



**Australian Government**  

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**National Measurement  
Institute**

12 Lyonpark Road, North Ryde NSW 2113

**Supplementary Certificate of Approval**  
**No S454**

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

Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

submitted by Compac Industries Ltd  
52 Walls Road  
Penrose Auckland  
NEW ZEALAND.

**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.

**CONDITIONS OF APPROVAL**

This approval becomes subject to review on 1 March 2010, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S454' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S454' 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 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 25 February 2005

- A Compac model DCA control system for use with compatible approved fuel dispensers for motor vehicles.

**Variant:** approved 25 February 2005

1. A Compac model RAS control system.

Technical Schedule No S454 describes the pattern and variant 1.

#### FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S454 dated 28 February 2005  
Technical Schedule No S454 dated 28 February 2005  
Figures 1 to 3 dated 28 February 2005

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 'J. H. T.', located in the bottom right corner of the page.

TECHNICAL SCHEDULE No S454

**Pattern:** Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

**Submittor:** Compac Industries Ltd  
52 Walls Road  
Penrose Auckland NEW ZEALAND

## 1. Description of Pattern

The pattern is a Compac model DCA ('Driveway Card Acceptor') card-operated control system (Figure 1) to provide unattended self-service operation for fuel dispensers fitted with Compac model C4000 indicators or other compatible (#) approved fuel dispensers for motor vehicles.

(#) "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 DCA control system is approved for environmental class N for outdoor use between -10°C and 55°C.
- The system can provide a self-service arrangement for up to 32 compatible approved fuel dispensers fitted with Compac model C4000 indicators (as described in the documentation of approval NSC S377) or other compatible approved indicators.
- The nominal supply voltage is 240 V AC.

### 1.2 System Description

The DCA control system is a standalone card-operated terminal that allows unattended self-serve operation of fuel dispensers. Payment is authorised prior to delivering fuel via magnetic customer card reader and/or PIN pad.

The device is housed in a weatherproof housing (Figure 2) and has a Customer Interface Module (CIM) installed at the front, which consists of a card reader, keypad, liquid crystal display (LCD) and receipt printer in a single unit.

The DCA control system contains the Compac Communicator Controller circuit board (Figure 3) using software EA-B-01:80.xx (\*), and provides communication and control of the fuel dispensers.

(\*) Minor revision versions are denoted by 'xx'. Minor revisions shall not impact on the metrological control functions of the software.

An uninterruptible power supply unit (UPS) to provide operation under power failure condition. Note: The UPS supplied was a Sola model of 550 VA rating – the submitter should be consulted regarding the acceptability of alternative power supply units, which must also be compatible with clause **1.3 (i)**.

### **1.3 Checking Facilities**

#### **(i) Uninterruptible Power Supply (UPS)**

The system monitors the condition of the uninterruptible power supply, and if an error condition is detected it prevents a new transaction being started (authorised).

#### **(ii) Receipt Printer**

If the receipt printer in the CIM is unavailable or out of paper, the LCD will display that a receipt will not be available before a user enters their card or identification number to authorise a transaction.

#### **(iii) Memory Facilities**

Prior to a dispenser being authorised the device checks the status and availability of memory for storage of the transaction. If there is insufficient memory available, no further transactions can be authorised.

### **1.4 Verification/Certification Provision**

The DCA control console has provision for a certification/verification mark to be applied.

### **1.5 Markings**

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

Manufacturer's name or mark	.....
Model number	.....
Serial number	.....
NSC approval number	S454
Environmental class	Class N

## **2. Description of Variant 1**

A Compac model RAS ('Remote Authorisation Station') control system which is similar to (and externally identical to) the pattern (model Compac DCA, Figure 2) except that it does not contain the Compac Communicator controller. The Communicator controller circuit board is replaced by a C4000 circuit board, which allows the RAS to communicate with other approved Compac control systems to provide additional unattended self-service operation, e.g. with the pattern (model DCA) or the model Commander (as described in the documentation of approval NMI S340A).

