DRAPER ®

DIAGNOSTIC
FAULT CODE READER

81163

CE

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

1. TITLE PAGE

1.1 INTRODUCTION:
USER MANUAL FOR: Diagnostic Fault Code Reader
Stock No: 81163
Part No: FCR-100

1.2 REVISIONS:
Date first published October 2017.

As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: http://drapertools.com/manuals

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1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:
WARNING! – Information that draws attention to the risk of injury or death.
CAUTION! – Information that draws attention to the risk of damage to the product or surroundings.

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2. CONTENTS

3.   GUARANTEE

3.1 GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact:

Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or:

Product Helpline (023) 8049 4344.

A proof of purchase must be provided.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is 90 days from the date of purchase. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

4. INTRODUCTION

4.1 SCOPE

Diagnostic Fault Code Reader is specially designed to support OBDII service modes, including live data, on OBDII/EOBD compliant vehicles.

4.2 SPECIFICATION

Stock No. 81163
Part No. FCR-100
Display..320*240 pixel colour display
Working Temperature .... 0 to 60 °C (32 to 140°F)
Storage Temperature..-20 to 70°C (-4 to 158°F)
Power Supply ....8-18V vehicle power
Supported Protocols...................... J1859-41.6, J1850-10.4, ISO9141, KWP2000 (ISO 14230) and
 .... CAN (Control Area Network ISO 11898)
Dimensions (L*W*H) 120*75*20mm
Weight 0.3kg

4.3 HANDLING AND STORAGE

Care must still be taken when handling and lifting. Dropping this machine will have an effect on the accuracy. This machine is not a toy and must be respected.

The environment will have a negative result on its operation if you are not careful. If the air is damp, components will rust. If the machine is unprotected from dust and debris; components will become clogged: And if not cleaned and maintained correctly or regularly the machine will not perform at its best.

5.   HEALTH AND SAFETY INFORMATION

5.1 SAFETY INFORMATION

For your own safety and the safety of others, and to prevent damage to the equipment and vehicles, read this manual thoroughly before operating your code reader. The safety messages presented below and throughout this user's manual are reminders to the operator to exercise extreme care when using this device. Always refer to and follow safety messages and test procedures provided by vehicle manufacturer. Read, understand and follow all safety messages and instructions in this manual.

5.2 SAFETY MESSAGE CONVENTIONS USED

We provide safety messages to help prevent personal injury and equipment damage. Below are signal words we used to indicate the hazard level in a condition.

Danger: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.

Warning: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Caution: Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury to the operator or to bystanders.

5.3 IMPORTANT SAFETY INSTRUCTIONS

And always use your code reader as described in the user's manual, and follow all safety messages.

WARNING:

- Do not route the test cable in a manner that would interfere with driving controls.
- Do not exceed voltage limits between inputs specified in this user's manual.
- Always wear ANSI approved goggles to protect your eyes from propelled objects as well as hot or caustic liquids.
- Fuel, oil vapours, hot steam, hot toxic exhaust gases, acid, refrigerant and other debris produced by a malfunction engine can cause serious injury or death. Do not use the code reader in areas where explosive vapour may collect, such as in below-ground pits, confined areas, or areas that are less than 18 inches (45 cm) above the floor.
- Do not smoke, strike a match, or cause a spark near the vehicle while testing and keep all sparks, heated items and open flames away from the battery and fuel / fuel vapours as they are highly flammable.
- Keep a dry chemical fire extinguisher suitable for gasoline, chemical and electrical fires in work area.
- Always be aware of rotating parts that move at high speed when an engine is running and keep a safe distance from these parts as well as other potentially moving objects to avoid serious injury.
- Do not touch engine components that get very hot when an engine is running to avoid severe burns.
- Block drive wheels before testing with engine running. Put the transmission in park (for automatic transmission) or neutral (for manual transmission). And never leave a running engine unattended.
- Do not wear jewellery or loose fitting clothing when working on engine.

6.   TECHNICAL DESCRIPTION

6.1 IDENTIFICATION

① **LCD Display** - shows menus, test results and operation tips.

② **UP Key** - quick access to the Read Codes function before going to diagnostic menu and moves selection up. When looking up DTC, it is used to change value of selected character.

③ **Green LED Display** - indicates the engine system is working normally (all monitors on the vehicles are active and performing their diagnostic testing), and no DTCs are found.

④ **Yellow LED Display** - shows the tool finds a possible problem. Pending DTCs exist or/and some of the vehicle's emission monitors have not run their diagnostic testing.

⑤ **Red LED Display** - indicates there are some problems in one or more of the vehicle's systems. In this case, the MIL lamp on the instrument panel is on.

⑥ **ESC Key** - cancels an action and returns to previous screen or level.

⑦ **DOWN Key** - Quick access to the Clear Codes function before going to diagnostic menu and moves selection down. When looking up DTC, it is used to change value of selected character.

⑧ **USB Port** – provides a USB connection between the code reader and PC or laptop.

⑨ **ENTER Key** - confirms an action or movement and moves to next level.

⑩ **One Click I/M Readiness Key** - quick checks state emissions readiness and drive cycle verification.

⑪ **OBD II Cable** - provides communication for vehicle DLC.

7.   UNPACKING AND CHECKING

7.1 PACKAGING

Carefully remove the machine from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing; please contact the Draper Helpline (the telephone number appears on the Title page) and do not attempt to use the machine.

The packaging material should be retained at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.

