



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Cancellation
Certificate of Approval No 5/6A/97A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

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

Fuelquip Model Vision VNP2PD-K-E Fuel Dispenser for Motor Vehicles

submitted by Fuelquip Pty Limited
Cnr First Street & First Avenue
Moorabbin Airport VIC 3194

has been cancelled in respect of new instruments as from 1 December 2008.

Signed by a person authorised by the Chief Metrologist
to exercise his powers under Regulation 60 of the
National Measurement Regulations 1999.

A handwritten signature in black ink, appearing to be 'J. G. T.', written in a cursive style.



Australian Government
National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Notification of Change
Certificate of Approval No 5/6A/97A
Change No 1

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

The following change is made to the approval documentation for the
Fuelquip Model Vision VNP2PD-K-E Fuel Dispenser for Motor Vehicles

submitted by Fuelquip Pty Limited
Cnr First Street & First Avenue
Moorabbin Airport VIC 3194.

In Technical Schedule No 5/6A/97A dated 18 August 2003, clause
2.2 Variant 2 should be amended by adding:

“In addition to the markings specified in clause **1.5 Descriptive Markings**, the maximum and minimum flow rates (#) shall be marked when different rates are used for various hoses/nozzles within the same fuel dispenser.

(#) e.g. $Q_{\max} = 50/80 \text{ L/min}$
 $Q_{\min} = 5/5 \text{ L/min}$ ”

Signed by a person authorised by the Chief Metrologist
to exercise his powers under Regulation 60 of the
National Measurement Regulations 1999.

A handwritten signature in black ink, appearing to be 'J. G. T.', written in a cursive style.



National Standards Commission

12 Lyonpark Road, North Ryde NSW

Certificate of Approval

No 5/6A/97A

Issued under Regulation 60
of the
National Measurement Regulations 1999

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

Fuelquip Model Vision VNP2PD-K-E Fuel Dispenser for Motor Vehicles

submitted by Fuelquip Pty Limited
Cnr First Street & First Avenue
Moorabbin Airport VIC 3194.

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.

This Certificate is issued upon completion of a review of NSC approval No 5/6A/97.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 January 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 5/6A/97A and only by persons authorised by the submittor.

It is the submittor'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 NSC P 106.

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

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

DESCRIPTIVE ADVICE

Pattern: approved 13 December 2002

- A Fuelquip model Vision VNP2PD-K-E fuel dispenser for motor vehicles.

Variants: approved approved 15 August 2003

1. Certain other models and configurations.
2. Dispensing kerosene or distillate with a maximum flow rate of 80 L/min.
3. Without a pre-set facility.
4. With a submersible turbine pump hydraulic system.
5. With additional communication hardware to provide Gilbarco communication protocol.

Technical Schedule No 5/6A/97A describes the pattern and variants 1 to 5.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 5/6A/97A dated 18 August 2003
Technical Schedule No 5/6A/97A dated 18 August 2003 (incl. Test Procedure)
Figures 1 to 5 dated 18 August 2003

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

A handwritten signature in black ink, appearing to be 'J. H. C.', is located in the bottom right corner of the page.

TECHNICAL SCHEDULE No 5/6A/97A

Pattern: Fuelquip Model Vision VNP2PD-K-E Fuel Dispenser for Motor Vehicles

Submittor: Fuelquip Pty Limited
Cnr First Street & First Avenue
Moorabbin Airport VIC 3194

1. Description of Pattern

A Fuelquip model Vision VNP2PD-K-E fuel dispenser for motor vehicles (Figure 1) approved to dispense various grades of fuels, in attendant-operated mode. The meter is adjusted to be correct for the liquid for which it is to be verified/certified (*).

1.1 Field of Operation

The field of operation of the measuring system is determined by the following characteristics:

• Minimum measured quantity, V_{min}	2 L
• Maximum flow rate, Q_{max}	50 L/min
• Minimum flow rate, Q_{min}	5 L/min
• Maximum pressure of the liquid, P_{max}	300 kPa
• Minimum pressure of the liquid, P_{min}	100 kPa
• Range of liquids that can be measured	0.5 to 20 mPa.s (at 20°C) (*)
• Maximum temperature of the liquid, T_{max}	40°C
• Minimum temperature of the liquid, T_{min}	5°C
• Ambient temperature range	-10°C to 55°C

(*) Fuels include petrol, kerosene and distillate.

1.2 System Components

The pattern, model VNP2PD-K-E, is a Vision series fuel dispenser (VN) with an internal pump (P), 2 meters/hoses/nozzles (2), dispensing petrol and distillate (PD), has a pre-set facility (K), and is in a conventional (end-oriented) housing (E). The model Vision VNP2PD-K-E fuel dispenser (Figure 1) has the following components or features:

Note: Figure 2 shows model VNP2PP-K-E hydraulics, i.e. for dispensing petrol only.

