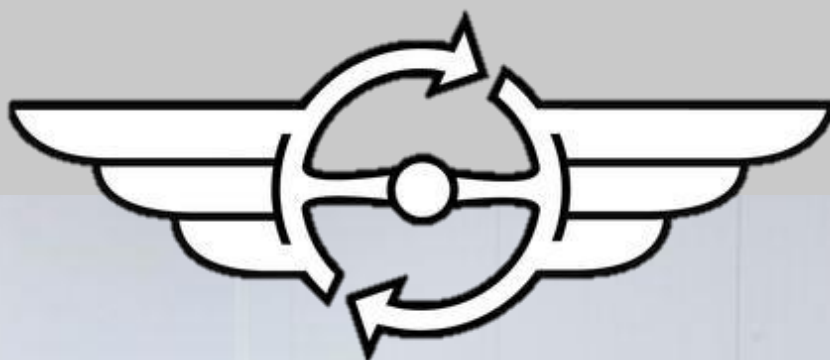


# **EZ ELECTRIC POWER STEERING**

## **INSTALLATION GUIDE**

**JAGUAR XK140**





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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](http://www.ezpowersteering.com) or send an e-mail to [info@ezpowersteering.nl](mailto:info@ezpowersteering.nl). If you have any questions of a technical nature please contact [workshop@ezpowersteering.nl](mailto:workshop@ezpowersteering.nl)

Version C1.1

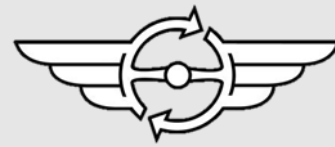
Date 03-03-2022

*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.*

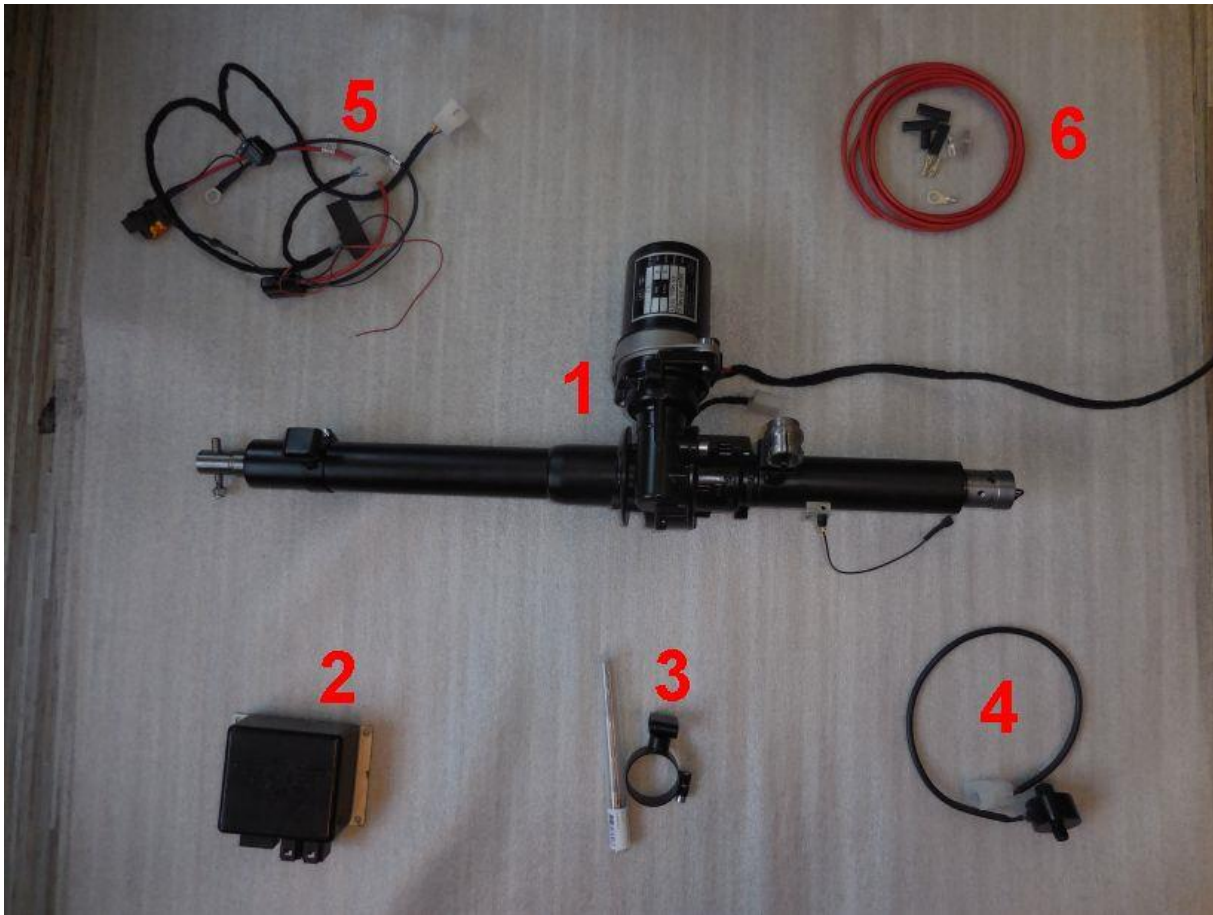
*If you do not have the skills or tools to perform the installation, have it performed by a professional. EZ POWER STEERING cannot be held liable for incorrect installation or self-inflicted damage.*