If any of the packaging is to be thrown away, make sure they are disposed of correctly; according to local regulations.

7.2 WHAT´S IN THE BOX?

The packaging contains several parts and semi-assembled elements that require final assembly. Lay out the contents and check off the items against those featured below.

(12) USB lead.

8.   OPERATING INSTRUCTION

8.1 GETTING STARTED

This section describes how to provide power to the code reader, provides brief introductions of applications loaded on the code reader and display screen layout and illustrates how to input text and numbers with the code reader.

1   Providing Power to Code reader

Before using the code reader, make sure to provide power to the code reader.

The unit operates on any of the following sources:

- •   12-volt vehicle power
- •   USB connection to personal computer.

a. Connecting to Vehicle Power

The code reader normally powers on whenever it is connected to the data link connector (DLC).

To connect to vehicle power:

i. Locate the data link connector (DLC). The DLC is generally located under the dash on the driver side of the vehicle.

ii. Connect the code reader with the DLC.

iii. Switch the ignition key to the ON position.

iv. The code reader automatically boots up.

Important: Never try to provide power for the code reader from USB connection when the code reader is communicating with a vehicle.

b. Connecting to Personal Computer with USB Cable

The code reader also receives power through the USB port when it is connected to a PC.

To connect to PC:

i. Insert the small end of the USB cable to the USB port at the right side of the code reader and the large end to a computer.

ii. Press the power switch of the code reader to power it on.

2   Application Overview

When the code reader boots up, the Home screen opens. This screen shows all applications loaded on the unit.

Following applications are preloaded into the code reader:

- • **Diagnostics** – leads to OBDII screens for generic OBD system tests.
- • **About** – leads to screen that shows information about the code reader.
- • **Setup** – leads to screens for adjusting default settings to meet your own preference when using the code reader.
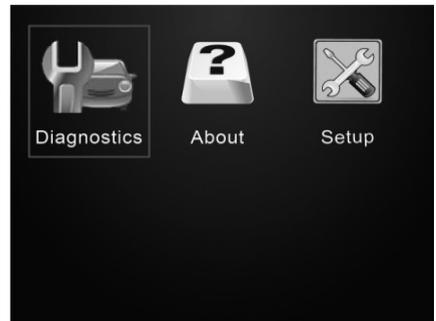
8.   OPERATING INSTRUCTION

8.2 OBDII/EOBD OPERATIONS

OBD-II/EOBD menu lets you access all OBD service modes. According to ISO 9141-2, ISO 14230-4, and SAE J1850 standards, the OBD application is divided into several sub programs, called 'Service $xx'. Below is a list of OBD diagnostic services:

- Service $01 - request current powertrain diagnostic data
- Service $02 - request powertrain freeze frame data
- Service $03 - request emission-related diagnostic trouble codes
- Service $04 - clear/reset emission-related diagnostic information
- Service $05 - request emission-related diagnostic trouble codes detected during current or last completed driving cycle
- Service $06 - request Vehicle Information

When Diagnostics application is selected from Home screen, the code reader starts to detect the communication protocol automatically. Once the connection has established, a menu that lists all of the tests available on the identified vehicle displays. Menu options typically include:

- Read Codes
- Freeze Frame Data
- Erase Codes
- Live Data
- I/M Readiness
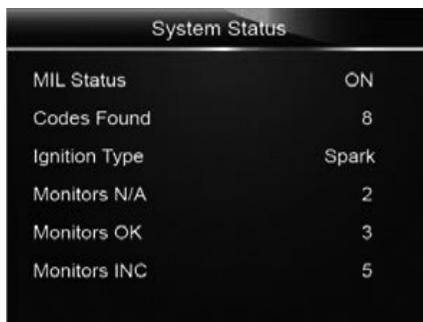- Vehicle Information
- Unit of measure

Note: Not all function options listed above are applicable to all vehicles. Available options may vary by the year, model, and make of the test vehicle. A "The selected mode is not supported!" message displays if the option is not applicable to the vehicle under test. When the code reader links to vehicle, it checks the status of I/M Monitors automatically, and gives a summary report on the display as illustrated below.

System Status	
MIL Status	ON
Codes Found	8
Ignition Type	Spark
Monitors N/A	2
Monitors OK	3
Monitors INC	5

Note: If vehicle is equipped with more than one computer module (for example a powertrain control module [PCM] and a transmission control module [TCM]), the code reader identifies them by their identification names (ID) assigned by manufacturer (i.e. Engine or Module $A4).

A screen with prompted information to erase the previously stored data in order to save the data from this test displays as below.

If previous data is to be erased, select Yes; if data is not to be erased, Use the UP/DOWN key to pick No. Wait a few seconds to return to Diagnostic Menu.

Note: If no data is stored in the code reader, the above screen will not show up.

8. OPERATING INSTRUCTION

1   Read Codes

Read Codes menu lets you read stored codes and pending codes found in the control unit. Typical menu options include:

- Stored Codes
- Pending Codes

Diagnostic trouble codes stored in a control module are used to help identify the cause of a trouble or troubles with a vehicle. These codes have occurred a specific number of times and indicate a problem that requires repair.
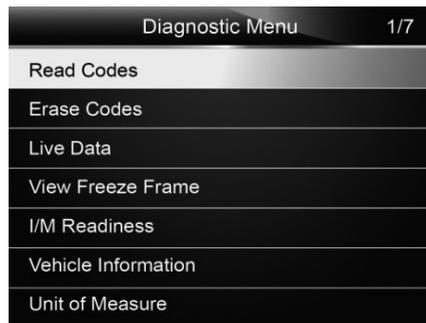
Pending codes are referred to as maturing codes that indicate intermittent faults. If the fault does not occur within a certain number of drive cycles (depending on vehicle), the code clears from memory. If a fault occurs a specific number of times, the code matures into a DTC and the MIL illuminates or blinks.

