

Instructions for S80[W] 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 instructions in this leaflet. Please contact your local Sturmey-Archer dealer if any problems are experienced with the product.

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

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 the 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 or drum brake shoes, as this may prevent the brake from functioning.

1.3 Gear changing

Stop pedaling and select the gear required, then resume pedaling. If the bicycle is stationary simply select the gear required.

1.4 Gear ratios

Sturmey-Archer S80[W] 8-speed hub gears have the following ratios:

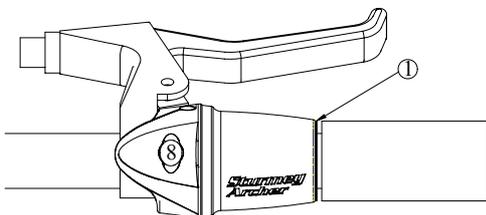
1 st gear	1.0	2 nd gear	1.30
3 rd gear	1.48	4 th gear	1.69
5 th gear	1.92	6 th gear	2.20
7 th gear	2.50	8 th gear	3.25

1.5 Brake operation

To activate the brake, pull the appropriate brake lever on the handlebar. If the brake is rubbing or cannot be locked by a full application of the lever, then brake adjustment is necessary (See section 5).

2. SHIFTER INSTALLATION

- (1) Select 8th gear. Position the shifter onto the right side of the handlebar. Ensure enough space is left to fit the end grip and leave a 0.5mm space between the sleeve spacer (1) and the end grip.
- (2) Fix the twist shifter using a 3mm allen key to tighten the clamp bolt to a torque of **1.5-2.5 Nm**. Mount the end grip and leave a gap to allow free rotation.



- (3) Pass through the inner cable into outer casing and connect to the gear hub (See section 3).

◆**Note: Avoid sharp bends and kinks in the inner cable.**

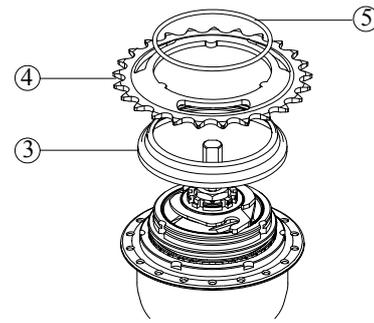
- (4) Readjust the relative position between the brake lever and the shifter to allow optimum function..

3. GEAR HUB INSTALLATION

3.1 X-RD8(W) with drum brake.

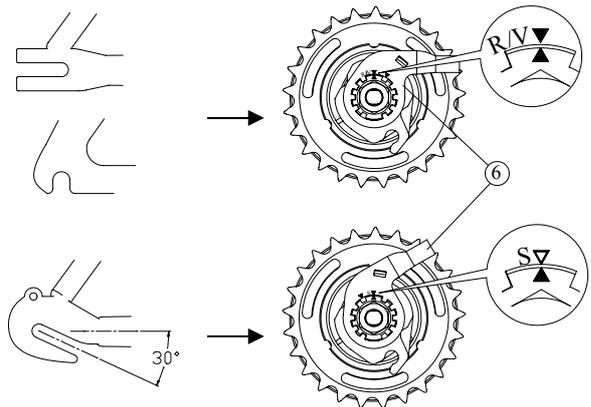
- (1) Fit the dust cap (3), sprocket (4), circlip (5) onto the driver.

◆**Note: dished sprocket must to dished to the inside of the hub.**

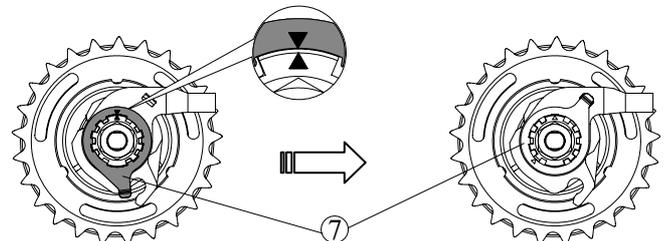


- (2) Fit the fulcrum lever (6), and align the red mark.

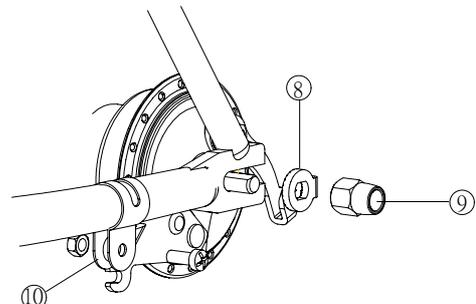
◆**Note: There are two ways of fitting ,depending upon type of fork ends.**



- (3) Align the two red marks and fit the fulcrum lever clip (7), and then turn the clip clockwise until it is located.

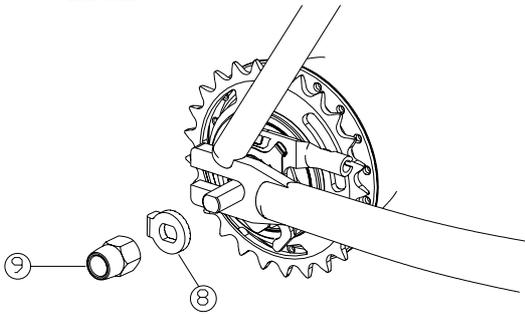


- (4) Put the hub axle into the rear fork ends and place the chain around the sprocket.
- (5) Fit the lock-washer (8) \ domed-nut (9) on the left of the axle. **Screw the nut finger tight.**
- (6) Fit brake arm into brake clip (10) with nut and bolt. **Do not tighten at this point.** (X-RF8(W), X-RK8(W) and X-RR8(W) skip this step.)

