

R1300GS Adv (KA2) OE Auxiliary headlights (Fogs) not working after Battery disconnection

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Version	date	Author	comments
1.0	18 Jan 2026	ST	Original draft analysis

Abbreviations and Legend Keys:

A240 : Digital Motor Electronics (DME) commonly known as Engine controller

A285 : Keyless Ride controller - commonly known as Keyless ignition

A512 : Body Domain Controller (BDC) commonly known as Body controller

E208 : headlight

E212 & E213 : OE Auxiliary headlights / Fogs

K14 : Main Relay

K97 : Headlight relay

Summary:

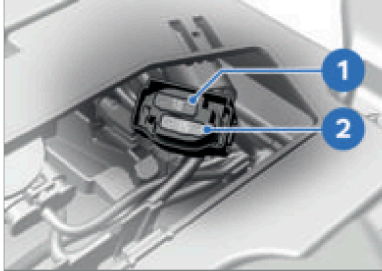
We have had various reports of customers or installers installing ezCAN/CANsmart/MotoCAN onto specifically a R1300GS Adv. whereafter the OE Aux headlights / fogs no longer work. This has nothing to do with the ezCAN/CASNsmart/MotoCAN and we suspect it is the K97 Headlight relay going into some form of lockup...

Reset the headlight relay by removing the F3 (15Amp) fuse that powers this relay.

From the R1300GSA owners Manual:

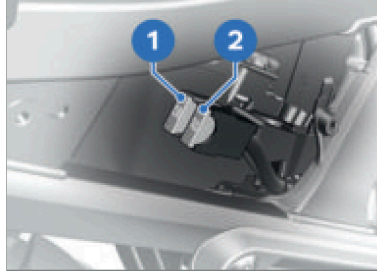
242 MAINTENANCE

Fuse assignment II

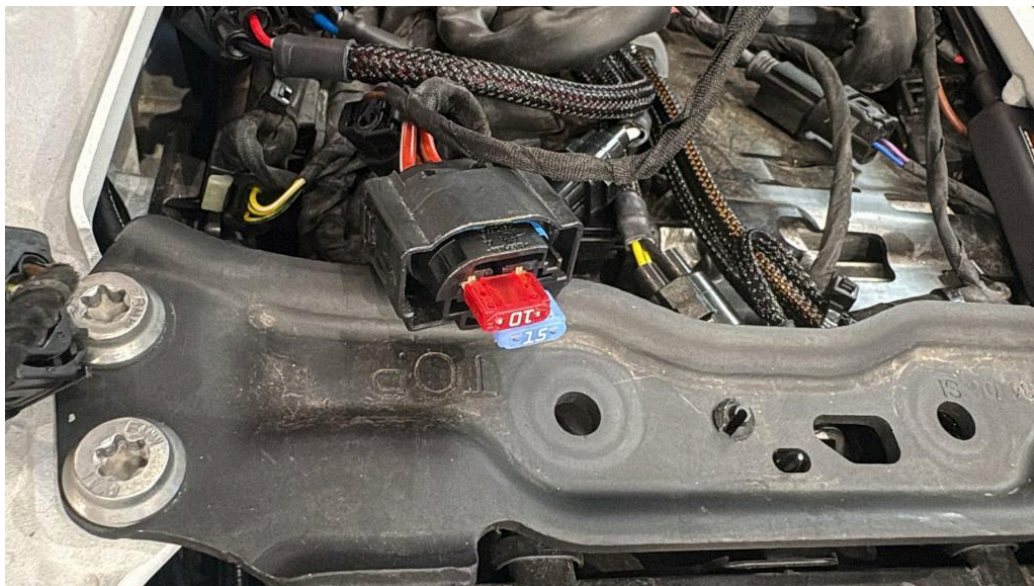


- 1** 10 A
Instrument cluster
Anti-theft alarm
Socket for onboard diagnosis
Seat heating
Central locking, cases and topcase
- 2** 15 A
Keyless Ride
Coil, isolating relay
Headlight

