

**Maximum road speed limiters for motor vehicles—
Part 1: Performance and installation requirements**

PUBLIC REVIEW DRAFT, FEBRUARY 2018

DRAFT KENYA STANDARD KS 2295-1:2018 PUBLIC REVIEW DRAFT

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented in the technical committee.

Motor Vehicle Inspection Unit Road Safety Association of Kenya Kenya Federation of Jua Kali
Association Kenya Automotive Security Association Ministry of Transport, Infrastructure,
Infrastructure, Housing and Urban Development (CM&IE)
(KENAS)
Safety Association
Systems Limited

Manufacturers East Africa Ltd.
Secretariat

REVISION OF KENYA STANDARDS

To ensure progress in industry, Kenya Standards shall be regularly reviewed. Submitted standards, addressed to the Managing Director, Kenya

Housing and Urban Development (CM&TE) Kenya Accreditation Services (KENAS) Speed Governors and Road
Safety Association Saferider Management Systems Limited Pinnacle Systems Ekas Technologies Matatu Welfare
Association KEMRA Associated Battery Manufacturers East Africa Ltd. Kenya Bureau of Standards – Secretariat

for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

© Kenya Bureau of Standards, 2018

Copyright: Users are reminded that by virtue of section 6 of the Copyright Act, Cap. 130 of the Laws of Kenya, copyright subsists in all Kenya Standards and except as provided under section 7 of this Act, no Kenya Standard produced by Kenya Bureau of Standards may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from the Managing Director.

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974 Nairobi, Tel.: (+ 254 020) 605490, 603433, 602350/1, 603352, Fax: (+ 254 020) 604031

E-Mail: info@kebs.org, Web: <http://www.kebs.org>

Coast Regional Office

P.O. Box 99376, Mombasa
Tel.: (+254 041) 229563, 230939/40

Western Kenya Regional Office

P.O. Box 2949, Kisumu
Tel.: (+254 057) 23549, 22396

Rift Valley Regional Office

P.O. Box 8111, Eldoret
Tel.: (+254 053) 33151, 63377

**rs for motor vehicles
stallation requiremen**

© KEBS 2018 KS 2295-1:2018

**cles— P
art 1:
Performa
nce and
installati
on
requirem
ents**

Rift Valley Regional Office

P.O. Box 8111, Eldoret Tel.: (+254 053) 33151, 63377 Fax: (+254 053) 33150

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974 Nairobi, Tel.: (+ 254 020) 605490, 603433, 602350/1, 603352, Fax: (+ 254 020) 604031

E-Mail: info@kebs.org, Web: <http://www.kebs.org>

Coast Regional Office

P.O. Box 99376, Mombasa
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

Western Kenya Regional Office

P.O. Box 2949, Kisumu
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Regional Office

P.O. Box 8111, Eldoret
Tel.: (+254 053) 33151, 63377
Fax: (+254 053) 33150

Foreword

This Kenya Standard was developed by the Technical Committee on Extra-low Voltage equipment under the guidance of the Standards Projects Committee (SPC) and is in accordance with the procedures of the Bureau.

The first edition of this standard was developed in 2011 following an increased number of accidents that occurred due to speeding. At the time, government had put in place a number of measures aimed at curbing speeding on the

speed of the vehicle was the other technique that had been identified as a measure to be used in reducing the accidents. This standard was developed to provide guidelines on the operation of Speed Limiting devices used in vehicles.

Speed limiters on late model vehicles work via the computer software instructions that are integrated within the various engine management functions. The system relies on data received from sensors that supply

engine management performance. These control processes are usually “spark” restriction or fuel restriction, or a combination of both. The result is totally effective for restricting Top Speed without affecting performance in any way. That is, it does not affect engine “power” – until a predetermined “activation” speed is reached. The speed limiter is in essence a “rev-limiter” and thus only impacts on top speed.

A driver whose speed is no more than 80 Km/h is obviously far less likely to have an accident than the same driver under the same road conditions going 90, 100, or even 120 Km/h. The differential between his speed and that of other vehicles on the road, the distance needed to stop the car, etc. are all much less. Moreover, even if an accident does occur, it will almost always be less severe. An accident at 120 Km/h is about 225% as severe as one occurring at 80 Km/h, even though the first vehicle is traveling only 50% faster. This is because the severity of the accident is directly related to the kinetic energy of the vehicle, which in turn is proportional not to the speed but to the square of the speed,

Introduction of the standard for speed limiting devices came with its own challenges. Users in particular devised ways to ensure that the recorders did not accurately capture the vehicle speed. This was done using several techniques including corrupting the recorded data, ensuring the recorded speeds are manipulated not to exceed a certain programmed speed among others.