There are two ways to read codes using the fault code reader.

- Press the Read hot key to read codes from home screen.
- Traditional way: select Read Codes from the diagnostic menu.

To read codes from a vehicle:

1. Press the Read hot key to directly read the codes from home screen. Or scroll with the UP/DOWN key to highlight Read Codes from Diagnostic Menu and press the ENTER key.

Diagnostic Menu	1/7
Read Codes	
Erase Codes	
Live Data	
View Freeze Frame	
I/M Readiness	
Vehicle Information	
Unit of Measure	

2. Select Stored Codes/Pending Codes and press the ENTER key to confirm.

Read Codes	1/2
Stored Codes	
Pending Codes	
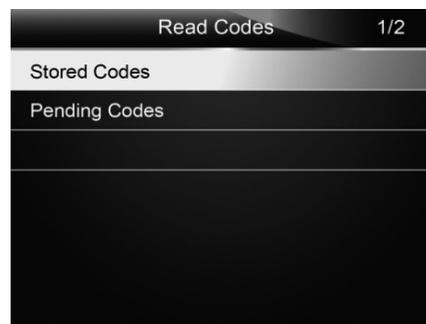
8. OPERATING INSTRUCTION

3. A code list including code number and its description displays.
   Note: If no DTCs are present, the message "No (Pending) Codes Found!" is displayed. If any manufacturer specific or enhanced codes detected, the fault code reader reads the correct DTC information automatically according to the VIN.
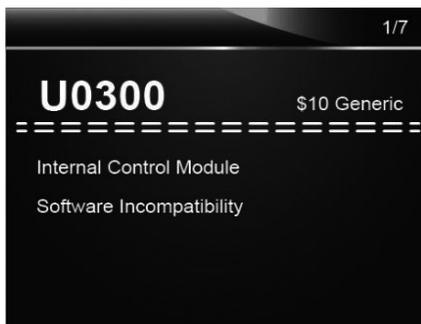
2 Erase Codes

Erase Codes menu lets you to clear all current DTCs from the control module. Also it erases all temporary ECU information, including freeze frame. So make sure that the selected system are completely checked and serviced by technicians and no vital information will be lost before clearing codes.

The way to erase codes:

• Selecting Erase Codes from the diagnostic menu.

NOTE

• To clear codes, make sure that the ignition key is switched to ON with the engine off.
• Erase Codes does not fix the problem that caused the fault! DTCs should only be erased after correcting the condition(s) that caused them.

To clear codes:

1. Use the UP/DOWN key to highlight Erase Codes from Diagnostic Menu and press the ENTER key.
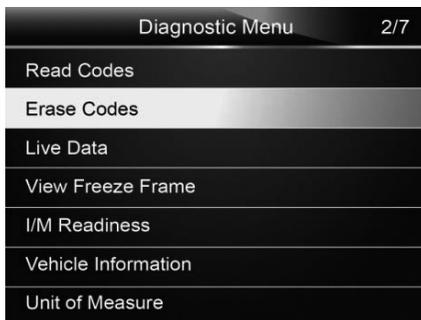
2. Follow the on-screen instructions and answer questions about the vehicle being tested to complete the procedure.
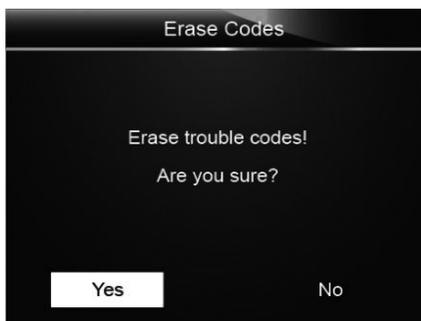
3. Check the codes again. If any codes remain, repeat the Erase Codes steps.

8. OPERATING INSTRUCTION

3   Live Data

Live Data menu lets you view real time PID data from the electronic control module.

    1.   View Data

       The View Data function allows real time viewing of the vehicle's electronic control unit's PID data, including sensor data, operation of switches, solenoids and relays.
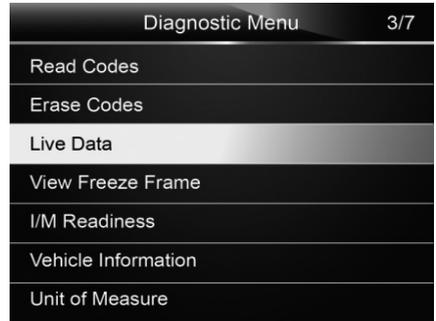
    Menu options typically include:

- Complete Data
- Unit of measure (Please refer to Chapter 7 System Setup)
  - i.   Complete Data Set

Complete Data Set displays all supported PIDs of the vehicle being tested.

