



Australian Government

**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Notification of Change

Certificate of Approval No 5/6A/220

Change No 1

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

The following changes are made to the approval documentation for the
Dresser Wayne Model Global Vista 3/G3490P Fuel Dispenser for Motor Vehicles
submitted by Transponder Technologies Pty Ltd
2 Hamra Drive, Export Park
Adelaide Airport SA 5950.

- A. In Certificate of Approval No 5/6A/220 dated 28 July 2010, the FILING
ADVICE should be amended by:
- (i) changing the first sentence to read, in part;
“Certificate of Approval No **5/6A/220** dated ... may be destroyed”
 - (ii) amending the list of documents by adding the following:
“Notification of Change No 1 dated 23 May 2011”
- B. Technical Schedule No 5/6A/220 dated 9 September 2010 and its Variation
No 1 dated 28 July 2010, the title of the pattern should be amended by;
replacing “Transponder Technologies” with “**Dresser Wayne**”:
- C. In Technical Schedule No 5/6A/220 dated 9 September 2010:
- (i) the first sentence of the first paragraph of the TEST PROCEDURE should
be amended as follows;
“Instruments shall be tested in accordance with any relevant tests specified
in the **national inspection test procedures.**”
 - (ii) the caption for Figure 1 should be amended to read;
“**Dresser Wayne** Model Global Vista ... for Motor Vehicles”

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 'M. J. ...', written over a horizontal line.



Australian Government

**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 5/6A/220

Issued by the Chief Metrologist 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

Dresser Wayne Model Global Vista 3/G3490P Fuel Dispenser for Motor Vehicles

submitted by Transponder Technologies Pty Ltd
 2 Hamra Drive, Export Park
 Adelaide Airport SA 5950.

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 approval has been granted with reference to document NMI R 117-1, Measuring Systems for Liquids Other than Water, July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 May 2014, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 5/6A/220' and only by persons authorised by the submitter.

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 National Measurement Institute (NMI) 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 document NMI P 106.

The National Measurement Institute 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 3 April 2009

- A Dresser Wayne model Global Vista 3/G3490P fuel dispenser for motor vehicles.

Variants: approved 3 April 2009

1. Certain other models of the Global Vista series as listed in Table 1.
2. With two pumps supplying a single meter.
3. With one or more compatible submersible turbine pumps.


Technical Schedule No 5/6A/220 describes the pattern and variants 1 to 3.

Variant: approved 27 July 2010


4. With updated software.

Technical Schedule No 5/6A/220 Variation No 1 describes variant 4.

FILING ADVICE

 Certificate of Approval No 5/6A/218 dated 9 September 2009 is superseded by this certificate, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 5/6A/220 dated 28 July 2010
Technical Schedule No 5/6A/220 dated 9 September 2009 (incl. Table 1 and Test Procedure)

 Technical Schedule No 5/6A/220 Variation No 1 dated 28 July 2010
Figures 1 to 5 dated 9 September 2009

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



TECHNICAL SCHEDULE No 5/6A/220



Pattern: Transponder Technologies Model Global Vista 3/G3490P Fuel Dispenser for Motor Vehicles

Submitter: Transponder Technologies Pty Ltd
2 Hamra Drive, Export Park
Adelaide Airport SA 5950

1. Description of Pattern

A Dresser Wayne Global Vista model 3/G3490P multi-product fuel dispenser for motor vehicles (Figures 1 and 2) is approved to dispense various grades of fuels (*), in attendant-operated mode, or in attended self-service mode using any compatible (#) approved control console. The meter is adjusted to be correct for the liquid for which it is to be verified/ certified.

- (*) including up to 10% ethanol (E10) and various grades of pure biodiesel and biodiesel/distillate blends (to Australian government standard).
- (#) 'Compatible' is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system including all checking facilities.

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} 40 L/min
 - Minimum flow rate, Q_{min} 4 L/min
 - Maximum pressure of the liquid, P_{max} 300 kPa
 - Minimum pressure of the liquid, P_{min} 120 kPa (#1)
 - Range of liquids viscosity 0.5 to 20 mPa.s (at 20°C) (#2)
 - Maximum temperature of the liquid, T_{max} 50°C
 - Minimum temperature of the liquid, T_{min} -10°C
 - Ambient temperature range -25 to 55°C
 - Accuracy class 0.5
- (#1) Minimum pressure required for effective operation of the gas elimination device.
- (#2) The flowmeter is adjusted for use with one product viscosity. Fuels include kerosene, distillate and various grades of petrol (which may include up to 10% ethanol).

