5/6A/202
15 March 2007

Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Cancellation Certificate of Approval No 5/6A/202

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

Gilbarco Model T185P6 Enterprise Fuel Dispenser for Motor Vehicles

submitted by Gilbarco Australia Limited
(formerly Marconi Commerce Systems Australia Limited)
20 Highgate Street
AUBURN NSW 2144

has been cancelled in respect of new instruments as from 1 June 2007.

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

5/6A/202
18 February 2005

Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Notification of Change
Certificate of Approval No 5/6A/202
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

Gilbarco Model T185P6 Enterprise Fuel Dispenser for Motor Vehicles

submitted by Gilbarco Australia Limited
(formerly Marconi Commerce Systems Australia Limited)
20 Highgate Street
AUBURN NSW 2144.

A. In Technical Schedule No 5/6A/202 dated 14 March 2000 the first paragraph of the **Maximum Permissible Errors at Verification/Certification** should be amended to read, in part:

"±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."

B. In Certificate of Approval No 5/6A/202 dated 14 March 2000, the FILING ADVICE should be amended by adding the following:

"Notification of Change No 1 dated 18 February 2005"

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

5/6A/202
2 January 2001

National Standards Commission

12 Lyonpark Road, North Ryde NSW

Certificate of Approval

No 5/6A/202

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

Gilbarco Model T185P6 Enterprise Fuel Dispenser for Motor Vehicles

submitted by Marconi Commerce Systems Australia Limited
12-38 Talavera Road
North Ryde NSW 2113.

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.

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CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 November 2004, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 5/6A/202 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 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.

Special:

Variant 3 was approved in Interim Certificate No 5/6A/202 issued 21 October 1999, but has now been cancelled in respect of new instruments as of 31 December 1999. Instruments purporting to comply with Variant 3 and which were verified/certified before the date of cancellation, may, with the concurrence of the relevant verifying authority, be submitted for reverification.

DESCRIPTIVE ADVICE

Pattern: provisionally approved 21 April 1999
approved 21 October 1999

- A Gilbarco model T185P6 Enterprise fuel dispenser for motor vehicles approved for use to dispense various types of liquid hydrocarbons over a flow rate range of 5 to 85 L/min. May also be known as Marconi Commerce Systems model T185P6 Enterprise fuel dispenser.

Variant: provisionally approved 21 April 1999
approved 21 October 1999

1. With a Commission-approved submersible turbine pumping system.

Variant: approved 21 October 1999

2. With the indicator/calculator incorporating price, volume and unit price displays for each grade of fuel.

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Variant: approved 21 October 1999
cancelled 31 December 1999

3. With the indicator/calculator incorporating price, volume and a single unit price display for the selected grade of fuel.

Variants: approved 29 February 2000

4. With electromechanical non-resettable totalisers for each meter.

5. With ultra high flow (UHF) hydraulics.

6. Other models of the Enterprise series identified using Table 1.

Technical Schedule No 5/6A/202 describes the pattern and variants 1 to 6.

Variant: approved 1 December 2000

7. With alternative markings.

Technical Schedule No 5/6A/202 Variation No 1 describes variant 7.

FILING ADVICE

Certificate of Approval No 5/6A/202 dated 14 March 2000 is superseded by this Certificate, and may be destroyed.

The documentation for this approval now comprises:

Certificate of Approval No 5/6A/202 dated 2 January 2001
Technical Schedule No 5/6A/202 dated 14 March 2000 (incl. Table 1 & Test Procedure)
Technical Schedule No 5/6A/202 Variation No 1 dated 2 January 2001
Figures 1 to 8 dated 14 March 2000

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.

TECHNICAL SCHEDULE No 5/6A/202

Pattern: Gilbarco Model T185P6 Enterprise Fuel Dispenser for Motor Vehicles.

Submittor: Marconi Commerce Systems Australia Limited
12-38 Talavera Road
North Ryde NSW 2113.

1. Description of Pattern

A Gilbarco model T185P6 Enterprise fuel dispenser for motor vehicles approved to dispense various grades of petrol, kerosene and diesel (#), in attendant-operated mode, or in attended self-service mode using the Gilbarco Transac T24 control console (NSC No S246A) or any other compatible Commission-approved control console. The meter is adjusted to be correct for the liquid for which it is to be verified/certified. The pattern may also be known as Marconi Commerce Systems model T185P6 Enterprise fuel dispenser.

