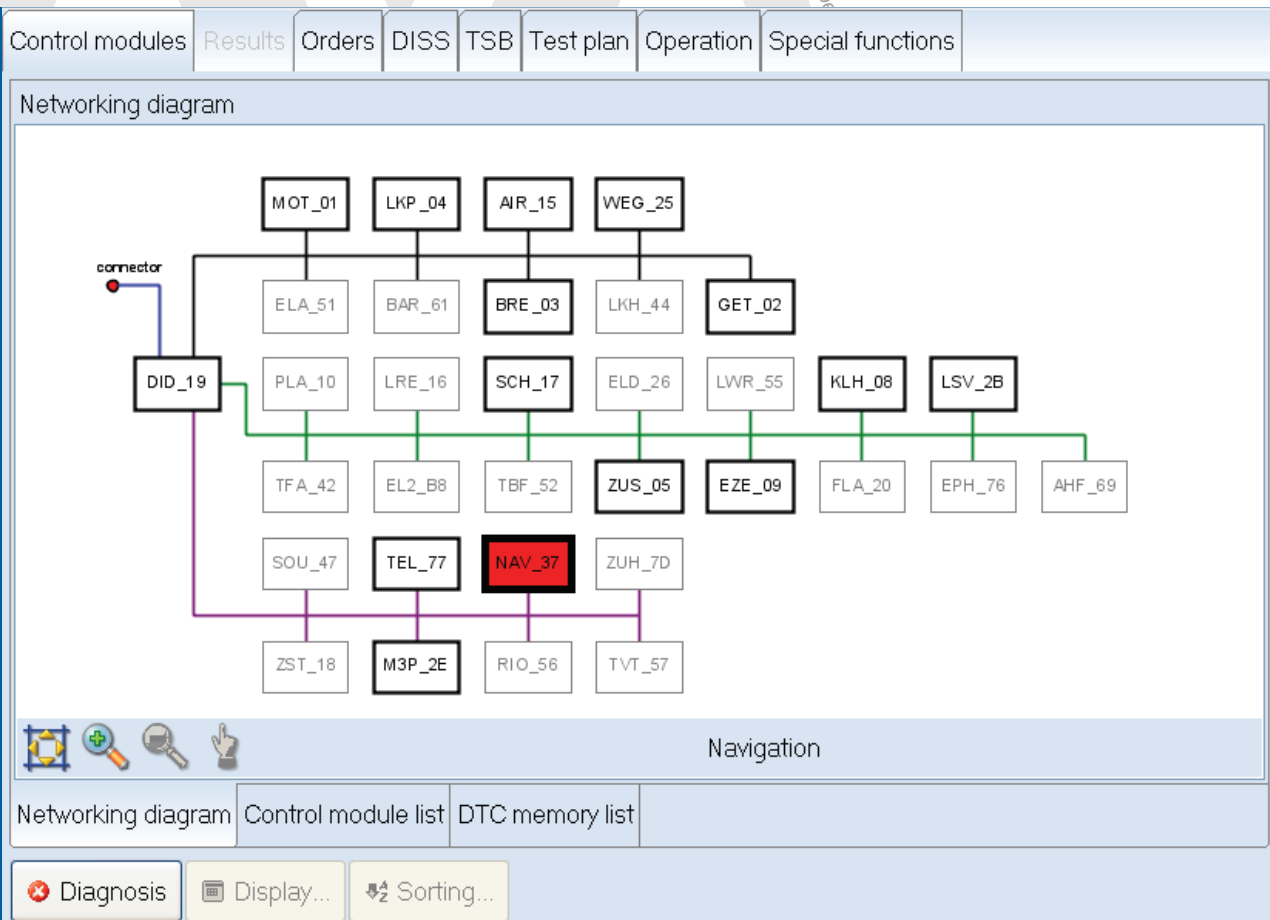




Offboard Diagnostic Information System

ODIS Service Workbook 810223

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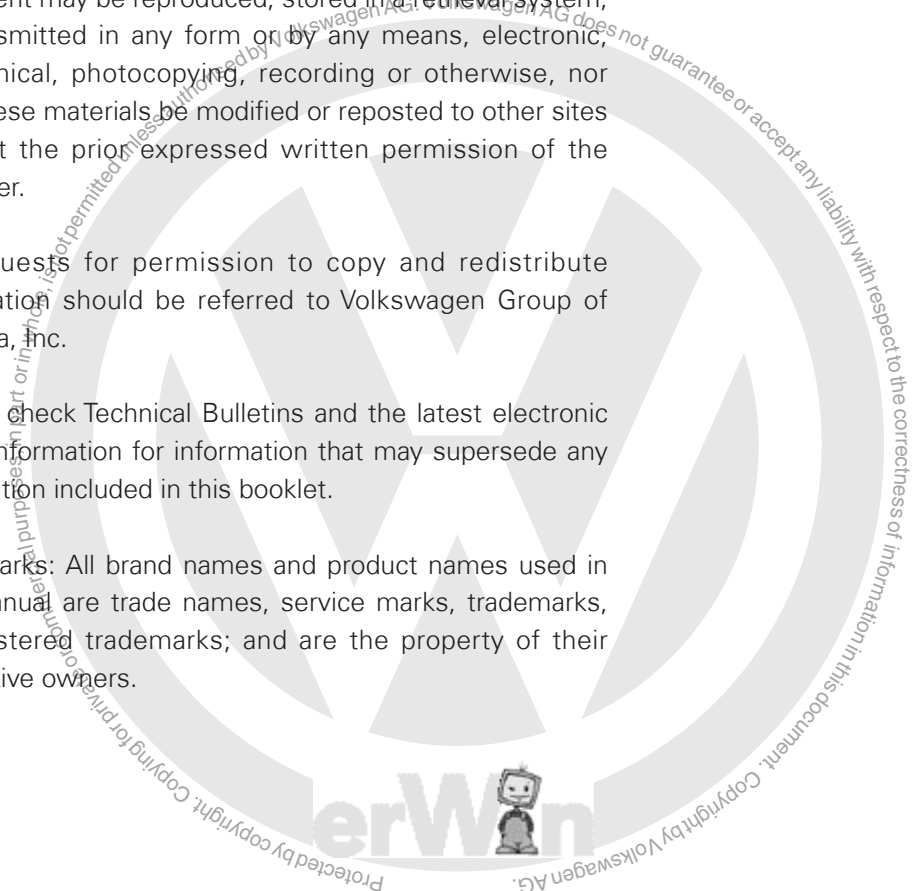
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Always check Technical Bulletins and the latest electronic repair information for information that may supersede any information included in this booklet.

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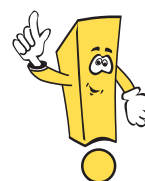
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This Self-Study Program provides information regarding the design and function of new models.
This Self-Study Program is not a Repair Manual.

For maintenance and repair procedures, always refer to the latest electronic service information.

Note



Important!





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Introduction

The Off-board Diagnostic Information System (ODIS Service) is the software that will be replacing the VAS-PC diagnostic software in the near future. ODIS Service adds many features to help with vehicle diagnosis and repair. ODIS Service does not replace Guided Fault Finding (GFF). Guided Fault Finding is an integral component of ODIS Service.

ODIS can be used on VAS 5051B, VAS 5052A and VAS 6150 diagnostic tools, as long as they are correctly updated. It cannot be used on the VAS 5051A or the VAS 5052.



This workbook requires the use of one of the above scan tools with ODIS Service loaded, a vehicle and a memory stick.



ODIS-1

Using this Workbook

This workbook is designed to help you start using the ODIS application. To use this workbook, you must have the following:

- This workbook
- The ODIS Service Reference Guide
- A late model Volkswagen vehicle
- A VAS 5051B, VAS 5052A or a VAS 6150 with ODIS installed
- A USB memory stick

This workbook is designed to be interactive, not just instructional. You will be required to set a DTC in a vehicle, then scan that vehicle for DTCs using the ODIS application.

To receive credit for completing the workbook, you must complete the online assessment in the Certification Resource Center (CRC). Refer to the instructions on the last page of this workbook.

ODIS Version

Like all software programs, ODIS will be updated on a regular basis. This workbook is based on ODIS version 1.1.2. Other versions may be slightly different in operation. Always check the CRC for the latest version.

ODIS Service Reference Guide 810123

This workbook is only one of several publications supporting ODIS. There is also a Reference Guide that will help you to understand some functions that are not included in this workbook. ODIS also has its own support manual. Remember, this workbook is only the beginning. ODIS has many functions and capabilities.

Some pages of this workbook and the ODIS Reference Guide may appear to be very similar. That is part of the design of this workbook. It is consistent with the other training materials. Use this Reference Guide to help you complete this workbook.

ODIS Instructor-Led Training

There is an instructor-led training course that covers ODIS, Introduction to Volkswagen Scan Tools 811102. This workbook is similar to the first exercise of the instructor-led class. However, the instructor-led training course goes deeper into the functions of ODIS. Performing the tasks in this workbook is not an equivalent of the instructor-led course.

Setup

Everything must be ready in order to follow the steps in this workbook correctly. Keep in mind that, depending on the person, it may take an hour to go through the steps of this workbook. If you are borrowing a vehicle from your dealer, make sure you have allocated enough time.

Scan Tool:

As mentioned previously, you must have an operational scan tool with ODIS loaded to follow the steps of this workbook.

Which scan tool are you using? _____

Vehicle:

Choose a late model Volkswagen vehicle for this exercise, preferably an A5 Jetta, B6 Passat, etc.

What vehicle are you using? _____

Vehicle DTC:

You must set a DTC in the vehicle to learn how to view and erase DTCs using ODIS. To set the DTC:

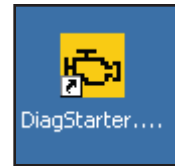
- Locate the connector for G65, the air conditioning high pressure sensor. Remove the connector from the sensor.
- Start the vehicle and turn on the air conditioning to set a DTC in the air conditioning system. Some vehicles may set the DTC without the need to start the engine.

Working with ODIS

In this workbook, you will interactively use ODIS and learn about its basic functions. Make sure the ODIS Reference Guide 810123 is readily available, because some sections of this workbook will ask you to use it.

Please refer to the Reference Guide under Launching ODIS for information about the following questions.

1. Now that your vehicle has a DTC, launch the ODIS application by double-clicking on the **DiagStarter** icon on the computer desktop. This launches the program selection window. What choices are available to you?



2. Select the **Offboard Diagnostic Information System (ODIS)**. It will take a minute for the application to launch.

3. What is the purpose of the Release Notes window?

NOTE: The Release Notes window may briefly appear for a couple of seconds, then minimize to the taskbar. If it does not appear, skip to question #4. If it does appear, click the icon in the Windows taskbar to read the notes.

4. After ODIS launches the Warnings/Notes window appears. What do you have to do to proceed past this window?

Please refer to the Reference Guide under Launching GFF for information about the following questions.

5. Based on the vehicle, diagnostic connection and network connection, what does this graphic represent?



6. Make sure that ODIS recognizes your vehicle and the key in the ignition. A network connection is not necessary.
7. After ODIS has launched, carefully review the information in the Vehicle Basic Features window. If the information is not correct, identify your vehicle manually. What is the following information for your vehicle?

- VIN _____
- Model _____
- Model Year _____
- Version _____
- Engine _____

8. Always make sure that **Work With Guided Fault Finding** is selected before you proceed. If it is not, any diagnostic options will be severely limited.

Note: If the Global ID window appears, select **Cancel**.

9. Now ODIS switches to the Orders tab. Select the **No Order** option.



10. After this is done, ODIS begins scanning the vehicle control modules. Where is the progress indicator for scanning the vehicle control modules located on the ODIS screen?

11. If you are not presented with a Variant Selection screen, skip to step 12.
 If the Variant Selection screen appears, use the Reference Guide to learn how to navigate through this feature.
 Write your notes below on where you located the information on how to get through this page, and what
 was required at each step. Remember that ElsaWeb and visual identification are your primary resources to
 determine control module variants.

12. Continuing with GFF starts scanning the vehicle for DTCs. The same progress indicator is used for the status
 of the scan.

13. ODIS now switches to the DISS tab. The Orders, DISS and TSB tabs are not currently used for our market.
 Continue by selecting the **Control Module** tab at the top of the screen,

14. Once you are on the Control Modules screen, note the three
 tabs (not the three buttons) at the bottom. Select each one
 and note how the screen changes.

Networking diagram	Control module list	DTC memory list
--------------------	---------------------	-----------------

- Networking Diagram _____
- Control Module List _____
- DTC Memory List _____

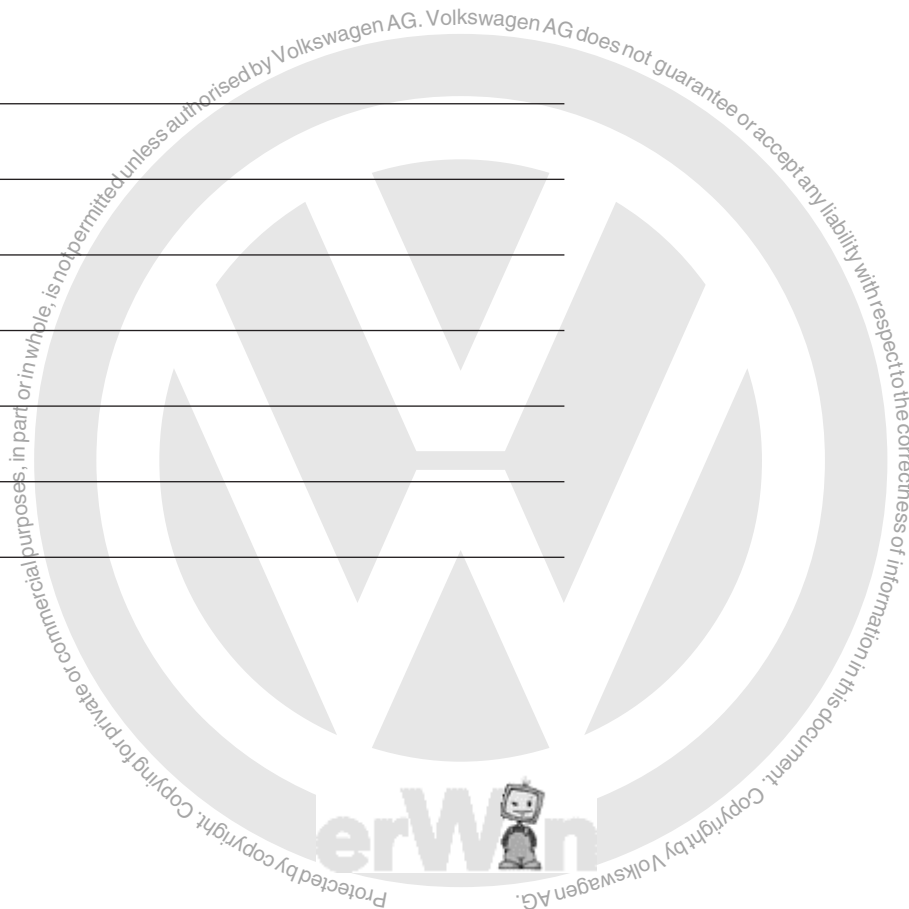
15. Select the **Network Diagram** tab at the bottom of the screen. What is displayed?

16. Left single click on a control module in the Network Diagram and look at the area below the network diagram
 window. What text appears? Note how this changes as you click on different control modules.

17. What do the different borders and control module colors indicate about the status of a control module? This information is in the Reference Guide and also under the Support function.
To access the Support function, select the **On-Line Help** button under Support on the right side menu. Does this open to the help screen with information about your current area of ODIS? Close the ODIS Service User Handbook and return to ODIS.

18. Use the magnification and finger icons below the network diagram. How does each one work?

19. Left double or right click on a control module to get the popup menu. What selections appear in the popup window?



Please refer to the Reference Guide under Control Module Tab Tips for information about the following questions.

20. Now select the **Control Module List** tab at the bottom of the screen. This displays the control modules.

Networking diagram	Control module list	DTC memory list
--------------------	---------------------	-----------------

At the bottom of the screen, select the **Display** button. Now select **Actual Installation**. What happens?

21. Now select the **Sorting** button next to the Display button at the bottom of the screen. What options are displayed?

22. Choose each option to view how the list changes. Note that you can also select these options by selecting the words Address, Fault, or Name at the top of the Control Modules List.



Please refer to the Reference Guide under Viewing DTCs for information about the following questions.

23. Select the **DTC Memory List** tab at the lower left of the screen.

24. The DTCs have a \pm next to them. Expand this \pm sign so that you can see all of the information for that DTC. What is displayed?

\pm 930 8 Lock u
\pm 1554 12 Cen

Please refer to the Reference Guide under Launching Test Plans, GFF Test Plan Tips and Documents for information about the following questions.

25. Select the **Test Plan** tab at the top of the screen. This displays the test plans that have been loaded by GFF based on the DTC in your vehicle.

26. Select a test plan for the DTC in your vehicle. Click on the \pm symbol next to the DTC. This will display the DTC text. Note that if you click on this text, the Perform Test button at the bottom of the screen will be grayed-out.

27. Select the DTC, then select the **Perform Test** button at the lower left of the screen. Note that the tab at the top of the screen changes from Test Plan to Operation. You are now in a GFF test plan. What looks different from the VAS-PC GFF test plans?

28. Continue through a couple of steps of the test. If there are any connector views or documents, select and view them.

29. Note the steps that appear to the left of the screen. What happens when you click on each of them? Can you restart the test plan from that point?

30. Select **Cancel Test** and select the **Test Plan** tab to view the test plans that were selected by Guided Fault Finding.

31. Select the **Documents** button at the bottom of the screen. What options appear?

32. Select **Documents for the Test Plan**.

33. Note that all of the top tabs have changed and you are now under the Documents tab. More importantly, look at the right side of the window under the Operating Modes heading. All steps up to this point were performed using the Diagnosis button. Now the Info button is highlighted. Keep this in mind.

34. Even if no documents are available, Select the **Documents** button at the bottom of the window and use the file tree to select any document then select **Display Document**.

35. Now select the **Diagnosis** button on the right side of the screen under Operating Modes. This returns you to the Diagnosis tabs and screens.

36. Go back and select **Documents for the Test Program**. This displays only the documents that are relevant to the highlighted test plan. If any are available, select one and view it.

37. Now select the **Diagnosis** tab on the right side of the screen under Operating Modes. This returns you to the Diagnosis tabs and screens.

Please refer to the Reference Guide under Printing and Saving for information about the following questions.

38. Look to the right side of the screen and click on the **Data** tab. It expands. What functions are under the Data tab?

39. Select the **Print** under Diagnostic Log. What options appear?

40. Insert a memory stick into your scan tool. Go back to the **Data** tab and select **Save**, select the desired log type, and save the file to the memory stick.

41. Open your log in Windows Explorer by double-clicking on it. Review your log quickly to view the information from your vehicle and test plans.

42. This as far as we will go for this workbook. Connect the G65 electrical connector, and rescan the vehicle to make sure all DTCs are removed from the vehicle. Now, exit diagnosis using the red **X** at the bottom right of the screen. Make sure to write down the screens that appear and your answer to each of them.



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Knowledge Assessment

An on-line Knowledge Assessment (exam) is available for this workbook.

The Knowledge Assessment may or may not be required for Certification.

