

# National Standards Commission



## Certificate of Approval

No 10/1/6A

Issued under Regulation 9  
of the  
National Measurement (Patterns of Measuring Instruments) Regulations

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

Email Model ELC1 LPG Driveway Flowmeter

submitted by Email Electronics  
88 - 94 Canterbury Road  
Kilsyth VIC 3137.

**NOTE:** This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

### CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/12/93.  
This approval expires in respect of new instruments on 1/12/94.

Instruments purporting to comply with this approval shall be marked NSC No 10/1/6A and only by persons authorised by the submittor.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the Commission and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with the Commission's Document 106.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

**Special:**

The initial verification of each driveway flowmeter shall be carried out under the supervision of a government-licensed LPG installer or a person experienced in the design and installation of LPG systems.

Instruments installed under this approval are to be calibrated at intervals not exceeding 6 months.

**Special: for Provisional Variant 8**

This approval is subject to review on or after 1/11/93.  
This approval expires in respect of new instruments on 1/11/94.

Instruments purporting to comply with the provisional variant shall be marked NSC No P10/1/6A and only by persons authorised by the submitter.

Instruments installed under this approval are to be tested at six-monthly intervals. Such tests are to be arranged by the submitter and supervised by the State Trade Measurement Authority; the results are to be sent to the Commission by the submitter.

In the event of unsatisfactory performance or of suitable test results not being received by the Commission, this approval may be withdrawn.

DESCRIPTIVE ADVICE

**Pattern:** approved 8/11/88

An Email model ELC1 locally-authorized driveway flowmeter for the dispensing of liquefied petroleum gas.

**Variants:** approved 8/11/88

1. An Email model ELS1 driveway flowmeter suitable for connection to an Epitec MKI or MKII self-serve control console.
2. With an electromechanical totaliser.
3. In an alternative "round" housing.

Technical Schedule No 10/1/6A dated 21/12/88 describes the pattern and variants 1 to 3.

**Variants:** approved 18/12/90

4. An Email model ELF1 single LPG driveway flowmeter.
5. An Email model ELF2 dual LPG driveway flowmeter.

Technical Schedule No 10/1/6A Variation No 1 describes variants 4 and 5.

**Variant:** provisionally approved 17/5/91 - approved 4/9/91

6. An Email model MPP2G dual LPG driveway flowmeter.

**Variant:** approved 4/9/91

7. With a Nuovo Pignone model TLO 1254404 two-piston meter replacing the meter of the pattern.

Technical Schedule No 10/1/6A Variation No 2 describes variants 6 and 7.

**Variant:** provisionally approved 19/10/92

8. With an Email model 4462 automatic density measuring device.

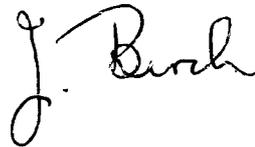
Technical Schedule No 10/1/6A Variation No 3 describes variant 8.

FILING ADVICE

Certificate of Approval No 10/1/6A dated 11/10/91 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 10/1/6A dated 4/3/93  
Technical Schedule No 10/1/6A dated 21/12/88  
Technical Schedule No 10/1/6A Variation No 1 dated 13/5/91 (incl. Test  
Procedure and Notification of Change)  
Technical Schedule No 10/1/6A Variation No 2 dated 11/10/91 (incl.  
Notification of Change)  
Technical Schedule No 10/1/6A Variation No 3 dated 4/3/93 (incl. Test  
Procedure Variation No 1)  
Test Procedure No 10/1/6A dated 21/12/88  
Figures 1 to 4 dated 21/12/88  
Figures 5 and 6 dated 13/5/91  
Figures 7 and 8 dated 11/10/91  
Figure 9 dated 4/3/93

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.





# NATIONAL STANDARDS COMMISSION

10/1/6A  
21/12/88

## TECHNICAL SCHEDULE No 10/1/6A

Pattern: Email Model ELC1 LPG Driveway Flowmeter.

Submitter: Email Electronics  
Cnr Canterbury and Liverpool Roads  
KILSYTH VIC 3137.

### 1. Description of Pattern

The pattern is an Email model ELC1 driveway flowmeter (Figure 1) for the delivery of liquefied petroleum gas of density 0.500 to 0.540 kg/L (at 15°C), at temperatures between -5°C and +45°C.

The instrument is approved for locally-authorised operation with maximum and minimum flow rates of 60 L/min and 15 L/min respectively.

#### 1.1 Component Structure

The component parts of each driveway flowmeter comprise components as detailed below. The hydraulic diagram of the flowmeter is shown in Figure 2.

##### (I) Supply Tank

The supply tank is located above the pump and where suitable pumping equipment is provided, the tank may be below ground.

##### (II) Pump

The pump is positioned as close as possible to the supply tank and must always be in a state of flooded suction. There shall be no restrictive fittings within ten pipe diameters of the pump inlet. The inlet pipe to the pump is larger than the outlet from the pump. The external pump by-pass relief valve is installed in a line returning to the supply tank.

##### (III) Meter

A Schwelm two-piston liquefied petroleum gas meter, part number 840039 is used.

##### (iv) Gas Purger

The meter is protected from the measurement of vapour by correct installation and by a Neptune 32 mm gas purger (Figure 3). The purger, which incorporates a strainer and a float valve, is vented through a non-return valve, via a vapour return line not less than 20 mm in diameter to the vapour space in the supply tank.

A thermometer pocket is situated in the strainer cover.

(v) Driveway Flowmeter Indicator

An Eclipse MVR79 series electronic driveway flowmeter indicator is used and is driven from the output shaft of the meter.

Volume	999.99 L in 0.01 L Increments
Unit Price	999.9 c/L in 0.1 c Increments
Price	\$999.99 in 1 c Increments
Totaliser Volume	99999 L in L Increments

The operating cycle is started by pressing the START/EMERGENCY STOP button, and releasing.

The indicator will go blank, display all 8's and then display all zeros leaving only the unit price displayed. The pump motor will then start. When the hose is full of liquid, the solenoid-operated latch holding the nozzle will release (after an automatically variable time of between 10 and 28 seconds) and the nozzle can then be withdrawn from its receptacle, and connected to the purchaser's tank; delivery can now commence.

If the nozzle is not removed from its receptacle within 20 seconds of the solenoid being actuated, the pump motor and system will shut down and the sale will be terminated.

(vi) Electronic Temperature Compensation

Temperature compensation is achieved by means of an electronic compensator built into the Eclipse MVR79 Indicator.