The dispenser (Figures 1 and 2) may be constructed in various configurations.

The instrument incorporates the following components:

- Up to four Tankalagen Salzkotten (or Marconi Commerce Systems) model ZPA 2180 pumping units with integrated gas elimination device;
- Up to eight Gilbarco (or Marconi Commerce Systems) model PA024TC positive displacement meters fitted with a model BR405799 pulse generator;
- A Gilbarco (or Marconi Commerce Systems) model Epsilon calculator/ indicator module; and
- Up to eight nozzles.

1.1 Field of Operation

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

- Minimum measured quantity, *MMQ* 5 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
- Nature of the liquids to be measured e.g. petrol
- Maximum temperature of the liquid, T_{max} 50°C
- Minimum temperature of the liquid, T_{min} -10°C
- Environmental class class C

(#) When used to dispense diesel, instruments may be used with a Q_{max} value of 85 L/min, and shall be so marked.

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1.2 Indicator/Calculator

The Gilbarco model Epsilon indicator/calculator modules (Figures 3 and 4) incorporate:

(i) Management Interface Unit with a keypad for programming functions;

(ii) Price, volume and transaction unit price displays for the delivery and a separate unit price display allocated for each nozzle; and

(iii) Optional pre-set facility (keypad and display).

Operation of display

Removing a nozzle from its normal hang-up position initiates a segment check of the price, volume, and the transaction unit price displays. Then the price and volume displays reset to zero, and the transaction unit price display shows the unit price of the grade of fuel selected, while the separate unit price displays indicate the corresponding unit price allocated to that nozzle.

The indicators display the following maximum values:

Volume	To 9999.99 L
Unit price	To 999.9 c/L
Total price	To $9999.99
Totaliser	To 9999999 L

The optional pre-set facility (Figures 3 and 4) allows pre-set values to be entered either in dollar increments up to a maximum of $99 or in litre increments up to a maximum of 99 litres.

Instruments may inhibit displaying the volume for the first 100 mL of any delivery.

1.3 Markings

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

Pattern approval sign	NSC No 5/6A/202
Manufacturer's identification mark or trade mark	...
Manufacturer's designation (model number)	...
Serial number and year of manufacture	...
Minimum measured quantity, *MMQ*	... L (#)
Maximum flow rate, Q_{max}	... L/min
Minimum flow rate, Q_{min}	... L/min
Maximum pressure of the liquid, P_{max}	... kPa
Minimum pressure of the liquid, P_{min}	... kPa
Nature of the liquids to be measured	...
Environmental class	class C

(#) This may also be marked on the indicator/calculator.

1.4 Sealing and Verification/Certification Provision

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

The gas separator test valve has provision for sealing. The meter is sealed as shown in Figure 5.

2. Description of Variants

2.1 Variant 1

With one or more Commission-approved submersible turbine pumping systems. The remote pump replaces the equivalent components (i.e. motor, pump/strainer/ gas separator, and associated pipework) in any fuel dispenser covered by this approval (Figure 6).

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

2.2 Variant 2

With the indicator/calculator incorporating price, volume and unit price displays for each grade of fuel. An optional LED may be located above each unit price display.

Removing a nozzle from its normal hang-up position initiates a display segment check of the price, volume and unit price corresponding to the grade of fuel selected, whereas the unit price displays for the other grades of fuel blank. Then the price and volume displays reset to zero and the unit price display shows the unit price of the grade of fuel selected. The optional LED will turn red for the unit price selected and will remain displayed during the delivery.

When the nozzle is hung-up, all unit price displays indicate the corresponding unit price of grade of fuel and the optional LED remains red, indicating the last unit price used.

2.3 Variant 3

With the indicator/calculator incorporating price, volume and a single unit price display for the selected grade of fuel.

(Refer to the Special Condition of Approval.)

2.4 Variant 4

In addition to the electronic totaliser facility, an electromechanical non-resettable totaliser for each meter is installed next to the Management Interface Unit.

2.5 Variant 5

With ultra high flow (UHF) hydraulics comprising two meters connected in parallel and supplied from a Commission-approved submersible turbine pumping system (as described in Variant 1).

Field of Operation

The field of operation of this variant is the same as for the pattern, except for the following characteristics:

- Maximum flow rate, Q_{max} 160 L/min
- Minimum flow rate, Q_{min} 16 L/min
- Maximum pressure of the liquid, P_{max} 350 kPa

2.6 Variant 6

Other models of the Enterprise series identified using Table 1.