*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



EZ-JAGXK140-01. EZ Powersteering Unit

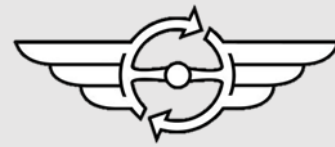
EZ-JAGXK140-02. ECU

EZ-JAGXK140-03. Clamp

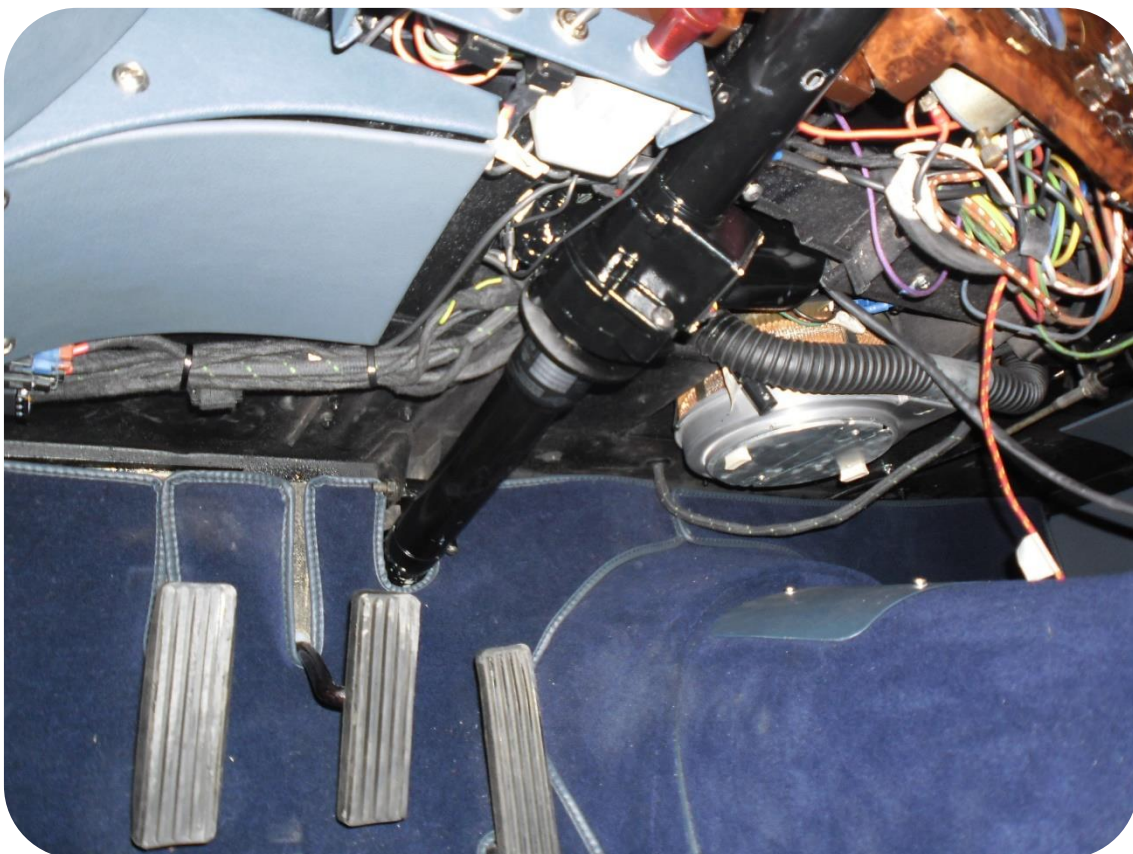
EZ-JAGXK140-04. Speedsensor

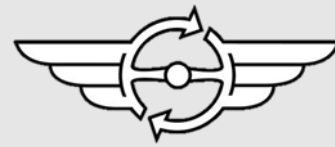
EZ-JAGXK140-05. Wiring harness + grey controller