The probe for the compensator is located in the stream of liquid close to the meter's inlet. The electronic probe circuitry senses changes of temperature in the liquid, and the MVR79 adjusts the indicated volume to the equivalent volume at 15°C. For testing purposes a switch is provided to deactivate the temperature compensating function.

Fifteen seconds after the nozzle has been returned into its receptacle, pressing the TOTALS (or TOTES) button in the middle of the indicator will display the following:

Cumulative Dollars Sold in Whole Dollars  
Cumulative Volume Sold in Whole Litres  
Temperature Display

On release of the button the display will revert to the previous sale information.

The temperature display is an indirect display of the temperature that the probe is reading. The display can be converted into degrees celsius by the following:

$$\frac{\text{Temperature Display} - 20}{2} = \text{Liquid Temperature in } ^\circ\text{C}$$

Note: When the electronic temperature compensator is deactivated the temperature display will show "50".

(vii) Differential Valve

A Schwelm spring-loaded-piston pressure differential valve maintains pressure in the metering chamber to prevent the formation of vapour.

A pressure-equalising pipe is connected from the differential valve to the supply tank, through the vapour return line from the gas purger vent (Figure 2).

An excess flow valve is incorporated in the outlet of the differential valve and will function at a flow rate of 80 L/min.

(viii) Vapour Indicator

A slight glass flow indicator is fitted in the pipe between the gas purger and the meter so that it may be seen if vapour is being metered.

A pressure gauge is fitted adjacent to the pressure differential valve (Figure 4).

(ix) Outlet Pipe

The pipe connection from the differential valve to the hose is fitted with a bleed screw to enable the pressure in the hose to be lowered for reassembly of the hose break coupling.

(x) Hose

The dispenser is fitted with a hose of 20 mm bore, complying with the SAA code for hoses in use with liquefied petroleum gases.

The hose is supported on a hose mast and is fitted with a hose break coupling which will break with a loss of no more than 15 ml of liquid in the event of an excessive pull on the nozzle.

(xi) Nozzle

The nozzle used is a Gilbarco model 102-ZVG 1.3, also known as an Elaflex, as described in the documentation of NSC approval No S158.

1.2 Markings

The instrument data plate permanently fixed to the external housing of the driveway flowmeter is marked with the following:

Manufacturer's name or mark	
Year of manufacture	
Serial number	
NSC approval number	NSC No 10/1/6A
Maximum flow rate	..... L/min
Minimum flow rate	..... L/min
Liquid temperature range	-5°C to +45°C
Approved for LPG of density range	0.500 to 0.540 kg/L
Density for which temperature compensator is set	..... kg/L
Maximum operating pressure	2450 kPa

...../4

### 1.3 Sealing

The MVR79 Indicator and meter calibration adjustments are sealed.

Alternatively, the computer calibration adjustments may be sealed. Only one side of the computer is sealed.

The temperature compensator switch (Figure 4) and the vapour return line provided for pressure equalisation during testing with a pressure prover, are also sealed.

## 2. Description of Variants

### 2.1 Variant 1

The Email model ELS1 LPG driveway flowmeter in which the computer of the pattern has been modified to facilitate connection to an Epitronic MKI or MKII control console, i.e. remotely-authorized operation.

The operating sequence is similar to that for the pattern; pressing the START/EMERGENCY STOP button signals the console for authorisation, after which the cycle is the same as for the model ELC1.

### 2.2 Variant 2

With an electromechanical totaliser (line model MGU). The totaliser range is 9999999 L in 1 L increments.

### 2.3 Variant 3

In an alternative "round" housing. In this case the prefix E of the model number is replaced by M (e.g. ELC1 becomes MLC1).



# NATIONAL STANDARDS COMMISSION

10/1/6A  
21/12/88

## TEST PROCEDURE No 10/1/6A

The following test procedure is to be used at each six-monthly calibration test, in addition to any tests specified in the Inspector's Handbook. The tests are to be arranged so that one is carried out in the hotter period of each year and the other in the cooler period. One test should also be arranged when there is a low liquid level in the supply tank to ensure that there is still sufficient pressure at the inlet to the pump to avoid vapour being generated.

The maximum permissible errors are specified in Document 118, Second Edition, October 1986.

### 1. Meter Test With Temperature Compensator Deactivated

- (i) Carry out at least three runs at the normal flow rate at which the meter is used.
- (ii) Repeat the above test with the flow rate set at 15 L/min.

### 2. Meter Test With Temperature Compensator Activated

Repeat the above tests and calculate the equivalent volume that would have been delivered at 15°C using the temperature indicated at the meter and the appropriate ASTM-IP Petroleum Measurement Tables, for the density of the liquid for which the temperature compensator is set.

### 3. Price-computation

- (i) Note the price per litre set on each driveway flowmeter under test, and for the model ELS1, the mode of operation (that is, CONSOLE or ATTENDED mode).
- (ii) For model ELS1 only - At the flowmeter set the mode of operation to ATTENDED via the selection switch.
- (iii) For models ELC1 and ELS1 - Wait 5 seconds from the last delivery and press the START/EMERGENCY STOP button and release. The computer displays should blank, show all 8's and then show zeros in the price and column displays and the unit price display will show the unit price setting for that flowmeter as noted in (i).

The pump motor will start and the nozzle-latch solenoid will activate after a period between 10 and 28 seconds. Remove the nozzle and press the START/EMERGENCY STOP button and release. The pump motor will stop and the nozzle-latch solenoid will de-activate. Replace the nozzle in its receptable.

- (iv) Wait 15 seconds and with the nozzle fully positioned in the nozzle receptable, press and release the TEST button on the flowmeter indicator. The word TEST will appear on all displays. The unit price indicator will show the unit price setting for that flowmeter as recorded in (i).

Note: The nozzle-latch solenoid will activate at this time.

- (v) Change the unit price to 30.0 cents per litre (the price may be changed by simultaneously pressing the PRICE and the UP or DOWN buttons).

...../2

- (vi) Press the UP/FAST or DOWN/SLOW TEST button to display a volume of between 7.49 litres and 7.54 litres. The price will be \$2.25 for 7.49, 7.50 or 7.51 litres, or \$2.26 for 7.52, 7.53 or 7.54 litres. If an indication beyond this volume is achieved by mistake, reset the price and volume indicators to zero by pressing the START/EMERGENCY STOP button.

Repeat test for the required number of runs.

