

Instructions for C50 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 correct 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

Ease pedaling and select the gear required. If the bicycle is stationary simply select the gear required.

1.4 Gear ratios

Sturmey-Archer C50 5-speed hub gears have the following ratios:

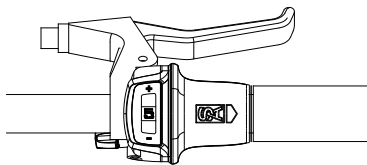
1 st gear	0.64	2 nd gear	0.8
3 rd gear	1.0	4 th gear	1.25
5 th gear	1.56		

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 5th 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 two sleeve spacers and the end grip.
- (2) Fix the twist shifter using a 3mm Allen key to tighten the clamp bolt to a torque of **2 - 3 Nm**. Mount the end grip and leave a gap to allow free rotation.



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

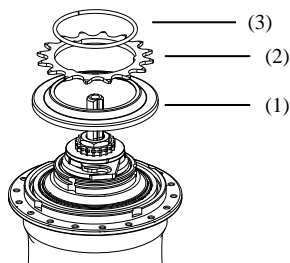
♦**Note: Avoid sharp bends and kinks in the inner cable.**

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

3. GEAR HUB INSTALLATION

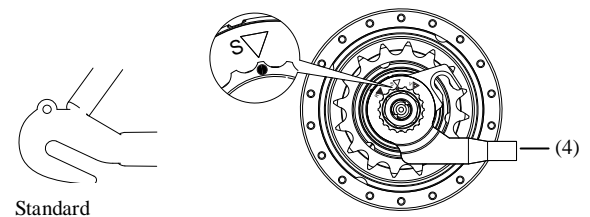
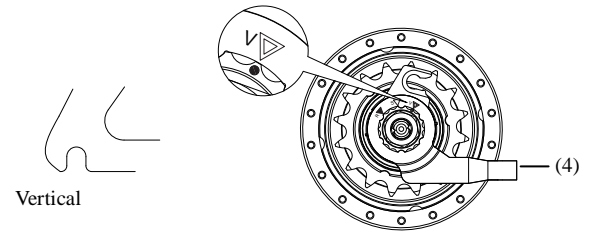
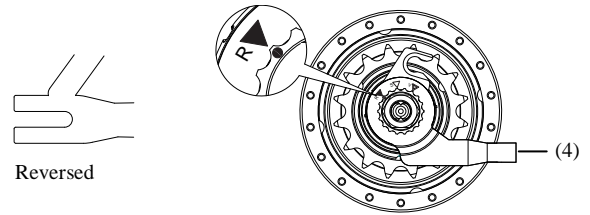
3.1 RXL-RD5 and RX-RD5 with drum brake.

- (1) Fit the dust cap (1), sprocket (2), and circlip (3) onto the driver.

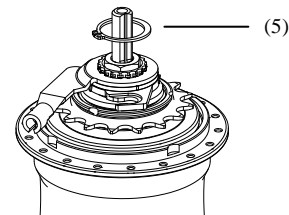


- (2) Align the red mark and then fit the fulcrum lever (4)

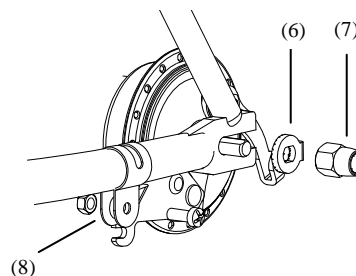
♦**Note: There are three ways of fitting, depending upon type of fork ends.**



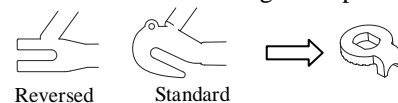
- (3) Fit the C-clip (5)



- (4) Place the chain around the sprocket and put the hub axle into the fork ends.
- (5) Fit the lock-washer (6) and dome-nut (7) on the left of the axle. **Screw the nut finger tight.**
- (6) Fit brake arm into brake clip (8) with nut and bolt. **Do not tighten at this point.** (RX-RF5 and RX-RK5 skip this step.)



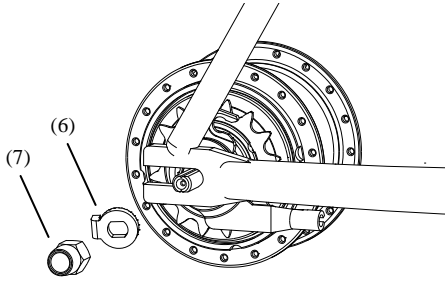
Fit proper lockwashers according to dropout type.



