CERTIFICATE OF APPROVAL No 5/6A/37

VARIATION No 1

This is to certify that the following modification of the pattern and variants of the

Wayne 67-1 Driveway Flowmeter

approved in Certificate No 5/6A/37 dated 30 November 1970

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.

The approved modification converts all driveway flowmeter models to indicate in metric units in accordance with Appendix 14 of the General Specifications for Measuring Instruments to be Used for Trade.

Approval was granted on 28 May 1974.

This variation is described in Technical Schedule No 5/6A/37, Variation No 1, and in drawings and specifications lodged with the Commission.

The submittor shall notify the Commission of the location of the first ten instruments conforming to the pattern and variants submitted to State or Territorial Weights and Measures Authorities for verification. *

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

All instruments conforming to this approval shall be marked with the approval number "NSC No 5/6A/37".

Signed

Executive Officer

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* Inspectors should not verify any instrument conforming to this Certificate until advised in writing by the Pattern Approval Laboratory that the Commission has been so notified.

28/5/74

COMMONWEALTH OF AUSTRALIA

NATIONAL STANDARDS COMMISSION

Weights and Measures (National Standards) Act 1960-1966

Weights and Measures (Patterns of Instruments) Regulations

Certificate of Approval

CERTIFICATE NUMBER 5/6A/37

In respect of the pattern of

Wayne 67-1 Solo Dispenser and Variants.

Submitted and manufactured by: Wayne Pumps Australia Pty. Ltd.,
29 Anzac Highway,
Keswick,
South Australia. 5035.

This is to certify that the pattern and variants of the instrument illustrated and described in this Certificate have been examined by the National Standards Commission under the provisions of the abovementioned Regulations and have been approved as being suitable for use for trade.

The pattern and variants were approved on 20th November, 1970.

Approval was granted on condition that:

1. all instruments made in conformity with this Certificate:

   (a) are appropriately marked NSC No 5/6A/37; and

   (b) comply with the General Specifications for Weighing and Measuring Instruments to be Used for Trade;

2. only 40 instruments (see Note 1, Figure 1) are submitted to State or Territorial Weights and Measures Authorities for verification;

3. the Commission is notified of the location of each instrument referred to in Condition 2 before verification;

4. the Commission may re-examine any instrument referred to in Condition 2 after verification; and

5. the instruments are tested in accordance with the test procedure described in the Certificate.

This Certificate comprises:

Pages 1 to 6 dated 30th November, 1970.
Figures 5/6A/37 - 1 to 15 dated 30th November, 1970.

Date of issue 30th November, 1970.

Signed

A person authorised by the Commission to sign Certificates under the abovementioned Regulations.

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DESCRIPTION OF PATTERN

The pattern (see Figure 2) is of a retail price-computing flowmeter known as the Wayne Model 67-1 Solo Dispenser supplied with liquid by a remotely located non-positive displacement pump. It comprises the components tabulated in Column 5 of Figure 1 which, with the exception of the pump, are housed in a steel cabinet, and arranged as shown in Figure 3.

The remote pump is started by a switch in the dispenser which is activated by the starting handle; at the same instant the normally closed solenoid valve is energised, allowing the pump pressure to be applied through the dispenser to the nozzle.

The hydraulic diagram is illustrated in Figures 4 and 5, and the maximum flow rate is $10\frac{1}{2}$ gallons per minute.

DESCRIPTION OF VARIANTS

1. The components tabulated in Column 6 of Figure 1 make up variants also known as the Wayne Model 67-1 Solo Dispenser, each variant having the housing and component arrangement as the pattern.

   The hydraulic diagram is the same as the pattern (see Figures 4 and 5), and the maximum flow rate is $10\frac{1}{2}$ gallons per minute.

2. One pump with two sets of the other components tabulated in Column 7 of Figure 1 make up variants known as the Wayne Model 67-1 Dual Dispenser (see Figure 6). With the exception of the pump, the components in each variant are housed in a steel cabinet and arranged as shown in Figure 7.

   The hydraulic diagram of each set of components is the same as for the pattern (see Figures 4 and 5) and the maximum flow rate is $10\frac{1}{2}$ gallons per minute.

3. Installations in which more than one dispenser is connected to one pump are approved as variants. In such installations the electric control system is arranged so that the first dispenser

to be started will start the pump, which will continue to operate until all dispensers have been shut off by their starting handle.

DESCRIPTION OF COMPONENTS

1. Pump assembly — a non-positive displacement pump with a falling head/flow characteristic; it is fitted with an integral non-return valve, a manual by-pass valve, and a sight glass (see Figure 8), all arranged as shown in Figure 5.
2. Test valve — Wayne P10107 comprising a self-closing pneumatic inlet to the delivery pipe between the pump and dispenser (see Figure 5). The valve is located within the dispenser cabinet in the impact valve, upstream of the solenoid valve (see Figure 9).
3. Solenoid valve — Wayne P8526 (see Figure 10), an electrically operated normally closed valve in the pipe upstream of the gas separator (see Figures 4 and 5); it is energised by turning the starting handle to "on".
4. Gas separator with integral float chamber — Wayne P9849 (see Figures 11 and 12), in which gas separation is achieved by reducing the velocity of the liquid and allowing the gas to rise to the surface. The gas and a quantity of the liquid pass through an orifice in the top of the gas separator, into the float chamber, thence through an orifice into the gas/liquid return pipe, which is connected to the underground supply tank. Accumulation of gas in the float chamber allows the float to fall and open a valve in the gas separator which provides an additional orifice in the top of the gas separator to rapidly disperse any gas in the pump delivery pipe.
5. Non-return valve — Wayne P5687.
6. Meter — Wayne P8765, as described in Certificate No 5/6A/4.
7. Meter sealing — 1-hole cup-and-wire seal, as described in Certificate No 5/6A/4.
8. Computer — Veeder-Root 1613, as described in Certificate No 5/6A/6 with $\frac{1}{2}$ gallon graduations on the quantity indicator.
9. Computer — Component No 8 with 0.1 gallon graduations on the quantity indicator.

10. Computer — Veeder-Root 1611, converted to decimal currency, as described in Certificate No 5/6A/11, with $\frac{1}{2}$ gallon graduations on the quantity indicator.

11. Computer — Component No 10, with 0.1 gallon graduations on the quantity indicator.

12. Back-pressure valve — Wayne P9252, as described in Certificate No 5/6A/13.

13. Sight glass — Wayne P9870 by-pass type (see Figure 13).

14. Hose — external retractable $\frac{3}{4}$ inch bore hose.

15. Nozzle — Wayne P7775 automatic hose nozzle with external anti-drain valve unit fitted, as described in Certificate No 5/6A/28.

16. Nozzle — Wayne P9199 manual hose nozzle, as described in Certificate No 5/6A/13.

17. Nozzle — Wayne P9809 manual hose nozzle, as described in Certificate No 5/6A/28.

18. Nozzle — STM 363 automatic hose nozzle, as described in Certificate No 5/6A/7.

19. Nozzle — OPW 1A or 1AM automatic hose nozzle, as described in Certificate No 5/6A/7.

20. Dial face — on each side of the cabinet, integral with a hinged glazed door, is a metal panel with two cut-outs, through which black dial faces with white markings are viewed.

