

## 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 dealer if any problems are experienced with these products.

**△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 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

Continue pedaling, but ease pressure on the pedals and select the gear required. If the bicycle is stationary simply select gear required.

### 1.4 Gear Ratio

1<sup>st</sup> Gear 0.75 | 2<sup>nd</sup> Gear 1.0 | 3<sup>rd</sup> Gear 1.33

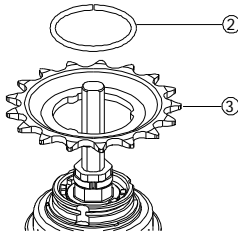
### 1.5 Brake Operation

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.

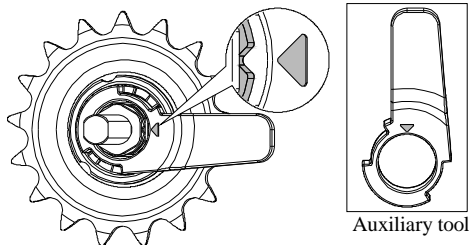
## 2. INSTALLATION

### 2.1 RX-RD3 3-speed hub with drum brake

1. Build hub into wheel.
2. Assemble the sprocket (3) and circlip (2).

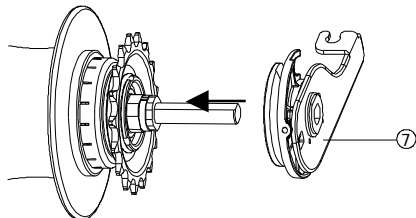


3. Fit auxiliary tool on driver and then turn tool to be in 3<sup>rd</sup> gear position. (Turn tool clockwise until the yellow marking is aligned with washer opening.)



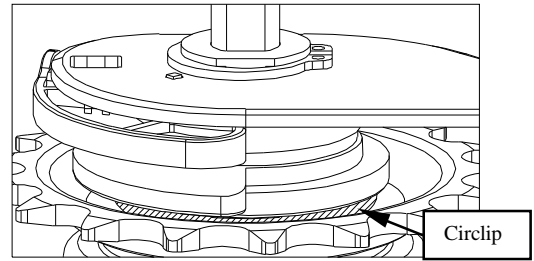
**Note : If it jams during turning of the tool, turn the sprocket clockwise until the tool rotates freely.**

4. Fit fulcrum lever set (7) on the hub.

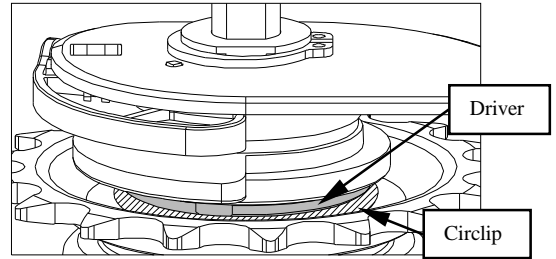


**△ Make sure the hub is still in 3<sup>rd</sup> gear position. If it is not, repeat step 3.**

**△ Incorrectly installed fulcrum lever set will allow the driver to be seen, thus repeat steps 3 to 4.**

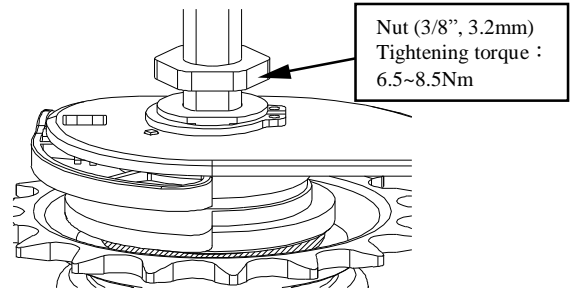


**Correct** (only the circlip can be seen)

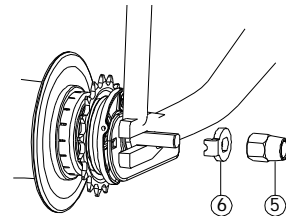


**Incorrect** (the driver can be seen)

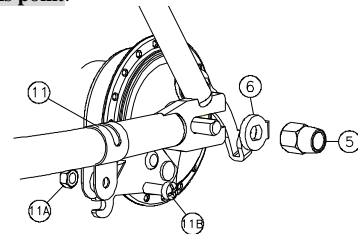
5. Place nut onto axle to fix fulcrum lever set. (The thickness of nut is 3.2mm, and the tightening torque is **6.5~8.5Nm.**)



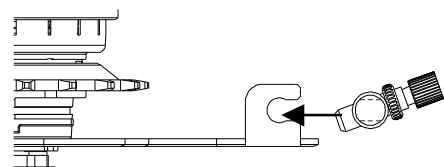
6. Place the wheel into frame and place the chain around the sprocket. Fit the lock-washer (6) · dome-nut (5) on the right side of the axle. **Screw the nut finger tight.**