Fuse assignment III



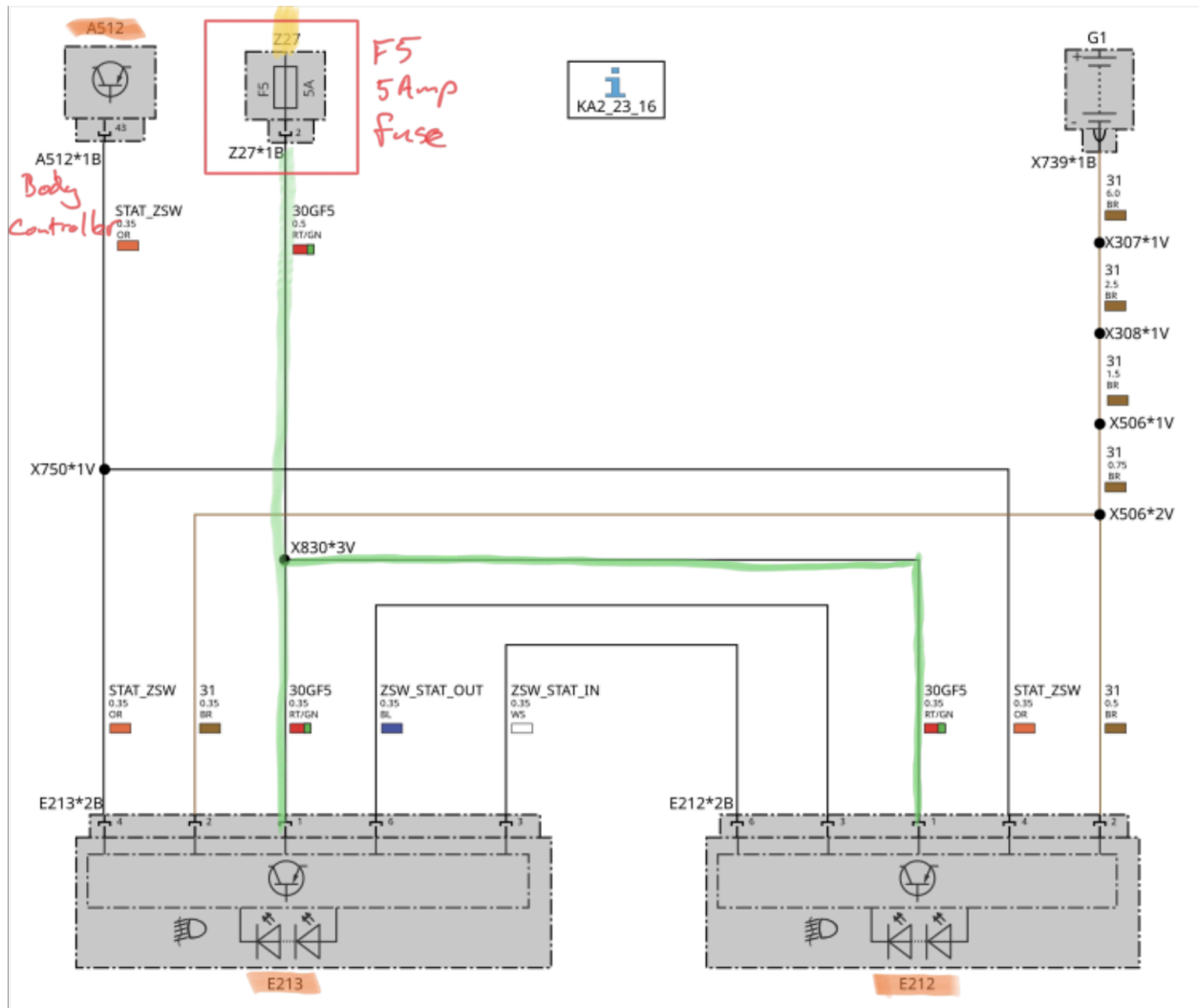
- 1** 50 A
Main fuse
- 2** 20 A
Rear radar
Front radar
Sensor box
Windscreen motor
CCP



Further information for self exploration

Wiring analysis

Below is the power and control circuitry to the OE Auxiliary headlights E212 and E213



