED
3. Car access system (CAS)
4. Light module (LM)
5. Tilt sensor / alarm siren (SINE)
6. Hood switch

DWA operation

When the anti-theft system (DWA) is armed:

- The doors, hood, windows and trunk lid are monitored against forcible entry.
- A tilt sensor protects the vehicle from being jacked up or towed away.
- Movement inside the vehicle is monitored.
- Battery voltage is monitored.

The system responds to unauthorized vehicle entry or attempted theft by activating the following:

- Alarm siren sounds for 30 seconds.
- Hazard warning lights and high beams flash for approx. 5 minutes.

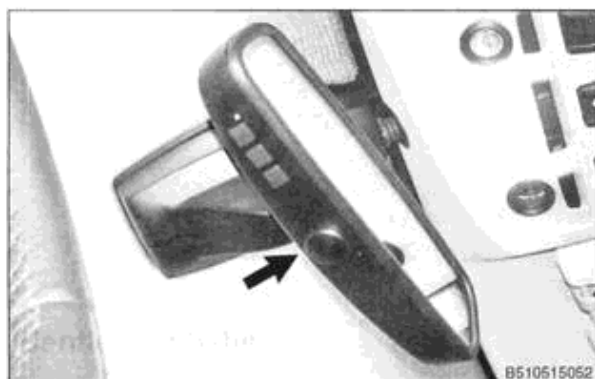
The system is armed or disarmed from the driver door lock or the remote transmitter when the vehicle is locked or unlocked. The interior compartment monitor is activated approx. 30 seconds after the vehicle is locked.

The system indicates that it is armed by flashing the hazard warning lights once and emitting a brief chirp from the siren.

If the alarm is activated, the tailgate may still be opened using button 3 on the remote key. The alarm resets when the tailgate is closed.

515-24 Central Locking and Anti-theft

DWA LED display



Following the triggering of an alarm, the system resets and can trigger again if further tampering to the vehicle is detected.

The interior protection ultrasonic sensor (USIS) is in the DWA main control module. It monitors the passenger compartment and receives inputs from corresponding modules for alarm activation, deactivation and triggering.

DWA LED display

- ✦ The DWA status LED (**arrow**) is below the interior rear view mirror. LED displays are listed in **Table a**.

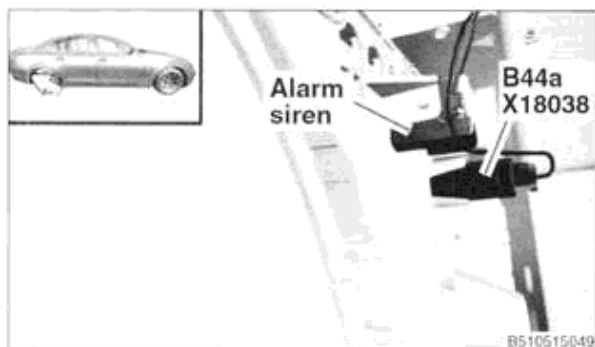
Table a. DWA LED status

DWA status	LED signal
Disarmed	OFF
Armed	Continual slow flash.
Armed with tailgate or door not fully closed	Rapid flash for 10 second, then continual slow flash. Interior motion sensor not activated.
Alarm activated	Rapid flash for 5 minutes, then continual slow flash.
Disarmed after activated alarm	Blinks for 5 minutes then goes OFF, or goes OFF when remote key in inserted.

DWA alarm siren

- ✦ The DWA alarm siren is at the right side rear inner bumper, behind the plastic inner fenderwell.

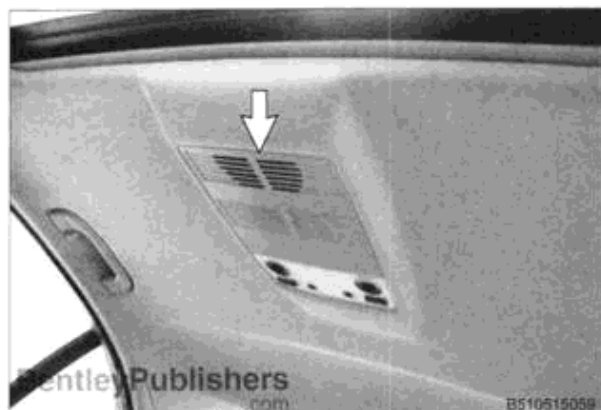
The siren is powered by a separate rechargeable battery. This battery is recharged by the vehicle electrical system when DWA is not armed.



Tilt sensor

The tilt sensor is integrated into the alarm siren. It registers the vehicle rest position when armed and detects changes in position, for example jacking of the vehicle.

When flat-bed transporting the vehicle, lock the vehicle twice within 10 seconds to switch tilt sensor OFF.



Interior protection

- ◀ The interior motion ultrasonic sensor (USIS) is in the center of the headliner. Due to the design of the vehicle interior, install sensor in the correct direction to ensure proper operation of the system. The arrow on sensor points toward front of vehicle

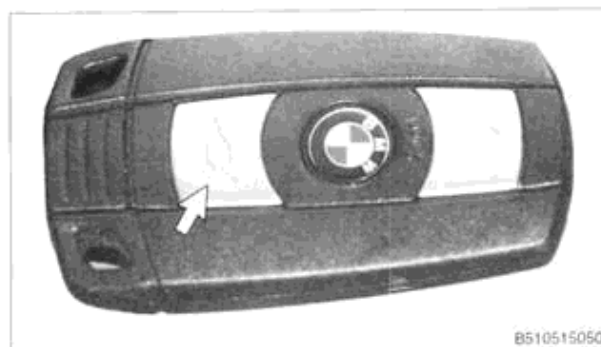
As with the tilt sensor, when flat-bed transporting the vehicle, lock the vehicle twice within 10 seconds to switch interior motion sensor OFF.

The USIS system uses ultrasound to sense motion inside its detection cone. Every time DWA is armed, the USIS sensor adapts to whatever objects are stationary in the interior. USIS also checks for background hiss (wind noise through a partially open window) and adapts for this.

- If detected echoes and sounds are consistent, no movement is detected.
- If the echoes are altered (inconsistent), USIS determines motion in the interior compartment.
- If motion is detected, the USIS changes from a pulsed signal to a constant signal and the echo is compared again.
- If the inconsistency is still present USIS triggers the alarm.

Panic mode

- ◀ If the tailgate button (**arrow**) is pressed and held for more than 2 seconds, USIS activates the siren in panic mode. This function is available with either an armed or disarmed DWA.



Emergency disarming

Emergency disarming occurs automatically when a recognized key is inserted into the ignition lock or a remote key is inserted into the key slot. If the key is accepted by CAS, the doors are unlocked and the alarm deactivated.



