

KB HUBS EXAMINED.

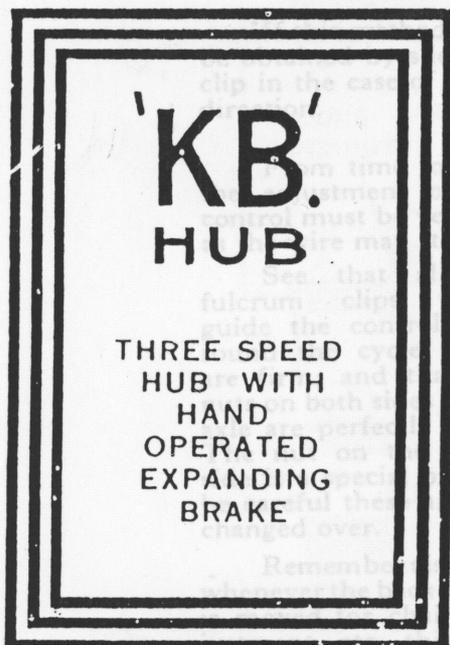
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1931 - 1938.

These KB hubs have 3.1/2" (90mm) diam. brake drums.
All hubs have 6" axles with 2.1/8" of thread at L.H. end. All have 40 holes in shell.
Gear end generally follows the K hubs but have a shortened Planet Cage.
All hubs have 1931 - 1938 type Cones, K.105 and LB.121 notched Washers. except where stated otherwise.
All hubs have Indicators unless shown otherwise.

KB4/a	1934.	Goodish chrome.	Wavy Emblem.
		12 ratchet teeth. Clips on Pawl Pins.	<i>Sturmey Archer 3 Speed Gear.</i>
		Has 1950's L.H. cone K.105AZ. with LB.121 notched Washer..	
		Bearings reasonable. Two "repair" Pinion Pins.	
		Aluminium Brake Plate. Arm K.111A. (to suit cable.)	Has NIG.
KB4/b	1934.	Poor chrome.	Wavy Emblem.
		12 ratchet teeth, Clips on Pawl Pins.	<i>Sturmey Archer 3 Speed Gear.</i>
		K.61 Driver with taper Prongs, no slot on end face.	
		Aluminium Brake Plate. Arm K.111A. (to suit cable.)	5 rivets in aluminium shoes.
		Dogs on Cage good, Splines in Gear Ring poor.	Has NIG.
		No Indicator. Axle Spring fitted.	
KB5/a	1935	Chrome worn.	Wavy Emblem.
		6 ratchet teeth. Clips on Pawl Pins.	<i>Sturmey Archer 3 Speed Gear.</i>
		Sun Pinion slightly damaged but does not effect operation.	
		All races good. Has 1950's L.H. cone K.105AZ. and LB.121 notched Washer.	
		Aluminium Brake Plate. Arm LB.302. (to suit rod.)	Not NIG.
		AW type nuts.	
KB5/b.	1935	V. Good chrome	Wavy Emblem.
		12 ratchet teeth. Clips on Pawl Pins.	<i>Sturmey Archer 3 Speed Gear.</i>
		All races good. Splines in Gear Ring poor, Dogs on Cage good.	
		Aluminium Brake Plate. Arm LB.302. (to suit rod.)	Has NIG.
		AW type nuts.	
B6. (KB Type.)	1936.	Black Shell. Clean. All in good condition.	Wavy Emblem.
		6 ratchet teeth. Groove for Clips, but not fitted.	<i>Sturmey Archer Gears England.</i>
		Main raceway on Driver poorish.	Splines in Gear Ring as new.
		Steel Brake Plate. Arm LB.166. (to suit rod.)	Pressed steel shoes, same as TFB.5.
		AW type nuts.	Not NIG.
KB7	1937.	Good condition but no brake section.	Wavy Emblem.
		6 ratchet teeth. AW type Pawl Pins (plain)	<i>Sturmey Archer Gears England.</i>
		Cage looks new. Splines in Gear Ring worn.	
		No Nuts.	Not NIG.
Perry-Sturmey.	c.1934.	Nickel. 3" diam. brake drum.	Emblem in square box.
		12 ratchet teeth. Clips on Pawl Pins.	<i>3 Speed Hub- Brake.</i>
		K.61 Driver with straight Prongs and slot in outer face,	<i>Perry & Co. Ltd.</i>
		K.106 Notched washer. 1/4" thick.	<i>Made Under</i>
			<i>Sturmey-Archer</i>
			<i>License.</i>

J.G. 1998.



FEATURES. This hub is similar in arrangement to the "K" pattern but in addition to the 3-speed gear, it incorporates an internal expanding, hand-operated brake.

Although fitted in the same shell the brake is entirely separate from and independent of the gears. It is also separately controlled.

The brake is designed to run dry and must on no account be oiled. Special precautions are taken to drain away any oil which escapes from the gear side.

Cone lock nuts, wing nuts and quick release control connection are available to facilitate wheel removals.

WEIGHT.

Hub only	3 lbs. 5 ozs.
Top-Tube Gear Control	3 ozs.
Handlebar Gear Control	6 ozs.
Cable Brake Control.....	8 ozs.

The weight of rod brake controls cannot be given as we do not supply the whole of these parts.