21. Nameplate — marked "approved for liquid petroleum $\leq$ 1 cSt", which means that the instrument is approved for liquid petroleum of viscosity not more than 1 cSt.

22. Dispenser interlock:

    (a) When starting the dispenser, the starting handle causes the reset pawl to engage in the reset cam, before the solenoid valve is energised.

    (b) When stopping the dispenser, the interlock which prevents the solenoid valve from being re-energised is engaged and the solenoid valve is de-energised before the second stage

of the interlock is engaged, by which time the starting handle has reached a position of 45° to the horizontal (see Figures 14 and 15).

GENERAL NOTES

1. Test Procedures for Gas Separator

   1. Check accuracy of delivery and adjust if necessary; record the actual amount delivered.
   2. Stop the pump by turning off the dispenser (and all other dispensers if more than one is connected).
   3. Open the pump by-pass valve (see Figures 5 and 8).
   4. Close the impact valve.
   5. Connect the compressed air hose to the test valve at the dispenser (see Figure 9), and purge the delivery pipe of liquid, observing the sight glass in the by-pass pipe (see Figures 5 and 8).
   6. Disconnect the compressed air hose and close the by-pass valve.
   7. Open the impact valve.
   8. Start the dispenser and repeat the accuracy test of Step 1. The amount delivered should be within 0.5% of the amount recorded in Step 1. (It should be noted that when the nozzle valve is opened no liquid will be discharged until the air in the delivery pipe is purged by the gas separator.)

2. Test Procedure for Minimum Flow Rate

   In installations in which more than one dispenser is connected to one pump, check the flow rate for each dispenser with all dispenser nozzles fully open. The flow rate of each dispenser shall not be less than that specified in the General Specifications.

3. General

   Inspectors are requested to confirm with the Pattern Approval Laboratory that Condition No 3 has been carried out before verifying an instrument.

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6A/37

VARIATION No 1

Pattern: Wayne 67-1 Driveway Flowmeter

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

Date of Approval of Variant: 28 May 1974

The modification described in this schedule applies to the pattern and variants described in the following pages and figures of Certificate No 5/6A/37 dated 30 November 1970:

Pages 3 to 6 dated 30 November 1970
Figures 5/6A/37 - 1 to 15 dated 30 November 1970

The submittor shall notify the Commission of the location of the first ten instruments conforming to the pattern and variants submitted to State or Territorial Weights and Measures Authorities for verification. *

All instruments conforming to this approval shall be marked "NSC No 5/6A/37".

Description:

This variation approves the conversion of all models to indicate in metric units in accordance with Appendix 14 of the General Specifications for Measuring Instruments to be Used for Trade.

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* Inspectors should not verify any instrument conforming to the Certificate until advised in writing by the Pattern Approval Laboratory that the Commission has been so notified.

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FIGURE 5/6A/37 - 1

1	2	3	4	5	6	7
	COMPONENTS	DATE APPROVED	NOTES	PATTERN M67-1 SOLO	VARIANTS	
					M67-1 SOLO	M67-1 DUAL
1	Pump assembly			*	*	*
2	Test valve, Wayne P10107			*	*	*
3	Solenoid valve, Wayne P8526			*	*	*
4	Gas separator, Wayne P9849		1	*	*	*
5	Non-return valve, Wayne P5687			*	*	*
6	Meter, Wayne P8765			*	*	*
7	Meter sealing, 1-hole cup-and-wire seal			*	*	*
8	Computer, VR 1613, $\frac{1}{2}$ gallon graduations				A	A
9	Computer, VR 1613, 0.1 gallon graduations			*	A	A
10	Computer, VR 1611, $\frac{1}{2}$ gallon graduations				A	A
11	Computer, VR 1611, 0.1 gallon graduations				A	A
12	Back-pressure valve, Wayne P9252	20 NOV 1970		*	*	*
13	Sight glass, Wayne P9870			*	*	*
14	Hose, $\frac{3}{4}$ inch bore			*	*	*
15	Nozzle, Wayne P7775, with external anti-drain valve			*	B	B
16	Nozzle, Wayne P9199				B	B
17	Nozzle, Wayne P9809				B	B
18	Nozzle, STM 363				B	B
19	Nozzle, OPW 1A				B	B
20	Dial face, black			*	*	*
21	Nameplate, "approved for petroleum $\leqq$ 1 cSt"			*	*	*
22	Dispenser interlock			*	*	*

* - indicates required component

A - indicates alternative components, one of which is required

B - as for A

NOTES

1 - Applicable only to 20 Model 67-1 Solo Dispensers and 20 Model 67-1 Dual Dispensers

Compatibility Table for Components Described in this Certificate

FIGURE 5/6A/37 - 2

Wayne 67-1 Solo Dispenser

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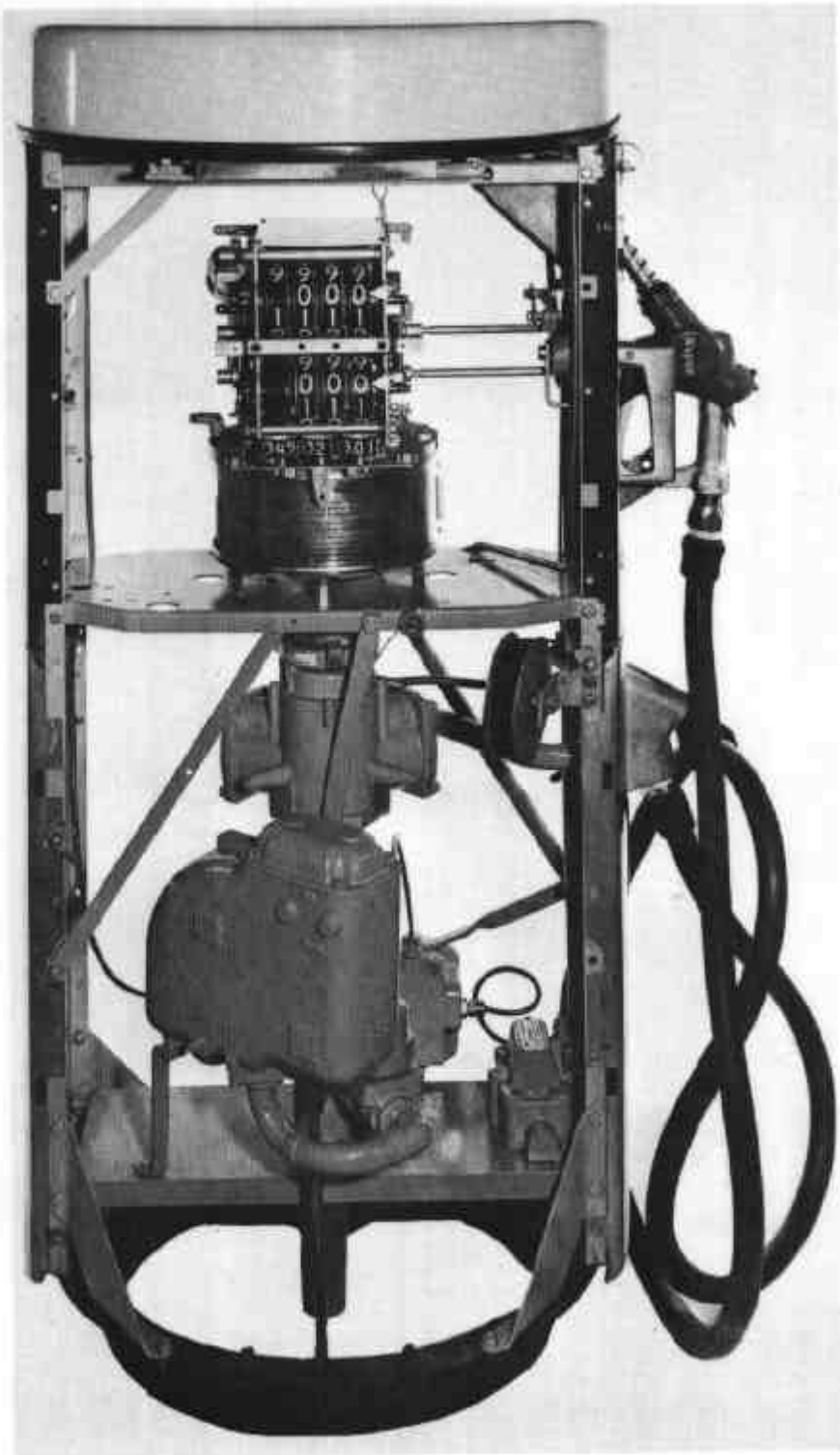
FIGURE 5/6A/37 - 3



