OPERATING INSTRUCTIONS
and
PARTS LIST

CLAUSING

20-inch DRILL PRESSES

VARIABLE SPEED DRIVE MODELS

CLAUSING CORPORATION
2019 N. PITCHER ST., KALAMAZOO, MI 49007

CLAUSING CORPORATION

SAFETY RULES FOR POWER TOOLS

1. KNOW YOUR POWER TOOL

Read the owner's manual carefully. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

2. GROUND ALL TOOLS

If tool is equipped with three-prong plug, it should be plugged into a three-hole receptacle. If adapter is used to accommodate two-prong receptacle, the adapter wire must be attached to a known ground. Never remove third prong.

3. KEEP GUARDS IN PLACE

and in working order.

4. REMOVE ADJUSTING KEYS AND WRENCHES

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on tool.

5. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents.

6. AVOID DANGEROUS ENVIRONMENT

Don't use power tools in damp or wet locations. Keep work area well illuminated.

7. KEEP CHILDREN AWAY

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP KID PROOF

— with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL

It will do the job better and be safer at the rate for which it was designed.

10. USE RIGHT TOOL

Don't force tool or attachment to do a job it was not designed for.

11. WEAR PROPER APPAREL

No loose clothing or jewelry to get caught in moving parts.

12. USE SAFETY GLASSES

Also use face or dust mask if cutting operation is dusty.

13. SECURE WORK

Use clamps or a vise to hold work when practical. It's safer than using your hand, frees both hands to operate tool.

14. DON'T OVERREACH

Keep your proper footing and balance at all times.

15. MAINTAIN TOOLS IN TOP CONDITION

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. DISCONNECT TOOLS

before servicing and when changing accessories such as blades, bits, cutters.

17. AVOID ACCIDENTAL STARTING

Make sure switch is "OFF" before plugging in cord.

18. USE RECOMMENDED ACCESSORIES

Consult the owner's manual. Use of improper accessories may be hazardous.

The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before commencing power tool operation.

INSTRUCTIONS AND PARTS

CLAUSING

DIVISION, ATLAS PRESS CO.
KALAMAZOO, MICHIGAN

20" DRILL PRESSES

VARIABLE SPEED DRIVE

SERIES – 22V

FROM SERIAL No. 500456 TO 501382

MODELS 2251 THROUGH 2288

JUNE, 1961 – FILE No. 2271-2

1.2
2.1
3.2
4.1
5.1
6.1
7.2
8.1

LEVELING THE DRILL PRESS

Drill press should be level and rest solidly on floor; place shims underneath the three foundation holes to level the drill press. Equal pressure should be applied to foundation bolts to prevent distorting the base.

RAISING HEAD TO OPERATING POSITION WITH TABLE LIFT

1. Loosen table lock (D, fig. 1).
2. With lift crank (J), raise the table (E) to bottom of spindle (C). *(Place block of wood between spindle and table.)*
3. Lock table *securely* with handle (D).
4. Loosen two head lock nuts (A) and quill lock (K).
5. Lift head by turning feed handle (B) counter-clockwise. While holding handle, tighten head lock nuts (A).
6. Slide safety collar (M) up to bottom of head. Tighten screws (L) in collar.

REPEAT OPERATIONS 1-6 until table has reached top of rack.

RAISE RACK—steps 7-10.

7. Lock table with handle (D, fig. 1).
8. Loosen two screws (G) in rack collar (F).
9. Turn crank (J), raising rack (H) to bottom of collar (M).
10. Securely tighten two screws (G) in rack collar.

REPEAT OPERATIONS 1-10 until head is in position.

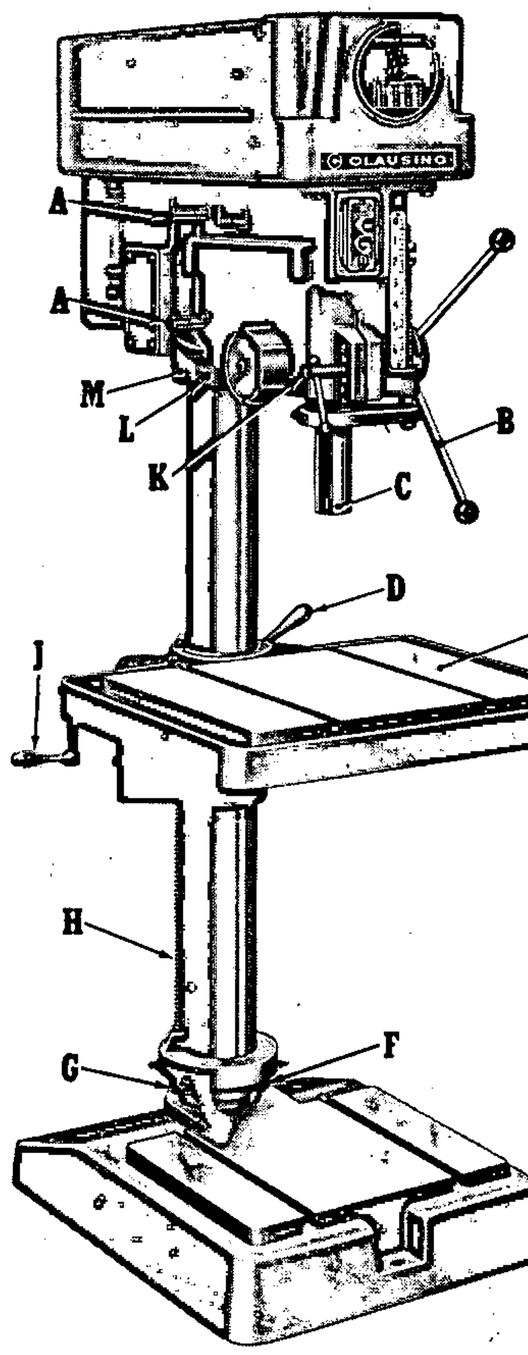


Figure 1

LUBRICATION

1. SPINDLE PULLEY DRIVE — use a light grease occasionally on spindle splines (A, fig. 2).
2. LOWER QUILL BEARING (C) — lubricate daily with a few drops of S.A.E. No. 20 oil. (All other ball bearings in head are lubricated-for-life.)
3. FEED SHAFT (B) oil once a week with S.A.E. No. 20 oil.
4. Keep QUILL (J) and COLUMN (H) covered with a light film of oil.
5. TABLE LIFT SHAFT (F) — oil once a week with S.A.E. No. 20 oil.
6. LIFT RACK (G) — lubricate regularly with S.A.E. No. 20 oil. Before oiling, clean rack with brush and kerosene.
7. TABLE LIFT GEARS — once a year, clean and repack with gear grease.

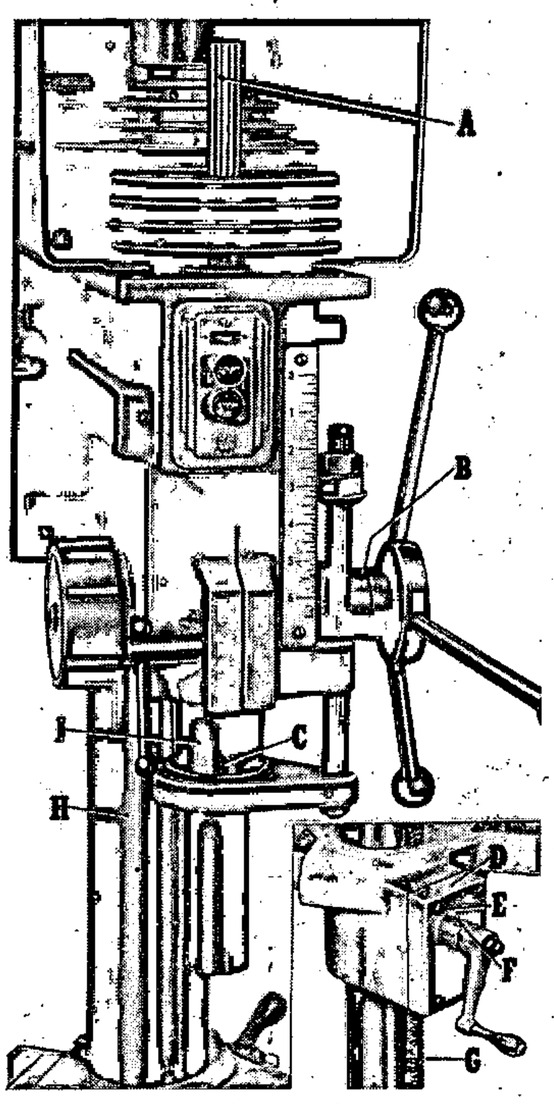


Figure 2

LUBRICATING VARIABLE DRIVE

1. Oil hole in fork (A, fig. 3) — oil once a week with S.A.E. No. 20 oil.
2. Oil post (B) and rod (D) occasionally with S.A.E. No. 20 oil.
3. *Do not oil pulley bearings (C).*
4. Once a year, clean and grease (medium cup grease) cam in handwheel (C, fig. 4). To disassemble — loosen screw (A) and remove plate (B); remove handwheel by taking out center bolt.

