EZ ELECTRIC POWER STEERING

INSTALLATION MANUAL

Volkswagen T3

Content

The Product

Thank you for choosing an EZ ELECTRIC POWER STEERING system for its quality, certification and easy installation. We have been producing complete steering columns with integrated power steering since 2006. All columns are tailor-made for every type of car and we already have 200 types in stock! For more information about our products (power steering systems and replica steering wheels) or to place an order, visit our website www.ezpowersteering.nl or send an e-mail to info@ezpowersteering.nl. If you have any questions about the installation, please contact us via workshop@ezpowersteering.nl.

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This manual should be read carefully to avoid errors. Check whether all parts of the set are present. This can be done on the basis of the picture in this manual. Before installation, compare the EZ POWER STEERING column with the original column. Check that the dimensions are the same. Also fit the steering wheel to the column.

If you do not have the skills or tools to perform the installation, have it performed by a professional. EZ POWER STEERING cannot be held liable for incorrect installation or self-inflicted damage.
The manuals are generally based on a left-hand-drive vehicle. In most cases, the right-hand drive version is the mirror image of the installation of a left-hand drive vehicle.

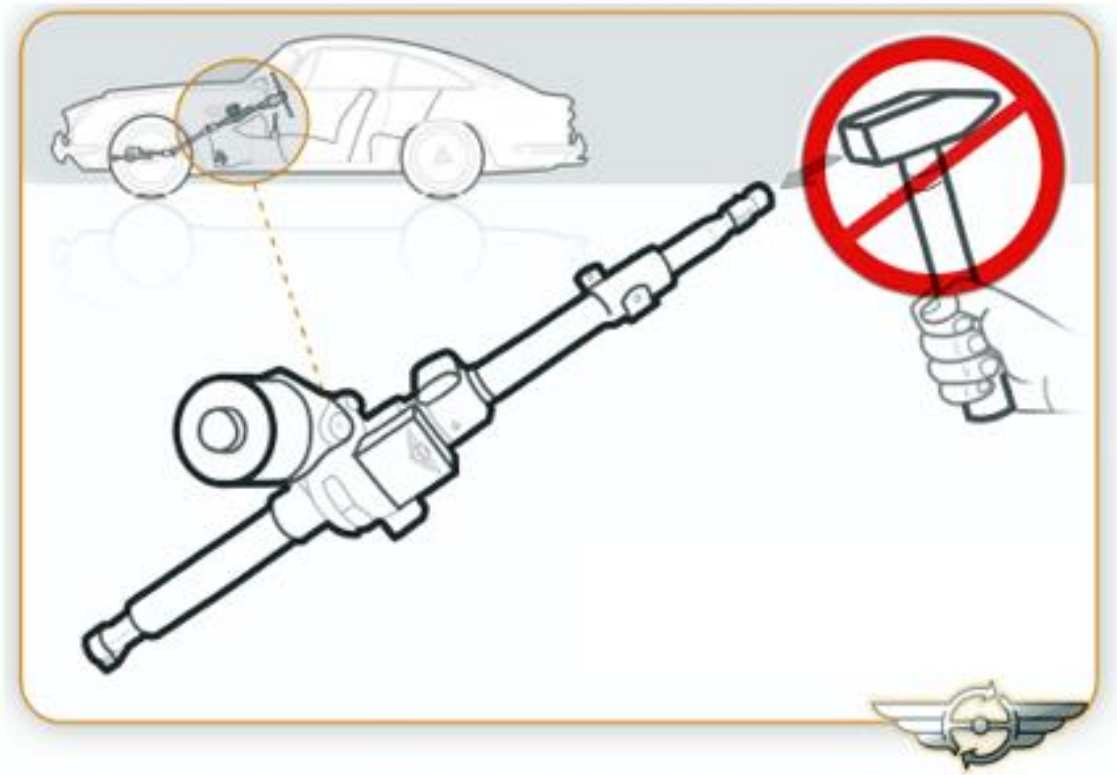
If you think that any changes are needed in this manual, we would like to receive your pictures and comments. With your feedback we can improve our manuals!

