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Safety Precautions

To avoid personal injury, instrument damage and/or damage to your vehicle; do not use the VAG401 before reading this manual.

This manual describes common test procedures used by experienced service technicians. Many test procedures require precautions to avoid accidents that can result in personal injury, and/or damage to your vehicle or test equipment. Always read your vehicle's service manual and follow its safety precautions before and during any test or service procedure. **ALWAYS** observe the following general safety precautions:

- When an engine is running, it produces carbon monoxide, a toxic and poisonous gas. To prevent serious injury or death from carbon monoxide poisoning, operate the vehicle ONLY in a well-ventilated area.
- To protect your eyes from propelled objects as well as hot or caustic liquids, always wear approved safety eye protection.
- When an engine is running, many parts (such as the coolant fan, pulleys, fan belt etc.) turn at high speed. To avoid serious injury, always be aware of moving parts. Keep a safe distance from these parts as well as other potentially moving objects.
- Engine parts become very hot when the engine is running. To prevent severe burns, avoid contact with hot engine parts.
- Before starting an engine for testing or trouble-shooting, make sure the parking brake is engaged. Put the transmission in park (for automatic transmission) or neutral (for manual transmission). Block the drive wheels with suitable blocks.
- Connecting or disconnecting test equipment when the ignition is ON can damage test equipment and the vehicle's electronic components. Turn the ignition OFF before connecting the VAG501 to or disconnecting the VAG401 from the vehicle’s Data Link Connector (DLC).
- To prevent damage to the on-board computer when taking vehicle electrical measurements, always use a digital multimeter with at least 10meg Ohms of impedance.
- Fuel and battery vapors are highly flammable. To prevent an explosion,

keep all sparks, heated items and open flames away from the battery and fuel / fuel vapors. DO NOT SMOKE NEAR THE VEHICLE DUR-ING TESTING.

- Don't wear loose clothing or jewelry when working on an engine. Loose clothing can become caught in the fan, pulleys, belts, etc. Jewelry is highly conductive, and can cause a severe burn if it makes contact between a power source and ground.

About VAG401

1. Applications

VAG401 is the higher version based on VAG5053 with powerful function. It can work on VW, AUDI, SEAT and SKODA. With its smart appearance and powerful function, it can be conveniently used and can be run detachedly without PC.

2. Available Functions

- Controller Info
- Fault Codes
- Clear Codes
- Measure Blocks
- Output Tests
- Basic Settings
- Adaptation
- Coding
- Security Access
- Readiness
- Advanced ID

3. Supported Systems

VAG401 can support the following systems:

- Engine
- Auto Trans
- ABS Brakes
- Auto HVAC
- Cent. Elect.
- Airbags
- Steering wheel
- Instruments

With other systems totally over tens here not listed one by one.

4. Professional function.

- Oil Reset
- Srs Reset
- Throttle Adaption
- Mileage Reset
- EEPROM Access

5. Main features

- Display: Backlit LCD,160*160 pixel display.
- Favorable----about only 10% of that of professional tool.
- Powerful function-----with all the function of VAG1551/1552.
- Conveniently connection and simply operation.
- Powered via diagnostic connector, no need of power exteriorly charged.
- Operating Temperature: -20℃ to 50℃ .
- Storage Temperature: -50℃ to70℃ .

6. Appearance and Key Descriptions



The appearance of a VAG401 is as shown in the above figure.

1. LCD screen: 160*160
2. Enter key: confirm selection and enter
3. Esc key: go back to the previous screens
4. up/down arrows: moves the selection pointer and scrolls up or down
5. LEFT/RIGHT arrows: move cursor.
6. Diagnostic extension cable: OBDII -16PIN

Operation Instructions

1. Preparation for Testing

The VAG401 aids in monitoring electronic and emissions-related faults in your vehicle and retrieving fault codes related to malfunctions in these systems. Mechanical problems such as low oil level or damaged hoses, wiring or electrical connectors can cause poor engine performance and may also cause a “false” fault code. Fix any known mechanical problems before performing any test. See your vehicle’s service manual or a mechanic for more information.

