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- There is a possibility that this unit is inapplicable to some of the vehicle models or systems listed in the diagnosis section due to different countries, areas, and/or years. Do not hesitate to contact LAUNCH if you come across such questions. We are to help you solve the problem as soon as possible.

Disclaimer

- To take full advantage of the unit, you should be familiar with the engine.
- All information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make change at any time without notice.

Table of Contents

Introduction

X-431 is the most advanced automobile diagnostic unit in the world at present. Please refer to X-431 User's Manual for its features, hardware configuration, printer operation, button description, conditions for test, etc.

Here we describe the operation procedure for Russia VAZ diagnostic program.

Select Diagnostic Connector

At present, this diagnostic program can be used to diagnose VAZ vehicle up to 2004 with 12PIN diagnostic socket or 16PIN OBDII diagnostic socket. So, select [VAZ-12PIN] diagnostic connector when testing VAZ vehicles with 12PIN diagnostic socket; and select [Smart OBDII] diagnostic connector when testing VAZ vehicles with 16PIN diagnostic socket.

Diagnostic Socket Location

The Diagnostic socket is located in glove compartment for VAZ2108-09 and down to steering wheel for VAZ2110.

Pin Definitions

VAZ 12PIN Diagnostic Socket

The VAZ 12PIN diagnostic socket is as shown in Figure 01.

Figure 01

PIN definition of VAZ 12PIN diagnostic socket

PIN	Definition
A	Body ground
B	L-LINE
L	K-LINE
M	K_LINE

VAZ 16PIN Diagnostic Socket

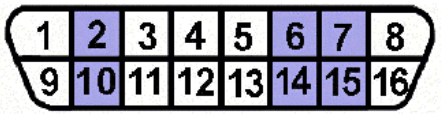

Figure 02

PIN	Definition
4	Body ground
7	ISO9141-2 K-LINE
16	Battery +

Connection

Refer to Figure 03 for connection before performing diagnosis.

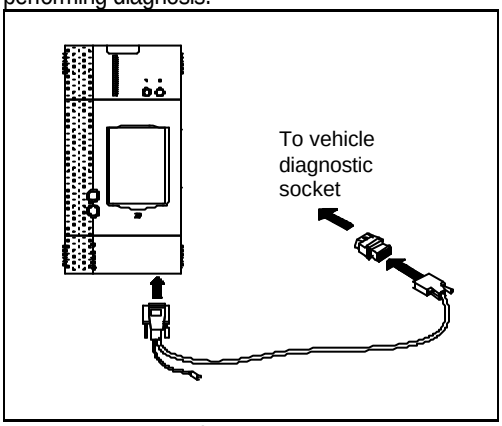

Figure 03

- Select diagnostic connect according to the mode of the diagnostic socket of the vehicle to be tested.
- Insert the CF card into the CF card slot, ***(Note: keep the face labeled 'UPSIDE" upward),*** and make sure the card is fully seated.
- Insert one end of the main cable into the diagnostic socket on SMARTBOX.
- Connect the other end of the main cable to the selected diagnostic connector.
- Connect the other end of the diagnostic connector to VAZ 12PIN or 16PIN diagnostic socket.

Note:

If the power supply on vehicle diagnostic socket is insufficient or the power pin is damaged, you can get power in the following ways:

? ? ***From cigarette lighter: insert one end of the cigarette lighter cable into the lighter socket in vehicle and connect the other end to the power connector of X-431 main cable.***

? ? ***From battery: clamp the two clips of battery cable on the positive and negative poles of battery and insert another end of the cable into the power connector of X-431 main cable.***

? ? ***From power adapter: connect the power adapter to the 100-240V AC outlet with power cord. Insert the 12V DC plug of power adapter into the power connector of X-431 main cable.***

Operation

Entering Function Menu

After connection, press [**POWER**] key to start X-431.

