Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI LM 6/9C/242A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use as legal measuring instruments has been granted in respect of the instruments herein described.

Haenni Model WL 103 Weighing Instrument

submitted by Haenni Australia
7/10 Enterprise Street
Ashmore QLD 4214

This Certificate does NOT grant approval for use for trade.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on **1/01/18**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	8/12/97
1	Pattern approved – certificate issued	9/03/98
2	Pattern amended (amend Note) – notification of change issued	24/02/99
3	Pattern amended (add Special Condition) – notification of change issued	22/01/01
4	Pattern reviewed – notification of change issued	8/04/03
5	Variant 1 approved – certificate issued	18/08/03
6	Pattern & variant 1 reviewed – certificate issued	25/02/08
7	Pattern & variant 1 reviewed & updated – variant 2 approved – certificate issued	18/05/12

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI (or NSC) LM 6/9C/242A' and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

Special

This Certificate relates to the suitability of the instrument as a class 4 non-automatic weighing instrument. Instruments complying with this approval and verified as complying with the requirements for a class 4 non-automatic weighing instrument may be used for determining the wheel loads of a vehicle for enforcement of legal limits for roads.

This approval shall NOT be used in conjunction with General Certificate of Approval No 6B/0.

Multiple instruments may be used with their indications being summed to provide the mass of an individual axle, an axle group or a total vehicle. When multiple instruments are used, caution should be exercised as the uncertainty of the values obtained by the summation of readings could exceed the maximum permissible errors for class 4 weighing instruments. Use of a single instrument is not permitted for any of these mass determinations.

Signed by a person authorised by the Chief Metrologist to exercise his powers under Regulation 60 of the *National Measurement Regulations 1999*.

TECHNICAL SCHEDULE No 6/9C/242A

1. Description of Pattern approved on 8/12/97

A Haenni model WL 103 non-automatic self-indicating class (III) platform weighing instrument (Figure 1) of 10 000 kg maximum capacity with a verification scale interval of 50 kg.

1.1 Platform

The platform has the weighing area supported by a grid of flat oval liquid-filled tubes. The elastic tubes are compressed between the moving cover plate and the base plate when the platform is loaded. The liquid pressure is measured by a sensor located in the digital indicator. This information together with data from a temperature sensor is used to produce the weighing result.

The model WL 103 has an active area of 660 mm × 345 mm.

1.2 Indicator

The integral electronic digital indicator is approved for a maximum of 200 scale intervals.

1.3 Zero

Zero is automatically corrected to within ±0.25e whenever power is applied and whenever the instrument comes to rest within 0.5e of zero.

The initial zero-setting device has a nominal range of not more than 10% of the maximum capacity of the instrument.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Descriptive Markings

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	…….
Name or mark of manufacturer's agent	…….
Indication of accuracy class	(III)
Pattern approval mark for the instrument	NMI (or NSC) 6/9C/242A
Maximum capacity	*Max* ..... g or kg #1
Minimum capacity	*Min* ..... g or kg #1
Verification scale interval	*e* = ... g or kg #1
Serial number of the instrument	…….
Special temperature limits	–20°C to +60°C #2

#1 These markings are also shown near the display of the result if they are not already located there.

#2 Refer to variant 1.

1.7 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed by a lead and wire seal between the indicator cover and housing using the screws provided (Figure 2).

2. Description of Variant 1 approved on 15/08/03

For use over a temperature range of –20^{o}C to +60^{o}C, and which is marked on the instrument.

3. Description of Variant 2 approved on 18/05/12

The Haenni model WL-103XL (Figure 3) weighing instrument has the same parameters as the pattern and variant 1, except the platform size which has an active area of 1395 mm × 345 mm.

TEST PROCEDURE No 6/9C/242A

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

Tests

(a) Apply a test load of not less than half the capacity of the instrument to the load receptor at least three times to exercise the instrument.

(b) Zero the instrument.

(c) Apply an appropriate zero test using test loads of 0.25 e and 0.75 e.