Check the following areas before starting any test:

- Check the engine oil, power steering fluid, transmission fluid (if applicable), engine coolant and other fluids for proper levels. Top off low fluid levels if needed.
- Make sure the air filter is clean and in good condition. Make sure all air filter ducts are properly connected. Check the air filter ducts for holes, rips or cracks.
- Make sure all engine belts are in good condition. Check for cracked, torn, brittle, loose or missing belts.
- Make sure mechanical linkages to engine sensors (throttle, gearshift position, transmission, etc.) are secure and properly connected. See your vehicle’s service manual for locations.
- Check all rubber hoses (radiator) and steel hoses (vacuum/fuel) for leaks, cracks, blockage or other damage. Make sure all hoses are routed and connected properly.
- Make sure all spark plugs are clean and in good condition. Check for damaged, loose, disconnected or missing spark plug wires.
- Make sure the battery terminals are clean and tight. Check for corrosion or broken connections. Check for proper battery and charging system voltages.
- Check all electrical wiring and harnesses for proper connection. Make sure wire insulation is in good condition, and there are no bare wires.
- Make sure the engine is mechanically sound. If needed, perform a compression check, engine vacuum check, timing check (if applicable), etc.

2. Connect the VAG401

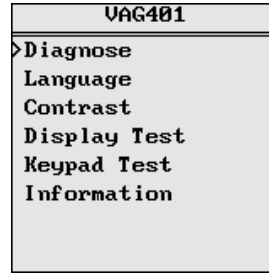
2.1 Turn the ignition on.

2.2 Locate the vehicle's 16-pin Data Link Connector (DLC).

2.3 Connect the VAG401 cable connector to the vehicle's DLC. Turn on the ignition, The VAG401 will auto start, the following screen will be displayed.



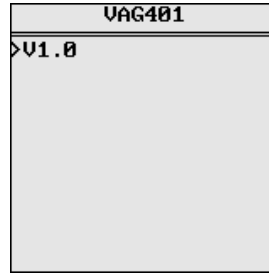
2.4 Wait a moment, the screen will auto display the main menu:



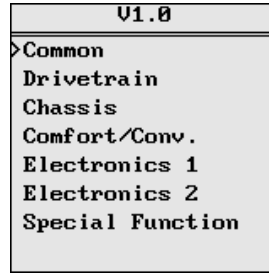
- **[Diagnose]**: diagnose
- **[Language]**: language select
- **[Contrast]**: Contrast adaptation
- **[Display Test]**: Lcd test
- **[Keypad Test]**:Keypad test
- **[Information]**:show version

3. Diagnosis system

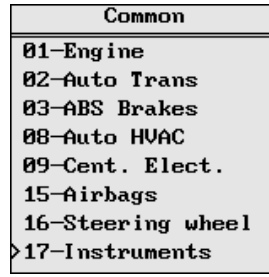
Select [Diagnosis system] and then press [enter] key. The screen will display the system selection menu as follow:



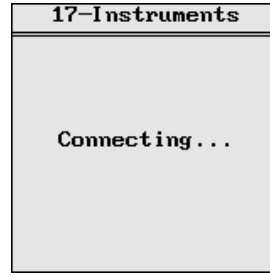
Now we can select a version, then press [Enter]. The screen will display as the following shows.



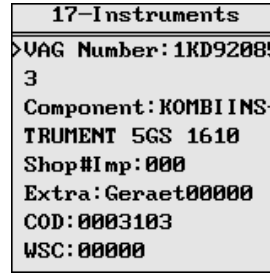
Systems that the VAG401 supports are listed as the following 7 ones. Each system in the 7 kinds comes with similar operation method. Press [Common], then press [Enter].The screen will show the systems most cars shares. See the following.



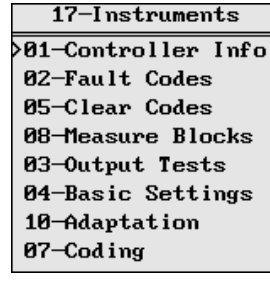
Now we can select any one system, say, selecting [17-Instruments], then press [Enter]. The screen will display as the following shows.