EZ-JAGXK140-06. Power supply cable

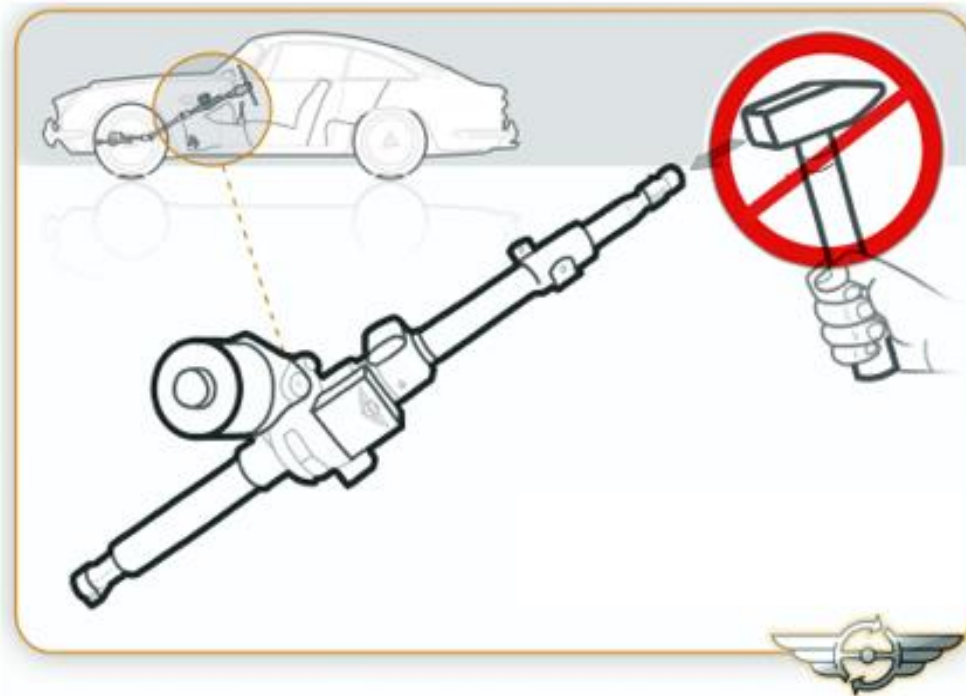


## BEFORE AND AFTER ASSEMBLY

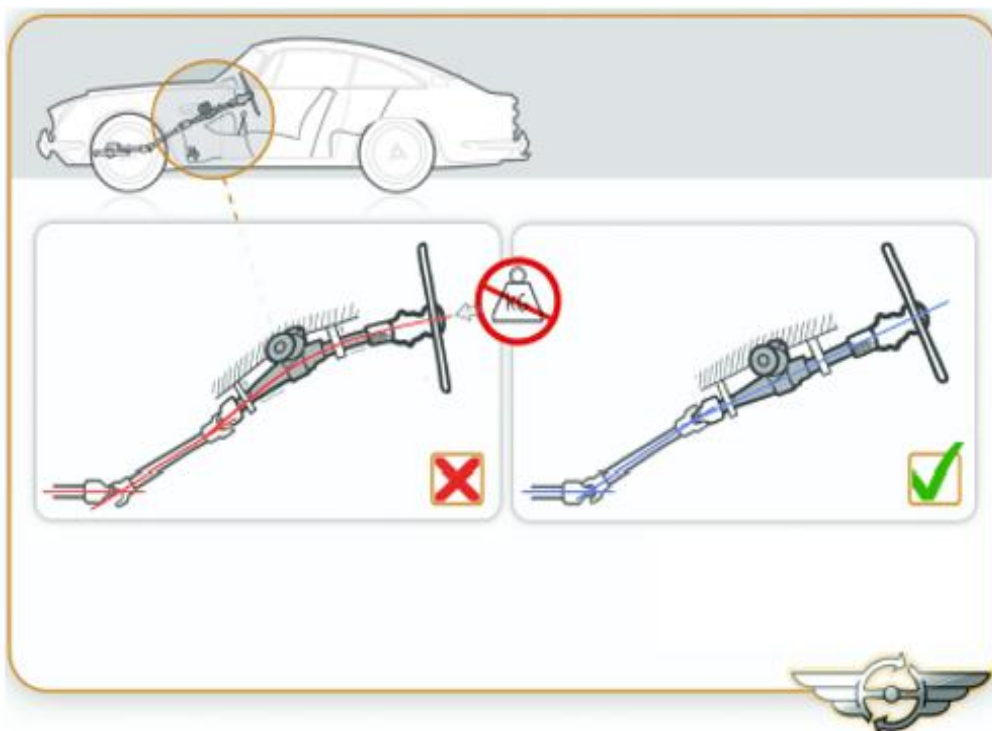




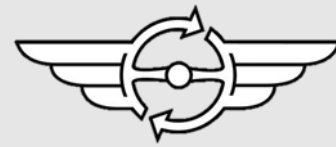
# INSTALLATION



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

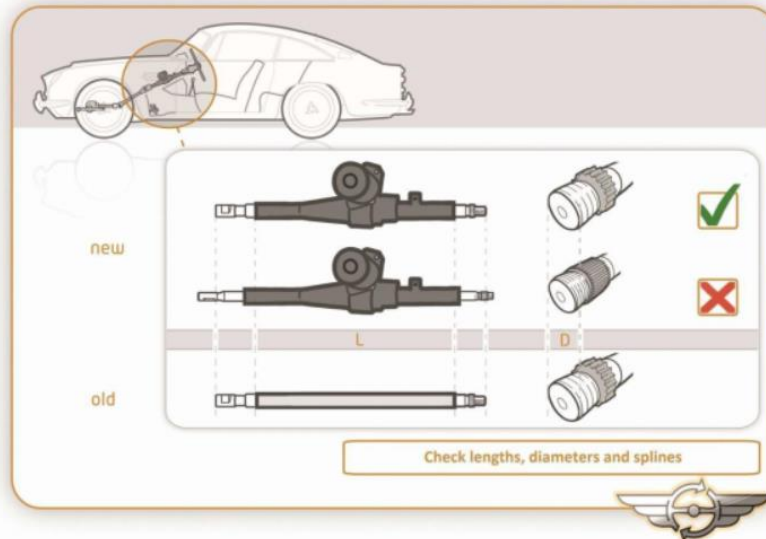


The steering system must always be properly aligned and mounted without tension.



## 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.

Take a test drive with the car. Check the indicator switch, the horn and the main beam switch. Check if the steering wheel self-centers. Check that the steering does not show any defects. If everything is functioning correctly, proceed with the conversion.

