Tástáil Ródacmhainneachta um Fheithiclí Tráchtála
Commercial Vehicle Roadworthiness Testing

Steering Side Slip Unit Specification

Section 1

1.1 General overview

(a) The Steering Side Slip Unit (side slip unit) must provide a value for distance of deviation in metres per kilometre (m/Km) per axle and return values for each axle to CoVIS
(b) The range of the side slip unit to be measured shall be at minimum 0 - 20 m/Km for either direction. The sampling plate or equivalent device shall record 1000mm of uninterrupted travel of the vehicle. The side slip unit shall record the maximum reading taken over the full sample of travel.
(c) The side slip unit should be capable of connection to CoVIS. It must connect to a PC running software capable of outputting test data to CoVIS via the protocols as set out in section 3 below.
(d) The side slip unit shall have the capacity to operate and produce a print out and electronically file test results independent of CoVIS. A sample printout report listing the minimum detail required is shown in **Appendix 1**.

1.2 Location of and specification of LCV Steering Side Slip Unit

(a) The side slip unit shall be capable of accurately measuring the geometry of front and rear axles of light commercial vehicles with GVW up to 3,500kg and an axle load of up to 2,800kg. It shall be located on the right hand side of the of the test lane drive line (as a vehicle drives through the test lane), before the suspension tester.
(b) The centre line of the side slip unit shall be on the same centre line as the suspension test pad on the right hand side of the test lane.
(c) The approach and exit of the side slip unit shall be level and comply with Premises & Equipment Guidelines specifications. The surface shall be flat and free of any significant changes that may affect readings on the side slip unit.
(d) The area on the corresponding left hand side of the test lane shall have a surface equally as flat as the sampling plate side slip unit. It shall be level with the side slip unit plate to minimise camber.
(e) On exiting the side slip unit, the surface shall be flat and free of obstruction or test equipment for 0.2 metres.

Section 2

2.1 Location and specification of HCV Side Slip Unit

(a) The side slip unit shall be capable of accurately measuring and recording the geometry of multiple axles of HCV's with axle loads up to 15,000kg, as nominated by the vehicle inspector.
(b) The side slip unit shall be located on the right side of the of the test lane (as a vehicle drives through the lane).
(c) The location of the side slip unit centre line shall ensure all vehicles tested on the HCV lane shall be facilitated, and the HCV tester is not forced to deviate from the test lane centre line to accommodate a correct drive over of the side slip unit.
(d) The side slip unit test area shall comply with the Premises & Equipment Guidelines. The surface shall be flat and free of any significant changes that may affect readings on the side slip unit. Particular attention should be made in relation to the distance between the side slip unit and the brake tester roller set.
(e) The area on the corresponding left side of the test lane shall have a surface equally as flat as the side slip unit sampling plate. It shall be level with the sampling plate to minimise camber.
(f) On exiting the side slip unit, the surface shall be flat and free of obstruction or test equipment for a distance that complies with the Premises & Equipment Guidelines lane plan layout.

Section 3

3.1 Connection to CoVIS

(a) The side slip unit host PC must be capable of connecting to the CoVIS network via the internal test centre network.
(b) This PC must be capable of communicating to CoVIS via ASANetwork Standard on a network i.e. requires a network card dedicated to communicate with CoVIS or the centre's LAN.
(c) The host PC date and time format must be set to a standard Irish date/time format and time zone. These must be set to the correct time as displayed on the CoVIS admin computer.
(d) There must be no firewalls or firewall rules preventing data from transferring to\from ASANetwork.

3.2 Communication with CoVIS

(a) The side slip unit and its host must have the capability to receive test orders transmitted by CoVIS and return test results to CoVIS using the ASA network secure common industry standard interface (see example in **Appendix 3** below).
(b) The unit of measurement returned will contain the value in meters per kilometre (m/Km). The value returned can be either negative or positive to indicate the direction of the deviation. It must transmit the actual measurement value of each axle, a pass / fail result is not acceptable.
(c) The side slip unit must be capable of providing separate values for each axle on a vehicle and labelling each measurement with the axle number
(d) The side slip unit must provide a start date & time for each test
(e) The side slip unit must provide an end date & time for each test
(f) The side slip unit must provide the Serial Number of the equipment used for each test
(g) The input data shall comply with ASANetwork input data requirements. It shall include;

