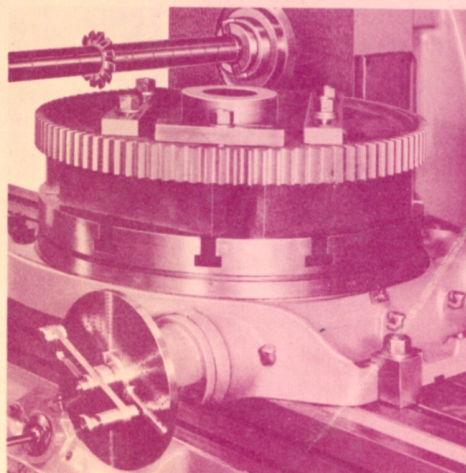


PARTS LIST CATALOG



**12", 16", 20" and 24"
CIRCULAR MILLING TABLES**



**Identification Nos. ARA-DH
and AYA-DH**

Publication No. M-2341

WHEN ORDERING REPAIR PARTS

1. Give complete Serial Number of Machine.
2. Give Part Number and Name.
3. Give Amount Required.

UNLESS THE ABOVE DATA IS INCLUDED WE CANNOT FILL YOUR ORDER

This Booklet should be Filed in Tool Crib and issued by Tool Check only

**MILLING MACHINE DIVISION
THE CINCINNATI MILLING MACHINE CO.
CINCINNATI 9, OHIO, U. S. A.**



PARTS LIST CATALOG

for

CINCINNATI

12", 16", 20" and 24"

CIRCULAR MILLING TABLES



This catalog was prepared to expedite the ordering of repair parts and to present to maintenance personnel the correct method of servicing these Circular Milling Tables.

Due to continual improvements in design, it is possible that some information or the appearance of component parts to be found in this catalog may vary slightly from the Circular Milling Table delivered to you. This merely indicates that the Circular Milling Table has been improved to better fulfill your requirements.

MILLING MACHINE DIVISION

THE CINCINNATI MILLING MACHINE CO.

CINCINNATI 9, OHIO, U. S. A.

PARTS LIST CATALOG

THIS CATALOG TO BE USED ONLY FOR CIRCULAR MILLING TABLES
WHOSE SERIAL NUMBERS BEGIN WITH "ARA" OR "AYA"

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The design and specifications of the attachments illustrated
and described herein are subject to change without notice.