After starting the main unit, press [**HOTKEY**] (or click [**Start**] button on **the main menu**, and select [**GAG**]→[**GD Scan**] on the pop-up menu). The screen will display the home page of vehicle diagnosis as shown in Figure 04.

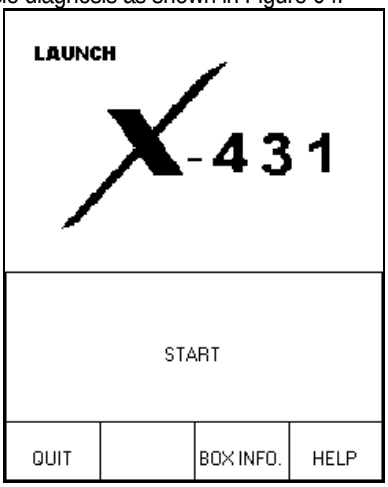

Figure 04

Button descriptions:

? ? ***[QUIT]: to exit the diagnostic program.***

? ? ***[BOX INFO.]: to display hardware and software version of SMARTBOX.***

? ? ***[HELP]: to display help information.***

? ? ***[START]: to start diagnosis.***

Click [**START**] button, the screen will display **the vehicle make menu** as shown in Figure 05.

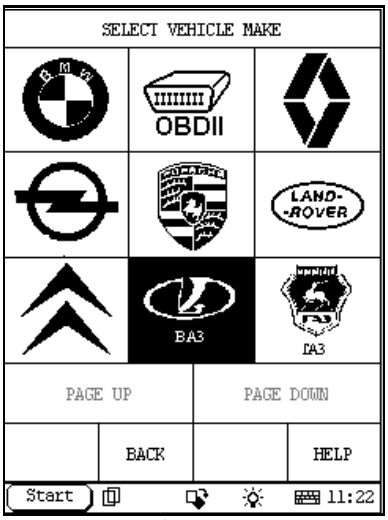

Figure 05

Button descriptions:

? ? ***[BACK]: to return to the previous interface.***

? ? ***[PAGE UP]: to display the previous page, it is inactive if the current page is the first page.***

? ? ***[PAGE DOWN]: to display the next page, it is inactive if the current page is the last page.***

? ? ***[HELP]: to display the help information.***

Click the icon of VAZ on the vehicle make menu. The screen as shown in Figure 06 will appear.

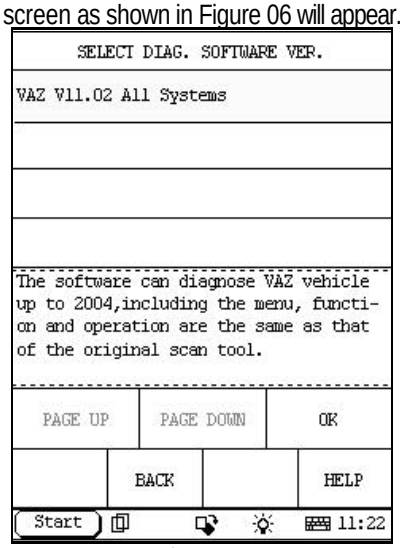

Figure 06

Click [**VAZ V11.02 all system**]. The screen will

display the information as shown in Figure 07.

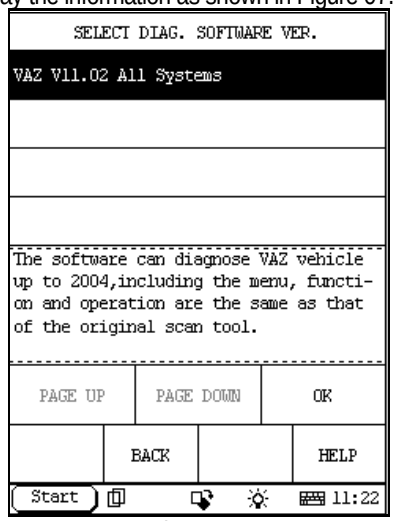

Figure 07

The software can diagnose all systems of VAZ vehicle up to 2004.

