

HONDA VSA Neutral Position Memorization Procedure

Launch Software (Shenzhen) Company Limited Xiangjun.Feng(Engineer)

Vehicle Stability Assist (also called for VSC in Toyota, DSC in BMW, ESP of Bosch in VW and Mercedes) is an active security system based on ABS. This system can brake anyone wheel independently via vehicle state detected when the vehicle is turning at high speed, to prevent from side tumbling caused by over or less turning, so make the vehicle more security. After replacing the ECU or sensors of this system, it is necessary to set the neutral position of the sensor. Here we discuss how to adjust neutral position for HONDA VSA with X-431.

Honda has two kinds of ABS ECU. Select "ABS" after entering system menu selection, and then perform "ABS ECU Information" or "Version Information". See Figure 1 and Figure 2.

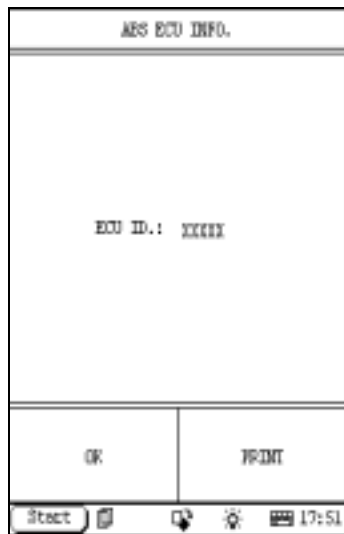


Figure 1

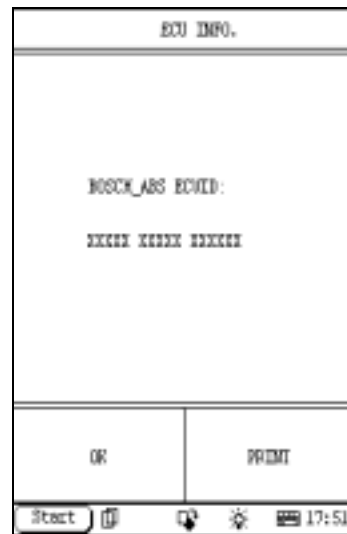


Figure 2

The adjustment procedure is different as different conditions.

1. HONDA ECU Neutral Position Adjustment

Select "All Sensors Adjustment" after entering function menu, (Not all the Honda models have this function, only the ones with VSA have). See Figure 3. After clicking, see the adjustment conditions and objects as shown in Figure 4.



Figure 3

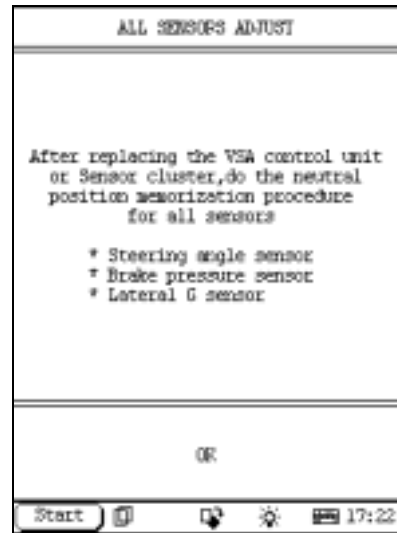


Figure 4

It is necessary to check trouble codes before performing this function. This function can not be performed if other trouble codes are present except 84-1 (sensor logic fault). Firstly, clear the trouble codes, and then perform this function. If you don't replace ECU or sensor cluster of VSA, you should not perform this function. If all the conditions as shown in Figure 4 are met, press **[OK]**. See Figure 5. If the conditions as shown in Figure 5 are met, press **[OK]**. See Figure 6.



Figure 5

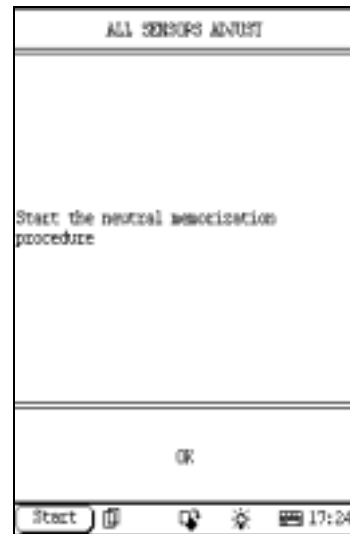


Figure 6

Press **[OK]** to enter adjustment procedure as shown in Figure 7. Please don't press any button and wait for a while. If the operation failed as shown in Figure 8, check DTC and other conditions. Repeat this operation when all the conditions are met.