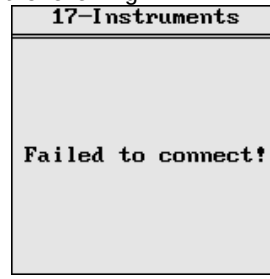
If it runs successfully, then the following will be displayed.



Press [Enter] button or [Esc] button.

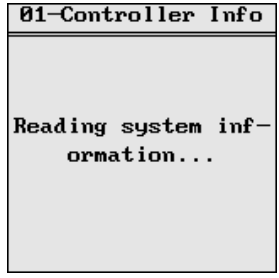


If failed, then it displays the following.



3. 1 READ ECU version

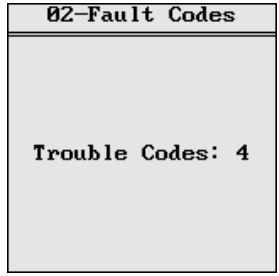
Select [01.READ ECU version] and then press [Enter] key. The screen will display the control unit information:

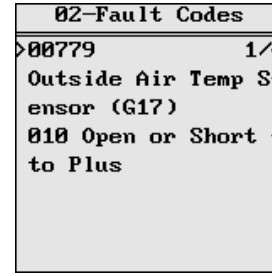




3.2 Read Fault Codes

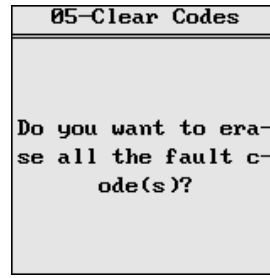
Select [02-Fault Codes] and then press [Enter] key. The screen will show the error code and you can press up or down key to check out each error code as the following.



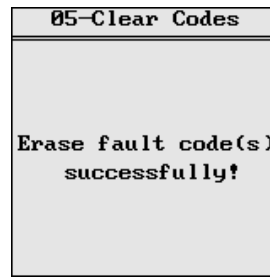


3.3 Erase fault codes

Select [05-Clear Codes] and then press [Enter] as the following.

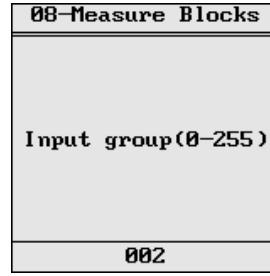


You need to press [Enter] button for the second time to perform “code erase”. Of course you can also press [Esc] button to give u. If code erasing successfully, it will display as the following.

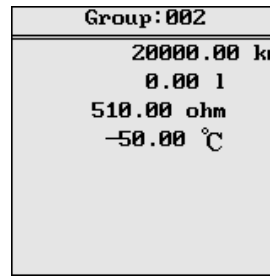


3.4 Read measuring data value

Select [08-Measure Blocks] and then press Enter as the following.

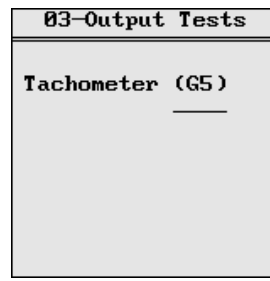


Press the left / right to choose the number of places, by up / down button to select the input number and press [Enter] button to confirm. Figure shows that:

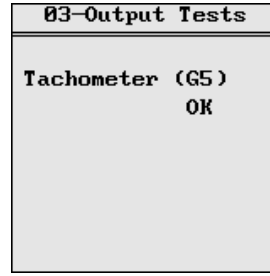


3.5 Output test.

Select [03-Output Test] and then press [Enter]. If failed, it will display as the following.

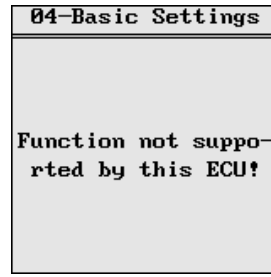


If succeeded, it will display as the following.



3.6 Basic items setting.

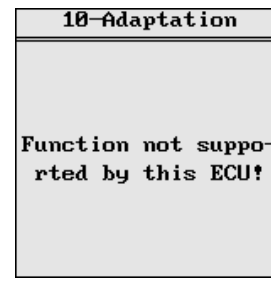
Select [04-Basic Settings] and then press [Enter]. The way of operating likes that of point 3.4 regarding of measuring data value.



