



Audi

Workshop Manual

Audi A5 Coupé 2008 ➤

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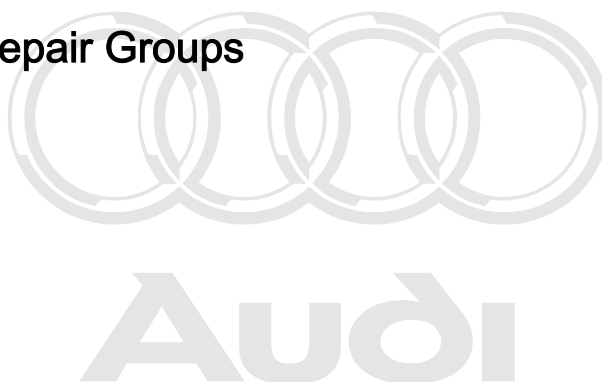
System description - exterior lights

Edition 10.2011

List of Workshop Manual Repair Groups

Repair Group

01 - Self-diagnosis, electrical checks



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

Contents

01 - Self-diagnosis, electrical checks	1
1 General notes on the exterior light functions	1
1.1 General notes and technical data	1
1.2 Components used	1
2 Switching on the dipped beam headlights automatically	2
2.1 General notes and components used	2
2.2 Description	2
2.3 Notes for service	3
3 Switching on the main beam headlights automatically (main beam assist)	4
3.1 General notes and components used	4
3.2 Description	4
3.3 Notes for service	6
4 Switching on the lights via the light switch E1	7
4.1 General notes and components used	7
4.2 Description	7
4.3 Notes for service	8
5 Activation of the brake lights	9
5.1 General notes and components used	9
5.2 Description	9
5.3 Notes for service	9
6 Flashing functions	10
6.1 General notes and components used	10
6.2 Description	10
6.3 Notes for service	11
7 Coming home	12
7.1 General notes and components used	12
7.2 Description	12
7.3 Notes for service	12
8 Leaving home	14
8.1 General notes and components used	14
8.2 Description	14
8.3 Notes for service	14
9 Switching on the reversing lights	16
9.1 General notes and components used	16
9.2 Description	16
9.3 Notes for service	17
10 Number plate light	18
11 Renewing bulbs	19
12 Headlight range control	20
12.1 General notes and components used	20
12.2 Description of manual headlight range control	20
12.3 Description of automatic dynamic headlight range control	20
12.4 Description of automatic dynamic headlight range control with AFS (cornering lights)	21
12.5 Showroom mode	21
12.6 Tourist mode	21
12.7 Notes for service	22



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01 – Self-diagnosis, electrical checks

1 General notes on the exterior light functions

1.1 General notes and technical data

The headlights, rear lights and lights in the exterior mirrors are activated as one interconnected function.

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1.2 Components used

Component:	Comments:
Light switch -E1-	Always fitted
Turn signal switch -E2-	Always fitted
Hazard warning lights button -E229-	Always fitted
Rain and light sensor -G397-	Optional equipment
Control unit in dash panel insert -J285-	Always fitted
Driver door control unit -J386-	Always fitted
Front passenger door control unit -J387-	Always fitted
Convenience system central control unit -J393-	Always fitted
Onboard supply control unit -J519-	Always fitted
Steering column electronics control unit -J527-	Always fitted
Main beam assist control unit -J844-	Optional equipment
Driver side exterior mirror turn signal bulb -L131-	Always fitted
Front passenger side exterior mirror turn signal bulb -L132-	Always fitted
Number plate light -X-	Always fitted
Headlights, left and right	Always fitted, halogen or xenon headlights
Rear lights, left and right	Always fitted

2 Switching on the dipped beam head-lights automatically

2.1 General notes and components used

This function is only possible if the rain and light sensor -G397- is fitted and the light switch -E1- is set to AUTO.

The following components are used:

- ◆ Onboard supply control unit -J519-
- ◆ Rain and light sensor -G397-
- ◆ Light switch -E1-
- ◆ Convenience system central control unit -J393-
- ◆ Steering column electronics control unit -J527-
- ◆ Intermittent wiper switch -E22-
- ◆ Rear lights
- ◆ Headlights

2.2 Description

Conditions:

1 - Switching on based on darkness detection

The rain and light sensor -G397- sends its information on the ambient brightness over the LIN data bus to the onboard supply control unit -J519- .

The following conditions must be met to ensure that the rain and light sensor -G397- has the correct operating point:

- ◆ Windscreen must be clear in area of sensor
- ◆ Coding in rain and light sensor -G397- must match windscreen

If the operating range of the rain and light sensor -G397- is set incorrectly, the lights may be switched on too early or too late.

