

TWINGO

8 Electrical equipment

80D LIGHTING

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V1

Edition Anglaise

"The repair procedures given by the manufacturer in this document are based on the technical specifications current when it was prepared.

The procedures may be modified as a result of changes introduced by the manufacturer in the production of the various component units and accessories from which his vehicles are constructed."

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LIGHTING

Fault finding - Introduction

80D

1. SCOPE OF THIS DOCUMENT

This document presents the fault finding procedure applicable to all computers with the following specifications:

<i>Vehicle(s):</i> NEW TWINGO
<i>Function concerned:</i> Lighting

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedures (this manual):

- Assisted fault finding (integrated into the diagnostic tool), Dialogys.

Wiring Diagrams:

- Visu-Schéma (CD-ROM), paper.

Type of diagnostic tools

- CLIP

Special tooling required

Special tooling required	
Multimeter	
Elé. 1681	Universal bornier

3. REMINDERS

To run diagnostics on the vehicle's computers, switch on the ignition in fault finding mode (+ after ignition feed).

Faults

Faults are declared as either present or stored (depending on whether they appeared in a certain context and have disappeared since, or whether they remain present but have not been diagnosed within the current context).

The **present** or **stored** status of faults should be taken into consideration when the **diagnostic tool** is switched on after the + after ignition feed (without any system components being active).

For a **present fault**, apply the procedure described in the **Interpretation of faults** section.

For a **stored fault**, note the faults displayed and apply the instructions in the **Notes** section.

If the fault is **confirmed** when the instructions in the Notes section are applied, the fault is present. Deal with the fault

If the fault is **not confirmed**, check:

- the electrical lines which correspond to the fault,
- the connectors on these lines (corrosion, bent pins, etc.),
- the resistance of the component detected as faulty,
- the condition of the wires (melted or split insulation, wear).

Conformity check

The aim of the conformity check is to check data that does not produce a fault on the **diagnostic tool** because the data is inconsistent. Therefore, this stage is used to:

- run diagnostics on faults that do not have a fault display, and which may correspond to a customer complaint.
- check that the system is operating correctly and that there is no risk of a fault recurring after repairs.

This section gives the fault finding procedures for statuses and parameters and the conditions for checking them.

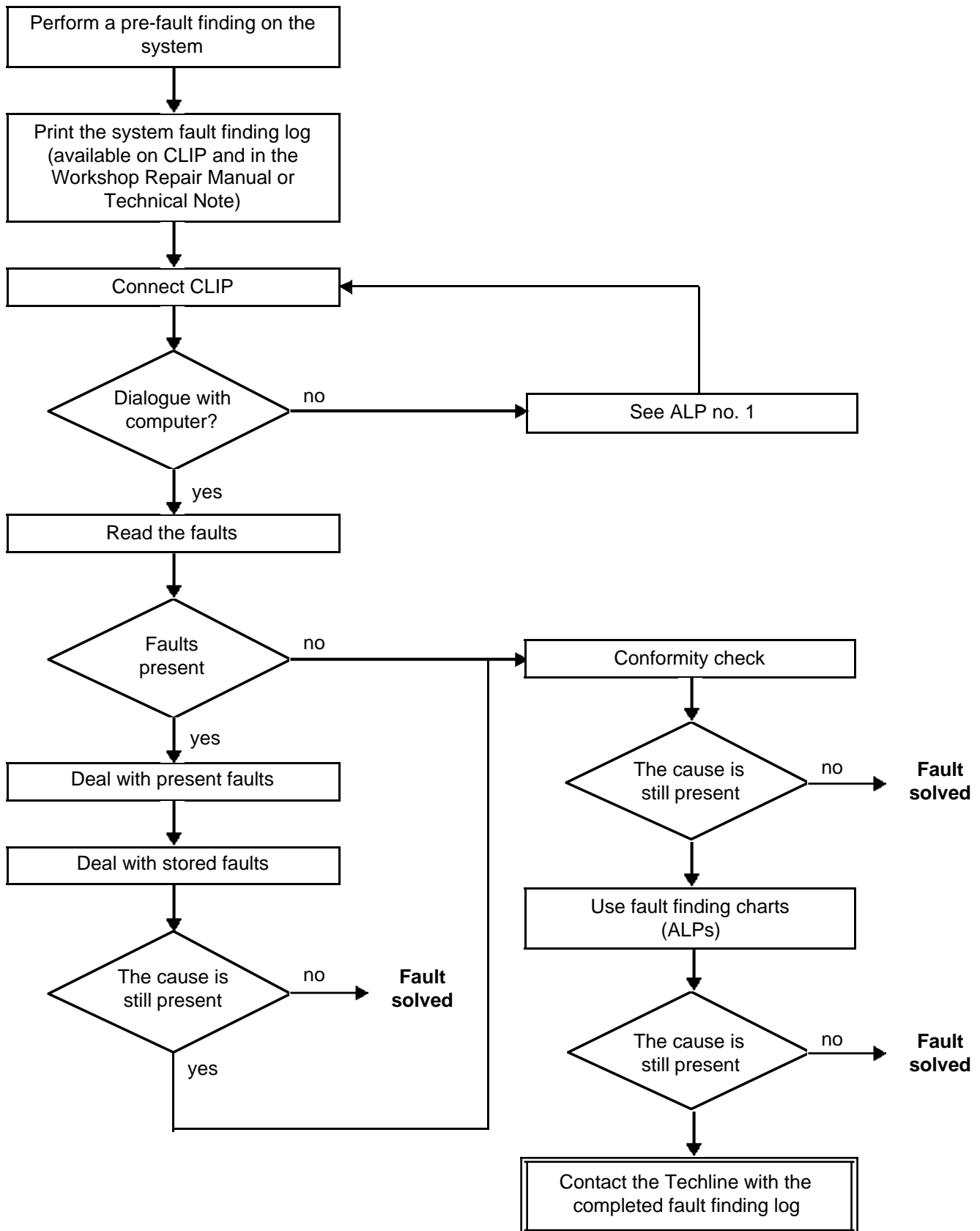
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

Customer complaints - Fault finding chart

If the test with the diagnostic tool is OK but the customer complaint is still present, the fault should be processed by **customer complaint**.

A summary of the overall procedure to follow is provided on the following page in the form of a flow chart.

4. FAULT FINDING PROCEDURE



4. FAULT FINDING PROCEDURE (CONTINUED)

Wiring check

Fault finding problems

Disconnecting the connectors and/or manipulating the wiring harness may temporarily remove the cause of a fault. Electrical measurements of voltage, resistance and insulation are generally correct, especially if the fault is not present when the analysis is made (stored fault).

Visual inspection

Look for damage under the bonnet and in the passenger compartment. Carefully check the fuses, insulators and wiring harness routing. Look for signs of oxidation.

Physical inspection

While manipulating the wiring harness, use the diagnostic tool to note any change in fault status from stored to present.

Ensure that the connectors are properly locked.

Apply light pressure to the connectors.

Twist the wiring harness.

If there is a change in status, try to locate the source of the fault.

Inspection of each component

Disconnect the connectors and check the appearance of the clips and tabs, as well as the crimping (no crimping on the insulating section).

Make sure that the clips and tabs are properly locked in the sockets.

Check that no clips or tabs have been dislodged during connection.

Check the clip contact pressure using an appropriate model of tab.

Resistance check

Check the continuity of entire lines, then section by section.

Look for a short circuit to earth, to + 12 V or to another wire.

If a fault is detected, repair or replace the wiring harness.

5. FAULT FINDING LOG



IMPORTANT

IMPORTANT

Any fault on a complex system requires thorough fault finding with the appropriate tools. The FAULT FINDING LOG, which should be completed during the procedure, enables you to keep track of the procedure which is carried out. It is an essential document when consulting the manufacturer.

IT IS THEREFORE MANDATORY TO FILL OUT A FAULT FINDING LOG EACH TIME FAULT FINDING IS CARRIED OUT.

You will always be asked for this log:

- when requesting technical assistance from the Techline,
- for approval requests when replacing parts for which approval is obligatory
- to be attached to monitored parts for which reimbursement is requested. The log is needed for warranty reimbursement, and enables better analysis of the parts removed.

6. SAFETY INSTRUCTIONS

Safety rules must be observed during any work on a component to prevent any damage or injury:

- check the battery voltage to avoid incorrect operation of computer functions,
- Use the proper tools.

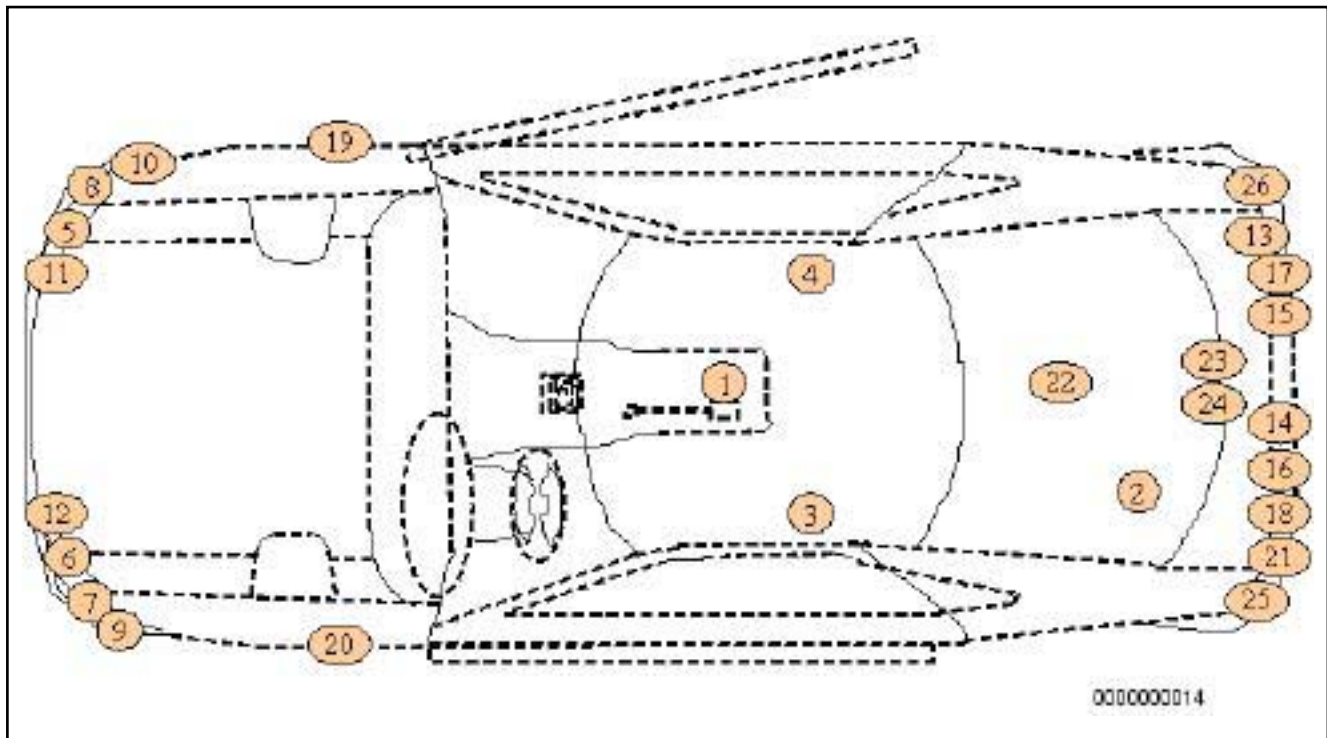
Procedure for disconnecting the battery:

- switch off the ignition,
- switch off all electrical consumers,
- wait at least **1 minute** for the electronic systems to switch off,
- disconnect the battery, starting with the negative terminal.