GEAR CHANGING. We would emphasize in this connection that contrary to general belief it is **not desirable to stop pedalling** when changing gear. We definitely recommend that the pedals shall be kept moving forwards, merely easing the pressure on them just for the moment that the lever is moved. This is specially important when changing from top gear to middle gear.

Change gears smartly, as slow gear changes may cause chipping of the engaging dogs.

ADAPTABILITY. Hub width $4\frac{1}{4}$ ins. over cone lock nuts (standard) or can be reduced to $4\frac{1}{8}$ ins. by omitting both of these nuts.

Shell drilled for 40 or 36 spokes up to 13 gauge.

Sprockets available with 16, 17, 18, 19, 20 or 22 teeth for $\frac{1}{2}$ in. x $\frac{1}{2}$ in. or for $\frac{1}{2}$ in. x $\frac{3}{8}$ in. roller chain.

Chain line variable from $1\frac{1}{4}$ ins. to $1\frac{3}{4}$ ins.

CONTROLS. The gear controls are identical with those used on the "K" hub and both Top Tube or Handle Bar types are available.

For the brake either cable or rod-operation can be used. In the latter case the handle-bar fittings are not supplied by us.

ADJUSTMENTS. (1) Gear Control. When the gears are correctly adjusted, and the control lever is in the middle gear notch, the end of the indicator spindle should be level with the end of the hub axle as illustrated. If the indicator projects, slacken the locking nut at the end of the wire near the chain, and with the thumb and forefinger, turn the milled adjusting connection until the indicator is level with the end of the axle; then tighten the locking nut and the adjustment is complete.



If this method gives insufficient adjustment, further adjustment can be obtained by sliding the clip on the top tube control, or the fulcrum clip in the case of handlebar control along the top tube in the required direction.

From time to time the adjustment of the control must be verified as the wire may stretch.

See that all the fulcrum clips which guide the control wire round the cycle frame are firm, and that the nuts on both sides of the axle are perfectly tight. The nut on the chain side is a special one, so be careful these are not changed over.

Remember also that whenever the back wheel is moved for chain adjustment, etc., this will alter the tension of the control wire and necessitate readjustment as described above.

The drawing on the next page shows the axle with the nut removed. It is not, however, necessary to take the nut off in order to carry out an adjustment as the position of the indicator can be easily observed through the hole in the end of the nut.

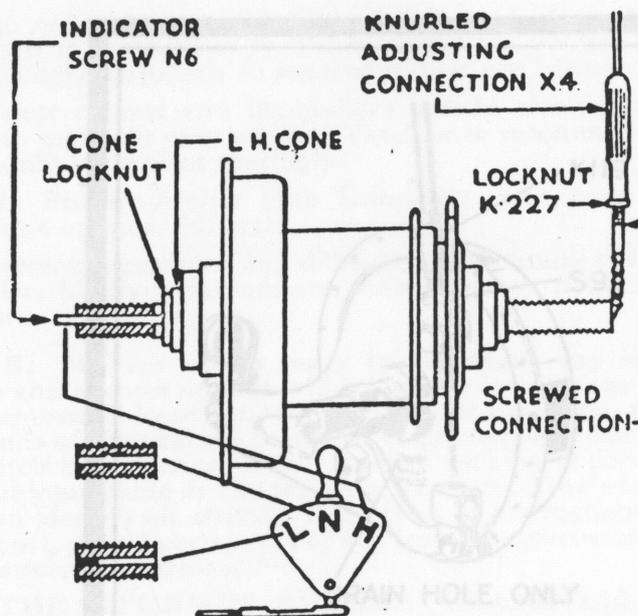
A quick-release knurled connection can be fitted and it is then only necessary to drop the control lever into high gear where the cable is slack. The wire nipple

can then be slipped out of the knurled connection without interfering in the slightest degree with the setting of the indicator.

(2) Brake Control. (a) Cable Type :—Apply the brake frequently when new, to bed the linings to the drum surface. The Brake Cable will then require adjusting. Slacken off the small hexagon nut (S.93) on the adjusting screw (K.119) up against the wire guide (K.118) and unscrew the adjuster the required amount (in an anti-clockwise direction). Finally secure by tightening up the lock nut again.

(b) Rod Type :—Adjustment in the latest type is obtained by simply turning the nut at the brake end of the rods. No tools are needed, and the cam face of the nut automatically fixes it every half revolution. Earlier types call for screwing up the connection at the brake end of the





rod. This is easily disconnected from the hooked end of the brake operating lever for the purpose.

Brake inefficiency may often be traced to these fittings and the following points may be noted :—

I. The studs in the handlebar which support the roller lever may wear and allow too much play. In such cases the matter must be referred to the cycle manufacturer.

II. The "tab" on the end of the roller lever may develop play. This is usually fixed by means of a square hole, fitting over the square end of the lever. This hole may become enlarged (this being a matter for the cycle manufacturer) or the lock nut which secures the lever may loosen.

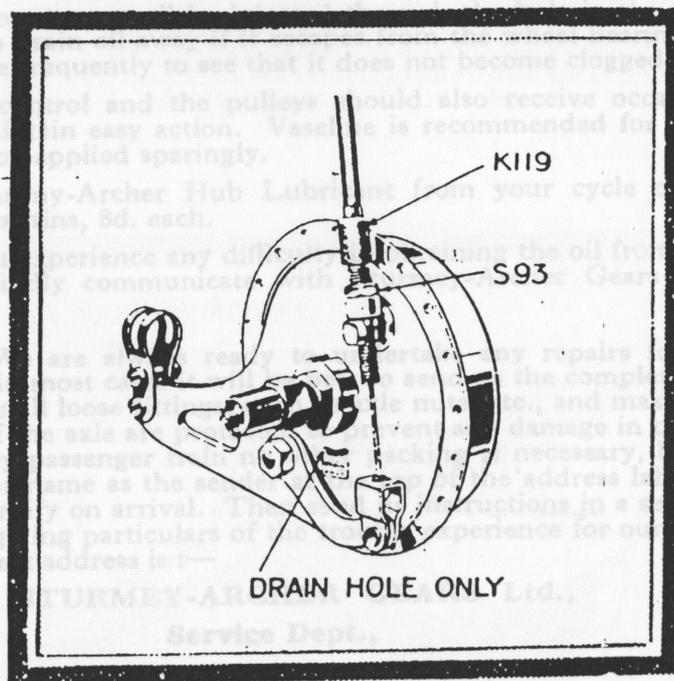
III. All the joints and swivel pins in the control can wear slack. This means loss of movement applied to the brake shoes.

IV. There should be half an inch clearance between the link joining the two rear brake rods, and the bottom bracket, to allow ample movement for applying the brake fully. Any attempt to adjust the brake by shortening the down-tube rod will reduce this clearance and should therefore be avoided.

V. The brake shoe operating lever also has a square hole for fixing purposes. See that this is not loose and that the lock nut is fully tightened.

(3) **Bearings.** Adjustment of all the wheel bearings is simultaneously accomplished by adjusting the left hand cone which is extended so as to project through the Brake Arm and a slotted washer fits over its flats so that it may easily be turned, after first loosening the Axle Nut and the Cone Lock Nut.

This is only true providing the R.H. cone is correctly set. This is carefully adjusted and locked into position at the works and should not be interfered with unless it is essential to do so. To set the R.H. cone correctly it should be screwed up finger tight and then slacken back half a turn (enough to allow the driver to revolve freely on the axle). As soon as this position is found, fit the star washer to secure the cone.



(4) **Indicating Spindle.** The indicator should project $9/32$ in. out of the axle when the control is engaged in the high gear notch. If this measurement is exceeded, the Indicator screw has worked loose, and may be gently screwed up, but do not use force.

For convenience in wheel building the chain and coupling may be unscrewed and removed. When replacing, hold a screwdriver in the notch of the indicator screw to prevent it turning, whilst rotating the chain at the other end of the axle; to the right when screwing up.

If top gear does not hold and the planet cage dogs are not worn, check the position of the hollow grub screw which anchors the outer end of the main axle spring. This should screw down $1/2$ in. below the end of the standard length axle.

(5) **Brake Parts.** It is important when fitting the brake arm to see that the clip for securing it to the frame is set to fit the arm without any side strain, otherwise the alignment of the shoes with the drum is affected. The brake arm cannot be bent for this purpose.

There is no internal adjustment. Care must be taken however to see that the linings are not allowed to wear sufficiently to allow the heads of the fixing rivets to come into contact with the drum surface.

LUBRICATION. Use only Sturmev-Archer Hub Lubricant. This is a high-grade oil of superior quality which will not become sticky or gummy, nor will it evaporate or corrode.

Inject half a teaspoonful every 150/200 miles, or at least once a fortnight.

Make sure that the lubricator hole is clear.

Grease or oils that become gummy, corrode, or evaporate, must not on any account be used, as they impede the free operation of the pawls and will not allow the hub to function properly.

On no account must oil be injected through the hole in the brake arm. This is to drain oil away if it escapes from the wheel bearings, so inspect this hole frequently to see that it does not become clogged.

The gear control and the pulleys should also receive occasional attention to maintain easy action. Vaseline is recommended for these, but must only be applied sparingly.

Obtain Sturmy-Archer Hub Lubricant from your cycle dealer. Supplied in 4 oz. tins, 8d. each.

In case you experience any difficulty in obtaining the oil from your cycle dealer, kindly communicate with Sturme-Archer Gears Ltd., Nottingham.

REPAIRS. We are always ready to undertake any repairs for our customers and in most cases it will be best to send us the complete rear wheel. Remove all loose fittings, such as axle nuts, etc., and make sure that the ends of the axle are protected to prevent any damage in transit. For despatch by passenger train no other packing is necessary, but be sure to put your name as the sender at the top of the address labels so that we can identify on arrival. Then send us instructions in a separate letter by post, giving particulars of the trouble experience for our guidance. The correct address is :—

THE STURMEY-ARCHER GEARS Ltd.,
Service Dept.,
Lenton,
NOTTINGHAM.

An estimate will be sent without delay, and we can usually complete the repairs immediately when we have your acceptance and remittance against this estimate.

To reduce carriage charges the internals may be removed and sent by post but if the low gear is giving trouble do not omit to send the left hand ball cup. Otherwise this part need not be detached from the shell. Make sure, however, that the bearing surface in it is in good condition if it is not sent. Instructions can be enclosed in the parcel, otherwise mark label as for a wheel.

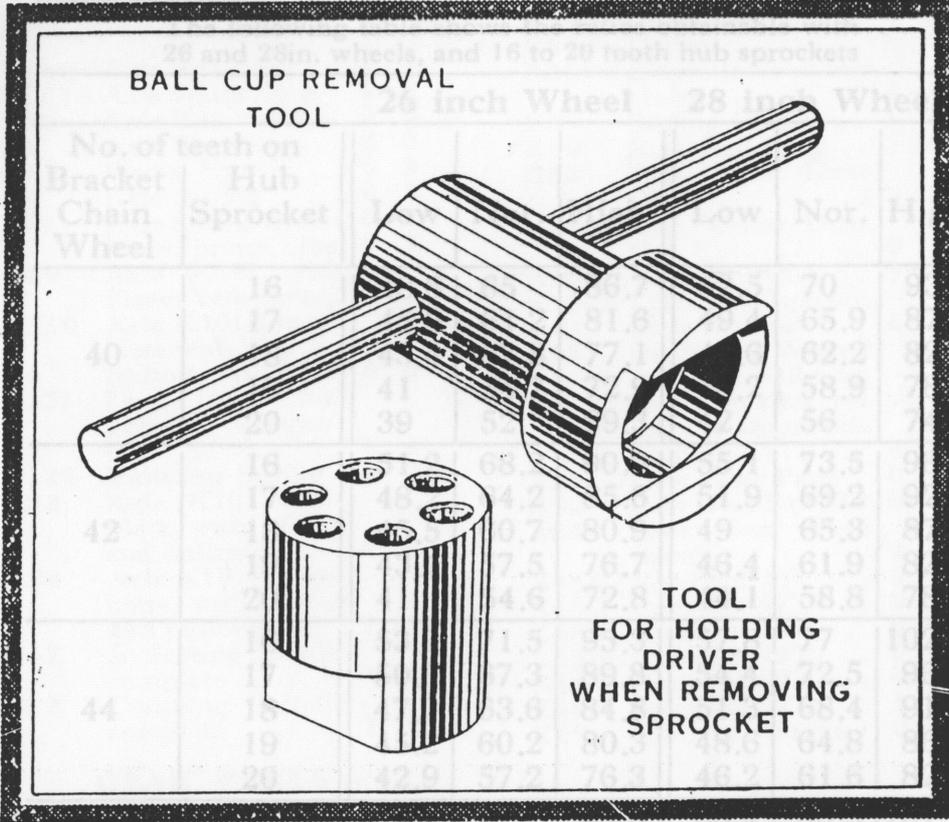
TO REMOVE THE INTERNALS. Remove the cone lock nut and pull off the slotted washer used for cone adjustment purposes. This releases the brake parts en bloc and exposes the left hand cone for removal. Then unscrew the right hand ball ring from the shell (right-hand thread). This will detach all the gears except the left-hand ball cup. This ball cup screws into the shell with a left-hand thread. Difficulty may be experienced when refitting the left-hand ball cup, in securing an oil-tight joint. In such cases an oil sealing washer (K.135) should be used.

Do not dismantle the hub unless it is essential to do so, as the hub is carefully adjusted before despatch and it is not advisable to interfere with this adjustment. If at any time it has to be dismantled see that the recess in the R.H. ball ring in which the outer dust cap revolves is filled with vaseline or grease as a protection against water entering the bearings. Also put a little vaseline or grease in the R.H. and L.H. Cone Ball Races.

TOOLS. A special spanner is necessary to enable the left-hand ball cup to be unscrewed from the shell. This is available and is listed after the spares in the price list. A tool for holding the driver for sprocket removal is also available.

A cone spanner with "C" end for left-hand adjusting washer is also supplied (K.44A) also a spanner for the Sleeve Nut and for the left-hand cone (X44B). A screwdriver (K.43) is offered for assembling the indicator parts in the axle. This is marked to show the correct depth for the axle spring screw inside the standard length axle.

KB GEAR RATIO TABLE



No. of teeth on Bracket Chain Wheel	Hub Sprocket	High	Normal	Low	High	Normal	Low
40	16	52.7	70.3	93.7	56.9	75.8	101.1
	17	49.8	66.4	88.5	53.6	71.8	95.3
	18	47.2	62.9	83.9	50.9	67.8	90.4
	19	44.9	59.8	79.7	48.3	64.4	85.9
42	16	58.5	78	104	63	84	112
	17	55.1	73.5	98	59.3	79.1	105.5
	18	52	69.3	92.4	56	74.7	99.6
	19	49.3	65.7	87.6	53	70.7	94.3
44	16	61	81.3	108.4	65.6	87.5	116.7
	17	57.4	76.5	102	61.8	82.4	109.9
	18	54.2	72.2	96.3	58.4	77.8	103.7
	19	51.3	68.4	91.2	55.3	73.7	98.3
46	16	68.8	91.5	121.5	74.5	100.5	133.5
	17	64.2	84.2	111.8	69.2	92.5	122.5
	18	60.7	80.7	107.5	65.8	88.5	117.5
	19	57.5	76.7	102.4	61.9	84.5	112.5
48	16	77.5	102.5	136.5	83.5	112.5	149.5
	17	73	97.3	129.5	79.5	107.5	142.5
	18	69.6	92.6	123.5	75.6	102.5	136.5
	19	66.2	88.2	118.5	72.2	98.5	131.5
50	16	86.2	113.5	151.5	92.5	124.5	164.5
	17	81.5	107.5	143.5	87.5	118.5	156.5
	18	77.5	102.5	137.5	83.5	113.5	150.5
	19	73.5	97.5	131.5	79.5	108.5	144.5
52	16	95.5	126.5	167.5	102.5	138.5	181.5
	17	90.5	120.5	159.5	97.5	132.5	174.5
	18	86.5	115.5	153.5	93.5	127.5	168.5
	19	82.5	110.5	147.5	89.5	122.5	162.5
54	16	105.5	141.5	185.5	113.5	153.5	201.5
	17	100.5	135.5	177.5	108.5	147.5	194.5
	18	96.5	130.5	171.5	104.5	142.5	188.5
	19	92.5	125.5	165.5	100.5	137.5	182.5
56	16	115.5	156.5	203.5	124.5	168.5	221.5
	17	110.5	150.5	195.5	119.5	162.5	214.5
	18	106.5	145.5	189.5	115.5	157.5	208.5
	19	102.5	140.5	183.5	111.5	152.5	202.5
58	16	126.5	172.5	223.5	136.5	183.5	241.5
	17	121.5	166.5	215.5	131.5	177.5	234.5
	18	117.5	161.5	209.5	127.5	172.5	228.5
	19	113.5	156.5	203.5	123.5	167.5	222.5
60	16	137.5	188.5	245.5	148.5	195.5	261.5
	17	132.5	182.5	237.5	143.5	189.5	254.5
	18	128.5	177.5	231.5	139.5	184.5	248.5
	19	124.5	172.5	225.5	135.5	179.5	242.5
62	16	148.5	204.5	267.5	160.5	213.5	281.5
	17	143.5	198.5	259.5	155.5	207.5	274.5
	18	139.5	193.5	253.5	151.5	202.5	268.5
	19	135.5	188.5	247.5	147.5	197.5	262.5
64	16	159.5	220.5	290.5	172.5	225.5	301.5
	17	154.5	214.5	282.5	167.5	219.5	294.5
	18	150.5	209.5	276.5	163.5	214.5	288.5
	19	146.5	204.5	270.5	159.5	209.5	282.5
66	16	170.5	236.5	313.5	184.5	247.5	321.5
	17	165.5	230.5	305.5	179.5	241.5	314.5
	18	161.5	225.5	299.5	175.5	236.5	308.5
	19	157.5	220.5	293.5	171.5	231.5	302.5
68	16	181.5	252.5	336.5	196.5	269.5	341.5
	17	176.5	246.5	328.5	191.5	263.5	334.5
	18	172.5	241.5	322.5	187.5	258.5	328.5
	19	168.5	236.5	316.5	183.5	253.5	322.5
70	16	192.5	268.5	359.5	208.5	291.5	361.5
	17	187.5	262.5	351.5	203.5	285.5	354.5
	18	183.5	257.5	345.5	199.5	280.5	348.5
	19	179.5	252.5	339.5	195.5	275.5	342.5

The Gear ratios provided are high gear 33 1/3 per cent. above normal, and low gear 25 per cent. below normal. The normal gear is according to the number of teeth on the front chain wheel, as in a single-speed machine.

'K B' GEAR RATIO TABLE

The following table shows the ratios obtainable with
26 and 28in. wheels, and 16 to 20 tooth hub sprockets

		26 inch Wheel			28 inch Wheel		
No. of teeth on Bracket Chain Wheel	Hub Sprocket	Low	Nor.	High	Low	Nor.	High
		40	16	48.8	65	86.7	52.5
17	45.9		61.2	81.6	49.4	65.9	87.9
18	43.4		57.8	77.1	46.6	62.2	82.9
19	41		54.7	72.9	44.2	58.9	78.5
20	39		52	69.3	42	56	74.7
42	16	51.2	68.2	90.9	55.1	73.5	98
	17	48.2	64.2	85.6	51.9	69.2	92.3
	18	45.5	60.7	80.9	49	65.3	87.1
	19	43.1	57.5	76.7	46.4	61.9	82.5
	20	41	54.6	72.8	44.1	58.8	78.4
44	16	53.6	71.5	95.3	57.8	77	102.7
	17	50.5	67.3	89.8	54.4	72.5	96.7
	18	47.7	63.6	84.8	51.3	68.4	91.2
	19	45.2	60.2	80.3	48.6	64.8	86.4
	20	42.9	57.2	76.3	46.2	61.6	82.1
46	16	56	74.7	99.6	60.4	80.5	107.3
	17	52.7	70.3	93.7	56.9	75.8	101.1
	18	49.8	66.4	88.5	53.6	71.8	95.3
	19	47.2	62.9	83.9	50.9	67.8	90.4
	20	44.9	59.8	79.7	48.3	64.4	85.9
48	16	58.5	78	104	63	84	112
	17	55.1	73.5	98	59.3	79.1	105.5
	18	52	69.3	92.4	56	74.7	99.6
	19	49.3	65.7	87.6	53	70.7	94.3
	20	46.8	62.4	83.2	50.4	67.2	89.6
50	16	61	81.3	108.4	65.6	87.5	116.7
	17	57.4	76.5	102	61.8	82.4	109.9
	18	54.2	72.2	96.3	58.4	77.8	103.7
	19	51.3	68.4	91.2	55.3	73.7	98.3
	20	48.8	65	86.7	52.5	70	93.3

The Gear ratios provided are high gear $33\frac{1}{2}$ per cent. above normal, and low gear 25 per cent. below normal. The normal gear is according to the number of teeth on the front chain wheel, as in a single-speed machine

'K B' SPARE PARTS

AXLE

K101	Axle 6ins. long ..	4	0
K101A	Axle 6 $\frac{1}{2}$ ins. long ..	4	0
K2	Axle Key	0	2
K3	Axle Sleeve	0	8
K4	Sleeve Nut	0	3
N8	Axle Spring	0	2
X47	Axle Spring Screw ..	0	1
X8	Main Spring Collar ..	0	1
KZ9	Axle K101 with Sleeve complete ..	5	3
KZ10	Axle K101A complete with Sleeve ..	5	3
N6	Indicator Screw	0	6
K227	Lock Nut for Screwed Connection	0	1
N126	Indicator Spring	0	2
KZ3	Axle K101 complete with sleeve and indicator ..	7	0
KZ4	Axle K101A complete with sleeve and indicator ..	7	0
N6Z	Indicating Spindle complete	1	8
N7Z	Coupling Spindle complete	1	0

GEAR PARTS

K11	Gear Ring	3	6
K12A	Gear Ring Pawl for high and middle gears	0	4
K58	Pawl Pin for Gear Ring	0	1
K64	Pawl Spring for K12A (R shape) ..	0	$\frac{1}{2}$
K11Z	Gear Ring fitted with Pawls	4	6
K103	Planet Cage	3	6
K16	Planet Pinion	0	6
N24	Pinion Pin	0	2
K103Z	Planet Cage complete with Pinions ..	6	0
K45	Cage End Cap	0	3
K125	Cage End Cap Spring	0	1

SHELL & DRIVE PARTS

K102	Shell (40 holes) ..	5	0
K102A	Shell (36 holes) ..	5	0

K68	Lubricator	0	3
K61	Driver	3	6
K361	Driver for Tandem Hubs	4	3
K5	Sliding Clutch	1	6
K60	R.H. Ball Ring	2	6
K63	R.H. Inner Dust Cap	0	3
K62	R.H. Outer Dust Cap	0	3
K104	L.H. Ball Cup	3	6
K104Z	L.H. Ball Cup complete with pawls ..	4	3
K135	Oil Sealing Washer for L.H. Ball Cup (for use after repairs to secure oil-tight joint) ..	0	1
X28	Low Gear Pawl	0	3
X92	Low Gear Pawl Pin ..	0	1
X34	Low Gear Pawl Spring	0	$\frac{1}{2}$
X48E	Sprocket 16T	0	9
X48C	Sprocket 17T	0	9
X48	Sprocket 18T	0	9
X48D	Sprocket 19T	0	9
X48F	Sprocket 20T	0	9
X48G	Sprocket 22T	1	6
X49	Sprocket Washer	0	2

NUTS, CONES AND WASHERS

K6AZ	R.H. Cone with Dust Cap	1	0
K105Z	L.H. Cone with Dust Cap	1	0
K106	L.H. Adjuster Washer	0	5
K47A	Cone Lock Nut	0	1
K48	Lip Washer for securing Axle in frame (not necessary in all cases) ..	0	2
K67	Ball Retainer with 8 balls $\frac{1}{2}$ in. diam. ..	0	3
X42	Axle Nut Spacing Washer	0	1
N189A	Step	0	9
N190	L.H. Nut	0	8
N200	R.H. Nut with Chain Guide	0	9

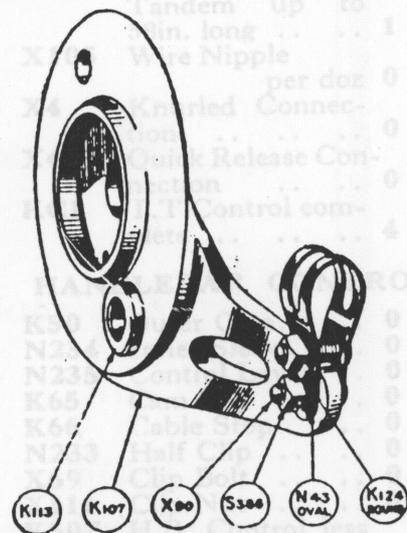
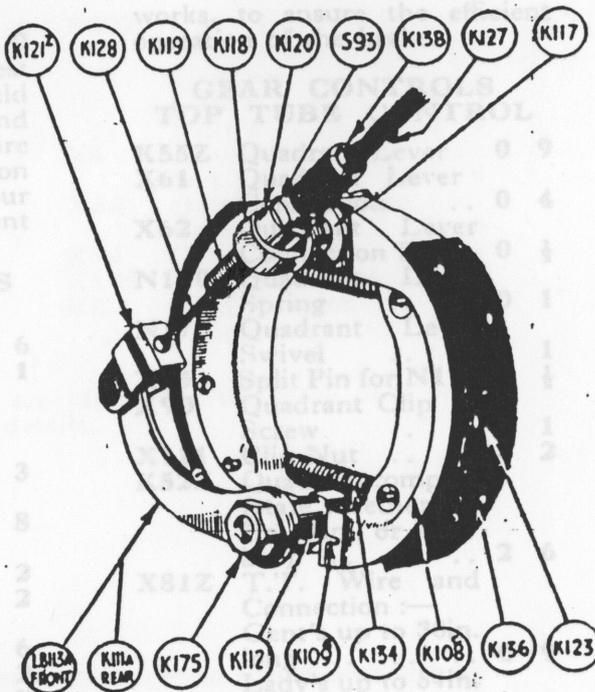
- N222 Star Washer for locking R.H. Cone 0 2
- K231Z Wing Nuts per pair 2 0
- K234 Chain Guide (for R.H. Wing Nut) 0 2

TOOLS

- K44A Spanner for Axle Nuts and L.H. Adjusting Washer 0 6
- DD1670 Tool for holding driver to remove Sprocket 2 9
- DD911 Tool for removing L.H. Ball Cup 4 0
- X44B Spanner for Sleeve nut and left-hand cone 0 6
- K43 Screwdriver for assembling indicator parts in axle 0 6

ALUMINIUM BRAKE PARTS 1931 - 1935

- K107 Brake Arm 2 6
- K108CZ Brake Shoes complete with K136 linings and springs K134 per pair 4 3
- K115 Brake Linings with 6 rivet holes (old type) per pair 1 8
- K136 Brake Linings with 5 rivet holes per pr. 1 8
- K123 Rivets for Brake Linings per doz. 0 2
- K134 Brake Shoe Spring 0 2
- K116 Brake Shoe Spring with long hook (early pattern) 0 2
- K112 Brake Operating Cam and Washer 0 5
- K113 Brush for Brake Operating Cam 0 2
- K117 Fulcrum Sleeve 0 2
- K118 Wire Guide (for Cable - operated Brakes) 0 4
- LB127 Fulcrum Screw (alternative to K118 for rod - operated brake) 0 3
- K111A Brake Lever for cable - operated brake 0 6
- LB113A Brake Lever (early type for rod operated brake) 0 6
- LB302 Brake Lever (swivel type for rod-operated brake) 0 6



- LB304 Swivel Pin for LB302 0 1
- K175 Cam Lever Nut 0 1
- K124 Brake Arm Clip (round) 0 2
- N43 Brake Arm Clip (standard) 0 2
- X69 Brake Arm Clip Screw 0 1
- S386 Clip Screw Nut 0 1
- S546 Thumb Screw for Brake Arm Clip 0 1

Fitting new Linings to shoes per pair 2 0

NOTE.—In their own interest all users of our hubs should insist on the brake shoes and linings being of our manufacture and they should also insist on the linings being fitted at our works, to ensure the efficient operation of the brake.

STEEL BRAKE PARTS
1936 · 1937

K160Z	Brake Arm	.. 2	6
K360	Spacing Washer	0	1
K158Z	Brake Shoes complete with K136 Linings and Spring K166 per pair	4	3
K136	Brake Linings with 5 rivet holes per pr.	1	8
K173	Rivets for brake linings per doz.	0	2
K166	Brake Shoe Spring	0	2
K162	Brake Operating Cam and Washer	0	6
K163	Cam Bush	0	2
K167	Fulcrum Sleeve	0	3
K164	Washer for sleeve	0	½
K171	Wire Guide (for cable - operated brakes)	0	3
K172	Lock Washer for Wire Guide	0	½
K168	Wire Guide Nut	0	1
LB127	Fulcrum Screw	0	3
K169	Brake Lever for cable - operated brake	0	6
LB335	Brake Lever (swivel type for rod-operated brake)	0	6
LB304	Swivel Pin for LB335	0	1
K175	Cam Lever Nut	0	1
K124	Brake Arm Clip (round)	0	2
N43	Brake Arm Clip Standard	0	2
X69	Brake Arm Clip Screw	0	1
S386	Clip Screw Nut	0	1
S546	Thumb Screw for Brake Arm Clip	0	1
	Fitting New Linings to shoes per pair	2	0

NOTE.—In their own interest all users of our hubs should insist on the brake shoes and linings being of our manufacture and they should also insist on the linings being fitted at our

works, to ensure the efficient operation of the brake.

GEAR CONTROLS
TOP TUBE CONTROL

K55Z	Quadrant Lever	0	9
X61	Quadrant Lever Connection	0	4
X62	Quadrant Lever Connection Pin	0	½
N120	Quadrant Lever Spring	0	1
N179	Quadrant Lever Swivel	0	1
X35	Split Pin for N179	0	½
X90	Quadrant Clip Screw	0	1
X111	Clip Nut	0	2
K52Z	Quadrant complete (state whether for ½ in., 1 in., or 1½ in. bar)	2	6
X81Z	T.T. Wire and Connection:— Gent's up to 36in. long	0	9
	Lady's up to 54in. long	1	0
	Tandem up to 58in. long	1	0
X105	Wire Nipple per doz	0	5
X4	Knurled Connection	0	4
X4A	Quick Release Connection	0	4
KC1	T.T. Control complete	4	3

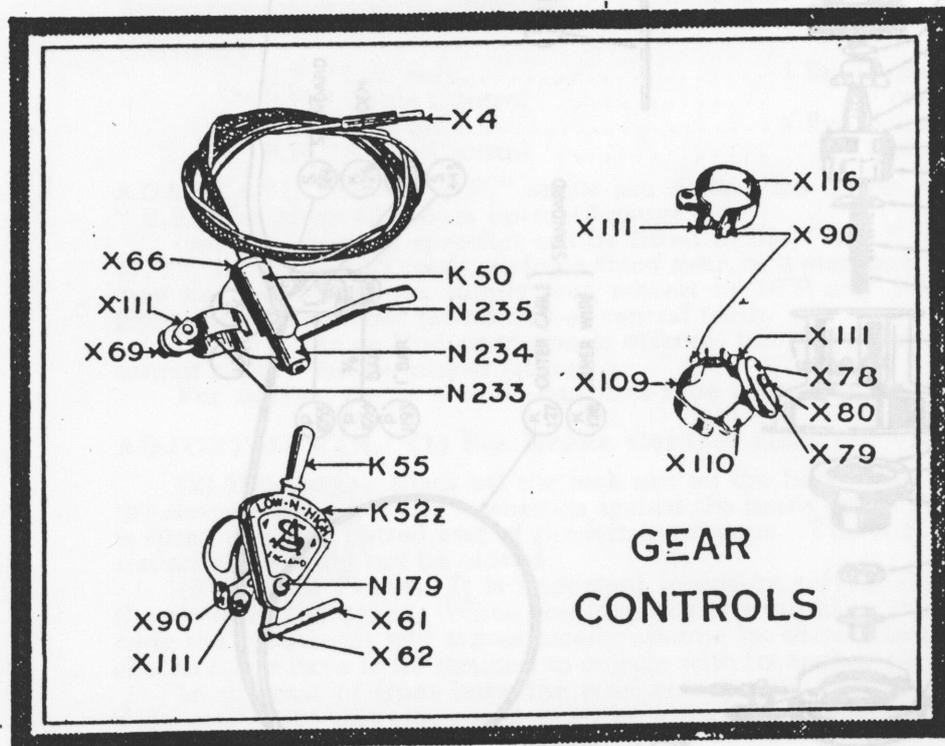
HANDLEBAR CONTROL

K50	Outer Cam	0	9
N234	Inner Sleeve	0	9
N235	Control Lever	0	9
K65	Cam Cap	0	2
K66	Cable Stop	0	1
N233	Half Clip	0	3
X69	Clip Bolt	0	1
X111	Clip Nut	0	2
K50Z	H.B. Control less wires and pulley as above	3	0
X116Z	Fulcrum Clip complete (state whether 1 in. or ½ in. diam.)	0	6
X90	Fulcrum Clip Bolt	0	1
X78	Pulley Wheel	0	3
X79	Pulley Arm	0	1
X80	Pulley Arm Screw	0	1
X109	Pulley Half Clip	0	3
X110	Pulley Clip	0	3

X78Z	Pulley complete (state whether for lin. or 1½in. bar)	1	0
X82	Outer Cable, Black	1	0
X81Z	H.B. Inner Wire and Connection :		
	Gent's up to 58in. long	1	0
	Lady's up to 78in. long	1	3

X82Z	H.B. Inner and Outer wires com- plete :—		
	Gent's	2	0
	Lady's	2	3
X4	Knurled Con- nection	0	4
X4A	Quick Release Connection	0	4
X83	Cable Ferrule	0	1
X105	Wire Nipple doz	0	5
KC2	H. B. Control complete	6	9

Brake Controls for KB hubs are identical with those used with BR hubs. See pages 17 to 20 for details.



KB STANDARD 3 SPEED HUB PARTS

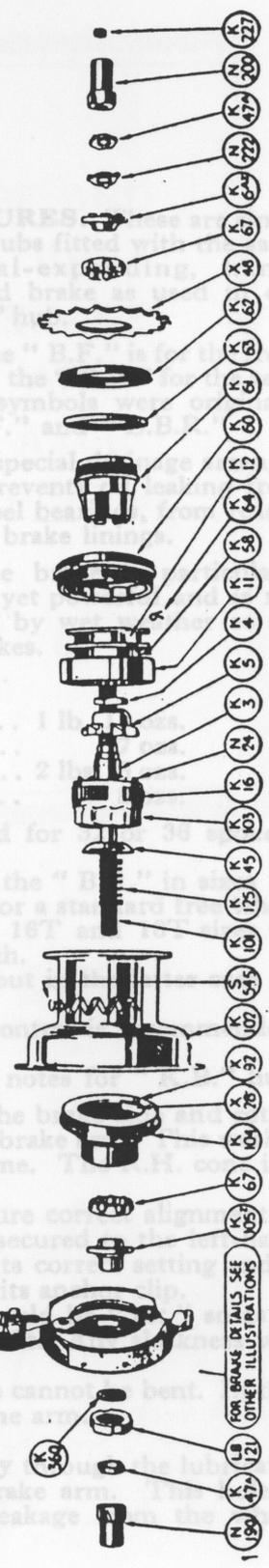
P 1053^A DROP BARS
P 1156^A NORTH ROAD BARS
P 1203 STANDARD UPTURNED BARS

S STANDARD
K 129 TANDEM
S 583
S 443
P 1056
P 1054
P 1054
P 1054
P 193
7/16" BAR
1" BAR

K 127 OUTER CABLE
K 170 INNER WIRE

N 6
N 126
K 2
K 8
N 8
X 47
N 7
X 2
X 3
X 4

K 138
K 119
S 31
K 120
K 121
K 120



FOR BRAKE DETAILS SEE OTHER ILLUSTRATIONS