If the brightness level falls below the minimum threshold, the onboard supply control unit -J519- places the information to switch on the lights on the data bus.



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The rear lights are switched on via the convenience system central control unit -J393- and the headlights via the onboard supply control unit -J519-. The dash panel illumination and switch illumination are also switched on.

2 - Switching on based on detection of rain

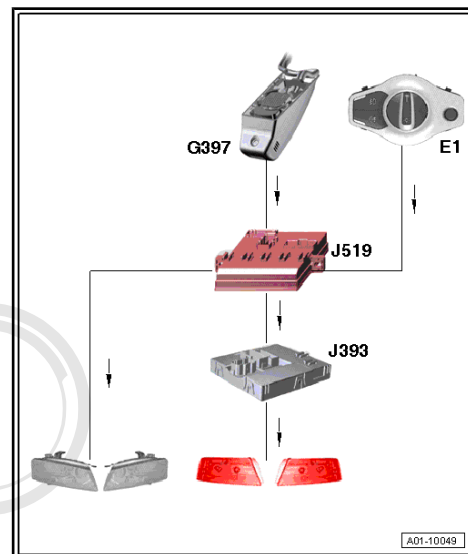
After a specific number of wipe cycles the dipped beam headlights switch on (rain lights). The number of wipe cycles is also dependent on the brightness level.

The rear lights are switched on via the convenience system central control unit -J393- and the headlights via the onboard supply control unit -J519-.

If there is no wiping for a specific time, the rain lights are automatically switched off. In this case the dash panel and switch illumination are not switched on.

3 - Switching on when fog lights are switched on

If the headlight switch is set to AUTO, the dipped beam headlights are switched on when the fog light button is pressed. This happens regardless of whether the rain and light sensor -G397- detects darkness. It is only possible to switch off the dipped beam headlights by switching the ignition on and off.



2.3 Notes for service

When renewing the windscreen, ensure that the rain and light sensor -G397- is correctly installed. If a different windscreen type is fitted, the coding in the rain and light sensor -G397- needs to be changed. See Guided Fault Finding: 09 — Electronic central electrics, functions for rain and light sensor -G397-.

If the rain and light sensor -G397- is defective, and if the light switch -E1- is set to AUTO, the dipped beam headlights are switched on as a safety measure.

The driver can adjust the sensitivity of the rain and light sensor -G397- in the MMI CAR menu. For this purpose, the exterior lighting menu includes a setting which controls when the lights are switched on. Possible settings: early, medium, late.

3 Switching on the main beam headlights automatically (main beam assist)

3.1 General notes and components used

The main beam assist controls the activation of the main beam or dipped headlights, depending on the traffic situation and the prevailing ambient conditions. This prevents oncoming traffic from being dazzled and the main beam headlights from being activated unnecessarily.

This function is only possible if a rain and light sensor -G397- and main beam assist control unit -J844- are fitted.

The following components are used for the automatic main beam control:

- ◆ Light switch -E1-
- ◆ Turn signal switch -E2-
- ◆ Rain and light sensor -G397-
- ◆ Control unit in dash panel insert -J285-
- ◆ Onboard supply control unit -J519-
- ◆ Steering column electronics control unit -J527-
- ◆ Data bus diagnostic interface -J533-
- ◆ Main beam assist control unit -J844- with CMOS camera
- ◆ Left headlight main beam bulb -M30- and right headlight main beam bulb -M32- (halogen headlights)
- ◆ Left dip beam screen -V294- and right dip beam screen -V295- (bi-xenon headlights)

3.2 Description

Activating:

The main beam assist is activated if the light switch -E1- is set to AUTO and the turn signal switch -E2- is then pushed forwards once. The position of the turn signal switch -E2- is scanned by the steering column electronics control unit -J527- and transmitted across the convenience CAN bus to the onboard supply control unit -J519-.

A headlight symbol with an »A« lights up in the instrument cluster to indicate to the driver that the main beam assist is active. The blue main beam symbol lights up in addition when the main beam headlights are activated.

Operating principle:

A CMOS camera is installed in the base of the interior mirror so that the main beam headlights can be switched on and off automatically in addition to the dipped beam headlights (see Chapter 2). The associated evaluation electronics, in the form of the main beam assist control unit -J844-, are integrated in the automatic anti-dazzle interior mirror -Y7-.

The CMOS camera takes a white picture and a red picture in order to determine the current traffic situation and ambient conditions. The main beam assist control unit -J844- uses these pictures to generate the information as to whether the main beam headlights are to be activated or deactivated.

If vehicles travelling in the same or opposite direction are detected a short distance in front of the vehicle, the request to dip the headlights is transmitted across the CAN bus to the onboard supply control unit -J519-. Similarly, a request to dip the headlights is also transmitted if the road speed drops below a specified minimum or if the ambient brightness exceeds a defined threshold level due to daylight or bright street lighting. If no dipped headlights condition applies, a main beam request is transmitted.

