

SCHEDULED SERVICES - GASOLINE

Article Text

1989 Volkswagen Golf

For Volkswagen Technical Site

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Tuesday, August 24, 1999 12:01AM

ARTICLE BEGINNING

1985-92 MAINTENANCE

Volkswagen Maintenance & Service Intervals

Golf,
GTI,
Jetta

*** PLEASE READ THIS FIRST ***

NOTE: All SERVICE SCHEDULES are listed for normal service vehicles. If vehicle is operated under severe service conditions, see SEVERE SERVICE REQUIREMENTS (PERFORM W/SERVICE SCHEDULES) for items requiring additional maintenance.

NOTE: This article contains scheduled maintenance service information. Fluid types and capacities listed with each service in this article are only those necessary to perform that scheduled service. For specifications pertaining to fluid capacities for the entire vehicle, fuse and circuit breaker identification, wheel and tire size, battery type, warranty information, or model identification refer to the MAINTENANCE INFORMATION article in this section.

CAUTIONS & WARNINGS

BATTERY WARNING

WARNING: When battery is disconnected, vehicles equipped with computers may lose memory data. When battery power is restored, driveability problems may exist on some vehicles. These vehicles may require a relearn procedure. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION section.

REPLACING BLOWN FUSES

Before replacing a blown fuse, remove ignition key, turn off all lights and accessories to avoid damaging the electrical system. Be sure to use fuse with the correct indicated amperage rating. The use of an incorrect amperage rating fuse may result in a dangerous electrical system overload.

BRAKE PAD REPLACEMENT

WARNING: Use caution when checking and/or changing brake pads, some pads may contain asbestos which can irritate eyes and may cause other health hazards. A water based solution should be used to clean brake dust from wheel and brake components. DO NOT use compressed air to blow off brake dust.

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BRAKE SYSTEM

CAUTION: If brake warning light comes on while driving it indicates a low fluid level or failure in one of the braking circuits. If the brake pedal can be depressed further than normal it is an indication that one of the brake circuits is not functioning. Stop vehicle and check brake reservoir fluid level. If level is below MIN mark, DO NOT drive vehicle. Have it towed to a repair shop. If level is between the MIN and MAX marks, proceed cautiously to a repair shop.

BRAKE PAD WEAR INDICATOR

Indicator will cause a squealing or scraping noise, warning that brake pads need replacement.

BRAKE PEDAL PRESSURE WITH ENGINE NOT RUNNING

CAUTION: Brake pedal requires extreme pressure to stop the vehicle when the engine is not running.

CATALYTIC CONVERTER

Continued operation of vehicle with a severe malfunction could cause converter to overheat, resulting in possible damage to converter and vehicle.

Any modification to the exhaust system on turbo models, which reduces exhaust backpressure, will lead to lean fuel mixtures and excessive spark advance. This could cause serious engine damage.

COOLANT (PROPYLENE-GLYCOL FORMULATIONS)

To avoid possible damage to vehicle use only ethylene-glycol based coolants with a mixture ratio from 44-68% anti-freeze. DO NOT use 100% anti-freeze as it will cause the formation of cooling system deposits. This results in coolant temperatures of over 300° F (149°C) which can melt plastics. 100% anti-freeze has a freeze point of only -8° F (-22°C).

CAUTION: Propylene-Glycol Mixtures has a smaller temperature range than Ethylene-Glycol. The temperature range (freeze-boil) of a 50/50 Anti-Freeze/Water Mix is as follows:

Propylene-Glycol	-26° F (-32°C)	-	257° F (125°C)
Ethylene-Glycol	-35° F (-37°C)	-	263° F (128°C)

CAUTION: Propylene-Glycol/Ethylene-Glycol Mixtures can cause the destabilization of various corrosion inhibitors. Also Propylene-Glycol/Ethylene-Glycol has a different specific gravity than Ethylene-Glycol coolant, which will result in inaccurate freeze point calculations.

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ELECTRIC SHOCK HAZARD

WARNING: Contact with live components of ignition system while engine is running could lead to a fatal electric shock.

ELECTROSTATIC DISCHARGE SENSITIVE (ESD) PARTS

WARNING: Many solid state electrical components can be damaged by static electricity (ESD). Some will display a warning label, but many will not. Discharge personal static electricity by touching a metal ground point on the vehicle prior to servicing any ESD sensitive component.

ENGINE OIL

CAUTION: Never use non-detergent or straight mineral oil.

FUEL SYSTEM SERVICE

WARNING: Relieve fuel system pressure prior to servicing any fuel system component (fuel injection models).

HALOGEN BULBS

Halogen bulbs contain pressurized gas which may explode if overheated. DO NOT touch glass portion of bulb with bare hands. Eye protection should be worn when handling or working around halogen bulbs.

RADIATOR CAP

CAUTION: Always disconnect the fan motor when working near the radiator fan. The fan is temperature controlled and could start at any time even when the ignition key is in the OFF position. DO NOT loosen or remove radiator cap when cooling system is hot.

RADIATOR FAN

WARNING: Keep hands away from radiator fan. Fan is controlled by a thermostatic switch which may come on or run for up to 15 minutes even after engine is turned off.

SERVICE POINT LOCATIONS

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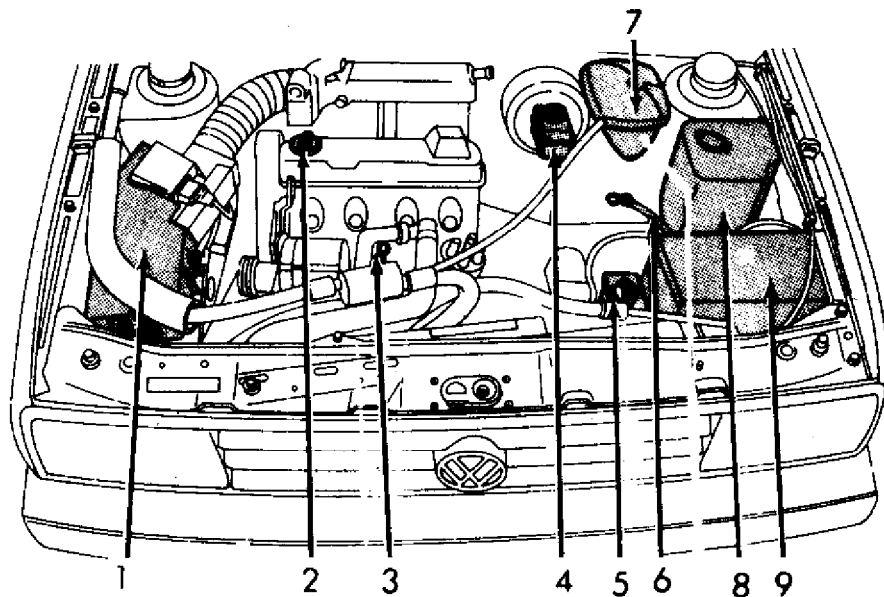
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GASOLINE ENGINE

- | | |
|-----------------------------|------------------------------------|
| 1. Air Cleaner | 6. Automatic Transmission Dipstick |
| 2. Engine Oil Filler Cap | 7. Engine Coolant Expansion Tank |
| 3. Engine Oil Dipstick | 8. Windshield Washer Reservoir |
| 4. Brake Fluid Reservoir | 9. Battery |
| 5. Power Steering Reservoir | 10. Diesel Fuel Filter |

93C45783

Fig. 1: Service Point Locations (Gasoline Engine)
Courtesy of Volkswagen United States, Inc.

