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CERTIFICATE OF APPROVAL No 5/6B/26

VARIATION No 1

This is to certify that the following modification of the patterns of the

A. O. Smith T11 (Drum-filling) Flowmeter

approved in Certificate No 5/6B/26 dated 6 December 1974

submitted by Wayne Pumps Australia Pty Ltd,
29 Anzac Highway,
Keswick, South Australia, 5035,

has been approved under the Weights and Measures (Patterns of Instruments) Regulations as being suitable for use for trade.

Date of Approval: 4 September 1978

The approved modification, described in Technical Schedule No 5/6B/26 - Variation No 1, and in drawings and specifications lodged with the Commission, provides for a 60 litre capacity drum-filling flowmeter.

The approval is subject to review on or after 1 November 1979.

All instruments conforming to this approval shall be marked with the approval number "NSC No 5/6B/26".

Signed

H. Felix

Executive Officer

21/9/78

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6B/26

Pattern: A. O. Smith T11 (Drum-filling) Flowmeter

Submittor: Wayne Pumps Australia Pty Ltd,
29 Anzac Highway,
Keswick, South Australia, 5035.

Date of Approval: 6 December 1974

Conditions of Approval:

1. The flow rate is limited to a maximum of 400 litres per minute.

2. The pump suction is operated under a positive liquid head.

3. The supply tank is of sufficient capacity to ensure that the liquid in the tank does not fall to a level at which air could be drawn into the pump, or a device is fitted to prevent the level of the liquid falling to a level at which air could be drawn into the pump.

4. The liquids to be measured are limited to viscosities between 0,5 and 220 mm^2/s only. Within the viscosity range of 0,5 and 10 mm^2/s the specific liquid for which the instrument is calibrated is nominated on the instrument data plate. For liquids of viscosity above 10 mm^2/s the instrument data plate is marked with the viscosity range for which the instrument has been calibrated.

5. All instruments conforming to this approval shall be marked "NSC No 5/6B/26".

Description:

The pattern (see Figures 1, 2 and 3) is a flooded-suction drum-filling flowmeter to measure 200 litres of liquid petroleum within a viscosity range of 0,5 and 220 mm^2/s.

The flowmeter comprises the following:

1. Supply tank.

2. Pump mounted lower than the minimum height of the liquid in the supply tank. The supply pipe from the tank to the pump has a continuous fall to the pump.

3. Non-return valve in the pipe between the pump and the gas separator.

4. A. O. Smith T2A gas separator (see Figures 2 and 3), which is used only as a strainer. A pressure-relief pipe connects the gas separator to the outlet-control valve; the opening of the vent valve in the gas separator causes the outlet-control valve to close.

5. A. O. Smith T11 meter (see Figures 2 and 3).

6. A. O. Smith 502 counter, which causes the outlet-control valve to close when the quantity delivered is 200 litres. Two additional counters are provided which are "not approved for use for trade"; one is a non-resettable totalizer and the other a resettable drum counter.

   The counter is marked "to deliver 200 litres".

7. A. O. Smith BP2 outlet-control valve with integral anti-drain valve (see Figure 3). The valve may be closed manually or by the 502 counter. A short length of pipework downstream of the valve has a continuous fall to the delivery point so that it fully drains after each delivery; a vacuum breaker may be fitted to ensure complete drainage. No valves are fitted downstream of the outlet-control valve.

   A drum-filling spear which fills drums from the bottom may be attached to the outlet pipe (see Figure 4).

8. Marking — an instrument data plate sealed to the instrument is marked specifically with the product to be measured for products of viscosity up to 10 mm^2/s and with a viscosity range for products of viscosity above 10 mm^2/s; for example:

   (a) "approved for petrol only";

(b) "approved for kerosene only";

(c) "approved for heating oil only";

(d) "approved for distillate only"; or

(e) "approved for liquid petroleum of viscosity 10 to 220 mm^2/s only".

9. Sealing — the meter is sealed as illustrated in Figure 2.

The approval includes:

1. A hose of up to 1 metre in length and an F13931 nozzle fitted to the outlet valve, or to the end of the outlet pipe (see Figure 5). The nozzle is only fitted with an anti-drain valve — no nozzle-control valve is provided. In this case, the hose and pipe downstream of the outlet-control valve remain full of liquid after a delivery.