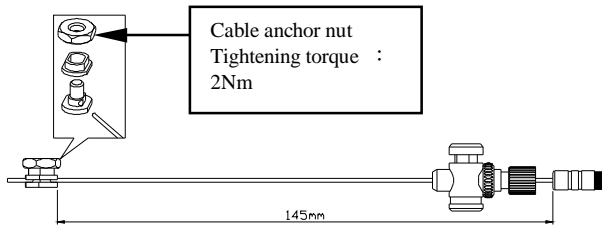
7. Fit the lock-washer (6) and dome-nut (5) on the left side of the axle.
8. Fit brake arm into brake clip (11) with nut (11A) and bolt (11B). **Do not tighten at this point.**



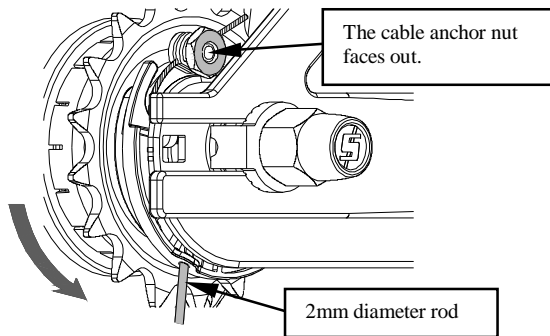
9. Align the wheel and tension the chain. Tighten the dome-nut to **28Nm** and tighten the brake arm clip screw to **7Nm**.
10. Make sure the shifter is in 3<sup>rd</sup> gear position.
11. Slide the cable adjuster guide onto the fulcrum lever.



12. Fix the cable with the cable anchor unit. Set a proper distance as shown., then tighten the cable anchor nut to **2Nm**.



13. Insert a 2mm diameter rod into guide hole and turn fulcrum lever pulley counter-clockwise, take the shifter cable and loop the cable underneath and around the fulcrum lever pulley and fix the cable bolt into position with the cable anchor nut face out. Then remove the rod.

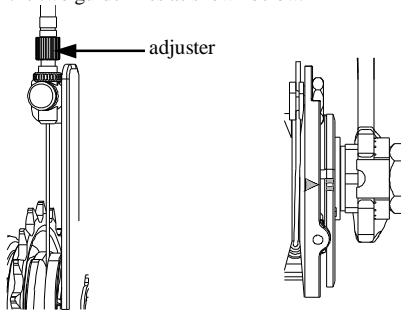


## 2.2 RS-RF3 3-speed hub without brake

See section 2.1. Step 8 does not apply.

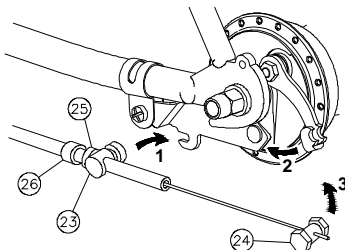
### 3. GEAR ADJUSTMENT

1. Turn Shifter to position "2".
2. Adjust the adjuster till yellow guide arrow on fulcrum lever pulley is in the center of the two guide lines as shown below.



### 4. DRUM BRAKE INSTALLATION AND ADJUSTMENT

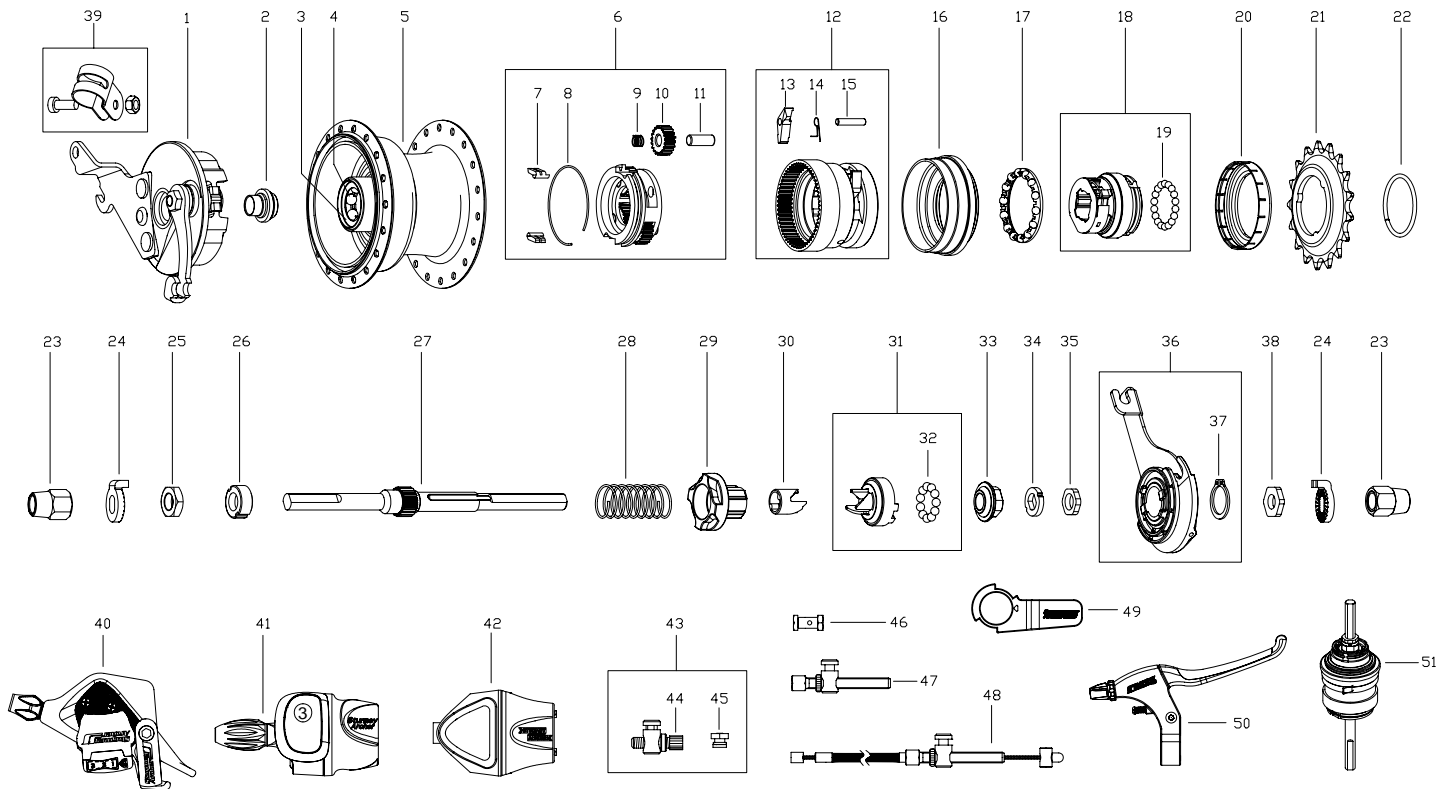
1. Locate the brake cable adjuster bolt (23) into brake arm. Rotate the brake lever and then put the brake cable nipple (24) into the brake lever.
2. Slacken the brake adjuster locknut (25).
3. Turn the adjuster (26) counterclockwise until the brake is just applied.
4. Turn the adjuster clockwise (about four revolutions) until the wheel just spins freely.
5. Tighten the locknut (25).