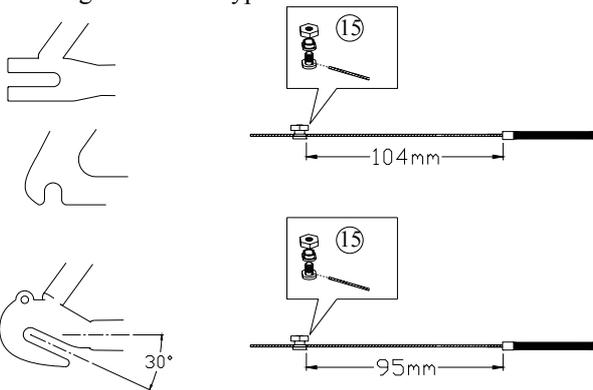


- (7) Locate the lock-washer (8) and dome-nut (9). **Do not tighten axle nuts at this point.** Align the wheel and tension the chain.

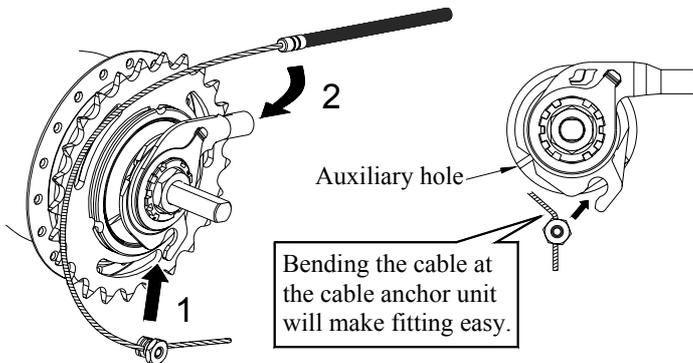
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- (8) Tighten the domed-nut (9) to **28Nm** and tighten the brake arm clip screw to **7Nm**.
- (9) Fix the cable with the cable-anchorage unit (15) and tighten it to torque **3-4 Nm**. Fix the correct distance as shown, according to fork end type.



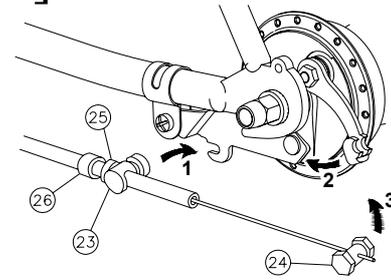
- (10) Bring the cable around the pulley with the nut of the cable-anchorage unit facing to the outside (toward the fork end) and then slide the flat section of the cable-anchorage unit into the slot of the pulley. Insert the cable outer casing into the notch of the fulcrum lever. Check the cable is correctly seated inside the pulley groove.



There is an auxiliary hole by the groove. You can insert a 2mm allen key or a #14 spoke in the pulley and then turn the pulley clockwise to help fit the cable-anchorage unit.

- (11) Locate the brake-adjusting spigot (23) into brake arm. Depress the hub brake lever and then put the brake cable nipple (24) into the brake lever.

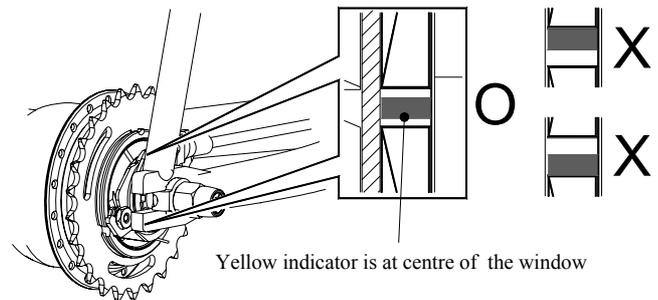
◆ **Note:** To maintain good braking efficiency avoid sharp bends and kinks in the brake cable.



- 3.2 Hub types X-RF8(W), X-RK8(W), X-RR8(W)
See section 3.1. Step 6 and step 11 do not apply.

4. GEAR ADJUSTMENT

- (1) Move the shifter from gear number 8 to gear number 4.
- (2) Turn the cable adjuster of shifter until the **window is aligned with the yellow indicator and the yellow indicator is at the centre of the window**.
- (3) Re-select gear number 8 and then change back to gear number 4. Rotate the pedal crank a full turn. **Check again if the window is aligned with the yellow indicator and the yellow indicator is at the centre of the window.**
- (4) Repeat instructions 1 to 3 if yellow arrow is not aligned within the yellow indicator centre between the two red lines of fulcrum lever.



Yellow indicator is at centre of the window

◆ **Note:** If all 8 gears cannot be obtained after following above instructions, contact your Sturmey-Archer dealer for assistance.

5. BRAKE ADJUSTMENT

5.1 X-RD8(W)

- (1) Loosen the brake adjuster locknut (25).
- (2) Turn the adjuster (26) until the brake is applied.
- (3) Loosen the adjuster until the wheel just spins freely.
- (4) Tighten the locknut.

The brake adjustment must be checked before first using the bicycle and after removing or replacing the wheel.

◆ **Note:** After riding the first few miles brake linings "bed-in" and may require re-adjustment. Should braking efficiency become impaired beyond adjustment, brake shoes and linings may need replacement. Contact your Sturmey-Archer dealer who is equipped to replace these

5.2 Hub types X-RF8(W), X-RK8(W), X-RR8(W)

Check and adjust brakes according to the original brake manufacturer's manual.