- Order type id
- Order description
- Vehicle registration number
- EU Vehicle Category
- Date of first registration
- Number of axles

Section 4

4.1 Documentation/Identification

(a) The side slip unit shall have a durable identification mark on its exterior or its control unit showing the make, model and serial number.
(b) The manufacturer of the side slip unit shall provide a clear and easy to understand user manual, written in English and available at any time to the test centre, which shall explain how it operates, including the function of each aspect of the side slip unit.
(c) The manufacturer of the side slip unit shall provide a recommended "maintenance procedure".

Section 5

5.1 Calibration

(a) **The Calibration service provider, as part of their quality programme, shall adhere to the CITA 9B Quality Requirements (see Appendix 2 below).**
(b) The manufacturer of the side slip unit shall, if requested, provide a technical handbook in English with a description of the calibration technology for review by the RSA.
(c) The calibration procedure shall match the manufacturer's recommendation.
(d) For an initial set up, the installer shall provide a calibration certificate.
(e) A competent person shall calibrate the side slip unit every 12 months, or more frequently if required, using calibration equipment as specified by the side slip unit manufacturer

5.2 Condition

(a) A condition report on the side slip unit shall be completed by a competent person. It may be carried out at time of calibration.
(b) A condition report shall be carried out at 12 month intervals or if the side slip unit is potentially damaged in any way e.g. excessive lateral force causing incorrect play in the plate or if the base is insecure in the floor.
(c) Particular attention shall be made to the following and noted;
    - With a max axle load on the plate, the plate shall only move freely in a lateral direction left and right perpendicular to the driving direction of the vehicle.
    - Detectable play in the plate other than the plate's natural vertical movement, due to a vehicle load, and the lateral direction movement.
    - The effect of corrosion or excessive wear on the side slip unit.
    - The side slip unit plate shall have equal resistance for left and right lateral movement.
    - After a lateral movement has occurred the side slip unit plate shall promptly return to its centre position.
    - Bearings and roller tracks should be free of dirt, corrosion and water ingress. Sliding mechanism should be sufficiently lubricated.
    - Correct time and date (EU format) is noted on measurement device controller

5.3 Settings

(a) Pass / fail limits set in the side slip unit must correspond to the limits applied by the RSA for left and right deviation on each axle as per the relevant Vehicle Tester's Manual.
(b) Local Settings and variables that affect the outcome of the readings shall be uniform for each make/ model type.

NOTE - Valid and current calibration certificates shall be issued to the test centre for scanning and uploading to CoVIS. An original hard copy shall be stored securely and made accessible for inspection for 12 months.

Appendix 1

Printout Report

The side slip unit shall have the capability to operate independent of Covis and produce a printed report that must include, at a minimum, the following details on the report. The test values on the print out report must match the data values returned to ASANetwork for CoVIS i.e. where a value is calculated and presented with no decimal places, the value will be rounded down to no decimal place.

- Test Centre Details – Name / Address / Centre number
- Completion Time and date of test – dd/mm/yyyy - hh/mm
- Vehicle Registration – Registration
- Vehicle odometer reading – odometer reading
- Detail requirements for each axle
    - Axle number
    - Maximum deviation of axle
    - Direction of deviation - left / right (+ /- also acceptable to indicate direction)
- Test limit applied and presentation of performance results for each axle
- Outcome of the test – Pass / Fail / Void / Aborted
- Provision for CVRT testers' signature and tester number issued by the RSA.

Appendix 2

CITA 9B Quality Requirements Covering Calibration

6.3. Calibration

6.3.1 The inspection body shall ensure that there are proper arrangements to adequately control and calibrate vehicle inspection equipment before and during use, in order to ensure its accuracy, its conformity to the relevant requirements and its continued suitability and to provide confidence in decisions based on measurements.

6.3.2 The calibration procedures, sometimes known as calibration programmes, shall define the calibration processes, their environmental conditions, their frequency, the acceptance criteria and the action to be taken when the results are found unsatisfactory and/or inadequate.