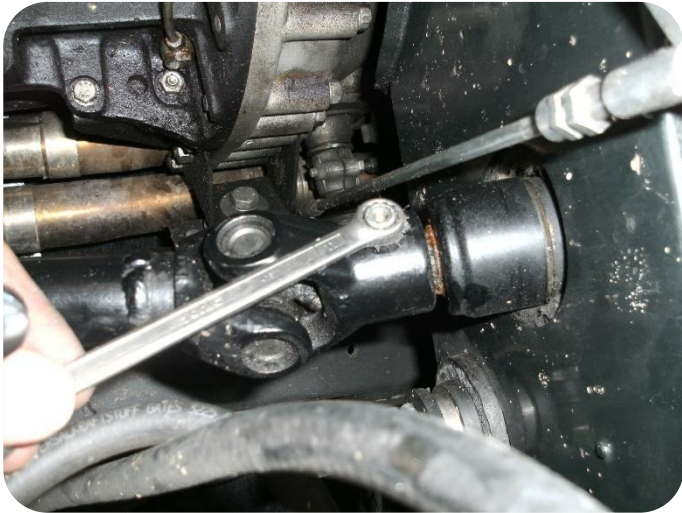
### Step 2.

Find a power supply connected via the contact. This is necessary for controlling the EZ power steering unit (see point 18). For this, if present, dismantle the bottom plate under the dashboard, the switched power supply can either be removed from the contact lock or the start button. 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 two and adjust the wheel alignment after installation, if necessary.



### Step 3.

Remove the retaining grub screw from the steering shaft. Then, the steering wheel can be removed. Please note, the horn wire must be cut.



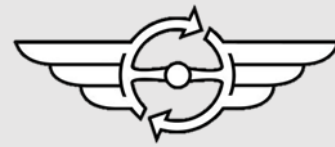
**Step 4.**

Remove the nut from the taper pin of the universal joint. Use a hammer with a drift to remove the pin itself.



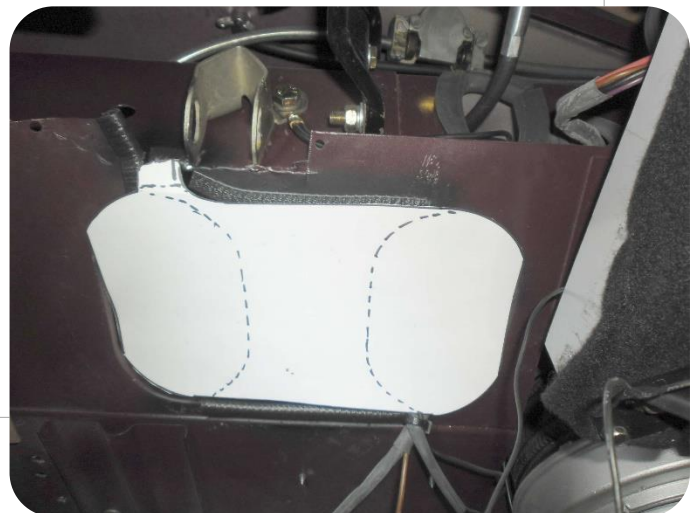
**Step 5.**

Remove the cover at the bottom of the dashboard. The steering column is mounted behind the dashboard and the firewall. Demount the retaining screws and remove the original steering column from the car.



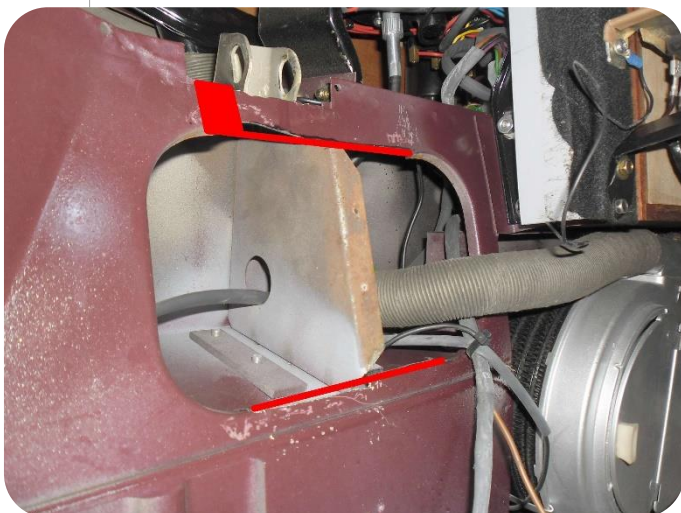
### Step 6.

