



6/4D/226
8/7/88

NATIONAL STANDARDS COMMISSION

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/4D/226

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

Avery Model 1770 Weighing Instrument

submitted by Avery Australia Limited
3 Birmingham Avenue
Villawood NSW 2163.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/3/89.

This approval expires in respect of new instruments on 1/3/90.

Instruments purporting to comply with this approval shall be marked NSC No 6/4D/226.

This approval may be withdrawn if instruments are constructed other than as described in the drawings and specifications lodged with the Commission.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates Nos S1/0 and/or S2/0, as appropriate.

Signed

Executive Director

Descriptive Advice

Pattern: approved 20/2/84

- A self-indicating price-computing weighing instrument of 15 kg capacity with a verification scale interval of 0.005 kg.

Technical Schedule No 6/4D/226 describes the pattern.

Variants: approved 2/7/86

1. With an inbuilt label printer.
2. With the price-computing facility inhibited when connected to a price-computing auxiliary device.
3. With an Avery model 8636 Packscan printer.

Technical Schedule No 6/4D/226 Variation No 1 describes variants 1 to 3.

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Variant: approved 13/5/88

4. With an Avery model T103 load cell.

Technical Schedule No 6/4D/226 Variation No 2 describes variant 4.

Filing Advice

Certificate of Approval No 6/4D/226 dated 11/8/86 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/4D/226 dated 8/7/88
Technical Schedule No 6/4D/226 dated 15/3/84
Technical Schedule No 6/4D/226 Variation No 1 dated 11/8/86
Technical Schedule No 6/4D/226 Variation No 2 dated 8/7/88
Test Procedure No 6/4D/226 dated 15/3/84
Figure 1 dated 15/3/84



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/226

Pattern: Avery Model 1770 Weighing Instrument

Submittor: Avery Australia Limited
3-5 Birmingham Avenue
Villawood, New South Wales, 2163

1. Description of Pattern

A self-indicating price-computing weighing instrument (Figure 1) of 15 kg capacity by 0.005 kg scale intervals with unit price to \$999.99/kg and price to \$9999.99.

The instrument may be fitted with an output socket for the connection of auxiliary or peripheral devices.

1.1 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 within 0.25e.

1.2 Display Check

When power is applied to the instrument, there is a small time delay before the displays will show all 8's, and then blank. The instrument will then automatically rezero, if the instrument is within 30e of zero.

1.3 Unit Price

When a unit price is entered, if a delay of greater than 2 seconds occurs between the entering of digits, the last digit entered will clear the price already set and become the first digit of the new price.

Price can also be cancelled by pressing the PRICE CANCEL button.

1.4 Tare

A semi-automatic taring device of up to 7.5 kg capacity may be fitted. The entered tare will automatically cancel after a weighing when the load receptor is empty unless the TARE HOLD button is pressed.

1.5 Marking

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

Manufacturer's name or mark	NSC No 6/4D/226
NSC approval number	(III)
Accuracy class	Max = 15 kg
Maximum capacity	Min = 0.100 kg
Minimum capacity	e = d = 0.005 kg
Verification scale interval	T = - kg
Maximum subtractive tare in the form	

Note:

- . The serial number is located on a separate nameplate on the base of the instrument
- . The instrument may display mass below zero in which case the instrument must also be marked NOT FOR RETAIL COUNTER USE.

1.6 Levelling

The instrument is provided with a level indicator and adjustable feet. Adjacent to the level indicator is a notice advising that the instrument must be level when in use.

1.7 Verification

Provision is made for the application of a verification mark.

TEST PROCEDURE No 6/4D/226

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:

- ± 0.5e for loads between 0 and 500e;
- ± 1.0e for loads between 501 and 2000e; and
- ± 1.5e for loads above 2000e.

1. Zero Test

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.

2. Zero Range

The maximum range of operation of the zero setting device should not exceed 4% of the maximum capacity ($\pm 2\%$ approximately). With zero balance indicated apply a load of, say, 2.5% of maximum capacity to the instrument and press the zero button; the instrument should not rezero.

3. Level Sensitivity

As the automatic zero device may prevent the zero from changing when the instrument is tilted at zero load, the effect of tilt should be initially checked with a small load on the instrument, say, 10e.

When the instrument is tilted so that the bubble in the level indicator moves 2 mm, the indication of 10e should not change by more than 2e, and when, in the tilted position, the 10e load is removed and zero is allowed to automatically reset, or it is manually reset, the instrument should satisfy the accuracy requirements given above.

4. 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.

5. Range of Indication

- (a) The maximum mass indicated should not exceed the marked maximum capacity (Max) by more than 10e; 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 indicator should be blank or show non-numerical characters or the instrument must be marked NOT FOR RETAIL COUNTER USE.

6. Taring

The tare function should be able to reset the mass indicator to zero within 0.25e at any load within its capacity. This may be checked as described for Zero Test. A tare should not be able to be acquired above the marked tare capacity.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/226

VARIATION No 1

Pattern: Avery Model 1770 Weighing Instrument

Submitter: Avery Australia Limited
3-5 Birmingham Avenue
Villawood NSW 2163

1. Description of Variants

1.1 Variant 1

With an inbuilt label printer mounted between the main housing and the load receptor.

