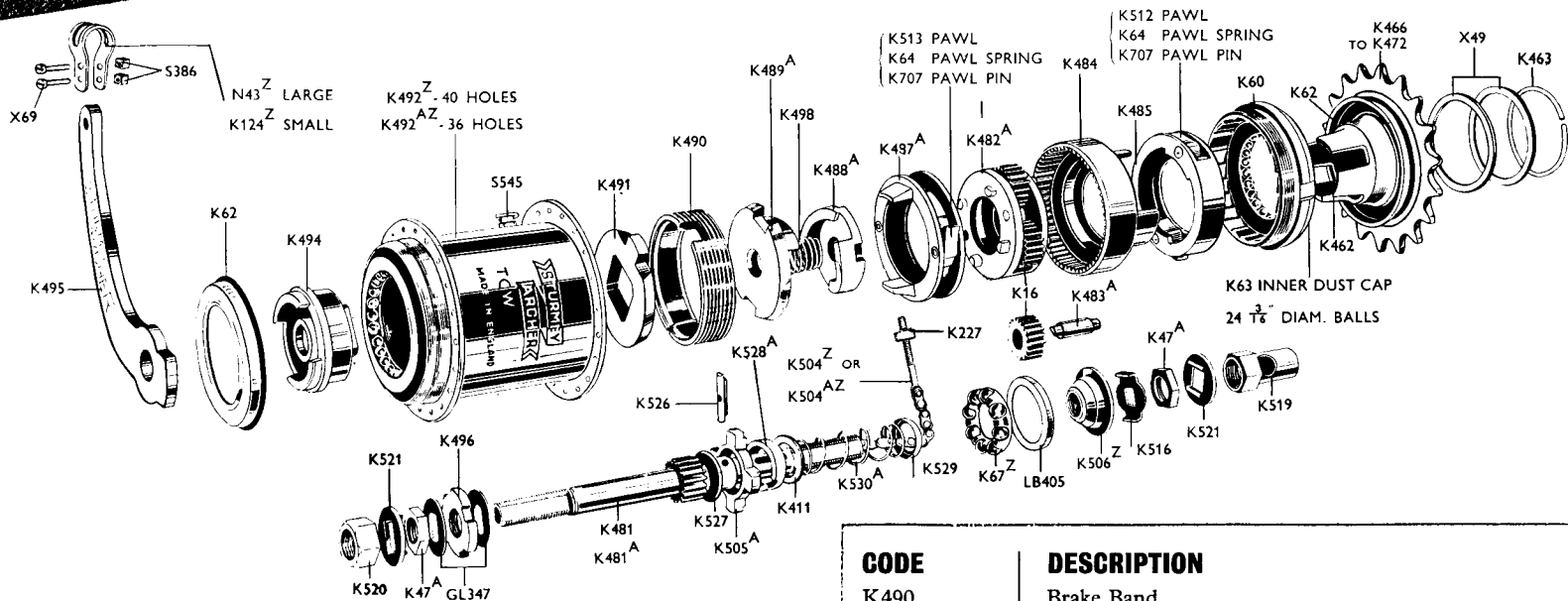


TGW Combined 3-SPEED GEAR COASTER BRAKE



CODE

K481
K481A
K482A
K527
K505A
K526
K528A
K411
K16
K483A
K484
K485
K512
K64
K707
K60
329
K63
K530A
K529
K462
K67Z
LB405
K506Z
K516
K487A
K513
K488A
K489A