ADDITIONAL GASOLINE SERVICE INFORMATION

ALIGNING CAMSHAFT TIMING MARKS

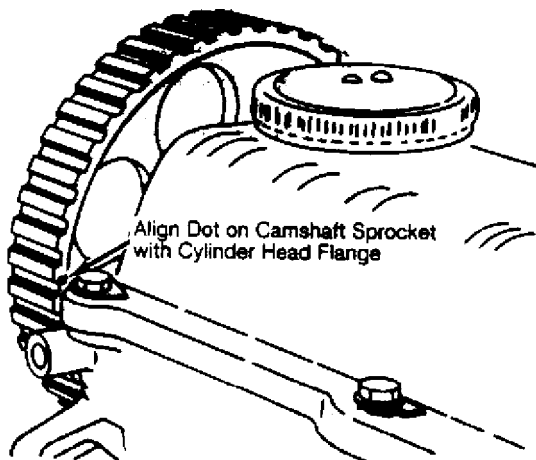


Fig. 2: Camshaft Sprocket Positioning (Gasoline)
Courtesy of Volkswagen United States, Inc.

NOTE: For more information regarding camshaft timing belt service refer to the 1.7L 4-CYL article in the

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ENGINE MECHANICAL section.

VALVE CLEARANCE ADJUSTMENT - GASOLINE

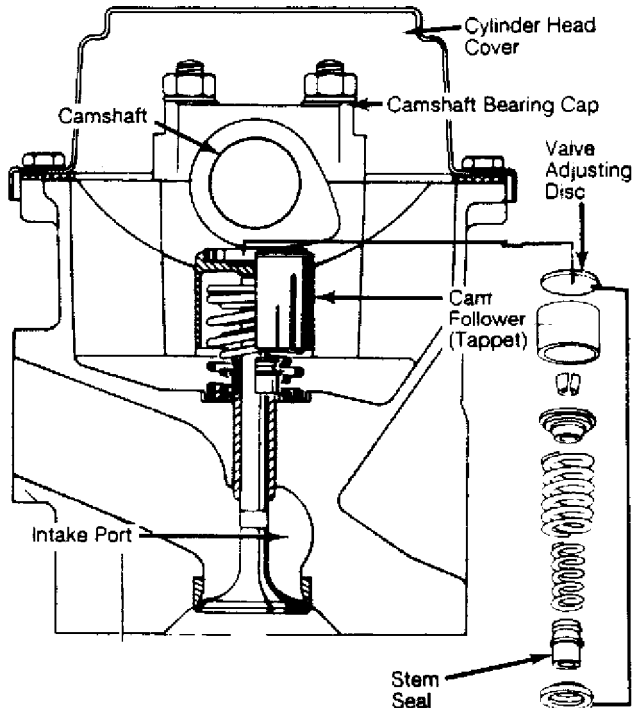


Fig. 3: Assembled View of Valve and Camshaft
Courtesy of Volkswagen United States, Inc.

NOTE: For more information regarding valve clearance adjustments refer to the 1.7L 4-CYL article in the ENGINE MECHANICAL section.

JACKING & HOISTING POINTS

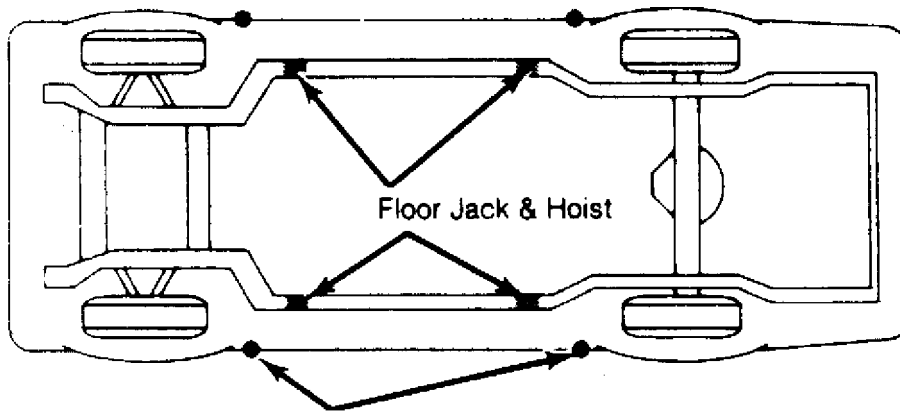


Fig. 4: Floor Jack, Floor Hoist & Vehicle Jack
Courtesy of Volkswagen United States, Inc.

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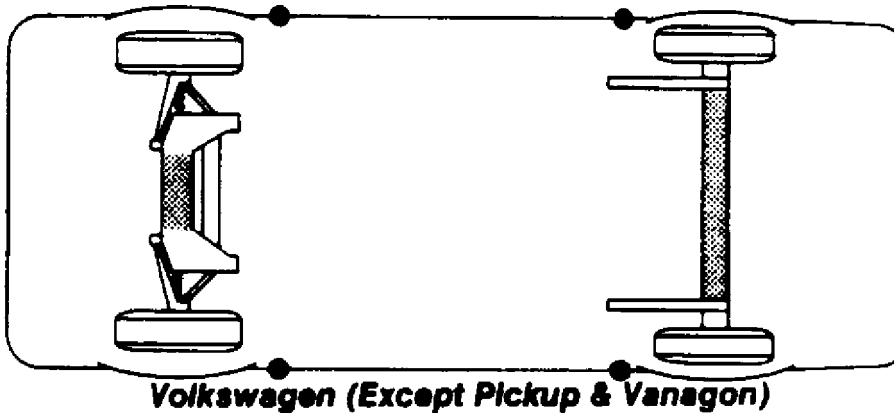


Fig. 5: Vehicle Lifting Points - Except Pickup
Courtesy of Volkswagen United States, Inc.

NOTE: For more information regarding jacking and hoisting points refer to the JACKING & HOISTING article in the WHEEL ALIGNMENT section.

INFORMATION LABEL LOCATIONS

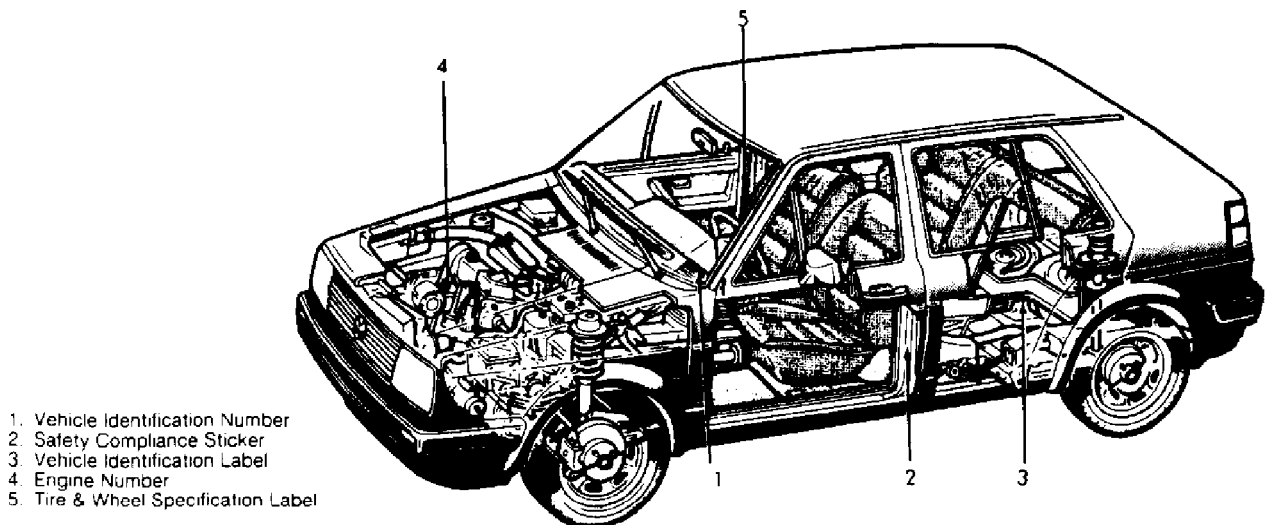


Fig. 6: Information Label Locations
Courtesy of Volkswagen United States, Inc.