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

Note : During 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.

## Part List – RX-RD3 Rotary Three Speed Hub



Item Sales			Item Sales			Item Sales		
No.	No.	Description	No.	No.	Description	No.	No.	Description
1	HSB429	70mm Alloy Rear Brake Plate Assy.	21	HSL827	17T Sprocket(Chrome)	38	HMN406	Nut 3/8"
2	HSA699	L/H Cone		HSL828	17T Sprocket(Black)	39	HSL767	Brake Arm Clip Assembly - 15.5mm
3	HSA241	Cone Dustcap	22	HSL721	Sprocket Circlip		HCB101	Brake Arm Clip Assembly - 15.9mm
4	HSA284	L.H. Ball Cage Assy.-6.4mm Ball	23	HMN387	Dome Nut 3/8"		HCB103	Brake Arm Clip Assembly - 18.3mm
5	HSA700	RX-RD3 Hub Shell Assy.-36H	24	HMW518	Lockwasher 4.0t - 9.5mm Slot	40	HSJ940	DLC34 Shifter w/Cable
6	HSA701	Planet Cage Assembly		HMW515	Lockwasher 1.8t - 9.5mm Slot	41	HSJ931	TSS34 Shifter w/Cable
7	HSA573	Pawl for Planet Cage	25	HMN366	Cone Locknut(3/8"-6.4mm)	42	HSJ975	TSC34 Shifter w/Cable
8	HSA450	Pawl Spring Circlip	26	HSA371	Cone Adjuster	43	HSJ974	Shifter Adjuster and Pinch Bolt Set
9	HSA702	Pinion Pin Spring	27	HSA706	Axle	44	HSL872	Shifter Adjuster Assembly
10	HSA292	Planet Pinion	28	HSA707	Clutch Spring	45	HSL802	Shifter Cable Pinch Bolt Assembly
11	HSA436	Pinion Pin	29	HSA708	Clutch	46	HSK715	Brake Cable Pinch Bolt Assembly
12	HSA703	Gear Ring Assembly	30	HSA709	Shift Cam	47	HSB422	Brake Adjuster Assembly
13	HSA119	Gear Ring Pawl	31	HSA710	Shift Actuator Assembly	48	HSK736	Brake Cable Assembly, 1600mm
14	HSA120	Pawl Spring	32	HSA705	3/16" Ball Bearing – 11 off		HSK730	Brake Cable Assembly, 900mm
15	HSA415	Pawl Pin	33	HSA711	R/H Cone	49	HTR137	Tool
16	HSA584	Ball Ring	34	HMW540	Indicator Washer	50	HSK742	Brake Lever BLS80 RH
17	HSA438	Ball Cage Assembly	35	HMN137	Cone Locknut		HSK743	Brake Lever BLS80 LH
18	HSA704	Driver Assembly	36	HSJ932	Fulcrum Lever Set for Reversed Dropout	51	HSX153	Gear Internal Assembly Complete
19	HSA520	5/32" Ball Bearing – 18 off	37	HSL903	C-clip No.18			
20	HSL904	Plastic Sprocket Dustcap						

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