

# Lite(r) steering

A retro-fit, speed-sensitive, electronic power steering system to ease the burden of low speed Bay Window manoeuvres

Words and pics Jimbo Wallace



It feels like you're about to rip the steering wheel off sometimes," says boss man Peene of trying to coerce the beloved Panzerfaust into a parking space. There's no doubt the pleasure of piloting either an Early or Late Bay is drastically reduced by the clunky, heavy, cumbersome steering that becomes all the more apparent if, like a lot of Bus owners these days, you drive your Bus as well as a modern day vehicle.

So what do you do? "Don't fight steer, Lite Steer," says the tagline that supports Neil Oakley's DIY power steering conversion for VW's venerable Bus (Type 25 kits are also available). The unit comes fully assembled, you just bolt it in and follow the wiring instructions. No welding or floor work is required and the difference is like light and day. Check out [www.litesteer.com](http://www.litesteer.com) for more information

## JOB INFO

### PARTS NEEDED

1 x Lite Steer Late Bay power steering kit (£850+VAT)  
1 x Lite Steer top column replacement bearing (£21)

### TOOLS USED

Screwdrivers and socket set; pipe cutter; coat hanger; bearing puller; ruler; lever bar; drill and 8mm bit

### SKILL LEVEL

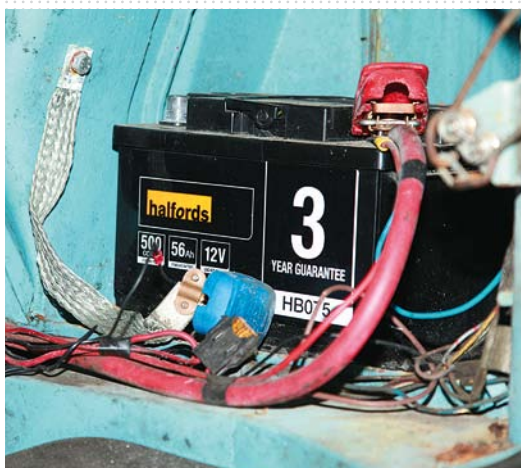
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### TIME TAKEN

Put aside a day for this job, as some aspects can be rather fiddly

### COST

**DIY:** £1,020 inc. VAT  
**Pro:** £1,296 inc. VAT



**NB:** for the sake of clarity, Neil kindly removed the door, kick panel cover and the floor mats

**01** Disconnect the battery and lever off the horn push with a flathead screwdriver. Disconnect the earth terminal from the tab



**02** Using a 24mm socket, remove the nut that holds the steering wheel in place



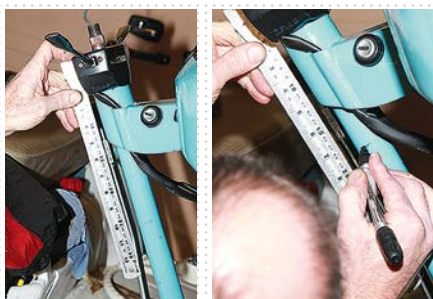
**03** If your steering wheel refuses to pull off the splines, Lite Steer make a tool that will help. Insert it down the column and tap with a hammer, then (hopefully) pull the steering wheel free



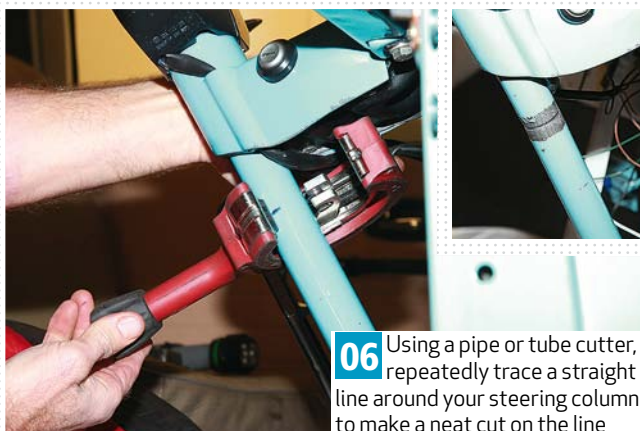




**04** Using a pick, pull the bearing cage clear of the column. It might be quite stubborn



**05** Measure 185mm down from the top of where your metal steering column cowling (inside the plastic) starts and mark the column. This measurement is vital, so measure twice and cut once