CAMSHAFT TIMING BELT REPLACEMENT INFORMATION

CAUTION: Failure to replace a faulty camshaft timing belt may result in serious engine damage.

The condition of camshaft drive belts should always be checked on vehicles which have more than 50,000 miles. Although some manufacturers do not recommend belt replacement at a specified mileage, others require it at 60,000-100,000 miles. A camshaft drive belt failure may cause extensive damage to internal engine components on most engines, although some designs do not allow piston-to-valve

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Condition	Action	Item	Perform Every (1)

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```
3 Short Trips In 3 Replace 3Engine Oil & 3 3,750 Miles or 3 Months 3
3 Freezing 3 3 Filter 3
3 Temperatures
3
3 Replace 3 A/T Fluid 3 15,000 Miles 3
3
3 Towing Or Heavily 3 Replace 3Engine Oil & 3 3,750 Miles or 3 Months 3
3 Loaded 3 3 Filter 3
3
3 Replace 3 A/T Fluid 3 15,000 Miles 3
3
3 Severe Dust 3 Replace 3Engine Oil & 3 3,750 Miles or 3 Months 3
3 Conditions 3 3 Filter 3
3
3 Replace 3 A/T Fluid 3 15,000 Miles 3
3
3 Hot Weather, 3 Replace 3Engine Oil & 3 3,750 Miles or 3 Months 3
3 Stop-And-Go 3 3 Filter 3
3 Driving 3
3 Replace 3 A/T Fluid 3 15,000 Miles 3
3
3 Extensive Idling 3 Replace 3Engine Oil & 3 3,750 Miles or 3 Months 3
3 3 Filter 3
3
3 Replace 3 A/T Fluid 3 15,000 Miles 3
3
3(1) - Perform these services at the mileage or number of months 3
3 (since the last time), whichever comes first. 3
3
```

NORMAL MAINTENANCE SERVICE SCHEDULES

CAUTION: The following service schedules refer to vehicles driven under normal operating conditions. For vehicles driven under severe conditions, additional services may be necessary. See SEVERE SERVICE REQUIREMENTS (PERFORM W/SERVICE SCHEDULES) above in this article for additional service requirements.

7500 MILE (12,000 KM) SERVICE

7500 MILE (12,000 KM) SERVICE

