How to Disable Headlight Vertical Aim Control (BMW F-Series)

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Disclaimer

This guide is for informational purposes only. The author assumes no responsibility for any damage, legal issues, or functionality problems resulting from applying these changes. Proceed at your own risk. Always make a backup before coding any modules.

Introduction

BMW vehicles equipped with automatic headlight leveling may show errors or undesired behavior when retrofitting aftermarket or non-original headlights. In such cases, disabling the vertical aim control function can eliminate error messages and simplify setup. This guide explains how to disable headlight vertical aim in BMW F-series vehicles by changing a specific parameter via E-Sys coding.

Tools & Requirements

- Laptop with E-Sys software installed
- ENET cable (OBD to Ethernet)
- PSdZData for your vehicle's I-Level
- Basic understanding of FDL coding

Step-by-Step Procedure

Step 1 – Connect to Vehicle

1. Connect the ENET cable to your car and computer.

- 2. Launch E-Sys.
- 3. Open the "Connection" window and select your target vehicle chassis.
- 4. Click "Connect via VIN" or choose your series manually.

Step 2 – Access the Correct Module

- 1. Go to Expert Mode \rightarrow Coding.
- 2. Read the vehicle FA (if needed).

3. Load the SVT (VCM) and locate the module responsible for headlight functions (typically FEM_BODY, TMS, or BDC_BODY).

4. Click Read ECU and then locate the module again under the coding section.

Step 3 – Code C_MLC_ENA

- 1. Expand the module (e.g., FEM_BODY) and locate the parameter:
- C_MLC_ENA
- 2. Change its value from the default (often 01) to 00.
- This disables the vertical aim motor control (MLC = Motor Level Control).
- 3. Press "Code FDL" to apply the change.

Step 4 – Verify and Reboot

- 1. Once coding completes, restart the ignition.
- 2. Use ISTA+ or a diagnostic tool to clear any remaining errors.
- 3. Verify that no vertical aim errors appear in the instrument cluster.

Conclusion

By setting the C_MLC_ENA parameter to 00, you've successfully disabled the automatic vertical aim control system. This change is useful when running fixed-position headlights, especially after retrofitting units that do not support dynamic leveling. Always verify changes using ISTA+ or an equivalent tool, and ensure you're compliant with local regulations regarding headlight systems.