Nissan SYLPHY B18 2024 Deceleration G Sensor Calibration

Tested Model: Nissan SYLPHY B18 2024

Function Description:

1. Deceleration G sensor calibration is used to correct the zero-point offset of the deceleration G sensor. By relearning the sensor output value while the vehicle is stationary on a level surface, this function eliminates zero-point errors caused by sensor manufacturing tolerances, mounting deviations, ambient temperature drift and other factors, thereby ensuring accurate deceleration calculations and reliable ABS system control strategies.
2. This calibration must be performed in a perfectly level environment after operations such as deceleration G sensor replacement, ABS/ESP control module replacement or updates, chassis suspension repairs, or wheel alignment adjustments. It corrects sensor reference offset issues to ensure the proper functioning of the braking control system.
3. When the diagnostic tool reads a DTC related to the deceleration G sensor (such as "G sensor not calibrated") and other peripheral issues have been ruled out, this function must be executed to calibrate the sensor reference point and ensure normal system operation.
4. This calibration function is required when functional faults occur (such as the ABS warning light illuminating, hill descent control failure, or abnormal ABS intervention during emergency braking), and other braking components have been confirmed to be functioning correctly. It resolves system logic errors caused by inaccurate G sensor signals.

Supported Equipment: Launch PRO or PAD series comprehensive diagnostic equipment

Attention:

1. The deceleration G sensor calibration must be performed on a perfectly level surface (such as a wheel alignment platform) with the vehicle completely unloaded.
2. Ensure that the steering wheel is centered, the transmission is in Neutral (or Park), and the parking brake is engaged so the vehicle is

completely stationary. It is also recommended to place wheel chocks in front of and behind the wheels to prevent accidental vehicle movement.

3. Keep the ignition switch ON and turn off all electrical accessories (e.g., A/C, headlights); ensure that the voltage is sufficient and stable during the procedure.
4. Ensure that the accelerator and brake pedals are fully released while the function is being executed.

Procedure:

1. On an X-431 PRO3S+, follow the steps shown in Figure 1 to Figure 3: Choose [Local Diagnose], choose [NISSAN], and then click “OK“ to enter the Nissan vehicle model menu interface (Figure 4).