- (vii) Lift nozzle and alter the unit price to 30.9 cents per litre; "ERROR 2" should flash in the price indicator, indicating a multiplication error.
- (viii) Change the unit price back to the value as recorded in (i).
- (ix) Replace the nozzle and press the TEST button once and release. The word TEST on the displays will now clear. The nozzle-latch solenoid will de-activate.
- (x) Press the START/EMERGENCY STOP button and release. The computer will reset and the pump motor will start (the solenoid may activate). Press the START/EMERGENCY STOP button again and release, and the pump motor will stop.
- (xi) Press the TOTES button on the driveway flowmeter indicator, and check the decimal markers on the price indicator. If they show between each figure, the batteries need immediate replacement.
- (xii) For model ELS1 only - Return the flowmeter to the mode recorded in (i).

4. System with Epitronic MKI or MKII Consoles - MVR79 Eclipse (self-serve post-pay model) For ELS1 Models Only

The following test procedure will check whether the system is operating in accordance with the approved design.

Note: In order to allow the service station to continue to function while these tests are carried out, a number of the driveway flowmeters may be isolated by switching to ATTENDED (MANUAL) mode at the flowmeter while the remainder are left in CONSOLE mode.

- (i) Ensure that the CONSOLE mode is selected at those flowmeters to be tested.
- (ii) At the control console select CONSOLE (POST-PAY) mode of operation by use of the keyswitch.
- (iii) In turn, press each STATUS button and check that all 8's are displayed.

For one flowmeter (or more if thought to be necessary):

- (iv) Press the START/EMERGENCY STOP button and release - the AUTHORISATION light should flash at the console; authorise the flowmeter by pressing AUTHORISATION button for that flowmeter.

- (v) Deliver sufficient liquid to cause the price and quantity indicators on the flowmeter to move significantly off zero.
- (vi) Stop the pump motor by returning the nozzle to its receptacle.
- (vii) Record the flowmeter number and the price indicated on the driveway flowmeter.
- (viii) Press the START/EMERGENCY STOP button and release, and check that the price-computing indicator does not reset to zero and that the pump motor does not start (AUTHORISATION and STATUS lights will be illuminated).
- (ix) At the control console, press the STATUS button for the flowmeter and check the display price against the price recorded at the flowmeter (refer (vii)).
- (x) Authorise the flowmeter by pressing the AUTHORISATION button.
- (xi) After a minimum of 20 seconds the STATUS light for that flowmeter will flash. Press the STATUS button; the price and volume indicators, on both the console and the flowmeter, should zero.



# National Standards Commission

## TECHNICAL SCHEDULE No 10/1/6A

### VARIATION No 1

**Pattern:** Email Model ELC1 LPG Driveway Flowmeter.

**Submitter:** Email Electronics  
Cnr Canterbury and Liverpool Roads  
KILSYTH VIC 3137.

#### 1. Description of Variants

##### 1.1 Variant 4

An Email model ELF1 single LPG driveway flowmeter (Figures 5 and 6) in which the Neptune 32 mm gas purger, the Schwelm spring-loaded-piston pressure differential valve and manual shut off valve of the pattern have been replaced by a vapour detection/elimination system comprising an Email model 001-4272 vapour detection sensor and an LPG Engineering model EVE-10 vapour elimination chamber.

The meter is protected from the measurement of vapour by correct installation and by the vapour detection/elimination system. The system is vented through an excess flow valve, via a vapour return line of not less than 20 mm in diameter to the vapour space in the supply tank. A temperature sensor, a thermometer pocket, a liquid level sensor, a bleed valve, and provision for a pressure gauge are incorporated into the vapour eliminator.

##### 1.1.1 Components

###### (i) Supply

Instruments fitted with the vapour detection/elimination system described above may be used with the pump positioned above the supply tank provided the pump used is specifically designed for use with LPG in negative suction head installations.

The supply tank may be located above or below ground.

###### (ii) Solenoid Valve

A 20 mm solenoid valve located downstream of the meter maintains pressure in the metering chamber to prevent the formation of vapour. The valve is controlled by the computing indicator and by the vapour eliminator to prevent delivery during the reset cycle and when vapour has been detected.

**(iii) Vapour Indicator**

A sight glass flow indicator is fitted in the pipework downstream of the meter.

**(iv) Outlet Piping**

The pipe connection from the meter to the hose is fitted with an air-operated ball valve to a positive shut-off valve, to ensure closure of the delivery line when the emergency shut-down system is activated.

**(v) Pressure Equalisation**

Provision is made for a vapour line from the vapour space in the supply tank to a pressure prover used for testing, either directly or via a tee in the vapour return line from the vapour eliminator. During a normal delivery there is no vapour return connection between the receiving container and the supply tank.

**1.1.2 Operating Cycle**

The operating sequence is similar to that described in Technical Schedule No 10/1/6A cl. 1.1 (v), except that the nozzle is not latched.

The operating cycle is started by removing the nozzle from its receptacle. The displays will be cleared of any previous sale and the remote pump will start. After a delay of about 1 second a segment check is initiated; when completed only the unit price is displayed. At the end of this cycle a solenoid valve opens. Provided that the nozzle has been attached to a receiving container, which may be done at any time during the cycle, filling can now commence. Replacement of the nozzle stops the remote pump but allows the details of the delivery to remain until the next reset cycle.

**1.1.3 Sealing**

The vapour sensor connection plug at the top of the vapour eliminator and the vapour sensor interjunction box are sealed.

**1.2 Variant 5**

An Email model ELF2 dual LPG driveway flowmeter which consists of two sets of model ELF1 (variant 4) components in the one housing (Figure 6).

## NOTIFICATION OF CHANGE

Technical Schedule No 10/1/6A dated 21/12/88 cl. 1.1 (xi) Nozzle, is amended by adding "..., or a Gasguard model LG1 LPG nozzle."

## TEST PROCEDURE

### Test of the Vapour Detection/elimination System.

Sensing of vapour can be simulated by a switch located inside the vapour sensor interjunction box.

- (i) Deactivate the switch. The LED on the side of the sensor interjunction box will go out, simulating the presence of vapour. Attempt to make a delivery; this should not be possible.
- (ii) Activate the switch and check that the time taken to reset the electronic vapour detection/elimination system (indicated by the LED coming back on), necessary to allow a delivery to be made, is not less than 90 seconds.



## National Standards Commission

TECHNICAL SCHEDULE No 10/1/6A

VARIATION No 2

**Pattern:** Email Model ELC1 LPG Driveway Flowmeter.

**Submittor:** Email Electronics  
Cnr Canterbury and Liverpool Roads  
KILSYTH VIC 3137.

### 1. Description of Variants

#### 1.1 Variant 6

An Email model MPP2G dual LPG driveway flowmeter which uses the same hydraulic components as the model ELF2 (Variant 5). Instruments use Email model MPP indicators. Temperature conversion is achieved by means of an electronic compensator, whose electronics are located in the column that supports the indicator, along with the electronics for the vapour detection/elimination system of Variant 4.

