

# BYD 2023 Tang DM-i Champion Edition

## Motor Zero Position Calibration

**Tested Model:** BYD 2023 Tang DM-i Champion Edition

### Function Description:

This function is used to perform zero position calibration of the front drive motor for Tang DM-i Champion Edition.

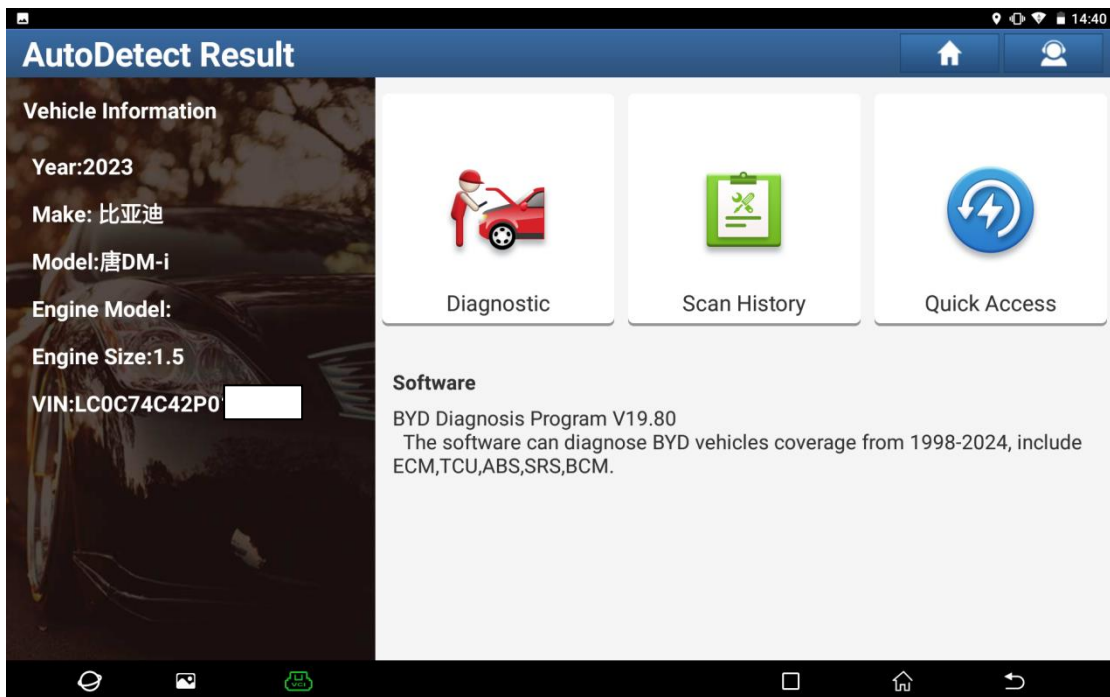
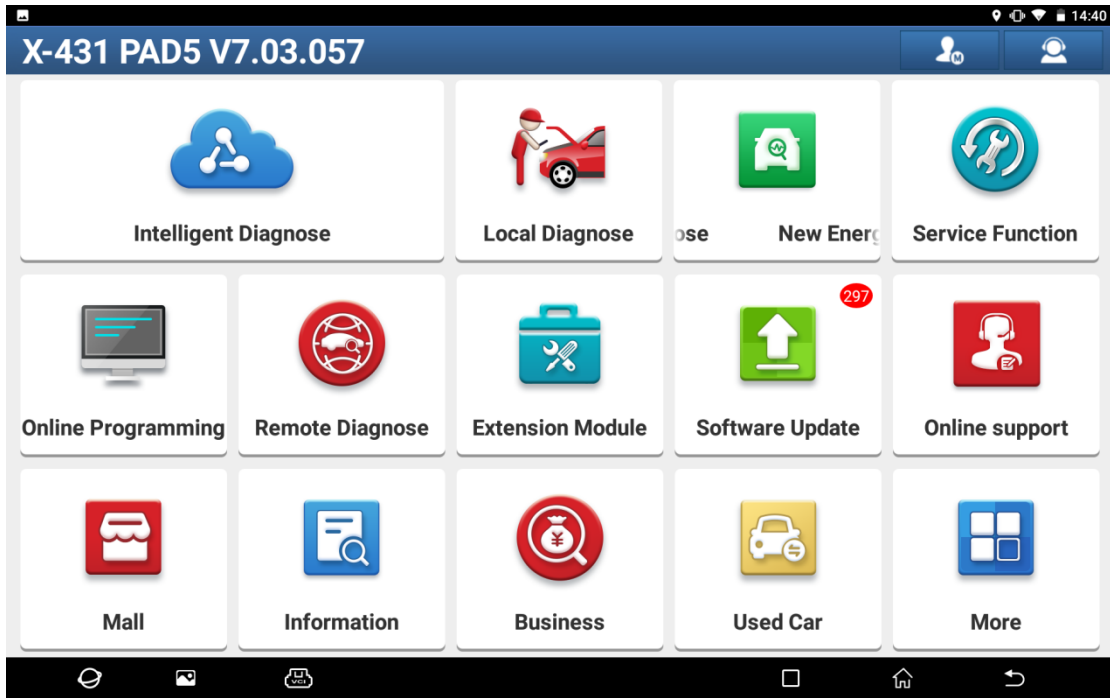
When replacing the drive motor controller alone, you need to perform the zero position calibration process. Record the zero position bar code on the motor, and use the diagnostic instrument to calibrate the motor electronic control zero position after the assembly is completed.