In order to address emerging technological changes, the technical committee embarked on the revision of the standard to address already known challenges as well as forecasted ones. Among the major issues addressed in this second edition are tampering with the speed recording device, tampering with the speed recorder as well as making it mandatory to have an online reporting system.

This Kenya Standard specifies requirements for the performance and installation of devices designed to limit the maximum road speed of motor vehicles by control of engine power

In the preparation of the first edition of this Kenya Standard, reference was made to the British Standard BS AU 217-1a 1987, Zambia Standard ZS 675:2006. In addition to the two references mentioned, this second edition takes into consideration field study report findings carried out on Kenyan roads between 2014 and 2016.

Kenyan roads. Combined with the mounting of speed traps, limiting the maximum

“road speed” information to the primary computer -thereby signaling the requirement to restrict “specific”

Acknowledgement is hereby made for assistance derived from these sources.

Table of contents

TECHNICAL COMMITTEE REPRESENTATION.....ii Foreword
.....iv 1 Scope
..... 1 2 Normative
references..... 1

APPENDIX A SAMPLE DISPLAY CERTIFICATE..... 10
APPENDIX B recommended reported data and data format..... 11

3	Definitions.....	1
4	REQUIREMENTS	2
4.1	General Requirements	2
4.2	Requirements for Speed Limiters.....	4
4.2.1	Workmanship	4
4.2.2	No effect on the normal operation of vehicle	4
4.2.3	Compatibility with environmental conditions	4
4.2.4	Susceptibility to tampering	5
4.2.5	Manuals.....	5
4.3	Requirements for the Speed recording, storing and transmitting device (recorder).....	6
4.3.1	General.....	6
4.3.2	Onboard data storage	6
4.3.3	Off board data storage	6
4.4	Conditions for Limiter Suppliers of Speed Limiters.....	7
4.4.1	Manufacturers authorization.....	7
4.4.2	Manufacturers warranty	7
4.4.3	Establishment of fitting centers and appointing of agents	7
4.4.4	Change in design or construction of the approved type of speed limiter.....	7
4.4.5	Training of government technical personnel	7
4.4.6	Inspection devices.....	7
4.4.7	Records	8
4.4.8	Fitting certificates	8
4.4.9	Record of technicians.....	8
4.4.10	Calibration equipment	8
4.4.11	The suitability of the speed limiter for a particular type of vehicle.....	8
4.4.12	Warranty obligations	8
4.4.13	Start of operations	8
4.4.14	Poor field performance.....	9

APPENDIX C Modifications to KNWA 2460:2013 13

PUBLIC REVIEW DRAFT

APPENDIX D SAMPLE CERTIFICATE OF COMPLIANCE..... 17

DRAFT KENYA STANDARD KS 2295-1:2018

1 Scope

This Part of this Kenya Standard specifies requirements for the performance and installation of devices designed to limit the maximum road speed of motor vehicles by control of engine power.

This part of this Kenya Standard also specifies performance requirements of Speed Recording and Reporting Devices. These may be a separate unit to be installed on the vehicle and an add-on or on-board

NOTE 1 unless otherwise referred to in clause 3, the device is referred to hereafter as the limiter. NOTE 2 Permitted tolerances of the system may allow the vehicle to exceed the set speed.

approval with system built in the vehicle.

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.

over methods of test and procedure for type approval of this standard cannot therefore be read in isolation.

vice is referred to hereafter as the limiter. The vehicle to exceed the set speed.

Part of this Kenya Standard does not cover methods of test and procedure for type approval which

Traffic Act, CAP 403 of the laws of Kenya.

KNWA 2460: Motor vehicle garages for repair and services — Code of practice

r and services — Code of practice

KS 2295-2: Maximum road speed limiters for motor vehicles — Part 2: Specification for system

for motor vehicles — Part 2: Specification for s

3 Definitions

For the purposes of this Kenya Standard the following definitions apply.

are

3.1

Authority

the National Transport and Safety Authority at the time of approval or its successor(s) post approval of this standard

under KS 2295-2. The two parts of this standard should be read in isolation.

and component requirements

3.2

authorized official

authorized motor vehicle inspector or traffic police officer

3 Definitions

For the purposes of this Kenya Standard the following definitions apply.

3.3

calibration

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

3

.

