6/9C/84
27/11/86

NATIONAL STANDARDS COMMISSION

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/9C/84

This is to certify that an approval for use for trade has been granted in respect of the pattern and variants of the

Yamato Model PL-LLC2 Platform Weighing Instrument

submitted by Yamato Scale (Australia) Pty Ltd

on behalf of Yamato Scale Co Ltd
5/22 Chaemba-Cho
Akashi 673 JAPAN.

Conditions of Approval

General:

This approval is subject to review on or after 1/2/90.

This approval will expire in respect of new instruments on 1/2/91.

Instruments purporting to comply with this approval shall be marked NSC No 6/9C/84.

This approval may be withdrawn if instruments are constructed and used other than in accordance with the drawings and specifications lodged with the Commission.

Special:

If used in a Class IV application instruments shall be marked IIII and FOR LUGGAGE ONLY (or similar) adjacent to the indicator.

Signed

Executive Director

Descriptive Advice

Pattern: approved 17/1/85

. A self-indicating weighing instrument of up to 1000 kg capacity and approved for use with up to 3000 verification scale intervals, using a UB7 200 kg load cell and an EDI-500W indicator.

.../2

Variants: approved 17/1/85

1. Of 150 kg capacity.

2. Of 250 kg capacity.

3. The pattern using an R208-A1 or R208-A2 indicator approved for use with up to 1000 verification scale intervals.

4. Using other Commission-approved UB7 series load cells.

Technical Schedule No 6/9C/84 describes the pattern and variants 1 to 4.

Variant: approved 16/8/86

5. Of up to 2000 kg capacity approved for use with up to 2000 verification scale intervals.

Technical Schedule No 6/9C/84 Variation No 1 describes variant 5.

Filing Advice

Certificate of Approval No 6/9C/84 dated 16/8/85 is superseded by this Certificate and may be destroyed.

The documentation for this approval now comprises:

Certificate of Approval No 6/9C/84 dated 27/11/86
Technical Schedule No 6/9C/84 dated 16/8/85
Technical Schedule No 6/9C/84 Variation No 1 dated 27/11/86
Test Procedure No 6/9C/84 dated 16/8/85
Figures 1 to 4 dated 16/8/85.

6/9C/84
27/11/86

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/9C/84

VARIATION No 1

Pattern:	Yamato Model PL-LLC2 Platform Weighing Instrument
Submittor:	Yamato Scale (Australia) Pty Ltd
on behalf of	Yamato Scale Co Ltd 5/22 Chaemba-Cho Akashi 673 JAPAN.

Description of Variant 5

Of up to 2000 kg maximum capacity using a Yamato model UB7-300-C3E load cell of 300 kg capacity, and approved for use with up to 2000 verification scale intervals.

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/9C/84

Pattern: Yamato Model PL-LLC2 Platform Weighing Instrument

Submittor: Yamato Scale (Australia) Pty Ltd

on behalf of Yamato Scale Co Ltd
5/22 Chaemba-Cho
Akashi 673 JAPAN

1. Description of Pattern

The pattern is a self-indicating platform weighing instrument of up to 1000 kg capacity (Figure 1).

1.1 Indicator

The model EDI-500W indicator (Figure 2) is described in the documentation of NSC approval No S129 and is approved for use with up to 3000 scale intervals.

1.2 Basework

The basework is approved in capacities up to 1000 kg and uses a 2-lever system coupled directly to the model UB7 200 kg load cell by a link from the nose end Figure 3. The load cells are described in the documentation of NSC approval No S140.

The basework is provided with adjustable feet. Adjacent to the level indicator and repeated adjacent to the indicator reading face, is a notice advising that the instrument must be level when in use.

1.3 Selection of Load Cell - Lever Ratio Compatability

Lever ratios and load cells (refer variant 4) shall be chosen so that:

a) The live load of the cell shall be no less than 30% of the maximum capacity of the cell.

b) The maximum number of verification scale intervals and minimum value of verification scale interval applicable (where alternatives are provided) are those specified for the load cell when used in single-cell applications and with an indicator with or without an automatic zero tracking facility, as appropriate.