### Execution Conditions:

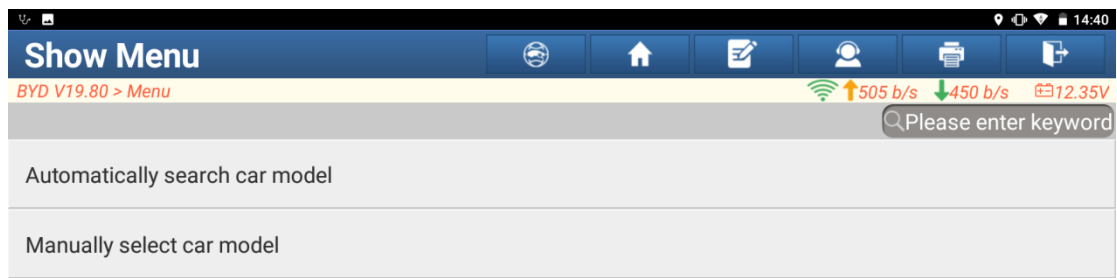
- The drive motor controller is replaced.
- The ignition switch is in the ON position.
- The diagnostic instrument is connected to the network.

### Procedure:

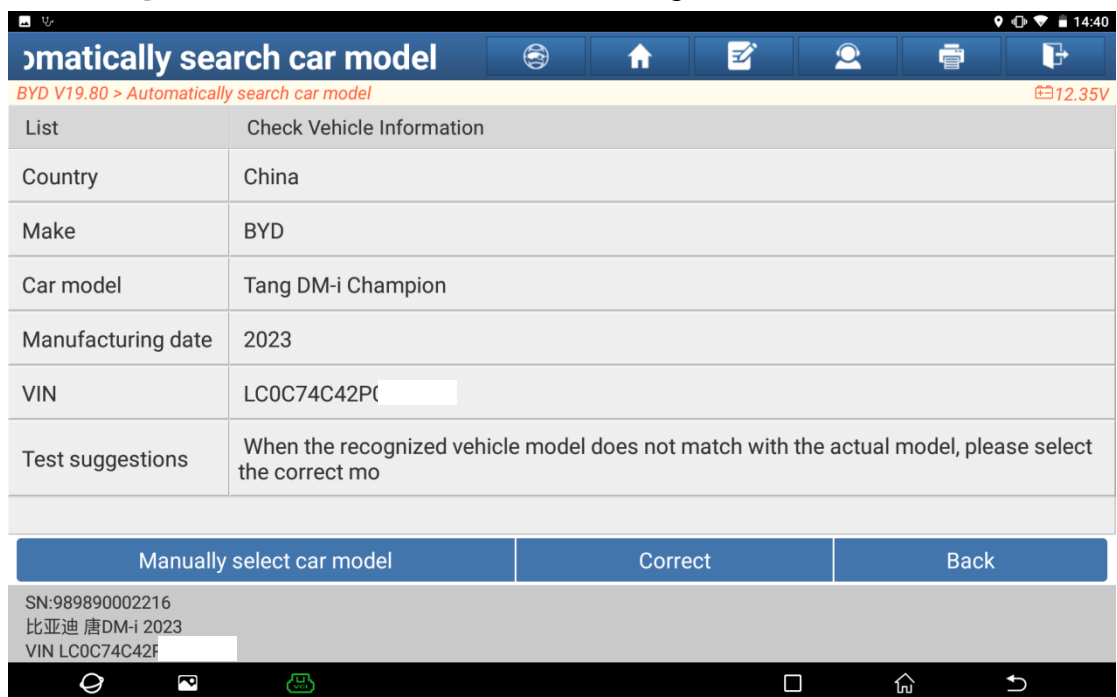
1. On an X-431 PAD 5, choose [Intelligent Diagnose] to identify the correct model, and then choose [Diagnostic].