LIGHTING

Fault finding - List and location of components

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- | | | | |
|----|---------------------------------|----|-------------------------------------|
| 1 | Courtesy lights | 14 | Left-hand rear fog light |
| 2 | Luggage compartment lighting | 15 | Rear right-hand side light |
| 3 | Driver's side courtesy light | 16 | Rear left-hand side light |
| 4 | Passenger's side courtesy light | 17 | Right-hand brake light |
| 5 | RH side light | 18 | Left-hand brake light |
| 6 | LH side light | 19 | Right-hand side-mounted indicator |
| 7 | Left hand dipped headlight | 20 | Left-hand side-mounted indicator |
| 8 | Right hand dipped headlight | 21 | Left-hand reversing light |
| 9 | LH front indicator light | 22 | High level brake light |
| 10 | RH front indicator light | 23 | Number plate light |
| 11 | Right-hand front fog light | 24 | Number plate light |
| 12 | Left-hand front fog light | 25 | Left-hand rear direction indicator |
| 13 | Right-hand rear fog light | 26 | Right-hand rear direction indicator |

Side lights:

– **without automatic headlighting:**

The side lights are switched on directly via the passenger compartment fuse box using the horn and lights switch.

- **with ALS:** when the horn and lights switch is operated, the side lights relay is activated via the UCH which in turn switches on the side lights via the passenger compartment fuse box.

Dipped headlights:

- **without automatic headlighting:** the dipped headlights are switched on directly via the passenger compartment fuse box using the horn and lights switch.

- **with ALS:** when the horn and lights switch is operated, the dipped headlights relay is activated via the UCH which in turn switches on the dipped headlights via the passenger compartment fuse box.

Main beam headlights:

- **without ALS:** the main beam headlights are switched on directly via the passenger compartment fuse box using the horn and lights switch.

- **with ALS:** when the horn and lights switch is operated, the main beam headlights relay is activated via the UCH which in turn switches on the main beam headlights via the passenger compartment fuse box.

Rear fog lights:

- **without ALS:** the rear fog lights are switched on directly via the passenger compartment fuse box using the horn and lights switch.

- **with ALS:** when the horn and lights switch is operated, the rear fog lights relay is activated via the UCH which switches on the rear fog lights.

Front fog lights:

- **without ALS:** the front fog relay is activated when the horn and lights switch is operated and the front fog lights are switched on.

- **with ALS:** when the horn and lights switch is operated, the front fog lights relay is activated via the UCH which switches on the front fog lights.

Hazard warning lights:

- the hazard warning lights are switched on using the door locking/warning switch via the UCH and the passenger compartment fuse box.

LIGHTING

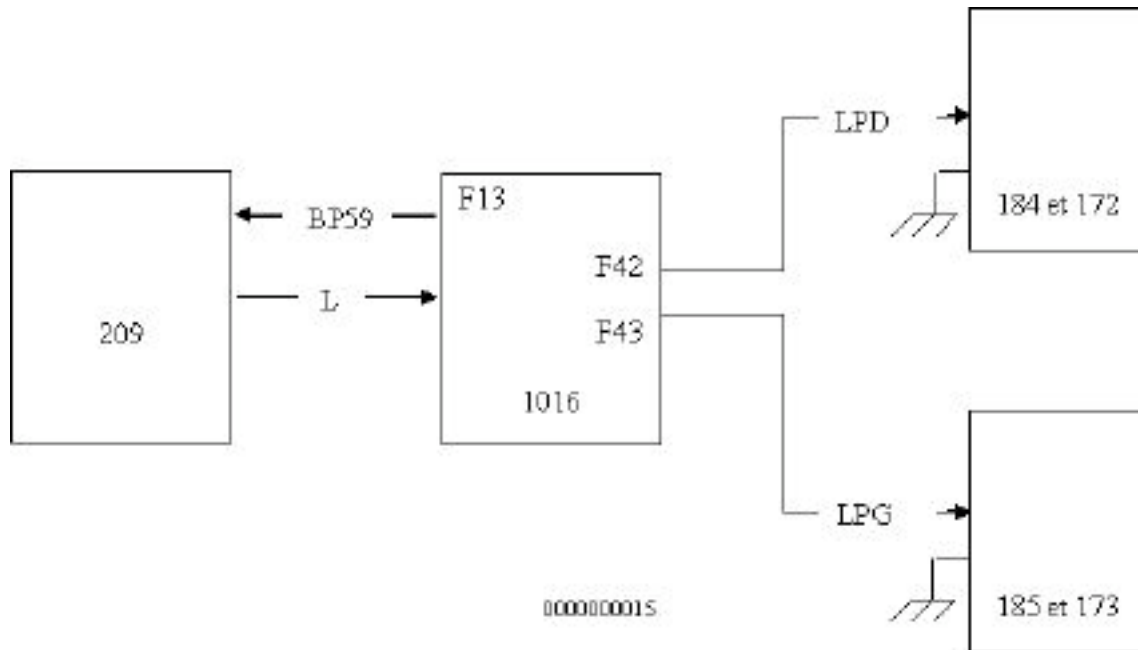
Fault finding - Operating diagram

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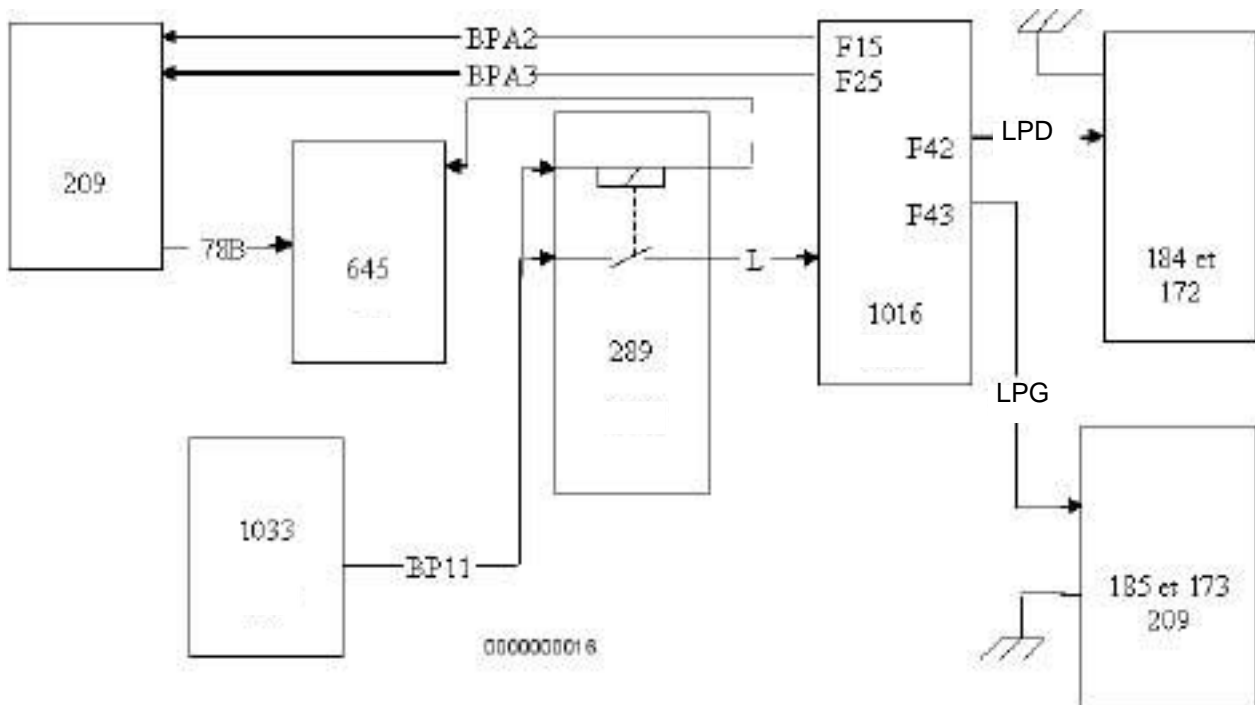
List of system components and associated component codes:

Component code	Components
172	Right-hand front side light
173	Rear left-hand side light
176	Right-hand front fog light
177	Left-hand front fog light
184	Right-hand front side light
185	Left-hand front side light
209	Horn and lights switch
226	Right hand headlight
227	Left hand headlight
230	Rear fog light relay
231	Front fog relay
255	RH front indicator light
256	LH front indicator light
267	Right-hand repeater
268	Left-hand repeater
281	Dipped headlights relay
289	Running lights side lights relay
597	Engine fuse and relay box
645	UCH
1016	Passenger compartment fuse box
1033	Positive protected battery (connector (socket) on + battery)
1391	Door locking/warning switch
1574	Main beam headlight relay

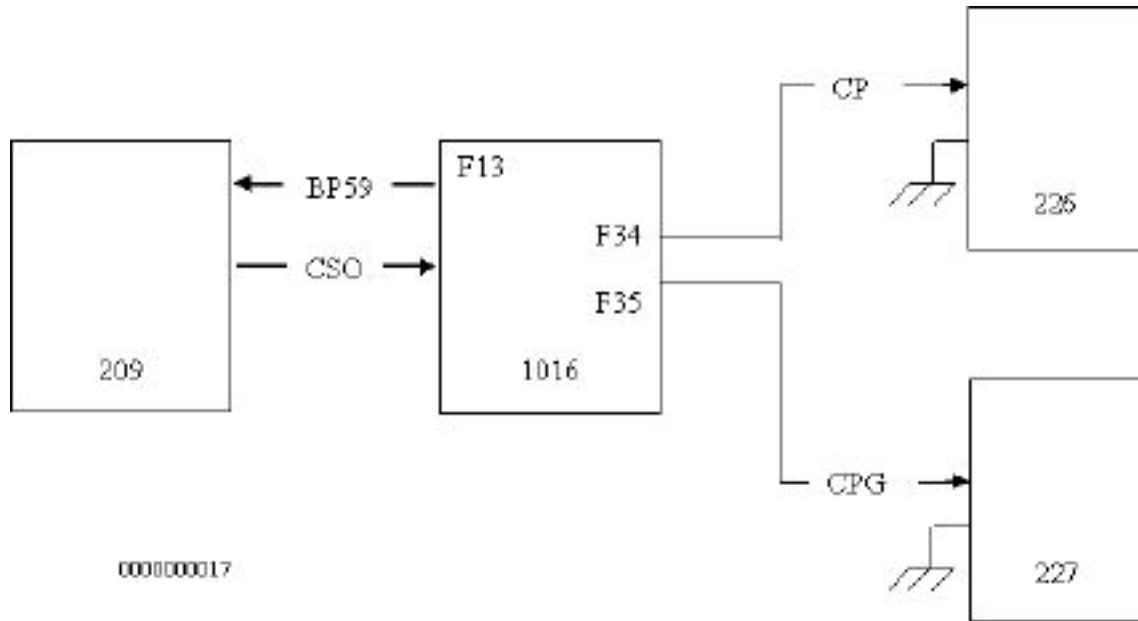
Side lights without automatic headlighting:



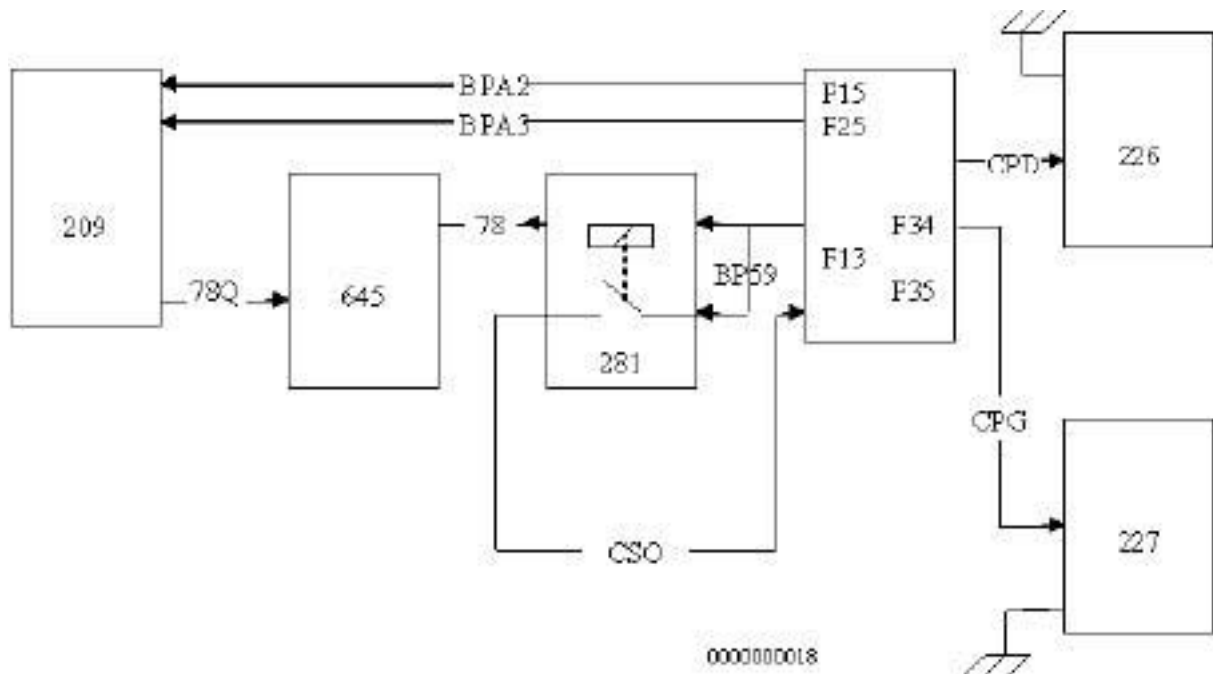
Side lights with automatic headlighting:



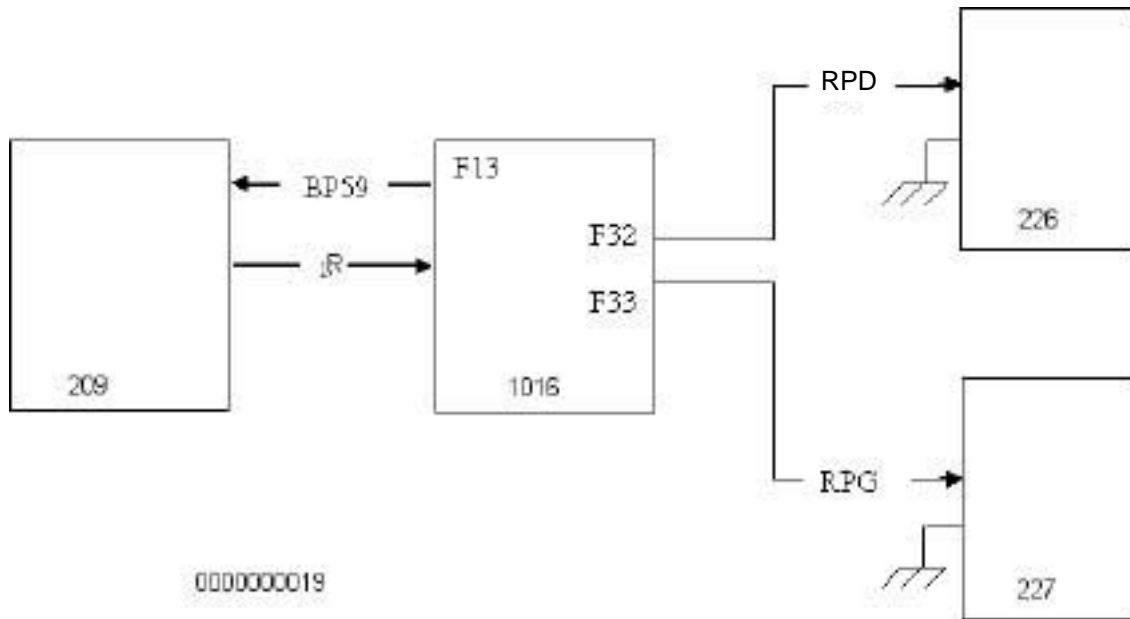
Dipped headlights without automatic headlighting:



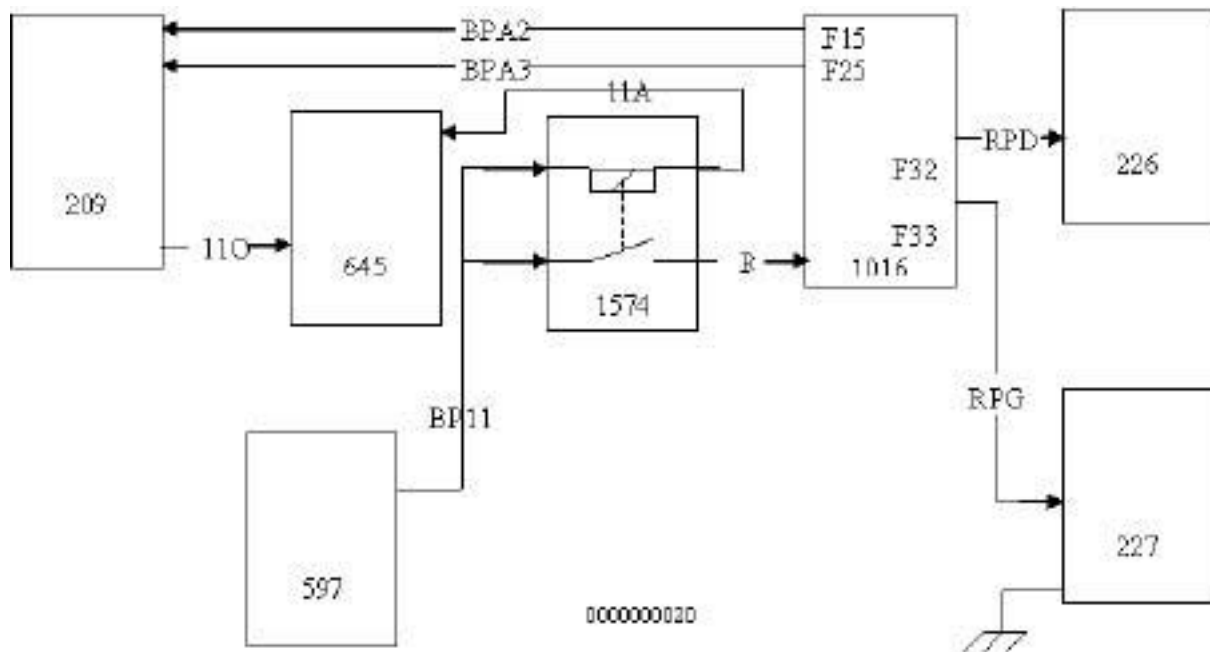
Dipped headlights with automatic headlighting:



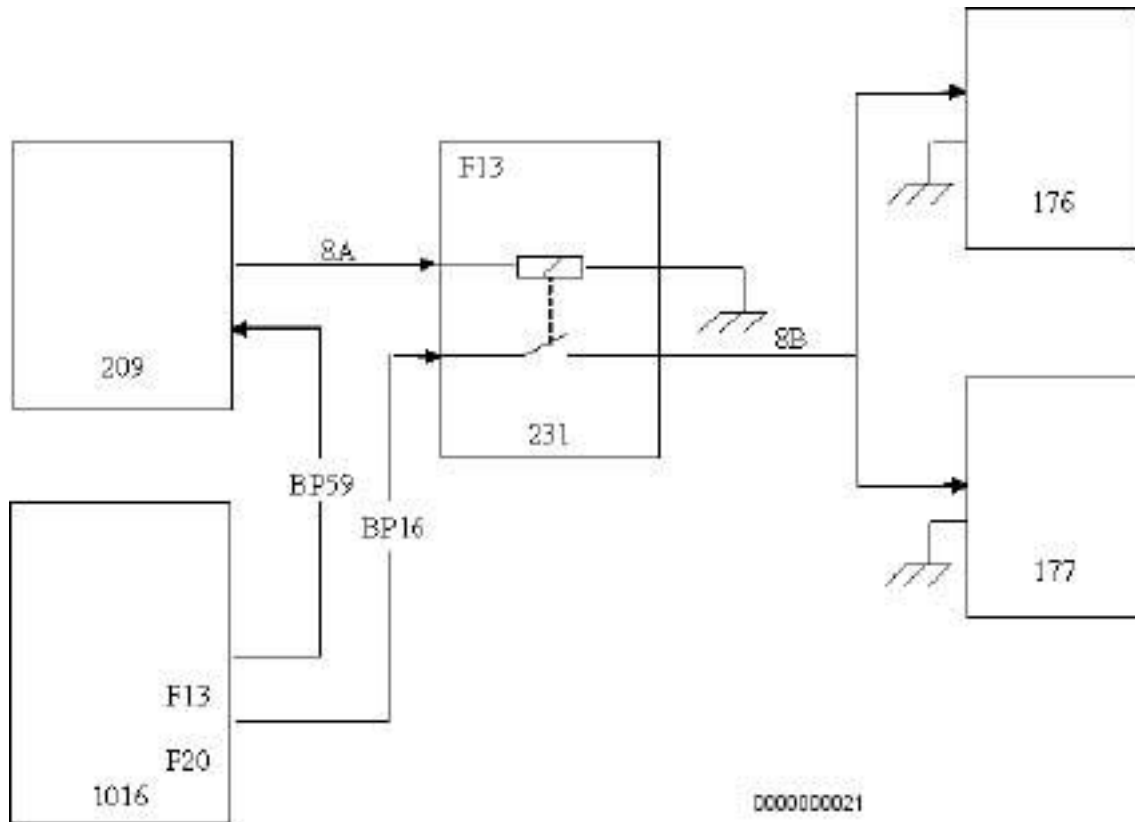
Main beam headlights without automatic headlighting:



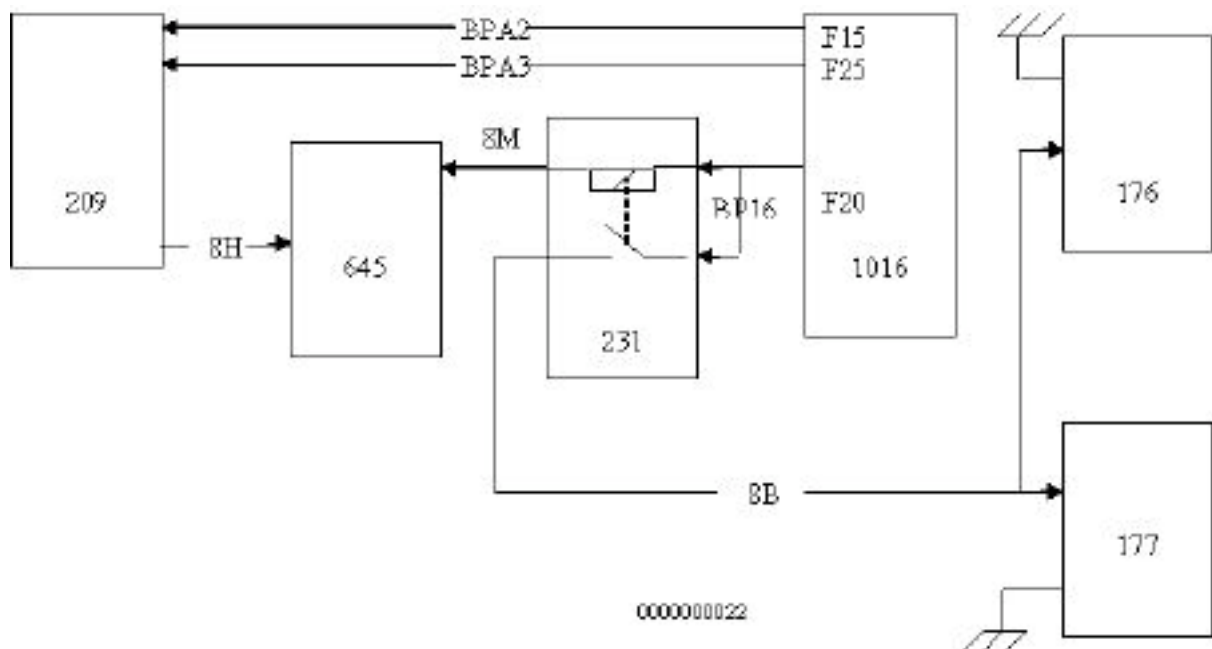
Main beam headlights with automatic headlighting:



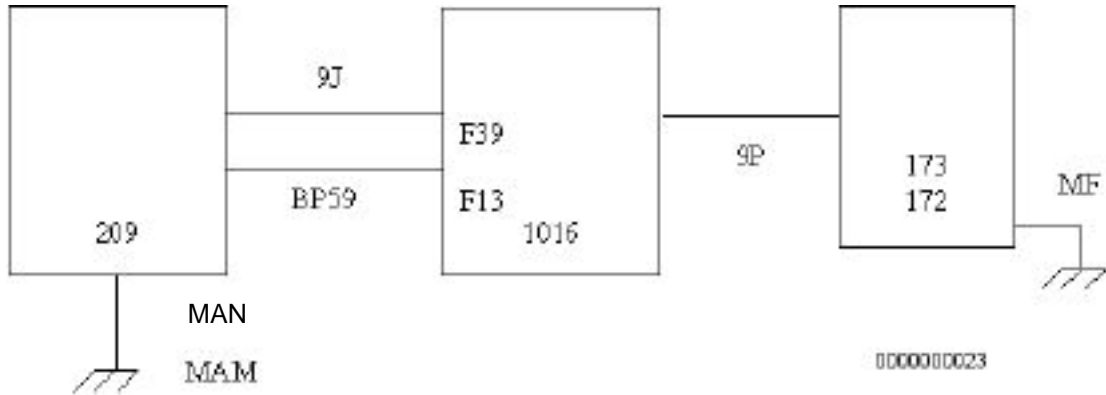
Front fog lights without automatic headlighting:



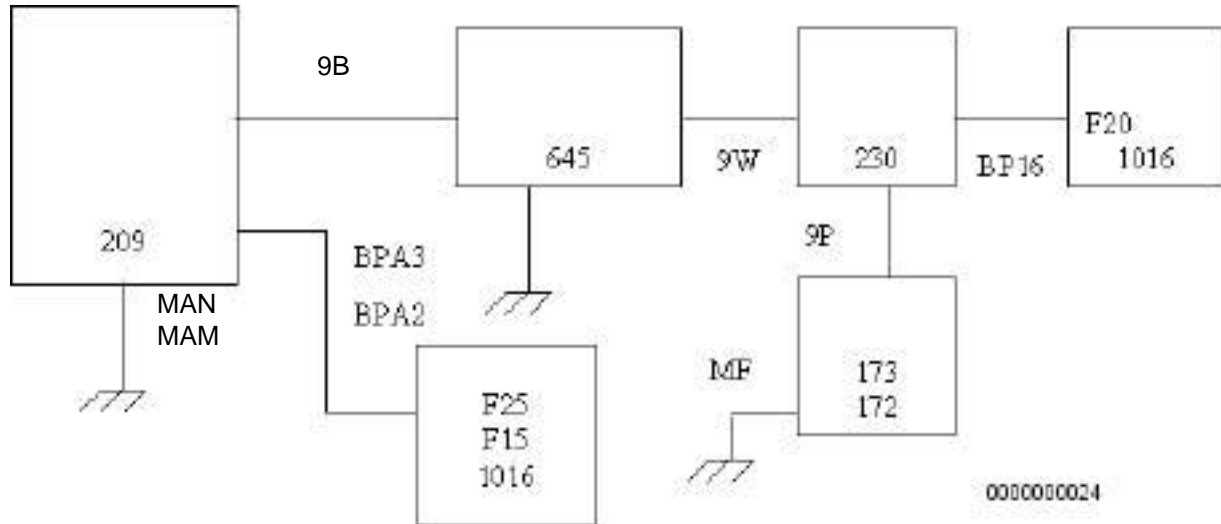
Front fog lights with automatic headlighting:



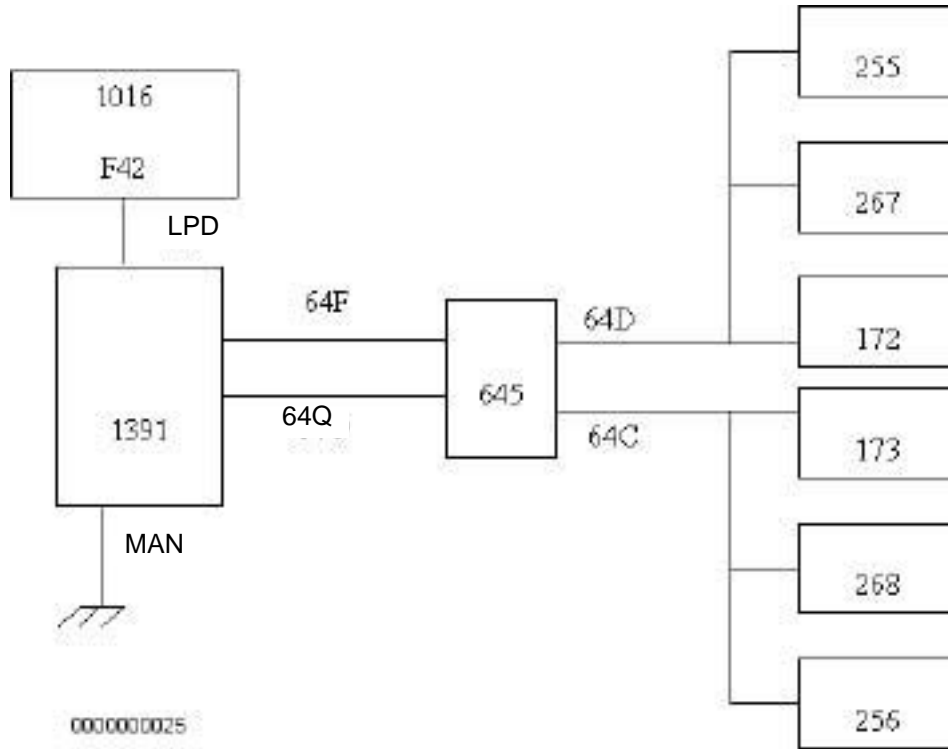
Rear fog lights without automatic headlighting:



Rear fog lights with automatic headlighting:



Hazard warning lights:



Layout of the lighting function

The lighting function is provided by the computer: UCH. This computer is connected via a wire connection.

The UCH interprets the driver's requests via the steering column switch and from the rain/light sensor, and then sends lighting function requests.

These requests are controlled by the UCH.

The UCH also controls the interior lights (courtesy lights, air conditioning operating light, central door locking operating light).

The LIGHTING function is divided into two sub-functions: **Lighting command**, **Lighting power**.

If the vehicle is equipped with a light detector, this function is controlled by the UCH.
Otherwise this function is controlled directly with no intervention from the UCH.

1. Lighting control

Operated by the driver

The UCH receives the driver's request via the steering column switches and the hazard warning lights button. The UCH controls the supply to the side lights, dipped headlights, main beam headlights and front fog lights. The dipped headlights are still supplied when the main beam headlights are activated. Automatic headlighting: the automatic lighting function is activated by switching the side lights on and off twice in succession: a beep will sound to confirm this.

Check the statuses of the following commands:

ET081	Lighting stalk position
ET085	Hazard warning lights button
ET111	Front fog lights request
ET082	Rear fog lights request
ET083	Left hand indicator request
ET084	Right hand indicator request
ET463	Door(s) or tailgate

Operated by the light sensor

The rain and light sensor is a single and unique sensor fitted in the windscreen. It is linked by a single connection to the UCH.

The light sensor enables automatic operation of the side lights and dipped headlights as soon as the vehicle is in a dark place (tunnel, night, gloomy weather conditions, etc.).

View the sensor status using status **ET115 Request to switch on lights by light sensor**.

The sensor configuration can be viewed by reading configuration **LC044 Rain/light sensor** and can be altered using command **CF035 Rain/light sensor**.

The automatic lighting function is configured using **CF193 "Automatic lighting function"** and can be viewed using **LC095 "Automatic lighting function"**. Configuration **CF194 "Automatic wiper function"** is also connected to the automatic lighting function and this function can be viewed using **LC096 "Automatic wiper function"**.

2. Lighting output

The UCH controls the interior lighting supply (courtesy lights, footwell lights, etc.), the air conditioning and central locking indicator lights.

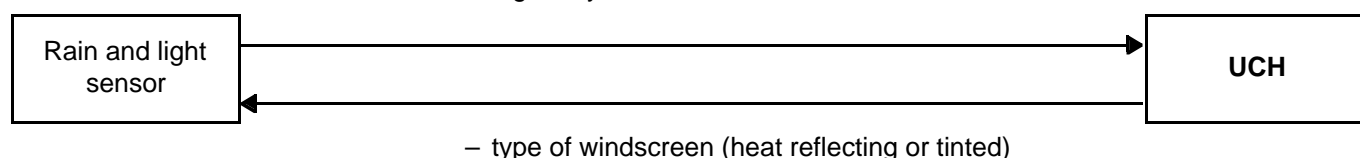
The UCH controls the supply to the rear lights, front lights and the indicators.

The operation of the lights supplied by the UCH can be checked using actuator commands **AC009 "Rear fog lights"**, **AC022 "Left-hand indicator"**, **AC023 "Right-hand indicator"**, **AC063 "Gradual lighting and dimming of the courtesy light"**, **AC062 "Main beam headlights"**, **AC054 "Dipped headlights"**, **AC055 "Side lights"** and **AC008 "Front fog lights"**.

Exchanges between the lighting function components

Rain/light sensor - UCH

- brightness value
- request to automatically switch on dipped headlights
- tunnel detection
- night/day detection



- type of windscreen (heat reflecting or tinted)

Functions available and operating mode

- Hazard warning lights switched on by ABS:

This function is available for all countries except Brazil, Finland, Great Britain, Japan and Sweden. In the event of braking involving rapid deceleration, the ABS computer transmits a request to the UCH to switch on the hazard warning lights via the multiplex network. The illumination of the hazard warning lights by the ABS is configured using **CF024 "Illumination of hazard warning lights by the ABS"**, and this function can be viewed using **LC018 "Illumination of the hazard warning lights by the ABS"**.

- See-me-home lighting:

This function is available on top of the range vehicles. It switches on the dipped headlights for several seconds. This function is activated without using + 12 V APC by using the "headlight flasher" several times. The See-me-home lighting function is configured using **CF032 "See-me-home lighting"**, and this function can be viewed using **LC025 "See-me-home lighting"**.

- Daytime running lights:

In Scandinavian countries, when the engine is running, this function switches on the side lights and dipped headlights without the driver switching them on. The daytime running lights function is configured using **CF014 "Daytime running lights"**, and this function can be viewed using **LC008 "Daytime running lights"**.

- Automatic headlighting:

This function is only available if the vehicle is equipped with a rain/light sensor. It lights up the side lights and the dipped headlights as soon as the exterior light fades (night, tunnel, etc.). This function is activated by turning the horn and lights switch from the OFF position to the "ON" position (side lights) twice in succession.