To view all live PID data:

1. Use the UP/DOWN key to highlight Live Data from Diagnostic Menu and press the ENTER key.

Diagnostic Menu   3/7
Read Codes
Erase Codes
Live Data
View Freeze Frame
I/M Readiness
Vehicle Information
Unit of Measure

2. Select Complete Data Set from the menu and press the ENTER key to display the data stream screen.
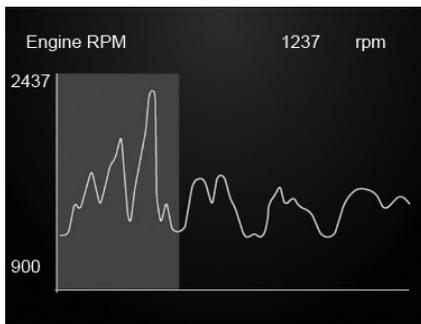

View Data   1/2
Custom Data Set
Unit of Measure
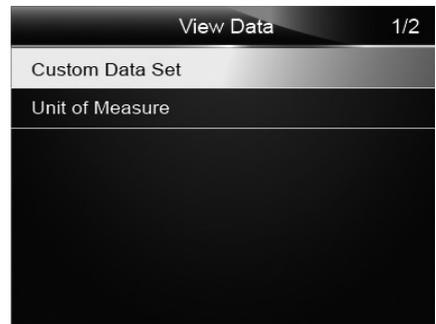
3. Scroll with the up and down arrow keys to scroll through data to select lines, and left and right arrow keys to scroll back and forth through different screens of data.

View Data   1/2
Custom Data Set
Unit of Measure
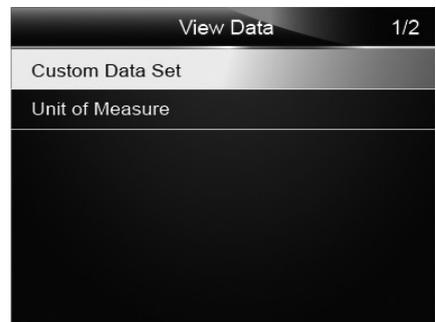
8. OPERATING INSTRUCTION

4. Press the ENTER key to view PID graph if the PID gives a numeric reading.

5. Use the ESC key to return to diagnostic menu.

4   View Freeze Frame

Freeze Frame menu displays freeze frame data, a snapshot of critical vehicle operating conditions automatically recorded by the on-board computer at the time of the DTC set. It is a good function to help determine what caused the fault.

To view freeze frame data:

1. Select View Freeze Frame from the Diagnostic Menu. Details of freeze frame data displays.

2. Use the up and down arrow keys to scroll through data to select lines, and ESC arrow keys to scroll back and forth through different screens of data. If no freeze frame detected, the message "No freeze frame data stored!" is displayed.

Use the ESC key to return to Diagnostic Menu.

8. OPERATING INSTRUCTION

5   Read I/M Readiness Status Data

I/M Readiness option allows to view a snapshot of the operations for the emission system on OBDII/EOBD vehicles.

I/M Readiness is a useful function used to check if all monitors are OK or N/A. The vehicle's computer performs tests on the emission system during normal driving conditions. After a specific amount of drive time, the computer's monitors decide if the vehicles emission system is working correctly.

There are two types of I/M Readiness tests:

- Since DTCs Cleared - shows status of the monitors since the DTCs were last cleared.
- This Drive Cycle - shows status of monitors since the start of the current drive cycle.

When the monitor's status is:

- OK - vehicle was driven enough to complete the monitor.
- INC (Incomplete) - vehicle was not driven enough to complete the monitor.
- N/A (Not Applicable) - vehicle does not support that monitor.
  There are two ways to retrieve I/M Readiness Status data:
- One-click I/M readiness key
- Typical way: select I/M Readiness from Diagnostic Menu

Note:

- To review I/M Readiness status, make sure that the ignition key is switched to ON with the engine off.
- Not all monitors are supported by all vehicles.

To retrieve I/M Readiness Status data by one-click I/M readiness key:

1. Press the One-Click I/M Readiness Key on the keypad and the following screen displays.

2. Coloured LED and build-in beeper provide both visual and audible reminders for emission check and DTCs. Below is the interpretation of the LED and build-in beeper.
   When the LED is :
   - Green - Indicates that engine systems are "OK" and working properly (the number of Monitors equipped with the vehicle which have run and performed their self-diagnostic testing is in the allowed range. MIL is off.).No stored and pending DTCs exist. The vehicle is ready for an Emissions Test.
   - Yellow - The tool finds a possible problem. It indicates the following two conditions:
   a. Pending DTCs exist. Please check the I/M Readiness test result screen and use the Read Codes function to view detailed codes information.
   b. Some of the vehicle's emission monitors have not working properly. If the I/M Readiness screen shows no DTC (including pending DTC), but the Yellow LED is still illuminated, it indicate a "Monitor Has Not Run" status.

- Red - Indicates some problems exist with one or more of the vehicle's system, and the vehicle is not ready for an Emissions Test. As well there are DTCs found. The MIL lamp on the vehicle's instrument panel will light steady. The problem that is causing the illumination of Red LED should be fixed before an Emissions Test or driving the vehicle further.
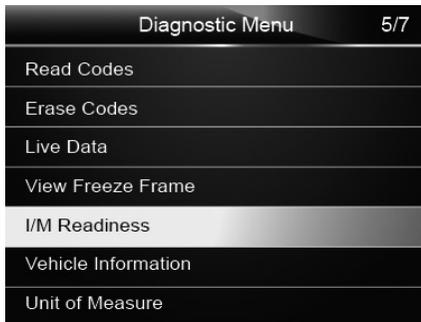
The built-in beeper works with the coloured LED simultaneous, as an assistance to reflect the I/M Readiness test results:

- Green - two long beeps.
- Yellow - short, long, short beeps.
- Red - four short beeps.

