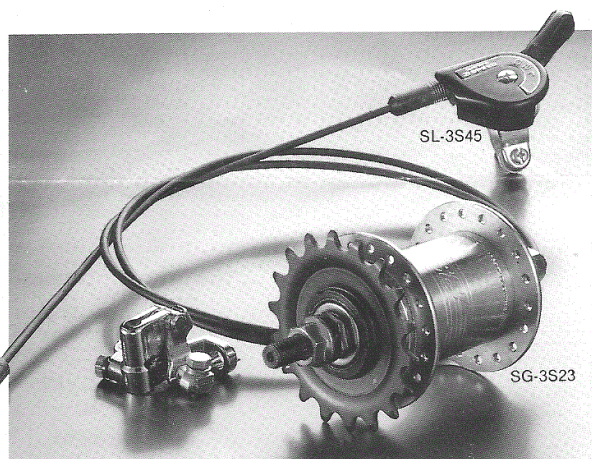
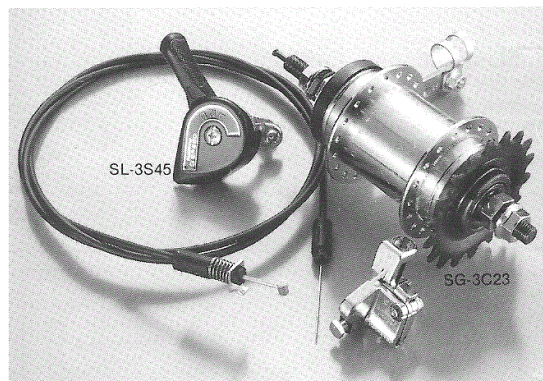


# SHIMANO SPEED GEAR

## Three Speed Hub Positron Type Three Speed Hub with Coaster Brake Positron Type



Three Speed Hub Positron Type



Three Speed Hub with Coaster Brake  
Positron Type

**SHIMANO**  
**speed**  
**gear**

# Model SG-3S23 Three Speed Hub Positron Type

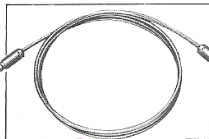
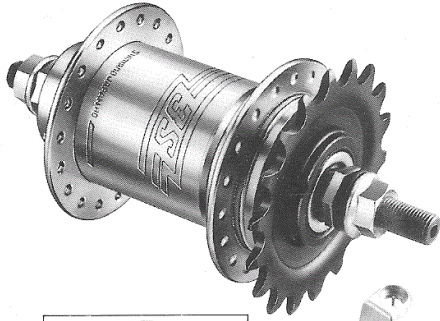
# Model SL-3S45 Positron Lever

Three Speed Hub Positron Type

## Model SG-3S23

### SPECIFICATION

- Weight • 37.2 oz. (1055g.)
- Teeth • 14~21T
- Over Lock Nut Dimension
  - 4-11/32" (110mm.)
- Sprocket • 1/2" x 1/8" Chain
- Spork Holes • 28H, 36H



Push-Pull Cable

Positron Lever

## Model SL-3S45

### SPECIFICATION

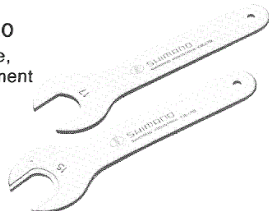
- Weight • 2.3 oz. (66g.)
- Material • Resin & Steel
- Type • Positron Type
- Attachment Position
  - Handle Bar
- Lever Clamp Diameter
  - 7/8" (22.2mm.)



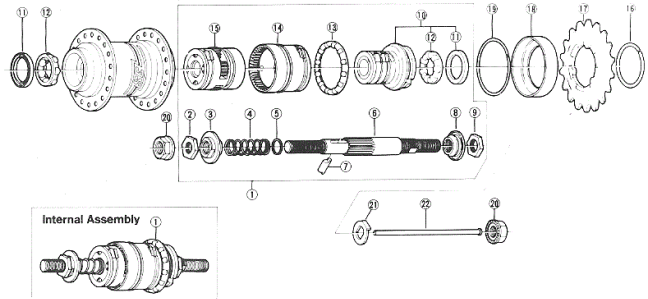
Note: Use the Positron Bell Crank for the Positron Lever.