1.4 Marking

The instrument is marked with the following data, together in one location:

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 6/9C/84
Accuracy class in the form	(III) or (III)
Maximum capacity in the form	Max .....*
Minimum capacity in the form	Min .....*
Verification scale interval in the form	e = d = ...*
Maximum subtractive tare in the form	T = - .....

* These to be repeated in the vicinity of each reading face.

1.5 Verification Provision

Provision is made for a verification mark to be applied.

...../2

2. Description of Variants

2.1 Variant 1

Of 150 kg maximum capacity approved for use with up to 750 scale intervals.

Note: This variant has a lever ratio of 3.33:1 and does not conform with para. 1.3 above.

2.2 Variant 2

Of 250 kg maximum capacity approved for use with up to 500 scale intervals.

This instrument may have a conveyor assembly as part of the weighing platform but is only approved for static weighing.

Note: This variant has a lever ratio of 7.35:1 and does not conform with para. 1.3 above.

2.3 Variant 3

The pattern with an R208-A1 or R208-A2 indicator replacing the EDI-500W indicator, and approved for use with up to 1000 scale intervals.

The indicator may use a remote display and keyboard (Figure 4).

2.3.1 Zero

Zero is automatically corrected to within 0.25e whenever the instrument comes to rest within 0.5e of zero. If the instrument comes to rest outside that range but within the zero reset range, zero may be reset by pressing the zero button. The zero light illuminates whenever zero is correct to within 0.25e.

2.3.2 Display Check

When power is applied to the instrument, the display will alternatively show all 8's and blank several times, and then stay blank. Zero is then set by pressing the zero button.

2.3.3 Totalising Facility

A totalising facility may be fitted whereby successive weighings may be summed by the use of the ADD button, provided that the scale is returned to zero between weighings. A TOTAL CLEAR button resets the totaliser to zero. Instruments with this facility are known as model R208-A2.

2.4 Variant 4

With other Commission-approved UB7 series load cells in which case the maximum number of scale intervals allowable shall be 3000, or the maximum approved for the indicator or for the load cell, whichever is the smallest. Particular care should be taken to ensure that the conditions of para. 1.3 above are met.

TEST PROCEDURE No 6/9C/84

All load applications to the instrument should be in accordance with the Commission's recommended testing procedure for the elimination of rounding error as set out in Document 104.

The maximum permissible errors are specified in Document 118.

1. Zero Range

The maximum range of the zero setting device should not exceed 4% of the maximum capacity (± 2% approximately). With zero balance indicated, apply a load of, say, 2.5% of maximum capacity to the instrument; it should not be possible to obtain zero by means of the zero adjustment.

2. Zero Test

(a) Check by means of Document 104 that when the zero light illuminates, zero is set within 0.25e.

(b) As the automatic device resets zero when the weighing mechanism is in equilibrium within 0.5e of zero, zero should be checked as described in Document 104, with a load equal to, say, 10e on the load receptor. The indications with 0.25e and 0.75e additional mass on the load receptor will then be 10e and 11e respectively.

3. Range of Indication

(a) The maximum mass indicated should not exceed the maximum capacity (Max) by more than 10 scale intervals; above this indicated mass the indication should be blank or show non-numerical characters.

(b) The minimum mass indicated should be zero; below this the indication should be blank or show the mass preceded by a minus sign.

4. Tare

(a) Attempt to tare a mass greater than the marked tare capacity; this should not be possible.

(b) The semi-automatic tare function should be able to reset the mass indicator to zero within 0.25e at any load within its tare capacity. This may be checked as described for Zero Test - 2(a).

5. Load Test

Test loads are to be applied to the weighing instrument increasing in not less than 5 approximately equal steps to maximum capacity, followed by decreasing loads in not less than 5 approximately equal steps to zero load.

