

## National Standards Commission



### Supplementary Certificate of Approval No S270

Issued under Regulation 9  
of the  
National Measurement (Patterns of Measuring Instruments) Regulations

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

Southwest Pumps Model ECS1A Driveway Flowmeter Control System

submitted by Southwest Pumps Australia  
PO Box 167  
Forestville NSW 2087.

#### CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/5/96.

This approval expires in respect of new instruments on 1/5/97.

Instruments purporting to comply with this approval shall be marked NSC No S270 and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S270 in addition to the approval number of the instrument.

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.

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

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

#### DESCRIPTIVE ADVICE

**Pattern:** approved 1/5/91

. A Southwest Pumps model ECS1A driveway flowmeter control console.

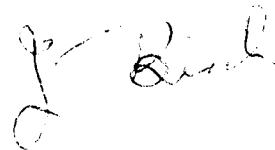
Technical Schedule No S270 describes the pattern.

#### FILING ADVICE

The documentation for this approval comprises.

Supplementary Certificate of Approval No S270 dated 1/12/92  
Technical Schedule No S270 dated 1/12/92 (Test Procedure)  
Figures 1 and 2 dated 1/12/92

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.

A handwritten signature in dark ink, appearing to be 'J. D. Smith', written in a cursive style.



## National Standards Commission

### TECHNICAL SCHEDULE No S270

**Pattern:** Southwest Pumps Model ECS1A Driveway Flowmeter Control System.

**Submittor:** Southwest Pumps Australia  
PO Box 167  
Forestville NSW 2087.

#### 1. Description of Pattern

The pattern is a Southwest Pumps model ECS1A control system (Figure 1) which is approved for use with any Commission-approved Southwest Pumps driveway flowmeter fitted with a model MLPC2 indicator, as described in the documentation of NSC approval No 5/6A/89.

##### 1.1 Features

The model ECS1A console (Figure 2) may communicate with up to 24 MLPC2 indicators, and be used with a number of flowmeters in any combination of the number of indicators (I) and the number of hoses/nozzles (H), such that  $I \times H \leq 56$ . The console has the following features:

- A vendor's indicator and a remote purchaser's indicator.
- A pump status LED.
- A facility for centrally setting the unit price of up to 8 grades of fuel, with 2 price schedules per grade.
- A preset facility, which may be used for prepay or postpay operations.
- An optional dual-memory facility.
- A facility to recall transaction details, including from the dual-memories, in the event of a power failure.

##### 1.2 Segment Display Check

Segment checks are available for both the console and remote purchaser's indicator and may be executed through the service or manager facility accessible via the keyswitch.

##### 1.3 Dual-memory Facility

This facility allows two transactions to operate simultaneously i.e. a second transaction may be carried out while a previous transaction which has not yet been completed is retained in memory.

## 1.4 Markings

The console is marked with the following data, together in one location:

Manufacturer's name or mark	
Model number	
NSC approval number	NSC No S270
Serial number	
Operating (air) temperature range	0°C - 40°C

## 1.5 Verification/Certification Provision

Provision is made for a verification/certification mark to be applied.

### TEST PROCEDURE

Instruments should be tested in accordance with any tests included in the approval documentation for the driveway flowmeter/s 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 pattern is connected, as stated in the approval documentation for the system.

#### 1. Postpay Mode (including dual-memory test)

- (i) At any driveway flowmeter, remove a nozzle from its hang-up position; the CURRENT LED adjacent to the appropriate flowmeter authorisation button on the console will start flashing. Authorise the flowmeter at the console and then deliver sufficient fuel to cause the price and quantity indicators to move significantly off zero. Stop the flowmeter by returning the nozzle to its hang-up; the details of the transaction will be displayed on the console.
- (ii) Check that the price and volume displayed at the console are the same as the price and volume recorded from the driveway flowmeter.