The model MPP2G uses a multi-product style housing as shown in Figure 7.

#### 1.2 Variant 7

With a Nuovo Pignone model TLO 1254404 two-piston meter (Figure 8) replacing the Schwelm meter described for the pattern.

### NOTIFICATION OF CHANGE

The following changes are made to Technical Schedule No 10/1/6A Variation No 1 dated 13/5/91;

- (i) In cl. 1.1.2 **Sealing**, delete the reference to the vapour sensor interjunction box being sealed.
- (ii) Delete the Test Procedure.



## National Standards Commission

TECHNICAL SCHEDULE No 10/1/6A

VARIATION No 3

**Pattern:** Email Model ELC1 LPG Driveway Flowmeter.

**Submitter:** Email Electronics  
88 - 94 Canterbury Road  
Kilsyth VIC 3137.

### 1. Description of Variant 8

An Email model 057-0291 liquid petroleum gas density measurement probe and interface unit for use only in conjunction with the Email vapour elimination/detection system (as described in Variant 4).

- (i) The unit consists of a probe, a density interface and an interjunction unit. The probe includes 2 sensors, one each for density and vapour detection, and is fitted to the top of the vapour elimination chamber. The density sensor measures the relative permittivity (dielectric constant) of LPG flowing through the sensor and a signal is sent to the indicator to enable automatic temperature conversion to be carried out for the appropriate density.
- (ii) The interjunction unit is either located as shown in Figure 9 or, for model MPP2G (multi-product style housing - Variant 6) it is included in the column that supports the indicator.
- (iii) If the vapour detection sensor detects vapour, a signal is provided to the computer to close the solenoid valve (refer Variant 4).
- (iv) The temperature conversion included in the indicator has been programmed with the volume conversion equation for ASTM IP Table 54 for a density range between 0.500 and 0.555 kg/L.
- (v) The indicator may display the current density and temperature of the product, and this is achieved by following the procedure as set out in Clause 1.1 (vi) of Technical Schedule 10/1/6A dated 21/12/88. The density is displayed on the top window of the indicator instead of the 'cumulative dollars sold in whole dollars'.

Density @15 C  
Cum Tots Volume  
Temperature

"0.XXX" (in 0.001 increments)  
"Litres Sold"  
"Indirect Temp Reading"

Density displayed is the equivalent density @ 15°C, in the following range:

up to 0.499	low out of range reading
0.500 to 0.555	valid range
0.556 or greater	high out of range reading

The display shows the density value without units, e.g. 0.515 not 0.515 kg/L.

- (vi) If the temperature conversion is deactivated the density of the product is still displayed, but conversion will be based on a product temperature of 15°C.

#### TEST PROCEDURE - VARIATION No 1

Instruments should be tested in accordance with any tests included in the approval documentation for the indicator used, and in accordance with any relevant tests specified in the Inspector's Handbook.

#### Maximum Permissible Errors at Verification/Certification

The maximum permissible errors applied during a verification test from normal flow rate to the minimum flow rate specified in the Certificate of Approval or Technical Schedule are:

- ±1.0% with the temperature convertor deactivated; and
- ±1.2% with the temperature convertor activated.

#### 1. Test of Vapour Detection/Elimination System

During a delivery, press the button adjacent to the temperature convertor ON/OFF switch. When this is held down, the vapour return solenoid will open and the vapour indicator LED, on the indicator or on the vapour sensor interjunction unit, will illuminate.

#### 2. Test of Automatic Density Measuring Device

Check that the density displayed corresponds to the density of the product being measured (±0.005 kg/L). Refer to clause 1. (v).

#### 3. Test of Temperature Conversion Facility

Check that the temperature displayed corresponds to the temperature of the product being measured (±0.5°C). Refer to clause 1. (v).

## National Standards Commission



### NOTIFICATION OF CHANGE

### VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for various LPG flowmeter approvals as listed below:

In the approvals listed below, remove from the Certificate, Technical Schedule and Test Procedure, any Condition of Approval or clause that refers to instruments being verified, re-verified or calibrated at specific intervals. (Note that the re-verification period is determined by the Trade Measurement Authority in the State or Territory in which the instrument is located.)

APPROVAL NUMBER	PATTERN
10/1/2	Halco Neptune 32/38 mm LPG Flowmeter
P10/1/3	Acme Model LGD 100 LPG Driveway Flowmeter
10/1/3A	Acme Model LGD 105S LPG Driveway Flowmeter
P10/1/5	Batchen Model Mk II LPG Driveway Flowmeter
P10/1/6	Wayne Model ELC1 LPG Driveway Flowmeter
10/1/6A	Email Model ELC1 LPG Driveway Flowmeter
P10/1/7	Indeng Model MKO LPG Driveway Flowmeter
10/1/8	Gilbarco Model T093D LPG Driveway Flowmeter
10/1/8A	Gilbarco Model T093D LPG Driveway Flowmeter
10/1/9	Batchen Model Commander LPG Driveway Flowmeter
P10/1/10	LPG Engineering Model Stargas LPG Driveway Flowmeter
10/1/10A	LPG Engineering Model Stargas LPG Driveway Flowmeter
10/1/11	LPG Engineering Model Stargas EPSN LPG Driveway Flowmeter
10/1/12	CleverHead Model 93 LPG Driveway Flowmeter
10/1/13	Batchen Model SCB Commander LPG Driveway Flowmeter
P10/2/2	Liquid Controls Model MA-7-GY-10 Bulk LPG Flowmeter
10/2/3	Neptune Model 4D 32 mm Bulk LPG Flowmeter
P10/2/4	Euromatic Model FL 11/2-125 Turbine Bulk LPG Flowmeter

