

Instructions for 5-speed Internal Gear Hubs

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 the instructions in this manual. Please contact your dealer if any problems are experienced with these products. **Please be sure your hub is adjusted properly. All 5 speed wide range hubs have a small margin of error for adjustment. Riding the gear hub out of correct adjustment will cause damage to the internal parts and possible malfunction!**

This leaflet refers to the following 5-speed gear hub types :

- ◎ **Gear Hubs with Drum Brake : AB5, X-RD5, X-RD5(W), XL-RD5(W)**
- ◎ **Gear Hubs : X-RF5, S5, X-RF5(W), SRF5(W)**
- ◎ **Gear Hubs with Coaster Brake : S5C(W), S-RC5(W), X-RC5(W)**
- ◎ **Gear Hubs for Disk Brake : X-RK5, S-RK5(W), X-RK5(W)**

1.2 Lubrication

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

Under no circumstances should any lubricant be applied to the hub drum brake 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 the gear required.

1.4 Gear Ratio

X-RD5, X-RF5, X-RK5
, ABS, S5

1 st . Gear	0.67
2 nd . Gear	0.79
3 rd . Gear	1.0
4 th . Gear	1.27
5 th . Gear	1.5

X-RC5(W), S-RC5(W), S5C(W), SRF5(W), X-RF5(W),
XL-RD5(W), X-RD5(W), S-RK5(W), X-RK5(W)

1 st . Gear	0.625
2 nd . Gear	0.75
3 rd . Gear	1.0
4 th . Gear	1.33
5 th . Gear	1.6

1.5 Brake Operation

1.5.1 AB5, XRD5, X-RF5(W), SRF5(W), XL-RD5(W), X-RD5(W), X-RK5(W), S-RK5(W)

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, re-adjustment could be necessary.

1.5.2 X-RC5(W), S-RC5(W), S5C(W)

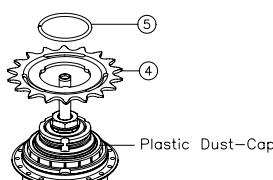
The coaster brake is activated by back-pedaling. To apply maximum braking effort, begin brake application when the pedals are horizontal. When descending a long steep slope it is advisable to apply front and rear brakes alternately to prevent the coaster brake from overheating.

2. INSTALLATION

2.1 AB5, X-RD5, X-RD5(W), XL-RD5(W)

1. Build hub into complete wheel .

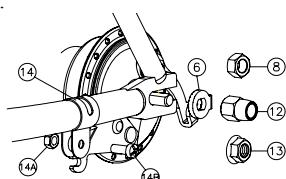
2. Fit the sprocket (4) & circlip (5) onto the driver.



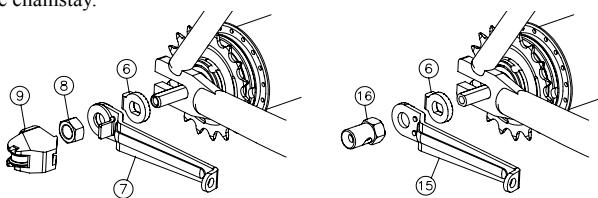
3. Put the hub axle into the rear fork end and place the chain around the sprocket (4).

4. Fit the lock-washers (6) & domed nuts (12) or hex nuts (8) or flange nuts (13) on the axle. **Screw the nuts finger tight.**

5. Fit brake arm into brake arm clip (14) with nut (14A) and bolt (14B). **Do not tighten at this point.**

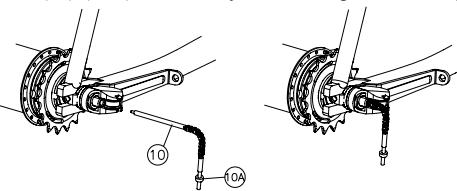


6. Locate the lock-washer (6) & fulcrum lever (7)/(15) and guide nut (16) or hex nut (8) and guide pulley set (9), **Do not tighten nuts at this point.** Align the wheel, tension the chain and ensure the fulcrum lever (7)/(15) is parallel with the chainstay.

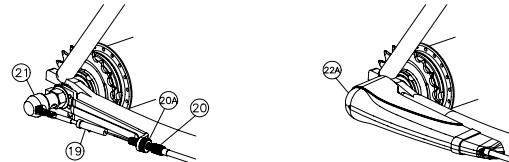


7. Tighten both axle nuts to **28Nm** and the brake arm clip (14) nut to **7Nm**.

8. Fit the indicator rod (10) into the axle and screw it finger tight. Fit the indicator cover (21)/(22A) if necessary, but do not push on firmly at this point.



9. Ensure all components are fitted to the right side of axle. Unscrew the indicator rod 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).

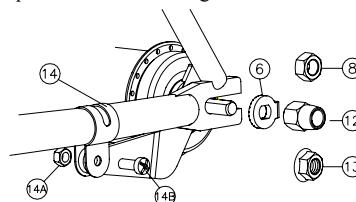


2.2 X-RF5, S5, X-RF5(W), SRF5(W)

See section 2.1. Step 5 does not apply.

2.3 X-RC5(W), S-RC5(W), S5C(W)

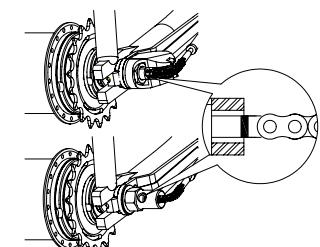
See section 2.1. Step 5 is as shown in diagram.



3. GEAR ADJUSTMENT

Please be sure your hub is adjusted properly. All 5 speed wide range hubs have a small margin of error for adjustment. Riding the gear hub out of correct adjustment will cause damage to the internal parts and possible malfunction!

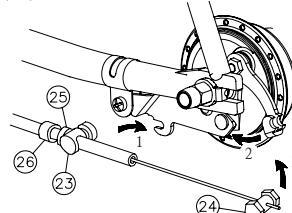
- Move the indicator protection cover (21)/(22A) for easier gear adjustment.
- Make sure that no more than **2.5mm** of axle protrudes from the axle hex nut.
- Select 2nd gear and turn the pedal crank forward to ensure the gear is engaged. Turn the cable adjuster (20) or cable connector (19) until the coloured mark of the indicator rod is level with the end of the axle, as show in diagram.
- Tighten the cable-adjusting locknut (20-A) and indicator locknut (10-A), to lock in adjustment.
- Select 5th gear position, rotate the pedal cranks, change back to 2nd gear and check adjustment. Repeat the stages described above when gear changing is incorrect.
- If there is an indicator cover (21)/(22A), fit it now firmly onto the guide nut (16) or the guide pulley set (9).



4. BRAKE ADJUSTMENT

4.1 AB5, X-RD5, X-RD5(W), XL-RD5(W)

- 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.
- Slacken the brake adjuster locknut (25).
- Turn the adjuster (26) counterclockwise until the brake is applied.
- Rotate the adjuster (26) clockwise (about four revolutions) until the wheel just spins freely.
- Tighten the locknut (25).



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

Note: During the first few miles brake linings and cables "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 X-RF5, S5, X-RK5, X-RF5(W), SRF5(W), X-RK5(W), S-RK5(W)

Check and adjust according to brake manufacturers manual.