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31-12-90

# NATIONAL STANDARDS COMMISSION

## WEIGHTS & MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS

### REGULATION 9

#### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S129

This is to certify that an approval has been granted by the Commission that the pattern of the

Yamato Model EDI 500W Digital Indicator

submitted by Yamato Weighing Systems Pty Ltd,  
16 Gertrude Street,  
Arncliffe, New South Wales, 2205,

is suitable for use for trade when replacing the indicator in a Commission-approved weighing instrument.

The approval of the pattern is subject to review on or after 1/7/87.

All instruments purporting to comply with this approval shall be marked NSC No S129 in addition to the approval number of the pattern to which they are connected.

Relevant drawings and specifications are lodged with the Commission.

#### Conditions of Approval

1. An instrument fitted with a model EDI 500W indicator shall have a maximum number of 3000 scale intervals.
2. The number of scale intervals applicable to the weighing instrument in which this indicator is used shall be no greater than the number of verification scale intervals approved for the indicator, the basework, or the load cell(s), whichever is the smallest.

Signed

Executive Director

#### Descriptive Advice

Pattern: approved 23/6/82

. Yamato model EDI 500W digital indicator.

Technical Schedule No S129 dated 19/7/82 describes the pattern.

#### Filing Advice

The documentation for this approval consists of:

Certificate of Approval No S129 dated 19/7/82  
Technical Schedule No S129 dated 19/7/82  
Test Procedure No S129 dated 19/7/82.

19/7/82

The following tests should be carried out in conjunction with any test procedures in the Technical Schedule of the instrument to which the model EDI 500W is connected.

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

The maximum permissible are:

- ±0.5e for loads between 0 and 500e;
- ±1e for loads between 501e and 2000e; and
- ±1.5e for load above 2000e.

#### 1. Zero Range

Check that the range of the zero adjustment is not more than 4% of the maximum capacity (±2% approximately). Satisfactory setting may be checked by the following method:

- (a) 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 re-zero.
- (b) Reduce the load to, say, 1.5 and again press the ZERO button; the instrument should indicate zero balance.

#### 2. Zero Test

As the automatic zero tracking 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 indicator should be blank.
- (b) Below zero the indicator should display a negative quantity.

#### 4. Taring

- (a) Attempt to tare a mass above maximum capacity as determined in 3(a). On removal of the mass no tare should have been entered, and the indicator should display all zeroes.
- (b) The tare function should reset the mass indicator to zero within 0.25e at any load within its tare capacity. This may be checked as described in Document 104.

#### 5. Test Loads

Test loads are to be applied to the complete 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.

#### 6. Multiple Indicators

Where the existing headwork is retained and used in conjunction with the pattern, the variation between indications or printings for the same load shall not be greater than the absolute value of the maximum permissible error for that load on the device with the largest verification scale interval.



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No S129

Pattern: Yamato Model EDI 500W Digital Indicator

Submittor: Yamato Weighing Systems,  
16 Gertrude Street,  
Arncliffe, New South Wales, 2205.

### 1. Description of Pattern

A digital mass indicator (Figure 1) capable of displaying up to 3000 scale intervals.

#### 1.1 Zero

Zero to within  $0.25e$ , indicated by the CENTRE ZERO light illuminating, may be obtained either semi-automatically, using the ZERO push-button, or automatically, whenever the instrument comes to rest within  $0.5e$  of zero.

#### 1.2 Tare

##### 1.2.1 Use of Tare

- (a) Use of tare is indicated by the TARE light illuminating and the tare value being displayed in the TARE mass indicator.
- (b) A tare may only be entered when the NET light is illuminated.
- (c) Only one method of tare may be used at a time.

##### 1.2.2 Semi-Automatic Tare

Use of the push-button marked T allows a mass to be tared to within  $0.25e$ , indicated by the CENTRE ZERO light illuminating. On removal of this tared mass, the tare value, prefixed by a minus sign, is displayed on the mass indicator.

This tare is subtractive and has a capacity up to the maximum capacity of the instrument.

##### 1.2.3 Digital Tare

Use of the keypad allows a tare to within  $0.5e$  to be entered and displayed as a negative value on the mass indicator.

When the gross mass is equal to or greater than maximum capacity (Max), the mass indicator will blank irrespective of entered digital tare.