### TEST PROCEDURE

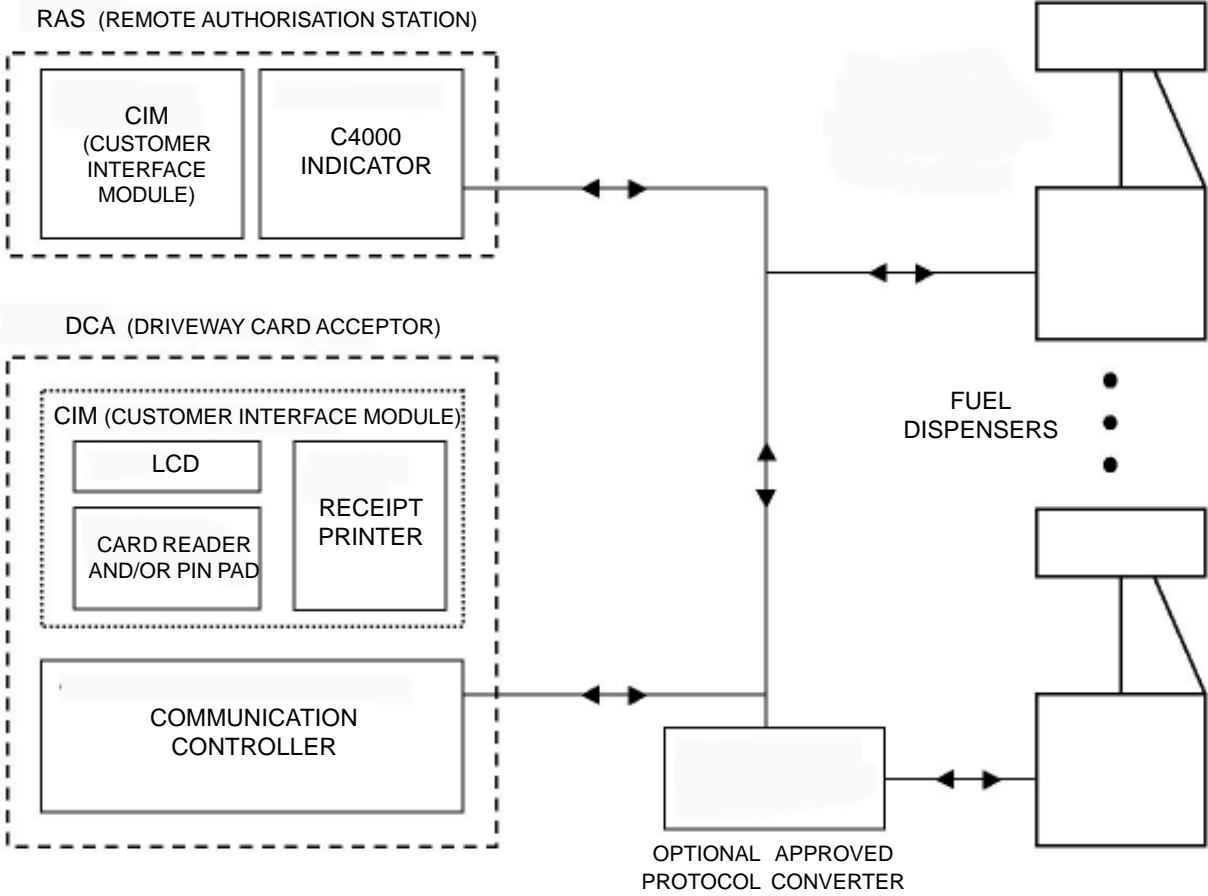
Instruments shall be tested in conjunction with any test specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and accordance with any relevant tests specified in the Uniform Test Procedures.

The maximum permissible errors applicable are those applicable to the fuel dispenser to which the pattern is connected, as stated in the approval documentation for the dispenser.

Points 2-6 are required at commissioning, thereafter may be conducted at the discretion of the inspecting officer.

1. Check the DCA software version number. The version number is displayed on the front liquid crystal display (LCD) during the power on initialisation sequence.
2. Check that the unit price change for the grade of fuel is implemented to the allocated fuel dispensers when they are available for authorisation.
3. Check that the control console identifies, displays and prints the correct data for the corresponding number allocated to the fuel dispenser.
4. Authorise a delivery and check that the delivery details on the fuel dispenser agree with the receipt obtained.
5. Check that when principal power supply is disconnected from uninterruptible power supply, the fuel dispenser cannot be authorised.
6. Remove paper from receipt printer to check that when the receipt printer is unavailable an appropriate message is displayed on the front LCD.

FIGURE S454 – 1



Compac Model DCA Control System for Fuel Dispensers for Motor Vehicles

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FIGURE S454 – 2



Compac model DCA/RAS Card-Operated Terminal

FIGURE S454 – 3



Compac Communicator Controller Circuit Board