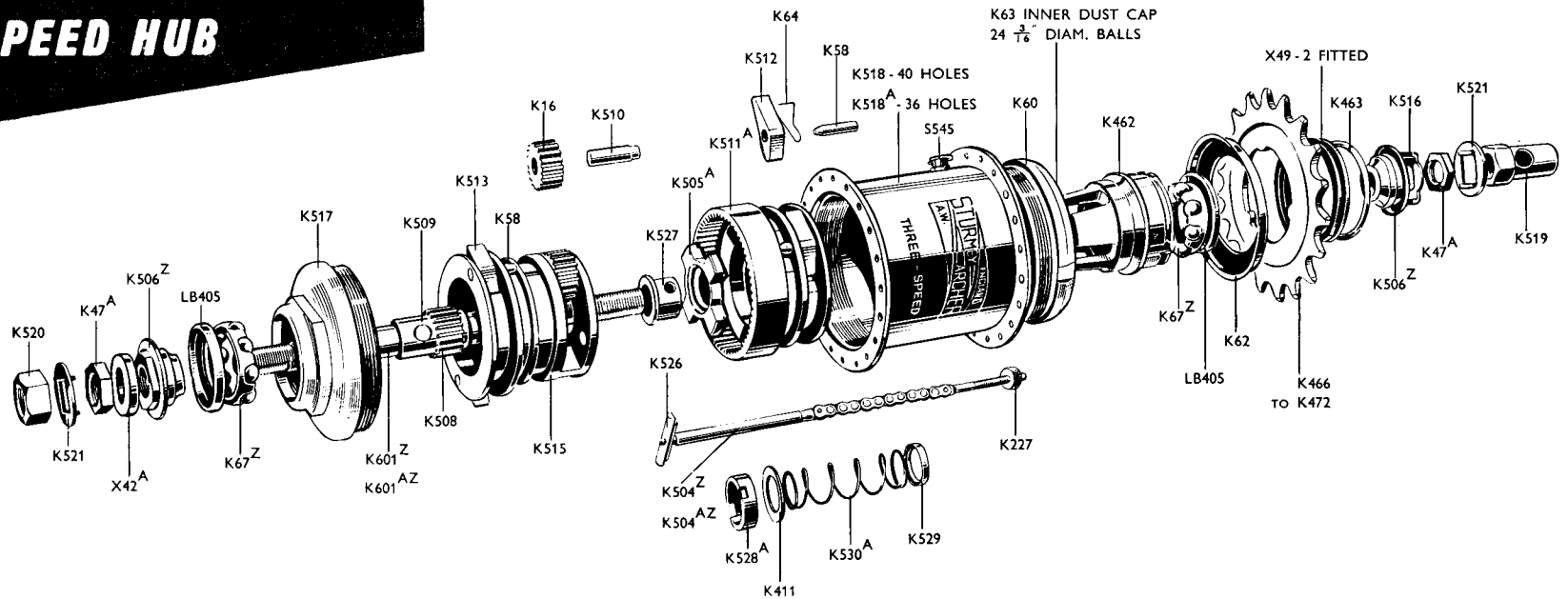


AW Wide-Ratio 3-SPEED HUB



CODE No.

K601Z
K601AZ
K508
K509
K515
K527
K505A
K526
K528A
K411
K16
K510
K511A
K512
K64
K58
K60
329
K63
K530A
K529
K462
K67Z
LB405
K506Z
K516

DESCRIPTION

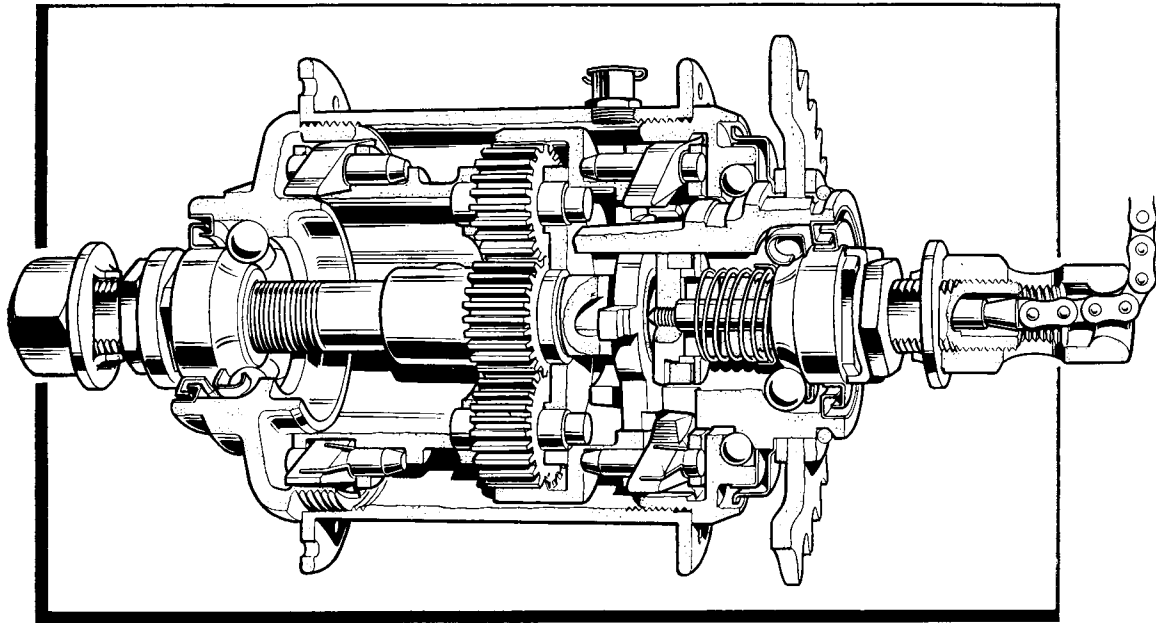
Axle complete with Sun Pinion (5 $\frac{3}{4}$ " long)
Axle complete with Sun Pinion (6 $\frac{1}{4}$ " long)
Sun Pinion only
Dowel for Sun Pinion
Planet Cage
Planet Pin
Clutch Sleeve
Sliding Clutch
Axle Key
Thrust Ring
Thrust Washer
Planet Pinion
Pinion Pin
Gear Ring
Gear Ring Pawl
Pawl Spring
Pawl Pin
R.H. Ball Ring
Ball Bearings, $\frac{3}{16}$ " diam. (per set of 24)
Inner Dust Cap
Clutch Spring
Clutch Spring Cap
Driver
Ball Cage with $\frac{1}{4}$ " balls
Outer Dust Cap
Axle Cone with Dust Cap
R.H. Cone Locking Washer

