



SMART 2 TACHOGRAPH CALIBRATION



SMART 2
SE5000

OPTAC3 | OPTIMO

Workshop Inspection/Calibration Procedure- Preparation

- The purpose of a tachograph inspection/calibration is to ensure correct legal operation of the tachograph system in your vehicle
- The calibration procedure for an LCV is identical to that of an HGV
- All tachograph calibrations and inspections must be carried out at a tachograph centre approved by your country
- You are not permitted to work on tachographs unless you are authorised by your government to do so
- Preparation for calibration: please check that
 - Vehicle unladen, in normal running order
 - Tyre pressures in accordance with the manufacturer's instructions
 - Tyre wear, within the limits allowed by national law



Workshop Calibration Procedure

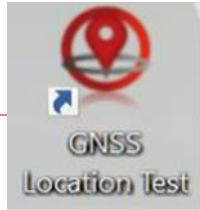
- A mandatory vehicle calibration and test must be carried out using an approved, regulated method as appropriate to your country to determine vehicle calibration parameters, w, k & l. This ensures your vehicle is travelling at the correct calibrated speed as defined by tachograph regulation
- Smart 2 tachographs also have several other features which must be tested at the calibration centre prior to a calibration certificate being issued, the system being sealed for use and a calibration plaque being fitted in the vehicle



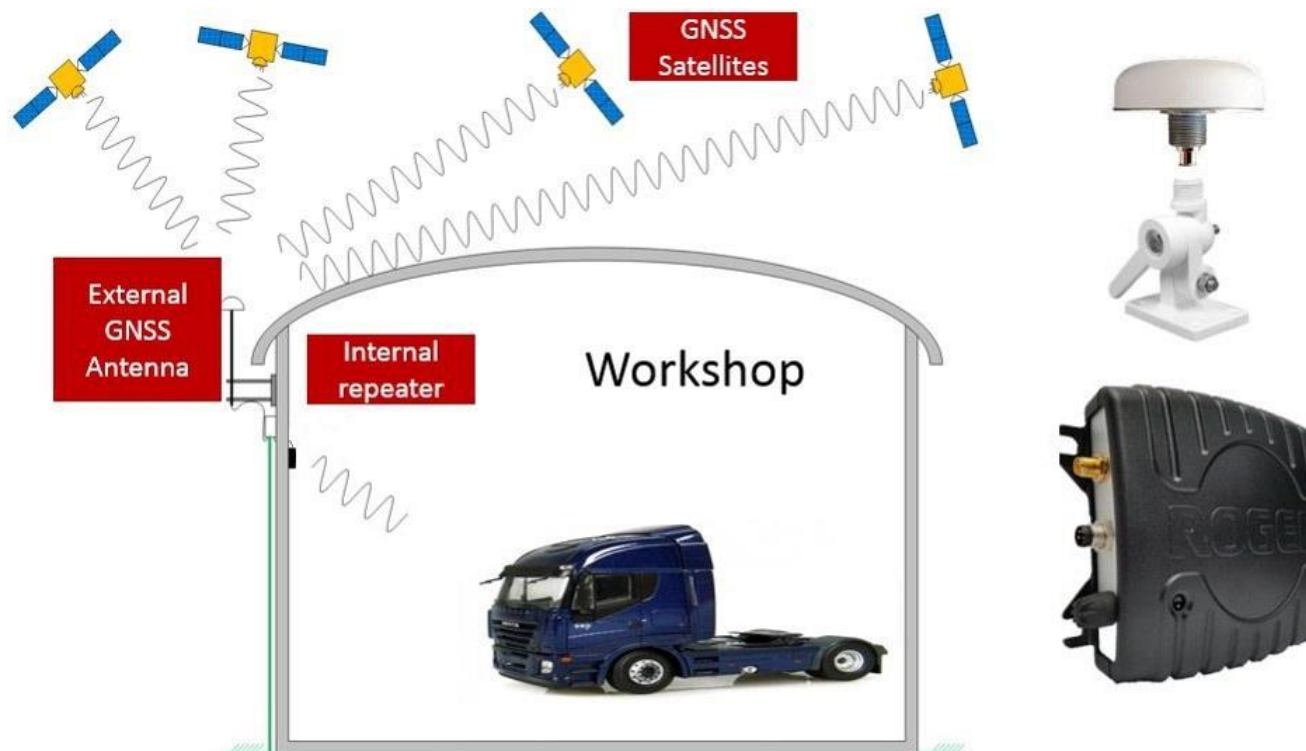
k-factor= 6388 imp/km	l-factor= 3168 mm
w-factor= 6388 imp/km	Tyre size= 315/70R22.5
Date of Calibration= 31 Jul 2020	VIN= XLR
Workshop Number= GBK	VU Serial No= 148
Sensor S/N= 206	Load Type= Goods
Technician Surname= DA	
Technician Forenames= RO	
Workshop= AD	
Address= Bur	
Location of Adaptor=	
Location of Sensor= Gearbox	
Impulse Cable Colour=	
	Remote Com S/N= 202
	GNSS S/N= Internal GNSS
	Seal S/Ns= UN 0026