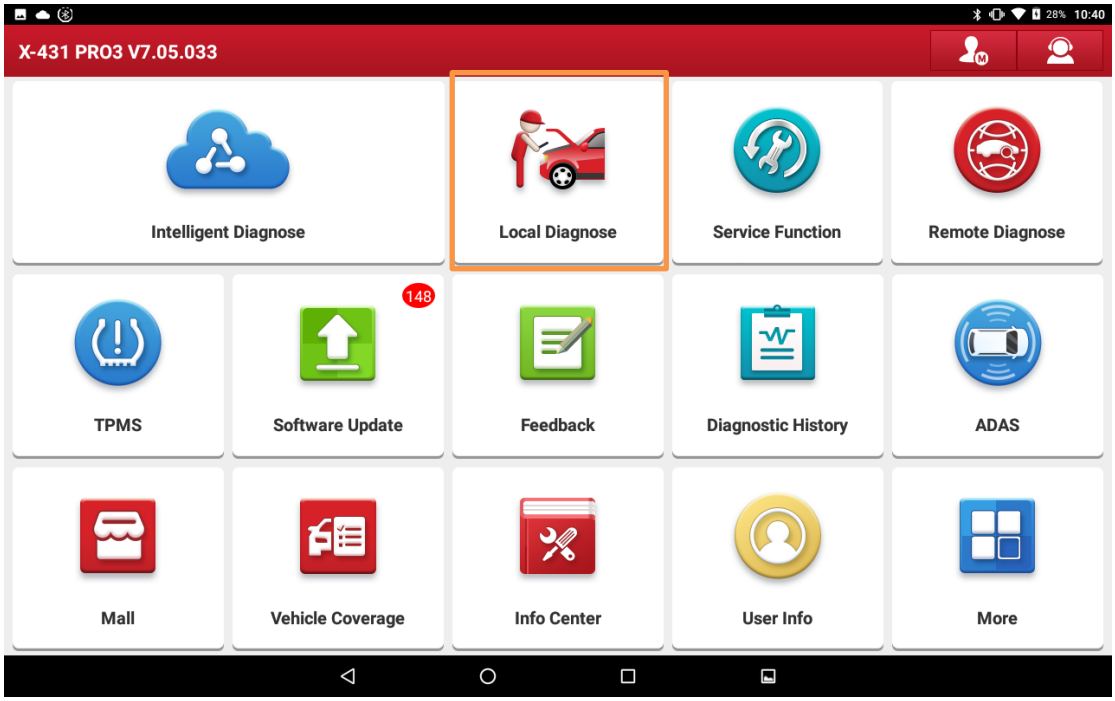

Figure 1

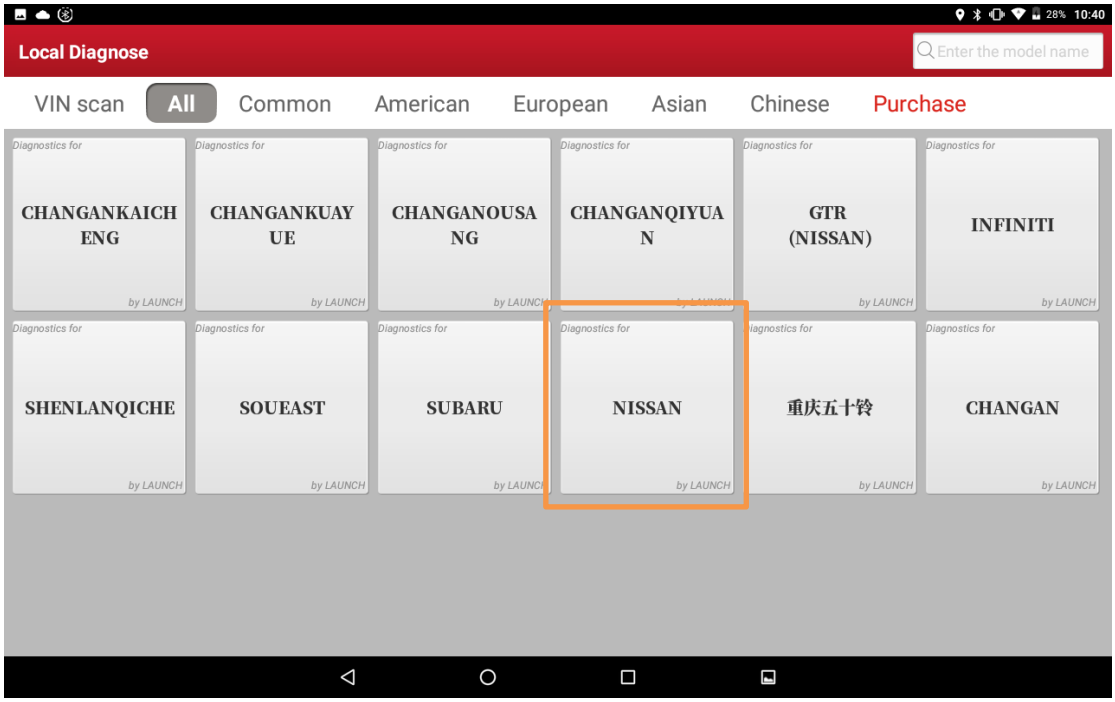

Figure 2

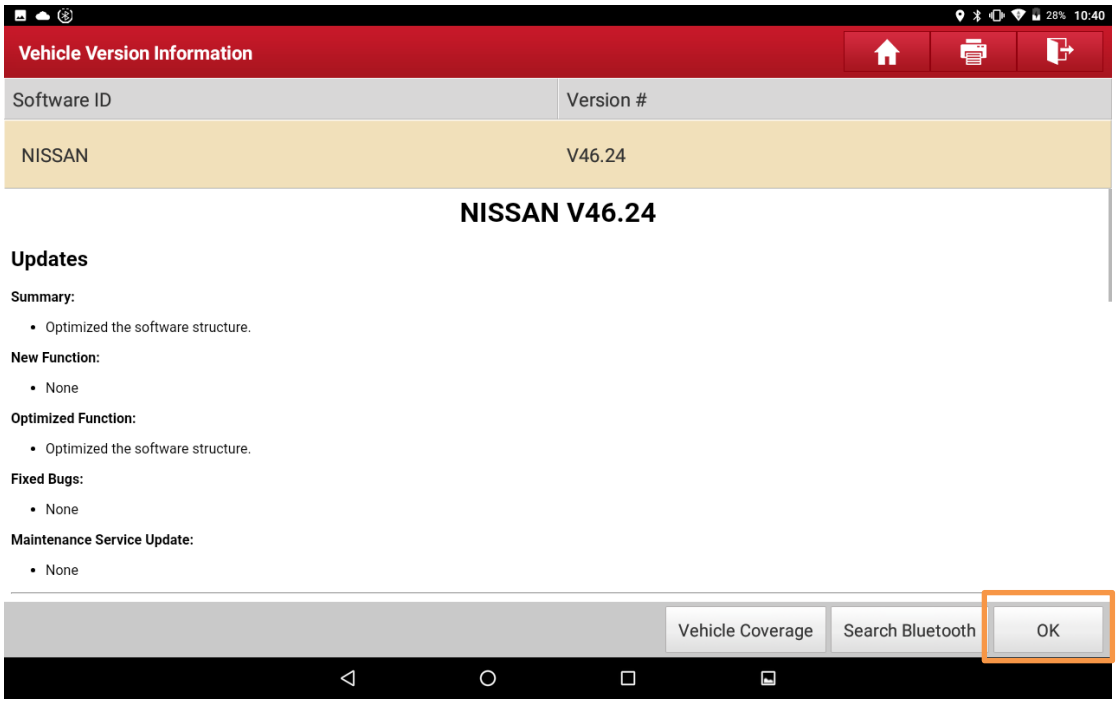

Figure 3

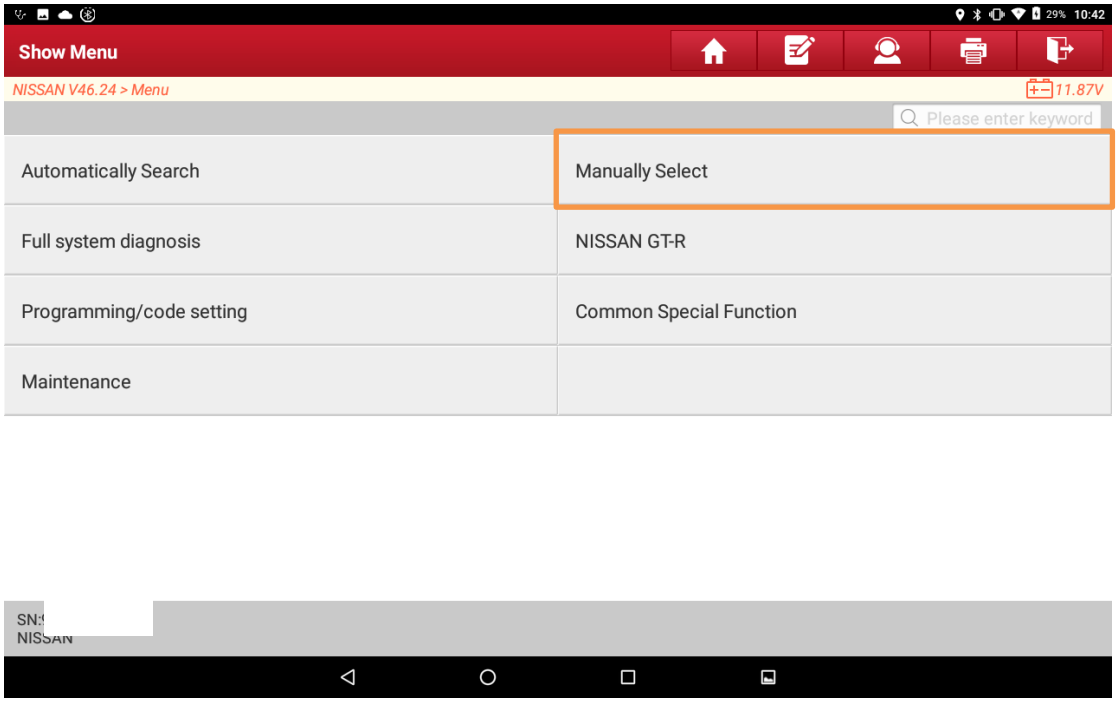

Figure 4

2. Click [Manually Select], and choose [Far East] > [People's Republic of China] > [SYLPHY] > [B18] > [12/2024] to enter the vehicle model system interface (Figure 5).

