

C - SPECIFICATIONS

Article Text

1989 Volkswagen Golf
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Monday, August 23, 1999 11:42PM

ARTICLE BEGINNING

1989 ENGINE PERFORMANCE

Volkswagen Service & Adjustment Specifications

Cabriolet, Fox, Golf, Gold GT, Jetta, Vanagon

INTRODUCTION

Use this article to quickly find specifications related to servicing and on-vehicle adjustments. This article be used to quick reference when familiar with proper adjustment procedures and only needing a specification.

CAPACITIES

BATTERY SPECIFICATIONS TABLE

Application		Amp Hr. Rating
Cabriolet, Golf & Jetta	.....	45
Fox, Golf GT & Vanagon	.....	54

FLUID CAPACITIES TABLE

Application		Quantity Qts. (L)
Auto. Transaxle (Dexron II)	..... (1)	3.2 (3.0)
Auto. Transaxle Final Drive (SAE 90/API GL-5)		
Except Vanagon	.....	.8 (.76)
Vanagon	.....	1.4 (1.3)
Cooling System (Includes Heater)		
Cabriolet	.....	5.1 (4.8)
Fox	.....	6.9 (6.5)
Golf & Golf GT	.....	7.3 (7.0)
Jetta	.....	6.8 (6.5)
Vanagon	.....	18.4 (17.5)
Crankcase (Includes Filter)		
Fox	.....	3.7 (3.5)
Vanagon	.....	4.8 (4.5)
All Other Models	.....	4.3 (4.1)
Man. Transaxle (SAE 80W-90/API GL-4)		
Fox	.....	1.8 (1.7)
Vanagon		
4-Speed	3.2 (3.0)
5-Speed	4.7 (4.5)
All Other Models	2.1 (2.0)

(1) - Refill capacity.

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QUICK-SERVICE

SERVICE INTERVALS & SPECIFICATIONS

BELT ADJUSTMENT TABLE

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Application (1) Deflection In. (mm)

Cabriolet

New (2) 5/64 (2)

Old (3) 13/64 (5)

Fox, Golf,

Golf GT & Jetta

A/C Compressor

New 3/8 (10)

Old 3/8 (10)

Alternator

New 5/64 (2)

Old 13/64 (5)

Power Steering

New 5/64 (2)

Old 13/64 (5)

Vanagon 3/8-9/16 (10-15)

(1) - Deflection is with 22 lbs. (10 kg) pressure applied
midway on longest belt run.

(2) - Use 3/8" (10 mm) on models with A/C.

(3) - Use 9/16" (15 mm) on models with A/C.

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REPLACEMENT INTERVALS TABLE

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Component Interval (Miles)

Air Filter 30,000

Coolant 30,000

Fuel Filter (1) 15,000

Oil & Filter 7,500

Spark Plugs 30,000

(1) - Discard mini-fuel at 1000-mile maintenance interval.
Install new copper gaskets.

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MECHANICAL CHECKS

ENGINE COMPRESSION

COMPRESSION TABLE

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Application Specification

Compression Ratio

Cabriolet	8.5:1
Fox	9.0:1
Golf	10.0:1
Golf GT	10.0:1
Jetta	10.0:1
Vanagon	9.0:1

VALVE CLEARANCE

NOTE: All models are equipped with hydraulic lifters. No adjustments are required.

NOTE: Right and left sides refer to engine, as viewed from flywheel.

VALVE ARRANGEMENT

Vanagon - E-I-I-E (both banks)

All Other Models - E-I-E-I-I-E-I-E (Front-to-rear)

IGNITION SYSTEM

IGNITION COIL

IGNITION COIL RESISTANCE TABLE - Ohms @ 68°F (20°C)

Application	Primary	Secondary
Fox	.60-.70	2500-3500
All Other Models	.52-.76	2400-3500

HIGH TENSION WIRE RESISTANCE

HIGH TENSION WIRE RESISTANCE TABLE

Application	Ohms
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Cabriolet, Golf,

Golf GT & Jetta

Coil Wire (1)

Spark Plug Wire (1)

Spark Plug Connector 4000-6000

Suppressor (2) 600-1400

Fox

Coil Wire With Connector 1600-2400

Spark Plug Wire With Connector 4800-7200

[illegible]

