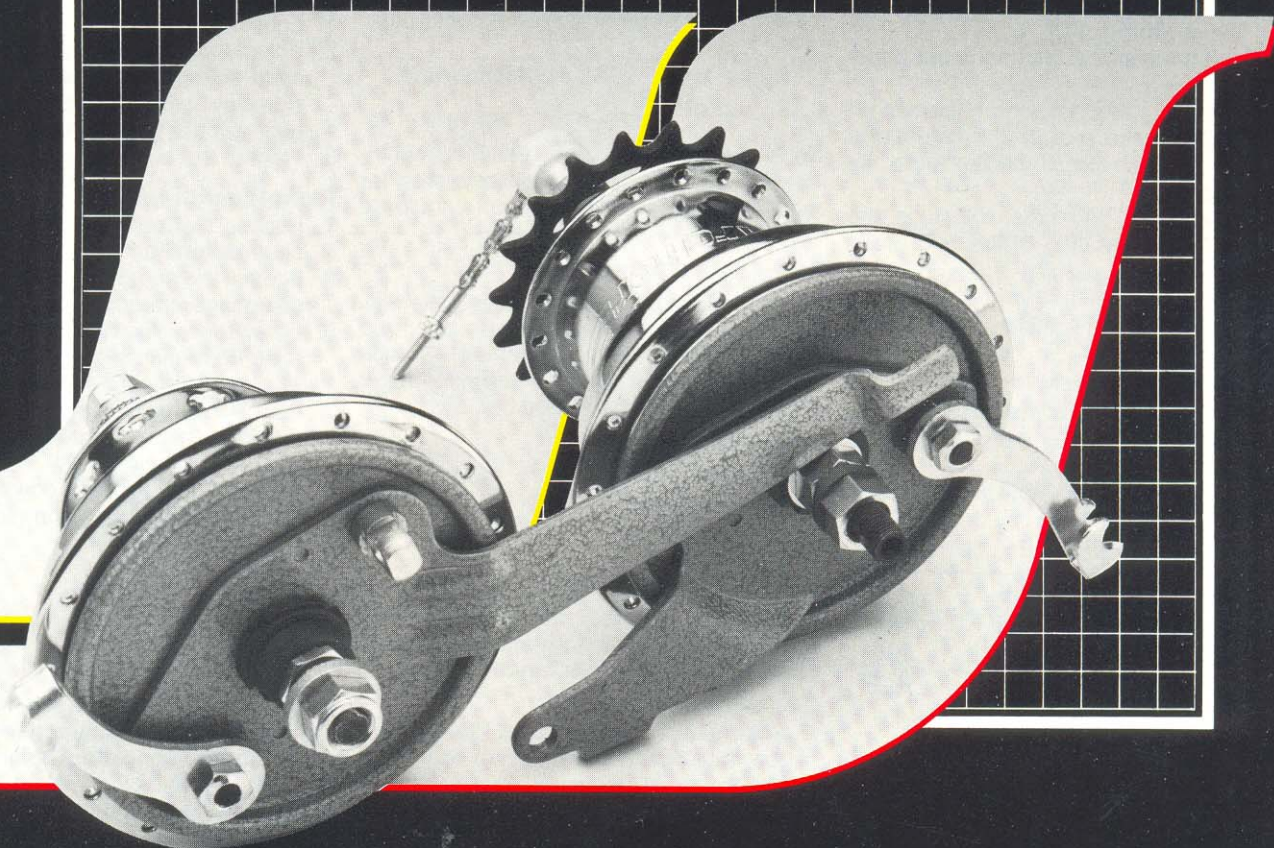


Sturmey ***Archer***

Parts List
Hub Brakes (90 mm)
AB/C - BF/C



Part 1 GENERAL INFORMATION

The information contained in this manual relates specifically to servicing the BF/C; together with general maintenance instructions, and full service details, for the brake only, on the AB/C. For further information on assembly and disassembly and full servicing instructions for the gears on the AB/C refer to "Technical Information - Three Speed Hub Brakes" (LTE118)

1.1 Hub/Frame Assembly

1. Fit the hub into the front or rear forkends and position the wheel centrally in the frame.
2. Fit axle nuts with washers. On the AB/C these must include the correct size anti-rotation washers. DO NOT tighten the axle nuts at this stage or misalignment of the brake plate may occur. (N.B. Both the BF/C and AB/C should be assembled with the brake on the left hand (non chain) side of the bicycle.)