1.2 Description of the Metering System

The metering system incorporates the following components:

- (i) Eight Dresser Wayne AB model CPU compact pumping units each with an integral gas elimination device.

- (ii) Eight Dresser Wayne AB model WM 002393-001 positive displacement four piston measurement transducers (Figure 3) each fitted with a Dresser Wayne AB model WM 001682 WIP ('Wayne Integrated Pulser') pulse generator (Figure 3) which produces 200 pulses per revolution.
- (iii) Eight hoses/nozzles are used, four mounted on both the front and the rear of the dispenser housing. The nozzles used are 16 mm ZVA Elaflex. Note that the submitter should be consulted regarding the acceptability of any alternative nozzles.

1.3 Calculator/Indicator

The Dresser Wayne AB model iGEM calculator/indicators (Figure 1), one per side, have a display for total price and for volume delivered, as well as a separate unit price display allocated for each nozzle.

The display limits and increments are:

| | |
|------------|--|
| Price | (6 digits) up to 9999.00 in 0.01 cents |
| Volume | (6 digits) up to 9999.00 in 0.01 L |
| Unit price | (4 digits) up to 99.99 in price/L |

A pre-set facility (keypad and display) may also be fitted.

The instrument is approved with version 10.xx (#) software, which can be viewed by pressing '3' on the remote control or by pressing 'CRC' button on the iGEM computer board. The software version will appear on the unit price display.

- (#) The last two digits of the software version number (10.xx) may be any number greater than '02' (e.g. 10.03) – these last two digits represent features which are not metrologically significant.

1.4 Checking Facilities

An automatic segment test is performed at the start of each delivery.

The calculator monitors the presence and correct transmission of signal from the measurement transducer, and in the event of detecting a fault the instrument indicates an error code and has provision for controlling electrically-operated valves to stop the delivery.

1.5 Sealing Provision

The gas separator test valve has provision for sealing. The meter is sealed as shown in Figure 4.

1.6 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

1.7 Markings

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

| | |
|--|------------------|
| Pattern approval sign | 5/6A/220 |
| Manufacturer's identification mark or trade mark | Dresser Wayne AB |
| Manufacturer's designation (model number) | |
| Serial number | |
| Year of manufacture | |
| Maximum flow rate (Q_{max}) | L/min |
| Minimum flow rate (Q_{min}) | L/min |
| Minimum measured quantity (V_{min}) | L (#1) |
| Maximum operating pressure (P_{max}) | kPa |
| Minimum operating pressure (P_{min}) | kPa |
| Nature of liquids to be measured | (#2) |
| Maximum temperature of the liquid, T_{max} | 50°C |
| Minimum temperature of the liquid, T_{min} | -10°C |
| Environmental class | class C |

(#1) In addition, 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 2/5 L'.

(#2) e.g. distillate or D.

2. Description of Variants

2.1 Variant 1

Certain other models and configurations of the Global Vista series of fuel dispensers identified using Table 1.

2.2 Variant 2

With two Dresser Wayne AB model CPU compact pumping units as described for the pattern supplying a single Dresser Wayne AB model WM 002393-001 meter using 25 mm piping, a 25 mm hose, and a ZVA Elaflex 25 mm nozzle (*). The fuel dispenser has the following field of operation:

- For use with distillate
- Maximum flow rate (Q_{max}) 130 L/min
- Minimum flow rate (Q_{min}) 13 L/min
- Minimum measured quantity (V_{min}) 5 L

(*) The submitter should be consulted regarding the acceptability of alternatives.

2.3 Variant 3

With one or more compatible submersible turbine pumps (STPs) incorporating a leak detection system. The STP replaces the equivalent components (i.e. motor, pump/strainer/gas separator, and associated pipework) in certain fuel dispensers covered by this approval (refer to Table 1). Figure 5 shows a typical fuel dispenser with a submersible turbine pump system, including typical sealing.

More than one fuel dispenser may be connected to the same submersible turbine pump.

Dispensers may operate with the standard maximum flow rate, Q_{max} of 40 L/min, or dispensers for use with distillate may be used with the high maximum flow rate, Q_{max} of 130 L/min.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the **Uniform Test Procedures**. Tests should be conducted in conjunction with any tests specified in the approval documentation for any components used, including indicator/controller and submersible turbine pump (STP) hydraulic systems.

Maximum Permissible Errors at Verification/Certification

The maximum permissible error 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 is:

0.3%.

