

PROFILERS 672, 684

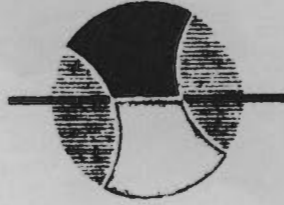
WT 2672 and WT 2684

MACHINE WORKS, Inc.



PROFILE SHAPERS

4-1-1969



ONSRUD

ONSRUD MACHINE WORKS, INC.
7720 NORTH LEHIGH AVENUE
NILES 48, ILLINOIS
Suburban Chicagoland
NEwcastle 1-9800
"ONSRUDMACH"

MACHINE TYPE: **PROFILER**

MACHINE MODEL:

MACHINE SERIAL NO:

CUSTOMER:

INDEX

All standard hydraulic profilers W672H, W684H, WT-2672 and WT-2684

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GENERAL DESCRIPTION

The Onsrud Contour Profiler is a new woodworking machine for producing most of the type of work now done by hand shaping. The machine consists of a rectangular table with a reciprocating table stroke, for carrying the work past the cutter and return, a high speed cutter head that can travel in or out at right angles to the work, and an automatic air clamping system to hold work securely in position. Communications with Onsrud Machine Works regarding further information pertaining to operation, maintenance, adjustment or repair of the machine MUST INCLUDE THE SERIAL NUMBER OF THE MACHINE. Serial number is located on a metal tag fastened near the speed control valve on the backside of the machine.

MACHINE SPECIFICATIONS

Depth of cut	0 to 6 inches all machines
Length of cut	84" inches maximum WT-2684-W684H
Length of cut	72" inches maximum WT-2672-W672H
Work height	10"
Overall machine height	57 inches
Overall machine width	38 inches
Overall machine length	14 ft. W672H 16 ft. W684H 17 ft. WT-2672 19 ft. WT-2684
Hydraulic unit floor space	17 square feet
Cutter head adjustable	1 inch all machines 3 inch #2 head WT-2684 WT-2672
Pattern thickness	1-1/2 inches
Pneumatic clamps	Adjustable in all three dimensions
Clamping pressure	300 pounds per clamp
Table speed	Variable - 0 to 80 FPM forward 80 FPM return up to 150 FPM return
Table drive	Straight hydraulic
Motors	Grease packed bearings, with cups for lubrication spindle lock, totally enclosed fan, air cooled, air brake, 20 H.P., 7200 r.p.m. 440 volts, 120 cycle, 3 phase, 2 pole

Variable

220 volt motor, 120 cycle

Note: 20 h.p., 7200 r.p.m., 440 volts, 120 cycle motors can be operated at 220 volts, 60 cycle, which will result in the motor developing 10 h.p. at 3600 r.p.m.

HOISTING & UNLOADING

When hoisting be careful to maintain center of gravity. Remove all crating after machine has been moved to proper installation point. When removing machine from skid be very careful to let the weight of the "table carrying frame" to be carried by the cast iron center pedestal unit. DO NOT ATTEMPT TO LIFT MACHINE BY ENDS ONLY.

CLEANING

The Onsrud Contour Profiler is shipped with table ways protected by a KNOX RUST COMPOUND. MAKE SURE BEFORE OPERATING machine this compound is flushed off with kerosene and replaced by a light coating of oil.

FOUNDATION

The weight of the Contour Profiler is less than three tons and has no exact specifications on foundation as long as leveling requirements are fulfilled. We recommend 4" to 6" of concrete be poured for the base of this machine.

Machine should be bolted to floor for best results.

LEVELING

THE CENTER SECTION OF MACHINE SHOULD ALWAYS REST ON THE FLOOR. If the two end supports allow the center section to be higher than floor due to uneven floors, use shims under center section to assure bearing between this center unit and floor. If center section is allowed to be raised from floor serious damage may occur to the machine.

LUBRICATION & RECOMMENDED LUBRICANTS.

A) TABLE WAYS

1. Automatic application by pressurized system.
2. Check daily sight glass located in bridge of machine where oil reservoir is housed.
3. If ways are not getting enough lubrication, regulator located by reservoir should be adjusted. Never apply more than five pounds of air in addition to average of eight to ten pounds operating pressure. Never allow more than thirty pounds of air pressure to be applied to lubrication tank.
4. Use Mobile way oil Vactra #1.

B) MOTOR SLIDE SHAFTS

1. Each motor slide has two grease fittings which are to be lubricated every month. They supply grease to the shafts as well as to the ball bushing.
Note: Over lubrication can be as harmful as under lubrication.
2. We recommend Mobilux grease no. 2 or equivalent.

C) HYDRAULIC UNIT

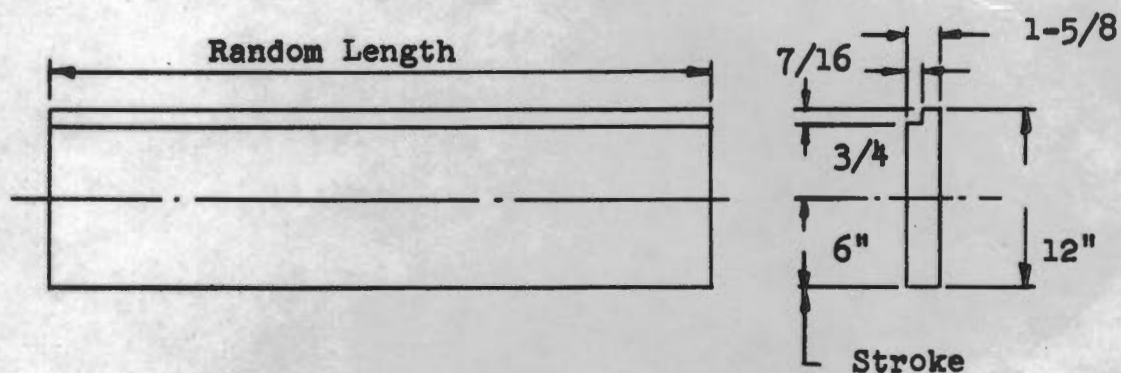
1. We recommend Mobile D.T.E. light or equivalent hydraulic oil.

D) CUTTER HEAD - SPINDLE BEARINGS

1. One turn every forty hours.
2. Refill with Texaco Unitemp grease.

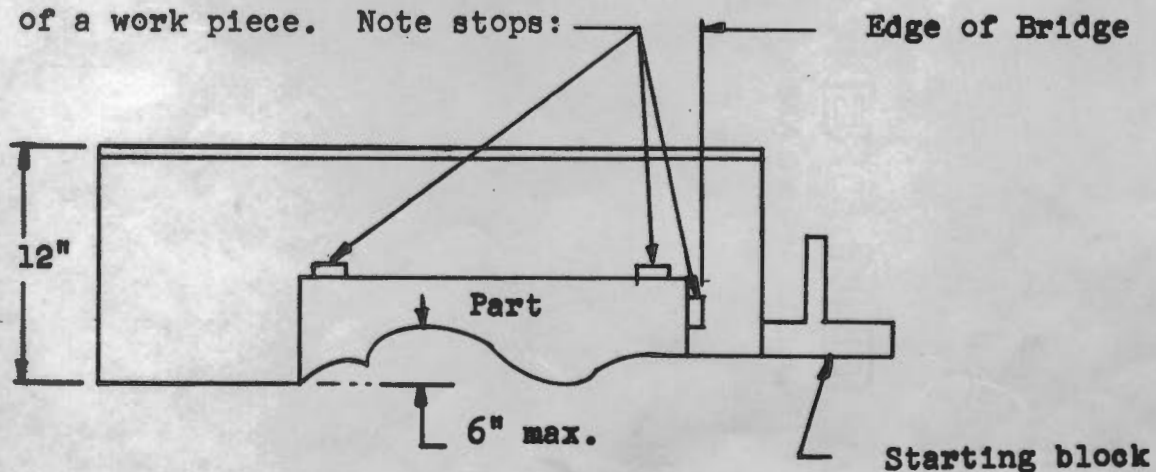
HOW TO MAKE CONTOUR PROFILER PATTERNS (TEMPLATES)

Contour profiler shaper in most cases (other than straight line cutting) uses two different types of templates. The first template will be the piece part form template. Below is a rough sketch showing the rough stock required.

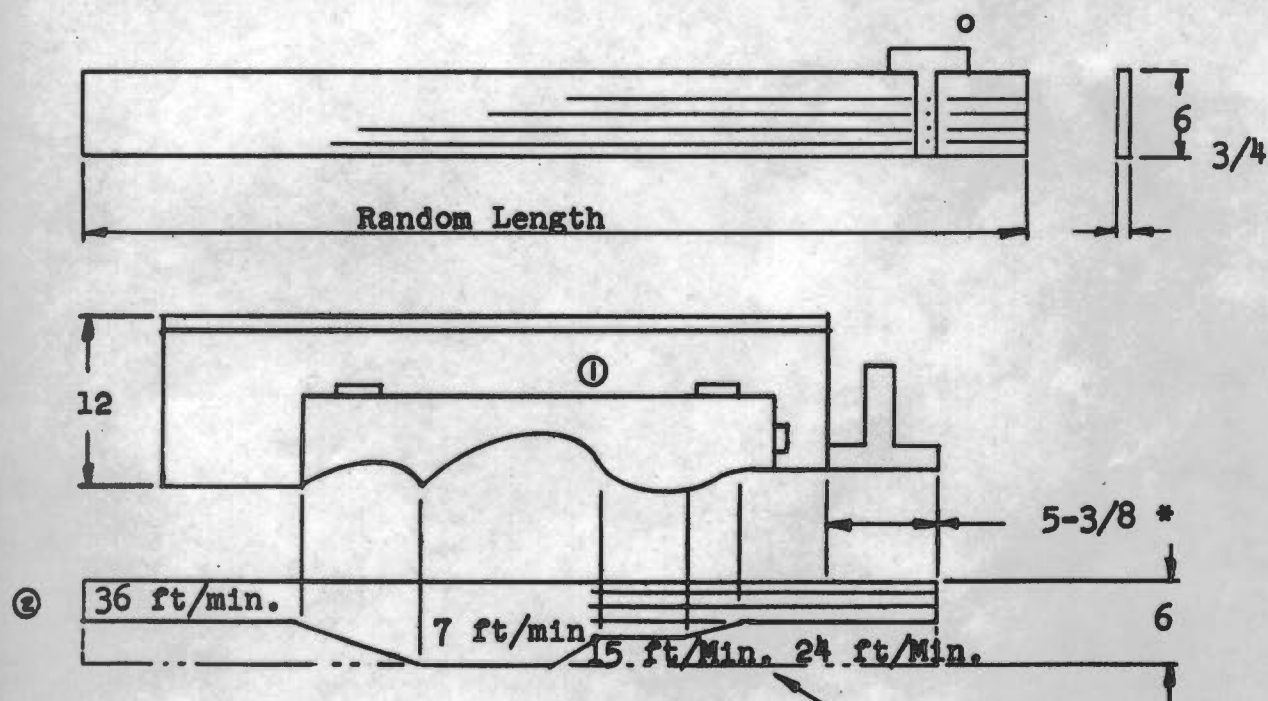


We suggest for your convenience that the rough templates be made in random lengths and cut off to suit your particular length. The maximum length will be the capacity of your machine. 72" for a W672H and WT-2672; 84" for a W684H and WT-2684.

Now that you have the rough stock necessary, take the part to be shaped and duplicate it to the form. Below is an example of a work piece. Note stops:

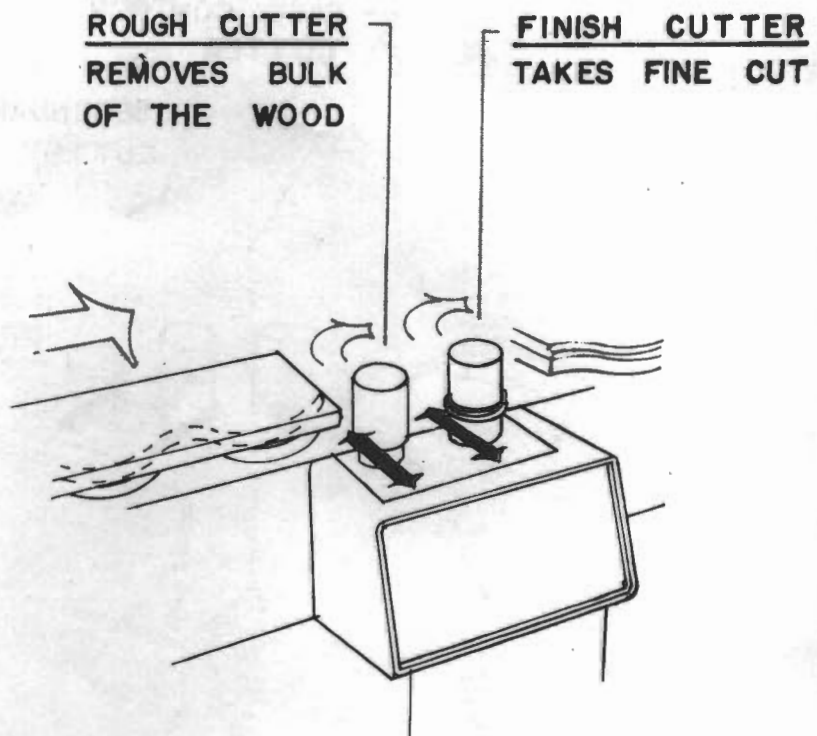


This takes care of the form or pattern as sometimes called. Now for the speed control template. We suggest a piece of wood 6" wide x 3/4" thick. Again for your convenience you can make this template in random lengths. A marking gauge^o shown below should be found in the accessories box supplied with the machine. Place form and templates stock as shown below. ^① Attached you will find a chart with the feed rates for various types of woods. These will change slightly depending on your particular wood. Below is a sketch showing how a typical template is made. ^②



For good shaping we suggest the angle of rise or fall on the speed template should be no less than 45°.

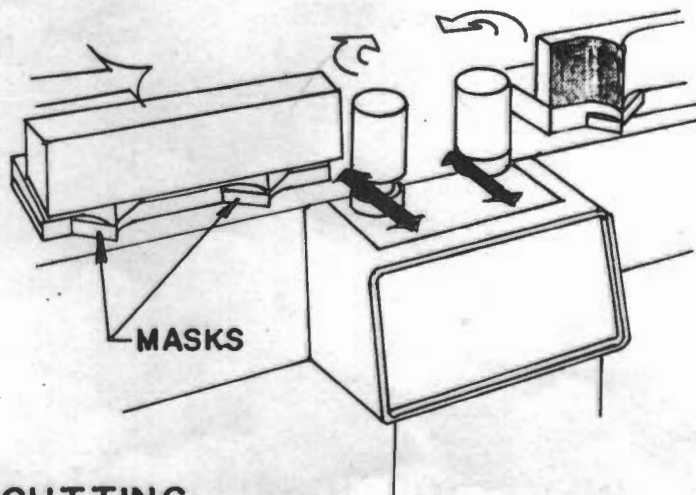
*WT-2672 and WT-2684 have 21" lead on for second head.



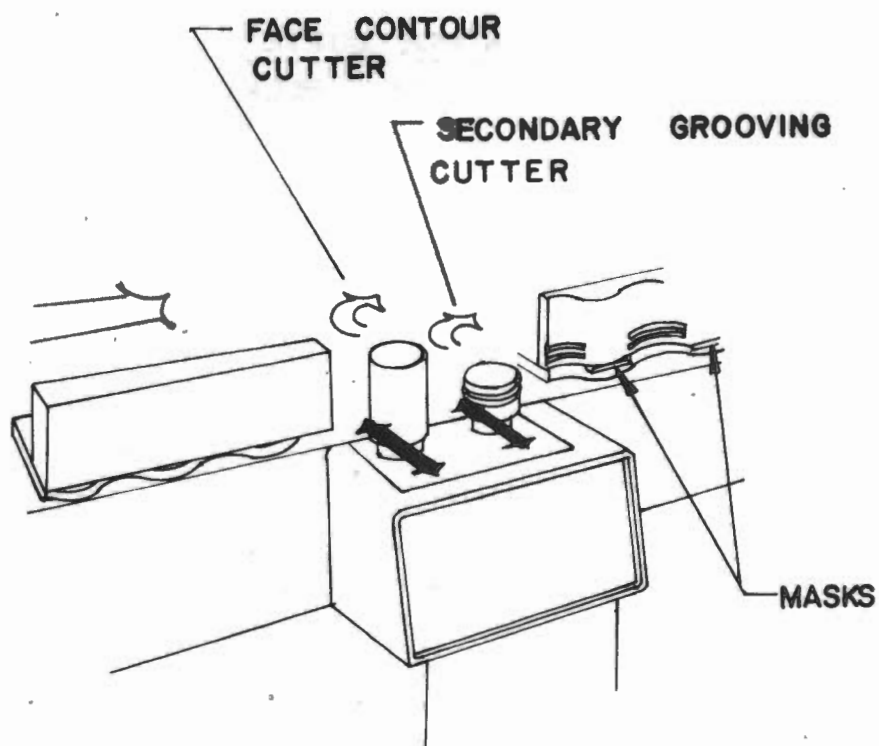
ROUGH & FINISH CUTTING

FIRST CUTTER
FOLLOWS BOTTOM HALF
OF PATTERN CUTS OUT
UNSHADED AREA

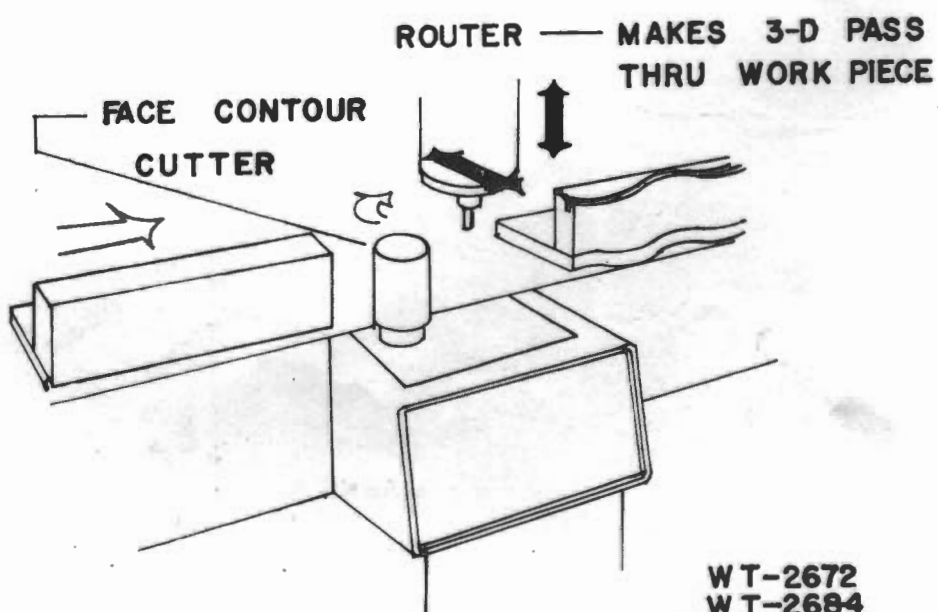
SECOND CUTTER
FOLLOWS TOP HALF
OF PATTERN CUTS
OUT SHADED AREA



REVERSE ROTATION CUTTING



SECONDARY CUTTING OPERATION



ROUTER ATTACHMENT (OPTIONAL)

WT-2672
WT-2684

OPERATION:

WORK SET UP

1. Fasten WORK template to table.
2. Motor cylinder exhaust valve lever located on the right hand side of the cutter motor pedestal should be turned 180° with lever pointing toward operator. It will exhaust the air to the cutter motor cylinder and allow cutter motor to move back from starter block.

On WT-2672 and WT-2684 #2 head motor cylinder exhaust valve lever is located on opposite side of #1 head.

3. Adjust clamp arms. Leave a maximum of 3/8" between work and clamping shoe. MAKE SURE CLAMPS DO NOT PROJECT IN PATH OF CUTTER.
4. When setting up any job always see that the dust hood is clear of any obstruction mainly the clamps. For instance, if a fast drop-in or pull-out of cutter into pockets on template is needed check clearances.
5. Set reversing dog in line with end of template. Slight over travel may occur.
6. Fasten wood SPEED CONTROL template to table.
7. Push motor in against starting block then turn motor cylinder valve 180° pointing away from operator. This will allow cutter head follower to engage against starter block.
8. Press foot switch and let table go through one cycle WITHOUT WORK ON PATTERN OR POWER TO CUTTER MOTOR. Check for desired speed. Notice follower movement against template and table reversing. Make sure follower does not run off end of pattern.

OPERATION OF MACHINE (continued)

1. Start cutter motor

2. Press foot switch (automatic cycle.)

Start cutter motor #2 - WT-2684 and WT-2672.

a) Table moves forward

b) Clamps operate

c) Table slows down. { Infinitely variable depending on each
d) Table speed up { particular template.

e) Table hits reversing dog.

f) Cutter head retracts.

WT-2684 and WT-2672 - both cutter heads retract

g) Table reverses and stops, clamps open

h) Cutter head follower feeds in and contacts pattern.

3. Stop button (two locations).

a) Cycle stop forward table motion and reverses as described in #2, steps (f), (g), and (h).

b) If stop button is held down, air brake is applied to cutter motor spindle. Motor stops.

ADJUSTMENTS:

CUTTER MOTOR UNIT

1. SHAFTS - The shafts on the cutter motor pedestal should be rotated whenever a groove in the shaft becomes noticeable. Loosen set screw in pedestal holding shaft and turn shaft with screw driver 10°.
2. GIB - The motor gib should be tightened for production runs. The motor adjusting screw should not be allowed to carry the full weight of the motor.

CENTER SUPPORT FOR BRIDGE

W684H, WT2672, WT2684

The center bridge support should be used when concentrating the clamps in one section of the table. It should remain on the machine with the exception of larger work widths, in which case it may be removed.

It should be noted that the clamps have even distribution pressure, when removing the support for larger work.

TANDEM HEAD ROTATION

IMPORTANT: _ ONSRUD TANDEM HEAD MACHINES ONLY _ WT-2672 and WT-2684.

These machines have two cutting heads. The first head or #1 head nearest operator is a climb cutting head only. The #2 head is both a conventional and climb cutting head. Switch for reversing is located on operators control station.

Caution should be experienced in:

- A. Never reverse motor while running.
- B. Proper cutter for respective rotation.
- C. Nut on arbor to be locked on cutter by arbor wrench and Set screws for locking threaded gib. **ALL MUST BE TIGHT.**

WHEN TAKING OFF ARBOR: BACK OFF LOCKING SET SCREWS
BEFORE REMOVING ARBOR WITH WRENCH.

CUTTER MOTOR:

20 H.P. Hi-cycle (7200 RPM) precision spindle motor. Totally enclosed, fan cooled with screw on type spindle, clockwise rotation looking from arbor end. Equipped with grease cups for spindle bearing lubrication; air brake energized with motor stop button. Standard machine furnished with a 4" diameter roller bracket assembly and 1-1/4" x 6" long screw on arbor assembly. W672H and W684H tandem heads are furnished with outboard bearing bracket.

Inspection and repairs of motor on the Contour profiler should not be undertaken except by skilled individuals experienced in care of high speed motors. The high speed and extremely close tolerances required to avoid vibration demand precision construction and assembly which should not be attempted by those unfamiliar with the work.

We recommend that the motor be sent to Onsrud Machine Works, should any repair be necessary.

Grease cups should be turned 1/4 turn clockwise every 40 hours of operation. Refill with Texaco Unitemp grease or equal (MIL. STD. #9-3278A).

RECOMMENDED PROCEDURE FOR REPLACING SPINDLE BEARING ON D135-268 MOTOR USED ON W672 CONTOUR PROFILER.

Top Bearing requires an Onsrud #310 Brg. (606-82) lower Bearing requires an Onsrud #307 Brg. (606-79) whenever bearings are replaced, we recommend also replacing. The Nilos Seals top bearing. Requires one #6310 AV Nilos Seal (675-72). Lower bearing requires one #6307 AV Nilos Seal (675-71) bearings to be packed 50 to 60% of capacity with Unitemp grease (Texaco) or equal. Also fill the cup portion of the Nilos Seal and outside lip with above grease.

Suggest motor to be run in as follows to allow for the proper run in of the Nilos Seal and for the grease to form its own pathway. Normally a bearing will run warm during the first hour of running.

Start stop motor momentarily three times. Then let motor run 20 to 60 minutes, checking periodically for heating. After motor temperature is reached let motor cool before starting a production run.