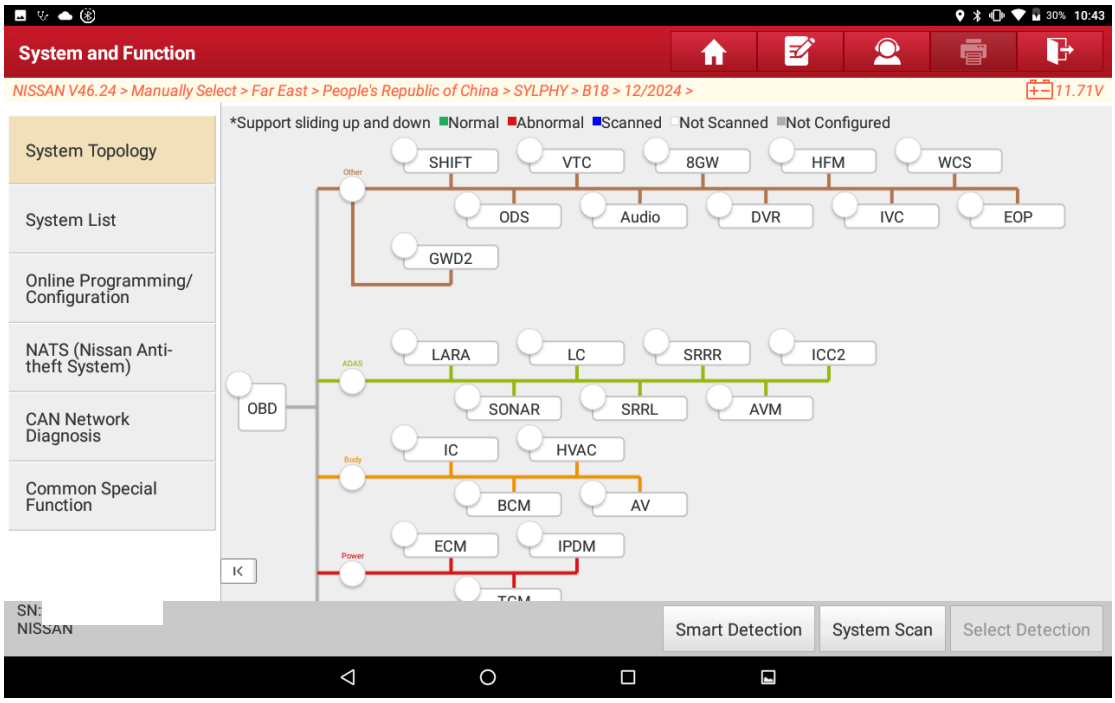

Figure 5

3. On the vehicle model system interface (Figure 6), click [Smart Detection].

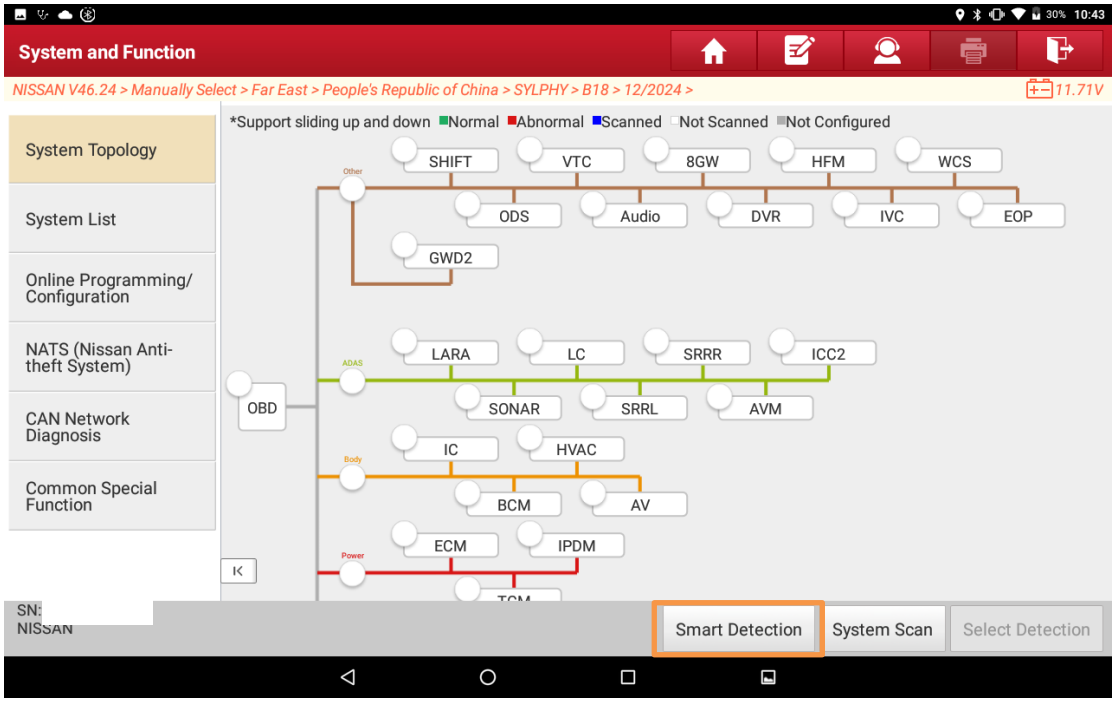

Figure 6

4. After the detection is completed, click [ABS] on the system topology (Figure 7) to display ABS DTC information (Figure 8 and Figure 9). If fault information similar to that in Figure 8 and Figure 9 is read out, and other peripheral issues have been ruled out, it indicates that the deceleration G sensor calibration needs to be executed.