Contents of the set

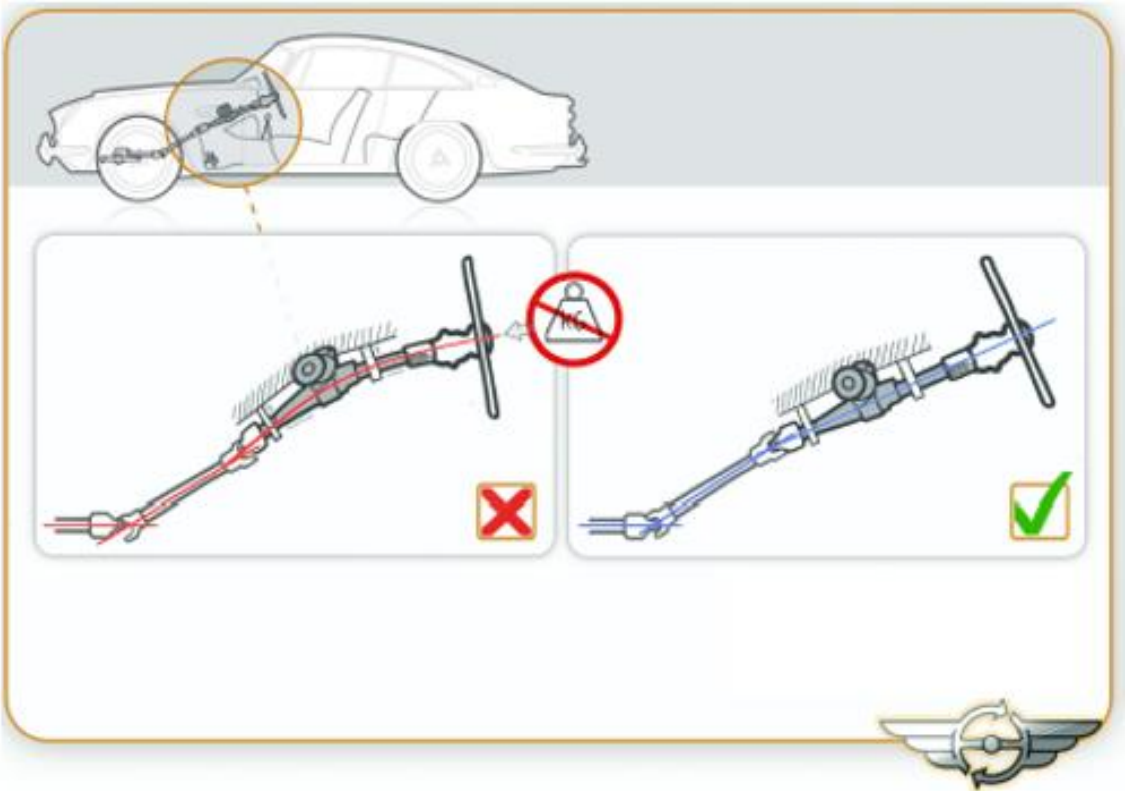
1. Powersteering Unit
2. ECU
3. Power supply cable + fuse holder (extended)
4. EZ Wiring harness + controller (yellow)

Before and after assembly

Installation



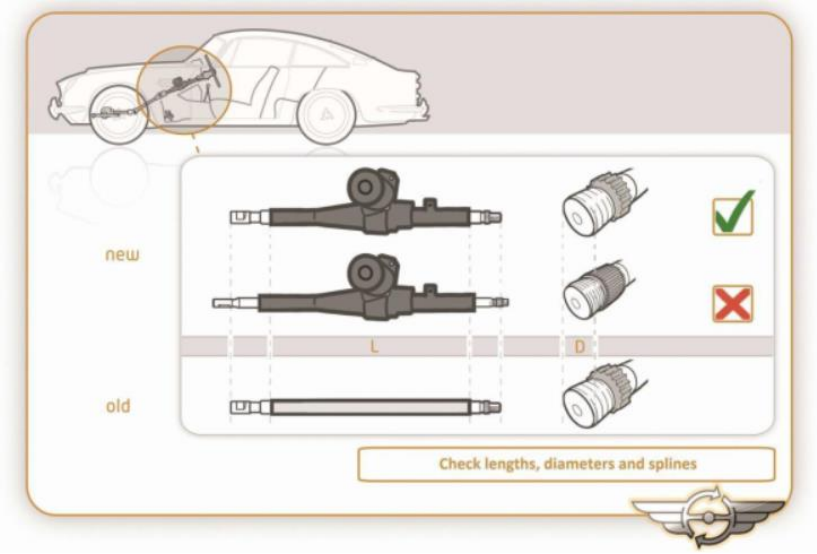
Never strike the input shaft with an object during or after assembly. This can adversely affect the sensors.



The steering system must always be properly aligned and mounted without tension

Check length, diameter and splines

Compare the EZ Power Steering Column (EZ-unit) with the original steering column before installing it. Check if the splines on the top and bottom, the diameter of the steering tube and the length of the column are all the same as the original steering column. When in doubt you can use the original steering wheel to check the top splines for fit. Never hammer on the steering shaft of the EZ unit!