3.7 Route adaptation

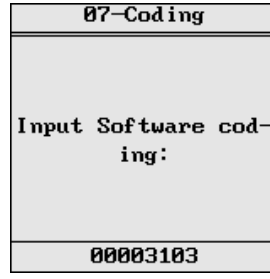
Select [10-Adaptation] and then press [Enter]. The way of operating likes that of point 3.4 regarding of measuring data value.



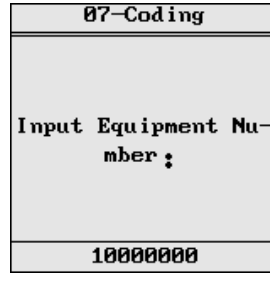


3.8 Coding

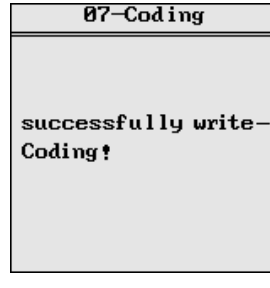
Select [07-Coding] and then press [Enter].It will display as the following.



Press Left or Right key to choose the number of places; by Up or Down key to input number. Press [Enter] button to confirm.

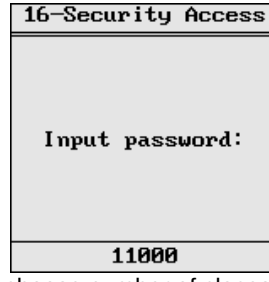


After all information written, press [Enter]. If operation is successful, it will display as the following.

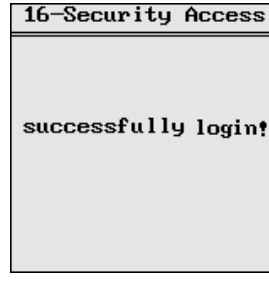


3.9 Login the system

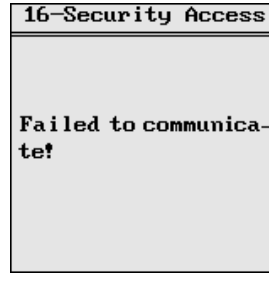
Choose [16-Security Access] and then press [Enter] button. It shows as the following



Press left/right button to choose number of places. Press up/down button to enter the passing code and then press [Enter].The following will be displayed if you login successfully.

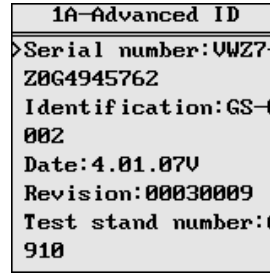


If failed, it shows as the following.



3.10 Advanced ID

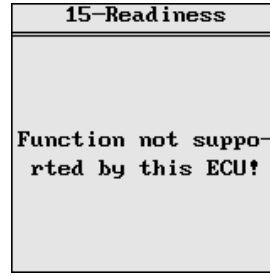
Choose [1A-Advanced ID] and then press [Enter] button. It shows as the following.



Press [Esc] to draw out.

3.11 System being ready

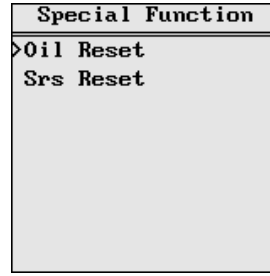
Press [15-Readiness] and then press [Enter], it shows as the following.



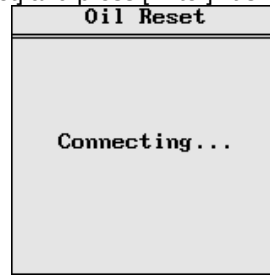
Press [Esc] to login out.

3.12 Professional function

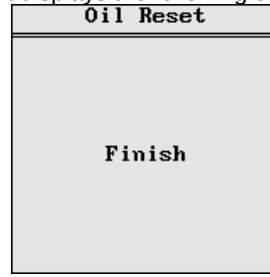
Return to the main memu, choose [Diagnose] and then press [Enter]. Press right arrow to go to the next page. Choose [Special Function]. Press [Enter]. It will show the following.