3. AB/C

Select a suitable brake arm clip to clamp the brake arm loosely to the bicycle frame. With the wheel centralised and the chain tensioned correctly, tighten the axle nuts to a torque of 25 Nm (220 lb. in.).

BF/C

Select a suitable brake arm clip to clamp the brake arm loosely to the front fork. With the wheel centralised, tighten the axle nuts to a torque of 22 Nm (195 lb. in.).

4. Tighten the brake arm clip firmly in this position to either 7Nm (60 lb. in.) maximum for the AB/C or 2 Nm (18 lb. in.) maximum for the BF/C.

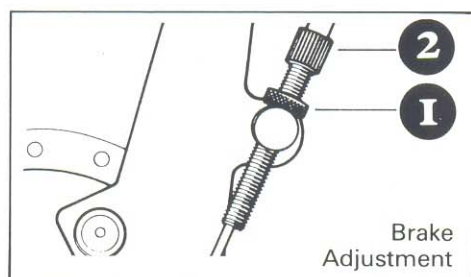
1.2 Cable Fitting

1. Attach the cable at the handlebar brake lever.
2. Locate the cable adjuster in the slot on the AB/C brake arm or the cable wire guide on the BF/C brake plate as appropriate.
3. Fit the cable end cross piece in the semi-circular seating of the hub brake lever assembly.

N.B. To maintain maximum braking efficiency avoid sharp bends and kinks in the cable.

1.3 Brake Adjustment

1. Slacken the brake adjuster locknut (1).
2. Turn the adjuster (2) until the brake is applied.
3. Slacken the adjuster until the wheel can just be turned freely.
4. Tighten the locknut (1).



Part 2 BRAKE SHOE SERVICE

The asbestos free linings in Sturmey-Archer hub brakes are long lasting and should only need replacement at major service intervals. A complete brake replacement unit is available for this purpose. Before replacing this unit, check for excessive cable stretch.

2.1 Brake Unit Removal

1. Remove the brake cable, (and gear cable on AB/C), brake arm clip and axle nuts from the hub and take the wheel out of the bicycle.
2. Take off the brake plate locknut, washer(s) and cone adjusting washer to release the brake plate and shoe assembly.

2.2 Brake Unit Replacement

1. Wipe the inside of the brake drum surface to remove grease and dirt.
2. Fit the replacement unit onto the hub over the left hand cone and re-assemble the cone adjuster, washer(s) and locknut.
3. Tighten the locknut to 7Nm (60 lb.in.) max. and assemble the wheel in the bicycle following the instructions given in Part 1.

NB: For AB/C cone adjustment refer to Section 4.3.

Part 3 BEARING ADJUSTMENT - BF/C

1. Loosen the left hand cone locknut.
2. Adjust the left hand cone, using the slotted cone adjuster, until there is very slight side play at the wheel rim and none at the hub - giving a free-running hub.

Part 4 HUB GEAR MAINTENANCE - AB/C

To ensure many years of reliable trouble-free service, the following procedures for lubrication and gear adjustment should be carried out at regular intervals.

4.1 Lubrication

No routine lubrication is required. However, during assembly/disassembly the hub greases should be replenished. Grease types meeting the following Sturmey-Archer Technical Standards should be used:

For bearings - SA103B

For all other internal parts - SA103A

Please contact Sturmey-Archer for information on the availability of these greases.

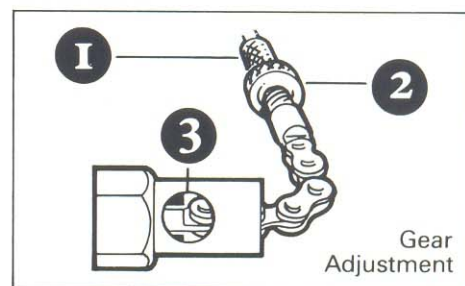
WARNING: Under no circumstances should any lubricant be applied to the Brake Drum or Brake Shoes as this may prevent the brake from functioning.