This function can be configured using one of the following configurations:

- **CF193 "Automatic lighting function"** and can be viewed using **LC095 "Automatic lighting function"**.
- **CF194 "Automatic wiper function"** and can be viewed using **LC096 "Automatic wiper function"**.
- **CF035 "Rain/light sensor"** and can be viewed using **LC044 "Rain/light sensor"**.

UCH LIGHTING CONFIGURATIONS

List of individual configurations available on the diagnostic tool with the associated configuration reading

Configuration	Configuration reading	Name of configuration	Choice of configuration
CF032	LC025	"See-me-home lighting"	WITH/WITHOUT
CF021	LC015	"Front fog lights"	WITH/WITHOUT
CF014	LC008	"Daytime running lights"	WITH/WITHOUT
CF193	LC095	"Automatic lighting function"	WITH/WITHOUT
CF194	LC096	"Automatic wiper function"	WITH/WITHOUT
CF035	LC044	"Rain/light sensor"	PRESENT/ABSENT
CF024	LC018	"Hazard warning lights switched on by ABS"	WITH/WITHOUT

Procedure for modifying a configuration

- establish dialogue with the computer corresponding to the desired configuration.
- select the "**repair mode**" menu,
- select the "**Write configuration**" menu,
- select the line which corresponds to the configuration,
- at the same time, select the line for the vehicle equipment or the customer choice,
- Click on "**Confirm**",
- in the "**Read configuration**" menu, check that the configuration has been completed.

LIGHTING

Fault finding - Conformity check

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NOTES	<p>Only carry out this conformity check after a complete check with the diagnostic tool (fault reading and configuration checks).</p> <p>Application condition: engine stopped, + after ignition feed present.</p>
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LIGHTING FUNCTION SUB-FUNCTION: LIGHTING CONTROL

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	1	Lighting control	ET081: Lighting switch position	SIDE DIPPED MAIN BEAM HEADLIGHTS	In the event of a fault, refer to the interpretation for status ET081 .
	2		ET085: Hazard warning lights button	PRESSED RELEASED	In the event of a fault, consult the interpretation for status ET085 .
	3	Lighting request	ET115: Request to switch on lights by light sensor	PRESENT ABSENT	In the event of a fault, consult the interpretation for status ET115 .
	4		ET111: Front fog lights request	PRESENT ABSENT	In the event of a fault, refer to the interpretation for status ET111 .
	5		ET082: Rear fog lights request	PRESENT ABSENT	In the event of a fault, refer to the interpretation of status ET082 .
	6		ET083: Left hand indicator request	PRESENT ABSENT	In the event of a fault, consult the interpretation of statuses ET083 and ET084 .
	7		ET084: Right hand indicator request	PRESENT ABSENT	
	8	Tailgate	ET463: Door(s) or tailgate	OPEN CLOSED	In the event of a fault, consult the interpretation for status ET0463 .
	9	Vehicle speed	PR008: Vehicle speed	0 mph	In the event of a fault, carry out fault finding on the ABS (see 38C, ABS and 87B, Passenger compartment connection unit).

LIGHTING

Fault finding - Conformity check

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NOTES

Only carry out this conformity check after a **complete check** with the **diagnostic tool** (fault reading and configuration checks).

Application condition: engine stopped, + after ignition feed present.

SUB-FUNCTION: LIGHTING OUTPUT

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	1	Front fog lights	AC008: Front fog lights	This command is used to activate the front fog light	In the event of a fault, apply the procedure for DF108 (see 87B, UCH).
	2	Rear fog lights	AC009: Rear fog lights	This command is used to activate the rear fog light	In the event of a fault, apply the procedure for DF109 (see 87B, UCH).
	3	Direction indicators	AC022: Left hand direction indicators	This command is used to activate the left hand direction indicators.	In the event of a fault, refer to the interpretation of fault DF013 "Left-hand indicator circuit" (see 87B, UCH).
	4		AC023: Right hand direction indicators	This command is used to activate the right hand direction indicators.	In the event of a fault, refer to the interpretation of fault DF012 "Right-hand indicator circuit" (see 87B, UCH).
	5	Lights	AC055: Side lights	This command enables the side lights to be activated.	In the event of a fault, apply the procedure for DF087 (see 87B, UCH).
	6		AC054: Dipped headlights	This command enables the dipped headlights to be activated.	In the event of a fault, apply the procedure for DF088 (see 87B, UCH).
	7		AC062: Main beam headlights	This command enables the main beam headlights to be activated.	In the event of a fault, apply the procedure for DF098 (see 87B, UCH).

LIGHTING

Fault finding - Conformity check

80D

NOTES

Only carry out this conformity check after a **complete check** with the **diagnostic tool** (fault reading and configuration checks).

Application condition: engine stopped, + after ignition feed present.

SUB-FUNCTION: LIGHTING OUTPUT (CONTINUED)

Computer	Order	Function	Parameter or Status checked or Action	Display and Notes	Fault finding
UCH (see 87B, Passenger compartment connection unit)	8	Lights	AC063: Gradual lighting and dimming of the courtesy light	This command is used to check that the courtesy light gradual lighting and dimming function is operating correctly.	In the event of a fault, apply the procedure for DF139 (see 87B, UCH) .
	9	Temperature display	AC110: Temperature display	Controls the display.	In the event of a fault, apply the procedure for command AC110 (see 87B, UCH) .

LIGHTING

Fault finding - Customer complaints

80D**NOTES**

Only refer to these customer complaints after performing a complete check with the diagnostic tool.

LIGHTING**80D**

NO REAR FOG LIGHTS

ALP 2

NO RIGHT HAND DIRECTION INDICATOR

ALP 3

NO LEFT HAND DIRECTION INDICATOR

ALP 4

NO SIDE LIGHTS

ALP 5

NO DIPPED HEADLIGHTS

ALP 6

NO HEADLIGHTS

ALP 7

NO FRONT FOG LIGHTS

ALP 8

LIGHTS NOT SWITCHING OFF AFTER + AFTER IGNITION FEED IS CUT
AND DRIVER'S DOOR IS OPENED

ALP 9

LIGHTS NOT SWITCHING ON AT NIGHT

ALP 10

NO SEE-ME-HOME LIGHTING

ALP 11

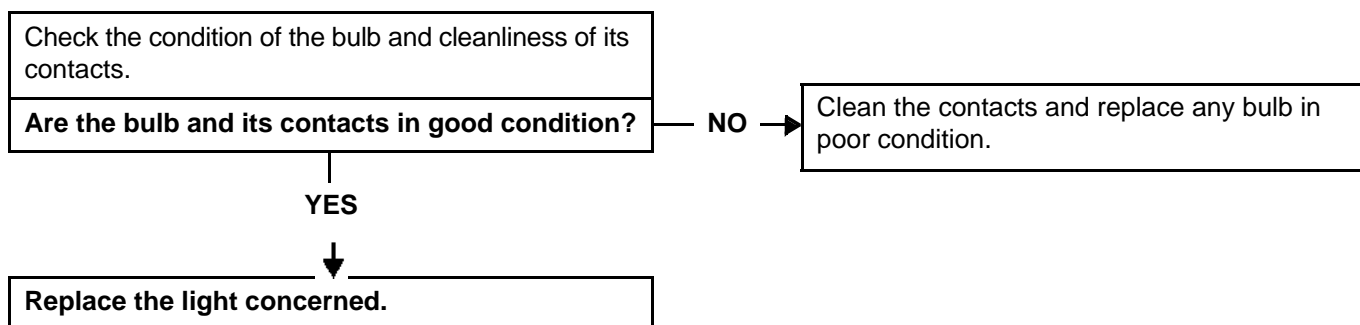
NO COURTESY LIGHTS

ALP 12

ALP 2	No rear fog light
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NOTES	<p>Only refer to the customer complaints after performing a complete check using the diagnostic tool.</p> <p>If the horn and lights switch is a one-touch control: Check the operation of status ET082 Rear fog lights request and command AC009 Rear fog light in the UCH. If there is a malfunction on status ET082 "Rear fog lights request" and command AC009 "Rear fog lights", refer to the interpretation of status ET082 "Rear fog lights request", of command AC009 "Rear fog lights" and of fault DF109 "Rear fog lights control circuit".</p>
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If the vehicle lighting is controlled by the UCH (with rain/light sensor):



If the switch is not a one-touch control:

If the vehicle lighting is not controlled by the UCH (no rain/light sensor):

<p>Check that fuses F13 (10 A) and F39 (10 A) are sound and correctly fitted in the passenger compartment fuse and relay box. Replace the fuse if necessary.</p>
<p>Check the condition and connection of the light connector concerned (bent, oxidised, broken tabs). If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the condition and connection of the horn and lights switch connector (tabs broken, bent, oxidised). If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check for + 12 V (when there is a rear fog lights request) on connection 9P of components 172 and 173. Check for an earth on connection MF of component 172 and connection MG on component 173.</p>

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 2 CONTINUED	
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If **+ 12 V** not found, check the rear fog lights relay:

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

Right-hand rear fog light:

- Connection code **9P** between components **172** and **1016**.

Left-hand rear fog light:

- Connection code **9P** between components **173** and **1016**.

Check between the relay/fuse box and the fog light relay:

- Connection code **BP16** between components **230** and **1016**.
- Connection code **9P** between components **230** and **1016**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check between the horn and lights switch and the passenger compartment fuse and relay box:

- Connection code **9J** between components **209** and **1016**.
- Connection code **BP59** between components **209** and **1016**.
- Connection code **BP11** between components **209** and **1016**.
- Connection code **MAN** or **MAM** between components **209** and **earth MAN** or **earth MAM** (depending on the driving layout, right- or left hand drive).

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** on connections **BP59** and **BP11** of component **209**. Check for **earth** on connection **MAN** (for right-hand drive vehicles) or **MAM** (for left-hand drive vehicles) of component **209**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

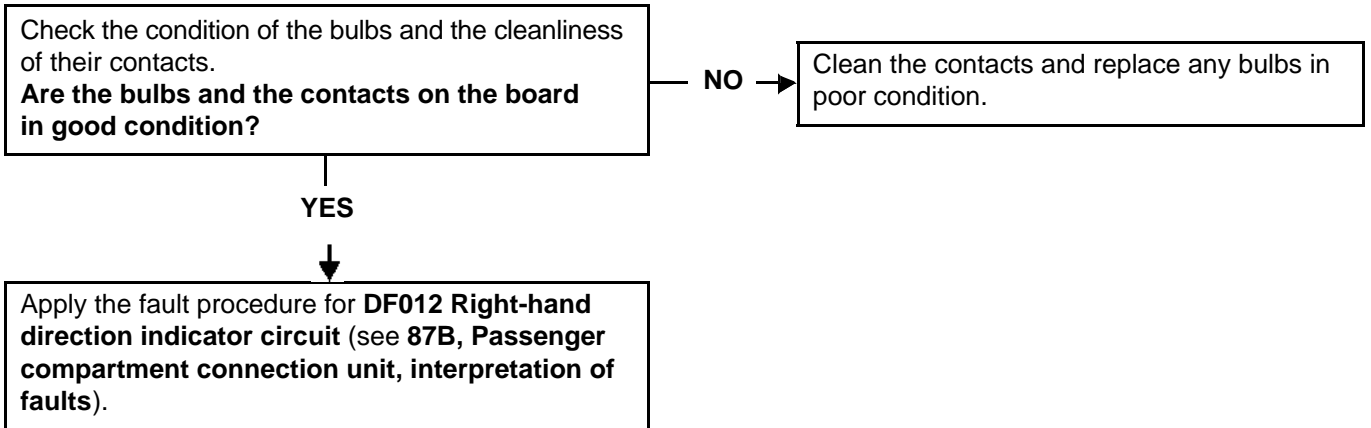
If the **supplies, earth** and connections are correct, replace the horn and lights switch.

