



STURMEY GEARED REAR HUBS & INTERNALS.

The hubs which Brompton supplies are intended EITHER as a source of internals for replacement of those in an existing hubshell OR as a hub to be built into a wheel: to help with the former the internals have been slightly slackened off by Brompton in the factory to facilitate extraction of the new internals from the hub. So if you intend to use such a hub, complete, for building into a wheel, make sure that the internals have been locked back into position, and then that the LH bearing cone & lock-nut(s) have been correctly re-set (not overtight, as the driver must be free to back-pedal easily).

Sturmey hubs & internals, compatibility of old and new.

Although the complete Sturmey BWR hub (wide-ratio, for 6-spd) can obviously be used to build a new wheel, the internals are suitable only for use in a wheel with the BWR shell.

If you are replacing internals from an early Sturmey 3-spd AW hub (using steel shell) with a new STURMEY 3-spd internal (from an alloy hubshell), note that there is less room on the driver of the new hub for the sprocket stack: the new stack consists of just two parts:

1. the flanged nylon chain-guide-disc (which doubles as a dustcap), and
2. a 3mm thick I3T or I4T sprocket,

retained by a circlip as usual. If the original sprocket is only 2.6mm thick, you should replace this with a new sprocket 3.0mm thick, available from Brompton (with a new sprocket it's advisable to fit a new chain too).

When replacing the original internals from an earlier AW hub (steel shell) or replacing a complete hub, the new axle is slightly longer at the RH end: so you should fit

1. the new gear-indicator chain (with two marks) instead of the original, and
2. the new chain-tensioner-nut instead of the original.

Extracting and re-fitting internals, Sturmey hub.

Remove the LH lock-nut(s) and cone and any spacer(s) from the LH end of the axle of the old hub. It's essential that you do this **before** unscrewing the internals from the shell. If the internals are still locked firmly into the hubshell, you will need a proprietary Sturmey C-spanner to release them from the hubshell: alternatively, you can use a suitable drift engaged on one of the three cut-outs.

After fitting the new internal, and securing it firmly into the shell, reassemble the LH lock-nut(s) and cone and any spacer(s) onto the LH end of the axle, and set these so as to remove play from the main bearings, but do not **over-**tighten, as it is important that the driver remains able to back-rotate completely freely relative to the axle and hubshell.

SRAM GEARED REAR HUBS & INTERNALS.

The hubs which Brompton supplies are intended EITHER as a source of internals for replacement of internals in an existing hubshell OR to be built, complete, into a wheel.

Extracting and re-fitting internals, Sram hub.

To extract the internals, release the outer of the two 22AF lock-nuts on the LH side, unscrew both nuts from the axle and remove the dustcap and LH bearing-cone. The internals can then be withdrawn from the RH side.

When feeding the internals back into a hubshell, it helps to rotate them backwards (anti-clockwise as seen from the right) to allow the pawls to slip into place on the ratchet. Once the internals are seating OK, feed the LH bearing-cone and dustcap into place, and screw on the lock-nuts. It is important to set the inner lock-nut so that bearings run freely, and with minimum play: once this is OK, lock the outer nut against the inner lock-nut.