

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

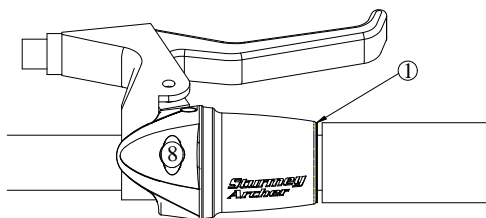
1 st gear	1.0	2 nd gear	1.30
3 rd gear	1.48	4 th gear	1.69
5 th gear	1.92	6 th gear	2.20
7 th gear	2.50	8 th gear	3.25

1.5 Brake Operation

To activate the brake, pull the appropriate brake lever on the handlebar. If the 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 leave a 0.5mm space between the sleeve spacer (1) and the end grip.
- (2) 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 a gap for providing freely rotating.



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

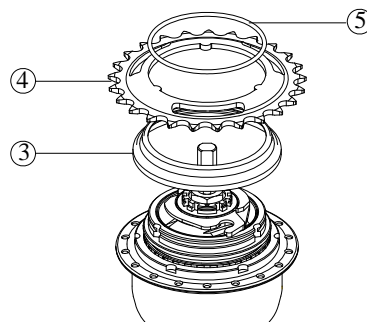
◆Notice: Avoid sharp bends and kinks in the inner cable.

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

3. GEAR HUB INSTALLATION

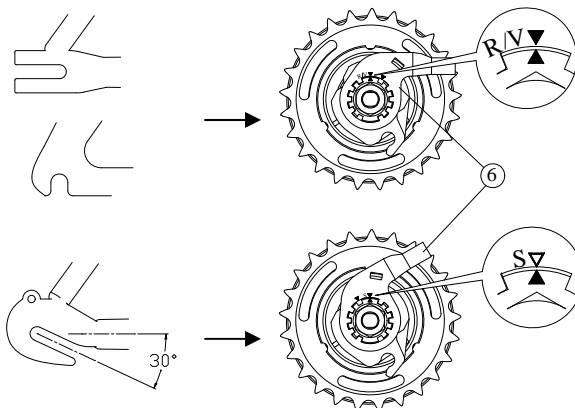
3.1 X-RD8(W)

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

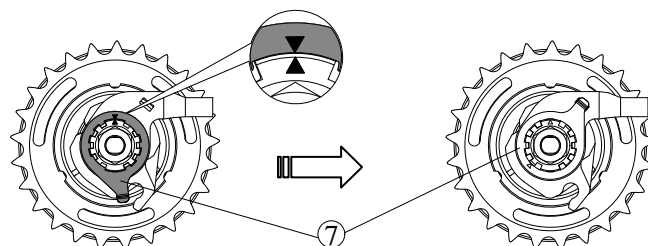


- (2) When fit the fulcrum lever (6), align the red mark

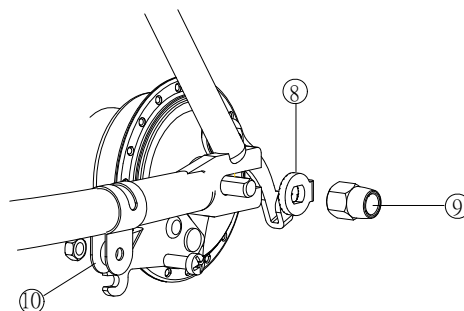
◆Notice: There are two conditions for fitting.



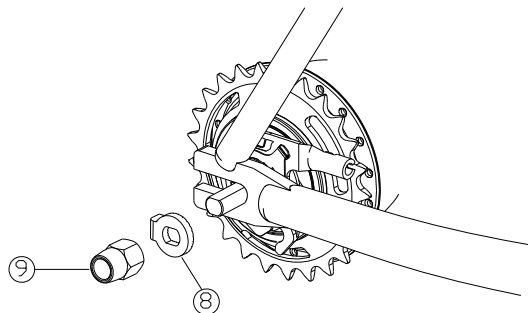
- (3) Align the two red marks and fit the fulcrum lever clip (7), and then turn the clip clockwise until it is clip-on.



- (4) Put the hub axle into the rear fork end and place the chain around the sprocket.
- (5) Fit the lock-washer (8) \ dome-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.)

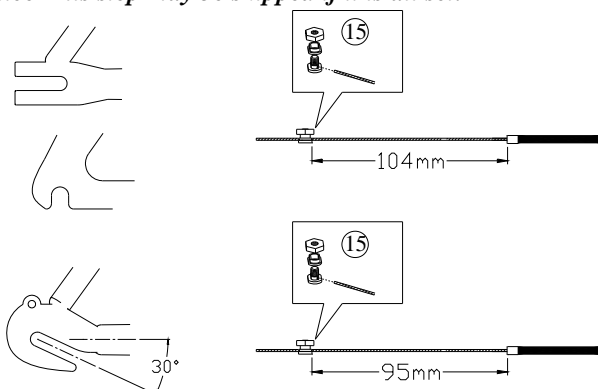


- (7) Locate the lock-washer (8) and dome-nut (9). **Do not tighten nuts at this point.** Align the wheel and tension the chain.