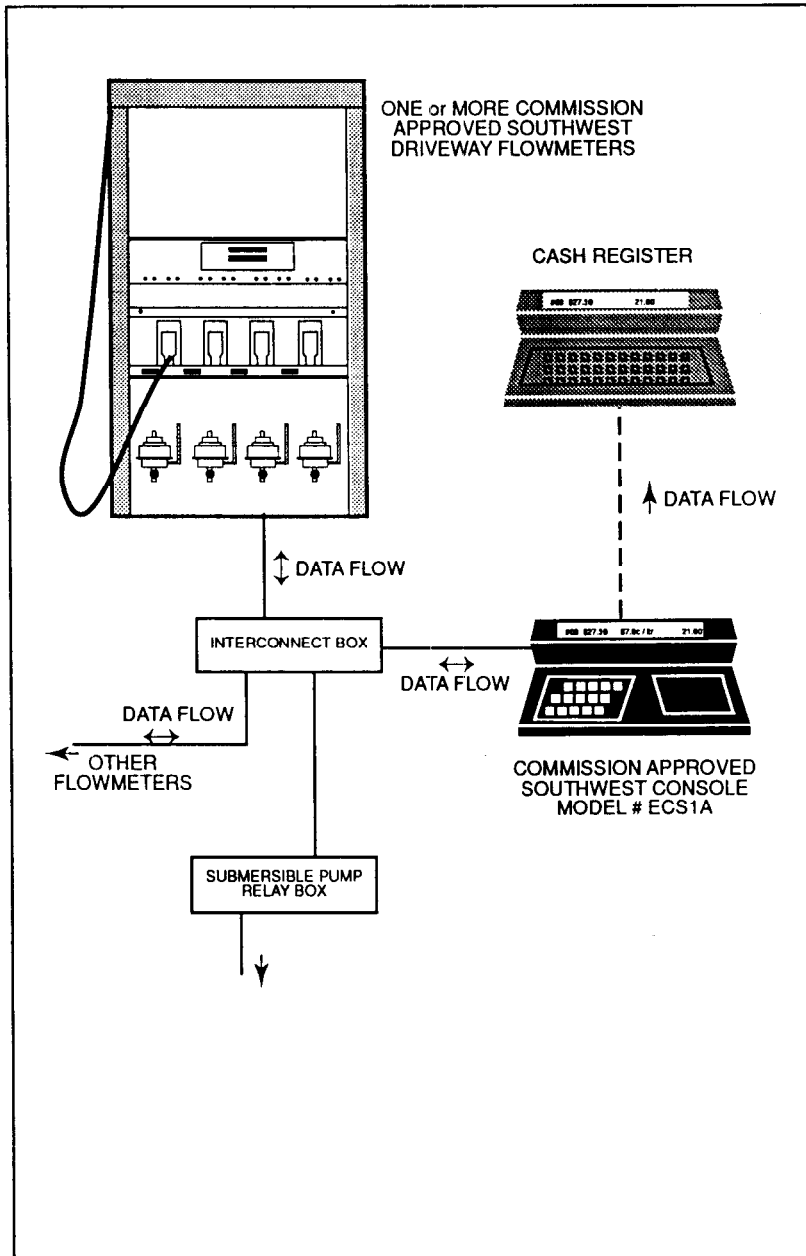
- (iii) At the same flowmeter, perform another delivery as per (i) above; the details of the two transactions are displayed consecutively and are distinguished by one of two arrows being displayed adjacent to the flowmeter number in the display. The upward pointing arrow relates to the CURRENT (2nd) transaction, while the downwards pointing arrow relates to the PREVIOUS (1st) transaction.
- (iv) Attempt to authorise a third delivery from the same flowmeter; this should not be possible.
- (v) Complete the transactions. Check that both the PREVIOUS and CURRENT memories are now clear, indicated by the relevant LED's being extinguished.
- (vi) Repeat steps (i) to (v) for a number of driveway flowmeters.