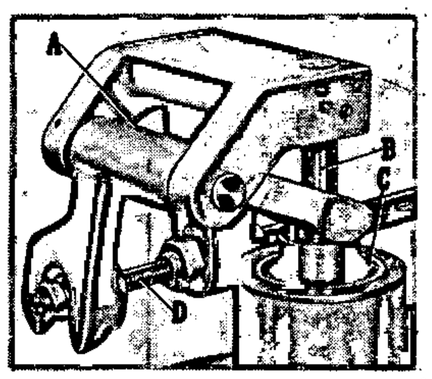


Figure 3

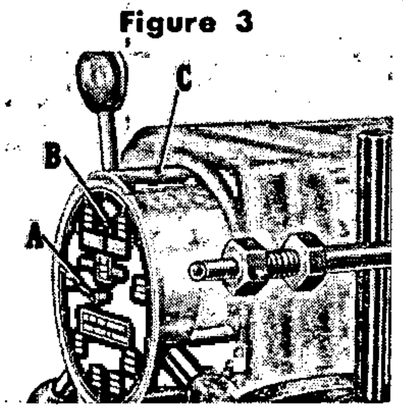


Figure 4

CHANGING SPINDLE SPEEDS

To change speeds on variable drive, turn handwheel control until pointer shows desired speed.

CAUTION: *Do not turn handwheel control unless motor is running.*

REPLACING BELTS

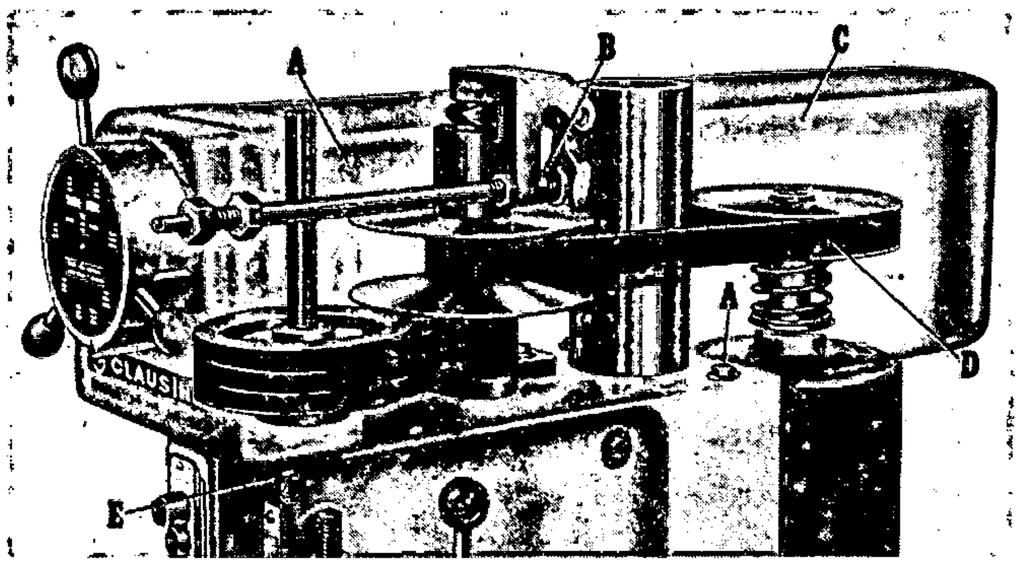


Figure 5

VARIABLE COG BELT

1. Remove belt guard (C, fig. 5).
2. Remove two screws (E). Loosen nut (B) and remove guard, handwheel and tube assembly.
3. Remove variable speed belt (D).
4. Replace belt and reassemble.

NOTE: *Belt is properly tensioned if outside is slightly convex where it contacts the pulley.*

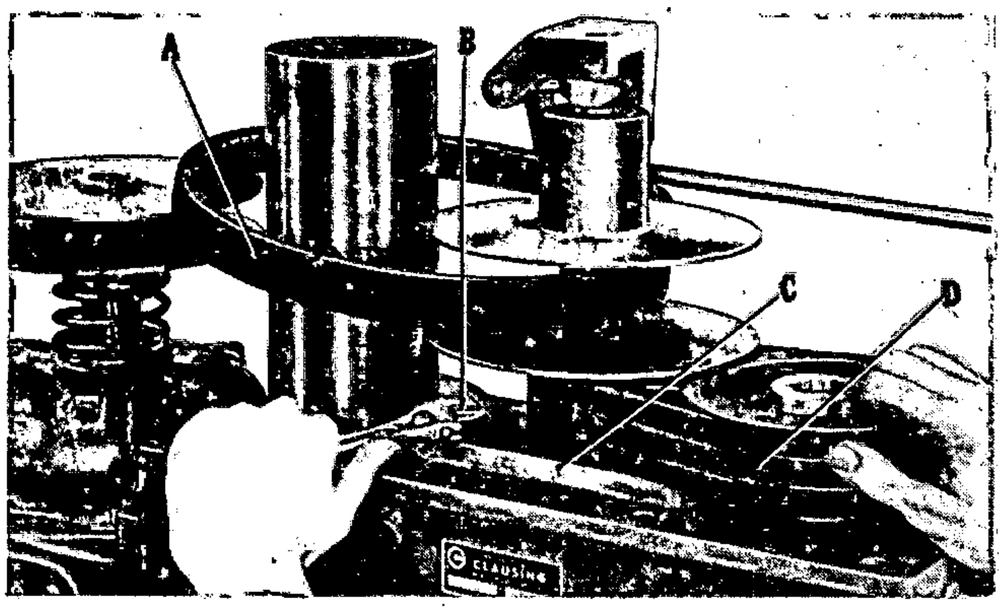


Figure 6

SPINDLE BELTS

1. Remove belt guard (C, fig. 5).
2. Remove two screws (E). Loosen nut (B) and remove guard, handwheel and tube assembly.
3. Remove variable speed belt (A, fig. 6).
4. Loosen two screws (B) in countershaft housing (C), slide housing towards front of head.
5. Remove the spindle belts (D).
6. Replace belts and reassemble.

NOTE: *For proper spindle belt tension, belts should depress 1/8" with light finger pressure.*

ADJUSTING DEPTH STOP

1. When setting drill depth, position pointer (B, fig. 7) at depth required and tighten nuts (C).
2. Loosen screws (A) and with quill at maximum travel, position scale so pointer is at 6 3/4", then tighten screws.