DESIGN & CONSTRUCTION

W684H

POWER UNIT

W672H

A POWER COMPONENTS

1. PUMP:
Type: Vickers, pressure balanced gear
Pressure: Design rating/working 350 psi
Delivery: @1800 rpm and 350 psi - 16 gallons per min.
Mounting: Foot Mounting
Pipe Connections: Bolted flanges
#V214-11W-1A12
2. ELECTRIC MOTOR:
Type: Allis Chalmers or equivalent frame 215
Horse power x rpm - 5 x 1740
Electric rating: 220/440 V, 3 ph/60 c.
Mounting: Foot Mounting

B. CONTROL COMPONENTS - Operating pressure 350 psi

1. PRESSURE GAUGE: Marsh
Pressure range: 500 psi
NOTE: RED IS DANGER ZONE ABOVE 350 psi
2. PRESSURE RELIEF VALVE: Vickers
Model #CT-06B-10
3. DIRECTIONAL CONTROL VALVE: ONSRUD

C. ASSEMBLY

1. OIL RESERVOIR Capacity - - - - - 60 gals.
2. RESERVOIR ACCESSORIES:
Oil level gauge
Filling screen
Air vent filter (in cap)
Drain plug
3. HEAT EXCHANGE
Aluminum coil with 12" Exhaust-Fan

CONTOUR PROFILER W684-H

Test results based on 100% efficiency of motor indicated by Onsrud cutters and motors. Due to different density of various woods and etc. individual application may vary.

All tests were taken at the rate of 18 ft. min. table speed.

Test 1.	Cutter step	Wood	Poplar
	Cubic inches per horsepower		52.6
Test 2.	Cutter step	Wood	Maple
	Cubic inches per horsepower		23.9
Test 3.	Cutter step	Wood	Oak
	Cubic inches per horsepower		29
Test 4.	Cutter step	Wood	Pine
	Cubic inches per horsepower		52.5
Test 5.	Cutter Spiral	Wood	Pine
	Cubic inches per horsepower		42.1
Test 6.	Cutter spiral	Wood	Maple
	Cubic inches per horsepower		18.7
Test 7.	Cutter spiral	Wood	Oak
	Cubic inches per horsepower		26.3
Test 8.	Cutter spiral	Wood	Poplar
	Cubic inches per horsepower		29,2
Test 9.	Cutter knives	Wood	Poplar
	Cubic inches per horsepower		50.4
Test 10.	Cutter knives	Wood	Pine
	Cubic inches per horsepower		60
Test 11.	Cutter knives	Wood	Oak
	Cubic inches per horsepower		45
Test 12.	Cutter knives	Wood	Maple
	Cubic inches per horsepower		40

ONSRUD TEST DATA

TABLE FEEDS — FT/MIN

1. 100% EFF. OF MOTOR

2. ONSRUD SPIRAL CUTTER

3. HARD MAPLE *

* A, OAK x 1.2

B, POPLAR x 2

C, DOUGLAS FIR x 2.5

DEPTH OF CUT

HEIGHT OF CUT

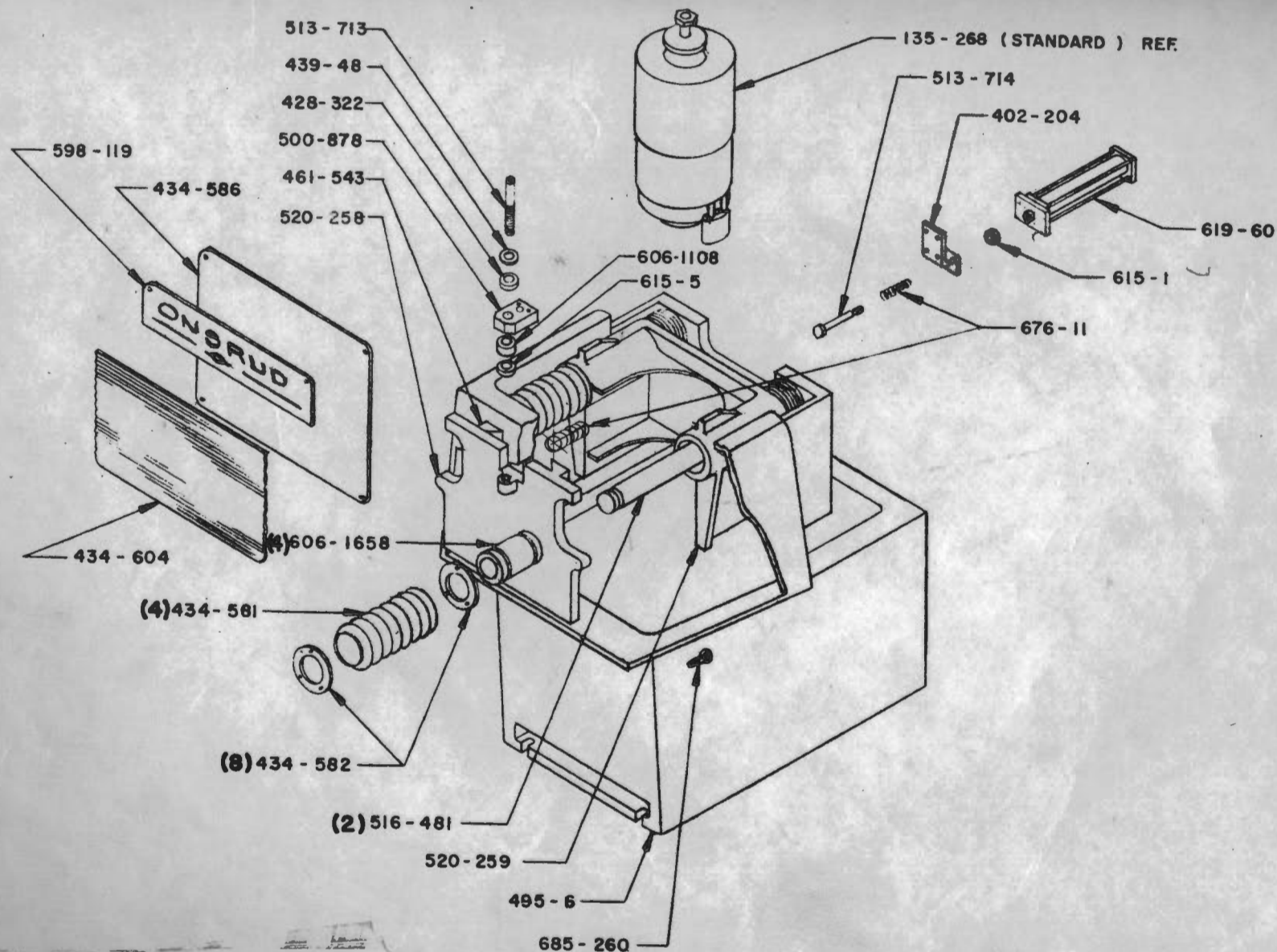
	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4
$\frac{1}{2}$	MAX	MAX	MAX	72 $\frac{FT}{MIN}$	54	36	28
1	108	68	54	40	27	18	14
$1\frac{1}{2}$	79	51	40	27	20	14	10
2	54	34	27	18	14	9	7
$2\frac{1}{2}$	47	27	22	16	12	8	—
3	40	20	18	14	9	7	—
4	27	17	14	9	7	—	—
5	23	15	12	—	—	—	—
6	20	13	10	—	—	—	—
7	17	10	8	—	—	—	—
8	14	8	7	—	—	—	—

W 672 H

W 684 H

WT 2672

WT 2684



W 672 H

W 684 H

ONSRUD

REVERSIBLE MOTOR — 135-300

STANDARD MOTOR — 135-268

(2) 461-543

513-845

(2) 439-48

(2) 428-322

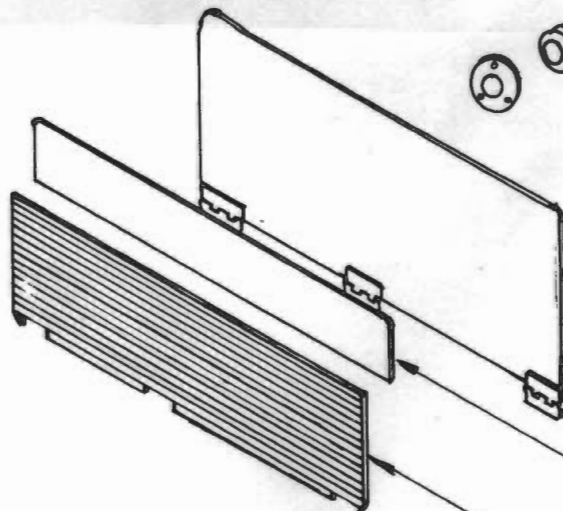
(2) 500-1134

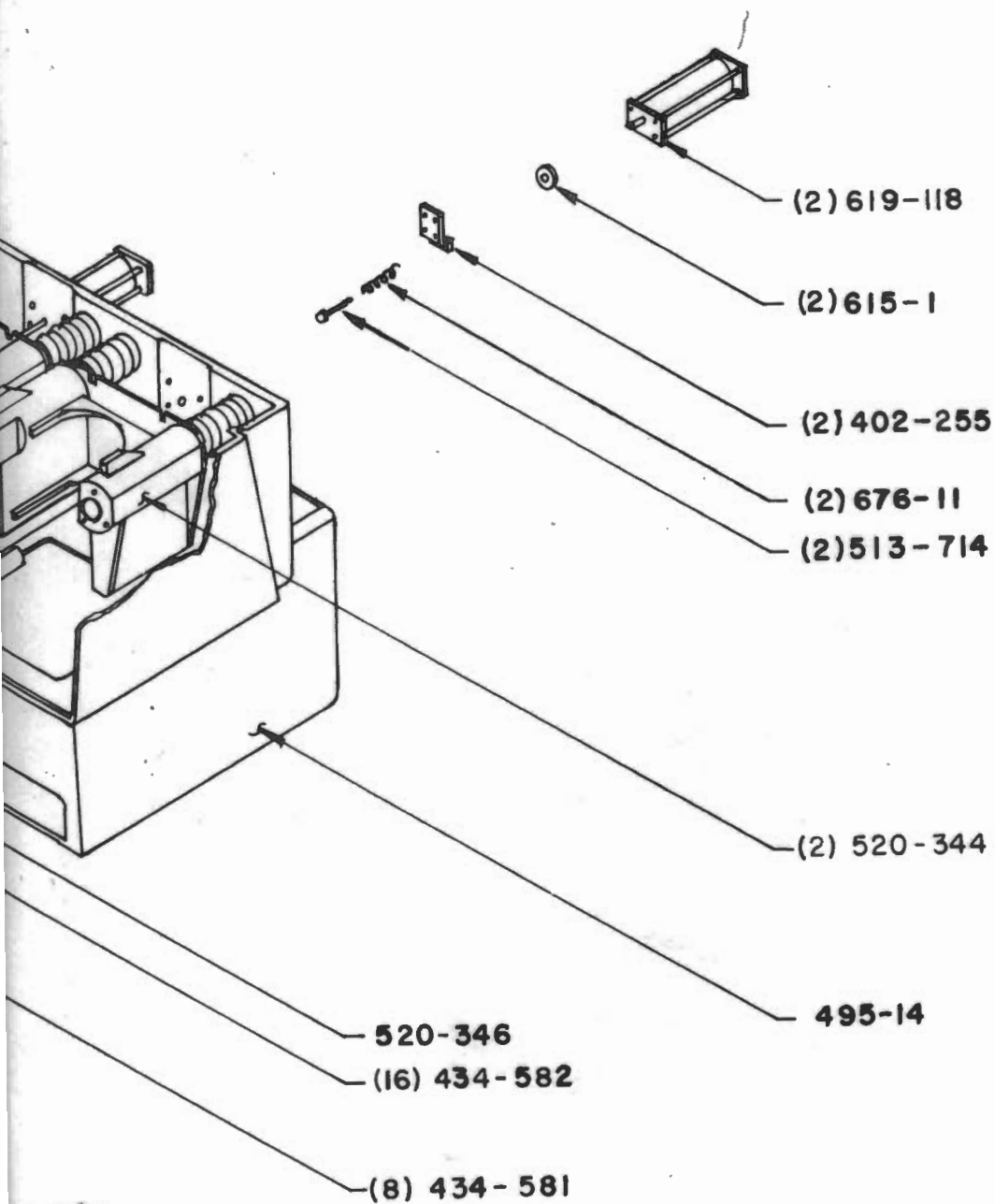
513-787

520-258

(4) 516-641

491-839





W T-2684

&

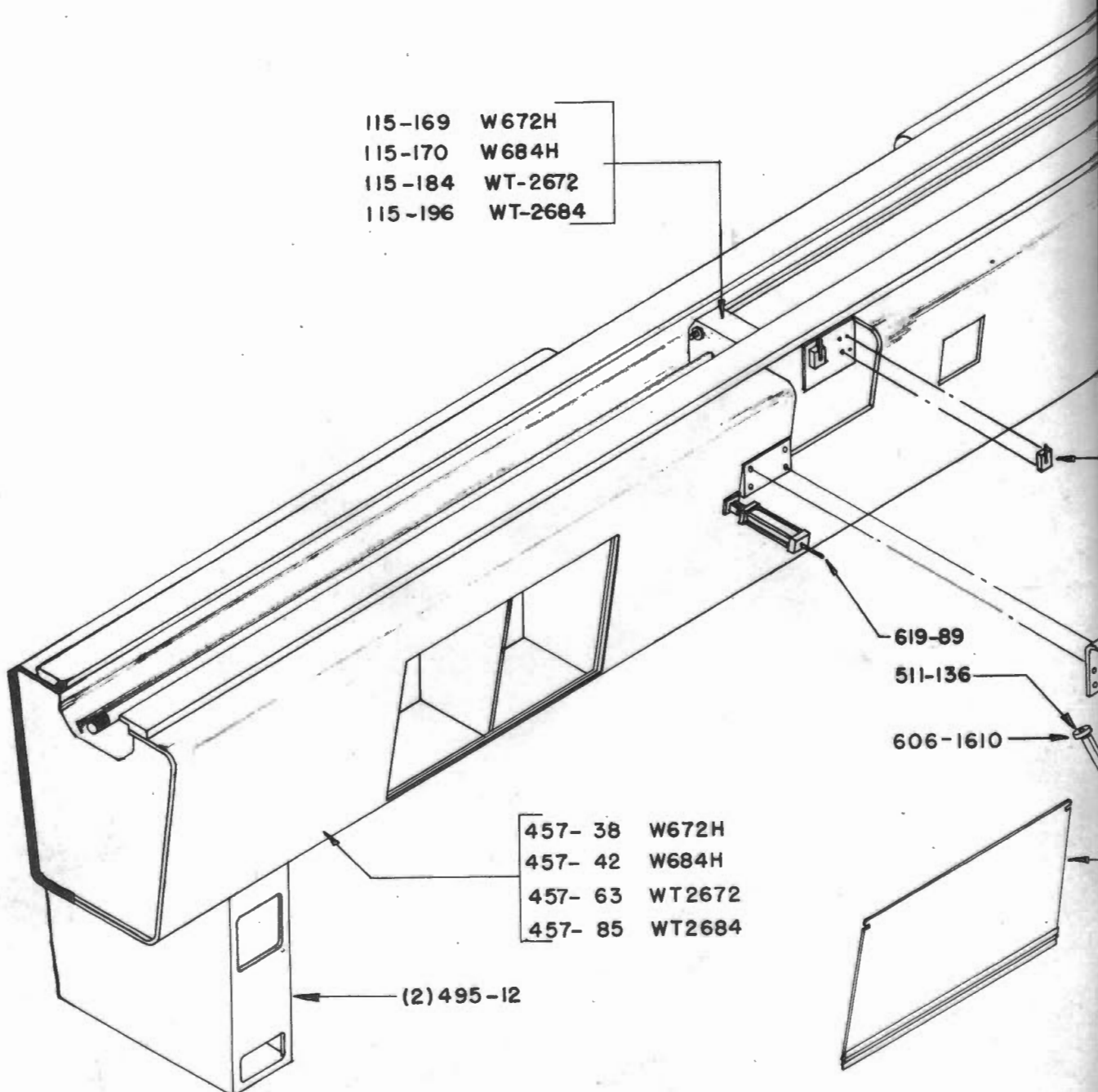
W T-2672

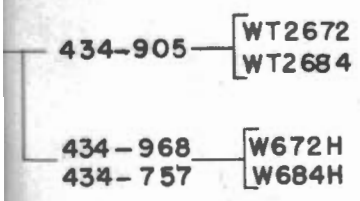
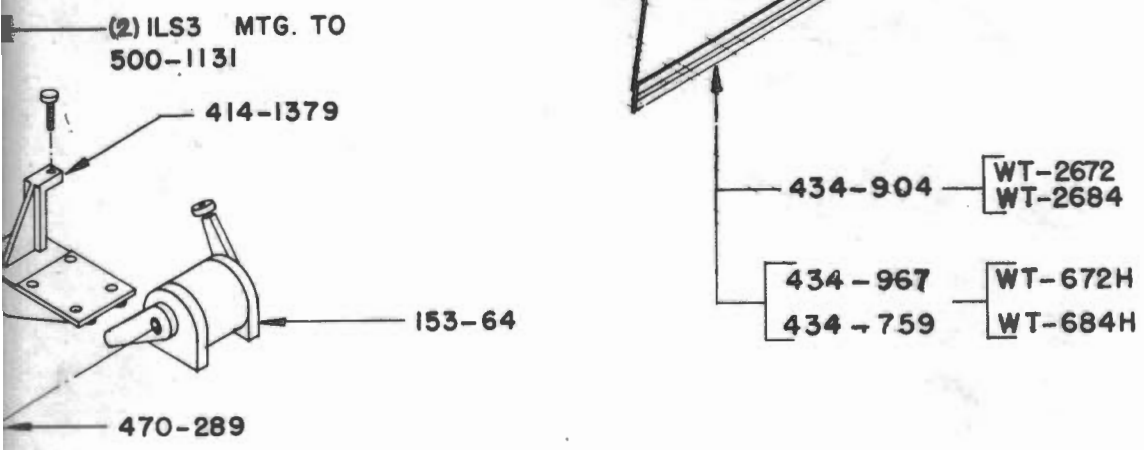
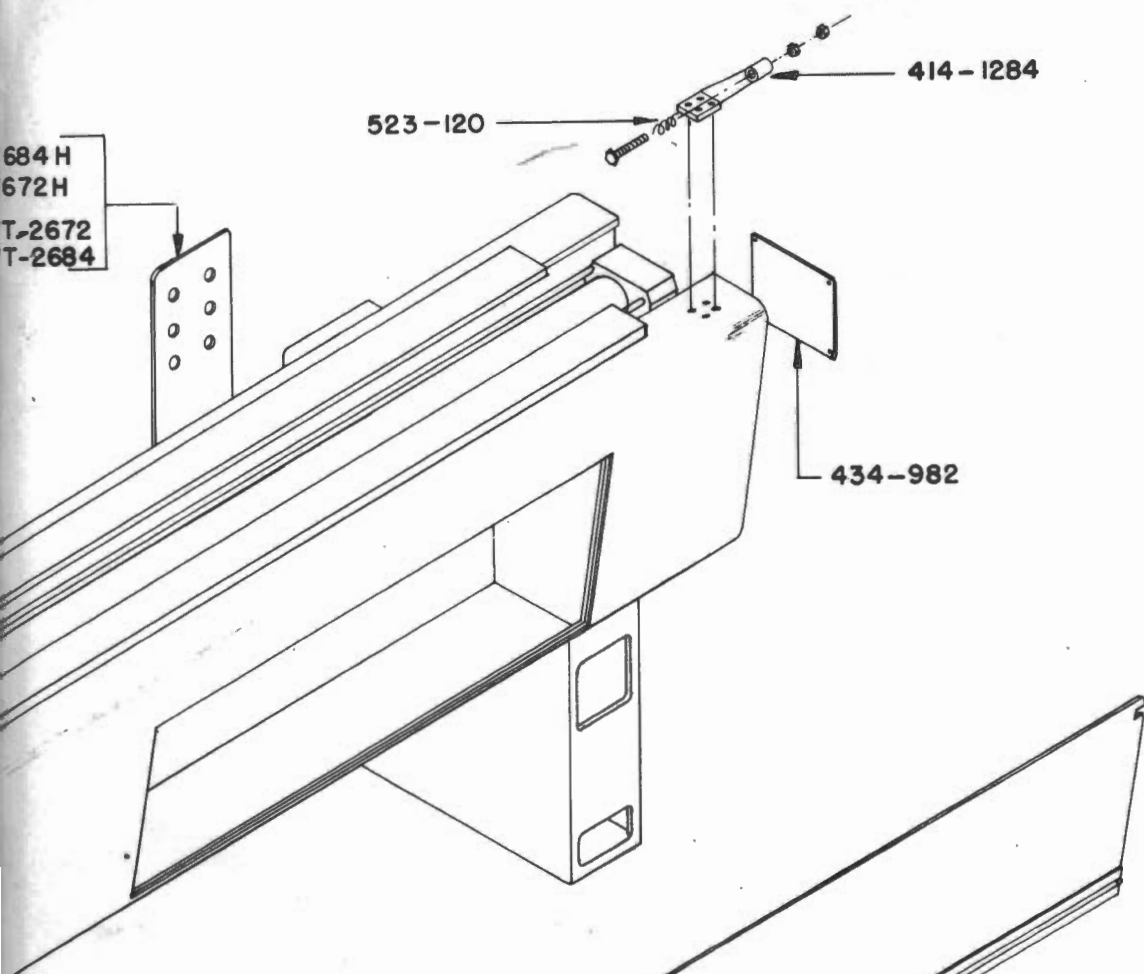
ONSRUD

434-758
434-755

434-902

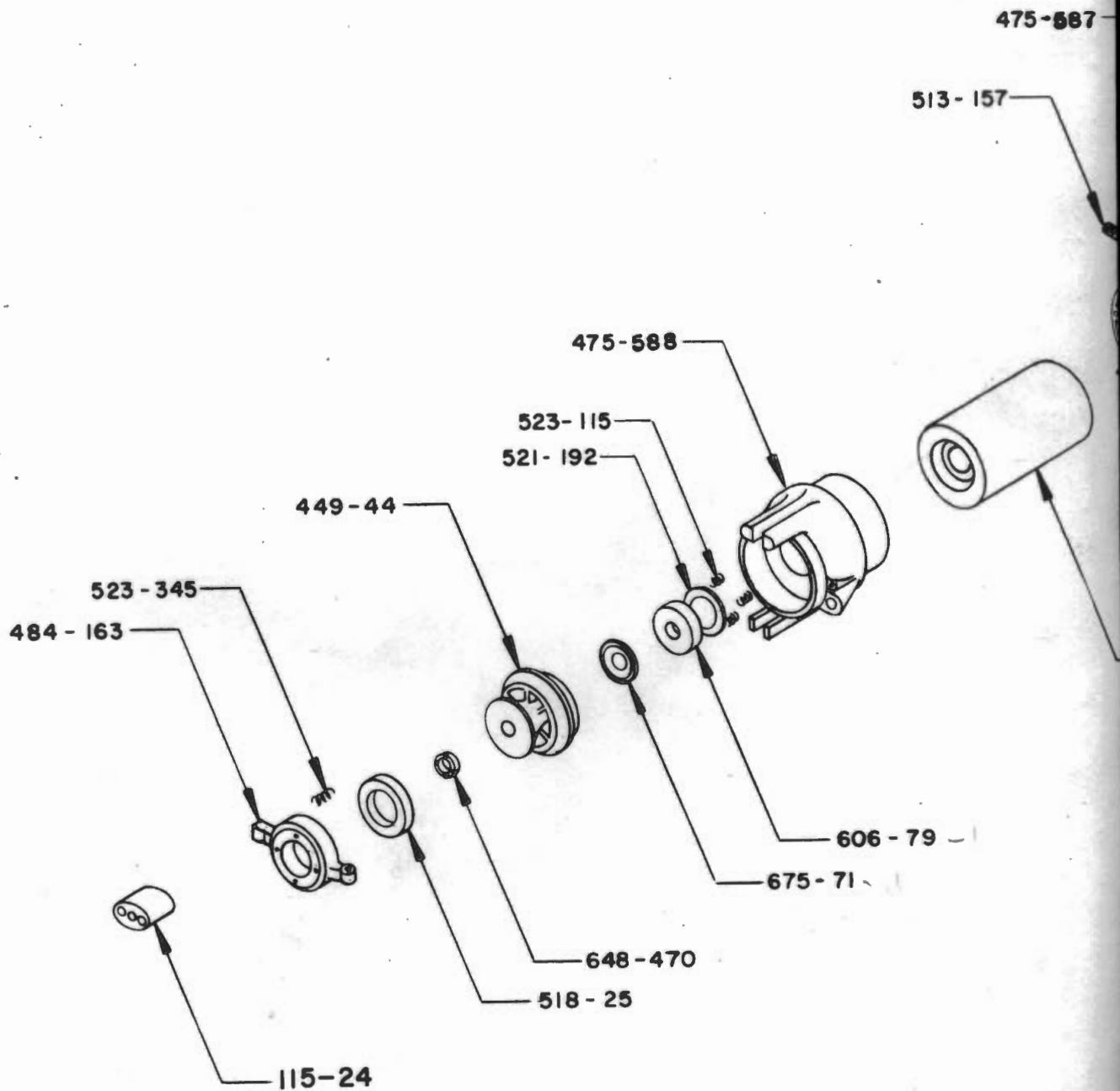
115-169 W672H
115-170 W684H
115-184 WT-2672
115-196 WT-2684