Note: The built-in beeper which makes different tones corresponding to different LED indicators is invaluable when the test is performed while driving or in bright areas where LED illumination may not be visible.

To retrieve I/M Readiness Status data by typical way:

1. Scroll with UP/DOWN key to highlight I/M Readiness from Diagnostic Menu and press the ENTER key. If vehicle supports both types of monitors, a screen for monitor type selection displays. Select a monitor type and press the ENTER key.

Diagnostic Menu	5/7
Read Codes	
Erase Codes	
Live Data	
View Freeze Frame	
I/M Readiness	
Vehicle Information	
Unit of Measure	

2. If the vehicle being tested supports both types of monitors, following screen displays.

I/M Readiness	1/2
Since DTCs cleared	
This driving cycle	

3. Depending on readiness test, one of these 2 screens will be present. Use the up and down arrow keys to scroll through data. Press the BACK key to exit.

Since DTCs cleared	1
MIL	ON
MIS	OK
FUEL	OK
CCM	OK
CAT	INC
HCAT	N/A
EVAP	INC

3. Depending on readiness test, one of these 2 screens will be present. Use the up and down arrow keys to scroll through data. Press the BACK key to exit.

Since DTCs cleared	1
MIL	ON
MIS	OK
FUEL	OK
CCM	OK
CAT	INC
HCAT	N/A
EVAP	INC

or

This driving cycle	1
MIS	OK
FUEL	OK
CCM	OK
CAT	INC
HCAT	N/A
EVAP	OK
AIR	N/A

6 Request Vehicle Information

Vehicle Information allows to request the vehicle's VIN number, calibration ID(s) which identifies software version in vehicle control module(s), calibration verification numbers (CVN(s)) and in-use performance tracking on model year 2000 and newer OBD II compliant vehicles.

CVNs are calculated values required by OBD II regulations. They are reported to check if emission-related calibrations have been changed. Multiple CVNs may be reported for a control module. It may take several minutes to do the CVN calculation. In-use performance tracking tracks performance of key readiness monitors.

Note: Available options will vary depending on the vehicle under test.

To request vehicle information:

1. Use the UP/DOWN key to highlight Vehicle Info. from Diagnostic Menu and press the ENTER key.

| Diagnostic Menu	6/7
Read Codes	
Erase Codes	
Live Data	
View Freeze Frame	
I/M Readiness	
Vehicle Information	
Unit of Measure	

8.   OPERATING INSTRUCTION

2. Follow on-screen instruction and send the command to read vehicle information. A screen with a list of available options displays.

Vehicle Information	1/4
Vehicle ID Number	
Calibration ID	
Cal.Verf. Number	
In-use Perform Track	
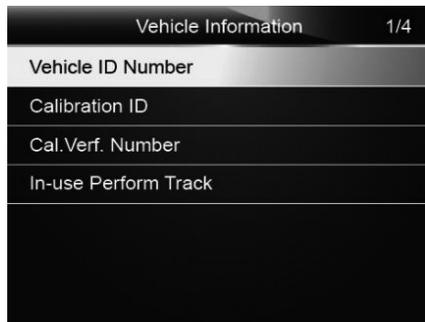
3. Use the UP/DOWN key to highlight an available option and press the ENTER key. A screen with details of the selected option displays.

Vehicle ID Number
VIN: SALAE25456A411919
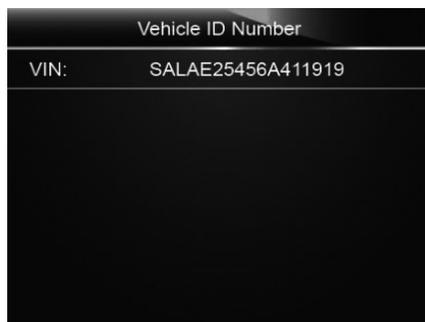
4. Press the ESC key to exit and return.

8. OPERATING INSTRUCTION

8.3 SYSTEM SETUP

This section illustrates how to program the code reader to meet your specific needs.

When Setup application is selected, a menu with available service options displays. Menu options typically include:

- Language
- Configure monitors
- Unit of measure
- Key Beep Set
- Diag Beep Set
- Tool self-test

1   Select Language

Selecting Language opens a screen that allows you to choose system language.

To configure system language:

1. Use the LEFT/RIGHT key to highlight Setup from

2. A screen of a list of menu options displays.
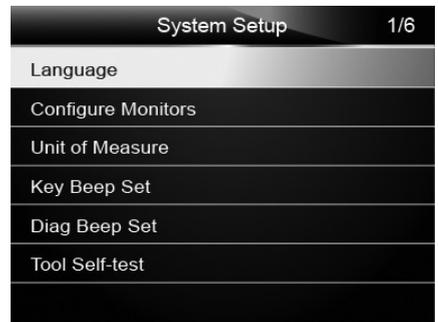
3. Press the UP/DOWN key select a language and press the ENTER key to confirm. Press the BACK key to exit and return

8. OPERATING INSTRUCTION

2 Configure Monitors

This menu allows the users to configure the monitors required to test spark ignition and compression ignition, the number of monitors to pass diagnosis, and restore the default settings. Menu options typically include:

- Spark IGN Required Monitors
- Compression IGN Required Monitors
- Allowed INC Monitors
- Reset Factory Default

There are two different types of monitors: continuous and non-continuous. Continuous monitors are different in design from the non-continuous monitors. Continuous monitors are being constantly tested and evaluated by the car's computer while the car is running. Conversely, the non-continuous monitors require certain conditions to be met before a test or series of tests can be completed.