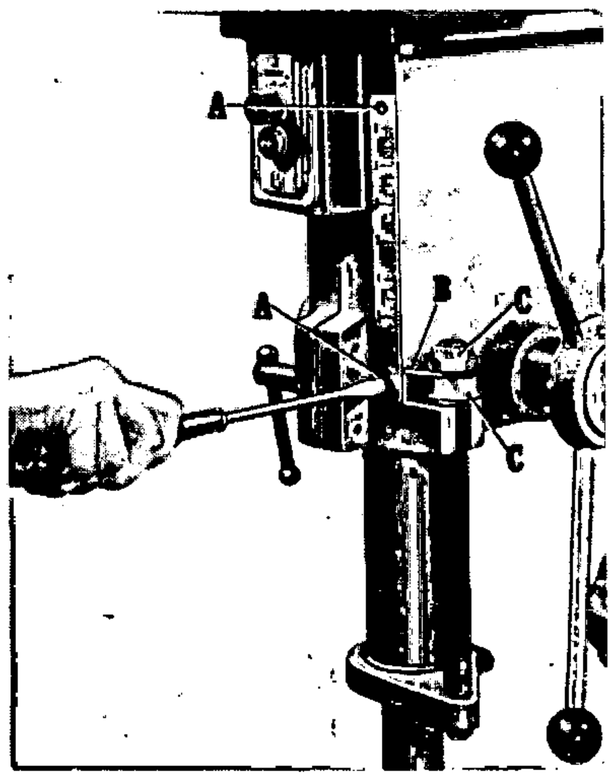


Figure 7

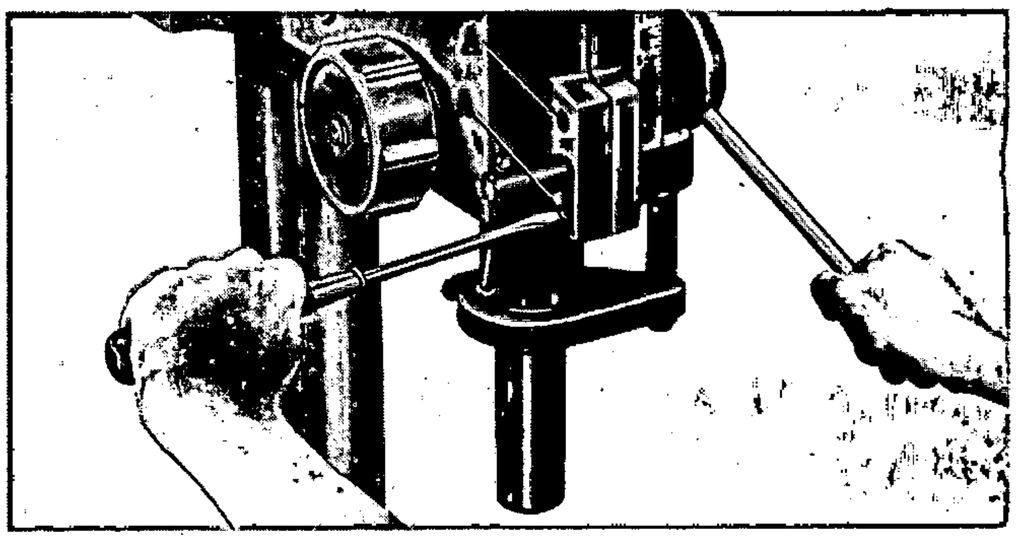


Figure 8

QUILL TAKE-UP

Front of drill press head is split — has two take-up screws set at factory to provide accurate fit between head and quill. This setting should not be disturbed unless play develops between quill and head. To eliminate play, tighten screws (A, fig. 8) — using correct size screw driver — until play has been removed. Move quill up and down in head to make sure it slides freely.

ADJUSTING SPINDLE RETURN SPRING

To increase tension, lower quill to bottom of stroke, turn the spring cap counter-clockwise. To release tension, pull out spring cap (fig. 8) and turn clockwise.

ADJUSTING SPINDLE END PLAY

1. Release spindle return spring tension (fig. 8).
2. While holding spindle to prevent its falling, remove hex nut on bottom of depth stop rod. Remove spindle and quill assembly from head.
3. Loosen set screw in collar directly above quill.
4. Push spindle firmly against bottom of quill. Force collar against top of quill and lock collar in this position.
5. Rotate spindle by hand to make sure it turns freely — *DO NOT have adjustment too tight.*
6. Replace spindle — quill assembly.

PARTS INDEX

for

20" CLAUSING DRILL PRESSES

VARIABLE SPEED DRIVE

MODELS 2251 THROUGH 2288

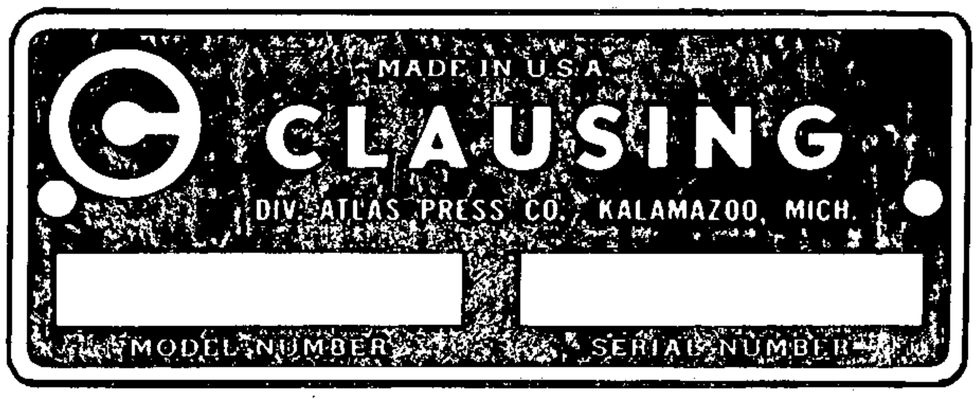
22V - SERIES

FROM SERIAL NO. 500456 TO 501382

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 -- note illustration below.