Click [**OK**] button. X-431 begins to reset and check the SMARTBOX, and load the diagnostic program from the CF card. After download, the screen will display the message as shown in Figure 08.

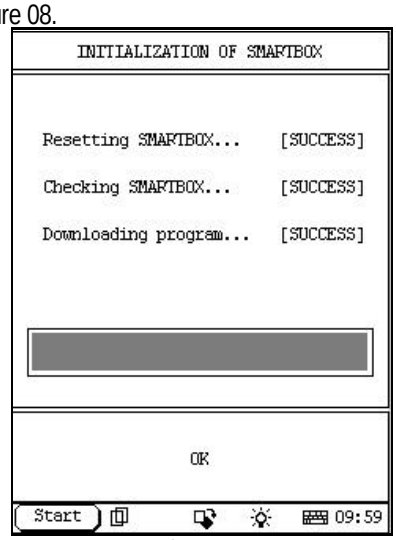

Figure 08

Button descriptions:
[OK]: to go on the test.

Click [OK] button. X-431 will read the version information of ECU on the tested vehicle as shown in Figure 09.

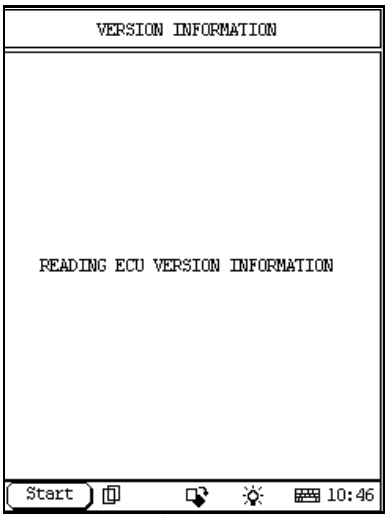

Figure 09

After reading the version information of ECU, the screen will display the system menu as shown in Figure 10

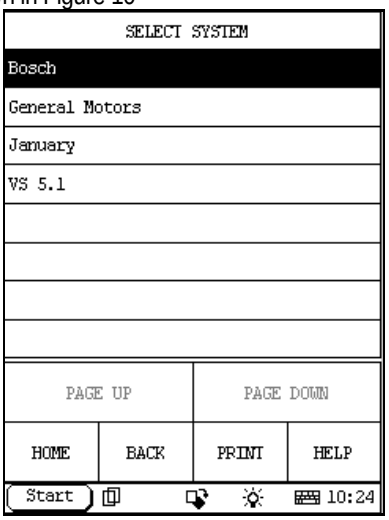

Figure 10

The test procedures of the four systems are similar, here we only gives the test procedures of [BOSCH]. Click [BOSCH], the screen will display the corresponding sub-system menu as shown in Figure 11.

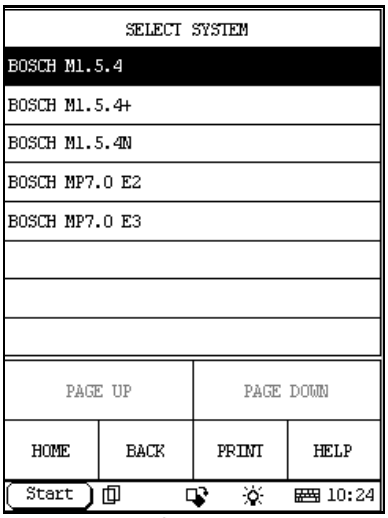

Figure 11

The test procedures of the four systems are similar, here we only gives the test procedures of [BOSCH M 1.5.4N]. Click [BOSCH M1.5.4N], the screen will display the corresponding function menu as shown in Figure 12.