In the car industry its common to have some small tolerances in spline connections. In very exceptional cases connecting a new shaft from the EZ-unit in the original (old) U-joint could cause a tight fitting. This is sometimes relatively easy to solve by sanding only about 0,2mm (0,007 inch) in the inner part of the U-joint and also the spline on the output shaft on the EZ-unit.

Torque tightening values in Nm.

When the new steering column is being fitted hand tighten all the bolts and check if everything turns smoothly before tightening to required Torque, use torque tightening table below:

	Alu	8.8	10.9	12.9
M6	6	11	16	19
M8	15	27	40	47

The system works with a torsion bar into the unit, this measures the amount of torque/load on the steering shaft while steering, the torque sensor measures this and sends a voltage to the ECU. The ECU uses this signal together with the speed signal to control the electric motor from the EZ-unit

Voltage

The basic EZ-unit, is a 12V system with negative earth! There are extra wiring sets available, so that the kit will work with a 6V or 24V system and/or positive earth. Check your vehicle setup before fitting the EZ-unit.

Step 1.

Check the tire pressure and test drive the car. Check that the handlebars return to the straight ahead position. Check that the controls and instruments are free from defects. If everything is in order, proceed with the conversion.

Step 2.

Find a contact-switched power supply. This is necessary for controlling the EZ power steering unit (see point 12). To do this, disassemble, if present, the bottom plate under the dashboard, the switched power supply can either be removed from the ignition lock or the start button. Then disconnect the earth cable from the battery. Make a choice before installation, or put the wheels and steering wheel in the straight-ahead position, mark this position and proceed with the conversion. Or determine the center of the wheelhouse by dividing the number of steering turns, from full left to full right, by two and adjust wheel alignment as necessary after installation.

Step 3.

Remove the steering wheel and the original cover caps from the column.

Step 4.

Disconnect the wires from the steering column switch and the ignition switch and remove them from the car.

Step 5.

Disassemble the original steering column, remove the protective cover to access the bottom clamp bolt. Remove the clamping bolt and mounting bolts, the column can then be removed.

Step 6.

The EZ unit can now be mounted on the original mounting points.

Step 7.

Install the original steering axle in the lower clamping bolt, think of the protective cover, and tighten it.

Step 8.

Install the plastic ring and spring from the original column on the EZ column.

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Step 9.

Re-install the ignition switch and steering column switches, and reconnect them. Temporarily install the steering wheel to determine the correct distance, then disassemble it again to obtain work space.

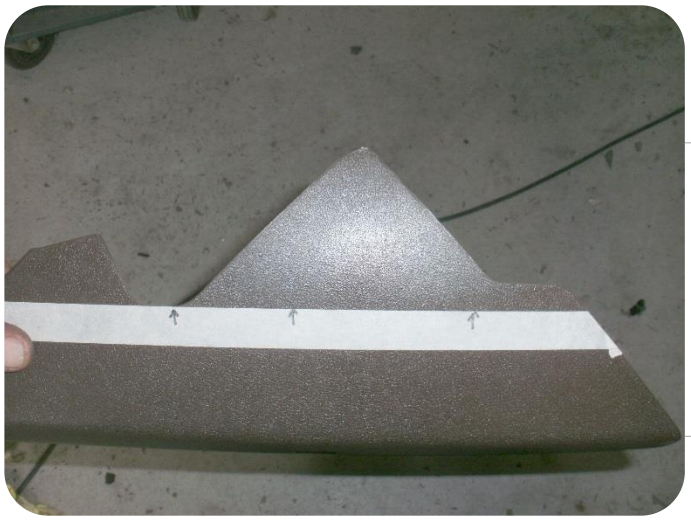
Step 10.

Find a suitable location for the ECU and potentiometer. Connect it.

Step 11.
Connect the thick red wire (30+) directly to the EZ cable harness via the fuse holder.

Step 12.
Connect the thin red wire (15+) to a contact-switched power supply (see point 2)

Step 13.
Connect the black wire (31-) to a suitable ground point.



Step 14.
Adjust the original cover to create space for the unit.

Step 15.
Refit the steering wheel and cover caps of the car.

Step 16.

After switching on the ignition, a click is heard from the ECU, the system is now operational, check this. After switching off the ignition, a click is heard after about 4 seconds. The system switches off after a delay.

Step 17.

Take a test drive and check all systems again. Also check whether the position of the steering wheel is correct.

Step 18.

The end result