## Model TL-HS20

- Spanner for Cone, Lock Nut Adjustment
- Width: 15mm., 17mm.

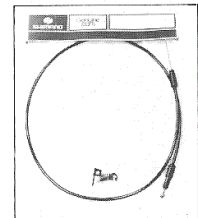
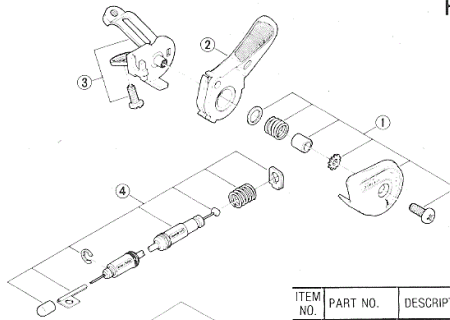


## THREE SPEED HUB (Positron Type)



ITEM NO.	PART NO.	DESCRIPTION	QUANTITY	ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	3-322-9902	Internal Assembly for Axle Length 153mm (6-1/32")		15	3-322-9018	Complete Ratchet B	
	3-322-9913	Internal Assembly for Axle Length 163mm (6-11/32")		16	321-2000	Snap Ring C	
	3-322-9922	Internal Assembly for Axle Length 173mm (6-13/16")			321-0300	Sprocket Wheel 14T	
2	220-0510-1	Lock Nut 4.5mm			321-0310	Sprocket Wheel 15T Flat Type	
3	3-322-9025-1	Left Hand Cone w/Dust Cap B		17	322-0320	Sprocket Wheel 16T	
4	321-3000	Clutch Spring			321-0330	Sprocket Wheel 17T	
5	333-3400	Washer for Clutch Spring			322-0340	Sprocket Wheel 18T	
6	322-5200	Hub Axle 153mm (6-1/32") Caliper Type			322-0350	Sprocket Wheel 19T	
	322-5210	Hub Axle 163mm (6-11/32")			322-0360	Sprocket Wheel 20T	
	322-5000	Hub Axle 173mm (6-13/16")			321-0370	Sprocket Wheel 21T	
7	321-2501	Sliding Key BR		18	322-0400	Seal Cap	
8	3-321-9024-1	Right Hand Cone w/Dust Cap B		19	322-0410	Seal Spring	
9	321-3900	Lock Nut B 3mm		20	220-1501-1	Flange Nut	
10	3-322-9009-2	Complete Driver		21	321-6400	Non-Turn Washer	
11	321-2700	Dust Cap A		22	321-7300	Push Rod 108.4mm (4-9/32") Black for Hub Axle 153mm	
12	3-321-9022	Ball Retainer (1/4")			321-7500	Push Rod 113.4mm (4-15/32") for Hub Axle 163mm, 173mm	
13	3-321-9081	Ball Retainer (3/16")					8303-584
14	3-322-9014	Complete Ratchet A					

## POSITRON LEVER



Spare Parts Cable

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	3-617-9800	Cover Unit	
2	617-0200	Lever	
3	3-617-9802	Clamp Band	
4	3-692-9105	Cable Assembly (1700 x 1770mm) White	
	3-692-9106	Cable Assembly (1800 x 1870mm) White	
	3-692-9140	PPS Cable Assembly (1650 x 1720mm) Black	
	3-692-9135	PPS Cable Assembly (1700 x 1770mm) Black	
	3-692-9136	PPS Cable Assembly (1800 x 1870mm) Black	
	5	3-331-9804	Complete Bell Crank
6	3-331-9801	Cable Fixing Bolt Unit	
7	3-331-9802	Bell Crank Fixing Bolt Unit	
8	3-331-9806	Bell Crank Assembly	
9	3-331-9906	Bell Crank Assembly with Stop Ring	

