

EZ ELECTRIC POWER STEERING
INSTALLATION MANUAL
PORSCHE 911 (NO AIRCO)





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THE PRODUCT

Thank you for choosing an EZ ELECTRIC POWER STEERING product for its quality, it's performance, type approval and its straightforward assembly. Since 2006 we have been manufacturing complete steering columns with integrated electrical assistance. All columns are tailor made for each type of car and we have over 200 different 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.com or send an e-mail to info@ezpowersteering.nl. If you have any questions of a technical nature please contact workshop@ezpowersteering.nl.

Version C1.2

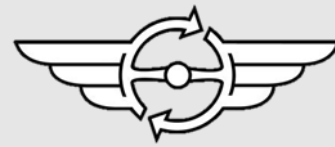
Date 02-02-2022

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.

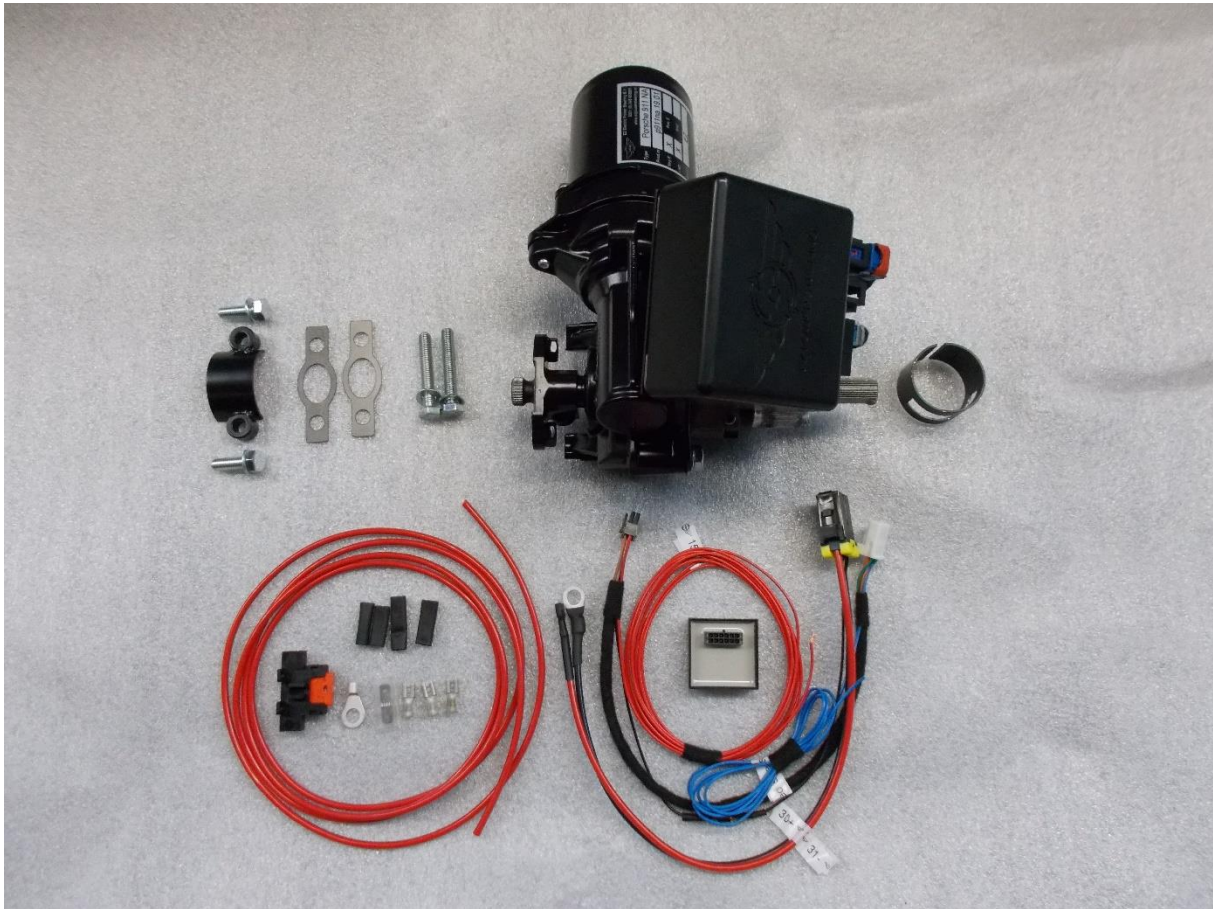
If you do not have the skills or tools to perform the installation, have it performed by a professional. EZ POWER STEERING cannot be held liable for incorrect installation or self-inflicted damage.