1

A

u

t

h

3.4

engine

Authority

the National Transport and Safety Authority at the time of approval of this standard or any of its

3.2 authorized official

3.3 calibration

comparison between an instrument and a measuring standard of higher accuracy to detect, correlate, adjust, and

document the accuracy of the item being compared

source (or sources) of the vehicle's motive power

3.5 inspection Device

piece of equipment that has been designed to test all circuitry and shall be able to detect any interference with the system

3.6 juddering

action of shaking rapidly during the retardation process

3.7 limiter supplier

in the case of maximum road speed limiters fitted in the course of construction of the vehicle, the vehicle constructor. In all other cases, the limiter manufacturer or any individual or company authorized to import

in Kenya unless it demonstrates full compliance with all the requirements set out in this part of this Kenya Standard and as tested in accordance with KS 2295-2.

4.1.2 The speed limitation shall be such that the vehicle in normal use complies with the provisions of this standard. It shall be so designed, constructed, that its performance is not affected by the vibrations to which the vehicle may be subjected and as tested in accordance with KS 2295-2.

4.1.3 The Limiter shall be so designed, constructed and assembled and fitted to the vehicle to make it maximum tamper proof and "failsafe" against various factors such as disconnection/failure of various components e.g. power supply, speed sensor, mechanical actuator system, linkages or any unauthorized modification and adjustment to the system. If the plug/s to the electronic controller is/are removed, power is disconnected or if the speed signal and/or wire is disconnected the vehicle shall automatically default to a limp mode and shall not be able to be driven in excess of forty kilometers per hour (40km/h). In the event of any form of malfunction an alert signal shall be generated and transmitted in the prescribed manner (**Error! Reference source not found.**). The speed limiter shall be set in such a way that it shall be hard to tamper with (adjust speed) and

that it shall be hard to tamper with (adjust speed) and demonstrated to the Authority and testing agencies with the system will be globally examined. The analysis states taken by the system, the consequences of a he functioning, the possibilities of obtaining these sibility of their occurrence. The analysis level will be

es that allow functionality checks when the vehicle is able of being verified, authenticated and tested by an electronic device plugged into a receiver installed in a le is "on" the road. This device should test all circuitry e system.

pendent of the speed limiter type and shall be capable or fitting in vehicles in Kenya.

speed of the vehicle by the installation of an electro-ometer cable, take off at the gearbox or by use of the easy to detect tampering. The inviolability shall be demonstrated to the Authority and testing agencies with documentation analyzing the failure mode in which the system will be globally examined. The analysis shall show, taking into account the different states a modification of the input or output states on the functioning, the possibilities modifications by failures or by tampering and possibility of their occurrence. The analysis level will be always to the first failure.

speed limiters, open up fitting centers and or appoint agents as retailers or fitting centers

**3.8
malfunction**

the state of a speed limiter not functioning in the intended manner either through deliberate human intervention (tampering) or unintended system failure

**3.9
maximum speed (Vmax)**

maximum speed declared by the limiter supplier at which the limiter may be set and meet the requirements of this standard

**3.10
set speed (Vset)**

intended mean vehicle speed when operating in a stabilized condition as defined in this standard. It shall be marked on the vehicle and used for calibration purposes

**3.11
speed limiter (Governor)**

device that shall temporarily cause the engine to lose power when the set speed is reached

Note - The purpose of the limiter is to limit the maximum road speed for vehicles to a specified value without affecting the other performance parameters of the vehicle in any manner

**3.12
speed limitation function (SLF)**

function to control the fuel feed of the vehicle or engine management in order to limit the vehicle speed to a fixed maximum value

**3.13
violation**

malfunction (see **3.8**) or any speed in the excess of 5 Km/h of the set speed (see 3.10)

4 REQUIREMENTS

4.1 General Requirements

4.1.1 The speed limiting system shall only be considered complete if it consists the limiter and a speed recording, storing and transmitting device (recorder). No speed limiting system shall be approved for use

4.1.5 The speed limiter shall have in built features that allow functionality checks when the vehicle is not in motion. The speed limiter system shall be capable of being verified, authenticated and tested by an authorized official by means of a calibrated electronic device plugged into a receiver installed in a convenient position on the vehicle, whilst the vehicle is "on" the road. This device should test all circuitry and shall be able to detect any interference with the system.

4.1.6 The functionality check device shall be independent of the speed limiter type and shall be capable of testing all the types of speed limiters approved for fitting in vehicles in Kenya.

4.1.4

The speed limiter shall pre-warn the driver, by way of a high frequency buzzer, that the set speed

When the set speed is reached, the speed limiter shall temporarily cause the engine to lose power.

A second (critical) road speed limiter set point should activate a retarder device (where legislated)

4.1.7 The speed limiter shall monitor the road speed of the vehicle by the installation of an electro-mechanical speed sensor installed onto the speedometer cable take off at the gearbox or by use of the vehicle inbuilt speed sensor.

