

Tech Tips – Canada

CTT 37-14-01

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02E Transmission Manual Basic Setting

The following procedure should be used when instructed by the Technical Help Line to perform manual basic settings. This procedure applies to the 02E 6 speed DSG transmission only.

With the VAS scan tool select “Vehicle Self Diagnosis” to perform Basic Settings

Prerequisites:

- Transmission oil temperature must be above 30 degrees Celsius but less than 100 degrees Celsius check this in MVB 19 field 1.
- Selector lever must be in the “P” position
- Engine running for a minimum of 60 seconds
- Footbrake PRESSED during the ENTIRE procedure
- Gas pedal NOT pressed during the ENTIRE procedure

Carry out the following procedure in the exact order as described!

1. Adaptation of Shift Fork Distance

In the TCM select Basic Settings 61 and confirm with “Q”

NOTE: *There will be clicking noises during the adaptation, this noise is normal.*

When the adaptation is complete the screen will display

2. Adaptation of Synchronous points

Basic settings 60 and confirm with “Q”

NOTE: *There will be clicking noises during the adaptation, this noise is normal. If there is a damaged synchronizer the engine may stall or you will hear grinding noises like a manual transmission with defective synchronizers. This is because both clutches are slightly engaged so they can transit torque. The Mechatronics Unit finds the kissing point of the synchronization when the rpm goes down. So, if the synchronizer is burned it will bite into the cone of the gear and cause the engine to stall.*

When this adaptation is complete the screen will display

3. Clutch Adaptation

Safety function of the clutches, main pressure

Select basic settings 067 and confirm with “Q”



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4. Adaptation of main pressure

Select basic settings 065 and confirm with “Q”

5. Configuration adaptation

The TCM communicates with the power train can-bus and saves the data with these “communication partners”

Select basic settings 69 and confirm with Q

6. Test Drive

DTC memory: To perform this procedure correctly the DTC memory must now be erased or the Basic Settings may not be secured.

1. Transmission temperature greater than 30°C and less than 100°C

2. Drive in Tiptronic mode from a standing start to 6th gear.

Drive in gear 3 or 5 for approximately 5 minutes.

Drive in gears 4 or 6 for approximately 5 minutes.

Speed range for all gears approx. 1200 – 3500 RPM. Attempt to change gears as much as possible (for measurement of clutches). IN “D” one time (WHEN SAFE TO PERFORM) apply the brakes very hard and then accelerate with Wide Open Throttle.

3. Continue until Measuring Value Block 34 fields 1 and 3 read at least 20.

Note: If the adaptation is not running as described above or you are having trouble to reach the necessary values perform the following.

1. Make a reset of the TCM by disconnecting the harness from of the transmission and wait 30 seconds then reconnect it.

2. Check fault memory and erase.

3. Repeat the complete procedure as described above.

7. Update the VTA ticket with the results

Be sure to attach a screen shot of Measuring Value Block 34 to the ticket before calling back.

Cautions & Warnings

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

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

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- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly; do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.
- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians should test, disassemble or service the airbag system.

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- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the VAG 1551 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.