8205-488 A

SHIMANO  
**speed gear**

# Model SG-3C23 Model SL-3S45

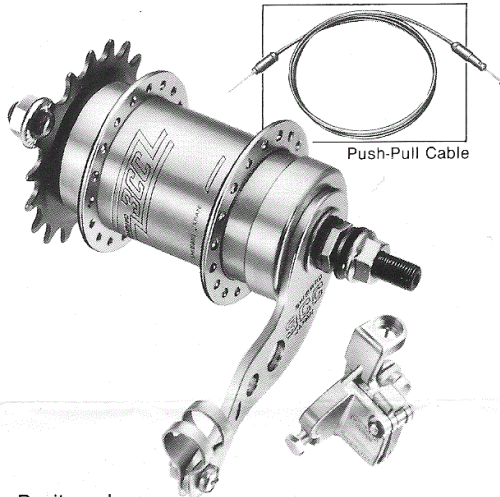
Three Speed Hub  
with Coaster Brake Positron Type  
Position Lever

Three Speed Hub  
with Coaster Brake Positron Type

## Model SG-3C23

### SPECIFICATION

- Weight • 46.6 oz. (1,320g.)
- Teeth • 14T~21T
- Gear Ratio • (H) 1:1.33/(N) 1:1/(L) 1:0.75
- Over Lock Nut Dimension
  - 4-3/4" (120mm.)
- Sprocket • 1/2" x 1/8" Chain
- Spork Holes • 28H, 36H



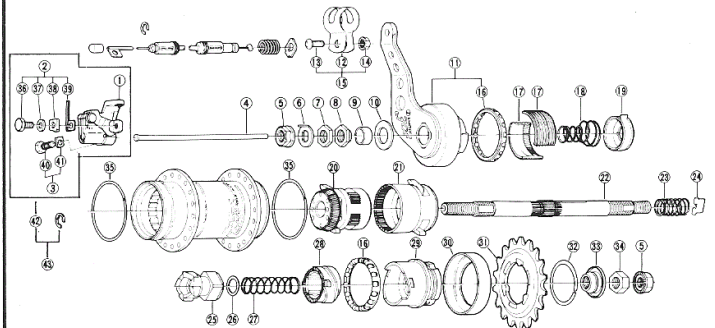
Push-Pull Cable

## Positron Lever Model SL-3S45

- For specifications, refer to page 1.



## THREE SPEED COASTER BRAKE (Positron Type)



ITEM NO.	PART NO.	DESCRIPTION	QUANTITY	ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	3-331 9804	Bell Crank Body		22	334 1500-1	Hub Axle 168mm (6-5/8")	
2	3-331 9801	Cable Fixing Bolt Unit			334 1501	Hub Axle 178mm (7")	
3	3-331 9802	Bell Crank Fixing Bolt & Washer		23	332 3400	Clutch Spring B	
4	321 7300-1	Push Rod 108.4mm (4.9/32") Black for Hub Axle 168mm		24	333 3300	Axle Key	
	321 7500-1	Push Rod 113.4mm (4.15/32") Hub Axle 178mm		25	334 1200-1	Sliding Clutch	
5	220 1501-1	Flange Nut		26	333 3400	Clutch Washer	
6	321 6400	Non-Turn Washer		27	333 3500	Clutch Spring A	
7	321 3900	Lock Nut B		28	334 1300	Lead	
8	331 0100	Stop Nut		29	3-334 9015	Driver w/Ball Retainer & Dust Cap	
9	334 0400-1	Sleeve		30	322 0400	Seal Cap	
10	334 1600	Brake Arm Washer			321 0300	Sprocket Wheel 14T	
11	3-324 9007-1	Brake Arm Assembly			321 0310	Sprocket Wheel 15T Flat Type	
12	282 2810	Brake Arm Clip (Band Type) 16mm (5/8")			322 0320	Sprocket Wheel 16T	
	282 2807	Brake Arm Clip (Band Type) 19mm (3/4")			322 0340	Sprocket Wheel 18T	
13	333 0700-1	Clip Screw M6 x 14mm (9/16")			322 0350	Sprocket Wheel 19T	
14	282 2900	Clip Nut (M6)			322 0360	Sprocket Wheel 20T	
15	3-283 9036	Brake Arm Clip Assembly (Band Type) 16mm (5/8")		32	321 2000	Snap Ring	
	3-283 9009	Brake Arm Clip Assembly (Band Type) 19mm (3/4")		33	3-321 9024	Right Hand Cone	
16	3-321 9023	Ball Retainer B		34	321 4000	Right Hand Lock Nut	
17	3-334 9008	Brake shoe Assembly		35	322 0410	Seal Spring	
18	334 0800	Return Spring		36	533 1300	Cable Fixing Bolt	
19	3-333 9033	Spring Guide & Slide Spring(6mm)		37	000 3460	Washer	
20	3-334 9009	Carrier Assembly		38	333 5700	Cable Fixing Plate	
21	3-334 9010	Ring Gear Assembly		39	533 1200-1	Inner Sleeve	
				40	000 1151	Bell Crank Fixing Bolt	
				41	334 5800	Non-Turn Washer	
				42	3-331 9806	Bell Crank Assembly	
				43	3-331 9901	Bell Crank Assembly with Stop Ring	