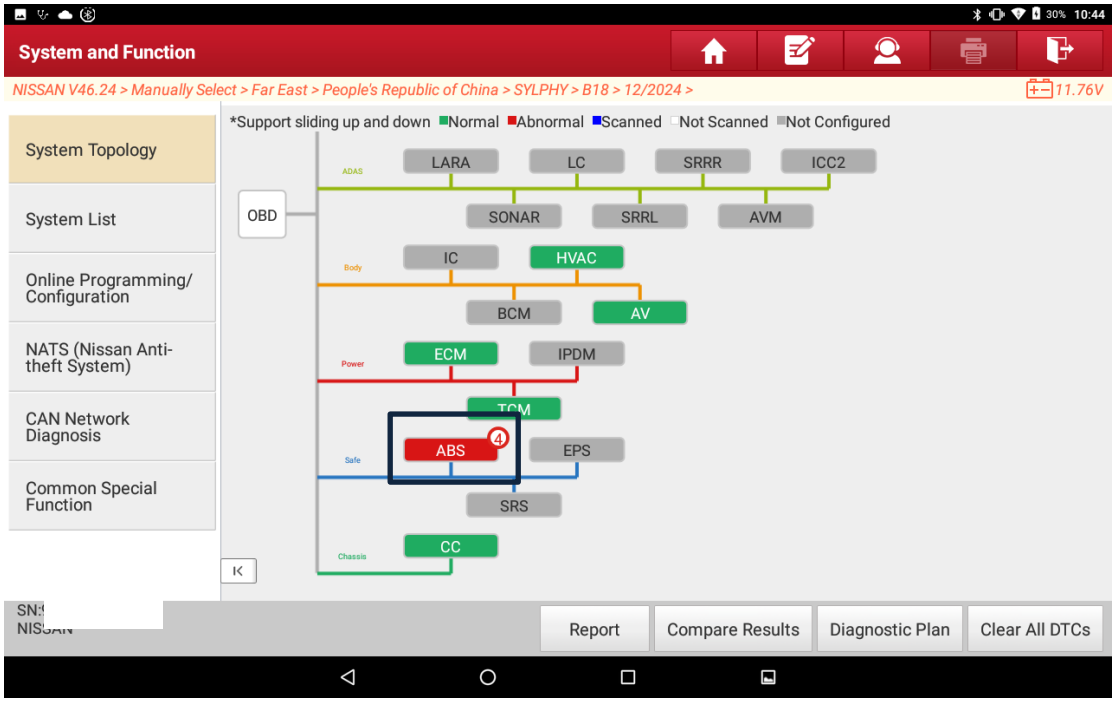

Figure 7

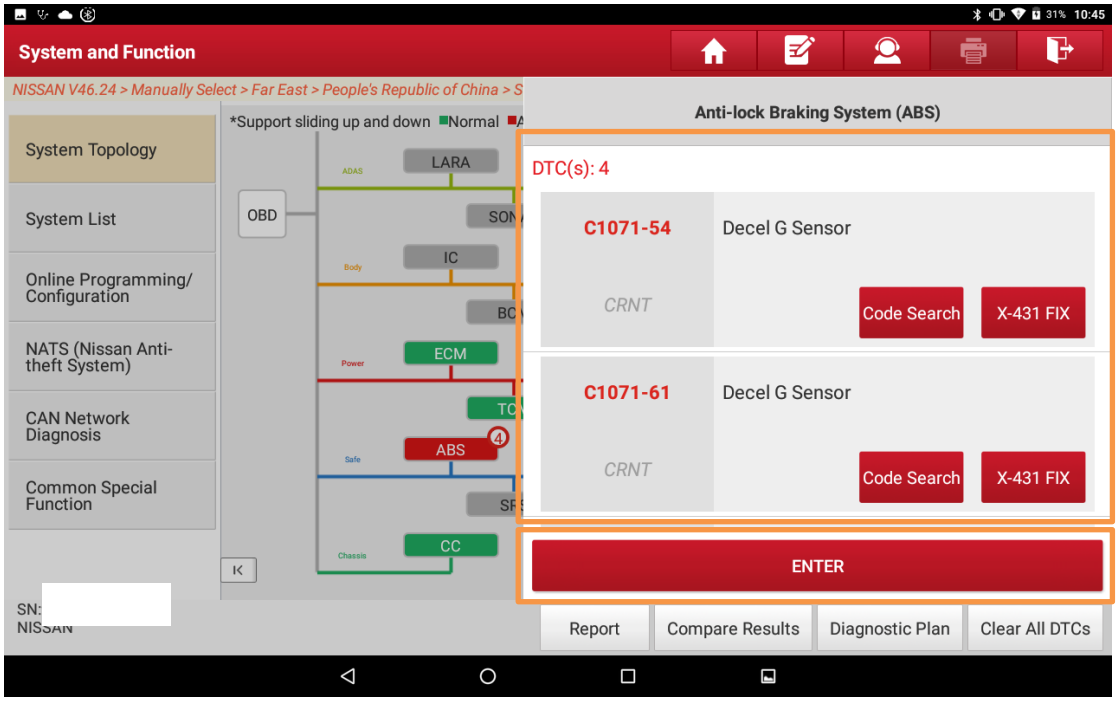

Figure 8

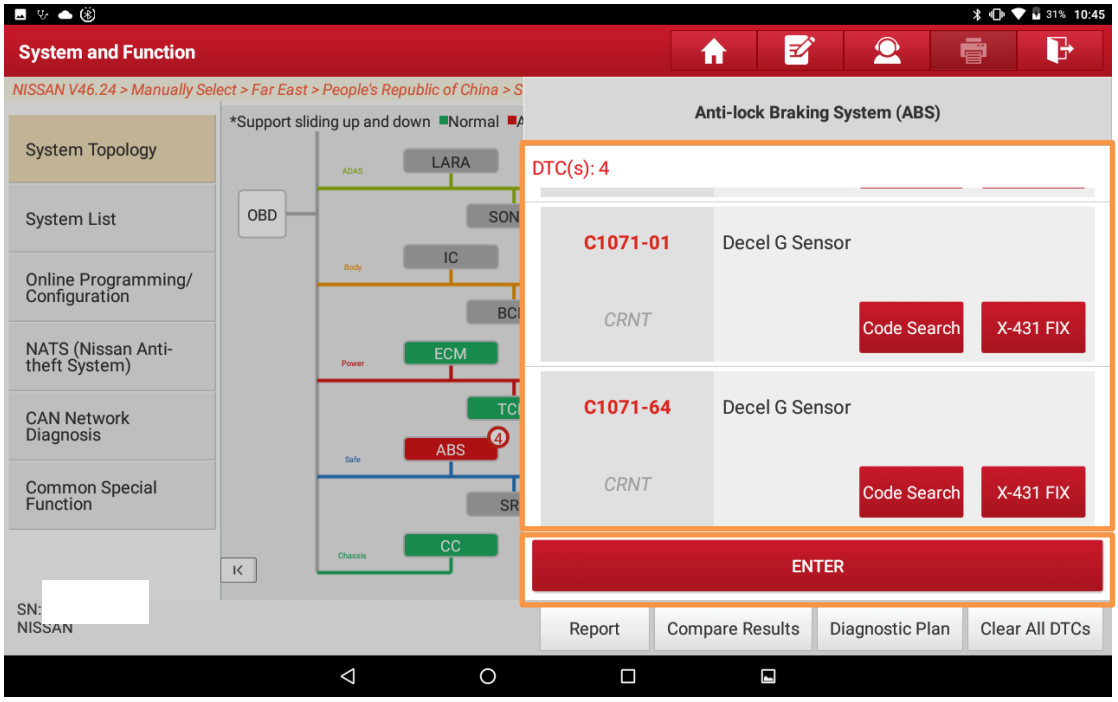

Figure 9

5. Click “ENTER“ to enter the ABS menu interface (Figure 10).