Wayne 67-1 Solo Dispenser with Panels Removed

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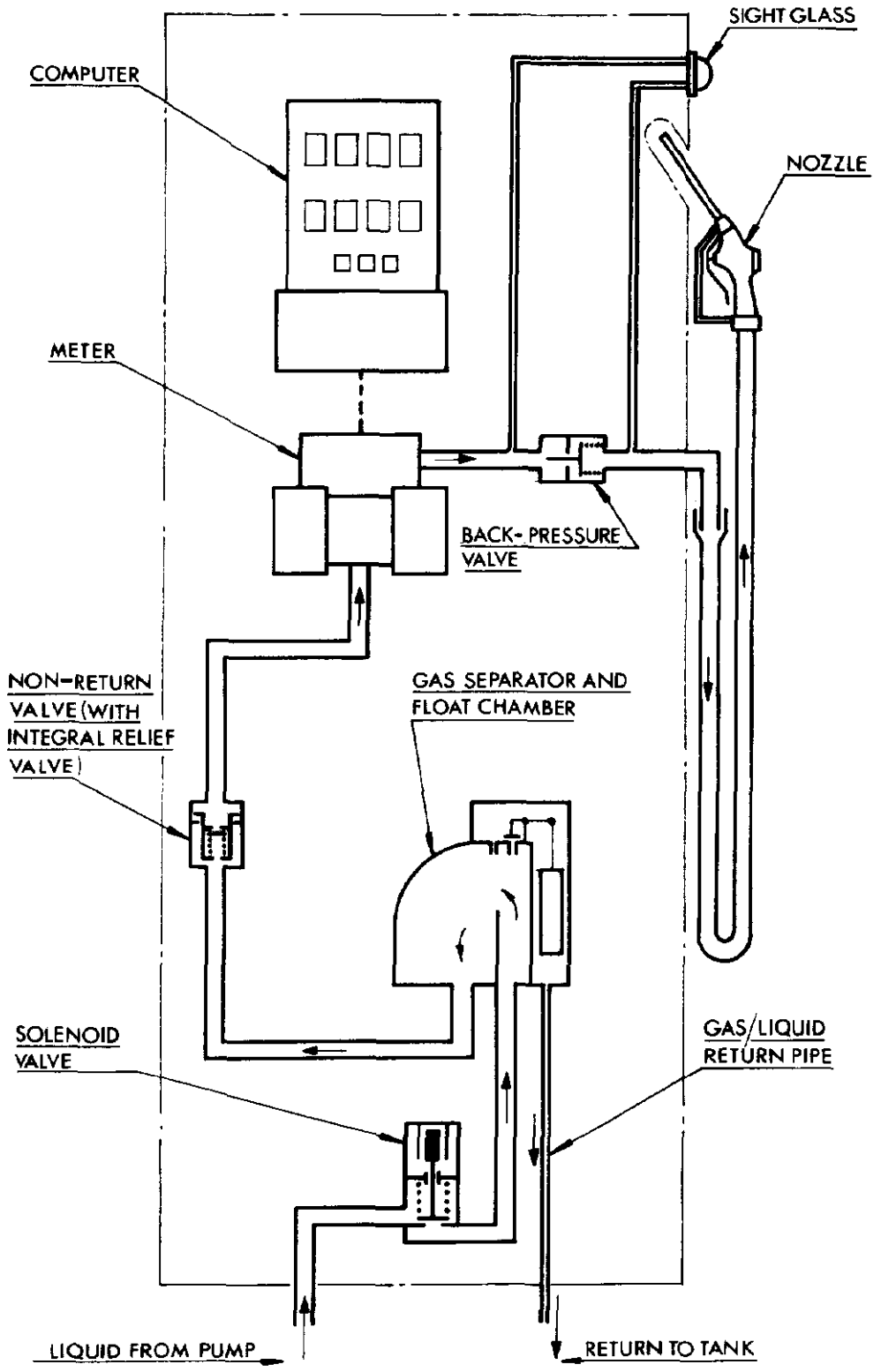
FIGURE 5/6A/37 - 4