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



FIGURE 10/1/6A - 1



Endit Model ELC1 LPG Driveway Flowmeter

FIGURE 10/1/6A - 2

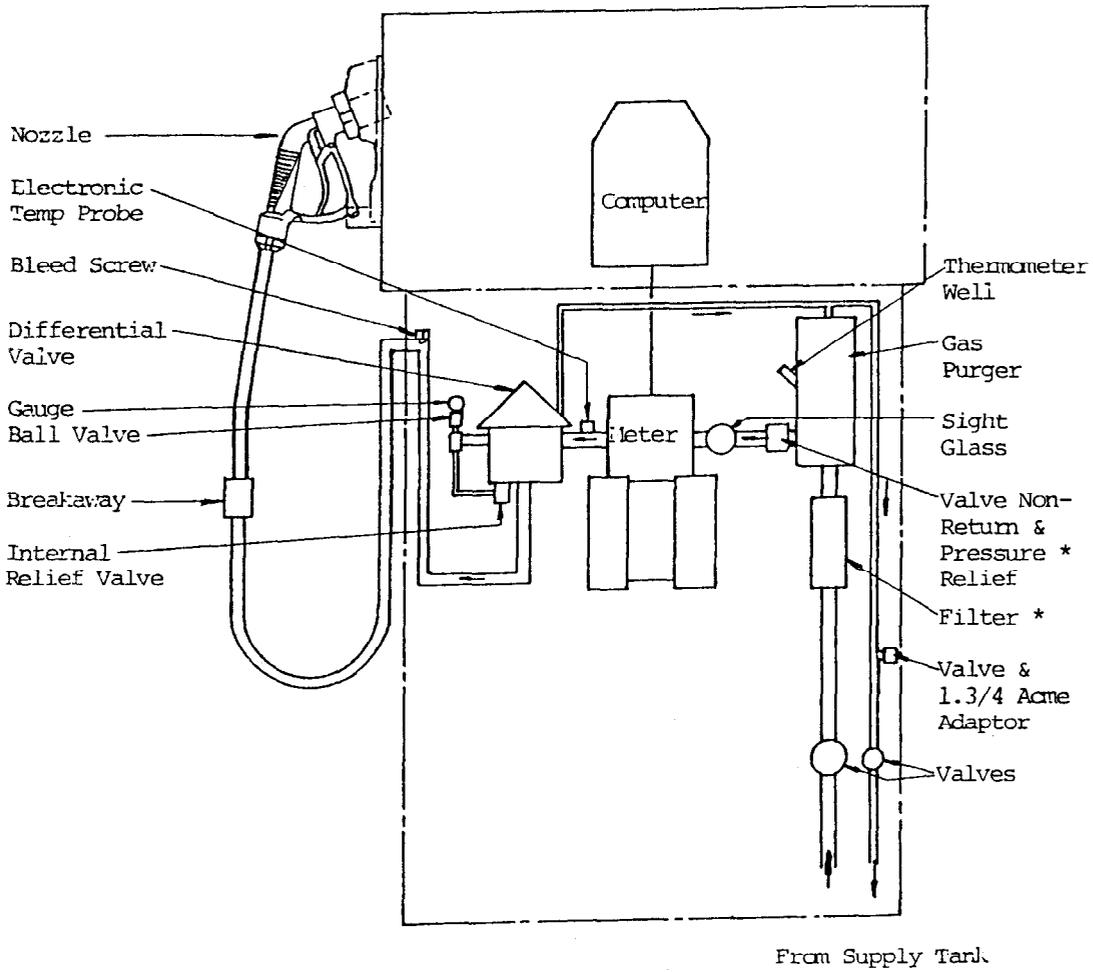
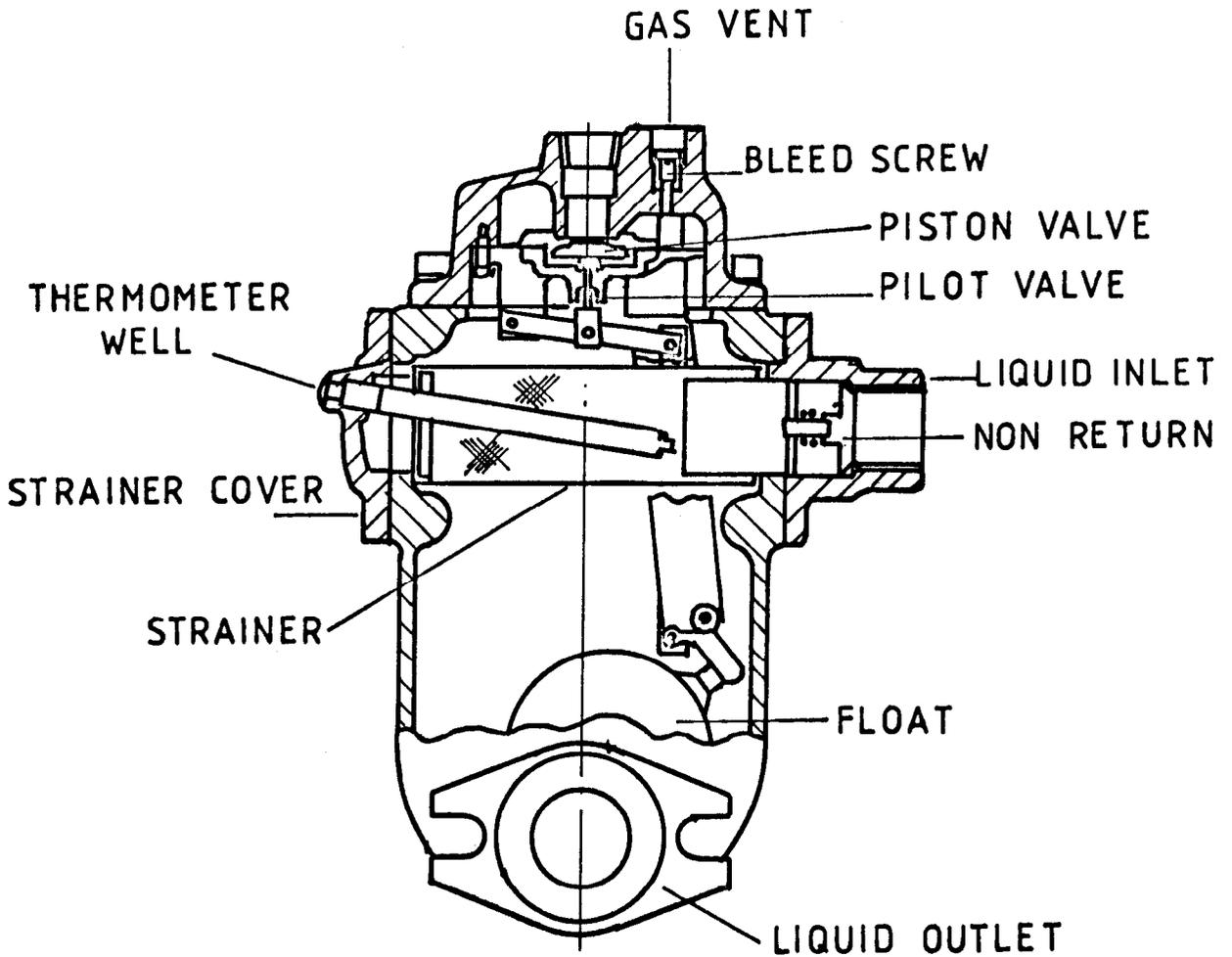