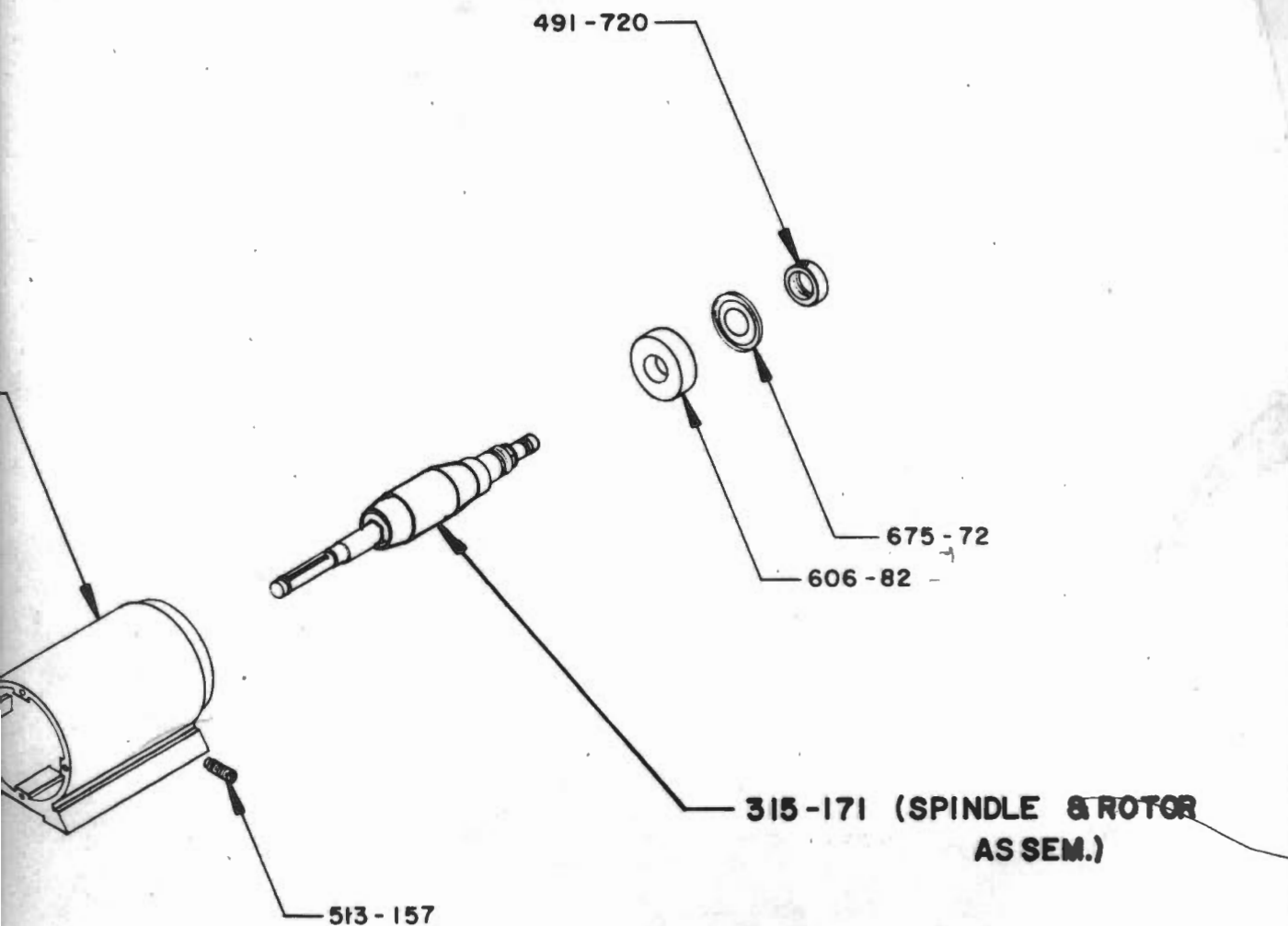




W 672H
W 684H
W T-2684
W T-2672

ONSRUD



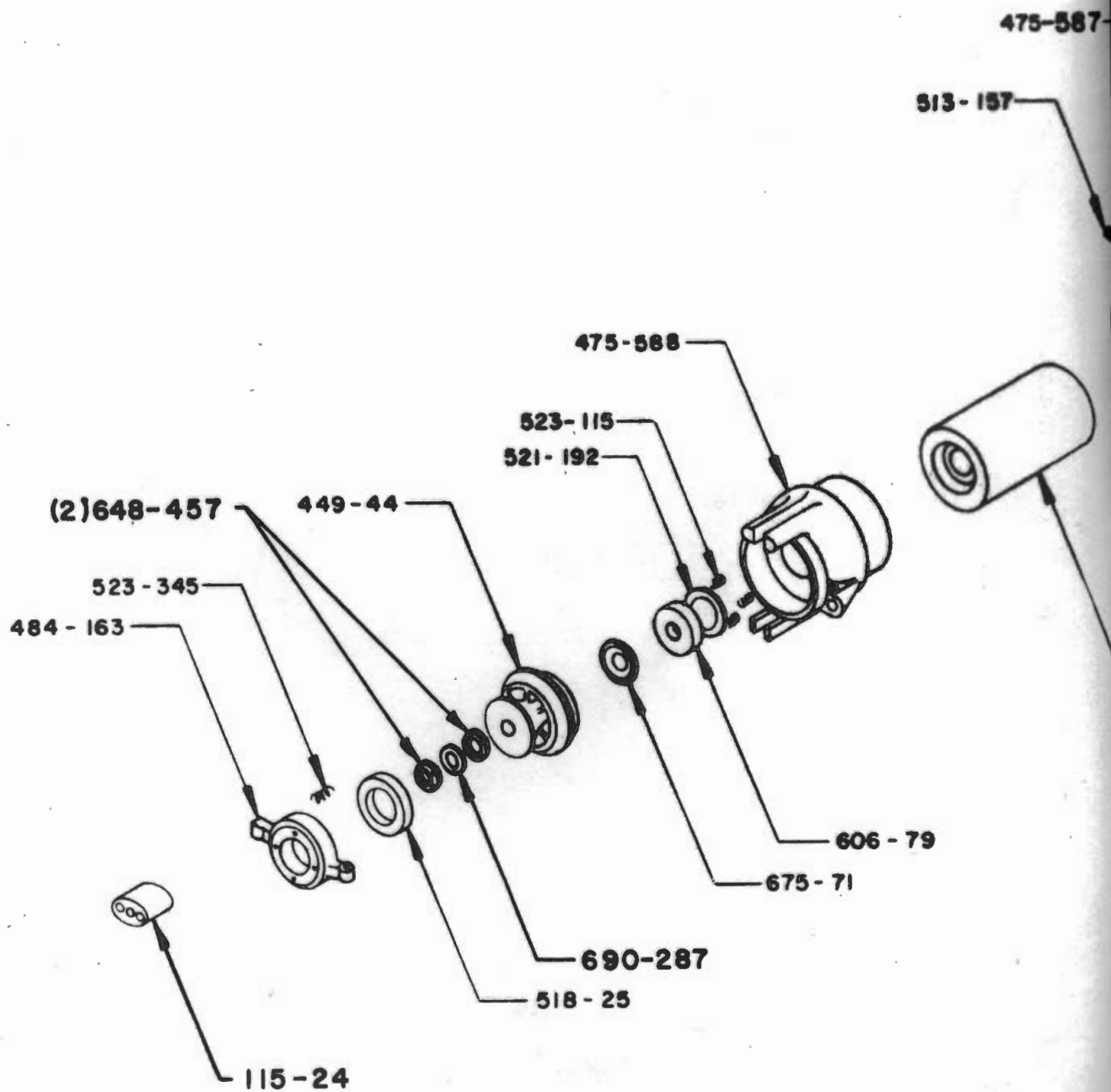


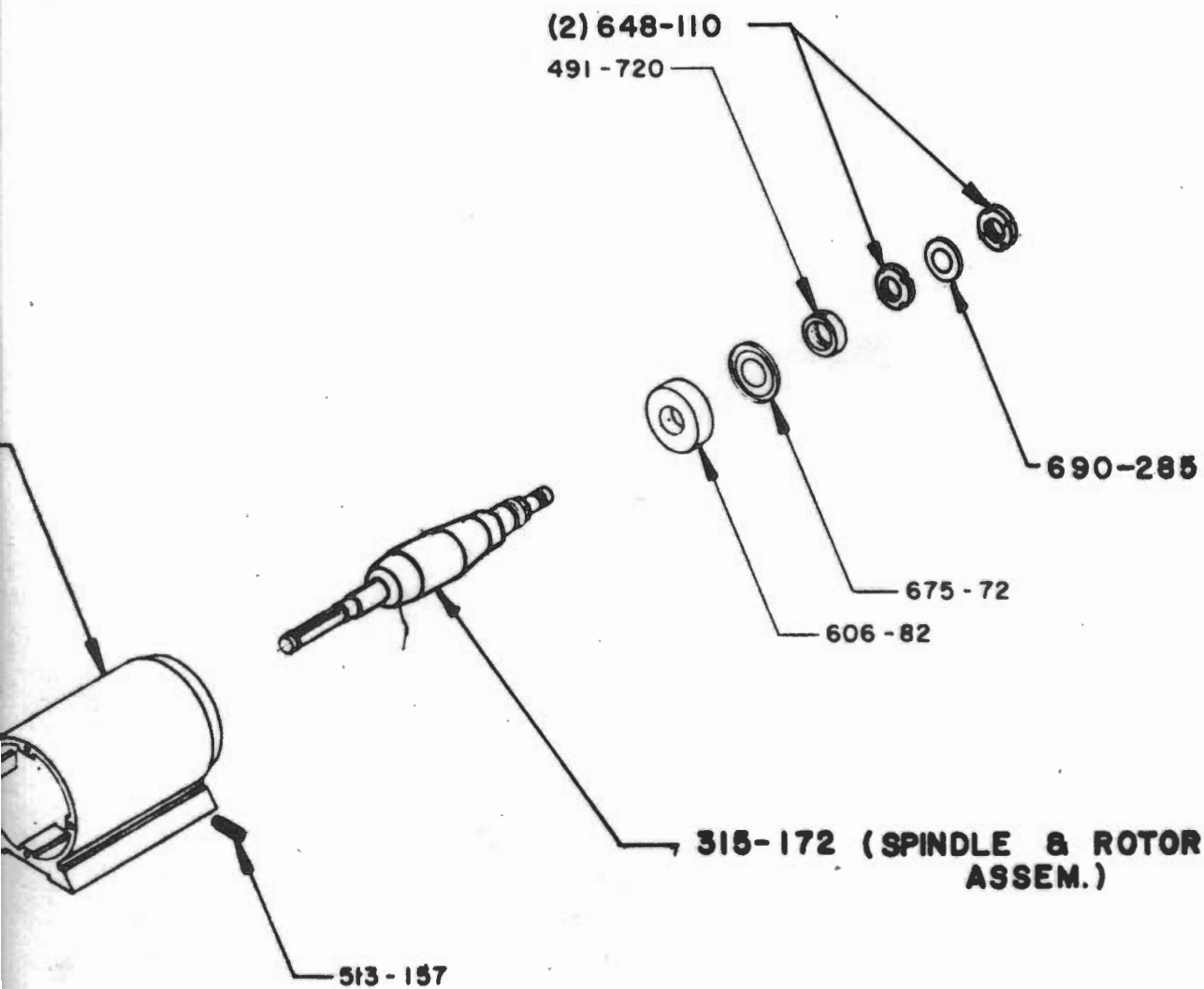
707-26 (220 V)
707-203 (440 V)
707-204 (550 V)

W 672H
W 684H
WT2672
WT2684

135-268
STANDARD MOTOR ASSEMBLY
ONSRUD

P. - 19



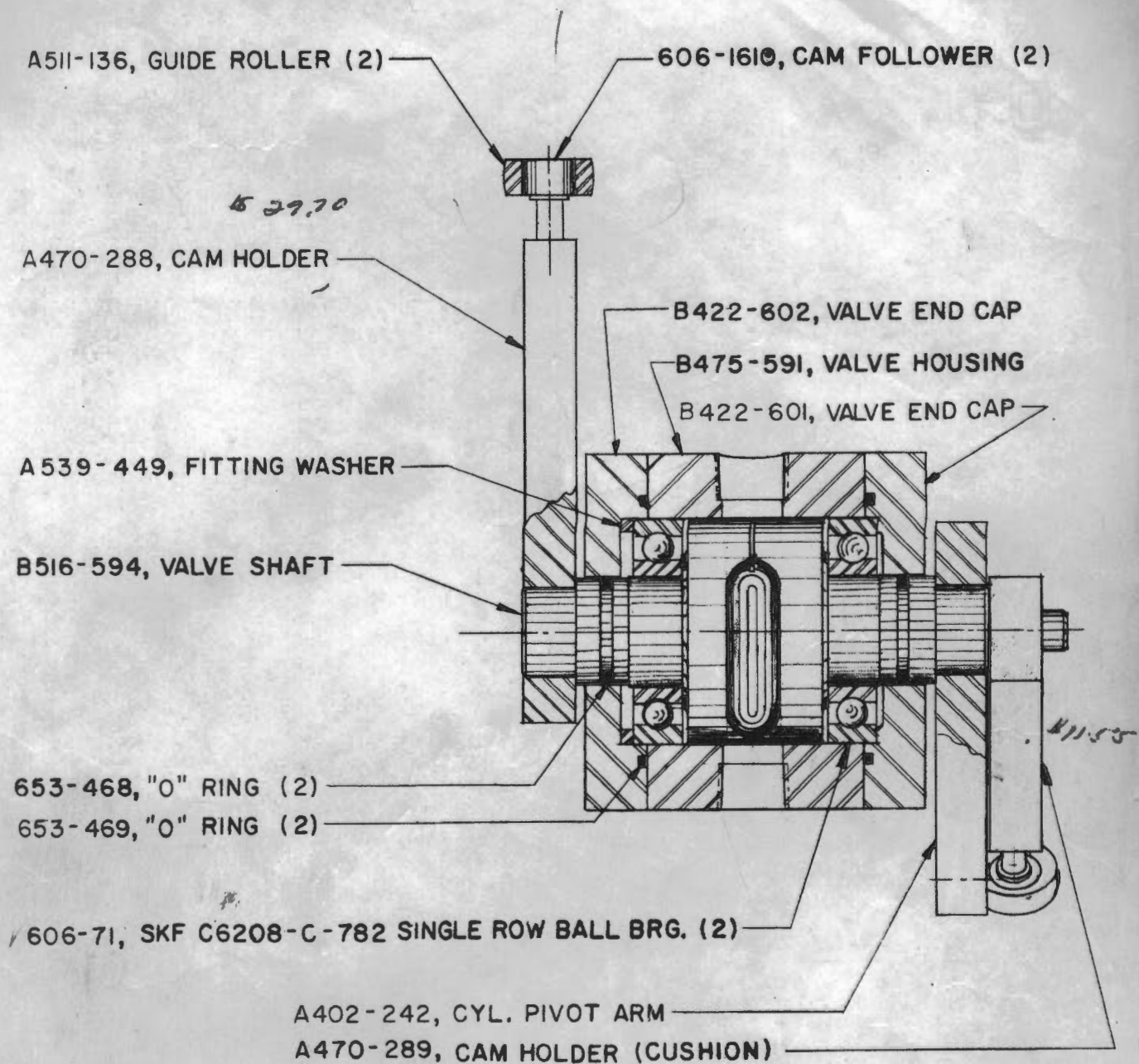


707-26 (220 V)
 707-203 (440 V)
 707-204 (550 V)

