INSTRUCTIONS and PARTS

ATLAS

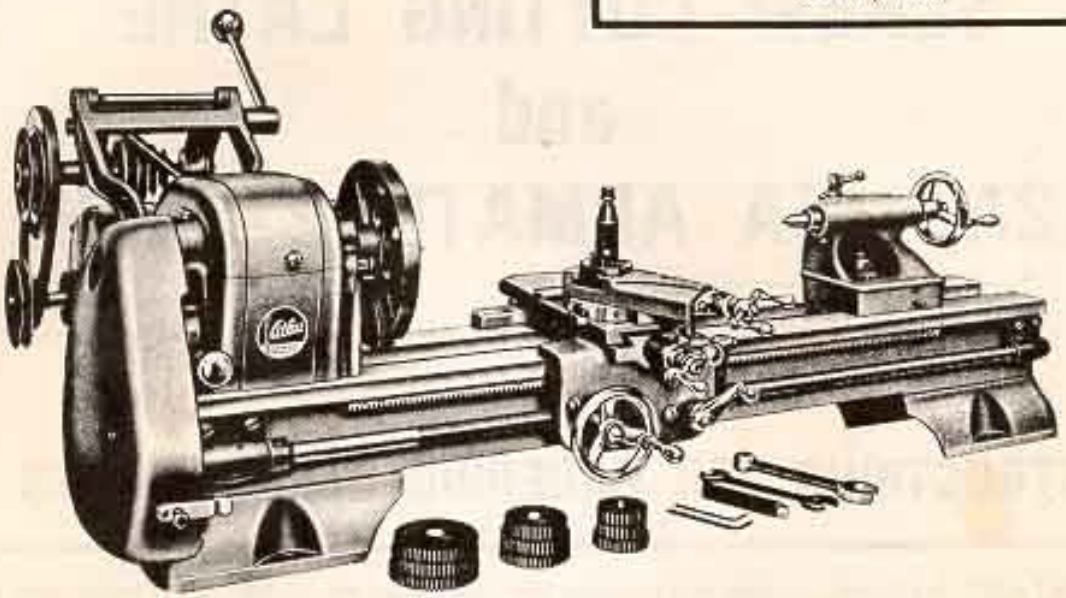
CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49007

NO. 618
6" ATLAS BACK GEARED SCREW CUTTING LATHE

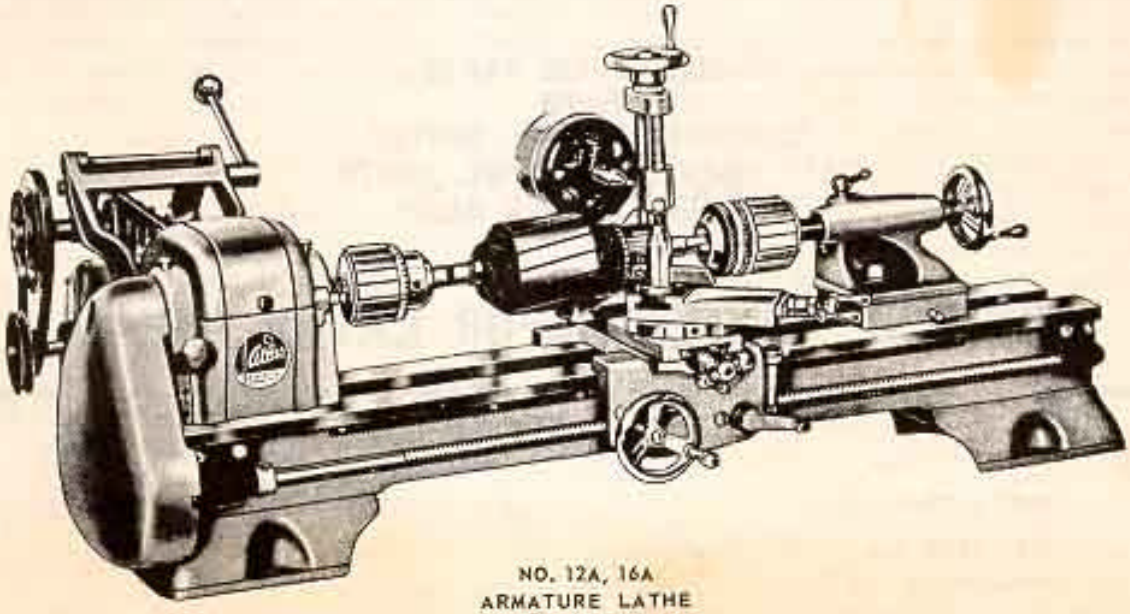
NO. 12A, 16A
ARMATURE LATHE

JULY, 1976

8



NO. 618
BENCH LATHE



NO. 12A, 16A
ARMATURE LATHE

Printed in U.S.A.

JULY, 1976

618 ATLAS 6" BACK GEARED SCREW CUTTING LATHE and 12A, 16A ARMATURE LATHE

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 and SERIAL NUMBER of machine tool-you'll find both on the metal plate attached to machine.

ORDER REPAIR PARTS
FROM
CLAUSING SERVICE CENTER
811 EISENHOWER DRIVE, SOUTH
GOSHEN, INDIANA 46526

TABLE OF CONTENTS FOR LATHE PARTS

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CARRIAGE and COMPOUND 4-5
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INSTRUCTIONS

NO. 6L-1
SIX INCH LATHE MOUNTING

JAN. 1969 FILE NO. 6L-1

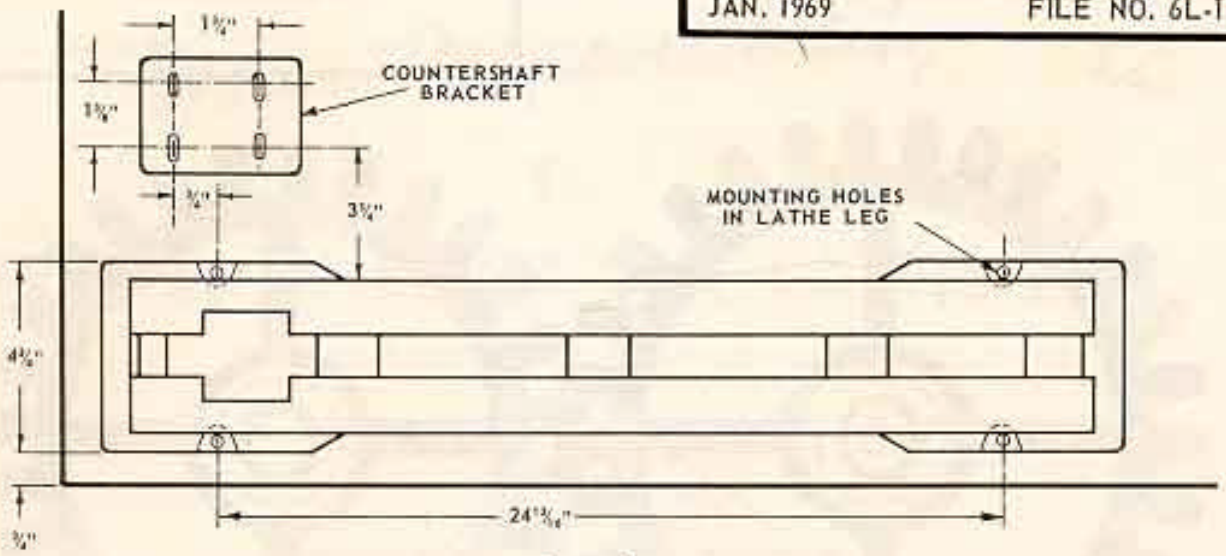

Figure 1

MOUNTING LATHE

Place lathe on bench in approximately position shown in figure 1. Bench top should be at least 20 by 34 inches. Front edges of legs should be about ¾" from front of bench top. Mark positions of four holes in lathe legs and drill holes to accommodate either lag screws or bolts as desired.

Next, bolt lathe to bench top and level bed by carefully following instructions contained in bulletin "PROPERLY LEVEL THE LATHE BED". This is a most important step and should not be slighted.

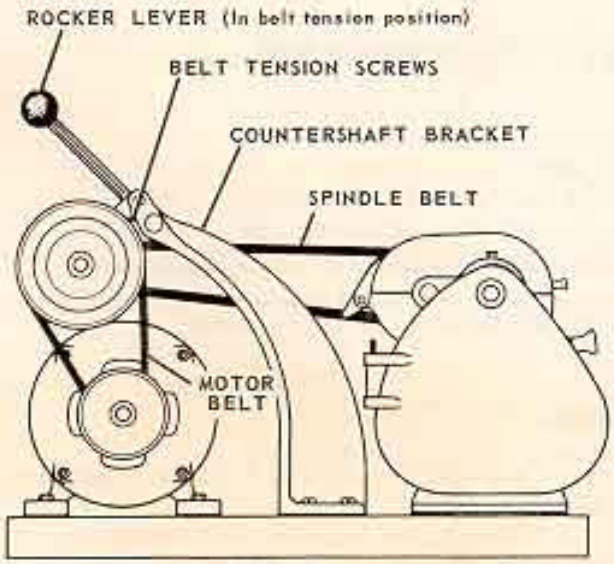

Figure 2

MOUNTING COUNTERSHAFT

The four holes for the countershaft bracket may now be located and drilled by following the dimensions in figure 1. With countershaft belt tension screws (refer to figure 2), in about the midway position, place spindle belt on smallest step of countershaft pulley and largest step of spindle pulley. Bolt countershaft bracket lightly to bench.

Put rocker lever in tension position, that is, so that the belt tension screws (refer to figure 2) rest on the smaller of the two flat spots on rocker shaft. Now move countershaft bracket on its slotted holes so that countershaft spindle is parallel with lathe spindle. Move bracket away from lathe until belt is tight and tighten the four mounting bolts. With belt tension screws, adjust belt so that with a moderate amount of pressure belt can be depressed about 1" in the center. Lock this adjustment by tightening locknuts on belt tension screws.

MOUNTING MOTOR

Before mounting motor, make all electrical connections.

Slide pulley on motor shaft so that small step is toward motor. Place motor in position shown in figure 2, with belt on small step of motor pulley and on large step of countershaft pulley. Be sure rockershaft is still in tension position and pull motor as close to countershaft bracket as belt will allow, line up belt and bolt motor to bench. Check tension and alignment of both belts, then tighten all mounting screws or bolts securely.

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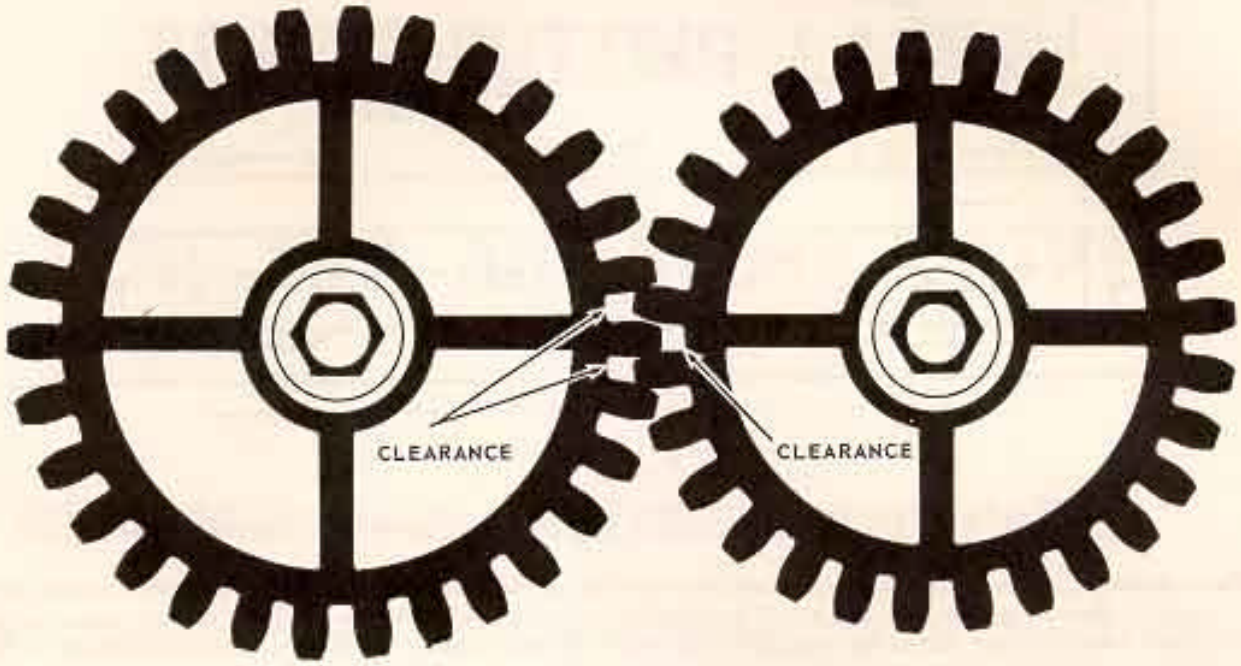
INSTRUCTIONS

NO. 6L-2
GEAR CLEARANCE

JAN. 1969 FILE NO. 6L-2



View of two meshing gears showing gear clearance.

When setting up gear train, sufficient clearance must be allowed between two meshing gears. Gear clearance does not reduce accuracy of a thread cutting operation because all play, or back lash, is taken up in one direction.

A SUGGESTED METHOD TO OBTAIN PROPER GEAR CLEARANCE IS:

1. *Place a sheet of thick wrapping paper between the teeth of two meshing gears.*
2. *Tighten gears in position.*
3. *Remove paper.*

Clean gears occasionally to remove any chips which become lodged in gear teeth. Chips in gear teeth result in inaccuracies when cutting screw threads. A wad of cloth placed in the rear end of spindle will prevent chips from working into gear teeth.

LUBRICATION

A small amount of S.A.E. No. 30 oil or grease (we recommend Keystone No. 122 Gear Lubricant or equivalent) applied to gear teeth, will aid in obtaining smoother, more quiet operation.

NOTE: Remove oil and dirt before applying grease.

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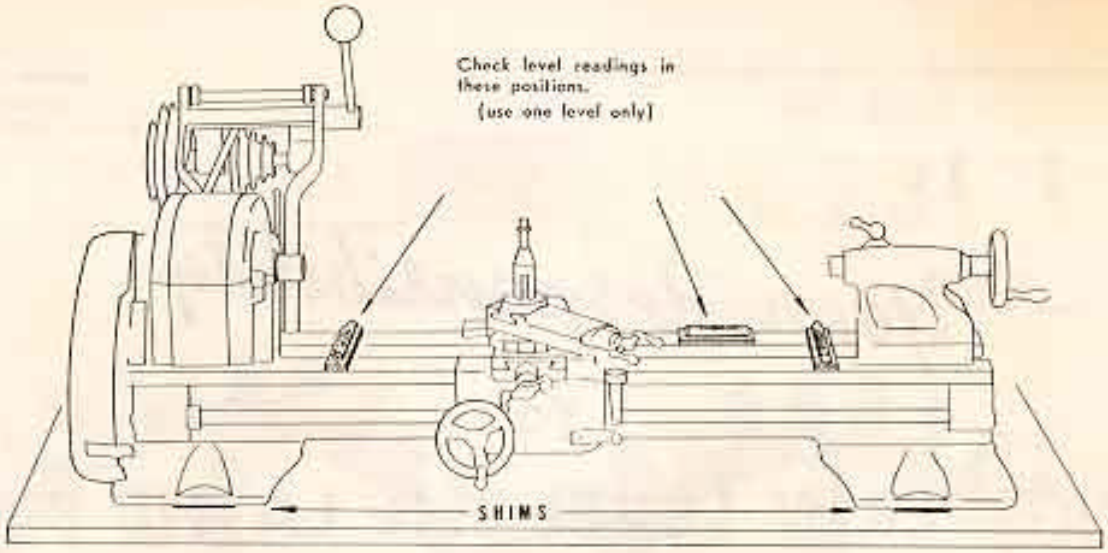


FIGURE 1. Positions for checking level readings.

LATHE BENCH REQUIREMENTS

1. A rigid bench or floor stand must be used for mounting the lathe. Bench top must have a clear semi-hard or hardwood top at least 1-5/8" thick, cleated or well doweled to form a rigid table. Do not use soft-woods or boards not cleated together.
2. Bench legs should be of heavy construction, preferably 4" x 4" lumber, well braced and securely anchored to bench top. Provide legs with lugs for bolting bench securely to floor. Overall height of bench should be approximately 30 or 32 inches.
3. Level the floor stand or bench before mounting lathe, this will omit excessive shimming when leveling lathe bed. Use a precision machinists level, placing shims as required between bench legs and floor to accurately level bench top. BOLT BENCH TO FLOOR.
4. Mount the lathe on the floor stand or bench. If bench is used, mark and drill four 3/8" diameter holes in bench top under corresponding holes in lathe legs. Do not bolt lathe securely in position.

HOW TO LEVEL THE LATHE BED

1. Using only a precision machinists spirit level, check level readings at the positions shown in Figure 1 above. A VERY SENSITIVE LEVEL MUST BE USED.
   A sensitive level should move the bubble approximately 1/8" when a .003" shim is placed under one end of lathe.
2. Level readings in the four positions must be identical. Compensate variations of bubble readings with thin metal shims placed around bolts between lathe legs and bench top until bubble readings are identical. See Figure 2 for approximate size of shim.
3. Shim should be the only contact point with the bench top. If outer or inner edges of bench legs bear on bench top, bed is apt to be bowed or twisted when lathe is bolted down.
4. Bolt lathe securely in position and recheck level readings. Variations in bolt pressure may twist the lathe bed out of level.
5. The levelness of the lathe should be inspected at frequent intervals, especially before and after machining heavy work.

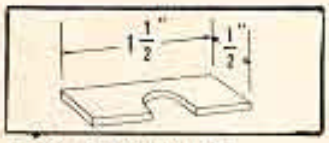


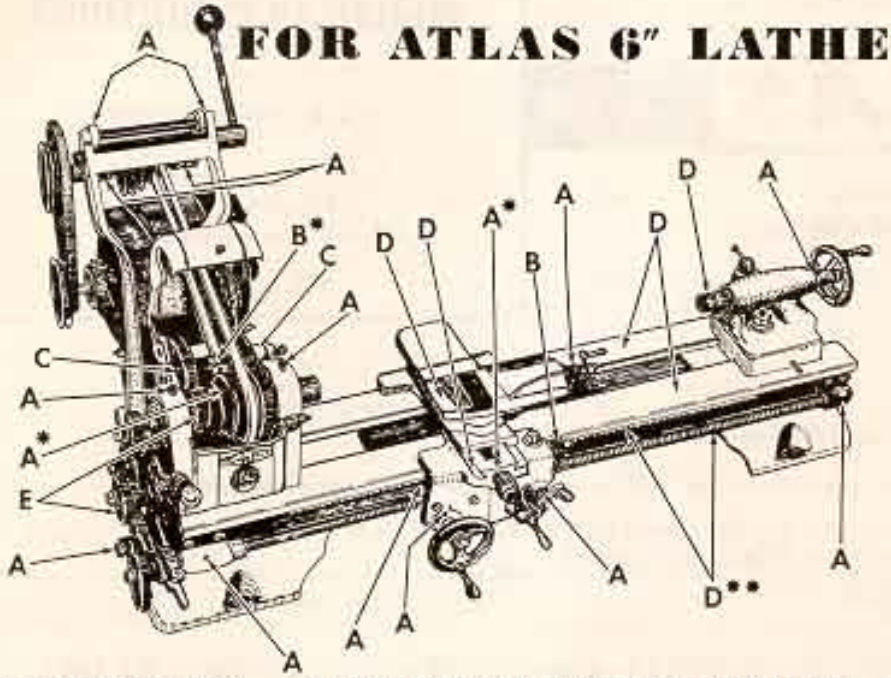
FIG. 2. Approximate shim dimension.

IF SATISFACTORY PERFORMANCE IS NOT OBTAINED OR OPERATING INACCURACIES OCCUR — CHECK THE LATHE BED AND MAKE SURE IT IS PERFECTLY LEVEL.

Printed in U. S. A.

LUBRICATION CHART

FOR ATLAS 6" LATHE



IMPORTANT — LUBRICATE LATHE BEFORE OPERATING

CODE

A — OIL DAILY with S.A.E. No. 20 oil
B — OIL WEEKLY with S.A.E. No. 20 oil
C — OIL MONTHLY with S.A.E. No. 20 oil

CARRIAGE —
HEADSTOCK AND BACK GEARS

*Remove screw to oil bearings.

D — KEEP CLEAN and well oiled at all times.

E — LUBRICATE gear teeth with Keystone No. 122 gear lubricant, or equivalent, to obtain smoother, more quiet operation. Remove oil and dirt before applying grease.

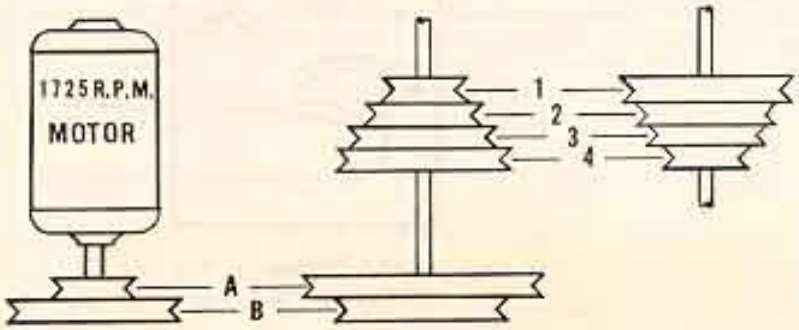
TAILSTOCK — LEADSCREW —
LEADSCREW BEARING — RACK

**About once a month clean with kerosene and a brush, then cover with oil.

KEEP YOUR LATHE CLEAN

Oil and dirt form an abrasive compound which can easily damage carefully fitted bearing surfaces. Wipe the bed and all polished parts with a clean oily rag at frequent intervals. Use a brush to clean spindle threads, gear teeth, lead screw threads, etc.

SPEED CHART



SPINDLE SPEEDS IN R.P.M.

DIRECT DRIVE			BACK GEAR DRIVE		
Spindle Belt Position	Motor Belt Position		Spindle Belt Position	Motor Belt Position	
	A	B		A	B
1	380	975	1	55	145
2	540	1380	2	82	210
3	835	2150	3	125	315
4	1185	3050	4	185	463

ATLAS PRESS COMPANY • KALAMAZOO, MICH., U.S.A.

INSTRUCTIONS and PARTS

ATLAS

CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49007

WIRING INSTRUCTIONS

for

SINGLE PHASE MOTORS

Manufactured by
Howell Electric Motors Co.

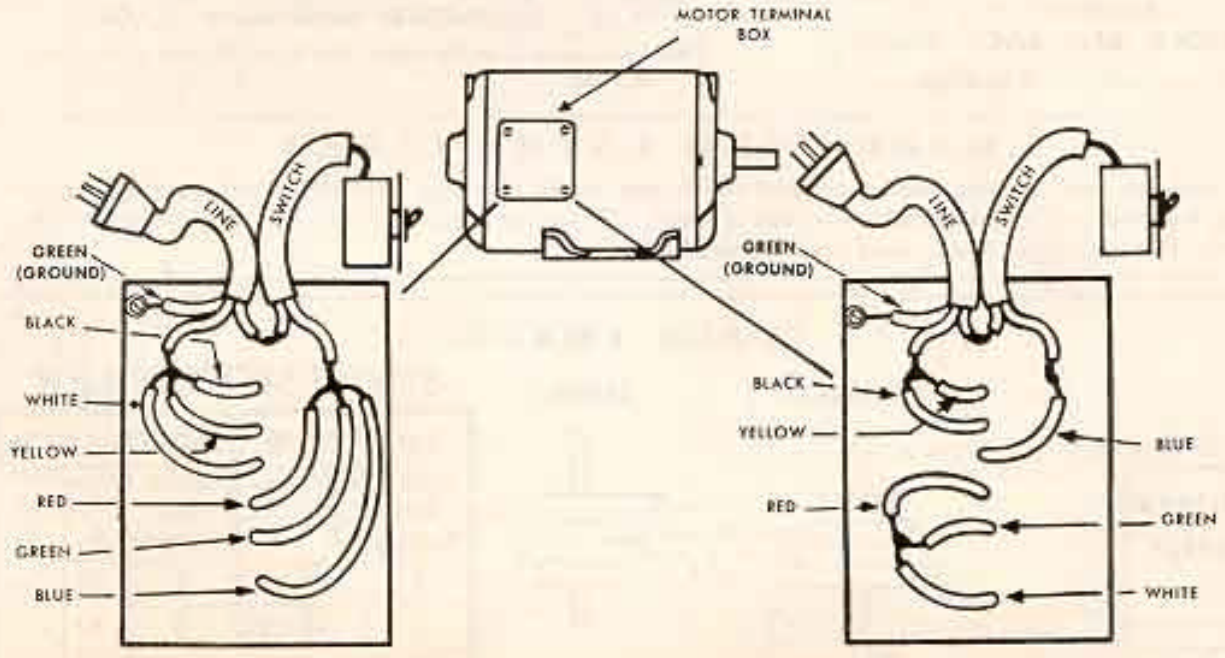
JULY, 1976

1. Make all wiring connections before mounting motor.
2. Run both line and switch cords through the TOP knock-out in the terminal box (see diagram below).
3. Motor must rotate counterclockwise when viewed from the end of the motor opposite the shaft -- diagram below shows correct hook-up for either 110V or 220 V current.

MOTOR NO.	CATALOG NO.	DESCRIPTION
38-J11-4100-2	2720	1/2 HP - 1-phase - 115/230 volts - 1725 RPM - 7/3.5 AMPS.
38-J3-3100-2	2730	1/3 HP - 1-phase - 115/230 volts - 1725 RPM - 5.6/2.8 AMPS.
38-J11-5100-1	2790	3/4 HP - 1-phase - 115/230 volts - 1725 RPM - 9.6/4.8 AMPS.

Made by Howell Electric Motors Company.

This wiring diagram applies only to motors listed above.



MOTOR TERMINAL BOX
110 VOLT SINGLE PHASE

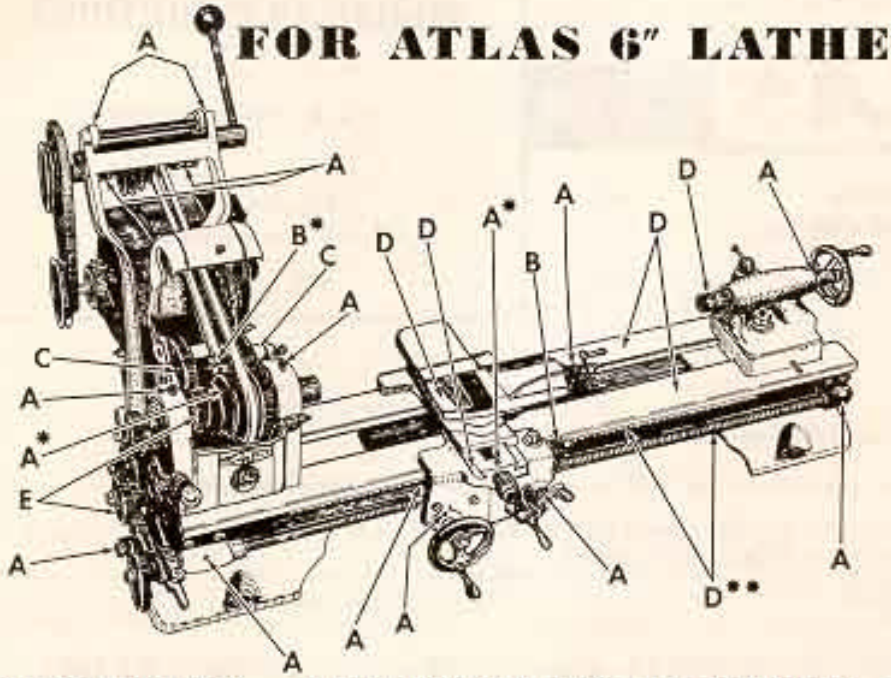
MOTOR TERMINAL BOX
220 VOLT SINGLE PHASE

NOTE: TO REVERSE ROTATION OF MOTOR INTERCHANGE RED LEAD WITH BLACK LEAD.

To wire other make motors follow manufacturer's instructions.

LUBRICATION CHART

FOR ATLAS 6" LATHE



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HEADSTOCK AND BACK GEARS

*Remove screw to oil bearings.

D — KEEP CLEAN and well oiled at all times.

E — LUBRICATE gear teeth with Keystone No. 122 gear lubricant, or equivalent, to obtain smoother, more quiet operation. Remove oil and dirt before applying grease.

TAILSTOCK — LEADSCREW —
LEADSCREW BEARING — RACK

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KEEP YOUR LATHE CLEAN

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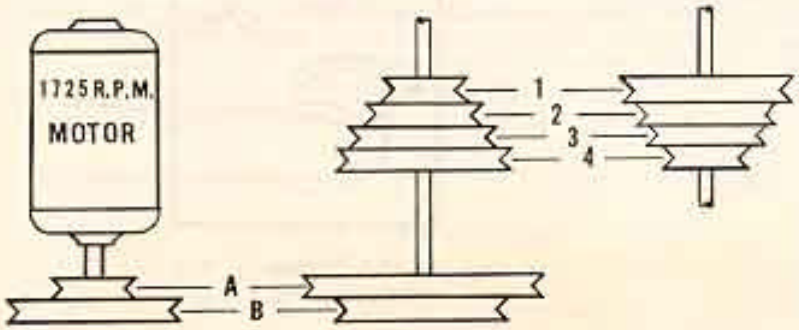
SPEED CHART



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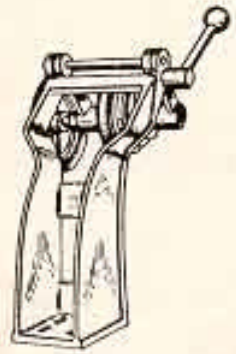
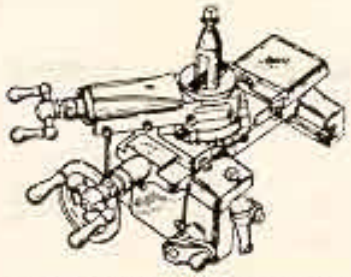
Atlas 6" LATHE UNIT ASSEMBLIES

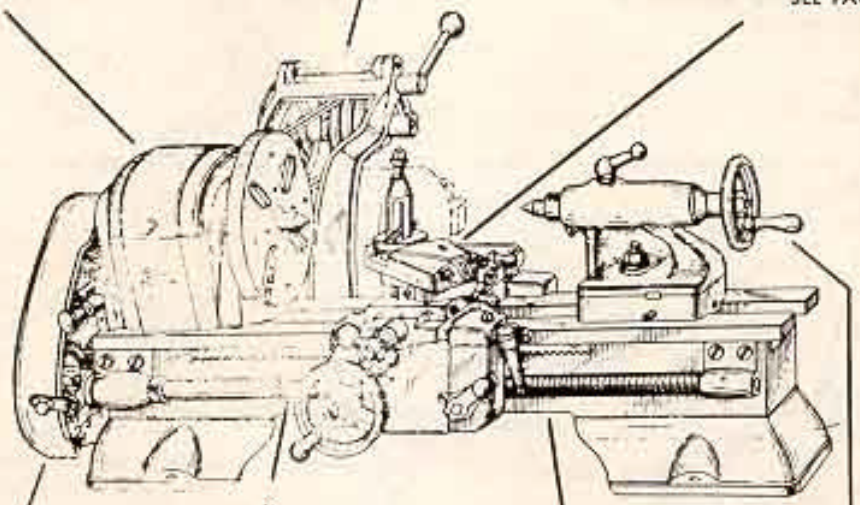
M6-2X HEADSTOCK ASSEMBLY
SEE PAGE 6

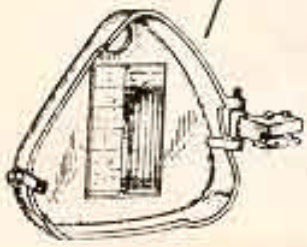


M6-20BX COUNTERSHAFT ASSEMBLY
SEE PAGE 8

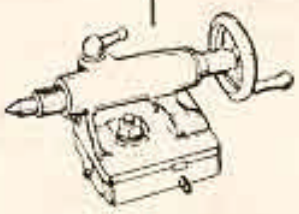


M6-9XY CARRIAGE ASSEMBLY
SEE PAGE 4 and 5



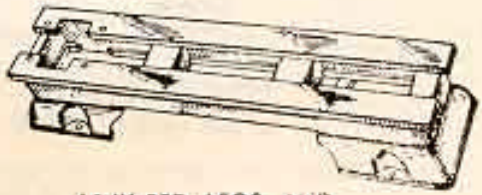


M6-28X GEAR GUARD ASSEMBLY
SEE PAGE 7



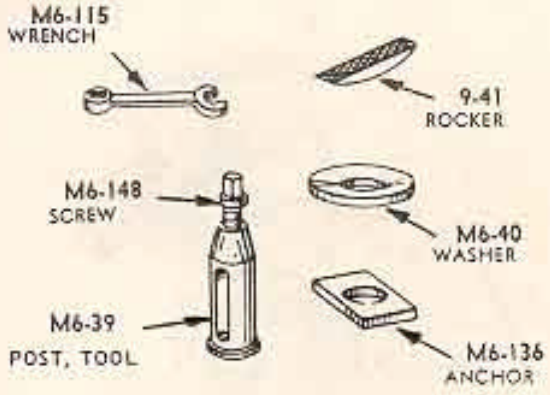
3950-24 TAILSTOCK ASSEMBLY
SEE PAGE 8

L9-35X LEAD SCREW AND FEED GEAR ASSEMBLY
SEE PAGE 7

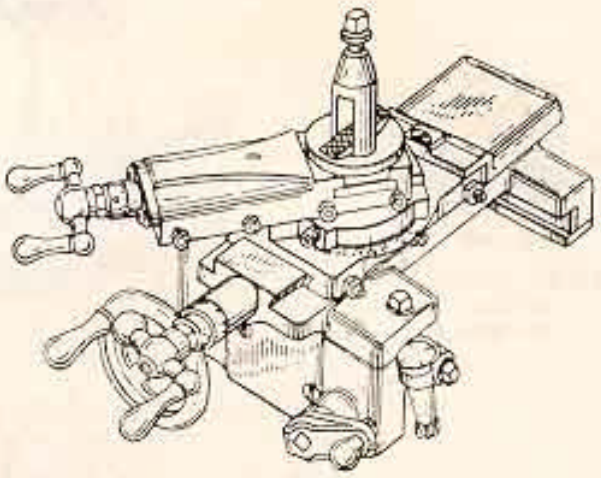


L9-IX BED, LEGS, AND RACK ASSEMBLY
SEE PAGE 7

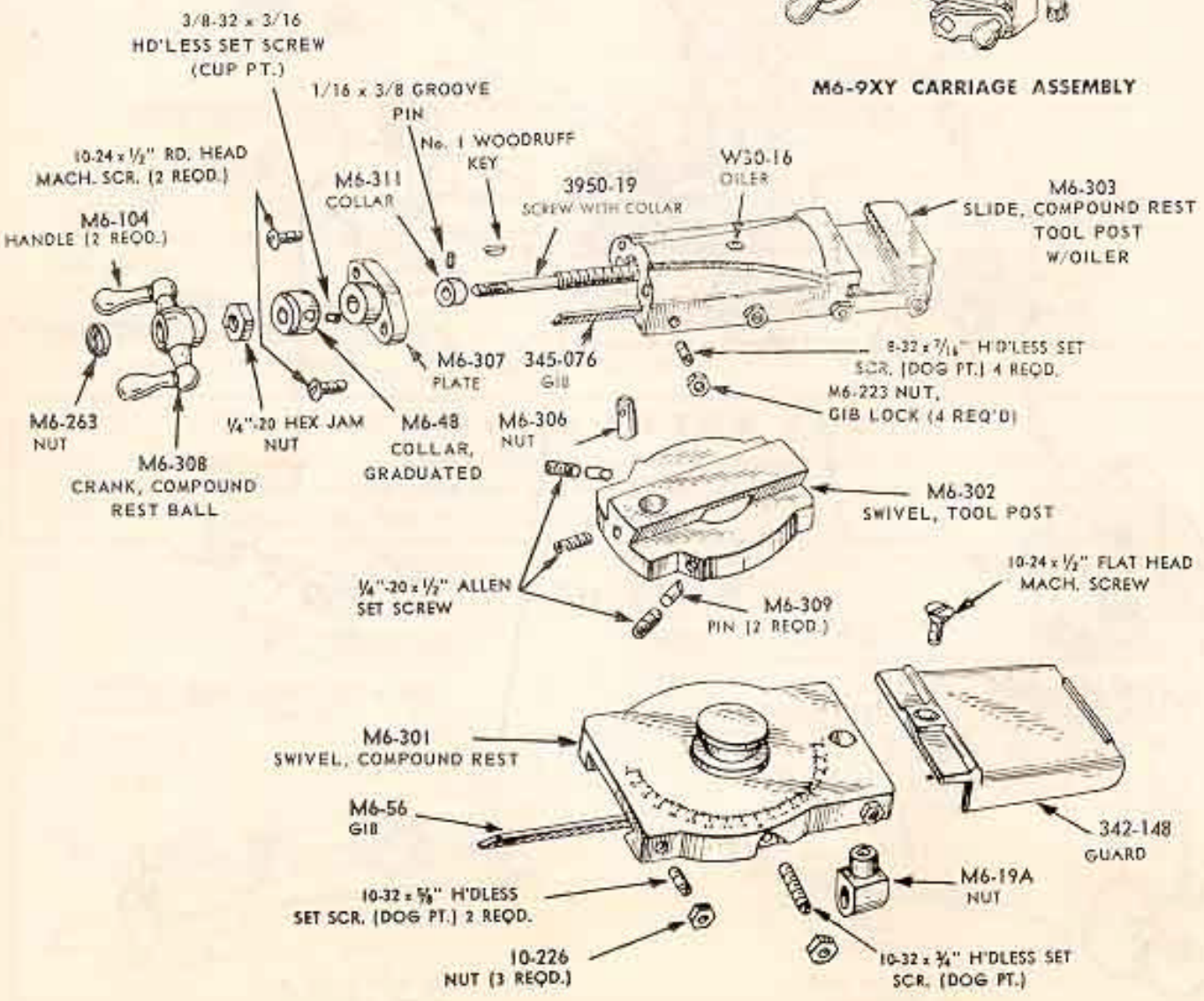
CARRIAGE PARTS LIST



M6-39X TOOL POST ASSEMBLY
LESS WRENCH

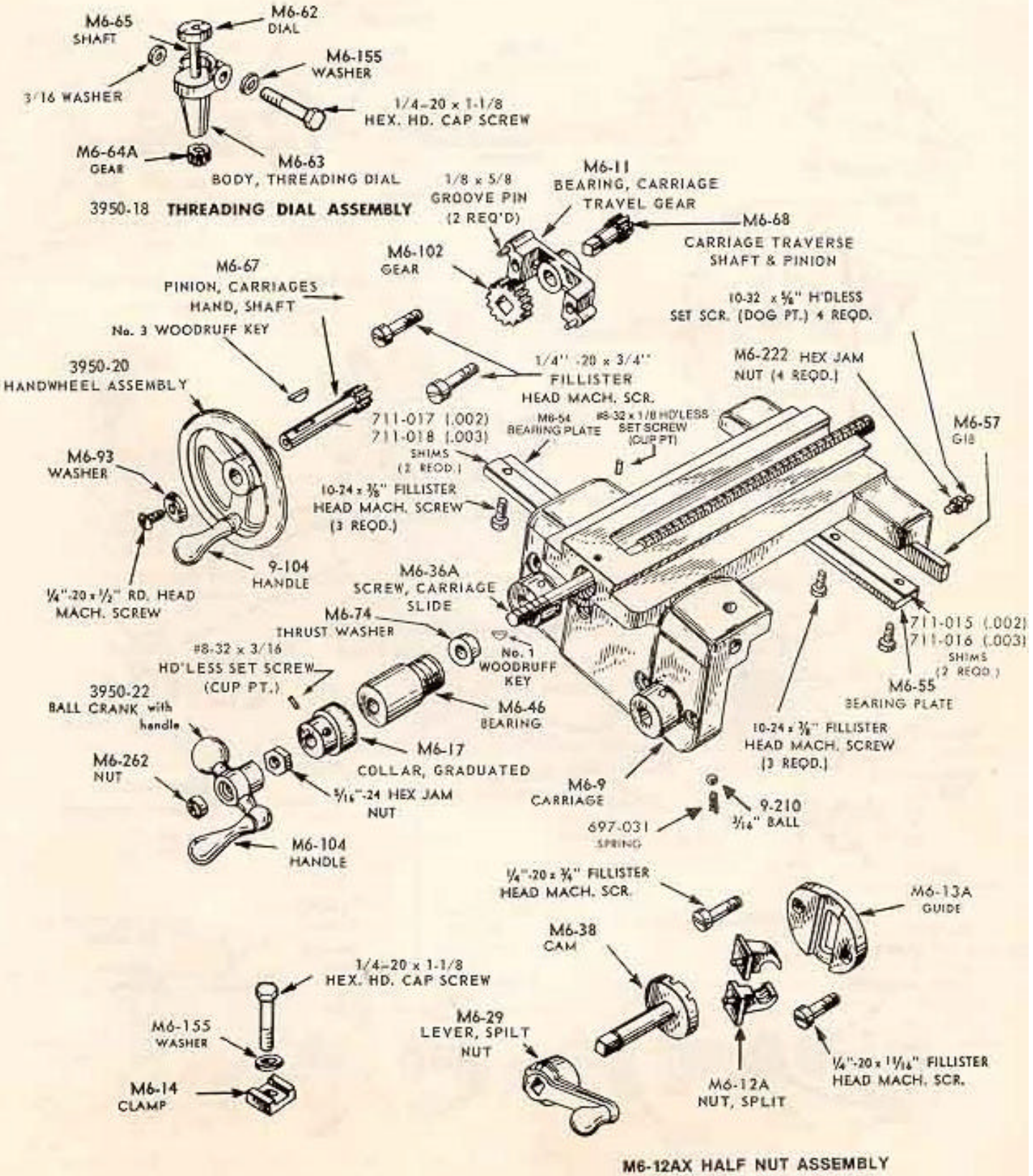


M6-9XY CARRIAGE ASSEMBLY



3950-27 COMPOUND REST ASSEMBLY

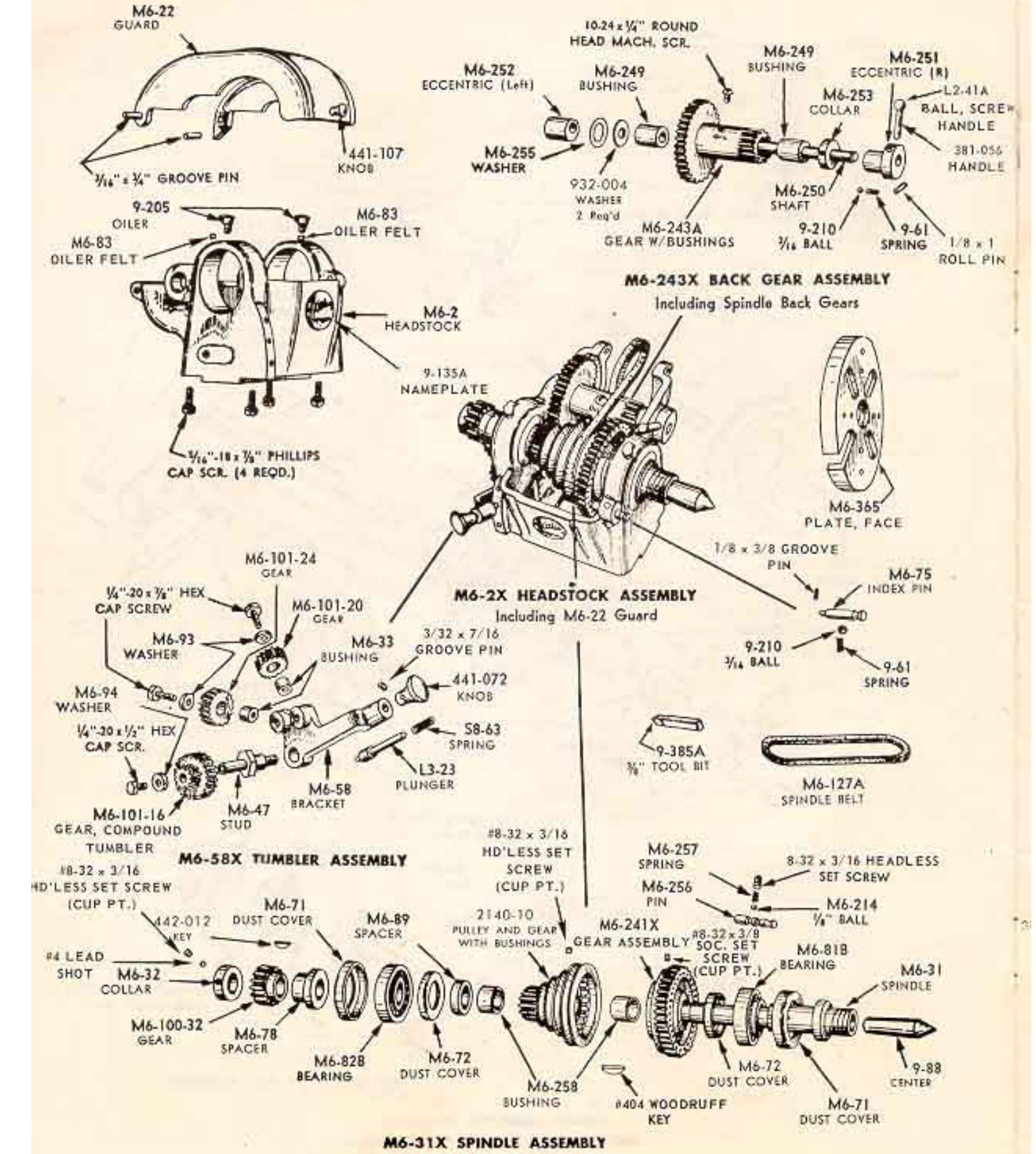
CARRIAGE PARTS LIST



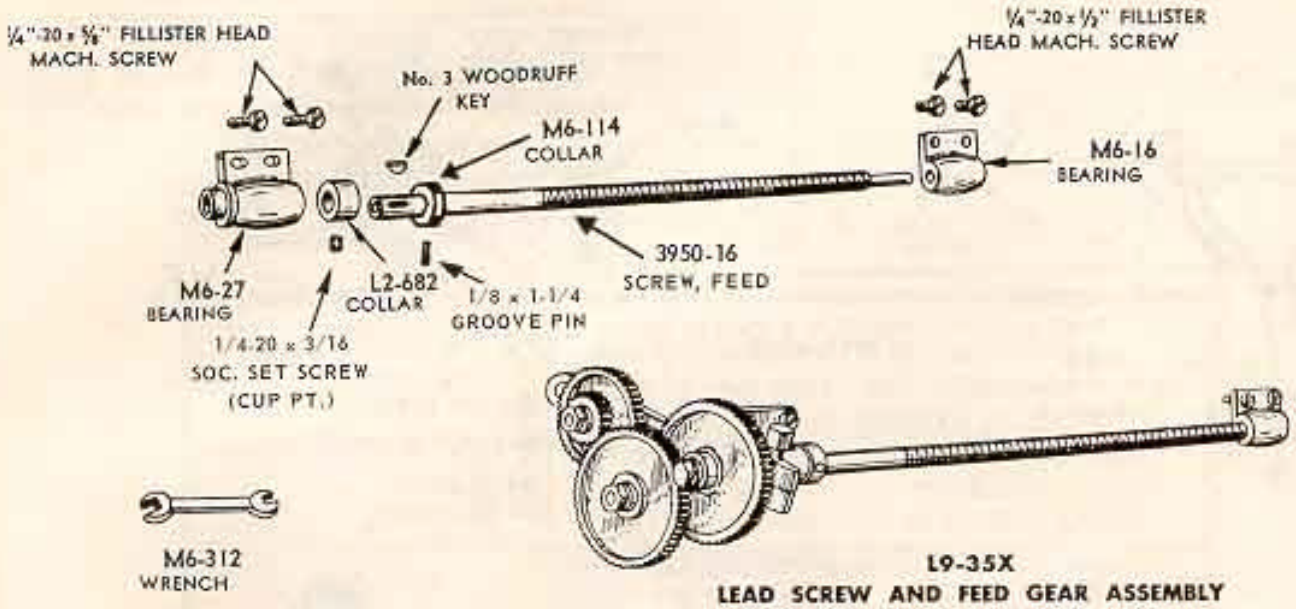
M6-9X CARRIAGE ASSEMBLY

LESS COMPOUND REST AND THREADING DIAL

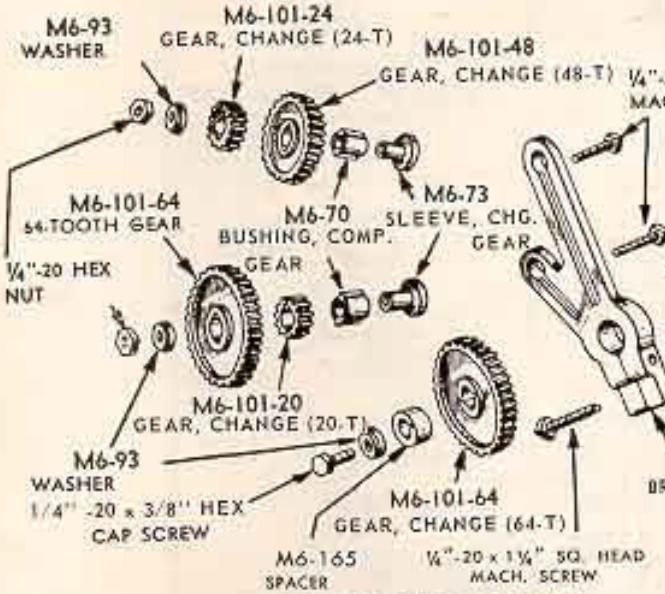
HEADSTOCK PARTS LIST



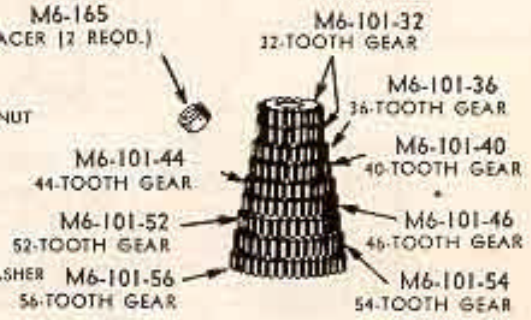
LEAD SCREW, CHANGE GEARS, GEAR GUARD, AND LATHE BED PARTS LIST



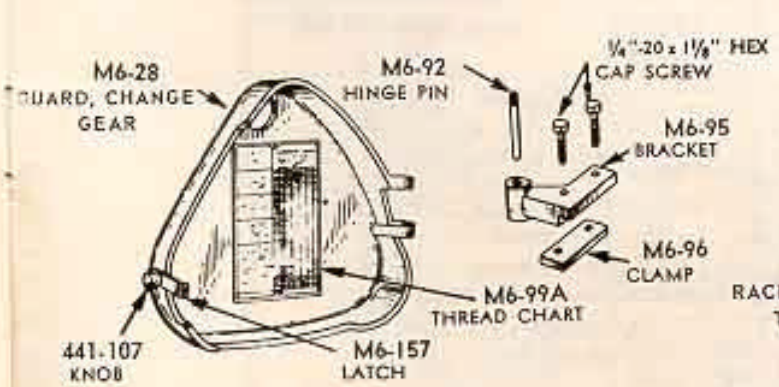
L9-35X
LEAD SCREW AND FEED GEAR ASSEMBLY



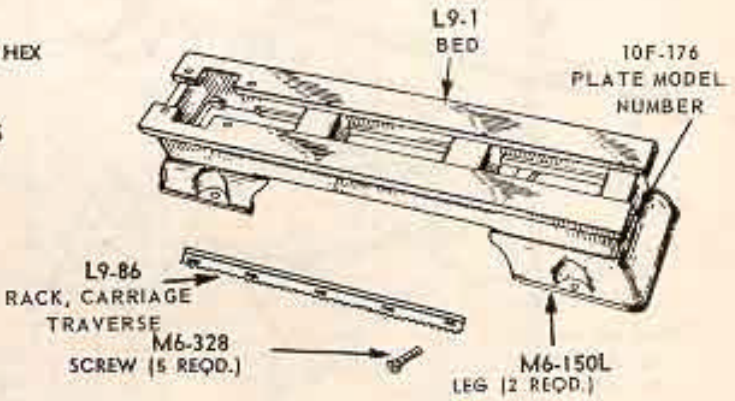
M6-25X CHANGE GEAR BRACKET ASSEMBLY



M6-101X CHANGE GEAR ASSEMBLY
LESS SPACER

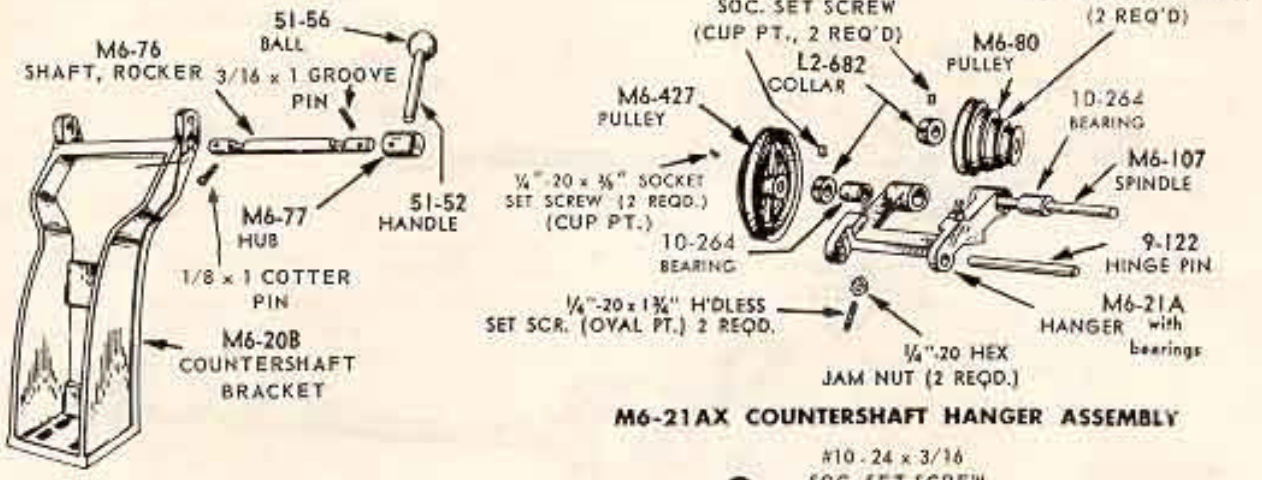


M6-28X GEAR GUARD ASSEMBLY



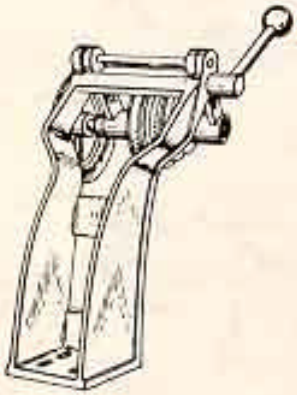
L9-1X BED, LEGS, AND RACK ASSEMBLY

COUNTERSHAFT AND TAILSTOCK PARTS LIST



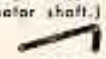
M6-21AX COUNTERSHAFT HANGER ASSEMBLY

L9-125
MOTOR-TO-COUNTERSHAFT BELT



#10-24 x 3/16
SOC. SET SCREW
(CUP PT.)

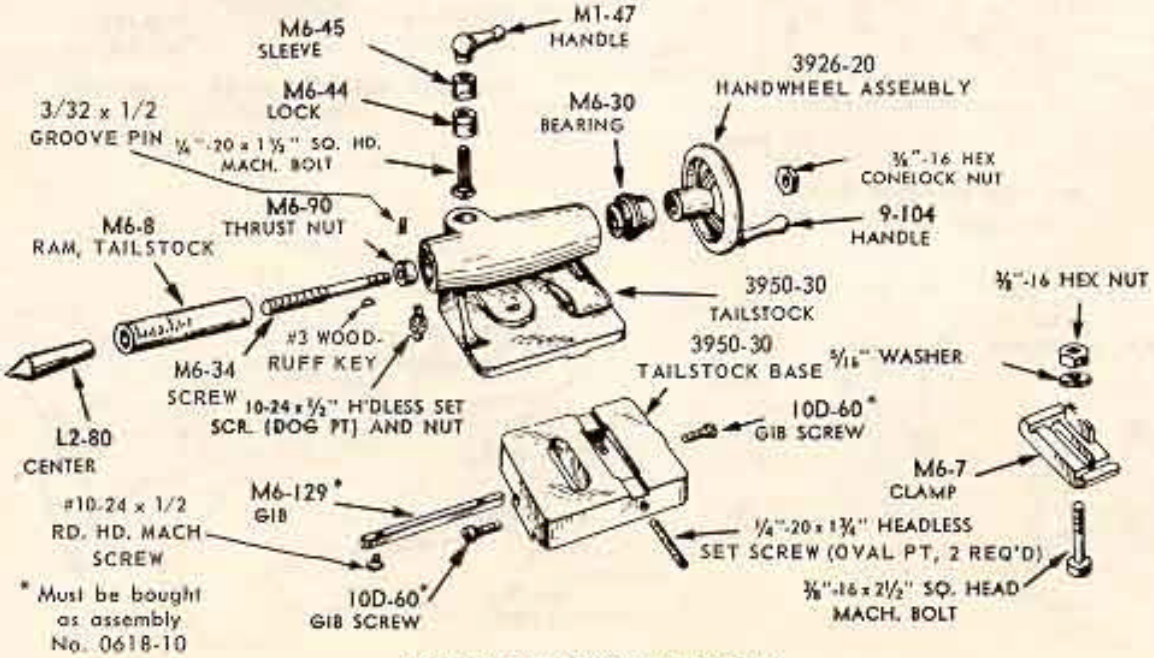
M6-429
MOTOR PULLEY (5/8" HOLE)
(Dealer can supply
bushing for 1/2" dia.
motor shaft.)



W44-2
1/4" ALLEN WRENCH

W44-1
No. 10 ALLEN WRENCH
(USED ON M6-429)

M6-20BX COUNTERSHAFT ASSEMBLY
WITH MOTOR BELT AND PULLEY



3950-24 TAILSTOCK ASSEMBLY

INSTRUCTIONS and PARTS

ATLAS

CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49007

THREADING CHART

for

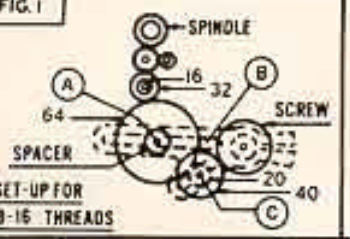
6" ATLAS LATHES

JULY, 1976

THREADING CHART

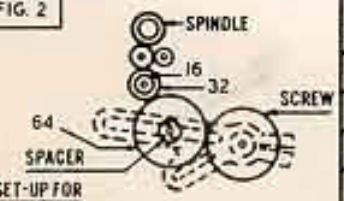
A-B-C ARE GEAR STUD POSITIONS
B=BACK POSITION (TOWARD HEADSTOCK)
F=FRONT POSITION (AWAY FROM HEADSTOCK)
I=IDLER GEAR —=BLANK
S=SPACER GEAR XXS=STEEL SPACER

FIG. 1



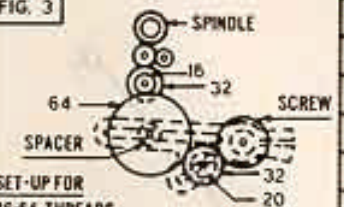
SET-UP FOR 8-16 THREADS

FIG. 2



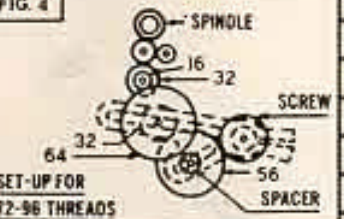
SET-UP FOR 18-32 THREADS

FIG. 3



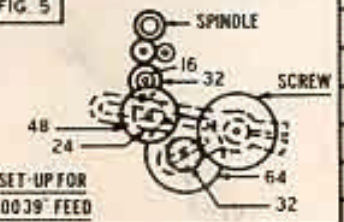
SET-UP FOR 36-64 THREADS

FIG. 4



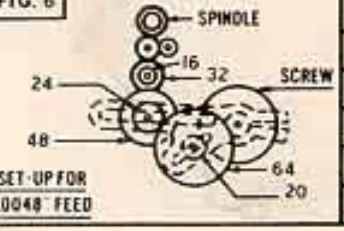
SET-UP FOR 72-96 THREADS

FIG. 5



SET-UP FOR .0039" FEED

FIG. 6



SET-UP FOR .0048" FEED

THREADS PER INCH	GEAR ON SCREW	POSITION C B	POSITION C F	POSITION B B	POSITION B F	POSITION A B	POSITION A F	SPINDLE STUD GEAR	FIG.
8	32F	32	64	—	—	64I	XXS	32	1
9	36F	32	64	—	—	64I	XXS	32	1
10	40F	32	64	—	—	64I	XXS	32	1
11	44F	20	40	—	—	64I	XXS	32	1
11.5	46F	20	40	—	—	64I	XXS	32	1
12	48F	20	40	—	—	64I	XXS	32	1
13	52F	20	40	—	—	64I	XXS	32	1
14	56F	20	40	—	—	64I	XXS	32	1
16	64F	20	40	—	—	64I	XXS	32	1
18	36B	—	—	64I	XXS	—	—	32	2
20	40B	—	—	64I	XXS	—	—	32	2
22	44B	—	—	64I	XXS	—	—	32	2
24	48B	—	—	64I	XXS	—	—	32	2
27	54B	—	—	64I	XXS	—	—	32	2
28	56B	—	—	64I	XXS	—	—	32	2
32	64B	—	—	64I	XXS	—	—	32	2
36	36F	20S	32I	—	—	XXS	64I	16	3
40	40F	20S	32I	—	—	XXS	64I	16	3
44	44F	20S	32I	—	—	XXS	64I	16	3
48	48F	20S	32I	—	—	XXS	64I	16	3
56	56F	20S	32I	—	—	XXS	64I	16	3
64	64F	20S	32I	—	—	XXS	64I	16	3
72	36B	56I	XXS	—	—	32	64	16	4
80	40B	56I	XXS	—	—	32	64	16	4
96	48B	56I	XXS	—	—	32	64	16	4
FEED PER REVOLUTION OF SPINDLE									
.0024"	64F	64	20	—	—	24	48	16	5
.0039"	64F	64	32	—	—	24	48	16	5
.0048"	64B	20	64	—	—	48	24	32	6
.0078"	64B	32	64	—	—	48	24	32	6