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**Vehicle test station evaluation — Code of practice**



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## **Introduction**

<Text indicating rationale for the development/harmonization of the standard>

Public Review Draft for comments only — Not to be cited as African Standard



## Vehicle test station evaluation — Code of practice

### 1 Scope

**1.1** This standard covers general provisions for the evaluation of the technical competence of a vehicle test station. It also serves as a basis for determining the grading and registration of the vehicle test station on the grounds of its adherence to the provisions of this standard, the suitability of the equipment and the competence of registered examiners of vehicles employed.

**1.2** The principal grades intended for vehicle test stations based on the available test lane classes in accordance with ARS 1355-5 are:

- a) grade A – examination and testing of any class of vehicle; and
- b) grade B – examination and testing of motor vehicles other than a goods vehicle or a bus of gross vehicle mass exceeding 3 500 kg; and
- c) grade C – examination and testing of motorcycles and mopeds.

**1.3** In addition, where the population of a rural area does not justify the introduction of a permanent vehicle test station, a mobile vehicle test unit that complies with the provisions of this standard and that is confined to a specific area should be allowed.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ARS 1355-1: *Vehicle Standards — Specification for Vehicle Roadworthiness — Part 1: Roadworthiness of vehicles already in use*

ARS 1355-4: *Vehicle Standards — Specification for Vehicle Roadworthiness — Part 4: Requirements for vehicle examiners*

ARS 1355-5: *Vehicle Standards — Specification for Vehicle Roadworthiness — Part 5: Requirements for testing equipment*

ISO 5130, *Acoustics — Measurements of sound pressure level emitted by stationary road vehicles*

UNECE R13, *Uniform provisions concerning the approval of vehicles of categories M, N and O with regard to braking*

UNECE R13-H, *Uniform provisions concerning the approval of passenger cars with regard to braking*

UNECE R26, *Uniform provisions concerning the approval of vehicles with regard to their external projections*

UNECE R58, *Uniform provisions concerning the approval of rear underrun protective devices (RUPDs) and rear underrun protection (RUP)*

### 3 Terms and definitions

For the purpose of this standard the following definitions and abbreviations apply.

# DARS 1357:2020

## 3.1 Definitions

### 3.1.1

#### **acceptable**

acceptable to the inspectorate of vehicle test stations

### 3.1.2

#### **audit**

systematic investigation by the appointed inspectorate, with proof of this appointment, to determine a vehicle test station's adherence to established procedures and to this standard as mandated by the relevant domestic legislation

### 3.1.3

#### **calibration**

comparison between an instrument and a measuring standard of higher accuracy to detect, correlate, adjust and document the accuracy of the item being calibrated

### 3.1.4

#### **corrective action**

any change introduced into the equipment, methods, procedures or sequence of the system in order to prevent the recurrence of a specific deficiency in the product, service or system

### 3.1.5

#### **customer**

applicant

person or persons who require(s) or obtain(s) services rendered by a vehicle test station

### 3.1.6

#### **floor working space**

floor level in an inspection pit on the lowest level that allows the vehicle examiner free and unimpeded access to the vehicle and the underside of the vehicle

### 3.1.7

#### **inspectorate of vehicle test stations**

institution appointed as such by the relevant minister in accordance with domestic legislation

NOTE Inspectorate of vehicle test stations is hereafter referred to as inspectorate.

### 3.1.8

#### **procedure**

documented description of an activity, including the sequence of operations, methods to be employed and equipment to be used

### 3.1.9

#### **quality system**

documented method of operation, based on this standard, which identifies the activities and establishes controls of an organization

### 3.1.10

#### **roadworthiness**

descriptive of a vehicle that complies with the relevant domestic legislation and with DARS 1355-1

### 3.1.11

#### **vehicle test station**

#### **VTS**

institution with facilities and equipment compliant with ARS 1355-5, whose function is to examine, measure or otherwise determine the roadworthiness of a vehicle by vehicle examiners compliant with ARS 1355-4 with respect to the requirements of the relevant domestic legislation and with ARS 1355-1



### **3.2 Abbreviations**

<b>ANPR</b>	automatic number plate recognition.
<b>COF</b>	Certificate of Fitness issued after a periodic roadworthiness test which is to be displayed on the vehicle to which it relates
<b>GPS</b>	Global Positioning System
<b>NTIS</b>	National Transport Information System
<b>UN ECE</b>	United Nations Economic Commission for Europe
<b>VIN</b>	vehicle identification number issued, affixed to and recorded on a vehicle in accordance with ISO 3779, ISO 3780 and ISO 4030 or FMVSS 115, also included in the definition of chassis number in domestic legislation

## **4 Organization**

### **4.1 Management representative**

The VTS shall appoint a management representative who shall have the necessary authority for, and the responsibility of, ensuring that the levels of technical and managerial competence required for the successful evaluation of the VTS in terms of this standard are maintained.