DIMENSIONAL DRAWING

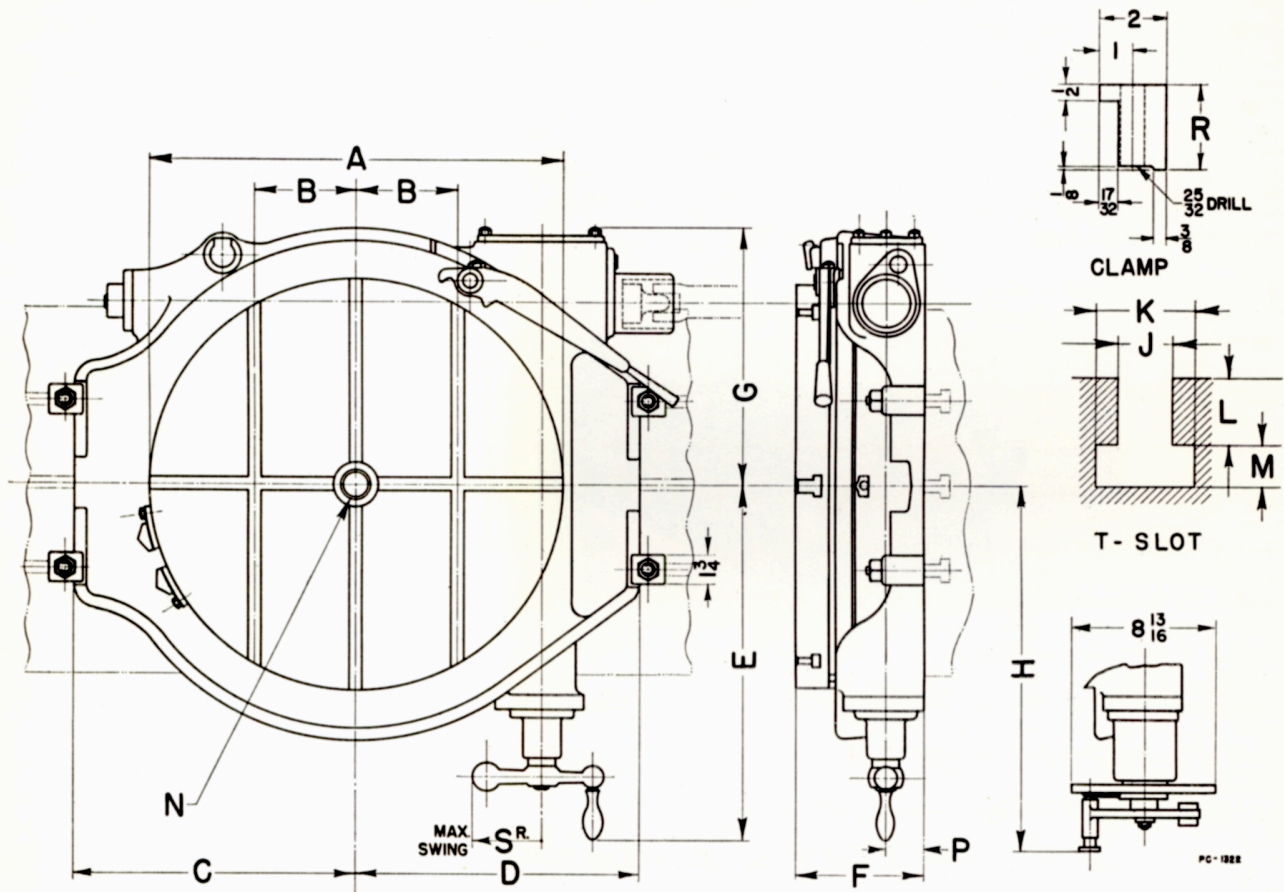


Figure 3A *

TABLE DIMENSIONS

Size	A	B	C	D	E	F	G	H	J	K	L	M	N			P	R	S
													B & S Taper	Dia. at Small End	Plug Depth			
12"	12"	**	7"	7-1/2"	13-1/2"	4-5/8"	6-3/4"	12-3/8"	9/16"	21/32"	1/2"	25/64"	No. 9	.900"	4-1/8"	1-5/8"	--	3"
16"	16"	4"	10"	10-3/4"	14-1/2"	6"	9-3/8"	13-1/2"	11/16"	1-1/4"	3/4"	31/64"	No. 11	1.250"	5-3/4"	1-3/4"	1-7/8"	3-1/2"
20"	20"	5"	14-5/8"	14-5/8"	19"	7"	13-15/16"	20-1/8"	13/16"	1-15/32"	1"	5/8"	No. 12	1.500"	6-7/8"	2-1/4"	2-1/2"	4-1/8"
24"	24"	6"	16-9/16"	16-9/16"	21"	7-1/2"	15-5/16"	22-1/8"	13/16"	1-15/32"	1"	5/8"	No. 12	1.500"	6-7/8"	2-1/4"	2-1/2"	4-1/8"

Note:

* Serial Number is stamped on top of right clamping flange.