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; and

±1.0% for gas elimination device for liquids having a dynamic viscosity exceeding 1 mPa.s.

For instruments with a minimum measured quantity of 2 L;

±20 mL for deliveries equal to the minimum measured quantity; and

±20 mL due to hose dilation for instruments without a hose reel.

For instruments with a minimum measured quantity of 5 L;

±50 mL for deliveries equal to the minimum measured quantity; and

±50 mL due to hose dilation for instruments without a hose reel.

TABLE 1

| Field Descriptor | Code (#1) | Code Description |
|---|---------------------------------|---|
| Defines electronics & hydraulics configuration | 3 | iGem computer & Global hydraulics module |
| Defines the product line | G | Global product line |
| Defines base model series | 3 | High hose "H" style - Default for Global VISTA |
| Defines base configuration (*) | 3 | Single, Duo I, Duo II, Quadro & 3 product MGD (#2) |
| | 4 | Four product MGD (#2) |
| Defines body width | 7 | 24" extra narrow body chassis |
| | 8 | 36" narrow body chassis |
| | 9 | 48" wide body chassis |
| Defines products & hoses | 1 | 1 product, 1 hose, island oriented nozzle - Single |
| | 2 | 1 product, 2 hoses, island oriented nozzles - Duo I |
| | 3 | 2 product, 2 hoses, island oriented nozzles - Duo II |
| | 4 | 2 product, 4 hoses, lane oriented nozzles - Twin Duo II |
| | 7 | 1 product, 2 hoses, lane oriented nozzles - Duo I |
| | 8 | 2 product, 2 hoses, lane oriented nozzles - Duo II |
| | 9 | 2 product, 4 hoses, lane oriented nozzles - Quadro |
| | 0 | If (*) = 3 then 3 product 6 hose, lane oriented nozzles - MGD 3 |
| | 0 | If (*) = 4 then 4 product 8 hose, lane oriented nozzles - MGD 8 |
| | Defines hydraulic configuration | D |
| P | | P = pump hydraulics fitted with internal suction pump(s) |
| Defines options (Blank (no code) if not fitted with option/s) | 2 | Enhanced capacity- 70 litres/minute |
| | 3 | Super high capacity - 130 litres/minute |
| | 4 | Ultra high capacity - 151 litres/minute |
| | A | Auto on |
| | B | Buzzer |
| | D 1,2,3 | Vapour recovery options |
| | G | Spin-on filter |
| | I | Intercom call button |
| | P | Stop button |
| | R | Single-sided unit |
| | S1 | 12 button pre-set |
| | S2 | 5 button pre-set |
| | U | Unihose MGD |
| X2 | Single phase 230VAC | |

(#1) The model number for the pattern is 3/G3490P

(#2) MGD stands for 'Multi Grade Dispenser'

Meaning of Model Designations

TECHNICAL SCHEDULE No 5/6A/220

VARIATION No 1



Pattern: Transponder Technologies Model Global Vista 3/G3490P Fuel Dispenser for Motor Vehicles

Submitter: Transponder Technologies Pty Ltd
2 Hamra Drive, Export Park
Adelaide Airport SA 5950

1. Description of Variant 4

The pattern and variants now with version 11.xx (#) software, which can be viewed by pressing '3' on the remote control or by pressing 'CRC' button on the iGEM computer board. The software version will appear on the unit price display.

(#) The last two digits of the software version number (11.xx) may be any number greater than '00' (e.g. 11.01) – these last two digits represent features which are not metrologically significant.

FIGURE 5/6A/220 – 1



Transponder Technologies Model Global Vista 3/G3490P
Fuel Dispenser for Motor Vehicles