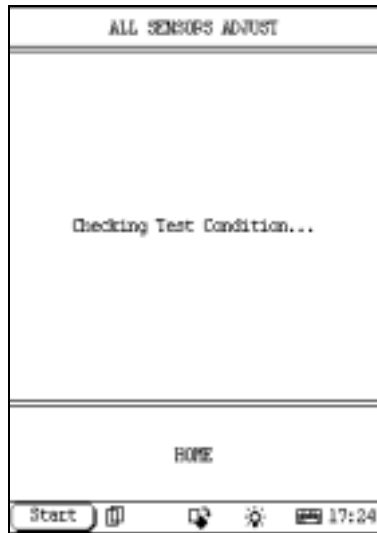


Figure 7

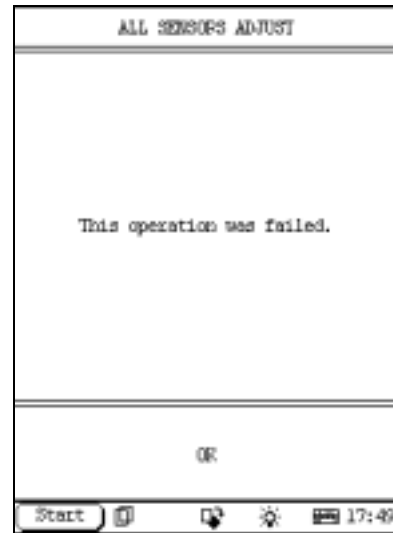


Figure 8

If the operation succeeded as shown in Figure 9, press [OK]. X431 will pop up "Turn ignition switch OFF".

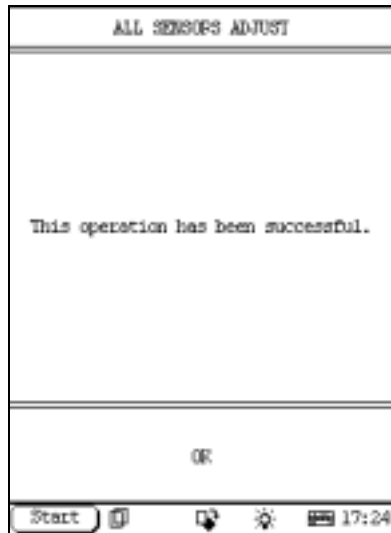


Figure 9

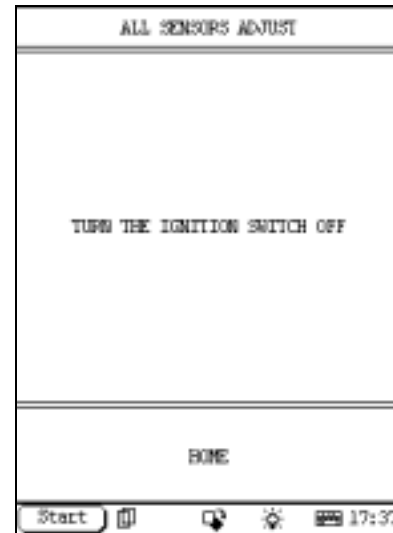


Figure 10

X431 will pop up "Turn ignition switch ON" as shown in Figure 11. And then turn ignition switch on. Till now, the operation of adjustment function is completed.

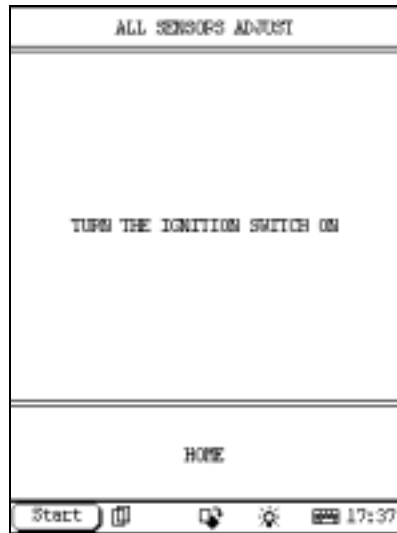


Figure 11

2. Rewrite Neutral Position of VSA BOSCH ECU

Enter the function menu as shown in Figure 12, and click "NEUTRAL REWRITING". X431 will display "Turn the front wheels to forward direction". After turning the steering wheel to forward direction, please press [OK].