- Two Dresser-Wayne model 33-044059 pump/gas separators with a gas test valve that has provision for sealing.
- Two Dresser-Wayne model 2PM6 2-piston positive displacement meters.
- Two Fuelquip model VN pulse generators.
- Four Fuelquip model Vision price, volume and unit price displays.
- A pre-set facility including an ASCO two-stage solenoid-operated control valve between the meter and the hose.
- Two ZVA nozzles or any other compatible Commission-approved nozzles.

The hydraulics used with liquids having a viscosity greater than 1 mPa.s (e.g. kerosene or distillate) incorporate a gas detection device which stops the delivery when the gas separator cannot perform within the maximum permissible errors.

The dispenser may also be connected to a compatible (#) Commission-approved control system approved for use with Fuelquip (Email)/Vision communication protocol to provide self-service operation.

(#) "Compatible" is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system.

1.3 Calculator/Indicator

The Fuelquip model Vision calculator/indicator comprises a computing unit and display units for volume, total price and unit price. The indicators display the following maximum values:

Volume	To 999.90 L in 0.01 L increments
Unit price	To 500.0 c/L in 0.1 cent increments
Total price	To \$990.00 in 1 cent increments
Totaliser (*)	To 99999 or 9999999999 L in 1 L increments

(*) Electronic totaliser (software driven and resettable - can be configured to display 5 or 10 digits) and mechanical totaliser (non-resettable).

The software version number for the calculator/indicator is VN-5.5.0.

The pre-set facility includes a price pre-set display on the front of the indicator panel and four buttons marked \$5, \$10, \$20 and CLR which are used to set the desired pre-set price. These buttons on the totaliser display side of the dispenser are also used to access the manager's mode whereby the following functions can be changed, once the keyswitch (with red ring) located underneath the indicator has been unlocked:

- Set price
- Set Communications Mode
- Set dispenser (pump) numbers

The following functions can be viewed by using the abovementioned procedure; these functions can be changed by a Calibration button located in the Vision printed circuit board (upper left hand side) behind a sealing cover, which is sealed after calibration:

- Display communications protocol type
- Display status
- Display LCD tests
- Display k-factors
- Display type pump/dispenser
- Display model type
- Display products
- Display electronic totals format
- Display mechanical totals format
- Display pre-set type
- Display pre-set dollar amount
- Display pre-set litre amount
- Display pre-set active digits
- Display software version

1.4 Sealing and Verification/Certification Provision

Provision is made for the application of a verification/certification mark. The meters, calibration button and the gas separator test valve have provision for sealing.

1.5 Descriptive Markings

Instruments are marked with the following data, together in one location on a data plate:

Pattern approval sign	NSC No 5/6A/97A
Manufacturer's identification mark or trade mark
Manufacturer's designation (model number)
Serial number
Year of manufacture
Environmental class	class N (#)
Maximum flow rate (Q_{max}) L/min
Minimum flow rate (Q_{min}) L/min
Maximum operating pressure (P_{max}) kPa
Minimum operating pressure (P_{min}) kPa
Type of liquid
Maximum temperature of the liquid, T_{max}	40°C
Minimum temperature of the liquid, T_{min}	5°C

(#) See clause 1.1 Field of Operation.

The minimum measured quantity (V_{min}) shall be clearly visible on any indicating device visible to the user during measurement, in the form "minimum delivery 2L".

2. Description of Variants

2.1 Variant 1

Other models and configurations, as listed below using the following identification code:

The pattern, model VNP2PD-K-E, is a Vision series fuel dispenser (VN) with an internal pump (P), 2 meters/hoses/nozzles (2), dispensing petrol and distillate (PD), has a pre-set facility (K), and is in a conventional (end-oriented) housing (E).

- In an alternative MPP-style lane-oriented housing, e.g. the model VNP2PP-K-L (Figure 3).
- With one meter/hose/nozzle, e.g. model VNP1P-K-E dispensing petrol.
- With four meters/hoses/nozzles in lane-oriented housing only, e.g. model VNP4PP-K-L (Figure 4) dispensing two grades of petrol.

2.2 Variant 2

For high flow rate use with liquids having a viscosity greater than 1 mPa.s (e.g. kerosene or distillate) with a maximum flow rate of 80 L/min, e.g. model VNP1DH-K-E.

2.3 Variant 3

Without a pre-set facility in which case the model number does not include a K, e.g. VNP2PP-E or VNP2PPN-L. Instruments without pre-set facility cannot be used for PREPAY transactions.

Instead of the pre-set keypad, on one side of the dispenser the lower left corner of the indicator has a row of four black dots that are used to access the manager's functions once the keyswitch (with red ring) located underneath the indicator has been unlocked. The black dots, from left to right respectively, are Test, Manager, Up and Down pushbuttons used to access the manager's mode.