The management representative shall:

- a) be a registered examiner of vehicles, or
- b) be in possession of a related technical qualification.

Where a management representative was appointed without compliance with (a) or (b) above, such a qualification shall be obtained within a period of two (2) years.

**NOTE** For the interim appointed management representatives may be trained by an approved service provider approved by the inspectorate.

### **4.2 Field of application and methods**

The VTS shall ensure that:

- a) its organizational structure is clearly documented in the form of an organogram,
- b) the field of application of the VTS, as recommended by the appointed inspectorate authority and determined by the relevant national authority, is clearly stated by its grade, and
- c) all methods and procedures used in each activity are clearly documented and, in particular, that the procedures for continuous co-ordination with the appointed inspectorate authority are clearly stated.

### **4.3 Policy documentation**

**4.3.1** The VTS shall develop and shall effectively maintain clear and concise documentation of its policy regarding:

- a) inspection management, as required by the provisions of this standard,
- b) the legality of procedures and operations,
- c) general good housekeeping, and
- d) good public relations.

**4.3.2** Rules and measures for ensuring the protection of proprietary rights and confidential information shall be instituted and shall be effectively maintained.

**4.3.3** Procedures shall be laid down for the periodic review of organizational matters, the documentation (including amendments thereto), and the written notification and distribution thereof to all parties concerned.

**4.3.4** Rules and measures shall be instituted and shall be effectively maintained to limit the vehicle inspection and testing activities of the VTS to those covered by the relevant provisions of DARS 1355-1:2020.

**4.3.5** Provision shall be made in relevant documentation for the authorized access of the appointed inspector to all applicable documents and procedures.

**4.3.6** The policy statement of the VTS shall be placed on permanent public display.

## **5 Quality management system**

### **5.1 Quality documentation and documentation control**

**5.1.1** The VTS shall operate in accordance with a formalized quality system that is appropriate to its authorization and to the range and volume of vehicle inspections performed. All procedures related to the quality system shall be so documented as to cover all the provisions of this standard and any such further procedures deemed necessary for the assurance of good housekeeping.

**5.1.2** Documentation shall be so presented that each person involved with inspection matters is aware of both the extent and the limitations of his/her area of responsibility.

**5.1.3** The preparation, approval and implementation of any changes, amendments or modifications to any work instruction or test method shall be clearly defined and any amendments to existing documents shall indicate the date and the author or source of the amendment.

**5.1.4** The VTS shall establish and maintain a system to control all documentation that relates to the provisions of this standard. The system shall ensure that:

- a) the latest issues of the following mandatory documents are available at all points of issue or use:
  - 1) for grade A: UNECE R58 and UNECE R26; and
  - 2) for grades A and B: this standard, UNECE R13, UNECE R13-H, and the relevant national legislation,
- b) all amendments to documentation are in writing and are processed in a manner that will ensure prompt response,
- c) records of amendments are updated as the amendments are made,
- d) an updated document (incorporating any amendments) is issued promptly, and
- e) provision is made for the prompt removal of obsolete documents from all points of issue or use.

### **5.2 Review of the quality management system**

**5.2.1** The continued effectiveness of the quality system established in accordance with the provisions of this standard shall be ensured by an annual systematic review by the VTS. Records of such reviews and of any corrective action taken shall be maintained and, when relevant, made available to the inspector.

**5.2.2** Notwithstanding and in addition to any actions performed to establish whether particular aspects of the inspection system are in compliance with documented procedures, the VTS shall, at such intervals as are prescribed by the management representative (see 4.1), be subjected to a comprehensive self-audit for

verification of compliance of all relevant matters within the provisions of this standard, and of the documented system.