FIGURE 10/1/6A - 3



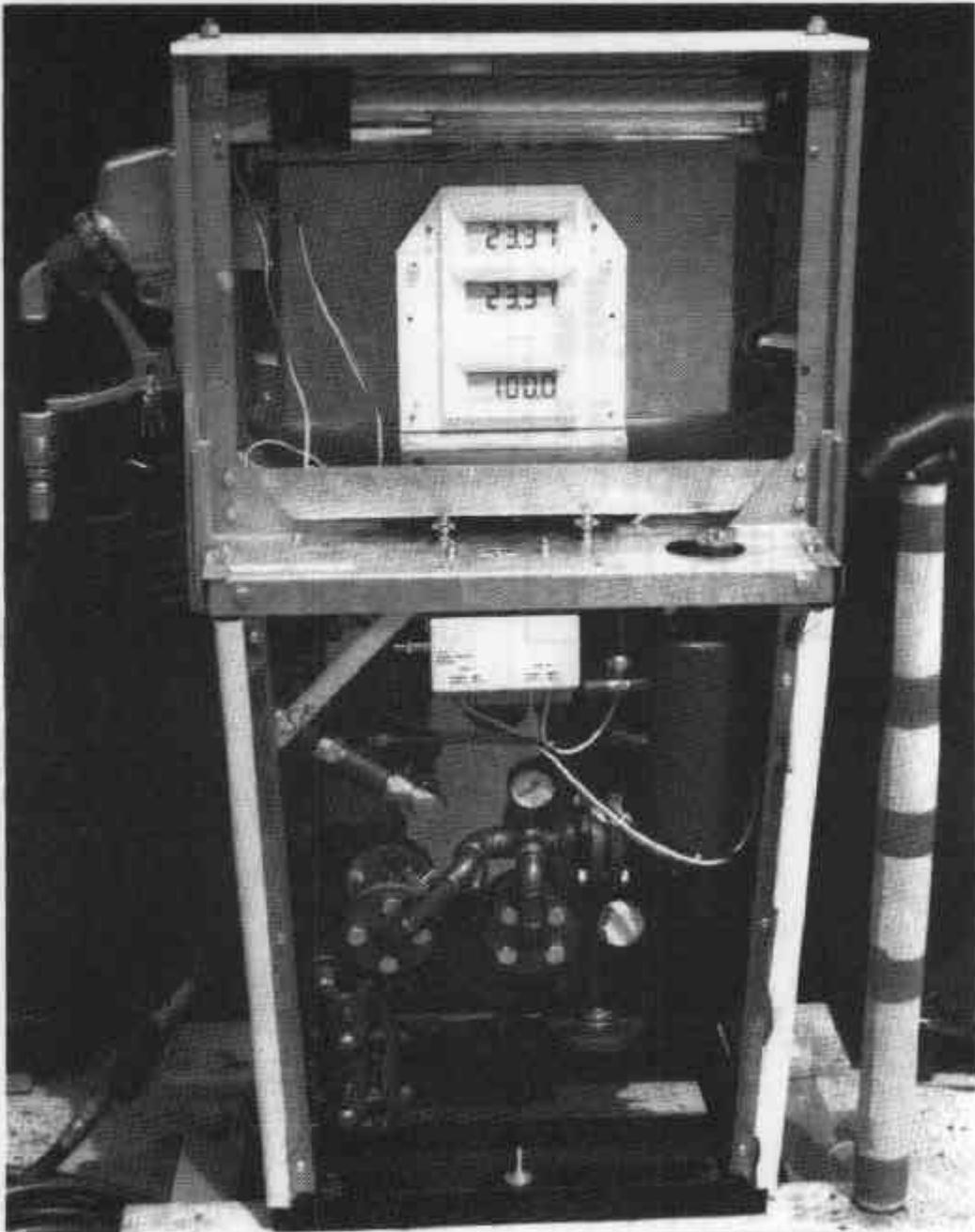
Neptune Gas Purger - Schematic Diagram

10/1/6A  
21/12/88

FIGURE 10/1/6A - 4



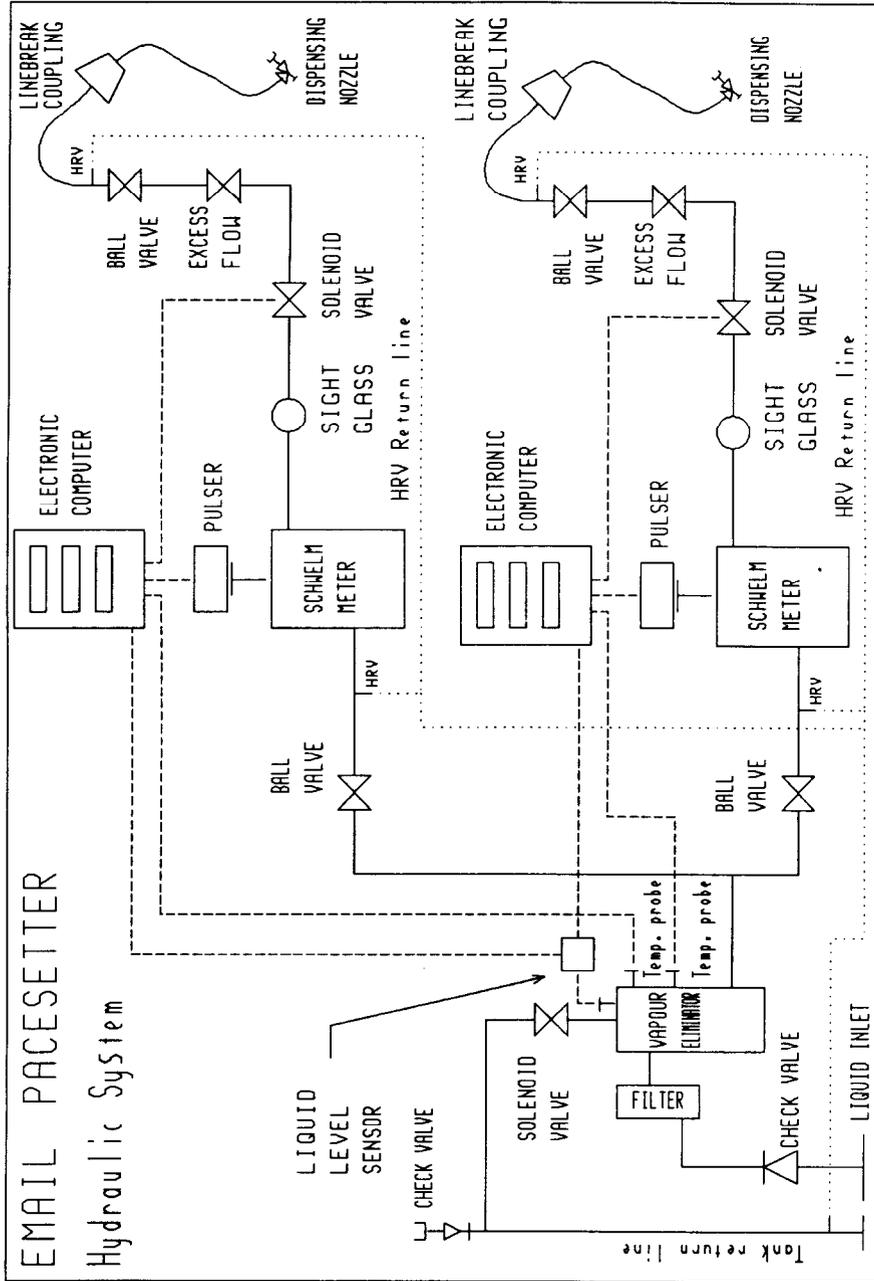
Piping Arrangement For Pressure Gauge And  
Sealing of Temperature Compensation Switch Cover