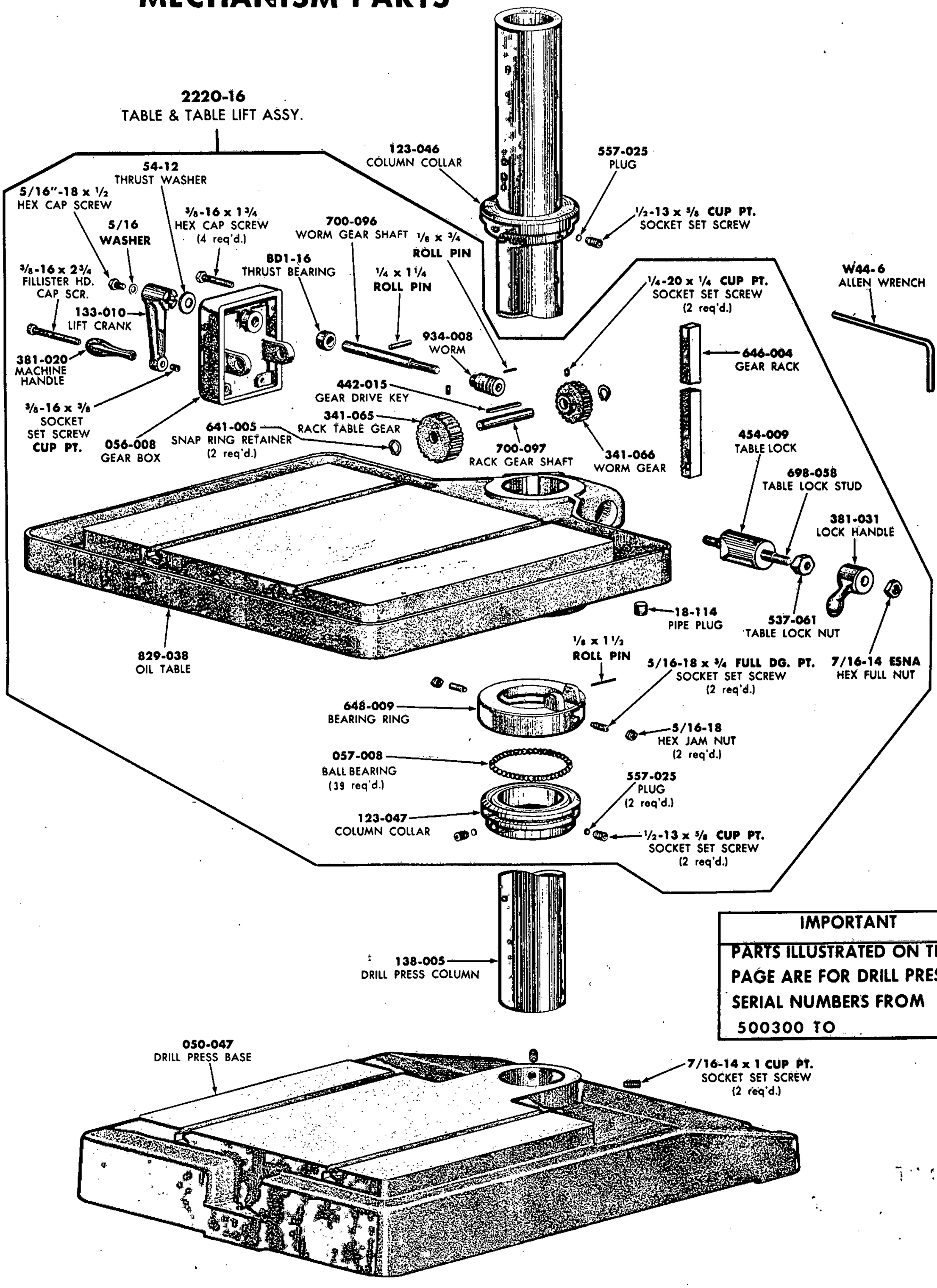


Be sure to give Model and Serial Number on this plate.

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.

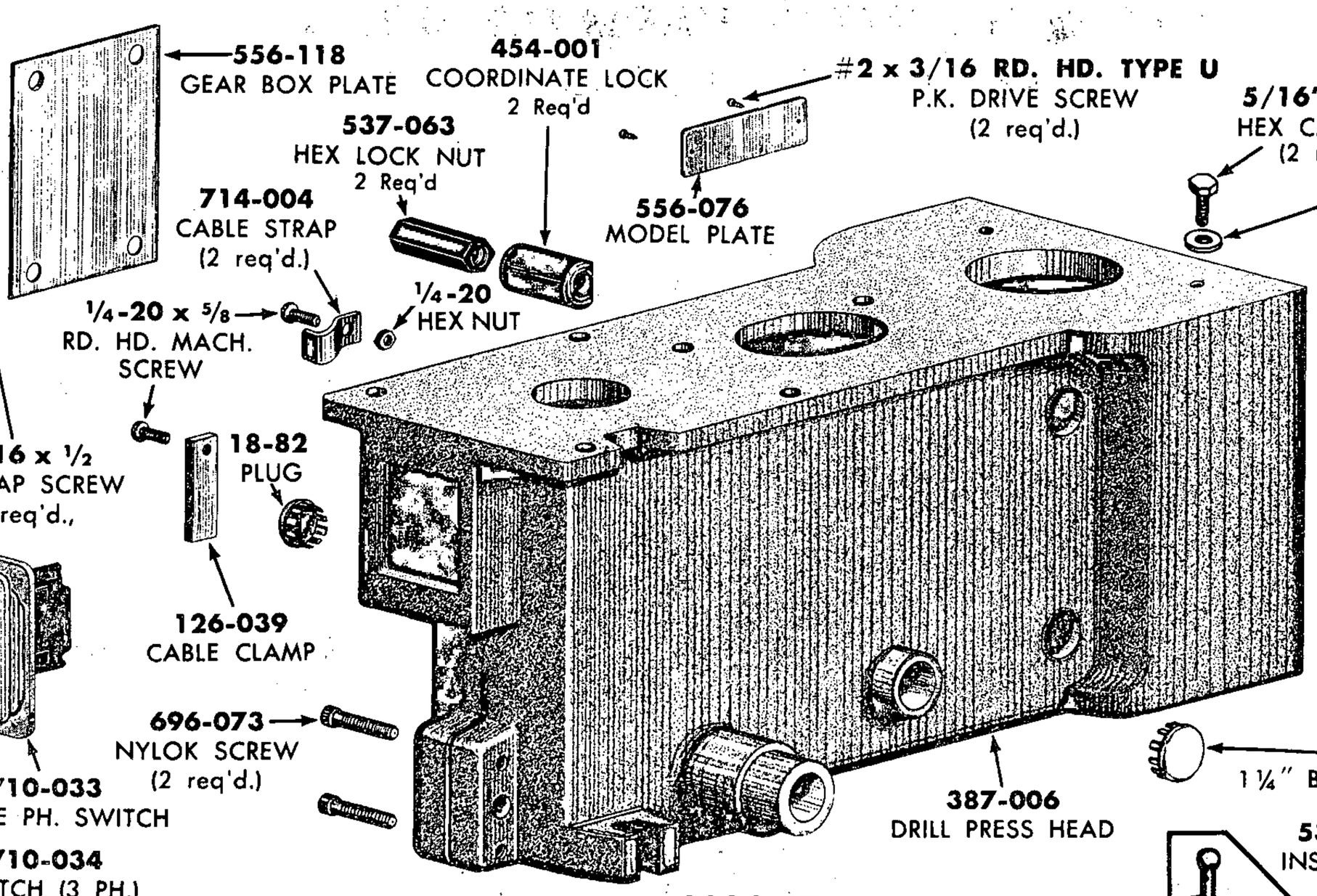
COLUMN, TABLE, BASE and TABLE POSITIONING MECHANISM PARTS



IMPORTANT

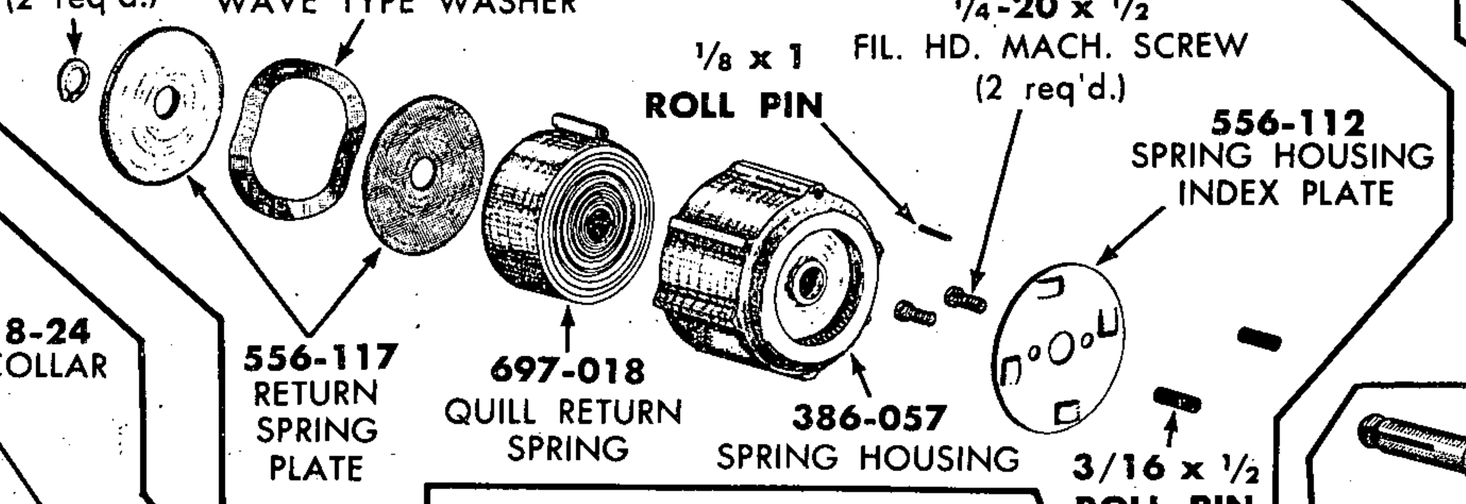
PARTS ILLUSTRATED ON THIS PAGE ARE FOR DRILL PRESSES SERIAL NUMBERS FROM 500300 TO