4.1.8 All cable or harness connectors in the speedometer circuit shall be wired and sealed for certification purposes. All connections shall be soldered and insulated with a flame proof insulation tape of adequate length of such a colour as to blend well with the rest of the vehicle wiring.

4.1.9 The speed limiter shall pre-warn the driver, by way of a high frequency buzzer, that the set speed is being reached. This warning shall occur at 5% prior to the set speed and shall continue buzzing once the set speed is achieved/exceeded.

4.1.10 When the set speed is reached, the speed limiter shall temporarily cause the engine to lose power. Engine power shall be reinstated at a speed not less than the pre-warning switch point, which is 5% below the set speed.

4.1.11 A second (critical) road speed limiter set point should activate a retarder device (where legislated) when this set point is reached. This set point should be no more than 5 Km/h above the standard set point and shall, automatically, activate the retarder to ensure that the vehicle cannot exceed the preset limit. The speed limiter shall monitor the road speed of the vehicle by the installation of an electroin the speedometer circuit shall be wired and sealed for and shall, automatically, activate the retarder to ensure that the vehicle cannot exceed the preset limit.

4.1.12 No vehicle that is covered by the road speed limit legislation may proceed on a public road without an approved road speed limiter device being installed and calibrated and sealed and in possession of an authorized certificate of compliance or with the device interfered with or with the device in an inoperative condition.

4.1.13 All road speed limiter systems shall be checked for accuracy and functionality, at least once per year, at the time of the motor vehicle inspection.

4.1.14 A duly signed original certificate in indelible ink containing the information as detailed in **APPENDIX A** shall be clearly displayed in an easily accessible position within the vehicle.

Requirements for Speed Limiters.

The speed limiter shall be approved as a device alone upon satisfying the requirements described below

4.2.1 Workmanship

The limiter shall be approved as a device alone upon satisfying the requirements described herein stated in accordance with KS 2295-2. When the limiter is intended for a specific vehicle model, it shall meet the requirements specified in this standard.

Workmanship

The limiter shall be visually examined for workmanship, finish, marking and general requirements mentioned in **4.1**.

No effect on the normal operation of vehicle

The speed limiter shall allow normal acceleration and full engine power up to the set maximum speed when the limitation function comes to play.

The speed limiter shall not interfere with the brake system of the vehicle.

The speed limiting function shall be performed progressively in such a manner that excessive vibration or discomfort is not caused.

The limiter shall be tested in accordance with KS 2295-2. When the limiter is intended for a specific vehicle model, it shall meet the requirements specified in this standard. and as

The limiter shall be visually examined for workmanship, finish, marking and general requirements mentioned in **4.1**.

4.2.2 No effect on the normal operation of vehicle

4.2.2.1

speed limit when the limitation function comes to play.

4.2.2.2

4.2.2.3

Compliance with the requirements of clause 4.2.2 shall be tested in accordance with KS 2295-2.

Compatibility with environmental conditions

4.2.3.1 The speed limiter shall be so designed, constructed and assembled so as to resist vibrations, corrosion, dust, humidity, petrochemicals and aging phenomena to which it may be exposed.

The speed limiting function shall be performed progressively in such a manner that excessive juddering or discomfort is not caused.

4.2.2.4 The speed limiting function shall not cause engine back firing.

4.2.2.5 The speed limiter shall not cause uncontrolled engine power

4.2.2.6 No malfunction or tempering shall result in increase in engine power above that demanded by the position of the driver's accelerator.

4.2.2.7 The speed limitation function shall be obtained once the vehicle speed reaches the set maximum speed (V_{set}) regardless of the acceleration a driver may apply.

4.2.2.8 When the vehicle, running at its set speed and with the driver's accelerator at its position of maximum travel is subject to an accelerating force due to a down gradient, the limiter shall control speed by restricting the engine power to the limiter's minimum engine power control setting.

NOTE 1 the speed limiter may allow normal accelerator control for the purposes of gear changing.

NOTE 2 Descending gradient does not imply freewheeling.

4.2.3.9 The speed limitation function shall be independent of the condition or soundness of the speedometer.

The speed limiting function shall be performed progressively in such a manner that excessive

The

Compliance shall be tested in accordance with KS 2295-2.

4.2.3.2 The speed limiter shall operate satisfactorily without unacceptable electromagnetic disturbance from any other device in its environment.

Compliance shall be tested in accordance with KS 2295-2.

The speed limiter shall be resistant to reverse polarity connections .