### **5.3 Work instructions**

The VTS shall develop and maintain clear and complete documented instructions that prescribe the manner of executing the following vehicle inspection work:

- a) the distribution of documentation,
- b) the admission of vehicles to the VTS,
- c) the approach to, and treatment of, customers,
- d) vehicle identification examination,
- e) the completion of inspection records,
- f) the payment of test fees,
- g) the issue of roadworthiness certificates and inspection records,
- h) the control of records,
- i) the procedures in the case of retests,
- j) in-house maintenance and calibration,
- k) vehicle testing,
- l) the processing of vehicle test information onto the NTIS, and
- m) actions in the event of NTIS failure.

### **5.4 Corrective action**

**5.4.1** The VTS shall develop and maintain documented procedures for

- a) determining the implications of any deviations from authorized procedures that occur and what corrective action such deviations require,
- b) the continued monitoring of procedures and records, in order to detect, eliminate and prevent any suspicious inspection results, and
- c) ensuring that corrective actions are effective.

**5.4.2** The VTS shall have procedures to be followed in the case of

- a) customer complaints,
- b) document problems,
- c) personnel problems,
- d) managerial problems, and
- e) administration problems (internal and external).

## 5.5 Personnel

**5.5.1** All personnel shall be competent to perform the functions allocated to them.

**5.5.2** The proportion of senior (supervisory) to junior (non-supervisory) staff should be such as to ensure effective supervision of all the work. Where relevant, one member of staff, competent in the routine work involved, shall be nominated to supervise the running of the facility in the absence of the management representative.

**5.5.3** The VTS shall identify the training requirements for specific technical or quality assurance functions.

**5.5.4** Records of the qualifications and experience of each staff member and of his/her position in the organizational structure shall be available and shall be kept up to date.

**5.5.5** The persons responsible for the functions given in 5.8 shall receive written authorization by the management representative to perform these functions.

**5.5.6** Vehicles shall only be examined by a graded vehicle examiner who is registered with the central register for vehicle examiners. He/she shall, at any time be able to demonstrate a sound understanding of those sections of the following documents that are appropriate to the grade of the VTS:

- a) the relevant national legislation,
- b) ARS 1355-1,
- c) ARS 1355-4, and
- d) the mandatory documents in 5.1.4(a).

**5.5.7** The VTS shall establish a system for disciplinary procedures.

## 5.6 Facilities and control of testing and measuring equipment

**5.6.1** Facilities and equipment listed in ARS 1355-5, applicable to the grading of the VTS, shall be maintained in a serviceable condition and be readily available for use by the VTS. A record of all such items and a means of identification shall be maintained.

**5.6.2** The equipment shall only be operated by authorized staff, or under the direct supervision of authorized staff.

**5.6.3** Information concerning items of equipment that require special instructions regarding their operation and maintenance shall be kept in files (or similar systems) that are properly maintained and readily accessible for use by the relevant personnel.

**5.6.4** Equipment shall be properly maintained and protected against corrosion and other causes of deterioration. An effective maintenance procedure shall be available.

**5.6.5** An item of equipment that has been damaged or is likely to give suspect results, or that has been shown by calibration or in other ways to be defective shall be clearly labelled as such and withdrawn from use until it has been repaired and calibrated or otherwise proved to be in good working order.

**5.6.6** For each item of equipment, files shall be maintained that include

- a) the manufacturer's specifications,
- b) operating instructions,
- c) maintenance instructions,

- d) calibration recommendations,
- e) the date of purchase,
- f) maintenance work carried out, and
- g) the results of any calibration.

**5.6.7** In the absence of a manufacturer's recommendations, equipment shall be calibrated during the periods outlined in Table 1.

**Table 1 — Calibration periods**

1	2
Equipment	Calibration period
Roller brake tester	1 year
Headlamp beam checking device	1 year
Wheel alignment gauge	1 year
Kingpin and fifth wheel gauges	1 year
Tyre tread depth gauge	1 year
Measuring tapes	1 year
Height gauge	1 year
Straight edge	1 year
Turning radius measuring device	1 year
Vernier caliper	1 year

**5.6.8** Testing and measuring equipment, where appropriate, shall be calibrated before being commissioned and thereafter shall be calibrated in accordance with an established programme and schedule at appropriate intervals, dependent on the nature of the equipment and what is recommended by the equipment manufacturer.