6.3.3 Quality relevant vehicle inspection equipment shall be calibrated before first use and at least at the following frequencies during in-service use **or *at other frequencies as prescribed in national regulations*:**

NOTE; All calibration frequencies mentioned in the CITA requirements have been omitted from this Appendix as they are superseded by the prescribed calibration frequencies outlined in the Premises & Equipment Guidelines.

6.3.4 Calibration shall be done, where appropriate, against certified equipment having a known and traceable relationship to internationally or nationally recognised standards. Where no such standards exist, the basis used for calibration shall be fully documented, according to the equipment manufacturer's recommendation, if any.

6.3.5 If vehicle inspection equipment is found to be out of calibration or there are any other systematic errors, the validity of the vehicle inspection results since the date of last calibration shall be re-assessed. If there was any relevant non-conformity, the vehicle inspection body shall, as soon as practicable inform the owners/keepers of the affected vehicles and invite them immediately for re-inspection, making it clear that there will be no charge for the inspection.

6.3.6 The calibration status shall be shown clearly on relevant vehicle inspection equipment, preferably by means of suitable markers or labels, indicating at least the date of the last calibration and the date the next calibration is due.

6.3.7 Reference measurement standards held by the inspection body shall be used for calibration only and not for other purposes. Only competent bodies who can provide traceability to international or national measurement standards shall calibrate reference measurement standards.

6.3.8 The inspection body shall keep records of all calibrations performed.

Appendix 3

Sample XML Stream sent to CoVIS from ASANetwork

Important Note

- **The highlighted content in the sample below shows the minimum output fields required**
- The data must be returned to ASANetwork in the correct format
- All XML must be valid or will be rejected
- The sample file contains results for a 2 axle vehicle
- Should output all raw data including decimal values
- The results must relate to the test Order ID received from CoVIS. The registration number is not read when processing the results

SAMPLE ONLY

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="no" ?>
<!DOCTYPE RESULTS SYSTEM "awnres.dtd">
<!-- Created 22.11.2013 11:37:31 with AWNX32.dll Version 1.2.1 Build 28 -->

<RESULTS>
  <RESULTSHEADER>
    <COUNTRY>
      <REGULATION>IRISH</REGULATION>
      <LANGUAGE>ENGLISH</LANGUAGE>
    </COUNTRY>
    <CUSTOMER>
      <NAME>JACK O TRADE </NAME>
      <ADDRESS> SQUARE WOOD
ROUNDWOOD</ADDRESS>
      <CITY>WICKLOW</CITY>
      <ZIP>M1</ZIP>
    </CUSTOMER>
    <VEHICLE>
      <IDENT>
        <REGISTRATION>08-XW-12345</REGISTRATION>
        <MANUFACTURER>FoXd</MANUFACTURER>
        <MODEL>TRANSITX 1 OVER 12 SEATS 5DR</MODEL>
        <VIN>WFXDXXTTFDC8C837</VIN>
      </IDENT>
      <DATA>
```

```
            <ODOMETER></ODOMETER>
          </DATA>
        </VEHICLE>
    </RESULTSHEADER>
    <RESULT OBJECT="SIDE_SLIP">
        <TITLE>Spur</TITLE>
        <HEADER>
            <EQUIPMENT TYPE="Videoline">
                <MANUFACTURER>CARTEC</MANUFACTURER>
                <SERIAL_NO>2006525</SERIAL_NO>
                <VERSION>SW-V 5.182C</VERSION>
            </EQUIPMENT>
            <START_TEST>22/11/2013 11:37:31</START_TEST>
            <END_TEST>22/11/2013 11:37:31</END_TEST>
        </HEADER>
        <SECTION OBJECT="SIDE_SLIP" AXLE="1">
            <MEAS OBJECT="TRACK">
                <TITLE> track</TITLE>
                <VALUE RESULT="1" UNIT="m\km">2.9</VALUE>
            </MEAS>
        </SECTION>
        <SECTION OBJECT="SIDE_SLIP" AXLE="2">
            <MEAS OBJECT="TRACK">
                <TITLE> track</TITLE>
                <VALUE RESULT="1" UNIT="m\km">5.1</VALUE>
            </MEAS>
        </SECTION>
    </RESULT>
</RESULTS>
```