If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 3	NO RIGHT hand DIRECTION INDICATOR
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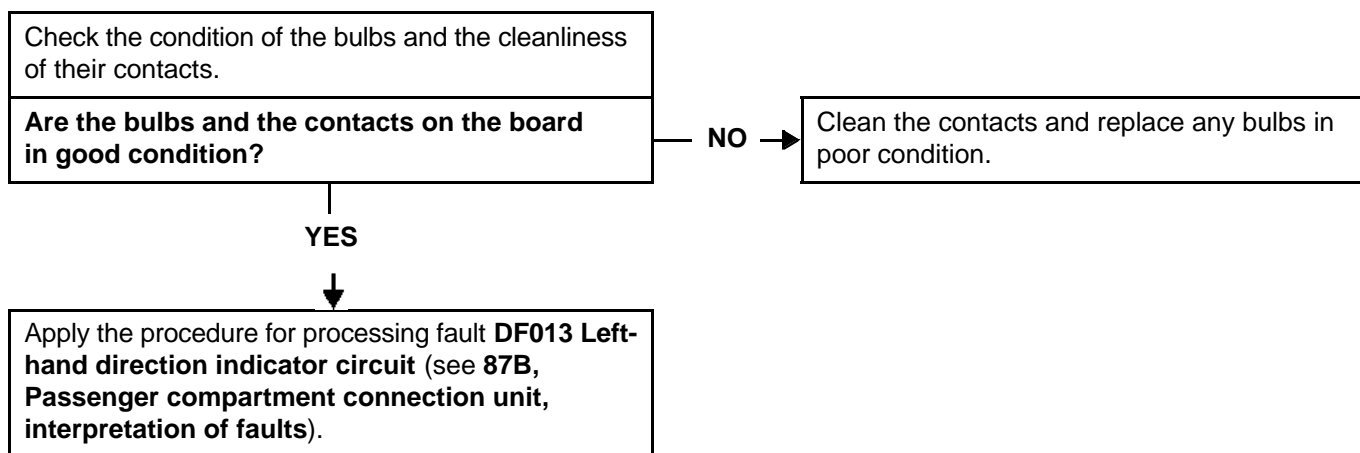
NOTES	<p>Only refer to the customer complaints after performing a complete check using the diagnostic tool.</p> <p>Check the operation of status ET084 Right hand direction indicator request and command AC023 Right hand direction indicator in the UCH. If there is a malfunction on status ET084 "Right-hand indicator request" and command AC023 "Right-hand indicator", refer to the interpretation of status ET084 "Right-hand indicator request" and of command AC023 "Right-hand indicator".</p>
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AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 4	No left hand direction indicator
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NOTES	<p>Only refer to the customer complaints after performing a complete check using the diagnostic tool.</p> <p>Check, as a priority, the operation of status ET083 Left hand direction indicator and command AC022 Left hand direction indicator in the UCH. If there is a malfunction on status ET085 "Left-hand indicator request" and command AC022 "Left-hand indicator", refer to the interpretation of status ET085 "Left-hand indicator request" and of command AC022 "Left-hand indicator".</p>
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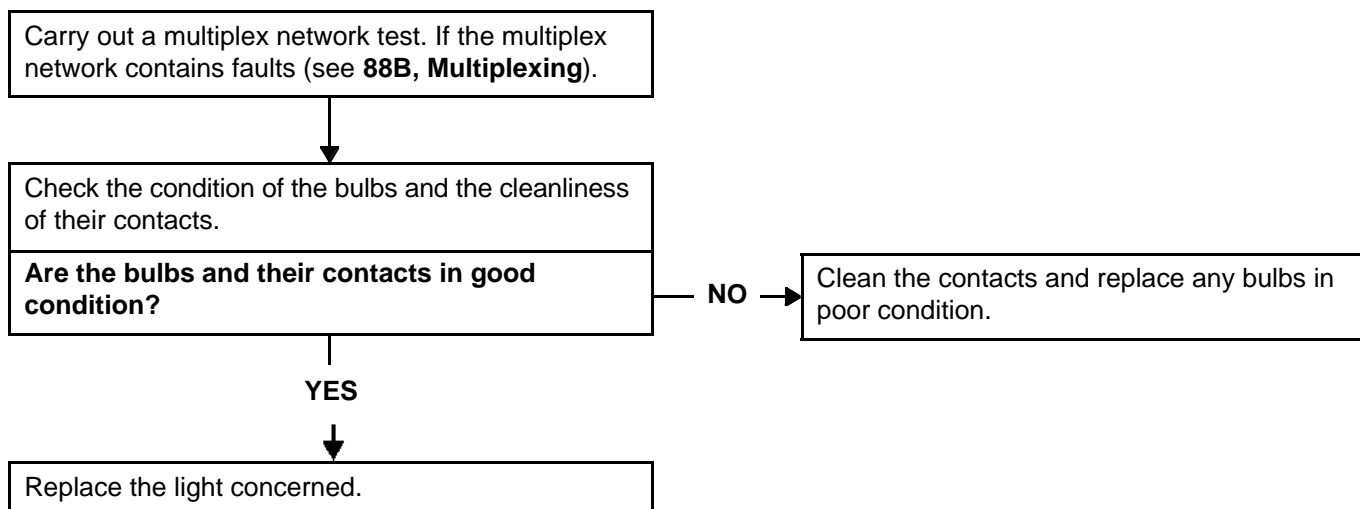


AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 5	No side lights
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>Check, as a priority, the operation of status ET081 Lighting stalk position and command AC055 Side lights in the UCH. If there is a malfunction on status ET081 "Lighting stalk position" and command AC055 "Side lights", refer to the interpretation of status ET081 "Lighting stalk position" and of command AC055 "Side lights".</p>
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If the vehicle lighting is controlled by the UCH (with rain/light sensor):



If the vehicle lighting is not controlled by the UCH (no rain/light sensor):

<p>Check that fuses F13 (30 A), F42 (10 A) and F43 (10 A) are sound and correctly fitted in the passenger compartment fuse and relay box. Replace the fuse if necessary.</p>
<p>Check the condition and connection of the light connector concerned (bent, oxidised, broken tabs). If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the condition and connection of the horn and lights switch connector (tabs broken, bent, oxidised). If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
---------------------	--

ALP 5 CONTINUED 1

Check for **+ 12 V** (when there is a side lights request) on connection **LPD** of components **184 and 172** and connection **LPG** on components **185 and 173**. Check for an **earth** on connection **MAR** of component **184** and connection **MAS** on component **185**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Side lights check:

Check **the insulation, continuity and the absence of interference resistance** on the following connections:

Right-hand front side light:

- Connection code **LPD** between components **184 and 1016**.
- Connection code **MAR** between component **184 and earth MAR**.

Left-hand front side light:

- Connection code **LPG** between components **185 and 1016**.
- Connection code **MAS** between components **185 and earth MAS**.

Rear right-hand side light:

- Connection code **LPD** between components **172 and 1016**.
- Connection code **MF** between components **172 and earth MF**.

Rear left-hand side light:

- Connection code **LPG** between components **173 and 1016**.
- Connection code **MG** between components **173 and earth MG**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** on connections **BP59 and BP11** of component **209**. Check for **earth** on connection **MAN** (for right-hand drive vehicles) or **MAM** (for left-hand drive vehicles) of component **209**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

Carry out a complete check with the **diagnostic tool**.

ALP 5 CONTINUED 2	
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Check between the horn and lights switch (component 209) and the passenger compartment fuse and relay box (component 1016):

Check the **insulation, continuity and the absence of interference resistance** on the following connection:

- Connection code **L** between components **209** and **1016**.
- Connection code **BP59** between components **209** and **1016**.
- Connection code **MAN** or **MAM** between components **209** and **earth MAN** or **earth MAM** (depending on the driving layout, right- or left hand drive).

Check between the engine relay/fuse box (component 597) and the passenger compartment fuse and relay box (component 1016):

- Connection code **BP11** between components **597** and **1016**.
- Connection code **BP13** between components **597** and **1016**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the **supplies, earth** and connections are correct, replace the horn and lights switch.

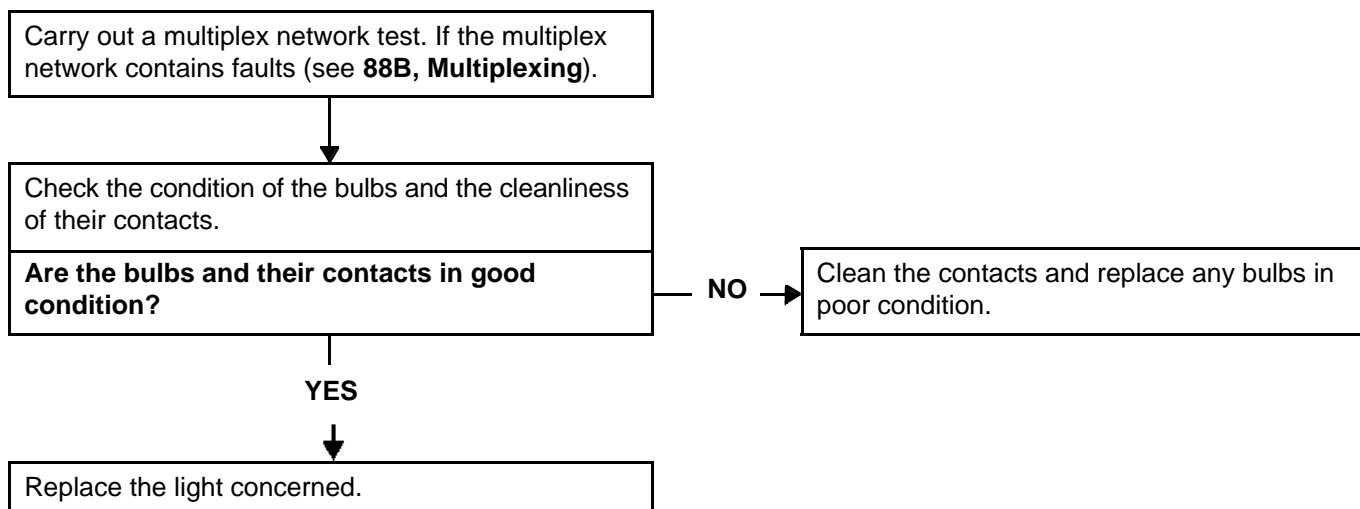
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 6	No dipped headlights
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>Check, as a priority, the operation of status ET081 Lighting stalk position and command AC054 Dipped headlights in the UCH. If there is a malfunction on status ET081 "Lighting stalk position" and command AC054 "Dipped headlights", refer to the interpretation of status ET081 "Lighting stalk position" and of command AC054 "Dipped headlights".</p>
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If the vehicle lighting is controlled by the UCH (with rain/light sensor):



If the vehicle lighting is not controlled by the UCH (no rain/light sensor):

<p>Check that fuses F13 (30 A), F34 (15 A) and F35 (15 A) are sound and correctly fitted in the passenger compartment fuse and relay box. Replace the fuse if necessary.</p>
<p>Check the condition and connection of the light connector concerned (bent, oxidised, broken tabs).</p> <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 6 CONTINUED 1	
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Check the condition and connection of the horn and lights switch connector (tabs broken, bent, oxidised).

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** (when there is a dipped headlights request) on connection **CPD** of component **226** and connection **CPG** on the connection of component **227**. Check for an **earth** on connection **MAR** of component **226** and on connection **MAS** on component **227**. Check the supply to connection **LPD** on component **172** and the supply to connection **LPG** on component **173**.

