

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 transmitted 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

Stop pedal and select the gear required, then go on pedaling. If the bicycle is stationary simply select gear required.

1.4 Gear Ratio

Sturmey-Archer 8-speed hub gears have the following ratios:

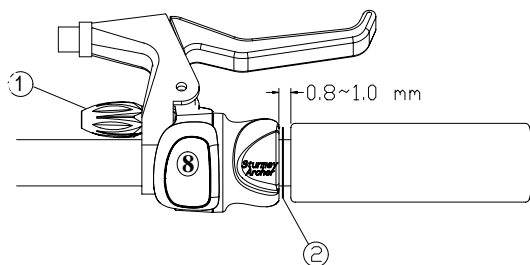
1 st gear	1	2 nd gear	1.28
3 rd gear	1.45	4 th gear	1.64
5 th gear	1.86	6 th gear	2.10
7 th gear	2.38	8 th gear	3.05

1.5 Brake Operation

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 (See section 5).

2. SHIFTER INSTALLATION

- (1) Select 8th gear. Choose a proper mounting angle and insert it into the right side of the handlebar. Ensure enough space to fit the end grip and plastic spacers (2).
- (2) Ensure that no interaction between the cable adjuster (1) and the brake lever.
- (3) To fix the twist shifter by a 3mm Allen key to screw the clamp bolt a torque during **1.5-2.5 Nm**. Set the end grip and keep 0.8-1.0mm gap for providing freely rotating.



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

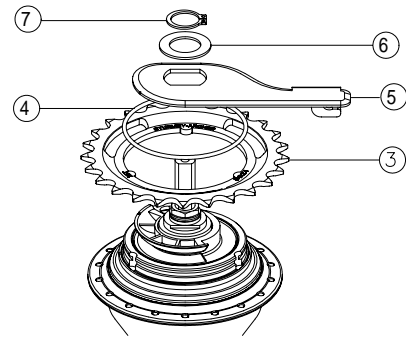
Notice: Avoid sharp bends and kinks in the inner cable.

- (5) Readjust the related position if there exists interaction between the brake lever and the shifter.

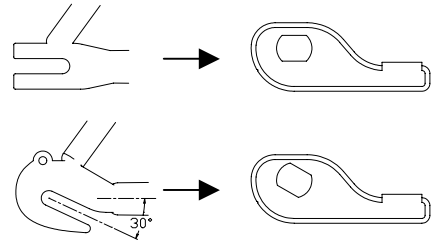
3. GEAR HUB INSTALLATION

3.1 X-RD8

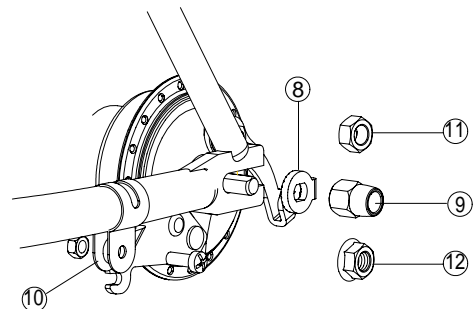
- (1) Fit the sprocket (3), cir-clip (4), fulcrum lever (5), washer (6) and C-clip (7) onto the driver.



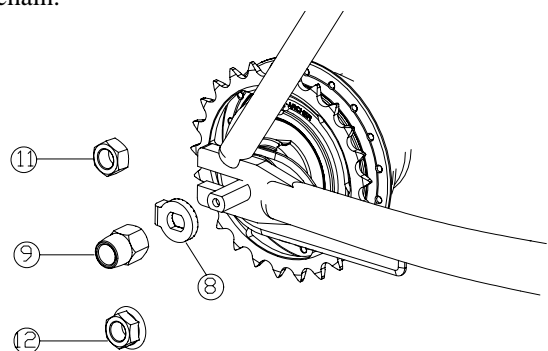
- (2) Ensure that fulcrum lever type is correct.



- (3) Put the hub axle into the rear fork end and place the chain around the sprocket.
- (4) Fit the lock-washer (8), dome-nut (9) on the left of the axle. **Screw the nut finger tight.**
- (5) Fit brake arm into brake clip (10) with nut and bolt. **Do not tighten at this point.**

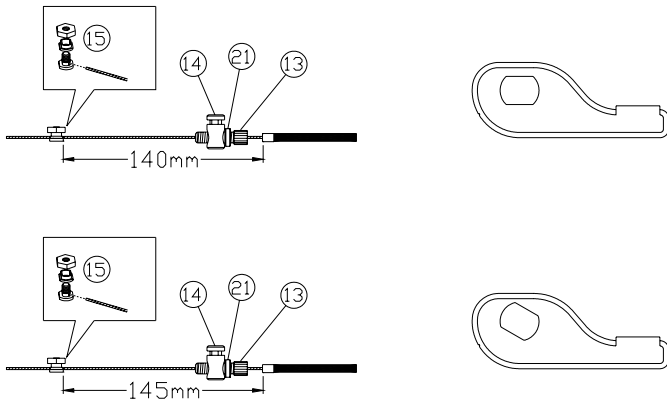


- (6) Locate the lock-washer (8) and dome-nut (9). **Do not tighten nuts at this point.** Align the wheel and tension the chain.