If the automatic main beam control is active, and if the road speed exceeds a specified threshold level, and if the onboard supply control unit -J519- concurrently receives a command from the rain and light sensor -G397- to switch on the dipped headlights, then the onboard supply control unit -J519- activates the left and right headlight main beam bulbs -M30- and -M32- or the left and right dipped beam screens -V294- and -V295-, according to the main beam setting recommended by the main beam assist control unit -J844-.

The main beam is not activated if the rain and light sensor -G397- has not transmitted a command to switch on the dipped headlights. If the main beam has been activated by the main beam assist and the rain and light sensor -G397- then transmits the command to switch off the headlights, the main beam is also deactivated.

If the driver prefers a different setting to that currently requested by the main beam assist, he can switch the main beam on or off manually.

If the main beam assist control unit -J844- is transmitting a dipped beam request, the driver can switch on the main beam by pushing the turn signal switch -E2- forwards once. The main beam assist is now deactivated temporarily. The main beam assist is re-activated if the driver pushes the turn signal switch -E2- forwards again. If the driver pulls back the turn signal switch -E2- after the temporary deactivation, the headlights are dipped and the main beam assist is deactivated permanently.

If the main beam is activated in response to a request from the main beam assist, the driver can dip the headlights by pulling back the turn signal switch -E2- once. This permanently deactivates the main beam assist. If the driver pushes the turn signal switch -E2- forwards once when the main beam is active, the main beam assist is deactivated temporarily and the main beam remains on. The main beam assist is re-activated by pushing the turn signal switch -E2- forwards again. If the turn signal switch -E2- is pulled back once after a temporary deactivation, the main beam assist is deactivated permanently.