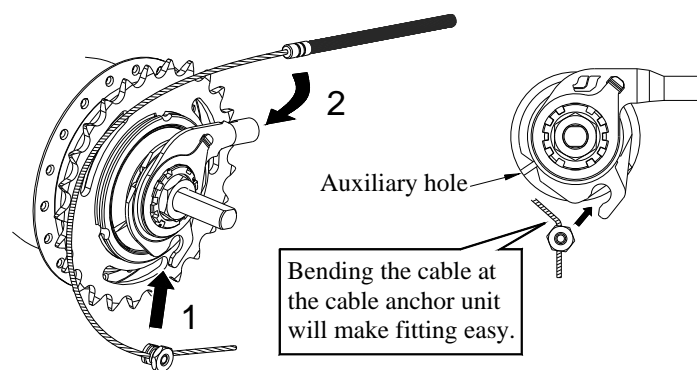


- (8) Tighten the dome-nut (8) to **28Nm** and tighten the brake arm clip screw to **7Nm**.
- (9) Fix the cable with the cable-anchor unit (15) and tighten it to torque **3-4 Nm**. Set a proper distance as shown.

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



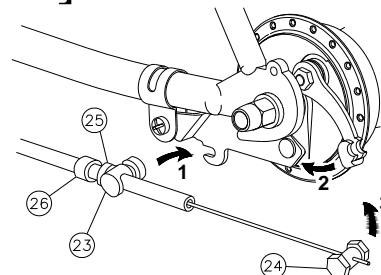
- (10) Bring the cable around to the pulley and set the nut of the cable-anchor unit is facing to the outside (toward the fork end), and then slide the flat section of the cable-anchor unit into the slot of the pulley. Let the cable casing fit into the notch of the fulcrum lever. Check the cable is correctly 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 you fit the cable-anchor unit or take it off.

- (11) 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.

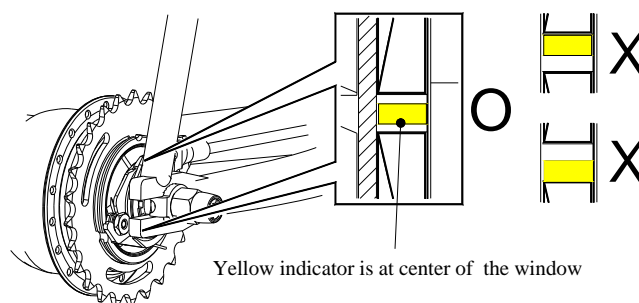


3.2 X-RF8(W), X-RK8(W), X-RR8(W)

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

4. GEAR ADJUSTMENT

- (1) Select 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 center of the window**.
- (3) 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 window is aligned with the yellow indicator and the yellow indicator is at the center of the window**.
- (4) 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(W)

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

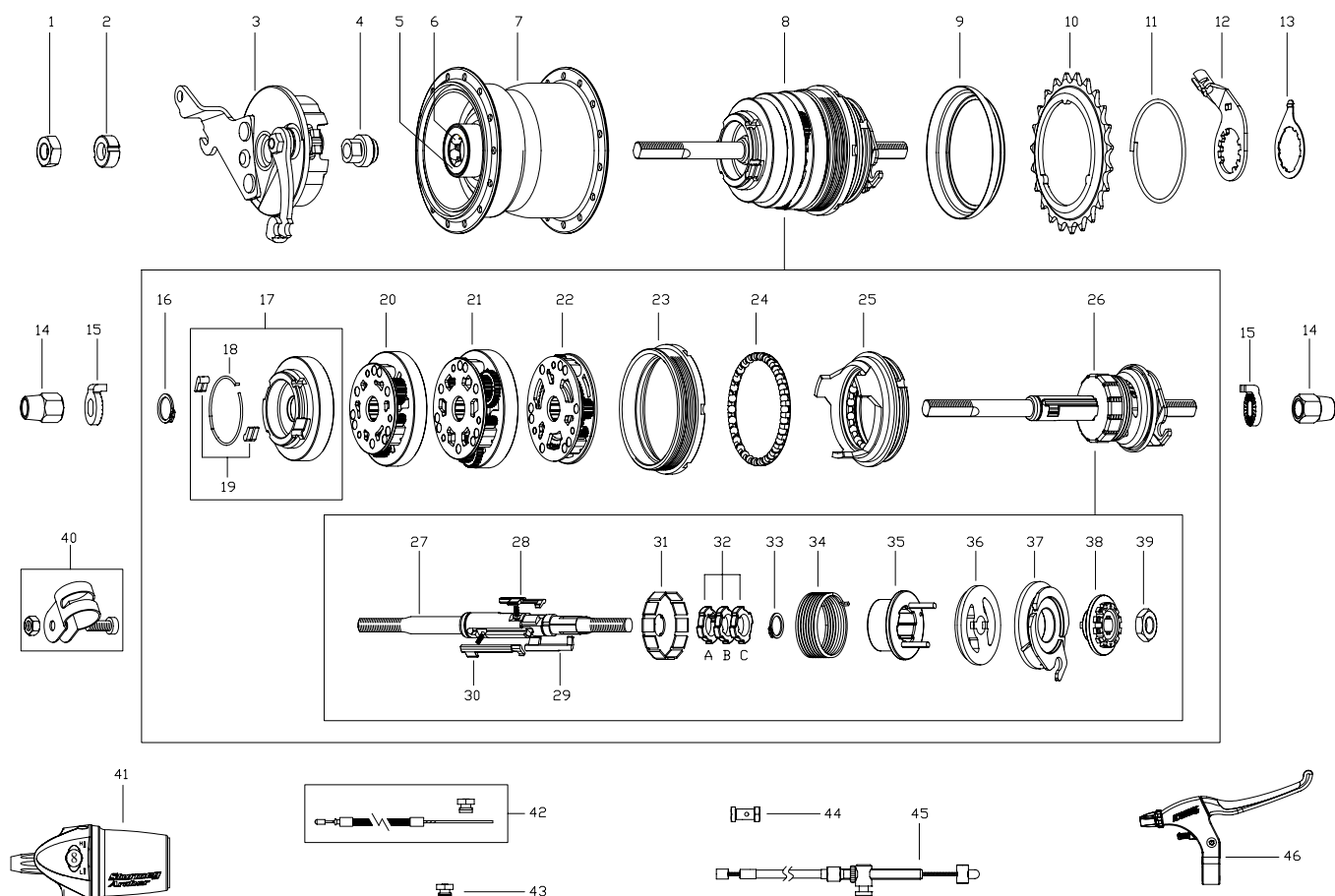
⚠**The brake adjustment must be checked or replaced if necessary before first using the bicycle, and after removing or replacing the wheel.**