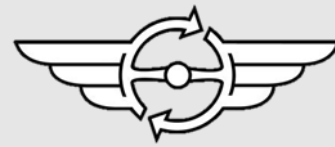
To gain space for the EZ unit, it is necessary to remove excessive material. Use the template to decide where to cut. NOTE: this manual is for a LHD car, normally a RHD car is the mirror image from a LHD. In case of a RHD, double check with the EZ unit to decide where to cut.



### Step 7.

After this, the middle piece can be adapted. Use the supplied template again to decide where to cut.





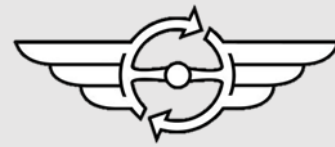
**Step 8.**

Use the template to cut the last piece of excessive material. It is recommended to paint the cut edges and then fit rubber edging over sides of the metal.



**Step 9.**

Mount the speed sensor between the speedometer and cable.



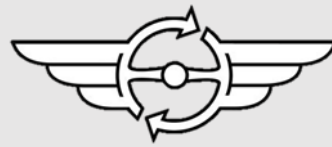
### Step 10.

Compare the original steering column with the EZ unit. A difference in length is acceptable up to 17.5mm, this is within original Jaguar specs.



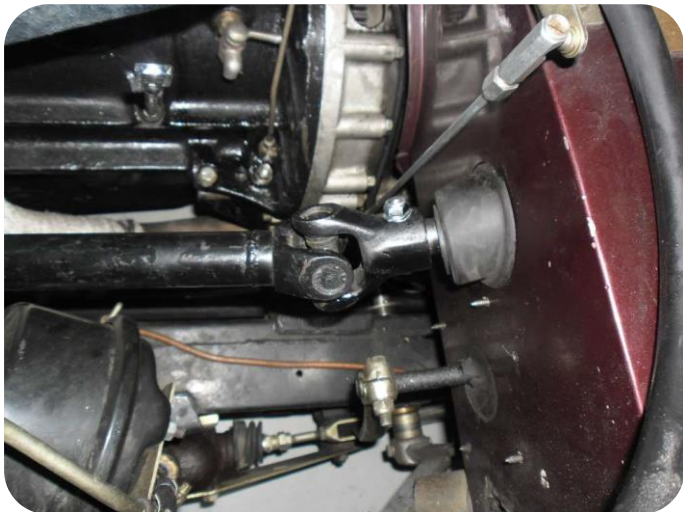
### Step 11.

In an XK140 OTS the upper mounting point is relocated compared to an coupe version. An adapter is supplied to solve this. Slide this over the EZ unit, use the original column for the right location.



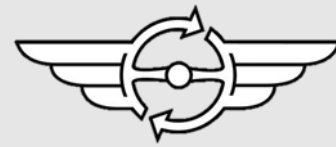
### Step 12.

Mount the EZ unit in the car. The mounting points from the EZ unit are fitted with clamp bolts. As a result, it is possible to turn the column in the right position. Do not forget to fasten the clamps again together with the remaining mounting bolts.



### Step 13.

Fit the taper pin in the lower universal joint and fasten it! NOTE: the pin is conical, make sure it is mounted right.



#### Step 14.

Connect the original horn wire to the spring contact at the side of the EZ unit.



#### Step 15.

Find an appropriate place for the ECU and connect the wiring loom to the ECU.



#### Step 16.

Mount the steering wheel and connect the horn switch with the horn wire of the EZ unit. Subsequently, mount the horn switch.

NOTE: Make sure that the collet is mounted in the right way (see picture), and don't forget the retaining grub screw! Also watch the length of the horn wire, with regards the adjustability of the steering wheel.