E1 - Light switch

E2 - Turn signal switch

J285 - Control unit in dash panel insert

J519 - Onboard supply control unit

J527 - Steering column electronics control unit

J533 - Data bus diagnostic interface

J844 - Main beam assist control unit

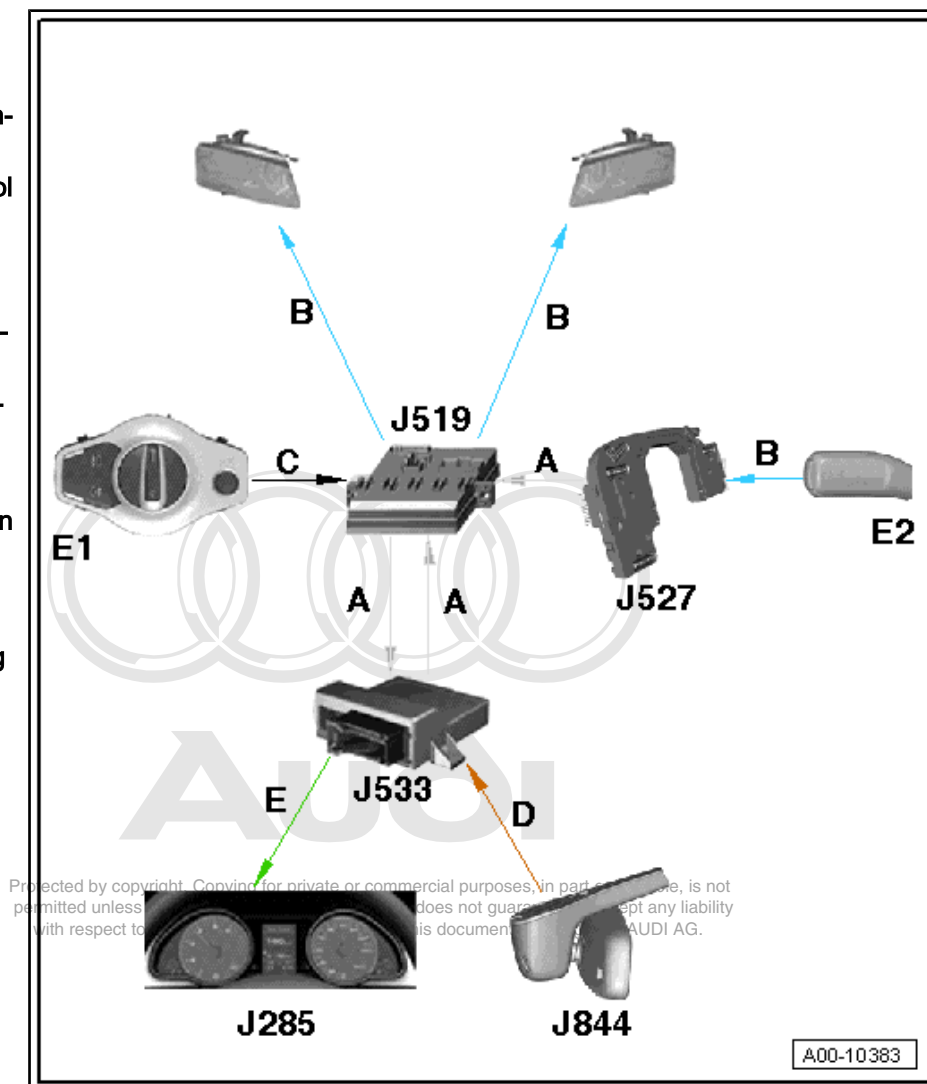
A - Convenience CAN bus

B - Separate wiring connection

C - LIN bus

D - Extended CAN bus

E - Instrument cluster/running gear CAN bus



3.3 Notes for service

In the event of a fault (communication with main beam assist control unit -J844- not possible, view of CMOS camera blocked or main beam assist control unit -J844- defective), the driver is warned as follows:

- ◆ A warning tone sounds once when the fault occurs (main beam assist active or being activated). The warning tone sounds again if the ignition is switched off and on again and the main beam assist is re-activated.
- ◆ A driver message appears in the instrument cluster.

4 Switching on the lights via the light switch -E1-

4.1 General notes and components used

Various lighting modes can be set by way of the rotary light switch.

The following components are used:

- ◆ Onboard supply control unit -J519-
- ◆ Rain and light sensor -G397-
- ◆ Light switch -E1-
- ◆ Convenience system central control unit -J393-
- ◆ Rear lights
- ◆ Headlights

4.2 Description

The position of the light switch -E1- is scanned by the onboard supply control unit -J519- .

Lighting mode	Switch-on condition	Comments
AUTO, automatic lights		Not standard, only possible if rain and light sensor -G397- is fitted
Side lights (USA: side markers)	◆ Light switch -E1- set to side lights ◆ Ignition off, light switch -E1- set to dipped beam ◆ Terminal 15 off, light switch -E1- set to AUTO, rain and light sensor -G397- signals »darkness«	Bulbs for left and right daytime running light and side light -L186- and -L188- are not fitted on USA vehicles with halogen headlights. Front left and front right side marker bulbs -M33- and -M34- are activated instead. On USA vehicles with xenon headlights, front left and front right side marker bulbs -M33- and -M34- are activated in addition to left and right LED modules for daytime running light and side light -L176- and -L177-. At the rear of the vehicle on USA vehicles, rear left and rear right side marker bulbs -M37- and -M38- are also activated.
Dipped beam headlights	Ignition on and light switch -E1- set to dipped beam headlights	
Daytime running lights	Terminal 15 on, light switch -E1- set to 0 or AUTO	Daytime running lights must be coded in the onboard supply control unit -J519- . Daytime running lights can be coded regardless of the headlight type. The rear lights function is coded independently of the headlights. The daytime running lights can also be switched on or off by the driver in the Car menu depending on the coding in the onboard supply control unit -J519- .
Main beam headlights, static (with rain and light sensor -G397-)	Terminal 15 on, light switch -E1- set to AUTO, rain and light sensor -G397- signals »darkness« => dipped beam headlights on, turn signal switch set to main beam	The main beam is either a dedicated bulb or implemented as a separately controlled flap in the headlight.



Lighting mode	Switch-on condition	Comments
Main beam, static (without rain and light sensor -G397-)	Terminal 15 on, light switch -E1- set to dipped beam headlights, turn signal switch set to main beam	The main beam is either a dedicated bulb or implemented as a separately controlled flap in the headlight.
Main beam, headlight flasher		Turn signal switch set to headlight flasher
Fog lights	Fog light button on light switch -E1- pressed, light switch -E1- set to AUTO or side lights or dipped beam headlights	
Rear fog light	Rear fog light button on light switch -E1- pressed, light switch -E1- set to AUTO or dipped beam headlights or side lights (including front fog lights)	
Parking lights	Terminal 15 off, light switch -E1- set to 0 or AUTO, turn signal switch set to flash	

4.3 Notes for service

The position of the rotary light switch -E1- can be read from the measured values of the onboard supply control unit -J519- (09 — Electronic central electronics).

If the headlights are modified or refitted, the coding in the onboard supply control unit -J519- must be changed.

If the rear lights are modified or refitted, the coding in the convenience system central control unit -J393- must be changed.

If a defect is detected in the light switch -E1- , the onboard supply control unit -J519- automatically switches on the dipped headlights.

If the driver's door is opened and an exterior light function is still active, the control unit in dash panel insert -J285- triggers a warning tone on the buzzer.

