

## **D - ADJUSTMENTS - VR6**

### **Article Text**

1993 Volkswagen Passat

For Volkswagen Technical Site: <http://vw.belcom.ru>

Copyright © 1998 Mitchell Repair Information Company, LLC

Wednesday, March 22, 2000 10:04PM

## **ARTICLE BEGINNING**

1993 ENGINE PERFORMANCE

On-Vehicle Adjustments

Passat GLX 2.8L VR6

## **ENGINE MECHANICAL**

Before performing any on-vehicle adjustments to fuel or ignition systems, ensure engine mechanical condition is okay.

## **VALVE CLEARANCE**

NOTE: All models use hydraulic lifters. No adjustments are required.

## **IGNITION TIMING**

NOTE: See ENTERING SELF-DIAGNOSTICS in the G - TESTS W/CODES article in this section for additional scan tester operating instructions.

## **VR6 IGNITION TIMING**

Passat GLX (2.8L)

1) Start and warm engine to normal operating temperature. Ensure engine oil temperature is 176°F (80°C). Ensure A/C and electrical loads are off, including cooling fan.

2) Connect engine analyzer to engine. Connect Scan Tester (VAG 1551) to Data Link Connectors (DLC) located in center console, in front of shift lever. Ensure no Diagnostic Trouble Codes (DTC) are stored.

3) Ensure throttle position sensor is properly adjusted. Ensure idle air control valve is okay. Valve must vibrate or hum. Connect CO tester using Adapter (VAG 1363/3) on CO tap tube. DO NOT remove oxygen sensor. Ensure exhaust system has no leaks.

4) Start engine and let it run at closed throttle (less than 1500 RPM). Operate scan tester and observe display. Press "1" button to select RAPID DATA TRANSFER function. Press "Q" button to enter input. Press right arrow button.

5) Press "0" and "1" buttons to select ENGINE ELECTRONICS function. Press "Q" button to enter input. Press right arrow button, then "0" and "4" buttons to select BASIC SETTING function. Press "Q" button to enter input.

6) Press "0" and "1" buttons to select INPUT DISPLAY GROUP NUMBER 01. Press "Q" button to enter input. Scan tester will display SYSTEM IN BASIC ADJUSTMENT 1 through 4. Briefly increase engine speed and then let it run for 2 minutes at closed throttle. Scan tester displays idle speed in field one and ignition timing in field four. Check CO level on CO tester.

## **D - ADJUSTMENTS - VR6**

### **Article Text (p. 2)**

1993 Volkswagen Passat

For Volkswagen Technical Site: <http://vw.belcom.ru>

Copyright © 1998 Mitchell Repair Information Company, LLC

Wednesday, March 22, 2000 10:04PM

7) When radiator cooling fan stops running, end basic setting function by pressing right arrow button. Press "0" and "6" for END OUTPUT function. Press "Q" button to enter input.

8) If idle speed, CO level or ignition timing is incorrect, turn ignition off. Check accelerator pedal and throttle cable for ease of operation. Check dashpot adjustment. Check throttle position sensor, idle air control valve, and EGR valve.

### **IDLE SPEED & MIXTURE**

NOTE: Mixture adjustment is NOT a part of normal tune-up procedure and should not be performed unless mixture control unit is replaced or vehicle fails emissions testing.

NOTE: Ensure fuel system pressure is correct before attempting idle speed or mixture adjustment.

### **VR6 IDLE SPEED & MIXTURE ADJUSTMENT**

Passat GLX (2.8L)

See VR6 IGNITION TIMING under IGNITION TIMING above in this article.

### **THROTTLE BODY**

#### **THROTTLE BODY ADJUSTMENT**

CAUTION: Throttle limiting (stop) screw is set by manufacturer and should NOT be moved. If screw is accidentally turned, perform throttle body adjustment.

If stop screw for basic throttle adjustment has been moved, replace throttle body.

### **DASHPOT**

Passat GLX (2.8L)

Open and close throttle until dashpot piston contacts roller. With throttle in this position, check gap between limiter (stop) screw and throttle. Gap between limiter (stop) screw and throttle lever must be 0.10-0.14" (2.5-3.5 mm).

### **IDLE & FULL THROTTLE SWITCHES**

#### **THROTTLE POSITION (TP) SENSOR ADJUSTMENT**

Passat GLX (2.8L)

1) Connect Scan Tester (VAG 1551) to Data Link Connectors (DLC) located in center console, in front of shift lever. Turn ignition on. Operate scan tester and select RAPID DATA TRANSFER, ENGINE ELECTRONICS, then READ MEASURING VALUE BLOCK functions.

## **D - ADJUSTMENTS - VR6**

### **Article Text (p. 3)**

1993 Volkswagen Passat

For Volkswagen Technical Site: <http://vw.belcom.ru>

Copyright © 1998 Mitchell Repair Information Company, LLC

Wednesday, March 22, 2000 10:04PM

2) Press "0" and "3" buttons to select INSERT DISPLAY GROUP NUMBER 03 function. Press "Q" button to enter input. Slowly open throttle, while observing display in channel 3, until throttle is wide open. Numerical value must increase uniformly over entire opening range and without interruption.

3) Reading should be 5-19 at idle. Reading should be 94-100 at full throttle stop. If readings are correct, press right arrow button. Press "0" and "6" to select ENDING OUTPUT function. Press "Q" button to enter input. If readings are incorrect, check TP sensor circuit or replace TP sensor as necessary.

**END OF ARTICLE**