2. Choose [Automatically search car model].



3. Determine whether the identified model is consistent with the actual model. If they are consistent, click [Correct]. Otherwise, click [Manually select car model] to select the correct model for testing.



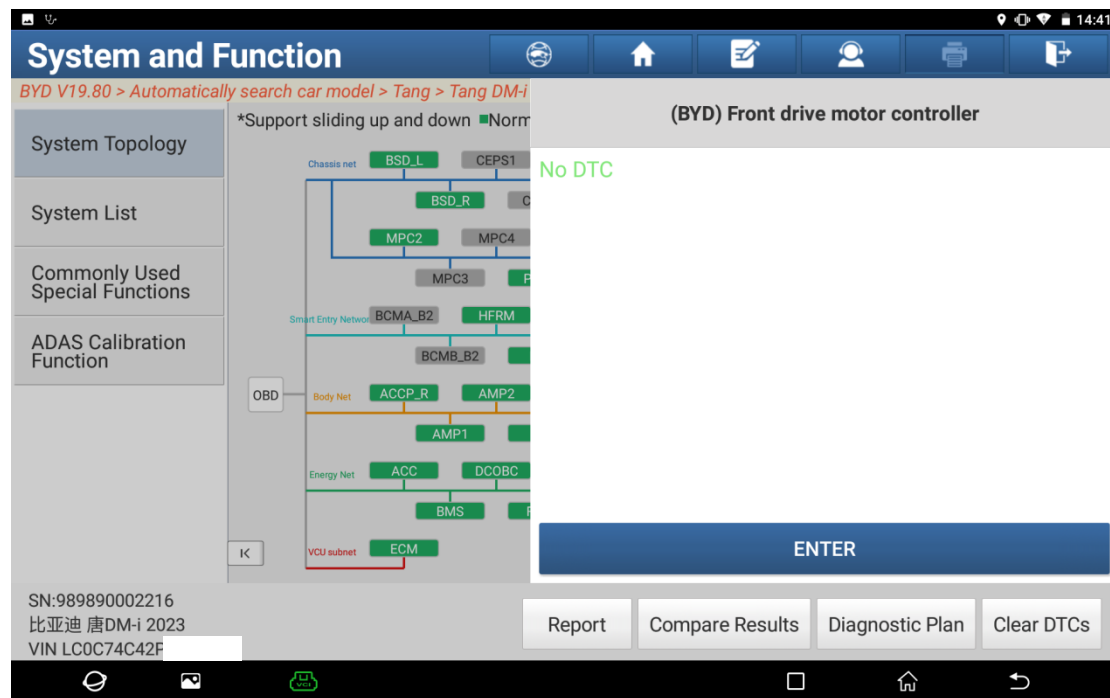
4. Click [High-speed Scan].