##### 1.2.4 Clearing Tare

Use of the push-button marked C clears any entered tare.

#### 1.3 Gross/Net Button

Use of this button allows either the gross or net mass to be displayed, indicated by the appropriate light illuminating.

1.4 Display Check

When power is applied, the indicator flashes all "8's", then blank, before zero is balanced.

1.5 Markings

The instrument is marked with the following data, together in one location (Figure 1):

Manufacturer's name or mark	Indicator NSC No S129
Serial number	Headwork NSC No.....¶
NSC approval numbers in the form	Basework NSC No.....
	Load Cell(s) NSC No.....
	III
Accuracy class	Max .....*
Maximum capacity	Min .....*
Minimum capacity	d = e = .....*
Scale interval	T = - .....
Maximum subtractive tare	
Load cell serial numbers - refer para 1.6.2	

Note: Digital tare scale interval may be included and marked  $d_T = \dots\dots$

In addition the indicator is marked NOT FOR RETAIL COUNTER USE.

1.6 Sealing

1.6.1 Indicator

Access to the indicator cabinet via the cover plate, is prevented by lead and wire seals on two retaining brackets fitted to the cover (Figure 1).

1.6.2 Serial Numbers

Load cell serial numbers may be marked on metal tags sealed to the indicator (Figure 1) or marked on the nameplate.

1.6.3 Nameplate

A stamping plug seals the nameplate (Figure 1).

These markings must be repeated in the vicinity of the reading face if not already there.

¶This approval number should be included where the headwork is retained as part of the modified instrument.