- i. Principles of operation covering details of how the road speed limiter works.
- ii. Fitting Instructions.
- iii. Calibration or programming instructions.
- iv. Inspection and functionality checks.
- v. Maintenance and troubleshooting instructions.

Compliance shall be tested in accordance with KS 2295-2.

4.2.4 Susceptibility to tampering

The limitation threshold shall not, in any case be capable of being increased or removed temporarily on vehicles where the speed limitation device has been fitted.

The speed limitation function, the road speed limiter and the connections necessary for its operation shall be capable of being protected from any unauthorized adjustments or the interruptions of its energy supply by the attachment of sealing devices and/or the need to use special tools. All components necessary for the full function of the limiter shall be energized whenever the vehicle is being driven.

The road speed limiter shall be designed and constructed in such a way that it can be fitted in a place not easily accessible to unauthorized people.

Compliance shall be checked by visual examination

4.2.5 Manuals

It is required that the road speed limiter has two manuals, a vehicle owner's manual and a Technician's manual, in English and/or Kiswahili.

4.2.5.1 Vehicle Owner's Manual

The following information shall be included in the vehicle owner's manual

- i. The expected behaviour of a vehicle where a road speed limiter has been fitted.
- ii. Driving tips for a vehicle where road speed limiter has been installed.
- iii. What should not be done to the installed road speed limiters.
- iv. What should be done in case of malfunction.
- v. The liability of the owner or driver of vehicle for tampering with the road speed limiters.

4.2.5.2 Technician's Manual

The following information shall be included in the Technician's manual

- vi. Parts list.
- vii. Manufacturer's name and authorized trade mark
- viii. model

Requirements for the Speed recording, storing and transmitting device (recorder)

General

4.3.1

4.3.1.1 The recorder shall incorporate a combination of an onboard and off-board mechanism for recording and storing the speed of the vehicle.

4.3.1.2 The speed shall be recorded in Km/h at not more than five seconds interval.

4.3.1.3 The retrieved data shall clearly and in an unambiguous manner display the date (ddmmyyyy) of recording.

4.3.1.4

4.3.1.5

4.3.1.6

4.3.2 Onboard data storage

4.3.2.1

remain retrievable.

4.3.2.2

4.3.2.3

data.

4.3.2.4

4.3.2.5

d.c.



The system shall, in real time, electronically relay speed data to the speed limiter's data

The system shall, in real time, electronically relay speed data to a data storage system as required by the Authority.

4.3.3.3 All detected violations shall, in real time, be transmitted to the limiter supplier and the Authority's storage system and shall trigger an alarm to both the supplier and the Authority.

4.3.3.4 If for any reason there is loss of power to the system, the system shall automatically trigger an alarm to both the supplier and the Authority.

4.3.1.1 The recorder shall incorporate a combination of an onboard and off-board mechanism for recording and storing the speed of the vehicle.

4.3.1.2 The speed shall be recorded in Km/h at not more than five seconds interval.

4.3.1.3 The retrieved data shall clearly and in an unambiguous manner display the date (ddmmyyyy) of recording.

4.3.1.4 Each entry shall be time related (either 24 hour or 12 hour format)

4.3.1.5 Each entry shall capture position coordinates

4.3.1.6 The Authority shall prescribe the format and contents of the data to be recorded and transmitted. **APPENDIX B** gives a recommendation on the information to be captured.

4.3.2 Onboard data storage

4.3.2.1 The data shall be stored onboard in a non-erasable memory. If the power supply is disconnected, information in electronic format stored in the recorder for a period of 72 hours prior to the disconnection shall remain retrievable.

4.3.2.2 An officer authorized by the Authority and/or a testing officer authorized by the testing agency shall be able to retrieve data from the onboard recording device at an inspection point without using specialized equipment. The retrieved data shall conform to the format prescribed by the Authority.

Note: Examples of data retrieval mechanisms include on-screen display and device printout.

4.3.2.3 The officer shall not require the services of a speed limiter specialist to interpret the retrieved data.

4.3.3 Off board data storage shall be activated once the details of the vehicle, vehicle owner and driver are entered into the system for certification purposes.

All speed limiter systems shall have an off-board data storage system when connected to a power supply in the range (12/24V) complying with the following requirements:

4.3.3.1 The system shall, in real time, electronically relay speed data to a data storage system.

4.3.3.2 The system shall, in real time, electronically relay speed data to a data storage system.

4.3.3.5 Any loss of signal from the system to the data storage system lasting for more than five minutes (300 seconds) shall automatically trigger an alarm to both the supplier and the Authority.

Conditions for Limiter Suppliers of Speed Limiters.