4.2 Gear Adjustment

1. Set the fulcrum clip at least 125mm from the hub. Screw the indicator rod firmly into the axle. Unscrew by up to half a turn to ensure easy connection to the gear cable.

2. Select third gear position at the control and loosely connect the cable adjuster (1) to the indicator coupling. Take up the cable slack and tighten the fulcrum clip.
3. Select second gear. Looking through the 'window' in the right hand nut, turn the cable adjuster until the end of the indicator rod is exactly level with the end of the axle (3).
4. Tighten the locknut (2) against the adjuster.
5. If the gear cannot be correctly adjusted, the fulcrum clip must be moved in the appropriate direction before re-adjustment.

WARNING: The hub must not be ridden out of adjustment as this may damage the internal parts and cause the hub to malfunction.



4.3 Hub Bearing Adjustment

If, for any reason, the bearing adjustment is altered, the cones must be reset correctly before using the hub. The right hand cone is pre-set at the factory and should only be disturbed at major service intervals. The left hand cone is used to adjust the bearings in the hub.

Left Hand Cone:

1. Loosen the cone locknut.
2. Adjust the cone by means of the slotted cone adjuster until there is very slight side play at the wheel rim and none at the hub with the hub running freely.
3. Tighten the cone locknut.

Right Hand Cone:

1. Loosen the left hand cone locknut and cone several turns.
2. Loosen the right hand cone locknut, and disengage the cone lockwasher.
3. Screw down the right hand cone finger tight, then unscrew by 135° to 180° turn to accept the cone lockwasher.

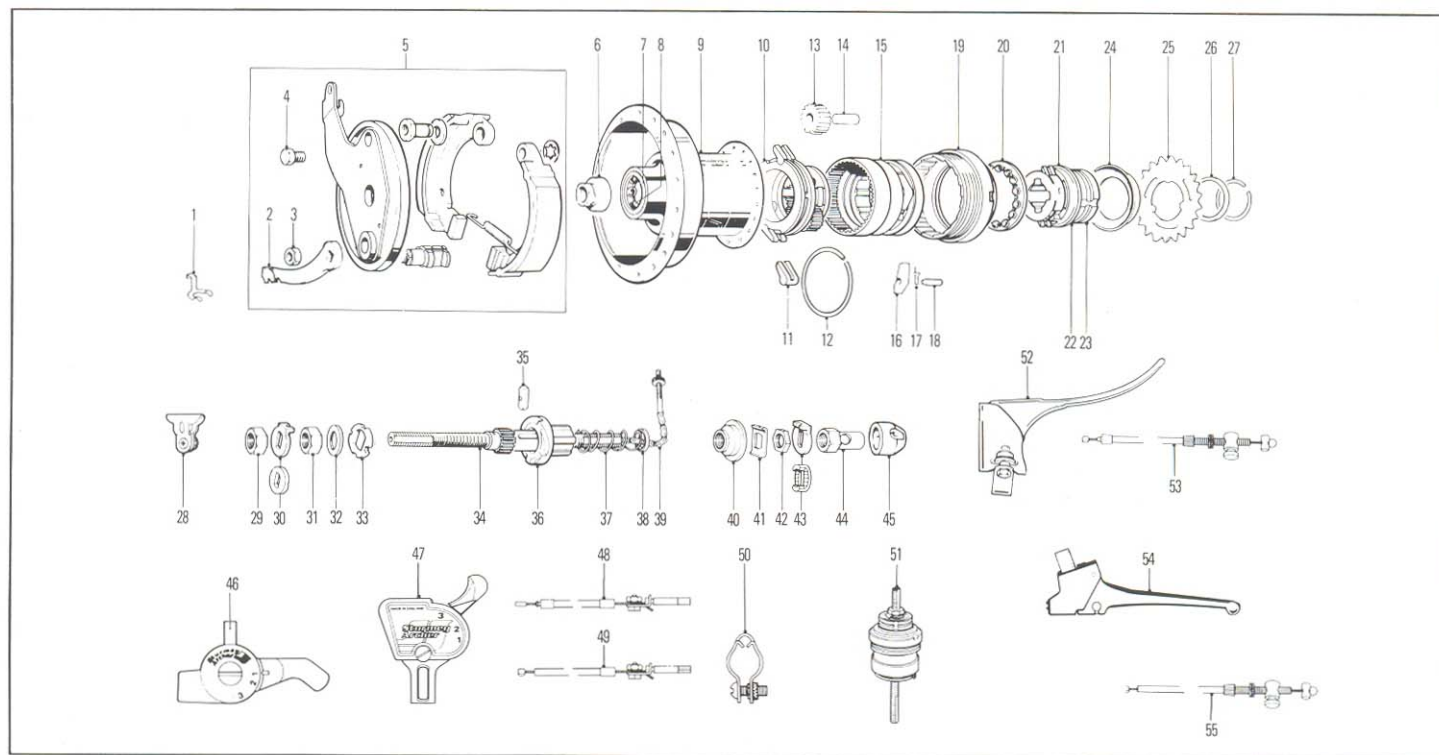
N.B. Under no circumstances must the right hand cone be unscrewed more than 225° of a turn.