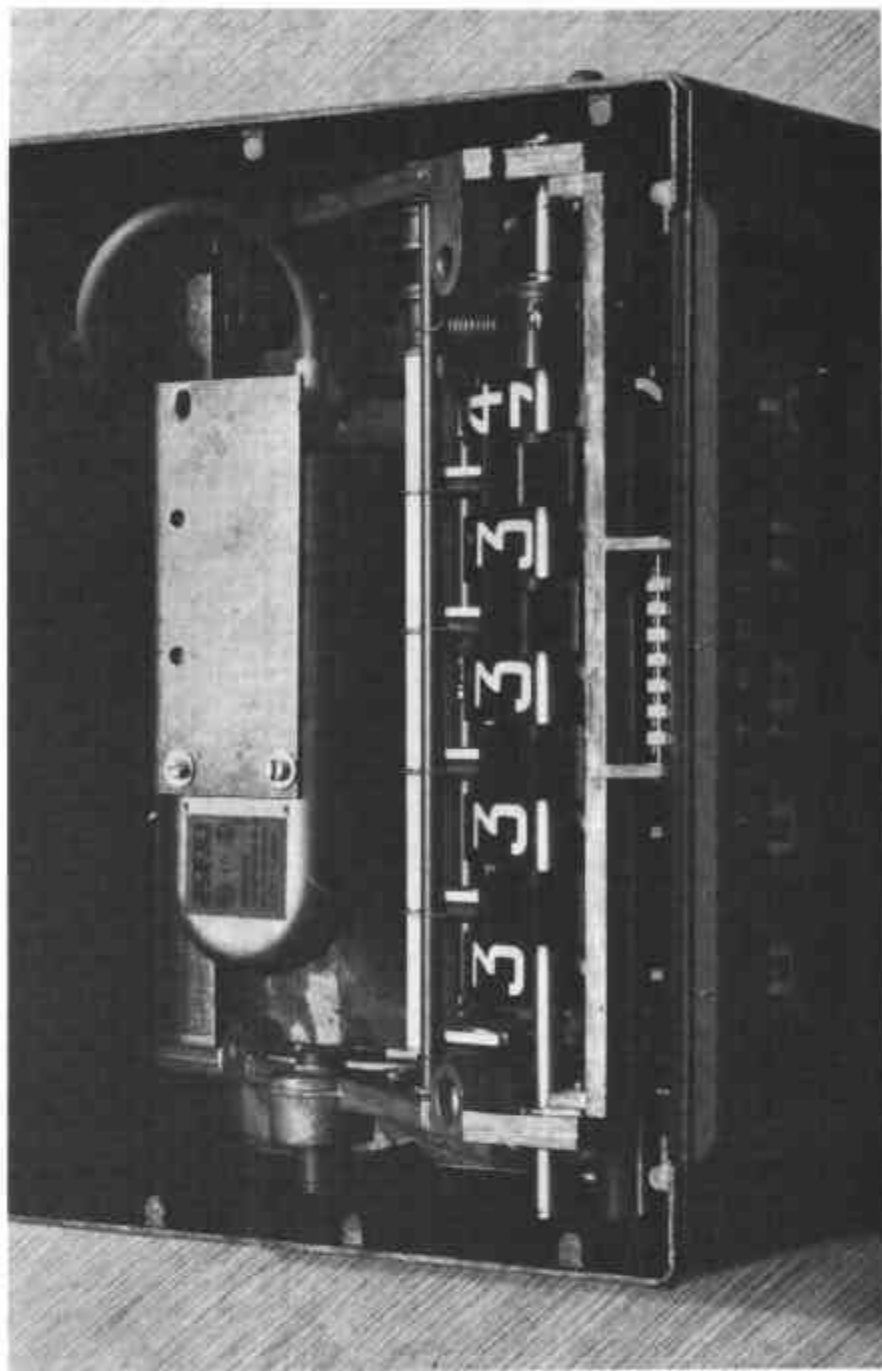
FIGURE S129 - 1



Yamato Model EDI-500W Indicator

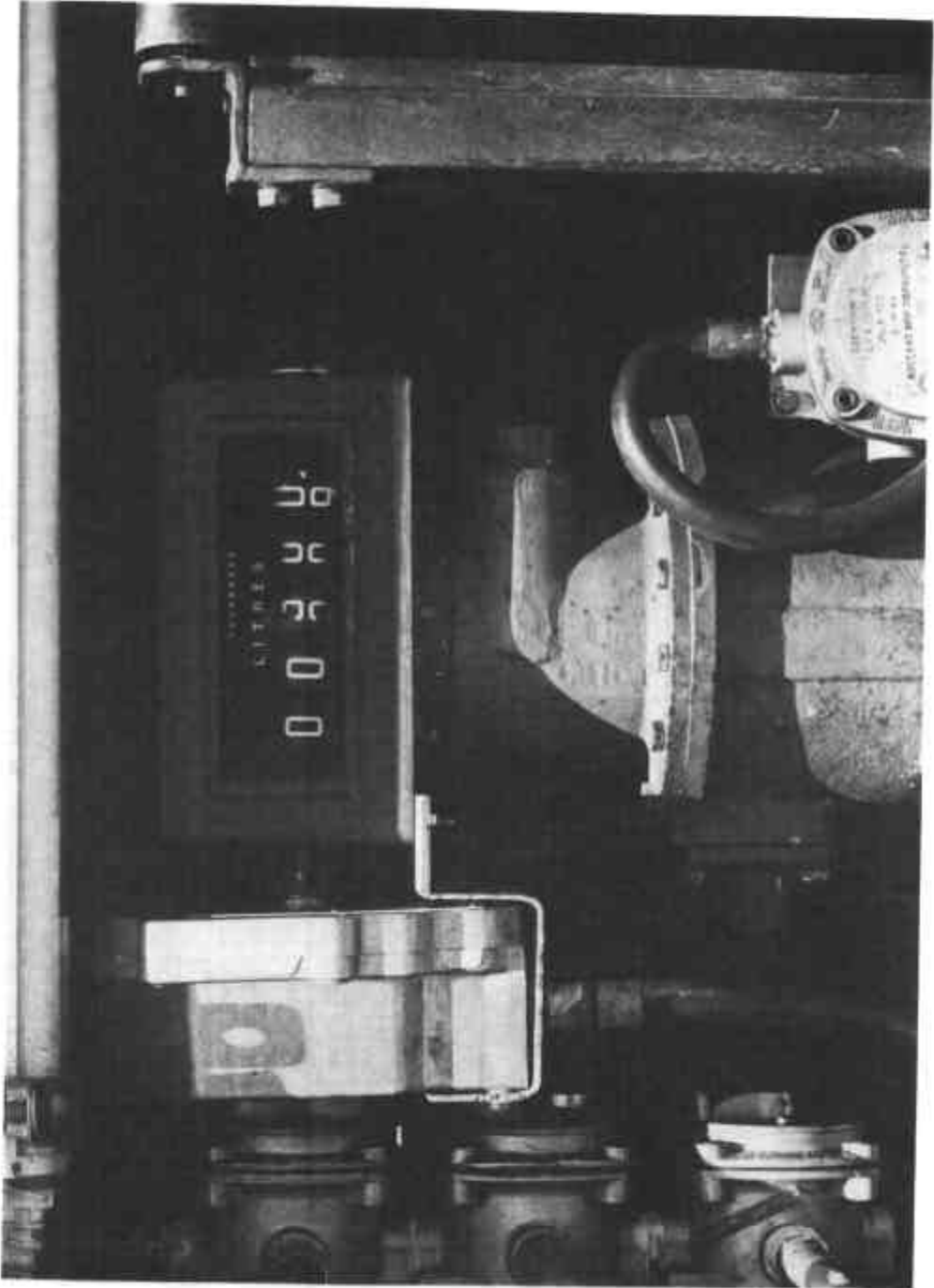
19/7/82

FIGURE S109 - 9