For the purpose of giving full effect to the Traffic Act CAP 403 of the laws of Kenya and all other applicable regulations, the following conditions shall be followed by all Limiter suppliers of speed limiters.

4.4.1 Manufacturers authorization

No person shall be authorized to be a Limiter Supplier for any type of speed limiter.

Compliance shall be by proof of a certified copy of the authorization for dealing in a particular type of manufacturer's authorization certificate.

4.4.2 Manufacturers warranty

The road speed limiter shall have a manufacturer's warranty covering a period of not less than 12 months and this shall be properly documented on a warranty card issued to the vehicle owner where the road speed limiter is installed.

and to the approving authorities that at the

rs and appointing

or shall open fitting centers in accordance with the existing legal requirements.

4.4.3.2 Where a fitting centre is also used as a garage, the facility shall meet all the requirements specified in KNWA 2460:2013 and all the additional requirements specified in **APPENDIX C**.

4.4.3.3 Where a facility is used purely as a fitting centre, the facility shall meet the requirements specified in KNWA 2460:2013 and as modified in **APPENDIX C**.

4.4.4 Change in design or construction of the approved type of speed limiter.

A Limiter supplier shall seek fresh approval when a speed limiter for which approval was given changes in design, operation or construction.

4.4.5 Training of government technical personnel

The authorized Limiter Supplier shall open fitting centers and appoint agents in accordance with the existing legal requirements.

4.4.3.1

4.4.3.2 Where a fitting centre is also used as a garage, the facility shall meet all the requirements specified in KNWA 2460:2013 and all the additional requirements specified in **APPENDIX C**.

4.4.3.3 Where a facility is used purely as a fitting centre, the facility shall meet the requirements specified in KNWA 2460:2013 and as modified in **APPENDIX C**.

Change in design or construction of the approved type of speed limiter.

A Limiter supplier shall seek fresh approval when a speed limiter for which approval was given changes in design, operation or construction.

Training of government technical personnel

The Limiter Supplier who introduces a type of speed limiter for approval shall train officers from the relevant approving authorities that at the minimum meets the requirements of **4.4.12**.

regulatory/testing agencies in the fitting and inspection of the presented speed limiter once approved.

4.4.6 Inspection devices

The limiter supplier shall ensure that the speed limiter presented for approval is compatible with the functionality check device described in clause **4.1.5 & 4.1.6**.

Records

4.4.7

4.4.7.1 The Limiter supplier shall keep records of all vehicles fitted with the speed limiters. A master register, kept in a central place, shall have all the information for fittings at all branches and appointed agents/fitting centers.

4.4.7.2 The limiter supplier shall forward the compiled data to the Authority in such a manner as shall be

4.4.13.1 A Limiter Supplier shall train relevant officers from the Authority and testing agencies in the fitting and prescribed by the Authority. The same data shall be made available to any other agency(ies) on demand.

4.4.7.3 The limiter supplier shall keep the records for inspection by the Authority/agency(ies) for a period governed by the relevant legislation/regulation.

4.4.8 Fitting certificates

Every vehicle fitted with a speed limiter shall be issued with a certificate of compliance (see **APPENDIX D**) signed by a person approved by the Limiter Supplier. The sample compliance certificate with the specimen signature of the supplier shall be forwarded to the Authority as required by the relevant legislation/regulation.

4.4.9 Record of technicians

The Limiter Supplier shall approve and keep a record of all the technicians who fit the speed limiter.

The training of personnel approved to fit speed limiters shall be, as a minimum, as prescribed in KNWA 2460 together with any approved modifications for speed limiter fitters.

4.4.10 Calibration equipment

All unique calibration and sealing devices shall remain the property of the Limiter Supplier.

The Limiter Supplier shall retrieve all sealing and calibration equipment once a branch is closed or fitting agency is withdrawn.

The Limiter Supplier shall limit the possession of calibration equipment or devices to authorized personnel.

4.4.11 The suitability of the speed limiter for a particular type of vehicle.

The responsible Authority shall approve and gazette the types of speed limiters to be used in Kenya. However, the responsibility to determine the suitability of speed limiter for a particular type of vehicle shall be vested on the speed limiter supplier and or his approved agent.

4.4.12 Warranty obligations

The Limiter Supplier shall take responsibility for the warranty obligations for the speed limiter supplied.

4.4.13 Start of operations

detecting of tampering before being allowed to start operation. Records of such training shall be made available at the time of applying for approval.

