Assembly Instructions

1. Bottom bracket dimensions

Please check first for correct dimensions of the b.b. shell: standard ***speed-drive*** fits bottom brackets with width from 67.5 up to 73mm. If the b.b. shell is shorter, please ask for wider cone rings or, in case of a longer shell, use the 10mm longer version, that is available.
Diameter: the unit is designed for BSA diameter (1.37"x24), but doesn't need the threads.

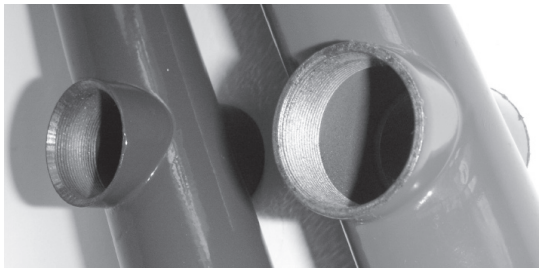


Fig. 1: Standard bottom bracket shells with and without chamfered edge.

2. Cone installation

Please note: ***speed- and high-speed-drive*** uses right-handed threading, ***mountain-drive*** uses left-handed threading.
Important: For installation, unscrew only the black nut, never the gray one!!

You must prepare the bottom bracket tube as shown in Fig. 3. It is very important that the diameter of the conical part is 39 - 39,5mm. To tighten the lockring, use the special box spanner and combine it with a torque wrench. Tighten this down very hard! Torque: 100-115 lb/ft (140-160Nm).
Do not use the cone installation with thin aluminum bottom bracket shells. The conical rings exert considerable force that could damage the shell.
Use a steel cone on the right side for aluminum b.b. shells and an aluminum cone for steel bottom bracket shells.

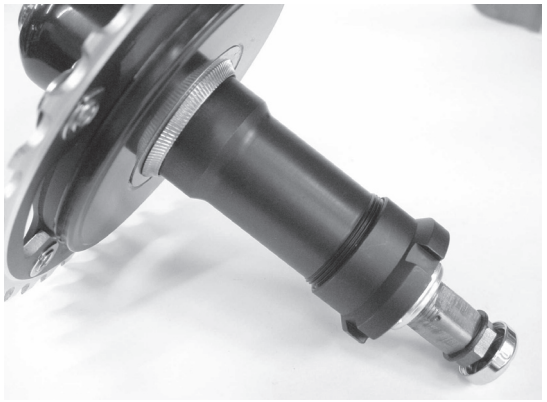


Fig. 2: Adapters for larger diameter of the b.b. shell. Please specify inner diameter when ordering.

3. Crank Assembly

The right side crank is usually preassembled by the manufacturer. For tightening the left crankarm, please use a torque wrench and tighten with a torque of 50-55Nm (35-40 lbft).
Very important: When disassembling a crankarm, always use the small tube (part of the tool sets) in combination with a standard puller to avoid damaging the thin shifting shaft!

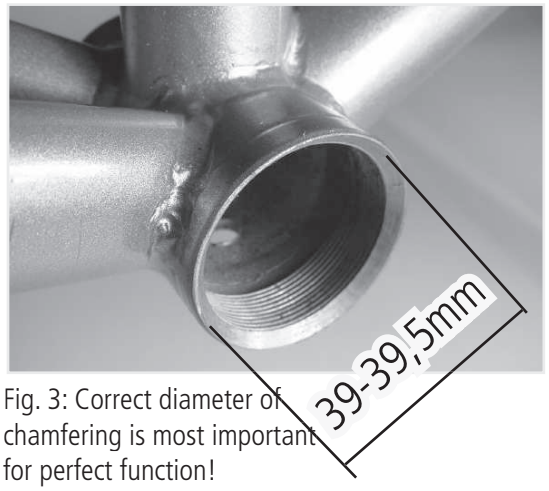


Fig. 3: Correct diameter of chamfering is most important for perfect function!

4. Chainring

If possible, always fit the chainring to the left side of the spider. Put washers between the spider and chainring in order to achieve a chainline that is 2mm narrower.
Please note: all chainrings provided by the maker can be mounted to the left side of the spider without disassembling the whole drive! Chainrings smaller than 40t. come with a turned out inner diameter.

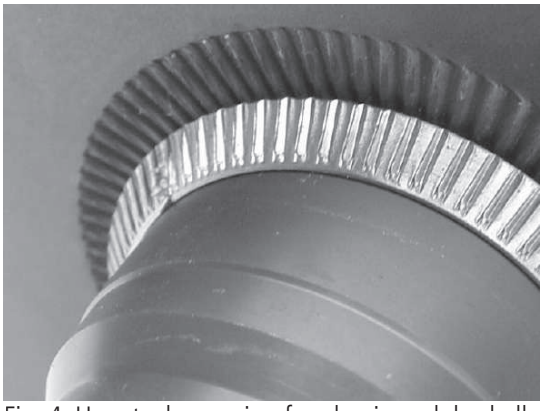


Fig. 4: Use steel cone ring for aluminum b.b. shell and aluminum cone ring for steel shell.