**5.6.9** The programme for calibration shall be so designed that testing equipment is calibrated by a person or organization equipped and authorized to do the work. Valid certificates of calibration for all testing equipment shall be available on site.

**5.6.10** The testing equipment shall be calibrated to an accuracy commensurate with the accuracy required in the use of the equipment.

**5.6.11** In-house reference standards of measurement held by a VTS shall not be used for any purpose other than calibration.

**5.6.12** The vehicle testing shall be stopped if any item of the relevant equipment or if the facility is not available and if no alternative arrangement can be made. However, if an alternative arrangement is made to test the vehicle, it shall be recorded on the required technical records.

## **5.7 Subcontractors**

The inspection or testing of a vehicle for roadworthiness shall not be subcontracted to outside parties, unless prior written permission has been obtained from the relevant national authority.

## **5.8 Technical records**

Technical records shall be kept and retained for at least five years in respect of all inspection, testing and results of calibrations, in particular the following:

- a) A co-ordinated system shall be used throughout all the separate parts of the VTS.

- b) Records in the form of loose-leaf sheets shall at all times be properly filed.
- c) All observations and calculations shall be recorded at the time they are made.
- d) The records for each inspection or test shall contain sufficient information to permit the tracing of possible sources of error and to permit, where necessary, satisfactory repetition of the inspection or test under the original conditions.
- e) All records shall be protected from loss, damage or misuse (where computer data facilities are used for recording purposes, precautionary measures shall have been instituted to prevent accidental erasure of data from the system).
- f) Any departures from any test procedure, inspection procedure, specification, work instruction or other technical procedure as originally documented shall be recorded and justified, together with authorization, where appropriate.
- g) The VTS shall keep a record of all technical work contracted to outside parties.
- h) A register shall be kept that contains the designation of staff members responsible for
  - 1) maintaining the vehicle test register,
  - 2) handling equipment maintenance work and calibration,
  - 3) submitting statistical returns to the relevant national authority (see foreword),
  - 4) submitting technical queries to the appointed inspectorate authority,
  - 5) maintaining a file on, and analysing, customer complaints,
  - 6) establishing and analysing the average throughput times,
  - 7) maintaining copies of the documents listed in 5.1.4(a),
  - 8) preparing and maintaining procedures for the admission of vehicles to the VTS,
  - 9) approaching and treating customers,
  - 10) identifying vehicles,
  - 11) producing documentation
  - 12) handling payment of test fees,
  - 13) issuing of roadworthiness certificates and inspection records, and
  - 14) procedures in the case of retests and other related matters.

### **5.9 Statistical returns to the relevant national authority**

#### **5.9.1 Responsibility**

The staff member responsible in terms of 5.8(h)(3) shall submit accurate monthly statistical returns to the relevant national authority (see foreword). The staff member shall keep a file of the returns and of the comments received from the relevant national authority.

NOTE The returns will be used by the relevant national authority and by the inspectorate authority to assess the following:

- a) a comparison of the number and types of vehicles being tested in different parts of the country,

- b) the vehicle defects that predominate nationally and by area,
- c) the relative stringencies of examinations at particular VTS', compared with the national norms, and
- d) changes over the years in the general state of vehicle roadworthiness.

## 5.9.2 Analysis of returns

The staff member responsible in terms of 5.8(h)(3) shall regularly analyse the returns and the comments received from the relevant national authority (see foreword) and shall communicate this analysis to the appropriate personnel of the VTS at intervals not exceeding one month.

## 5.10 Technical queries to the appointed inspectorate authority

### 5.10.1 Responsibility

The staff member responsible in terms of 5.8(h)(4) shall submit written technical queries to the inspectorate authority on a form as shown in annex A and shall keep a file of these technical queries together with the responses received from the appointed inspectorate authority.

### 5.10.2 Analysis of technical queries

The staff member responsible in terms of 5.8(h)(4) shall regularly analyse the technical queries and the responses received from the inspectorate authority and shall communicate this analysis to the appropriate personnel of the VTS at intervals not exceeding one month.

NOTE The written technical queries should be used by the inspectorate authority to

- a) assess when amendments, elaboration or additions are necessary to this standard, or regulations of the relevant national legislation,
- b) ensure uniformity of approach,
- c) assess which VTS's require aid so that liaison visits to selected areas can be planned, and
- d) detect emerging problems at an early stage so as to be able to advise all VTS's promptly.