DESCRIPTION

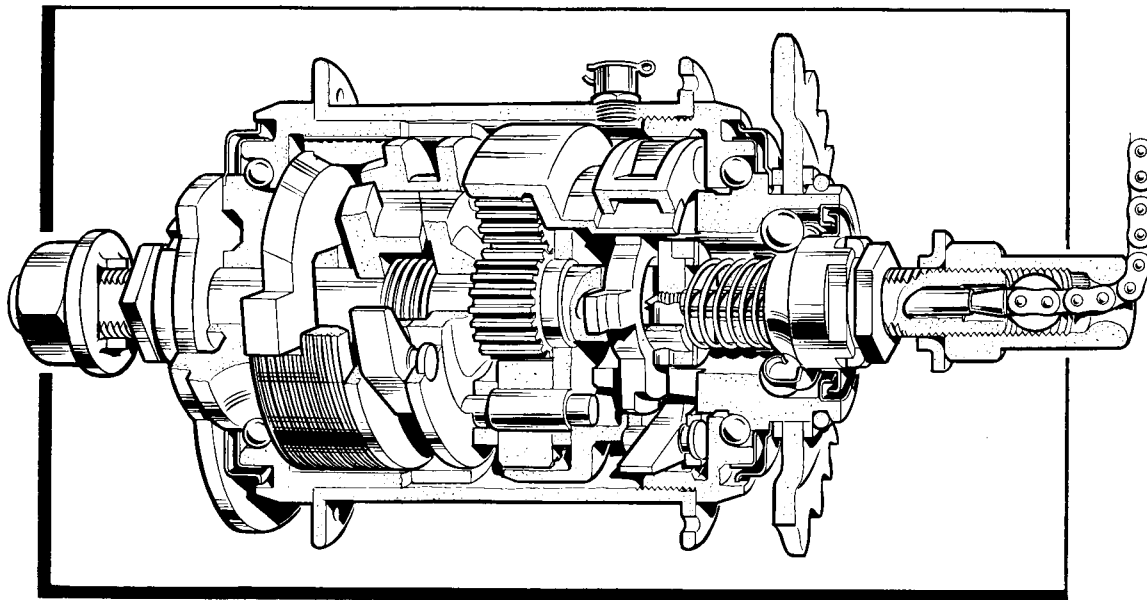
Axle, 5 1/4" long
Axle, 6 1/4" long
Planet Cage
Clutch Sleeve
Sliding Clutch
Axle Key
Thrust Ring
Thrust Washer
Planet Pinion
Pinion Pin
Gear Ring
Gear Ring Pawl Ring
Gear Ring Pawl
Pawl Spring
Pawl Pin
R.H. Ball Ring
Ball Bearings, 3/16" diam. (per set of 24)
Inner Dust Cap
Clutch Spring
Spring Cap
Driver
Ball Cage with 8 1/4" diam. balls
Outer Dust Cap
R.H. Cone with Dust Cap
R.H. Cone Locking Washer
Low Gear Pawl Ring
Low Gear Pawl
Brake Cam
Brake Thrust Plate

CODE

K490
K491
K498
K492Z
K492AZ
S545
K494
K495
K504Z
K504AZ
K227
GL347
K496
X42A
K47A
X42
K519
K520
K62
K466
K467
K468
K468A
K469
K469A
K470
K472
K470
K472
X49
K463
N43Z
K124Z
X69
S386

DESCRIPTION

Brake Band
Brake Plate
Brake Cam Spring
Shell, 40 holes with Ball Cup
Shell, 36 holes with Ball Cup
Lubricator
L.H. Cone
Brake Arm
Indicator for short axle
Indicator for long axle
Connection Locknut
Lock Washer
Brake Arm Nut
Axle Washer, 3/8" thick. *Not illustrated*
Cone Locknut
Axle Washer, 1/16" thick. *Not illustrated*
R.H. Axle Nut
L.H. Axle Nut
Sprocket Dust Cap
Sprocket, 16 teeth
Sprocket, 17 teeth
Sprocket, 18 teeth
Sprocket, 18 teeth for 3/16" wide chain
Sprocket, 19 teeth
Sprocket, 19 teeth for 3/16" wide chain
Sprocket, 20 teeth
Sprocket, 22 teeth
Sprocket Spacing Washer
Circlip
Brake Arm Clip complete for oval tubing
Brake Arm Clip complete for round tubing
Clip Screw
Clip Nut