(d) Apply an appropriate discrimination test.

(e) Apply a repeatability test.

(f) Where practical, apply an eccentricity test.

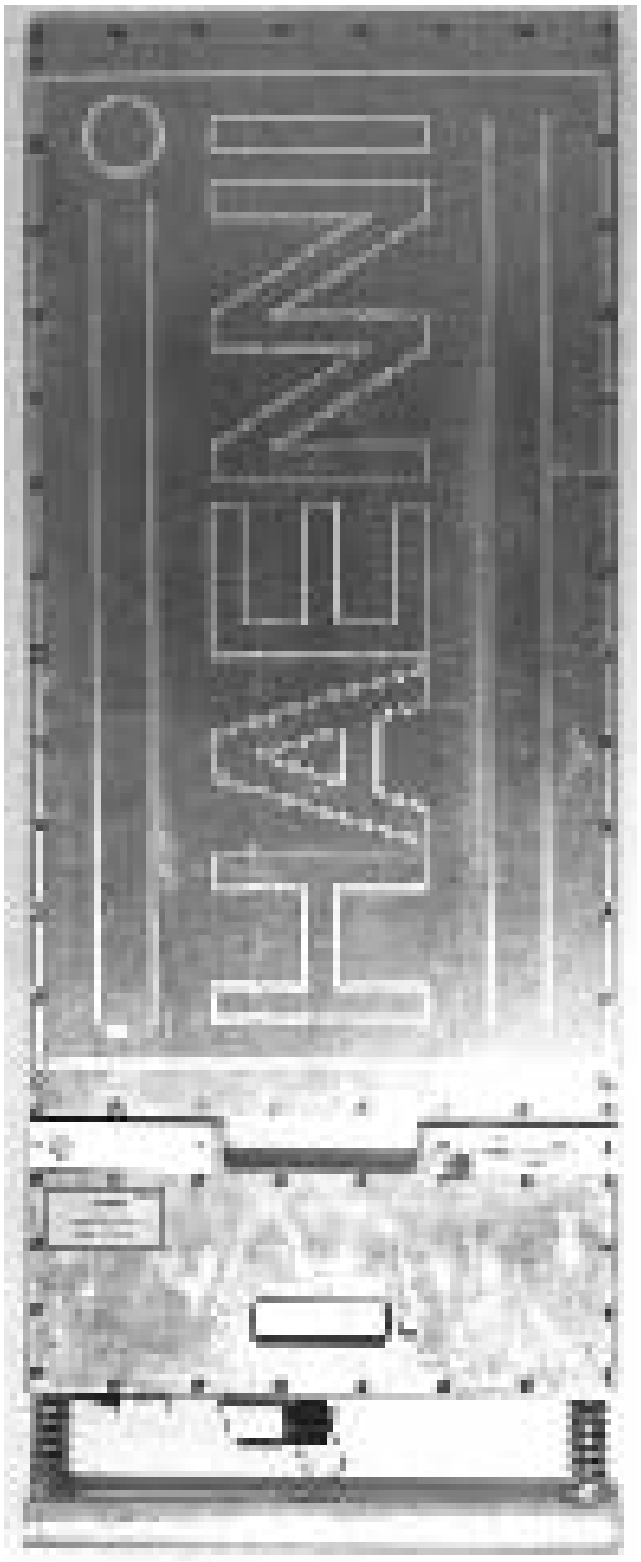
(g) With the zero indication correct, apply test loads to the centre of the load receptor in not less than five approximately-equal steps increasing to the maximum capacity.

Ensure that the indications are within the maximum permissible error for the load applied.

Each test load is to be applied at least twice and, where test masses are used and the test load consists of more than one test mass, the test load is to be applied as one mass.