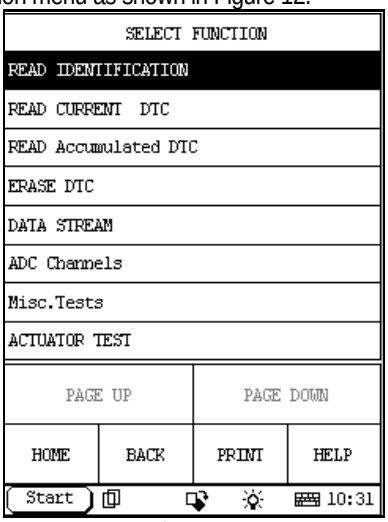

Figure 12

User can perform the desired function by clicking corresponding item on the function menu.

Read Identification

Click [READ IDENTIFICATION] in the function menu. X-431 will display the data stream related to the vehicle identification as shown in Figure 13.

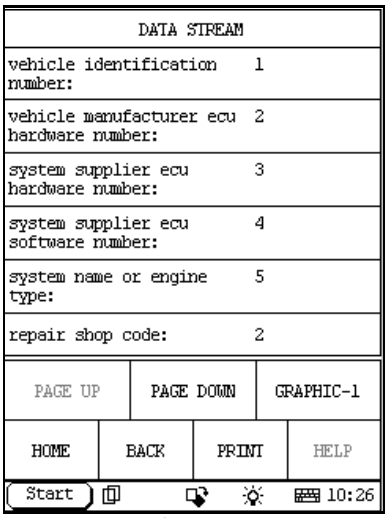

Figure 13

Click [PAGE DOWN] to view the next page.

Read Current DTC

Click [READ CURRENT DTC] in the function menu. The screen will display the current DTC of the tested vehicle if any. If the vehicle has no current DTC, the screen will display a message as shown in Figure 14.

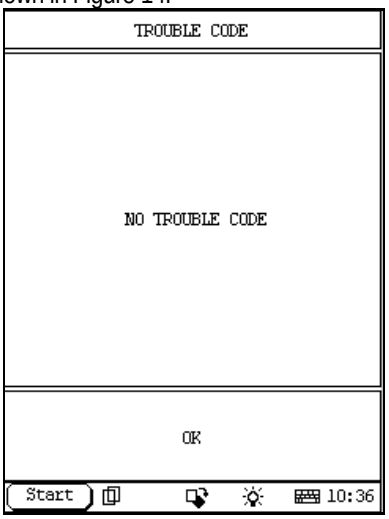

Figure 14

Click [OK] to return to the function menu.

Read Accumulated DTC

Click [READ ACCUMULATED DTC] in the function menu. The screen will display the

accumulated DTC of the tested vehicle if any. If the vehicle has no accumulated DTC, the screen will display a message as shown in Figure 15.

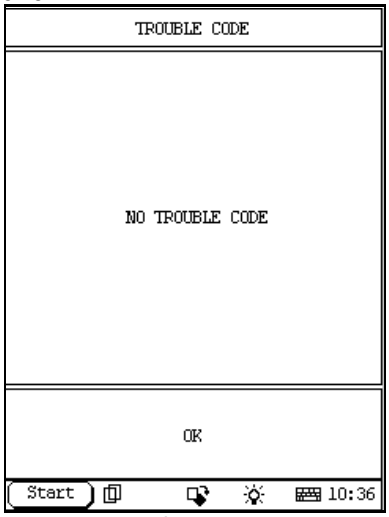

Figure 15

Click [OK] to return to the function menu.

Erase DTC

Click [ERASE DTC] in the function menu. X-431 will display a message as shown in Figure 16.

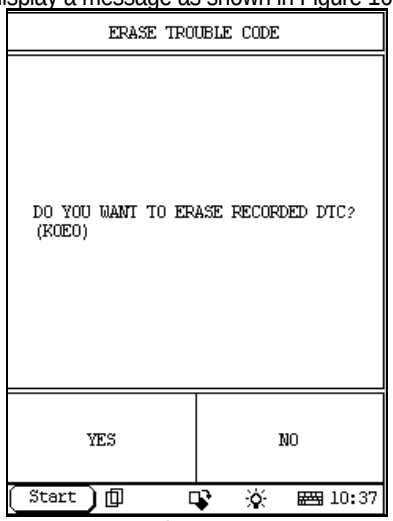

Figure 16

Click [YES] to perform erasing, click [NO] to cancel erasing and return. After erasing, the screen will display a message as shown in Figure17.