Wayne 67-1 Solo Dispenser — Hydraulic Diagram

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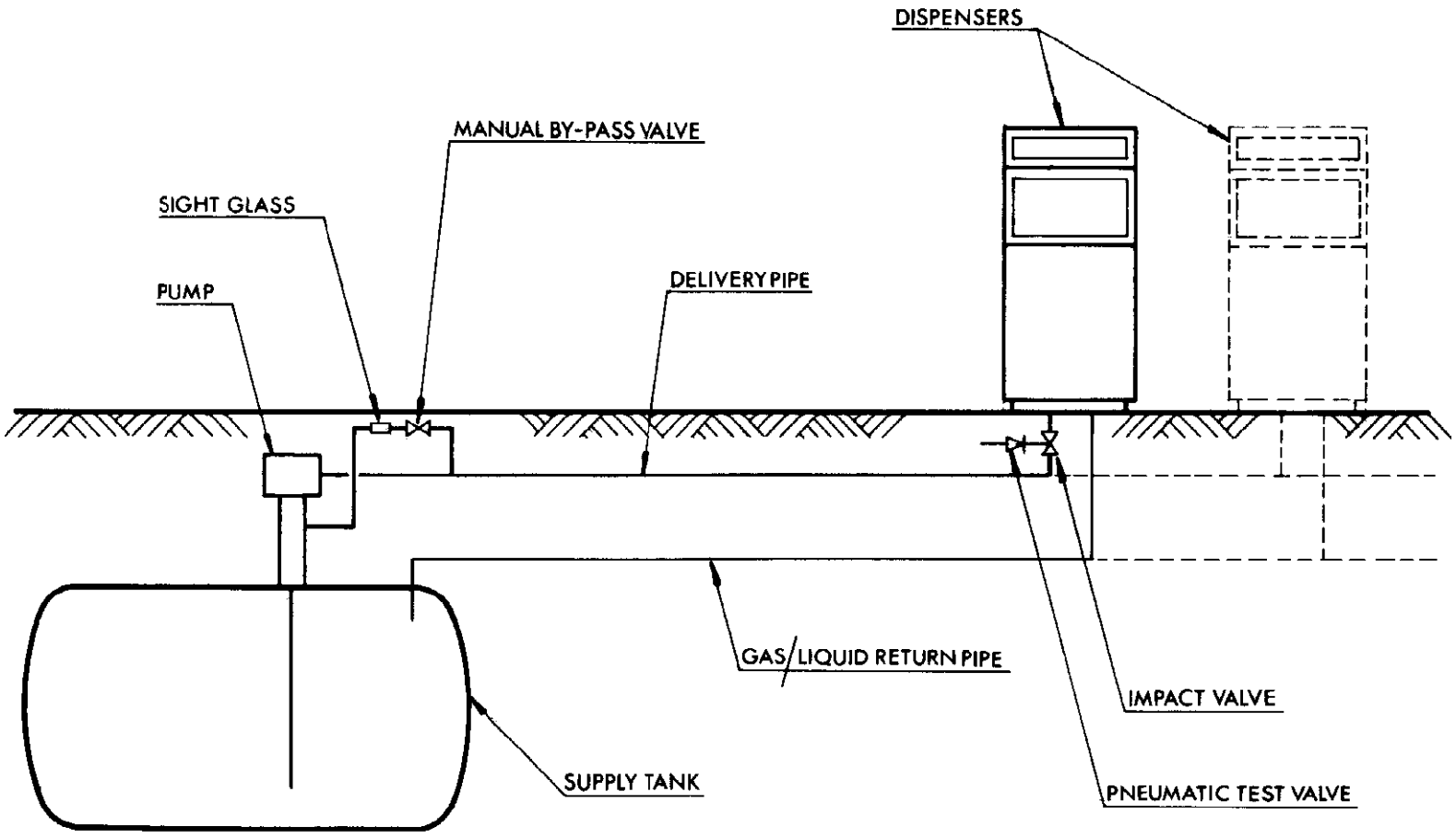
FIGURE 5/6A/37 - 5



Wayne 67-1 Dispenser — Hydraulic Diagram of the Installation

FIGURE 5/6A/37 - 6

Wayne 67-1 Dual Dispenser

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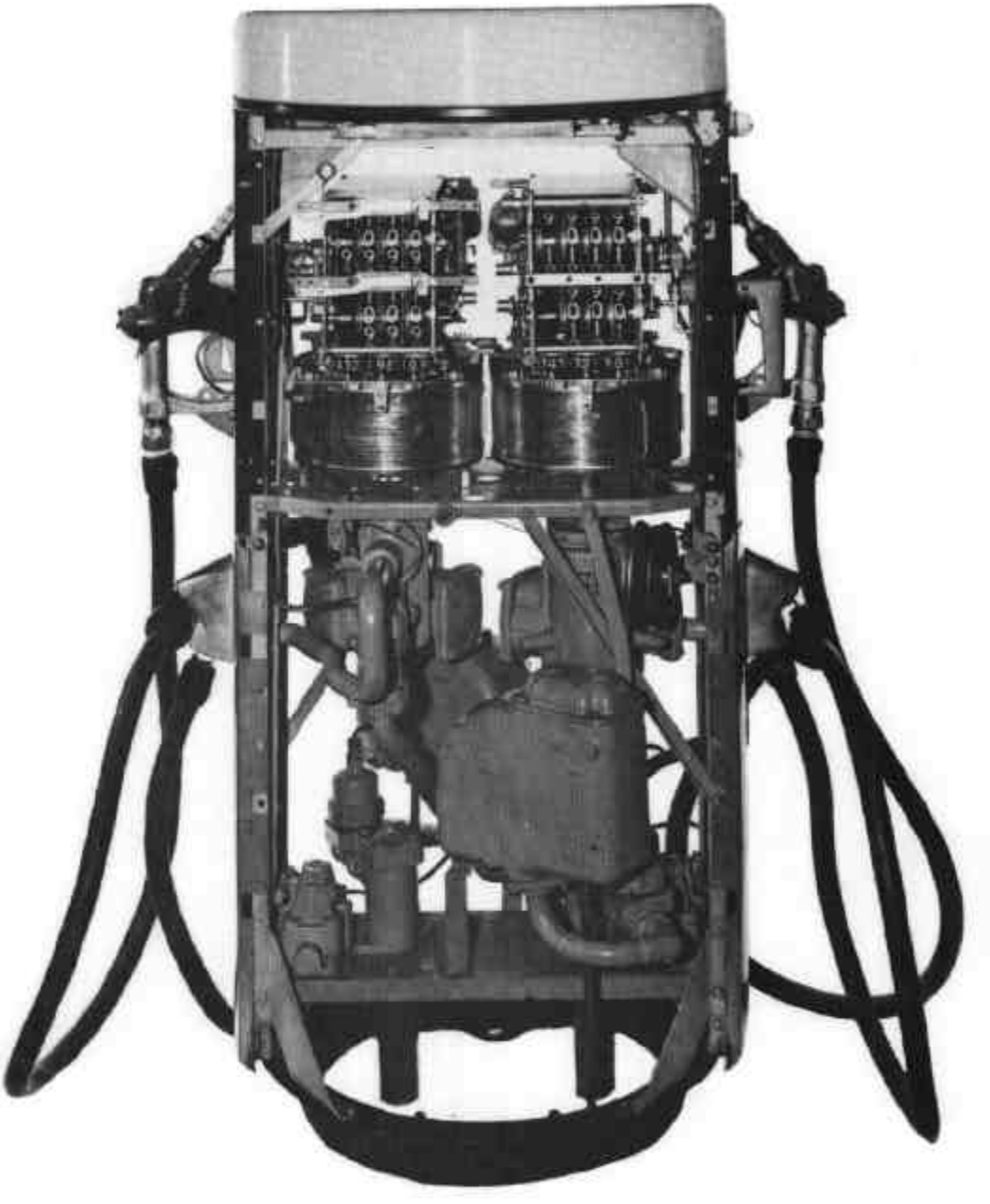
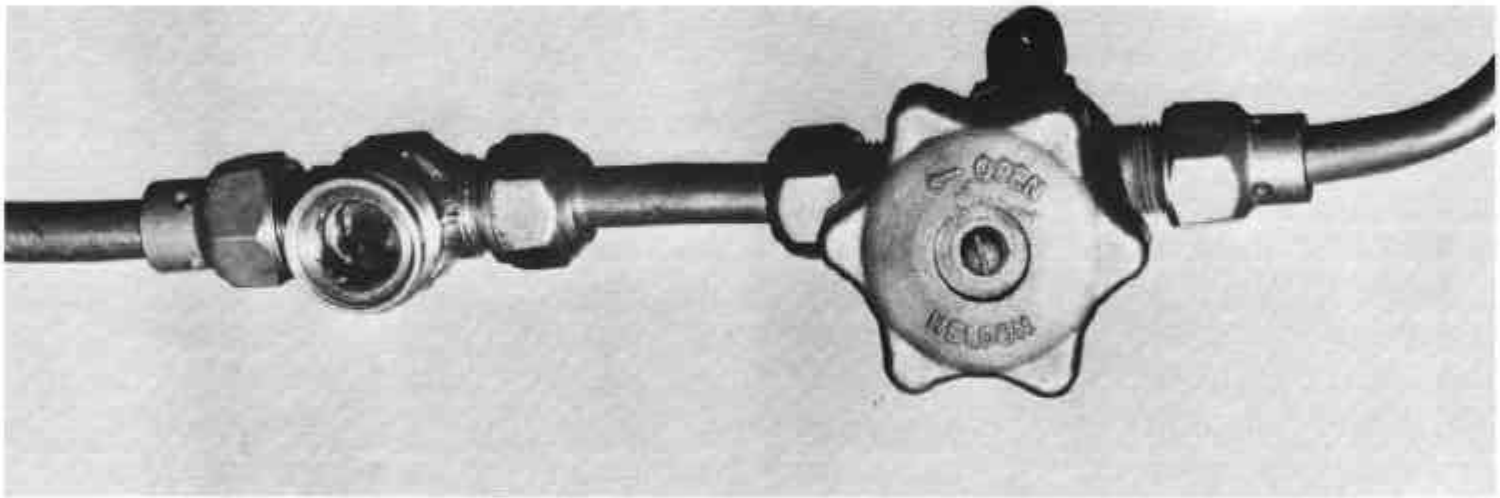