20" DRILL PRESS HEAD PARTS



556-118 GEAR BOX PLATE
454-001 COORDINATE LOCK 2 Req'd
#2 x 3/16 RD. HD. TYPE U P.K. DRIVE SCREW (2 req'd.)
5/16"-18 x 1/2 HEX CAP SCREW (2 req'd.)
5/16 WASHER (2 req'd.)
537-063 HEX LOCK NUT 2 Req'd
714-004 CABLE STRAP (2 req'd.)
556-076 MODEL PLATE
1/4-20 x 5/8 RD. HD. MACH. SCREW
1/4-20 HEX NUT
454-007 COORDINATE LOCK (2 req'd.)
1/2-13 x 5 HEX CAP SCREW 2 Req'd
3/8-16 x 1/2 HEX CAP SCREW (4 req'd.,
18-82 PLUG
#10-24 x 1/4 RD. HD. MACH. SCREW (2 req'd.)
126-039 CABLE CLAMP
696-073 NYLOK SCREW (2 req'd.)
710-033 SINGLE PH. SWITCH
710-034 SWITCH (3 PH.)
18-83 1 1/4" BUTTON PLUG
387-006 DRILL PRESS HEAD
537-058 INSERT NUT
703-009 DEPTH SCALE

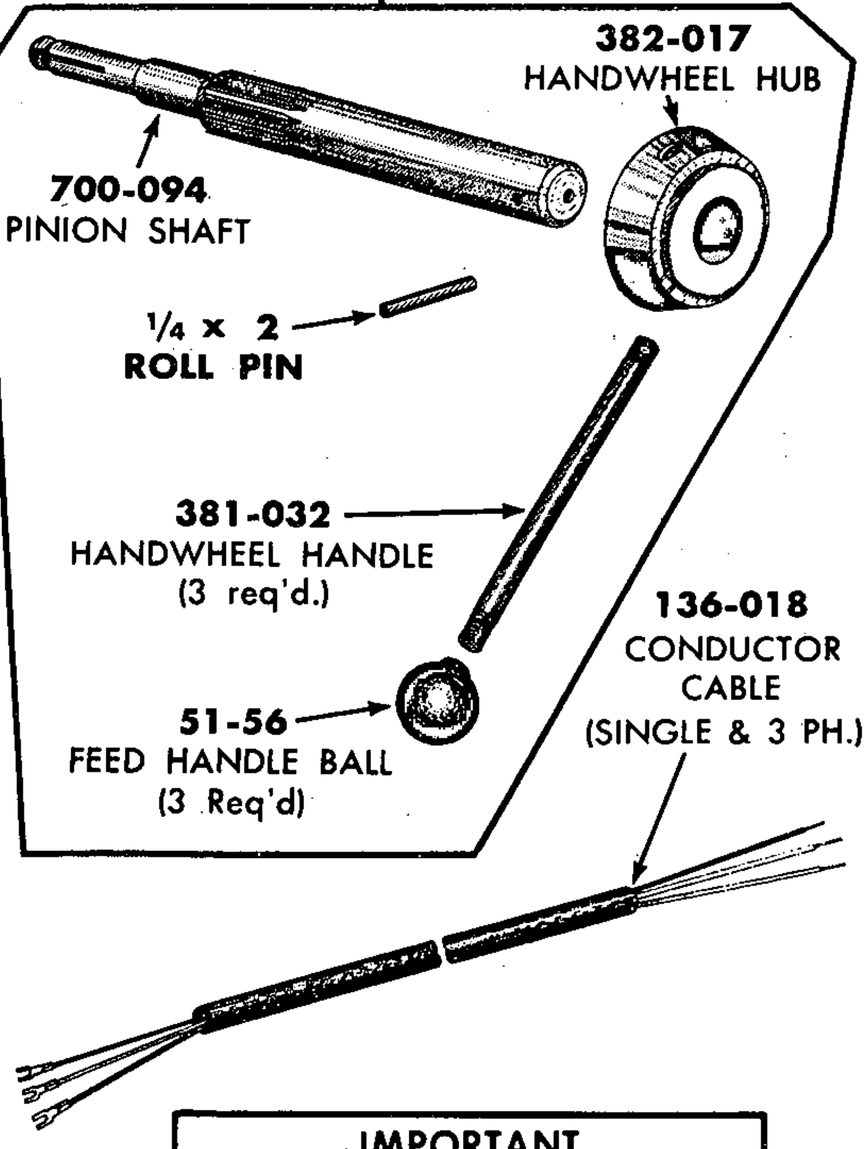
2220-17 SPRING & HOUSING ASSY.



641-005 RETAINER (2 req'd.)
932-054 WAVE TYPE WASHER
1/4-20 x 1/2 FIL. HD. MACH. SCREW (2 req'd.)
1/8 x 1 ROLL PIN
556-112 SPRING HOUSING INDEX PLATE
556-117 RETURN SPRING PLATE
697-018 QUILL RETURN SPRING
386-057 SPRING HOUSING
3/16 x 1/2 ROLL PIN (2 req'd.)

2220-21 QUILL LOCK HANDLE ASSY.

2220-18 HAND FEED ASSY.



382-017 HANDWHEEL HUB
700-094 PINION SHAFT
1/4 x 2 ROLL PIN
381-032 HANDWHEEL HANDLE (3 req'd.)
136-018 CONDUCTOR CABLE (SINGLE & 3 PH.)
51-56 FEED HANDLE BALL (3 Req'd)

5/16-18 x 5/16 SOCKET SET SCREW CUP PT. (2 req'd.)
18-24 COLLAR
044-017 SINGLE ROW BALL BEARING

2220-11 #3 MT SPINDLE & QUILL ASSY.

631-005 SPINDLE QUILL
18-17 BALL BEARING
2220-10 #3 MT SPINDLE

2220-13 DRILL STOP ASSY.

537-062 DEPTH STOP NUT (UPPER)
424-004 DEPTH STOP INDICATOR
1/8 x 5/8 ROLL PIN
990-254 DEPTH STOP NUT (LOWER)
567-014 "O" RING PACKING
698-032 DEPTH STOP STUD
5/16-18 x 2 1/2 FIL. HD. MACH. SCREW
5/16-18 HEX FULL NUT
041-180 DEPTH STOP BRACKET
1/2-20 HEX FULL NUT

IMPORTANT

PARTS ILLUSTRATED ON THIS PAGE ARE FOR DRILL PRESSES SERIAL NUMBERS FROM 500300 TO 503537

20" DRILL PRESS VARIABLE DRIVE PULLEY PARTS

051-027
C SHAFT BELT (MATCHED)
(3 req'd.)

705-007
SPEED CONTROL SUPPORT

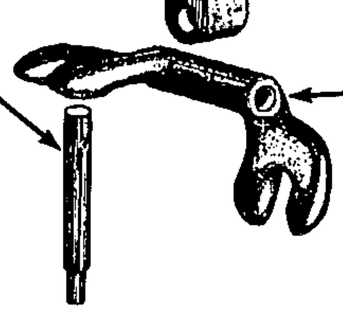
3/16 x 1
ROLL PIN

1/8 x 7/8
ROLL PIN

562-056
HINGE PIN

700-098
PULLEY SHAFT

295-008
SPEED CONTROL FORK



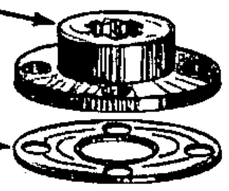
051-029
BELT

2220-14
SPINDLE PULLEY ASSY.

#10-24 x 3/4
SOCKET HD. CAP SCREW
(4 req'd.)

699-082
DRIVER SPACER
(4 req'd.)

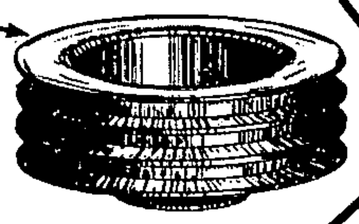
344-007
RUBBER GROMMET
(4 req'd.)