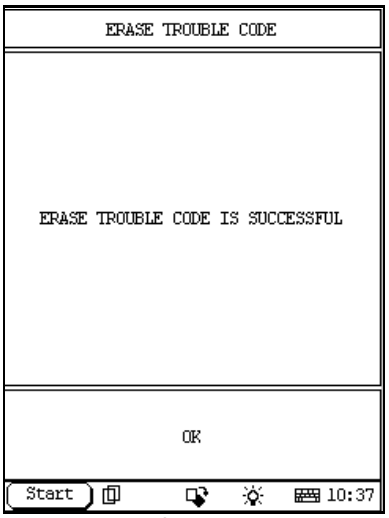

Figure 17

Click [OK] to return to the function menu.

Data Stream

Click [DATA STREAM] in the function menu. X-431 will display the data stream items as shown in Figure18.

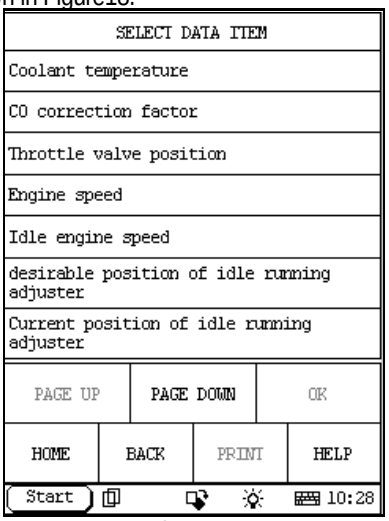

Figure 18

Click [PAGE DOWN] button to display the data stream items on the next page. To view the data stream live values, click the corresponding items to select as shown in Figure 19.

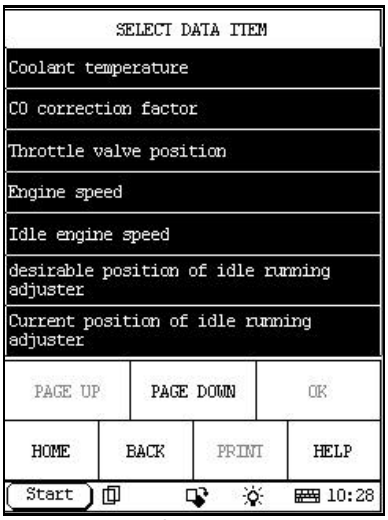

Figure 19

After selecting, click [OK] to display the live data stream as shown in Figure 20.

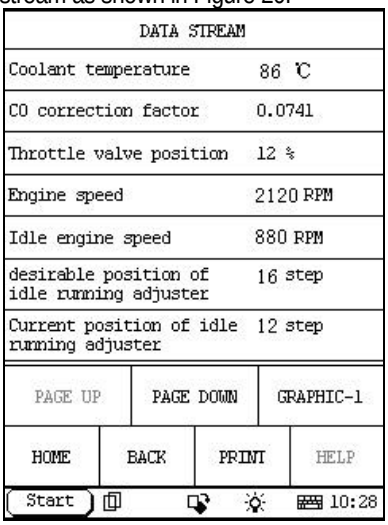

Figure 20

Note:

- ***Click [GRAPHIC-1] on the digital display mode to display the waveform of a single data stream item.***
- ***Click [GRAPHIC-2] on the GRAPHIC-1 display mode to display the waveforms of 2 data stream items.***
- ***Click [DIGITAL] on the GRAPHIC-2 display mode to display the live data stream value again.***
- ***The three display modes -- [DIGITAL], [GRAPHIC-1] and [GRAPHIC-2] can be switched in turn.***

ADC Channels

Note: ECU uses A/D converter channels for several sensors, i.e. oil temperature sensor and so on. Here, ADC refers to the Analog Digital Converter.

