

1. GENERAL INFORMATION

1.1 Scope of this leaflet

Congratulations on your purchase of a Sturmey-Archer internal gear hub. For the best performance, please follow instructions in this leaflet. Please contact your dealer if any problems are experienced with these products.

⚠ Riding the gear hub out of the adjustment may cause damage to the internal parts and possible malfunction !

This leaflet refers to the following 3-speed gear hubs:

- ⊙ Gear Hubs with Drum Brake : AB3, SAB3, X-RD3, XL-RD3
- ⊙ Gear Hubs : AW, S-RF3
- ⊙ Gear Hubs with Coaster Brake : AWC(II), S-RC3(II)
- ⊙ Gear Hubs for Band Brake : AWB, S-RB3

1.2 Lubrication

No routine lubrication is required. During a major service, the hub greases should be replenished or replaced especially for transmission parts of internal hub. Please contact your Sturmey-Archer dealer who is equipped to carry this out.

⚠ Under no circumstances should any lubricant be applied to the brake drum and brake shoes, as this may prevent the brake from functioning!

1.3 Gear Changing

Continue pedaling, but ease pressure on the pedals and select the gear required. If the bicycle is stationary simply select gear required.

1.4 Gear Ratio

1st Gear 0.75 || 2nd Gear 1.0 || 3rd Gear 1.33

1.5 Brake Operation

1.5.1 AB, SAB3, X-RD3, XL-RD3

To activate the brake, pull the appropriate brake lever on the handlebar. If the wheel does not run free, or cannot be locked by a full application of the brake, then adjustment is necessary.

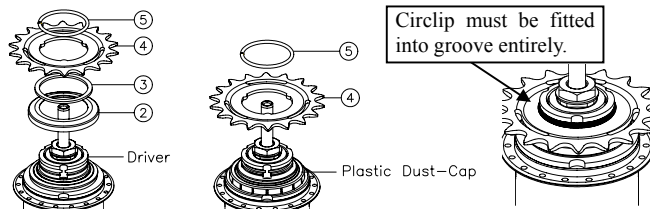
1.5.2 AWC(II), S-RC3(II)

The coaster brake is activated by back-pedaling. To apply maximum braking effort, begin brake application when the pedals are horizontal. When descending down a long steep slope it is advisable to apply front and rear brakes alternately to prevent the coaster brake from overheating.

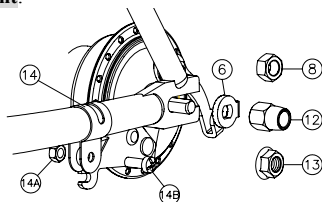
2. INSTALLATION

2.1 AB3, SAB3, X-RD3, XL-RD3

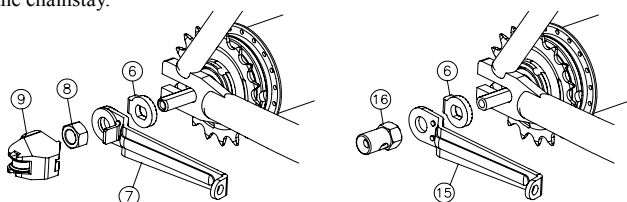
1. Build hub into complete wheel set.
2. Fit the dust-cup (2) · spacer (3) · sprocket (4) · circlip (5) onto the driver. For hubs already pre-fitted with a plastic dust-cap with built-in spacer, simply fit sprocket (4) and circlip (5) onto the hub driver.



3. Put the hub axle into the rear fork end and place the chain around the sprocket (4).
4. Fit the lock-washer (6) · dome nut (12) or hex nut (8) or flange nut (13) on the right side of the axle. **Screw the nut finger tight.**
5. Fit brake arm into brake arm clip (14) with nut (14A) and bolt (14B). **Do not tighten at this point.**

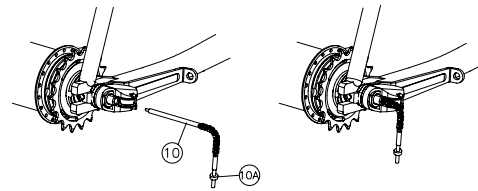


6. Locate the lock-washer (6) · fulcrum lever (7)/(15) and guide nut (16) or hex nut (8) and guide pulley set (9), **Do not tighten nuts at this point.** Align the wheel, tension the chain and ensure the fulcrum lever (7)/(15) is parallel with the chainstay.