FIGURE 5/6A/220 – 2



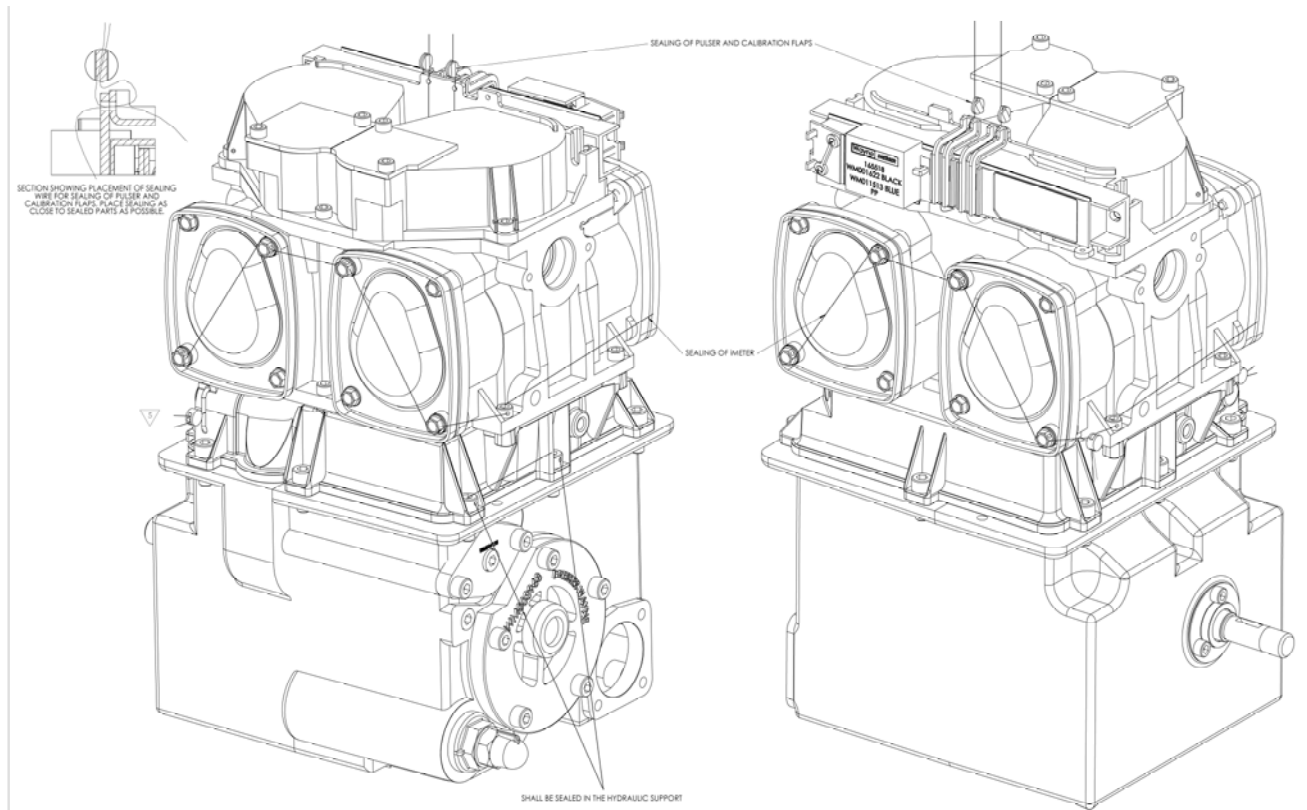
Model Global Vista 3/G3490P – Hydraulics

FIGURE 5/6A/220 – 3



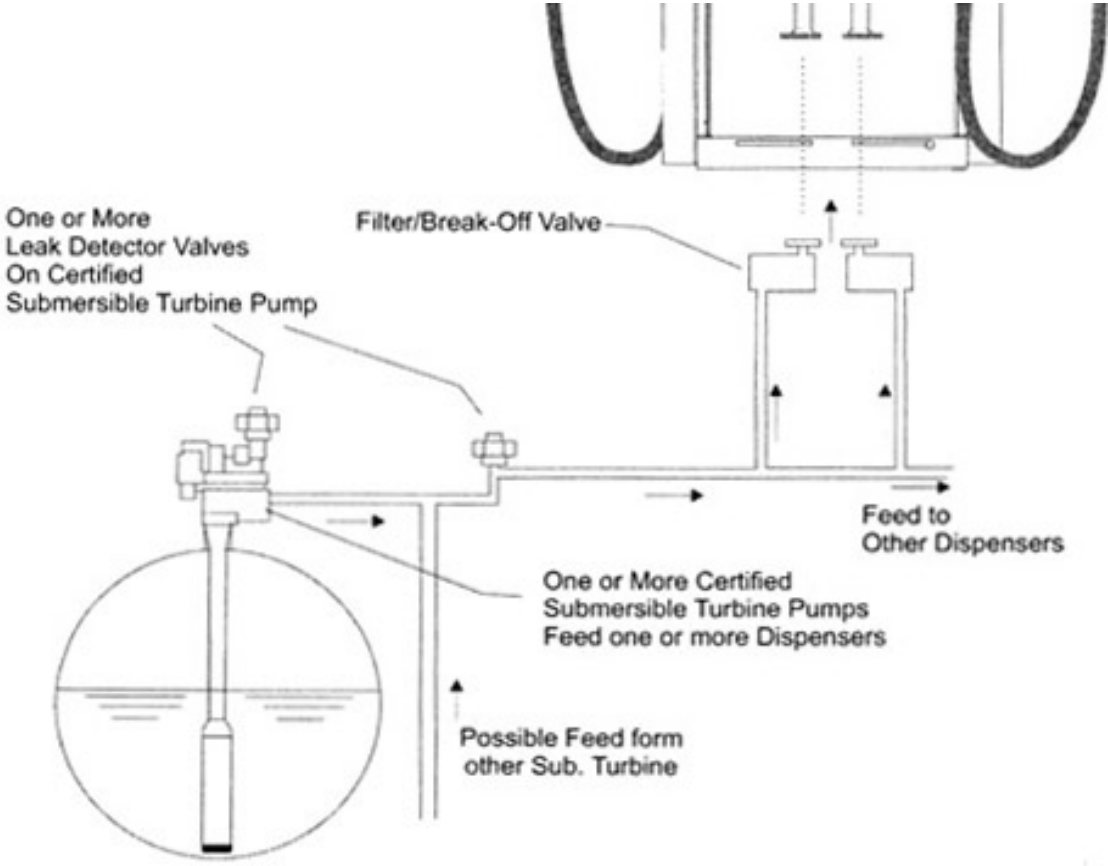
Dresser Wayne AB Model WM 002393-01 Measurement Transducer and
Model WM 001682 WIP Pulse Generator