The coding in the onboard supply control unit -J519- can only be performed using Software Version Management.

5 Activation of the brake lights

5.1 General notes and components used

The brake lights are terminal 30 loads. When terminal 15 is off, the brake lights come on when the brake is pressed, as long as the vehicle is not yet in bus sleep mode.

- ◆ Brake light switch -F-
- ◆ Pedal cluster
- ◆ Convenience system central control unit -J393-
- ◆ Brake pressure sender 1 -G201-
- ◆ ABS control unit -J104-
- ◆ Engine control unit
- ◆ Trailer detector control unit -J345-

5.2 Description

The following control units have a discrete wire to the brake light switch -F- :

- ◆ Engine control unit
- ◆ Trailer detector control unit -J345-
- ◆ Convenience system central control unit -J393-

If the brake light switch -F- is now switched via the pedal cluster, the connected control units will scan the switching state. The engine control unit is the master for this function, and also places the »brake lights on« signal on the CAN data bus.

Braking is additionally initiated by way of brake pressure sender 1 -G201-. When the brake pedal is pressed, the brake pressure sender 1 -G201- signals the brake pressure to the ABS control unit -J104-. The engine control unit reads this information over the data bus and signals »brake lights on« over the data bus to all other control units.

The control units switch on the brake lights as soon as the discrete wire or the CAN data bus outputs the »brake lights on« signal. This ensures that the brake lights still function even in the event of an open circuit in the discrete wiring.

- Brake lights are activated by the convenience system central control unit -J393- .
- Trailer brake lights are activated by the trailer detector control unit -J345- . The trailer control unit applies the voltage for the brake lights to the trailer power socket.

5.3 Notes for service

When it is inserted, the plunger of the brake light switch -F- is automatically adjusted. The brake light switch -F- must be engaged and locked in place. ⇒ Rep. gr. 45

6 Flashing functions

6.1 General notes and components used

The following flashing functions are only possible when the ignition is on:

- ◆ Turn signals
- ◆ One-touch signalling (= lane change flash)

These functions are terminal 30 functions:

- ◆ Crash flash
- ◆ Hazard warning flash
- ◆ Central locking flash
- ◆ Anti-theft alarm flash

The following components are used for the flashing functions:

- ◆ Hazard warning lights button -E229-
- ◆ Turn signal switch -E2-
- ◆ Onboard supply control unit -J519-
- ◆ Steering column electronics control unit -J527-
- ◆ Anti-theft alarm sensor -G578-
- ◆ Driver door control unit -J386-
- ◆ Front passenger door control unit -J387-
- ◆ Convenience system central control unit -J393-
- ◆ ABS control unit -J104-
- ◆ Crash sensors
- ◆ Airbag control unit -J234-
- ◆ Engine control unit
- ◆ Trailer detector control unit -J345-

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6.2 Description

Function	Triggered by switch or control unit	Input signal scanned by control unit
Turn signals and one-touch signalling	Turn signal switch -E2-	Steering column electronics control unit -J527-
Crash flash	Crash sensors	Airbag control unit -J234-
Hazard warning flash	Hazard warning lights button -E229-	Onboard supply control unit -J519-
Anti-theft alarm flash	Bonnet contact switch -F266- or anti-theft alarm sensor -G578-	Convenience system central control unit -J393-
Central locking flash	Remote control key	Convenience system central control unit -J393-
Emergency braking flash	Brake pressure sender 1 -G201- , condition: high brake pedal pressure	ABS control unit -J104-

The bulbs are activated by different control units:

Bulb	Activated by
Bulbs for front turn signals	Onboard supply control unit - J519-
Bulbs for rear turn signals	Convenience system central control unit -J393-
Bulb for turn signal in exterior mirror (left-side)	Driver door control unit -J386-
Bulb for turn signal in exterior mirror (right-side)	Front passenger door control unit -J387-

6.3 Notes for service

The lights can be checked by final control diagnosis of the on-board supply control unit -J519- and the convenience system central control unit -J393- . The lights in the exterior mirrors can be checked by final control diagnosis of the door control units.



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7 Coming home

7.1 General notes and components used

The Coming home function lights up the area around the vehicle when getting out in the dark.