238-001
SPINDLE PULLEY
DRIVER

346-034
RUBBER GASKET

560-070
SPINDLE PULLEY

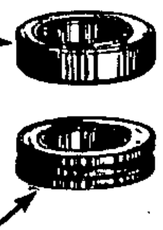


1/4-20 x 1/2
SOCKET SET
SCREW
CUP PT.

442-014
PULLEY DRIVE KEY

702-030
SPIN. DRIVE SLEEVE

18-20
BALL BEARING
(2 req'd.)



5/16-18 x 3/4
SOCKET SET SCREW
FULL DG. PT.

702-031
BRG. SPACER SLEEVE

641-068
RING RETAINER

2271-17
VARIABLE
PULLEY ASSY.

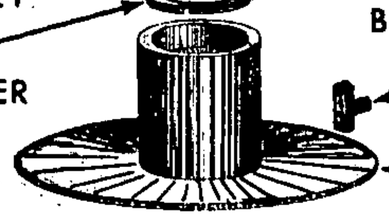
567-016
"O" RING

123-050
STOP COLLAR

442-014
PULLEY DRIVE KEY

044-017
SINGLE ROW
BALL BEARING

641-051
RING RETAINER



442-017
PULLEY KEY

2271-11
UPPER PULLEY
ASSY.

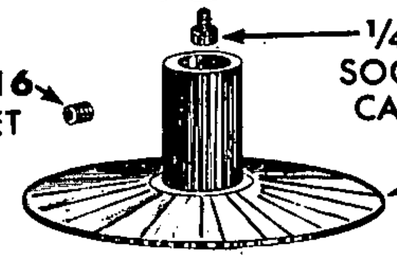
044-021
BALL BEARING

641-006
INT. RETAINER

M6-93
WASHER

1/4-20 x 1/2
SOCKET HEAD
CAP SCREW

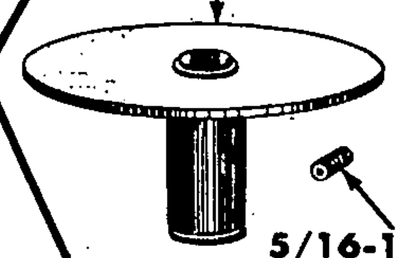
5/16 - 18 x 5/16
SOCKET SET
SCREW
CUP PT.



2271-10
LOWER PULLEY
ASSY.

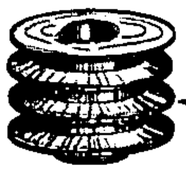
2271-15
MOTOR PULLEY ASSY.

2271-12
UPPER MOTOR
PULLEY ASSY.



5/16-18 x 5/16
SOCKET SET SCREW

1/4-20 x 5/16
SOCKET
SET SCREW
CUP PT.



560-071
C'SHAFT PULLEY

044-017
BALL BEARING
(2 req'd.)

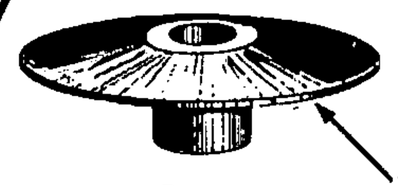
7/16-14
x 1 HEX
CAP SCREW
(2 req'd.)

702-032
C'SHAFT SLEEVE

7/16
WASHER
(2 req'd.)

386-058
C'SHAFT
BEARING
HOUSING

5/16 - 18 x 3/4
SOCKET SET SCREW



2271-13
LOWER MOTOR
PULLEY ASSY.

697-038
PULLEY SPRING

641-074
SPRING RETAINER

700-095
COUNTERSHAFT SHAFT

#606 WOODRUFF
KEY (#9)

442-017
PULLEY DRIVE
KEY

641-071
EXT. RETAINER

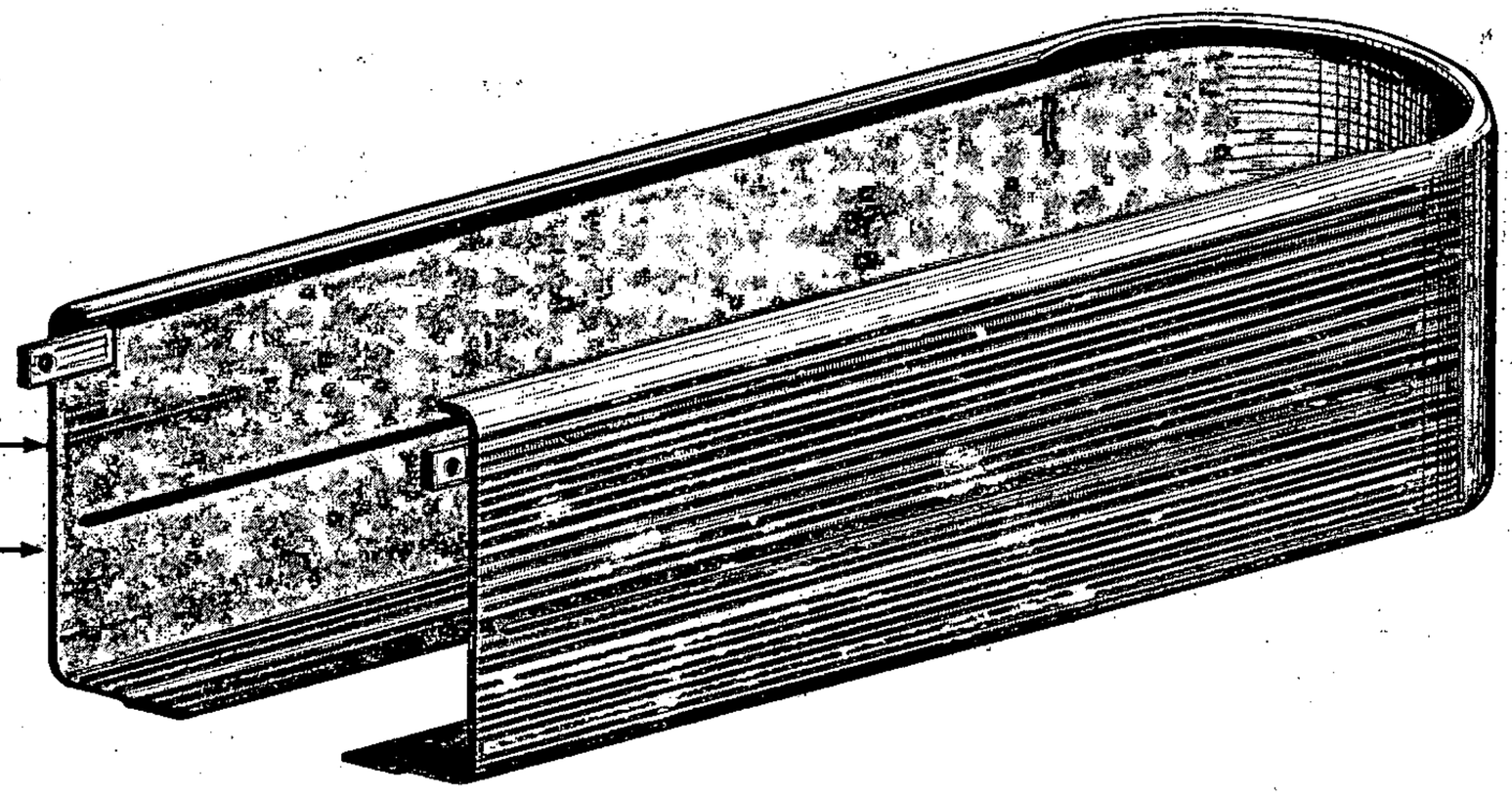
641-066
RING EXT.
RETAINER

2271-14
C'SHAFT PULLEY ASSY.

IMPORTANT

PARTS ILLUSTRATED ON THIS PAGE ARE FOR DRILL PRESSES SERIAL NUMBERS FROM 500300 TO 501382

20" DRILL PRESS VARIABLE DRIVE GUARD & PUSH ROD ASSY. PARTS



342-046
BELT GUARD

342-047
BELT GUARD
for
(POWER FEED)

2271-20
HANDWHEEL PUSH ROD ASSY.

