

# MAINTENANCE INFORMATION

## Article Text

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

### ARTICLE BEGINNING

1985-92 MAINTENANCE

Volkswagen Maintenance Information

Golf,  
GTI,  
Jetta

#### \* PLEASE READ THIS FIRST \*

NOTE: For scheduled maintenance intervals and the related fluid capacities, fluid specifications and labor times for major service intervals, see SCHEDULED SERVICES article below:

- \* SCHEDULED SERVICES - DIESEL(Golf & Jetta)
- \* SCHEDULED SERVICES - GASOLINE

Warranty information and specifications for fluid capacities, lubrication specifications, wheel and tire size, and battery type are covered in this article.

### MODEL IDENTIFICATION

#### VIN LOCATION

The Vehicle Identification Number (VIN) is located on the left side of the dash panel at the base of the windshield. The VIN chart explains the code characters.

#### VIN CODE ID EXPLANATION

Numbers preceding the explanations in the legend below refer to the sequence of characters as listed on VIN identification label. See VIN example below.

UAAA  
3 (VIN) W V 2 Y B 0 2 5 5 K H 0 9 9 7 1 7 3  
3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 3  
AAU

#### 1 - Manufacturing Country

- W \* Germany
- 1 \* United States
- 3 \* Mexico
- 9 \* Brazil

#### 2-3 - Manufacturer

- VW \* Volkswagen

#### 4 - Series

# MAINTENANCE INFORMATION

## Article Text (p. 2)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

A \* 2-Door Base  
B \* 2-Door Custom  
C \* 2-Door Custom  
D \* 2-Door Sport  
E \* 4-Door Base  
F \* 4-Door Custom  
G \* 4-Door Custom  
G \* 4-Door Wagon  
H \* 4-Door Turbo  
H \* 2-Door GTI- 16V  
P \* 4-Door Base  
R \* 4-Door Custom  
T \* 4-Door GLI- 16V

### 5 - Engine

A \* 4-Cyl. Gas, 80 & 100 HP  
B \* 4-Cyl. Gas, 81, 90, 105 HP  
B \* 4-Cyl. Gas, 108, 134 & 158 HP  
C \* 4-Cyl. Gas, 94, 134, 158 HP  
D \* 4-Cyl. Gas, 81, 90, 105 HP  
D \* 4-Cyl. Gas, 108, 134 & 158 HP  
D \* V6 Gas, 172 HP  
E \* 4-Cyl. Gas, 134 HP  
E \* V6 Gas, 172 HP  
F \* 4-Cyl. Gas, 134 HP  
G \* 4-Cyl. Diesel, 52 HP  
H \* 1.6L Turbo Diesel  
J \* 4-Cyl. Gas, 134 HP  
K \* 4-Cyl. Gas, 100 HP  
M \* V6 Gas, 172 HP

### 6 - Restraint System

0 \* Active  
1 \* Passive  
2 \* Passive With Manual Lap  
4 \* Electric Passive With Manual Lap  
5 \* Driver Air Bag With Active Driver & Passenger  
8 \* Active Driver & Passenger With Driver & Passenger Air Bag  
9 \* Passive

### 7-8 - Model

1G \* Golf, GTI & Jetta (1990-91)  
1H \* Golf, GTI, & Jetta (1992)  
16 \* Jetta (1985-89)  
17 \* Golf, GTI (1985-89)

### 9 - VIN Check Digit

2 \* Computer Selected Check Number

### 10 - Vehicle Model Year

F \* 1985  
G \* 1986

## MAINTENANCE INFORMATION

### Article Text (p. 3)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

H \* 1987  
J \* 1988  
K \* 1989  
L \* 1990  
M \* 1991  
N \* 1992

#### 11 - Assembly Plant

A \* Ingolstadt  
B \* Brussels  
E \* Emden  
G \* Graz  
H \* Hannover  
K \* Osnabruk  
M \* Mexico  
N \* Neckarsulm  
P \* Brazil  
S \* Stuttgart  
V \* United States  
W \* Wolfsburg

#### 12-17 - Serial Number

\* Sequential Production Number

## MAINTENANCE SERVICE INFORMATION

### SEVERE & NORMAL SERVICE DEFINITIONS

**NOTE:** Use the Severe Service schedule if the vehicle to be serviced is operated under ANY (one or more) of these conditions:

Service is recommended at mileage intervals based on vehicle operation. Service schedules are based on the following primary operating conditions:

#### Normal Service

- \* Driven More Than 10 Miles Daily
- \* No Operating Conditions From Severe Service Schedule

#### Severe Service (Unique Driving Conditions)

- \* Short Trips In Freezing Temperatures
- \* Towing Or Heavily Loaded
- \* Severe Dust Conditions
- \* Hot Weather, Stop-And-Go Driving
- \* Extensive Idling

### CAMSHAFT TIMING BELT

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

## MAINTENANCE INFORMATION

### Article Text (p. 4)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

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 contact. These designs are often called "Free Wheeling".

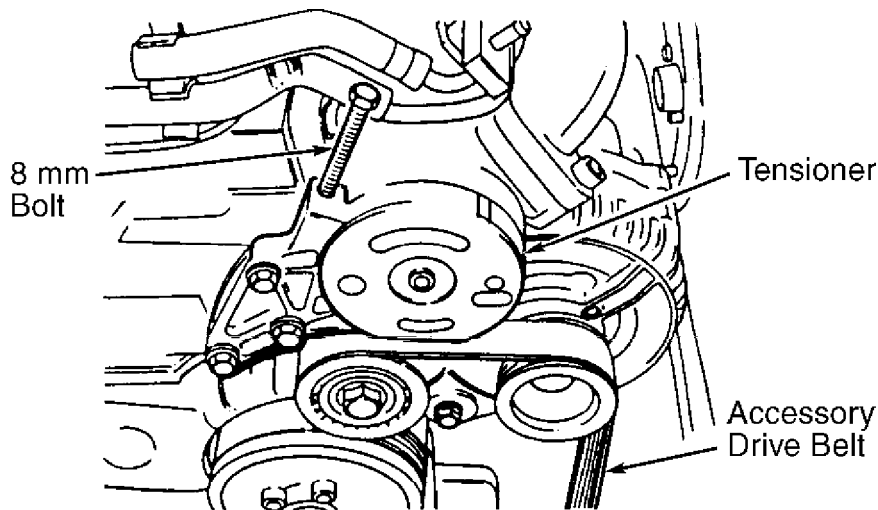
Many manufacturers changed their maintenance and warranty schedules in the mid-1980's to reflect timing belt inspection and/or replacement at 50,000-60,000 miles. Most service interval schedules in this manual reflect these changes.

Belts or components should be inspected and replaced if any of the following conditions exist:

- \* Cracks Or Tears In Belt Surface
- \* Missing, Damaged, Cracked Or Rounded Teeth
- \* Oil Contamination
- \* Damaged Or Faulty Tensioners
- \* Incorrect Tension Adjustment

Inspect timing belt at 20,000 mile intervals. Replace belt as necessary.

#### DRIVE BELT ROUTING



93J83104

Fig. 1: Drive Belt Tensioner Adjustment (VR6)  
Courtesy of Volkswagen United States, Inc.

## MAINTENANCE INFORMATION

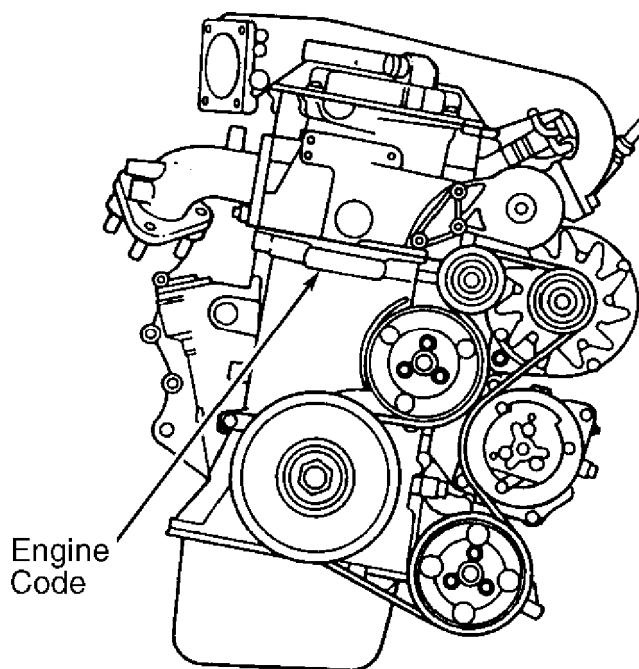
### Article Text (p. 5)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM



93H83102

Fig. 2: Drive Belt Routing (VR6)

Courtesy of Volkswagen United States, Inc.

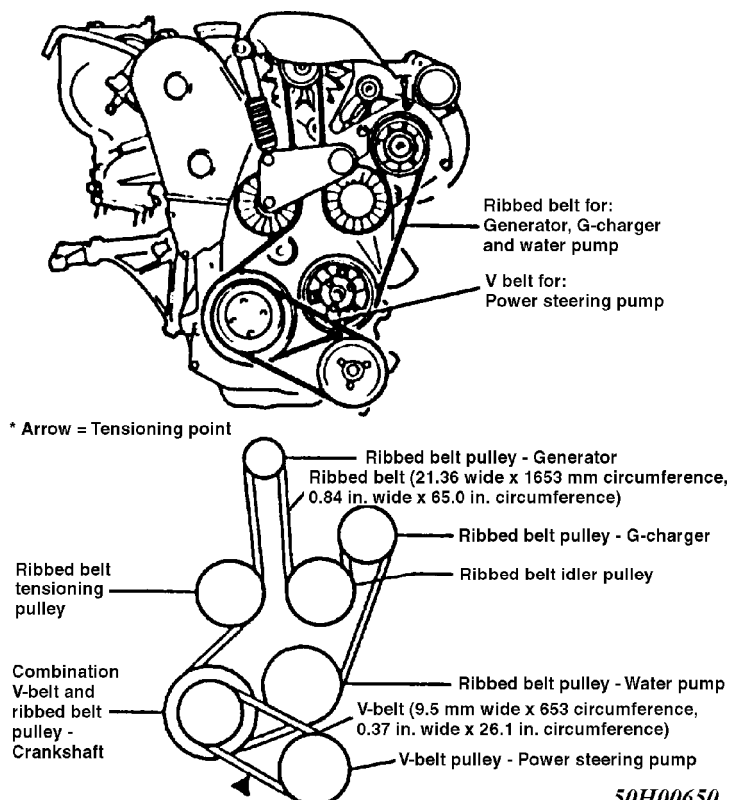


Fig. 3: Drive Belt Routing (Four Cylinder Without A/C)

Courtesy of Volkswagen United States, Inc.

## MAINTENANCE INFORMATION

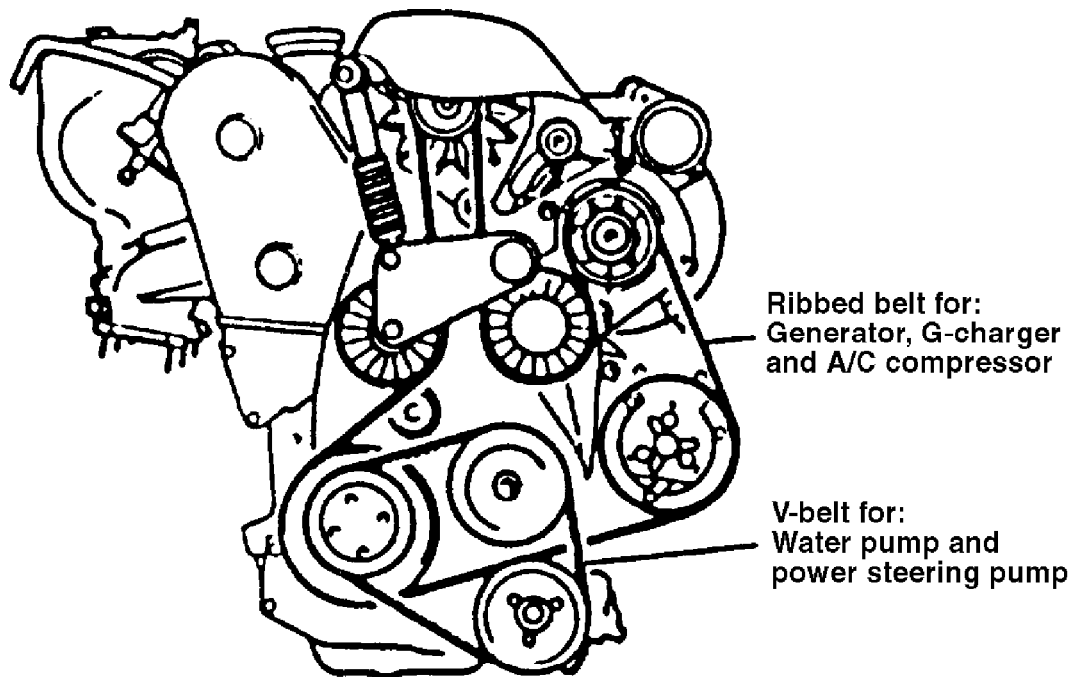
### Article Text (p. 6)

1989 Volkswagen Golf

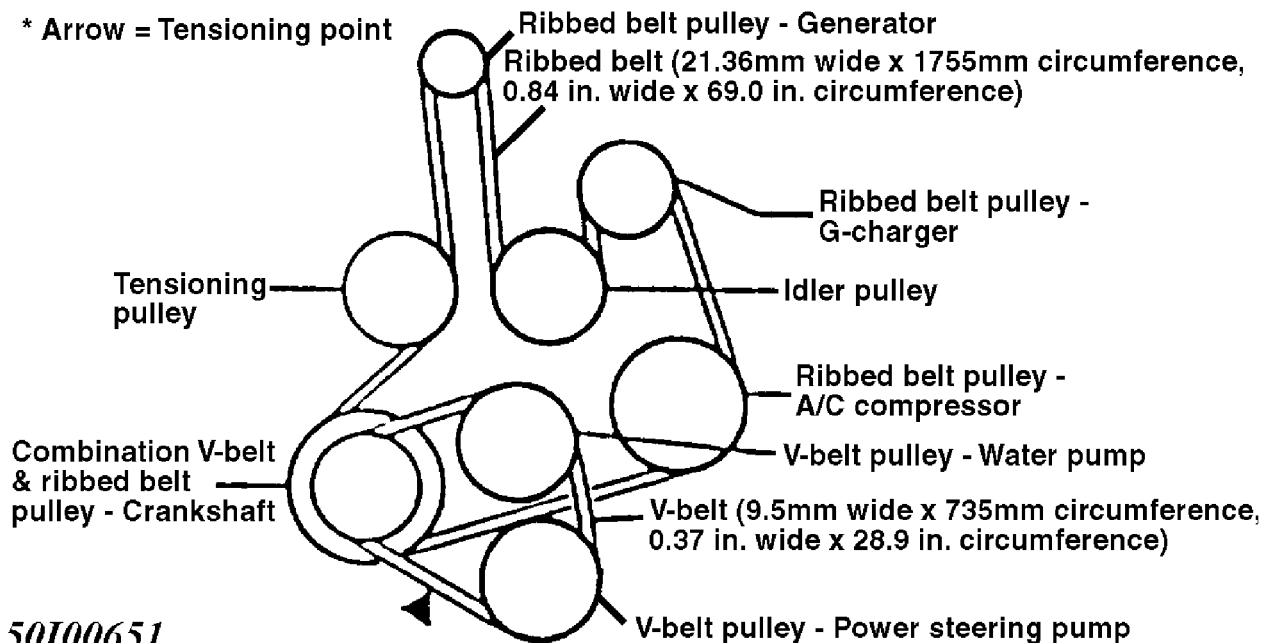
For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM



\* Arrow = Tensioning point



50I00651

Fig. 4: Drive Belt Routing (Four Cylinder With A/C)

Courtesy of Volkswagen United States, Inc.

## SERVICE POINT LOCATIONS

## MAINTENANCE INFORMATION

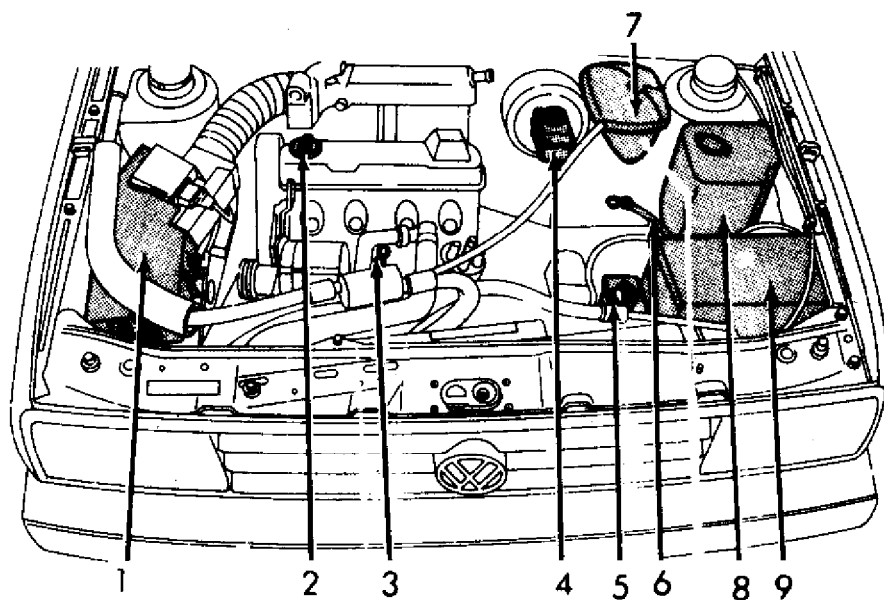
### Article Text (p. 7)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

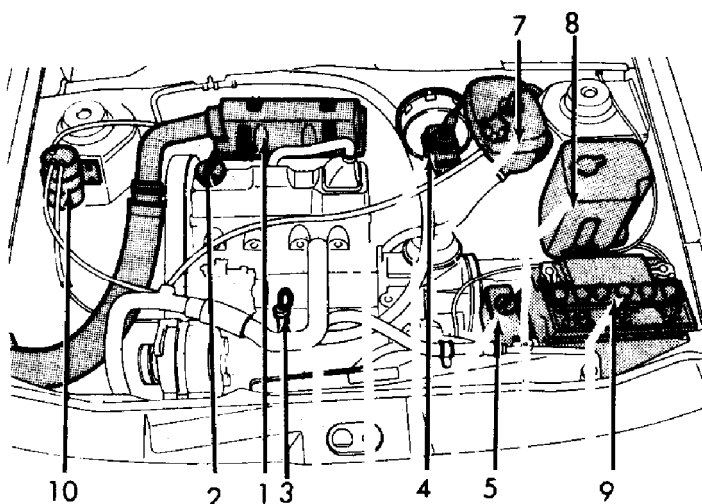


#### GASOLINE ENGINE

- |                             |                                    |
|-----------------------------|------------------------------------|
| 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. 5: Service Point Locations (Gasoline Engine)  
Courtesy of Volkswagen United States, Inc.



#### DIESEL 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             |

93D45784

Fig. 6: Service Point Locations (Diesel Engine)  
Courtesy of Volkswagen United States, Inc.

## MAINTENANCE INFORMATION

### Article Text (p. 8)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

## INFORMATION LABEL LOCATIONS

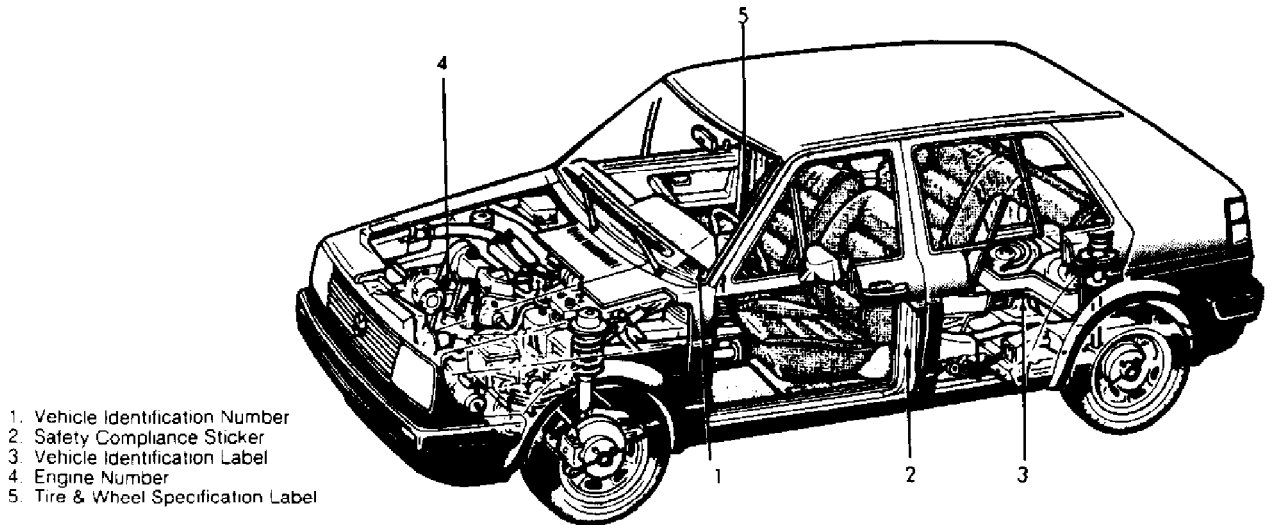


Fig. 7: Information Label Locations  
Courtesy of Volkswagen United States, Inc.

## SERVICE LABOR TIMES

### SERVICE LABOR TIMES TABLE (HOURS)

Application (1) (2) (3)				15, 000	30, 000 (60, 000)
				Mile Service	Mile Service
Non-Turbo Diesel Engine					
Automatic Transmission	.....	1.5	.....	3.2 (3.9)	
Manual Transmission	.....	1.7	.....	2.6 (3.1)	
Turbo Diesel Engine					
Automatic Transmission	.....	1.5	.....	3.2 (3.9)	
Manual Transmission	.....	1.7	.....	2.6 (3.1)	
Gasoline Engine					
Automatic Transmission	.....	1.5	.....	3.2 (4.1)	
Manual Transmission	.....	1.7	.....	2.6 (3.5)	

- (1) - Add .2 hr. if equipped with A/C.  
(2) - Add .1 hr. if equipped with cruise control.  
(3) - 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.

## LUBRICATION SPECIFICATIONS

### LUBRICATION SPECIFICATIONS TABLE

Application	Fluid Specifications
-------------	----------------------



## MAINTENANCE INFORMATION

### Article Text (p. 9)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

#### Engine Oil

##### Ambient Temperatures

Greater Than 50°F (10°C) ..... SAE 20W-50 API SF/CD

14° To 50°F (-10°C To 10°C) ..... SAE 10W-40 API SF/CD

Less Than 14°F (-10°C) ..... SAE 5W-30 API SF/CD

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

Power Steering Fluid ..... VW Hydraulic Oil  
(G 002000) Or Equivalent

Automatic Transmission ..... Dexron-II E ATF Or Equivalent

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

AA

## FLUID CAPACITIES

### FLUID CAPACITIES TABLE (1)

AA

Application	Quantity
-------------	----------

A/C System R-12 Refrigerant	37-40 Ozs.
-----------------------------	------------

#### Cooling System

4-Cylinder Engines	5.0-7.0 Qts. (4.8-6.5L)
--------------------	-------------------------

V6 Engines	9.1 Qts. (8.6L)
------------	-----------------

#### Engine Oil (3)

##### 4-Cylinder Engines

Gas	4.3 Qts. (4.0L)
-----	-----------------

Diesel & Turbo Diesel	4.7 Qts. (4.5L)
-----------------------	-----------------

V6 Engines	6.3 Qts. (6.0L)
------------	-----------------

Fuel Tank	14.5 Gals. (55.0L)
-----------	--------------------

#### Transmission

Automatic (All models)	3.2 Qts. (3.0L)
------------------------	-----------------

#### Final Drive

Automatic Transmission (4)	.8 Qt. (.75L)
----------------------------	---------------

Manual Transmission	2 Qts. (1.9L)
---------------------	---------------

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

(2) - Use of R-12 in a R134a system will result in SEVERE DAMAGE.

(3) - Includes oil filter change.

(4) - Lifetime fill.

AA

## WHEEL & TIRE SPECIFICATIONS

Wheel and tire sizes vary according to vehicle and equipment and can be found on the tire information label on each vehicle. Wheel and tire specifications and tire inflation pressures are listed on a label found on the right door post for 2-door vehicles and the right rear door post on 4-door vehicles.

NOTE: Snow chains must be used on drive wheels, in pairs only.

## **MAINTENANCE INFORMATION**

### **Article Text (p. 10)**

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

#### **WHEEL TIGHTENING**

Tighten all wheel lugs to 80 ft. lbs. (110 N.m).

#### **BATTERY SPECIFICATIONS**

**CAUTION:** 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 the **GENERAL INFORMATION** section.

All models use BCI group 42 batteries with cold crank rating of 360 amps.

#### **CAUTIONS & WARNINGS**

##### **ELECTRIC SHOCK HAZARD**

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

##### **BRAKE PEDAL PRESSURE WITH ENGINE NOT RUNNING**

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

##### **SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG SYSTEM)**

**NOTE:** For information on air bag **DIAGNOSIS & TESTING** or **DISPOSAL PROCEDURES**, see **AIR BAGS** article in the **ACCESSORIES/SAFETY EQUIPMENT** Section.

#### **WARRANTY INFORMATION**

**CAUTION:** Always refer to customer's copy of warranty information for specific model application and/or coverage limitations.

##### **BASIC NEW CAR WARRANTY**

The manufacturer warrants that every vehicle imported and sold as a new vehicle to a retail customer will be free of defects in material and workmanship for 2 years or 24,000 miles, whichever comes first, after the date of delivery to the first retail customer, or after the vehicle was first placed in service.

##### **LIMITED POWER TRAIN WARRANTY**

Covers the engine, transmission and drivetrain for a period

## MAINTENANCE INFORMATION

### Article Text (p. 11)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

of 5 years or 50,000 miles, whichever occurs first.

#### ANTI-CORROSION

Covers holes caused by corrosion in body sheet metal for 6 years, without respect to mileage, so long as the inspection and maintenance services are performed.

#### EMISSION CONTROL SYSTEM (ALL MODELS)

Manufacturer warrants that this vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. and California Air Resources Board emission regulations applicable at the time of manufacture and that this vehicle is free from defects in materials and workmanship which cause it to fail to conform with applicable regulations within the first 5 years or 50,000 miles, whichever occurs first.

#### EMISSION CONTROL SYSTEM (CALIFORNIA ONLY)

Vehicles are warranted against failure to conform with applicable standards for 3 years or 50,000 miles, whichever occurs first, under the Performance Warranty. The warranty covers defective emission-related parts for 7 years or 70,000 miles, whichever occurs first.

#### FUSES & CIRCUIT BREAKERS

\* PLEASE READ FIRST \*

The fuse panel is located under the left side of the dash board by the driver's knee on the Jetta. On the Golf and GTI models the panel is located by the driver's right knee, under the dash panel.

NOTE: On all models, fuse specifications are listed on inside of panel cover.

ALL BUT JETTA

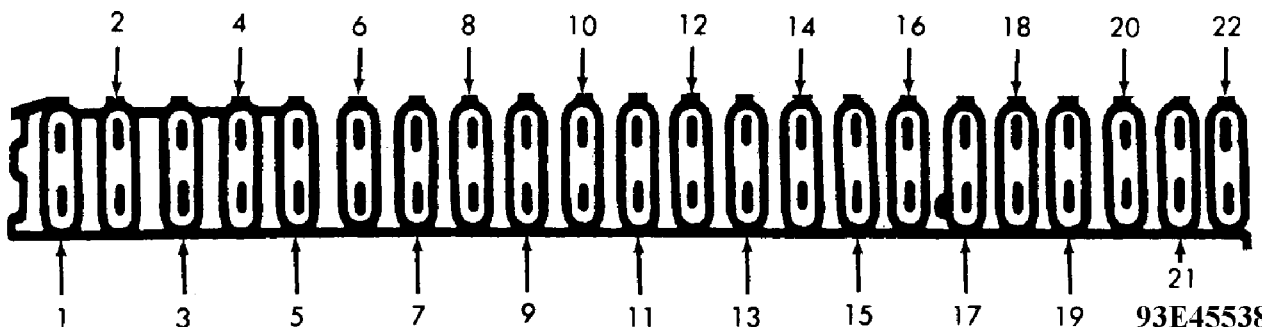


Fig. 8: Fuse Panel Id (All But Jetta)  
Courtesy of Volkswagen United States, Inc.

## MAINTENANCE INFORMATION

### Article Text (p. 12)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

#### Fuse & Circuit Breaker Identification

- 1 - 10 Amp  
Left Headlight Low Beam
- 2 - 10 Amp  
Right Headlight Low Beam
- 3 - 10 Amp  
Instrument & License Lights
- 4 - 15 Amp  
Rear Window Wiper, Glove Box Light
- 5 - 15 Amp  
Windshield Wiper/Washer
- 6 - 30 Amp  
A/C, Fresh Air Fan
- 7 - 10 Amp  
Right Taillight & Side Marker Light
- 8 - 10 Amp  
Left Taillight & Side Marker Light
- 9 - 20 Amp  
Rear Window Defogger, Mirror Heater
- 10 - 15 Amp  
Fog Lights
- 11 - 10 Amp  
Left Headlight High Beam & High Beam Indicator
- 12 - 10 Amp  
Right Headlight High Beam
- 13 - 10 Amp  
Horn, Radiator Cooling Fan
- 14 - 15 Amp  
Backup Lights, Electric Mirrors, Heated Front Seats,  
Windshield Washer Jets
- 15 - 10 Amp  
Engine Electronics
- 16 - 15 Amp  
Power Sunroof
- 17 - 10 Amp  
Emergency Flasher
- 18 - 20 Amp  
Fuel Pump, Oxygen Sensor
- 19 - 30 Amp  
A/C, Radiator Cooling Fan
- 20 - 10 Amp  
Brakelights, Cruise Control
- 21 - 15 Amp  
Dome/Luggage/Vanity Mirror Lights, Clock, Radio, Central  
Locking System, Multi-Function Indicator, Alarm System
- 22 - 10 Amp  
Radio, Cigarette Lighter, Remote Luggage Compartment Release

1985-1989 (VIN 1G-KW400 000)

## MAINTENANCE INFORMATION

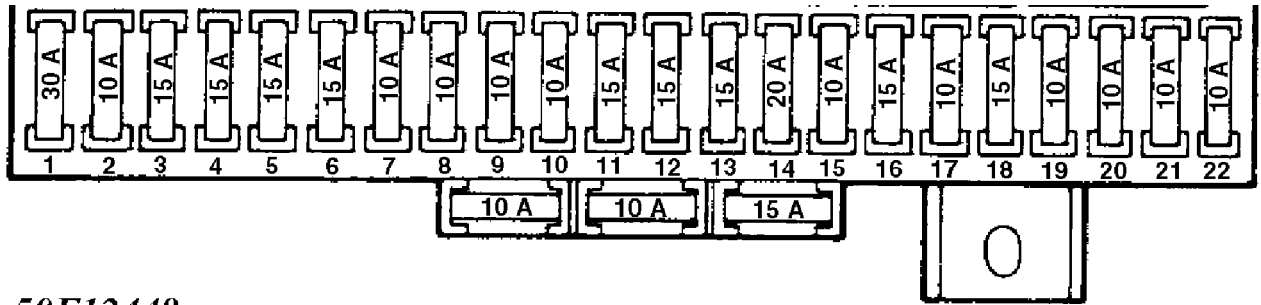
### Article Text (p. 13)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM



**50F12448**

Fig. 9: Fuse Panel Id (1985- Jan. 1989 VIN 1G-KW400 000)

#### Fuse Block

Fuse block is located under left side of instrument panel.

