

A2L Debugging Checklist

(File Name Suggestion: a2l-debugging-checklist.pdf)

Use this as a downloadable PDF or checklist section.

A2L Debugging Checklist for XCP Calibration

1. Address Validation

- Confirm ECU memory address matches firmware map
- Verify address extension if used

2. Datatype Verification

- Confirm UBYTE, UWORD, ULONG alignment
- Ensure signed/unsigned correctness

3. Byte Order Check

- Verify little-endian or big-endian configuration

4. Conversion Method Validation

- Confirm scaling factor
- Confirm offset value
- Verify physical unit

5. Record Layout Check

- Ensure memory structure matches ECU implementation

6. Event Configuration

- Confirm event channel exists
- Check acquisition rate

7. Min/Max Limits

- Ensure physical limits are realistic
- Prevent calibration overflow

8. Tool Compatibility

- **Validate with calibration tool**
- **Check XCP master configuration**

9. Version Alignment

- **Confirm A2L matches ECU firmware version**
- **Avoid A2L drift**

10. Large File Validation

- **Use A2L validator tools**
- **Remove unused objects**

This checklist makes your page practical and highly valuable.

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