Click [ADC CHANNELS] in the function menu. X-431 will display the data stream items as shown in Figure 21.

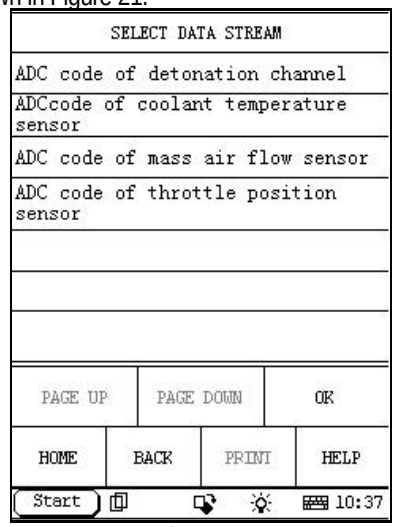

Figure 21

To view the live data stream, click the corresponding items to select as shown in Figure 22.

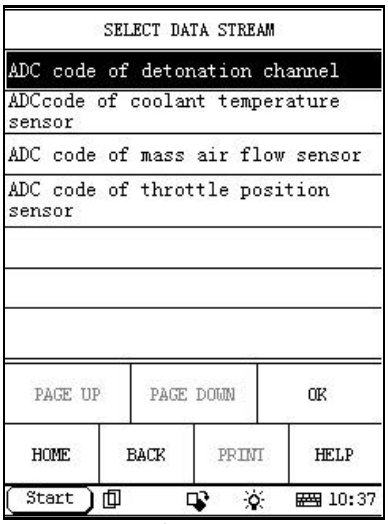

Figure 22

After selecting, click [OK] to display the live data stream.

Misc. Test

Click [MISC. TEST] in the function menu. X-431 will display the sub-function menu as shown in Figure 23.

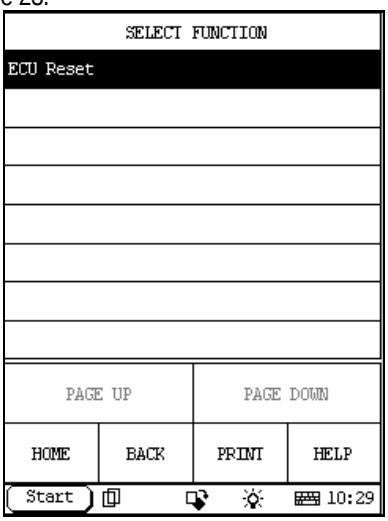

Figure 23

Click [ECU reset] to reset the ECU.

Actuator Test

Click [ACTUATOR TEST] in the function menu. X-431 will display actuator menu as shown in Figure 24.

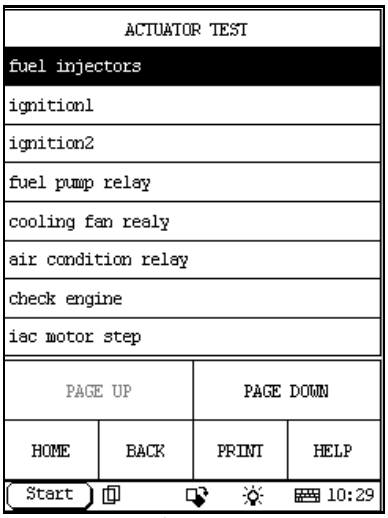

Figure 24

Click [PAGE DOWN] button to display the actuator items on the next page. To perform actuator test, click the corresponding items. For example, click [Fuel injector], the screen will display an interface as shown in Figure 25.