** Two Right Angles T-Slots

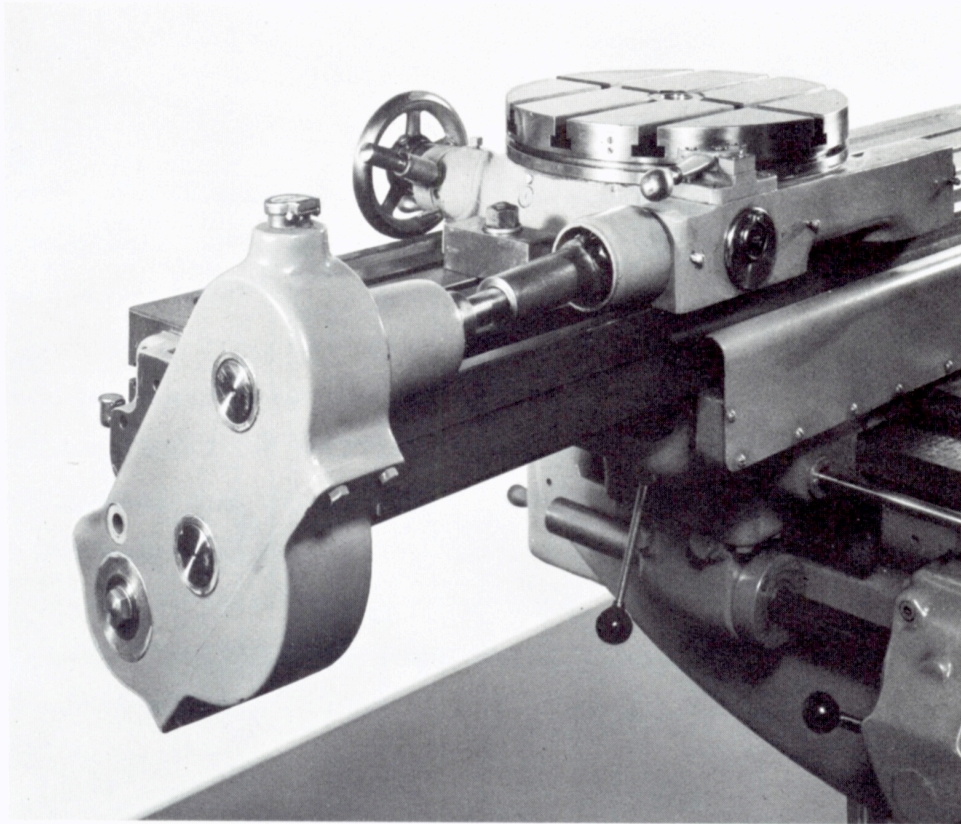


Figure 4A

Circular Table Drive Mechanism (16", 20" and 24" Tables)

IMPORTANT

When mounting Drive Mechanism on any machine (Plain or Vertical) for the first time run the machine table by hand to extreme left position. Set trip dog to trip feed just before Drive Mechanism contacts oil pump handle on plain machine or housing on universal machine. Stamp a mark on table to show where to set trip dog next time Drive Mechanism is used. This is a safety precaution and should be used to prevent damage to machine or Drive Mechanism.

SETTING UP CIRCULAR MILLING TABLE

To Align Circular Table with Spindle

1. Place a test arbor with B&S taper on one end, into tapered hole in center of table. The 20" and 24" tables have a No. 12 B&S taper, the 16" has No. 11 B&S taper and the 12" has the No. 9 B&S taper.
2. Fasten an indicator to spindle of vertical machine. With shifter bracket in neutral rotate machine spindle by hand and note readings as indicator moves around test arbor. Move saddle and table until test arbor is centrally located under spindle. *

To Set Radius

Circular Table must be aligned with spindle as discussed above.

1. Off-set either saddle or table a distance equal to radius of work piece to be milled. (Do not move both.)

NOTE: It is helpful when designing fixtures for Circular Milling Table to incorporate into fix-

- * On horizontal machines obtain center alignment under cutter by making side contact of cutter arbor and test arbor then moving table $1/2$ the combined diameters.

ture a tapered locating arbor, to center fixture with table center, thus quickly and accurately obtaining proper radius for milling work piece.

To Index Circular Table by Hand Crank Dial

1. The 12", 20" and 24" Circular Tables have an 80 to 1 ratio, worm to worm wheel, while 16" has a 120 to 1 ratio.
2. One complete turn of crank on 12", 20" and 24" Circular Table is equal to $4^{\circ} 30'$, while one complete turn on 16" is equal to 3° . Each graduation on dial (12", 16", 20" and 24") is equal to 1 minute of table rotation.