## 5.11 Customer complaints

### 5.11.1 Responsibility

The VTS shall display its customer complaints procedure to the public and all customer complaints shall be recorded.

The staff member responsible in terms of 5.8(h)(5) shall, in the event of a customer complaint, provide the customer with a complaint form as shown in annex B and shall keep a file of such completed complaint forms.

### 5.11.2 Analysis of complaints

The staff member responsible in terms of 5.8(h)(5) shall regularly analyse the complaints and any comments and shall communicate this analysis to the appropriate personnel of the VTS at intervals not exceeding one month in order to achieve the objective of minimizing future complaints.

NOTE The complaints records will be used by the inspectorate authority to

- a) assess whether there are common problems (on a national basis) that require solutions, and,
- b) in cases where problems are confined to a particular area, ascertain whether these are created primarily by the VTS's or by the operators concerned.

## 5.12 Throughput times

### 5.12.1 Responsibility

The staff member responsible in terms of 5.8(h)(6) shall compile the statistics for the VTS that show the average duration of the examination (i.e. the time that passes from when the examination is started to the time when the inspection record is issued) and establish suitable norms for the VTS, based on an analysis of these data.

NOTE 1 The information for what is accepted as being the busiest and least busy day of the week should be compiled at monthly intervals. Seasonal peaks and lows and days when the staff complement is either abnormally high or abnormally low should be avoided for the purposes of this return.

NOTE 2 A form as shown in annex C should be filled in and submitted to the relevant national authority and to the appointed inspectorate authority at six-monthly intervals.

### 5.12.2 Analysis of throughput times

The staff member responsible in terms of 5.8(h)(6) shall regularly analyse the throughput times and the comments from the inspectorate authority and shall communicate this analysis to the appropriate personnel of the VTS at intervals not exceeding six months in order to achieve the objectives of minimizing waiting time and ensuring a reasonable duration for the examination of a vehicle.

NOTE The throughput time data will be used by the inspectorate authority to

- a) assess the national norms, and
- b) advise each VTS where it stands in relation to national norms, so that in some cases steps can be taken to introduce improvements.



## Inspectorate authority — Technical enquiry

Public &

## Annex B

(normative)

## Vehicle Test Station — Customer complaint

Test station	
Address	.....
	.....
	Telephone No. ....
Station grade	
Province	
Responsible officer	
Vehicle manufacturer	
Registration No.	
Vehicle model	
Chassis No.	
DoT registration	
Date of inspection	
<b><u>Details of complaint</u></b> <div style="border: 1px solid black; height: 150px; margin-top: 5px;"></div>	
<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <hr style="width: 150px; border: 0.5px solid black;"/> <p>Signature</p> </div> <div style="text-align: center;"> <hr style="width: 150px; border: 0.5px solid black;"/> <p>Date</p> </div> </div> <p style="margin-top: 10px;">Supportive data attached:    YES/NO    (delete which is not applicable)</p>	

**Annex C**  
(normative)

**Vehicle Test Station — Throughput times/vehicle**

Vehicle Test Station			
Address			
Station grade			
Province			
Responsible officer			
Date			
Vehicle type	Average waiting time before examination	Average examination time (until issue of inspection record)	No. of vehicles
Cars			
LCV			
HCV			
Trailers			
Motorcycles			
1) From the time the client's application form is received, to the time the inspection starts.			

Number of COFs issued: .....

**Bibliography**

ARS 1355-2: *Vehicle standards — Specification for vehicle roadworthiness — Part 2: Roadworthiness of vehicles prior to entry into service, and thereafter*

ARS 1355-3: *Vehicle Standards — Specification for vehicle Roadworthiness — Part 3: Roadworthiness — Supporting information*

ARS 1379: *Definitions and classifications of power-driven vehicles and trailers*

FMVSS 115: *Federal VIN Requirements (Title 49, Chapter V, Part 565)*

ISO 3779: *Road vehicles — Vehicle identification number (VIN) — Content and structure*

ISO 3780: *Road vehicles – World manufacturer identifier (WMI) code*

ISO 4030: *Road vehicles – Vehicle identification number (VIN) – Location and attachment*

ISO/IEC 18013-1: *Information technology — Personal identification — ISO-compliant driving licence — Part 1: Physical characteristics and basic data set*