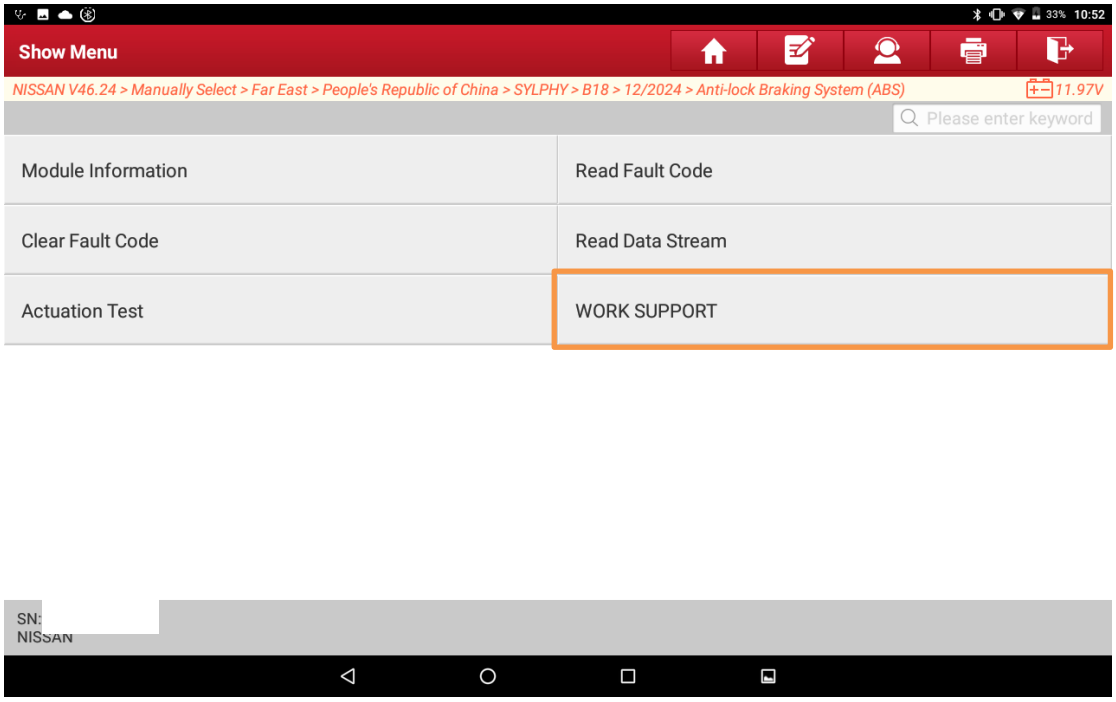

Figure 10

6. Click [WORK SUPPORT] to enter the [WORK SUPPORT] menu interface. On this interface, choose [Deceleration G Sensor Calibration] (Figure 11).