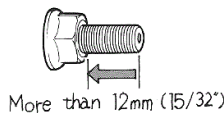
8303-517B



## Assembly Notes

### ■ Fitting Condition

The hub axle on the sprocket side should protrude at least 12mm (15/32") from the end of the hub axle, for assembling the bell crank.

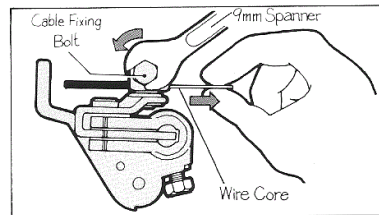
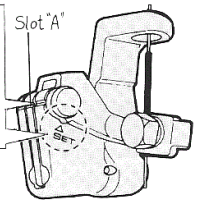


### ■ Shifting Lever and Bell Crank Assembly

- 1 Put the cable along the frame.  
Adjust the cable so that it will be long enough to avoid stretching when the handle moves.

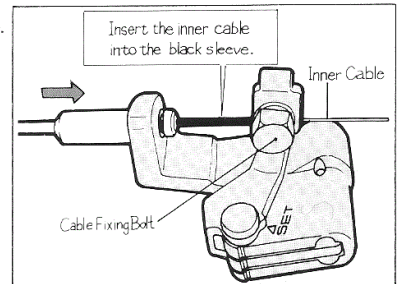
- 2 Set the bell crank.

Adjust this protrusion to the mark "ΔSET", or make sure that the slot "A" is set in a straight line with the adjoining slots.

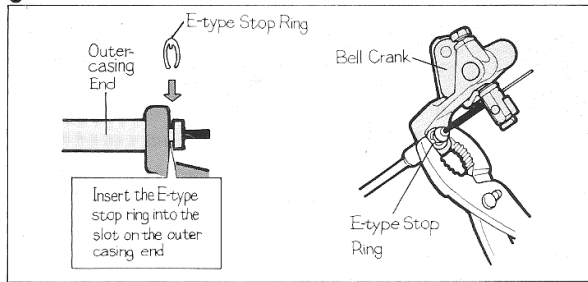


- 3 Loosen the cable-fixing bolt to remove the wire core.

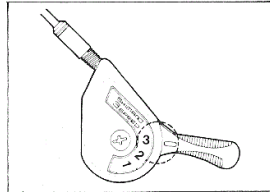
- 4 Insert the inner cable.



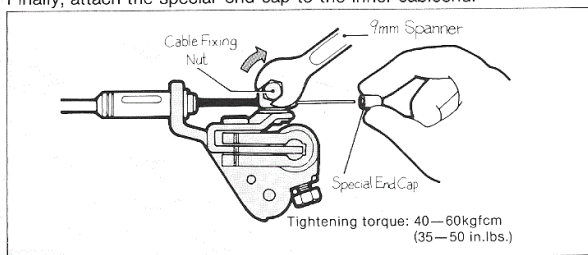
**5** Fix the outer casing to the bell crank with the E-type stop ring.