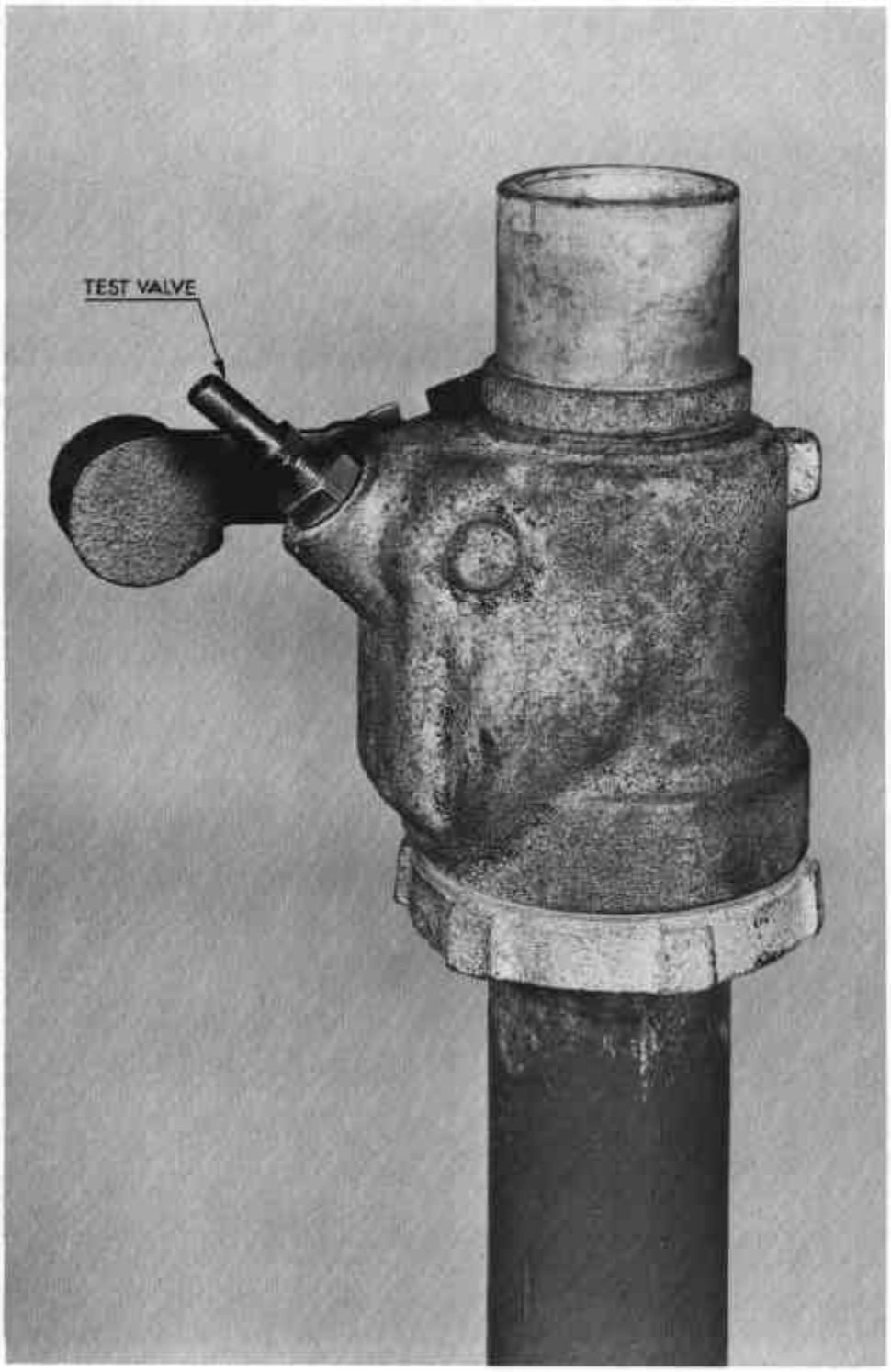
Wayne 67-1 Dual Dispenser with Panels Removed

