



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

Certificate of Approval

NMI LM 6/9C/266A

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.

PAT Model SAW 10 A // Weighing Instrument

submitted by Electronic Load Weighing Co of Australia Pty Ltd
 93 Cecil Avenue
 Castle Hill NSW 2154

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 Certificate is issued upon completion of a review of approval LM 6/9C/266.

This approval becomes subject to review on 1/12/21, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	4/11/11
1	Pattern reviewed, variant 1 to 3 approved – certificate issued	2/8/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI LM 6/9C/266A' and only by persons authorised by the submitter.

It is the submitter'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.

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 their powers under Regulation 60 of the *National Measurement Regulations 1999*.



Dr A Rawlinson

TECHNICAL SCHEDULE No 6/9C/266A

1. Description of Pattern approved on 4/11/11

A PAT model SAW 10 A /II self-indicating class 4 platform weighing instrument (Figure 1) of 10 000 kg maximum capacity with a verification scale interval of 20 or 50 kg.

The instrument is approved for a maximum of 500 scale intervals.

1.1 Platform

The instrument is constructed of aluminium alloy and utilises strain gauge technology.

1.2 Indicator

The instrument has an integral electronic digital indicator.

1.3 Zero

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


The initial zero-setting device of the pattern has a nominal range of not more than 20% of the maximum capacity of the instrument.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	International Road Dynamics
Name or mark of manufacturer's agent
Indication of accuracy class	
Pattern approval mark for the instrument	NMI LM 6/9C/266A
Model number
Maximum capacity	<i>Max</i> kg #
Minimum capacity	<i>Min</i> kg #
Verification scale interval	<i>e</i> = kg #
Serial number of the instrument

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

1.6 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of a destructive adhesive label over the calibration button cover, and by sealing the electronics access cover by either lead and wire or a destructive adhesive label (Figure 2).

1.7 Certification Provision

Provision is made for the application of a certification mark.

2. Description of Variant 1

approved on 2/8/16

A PAT model SAW 10 A /III self-indicating class 4 platform weighing instrument (Figure 3) of 10 000 kg maximum capacity with a verification scale interval of 20 kg.

The instrument is approved for a maximum of 500 scale intervals.

Sealing is provided by means of lead and wire type seal as shown in Figure 4.

Note: The SAW 10 A /III (also SAW 10C /III and SAW 15C/III below) have a feature by which two platforms may be connected by a cable. When connected the platform indication is preceded by the letter A (indicating 'axle', and the indicated value is the sum of the loads on the two platforms).

Use of the instruments in this mode is not approved.

3. Description of Variant 2

approved on 2/8/16

A PAT model SAW 10C /III self-indicating class 4 platform weighing instrument, similar to variant 1. However, the SAW 10C /III has a larger weighing surface, a maximum capacity of 10 000 kg, and a verification scale interval of 50 kg.

3. Description of Variant 3

approved on 2/8/16

A PAT model SAW 15C /III self-indicating class 4 platform weighing instrument, similar to variant 2. However, the SAW 15C /III has a larger weighing surface, a maximum capacity of 15 000 kg, and a verification scale interval of 50 kg.

TEST PROCEDURE No 6/9C/266A

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

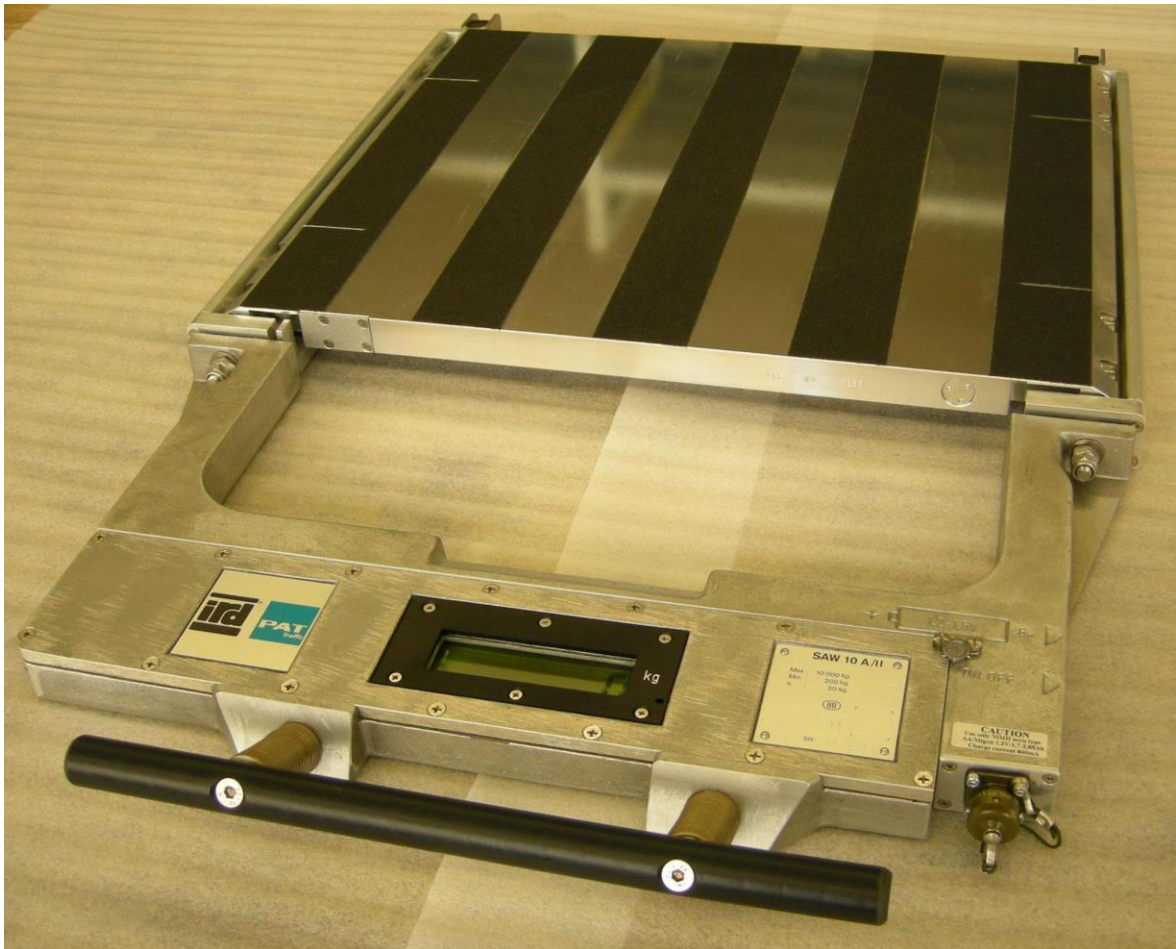
- (a) Apply a test load of not less than half the capacity of the instrument to the load receptor at least three times to exercise the instrument.
- (b) Zero the instrument.
- (c) Apply an appropriate zero test using test loads of 0.25 e and 0.75 e.
- (d) Apply an appropriate discrimination test.
- (e) 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.