TO RE-ASSEMBLE THE TCW HUB

Proceed as follows:

1. Prepare the following preliminary sub-assemblies:

- a. Fit the ball cage into the driver, with the ring of the ball retainer facing outwards and the recess in the dust cap also facing outwards. If a new ball-retainer is being fitted, the dust cap also should be new. If the sprocket has been removed, see No. 21 below.
- b. Fit the balls (only 24) and the retainer cap into the left-hand ball cap, making sure that they can revolve freely with the dust cap in place.
- c. Fit the balls (only 24) and the inner dust cap to the right-hand ball ring, making sure that they can revolve freely with the dust cap in place.
- d. Fit the pawls, pins and springs into the gear ring pawl ring and rivet the pins as described in the general instructions to 'The Re-assembling of Sturmey-Archer Hubs.'
- e. Fit the pawls, pins and springs into the planet cage pawl ring and rivet the pins as described in the general instructions to 'The Re-assembling of Sturmey-Archer Hubs.'
- f. Smear grease in the channel of the driver dust cap, in the recess

of the right-hand ball ring, and in the recess of the left-hand ball cup.

2. Hold the left-hand end of the axle in a vice, so that the slot for the axle key is above the sun pinion, and fit the planet cage.
3. Add the planet pinions and pins, making sure that the flattened ends of the pins are facing downwards.
4. Fit the sleeve (flange first), the sliding clutch with the recess over the flange of the sleeve and the axle key (with the flat of the key facing upwards), and screw in the indicator rod to hold them in the correct position.
5. Fit the thrust ring and washer, making sure that the flattened ends of the key engage properly in the slots of the thrust ring.
6. Fit the gear ring and the previously prepared gear-ring pawl ring sub-assembly, making sure that the heads of the pawl pins are facing upwards. NOTE.—A K511A gear ring must *never* be substituted for the correct combination of K484 gear ring and K485 gear-ring pawl ring.
7. Fit the previously prepared right-hand ball-ring sub-assembly.
8. Fit the previously prepared driver sub-assembly.
9. Drop the clutch spring over the axle.
10. Fit the cap and screw up the right-hand cone *finger-tight*. Then

slacken it back half a turn and lock it in that position with the special washer and locknut. On no account must the cone be unscrewed more than half a turn, as that would throw the gear mechanism out of adjustment.

11. Remove the assembled mechanism from the vice and replace it the other way up. Pour about two teaspoonfuls of good quality thin oil into the planet cage.
12. Fit the brake cam. (This part may be smeared with a light grease.)
13. Fit the previously prepared planet cage pawl-ring sub-assembly (over the flats on the pinion pins).
14. Fit the cam spring and the brake thrust plate. The cam spring must come between the brake cam and the brake thrust plate. It is important not to fit it in any other position by mistake.
15. Fit the brake band and the brake plate. (These may be smeared with a light grease.)
16. Remove the assembled mechanism from the vice.
17. Hold the cycle wheel in the left hand, with the open (right-hand)

end facing downwards, and insert the assembled mechanism from below, screwing the right-hand ball ring finger-tight only.

18. Make sure that the marks put on the ball ring and the hub flange before dismantling will register properly, and then screw up tight.
19. Fit the left-hand cone, making sure that the square on it engages with the square in the brake plate.
20. Fit the outer dust cap, the brake arm, the lock washer, the brake-arm nut, the lock washer and locknut. Then adjust the hub bearing (as described in 'The Fitting and Adjustment of Sturmey-Archer Hubs'), so that just the slightest amount of play can be felt at the wheel rim.
21. If the sprocket has been removed from the driver, fit the outer dust cap over the driver before replacing the sprocket, and see that the dust cap is properly centred on the flange of the driver. Replace the sprocket and spacing washers in the arrangement noted when dismantling, and add the circlip.
22. Replace the wheel in the cycle frame and adjust the gear as described in 'The Fitting and Adjustment of Sturmey-Archer Hubs'.

STURMEY
ARCHER