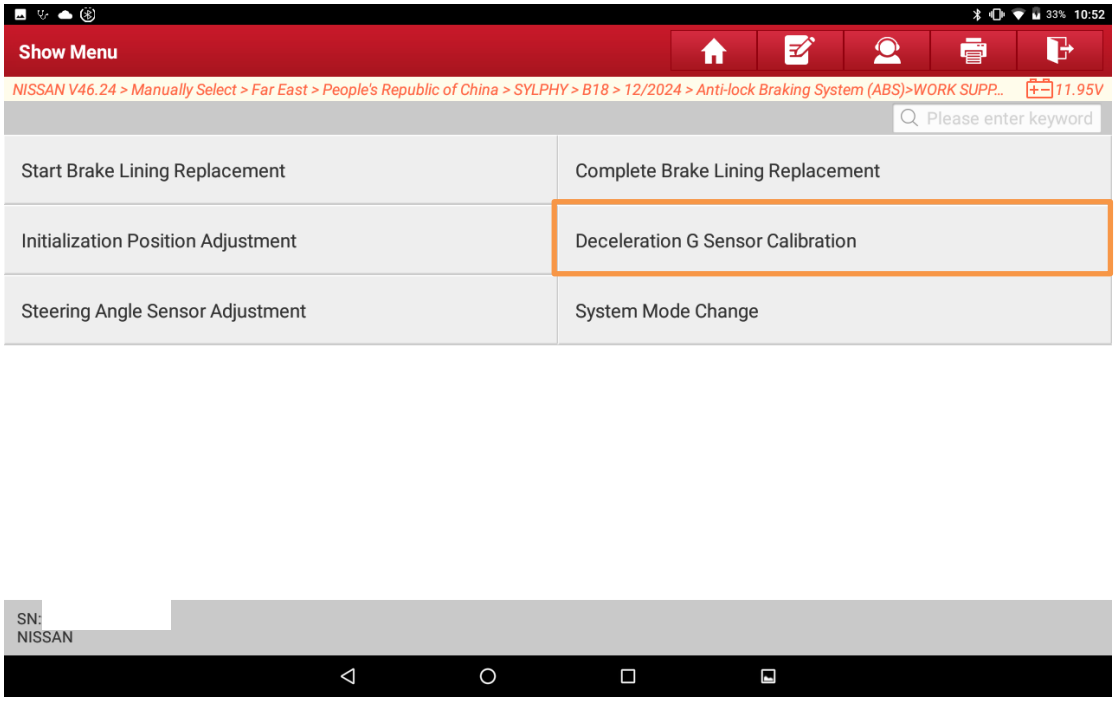

Figure 11

7. Carefully read the prompts, place the vehicle on a perfectly level surface (such as the lift platform of a four-wheel aligner), and touch "Start" to initiate the deceleration G sensor calibration function (Figure 12).

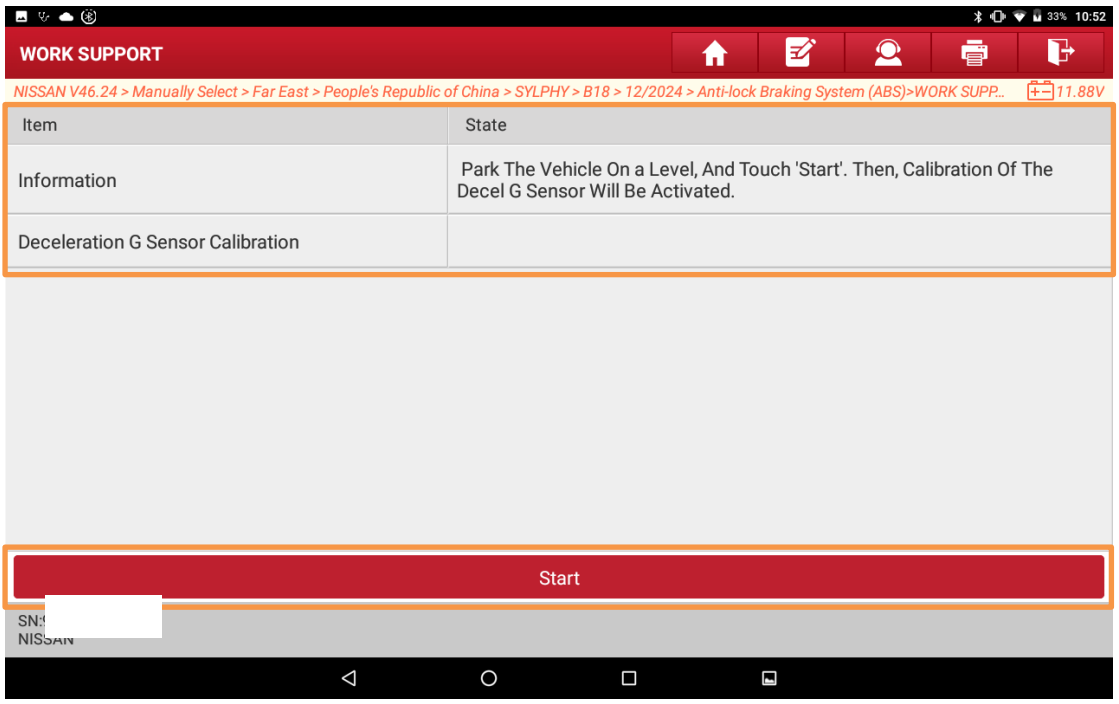

Figure 12

8. After a short wait, the status bar will display "Command Ended," indicating that the calibration is completed. Click “End” (Figure 13) to return to the [WORK SUPPORT] menu interface (Figure 14).