TABLE 1

Meaning of model designations.

Character	Codes	Meaning
First character	T	Gilbarco (or Marconi) product
Second character	1	Enterprise cabinet
Third character	8	Enterprise cabinet
Fourth character	5	Wide frame, lane orientation (Figure 1)
	6	Narrow frame, lane orientation (Figure 7)
	7	Narrow frame, island orientation (Figure 8)
Fifth character	P	Self-contained dispenser
	D	With remote pump
Sixth character	1-8	Number of hoses

e.g. The pattern, model T185P6 Enterprise (Figure 1), has a wide frame (lane orientation), self-contained pumps, and six hoses.

TEST PROCEDURE

Instruments should be tested 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 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 meter; and
±0.5% for the complete system.

For instruments fitted with Commission-approved submersible turbine pumping system:

1. Operation of the leak detector is tested by the following procedure:

Note: This test should be carried out on initial verification. Thereafter, it need not be done at every verification/certification but should be done periodically at the discretion of the relevant verifying authority.

a) Connect a pressure gauge and valve to the test port of the impact valve under the fuel dispenser. Ensure that the remote pump is not turned on during this operation by disabling at the STP control box.

b) Start the test by closing the test valve. The line pressure should be zero as indicated on the pressure gauge. At the control box, enable the pump and dispense at least 15 L of fuel to remove any air introduced when the pressure gauge and valve were connected.

c) Turn off the pump and open the test valve sufficiently so that a steady, unbroken stream of fuel is observed to flow from the test valve. Wait until flow ceases from the valve and the test gauge reads zero. Leave the test valve open.

d) Start the pump by lifting the nozzle out of its hang-up, but leave the nozzle closed. A steady stream of fuel should be observed to flow from the test valve. The pressure on the gauge should not exceed 150 kPa during this step.

Attempt to deliver fuel from the nozzle. A flow rate of less than 11 L/min indicates correct operation of the leak detector.

e) Close the test valve and nozzle with the pump still running. A rise in pressure on the test gauge should be noted after not more than 10 seconds.

f) Disable the pump at the control box. Remove the test fixture and replace the plug in the test port. Enable the pump, and dispense at least 15 L of fuel from the fuel dispenser to remove any air introduced into the system.

2. The minimum flow rate test is performed by simultaneously running either all hoses on all fuel dispensers connected to a particular remote pump (where the number of hoses is 6 or less) or by simultaneously running between 2/3 and 3/4 of all such hoses (where the number of hoses is more than 6). For the purpose of this test, where two or more pumps are connected in parallel, they shall be considered as one pump. Check that the lowest flow rate is not less than the rate specified in the Certificate of Approval or Technical Schedule.

Note: This test should be carried out on initial verification. Thereafter, it need not be done at every verification/certification but should be done periodically at the discretion of the relevant verifying authority.

3. For systems where more than one fuel dispenser is connected to the same remote pump, begin a delivery from one fuel dispenser.

While this delivery is still in progress, select a second fuel dispenser that is connected to the same pump. Attempt to make a delivery WITHOUT this fuel dispenser first being authorised (either locally or remotely); the second delivery should not be possible.

5/6A/202
2 January 2001

TECHNICAL SCHEDULE No 5/6A/202

VARIATION No 1

Pattern: Gilbarco Model T185P6 Enterprise Fuel Dispenser for Motor Vehicles.

Submittor: Marconi Commerce Systems Australia Limited
12-38 Talavera Road
North Ryde NSW 2113.

1. Description of Variant 7

With alternative markings to those listed in clause **1.3 Markings** of Technical Schedule No 5/6A/202 dated 14 March 2000.

The alternative markings are given below:

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

Manufacturer's identification mark or trade mark	Gilbarco Aust Ltd
Manufacturer's designation (model number)	Enterprise ...
Serial number	...
Year of manufacture	...
Minimum delivery MMQ	... L (#)
Flow rate	... to ... L/min
Max. operating pressure	... kPa
Min. operating pressure	... kPa
Approved for	...
Environmental class	class C
Pattern approval sign	NSC No 5/6A/202

(#) This may also be marked on the indicator/calculator.