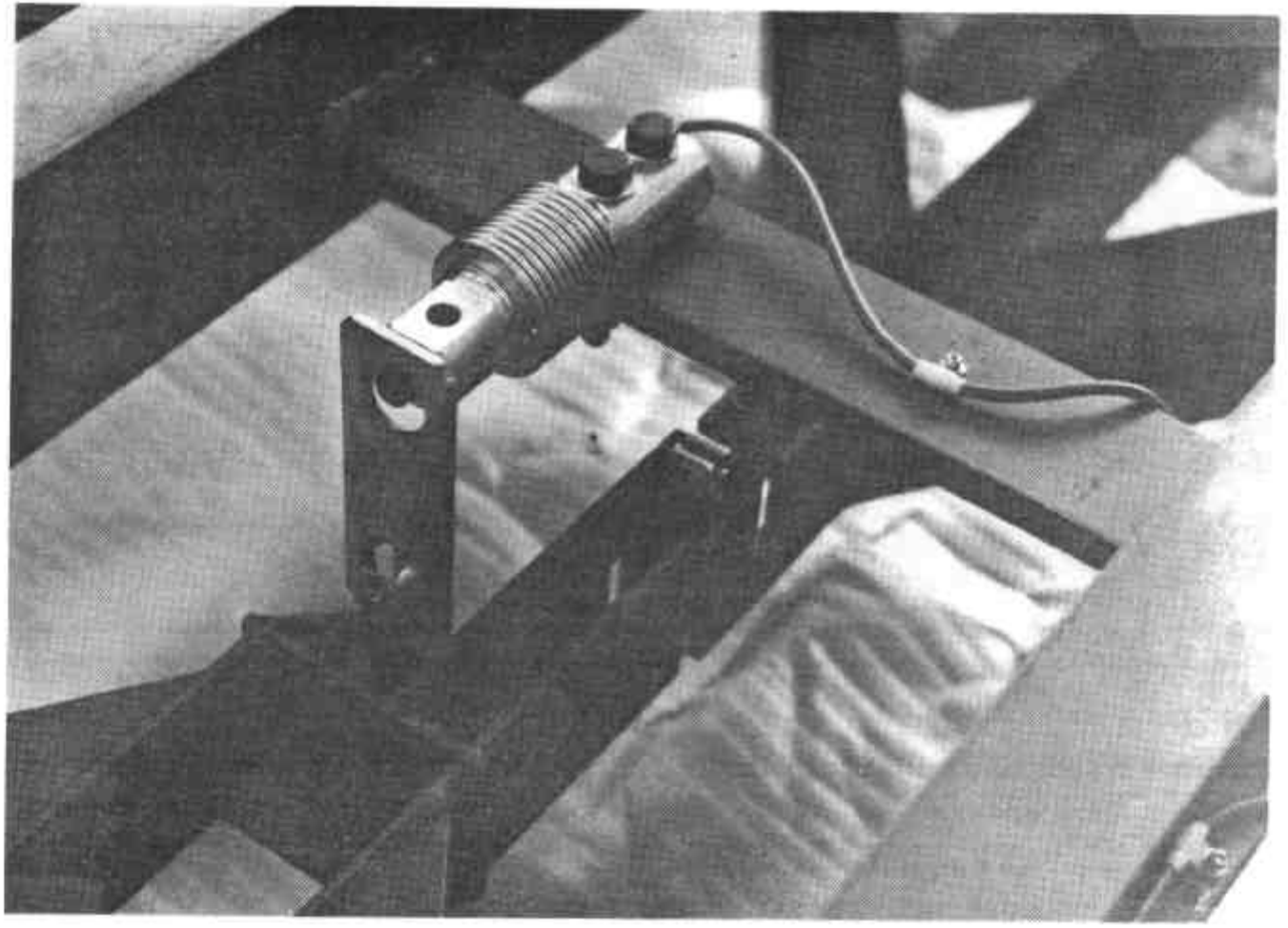
FIGURE 6/9C/84 - 1

PL-LLC2 Platform

FIGURE 6/9C/84 - 2

EDI-500W Indicator

FIGURE 6/9C/84 - 3



Load Cell Mounting

FIGURE 6/9C/84 - 4

Variant 3