```
3 Service Or Inspect 3
3
3 Check Fluid Levels 3
3
3 Inspect Coolant Hoses and Clamps 3
3
3 Inspect Brake System 3
3
3 Inspect Exhaust System 3
```


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3	3	Check Fuel Evaporation System	3
AAAAA			/
3	3	Check EGR System (Reset Mileage Counter - If Applicable)	3
AAAAA			/
3	3	Check Fluid Levels	3
AAAAA			/
3	3	Inspect Coolant Hoses and Clamps	3
AAAAA			/
3	3	Cooling & Heating System	3
AAAAA			/
3	3	Check Coolant Strength	3
AAAAA			/
3	3	Inspect/Adjust Accessory Drive Belts (Replace if Required)	3
AAAAA			/
3	3	Windshield Washer System	3
AAAAA			/
3	3	Clean Battery and Battery Terminals	3
AAAAA			/
3	3	Throttle Linkage	3
AAAAA			/
3	3	Inspect Fuel /Tank/Cap/Lines	3
AAAAA			/
3	3	Intake Air System	3
AAAAA			/
3	3	Clutch Hydraulic System	3
AAAAA			/
3	3	Inspect CV Joint Boots	3
AAAAA			/
3	3	Drive Shafts For Leaks & Damage	3
AAAAA			/
3	3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3
AAAAA			/
3	3	Inspect Condition of Wiper Blades	3
AAAAA			/
3	3	Check Headlight Alignment	3
AAAAA			/
3	3	Check Seat Belt Webbing and Release Mechanisms	3
AAAAA			/
3	3	Check Parking Brake Operation	3
AAAAA			/
3	3	Check Shift/Clutch Interlock Operation	3
AAAAA			/
3	3	Inspect Brake System Hoses & Lines	3
AAAAA			/
3	3	Brake Discs & Calipers	3
AAAAA			/
3	3	Inspect Front Brake Pads & Rotors	3
AAAAA			/
3	3	Inspect Rear Brake Linings & Drums	3
AAAAA			/
3	3	Lubricate Chassis	3
AAAAA			/

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3	3	Inspect Steering Linkage/Front Suspension	3
3	3	Suspension & Wheel Bearings	3
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
3	3	Lubricate Weatherstripping with Silicone	3
3	3	Lubricate Door Hinges	3
3	3	Lubricate Door Locks	3
3	3	Check Body Drain Holes	3
3	3	Inspect Shocks/Struts for Leakage	3
3	3	Inspect Tire Wear Pattern	3
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)	3
3		Replace	3
3	3	Engine Oil	3
3	3	Oil Filter	3
3	3	Clean Air Filter Element (Replace if Required)	3
3	3	Spark Plugs (Except California Models)	3
3	3	Fuel Filter	3
3		Lubrication Specifications	3
3		Application	Specification
3		Automatic Transaxle	Dexron-II E ATF
3		Brake Fluid	DOT 4 Brake Fluid (SAE J1703)
3		Coolant	50/50 Mix Water & Ethylene Glycol
3		Engine Oil (1)	
3		Ambient Temperatures	
3		Greater Than 140 F (-10°C)	SAE 15W-40 Or 20W-50 API SG/CD
3		140-50°F (-10° To +10°C)	SAE 10W-30 Or 10W-40 API SG/CD
3		Less Than 50°F (10°C)	SAE 5W-30 Or 5W-40 API SG/CD
3		Power Steering Fluid	VW Hydraulic Oil G-002-000
3		Manual Transaxle	Hypoid Gear Oil SAE 75W-90 API GL-4
3			Or SAE 75W-90 (G50 Synthetic)
3		Final Drive (A/T & M/T)	
3		(Differential)	SAE 75W-90 (G50 Synthetic Gear Oil)
3		Wheel Bearings	NLGI Grade 2 Category GC-LB
3		Steering Linkage (2)(3)	NLGI Grade 2 Category GC-LB
3		Ball Joints (2)(4)	NLGI Grade 2 Category GC-LB

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Weatherstrip Dielectric Silicone Grease

(1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme conditions or extended highway operation.

(2) - Use low pressure grease gun to prevent seal damage.

(3) - Fill until lubricant squeezes out from the base of seals.

(4) - Fill ball joint until seal starts to swell.

Fluid Capacities

Application	(1) Quantity
-------------	--------------

Cooling System

Convertible	5.1 Qts. (4.8L)
-------------	-----------------

Pickup	6.9 Qts. (6.4L)
--------	-----------------

Rabbit	5.2 Qts. (5.0L)
--------	-----------------

Engine Oil (2)	4.7 Qts. (4.5L)
----------------	-----------------

Automatic Transaxle

Fluid Change	3.2 Qts. (3.0L)
--------------	-----------------

Dry Fill	5.9 Qts. (5.6L)
----------	-----------------

Final Drive (Differential)

A/T (3)	0.8 Qt. (.75L)
---------	----------------

Manual Transaxle (4)	2.0 Qts. (1.9L)
----------------------	-----------------

(1) - Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.

(2) - Includes filter change.

(3) - Lifetime fill.

(4) - Single case includes manual transaxle & differential.

Service Labor Times

Application	(1) (2) (3) Hours
-------------	-------------------

Non-Turbo Diesel Engine

Automatic Transmission	1.5
------------------------	-----

Manual Transmission	1.7
---------------------	-----

Turbo Diesel Engine

Automatic Transmission	1.5
------------------------	-----

Manual Transmission	1.7
---------------------	-----

Gasoline Engine

Automatic Transmission	1.5
------------------------	-----

Manual Transmission	1.7
---------------------	-----

(1) - Add .2 hr. if equipped with A/C.

(2) - Add .1 hr. if equipped with cruise control.

(3) - Add .5 hr. for 1983-84 Jetta, Rabbit and Pickup.

22,500 MILE (36,000 KM) SERVICE

22,500 MILE (36,000 KM) SERVICE

[illegible]

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3	3	Verify Last Major Service Was Performed	3
3	3	Diagnostic System Read Out	3
3	3	Inspect For Fluid Leaks	3
3	3	Check/Adjust Valve Clearance	3
3	3	Check/Adjust Idle Speed	3
3	3	Perform Compression Test	3
3	3	Check Crankcase Ventilation System	3
3	3	Check Fuel Evaporation System	3
3	3	Check EGR System (Reset Mileage Counter - If Applicable)	3
3	3	Check Fluid Levels	3
3	3	Inspect Coolant Hoses and Clamps	3
3	3	Cooling & Heating System	3
3	3	Crankcase Ventilation System	3
3	3	Check Coolant Strength	3
3	3	Inspect/Adjust Accessory Drive Belts (Replace if Required)	3
3	3	Windshield Washer System	3
3	3	Clean Battery and Battery Terminals	3
3	3	Throttle Linkage	3
3	3	Fuel System	3
3	3	Intake Air System	3
3	3	Clutch Hydraulic System	3
3	3	Inspect CV Joint Boots	3
3	3	Drive Shafts For Leaks & Damage	3
3	3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3
3	3	Inspect Condition of Wiper Blades	3
3	3	Check Headlight Alignment	3

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3	3	Check Seat Belt Webbing and Release Mechanisms	3
AAAAA			/
3	3	Check Parking Brake Operation	3
AAAAA			/
3	3	Check Shift/Clutch Interlock Operation	3
AAAAA			/
3	3	Inspect Brake System Hoses & Lines	3
AAAAA			/
3	3	Brake Discs & Calipers	3
AAAAA			/
3	3	Inspect Front Brake Pads & Rotors	3
AAAAA			/
3	3	Inspect Rear Brake Linings & Drums	3
AAAAA			/
3	3	Lubricate Chassis	3
AAAAA			/
3	3	Inspect Steering Linkage/Front Suspension	3
AAAAA			/
3	3	Suspension & Wheel Bearings	3
AAAAA			/
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
AAAAA			/
3	3	Lubricate Weatherstripping with Silicone	3
AAAAA			/
3	3	Lubricate Door Hinges	3
AAAAA			/
3	3	Lubricate Door Locks	3
AAAAA			/
3	3	Check Body Drain Holes	3
AAAAA			/
3	3	Inspect Shocks/Struts for Leakage	3
AAAAA			/
3	3	Inspect Tire Wear Pattern	3