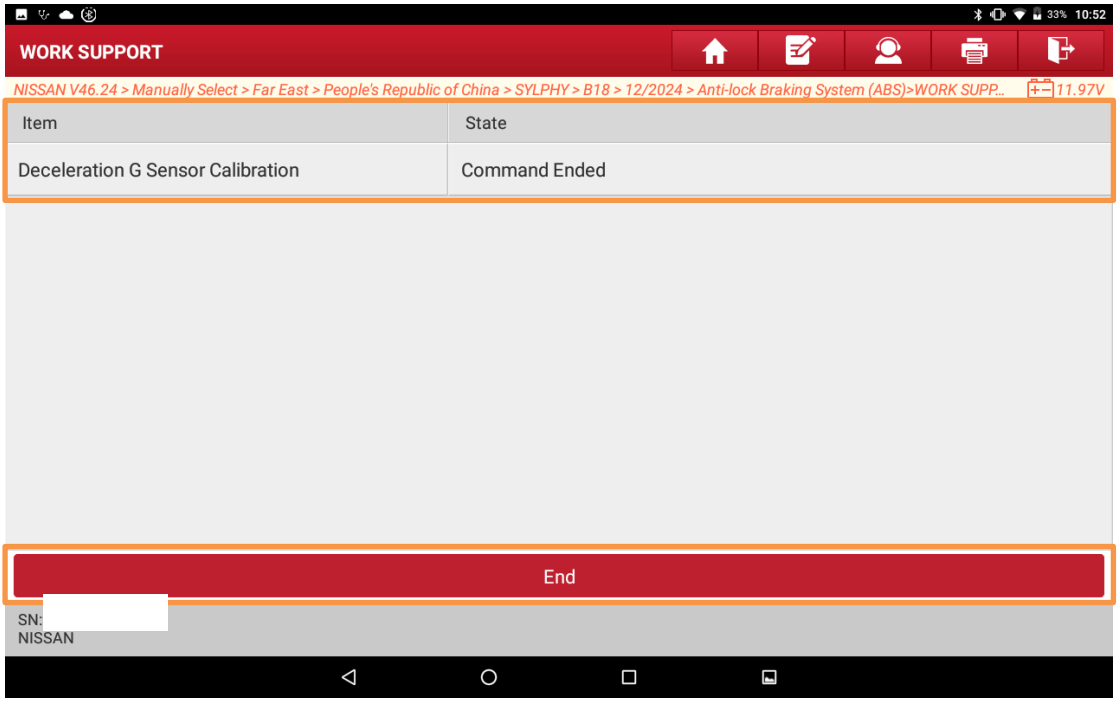

Figure 13

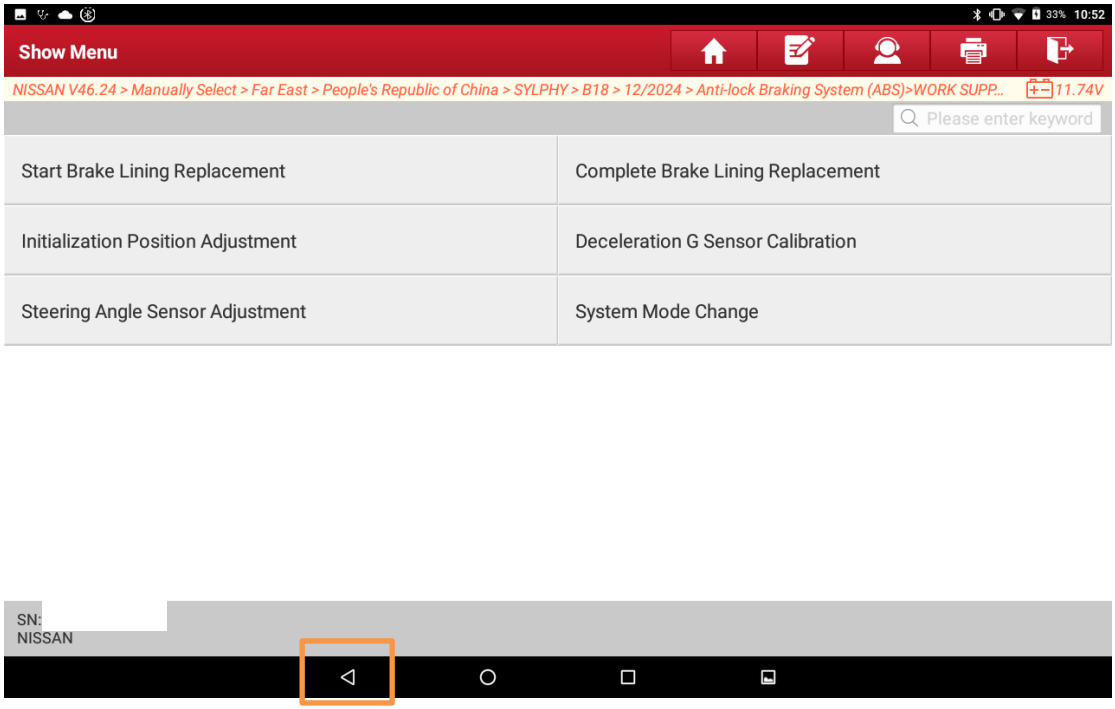

Figure 14

9. Exit to the ABS menu interface (Figure 10), click [Clear Fault Code] (Figure 15), click “Yes”, and then click “OK“ to clear the DTC information.

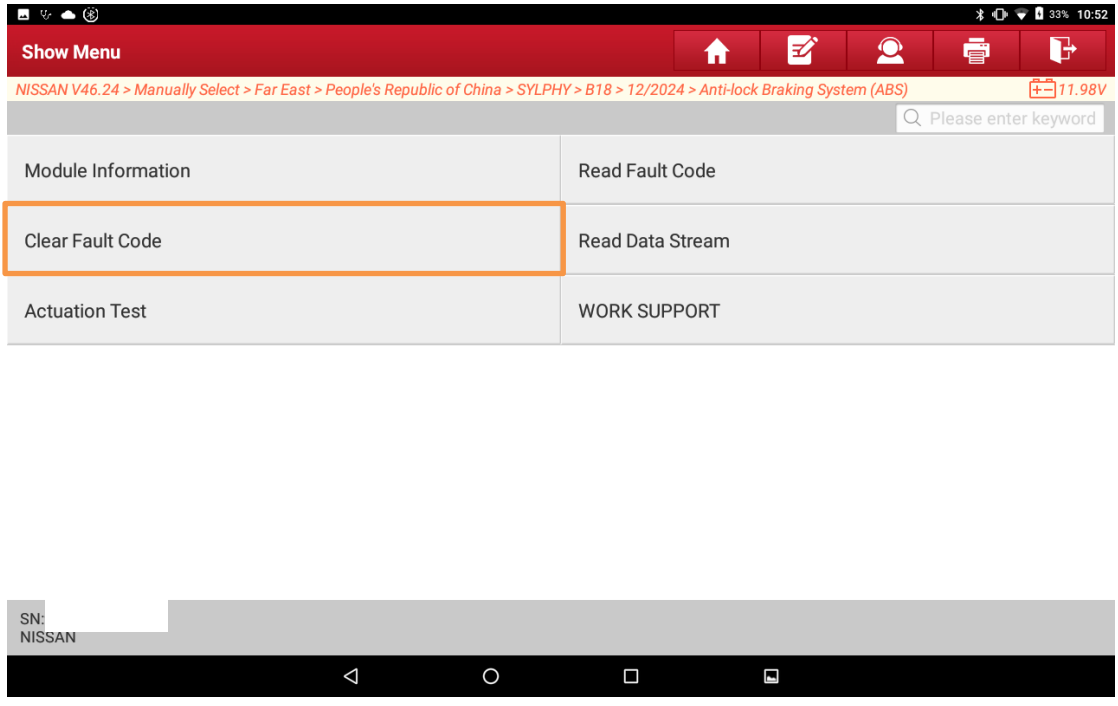

Figure 15

10. On the ABS menu interface, click [Read Fault Code] (Figure 16) to read the ABS DTC information. No DTC is displayed (Figure 17), indicating that the deceleration G sensor calibration function is executed successfully. The special function operations are now completed.

