Rebuilding the Spoiler Drive worm-and-wheel gearbox

Porsche 964 & 993

Before starting, I made a simple check to establish that the drive gearbox was noisy, and not some other part of the mechanism. Remove the cable and operate the spoiler motor. If it is quiet, then it must be something in the drive mechanism. Re-attach the cable and raise the spoiler half way. Disconnect the cable again and attach a cordless (reversible) drill to the cable. Run the drill in both directions and see if the noise is coming from the drive box or the large quadrant gear which is attached to the spoiler (which is rather unlikely). Remove the drive box and rotate the cable. If it feels 'notchy' then it is probably the ball bearing inside that is the problem. The bearing is a standard No. 625 bearing, but I suggest using a 625-2RS (sometimes known as 625DD), which is a sealed bearing. Bearing stockists usually have them in stock, and they are usually less than £2.00 each. The bearing is 16mm O/dia, 5mm I/dia and 5mm wide.

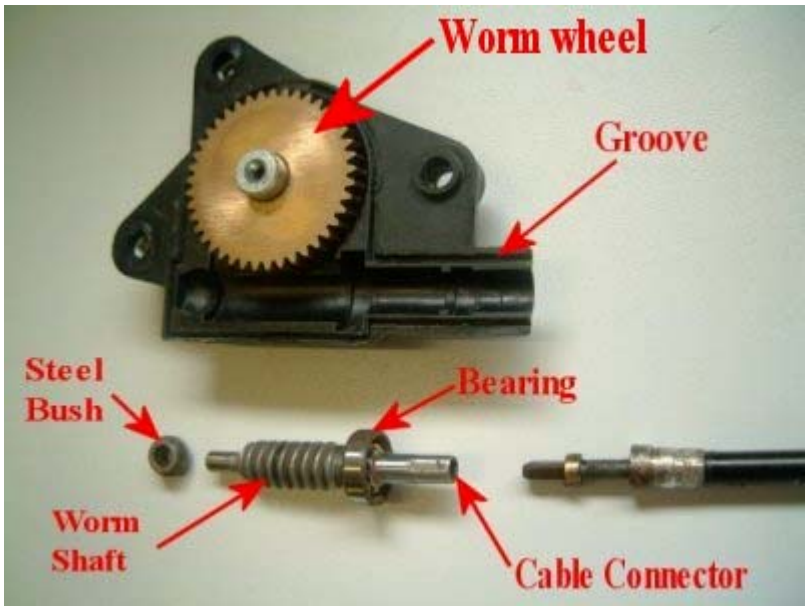
Pull back the rubber boot, prise out the white nylon ring with a small screwdriver, and remove the cable from the motor. The ring is split and comes out easily

Undo the two posidrive screws and remove the cover.

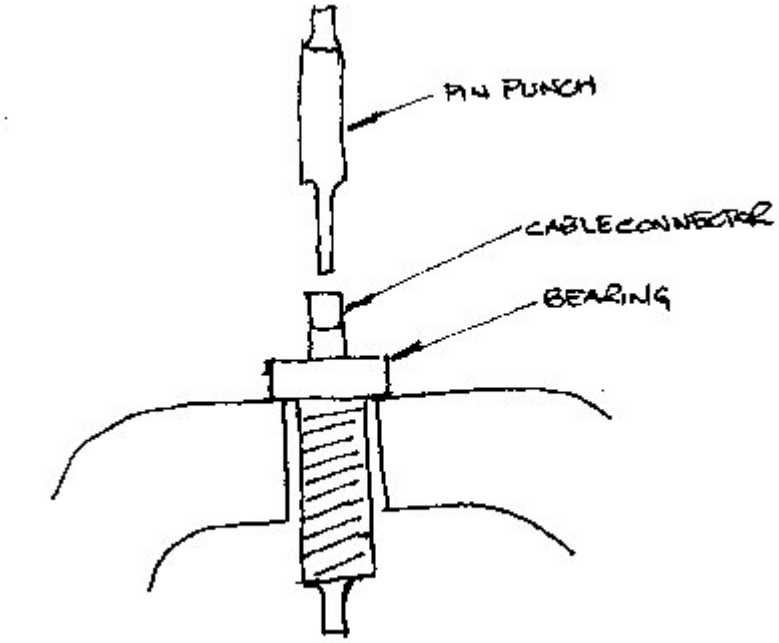
Undo the three M6 allen screws and remove the drive gearbox.

Carefully cut all around the periphery of the joint with a sharp knife to about 2mm deep. Take care not to go too far into the ridge of the joint. (See later photo).

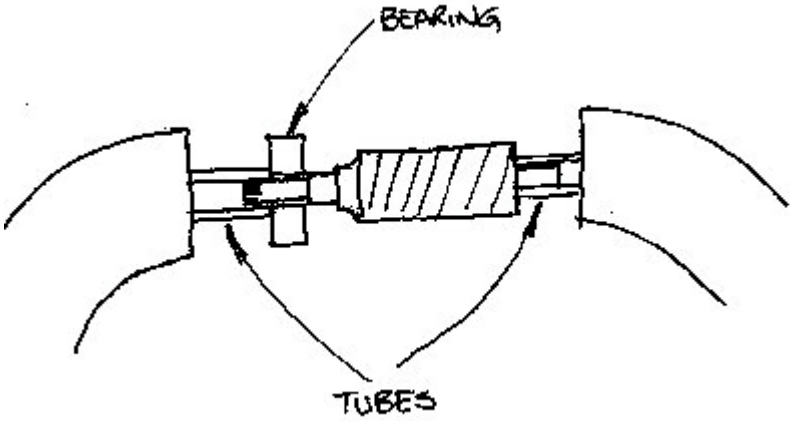
Carefully prise the joint apart using a knife edge scraper or similar. I gave a few light taps with a hammer and the joint separated fairly easily.



When you get it apart, wash all the old grease out with some spirit and thoroughly clean the joint. The other half of the casing has a ridge which mates with the groove shown. After cleaning the casing make sure that the two halves fit closely together. On mine the bearing had run dry, probably through lack of grease. The gearbox does not get warm enough to allow the grease to flow into the bearing, which is how this type of arrangement is supposed to work. If I were you I would not attempt to remove the worm wheel.



Place the worm shaft in a vice so that the vice jaws are supporting the bearing, but not gripping the worm. Using a pin punch which will fit through the cable connector, tap the shaft out of the bearing. This will also remove the cable connector.



Press the new bearing onto the shaft in a vice, using a tube at each end (or similar). Bearing inside diameter is 5.0mm, so a tube with a bore of 5.5mm or so will suffice.

Press the cable connector back on in a similar manner. The shaft is finely serrated, so try to line up the serration with the grooves in the connector.

Remove the inner cable and clean and grease it. Reassemble as shown, with a generous dollop of grease around the worm shaft and worm wheel, making sure none gets on the casing joints. Also grease the exposed shaft on the worm wheel.

I used a cyanoacrylate adhesive (super glue) Loctite 495, which I painted into the groove of the casing. Then (quickly) I put the two halves together and clamped them with small 'G' clamps.

Wait for it to dry, re-fit to the car, and Hey Presto! - No more grinding noises.