



Australian Government
National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval
No S491

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

Banlaw FuelTrack™ Model BFT08NMI Controller/Indicator for Liquid-measuring Systems

submitted by Banlaw Pty Ltd
 19 Metro Court
 Gateshead NSW 2290.

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 March 2012, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S491' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S491' in addition to the approval number of the instrument.

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 28 February 2007

- A Banlaw FuelTrack™ model BFT08NMI controller/indicator for liquid-measuring systems.

Technical Schedule No S491 describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S491 dated 4 April 2007
Technical Schedule No S491 dated 4 April 2007 (incl. Test
Procedure)
Figures 1 to 3 dated 4 April 2007

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, consisting of a stylized, cursive script that is difficult to decipher but appears to be a personal name or initials.

TECHNICAL SCHEDULE No S491

Pattern: Banlaw FuelTrack™ Model BFT08NMI Controller/Indicator for Liquid-measuring Systems

Submitter: Banlaw Pty Ltd
19 Metro Court
Gateshead NSW 2290.

1. Description of Pattern

A Banlaw FuelTrack™ model BFT08NMI unattended self-service flowmetering controller/indicator (Figures 1 and 2) for use with compatible (#) approved liquid-measuring systems.

(#) '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 is determined by the following characteristics:

- Ambient temperature range -10°C to 55°C (class N)
- Liquid temperature range -10°C to 50°C
- Power supply 240 V (nominal) AC mains supply
(Range 204 V to 264 V)
12 V to 24 V DC
- Maximum input frequency 800 pulses/second
- Accuracy class Class 0.5
- For use by registered clients

1.2 Design/Features

The Banlaw FuelTrack™ model BFT08NMI controller/indicator (Figure 1) consists of an operator keypad/indicator ('Depot') unit and a separate control unit as described below.

1.2.1 The FuelTrack™ Depot unit is the operator interface and is a microprocessor-based system that provides control and monitoring of liquid-measuring systems. The FuelTrack™ system (Figure 2) operates with Banlaw FuelTrack Depot version 8.** software (refer to the Test Procedure for instructions on how to view the version number). The FuelTrack™ Depot unit features include:

- A liquid crystal display (LCD) with 12 mm nine-digit indication of the measured volume of a flowmeter;
- Automatic or manual-entry vehicle identification;
- Each FuelTrack™ Depot unit provides control and monitoring for up to 6 flowmetering systems or a maximum of 8 flowmetering systems when multiple FuelTrack™ units are used in various master/slave configurations (Figure 3); and

- Allows fuel transactions of up to 6.5 million litres to 2 decimal places, e.g. in increments of 0.01 L.

Authorisation of fuel delivery is carried out automatically through an AutoID identification system built into the fuel dispenser nozzles, or manually through an operator presenting an electronic identification tag and/or entering identification and password details through the built-in keypad.

The delivery operation is completed when a defined timeout period expires.

The FuelTrack™ Depot has additional features including:

- FuelTrack™ system software for configuration and viewing of all transaction data from all Banlaw FuelTrack™ Depot units; and
- Optional monitoring function records fuel transfers to other tanks.

1.2.2 The Banlaw FuelTrack™ control box (Figures 1 and 2) connects to the Depot unit and houses the wiring for the flowmetering system, battery and power supply and communication interface such as serial port, Ethernet or radio for communication to Banlaw's FuelTrack™ PC management software.

1.3 Checking Facilities

- (i) An automatic segment test for the volume display is performed at the start of each delivery.
- (ii) A Banlaw remote pulse transmitter module monitors the presence and correct transmission of signal from the measurement transducer. In the event of detecting a fault the pulse transmitter signals to the FuelTrack™ Depot unit that a fault has occurred and prevents further deliveries until the fault is corrected.
- (iii) When an error occurs with the software or when the LCD display has a fault or is uncoupled, an audible alarm is sounded and further deliveries will be prevented from starting.
- (iv) When a mains power failure occurs an error message will be displayed on the indicator; the battery backup retains the FuelTrack™ Depot powered for a minimum of one hour, however no dispensing of product is allowed.

1.4 Pulse Generator

The controller/indicator is approved for use with a Liquip model ERP 100 pulse generator or any other compatible (#) approved measurement transducer. The ERP 100 is approved with a maximum shaft speed of 1000 revolutions per minute and with 150 pulses per shaft revolution.

(#) '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.