Conditions:

- ◆ Rain and light sensor -G397- fitted
- ◆ Switch-on time setting on MMI not zero seconds
- ◆ Function coded in onboard supply control unit -J519-
- ◆ Light switch -E1- set to AUTO

Components used:

- ◆ Rain and light sensor -G397-
- ◆ Onboard supply control unit -J519-
- ◆ Driver door control unit -J386-
- ◆ Driver door contact switch -F2-
- ◆ Light switch -E1-
- ◆ Convenience system central control unit -J393-
- ◆ Fog lights
- ◆ Rear lights
- ◆ Number plate light

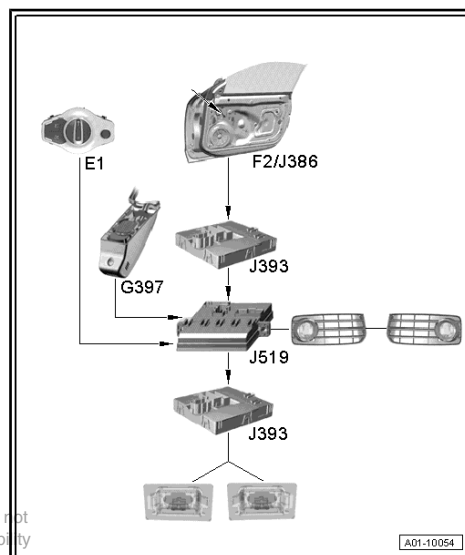
7.2 Description

The function starts when the ignition is switched off and the driver's door is opened. The ignition key may still be in the ignition lock. Also, the rain and light sensor must be signalling »darkness« to the onboard supply control unit -J519-.

The opened door is detected by the driver door contact switch -F2-. The driver door control unit -J386- scans the switch status and places the information on the data bus.

The fog lights are then switched on by the onboard supply control unit -J519-, and the rear lights and number plate light are switched on by the convenience system central control unit -J393-. On vehicles with bi-xenon headlights, the side lights are also switched on.

The lights are switched off after the time set on the MMI. This time begins when the last door (or rear lid) is closed.



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7.3 Notes for service

This function must be coded in onboard supply control unit -J519-. If the no-load current energy management is activated, this function is no longer available. The no-load current energy management is activated when the vehicle is no longer able to start.

The driver door contact switch -F2- is part of the driver side central locking lock unit -F220-. The driver door contact switch -F2- cannot be replaced separately.



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8 Leaving home

8.1 General notes and components used

The leaving home function lights up the area around the vehicle when it is unlocked after dark.

Conditions:

- ◆ Rain and light sensor -G397- fitted
- ◆ Function activated on MMI
- ◆ Onboard supply control unit -J519- coded
- ◆ Light switch -E1- set to AUTO

Components used:

- ◆ Rain and light sensor -G397-
- ◆ Onboard supply control unit -J519-
- ◆ Light switch -E1-
- ◆ Convenience system central control unit -J393-
- ◆ Fog lights
- ◆ Rear lights
- ◆ Number plate light
- ◆ Ignition lock

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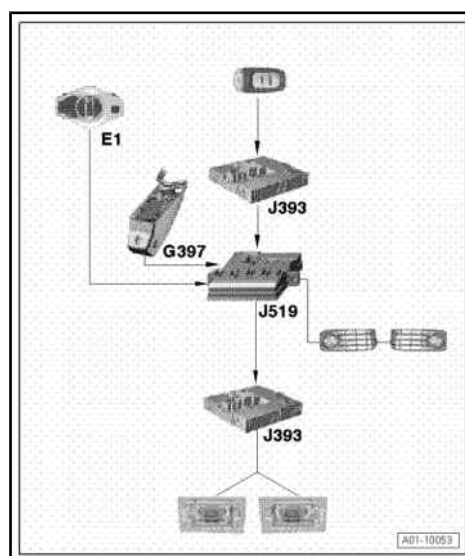
8.2 Description

The function starts when the conditions are met and the vehicle is unlocked. The vehicle can be unlocked as follows:

- ◆ By remote control or
- ◆ By operating a door handle (e.g.: contact sensor for front left exterior door handle -G605-) on vehicles with KESSY locking and starting system

Also, the rain and light sensor must be signalling »darkness« to the onboard supply control unit -J519- .

The status of the unlocked vehicle is placed on the data bus by the convenience system central control unit -J393- . If the other conditions are also met, the function is activated. The fog lights are then switched on by the onboard supply control unit -J519- , and the rear lights and number plate light are switched on by the convenience system central control unit -J393- . The function terminates when the ignition is switched on or at the latest one minute after the lights have been activated.



8.3 Notes for service

This function must be coded in onboard supply control unit -J519- . If the no-load current energy management is activated, this function is no longer available. The function is also disabled

after the vehicle has been unlocked several times using the remote control key if the ignition is not switched on in between.

The no-load current energy management is activated when the vehicle is no longer able to start.



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9 Switching on the reversing lights

9.1 General notes and components used

Activation of the reversing lights when reverse gear is engaged is implemented as a distributed function. The method used to detect when reverse gear is engaged depends on the type of gearbox fitted.

