

HARRISON
CENTRE LATHE
MODEL L5

Do NOT ORDER
FROM THIS BOOK.

INSTALLATION
AND
SPARE PARTS
LIST

HARRISON CENTRE LATHE MODEL L5

INSTALLATION AND SPARE PARTS LIST

T S HARRISON & SONS LTD

UNION MACHINE TOOL WORKS

HECKMONDWIKE YORKSHIRE

Telephone 627-8

Telegrams HARRISON HECKMONDWIKE

Code used ABC 5th Edition

Introduction

THE main purpose of this booklet is to provide users with a full list of spare parts for which replacement may be needed. When ordering these replacement parts, please quote the part number, description, AND THE NUMBER OF THE LATHE FOR WHICH THEY ARE REQUIRED; this number will be found stamped at the end of the bed near the tailstock. The introduction of splined shafts has been extended gradually as opportunity has arisen, and if replacements are needed with splined or broached fittings, this information should be given.

Attention has been drawn to a few points of detail which it is hoped will be of use to the purchaser of a 'HARRISON' Lathe; attention to these matters will ensure satisfactory service.

New developments and modifications resulting in improved performance may be incorporated from time to time and the right is reserved to modify the specification as may be required.

Installation

1. **SLINGING**—In the cabinet base model, special provision is made for lifting the lathe. Holes are provided in the cabinet base under the headstock and tailstock through which a bar may be passed for slinging purposes.

Care should be taken to avoid the lifting ropes bearing on the leadscrew or feed shaft.

2. **CLEANING**—All bright surfaces are covered with an anti-corrosive compound before despatch from the works; this should be removed with petrol or paraffin before putting the machine in operation.

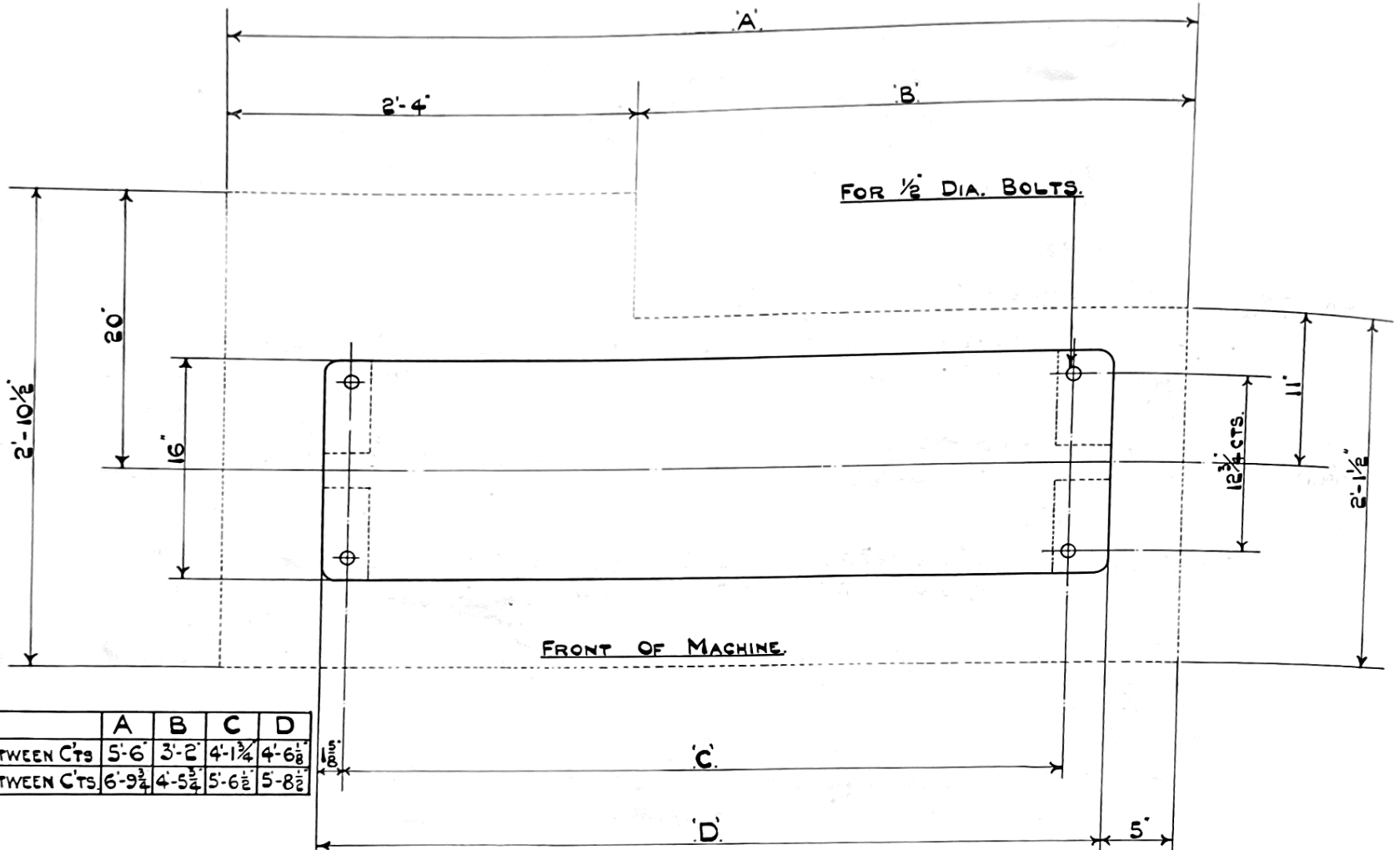
3. **LEVELLING**—A foundation plan is provided on page 4. It is important that the machine should be on a properly prepared solid base and correctly levelled. This should be checked with a sensitive spirit level as follows—

1—Test longitudinally by mounting the spirit level on either flat slideway.

2—Test the transverse levels and for twist, by mounting the spirit level across blocks of the same height one on the front and one on the rear flat slideway at each end of the bed in turn.

Reverse the level and take the mean readings. Pack separately under the low corner or corners of the base. Because of the rigid design of the base it is unnecessary to bolt to the floor, and after levelling, the machine is ready for use.

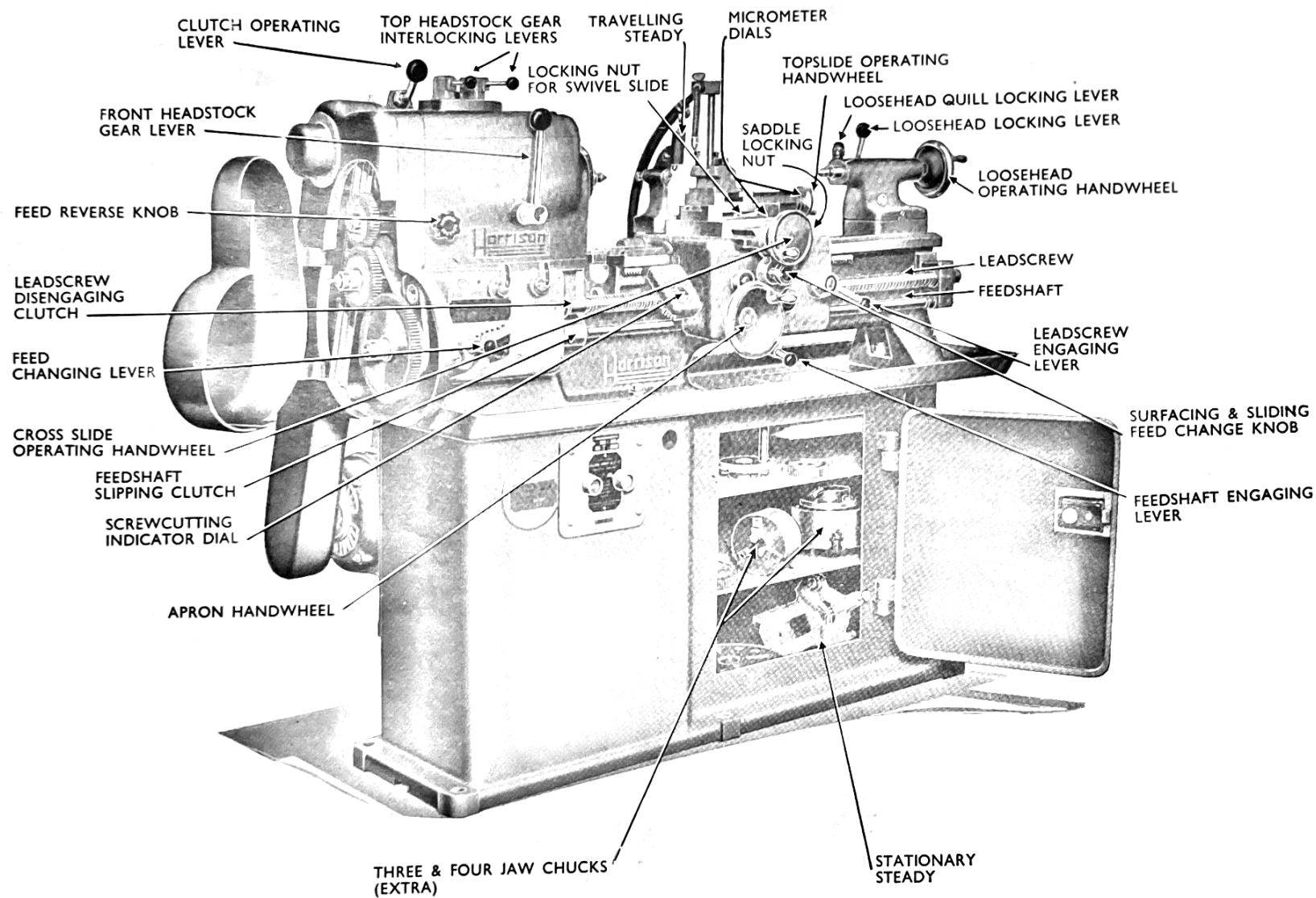
If it is essential that the lathe is bolted down, it is most important to ensure when tightening the nuts after levelling that no distortion is imparted to the lathe bed by clamping the base. When bolting down on concrete, pack the base level under the support points with foundation bolts in position. Run concrete under and round the base and allow it to solidify. The nuts should then be tightened on to spring washers only sufficiently firmly to prevent them working loose and a final level check made. It must be emphasised even with this method that great care must be taken to avoid distortion, and it is preferable to mount the lathe as stated with bolts, but without nuts, using the bolts merely as location pegs so as to avoid lateral displacement.



DIMENSIONS.	A	B	C	D
To ADMIT 24" BETWEEN CTS	5'-6"	3'-2"	4'-1 1/4"	4'-6 3/8"
To ADMIT 40" BETWEEN CTS	6'-9 3/4"	4'-5 3/4"	5'-6 1/2"	5'-8 1/2"

BROKEN LINE REPRESENTS TOTAL PROJECTED FLOOR SPACE OCCUPIED BY MACHINE.

FOUNDATION PLAN.



Operation & Maintenance

OPERATION

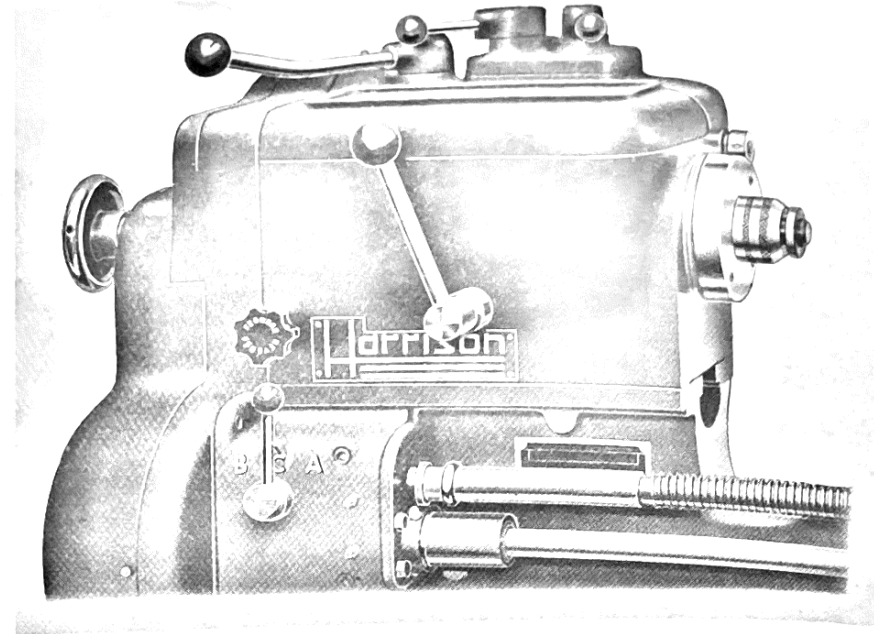
The control levers are shown on the illustrations opposite and on page 5.

HEADSTOCK

Speed changes should only be made after disengagement of the clutch. Push the large curved lever on the top of the headstock to the left to stop the spindle and disengage the clutch. The gear lever on the front has two positions, to the left for the lower speed range and to the right for the higher range. In conjunction with the two small gear levers on top of the headstock, each of which has two positions, a total of eight spindle speeds can be obtained. Forward or reverse rotation to the feed gearbox is obtained by rotating the bakelite knob immediately above the gearbox.

THREE-SPEED FEED GEARBOX

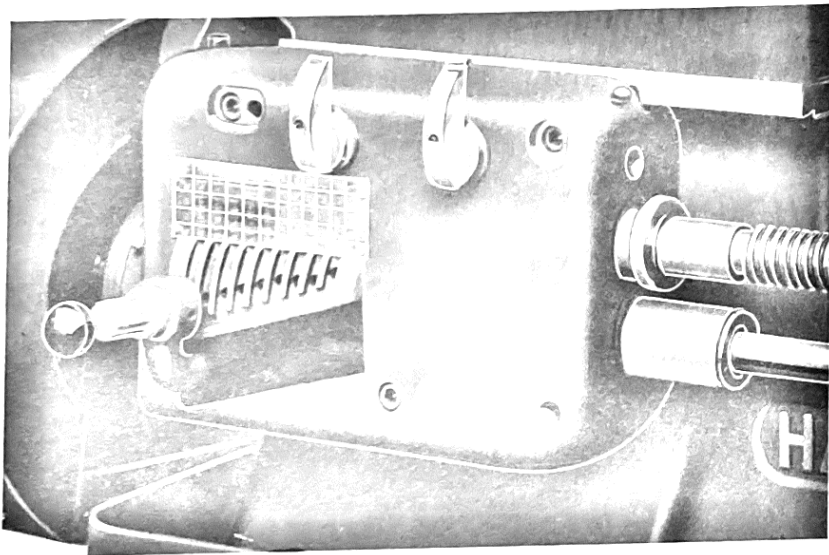
Three changes of feed for both sliding and surfacing are obtained by moving the feed change lever into the appropriate angular position 'A', 'B' or 'C'. The standard screwcutting chart attached to the inside of the guard gives the change wheel combinations for Whitworth and B.S.F. threads up to 80 T.P.I. For 19



T.P.I. a special 95-tooth wheel is required and for fine threads 36 and upwards a special 120 tooth wheel. Charts for Metric and B.A. threads are fitted when change wheels for these screw threads are ordered.

When not in use the leadscrew can be disengaged by operation of the dog clutch.

A slipping clutch is provided on the feed shaft which can be used with dead stops as a feed knock-off.



NORTON FEED GEARBOX

Thirty-six direct changes of threads and feeds are obtained by manipulation of the tumbler lever in combination with the two adjacent compound gear levers. Their relative positions are determined by reference to the chart immediately above the lever. A dog clutch is provided for leadscrew disengagement.

Charts for Metric and B.A. threads are provided when the extra change wheels for these screw threads are ordered.

The standard change wheel combination for a $4\frac{1}{2}$ in. centre ($9\frac{3}{8}$ in. swing) lathe is 50T top shaft, 50T intermediate shaft and 100T bottom shaft and gives a range of threads 4 to 60 T.P.I. By changing the 50T intermediate gear with the 100T bottom shaft gear, threads down to 2 T.P.I. can be cut.

On the 11 in. swing lathe the standard change wheel combination is 50T top shaft, 60T intermediate shaft and 100T bottom shaft. To cut the 2 T.P.I. range it necessitates the provision of an extra 50T gear and the required combination is 50T top shaft, 100T intermediate shaft and 50T bottom shaft.

APRON

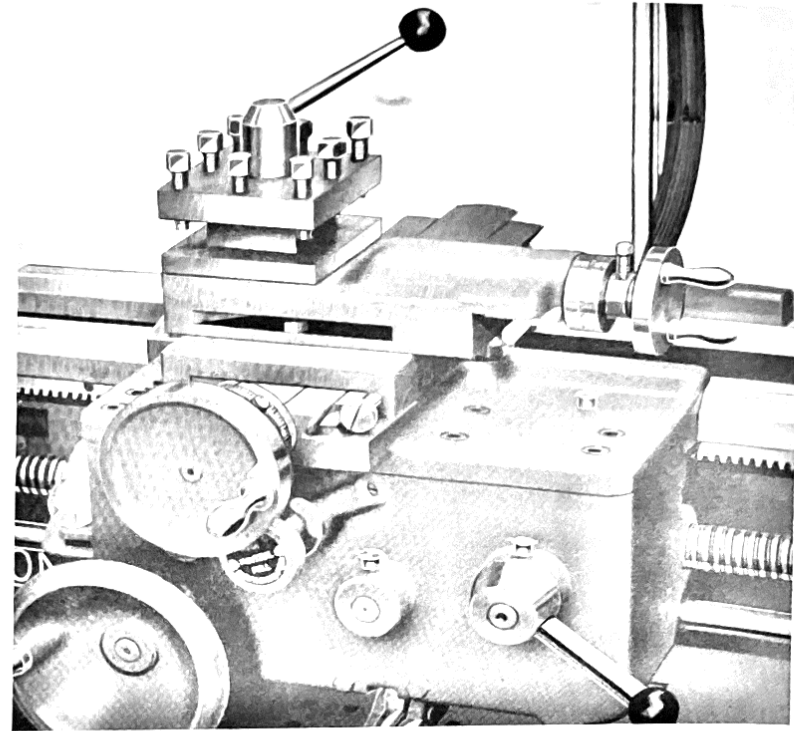
To engage the sliding or surfacing feed lift the trigger lever at the base of the apron. To select a sliding feed the circular knob below the cross slide hand-wheel should be pushed in, and for a surfacing feed this knob should be pulled out as far as possible. To engage the cross slide nut for screwcutting, the trigger lever should be released and the hand-lever at

the extreme right of the saddle pulled upwards. Each dial is graduated into divisions equivalent to 1/1000 part of an inch.

A screwcutting indicator is provided on every lathe to facilitate engagement of the leadscrew. The indicator is graduated and engagement for cutting any even number of threads per inch (e.g. 6, 8, 10, etc.) is made when any line on the indicator coincides with the fixed mark. For odd numbers of threads per inch (e.g. 3, 5, 7, etc.) engagement is made at any numbered line on the indicator, and for fractional threads per inch engagement is made on line marked 1 or 3.

When cutting Metric threads, a special 127-tooth transposing change wheel is required. The dial indicator should not be used. To facilitate the accuracy of second cuts, an electric reversing switch can be supplied. The leadscrew is then kept in engagement.

To cut multiple start threads the best procedure is to set the top slide travel dead parallel with the axis of the spindle (swivel slide is at zero setting) and cut the first thread in the usual manner at the correct lead. Cut subsequent threads by advancing the top slide each time a distance of the lead divided by the number of starts.



TAILSTOCK

Slow tapers such as morse etc. can be obtained by setting over the tailstock, for which screw adjustment of $\frac{1}{2}$ in. on either side of the centre line is provided.

Instructions regarding use of Attachments

METRIC SCREWCUTTING CHART FOR THREE-SPEED GEARBOX

METRIC PITCH MM.	TOP SHAFT	INTER-MEDIATE SHAFT	BOTTOM SHAFT	GEARBOX LEVER
1	40	60	127	A
1.25	50	60	127	A
1.5	60	60	127	A
1.75	70	60	127	A
2	40	60	127	C
2.25	60	40-60	127	A
2.5	50	60	127	C
2.75	55	60	127	C
3	60	60	127	C
3.5	70	60	127	C
4	80	60	127	C
* 4.5	60	20-60	127	A
5	80	40-50	127	C
5.5	80	40-55	127	C
6	80	40-60	127	C
7	80	40-70	127	C
† 8	80	20-40	127	C
† 9	60	20-60	127	C
10	80	20-50	127	C
11	80	20-55	127	C

No. 6

METRIC SCREWCUTTING CHART FOR "NORTON" TYPE GEARBOX

METRIC PITCH MM.	TOP SHAFT	INTER-MEDIATE SHAFT	BOTTOM SHAFT	T.P.I. POSITION
.5	50	40-60	127	60
.75	50	40-60	127	40
1	50	40-60	127	30
1.25	50	40-60	127	24
1.5	50	40-60	127	20
1.75	50	40-63	127	18
2	50	40-60	127	15
2.5	50	40-60	127	12
3	50	40-60	127	10
3.5	50	40-63	127	9
4	50	40-60	127	7½
4.5	50	40-63	127	7
5	50	40-60	127	6
6	50	40-60	127	5
7	50	40-63	127	4½

No. 63

FOR 11 in. SWING LATHE SUBSTITUTE

* 4.5	60	40-60	127	C
† 8	80	127-100	50	C
† 9	60	127-120	40	C

Delete 10 and 11 mm. pitch

(a) **Metric screwcutting with three-speed gearbox**

The change wheel combinations for cutting Metric threads are given in the Chart No. 6 opposite. A 127-tooth wheel is required.

(b) **Metric screwcutting with Norton type gearbox**

The change wheel combinations for cutting Metric threads are given in the Chart No. 63 opposite. 40, 60, 63 and 127-tooth change wheels are required.

(c) **Collet attachment (for ¾ in. bore spindle)**

Remove tail end sleeve from driving end of spindle, and remove chuck or faceplate, centre and sleeve from spindle nose. Assemble collet nose piece, closer bush and collet. Pass draw tube through spindle bore from driving end and screw into position.

(d) **Collet attachment (for 1¼ in. bore spindle)**

Remove chuck or faceplate, centre and sleeve from spindle nose. Screw on closer bush and fix with grub screw and die piece. Insert size of collet required and close by screwing on hand-wheel and sleeve.

(e) **Boring table and bar**

Remove complete cross slide by turning the hand-wheel until the cross slide becomes free and can be

taken from the rear of the slide. Replace by the boring table, feeding on to the screw which is operated in the reverse direction. Place the boring bar between lathe centres.

(f) Milling and gearcutting attachment

Replace tool post by the attachment. Place cutter arbor and cutters between lathe centres.

When using milling slide only, this attachment can be made more effective by the use of a face milling cutter fitted to spindle nose.

(g) Taper turning attachment

This will be fitted before despatch. When in use the desired taper is set by swivelling the slide at the back of the lathe against the graduations, which are inches per foot at one end, and degrees at the other. The saddle clamp nuts are slackened and taper turning can then take place. Location of the taper portion along the length of the bed is by the bed clamp provided.

When not in use the bed clamp must be released or removed, the slide set to zero graduation and the saddle clamp nuts securely locked.

(h) Dividing attachment

Remove change wheel guard and fit the attachment on the reverse shaft bearing.

LUBRICATION

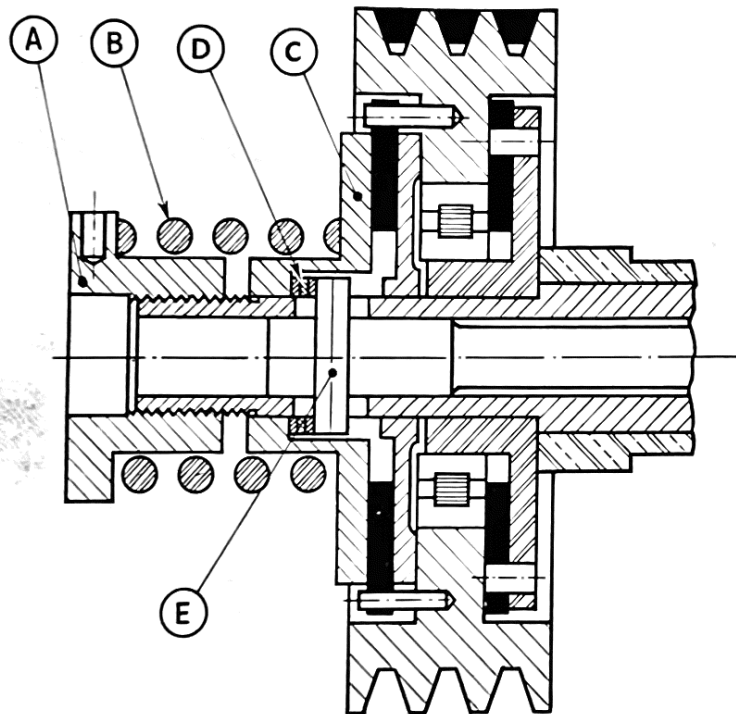
Thorough lubrication is essential before operating a new lathe, and for trouble-free running, attention should be paid to oiling daily with Gargoyle Vactra Heavy or equivalent (refer to lubrication chart on the lathe) and use the oil gun provided on all the nipples, which are easily visible. All lubrication points are important, but the most essential points are the headstock, gearbox and apron. The headstock oil level should be kept within the limits indicated by the red and green lines on the visible oil level at the rear of the headstock. The green line represents the maximum and the red line the minimum oil level. The headstock can be drained by removing the bottom screwed plug of this gauge and filled through the top screwed plug.

The grade of headstock oil recommended is—
'Vacuum' Gg. Vactra Oil Extra Heavy, 'Shell' Vitrea Oil 72 or 'Wakefield' Alpha 517.

ADJUSTMENTS

(a) Belt-slip

On cabinet base models fitted with vee belts, the motor is mounted on slide rails and belt tension is increased by adjustment of the screws beneath the motor. Where a flat belt drive is provided, adjustment is made by means of the jockey pulley.



ADJUSTMENT FOR CLUTCH FACE WEAR

- 1 Stop motor, leaving clutch in 'ON' position.
- 2 Remove adjusting nut 'A' (by turning clockwise), spring 'B' and clutch plate 'C'.
- 3 Remove one thin washer 'D' from front of pin 'E'.
- 4 Re-assemble clutch plate, spring and adjusting nut and load spring sufficiently to drive machine.

N.B.—To increase load on clutch faces turn nut to left.

(b) Clutch-slip

The clutch is carefully set during testing but if 'slip' occurs the end nut on the clutch shaft should be tightened—(rotated anti-clockwise) until the drive is restored. Further adjustments can be effected by removing one or more of the shims.

The clutch should be dismantled once every six months and any dried lubricant on the clutch faces should be removed by washing in paraffin.

(c) Play in front spindle bearing

After removing the headstock cover, the adjusting nut and a locking nut provided to control the axial movement of the opposed Timken taper roller bearings will be found easily accessible. To take up any wear, the locknut should be released and the adjusting nut turned in a clockwise direction only so far as is necessary to obviate sideplay. The locknut should then be carefully tightened.

(d) Play in slideways

Top slide and cross slide gibs are provided. Adjustment should be effected as required and the set screws and locknuts carefully tightened.

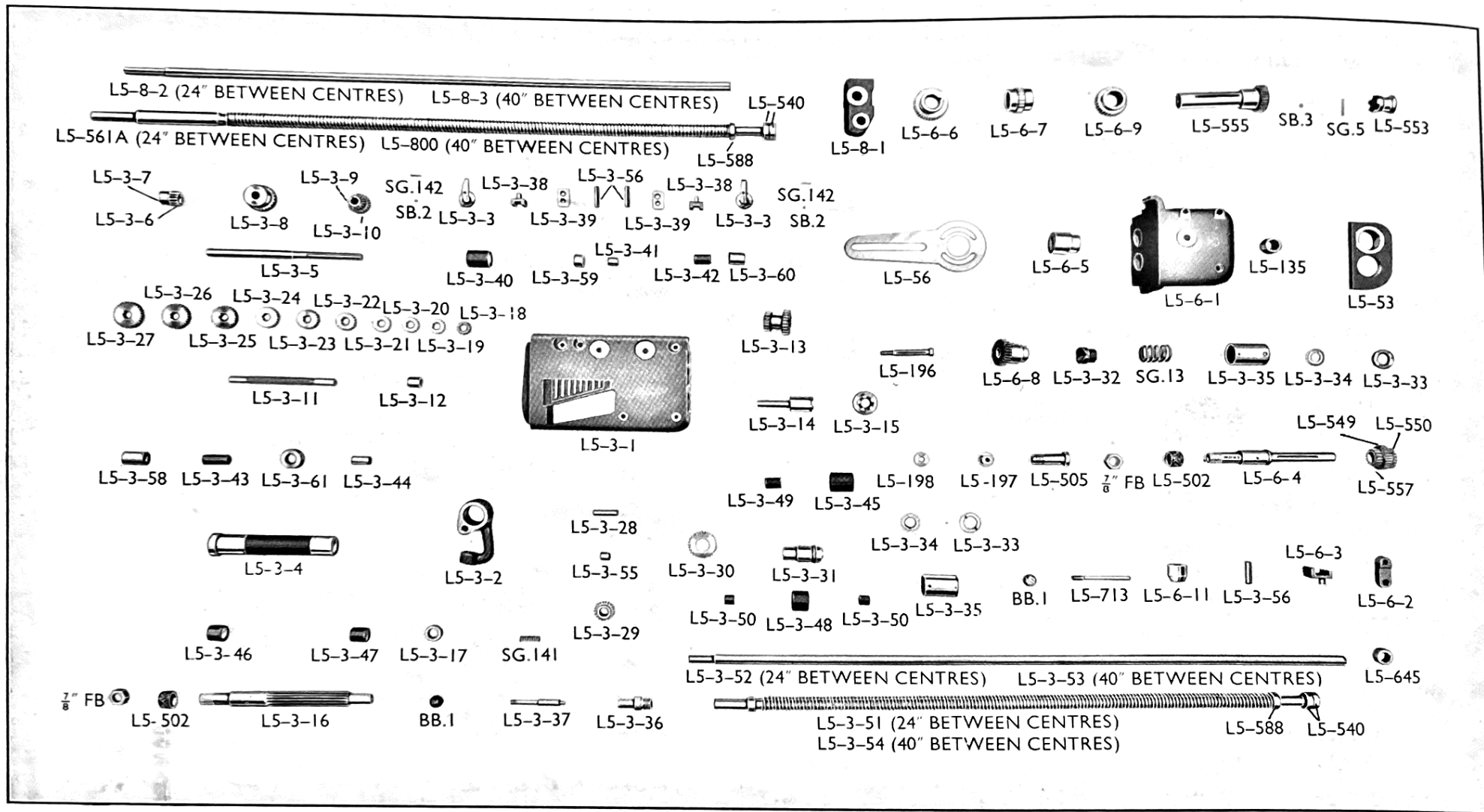
Spare Parts

ALL-GEARED HEAD

L5-2-20	Oil level indicator	L5-885	Washer
L5-2-19	Window	L5-213	Bearing
L21-2-141	$\frac{1}{4}$ in. Gas plug	L5-624	Clutch push rod
*WF.26	Filler cap	$\frac{1}{4}$ in. PR. $1\frac{1}{2}$ in.	Straight pin
L5-2-22	Fibre washer for filler cap	$\frac{1}{4}$ in. PR. $1\frac{1}{4}$ in.	Straight pin
L5-218	32T Idler gear (outer)	L5-2-67	R.H. clutch plate
L5-2-23	Bearing	DC.1	'Halo' disc
L5-2-27	32T Idler gear (inner)	PB.1	Brass pin
*W.12508725R4	Reverse shaft	RXLS $1\frac{1}{2}$ in.	Roller race
L5-626	Oil seal for reverse shaft	L5-2-68	Vee pulley
L5-2-26	Collar	L5-2-63	Clutch plate
L5-2-24	Bearing	DC.2	'Halo' disc
L5-629	42T Feed gear	L5-2-64	Pin
SG.5	Feed gear selector rack	L5-2-66	L.H. clutch plate
SB.3	Spring	L5-814	Washer
L5-2-13	$\frac{1}{2}$ in. dia. Steel ball	L5-814A	Washer
SP.40	Feed gear selector	SG.15A	Spring
L5-2-50	Hand-wheel	L5-613	Clutch adjuster
*L5-2-95	2nd Shaft	L5-2-3	Top selector lever bracket
L5-615	Sealing plug	L5-2-18	Top selector lever boss
L5-215	Collar	L5-654	Top selector lever
L5-614A	Bearing	BB.1	Bakelite ball 1 in. dia.
L5-2-51	Spacing bush	L5-2-16	Stud (short)
L5-2-9	56T Gear	L5-221	Shoe
L5-2-10	71T Gear	L5-205	R.H. interlocking lever
L5-2-52	65T Gear	L5-2-17	Stud (long)
L5-2-12	46T Gear	L5-220A	Shoq
L5-2-14	56T Gear	L5-206	L.H. interlocking lever
L5-214	Bearing	L5-2-2	Cover
L5-840	Clutch lever	73	Speed plate (21 to 480 r.p.m.)
BB.2	Bakelite ball $1\frac{1}{2}$ in. dia.	*74	Speed plate (31 to 720 r.p.m.)
L5-2-5	Boss, clutch lever	L5-2-34	Perspex cover
L5-2-7	Eccentric stud	(L5-2-33)	Front selector lever shaft
L5-2-6	Bush	(L15-7-4)	Hand-lever
L5-2-4	Stop piece	L5-585	Centre
L5-610	Shoe	*WR.19	Wrench
L5-2-47	1st Shaft		
L5-2-59	Collar	(L5-601A)	$\frac{3}{8}$ in. BORE SPINDLE
SkF.51102	Thrust washer	L5-604	Main spindle
L5-212	Bearing	355/354B	Washer
L5-2-59A	Collar	355/354A	'Timken' tapered roller bearing
L5-2-49	35 and 45T Double gear	L5-233	'Timken' tapered roller bearing
L5-2-48	20 and 26T Double gear	L5-651A	Spacer
L5-2-69	Clutch operating block	(L5-2-30)	Locknut
L5-884	Washer	L5-2-31	Main spindle gear
		LJ $1\frac{1}{4}$	42T Spindle gear (inner)
			R and M ball journal

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number

Code numbers in brackets are superseded by numbers following



GEARBOX AND SADDLE DRIVE

When ordering spares please quote lathe number

ALL-GEARED HEAD — *continued*

L5-203	Dust cover
L5-2-32	42T Spindle gear (outer)
L5-652	Locknut
L5-2-57	Tail end sleeve
L5-202	Bearing cover
L5-586	Sleeve
L5-210	Front selector lever
L5-220	Shoe
L5-2-1	Headstock (4½ in.) ¾ in. B spindle
L5-2-1.D	Headstock (11 in. swing) ¾ in. B spindle
	1¼ in. BORE SPINDLE
(L5-2-36)	Main spindle L5-2-82
L5-2-35	Main spindle gear
L5-2-45	Washer
387/382B	'Timken' tapered roller bearing
387/382A	'Timken' tapered roller bearing
L5-2-42	Spacer
(L5-2-40)	Adjusting nut L5-2-83
L5-2-37	42T Spindle gear (inner)
XLS 1¾	'Hoffman' bearing
L5-2-41	Front bearing cover
L5-2-46	Sleeve for centre
(W30023737)	Oil seal L5-2-79
L5-2-38	42T Gear outer
L5-2-58	Tail end sleeve
L5-2-39	Locknut
L5-2-44	Front selector lever
L5-2-43	Front selector shoe
L5-2-1B	Headstock (4½ in.) 1¼ in. B spindle
L5-2-1E	Headstock (11 in. swing) 1¼ in. B spindle
*WR.20	Wrench
*L5-2-75	Main spindle with L00 taper nose
*L5-2-77	Key
*L5-2-76	Draw nut
*L5-2-78	Washer
*WR.17	Hook spanner

THREE-SPEED GEARBOX AND SADDLE DRIVE

L5-6-1	Gearbox
L5-53	End plate
L5-555	Top shaft
L5-135	Bearing
L5-6-9	36T Gear
L5-6-7	30T Gear
L5-6-6	40T Gear

L5-6-4	Bottom shaft
L5-6-5	Bearing
L5-502	Change wheel collar
L5-557	20T Gear
L5-549	30T Gear
L5-550	24T Gear
*L5-6-10	Bearing
L5-6-8	Pinion feed shaft
L5-3-50	Bearing
L5-3-35	Sleeve
L5-3-32	Slipping clutch
SG.13	Spring
L5-3-34	Washer
L5-3-33	Adjusting nut
L5-713	Selector lever
L5-6-11	Selector boss
BB.1	Bakelite ball (1 in. dia.)
SG.142	Spring
SB.2	¾ in. dia. Steel ball
L5-3-56	Selector shaft
L5-6-2	Gear mover lever
L5-6-3	Gear mover shoe
L5-561A	Leadscrew (24" between centres)
L5-800	Leadscrew (40" between centres)
L5-553	Clutch
SG.5	Spring
SB.3	½ in. dia. Steel ball
L5-588	Collar
*L5-541	Washer
L5-540	Nut
L5-8-2	Feedshaft (24 in. between centres)
L5-8-3	Feedshaft (40 in. between centres)
L5-645	Collar
L5-8-1	Screw and shaft bracket
L5-56	Banjo plate
L5-505	Change wheel socket
L5-196	Change wheel stud
L5-197	Socket nut
L5-198	Socket stud collar
⅝ in. FB	Hex. nut 12 T.P.I.

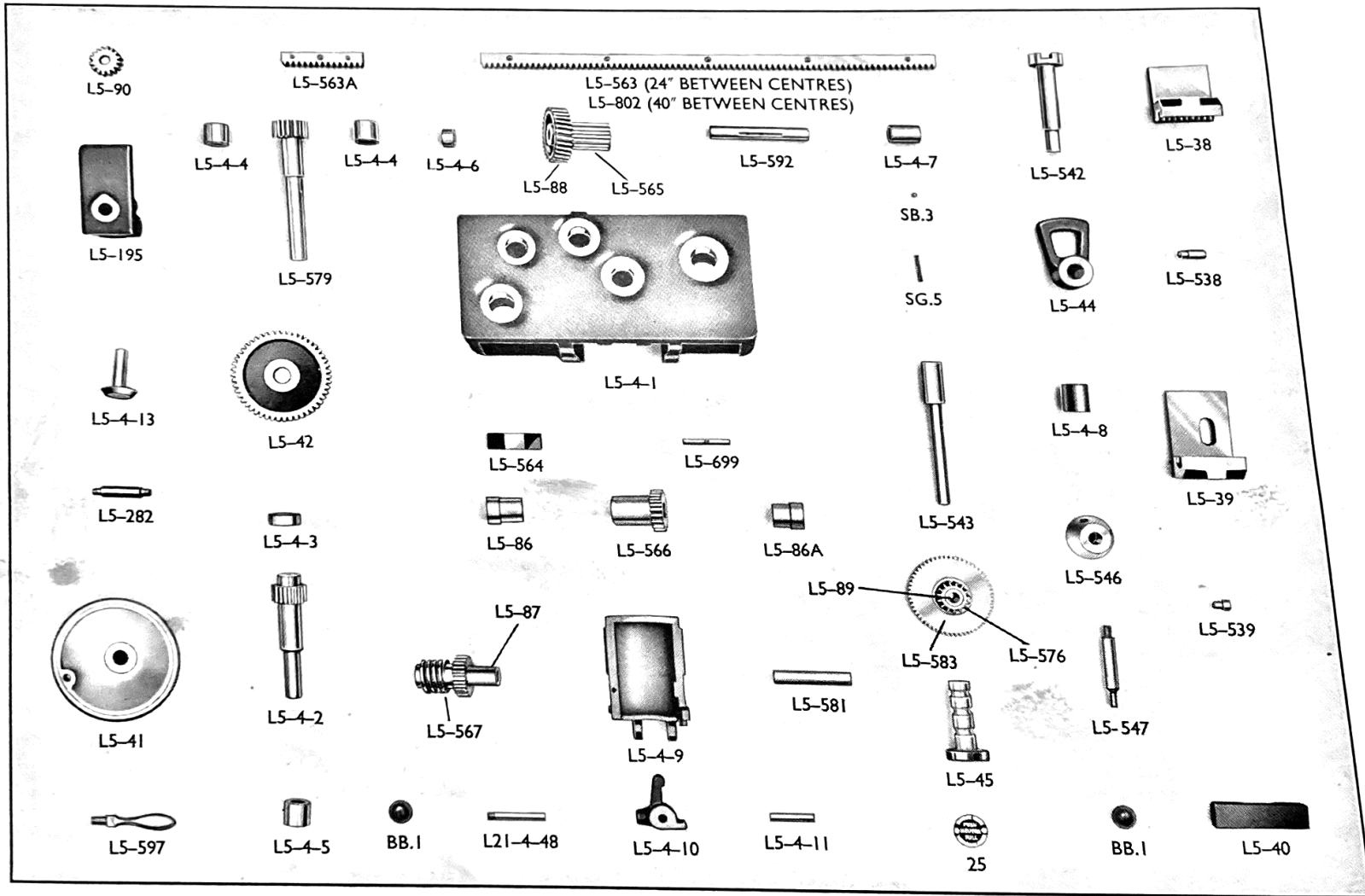
Also common to Norton gearbox

NORTON GEARBOX

L5-3-1	Gearbox
L5-3-58	Sleeve
L5-3-59	Sleeve
L5-3-60	Sleeve

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number

Code numbers in brackets are superseded by numbers following



APRON ASSEMBLY

When ordering spares please quote lathe number

NORTON GEARBOX —continued

L5-3-61	Sleeve
L5-3-5	Top shaft
L5-3-40	Bush, L.H.
L5-3-41	Bush, centre
L5-3-42	Bush, R.H.
L5-3-6	16T Gear
L5-3-7	Sleeve bearing
L5-3-8	32T Gear
L5-3-9	16T Sliding gear
L5-3-10	24T Sliding gear
L5-3-3	Selector handle
SB.2	$\frac{3}{8}$ in. dia. Steel ball
SG.142	Spring
L5-3-56	Selector shaft
L5-3-39	Selector lever
L5-3-38	Selector shoe
L5-3-11	Mid-shaft
L5-3-43	Bush, L.H.
L5-3-44	Bush, R.H.
L5-3-18	16T Splined gear
L5-3-19	18T Splined gear
L5-3-20	19T Splined gear
L5-3-21	20T Splined gear
L5-3-22	22T Splined gear
L5-3-23	24T Splined gear
L5-3-24	26T Splined gear
L5-3-25	28T Splined gear
L5-3-26	30T Splined gear
L5-3-27	32T Splined gear
L5-3-12	Spacer
L5-3-16	Bottom shaft
L5-3-17	Collar
L5-3-4	Sleeve
L5-3-46	Bush, L.H.
L5-3-47	Bush, R.H.
L5-502	Change wheel collar
$\frac{7}{8}$ in. FB.	Hex. nut 12 T.P.I.
L5-3-2	Swing lever
L5-3-29	Gear
L5-3-55	Bush
L5-3-28	Pin
L5-3-36	Plunger sleeve
L5-3-37	Plunger
BB.1	Bakelite ball
SG.141	Spring

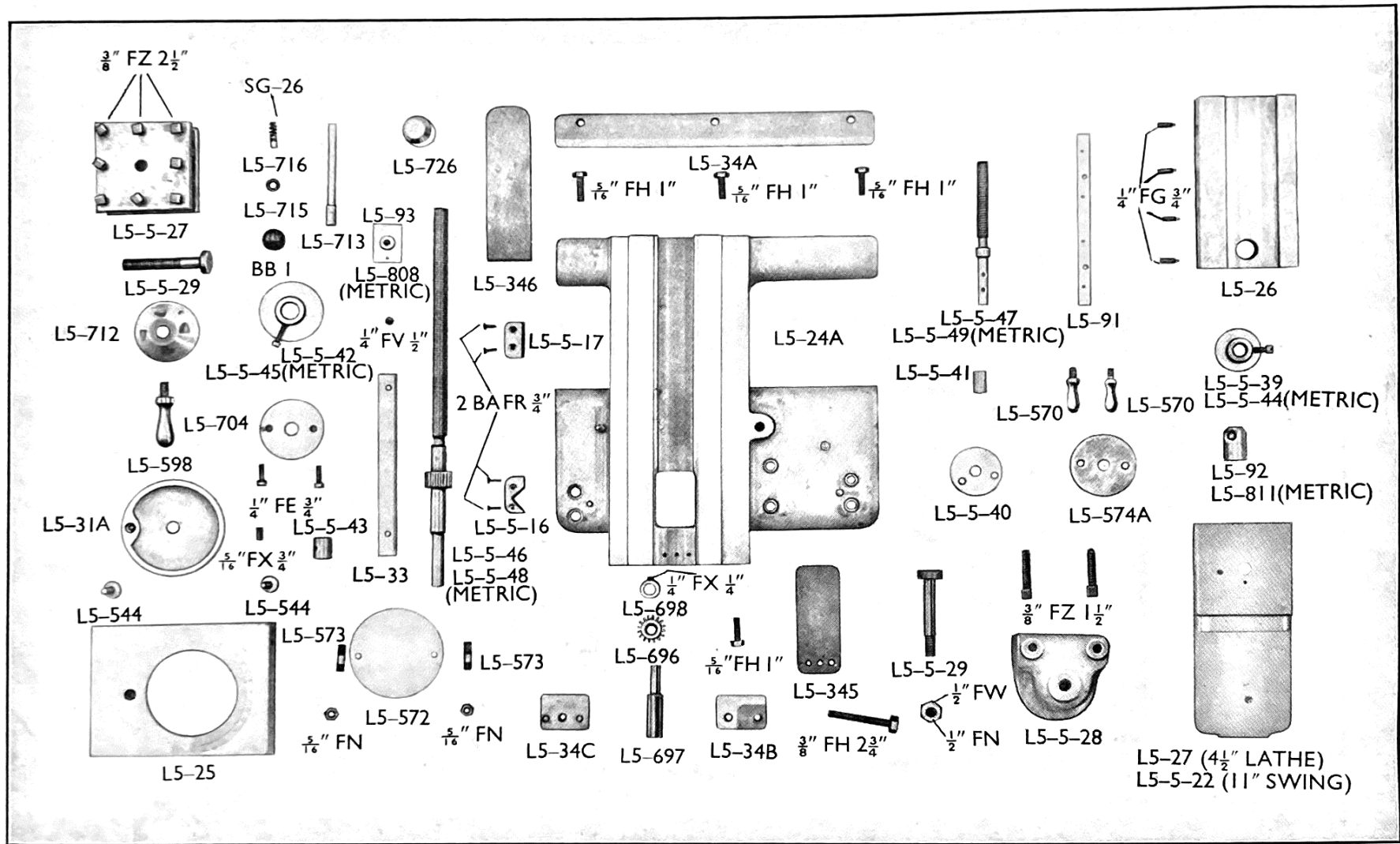
L5-3-14	Clutch shaft, leadscrew
L5-3-45	Bush
L5-3-13	Gear
L5-3-15	Clutch
L5-3-49	Bush
L5-3-31	Slipping clutch shaft
L5-3-48	Bush
L5-3-30	Gear
L5-3-35	Sleeve
L5-3-32	Slipping clutch
L5-3-33	Adjusting nut
L5-3-34	Washer
SG.13	Spring
L5-3-50	Bush
L5-3-51	Leadscrew (24 in. between centres)
L5-3-54	Leadscrew (40 in. between centres)
L5-3-52	Feedshaft (24 in. between centres)
L5-3-53	Feedshaft (40 in. between centres)
L5-588	Collar
*L5-541	Washer
L5-540	Nut

APRON

L5-4-1	Apron
L5-4-2	Hand motion pinion
L5-4-3	Bearing
L5-4-5	Bearing
L5-41	Hand-wheel
L5-597	Handle
(L5-579)	Rack pinion L5-4-15
L5-4-4	Bearing
L5-42	Rack pinion wheel
L5-543	Sliding wheel shaft
L5-45	Sliding knob
SG.5	Spring
SB.3	$\frac{1}{4}$ in. dia. Steel ball
L5-583	Sliding intermediate gear
L5-576	Sliding intermediate pinion
L5-89	Bush
25	Feed instruction plate
L5-592	Worm wheel shaft
L5-4-7	Bearing
L5-88	Worm wheel
L5-565	Broad pinion
L5-4-6	Bearing
L5-4-9	Worm box

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number

Code numbers in brackets are superseded by numbers following



SADDLE AND SLIDES ASSEMBLY

When ordering spares please quote lathe number

APRON — *continued*

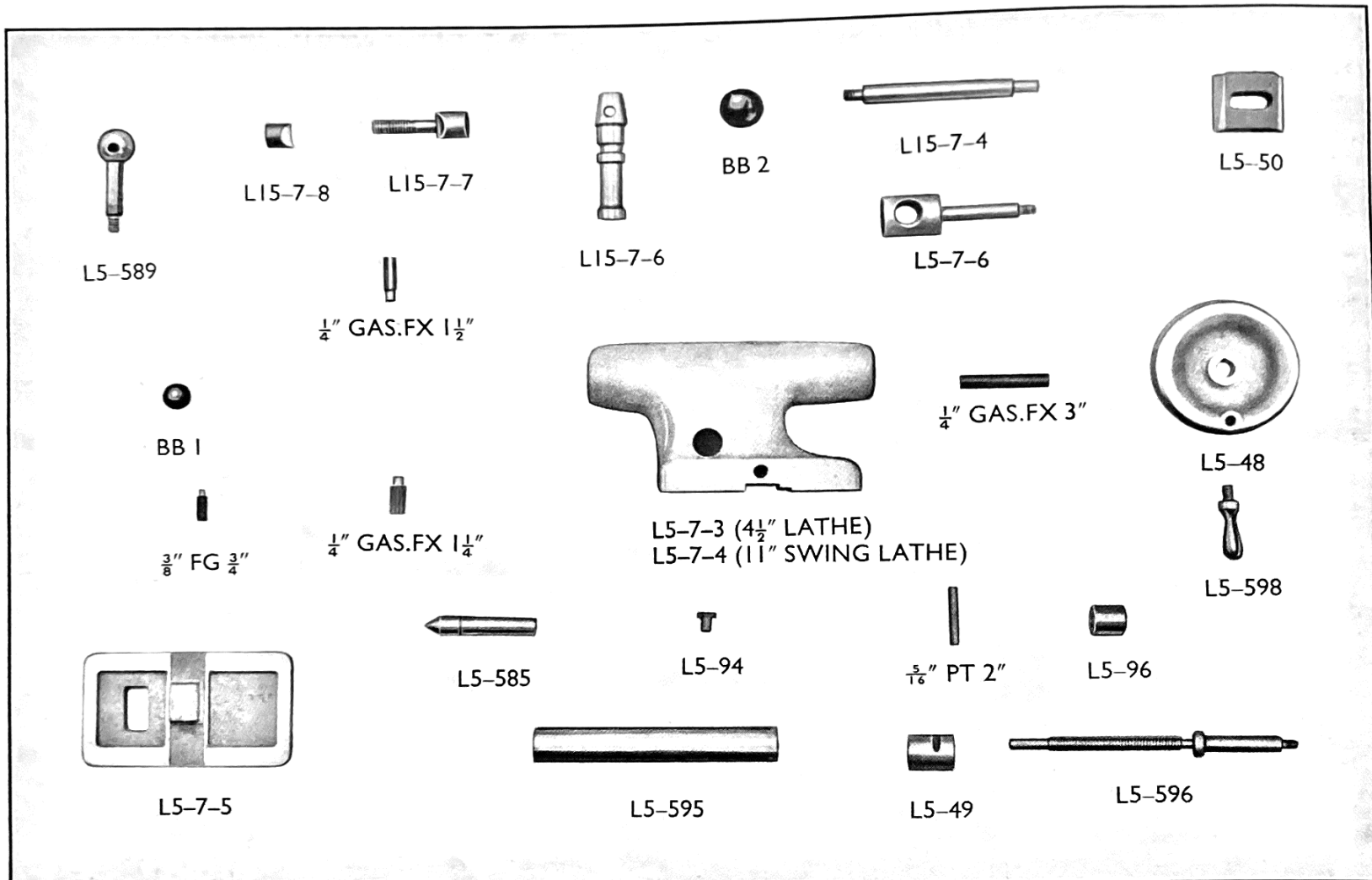
L5-4-10	Clip	
(L21-4-48)	Lever	L5-4-18
BB.1	Bakelite ball 1 in. dia.	
L5-4-11	Pin	
L5-564	Clip plate	
L5-581	Worm stud	
L5-87	Bush	
L5-567	Worm and pinion	
L5-86	Worm box bush, large	
L5-86A	Worm box bush, small	
L5-566	28T pinion	
L5-699	Key	
L5-542	Shaft for nut box	
L5-4-8	Bearing	
(L5-546)	Boss for lever	L5-4-17
(L5-547)	Lever	L5-4-16
L5-44	Interlocking quadrant	
L5-539	Short pin	
L5-538	Long pin	
L5-39	Bottom half nut slide	
L5-38	Top half nut slide	
L5-40	Nut slide plate	
(L5-195)	Indicator bracket	L5-4-14
(L5-282)	Stud	SS $\frac{5}{16}$ in. \times 2 in.
L5-4-13	Dial	
L5-90	Indicator pinion	
(L5-563)	Rack (24 in. between centres)	L5-8-5
(L5-802)	Rack	L5-8-4
(L5-563A)	Rack (gap piece)	L5-8-5A

SADDLE AND SLIDES

L5-24A	Saddle
L5-34B	R.H. front strip
L5-34C	L.H. front strip
L5-34A	Rear strip
L5-5-16	Front wiper cover
*L5-5-7	Front wiper
*L5-5-9	Felt wiper
L5-5-17	Rear wiper cover
*L5-5-8	Rear wiper
*L5-5-10	Felt wiper

L5-697	Stud
L5-696	Pinion
L5-698	Collar
L5-25	Cross slide
L5-33	Strip
L5-544	Adjusting screws
L5-93	Nut (standard)
L5-808	Nut (metric)
L5-5-46	Screw (standard)
L5-5-48	Screw (metric)
L5-704	Fixed collar
L5-5-42	Micrometer collar (standard)
L5-5-45	Micrometer collar (metric)
L5-5-43	Bush
*SG.5	Spring
*L5-5-15	Die piece
*SKF.51102	Thrust race
L5-31A	Hand-wheel
L5-598	Handle
L5-345	Front cover plate
L5-346	Rear cover plate
L5-26	Swivel slide
L5-572	Swivel plate
L5-573	Studs
L5-91	Strip
L5-5-47	Top slide screw (standard)
L5-5-49	Top slide screw (metric)
L5-92	Nut (standard)
L5-811	Nut (metric)
L5-5-40	Fixed collar
*SKF.51101	Thrust race
L5-5-39	Micrometer collar (standard)
L5-5-44	Micrometer collar (metric)
L5-5-41	Bush
L5-574A	Hand-wheel
L5-570	Handle
L5-5-28	Tool holder
L5-5-29	Pivot stud
L5-27	Top slide ($4\frac{1}{2}$ in. lathe)
L5-5-22	Top slide (11 in. swing lathe)
*L5-5-30	Tee piece (11 in. swing lathe)
*WR.7	Wrench

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number
Code numbers in brackets are superseded by numbers following



LOOSEHEAD ASSEMBLY

When ordering spares please quote lathe number

LOOSEHEAD

L5-589	Locking handle for spindle
BB.1	Bakelite ball 1 in. dia.
L15-7-7	Nipping stud
L15-7-8	Nipping bush
* L5-595	Spindle
* L5-94	Key
* L5-49	Bush
* L5-96	Nut
* L5-596	Screw
L5-48	Hand-wheel
L5-598	Handle
(L15-7-6)	Eccentric lock stud L5-7-10
(L15-7-4)	Locking lever L5-7-9
BB.2	Bakelite ball 1½ in. dia.
L5-50	Holding down plate
L5-7-6	Locking eye bolt
L5-7-5	Loose head base
¼ in. GAS.FX. 3 in.	Longitudinal set-up screw
¼ in. GAS.FX. 1½ in.	Lateral set-up screw (long)
¼ in. GAS. FX. 1¼ in.	Lateral set-up screw (short)
L5-585	Centre
L5-7-3	Loose head (4½ in. lathe)
L5-7-4	Loose head (11 in. swing lathe)

BED AND DRIVE

*L5-235A	Gap bed (24 in. between centres)
*L5-799	Gap bed (40 in. between centres)
*L5-2	Gap piece
*L5-692	Gap bolt
*L5-849	Cabinet base (24 in. between centres)
*L5-850	Cabinet base (40 in. between centres)
*L5-232	Door
*L5-732A	Boss for hinge pin
*PG.1	Hinge pin
*1072	Union lock

*L5-860	Cover plate
*L5-1-8	Hinge pin for change wheel guard
*L5-1-6	Button for latch
*L5-1-7	Latch
*SG.170	Spring
*L5-1-5	Clutch spring cover
*(L5-1-12)	Motor pulley L5-1-43
*M65	Veel belts
*4	Thread indicator chart
*L5-1-2	Drive guard (4½ in. lathe)
*L5-1-2B	Drive guard (11 in. swing lathe)
*L5-1-3	Drive cover (4½ in. lathe)
*L5-1-3B	Drive cover (11 in. swing lathe)
*L5-1-4	Change wheel guard (4½ in. lathe)
*L5-1-4B	Change wheel guard (11 in. swing lathe)

STANDARD INCLUDED EXTRAS

L5-57	Stationary steady top (4½ in. lathe)
L5-521	Swivel stud
L5-95	Clip
L5-640	Pin
L5-522	Nut
(L5-523)	Set-up screw ⅝ in. FY. 1¼ in. (4½ in. lathe)
L5-69	Pin
L5-50	Holding down plate
L5-73	Strip for travelling steady
L5-22	9 in. dia. Face plate (¾ in. B spindle)
L5-9-1	9 in. dia. Face plate (1¼ in. B spindle)
*L5-9-6	10 in. dia. Face plate (1¼ in. B spindle, L00 taper nose) 11 in. swing lathe
L5-9-4	Catch plate (¾ in. B spindle)
L5-9-3	Catch plate (1¼ in. B spindle)
*L5-9-5	Catch plate (1¼ in. B spindle and L00 taper nose)
L5-531	Driver pin
L5-68A	Stationary steady base (4½ in. lathe)
(L5-68C)	Stationary steady base (11 in. swing lathe) L5-10-48
L5-71	Travelling steady (4½ in. lathe)
L5-71B	Travelling steady (11 in. swing lathe)

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number

Code numbers in brackets are superseded by numbers following

STANDARD INCLUDED EXTRAS — *continued*

- L5-10-49 Stationary steady top (11 in. swing lathe)
- $\frac{5}{16}$ in. FY. 2½ in. Set-up screws (11 in. swing lathe)
- L5-10-50 Pin (11 in. swing lathe)

STANDARD CHANGE WHEELS (3-SPEED G.B.)

- L5-51T 20T Change wheel
- L5-51Q 40T Change wheel
- L5-51P 50T Change wheel
- L5-51M 55T Change wheel
- L5-51K 60T Change wheel
- L5-51J 65T Change wheel
- L5-51G 70T Change wheel
- L5-51E 80T Change wheel
- L5-51C 100 T Change wheel
- *L5-51B 120T Change wheel (11 in. swing lathe only)
- 48 Change wheel chart (4½ in. lathe)
- 112 Change wheel chart (11 in. swing lathe)

STANDARD CHANGE WHEELS (NORTON G.B.)

- L5-51P 50T Change wheel (2-off) } 4½ in. lathe
- L5-51C 100T Change wheel }
- L5-51P 50T Change wheel } 11 in. swing lathe
- L5-51K 60T Change wheel }
- L5-51C 100T Change wheel }
- *61 Feed and screwcutting chart

EXTRA CHANGE WHEELS (not supplied as standard)

- L5-51R 36T Change wheel
 - L5-51N 53T Change wheel
 - L5-51L 59T Change wheel
 - L5-51H 66T Change wheel
 - L5-51F 73T Change wheel
 - L5-51D 81T Change wheel
 - L5-51A 127T Change wheel
 - 7 B.A. screwcutting chart
- } For cutting B.A. threads
with 3-speed gearbox only

- L5-51R 36T Change wheel
 - L5-51Q 40T Change wheel
 - L5-51N 53T Change wheel
 - L5-51L 59T Change wheel
 - L5-51H 66T Change wheel
 - L5-51F 73T Change wheel
 - L5-51D 81T Change wheel
 - L5-51A 127T Change wheel
 - *81 B.A. screwcutting chart
 - L5-51A 127T Change wheel
 - *6 Screwcutting chart (4½ in. lathe)
 - *113 Screwcutting chart (11 in. swing lathe)
 - L5-51Q 40T Change wheel
 - L5-51K 60T Change wheel
 - L5-51V 63T Change wheel
 - L5-51A 127T Change wheel
 - L5-51Q 40T Change wheel
 - L5-51V 63T Change wheel
 - L5-51A 127T Change wheel
 - *63 Metric screwcutting chart
 - *L5-51S 95T Change wheel
- } For cutting B.A. threads
with Norton gearbox
- } For cutting Metric
threads with 3-
speed gearbox
- } 4½ in. lathe
- } 11 in. swing lathe
- } For cutting Metric
threads with
Norton gearbox
- } For cutting 19 T.P.I. with 3-speed
gearbox

FOUR-WAY TOOLPOST

- L5-5-27 Square turret
- L5-712 Pivot
- L5-715 Plunger shell
- L5-716 Plunger
- SG.26 Spring
- L5-5-29 Pivot stud
- L5-726 Nipping boss
- L5-713 Lever
- BB.1 Bakelite ball 1 in. dia.
- *WR.7 Wrench

Items marked * are not illustrated

Standard screws etc are not listed

When ordering spares please quote lathe number

AMERICAN TOOLPOST

*L5-5-25	Toolpost
*L5-5-24	Tool plate
*L5-5-23	Ring
*L5-5-26	Clamp plate
*WR.10	Wrench

TAPER TURNING ATTACHMENT

*L5-24B	Saddle
*L5-347	Block (24 in. between centres lathe)
*L5-348	Block (40 in. between centres lathe)
*L5-815	Support bracket
*L5-822	Bolts
*L5-14-6	Bottom slide (standard)
*L5-823	Stud
*L5-338	Set-up screw
*L5-14-8	Sliding block
*L5-14-9	Strip
*L5-819A	Stud
*L5-818	Block for screw
*L5-870	Plug
*L5-14-1	Screw (standard)
*L5-14-4	Screw (metric)
*L5-14-2	Pinion
*L5-14-3	Shaft
*L5-705	Bush
*L5-14-5	Washer
*L5-343	Nut
*L5-14-7	Bottom slide (metric)

BORING TABLE AND BARS

L5-247	Boring table
(L5-248)	Nut L5-93

L5-260	Strip
L5-646	1 $\frac{3}{4}$ in. dia. Boring bar
L5-680	$\frac{1}{2}$ in. dia. Boring bar
L5-647	$\frac{3}{8}$ in. square Boring bits, A, B, C, D, E, F

HAND-REST

(L5-243)	Hand-rest base	L2A-36
(L5-663)	Eccentric shaft	L2A-65
(L5-244)	Handle	L2A-63
(L5-664)	Eye bolt	L5-664A
L5-50	Holding down plate	
L5-245	7 in. Tee (wood turning)	
L5-246	Tee (metal turning)	

DIVIDING ATTACHMENT

(L5-655)	Index plate	L5-10-83
(L5-656)	Index arm	L5-157
L5-657	Worm	
(L5-658)	Worm shaft	L5-10-40
(L5-137)	Bracket	L5-10-82
(L5-662)	Locknut	L5-662A
*SG.119	Spring	
(L5-659)	Plunger	L5-10-41
(L5-661)	Knob for plunger	L5-10-42
L5-138	Worm wheel	

MILLING AND GEARCUTTING ATTACHMENT (common parts)

*L5-140	Angle bracket
*L5-165	Nipping stud
*L5-141	Swivel slide
*L5-155	Nut (standard)
*L5-892	Nut (metric)
*L5-162	Screw (standard)

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number

Code numbers in brackets are superseded by numbers following

MILLING AND GEARCUTTING ATTACHMENT*(common parts)—continued*

*L5-893	Screw (metric)
*L5-700A	Micrometer collar (standard)
*L5-812A	Micrometer collar (metric)
*L5-751	Locking screw
*L5-351	Locking bush
*L5-144	End plate
*L5-176	Ball handle
*L5-177	Handle
*L5-143	Vertical slide
*L5-150	Strip
*L5-886	Sleeve, work arbor ($1\frac{1}{4}$ in. B spindle only)

GEAR CUTTING ATTACHMENT ONLY

*L5-146	Bracket for arm
*L5-164	Nipping stud
*L5-167	Support bar
*L5-147	Supporting arm
*L5-156	Bush
*L5-159	Centre
*L5-145	Spindle bracket
*L5-160	Spindle
*L5-142	Worm bracket
*L5-151	Worm wheel
*L5-161	Nut
*L5-163	Worm
*L5-662A	Locknut
*L5-148A and B	Index plates
*L5-157	Index arms
*L5-10-41	Plunger
*L5-10-42	Plunger knob
*SG.119	Spring

*L5-170	Cutter arbor
*L5-173	Short spacer
*L5-172	Long spacer
*L5-174	Driver pin
*L5-169	Work arbor
*L5-179	Nut
*L5-175	Washer
*L5-171	Draw screw

DRAW COLLET ATTACHMENT ($\frac{3}{4}$ in. B SPINDLE)

L5-675	Draw tube
L5-249	Nose piece
L5-676	Closer bush
L5-236	Hand-wheel
*L5-677	Collets $\frac{1}{16}$ in. to $\frac{1}{2}$ in. in $\frac{1}{32}$ in. increments (millimetre sizes also available)
*L5-739	Tommy bar

COLLET ATTACHMENT ($1\frac{1}{4}$ in. B SPINDLE)

*L5-10-11	Closer bush
*L5-10-14	Die
*L5-10-12	Sleeve
*L5-10-13	Hand-wheel
*L5-10-15	Collet $\frac{3}{8}$ in., $\frac{7}{8}$ in., $\frac{1}{2}$ in., $\frac{9}{16}$ in., $\frac{5}{8}$ in., $\frac{3}{4}$ in., $\frac{7}{8}$ in., 1 in., $1\frac{1}{8}$ in., and $1\frac{1}{4}$ in.
*WR.13	Wrench
*L5-10-88	Tommy bar

CROSS SLIDE STOP

*L5-10-37	Body
*L5-10-38	Clamping strip
*L5-10-39	Stop screw

Items marked * are not illustrated Standard screws etc are not listed When ordering spares please quote lathe number

SADDLE STOP

*L5-10-31	Body
*L5-10-33	Screw
*L5-10-32	Micrometer collar
*L5-10-35	Die piece
*L5-10-36	Knurled screw
*L5-10-34	Clamp plate
*L5-10-47	Hex. bolt
*L5-10-61	Body (metric)
*L5-10-59	Screw (metric)
*L5-10-60	Micrometer collar (metric)

CHUCKS AND BACK PLATES

*	9 in. dia. 4-Jaw chuck
*	8 in. dia. 4-Jaw chuck
*	6 in. dia. 3-Jaw chuck
*L5-241A	Back plate ($\frac{3}{4}$ in. B spindle)
*L5-10-17	Back plate ($1\frac{1}{4}$ in. B spindle)
*	6 in. dia. 4-Jaw chuck
*L5-241B	Back plate ($\frac{3}{4}$ in. B spindle)
*L5-10-19	Back plate ($1\frac{1}{4}$ in. B spindle)
*	5 in. dia. 3-Jaw chuck
*L5-242A	Back plate ($\frac{3}{4}$ in. B spindle)
*L5-10-16	Back plate ($1\frac{1}{4}$ in. B spindle)
*	4 in. dia. 3-Jaw chuck
*L5-242C	Back plate ($\frac{3}{4}$ in. B spindle)

DRIVER AND FACE PLATES

L5-230	15 in. dia. Driver plate ($\frac{3}{4}$ in. B spindle)
L5-10-20	15 in. dia. Driver plate ($1\frac{1}{4}$ in. B spindle)
L5-23	15 in. dia. Face plate ($\frac{3}{4}$ in. B spindle)
L5-10-18	15 in. dia. Face plate ($1\frac{1}{4}$ in. B spindle)

L5-679	Clamp for face plate
L5-756	Square, square head bolt $\frac{1}{2}$ in. \times $2\frac{1}{2}$ in.
L5-757	Square, square head bolt $\frac{1}{2}$ in. \times $3\frac{1}{2}$ in.
L5-758	Square, square head bolt $\frac{1}{2}$ in. \times $4\frac{1}{2}$ in.
L5-678	Angle plate for face plate
*G14-20	Stud for face plate
L5-10-81	15 in. dia. Face plate (for Loo tapered nose spindle)

CENTRES etc

L5-665	Half centre
L5-666	Square centre
*L5-667	Flange chuck
*L5-668	Drill pad
*L5-669	Hollow centre
*L5-672	3-prong centre
*L5-875	Cup centre
*L5-180	Light centre

PUMP TANK AND FITTINGS (Common parts)

*L5-12-13	Bracket for stand pipe
*L5-12-8	Locking screw
*L5-12-6	Stand pipe
*L5-12-7	Collar
*G14-98	$\frac{1}{4}$ in. Gas elbow
*G14-100	$\frac{1}{4}$ in. Gas nipple
G14-105A	$\frac{1}{4}$ in. Gas tap
L5-682	Flexible pipe
*G14-95	Pipe clip
*	Rubber hose 3 ft. 6 in. L. (24 in. between centres)
*	Rubber hose 4 ft. 10 in. L. (40 in. between centres)
*L5-12-17	Connecting pipe (only fitted when taper turning att. is fitted)

PUMP TANK AND FITTINGS (Geared pump only)

*L5-894	Geared suds sump
*L5-687	Block for pump
*L5-12-14	Pump pulley (for lathes with 480 and 720 max. speed)
*L5-743A	Pump pulley (for lathes with max. speed above 720)
*L5-12-15	Belt guard (4½ in. lathe)
*L5-12-16	Belt guard (11 in. swing lathe)
*L5-883	Driving pulley (for lathes with 480 and 720 max. speed)
*L5-883A	Driving pulley (for lathes with max. speed above 720)
*	Driving belt 28 in. (4½ in. lathe) 30 in. if top speed is over 720
*	Driving belt 30 in. (11 in. swing lathe) 32 in. if top speed is over 720
*L5-12-11	Hinge stud for belt guard
*L5-12-12	Fixing stud for belt guard
*L5-12-32	¼ in. bore 'Bardex' tubing complete with nuts, stems and ferrules
	} 3 ft. 8 in. long for 24 in. between centres
	} 5 ft. 0 in. long for 40 in. between centres
*L5-12-25	⅜ in. to ¼ in. gas reduction bush

PUMP TANK AND FITTINGS (Electric pump only)

*L5-12-2	Suds tank
*L5-12-3	Lid
*L21-19-1	Electric suds pump A.C.
*L5-12-26	Fixing flange
*L5-12-31	Electric suds pump D.C.
*G14-121	Bracket for D.C. pump
*L21-19-7	Reduction coupling
*L5-12-24	Supply pipe
*L5-12-27	¾ in. Gas nipple
*L5-12-28	¾ in. Gas tee
*L5-12-29	¾ in. Gas plug

WATER POT AND TAP

L5-681	Water pot
L5-683	Water pot bar
L5-682	Flexible pipe
G14-105A	Tap
*L5-750	Bracket