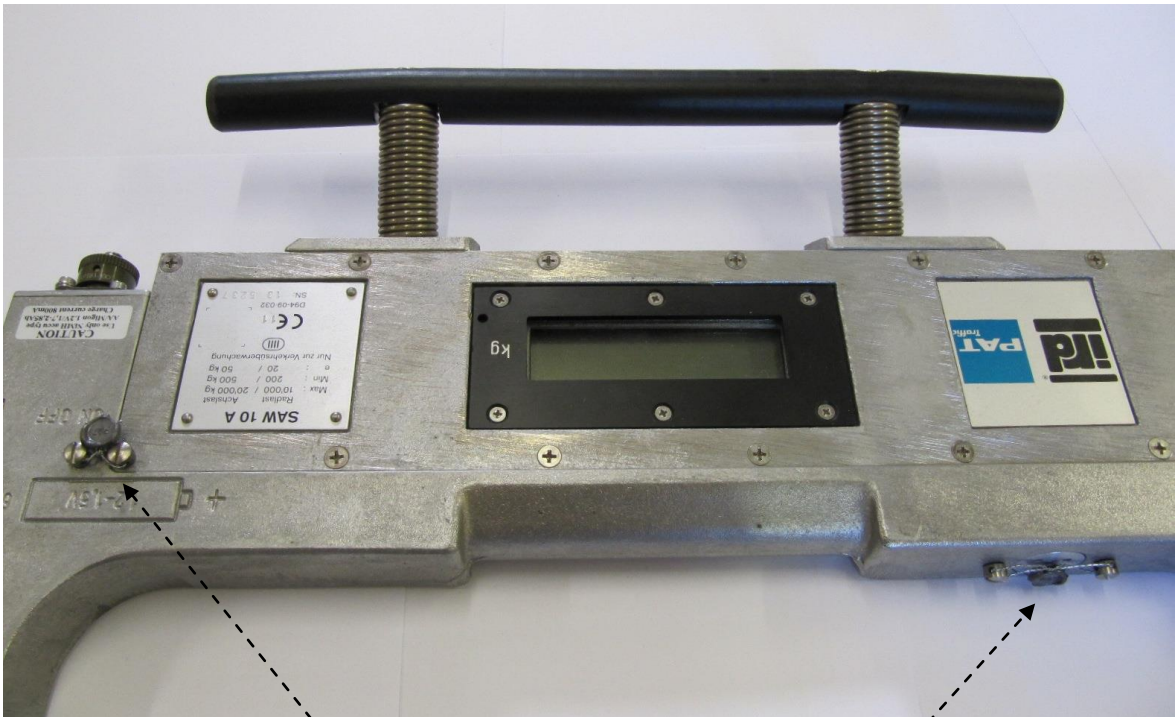
Ensure that after the load test, the zero indication is within ± 0.25 e.

FIGURE 6/9C/266A – 1



PAT Model SAW 10 A /II Weighing Instrument

FIGURE 6/9C/266A – 2



Showing Typical Sealing

FIGURE 6/9C/266A – 3



PAT Model SAW 10 A /III Weighing Instrument

FIGURE 6/9C/266A – 4



PAT Model SAW 10 A /III – Sealing arrangement

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