

**DEALER'S
MASTER PARTS MANUAL**

CLAUSING
1400 SERIES 14" LATHES

PROPERTY OF **CLAUSING**

MASTER PARTS MANUAL

for

CLAUSING 1400 SERIES 14-INCH LATHES

INTRODUCTION

This Master Parts Manual applies to all 1400 series, 14-inch lathes, including those in current production.

The manual is divided into sections by assemblies – Headstock, Countershaft, etc. – as indicated on the divider tabs.

Each page has a serial number box: Example –

CLOSED – 140200 To 140738. Assembly parts pertain to lathes within that serial block ONLY.

OPEN – 140200 To _____ . Assembly parts in current production.

HOW TO USE

To find the correct part number for your customer's lathe:

1. Ask for model, serial number.
2. Ask in which assembly the part is located.
3. Turn to section of manual and page where serial number applies.
4. Double-check by referring to Parts Price List to determine if part is still available or has been replaced by an interchangeable part or assembly. If replaced, use replacement number when ordering.

KEEP THIS MANUAL UP-TO-DATE

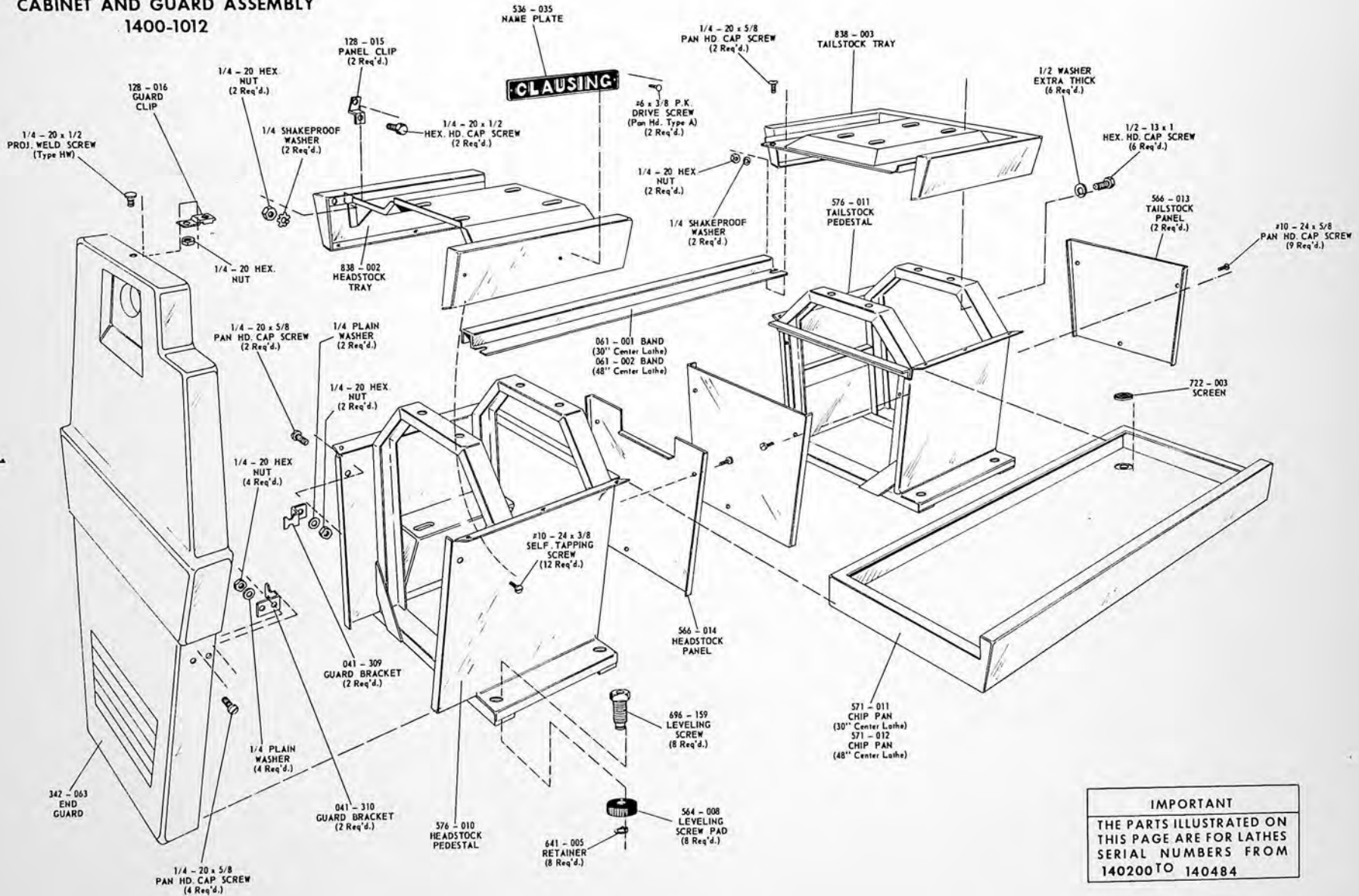
When parts are replaced or modified, two (2) new pages will be sent. One page will close-out the open serial number page and should be inserted in its place. The other page will have an open serial number and is to be inserted as the last page of the section. If part is replaced, it will be shown on the Parts Price List.

MODEL NUMBER	DRIVE	BETWEEN CENTERS	COUNTER SHAFT	MOTOR
1400	VARIABLE	30"	CLUTCH & BRAKE	5 H.P. 200 OR 230/460 V, 60 C
1401	VARIABLE	30"	CLUTCH & BRAKE	
1402	VARIABLE	*30"	CLUTCH & BRAKE	
1403	VARIABLE	**48"	CLUTCH & BRAKE	

*POWER FEED TURRET LATHE, SAME AS 30-INCH CENTER LATHE

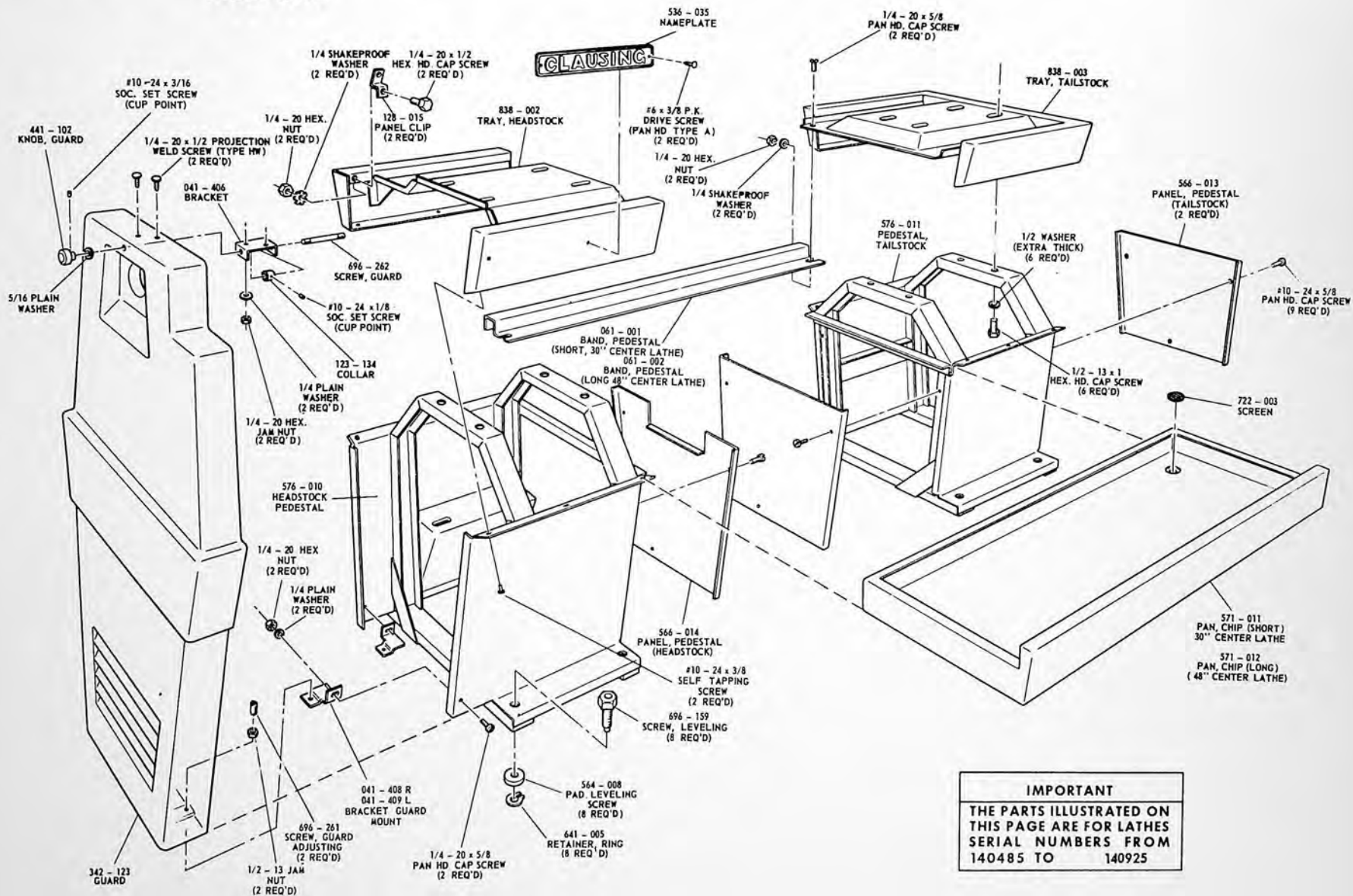
**POWER FEED TURRET LATHE, SAME AS 48-INCH CENTER LATHE

CABINET AND GUARD ASSEMBLY 1400-1012



IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140200 TO 140484

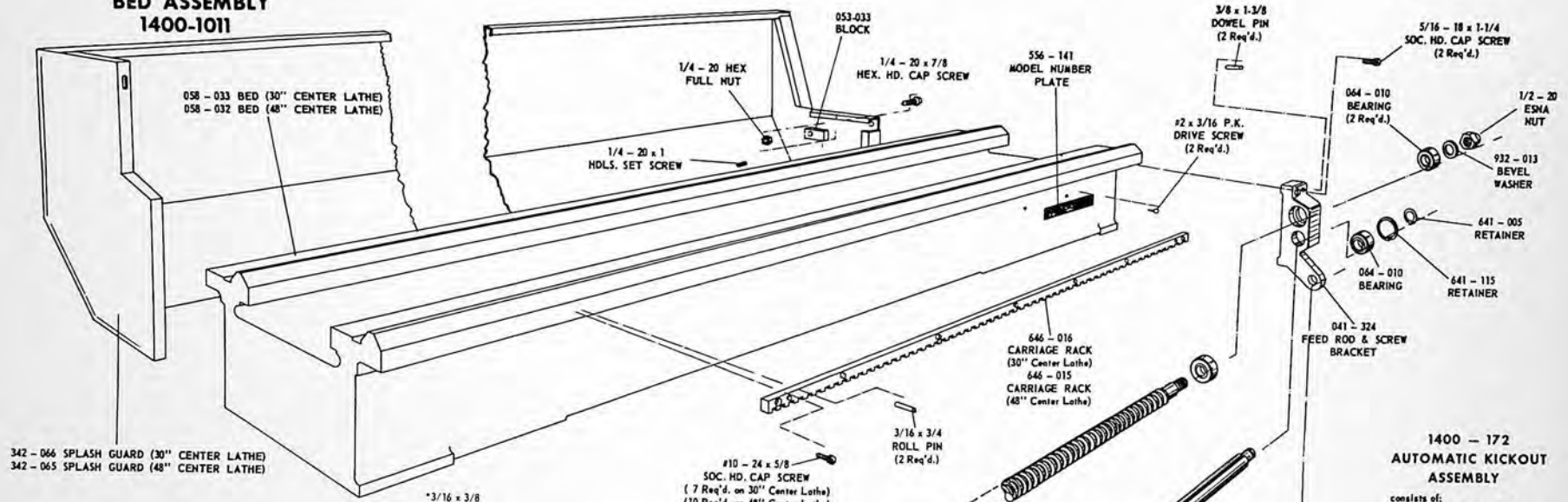
CABINET AND GUARD ASSEMBLY 1400-1012



IMPORTANT

THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140485 TO 140925

BED ASSEMBLY 1400-1011



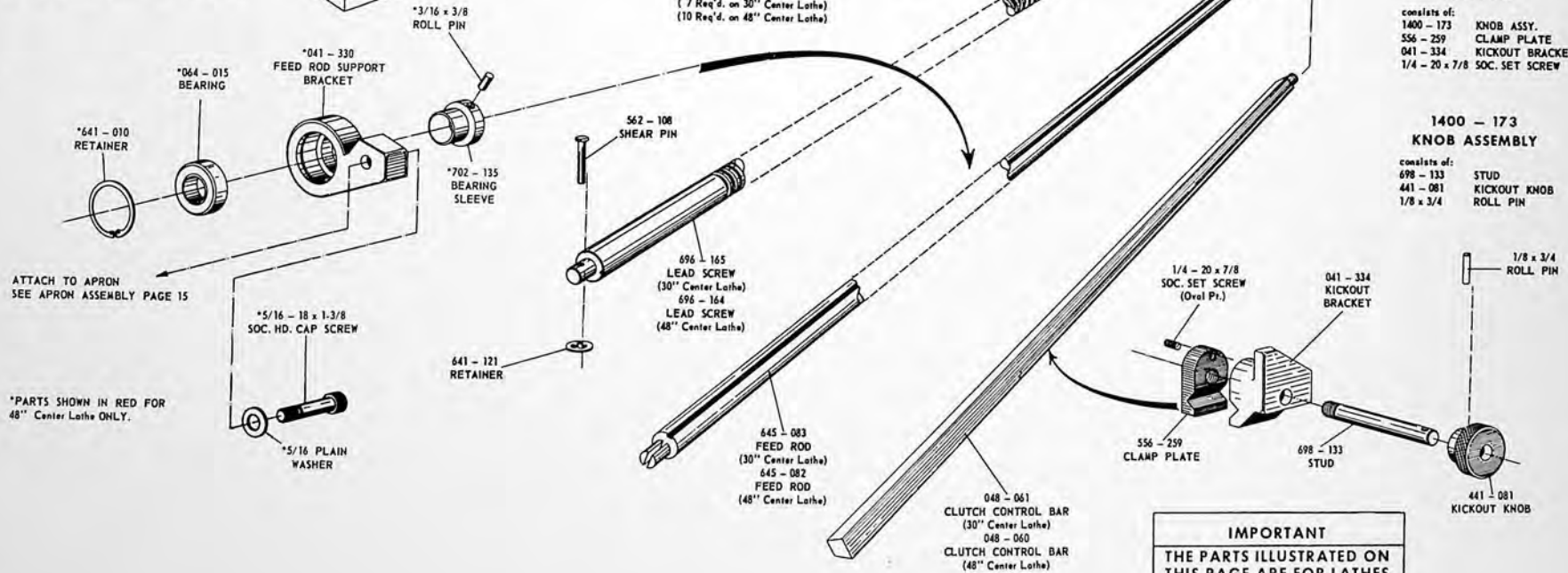
1400 - 172 AUTOMATIC KICKOUT ASSEMBLY

consists of:
1400 - 173 KNOB ASSY.
556 - 259 CLAMP PLATE
041 - 334 KICKOUT BRACKET
1/4 - 20 x 7/8 SOC. SET SCREW

1400 - 173 KNOB ASSEMBLY

consists of:
698 - 133 STUD
441 - 081 KICKOUT KNOB
1/8 x 3/4 ROLL PIN

2

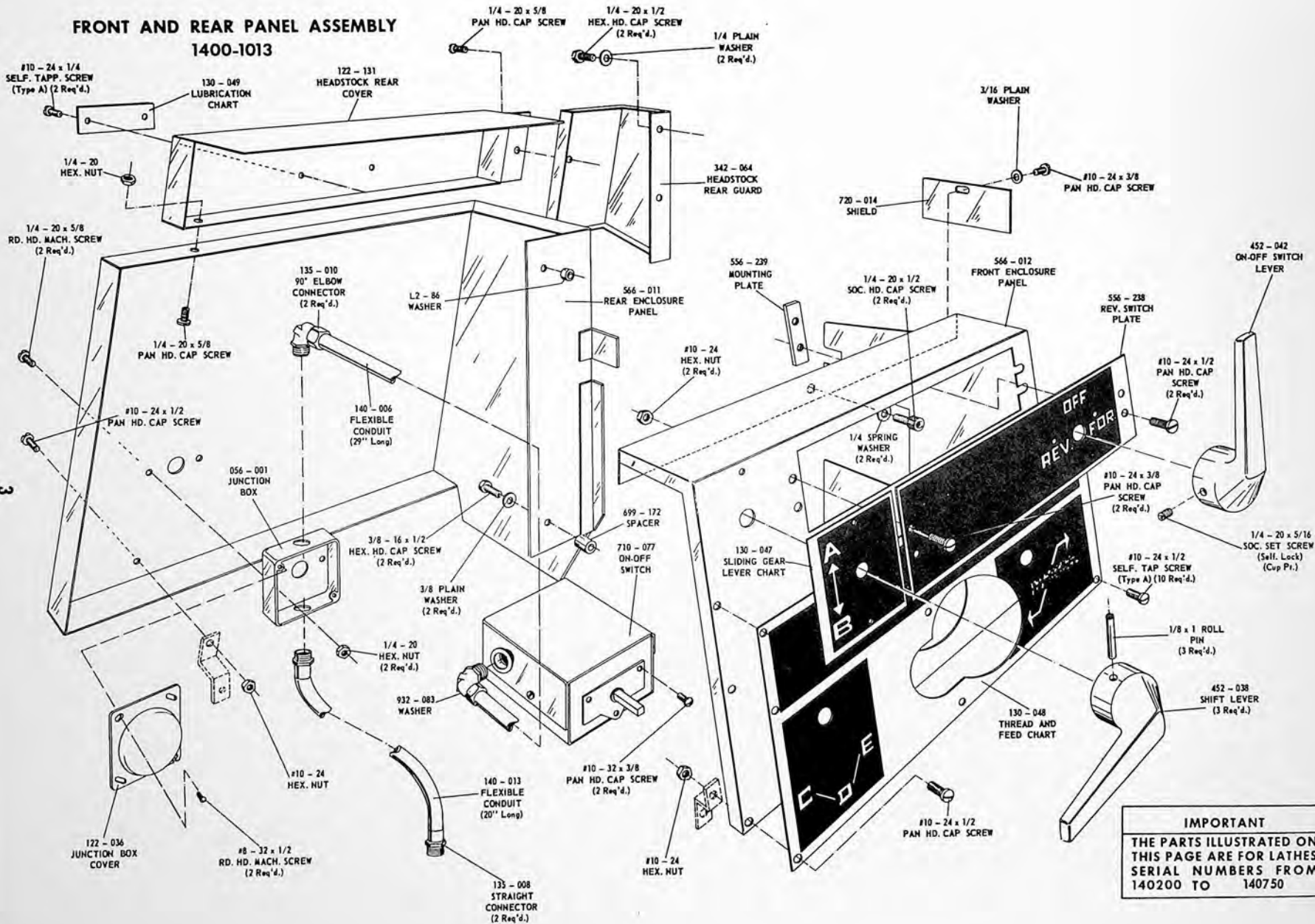


ATTACH TO APRON
SEE APRON ASSEMBLY PAGE 15

*PARTS SHOWN IN RED FOR
48" Center Lathe ONLY.

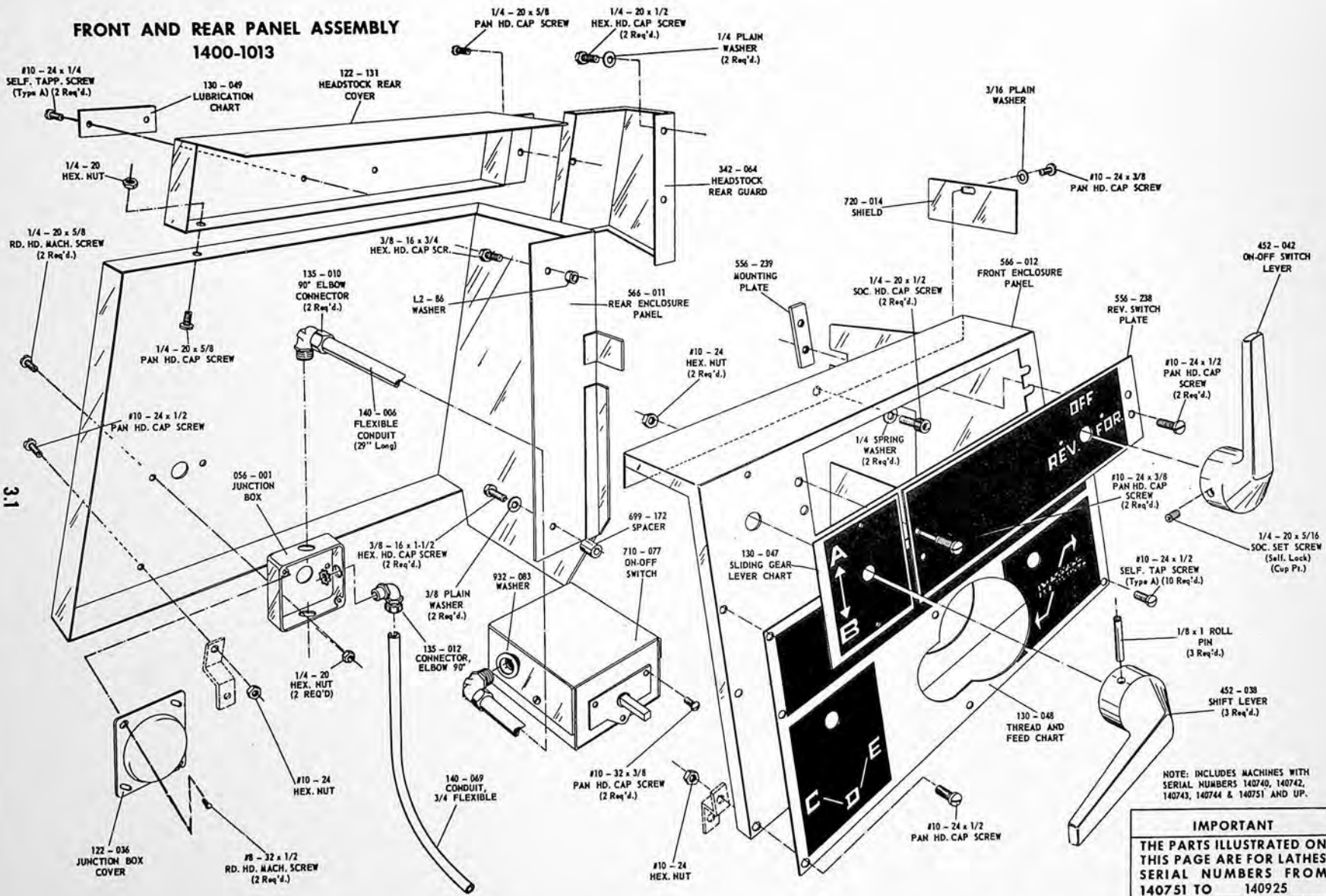
IMPORTANT
THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR LATHES
SERIAL NUMBERS FROM
140200 TO 140925

FRONT AND REAR PANEL ASSEMBLY 1400-1013

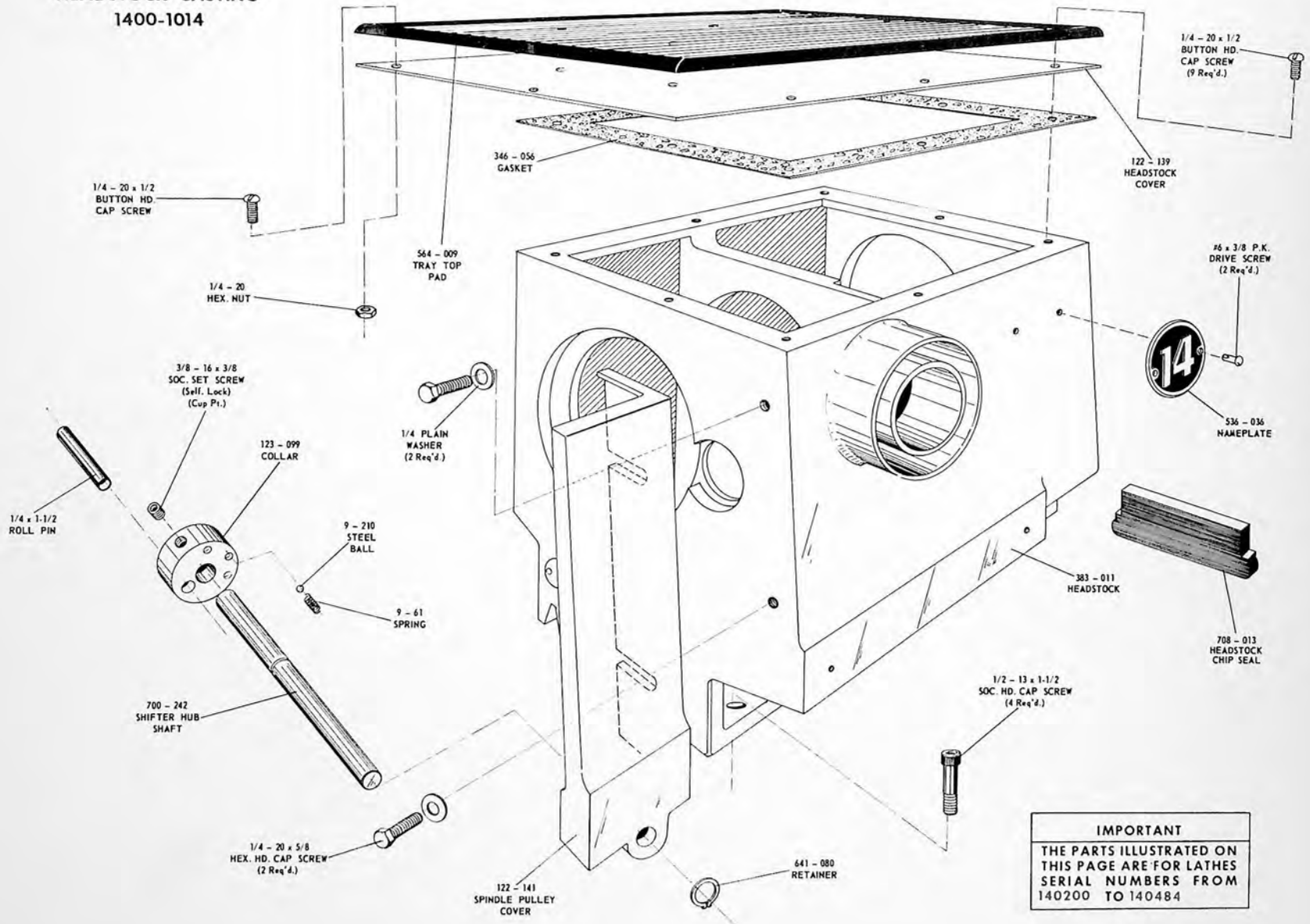


IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140200 TO 140750

FRONT AND REAR PANEL ASSEMBLY 1400-1013

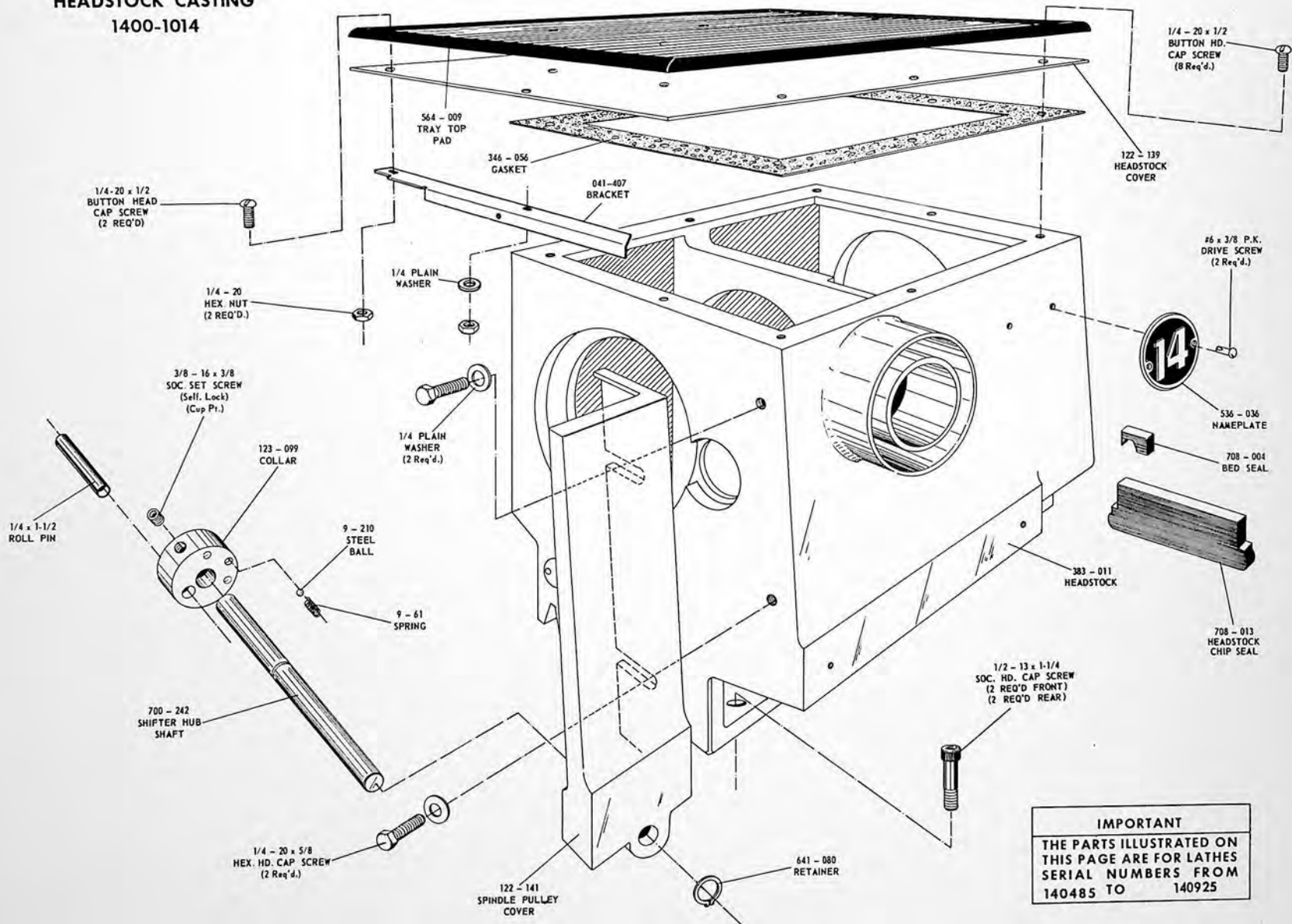


HEADSTOCK CASTING 1400-1014



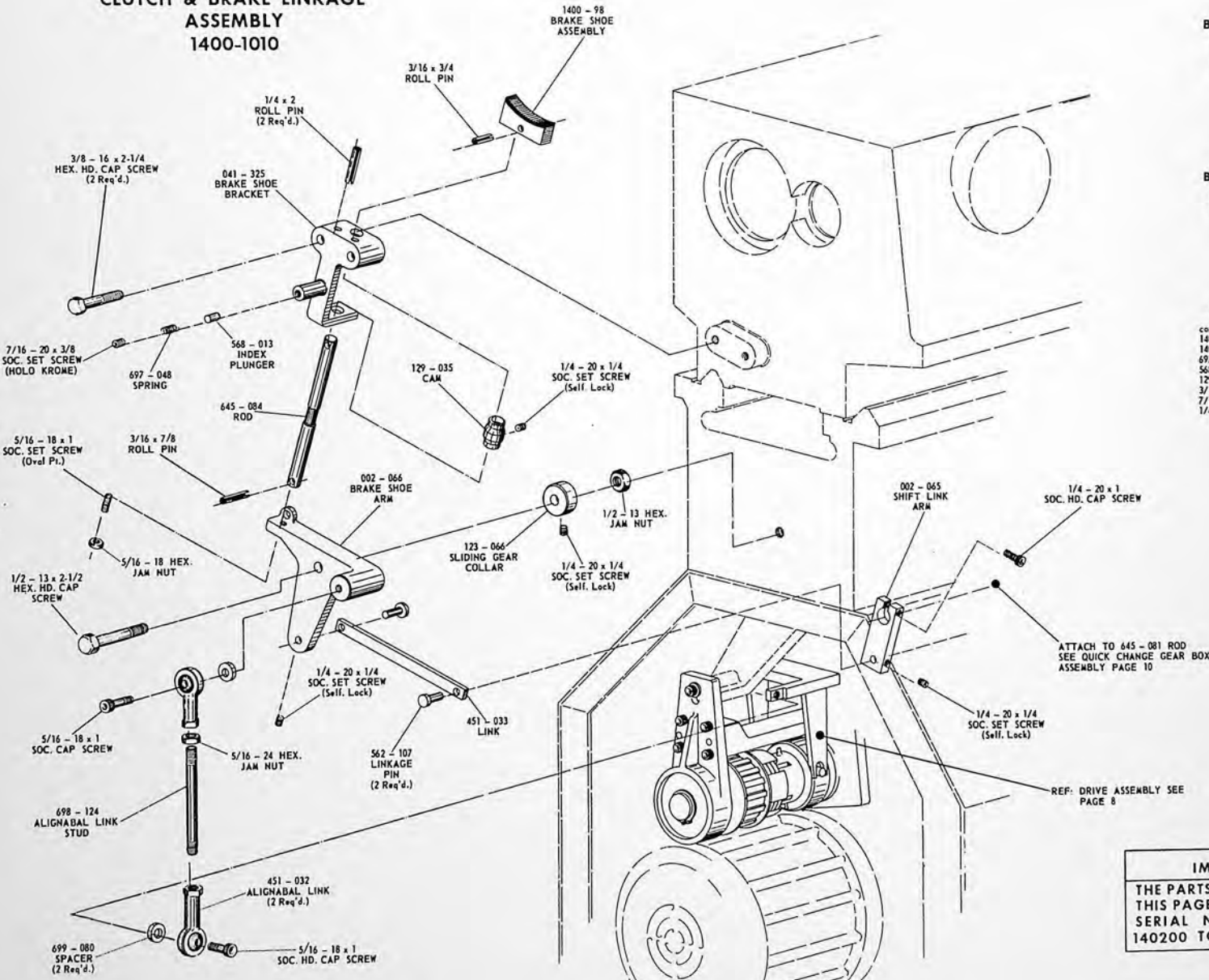
IMPORTANT
THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR LATHES
SERIAL NUMBERS FROM
140200 TO 140484

**HEADSTOCK CASTING
1400-1014**



IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140485 TO 140925

**CLUTCH & BRAKE LINKAGE
ASSEMBLY
1400-1010**



**1400 - 100
BRAKE SHOE ROD ASSEMBLY**

consists of:
1400 - 98 BRAKE SHOE ASSEMBLY
645 - 084 ROD
3/16 x 3/4 ROLL PIN

**1400 - 99
BRAKE BRACKET ASSEMBLY**

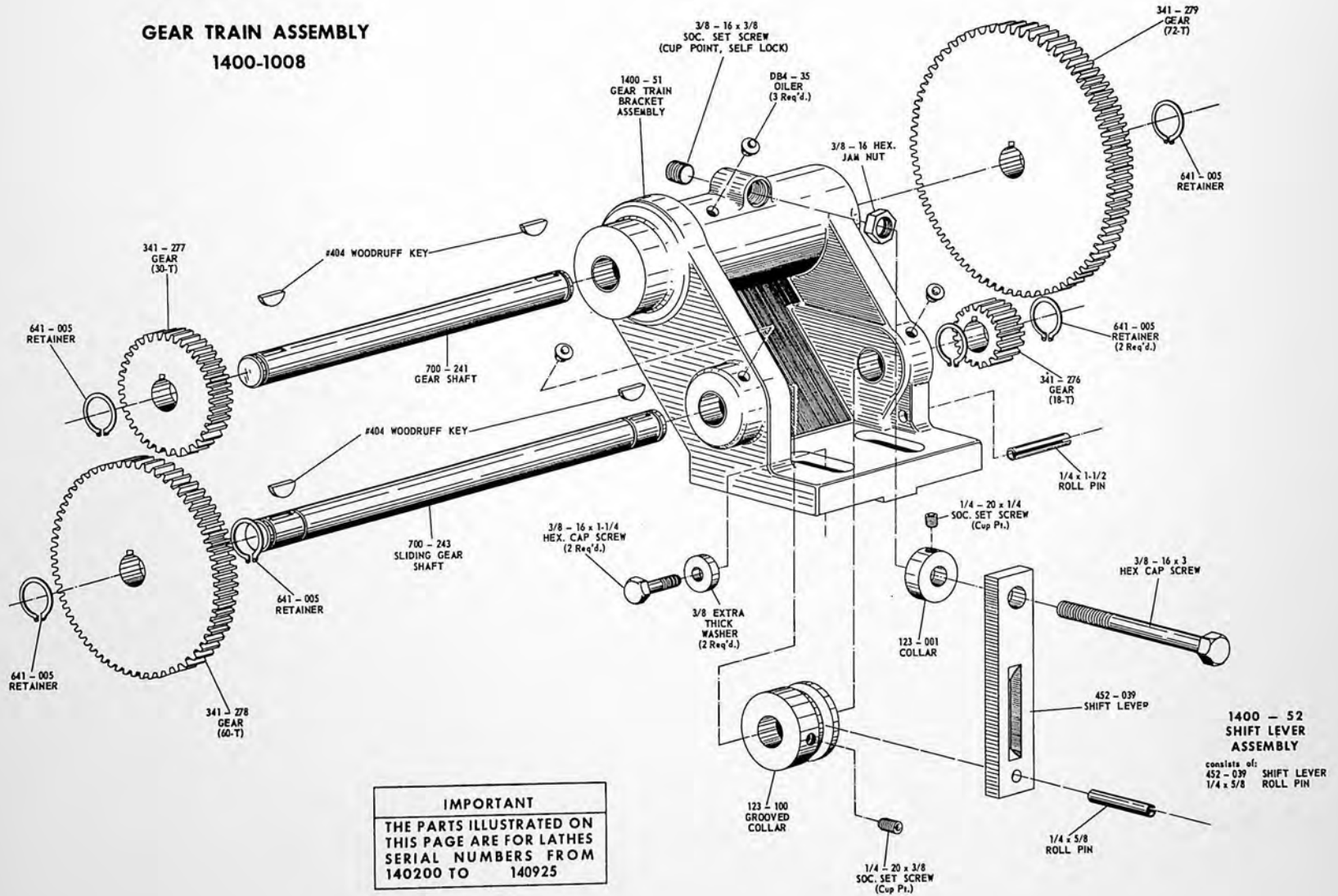
consists of:
041 - 325 BRAKE SHOE BRACKET
1/4 x 2 ROLL PIN (2)

**1400 - 97
CAM BRAKE ASSEMBLY**

consists of:
1400 - 100 BRAKE SHOE ROD ASSY.
1400 - 99 BRAKE BRACKET ASSY.
697 - 048 SPRING
568 - 013 INDEX PLUNGER
129 - 035 CAM
3/16 x 7/8 ROLL PIN
7/16 - 20 x 3/8 SOC. SET SCREW
1/4 - 20 x 1/4 SOC. SET SCREW

IMPORTANT
THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR LATHES
SERIAL NUMBERS FROM
140200 TO 140925

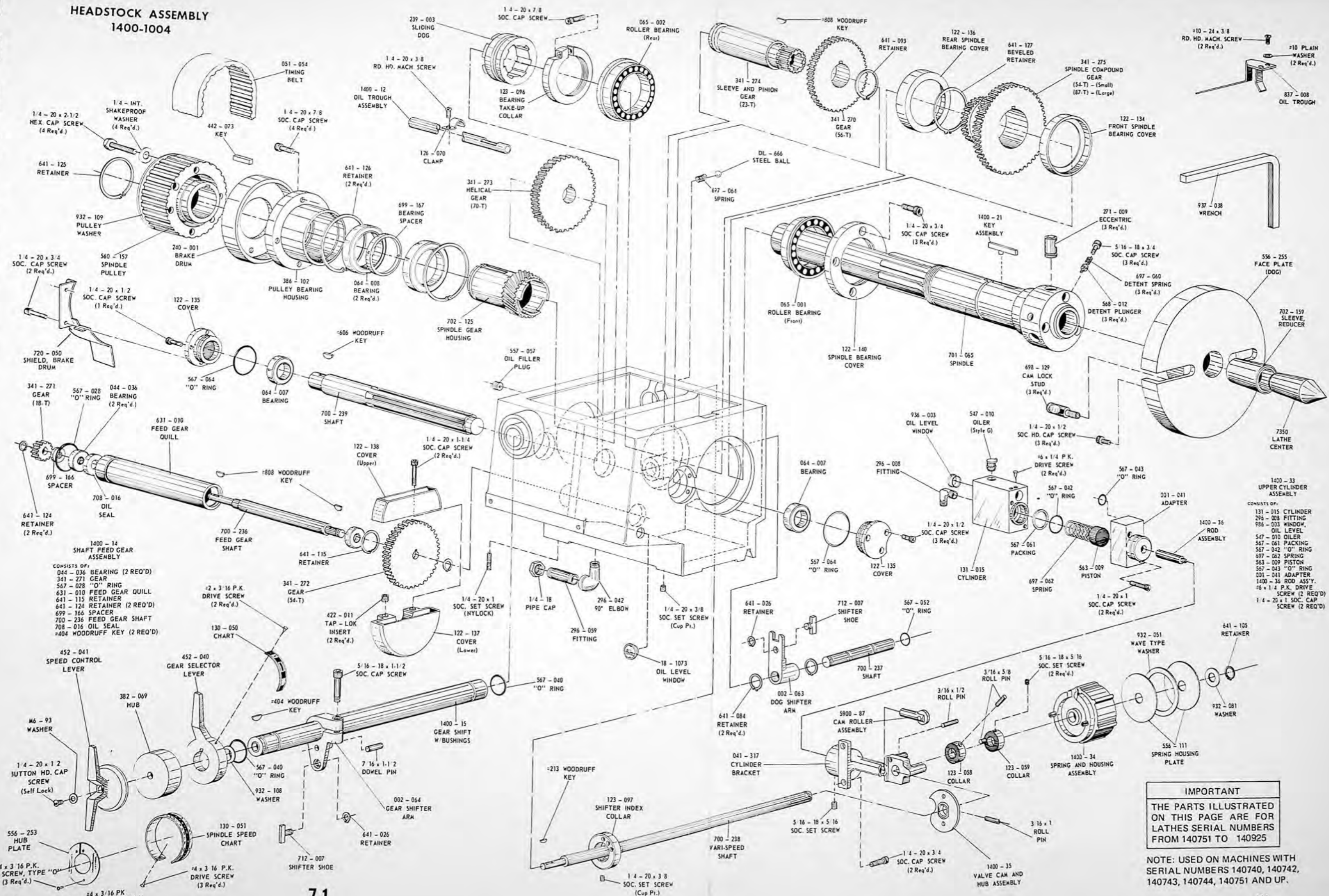
GEAR TRAIN ASSEMBLY 1400-1008



IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140200 TO 140925

1400 - 52 SHIFT LEVER ASSEMBLY
consists of:
452 - 039 SHIFT LEVER
1/4 x 5/8 ROLL PIN

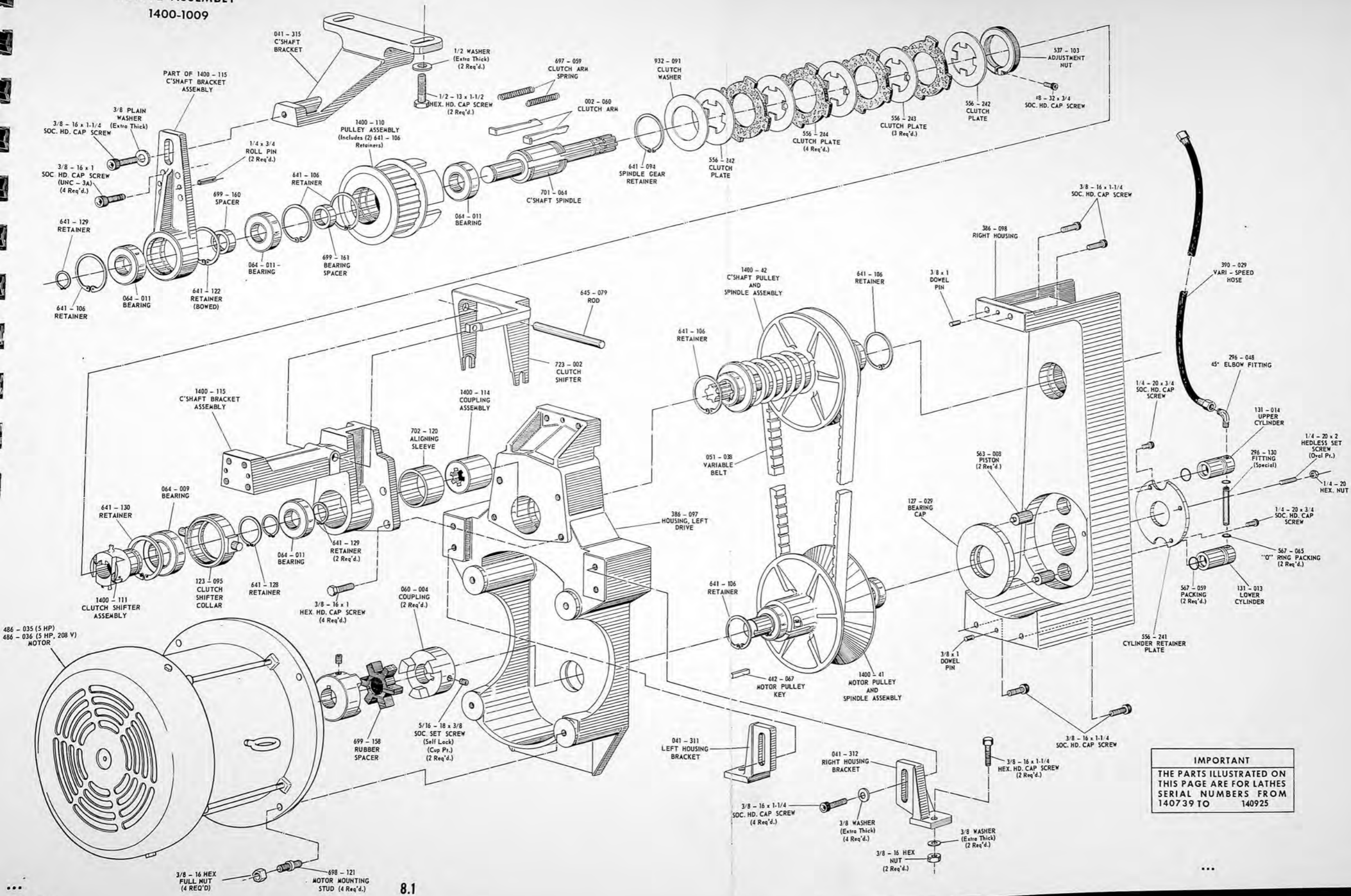
HEADSTOCK ASSEMBLY 1400-1004



IMPORTANT
THE PARTS ILLUSTRATED
ON THIS PAGE ARE FOR
LATHES SERIAL NUMBERS
FROM 140751 TO 140925

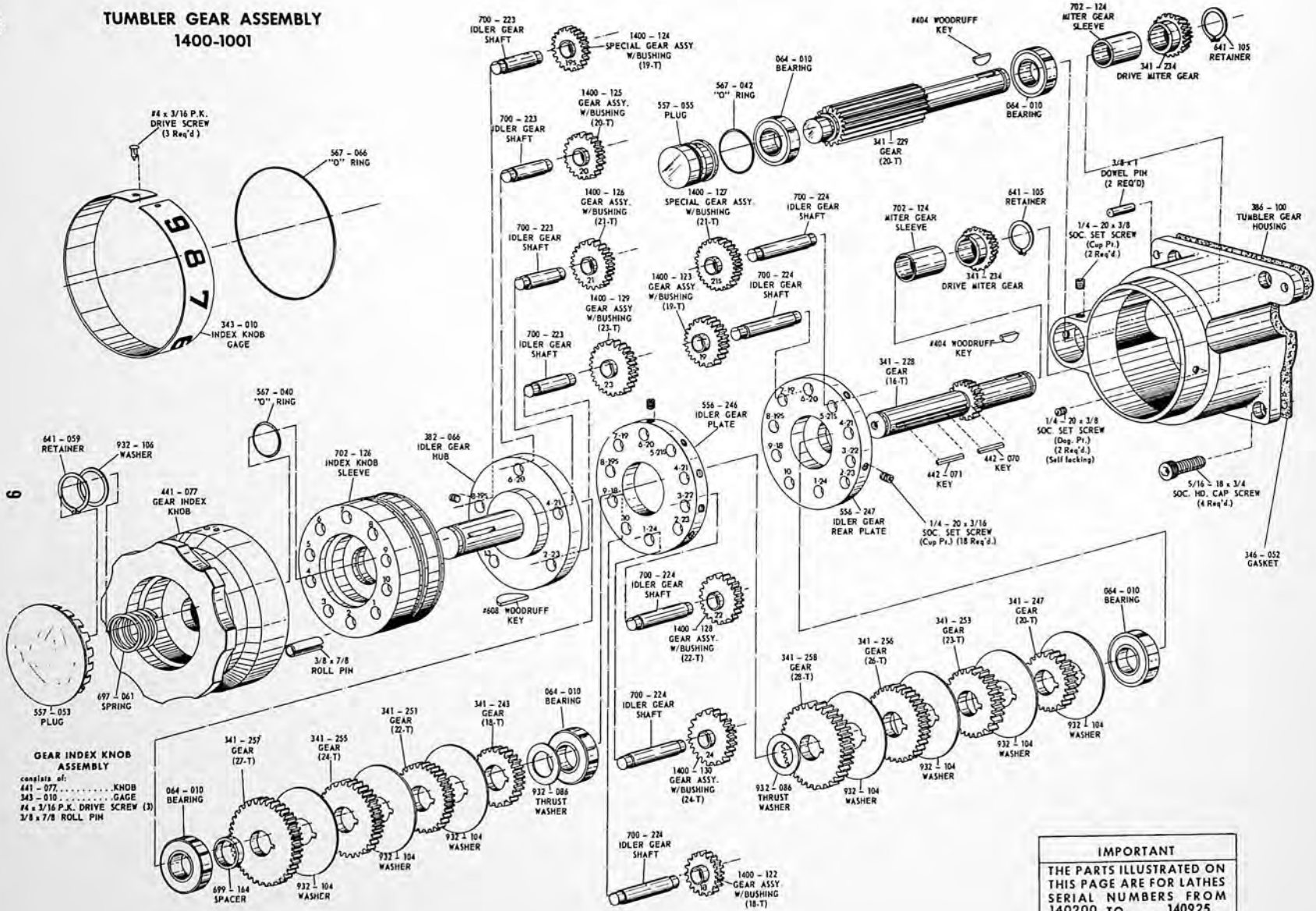
NOTE: USED ON MACHINES WITH
SERIAL NUMBERS 140740, 140742,
140743, 140744, 140751 AND UP.

DRIVE ASSEMBLY
1400-1009



IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140739 TO 140925

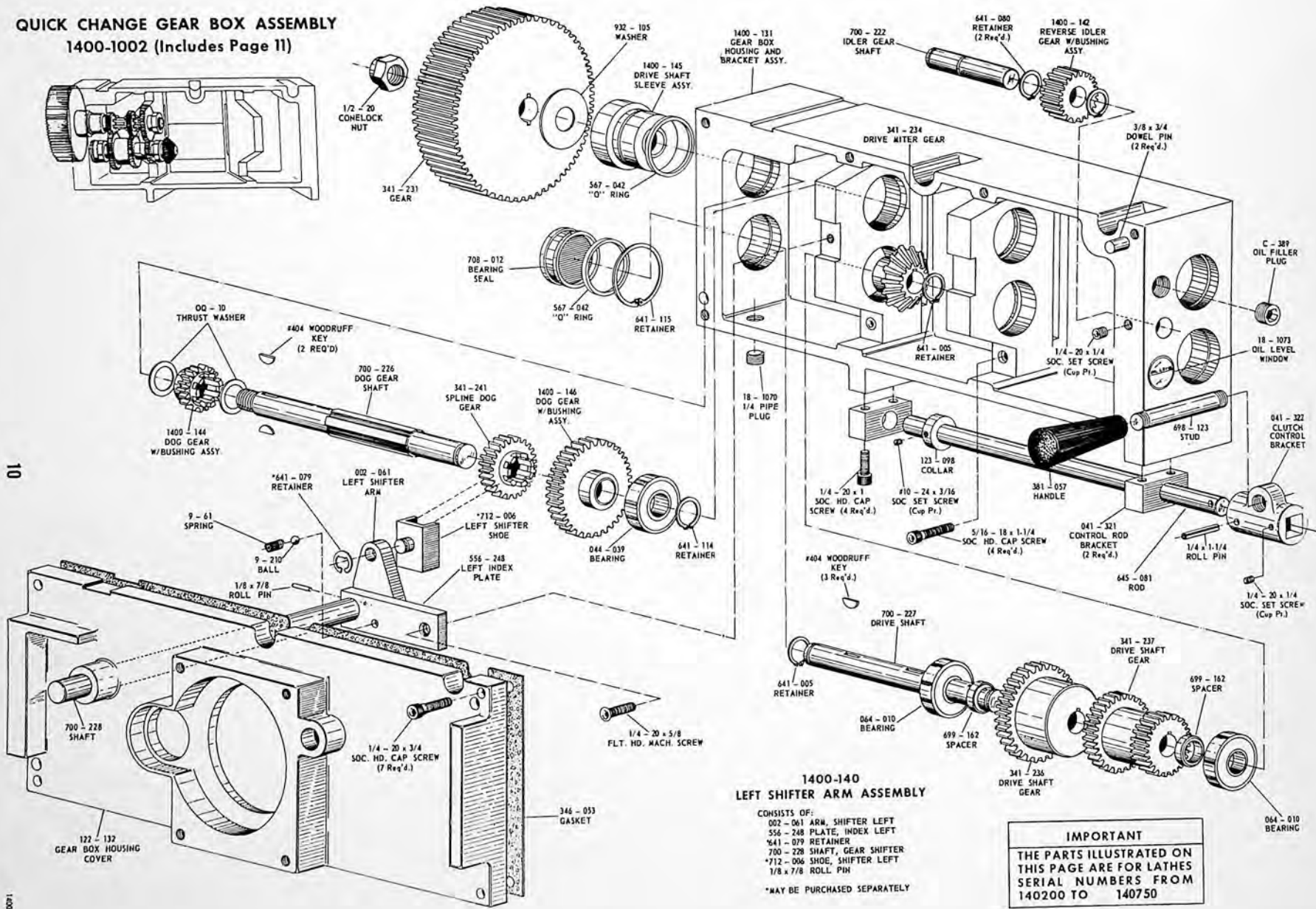
TUMBLER GEAR ASSEMBLY 1400-1001



GEAR INDEX KNOB ASSEMBLY
 consists of:
 441-077.....KNOB
 343-010.....GAGE
 74 x 3/16 P.K. DRIVE SCREW (3)
 3/8 x 7/8 ROLL PIN

IMPORTANT
 THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140200 TO 140925

QUICK CHANGE GEAR BOX ASSEMBLY
1400-1002 (Includes Page 11)



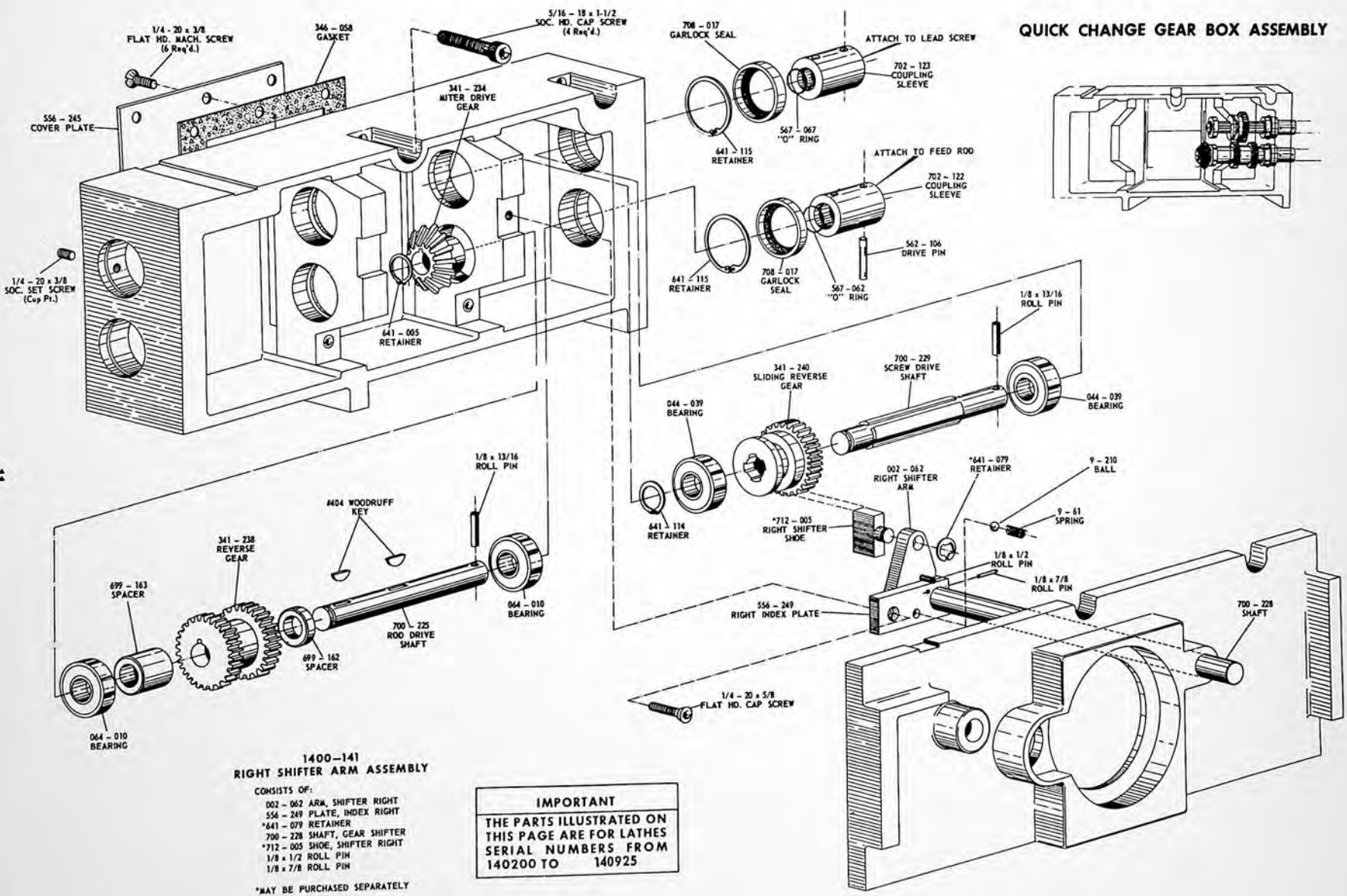
1400-140 LEFT SHIFTER ARM ASSEMBLY

- CONSISTS OF:
- 002 - 061 ARM, SHIFTER LEFT
 - 556 - 248 PLATE, INDEX LEFT
 - 641 - 079 RETAINER
 - 700 - 228 SHAFT, GEAR SHIFTER
 - *712 - 006 SHOE, SHIFTER LEFT
 - 1/8 x 7/8 ROLL PIN

*MAY BE PURCHASED SEPARATELY

IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140200 TO 140750

QUICK CHANGE GEAR BOX ASSEMBLY



**1400-141
RIGHT SHIFTER ARM ASSEMBLY**

- CONSISTS OF:
- 002 - 062 ARM, SHIFTER RIGHT
 - 556 - 249 PLATE, INDEX RIGHT
 - *641 - 079 RETAINER
 - 700 - 228 SHAFT, GEAR SHIFTER
 - *712 - 005 SHOE, SHIFTER RIGHT
 - 1/8 x 1/2 ROLL PIN
 - 1/8 x 7/8 ROLL PIN
- *MAY BE PURCHASED SEPARATELY

IMPORTANT

THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR LATHES
SERIAL NUMBERS FROM
140200 TO 140925

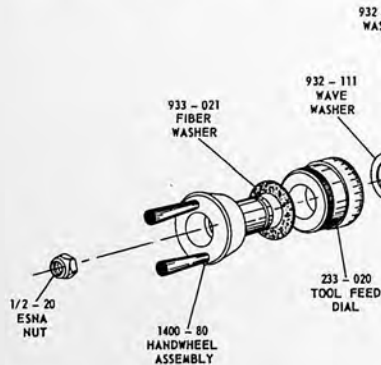
COMPOUND AND CROSS SLIDE ASSEMBLY

1400-1006



1400-80 HANDWHEEL ASSEMBLY

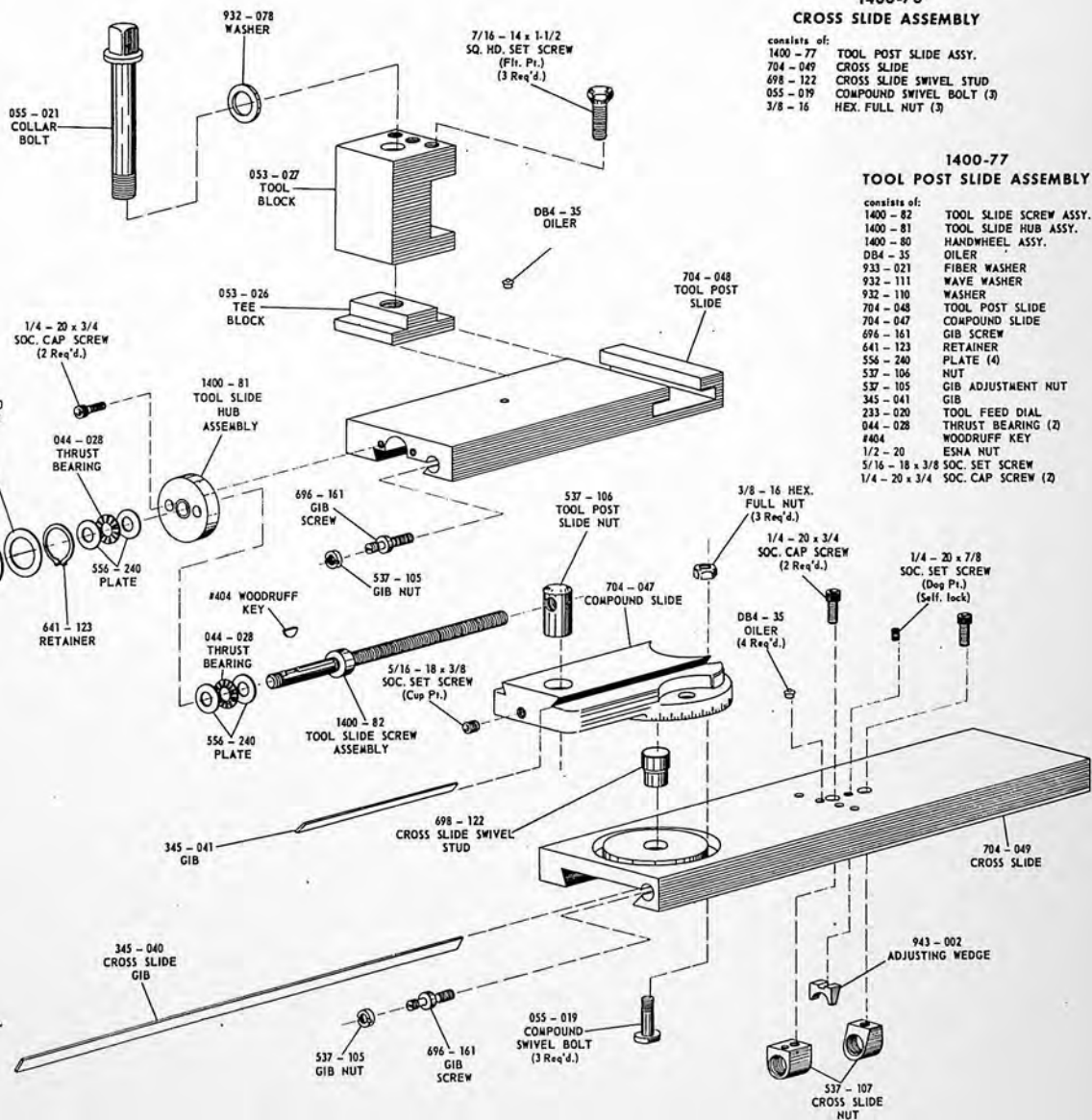
consists of:
388 - 025 TOOL SLIDE HANDWHEEL HANDLE (2)
381 - 062 SOC. SET SCREW (2)
5/16 - 18 x 1-3/4 SOC. SET SCREW (2)



THIS PAGE DOES NOT APPLY TO POWER FEED TURRET LATHES.

IMPORTANT

THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR LATHES SERIAL NUMBERS FROM 140200 TO 140925



1400-76 CROSS SLIDE ASSEMBLY

consists of:
1400 - 77 TOOL POST SLIDE ASSY.
704 - 049 CROSS SLIDE
698 - 122 CROSS SLIDE SWIVEL STUD
055 - 019 COMPOUND SWIVEL BOLT (3 Req'd.)
3/8 - 16 HEX. FULL NUT (3)

1400-77 TOOL POST SLIDE ASSEMBLY

consists of:
1400 - 82 TOOL SLIDE SCREW ASSY.
1400 - 81 TOOL SLIDE HUB ASSY.
1400 - 80 HANDWHEEL ASSY.
DB4 - 35 OILER
933 - 021 FIBER WASHER
932 - 111 WAVE WASHER
932 - 110 WASHER
704 - 048 TOOL POST SLIDE
704 - 047 COMPOUND SLIDE
696 - 161 GIB
641 - 123 RETAINER
556 - 240 PLATE (4)
537 - 106 NUT
537 - 105 GIB ADJUSTMENT NUT
345 - 041 GIB
233 - 020 TOOL FEED DIAL
044 - 028 THRUST BEARING (2)
#404 WOODRUFF KEY
1/2 - 20 ESNA NUT
5/16 - 18 x 3/8 SOC. SET SCREW (2)
1/4 - 20 x 3/4 SOC. CAP SCREW (2)

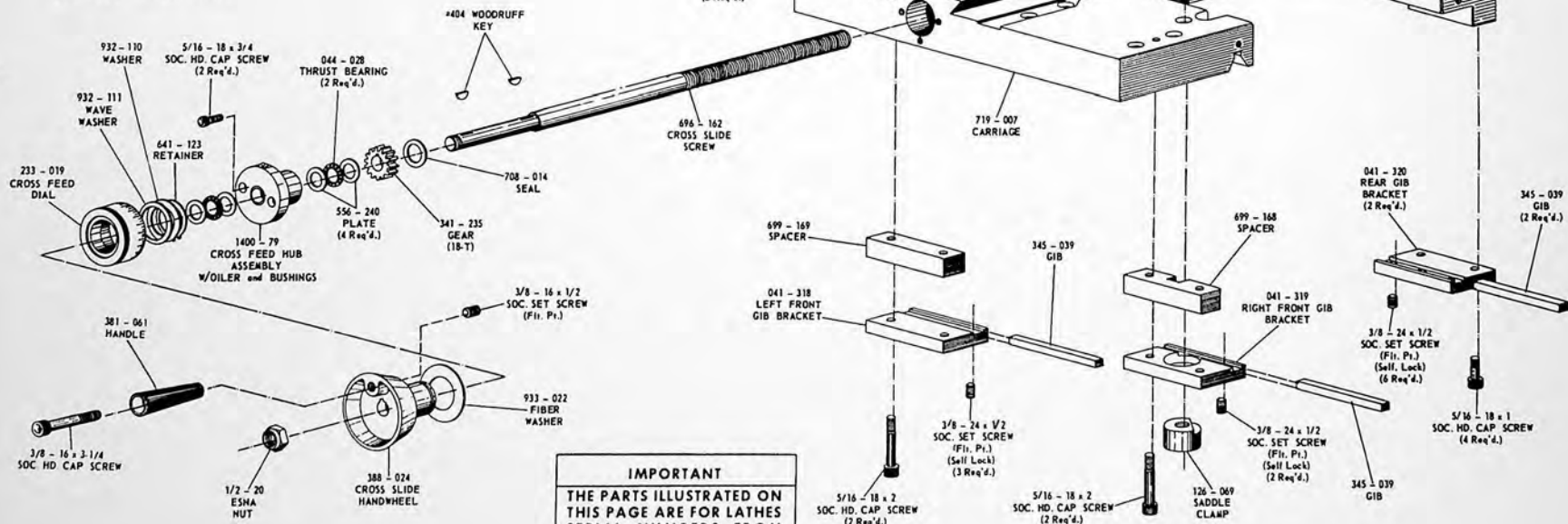
CARRIAGE SADDLE ASSEMBLY

1400-1005

IMPORTANT:
PARTS IN RED ONLY FOR LATHES
WITH TAPER ATTACHMENTS.

1400-78 CROSS SLIDE HANDWHEEL ASSEMBLY

consists of:
388 - 024 HANDWHEEL
381 - 061 HANDLE
3/8 - 16 x 3-1/4 SOC. CAP SCREW
3/8 - 16 x 1/2 SOC. SET SCREW



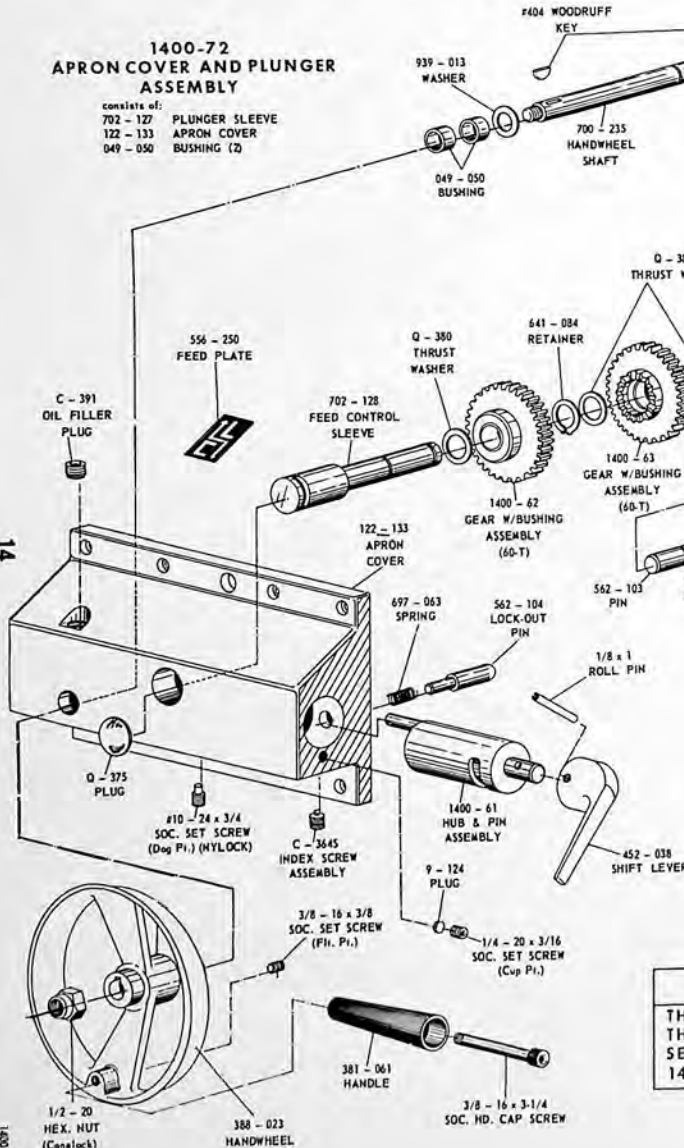
IMPORTANT

THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR LATHES
SERIAL NUMBERS FROM
140200 TO 140925

APRON ASSEMBLY 1400-1003 (Includes Page 15)

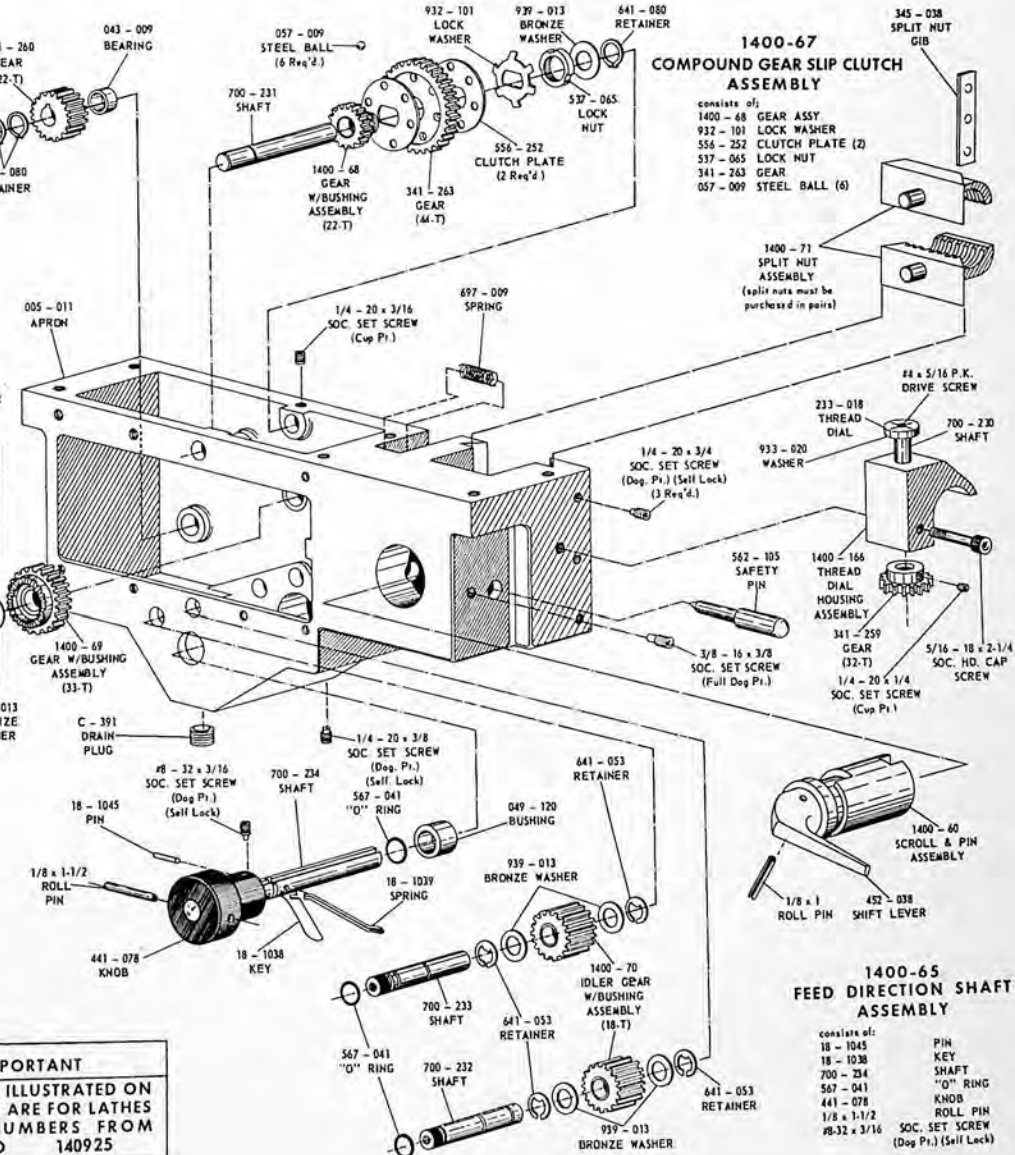
1400-72 APRON COVER AND PLUNGER ASSEMBLY

consists of:
702 - 127 PLUNGER SLEEVE
122 - 133 APRON COVER
049 - 050 BUSHING (2)



1400-67 COMPOUND GEAR SLIP CLUTCH ASSEMBLY

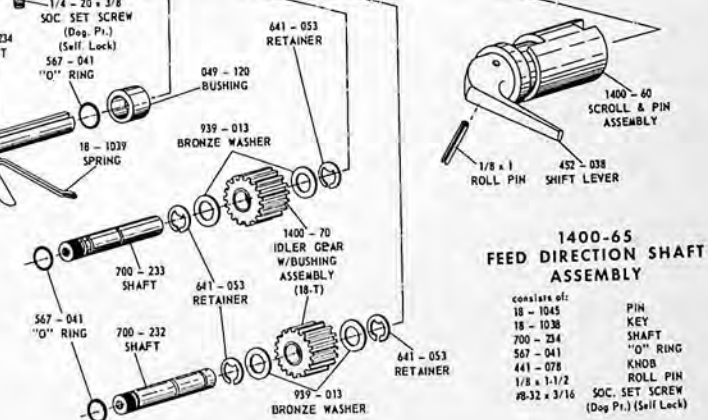
consists of:
1400 - 68 GEAR ASSY
932 - 101 LOCK WASHER
556 - 252 CLUTCH PLATE (2)
537 - 065 LOCK NUT
341 - 263 GEAR
057 - 009 STEEL BALL (6)



IMPORTANT
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SERIAL NUMBERS FROM
140200 TO 140925

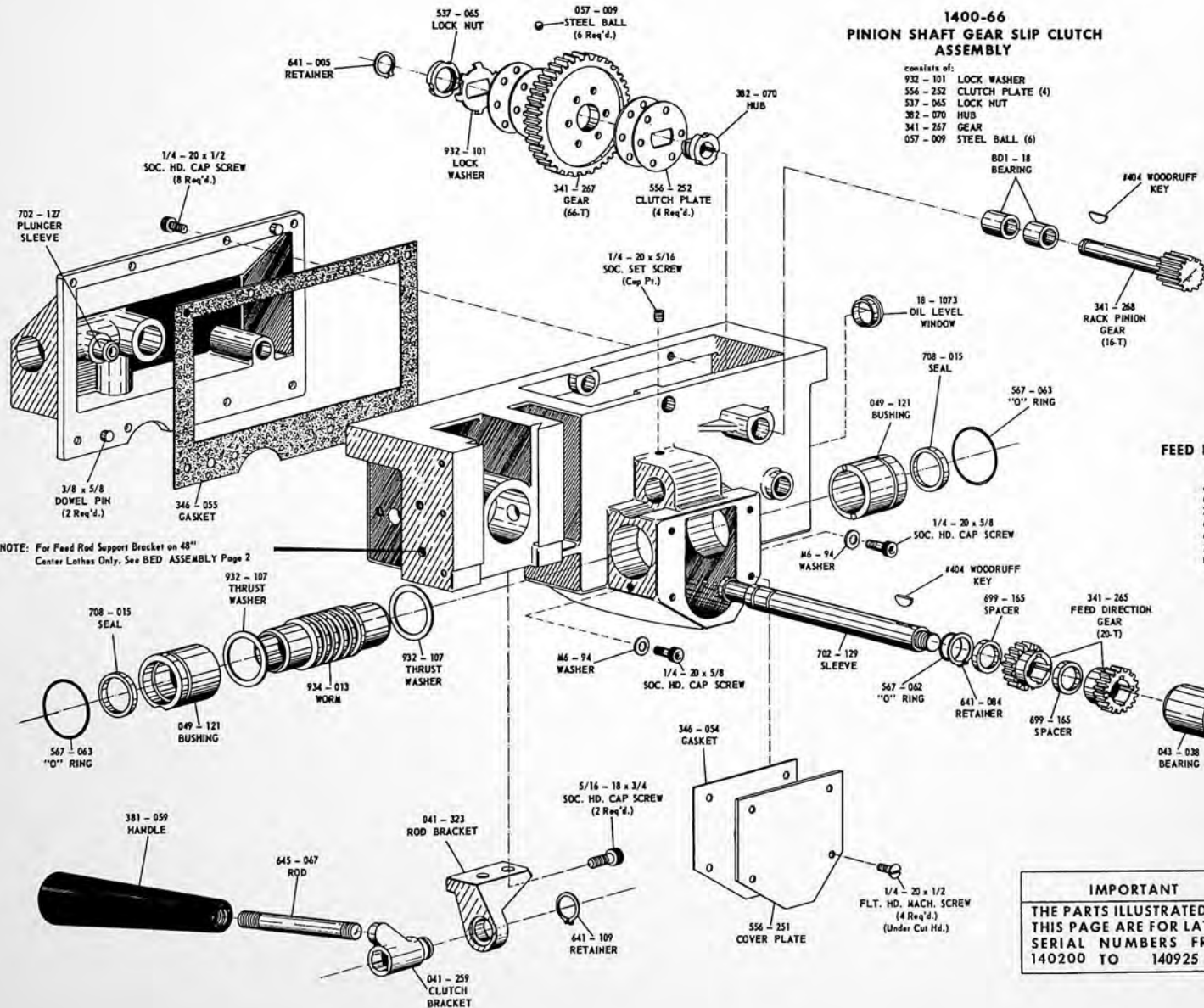
1400-65 FEED DIRECTION SHAFT ASSEMBLY

consists of:
18 - 1045 PIN
18 - 1038 KEY
700 - 234 SHAFT
567 - 041 "O" RING
441 - 078 KNOB
1/8 x 1-1/2 ROLL PIN
#8-32 x 3/16 SOC. SET SCREW (Dog Pl.) (Self Lock)

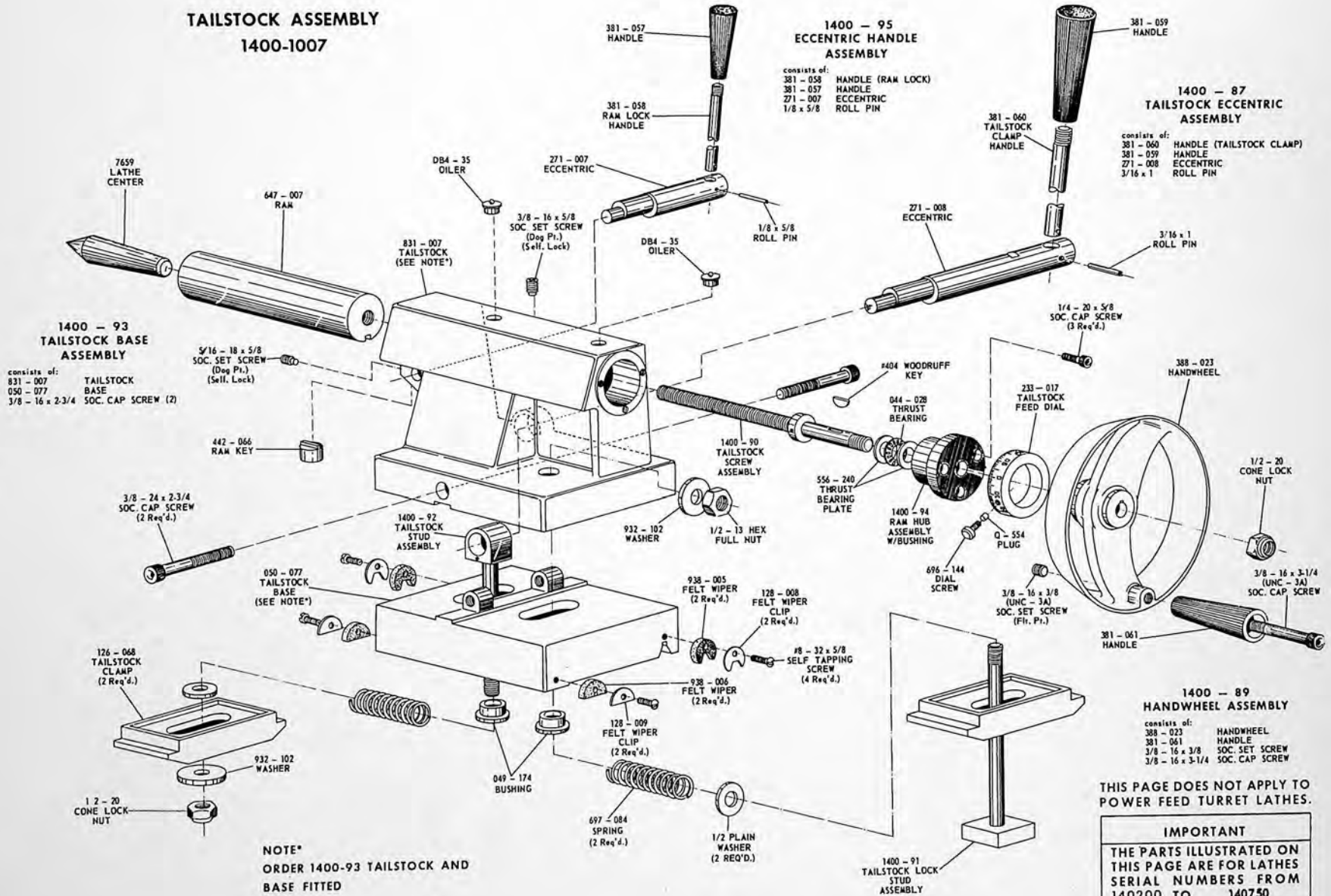


1400-66 PINION SHAFT GEAR SLIP CLUTCH ASSEMBLY

consists of:
 932 - 101 LOCK WASHER
 556 - 252 CLUTCH PLATE (4)
 537 - 065 LOCK NUT
 382 - 070 HUB
 341 - 267 GEAR
 057 - 009 STEEL BALL (6)



TAILSTOCK ASSEMBLY 1400-1007



**1400 - 93
TAILSTOCK BASE
ASSEMBLY**
consists of:
831 - 007 TAILSTOCK
050 - 077 BASE
3/8 - 16 x 2-3/4 SOC. CAP. SCREW (2)

**1400 - 95
ECCENTRIC HANDLE
ASSEMBLY**
consists of:
381 - 058 HANDLE (RAM LOCK)
381 - 057 HANDLE
271 - 007 ECCENTRIC
1/8 x 5/8 ROLL PIN

**1400 - 87
TAILSTOCK ECCENTRIC
ASSEMBLY**
consists of:
381 - 060 HANDLE (TAILSTOCK CLAMP)
381 - 059 HANDLE
271 - 008 ECCENTRIC
3/16 x 1 ROLL PIN

**1400 - 89
HANDWHEEL ASSEMBLY**
consists of:
388 - 023 HANDWHEEL
381 - 061 HANDLE
3/8 - 16 x 3/8 SOC. SET SCREW
3/8 - 16 x 3-1/4 SOC. CAP SCREW

NOTE*
ORDER 1400-93 TAILSTOCK AND
BASE FITTED

**THIS PAGE DOES NOT APPLY TO
POWER FEED TURRET LATHES.**

IMPORTANT
THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR LATHES
SERIAL NUMBERS FROM
140200 TO 140750

TAILSTOCK ASSEMBLY 1400-88

1400-95 ECCENTRIC HANDLE ASSEMBLY

1400-87 TAILSTOCK ECCENTRIC ASSEMBLY

CONSISTS OF:
381-060 HANDLE, TAILSTOCK CLAMP
381-059 HANDLE
271-008 ECCENTRIC, TAILSTOCK CLAMP
3/16 x 1 ROLL PIN

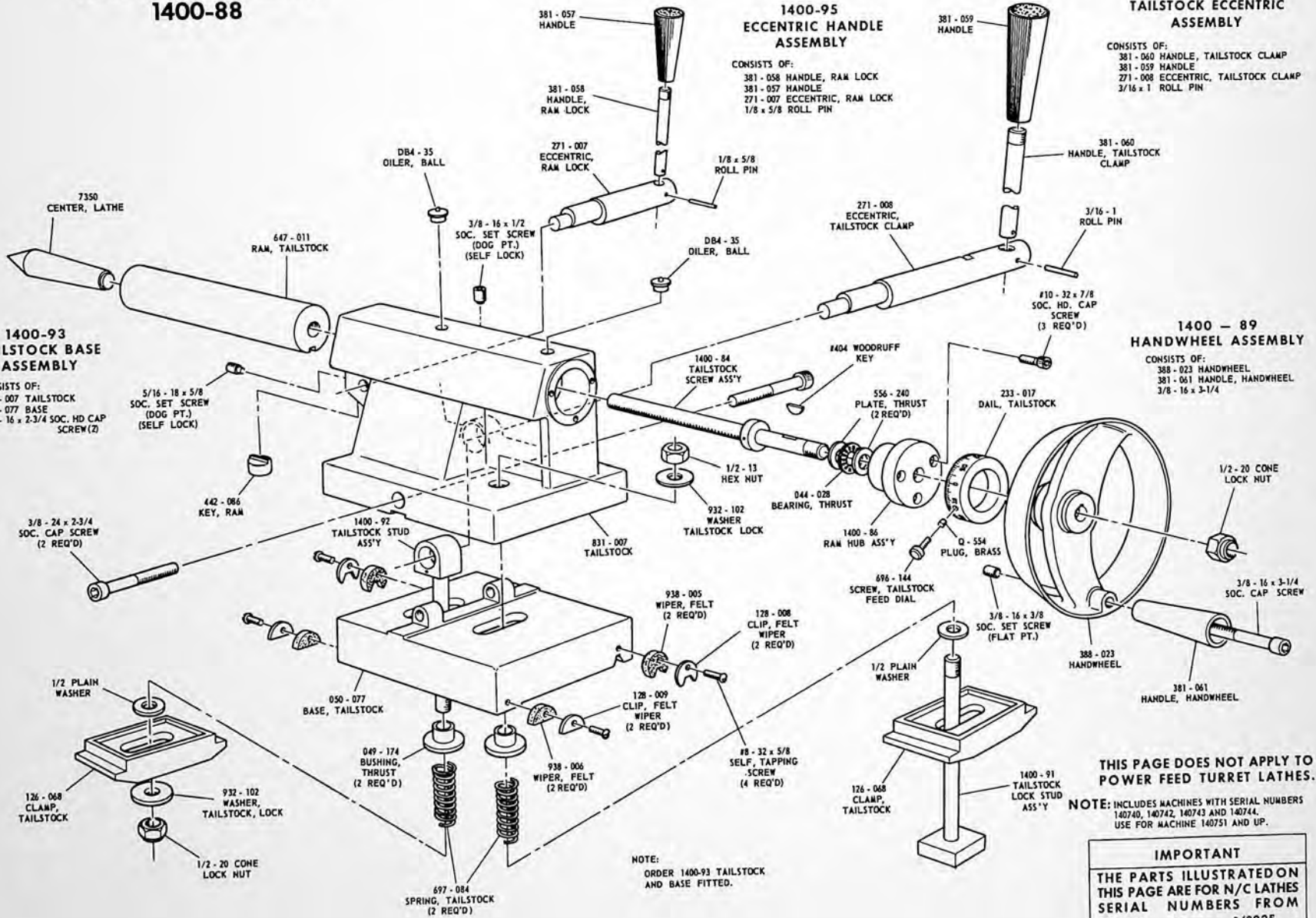
CONSISTS OF:
381-058 HANDLE, RAM LOCK
381-057 HANDLE
271-007 ECCENTRIC, RAM LOCK
1/8 x 5/8 ROLL PIN

1400-89 HANDWHEEL ASSEMBLY

CONSISTS OF:
388-023 HANDWHEEL
381-061 HANDLE, HANDWHEEL
3/8 - 16 x 3-1/4

1400-93 TAILSTOCK BASE ASSEMBLY

CONSISTS OF:
831-007 TAILSTOCK
050-077 BASE
3/8 - 16 x 2-3/4 SOC. HD CAP
SCREW (2)

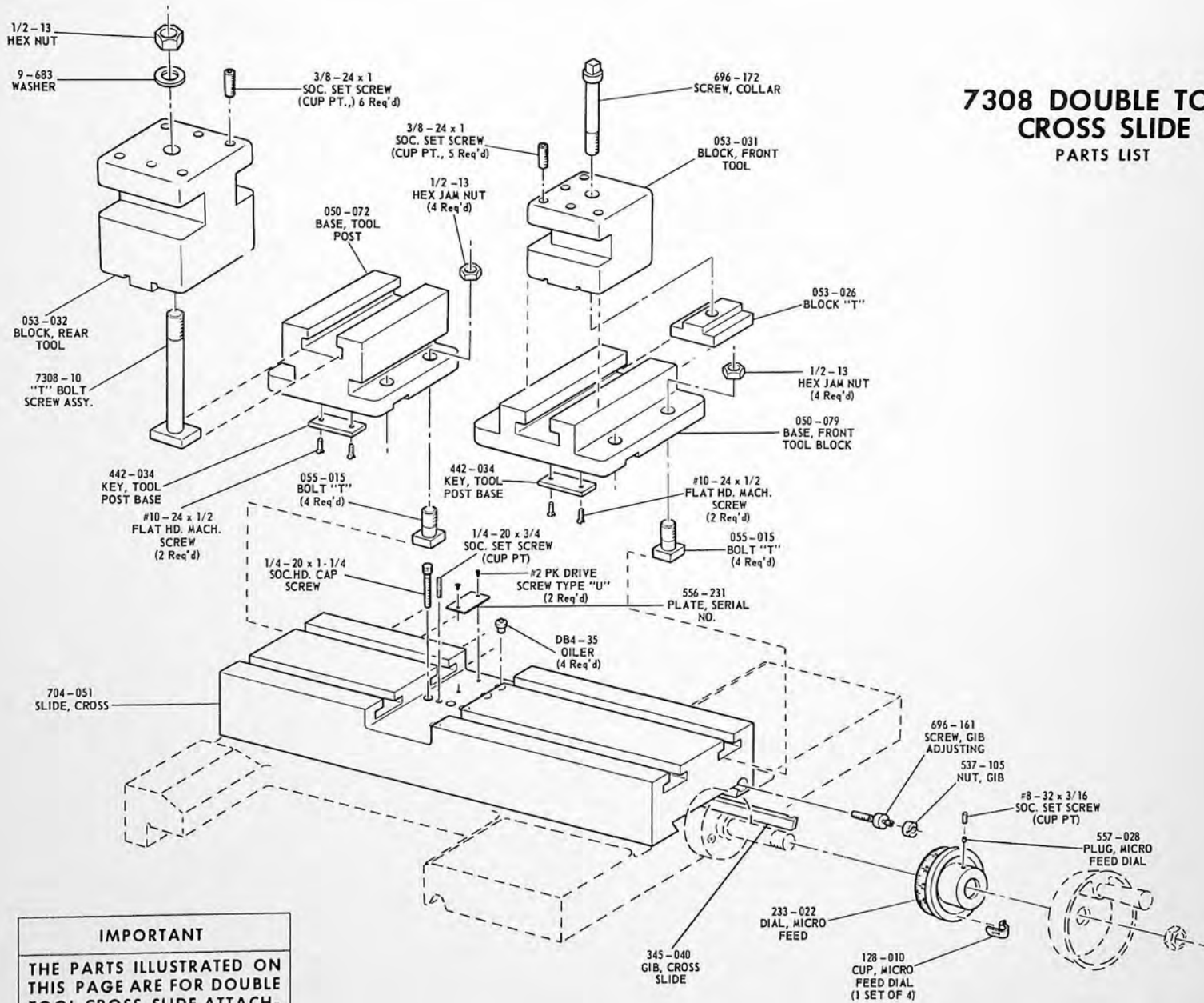


NOTE:
ORDER 1400-93 TAILSTOCK
AND BASE FITTED.

THIS PAGE DOES NOT APPLY TO
POWER FEED TURRET LATHES.
NOTE: INCLUDES MACHINES WITH SERIAL NUMBERS
140740, 140742, 140743 AND 140744.
USE FOR MACHINE 140751 AND UP.

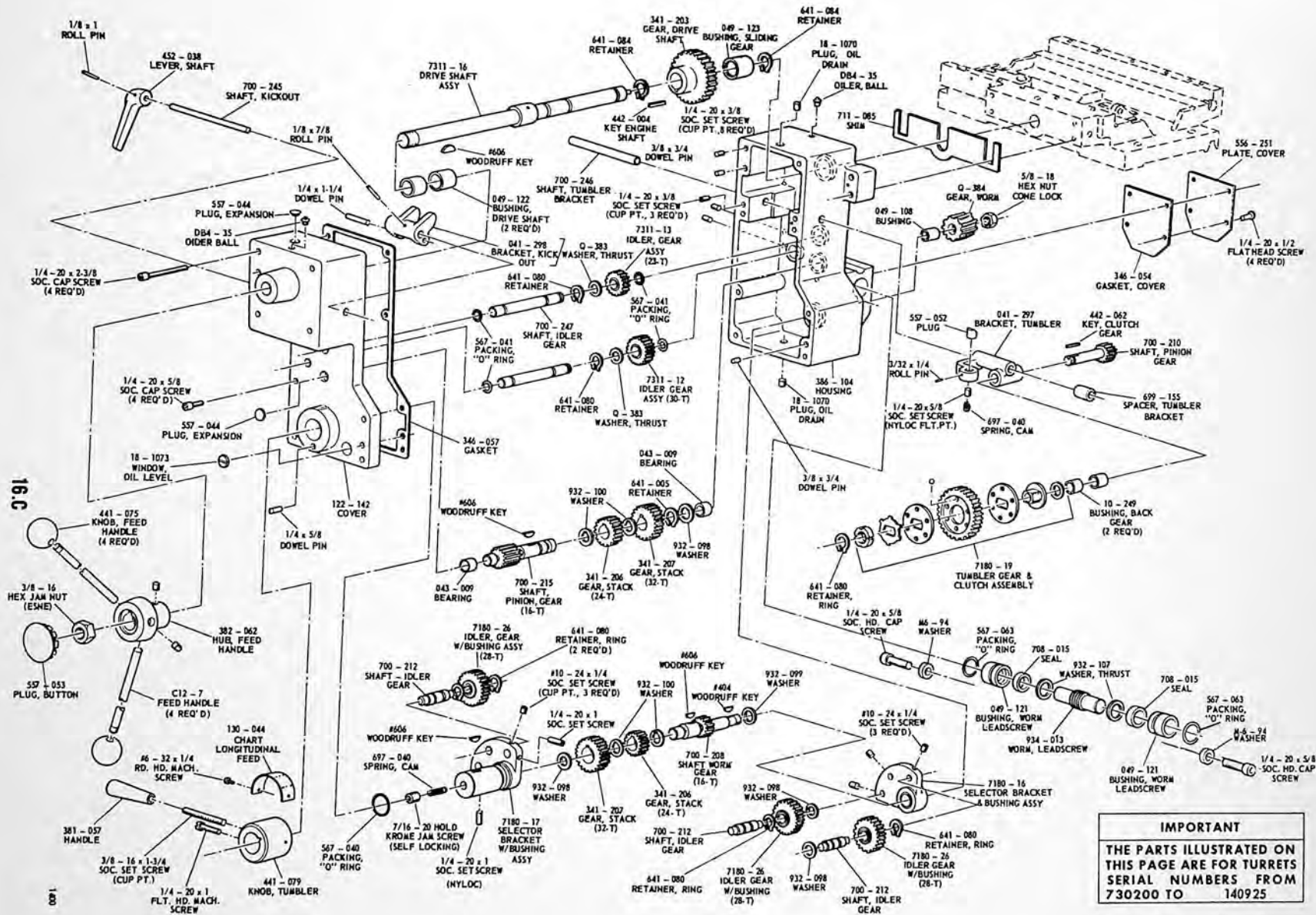
IMPORTANT
THE PARTS ILLUSTRATED ON
THIS PAGE ARE FOR N/C LATHES
SERIAL NUMBERS FROM
140751 TO 140925

7308 DOUBLE TOOL CROSS SLIDE PARTS LIST



IMPORTANT

THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR DOUBLE TOOL CROSS SLIDE ATTACHMENTS SERIAL No. 730800



IMPORTANT

THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR TURRETS SERIAL NUMBERS FROM 730200 TO 140925



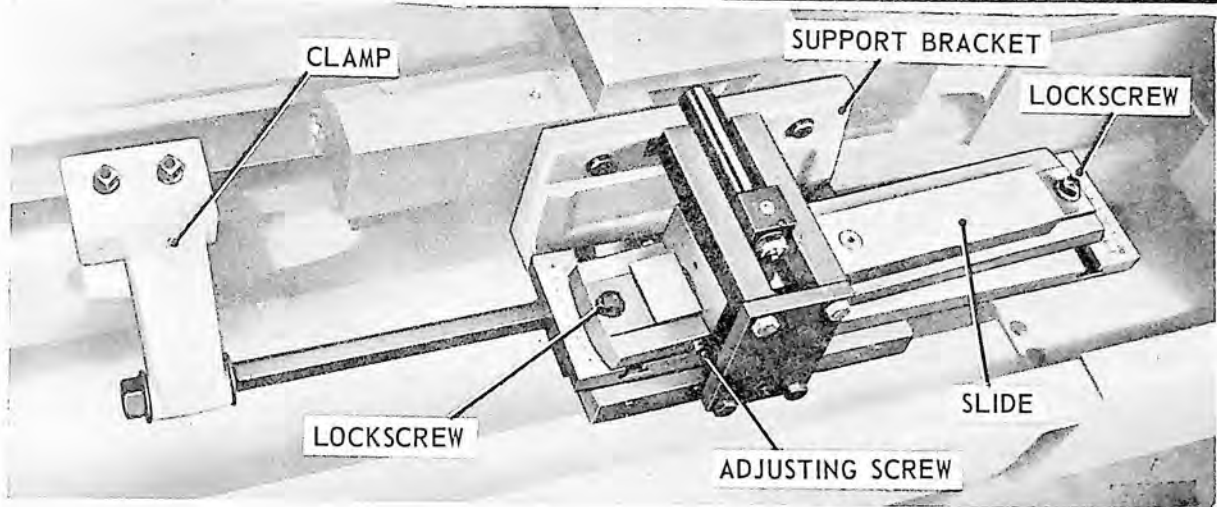
CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

**NO. 7300
TELESCOPIC TAPER
ATTACHMENT**

for
1400 SERIES CLAUSING 14" LATHES

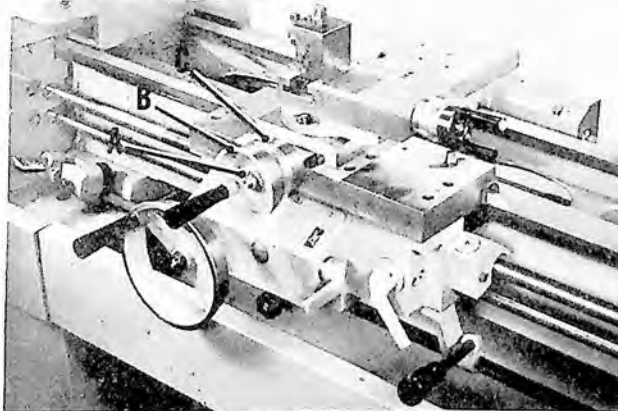
JAN. 1971

FILE NO. 7300



INSTALLATION

1. Use grease solvent to remove rust-proof coating from unpainted surfaces.
2. Using handwheel (B, figure 1) move cross slide to rear of lathe until the adjusting nuts on underside of cross slide have turned completely off cross slide screw.



(Figure 1)

3. Remove nut (A), pull handwheel (B) off cross slide screw and remove woodruff key.
4. Remove two screws from cross feed hub (C) and remove cross slide screw from saddle.

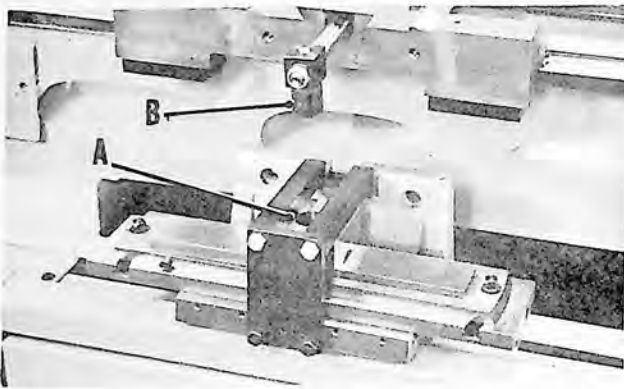
5. Remove nut halves and adjusting wedge from cross slide and thread them on female spline as shown in figure 2.



(Figure 2)

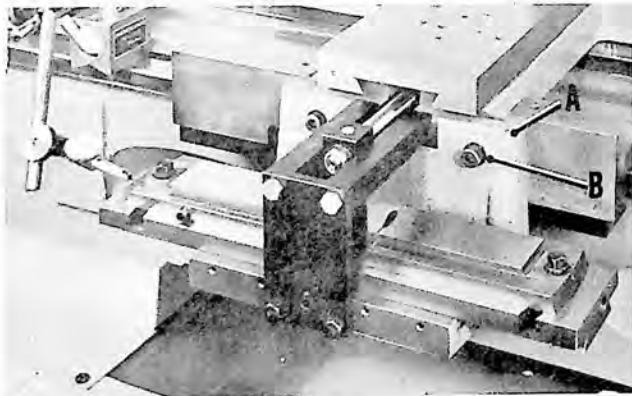
6. Reinstall nuts (with assembled spline screw) on cross slide. Reach under the saddle and hold the adjusting wedge up toward the saddle while tightening capscrews; tighten screws snugly. Start set screw (A, figure 2) but do not tighten.
7. Move cross slide until end is aligned with edge of saddle as shown in figure 3.

NOTE: Spline screw should extend approximately 4-1/2 inches out from cross slide – turn screw in or out of cross slide accordingly.



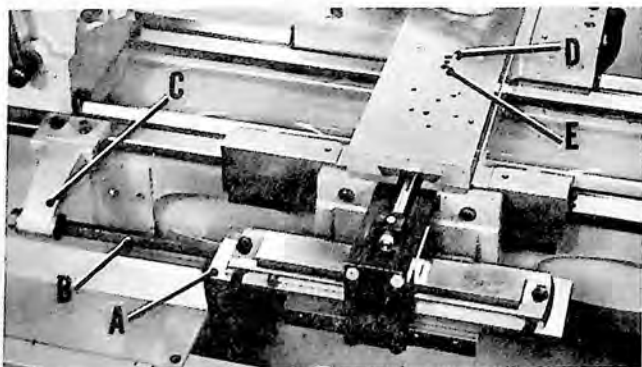
(Figure 3)

8. Align hole in taper attachment housing (A) with slide hub. (B). Lift the housing up (two man operation) and attach to saddle with screws (C).
9. Make sure attachment is parallel with bed ways – mount a dial indicator as shown in figure 4 and move carriage back and forth. Readings should be identical at both ends of the slide. If not, adjust support bracket (A) until readings are identical; tighten screws (B) securely.



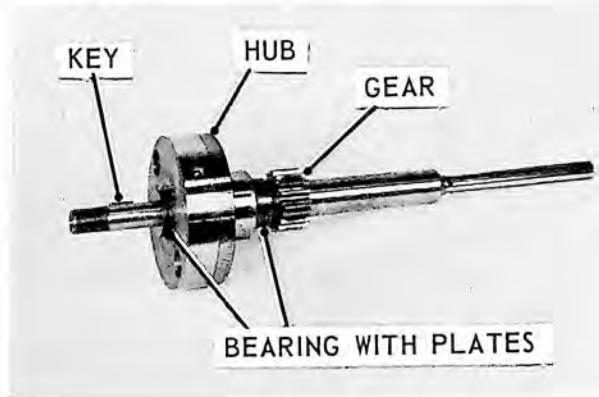
(Figure 4)

10. Thread bed clamp shaft (B, figure 5) into trunion (A).



(Figure 5)

11. Install bed clamp (C) on lathe bed and on shaft as shown in figure 5.
12. Remove cross feed hub, bearings, thrust plates and gear from cross slide screw removed from lathe in step 5. Assemble the parts on taper attachment male spline screw as shown in figure 6.



(Figure 6)

13. Slide assembled spline screw into carriage and turn until splines mesh with female screw. Push screw all the way in and secure with two socket head capscrews.
14. Install handwheel and nut. Tighten the nut slowly until handwheel backlash is at a minimum. DO NOT overtighten the nut.
15. Slightly loosen capscrew (D, figure 5); slowly tighten set screw (E) while turning cross slide handwheel back and forth until cross slide screw backlash is eliminated.

FINDING TAPER PER FOOT

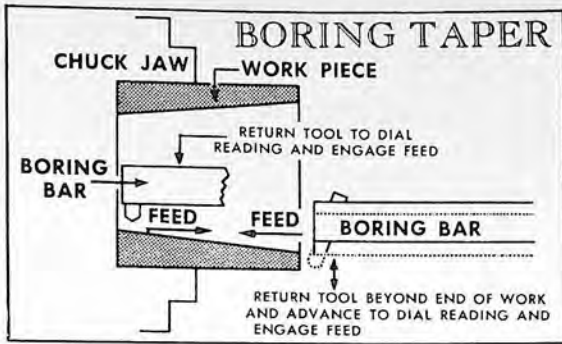
Taper per foot is the difference between the diameters of two ends of a tapered piece of work, expressed in inches per foot of length. Taper per foot is determined as follows:

Assume a piece of stock has a diameter of 3-1/4" at one end, 2-1/2" at the other, and is 8" long.

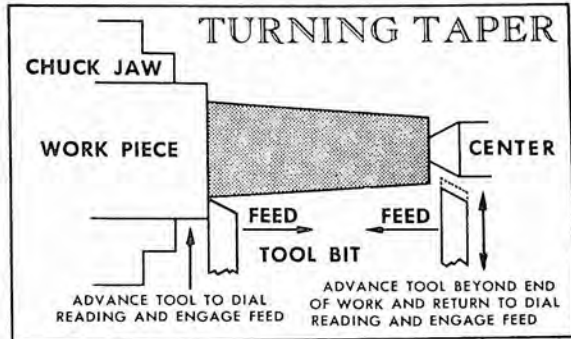
$$\text{Taper per foot (in inches)} = \frac{12 (3-1/4 - 2-1/2)}{8}$$

$$\text{Taper per foot (in inches)} = \frac{12 \times .750}{8} = 1.125$$

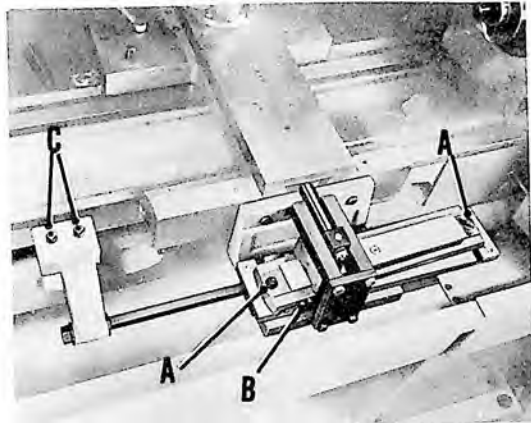
Set the taper slide on the 1-1/8 graduation mark to right of left of zero, depending upon which way the taper is cut.



(Figure 7)



(Figure 8)



(Figure 9)

OPERATION

1. Mount work in the lathe; whenever possible the cut should be made as shown in figure 7 for boring taper and figure 8 for turning taper.
2. Set point of tool bit on exact center line.
3. Lathe cross slide and taper slide should move freely, but with no up or down play. Adjust the tension with the gib screws in the cross slide and support bracket.
4. Position taper attachment so it is about in the center of the work. Lock clamp bracket to lathe bed.
5. Move the carriage by hand to make sure there is sufficient travel to complete the taper cut. If there isn't, adjust the compound rest, move the carriage or the taper attachment to a different position.
6. Set the taper slide to taper desired – graduations on left end are marked in degrees (graduations indicate included angle)—the right end in inches per foot.
7. To set the attachment for taper desired:
 - A. Loosen the two lock screws (A, figure 9) on each end of taper slide.
 - B. Turn taper adjusting screw (B) to taper desired.
 - C. Tighten the two taper slide lock screws (A).
 - D. Be sure clamp bracket (C) is locked to lathe bed.
8. Engage feed with tool approximately 1" away from beginning of cut to be sure backlash is removed before tool commences to cut.

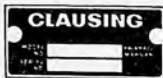
CAUTION: WHEN TAPER ATTACHMENT IS NOT IN USE, LOOSEN CLAMP (C) SO IT WILL SLIDE FREELY ALONG LATHE BED WITH THE MOVEMENT OF THE CARRIAGE.

7300 TAPER ATTACHMENT PARTS LIST

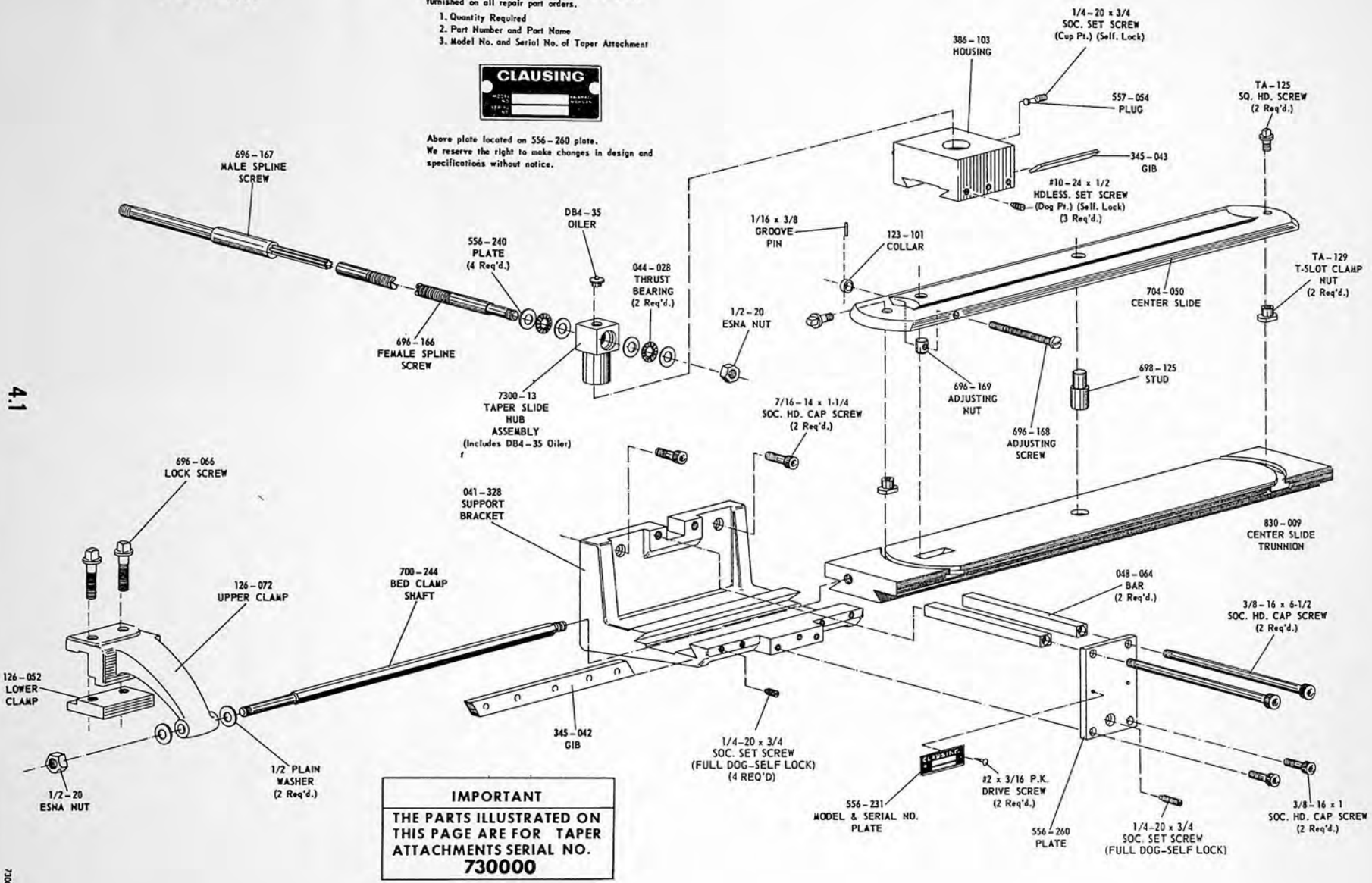
ORDERING INFORMATION

IMPORTANT - The following information must be furnished on all repair part orders.

1. Quantity Required
2. Part Number and Part Name
3. Model No. and Serial No. of Taper Attachment



Above plate located on 556-260 plate.
We reserve the right to make changes in design and specifications without notice.



IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR TAPER ATTACHMENTS SERIAL NO. 730000

4.1

7300



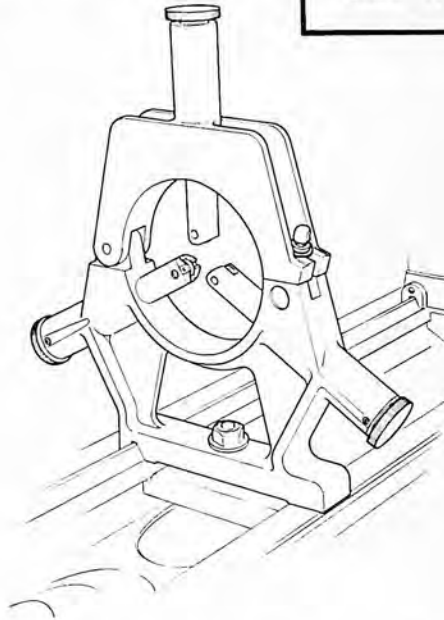
CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

**NO. 7301
STEADY REST**

for
1400 SERIES CLAUSING
14" LATHES

JAN. 1971

FILE NO. 7301-1



MOUNTING INSTRUCTIONS

Work less than 3/4" diameter, and machined more than 5 or 6 inches away from headstock, should be supported by the steady rest.

The base clamps to the bed ways — the adjustable jaws form a bearing for, and hold the work in exact position. Two sets are furnished — one has replaceable brass jaws; the other, anti-friction roller jaws to minimize scoring of machined materials.

Accurate positioning of the jaws to the work is important. The jaws must form a true bearing for the work, allowing it to turn freely, but without play. The following method is recommended. — Clean the bed ways. With the work trued in the lathe, clamp the steady rest to lathe bed, close to headstock. Adjust bottom two jaws to just touch the work. Then, with a strip of paper between the work and the jaw, turn the top jaw down until there is a slight drag on the paper as it is removed. After all three jaws have been properly adjusted, slide the steady rest near the point where the work is to be machined and clamp it to the bed. For jobs requiring maximum accuracy, check trueness of work with a dial indicator before adjusting the jaws.

Apply plenty of lubricant on the work at the point of bearing with the jaws, during the cutting operation. Hinged top permits inserting and removing work without disturbing jaw setting.

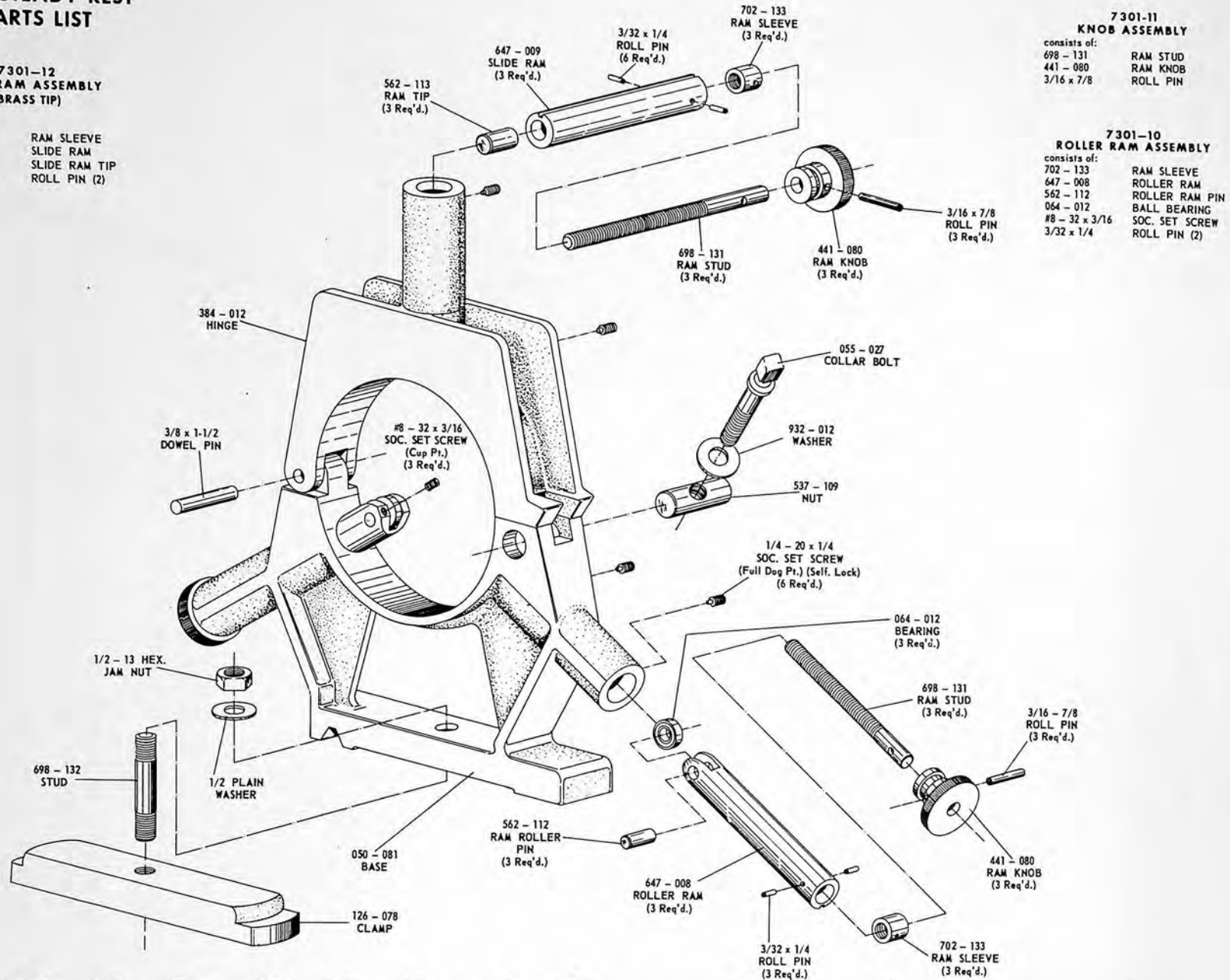
Scoring is usually the result of the top jaw being clamped too tightly, or lack of oil — chatter, by the top ram being too loose.

7301 STEADY REST PARTS LIST

7301-12 SLIDE RAM ASSEMBLY (BRASS TIP)

consists of:

702 - 133	RAM SLEEVE
647 - 009	SLIDE RAM
562 - 113	SLIDE RAM TIP
3/32 x 1/4	ROLL PIN (2)



7301-11 KNOB ASSEMBLY

consists of:

698 - 131	RAM STUD
441 - 080	RAM KNOB
3/16 x 7/8	ROLL PIN

7301-10 ROLLER RAM ASSEMBLY

consists of:

702 - 133	RAM SLEEVE
647 - 008	ROLLER RAM
562 - 112	ROLLER RAM PIN
064 - 012	BALL BEARING
#8 - 32 x 3/16	SOC. SET SCREW
3/32 x 1/4	ROLL PIN (2)



CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

**NO. 7308
DOUBLE TOOL
CROSS SLIDE**

for
1400 SERIES CLAUSING
14" LATHES

DECEMBER, 1970 FILE NO. 7308-1

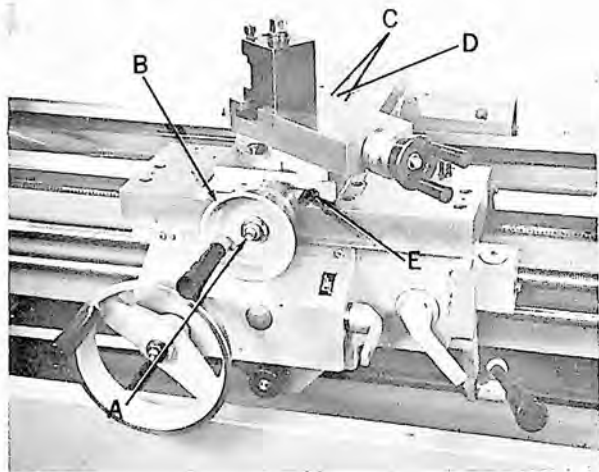


Figure 1

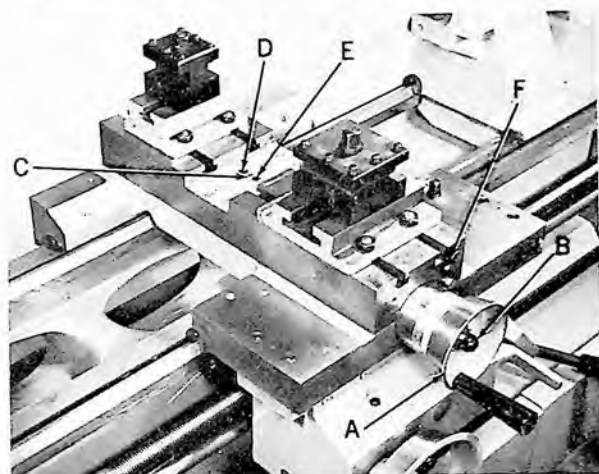
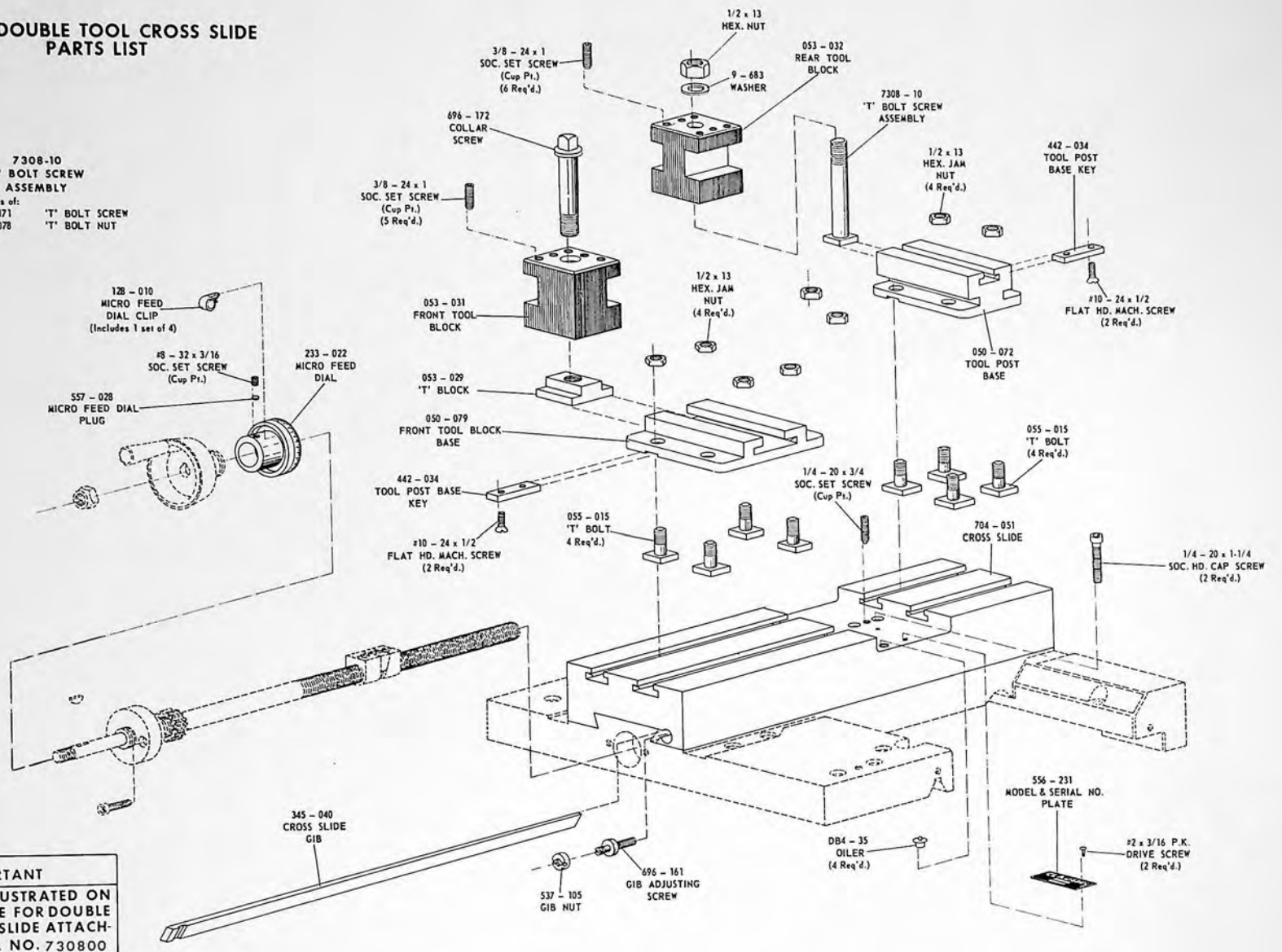


Figure 2

1. Remove nut (A, figure 1).
2. Remove handwheel (B) with assembled feed dial and woodruff key from cross slide screw.
3. Using snap ring pliers remove ring which retains cross feed dial on handwheel; remove dial and washers.
4. Install new micro feed dial on handwheel, secure with brass plug and #8 set screw furnished.
5. Reinstall woodruff key in cross slide screw and handwheel (A, figure 2).
6. Install nut (B) and tighten slowly while turning handwheel (A) back and forth until backlash in handwheel is at a minimum. **DO NOT** overtighten the nut.
7. Loosen gib nut and back gib screw (E) out of cross slide thus freeing the gib (figure 1).
8. Using handwheel (B) move cross slide to rear of lathe until the slide nut and adjusting wedge are clear of the saddle — do not turn nuts off the cross slide screw.
9. Remove socket head screws (C) and set screw (D); slide the cross slide off rear of saddle.
10. Clean and oil saddle and cross slide dovetails.
11. Position new gib on saddle dovetail, slide the cross slide onto saddle.
12. Install gib adjusting screw — be sure flange on screw is in slot in the gib. Install gib nut (F, figure 2). Do not tighten gib screw or nut.
13. Move cross slide until holes for screws (D and E) are aligned with the holes in cross slide nuts (on cross slide screw).
14. Install two 1/4 x 1-1/4 socket cap screws (D and E). Reach under the saddle and hold the adjusting wedge up toward the saddle while tightening cap screws; tighten screws snugly.
15. Slightly loosen cap screw (D) and start the 1/4 x 3/4 set screw (C) — tighten slowly while turning handwheel (A) back and forth until backlash is at a minimum.
16. Adjust gib by turning adjustment screw until a slight drag is felt as the slide is moved; tighten the gib nut.

7308 DOUBLE TOOL CROSS SLIDE PARTS LIST

7308-10 'T' BOLT SCREW ASSEMBLY
 consists of:
 696 - 171 'T' BOLT SCREW
 537 - 078 'T' BOLT NUT

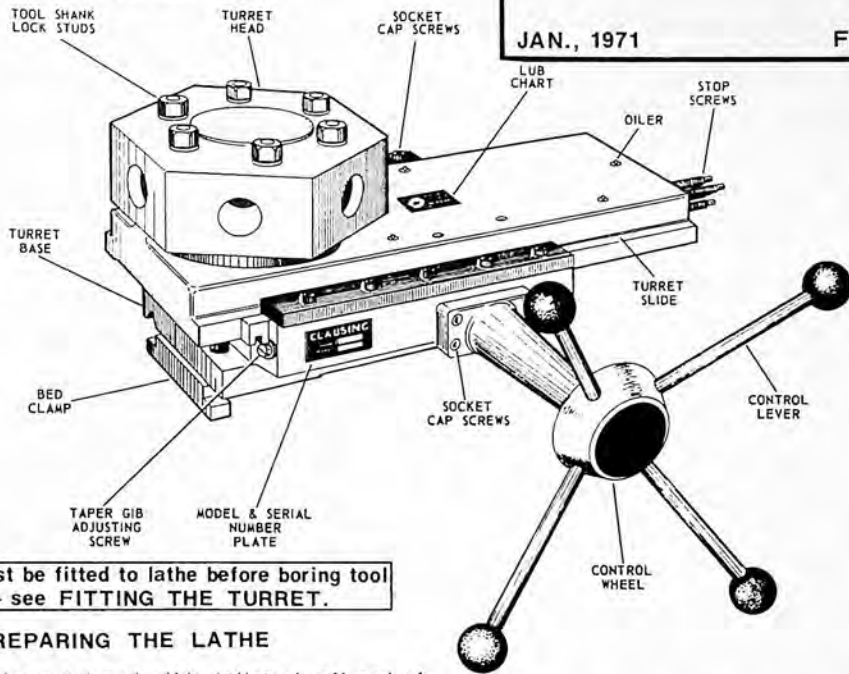


IMPORTANT
 THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR DOUBLE TOOL CROSS SLIDE ATTACHMENTS SERIAL NO. 730800



CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

**NO. 7309 & 7310
BED TURRETS**
for
1400 SERIES CLAUSING LATHES
JAN., 1971 FILE NO. 7309



NOTE:

Bed turret must be fitted to lathe before boring tool shank holes - see FITTING THE TURRET.

PREPARING THE LATHE

1. Loosen bed clamp nut and slide tailstock off end of lathe bed.
2. Move carriage toward tailstock end of lathe to provide sufficient space for turret.
3. Wipe the bed ways clean of oil, chips and dirt - remove any marks with a fine emery cloth or hone. **IMPORTANT:** To assure accurate performance, the lathe bed must be level before installing the turret and boring the tool shank holes. Use a sensitive machinist level and take readings parallel and, at right angles to the lathe bed at the headstock and tailstock ends - refer to 6900 Series INSTRUCTION AND PARTS MANUAL.

FITTING THE TURRET

1. Remove turret and bag from shipping box. Bag contains 4 control levers, 6 tool shank studs, speed wrench, socket set screw wrench, 6 nylon plugs, 2 clamping plates.
2. Place turret on clean bench with bottom of base up.
3. Use a grease solvent to clean rust proof coating from all machined surfaces - wipe dry with clean cloth.
4. Apply a thin film of blueing to lathe bed ways where turret is to be positioned.
5. To avoid damage, have someone assist in lowering turret into position on lathe bed. Slide turret back and forth over blueed section and check for rock by applying pressure on opposite corners front and rear of turret base.

6. Remove turret and check base for good bearing. Blueing will indicate high spots if any on turret bearing pads.

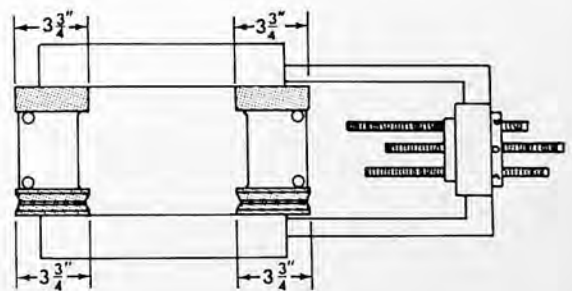


Figure 1

7. Scrape high spots just enough to remove blueing - then place turret back on lathe and check again as in steps 5 and 6. Repeat this procedure until bearing pads bear $3\frac{3}{4}''$ as shown in figure 1.
8. Wipe bed ways and turret clean. Position turret on lathe and install turret bed clamps. Alternate tightening clamp screws from corner to corner, keeping clamp pressure as equal front and back as possible. Tighten clamp screws just enough to keep turret in place under operating conditions.

CHECKING ALIGNMENT

1. Remove six stop screws at rear of turret slide.
2. Install one control lever and advance turret approximately 2" or until click is heard, this allows index pin to "pop in" locking turret head.

CAUTION: Check to be sure turret head is locked in position. If turret head can't be moved, it is properly locked.

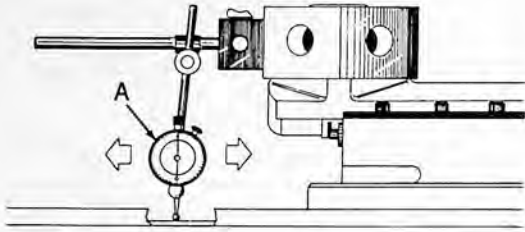
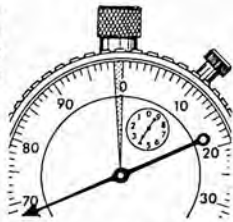


Figure 2

3. Mount indicator (A, Fig. 2) on front of turret head.
4. Set indicator so it bears on flat of lathe bed way.

5. With zero indicator reading, traverse turret slide towards lathe headstock. Indicator should read .000" to -.001" as shown in drawing at right.

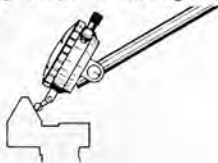


IMPORTANT: If readings do not fall within .000" to -.001" remove turret and scrape front or rear pads. If a plus reading is obtained, it will be necessary to scrape the rear bearing pads. If a minus reading exceeding -.001" is obtained, it will be necessary to scrape the front bearing pads.

NOTE: If scraping is necessary to get alignment, be sure to re-check bearing pads as in steps 5 and 6 page 1.

6. Check lateral alignment following steps 1 through 5 above, except, set indicator to bear on side of lathe bed "V" as shown in drawing at right.

7. To correct lateral alignment, remove turret and scrape opposing sides of turret "V" front and rear in direction desired.



BORING TOOL SHANK HOLES

The tool shank holes must be concentric and bored to exact size for accurate performance. The holes have been rough bored to $1\frac{3}{8}$ " diameter and must be finished bored to $1\frac{1}{2}$ " diameter. The turret head will handle tools with $1\frac{1}{2}$ " diameter shanks. Study the following procedure before starting boring operation.

1. Remove turret from lathe bed and traverse carriage to tailstock end of lathe.
2. Wipe turret and lathe bed ways clean. Mount turret back on bed ahead of carriage.
3. Make sure tool shank lock studs are NOT in the turret head.
4. Mount a boring bar at least $1\frac{1}{4}$ " diameter in a 4-jaw chuck. The bar should extend 3" maximum beyond the chuck jaws (the length of the holes in the turret head).

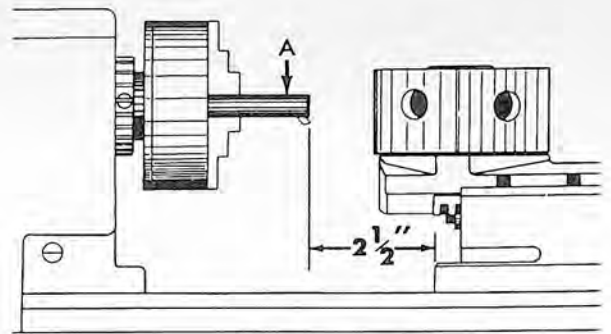


Figure 3

5. Move the turret forward on the lathe bed until the distance between the boring bar cutter (A fig. 3) and the front of the turret base is about 2½". In this location, overhang is at a minimum, and turret can be indexed. Lock turret to lathe bed by tightening clamp plates. (See 8, page 1).
6. Be sure turret head is indexed and locked in position before each boring operation. To check, take hold of head — if it can't be moved, it is properly locked. Repeat this procedure each time the head is turned to the next station.

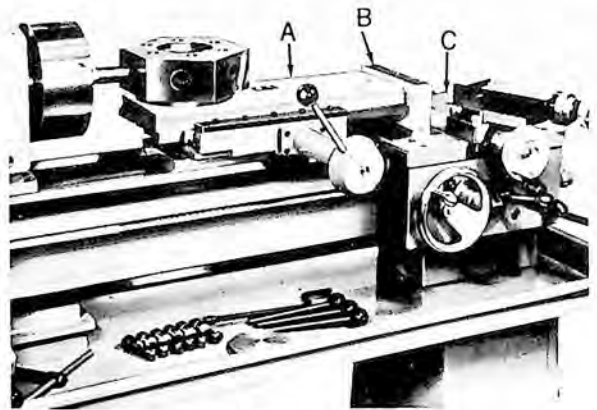


Figure 4

7. Place a wooden block (B, fig. 4) in front of carriage (C) to drive the turret slide (A).
8. Set the lathe quick change gear box for .0022" feed.
9. Bore the tool shank holes with power feed taking at least four cuts to bore holes to $1\frac{1}{2}$ " diameter — removing .020" on each of the first three cuts, and about .002" to .003" on the fourth or finishing cut.
10. Take roughing cut on first hole and all succeeding holes until all six holes are rough bored. (Starting hole may be indicated with a chalk mark.) Then, take the second roughing cut boring all six holes. Repeat on the third roughing cut, boring out all the holes. Then, finish bore all six holes to $1\frac{1}{2}$ " diameter.
11. Remove chips after each boring operation.
12. To obtain correct hole size, check with telescoping gauge.
13. After all six holes have been finished to size — clean away all chips, remove clamp screws and lift turret from lathe.

14. Clean lathe bed and move carriage up to the headstock. Wipe bed at tailstock end and install bed turret – tighten clamp plates. (See 8, page 1).
15. Install the 6 tool shank lock studs, 6 stop screws, 6 nylon plugs and set screws and 3 control levers.

OPERATION AND MAINTENANCE

1. Six adjustable stop screws (A, Fig. 5) – one for each of the turret stations, are located at rear of turret slide.

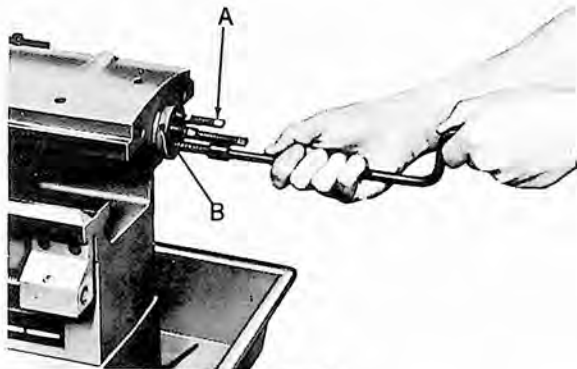


Figure 5

2. To adjust, loosen lock screws (B) in ring and turn screws to position desired – use speed wrench, see figure 5. Tighten lock screws in ring.
3. Make sure turret is indexed and locked before each machining operation.
4. Turret slide should move freely in the turret base, but with no up or down play. Adjustment may be made by removing shim plates.
5. Should lateral play develop, correct by turning taper gib adjusting screws on each end of turret base.
 - (a) To check turret alignment refer to figure 6.
 - (b) Mount a 1-1/2" diameter by 7-1/2" long ground test bar in the turret head, and another exactly the same diameter in lathe spindle or 4-jaw chuck.
 - (c) Clamp a dial indicator to carriage and dial indicate the side of the test bar in the chuck while turning the spindle by hand – reading should be within .001".

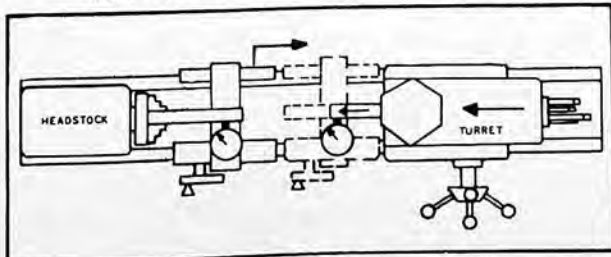


Figure 6

- (d) Without disturbing the dial, move the carriage until the indicator button touches the end of the test bar in the turret – turret slide must be as far back as possible.
 - (e) Now adjust the gib screws so the turret test bar is in alignment with chuck test bar.
7. The turret head bearings seldom require adjustment, however, they may be adjusted if excessive play is noticeable.
 - (a) Move the slide forward and retract to a point where the lock pin is disengaged from the head, head will spin freely in a clockwise direction.
 - (b) Remove head cap and use a socket wrench to tighten the 3/4 esna nut. The head should spin freely but with a slight amount of bearing drag. Replace cap.

CAUTION: Over-tightening will cause bearing damage and difficult turret operation.

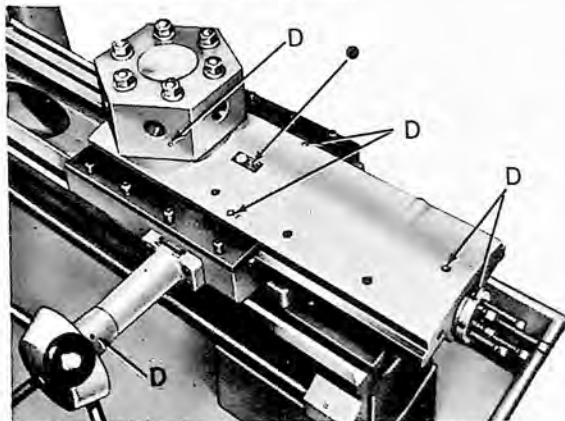
IMPORTANT

KEEP YOUR BED TURRET CLEAN – oil and dirt form an abrasive compound which will damage bearing surfaces. Wipe machined surfaces with clean oily rag at frequent intervals.

LUBRICATION

CODE – D Daily lubricate with TEXACO WAY Lubricant "D" or equivalent.

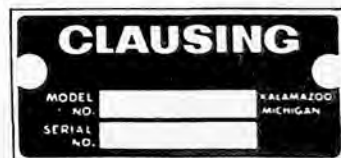
- Position head as shown on plate.



ORDERING REPAIR PARTS

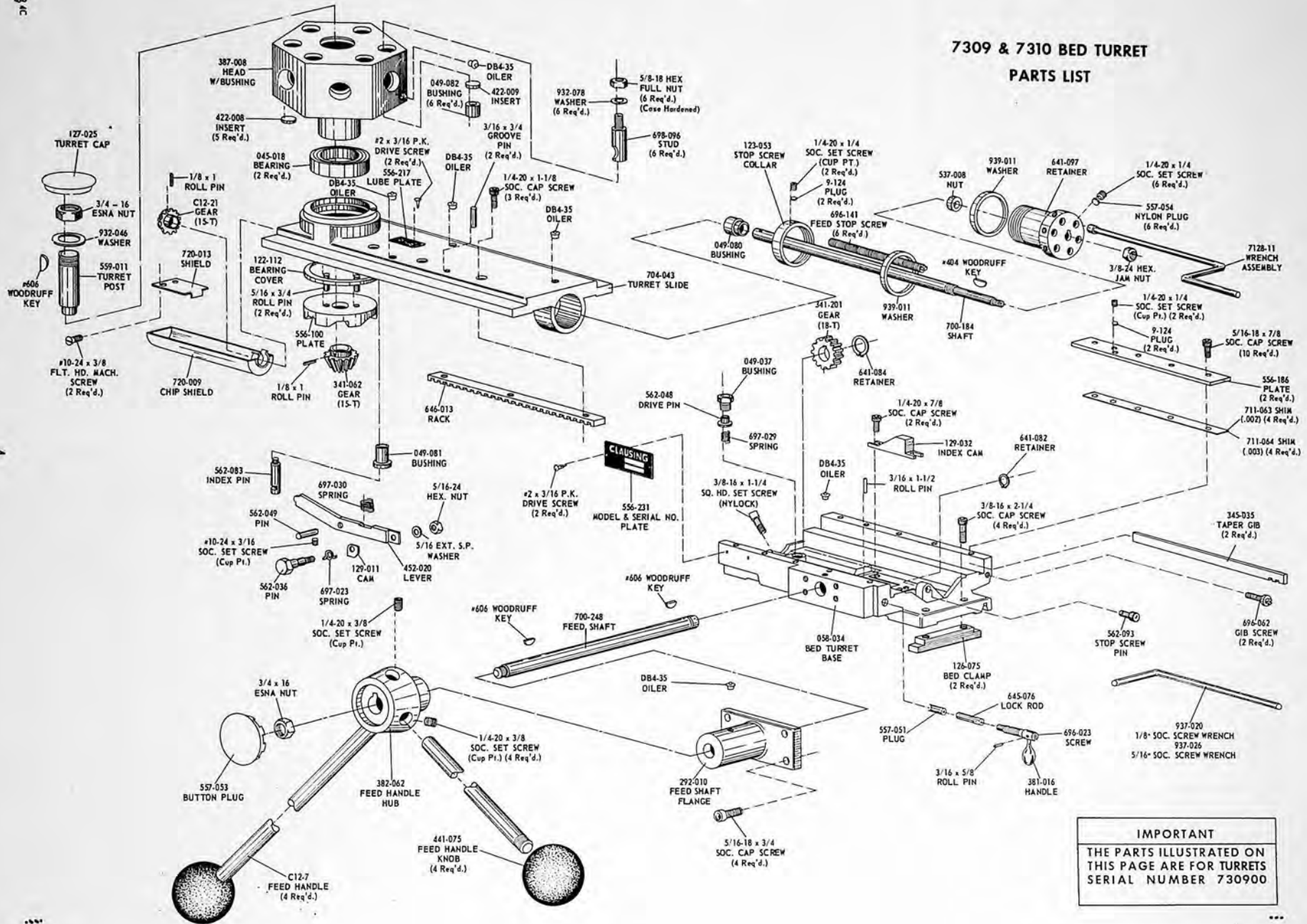
The following must be furnished when ordering parts in addition to quantity required.

- 1 PART NUMBER
- 2 PART NAME
- 3 MODEL & SERIAL NUMBER – on Plate attached to side of turret base – see illustration above.



NOTE: Screws and nuts shown without part numbers should be purchased locally.

7309 & 7310 BED TURRET PARTS LIST



IMPORTANT
THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR TURRETS SERIAL NUMBER 730900



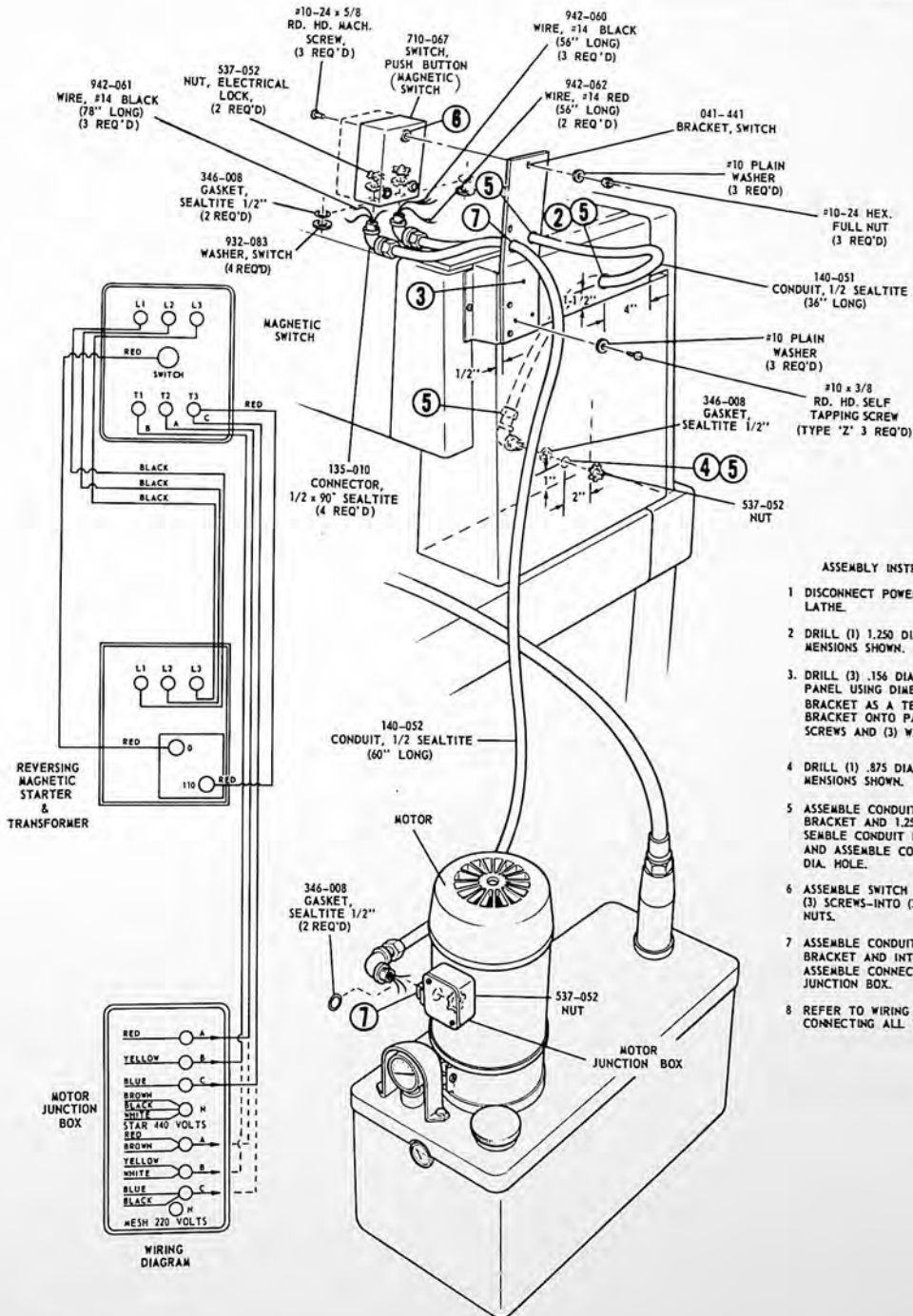
CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

7312 & 7313
TRACER ATTACHMENT
MAGNETIC ELECTRICS

for
1400 & 1500 SERIES CLAUSING LATHES

JULY, 1972

FILE NO. 7312-13



ASSEMBLY INSTRUCTIONS

- 1 DISCONNECT POWER SUPPLY FROM LATHES.
- 2 DRILL (1) 1.250 DIA. HOLE TO DIMENSIONS SHOWN.
- 3 DRILL (3) .156 DIA. HOLES INTO PANEL USING DIMENSION AND THE BRACKET AS A TEMPLATE. ASSEMBLE BRACKET ONTO PANEL WITH (3) SCREWS AND (3) WASHERS.
- 4 DRILL (1) .875 DIA. HOLE TO DIMENSIONS SHOWN.
- 5 ASSEMBLE CONDUIT (36" LG.) THRU BRACKET AND 1.250 DIA. HOLE; ASSEMBLE CONDUIT INTO CONNECTOR AND ASSEMBLE CONNECTOR INTO .875 DIA. HOLE.
- 6 ASSEMBLE SWITCH ONTO BRACKET WITH (3) SCREWS-INTO (3) WASHERS AND (3) NUTS.
- 7 ASSEMBLE CONDUIT (60" LG.) THRU BRACKET AND INTO CONNECTOR; ASSEMBLE CONNECTOR INTO MOTOR JUNCTION BOX.
- 8 REFER TO WIRING DIAGRAM FOR CONNECTING ALL WIRES.



CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

NO. 7314 TOOL POST GRINDER

for
1400 SERIES CLAUSING LATHE

JANUARY 1973

FILE NO. 7314-2

MOUNTING INSTRUCTIONS

Grinder mounts in tool post slide of compound rest — clean both the grinder base and the slot before mounting. Loosen cap screw (A, figure 1) and mount grinder on slide. Fasten securely in place.

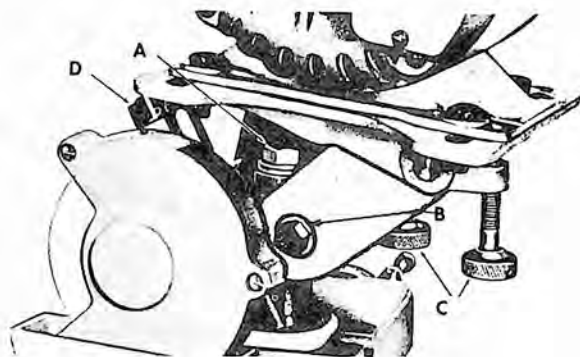


Figure 1

CONTROLS

(Refer to figure 1)

1. Screw (B) locks grinder in any vertical direction.
2. Knob (D) regulates height of grinder. Always loosen screw (B) before raising or lowering grinder.
3. Adjusting screws (C) regulate belt tension.

SPEEDS

Two speeds are available — 4900 and 9100 rpm. The slower speed is obtained by placing belt on the smaller step of motor pulley and the larger step of spindle pulley. **WARNING:** Never run large grinding wheels at the higher speed. This is for internal grinding wheels only.

DRESSING WHEELS

The dressing tool mounts in a holder clamped to lathe bed. The diamond point should be at an angle and slightly below center as shown in figure 2. Run wheel back and forth, taking light cuts until diamond cuts evenly and has removed glazed surface from wheel. For a fine, accurate finish, the grinding wheel must be dressed before each operation. **NOTE:** Wheel should be dressed in position at which it will be used and at same rate of feed.

7314

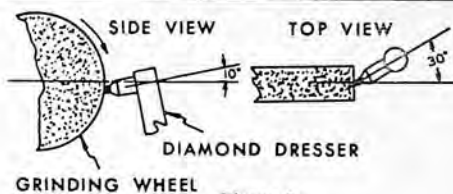


Figure 2

LUBRICATION

Bearings in grinder and motor are grease packed at time of assembly and need no further attention. **IMPORTANT:** Grinding dust is a mixture of abrasive and fine particles of metal and can cause rapid wear. Always cover bed ways and cross slide during dressing or grinding operations. After grinding, thoroughly clean bed ways and carriage dovetails, then apply plenty of clean oil.

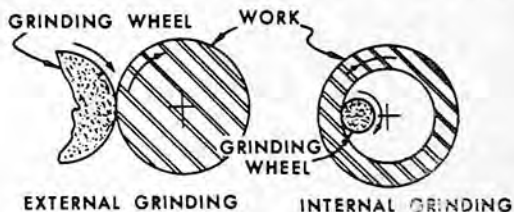


Figure 3

OPERATING INSTRUCTIONS

For most operations, grinder spindle should be on exact center line of lathe. The work must rotate in a direction opposite that of grinding wheel (figure 3). Rotation of lathe spindle must be clockwise (reverse) for external grinding, and counterclockwise (forward) for internal grinding.

When grinding a surface parallel to lathe center line, set compound rest at 0 and feed carriage back and forth by hand or by power feed. When grinding at an angle, compound rest is set at the proper angle and grinder is fed back and forth with the compound rest feed.

External Grinding — work should be turned as close to the final finish size as possible before grinding operation is begun — grinding is a finishing operation. With work and grinder in proper position, take light cuts across entire length of work. Use fine feed. Finishing cut should be less than .001 inch.

Internal Grinding — be sure to remove external wheel before mounting internal grinding wheel. Take light cuts and feed in very slowly because of overhang of grinding wheel and arbor. After last cut, allow wheel to pass back and forth across work several times without advancing feed.

Printed in U.S.A.



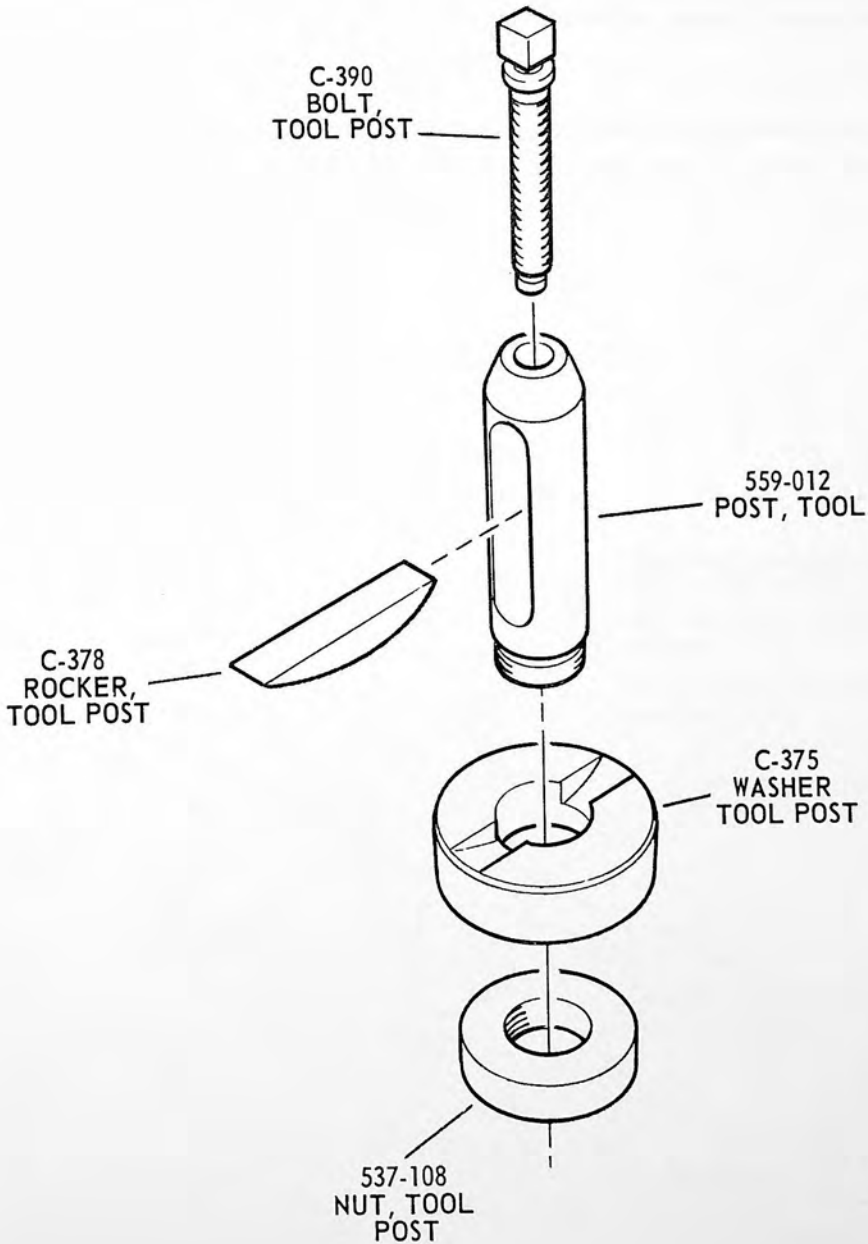
CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

No. 7319
TOOL POST ASSEMBLY

for
1400 & 1500 CLAUSING LATHES

JULY, 1972

FILE 7319





CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

NO. 7320 HANDWHEEL COLLET CHUCK

for

1400 & 1500 SERIES CLAUSING 14" LATHES

JULY, 1972

FILE NO. 7320

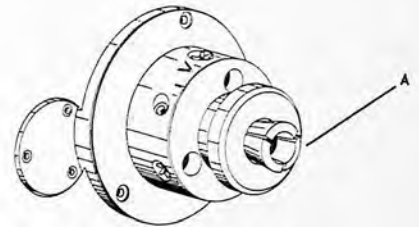
Carefully clean lathe spindle taper (A) and both tapers of Collet Closer sleeve. Insert Closer sleeve into spindle taper. Wipe collet clean, install in closer sleeve so key way in collet engages key in Closer sleeve.

Carefully slide drawbar and handwheel through left end of spindle. Turn handwheel clockwise a few turns to engage collet threads. Insert stock in collet, tighten handwheel to clamp collet onto stock to desired tension.

7320-10 SLEEVE COLLET CLOSER ASSEMBLY

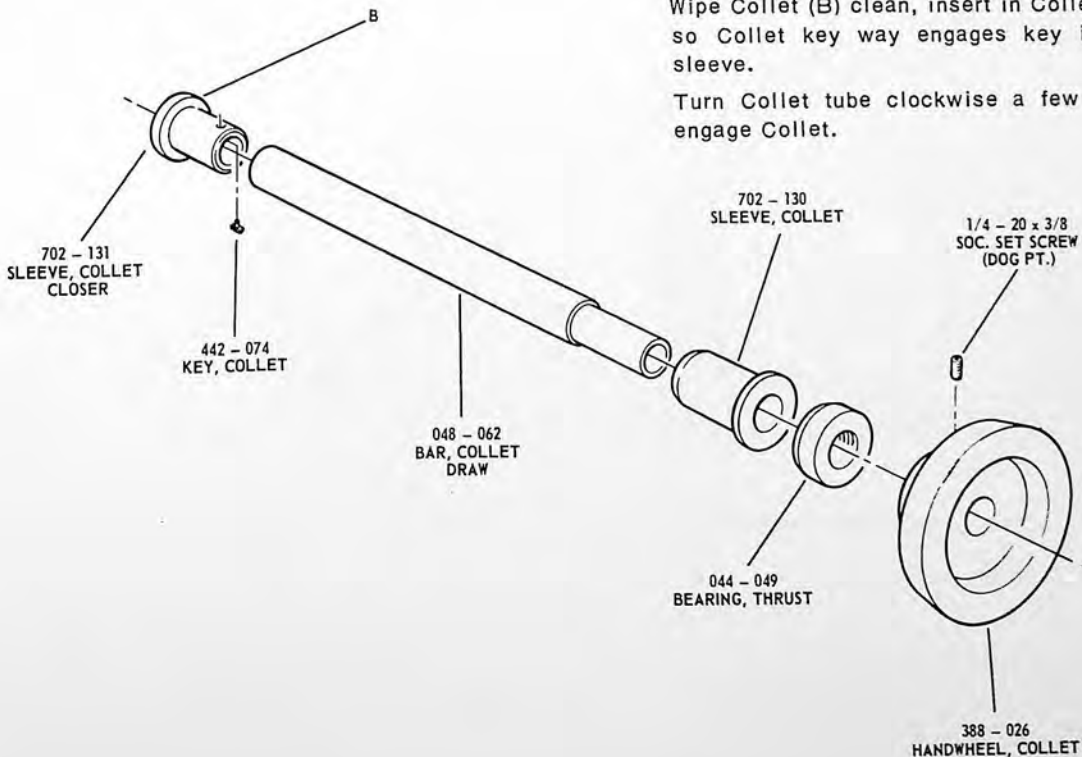
consists of:

- 702 - 131 SLEEVE COLLET CLOSER
- 442 - 074 KEY, COLLET



Then seat Collet Sleeve (A) in spindle taper. Wipe Collet (B) clean, insert in Collet sleeve so Collet key way engages key in Collet sleeve.

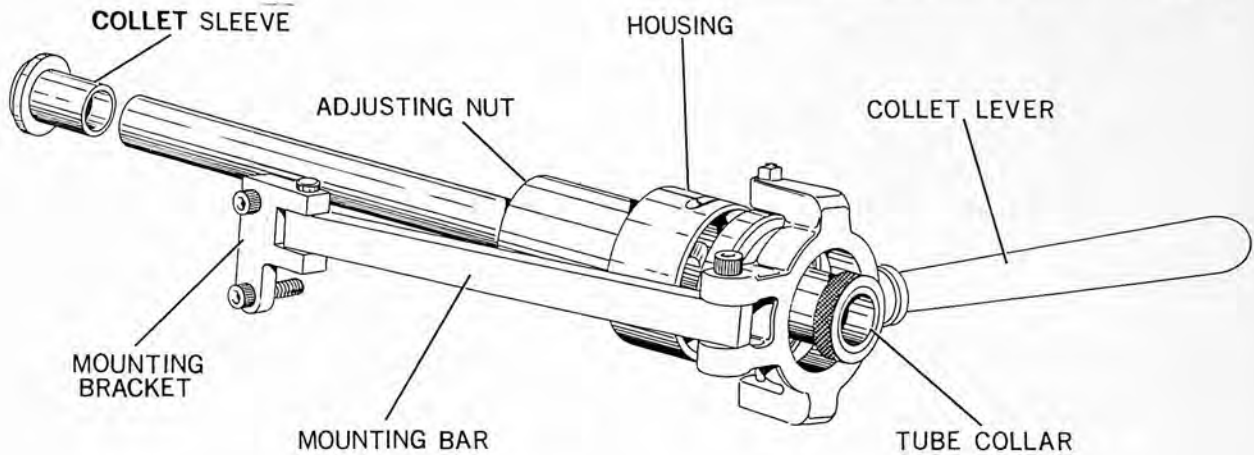
Turn Collet tube clockwise a few turns to engage Collet.





CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

NO. 7321
LEVER TYPE
COLLET CHUCK
for
1400 & 1500 SERIES CLAUSING LATHES
JULY 1972 FILE NO. 7321-1



INSTALLATION INSTRUCTIONS

1. Remove gear train end guard from lathe.

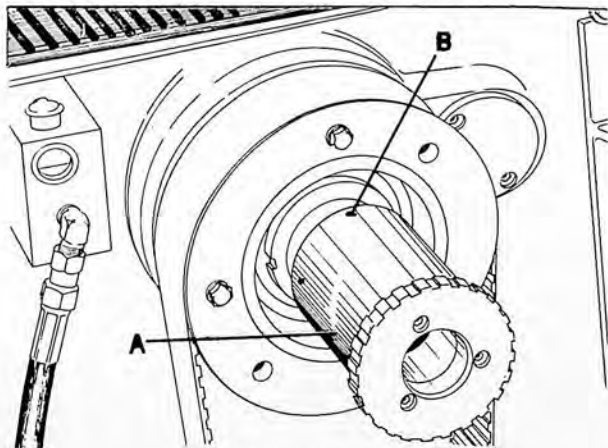


FIGURE 1

2. Install adjusting nut assembly (A, figure 1) on spindle. If necessary tap lightly with a soft hammer until nut bottoms on spindle.
3. Insert brass plugs in set screw holes and install socket set screws (B).

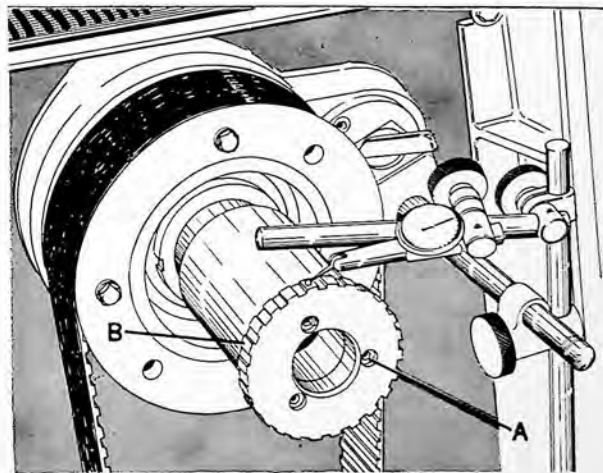


FIGURE 2

4. To balance the adjusting nut.
 - a. Mount a magnetic base dial indicator as shown in figure 2.
 - b. Loosen the three screws (A) just enough to allow the nut part of assembly (B) to move when lightly tapped with a soft hammer.

- c. Turn spindle slowly, by hand and lightly tap nut (B) on high points with soft hammer until total indicator reading is within 0.005".
- d. Then tighten screws (A) securely and re-check indicator reading. If reading has changed repeat the last three steps.

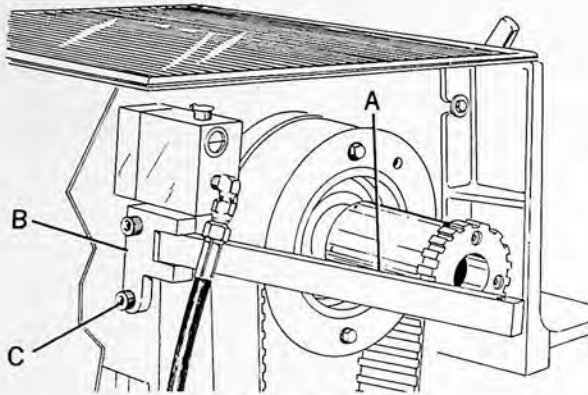


FIGURE 3

5. Attach bar (A) and bracket (B, fig. 3) to headstock with two 3/8-16x7/8 screws (C).
6. Cut out indented area (A, figure 4) in gear train guard and install guard with collet mounting bar extending through the hole.

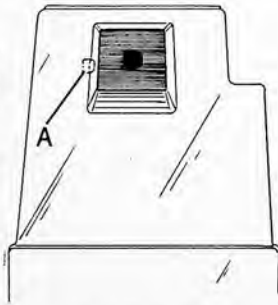


FIGURE 4

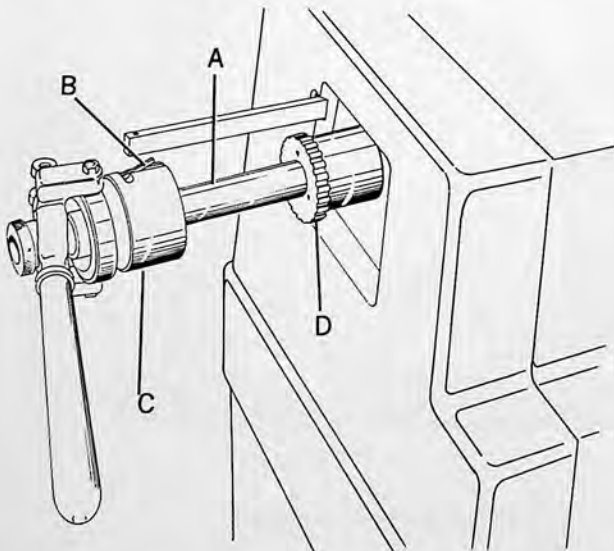


FIGURE 5

7. Slide collet tube (A, figure 5) into spindle, lift key (B) and locate housing (C) over adjusting nut (D). Depress key into nearest groove in adjusting nut.

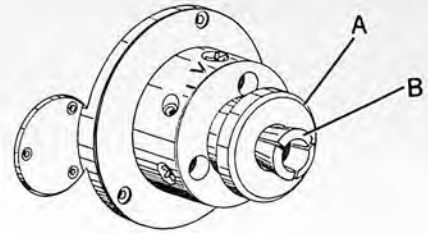


FIGURE 6

8. Then seat Collet sleeve (A) in spindle taper. Wipe Collet (B) clean, insert in Collet sleeve so Collet key way engages key in Collet sleeve. Turn Collet tube clockwise a few turns to engage Collet.

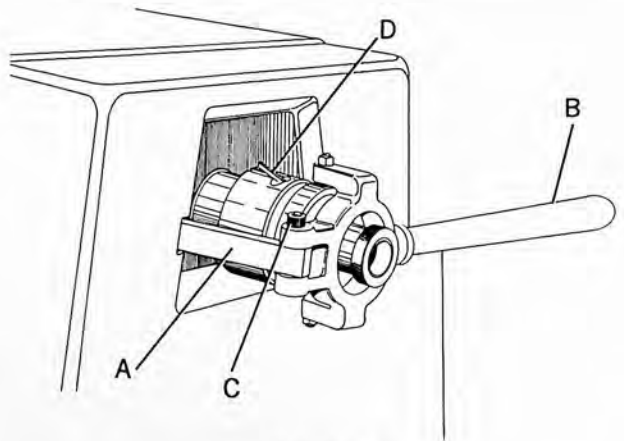


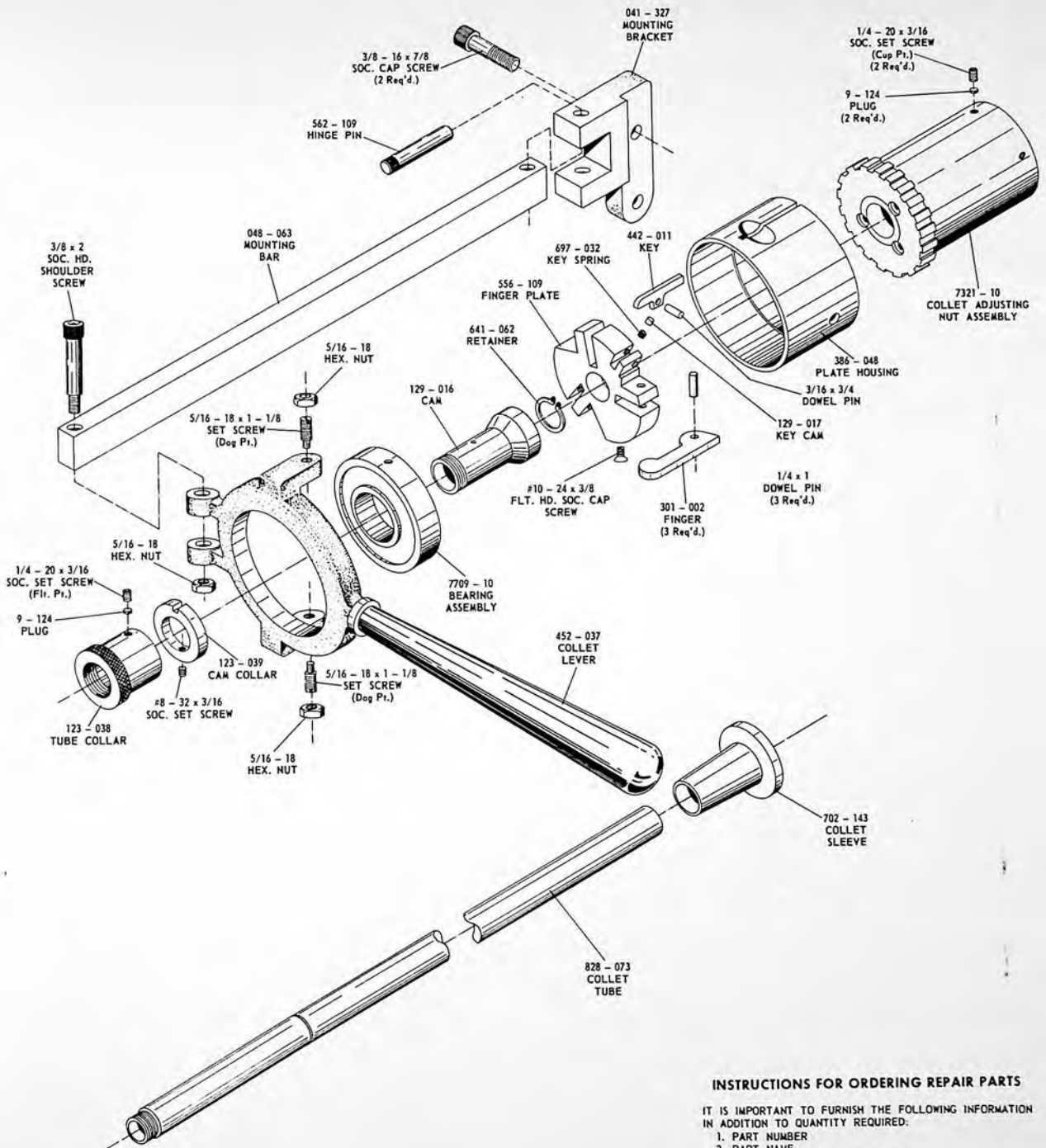
FIGURE 7

9. Next see figure 7 – connect mounting arm (A) to collet lever (B) with shoulder screw (C) and 5/16-18 nut.
10. Insert stock in collet.
11. Raise key (D) as shown. Move lever (B) away from headstock to end of stroke. Turn collar (E) clockwise until collet has sufficient holding power and releases when lever is moved.
12. Depress key (D) into nearest groove in adjusting nut.
13. Use General Purpose Grease to lubricate actuating parts.

CHANGING COLLETS

1. Remove collet, by releasing key (D) and turning collar (E) counterclockwise until collet is disengaged.
2. Select collet for size of stock available, clean collet and insert.
3. Follow steps 8 through 12 to install new collet.

NO. 7321 LEVER COLLET ATTACHMENT PARTS LIST



INSTRUCTIONS FOR ORDERING REPAIR PARTS

IT IS IMPORTANT TO FURNISH THE FOLLOWING INFORMATION IN ADDITION TO QUANTITY REQUIRED:

1. PART NUMBER
2. PART NAME
3. MODEL NUMBER OF ATTACHMENT.

NOTE: SCREWS AND NUTS SHOWN WITHOUT PART NUMBERS SHOULD BE PURCHASED LOCALLY.

WE RESERVE THE RIGHT TO MAKE CHANGES IN DESIGN AND SPECIFICATIONS WITHOUT NOTICE.



CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

**NO. 7326 and 7344
COOLANT SYSTEM**

for
1400 SERIES CLAUSING LATHES

OCTOBER, 1970

FILE NO. 7326-1

1
2

INSTALLATION

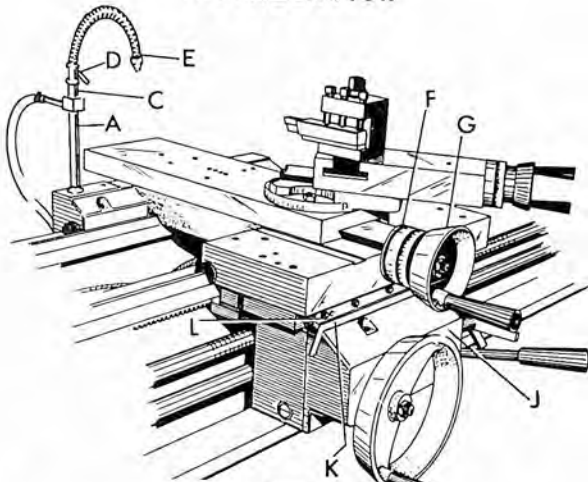


Figure 1

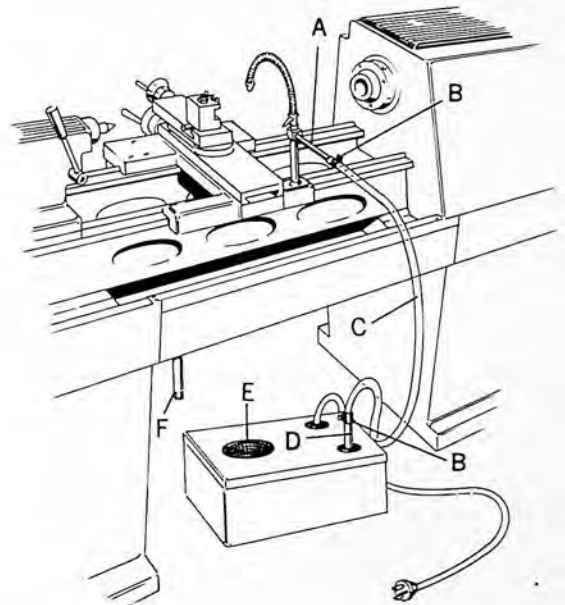


Figure 3

1. Install O-ring (F, Fig. 1) on cross feed hub (G)- (stretch O-ring and slip over cross slide handwheel).
2. Remove top four capscrews from apron cover (J).
3. Install coolant guard assembly (K) with four 1/4-20 x 5/8 button head capscrews (L).
4. Install nozzle mount assembly (A) in tapped hole in saddle wing.
5. Screw fittings (C and D) into mount. Screw valve (D) on fitting (C) and flexible nozzle (E) into valve (D).

6. Install pump (F, Fig. 2) on cover bracket (E) with two #8-32 x 1/2 screws and shakeproof washers.

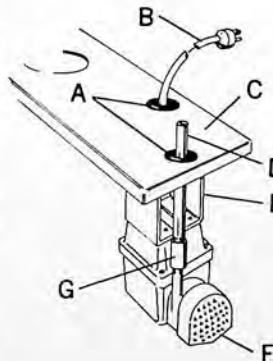


Figure 2

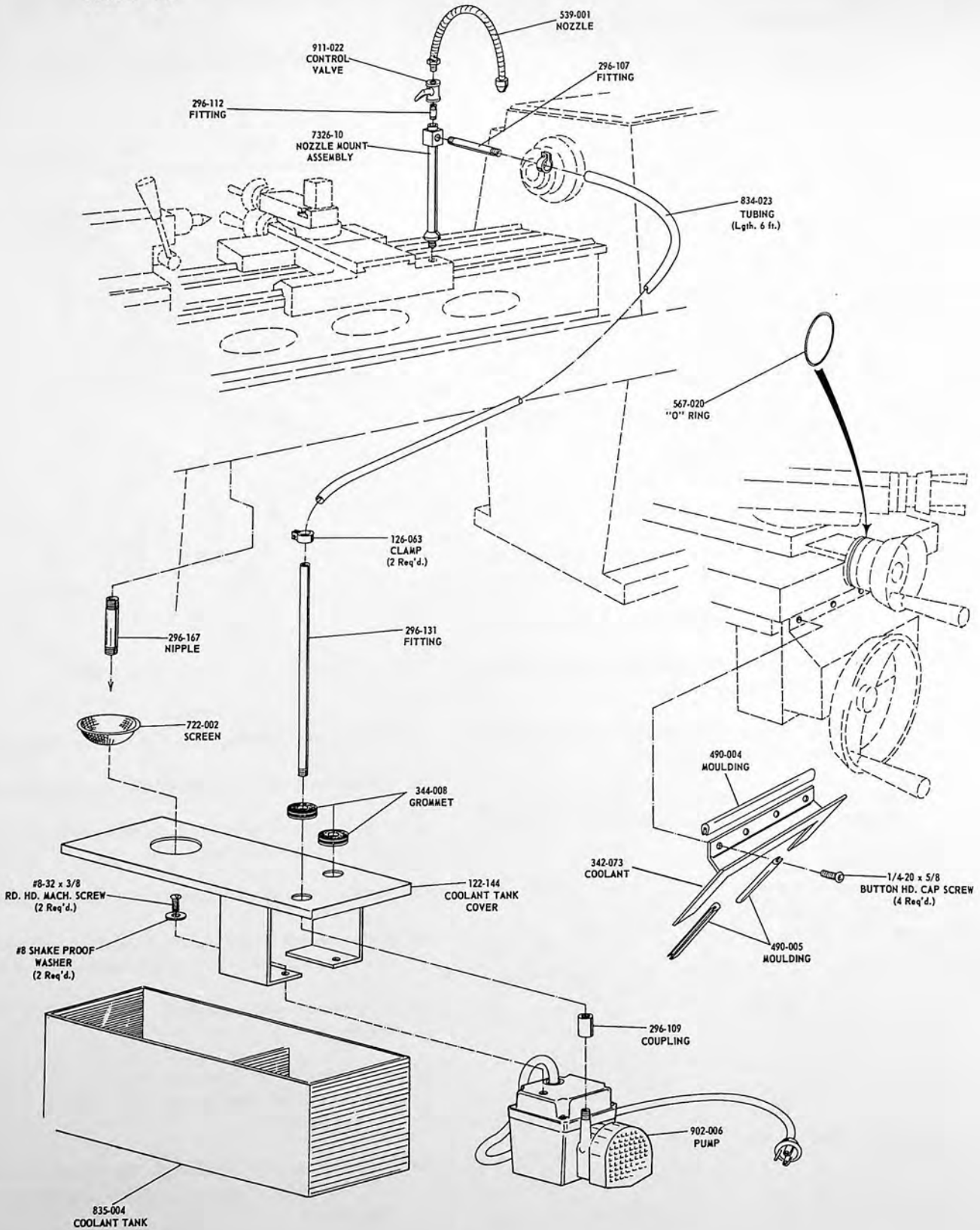
7. Pull electrical cord (B) through hole in cover (C).
8. Install grommets (A).
9. Screw coupling (G) on pump.
10. Install fitting (D).

11. Install wire strainer (E, Fig. 3) on pump cover.
12. Place cover with assembled parts on coolant tank.
13. Install plastic tubing (C) on fitting (A) and fitting (D) - secure with clamps (B).
14. Install 1/2 inch pipe nipple (F) in chip pan drain.
15. Fill tank with coolant; tank capacity is 10 gallons. Position strainer (E) under return nipple (F) in chip pan.
16. Plug pump electrical cord into 110 volt service outlet.

NOTE: If lathe is equipped with special J.I.C. electrics No. 7324, plug pump into outlet in bottom of electrical box on lathe.

CAUTION: PUMP IS DESIGNED TO OPERATE ONLY ON 115 VOLT AC, 60 CYCLE SINGLE PHASE POWER.

**NO. 7326 and 7344
COOLANT SYSTEM
PARTS LIST**



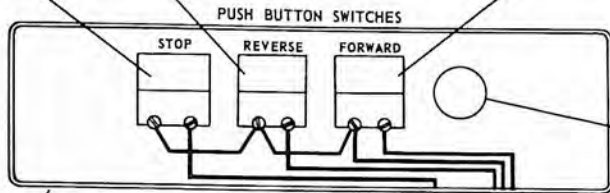
INSTRUCTIONS and PARTS



CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

REVERSING MAGNETIC STARTER
7329 (230V/460V) - 7330 (460V)
7340 (200V)
3 - PHASE
WIRING DIAGRAM AND
PARTS LIST
for
1400 & 1500 CLAUSING LATHES
OCT. 15, 1972 FILE 7329-30-40

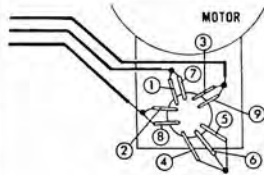
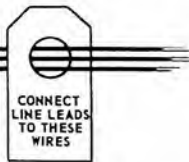
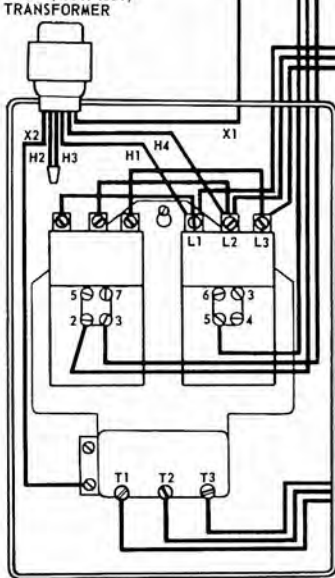
710 - 087 SWITCH, PUSH BUTTON "STOP"
710 - 084 SWITCH, PUSH BUTTON "REVERSE"
710 - 083 SWITCH, PUSH BUTTON "FORWARD"



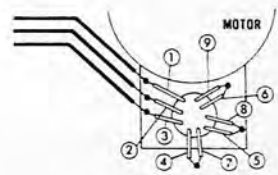
056 - 017 BOX, PUSH-BUTTON

836 - 012 (208V)
836 - 002 (230V/460V)
TRANSFORMER

NOTE: WIRING DIAGRAM INDICATES CONNECTIONS BETWEEN PUSH BUTTON SWITCHES, MAGNETIC STARTER, TRANSFORMER AND MOTOR. MAGNET STARTER PRE-WIRED AT FACTORY, SEE INSIDE COVER FOR STARTER WIRING DIAGRAM.

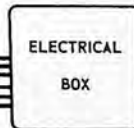


ELECTRICAL BOX 230 V

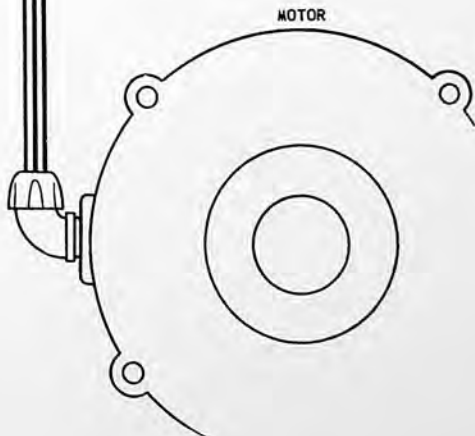


ELECTRICAL BOX 460 V

715 - 054 (230V)
715 - 055 (460V)
MAGNETIC STARTER



200 V SHOWN
230V & 460V TIED OFF IN ELECTRICAL BOX



HEATER COIL CHART

MODEL	MOTOR VOLTAGE	CYCLE	COIL AMPS.	COIL SIZE
1300 5 HP	220/440	60	15/7.5	N34/N27
1300 5 HP	200	60	17.3	N36
1400 7½ HP	220/440	60	21/10.5	N38/N31
1400 7½ HP	200	60	24	N39

INSTRUCTIONS and PARTS



CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

130-048-14
THREADING CHART

for

1400 & 1500 SERIES CLAUSING LATHES
JULY 1972 FILE 130-048-14

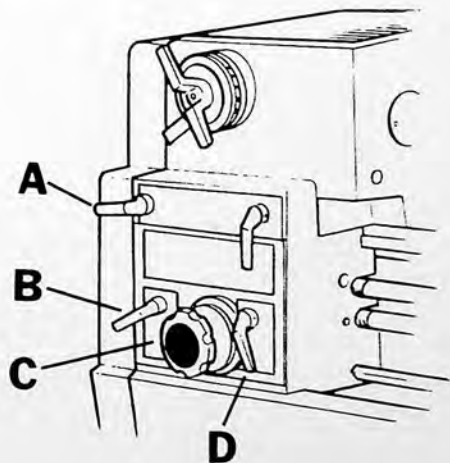
	INCHES PER REVOLUTION									THREADS PER INCH								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
AC	.0374		.0299		.0260		.0230		.0213	4	4.5	5	5.5	5.75	6	6.5	6.75	7
AD	.0187	.0332	.0149	.0272	.0136	.0130	.0124	.0115	.0110	8	9	10	11	11.5	12	13	13.5	14
AE	.0093	.0166	.0074	.0068	.0065	.0062	.0057	.0055	.0053	16	18	20	22	23	24	26	27	28
BC	.0046	.0041	.0037	.0034	.0032	.0031	.0028	.0027	.0026	32	36	40	44	46	48	52	54	56
BD	.0023	.0020	.0018	.0017	.0016	.0015	.0014	.00136	.00134	64	72	80	88	92	96	104	108	112
BE	.00117	.00104	.00093	.00085	.00081	.00078	.00072	.00069	.00067	128	144	160	176	184	192	208	216	224

CROSS FEED 1/2 LONGITUDINAL FEED

LEGEND

- A. **SLIDING GEAR LEVER** selects hi range or low range of threads or feeds on quick change gear box. Has 2 positions A or B. Do not shift while spindle is turning.
- B. Changes ratio between spindle and lead screw. There are 3 positions C, D, and E. Do not shift while spindle is turning.
- C. **SELECTOR DIAL** has nine positions, pull out to release - select number indicated on chart - push in to lock.
- D. **LEAD SCREW DIRECTION CONTROL** this control is for right hand or left hand threading - arrows show direction of carriage movement. Central position is neutral, lead screw does not turn. Leave control in neutral when not threading.

CROSS FEED 1/2 OF LONGITUDINAL



CAUTION: DO NOT SHIFT CONTROLS WHILE SPINDLE IS TURNING.

For complete operating instructions, refer to manual furnished with lathe.



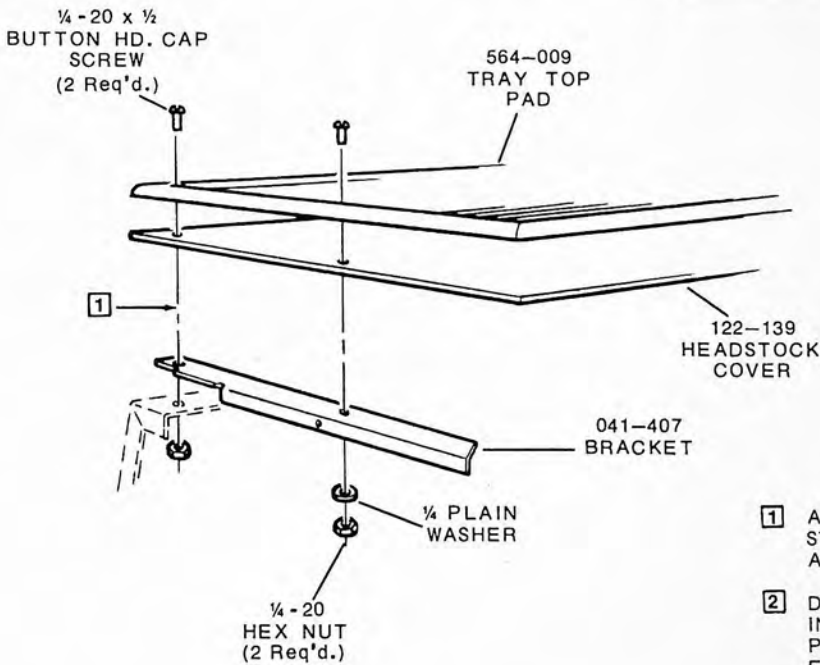
CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49001

342-123
FIBERGLASS END
GUARD INSTALLATION

FOR
1400 SERIES CLAUSING LATHES
BELOW SERIAL NO. 140485

JULY, 1971

FILE NO. 342-123



1 ASSEMBLE BRACKET ONTO HEAD-
STOCK COVER AND TRAY TOP PAD
AS SHOWN.

2 DRILL (2) .281 DIA. HOLES - ONE
IN LEFT PANEL AND ONE IN RIGHT
PANEL AND ASSEMBLE ONE BRACK-
ET ON EACH SIDE AS SHOWN.