AAAAA			/
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)	3
AAAAA			/
3		Replace	3
AAAAA			/
3	3	Engine Oil	3
AAAAA			/
3	3	Oil Filter	3
AAAAA			/
3	3	Air Filter Element	3
AAAAA			/
3	3	Spark Plugs	3
AAAAA			/
3	3	Oxygen Sensor (Reset Mileage Counter - If Applicable)	3
AAAAA			/
3	3	Fuel Filter	3
AAAAA			/
3	3	Change Automatic Transaxle Fluid & Clean Strainer	3
AAAAA			/

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[illegible][illegible][illegible]

3 3

³ Brake Fluid DOT 4 Brake Fluid (SAE J1703) ³

³ Engine Oil (1) 3

³ Greater Than 140 F (-100C) .. SAE 15W-40 Or 20W-50 API SG/CD ³

³ Less Than 50øF (10øC) SAE 5W-30 0r 5W-40 API SG/CD ³

³ Manual Transaxle Hypoid Gear Oil SAE 75W-90 API GL-4 ³

³ Final Drive (A/T & M/T) 3

³ Wheel Bearings NLGI Grade 2 Category GC-LB ³

³ Ball Joints (2) (4) NLGI Grade 2 Category GC-LB ³

3 3

3 conditions or extended highway operation. 3

³ (3) - Fill until lubricant squeezes out from the base of seals. ³

[illegible]

A

3 11 3

³ Convertible 5.1 Qts. (4.8L) ³

³	Rabbit	5.2 Qts. (5.0L)	³
--------------	--------------	-----------------	--------------

3 Automatic Transaxle

³	Dry Fill	5.9 Qts. (5.6L)	³
--------------	-----------------	-------	------------------------	--------------

A/T (3) 0.8 qt. (.75L) 3

3

3 dipstick (if available) to measure level. 3

³ (3) - Lifetime fill. 3

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(4) - Single case includes manual transaxle & differential.					
Service Labor Times					
Application	(1)	(2)	(3)	(4)	Hours
Non-Turbo Diesel Engine					
Automatic Transmission					3.2
Manual Transmission					2.6
Turbo Diesel Engine					
Automatic Transmission					3.2
Manual Transmission					2.6
Gasoline Engine					
Automatic Transmission					3.2
Manual Transmission					2.6
(1) - Add .2 hr. if equipped with A/C.					
(2) - Add .1 hr. if equipped with cruise control.					
(3) - Add .5 hr. for 1983-84 Jetta, Pickup and Rabbit.					
(4) - Add the following times to replace camshaft timing belt.					
2.8 hours on diesel engine, 2.2 hours on gasoline engines					
with air conditioning and 1.8 hours on gasoline engines					
without air conditioning.					

37,500 MILE (60,000 KM) SERVICE

37,500 MILE (60,000 KM) SERVICE	
Service Or Inspect	
Verify Last Major Service Was Performed	
Check Fluid Levels	
Inspect Coolant Hoses and Clamps	
Inspect Brake System	
Inspect Exhaust System	
Inspect CV Joint Boots	
Lubricate Chassis	
Replace	
Engine Oil	
Oil Filter	
Lubrication Specifications	

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Application		Specification
Engine Oil		
Ambient Temperatures		
Greater Than 140 F (- 100C)	..	SAE 15W-40 Or 20W-50 API SG/CD
140- 500F (- 100 To +100C)	....	SAE 10W-30 Or 10W-40 API SG/CD
Less Than 500F (100C)	.....	SAE 5W-30 Or 5W-40 API SG/CD
Fluid Capacities		
Application		(1) Quantity
Engine Oil (2)		4.7 Qts. (4.5L)
(1) - Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.		
(2) - Includes filter change.		

45,000 MILE (72,000 KM) SERVICE

45,000 MILE (72,000 KM) SERVICE

Service Or Inspect	
Verify Last Major Service Was Performed	
Diagnostic System Read Out	
Inspect For Fluid Leaks	
Check/Adjust Valve Clearance	
Inspect Camshaft Timing Belt (Replace if Required)	
Check/Adjust Idle Speed	
Perform Compression Test	
Check Crankcase Ventilation System	
Check Fuel Evaporation System	
Check EGR System (Reset Mileage Counter - If Applicable)	
Check Fluid Levels	
Inspect Coolant Hoses and Clamps	
Cooling & Heating System	

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3	3	Crankcase Ventilation System	3
AAAAA			/
3	3	Check Coolant Strength	3
AAAAA			/
3	3	Inspect/Adjust Accessory Drive Belts (Replace if Required)	3
AAAAA			/
3	3	Windshield Washer System	3
AAAAA			/
3	3	Clean Battery and Battery Terminals	3
AAAAA			/
3	3	Throttle Linkage	3
AAAAA			/
3	3	Fuel System	3
AAAAA			/
3	3	Intake Air System	3
AAAAA			/
3	3	Clutch Hydraulic System	3
AAAAA			/
3	3	Inspect CV Joint Boots	3
AAAAA			/
3	3	Drive Shafts For Leaks & Damage	3
AAAAA			/
3	3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3
AAAAA			/
3	3	Inspect Condition of Wiper Blades	3
AAAAA			/
3	3	Check Headlight Alignment	3
AAAAA			/
3	3	Check Seat Belt Webbing and Release Mechanisms	3
AAAAA			/
3	3	Check Parking Brake Operation	3
AAAAA			/
3	3	Check Shift/Clutch Interlock Operation	3
AAAAA			/
3	3	Inspect Brake System Hoses & Lines	3
AAAAA			/
3	3	Brake Discs & Calipers	3
AAAAA			/
3	3	Inspect Front Brake Pads & Rotors	3
AAAAA			/
3	3	Inspect Rear Brake Linings & Drums	3
AAAAA			/
3	3	Lubricate Chassis	3
AAAAA			/
3	3	Inspect Steering Linkage/Front Suspension	3
AAAAA			/
3	3	Suspension & Wheel Bearings	3
AAAAA			/
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
AAAAA			/
3	3	Lubricate Weatherstripping with Silicone	3
AAAAA			/

SCHEDULED SERVICES - GASOLINE

Article Text (p. 20)

1989 Volkswagen Golf

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Tuesday, August 24, 1999 12:02AM

3	3	Lubricate Door Hinges	3
3	3	Lubricate Door Locks	3
3	3	Check Body Drain Holes	3
3	3	Inspect Shocks/Struts for Leakage	3
3	3	Inspect Tire Wear Pattern	3
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)	3
3		Replace	3
3	3	Engine Oil	3
3	3	Oil Filter	3
3	3	Clean Air Filter Element (Replace if Required)	3
3	3	Spark Plugs (Except California Models)	3
3	3	Fuel Filter	3
3		Lubrication Specifications	3
3	Application	Specification	3
3	Automatic Transaxle	Dexron-II E ATF	3
3	Brake Fluid	DOT 4 Brake Fluid (SAE J1703)	3
3	Coolant	50/50 Mix Water & Ethylene Glycol	3
3	Engine Oil (1)		3
3	Ambient Temperatures		3
3	Greater Than 140 F (-10°C)	SAE 15W-40 or 20W-50 API SG/CD	3
3	140-500F (-10° To +10°C)	SAE 10W-30 or 10W-40 API SG/CD	3
3	Less Than 500F (10°C)	SAE 5W-30 or 5W-40 API SG/CD	3
3	Power Steering Fluid	VW Hydraulic Oil G-002-000	3
3	Manual Transaxle	Hypoid Gear Oil SAE 75W-90 API GL-4	3
3		Or SAE 75W-90 (G50 Synthetic)	3
3	Final Drive (A/T & M/T)		3
3	(Differential)	SAE 75W-90 (G50 Synthetic Gear Oil)	3
3	Wheel Bearings	NLGI Grade 2 Category GC-LB	3
3	Steering Linkage (2)(3)	NLGI Grade 2 Category GC-LB	3
3	Ball Joints (2)(4)	NLGI Grade 2 Category GC-LB	3
3	Weatherstrip	Dielectric Silicone Grease	3
3	(1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme		3
3	conditions or extended highway operation.		3
3	(2) - Use low pressure grease gun to prevent seal damage.		3
3	(3) - Fill until lubricant squeezes out from the base of seals.		3
3	(4) - Fill ball joint until seal starts to swell.		3
3			3

SCHEDULED SERVICES - GASOLINE

Article Text (p. 21)