FIGURE 5/6A/37 - 8



Manual By-pass Valve and Sight Glass

FIGURE 5/6A/37 - 9



Wayne P10107 Pneumatic Test Valve and Impact Valve

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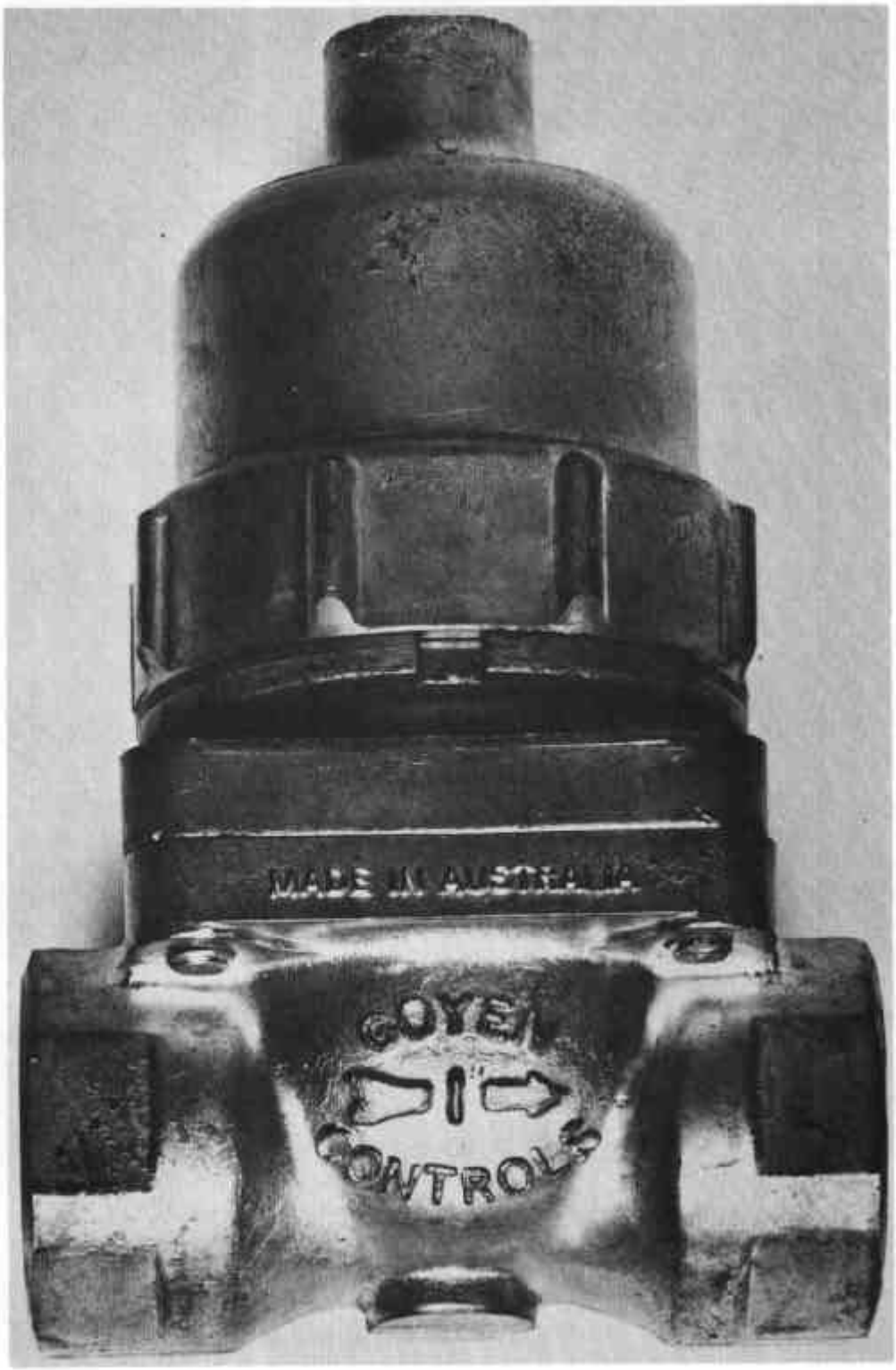
FIGURE 5/6A/37 - 10



Wayne P8526 Solenoid Valve

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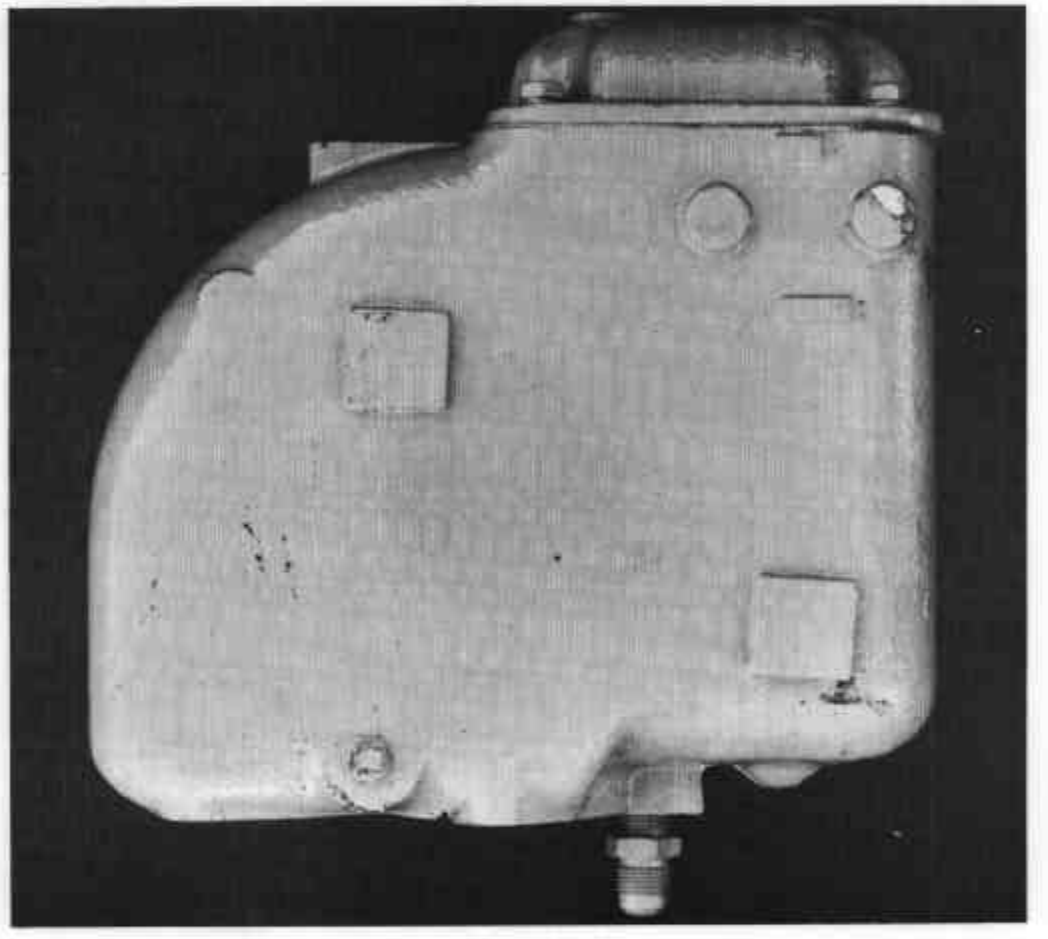
FIGURE 5/6A/37 - 11