To Index Table by Indexing Attachment

This indexing mechanism, built into the Circular Table at factory, is used for machining a number of accurately spaced holes, slots, grooves, etc. It is the same type of indexing equipment as used on "CINCINNATI" Dividing Heads. The following charts can be used to make correct settings with the standard index plate or with the high number index plates.

HIGH NUMBER INDEX PLATES

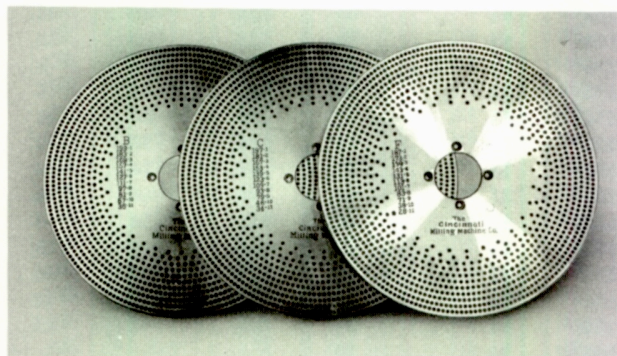


Figure 5A

High Number Index Plates

This attachment consists of three plates, with circle of holes drilled on their six sides - A, B, C, D, E and F. These plates are interchangeable with the standard plates.

PARTS LIST CATALOG

INDEX TABLE FOR STANDARD INDEX PLATE 16" CIRCULAR MILLING TABLE

Indexes all numbers up to and including 60; all even numbers as well as those divisible by 5 up to 120, and higher divisions as listed up to 400. The Index Plate is drilled on both sides, with circles of equally spaced holes, as follows:

Part No. 6855

One Side --- 24-25-28-30-34-37-38-39-41-42-43

Other Side --- 46-47-49-51-53-54-57-58-59-62-66

No. of Divisions	Circle	Turns	Holes	No. of Divisions	Circle	Turns	Holes	No. of Divisions	Circle	Turns	Holes	No. of Divisions	Circle	Holes
2	Any	60	.....	45	24	2	16	106	53	1	7	212	53	30
3	Any	40	.....	46	46	2	28	108	54	1	6	215	43	24
4	Any	30	.....	47	47	2	26	110	66	1	6	216	54	30
5	Any	24	.....	48	24	2	12	112	28	1	2	220	66	36
6	Any	20	.....	49	49	2	22	114	38	1	2	224	28	15
7	28	17	4	50	25	2	10	115	46	1	2	228	38	20
8	Any	15	.....	51	34	2	12	116	58	1	2	230	46	24
9	24	13	8	52	39	2	12	118	59	1	1	232	58	30
10	Any	12	.....	53	53	2	14	120	Any	1	.....	235	47	24
11	66	10	60	54	54	2	12	124	62	.....	60	236	59	30
12	Any	10	.....	55	66	2	12	125	25	.....	24	240	24	12
13	39	9	9	56	28	2	4	130	39	.....	36	245	49	24
14	28	8	16	57	38	2	4	132	66	.....	60	248	62	30
15	Any	8	.....	58	58	2	4	135	54	.....	48	250	25	12
16	24	7	12	59	59	2	2	136	34	.....	30	255	34	16
17	34	7	2	60	Any	2	.....	140	28	.....	24	260	39	18
18	24	6	16	62	62	1	58	144	24	.....	20	264	66	30
19	38	6	12	64	24	1	21	145	58	.....	48	270	54	24
20	Any	6	.....	65	39	1	33	148	37	.....	30	272	34	15
21	28	5	20	66	66	1	54	150	30	.....	24	280	28	12
22	66	5	30	68	34	1	26	152	38	.....	30	288	24	10
23	46	5	10	70	28	1	20	155	62	.....	48	290	58	24
24	Any	5	.....	72	24	1	16	156	39	.....	30	296	37	15
25	25	4	20	74	37	1	23	160	24	.....	18	300	30	12
26	39	4	24	75	25	1	15	164	41	.....	30	304	38	15
27	54	4	24	76	38	1	22	165	66	.....	48	310	62	24
28	28	4	8	78	39	1	21	168	28	.....	20	312	39	15
29	58	4	8	80	24	1	12	170	34	.....	24	320	24	9
30	Any	4	.....	82	41	1	19	172	43	.....	30	328	41	15
31	62	3	54	84	28	1	12	176	66	.....	45	330	66	24
32	24	3	18	85	34	1	14	180	24	.....	16	336	28	10
33	66	3	42	86	43	1	17	184	46	.....	30	340	34	12
34	34	3	18	88	66	1	24	185	37	.....	24	344	43	15
35	28	3	12	90	24	1	8	188	47	.....	30	360	24	8
36	24	3	8	92	46	1	14	190	38	.....	24	368	46	15
37	37	3	9	94	47	1	13	192	24	.....	15	370	37	12
38	38	3	6	95	38	1	10	195	39	.....	24	376	47	15
39	39	3	3	96	24	1	6	196	49	.....	30	380	38	12
40	Any	3	.....	98	49	1	11	200	30	.....	18	.....	.....	.....
41	41	2	38	100	25	1	5	204	34	.....	20	390	39	12
42	28	2	24	102	34	1	6	205	41	.....	24	392	49	15
43	43	2	34	104	39	1	6	210	28	.....	16	400	30	9
44	66	2	48	105	28	1	4	.....	.....	.....	.....	.....	.....	.....