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



- EZPOR9111: EZ power steering with
- ECUEZPOR9112: Clamp
- EZ-POR9113: Supply wire
- EZ-POR9114: Wiring harness with controller

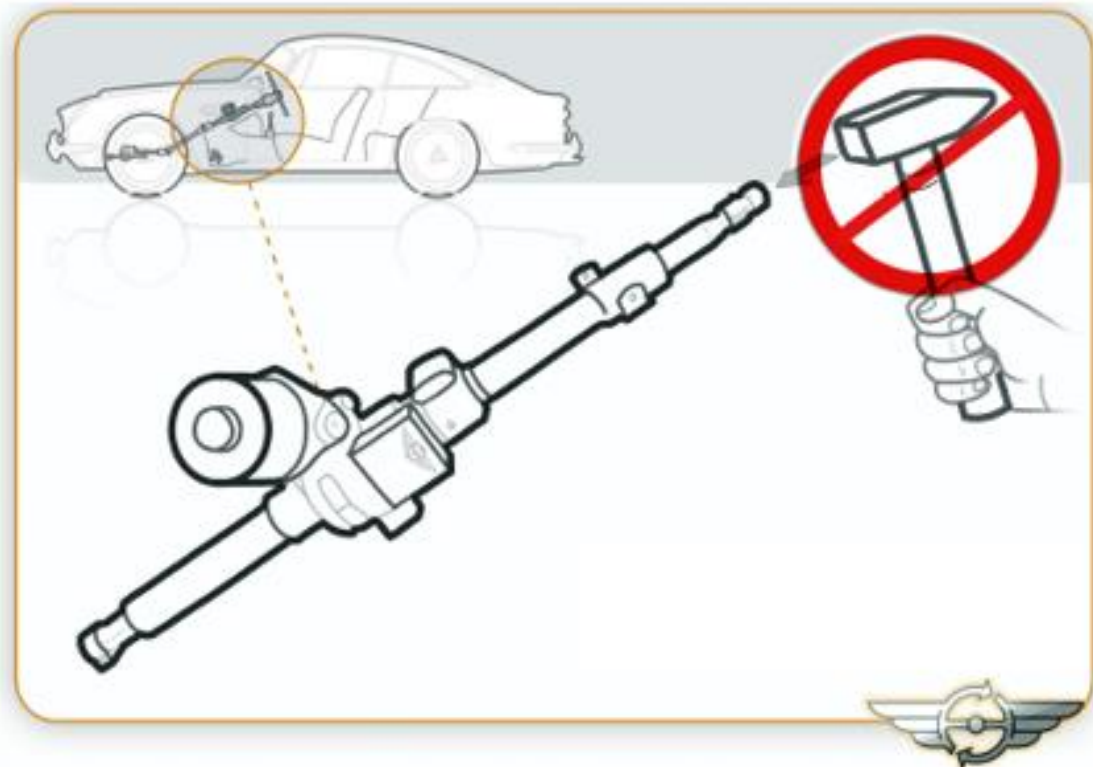


BEFORE AND AFTER ASSEMBLY

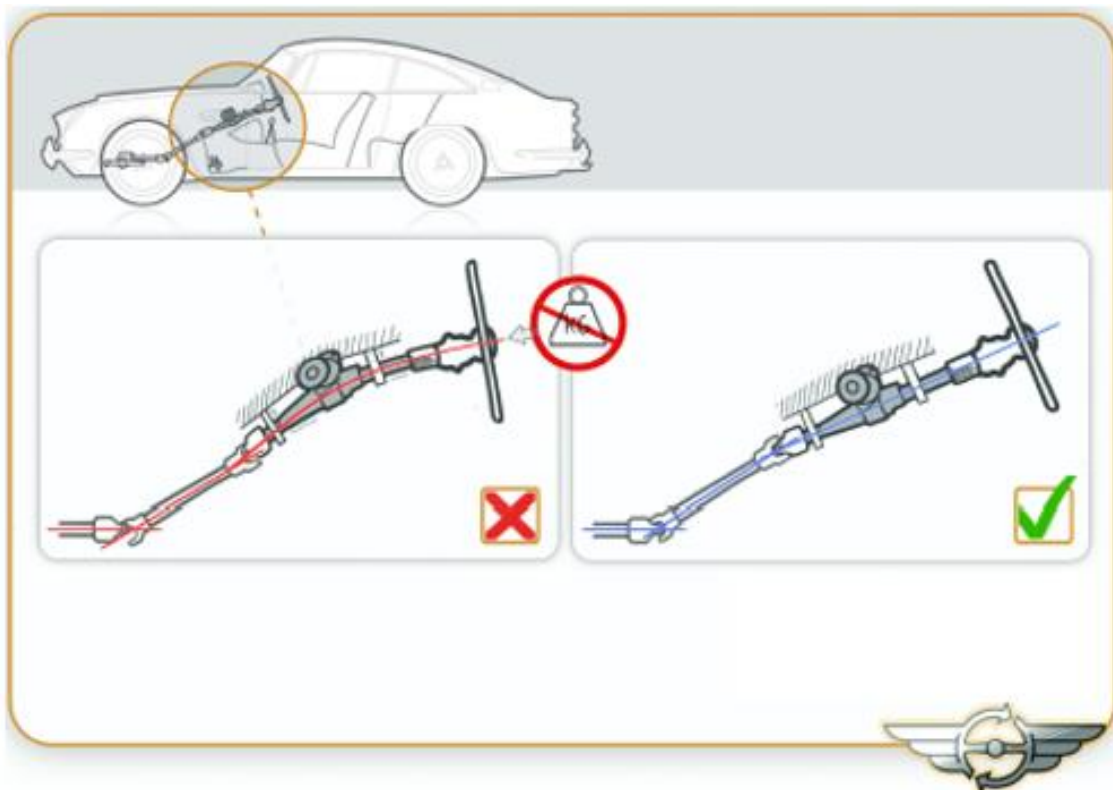




INSTALLATION



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

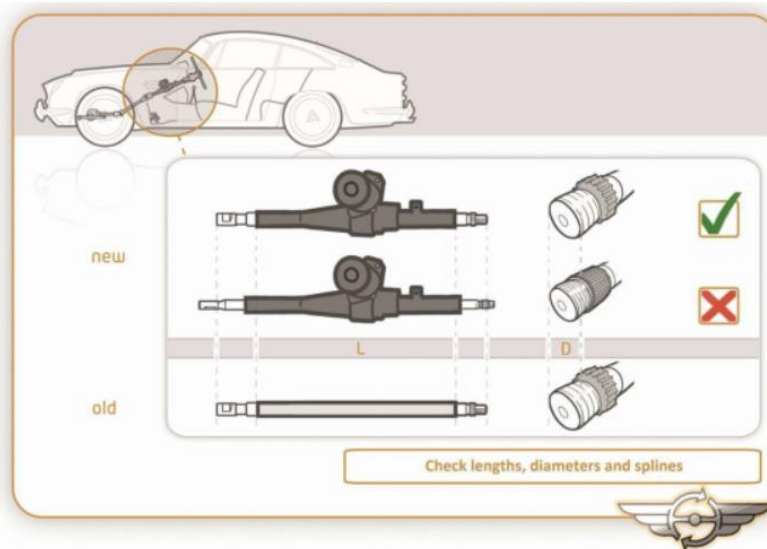


The steering system must always be properly aligned and mounted without tension.



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 take a test drive with the car. Check whether the steering wheel returns to the straight-ahead position. Check whether the controls and instruments are defective. If all this is in order, then proceed with the conversion.

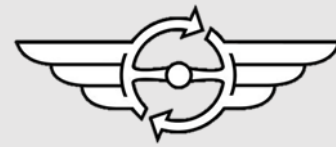


Step 2.

