

DEPARTMENT
OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST

FOR

LATHE, ENGINE: 9-INCH SWING
MODEL CL 670Z
(SOUTH BEND LATHE) (3416-00-235-0551)

HEADQUARTERS,
DEPARTMENT OF THE ARMY
DECEMBER 1980

TECHNICAL MANUAL }
No. 9-3416-235-14&P }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 19 December 1980

**OPERATOR'S, ORGANIZATIONAL, DIRECT
SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST
FOR
LATHE, ENGINE: 9-INCH SWING
MODEL CL 670Z
(NSN 3416-00-235-0551)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this lathe is issued.

Manufactured by: South Bend Lathe
400 West Sample Street
South Bend, Indiana 46621

Procured under Contract No. DAAA09-77-C-6144

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

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INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

- 1 - Manufacturer's Federal Supply Code Number - 55985
- 2 - Manufacturer's Part Number exactly as listed herein.
- 3 - Nomenclature exactly as listed herein, including dimensions, if necessary.
- 4 - Manufacturer's Model Number - Model CL 670Z
- 5 - Manufacturer's Serial Number (End Item)
- 6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.
- 7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

- (a) In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number - 55985 followed by a colon and manufacturer's Part Number for the repair part.
- (b) Complete Remarks field as follows:
Noun: (nomenclature of repair part)
For: NSN: 3416-00-235-0551
Manufacturer: South Bend Lathe, Inc.

Model: CL 6'707
Serial: (of end item)

Any other pertinent information such as Frame Number,
Type, Dimensions, etc.

TABLE OF CONTENTS

| | Page |
|----------------------------------|------|
| Mounting the Motor | 1 |
| Ordering Replacement Parts | 2 |
| Special Information | 3 |
| Maintenance | 4 |
| Parts List..... | 5-59 |

10-K HORZ. DRIVE

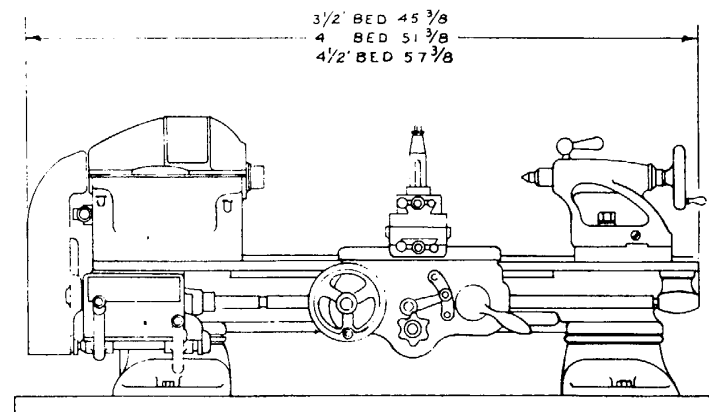
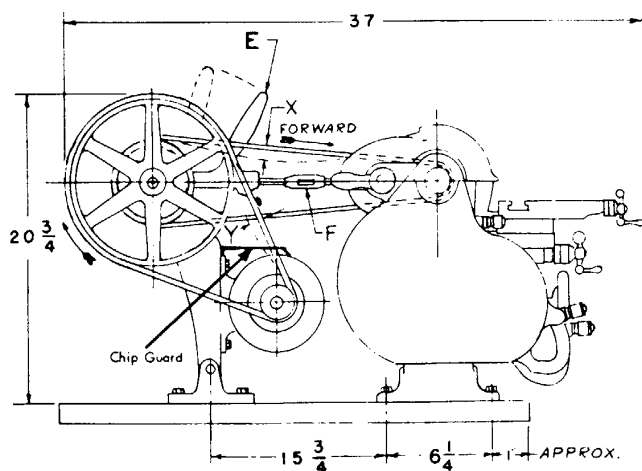
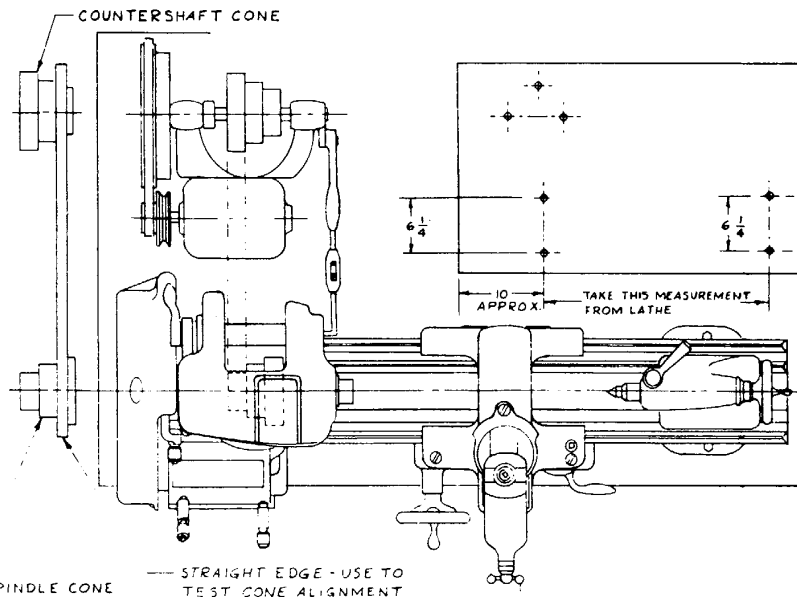
EP 139-4

TO MOUNT MOTOR & CHIP GUARD ON DRIVE UNIT

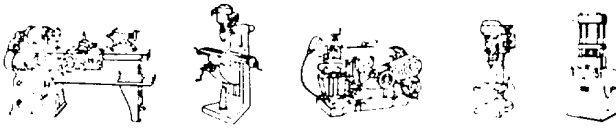
1. Mount the pulley on the motor shaft. Be sure the large step of the pulley is on the inside.
2. With the four hex cap screws and washers provided, mount the motor on the drive unit with the tongue of the chip guard between the drive unit and the motor bracket.
3. Install belt on drive unit.
4. Use a straight edge to check alignment of the motor pulley and the drive unit pulley. Adjust if necessary. Tighten motor mounting screws and motor pulley securely when properly aligned.

TO MOUNT LATHE ON BENCH

1. Set lathe and countershaft drive unit on bench as shown, use straight edge to align both cone pulleys. Scribe outline of holes in lathe and countershaft drive unit. Remove both units and drill holes in bench. Remount lathe with drive unit and align cone pulleys with straight edge. Fasten both units securely with bolts.
2. Place belt tension lever E in tight position and adjust turnbuckle F so that the ends of the rods touch each other.
3. Assemble belt around cone pulleys.
4. Place belt on center step of cone pulleys. Rotate cone pulleys by hand and adjust the drive unit or countershaft pulley until belt runs in center of both pulleys.
5. Do not run lathe with belts too tight, excessive loss of power and damage to bearing may result.
6. Belt tension should be adjusted so that moderate pressure with thumb at X & Y will depress the belts about one inch to positions indicated by dotted lines.



IMPORTANT



Machine tools are designed and manufactured to assure you the greatest measure of long life performance. There remains, however the important factor of getting prompt service when replacement parts are required as a result of natural wear or accidental damage. This parts list was prepared for your convenience to determine quickly the part needed.

PARTS AND ASSEMBLIES. Frequently replacement parts are ordered that appear to be individual parts but in reality the particular part ordered is attached to other parts by press fit, hand scraping, tapered pins or by some other mechanical means which can only be properly done in the factory, and are part of an assembly. The part numbers with prefixes and AS identify assemblies and the parts included in these assemblies are indicated by the item numbers appearing in parenthesis after the part name. Such parts are not sent out individually, but as assemblies.

SERIAL NUMBER OF LATHE.

This number must always appear on your order for replacement parts or attachments to assure prompt shipment of the part or attachment ordered. This number is an index as to the size, type and model of

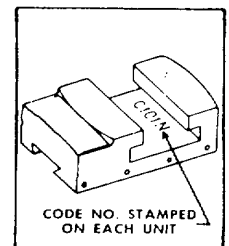
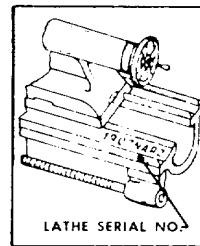
your machine, also date the machine was built. Location of these numbers illustrated at right.

CODE NUMBER. This number should also appear on your order of replacement part. This number is an index to the specific design of part that went into the unit assembly.

We may change the dimension or the appearance of a certain part, yet it is still interchangeable with the old part. You will always receive the benefit of the improved design on orders for replacement parts whenever interchangeability makes this possible. Location of this number (illustrated below) is shown on the repair parts sheet.

Therefore, when ordering have the following information:

1. Serial or Model No. of Machine.
2. Unit code number.
3. Part number & name of part required.
4. Quantity.



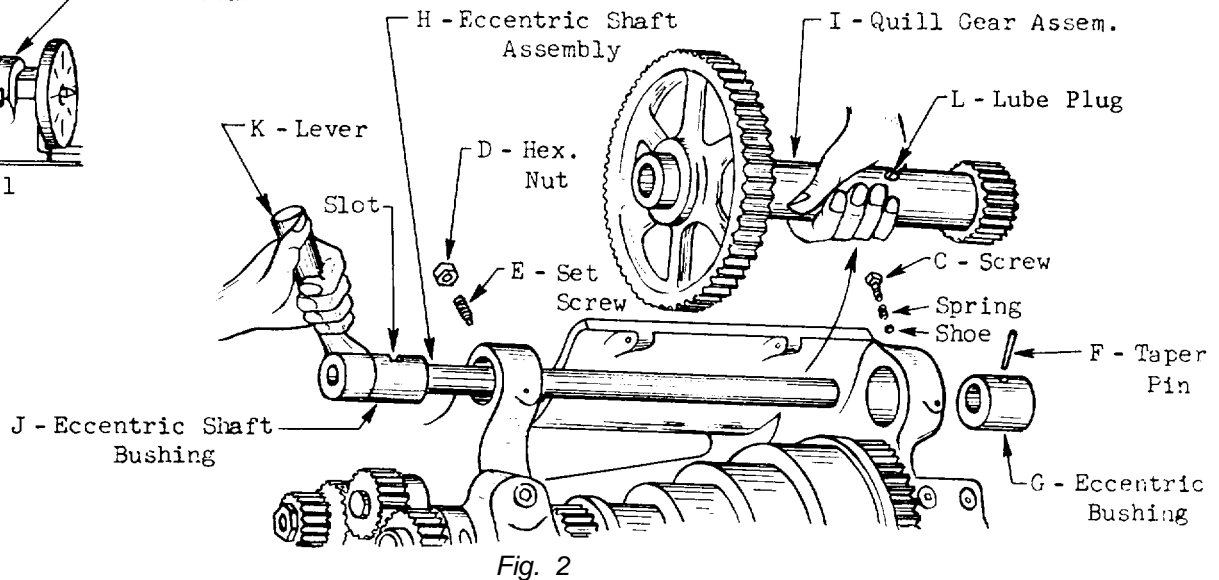
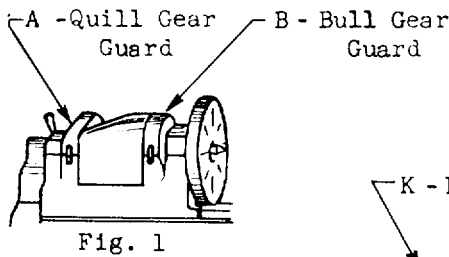
CARE OF MACHINE TOOLS THAT ARE NOT IN USE

When a machine is taken out of service, such as in a school where they would not be used during the summer months or at some other vacation or off period, it should be properly taken care of as follows:

1. Thoroughly clean the machine, being sure that all surfaces are cleaned. It is as important to clean the painted surfaces as well as the machined surfaces. The machine should be cleaned with some type of solvent if the machine has accumulated hard to remove deposits. If all deposits are not removed and a protective coating is applied, it will make the machine doubly hard to clean when the machine is put back into service. A neutralizing agent should be used where finger printing is common or where the climate is very damp.
2. After the machine has been thoroughly cleaned all of the machined surfaces should be covered with either a good Grade of medium weight MACHINE OIL (NOT AUTO ENGINE OIL,) or if the machine is going to be out of service for a long period of time a light weight grease (commercial petroleum jelly that has been thinned with naphtha or mineral spirits is very good) should be used. When covering the machine surfaces care should be taken so that the machined surfaces are completely covered. Also you should try and keep the oil and grease off the painted surfaces.
3. If the machine has belts of any type, they should be loosened, so that they will not stretch while the machine is not in use.
4. All power to the machine should be disconnected. Some machines could be very easily damaged if run after being out of service for a long period of time.
5. The machine should be covered with a cover that will keep dust and dirt from accumulating on it. Also the cover should be liquid repellent to keep any liquid from coming into contact with the working parts of the machine. These covers are available for all sizes and types of machines.

MAINTENANCE

BACK GEAR AND ECCENTRIC SHAFT 9", 10K, 10" and 14½" lathes only



I. TO DISASSEMBLE:

1. Remove items A and B (Fig. 1).
2. Loosen screw C (Fig. 2).
3. Remove items D thru I (Fig. 2) in alphabetical order.

II. TO REASSEMBLE:

1. Replace items H and I. (Be sure gears are free of dirt, chips, and nicks.)
2. Replace item G and pin with item F
3. Replace item E, locating the point of the screw in slot of eccentric shaft bushing J and replace nut D.

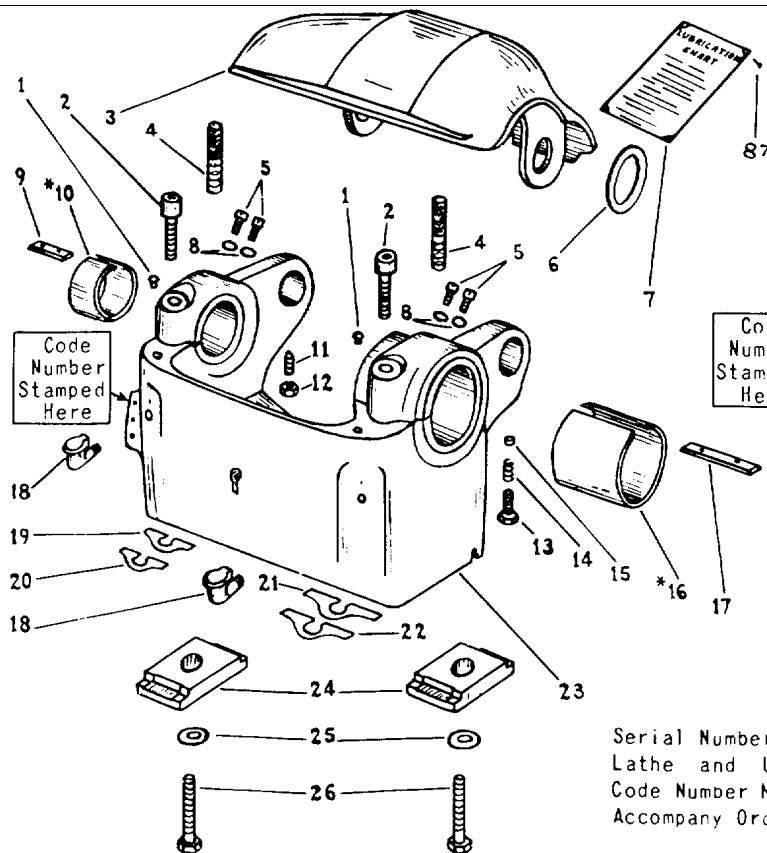
III. ADJUSTING BACK GEARS:

1. Engage back gears using eccentric shaft lever K and allow mating gears to bottom. Then back off back gears until you feel a slight rock between mating gears and tighten set screw E. Tighten screw C so tension on bushing C is enough to hold gears in mesh on heavy cuts, but not so tight that the eccentric shaft lever K is hard to operate. Make final adjustment by allowing lathe to run for a few minutes. If there is an abnormal amount of noise such as a gear rattling noise the gear clearance is too great, adjust by slightly unscrewing set screw E. If it seems to be a howling noise, the gear clearance is insufficient. Adjust by screwing in slightly set screw E. When proper gear clearance is obtained, lock set screw E with nut D.

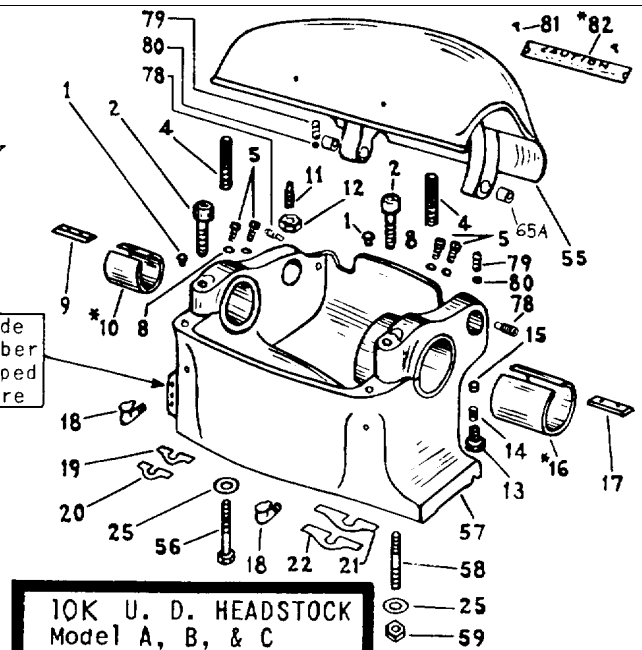
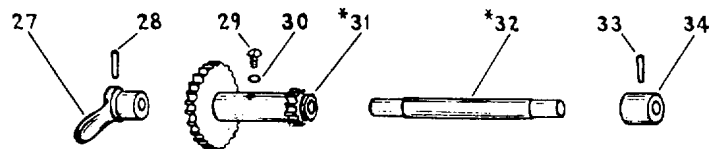
IV. OILING

1. Remove plug L and fill with teflon grease. Use CE1625 or equal.

PARTS LIST

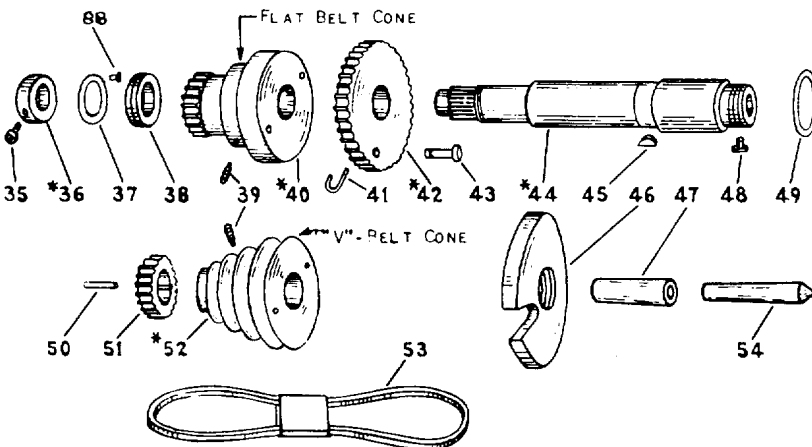


10K HORIZONTAL DRIVE HEADSTOCK
Model A, B, & C



10K U. D. HEADSTOCK
Model A, B, & C

Serial Number of
Lathe and Unit
Code Number MUST
Accompany Order.



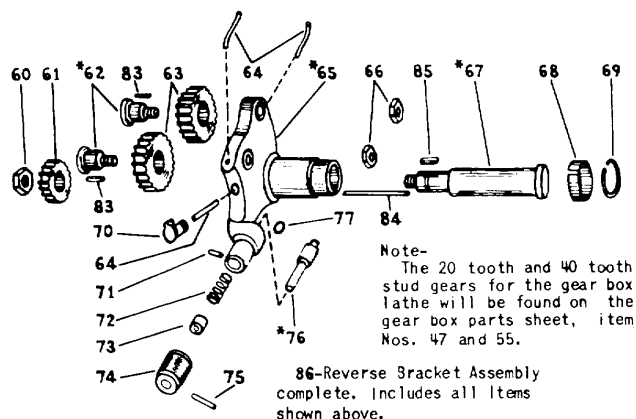
| ITEM NO. | PART NO. | PART NAME |
|----------|-----------|-----------------------------------|
| 1 | PT3R7NK1 | RUBBER PUMPER |
| 2 | 114X220 | CAPSCREW |
| 3 | PT2577K4 | COVER |
| 4 | AS373KH2 | CAPILLARY OILER |
| 5 | PT1165RH1 | SCREW |
| 6 | PT257K1 | FLAT SPRING |
| 7 | AS441-3 | LURE CHART |
| 8 | 183X103 | WASHER |
| 9 | PT523K2 | EXPANDER(SMALL) |
| 10 | *AS512K1 | SMALL REARING (4-5-8-9-19-20) |
| 11 | PT377NR1 | STOP SCREW |
| 12 | 139X26 | NUT |
| 13 | 112X1112 | SCREW |
| 14 | PT374NR1 | SPRING |
| 15 | PT1075NR1 | SHOE |
| 16 | *AS511K1 | LARGE BEARING(4- 5-8-17-21-22) |
| 17 | PT524K2 | EXPANDER(LARGE) |
| 18 | PT2676NK1 | OILER |
| 19 | PT365K1 | LAM. SHIM |
| 20 | PT366K1 | SOLID SHIM |
| 21 | PT363K1 | LAM. SHIM |
| 22 | PT364K1 | SOLID SHIM |
| 23 | PT10K3 | HEADSTOCK |
| 24 | PT13NK1 | CLAMP |
| 25 | PT1672NK1 | WASHER |
| 26 | 112X228 | CLAMP SCREW |
| 27 | PT24NK2 | ORDER ITEM 32 |
| 28 | 168X312 | TAPER PIN |
| 29 | PT1151N1 | SCREW |
| 31 | PT378NK1 | OIL HOLE WASHER |
| 32 | *AS361NK2 | BACK GEAR (29-30) |
| | *AS202NK1 | Ecc. SHAFT(27-28- 33-34) |
| 33 | 168X310 | TAPER PIN |
| 34 | PT438NK1 | ORDER ITEM 32 |
| 35 | PT382NK1 | SCREW |
| 36 | *AS25NK1 | TAKE-UP NUT(35-37) |
| 37 | PT26NK1 | TAKE-UP WASHER |
| 38 | PT207NK1 | THRUST BEARING |
| 39 | PT381NH1 | OIL- PLUG SCREW |
| 40 | *AS14NK1 | CONE (39) |
| 41 | PT367NR1 | SPRING |
| 42 | *AS15NK1 | BULL GEAR(41.43) |
| 43 | PT214NR2 | PLUNGER |
| 44 | *AS200K2 | SPINDLE (48) |
| 45 | PT2090 | MORTON KEY |

*Available only as sub-assembly. Parts included are indicated by the item numbers appearing in parenthesis after part name.

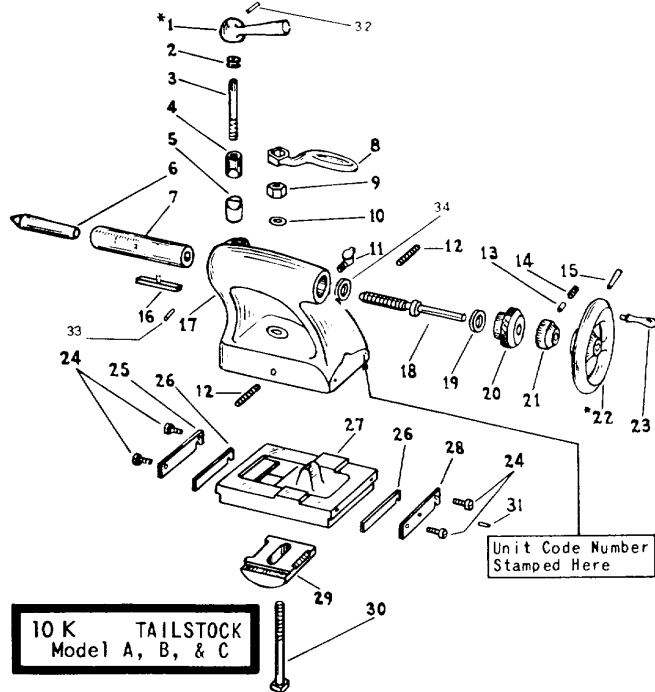
PARTS LIST

Serial Number of Lathe and Unit
Code Number MUST Accompany Order

HEADSTOCK PARTS



10 K HEADSTOCK (REVERSE BRACKET) Model A, B, & C



10 K TAILSTOCK Model A, B, & C

*Available only as sub-assembly. Parts included are indicated by the item numbers appearing in parenthesis after part name.

| ITEM NO. | PART NO. | PART NAME |
|----------|------------|-------------------------------|
| 46 | CL2175NK | FACE PLATE |
| 47 | (L205)NK | SPINDLE SLEEVE |
| 48 | PT973K1 | KEY |
| 49 | PT370K1 | PROTECTING RING |
| 50 | 160X23 | PIN |
| 51 | PT433NK1 | V CONE PINION |
| 52 | *AS432NK2 | V CONE(39-50-1) |
| 53 | CF 5L20 | V BELT |
| 54 | CF2401 | CENTER |
| 55 | PT2576NK1 | CONE COVER |
| 56 | 112X248 | SCREW |
| 57 | PT2575K1 | U. D. HDSTOCK |
| 58 | PT385NK1 | CLAMPING STUD |
| 59 | 138X27 | NUT |
| 60 | 137X29 | NUT |
| 61 | PT28NK1 | REV. GEAR |
| 62 | *AS229K1 | TWIN STUD (66-83) |
| 63 | PT27K32NK1 | TWIN GEAR |
| 64 | 256X14 | WICK |
| 65 | *AS635K2 | REV. BRKT. (70-76) |
| 65 A | PT2589NK1 | BUSHING |
| 66 | 139X25 | NUT |
| 67 | *AS637NK1 | REV. SHAFT (60-85) |
| 68 | PT2584K2 | LOCK BUSHING |
| 69 | PT409T1 | SNAP PIN |
| 70 | 155X38 | OILER |
| 71 | PT2584K1 | PIN |
| 72 | 162X35 | SPRING |
| 73 | PT2586K1 | BUSHING |
| 74 | PT88NK2 | PLUNGER KNOB |
| 75 | 160X10 | PIN |
| 76 | *AS640K1 | REV. PLUNGER (71-72-73-74-75) |
| 77 | PT1501 | PLUG |
| 78 | 121X16 | SCREW |
| 79 | 122X106 | SCREW |
| 80 | PT1080NK1 | SHOE |
| 81 | 132X1 | DRIVE SCREW |
| 82 | *AS2583NK1 | "CAUTION" PLATE (81) |
| 83 | 256X1 | OIL WICK |
| 84 | 256X3 | OIL WICK |
| 85 | 164X85 | KEY |
| 86 | AXS635K2 | REV. BRKT. ASSEM. |
| 87 | 130X103 | DRIVE SCREW |
| 88 | PT383NR1 | PIN |

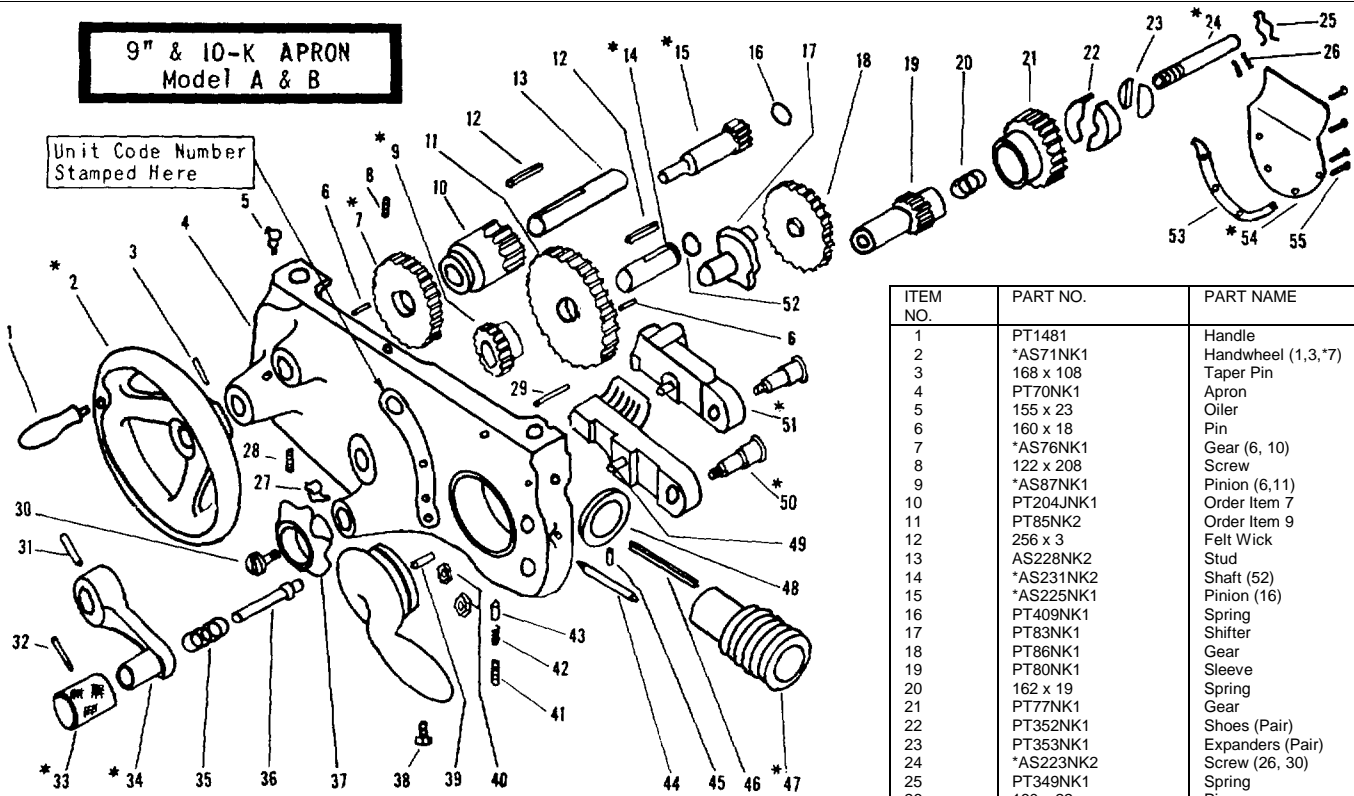
TAILSTOCK PARTS

| | | |
|----|-----------|--------------------|
| 1 | *AS54K6R | LEVER (2-3-32) |
| 2 | PT293NR2 | ORDER ITEM 1 |
| 3 | PT206KR3 | ORDER ITEM 1 |
| 4 | PT248KR3 | UPPER PLUG |
| 5 | PT249KR3 | LOWER PLUG |
| 6 | CE2401 | CENTER |
| 7 | PT201KR2 | SPINDLE |
| 8 | CE2653NK | WRENCH |
| 9 | PT283NK1 | NUT |
| 10 | PT2861NK1 | WASHER |
| 11 | PT2677NR1 | OILER |
| 12 | PT278NK1 | SET-OVER SCREW |
| 13 | PT1076NR1 | BINDER SHOE |
| 14 | 122X104 | SCREW |
| 15 | 168X106 | TAPER PIN |
| 16 | AS285KR1 | KEY |
| 17 | PT50K1 | T.S. TOP |
| 18 | PT226K3 | T. S. SCREW |
| 19 | PT288NR1 | FELT WASHER |
| 20 | PT52K2 | T.S. NUT |
| 21 | *AS278K1 | GRAD. DIAL (13-14) |
| 22 | *AS53NK1 | HANDWHEEL (15-23) |
| 23 | PT1480 | HANDLE |
| 24 | PT1164-1 | SCREW |
| 25 | PT581K2 | RETAINER (FRONT) |
| 26 | PT582K1 | FELT WIPER |
| 27 | PT51K3 | T. S. BASE |
| 28 | PT580K2 | RETAINER (REAR) |
| 29 | PT56NK2 | T. S. CLAMP |
| 30 | 143X216 | CLAMP BOLT |
| 31 | 160X18 | PIN |
| 32 | 160X255 | PIN |
| 33 | 160X48 | PIN |
| 34 | PT3554NR1 | RUBBER WASHER |

PARTS LIST

9" & 10-K APRON Model A & B

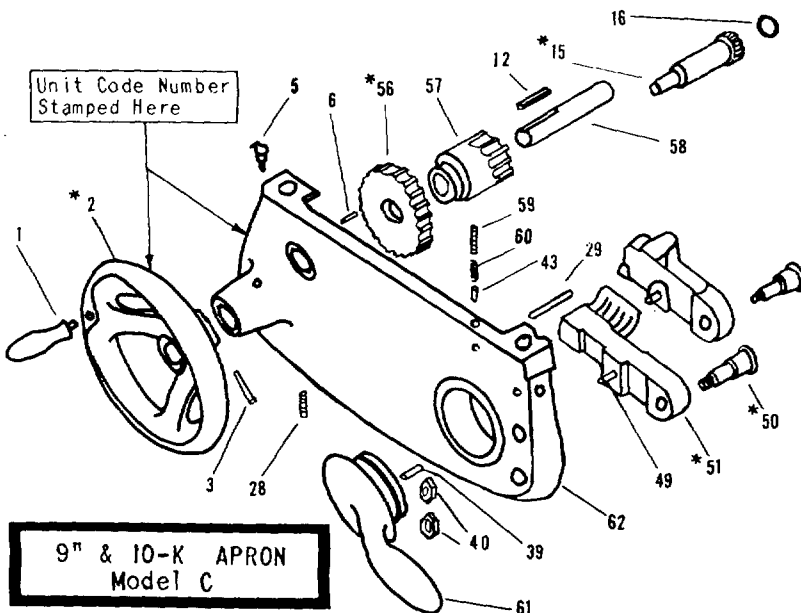
Unit Code Number
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SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

| ITEM NO. | PART NO. | PART NAME |
|----------|-----------|--------------------|
| 1 | PT1481 | Handle |
| 2 | *AS71NK1 | Handwheel (1,3,*7) |
| 3 | 168 x 108 | Taper Pin |
| 4 | PT70NK1 | Apron |
| 5 | 155 x 23 | Oiler |
| 6 | 160 x 18 | Pin |
| 7 | *AS76NK1 | Gear (6, 10) |
| 8 | 122 x 208 | Screw |
| 9 | *AS87NK1 | Pinion (6,11) |
| 10 | PT204JNK1 | Order Item 7 |
| 11 | PT85NK2 | Order Item 9 |
| 12 | 256 x 3 | Felt Wick |
| 13 | AS228NK2 | Stud |
| 14 | *AS231NK2 | Shaft (52) |
| 15 | *AS225NK1 | Pinion (16) |
| 16 | PT409NK1 | Spring |
| 17 | PT83NK1 | Shifter |
| 18 | PT86NK1 | Gear |
| 19 | PT80NK1 | Sleeve |
| 20 | 162 x 19 | Spring |
| 21 | PT77NK1 | Gear |
| 22 | PT352NK1 | Shoes (Pair) |
| 23 | PT353NK1 | Expanders (Pair) |
| 24 | *AS223NK2 | Screw (26, 30) |
| 25 | PT349NK1 | Spring |
| 26 | 160 x 22 | Pin |
| 27 | PT2677NR1 | Oiler |
| 28 | 120 x 108 | Screw |
| 29 | PT2854NK1 | Oil Tube |
| 30 | PT355NF1 | Screw |
| 31 | 168 x 210 | Taper Pin |
| 32 | 160 x 10 | Pin |
| 33 | *AS88NK2 | Knob (32,35,36) |
| 34 | *AS84NK1 | Lever (17,31*33) |
| 35 | 162 x 35 | Spring |
| 36 | PT89NK1 | Order Item 33 |
| 37 | PT82NK1 | Knob |
| 38 | PT1511 | Pipe Plug |
| 39 | 160 x 76 | Pin |
| 40 | 137 x 25 | Nut |
| 41 | 122 x 604 | Screw |
| 42 | 162 x 5 | Spring |
| 43 | PT351NK1 | Pin |
| 44 | PT97NK2 | Plunger |
| 45 | 160 x 19 | Pin |
| 46 | PT690NK1 | Key |
| 47 | *AS203NK1 | Worm (45,46,48) |
| 48 | PT208NK1 | Collar |
| 49 | PT172NK1 | Pin |
| 50 | *AS350NK1 | Screw (40) |
| 51 | *AS72NK1 | Half Nut (49) |
| 52 | PT357NK1 | Spring |
| 53 | PT412NK1 | Gasket |
| 54 | *AS227NK1 | Trough (53,55) |
| 55 | 101 x 104 | Screw |
| 56 | *AS76JNK1 | Gear (6,57) |
| 57 | PT204JNK1 | Order Item 56 |
| 58 | AS228JNK1 | Stud |
| 59 | 122 x 606 | Screw |
| 60 | 162 x 34 | Spring |
| 61 | AS74JNK1 | Cam |
| 62 | PT70JNK1 | Apron |

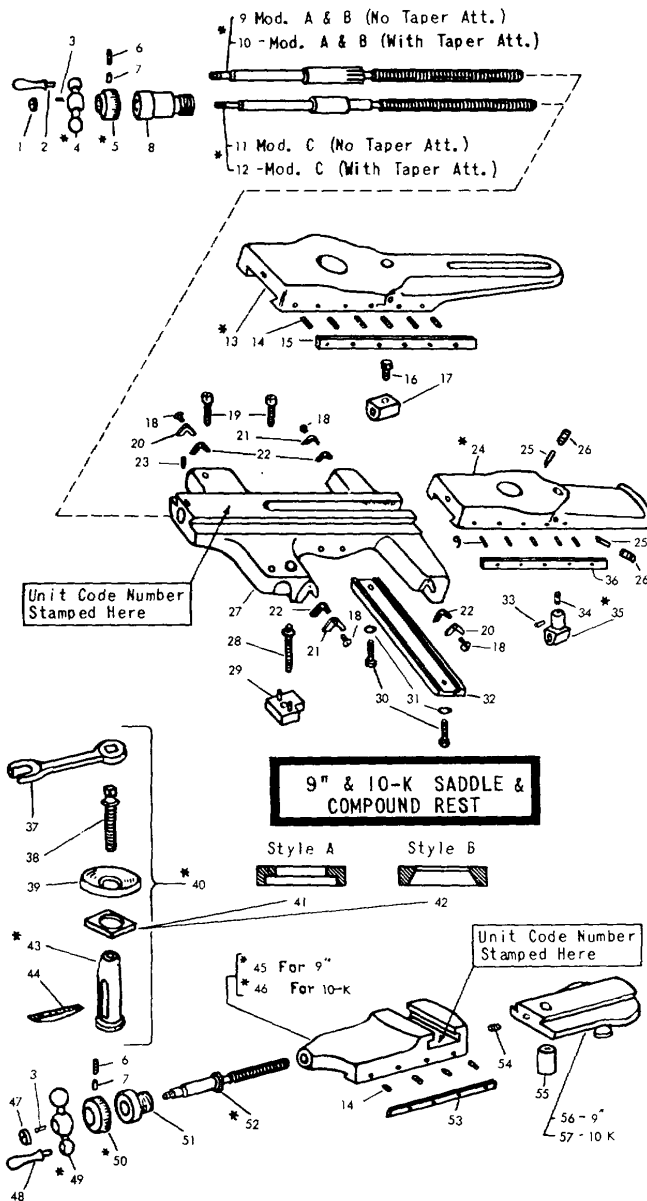
Unit Code Number
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9" & 10-K APRON Model C

*AVAILABLE ONLY AS SUB-
ASSEMBLY. PARTS INCLUDED
ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN PAR-
ENTHESIS AFTER PART NAME.

PARTS LIST



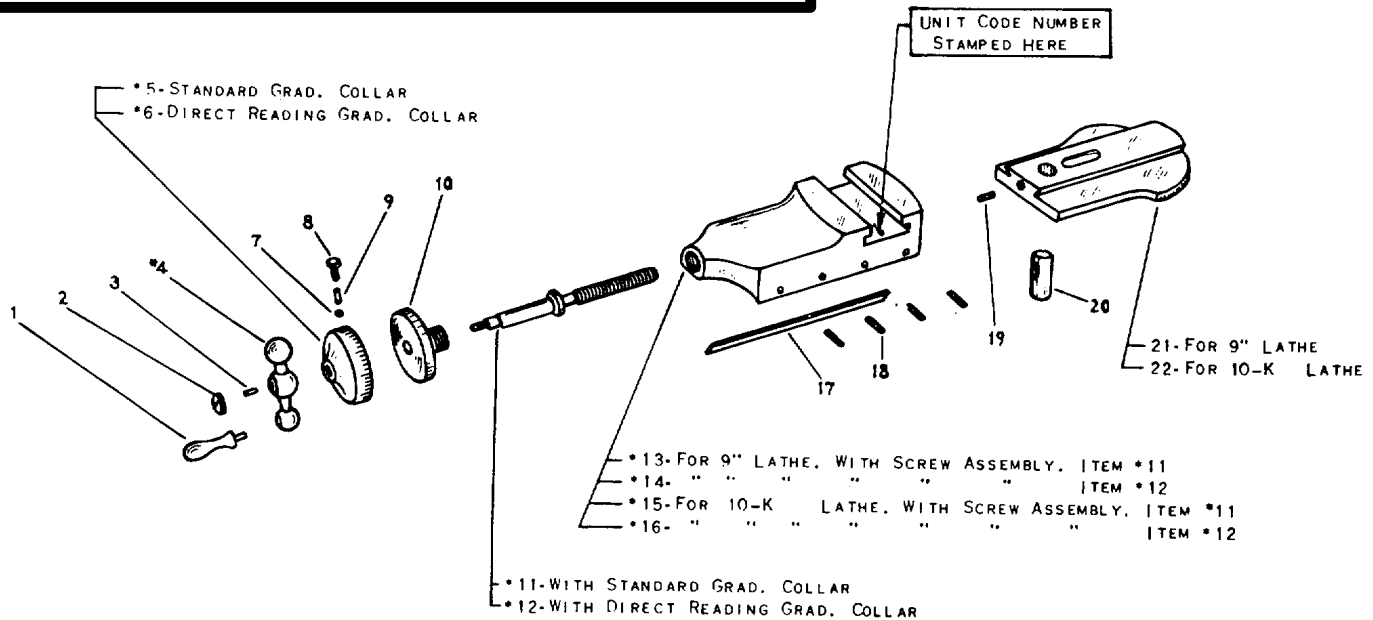
| ITEM NO | PART NO. | PART NAME |
|---------|-------------|----------------------------------|
| 1 | PT295R1 | Nut |
| 2 | PT1480 | Handle |
| 3 | 160 x 17 | Straight Pin |
| 4 | *AS276NK1 | Ball Crank (2) |
| 5 | *AS64NK1 | Collar (6,7) |
| 6 | 122 x 103 | Screw |
| 7 | PT1076NR1 | Binder Shoe |
| 8 | PT63NK1 | Bushing |
| 9 | *AS224NK2 | Cross Feed Scr. (1, *4,*5,8,*35) |
| 10 | *ATA224NK2 | T.A.C.F. Screw (1,*4,*5,8,16,17) |
| 11 | *AS224JNK2 | C. F. Screw (1,*4,*5,8,*35) |
| 12 | *ATA224JNK2 | T.A.C.F. Screw (1,*4,*5,8,16,17) |
| 13 | *AS485NK1 | T. A. Base (14,15,25,26) |
| 14 | 122 x 444 | Screw |
| 15 | PT874NK1 | Gib |
| 16 | PT66NK1 | Screw |
| 17 | PT486NK1 | Cr. Feed Nut |
| 18 | 107 x 6 | Screw |
| 19 | PT244NK1 | Saddle Screw |
| 20 | PT58NK1 | Retainer - R |
| 21 | PT57NK1 | Retainer - L |
| 22 | PT59NK1 | Felt Wiper |
| 23 | 122 x 102 | Screw |
| 24 | *AS92NK2 | Base (14,25,26,36) |
| 25 | PT211NK1 | Shoe |
| 26 | 121 x 212 | Screw |
| 27 | AS60NK2 | Saddle |
| 28 | PT210NK2 | Lock Screw |
| 29 | AS62NK2 | Lock |
| 30 | 112 x 114 | Screw |
| 31 | PT3400 | Washer |
| 32 | PT61NK1 | Gib |
| 33 | PT358NK1 | Pin |
| 34 | PT359NK1 | Lock Screw |
| 35 | *A665NK1 | C. F. Nut (33, 34) |
| 36 | PT221NK1 | Gib |
| 37 | CE2650NK | Wrench |
| 38 | PT233NK1 | T. P. Screw |
| 39 | PT251NK1 | Ring |
| 40 | *CE2450NK | Tool Post Assy. |
| 41 | PT209NK1 | Block |
| 42 | PT209NK2 | Block |
| 43 | *AS250NK3 | Tool Post (41 or 40) |
| 44 | PT252NK2 | Wedge |
| 45 | *AS90N1 | C.R. Top (*52, 14, 53, 56) |
| 46 | *AS90K1 | C.R. Top (*52, 14, 53, 57) |
| 47 | PT295NR1 | Nut |
| 48 | PT1480 | Handle |
| 49 | *AS277NR1 | Crank (48) |
| 50 | *AS110NK1 | Collar (6,7) |
| 51 | PT94NK1 | Bushing |
| 52 | *AS230NK2 | Screw (37, *49 150,51,55) |
| 53 | PT257NK1 | Gib |
| 54 | 122 x 508 | Screw |
| 55 | PT95NK1 | C.R. Nut |
| 56 | PT91N1 | Swivel |
| 57 | PT91K1 | Swivel |

*Available only as sub-assembly. Parts included are indicated by the item numbers appearing in parenthesis after part name.

PARTS LIST

DIRECT READING GRADUATED COLLARS - EACH GRADUATION REPRESENTS A MOVEMENT OF THE CROSS SLIDE OF .0005" OR A REDUCTION IN THE DIAMETER OF THE WORK OF .001"

9" & 10-K COMPOUND REST TOP-LARGE DIA.(1 3/4")COLLAR
STANDARD AND DIRECT READING GRADUATIONS
FOR MODEL A. B, AND C



*AVAILABLE ONLY AS SUB
ASSEMBLY. PARTS INCLUDED
ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN PAR-
ENTHESIS AFTER PART NAME.

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

| ITEM NO. | PART NAME | PART |
|----------|-------------------------------------|------------|
| 1 | HANDLE | PT1480 |
| 2 | RETAINING NUT | PT29SNR1 |
| 3 | PIN | 160X17 |
| 4 | BALL CRANK (1) | *AS277NR1 |
| 5 | GRADUATED COLLAR (7-8-9) | *AS110NR2 |
| 6 | GRADUATED COLLAR (7-8-9) | *AS1269NR1 |
| 7 | SHOE | PT1080NK1 |
| 8 | THUMB SCREW | PT1857 |
| 9 | PIN | 160X17 |
| 10 | COMP. REST BUSHING | PT94NR2 |
| 11 | COMP. REST SCREW (2-3-4-5-10-20) | *AS230NK3 |
| 12 | COMP. REST SCREW (2-3-4-6-10-20) | *ASD230NK3 |
| 13 | COMP. REST TOP (*11-17-18-19-21) | *ASL90N1 |
| 14 | COMP. REST TOP (*12-17-18-19-21) | *ASD90N1 |

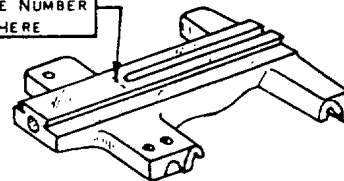
| ITEM NO. | PART NAME | PART |
|----------|-------------------------------------|----------|
| 15 | COMP. REST TOP (*11-17-18-19-22) | *ASL90K1 |
| 16 | COMP. REST TOP (*12-17-18-19-22) | *ASD90K1 |
| 17 | COMP. REST GIB | PT2S7NKL |
| 18 | SCREW | 122X444 |
| 19 | SCREW | 122X508 |
| 20 | COMP. REST NUT | PT95NKK1 |
| 21 | COMP. REST SWIVEL | PT91N1 |
| 22 | COMP. REST SWIVEL | PT91K1 |

PARTS LIST

STANDARD GRADUATED COLLARS - EACH GRADUATION REPRESENTS A MOVEMENT OF THE CROSS SLIDE OF .001" OR A REDUCTION IN THE DIAMETER OF THE WORK OF .002".

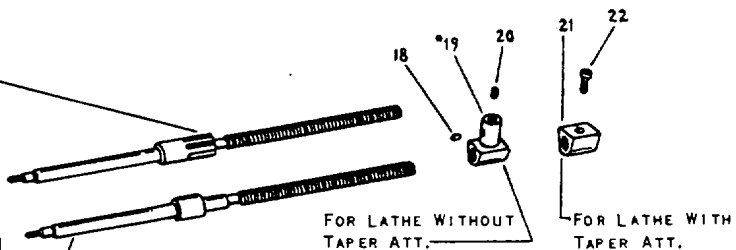
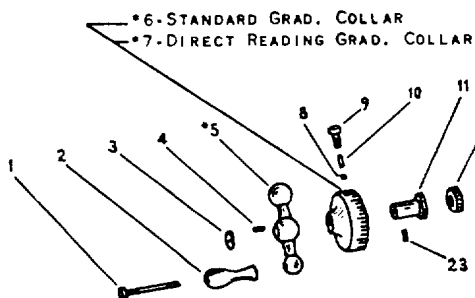
DIRECT READING GRADUATED COLLARS
EACH GRADUATION REPRESENTS A MOVEMENT OF THE CROSS SLIDE OF .0005" OR A REDUCTION IN THE DIAMETER OF THE WORK OF .001".

UNIT CODE NUMBER
STAMPED HERE



TOP VIEW OF SADDLE SHOWING
LOCATION OF CODE NUMBER

- * 14- FOR MODEL A & B WITH STANDARD GRAD. COLLAR-WITHOUT TAPER ATT.
- * 15- " " " " " " " " -WITH TAPER ATT.
- * 16- " " " " " DIR. RDG. " " -WITHOUT TAPER ATT.
- * 17- " " " " " " " " -WITH TAPER ATT.



- *24-FOR MODEL C WITH STANDARD GRAD. COLLAR-WITHOUT TAPER ATT.
- *25- " " " " " " " " -WITH TAPER ATT.
- *26- " " " " DIR. RDG. " " -WITHOUT TAPER ATT.
- *27- " " " " " " " " -WITH TAPER ATT.

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

**9" & 10-K CROSS FEED SCREW-LARGE DIA.(1 3/4")COLLAR
STANDARD AND DIRECT READING GRADUATIONS
FOR MODEL A. B. AND C**

*AVAILABLE ONLY AS SUB-ASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER PART NAME.

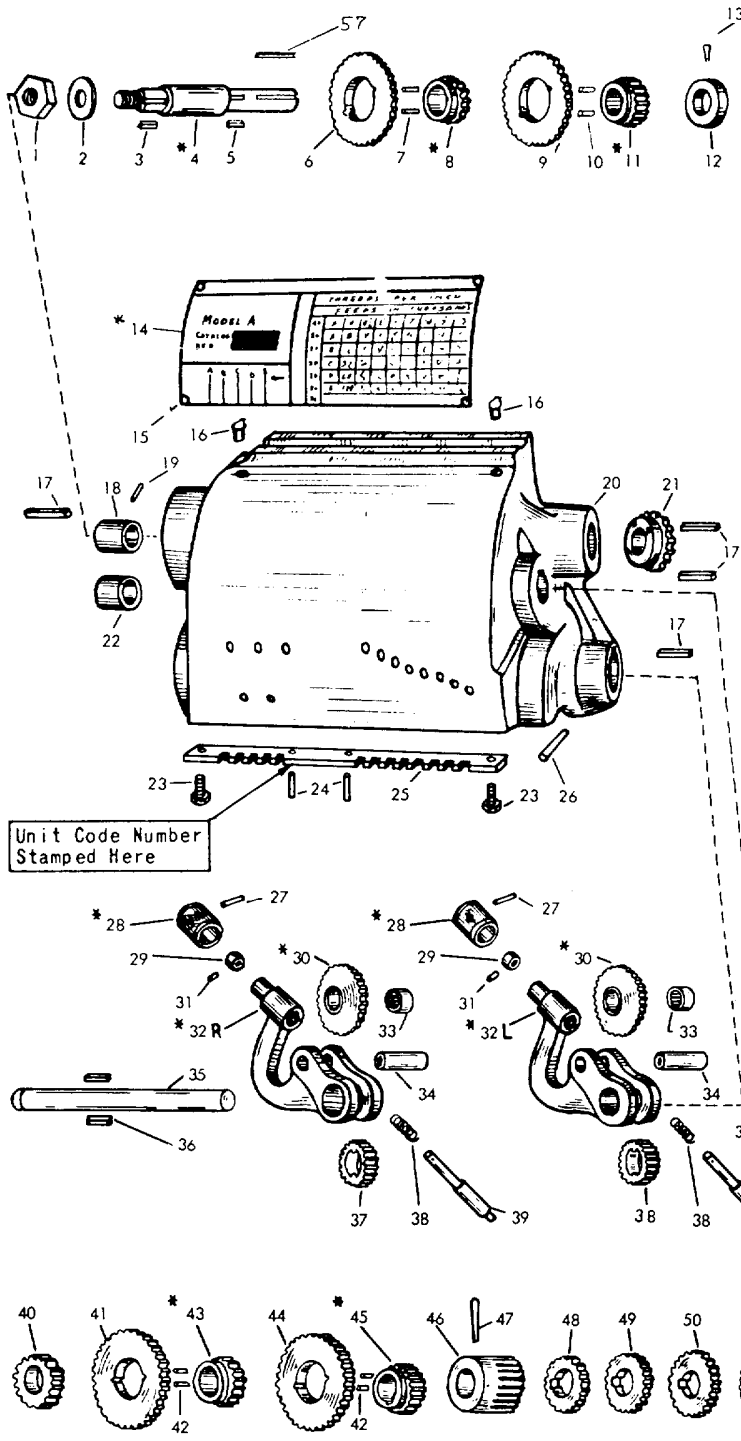
| ITEM NO. | PART NAME | PART NO. |
|----------|---|-------------|
| 1 | STUD | PT1241 |
| 2 | HANDLE | PT1491 |
| 3 | RETAINING NUT | PT295NR1 |
| 4 | PIN | 160X17 |
| 5 | BALL CRANK (1-2) | *AS1264NK1 |
| 6 | GRADUATED COLLAR (8-9-10) | *AS64NK2 |
| 7 | GRADUATED COLLAR (8-9-10) | *AS1266NK2 |
| 8 | SHOE | PT1080NK1 |
| 9 | THUMB SCREW | PT1857 |
| 10 | PIN | 160X16 |
| 11 | C. F. SLEEVE | PT69R1 |
| 12 | BEARING | AS841R1 |
| 13 | CROSS FEED BUSHING | PT63NK |
| 14 | CROSS FEED SCREW (3-4-*5-*6-11-12-13- *19-23) | *AS224NK4 |
| 15 | CROSS FEED SCREW (3-4-*5-*6-11-12-13- 21-22-23) | *ATA224NK4 |
| 16 | CROSS FEED SCREW (3-4-*5-*7-11-12-13- *19-23) | *ASD224NK4 |
| 17 | CROSS FEED SCREW (3-4-*5-*7-11-12-13- 21-22-23) | *ADTA224NK4 |
| 18 | PIN | PT358NK1 |

| ITEM NO. | PART NAME NO. | PART |
|----------|---|--------------|
| 19 | CROSS FEED NUT (18-20) | *AS65NK1 |
| 20 | SCREW | PT359NK1 |
| 21 | CROSS FEED NUT | PT486NK1 |
| 22 | SCREW | PT66NK1 |
| 23 | PIN | 160X247 |
| 24 | CROSS FEED SCREW (3-4*5*6-11-12-13- *19-23) | *AS224JNK4 |
| 25 | CROSS FEED SCREW (3-4*5*6-11-12-13- 21-22-23) | *ATA224JNK4 |
| 26 | CROSS FEED SCREW (3-4*5*7-11-12-13- *19-23) | *ASD224JNK4 |
| 27 | CROSS FEED SCREW (3-4*5*7-11-12-13- 21-22-23) | *ADTA224JNK4 |

PARTS LIST

9" & 10-K GEAR BOX Model A

GEAR BOX PARTS



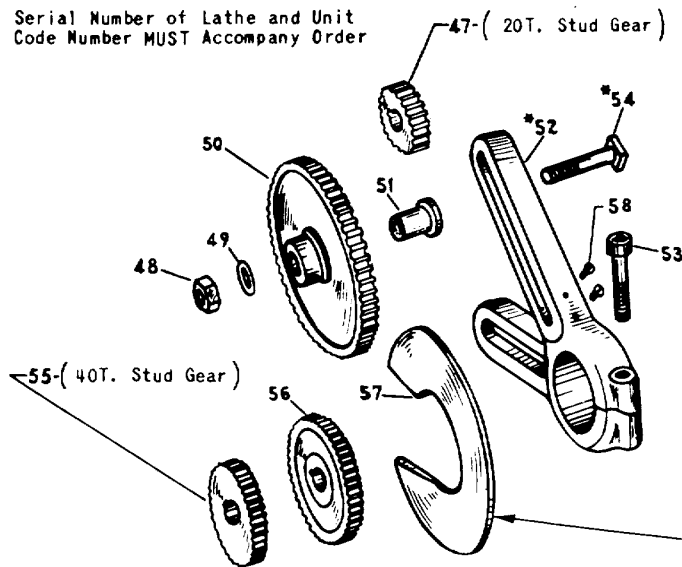
| ITEM NO. | PART NO. | PART NAME |
|----------|-------------|---|
| 1 | 140 x 29 | Nut |
| 2 | 161 x 73 | Washer |
| 3 | 164 x 86 | Key |
| 4 | *AS603NK1 | Shaft (1,2,3,5, 12, 13) |
| 5 | 164 x 17 | Key |
| 6 | PT627NK1 | Order Item 8 |
| 7 | 160 x 17 | Straight Pin |
| 8 | *AS625NK1 | Camp Pinion (6,7) |
| 9 | PT626NK1 | Order Item 11 |
| 10 | 160 x 16 | Straight Pin |
| 11 | *AS619NK1 | Comp. Pinion (9, 10) |
| 12 | PT604NK1 | Collar |
| 13 | 168 x 108 | Taper Pin |
| 14 | *AS1541NK3 | Index Pit. (15) |
| 15 | 132 x 1 | Screw |
| 16 | 155 x 38 | Oiler |
| 17 | 256 x 3 | Felt Wick |
| 18 | PT606NK2 | Bushing |
| 19 | 160 x 31 | Straight Pin |
| 20 | AS604NK1 | Gear Box |
| 21 | PT628NK1 | Lead Scr. Gear |
| 22 | PT601NK2 | Bushing |
| 23 | 111 x 6 | Screw |
| 24 | 160 x 19 | Pin |
| 25 | PT607NK1 | Guide Bar |
| 26 | PT1807 | Pin |
| 27 | 160 x 27 | Pin |
| 28 | *AS88R2 | Knob (27, 38, 39) |
| 29 | PT607NR1 | Bushing |
| 30 | *AS605NK1 | Gear (33) |
| 31 | 160 x 42 | Pin |
| 32R | *AS400NK2 | R.H. Tumbler (27, 28,29, 30, 31,33, 38, 39) |
| 32L | *AS401NK1 | L.H. Tumbler (27, 28,29, 30, 31,33, 38, 39) |
| 33 | PT384NK1 | Bearing |
| 34 | 160 x 252 | Shaft |
| 35 | PT620NK1 | Shaft |
| 36 | 256 x 1 | Felt Wick |
| 37 | PT621NK1 | Gear |
| 38 | 162 x 50 | Spring |
| 39 | PT608NR1 | Plunger |
| 40 | PT624NK1 | Gear |
| 41 | PT626NK1 | Order Item 43 |
| 42 | 160 x 16 | Pin |
| 43 | *AS623NK1 | Pinion Gear (40,42) |
| 44 | PT626NK1 | Order Item 45 |
| 45 | *AS622NK1 | Pinion Gear (42,44) |
| 46 | PT615K16NK1 | Cone Gear 16T |
| 47 | 168 x 310 | Taper Pin |
| 48 | PT615K18NK1 | Cone Gear 18T |
| 49 | PT615K20NK1 | Cone Gear 20T |
| 50 | PT615K22NK1 | Cone Gear 22T |
| 51 | PT615K23NK1 | Cone Gear 23T |
| 52 | PT615K24NK1 | Cone Gear 24T |
| 53 | PT615K26NK1 | Cone Gear 26T |
| 54 | PT615K28NK1 | Cone Gear 28T |
| 55 | 160 x 251 | Pin |
| 56 | *AS614NK1 | Shaft (55,57,58) |
| 57 | 256 x 1 | Wick |
| 58 | 164 x 22 | Key |

*AVAILABLE ONLY AS SUBASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER PART NAME.

SERIAL NUMBER OF LATHE AND UNIT CODE NUMBER MUST ACCOMPANY ORDER

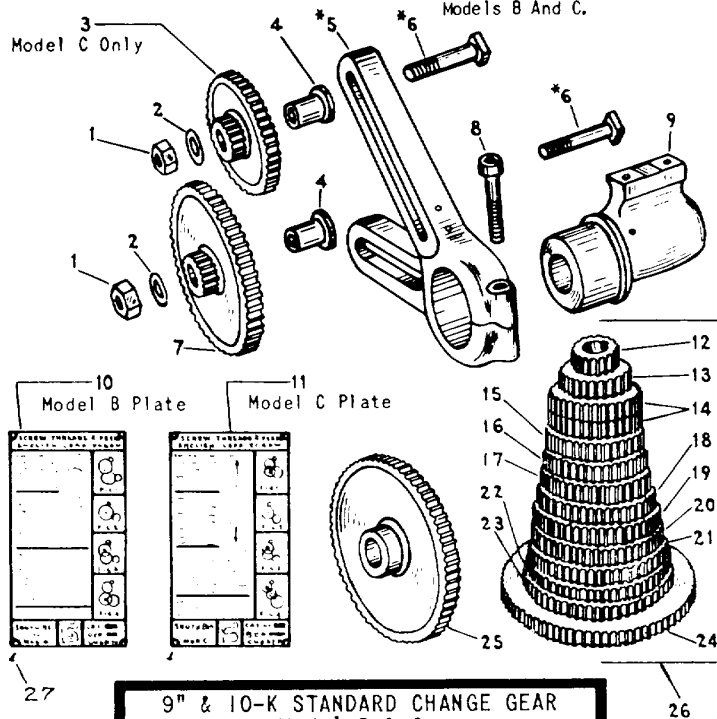
PARTS LIST

Serial Number of Lathe and Unit
Code Number MUST Accompany Order



*AVAILABLE ONLY AS SUB-
ASSEMBLY. PARTS INCLUDED
ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN PAR-
ENTHESIS AFTER PART NAME.

NOTE: This Guard, With Screws,
Item No. 57A Also Used On
Models B And C.



GEAR BOX PARTS

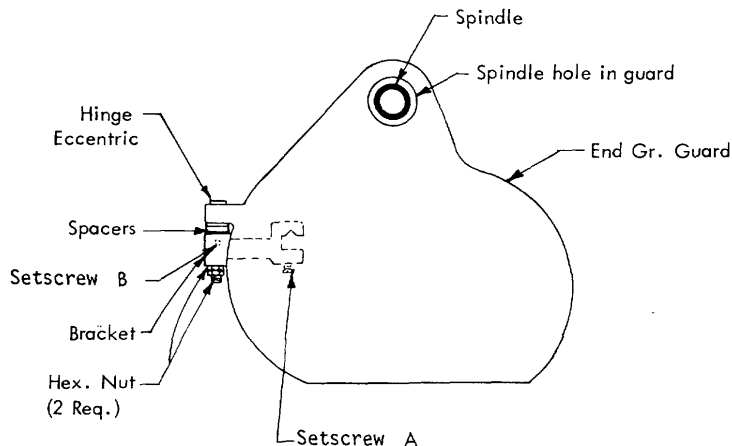
| ITEM NO. | PART NO. | PART NAME |
|----------|------------|--------------|
| 47 | PT32K20NK1 | GEAR, 20 T. |
| 48 | 140X29 | NUT |
| 49 | 161X21 | WASHER |
| 50 | PT33NK1 | IDLER GEAR |
| 51 | PT38NK1 | BUSHING |
| 52 | *AS31NK1 | BRACKET (53) |
| 53 | 114X228 | SCREW |
| 54 | *A3247NK1 | BOLT (48-49) |
| 55 | PT32K40NK1 | GEAR, 40 T. |
| 56 | PT32K56NK1 | GEAR, 56 T. |
| 57 | PT389NK3 | GUARD |
| 58 | PT1150NR | SCREW |

STANDARD CHANGE GEAR PARTS

| ITEM NO. | PART NO. | PART NAME |
|----------|------------|--------------------|
| 1 | 140X29 | NUT |
| 2 | 161X21 | WASHER |
| 3 | AS336NK1 | COMP. GEAR 18/54T |
| 4 | PT38NK1 | BUSHING |
| 5 | *AS31NK1 | BRACKET (8) |
| 6 | *AS247NK1 | BOLT (1-2) |
| 7 | AS36NK1 | COMP. GEAR, 18/72T |
| 8 | 114X220 | SCREW |
| 9 | PT4NK1 | FRONT BRACKET |
| 10 | AS1525NK3 | INDEX PLATE |
| 11 | AS1527JNR2 | INDEX PLATE |
| 12 | PT32K1GKN1 | CHANGE GEAR, 16T |
| 13 | PT32K2411K | CHANGE GEAR, 24T |
| 14 | PT32K32NK1 | CHANGE GEAR, 32T |
| 15 | PT32K36NK1 | CHANGE GEAR, 36T |
| 16 | PT32K40NK1 | CHANGE GEAR, 40T |
| 17 | PT32K44NK1 | CHANGE GEAR, 44T |
| 18 | PT32K46NK1 | CHANGE GEAR, 46T |
| 19 | PT32K48NK1 | CHANGE GEAR, 48T |
| 20 | PT32K52NK1 | CHANGE GEAR, 52T |
| 21 | PT32K54NK1 | CHANGE GEAR, 54T |
| 22 | PT32K56NK1 | CHANGE GEAR, 56T |
| 23 | PT32K60NK1 | CHANGE GEAR, 60T |
| 24 | PT32K80NK1 | CHANGE GEAR, 80T |
| 25 | PT33NK1 | IDLER GEAR, 80T |
| 26 | *AS32NK1 | CHANGE GEARS |
| 27 | 132X1 | SCREW |

PARTS LIST

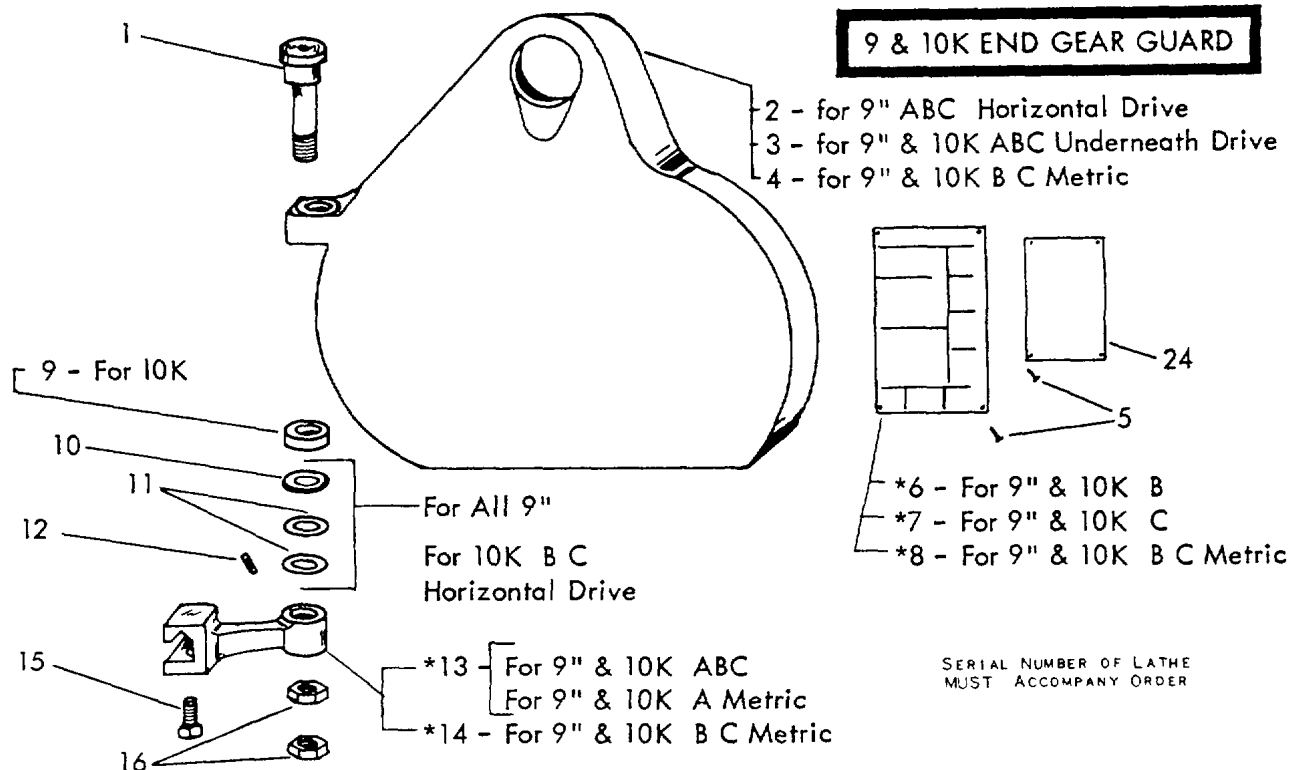
TO MOUNT AND ADJUST 9" & 10K END GEAR GUARD



1. Install bracket on bed and secure in place. On horizontal lathes set bracket near end of bed. On underdrive lathes set bracket approximately 1/4" back from end of bed. Tighten setscrew A
2. Place eccentric in guard and mount in bracket with spacers between guard and bracket. (See fig. above) Use any combination of spacers required for proper clearance between spindle end and hole in guard.
NOTE: Spacers of varied thicknesses are supplied for the purpose of using any combination to obtain proper installation.
3. Install one hex nut on end of hinge eccentric just enough to allow the second one to be installed.
4. Install second hex nut and lock with first.
5. Adjust the guard right or left by turning the eccentric by the locked nuts with a wrench.
6. Secure eccentric by tightening setscrew B
7. Unlock nuts and turn one up against bracket tight enough to keep guard closed but loose enough to swing open by hand.
8. Lock with second nut.

NOTE: New machines have hinges tightened to keep guard closed during transit. It may be necessary to loosen hex nuts slightly and relock to allow guard to open easier.

PARTS LIST



COMPLETE ASSEMBLY AS SHOWN
TO INCLUDE GUARD, HINGE EC-
CENTRIC BRACKET, AND ALL
HARDWARE FITTINGS REQUIRED.

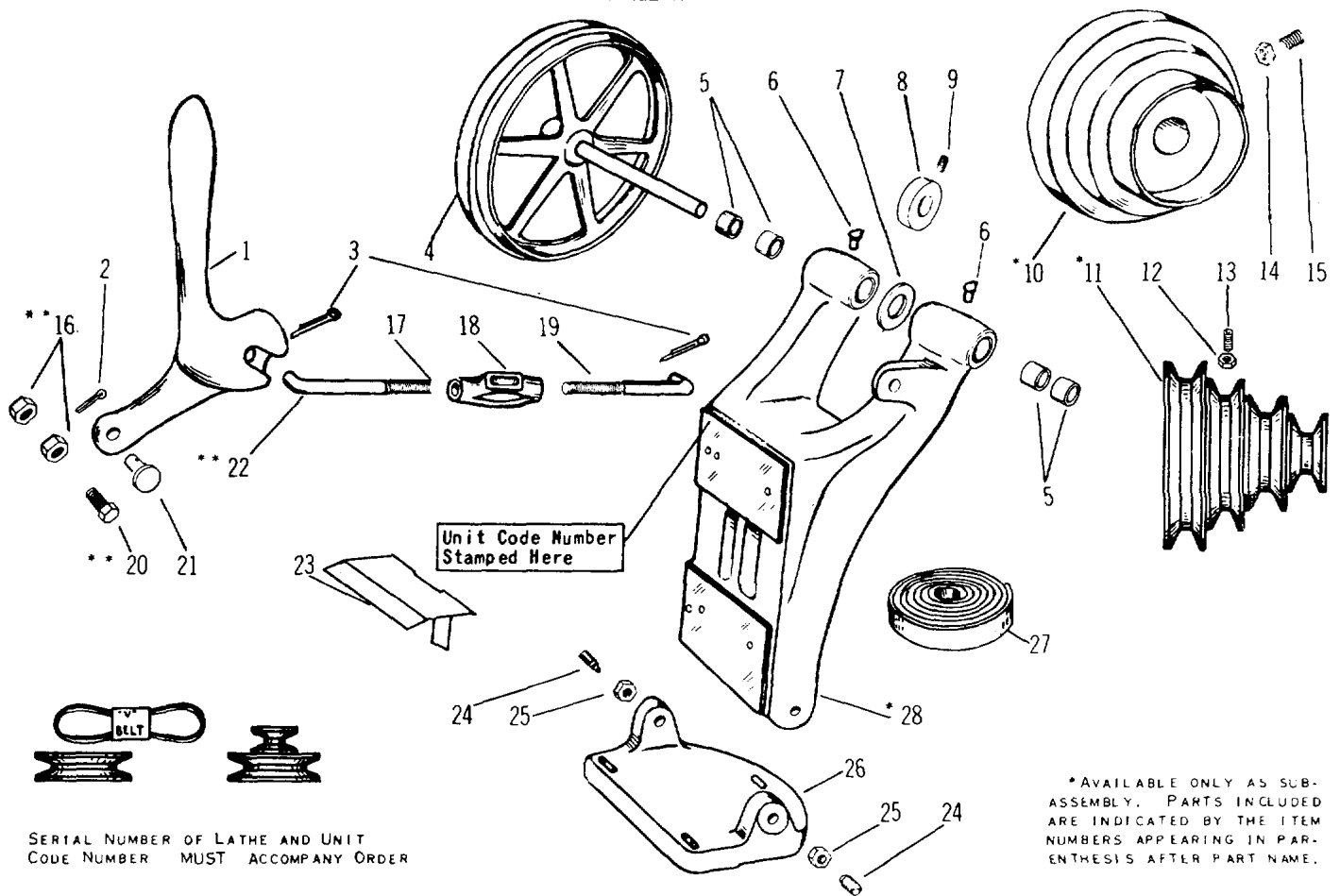
*AVAILABLE ONLY AS SUB-ASSEMBLY. PARTS INCLUDED ARE INCI-
CATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER
PART NAME.

| ITEM NO. | PART NO. | PART NAME | NO. REQ. |
|----------|-------------|------------------|----------|
| 1 | PT145NK1 | Eccentric | 1 |
| 2 | PT146N2 | Guard | 1 |
| 3 | PT650NK2 | Guard | 1 |
| 4 | PT906NK2 | Guard | 1 |
| 5 | 130 x 103 | Drive Screws | 4 |
| 6 | *AS1525NK2 | Index Plate (5) | 1 |
| 7 | *AS1527JNR1 | Index Plate (5) | 1 |
| 8 | *AS1529NR2 | Index Plate (5) | 1 |
| 9 | PT648K1 | Spacer | 1 |
| 10 | 161 x 27 | Finished Washer | 1 |
| 11 | 161 x 65 | Finished Washer | 2 |
| 12 | 120 x 106 | Setscrew | 1 |
| 13 | *AS147NK3 | Bracket (12, 15) | 1 |
| 14 | *AS907NK3 | Bracket (12,15) | 1 |
| 15 | 118 x 214 | Setscrew | 1 |

| ITEM NO. | PART NO. | PART NAME | NO. REQ. |
|----------|------------|---------------------------------------|----------|
| 16 | 139 x 31 | Hex Nuts | 2 |
| 17 | *AS650NK2A | Guard Assembly (1,3,9,10,11,13,16) | |
| 18 | *AS650NK2B | Guard Assembly (1,3,6,9,10,11,13,16) | |
| 19 | *AS650NK2C | Guard Assembly (1,3,7,9,10,11,13,16) | |
| 20 | *AS146N2A | Guard Assembly (1,2,9,10,11,13,16) | |
| 21 | *AS146N2B | Guard Assembly (1,2,6,9,10,11,13,16) | |
| 22 | *AS146N2C | Guard Assembly (1,2,7,9,10,11,13,16) | |
| 23 | *AS906NK2 | Guard Assembly (1,4,8,9, 10,11,14,16) | |
| 24 | *AS441-3 | Lubrication Plate (5) | |

PARTS LIST

9" & 10-K HORIZONTAL DRIVE UNIT



SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

****For 10-K Gap Bed Lathes Only**

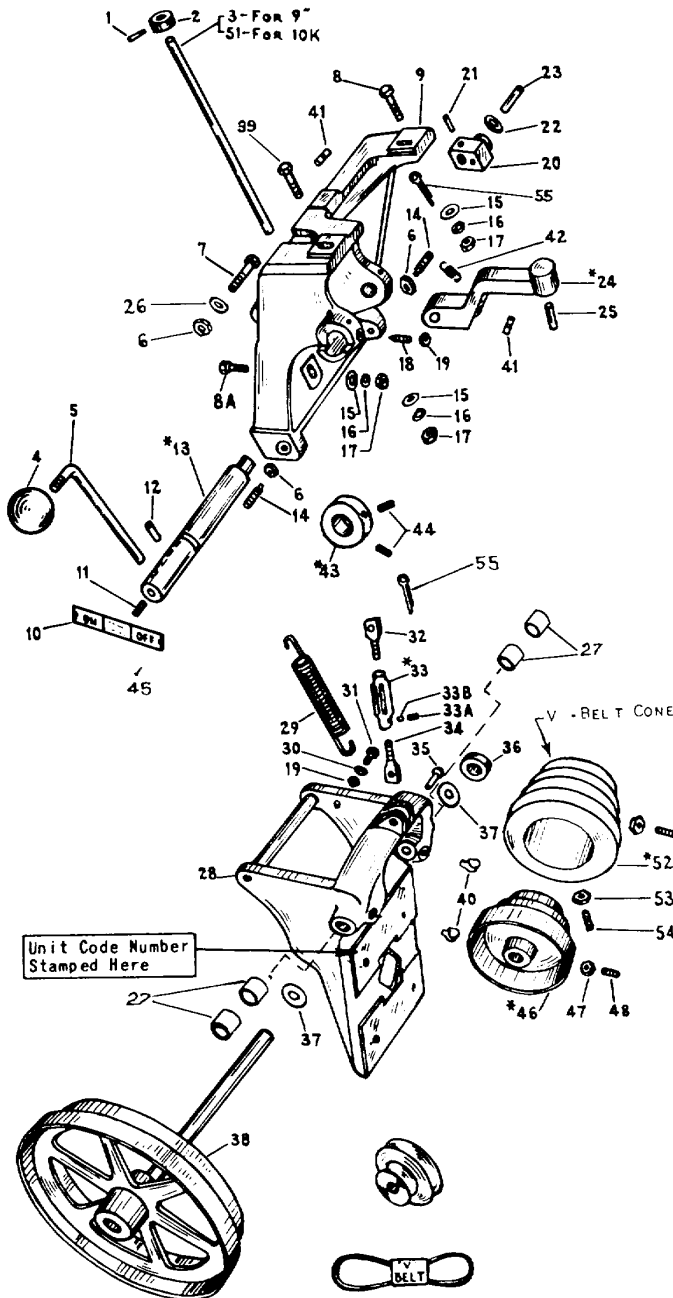
| ITEM NO. | PART NO. | PART NAME |
|----------|-----------|----------------|
| 1 | PT1945N1 | Lever |
| 2 | 170 x 206 | Cotter Pin |
| 3 | 170 x 206 | Cotter Pin |
| 4 | AS1960N3 | Shaft & Pulley |
| 5 | PT3658R1 | Oilite Bearing |
| 6 | 155 x 38 | Oiler |
| 7 | PT1676NK1 | Washer |
| 8 | AS735NR1 | Collar (9) |
| 9 | 120 x 206 | Screw |
| 10 | *AS103NK1 | Cone (14,15) |
| 11 | *AS431NK2 | Cone (12,13) |
| 12 | 139 x 25 | Hex Nut |
| 13 | 120 x 112 | Screw |
| 14 | 139 x 27 | Hex Nut |
| 15 | 120 x 212 | Screw |

| ITEM NO. | PART NO. | PART NAME |
|----------|------------|----------------|
| 16 | 139 x 27 | Hex Nut |
| 17 | PT1946N1 | R. H. Rod |
| 18 | PT1948N1 | Turnbuckle |
| 19 | PT395 N1 | L. H. Rod |
| 20 | 112 x 224 | Hex. Capscrew |
| 21 | PT1949NK3 | Pin |
| 22 | PT1946K1-G | R. H. Rod |
| 23 | PT1373 | Chip Guard |
| 24 | PT243NR1 | Pivot Screw |
| 25 | 139 x 29 | Hex Nut |
| 26 | PT1944NT | Base |
| 27 | CE2323N | Belt 1-Ply |
| 28 | *AS1940N3 | Standard (6,5) |

PARTS LIST

9" & 10K UNDERNEATH DRIVE UNIT

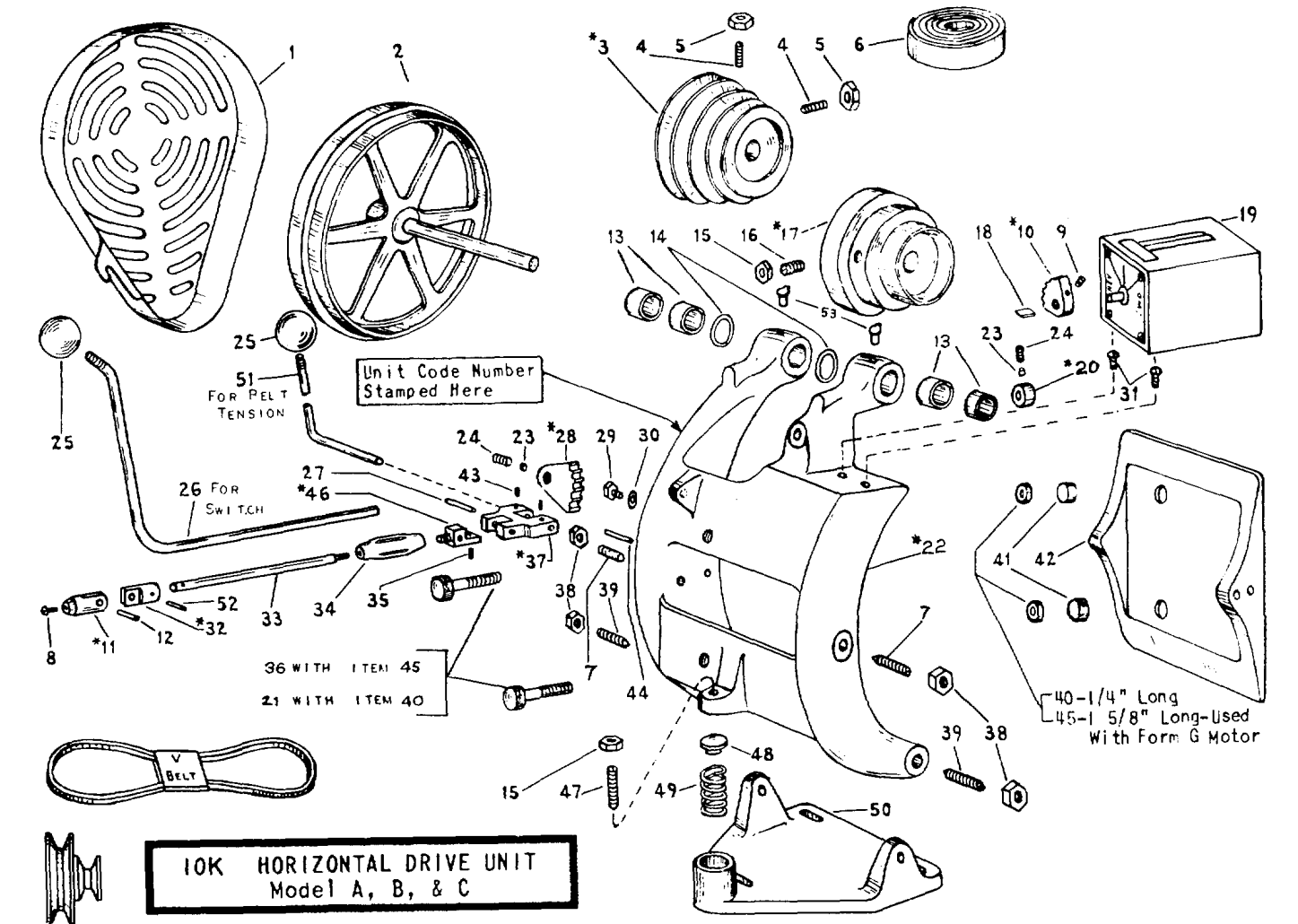
Serial Number of Lathe and Unit
Code Number MUST Accompany Order



| ITEM NO. | PART NO. | PART NAME |
|----------|------------|---------------------------|
| 1 | 120X 206 | SCREW |
| 2 | PT2611NK | COLLAR |
| 3 | PT2608N1 | LOCK PIN |
| 4 | PT406K&FMI | KNOB |
| 5 | PT2609NKI | HANDLE |
| 6 | 139X29 | NUT |
| 7 | 112X336 | BOLT |
| 8 | 112X224 | BOLT |
| 8A | 542X406 | BOLT |
| 9 | PT2640NKZ | CRADLE SUPPORT |
| 10 | AS417NKI | PLATE |
| 11 | 120X106 | SCREW |
| 12 | 160X116 | PIN |
| 13 | *AS2605NKI | SHAFT (11-12-20 21-22-23) |
| 14 | PT390NK2 | PIVOT SCREW |
| 15 | 167X4 | WASHER |
| 16 | 180X302 | LOCK WASHER |
| 17 | 138X27 | NUT |
| 18 | 121X112 | SCREW |
| 19 | 139X25 | NUT |
| 20 | PT2603NKI | CRANK |
| 21 | 168X410 | TAPER PIN |
| 22 | 161X17 | WASHER |
| 23 | PT2604NKI | RELEASE PIN |
| 24 | *AS2607NK2 | BRACKET (25) |
| 25 | PT1824-3 | PIN |
| 26 | 161 X 21 | WASHER |
| 27 | PT36 58-1 | Oilite Bearing |
| 28 | PT2540NK3 | CRADLE |
| 28A | | |
| 29 | PT2638NTI | SPRING |
| 30 | 161X14 | WASHER |
| 31 | 112X116 | SCREW |
| 32 | PT2600NKI | R. H. SCREW |
| 33 | AS2606NKI | TURNBUCKLE(3334) |
| 33A | 120X6 | SCREW |
| 33B | PTI081NTI | SHOE |
| 34 | PT2601NKI | L. H. SCREW |
| 35 | PT1949NK2 | CLEVIS PIN |
| 36 | AS735HRI | COLLAR |
| 37 | PT1676NKI | WASHER |
| 38 | AS1960N3 | SHAFT & PULLEY |
| 39 | 112X232 | BOLT |
| 40 | 155X44 | OILER |
| 41 | PT2615NKI | PIN |
| 42 | PT2614NKI | SPRING |
| 43 | *AS2613NKI | COLLAR (44) |
| 44 | 120X108 | SCREW |
| 45 | 144 X 1 | SCREW |
| 46 | WAS103NKI | C. S. CONE(47-48) |
| 47 | 139X27 | NUT |
| 48 | 120X212 | SCREW |
| 49 | | |
| 50 | | |
| 51 | PT2608KI | COVER LOCK ROD |
| 52 | *AS43INKI | C. S. CONE(53-54) |
| 53 | 139X25 | NUT |
| 54 | 120X1112 | SCREW |
| 55 | 170X206 | C. PIN |

*AVAILABLE ONLY AS SUBASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER PART NAME.

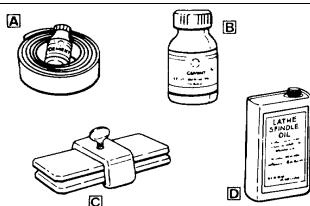
PARTS LIST



| ITEM NO. | PART NO. | PART NAME |
|----------|------------|--------------------|
| 1 | PT4137K1 | GUARD |
| 2 | AS4128K1 | SHAFT & PULLEY |
| 3 | *AS431NK2 | V CONE (4-5) |
| 4 | 120X112 | SCREW |
| 5 | 139x25 | NUT |
| 6 | CE3750K | FLAT BELT |
| 7 | PT705K2 | SCREW |
| 8 | 101 x 714 | SCREW |
| 9 | 120 X 6 | SCREW |
| 10 | *AS4130K2 | GEAR SEGMENT(9) |
| 11 | *AS4293K1 | BELT ROD FORK (12) |
| 12 | 160x136 | PIN |
| 13 | PT3660-1 | BUSHING |
| 14 | PT167NK1 | WASHER |
| 15 | 139 X 27 | SCREW |
| 16 | 120X212 | SCREW |
| 17 | *AS103NK2 | CONE (15-16) |
| 18 | PT2042H1 | SHAFT EXPANDER |
| 19 | CE790 | DRUM CONTROL |
| 20 | AS4131K1 | COLLAR (23-24) |
| 21 | PT1855 | THUMB SCREW |
| 22 | *AS4120K4 | FRAME (13-20-53)) |
| 23 | PT1081NT1 | SHOE |
| 24 | 120x1 | SCREW |
| 25 | PT403K& | BAKELITE BALL |
| 26 | PT41214K2 | SWITCH LEVER |
| 27 | 160 x 148 | PIN |
| 28 | *AS41372K2 | GEAR SEGMENT |
| 29 | 112X116 | |

| ITEM | PART NO. | PART NAME |
|------|------------|-------------------------|
| 30 | 161X12 | WASHER |
| 31 | 101 X 606 | SCREW |
| 32 | *AS4292K1 | FORK CONNECTOR (52) |
| 33 | PT4291K1 | PELT ROD |
| 34 | PT1948N1 | TURNBUCKLE |
| 35 | 120 X 906 | SETSCREW |
| 36 | PT1853 | THUMB SCREW |
| 37 | *AS4127K2 | ADJ. SCREW FORK (27-43) |
| 38 | 139X29 | NUT |
| 39 | PT390NK2 | SCREW |
| 40 | PT4136K1 | SCREW PAD |
| 41 | PT4131K1 | RUBBER PAD |
| 42 | PT4123K2 | MOTOR HANGER |
| 43 | 120 x 1104 | SETSCREW |
| 44 | 160x 111 | SCREW PAD |
| 45 | PT4164K1 | ADJ. SCREW (35) |
| 46 | *AS4290K1 | SCREW |
| 47 | PT706K1 | CAP |
| 48 | PT4135K1 | SPRING |
| 49 | PT4134K2 | BASE |
| 50 | PT4121K1 | FELT TIGHTNER |
| 51 | PT4294K1 | HANDLE |
| 52 | 160X522 | PIN |
| 53 | 155x38 | OILER |

PARTS LIST



BELTS AND LUBRICATION

A TEXALON FLAT BELTS. A combination of textile and extruded nylon form a strong flexible belt recommended for use with Lathes. Able to withstand continual flexing without significant stretch and loss of efficiency. Texalon belts are skived on both ends and cement for joining skived ends is included with each belt.

| Type of Drive | Cat. No. | Type of Drive | Cat. No. |
|----------------|----------|--------------------|----------|
| 9" HMD | CE370N | 13 UMD 3-Step | CE3753T |
| 10-KHMD | CE3750K | 14 1/2" UMD 4-Step | CE3752F |
| 9" UMD | CE3752N | 14 1/2" UMD 3-Step | CE3753F |
| 10 K UMD | CE3752K | 16" UMD 4-Step | CE3752H |
| 10" UMD Bench | CE3753R | 16" UMD 3 Step | CE3753H |
| 10" UMD Floor | CE3752R | 16-24" UMD 4-Step | CE3752V |
| 13" UMD 4-Step | CE3752T | 16-24" UMD 3-Step | CE3753V |
| | | 16" Turret | CE3753H |

B TEXALON BELT CEMENT for bonding skived ends of Texalon Belts.

CE1887. Texalon Belt Cement 1/4 oz. bottle

CE2323N. Oak tan single ply flat leather belt without cord reinforcing for 9" Horizontal Motor Drive only. Ho square ends and lace for joining.

C BELT SPLICING CLAMPS. For gluing skived ends of cone pulley belts or other flat leather belts. Made of heavy steel plate with guide for aligning edges of belt ends

| Maximum Size of Belt | | | | Ship. Wt. |
|----------------------|--------|-----------|--------------|-----------|
| Catalog Number | Width | Thickness | Skive Length | |
| CE1898 | 1 3/4" | 1/8" | 6 3/8" | 4 lbs. |
| CE1899 | 3" | 1/8" | 6 3/8" | 5 lbs. |

D LUBRICATING OIL. Nothing is more important to the satisfactory operation and life of fine machinery than correct lubrication. The lubricating oils listed below have been thoroughly tested in our research laboratory and are highly recommended. It is essential that the correct type of oil be used for the lathe spindle and lathe apron oil reservoirs and general lubrication. A supply of each kind of oil should be kept on hand and used as needed. The Saybolt viscosity of the various oils is indicated in seconds at 100°F.

| Cat No. | Viscosity | Quantity | Ship. Wt. |
|---|-----------|-----------|-----------|
| General Lubricating Oil (See Oil Chart For Individual Machine) | | | |
| CE1603 | 240-500 | 1 quart | 3 lbs. |
| CE1906 | 240-500 | 12 quarts | 31 lbs. |
| CE2019 | 240-500 | Gal. can | 11 lbs. |
| Oil for Spindle Bearings of Lathes (For other components see Oil Chart for Individual Machine) | | | |
| CE1600 | 100 | 1 quart | 3 lbs. |
| CE1905 | 100 | 12 quarts | 31 lbs. |
| CE2017 | 100 | Gal. can | 11 lbs. |
| Oil for Lathes (See Oil Chart for Individual Machine) | | | |
| CE1602 | 150-240 | 1 quart | 3 lbs. |
| CE1904 | 150-240 | 12 quart | 3 lbs. |
| CE2018 | 150-240 | Gal can | 11 lbs. |

LEATHER V-BELTS FOR CONE PULLEYS

Lathe cone pulley V-belts can be replaced without disassembling the lathe



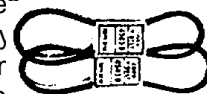
headstock or drive unit by using these cord reinforced leather V-belts. Belts are skived for gluing and belt splicing cement is included.

| Cat. No. | Size Lathe | Drive | Ship. Wt. |
|----------|------------|--------|-----------|
| CE5L61L | 9" | U.M.D. | 1 lb. |
| CE5L62L | 10-K | U.M.D. | 1 lb. |
| CE5L54L | 9" | H.M.D. | 1 lb. |
| CE5L51L | 10-K | H.M.D. | 1 lb. |

NOT PERMISSABLE TO SHIP BY ANY OF THE AIR SERVICES

Rubber V-Belts

Rubber V-Belts for use with Lathe and other power driven machinery. Specify catalog number, maximum width, and outside circumference when ordering.



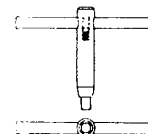
| Catalog Number | Outside Length | Catalog Number | Outside Length |
|-----------------------------|----------------|----------------|----------------|
| V-Belts with 3/8" Top Width | | | |
| CE3L210 | 21" | CE3L240 | 24" |
| CE3L220 | 22" | CE3L260 | 26" |
| CE3L230 | 23" | CE3L270 | 27" |

| | | | |
|-----------------------------|-----|---------|-----|
| V-Belts with 1/2" Top Width | | | |
| CE4L208 | 28" | CE4L480 | 48" |
| CE4L290 | 29" | CE4L490 | 49" |
| CE4L300 | 30" | CE4L530 | 53" |
| CE4L310 | 31" | CE4L540 | 54" |
| CE4L320 | 32" | CE4L580 | 58" |
| CE4L440 | 44" | CE4L800 | 60" |
| CE4L450 | 45" | CE4L640 | 64" |
| CE4L460 | 46" | CE4L700 | 70" |
| CE4L470 | 47" | CE4L800 | 80" |

| | | | |
|-----------------------------|-----|---------|-----|
| V-Belts with 5/8" Top Width | | | |
| CE5L380 | 36" | CE5L480 | 46" |
| CE5L400 | 40" | CE5L470 | 47" |
| CE5L410 | 41" | CE5L490 | 49" |
| CE5L420 | 42" | CE5L500 | 50" |
| CE5L430 | 43" | CE5L510 | 51" |
| CE5L440 | 44" | CE5L520 | 52" |
| CE5L450 | 45" | CE5L550 | 55" |

Chuck Wrenches

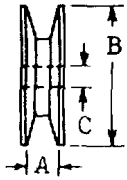
| Catalog Number | Size Square | Shipping Weight |
|----------------|-------------|-----------------|
| CE2748 | .277" | 2 lb. |
| CE2742 | .297" | 1 lb. |
| CE2743 | .375" | 2 lbs. |
| CE2749 | .400" | 2 lbs. |
| CE2744 | .420" | 2 lbs. |
| CE2746 | .570" | 2 lbs. |



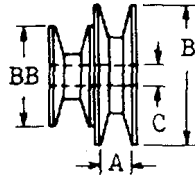
Sizes of Wrenches Required for Various Sizes of Chucks

| Cat. No. of Chuck | Size of Chuck | Type of Chuck | Size Square | Cat. No. of Required Wrench |
|-------------------|---------------|---------------|-------------|-----------------------------|
| CL4006NK | 6" | Independent | .297" | CE2742 |
| CL4206NK | 6" | Independent | .297" | CE2742 |
| CL4006R | 6" | Independent | .297" | CE2742 |
| CL4206R | 6" | Independent | .297" | CE2742 |
| CL4207R | 7 1/2" | Independent | .420" | CE2744 |
| CL4006L | 6" | Independent | .297" | CE2742 |
| CL4206LQ | 6" | Independent | .297" | CE2742 |
| CL4207LQ | 7 1/2" | Independent | .420" | CE2744 |
| CL42090 | 9" | Independent | .420" | CE2744 |
| CL4207MH | 7 1/2" | Independent | .420" | CE2744 |
| CL4209MH | 9" | Independent | .420" | CE2744 |
| CL4210MH | 10" | Independent | .420" | CE2744 |
| CL4212H | 12" | Independent | .420" | CE2744 |
| CL3005NK | 5" | Universal | .277" | CE2748 |
| CL3505NK | 5" | Universal | .375" | CE2743 |
| CL3506NK | 6" | Universal | .400" | CE2749 |
| CL3005R | 5" | Universal | .277" | CE2748 |
| CL3505R | 5" | Universal | .375" | CE2743 |
| CL3506R | 6" | Universal | .400" | CE2749 |
| CL3005L | 5" | Universal | .277" | CE2748 |
| CL3505LQ | 5" | Universal | .375" | CE2743 |
| CL3506LQ | 6" | Universal | .400" | CE2749 |
| CL3507Q | 7 1/2" | Universal | .400" | CE2749 |
| CL3505MH | 5" | Universal | .375" | CE2743 |
| CL3506MH | 6" | Universal | .400" | CE2749 |
| CL3507MH | 7 1/2" | Universal | .400" | CE2749 |
| CL3509MH | 9" | Universal | .570" | CE2746 |

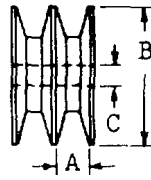
PARTS LIST
MOTOR PULLEYS



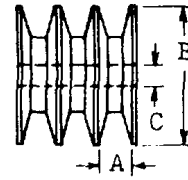
STYLE 1



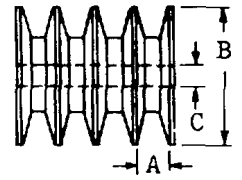
STYLE 2A



STYLE 2



STYLE 3



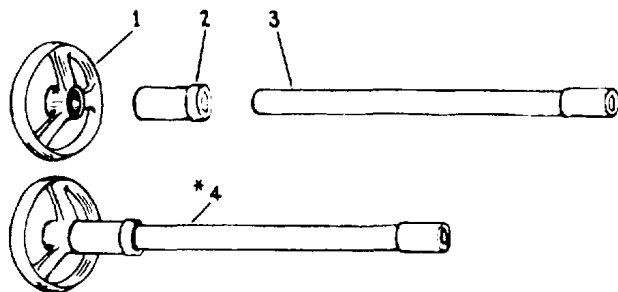
STYLE 4

| Part No. | A | B | BB | C |
|-----------|------|---------|---------|-----|
| STYLE 1 | | | | |
| PT2101NR1 | .635 | 2- 3/32 | | 5/8 |
| PT2106NR1 | .635 | 2-15/32 | | 5/8 |
| PT2111NR1 | .635 | 3 | | 5/8 |
| PT2116NR1 | .635 | 3-45/64 | | 5/8 |
| STYLE 2A | | | | |
| PT2131NR1 | .635 | 3.408 | 2.093 | 5/8 |
| PT2181NR1 | .635 | 3.570 | 2.093 | 5/8 |
| PT2183NR1 | .635 | 3.570 | 2.093 | 7/8 |
| PT2131K1 | .635 | 3.956 | 2.237 | 5/8 |
| PT2136K1 | .635 | 4- 3/16 | 2-43/64 | 5/8 |
| PT2185NK1 | .635 | 4- 3/16 | 2-23/32 | 5/8 |
| PT2187NK1 | .635 | 4- 3/16 | 2-23/32 | 7/8 |
| PT2136NR1 | .635 | 4- 3/16 | 2.822 | 5/8 |
| PT2138NR1 | .635 | 4- 3/16 | 2.822 | 7/8 |
| PT2127R1 | .635 | 4-19/32 | 3- 5/32 | 5/8 |
| PT2129R1 | .635 | 4-19/32 | 3- 5/32 | 7/8 |
| PT2156R1 | .635 | 5- 5/16 | 2- 3/32 | 5/8 |
| PT2158R1 | .635 | 5- 5/16 | 2- 3/32 | 7/8 |

| Part No. | A | B | C |
|-----------|------|---------|-------|
| STYLE 2 | | | |
| PT2101T1 | .490 | 2-17/32 | 7/8 |
| PT2103T1 | .490 | 2-17/32 | 1-1/8 |
| PT2106T1 | .490 | 2-63/64 | 7/8 |
| PT2108T1 | .490 | 2-63/64 | 1-1/8 |
| PT2127T1 | .490 | 4-21/64 | 7/8 |
| PT2129T1 | .490 | 4-21/64 | 1-1/8 |
| STYLE 3 | | | |
| PT2101F1 | .490 | 2-17/32 | 7/8 |
| PT2106F1 | .490 | 2-63/64 | 7/8 |
| STYLE 4 | | | |
| PT2101HI | .490 | 2- 1/8 | 7/8 |
| PT2102H1 | .490 | 2- 1/8 | 1 |
| PT2101FH2 | .490 | 2-17/32 | 7/8 |
| PT2103FHI | .490 | 2-17/32 | 1-1/8 |
| PT2106FH2 | .490 | 2-63/64 | 7/8 |
| PT2108FH1 | .490 | 2-63/64 | 1-1/8 |
| PT2161HI | .490 | 3- 9/64 | 7/8 |
| PT2163H1 | .490 | 3- 9/64 | 1-1/8 |
| PT2189H1 | .490 | 3-13/64 | 7/8 |
| PT2191H1 | .490 | 3-13/64 | 1-1/8 |
| PT2127F1 | .490 | 3- 9/16 | 7/8 |
| PT2129F1 | .490 | 3- 9/16 | 1-1/8 |
| PT2166FH1 | .490 | 3-49/64 | 7/8 |
| PT2168FH1 | .490 | 3-49/64 | 1-1/8 |
| PT2127H1 | .490 | 4- 5/64 | 7/8 |
| PT2129H1 | .490 | 4- 5/64 | 1-1/8 |

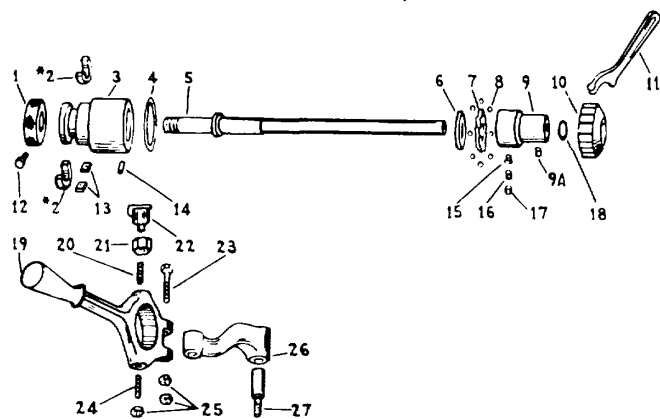
PARTS LIST

10-K HANDWHEEL COLLET ATT. MODEL A, B & C



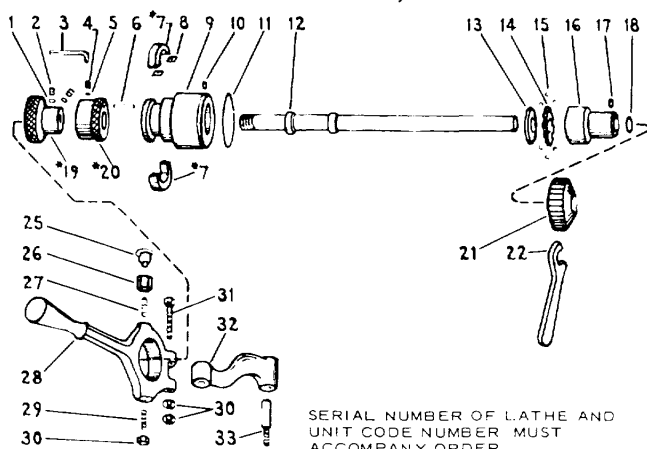
| ITEM NO. | PART NO. | PART NAME |
|----------|----------|-----------------|
| 1 | AS798K1 | HANDWHEEL |
| 2 | PT794K1 | DRAW BAR SLEEVE |
| 3 | PT793K1 | DRAW BAR |
| 4 | *AS793K1 | DRAW BAR(1-2-3) |

10-K HANDLEVER COLLET ATT. OLD STYLE MODEL A, B & C



| | | |
|----|------------|------------------|
| 1 | PT978K1 | ADJUSTING NUT |
| 2 | *AS988NK1 | YOKE SECTOR (13) |
| 3 | PT986K1 | YOKE CONE |
| 4 | PT983NK1 | SNAP RING |
| 5 | PT975K1 | DRAW BAR |
| 6 | PT981K1 | COLLAR |
| 7 | PT488K1 | BALL RETAINER |
| 8 | 172X20 | CAM BALL |
| 9 | PT979K1 | SLEEVE |
| 9A | 160X58 | PIN |
| 10 | PT995NK1 | KNOCK-OUT NUT |
| 11 | CE2734 | SPANNER WRENCH |
| 12 | PT490NH1 | STOP NUT SCREW |
| 13 | 256X11 | WICK |
| 14 | PT1823 | PIN |
| 15 | PT984NH1 | SHOE |
| 16 | 162X2 | SPRING |
| 17 | PT489NH1 | SCREW |
| 18 | PT409R1 | SNAP RING |
| 19 | PT991NK1 | YOKE LEVER |
| 20 | PT492NR&T1 | SCREW-WITH HOLE |
| 21 | PT494NR&T1 | YOKE NUT |
| 22 | 155X5 | OILER |
| 23 | PT991NK1 | YOKE BOLT |
| 24 | PT377NR1 | SCREW |
| 25 | PT1058NR1 | NUT |
| 26 | PT993NK2 | YOKE BRACKET |
| 27 | PT997NK1 | BRACKET STUD |

10-K HANDLEVER COLLET ATT. NEW STYLE MODEL A, B & C

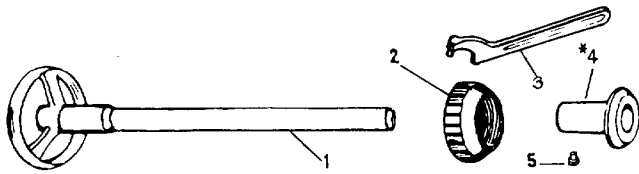


| | | |
|----|------------|-------------------|
| 1 | PT4809RH1 | SHOE |
| 2 | 120X903 | SETSCREW |
| 3 | CE2392 | WRENCH |
| 4 | 126X503 | SETSCREW |
| 5 | PT1078RH1 | SHOE |
| 6 | PT1159-1 | PIN |
| 7 | *AS989NK1 | YOKE SEGMENT(B) |
| 9 | 256x11 | FELT WICKS |
| 9 | P1986K2 | CLUTCH YOKE CONE |
| 10 | PT1823 | PIN |
| 11 | PT983NK1 | CONE SNAP RING |
| 12 | PT975K2 | DRAW BAR |
| 13 | PT981K1 | COLLAR |
| 14 | PT488K1 | BALL RETAINER |
| 15 | 172x20 | STEEL BALL |
| 16 | PT979K2 | CLUTCH SLEEVE |
| 17 | 160x58 | SPINDLE PIN |
| 18 | PT409R1 | SPRING |
| 19 | *AS978K2 | CL. STOP NUT(I-2) |
| 20 | *AS998K1 | LOCK COLLAR(4-5) |
| 21 | PT995NK1 | KNOCK-OUT NUT |
| 22 | CE2734 | SPANNER WRENCH |
| 23 | | |
| 24 | | |
| 25 | 155x5 | OILER |
| 26 | PT494NR&T1 | YOKE LEVER NUT |
| 27 | PT492NR&T1 | YOKE LEVER SCREW |
| 28 | PT990NK1 | YOKE LEVER |
| 23 | PT377NR1 | SCREW |
| 30 | PT1058NR1 | JAM NUT |
| 31 | PT991NK1 | YOKE BOLT |
| 32 | PT993NK2 | YOKE BRACKET |
| 33 | PT997NK1 | BRACKET STUD |

*AVAILABLE ONLY AS
SUBASSEMBLY PARTS INCLUDED
ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN
PARENTHESIS AFTER PART NAME.

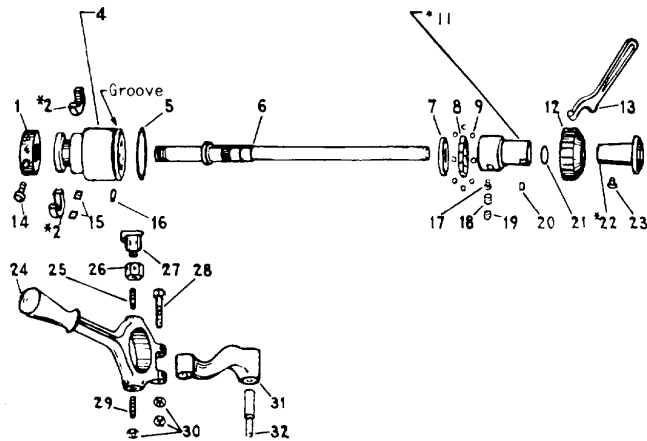
PARTS LIST

9" HANDWHEEL COLLET ATT. MODEL A, B & C



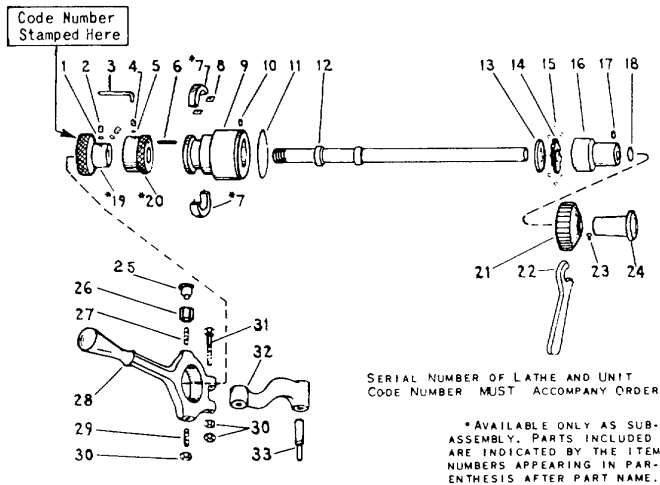
| ITEM NO. | PART NO. | PART NAME |
|----------|----------|----------------|
| 1 | AS793N4 | DRAW BAR ASM. |
| 2 | PT995NK | KNOCK-OUT NUT |
| 3 | CE2734 | SPANNER WRENCH |
| 4 | *AS795N1 | SLEEVE (5) |
| 5 | PT493NH1 | KEY |

9" HANDLEVER COLLET ATT. OLD STYLE MODEL A, B & C



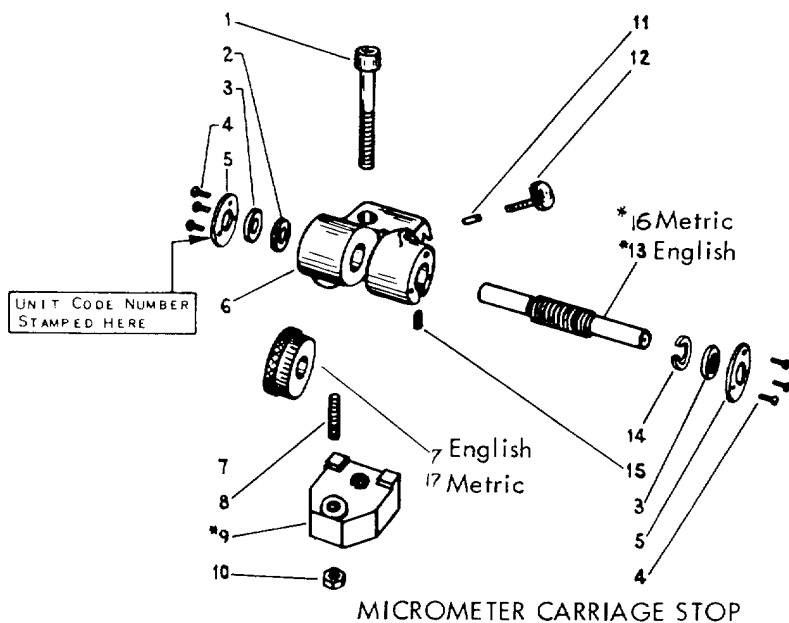
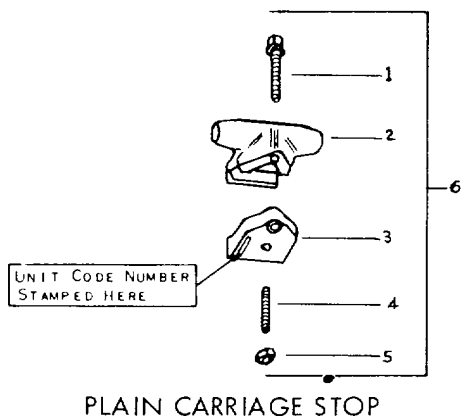
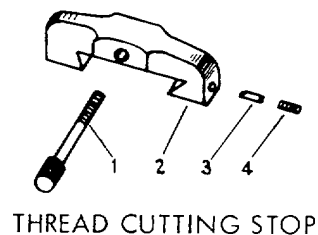
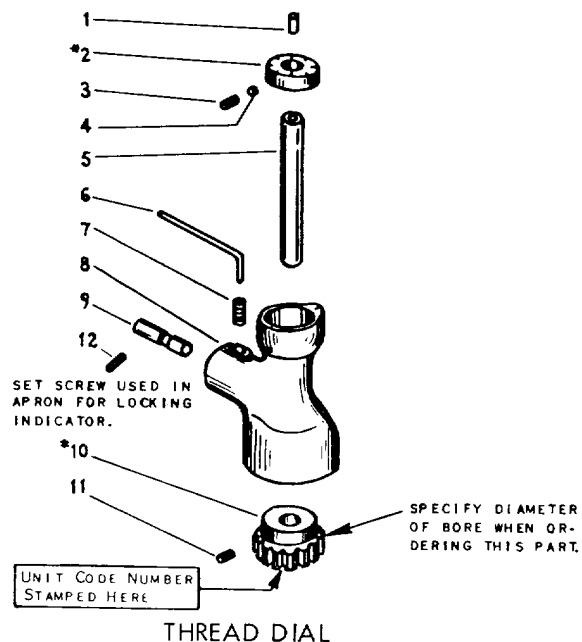
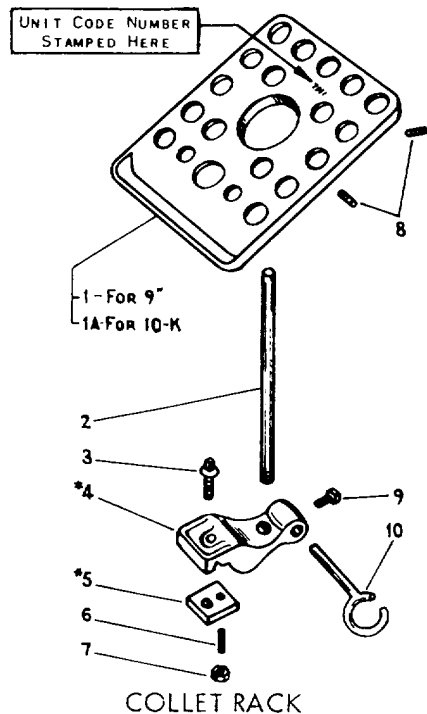
| | | |
|----|------------|-------------------------------------|
| 1 | PT978N1 | ADJUSTING NUT |
| 2 | *AS988NK1 | YOKE SECTOR (15) |
| 3 | | |
| 4 | PT986N3 | Order Item II |
| 5 | PT983MK1 | SNAP RING |
| 6 | PT975N2 | DRAW BAR |
| 7 | PT981N2 | COLLAR |
| 8 | PT488N2 | BALL RETAINER |
| 9 | 172x20 | CAM BALL |
| 10 | PT979N3 | SLEEVE |
| 11 | *AS979N3 | SLEEVE(4-5-7-8-9 16-17-18-19-21) |
| 12 | PT995NK1 | KNOCK-OUT NUT |
| 13 | CE2734 | SPANNER WRENCH |
| 14 | PT490NH1 | STOP NUT SCREW |
| 15 | 256x11 | WICK |
| 16 | PT1823 | PIN |
| 17 | PT9B4NH1 | SHOE |
| 18 | 162x52 | SPRING |
| 19 | PT489NH1 | SCREW |
| 20 | 160X58 | PIN |
| 21 | PT976N1 | SNAP RING |
| 22 | *AS795N1 | SLEEVE (23) |
| 23 | PT493NH1 | KEY |
| 24 | PT990NK1 | YOKE LEVER |
| 25 | PT492NR&T1 | SCREW, WITH HOLE |
| 26 | PT494NR&T1 | YOKE NUT |
| 27 | 155x5 | OILER |
| 28 | PT991NK1 | YOKE BOLT |
| 29 | PT377NR1 | SCREW |
| 30 | PT1058NR1 | NUT |
| 31 | PT993NK2 | YOKE BRACKET |
| 32 | PT997K1 | BRACKET STUD |

9" HANDLEVER COLLET ATT. NEW STYLE MODEL A, B & C



| | | |
|----|------------|-------------------|
| 1 | PT4809RH1 | SHOE |
| 2 | 120x903 | SETSCREW |
| 3 | CE2392 | WRENCH |
| 4 | 126 x503 | SETSCREW |
| 5 | PT1078RH1 | SHOE |
| 6 | PT1859-1 | PIN |
| 7 | *AS988NK1 | YOKE SEGMENT(8) |
| 8 | 256x11 | FELT WICKS |
| 9 | PT986N4 | CLUTCH YOKE CONE |
| 10 | PT1823 | PIN |
| 11 | PT983NK1 | CONE SNAP RING |
| 12 | PT975N3 | DRAW BAR |
| 13 | PT981N2 | COLLAR |
| 14 | PT488N2 | BALL RETAINER |
| 15 | 172x20 | STEEL BALL |
| 16 | PT979N4 | CLUTCH SLEEVE |
| 17 | 160x58 | SPINDLE PIN |
| 18 | PT976N1 | BAR SNAP RING |
| 19 | *AS97BN2 | CL. STOP NUT(1-2) |
| 20 | *AS998N1 | LOCK COLLAR(4-5) |
| 21 | PT995NK1 | KNOCK-OUT NUT |
| 22 | CE2734 | SPANNER WRENCH |
| 23 | PT493NH1 | KEY |
| 24 | *AS795N1 | SLEEVE (23) |
| 25 | 155x5 | OILER |
| 26 | PT494NR&T1 | YOKE LEVER NUT |
| 27 | PT492NR&T1 | YOKE LEVER SCREW |
| 28 | PT990NK1 | YOKE LEVER |
| 29 | PT377NR1 | SCREW |
| 30 | PT1058NR1 | JAM NUT |
| 31 | PT991NK1 | YOKE BOLT |
| 32 | PT993NK2 | YOKE BRACKET |
| 33 | PT997NK1 | BRACKET STUD |

PARTS LIST 9" & 10-K ACCESSORIES



*AVAILABLE ONLY AS SUB-
ASSEMBLY. PARTS INCLUDED
ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN PAR-
ENTHESIS AFTER PART NAME.

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

PARTS LIST

9" & 10-K MICROMETER CARRIAGE STOP

| ITEM NO. | PART NAME | PART NO. |
|----------|------------------------|------------|
| 1 | CAPSCREW | 114 x 124 |
| 2 | FELT WASHER | PT1207NT1 |
| 3 | BUSHING | PT1206NT1 |
| 4 | PHILLIP SCREW | 104 x 206 |
| 5 | COVER PLATE | PT1209NT1 |
| 6 | MICROMETER STOP FRAME | |
| 7 | ORDER ITEM 13 | PT1203NT2 |
| 8 | SETSCREW | 122 x 520 |
| 9 | CLAMP (8 10) | AAS1201NK1 |
| 10 | JAM NUT | 137 x 23 |
| 11 | SHOE | PT1083NT1 |
| 12 | LOCK SCREW | PT1204NT2 |
| 13 | SHAFT (7) English | *AS1202NK2 |
| 14 | FELT WASHER -- SLOTTED | PT1208NT1 |
| 15 | KEY | PT1210NH1 |
| 16 | Shaft (17) Metric | PT2271NK1 |
| 17 | Order Item 16 | |

9" & 10-K COLLET RACK

| ITEM NO | PART NAME | PART NO. |
|---------|---------------------|--------------|
| 1 | COLLET RACK | P-780N2 |
| 1A | COLLET RACK | PT780KR2 |
| 2 | RACK PIPE | PT497NK1 |
| 3 | COLLAR SCREW | PT371NK1 |
| 4 | BRACKET (3-*5-9) | *AS782NK1 |
| 5 | CLAMP (6-7) | *AS863NR1 |
| 6 | SETSCREW | 122 x 624 |
| 7 | JAM NUT | 137 x 25 |
| 8 | SETSCREW | 122 x 505 |
| 9 | SQUARE HD. SETSCREW | 118 x 108 |
| 10 | DRAW BAR HOOK | PT781NR & T1 |

9" & 10K THREAD DIAL

| ITEM NO. | PART NAME | PART NO. |
|----------|----------------------|-----------|
| 1 | OILER | 155 X 16 |
| 2 | INDICATOR DIAL (3-4) | *AS888NK2 |
| 3 | SETSCREW | 122 x 903 |
| 4 | SHOE | PT1078NK1 |
| 5 | INDICATOR SHAFT | PT891NK2 |
| 6 | WRENCH | CE2392 |
| 7 | SETSCREW | 120 x 6 |
| 8 | INDICATOR FRAME | |
| 9 | MOUNTING STUD | PT889NK1 |
| 10 | WORM WHEEL (11) | *A887NR2 |
| 11 | SETSCREW | 120 x 6 |
| 12 | SETSCREW | 120 X 6 |

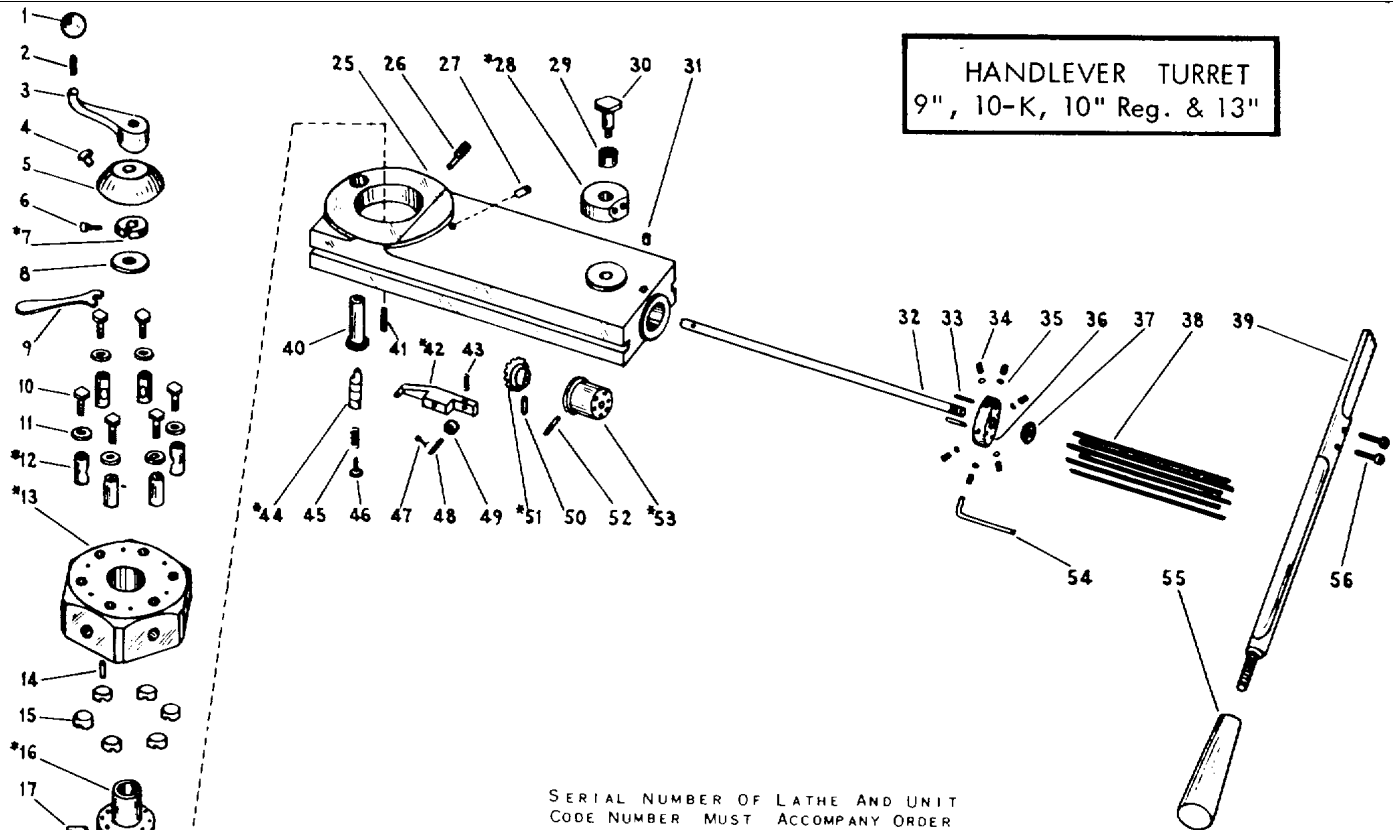
9" & 10-K PLAIN CARRIAGE STOP

| ITEM NO. | PART NAME | PART NO. |
|----------|---------------|-----------|
| 1 | Collar. Screw | PT210NK2 |
| 2 | Stop | PT1489NK1 |
| 3 | Clamp | PT1201NK1 |
| 4 | Setscrew | 122 x 520 |
| 5 | Hex Nut | 137 x 23 |
| 6 | Complete Unit | CL758NK1 |

9" & 10-K THREAD CUTTING STOP

| ITEM | PART NAME | PART NO. |
|------|--------------|-----------|
| 1 | SCREW | PT245NR1 |
| 2 | CUTTING STOP | PT67NK1 |
| 3 | BINDER PLUG | PT418NK1 |
| 4 | SETSCREW | 122 x 606 |

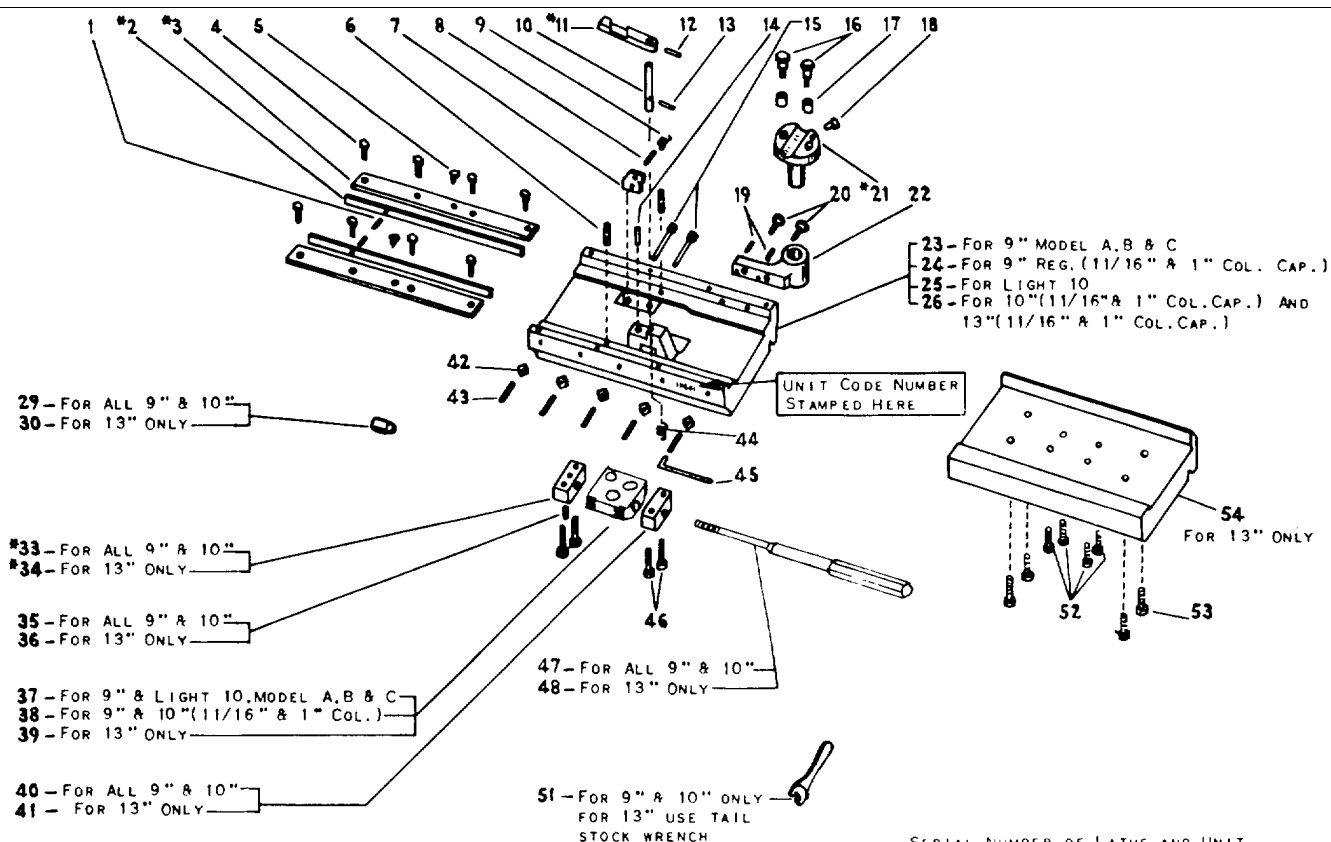
PARTS LIST



| ITEM NO. | PART NAME | PART NO. |
|----------|--|------------|
| 1 | BAKELITE BALL | PT3131NR1 |
| 2 | SETSCREW | 122x510 |
| 3 | CLAMPING LEVER | PT3006NR1 |
| 4 | OILER | 155X38 |
| 5 | TURRET CLAMP | PT3003NR1 |
| 6 | SETSCREW | 114x710 |
| 7 | ADJ. NUT (6) | *AS3009NR1 |
| 8 | STUD GUIDE | PT3130NR2 |
| 9 | WRENCH | CE2657 |
| 10 | CAPSCREW | PT2901NT1 |
| 11 | WASHER | PT3037NR1 |
| 12 | TURRET BINDER (10-11) | *AS3010NR1 |
| 13 | HEX. TURRET(12-15-16. 18-19-20) | AS3002NR2 |
| 14 | DOWEL | 153x16 |
| 15 | INDEX BUSHING | PT3013NR2 |
| | NOTE: CUSTOMERS ORDER FOR THIS PART MUST BE ACCOMPANIED WITH UNIT CODE NUMBER. | |
| 16 | TURRET PLUG (17) | *AS3129NR1 |
| 17 | PIN | 160x21 |
| 18 | SETSCREW | 120X105 |
| 19 | TURRET GEAR | PT3023NR2 |
| 20 | INDEXING PIN | PT477NR2 |
| 21 | SPRING | 162 X 16 |
| 22 | WASHER | 161 x 26 |
| 23 | WOODRUFF KEY | PT2070 |
| 24 | TURRET STUD | PT3008NR1 |
| 25 | TURRET RAM | PT3001NR3 |
| 26 | PIVOT PIN | PT3019NR1 |
| 27 | OILER | 155x16 |
| 28 | SWIVEL (2q-30) | *AS3119NR2 |
| 29 | NEEDLE REARING | PT3134NR1 |
| 30 | SWIVEL STUD | PT3173NR2 |
| 31 | OILER | 155 X 17 |
| 32 | INDEX SHAFT | PT3030NR1 |
| 33 | PIN | 160 X 25 |
| 34 | SETSCREW | 126x505 |
| 35 | SHOE | PT1081NT1 |

| ITEM NO. | PART NAME | PART NO. |
|----------|--|------------|
| 36 | END PLATE | PT3005NR1 |
| 37 | NUT | 139x23 |
| 38 | STOP SCREW | PT3029NR1 |
| 39 | HANDLEVER | PT3121NR1 |
| 40 | LOCK BOLT BUSHING | PT3012NR1 |
| 41 | SETSCREW | 120x1006 |
| 42 | LOCK BOLT LEVER(47-48-49) | *AS3016NR1 |
| 43 | SPRING | 162x34 |
| 44 | LOCK BOLT(40-45) | *AS3011NR3 |
| | NOTE: CUSTOMERS ORDER FOR THIS PART MUST BE ACCOMPANIED WITH UNIT CODE NUMBER. | |
| 45 | SPRING | PT3014NR3 |
| 46 | SPRING RETAINER | PT3015NR2 |
| 47 | COTTER PIN | 170x103 |
| 48 | PIN | PT3018NR2 |
| 49 | ROLLER | PT3017NR1 |
| 50 | TAPER PIN | 168X6 |
| 51 | STOP SCREW GEAR (32-50) | *AS3024NR1 |
| 52 | TAPER PIN | 168x5 |
| 53 | STOP SCREW INDEX(32-33-34-35-36-37-51) | *AS3004NR1 |
| 54 | WRENCH | CE2392 |
| 55 | HANDLE | PT3122NR1 |
| 56 | CAPSCREW | 114x616 |

PARTS LIST

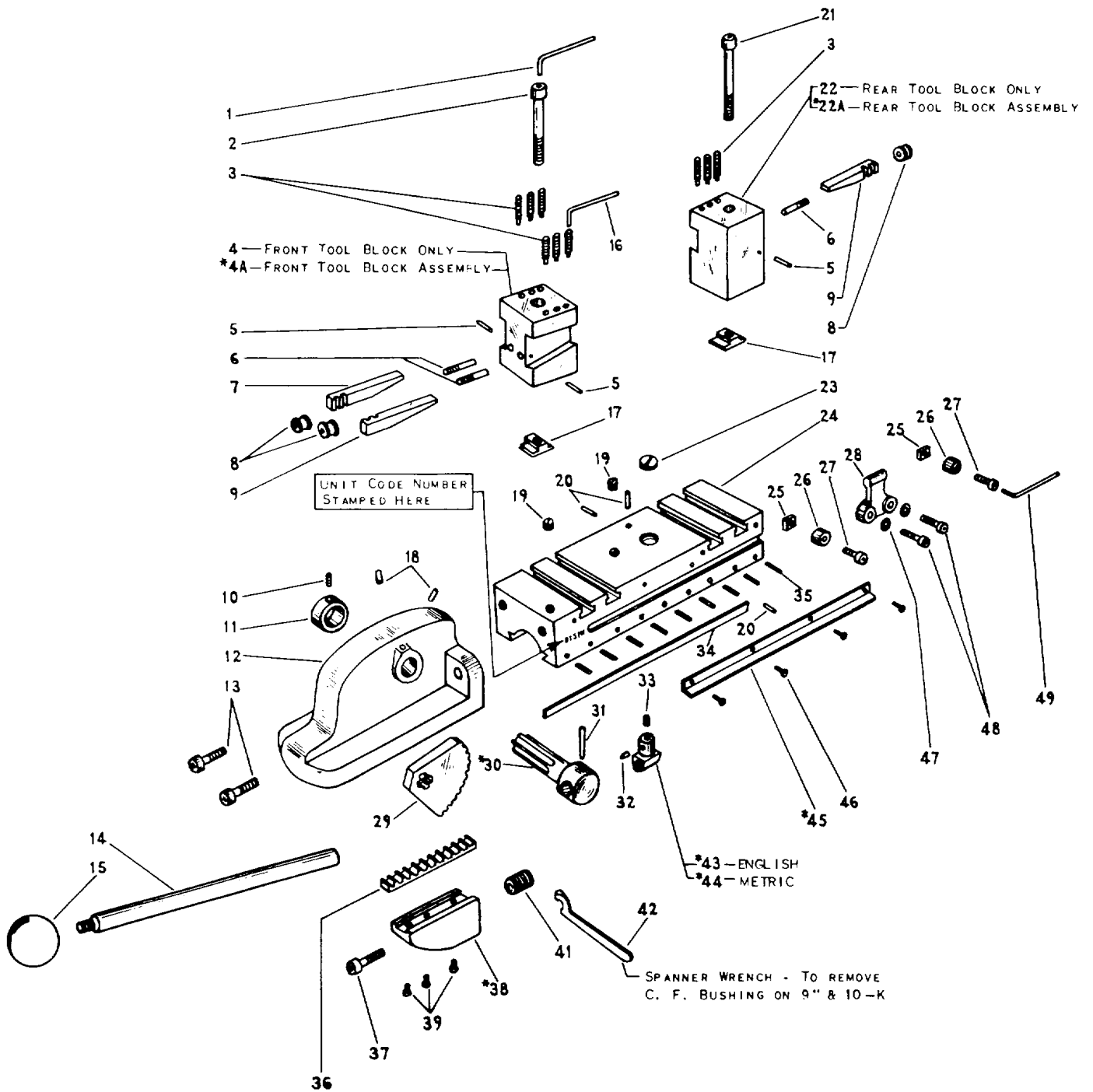


| ITEM NO. | PART NAME | PART NO. |
|----------|---|------------|
| 1 | PIN | 160X18 |
| 2 | SIDE GIB (1) | *AS3036NR1 |
| 3 | HORIZ. GIB (5) | *AS3035NR1 |
| 4 | HORIZ. GIB SCREW | 111X110 |
| 5 | OILER | 155X38 |
| 6 | ROUND FELT | 256x8 |
| 7 | LOCK BOLT CAM | PT3020NR1 |
| 8 | PIN | 160x48 |
| 9 | SPRING | PT3021NR1 |
| 10 | LEVER PIN | PT3027NR1 |
| 11 | INDEXING LEVER (10-12-13) | AS302NR2 |
| 12 | TAPER PIN | 168 X 5 |
| 13 | PIN | 160 x21 |
| 14 | PIN | 160 x 48 |
| 15 | CAM PIVOT PIN | PT3022NR1 |
| 16 | HINGE STUD | PT3124NR1 |
| 17 | NEEDLE BEARING | PT384NK1 |
| 18 | OILER | 155x16 |
| 19 | PIN | 160X52 |
| 20 | CAPSCREW | 114x114 |
| 21 | SWIVEL HINGE(16-17-18) | AS3120NR1 |
| 22 | H. L. BRACKET | PT3118NR1 |
| 23 | TURRET BASE FOR 9" MODEL A. B. & C | PT3000N1 |
| 24 | TURRET BASE FOR 9" REG. 1 1/16" R 1" COL. | PT3000S1C |
| 25 | TURRET BASE FOR LIGHT 10, MODEL A. B. & C | PT3000K1 |
| 26 | TURRET BASE FOR 10' 13'-11/16" & 1" COL. | PT3000R1 |
| 27 | | |
| 28 | | |
| 29 | FRONT CONE | PT3127NR1 |
| 30 | FRONT CONE | PT3127T1 |
| 31 | | |
| 32 | | |
| 33 | CONE BEARING-FRONT (35) | *AS3125NR1 |

| ITEM NO. | PART NAME | PART NO. |
|----------|-------------------------|-----------|
| 34 | CONE BEARING. FRONT(36) | AS3125T1 |
| 35 | PIN | 160x16 |
| 36 | PIN | 160X50 |
| 37 | BASE CLAMP | PT3139NK2 |
| 38 | BASE CLAMP | PT3139R2 |
| 39 | BASE CLAMP | PT3139T1 |
| 40 | CONE BEARING-REAR | PT3137NR1 |
| 41 | CONE BEARING-REAR | PT3137T1 |
| 42 | HEX. NUT | 138x18 |
| 43 | SETSCREW | 125x112 |
| 44 | SPRING | PT3028NR1 |
| 45 | WRENCH | CE2391 |
| 46 | CAPSCREW | 114X124 |
| 47 | REAR CONE | PT3126NR2 |
| 48 | REAR CONE | PT3126T2 |
| 49 | | |
| 50 | | |
| 51 | WRENCH | CE2658 |
| 52 | CAPSCREW | 114x124 |
| 53 | CAPSCREW | 114x340 |
| 54 | ADAPTER BASE | PT3135T1 |

PARTS LIST

H. L. DOUBLE TOOL CROSS SLIDE FOR 9", 10-K, 10" REG.



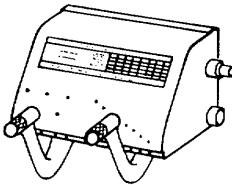
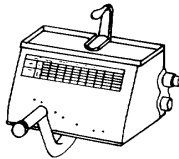
PARTS LIST

| ITEM NO. | PART NAME | 9" | | 10-K | | 10" REG | | |
|---|---|--------------|--|--------------|--|--------------|--|--|
| | | PART NO | | PART NO | | PART NO | | |
| 1 | WRENCH | CE2389 | | CE2389 | | CE2389 | | |
| 2 | HOL. HD. CAPSCREW | 11 4x244 | | 114x252 | | 114X244 | | |
| 3 | SETSCREW | 121x116 | | 121x116 | | 121x116 | | |
| 4 | FRONT TOOL BLOCK | PT812NR2 | | PT812K1 | | PT812NR2 | | |
| 4A | FRONT TOOL BLOCK ASSEM. (2-3-5-6-7-8-9-17) | | | | | | | |
| 5 | PIN | *AS812NR2 | | *AS812 I | | *AS812 NR2 | | |
| 6 | STUD SCREW | 160x21 | | 160X21 | | 160x21 | | |
| 7 | BLOCK GIB - LEFT | PTS17NR1 | | PT817NR1 | | PT817NR1 | | |
| 8 | STUD SCREW NUT | PT449NR1 | | PT449NR1 | | PT449NR1 | | |
| 9 | BLOCK Gib - RIGHT | PT818NR1 | | PTBIBNR1 | | PTBIBNR1 | | |
| 10 | SETSCREW | PT448NR1 | | PT448NR1 | | PT448NR1 | | |
| 11 | COLLAR | 121x5 | | 121x5 | | 121x5 | | |
| 12 | GEAR RETAINER | PT453NR1 | | PT453NR1 | | PT453NR1 | | |
| 13 | CAPSCREW | PT824NK1 | | PT824NK1 | | PT824R1 | | |
| 14 | SHAFT LEVER | 114x216 | | 114x216 | | 114x216 | | |
| 15 | BAKELITE BALL | PTB08NR1 | | PT808NR1 | | PT808NR1 | | |
| 16 | WRENCH | PT406K & FH1 | | PT406K & FH1 | | PT406K & PH1 | | |
| 17 | TEE SLOT NUT | CE2385 | | CE2385 | | CE2385 | | |
| 18 | OILER | PT741NR2 | | PT741NR2 | | PT741NR2 | | |
| 19 | SETSCREW | 155x17 | | 155X17 | | 155X17 | | |
| 20 | PIN | 122x706 | | 122x706 | | 122x706 | | |
| 21 | HOL. HD. CAPSCREW | 160x240 | | 160240 | | 160x240 | | |
| 22 | REAR TOOL BLOCK | 114x252 | | 114x256 | | 114x252 | | |
| 22A | REAR TOOL BLOCK ASSEM. (3-5 6.8-9-17-21) | PT813NR2 | | PT813K1 | | PT813NR2 | | |
| 23 | OIL PLUG | | | | | | | |
| 24 | BASE | AS8 I 3NR2 | | *AS813K1I | | *AS8 13NR2 | | |
| 25 | NUT | PT823NH1 | | PT823NH1 | | PT823NH1 | | |
| 26 | BUSH1NG | PT800NK3 | | PT800NK3 | | PT800NK3 | | |
| 27 | CAPSCREW | PTB11NH1 | | PT811NH1 | | PT811H1 | | |
| 28 | STOP | PT810NH1 | | PTBIONH1 | | PT810H1 | | |
| 29 | PINION SEGMENT | 114x110 | | 114x110 | | 114x1 10 | | |
| 30 | SEGMENT SHAFT (10-11-31) | PT809NK1 | | PT809NK1 | | PT809R1 | | |
| 31 | TAPER PIN | PT805NK1 | | PT805NK1 | | PTB05R1 | | |
| 32 | LOCK PIN | | | | | | | |
| 33 | SETSCREW | * AS807N R | | * AS07N R1 | | AS807NR1 | | |
| 34 | BASE GIB | 168x210 | | 168x210 | | 168x210 | | |
| 35 | SETSCREW | PT358NK1 | | PT358NK1 | | PT358NK1 | | |
| 36 | RACK | PT359NK 1 | | PT359NK1 | | PT359NK1 | | |
| 37 | CAPSCREW | PT80INK1 | | PTR80NK1 | | PT8OIRI | | |
| 38 | RACK SUPPORT (36 37 39-40) | 122x444 | | 122x444 | | 122x513 | | |
| 39 | MACH1NE SCREW | PT82ONK1 | | PT82ONK1 | | PT82ORI | | |
| 40 | PIN | 114x216 | | 114x216 | | 114x216 | | |
| 41 | BUSH1NG | | | | | | | |
| 42 | WRENCH | *AS804NK1 | | AS804NK1 | | *AS804R1 | | |
| 43 | C. F. NUT ENGLISH (32-33) | 103x106 | | 103x106 | | 103x107 | | |
| 44 | C. F. NUT METRIC (32-33) | PT814NK1 | | PT814NK | | PT814R1 | | |
| 45 | CH1P GUARD (46) | CE2739 | | CE2739 | | | | |
| 46 | SCREW | *AS799NR1 | | *AS799NR1 | | * AS799NR1 | | |
| 47 | WASHER | | | | | | | |
| 48 | CAPSCREW | *AS2252NR1 | | 'AS2252NR1 | | 'AS2252NR1 | | |
| 49 | WRENCH | *AS821NK2 | | *AS821NK2 | | *AS821R2 | | |
| | | 110x106 | | 10IXI06 | | 101X106 | | |
| | | 161x11 | | 161x11 | | 161x11 | | |
| | | 112x116 | | 112x116 | | 112x116 | | |
| | | CE2387 | | CE2387 | | -- | | |
| • AVAILABLE ONLY AS SUB-ASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APP EARING IN PARENTHESIS AFTER PART NAME. | | | | | | | | |
| SERIAL NUMBER OF LATHE AND UNIT CODE NUMBER MUST ACCOMPANY ORDER | | | | | | | | |

PARTS LIST

27 THREADS PER INCH

It is possible to NUT 27 threads per inch on any Lathe by procuring an additional gear. 9" and Light Ten Models B & C Lathes and 10"-1" Collet Lathes with wide range gear box are already equipped to nut 27 threads. For other Lathes see list below:

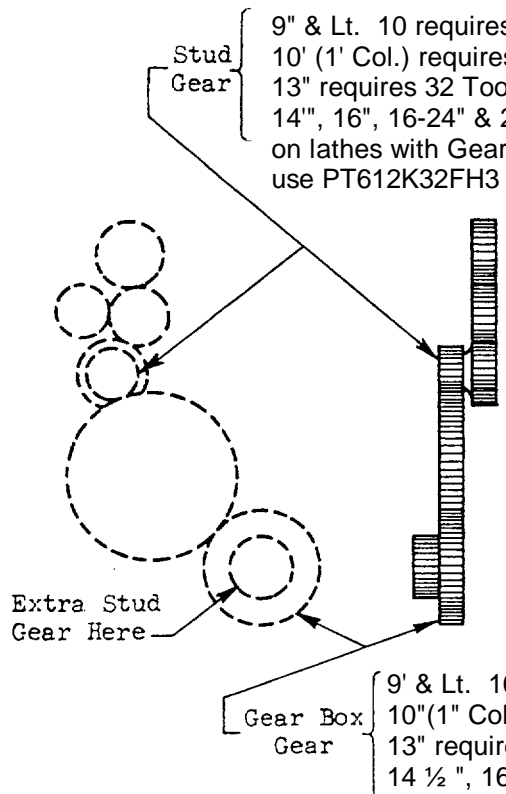
| SIZE AND TYPE OF LATHE | | PART NO. | |
|---|--|--|-------------|
|  | | DOUBLE TUMBLER GEAR BOXES | |
| | | 9" & Lt. 10AA, Model A, Double Tumbler | PT32K42NK1 |
| | | 10" (11/16 or 1" Col. Cap.) Double Tumbler | PT32K42R1 |
| | | 13" Double tumbler . | PFT612K32T1 |
| | | 14", 16" 16-24" & 2H Double Tumbler For Gear Box Code No. Q.C.G. 103... | PT612K32F52 |
| | | For Gear Box Code No. D. T.'; 104... | PT612K32FH3 |
|  | | SINGLE TUMBLER GEAR BOXES | |
| | | 10" (11/16 or 1" Col. Cap.) Single Tumbler | PT612K32R1 |
| | | 13" Single Tumbler . | PT612K24T1 |
| | | 145", 16', 16-24" & 2H Single Tumbler | PT612K24FH1 |
| SEE REVERSE SIDE FOR SET-UP CHART | | | |

IMPORTANT. When ordering you must specify "Gear is to be used to cut 27 threads per inch." Also state serial number of your lathe which is stamped on flat way of bed at tailstock end and gear box code number stamped on face of tumbler guide bar attached to bottom of gear box. This information enables us to doublecheck and to determine if correct gear is being ordered.

PARTS LIST

SET-UP CHART FOR CUTTING 27 THREADS PER INCH

DOUBLE TUMBLER GEAR BOX



Stud Gear

9" & Lt. 10 requires: 20 Tooth Gear. Furnished With Lathe
 10" (1" Col.) requires: 20 Tooth Gear. Furnished With Lathe
 13" requires 32 Tooth Special Gear, PT612K32T1
 14", 16", 16-24" & 2H requires 32 Tooth Special Gear. Use PT612K32FH2 Gear on lathes with Gear Box Code QCG103. For lathes with Gear Box Code DTG104 use PT612K32FH3 Gear

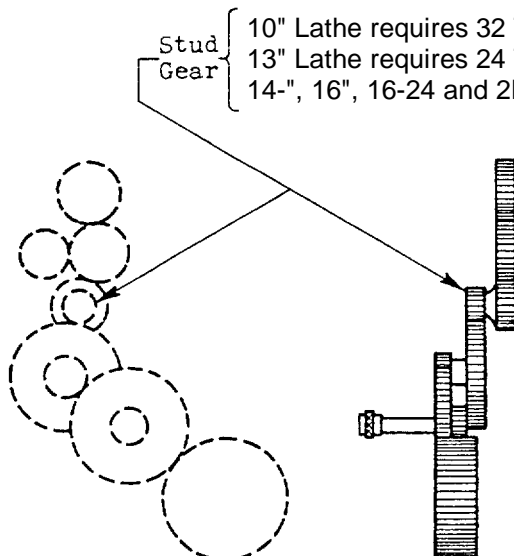
Extra Stud Gear Here

Gear Box Gear

9' & Lt. 10 requires 42 Tooth Special Gear, PT32K421, TYI
 10" (1" Col.) requires 42 Tooth Special Gear, PT32K42R1
 13" requires 64 Tooth Gear. Furnished On Lathe
 14 1/2", 16", 16-24 and 2H requires 64 Tooth Gear. Furnished On Lathe

| Stud Gear | Left Hand Tumbler | Threads per Inch | | | | | | | | | |
|----------------|-------------------|------------------|---|----|---|---|---|--|--|--|--|
| | | A | A | B | C | D | E | | | | |
| See Note Above | A | | | | | | | | | | |
| | B | | | | | | | | | | |
| | C | | | 27 | | | | | | | |
| | D | | | | | | | | | | |
| | E | | | | | | | | | | |

SINGLE TUMBLER GEAR BOX

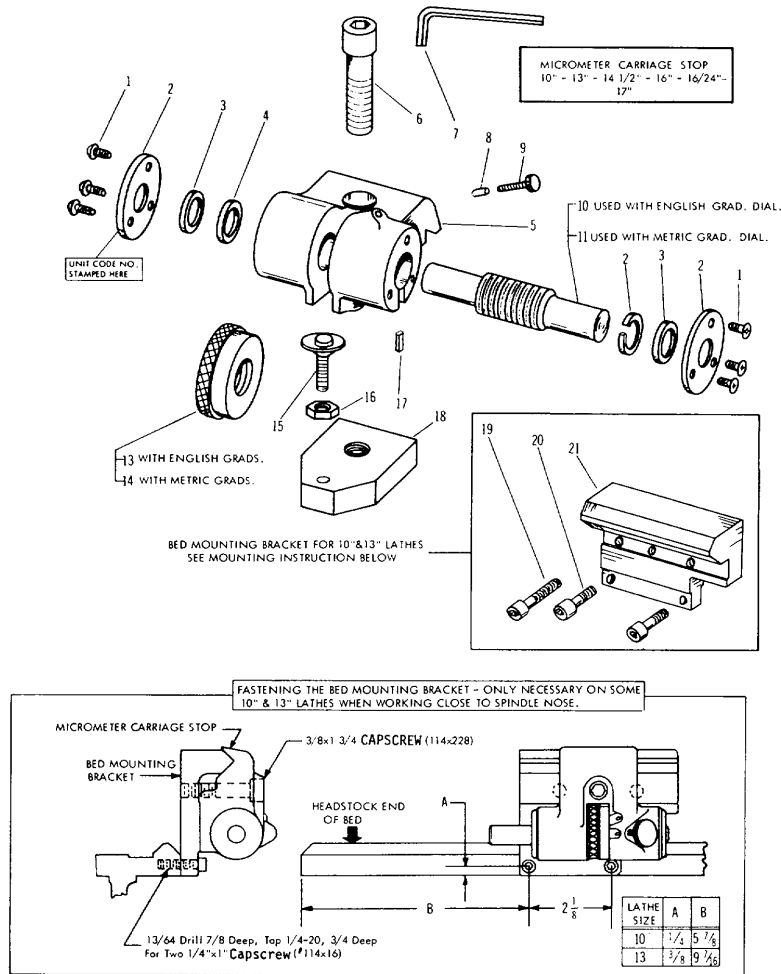


Stud Gear

10" Lathe requires 32 Tooth Special Gear, PT612K32R1
 13" Lathe requires 24 Tooth Special Gear, PT612K2LT1
 14", 16", 16-24 and 2H Lathes requires 24 Tooth Special Gear, PT612K24FH1

| Sliding Gear | Top Lever | Threads Per Inch | | | | | | | | | |
|--------------|-----------|------------------|--------|-------|--|--|--|--|--|--|--|
| | | Left | Center | Right | | | | | | | |
| In | Left | | | | | | | | | | |
| | Center | | | | | | | | | | |
| | Right | | | | | | | | | | |
| Out | Left | | | 27 | | | | | | | |
| | Center | | | | | | | | | | |
| | Right | | | | | | | | | | |

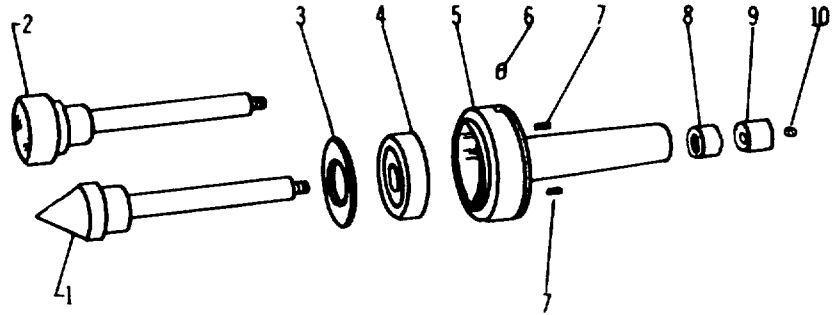
PARTS LIST



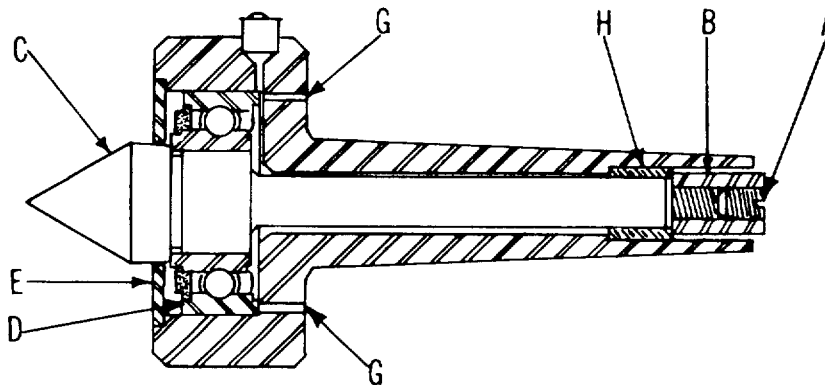
| ITEM NO. | PART NAME | 10" PART NO | 13" PART NO | 14 1/2" PART NO | 16", 16/24 & 17" PART NO | SERIAL NUMBER OF LATHE AND UNIT CODE NUMBER MUST ACCOMPANY ORDER |
|----------|---------------------------|-------------|-------------|-----------------|--------------------------|--|
| 1 | PH1LLIPS SCREW | 104 . 206 | 104 x 206 | 104 x 206 | 104 x 206 | |
| 2 | COVER PLATE | PT1209NT1 | PT1209NT1 | PT1209FH1 | PT1209FH1 | |
| 3 | BUSH1NG | PT1206NT1 | PT1206NT1 | PT1206FH1 | PT1206FH1 | |
| 4 | FELT WASHER | PT1207NT1 | PT1207NT1 | PT1207FH1 | PT1207FH1 | |
| 5 | MICRO STOP FRAME | | | | | |
| 6 | CAPSCREW | 114 x 236 | 114 x 236 | 114 .444 | 114 x 444 | |
| 7 | HEX. WRENCH | CE2389 | | | | |
| 8 | SHOE | PT1083NT1 | PT1083NT1 | PT1083FH1 | PT1083FH1 | |
| 9 | LOCK SCREW | PT1204NT2 | PT1204NT2 | PT1204FH2 | PT1204FH2 | |
| 10 | MICRO SHAFT (ENGLISH) | PT1202RT1 | PT1202RT1 | PT1202FH2 | PT11202FH2 | |
| 11 | MICRO SHAFT (METRIC) | PT2271RT1 | PT2271RT1 | PT2271FH1 | PT2271FH1 | |
| 12 | FELT WASHER (SLOTTED) | PT1208NT1 | PT1208NT1 | PT1208FH1 | PT1208FH1 | |
| 13 | MICRO STOP DIAL (ENGLISH) | PT1203NT2 | PT1203NT2 | PT1203FH2 | PT1203FH2 | |
| 14 | MICRO STOP DIAL (METRIC) | PT2270NT1 | PT2270NT1 | PT2270FH1 | PT2270FH1 | |
| 15 | CLAMP SCREW | PT121 IRT1 | PT1 21IRT1 | PT121 IFH1 | PT121 IFH1 | |
| 16 | JAM NUT | 137 x 25 | 137 x 25 | 137 x 25 | 137 x25 | |
| 17 | KEY | PT1210NH1 | PT1210NH1 | PT1210NH1 | PT1210NH1 | |
| 18 | CLAMP | PT1201R2 | PT1201T2 | PT1201FH2 | PT 1201FH2 | |
| 19 | CAPSCREW | 114 n 228 | 114 X 22B | | | |
| 20 | CAPSCREW | 114x6 | 114x6 | | | |
| 21 | BED MOUNT1NG BRACKET | PT1121RI | PT1212RI | | | |

PARTS LIST

BALL BEARING LIVE CENTERS



| ITEM NO. | 9" & 10" PART NO. | 13", 14 1/2" & 16" PART NO. | PART NAME |
|----------|-------------------|-----------------------------|-------------------|
| 1 | PT3276NR1 | PT3276TH1 | SPINDLE POINT |
| 2 | PT3281NR1 | PT3281TH1 | SPINDLE HOLLOW |
| 3 | PT3277NR1 | PT3277TH1 | PROTECTING COLLAR |
| 4 | PT502NH1 | PT3280TH1 | BALL BEARING |
| 5 | PT3275NR1 | PT3275TH1 | BODY |
| 6 | 155 x 17 | 155 x 17 | OILER |
| 7 | ----- | 120 x 904 | SETSCREW |
| 8 | PT3278NR2 | PT3278TH2 | REAR BUSHING |
| 9 | PT3279NR1 | PT3274TH 1 | TAKE-UP NUT |
| 10 | 120 x 1104 | 120 x 1104 | SETSCREW |



LUBRICATION

Use CE1602 Machine Oil or equal. No. 2 M. T. Center Bearings are sealed but No. 3 :MT. Center Bearings are not: therefore should be periodically repacked with grease.

ADJUSTMENT

Screw Take-up NUT B tight so Spindle can hardly be turned by hand. Back up fraction of a turn so the Spindle will just barely turn freely. Proper tension is important. Cannot be too tight or loose. Lock the setscrew A snug, but not too tight.

TO DISASSEMBLE

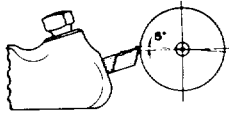
Loosen setscrew A and remove Take-up NUT B. Drive out Spindle C along with bearing D and collar E with a punch through.; the two holes as shown at G. (Drive out with two set screws on No. 3 ;.T.) If necessary to remove rear bushing H drive out by inserting bar into front end of body. Bar diameter must be just slightly under hole size of Body.

TO ASSEMBLE

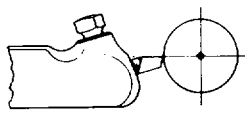
Flush center of body with mineral spirits or equal before assembling. Drive in rear bushing, if it has been removed. Place Spindle into Body, tapping lightly on outer bearing race if necessary. Press on protective collar.

CUTTING TOOLS DATA

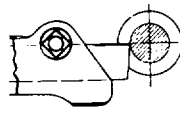
CORRECT HEIGHT OF THE CUTTING EDGE



STRAIGHT TURNING

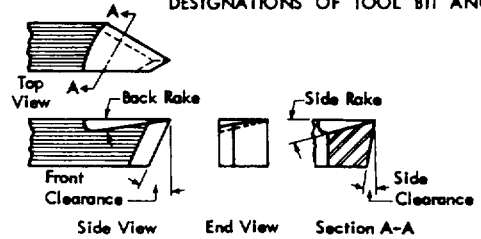


TAPER TURNING, THREAD CUTTING, BRASS TURNING



CUTTING OFF

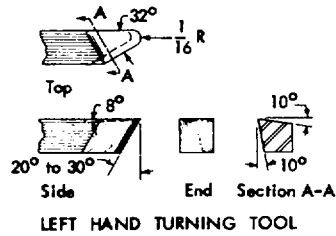
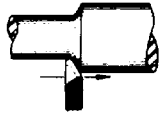
DESIGNATIONS OF TOOL BIT ANGLES



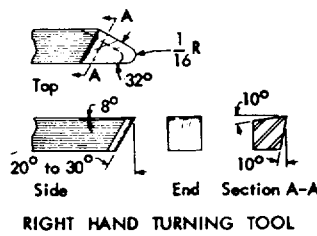
APPLICATIONS

TOOL BIT ANGLES

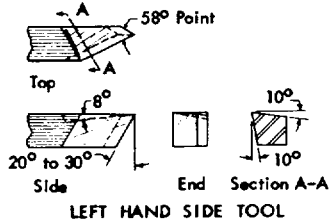
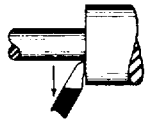
APPLICATIONS



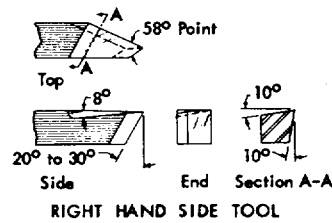
LEFT HAND TURNING TOOL



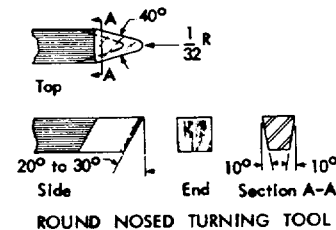
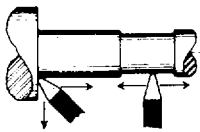
RIGHT HAND TURNING TOOL



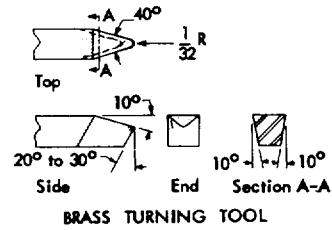
LEFT HAND SIDE TOOL



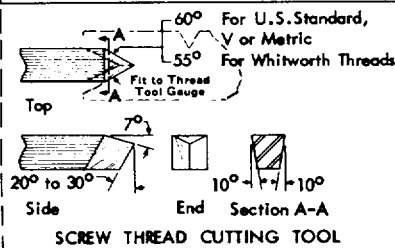
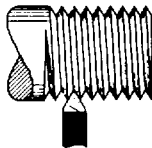
RIGHT HAND SIDE TOOL



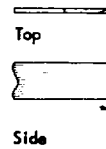
ROUND NOSED TURNING TOOL



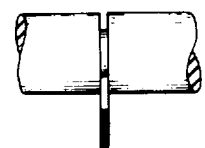
BRASS TURNING TOOL



SCREW THREAD CUTTING TOOL



CUTTING OFF TOOL
Cutting off tool cannot be ground in block



Cutting Speeds for Turning With High Speed Steel Cutting Tools

| Material | Ft. per Minute | Lubricant |
|---------------------|----------------|-------------------|
| Aluminum | 300-400 | Comp. or Kerosene |
| Brass, leaded | 300-700 | Dry or Comp. |
| Brass, red & yellow | 150-300 | Comp. |
| Bronze, leaded | 300-700 | Comp. |
| Bronze, phosphor | 75-150 | Comp. |
| Cast Iron | 50-110 | Dry |
| Cast Steel | 45-90 | Comp. |
| Copper, leaded | 300-700 | Comp. |
| Copper, electro. | 75-150 | Comp. |
| Chrome Steel | 65-115 | Comp. |
| Die Castings | 225-350 | Comp. |
| Duralumin | 275-400 | Comp. |
| Fiber | 200-300 | Dry |
| Machine Steel | 115-225 | Comp. |

The above speeds have been collected from several sources and are suggested as practical for average work. Special conditions may necessitate the use of higher or lower speeds for maximum efficiency.

Cutting Speeds for Turning With High Speed Steel Cutting Tools

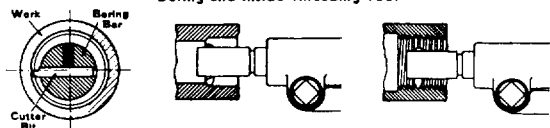
| Material | Ft. per Minute | Lubricant |
|--------------------------|----------------|--------------------|
| Malleable Iron | 80-130 | Dry or Comp. |
| Mang. Bronze | 150-300 | Comp. |
| Mang. Steel | 20-40 | Comp. |
| Moly. Steel | 100-120 | Comp. |
| Monel Metal | 100-125 | Comp. or Sul. Base |
| Nickel Silver | 75-150 | Comp. |
| Nickel Silver, 18% | 150-300 | Comp. |
| Nickel Steel | 85-110 | Comp. or Sul. Base |
| Plastics, hot-set molded | 200-600 | Dry |
| Rubber, Hard | 200-300 | Dry |
| Stainless Steel | 100-150 | Sul. Base |
| Tool Steel | 70-130 | Comp. |
| Tungsten Steel | 70-130 | Comp. |
| Vanadium Steel | 85-120 | Comp. |

HONING the CUTTER BIT



After grinding, hone cutting edge of tool on oil stone. It will improve cutting quality of cutter bit.

Boring and Inside Threading Tool

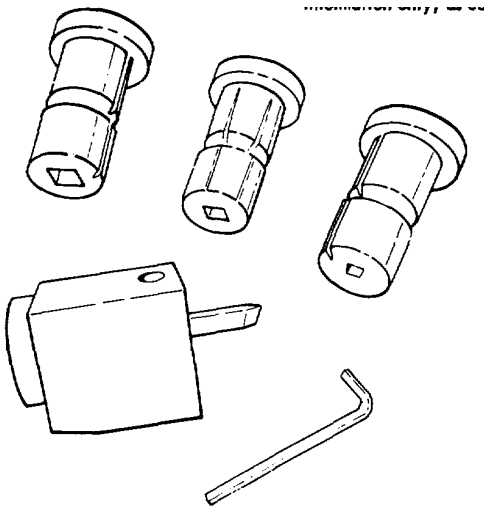


The boring tool is ground exactly the same as the left hand turning tool except the front clearance of boring tool must be ground at a slightly greater angle so that the heel of the tool will not rub in the hole of the work. The inside threading tool is ground the same as the screw thread cutting tool except that the front clearance must be increased for the same reason as for the boring tool.

NOTE: These are suggested starting angles for general work. Slightly smaller or larger angles may prove more efficient, depending on the texture of the material machined, finish required, cutting speed and the type of cutting tool used.

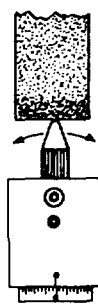
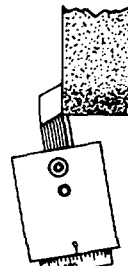
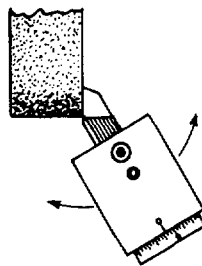
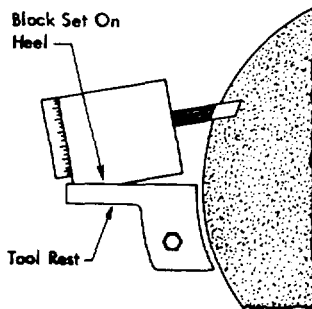
INSTRUCTIONS ON USE OF CUTTER BIT GRINDING BLOCK

Suggested CUTTING Off Tool grinding angles are illustrated and given as general information only, in cutting off tools CANNOT be ground in the Universal cutter Bit Grinding Block.

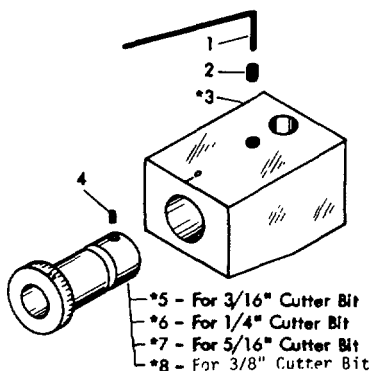


1. cutter bit in proper sleeve and tighten securely, allowing approximately of the cutter bit to protrude from the nose of the sleeve.
2. Place sleeve in block, set cutter bit to desired angle (graduations on sleeve are in increments of 50) and lock in position with set screw on top of block. Reset for top and side clearance angles, if desired.
3. Due to the many variations that enter into correct grinding angles such as: cutting speed, type of finish and kind of material to be machined with cutter bit, no attempt has been made to show these angles in the instructions, however, suggested clearances are charted on the reverse side of this sheet. This is for the average type of work and may not agree with the various other publications on cutter bit grinding.

Note: If tool rest on your grinder is not large enough to accommodate cutter Bit Grinding Block, clamp an auxiliary plate to extend the tool rest.



1. Heel the block as shown for grinding all clearances. Unless a small degree of front clearance is required then lay on flat of block.
2. Use both sides of wheel for grinding side clearances on all shapes of tools. Angle block to get proper shape.
3. Use sides of wheel for grinding back and side rake. Angle block to get proper top back rake. Heel block if desired.
4. Use face of wheel for grinding radius, on round nose tools, rotating the block to develop the proper radius. Heel the block as shown in Fig. 1.



| Item No. | Part Name | Part No. |
|----------|--------------------------|-----------|
| 1 | Hex Wrench | 173x6 |
| 2 | Setscrew | 149xS05 |
| 3 | Block (2) | *AS4635-1 |
| 4 | Setscrew | 126x503 |
| 5 | Sleeve (4) For 3/16" Bit | *A5636 |
| 6 | Sleeve (4) For 1/4" Bit | *AS4637-1 |
| 7 | Sleeve (4) For 5/16" Bit | *AS4638-1 |
| 8 | Sleeve (4) For 3/8" Bit | *A54639-1 |

Available only as sub-assembly. Parts included are indicated by the item numbers appearing in parenthesis after part name.

HOW TO USE YOUR 10-IN-1 TOOL BLOCK

The Ten-in-One Tool Block will replace practically all of the tool holders and boring bar holders ordinarily required, combining them into one practical easy-to-use unit. It may be used for heavy duty operations or, because of its compactness, for similar classes of work. An outstanding advantage is the screw adjustments for tool height which are easily made and need never be changed until all change in the height of the cutting edge of the tool becomes necessary. Cutter bits may be removed, ground and replaced without the usual height adjustments. The tool block may be revolved to permit mounting the tools from either the right or the left hand side. Instructions for using and a few of the many applications are shown in the diagrams below.

TURNING AND CUTTING OFF

To mount the 10 in 1 Tool Holder on the compound rest, first remove the NUT A and block from stud S. Then slide stud assembly into T-slot and tighten flat head screws F. Replace block and NUT, but do not tighten NUT until adjustment for tool height is made.

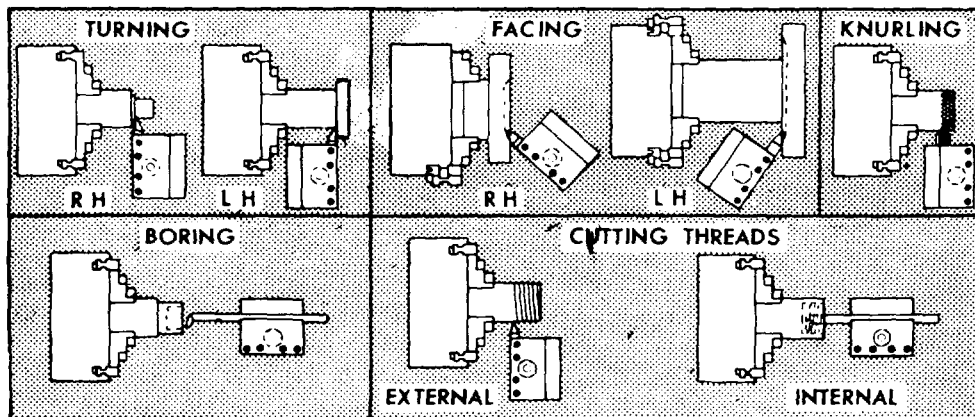
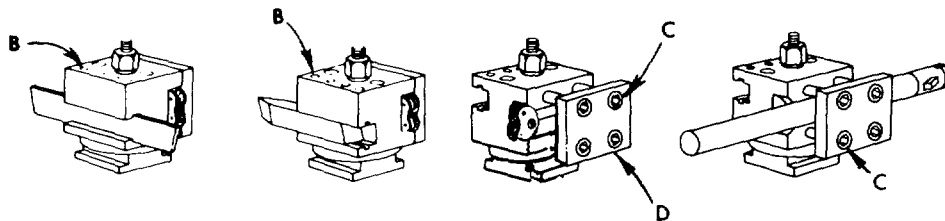
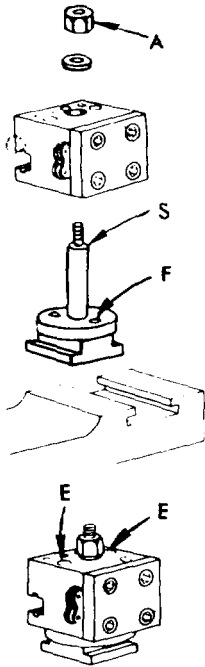
Vertical adjusting screws are used to position the cutting tool. First make sure NUT A is loose enough to permit complete adjustment, then unscrew the back (adjusting screw (one farthest from work) and adjust front screw until cutting edge is at the desired height. Swivel the tool block to the correct position for taking the cut, and tighten NUT A with fingers only. Now tighten back vertical adjusting screw, and you are ready to take the cut.

Cut-off blades and cutter bits are held in the tool slots by the 4 set screws labeled B in the diagram. Loosen these screws sufficiently to allow entry of the tool and then tighten the to lock the tool in place.

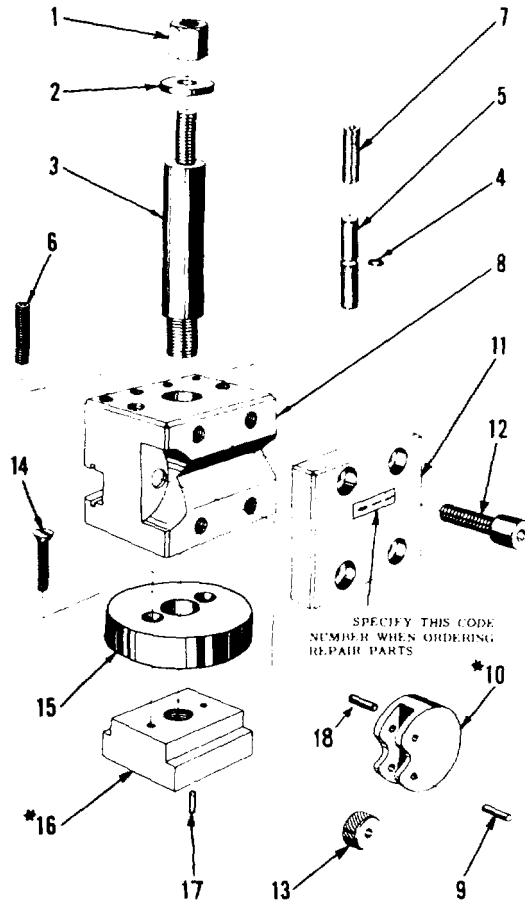
BORING AND KNURLING

Your Tool Block comes equipped with a self-aligning knurling head having No. 1151 medium diamond knurls. To change knurls or for using a boring bar, loosen the 4 cap screws labeled C and move plate A away from the main body to allow sufficient clearance for removal of the knurling head. When replacing, always tighten these screws enough to bring the plate solidly against the main body of tool block.

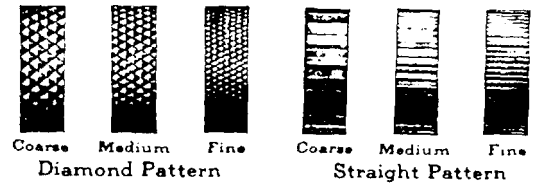
For all boring and knurling operations, invert the entire tool block. This places the boring or knurling tool at the correct height, without disturbing the height adjustment for the turning tool.



PARTS LIST



Extra Knurls for Knurling Tool



THE TEN IN ONE TOOL BLOCK COMES EQUIPPED WITH A SELF-ALIGNING KNURLING HEAD HAVING No. CE3151 MEDIUM DIAMOND KNURLS. OTHER KNURLS ARE AVAILABLE AT EXTRA COST. ILLUSTRATIONS ABOVE SHOW ACTUAL SIZES OF KNURLING PRODUCED. SUPPLIED IN PAIRS

| CAT. NO. | PATTERN | SIZE |
|----------|-----------------|--------------|
| CE3150 | FINE DIAMOND | 5/8" x 5/16" |
| CE3151 | MED. DIAMOND | 5/8" x 5/16 |
| CE3152 | COARSE DIAMOND | 5/8" x 5/16 |
| CE3153 | FINE STRAIGHT | 5/8" x 5/16 |
| CE3154 | MED. STRAIGHT | 5/8" x 5/16 |
| CE3155 | COARSE STRAIGHT | 5/8" x 5/16 |

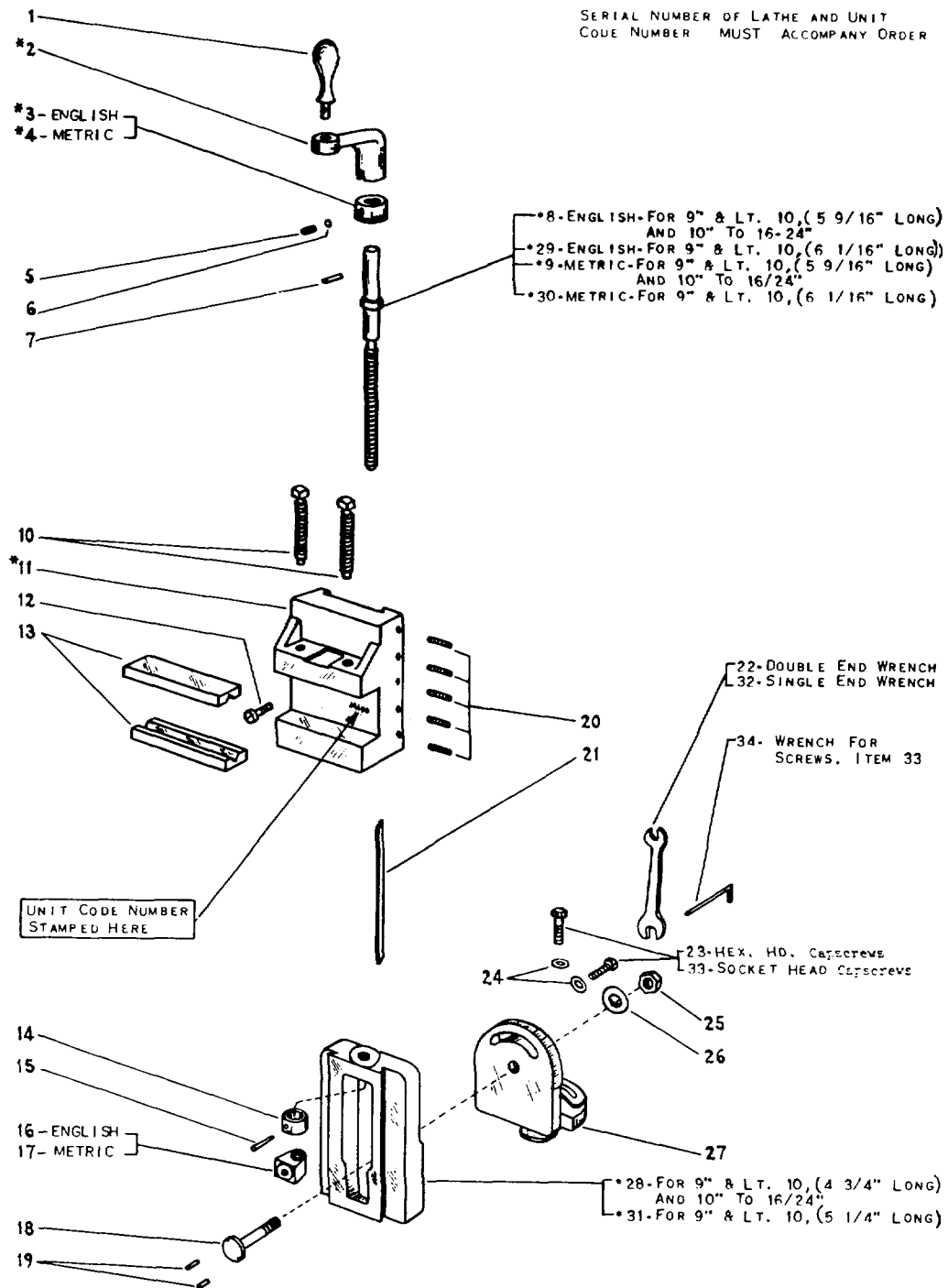
10 in 1 Tool Block

For 9", LT. 10, 10", 13", 14 1/2 " 16" & 16/24

AVAILABLE ONLY AS SUB-ASSEMBLY PARTS INCLUDED ARE INDICATED B;Y THE ITEM NUMBERS APPEARING IN PAR. ENTHESES AFTER PART NAME.

| ITEM NO. | PART NAME | 9" & LT 10 (A, B, & C) | 10" (1" COL) | 13" | 14 1/2 " | 16" & 16/24" |
|----------|-------------------|------------------------|--------------|------------|------------|--------------|
| | | PART NO. | PART NO. | PART NO. | PART NO. | PART NO. |
| 1 | NUT | PT283NK1 | PT283NK1 | PT283R1 | PT283R1 | PT283R1 |
| 2 | WASHER | PT1673NR1 | PT1673NR1 | PT1674T1 | PT1675T1 | PT1675T1 |
| 3 | STUD | PT1464NR1 | PT1464NR1 | PT1464T1 | PT1464T1 | PT1464T1 |
| 4 | SNAP RING | NOT USED | NOT USED | PT1474T1 | PT1474FFH1 | PT1474FH1 |
| 5 | ADJ. PIN | NOT USED | NOT USED | PT1473FH1 | PT1473FH1 | PT1473FH1 |
| 6 | DOG PT. SCR | 121 X 16 | 121 X 16 | 121 X 224 | 121 X 224 | 121 X 224 |
| 7 | ADJ. DOG PT. SCR | 121 X 228 | 121 X 228 | 121 X 312 | 121 X 412 | 121 X 412 |
| 8 | BLOCK | | | | | |
| 9 | KNURL STUD | PT1476NH1 | PT1476NH1 | PT14674T1 | PT1476NH1 | PT1476NH1 |
| 10 | KNURL HD. (18) | *AS1475NH1 | *AS1475NH1 | *AS1475NH1 | *AS1475NH1 | *AS1475NH1 |
| 11 | CLAMP | PT1461NK1 | PT1461R1 | PT1461R1 | PT1461F1 | PT1461H1 |
| 12 | CAPSCREW | 114 x 16 | 114 x 16 | 114 x 124 | 114 x 224 | 114 x 224 |
| 13 | KNURLS | | SEE | TABULAT1ON | ABOVE | |
| 14 | FLAT HD. SCR | 103 x 212 | 103 x 212 | 103 x 212 | 103 x 614 | 103 x 618 |
| 15 | BASE | PT1462NR1 | PT1462NR1 | PT1462E1 | PT1463F1 | PT1462H1 |
| 16 | CLAMP (1-2-3- 17) | *AS1463NK1 | *AS1463R1 | *AS1463T1 | *AS1463F1 | *AS1463H1 |
| 17 | PIN OR SCREW | 160 x 18 | 160 x 18 | 120 x 906 | 160 X 45 | 160 X 45 |

PARTS LIST



MILLING ATTACHMENT ENGLISH AND METRIC

AVAILABLE ONLY AS SUB-ASSEMBLY. PARTS INCLUDED
ARE INDICATED BY THE ITEM NUMBERS APPEARING IN
PARENTHESIS AFTER PART NAME.

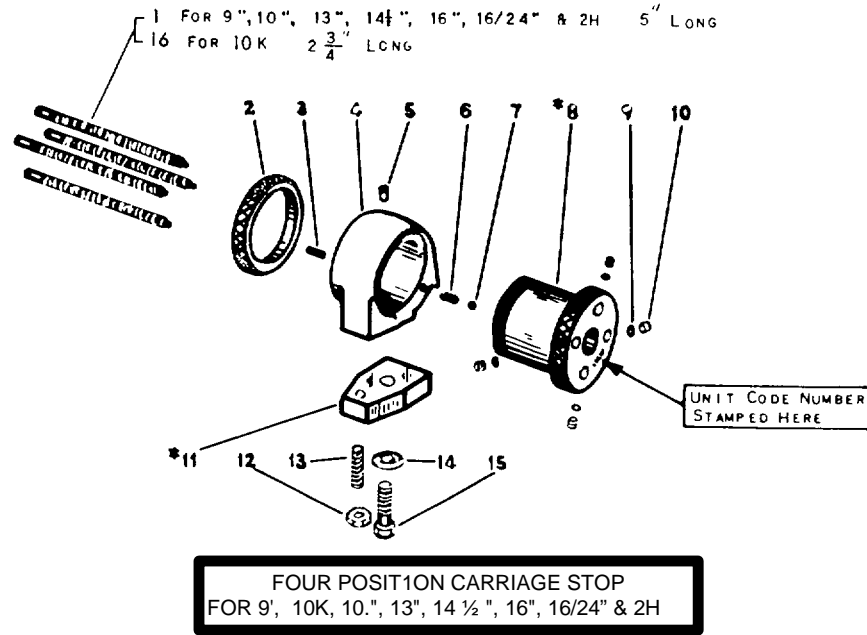
PARTS LIST

| ITEM NO. | PART NAME | 9" & LIGHT 10 | 10" (11/16" & 1" COL) |
|----------|-----------------------------------|---------------|-----------------------|
| | | PART NO. | PART NO. |
| 1 | HANDLE | PT1482 | PT1482 |
| 2 | CRANK (1) | *AS830NH1 | *AS830NH1 |
| 3 | GRAD. COLLAR - ENGLISH (5-6) | | |
| 4 | GRAD. COLLAR - METRIC (5-6) | *AS829NT1 | *AS829NT1 |
| 5 | SETSCREW | *AS2243NT1 | *AS2243NT1 |
| 6 | BRASS PUNCH1NG | 122x103 | 122x103 |
| 7 | PIN | PT1078NK 1 | PT1078NK I |
| 8 | FEED SCREW-ENGLISH (7 14- 15- 16) | 160x46 | 160x46 |
| 9 | FEED SCREW-METRIC (7- 14 1 5- 17) | *AS832NK2 | AS832R2 |
| 10 | CLAMPING SCREW | *AS2242NK1 | *AS2242R1 |
| 11 | WISE (20-21) | PT836NR1 | PT83;NR1 |
| 12 | CAPSCREW | *AS827NK1 | *AS827R1 |
| 13 | V PLOCK | 111 x 12 | 111 x 14 |
| 14 | COLLAR | PT831NK1 | PT831R1 |
| 15 | TAPER PIN | PT833NT1 | PT833NT1 |
| 16 | FEED NUT-ENGLISH | 168X206 | 168X206 |
| 17 | FEED NUT-METRIC | PT828NR1 | PT82PNR1 |
| 18 | SWIVEL 90LT | PT2241NR1 | PT2241NR1 |
| 19 | PIN | PT834NK1 | PT834R1 |
| 20 | SETSCREW | 160x18 | 160x18 |
| 21 | WISE GIB | 122x210 | 122x512 |
| 22 | WRENCH | PT835NK1 | PT835RI |
| 23 | CAPSCREW | CE2655 | CE2655 |
| 24 | WASHER | 112x120 | 112X120 |
| 25 | HEX. NUT | 112 x12 | 161x12 |
| 26 | WASHER | 136x29 | 136x31 |
| 27 | BASE | 161X21 | 161X27 |
| 28 | SADDLE(18- 1q) | PT8 25NK2 | PT825R1 |
| 29 | FEED SC. ENGLISH (7- 14- 1 5- 1) | *AS826NK1 | *AS826R1 |
| 30 | FEED SC. METRIC (7- 14- 15- 17) | *AS832NK | |
| 31 | SADDLE (IR- 19) | *AS2242NK2 | |
| | | *AS826FNK2 | |

| ITEM NO | PART NAME | 13' (11/16" & 1" COL.) | 14 ½ " (3/4 " & 1" COL) | 16" & 16/24" (1" COL) |
|---------|-------------------------------------|------------------------|-------------------------|-----------------------|
| | | PART NO | PART NO | PART NO. |
| 1 | HANDLE | PT1482 | PT1482 | PT1482 |
| 2 | CRANK (1) | *ASP30NH1 | *AS830NH1 | *AS830NH1 |
| 3 | GRAD. COLLAR - ENGLISH (S- 6) | | | |
| 4 | (RAD. COLLAR - METRIC (F- F) | *AS824NT1 | *AS829FH1 | *AS29 FH 1 |
| 5 | SETSCREW | *AS2243NT1 | *AS2243FH1 | *AS243FH1 |
| 6 | PRASS PUNCH1NG | 122x103 | 122x104 | 122x104 |
| 7 | PIN | PT107RNK1 | PT1078NK1 | PT107RNK 1 |
| 8 | FEED SCREW- ENGLISH (7- 14- 15- 17) | 160X46 | 160X46 | 160X46 |
| 9 | FEED SCREW-METRIC (7-14-15-17) | *ASR32T2 | *AS832FH2 | *ASR32FH2 |
| 10 | CLAMP ING SCREW | *AS2242T1 | *AS2242FH1 | *AS2242FH1 |
| 11 | WISE (20-21) | PT836T1 | PT836FH1 | PT836FH1 |
| 12 | CAPSCREW | *ASR27T1 | *ASR27FH1 | *ASR27FH1 |
| 13 | V BLOCK | 111x114 | 111 x120 | 111x120 |
| 14 | COLLAR | PT831T1 | PT831FH1 | PTRSFH |
| 15 | TAPER PIN | PT833NT1 | PT833FH1 | PT833FH1 |
| 16 | FEED .NUT- ENGLISH | 168X206 | 168 X208 | 168 X208 |
| 17 | FEED NUT-METRIC | PT828T1 | PT828FH1 | PTR28FH 1 |
| 18 | SWIVEL BOLT | PT2241T1 | PT2241FH1 | PT2241FH1 |
| 19 | PIN | PT834T1 | PT834FH | PT834FH1 |
| 20 | SETSCREW | 160x45 | 160X45 | 160x45. |
| 21 | WISE -GIB | 122x514 | 122x518 | 122x51R |
| 22 | WRENCH | PTR35T1 | PT835FHPI | PT835FH1 |
| 23 | CAPSCREW | CE2656 | CE2656 | CE2656 |
| 24 | WASHER | 11 2x4 24 | 112x427 | 112x42P |
| 25 | HEX. NUT | 1 I x27 | 161x30 | 161X30 |
| 26 | WASHER | 13FX35 | 136 X39 | 136X38 |
| 27 | RASE | 161x36 | 161 x42 | 161 x42 |
| 28 | SADDLE 1P-10 | PTP25T1 | PT825FI | PT825H2 |
| 32 | WRENCH (SINGLE END) | *AS826T1 | *AS826FH2 | *AS826FH2 |
| 33 | CAPSCREW SOCKET HD | CE2R76 | CE267c | CE267E |
| 34 | SOCKET HO. WRENCH | 114x42R | 114x428 | 114x424 |
| | | CE2390 | CF2390 | CF2390 |

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

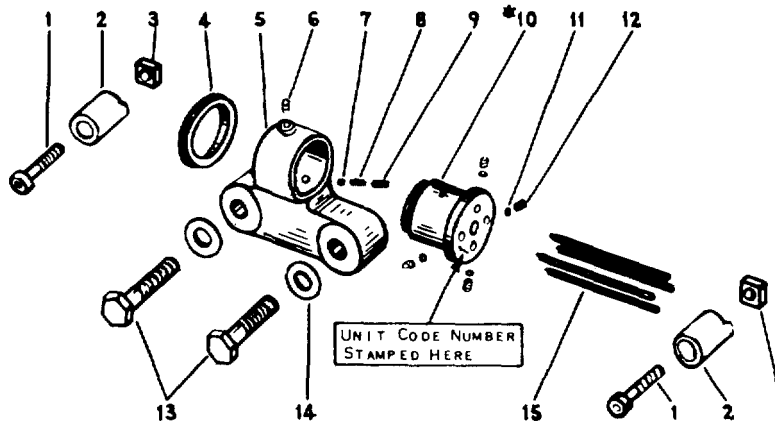


AVAILABLE ONLY AS SUBASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER PART NAME.

| ITEM NO | PART NAME | 9" & 10K | 10" | 13" | 14 1/2", 16", 16 1/4" & 2H |
|---------|------------------|------------|------------|------------|----------------------------|
| | | PART NO | PART NO | PART NO. | PART NO. |
| 1 | STOP SCREW | PT1219NH1 | PT1219NH | PT1219NH1 | PT1219NH1 |
| 2 | TAKE UP NUT | PT1218NH1 | PT1218NH1 | PT1218NH1 | PT1218NH1 |
| 3 | SETSCREW | 122x108 | 122x108 | 122x108 | 122x108 |
| 4 | FRAME | | | | |
| 5 | OILER | 155x17 | 155x17 | 155x17 | 155x17 |
| 6 | COIL SPRING | 162X 54 | 162X 54 | 16 2x 54 | 16 2x 54 |
| 7 | STEEL BALL | 172X12 | 172x12 | 172X12 | 172X12 |
| 8 | SPINDLE (2-9-10) | *AS1217NH1 | *AS1217NH | *AS1217NH1 | *AS1217NH1 |
| 9 | BINDER SHOE | PT1080NK1 | PT1080NK1 | PT1080NK1 | PT1080NK1 |
| 10 | SETSCREW | 126x505 | 126x505 | 126x505 | 126x505 |
| 11 | CLAMP (12-13) | *AS1216NK1 | *AS1216RT1 | *AS1216FH1 | *AS1216FH1 |
| 12 | JAM NUT | 139X23 | 139X23 | 139x25 | 139x25 |
| 13 | SETSCREW | 122x518 | 122x524 | 122x624 | 122x624 |
| 14 | WASHER | 161X63 | 16 1X2 | 16 1 16 | 16 1 16 |
| 15 | CAPSCREW | 114x120 | 114x120 | 114x228 | 114x228 |
| 16 | STOP SCREW | PT1236K1 | | | |

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
COOE, NUMBER MUST ACCOMPANY ORDER



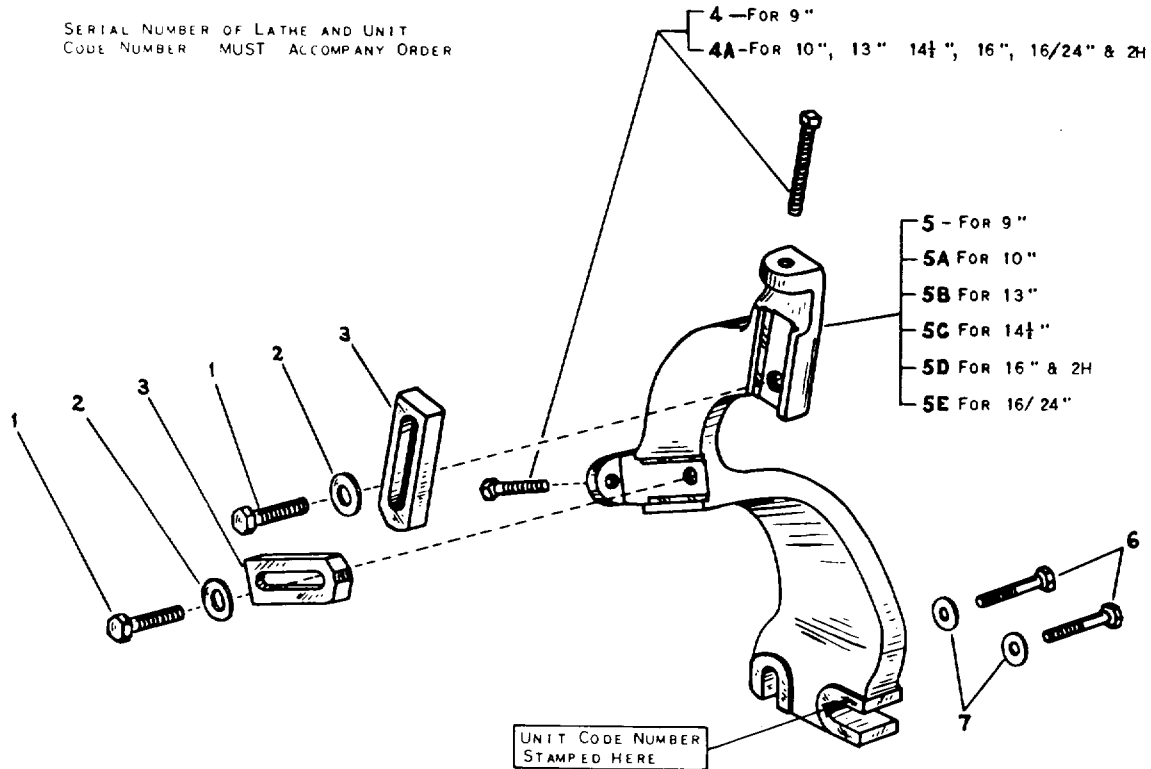
FOUR POSITION CROSS SLIDE STOP
FOR 9" 10K, 10", 13, 16", SERIES 900, 1000 AND 2H

AVAILABLE ONLY AS SUBASSEMBLY.
PARTS INCLUDED ARE INDICATED BY THE
ITEM NUMBERS APPEARING IN
PARENTHESIS AFTER PART NAME.

| ITEM NO | PART NAME | 10K, | 13" | 16" & 2H |
|------------|-------------------|------------|------------|-------------|
| | | PART NO | PART NO | PART NO. |
| 1 | CAPSCREW | 114x116 | 114x120 | 114x120 |
| 2 | RUSHING | PT1223NR2 | PT1223TH1 | PT1223TH |
| 3 | STOP SCREW NUT | PT811NH1 | PT811NH1 | PT811NHQ |
| 4 | TAKE UP NUT | PT1222NH1 | PT1222NH1 | PT1222NH1 |
| 5 | FRAME | | | |
| 6 | SETSCREW | 122x102 | 122x102 | 122x102 |
| 7 | STEEL BALL | 172x12 | 172x12 | 172x12 |
| 8 | COIL SPRING | 162x1 | 162x1 | 162x1 |
| 9 | SETSCREW | 126x505 | 126x505 | 126x505 |
| 10 | SPINDLE (4-11-12) | *AS1221NH1 | *AS1221NH1 | *AS1221NH1 |
| 11 | SHOE | PT1078NK1 | PT1078NK1 | PT1078NK1 |
| 12 | SETSCREW | 120x904 | 120X904 | 120x904 |
| 13 | CAPSCREW | 112x132 | 112x224 | 112x428 |
| 14 | WASHER | 161x63 | 161x16 | 161x26 |
| 15 | STOP SCREW | PT1224NH1 | PT1224NH1 | PT1224NH1 |

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER



REGULAR FOLLOWER REST
FOR 9 ; 10", 13", 14 1/2 ", 16", 16/24" & 2H

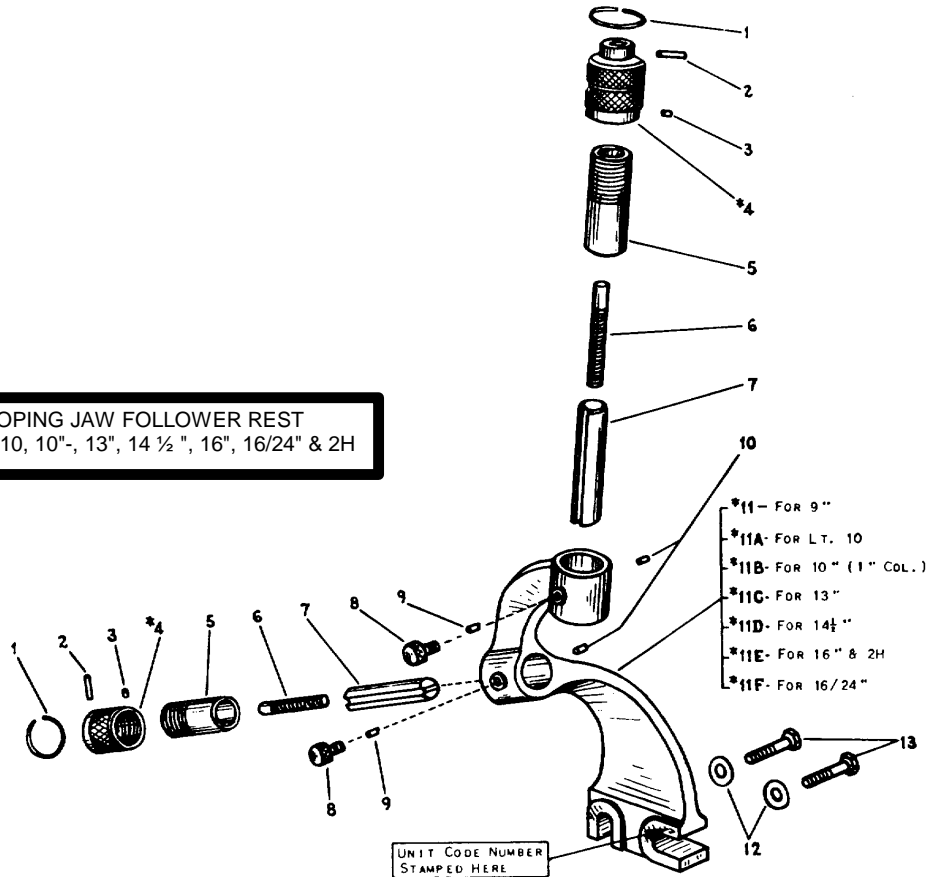
AVAILABLE ONLY AS SUBASSEMBLY PARTS
INCLUDED ARE INDICATED BY THE ITEM NUMBERS
APPEARING IN PAR. ENTESISIS AFTER PART NAME.

| ITEM NO | PART NAME | 9" & 10" (1 COL.) | 13" | 14 1/2 ", 16", 16/24" & 2H |
|------------|------------------|-------------------|------------|----------------------------|
| | | PART NO | PART NO | PART NO. |
| 1 | HEX. CAPSCREW | 112X116 | 112x220 | 112x220 |
| 2 | WASHER | 161X12 | 161X17 | 161X17 |
| 3 | JAW | PT128NR1 | PT128T1 | PT128FH1 |
| 4 | Sq. HD. CAPSCREW | 118x128 | - - - | - - - |
| 4A | | 118 x136 | 118x240 | 118x248 |
| 5 | FRAME | PT1 30N1 | | |
| 5A | FRAME | PT130R1 | | |
| 5B | FRAME | - - - | PT130T1 | - - - |
| 5C | FRAME | - - - | - - - | PT130F1 |
| 5D | FRAME | - - - | - - - | PT130H1 |
| 5E | FRAME | - - - | PT2010H1 | |
| 6 | HEX. CAPSCREW | 112x132 | 112x228 | 112x432 |
| 7 | WASHER | 161X63 | 161X64 | 161X65 |

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

TELESCOPING JAW FOLLOWER REST
FOR 9", LIGHT 10, 10"-, 13", 14 1/2", 16", 16/24" & 2H

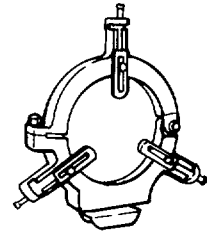
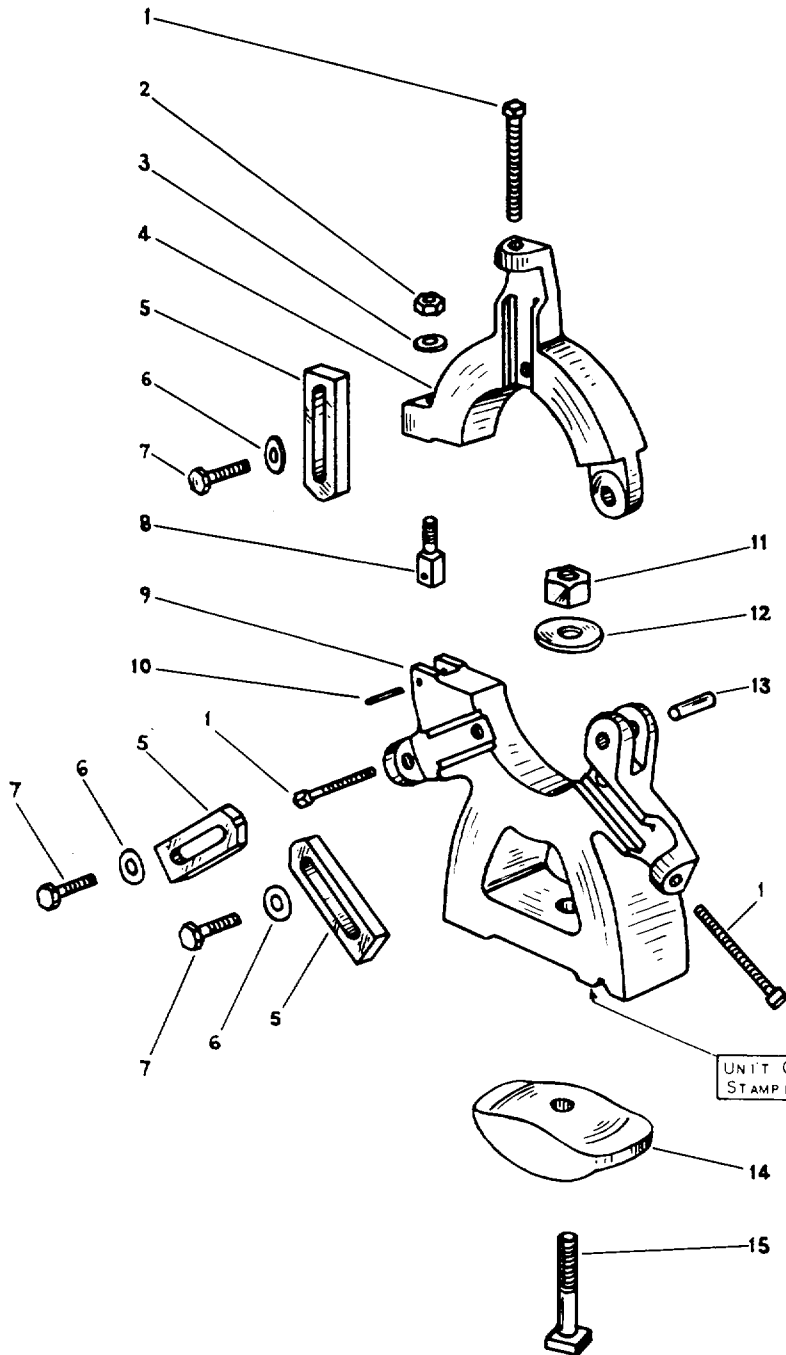


AVAILABLE ONLY AS
SUBASSEMBLY. PARTS INCLUDED ARE
INDICATED BY THE ITEM NUMBERS
APPEARING IN PARENTHESIS AFTER
PART NAME.

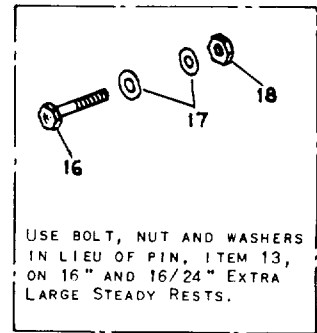
| ITEM NO | PART NAME | 9", LT. 10 & 10"(1'COL) | 13" | 13" 14 1/2", 16", 16/24" 2H |
|------------|------------------------------|-------------------------|------------|-----------------------------|
| | | PART NO | PART NO | PART NO. |
| 1 | SNAP RING | PT135NR1 | PT135T1 | PT135FH1 |
| 2 | PIN | 160x25 | 160X54 | 160x55 |
| 3 | SHOE | PT1082NT1 | PT10 2NT1 | PT1082FH1 |
| 4 | ADJUSTMENT KNOB (1-2-3-6) | *AS132NR1 | *AS132T1 | *AS132FH1 |
| 5 | ADJ. KNOB SLEEVE | PT131NR1 | PT131T1 | PT131H1 |
| 6 | JAW ADJ. SCREW | PT133NR1 | PT133T1 | PT133FH1 |
| 7 | JAW | PT129NR1 | PT129T1 | PT129FH1 |
| 8 | LOCK SCREW | PT134NR1 | PT134TH1 | PT134TH |
| 9 | KEY | PT137NR1 | PT137TH1 | PT1 37TH I |
| 10 | PIN | 160X46 | 160X47 | 160X47 |
| 11 | FRAME (5-10) | *AS 120N1 | --- | --- |
| 11A | FRAME (5-10) | *AS120K 1 | --- | --- |
| 11B | FRAME (5-10) | *AS120RI | --- | --- |
| 11C | FRAME (5-10) | --- | *AS120T1 | --- |
| 11D | FRAME (5-10) | --- | --- | *AS120F1 |
| 11E | FRAME (5-10) | --- | --- | *A5120H1 |
| 11F | FRAME 5- 10) | --- | --- | *AS2009VI |
| 12 | WASHER | 161X63 | 161X17 | 161x65 |
| 13 | CAPSCREW | 112x132 | 112x228 | 112x432 |

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER



16/24" EXTRA LARGE STEADY REST
ALTHOUGH SLIGHTLY DIFFERENT IN
DESIGN, PARTS ARE SAME AS
STANDARD RESTS.



USE BOLT, NUT AND WASHERS
IN LIEU OF PIN, ITEM 13,
ON 16" AND 16/24" EXTRA
LARGE STEADY RESTS.

REGULAR STEADY REST
FOR 9", 10", 1 3", 14 1", 16" AND 16/24"
ALSO 16.1" AND 16/24" EXTRA LARGE

RAISING BLOCK - FOR 16/24" ONLY

PARTS LIST

FOR 9", 10", 13" AND 14 1/2 "

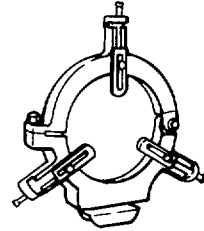
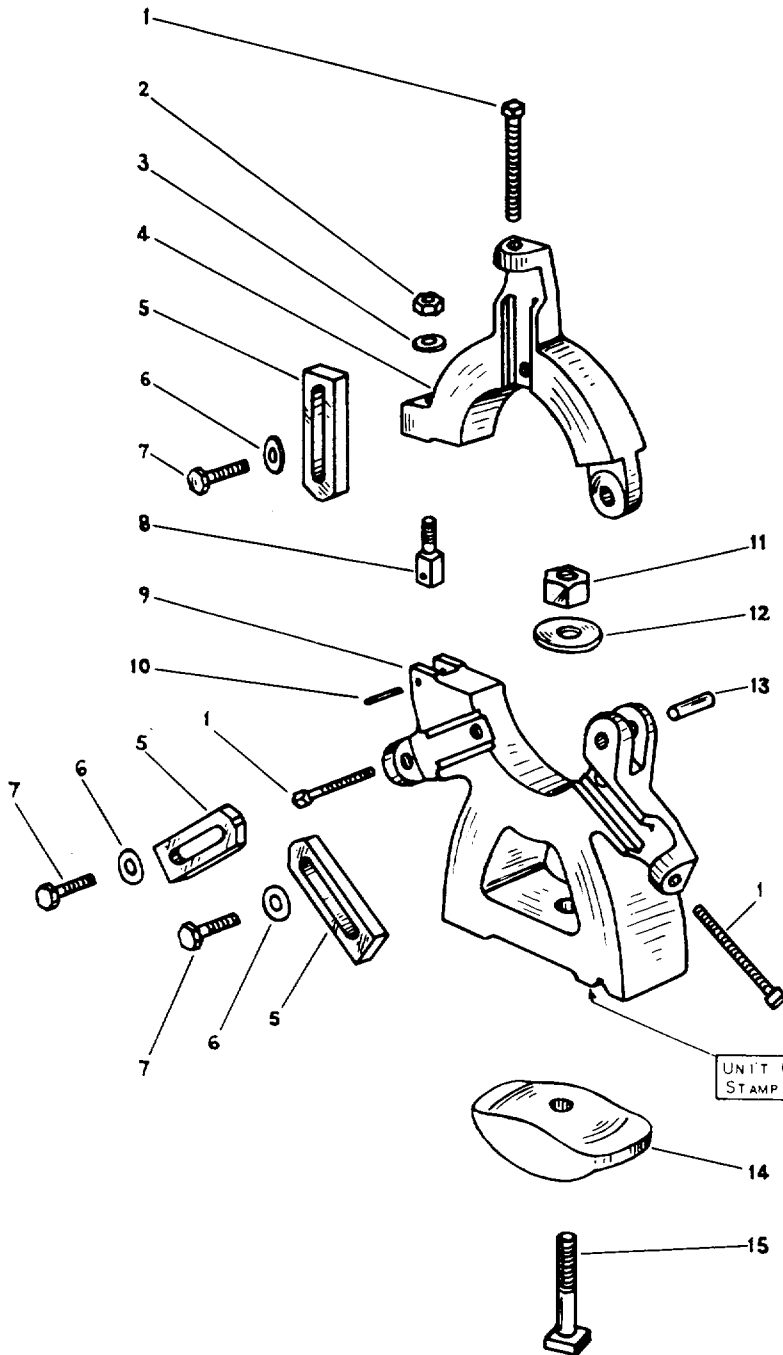
| ITEM NO. | PART NAME | 9" | 10" (1" COL) | 13" | | 14 1/2 " |
|----------|-------------------|----------|--------------|----------|------|----------|
| | | PART NO. | PART NO. | PART NO. | | PART NO. |
| 1 | Sq HD. SETSCREW | 118x136 | 118x136 | 118 x244 | .30 | 118 x248 |
| 2 | HEX. NUT | 138x25 | 138x25 | 138x27 | .05 | 138x27 |
| 3 | WASHER | 161X12 | 161X12 | 161X17 | .05 | 161X18 |
| 4 | STEADY REST TOP | | | | | |
| 5 | STEADY REST JAW | PT128NR1 | PT128NR1 | PT128T1 | 1.65 | PT12RFH1 |
| 6 | WASHER | 161x12 | 161X12 | 161X17 | .05 | 161x17 |
| 7 | HEX. HD. CAPSCREW | 112x120 | 112x120 | 112x220 | .05 | 112x220 |
| 8 | LOCK BOLT | PT217NR1 | PT217NR1 | PT217T1 | 1.35 | PT217FH1 |
| 9 | STEADY REST BASE | | | | | |
| 10 | PIN | 160X56 | 160x56 | 160X60 | .05 | 180x97 |
| 11 | HEX. NUT | 138X29 | 138x31 | 138x35 | .15 | 138x39 |
| 12 | WASHER | 167X5 | 1R7x6 | 167x8 | .05 | 167x4 |
| 13 | PIN | 160X160 | 160x60 | PT1804 | .10 | PT1804 |
| 14 | CLAMP | PT127NK4 | PT127R1 | PT127T1 | 1.80 | PT1 27FI |
| 15 | MACH1NE BOLT | 143X208 | 143X309 | 143x412 | .40 | 147x 514 |
| 16 | CAPSCREW | ---- | ---- | ---- | .- | ---- |
| 17 | WASHER | ---- | ---- | ---- | .- | ---- |
| IS | JAM NUT | ---- | ---- | ---- | .- | ---- |
| 19 | RAISING BLOCK | | | | | |

FOR 16" AND 16/24" REGULAR AND EXTRA LARGE

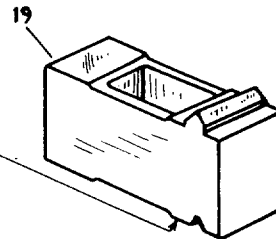
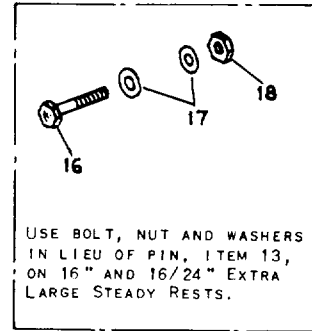
| ITEM NO. | PART NAME | 16" REGULAR | 16" EXTRA LARGE | 16/24" REGULAR | 16/ 24" EXTRA LARGE |
|----------|-------------------|-------------|-----------------|----------------|---------------------|
| | | PART NO. | PART NO. | PART NO. | PART NO. |
| 1 | Sq. HD. SETSCREW | 118x248 | 118x464 | 118x248 | 118x248 |
| 2 | HEX. NUT | 138x25 | 138x31 | 138x27 | 138x31 |
| 3 | WASHER | 161x18 | 161X65 | 161x18 | 161x65 |
| 4 | STEADY REST TOP | | | | |
| 5 | STEADY REST JAW | PT128FH1 | PT963H1 | PT128FH1 | PT963H1 |
| 6 | WASHER | 161x17 | 161x65 | 161x17 | 161x65 |
| 7 | HEX. HD. CAPSCREW | 112x220 | 112x424 | 112x220 | 112x424 |
| 8 | LOCK BOLT | PT217FH1 | PT464H1 | PT217FH1 | PTq64H1 |
| 9 | STEADY REST BASE | | | | |
| 10 | PIN | 160x97 | 160x124 | 160 x97 | 160x124 |
| 11 | HEX. NUT | 138x39 | 138x39 | 138x39 | 138x39 |
| 12 | WASHER | 167x9 | 167x9 | 167x9 | 167x9 |
| 13 | PIN | PT1805 | ---- | PT1805 | ---- |
| 14 | CLAMP | PT127H1 | PT127H1 | PT127H1 | PT1 27H1 |
| 15 | MACH1NE BOLT | 143x514 | 143x514 | 143x534 | 143X34 |
| 16 | CAPSCREW | ---- | 112x440 | ---- | 112x440 |
| 17 | WASHER | ---- | 161x27 | ---- | 161X27 |
| 18 | JAM NUT | ---- | 139x31 | ---- | 139x31 |
| 19 | RAISING BLOCK | ---- | ---- | PT2003H1 | PT962H1 |

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER



16/24" EXTRA LARGE STEADY REST
ALTHOUGH SLIGHTLY DIFFERENT IN
DESIGN, PARTS ARE SAME AS
STANDARD RESTS.



RAISING BLOCK - FOR 16/24" ONLY

TELESCOPING JAW STEADY REST
FOR 9", LT. 10, 10", 13", 14 1/2", 16" AND 16 1/2"
ALSO 16" AND 16 1/2" EXTRA LARGE

AVAILABLE ONLY AS SUBASSEMBLY. PARTS
INCLUDED ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN PARENTHESIS
AFTER PART NAME.

PARTS LIST

FOR 9", LT. 10, 10", 13" AND 14 1/2 "

| ITEM NO | PART NAME | 9" & LIGHT 10 | | 10" | | 13" | | 14 1/2" | |
|---------|---------------------------|---------------|--|-----------|--|-----------|--|-----------|--|
| | | PART NO. | | PART NO | | PART NO | | PART NO. | |
| 1 | RING | PT135NR1 | | PT135NR1 | | PT135T1 | | PT135FH1 | |
| 2 | PIN | 160x25 | | 160x25 | | 160x54 | | 160x55 | |
| 3 | ADJUSTMENT KNOB (1-2-4-6) | *AS132NR1 | | *AS132NR1 | | *AS132T1 | | *AS132FH1 | |
| 4 | SHOE | PT1082NT1 | | PT1082NT1 | | PT1082NT1 | | PT1082FH1 | |
| 5 | KNOB SLEEVE | PT131NR1 | | PT131NR1 | | PT131T1 | | PT131FH1 | |
| 6 | JAW ADJ. SCREW | PT133NR1 | | PT133NR1 | | PT133T1 | | PT133FH1 | |
| 7 | JAW | PT129NR1 | | PT129NR1 | | PT129T1 | | PT129FH1 | |
| 7A | JAW - 4 5/8" | ---- | | ---- | | ---- | | ---- | |
| 7B | JAW - 5 1/4" | ---- | | ---- | | ---- | | ---- | |
| 8 | KEY | PT137NR1 | | PT137NR1 | | PT137TH1 | | PT137TH1 | |
| 9 | LOCK SCREW | PT134NR1 | | PT134NR1 | | PT134TH1 | | PT134TH1 | |
| 10 | HEX, NUT | 138x29 | | 138x31 | | 138x35 | | 138x39 | |
| 11 | WASHER | 167x5 | | 167x6 | | 167x8 | | 167x9 | |
| 12 | PIN | 160x160 | | 160x160 | | PT1804 | | PT1805 | |
| 13 | CLAMP | PT127NK4 | | PT127R1 | | PT127T1 | | PT127F1 | |
| 14 | SQ. HD. BOLT | 143x208 | | 143x309 | | 143x412 | | 143x514 | |
| 15 | HEX, NUT | 138x25 | | 138x25 | | 138x27 | | 138x27 | |
| 16 | WASHER | 161x12 | | 161x12 | | 161x17 | | 161x18 | |
| 17 | STEADY REST TOP | | | | | | | | |
| 18 | LOCK BOLT (15-16-20) | *AS217NR1 | | *AS217NR1 | | *AS217T1 | | *AS118FH1 | |
| 19 | STEADY REST BASE | | | | | | | | |
| 20 | PIN | 160x56 | | 160x56 | | 160x60 | | 160x97 | |
| 21 | PIN | 160x46 | | 160x46 | | 160x47 | | 160x47 | |
| 22 | SETSCREW | ---- | | ---- | | ---- | | ---- | |
| 23 | RAISING BLOCK | ---- | | ---- | | ---- | | ---- | |

FOR 16" AND 16/24" REGULAR AND EXTRA LARGE

| ITEM NO | PART NAME | 16" | | 16" EXTRA LARGE | | 16/24" | | 16/24" EXTRA LARGE | |
|---------|---------------------------|-----------|--|-----------------|--|-----------|--|--------------------|--|
| | | PART NO. | | PART NO | | PART NO | | PART NO. | |
| 1 | RING | PT135FH1 | | PT135FH1 | | PT135FH1 | | PT135FH1 | |
| 2 | PIN | 160x55 | | 160x55 | | 160x55 | | 160x55 | |
| 3 | ADJUSTMENT KNOB (1-2-4-6) | *AS132FH1 | | *AS132FH1 | | *AS132FH1 | | *AS132FH1 | |
| 4 | SHOE | PT1082FH1 | | PT1082FH1 | | PT1082FH1 | | PT1082FH1 | |
| 5 | KNOB SLEEVE | PT131FH1 | | PT131FH1 | | PT131FH1 | | PT131FH1 | |
| 6 | JAW ADJ. SCREW | PT133FH1 | | PT133FH1 | | PT133FH1 | | PT133FH1 | |
| 7 | JAW | PT129FH1 | | ---- | | PT129FH1 | | ---- | |
| 7A | JAW - 4 5/8" | ---- | | PT129FH1 | | ---- | | PT129FH1 | |
| 7B | JAW - 5 1/4" | ---- | | PT963H2 | | ---- | | PT963H2 | |
| 8 | KEY | PT137TH1 | | PT137TH1 | | PT137TH1 | | PT137TH1 | |
| 9 | LOCK SCREW | PT134TH1 | | PT134TH1 | | PT134TH1 | | PT134TH1 | |
| 10 | HEX, NUT | 138x39 | | 138x39 | | 138x39 | | 138x39 | |
| 11 | WASHER | 167x9 | | 167x9 | | 167x9 | | 167x9 | |
| 12 | PIN | PT1805 | | PT1805 | | PT1805 | | PT1805 | |
| 13 | CLAMP | PT127H1 | | PT127H1 | | PT127H1 | | PT127H1 | |
| 14 | SQ. HD. BOLT | 143x514 | | 143x514 | | 143x534 | | 143x534 | |
| 15 | HEX, NUT | 138x27 | | 138x31 | | 138x27 | | 138x31 | |
| 16 | WASHER | 161x18 | | 161x65 | | 161x18 | | 161x65 | |
| 17 | STEADY REST TOP | | | | | | | | |
| 18 | LOCK BOLT (15-16-20) | *AS118FH1 | | *AS964H1 | | *AS118FH1 | | *AS964H1 | |
| 19 | STEADY REST BASE | | | | | | | | |
| 20 | PIN | 160x97 | | 160x124 | | 160x97 | | 160x124 | |
| 21 | PIN | 160x47 | | 160x47 | | 160x47 | | 160x47 | |
| 22 | SETSCREW | ---- | | 109x12 | | ---- | | 109x12 | |
| 23 | RAISING BLOCK | ---- | | ---- | | PT2003H1 | | PT962H1 | |

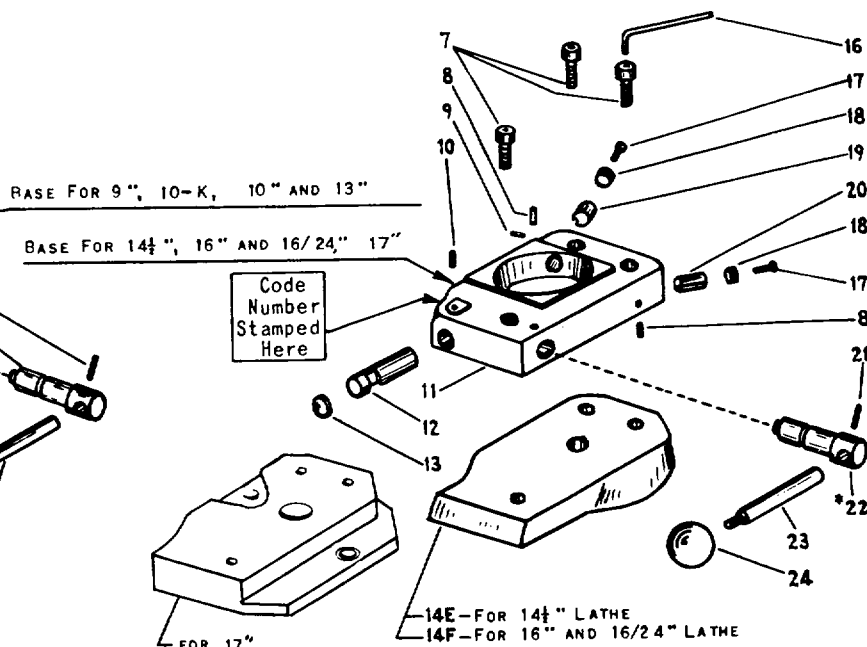
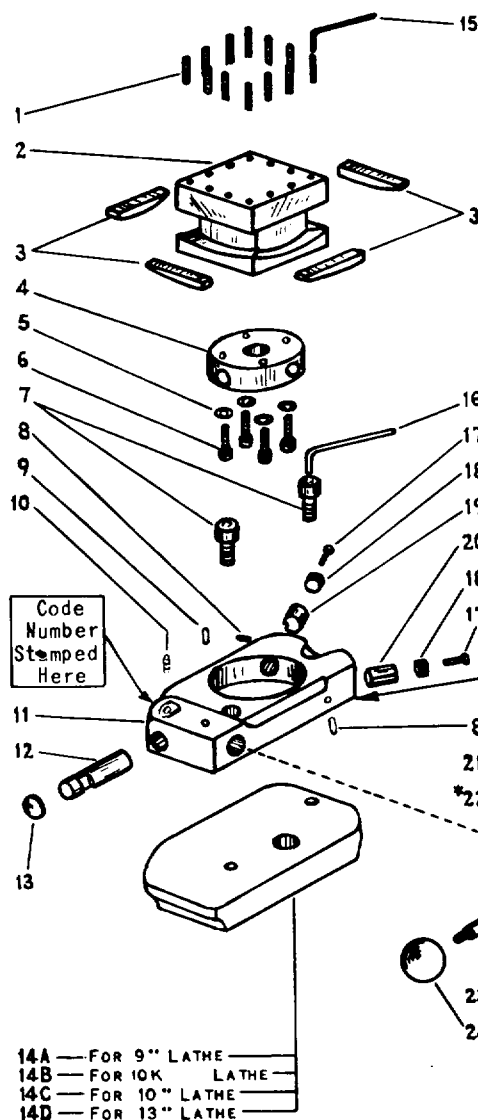
PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT CODE NUMBER MUST ACCOMPANY ORDER

SQUARE TURRET TOOL BLOCK

FOR 9", 10-K, 10",
13", 14 1/2", 16", 16/24" AND 17"

| ITEM NO | PART NAME | 9", 10-K, 10" & 13" | | 14 1/2", 16", 16/24", 17" | |
|---------|-------------------------|---------------------|--|---------------------------|--|
| | | PART NO | | PART NO | |
| 1 | SETSCREW | 121x116 | | 121x 320 | |
| 2 | SQUARE TURRET | | | | |
| 3 | TOOL ADJ. WEDGE | PT744NT2 | | PT744FH2 | |
| 4 | INDEX PILOT | PT759NT1 | | PT759FH1 | |
| 5 | WASHER | 180x300 | | PT3400 | |
| 6 | CAPSCREW | 114x12 | | 114x120 | |
| 7 | CAPSCREW | 114x212 | | 114x424 | |
| 8 | PIN | 160x258 | | 160x258 | |
| 9 | PIN | 160x28 | | 160x59 | |
| 10 | SETSCREW | 122x102 | | 122x102 | |
| 11 | BASE | PT740NT2 | | PT740FH2 | |
| 12 | ORDER ITEM 22 | PT751NT2 | | PT751FH2 | |
| 13 | EXPANSION PLUG | PT1502 | | PT1503 | |
| 14A | RAISING BLOCK 9" LATHE | PT762N1 | | ---- | |
| 14B | LT. 10 | PT762K1 | | ---- | |
| 14C | 10" | PT762R1 | | ---- | |
| 14D | 13" | PT762T1 | | ---- | |
| 14E | 14 1/2" | ---- | | PT762F1 | |
| 14F | 16"-16/24" | ---- | | PT762H1 | |
| 15 | HEX, WRENCH | CE2385 | | CE2387 | |
| 16 | HEX, WRENCH | CE2389 | | CE2390 | |
| 17 | MACH, SCREW | 107x110 | | 107x316 | |
| 18 | ADJUSTING SCREW | PT761NT1 | | PT761FH1 | |
| 19 | CLAMP SHOE - LEFT | PT764NT1 | | PT764FH1 | |
| 20 | CLAMP SHOE - RIGHT | PT763NT1 | | PT763FH1 | |
| 21 | PIN | 160x25 | | *AS758FH1 | |
| 22 | ECCENTRIC (12-21-23-24) | *AS758NT1 | | PT750FH2 | |
| 23 | HANDLE | PT750NT1 | | PT406K&FH1 | |
| 24 | BAKELITE BALL | PT406NT1 | | PT673GJ1 | |
| 25 | RAISING BLOCK | | | | |

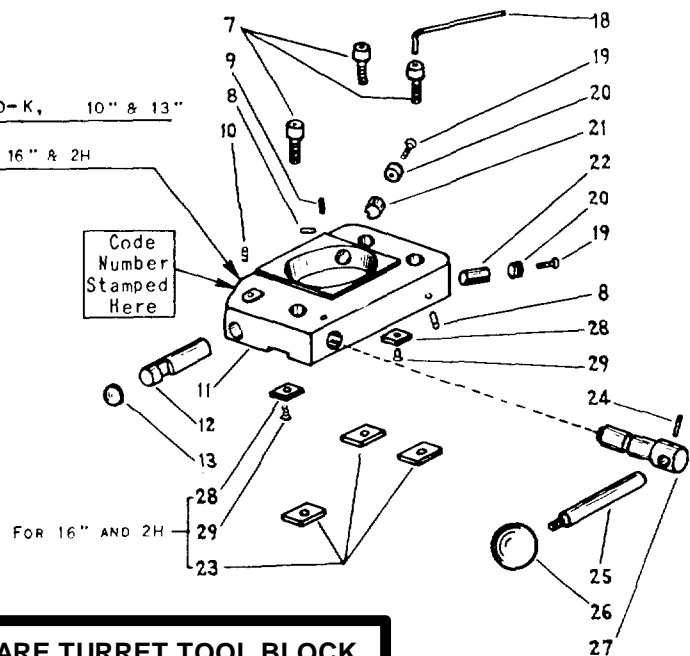
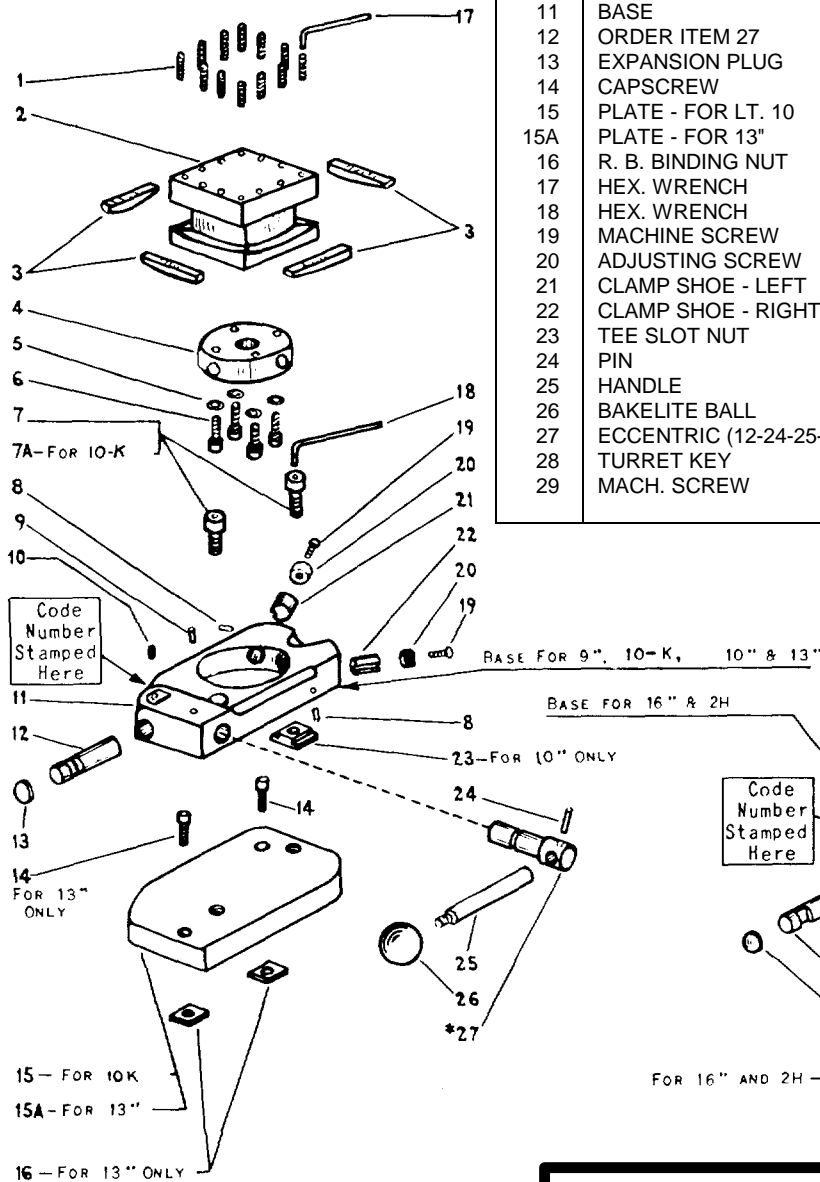


*AVAILABLE ONLY AS SUB. ASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PAR. ENTESIS AFTER PART NAME.

PARTS LIST

SERIAL NUMBER OF LATHE AND UNIT
CODE NUMBER MUST ACCOMPANY ORDER

| ITEM NO | PART NAME | 9", 10-K, 10" & 13" | | 14 1/2", 16", 16/24", 17" | |
|------------|-------------------------|------------------------|--|---------------------------|--|
| | | PART NO | | PART NO | |
| 1 | SETSCREW | 121x116 | | 121x320 | |
| 2 | SQUARE TURRET | | | | |
| 3 | TOOL ADJ. WEDGE | PT744NT2 | | PT744FH2 | |
| 4 | INDEX PILOT | PT759NT1 | | PT759FH1 | |
| 5 | WASHER | 180x300 | | PT3400 | |
| 6 | CAPSCREW | 114x12 | | 114x120 | |
| 7 | CAPSCREW - FOR | | | | |
| | 9", 10", 13" & 16" | 114x212 | | 114x424 | |
| 7A | CAPSCREW - FOR LT. 10 | 114x220 | | ---- | |
| 8 | PIN | 160x258 | | 160x258 | |
| 9 | PIN | 160x28 | | 160x59 | |
| 10 | SETSCREW | 122x102 | | 122x102 | |
| 11 | BASE | PT740NT2 | | PT740FH2 | |
| 12 | ORDER ITEM 27 | PT751NT1 | | PT751FH2 | |
| 13 | EXPANSION PLUG | PT1502 | | PT1503 | |
| 14 | CAPSCREW | 114x228 | | ---- | |
| 15 | PLATE - FOR LT. 10 | PT770K1 | | ---- | |
| 15A | PLATE - FOR 13" | PT770T2 | | ---- | |
| 16 | R. B. BINDING NUT | PT772T1 | | ---- | |
| 17 | HEX. WRENCH | CE2385 | | CE2387 | |
| 18 | HEX. WRENCH | CE2389 | | CE2390 | |
| 19 | MACHINE SCREW | 107x110 | | 107x316 | |
| 20 | ADJUSTING SCREW | PT761NT1 | | PT761FH1 | |
| 21 | CLAMP SHOE - LEFT | PT764NT1 | | PT764FH1 | |
| 22 | CLAMP SHOE - RIGHT | PT763NT1 | | PT763FH1 | |
| 23 | TEE SLOT NUT | PT741NR2 | | PT741FH1 | |
| 24 | PIN | 160x25 | | 160x33 | |
| 25 | HANDLE | PT750NT1 | | PT750FH2 | |
| 26 | BAKELITE BALL | PT406NT1 | | PT406K&FH1 | |
| 27 | ECCENTRIC (12-24-25-26) | *AS758NT1 | | *AS758FH1 | |
| 28 | TURRET KEY | ---- | | PT753FH1 | |
| 29 | MACH. SCREW | ---- | | 103 X 208 | |

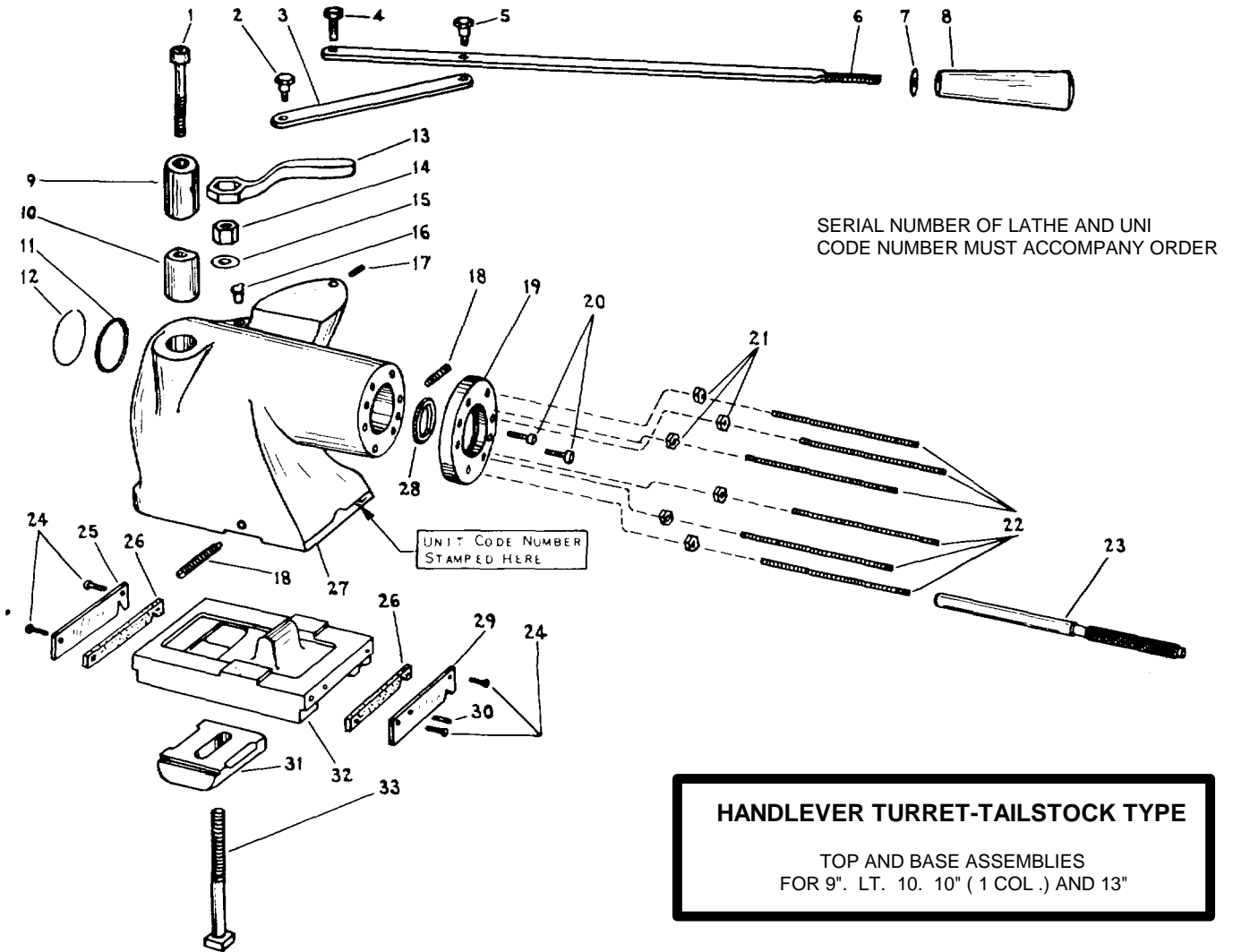


*AVAILABLE ONLY AS SUB.
ASSEMBLY. PARTS INCLUDED ARE
INDICATED BY THE ITEM NUMBERS
APPEARING IN PAR. ENTESIS
AFTER PART NAME.

SQUARE TURRET TOOL BLOCK

for Double Tool Cross Side
For 9", 10-K", 13", 16" and 2h

PARTS LIST

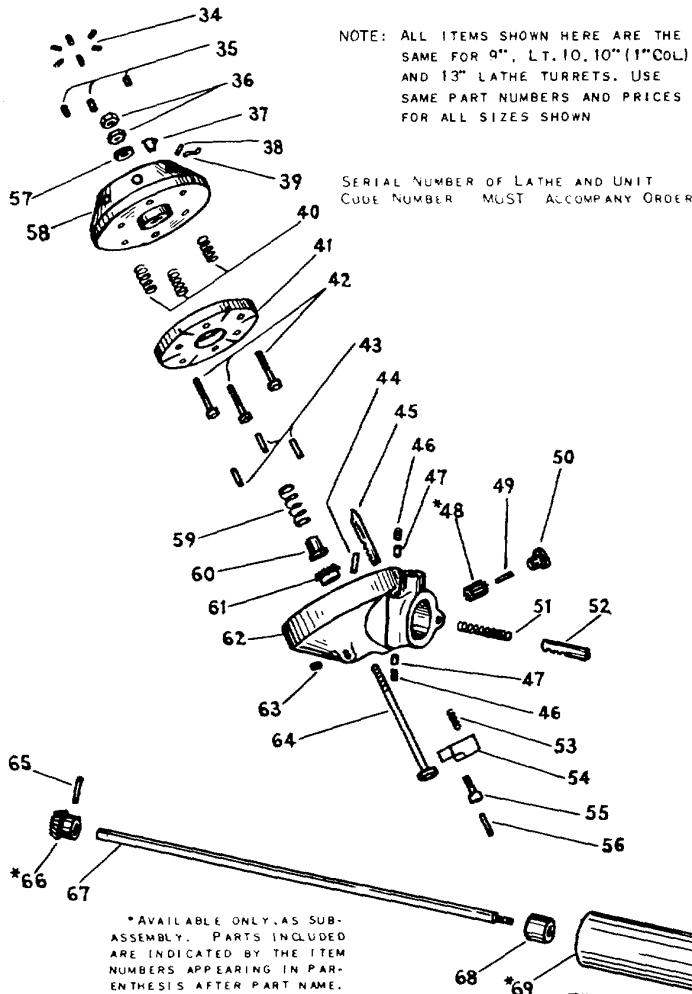


| ITEM NO | PART NAME | 9" | | LT. 10 | | 10" (1" COL.) | | 13" | |
|------------|-------------------|-----------|--|-----------|--|---------------|--|-----------|--|
| | | PART NO. | | PART NO | | PART NO | | PART NO. | |
| 1 | CAPSCREW | 114x340 | | 114x340 | | 114x340 | | 114x340 | |
| 2 | BOWL SCREW | PT173BNT1 | | PT1738NT1 | | PT1738NT1 | | PT173RNT1 | |
| 3 | LINK | PT1745NT1 | | PT1745NT1 | | PT1745NT1 | | PT1745NT1 | |
| 4 | LEVER PIN | PT1735NT2 | | PT1735NT2 | | PT1735NT2 | | PT1735NT2 | |
| 5 | LINK SCREW | PT1734NT1 | | PT1734NT1 | | PT1734NT1 | | PT1734NT1 | |
| 6 | LEVER | PT1746NT1 | | PT1746NT1 | | PT1746NT1 | | PT1746NT1 | |
| 7 | WASHER | PT1709NR1 | | PT1709NR1 | | PT1709NR1 | | PT1709NR1 | |
| 8 | HANDLE | PT3122NR1 | | PT3122NR1 | | PT3122NR1 | | PT3122NR1 | |
| 9 | UPPER PLUG | PT1747NT1 | | PT1747NT1 | | PT1747NT1 | | PT1747NT1 | |
| 10 | LOWER PLUG | PT249T2 | | PT249T2 | | PT249T2 | | PT249T2 | |
| 11 | FELT WICK | 256x2 | | 256x2 | | 256x2 | | 256x2 | |
| 12 | SNAP RING | PT1737NT1 | | PT1737NT1 | | PT1737NT1 | | PT1737NT1 | |
| 13 | CLAMP WRENCH | CE2653NK | | CE2653NK | | CE2653R | | CE2653T | |
| 14 | CLAMP NUT | PT283NK1 | | PT283NK1 | | PT283R1 | | PT283T1 | |
| 15 | WASHER | PT2861NK1 | | PT2861NK1 | | PT1720R1 | | PT238T1 | |
| 16 | OILER | 155x20 | | 155x20 | | 155x20 | | 155x20 | |
| 17 | SETSCREW | 120x5 | | 120x5 | | 120x5 | | 120x5 | |
| 18 | SET-OVER SCREW | PT278NK1 | | PT278NK1 | | PT278R1 | | PT278TF1 | |
| 19 | STOP SCREW RING | PT1729NT2 | | PT1729NT2 | | PT1729NT2 | | PT1729NT2 | |
| 20 | CAPSCREW | 114X10 | | 114x10 | | 114x10 | | 114x10 | |
| 21 | HEX NUT | 138x24 | | 138x24 | | 138x24 | | 138x24 | |
| 22 | STOP SCREW | PT1730NT1 | | PT1730NT1 | | PT1730NT1 | | PT1730NT1 | |
| 23 | STOP SCREW WRENCH | PT1727NT1 | | PT1727NT1 | | PT1727NT1 | | PT1727NT1 | |

PARTS LIST

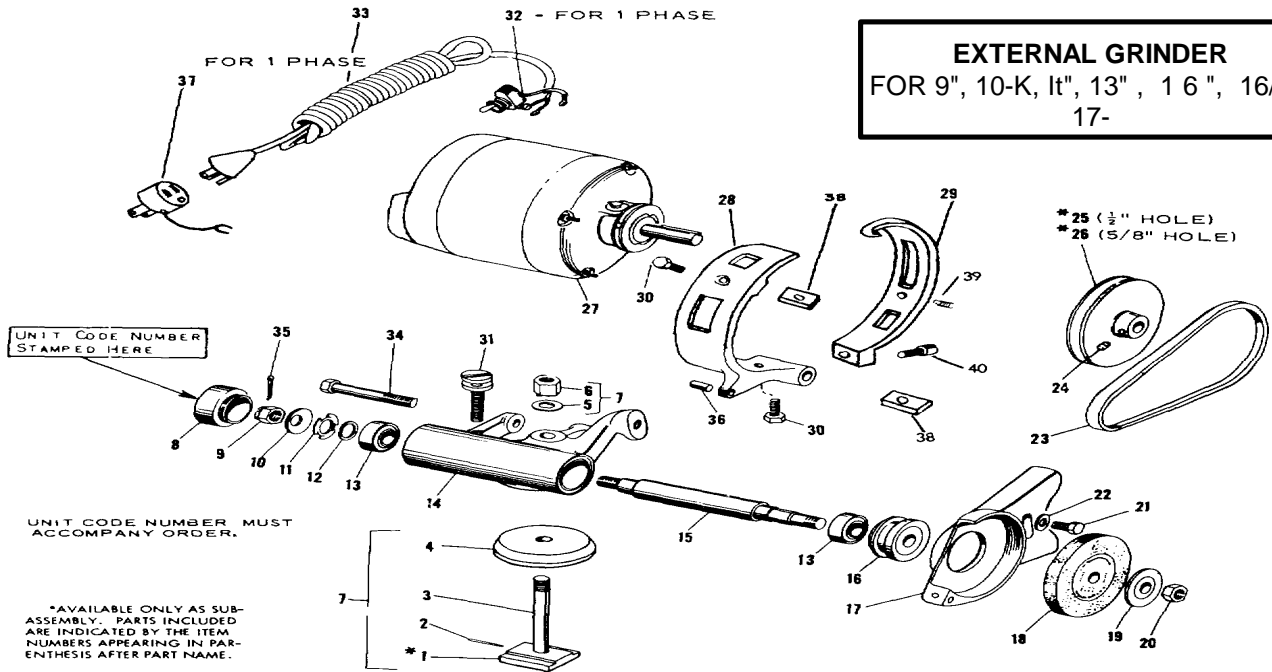
| ITEM NO. | PART NAME | 9" | | LT. 10 | | 10" (1" COL.) | | 13" | |
|----------|---------------------|----------|--|----------|--|---------------|--|----------|--|
| | | PART NO. | | PART NO. | | PART NO. | | PART NO. | |
| 24 | MACH. SCREW | PT1164-1 | | PT1164-1 | | PT1164-1 | | PT1164-1 | |
| 25 | FELT RETAINER-FRONT | PT581K2 | | PT581K2 | | PT581K2 | | PT581K2 | |
| 26 | WIPER | PT582K1 | | PT582K1 | | PT582K1 | | PT582K1 | |
| 27 | T. S. TURRET TOP | | | | | | | | |
| 28 | FELT WICK | 256x1 | | 256x1 | | 256x1 | | 256x1 | |
| 29 | FELT RETAINER-REAR | PT580K2 | | PT580K2 | | PT580R2 | | PT580T2 | |
| 30 | PIN | 160x18 | | 160x18 | | 160x18 | | 160x18 | |
| 31 | CLAMP | PT56NK2 | | PT56NK2 | | PT56R1 | | PT56T1 | |
| 32 | BASE | PT51K3 | | PT1717K2 | | PT51R3 | | PT51T3 | |
| 33 | CLAMP BOLT | 143x214 | | 143x216 | | 143x317 | | 143x422 | |

| ITEM NO. | PART NAME | 9". LT. 10. 10" & 13" | |
|----------|----------------------|-----------------------|--|
| | | PART NO. | |
| 34 | SETSCREW | 120x10 | |
| 35 | SETSCREW | 126 x505 | |
| 36 | JAM NUT | PT1062- 1 | |
| 37 | OILER | 155x20 | |
| 38 | PIN | 160X240 | |
| 39 | FELT WICK | 256x1 | |
| 40 | COMPRESSION SPRING | PT1715NT1 | |
| 41 | INDEX PLATE | PT1722NT1 | |
| 42 | CAPSCREW | 114x20 | |
| 43 | DOWEL PIN | 153x10 | |
| 44 | PIN | 160x25 | |
| 45 | INDEX PIN | PT1744NT1 | |
| 46 | SETSCREW | 126 x604 | |
| 47 | BINDER PLUG | PT4931S1 | |
| 48 | PINION (49) | *AS1741NT1 | |
| 49 | PIN | PT1822 | |
| 50 | PLUG | PT1742NT1 | |
| 51 | SPRING | 162x53 | |
| 52 | PLUNGER | PT1743NT1 | |
| 53 | SPRING | 162x49 | |
| 54 | SPRING HOUSING | PT1716NT1 | |
| 55 | CAPSCREW | 11 4x10 | |
| 56 | PIN | 160x25 | |
| 57 | WASHER | PT3037NR1 | |
| 58 | HEAD | PT1721NT2 | |
| 59 | COIL SPRING | 162x20 | |
| 60 | DR IVER | PT17 24NT2 | |
| 61 | BEVEL GEAR | PT1726NT2 | |
| 62 | BOWL | | |
| 63 | SETSCREW | 126x505 | |
| 64 | CENTER POST | PT1740NT2 | |
| 65 | TAPER PIN | 168x107 | |
| 66 | BEVEL GEAR (65) | *AS1725NT2 | |
| 67 | ROTOR ROD | PT1732NT1 | |
| 68 | BUSHING | PT1739NT2 | |
| 69 | SPINDLE (68-70-71) * | *AS1733NT2 | |
| 70 | KEY | PT285KR1 | |
| 71 | PIN | 160x19 | |
| 72 | SETSCREW | 120x4 | |
| 73 | ROTOR (72) | *AS1731NT2 | |
| 74 | JAM NUT | 139x23 | |
| 75 | BORING BAR | CE3420 | |



**HANDLEVER TURRET-TAILSTOCK TYPE
HEAD AND SPINDLE ASSEMBLIES
FOR 9". LT. 10. 10" (1 COL.) AND 13"**

PARTS LIST



| ITEM NO | PART NAME | 9" & 10-K PART NO. | 10" PART NO. | 13" PART NO. | 14-1/2" PART NO. | 16" & 16 1/4" PART NO. | 17" PART NO. |
|---------|-----------------------------------|-----------------------|-----------------|-----------------|---------------------|---------------------------|-----------------|
| 1 | CLAMP (2-3) | AS1577NK1 | *AS1577R1 | *AS1577T1 | *AS1577F1 | *AS1577H1 | *AS1577H1 |
| 2 | PIN | 160 x 19 | 160 x 19 | 160 x 21 | 160 x 21 | 160 x 21 | |
| 3 | CLAMP STUD | PT1585NR1 | PT1585NR1 | PT1585T1 | PT1585F1 | PT1585H1 | PT1585H1 |
| 4 | RAISING BLOCK | ----- | ----- | PT1586T1 | PT596F1 | PT1586H1 | PT1586GJ1 |
| 5 | WASHER | 161 x 22 | 161 x 22 | 161 x 22 | 161 x 22 | 161 x 22 | |
| 6 | CLAMPING NUT | PT283NK1 | PT283NK1 | PT283NK1 | PT283NK1 | PT283NK1 | PT283NK1 |
| 7 | CLAMP BOLT EQUIPMENT (1-4-5-6) | CE307NK | CE307R | CE307T | CE307F | CE307H | CE307GJ |

| ITEM NO. | PART NAME | PART NO | ITEM NO. | PART NAME | PART NO. | |
|----------|------------------------|------------|----------|--|------------|--|
| 8 | GRINDER CAP | PT1592NH1 | 24 | SETSCREW | 120 x 4 | |
| 9 | CASTELLATED NUT | PT1070NH1 | 25 | SETSCREW | 120 x 6 | |
| 10 | WASHER | 161 x 27 | 26 | MOTOR PULLEY - 1/2" (24) | *AS1583NH2 | |
| 11 | SPRING | PT1588NH1 | 27 | MOTOR PULLEY 5/8" (24) | *AS1582NH2 | |
| 12 | WASHER | 161 x 68 | 28 | MOTOR-SPECIFY, H.P., PHASE, CYCLE & VOLT | | |
| 13 | BEARING | PT502NH1 | 29 | MOTOR BASE | PT1574NH1 | |
| 14 | GRINDER FRAME | PT1575NH1 | 30 | MOTOR BASE | PT1573NH1 | |
| 15 | GRINDER SPINDLE | PT1579NH1 | 31 | CAPSCREW | 112 x 110 | |
| 16 | GRINDER SPINDLE PULLEY | PT1584NH1 | 32 | BELT TIGHTENER ADJ. SCREW/V | PT1587NH1 | |
| 17 | WHEEL GUARD | PT1576NH1 | 33 | TOGGLE SWITCH | SE4679 | |
| 18 | GRINDING WHEEL | CE2759 | 34 | CORD SET | CE3659 | |
| 19 | WHEEL FLANGE | PT1580NH1 | 35 | CAPSCREW | PT2900NH1 | |
| 20 | NUT | PT11056NH1 | 36 | COTTER PIN | 170 x 206 | |
| 21 | CAPSCREW | 112 x 110" | 37 | PIN | PT1803 | |
| 22 | WASHER | 161 x 12 | 38 | ADAPTER | PT6883 | |
| 23 | BELT | CE3L220 | | SPACER | PT1580-2 | |
| 39 | | | | SETSCREW | 126 x 762 | |
| 40 | | | | SOC. HD. SCREW | 114 x 220 | |

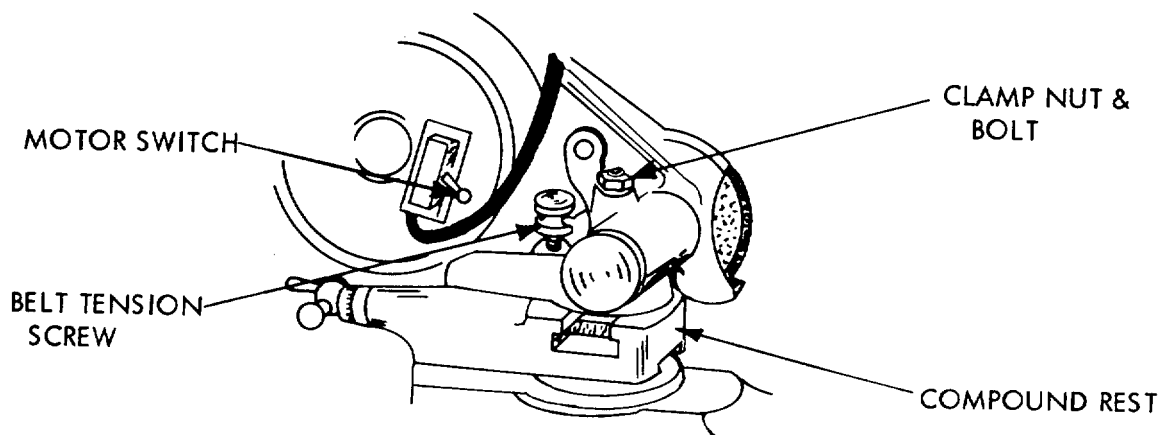
PARTS LIST

EXTERNAL GRINDER

| GRINDING WHEELS CUP 4" DIAMETER, ½" FACE, AND 1" HOLE | | | GRINDING WHEEL |
|--|-----|--------------------------------|---|
| CE2759 | FOR | GENERAL WORK - ROUGH OR FINISH | 3 ¼" ONUTSIDE DIAMETER, 14" FACE. 1" HOLE |
| CE2758 | " | CNUTT1NG TOOLS- " " " | CE3236 FOR SHARPENING REAMERS & CNUTTERS |
| CE2774 | " | ANUTOMOBILE VALVES- " " " | |
| CE2757 | " | CAST IRON - FINISH GRINDING | |
| CE2769 | " | SOFT STEEL - " " " | |

INSTRUCTION

The External Grinder Attachment is mounted in the compound T-slot with item 7 clamp assembly as shown below:



LUBRICATION - GRINDER.

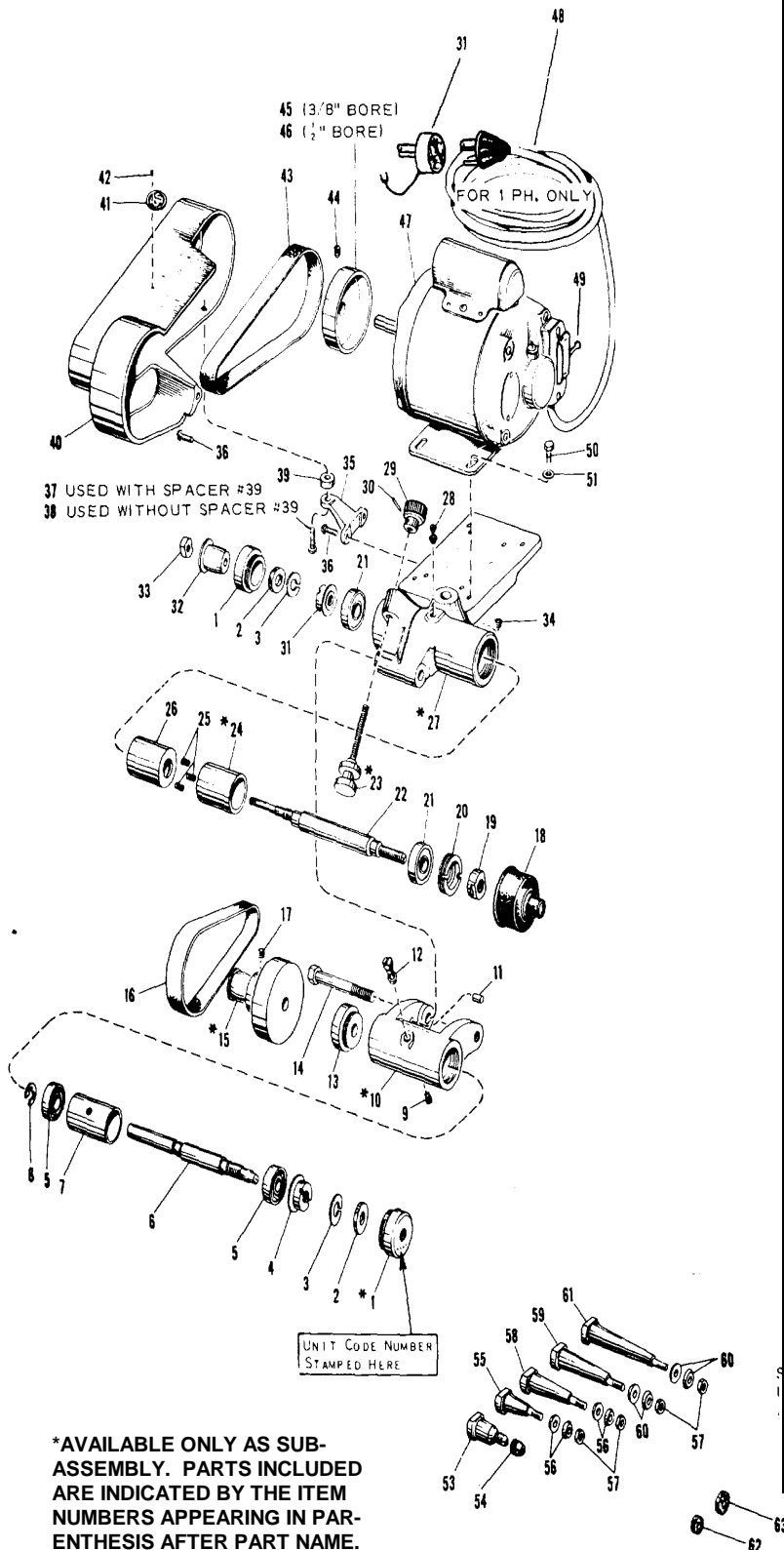
The spindle revolves in pre-lubricated, precision ball bearings which are sealed to protect them from damage and requires no further lubrication.

LUBRICATION - MOTOR (1-PHASE)

After 3 years normal or 1 year heavy duty service add oil annually. No recoiling normally required for light duty with total operating Time under 25,000 hours. Use electric motor oil. Do not over oil.

PARTS LIST

INTERNAL GRINDER FOR 9", 10-K, 10", 13", 14 1/2", 16", 16/24" AND 17"

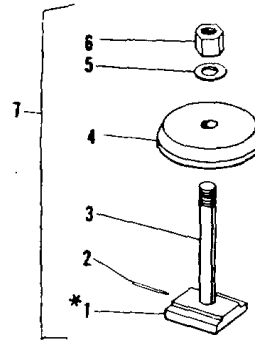


| ITEM NO. | PART NAME | PART NO. |
|----------|-----------------------------|-------------|
| 1 | RETAINER CAP (2-3) | *AS2411NH1 |
| 2 | FELT | PT2421NH1 |
| 3 | SPLIT WASHER | PT2422NH1 |
| 4 | RETAINER NUT | PT2410NH1 |
| 5 | BALL BEARING | PT2450NH1 |
| 6 | JACKSHAFT SPINDLE | PT2430NH2 |
| 7 | JACKSHAFT SPACER | PT2424NH1 |
| 8 | RETAINING RING | PT2444NH1 |
| 9 | SETSCREW | 121 X 5 |
| 10 | JACKSHAFT HOUSING (9-11-12) | *AS2429NH2 |
| 11 | STRAIGHT PIN | PT1825-1 |
| 12 | OILER | PT2679-1 |
| 13 | RETAINER CAP | PT2443NH1 |
| 14 | CAPSCREW | 115 X 248 |
| 15 | JACKSHAFT PULLEY (17) | *AS2419NH2 |
| 16 | BELT | PT2438NH1 |
| 17 | SETSCREW | 120 X 903 |
| 18 | SPINDLE NOSE PROTECTOR | PT2449NH1 |
| 19 | RETAINER NUT | PT2406NH1 |
| 20 | RETAINER SEAL | PT2407NH1 |
| 21 | BEARING | PT2437NH1 |
| 22 | SPINDLE | PT2401NH1 |
| 23 | BELT ADJ. SCREW (29-30) | *AS2432NH1 |
| 24 | SPACER - FRONT (25) | *AS2408NH1 |
| 25 | COIL SPRING | 162 X 54 |
| 26 | SPACER- REAR | PT2409NH1 |
| 27 | FRAME (28-34) | *AS2400NH2 |
| 28 | OILER | PT2679-1 |
| 29 | BELT TIGHTNER ADJ, KNOB | PT2433NH1 |
| 30 | PIN | 160 X 25 |
| 31 | Adapter | PT6883 |
| 32 | SPINDLE PULLEY | PT2412NH1 |
| 33 | LOCK NUT | PT2415NH1 |
| 34 | SETSCREW | 121 X 5 |
| 35 | BRACKET | PT2470NH1 |
| 36 | SCREW | 101 X 308 |
| 37 | SCREW | 101 X 312 |
| 38 | SCREW | 101 X 308 |
| 39 | SPACER | PT2471NH1 |
| 40 | BELT GUARD (41-42) | *AS2431NH1 |
| 41 | INSIGNIA PLATE | PT3300 |
| 42 | DRIVE SCREW | 130 X 100 |
| 43 | BELT | PT2439NH1 |
| 44 | SCREW | 122 X 505 |
| 45 | MOTOR PULLEY | *AS2472NH1 |
| 46 | MOTOR PULLEY (44) | *AS2414NH1 |
| 47 | MOTOR - SPECIFY | |
| 48 | CORD SET (FOR 1 PH, ONLY) | PT1104-2 |
| 49 | SWITCH (FOR 1 PH. ONLY) | SE4679 |
| 50 | CAPSCREW | 112 X 8 |
| 51 | WASHER | PT1679-1 |
| 52 | END WRENCH | PT2458-2 |
| 53 | CHUCK (54) | *AS2403NH2 |
| 54 | CHUCK NUT | PT2402NH2 |
| 55 | ARBOR (56-57) | *AS2425NH1 |
| 56 | WASHER | PT2442NH1 |
| 57 | NUT | 138 X 24 |
| 58 | ARBOR (56-57) | *AS2426NH 1 |
| 59 | ARBOR (57-60) | *AS2427NH1 |
| 60 | WASHER | PT2404NH1 |
| 61 | ARBOR (57-60) | *AS2428NH1 |
| 62 | GRINDING WHEEL | CE2925 |
| 63 | GRINDING WHEEL | CE2926 |

SERIAL NUMBER OF LATHE AND
UNIT CODE NUMBER MUST
ACCOMPANY ORDER.

PARTS LIST

CLAMP BOLT ASSEMBLY



| ITEM NO. | PART NAME | 9" AND 10 K | 10" | 13" | 14 1/2" | 16" & 16/24" | 17" |
|----------|-----------------------------------|-------------|-----------|-----------|-----------|--------------|-----------|
| | | PART NO. | PART NO. | PART NO. | PART NO. | PART NO. | PART NO. |
| 1 | CLAMP (2-3) | *AS1577NK1 | *AS1577R1 | *AS1577T1 | *AS1577F1 | *AS1577H1 | *AS1577H1 |
| 2 | PIN | 160 X 19 | 160 X 19 | 160 X 19 | 160 X 21 | 160 X 21 | 160 X 21 |
| 3 | CLAMP STUD | PT1585NR1 | PT1585NR1 | PT1585T1 | PT1585F1 | PT1585H1 | PT1585H1 |
| 4 | RAISING BLOCK | ----- | ----- | PT1586T1 | PT1586F1 | PT1586H1 | PT1586GJ1 |
| 5 | WASHER | 161 X 22 | 161 X 22 | 161 X 22 | 161 X 22 | 161 X 22 | 161 X 22 |
| 6 | CLAMPING NUT | PT283NK1 | PT283NK1 | PT283NK1 | PT283NK1 | PT283NK1 | PT283NK1 |
| 7 | CLAMP BOLT EQUIPMENT (1-4-5-6) | CE307NK | CE307R | CE307T | CE307F | CE307H | CE307GJ |

INSTRUCTION

The internal grinder attachment mounts on the compound rest top. Adjust the belt to proper tension with belt adjusting screw item 23. The grinder spindle and the jackshaft spindle run on high speed ball bearings which require no adjustment.

LUBRICATION - GRINDER

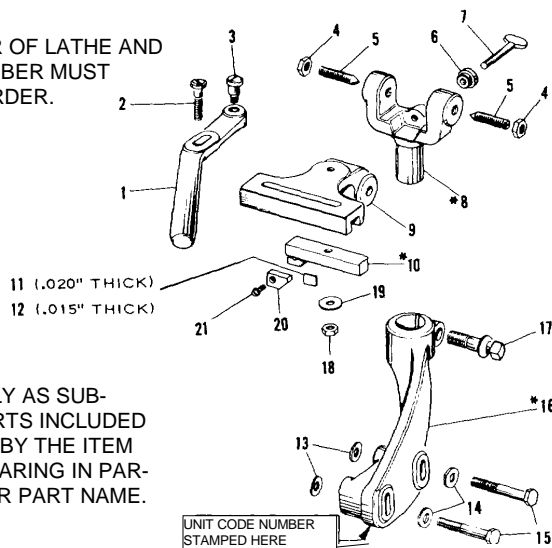
Remove oil screws periodically, items 12 and 18, and add a few drops of spindle bearing oil at both points. Use SBL CE1600 oil or equal.

LUBRICATION - MOTOR (1 PHASE)

Motors having ball bearings are packed with grease sufficient for about two years of normal service. At the end of that time, the bearings should be cleaned thoroughly of the old grease and repacked about one-third full with General Electric ball-bearing grease.

PARTS LIST

SERIAL NUMBER OF LATHE AND
UNIT CODE NUMBER MUST
ACCOMPANY ORDER.



MICA UNDERCUTTING ATTACHMENT

FOR 9", 10 K 10", 13", 14 1/2", 16"

*AVAILABLE ONLY AS SUB-
ASSEMBLY. PARTS INCLUDED
ARE INDICATED BY THE ITEM
NUMBERS APPEARING IN PAR-
ENTHESIS AFTER PART NAME.

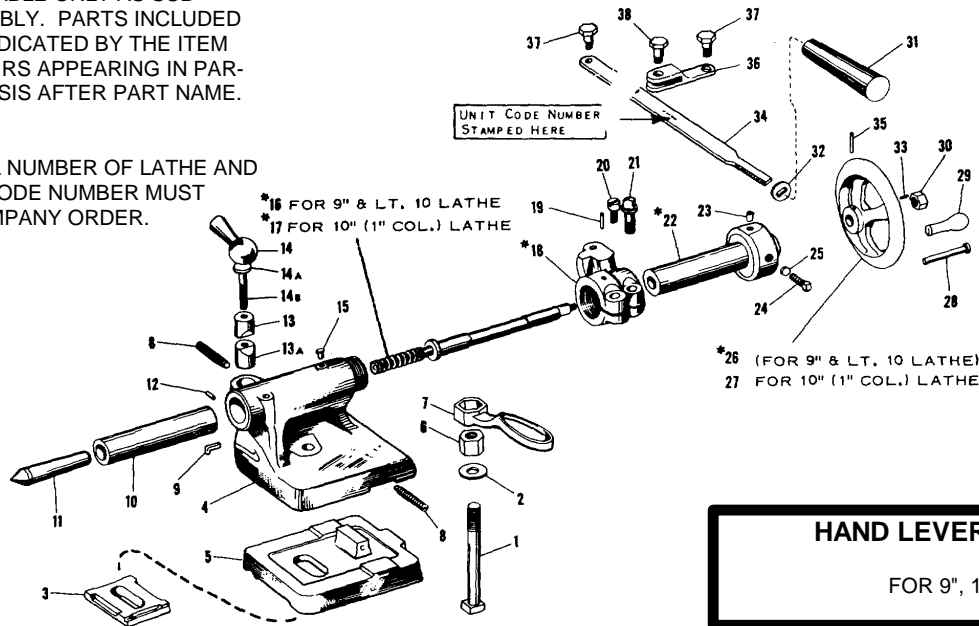
| ITEM NO. | PART NAME | 9" | | 10 K & 10" (1" COL) | | 13" | |
|-------------|----------------------|------------|--|---------------------|--|------------|--|
| | | PART NO. | | PART NO. | | PART NO. | |
| 1 | LEVER | PT1446NH2 | | PT1446NH2 | | PT1446NH2 | |
| 2 | STUD SCREW | PT1448NH1 | | PT1448NH1 | | PT1448NH1 | |
| 3 | SHOULDER SCREW | PT1447NH1 | | PT1447NH1 | | PT1447NH1 | |
| 4 | JAM NUT | 139 X 27 | | 139 X 27 | | 139 X 27 | |
| 5 | SETSCREW | PT703NH1 | | PT703NH1 | | PT703NH1 | |
| 6 | LOCK NUT | PT 1437NH1 | | PT 1437NH1 | | PT1437NH1 | |
| 7 | THUMB SCREW | 131 X 26 | | 131 X 26 | | 131 X 26 | |
| 8 | FORK (4-5) | *AS1449NH1 | | *AS1449NH1 | | *AS1449NH1 | |
| 9 | GUIDE | PT1443NH2 | | PT1443NH2 | | PT1443NH2 | |
| 10 | BLADE HOLDER (14-15) | *AS1444NH1 | | *AS1444NH1 | | *AS1444NH1 | |
| 11 | BLADE - .020" TH1CK | CE2029 | | CE2029 | | CE2029 | |
| 12 | BLADE - .015" TH1CK | CE2028 | | CE2028 | | CE2028 | |
| 13 | WASHER | 161 X 63 | | 161 X 63 | | ----- | |
| 14 | WASHER | 161 X 12 | | 161 X 12 | | 161 X 16 | |
| 15 | CAPSCREW | 112 X 132 | | 112 X 132 | | 112 X 236 | |
| 16 | BRACKET (16) | *AS1442N1 | | *AS1442KR1 | | *AS1442T1 | |
| 17 | COLLAR SCREW | PT212R1 | | PT212R1 | | PT1436T1 | |
| 18 | HEX JAM NUT | 139 X 25 | | 139 X 25 | | 139 X 25 | |
| 19 | WASHER | 161 X 12 | | 161 X 12 | | 161 X 12 | |
| 20 | BLADE CLAMP | PT1441NH1 | | PT1441NH1 | | PT1441NH1 | |
| 21 | MACHINE SCREW | 102 X 310 | | 102 X 310 | | 102 X 310 | |

| ITEM NO. | PART NAME | 14 1/2" | | 16" | |
|-------------|----------------------|------------|--|------------|--|
| | | PART NO. | | PART NO. | |
| 1 | LEVER | PT1446NH2 | | PT1446NH2 | |
| 2 | STUD SCREW | PT1448NH1 | | PT1448NH1 | |
| 3 | SHOULDER SCREW | PT1447NH1 | | PT1447NH1 | |
| 4 | JAM NUT | 139 X 27 | | 139 X 27 | |
| 5 | SETSCREW | PT703NH1 | | PT703NH1 | |
| 6 | LOCK NUT | PT1437NH1 | | PT1437NH1 | |
| 7 | THUMB SCREW | 131 X 26 | | 131 X 26 | |
| 8 | FORK (4-5) | *AS1449NH1 | | *AS1449NH1 | |
| 9 | GUIDE | PT1443NH2 | | PT1443NH2 | |
| 10 | BLADE HOLDER (14-15) | *AS1444NH1 | | *AS1444NH1 | |
| 11 | BLADE - .020" THICK | CE2029 | | CE2029 | |
| 12 | BLADE - .015" THICK | CE2028 | | CE2028 | |
| 13 | WASHER | ----- | | ----- | |
| 14 | WASHER | 161 X 26 | | 161 X 26 | |
| 15 | CAPSCREW | 112 X 436 | | 112 X 436 | |
| 16 | BRACKET (16) | *AS1442F1 | | *AS1442H1 | |
| 17 | COLLAR SCREW | PT1436FH1 | | PT1436FH1 | |
| 18 | HEX JAM NUT | 139 X 25 | | 139 X 25 | |
| 19 | WASHER | 161 X 12 | | 161 X 12 | |
| 20 | BLADE CLAMP | PT1441NH1 | | PT1441NH1 | |
| 21 | MACHINE SCREW | 102 X 310 | | 102 X 310 | |

PARTS LIST

*AVAILABLE ONLY AS SUB-ASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER PART NAME.

SERIAL NUMBER OF LATHE AND UNIT CODE NUMBER MUST ACCOMPANY ORDER.



HAND LEVER TAILSTOCK

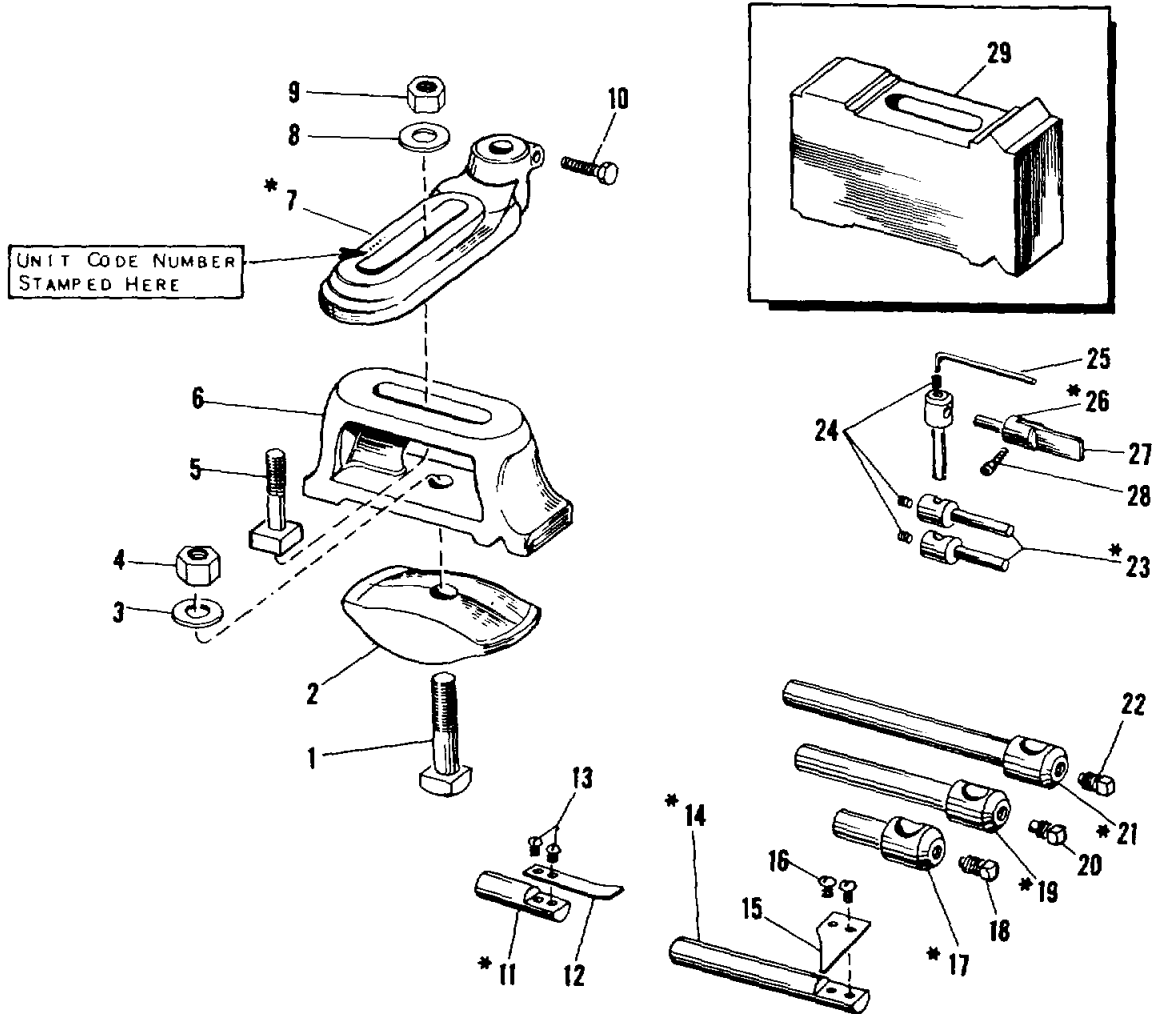
FOR 9", 10-K, & 10"

| ITEM NO. | PART NAME | 9" | | LIGHT 10 | | 10" (11/16" & 1" COL.) | |
|----------|----------------------------|------------|--|------------|--|------------------------|--|
| | | PART NO. | | PART NO. | | PART NO. | |
| 1 | BOLT | 143 X 214 | | 143 X 216 | | 143 X 317 | |
| 2 | WASHER | PT2861NK1 | | PT2861NK1 | | PT1720R1 | |
| 3 | TAILSTOCK CLAMP | PT56NK2 | | PT56NK2 | | PT56R1 | |
| 4 | TAILSTOCK TOP | | | | | | |
| 5 | TAILSTOCK BASE | PT51N1 | | PT1701K1 | | PT51R1 | |
| 6 | NUT | PT283NK1 | | PT283NK1 | | PT283R1 | |
| 7 | TAILSTOCK WRENCH | CE2653NK | | CE2653NK | | CE2653R | |
| 8 | SET OVER SCREW | PT278NK1 | | PT278NK1 | | PT278R1 | |
| 9 | TAILSTOCK SPINDLE KEY | PT286NR1 | | PT286NR1 | | PT286NR1 | |
| 10 | TAILSTOCK SPINDLE | PT201NR1 | | PT201NR1 | | PT201NR1 | |
| 11 | HARD CENTER | CE2401 | | CE2401 | | CE2401 | |
| 12 | PIN | ----- | | ----- | | 160 X 48 | |
| 13 | UPPER PLUG | ----- | | ----- | | PT248KR3 | |
| 13A | LOWER PLUG | ----- | | ----- | | PT249KR3 | |
| 14 | BINDING LEVER (14A-14B) | PT54NK1 | | PT54NK1 | | *AS54KR2 | |
| 15 | OILER | ----- | | ----- | | 155 X 23 | |
| 16 | TAILSTOCK SCREW | *AS1706NK1 | | *AS1706NK1 | | | |
| 17 | TAILSTOCK SCREW | ----- | | ----- | | *AS1706R1 | |
| 18 | BARREL BUSHING (19-20-21) | *AS1700NK1 | | *AS1700NK1 | | *AS1700R1 | |
| 19 | PIN | 160 X 46 | | 160 X 46 | | ----- | |
| 20 | SCREW | 111 X 112 | | 111 X 112 | | 111 X 112 | |
| 21 | COLLAR SCREW | PT872NK1 | | PT872NK1 | | PT872R1 | |
| 22 | SLIDING BUSHING (23-24-25) | *AS1703NR1 | | *AS1703NR1 | | *AS1703NR1 | |
| 23 | OILER | 155 X 17 | | 155 X 17 | | 155 X 17 | |
| 24 | SCREW | 118 X 112 | | 118 X 112 | | 118 X 112 | |
| 25 | BINDER SHOE | PT1075NR1 | | PT1075NR1 | | PT1075NR1 | |
| 26 | HANDWHEEL (28-29-35) | *AS53NK1 | | *AS53NK1 | | | |
| 27 | HANDWHEEL (28-29-35) | ----- | | ----- | | *AS1262R1 | |
| 28 | HANDLE STUD | ----- | | ----- | | PT1242 | |
| 29 | HANDLE PT 1480 | PT1480 | | PT1480 | | PT1492 | |
| 30 | NUT | ----- | | ----- | | 136 X 25 | |
| 31 | HANDLE | PT3122NR1 | | PT3122NR1 | | PT3122NR1 | |
| 32 | LEVER WASHER | PT1709NR1 | | PT3122NR1 | | PT1709NR1 | |
| 33 | PIN | ----- | | ----- | | 160 X 19 | |
| 34 | HAND LEVER | PT1707NR1 | | PT1707NR1 | | PT1707NR1 | |
| 35 | PIN | 168 X 106 | | 168 X 106 | | | |
| 36 | LEVER LINK | PT1711NR1 | | PT1711NR1 | | PT1711NR1 | |
| 37 | LINK SCREW | PT1710NR1 | | PT1710NR1 | | PT1710NR1 | |
| 38 | LINK SCREW | PT1712NR1 | | PT1712NR1 | | PT1712NR1 | |

PARTS LIST

TOOL and REAMER ATTACHMENT

FOR 9", LT. 10, 10", 13", 14 1/2", 16" & 16 24"

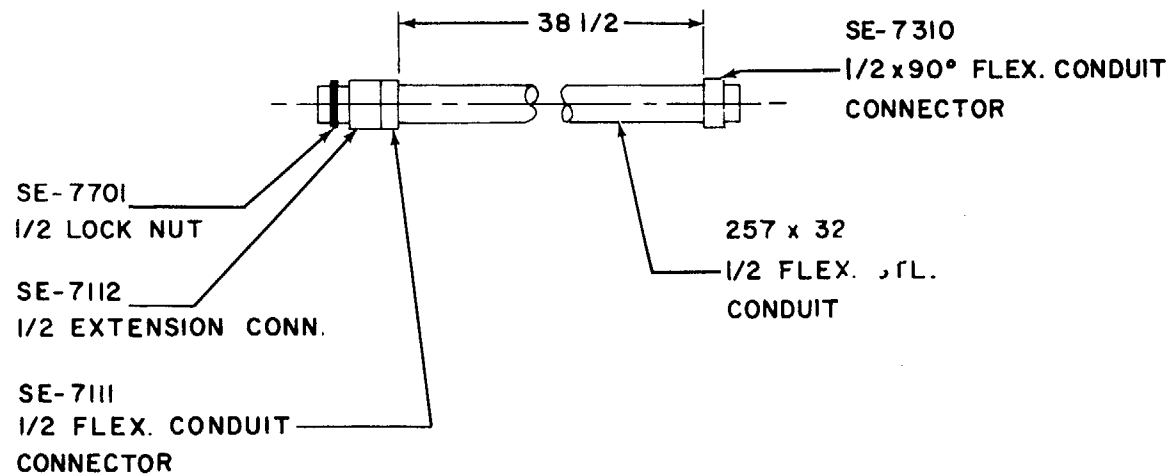
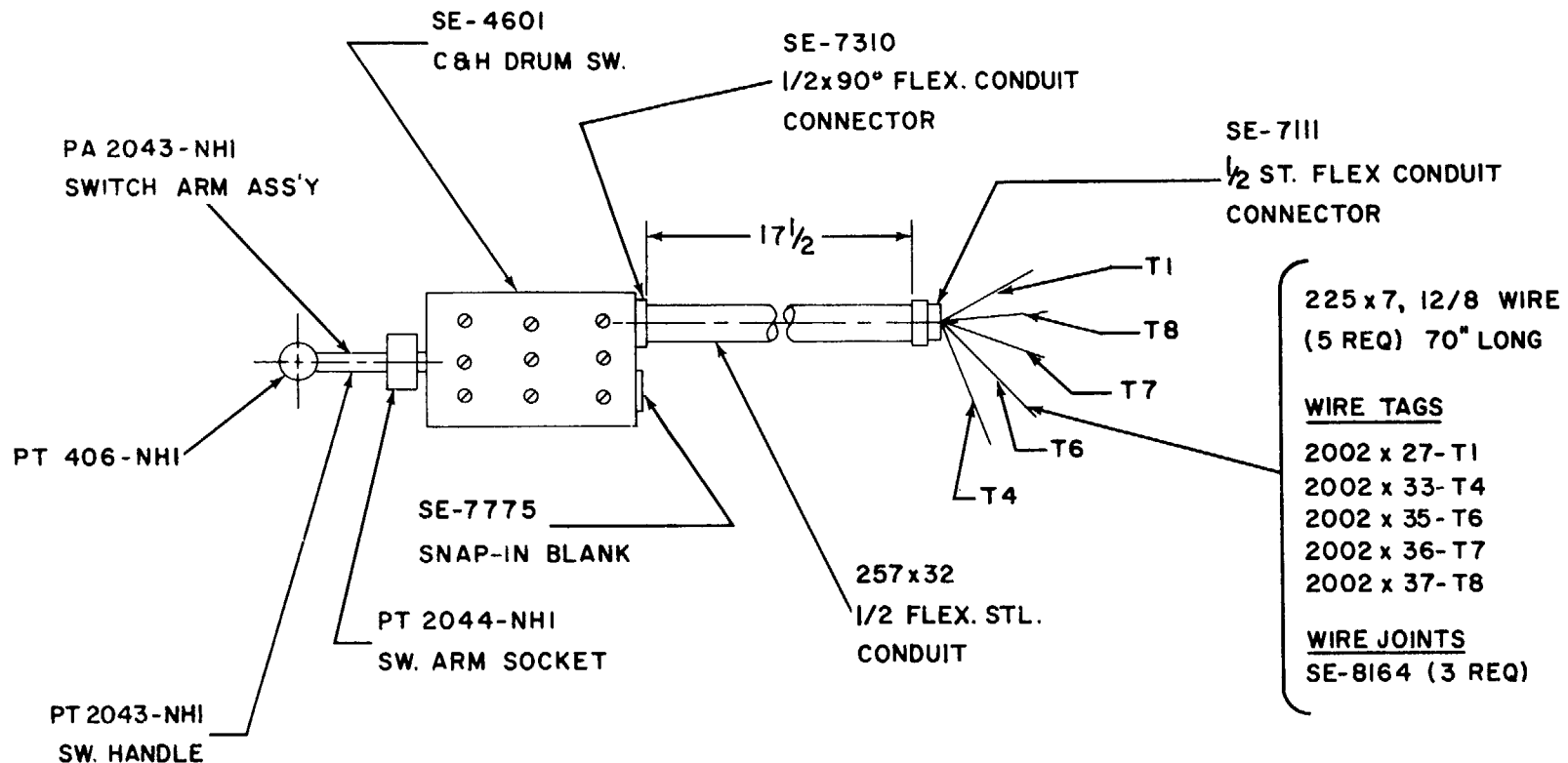


*AVAILABLE ONLY AS SUB-ASSEMBLY. PARTS INCLUDED ARE INDICATED BY THE ITEM NUMBERS APPEARING IN PARENTHESIS AFTER PART NAME.

SERIAL NUMBER OF LATHE AND UNIT CODE NUMBER MUST ACCOMPANY ORDER.

PARTS LIST

| ITEM NO. | | 9" & LIGHT 10 | | 10" (11/16" & 1" COL. | | 13" | |
|----------|----------------------------|---------------|---|-----------------------|---|------------|---|
| | | PART NO. | | PART NO. | | PART NO. | |
| 1 | BOLT | 143 X 210 | | 143 X 312 | | 143 X 410 | |
| 2 | CLAMP | PT127NK4 | | PT127R1 | | PT127T1 | |
| 3 | WASHER | 161 X 25 | | 161 X 30 | | 161 X 36 | |
| 4 | NUT | 136 X 29 | | 136 X 30 | | 136 X 35 | |
| 5 | BOLT (8-9) | NOT USED | | NOT USED | | PTS17T1 | |
| 6 | SPRING STOP PLATE | NOT USED | | NOT USED | | PT122ST1 | |
| 7 | SPRING STOP SOCKET (10) | *AS1226NR1 | | *AS1226NR1 | | *AS1226T1 | |
| 8 | WASHER | NOT USED | | NOT USED | | 161 X 65 | |
| 9 | NUT | NOT USED | | NOT USED | | 136 X 31 | |
| 10 | CAPSCREW | 112 X 16 | | 112 X 16 | | 112 X 116 | |
| 11 | SPRING STOP SHANK (12-13) | *AS1227NH1 | | *AS1227NH 1 | | *AS1227NH1 | |
| 12 | SPRING STOP - VERTICAL | PT1229NH1 | | PT1229NH1 | | PT1229NH1 | |
| 13 | SCREW | 101 X 107 | | 101 X 107 | | 101 X 107 | |
| 14 | SPRING STOP BAR (15-16) | *AS1234NH1 | | *AS1234NH1 | | *AS1234NH1 | |
| 15 | SPRING STOP - HORIZONTAL | PT1235NH1 | | PT1235NH1 | | PT123SNH1 | |
| 16 | SCREW | 101 X 306 | | 101 X 306 | | 101 X 306 | |
| 17 | SWIVEL BAR - SHORT (18) | *AS1231NH1 | | *AS1231NH1 | | *AS1231NH1 | |
| 18 | SETSCREW | 119 X 108 | | 119 X 108 | | 119 X 108 | |
| 19 | SWIVEL BAR - MEDIUM (20) | *AS1232NH1 | | *AS1232NH1 | | *AS1232NH1 | |
| 20 | SETSCREW | 119 X 108 | | 119 X 108 | | 119 X 108 | |
| 21 | SWIVEL BAR - LONG (22) | *AS1233NH1 | | *AS1233NH1 | | *AS1233NH1 | |
| 22 | SETSCREW | 119 X 108 | | 119 X 108 | | 119 X 108 | |
| 23 | SWIVEL BAR (24) | *AS1594NH11 | | *AS1594NH1 | | *AS1594NH1 | |
| 24 | SETSCREW | 120 X 4 | | 120 X 4 | | 120 X 4 | |
| 25 | HEX WRENCH | 173 X 6 | | 173 X 6 | | 173 X 6 | |
| 26 | SPRING STOP SHANK (27-28) | *AS1595NH1 | | *AS1595NH1 | | *AS1595NH1 | |
| 27 | SPRING STOP | PT1596NH1 | | PT1596NH1 | | PT1596NH1 | |
| 28 | SCREW | 103 X 210 | | 103 X 210 | | 103 X 210 | |
| 29 | RAISING BLOCK | | | | | | |
| | | 14 1/2" | | 16" | | 16/24" | |
| ITEM NO. | | PART NO. | | PART NO. | | PART NO. | |
| 1 | BOLT | 143 X 514 | 1 | 143 X 514 | 1 | 143 X 534 | 1 |
| 2 | CLAMP | PT127F | 1 | PT127H1 | 1 | PT127H1 | 1 |
| 3 | WASHER | 161 X 41 | 1 | 161 X 41 | 1 | 161 X 41 | 1 |
| 4 | NUT | 136 X 39 | 1 | 136 X 39 | 1 | 136 X 39 | 1 |
| 5 | BOLT (8-9) | PTS17FH1 | 1 | PT517FH1 | 1 | PT517FH1 | 1 |
| 6 | SPRING STOP PLATE | PT1225F1 | 1 | PT1225H1 | 1 | PT1225H1 | 1 |
| 7 | SPRING STOP SOCKET (10) | *AS1226FH1 | 1 | *AS1226FH1 | 1 | *AS1226FH1 | 1 |
| 8 | WASHER | 161 X 65 | 1 | 161 X 65 | 1 | 161 X 65 | 1 |
| 9 | NUT | 136 X 31 | 1 | 136 X 31 | 1 | 136 X 31 | 1 |
| 10 | CAPSCREW | 112 X 216 | 1 | 112 X 216 | 1 | 112 X 216 | 1 |
| 11 | SPRING STOP SHANK (12-13) | *AS1227NH1 | 1 | *AS1227NH1 | 1 | *AS1227NH1 | 1 |
| 12 | SPRING STOP - VERTICAL | PT1229NH 1 | 1 | PT1229NH 1 | 1 | PT1229NH1 | 1 |
| 13 | SCREW | 101 X 107 | 1 | 101 X 107 | 1 | 101 X 107 | 1 |
| 14 | SPRING STOP BAR (15-16) | *AS1234NH1 | 1 | *AS1234NH1 | 1 | *AS1234NH1 | 1 |
| 15 | SPRING STOP - HORIZONTAL | PT1235NH1 | 1 | PT1235NH1 | 1 | PT1235NH1 | 1 |
| 16 | SCREW | 101 X 306 | 1 | 101 X 306 | 1 | 101 X 306 | 1 |
| 17 | SWIVEL BAR - SHORT (18) | *AS1231NH1 | 1 | *AS1231NH1 | 1 | *AS1231NH1 | 1 |
| 18 | SETSCREW | 119 X 108 | 1 | 119 X 108 | 1 | 119 X 108 | 1 |
| 19 | SWIVEL BAR - MEDIUM (20) | *AS1232NH1 | 1 | *AS1232NH1 | 1 | *AS1232NH1 | 1 |
| 20 | SETSCREW | 119 108 | 1 | 119 X 108 | 1 | 119 X 108 | 1 |
| 21 | SWIVEL BAR - LONG (22) | *AS1233NH1 | 1 | *AS1233NH1 | 1 | *A51233NH1 | 1 |
| 22 | SETSCREW | 119 X 108 | 1 | 119 X 108 | 1 | 119 X 108 | 1 |
| 23 | SWIVEL BAR (24) | *AS1594NH1 | 1 | *AS1594NH1 | 1 | *AS1594NH1 | 1 |
| 24 | SETSCREW | 120 X 4 | 1 | 1120 X 4 | 1 | 120 X 4 | 1 |
| 25 | HEX WRENCH | 173 X 6 | 1 | 173 X 6 | 1 | 173 X 6 | 1 |
| 26 | SPRING STOP SHANK (27-281) | *AS1595NH1 | 1 | *AS1595NH1 | 1 | *AS1595NH1 | 1 |
| 27 | SPRING STOP | PT1596NH1 | 1 | PT1596NH1 | 1 | PT1596NH1 | 1 |
| 28 | SCREW STOP | 103 X 210 | 1 | 103 X 210 | 1 | 103 X 210 | 1 |
| 29 | RAISING BLOCK | | | | | PT2003H1 | |



By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

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