**06** Using a pipe or tube cutter, repeatedly trace a straight line around your steering column to make a neat cut on the line



**07** Undo the Phillips head screws that secure the cowling to the dash surround



**08** Next, undo the two bolts that retain the steering column outer casing to the cab floor...



**09** ...and undo the M8 pinch bolt that secures the steering column shaft to the steering box beneath the Bus

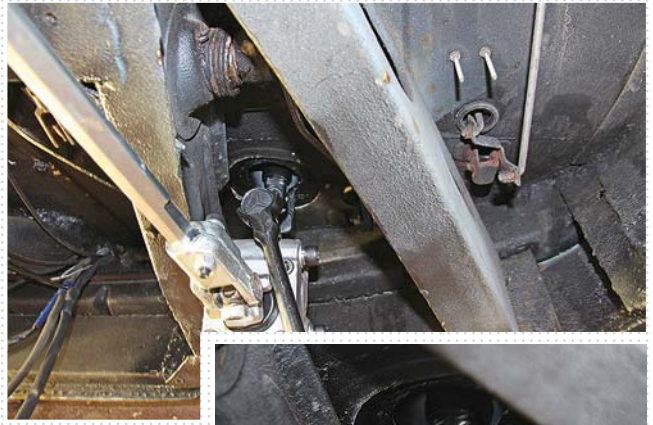


**10** Lever down against the steering box to liberate the splined steering shaft from the coupling





**17** Remove the headlight switch from the dash and locate the black and yellow wire. You need to take a 12V feed from this using a piggyback terminal. Fit both wires onto the same terminal and replace the switch



**20** Locate the detent of the splined steering box shaft and secure it with the new M8 high tensile nut and bolt



**18** Ready your new Lite Steer column and slot it into the housing both top and bottom, ensuring the shaft has located in the steering box beneath the Bus



**19** Screw the two original bolts back into place, then drill new holes for the four extra fixings supplied. This is vital as the extra torque of the electric motor places more stress on the surrounding metalwork in the cab



**21** Follow the original loom with the new wiring through the crossmember, over the axle, over the belly pans and over the rear axle to the engine bay. Secure with cable ties as you go



**22** Poke a coat hanger or cable puller through the main loom grommet in the engine bay and attach the new wiring loom to the other end. Pull (hard) and it draw it through into the engine bay

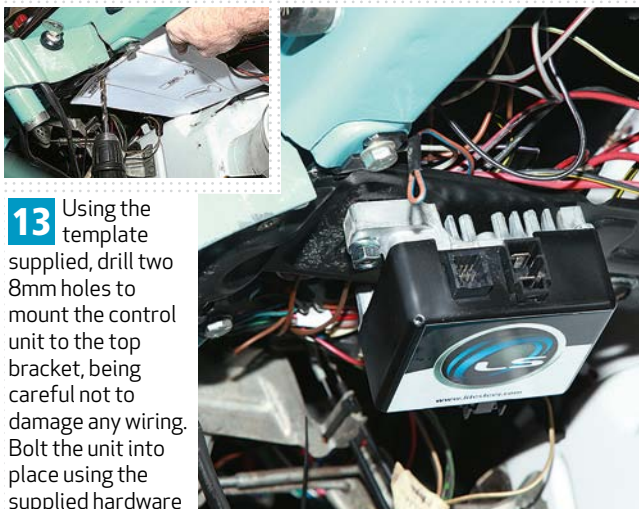




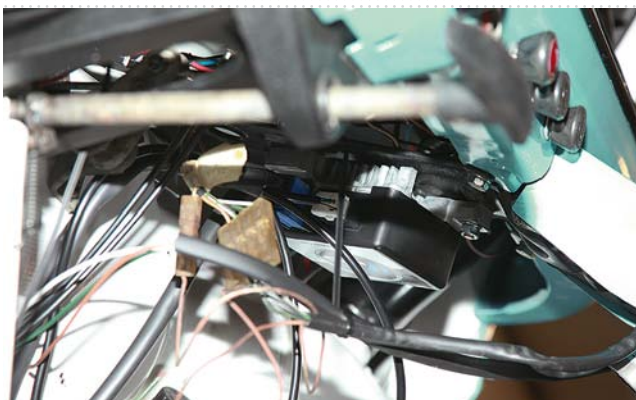
**11** With the splined shaft free of the steering box, the entire steering column assembly should now pull clear of the Bus. Now's a good time to check your steering box oil level. Top up with EP80/90