Email Model ELFI LPG Driveway Flowmeter

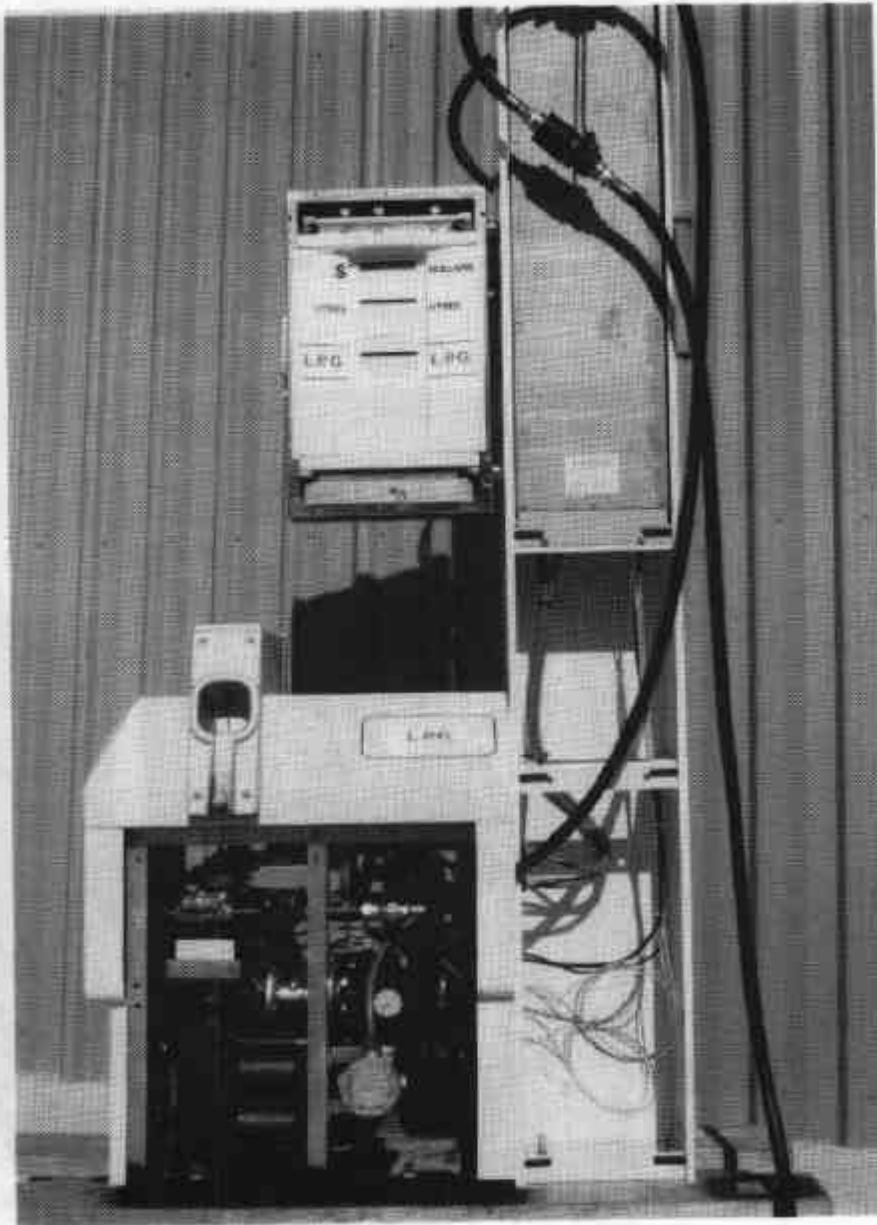
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FIGURE 10/1/6A - 6