Wayne P9849 Gas Separator with Integral Float Chamber
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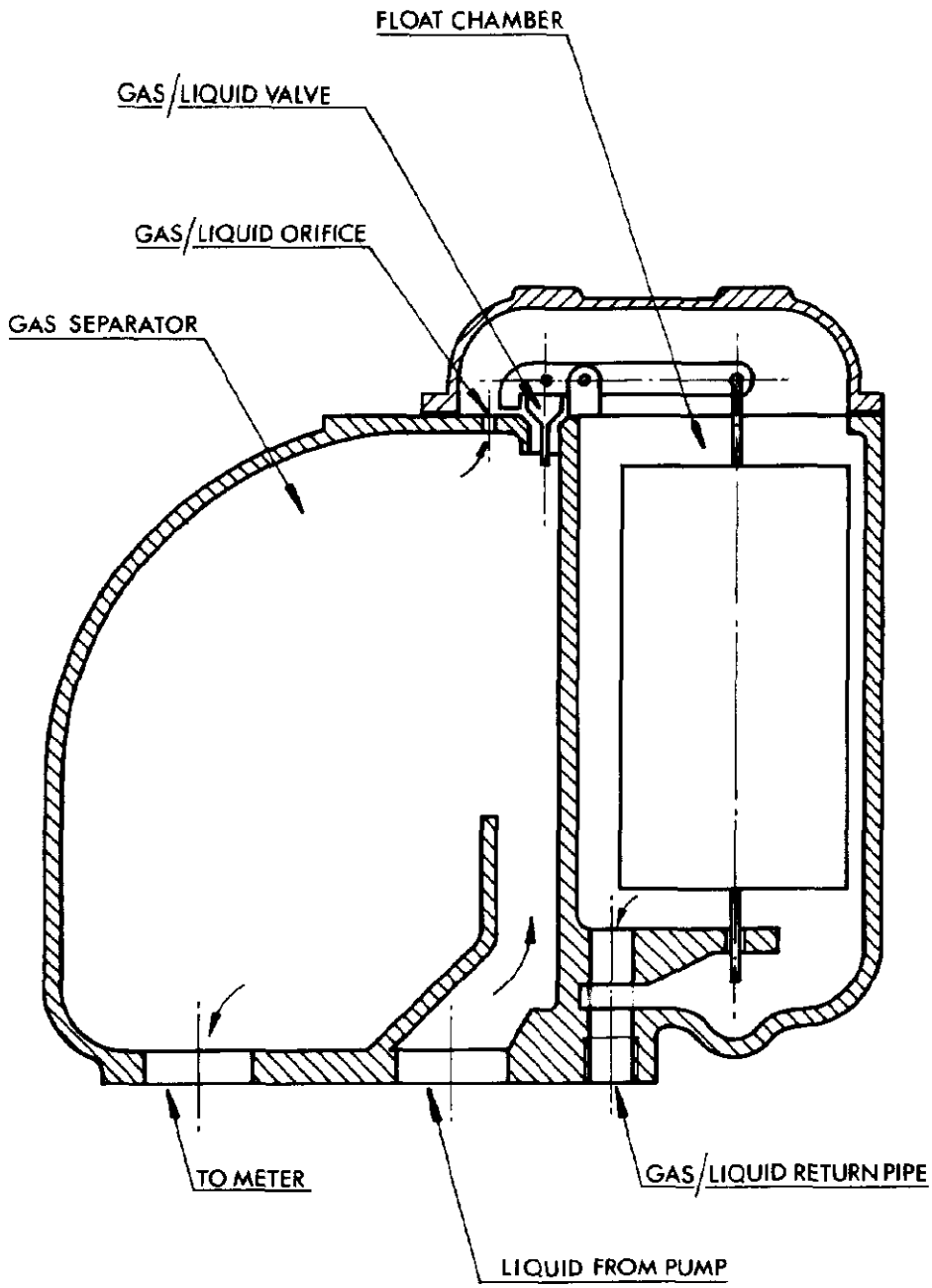
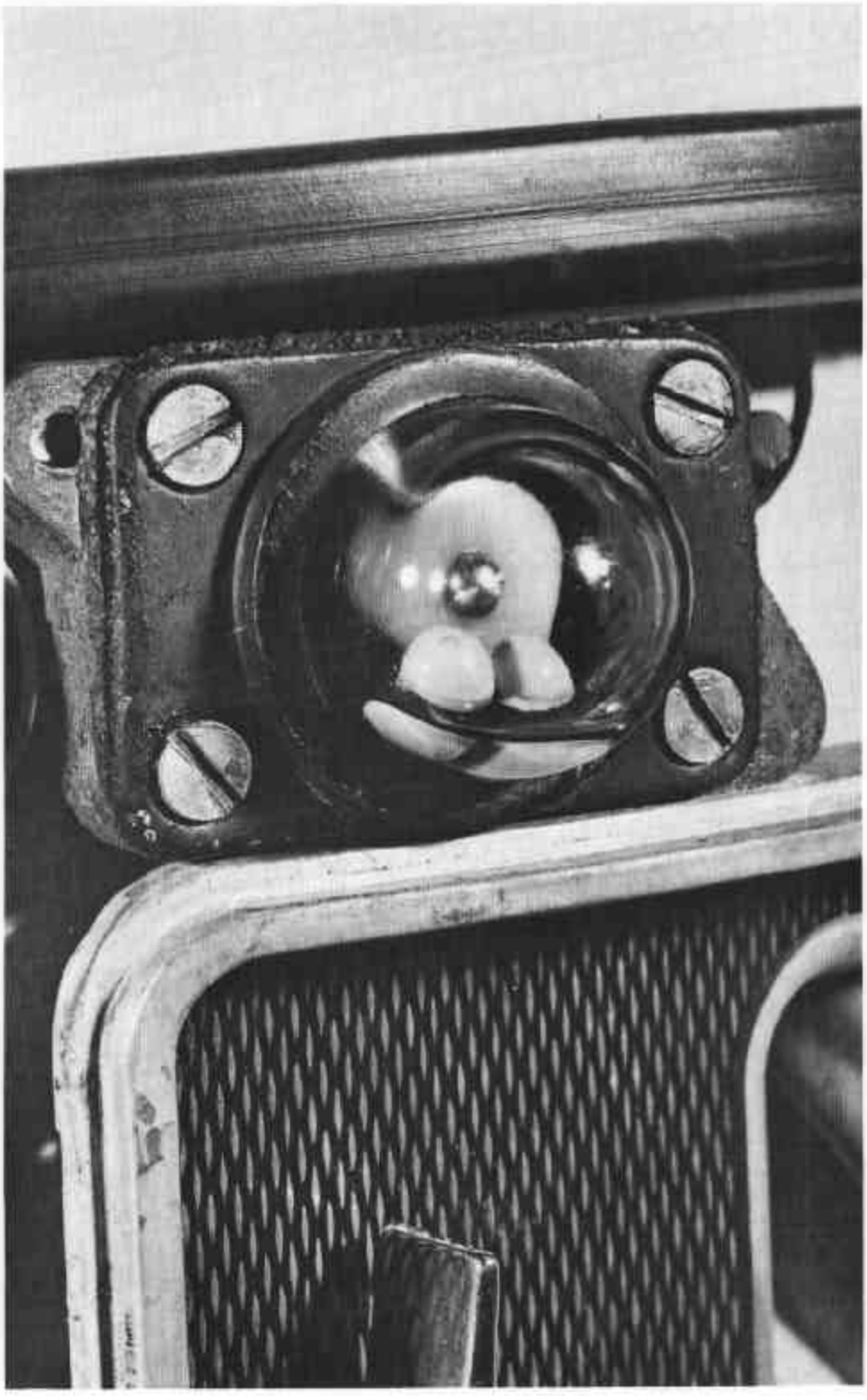
FIGURE 5/6A/37 - 12