4. Tighten the right hand cone locknut.
5. Tighten the left hand cone locknut.

NB. The information in this leaflet refers ONLY to AB hubs manufactured after 6-89 and with no lubricating hole in the hub shell.

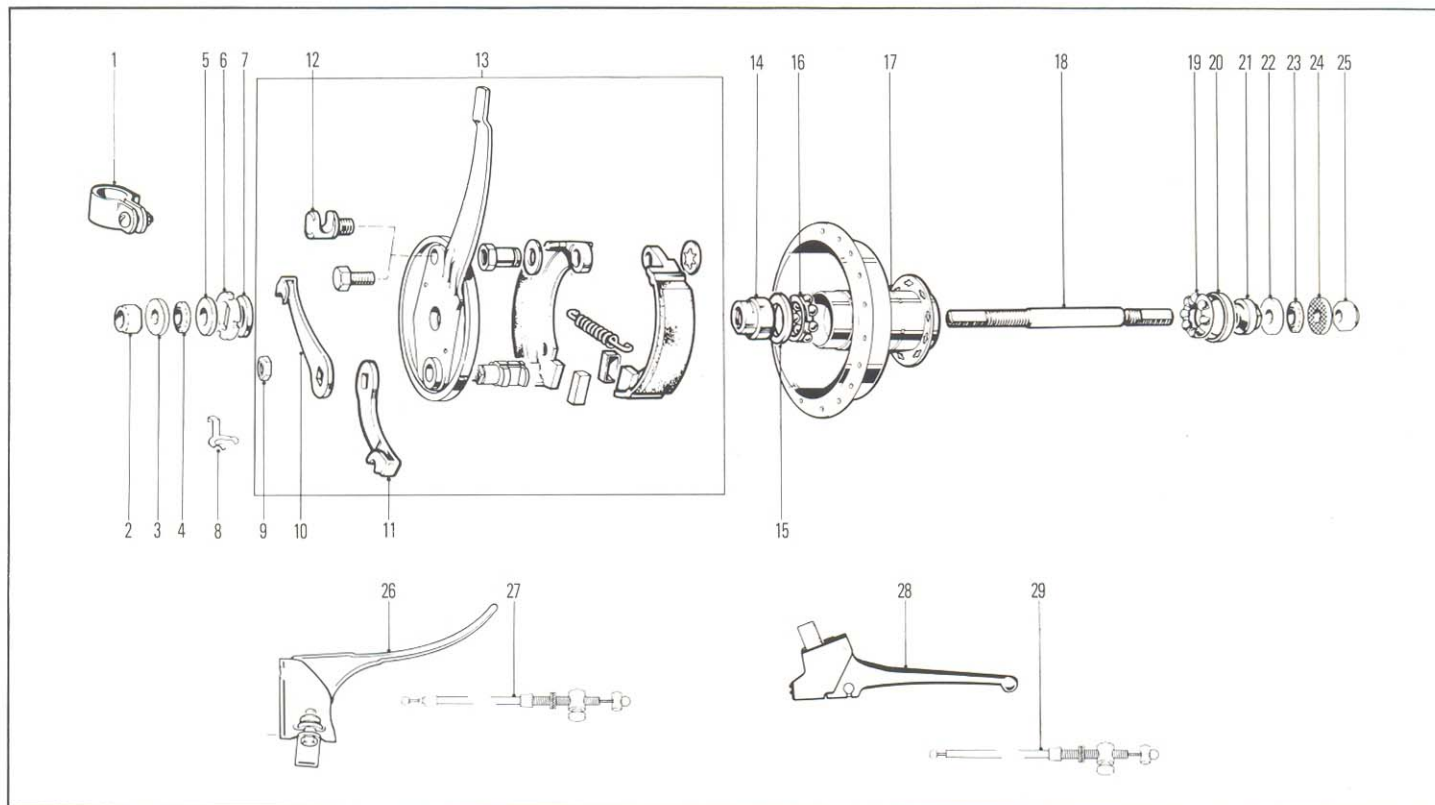
For earlier models, please refer to leaflet LTE115.