FIGURE 5/6A/202 - 1

Gilbarco (Marconi) Model T185P6 Enterprise Fuel Dispenser

FIGURE 5/6A/202 - 2

Gilbarco (Marconi) Model T185P6 Enterprise Fuel Dispenser Hydraulics

FIGURE 5/6A/202 - 3

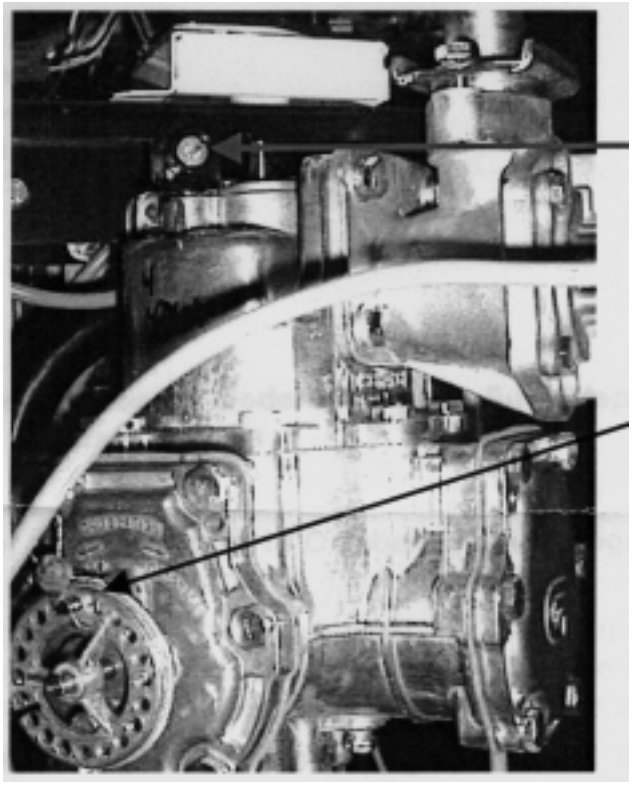
Gilbarco (Marconi) Model Epsilon Indicator/Calculator Module
in 'Wide Frame, Lane Orientation' Dispenser

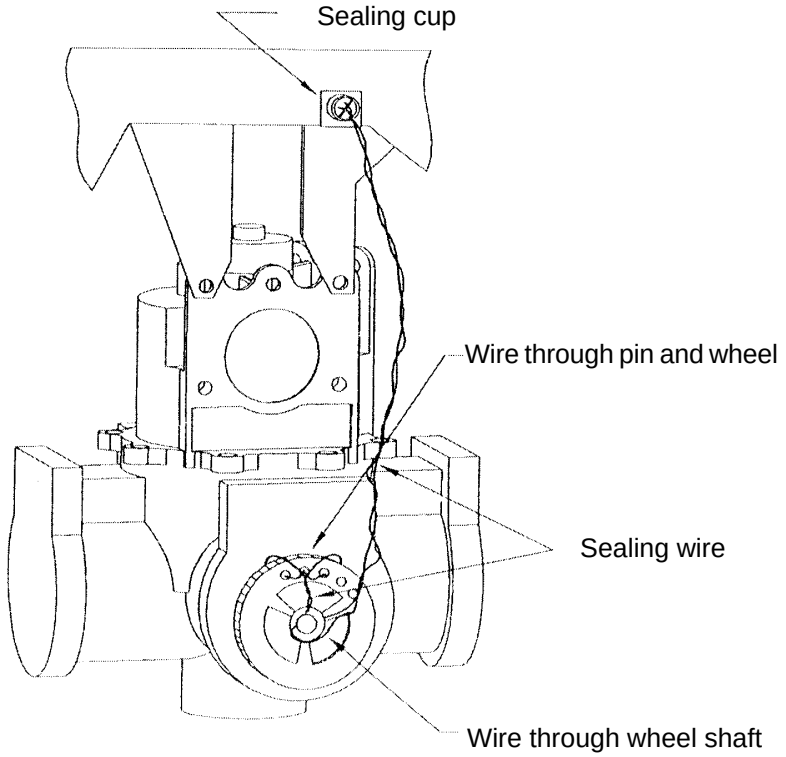
FIGURE 5/6A/202 - 4

Gilbarco (Marconi) Model Epsilon Indicator/Calculator Module
in 'Narrow Frame, Lane Orientation' Dispenser