INDEX TABLE FOR STANDARD INDEX PLATE

12", 20 and 24" CIRCULAR MILLING TABLES

Indexes all numbers up to and including 60; all even numbers as well as those divisible by 5 up to 120, and higher divisions as listed up to 400. The Index Plate is drilled on both sides, with circles of equally spaced holes, as follows:

Part No. 6855

One Side --- 24-25-28-30-34-37-38-39-41-42-43

Other Side --- 46-47-49-51-53-54-57-58-59-62-66

No. of Divisions	Circle	Turns	Holes	No. of Divisions	Circle	Turns	Holes	No. of Divisions	Circle	Holes	No. of Divisions	Circle	Holes
2	Any	40	.....	45	59	1	42	106	53	40	212	53	20
3	24	26	16	46	46	1	34	108	54	40	215	43	16
4	Any	20	.....	47	47	1	33	110	66	48	216	54	20
5	Any	16	.....	48	24	1	16	112	28	20	220	66	24
6	24	13	8	49	49	1	31	114	57	40	224	28	10
7	28	11	12	50	25	1	15	115	46	32	228	57	20
8	Any	10	.....	51	51	1	29	116	58	40	230	46	16
9	54	8	48	52	39	1	21	118	59	40	232	58	20
10	Any	8	.....	53	53	1	27	120	66	44	235	47	16
11	66	7	18	54	54	1	26	124	62	40	236	59	20
12	24	6	16	55	66	1	30	125	25	16	240	66	22
13	39	6	6	56	28	1	12	128	24	15	245	49	16
14	49	5	35	57	57	1	23	130	39	24	248	62	20
15	24	5	8	58	58	1	22	132	66	40	250	25	8
16	Any	5	.....	59	59	1	21	135	54	32	255	51	16
17	34	4	24	60	42	1	14	136	34	20	260	39	12
18	54	4	24	62	62	1	18	140	28	16	264	66	20
19	38	4	8	64	24	1	6	144	54	30	270	54	16
20	Any	4	.....	65	39	1	9	145	58	32	272	34	10
21	42	3	34	66	66	1	14	148	37	20	280	28	8
22	66	3	42	68	34	1	6	150	30	16	288	54	15
23	46	3	22	70	28	1	4	152	38	20	290	58	16
24	24	3	8	72	54	1	6	155	62	32	296	37	10
25	25	3	5	74	37	1	3	156	39	20	300	30	8
26	39	3	3	75	30	1	2	160	28	14	304	38	10
27	54	2	52	76	38	1	2	164	41	20	310	62	16
28	42	2	36	78	39	1	1	165	66	32	312	39	10
29	58	2	44	80	Any	1	.....	168	42	20	320	24	6
30	24	2	16	82	41	.....	40	170	34	16	328	41	10
31	62	2	36	84	42	.....	40	172	43	20	330	66	16
32	28	2	14	85	34	.....	32	176	66	30	336	42	10
33	66	2	28	86	43	.....	40	180	54	24	340	34	8
34	34	2	12	88	66	.....	60	184	46	20	344	43	10
35	28	2	8	90	54	.....	48	185	37	16	352	66	15
36	54	2	12	92	46	.....	40	188	47	20	360	24	5
37	37	2	6	94	47	.....	40	190	38	16	368	46	10
38	38	2	4	95	38	.....	32	192	24	10	370	37	8
39	39	2	2	96	24	.....	20	195	39	16	376	47	10
40	Any	2	.....	98	49	.....	40	196	49	20	380	38	8
41	41	1	39	100	25	.....	20	200	30	12	384	24	5
42	42	1	38	102	51	.....	40	204	51	20	390	39	8
43	43	1	37	104	39	.....	30	205	41	16	392	49	10
44	66	1	54	105	42	.....	32	210	42	16	400	30	6