## **2. Prepay Mode**

- (i) Conduct a suitable prepay test at one or more driveway flowmeters; observe that the flowmeter stops at the preset value.
- (ii) For a partially completed delivery; observe that the driveway flowmeter cannot be re-authorized until the nozzle is hung up and the transaction is completed by the operator.

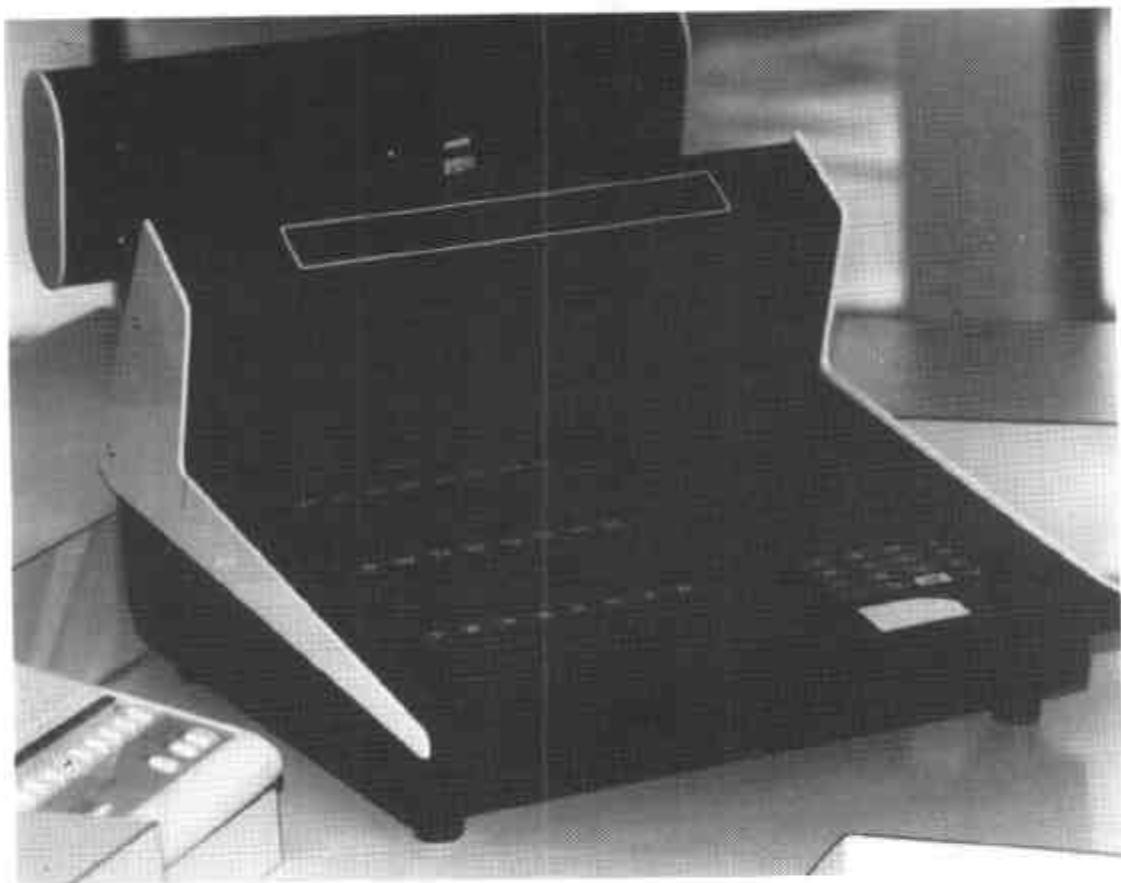
A CHANGE DUE notice appears on the purchaser display after the nozzle has been hung up. The transaction is complete when the CHANGE DUE notice is 'cashed off' by the operator.

FIGURE S270 - 1



Typical Southwest Pumps Model ECS1A Control System

FIGURE S270 - 2



Southwest Pumps Model ECS1A Control Console