Dipped headlights check:

Check **the insulation, continuity and the absence of interference resistance** on the following connections:

Right-hand front dipped headlight:

- Connection code **CPD** between components **226** and **1016**.
- Connection code **MAR** between components **226** and **earth MAR**.

Left-hand front dipped headlight:

- Connection code **CPG** between components **227** and **1016**.
- Connection code **MAS** between components **227** and **earth MAS**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** on connections **BP59** and **BP11** of component **209**. Check for **earth** on the connection. Check for **earth** on connection **MAN** (for right-hand drive vehicles) or **MAM** (for left-hand drive vehicles) of component **209**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 6 CONTINUED 2	
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Horn and lights switch check:

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **CS0** between components **209** and **1016**.
- Connection code **BP59** between components **209** and **1016**.
- Connection code **BP11** between components **209** and **1016**.
- Connection code **MAN** or **MAM** between components **209** and **earth MAN** or **earth MAM** (depending on the driving layout, right- or left hand drive).

Check between the engine relay/fuse box (**component 597**) and the **Passenger compartment fuse and relay box (component 1016)**:

- Connection code **BP11** between components **597** and **1016**.
- Connection code **BP13** between components **597** and **1016**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the supplies, earth and connections are correct, replace the horn and lights switch.

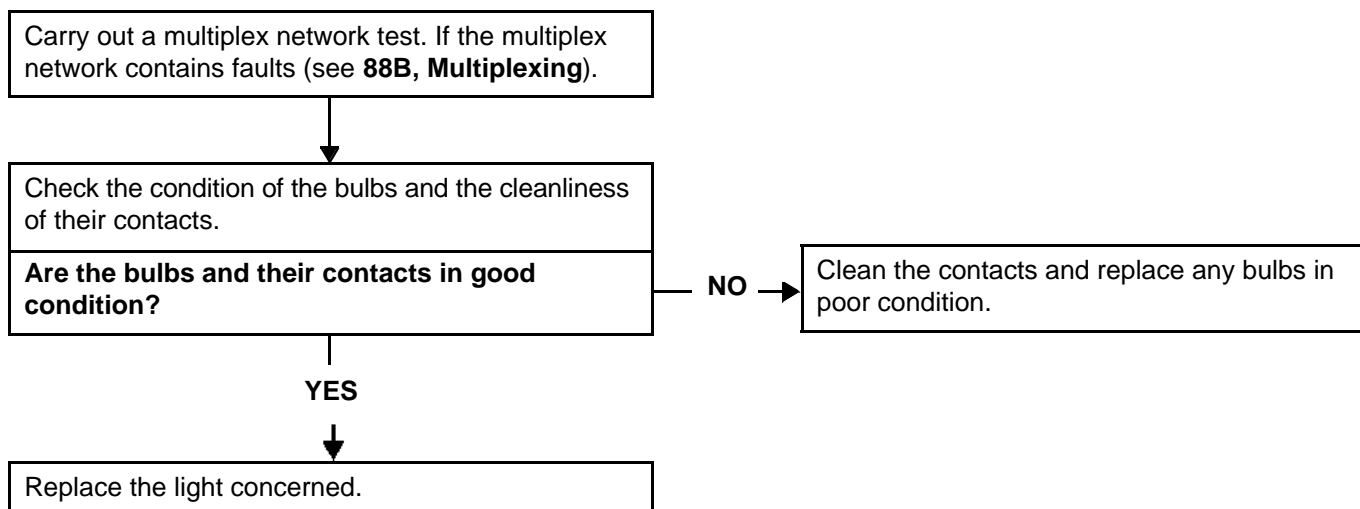
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 7	No main beam headlights
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>Check, as a priority, the operation of status ET081 Lighting stalk position and command AC062 Main beam headlights in the UCH. If there is a malfunction on status ET081 "Lighting stalk position" and command AC062 "Main beam headlights", refer to the interpretation of status ET081 "Lighting stalk position" and of command AC062 "Main beam headlights".</p>
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If the vehicle lighting is controlled by the UCH (with rain/light sensor):



If the vehicle lighting is not controlled by the UCH (no rain/light sensor):

<p>Check that fuses F13 (30 A), F32 (10 A) and F33 (10 A) are sound and correctly fitted in the passenger compartment fuse and relay box. Replace the fuse if necessary.</p>
<p>Check the condition and connection of the light connector concerned (bent, oxidised, broken tabs).</p> <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
<p>Check the condition and connection of the horn and lights switch connector (tabs broken, bent, oxidised).</p> <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 7 CONTINUED

Check for **+ 12 V** (when there is a main beam headlights request) on connection **RPD** of component **226** and connection **RPG** on component **227**. Check for an **earth** on connection **MAR** of component **226** and on connection **MAS** of component **227**.

Main beam headlights check:

Check **the insulation, continuity and the absence of interference resistance** on the following connections:

Front right-hand main beam headlight:

- Connection code **RPD** between components **226** and **1016**.
- Connection code **MAR** between component **226** and earth **MAR**.

Front left-hand main beam headlight:

- Connection code **RPG** between components **227** and **1016**.
- Connection code **MAS** between component **227** and earth **MAS**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** on connections **BP59** and **BP11** of component **209**. Check for **earth** on connection **MAN** (for right-hand drive vehicles) or **MAM** (for left-hand drive vehicles) of component **209**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check between the horn and lights switch and the passenger compartment fuse and relay box:

Check **the insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **R** between components **209** and **1016**.
- Connection code **BP59** between components **209** and **1016**.
- Connection code **BP11** between components **209** and **1016**.
- Connection code **MAN** or **MAM** between components **209** and earth **MAN** or earth **MAM** (depending on the driving layout, right- or left hand drive).

Check between the engine relay/fuse box (**component 597**) and the **Passenger compartment fuse and relay box (component 1016)**:

- Connection code **BP11** between components **597** and **1016**.
- Connection code **BP13** between components **597** and **1016**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the **supplies, earth** and connections are correct, replace the horn and lights switch.

If the fault is still present, contact the Techline.

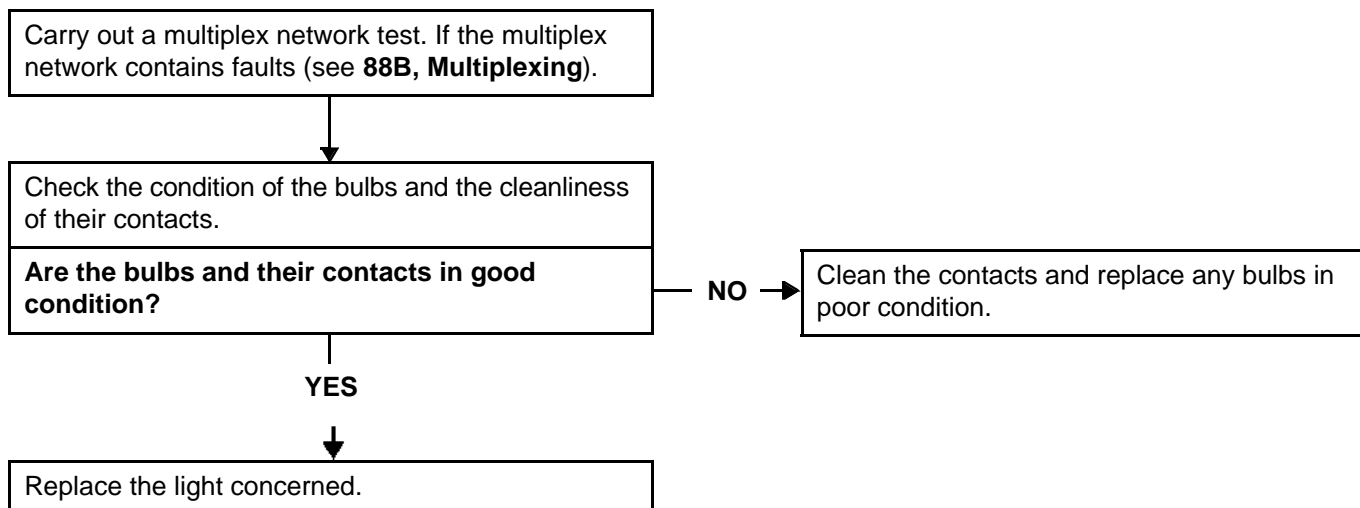
AFTER REPAIR

Carry out a complete check with the **diagnostic tool**.

ALP 8	No front fog lights
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>If the fog light control on the horn and lights switch is a one-touch control, check that the front fog lights are "WITH" by reading configuration LC015 "Front fog lights". Otherwise use command CF021 "Front fog lights".</p> <p>Check the operation of status ET111 Front fog lights request and command AC008 Front fog light in the UCH. If there is a malfunction on status ET111 "Front fog lights request" and command AC008 "Front fog lights", refer to the interpretation of status ET111 "Front fog lights request" and command AC008 "Front fog lights".</p>
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If the vehicle lighting is not controlled by the UCH (no rain/light sensor):



If the vehicle lighting is controlled by the UCH (with rain/light sensor):

<p>Check that fuse F13 (10 A) is sound and fitted in the passenger compartment fuse and relay box. Replace the fuse if necessary.</p> <p>Check the condition and connection of the light connector concerned (bent, oxidised, broken tabs).</p> <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 8 CONTINUED 1	
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Check the condition and connection of the horn and lights switch connector (tabs broken, bent, oxidised).

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** (when there is a front fog lights request) on connection **8B** of components **176** and **177**. Check for an **earth** on connection **MAR** of component **176** and connection **MAS** on component **177**.

Front fog lights check:

Check the **insulation, continuity and the absence of interference resistance** on the following connection:

Right-hand front fog light:

- Connection code **8B** between components **231** and **176**.

Left-hand front fog light:

- Connection code **8B** between components **231** and **177**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** (when there is a front fog lights request) on connection **8A** of component **231**.
Check for **+ 12 V** on connection **BP16** of component **231**. Check the **earth** on connection **MAM** of component **231**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 8 CONTINUED 2	
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Front fog lights relay check:

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **8A** between components **231** and **209**.
- Connection code **BP16** between components **231** and **1016**.
- Connection code **MAM** between components **231** and **earth MAM**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check for **+ 12 V** on connections **BP59** and **BP11** of component **209**. Check for **earth** on connection **MAN** (for right-hand drive vehicles) or **MAM** (for left-hand drive vehicles) of component **209**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check between the horn and lights switch and the passenger compartment fuse and relay box:

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- Connection code **BP59** between components **209** and **1016**.
- Connection code **BP11** between components **209** and **1016**.
- Connection code **MAN** or **MAM** between components **209** and **earth MAN** or **earth MAM** (depending on the driving layout, right- or left hand drive).

Check between the engine relay/fuse box (**component 597**) and the **Passenger compartment fuse and relay box (component 1016)**:

- Connection code **BP11** between components **597** and **1016**.
- Connection code **BP13** between components **597** and **1016**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the **supplies**, the **earth** and the connections are correct, replace the horn and lights switch.