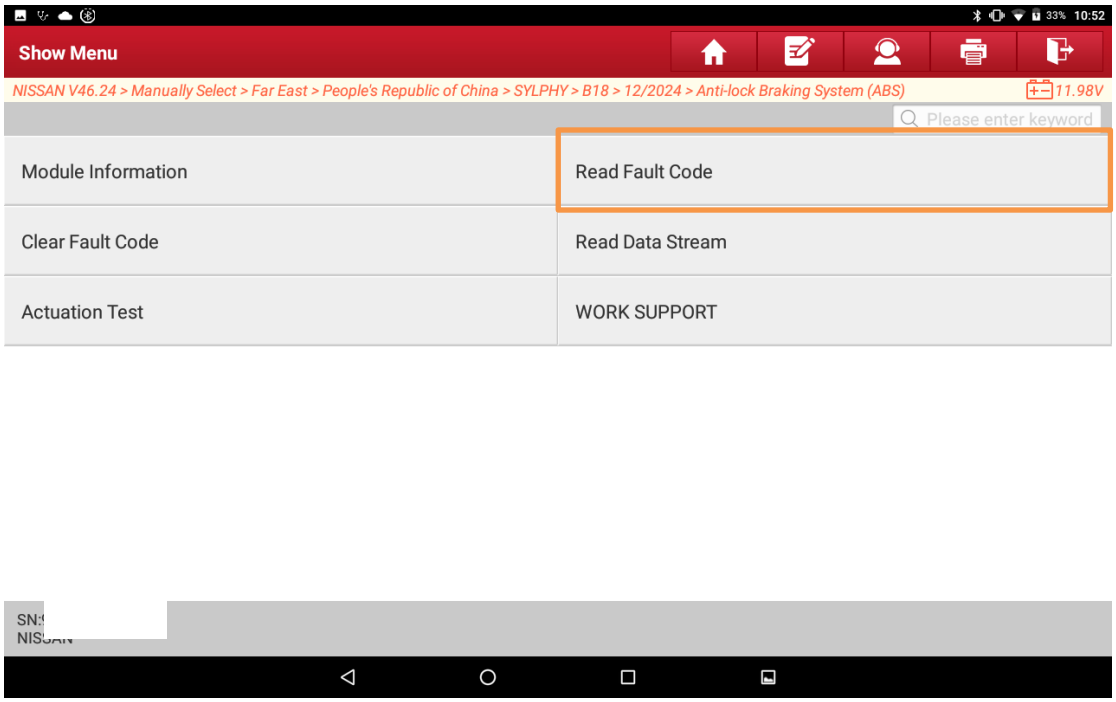

Figure 16

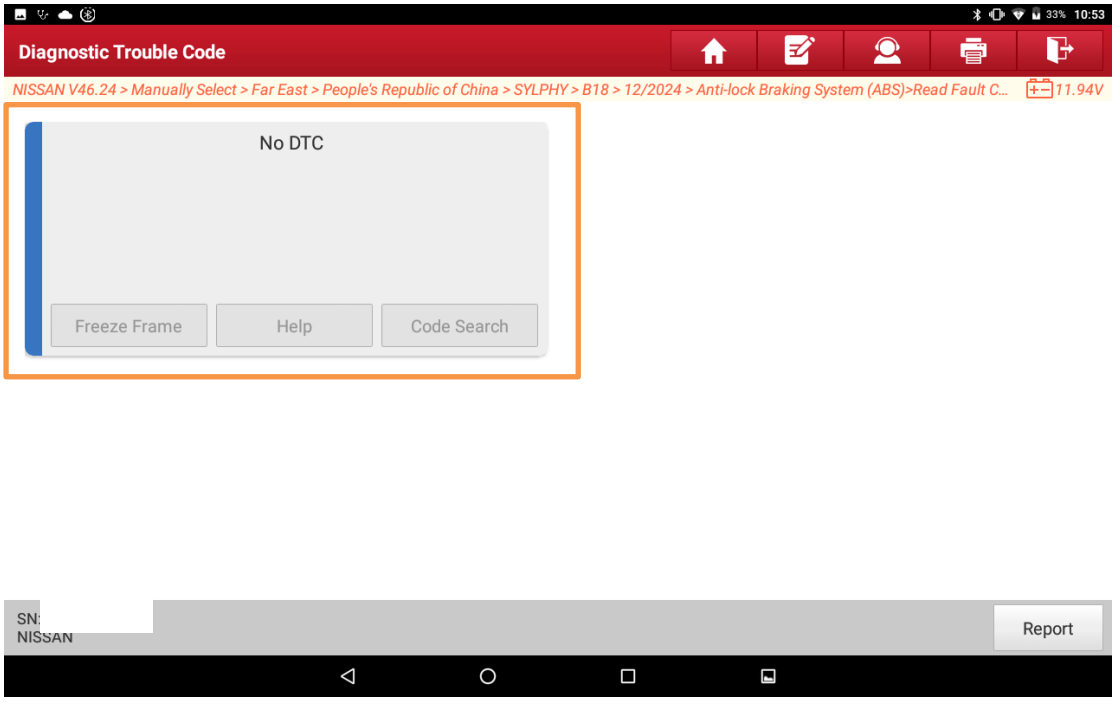

Figure 17

Statement: