

**Tech Tips for Previous Years:**

[1996](#)

[1997](#)

[1998](#)

[1999](#)

[2000](#)

[2001](#)

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Week of May 27, 2002

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**Tech Tip #1:**

**Passat W8 2002, oil specification**

When adding or changing oil on the New Passat with the W8 engine make sure to only use the recommended oil and the correct quantity. You can find this information in Technical Bulletin 17-02-02 dated May 16, 2002 which is currently on the Web version of VESIS and will also be incorporated in the next disc release.

**Tech Tip #2:**

**2002 Jetta Wagon arriving with complete shipping cover**

Beginning in May 2002 some vehicles may arrive at dealerships with a complete shipping cover. Information explaining proper removal of this cover can be found in Technical Bulletin 00-02-04 dated May 10, 2002.

**Tech Tip #3:**

**Radio Premium VI with Monsoon**

If you have a Premium VI radio with Monsoon that exhibits a condition of difference in sound quality or insufficient bass on left side of the vehicle, please refer to Technical Bulletin 91-02-04 dated March 28, 2002 for possible incorrect wiring assignments at the rear of the radio.

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Week of April 15<sup>th</sup>, 2002

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**Tech Tip #1:**

**Howling noise on 1.8L Turbo at approximately 2000 rpm**

When looking for humming noise at around 2000 rpm or while shifting on a vehicle equipped with a 1.8L Turbo engine, always make sure that you check the Turbo bypass valve. Always check with part for the latest part available.

**Tech Tip #2:**

**Immobilizer III Service procedure**

When dealing with programming keys or matching and or replacing control modules on Immobilizer III system, there is a new Immobilizer III service procedure step by steps in VESIS WEB that you can look into it. The procedure has 8 pages and all the possible scenarios are listed in it. Select the vehicle you are working on and go in Electrical Equipment OBD and when you are prompted to select a topic go in Quick Reference and select Immobilizer III Service procedure.

**Tech Tip #3:**

**ESP equipped vehicle.**

Some of our vehicles equipped with ESP (Electronic Stabilization Program) may need to have special basic setting for the steering angle sensor, you may find some information on how to proceed in VESIS under Eurovan in Brake System on-board-diagnostic (OBD) from MY 1997 and than choosing in Quick Reference: ESP Steering Angle sensor G85, Zeroing and follow the procedure to have the basic setting done for steering angle.

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Week of April 1, 2002

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**Tech Tip #1:**

**Subject: Immobilizer III Key adaptation/ECM matching**

When adapting an immobilizer always make sure that the gateway "address 19" is correctly coded and that your dealership number (WSC) appears in the screen of VAS 5051/5052, Also keep in mind that when replacing only the instrument cluster, the old cluster 14 digit serial number should be used to get the 7 digit PIN from WIN2 system. We recommend that you **always** read thru the Immobilizer section in VESIS under Electrical Equipment OBD and be aware of any new information before trying to adapt an immobilizer.

**Tech Tip #2:**

**Subject: WA Recall**

If you should encounter difficulties with the WA recall regarding reflashing the ECM with the VAS 5051, we

recommend that you review the tech tips in the Volkswagen Tech News Dated March 15, 2002 there are several helpful recommendations.

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**Tech Tip #3:**

**Subject: Calling Volkswagen Dealer Technician Helpline**

**Condition: Call Preparation**

The Volkswagen Dealer Technician Helpline has been designed to solely assist technicians in solving complex technical issues. Before contacting the Technician's Helpline, be certain you have utilized those resources already available to you such as VESIS, your Shop Foreman/Service Manager, Volkswagen Technical Manager, etc.. If you then require assistance from the Technician Helpline and in order for us to serve you better, **you must have all your information available and organized prior to calling the Helpline**, as incomplete or inaccurate information will increase assist times and create a backlog of calls on hold. You should use the Technician's Helpline Contact Form to organize your information. This form can be found in VESIS under the **Help** button.

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Week of March 4, 2002

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**Tech Tip #1:**

**Login number, Adapting odometer in instrument cluster**

When performing the odometer adaptation in instrument cluster after replacing it, be aware that the login number for the odometer adaptation in function 11 is 13861 and should not be confused with function 11 and inputting the immobilizer secret code number. Always refer to VESIS for the latest information.

**Tech Tip #2:**

**Armrest latch replacement, latch replacement on vehicle equipped with armrest**

When performing the Armrest latch replacement as per the Technical Bulletin 68-02-01 dated February 14<sup>th</sup> 2002 take note that the part number for the clip is 3B0 868 445 and must include the applicable color code A94, 7DE or R48.

**Tech Tip #3:**

**VAS 5051 update, 5051 Base CD (3.10) installation**

Before you install the new VAS 5051 base cd 3.10 please read carefully Technical Bulletin 01-02 01 dated

February 21 2002. It is very important that the importer code, dealer code and the date and time are correctly entered into the VAS 5051. This is necessary to ensure that the 7 digit immobilizer PIN will function correctly .

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Week of February 1, 2002

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**Tech Tip #1:**

**Air Bag Safety procedures, DTC`s in fault memory**

When diagnosing air bag systems for faults, it is a good practice not to move anything in the vehicle and to keep everything as it was, like: seats, steering wheel, etc. [try to keep the customer seating position the same]

When diagnosing a DTC indicating a short to B+ or short to B -, the DTC should not be erased prior to the diagnosis and repair. This is to prevent the possibility of an unwanted airbag deployment by the diagnosis strategy of the module.

**When key is turned on, the module performs a two step self-diagnosis, so we recommend that you check everything with the VAS 5051 first and when ready to perform repairs disconnect the Battery and do the repairs.**

**Reminder: Always follow all safety procedures as outlined in VESIS.**

**Tech Tip #2:**

**Coding of the Instrument Cluster, K number determining**

When coding an Instrument Cluster always make sure that the last coding digit is the correct one, otherwise the speedometer and the odometer might not be accurate. You can check the K number adaptation by looking in Address 17 function 10 and channel 16 then match the adaptation number with the one in the coding table. Also make sure that the WSC number ( Dealer number) is present in the VAS 5051 display when the coding is completed.

**Tech Tip #3:**

**TDI Engine ALH DTC 17656/P1248, Cold Start Injector N108**

New Beetle, Golf/Jetta A4 when diagnosing fault 17656 or P1248 on a TDI ALH engine, it's a good practice to check the operation of the cold start injector N108. VESIS instructs you to perform the Output diagnostic test in function 03 to check it. You can also use function 04 display group 000 and observe channel 2. With the engine idling remove fuse S34. The value in channel 2 should move up to 255 while the fuse is removed and return to the original value when the fuse is replaced. This indicates that the N108 injector is functioning correctly.

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Week of January 15, 2002

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**Tech Tip #1:**

**IP Cluster loosing battery power, Clock resets to 00:00**

On some vehicles for transportation purposes there is a Battery disconnect unit installed at the assembly plant, this will cut the power at the instrument cluster and other components after a moment to prevent battery drainage. This unit should be removed prior to delivery and return to Warranty test Center. Refer to Technical Bulletin 00-02-01 for proper removal instructions.

**Tech Tip #2:**

**Immobilizer 3, Lock up time checking**

If you encounter problems with key adaptation on an immobilizer 3 equipped vehicle after replacement of the instrument cluster or the ECM, always check first to see if the system has been locked out. In address 17, function 08, display group 24 and channel 1 you can see the wait time in minutes remaining, exit the system using function 06 and leave the key ON for the amount of time recorded in display group 24.

**Tech Tip #3:**

**TDI Winter operation, Diesel operation in cold weather**

At this time of the year we occasionally have some reports of TDI engines with poor engine performance when the outside temperature is below freezing. We recommend reviewing Technical Bulletin 20-01-01 to check the condition of the diesel fuel before proceeding with any repairs.

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Week of November 15, 2001

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**Tech Tip #1:**

**ZF Transmission Repairs, Procedure After Repairs**

When performing repairs on ZF 01V transmissions, such as valve body or transmission replacements, the TCM needs to be disconnected to reset the shift pressure adaptation. Without doing so, the transmission may shift hard

due to the increased pressure.

**Tech Tip #2:**

**Immobilizer, Problems with Aftermarket Remote Starter Installers**

Be aware that some aftermarket remote starter installers attach an immobilizer “chip” to the immobilizer reader coil so the vehicle can be remotely started. This can cause various DTCs to be stored and can also cause problems when trying to adapt ignition keys.

**Tech Tip #2:**

**Winnebago Campers**

There is a switch under the **right** front seat in the Winnebago camper that prevents the vehicle from starting unless the seat is facing the forward position.

**Tech Tip #3:**

**Premium VI Radio**

Contrary to the Owner’s Manual, the turn-on volume for the premium VI radio cannot be adjusted.

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Week of October 15, 2001

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**Tech Tip #1:**

**2002 TDI Glow Plug Relay**

The 2002 TDI Glow Plug Relay (J179) is located in the plenum near the wiper.

**Tech Tip #2:**

**TDI DTC P3130**

DTC P3130 for the TDI engine refers to EGR flow. Follow the repair procedure in VESIS under group 26 for checking the EGD system.

**Tech Tip #3:**

**Airbag Coding**

A complete list of airbag codings can be found through web VESIS. Go to Body OBD, and look under “quick reference”. Search from the index number using the find (binocular icon) function on the navigation bar.

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Week of October 1, 2001

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**Tech Tip #1:****Premium VI Radio Removal**

The Premium VI Radio available in MY 2001 vehicles is removed using tool number T10057.

**Tech Tip #2:****Jatco 5-Speed Automatic Transmission**

The new Jatco transmission requires a different automatic transmission fluid than the AG4. The part number is G 052 990 A2. This part number and repair information can be found in VESIS.

**Tech Tip #3:****Tech Talk**

The MAX Broadcast “Tech Talk” will air on October 16<sup>th</sup> at 11:30 am and 2:30 pm. This broadcast will cover interior trim removal and preliminary Jatco 5-speed Automatic Transmission diagnosis.

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Week of September 15, 2001

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**Tech Tip #1:****TDI Valve Cover Gasket**

The valve cover gasket on the TDI engine is bonded right to the valve cover, and not available separately. The valve cover should only be replaced in the event of a leak. It is possible to reuse the cover if the seal is in good condition.

**Tech Tip #2:****2002 Comfort System**

The comfort system on the 2002 A4 platform is now part of the gateway. The communication between the comfort module and the gateway can be seen in the measured value blocks 130 and 131 of the gateway (19-08-130 & 131)

**Tech Tip #3:****MK60 ABS DTCs 00688 & 01276**

When diagnosing MK60 ABS fault codes 00688 (terminal 30 voltage) and 01276 (ABS hydraulic pump), perform voltage drop tests on the two main power and ground wires at the ABS module (pins 1 & 32; 47 & 16). Perform the voltage drop tests while operating the ABS pump in output diagnosis (03). A loose ground or power supply connector may cause these DTCs. Static voltage tests may not detect the problem.

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## Week of September 1, 2001

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### **Tech Tip #1:**

#### **Jetta, Golf and New Beetle. Brake Light Switch**

It is impossible to check the new replacement brake light switch (1J0 945 511 B or C) out of the vehicle. The switch has a tab that positions an actuator inside the switch. To install the switch, the brake pedal must be in the **rest position**. Insert the switch into the coded hole than twist the switch 45 degrees to the right. If the brake pedal is not in the rest position during installation, the internal tab will be blocked causing the switch to break internally.

### **Tech Tip #2:**

#### **Fuel Pump Relay - Cabrio**

The new fuel pump relay for the 2000> Cabrio is part number 1J0 906 383 C. This relay will help eliminate the “short to Ground” DTCs if the grounds are in good condition.

### **Tech Tip #3:**

#### **Airbag Coding**

When coding a new airbag control unit you need to index number off of the **new** unit. The coding goes by index number, not part number.

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## Week of August 15, 2001

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### **Tech Tip #1:**

#### **Volkswagen 1998> Passat Torque Converter installing**

The distance between the tapped holes in the converter and the contact surface of the converter bell housing of the automatic transmission is approximately 23mm. This can be measured with a depth gauge. If the converter is left in the wrong installed position, the converter or the ATF pump will be destroyed when the transmission is connected to the engine. This information can be read in VESIS page 32-7.

### **Tech Tip #2:**

#### **Eurovan 2001 with ESP (Electronic Stability Program) Spiral Spring replacement.**

When the spiral spring is replaced on the steering column of a 2001 Eurovan, (Basic Settings) of the Steering Angle Sensor must be checked and the ABS control module (w/EDL) J104 must be



coded. Refer to VESIS for complete information.

**Tech Tip #3:**

**New Passat 2001 Immobilizer III Quick Reference**

Printable pages on Immobilizer III procedures can be located in:

VESIS: Passat 98> Electrical Equipment on Board Diagnostic (OBD) from October 2000. Quick Reference section.

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Week of August 1, 2001

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**Tech Tip #1:**

**Helpline Contact Form**

The VW Helpline contact form is now available in VESIS. Go to “help” then “contact us” and click on the topic VW Helpline.

**Tech Tip #2:**

**Smoke Checking Intake Systems**

When checking the intake manifold for leaks using the VAG 1687 pressure tester, some leaks may be difficult to pinpoint. Adaptor number KLI 9210/50 is available from Equipment Solutions, which will allow you to pump smoke into the intake using the KLI9210 Evap tester.

**Tech Tip #3:**

**MAX Broadcast**

Be sure to watch the MAX broadcast “TECH TALK” on August 21<sup>st</sup>. Buzz and Dan will cover Voltage Drop Testing.

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Week of July 15, 2001

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**Tech Tip #1:**

**Pressure Bleeding The ABS System**

When pressure bleeding an ABS braking system with MK20 or MK60 brakes, be sure not to exceed 1 bar (14.7 PSI) of pressure. Pressure over 1 bar will cause the change over valve in the EDS unit to close, which will not

allow the inner circuit of the brake system to bleed.

**Tech Tip #2:**

**Side Curtain Airbag Trim**

The clips on the trim for the side curtain airbags are available separately. Part number for the Jetta is 1J0 880 385B. Passat number is 3B0 880 385B. When removing the trim only replace the clips unless the trim is damaged.

**Tech Tip #3:**

**Technical Information**

To receive the Volkswagen monthly Tech News letter and the Technical Bulletins at your home, FAX your name and address to Marie Sasak at 1-800-572-1438.

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Week of July 1, 2001

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**Tech Tip #1:**

**Submitting Parts to Volkswagen of America**

When submitting parts to Volkswagen of America, please double check the contents of your package(s); verify that each of the requested part(s) has a copy of the EPT (electronic parts tag) and a copy of the repair order ATTACHED to the part. If either the 1551 or 5051 was used to diagnose the problem, a printout of the DTC's must be with the attached paperwork (rule of thumb: if the MIL was on, VWoA requires a diagnostic printout). When packing the box(es), use original packaging materials and be careful to protect delicate parts. (Note; Parts damaged during shipment as a result of improper packing will be returned to the dealership and the claim will be denied.

**Tech Tip #2:**

**Submitting Audio Parts to Volkswagen of America**

All AUDIO components replaced under warranty, goodwill or, customer pay MUST have the Audio Diagnostic Worksheet completely filled out and included with the part to ensure that the customer complaint is corrected during the remanufacture process (The diagnostic worksheet is available in VESIS). If a Radio or CD Player has the customer's Tape or CD's stuck inside, DO NOT disassemble the unit to retrieve the CD's. Please fill out the Retrieval Form and VWoA will return the customer's items to your parts manager.

**Tech Tip #3:**

**Golf/Jetta TDI Grounds**

When checking a vehicle with the TDI engine for poor performance or MAF sensor DTC's, be sure to check the ground wires under the battery tray. The grounds could be loose or corroded. Repair as needed using the VAS 1978 wiring kit.

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Week of June 15, 2001

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**Tech Tip #1:**

**TDI Engine Coking with Carbon**

In the event you have a TDI come in with the intake manifold coked with carbon, be sure to check the start of injection (01-04-000). Also check the belt timing and the MAF sensor. If a problem is found in these areas, it could contribute to the coking.

**Tech Tip #2:**

**Cabrio Convertible Top Cover 2001>**

The color of the Cabrio convertible top cover matches the interior color, not the color of the top. **DO NOT** replace the cover to get one to match the top color.

**Tech Tip #3:**

**The KLI9210 Evaporative Emissions Tester**

When checking for leaks using the KLI9210 Evap tester, you need to remove the LDP filter and plug the hose. If this is not done you may see a leak coming from the filter, as the evap system vents through the LDP filter.

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Week of June 1, 2001

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**Tech Tip #1:**

**Guided Fault Finding for the Comfort System-New Passat**

For measuring blocks, coding and adaptation information for the comfort system on the New Passat, refer to guided fault finding in the VAS 5051.

**Tech Tip #2:**

**Airbag System in the Golf/Jetta and New Beetle**

In the event you have an airbag DTC for one of the seatbelt switches (E24 or E25) check the wiring harness for the switch. It may be pinched by the seat track trim.

**Tech Tip #3:**

**The New Passat Remote Transmitter**

When replacing remote transmitters on the New Passat, be sure to look in ETKA for the proper part number. The remotes from the Golf/Jetta/New Beetle appear to be the same but will not function with this system.

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Week of May 15, 2001

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**Tech Tip #1:**

**Wiring Harness Repairing**

When performing wiring repairs using the crimp connectors in the VAS 1978 wiring kit, cut the existing terminal with pigtail still attached and have them sent to the warranty test center Attn: Jack Lampcov.

**Tech Tip #2:**

**TDI Coolant Glow Plugs**

The coolant glow plugs that are located in the coolant flange on the end of the cylinder head should be sealed before installation. The part number for the sealant is D 000 600 A2.

**Tech Tip #3:**

**[www.vwwebservice.com](http://www.vwwebservice.com)**

The latest repair information, tech tips, individual certification transcripts and more can be located through .

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Week of May 1, 2001

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**Tech Tip #1:**

**Wiring Harness Repairing**

When performing wiring repairs using the crimp connectors in the VAS 1978 wiring kit, be sure to seal the connectors using the hot air gun. Start in the center of the connector and work towards the outside until the crimp connector is completely sealed. Complete instructions and illustrations are in the VAS 1978 instruction manual.

**Tech Tip #2:**

**VAS 5051 Maintenance**

The air filter in the VAS 5051 must be changed every three months or the unit may overheat. Also, the battery should be formed once a month, or shortened battery life will occur. Please refer to the VAS 5051 care and

maintenance book for the proper procedures.

**Tech Tip #3:**

**M.Y. 2000 and on Canbus Checking**

When checking the Canbus system on M.Y. 2000 on, the internal resistance in the ECM should measure 60 to 72 ohms, not 120 as stated in VESIS.

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Week of April 15, 2001

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**Tech Tip #1:**

**The New Passat Fuse Location**

The fuse for the rear power outlet in the console is located on the left side lower A-pillar behind the kick panel cover.

**Tech Tip #2:**

**The New Passat Cooling System**

If you experience a complaint of engine overheating or running hot on a New Passat with a 1.8L turbo, check the radiator for proper flow. Start with a cold engine, let it idle and make sure the radiator gets equally hot on both sides.

**Tech Tip #3:**

**All models with Immobilizer**

When checking the induction coil around the ignition lock cylinder, the resistance should be 20 to 24 ohms.

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Week of April 1, 2001

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**Tech Tip #1:**

**All models**

In the event you have a vehicle with O2 sensor DTC's, do not replace the O2 sensor without checking the entire system. If the O2 sensor DTC is accompanied with other DTC's such as fuel trim, check the fuel trim first. A fuel trim problem can cause O2 sensor DTC's and should be repaired first.

**Tech Tip #2:**

### **Passat 1998> Wiring Diagram Correction**

In the Passat 1998> wiring diagram binder, the index for the comfort system on page 15 is incorrect. It currently reads comfort system from February 2000. It should read from October 2000. This applies to diagram 51. Please make the necessary corrections until the next update is sent out.

### **Tech Tip #3:**

#### **All models with TDI Engine**

If you experience a complaint of a TDI engine intermittently cutting out with no DTC's stored, check the power supply relay. This relay is located in position 12 and has a production number 109 on the back of the relay.

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Week of March 15, 2001

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### **Tech Tip #1:**

#### **All Models with ME 7 Fuel System**

In the event you have a customer complaint of engine RPMs rising while pushing in the clutch pedal, check the adjustment of the clutch switch. The clutch switch signal can be seen in measuring block 066, field 2 (01-08-066).

### **Tech Tip #2:**

#### **Freeze Frame Data**

Before erasing any DTC's in the ECM, always retrieve the freeze frame data from address word 33. Have the print out of the freeze frame data before calling the Helpline.

### **Tech Tip #3:**

#### **Parts Ordering**

Before ordering replacement parts, especially fuel injection related parts, do not use the part number of the current part. Always check in ETKA for the proper part number matched with the engine code.

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Week of March 1, 2001

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### **Tech Tip #1:**

#### **New Beetle Gateway Coding**

The coding for the gateway for the New Beetle from October 2000 on has changed. The gateway automatically

detects the presence of a TCM. The coding for vehicles with Airbag and ABS is 00006, regardless of transmission type. Please refer to VESIS for the latest repair information.

**Tech Tip #2:**

**TDI Hard Starting**

In the event you have a TDI engine with the complaint of a hard start or long cranking time, check the cranking RPM. The TDI needs a minimum of 250 RPM during cranking. If the RPM is low, check the battery and starter system.

**Tech Tip #3:**

**VR6 Engine Identification Number Location**

The engine identification number location for the VR6 has been moved starting with engine number AFP-019059. The new location is stamped on the engine block near the front crankshaft pulley. The number is also located on a sticker on the back of the intake manifold.

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Week of February 15, 2001

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**Tech Tip #1:**

**New Passat Immobilizer System**

When replacing the instrument cluster on the **2001.5** New Passat, be sure to refer to VESIS for the correct procedure to adapt the replacement cluster to the ECM. This procedure is not the same as the other models. If you are replacing only the cluster, the secret 4-digit number from the old cluster must be used, as outlined in VESIS.

**Tech Tip #2:**

**TDI Glow Plugs**

Be aware that there are 2 suppliers for the TDI glow plugs-Bosch and Beru. When replacing the glow plugs make sure that you do not mix stock. The vehicle must have all the same supplier or DTC P0380 (Glow Plug Monitoring) may set.

**Tech Tip #3:**

**Comfort Control Module Draw**

In the event that you have a comfort module that will not go into sleep mode, disconnect each door control unit one at a time and see if the system then goes to sleep. It is possible that one of the door control modules will prevent the rest of the comfort system from going into sleep mode.

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## Week of February 1, 2001

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### **Tech Tip #1:**

#### **ABS MK60 Coding**

The coding for the MK60 ABS is as follows: ABS without ASR code is 04097 and the code for ABS with ASR is 18945.

### **Tech Tip #2:**

#### **2000 Passat Comfort System**

If you receive a complaint of the comfort module being inoperative, check T23/22 for power. If you do not have 12 volts, check fuse 14. If the fuse is ok, check the W47 splice. This splice is about 10 inches from the comfort module connector. The splice may be corroded.

### **Tech Tip #3:**

#### **Prepared Technicians**

When calling the Dealer Technicians Helpline you MUST have the Helpline contact form filled out to entirety. Also have the wiring diagram when the call pertains to an electrical issue.

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## Week of January 15, 2001

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### **Tech Tip #1:**

#### **All New Beetle**

The gas door can be opened manually in the event that the actuator becomes inoperative. First remove the access cover for the right rear taillight. Then grasp the gas door cable and pull down firmly. The door should pop open.

### **Tech Tip #2:**

#### **All Models with TDI Engine**

If you receive a complaint of low power with a TDI engine, check the Mass Air Flow (MAF) sensor reading in measuring block, group 00, field 10 (01-08-00). The value should reach 255 under full load. If the reading is low, check the air filter and air box for restrictions. If ok, suspect the MAF is at fault.

### **Tech Tip #3:**

#### **All Models with Side Curtain Protection**

The crash sensor for the side curtain protection airbags is located at the base of each C-pillar. To gain access,



remove the seat bottom and the C-pillar trim.

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Week of January 1, 2001

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**Tech Tip #1:**

**Passat Gateway Coding M.Y. 2000>**

The display for the trans selector position in the instrument cluster is turned on or off depending of the coding of the gateway. After replacing a cluster be sure to code the gateway or the display may be blank. The code for a Passat with a manual transmission is 00004, and for an automatic transmission it is 00005. Refer to VESIS for the proper coding procedure.

**Tech Tip #2:**

**Fault Code 17705 / P1297**

In the event you get a MIL with fault code P1297/ 17705 in the ECM, this is an intake leak of the **pressure side** of the turbo system between the turbo and the throttle body. Check the **entire intake system** for integrity.

**Tech Tip #3:**

**All Models with Multi-function Steering Wheel**

The multi-function steering wheel controls are accessible through address word 16. The switch operations can be seen in the measuring blocks. Refer to the Radio OBD section in VESIS for the diagnostic procedures.

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Week of December 15, 2000

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**Tech Tip # 1**

**All Models with Immobilizer**

In the event that after adding additional keys to an immobilizer system the new keys do not function, check measuring block 023 in the instrument cluster (17-08-023). Field number 3 should be a 1 after using the key in question. If it is a 0 the key with the wrong type of transponder (wrong key) or a faulty key may be the problem.

**Tech Tip # 2**

**Fault Code 17704 / P1296**

In the event you get a MIL with fault code P1296/17704 in the ECM, this is a coolant temp sensor fault. Check the

operation of the sensor from cold to hot, and replace if the readings are erratic.

### **Tech Tip # 3**

#### **Holiday Hours**

The Volkswagen Dealer Technicians Helpline will be working with a reduced staff on the 26<sup>th</sup> through the 29<sup>th</sup> of December for the Christmas holiday. Please limit your calls to the most essential calls only. Have a safe and happy holiday season, from your Helpline consultants.

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Week of December 1, 2000

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### **Tech Tip # 1**

#### **Jetta and New Beetle Fuel Pump Noise**

In the event you have a customer complaint of a noisy fuel pump, please complete the Helpline contact form and fax it to 1-800-403-4710.

### **Tech Tip # 2**

#### **Checking for a Parasitic Draw**

When checking for a parasitic draw on all vehicles with the comfort system, you must first arm the alarm. The comfort module does not go into “sleep” mode until it is armed. If you leave a vehicle unlocked for an extended period of time, it will eventually drain the battery. When locking the vehicle the comfort module must see all contact switches closed or it will not power down.

### **Tech Tip # 3**

#### **ABS Faults**

When diagnosing ABS wheel speed sensor fault codes, or other complaints, be sure to check the tire circumference. There should be no more than +/- 7mm difference between all four tires. A difference in tire circumference could contribute to speed sensor faults.

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Week of November 15, 2000

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### **Tech Tip # 1**

#### **Passat with Automatic Transmission. ZF Transmission Slippage**

If you have a complaint of slippage with a ZF transmission first check measuring block 122 in the ECM (01-08-122). Field 4 should read **TCS Active**, then, when the shift occurs, it should read **Motor Engage**. The ECM reduces the torque output during the shift. If this field does not change it can cause transmission slippage. A faulty ECM could be the cause.

**Tech Tip # 2**

**All Models. tech.vw.com**

The latest service repair information can be found on the internet at tech.vw.com. The site includes the latest Technical Bulletins, Campaign and Service Circulars.

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Week of November 1, 2000

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**Tech Tip # 1**

**All Models. Silicone Contamination**

**Do Not** use any sprays containing silicone near the engine compartment. This includes engine and tire dressings and lubricant sprays. The use of silicone products can contaminate MAF and/or O2 sensors, causing false readings.

**Tech Tip # 2**

**All Models with Automatic Transmission. Shift Lock**

In the event you have an automatic transmission equipped vehicle and the battery goes dead or is disconnected and you need to get the shifter mechanism out of park, turn the ignition switch to the first click before the switch is to the run position. This will allow you to shift out of park.

**Tech Tip # 3**

**All Models Except Cabrio and Eurovan. Airbag Diagnosis**

Supplemental diagnostic procedures for airbag DTC number 00588 can be found in Technical Bulletin Group 01, Number 00-07.

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Week of October 15, 2000

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**Tech Tip # 1**

**2001 Cabrio Immobilizer 3**

The 2001 Cabrio has immobilizer 3 beginning with VIN number 3VWDC21V91M804288. Be sure to check the VIN before ordering keys. Immobilizer 2 and Immobilizer 3 keys are **NOT** interchangeable.

**Tech Tip # 2**

**Jetta, Golf and New Beetle. Brake Light Switch**

It is impossible to check the new replacement brake light switch (1J0 945 511 B) out of the vehicle. The switch has a tab, which positions an actuator inside the switch. To install the switch the brake pedal must be in the rest position. Insert the switch into the coded hole then twist the switch 45 degrees to the right. If the brake pedal is not in the rest position during installation the internal adjustment will be blocked, causing the switch to destroy internally

**Tech Tip # 3**

**All Models. Remote Key Ring**

In the event that the key ring is lost from the remote, **DO NOT** replace the remote. A replacement key ring is available with part number 4D0 905 835. This is the new swivel style ring.

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Week of October 1, 2000

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**Tech Tip # 1**

**All Models. 8 Digit Labor Operations**

October 16th begins the official start of the 8-digit labor operation and the end of the 7-digit labor operation. Starting on the 16<sup>th</sup> of October, the 7-digit labor operation will not be accepted. You may only use the 8-digit labor operation. Refer to Warranty Service Circular number AWA-00-08.

**Tech Tip # 2**

**All Models With Steering Wheel Controls. Radio Controls Inoperative.**

The green connector on the radio contains the wire for communication between the steering wheel and the radio. This connector must be re-connected when installing an in-dash CD player; otherwise the controls on the steering wheel will be inoperative.

**Tech Tip # 3**

**All Models. Engine Coolant Concentration.**

Be sure to check the concentration of the engine coolant during the PDI procedure. Refer to VESIS for the proper concentration levels.

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Week of September 15, 2000

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### **Tech Tip # 1**

#### **All Models, Odometer Adaptation**

When replacing an instrument cluster, prior to removal of the old unit, get the current adaptation numbers from channel 09. This can be performed by adaptation (10) then channel 09. This will eliminate the need to perform the calculation from miles to kilometers.

### **Tech Tip # 2**

#### **All Models With Snow Screen, Fuel Trim Faults**

When diagnosing a fuel trim fault, check the intake box air duct for a snow screen. This screen can become clogged and can contribute to these faults. This screen must not be removed.

### **Tech Tip # 3**

#### **2001 Jetta 1.8 Turbo, ECM Configurations**

2001 Jettas with the 1.8 turbo come in two configurations and emission levels- AWD and AWW. The AWD is TLEV, and has part numbers 06A 906 032 CL with manual transmission, and 06A 906 032 CM for automatic transmission. Coding is 06500 for manual and 06530 for automatic transmission. The AWW is LEV, and has part numbers 06A 906 032 DL with manual transmission, and 06A 906 032 DM for automatic transmission. Coding is 07500 for manual and 07530 for auto transmission. Always check with the parts department for the latest part number information.

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Week of September 1, 2000

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### **Tech Tip # 1**

#### **2001 Jetta/Golf with 1.8L Turbo. Cruise Control Not Working at PDI**

If you see that the cruise control system has not been activated when performing the PDI procedure, activate it by doing the following procedure: Using the 5051 select 01, "Engine Electronics," then select 11, "Login Procedure" and enter 16167 to deactivate and end output by using 06. Next select 01, "Engine Electronics," then select 11, "Login Procedure" and enter 11463 to activate. If the cruise control does not work after this, and the 'G' does not appear in the display, continue with standard diagnostic procedures.

### **Tech Tip # 2**

#### **All Models with RAPGARD. Inspection, Removal and Disposal of RAPGARD.**

Volkswagen vehicles are shipped with a paint protection product called RAPGARD. Proper procedure for

Inspection, Removal and Disposal of RAPGARD can be found in Technical Bulletin Group 00, Number 00-05, dated August 22, 2000.

### **Tech Tip # 3**

#### **New Beetle. Odometer Adaptation.**

Complete odometer mileage adaptation can be found in VESIS under Electrical Equipment on board diagnosis (OBD) for all New Beetle model years.

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Week of August 15, 2000

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### **Tech Tip # 1**

#### **All Models. Replacement Engines.**

Replacement engines may have an air pocket in the oil lubrication system. Before starting the engine, disable ignition system, loosen oil filter, and crank the engine until oil appears at filter seal. Tighten the oil filter and start engine. Ensure that there are no oil leaks and oil is at proper level.

### **Tech Tip # 2**

#### **Model Year 2001, All with 1.8L Turbo. Readiness Code Checking at PDI**

During the PDI, ensure that the readiness code is set. To set the readiness code, see Repair Manual Fuel Injection and Ignition, Group 01 On Board Diagnostic (OBD), "Readiness code generating or creating".

### **Tech Tip # 3**

#### **Passat with Rear Cup Holder. Rear Cup Holder, Breakaway Design.**

The rear cup holder on a Passat is designed to breakaway during impact. Do not replace the cup holder for this condition. Reassembly of the cup holder can be found in Technical Bulletin Group 68, Number 00-02.

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Week of August 1, 2000

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### **Tech Tip #1:**

#### **2000 Model A4 Jetta, Golf and Passat. Coding Gateway System.**

Coding information for Gateway can be found on VESIS in Electrical Equipment On Board Diagnostics under Diagnostic Interface for Databus. Gateway must be coded when an instrument cluster is replaced

on vehicles equipped with automatic transmissions in order for the prndl to appear on the instrument cluster.

**Tech Tip #2:**

**Model Year 2001. Reporting Shortcomings.**

Please report all shortcomings on model year 2001 vehicles found during PDI on the Dealer Technician's Helpline Contact form and fax the completed form to the Helpline fax number 1-800-403-4710.

**Tech Tip #3:**

**Model Year 2001. Warranty Parts Submission.**

With the introduction of the new model year vehicles, warranty parts may once again be on 100% submission to the warranty test center. Electronic parts tags and copies of the VAG 1551 or VAS 5051 printouts, if applicable, must accompany the failed part or the claim may be held up.

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Week of July 1, 2000

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**Tech Tip #1:**

**2000 New Beetle. Volkswagen Paint Codes.**

Some New Beetles equipped with Vapor Blue or Reflex Yellow may not have the proper paint code label. The correct paint code for Vapor Blue is LG5A and for Reflex Yellow the correct paint code is LW2B.

**Tech Tip #2, part Number 3:**

**1998 to 2000 Passat. 01V 5 speed Automatic Transmission OBD.**

The 5 speed Automatic transmission 01V front wheel drive on board diagnostic (OBD) can be found in VESIS under the heading of 4 speed Automatic Transmission 01N front wheel drive on board diagnostic (OBD). The heading in VESIS is incorrect and should be corrected in the next VESIS update.

**Tech Tip #3:**

**All Models with Comfort Control. Comfort Control Module Ordering.**

To order a Comfort Control Module, you must input the part number as well as a 3 digit code into the color code field of the Part Number. Procedure for getting the 3-digit code using the VAS 5051/1551 can be found in Technical Bulletin Group 64, Number 00-01.

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Week of June 15, 2000

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### **Tech Tip # 1**

#### **All TDI Diesel Vehicles. Start of Injection Checking and Adjusting.**

The procedure to properly check and adjust the start of injection is performed using the VAS 5051 in address word 01-04-000. This function must be carried out in basic settings (04) and not in measure value block (08). The correct procedure can be found on VESIS in Start of Injection, dynamically checking and adjusting.

### **Tech Tip # 2**

#### **2000 Passat V6 2.8L. ECM Part Number 3B0 907 551AN.**

DTC P1558 and P1545 can be caused by internal electronic component failure in the ECU.

Only ECMs with production date 17.09.99 and VIN Range YE128251-YE185023 are affected. Contact the VW Helpline if you encounter the above DTCs outside the effected VIN range and production date. ECM part number 3B0 907 551AN in the parts system is ok.

### **Tech Tip # 3**

#### **All Models. Freeze Frame OBD II**

It is important to get Freeze Frame data and print the results prior to clearing any DTCs generated by drivability complaints. You can access Freeze Frame data by going into 33 and then 2 on the VAS 5051.

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Week of June 1, 2000

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### **Tech Tip # 1**

#### **2000 Passat 4Motion. Fuel Gauge Diagnosis**

2000 Passat 4Motion fuel gauge diagnosis can be found in the Electrical Wiring Diagram and Trouble shooting repair manual, trouble shooting procedure number 17.

### **Tech Tip # 2**

#### **2000 Jetta VR6. PCM coding.**

The coding for 2000 Jetta VR6 PCM/ECU is 00031 for Manual transmission and 00033 for Automatic transmission. The 4th digit "3" states that there is a Can bus.

### **Tech Tip # 3**

#### **1999 and 2000 Golf, Jetta and New Beetle 1.8L Turbo. Engine Stalls.**

DTC 1557 (17965) Charge Pressure Control Positive Deviation can be caused by a defective Re-circulation valve for turbo boost, causing the fuel trim to go to rich. Replace the re-circulation valve for turbo boost to correct this fault.



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## Week of May 15, 2000

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### **Tech Tip # 1**

#### **2000 New Beetle, Golf and Jetta. AG4 Automatic Transmission Shift Lock Solenoid.**

When diagnosing an Automatic transmission stuck in park complaint, first check the function of the brake light switch using the VAG 1551/5051. Go into 02-08-001, field number 4. The first digit shows the brake light switch application (0 is not applied, 1 is applied). If the value block readings are OK then check for a miss-aligned or shorted shift solenoid.

### **Tech Tip # 2**

#### **1998 to 2000 New Beetle. Instrument Cluster Replacement.**

Just a reminder that the procedure for replacing an instrument cluster in VESIS is only applicable to model year 1998. For model year 1999 and 2000 refer to Technical Bulletin Group 01, Number 99-01.

### **Tech Tip # 3**

#### **1999 and 2000 Cabrio. Airbag Control Unit Code.**

The code for a 1999 and 2000 Cabrio airbag control unit Part # 1J0909608 BF is 16966.

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## Week of May 1, 2000

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### **Tech Tip # 1**

#### **All Models with AG4 Automatic Transmission. AG4 Automatic Transmission Diagnosis Sheet.**

The AG4 Automatic transmission test sheet can be found in VESIS under Technical Bulletin Group 37 Number 97-01, Automatic Transmission Repair.

### **Tech Tip # 2**

#### **All Models Equipped with Airbags. Driver's side and Passenger's Side Airbags, On Board Diagnostics.**

Additional Diagnostic procedures and a new special service tool have been established to prevent the unnecessary replacement of airbag components. These can be found in the superseded Technical Bulletin Group 01, Number 00-02 for Driver's Side Airbag and Group 01, Number 00-03 for Passenger's side Airbag.

### **Tech Tip # 3**

#### **New Beetle 1998 and Up. Headlight Electrical Connection, Repair.**

If service necessitates headlight harness repair or connector replacement, replace complete harness with Part # 1C0

971 671. Do not replace the headlight assembly or repair harness for this condition.

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Week of April 15, 2000

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**Tech Tip # 1**

**2000 Golf, Jetta and New Beetle. Immobilizer Code on Replacement Instrument Cluster.**

The new Immobilizer secret 4-digit number can be found on a white sticker on the back of the replacement instrument cluster. You must scratch off the black material to expose the 4-digit code. A small square sticker is also attached to the cluster with the secret code hidden to give to the customer.

**Tech Tip # 2**

**2000 Golf, Jetta and New Beetle. Sticking Shift Lock Solenoid.**

When experiencing a stuck in park due to a sticking or binding shift solenoid on a vehicle with an automatic transmission, proceed as follows: Loosen the two screws that secure the solenoid to the housing. Re-Align the solenoid so that it operates smoothly. Tighten the screws. Do not replace the solenoid.

**Tech Tip # 3**

**2000 New Beetle, Golf and Jetta. DTC 17704**

DTC 17704 / P1296 refers to the engine coolant sensor. Check to see if the engine coolant sensor is defective. Go into 01-08-004 and watch the 3rd value as the engine warms to operating temperature. Look for an interruption in the reading from cold to operating temperature. Replace the engine temperature sensor if you see an interruption in the reading.

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Week of April 1, 2000

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**Tech Tip # 1**

**1998 and 1999 Passat 2.8L V6. Engine Cranks But Will Not Start.**

If you experience engine cranks but will not start on a 2.8 Liter V6 Passat, perform the repairs listed in Technical Bulletin Group15, Number 00-01, dated March 24, 2000.

**Tech Tip # 2**

**2000 Jetta 1.8L Turbo. Close Out Panel.**

On a 2000 Jetta 1.8 Liter Turbo, the close out panel in front of the intercooler needs to be removed during the PDI to assure proper airflow to the intercooler.

### **Tech Tip # 3**

#### **1998 and 1999 New Beetle. Vehicle Grounds Identification Chart.**

Vehicle grounds and tips on ground repairs can be found in the ground identification chart in Technical Bulletin Group 97, Number 00-01, dated March 24, 2000.

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Week of March 15, 2000

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### **Tech Tip # 1**

#### **1999/2000 Jetta VR6. Whining noise from final drive between 35 and 40 MPH.**

To properly repair a whining sound from the final drive between 35 and 40 mph under slight load conditions, both the ring and pinion must be replaced.

### **Tech Tip # 2**

#### **2000 Jetta 2.0 Liter. Sound Deadening Material.**

As of week 49 in 1999, the sound deadening material on the inside of the hood has been deleted in 2000 Jetta 2.0-liter models.

### **Tech Tip # 3**

#### **All Models with Alloy Oil Pans. Oil Drain Plug with Sealing Gasket.**

The oil drain plug can be reused until the sealing gasket is deformed. The drain plug must be torqued to 30Nm each time. After that, the oil drain plug with gasket must be replaced. The drain plug and gasket must be ordered separately as per the parts catalogue.

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Week of March 1, 2000

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### **Tech Tip # 1**

#### **All Models. Wire Harness Repairs**

No other procedure or materials other than those in the VAS 1978 Wire Harness Repair Kit may be used for wire harness repairs.

### **Tech Tip # 2**

#### **1998 to 2000 New Beetle, and 1999 to 2000 Jetta. Suspension Noise.**

Suspension noise experienced by New Beetles and Jettas may be due to sway-bar links coming loose. Re-torque the sway-bar link nuts to 40 Nm +/- 10%. The torque of 30 Nm in VESIS is not correct, but will be corrected in the

next version. The Factory has increased the torque as of New Beetle VIN YM414024 and Jetta VIN YM023055.

### **Tech Tip # 3**

#### **2000 Passat 4-Motion. Product shortcomings.**

For the next 90 days, please contact the VW Helpline with any product shortcomings concerning 4-Motion vehicles. This will enable us to monitor the quality of the vehicle and report the information to the factory.

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Week of February 15, 2000

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### **Tech Tip # 1**

#### **1999 and 2000 TDI Diesel. Diesel injection pump timing.**

The injection pump sprocket mounting bolts must be replaced each time the start of injection is adjusted. The proper repair procedures can be found on VESIS in group 23.

### **Tech Tip # 2**

#### **1999 and 2000 Jetta to VIN YM025031. Rear Center Seat belt.**

If the rear center seat belt is hard to pull out after the seat has been folded down, it may be that the seat belt stop button has broken and jammed into the plastic cover. New cover part number 1J0 857 785B and new seat belt part number 1J0 857 807B must be installed. Add color code to part number as necessary.

### **Tech Tip # 3**

#### **2000 Golf GTI VR6. Engine Vibration between 1100 and 1300 RPM**

If engine vibration is noted in the RPM range of 1100 to 1300, and all basic settings are correct, mount 1J0 199 555 AH should be installed. Please report the results to the VW Helpline.

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Week of February 1, 2000

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### **Tech Tip # 1**

#### **Minimum Requirement Tool, JC2000, Spacer Gage.**

Special tool JC2000 is required in order to correctly adjust the gap between the airbag spiral spring and the steering wheel. It consists of two gages, JC2000 A and B. Technical Bulletin Group 01 Number 99-20 addresses the correct procedure for the use of this special tool.

### **Tech Tip # 2**

**2000 Golf, Jetta and New Beetle. 2.0L Engine Throttle Pedal Vibration.**

The throttle cable contacting the engine cover may cause throttle pedal vibration and or noise. Proper Repair procedures can be found in the Technical Bulletin Group: 20 Number 00-01.

**Tech Tip # 3**

**Helpline Phone Contact.**

The Volkswagen Technician's Helpline asks that technicians have the necessary information on hand prior to calling. For example, the repair order, dealer number, fax number, name of the OTS and any other repair reference material will aid us in properly assisting the technician with repairing the vehicle.

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Week of January 15, 2000

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**Tech Tip # 1**

**2000 New Beetle Golf and Jetta. Loss of Dash Lights.**

Aftermarket installation of remote starter systems could cause the dash lights to fail due to feedback in the instrument cluster wiring harness, and it will also defeat the immobilizer system. Aftermarket installation of the remote starter system is not recommended.

**Tech Tip # 2**

**1999 & 2000 Golf, Jetta Passat and New Beetle. Poor or No AM Reception.**

Diagnostic and repair instructions for poor or no AM radio reception can be found in Technical Bulletin Group: 91 Number: 99-11 dated December 9, 1999.

**Tech Tip # 3**

**Consultants Wish List.**

The Volkswagen Technician's Helpline Consultants wish all of you a Safe and Happy Holiday Season and a prosperous New Year.

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Week of December 1, 1999

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**Tech Tip # 1**

**2000 New Beetle, Golf, Jetta and Passat with Armrest. Armrest Cupholder.**

Until further notice, all models listed above should have a cupholder, part number ZVW 919 001 installed in the armrest. A Technical Bulletin with installation instructions will be released the week of November 29.

### **Tech Tip # 2**

#### **2000 New Beetle 1.8L Turbo. Rear Spoiler and Sunroof Equipped.**

From 08-99 a new control unit, part # 1C0959733B, equipped with Diagnostic Trouble Code memory, was installed as a rear spoiler component. Address word 54 will gain you access to the control unit. If you get a sporadic DTC of 01512, no communication between sunroof and spoiler, both the sunroof and the rear spoiler control units have to be replaced.

### **Tech Tip # 3**

**Dealer Technical Helpline Contact Form** In an effort to reduce telephone on hold time and to serve you our customer better, we ask that you have The Dealer Technical Helpline Contact Form completed prior to contacting a helpline consultant for technical assistance.

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Week of November 15, 1999

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### **Tech Tip # 1**

#### **2000 New Beetle, Golf, Jetta -- Vibrating Gearshift Lever.**

There is a new selector shaft available for vibrating gearshift levers for model year 2000 New Beetle, Golf and Jetta. The new part number is 02J 301 233C. Refer to Technical Bulletin Group 34 number 99-02 for proper repairs.

### **Tech Tip # 2**

#### **2000 Model Year Vehicles -- Gateway System.**

Information on the Gateway System Address Word 19 can be found on VESIS in Jetta Electrical Equipment On Board Diagnostic under Diagnostic Interface for Databus. Gateway Address Word 19 must be checked for DTC faults when you have communication faults in the engine ECM, TCM, airbag and ABS control modules. The faults have to be cleared in both the respective Control Modules as well as in Gateway.

### **Tech Tip # 3**

#### **All Vehicles -- Electrical Wiring Repairs.**

The VAS 1979 Electrical Wiring Repair Kit must be used when performing electrical wiring repairs while the vehicle is under the 24/24 warranty. The VAS 1978 Electrical Wiring Repair Kit should be used for all other electrical wiring repairs. Never use soldering methods since corrosion may result.

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Week of November 1, 1999

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**Tech Tip # 1****1996 to present OBD II Vehicles. Basic Settings, Throttle Valve Control Module.**

When performing basic settings, throttle valve control module (04-098-04-060), it is important to stay in the program for 30 seconds. Exiting the program prior to 30 seconds could cause the basic settings not to set.

**Tech Tip # 2****2000 Cabrio. Anti-theft Immobilizer, On Board Diagnosis.**

Anti-theft Immobilizer information for 2000 Cabrio can be found in Technical Bulletin Group 01 number 99-17 Dated: Oct. 6, 1999.

**Tech Tip # 3****2000 Jetta and Golf Multi-Function Indicator, Outside Temperature Change. Changing the ambient temperature display in the MFA indicator from Celsius to Fahrenheit or vise versa.**

On a Golf or Jetta with Climatronic, changing the Climatronic display from Celsius to Fahrenheit will also change the display in the MFA indicator. Holding the Auto button and Econ button on the Climatronic control head will switch the display from Celsius to Fahrenheit or vise versa.

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Week of October 15, 1999

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**Tech Tip # 1****2000 Jetta , New Beetle and Golf. Cruise Control Indicator Light.**

Model year 2000 Jetta, Golf and New Beetle come with the provision of an indicator light in the instrument cluster for the cruise control. This light is not activated and will not come on when the cruise control is activated. The owner's manual currently reflects the wrong information.

**Tech Tip # 2****All Models with the Immobilizer System. DTC 17978 Control Module Locked.**

The DTC 17978 Control Module Locked, occurs in the Engine ECM in an Immobilizer-equipped vehicle when the ECM is not matched to the Immobilizer. Instructions to match the ECM to the Immobilizer can be found in VESIS. Do not replace the Engine ECM for this fault.

**Tech Tip # 3****1999 New Beetle 1.8L Turbo. Spoiler Function, Sunroof Closing.**

The sunroof will close at 83MPH (140KM) if the sunroof is in the tilt position. The sunroof will not close if it is in the open position.

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## Week of September 15, 1999

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### **Tech Tip # 1**

#### **2000 New Beetle and A4 Golf and Jetta. Anti-theft Immobilizer Information..**

Anti-theft Immobilizer information can be found on VESIS. To access VESIS, click on New Beetle or Golf, Jetta 99. Scroll down and click on electrical equipment, click on 01- On board Diagnostic (OBD), then scroll down to Anti-theft Immobilizer on board Diagnostic (OBD). The Step by step diagnosis and repair instructions can be found in this section.

### **Tech Tip # 2**

#### **1994 to 1999 All Models with Airbags. Airbag Coding.**

1994 to 1999 Airbag Coding information can be found in Technical Bulletin Group: 01 Number 98-17. This information can also be found in VESIS in the Technical Bulletin section. 2000 model year Airbag coding information is forthcoming.

### **Tech Tip # 3**

#### **2000 All Models with RAPGUARD. RAPGUARD Removal.**

New RAPGUARD, inspection, removal, and disposal procedures can be found on Technical Bulletin Group: 00 Number 99-15.

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## Week of September 1, 1999

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### **Tech Tip # 1**

#### **1999 Golf and Jetta. Sunroof Clips for Sliding Headliner.**

The part number for the new improved sunroof headliner clip is 8D5 877 165A. The new clips are available in the VW parts system.

### **Tech Tip # 2**

#### **1998 and 1999 New Beetle and Passat and 1999 A4 Golf and Jetta. Airbag Adapter Harness.**

The part number for the adapter harness that goes between the spiral spring and the air bag is 1J0 971 584 for the three spoke steering wheel and 1J0 971 584A for the 4 spoke steering wheel.

### **Tech Tip # 3**

#### **MY 2000, All Models. Monsoon Sound System Coding.**

The codings for premium radios with the Monsoon sound system are: Golf without CD changer 01031, Golf with CD changer 01033. Jetta without CD changer 02041, Jetta with CD changer 02043. Passat without CD changer



04041, and Passat with CD changer 04043.

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Week of August 15, 1999

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**Tech Tip # 1**

**2000 New Beetle and Golf and Jetta. DTC 17978, Control Module locked.**

DTC 17978 Control Module Locked, occurs in the engine ECM if the ECM is replaced in an immobilizer-equipped vehicle and the new ECM is not matched to the immobilizer. Instructions on how to match the ECM to the immobilizer can be found in Technical Bulletin Group 01 Number 99-11.

**Tech Tip # 2**

**1999 New Beetle 1.8L Turbo. Cruise control inoperative.**

Prior to checking out the cruise control system, check if the ECM has the cruise control active. To activate the cruise control using the VAG 1551 or VAS 5051, go into 01 ( engine electronics) then 11( login). Enter 00003 to activate cruise control or 00004 to deactivate the cruise control.

**Tech Tip # 3**

**2000 All Models. Damage category for towing.**

When a customers vehicle has been towed in for warranty repairs, the damage category #88 should be used in the completion of the warranty claim. This applies to all tow-ins including AAA Road Aid service.

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Week of August 1, 1999

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**Tech Tip # 1**

**1998 and 1999 New Beetle and 1999 Golf and Jetta. Throttle Body replacement.**

Prior to replacing a throttle body, because idle adaptation could not be set, check the intake manifold mounting flange for straightness. An uneven mounting surface could cause the throttle housing to bind and idle adaptation not to set.

**Tech Tip # 2**

**1999 Jetta. Between VIN XM001540 and XM015453. CD bracket rubs against rear harness.**

Proper procedure for repairing a rear wiring harness that has rubbed against the CD bracket can be found in Technical Bulletin Group: 91 Number: 99-06 Dated July 14, 1999.

**Tech Tip # 3**

**1998 and 1999 New Beetle. Gear shift knob, replacing shift pattern insert.**

If a shift pattern insert becomes damaged, do not replace complete gearshift lever knob. Replace only the insert as follows. Insert small screwdriver under insert, and gently pry insert upward to remove. Snap new insert PAR # 1C0 711 144A into gear shift lever knob.

THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of July 15, 1999

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**Tech Tip # 1**

**2000 Golf, Jetta, Cabrio, New Beetle. Anti-theft Immobilizer**

Model year 2000 Golf, Jetta, Cabrio, and New Beetle come equipped with the Anti-theft immobilizer System. Anti-theft immobilizer information can be found on Technical Bulletin Group: 01 Number: 99-11 Date: June 25, 1999.

**Tech Tip # 2**

**All Models: Use of Stabilant 22A on Airbag components and wiring harness.**

We have been informed by the Factory that the use of Stabilant 22A Part # ZVW 186 001 must not be used on any connection on the Airbag System.

**Tech Tip # 3**

**Model year 2000. Warranty Parts Submission.**

With the introduction of the new model year Vehicles all warranty parts will once again be on 100% Submission to the warranty test center. The electronic parts tag and a copy of the VAG 1551 printout, if applicable, must accompany the failed part, or the claim may be held up.

THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of July 1, 1999

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**Tech Tip # 1**

**1998 and 1999 B-5 Passat. Steering Rack Identification.**

The 1998 and 1999 B-5 Passat comes with steering racks manufactured by ZF and Koyo. The steering racks can be identified as follows. The ZF steering rack has an all aluminum body, and the Koyo steering rack has a steel body

and aluminum end caps.

**Tech Tip # 2**

**All Models 1990 to 2000. Airbag Units, Replacement Following Deploy.**

For proper airbag component replacement following airbag deployment, refer to Technical Bulletin Group: 69 Number: 99-02, Dated: June 17, 1999.

**Tech Tip # 3**

**1998 and 1999 New Beetle. Static/Interference Heard on AM Radio Stations.**

Radio Static/Interference may be caused by antenna cable routing within the wiring harness. New antenna cable routing may be found in Technical Bulletin Group 91 Number: 99-04, Dated: June 9, 1999. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of June 15, 1999

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**Tech Tip # 1**

**B-5 Passat 1.8L Turbo. Cam pulley bolt torque.**

The torque specification of the cam pulley is incorrect on the B-5 Passat 1.8L Turbo (Vesic page 15-12). The correct value is 65NM (Newton Meters) (48 ft lbs.) The next edition of Vesic will reflect this change

**Tech Tip # 2**

**1998 & 1999 New Beetle. Wind noise/whistle from instrument panel area.**

Wind noise/whistle from instrument panel area at speeds above 45 MPH may be caused by a poor seal at the plenum close out panel. Repair procedures can be found in Technical Bulletin Group: 50 Number: 99-02 Dated June 2, 1999.

**Tech Tip # 3**

**1998 & 1999 New Beetle and 1999 A-4 Golf and Jetta. Service Reminder Indicator.**

If you have a Service Reminder Indicator light on in the Instrument cluster on a 1998 or 1999 New Beetle or 1999 A-4 Golf or Jetta, check the Instrument Cluster coding. If the Instrument Cluster is coded to European specs, changing the specs to US. or Canadian specs will eliminate the light in the Instrument Cluster. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of June 1, 1999

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**Tech Tip # 1****New Beetle with 01M Transmission. Vehicle speed sensor - G38- fault.**

When encountering a -VSS -G38- fault and no obvious fault has been found with the transmission. Install the -G38- overlay harness Part No. 1C0 971 661. Installation instructions can be found in Technical Bulletin Group: 01 Number: 99-03.

**Tech Tip # 2****All Models equipped with oxygen sensors. Caution: Sealant Containing Silicone.**

Do not use sealant, liquid gaskets or sprays that contain silicone on engines with oxygen sensors. Silicone entering the air intake system is not burned during combustion and can damage the oxygen sensor. Always read ingredients of the material you are using. It must not contain silicone.

**Tech Tip # 3****1998 & 1999 Passat with 1.8L Turbo and 2.8L 5V. Engine Misfire.**

If the MIL is on and one or more of the following Misfire faults are stored in DTC memory: DTC's P0300 P0301, P0302, P0303, P0304, P0305 and P0306. Perform the procedures as outlined on the following Technical Bulletins Group: 01 Number: 99-07 and 99-08. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of May 15, 1999

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**Tech Tip # 1****All Vehicles. Sunroof shade protective plastic cover.**

Caution must be taken when removing the plastic protective cover from the sliding sunroof During the PDI. Careless removal may damage the sliding sunroof shade guide clips. See Technical Bulletin Group 60 Number: 99-03 for proper repair instructions.

**Tech Tip # 2****1998 & 1999 New Beetle. Power Mirror switches.**

The part numbers for the power mirror switches are. 3B1 959 565A Power mirror-not heated/power windows. 1J1 959 565 Power mirror-not heated /manual windows. 1J1 959 565B Power mirror-heated /manual windows. 1J1 959 565E Power mirror- heated/power window. Care must be taken to order the correct power mirror switch based on equipment level.

**Tech Tip # 3****1998 & 1999 Passat and 1999 A-4 Jetta and Golf. Sunroof parts.**

Parts for the sunroof are available for replacement as individual components. It is no longer necessary to order the complete sunroof. Individual parts information is available on ETKA. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of May 1, 1999

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**Tech Tip # 1**

**1999 B-5 Passat GLX V6. Rain Sensor.**

1999 Passat GLX may be equipped with the rain sensor system. The intermittent wipers will make one sweep and then stop until it sees water on the glass. This is a normal operation and no repair is necessary.

**Tech Tip # 2**

**New Golf, New Jetta, New Beetle, Passat, Cabrio and Eurovan. Engine oil Capacities.**

Engine oil Capacities with oil filter change is available in Technical Bulletin Group 17 Number 99-02 Dated April 23, 1999. Proper oil filling instructions noted in the Technical Bulletin

**Tech Tip # 3**

**1998 & 1999 Passat and New Beetle and 1999 A-4 Jetta and Golf. Light switch removal.**

To remove the Headlight switch on the above vehicles push the knob in (while in the off position) turning the knob to the right and pulling out the Headlight switch. Care must be taken when removing the switch so As to not damage the headlight switch. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of April 15, 1999

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**Tech Tip # 1**

**1998 & 1999 New Beetle. Vehicle ground locations.**

Revised vehicle ground locations and torque specifications can be found in Technical Bulletin Group: 97 Number: 99-02. This Technical Bulletin also includes tips on how to properly check and repair poor grounds.

**Tech Tip # 2**

**All 1996 and 1997 up to VIN 143854 with 2.0L (OBDII). Oil on Mass Air Flow Sensor.**

A breather valve kit part # 037 198 002 is available to correct oil vapors from positive crankcase ventilation system

collecting on the Mass Air Flow Sensor. Installation instructions can be found in Technical Bulletin Group 24 Number 99-01.

**Tech Tip # 3**

**1999 A-4 Jetta and Golf. Sunroof shade guides breaking**

The sunroof shade guides P/N 8D5 877 165 are available as a replacement part for A-4 Golf and Jetta. This part number is common on the sunroof shades produced by Webasto and Rockwell-Goldie Meritor. Do not change the entire sunroof shade because of broken clips. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of April 1, 1999

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**Tech Tip # 1**

**A-4 Jetta and Golf. Drivers side air bag fault 00588**

If you encounter fault 00588 Drivers side air bag resistance to small on a A-4 Jetta or Golf, check the yellow connector on the bottom side of the spiral spring for proper contact/connection prior to replacing any components.

**Tech Tip # 2**

**1998 New Beetle. Fault code 18057 Data buss fault.**

When experiencing fault code 18057 on a 1998 New Beetle with a V10 Eprom level check to see that the ECM is properly coded. ( Automatic or 5 speed and ABS or non ABS) Proper coding procedure can be found on VESIS.

**Tech Tip # 3**

**11999 New Beetle and A-4 Jetta with 02J Transmission. Shift lever, vibrating/knocking.**

The proper repair procedures to repair shift lever vibrating/knocking in 1st, 2nd, 3rd or 4th gear on New Beetle and A-4 Jetta with 02J Transmission can be found in Technical Bulletin Group: 34 Number: 99-02. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of March 15, 1999

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**Tech Tip # 1**

**New Beetle and A-4 Jetta and Golf. Replacement of light L16 on Heating and ventilation controls.**

When the light L 16 burns out on the Heating and Ventilation control assembly, do not replace the Heating and

Ventilation control Assembly. Change the light L16 part number N 017 751 2 only. Instructions on changing the light L16 can be found in the Heating, Ventilation Repair Manual on page 80-25.

### **Tech Tip # 2**

#### **1998 and 1999 Passat 1.8 L Turbo with Automatic Transmission. Transmission shift concerns.**

When experiencing one or more of the following conditions. 1) With transmission in 5th gear and light throttle application with engine RPM's below 1400, engine surges. 2) Vehicle lacks power due to transmission upshifting too fast. 3) After climbing a hill, transmission upshift is delayed. If any of these conditions exist: replace transmission TCM with part # 8DO 927 156CL.

### **Tech Tip # 3**

#### **1999 New Beetle. Fog Light Relay location.**

The Fog light relay is located above the thirteen position auxiliary relay panel and has a production control # Of 53. Component location and wiring diagram in the Wiring Diagram Repair manual is incorrect. THANKS FOR CALLING THE VOLKSWAGEN HELP LINE AND IF YOU STAY ON THE LINE YOU WILL BE CONNECTED TO THE NEXT AVAILABLE CONSULTANT.

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Week of March 1, 1999

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### **Tech Tip # 1**

#### **B-5 Passat 1.8L Turbo. Turbocharger failure, due to lack of Lubrication.**

Lack of scheduled maintenance and /or high temperatures may cause oil in the oil supply line to coke which can restrict or stop oil flow to the turbocharger. Lack of lubrication may damage the turbocharger. If a turbocharger is replaced due to lack of lubrication: Also replace the oil supply line and the heat shield with the following. Oil supply line part # 058145778 and Heat shield Part # 058129585B

### **Tech Tip # 2**

#### **1998 and 1999 All Models. Replacement of new style Radio.**

When exchanging a new style radio it is important to code the radio to the specific equipment level. Radio codes can be found on Vesis or in the respective Electrical Equipment repair manuals.

### **Tech Tip # 3**

#### **1996-1999 all Models with TDI Diesel Engines. Synthetic oil, Usage.**

Beginning Jan. 26,1999, as announced in Warranty Service Circular V99-05, 5W30 synthetic oil has been approved and will be reimbursed under Warranty, when performing repairs or free maintenance on 96-99 vehicles equipped with TDI Diesel engines.

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## Week of February 15, 1999

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### **Tech Tip # 1**

#### **A-4 Golf Maintenance free Battery.**

Maintenance free Batteries with a magic eye are currently being supplied on the new A-4 Golf. The following charging procedure is recommended. 1) Charge the battery as specified. 2) When the equipment indicates that the charging sequence is finished, or after the calculated time on charge has lapsed, disconnect the battery and allow it to stand idle for two hours. 3) Check the open circuit voltage. If 12.5 V or better, the battery has been successfully recharged. If less than 12.5 V, go back to step one and start through the cycle again.

### **Tech Tip # 2**

#### **All TDI Diesels. Auxiliary heater glow plugs.**

The auxiliary heater is to improve the heating performance under certain temperatures via 3 glow plugs in the coolant flange. If one of the glow plugs becomes defective, the whole flange with the 3 glow plugs has to be changed to avoid coolant leaks.

### **Tech Tip # 3**

#### **Tech News.**

Recently the Volkswagen Helpline faxed the latest issue of Volkswagen Tech News to your dealership. The Volkswagen Tech News is a news letter created by the Helpline for technicians and service advisors. A personal copy of the news letter should be made for each technician and service advisor. You may elect to have the tech news mailed to your home. You can fill in your name and address in the space provided on the latest Volkswagen Tech News, or on a sheet of paper write, " Volkswagen Tech News", your name and address and fax it to 248-340-4755.

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## Week of January 1, 1999

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### **Tech Tip # 1**

#### **1998 & 1999 Passat and 1999 A-4 Jetta. Icy Road Warning**

On vehicles equipped with Multi-Function Indicator , the multi-function display will switch from the currently displayed function to the outside temperature display ( icy road warning) at outside temperature between + 21 F and + 39F. Press the rocker switch on the windshield wiper lever to return to the previously displayed function.. This is a normal function and no repair is needed.

### **Tech Tip # 2**



**All Vehicles with Airbags. Airbag Coding.**

Airbag Control Module coding information is summarized in the following chart on Technical Bulletin Group 01 Number 98-17 Dated Dec. 16, 1998.

**Tech Tip # 3**

**All TDI Diesels. Glow Plug Relay test.**

Prior to replacing the glow plug relay ( 038 911 253) perform the following test. 1) Disconnect the coolant temp. sensor. 2) Turn ignition on. 3) Wait 20 seconds for glow plugs light to go out 4) Using the VAG 1551 read the fault code, if the DTC 00522 appears the glow plug relay is OK. If DTC 00522 and DTC 01050 appears the Glow plug relay is defective and needs to be replaced.

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Week of December 15, 1998

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**Tech Tip # 1**

**1998 &1999 Passat V6 with 01V Automatic Transmission. Delayed shift on cold start.**

Vehicle exhibits delayed upshift under part load after a cold start A warm-up program determines this shift Characteristic and is activated when the following conditions apply. Fresh start of engine. Coolant temperature below 40 Celsius. This condition is normal. No repairs are necessary. Refer to Technical Bulletin Group: 37 Number: 98-04 for more details.

**Tech Tip # 2**

**All Vehicles. ECU Year 2000 Compliant.**

The year 2000 problem is created when the computer date clock changes from 1999 to 2000. Since our computers do not have a computer date clock this phenomenon will not effect our system.

**Tech Tip # 3**

**Consultants wish list.**

The Volkswagen Technicians Helpline Consultants wish all of you a Safe and Happy Holiday Season.

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Week of December 1, 1998

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**Tech Tip # 1**

**1999 A-4 Jetta, Front Bumper License Plate mount, Installation.**

When installing a front mounted license plate, refer to Technical Bulletin Group: 63 Number: 98-03 for the

installation instructions.

**Tech Tip # 2**

**All Phase 0 and Phase 1 AG4 Automatic Transmissions. Fault 00652 repair.**

When diagnosing a 00652 AG4 Transmission fault, inspect the connections at the G68 speed sensor. If the connections are corroded, replace the sensor and the connector. Put stabilant 22a on ECU and TCM connectors and clean all ground connections. Erase the fault and road test vehicle. If the fault returns contact the VW Helpline.

**Tech Tip # 3**

**1998 & 1999 New Beetle and Passat. Removing and installing front seats with side airbag.**

When removing and /or repairing a front seat which is equipped with side airbags, special tool VAS 5094 must be connected prior to seat removal and / or repair. Removal and installation procedures may be found in the Technical Bulletin Group: 72 Number: 98-01. : 98-04 Dated: Oct. 1, 1998.

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Week of November 15, 1998

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**Tech Tip # 1**

**1999 A-4 Jetta, Golf and New Beetle automatic transmission. Basic settings.**

When performing basic setting ( Throttle setting) on the Engine you must also perform basic setting on the automatic transmission. Basic setting procedures can be found in the respective repair manuals.

**Tech Tip # 2**

**1998 & 1999 B-5 Passat Spiral spring installation.**

It is critical that the spiral spring be centered, properly indexed to the steering wheel and the steering wheel properly torqued down prior to turning the steering wheel. Damage to the spiral spring may occur causing scraping and popping noises if the above procedure is not followed.

**Tech Tip # 3**

**1999 New Beetle. Front Headrests.**

The headrests on the 1999 New Beetle are not intended to be flush with the top of the seat.. The headrest angle and height have been changed. For safety reasons do not swap the front and rear headrests. Bulletin Group: 57 Number: 98-04 Dated: Oct. 1, 1998.

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Week of November 1, 1998

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### **Tech Tip # 1**

#### **1998 and 1999 New Beetle. Ground Connections.**

Please contact the VW Technical Helpline if you encounter loose or Poor ground connections during the performance of a repair. We will need the VIN, mileage and the exact location of the poor or loose ground connection. Please fax us this information . Fax # is 1-800-403 4710.

### **Tech Tip # 2**

#### **1998 & 1999 B-5 Passat 1.8 Liter Turbo. Turbocharger failure.**

Turbocharger failure can occur if the oil feed line to the turbocharger is plugged. Always check the oil feed line for restriction prior to replacing the turbocharger.

### **Tech Tip # 3**

#### **1999 New Beetle. Key Code Location.**

When checking throttle body wiring, please keep the following in mind. Vehicles with cruise control use wiring diagram # 13 page 4. Vehicles without cruise control use wiring diagram # 2page 4. If the incorrect wiring diagram is used the wire color codes and terminal assignments will not match.

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Week of October 15, 1998

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### **Tech Tip # 1**

#### **1999 New Beetle. New Clock and Temperature setting changes.**

The Clock has two functions for 1999. 1 Time and 2 Temperature. To change the temperature from Fahrenheit to Celsius and vice versa, turn the ignition to the on position and depress both buttons simultaneously on the clock. To change the clock from military to regular time or vice versa, turn the ignition off and depress both button s simultaneously on the clock.

### **Tech Tip # 2**

#### **1999 New Beetle and Passat. Delayed Trunk unlock function.**

To open the rear trunk using the FOB the Trunk button on the FOB has to be depressed for a minimum of 2 seconds before the rear trunk will open. This is a normal function and no repair should be performed.

### **Tech Tip # 3**

#### **1998 New Beetle. Throttle Body wiring.**

Beginning with VIN: 3VWCC21C2XM402129 the vehicle key code is stamped into the door lock cylinder. For more information see Technical Bulletin Group: 57 Number: 98-04 Dated: Oct. 1, 1998.

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## Week of October 1, 1998

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### **Tech Tip # 1**

**1998 New Beetle. Transparent film Protection, Installing and Removing.** Transparent film requires replacement during body repairs. The proper procedure for the removal and installation of the Transparent film protection can be found in Technical Bulletin Group 66 Number 98-01 dated September 18,1998.

### **Tech Tip # 2**

**1998 New Beetle. Ground Connections.** If you receive a New Beetle with the strange electrical complaints . Check all the ground connections for proper tightness , Use Stabilant 22A on the electrical connections . Ground connection locations can be found in the Component location section of the New Beetle Wiring Diagram Manual pages 2/3 2/4 and 2/5.

### **Tech Tip # 3**

**1999 New Beetle. Key Code Location.** If a replacement key is required and the code from the tag or the original key is not available, the key code can be found on the drivers door lock cylinder.

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## Week of September 1, 1998

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### **Tech Tip # 1**

1998 New Beetle and Passat. Comfort system ECM, replacement. ECM's replaced during warranty repairs have been found to be fully functional when tested. Always check for stored DTC's , prior to replacing the ECU. Proper repair procedures can be found in Technical Bulletin Group: 01 Number 98-12.

### **Tech Tip # 2**

1998 New Beetle TDI Diesel. DTC 01050 Glow plug relay fault. If you receive a New Beetle TDI Diesel with the MIL on and fault 01050, Check all the ground connections for proper tightness. Ground connection locations can be found in the Component location section of the New Beetle Wiring Diagram Manual pages 2/3 2/4 and 2/5. Please report all loose ground connections to Heinz Buechel via fax. Fax # 248-340-4744. Please indicate the position of the loose ground in the fax.

### **Tech Tip # 3**

All Vehicles equipped with LDP system. DTC 17884. When encountering a TDC of 17884 LDP system insufficient vacuum, check the vacuum supply from the intake to the LDP pump and if that is OK , check for LDP pump failure. The above fault does not pertain to the fuel tank vent system.

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## Week of August 14, 1998

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### **Tech Tip # 1**

#### **1998 New Beetle TDI Diesel.**

Glow plug relay location warning. The correct position for the Glow plug relay is in position Ten of the Relay panel. Installing a relay in the fourth position (B) of the six position relay panel can result in serious damage to the electrical system. Refer to Technical Bulletin Group 97 Number: 98-04 for more details.

### **Tech Tip # 2**

1997 and Below Golf , Jetta., Cabrio: Premium 4 radio installation. Vehicles with electrical harness for premium 2 Clarion radios can be modified to a premium 4 radio by connecting a wire from the black radio connector position 5 to central electric position 30 (12V) on relay board and from black radio connector position 3 to the K wire at the T 44 connection for the VAG 1551.

### **Tech Tip # 3**

1998 Passat, Golf, Jetta and New Beetle. FOB/ Transmitter part # The correct part number for the A-3 Golf /Jetta FOB/ Transmitter is 1HM 937 047. The part number for the Passat and New Beetle FOB/ Transmitter is 3B0 953 252.

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## Week of July 31, 1998

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### **Tech Tip # 1**

#### **All Models TDI Diesels.**

The correct part number for the glow plug relay is 028 911 253 with production control number of 180.

### **Tech Tip # 2**

1998 Golf , Jetta., Cabrio: A/C System repair. Currently we have the following concerns with 1) A/C hose part # 1H1 820 743P separating at crimping.. A/C hose part # 1HM 820 721 rubbing against fan motor cover. 3) Condenser part # 1HM 820 413B rubbing against front end lock carrier. In all cases the A/C system has been open, therefore the receiver dryer has to be replaced. See Technical Bulletin: group 87 # 93-02 for details.

### **Tech Tip # 3**

All Models: Wire Harness repairs using VAS 1978. The VAS 1978 wiring harness repair kit was developed as a tool for wiring harness repairs. All approved materials and repair guide are supplied in the repair kit. See Technical Bulletin Group: 97 Number 98-03 for repair procedures.

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Week of June 30, 1998

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**Tech Tip # 1**

**All Models Technical Bulletin Fax on Demand.**

Technical Bulletin Group: 00 Number 98-01 Explains how to use the Volkswagen Technical Bulletin Fax on Demand service. The Fax on Demand service now includes " Product Update Bulletins" .

**Tech Tip # 2**

**1998 Golf , Jetta. Radio Installation, VAG 1551 Scan tool warning.**

Prior to the installation of any aftermarket radio or any Volkswagen radio produced for 1997 m.y. and older vehicle , the radio wiring harness must be modified. Proper repair instructions can be found in the Technical bulletin Group: 67 Number: 98-02. Failure to follow repair procedures could damage the VAG 1551/1552 scan tool.

**Tech Tip # 3**

**1998 B-5 Passat and New Beetle. Odometer Reading Adaptation replacement instrument cluster.**

Adaption values on VDO instrument clusters must be entered in kilometers. For US models, adaptation value must be converted from miles to kilometers first.( miles x 1.609= Kilometers) Adaption values on Magnetti Marelli instrument clusters for US models must be entered in miles. Repair instructions can be found in the Electrical Equipment repair manuals.

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Week of June 15, 1998

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**Tech Tip # 1**

1998 Passat and New Beetle. Central Locking System Options.

To activate the specific remote/central locking functions refer to Technical Bulletin Group 01 Number 98-01 Dated March 25, 1998 for proper coding procedures.

**Tech Tip # 2**

**1998 New Beetle. Air Bag ECM coding.**

The coding for a New Beetle Air Bag ECU with the suffix AQ is 16721. This information is not in the New Beetle repair manual.

### **Tech Tip # 3**

#### **All Vehicles. New Radio Sound System.**

If you encounter complaints of no or poor AM radio reception perform the following checks before removing the radio to check the antenna connections.

1. Turn the radio on and change to FM mode.
  2. Press the balance button for 10 seconds. 3CPT7 will appear.
  3. Press the CD mode button. 020 I will appear.
  4. Press the CD mode again . FERN Off/On will appear. If FERN On appears antenna and connections are OK. If FERN OFF appears the problem is in the antenna or connections.
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Week of May 15, 1998

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### **Tech Tip # 1**

#### **1998 A-3 Jetta GLX VR6 Wheel Lug Covers.**

The 1998 Jetta GLX comes with new lug covers part # 6X0601173A. The tool needed to remove the wheel lug covers is 6X0012243 and should be in the tool package in the spare tire well. If it is missing please order as needed.

### **Tech Tip # 2**

#### **1995 and up AG4 Automatic Transmission with Digimat 2.1 TCM. Resistor Wire Modification.**

If you encounter erratic, harsh or delayed upshifts on a AG4 transmission with Digimat 2.1 TCM, refer to Technical Bulletin Group 01 Number 98-05 for the proper procedure to install the resistor wire part # ZVW 311 100.

### **Tech Tip # 3**

#### **All Vehicles. One touch up and pinch protection reactivating.**

If you have a complaint that the one of the front windows goes up and comes right down again. That window is either binding or the pinch protection is not set. To set the one touch up/ pinch protection , install key in drivers door and turn to the unlock position , hold until all windows are down.

**Turn key to the lock position until all windows are in the full up position. One touch up/ pinch protection should now be set, or the claim may be held up.**

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Week of April 15, 1998

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**Tech Tip # 1****1998 A-3 B5 Radio**

When an after market radio is installed in a 1998 A-3 or B-5 with the new style radio, the MIL will come on and the K wire will not switch fault will be in the 1551. You will not be able to interrogate any of the control units.

**Tech Tip # 2****1998 New Beetle Front suspension shipping spacers.**

When performing the Pre-Delivery Inspection, remove the yellow plastic shipping spacers located on both front strut shafts between the upper spring seat and the rubber stop/dust boot assembly.

**Tech Tip # 3****Warranty Parts Submission.**

With the introduction of the New Beetle Vehicles all warranty parts will once again be on 100% submission to the warranty test center. Electronic parts tag and copy of the VAG 1551 printout if applicable must accompany the failed part, or the claim may be held up.

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Week of March 1, 1998

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**Tech Tip # 1****1998 A-3 B5 Radio**

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Week of February 2, 1998



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**Tech Tip # 1****1998 B5 ZF 5 speed Automatic Transmission.**

If you encounter transmission shift complaints on a 1998 Passat with a ZF 5 speed automatic transmission, please contact the VW Helpline for assistance.

**Tech Tip # 2****1998 A-3 Golf, Jetta and Cabrio. Radio Codes**

The radio codes for 1998 A-3 vehicles can be found in the glove compartment or in the trunk. If the radio codes cannot be found in the vehicle, they can be retrieved in OTIS from the radio decoder program.

**Tech Tip # 3****Voice mail message.**

When leaving a message for the VW Helpline in voice mail ,speak slowly and in a clear voice. Leave your name, Dealer #, Telephone # including area code, and brief description of the problem.

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Week of January 1, 1998

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**Tech Tip # 1****1998 B5 Passat Air Conditioner function.**

For Safety reasons it is not possible to use the air recirculation feature when the controls are set to the defrost position. This is normal and no repairs should be attempted.

**Tech Tip # 2****A-3 Golf GTI and Jetta GLX 5 Speed Cruise Control.**

Cruise control will not set, all components and wiring check out . Ensure that the clutch pedal returns to the stop position. Air in the slave cylinder can restrict pedal travel and prevent the cruise control from setting.

**Tech Tip # 3****Consultants wish list**

The Volkswagen Technicians Helpline Consultants wish all of you a safe and happy New Year.

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Week of December 15, 1997

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### **Tech Tip # 1**

#### **A-3 1997 on up AG4 "ETA: Automatic transmission**

The 01M972 733DL TCM can only be used With a AG4 "ETA" automatic transmission. The TCM is not interchangeable with earlier Phase II TCM'S. Doing this will damage the Automatic transmission.

### **Tech Tip # 2**

#### **A-3 Drivers side Airbag.**

Early type Drivers side Airbag part # 1HM 880 199B has been superseded to Part # 1H0 898 203, and comes as a unit. ( Steering wheel, airbag and spiral spring.) This is a correct supersession.

### **Tech Tip # 3**

#### **Consultants wish list**

The Volkswagen Technicians Helpline Consultants wish all of you a very Merry Christmas and a safe and happy New Year.

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Week of December 1, 1997

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### **Tech Tip # 1**

#### **1998 B-5 Passat Radio Antenna.**

We have two suppliers that supply Radio Antennas for the B-5 Passat. One Antenna has a short base and the other one has a long base. Both Antennas are correct. Do not replace the Radio Antenna because of the length of the base of the antenna.

### **Tech Tip # 2**

#### **1996-97 A-3 Golf Jetta. Cruise control inop.**

If the cruise control does not set on a 1996-97 Golf or Jetta , check for damaged vacuum hoses under the Battery. Vacuum hose may be damaged by Battery Acid fumes.

### **Tech Tip # 3**

#### **1996-97 A-3 Golf and Jetta. CD Changer lock up.**

If the radio does not recognize the CD Changer, do not replace the Radio, CD Changer, or the Harness, Instead turn on the radio, disconnect the CD harness at the CD Changer, wait 20 seconds and reconnect the Harness. This will reset the Radio. Clarion is still working on a permanent fix.

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Week of November 1, 1997

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**Tech Tip # 1****1997 & 1998 A-3 CD installation with the Bose system**

Jetta Bose radios use the Panasonic CD changer part # 1H0035111 with the bracket Part # 1HM035233C  
Installation instructions can be found in Technical Bulletin Group 91 # 96-05

**Tech Tip # 2****1998 A-3 & B-5 Keyless Entry FOB system.**

1998 Golf and Jettas and Passats are equipped with a FOB system. The Keyless Entry remote will only open and close the doors and the trunk, it will not open and close the windows or the sunroof.

**Tech Tip # 3****1998B-5 Passat Front Suspension Shipping Spacers, Removal at Pre-Delivery Inspection.**

When performing the Pre-Delivery Inspection, remove the Red plastic shipping spacers located on both front strut shafts between the upper spring seat and the rubber stop/dust boot assembly. Instructions are listed in the Maintenance Bulletin Pre-Delivery Inspection # 97-02.

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Week of October 15, 1997

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**Tech Tip # 1****1998 A-3 Highline Cabrio Power Top.**

To operate the 1998 Cabrio power top the Ignition Key must be in the on position and the Hand Brake must be applied.

**Tech Tip # 2****1998 A-3 Golf and Jetta Keyless Entry FAB system.**

1998 Golf and Jettas are equipped with a FAB system. With this system the right door does not come with a door lock and the trunk lock has only one lock/unlock position. Do not replace the right door handle.

**Tech Tip # 3****1998 A-3 Golf and Jetta VR6 LDP..**

1998 Jetta GLX and Golf GTI VR6 are equipped with the Leak Detection Pump system. To set the readiness code 04-153 must also be performed. This procedure is currently not in the 2.8 liter VR6 repair manual.

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Week of October 1, 1997

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**Tech Tip # 1****1998 B-5 Passat Location of VAG 1551 Connector plug.**

The location of the VAG 1551 connector plug for the 1998 B-5 Passat has been relocated directly under the steering column about half way down the trim panel.

**Tech Tip # 2****1996-97 A-3 Golf/ Jetta DTC 17990 Idle adaptation at limit.**

If you experience a DTC of 17990 in the fault memory, this can be caused by dirt, oil or dust in the throttle valve housing . Clean the throttle valve housing , erase the fault memory , drive vehicle and recheck for faults .

**Tech Tip # 3****B-5 1998 Passat 01V ZF Automatic Transmission. DTC 00526 Brake light switch incorrect signal.**

DTC 00526 fault appears when the ignition is switched on and the brake is not applied prior to checking for DTC's. Before activating the DTC memory, press brake pedal briefly, so that the store malfunction is erased.

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Week of September 15, 1997

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**Tech Tip # 1****Service Action TS Extension.**

The TS Service Action Circular dated September, 1997 supersedes the previous version issued in July 1997. It has been extended to include certain 1995-1997 Passat, 1996-97 Golf/Jetta, Cabrio and 1997 Winnebago vehicles. As there are significant differences in the work procedure, please discard all TS Circulars dated July 1997.

**Tech Tip # 2****A-3 Golf/ Jetta Alarm Sounds after Alarm is set and cannot be switched off.**

With the Alarm system armed the alarm sounds and cannot be switched off. This may be caused by an open condition on fuse S 21. Prior to checking the alarm system function, check that fuses S 21 and S22 are OK.

**Tech Tip # 3****A-3 1997 Golf/Jetta Cigarette Lighter.**

As of VIN VM037128 the Cigarette Lighter wiring has changed. The Cigarette lighter is now wired to its own fuse located above the fuse relay panel, and not fuse S21

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Week of August 31, 1997

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**Tech Tip # 1****All with AG4 Automatic transmission.**

Transmission will not upshift, erratic shifting or will unnecessarily downshift and no DTC's stored in the TCM. This may be caused by an incorrect oil temperature sensor reading Refer to Technical Bulletin Group 01 Number 97-16 Dated Aug. 27,1997 for Diagnosis and repair procedures.

**Tech Tip # 2****A-3 Jetta Rear Muffler.**

The part number for the rear muffler with improved tailpipe for A-3 Jettas is 1HM253609R

**Tech Tip # 3****Warranty Parts Submission.**

With the introduction of the 1998 vehicles. All warranty part will once again be on 100% submission to the warranty test center. Electronic parts Tag and copy of the 1551 printout if applicable must accompany the failed part, or the claim may be held up.

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Week of July 31, 1997

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**Tech Tip # 1****A-3 1996&1997 Throttle position Sensor fault.**

When encountering a Throttle position sensor fault, check for a broken wire at the intake manifold. Metal clip used to hold the wire may be cutting the wire.

**Tech Tip # 2****A-3 Air Conditioner water leak.**

Water leaks to the right side interior can be caused by poor sealing between the Air Conditioner drain and the grommet on the firewall. This can be corrected by applying silicone or equivalent between the grommet and the drain tube on the interior of the vehicle.

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Week of July 15, 1997

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**Tech Tip # 1****All Vehicles. Air Conditioner Odor.**

Air Conditioner odor can be controlled by using Airsept Air Conditioner Treatment. Airsept Air Conditioner treatment controls odor by eliminating Mold, mildew and Bacteria which causes a foul smell. Airsept can be ordered from Equipment Solutions.

**Tech Tip # 2**

**A-3 1997 Airbag light on, DTC 00589 is stored in DTC Memory.**

When encountering the DTC 00589 Resistance value to large passenger side Airbag. Prior to replacing the passenger side Airbag. Check the yellow wire connector for proper seating on passenger side Airbag. If the connector is not fully seated, apply Stabilant 22A and fully seat connector. Erase stored DTC.

**Tech Tip # 3**

**A-3- B-4 System To rich DTC 16556**

When encountering DTC fault 16556 System to rich, check the load factor with the VAG 1551 01-08-015 The load factor at Idle should be 22 to 26%. A high load factor will indicate a problem with the Mass Airflow Sensor circuit. A defective 02 sensor will not cause this fault.

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Week of June 1, 1997

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**Tech Tip #1**

**A-3 & B-4 Secondary Air Injection System.**

When Encountering Secondary Air Injection System faults 17828, 17829 or 17830 refer to Technical Bulletin Group 26 Number: 97-04 dated May 21, 1997 for proper diagnosis and repair procedures.

**Tech Tip #2**

**A-3 & B-4 Evaporative Emissions System.**

When experiencing Evaporative Emissions System faults refer to Technical Bulletin Group 20 Number: 97-01 dated May 21, 1997 for proper diagnosis and repair.

**Tech Tip #3**

**A-3 & B-4 MIL Complaint.**

In the process of diagnosing a Customer complaint of MIL on, prior to replacing any electrical components always inspect and clean electrical contacts between the component and harness. Inspect and clean all ground connections, and apply Electrical Contact EnhancerStabilant 22A to the connector terminals.

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Week of May 15, 1997

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**Tech Tip #1 A-3 & B-4 Sunroof convenience close feature.**

When using the Convenience Close Feature, the Sunroof does not close after the windows close. Refer to Technical Bulletin Group: 60 Number 96-01 dated : Aug. 14, 1996 for complete repair instructions.

**Tech Tip #2**

**A-3 1996&1997 Starter failures.**

When experiencing Starter related failures on 1996 and 1997 Golfs and Jettas, also check the Ignition Switch for proper function.

**Tech Tip #3**

**VAG 1551 Printout.**

All parts that are replaced under warranty due to a VAG 1551 registered fault, must have a copy of the VAG 1551 printout attached to the electronic parts tag on all parts submitted to the warranty test center.

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Week of May 1, 1997

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**Tech Tip #1 A-3 2.0L 1997**

Technical Bulletin Group 13, No. 97-03, Feb 21, 1997 has been canceled. Please remove this bulletin from the Technical Bulletin binder. Do not install a thermo tension roller in a vehicle that is not already equipped with one from the factory.

**Tech Tip #2**

**B-4 TDI Diesel.**

When performing repairs as per Technical Bulletin Group 23 No 97-02, dated Feb. 19,1997 also check the Diesel pump injection timing using the VAG 1551 and if necessary adjust. Injection timing, checking and adjusting can be found in Repair Manual Passat # W42 012 194 121.

**Tech Tip #3**

**AG4 Automatic Transmission.**

When experiencing erratic, harsh or delayed upshifts or when replacing a TCM the basic settings must be performed as per Technical Bulletin Group 01 No. 97-01 dated Jan, 8 1997.

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Week of April 13, 1997

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**Tech Tip #1 A-3 Power Windows**

When addressing problems with the Power Window System on A-3 Vehicles, refer to the Repair manual "Electric Wiring Diagrams" trouble shooting procedure # 23 for proper diagnosis and repair. Please contact the VW Helpline if the vehicle could not be repaired utilizing trouble shooting procedure # 23

**Tech Tip #2****A-3 ABA Engine.**

When experiencing a G-40 fault on a 2 liter A-3 vehicle check the basic cam timing and timing belt tension prior to checking for electrical deficiencies with the Ignition Distributor.

**Tech Tip #3****AG4 Automatic Transmission.**

When experiencing a 00293 fault "Multi-Function TR switch" on AG4 Automatic Transmissions, check the ground connections on A pillar for proper ground prior to replacing the Multifunction switch.

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Week of April 14, 1997

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**Tech Tip #1 Secondary Air System Faults.**

When encountering Secondary Air System faults 17828,17829 or 17830 , check the AIR solenoid valve for proper operation. The Solenoid valve could be sticking reducing the vacuum going to the Combi- valve. Check the function of the Secondary Air System with the VAG 1551 by entering 01 (Engine) 04 (Basic Setting) and 160.

**Tech Tip #2****AG4 Automatic Transmission.**

Prior to replacing the Digimat Transmission Control Module on a AG4 Transmission, check the Technical Bulletin Group 00 Number 97-01 dated Jan. 29, 1997 Transmission/Engine Control module chart for proper application.

**Tech Tip #3****AG4 Automatic Transmission.**

When experiencing a 00293 fault " Multi-Function TR switch" on AG4 Automatic Transmissions, check the ground connections on A pillar for proper ground prior to replacing the Multifunction switch.

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Week of March 31, 1997

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**Tech Tip #1 A-3 Power Windows**



When addressing problems with the Power Window System on A-3 Vehicles, refer to the Repair manual "Electric Wiring Diagrams" trouble shooting procedure # 23 for proper diagnosis and repair. Please contact the VW Helpline if the vehicle could not be repaired utilizing trouble shooting procedure # 23

**Tech Tip #2**

**A-3 ABA Engine.**

When experiencing a G-40 fault on a 2 liter A-3 vehicle check the basic cam timing and timing belt tension prior to checking for electrical deficiencies with the Ignition Distributor.

**Tech Tip #3**

**AG4 Automatic Transmission.**

When experiencing a 00293 fault "Multi-Function TR switch" on AG4 Automatic Transmissions, check the ground connections on A pillar for proper ground prior to replacing the Multifunction switch.

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Week of March 15, 1997

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**Tech Tip #1 B-4 & A-3 Teves 20 GI ABS.**

Prior to replacing a Teves 20 GI ABS Control module check and print the Code using the VAG 1551. Use the recorded code to code the new ABS Control Module.

**Tech Tip #2**

**16 Valve Engine**

16V Exhaust Camshaft part # 027109022F has the timing Chain Sprocket in the wrong position. To install camshaft, align distributor drive horizontally to cyl. head using a straight edge and mark timing chain sprocket.

**Tech Tip #3**

**Volkswagen Warranty Batteries.**

If you have requested and received Battery shipment boxes for shipping warranty batteries to the warranty test center. Please utilize these boxes as soon as possible. The batteries are urgently needed for testing.

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Week of March 1, 1997

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**Tech Tip #1 A-3 Radio Speakers.**

If you experience a complaint of radio loosing all speakers intermittently, check for a chafed brown/yellow wire going to the rear door tweeter speaker. Repair wire as needed.

**Tech Tip #2****B-4 & A-3 Sunroof convenience close feature.**

When using the Convenience Close Feature, the sunroof does not close after the windows close. Refer to Technical Bulletin Group: 60 Number: 96-01 Dated: Aug. 14,1996 for complete repair instructions.

**Tech Tip #3****Dealer Technical Helpline Contact Form**

In an effort to reduce telephone on hold time and to serve you our customer better, we ask that you have the Dealer Technical Helpline Contact form completed prior to contacting a Helpline consultant for technical assistance.

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Week of February 15, 1997

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**Tech Tip #1 1997 TDI Diesel**

If a 1997 TDI Diesel has detected a 1551 fault of 00560, remove vacuum hose and apply vacuum to EGR valve using a hand held vacuum pump until EGR valve "pops". Clean EGR valve shaft and seat using brake cleaner spray and wipe off any residue. Use engine oil to lubricate the EGR valve shaft and seat assembly. Clear 1551 fault and drive for 10 miles on highway to verify that EGR valve is functioning properly and that the MIL does not come on. Please contact the VW Helpline on any occurrence in which this solution did not correct the problem.

**Tech Tip #2****1997 TDI Diesel**

1997 TDI Diesel has the MIL on and 1551 faults of 01050 and/or 01266, check if relay bridge part #3A0941817 is in position 12 on the fuse relay board. Install relay bridge if missing. Check for correct glow plug relay part #028911253 with production date of 180 located above relay board. If part # or production date is different replace relay. Check 80 AMP fuse located next to the glow plug relay. Replace fuse if defective.

**Tech Tip #3****Volkswagen Technical Bulletin Fax on Demand Service.**

1995 and up Technical Bulletins can be ordered by calling 1-800-216-3094 and following the voice menu prompts.

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Week of February 15, 1997

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**Tech Tip #1 1997 TDI Diesel**

If a 1997 TDI Diesel has detected a 1551 fault of 00560, remove vacuum hose and apply vacuum to EGR valve

using a hand held vacuum pump until EGR valve "pops". Clean EGR valve shaft and seat using brake cleaner spray and wipe off any residue. Use engine oil to lubricate the EGR valve shaft and seat assembly. Clear 1551 fault and drive for 10 miles on highway to verify that EGR valve is functioning properly and that the MIL does not come on. Please contact the VW Helpline on any occurrence in which this solution did not correct the problem.

**Tech Tip #2**

**1997 TDI Diesel**

1997 TDI Diesel has the MIL on and 1551 faults of 01050 and/or 01266, check if relay bridge part #3A0941817 is in position 12 on the fuse relay board. Install relay bridge if missing. Check for correct glow plug relay part #028911253 with production date of 180 located above relay board. If part # or production date is different replace relay. Check 80 AMP fuse located next to the glow plug relay. Replace fuse if defective.

**Tech Tip #3**

**Volkswagen Technical Bulletin Fax on Demand Service.**

1995 and up Technical Bulletins can be ordered by calling 1-800-216-3094 and following the voice menu prompts.

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Week of February 01, 1997

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**Tech Tip #1 B-4 Diesel**

Stalling complaints associated with cold starting a TDI vehicle and prior to shifting into gear may be eliminated by installing new double valve springs. Part # for the inner spring is 028 109 633A, outer spring is 028 109 623A and retainer is 056 109 629A.

**Tech Tip #2**

**VAG 1551 Printout**

All parts that are replaced under warranty due to a VAG 1551 registered fault, must have a copy of the VAG 1551 printout attached to the electronic parts tag on all parts submitted to the warranty test center.

**Tech Tip #3**

**B-4 TDI Diesel**

Until further notice, please contact the VW Helpline on all 1996 and 1997 TDI driveability complaints that are generated by a 1551 fault.

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Week of January 15, 1997

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**Tech Tip #1 A3 & B4**

If the alarm horn will not beep or the alarm will not set when setting the alarm, check the radio for proper installation. R&R radio, and disconnect power source. If alarm horn beeps then the problem is an improperly installed radio or the micro switch on the left side of the radio is defective.

**Tech Tip #2****1996-1997 A-3 Golf And Jetta**

Poor or no AM radio reception can be caused by incomplete snapped together antenna connector under left side of knee bar. Check and reconnect connector.

**Tech Tip #3****A3 Key Code Location**

Starting with VIN #SM041397 the key code number can be obtained by removing the drivers door handle and reading the key code on the lock cylinder.

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Week of January 1, 1997

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**Tech Tip #1 A3**

A grinding noise on hard right turns that sounds like a defective wheel bearing and cannot be recreated on the hoist can be caused by the heat shield on the downpipe touching the shift linkage. The fix is to bend the heat shield to clear the shift linkage.

**Tech Tip #2****1996-1997 Vehicles**

To eliminate a loud clicking noise from the evap system, check the routing of the hose from the carbon canister to the purge valve. The hose may be contacting the inner fender and amplifying the noise. Reroute the hose away from the inner fender and isolate with foam tape.