Parts List ~ AB/C Rear Hub Brake



Three Speed Hub Brake
Brake Drum Diameter: 90 mm (3½")

Item Sales No. No.	Description	Item Sales No. No.	Description	Item Sales No. No.	Description
1 *HSK 668	Brake Cable Nipple Retainer	*HSL 719	Sprocket 19T	*HSJ 765	Black Trigger Control
2 HSB 220	Brake Lever	*HSL 720	Sprocket 20T		23.8mm Clip
3 HMN 139	Brake Lever Nut	*HSL 747	Sprocket 21T	*HSJ 821	White Trigger Control
4 HMB 418	Pivot Bolt	*HSL 722	Sprocket 22T		22.2mm Clip
5 HSB 315	Brake Replacement Unit (includes 1 off Items 2, 3 and 4)	26 HMW 127	Sprocket Spacing Washer 1.6mm	*HSJ 822	White Trigger Control
					23.8mm Clip
6 HSA 391	L.H. Cone	27 HSL 721	Sprocket Circlip	48 HSJ 102	Trigger Cable with
7 HSA 241	Cone Dustcover	28 *HCB 101	Brake Arm Clip Assembly 15.9mm		Anchorage 1370mm x
8 HSA 284	Ball Cage Assembly L.H. 6.4mm Ball	*HCB 103	Brake Arm Clip Assembly 18.3mm	49 HSJ 802	1520mm – Black
9 HSA 442	Hub Shell Assembly 36H (includes 1 off Items 7 and 8)	29 HMN 128	Axle Nut L.H.		NIMBUS Cable with
		30 *HMW 155	Serrated Lockwasher 7.9mm Slot	50 *HSJ 607	Anchorage 1370mm x
10 HSA 434	Planet Cage Assembly (includes 2 off Item 11, 1 off Item 12)	*HMW 494	Serrated Lockwasher 9.5mm Slot	*HSJ 553	1520mm Black
					Chainstay Fulcrum Clip
11 HSA 410	Pawl for Planet Cage	31 HMN 128	K48 Lipwasher 9.5mm Slot Nut	*HSJ 548	12.7mm ø
12 HSA 435	Circlip	32 HMW 150	Dog Ring Lockwasher		Chainstay Fulcrum Clip
13 HSA 292	Planet Pinion	33 HMW 151	Cone Adjusting Washer	*HSJ 753	15.9mm ø
14 HSA 436	Pinion Pin	34 HSA 440	Axle with Sun Pinion		Chainstay Fulcrum Clip
15 HSA 443	Gear Ring Assembly (includes 2 off Items 16, 17 and 18)	35 HSA 295	Axle Key	51 HSX 120	19.1mm ø
		36 HSA 418	Clutch		Gear Internal Assembly
16 HSA 119	Pawl for Gear Ring	37 HSA 128	Clutch Spring	52 *HSK 666	Complete (includes Items
17 HSA 120	Pawl Spring	38 HSA 129	Clutch Spring Cap		10-23, 33-37, 39-41)
18 HSA 415	Pawl Pin	39 HSA 315	Gear Indicator (3 Mark)	53 *HSK 693	Steel Brake Lever Assembly
19 HSA 437	Ball Ring	40 HSA 101	R.H. Cone		RH/LH 22.2mm Clip
20 HSA 438	Ball Cage Assembly	41 HMW 147	Cone Lockwasher		Cable Complete for Steel
21 HSA 439	Driver Assembly Complete (includes 1 off Items 22 and 23)	42 HMN 132	Cone Locknut	54 *PKL 205	Brake Level – Black
		43 *HMW 155	Serrated Lockwasher 7.9mm Slot		–1470mm
22 HSA 284	Ball Cage Assembly R.H. 6.4mm Ball	*HMW 494	Serrated Lockwasher 9.5mm Slot	*PKL 206	DELTRIN Brake Lever
					Assembly RH/LH 22.2mm
23 HSA 102	Outer Dustcap	*HMW 515	K48 Lipwasher 9.5mm Slot		Clip
24 HSL 701	Sprocket Dustcap	44 HMN 129	R.H. Axle Nut	55 *HSK 696	DELTRIN Brake Lever
25 *HSL 714	Sprocket 14T	45 *HSL 711	Indicator Guard		Assembly RH/LH 23.8mm
*HSL 715	Sprocket 15T	46 *HSJ 823	NIMBUS Control 22.2mm Clip		Clip
*HSL 716	Sprocket 16T				Cable Complete for DELTRIN
*HSL 717	Sprocket 17T	47 *HSJ 762	Black Trigger Control 22.2mm Clip		Brake Lever – Black –
*HSL 718	Sprocket 18T				1570mm
* Optional Fitment		* Optional Fitment		* Optional Fitment	