4.4.13.2 A Limiter Supplier shall provide the following each to the Authority and testing agencies before being allowed to start operation:

- i. Submit one sample of the speed limiter for light and heavy commercial each (in case where the Limiter Supplier intends to fit both light and heavy commercial vehicles).
- ii. Submit one sample of the calibration device for each of the speed limiters.
- iii. Submit two samples of certificate of fitting.

Submit a list of physical addresses for all speed limiter-fitting centers under Limiter Supplier's control.
Submit two (2) copies of the technical manuals.

ings at various cer

- ing centers under shall be kept. e agencies in **4.4.13.2** on any new fitting c
- vi. Submit two of the sample warranty fitting certificates at those centers. certificates.
- vii. Submit two copies of the user manuals. niter Supplier shall sign a commitment bin speed limiters for the effective implementa the Authority from time to time.

4.4.13.3 The Limiter Supplier shall update the agencies in

4.4.13.4 Before starting operations, the Limiter sign a commitment binding them to the terms of any of the approved speed limiters st and conditions for Limiter Suppliers of speed limiters for the roving/testing agencies/authorities once v effective implementation of the Speed Limiter Regulations her contractual obligations is established. as shall be prescribed by

4.4.13.2 the Authority / new fitting centers under their control and from time to responsible signatories to the fitting certificates time. se centers.

4.4.14 Poor field performance

In case of poor field performance, the approval of any of the approved speed limiters shall be revoked by the Authority in consultation with other approving/testing agencies/authorities once violation of quality performance and lack of full compliance to other contractual obligations is established.

APPENDIX A SAMPLE DISPLAY CERTIFICATE (informative)

Certificate No:

Name of Limiter Supplier:

Address:

Telephone contact:

Speed Limiter Compliance

Date of Inspection

Vehicle registration No:

Chassis no:

Calibration frequency (Hz)

Type of Governor:

EXPIRY DATE:

Sign:

PUBLIC REVIEW

APPENDIX B recommended reported data and data format (informative)

B.1. Reports to be transmitted

B.1.1. Top Speed reached within the last 6 hours (TP). This is the maximum speed recorded within the last six hours

B.1.2. Speed records The speed records specified in 4.3.3 shall be continuously updated as required by this standard or as

B.1.3. Violations -VIOL

Violations represent information any information described in this standard such as over speed, tamper

e.g. Disconnecting the signal wire

B.2. Data Header

Each device header shall have data containing information specific to the particular device which shall be non-erasable once programmed into the device. This information shall be programmed first before the device can allow any other features of the speed recording device to be initialized. Below is a list of the information to be captured in the device header:

- b) VEHICLE OWNER ID
- c) OWNER PHONE NO.....
- d) VEHICLE REG. NUMBER.....
- e) CHASIS NO.....
- f) VEHICLE MAKE & TYPE.....
- g) CERTIFICATE NUMBER.....
- h) GOVERNOR TYPE.....
- i) GOVERNOR SERIAL.....
- j) DATE OF FITTING.....
- k) FITTING AGENTS NAME.....
- l) FITTING AGENT ID.....
- m) NAME & LOCATION OF STATION.....
- n) EMAIL ADDRESS.....
- o) VEHICLE OWNERS NAME.....
- p) BUSINESS REG. NO.....
- q) OWNER PHONE NO.....
- r) AGENT PHONE NUMBER.....

B.3. Commands

These are ASCII characters sent from a host to a device and may have a length of one byte or more.

The idea is to standardize the commands so that all speed limiters/recorders respond to known commands when specific data reports are requested from the recording device. See example given in the table below

FUNCTION	COMMAND	EXPECTED OUTPUT
RESET DEVICE	RST	The recording device is reset
READ TRIP DATA	TRP	All speed for the last SIX HOURS records stored in the device are printed on to the screen
Etc.		
The premises shall be insured		

B.4. Data presentation format

Data can be presented in many formats e.g. tables, graphs, barcharts, text etc.

The most convenient presentation in this case is in the form of text.

The suggested structure is shown below

<u>DATE</u>	<u>TIME</u>	<u>SPD</u>	<u>LONG</u>	<u>LATT</u>
22/11/2017	20:19:25	000.0	3.0674° S	37.3556° E

APPENDIX C Modifications to KNWA 2460:2013 (normative)

The requirements of KNWA 2460:2013 shall apply except as modified by this appendix where a facility doubles up as both a fitting centre and a garage or where the facility is used as a pure fitting centre.

C.1. Requirements for garages used as fitting centres

Where fitting is done in a garage, the garage shall fully comply with KNWA 2460:2013 in addition to any

C.2. Requirements for exclusive fitting centres

Where fitting is done in an exclusive fitting centre the term “fitting centre” shall replace “garage” and the

C.2.1. Where a requirement for garages as specified in KNWA 2460:2013 is not modified in this annex, the requirement shall apply as specified and users of this standard shall comply with the same.