2. The A. O. Smith 502 counter, causing the outlet-control valve to close when the quantity delivered is 205 litres.

Special Tests:

1. The instrument should be tested with the liquid for which it will be used, the name of which is marked on the instrument data plate.

2. If a device is fitted to prevent the level of the liquid in the supply tank falling to the level of the pump, at least one delivery should occur during which the device stops the delivery. It will be necessary to refill the supply tank to finish the delivery into the proving measure.

3. As this is a fixed-quantity delivery, no minimum delivery has been specified.

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6B/26

VARIATION No 1

Pattern: A. O. Smith T11 (Drum-filling) Flowmeter

Submittor: Wayne Pumps Australia Pty Ltd,
29 Anzac Highway,
Keswick, South Australia, 5035.

Date of Approval of Variation: 4 September 1978

The modification described in this Schedule applies to the patterns described in Technical Schedule No 5/6B/26 dated 21 May 1975.

All instruments conforming to this approval shall be marked "NSC No 5/6B/26".

Description:

The approved modification provides for the flowmeter to measure 60 litres at a fixed flow rate ± 5% between 160 and 220 litres per minute. The A. O. Smith 502 counter causes the outlet-control valve to close when the quantity delivered is 60 litres and is marked "to deliver 60 litres".

Special Tests:

The special tests described in Technical Schedule No 5/6B/26 dated 21 May 1975 apply to this variant.