**6** Accurately position the inner cable. Before fixing the inner cable, set the lever to the "3" position.

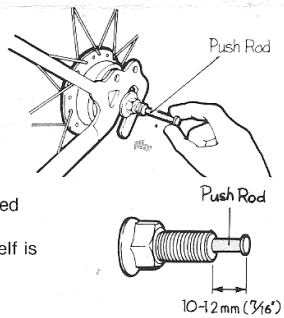


Then, tighten the cable fixing nut. Finally, attach the special end cap to the inner cable end.



**■ Bell Crank Assembly**

**7** Insert the push rod into the hub axle.



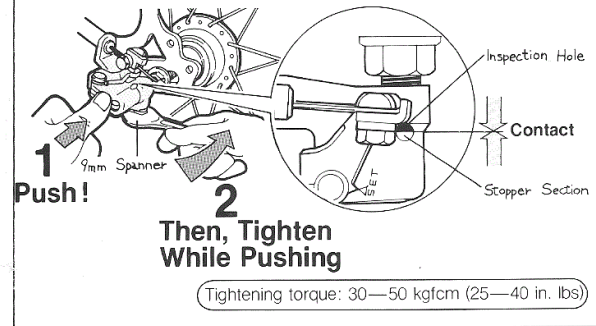
**NOTE:**

Make sure the push rod protruded 10 ~ 12mm from the end of the hub axle. If the push rod itself is too long or short, exchange it for one of the right length.

**8** Push the bell crank onto the hub axle strongly. After checking that the end of the hub axle is in contact with the stopper section of the bell crank, tighten the bell crank lock bolt while holding the bell crank in place.

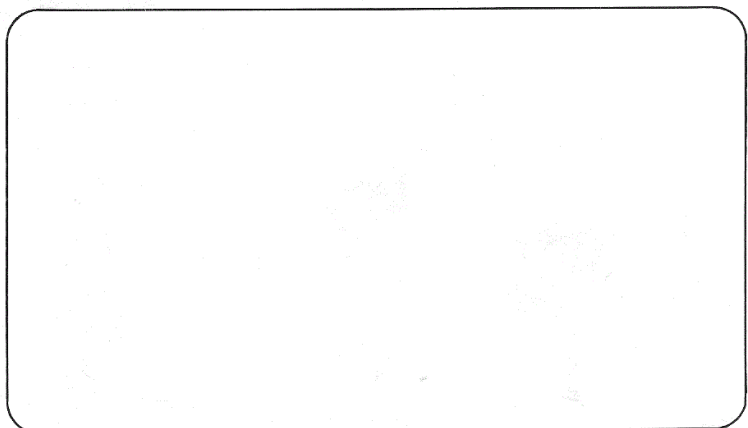
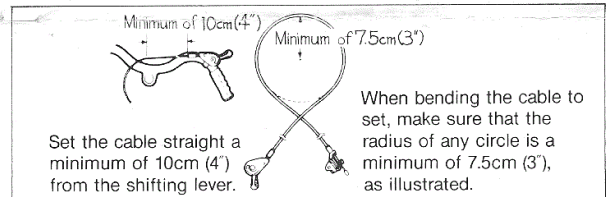
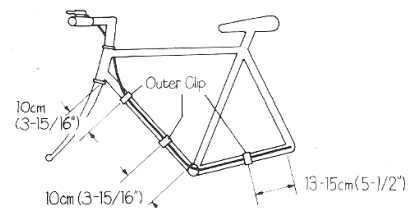
**NOTE:**

Confirm that the end of the hub axle is in contact with the stopper section of the bell crank, by looking into the inspection hole on the bell crank.



**■ Fix the Cable**

Fix the cable to the frame with an outer clip or an aluminium band at following position.



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