WT-2684
 WT-2672
 135-300

REVERSIBLE MOTOR ASSEMBLY
ONSRUD

P-20



HYDRAULIC VALVE ASSEMBLY (TABLE SPEED)
C153-64

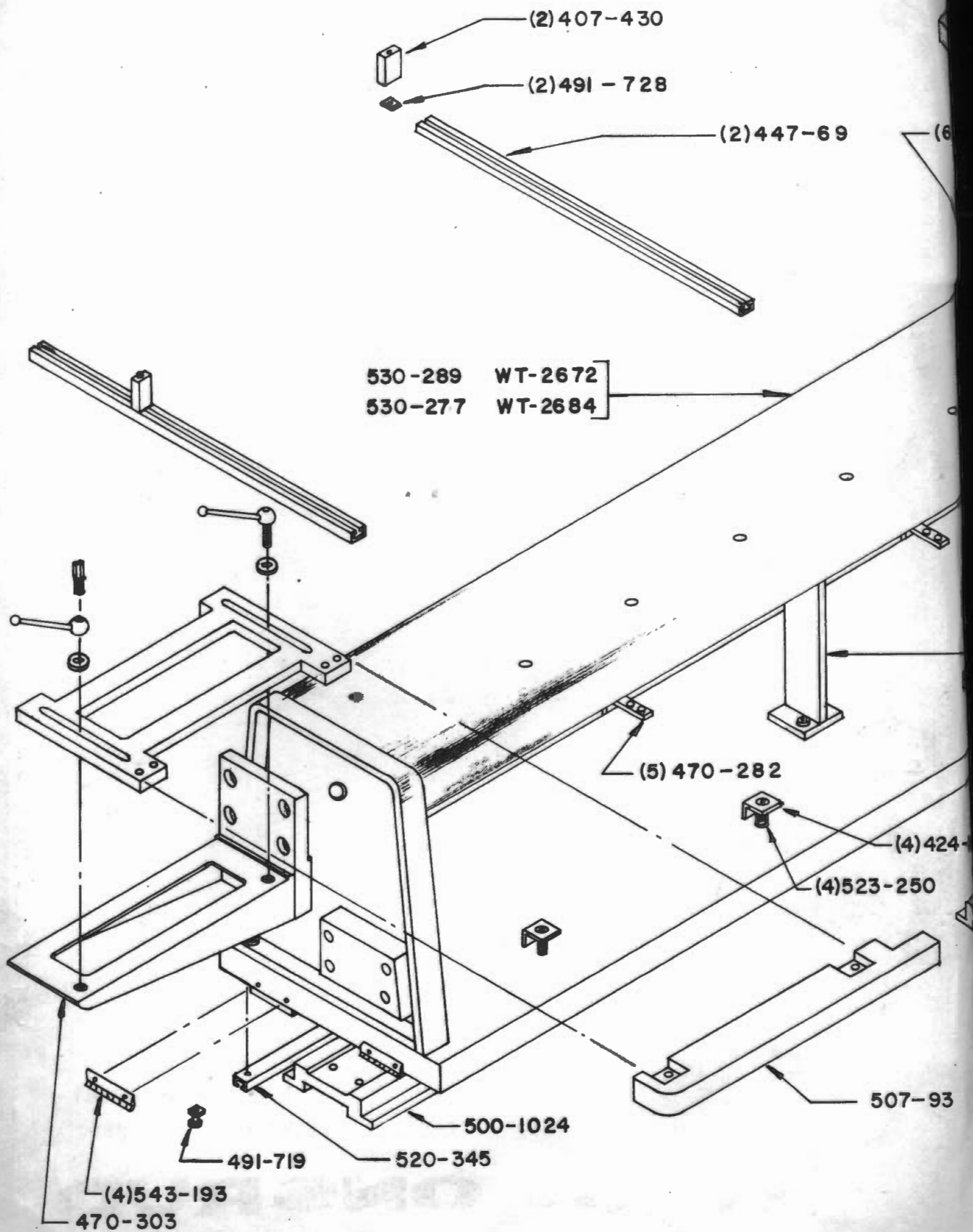
W672H

W684H

WT-2672

WT-2684

ONSRUD



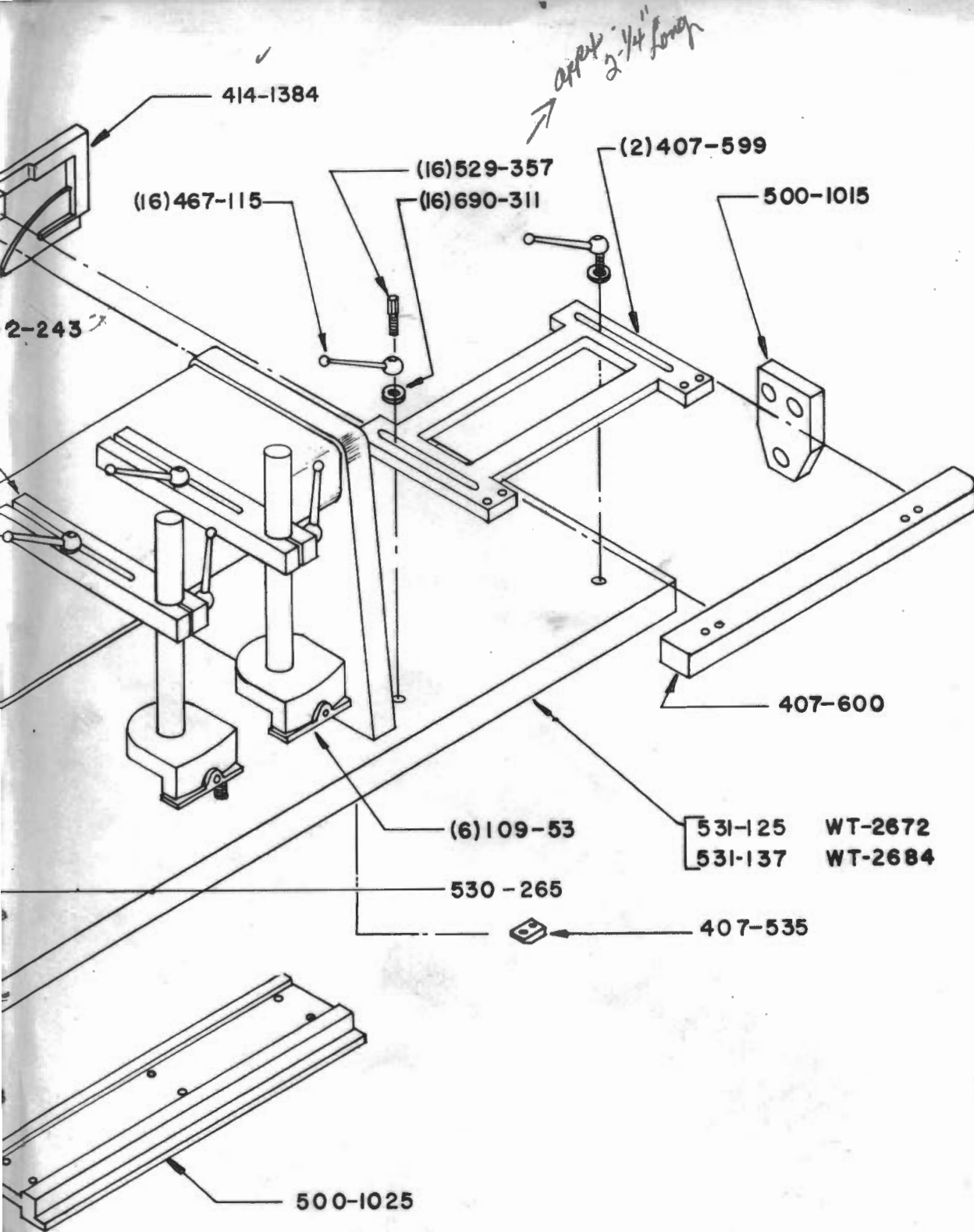


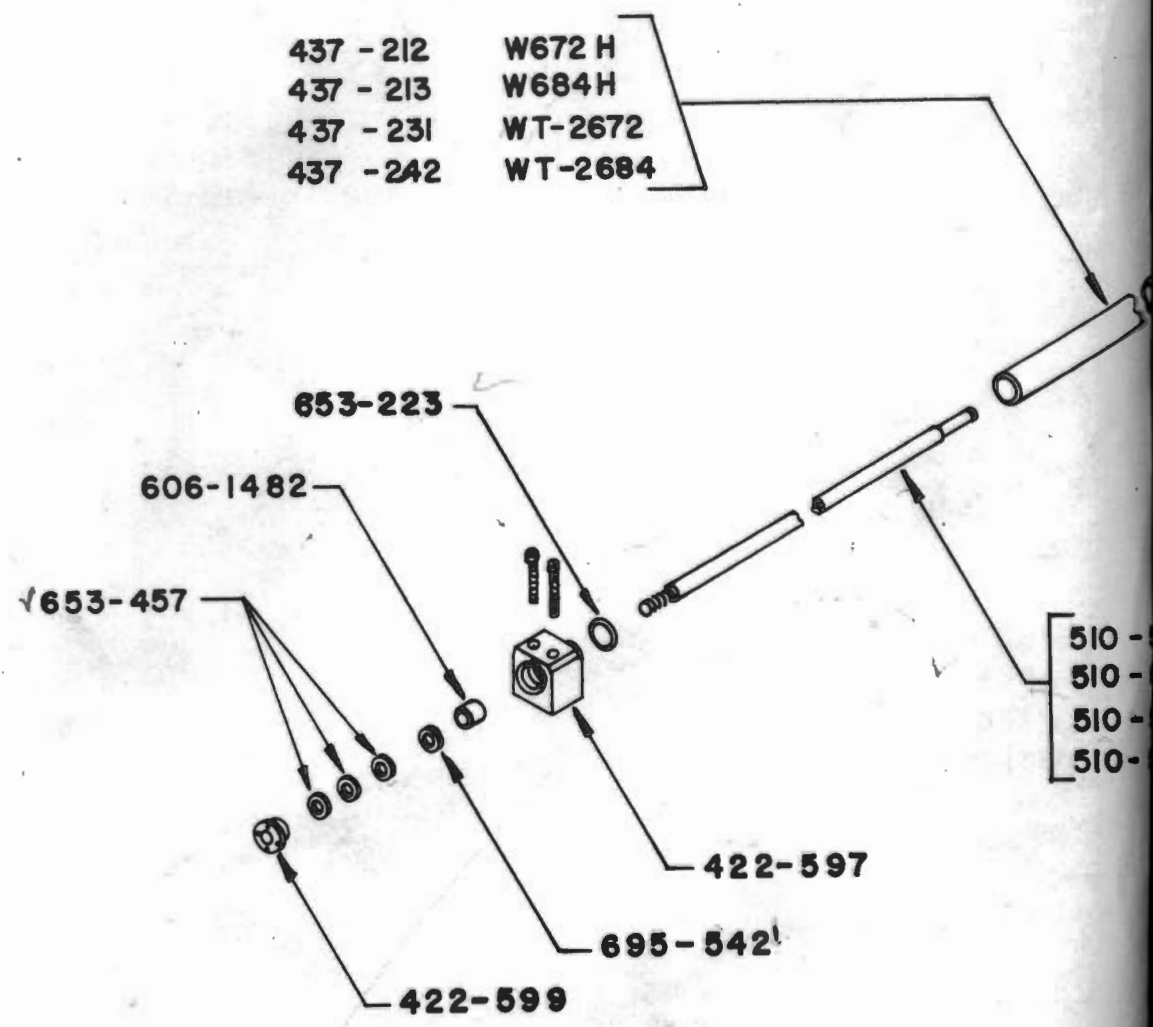
TABLE ASSEMBLY

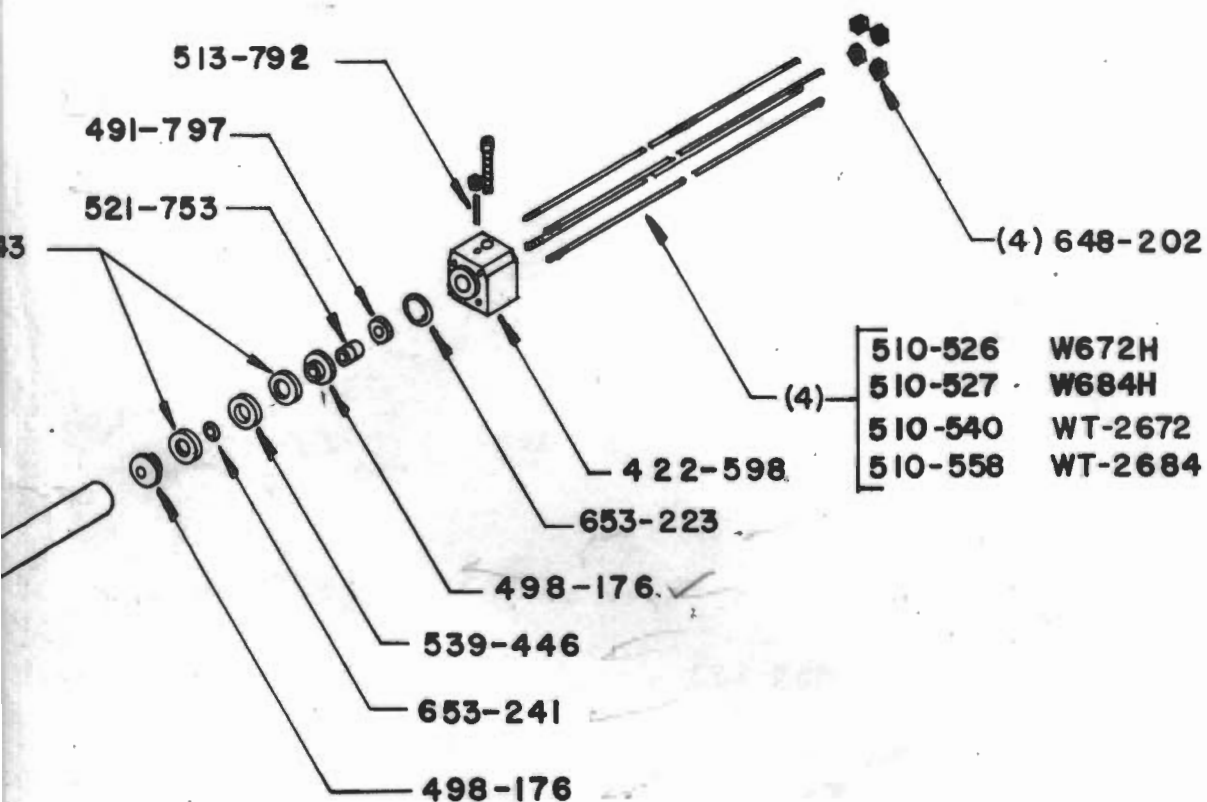
WT-2684
WT-2672

ONSRUD

695-

- | | |
|-----------|---------|
| 437 - 212 | W672 H |
| 437 - 213 | W684H |
| 437 - 231 | WT-2672 |
| 437 - 242 | WT-2684 |





8 W672H
 9 W684H
 1 WT2672 ✓
 9 WT2684

W 672 H
 W684H
 WT-2672
 WT-2684

HYDRAULIC CYLINDER ASSEMBLY

ONSRUD

407-430

491-728

447-69

414-1380

643-51

520-314

491-719

674-72

500-

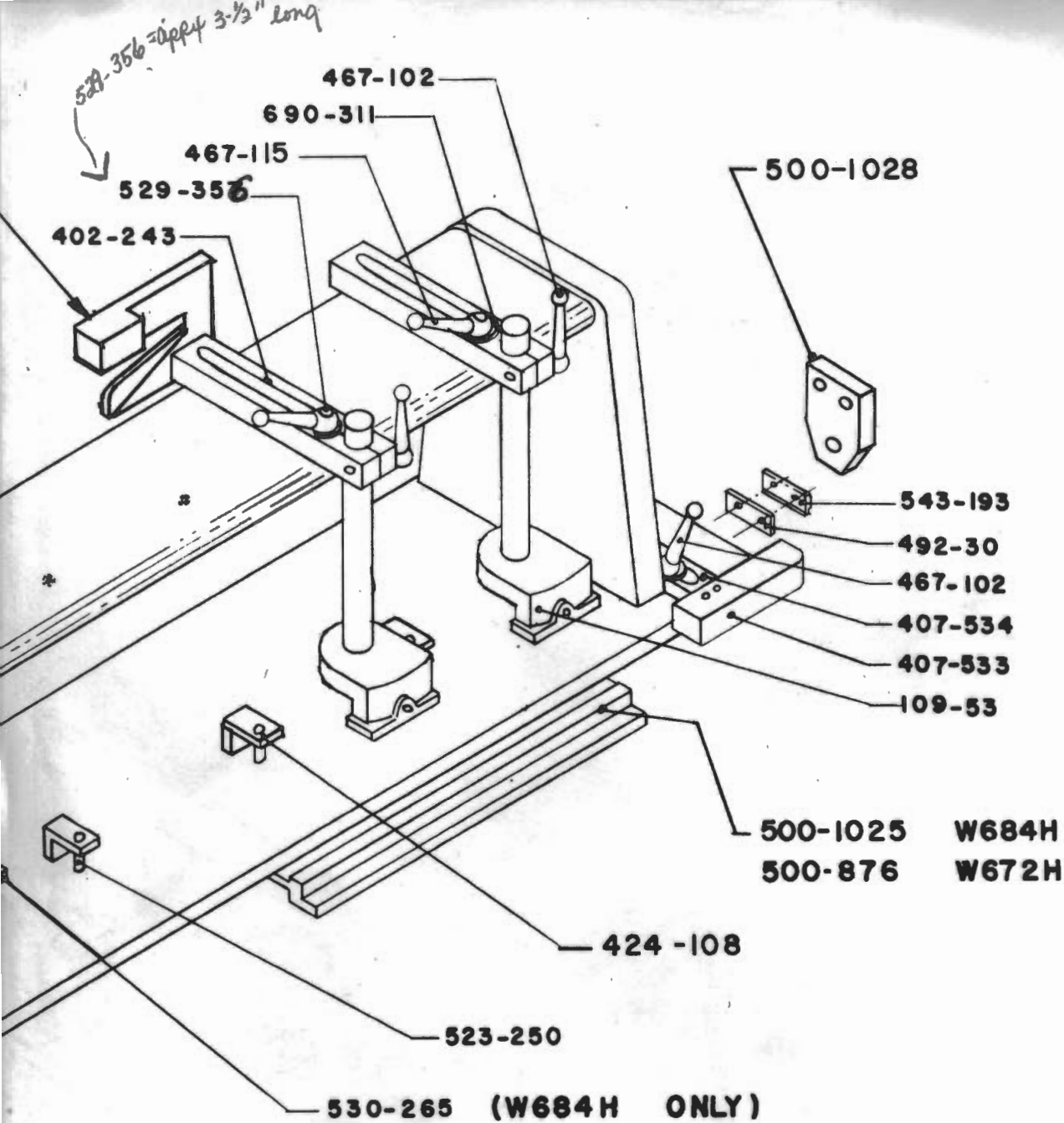
500-

530-264 W

530-262 W

543-193

PATENT NO. 187,718



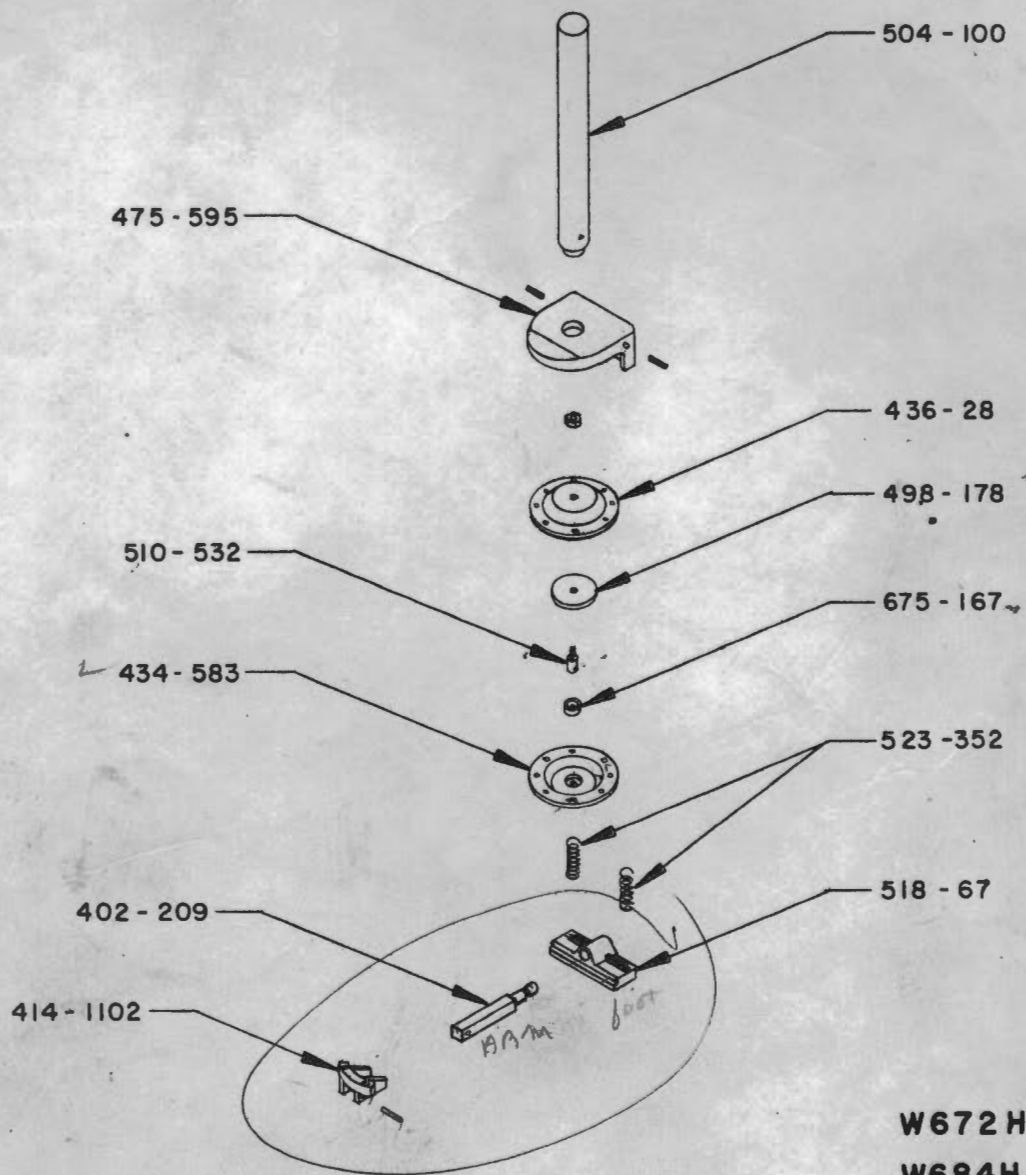
531-119 W684H
531-116 W672H

24 W684H
77 W672H

84H
72H

W672H
W684H

TABLE ASSEMBLY
ONSRUD

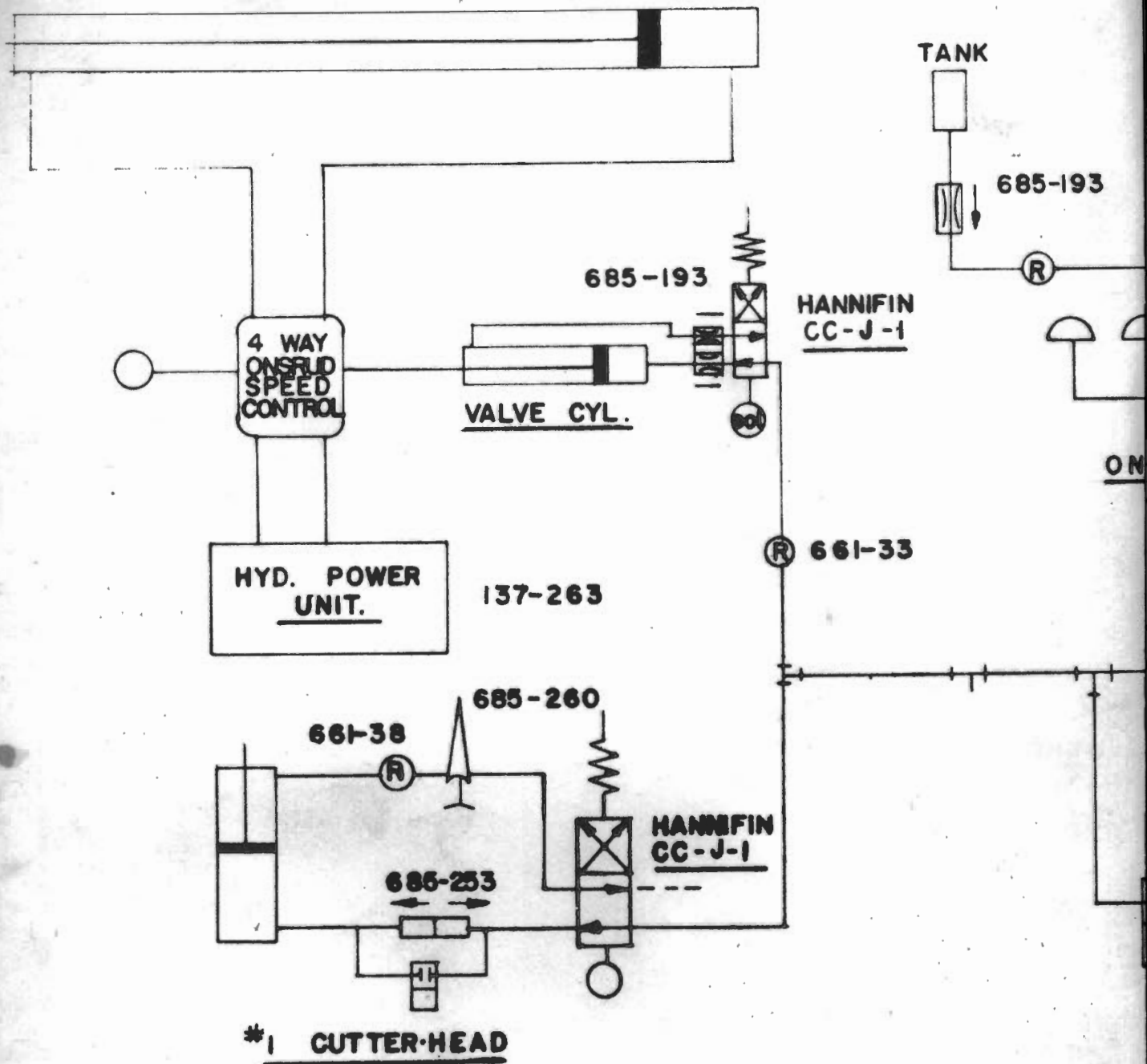


W672H
W684H
WT2672
WT2684

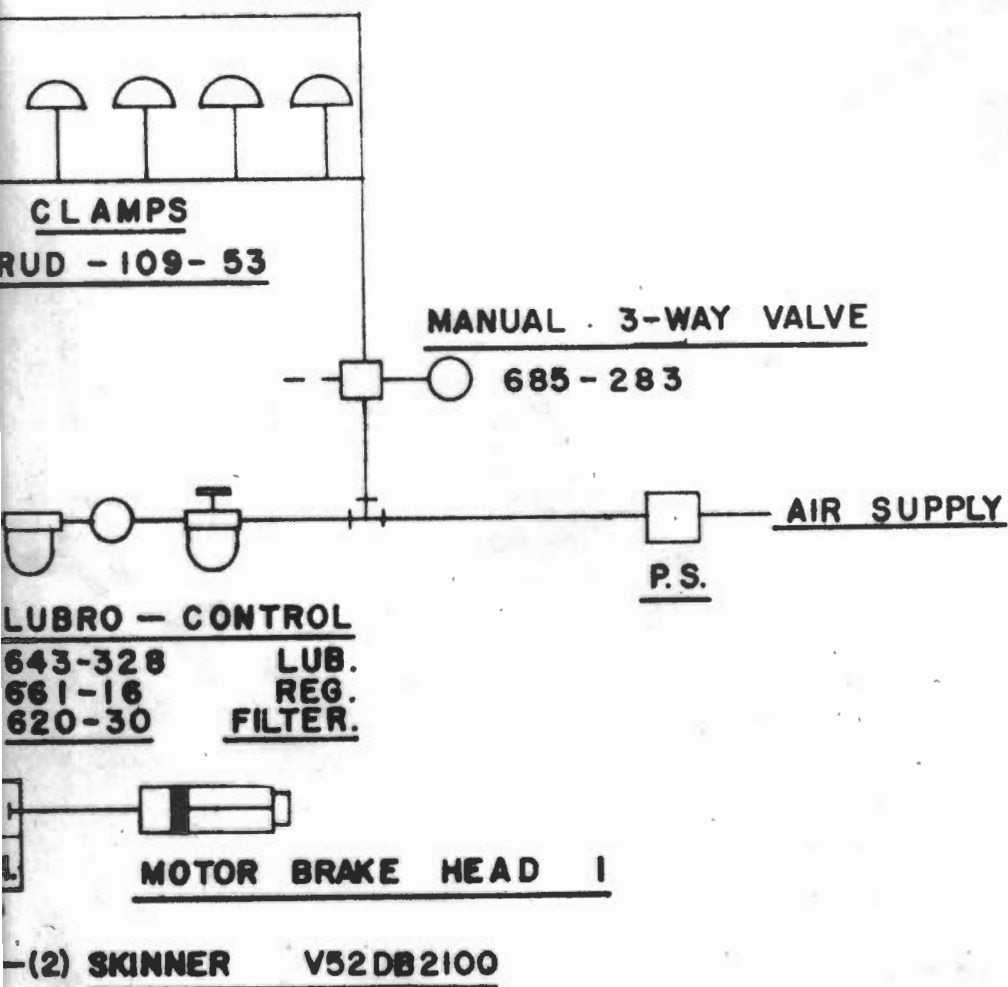
109-53
CLAMP ASSEMBLY

ONSRUD

TABLE DRIVE CYLINDER "ONSRUD"