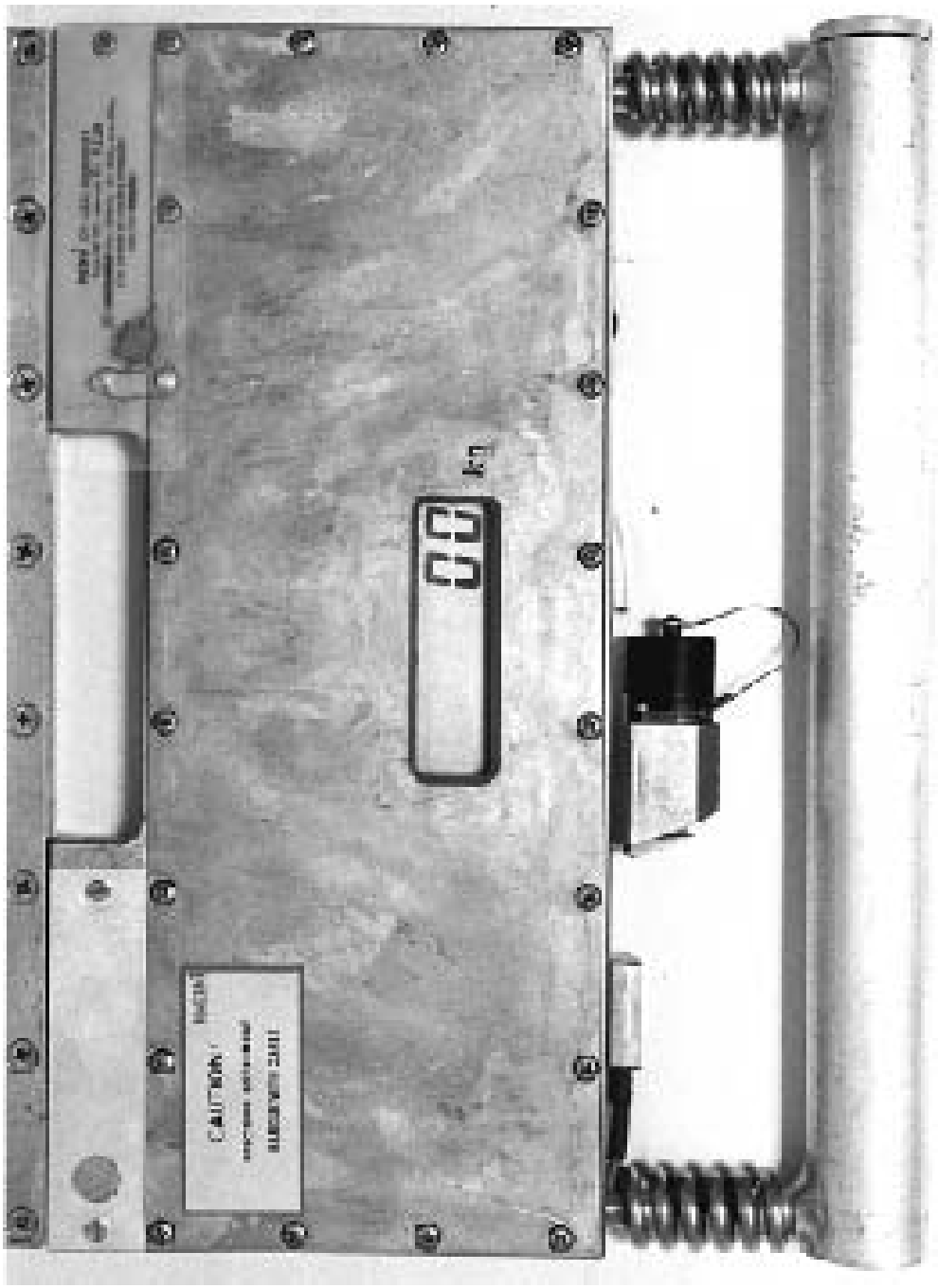
Ensure that after the load test, the zero indication is within ±0.25 e.