Continuous Monitors:

- Misfire
- Fuel System
- Comprehensive Component

Non-Continuous Monitors

Note: Non-continuous monitors are different for spark ignition cars (gasoline engines) and compression ignition card (diesel engines).

Spark ignition vehicles (Gas)

- Catalyst (CAT)
- Heated Catalyst
- Evaporative (EVAP) System
- Secondary Air System
- Oxygen (O2) Sensor
- Oxygen Sensor Heater
- EGR (Exhaust Gas Recirculation) and/or VVT System

Compression ignition vehicles (Diesel)

- NMHC Catalyst
- NOx/SCR After treatment
- Boost Pressure
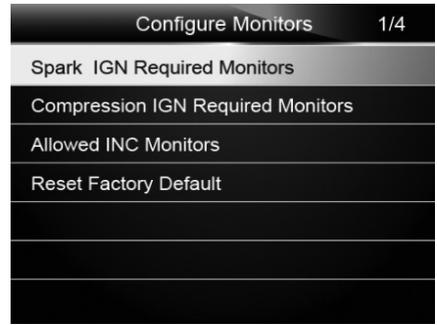- Exhaust Gas Sensor
- PM Filter
- EGR and/or VVT System

To configure monitors:

1. Use the UP/DOWN key to highlight Configure Monitors from Setup menu and press the ENTER key to confirm.
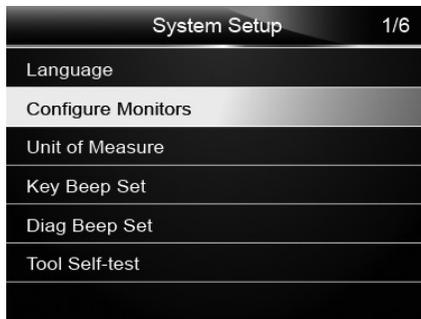
8. OPERATING INSTRUCTION

2. A screen with the optional monitors to be configured displays
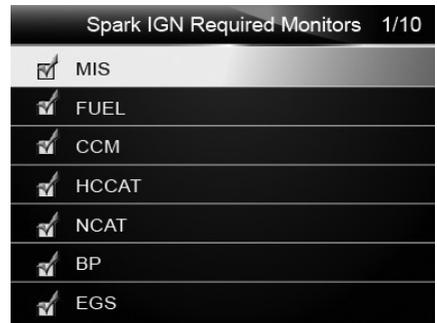

a. Spark IGN Required Monitors

In this menu, the operators can configure monitors for spark ignition cars (gasoline engines).

To configure spark IGN required monitors:

1. Use the UP/DOWN key to highlight Spark IGN Required Monitors from menu and press the ENTER key to confirm.
2. The custom monitors selection screen displays.

3. Use the RIGHT key to select or deselect a monitor or press the LEFT key to deselect all the monitors. Press the ENTER key to confirm and BACK key to cancel.
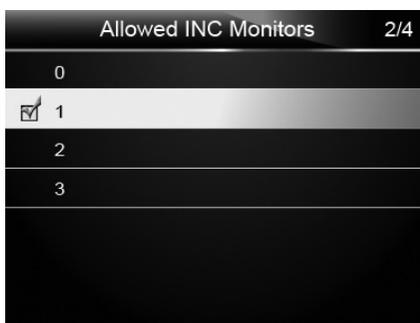
8. OPERATING INSTRUCTION

b. Compression IGN Required Monitors

In this menu, the operators can configure monitors for compression ignition cars (diesel engines).

To configure spark compression required monitors:

1. Use the UP/DOWN key to highlight Compression IGN Required Monitors from the menu and press the ENTER key to confirm.

2. The custom monitors selection screen displays and Use the RIGHT key to select or deselect a monitor or press the LEFT key to deselect all the monitors. Press the ENTER key to confirm and BACK key to cancel.
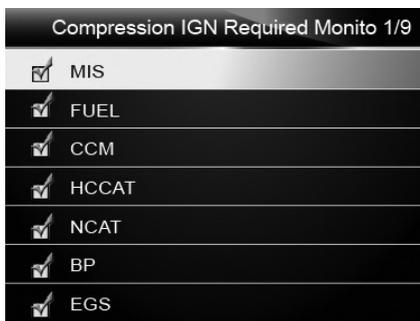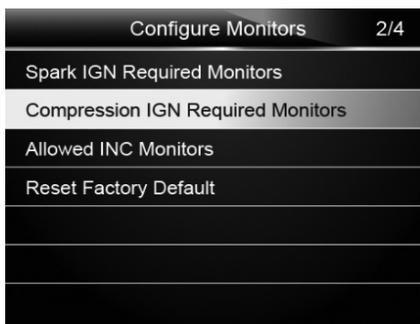

c. Allowed INC Monitors

Emissions tests vary depending on the geographic or regional area in which the vehicle is registered. The fault code reader provides a more flexible way to meet different standards, which allows the user to select 0, 1, 2, 3 INC monitors in test.