◆**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(W), X-RK8(W), X-RR8(W)

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

Part List – X-RD8(W) Eight Speed Hub



Item Sales

No.	No.	Description
1	HMN407	Cone Locknut-6.4t
2	HSA371	Cone Adjuster
3	HSB429	70mm Alloy Rear Brake Plate Assy.
4	HSA379	L.H. Cone
5	HSA241	Cone Dustcap
6	HSA284	L.H. Ball Cage Assy.-6.4mm Ball
7	HSA678	X-RD8(W) Hub Shell Assy. 36H
8	HSX150	Gear Internal Assembly Complete
9	HSL882	Dust Cap
10	HSL822	25T Sprocket, 1/8", Dished
	HSL867	25T Sprocket, 3/32", Dished
	HSL821	23T Sprocket, 1/8", Dished
	HSL868	23T Sprocket, 3/32", Dished
	HSL897	20T Sprocket, 3/32", Flat
11	HSL880	Sprocket Circlip
12	HSJ956	Fulcrum Lever
13	HSJ957	Fulcrum Lever Clip
14	HMN388	Dome Nut 13/32", Zinc Coating
15	HMW518	Lockwasher 4.0t-9.5mm Slot
	HMW534	Lockwasher for vertical dropout

Item Sales

No.	No.	Description
16	HSL901	C-clip No. 15
17	HSA679	81T Gear Ring Assembly
18	HSA450	Pawl Spring
19	HSH482	Pawl
20	HSA680	90T Gear Ring Assembly
21	HSA681	93T Gear Ring Assembly
22	HSA682	Planet Cage Assembly
23	HSA683	Ball Ring
24	HSA633	Ball Cage Assembly
25	HSA685	Driver Assembly
26	HSA686	Axle and Control Assembly
27	HSA688	Axle-185mm
28	HSA690	Control Pawl-S w/Spring
29	HSA691	Control Pawl-M w/Spring
30	HSA692	Control Pawl-L w/Spring
31	HSA693	Spring Bracket
32	HSA694	Cam Set
33	HSL902	C-clip No.13
34	HSA695	Torsion Spring
35	HSA696	Shift Actuator

Item Sales

No.	No.	Description
36	HSA697	R.H. Cone
37	HSJ972	Cable Drum
38	HSA698	Cone Locator
39	HMN405	Locknut-4.8t
40	HSL767	Brake Arm Clip Assembly-15.5mm
	HCB101	Brake Arm Clip Assembly-15.9mm
41	HSJ955	TSS82 Shifter w/Cable
42	HSJ973	TSS82 Cable with Pinch Bolt Assy. 2000x2250mm
43	HSL802	Shifter Cable Pinch Bolt Assembly
44	HSK715	Brake Cable Pinch Bolt Assembly
45	HSK736	Brake Cable Assembly, 1600mm
	HSK730	Brake Cable Assembly, 900mm
46	HSK742	Brake Lever BLS80 RH
	HSK743	Brake Lever BLS80 LH

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