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FIGURE 5/6B/26 - 1

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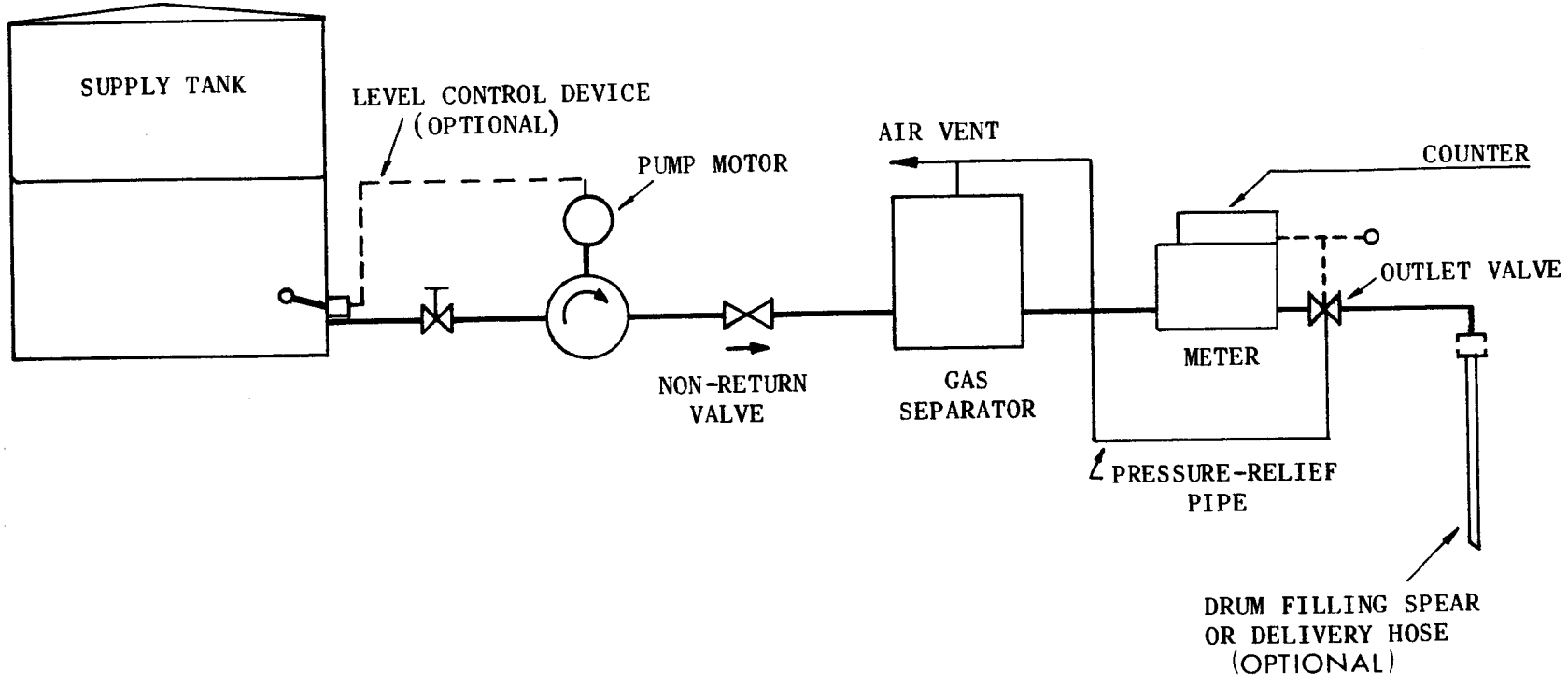
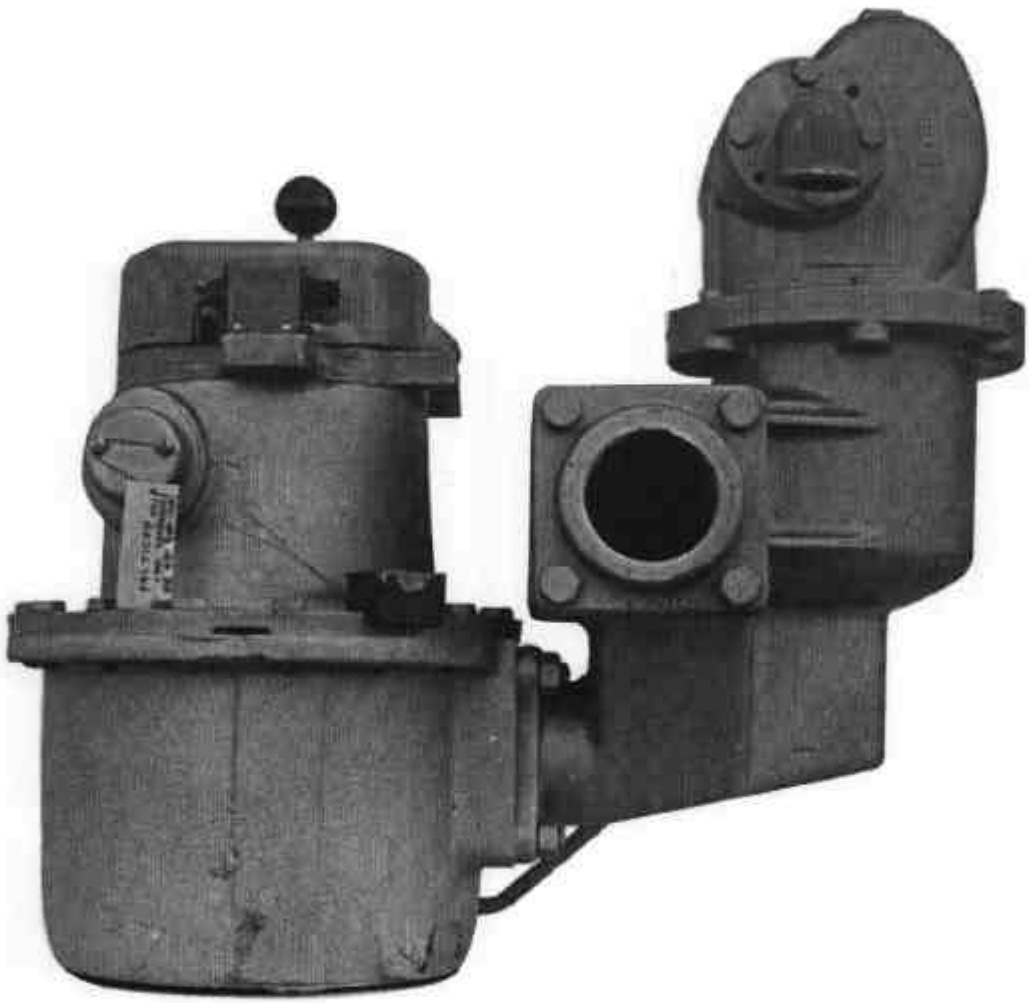