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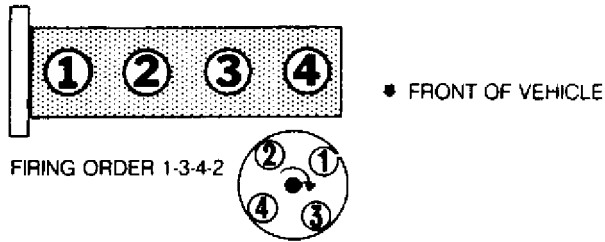


Fig. 1: 1.8L Firing Order & Distributor Rotation
Courtesy of Volkswagen United States, Inc.

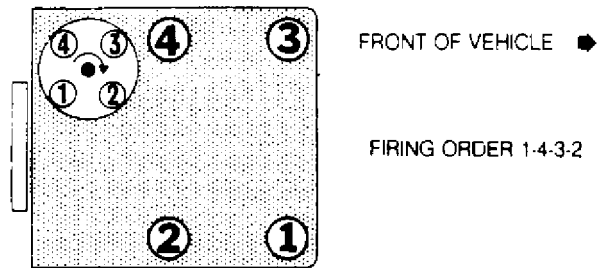


Fig. 2: 2.1L Firing Order & Distributor Rotation
Courtesy of Volkswagen United States, Inc.

IGNITION TIMING

1.8L

Timing mark location is on flywheel. Timing pointer is on timing hole on transaxle bellhousing.

2.1L

Timing mark location is on crankshaft belt pulley. Notch on V-belt pulley must align with parting line of engine crankcase.

IGNITION TIMING TABLE (Degrees BTDC @ RPM)

Application			
Checking		Adjusting	
1.8L	4-8 @ 2250-2350	5-7 @ 2250-2350	
2.1L	4-8 @ 2250-2350	5-7 @ 2250-2350	

DISTRIBUTOR SPECIFICATIONS

DISTRIBUTOR CENTRIFUGAL ADVANCE TABLE

Application			
Degrees BTDC		@ RPM	
Cabriolet	15-19	2600	
	22-26	4500	
Fox	15-19	2600	
	22-26	4500	
Golf, Golf GT & Jetta	12-17	2600	

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	23- 27	6000
Vanagon	16- 20	2400
	21- 25	3800
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DISTRIBUTOR VACUUM ADVANCE TABLE

AA		
Application	Degrees BTDC	In. Hg
Cabriolet	4- 8	3. 2- 4. 3
	10- 14	6. 5- 7. 0
Fox	4- 8	3. 2- 4. 3
	4- 8	3. 2- 4. 3
Golf, Golf GT		
& Jetta	10- 14	6. 4- 7. 0
Vanagon	12- 16	9. 7
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FUEL SYSTEM

FUEL PUMP

NOTE: Fuel pump performance is a measurement of fuel pressure and volume availability, not regulated fuel pressure.

FUEL PUMP PERFORMANCE TABLE

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	Pressure	Min. Vol. in 30 sec.
Application	psi (kg/cm ²)	Pts. (L)
Vanagon	33- 39 (2. 3- 2. 7)	4. 2 (. 5)
All Other Models	75- 82 (5. 3- 5. 8)	6. 6 (. 7)
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REGULATED FUEL PRESSURE TABLE

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	Speci fi cation
Application	psi (kg/cm ²)
At Idle W/Vacuum	29 (2. 0)
At Idle W/O Vacuum	36 (2. 5)
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INJECTOR RESISTANCE

INJECTOR RESISTANCE SPECIFICATIONS TABLE

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Application	Ohms
Vanagon	16. 0- 16. 4
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IDLE SPEED & MIXTURE

IDLE SPEED & CO LEVEL TABLE

Application			Idle RPM	C0 Level %
Cabriolet	.....	850- 1000	.....	...
Fox	.....	800- 1000	.....	0. 5- 1. 5%
Golf	.....	800- 1000	.....	0. 3- 1. 2%
Golf GT	.....	800- 900	.....	0. 3- 1. 2%
Jetta	.....	800- 1000	.....	0. 3- 1. 2%
Vanagon	.....	830- 930	.....	0. 3- 1. 2%

END OF ARTICLE