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Tuesday, August 24, 1999 12:02AM

Fluid Capacities			
Application			(1) Quantity
Cooling System			
Convertible	5.1 Qts.	(4.8L)	
Pickup	6.9 Qts.	(6.4L)	
Rabbit	5.2 Qts.	(5.0L)	
Engine Oil (2)	4.7 Qts.	(4.5L)	
Automatic Transaxle			
Fluid Change	3.2 Qts.	(3.0L)	
Dry Fill	5.9 Qts.	(5.6L)	
Final Drive (Differential)			
A/T (3)	0.8 Qt.	(.75L)	
Manual Transaxle (4)	2.0 Qts.	(1.9L)	
(1) - Capacities are recommended or calculated levels. Always use			
dipstick (if available) to measure level.			
(2) - Includes filter change.			
(3) - Lifetime fill.			
(4) - Single case includes manual transaxle & differential.			

52,500 MILE (84,000 KM) SERVICE

52,500 MILE (84,000 KM) SERVICE		
Service Or Inspect		
Verify Last Major Service Was Performed		
Check Fluid Levels		
Inspect Coolant Hoses and Clamps		
Inspect Brake System		
Inspect Exhaust System		
Inspect CV Joint Boots		
Lubricate Chassis		
Replace		
Engine Oil		
Oil Filter		
Lubrication Specifications		
Application	Specification	

U		
3	Service Or Inspect	3
A		
3	Verify Last Major Service Was Performed	3
A		
3	Diagnostic System Read Out	3
A		
3	Inspect For Fluid Leaks	3
A		
3	Check/Adjust Valve Clearance	3
A		
3	Check/Adjust Idle Speed	3
A		
3	Perform Compression Test	3
A		
3	Check Crankcase Ventilation System	3
A		
3	Check Fuel Evaporation System	3
A		
3	Check EGR System (Reset Mileage Counter - If Applicable)	3
A		
3	Check Fluid Levels	3
A		
3	Inspect Coolant Hoses and Clamps	3
A		
3	Cooling & Heating System	3
A		
3	Crankcase Ventilation System	3
A		
3	Check Coolant Strength	3
A		

SCHEDULED SERVICES - GASOLINE

Article Text (p. 23)

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Tuesday, August 24, 1999 12:02AM

3	3	Inspect/Adjust Accessory Drive Belts (Replace if Required)	3
AAAAA			/
3	3	Windshield Washer System	3
AAAAA			/
3	3	Clean Battery and Battery Terminals	3
AAAAA			/
3	3	Throttle Linkage	3
AAAAA			/
3	3	Fuel System	3
AAAAA			/
3	3	Intake Air System	3
AAAAA			/
3	3	Clutch Hydraulic System	3
AAAAA			/
3	3	Inspect CV Joint Boots	3
AAAAA			/
3	3	Drive Shafts For Leaks & Damage	3
AAAAA			/
3	3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3
AAAAA			/
3	3	Inspect Condition of Wiper Blades	3
AAAAA			/
3	3	Check Headlight Alignment	3
AAAAA			/
3	3	Check Seat Belt Webbing and Release Mechanisms	3
AAAAA			/
3	3	Check Parking Brake Operation	3
AAAAA			/
3	3	Check Shift/Clutch Interlock Operation	3
AAAAA			/
3	3	Inspect Brake System Hoses & Lines	3
AAAAA			/
3	3	Brake Discs & Calipers	3
AAAAA			/
3	3	Inspect Front Brake Pads & Rotors	3
AAAAA			/
3	3	Inspect Rear Brake Linings & Drums	3
AAAAA			/
3	3	Lubricate Chassis	3
AAAAA			/
3	3	Inspect Steering Linkage/Front Suspension	3
AAAAA			/
3	3	Suspension & Wheel Bearings	3
AAAAA			/
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
AAAAA			/
3	3	Lubricate Weatherstripping with Silicone	3
AAAAA			/
3	3	Lubricate Door Hinges	3
AAAAA			/
3	3	Lubricate Door Locks	3
AAAAA			/

SCHEDULED SERVICES - GASOLINE

Article Text (p. 24)

1989 Volkswagen Golf

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Tuesday, August 24, 1999 12:02AM

3	3	Check Body Drain Holes	3
3	3	Inspect Shocks/Struts for Leakage	3
3	3	Inspect Tire Wear Pattern	3
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)	3
3		Replace	3
3	3	Engine Oil	3
3	3	Oil Filter	3
3	3	Spark Plugs	3
3	3	Oxygen Sensor (Reset Mileage Counter - If Applicable)	3
3	3	Air Filter Element	3
3	3	Fuel Filter	3
3	3	Change Automatic Transaxle Fluid & Clean Strainer	3
3	3	A/T Differential Oil Level (Replace if Required)	3
3	3	Manual Transaxle Fluid Level (Replace if Required)	3
3	3	Drain, Flush and Refill Engine Coolant	3
3	3	Drain, Refill and Bleed Brake System Fluid	3
3		Lubrication Specifications	3
3	Application	Specification	3
3	Automatic Transaxle	Dexron-II E ATF	3
3	Brake Fluid	DOT 4 Brake Fluid (SAE J1703)	3
3	Coolant	50/50 Mix Water & Ethylene Glycol	3
3	Engine Oil (1)		3
3	Ambient Temperatures		3
3	Greater Than 140 F (- 100C)	SAE 15W-40 Or 20W-50 API SG/CD	3
3	140- 500F (- 100 To +100C)	SAE 10W-30 Or 10W-40 API SG/CD	3
3	Less Than 500F (100C)	SAE 5W-30 Or 5W-40 API SG/CD	3
3	Power Steering Fluid	VW Hydraulic Oil G-002-000	3
3	Manual Transaxle	Hypoid Gear Oil SAE 75W-90 API GL-4	3
3		Or SAE 75W-90 (G50 Synthetic)	3
3	Final Drive (A/T & M/T)		3
3	(Differential)	SAE 75W-90 (G50 Synthetic Gear Oil)	3
3	Wheel Bearings	NLGI Grade 2 Category GC-LB	3
3	Steering Linkage (2)(3)	NLGI Grade 2 Category GC-LB	3
3	Ball Joints (2)(4)	NLGI Grade 2 Category GC-LB	3

SCHEDULED SERVICES - GASOLINE

Article Text (p. 25)

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Tuesday, August 24, 1999 12:02AM

Weatherstrip Dielectric Silicone Grease

(1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme conditions or extended highway operation.

(2) - Use low pressure grease gun to prevent seal damage.

(3) - Fill until lubricant squeezes out from the base of seals.

(4) - Fill ball joint until seal starts to swell.

Fluid Capacities

Application (1) Quantity

Cooling System

Convertible 5.1 Qts. (4.8L)

Pickup 6.9 Qts. (6.4L)

Rabbit 5.2 Qts. (5.0L)

Engine Oil (2) 4.7 Qts. (4.5L)

Automatic Transaxle

Fluid Change 3.2 Qts. (3.0L)

Dry Fill 5.9 Qts. (5.6L)

Final Drive (Differential)

A/T (3) 0.8 Qt. (.75L)

Manual Transaxle (4) 2.0 Qts. (1.9L)

(1) - Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.

(2) - Includes filter change.

(3) - Lifetime fill.

(4) - Single case includes manual transaxle & differential.

Service Labor Times

Application (1) (2) (3) (4) Hours

Non-Turbo Diesel Engine

Automatic Transmission 3.9

Manual Transmission 3.1

Turbo Diesel Engine

Automatic Transmission 3.9

Manual Transmission 3.1

Gasoline Engine

Automatic Transmission 4.1

Manual Transmission 3.5

(1) - Add .2 hr. if equipped with A/C.

(2) - Add .1 hr. if equipped with cruise control.

(3) - Add .5 hr. for 1983-84 Jetta Pickup and Rabbit.

(4) - Add the following times to replace camshaft timing belt.
2.8 hours on diesel engine, 2.2 hours on gasoline engines
with air conditioning and 1.8 hours on gasoline engines
without air conditioning.

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Tuesday, August 24, 1999 12:02AM

3	Service Or Inspect	3
3	Verify Last Major Service Was Performed	3
3	Diagnostic System Read Out	3
3	Inspect For Fluid Leaks	3
3	Check/Adjust Valve Clearance	3
3	Check/Adjust Idle Speed	3
3	Perform Compression Test	3
3	Check Crankcase Ventilation System	3
3	Check Fuel Evaporation System	3
3	Check EGR System (Reset Mileage Counter - If Applicable)	3
3	Check Fluid Levels	3