The following components are used for this function:

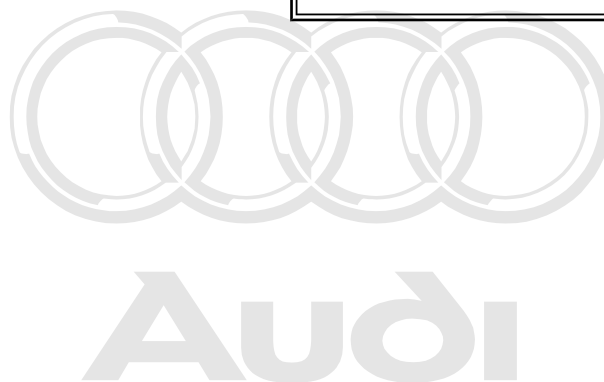
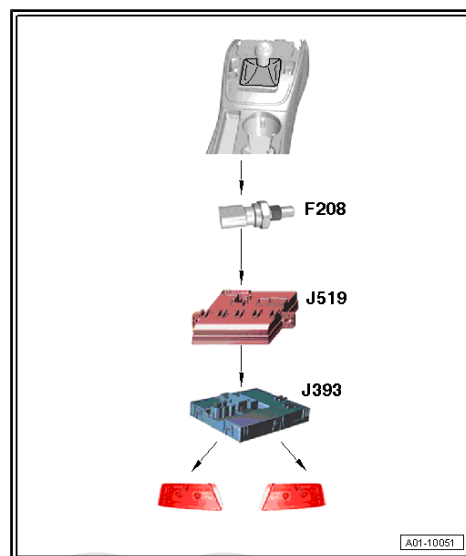
- ◆ Gear detector switch -F208- (manual gearbox only)
- ◆ Onboard supply control unit -J519-
- ◆ Convenience system central control unit -J393-
- ◆ Automatic gearbox control unit -J217- (automatic gearbox only)
- ◆ Multifunction switch -F125-
- ◆ Rear lights

9.2 Description

Reverse gear detection on vehicles with manual gearbox:

The gear detector switch -F208- is actuated when reverse gear is engaged. The onboard supply control unit -J519- detects that reverse gear has been engaged based on the resistance coding of the switch and places the »reverse gear« information on the data bus.

Reverse gear detection on vehicles with automatic gearbox:

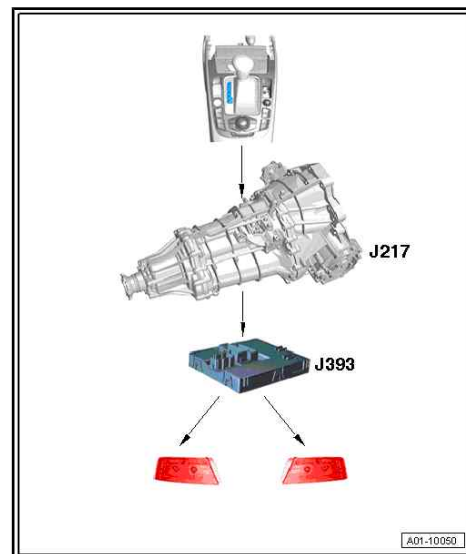


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When the selector lever is operated, the multifunction switch - F125- requests the gearbox to engage reverse gear. When reverse gear has been engaged, a feedback message is transmitted to the automatic gearbox control unit -J217-. The control unit transmits the »reverse gear« message across the data bus. There is also a checkback message to the selector lever position display -Y26- , and the »R« symbol is illuminated.

Activation of rear lights:

The onboard supply control unit -J519- interprets the reversing information and places the message to switch on the reversing lights on the data bus. The convenience system central control unit -J393- receives this information and switches on the reversing lights.



9.3 Notes for service

The »reverse gear« information on the data bus is also processed by a number of other control units and systems (parking aid, reversing camera system, exterior mirrors).



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10 Number plate light

The number plate light is controlled by the convenience system central control unit -J393- .

The number plate light cannot be switched on separately. The number plate light is switched on when the dipped beam headlights are on.



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11 Renewing bulbs

The following table indicates the type of bulb according to the headlight variant. It also lists the various lighting modes.

Lighting mode	Halogen	Bi-xenon
Dipped beam headlights	H7: Can be renewed by customer	Gas-discharge lamp: Cannot be renewed by customer
Main beams	H7: Can be renewed by customer	Gas-discharge lamp: Cannot be renewed by customer
Turn signals	HiPer 24W: Cannot be renewed by customer	H21W (USA: PY21W): Can be renewed by customer
Side lights/side markers	W5W: Can be renewed by customer	LED module, cannot be renewed separately; USA: additional side marker bulbs (W5W)
Daytime running lights	Reduced dipped beam, can be renewed like dipped beam headlights	LED module, cannot be renewed separately

The bulbs of the fog headlights and rear lights are also easy to renew. ⇒ Rep. gr. 94

12 Headlight range control

12.1 General notes and components used

The illumination range of the headlights has to be adjusted to the various loading states of the vehicle because this affects the vehicle's angle of inclination. The prime purpose of this is to avoid dazzling oncoming traffic.