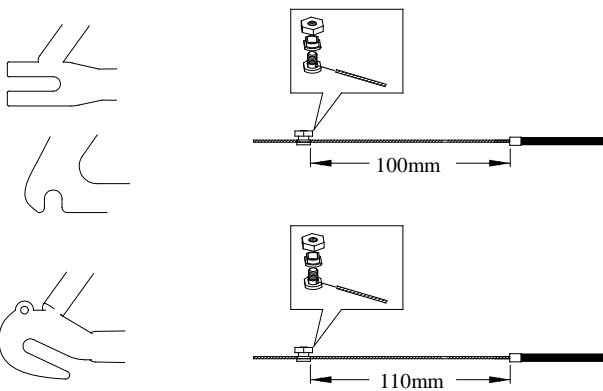
- (7) Locate the lock-washer (6) and dome-nut (7) on the right

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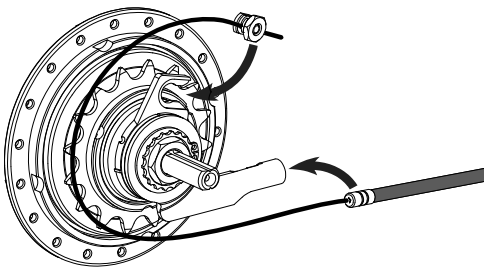
side. **Do not tighten axle nuts at this point.** Align the wheel and tension the chain.



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



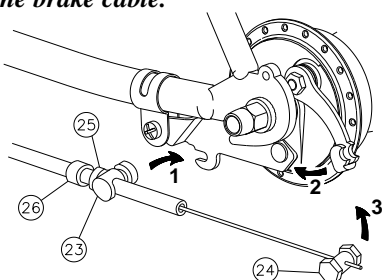
- (10) Bring the cable around the pulley with the nut of the cable-anchorage unit facing to the outside (toward the fork end) and then slide the flat section of the cable-anchorage unit into the slot of the pulley. Insert the cable outer casing into the notch of the fulcrum lever. Check the cable is 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 the 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 RX-RF5, RX-RK5

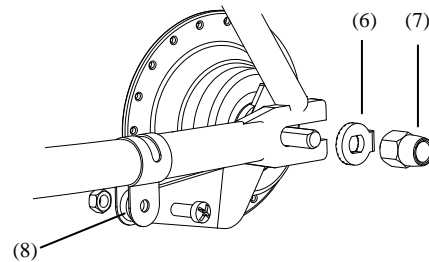
See section 3.1. Step 6 and step 11 do not apply.

3.2 Hub types RX-RF5

See section 3.1. Step 6 is as following diagram. Step 11 does not apply.

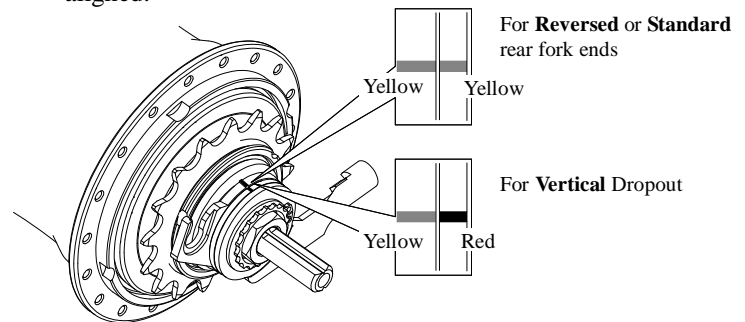
3.3 Hub type RX-RC5

See section 3.1. Step 6 is shown as diagram



4. GEAR ADJUSTMENT

- (1) Move the shifter from gear number 5 to gear number 2.
- (2) If the bicycle has reversed or standard rear fork ends, rotate the shifter cable adjuster, until the two yellow marks at the hub are aligned. If the bicycle has vertical dropouts, the yellow mark on the cable drum, must be aligned with the red mark on the cone locator.
- (3) Select gear 5 and then change back to gear 2. Rotate the pedal cranks a full turn and then check again to ensure that the two indicator marks are still aligned.
- (4) Repeat instructions 1 to 3 if yellow indicators are not aligned.



◆**Note:** If all 5 gears cannot be obtained after following above instructions, contact your Sturmey-Archer dealer for assistance.

5. BRAKE ADJUSTMENT

5.1 RXL-RD5 and RX-RD5

- (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 shoe and linings may need replacement. Contact your Sturmey-Archer dealer who is equipped to replace these

5.2 Hub types RX-RF5, RX-RK5

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