5/16"-18 x 5/8
HEX CAP SCREW
(2 req'd.)

5/16 WASHER
(2 req'd.)

#8-32 x 3/8
ROUND HEAD MACH. SCREW
(3 req'd.)

441-049
KNOB
(3 req'd.)

698-059
STUD
(3 req'd.)

648-011
CAM RING

W76-3
BEARING

055-009
HANDWHEEL
BOLT

382-019
HUB

130-016
SPEED CHART

1/4-20 x 3/8
SOC.
CAP SCREW

1/8 x 1/2
ROLL PIN

342-050
SPIN. PULLEY GUARD

536-018
NAMEPLATE

#2 x 3/16 RD. HD. TYPE U
P.K. DRIVE SCREW
(2 req'd.)

828-033
PUSH ROD TUBE

1/2-20
HEX JAM NUT

2271-18
PUSH ROD
W/ROLLER

7/16 –20
HEX JAM NUT

5/8 –18
HEX JAM NUT

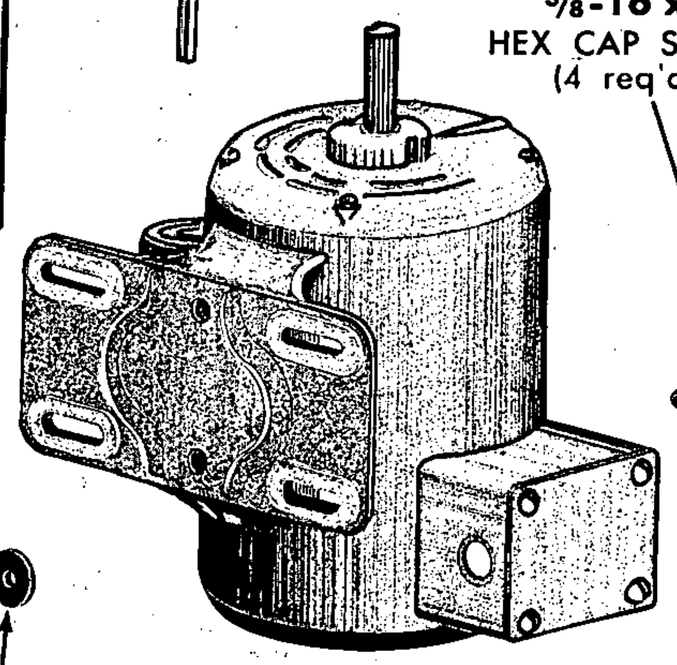
123-051
STOP
COLLAR

5/8-18
HEX JAM NUT

1/8 x 5/8
ROLL PIN

3/16" x 3/16"
x 1-1/4" KEY

3/8-16 x 1
HEX CAP SCREW
(4 req'd.)



3/8 PLAIN WASHER

IMPORTANT
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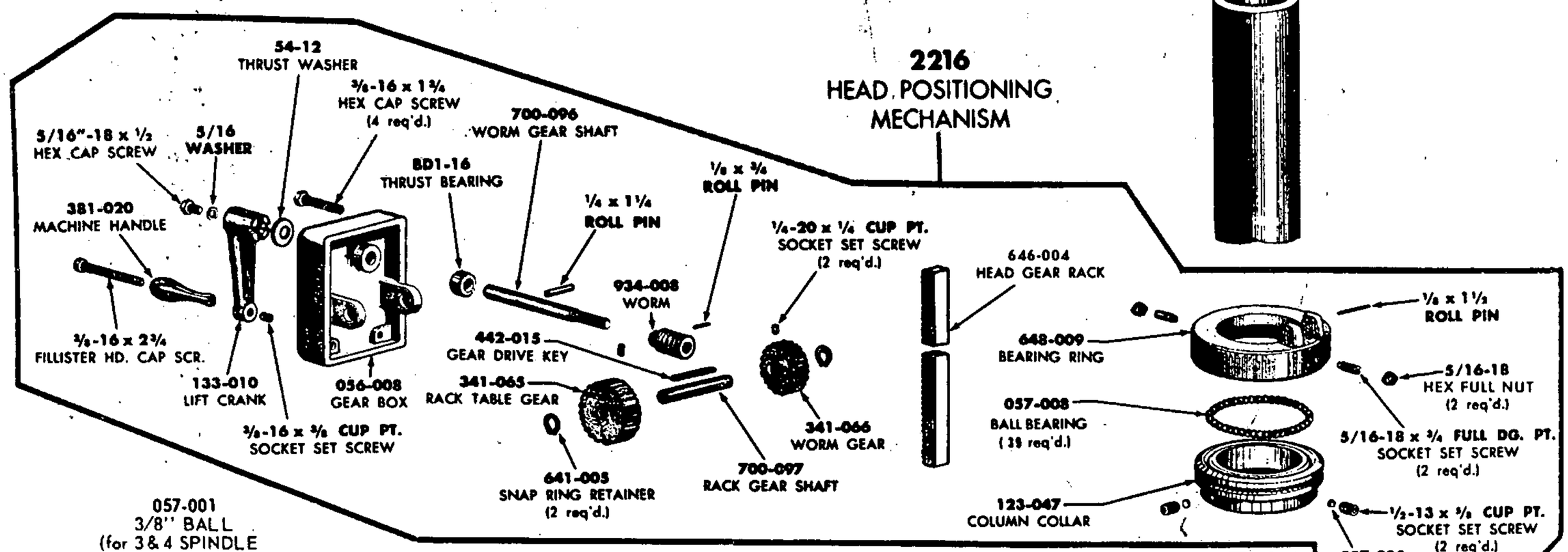
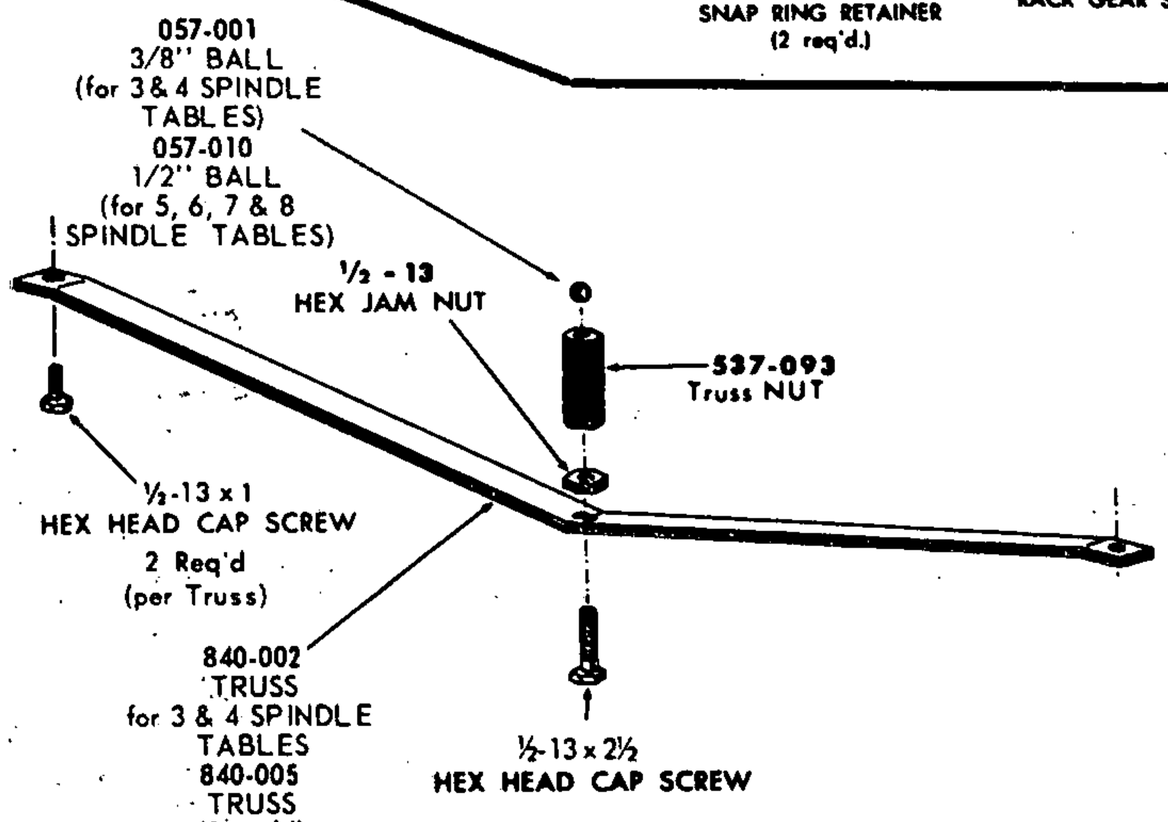
20" MULTIPLE SPINDLE DRILL PRESS PARTS