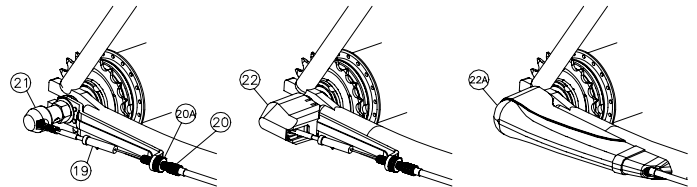


7. Tighten both axle nuts to **28Nm** and the brake arm clip (14) nut to **7Nm**.
8. Fit the indicator rod (10) into the axle and screw it finger tight. Put the

indicator cover (21)/(22)/(22A) on if necessary, but not snap at this point.



9. Ensure components are fitted to the right side of axle. Unscrew the indicator by up to half a turn if necessary to ensure easy fitment over the guide unit. Connect the indicator (10) to the cable connector (19).

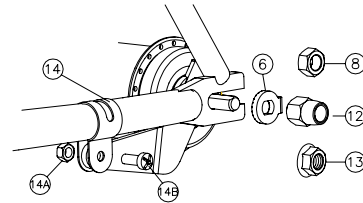


2.2 AW, S-RF3, AWB, S-RB3

See section 2.1. Step 5 does not apply.

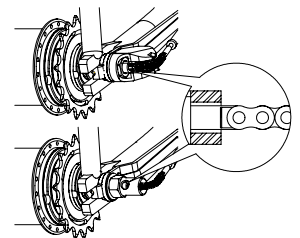
2.3 AWC(II), S-RC3(II)

See section 2.1. Step 5 is shown as diagram.



3. GEAR ADJUSTMENT

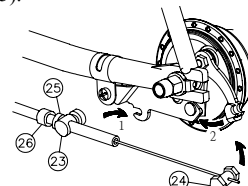
1. Move the indicator cover (21)/(22) for easy gear adjustment.
2. Make sure that no more than **2.5mm** of axle protrudes from the axle hex nut.
3. Select 2nd gear and turn the pedal crank forward to ensure the gear is engaged. Turn the cable adjuster (20) or cable connector (19) until the end of the indicator rod is level with the end of the axle, as show in diagram.
4. Tighten the cable-adjusting locknut (20-A) and indicator locknut (10-A) to lock in adjustment.
5. Select 3rd gear position, rotate the pedal crank, change back to 2nd gear and check adjustment. Retry the stages description above when the gear changing is not correct.
6. If there is an indicator cover (21)/(22)/(22A), fit it firmly onto the guide nut (16) or the guide pulley set (9).



4. BRAKE ADJUSTMENT

4.1 AB3, SAB3, X-RD3, XL-RD3

1. Fit the brake cable adjuster bolt (23) into brake arm. Depress the brake lever and then put the brake cable nipple (24) into the brake lever.
2. Slacken the brake adjuster locknut (25).
3. Turn the adjuster (26) counterclockwise until the brake is applied.
4. Rotate the adjuster (26) clockwise (about four revolutions) until the wheel just spins freely.
5. Tighten the locknut (25).



⚠ The brake adjustment should be checked or replaced if necessary before first using the bicycle and after removing or replacing the wheel.

Notice: During the first few miles brake linings “bed-in” and may require re-adjustment. Should braking efficiency become impaired beyond adjustment, the brake may need replacement. Contact your Sturmey-Archer dealer who is equipped to replace these.

4.2 AW, S-RF3, AWB, S-RB3

Check and adjust according to brake manufacturers manual.