LUBRICATION

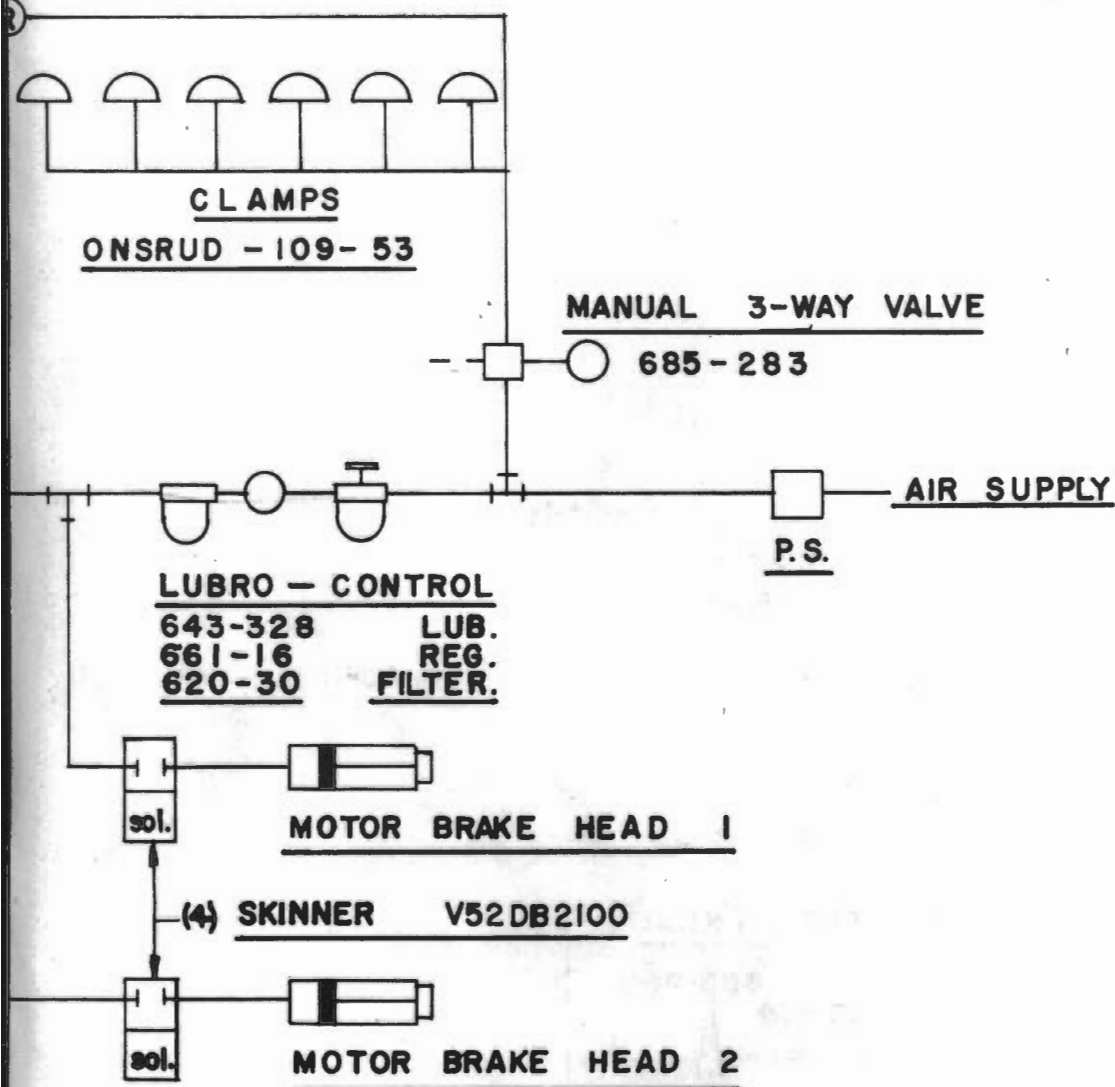


AIR & HYDRAULIC PIPING

W 672H
W 684H

LUBRICATION

5-193



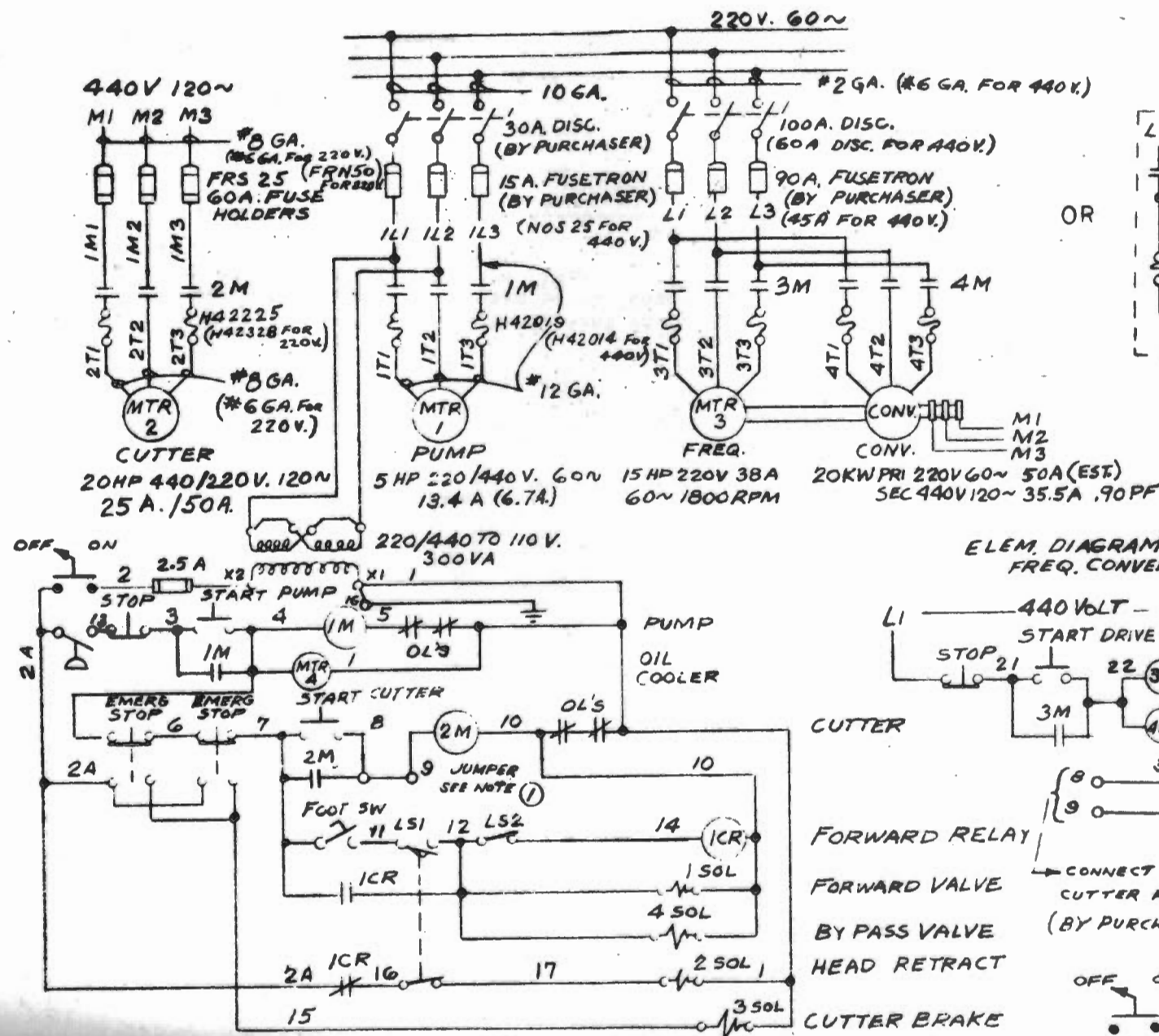
AIR & HYDRAULIC PIPING

WT-2672

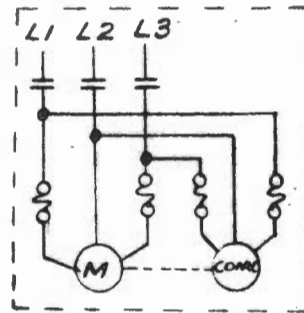
WT-2684



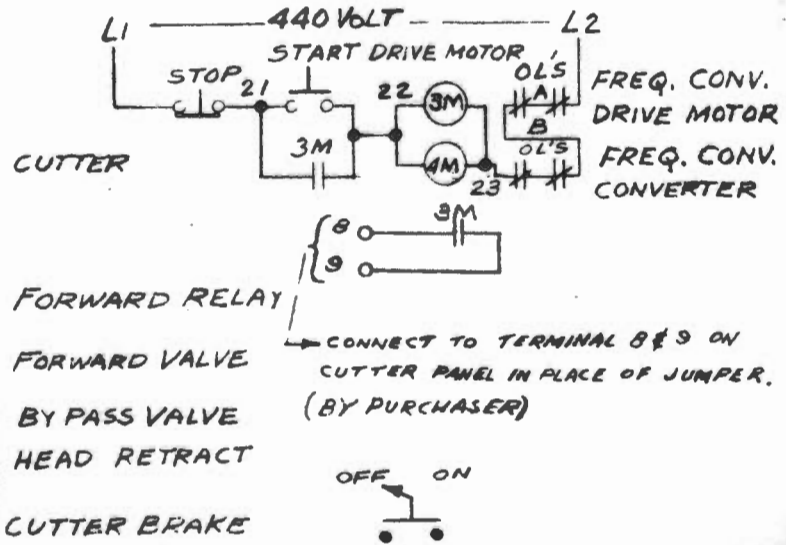
PART NO.
B2100-160
USED ON MACH.
W672H



OR



ELEM. DIAGRAM (REF)
FREQ. CONVERTER

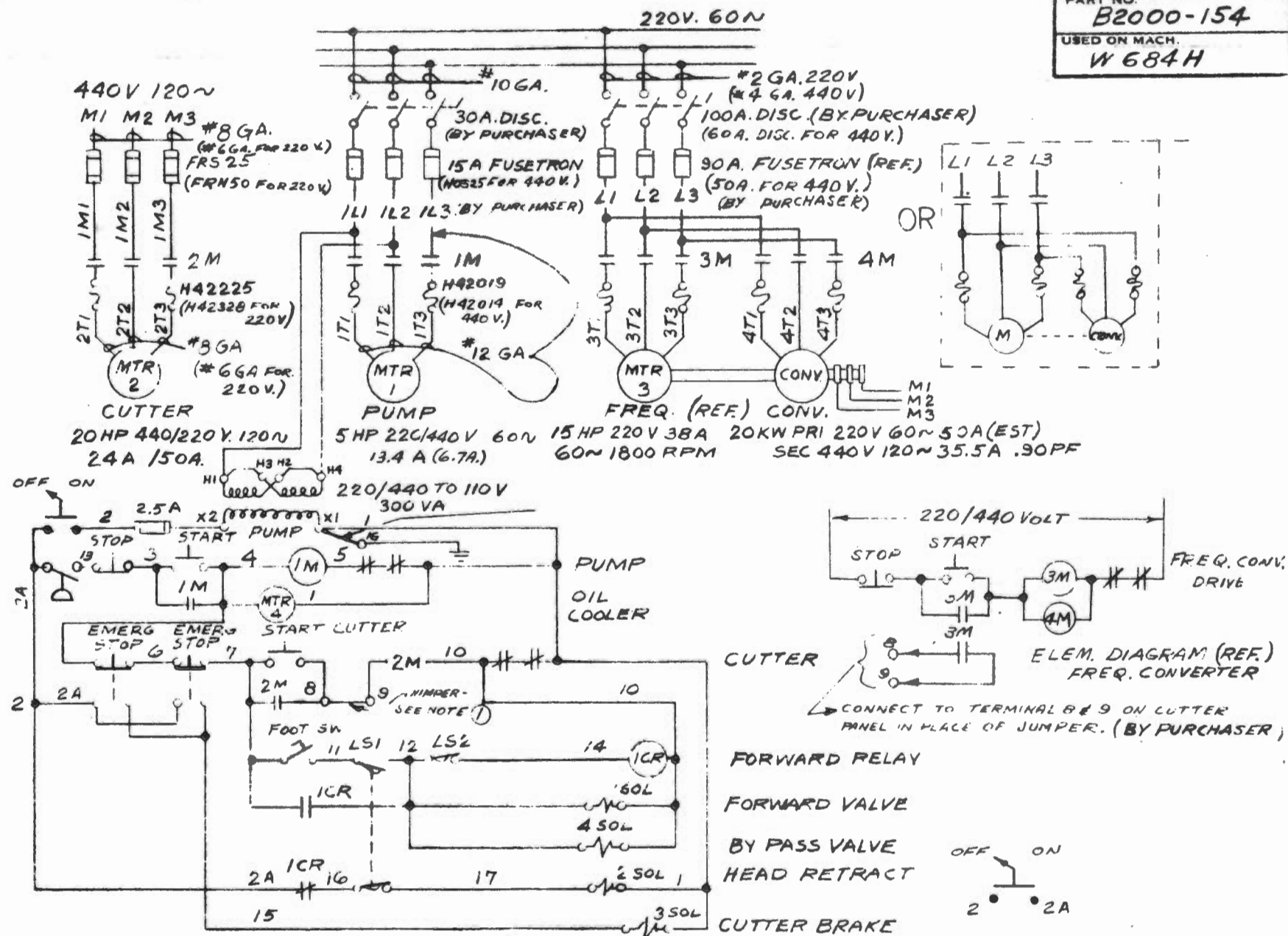


ELEMENTARY - CONTOUR PROFILER

CUTTER PUMP
START START

(OIL) OIL

PART NO.
B2000-154
USED ON MACH.
W 684 H



ELEMENTARY- CONTOUR PROFILER

CUTTER PUMP
START START

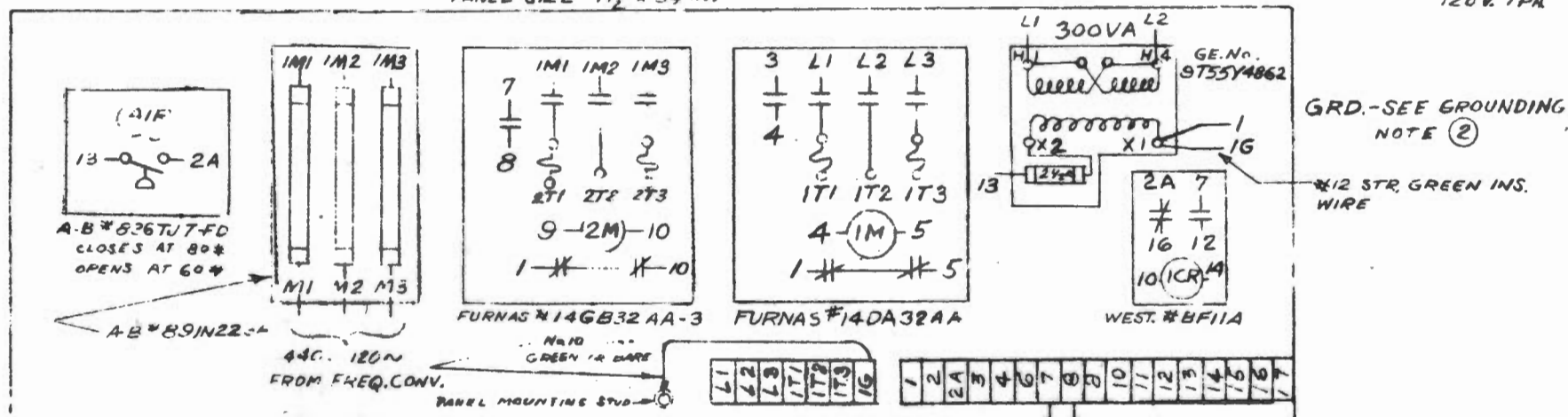
(OIL) OIL

CUTTER STOP LS1 LS2 1 SOL 3 SOL
 MTR 4-10-6 11-12 12-14-10 15-14-1
 2A-C 0-15 16-17 12-14 (HEAD RETRACT)
 2 SOL
 17-10-1

7-0-8 3-0-4 7-0-11
 EMERG STOP STOP SQ.D. 9002-AW-2
 7-0-6 3-1-2
 2A-C 0-15 0-0

7-0-11
 SQ.D. 9002-AW-2
 MTR 1 MTR 2
 1/20 H.R.
 1.5 A. FL.
 120 V. 1 PH

PANEL SIZE 11 1/2 x 34 IN.



CONNECTION DIAGRAM

(1) NOTE: Purchaser to remove jumper between terminals 8 & 9. Connect an unused N.O. contact of starter of freq. converter to terminals 8 & 9 of W684H control panel.

(2) NOTE: To be grounded by user if conditions permit. (connect jumper to term. 1G & X1) If portable cord is used to connect machine to power source use 4 conductor cord, Connect grounding conductor to term. 1G.

B/M 298-34

IMPORTANT	
5	4725 REV. 6/22/62
4	4555 REV. 3-1-62 PC
3	4452 REVISED 12-22-61
2	4403 REVISED 11-21-61
ISSUE	REVISIONS

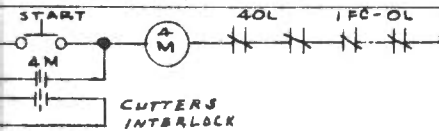
- DO NOT SCALE DRAWING
- OBTAIN ENGINEERING DEPT. APPROVAL BEFORE DEPARTING FROM DRAWING
- WHOLE & FRACTIONAL FIGURES MUST BE HELD = .010 TO FINISHED SURFACES
- UNLESS SPECIFIED HOLD DECIMAL DIMENSIONS TO ± .001

NO.	PART NUMBER	DESCRIPTION	MATERIAL
ONSRUD MACHINE WORKS. INC., CHICAGO, ILL.			
NAME W684H CONTOUR PROFILER		DESIGNED BY P.H.C.	
MAT'L		DRAWN BY PDL	
STK. SIZE		CHECKED BY	
PATT. NO.		APPROVED BY	
JIG NO.		S.O. NO.	
HEAT TREATMENT		DATE 4-12-61	
SUP'D'S PART NO.		SCALE NONE	
FOR ASSEM. OF THIS PART SEE		PART NO. B2000-154	



PART NO. 5H.1 OF 2
C 2100-224
USED ON MACH.
WT 2672 & WT-249
CR 1164 ATTACHMENT

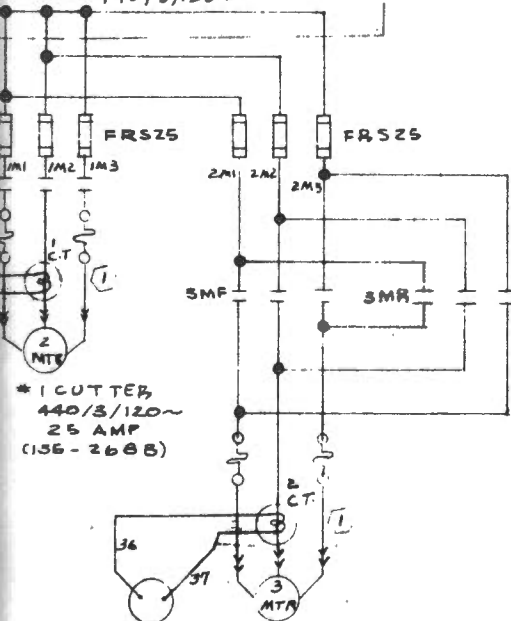
KW. CONVERTER CONTROL



FREQ CONVERTER & CONTROLS BY PURCHASER

OL'S

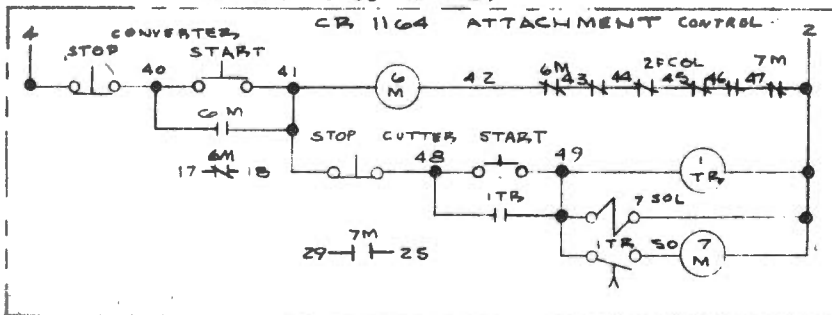
M1 M2 M3 440/3/120~



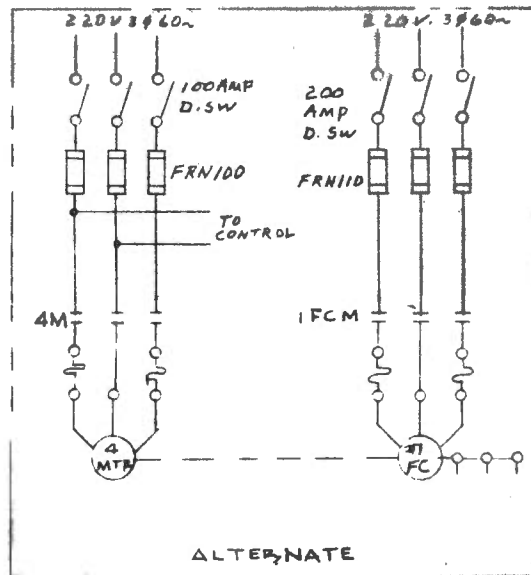
* 1 CUTTER
440/3/120~
25 AMP
(135-2688)

2 LOAD INDICATOR

* 2 CUTTER 440/3/120~
25 AMP (135-3008)



MICRO FOG VALVE
CUTTER



① C.T. (CURRENT TRANS.) PRI & SEC TURNS
TO MATCH METER NEEDS
SEE METER NAMEPLATE.
OR DRAWING A 2100-236

B/M 299-248
CR 1164 B/M 299-249

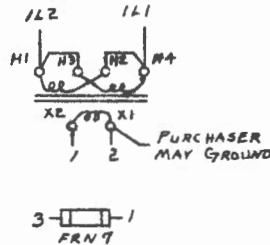
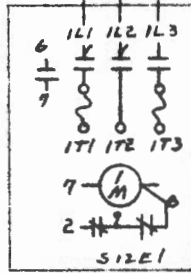
IMPORTANT

- DO NOT SCALE DRAWING
- OBTAIN ENGINEERING DEPT. APPROVAL BEFORE DEPARTING FROM DRAWING
- WHOLE & FRACTIONAL FIGURES MUST BE HELD ± 0.01 TO FINISHED SURFACES
- UNLESS SPECIFIED HOLD DECIMAL DIMENSIONS TO ± .001

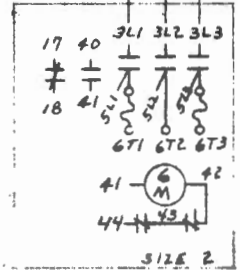
5/43 REVISIONS

NO.	PART NUMBER	DESCRIPTION	MATERIAL
ONSRUD MACHINE WORKS, INC., CHICAGO, ILL.			
NAME <u>ELEMENTARY DIAGRAM</u>			
MATL <u>220/3/60 LINE</u>			
STK. SIZE <u>440/3/120 SPINDLES</u>			
PATT. NO.			
JIG NO. <u>CR-1164, 220/3/60 &</u>			
HEAT TREATMENT <u>220/3/360</u>			
SUPD'S PART NO.			
FOR ASSEM. OF THIS PART SEE			
DESIGNED BY		DRAWN BY <u>GH</u>	
CHECKED BY <u>ED</u>		APPROVED BY	
S.O. NO.		DATE <u>3-15-63</u>	
SCALE <u>5H.1 OF 2</u>		PART NO. <u>C2100-224</u>	

220/3/60-
FROM #1 DISC SW.
3-1c #12



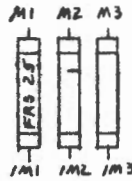
220/3/60
FROM #3 DISC SW.
3-1c #6



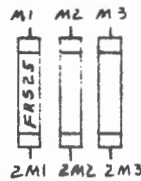
ONLY WITH CR 1.64 ATTACHMENT

M3
M2
M1

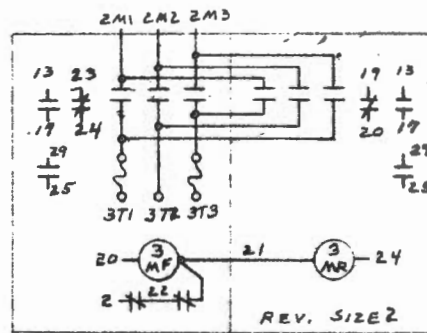
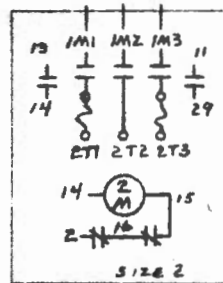
3-1c #10



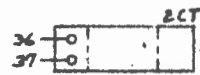
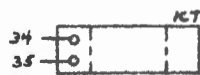
3-1c #10



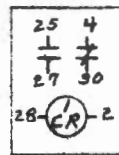
3-1c #10



34
35
36
37



(OPTIONAL)
SEE METERS
FOR C.T.
TURNS
OR DRAWG A2100-236

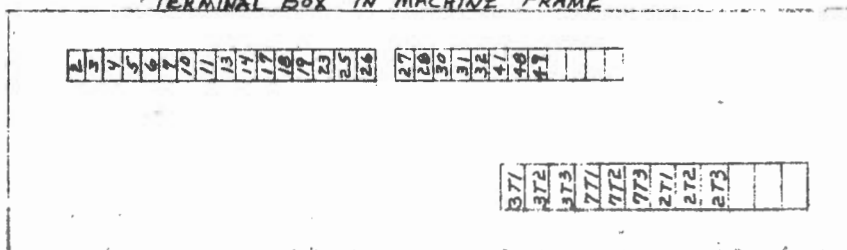


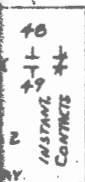
RUN STOP
11-0 0-12
11-0 0-25

2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
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TERMINAL BOX IN MACHINE FRAME





CR1164 ATT.

CONVERTER

START STOP
0-0 40-0-4
41-0 0-40 0 0

HEAD
RETRACT

1LS
26-0-27
30-0-31

FWD LIMIT

ELS
27-0-28

AIR SUPPLY
PRESSURE SW.

PS
4-0-5

CONTROL STATION

CONTROL

OFF ON

PUMP
START
0-0
6-0 0-7
PUMP
STOP
6-0-5
0 0
KEY
SW.
FWD REV.
0-0
CUTTER
START
0-0
49-0 0-48

STOP
7-0-10
4-0 0-32
#1 CUTTER
START
0-0
13-0 0-14
#2 CUTTER
START
0-0
13-0 0-17
CUTTER
STOP
41-0-48
0 0

150L
32-0-2 #1 BRAKE

250L
32-0-2 #2 BRAKE

350L
27-0-2 TABLE FWD VALVE

450L
27-0-2 #2 BY-PASS

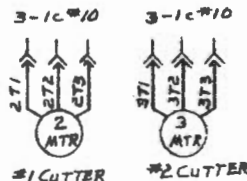
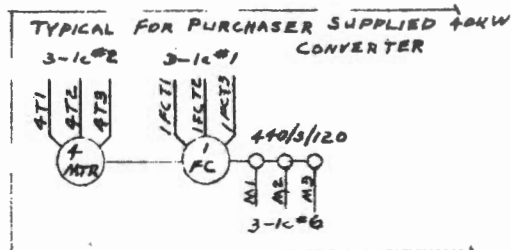
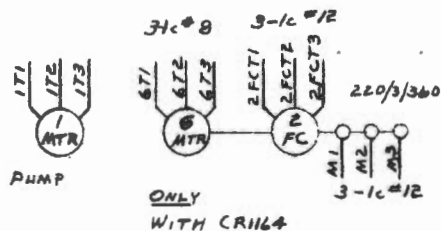
550L
31-0-2 #1 BY PASS

650L
27-0-2 HEAD RETRACT

FOOT SW.

25-0-26

STOP
10-0-11
7-0 0-32
AT CUTTERS



LOAD INDICATORS

#1 CUTTER #2 CUTTER



NOTE: #14 WIRE EXCEPT AS NOTED.