### Step 17.

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

### Step 18.

Connect the thin red wire (15+) to an ignition switched plus (see step 2).

### Step 19.

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

### Step 20.

Connect the speed sensor with the EZ wiring harness, make sure that the colors of the harness and sensor (brown, blue, yellow / green) are corresponding with each other.

### Step 21.

Install the previously disconnected earth cable from the battery. After switching on the ignition, a click can be heard from the ECU, the system is now operational, check this by making steering movements. After switching off the ignition, another click is heard after approximately 4 seconds. The system is then switched off.





### Step 22.

Install the cover under the dashboard and adjust if necessary.

### Step 23.

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 33.

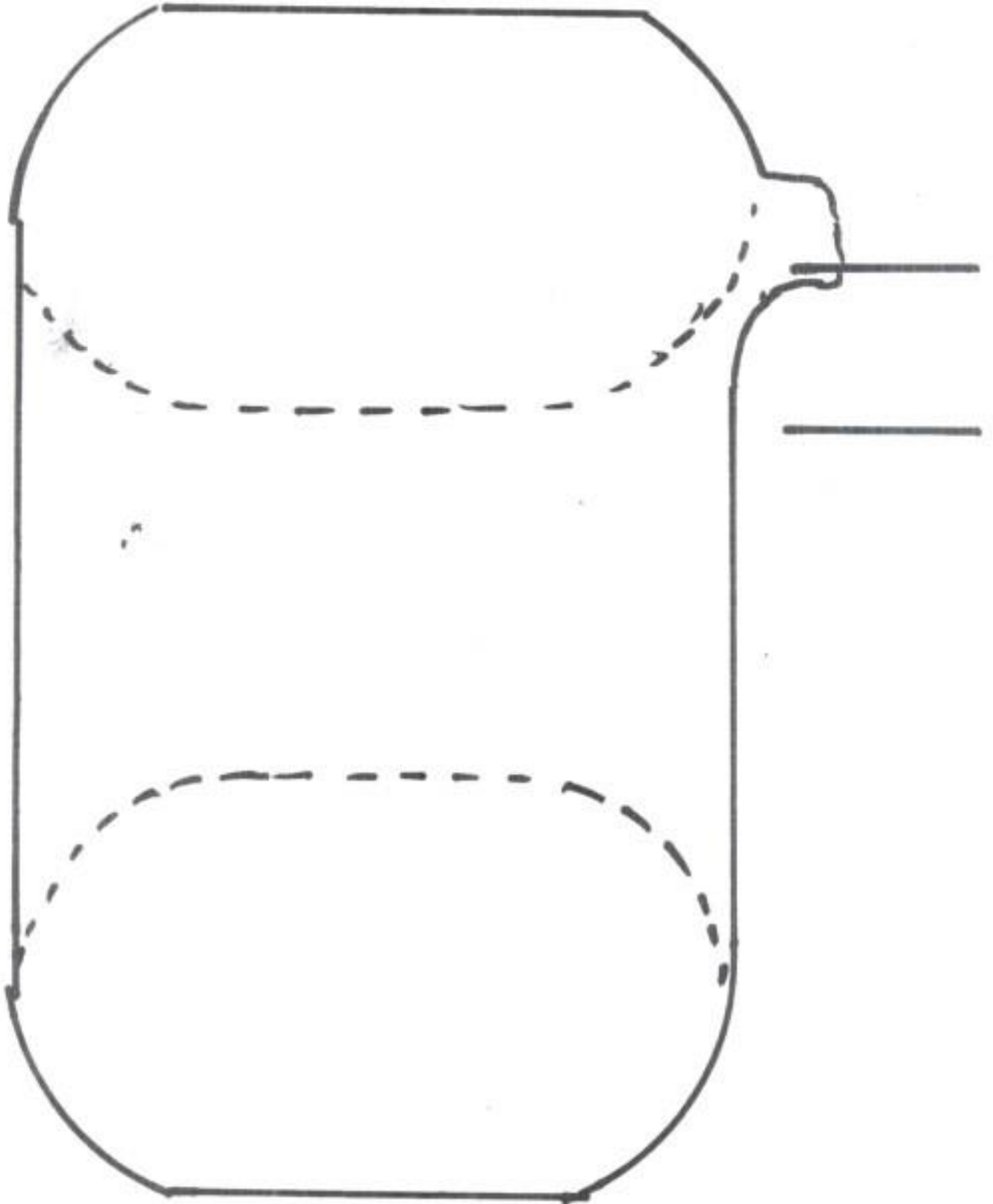
The end result. Above LHD. Under RHD.