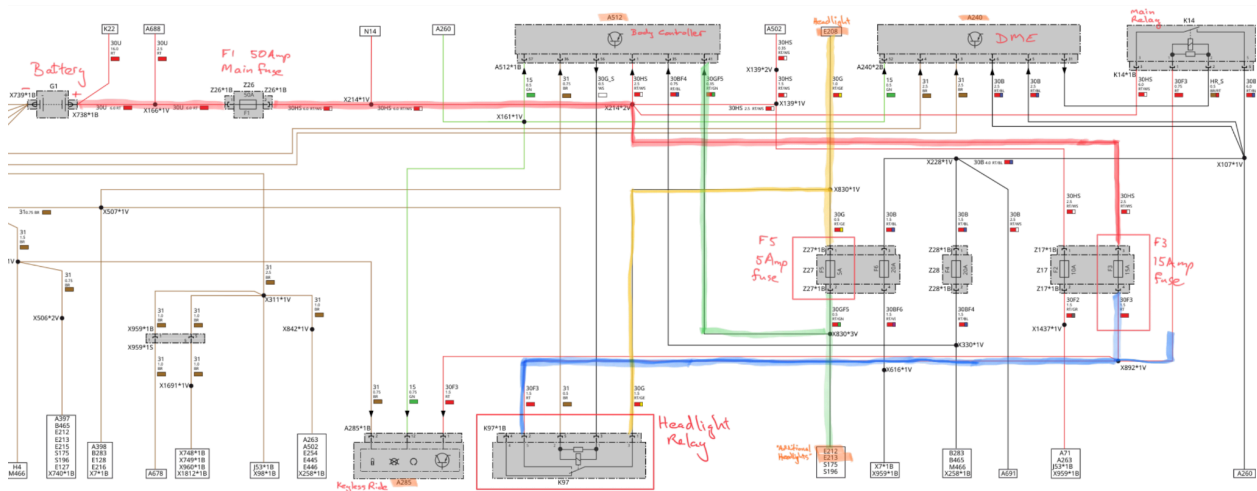
There are 2 wires between the two lights “ZSW_STAT_IN” and “ZSW_STAT_OUT”. Then there are 3 wires supplying the lights themselves, there are:

- The power that comes through F5 (5Amp) fuse (green highlight)
- The Battery negative shown as the brown trace
- The control/status line “STAT_ZSW” that is between both lights and what looks like pin43 from the Body controller (A512). This status line determines whether the Body controller raises an error or not..

Why would the body controller NOT detect one or more of the OPE Aux lights (E212 and/or E213)?

- One of more lights not plugged in
- Power not supplied
- No power through Fuse F5 (fuse blown or no supply to F5)
- Earth (Battery-) discontinuity
- Discontinuity in the wire going to the Body controller
- Faulty Body controller (Firmware or internal circuitry)

No let's look at the supply to fuse F5 (5 Amp)



Let follow the power:

1. The battery+ supplies Fuse F3 (15 Amp) through the main fuse F1 (50 Amp) - **red highlight**
2. F3 (15 Amp) supplies the Main relay (K14), the Headlight relay (K97) and the keyless ignition (A185) - **blue highlight**
3. When the Headlight relay (K97) is active it supplies power to the main Headlight (E208) as well as fuse F5 (5 Amp) - **yellow highlight**
4. Fuse F5 (5 Amp) in turn supplies the OE Auxiliary headlights (E121 & E213) - **green highlight**

Some notes:

- If the main headlight is working but the OE aux headlights are not, most likely fuse F5 (5 Amp) is blown (or both OE Aux lights are faulty - unlikely)
- If the main headlight is not working it could be fuse F3 (15 Amp) or a faulty Headlight relay (K97)
- It could also be a faulty body controller - highly unlikely...

Suggested tests:

1. Pull F3 (15 Amp) - test it for continuity.. Replace it, start, and test OE Aux headlights again
2. Pull F5 (5 Amp) - test for continuity.. Replace it, start, and test OE Aux headlights again
3. What could be helpful would be to test the Supply to the actual OE Aux headlights on their connectors..

Connectors to E212 & E213 OE Auxiliary Headlights:

