

# Vehicle Identification & VIN Decoder



Some of the information in this manual applies only to cars of a particular model year or range of years. For example, “1999 m.y.” refers to the 1999 model year. The model year does not necessarily match the calendar year in which the car was manufactured or sold. To be sure of the model year of a particular car, check the vehicle identification number (VIN) on the car. Technical changes made in production within a model year are identified in this manual by listing the VIN for the first car produced with this change.

The VIN is a unique sequence of 17 characters assigned by Volkswagen to identify each individual car. WVWDE21JXYW671801 is an example. Each of the 17 letters and numbers indicates certain facts about the car and its manufacture. VINs used to distinguish information in this manual may refer only to the last eleven digits—the characters 1JXYW671801 in the example above.

Your Volkswagen’s VIN can be found on a plate mounted on the top of the instrument panel, on the driver’s side where the number can be seen through the windshield. The 10th character is the model year code. The letters “I”, “O”, “Q” and “U” are not used for model year designation, for example, “X” for 1999 m.y., “Y” for 2000 m.y., “1” for 2001, “2” for 2002 m.y., etc. This manual covers Volkswagen Jettas, Golfs, and GTIs for the model years 1999 through mid-2005. The table below explains some of the various codes in the VIN numbers of models covered by this manual.

position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17      1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

**Jetta:**                  9 M        0 0 0 0 0 0 1 to                  9 M        9 9 9 9 9 9 9

**Golf:**                  1 J        0 0 0 0 0 0 1 to                  1 J        9 9 9 9 9 9 9

Position	Description	Decoding Information
1	Country of origin	3 Mexico W Germany 9 Brazil
2	Manufacturer	V Volkswagen
3	Vehicle Type	W Passenger Car
4	Series	Varies with model year See BentleyPublishers.com for more information
5	Engine	
6	Restraint system	
7	Model	9M Jetta sedan
8		1J Golf, GTI, Jetta Wagon, R32
9	Check Digit	0-9 or X, calculated by NHTSA
10	Model Year	X 1999 Y 2000 1 2001 2 2002 3 2003 4 2004 5 2005
11	Assembly Plant	4 Curitiba, Brazil H Hannover, Germany 8 Dresden, Germany M Puebla, Mexico D Bratislava, Slovakia P Mosel, Germany E Emden, Germany W Wolfsburg, Germany
12-17	Serial Number	Sequential production number of the specific vehicle

# Please read these **WARNINGS** and **CAUTIONS** before proceeding with maintenance and repair work.

## WARNING—

● Read the **Important Safety Notice** on the copyright page at the beginning of the book.

● Some repairs may be beyond your capability. If you lack the skills, tools and equipment, or a suitable workplace for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen dealer service department, or other qualified shop.

● A thorough pre-reading of each procedure, and the **WARNINGS** and **CAUTIONS** that accompany the procedure is essential. Posted corrections (errata) should also be reviewed before beginning work. Please see [www.BentleyPublishers.com/errata/](http://www.BentleyPublishers.com/errata/).

● Volkswagen is constantly improving its cars. Sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, before starting any major jobs or repairs to components on which passenger safety may depend, consult your authorized Volkswagen dealer about Technical Bulletins that may have been issued.

● Do not re-use any fasteners that are worn or deformed in normal use. Many fasteners are designed to be used only once and become unreliable and may fail when used a second time. This includes, but is not limited to, nuts, bolts, washers, self-locking nuts or bolts, circlips and cotter pins. Always replace these fasteners with new parts.

● Never work under a lifted car unless it is solidly supported on stands designed for the purpose. Do not support a car on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a car that is supported solely by a jack. Never work under the car while the engine is running.

● If you are going to work under a car on the ground, make sure that the ground is level. Block the wheels to keep the car from rolling. Disconnect the battery negative (–) terminal (Ground strap) to prevent others from starting the car while you are under it.

● Never run the engine unless the work area is well ventilated. Carbon monoxide kills.

● Finger rings, bracelets and other jewelry should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.

● Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.

● Do not attempt to work on your car if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medication or any other substance that may keep you from being fully alert.

● Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the car. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

● Catch draining fuel, oil, or brake fluid in suitable containers. Do not use food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.

● Always observe good workshop practices. Wear goggles when you operate machine tools or work with battery acid. Gloves or other protective clothing should be worn whenever the job requires working with harmful substances.

● Friction materials such as brake or clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.

● Disconnect the battery negative (–) terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.

● Batteries give off explosive hydrogen gas during charging. Keep sparks, lighted matches and open flame away from the top of the battery. If hydrogen gas escaping from the cap vents is ignited, it will ignite gas trapped in the cells and cause the battery to explode.

● Connect and disconnect battery cables, jumper cables or a battery charger only with the ignition switched off, to prevent sparks. Do not disconnect the battery while the engine is running.

● Do not quick-charge the battery (for boost starting) for longer than one minute. Wait at least one minute before boosting the battery a second time.

● Do not allow battery charging voltage to exceed 16.5 volts. If the battery begins producing gas or boiling violently, reduce the charging rate. Boosting a sulfated battery at a high charging rate can cause an explosion.

● The air-conditioning system is filled with chemical refrigerant, which is hazardous. The A/C system should be serviced only by trained technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.

● Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.

● Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.

● Most cars covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is inflated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious injury.

● To prevent personal injury or airbag system failure, **only factory trained Volkswagen service technicians** should test, disassemble or service the airbag system.

continued on next page

# Please read these **WARNINGS** and **CAUTIONS** before proceeding with maintenance and repair work.

## **WARNING** (continued) —

- Disconnect the power supply before working on the airbag system, or when doing repairs that require removing airbag system components. Disconnect the battery negative (–) terminal and cover the battery.
- On airbag-equipped cars, never apply stickers or any other type of covering on the steering wheel. Do not let chemical cleaners, oil or grease come into contact with vinyl covering of the airbag unit.
- Never open or otherwise attempt to repair airbag system parts. Always use new parts. Never leave airbag parts or the partially disassembled airbag system unattended.
- Never use a test light to conduct electrical tests on the airbag system. The system must only be tested by trained Volkswagen Service technicians using the Volkswagen VAG 1551/1552 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the car.
- Do not expose the airbag unit to temperatures above 194°F (90°C), even for brief periods. Keep clear of heat sources such as hot plates, soldering irons, heat lamps and welding equipment.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.
- Greases, lubricants and other automotive chemicals contain toxic substances, many of which are absorbed directly through the skin. Read manufacturer's instructions and warnings carefully. Use hand and eye protection. Avoid direct skin contact.

## **CAUTION**—

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen dealer or other qualified shop. We especially urge you to consult an authorized Volkswagen dealer before beginning repairs on any car that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen of America.
- Volkswagen offers extensive warranties, especially on components of fuel delivery and emission control systems. Therefore, before deciding to repair a Volkswagen that may still be covered wholly or in part by any warranties issued by Volkswagen United States, Inc., consult your authorized Volkswagen dealer. You may find that he can make the repair for free, or at minimal cost.
- Volkswagen part numbers listed in this manual are for identification purposes only, not for ordering. Always check with your authorized Volkswagen dealer to verify part numbers and availability before beginning service work that may require new parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly, do not attempt shortcuts. Use tools appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque specification listed.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond or lake. Consult local ordinances that govern the disposal of wastes.
- On cars equipped with anti-theft radios, make sure you know the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered into the radio when power is restored, that radio may lock up and be rendered inoperable, even if the correct code is then entered.
- Connect and disconnect a battery charger only with the battery charger switched off.
- Do not quick-charge the battery (for boost starting) for longer than one minute. Wait at least one minute before boosting the battery a second time.
- Sealed or "maintenance free" batteries should be slow-charged only, at an amperage rate that is approximately 10% of the battery's ampere-hour (Ah) rating.
- Do not allow battery charging voltage to exceed 16.5 volts. If the battery begins producing gas or boiling violently, reduce the charging rate. Boosting a sulfated battery at a high charging rate can cause an explosion.

# Golf, GTI and Jetta Product Familiarization

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## INTRODUCTION

The information included in this appendix is based on introductory and preliminary sales information for A4 Golf, GTI, and Jetta vehicles sold in the USA/Canada. The content provided is intended to serve a product familiarization guide. Note that the information given here is subject to change and should be used as a general reference only.

**WARNING —**

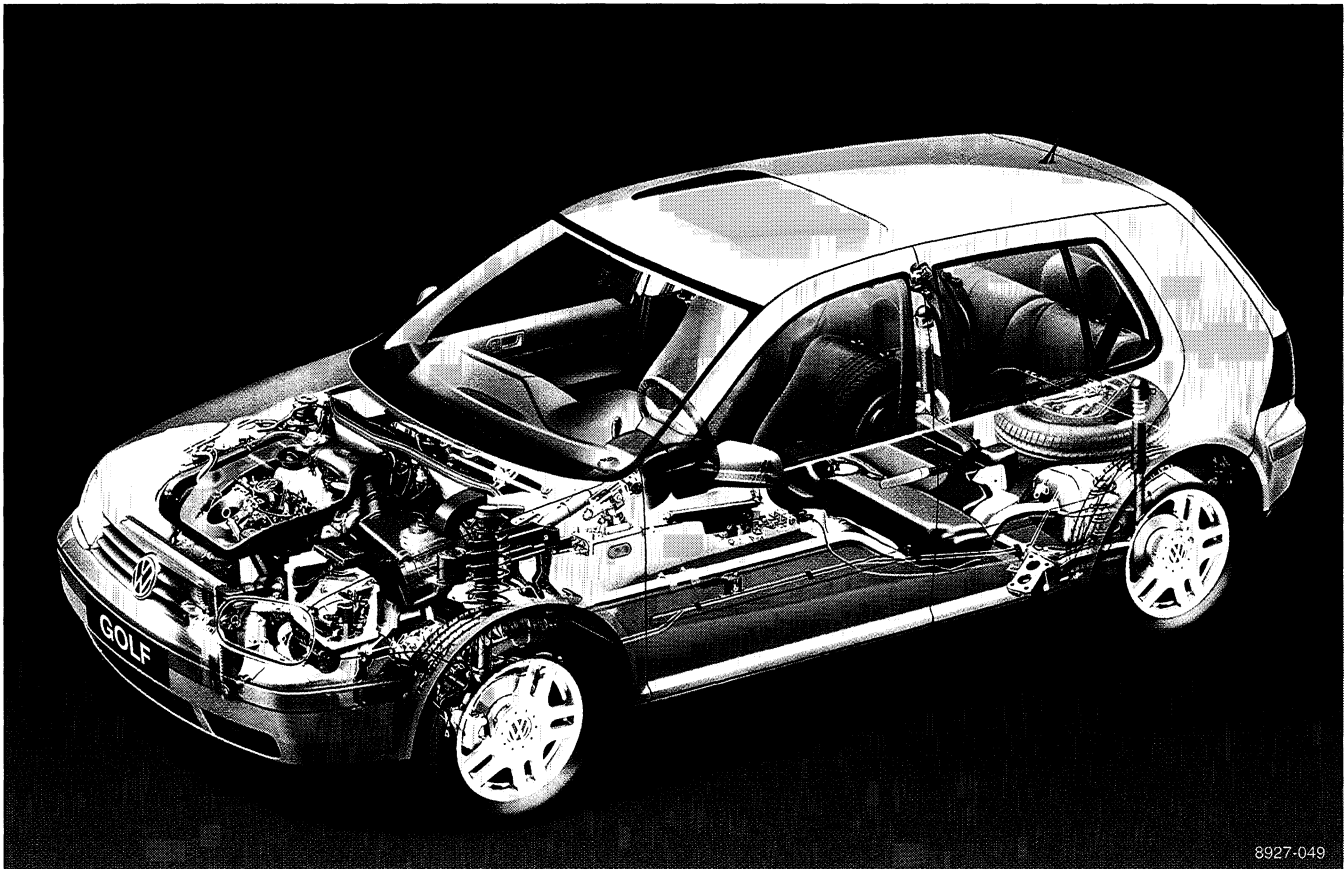
*Always check the Volkswagen Worldwide Repair Information System or the publisher's website at [www.bentleypublishers.com](http://www.bentleypublishers.com) for information that may supersede any information included in this section.*

### PRODUCT OVERVIEW

The fourth generation of the Golf and Jetta, known as the A4 platform, was introduced in 1999. When introduced, three trim levels were offered (GL, GLS, and GLX). The Jetta was available in GL, GLS, and GLX trim levels, first as a 4-door sedan, and beginning in the 2001, as a wagon. The Golf was available as both 2- and 4-door hatchbacks, in GL and GLS trim levels. GTI models were only available as 2-door hatchbacks (GLS, GLX models).

External badging was not used to identify the different models. The engine versions were however displayed on the rear of the vehicles. Available engines are listed below.

All models feature chrome accents and soft-textured painted surfaces. The rear seat has a one third/two third split with a center seat head rest and shoulder belt. Side airbags for the front seats are also standard equipment for all models.

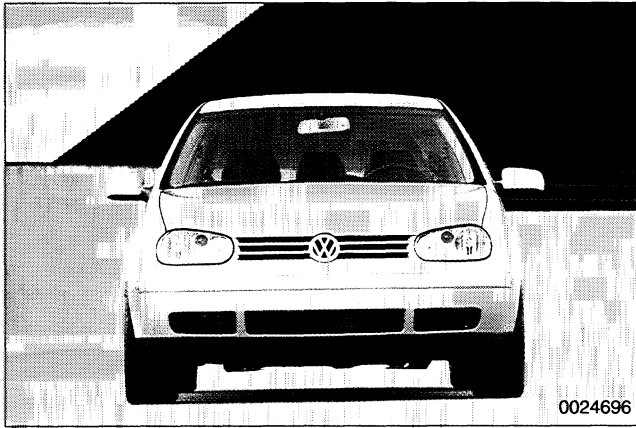


The only individual option available during the model's introduction was the CD changer. All models are pre-wired for dealer installation.

Additional optional equipment became available throughout the production span of the A4 vehicles. Late model high-tech options included ESP (Electronic Stabilization Program), Tiptronic 5-speed automatic transmission, 6-speed manual transmission, ASR (Anti Slip Regulation), Volkswagen

## 00-4 GOLF, GTI AND JETTA PRODUCT FAMILIARIZATION

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### **GTI and Jetta GLX models standard equipment (1999 model introduction)**

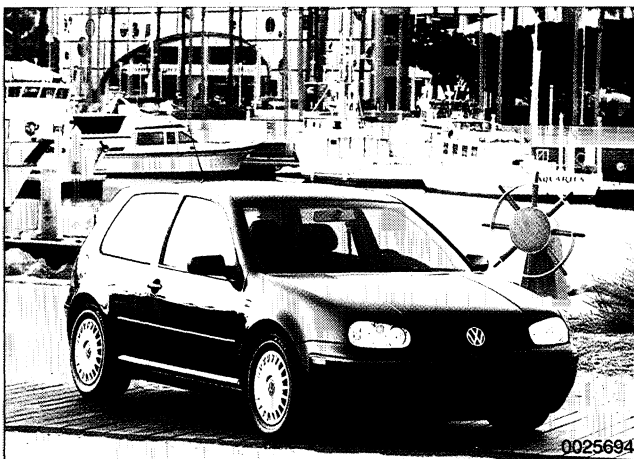
- All GLS level equipment
- 2.8 liter VR6 engine
- 16 inch 5 spoke alloy wheels
- Anti-theft wheel locks
- Partial leather interior trim
- 3-spoke leather wrapped steering wheel
- Power sunroof
- Cold weather package
- Rear sunshade (Jetta only)
- Climatronic (automatic climate control system)
- Rain sensor for windshield wipers
- Trip computer
- Foglights
- Sport suspension
- Auto-dimming rear view mirror
- Traction control

# GOLF, GTI AND JETTA PRODUCT FAMILIARIZATION 00-3

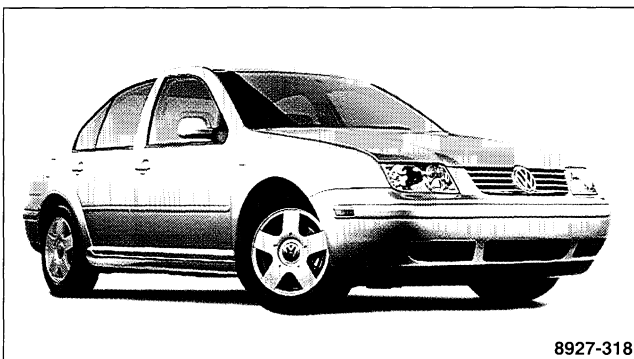
Telematics by OnStar, and Sport suspension with 18-inch alloy wheel and 225/40R18Y tires.

For 1999, a Luxury Package was available on the GLS models, which included a sunroof and 15" alloy wheels. A Leather Package was also available which contained partial leather interior trim, leather wrapped steering wheel, shift knob and parking brake handle. Heated seats and windshield washer nozzles were included with the Leather Package. Vehicles pictured represent several different model years.

## Golf and Jetta GL standard equipment (1999 model introduction)



- 2.0L 4-cylinder 115hp (gasoline)
- Optional 1.9L 4-cylinder 90hp (TDI) (diesel)
- Blue/red instrumentation
- Side turn signal lights
- Soft-texture painted interior panels
- Chrome interior accents
- Dual front and side airbags
- ABS with 4-wheel disc brakes
- 3 rear shoulder belts and 3 head rests
- Remote side mirrors
- Stereo/radio cassette
- Air conditioning
- Anti-theft alarm
- Remote power locks
- Power windows
- Tilt/telescopic adjustable steering wheel
- 15" steel wheels
- Full size spare tire on steel rim
- Roof antenna (amplified)



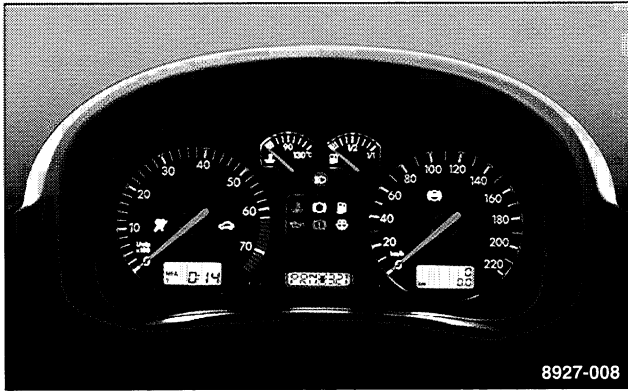
## Golf, GTI and Jetta GLS models standard equipment (1999 model introduction)

- All GL level equipment
- Optional 2.8L VR6 engine (Jetta only)
- Cruise control
- Heated power side mirrors
- Front center arm rest

# GOLF, GTI AND JETTA PRODUCT FAMILIARIZATION 00-5

## Feature Overview

### Instrument cluster illumination



### Front seat side airbags



### New headlight design, Golf



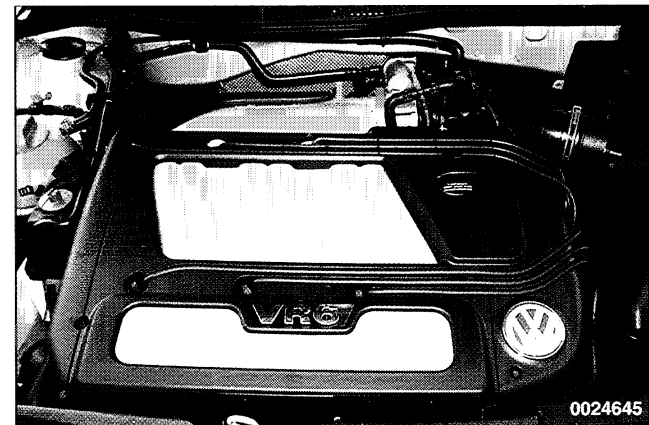
### Power windows



### New headlight design, Jetta

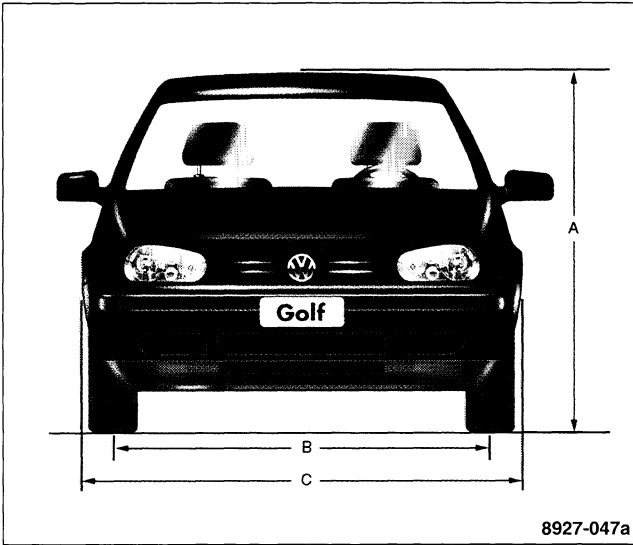


### VR6 engine



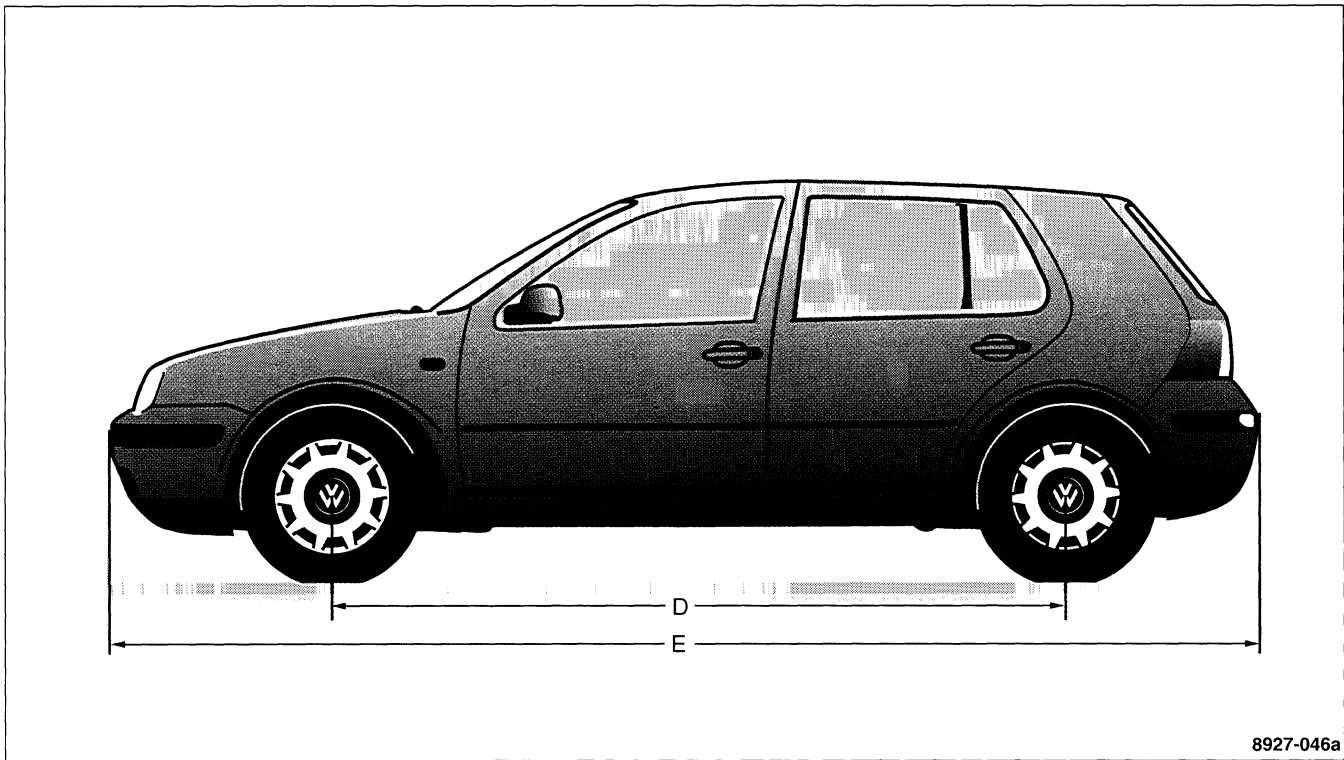


**Golf Dimensions**

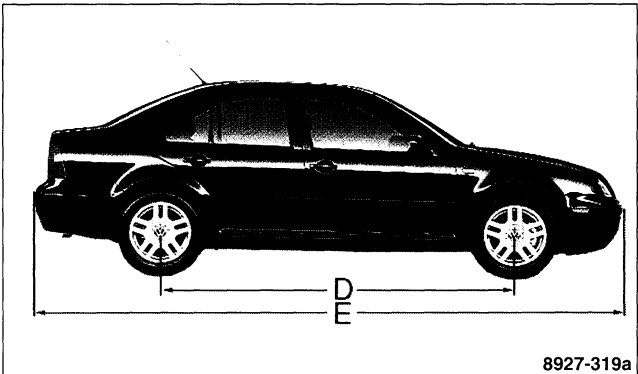
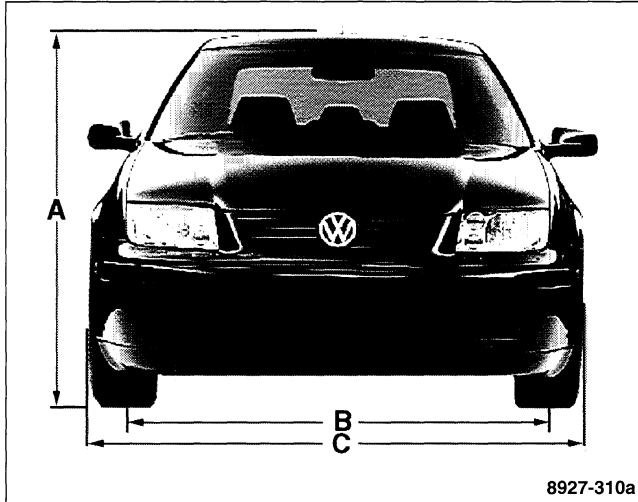


**Golf (1999)**

- Overall height (A) . . . . . 56.7 in. (1439 mm)
- Track (B)
  - Front . . . . . 59.6 in. (1513 mm)
  - Rear . . . . . 58.8 in. (1494 mm)
- Overall width (C) . . . . . 68.3 in. (1735 mm)
- Wheelbase (D) . . . . . 98.9 in. (2513 mm)
- Overall length (E) . . . . . 163.3 in. (4149 mm)
- Ground clearance . . . . . 4.8 in. (122 mm)
- Turning circle . . . . . 35.8 in. (10.9 mm)
- Curb weight
  - 5-speed manual . . . . . NA
  - 4-speed automatic . . . . . NA
- Passenger volume . . . . . 87.0 ft<sup>3</sup> (2.5 m<sup>3</sup>)
- Trunk volume . . . . . 17.6 ft<sup>3</sup> (0.5 m<sup>3</sup>)
- Seating capacity . . . . . Five



## Jetta Dimensions



### Jetta, sedan (1999)

- Overall height (A) . . . . . 56.9 in. (1446 mm)
- Track (B)
  - Front . . . . . 59.6 in. (1513 mm)
  - Rear . . . . . 58.8 in. (1494 mm)
- Overall width (C) . . . . . 68.3 in. (1735 mm)
- Wheelbase (D) . . . . . 98.9 in. (2513 mm)
- Overall length (E) . . . . . 172.3 in. (4376 mm)
- Ground clearance . . . . . 4.8 in. (122 mm)
- Turning circle. . . . . 35.8 in. (10.9 mm)
- Curb weight
  - 5-speed manual . . . . . 2853 (1279 kg)
  - 4-speed automatic . . . . . 2902 (1301 kg)
- Passenger volume . . . . . 88.0 ft<sup>3</sup> (2.5 m<sup>3</sup>)
- Trunk volume. . . . . 13 ft<sup>3</sup> (0.4 m<sup>3</sup>)
- Seating capacity . . . . . Five

## ENGINE AND TRANSAXLE

Multiple engine and transaxle configurations were used in the 1999 through 2005 A4 cars.

Engines ranged from the economical 90 hp 1.9 liter TDI engine to the high-performance 240 hp 3.2 liter R32 engine.

Manual transaxles were offered in 5 and 6-speed versions. Electronically-controlled automatics were available in 4-speed and 5-speed with Tiptronic.

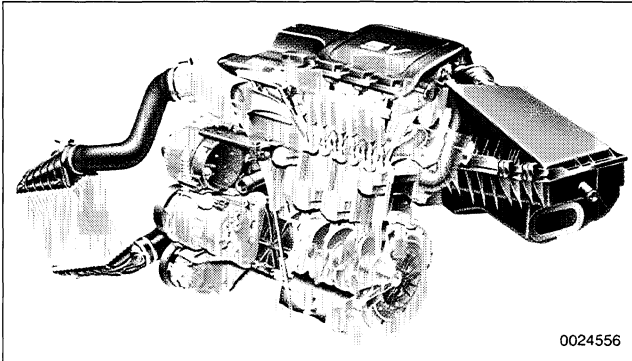
### Engines

Five engine displacements with a total of 13 engine code variants were used throughout the platform's production span.

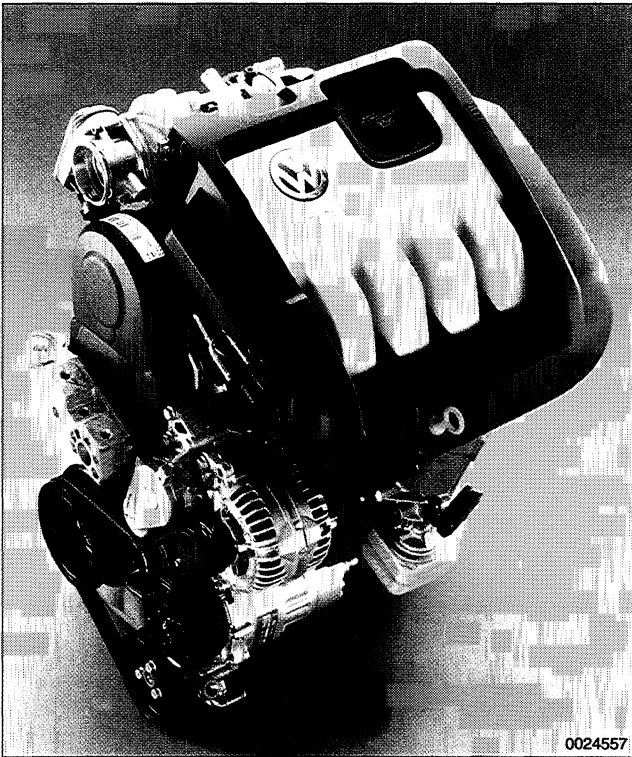
### Engine Applications

- 1.8L 4-cylinder turbo gasoline (AWD, AWW, AWP)
- 1.9L 4-cylinder turbo diesel (ALH)
- 1.9L 4-cylinder PD turbo diesel (BEW)
- 2.0L 4-cylinder gasoline (AEG, AVH, AZG, BBW, BEV)
- 2.8L 6-cylinder gasoline (AFP, BDF)
- 3.2L 6-cylinder gasoline (BJS)

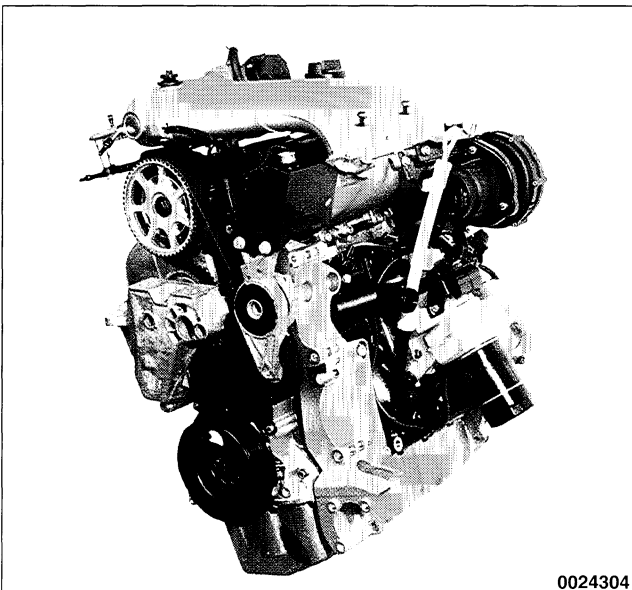
## 00-8 GOLF, GTI AND JETTA PRODUCT FAMILIARIZATION



- 1.8L 4-cylinder turbo gasoline engine was introduced in 2000 with 150 hp and later increased to 180hp for 2004. It was first available in GLS models.

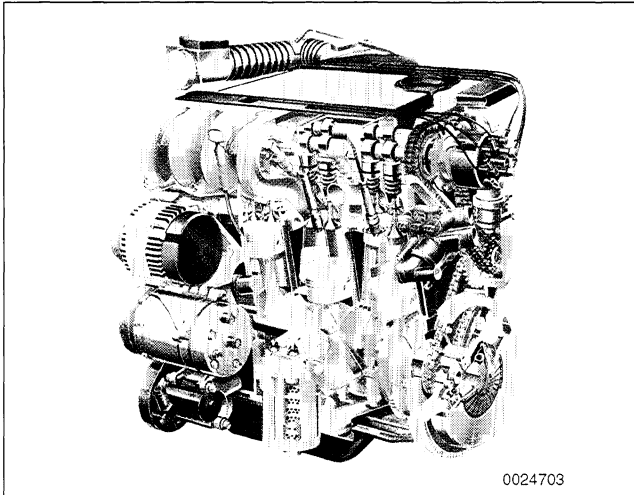


- 1.9L TDI Diesel engine (PD TDI engine shown). New TDI PD engine ("pumpe düse" or pump injector) was introduced in 2004.

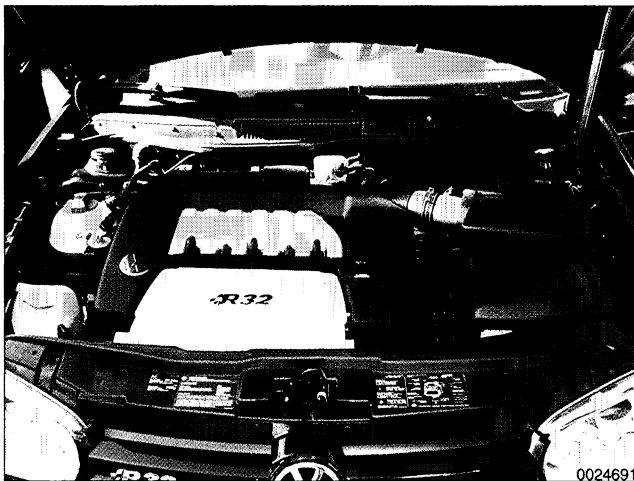


- 2.0L gasoline engine was the base 4-cylinder engine, producing 115 hp.

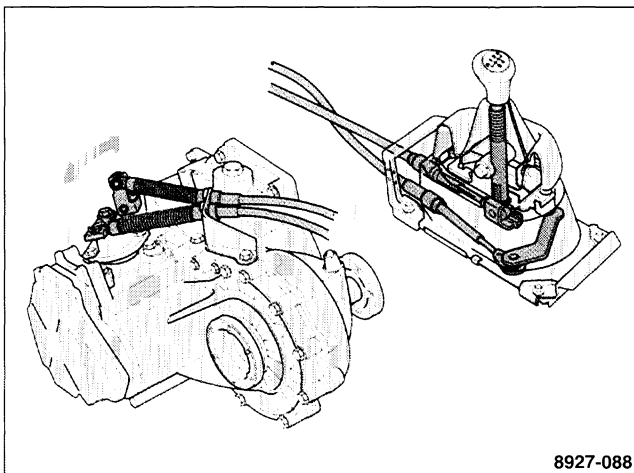
## GOLF, GTI AND JETTA PRODUCT FAMILIARIZATION 00-9



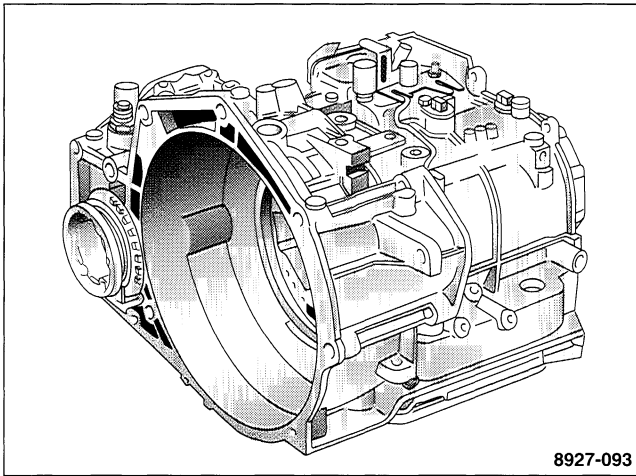
- ◀ A 2.8L 6-cylinder (VR6) engine is used in the 6-cylinder GTI GLX and in Jetta GLS and GLX models. It was produced in 12-valve and 24-valve versions. The 200 hp 24-valve VR6 was available from model year 2001 (engine code BDF). The VR6 was discontinued in the Jetta for 2005.



- ◀ 3.2L 15-degree V6 four-valve 240 hp engine was only available in the Golf R32 model.



- ### Transaxles
- ◀ Two cable-shifted manual transmissions were offered, a 5-speed and a 6-speed. The six speed was introduced in 2002 as an available option on some models and standard on the some of the higher performance models. See **34 Manual Transmission** for additional information.



Two automatic transmissions were offered. On early cars the 4-speed was the only available choice. In 2002, the 5-speed Tiptronic automatic transmission with manual-shift mode was offered as an option on 1.8T models. Both the 4-speed and the 5-speed units are electro-hydraulically controlled and feature adaptive programming and On-Board Diagnostic (OBD) capabilities. See **37 Automatic Transmission** for additional information.

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### Transaxle Applications

- Automatic transaxles
    - 01M . . . . . 4-speed automatic
    - 09A . . . . . 5-speed automatic with Tiptronic
  - Manual transaxles
    - 02J . . . . . 5-speed manual
    - 02M . . . . . 6-speed manual
    - 02Y . . . . . 6-speed manual (4MOTION)
- 

## SUSPENSION AND BRAKES

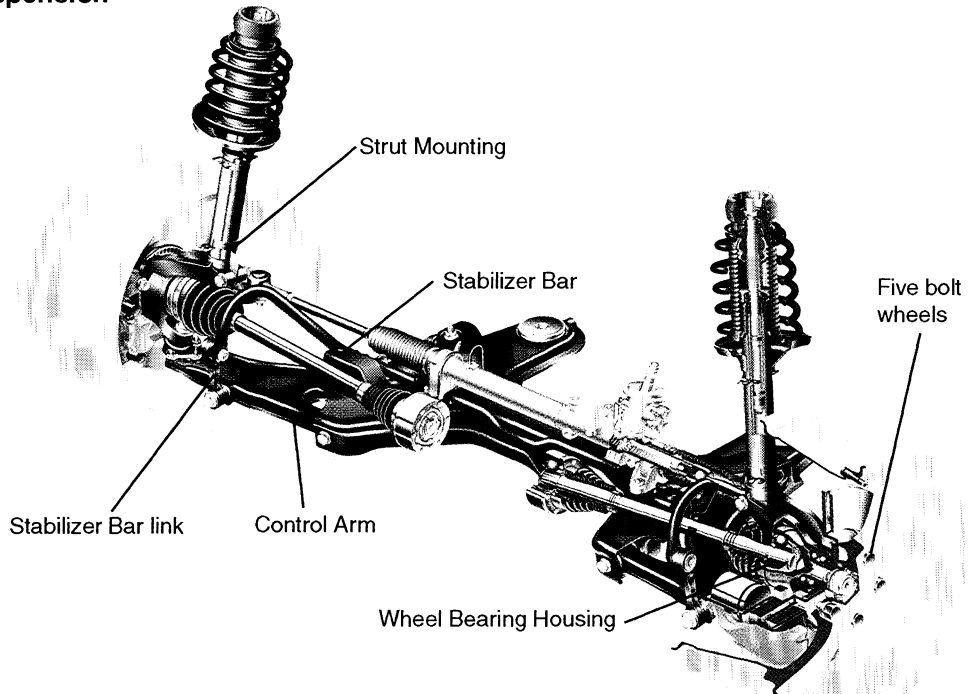
The layout of the A4's running gear has influenced generations of compact class cars since the series was launched in 1999.

Its MacPherson struts and lower wishbones on the front axle make it one of the most highly regarded axle systems on the market. The rear suspension is a torsion beam and trailing arm design with built in stabilizer bar. It is designed to maximize available interior room.

This suspension package results in maximum steering precision and clearly defined handling with excellent cornering stability.

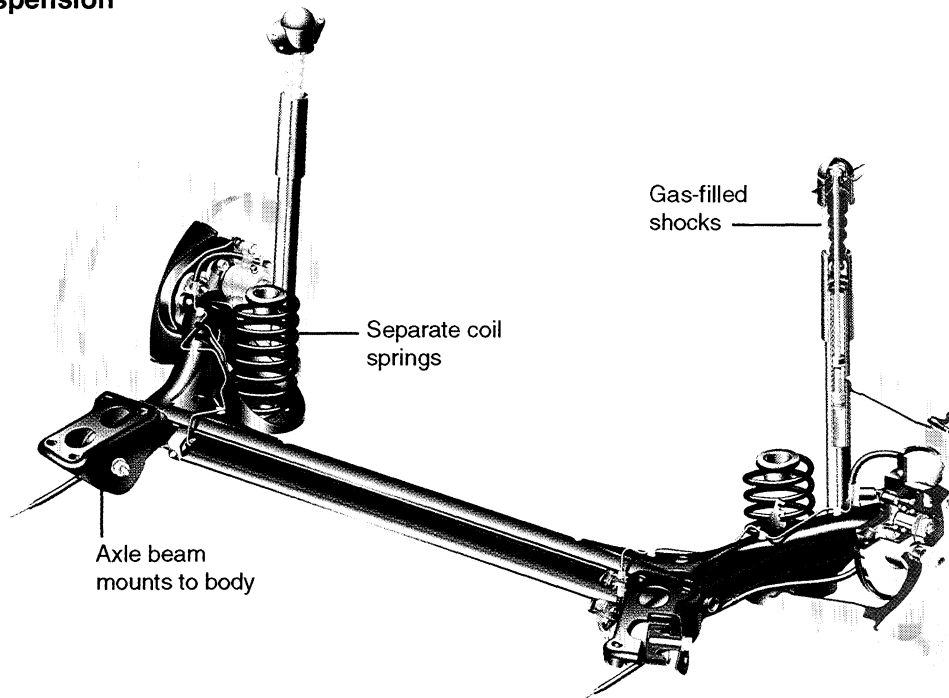
Front and rear suspension

Front Suspension



8927-098

Rear Suspension

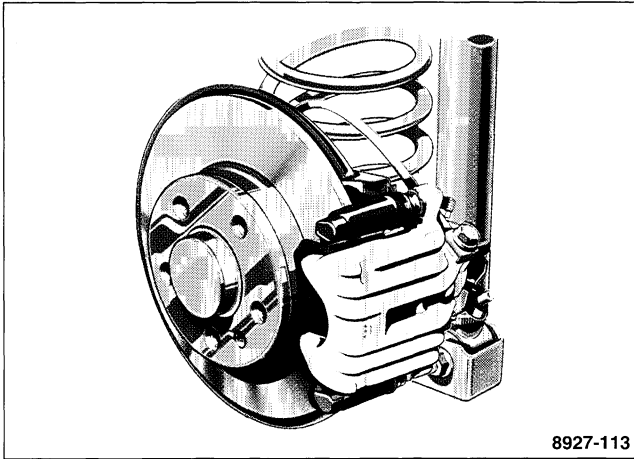


8927-105

### Brakes, mechanical

Golf, Jetta, and GTI models are equipped with 4-wheel disc brakes.

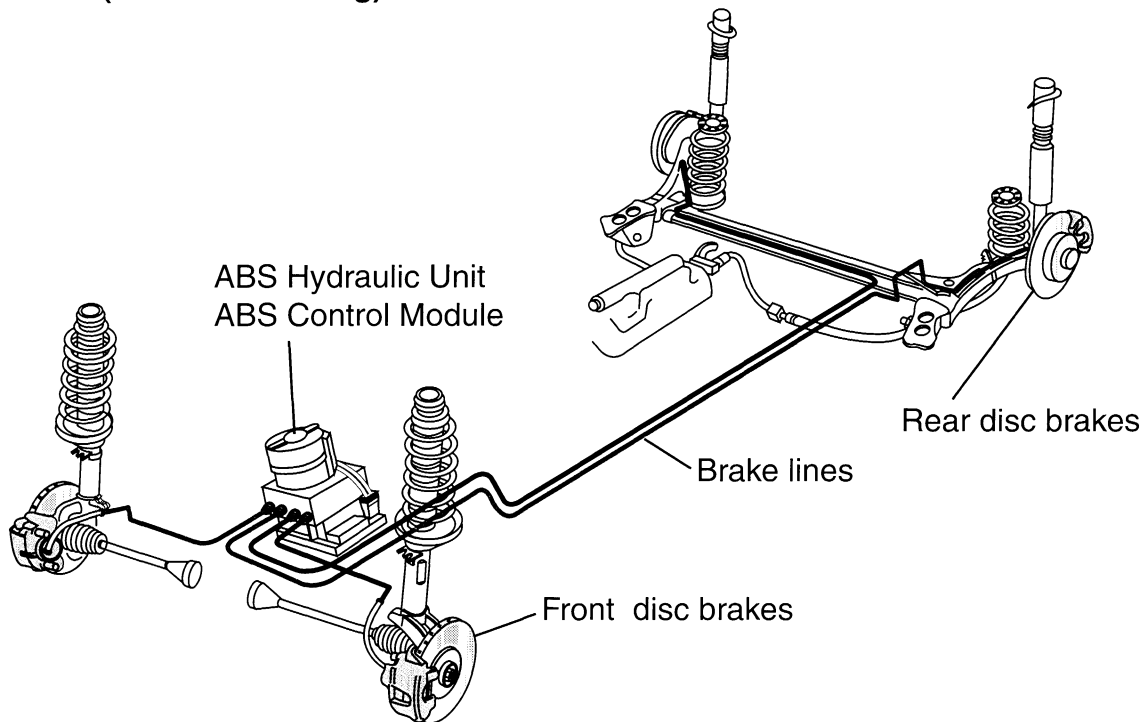
◀ The rear brake caliper housing are made of aluminum for reduced unsprung weight.



### ABS (Anti-lock Brake System)

ABS is standard equipment on all Jetta, Golf, and GTIs.

#### ABS (Anti-lock braking)



8927-118

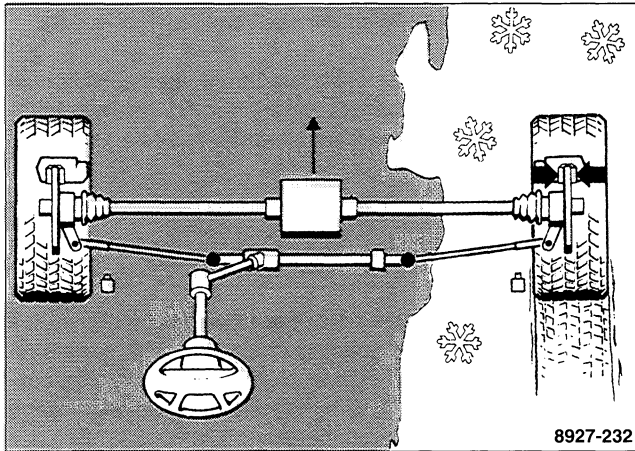
## EDL (Electronic Differential Lock)

EDL is a low speed traction control system that utilizes the ABS to apply brake pressure to a slipping wheel during acceleration. EDL is enabled at speeds of up to 24 miles per hour. EDL was standard equipment on models equipped with high output engines.

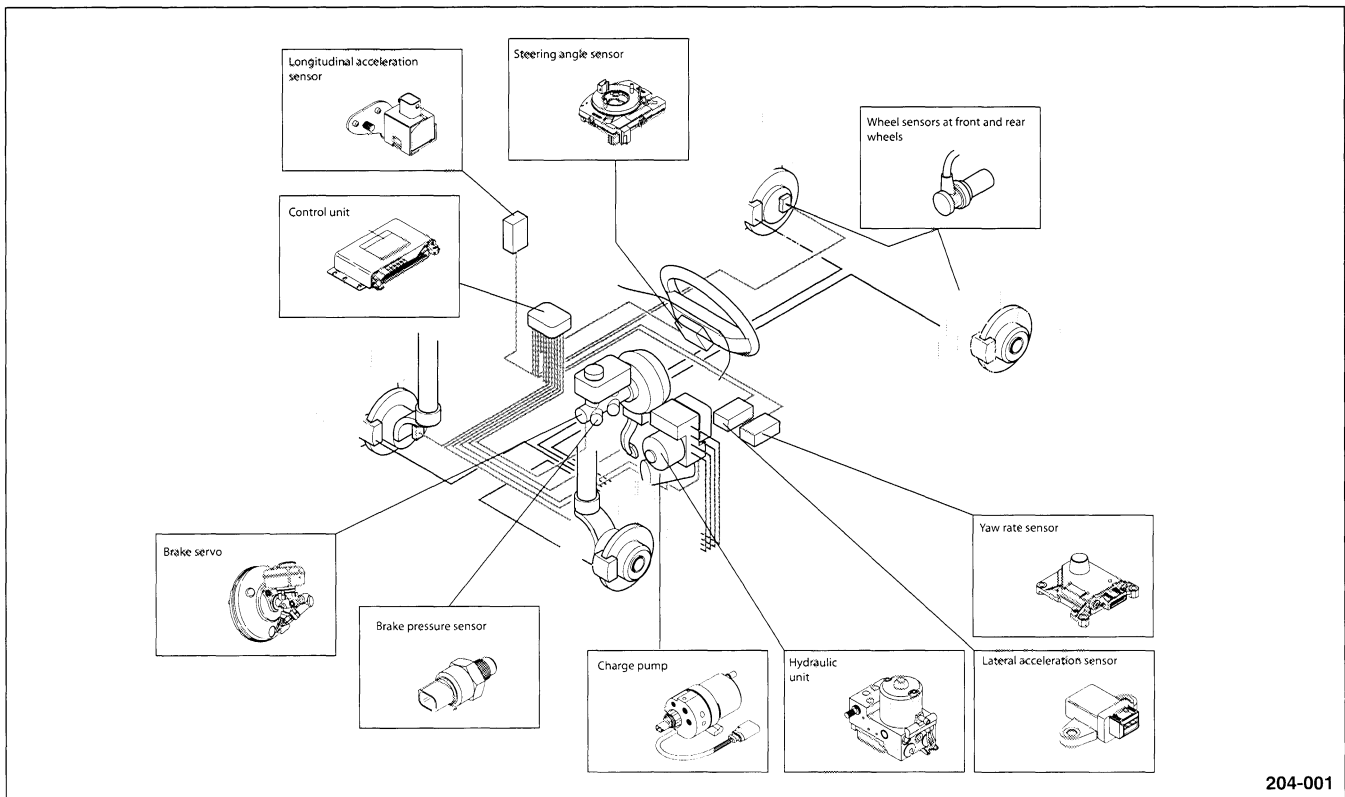
When the driving wheels experience unequal traction and the wheel with the least amount of traction spins, the ABS wheel speed sensor picks up the difference in wheel speed. The ABS control module responds by applying brake pressure to the spinning wheel which transfers the driving torque to the opposite wheel.

## ESP (Electronic Stability Program)

The ESP (Electronic Stability Program) is one of the vehicle's active safety features. It is also known as a "driving dynamic control system". In simple terms, ESP is a dynamic anti-skid program. Utilizing a variety of sensors and controls to monitor steering angle, road wheel angle, yaw rate and lateral acceleration, the EDL system recognizes when the vehicle is in danger of skidding. By counteracting any tendency towards understeer or oversteer, ESP stabilizes the dynamic handling response of the car. It constantly compares the actual movement of the vehicle with predetermined values and, according to the situation, reacts by braking the outer front or inner rear wheel and automatically adjusting the engine's output. The system works in conjunction with the existing ABS system.



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## BODY – EXTERIOR

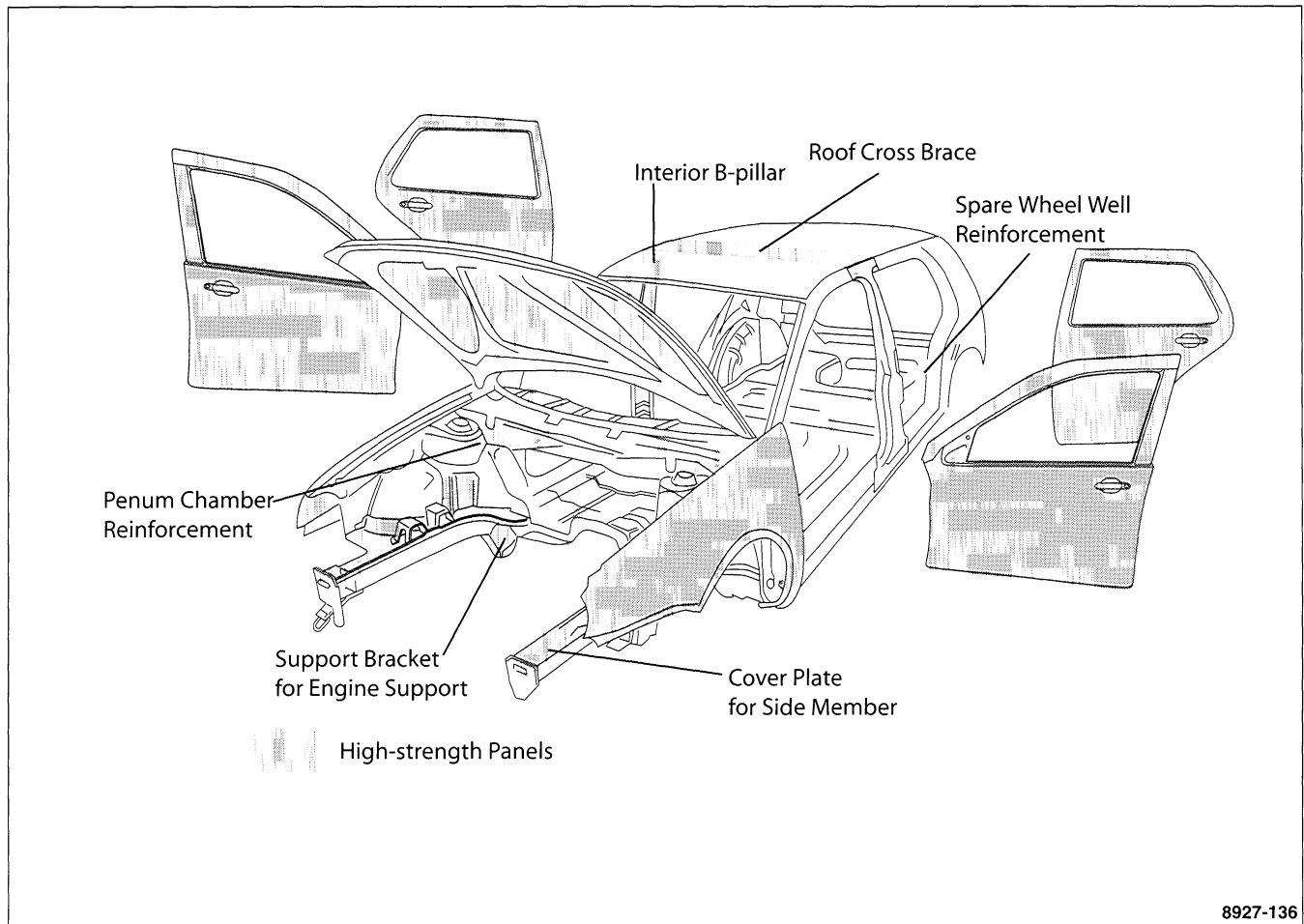
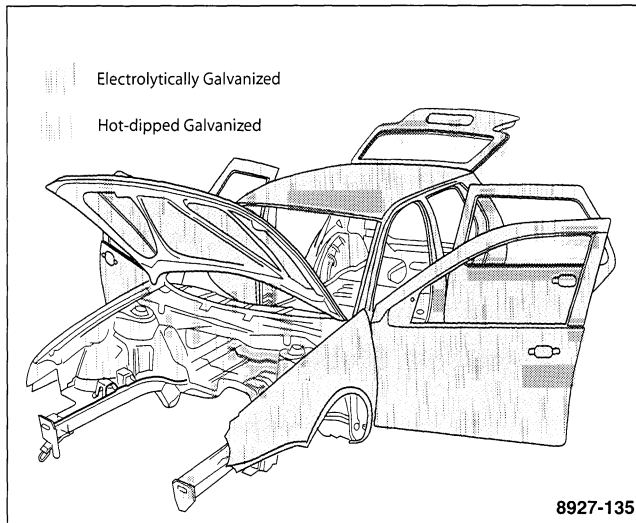
### Fully galvanized body

The Golf and Jetta models have fully galvanized steel bodies for greater protection against corrosion. Body panels that are not visible are hot dipped galvanized. External panels that require a smooth finish are electrolytically galvanized.

Some body panels are constructed from special alloy high strength steel. These panels are thinner than the steel normally used for body panels and therefore save a great deal of weight.

### High-strength steel body panels

The high strength steel used for these panels is relatively soft during the forming and welding processes. The panels require heat treatment to become as strong as the thicker, conventional body panels. This happens during the paint curing process when the bodies are heated to 170° C (338° F).



## Five step paint process

Electrolytic galvanizing provides a good base for the five-step paint process. A zinc phosphate coating is followed by an electro-chemical primer dip coating. A filler is applied, and then the top color coat. A clear coat is then applied. The filler and top coats have elastic properties that make them chip resistant.