Brake Drum Diameter: 90 mm (3½")

Item Sales No. No.	Description	Item Sales No. No.	Description	Item Sales No. No.	Description
1 *HSL 702	Brake Arm Clip 17.4mm	*HMB 418	Pivot Bolt - Rod Operation	23 HMN 137	Cone Locknut
*HSL 703	Brake Arm Clip 18.3mm	13 HSB 314	Brake Replacement Unit (includes Items 9, 10 & 12)	24 PMW 137	Axle Washer 3.2mm
2 HMN 118	Axle Nut	14 HSA 236	L.H. Cone	25 HMN 118	Axle Nut
3 PMW 137	Axle Washer 3.2mm	15 HSA 241	Dustcap	26 *HSK 666	Steel brake Lever Assembly RH/LH 22.2mm Clip
4 HMN 137	Cone Locknut	16 HSA 284	Ball Cage Assembly L.H. 6.4mm Ball	27 *HSK 692	Cable Complete for Steel Brake Lever - Black 920mm
5 *HMW 146	Spacing Washer 1.6mm	17 HSB 306	Hub Shell Assy. - 36H (Includes Items 15, 16, 19 & 20)	28 *PKL 205	DELRIN Brake Lever Assembly RH/LH 22.2mm Clip
*HMW 129	Spacing Washer 3.2mm	18 HSB 303	Axle 136.5mm	*PKL 206	DELRIN Brake Lever Assembly RH/LH 23.8mm Clip
*HMW 483	Spacing Washer 4.8mm	19 HSA 284	Ball Cage Assembly R.H. 6.4mm Ball	29 *HSK 695	Cable Complete for DELRIN Brake Lever - Black 900mm
*HMW 484	Spacing Washer 6.4mm	20 HSA 241	Cone Dust Cover		
6 HMW 151	Cone Adjusting Washer	21 HSA 237	R.H. Cone		
7 *HMW 152	Spacing Washer 2.4mm	22 *HMW 146	Spacing Washer 1.6mm		
*HMW 153	Spacing Washer 1.6mm	*HMW 129	Spacing Washer 3.2mm		
8 *HSK 668	Brake Cable Nipple Retainer	*HMW 483	Spacing Washer 4.8mm		
9 HMN 139	Brake Lever Nut	*HMW 484	Spacing Washer 6.4mm		
10 *HSB 205	Brake Lever for Cable Operation				
11 *HSB 204	Brake Lever for Rod Operation				
12 *HSB 226	Cable Wire Guide				

* Optional Fitment

* Optional Fitment

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