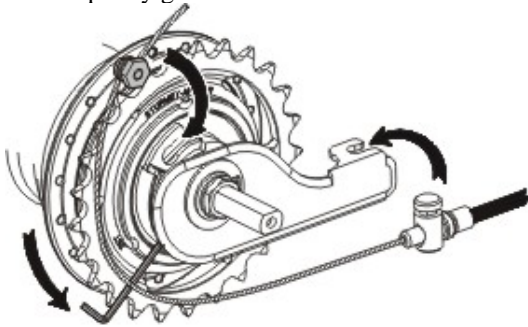


- (7) Tighten the axle nut to **28Nm** and tighten the brake arm clip screw to **7Nm**.
- (8) Screw the cable-adjusting screw (13) through the cable-adjusting locknut (21) and cable-adjusting spigot (14). Fix the cable with the cable-anchor unit (15) and tighten it to torque **2.5-3 Nm**. Set a proper distance as shown.

Notice This step may be skipped if it is all set.

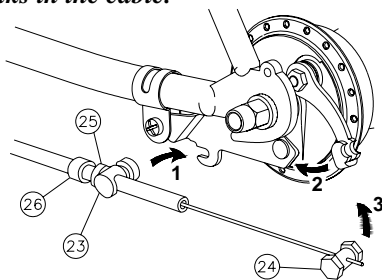


- (9) Bring the cable around to the pulley. Insert a 2mm Allen key or a #14 spoke in the pulley, and then turn the pulley counterclockwise, hold so that the nut of the cable-anchor unit is facing to the outside (toward the fork end), and then slide the flat section of the cable-anchor unit into the slot of the pulley. Let the cable-adjusting spigot fit into the notch of the fulcrum lever. Check the cable is correctly seated inside the pulley guide.



- (10) Locate the brake-adjusting spigot (23) into brake arm. Rotate the brake lever and then put the brake cable nipple (24) into the brake lever.

Notice: To maintain good braking efficiency avoids sharp bends and kinks in the cable.

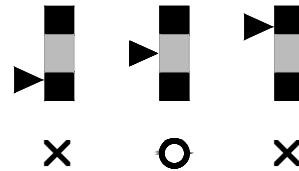
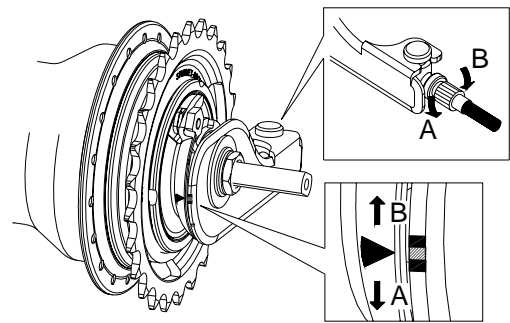


3.2 X-RF8, X-RK8, X-RR8

See section 3.1. Step 5 and step 10 do not apply.

4. GEAR ADJUSTMENT

- Select the shifter from gear number 8 to gear number 4.
- Turn the cable-adjusting screw (13) or cable adjuster of shifter until the **yellow arrow of the pulley is aligned within the yellow indicator center between the two red lines of the fulcrum lever**. Tighten the cable-adjusting locknut (21) to lock-in the gear changing system.
- Again select shifter first to gear number 8, and then change back to gear number 4. Rotate the pedal crank a fully around. **Re-check if the yellow arrow of the pulley is indeed aligned within the yellow indicator center between the two red lines of fulcrum lever.**
- Repeat instructions 1 through 3 if yellow arrow is not aligned within the yellow indicator center between the two red lines of fulcrum lever.



Notice: If attention to the above does not enable all 8 gears to be obtained, please contact your Sturmey-Archer dealer for assistance.

5. BRAKE ADJUSTMENT

5.1 X-RD8

- Slacken the brake adjuster locknut (25).
- Turn the adjuster (26) until the brake is applied.
- Slacken the adjuster until the wheel just spins freely.
- Tighten the locknut.

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

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

5.2 X-RF8, X-RK8, X-RR8

Check and adjust according to brake manufacturers manual.