T11 (Drum-filling) Flowmeter

FIGURE 5/6B/26 - 2



T11 (Drum-filling) Flowmeter

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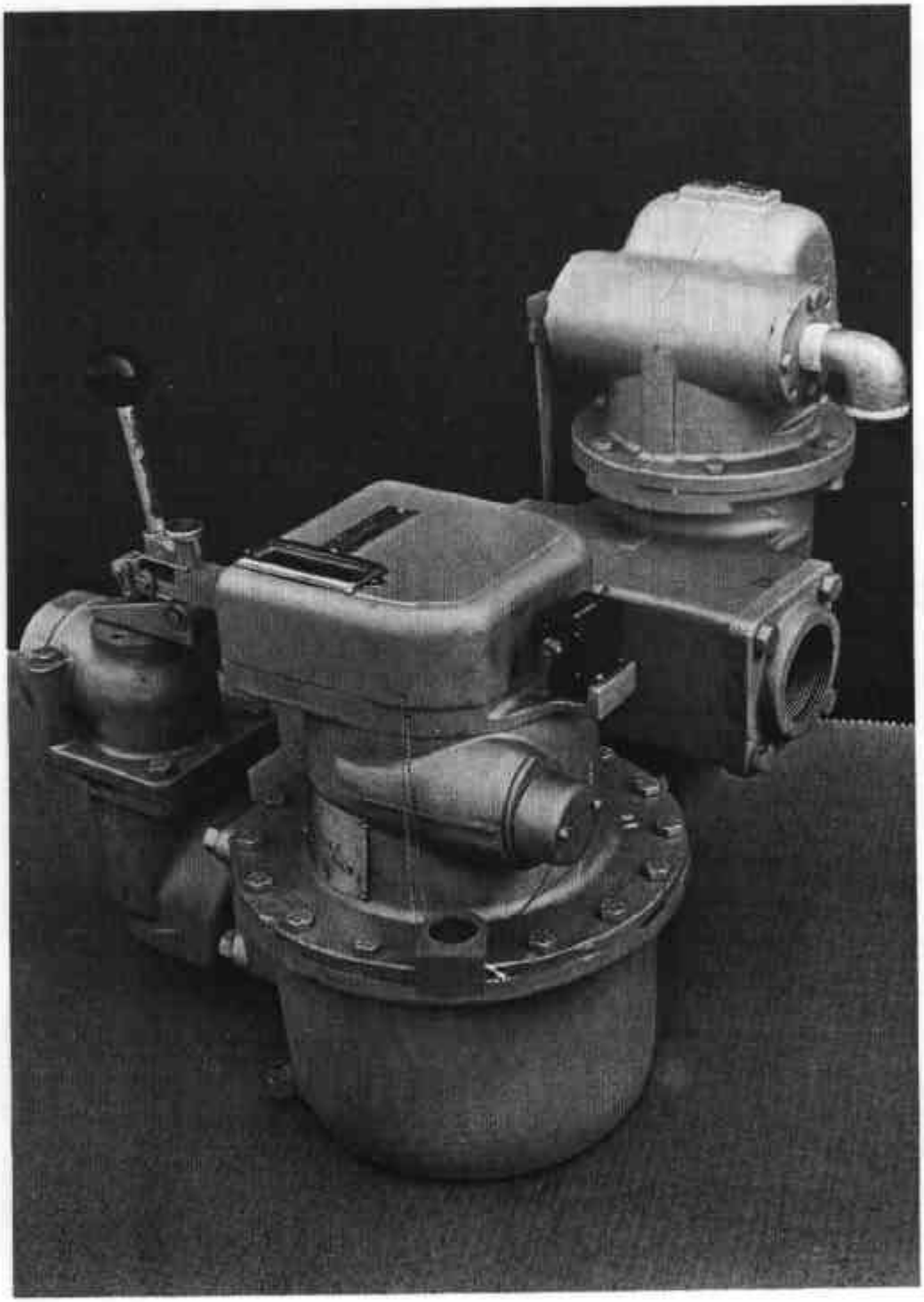
FIGURE 5/6B/26 - 3



T11 (Drum-filling) Flowmeter

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FIGURE 5/6B/26 - 4

Drum-filling Spear

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FIGURE 5/6B/26 - 5

Hose and F13931 Nozzle