

RICARDO CAVALLERO S.R.L.

Specialists in Manual Steering Gear Boxes

INSTALLATION OF STEERING BOXES: GENERAL BASIC ADVICE

1) LUBRICATION

Once the box has been fitted to the vehicle, top up with SAE 80W90 EP Oil.

"EP" means "Extreme Pressure" additives and in practice is similar to differential oil.

Fill it patiently, allowing time for air to escape from the interior and until it overflows. Use the appropriate cap.

On the other hand, in the steering boxes of Ford A, Ford V8 and similar models, because they have a deficient retention system, we recommend filling them with Multi-Purpose Grease, as for example the **Shell Gadus S2 V220 Ad2**.

2) CENTRED

The steering box has a total number of turns on the bench (top to top), which can be measured on the shaft or worm shaft.

When the steering box is fitted to the vehicle (with the wheels off the ground) the steering wheel must have **1/4 turn LESS** from top to top.

Example No.1: Number of turns on the bench: $4 - 1/2 \rightarrow \text{Placed}$: 4 - 1/4. Example No.2: Number of turns on the bench: $4 - 3/8 \rightarrow \text{Placed}$: 4 - 1/8. Example No.3: Number of turns on the bench: $6 - 2/3 \rightarrow \text{Placed}$: 6 - 1/3.

This is achieved by adjusting the external stops or "linkage" of the steering system. These are usually stops behind each wheel.

In this way, we prevent the mechanism from stopping internally and causing damage to the casing and the sector, which produces early wear.

The box is delivered to the centre and has a painted line indicating this.

3) ADJUSTMENTS OR REGULATION

Please DO NOT make any adjustments or loosen any screws, the mechanism is adjusted and set for correct operation. For a long period of use, the steering box will not need any adjustment or regulation. When you or your mechanic suspect that it needs it, please make sure to do it according to the proper steps and recommendations.

We are always at your disposal for any questions you may have.

4) PITMAN ARM

When placing the Pitman arm on the fluted, DO NOT strike, avoid using hammers, maces, etc. that could damage the mechanism housing.

The exit of the shaft-sector where the Pitman is placed, is very close to the housing of the oil seal of the sector, if this is hit it can be deformed and cause oil leaks.

It is recommended to carry out the adjustment with wrenches and tools suitable for this purpose. Don't forget to clean well and lubricate the threads a little. Use original high resistance bolt and nut and grower washer.

Check the adjustment of the Pitman Arm a week after installation and use.

A loose Pitman arm would be severely damaged, as would the shaft-sector, and these are expensive parts that are not always available for replacement.

Do not hesitate to contact us as many times as necessary.