2.4 Variant 4

With one or more Commission-approved submersible turbine pump hydraulic systems. These hydraulic systems replace the equivalent components (i.e. motor, pump/strainer/gas separator, and associated pipework) in any fuel dispenser covered by this approval in which case the model number has a VND prefix, e.g. the pattern (model VNP2PD-K-E) becomes model VND2PD-K-E. More than one fuel dispenser may be connected to the same submersible turbine pump hydraulic system.

2.5 Variant 5

With the Gilbarco auxiliary board installed in the calculator/indicator of the pattern (Figure 5), in which case the dispenser may then be connected to a compatible Commission-approved control system approved for use with Gilbarco (Marconi) communication protocol to provide self-service operation.

TEST PROCEDURE

Instruments should be tested in accordance with NSC Test Procedure No 5, *Driveway Flowmeters*.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors applied during a verification test of the fuel dispenser using the liquid for which it is to be verified/certified, and from normal flow rate to the minimum flow rate specified in the Certificate of Approval or Technical Schedule are:

- ±0.3% for the calibration/adjustment of the meter; and
- ±0.5% for in-service inspection of the complete measuring system.

Note: Adjusting the errors of a meter to values OTHER than as close as practical to zero is forbidden, even when these values are within the maximum permissible errors.

Other applicable maximum permissible errors are:

- ±0.5% for gas elimination device for petrol;
- ±1.0% for gas elimination device for liquids having a dynamic viscosity exceeding 1 mPa.s (distillate);
- ±20 mL for deliveries equal to the minimum measured quantity; and
- ±20 mL due to hose dilation.

Check the software version number; refer to clause 1.3 Calculator/Indicator in the Technical Schedule for how this is achieved.