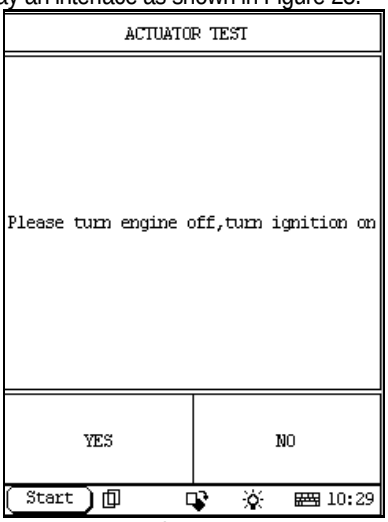

Figure 25

Turn off the engine and turn on the ignition switch follow the tips on the screen, and then click [YES]. The screen will display an interface as shown in Figure 26.

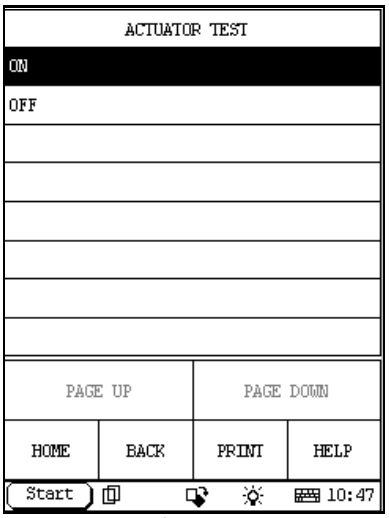

Figure 26

Click [ON] or [OFF], the injector will be switched ON or OFF. The screen will display a message as shown in Figure 27.

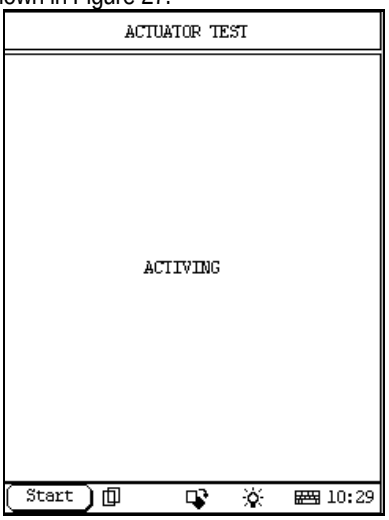

Figure 27

After test, the screen will display a message as shown in Figure 28.

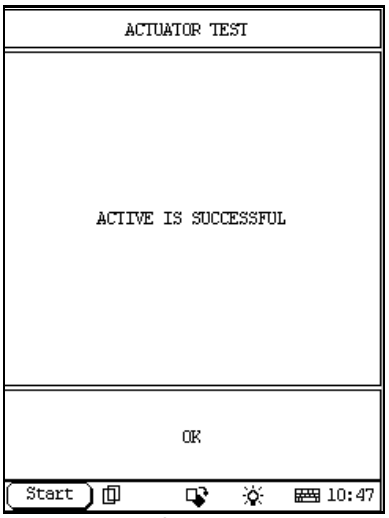

Figure 28

Click [OK] to return to the actuator menu. User can test another actuator by clicking it as required.

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This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any automotive meter found to be defective is repair or replacement, and LAUNCH shall not be liable for any consequential or incidental damages.

Final determination of defects shall be made by LAUNCH in accordance with procedures established by LAUNCH. No agent, employee, or representative of LAUNCH has any authority to bind LAUNCH to any affirmation, representation, or warranty concerning LAUNCH automotive meters, except as stated herein.

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Order Information

Replaceable and optional parts can be ordered directly from your LAUNCH authorized tool supplier. Your order should include the following information:

1. Quantity
2. Part number
3. Item description

Customer Service

If you have any questions on the operation of the unit, please contact us:

Tel: 86-755-82269474,
Fax: 86-755-82264570,
E-mail: overseasales@cnlaunch.com.

If your unit requires repair service, return it to the manufacturer with a copy of the sales receipt and a note describing the problem. If the unit is determined to be in warranty, it will be repaired or replaced at no charge. If the unit is determined to be out of warranty, it will be repaired for a nominal service charge plus return freight. Send the unit pre-paid to:

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