3	Inspect Coolant Hoses and Clamps	3
3	Cooling & Heating System	3
3	Crankcase Ventilation System	3
3	Check Coolant Strength	3
3	Inspect/Adjust Accessory Drive Belts (Replace if Required)	3
3	Windshield Washer System	3
3	Clean Battery and Battery Terminals	3
3	Throttle Linkage	3
3	Fuel System	3
3	Intake Air System	3
3	Clutch Hydraulic System	3
3	Inspect CV Joint Boots	3
3	Drive Shafts For Leaks & Damage	3
3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3

SCHEDULED SERVICES - GASOLINE

Article Text (p. 28)

1989 Volkswagen Golf

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Tuesday, August 24, 1999 12:02AM

3	3	Inspect Condition of Wiper Blades	3
3	3	Check Headlight Alignment	3
3	3	Check Seat Belt Webbing and Release Mechanisms	3
3	3	Check Parking Brake Operation	3
3	3	Check Shift/Clutch Interlock Operation	3
3	3	Inspect Brake System Hoses & Lines	3
3	3	Brake Discs & Calipers	3
3	3	Inspect Front Brake Pads & Rotors	3
3	3	Inspect Rear Brake Linings & Drums	3
3	3	Lubricate Chassis	3
3	3	Inspect Steering Linkage/Front Suspension	3
3	3	Suspension & Wheel Bearings	3
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
3	3	Lubricate Weatherstripping with Silicone	3
3	3	Lubricate Door Hinges	3
3	3	Lubricate Door Locks	3
3	3	Check Body Drain Holes	3
3	3	Inspect Shocks/Struts for Leakage	3
3	3	Inspect Tire Wear Pattern	3
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)	3
3	3	Replace	3
3	3	Engine Oil	3
3	3	Oil Filter	3
3	3	Clean Air Filter Element (Replace if Required)	3
3	3	Spark Plugs (Except California Models)	3
3	3	Fuel Filter	3

SCHEDULED SERVICES - GASOLINE

Article Text (p. 29)

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AA

Lubrication Specifications

AA

Application Specification

3

Automatic Transaxle Dexron- IIE ATF

Brake Fluid DOT 4 Brake Fluid (SAE J1703)

Coolant 50/50 Mix Water & Ethylene Glycol

Engine Oil (1)

Ambient Temperatures

Greater Than 140 F (- 100C) .. SAE 15W- 40 Or 20W- 50 API SG/CD

140- 500F (- 100 To +100C) SAE 10W- 30 Or 10W- 40 API SG/CD

Less Than 500F (100C) SAE 5W- 30 Or 5W- 40 API SG/CD

Power Steering Fluid VW Hydraulic Oil G- 002- 000

Manual Transaxle Hypoid Gear Oil SAE 75W- 90 API GL- 4

Or SAE 75W- 90 (G50 Synthetic)

Final Drive (A/T & M/T)

(Differential) SAE 75W- 90 (G50 Synthetic Gear Oil)

Wheel Bearings NLGI Grade 2 Category GC- LB

Steering Linkage (2) (3) NLGI Grade 2 Category GC- LB

Ball Joints (2) (4) NLGI Grade 2 Category GC- LB

Weatherstrip Dielectric Silicone Grease

3

(1) - SAE 15W- 40 or 20W- 40 engine oil is recommended for extreme

conditions or extended highway operation.

(2) - Use low pressure grease gun to prevent seal damage.

(3) - Fill until lubricant squeezes out from the base of seals.

(4) - Fill ball joint until seal starts to swell.

AA

Fluid Capacities

AA

Application (1) Quantity

3

Cooling System

Convertible 5.1 Qts. (4.8L)

Pickup 6.9 Qts. (6.4L)

Rabbit 5.2 Qts. (5.0L)

Engine Oil (2) 4.7 Qts. (4.5L)

Automatic Transaxle

Fluid Change 3.2 Qts. (3.0L)

Dry Fill 5.9 Qts. (5.6L)

Final Drive (Differential)

A/T (3) 0.8 Qt. (.75L)

Manual Transaxle (4) 2.0 Qts. (1.9L)

3

(1) - Capacities are recommended or calculated levels. Always use

dipstick (if available) to measure level.

(2) - Includes filter change.

(3) - Lifetime fill.

(4) - Single case includes manual transaxle & differential.

AA

Service Labor Times

3

Application		Specification
3	Engine Oil	3
3	Ambient Temperatures	3
3	Greater Than 140 F (-100C) ..	SAE 15W-40 Or 20W-50 API SG/CD
3	140-500F (-100 To +100C)	SAE 10W-30 Or 10W-40 API SG/CD

SCHEDULED SERVICES - GASOLINE

Article Text (p. 32)

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Tuesday, August 24, 1999 12:02AM

3	3	Clean Battery and Battery Terminals	3
3	3	Throttle Linkage	3
3	3	Fuel System	3
3	3	Intake Air System	3
3	3	Clutch Hydraulic System	3
3	3	Inspect CV Joint Boots	3
3	3	Drive Shafts For Leaks & Damage	3
3	3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3
3	3	Inspect Condition of Wiper Blades	3
3	3	Check Headlight Alignment	3
3	3	Check Seat Belt Webbing and Release Mechanisms	3
3	3	Check Parking Brake Operation	3
3	3	Check Shift/Clutch Interlock Operation	3
3	3	Inspect Brake System Hoses & Lines	3
3	3	Brake Discs & Calipers	3
3	3	Inspect Front Brake Pads & Rotors	3
3	3	Inspect Rear Brake Linings & Drums	3
3	3	Lubricate Chassis	3
3	3	Inspect Steering Linkage/Front Suspension	3
3	3	Suspension & Wheel Bearings	3
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
3	3	Lubricate Weatherstripping with Silicone	3
3	3	Lubricate Door Hinges	3
3	3	Lubricate Door Locks	3
3	3	Check Body Drain Holes	3
3	3	Inspect Shocks/Struts for Leakage	3

SCHEDULED SERVICES - GASOLINE

Article Text (p. 33)

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Tuesday, August 24, 1999 12:02AM

AAAAAA			/		
3	3	Inspect Tire Wear Pattern		3	
AAAAAA			/		
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)		3	
AAAAAA			/		
3		Replace		3	
AAAAAA			/		
3	3	Engine Oil		3	
AAAAAA			/		
3	3	Oil Filter		3	
AAAAAA			/		
3	3	Spark Plugs		3	
AAAAAA			/		
3	3	Oxygen Sensor (Reset Mileage Counter - If Applicable)		3	
AAAAAA			/		
3	3	Air Filter Element		3	
AAAAAA			/		
3	3	Fuel Filter		3	
AAAAAA			/		
3	3	Change Automatic Transaxle Fluid & Clean Strainer		3	
AAAAAA			/		
3	3	A/T Differential Oil Level (Replace if Required)		3	
AAAAAA			/		
3	3	Manual Transaxle Fluid Level (Replace if Required)		3	
AAAAAA			/		
3	3	Drain, Flush and Refill Engine Coolant		3	
AAAAAA			/		
3	3	Drain, Refill and Bleed Brake System Fluid		3	
AAAAAA			/		
3		Lubrication Specifications		3	
AAAAAA			/		
3	Application		Speci fication	3	
3					
3	Automatic Transaxle	.....	Dexron-IIE ATF	3	
3	Brake Fluid	.....	DOT 4 Brake Fluid (SAE J1703)	3	
3	Coolant	.....	50/50 Mix Water & Ethylene Glycol	3	
3	Engine Oil (1)				3
3	Ambient Temperatures				3
3	Greater Than 140 F (- 100C)	..	SAE 15W-40 Or 20W-50 API SG/CD	3	
3	140- 500F (- 100 To +100C)	....	SAE 10W-30 Or 10W-40 API SG/CD	3	
3	Less Than 500F (100C)	.....	SAE 5W-30 Or 5W-40 API SG/CD	3	
3	Power Steering Fluid	.....	VW Hydraulic Oil G-002-000	3	
3	Manual Transaxle	.....	Hypoid Gear Oil SAE 75W-90 API GL-4	3	
3			Or SAE 75W-90 (G50 Synthetic)	3	
3	Final Drive (A/T & M/T)				3
3	(Differential)	.....	SAE 75W-90 (G50 Synthetic Gear Oil)	3	
3	Wheel Bearings	.....	NLGI Grade 2 Category GC-LB	3	
3	Steering Linkage (2)(3)	.....	NLGI Grade 2 Category GC-LB	3	
3	Ball Joints (2)(4)	.....	NLGI Grade 2 Category GC-LB	3	
3	Weatherstrip	.....	Dielectric Silicone Grease	3	
3					
3	(1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme				3


