

OPERATOR'S HANDBOOK

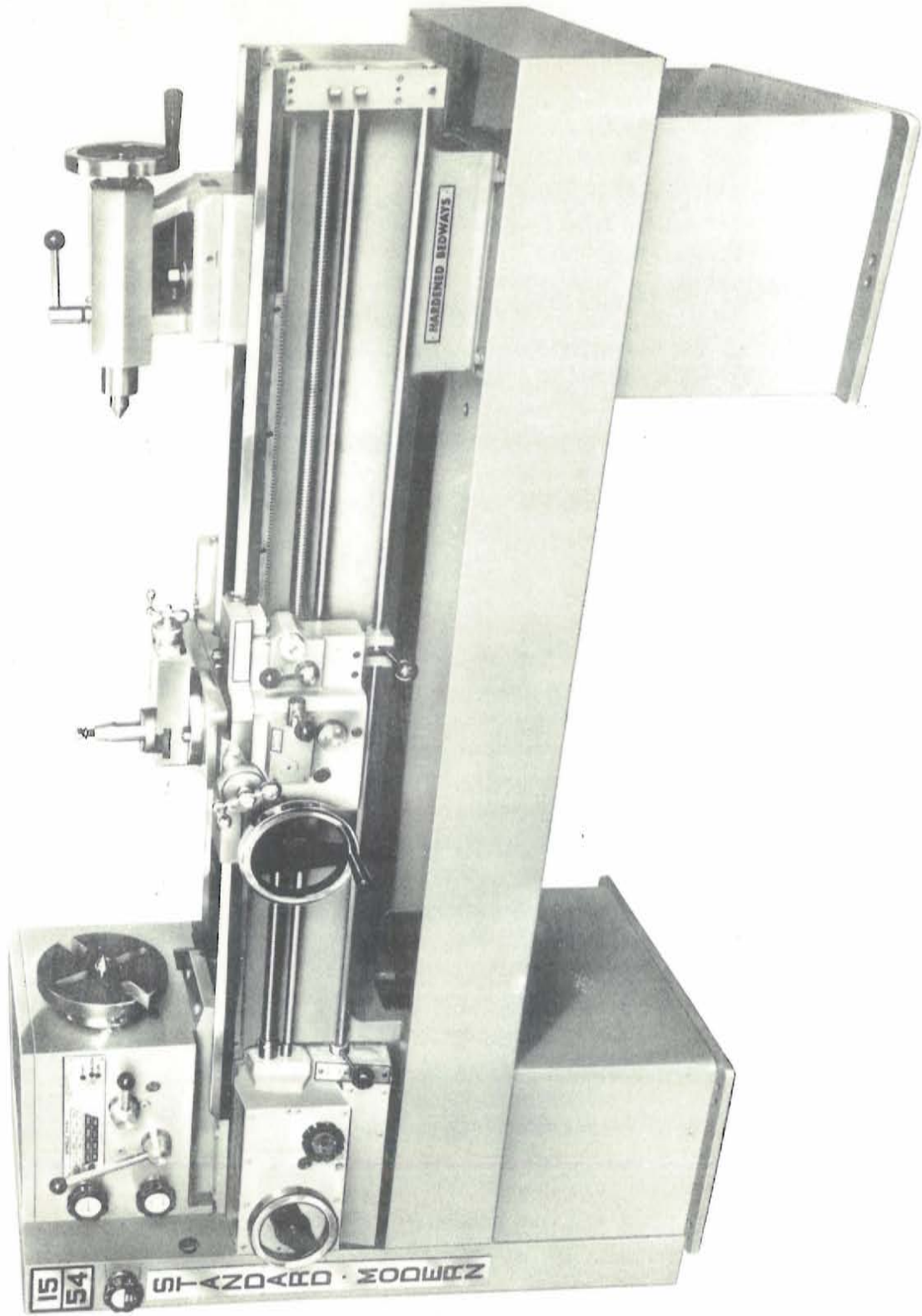
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MODEL 1554 LATHE

D1-6" CAMLOCK SPINDLE NOSE

Standard-Modern Tool Co. Ltd.

Head Office and Plant - 69 Montcalm Avenue - Toronto, Canada M6E 4N9 - 787-2494



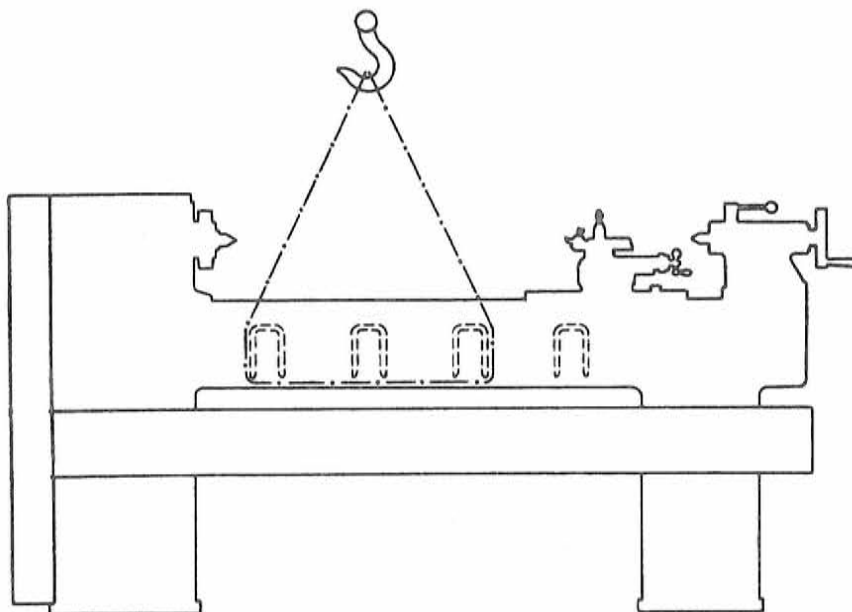
GENERAL VIEW

1. LIFTING AND INSTALLATION INSTRUCTIONS

1.1 Lifting the Machine

To lift the machine by the use of chain slings, run the carriage down to the tailstock and place the slings around the centre bed cross ribs.

Protect painted surfaces with thick pads.



Lifting equipment should have a capacity of approximately 4000 lbs.

Do not remove skids from the machine until it is brought to its final position.

1.2 Inspection

Check your delivery slip against the accessories that were ordered with the machine. If there is a shortage or error, report it to Standard-Modern Tool Co. Limited immediately, giving the serial number of the machine which is stamped on the recessed face, on top of the bed, at the tailstock end.

1.3 Cleaning

All unpainted parts of the machine have been coated with an anti-rust compound. This should be thoroughly removed after the machine is installed and before moving the carriage, compound rest or tailstock on their respective slides.

To remove the anti-rust compound use a wiper dipped in Varsol or Kerosene.

All unpainted surfaces should immediately be coated with a film of light machine oil to prevent rust. If the finished surfaces are kept clean and well coated with oil, the lathe will retain its new appearance indefinitely.

1.4 Installation

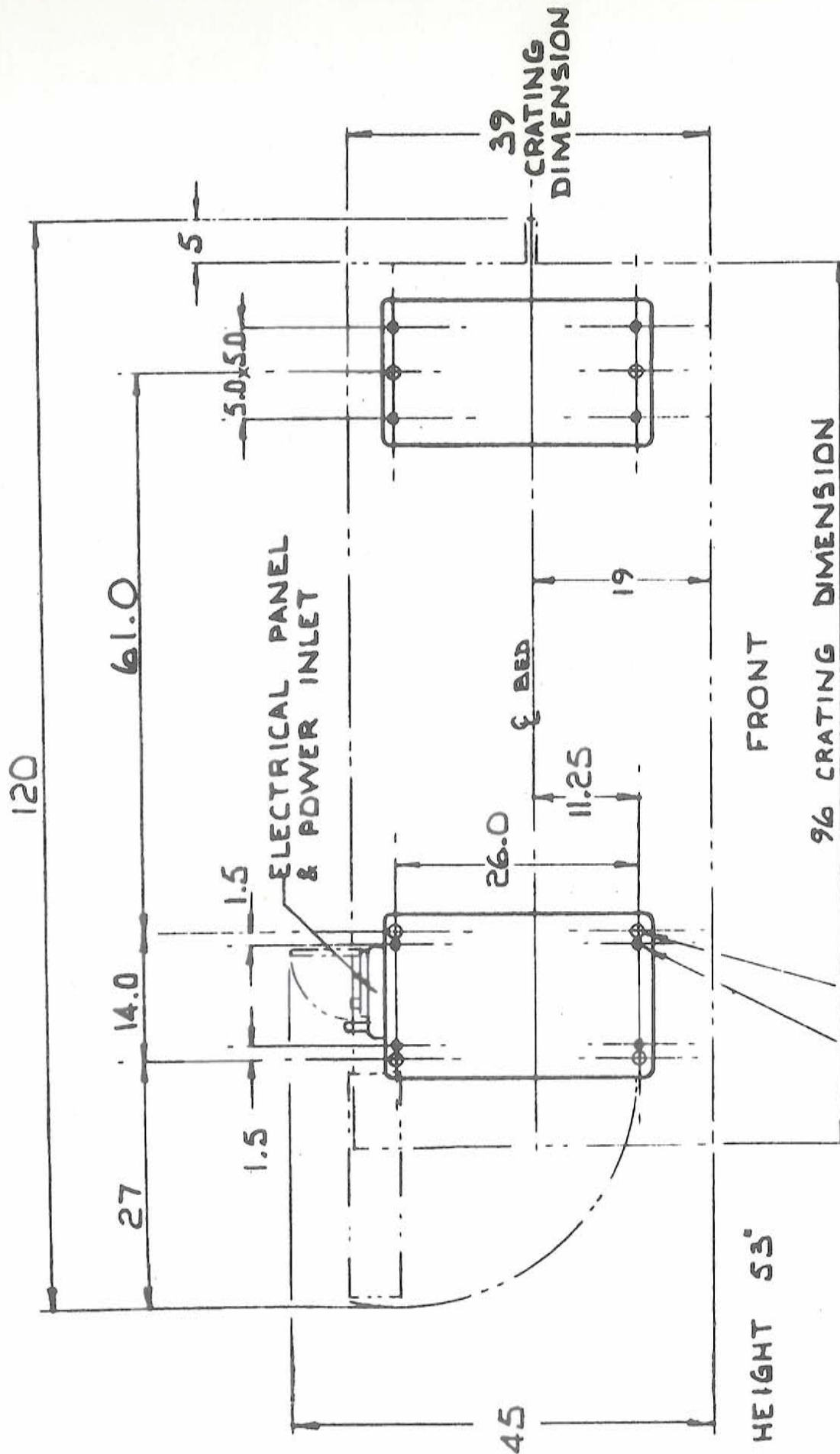
For proper operation, the machine should be set on a substantial floor capable of supporting the weight safely. To secure the machine on its foundation use anchor bolts or lag screws. For the size of the lathe and the location of the bolt holes see the floor plan (Page 4).

After the machine is in position, it must be levelled by the use of the square head set screws provided before tightening the lag screws. It will be necessary to use 4 inch square steel plates, about 3/8" thick, under the levelling screws to prevent the ends of the screws from sinking into the floor.

It is important that the lathe be level in order to produce accurate work.

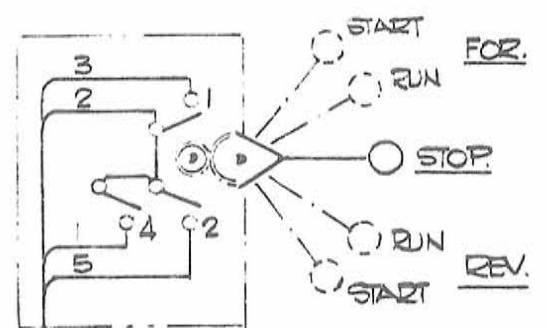
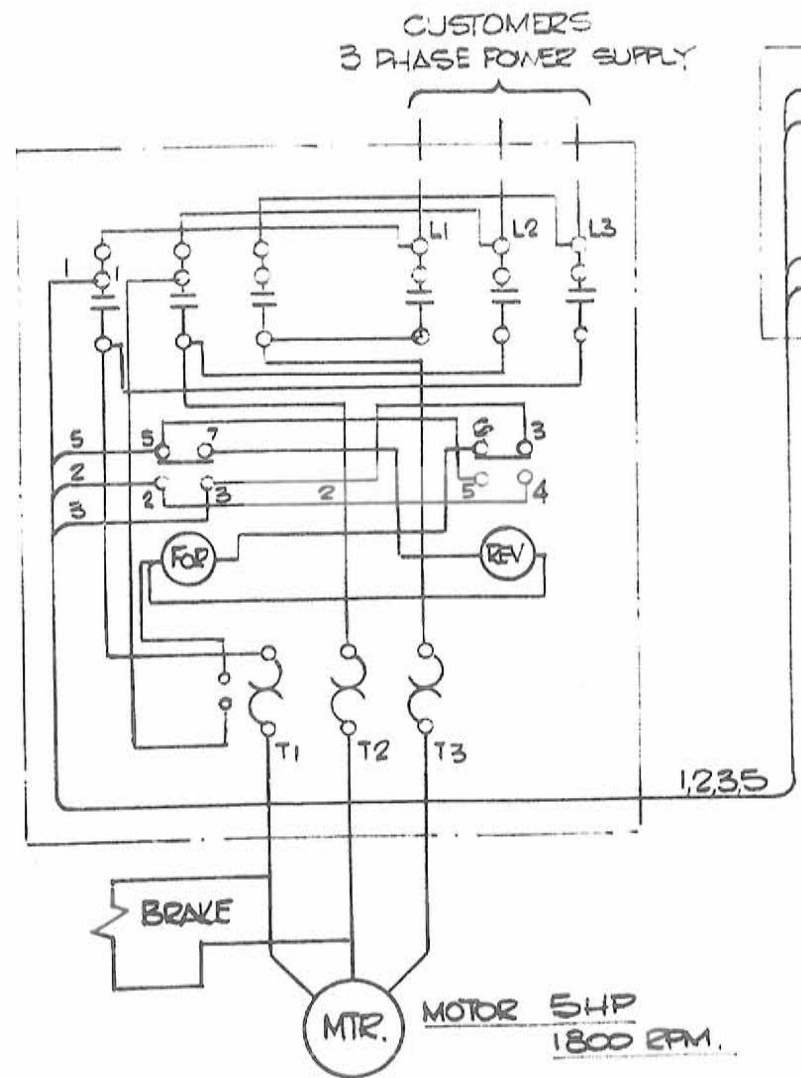
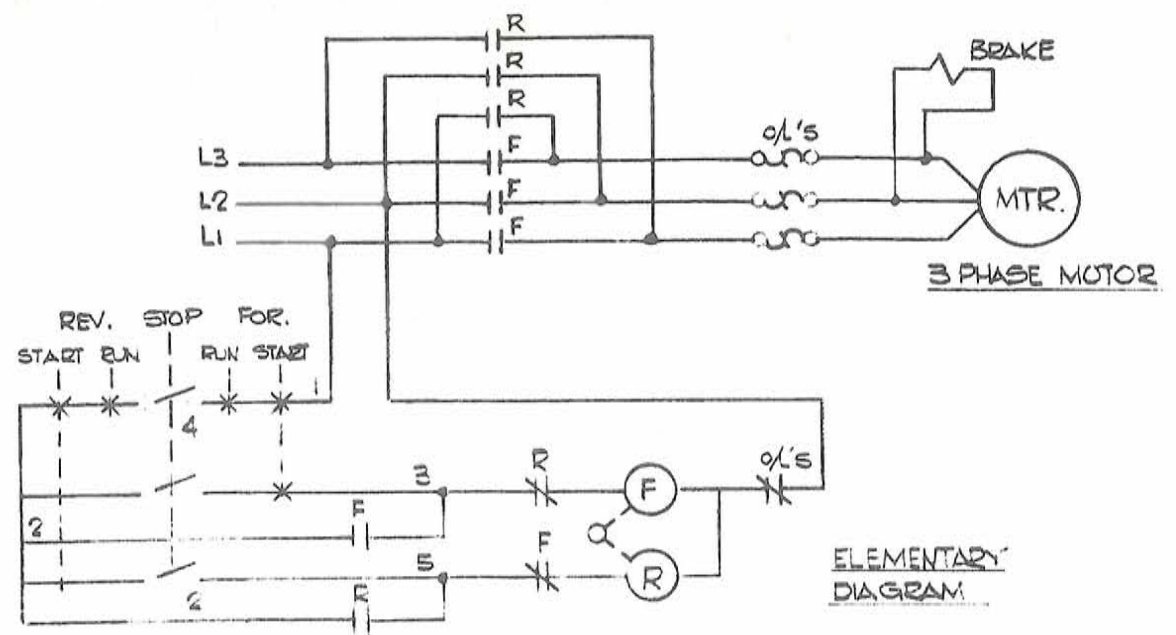
Use a precision level placed lengthwise, and crosswise on the bed. To take a reading off the level for the crosswise levelling of the bed, use parallel bars placed on the flats of the bed.

After all the strain and twist has been removed from the lathe bed, and it checks perfectly level, the pedestals should be lagged to the floor, and the levelling re-checked. Re-check the level of the machine at regular intervals.



5/8 φ 6-HOLES FOR LAG BOLTS
 1/2 - 13 UNC 8-HOLES FOR LEVELLING SCREWS

FLOOR PLAN



DRUM MASTER SWITCH OPERATION		
LEVER POSITION		CONTACTS CLOSED
FOR.	START	1 AND 4
	RUN	4
STOP.		NONE
REV.	START	2 AND 4
	RUN	4.

DEG. NO
B 96503

2. LUBRICATION

All machines are shipped with the lubricant oil drained from the oil sumps in the headstock, feedbox, and apron, and must be serviced before being put into use.

A high grade S.A.E. No. 30, Mineral Oil should be used.
(Viscosity 500-530 SUS at 100 Deg. F.)

CAUTION: Do not mix detergent type, automotive oil or multipurpose oils with the type of oil specified.

Before filling reservoirs or oil cups, always wipe off any accumulation of old oil, grease or dirt that might get into a part being lubricated.

2.1 Headstock

The lubrication of the headstock is automatic, so that an even distribution throughout the headstock is assured.

To service the headstock, fill the reservoir to the centre of the oil sight gauge through the oil pipe at the left end of the headstock inside the end guard.

The reservoir capacity of the headstock is approximately 9 British Imperial Quarts or 11 U.S. Quarts.

Depending on operating conditions, usually about every six months, the headstock should be drained and thoroughly flushed out, before adding new oil. The drain pipe is located at rear bottom of headstock.

Because most solvents tend to soften paints, they are not recommended as flushing mediums. A light blending oil, to which a small percentage of kerosene has been added, may be used to flush out any dirt or sediment. Run the machine for several minutes without load so that the flushing oil can circulate through the reservoir. The flushing oil should then be drained and new oil added.

LUBRICATION (cont'd).2.2 2-Speed Headstock Drive.

Four grease fittings, located inside the end guard, lubricate the shaft bearings of the 2-Speed Drive.

On the 2-Speed Drive, between the large "Slow Range" Pulley and the smaller "Fast Range" Pulley, a CLUTCH BOBBIN slides on a multi-tooth sleeve which requires the application of grease at regular intervals, to assure free shifting.

In order to apply grease to the sleeve, move the bobbin first to the "Fast" position and then to the "Slow" position. (The "SLOW RANGE-FAST RANGE" SELECTOR KNOB actuates the Clutch Bobbin).

Use a small rod to insert the grease on either side of the bobbin.

Also apply grease to the groove in the clutch bobbin to prevent noise from the actuating pin.

2.3 Feedbox

The lubrication of the Totally Enclosed Feedbox is automatic so that an even distribution throughout is assured. To service the feedbox, fill reservoir to the centre of the oil sight gauge through filler elbow at left end of feedbox. The reservoir capacity of the Feedbox is approximately 2 British Imperial Quarts or 2 1/2 U.S. Quarts.

Feedbox should be drained and flushed, using same procedure as outlined for headstock, approximately every 6 months. The drain hole is located on front face of Feedbox at left hand end.

2.4 Compound

On the compound rest, one oil hole lubricates both the ways and the screw, while an oiler lubricates the screw bearing.

2.5 Cross Slide

Off the three ball type oilers on top of the cross slide the two outer ones lubricate the cross slide dovetails and bearing surfaces on the saddle.

These two oilers are not used when the One-Shot Lubricator provides lubrication to the bearing surfaces through internal passages in the saddle. This lubricating system with One-Shot Lubricator, located on the apron, is option equipment.

One oiler, at the center on top of the cross slide lubricates the Cross Feed Nut and the threaded portion of the Cross Feed Screw.

The cross feed screw bearing is lubricated by an oiler behind the cross feed dial.

LUBRICATION (cont'd)2.6 Saddle

On the right top side of the saddle wings two oilers lubricate the bearing surfaces of the saddle on bedways.

These two oilers are not used when the oil is supplied by the One-Shot Lubricator.

The oil flows down through the oilers, or flows through the inside oil passages when using One-Shot Lubricating System, out onto the ways and along the length of the saddle through oil grooves.

The oil is retained at the bearing surfaces by felt seals located at either end of the saddle wings which also provides an even distribution of the lubricant over the ways.

2.7 Apron

The box construction of the apron completely encloses all moving parts. The lower half forms a large oil reservoir in which all the gears run, so providing an even distribution of lubricant.

Service the apron reservoir through the oil cup at the back of the apron handwheel. Fill with oil to the centre of the oil sight gauge. The reservoir capacity of the apron is approx. 1 British Imperial Quart or 1 1/4 U.S. Quarts.

The apron oil reservoir should be drained, flushed and re-filled with fresh, clean oil at least once every 6 months.

Two oil cups, located on the right hand front of the apron, lubricate individually the half-nuts control shaft and the thread chasing dial shaft.

2.8 Tailstock

The spindle and screw are lubricated by an oiler located on top of the spindle housing.

The bedways on which the tailstock slides should be cleaned and oiled frequently.

Dry red lead mixed with machine oil to a creamy consistency, is an excellent lubricant for the tailstock center when a revolving center is not available.

LUBRICATION (cont'd)2.9 Bed End Bracket and Leadscrew

Three grease fittings, located on the front face of the Bed End Bracket, lubricate individually the ends of the Leadscrew, Feed Shaft and Control Shaft.

Grease every 8 working hours the end of the Leadscrew and the end of the Feedshaft. The end of the Control Shaft requires grease once a month, as indicated on Lubrication Plate.

Before cutting a thread, clean and oil the Leadscrew thoroughly.

2.10 Taper Attachment

Clean and oil the pivoted Slide Bar before using.

Three oilers lubricate the cross guide bar and two oilers provide lubrication to the slide plate dovetails.

3. OPERATING INSTRUCTIONS

3.1 Motor Drive and Belt Tension Control

The Electrical Motor, located in the pedestal below the headstock, drives the machine through a 2-speed Drive Arrangement with Super H.C. V-Belts.

All belts are the same length and are interchangeable with one another.

When replacing belts, loosen the motor plate clamps and lift the motor plate.

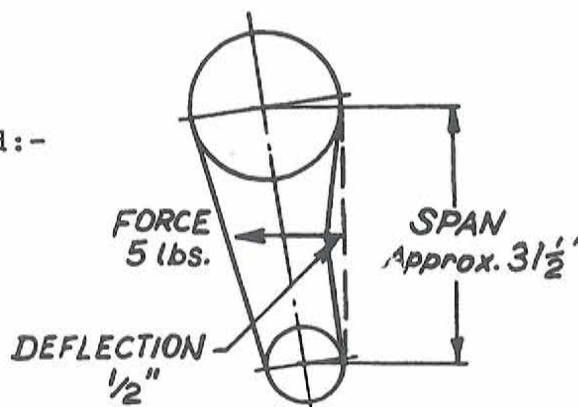
The belts on the Slow Range Pulley can be readily removed, simply by rolling them off the pulley. However, replacement of the Fast Range Belts, requires the removal of the Shifting Arm which drops down between the two pulleys.

When replacing the shifting arm, place the Clutch Bobbin in its central position between the pulleys and clamp the shifting arm by tightening the 3/8 Soc. Hd. Cap Screw. Be sure the clutch actuating pin does not touch the bottom of the Bobbin groove. Leave 1/32" clearance to prevent rubbing.

With the shifting arm in position adjust the new belts for proper tension (see below) and tighten motor plate clamps.

For the correct belt tension, use the following simple method:-

At the centre of the span apply a force of 5 lbs. using a spring scale (at right angles to the span) to deflect the belt 1/2 inch.



Check the tension frequently during the first day of operation, and periodically thereafter.

Keep the pulleys and belts clean and free of any foreign material to ensure long life and better traction.

3.2 Motor and Spindle Rotation Control

Spindle rotation is controlled by means of the dual Control Levers mounted on a common Control Shaft. This control shaft in turn actuates a 3-position Rotary Pilot Switch which selects FORWARD, STOP and REVERSE rotation of the motor and spindle.

Continued.....

Motor and Spindle Rotation Control (cont'd).

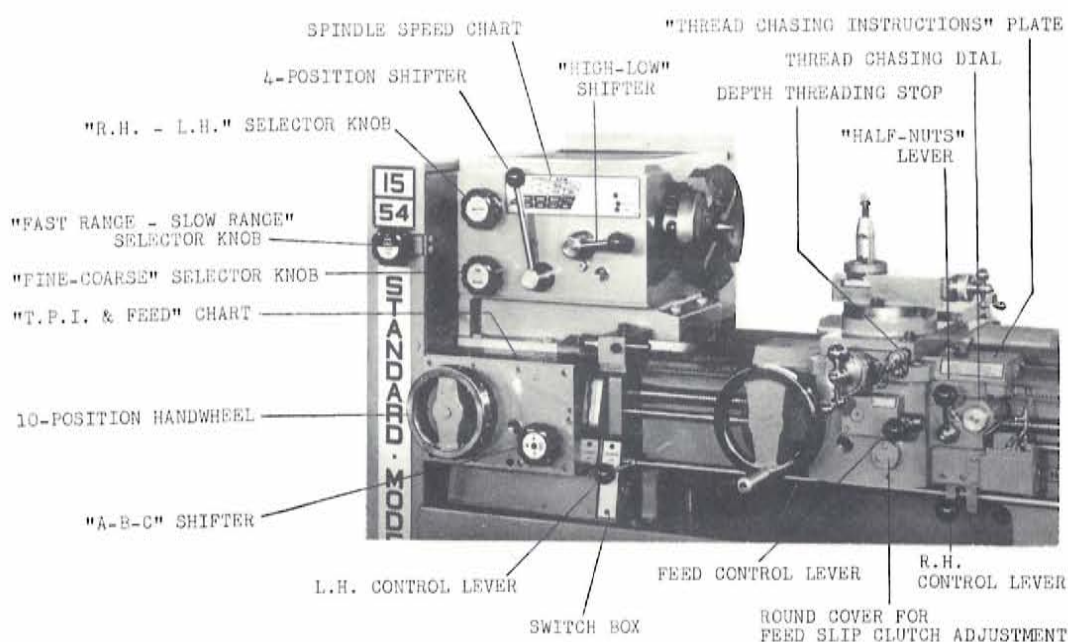
The switch box and the L.H. CONTROL LEVER are located just below the headstock at the right lower side of the feedbox.

The R.H. CONTROL LEVER is mounted at the right lower side of the apron and moves with the apron along the bed.

Lifting the levers up gives FORWARD rotation of spindle in the normal direction for turning, drilling, boring, etc.

Pushing the levers down gives REVERSE spindle rotation.

The central or STOP position stops the spindle.



3.3 Spindle Speed Selection

The direct reading SPINDLE SPEED CHART is located on the upper front face of the Headstock.

Immediately below are two speed selectors: THE 4-POSITION SHIFTER and the "HIGH-LOW" SHIFTER.

The third speed selector: The "FAST RANGE - SLOW RANGE" SELECTOR KNOB is located at the left hand end of headstock.

The desired spindle speed is obtained by placing the three Speed Selectors in positions corresponding to the selected spindle R.P.M. number noted directly on the SPINDLE SPEED CHART.

For free hand rotation of the spindle move the "HIGH-LOW" SHIFTER to its NEUTRAL position.

WARNING: DO NOT OPERATE THE SPEED SELECTORS WHEN THE MOTOR IS RUNNING.

OPERATING INSTRUCTIONS (cont'd).3.4 Power Feeds

To select the power longitudinal feed or the power cross feed arrange the "R.H. - L.H." and "FINE-COARSE" SELECTOR KNOBS on the headstock and also the "A-B-C" SHIFTER and the 10-POSITION HANDWHEEL on the feedbox, to correspond to the desired feed rate indicated on the "T.P.I. and FEED" CHART.

As an added feature all feed rates are exactly as shown on the chart. This makes it possible to cut scrolls on faceplate work when using the power cross feed.

CAUTION: AVOID THE COARSE RANGE OF FEEDS WHEN SPINDLE SPEEDS ARE ABOVE 500 R.P.M.

For longitudinal power feed move the FEED CONTROL LEVER up to the "LONG FEED" POSITION and the tool will move along the bed parallel to the spindle.

For cross power feed move the FEED CONTROL LEVER down to the "CROSS FEED" position, and the tool will move across the bed, at right angle to the spindle.

NOTE: A short side shift is required before shifting from LONG FEED to CROSS FEED or vice-versa. This prevents accidental through-shifting.

A safety interlock is also fitted so that it is impossible to engage the FEED CONTROL LEVER and the HALF-NUTS at the same time.

3.5 Automatic Carriage Stop.

As an additional feature, lathes can be equipped with automatic feed trip to provide accurate carriage stopping at any point on the bed and in either direction of longitudinal feed.

Simply clamp the moveable TRIP DOG to the rail at the desired stopping position.

3.6 Thread Cutting and Thread Chasing Dial

When cutting screw threads select the desired T.P.I. setting, and proceed in the normal manner.

To engage Apron for threading, the HALF-NUTS are brought into mesh with the Leadscrew by pushing the "HALF-NUTS" LEVER down.

To disengage, lift the same lever up.

The THREAD CHASING DIAL is conveniently located in relation to the lever and the "THREAD CHASING INSTRUCTIONS" PLATE is attached to the saddle wing just above it.

Thread Cutting (cont'd).

For cutting metric or special threads an ADJUSTABLE BRACKET with CHANGE GEARS for desired pitches is available as optional equipment together with a nameplate with TABLES of THREADS and PARTICULARS of CHANGE GEARS and FEEDBOX SETTINGS (as shown below).

END GEAR TRAIN
TABLE OF METRIC PITCHES
WITH PARTICULARS OF CHANGE GEARS AND FEEDBOX SETTINGS

METRIC PITCHES			
PITCH IN MM	CHANGE GEAR 'K'	CHANGE GEAR 'W'	FEEDBOX SETTING T.P.I.
0.125	50	127	80
0.15	60	5	80
0.175	70		80
0.2	80		80
0.225	45		40
0.25	80		64
0.3	60		20
0.35	70		40
0.4	80		40
0.45	45		20
0.5	80		32
0.6	60		20
0.7	70		20
0.75	60		16
0.8	80		20
1.0	80		16
1.25	50		8
1.5	60		8
1.75	70		8
2.0	80		8
2.5	50		4
3.0	60		4
3.5	70		4
4.0	80		4
4.5	45		2
5.0	50		2
5.5	55		2
6.0	60		2
7.0	70	ψ	2
8.0	80	127	2

NOTE:
WHEN CUTTING INCH THDS. REMOVE CHANGE GEARS A & B AND BRING 45 TOOTH GEARS AT REAR INTO MESH.

- For cutting the METRIC PITCHES as per chart a set of seven change gears is required.

- Virtually ANY DESIRED PITCH can be cut via the use of special change gears.

Consult STANDARD-MODERN TOOL CO. for particulars.

The Thread Chasing Dial cannot be used when cutting metric threads. The half nuts must be closed during the entire threading operation. Use the reversing motor to return carriage at the end of each cut - after retracting the cutting tool.

NOTE: It is not necessary to remove the ADJUSTABLE BRACKET when cutting Standard Inch Pitches. Simply remove the outer change gears and bring the 45T gears at rear into mesh.

OPERATING INSTRUCTIONS (cont'd).3.7 Taper Turning Attachment:Telescopic Type - Saddle Mounted

Taper: 4" per foot on dia. or 20 deg. included angle

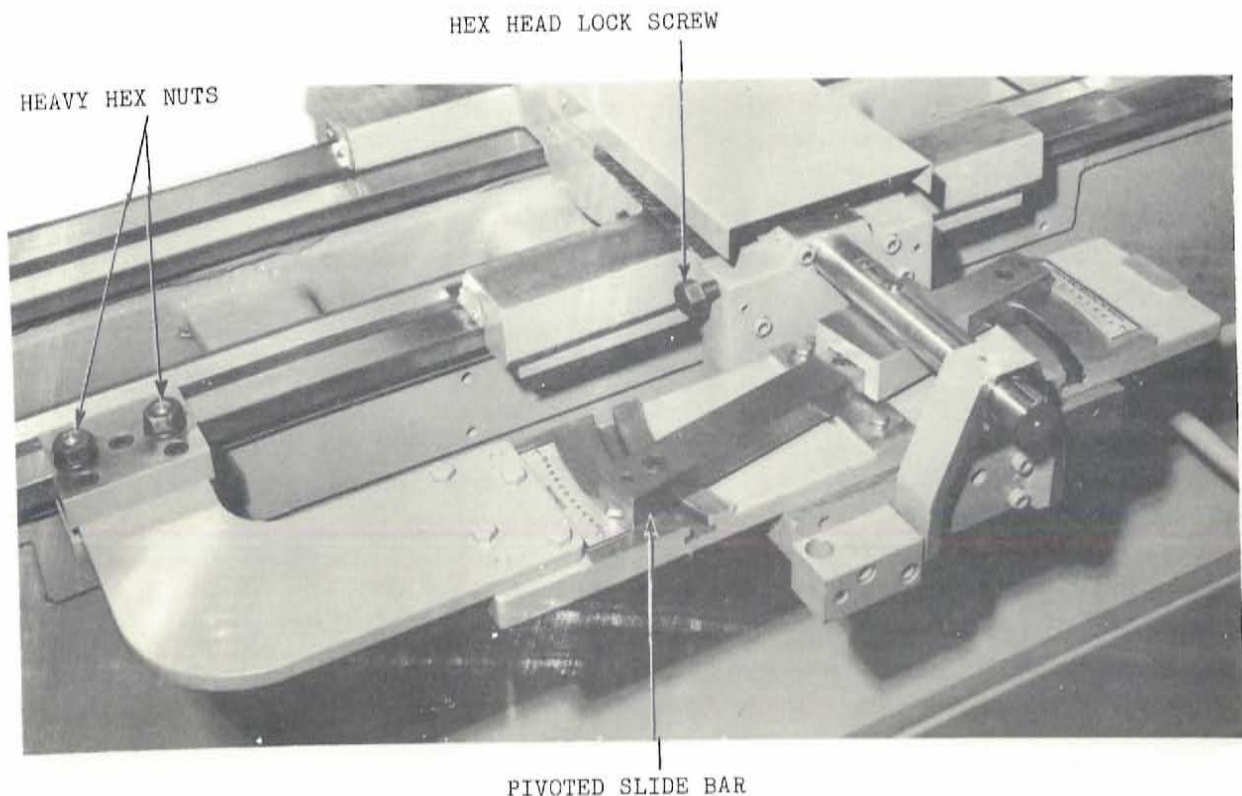
Stroke: 12" - Standard, or 15" stroke - special

For Taper Turning:

- (1) Loosen HEX HEAD LOCK SCREW on the bracket;
- (2) Locate saddle on bed in relation to work piece;
- (3) Tighten the two - HEAVY HEX NUTS on the bed clamp;
- (4) Adjust the PIVOTED SLIDE BAR to desired taper and lock securely.

For Straight Turning:

- (1) Loosen HEAVY HEX NUTS on the bed clamp;
- (2) Tighten the HEX HEAD LOCK SCREW on the bracket;
- (3) Leave the PIVOTED SLIDE BAR locked at its angular setting, so that taper attachment will move with the saddle.



3.8 Lead Screw Shear Pin

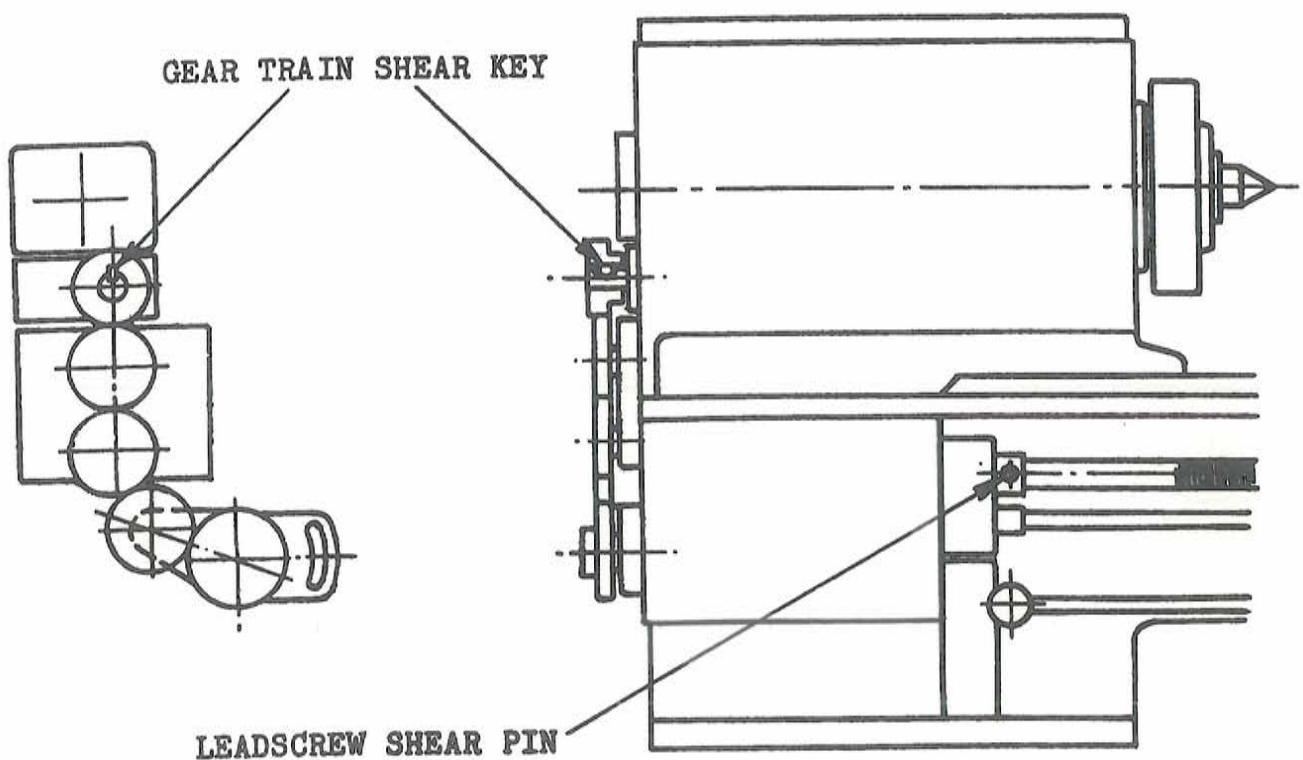
This brass shear pin is located at the left-hand end of the leadscrew (see below) and is provided to prevent damage to the leadscrew should the carriage be allowed to come in contact with the headstock or some other obstruction which acts as a positive stop. When the stoppage takes place the leadscrew continues to turn in the half nuts and will begin to move endwise thus shearing the pin longitudinally.

The shear pin can be readily replaced by first withdrawing the leadscrew from the coupling to remove the three portions of broken pin. It is then returned to the coupling and rotated by hand until the zero line on the screw coincides with that on the coupling. A new shear pin (4 spare are provided with the machine) is then driven into place.

3.9 Gear Train Shear Key

This brass shear key, is located in the feed compound shaft and drives the top gear of the end gear train (see below). It is provided to prevent damage to the feed compound gears in the headstock due to a possible seizure in the feed box.

A Spare Shear Key, which is provided with the machine, can be readily fitted by first removing the gear and knocking the broken portions of key out of the shaft with a small square nosed chisel. The new key is then fitted to the shaft and the gear assembled. It is important of course, to locate and remedy the cause of the seizure.



OPERATING INSTRUCTIONS (cont'd)3.10 Feed Slip Clutch Adjustment

A feed slip clutch is provided in the apron to prevent damage to the feed mechanism in case of accidental overload. The clutch is pre-adjusted at the factory for all normal cutting loads.

If further adjustment is required, proceed as follows:-

- (1) Remove the round cover from the front of the apron just below and to the left of the feed control lever (See picture on Page 11.)

NOTE: Oil will drain out through the screw holes and should be retained in a clean container for refilling the apron oil sump.

- (2) To adjust the feed slip clutch, simply tighten the socket set screw in the exposed end of the clutch shaft until the desired drive is obtained.

WARNING: Do not lock the screw up solid as this will make the slip clutch inoperative.

- (3) Test the drive via a very heavy cut or by grasping the apron handwheel with two hands while the carriage is in motion. You should be able to make the clutch "click" otherwise it is too tight and could shear the brass key in the end gear train (see picture on Page 15.)

- (4) Replace the round cover and the oil.

3.11 Coolant Attachment

Available with centrifugal pump unit, GRAYMILLS MODEL NO. X11-HR35-A which delivers a copious volume of liquid at relatively low pressure.

The flow may be throttled or shut off completely without overloading the motor.

The motor has permanently lubricated oilite bearings and no lubrication is required for either pump or motor.

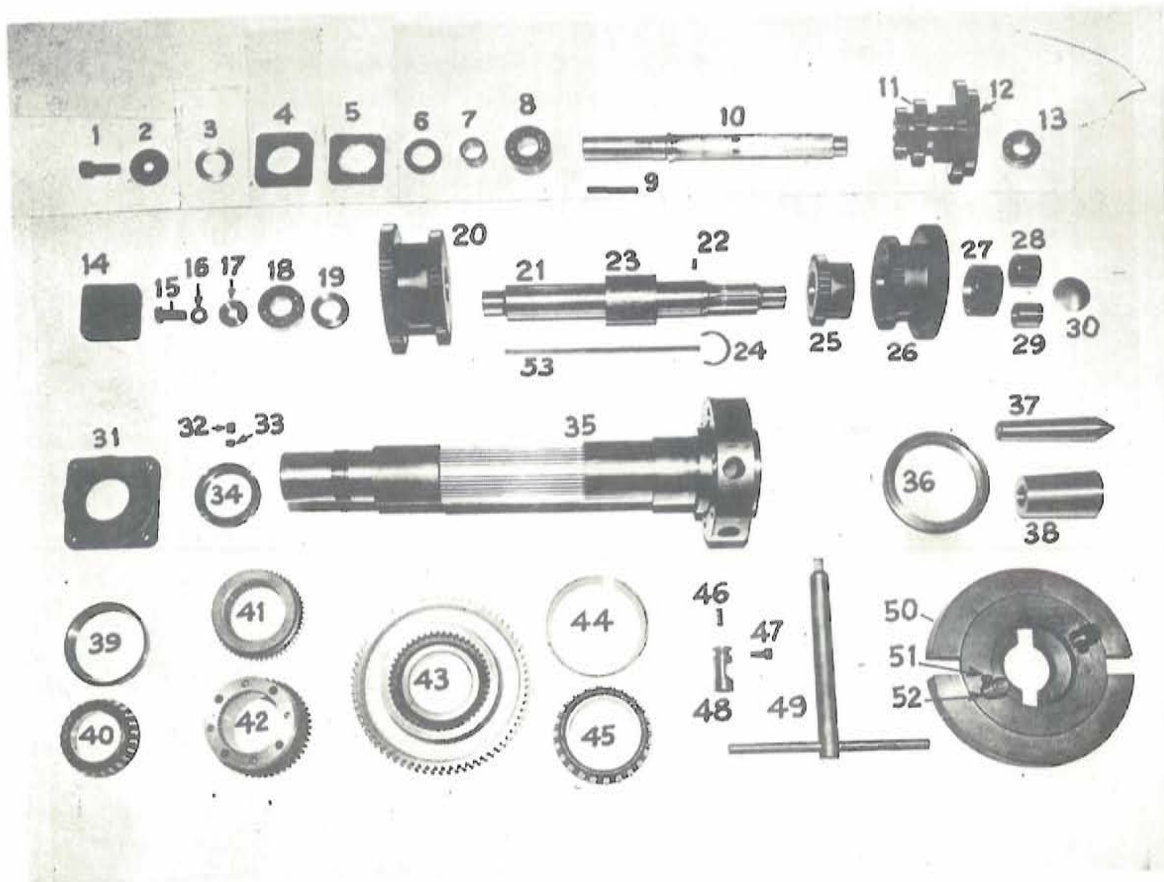
This unit has a 10 gal. tank supplied with removable chip and sludge collecting tray with a baffle and deflector for settling out sediment. Easily removed for cleaning.

Coolant tank should be cleaned and re-filled every 6 months or more frequently depending on usage.

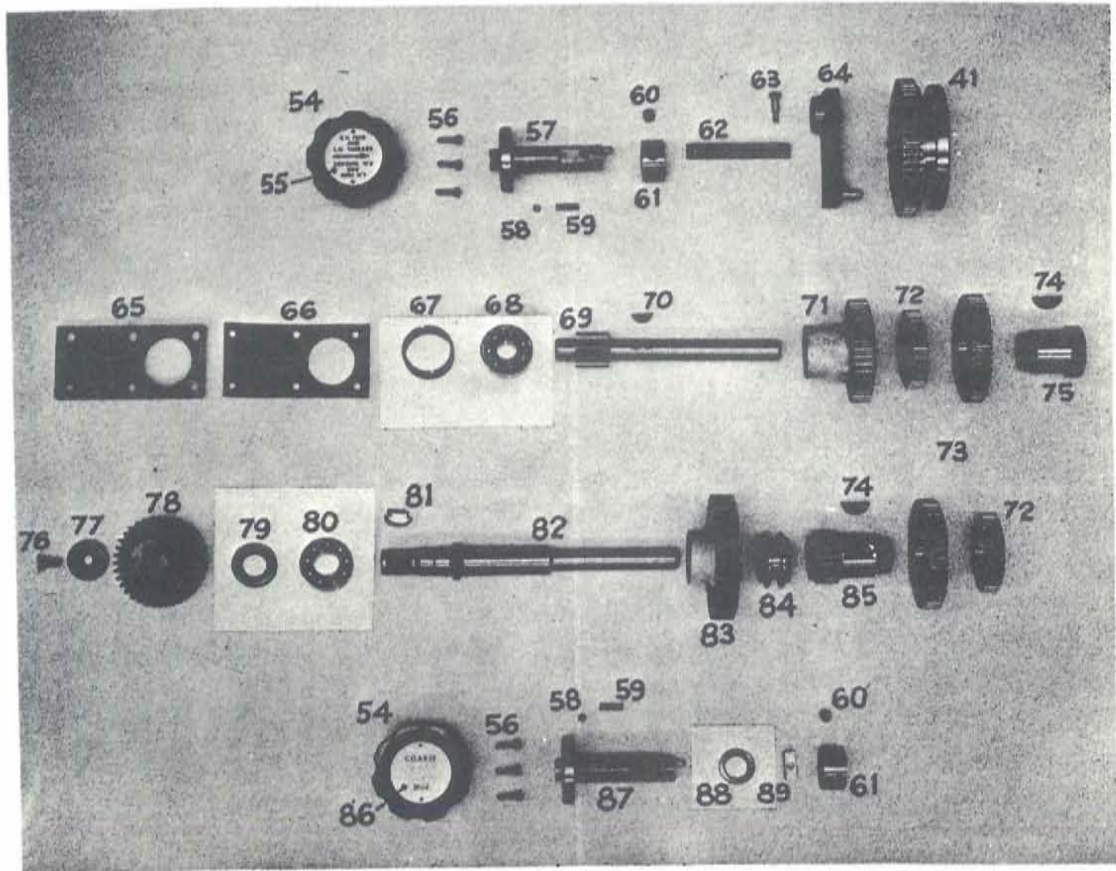
The pump motor as standard is supplied with a 6 feet cord complete with "U" ground plug for use with a 115 volt wall outlet.

On special applications the coolant pump is supplied with a twist-lock plug, and the lathe-mounted receptacle is connected to the Control Panel 115 Volt Supply via a coolant On-Off switch.

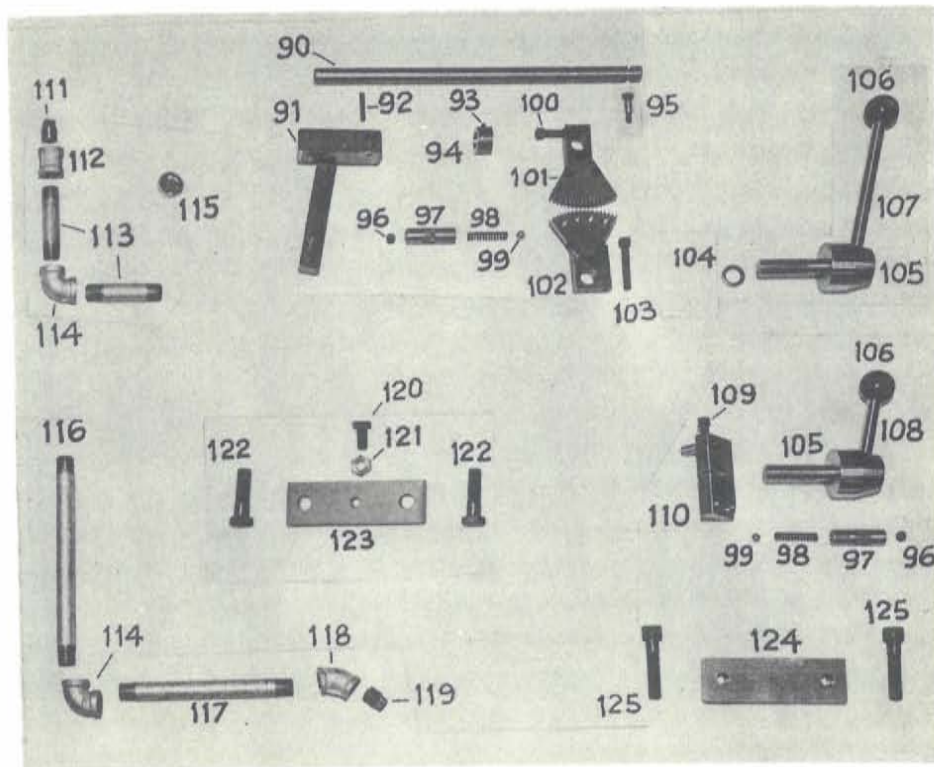
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	SOC. HD. CAP SCREW 1/2-13 x 1 1/4	A-33264	31	REAR COVER	B-33158
2	SPECIAL WASHER	A-33265	32	SOC. SET SCREW 1/4-28 x 1/4 LG.	
3	SPECIAL WASHER	B-33159	33	BRASS PAD	A-30564
4	REAR COVER	A-33218	34	LOCKNUT #N13	B-33155
5	GASKET		35	D1-6" CAMLOCK SPINDLE	D-32888
6	OIL SEAL (1 1/8 I.D. x 2 O.D. x 21/64)		36	BEARING SHIELD	B-32891
	CHICAGO RAWHIDE #13560		37	LATHE CENTER No. 4 MORSE: —FOR ENGINE LATHE —FOR TOOLROOM LATHE	A-22639 A-41591
7	INNER RACE—TORRINGTON #IR-1812		38	SLEEVE: —FOR ENGINE LATHE —FOR TOOLROOM LATHE	A-41064 A-41590
8	DOUBLE ROW BALL BEARING— S.K.F. #3206/C4		39	CUP #29520 } TIMKEN	
9	KEY 1/4 x 1/4 x 2 1/4 SQUARE ENDS	C-33161	40	CONE #29588 } ROLLER BEARING (No. 3 PRECISION FOR ENGINE LATHE) (No. 0 PRECISION FOR TOOLROOM LATHE)	
10	PULLEY SHAFT	C-33089	41	54T. FEED TAKE OFF GEAR	C-33173
11	TRIPLE SHIFTING GEAR	B-33090	42	HIGH-LOW SHIFTER GEAR	C-33188
12	38 TOOTH SPLINED GEAR		43	69T. BULL GEAR	C-33172
13	BALL BEARING—S.K.F. #6205	B-33157	44	CUP #492A } TIMKEN	
14	REAR COVER		45	CONE #497 } ROLLER BEARING (No. 3 PRECISION FOR ENGINE LATHE) (No. 0 PRECISION FOR TOOLROOM LATHE)	
15	HEX. HD. CAP SCREW 1/2-13 x 1 1/4		46	CAM SPRING (6 REQ'D.)	A-41131
16	SPLIT LOCKWASHER # 1/2	A-33175	47	CAM SCREW (6 REQ'D.)	A-41123
17	WASHER		48	CAM FOR D1-6" CAMLOCK (6 REQ'D.)	
18	BALL BEARING—S.K.F. #6206	B-33167	49	CAM WRENCH	B-41210
19	SPACER	B-33163	50	10" DIA. DOG PLATE #D-41216	
20	60T. & 52T. GEAR	C-33169	51	SOC. HD. CAP SCREW 5/16-18 x 1/4 (4 REQ'D.)	SUB-ASS'Y. #51634
21	INTERMEDIATE SHAFT		52	D1-6" CAMLOCK STUD "MAC-IT" (4 REQ'D.)	
22	ROLL PIN 3/16 DIA. x 1/2 LG.	B-33156	53	KEY 1/4 x 1/4 x 2 1/4 SQUARE ENDS	
23	SPACER				
24	CRESCENT RETAINING RING— TRUARC #5103-175	B-33166			
25	33T. GEAR	B-33160			
26	42T. & 53T. GEAR	B-33168			
27	RETAINER				
28	NEEDLE BEARING— TORRINGTON #JH-2016				
29	INNER RACE—TORRINGTON #IR-1616				
30	FROST PLUG 2" DIA.				



ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
41	54 T. FEED TAKE-OFF GEAR	C-33173	73	42 T. FEED IDLER	A-41093
54	KNOB	A-41016	74	WOODRUFF KEY # 15 (1/4 x 1" DIA.)	
55	R.H. & L.H. CHART	A-41026	75	IDLER SLEEVE	A-41091
56	SOC. HD. CAP SCREW # 10-32 x 1/4		76	FLAT HEAD SOCKET CAP SCREW	
57	UPPER ECCENTRIC SHAFT	B-33139		5/16-18 x 1/4 LG.	
58	STEEL BALL .250 DIA.		77	WASHER	A-41480
59	COMPRESSION SPRING	A-30454	78	35 T. FEED GEAR	B-41394
60	SOC. SET SCREW 1/4-24 x 1/8 LG.		79	OIL SEAL (21/32 I.D. x 1 1/4 O.D. x 5/16)	
61	COLLAR	A-33220		CHICAGO RAWHIDE #9667	
62	GEAR SHIFT LINK	B-33151	80	BALL BEARING—S.K.F. #6205	
63	SHOULDER SCREW 1/4 DIA. x 1/2 LG.		81	SHEAR KEY FOR FEED TRAIN	A-21180
64	FWD.-REV. GEAR SHIFTER	B-33142	82	FEED COMPOUND SHAFT	B-21429
65	COVER PLATE	B-33154	83	48 T. FEED CLUTCH GEAR	B-41096
66	GASKET	A-33217	84	FEED CLUTCH BOBBIN	A-41092
67	SPACER	A-41090	85	20 T. FEED CLUTCH IDLER	B-41095
68	BALL BEARING —S.K.F. #6304		86	COARSE & FINE CHART	A-41027
69	PINION SHAFT	B-41089	87	LOWER ECCENTRIC SHAFT	B-33138
70	WOODRUFF KEY # 8 (5/32 x 3/4 DIA.)		88	OIL SEAL (3/4 I.D. x 1 1/4 O.D. x 1/4)	
71	40 T. FEED COMPOUND GEAR	B-21422	89	CHICAGO RAWHIDE #8677	
72	30 T. FEED IDLER	A-41094		SHIFTER SHOE	A-30468



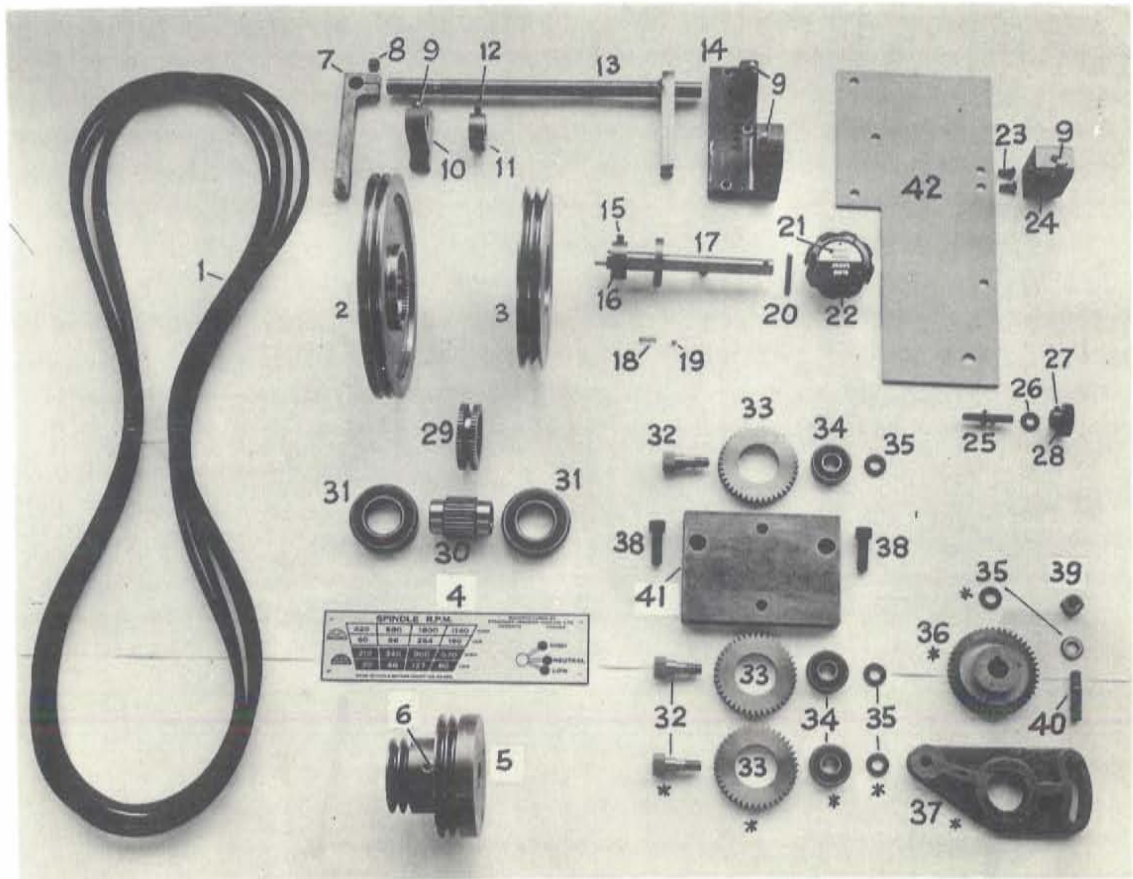
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
90	CROSS SHAFT	A-33181	112	GALVANIZED PIPE COUPLING 1/2 NPTF	
91	4-POSITION GEAR SHIFT SUB-ASS'Y.	B-33182	113	STANDARD GALVANIZED LONG NIPPLE 1/2 NPTF x 3 1/2" LG.	
92	ROLL PIN 1/4 DIA. x 1 1/2 LG.		114	GALVANIZED 90° ELBOW 1/2 NPTF	
93	SOC. SET SCREW 1/4-20 x 1/4 LG.	A-33185	115	OIL WINDOW—BIJUR #B-5093	
94	COLLAR	A-33291	116	STANDARD GALVANIZED LONG NIPPLE 1/2 NPTF x 12" LG. or OIL DRAIN PIPE—13 1/2" LG.	B-32987
95	RETAINING SCREW		117	STANDARD GALVANIZED LONG NIPPLE 1/2 NPTF x 8" LG.	
96	SOC. SET SCREW 1/2-13 x 3/8 LG.	A-33184	118	GALVANIZED 45° ELBOW 1/2 NPTF	
97	INDENT POSITIONER		119	SQUARE HD. PIPE PLUG 1/2 NPTF	
98	SPRING—WALLACE BARNES #1		120	HEX. HD. CAP SCREW 1/2-13 x 1" LG.	
99	STEEL BALL .4375 DIA.		121	HEX. JAM NUT 1/2-13	
100	SOC. HD. CAP SCREW 3/4-16 x 1 1/4 LG.	B-33144	122	HEX. HD. CAP SCREW 3/8-11 x 2 1/4 LG.	A-33203
101	GEAR SHIFTER SECTOR	C-33145	123	HEADSTOCK CLAMP (REAR)	B-33133
102	GEAR SHIFTER SECTOR		124	HEADSTOCK CLAMP	
103	SOC. HD. CAP SCREW 3/4-16 x 2 1/4 LG.		125	SOC. HD. CAP SCREW 3/8-11 x 4" LG.	
104	OIL SEAL (3/4 I.D. x 1 1/4 O.D. x 3/16)— CHICAGO RAWHIDE #7414	B-33176	NOT SHOWN		
105	2 & 4-POSITION SHIFTER SUB-ASS'Y.			HEADSTOCK CASTING	E-33123
106	BLACK PLASTIC BALL KNOB— DIMCO #230 (3/8-24 x 1/2 INSERT)	A-33179		HEADSTOCK COVER	C-33134
107	HAND LEVER	A-33180		MAT FOR HEADSTOCK COVER	B-33133
108	HAND LEVER				
109	SOC. HD. CAP SCREW 3/4-16 x 2 1/2 LG.	B-33143			
110	HI-LO GEAR SHIFTER SUB-ASS'Y.	A-41712			
111	FILLER BREATHER PLUG				



2-SPEED HEADSTOCK DRIVE AND END GEAR TRAIN PARTS

ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	V-BELTS 85" LG. GATES SUPER H.C. #3V850		25	BELT GUARD LATCH SPINDLE	A-41415
2	LOW SPEED PULLEY	C-33966	26	WASHER—WESPO #6001	
3	HIGH SPEED PULLEY	C-33967	27	SOC. SET SCREW 1/4-28 x 1/4 LG.	A-21120
4	SPEED CHART (30-1800 R.P.M.)	B-33986	28	KNOB FOR GUARD	B-33110
5	MOTOR PULLEY	C-33245	29	SPLINED CLUTCH	B-33266
6	SOC. SET SCREW 3/8-16 x 3/4 LG.		30	SPLINED SLEEVE	
7	OFFSET LEVER	B-33259	31	BALL BEARING—S.K.F. #6208-2RS	
8	SOC. HD. CAP SCREW 3/8-16 x 1 1/4 LG.		32	IDLER BOLT	A-41526
9	GREASE FITTING—"KLEENSEAL" LINCOLN #5042 STRAIGHT THREAD		33	42 T. IDLER GEAR	A-41363
10	PIVOT	B-33255	34	BALL BEARING—S.K.F. #6303-2RS	
11	COLLAR	A-33185	35	WASHER—WESPO #6009	
12	SOC. SET SCREW 1/4-20 x 1/4 LG.		36	45 T. FEED GEAR	B-41364
13	SHAFT & LEVER	B-33256	37	ADJUSTABLE IDLER BRACKET	B-33038
14	MOUNTING CASTING	C-33084	38	SOC. HD. CAP SCREW 1/2-13 x 1 1/2 LG.	
15	SOC. SET SCREW 3/8-24 x 1/2 LG.		39	HEAVY HEX. NUT 1/2-13	
16	COLLAR	A-41018	40	MILLED STUD 1/2-13 x 2 1/4 LG.	
17	ECCENTRIC SHAFT SUB-ASS'Y.	B-33974	41	FIXED IDLER BRACKET	B-33368
18	COMPRESSION SPRING	A-30454	42	FRONT END PLATE	C-33997
19	STEEL BALL .250 DIA.				
20	ROLL PIN 1/4 DIA. x 2" LG.	A-33263			
21	"SLOW RANGE-FAST RANGE" PLATE	A-33092			
22	KNOB				
23	BUTTON HD. SOC. CAP SCREW 5/16-18 x 3/4 LG.	A-33019			
24	SHAFT SUPPORT BLOCK				

Note: PARTS MARKED THUS * ARE NOT
REQUIRED FOR CUTTING METRIC OR
SPECIAL THREADS AND PITCHES—
SEE PAGE 28 FOR REPLACEMENT
PARTS



TOTALLY ENCLOSED FEED BOX PARTS

ITEM	NAME	PART NO.	ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	SQ. HD. PIPE PLUG 1/2 NPTF	A-33467	39	20 TOOTH GEAR	A-33450	76	POWER INPUT SHAFT	B-33470
2	STREET ELBOW 1/2 NPTF x 90°	A-33458	40	BEARING RETAINER	A-33451	77	WOODRUFF KEY #11	
3	ROTATING RACK	A-41156	41	BALL BEARING—S.K.F. #6302	A-33475	78	JAMER. STD. #6071 3/16 x 1/2	
4	LEAF-SPRING	A-33469	42	24 TOOTH CUTCH GEAR	A-33466	79	HEAVY HEX. NUT 1/2-13 NC	
5	ROLLER KEY	A-33468	43	36 TOOTH SLIDING GEAR	B-33474	80	HANDWHEEL	C33459
6	FLANGE BUSHING	B-33472	44	INTERMEDIATE SHAFT	B-33471	81	SOC. SET SCREW FLAT POINT	
7	ROLLER KEY SHAFT		45	CUTCH GEAR	B-33473	82	1/2-13 x 1/2 LG.	
8	WOODRUFF KEY #9		46	BUSHING 1 1/2 x 1 1/2		83	SOC. SET SCREW CONE POINT	
9	JAMER. STD. #6081 3/16 x 1/2		47	SHOULDER SCREW 1/2 x 1 1/2 LG.	A-33476	84	RETAINING RING—TRUARC #5100-75	
10	DOUBLE ROW BALL BEARING—NEW DEPARTURE #45205	B-33985	48	WASHER—INTERMEDIATE SHAFT		85	BEAR-N-BRONZ BEARING—BOSTON CAT. NO. M1216-14	A-33452
11	LEADSCREW COUPLING GEAR		49	BUSHING 1 1/2 x 1 1/2		86	FROST PLUG 1/2 DIA.	B-33455
12	WASHER 1/2 I.D.—WESPO #6008		50	SHOULDER SCREW 3/4 x 1 1/2 LG.	A-33428		HANDWHEEL GEAR & SHAFT SUB-ASSY.	
13	SPLIT LOCKWASHER #1/2	B-33071	51	SPACER	B-33427		RACK PINION SHAFT	
14	HEX. HD. CAP SCREW 3/4-24 x 1/2 LG.		52	SHIFTER BLOCK				
15	FEED SHAFT COUPLING GEAR	C-33423	53	H/DN. DOWEL PIN 3/16 DIA. x 1 1/2 LG.	A-33426			
16	SOC. HD. CAP SCREW 5/16-18 x 2 1/2 LG.	B-33456	54	H/DN. DOWEL PIN 3/16 DIA. x 1 1/2 LG.	A-33425			
17	END CASTING		55	SHIFTER LINK				
18	T.P.I. & FEEDS NAMEPLATE		56	H/DN. DOWEL PIN 3/16 DIA. x 1 1/2 LG.				
19	BUTTON HD. SOC. CAP SCREW #10-24 x 1/2 LG.		57	SHIFTER BLOCK				
20	THRUST RACE—TORRINGTON #TR8-2031	A-33432	58	SOC. HD. CAP SCREW 1/2-28 x 1/2 LG.				
21	27 TOOTH FEED DRIVE GEAR	A-33433	59	OIL SEAL 1 1/2 O.D. x 1 1/2 LG.				
22		A-33434	60	CHICAGO RAWHIDE #4938	A-30454			
23		A-33435	61	STEEL BALL .250 DIA.	B-33429			
24		A-33436	62	A-B-C SHIFTER KNOB SUB-ASSY.	A-33457			
25		A-33437	63	A-B-C NAMEPLATE				
26		A-33438	64	DRIVE SCREW TYPE "U" #4 x 1/2 LG.				
27		A-33439	65	OIL WINDOW—BLUR #B-5093				
28		A-33440	66	SOC. HD. CAP SCREW 5/16-24 x 1/2 LG.	A-33463			
29		A-33441	67	FLAT WASHER—S.A.E. #5/16	A-33465			
30		A-33442	68	BALL BEARING—S.K.F. #6202	A-33464			
31	27 TOOTH GEAR	A-33443	69	24 TOOTH GEAR	A-33460			
32		A-33444	70	SPACER				
33		A-33445	71	36 TOOTH GEAR				
34		A-33446	72	SPACER				
35		A-33447	73	48 TOOTH GEAR				
36		A-33448	74	BEARING BUSH				
37		A-33449	75	OIL SEAL 1 1/2 O.D. x 1 1/2 LG. x 5/161				
38				CHICAGO RAWHIDE #9840				

NOT SHOWN

GASKET

FEEDBOX CASTING

WITH: (2) PULL DOWEL

5/16 DIA. x 1 1/2 LG.

(2) HEX. HD. CAP SCREW

1/2-13 x 1 1/2 LG.

(2) SOC. HD. CAP SCREW

3/8-16 x 2 1/2 LG.

FRONT COVER

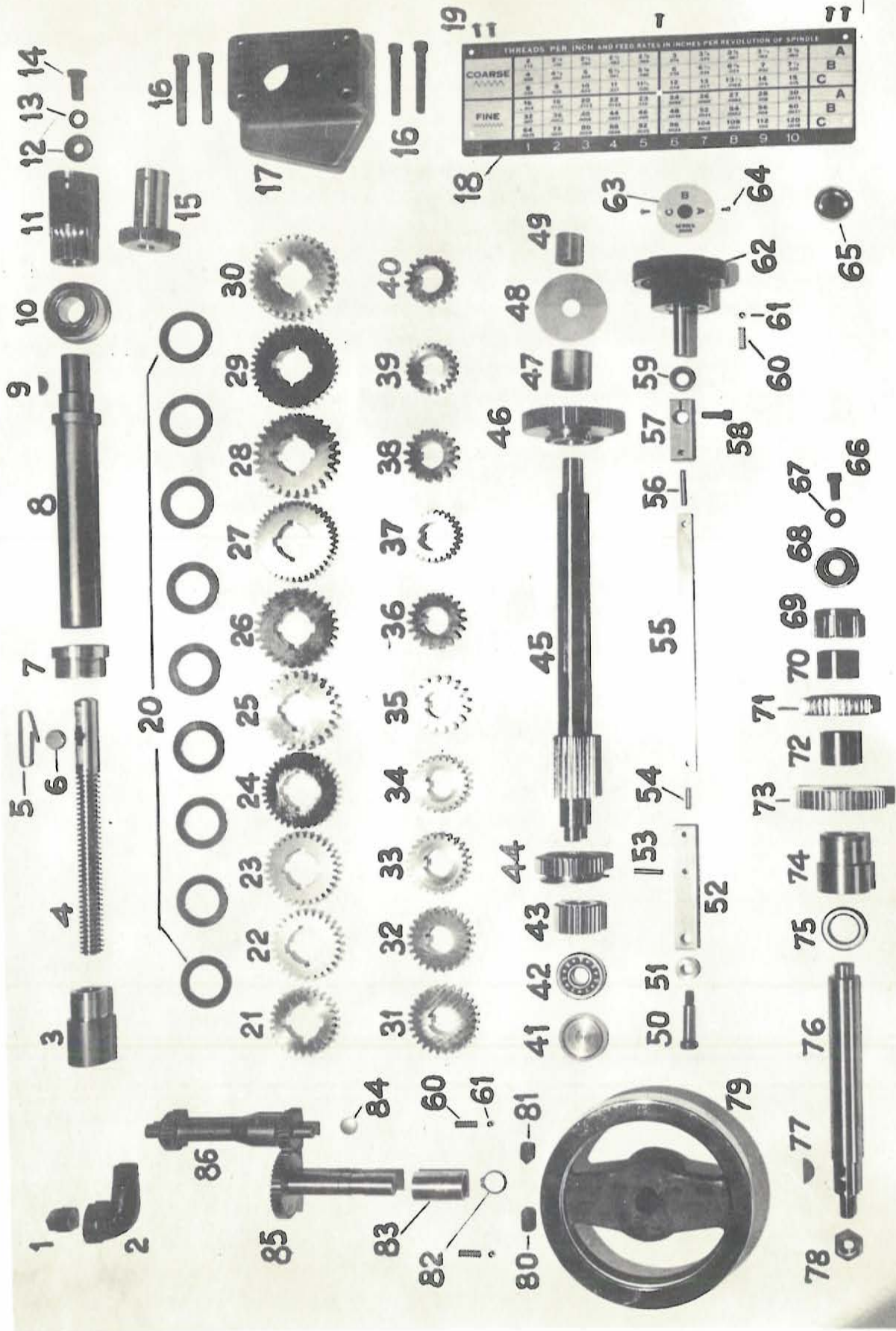
WITH: (2) DOWEL PIN 1/2 DIA. x 1/2 LG.

(10) SOC. HD. CAP SCREW

5/16-18 x 1 1/2 LG.

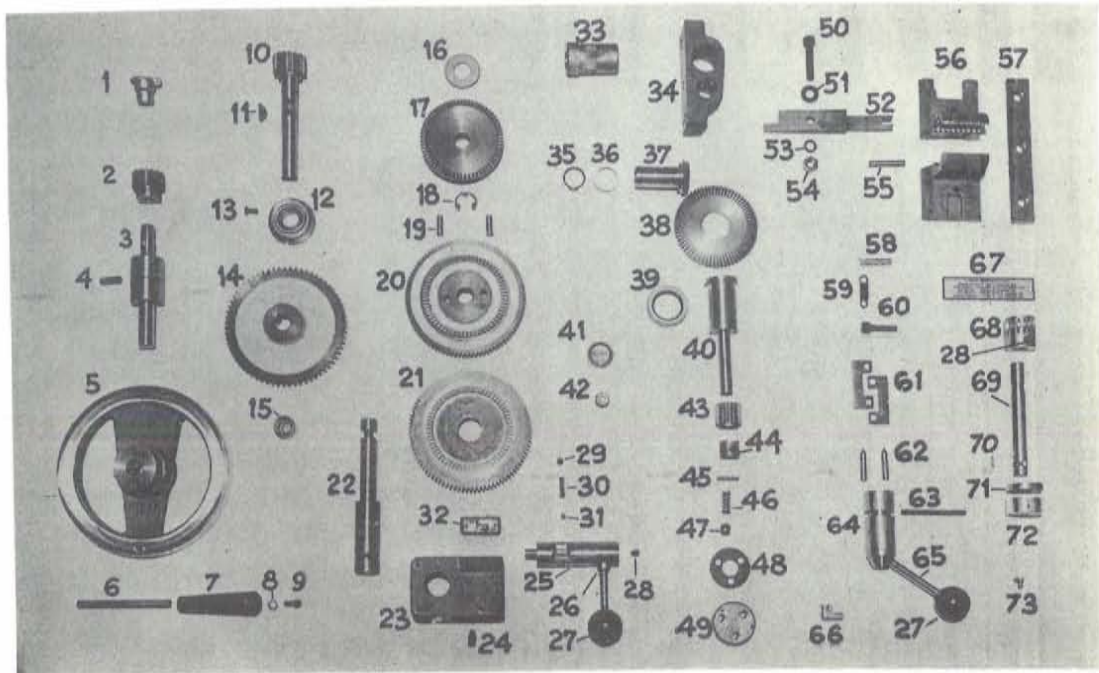
DRAIN PLUG—HEX. SOC. PIPE PLUG

1/2 NPTF



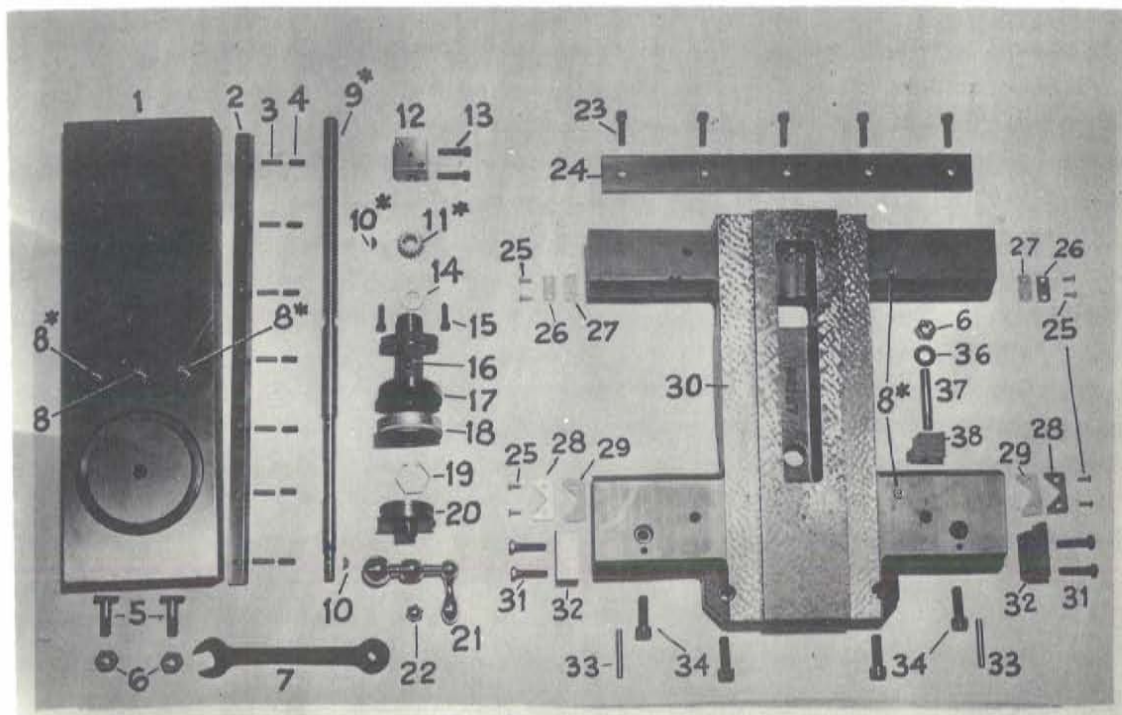
FEEDBOX PARTS

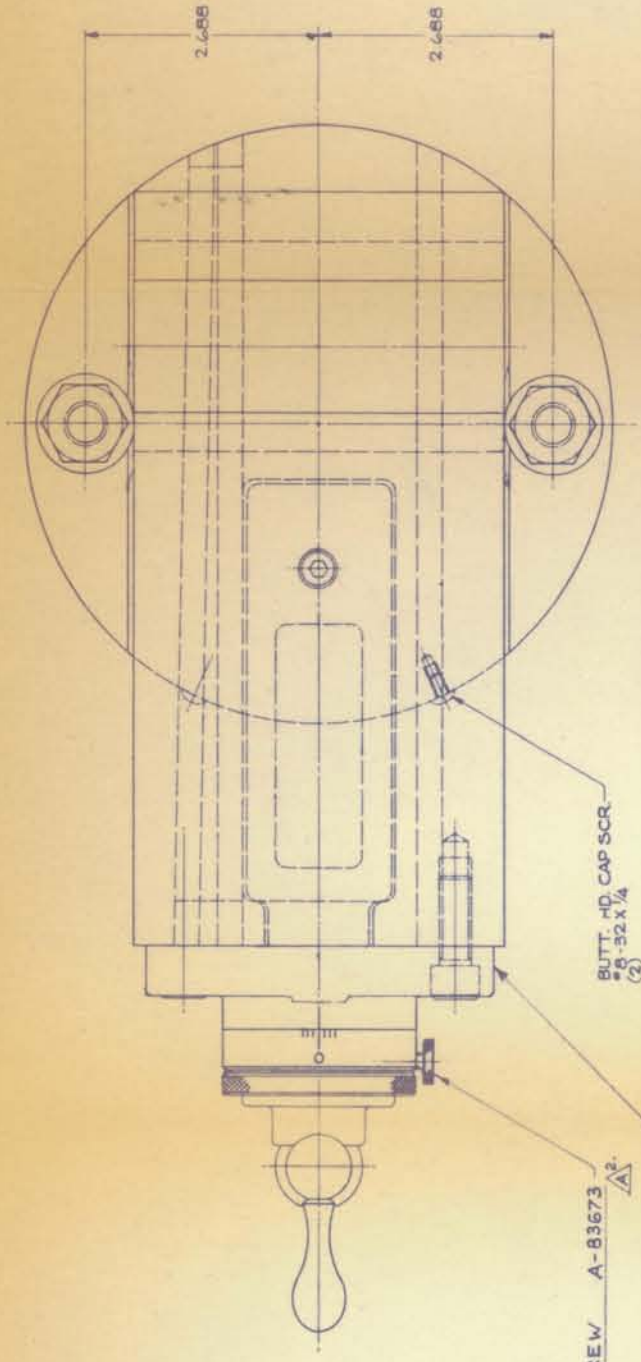
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	OILER—GITS #307		35	RETAINING RING—TRUARC #5100-100	
2	16 TOOTH GEAR	B-33059	36	THRUST WASHER	A-21250
3	FAN & PUMP BEARING—POLLARD #FPS 137		37	BEVEL PINION	B-21245
4	SOC. SET SCREW 3/8-16 x 1" LG.		38	66 T. BEVEL GEAR	B-21756
5	HANDWHEEL	C-33060	39	OIL SEAL (1 3/8 x 2 x 2 1/4)	
6	SHAFT	A-41245	40	CHICAGO RAWHIDE #13560	B-21757
7	HANDLE	B-41244	41	SHAFT FOR BEVEL GEAR	
8	WASHER 1/2 O.D. x 17/64 I.D. x .062 STAINLESS STEEL—H. M. HARPER CO.		42	OIL WINDOW—BIJUR #B-5093	
9	SOC. HD. CAP SCREW 1/4-28 x 1/2		43	HEX. SOC. PIPE PLUG 3/4-18 NPTF	A-21246
10	RACK PINION SHAFT	B-21238	44	18 T. SLIP CLUTCH PINION	A-21247
11	WOODRUFF KEY #11 (3/16 x 3/8 DIA.)		45	FEED SLIP CLUTCH	A-50507
12	BALL BEARING—S.K.F. #6304-2RS-NR		46	PIN	A-21267
13	BUTTON HD. SOC. CAP SCREW 1/4-20 x 1/2 LG.		47	COMPRESSION SPRING	
14	67 TOOTH GEAR	B-33053	48	SOC. SET SCREW 1/2-13 x 1/2 "NYLOK"	A-20985
15	CLOSED END NEEDLE BEARING—TORRINGTON #M-12121		49	GASKET	A-21249
16	SPACER	A-41285	50	COVER	
17	16 T. CLUTCH GEAR	B-41266	51	SOC. HD. CAP SCREW 3/8-16 x 1 1/4	
18	RETAINING RING—TRUARC #5133-75		52	WASHER—WESPO #6001	B-33054
19	SPACER PIN	A-41263	53	FEED INTERLOCK BAR	
20	90 T. DOUBLE CLUTCH GEAR	C-33051	54	SPLIT LOCKWASHER # 3/4	
21	90 T. SINGLE CLUTCH GEAR	B-33052	55	HEX. NUT 3/4-16	
22	CLUTCH SHAFT: —STANDARD —FOR AUTO. CARRIAGE STOP	B-41262 C-41669	56	DOWEL 5/16 DIA. x 1 1/2 LG.	C-33056
23	FEED CONTROL BOX: —STANDARD —FOR AUTO. CARRIAGE STOP	C-41259 C-41668	57	HALF NUTS	B-33057
24	SOC. SET SCREW 3/8-16 x 3/4 LG. "NYLOK" FULL DOG POINT		58	GIB	
25	CLUTCH CONTROL SHAFT	B-41260	59	DOWEL 5/16 DIA. x 1 1/2 LG.	A-21257
26	FEED CONTROL LEVER	A-33061	60	TENSION SPRING	
27	BLACK PLASTIC BALL KNOB—DIMCO #230 (1/2-24 INSERT)		61	SOC. HD. CAP SCREW 1/4-20 x 1 1/2 LG.	A-33068
28	SOC. SET SCREW 5/16-18 x 3/8 LG.		62	HALF NUT LINK	A-21252
29	SOC. SET SCREW 5/16-18 x 1/4 LG.		63	LINK PIN	A-21258
30	COMPRESSION SPRING	A-21268	64	RETAINER PIN	A-33058
31	STEEL BALL .250 DIA.		65	CONTROL SHAFT	A-21266
32	FEED INDICATING CHART	A-41202	66	HANDLE FOR HALF NUTS	
33	BUSH FOR BEVEL BRACKET	A-33076	67	ELBOW OILER—GITS #1207	
34	BEVEL GEAR BRACKET	B-21235	68	THREAD CHASING INSTRUCTIONS	A-41203
			69	CHART	A-33077
			70	16 T. WORM GEAR	A-21265
			71	DIAL SHAFT	
			72	DOWEL 1/4 DIA. x 1/2 LG.	A-41276
			73	ZERO WASHER	A-21263
				THREAD CHASING DIAL	
				OILER—GITS #521	
				NOT SHOWN	
				APRON HOUSING	E-33989



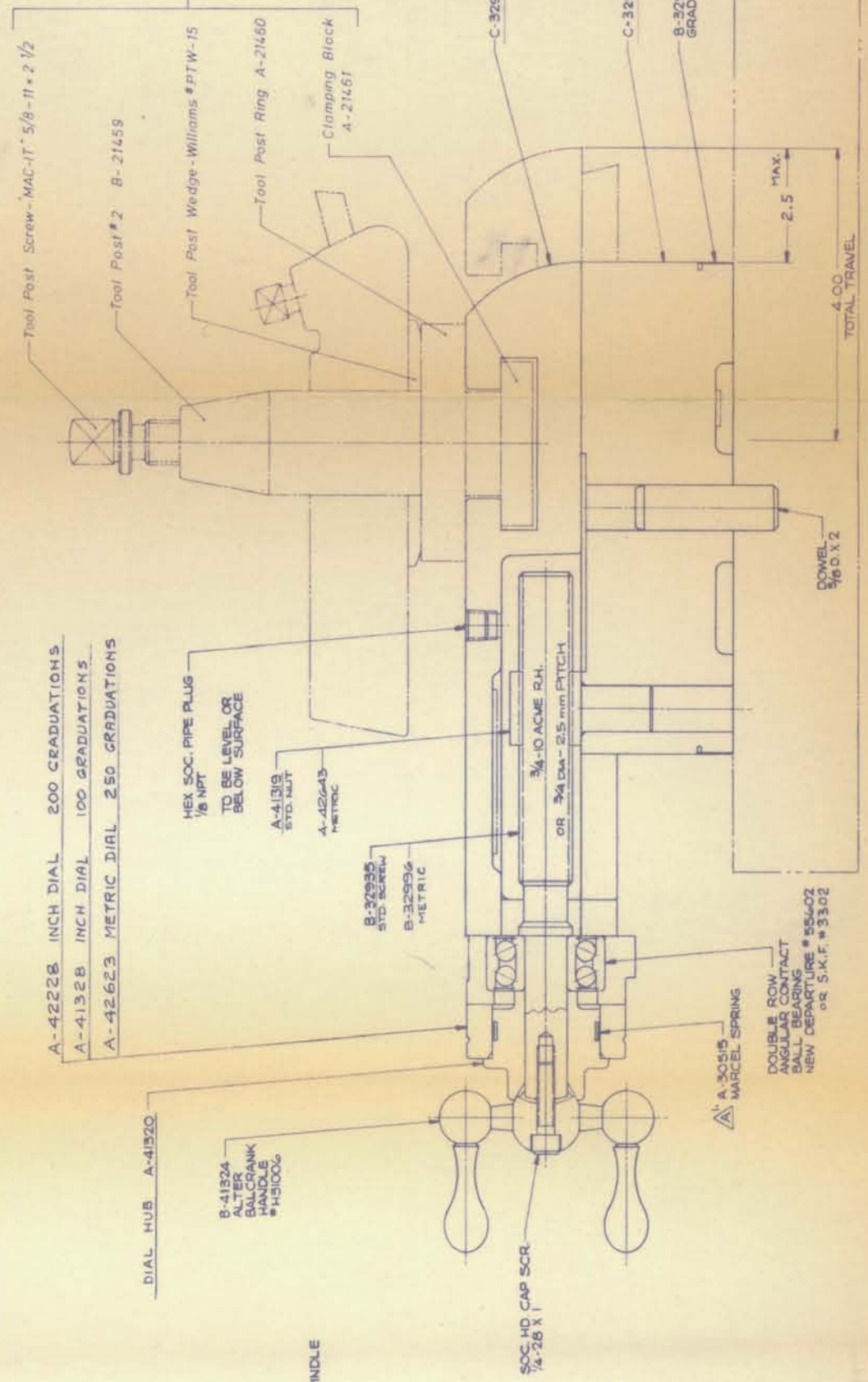
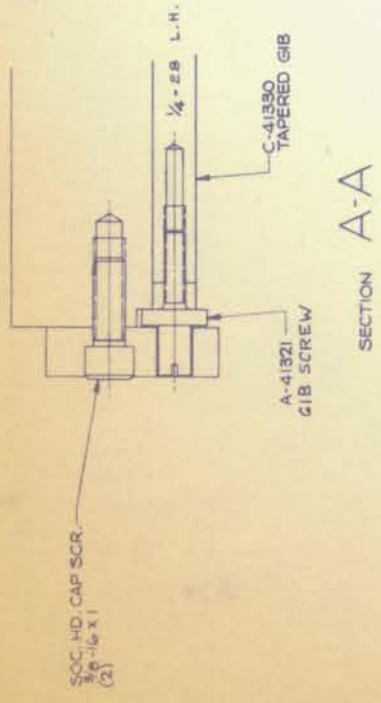
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	EXTENDED CROSS SLIDE: —STANDARD —FOR DEPTH THREADING STOP AND ONE-SHOT LUBRICATION —FOR DEPTH THREADING STOP ONLY —FOR ONE-SHOT LUBRICATION ONLY	D-32925 D-32936 D-32965 D-32966 B-33480	19	MARCEL SPRING: —STANDARD —FOR SPECIAL DIAL	A-30515 A-41455
2	GIB FOR EXTENDED CROSS SLIDE		20	HUB FOR CROSS FEED DIAL: —STANDARD —FOR SPECIAL DIAL	A-21205 A-33362 A-21208
3	HARDENED DOWEL 1/4 DIA. x 1" LG.		21	CRANK FOR CROSS FEED SCREW	
4	"NYLOK" SOC. SET SCREW 5/16-24 x 1/2" LG.		22	ACORN NUT 1/2-20, CHROME PLATED BRASS	
5	TEE-HEAD BOLT	A-21462	23	"LOC.WELL" SOC. HD. CAP SCREW 3/4-16 x 1 1/4 LG.	
6	HEAVY HEX. NUT 1/2-13 UNC		24	REAR SADDLE GIB	B-33126
7	TOOL POST WRENCH—ARMSTRONG #563D OR WILLIAMS #563D		25	ROUND HD. MACHINE SCREW #10-32 x 1/2 LG.	
8	OILER—GITS #523 (4 OILERS MARKED THUS * IN PICTURE ARE NOT REQUIRED FOR ONE SHOT LUBRICATION)		26	REAR SADDLE WIPER PLATE	A-21186
* 9	CROSS FEED SCREW	B-21202	27	REAR SADDLE WIPER	A-21188
* 10	WOODRUFF KEY #6 (5/32 x 5/8 DIA.)		28	FRONT SADDLE WIPER PLATE	A-21185
* 11	GEAR FOR CROSS FEED SCREW	A-21203	29	FRONT SADDLE WIPER	A-21187
12	NUT FOR CROSS FEED SCREW	A-32926	30	SADDLE CASTING: —STANDARD —FOR ONE-SHOT LUBRICATION	E-33086 E-33087
13	SOC. HD. CAP SCREW 5/16-24 x 1 1/4 LG.		31	HEX. HD. CAP SCREW 3/4-16 x 1 1/2 LG.	
14	THRUST WASHER	A-21204	32	FRONT SADDLE GIB	A-21219
15	SOC. HD. CAP SCREW 5/16-18 x 1" LG.		33	PULL DOWEL 5/16 DIA. x 2" LG.	
16	OILER—GITS #302		34	SOC. HD. CAP SCREW 1/2-13 x 1 1/2 LG.	
17	EXTENSION BEARING: —STANDARD (FOR 200 GRADUATION DIAL) —SPECIAL (FOR 400 GRADUATION DIAL)	B-21194 C-33361	36	WASHER—WESPO #6002	
18	DIAL FOR CROSS FEED SCREW: —STANDARD (200 GRADUATIONS) —SPECIAL (400 GRADUATIONS)	A-21206 B-33359	37	MILLED STUD 1/2-13 x 2 3/4 LG.	
			38	SADDLE CLAMP BLOCK	A-21218

Notes:—ITEM 8 WHERE MARKED THUS * IN PICTURE BELOW IS NOT REQ'D. WITH ONE-SHOT LUBRICATION.
—ITEMS 9, 10 AND 11 MARKED THUS * ARE NOT REQ'D. WITH TELESCOPIC TAPER ATTACHMENT. FOR REPLACEMENT PARTS SEE PAGE 29.



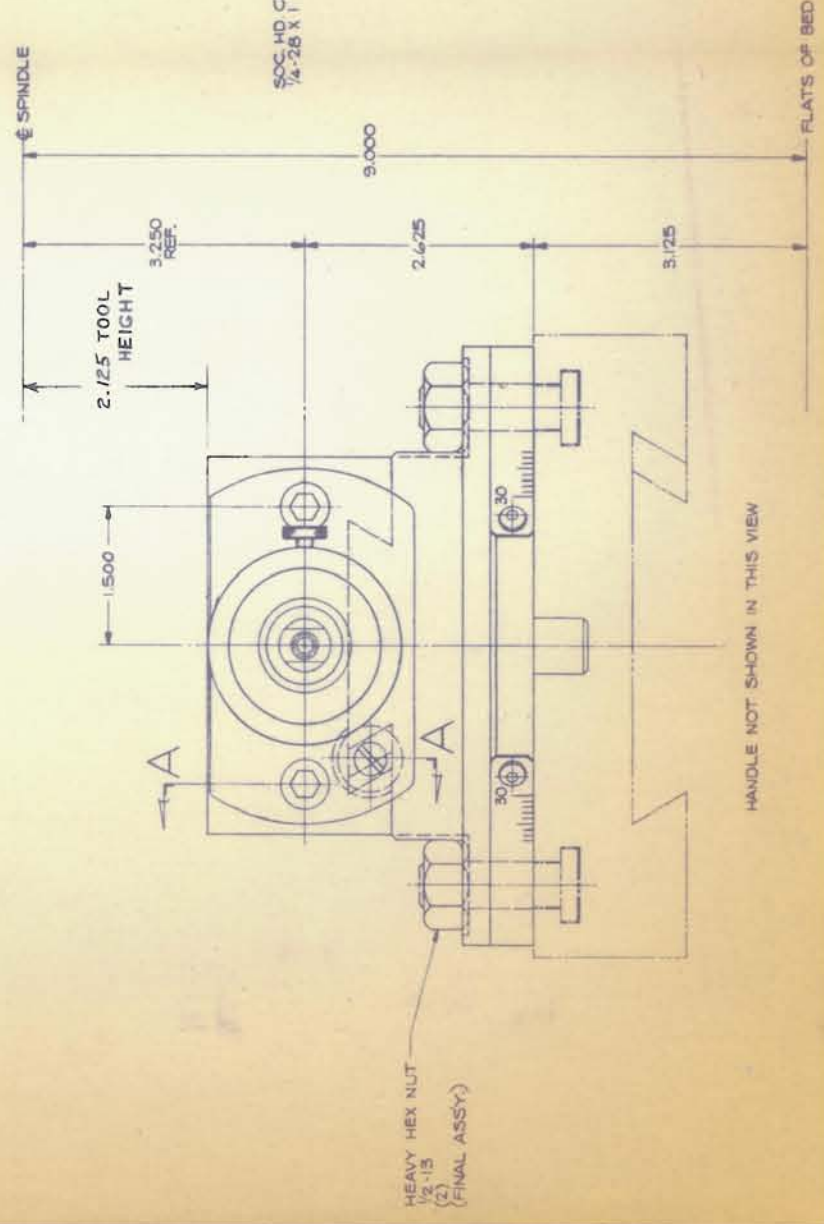


DIAL SCREW A-83673 Δ^2
 END PLATE B-32934



- A-42228 INCH DIAL 200 GRADUATIONS
- A-41328 INCH DIAL 100 GRADUATIONS
- A-42623 METRIC DIAL 250 GRADUATIONS

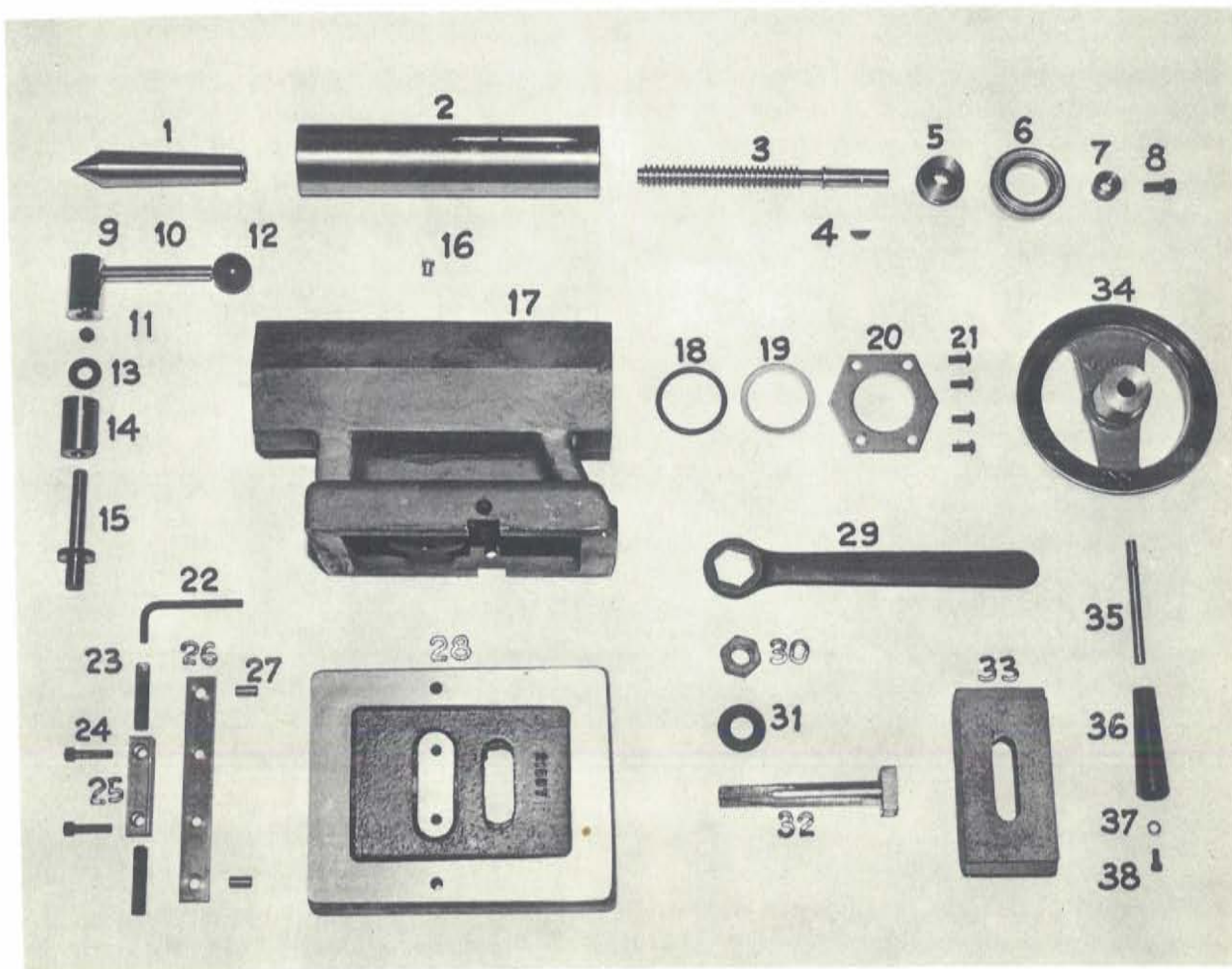
DIAL HUB A-41320



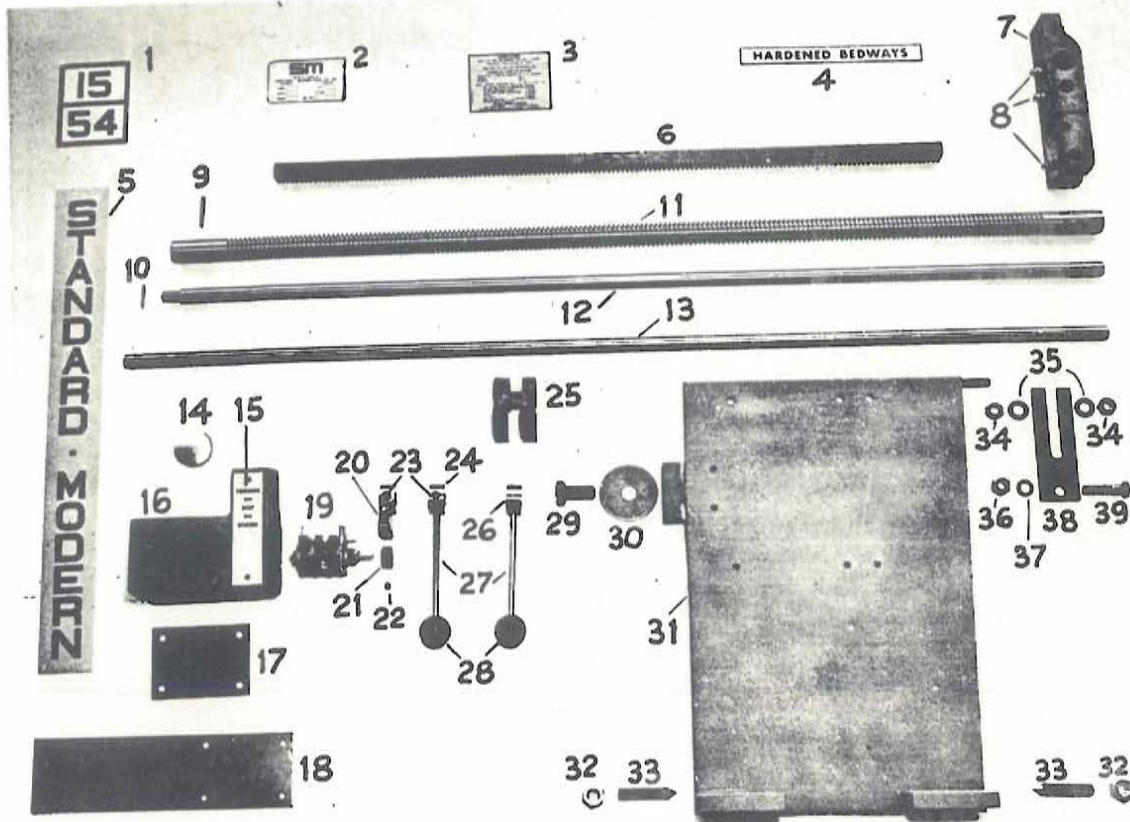
STANDARD-MODERN TOOL COMPANY LIMITED				TORONTO, CANADA	
REV.	DATE	BY	CHKD.	IN MET.	U.S.A. IN.
D					
C					
B					
A					

THIS COMPASS SLIDE ASSY. WITH 3/4-10 TPI. COMPOUND SCREW - 1973 DESIGN
 FULL SIZE
 LATHE MODELS - 1554 & 1754
 D-32970

ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	LATHE CENTER NO. 4 MORSE; —FOR ENGINE LATHE —FOR TOOLROOM LATHE	A-22639 A-41591	21	BUTTON HD. SOC. CAP SCREW 5/16-18 x 3/4 LG. (4 REQ'D.)	
2	SPINDLE WITH SPINDLE NUT AND SOC. HD. CAP SCREWS #10-32 x 3/4	C-33016 A-33018	22	ALLEN KEY # 1/4	
3	SPINDLE SCREW	B-33017	23	SOC. SET SCREW, FLAT POINT 1/2-13 x 2 1/2 LG. (2 REQ'D.)	
4	WOODRUFF KEY # 8 (5/32 x 3/4 DIA.)		24	SOC. HD. CAP SCREW 5/16-18 x 1 1/4 LG. (2 REQ'D.)	
5	BEARING SEAT COLLAR	A-33026	25	THRUST BLOCK	A-33033
6	BALL BEARING—S.K.F. # 6008-2RS		26	TENON STRIP	A-33025
7	HANDWHEEL RETAINER	A-41232	27	DOWEL 3/8 DIA. x 3/4 LG. (2 REQ'D.)	
8	SOC. HD. CAP SCREW 3/8-24 x 3/4		28	BASE CASTING	C-33366
9	BOSS FOR HANDLE	A-33027	29	BOX WRENCH WILLIAMS # 808 (1 1/4 ACROSS FLATS)	
10	SHAFT FOR HANDLE	A-33028	30	HARDENED HEAVY HEX NUT 3/4-10 (1 1/4 ACROSS FLATS)	
11	SOC. SET SCREW 1/2-13 x 3/4 LG.		31	WASHER—WESPO # 6011	
12	BLACK PLASTIC BALL KNOB DIMCO # 95 (3/8-24 INSERT)		32	CLAMP STUD	A-33363
13	WASHER—WESPO # 6009		33	CLAMP PLATE	B-21098
14	CLAMP BUSHING	B-21466	34	HANDWHEEL	C-33023
15	SPINDLE CLAMPING STUD	A-22813	35	SHAFT	A-41245
16	OILER—GITS # 533		36	HANDLE	B-41244
17	SPINDLE HOUSING	D-33012	37	WASHER 1/2 O.D. x 17/64 I.D. x .062	
18	O-RING # 330 (2 1/8 x 2 1/2 x 3/16)	A-33031	38	STAINLESS STEEL—H.M. HARPER CO. SOC. HD. CAP SCREW 1/2-28 x 1/2	
19	SPACER	A-33030			
20	RETAINING PLATE				



ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	MODEL SIZE NAMEPLATE	A-33992	24	HUB	A-33202
2	SERIAL NAMEPLATE	B-60275	25	CONTROL BRACKET	B-33067
3	LUBRICATION NAMEPLATE: —STANDARD LATHE —WITH ONE-SHOT LUBRICATOR	A-32923 A-32906	26	HUB	A-21092
4	"HARDENED BEDWAYS" NAMEPLATE	B-41519	27	STEM FOR CONTROL LEVER	A-21093
5	VERTICAL NAMEPLATE	D-41413	28	RED PLASTIC BALL KNOB	
6	RACK	B-21279	29	HEX HD. CAP SCREW 3/4 - 10 x 1 1/2" LG.	
7	BED END BRACKET	C-33984	30	WASHER	B-33252
8	GREASE FITTING—KLEENSEAL #5000		31	MOTOR PLATE	D-33124
9	LEADSCREW SHEARPIN	A-21142	32	HEX NUT 1/4 - 11	
10	TAPER PIN #1 x 1" LG.	B-33983	33	PIVOT SCREW	A-31231
11	LEADSCREW 1 3/16 DIA.	B-33484	34	HEX JAM NUT 1/2 - 13	
12	FEEDSHAFT	B-33486	35	PLAIN WASHER # 1/2	
13	CONTROL SHAFT		36	HEX NUT 1/2 - 13	
14	FROST PLUG 2" DIA.		37	SPLIT LOCKWASHER # 1/2	
15	"FWD-STOP-REV" NAMEPLATE	B-33196	38	ANCHOR FOR MOTOR PLATE	A-33221
16	SWITCH BOX	D-33193	39	HEX HD. BOLT 1/2 - 13 x 2" LG.	
17	GASKET FOR SWITCH BOX	B-33195	NOT SHOWN		
18	COVER PLATE FOR SWITCH BOX	B-33487		BED CASTING	E-33119
19	ROTARY PILOT SWITCH — ALLEN-BRADLEY #804-A3 (WITHOUT ENCLOSURE, HAND LEVER AND LEGEND PLATE)			CHIP TRAY	D-33078
20	CONTROL SHAFT SECTOR	B-33197		HEADSTOCK PEDESTAL	D-33116
21	PINION	B-33199		TAILSTOCK PEDESTAL	D-33135
22	SOC. SET SCREW 5/16-24 x 5/16 LG.			END GUARD	E-33083
23	SOC. SET SCREW 3/8 - 24 x 3/8 LG.			HINGE END PLATE	D-33996
				CONTROL BOX MOUNTING PLATE: —STANDARD LATHE —FOR COMBINATION STARTER	D-33998 D-33132

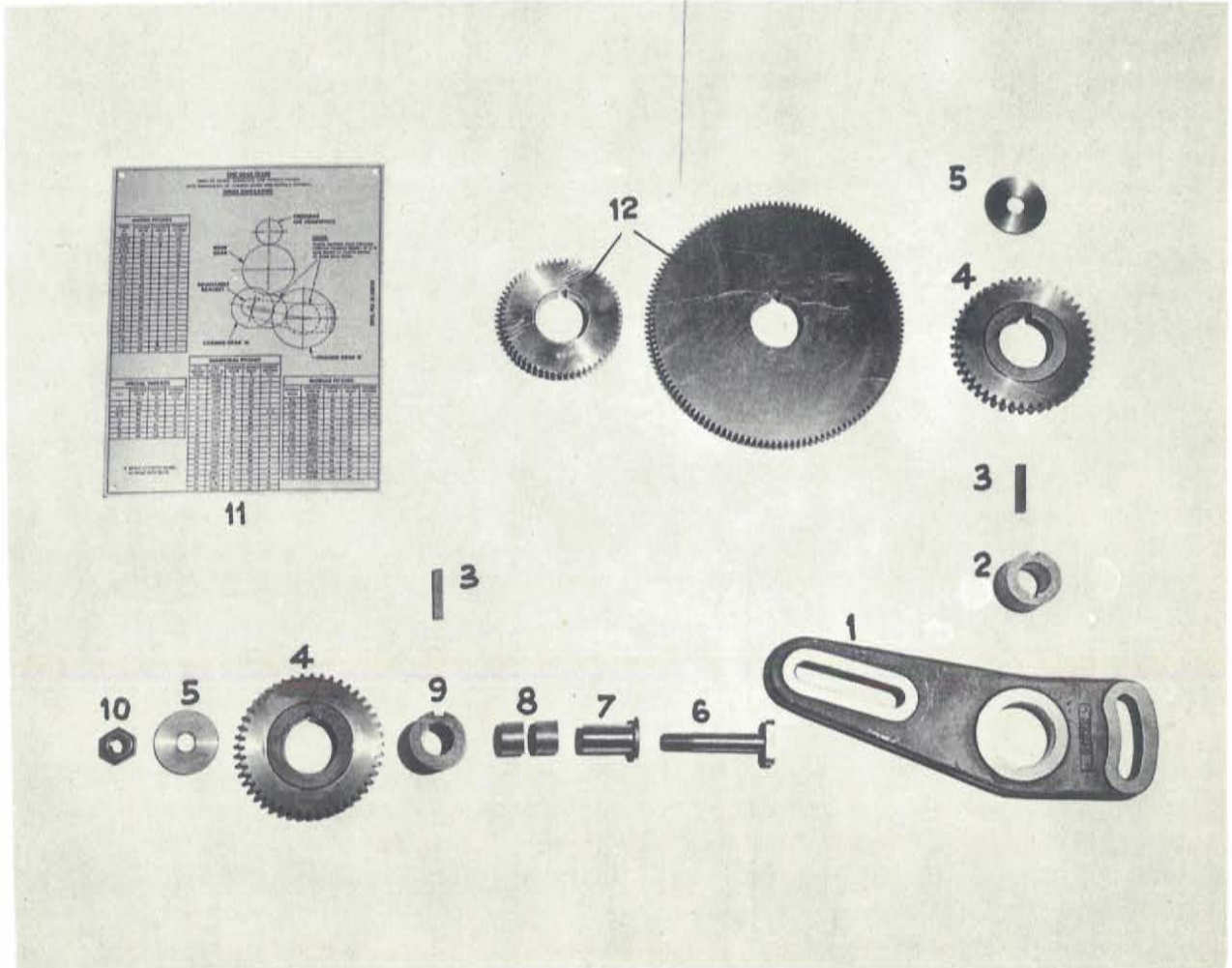


**END GEAR TRAIN PARTS
FOR CUTTING METRIC AND SPECIAL THREADS**

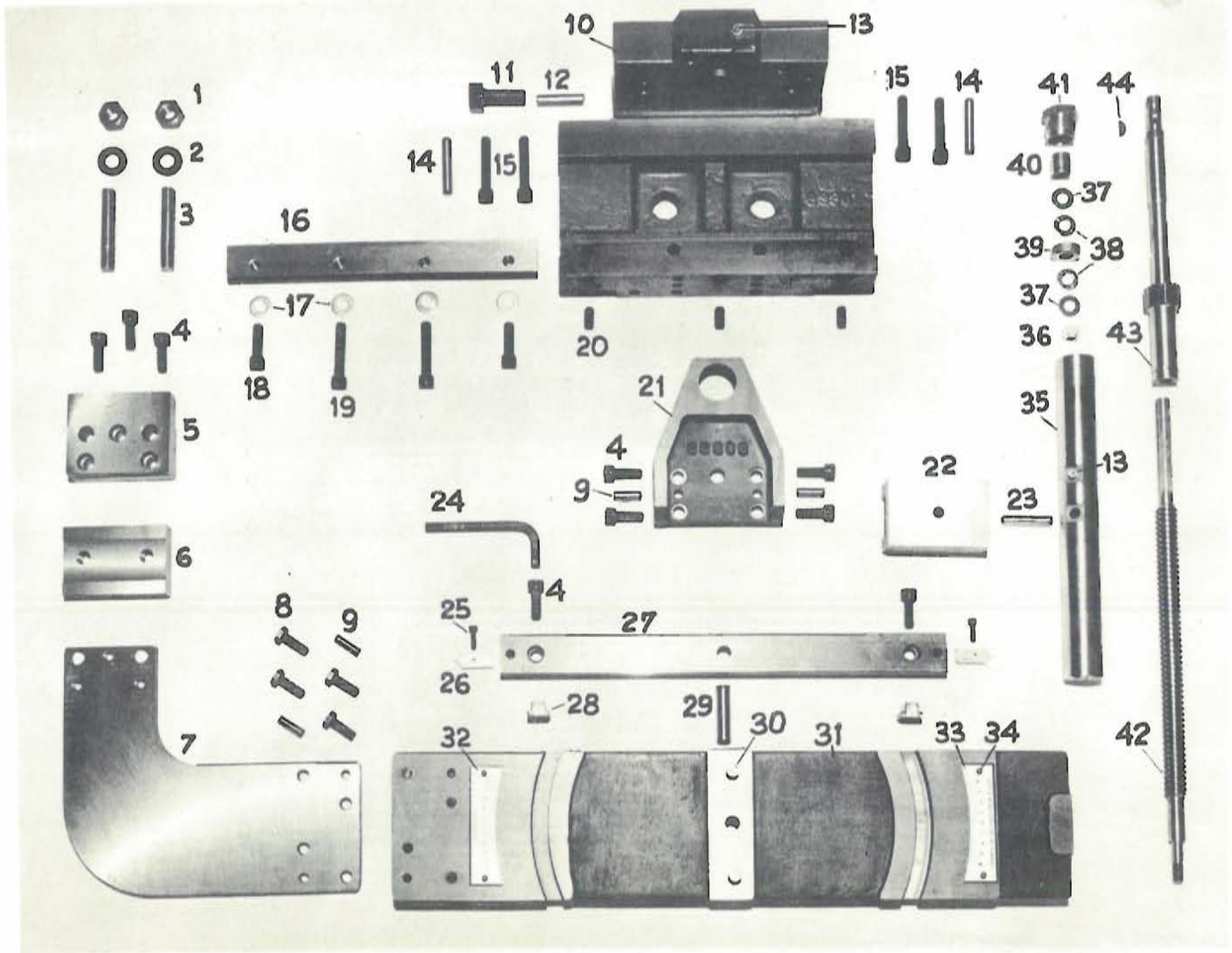
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	ADJUSTABLE BRACKET	C-21353	12 *	70 T. CHANGE GEAR	22656
2	FIXED GEAR HUB	A-21361		74 T. " "	22657
3	KEY 1/4 x 1/4 x 1 1/2 LG.			75 T. " "	22658
4	45 TOOTH SPUR GEAR	B-41407		79 T. " "	22659
5	SPECIAL WASHER	A-21359	*	80 T. " "	22660
6	SPECIAL BOLT	A-21360		84 T. " "	22661
7	HARDENED SLEEVE	A-21358		85 T. " "	22662
8	BUSHING (.751 x .878 x 1/8 LG.)— OILITE #AA-838-25			86 T. " "	22663
9	IDLER GEAR HUB	A-21357		88 T. " "	22664
10	HEAVY HEX NUT 1/2-13			89 T. " "	22665
11	NAMEPLATE: —METRIC THREADS ONLY —METRIC, DIAMETRAL, MODULE AND SPECIAL THREADS	B-33990 B-33039		91 T. " "	22666
12	CHANGE GEARS (TWO ONLY SHOWN FOR ILLUSTRATION)	C-21362		92 T. " "	22667
	45 T. CHANGE GEAR	22650		93 T. " "	22668
	50 T. " "	22651		95 T. " "	22681
	55 T. " "	22652		97 T. " "	22669
	60 T. " "	22653		98 T. " "	22670
	64 T. " "	22677		100 T. " "	22682
	65 T. " "	22654		107 T. " "	22671
	67 T. " "	22655	*	108 T. " "	22672
				110 T. " "	22673
				117 T. " "	22674
				124 T. " "	22675
				127 T. " "	22676

NOTE: CHANGE GEARS ARE SUPPLIED WHEN REQUIRED.

ONLY GEARS MARKED * SUPPLIED WITH METRIC SET

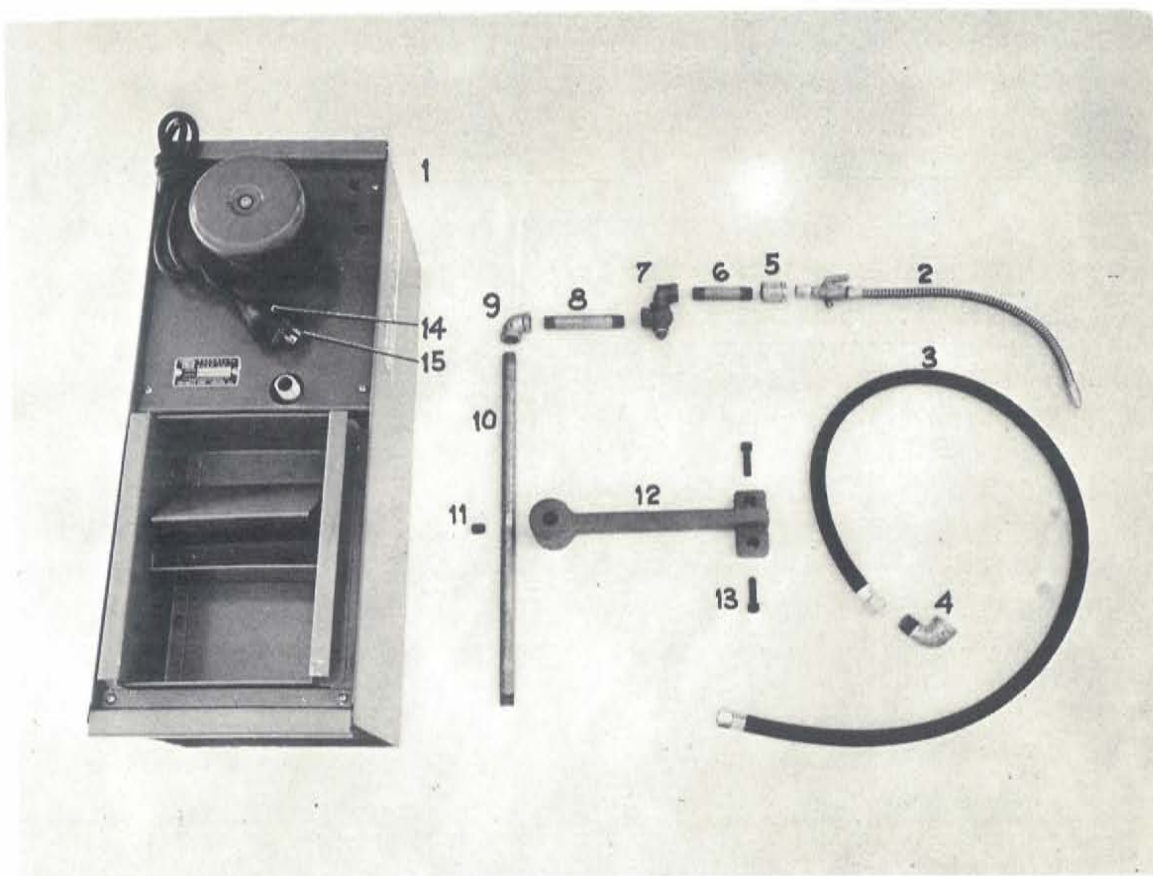


ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	HEAVY HEX NUT 1/2 - 13		27	SLIDE BAR: —FOR 12" STROKE	C-33306
2	WASHER - WESPO #6002			—FOR 15" STROKE	C-32911
3	MILLED STUD 1/2 - 13 x 3" LG.		28	T-SLOT NUT	A-41353
4	SOC. HD. CAP SCREW 3/4 - 16 x 1" LG.		29	DOWEL 1/2 DIA. x 2" LG.	
5	BED CLAMP - UPPER	A-33308	30	OILER—GITS #533	
6	BED CLAMP - LOWER	A-33309	31	SLIDE PLATE: —FOR 12" STROKE	D-33302
7	BED ANCHOR ARM	C-33307		—FOR 15" STROKE	D-32912
8	HEX HD. CAP SCREW 3/8 - 16 x 1" LG.		32	GRADUATED PLATE—DEGREES —FOR 12" STROKE	B-33318
9	DOWEL 5/16 DIA. x 1" LG.			—FOR 15" STROKE	B-32910
10	MAIN BRACKET	D-33301	33	GRADUATED PLATE—TAPER/FOOT: —FOR 12" STROKE	B-33317
11	HEX. HEAD LOCK SCREW	A-33320		—FOR 15" STROKE	B-32909
12	LOCKING PIN	A-33321	34	DRIVE SCREW "U" TYPE #4 x 1/4 LG.	
13	OILER - GITS #521		35	CROSS GUIDE BAR	C-33310
14	PULL DOWEL 3/8 DIA. x 2" LG.		36	HEAVY HUGLOCK NUT 3/4 - 24	
15	SOC. HD. CAP SCREW 3/4 - 16 x 2" LG.		37	THRUST RACE— TORRINGTON #TRC - 613	
16	GIB	B-33305	38	NEEDLE THRUST BEARING— TORRINGTON #NTA - 613	
17	PLAIN WASHER - S.A.E. #3/8		39	BEARING RING	A-33312
18	SOC.-HD. CAP SCREW 3/8 - 24 x 1 1/2 LG.		40	BOST-BRONZ BEARING #8911-6 (.565 I.D. x .691 O.D. x 3/4)	
19	SOC. HD. CAP SCREW 3/4 - 24 x 2" LG.		41	BEARING LOCKNUT	B-33311
20	SOC. SET SCREW "NYLOK" 3/4 - 16 x 3/4 LG.	C-33303	42	CROSS FEED SCREW	B-33313
21	OUTER SUPPORT	C-33304	43	CROSS FEED SHAFT	B-33314
22	SHOE		44	WOODRUFF KEY #6 (5/32 x 3/4)	
23	PULL DOWEL 3/8 DIA. x 1 1/4 LG.				
24	ALLEN KEY #5/16				
25	SOC. HD. CAP SCREW #10 - 32 x 3/4 LG.	A-33319			
26	POINTER				



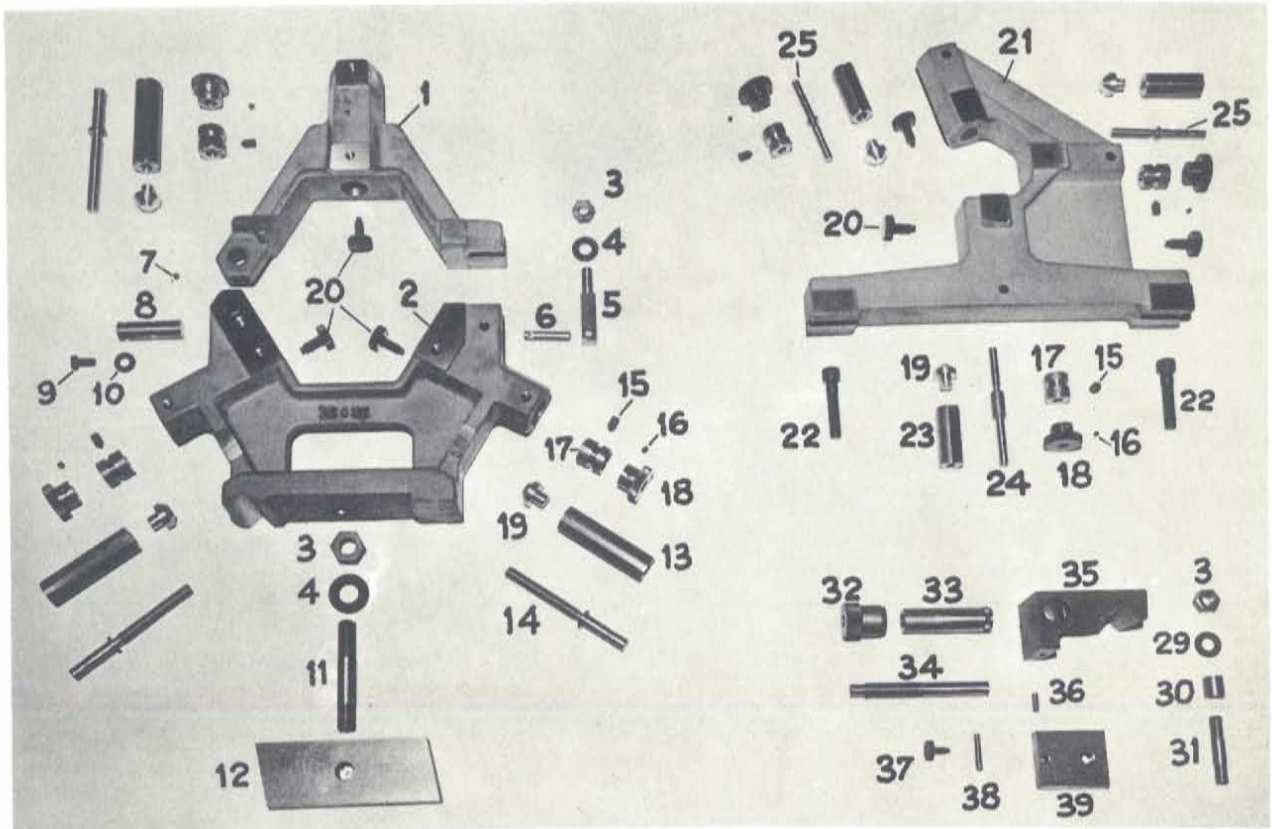
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	PUMP UNIT—GRAY MILLS #X11 - HR35 - A		9	ELBOW # 3/8 x 90°	
2	NOZZLE WITH SHUT-OFF COCK & REDUCING BUSHING # 3/8 x 1/4 (SUPPLIED WITH PUMP UNIT)		10	PIPE NIPPLE 3/8 x 18" LG.	C-33360
3	FLEXIBLE HOSE (SUPPLIED WITH PUMP UNIT)		11	SOC. SET SCREW 1/2 - 13 x 1/4 LG.	
4	STREET ELBOW # 1/2 x 90°		12	PIPE SUPPORT BRACKET	
5	PIPE COUPLING # 3/8		13	SOC. HD. CAP SCREW 3/8 - 16 x 1 1/4 LG.	
6	PIPE NIPPLE 3/8 x 3" LG.		14	SEALTITE RUBBER COVER— HUBBELL #7574 (WITH "TWIST-LOCK" PLUG ONLY)	
7	SWING JOINT # 3/8—CRANE #300		15	"TWIST-LOCK" ARMORED CAP— HUBBELL #4726 WITH CORD GRIP FOR CORD DIA. .296 - 562 (SPECIAL APPLICATION ONLY)	
8	PIPE NIPPLE 3/8 x 4" LG.				

NOTE: ITEM 12—PIPE SUPPORT BRACKET PART #C - 33360 NOT USED ON LATHE
WITH TELESCOPIC TAPER ATTACHMENT.
—USE PIPE SUPPORT BLOCK PART #B - 41475 INSTEAD.



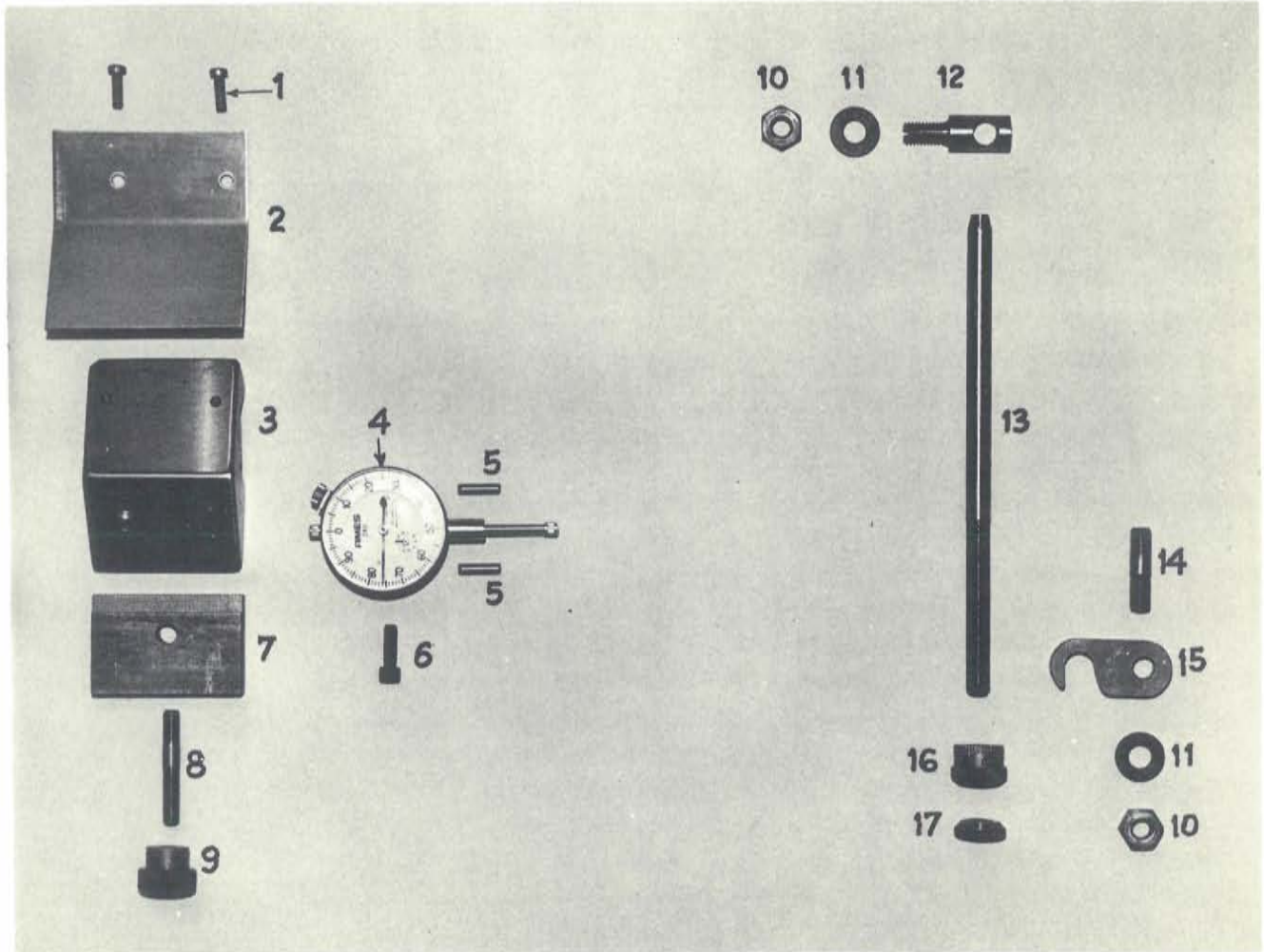
STEADY REST, FOLLOW REST AND MICROMETER CARRIAGE STOP PARTS

STEADY REST—33125			FOLLOW REST—33325		
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	UPPER CASTING	D-41482	15	SOC. SET SCREW $\frac{3}{8}$ - 16 x $\frac{1}{8}$ LG.	
2	LOWER CASTING	E-33097	16	CONE POINT (6 REQ'D.)	
3	HARDENED HEAVY HEX. NUT $\frac{1}{2}$ - 13, $\frac{3}{8}$ ACROSS FLATS (2 REQ'D.)		17	SOC. SET SCREW $\frac{1}{4}$ - 28 x $\frac{1}{4}$ (3 REQ'D.)	A-33095
4	WASHER—WESPO #6009 (2 REQ'D.)		18	BUSHING (3 REQ'D.)	A-21120
5	EYE BOLT	A-41488	19	KNOB (3 REQ'D.)	A-33096
6	PIVOT PIN	A-21392	20	BUTTON FOR SLEEVE (3 REQ'D.)	A-21292
7	SOC. SET SCREW $\frac{1}{4}$ - 20 x $\frac{3}{8}$ LG.		21	CLAMP SCREW (3 REQ'D.)	D-33326
8	HINGE PIN	A-41489	22	FOLLOW REST CASTING	
9	HEX. HD. CAP SCREW $\frac{3}{8}$ - 16 x $\frac{1}{4}$ LG.		23	SOC. HD. CAP SCREW $\frac{1}{2}$ - 13 x $3\frac{1}{2}$ LG.	A-21301
10	WASHER—WESPO #6001		24	SLEEVE (3 REQ'D.)	A-33098
11	MILLED STUD $\frac{1}{2}$ - 13 x 4 LG.		25	ADJUSTING SCREW—LONG	A-21302
12	CLAMP BAR	A-21288	MICROMETER CARRIAGE STOP—22187		
13	SLEEVE (3 REQ'D.)	A-41487	3	HARDENED HEAVY HEX. NUT $\frac{1}{2}$ - 13	
14	ADJUSTING SCREW	A-41483	29	WASHER—WESPO #6002	A-22819
15	SOC. SET SCREW $\frac{3}{8}$ - 16 x $\frac{1}{8}$ LG. CONE POINT (3 REQ'D.)		30	COLLAR	
16	SOC. SET SCREW $\frac{1}{4}$ - 28 x $\frac{1}{4}$ (3 REQ'D.)		31	MILLED STUD $\frac{1}{2}$ - 13 x $3\frac{1}{2}$ LG.	
17	BUSHING (3 REQ'D.)	A-41486	32	KNOB	A-21396
18	KNOB (3 REQ'D.)	A-41485	33	GRADUATED SLEEVE	B-41373
19	BUTTON FOR SLEEVE (3 REQ'D.)	A-41484	34	SCREWED STEM	A-21397
20	CLAMP SCREW (3 REQ'D.)	A-21292	35	BODY	B-22818
			36	DOWEL $\frac{1}{4}$ DIA. x $\frac{1}{4}$ LG.	
			37	CLAMP SCREW	A-30586
			38	TAPER PIN #4 x $1\frac{1}{2}$ LG.	
			39	CLAMP	A-41372



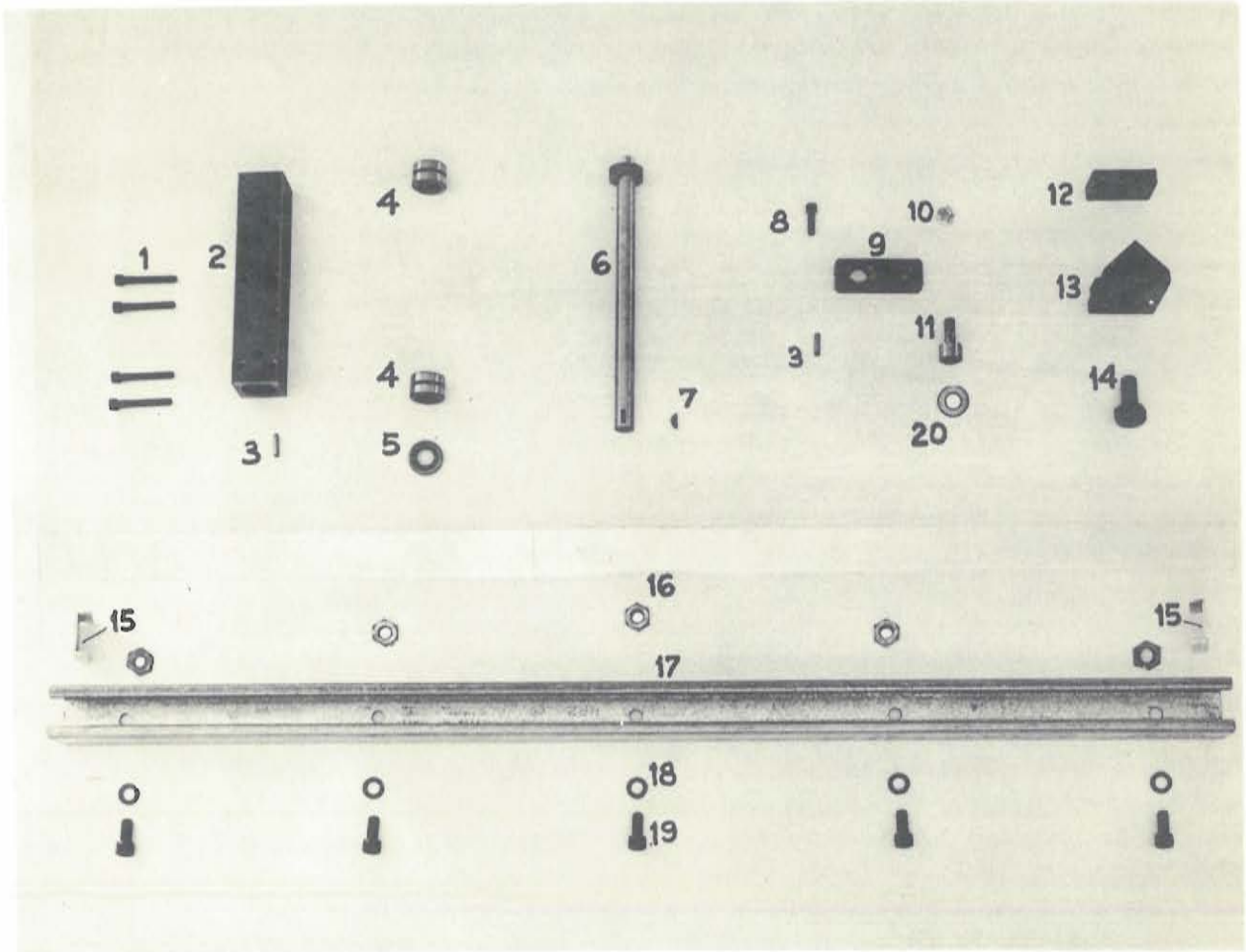
**DIAL INDICATOR CARRIAGE STOP
AND DEPTH THREADING STOP PARTS**

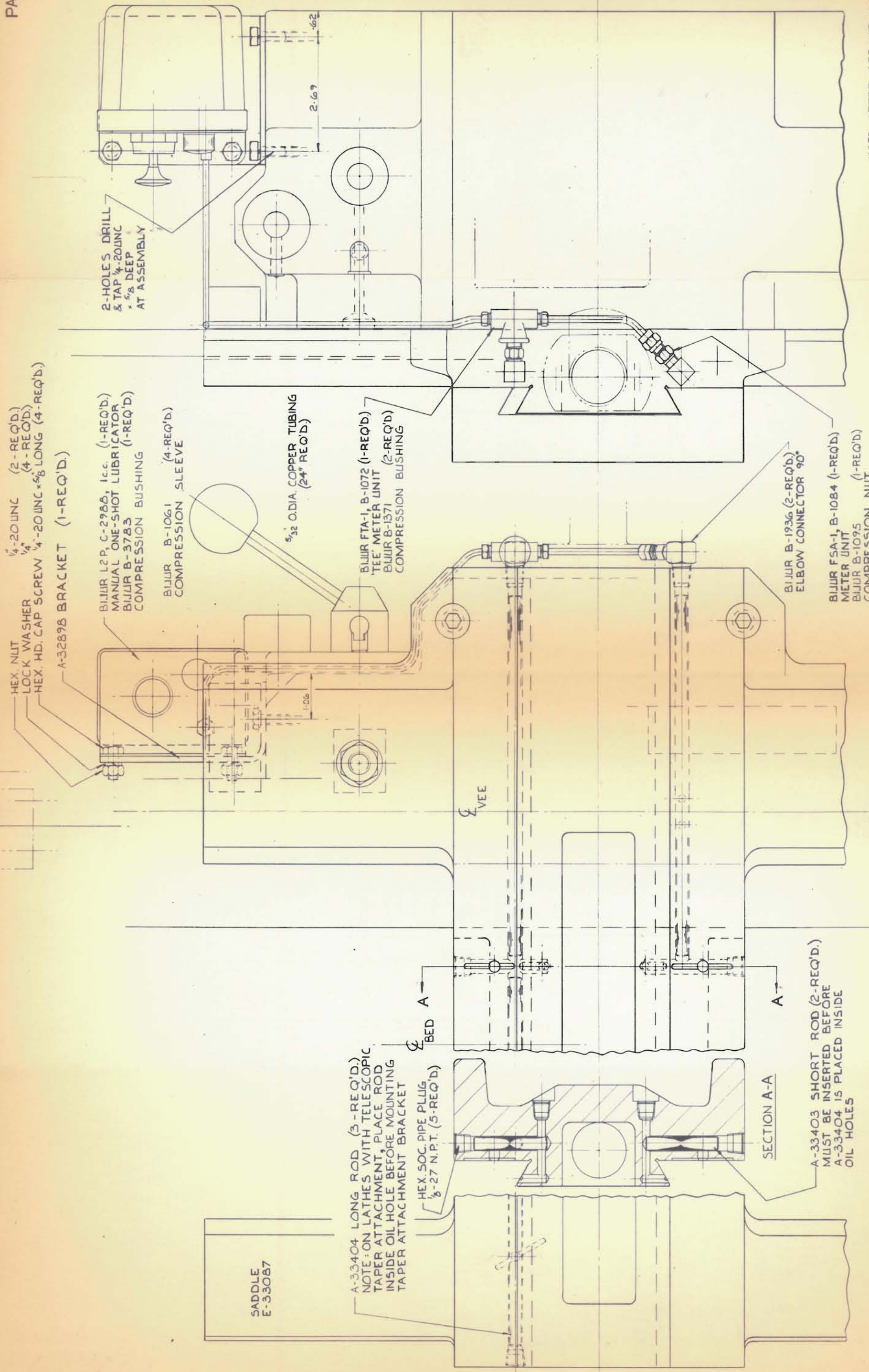
ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	FILLISTER HD. MACH. SCREW #10 - 32 x 1/2 LG.		8	CLAMPING STUD	A-23256
2	CHIP GUARD	A-21347	9	CLAMPING NUT	A-23254
3	CLAMPING BRACKET	B-21348	10	HARDENED HEAVY HEX NUT 3/4 - 16	
4	LONG RANGE DIAL INDICATOR AMES #282 WITH SCREW TYPE BACK, SHOCK- LESS, HUNDRED SERIES—GRADUATED .001		11	WASHER—WESPO #6001	A-41547
5	HARD STD. DOWEL 3/16 DIA. x 3/4 LG.		12	CLAMP BOLT	A-22708
6	SOC. HD. CAP SCREW 1/4 - 20 x 3/4 LG.		13	STOP ROD	
7	CLAMPING PLATE	A-21346	14	MILLED STUD 3/4 - 16 x 1 1/2 LG.	A-22710
			15	LATCH PLATE	A-22711
			16	GRADUATED NUT	A-22712
			17	KNURLED LOCKNUT	



AUTOMATIC CARRIAGE STOP PARTS

ITEM	NAME	PART NO.	ITEM	NAME	PART NO.
1	SOC. HD. CAP SCREW 1/4 - 20 x 1 1/4 LG. (4 REQ'D.)	B-33351	11	CAM FOLLOWER—TORRINGTON #CRS - 12	
2	STOP CONTROL BLOCK		12	CLAMP NUT	A-33356
3	HARDENED DOWEL 3/16 DIA. x 3/4 LG. (2 REQ'D.)		13	TRIP DOG	B-33354
4	ROLLER BEARING—TORRINGTON #HJ - 101812 (2 REQ'D.)		14	HEAVY HEX BOLT	A-21217
5	OIL SEAL (1/8 I.D. x 1 1/8 O.D. x 1/4) CHICAGO RAWHIDE STOCK NO. 6225	B-33352	15	END CAP—CANTRUSS #RR2E (2 REQ'D.)	
6	ECCENTRIC SHAFT		16	HEX. NUT 3/8 - 16 (5 REQ'D. FOR 30" BED—8 FOR 54")	
7	WOODRUFF KEY #3 (1/8 x 1/2 DIA.)	B-41672	17	RAIL FOR 30" BED	C-33353
8	SOC. HD. CAP SCREW 1/4 - 20 x 3/4		18	RAIL FOR 54" BED	C-33347
9	TRIM ARM		19	SPLIT LOCK WASHER # 3/8 (5 REQ'D. FOR 30" BED—8 FOR 54")	
10	HUGLOCK NUT 3/8 - 24 (5/16 THICK)		20	SOC. HD. CAP SCREW 3/8 - 16 x 3/4 LG. (5 REQ'D. FOR 30" BED—8 FOR 54")	
				SLEEVE FOR CAM FOLLOWER	A-32949





USED AFTER SER. NO. 8618

STANDARD-MODERN TOOL COMPANY LIMITED		TORONTO, CANADA	
REV.	DATE	BY	CHKD.
D			
C			
B	FEB 24 '77		
A	FULL		
TITLE		S. S. No.	
ONE-SHOT LUBRICATION			
ASSEMBLY - SLIDES		PART No.	
		MET.	
		D-32897	
		MOBEL 1530, 1554, 1730, 1754 LATHES	