To configure allowed INC monitors:

1. Use the UP/DOWN key to highlight Allowed INC Monitors from the menu and press the ENTER key to confirm.

2. The custom INC monitors selection screen displays and scroll with the up and down arrow keys to select. Press the ENTER key to confirm and BACK key to cancel.
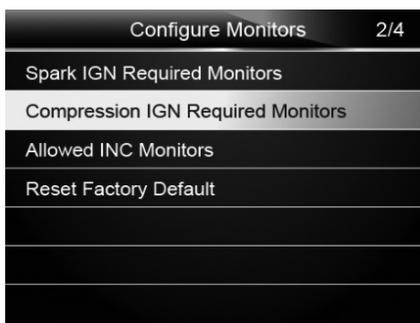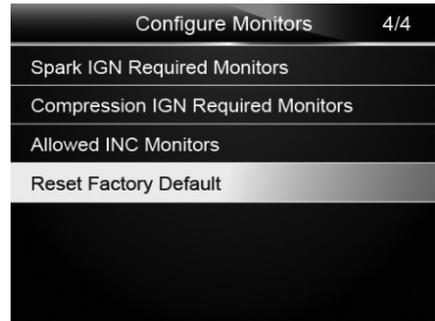
8. OPERATING INSTRUCTION

d. Reset Factory Default

This menu will allow the users to restore the default configuration settings in the Configure Monitors menu, and delete any customized settings. In this case, it will include all the available monitors for the Spark IGN Required Monitors and Compression IGN Required Monitors. Still the Allowed INC Monitors will be set to 1.

To reset factory default:

1. Use the UP/DOWN key to highlight Reset Factory Default from the menu and press the ENTER key to confirm.

2. A message prompting to reset factory default displays. Answer Yes to confirm the request or answer No to abort and return.
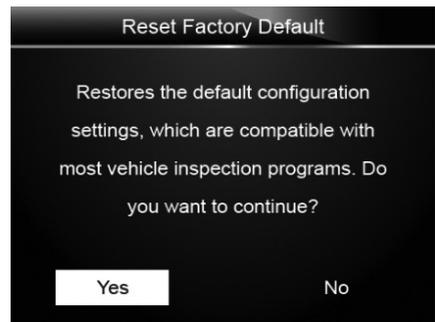
8. OPERATING INSTRUCTION

3   Unit of measure

Unit of measure opens a dialog box that allows you to choose between US customary or metric units of measure.

To change the unit setup:

1. Scroll the UP/DOWN keys to highlight Unit of Measure from Setup menu and press the ENTER key.

System Setup	1/6
Language	
Configure Monitors	
Unit of Measure	
Key Beep Set	
Diag Beep Set	
Tool Self-test	

2. Press the UP/DOWN arrow key select an item and press the ENTER key to save and return

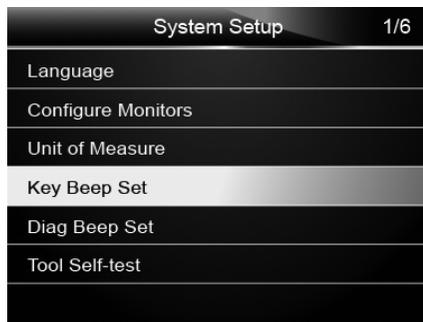| Unit of Measure	1/2
☑ English	
Metric	
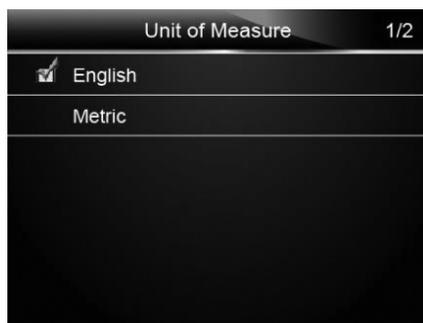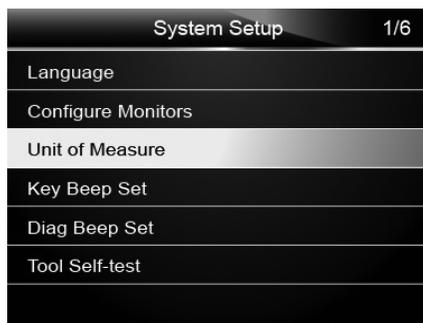
4   Key Beep Set

Key beep set opens a dialog box that allows you to turn on/off the built-in speaker for key pressing.

To set the key beep:

1. Use the UP/DOWN key to highlight Key beep set from Setup menu and press the ENTER key.

System Setup	1/6
Language	
Configure Monitors	
Unit of Measure	
Key Beep Set	
Diag Beep Set	
Tool Self-test	

2. Press the UP/DOWN arrow key select an item and press the ENTER key to save and return.

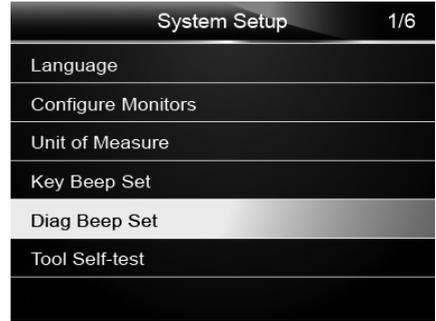| Key Beep Set	1/2
☑ Beep ON	
Beep OFF	

8. OPERATING INSTRUCTION

5   Diag Beep Set

Key beep set opens a dialog box that allows you to turn on/off the built-in speaker when performing diagnostics.