Remove the carpet from the trunk. Open the small 'smuggling hatch'. The wheelhouse, the fuse box and the battery are now visible.

Step 3.

Find a power supply connected via the contact. This is necessary for controlling the EZ power steering unit (see point 19). The switched power supply can be taken from the fuse box, this is usually the 8th fuse counted from the driver's side. Then disconnect the earth cable from the battery. Make a selection before installation, or put the wheels and steering wheel in the straight-ahead position, mark this position and continue with the conversion. Or determine the center of the wheelhouse by dividing the number of steering turns, from full left to full right, by dividing the two and adjust the wheel alignment after installation, if necessary.



Step 4.

Disassemble the finishing plate with four bolts, which is in front of the heater unit. Then fold up the two iron lips of the cover plate, which is mounted over the steering axle, so that it can be lifted, which makes installation easier.



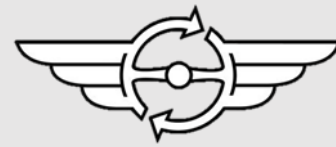
Step 5.

Loosen the circlip and loosen the lower mounting bolts of the steering gear box coupling (do not remove it yet). Then remove the lower bolt from the universal joint. Also loosen the upper bolt of the universal joint and also loosen the lower bolt of the universal joint of the steering shaft further under the cover plate. This allows everything to shift that facilitates installation.



Step 6.

Remove the 2 bolts from the mounting bracket of the steering axle.



Step 7.

The universal joint can now be pushed off the steering shaft. When the bottom 2 bolts are removed, the steering axle can be removed.



Step 8.

Pay attention. The position of the foot and the flat surface on the original axis may not match the EZ unit. This makes no difference to the assembly and operation of the EZ unit. However, the position of the steering wheel will have to be changed after installation.



Step 9.

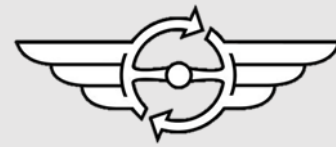
Disassemble the original silent block from the disassembled axle. Check this and replace if necessary.

Then install the silent block on the rear of the EZ power steering unit and secure the bolts.



Step 10.

Silent block mounted. Make sure that the bolts are also in the silent block for mounting on the wheelhouse.



Step 11.

Then install the silent block on the rear of the EZ power steering unit. Tighten the M8 bolt of the EZ clamp with a torque wrench to 35 Nm.



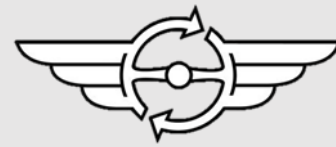
Step 12.

The sheet metal under the original support must be adjusted to provide oil to the EZ unit. Make the adjustment in the panel with a ball hammer. Use the EZ Powersteering unit to determine where the adjustment is to be made (see photo). Make sure that the EZ unit never touches the bodywork after assembly!



Step 13.

Install the supplied ring over the nose piece of the EZ unit. The recess of the ring fits over the original support that is mounted in the car.



Step 14.

The EZ Unit can now be mounted. Mount the EZ unit between the universal joint and the wheelhouse. Pay attention to the straight-ahead position of the steering box and the position of the steering wheel. Check that the unit does not touch the body of the car. Note that it may be that the position of the steering wheel has to be changed. See point 8.



Step 15.

Then install the silent block bolts and secure them in the steering box and the universal joint bolt.



Step 16.

Mount the supplied bracket on the original mounting point. Make sure that the recess of the ring fits properly during assembly. When everything is in the correct position, tighten all bolts, including those of the universal joints.



Step 17.

Connect the power cable (30+) to the battery plus via the fuse holder. It is wise to insulate the wire with an extra sheath.

