



NATIONAL STANDARDS COMMISSION

S245
10/2/89

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S245

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

Gilbarco Model STP Driveway Flowmeter Hydraulic Supply System

submitted by Gilbarco Aust. Ltd
12-38 Talavera Road
North Ryde NSW 2113.

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 S245. Instruments incorporating an hydraulic supply system purporting to comply with this approval shall be marked NSC No S245 in addition to the approval number of the instrument.

This approval may be withdrawn if instruments are constructed other than as described in the drawings and specifications lodged with the Commission.

Signed

Executive Director

Descriptive Advice

Pattern: approved 9/11/88

- A Gilbarco model STP driveway flowmeter hydraulic supply system.

Technical Schedule No S245 describes the pattern.

Filing Advice

The documentation for this approval comprises:

Supplementary Certificate of Approval No S245 dated 10/2/89
Technical Schedule No S245 dated 10/2/89
Test Procedure No S245 dated 10/2/89
Figure 1 dated 10/2/89



TECHNICAL SCHEDULE No S245

Pattern: Gilbarco Model STP Driveway Flowmeter Hydraulic Supply System

Submittor: Gilbarco Aust. Ltd
12-38 Talavera Road
North Ryde NSW 2113.

1. Description of Pattern

The pattern is a Gilbarco model STP hydraulic supply system which may replace the equivalent components (i.e. motor, pump, gas separator and associated pipework) in any Commission-approved Gilbarco driveway flowmetering system approved to dispense petrol, kerosene or distillate at flow rates up to a maximum of 55 L/min.

This system provides positive pressure at all times to the driveway flowmeters and incorporates one or more leak detectors to eliminate metering of air.

1.1 Components

The pattern may be connected to modified Commission-approved Gilbarco driveway flowmeters.

The main components of the hydraulic supply system, located as shown in Figure 1, are:

- one or more Gilbarco model T221W or T221X submerged pumps;
- one or more Gilbarco model DTO4966 leak detector valves;
- a flow control valve; and
- a pilot valve.

1.2 Markings

The following is the minimum data required to be permanently and indelibly marked on the hydraulic supply system, either on a nameplate or on a metal tag sealed to the top housing of the submerged pump:

Manufacturer's name or mark
Serial number
Year of manufacturer
NSC approval number

NSC No S245

Driveway flowmeters fitted with an hydraulic supply system purporting to comply with this approval shall be marked NSC No S245, in addition to the approval number of the flowmeter.

1.3 Verification

Driveway flowmetering systems which have any of their components replaced by any of the components listed in 1.1 above must be re-verified. Application of a verification mark to the flowmeter constitutes application of a verification mark to the system including any components listed above; there is no separate provision for the application of a verification mark to the components.



TEST PROCEDURE No S245

Instruments should be tested in accordance with any relevant tests in the Inspector's Handbook. The results shall not exceed the maximum permissible errors specified in Document 118, Second Edition, October 1986.

1. Operation of the leak detector is tested by the following procedure:
 - a) Connect a pressure gauge and valve to the test port of the impact valve under the driveway flowmeter. Ensure that the submerged turbine 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 by installing the pressure gauge and valve.
 - c) Turn off the pump and open the test valve 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 at the flowmeter but leaving 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 flowmeter to remove any air introduced into the system.
2. The minimum flow rate test is performed by simultaneously running all hoses connected to a particular pump. Check that the slowest flow rate is not less than 15 L/min.

National Standards Commission



NOTIFICATION OF CHANGE

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S245

CHANGE No 1

The following changes are made to the approval documentation for the

Gilbarco Model STP Driveway Flowmeter Hydraulic Supply System

submitted by Gilbarco Aust. Ltd
12-38 Talavera Road
North Ryde NSW 2113.

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

A handwritten signature in black ink, appearing to read 'J. Beah', is written over the signature line.

- (a) Test Procedure No S245 dated 10/2/89 is replaced by the Test Procedure attached in which notes concerning the frequency of testing have been added to Tests 1 and 2, and an additional Test has been included.
- (b) In Supplementary Certificate of Approval No S245 dated 10/2/89, the reference to the Test Procedure in the Filing Advice should have the date changed to read "24/12/90".

TEST PROCEDURE No S245

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Inspector's Handbook.

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

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

Note: This Test is optional i.e. it is not mandatory for verification/ certification.

- a) Connect a pressure gauge and valve to the test port of the impact valve under the driveway flowmeter. Ensure that the submerged turbine 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 by installing the pressure gauge and valve.
- c) Turn off the pump and open the test valve 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 at the flowmeter but leaving 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 flowmeter to remove any air introduced into the system.

2. The minimum flow rate test is performed by simultaneously running all hoses connected to a particular submerged turbine pump. Check that the slowest flow rate is not less than 15 L/min.

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 driveway flowmeters connected to a remote authorisation device begin a delivery from any flowmeter. While this delivery is still in progress, attempt to make a delivery from a 2nd flowmeter connected to the same submerged turbine pump WITHOUT this flowmeter first being authorised; the 2nd delivery should not be possible.