5. Gearshift button

- Screw in the gearshift button about two full turns.
- Push the button.
- Important: Turn the crank slightly, until the switch engages.
- Turn the gearshift button until it is about flush with the crank or protrudes a little bit (it can protrude up to 1mm if using easy-shift kickplates). It is very important that there is some play between the axle bolt and the gearshift button.
- Adjust the button and tighten Allen set-screw very firmly with the 1.5mm hex bit of the tool sets.

6. Some Maintenance Information

- Lubrication: Periodically (once or twice a year) remove the screw on the front and insert about 1/3 of the content of the syringe with special lube. Standard bicycle oil may do the job as well, but it won't last as long time as the special grease due to the only little pressure of the sealing.

- Bearing play: After several hundred miles of use, check for bearing play. The chainring must not have any play along the spindle axis. If there is any play, slightly tighten the self-locking nut on the left end of the axle. Never tighten the nut too firmly. Some play between the cranks and chainring in the direction of crank rotation is normal and necessary for proper engagement of the gears after switching.



Fig. 5: Use the box wrench in combination with a torque wrench.



Fig. 6: Hold the gear shift button with the small wrench and tighten it with the 1.5mm hex bit.

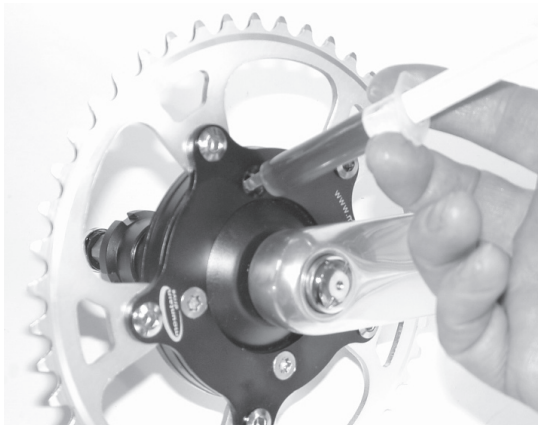


Fig. 7: Lubrication. insert about 1/3 of the syringe once or twice a year at the slot screw.

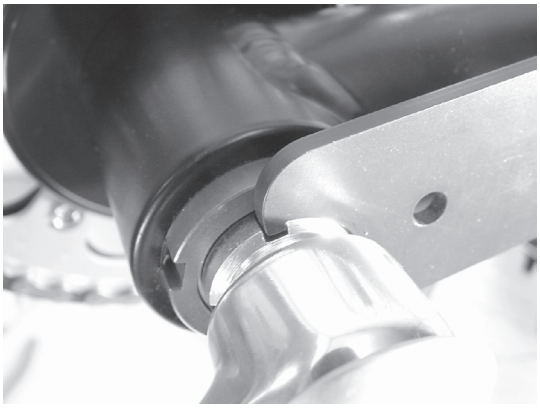
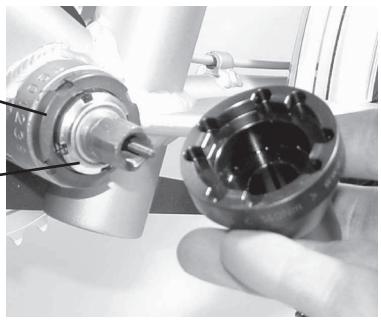


Fig. 8: Adjusting of gearing play. No preload!

Technical data

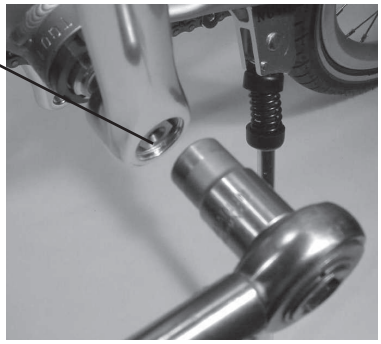
Tightening torques

- **Black nut on the left side:** 140 - 160 Nm (100 - 115 lbft)



- **Grey nut for adjusting gearing play** 0 Nm (0 lbft)
  No preload!!

- **Axle bolt** 50 - 55 Nm (35 - 38 lbft)



- **Gear shift button** 110 cNm (0.8 lbft)



- **Chainring screws** 12 - 14 Nm (8.5 - 10 lbft)
- **Steel cover** 8 Nm (5.5 lbft)