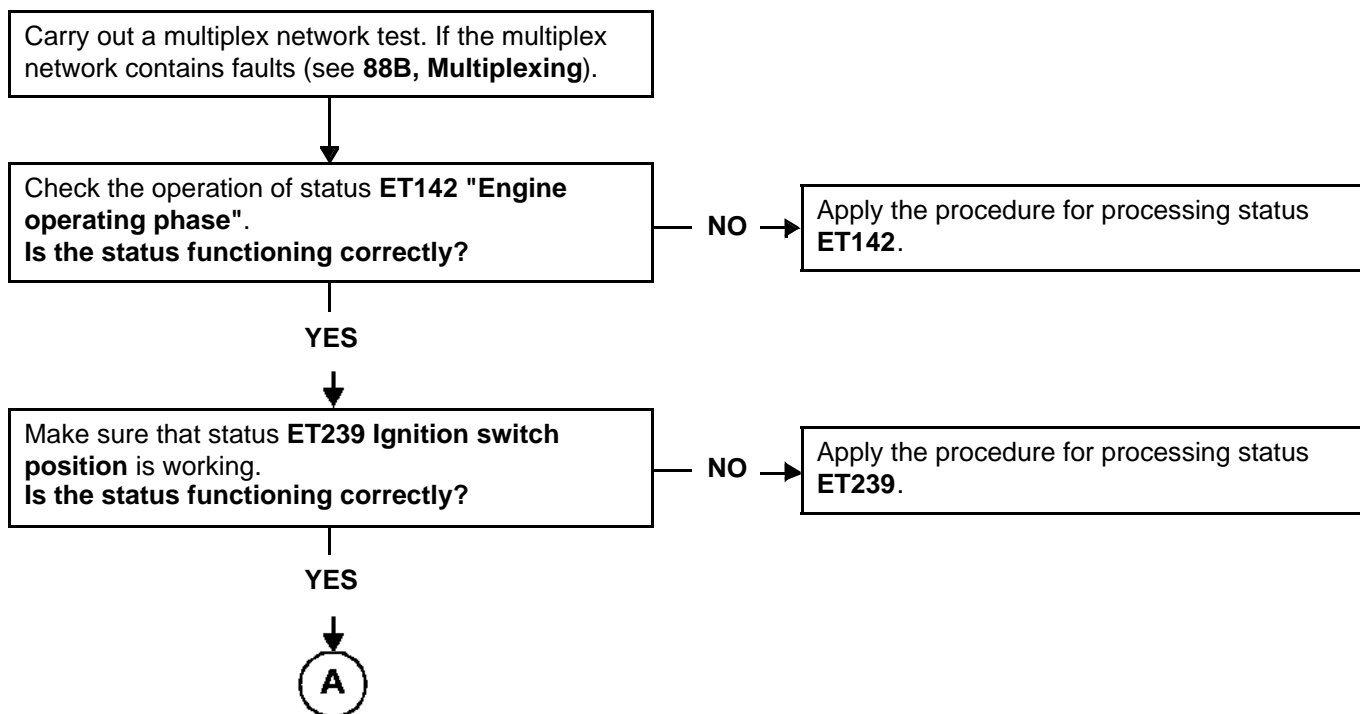
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 9	Lights are not switched off after switching off the + after ignition feed and the driver's door opening
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>Check, as a priority, the operation of status ET115 "Request to switch on the lights via the light sensor" and commands AC054 Dipped headlights and AC055 Side lights in the UCH.</p>
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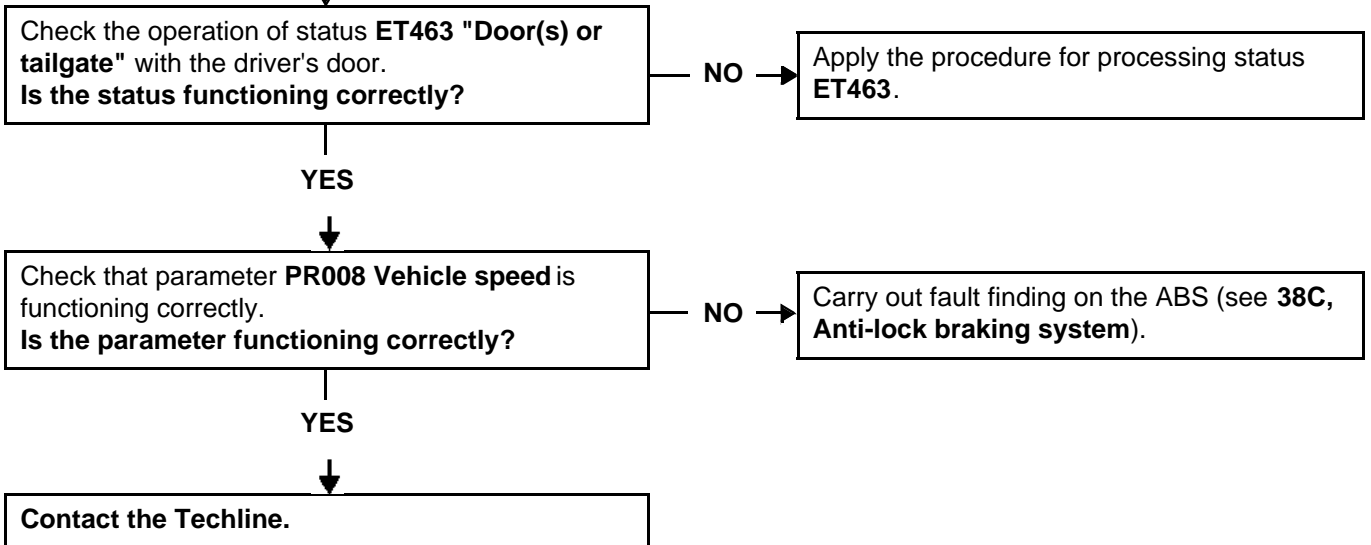
<p>Note:</p> <p>For the lights to switch off automatically after driving, the following conditions must all be met:</p> <ul style="list-style-type: none"> - engine stopped, - ignition: 0 (inactive), - vehicle speed > 0 mph (0 km/h), - driver's door: closed.



AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 9 CONTINUED	
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A



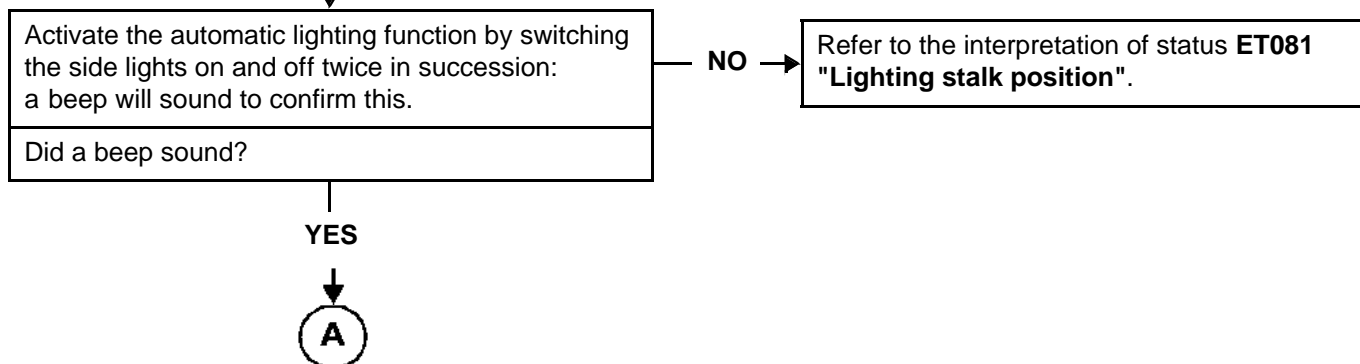
AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 10	Lights not switching on at night
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NOTES	<p>Only check this customer complaint after performing a complete check with the diagnostic tool.</p> <p>The engine must be running in order for the automatic lighting function to operate and the system must be equipped with a rain/light sensor.</p> <p>Check, as a priority, the operation of status ET115 "Request to switch on the lights via the light sensor" in the UCH. Check that the following faults are not present:</p> <ul style="list-style-type: none"> - DF011 "Rain/light sensor circuit", - DF135 "Rain sensor", - DF136 "Light sensor". <p>Deal with the above faults if they are present.</p>
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Note:
The sensor requests the lights to be switched on when there is poor light intensity (at night, in a tunnel, etc.).

Check whether the vehicle has a rain/light sensor. If the vehicle does not have a rain/light sensor, explain to the customer that this is normal, and that the vehicle does not have this feature.

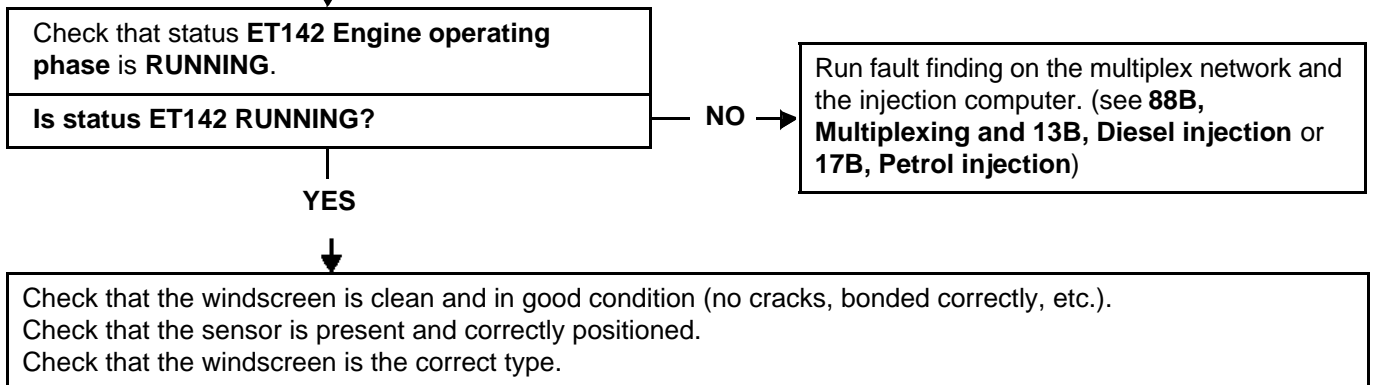


AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 10 CONTINUED	
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A

If the vehicle is fitted with a rain/light sensor, check that the vehicle is configured with a rain/light sensor. Check that **LC044 "Rain/light sensor"** displays **"Present"**. If not, carry out **CF035 "Rain/light sensor"**. Check that **LC096 "Automatic wiper function"** displays **"With"**. If not, carry out **CF194 "Automatic wiper function"**.
Check that LC095 "Automatic lighting function", displays "With". If not, carry out CF193 "Automatic headlight function".



AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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ALP 11	No See-me-home lighting
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NOTES	Only check this customer complaint after performing a complete check with the diagnostic tool .
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Check whether the vehicle has a rain/light sensor. If the vehicle does not have a rain/light sensor, explain to the customer that this is normal, and that the vehicle does not have this feature.

Check that **LC025 "See-me-home lighting"** is **"With"**, otherwise use **CF032 "See-me-home lighting"**.

Check that the ignition is switched off.
Flash the headlights one or more times (as required) to activate the See-me-home lighting function.

Check that the horn and lights switch is operating correctly using status **ET081 "Lighting stalk position"**. In the event of a fault with the horn and lights switch, refer to the interpretation of status **ET081 "Lighting stalk position"**.

Use the following commands to check that the side lights, dipped headlights and main beam headlights are operating correctly.

- **AC055 "Side lights"**,
- **AC054 "Dipped headlights"**,
- **AC062 "Main beam headlights"**.

In the event of a fault, refer to the interpretation of the following faults:

- **DF087 "Side lights relay control circuit"**,
- **DF088 "Dipped headlights relay control circuit"**,
- **DF098 "Main beam headlights relay control circuit"**.

If the fault is still present, contact Techline.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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LIGHTING

Fault finding - Fault Finding Chart

80D

ALP 12	No courtesy lights
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NOTES	Only check this customer complaint after performing a complete check with the diagnostic tool . Check that fault DF139 "Courtesy lights" is not present. Deal with the fault if it is present.
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Check the conformity of status **ET463 "Door(s) or tailgate"** (see 87B, **Passenger compartment connection unit**).

Check that **LC121 "Gradual lighting and dimming of the courtesy lights"** is **"With"**, otherwise use **CF031 "Calibration"**.

If the fault is still present, contact Techline.

AFTER REPAIR	Carry out a complete check with the diagnostic tool .
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