



Stromberg 175CD Easy Spindle Bearing Upgrade.

Due to the vintage of these carburetors many cars are cursed with a rough idle and tuning problems due to excessive throttle spindle to body clearance. The normal routine to cure this old-age condition is to have the spindle bores reamed and oversize spindles fitted or have the bores bushed back to standard. Just about any option is expensive and reduces the chances of procuring other vital necessities such as 20-year-old Scotch and custom kidskin driving gloves.

Stromberg CDs were offered in many models; mine are 175 CD-2 types made about 1969 or 1970, as far as I can ascertain. In my 45 years of carburetor T and T I have found the Stromberg CDs will give excellent economy and power when treated with respect and compassion and with the proliferation of accurate, cheap wideband UEGO analysers there's no excuse for not getting the needle absolutely bang-on. But Colortune still has a use: it is handy when setting up needle position by indicating the idle mixture of each cylinder (air bleeds closed, of course).

Now I must confess that I no longer own a Triumph; my beloved 2500TC (with overdrive) was sold long ago and these carbs are going onto a modified Mitsubishi 2.6 litre 4g54 engine and I will be starting off with B1AF needles as per Triumph TR-6. The carbs have been totally stripped, cleaned and blueprinted. Everything came up Jim-dandy except the clattering throttle spindles. I had just fitted sealed 8mm x 12mm ball bearings to both throttle shafts of a new Cheber (Chinese Weber copy) 32/36 DGEV and it was a fast, easy job. (As a quick "aside": my 32/36 was made by FAJS in northern China and is extremely well made, in fact noticeably superior to my so-called genuine Weber 32/36 DFEV made in Spain. And it works great.)

So, why not fit similar bearings to the CDs? The spindles are 5/16" (0.3125") diameter and the carb bodies are blessed with a 1/2" i.d. pressed-in steel housing on each side which accommodates the spindle seal and retainer. A quick search online found VXB.com in California and they listed 5/16" x 1/2" sealed ball bearings at \$5.95 each, also the 8mm x 12mm for 32/36 DGEV carbs (at about \$25 for ten!) so an order was placed and received promptly.

Fitting the bearings was not a major issue for me, but some care is required and certain techniques must be used, e.g. when fitting bearings to a shaft, press against the inner race only; when fitting to a housing, press against the outer race only; when fitting to a shaft and housing, press against both races.

With the spindle removed, meticulously strip-out and clean the seal housings: re-fit the spindle and butterfly and lightly scribe around the spindle at the base of the bearing housings. This will give you a reasonably accurate idea of bearing location. Remove the butterfly and spindle and press a bearing down the spindle to slightly short (about 0.50 mm or less) of the scribed position at the linkage end. Repeatedly fit the spindle/bearing assembly to the carb and adjust the position of the bearing until the butterfly fits and rotates into position accurately. Apply a **very** thin film of 30-minute metal-filled epoxy resin to the in-sides of the bearing housings and final-fit the spindle/bearing assembly. With the assembly in place, fit the butterfly and press another bearing down the shaft and into the housing at the opposite side; you will need to place the opposite tip of the spindle against something immovable when pressing this second bearing into place. Loosen the butterfly screws, back off the idle speed screw and let the closing action of the throttle position the butterfly correctly. Tighten the butterfly screws. At this point there's a 99% chance you have spindle rotation that's as slick as a lawyer in a new suit (don't worry about minor binding, it tends to fade away), but if not, there are a few possible glitches: 1. The bearing housings may not be perfectly centred on the spindle bores. Remedy....press the spindle out and polish the carb body spindle bores very slightly oversize to prevent binding. 2. The butterfly may be binding: carefully adjust the fore/aft spindle position until the butterfly seats correctly i.e. with no idle screw contact it closes tightly against the walls of the carburetor bore. 3. You applied too much epoxy resin to the bearing housings. Remedy....allow a drop of oil to seep from the inner spindle bores into the bearing housings as you oscillate the spindle. A final finishing-touch is to punch 5/16" x 1/2" external bearing covers from a thin-walled flat plastic drink bottle: install these with a thin smear of grease on the underside to protect the bearing from corrosion, and push this down the spindle into the bearing housing and onto the bearing before final re-assembly of ancillary parts.

To the non-savvy carb fan this conversion may sound a bit “involved”, but not so: the first carb stole about 40 minutes of my lifetime, the second carb about 25 minutes and these times included removing and re-fitting ancillary parts. Of course removal and refitting to an engine will add time, but not that much and we love to tinker, don’t we? The Strombergs will have smooth, non-leaky spindles for about 99 years (minimum) which is a little longer than I will be around, for a parts and shipping cost of around \$15 per carburettor.

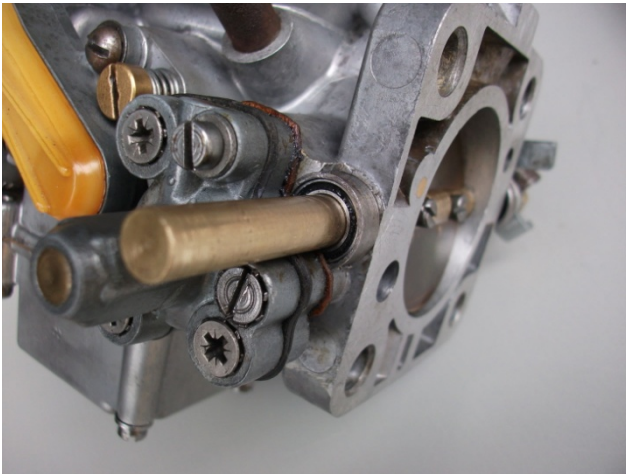
It’s quite feasible to convert other brands/models of carburetors to ball bearings: if the bodies have enough “meat” a piloted counterbore can be used to machine very nice housings for either direct bearing fit or installation of a slimline steel housing a la Stromberg CD.

Bearing supplier: vxb.com

Bearing part numbers/cost: 5/16” x 1/2” (Stromberg CD).....Kit17848 \$5.95 (1)

8mm x 12mm (Weber 32/36 DGV).....Kit7423 (1 x Stainless) \$6.49, Kit7081 (pk/10) \$24.95

(Bearings as above are double-sealed type; don’t use shielded as they leak and rapidly lose lubricant).



Stromberg 175CD-2 with spindle ball bearings fitted.
Bearing covers omitted for illustrative purposes.

Spindle bearings with 175CD needle.

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NEW ZEALAND

Coming up (but don’t hold your breath):

Wiring jets for fine tuning (and save \$\$\$).

Accelerator pump system for Stromberg CD and SU carburetors.

Universal anti-run-on (anti-dieseling) system.

Intake manifold temperature sensor/controller.