Fuses are arranged from left to right. Fuses and circuits protected are as follows:

- 1 - 30 Amp  
Radiator Fan
- 2 - 10 Amp  
Stoplights
- 3 - 15 Amp  
Cigarette Lighter, Clock, Interior Light, Central Locking System (Optional), Radio, Luggage Compartment Light
- 4 - 15 Amp  
Hazard Flashers
- 5 - 15 Amp  
Fuel Pump
- 6 - Not Used
- 7 - 10 Amp  
Left Parking, Side Marker & Tailights
- 8 - 10 Amp  
Right Parking, Side Marker & Tailights
- 9 - 10 Amp  
Right High Beam, High Beam Indicator
- 10 - 10 Amp  
Left High Beam
- 11 - 15 Amp  
Windshield Wiper/Washer
- 12 - 15 Amp  
Heated Seats, Power Mirror (Optional),  
Rear Wiper/Washer (Optional)
- 13 - 15 Amp  
Rear Window Defogger, Heated Rear View Mirror (Optional)
- 14 - 20 Amp  
Fresh Air Fan, Glove Box Light
- 15 - 10 Amp  
Back-Up Lights, Shift Console (Auto. Trans.)
- 16 - 15 Amp  
Horn (Single)
- 17 - Not Used
- 18 - 15 Amp

## MAINTENANCE INFORMATION

### Article Text (p. 14)

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

Coolant Level /Temp. Warning Light, Horn (Dual), Throttle Switch

19 - 10 Amp

Brake Warning Light, Turn Signals

20 - 10 Amp

License Plate Lights, Glove Box Light (2)

21 - 10 Amp

Left Low Beam

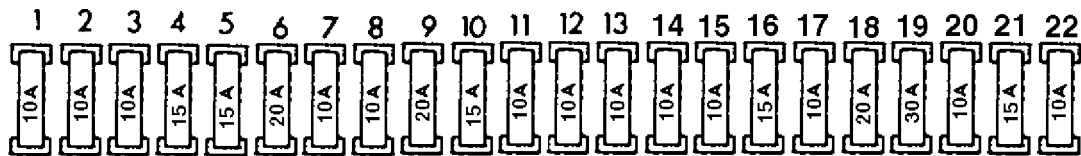
22 - 10 Amp

Right Low Beam

#### In-Line Fuses

2 in-line (30 Amp) fuses are located above fuse block. One protects Power Windows (Optional). One protects A/C System.

JETTA - 1989 (VIN 1G-KW400 001) - 1992



50E12447

Fig. 10: Fuse Panel Id (Jetta - 1989 (VIN 1G-KW400 001) - 1992)

Courtesy of Volkswagen United States, Inc.

#### Fuse & Circuit Breaker Identification

1 - 10 Amp

Left Headlight Low Beam

2 - 10 Amp

Right Headlight Low Beam

3 - 10 Amp

Instrument & License Lights

4 - 15 Amp

Rear Window Wiper, Glove Box Light

5 - 15 Amp

Windshield Wiper/Washer

6 - 20 Amp

A/C, Fresh Air Fan (16-Valve)

7 - 10 Amp

Right Taillight & Side Marker Light

8 - 10 Amp

Left Taillight & Side Marker Light

9 - 20 Amp

Rear Window Defogger

10 - 15 Amp

Fog Lights (2.0 16-Valve Only)

11 - 10 Amp

Left Headlight High Beam & High Beam Indicator Light

12 - 10 Amp

Right Headlight High Beam

## **MAINTENANCE INFORMATION**

### **Article Text (p. 15)**

1989 Volkswagen Golf

For Volkswagen Technical Site

Copyright © 1998 Mitchell Repair Information Company, LLC

Monday, August 23, 1999 11:57PM

- 13 - 10 Amp  
Horn, Radiator Cooling Fan (16-Valve)
- 14 - 10 Amp  
Backup Lights, Washer Nozzle Heaters
- 15 - 10 Amp  
2.0 16-Valve Only: Engine Electronics, Stabilizer Valve, Cold Start Valve
- 16 - 15 Amp  
Instrument Panel Warning Lights, Multi Function Indicator (16-Valve)
- 17 - 10 Amp  
Emergency Flasher, Turn Signals
- 18 - 20 Amp  
Fuel Pump, Oxygen Sensor
- 19 - 30 Amp  
A/C, Radiator Cooling Fan
- 20 - 10 Amp  
Brakelights, Cruise Control
- 21 - 15 Amp  
Interior Lights, Digital Clock, 16 Valve: Luggage Compartment Light, Central Locking System, Multi-Function Indicator
- 22 - 10 Amp  
Radio, Cigarette Lighter

**END OF ARTICLE**