The screenshot shows the 'System and Function' diagnostic tool interface. The top bar displays the car model 'BYD V19.80' and the search path 'Automatically search car model > Tang > Tang DM-i Champion'. The network topology diagram is visible, showing various components connected to different networks: Chassis net, Smart Entry Network, Body Net, Energy Net, and VCU subnet. The 'High-speed Scan' button is highlighted in the bottom navigation bar.

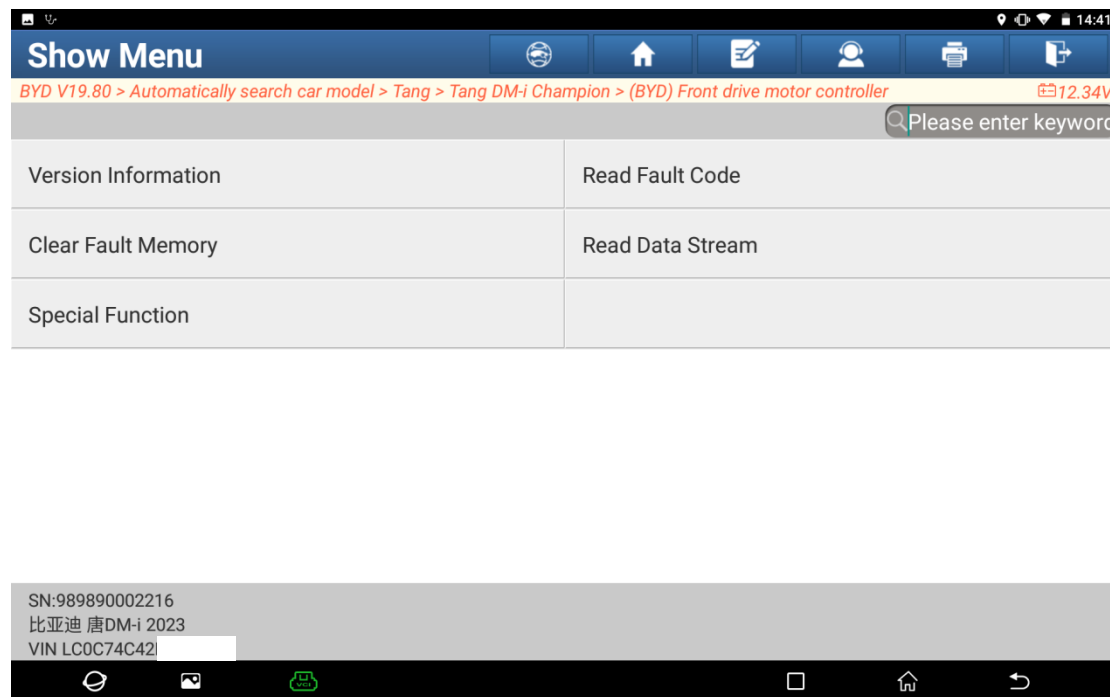
5. The entire vehicle systems are scanned out. Choose [FMCU] (BYD) front drive motor controller (FMCU\_BYD).

The screenshot shows the 'System and Function' diagnostic tool interface after a scan. The network topology diagram is visible, showing various components connected to different networks. The components are now mostly green, indicating they have been scanned. The 'High-speed Scan' button is no longer highlighted, and the bottom navigation bar now shows buttons for 'Report', 'Compare Results', 'Diagnostic Plan', and 'Clear DTCs'.

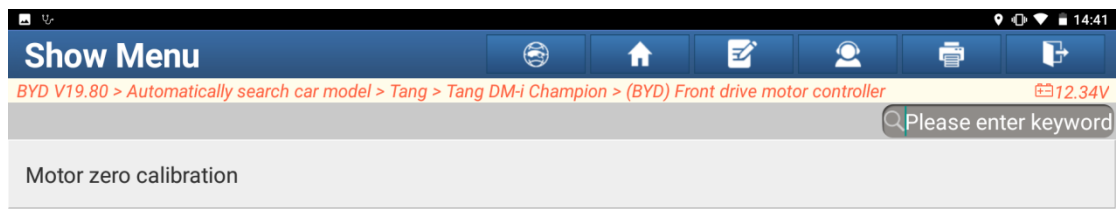
6. Click [ENTER].