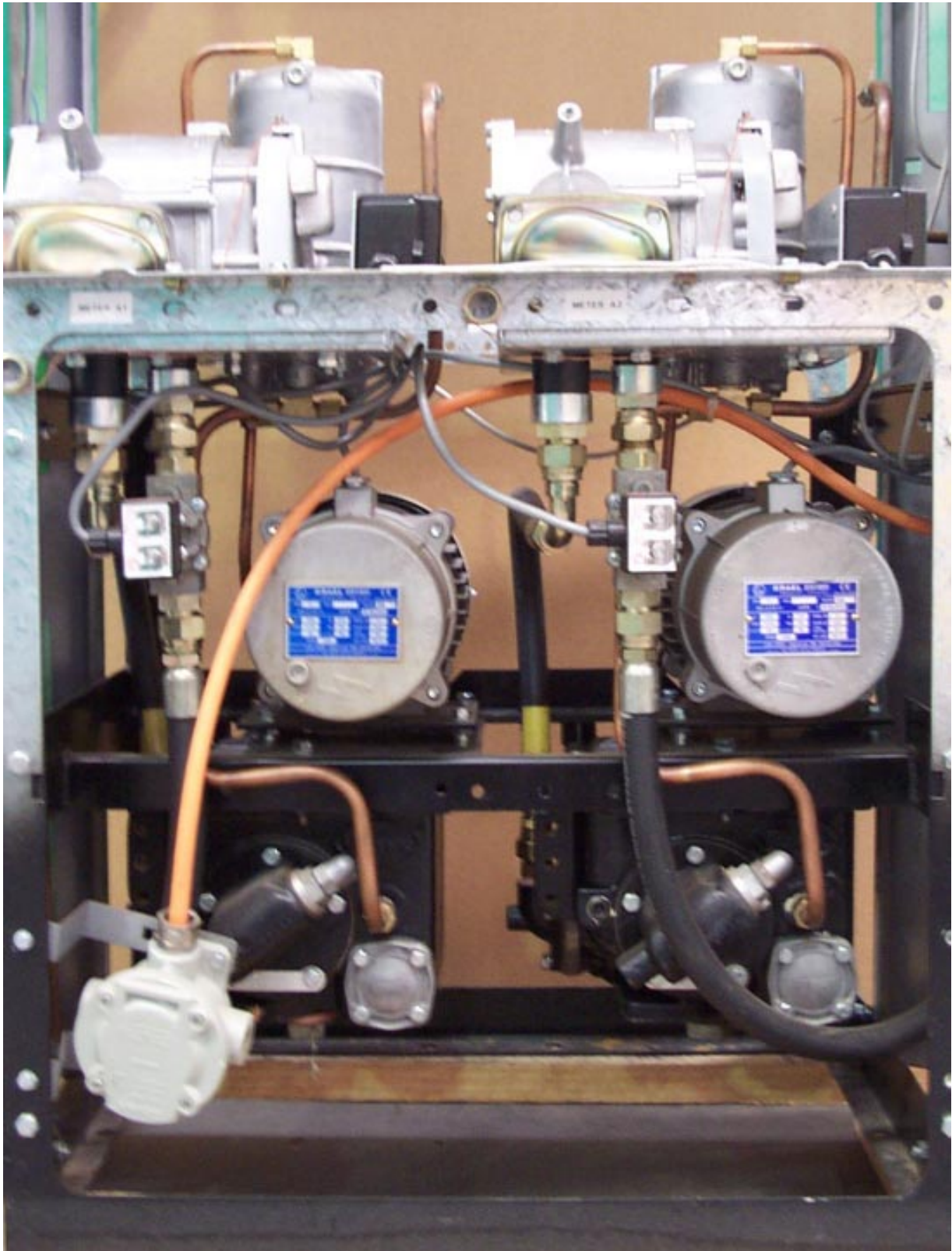
FIGURE 5/6A/97A – 1



Fuelquip Model Vision VNP2PD-K-E Fuel Dispenser

5/6A/97A
18 August 2003

FIGURE 5/6A/97A – 2



Model Vision VNP2PP-K-E – Hydraulics

FIGURE 5/6A/97A – 3



Model Vision VNP2PP-K-L

5/6A/97A
18 August 2003

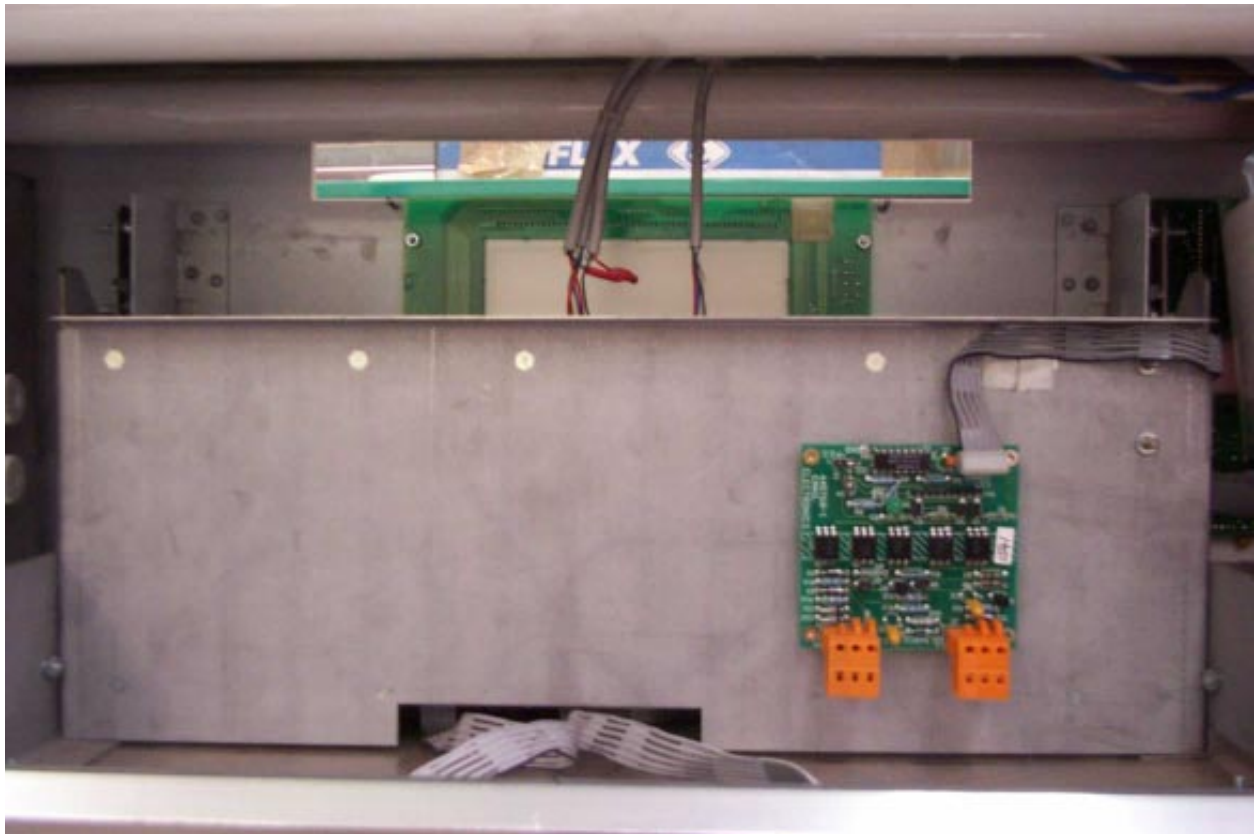
FIGURE 5/6A/97A – 4



Model Vision VNP4PP-K-L

5/6A/97A
18 August 2003

FIGURE 5/6A/97A - 5



With a Gilbarco Auxiliary Board