You can find this Knowledge Assessment at:

www.vwwebsource.com

For Assistance, please call:

Volkswagen Academy

Certification Program Headquarters

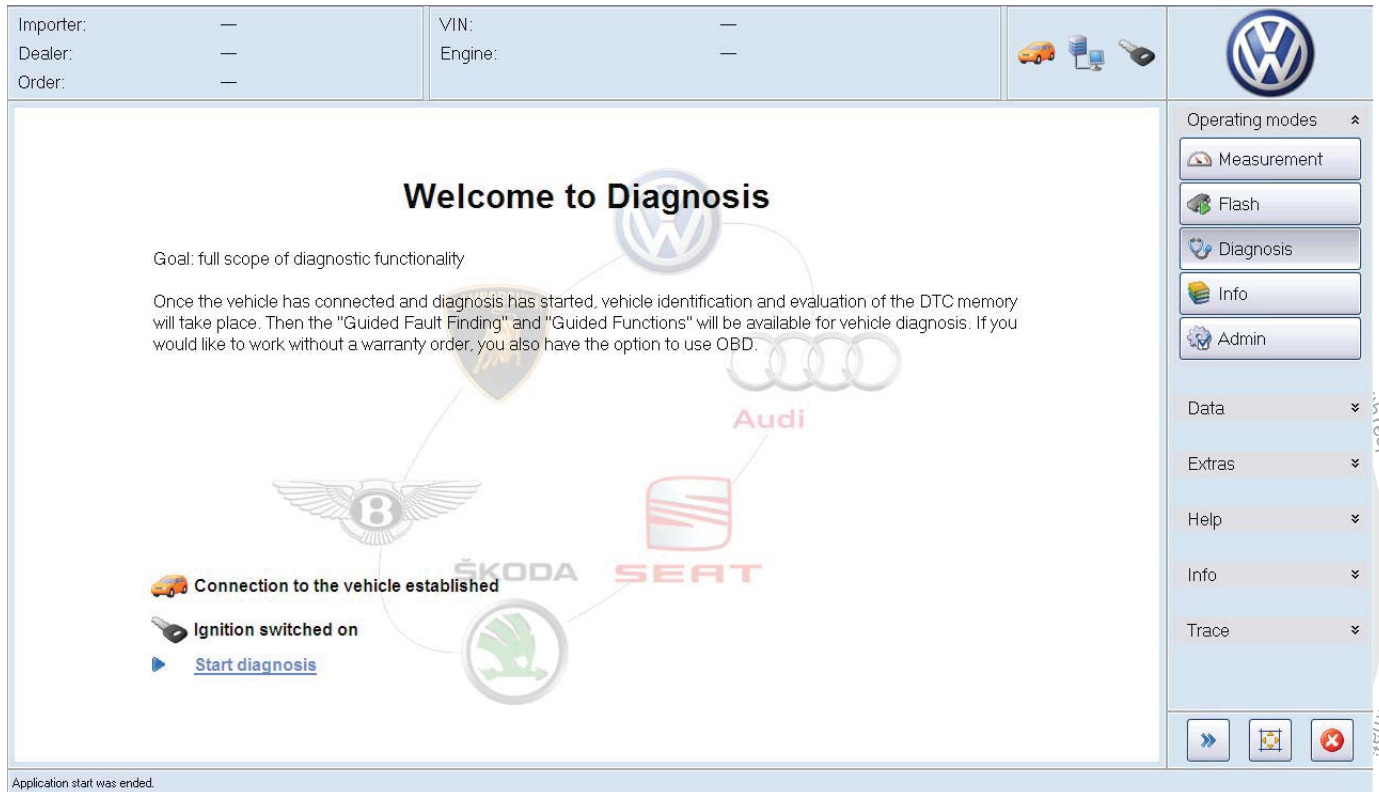
1-877-791-4838

(8:00 a.m. to 8:00 p.m. EST)

Or, E-mail:

concierge@volkswagenacademy.com





Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- 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 retailer or other qualified shop. We especially urge you to consult an authorized Volkswagen retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen.
- 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.
- Volkswagen is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Volkswagen retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the VAG 1551 Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- 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 re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.

Cautions & Warnings

- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and 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.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy 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 that are appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty 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.
- 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 listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- 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.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service 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.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- 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.
- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles 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 operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians should test, disassemble or service the airbag system.

Cautions & Warnings

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the VAG 1551 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.
- 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.
- 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.

I have read and I understand these Cautions and Warnings.