The headlight range for halogen headlights can be controlled manually. Automatic headlight range control is specified for xenon headlights.

Definition: AFS = Advanced Front lighting System = cornering lights

	Manual headlight range control	Dynamic headlight range control	Dynamic headlight range control with AFS (Advanced Front lighting System)
Control unit for headlight range control -J431-		Fitted	Fitted
Headlight range control regulator -E102-	Fitted		
Output module for left headlight -J667- and output module for right headlight -J668-	Fitted	Fitted	Fitted
Left headlight range control motor -V48- and right headlight range control motor -V49-			Fitted
Left dynamic cornering light control motor -V318- and right dynamic cornering light control motor -V319-			Fitted
Left swivel module position sensor -G474- and right swivel module position sensor -G475-			Fitted
Rear left vehicle level sender -G76- and front left vehicle level sender -G78-		Fitted	Fitted

12.2 Description of manual headlight range control

This method of headlight range control is specified for halogen headlights. The headlights can be adjusted to the vehicle's loading state by way of the headlight range control regulator -E102-. The headlight range control regulator -E102- is connected by a wire directly to the control motors. Using the adjuster knob, the headlight range can be adjusted by the driver so as not to dazzle oncoming traffic.

12.3 Description of automatic dynamic headlight range control

Automatic dynamic headlight range control not only compensates for different static loading states; it also compensates for dynamic

changes in the vehicle's inclination under braking and acceleration.

The loading state is registered by the level sensors. With automatic dynamic headlight range control, the vehicle's road speed signal, acceleration signal and braking signal are additionally processed. These dynamic driving parameters are evaluated continuously by the control unit for headlight range control -J431- while the vehicle is moving. The position of the headlights is adjusted by way of the control motors. The headlights have to be adjusted very rapidly. This is achieved by using stepper motors for the control motors and a 500 kBaud CAN drive bus for communication between the control unit for headlight range control -J431- and the other onboard control units.

12.4 Description of automatic dynamic headlight range control with AFS (cornering lights)

The automatic dynamic headlight range control with AFS incorporates the functions of the automatic dynamic headlight range control. The automatic dynamic headlight range control with AFS additionally features the AFS dynamic cornering lights system. Dynamic cornering lights are also termed adaptive light.

The control unit for headlight range control -J431- continuously evaluates various dynamic driving parameters, such as the road speed, steering angle and yaw rate while the vehicle is moving. The headlight is swivelled during cornering based on the evaluation of the parameters. This ensures optimum illumination of the road. Road safety and comfort are enhanced, because a greater visibility range is provided.

With dynamic cornering lights the headlight projection module is swivelled horizontally by a built-in motor. The headlight lens and holder do not swivel. At standstill and at road speeds < 6 km/h the projection modules are not swivelled.

The control unit for headlight range control -J431- communicates with the other onboard control units over the 500 kBaud drive data bus. The control unit communicates with the power output modules in the headlight via a 500 kBaud sub-data bus. This offers the advantage that, in the event of a failure or defect in the wire between the control unit and the output module, only the headlight range control function is lost, and not the complete drive data bus.

12.5 Showroom mode

The »showroom« mode allows the effect of the dynamic cornering lights to be demonstrated. With the vehicle at a standstill, the headlights can be swivelled horizontally as the steering wheel is turned. »Showroom« mode can be activated and deactivated by way of a vehicle diagnostic tester in the control unit for headlight range control -J431-. If the vehicle is moved at low speed, »showroom« mode is automatically deactivated. It must be reactivated by way of the vehicle diagnostic tester.

12.6 Tourist mode

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When travelling in countries where the vehicle is driven on the other side of the road, both headlights must be adjusted to prevent dazzling oncoming traffic. »Tourist« mode can be activated by way of a vehicle diagnostic tester in the control unit for headlight range control -J431-. When this function has been activated, the yellow headlight range control warning lamp in the instrument cluster lights up briefly every time the ignition is switched on.



12.7 Notes for service

A final control diagnosis can be performed in order to check the operation of the control motors for the dynamic headlight range control and for the dynamic cornering lights.

The control motors and the sensors for the dynamic cornering lights cannot be renewed separately. In the event of a defect, the complete headlight unit must be renewed.

The headlight adjustment operations are described in ⇒ Maintenance ; Booklet 811 .

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