To set the diag beep:

1. Use the UP/DOWN key to highlight Key Beep Set from Setup menu and press the ENTER key.

System Setup	1/6
Language	
Configure Monitors	
Unit of Measure	
Key Beep Set	
Diag Beep Set	
Tool Self-test	

2. Press the UP/DOWN key to select an item and press the ENTER key to save and return.

Diag Beep Set	2/3
For Monitor Ready	
☑ Beep With Light	
Beep OFF	

6   Tool Self-test

Key beep set opens a dialog box that allows you to check if the LCD display and the operation of keypad and LED are working correctly. Typical menu includes:
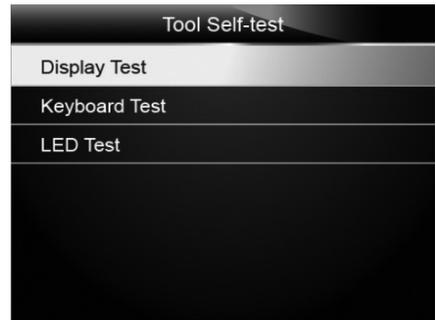
- Display Test
- Keypad Test
- LED Test

a. Display Test

Selecting Display Test option opens a screen that allows you to check the functionality of the display.

To test the display:

1. Use the UP/DOWN key to highlight Display Test from Setup menu and press the ENTER key to start test.

Tool Self-test
Display Test
Keyboard Test
LED Test

8. OPERATING INSTRUCTION
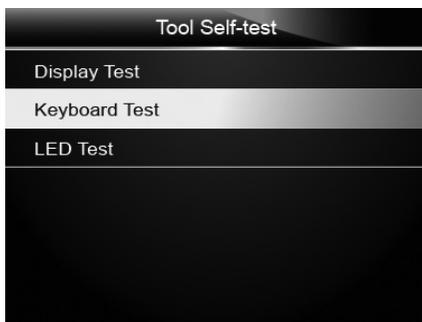
2. Check if there are any missing spots in the LCD screen

3. To quit the test, press the BACK key.

b. Keypad Test

Selecting Key Test option opens a screen that allows you to check the functionality of the keypad.

To test the keypad:

1. Use the UP/DOWN key to highlight Keyboard Test from Setup menu and press the ENTER key

> **Tool Self-test**
> Display Test
> Keyboard Test
> LED Test

2. Press any key to start test. Key name or scroll direction should show on display when you press a key. Double press BACK to return.

> **Keyboard Test**
>
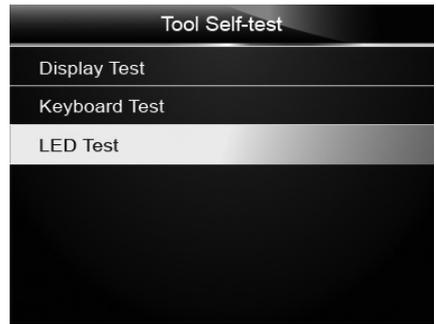> Press any key to start test.
>
> Key:
>
> Double [Back] to return

8.   OPERATING INSTRUCTION

c. LED Test
Selecting LED Test option opens a screen that allows you to check the functionality of the LED. To test the LED:
1. Use the UP/DOWN key to highlight LCD Test from Setup menu and press the ENTER key to start test.

2. Scroll with the up and down arrow keys to select the desired LED lamps to check. The LED should turn on/off according to the selected commands.
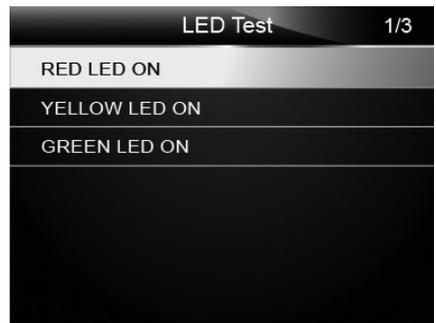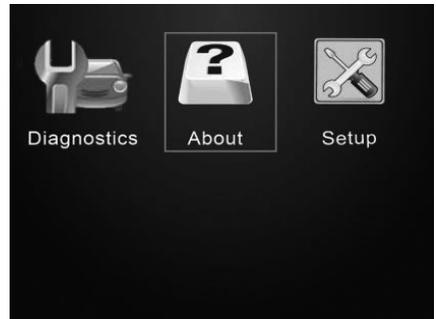
3. To quit the test, press the BACK key.

7   Tool Information
Selecting About option opens a screen that show information about your code reader, such as serial number and software version.

To view information of your code reader:
1. Use the LEFT/RIGHT key to highlight About from home menu and press the ENTER key.

2. A screen with detailed information of the code reader displays.

3. Press the BACK key to exit and return to the Setup menu.

9. EXPLANATION OF SYMBOLS

9.1 EXPLANATION OF SYMBOLS

Warning!
Read the instruction manual.

Do not dispose of WEEE*
unsorted municipal waste.

10. DISPOSAL

10.1 DISPOSAL

– At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.

– Contact your local authority for details of collection schemes in your area.

   In all circumstances:

   ● Do not dispose of power tools with domestic waste.

   ● Do not incinerate.

   ● Do not abandon in the environment.

   ● Do not dispose of WEEE* as unsorted municipal waste.

* Waste Electrical & Electronic Equipment.

NOTES

NOTES

CONTACTS

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Service/Warranty Repair Agent:
For aftersales servicing or warranty repairs, please contact the
Draper Tools Helpline for details of an agent in your local area.

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