1.5 Verification/Certification

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

1.6 Markings and Notices

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

Manufacturer's name or mark	Banlaw
Model number	BFT08NMI
Serial number
Pattern approval mark	NMI S491
Year of manufacture
Environmental class	Class N

The minimum measured quantity specified for the liquid-measuring system is marked on the face of the indicator in the form 'Minimum Delivery 2 L'.

TEST PROCEDURE

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instruments to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Uniform Test Procedures.

The maximum permissible shaft revolutions of the pulse generator and the maximum flow rate of the liquid-measuring system shall be considered in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, and in accordance with any relevant tests.

The maximum permissible errors applicable are those applicable to the fuel dispensers to which the instrument approved herein is fitted, as stated in the approval documentation for the fuel dispensers.

To view the software version number perform the following procedure:

There two methods of viewing the software version number:

1. Press the Enter button on the FuelTrack™ Depot keypad, display the version number and then the current date and time for approximately 15 seconds.
2. Reset the instrument by turning off the power to the FuelTrack™ Depot unit and observe the version number on the LCD when power is restored.

FIGURE S491 – 1



Banlaw FuelTrack Depot

Banlaw FuelTrack
Control Box

Banlaw
FuelTrack Depot



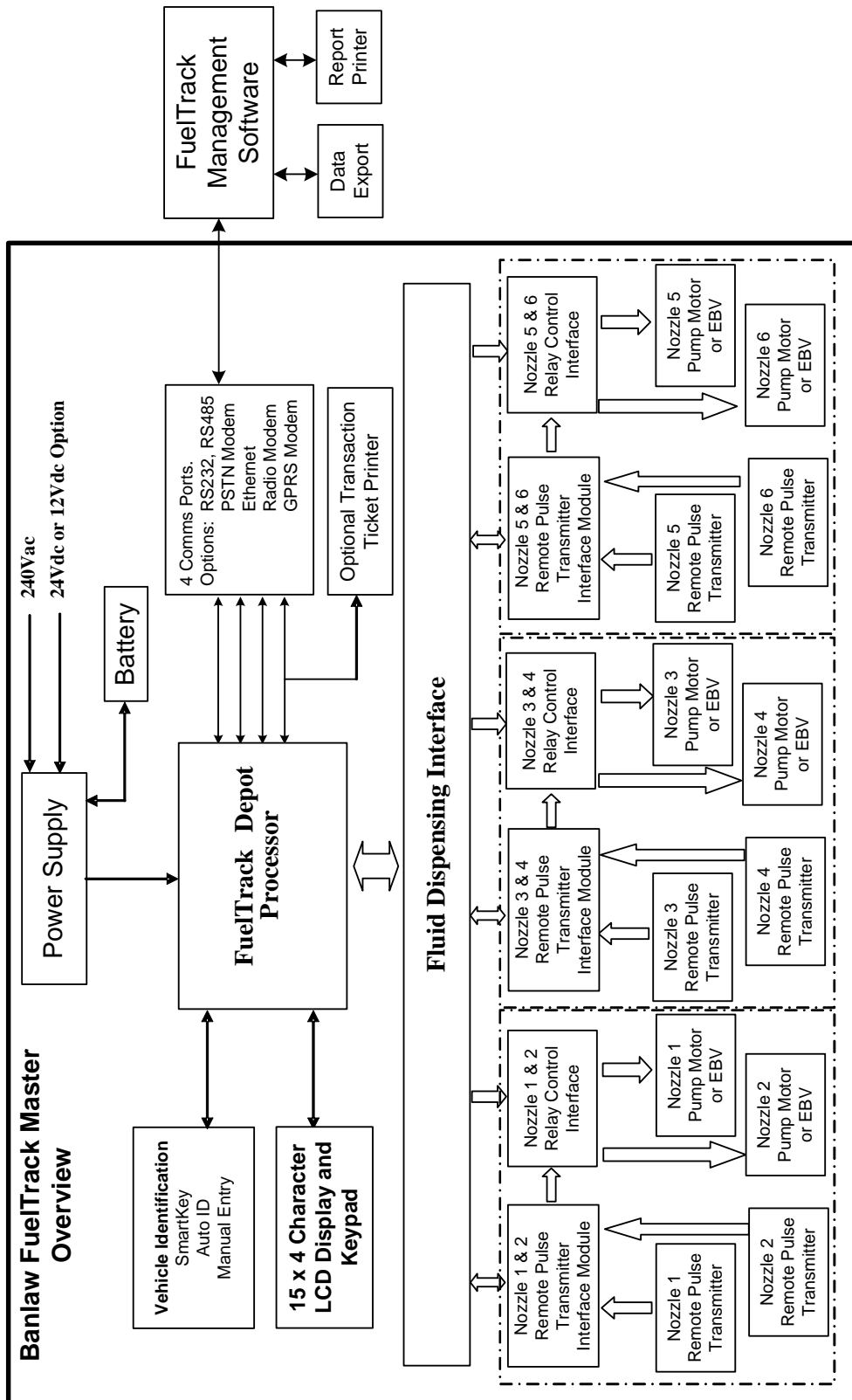
Typical Banlaw
FuelTrack
Control Box



Typical Banlaw
FuelTrack
Installation

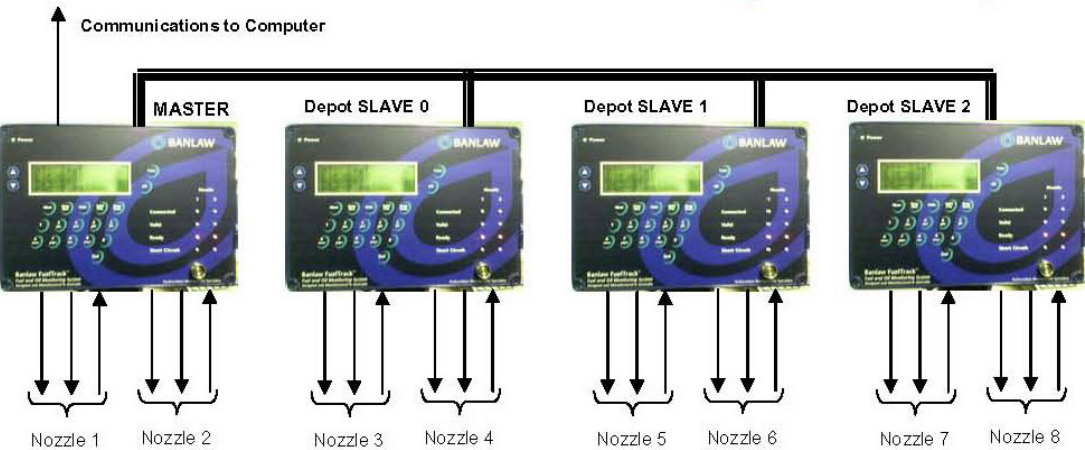
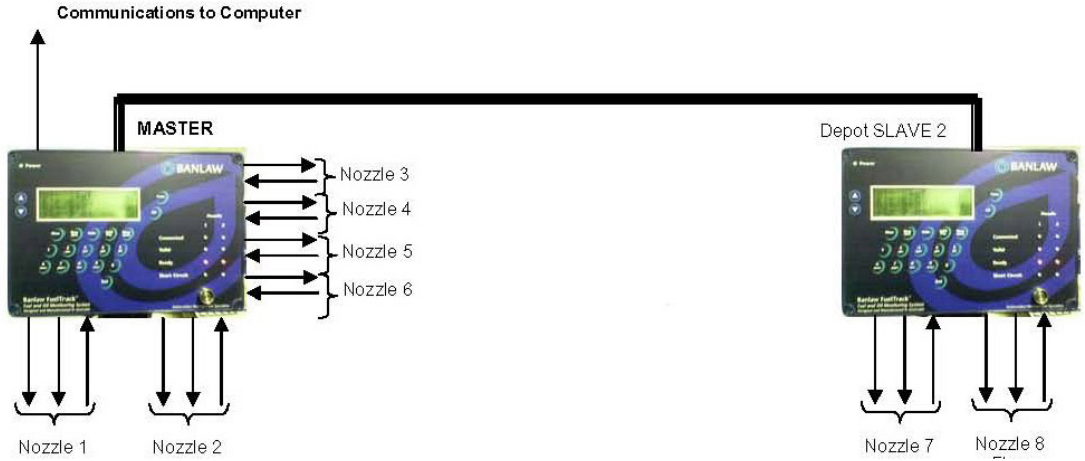
Banlaw Model FuelTrack™ Controller/Indicator

FIGURE S491 – 2



Typical System Overview

FIGURE S491 – 3



Typical Master/Slave Configurations