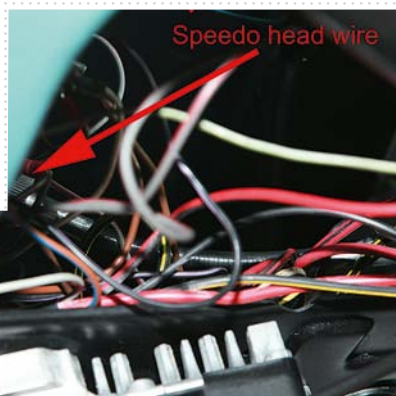
**12** Remove your washer bottle and start routing the wiring loom that comes with the Lite Steer kit from beneath the Bus. Follow the original VW loom for the best route. Comprehensive instructions come with every kit that explain what connectors fit where. Ensure the blue and white plugs are in the cabin area



**13** Using the template supplied, drill two 8mm holes to mount the control unit to the top bracket, being careful not to damage any wiring. Bolt the unit into place using the supplied hardware



**14** The blue and white plugs on the loom go towards the passenger side of the control box

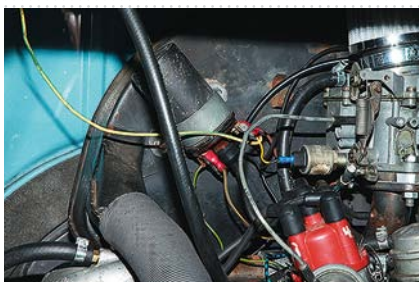


**15** The control unit is speed sensitive and will increase steering resistance as your speed builds, so you need to run a take off from the stock speed head. To do this, remove the original speedometer cable and screw the new sensor wire to the speedo head, then re-connect the cable and attach the white, three-pin plug to the corresponding white, three-pin plug on the new loom



**16** Remove the earth lead from the headlight and indicator housing and attach the green earth cable from the white, three-pin plug

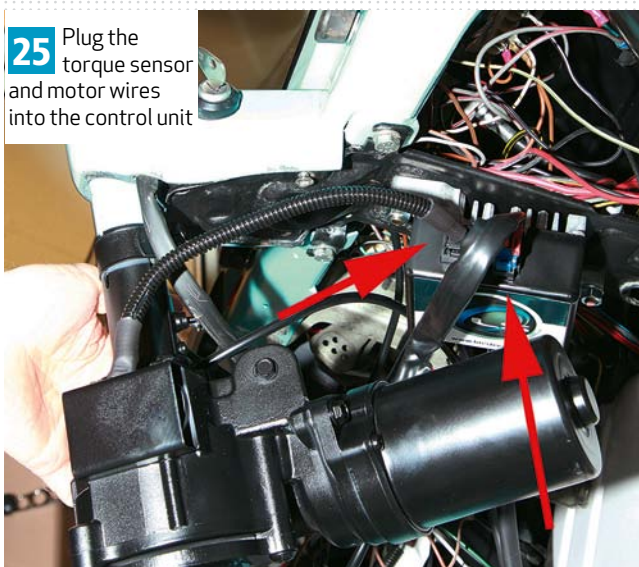




**23** Fit the ignition pulse wire on the negative side of the ignition coil. This should have a green wire if the dizzy is stock or black if aftermarket electronic ignition is fitted



**24** The fly lead and 12V+ fuse holder can then be connected to the positive terminal



**25** Plug the torque sensor and motor wires into the control unit



**26** Don't forget the main earth lead for the control unit that attaches to the column, then tighten the joining collar firmly



**27** The steering column should protrude from the plastic housing by 50mm. Lite Steer also offer this replacement needle bearing (£21) that can then be driven home using a suitable sized socket. Ensure you grease inside the bearing before tapping it home straight and true. Just fitting this bearing alone will improve steering feel no end



**28** Re-fit the Phillips-head screws that secure the cowl to the top bracket, tidy up the wiring with some cable ties and re-fit the steering wheel, not forgetting the earth terminal for the horn



**29** Last job is to replace the earth terminal on the battery, then start the Bus and see if the motor kicks in. At low speeds the difference is incredible and the speed sensitivity means you will notice the steering start to 'weight up' at between 30 and 50mph. Having driven a Bay Window before and after having this conversion done, we can confirm it's a fantastic improvement that makes your Bay Window a whole lot more enjoyable on a daily basis