CODE No.

K513
K518
K518A
S545
K517
K504Z
K504AZ
K227
X42A
K47A
K521
K48
X42
K519
K520
K62
K466
K467
K468
K468A
K469
K469A
K470
K472
X49
K463

DESCRIPTION

Low Gear Pawl
Shell, 40 holes
Shell, 36 holes
Lubricator
L.H. Ball Cup
Indicator for short axle (K601Z)
Indicator for long axle (K601AZ)
Connection Locknut
Axle Spacing Washer ($\frac{1}{8}$ " thick)
Cone Locknut
Axle Washer
Lip Washer
Axle Washer ($\frac{1}{16}$ " thick) } *Not illustrated*
R.H. Axle Nut } *Alternative to X42A*
L.H. Axle Nut
Sprocket Dust Cap
Sprocket, 16 teeth
Sprocket, 17 teeth
Sprocket, 18 teeth
Sprocket, 18 teeth for $\frac{3}{8}$ " wide chain
Sprocket, 19 teeth
Sprocket, 19 teeth for $\frac{3}{16}$ " wide chain
Sprocket, 20 teeth
Sprocket, 22 teeth
Sprocket Spacing Washer ($\frac{1}{16}$ " thick)
Circlip



TO RE-ASSEMBLE THE AW HUB

Proceed as follows:

1. If the left-hand ball cup has been removed from the hub shell, replace it by screwing anti-clockwise (it has a *left-hand thread*).
2. Prepare the following preliminary sub-assemblies:
 - a. Fit the ball cage into the left-hand ball cup, 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.
 - b. 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. 17 below.
 - c. Fit the balls (only 24) and the inner dust cap to the right-hand ball ring, making sure that the balls can revolve freely with the dust cap in place.
 - d. Fit the pawls, pins, and springs into the gear ring as described in the general instructions to 'The Re-assembling of Sturmey-

Archer Hubs.' (The planet-cage pawls, pins and springs are not fitted at this stage.)

- e. Smear grease in the channels of the dust caps of the left-hand ball cup and the driver and in the recess of the right-hand ball ring. *Do not use grease anywhere else.*
3. 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.
4. Add the planet pinions and pins. (The small ends of the pins protrude.)
5. Fit the sleeve (flange first), the sliding clutch with recess on 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 that position.
6. Fit the thrust ring and washer, making sure that the flatted ends of the key engage properly in the slots of the thrust ring.
7. Fit the previously prepared gear-ring sub-assembly.
8. Fit the previously prepared right-hand ball-ring sub-assembly.
9. Fit the previously prepared driver sub-assembly.
10. Drop the clutch spring over the axle.

11. 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.
12. Invert the assembly in the vice and fit the planet-cage pawls as described in the general instructions to 'The Re-assembling of Sturmey-Archer Hubs.'
13. Remove the assembled mechanism from the vice and, while holding it with the planet cage uppermost, pour about two teaspoonfuls of a good quality thin oil into the cage.
14. Hold the cycle wheel in the left hand, with the open (right-hand) end of the hub shell facing downwards, and insert the assembled mechanism from below, screwing up the right-hand ball ring finger-tight only.
15. Make sure that the position marks made on the ball ring and the hub flange before dismantling will register properly, and then screw up tightly.
16. Fit the left-hand cone, washers (if any), and locknut in the arrangement noted when dismantling, and adjust the hub bearings as described in 'The Fitting and Adjustment of Sturmey-Archer Hubs.'
17. 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.
18. Replace the wheel in the cycle frame and adjust the gear as described in 'The Fitting and Adjustment of Sturmey-Archer Hubs.'

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