**Tech Tip #3****Consultants Wish List**

The Volkswagen technicians Helpline consultants wish all of you a safe and happy new year.

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Week of December 15, 1996

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**Tech Tip #1 A3 1997 Heated Outside Mirrors**

On 1997 Golf/Jetta the heated side mirrors are activated with the ignition key, and stay on all the time the ignition switch is on. They no longer work of the defroster switch as in previous models.

**Tech Tip #2**

**A3 Cruise Control**

When using the 1466 tester to troubleshoot cruise control problems on automatic transmission vehicles, power must be supplied to fuse S-51 on test step # 1. This will assure proper test results.

**Tech Tip #3**

**Consultants Wish List**

The Volkswagen technicians helpline consultants wish all of you a very Merry Christmas and a safe and Happy New Year.

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Week of November 30, 1996

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**Tech Tip #1 A3 1996 Jetta Trek.**

Removal of the bicycle rack on a Jetta Trek may reveal paint discoloration underneath rack mounting points. See Technical Bulletin Group 50 number 95-03 for repair information.

Rapgard, Removal/Paint Swelling Repair

**Tech Tip #2**

**B4 Air Bag Control Unit.**

When replacing an airbag control unit in a Passat, the control unit must be coded. The correct code is 00071. Proper coding procedure can be found in the repair manual Passat body-exterior body-interior.

**Tech Tip #3**

After a battery, TCM or ECM have been replaced, the basic settings for engine and transmission must be performed.

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Week of November 15, 1996

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**Tech Tip #1 A3 1997 Coolant Concentration.**

The coolant concentration in some 1997 Golf/Jetta vehicles has been found to be incorrect. This could created A/C cutting out and transmission shift complaints. The correct coolant concentration should be 35 deg. F., and checked

with a refractometer. See service circular tools and equipment V96-01.

**Tech Tip #2**

**A3 1997**

The vacuum line to the fuel pressure regulator has been found to be either too loose or kinked on the regulator. To correct this, reroute the vacuum hose to the fuel pressure regulator.

**Tech Tip #3**

After a battery, TCM or ECM have been replaced, the basic settings for engine and transmission must be performed.

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Week of November 1, 1996

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**Tech Tip #1 A-3 Tier 1 and TLEV vehicles**

Tier I and TLEV equipped engines utilize a new cylinder head that is distinguished by the letters AD on the left front of the cyl. head. Only the AD cyl. head must be used if the cyl. head needs to be replaced.

**Tech Tip #2**

**1997 vehicles**

To eliminate a loud clicking noise from the evap system, check the routing of the hose from the carbon canister to the purge valve. The hose may be contacting the inner fender and amplifying the clicking noise.

**Tech Tip #3**

Air conditioner odor can be controlled by using airsept air conditioner treatment. Airsept air conditioner treatment controls odors by eliminating mold, mildew and bacteria which cause a foul smell. Airsept can be ordered from equipment solutions .

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Week of October 15, 1996

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**Tech Tip #1 A-3 1997 M.Y. Revised Equipment Levels**

Drivers side windshield wiper wind deflector is deleted.

**Tech Tip #2**

**1997 vehicles**

A new type of antifreeze G012 is being used for 1997 m.y vehicles. Part # for the new antifreeze is G012A8DA1. The new antifreeze is not compatible with the G011 type antifreeze and cannot be mixed.

### **Tech Tip #3**

#### **Secondary Air Faults OBD II Vehicles**

If you encounter secondary air faults, you should first check for loose vacuum hoses to the combi valve.  
Combi-valve Vacuum Hose, Seating

### **Tech Tip #4**

#### **A-3 PDI**

During a PDI assure that the brake fluid reservoir is properly filled. If brake fluid needs to be added, only use approved brake fluid that complies with MVSS 116 DOT 4.

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Week of October 1, 1996

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### **Tech Tip #1 A-3 1997 M.Y. Revised Equipment Levels**

1. The gas flap will no longer be locked with the central locking system.
2. The windshield washer spray jets are now a "fan jet" type instead of two pinpoint streams.
3. The "programmable" intermittent wiper feature has been deleted.

### **Tech Tip #2**

#### **European Produced Vehicles**

A new type of antifreeze G012 is being used for 1997 m.y. vehicles produced in Europe. Part # for the new antifreeze is G012A8DA1. the new antifreeze is not compatible with the G011 type antifreeze and cannot be mixed.

### **Tech Tip #3**

#### **Secondary Air Faults OBD II Vehicles**

If you encounter secondary air faults, you should first check for loose vacuum hoses to the EGR valve and the combi valve.

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Week of September 15, 1996

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**Tech Tip #1 Tier I and TLEV Engines** Immediately all 1996 and 1997 vehicles equipped with tier I and TLEV

engines experiencing mechanical or driveability repairs/ complaints must be reported to the Volkswagen dealers technicians Helpline.

### **Tech Tip #2**

#### **A-3 2 Liter OBD II**

Vehicles equipped with a 037 906 259D engine control module are equipped with an active LDP system; these are tier I engines. Vehicles equipped with a 037 906 259E engine control module are equipped with an active LDP system *and* active secondary air system; these are TLEV engines.

### **Tech Tip #3**

#### **Readiness Codes**

If the A/C system is on when performing the readiness code procedures, the A/C system will shut off. This is a normal function of the system.

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Week of September 1, 1996

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**Tech Tip #1 A3-B4 ABS Coding** The ABS control module for the Teves 20 GI system is coded for the specific vehicle application. New ABS control modules from the parts system are not coded, and must be coded after installation. The coding for the A-3 vehicles is 03604 and the coding for B-4 is 04505. Procedures for coding can be found in the ABS/EDL repair manuals.

### **Tech Tip #2**

#### **A-3 2 liter OBD II**

Vehicles equipped with a 037 906 259D engine control module are equipped with an active LDP system. Step 5 # 153 must be performed while setting the readiness code. vehicles equipped with a 037 906 259E engine control module are equipped with an active LDP system and active secondary air system. Step 5 # 153 and step 7 # 160 must be performed while setting the readiness code. Procedure for setting the readiness codes can be found in the OBD II repair manual.

### **Tech Tip #3**

#### **Warranty Parts Submission**

Electronic Parts Tag and copy of the 1551 printout if applicable must accompany the failed part, or the claim may be held up. Thanks for calling the Volkswagen help line and if you stay on the line you will be connected to the next available consultant.

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Week of Aug 15, 1996



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**Tech Tip #1 VAG 1551 DTC 2 liter** If you have a DTC fault of 00586 on vehicles equipped with EGR system, don't forget to check the EGR change-over valve filter. The EGR change-over valve filter part # 037-133-843a must be replaced at 15,000 mile maintenance intervals.

**Tech Tip #2**

**VAG 1551 Card 6**

On OBD II vehicles, card # 6 will display the correct DTC number ( P0137 ), but the description text for the 02 sensor is incorrect. The correct fault description and component identification is shown below:

<b>Fault Number</b>	<b>P-Code</b>	<b>Description</b>
16520	P0136	02 Sensor Circ, Bank1-Sensor2 Malfunction
16521	P0137	02 Sensor Circ, Bank1-Sensor2 Low Voltage
16522	P0138	02 Sensor Circ, Bank1-Sensor2 High Voltage
16524	P0140	02 Sensor Circ, Bank1-Sensor2 No Activity Detected
16537	P0153	02 Sensor Circ, Bank2-Sensor1 Slow Response
16539	P0155	02 Sensor Heater Circ, Bank2-Sensor1 Malfunction
16540	P0156	02 Sensor Circ, Bank2-Sensor2 Malfunction
16541	P0157	02 Sensor Circ, Bank2-Sensor2 Low Voltage
16542	P0158	02 Sensor Circ, Bank2-Sensor2 High Voltage
16721	P0337	Crankshaft Pos. Sensor (A) Circ. Low Input
16804	P0420	Catalyst System, Bank1-Efficiency Below Threshold
16955	P0571	Cruise/Brake Switch (A) Circ. Malfunction

**Tech Tip #3**

**Warranty Parts Submission**

With the introduction of the 1997 vehicles. All warranty parts will once again be on 100% submission to the Warranty Test Center. Electronic Parts Tag and copy of the 1551 printout if applicable must accompany the failed part, or the claim may be held up.

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Week of July 31, 1996

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**Tech Tip #1 VAG 1551** When checking VW Cabriolet Airbag System (model year 1990-1993), Use the USA3a or USA3 program card. The new USA/6 card does not take it's place. Caution: Do not remove /install card when the VAG 1551 is powered up.

**Tech Tip #2**

**After Hour Tech Tips**

In order to serve you better, we have made the Tech Tips available after normal working hours. To listen to the Tech Tips, call the Helpline and follow the phone prompt.

**Tech Tip #3**

**VAG 1551 Printout**

All parts that are replaced under warranty due to a VAG 1551 registered fault, must have a copy of the VAG 1551 printout attached to the Electronic Parts Tag on all parts submitted to the warranty test center. Failure to comply could lead to the claim being denied.

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Week of July 15, 1996

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**Tech Tip # 1**

**OBD II Vehicles.**

On OBD II equipped vehicles, don't forget to check the freeze frame data prior to canceling any faults. Information on how to access address word 33 utilizing the VAG 1551 can be found in the OBD II generic scan tool manuals.

**Tech Tip # 2**

When performing repairs on airbags, always make sure to use stabilant 22a on all connections and make sure that all connections are fully plugged together. Failure to assure that all connections are tight will lead to high resistance in that area.

**Tech Tip # 3**

**A-3 door will not open from the inside or outside.**

To open the door, hit the door handle in the area of the lock cylinder with a rubber mallet 5 to 7 times. This should open the door. To prevent this from happening again, increase the door handle free play at the adjusting screw located on the door latch. Information on how to adjust the door handle free play can be found in the repair manual Body-Exterior Body-Interior on page 57-15.

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Week of June 20, 1996

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**Tech Tip # 1****A-3 and B4: Symptom: hard starting hot.**

A new fuel hose with integrated check valve part # 1H0 998 759 is to be used in place of fuel pump replacement, if the pump does not hold residual pressure.

**Tech Tip # 2**

When leaving a message for the Helpline in voice mail, speak slowly and in a clear voice. Leave your name, dealer #, telephone # including area code and a brief description of the problem.

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Week of May 30, 1996

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**Tech Tip # 1**

A contact number is a reference number of conversation that has been recorded. The contact number is used for information retrieval or updating of already stored information A CONTACT NUMBER IS NOT AN AUTHORIZATION NUMBER.

**Tech Tip # 2**

When the sunroof does not close with the door key function; disconnect and reconnect the battery to reset the control unit. If it still does not function correctly, then the electric window control units have to be synchronized. Roll down all windows, disconnect all window control units, reconnect the left front window control unit and raise the windows. Do the same with the right front, left rear and right rear windows. Lower all windows, remove key from ignition, close all windows and sunroof using the door key function.

**Tech Tip # 3**

When making a right hand turn on an A-3 vehicle and a howling noise is heard. Check to see if the heat shield for the takedown pipe is rubbing against the shift lever linkage. This check must be performed on a hot engine due to the expansion of the exhaust system This noise could easily be confused with a defective wheel bearing.

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Week of May 1, 1996

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**Tech Tip # 1**

If you have to change the spark plug wires on a 2.0L engine, we now have the individual wires for each cylinder. These wires are listed in the part fiche as ignition wires for the 1996 Golf/Jetta vehicles. The part numbers are; #1

cyl. - N 104 186 06, #2 cyl. - N 104 186 04, #3 cyl. - N 104 186 02, & #4 cyl. - N 104 186 01. If these wires appear to be short or tight, install new wire holder 037 905 487 B.

### **Tech Tip # 2**

The Helpline consultants are committed to providing information as quickly as possible. To do this we ask the caller have the vehicle, vehicle data , and problem information available at the time you are calling. This will eliminate waiting times during the call and hence reduce the waiting time for the next caller trying to get through to us.

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Week of April 15, 1996

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### **Tech Tip # 1**

#### **On 2.8 liter Volkswagen vehicles**

If you have a hot start complaint caused by the lack of residual fuel pressure, there is a new check valve kit that can be added to the fuel line attaching point to the pump. The part number is 1H0 998 759. The fuel pump no longer has to be replaced to fix a residual fuel pressure problem.

### **Tech Tip # 2**

Have you seen the OBD II readiness code setting video? The video has been sent to all dealers. This is an excellent way to learn all the steps of the procedure. If your dealership does not have the video, it can be ordered by calling 1-800-544-8021

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Week of February 1, 1996

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### **Tech Tip # 1**

If you have an alarm system that sets itself, or goes off by itself, on A3 Golf or Jetta, you should check the ground connections in the trunk area. A loose or poor ground connection to the central locking system control unit can cause many problems with the alarm system.

### **Tech Tip # 2**

If you have a speed/tach functioning erratically on a new Passat, check fuse # 21. R&I fuse # 21 and cycle ignition key on and off several times to reset instrument cluster.

### **Tech Tip # 3**

If you have a N 020 5 speed trans. that grinds going into reverse, and it is not a clutch complaint, Install the updated selector shaft P/N 020-301-235P and set screw P/N 020301241J This shaft will slow down the spin of the main shaft while shifting into reverse. *This will not resolve chipped reverse gear complaints, if the vehicle is still moving while reverse gear is being engaged.*

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Week of January 11, 1996

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**Tech Tip # 1**

If you receive complaints of exhaust rattles, check the center exhaust hanger bracket bushing. The bushing may be pushed in too far and cause a rattle noise. Part # of the exhaust hanger bracket is 1H0253147D.

**Tech Tip # 2**

The VAG 1551 fault code 16509 (insufficient coolant temp. for closed loop fuel control) for 1996 Passats and Cabrio will be addressed at a later date via a service action similar to the current ZR for the Golf and Jetta.

**Tech Tip # 3**

When submitting parts to the warranty test center that were diagnosed using the VAG 1551 tester. The VAG 1551 printout showing the fault code must be submitted with the part.

**Tech Tip # 4**

When performing any electrical repairs, please use the electrical contact enhancer (stabilant 22a ) as outlined in Technical Bulletin group 97 number 95-01.

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