C.2.2. The requirements of 11.2 apply except f) and h) which are optional.

C.2.3. Requirements of 11.3 are optional

C.2.4. The fitting centre shall have all the hand tools prescribed in 13.1, except those prescribed in c, d, g, h, l, k, o, p, q which are optional. In addition, all fitting centres shall have the following hand tools: soldering gun, soldering wire, insulating tape

2460:2013 in addition to a

fitting centre shall replace “garage” and t

ad

d in KNWA 2460:2013 is not modified. Requirements given in this standard shall comply with the

2.

h) which are optional.

g, h, l, k, o, p, q which are optional. In addition, all fitting centres shall have the following hand tools: soldering gun, soldering wire, insulating tape

C.2.4.1. It is not a requirement for fitting centres to have the equipment listed under 13.2 but all fitting centres shall have: a laptop, computer, printer and an approved inspection device.

C.2.4.2. In addition to the information prescribed in Annex B, the customer complaint login form shall capture the following information:

Vehicle make/type, speed limiter type, serial number of limiter, date fitted.

C.2.4.3. Replace annex C with the following:

1. Company Name:		
	Details	Remarks
Reception		
Reception desk or counter clearly designated as reception		
KS 2460:2013, KS 2295:2011 certified copies of KEBS and CM&TE certificates, NTSA fitting centre compliance certificate		

FUNCTION	COMMAND	EXPECTED OUTPUT
RESET DEVICE	RST	Name of the legal entity comprising the business and the working hours The recording device is reset
READ TRIP DATA	TRP	All speed for the last SIX HOURS records stored in the device are printed on to the screen
Etc.		Well maintained reception areas being clean and tidy
The premises shall be insured		
Offices for administrative duties to be		
3. Workshop GDH		
Floors – Shall be in good condition, clean and oil free		Customer waiting facility
Signage – Sufficient signage to indicate facilities and customer / commercial restrictions		
	Seating for at least two clients and	
Signage – Workstation identification and clear no smoking sign	include reading material	
Lighting – Adequate lighting with all tubes and bulbs in working condition	Customer refreshments	
Ventilation – The working area shall be well ventilated		
	Ablution for customers/staff and	
Covered working bays (considering climatic conditions)	Operate business to be conducted in a workshop which is roofed and walled	
	proper signage	
Designated part storage area (parts not to be stored in cars)		
First aid kit (easy access)	Premises	
Security provided		
Staff ablution: Clean and adequate	Well maintained, clean and tidy	
4. Other requirements		
Administration (mandatory)	Demarcated customer parking and signage	
Pin certificate		
VAT		
NHIF, NSSF	Secure overnight parking	
	Quoting	
	The premises shall be insured	
2. Safety requirements:		
	Adequate fire extinguishers (valid for six months)	
	Demarcation of fire extinguishers.	
	Clear demarcation for emergency exits	Secure overnight parking

	Printed quotes/handwritten (optional)		
	Management system (electronic)		
	Guarantees – Guarantees on workmanship and paint		
	Indemnity signage to be clearly displayed (recommended)		
	Customer follow up – Mandatory for customer satisfaction		
	Complaint resolution to be clearly documented		
	Vehicle check-in list		
	Uniforms/overall		
	Must be clean and presentable		
	Safety boots		
5. Minimum personnel requirements — Registered production staff only			
	Qualified Technicians (minimum certificate level & computer literate)		
	Quality Inspector		

Name of Limiter SUPPLIER
Address and physical location

CERT No.....

SPEED GOVERNOR
COMPLIANCE CERTIFICATE

THIS IS TO CERTIFY THAT :

Vehicle Reg; No.....Chassis No.....

Make..... Type.....

Has been fitted with approved speed governor of type.....

APPENDIX D SAMPLE CERTIFICATE OF COMPLIANCE (informative)

Serial No.....Dated.....

The governor is calibrated and sealed at a frequency of Hz not to exceedKm/h

This certificate is valid for 12 months from the date of issuing. It is an offence to tamper with the speed governor and it will nullify all warranty.

Signed with stamp by Supplier/Dealer/Agent

FITTING CENTER DETAILS

Business Reg. No..... Pin
no..... VAT no.....

Pin no..... VAT no.....

Company Address.....

Date of installation/ inspection
.....Certified by

.....Certified by

Sign.....
.....

Expiry Date.....

This Certificate is issued without any alteration whatsoever.

