



1950-79 Beetle / Ghia Steering Rack Conversion Assembly Kit



T1 (Beetle) / Type 14 (Karmann Ghia)
License of Design - Limebug Ltd

Welcome to the Limebug's Steering Rack Conversion Assembly Kit.

Enclosed Step-by-Step Guide to Installation / Operation of this system.

Step 1: Remove The Fuel Tank

Step 2: Remove the Steering Box, Tie Rods & Steering Damper

Step 3: Remove the Steering Wheel & Steering Column

Step 4: Install the Steering Rack onto its' mounting bracket

- Consists of 4 Bolts (M8 x 85mm)
- Tighten to 30NM
- **NOTE: For Link Pin Beams Only** – If required, remove the factory centering pins from the beam and then install the Steering Rack onto the beam without tightening the bolts (4 Bolts M8 x 25mm) **After this skip to Step 7**



Step 5: Install the Steering Rack onto the beam, using the centering pins but without tightening the bolts (4 Bolts M8 x 25mm)

Step 6: Shorten the Steering Column:

- Steering Column with collapsible shaft section: Cut just above the collapsible section by 30mm
- Steering Column with non-collapsible shaft: Shorten the column by 200mm

Step 7: Remake the 2 cuts at the end of the now cut column to match the original design.

Step 8: Install the U-Joint on to the Steering Rack

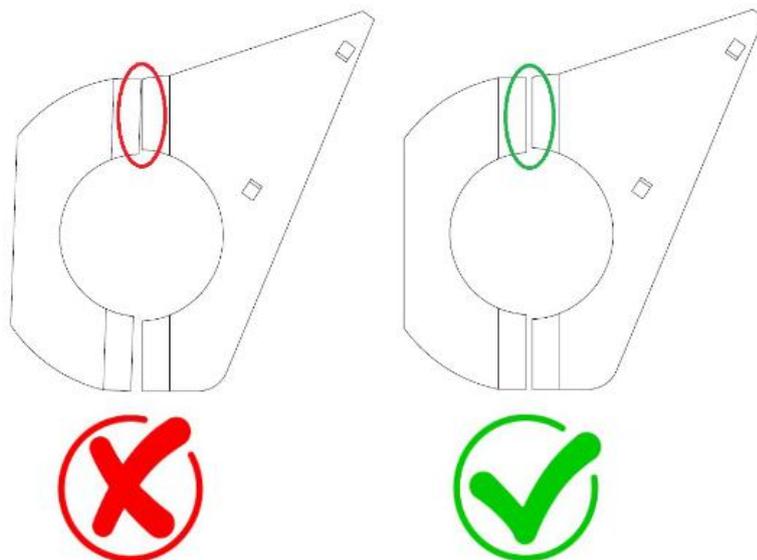
Step 9: Re-install the Steering Column & the Steering Wheel.

Step 10: Adjust the Steering Rack position, be careful to center the Steering Column inside the Steering Tube.

- **NOTE: For Link Pin Beams Only** – Adjust the Steering Rack to center the steering column inside the tube. It can be necessary to add washer to the left damper mounting to get enough space to the Steering Rack.

Step 11: Tighten the Steering Rack mounting bracket

- **Warning:** Cross tighten the bolts to 10NM



Step 12: Tighten the Steering Rack column strap

Step 13: Install the Tie Rod Ends with the half nuts into the Tie Rods.

Step 14: Install the assembled Tie Rods onto the vehicle.

Step 15: Trim the Tie Rod Mount from the end of the Steering Rack in order to have sufficient space (around 10mm) between the Tie Rod Ends and the top of the frame.

Step 16: Re-install the Fuel Tank temporarily

Step 17: Check carefully that the Steering Rack can travel freely with no interference with the fuel tank or any other surrounding components.

- **Please check Brake & Fuel Lines!**

Step 17: If all clearances are good, remove the Fuel Tank and ensure Tie Rod Ends are locked in location and to tighten the ends into Spindles and inner fixtures.

- Tighten Tie Rod Ends to 50NM

Step 18: Install the Fuel Tank and any other required accessories back to the vehicle. Double check all clearances are still good.

Step 19: Ensuring wheel alignment is good. Carry out any toe adjustments if necessary.

Step 20: Enjoy your Steering Rack assembly conversion!