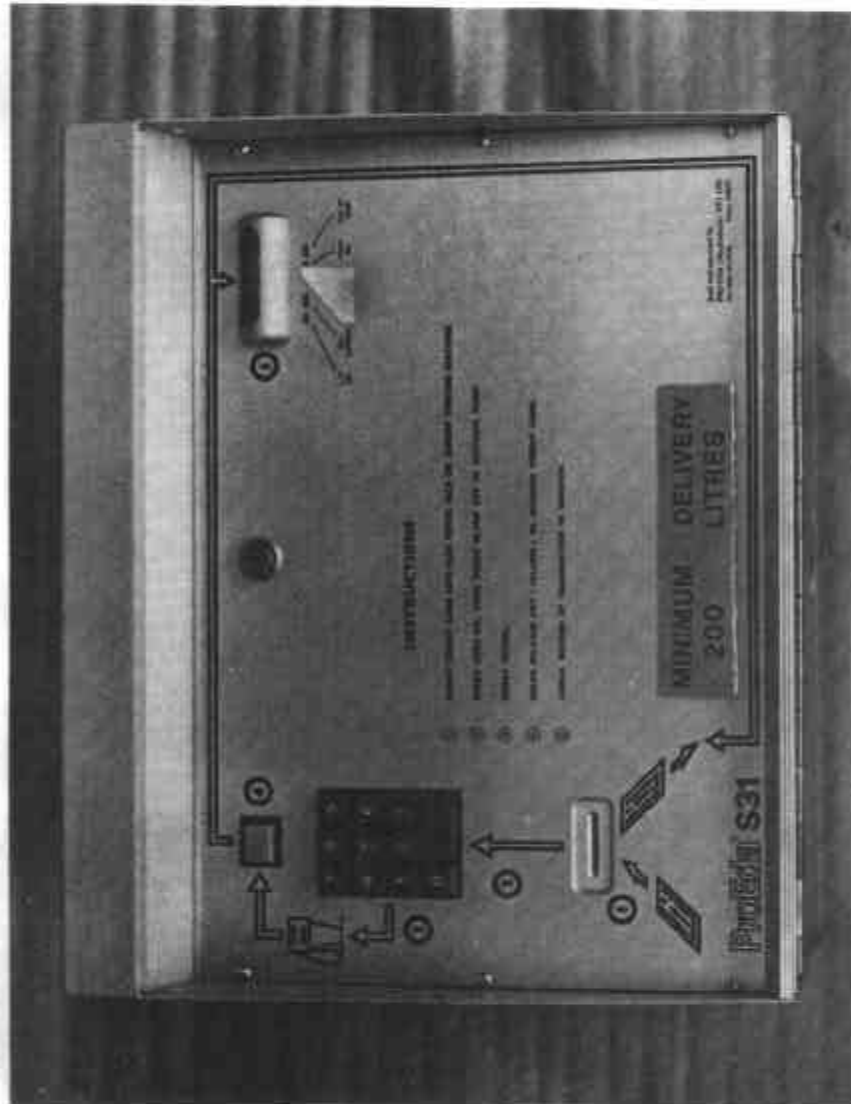
Showing Impulse Transmitter

FIGURE S109 - 10



Showing Mounting Of Electric Reset

FIGURE S109 - 11



16/6/82