1.2 Variant 2

With the price-computing facility inhibited i.e. displaying mass only, when connected to an auxiliary device which has price-computing capability.

1.3 Variant 3

With an Avery model 8636 Packscan printer which has facilities for storing product information, unit price and tare-look-up tables.

When in use the printer inhibits the price-computing facility of the weighing instrument and can communicate tare information to the weighing instrument, with the mass display modified accordingly.

As the taring device of the printer operates digitally (resetting zero to within $\pm 0.5e$) the mass display shall show the tared mass preceded by a minus sign when the mass is removed from the load receptor.

The printer is not for retail counter use and must be so marked.

TEST PROCEDURE

Taring

Digital taring devices shall reset the mass indicator to zero within $\pm 0.5e$.



6/4D/226
8/7/88

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/226

VARIATION No 2

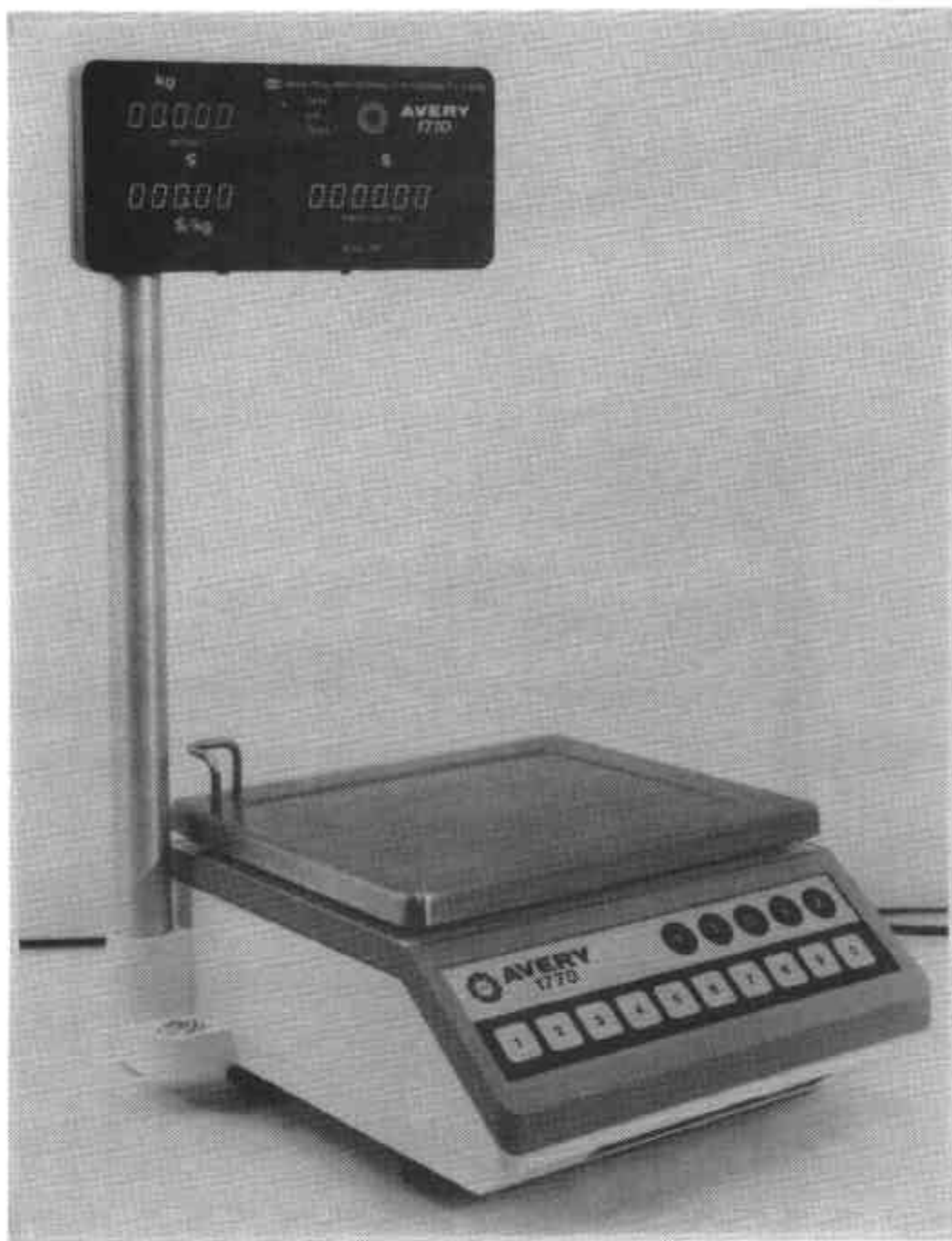
Pattern: Avery Model 1770 Weighing Instrument.

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1. Description of Variant 4

With the Avery model 8707 15 kg load cell used in the pattern and variants replaced by the Avery model T103 15 kg load cell.

FIGURE 6/40/226 - 1



Avery Model 1770 Weighing Instrument.