Variable Valve Timing Actuator: Testing and Inspection

Camshaft Adjustment Valve 1 N205, Checking

Special tools, testers and auxiliary items required

- Portable multimeter V.A.G 1526 B
- Connector test set V.A.G 1594 C
- Wiring diagram

Test requirements

- Fuse for Camshaft Adjustment Valve 1 N205 OK.
- Battery voltage at least 11.5 volts.
- All electrical consumers such as, lights and rear window defroster, switched off.
- Vehicles with automatic transmission, shift selector lever into position "P" or "N".
- A/C switched off.
- Ground (GND) connections between engine/transmission/chassis OK.
- Ignition switched off.

Test sequence

- Remove engine cover with air filter.
- Disconnect 2-pin harness connector - 1 - at Camshaft Adjustment Valve 1 N205.
- Using hand multimeter V.A.G 1526 B and adapter cables from connector test kit V.A.G 1594 C, measure resistance between terminals of Camshaft Adjustment Valve 1 N205.

Specified value: **5.0 to 8.0 Ohms (at approx. 20 degrees C)**

**Resistance OK:**
- Replace Camshaft Adjustment Valve 1 N205.
- Erase DTC memory. See: Testing and Inspection/Scan Tool Testing and Procedures/Diagnostic Mode 4: Reset/Erase Diagnostic Data
- Generate readiness code. See: Testing and Inspection/Monitors, Trips, Drive Cycles and Readiness Codes/Readiness Code, Generating

**Resistance not OK:**
- Connect test box to wiring harness of Motronic Engine Control Module (ECM) J220. See: Testing and Inspection/Component Tests and General Diagnostics/Test Box, Connecting For Wiring Test

- Check wire between test box socket and 2-pin connector for open circuit according to wiring diagram.

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Test box socket</th>
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<tbody>
<tr>
<td>2</td>
<td>20</td>
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Wire resistance: **max. 1.5 Ohms**

- Check wires for short circuit to each other, to Battery A (+) and Ground (GND).

Specified value: **Infinite Ohms**

- Check wire between 2-pin connector terminal 1 and Motronic Engine Control Module (ECM) Power Supply Relay J271 for open circuit according to wiring diagram.

Wire resistance: **max. 1.5 Ohms**

- Erase DTC memory. See: Testing and Inspection/Scan Tool Testing and Procedures/Diagnostic Mode 4: Reset/Erase Diagnostic Data
- Generate readiness code. See: Testing and Inspection/Monitors, Trips, Drive Cycles and Readiness Codes/Readiness Code, Generating

Wires OK:
- Replace Motronic Engine Control Module (ECM) J220.