ELEM. 5A.1 of 2

B/M 299-248
CR1164---B/M 299-249

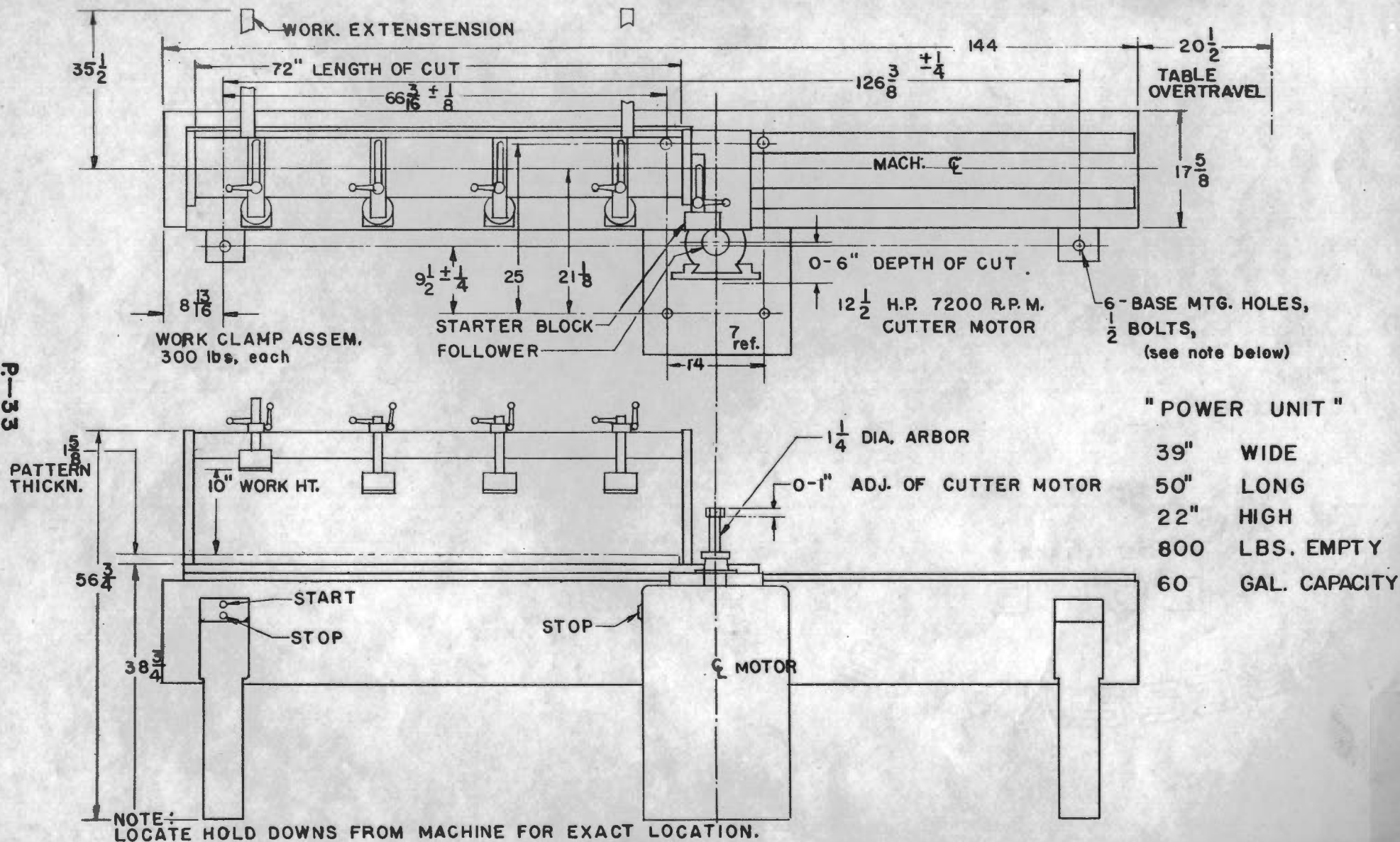
IMPORTANT

- DO NOT SCALE DRAWING
- OBTAIN ENGINEERING DEPT. APPROVAL BEFORE DEPARTING FROM DRAWING
- WHOLE & FRACTIONAL FIGURES MUST BE HELD $\pm .010$ TO FINISHED SURFACES
- UNLESS SPECIFIED HOLD DECIMAL DIMENSIONS TO $\pm .001$

ISSUE 5/43 REVISIONS

NO. REV.	PART NUMBER	DESCRIPTION	MATERIAL
ONBRUD MACHINE WORKS, INC., CHICAGO, ILL.			
NAME CONNECTIONS		DESIGNED BY	
MATT. DIAGRAM		DRAWN BY EB	
STK. SIZE 220/3/60 LINE		CHECKED BY	
PATT. NO. 440/3/120 SPINDLE		APPROVED BY	
JIG NO. CR-1164 220/3/60		S.O. NO.	
HEAT TREATMENT 220/3/120		DATE 4/1/63	
SUPD'S PART NO.		SCALE 5A.2 of 2	
FOR ASSEM. OF THIS PART SEE		PART NO. C2100-224	

P-33



"POWER UNIT"

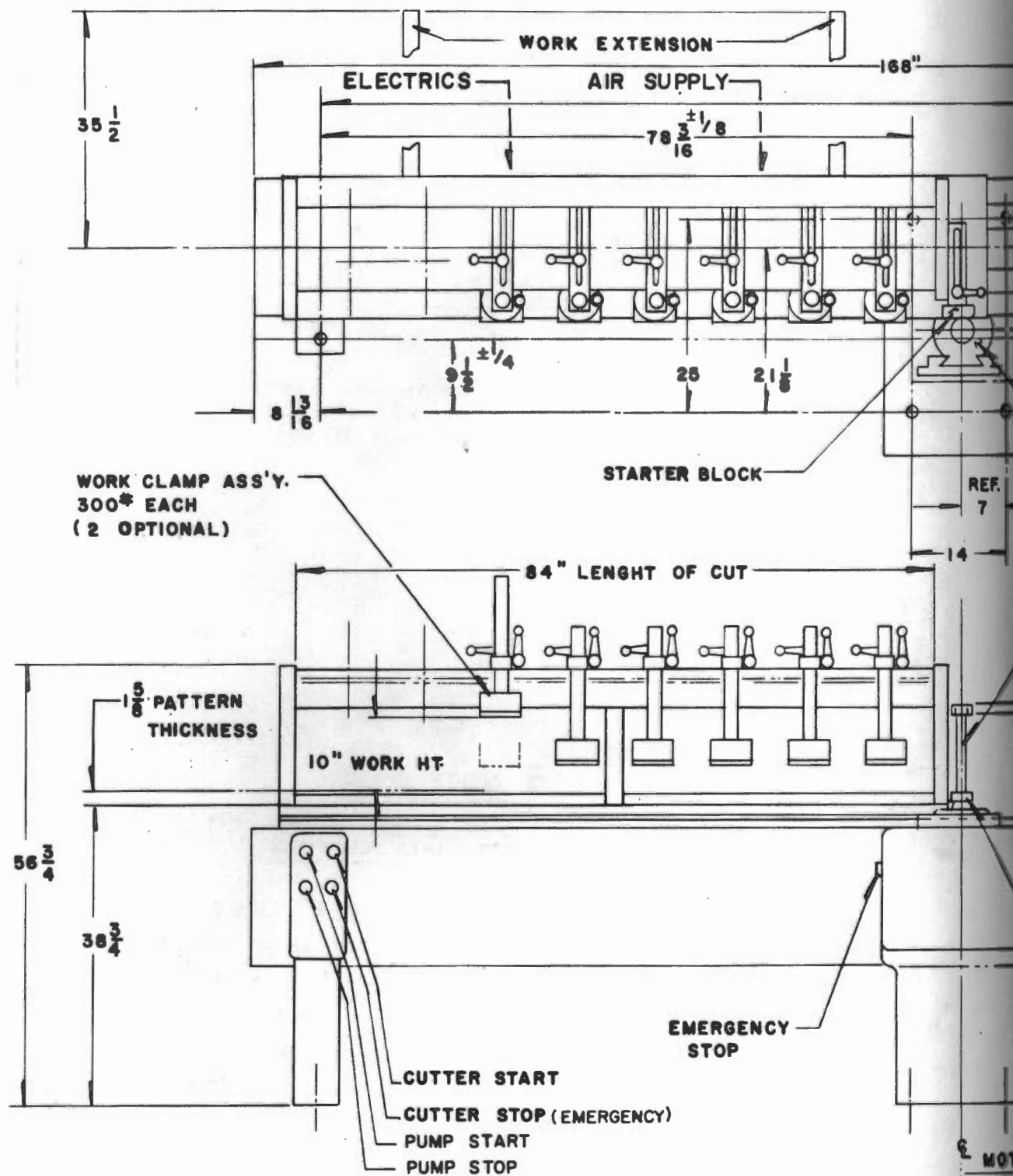
39"	WIDE
50"	LONG
22"	HIGH
800	LBS. EMPTY
60	GAL. CAPACITY

FLOOR PLAN

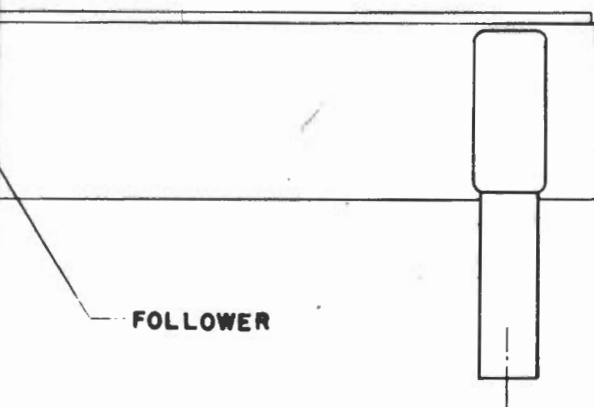
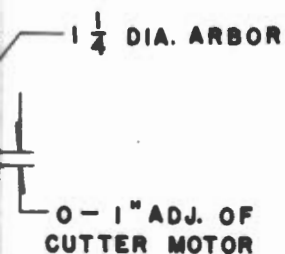
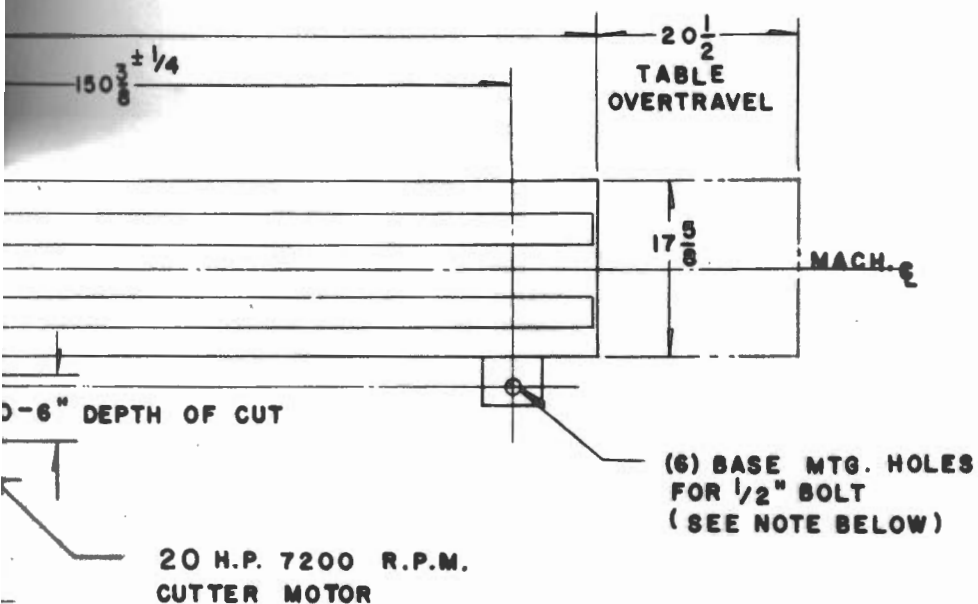
PATENT NO. 187, 718

W672H

ONSRUD



PATENT NO. 187,718



NOTE :

LOCATE HOLD DOWNS FROM MACHINE
FOR EXACT LOCATION.

" POWER UNIT "

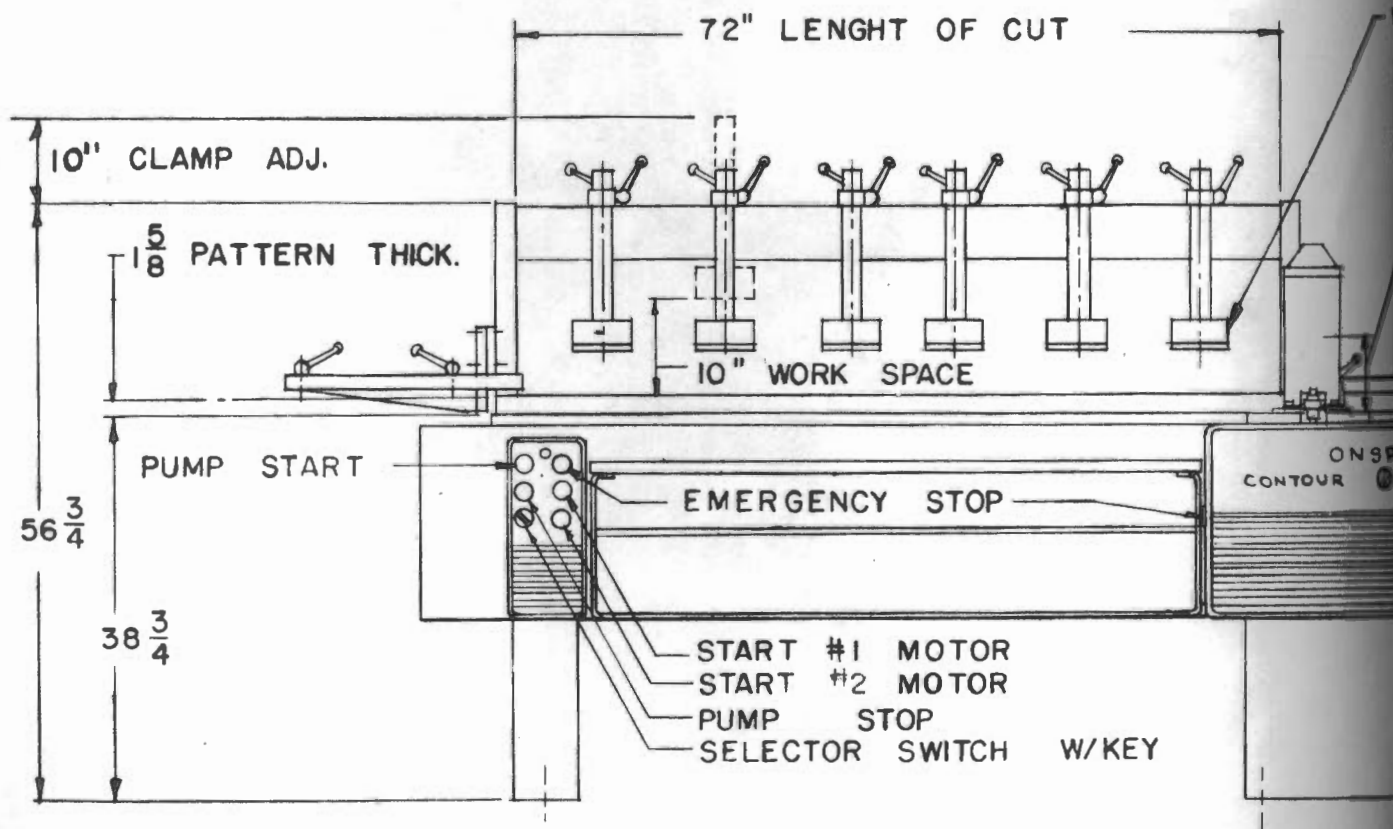
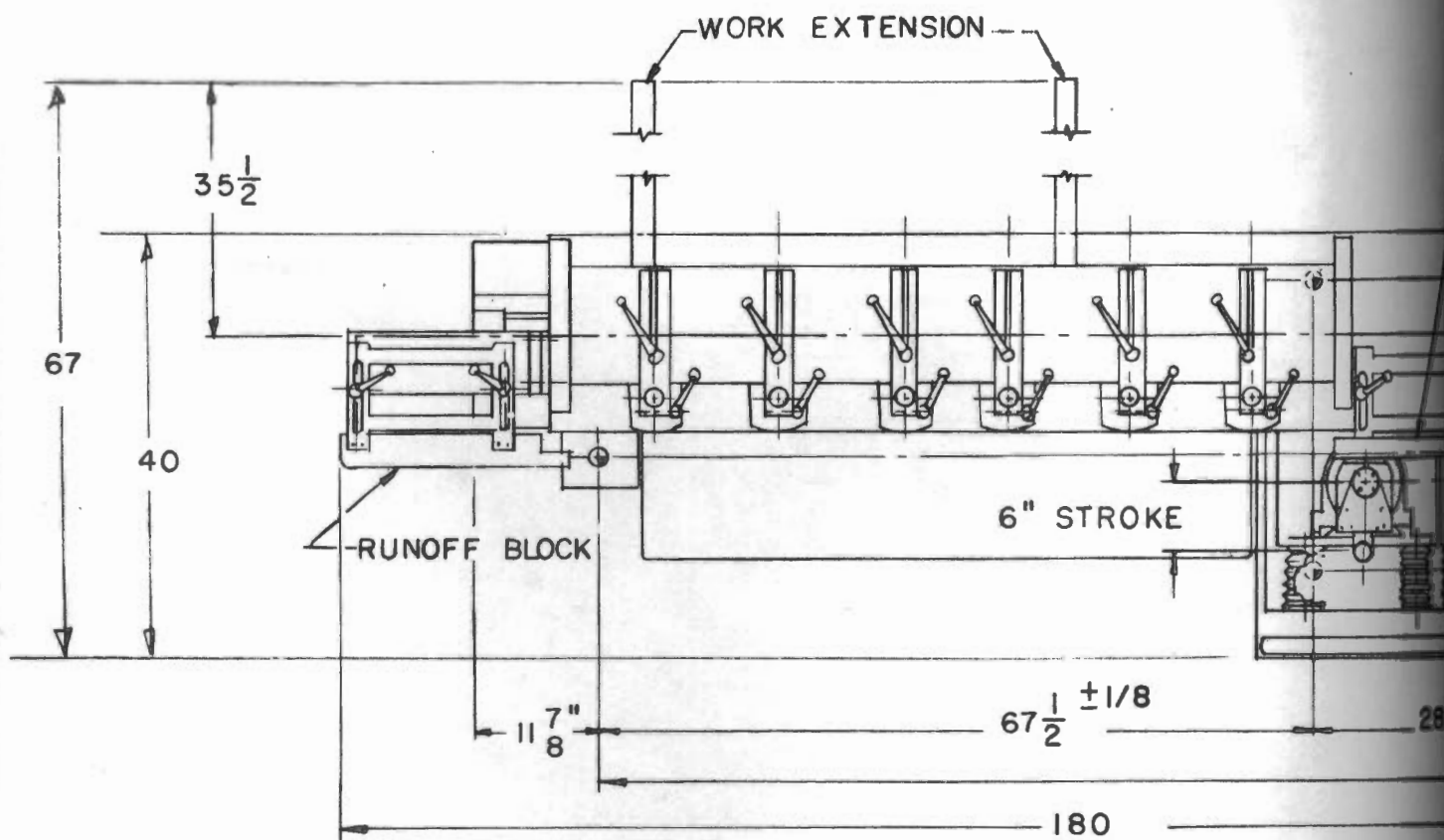
39" WIDE
50" LONG
22" HIGH
800 LBS. EMPTY
60 GAL. CAPACITY

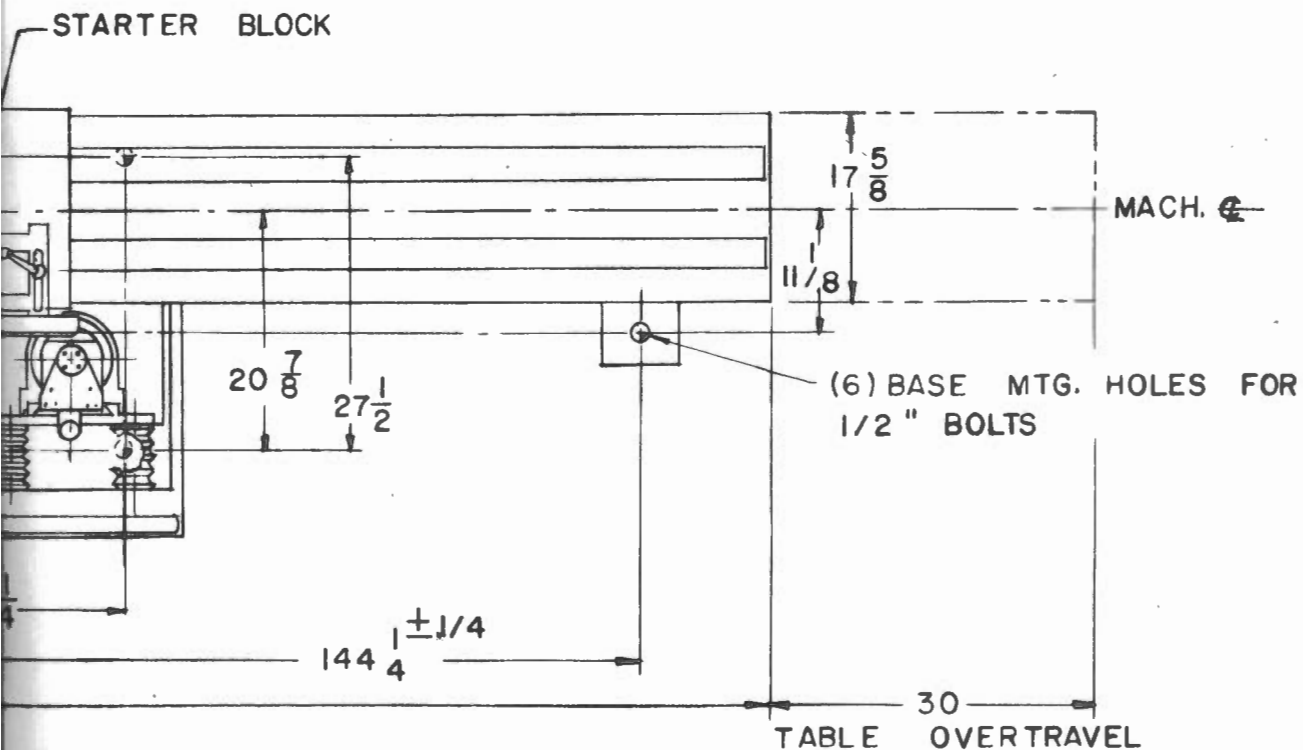
SINGLE HEAD PROFILER

FLOOR PLAN

W 684 H

ONSRUD

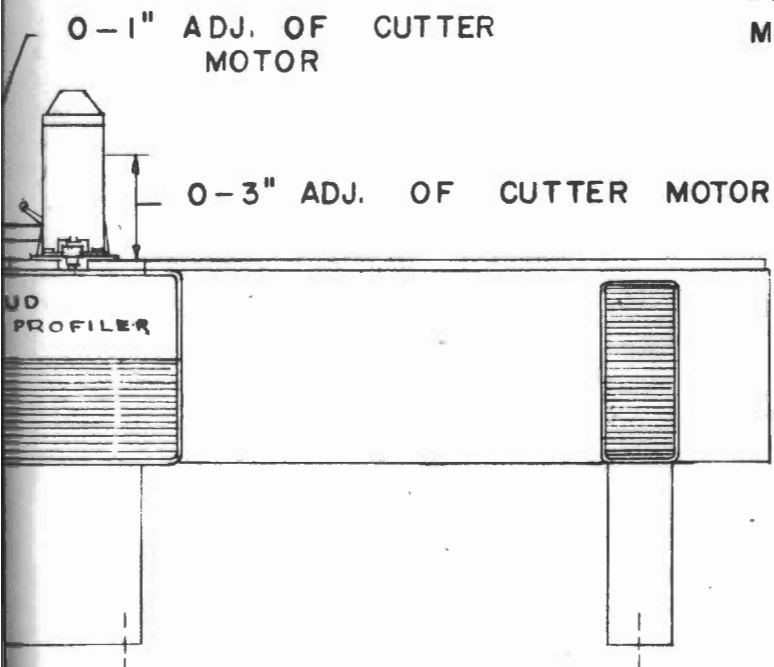




WORK CLAMP ASSEM. 300 LBS. EACH
2) OPTIONAL

NOTE:

LOCATE HOLD DOWNS FROM
MACHINE FOR EXACT LOCATIONS

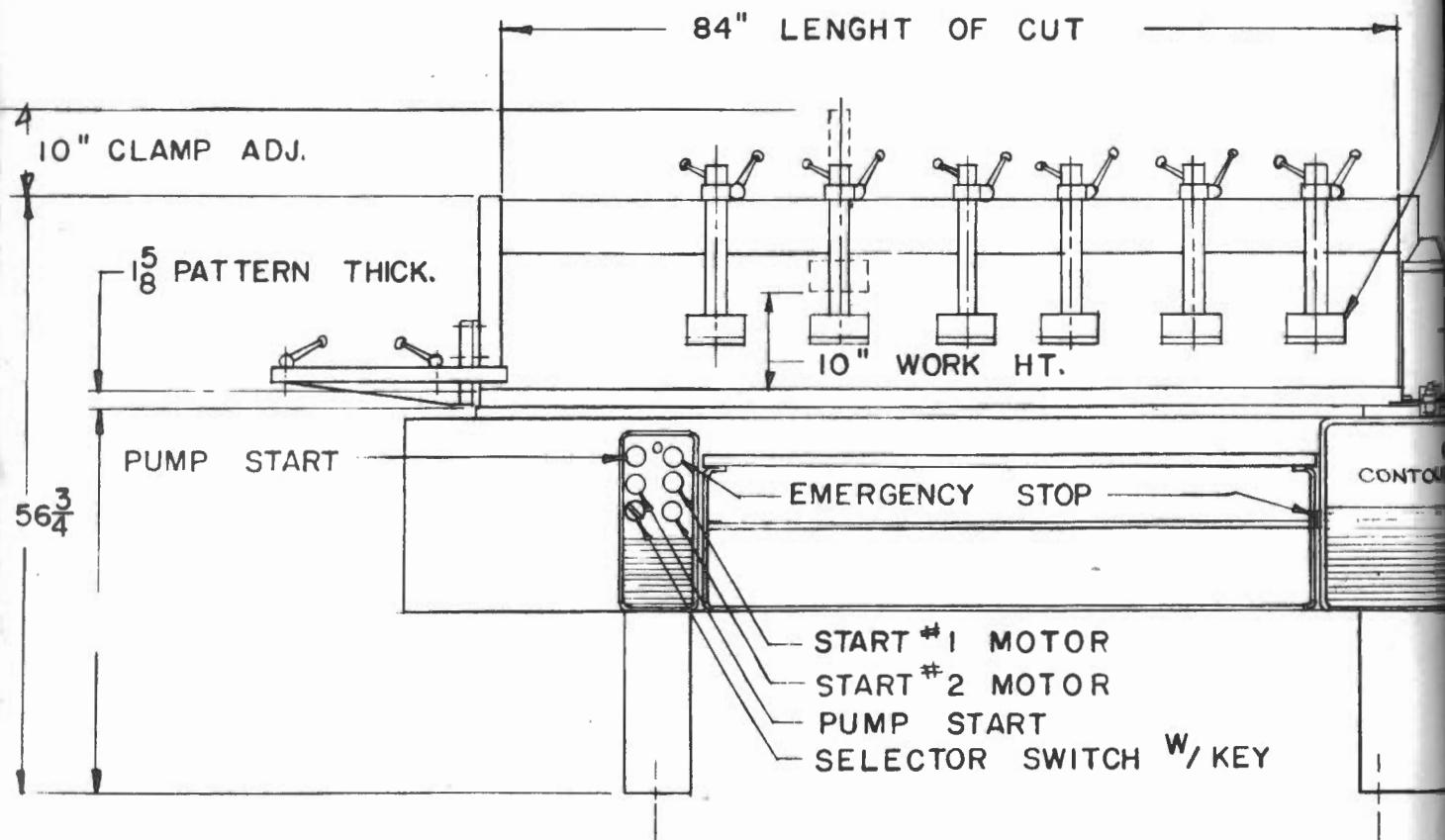
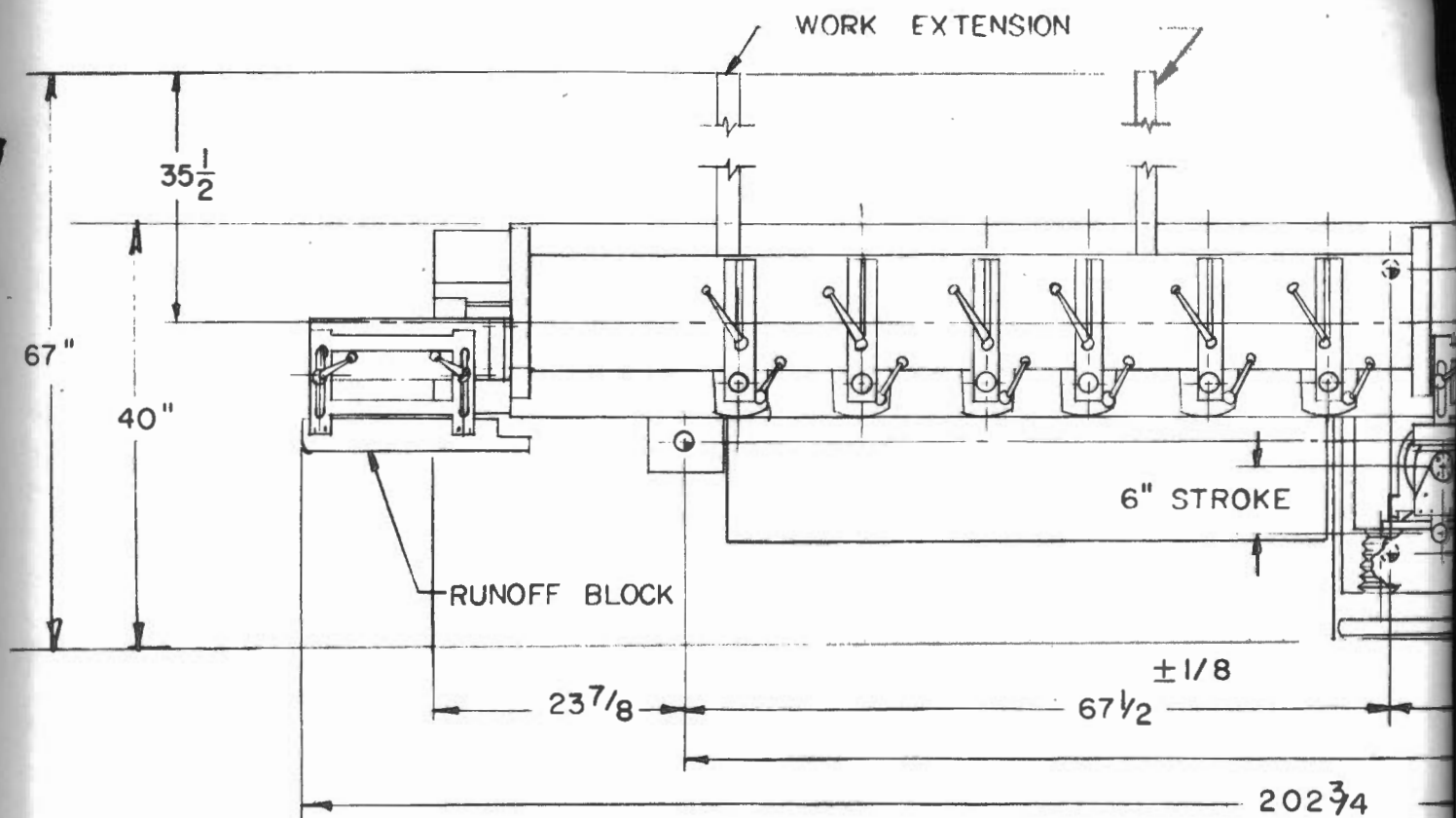


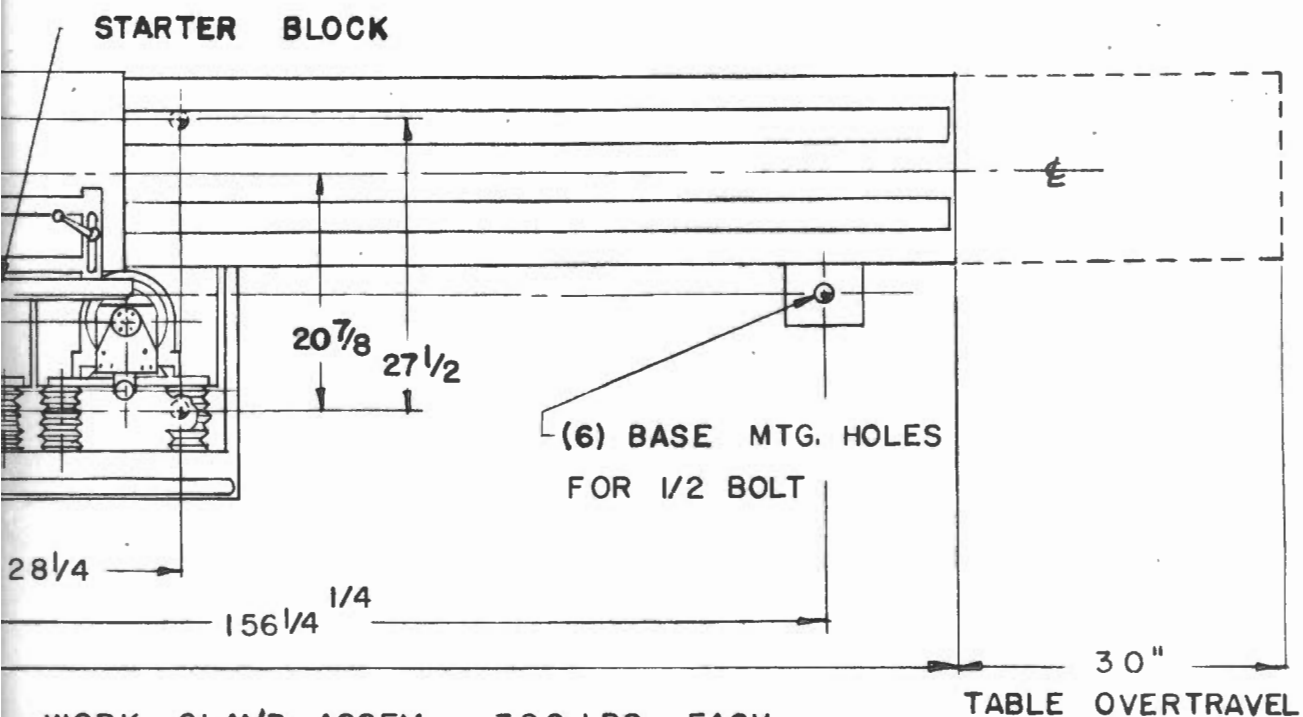
POWER	UNIT
39"	WIDE
50"	LONG
22"	HIGH
800	LBS EMPTY
60	GAL. CAPACITY

W T- 2672
FLOOR PLAN

ONSRUD

B2-51FA

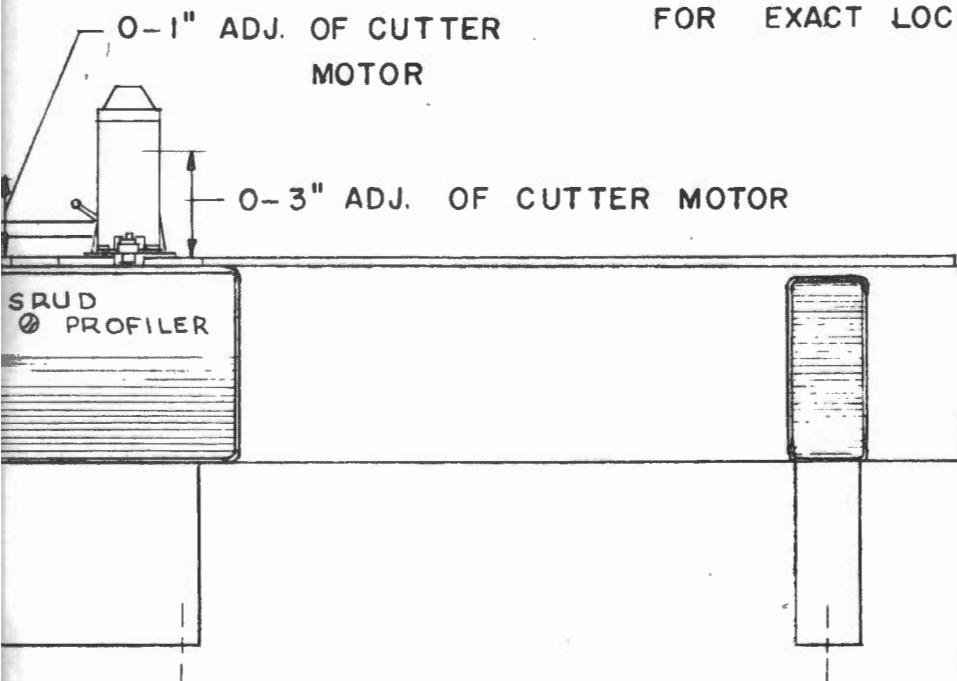




WORK CLAMP ASSEM. 300 LBS EACH
(2) OPTIONAL

NOTE :

LOCATE HOLD DOWNS FROM MACHINE
FOR EXACT LOCATION



"POWER UNIT"

39" WIDE
50" LONG
22" HIGH
800 LBS. EMPTY
60 GAL. CAPACITY

WT- 2684

FLOOR PLAN

ONSRUD

B 2--52 FA

TROUBLE SHOOTING

I Table fails to move when foot pedal is depressed:

1. Check hydraulic pump motor to see if its operating.
2. Air pressure switch (located in rear compartment of frame) is lacking sufficient pressure for electrical contact. Lower operating pressure until foot switch makes contact for table to move. Never allow pressure switch to be set less than 50 PSI on low limit.
3. Work table speed control valve by hand. Make sure you keep hands away from moving table!
4. If when pressure is put on valve arm by hand, table moves then operating pressure of cylinder that actuates valve is too low. Located in frame pressure regulator for cylinder should be increased.
5. Table is lacking lubrication or foreign matter **logged** against keeper plates. Loosen keeper plates and bolts (located on table surface.)
6. Check for dust in electrical contacts - foot switch and LCR relay.

II Table stops before end of cutting stroke and returns:

1. LCR relay is dropping open caused by dust in relay. Take air hose and blow relay contacts free of dust.
2. Air pressure drops and pressure switch shuts off machine. Increase air on pressure switch as mentioned above.
3. A jar or bump from neighboring equipment causes relay to drop open.

III Head fails to move away from form when table is in reverse stroke:

If head rides on return stroke - then there is dust in the LCR relay or the LLS limit switch.

IV Brake on cutterhead motor fails to operate or does not release:

1. Remove air actuator at bottom of motor and see that plunger is working free.

2. Solenoid faulty.

V Clamps fail to unclamp:

Chips between table bracket and front hydraulic preventing table from returning to home position.

VI Cutterhead motor failing to stay in against form:

1. Adjust pressure regulator for additional PSI (located in frame)
2. Cutterhead is too dull.

VII Rough or wavey cut when shaping stock:

1. Motor slide screws are loose - tighten screws. Machine picking up vibration from some other machine.
2. Machine is not mounted level and supported on all three legs of base.
3. Clamps springing form or table, caused by form too weak or center brace left out of table and too many clamps toward center of table.

VIII Table jumping or irregular movement:

Run table all the way to the end of stroke to bleed air out of table cylinder.

IX Table subject to stopping when running slow:

Seals need replacing in hydraulic cylinder.

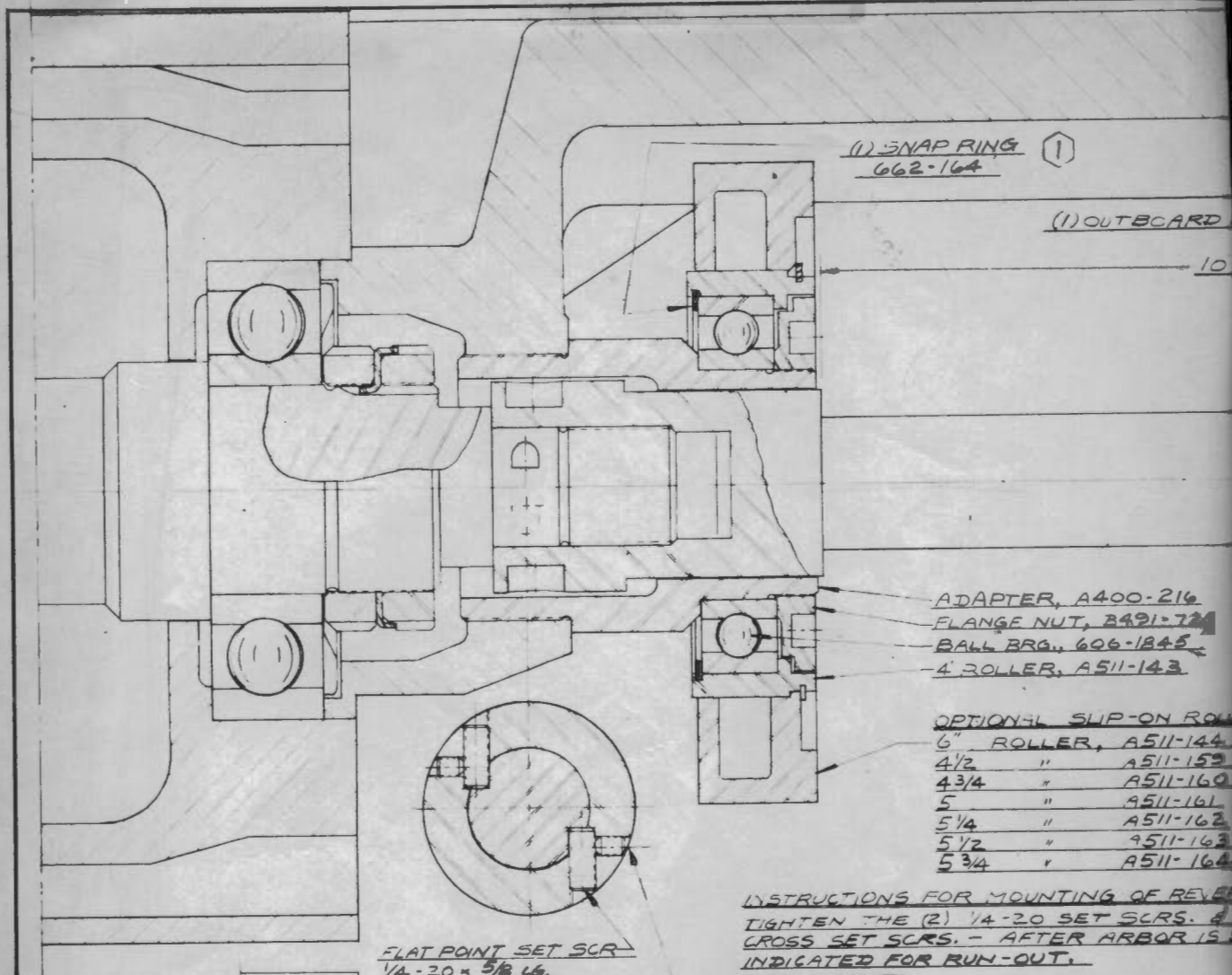
W684-H

Spare Parts List:

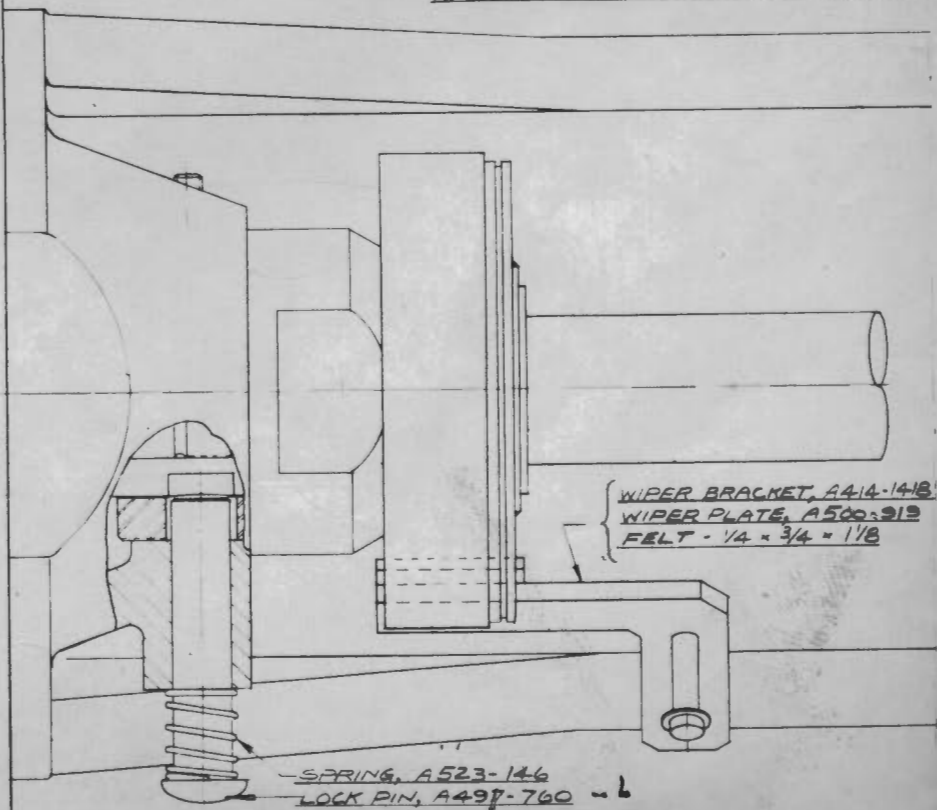
Parts listed below are suggested spare parts. Depending on particular customer requirements for the machine as to actual production schedule, type of work cut, etc. This will determine if any of the parts listed below will need replacing.

No. Req'd. Per Mach.	Part No.	Part Name	Used On
6	A436-28	Diaphragm Cup	Clamp all machines
4	606-1658	Ball Bushing	Motor slide - W672H and W684H
8	606-1658	Ball Bushing	Motor slides - WT-2672 and WT-2684
1	606-82	Bearing	Motor
2	675-72	Nilos Rings *	
1	606-79	Bearing	Motor
1	675-71	Nilos Ring *	
1	619-60	Cylinder "Sheffer"	Cutter motor slide W672H and W684H
For spare bearings on outboard bearing supports, see detail blow-up under your machine number.			
1	667-256	Hose Assembly	Air supply to clamps lubrication
6	667-255	Hose Assembly	Individual clamp lines W673H and W684H
8	667-255	Hose Assembly	Individual clamp lines WT-2672 and WT2684
2	695-543	Cups	Table drive cylinder cups
3	11S-3	Micro Limit Switch	Frame
1		Solenoid Hannifin CC-J1	Table Forward & Reverse W672H and W684H
1		Solenoid Hannifin CC-J1	Speed-Control-W672H and W684H
2		Skinner #V52DB2100	Cutter Motor Air Brake-Bypass
1	685-283	Schrader	Clamps & Lubrication
1		Solenoid schroeder #3457S	Speed control
1		Solenoid Schroeder #3456S	Table forward & Rev.

* Replace with bearings - See Motor for further instructions.



REVERSIBLE MOTOR ASSEMBLY, D135-300



PART NO.
C105-86
USED ON MACH.
WT2672 & -64

RG BRACKET, C414-1655

ARBOR SUPPORT
A530-288

MAX.

$\pm 1 \frac{1}{4}$ DIA.

RS:
SHOWN

REVERSIBLE ARBOR
ASSEM. 170-22

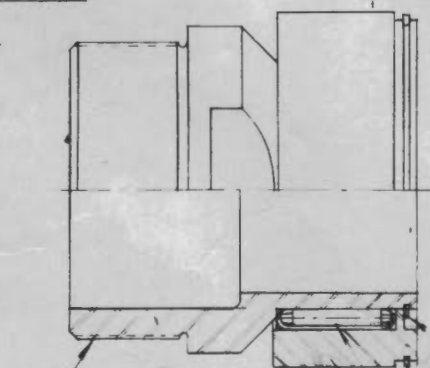
PACING COLLARS, 4428-71
ARBOR, B401-213
ARBOR NUT, A491-852

BALL BRG., 606-1594
(2) SNAP RING, 662-74
DUST SHIELD, A517-70
SNAP RING, 662-18
TAPER ADAPTER, A400-182
ADJUSTING NUT, A491-866

REVERSIBLE ARBOR:
WORK WITH (2) #10-32
SCREWED ON &

ARBOR SURFACE

RS, CLEAR
ARBOR.



3 ROLLER, A511-190
NEEDLE BRG, 606-1771
SNAP RING, 662-107
ADAPTER, A400-217
SNAP RING, 662-124

ROLLERS FROM $3 \frac{3}{8}$ DIA. UP TO
4 ARE OPTIONAL, SWP-CN
ROLLERS.
FOR ROLLERS LARGER THAN
4, USE BALL BRG. ARRANGEM.



$2 \frac{5}{8}$ ROLLER, A511-89
WITH NEEDLE BRG, 606-1771
(ALL SIZES UP TO $3 \frac{3}{4}$ DIA
HAVE INDIVIDUAL BRG.
PRESSED IN.)

