

6.3 Other ADS Requirements

- 6.3.5.1 For vehicles without manual driving controls, suitable means shall be made available, where necessary (e.g., special controls, test modes, ADS functions) to enable the performance of the physical checks required for mandated inspections of other vehicle systems in the jurisdiction of operation (e.g., Periodical Technical Inspection, safety standards inspection, etc.)

Explanation of the requirement

The intention of this requirement is to enable technical inspection on ADS vehicles that lack manual controls.

Examples of operations include :

- Operating the braking and steering systems
- Operating the engine at a specific rpm
- Activating exterior lighting and light signalling devices

- 6.3.6 The ADS shall receive all signals transmitted to it by other systems of the ADS vehicle and appropriately manage them. A list of these signals and how they are managed shall be included in the manufacturer's safety case.

Explanation of the requirement

This requirement covers both DDT and non-DDT signals, (whether prescribed by other regulations or not) designed to be transmitted to the ADS.

Signals could include logic (true / false), variables (the value of a parameter on a continuous scale, and/or other information “Manage” is intended to include a response, including dealing with multiple signals received simultaneously, appropriate to the level of urgency of the signal. Potential responses could include the ADS directly taking action or informing a user or a remote operator.

Examples of signals received from other vehicle systems (if applicable)

- Braking
- Steering
- Lighting
- Powertrain
- Tyre Pressure Monitoring System (TPMS)
- Emission control system
- Fire / smoke in a compartment
- Rechargeable energy storage system warning
- Safety belt unfastened
- Anti-theft
- Doors opened / unlocked
- Anti-pollution
- Passenger stop request
- Opening of emergency exits
- Absence/removal of fire extinguishers
- Absence/removal of emergency case
- Absence/removal of removable lamp
- Absence/removal of window breaker device
- Emergency command for door opening
- Emergency window not locked
- Hatches not closed
- Retractable step not retracted

- 6.3.7 While an ADSF-2 is active, the ADS shall manage relevant non-DDT-related tasks (which would otherwise be performed by a driver) in accordance with the manufacturer's safety case.

Alternatively, where the ADS does not perform such necessary tasks, the safety case shall describe how these tasks are performed.

Explanation of the requirement

This requirement requires that for an ADSF-2 where there is not a fallback user who can take responsibility for them, all the non-DDT-related tasks a driver would normally fulfil must be managed. This management may take the form of the ADS fulfilling the task or some other non-ADS method such as the vehicle owner being responsible.

Below is a non-exhaustive list of non DDT tasks, not all items will be appropriate for all use cases.

Examples of non-DDT-related tasks (if applicable)

Checking the correct working condition of the vehicle, including:

- Brake wear
- Tyre wear/tear pressure etc
- Fluid levels
- Lamps operation/angle
- Trailer correctly coupled
- Energy level
- Wheel alignment
- Locked status of doors, hood, trunk, liftgate, fuel cap etc
- Broken window, body damage or other safety hazard for occupants or other road users
- Actual mass compatible with maximum mass (including weight by axle)
- Dimensions of the vehicle with load compatible with permitted limits
- Position and situation of the load
- Presence of crew member / on-board operator (if required for that ADS feature)
- Driver warning system
- Driver inducement system
- Absence of temporary general restriction on road use (due to a severe incoming weather event, public safety, curfew, etc.)
- Position of the mobile equipment mounted on the vehicle

Checking passenger safety, including:

- Safety belts
- Airbags (operational status)
- Number of passengers compatible with vehicle capacity
- Presence and number of person with limited mobility on board
- Presence of person with limited mobility waiting for embarkment
- Absence of passengers (in vehicles of Category Y)

Operating non-DDT, safety-relevant elements of the vehicle, including:

- Doors and door locks (doors can be operated automatically, or operated by the on-board or remote operator, or operated locally by the passengers) The doors can be the service doors or the emergency doors
- Tyre wear/tear, pressure, etc.
- Windows and window locks
- Folding roof, retractable hardtop, panoramic roof, etc.
- Seating position, angle
- Retractable steps (bus)
- Ramp, liftgate, etc.
- Trailer coupling
- Windscreen wipers
- Defrosting and demisting the windscreen
- Climate control

- Hatch, trunk
- Emergency exits
- Indoor lights control
- Advance-warning triangles

6.3.8 The performance of the ADS shall not be adversely affected by magnetic or electrical fields

Explanation of the requirement

Testing for performance under magnetic or electrical fields should include those situations which are relevant for the ADS feature together with its ODD