FIGURE 6/9C/242A – 1



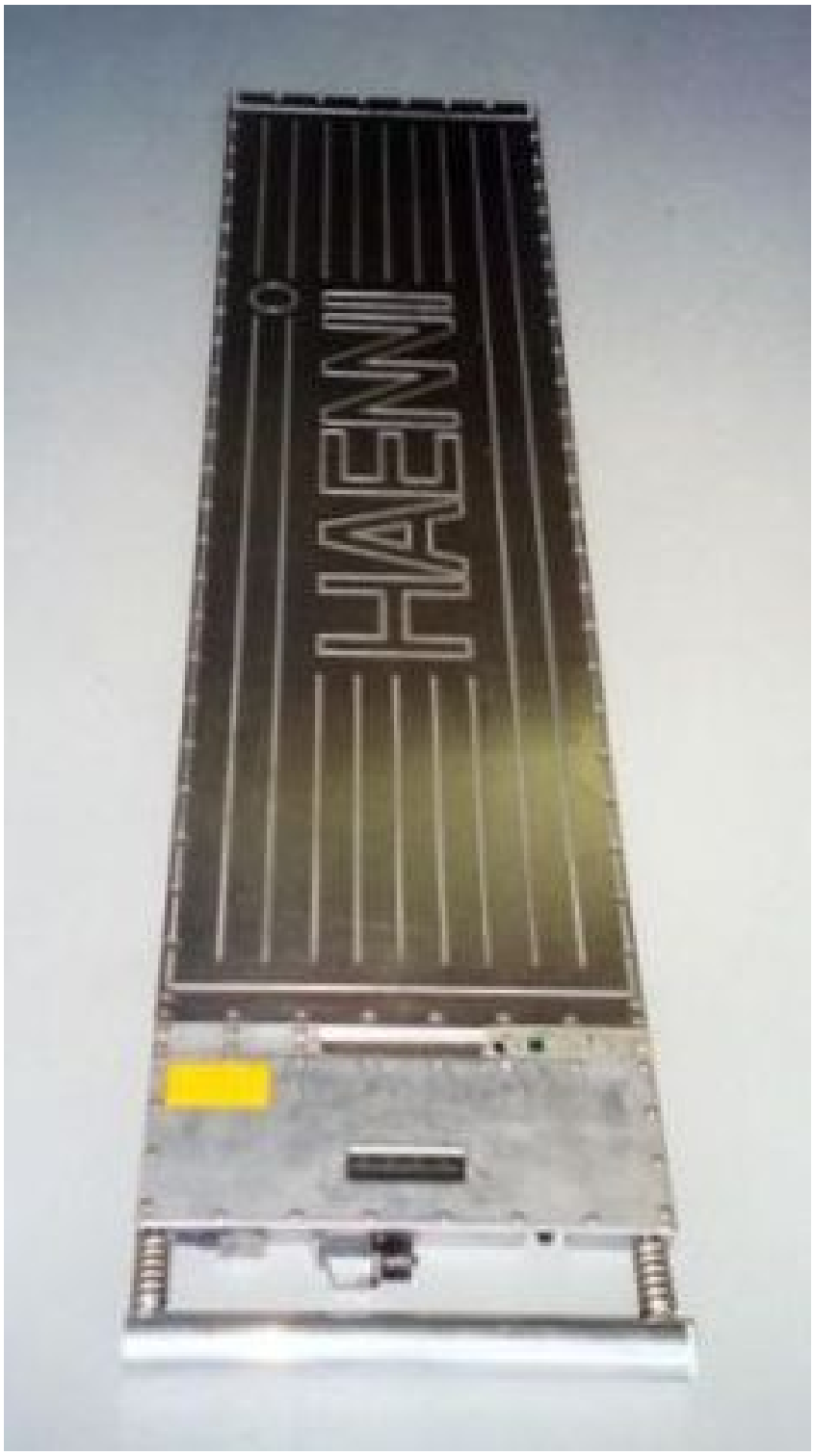
Haenni Model WL 103 Weighing Instrument

FIGURE 6/9C/242A – 2



Showing Typical Sealing Method

FIGURE 6/9C/242A – 3



Haenni Model WL 103XL Weighing Instrument

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