



Alliance of Automotive Manufacturers Infotainment System Compliance Checklist

1 Scope

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose. The purpose of this test procedure is to describe the process for validation of a telematics or infotainment product to the requirements presented in the Vehicle Technical Specification (VTS) 3.2.1.2.6.12 (see 2.3). It describes the Driver Workload Assessment (DWA) Checklist, a tool which is used to provide information and relevant data to the Driver Workload Performance Assessment Committee (DW-PAC) (see 2.3). This information forms the basis of a decision as to whether the features of the system represent “an appropriate balance of the design imperatives and a consistency with the Alliance Principles,” (see 2.3) and is so stated in the concurrence letter issued by the DW-PAC, a requirement for 100% validation.

With this procedure, a Performance Engineer can establish the need, (or lack of need) for Driver Workload Assessment processes. Specifically, this procedure introduces and explains the concept of the DWA Checklist, the tool used to make such a determination at various times in the lifecycle of component development or of the affiliated vehicle/system program(s). This tool can be used for multiple assessments along the development lifecycle, by multiple users and functions, in order to align design, development, implementation and integration with the Alliance principles as stated in VTS paragraph 3.2.1.2.6.12.

1.2 Foreword. Not applicable.

1.3 Applicability. This test procedure is applicable to vehicle programs with Vehicle Program Initiation (VPI) dates after September 30, 2003, or vehicles deemed by the DW-PAC as being in need of testing due to the nature of the in-vehicle information or communications content.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW15467 (I) GMW15591 (I)
GMW15558 (I) GMW15594 (I)
GMW15577 (I)

(I) = This is a standard that is distributed only internally within General Motors. This standard cannot be distributed outside of General Motors. Contact the GM lead engineer for any instructions.

2.3 Additional References.

- Alliance of Automotive Manufacturers (Alliance) Driver Focus Telematics Working Group, 2006. Statement of Principles, Criteria and Verification Procedures on Driver Interactions with Advanced In-Vehicle Information and Communication Systems, v.2.1.
- DWA Checklist Tool and the Alliance Document v.2.1.
- Vehicle Technical Specifications.
3.2.1.2.6.12 Operational Safeguards on Driver Workload.

3 Resources

3.1 Facilities. Not applicable.

3.1.1 Calibration. The test facilities and equipment shall be in good working order and shall have a valid calibration label.

3.1.2 Alternatives. Alternative test facilities and equipment may also be used. However, all measuring variables as specified in this standard shall be determined correctly with respect to their physical definition.

3.2 Equipment. A laptop PC will be needed. The checklist was designed to be used primarily as an electronic tool, in conjunction with an electronic version of the Alliance Document. If necessary, paper copies of both tools can be substituted.

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In order to effectively calculate the down vision angle for the position of the integrated system, the assessor must use the math calculation fully described within the Alliance Document.

3.3 Test Vehicle/Test Piece. The checklist tool was designed to be administered at several times in the system development lifecycle. It is important that all changes in software version, system functionality or components be documented in the respective versions of the checklist, as is specified within the tool instructions.

3.4 Test Time.

Calendar time:	1 to 2 days per test
Test hours:	4 to 6 hours
Coordination hours:	10 hours

3.5 Test Required Information. The required information is contained in the instructions for the assessment and in the Alliance Document. Additionally, evaluators are encouraged to add comments on procedures included in the assessment to increase the body of procedural knowledge for future evaluators.

Depending on the development stage of the program, there might have been previous driver workload assessments completed on the component or vehicle (i.e., test procedures):

- GMW15594 (Task Analysis)
- GMW15591 (DEMAND Modeling)
- GMW15577 (Occlusion Testing)
- GMW15467 (Static Load Testing)
- GMW15558 (On Road Testing)

This information should be available to the lead evaluator to complete checklist line items.

3.6 Personnel/Skills. The assessment is meant to be administered by a team of evaluators, which should include the Human Vehicle Integration (HVI) Performance Engineer for the program (who is considered the lead evaluator), the HVI process expert (who has previously experienced the Driver Workload Assessment Training), the Radio System Design Engineer (DE), and the Navigation System Lead for the component. The combined expertise used in this evaluation will allow discussion of system improvements proposed as well as the capture of gaps in compliance to the alliance requirements. This will also allow the integration of subsystem specification information into the assessment information.

In addition to the DWA training program, the combined members of the assessment team

should have a strong familiarity with the features and functions of the system. If multiple lead evaluators become involved during the lifecycle of development, the more recent evaluator should be fully versed in the program status, component development, or any proposed changes to the component, the system, or the placement of that component within the vehicle.

4 Procedure

4.1 Preparation. Preparation includes acquiring the simulation, component, or vehicle and assembling the assessment team. The necessary documentation, including the DWA Checklist Tool and the Alliance Document v.2.1.

4.2 Conditions. As part of the checklist assessment, potential for glare should be reviewed in an environment where there can be variation in lighting conditions.

4.2.1 Environmental Conditions. Not applicable.

4.2.2 Test Conditions. Deviations from the requirements of this standard shall have been agreed upon. Such requirements shall be specified on component drawings, test certificates, reports, etc.

4.3 Instructions. Instructions are imbedded into the DWA Checklist, along with contacts to seek for help. Pages 1 through 3 capture information about the evaluator, the component or vehicle owner's contact information, and component/system features. Page 4 explains a breakdown of responsibility and expected deliverables, and Page 5 explains potential ratings.

5 Data

5.1 Calculations. No calculations are required.

5.2 Interpretation of Results. Results are presented to the Driver Workload PAC for discussion and determination of path to concurrence with requirements.

5.3 Test Documentation. The checklist tool is designed for the inclusion of documentation of the assessment results inside the tool. The Alliance Document version 2.1 is used in conjunction with the Checklist Tool to complete the assessment. The completed assessment is sent to the process owner to be stored within the Performance and Quality Management System (PQMS) in the Safety Database for future reference.

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