National Standards Commission



NOTIFICATION OF CHANGE

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S245

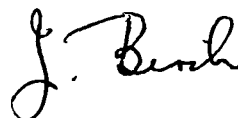
CHANGE No 2

The following changes are made to the approval documentation for the

Gilbarco Model STP Driveway Flowmeter Hydraulic Supply System

submitted by Gilbarco Aust. Ltd
12-38 Talavera Road
North Ryde NSW 2113.

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.



Test Procedure No S245 dated 24/12/90 (issued as part of Notification of Change No 1) is amended as follows:

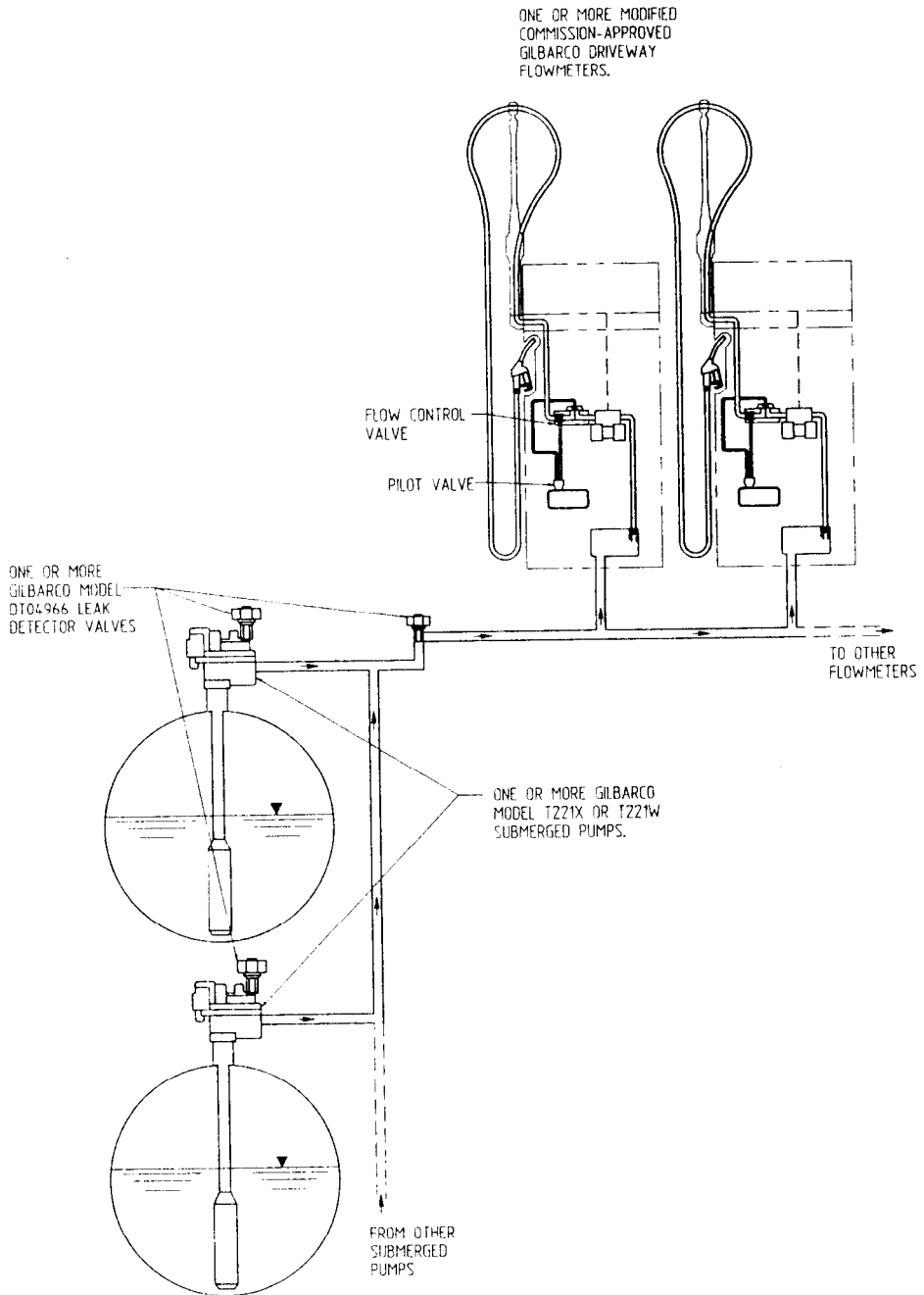
(a) In Test 1, replace the 'Note' with the following:

"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."

(b) In Test 2, replace the first paragraph with the following:

- "2. The minimum flow rate test is performed by simultaneously running either all hoses on all driveway flowmeters connected to a particular submerged turbine 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 15 L/min."

FIGURE S245 - 1



Schematic Diagram Of A Typical STP System