# EZ ELECTRIC POWER STEERING INSTALLATION GUIDE

ASTON MARTIN DB: 4, 5, 6





# CONTENTS

1.	THE PRODUCT	3
2.	OVERVIEW OF THE KIT	4
3.	INSTALLATION	5



# 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 M2 Date 16/1/20

This installation manual must be read very carefully to avoid mistakes. Check if all parts are present in the kit using the picture in the manual.

Compare the EZ Power Steering Column with the original column. Examine if the sizes are similar. If you do not have the skills or tools to carry out the installation, then have a professional fit the kit for you.

EZ Power Steering cannot be held accountable for a faulty installation or damages to the kit or vehicle.



# CONTENTS





# INSTALLATION



Never hit the input shaft with an object during or after installation. This can negatively



The steering system must always be fitted tension free and properly aligned.



#### 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:

	strength class 8.8	strength class 10.9	strength class 12.9
Bolt M6	11	16	19
Bolt M8	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.

The red supply wire (30+) has to be connected directly to the starter relay or the plus terminal of the battery and fused with the supplied 40 Ampere fuse.

Connect the black ground wire (31-) cable eyelet to a suitable earth point (not to the column). If you have a positive earth car (Plus battery terminal connected to the chassis) ensure that you have the correct wiring loom with additional relay

The thin red wire is ignition switched (15+) and should be connected to a fused contact switched power supply. Check the voltage between the ignition switched plus against earth, with switched on ignition, this must be at least 11,5 Volt. If it drops below this the electric power steering will switch off. (When this happens during driving, the vehicle will drive similar as before the EZ conversion).





Be sure to measure the voltage under load (with other electrical devices switched on like: cooling fan, windshield wiper or electric window defroster, etc.) and with running engine.

If needed there are electronical devices available, to maintain the correct ignition switched voltage above 11.5V!

Also a simple test of the electronics is to check if you hear a click after switching on the ignition, another click should be heard after 1 or 2 seconds after switching off the ignition



The EZ unit, wiring loom, ECU and other electric components may not be exposed to high temperatures (60 degrees centigrade or higher) or a wet environment.

# Step 1.

Take the car for a test drive and check the original steering system for faults. If everything is working correctly, continue with the conversion.

## Step 2.

Remove the cover underneath the dashboard and locate an ignition switched 12v plus. This is needed to control the EZ unit (see point 11). Disconnect the battery earth afterwards. Align the steering system to its center position and mark this position.



## Step 3.

To remove the steering wheel, the bolt/nut that clamps the steering wheel in place must be removed. Also, pay attention to the horn wire when removing the steering wheel.

# Step 4.

Disconnect the connectors from the steering column switch.



# Step 5.

Remove the bolts that hold the upper part of the steering column in place. Then remove this upper part, together with the switch from the column.



## Step 6a.

If needed, remove the cover in the inner wheel arche to get access to the U-joint.



# Step 6b.

Remove the bolt from the U-Joint together with the lower mounting bolts from the original column.





# Step 7.

Remove the braid wire that holds the rubber gaiter at the firewall. Slide the gaiter up afterwards.



# Step 8a.

If installed to the car, remove the support bracket underneath the dashboard.





Step 8b. Remove the upper steering column bolt.



# **Step 9.** The original steering column can be removed now.





#### Step 10

Before you proceed with the conversion, compare the width from the U-shaped bracket from the original with that of the EZ unit. They must be similar.

#### Step 11.

Connect the thick red wire (30+) through the fuse holder directly with the battery plus.

#### Step 12.

Connect the thin red wire 15+ with an ignition switched feed (see point 2).

#### Step 13.

Connect the black wire (31-) with a suitable earth point.

### Step 14.

Install the speed sensor to the speedometer and connect it with the EZ harness, double check that the colors correspond





# Step 15.

Install the EZ unit. Slide the U-Joint from the EZ unit onto the original steering shaft, but do not yet tighten the bolt.



Step 16. Now install the two lower bolts from the steering column.





# Step 17.

Install the rubber gaiter at the firewall and secure it with braid wire.



## Step 18.

Install the upper bolt from the column, get the electric motor in the correct position, and tighten all the bolts – do not forget the bolt from the U-Joint.

There are two different possible positions for the motor: motor to the left or motor facing upwards, behind the dash clocks. The latter of the two is preferred.





# Step 19.

If necessary, reinstall the support bracket underneath the column.



# Step 20.

Install the upper part with switch back onto the EZ unit. Reconnect connectors from the steering column switch.





Step 21.

Fasten all wiring underneath the dashboard and install the cover underneath the dashboard.

### Step 22.

Connect the previously disconnected battery negative terminal lead

## Step 23.

After the ignition has been turned on there will be a click noticeable from the ECU, the system is now operational, check this. After the ignition has been switched off, the system shuts down after a short delay. Once again the clicking should be noticeable.



## Step 24.

Install the steering wheel with the horn button and take the vehicle for a test drive. Recheck all systems.