3.12.1 Choose [Oil Reset] and press [Enter]. it shows as the following:



If connect successfully, it displays the following one by one.

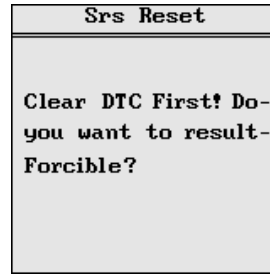


Press [Esc] to draw out.

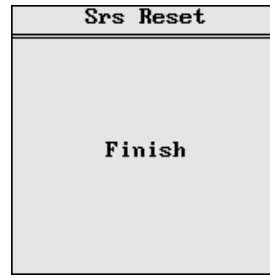
3.12.2 Choose [Srs Reset] and [Enter], it shows as the following.



If connected successfully, it will read code before it returns to the original; if it finds error code, it will display the following.



Then, press [Enter] and it will force the implementation of reset command and will display as the following after success.



If you don't want to force the implementation of reset command, please press [Esc] to draw out. After finishing code erasing, you can reset airbag.

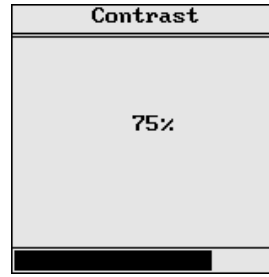
4. Language select

Choose [Language] at the main memu. Then press [Enter]. The screen will display as the following.



5. Contrast value adaptation

Choose [Contrast] at the main memu. Then press [Enter]. The screen will display as the following.



Simply press up/down arrow to set and then press [Enter] to confirm.

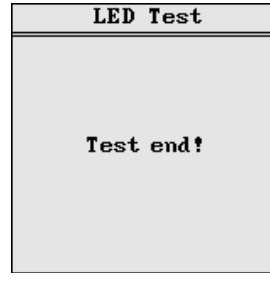
6. Lcd test

Choose[Lcd Test] at the main memu, Press Enter],The screen will display the following dynamic image.



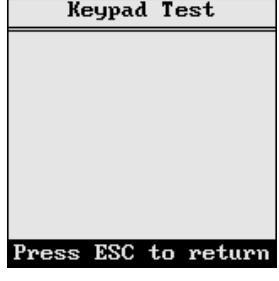


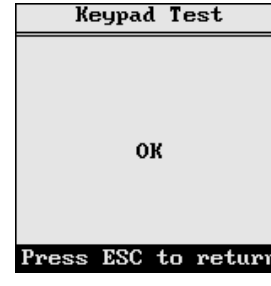
When after testing, it will show “Test end!” as what the following shows.



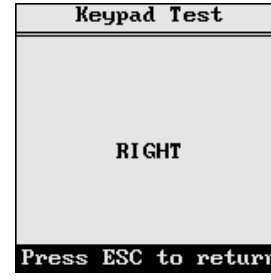
7. Key testing

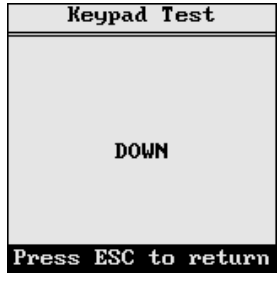
Choose [Keypad Test] at the main memu. Press [Enter]. The screen will display the following interface.

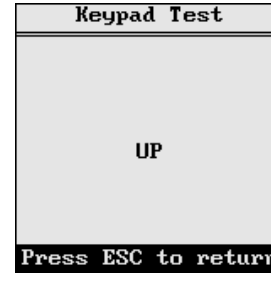












Press any key then the screen will flash due to corresponding to your cooperation. Double [Esc], you can withdraw from the testing.

8.About

Choose [About] and then press [Enter]. Then screen will display the version of this tool.



9.Location of Data Linking Connection.

Refer to the picture of OBD-II 16pin as the following. For VW GOLF, it locates in the right side of steering column; for Jetta, it locates in the left side of the bottom of the dashboard which is at the driver's ca; for Santana, it locates the dust-proof gearbox which is in the front. For more details, please refer to the vehicle repairing manual.