Wayne P9849 Gas Separator with Integral Float Chamber
30/11/70

FIGURE 5/6A/37 - 13



Wayne P9870 Sight Glass

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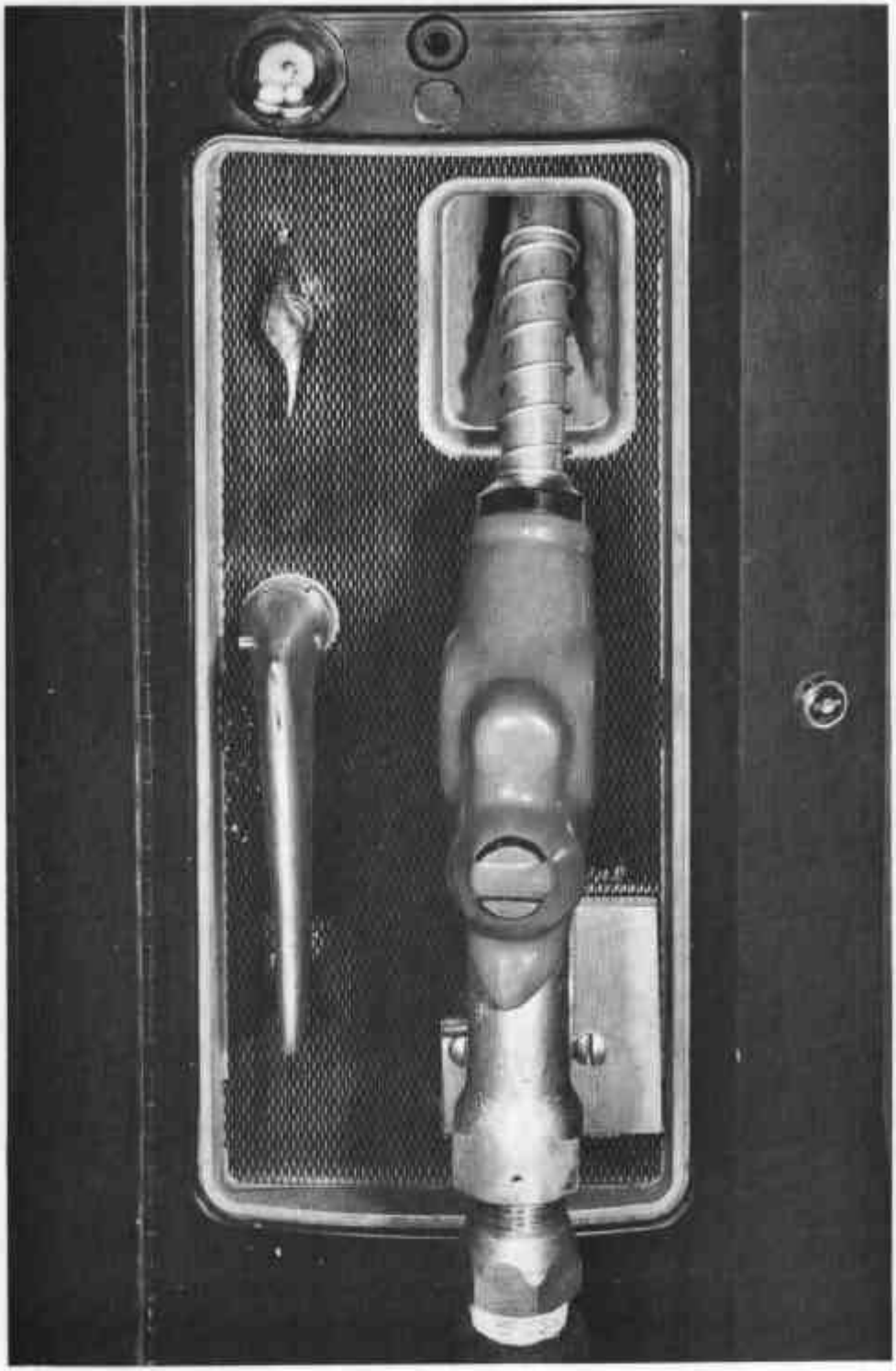
FIGURE 5/6A/37 - 14



Wayne 67-1 Nozzle Hang-up

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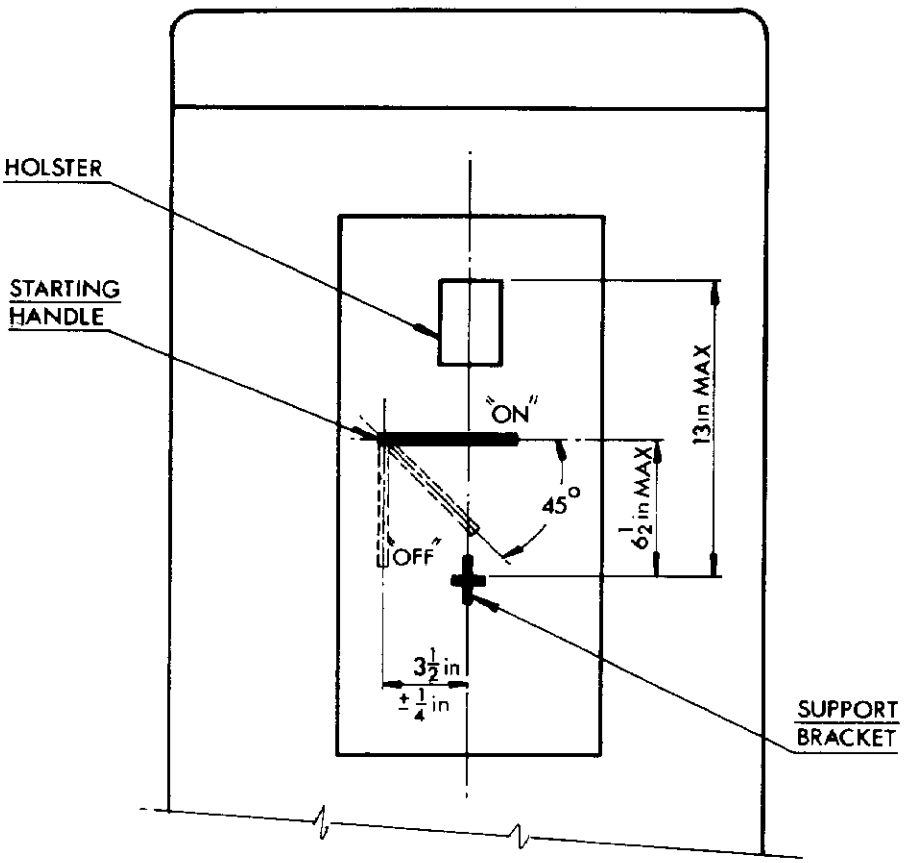
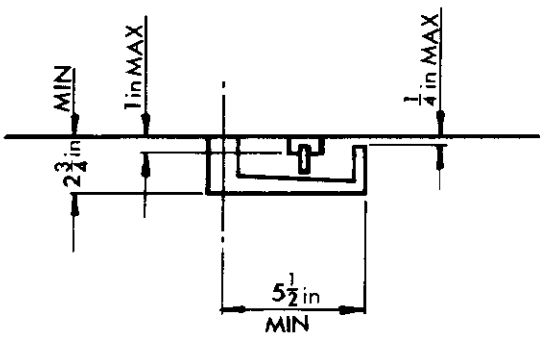
FIGURE 5/6A/37 - 15



SIDE VIEW OF PATTERN



PLAN VIEW OF STARTING HANDLE

Wayne 67-1 Nozzle Hang-up

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