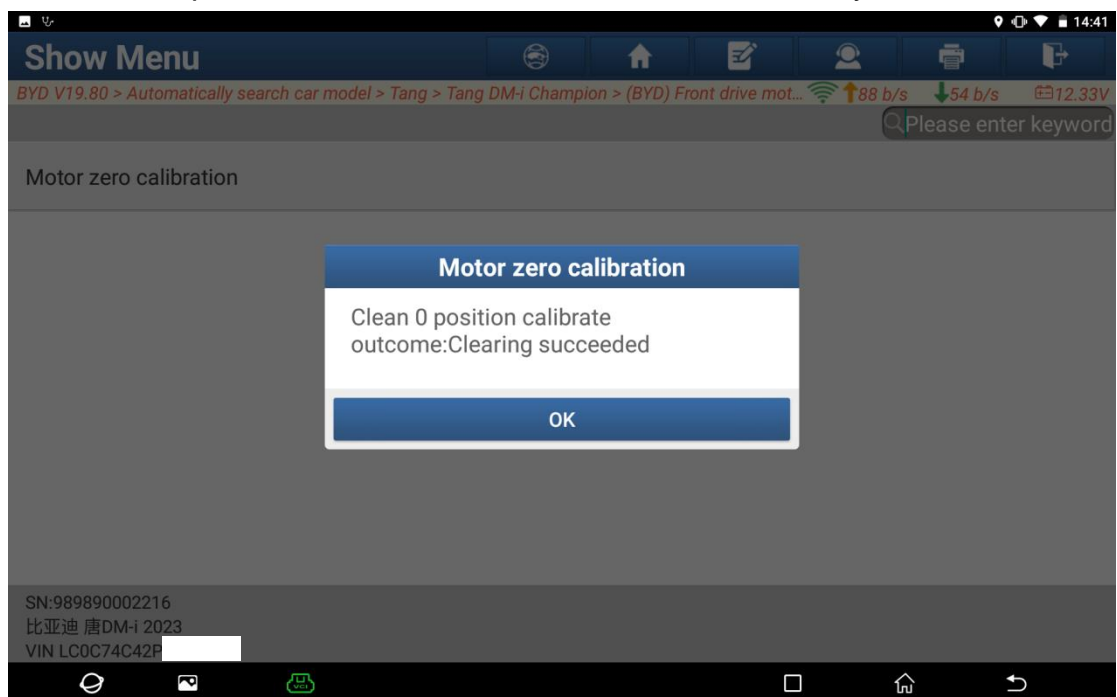
7. Click [Special Function].