Variant · With Vapour Detection/Elimination Sys. n

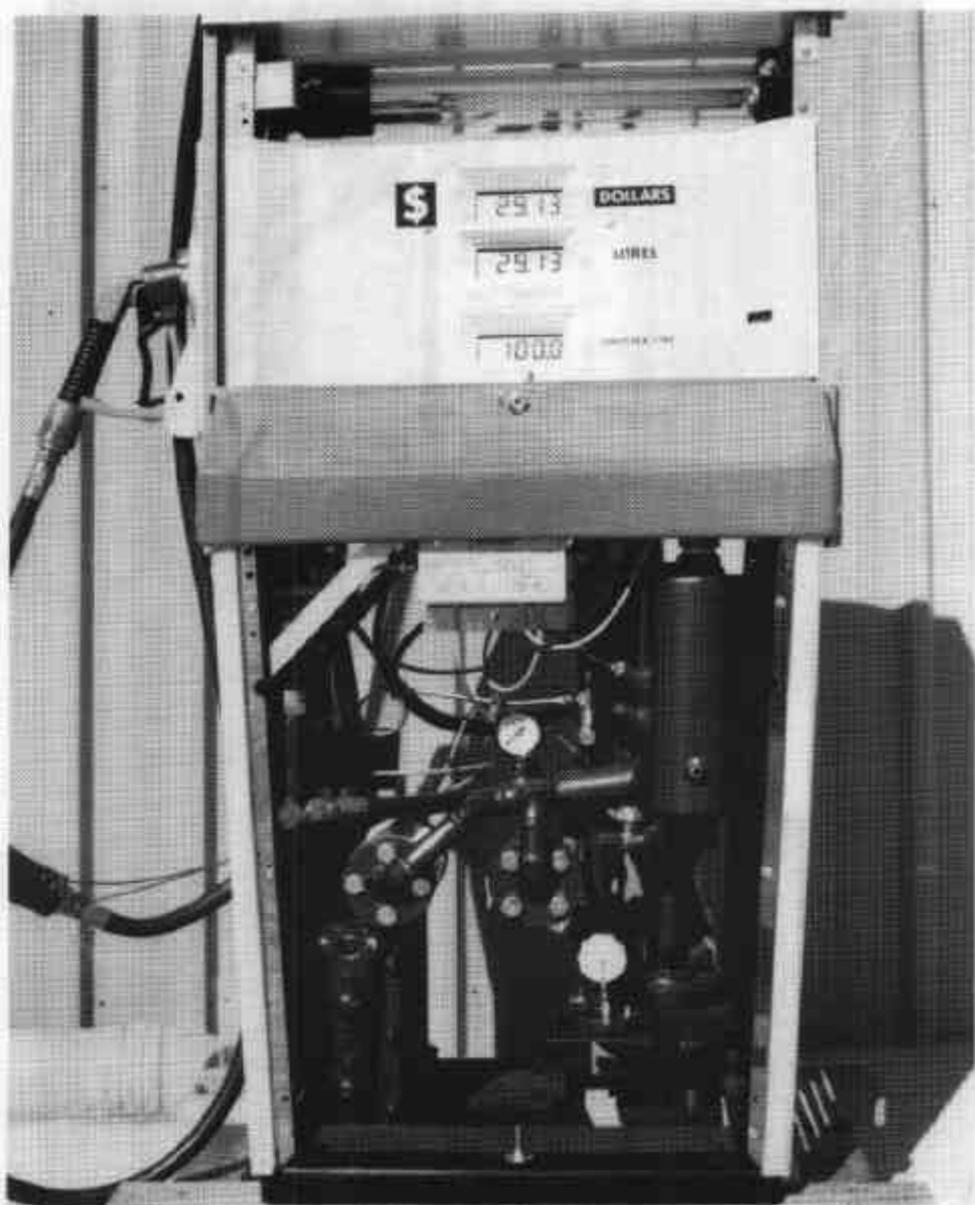
FIGURE 10/1/6A - 7



Email Model MPP2G LPG Driveway Flowmeter

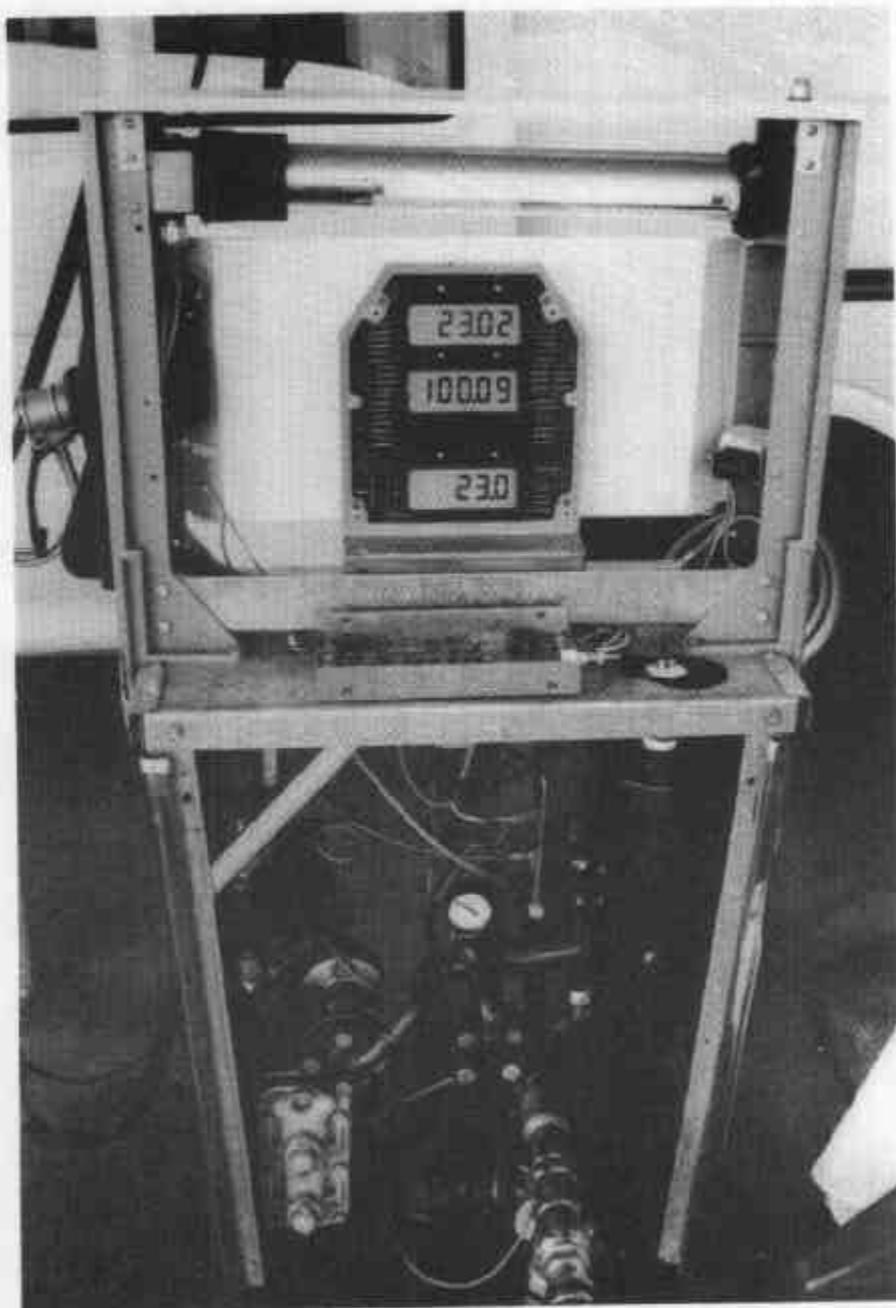
10/1/6A  
11/10/91

FIGURE 10/1/6A - 8



Model ELF1 With a Nuovo Pignone Meter

FIGURE 10/1/6A - 9



Showing Location of Interjunction Unit For Variant 8