WT2672 & WT-2684

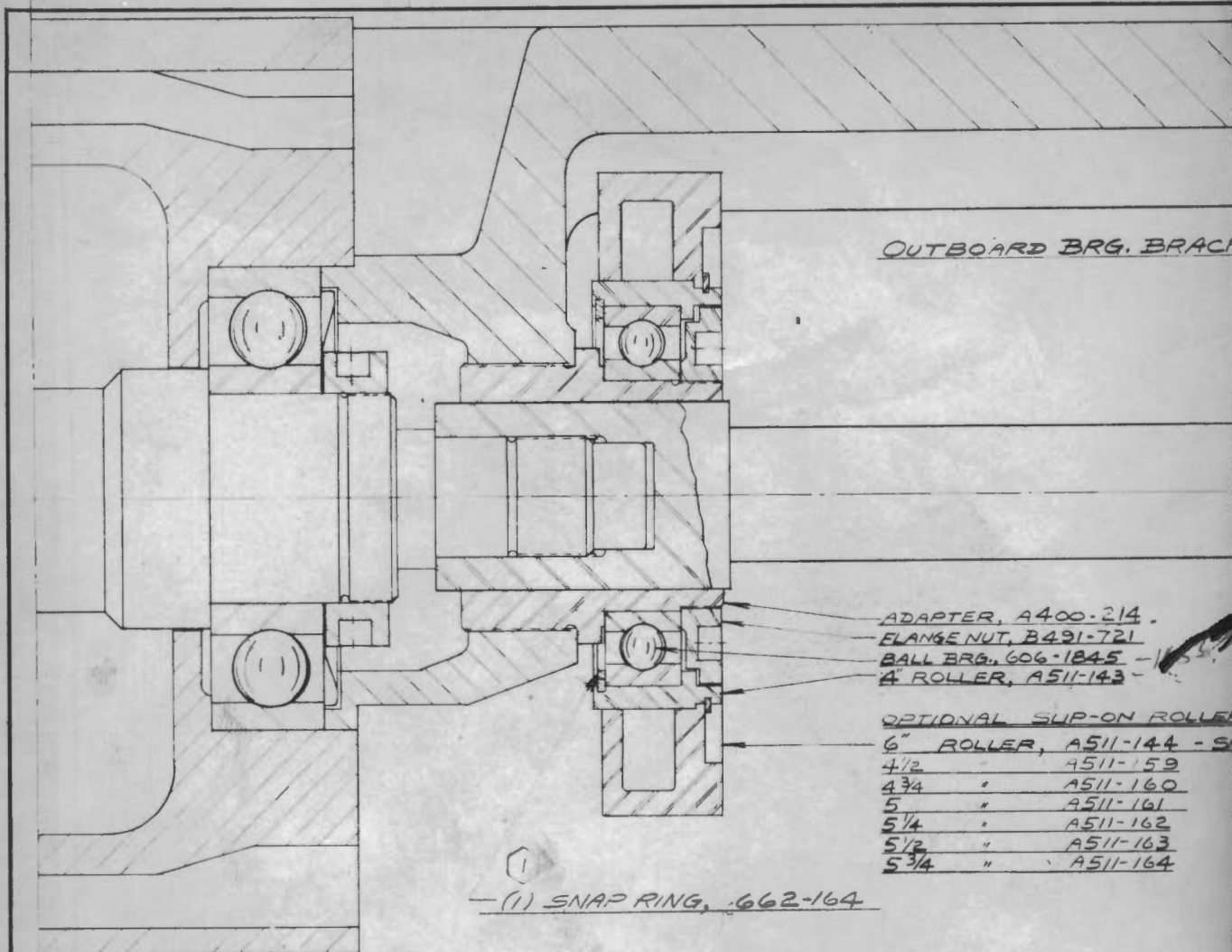
(1) REQ'D PER MACHINE
IMPORTANT

- DO NOT SCALE DRAWING
- OBTAIN ENGINEERING DEPT. APPROVAL BEFORE DEPARTING FROM DRAWING
- WHOLE & FRACTIONAL FIGURES MUST BE HELD $\pm .010$ TO FINISHED SURFACES
- UNLESS SPECIFIED HOLD DECIMAL DIMENSIONS TO $\pm .001$

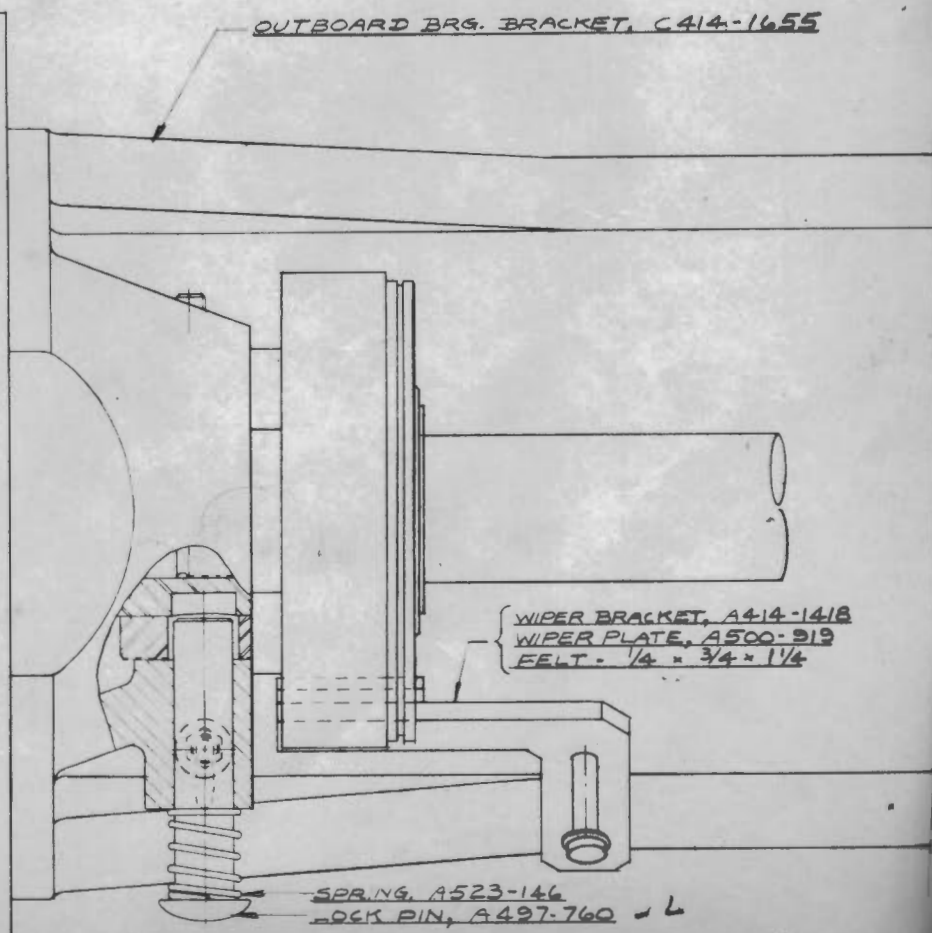
NO. REQD.	PART NUMBER	DESCRIPTION	MATERIAL
CONSRUD MACHINE WORKS, Inc., CHICAGO, ILL.			
NAME		DESIGNED BY	
MTRL		DRAWN BY	
STK. SIZE		CHECKED BY	
PATT. NO.		APPROVED BY	
JIG NO.		S.O. NO.	
HEAT TREATMENT		DATE	
SUPD'S PART NO.		SCALE	
FOR ASSEM. OF THIS PART SEE		PART NO.	

NAME 10 OUTBOARD BRG.
MTRL BRACKET ASSEM.
STK. SIZE REVERSIBLE MOTOR
PATT. NO.
JIG NO.
HEAT TREATMENT
SUPD'S PART NO.
FOR ASSEM. OF THIS PART SEE 22-51 & 22-52
PART NO. C105-86

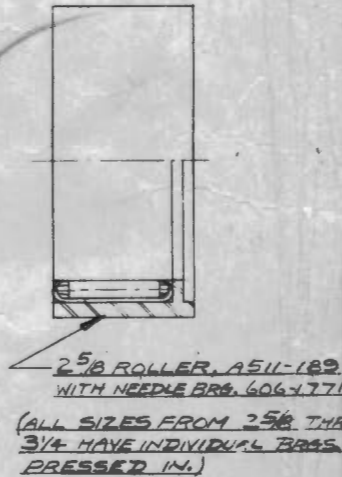
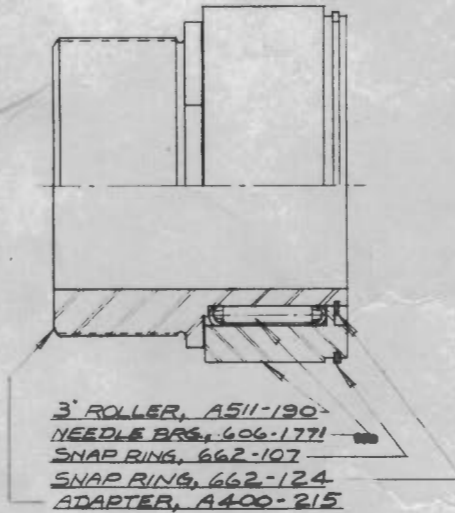
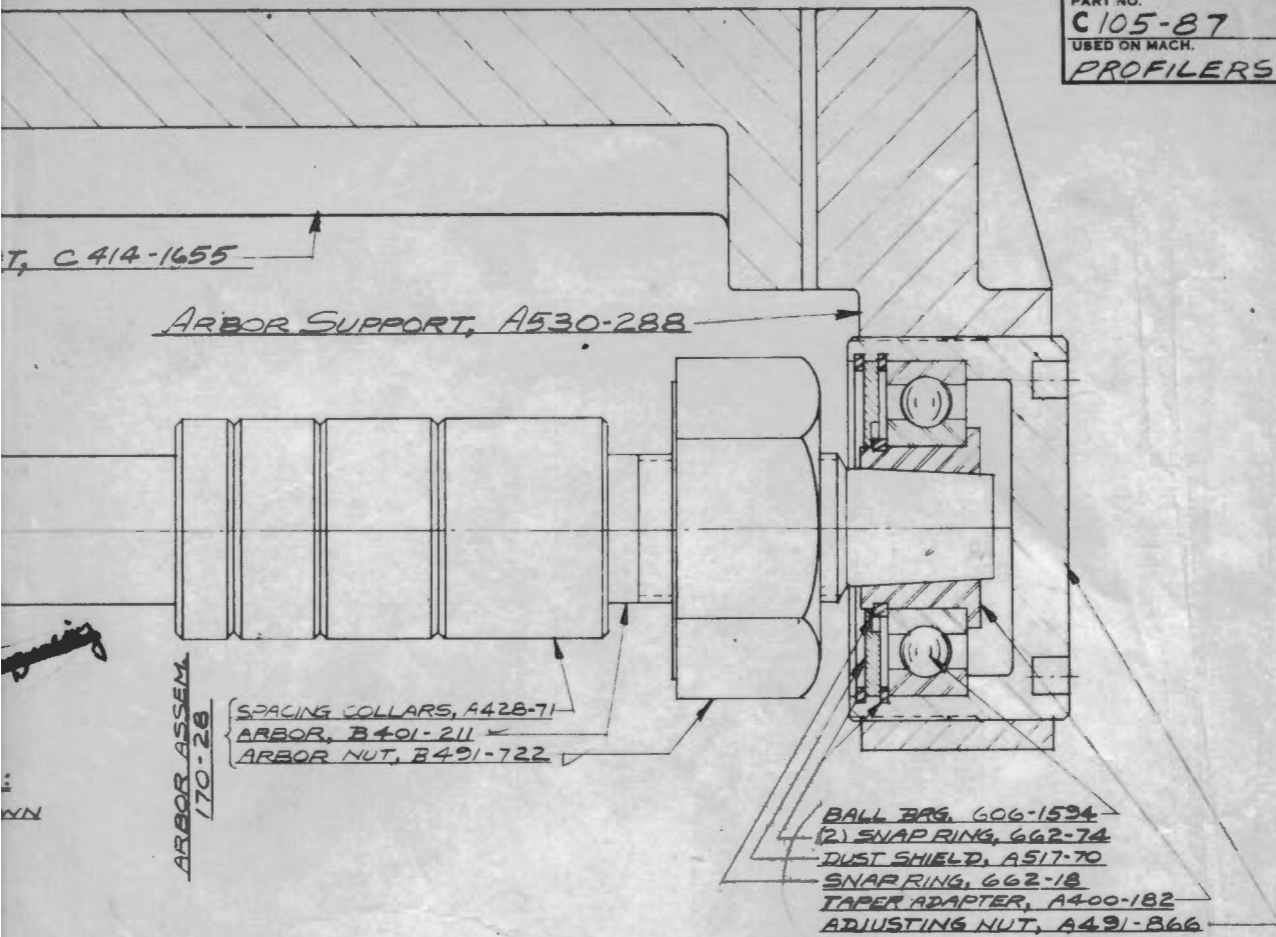
C105-86



STANDARD MOTOR ASSEM. D/35-268



PART NO.
C105-87
USED ON MACH.
PROFILERS



W672, W684, WT2672 & WT2694

NO. REV.	PART NUMBER	DESCRIPTION	MATERIAL
1	W672	W684	WT2672 & WT2694
CONSRUD MACHINE WORKS, INC., CHICAGO, ILL. NAME <u>10' OUTBOARD BRG</u> MAT'L <u>BRACKET ASSEM.</u> STK. SIZE <u>STD. MOTOR</u> PATT. NO. <u>D135-268</u> JIG NO. HEAT TREATMENT SUP'D'S PART NO. FOR ASSEM. OF THIS PART SEE <u>D2-45, D2-47, D2-51, D2-52</u>			
DESIGNED BY		DRAWN BY <u>LD</u>	
CHECKED BY		APPROVED BY	
S.O. NO.		DATE <u>1-2-1965</u>	
SCALE <u>1" = 1"</u>		PART NO. <u>C105-87</u>	

(1) REQ'D PER MACHINE

IMPORTANT

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- OBTAIN ENGINEERING DEPT. APPROVAL BEFORE DEPARTING FROM DRAWING
- WHOLE & FRACTIONAL FIGURES MUST BE HELD $\pm .010$ TO FINISHED SURFACES
- UNLESS SPECIFIED HOLD DECIMAL DIMENSIONS TO $\pm .001$

7. REVISED 662-164 8962
ISSUE REVISIONS

ARBOR ASSEMBLY
170-30

ARBOR NUT, A491-722

1/4 DIA X 6" CAPACITY ARBOR
B401-212

SPACING COLLAR SET
A428-71

2 5/8 DIA
MINIMUM DIAMETER

3 DIA. BASIC

FLANGE NUT, B491-721

4" DIA. ROLLER, A511-143

EXT. SNAP RING, 662-110

4" DIA.
BASIC

OPTIONAL
EQUIPMENT

6" DIA. SLIP-ON ROLLER
A511-144 - SHOWN

A511-159 = 4 1/2 DIA.

A511-160 = 4 3/4 DIA.

A511-161 = 5 DIA.

A511-162 = 5 1/4 DIA.

A511-163 = 5 1/2 DIA.

A511-164 = 5 3/4 DIA.

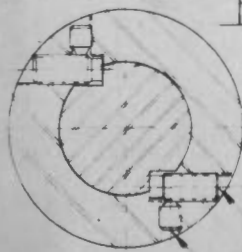
(1) SNAP RING
662-164

RADIAL BALL BRG, 606-1845
ADAPTER, A400-118

FOLLOWER BRACKET
C414-1673

FLAT POINT, SOCK SET SCR 1/4-20 X 5/16
WITH COPPER PLUG, 3/16 X 1/8 LG.

LOCK PIN, A
SPRING, A52



SECTION "A-A"
THRU REVERSIBLE
SPINDLE & ARBOR

- FLAT POINT SET SCR
1/4-20 X 5/16 LG. - GRIND POINT.

- 1/8" NYLON POINT SET SCR
#10-32 X 3/16 LG.

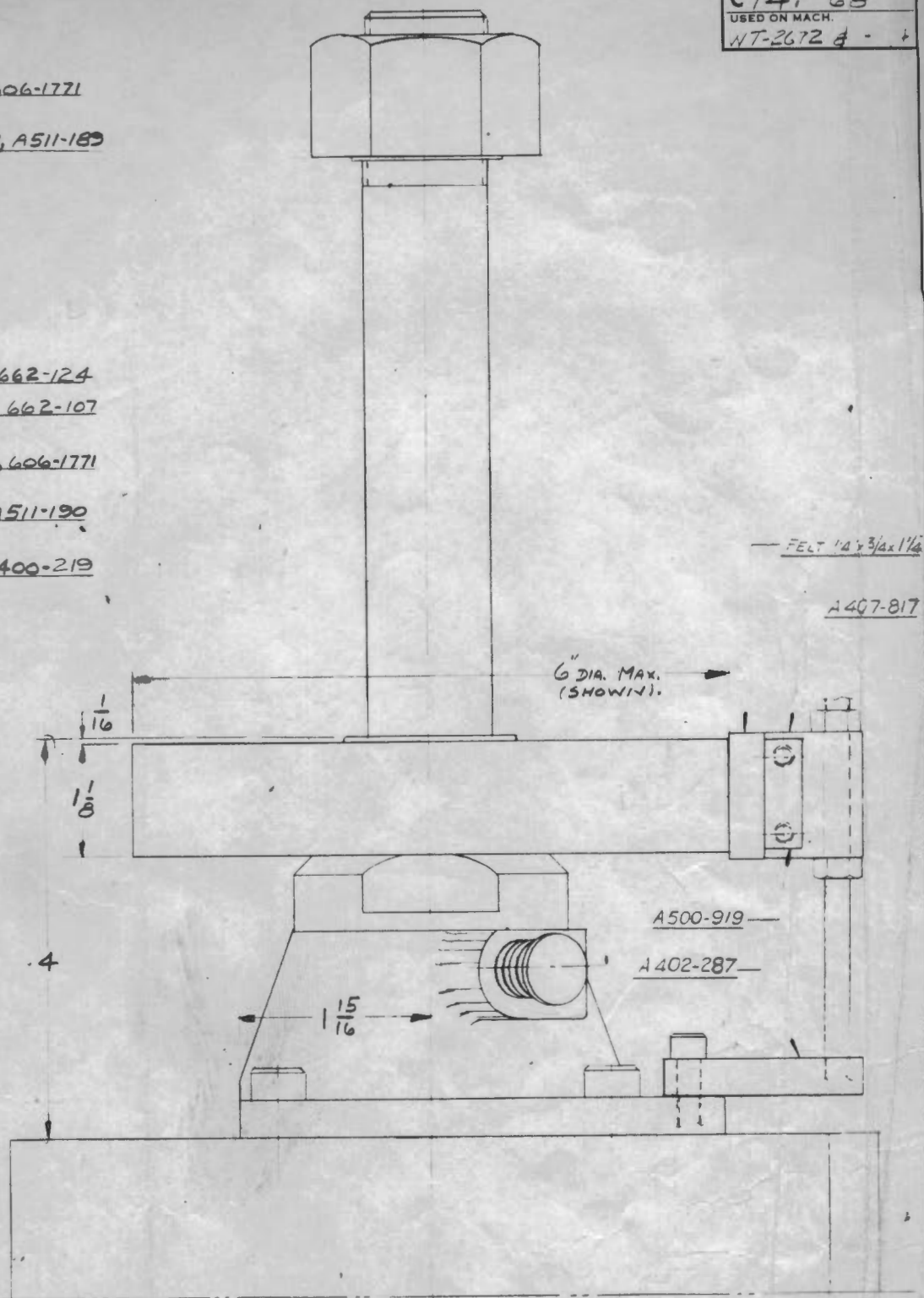
INSTRUCTIONS FOR ASSEM. & DIS-ASSEMBLY
OF REVERSIBLE ARBOR:
TIGHTEN (2) 1/4-20 SET SCR. &
LOCK WITH (2) #10-32 CROSS SET SCR.
AFTER ARBOR IS SCREWED ON &
INDICATED FOR RUN-OUT.

IMPORTANT:

NEITHER SCR TO PROTRUDE OUTSIDE
OF ARBOR SURFACE WHEN LOCKED IN POSIT.
ALSO MAKE SURE THAT 1/4-20 SCR CLEARS
ARBOR THREADS BEFORE UNSCREWING ARBOR

PART NO.
C/41-68
USED ON MACH.
NT-2672 & -

NEEDLE BRG, 606-1771
2 5/8" ROLLER, A511-189
RETAIN. RING, 662-124
RETAIN RING, 662-107
NEEDLE BRG, 606-1771
3" ROLLER, A511-190
ADAPTER, A400-219



97-760
3-146

REVERSIBLE MOTOR, D135-300

NT-2672 & WT-2684

NO. MOD.	PART NUMBER	DESCRIPTION	MATERIAL
AONSRUD MACHINE WORKS, INC., CHICAGO, ILL.			
NAME <u>FOUR-ARM BRACKET</u>		DESIGNED BY <u>JD</u>	
MAT'L <u>ASSY</u>		DRAWN BY <u>JD</u>	
STK. SIZE		CHECKED BY	
PATT. NO.		APPROVED BY	
JIG NO.		S.O. NO.	
HEAT TREATMENT		DATE <u>12-19-1963</u>	
SUP'D'S PART NO.		SCALE <u>1" = 1"</u>	
FOR ASSEM. OF THIS PART SEE <u>22-51 & 22-52</u>		PART NO. <u>C/41-6</u>	

(1) REQD PER MACHINE

IMPORTANT

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REVISIONS

ARBOR ASSEMBLY
170-21

ARBOR, B401-191

ARBOR NUT, 4491-722

SPACING COLLARS, 4428-71

OPTIONAL
EQUIPMENT

6 DIA SLIP-ON ROLLER, A511-144
4 1/2 DIA " " " A511-159
4 3/4 " " " A511-160
5 " " " " A511-161
5 1/4 " " " " A511-162
5 1/2 " " " " A511-163
5 3/4 " " " " A511-164

4BOYS ROLLERS SLIP ON 4 BASIC
ROLLER, INTERCHANGEABLY.

FLANGE NUT, B491-721

BALL BEARING, 606-1845

4 BASIC ROLLER, A511-143

ADAPTER, 4400-214

1/4-20 x 5/16 LOCK SET SCR, FLAT PT.
WITH 3/16 x 1/8 COPPER PLUG

2 5/8 DIA
MINIMUM DIAMETER

3 DIA. BASIC

(1) SNAP RING
662-164

SPRING, A523-14

LOCK PIN, A497

FOLLOWER BRACKET
C 44-1672

MOTOR ASSEMBLY, D135-268

PART NO.

C 141-69

USED ON MACH.

PROFILERS

FEEDLE BRG, 606-1771

5/8" ROLLER, A511-189

RETAIN. RING, 662-124

RETAIN RING, 662-107

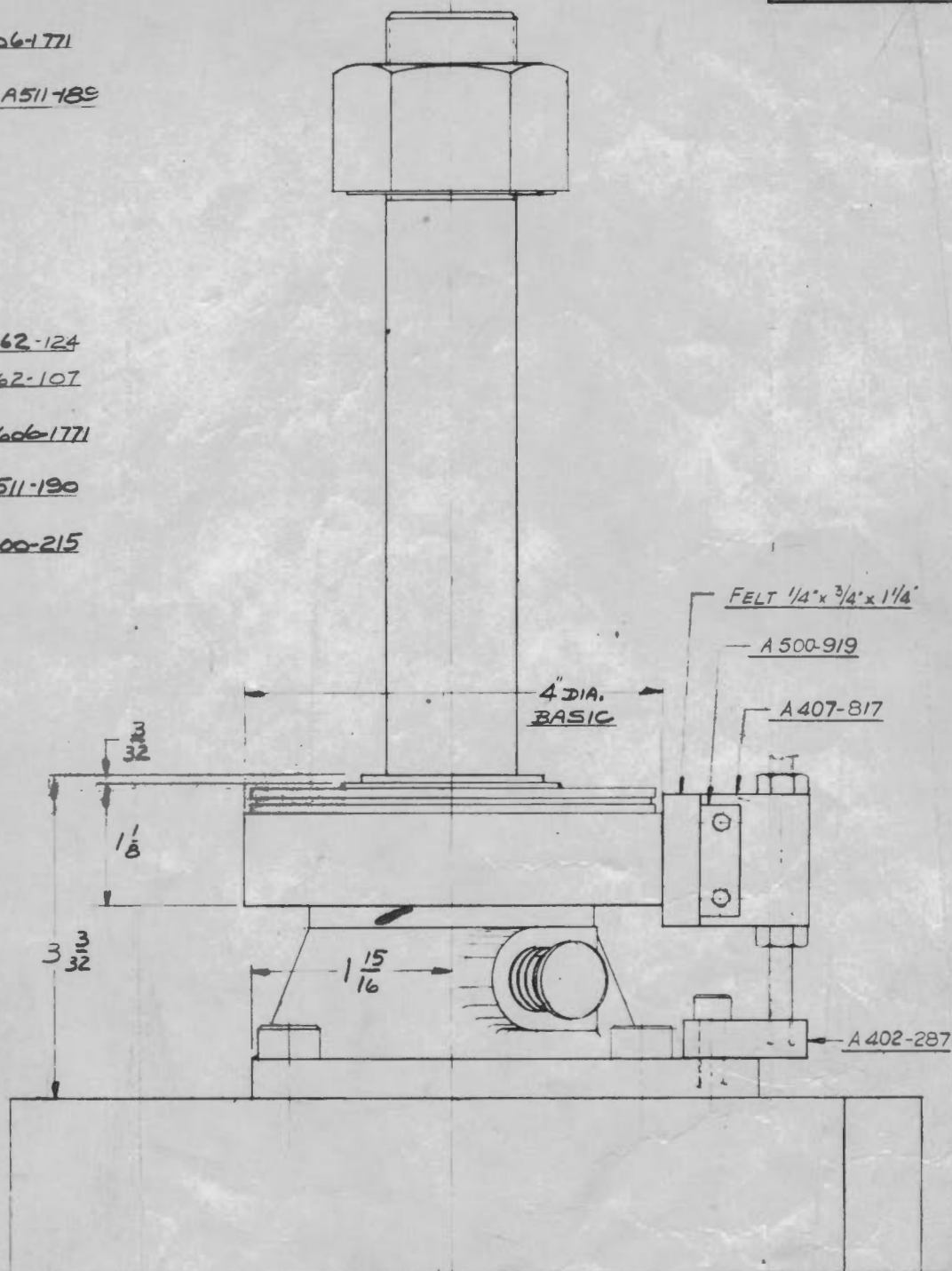
FEEDLE BRG, 606-1771

5/8" ROLLER, A511-190

ADAPTER, A400-215

673

ET



C 141-69

W672-T, W684-T, WT2672 & WT2684

NO. REGD.	PART NUMBER	DESCRIPTION	MATERIAL
AONSRUD MACHINE WORKS, INC., CHICAGO, ILL.			
NAME FOLLOWER BRACKET		DESIGNED BY	
MAT'L ASSEMBLY		DRAWN BY	
STK. SIZE		CHECKED BY	
PATT. NO.		APPROVED BY	
JIG NO.		S.O. NO.	
HEAT TREATMENT		DATE 12-21-1964	
SUP'D'S PART NO.		SCALE 1" = 1"	
FOR ASSEM. OF D2-45, D2-47		PART NO. C141-	
THIS PART SEE D2-51 & D2-52			

(1) REQ'D PER MACHINE
IMPORTANT

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GBC ADDED 662-164 & 662-165
REVISIONS W85