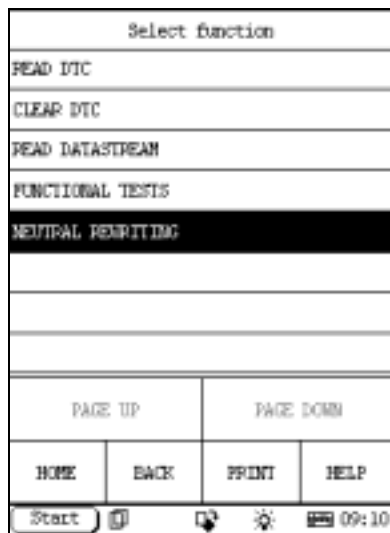


Figure 12

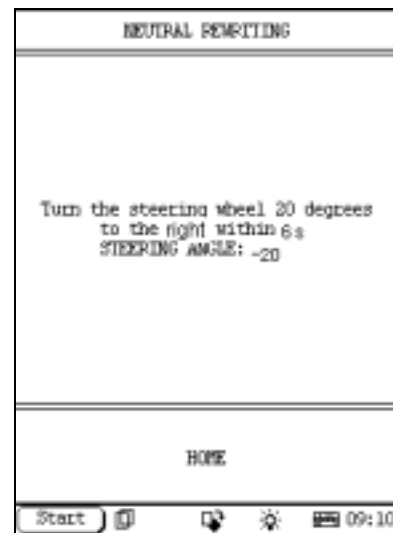


Figure 13

The X431 will display that the functional test is invalid as shown in Figure 14 if you don't turn the steering wheel right 20° in 6 seconds. Please repeat this operation. If the steering angle is over 20° , see Figure 15.

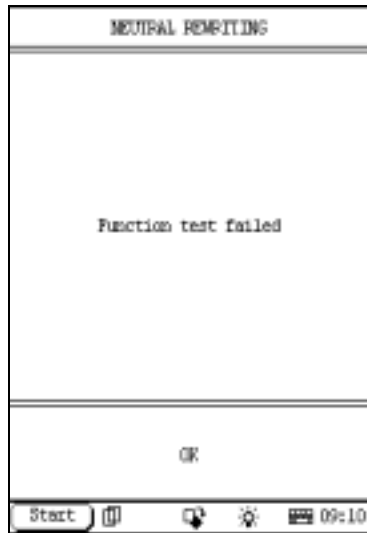


Figure 14

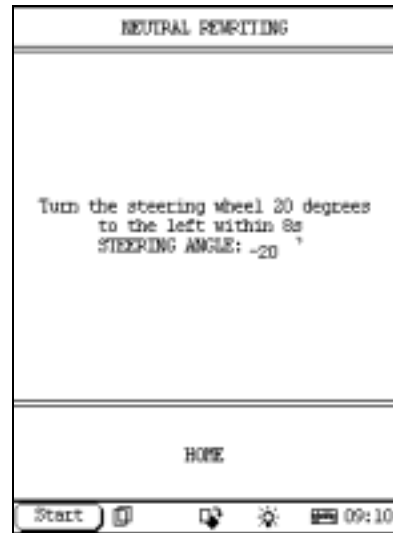


Figure 15

X431 will display that the functional test is invalid if you don't turn steering wheel left 20° in 8 seconds. Please repeat this operation. If the steering angle is less than -20°, see Figure 16. If you turn the wheels to forward direction in 12 seconds and steering angle is 0°, the adjustment is completed. Till now, setting neutral position is completed.

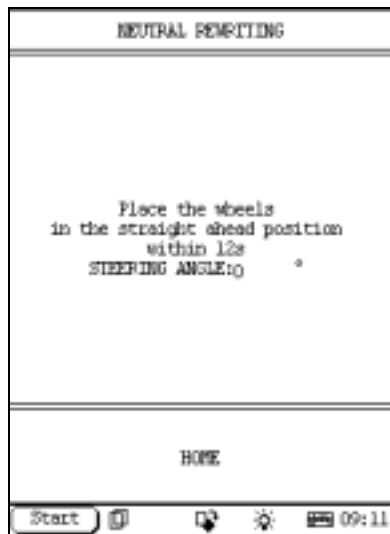


Figure 16



Figure 17

Repeat this operation if it displays that the functional test is invalid.

Notes:

- 1) The function menu in X-431 is described with "".
- 2) The button in X-431 is described with [].