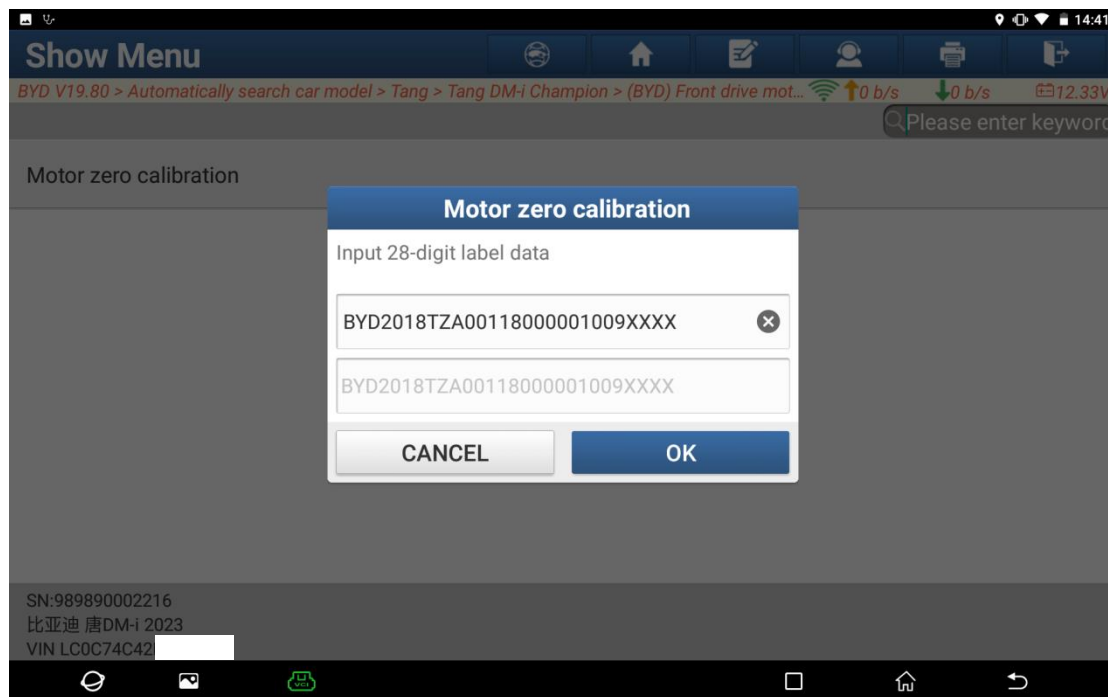
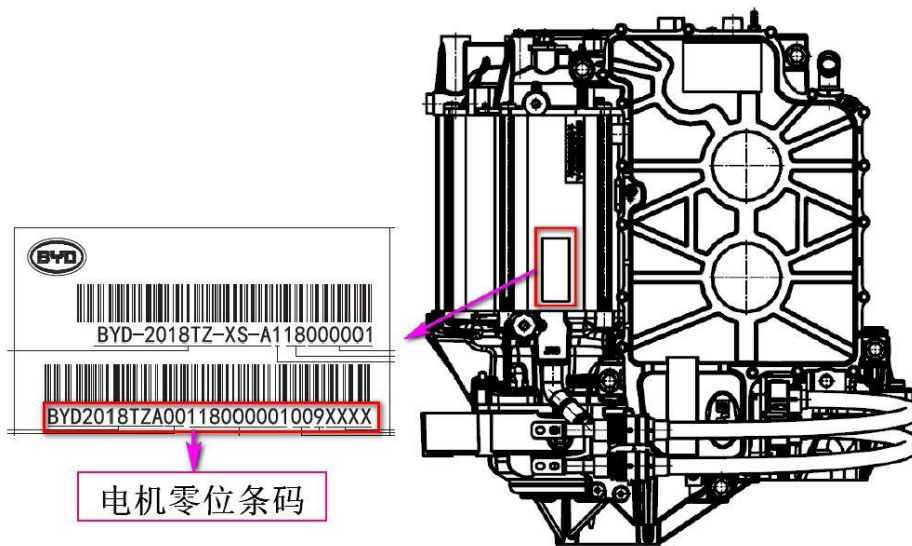
8. Click [Motor zero calibration].



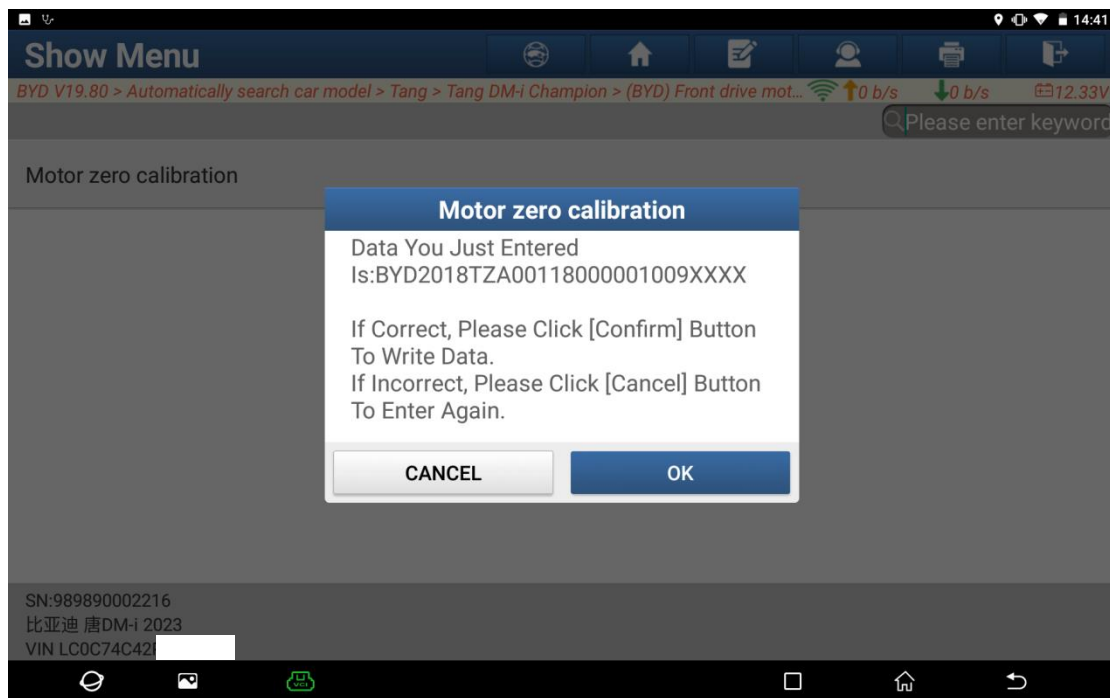
9. The zero position calibration value is cleared successfully. Click OK.



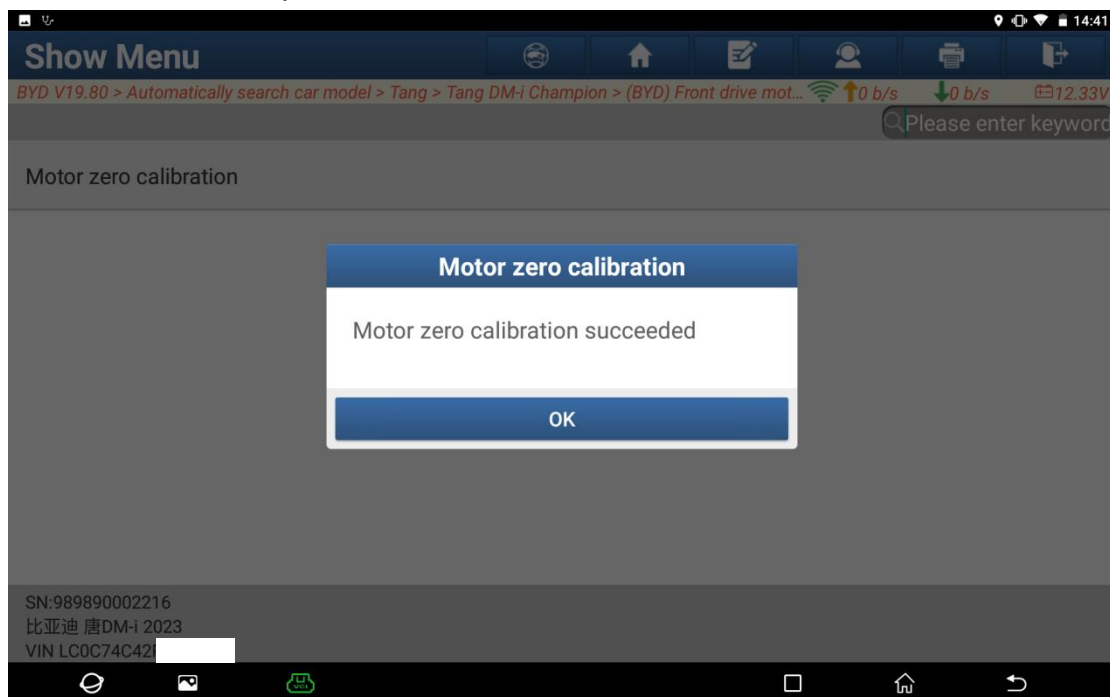
- 10. Record the 28-digit motor zero position bar code on the motor and enter it. Then, click OK.



11. After confirming that it is correct, click OK.



12. The motor zero position calibration is successful. Click OK to exit.



## Statement:

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