FIGURE 5/6A/220 – 4

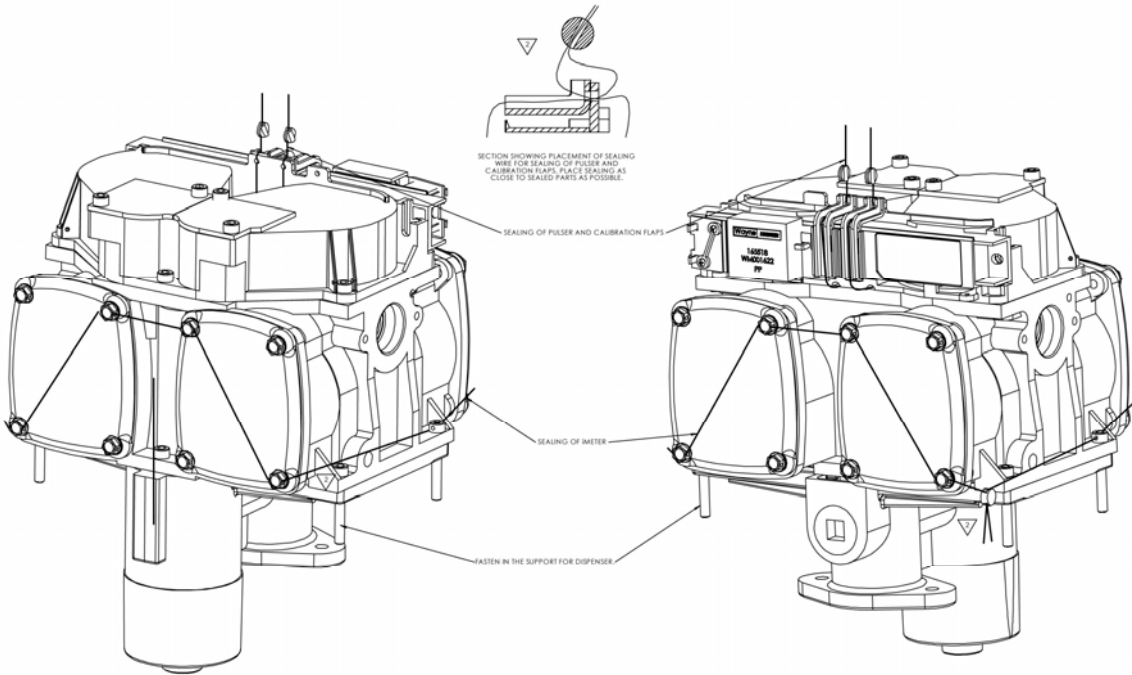


Showing Typical Sealing Method for Instruments With an Internal Pumping Unit

FIGURE 5/6A/220 – 5



(a) Typical Submersible Turbine Pump (STP) System



(b) Showing Typical Sealing Method for Instruments Connected to an STP System