Gilbarco (Marconi) Model Epsilon Indicator/Calculator Module
in 'Narrow Frame, Island Orientation' Dispenser

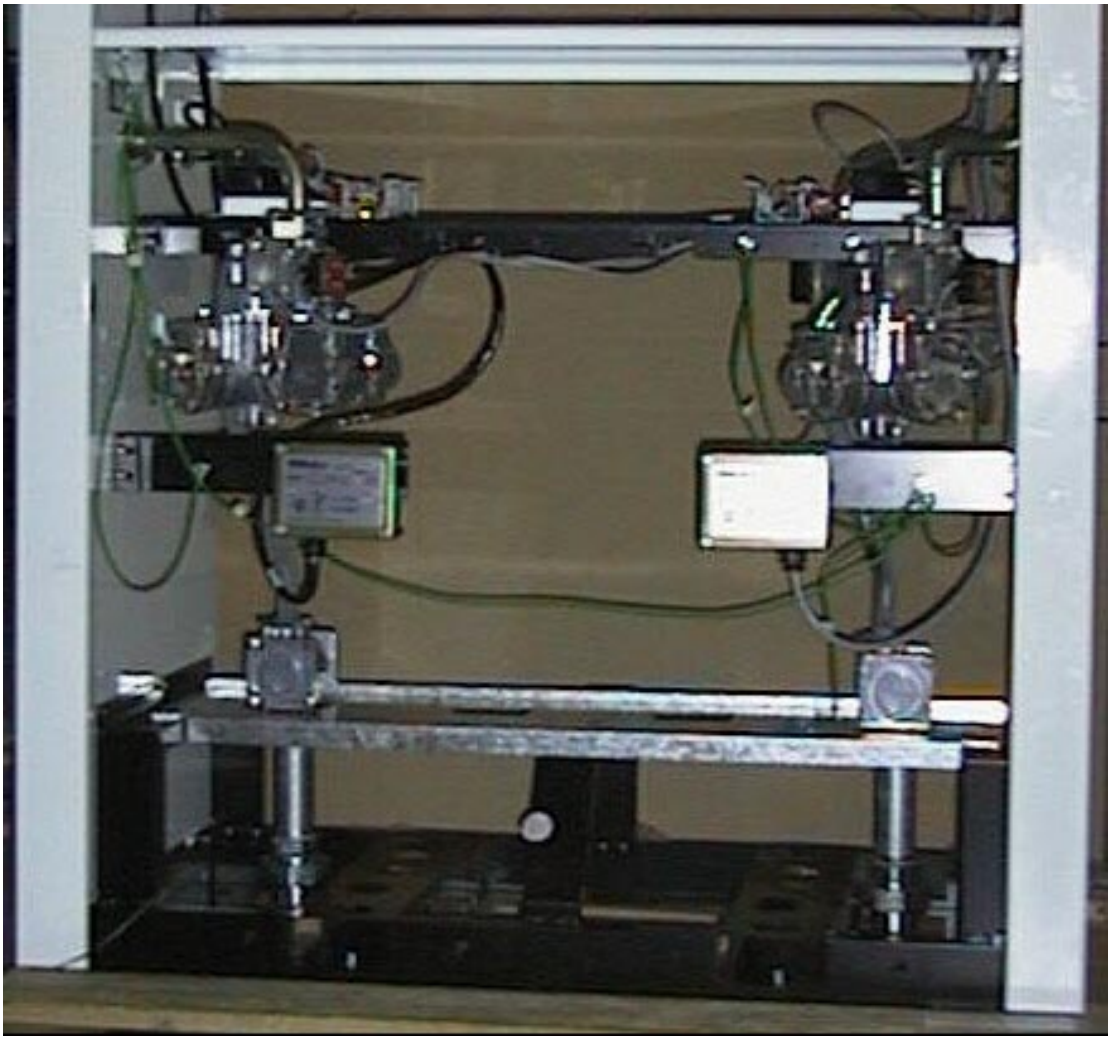
FIGURE 5/6A/202 - 5





Method of Sealing

FIGURE 5/6A/202 - 6



Typical Dispenser Supplied From Remote Pump Hydraulic System

FIGURE 5/6A/202 - 7

Typical ‘Narrow Frame, Lane Orientation’ Dispenser

FIGURE 5/6A/202 - 8

Typical ‘Narrow Frame, Island Orientation’ Dispenser