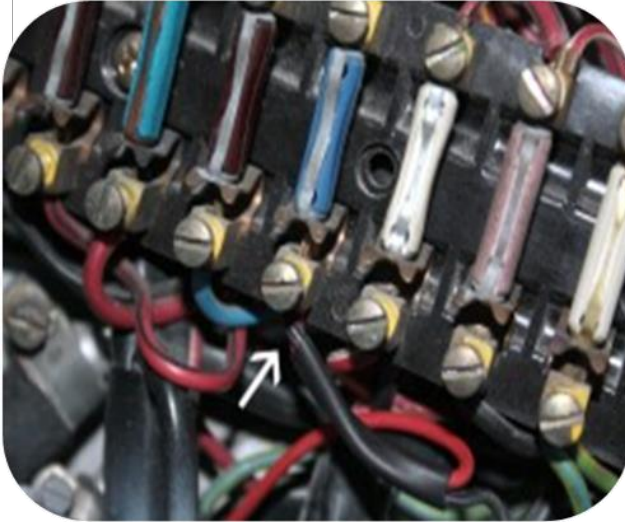
Step 18.

Connect the EZ cable harness to the computer of the EZ unit.



Step 19.

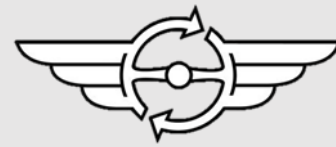
Connect the thin red wire (15+) with a contact-switched power supply. Normally this is the eighth fuse from the driver's side. Check this. Ensure that the 15+ is connected to the fused side.



Step 20.

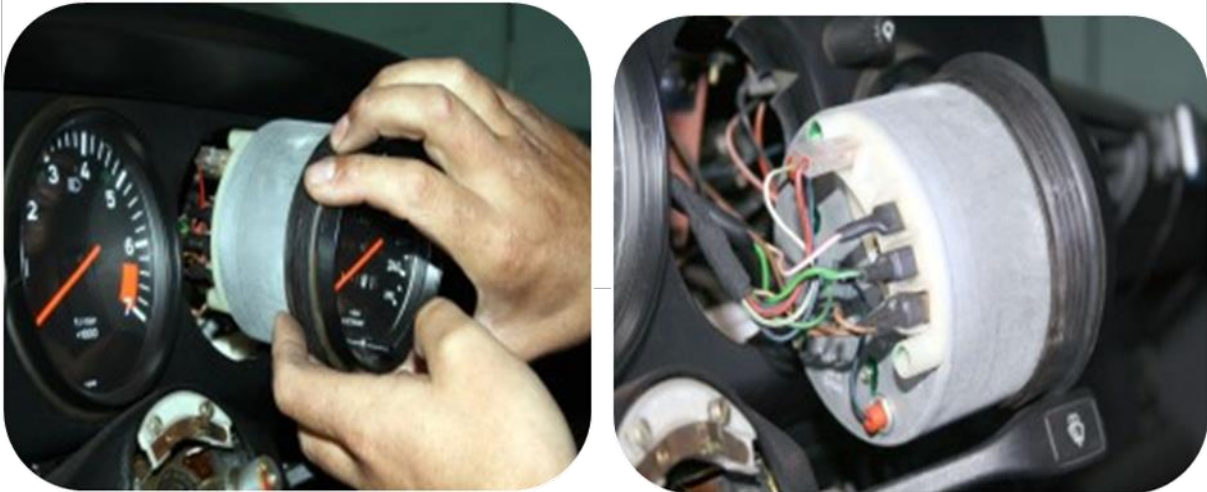
Connect the black ground cable (31-) to a suitable clean and blank ground point. In the room in which the EZ Powersteering is mounted, there is a threaded end on which it can possibly be mounted.





Step 21.

Disassemble the speedometer and connect the blue cable from the EZ Unit to the electronic speed signal (31B). The speedometer is mounted in rubber and can be "pulled" out of the dashboard. This can be difficult due to the rubber.



Step 22.

Install the speedometer. Take care not to pinch the wiring between the windscreen wiper mechanism.

Step 23.

Connect the negative pole of the battery. The computer must make one click when switching on the contact. The system is now operational, check this. The system switches off with a delay. This is noticeable by the click that is heard a few seconds after the ignition is switched off.

Step 24.

Refit the cover of the steering axle and refit the heater plate finishing plate. Mount the carpet in the car.



Step 25.

Re-install the steering wheel of the car. Or mount the handlebar at the position of the center of the wheelhouse and adjust the wheel alignment where necessary. Or mount the handlebar in the marked straight-ahead position. Take a test drive and check all systems again. Also check if the position of the steering wheel is correct, if not adjust it.

Step 26.

The end result.

