

SPECIFICATIONS & ELECTRIC COOLING FANS

Article Text

1993 Volkswagen Passat

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Wednesday, March 22, 2000 10:22PM

ARTICLE BEGINNING

1993 ENGINE COOLING

Volkswagen Specifications & Electric Cooling Fans

Volkswagen; Corrado SLC, Passat

SPECIFICATIONS

BELT ADJUSTMENT

BELT ADJUSTMENT TABLE

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Application	Specification
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A/C Compressor

Passat GL

New (1) 72 INCH Lbs. (8 N.m)

Used (1) 36 INCH Lbs. (4 N.m)

Alternator

Passat GL (1) (2) 72 INCH Lbs. (8 N.m)

Power Steering

Passat GL 13/64" (5 mm)

Serpentine Belt

Corrado SLC, Passat GLX (3)

(1) - Turn tensioning nut on toothed rack with Torque Wrench (VAG1410) and Ring Insert (SW VAG 1410-2).

(2) - Start engine and let it idle for 5 minutes. Loosen bolts and retighten belt to specification.

(3) - Serpentine belt tension automatically adjusted by tensioner.

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COOLING SYSTEM SPECIFICATIONS

COOLING SYSTEM SPECIFICATIONS (1)

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Model	Specification
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Coolant Replacement Interval 30,000 Miles

Corrado SLC 9.1 Qts. (8.6L)

Passat GL 5.9 Qts. (5.6L)

Passat GLX 9.1 Qts. (8.6L)

(1) - Cooling system includes heater.

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ELECTRIC COOLING FAN

NOTE: If detonation is a problem, it is possible that the cooling

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fan is not coming on at proper temperature and engine is overheating.

Corrado SLC, Passat GLX

The cooling fan is either a 1 or 2-speed motor. If vehicle is equipped with single-speed motor, the fan comes on at 198-207°F (92-97°C) and turns off at 183-196°F (84-91°C). If equipped with a 2-speed motor, low speed of cooling fan should come on at 198-208°F (92-98°C) on vehicles without A/C, or 183-207°F (84-97°C) on vehicles with A/C. Low speed will shut off at 183-196°F (84-91°C) on all vehicles. High speed comes on at 210-226°F (99-108°C) on vehicles without A/C, or 201-226°F (94-108°C) on vehicles with A/C. High speed will shut off at 196-220°F (91-104°C) on all vehicles.

After-Run Thermoswitch

An after-run switch is used to help prevent fuel vaporization. The thermoswitch turns cooling fan on when temperatures in engine compartment exceeds 230°F (110°C), and turns it off at 217°F (103°C).

Passat GL

The cooling fan is a 2-speed motor. Low speed of cooling fan should come on at 198-207°F (92-97°C) and will shut off at 183-196°F (84-91°C). High speed comes on at 210-221°F (99-105°C) and will shut off at 196-208°F (91-98°C).

TROUBLE SHOOTING

NOTE: Trouble shooting information not available from manufacturer.

TESTING

ENGINE COOLANT TEMPERATURE (ECT) SENSOR

Corrado SLC & Passat GLX (2.8L)

1) Ensure engine is cold. Connect Scan Tester (VAG 1551) to Data Link Connectors (DLC) located in center console, in front of shift lever.

2) Start engine and allow it to idle. With scan tester in READ TEST VALUE BLOCK function, select group No. 01 and read coolant temperature value in field No. 2 of scan tester. Temperature value must increase uniformly without interruption. If value increases as specified, select END OUTPUT function on scan tester.

3) If displayed value does not change or if engine malfunctions during certain temperature ranges, turn ignition off and measure engine coolant temperature sensor resistance. See ECT SENSOR LOCATION table. Replace ECT sensor if resistance is not within specification. See ECT SENSOR RESISTANCE table.

Passat GL

1) Ensure engine is cold. Connect Scan Tester (VAG 1551) to Data Link Connectors (DLC) located in center console. Start engine and

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allow it to idle. With scan tester in READ MEASUREMENT BLOCK function, read coolant temperature value in channel No. 1 of scan tester.

2) If temperature value increases uniformly without interruption, sensor and its circuit are okay. Select END OUTPUT function on scan tester. If display value is incorrect, test wiring harness for open or short circuit. See Corrado SLC WIRING DIAGRAMS, or Passat WIRING DIAGRAMS articles.

3) If necessary, use test leads from Adapter Kit (VAG 1594) to measure ECT sensor resistance. See ECT SENSOR LOCATION table. Replace engine coolant temperature sensor if not within specification. See ECT SENSOR RESISTANCE table.

ECT SENSOR RESISTANCE TABLE

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Temperature °F (°C)	Ohms
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68 (20)	3000-2000
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86 (30)	2000-1500
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104 (40)	1500-1000
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122 (50)	1000-800
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140 (60)	700-500
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158 (70)	500-375
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176 (80)	375-275
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194 (90)	275-225
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ECT SENSOR LOCATION TABLE

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Model	Location
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Corrado SLC & Passat GLX

Blue, Brown & Yellow Sensor . On Radiator Near Upper Hose

Passat GL Below Distributor

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END OF ARTICLE