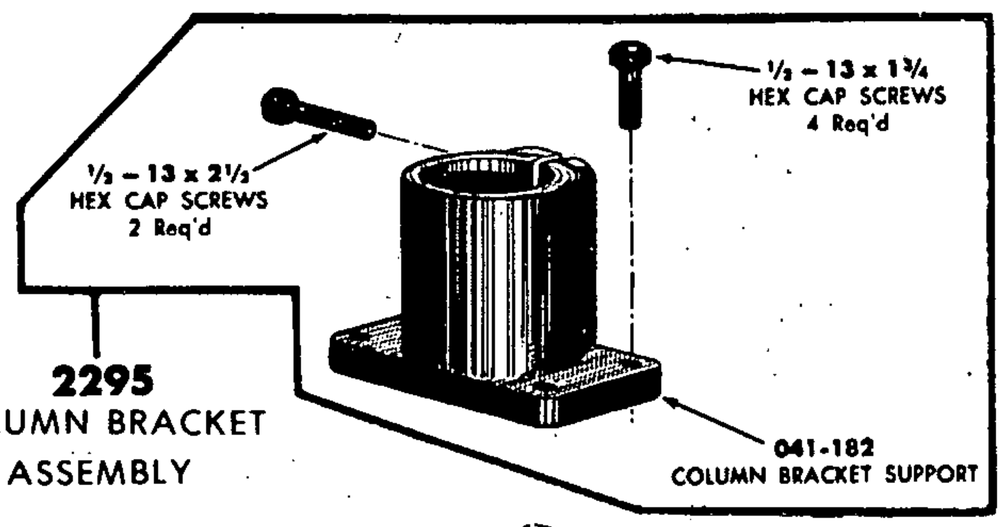
2216 HEAD POSITIONING MECHANISM



2293
COLUMN (43")

2294
COLUMN (66")





OIL TROUGH TABLES

No. 2292 Table. 24" x 40" working surface. Takes two 20" heads.

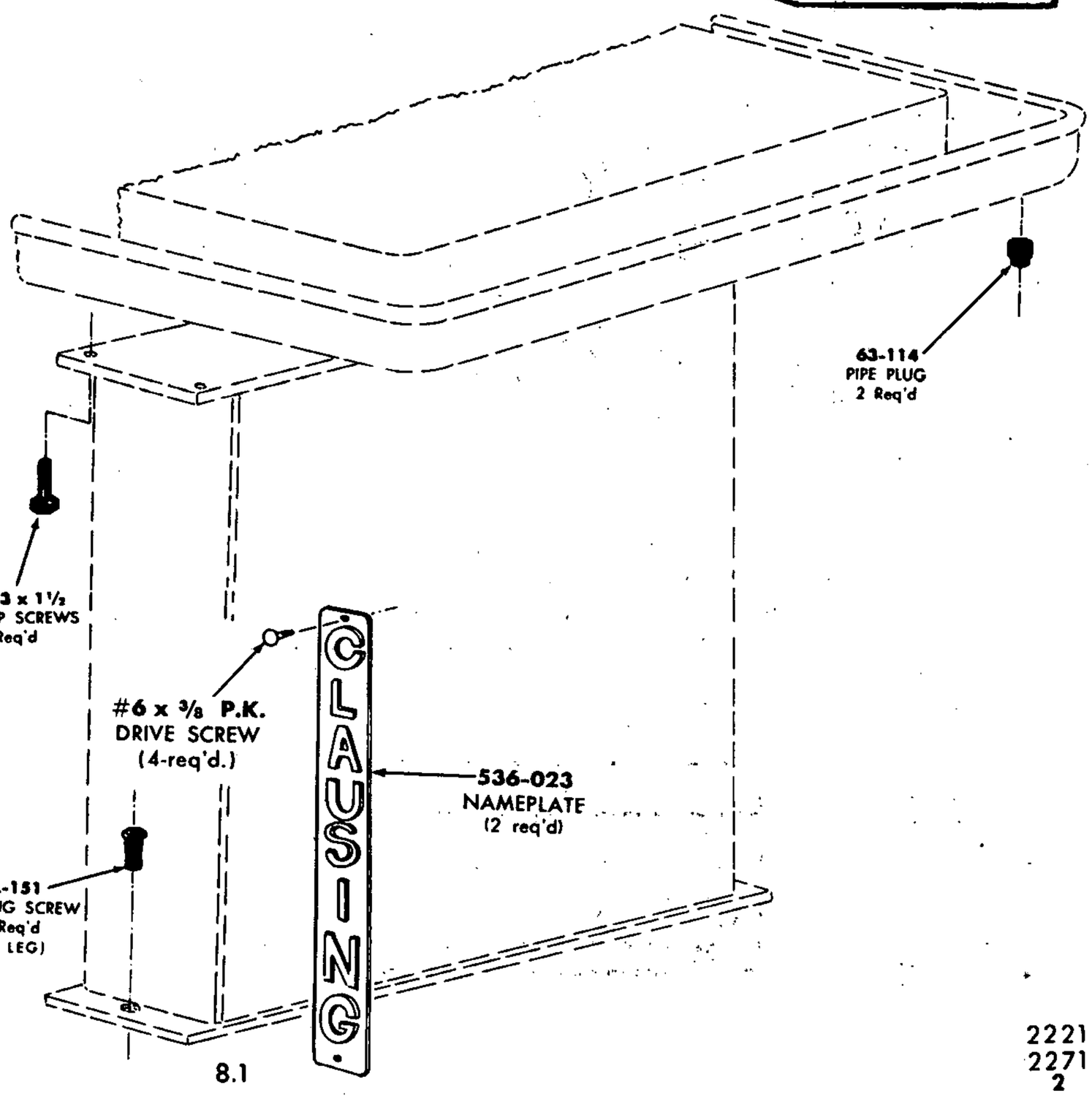
No. 2296 Table. 24" x 80" working surface. Takes four 20" heads.

No. 2297 END SECTION. Two sections provide 24" x 120" working surface for six 20" heads.

No. 2298 MID SECTION. 24" x 40" working surface. Takes two 20" heads. Use with two No. 2297 End Sections.

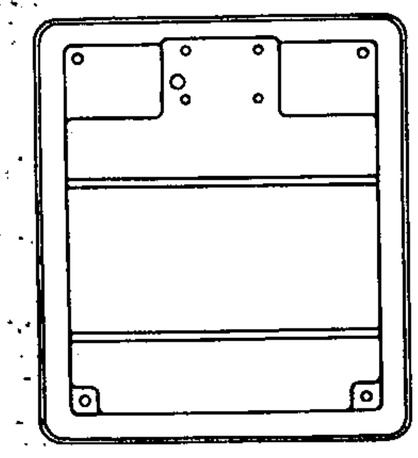
No. 2299 TABLE LEG. Two legs required for Nos. 2292 and 2296. Three legs required for two No. 2297. Three legs required for two No. 2297 with one No. 2298.

Tables are drilled for legs. Holes for column mounting brackets drilled on order to customer's specifications.



HEAD AND COMPONENT PARTS ARE ILLUSTRATED ON PARTS PAGES IN THE FRONT OF THIS SECTION.

NOTE: FASTENERS ARE INCLUDED WITH TABLE LEGS



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BASE, PRODUCTION