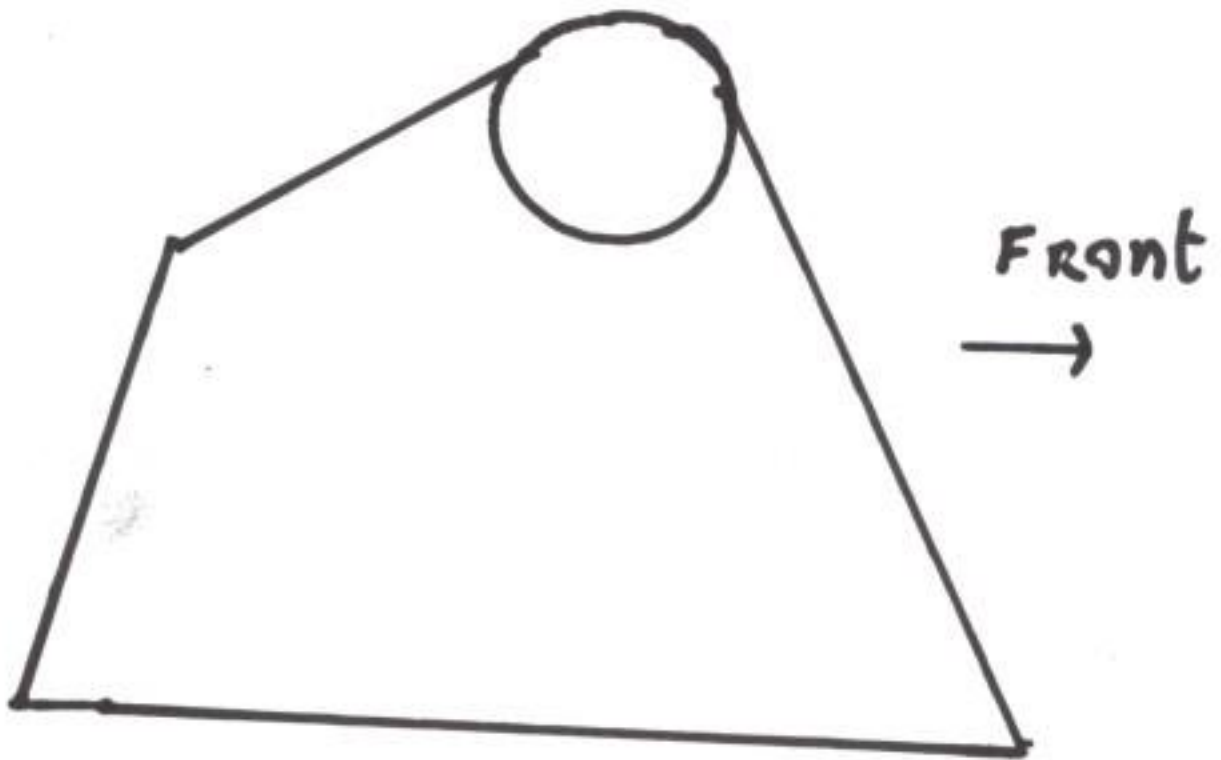
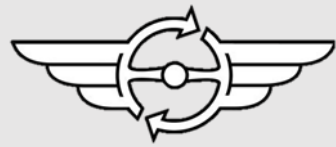


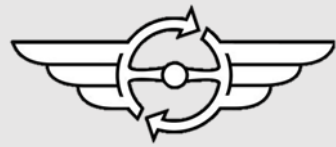


1.

↑  
Front







3.