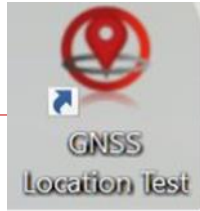
Global Navigation Satellite System – GNSS Testing



- The GNSS signal for the workshop will be provided by a GNSS repeater inside the workshop. The antenna of the device is placed external to the workshop building and connects to an internal transmitter to broadcast this signal, which transmits in the building over an area of approximately 30m
- The transmitter can be placed on the wall or ceiling



Global Navigation Satellite System – GNSS Testing



- You can visually check on the tachograph that the GNSS is present by entering the info menu on the tachograph and scrolling through until the screen below is visible. If the clock is not ticking over in seconds then GNSS is not being received by the tachograph
- If **symbol of padlock** is displayed, it shows that the current position is authenticated



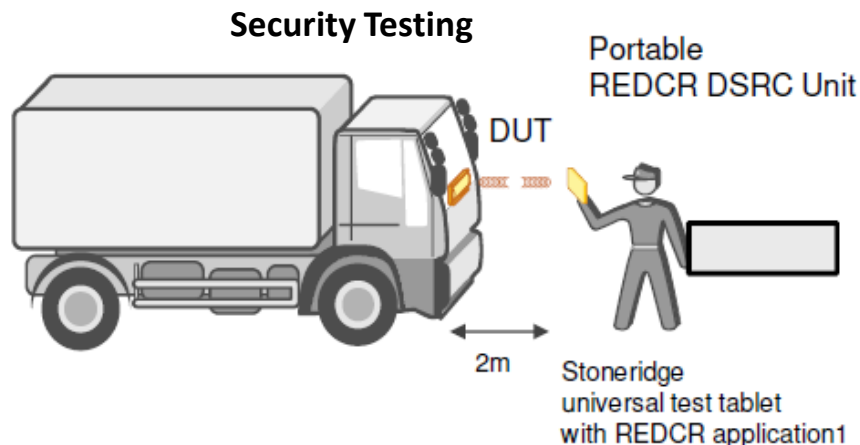
Global Navigation Satellite System – GNSS Testing

- Online setup, information on location taken from Google maps

Dedicated Short Range Communication Testing – Summary



- This DSRC test is conducted after the tachograph has been activated
 - Using Optimo, the technician places his card in the card slot provided
 - The technician selects the DSRC Application on Optimo and then selects the test required
 - All tests will take less than one minute to complete
 - Test verification is achieved by matching the calibration date of the data received with the actual calibration date of the tachograph
 - DSRC module serial number is stored in the Workshop card calibration record. It must be printed on the plaque under the description *Remote Com S/N*



DSRC Testing – Echo Test, Inspection Test & Installation Test



- On completion of the test the results screen below will be shown

DSRC Transaction	
ECHO test result: Pass	
RTM transaction result: Pass	
VRN	SRETEST64
Last Calibration	11/04/2023 12:22:59
Date Tachograph Connected	11/04/2023 12:22:59
Latest Authenticated Position	11/04/2023 12:16:29
RTM Data Timestamp	11/04/2023 12:23:36



Calibration Records – Digital Tachograph, VU

- After programming a VU with new calibration parameters, a calibration record is generated and stored in the VU. The record includes,
 - The calibration purpose: activation, first installation, installation, periodic inspection
 - Workshop name and address
 - Workshop card number, issuing member state and expiry date
 - VIN & VRN
 - The w, k & l factors
 - The tyre size
 - Speed limiter setting, if appropriate
 - The odometer value – old & new values
 - The UTC time – old & new values
 - Types and identifiers of all seals in place
 - Serial numbers of the motion sensor, the external GNSS facility, if any, and DSRC module, if any
 - By-default load type associated to the vehicle, goods or passengers
 - Country in which the calibration has been performed, and the date time when the position used to determine this country was provided by the GNSS receiver
 - Due date of next calibration



Workshop Inspection/Calibration Procedure – Download/Certificate

- The downloaded workshop data and a copy of the Calibration Certificate with all printouts attached must be kept for a minimum of 2 years
- Workshops shall keep traces in their inspection reports of any findings concerning broken seals or manipulations devices. These reports shall be kept by Workshops for at least 2 years and made available to the Competent Authority whenever requested to do so

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ANY QUESTIONS?



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