```

UAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3      Service Or Inspect      3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3      3      Verify Last Major Service Was Performed      3

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SCHEDULED SERVICES - GASOLINE

Article Text (p. 36)

1989 Volkswagen Golf

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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Diagnostic System Read Out 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Inspect For Fluid Leaks 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check/Adjust Valve Clearance 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check/Adjust Idle Speed 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Perform Compression Test 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Crankcase Ventilation System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Fuel Evaporation System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check EGR System (Reset Mileage Counter - If Applicable) 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Fluid Levels 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Inspect Coolant Hoses and Clamps 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Cooling & Heating System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Crankcase Ventilation System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Coolant Strength 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Inspect/Adjust Accessory Drive Belts (Replace if Required) 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Windshield Washer System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Clean Battery and Battery Terminals 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Throttle Linkage 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Fuel System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Intake Air System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Clutch Hydraulic System 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Inspect CV Joint Boots 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Drive Shafts For Leaks & Damage 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Operation of Horn, Wipers/Washers & All Exterior Lights 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Inspect Condition of Wiper Blades 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Headlight Alignment 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/
3 3 Check Seat Belt Webbing and Release Mechanisms 3

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Application	Specification
Automatic Transaxle	Dexron-II E ATF
Check Parking Brake Operation	
Check Shift/Clutch Interlock Operation	
Inspect Brake System Hoses & Lines	
Brake Discs & Calipers	
Inspect Front Brake Pads & Rotors	
Inspect Rear Brake Linings & Drums	
Lubricate Chassis	
Inspect Steering Linkage/Front Suspension	
Suspension & Wheel Bearings	
Steering Operation, Tie Rods, Gear Box & Boots	
Lubricate Weatherstripping with Silicone	
Lubricate Door Hinges	
Lubricate Door Locks	
Check Body Drain Holes	
Inspect Shocks/Struts for Leakage	
Inspect Tire Wear Pattern	
Rotate Tires and Adjust Air Pressure (Including Spare)	
Replace	
Engine Oil	
Oil Filter	
Clean Air Filter Element (Replace if Required)	
Spark Plugs (Except California Models)	
Fuel Filter	
Lubrication Specifications	

SCHEDULED SERVICES - GASOLINE

Article Text (p. 38)

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Tuesday, August 24, 1999 12:02AM

Brake Fluid	DOT 4 Brake Fluid (SAE J1703)
Coolant	50/50 Mix Water & Ethylene Glycol
Engine Oil (1)	
Ambient Temperatures	
Greater Than 140 F (- 100C)	SAE 15W-40 or 20W-50 API SG/CD
140- 500F (- 100 To +100C)	SAE 10W-30 or 10W-40 API SG/CD
Less Than 500F (100C)	SAE 5W-30 or 5W-40 API SG/CD
Power Steering Fluid	VW Hydraulic Oil G-002-000
Manual Transaxle	Hypoid Gear Oil SAE 75W-90 API GL-4 or SAE 75W-90 (G50 Synthetic)
Final Drive (A/T & M/T)	
(Differential)	SAE 75W-90 (G50 Synthetic Gear Oil)
Wheel Bearings	NLGI Grade 2 Category GC-LB
Steering Linkage (2)(3)	NLGI Grade 2 Category GC-LB
Ball Joints (2)(4)	NLGI Grade 2 Category GC-LB
Weatherstrip	Dielectric Silicone Grease

(1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme conditions or extended highway operation.

(2) - Use low pressure grease gun to prevent seal damage.

(3) - Fill until lubricant squeezes out from the base of seals.

(4) - Fill ball joint until seal starts to swell.

Fluid Capacities

Application (1) Quantity

Cooling System	
Convertible	5.1 Qts. (4.8L)
Pickup	6.9 Qts. (6.4L)
Rabbit	5.2 Qts. (5.0L)
Engine Oil (2)	4.7 Qts. (4.5L)
Automatic Transaxle	
Fluid Change	3.2 Qts. (3.0L)
Dry Fill	5.9 Qts. (5.6L)
Final Drive (Differential)	
A/T (3)	0.8 Qt. (.75L)
Manual Transaxle (4)	2.0 Qts. (1.9L)

(1) - Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.

(2) - Includes filter change.

(3) - Lifetime fill.

(4) - Single case includes manual transaxle & differential.

112,500 MILE (180,000 KM) SERVICE

112,500 MILE (180,000 KM) SERVICE

Service or Inspect

```

UAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJ
3      Service Or Inspect                                                         3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA'
3    3 Verify Last Major Service Was Performed                                3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA'
3    3 Diagnostic System Read Out                                              3

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SCHEDULED SERVICES - GASOLINE

Article Text (p. 40)

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3	3	Inspect For Fluid Leaks	3
3	3	Check/Adjust Valve Clearance	3
3	3	Check/Adjust Idle Speed	3
3	3	Perform Compression Test	3
3	3	Check Crankcase Ventilation System	3
3	3	Check Fuel Evaporation System	3
3	3	Check EGR System (Reset Mileage Counter - If Applicable)	3
3	3	Check Fluid Levels	3
3	3	Inspect Coolant Hoses and Clamps	3
3	3	Cooling & Heating System	3
3	3	Crankcase Ventilation System	3
3	3	Check Coolant Strength	3
3	3	Inspect/Adjust Accessory Drive Belts (Replace if Required)	3
3	3	Windshield Washer System	3
3	3	Clean Battery and Battery Terminals	3
3	3	Throttle Linkage	3
3	3	Fuel System	3
3	3	Intake Air System	3
3	3	Clutch Hydraulic System	3
3	3	Suspension & Wheel Bearings	3
3	3	Inspect CV Joint Boots	3
3	3	Drive Shafts For Leaks & Damage	3
3	3	Check Operation of Horn, Wipers/Washers & All Exterior Lights	3
3	3	Inspect Condition of Wiper Blades	3
3	3	Check Headlight Alignment	3
3	3	Check Seat Belt Webbing and Release Mechanisms	3

SCHEDULED SERVICES - GASOLINE

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1989 Volkswagen Golf

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3	3	Check Parking Brake Operation	3
3	3	Check Shift/Clutch Interlock Operation	3
3	3	Inspect Brake System Hoses & Lines	3
3	3	Brake Discs & Calipers	3
3	3	Inspect Front Brake Pads & Rotors	3
3	3	Inspect Rear Brake Linings & Drums	3
3	3	Lubricate Chassis	3
3	3	Inspect Steering Linkage/Front Suspension	3
3	3	Suspension & Wheel Bearings	3
3	3	Steering Operation, Tie Rods, Gear Box & Boots	3
3	3	Lubricate Weatherstripping with Silicone	3
3	3	Lubricate Door Hinges	3
3	3	Lubricate Door Locks	3
3	3	Check Body Drain Holes	3
3	3	Inspect Shocks/Struts for Leakage	3
3	3	Inspect Tire Wear Pattern	3
3	3	Rotate Tires and Adjust Air Pressure (Including Spare)	3
3		Replace	3
3	3	Engine Oil	3
3	3	Oil Filter	3
3	3	Spark Plugs	3
3	3	Oxygen Sensor (Reset Mileage Counter - If Applicable)	3
3	3	Air Filter Element	3
3	3	Fuel Filter	3
3	3	Change Automatic Transaxle Fluid & Clean Strainer	3
3	3	A/T Differential Oil Level (Replace if Required)	3

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(1) - Capacities are recommended or calculated levels. Always use

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[illegible]

Weatherstrip **Dielectric Silicone Grease**

SCHEDULED SERVICES - GASOLINE

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- (1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme conditions or extended highway operation.
- (2) - Use low pressure grease gun to prevent seal damage.
- (3) - Fill until lubricant squeezes out from the base of seals.
- (4) - Fill ball joint until seal starts to swell.

AA

FLUID CAPACITIES

FLUID CAPACITIES TABLE

AA

Application	Quantity (1)
A/C System R-12 Refrigerant	29-35 Ozs.
Cooling System	
Convertible	5.1 Qts. (4.8L)
Pickup	6.9 Qts. (6.5L)
Rabbit	5.2 Qts. (5.0L)
Engine Oil (2)	4.7 Qts. (4.5L)
Fuel Tank	
Diesel	
Pickup	15 Gals. (56.8L)
Rabbit	11 Gals. (41.5L)
Gasoline	
Convertible	10.5 Gals. (40.0L)
Pickup	15 Gals. (56.8L)
Rabbit	10 Gals. (38.0L)
Automatic Transaxle	
Fluid Change	3.2 Qts. (3.0L)
Dry Fill	5.9 Qts. (5.6L)
Final Drive (Differential)	
A/T (3)	0.8 Qt. (.75L)
Manual Transaxle (4)	2.0 Qts. (1.9L)

- (1) - Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.
- (2) - Includes filter change.
- (3) - Lifetime fill.
- (4) - Single case includes manual transaxle & differential.

AA

END OF ARTICLE