PARTS LIST CATALOG

INDEX FOR HIGH NUMBER INDEX PLATES 16" CIRCULAR MILLING TABLE

Indexes all numbers up to and including 200; all even numbers and those divisible by 5 up to and including 400, except 225, 275, 325 and 375.

Part No. 10525	Side A	30-48-69-91- 99-117-129-147-171-177-189
	Side B	36-67-81-97-111-127-141-157-169-183-199
Part No. 10526	Side C	34-46-79-93-109-123-139-153-167-181-197
	Side D	32-44-77-89-107-121-137-151-163-179-193
Part No. 10527	Side E	26-42-73-87-103-119-133-149-161-175-191
	Side F	28-38-71-83-101-113-131-143-159-173-187

No. of Div. Side Circle Turns Holes	No. of Div. Side Circle Turns Holes	No. of Div. Side Circle Turns Holes	No. of Div. Side Circle Turns Holes
2 Any Any 60 ...	18 E 42 6 28	33 F 143 3 91	48 E 26 2 13
3 Any Any 40 ...	18 C 93 6 62	34 C 34 3 18	48 F 28 2 14
4 Any Any 30 ...	18 F 159 6 106	34 E 119 3 63	48 A 30 2 15
5 Any Any 24 ...	19 F 38 6 12	34 F 187 3 99	48 D 32 2 16
6 Any Any 20 ...	19 E 133 6 42	35 F 28 3 12	48 C 34 2 17
7 F 28 17 4	19 A 171 6 54	35 E 42 3 18	48 B 36 2 18
7 E 42 17 6	20 Any Any 6 ...	35 D 77 3 33	49 A 147 2 66
7 D 77 17 11	21 F 28 5 20	35 A 91 3 39	50 A 30 2 12
7 A 91 17 13	21 E 42 5 30	36 A 30 3 10	50 E 175 2 70
8 Any Any 15 ...	21 D 77 5 55	36 B 36 3 12	51 C 34 2 12
9 A 30 13 10	21 A 91 5 65	36 E 42 3 14	51 E 119 2 42
9 B 36 13 12	22 D 44 5 20	36 C 93 3 31	51 F 187 2 66
9 E 42 13 14	22 A 99 5 45	36 F 159 3 53	52 E 26 2 8
9 C 93 13 31	22 F 143 5 65	37 B 111 3 27	52 A 91 2 28
9 F 159 13 53	23 C 46 5 10	38 F 38 3 6	52 F 143 2 44
10 Any Any 12 ...	23 A 69 5 15	38 E 133 3 21	52 B 169 2 52
11 D 44 10 40	23 E 161 5 35	38 A 171 3 27	53 F 159 2 42
11 A 99 10 90	24 Any Any 5 ...	39 E 26 3 2	54 A 30 2 5
11 F 143 10 130	25 A 30 4 24	39 A 91 3 7	54 B 36 2 6
12 Any Any 10 ...	25 E 175 4 140	39 F 143 3 11	54 E 42 2 7
13 E 26 9 6	26 E 26 4 16	39 B 169 3 13	55 D 44 2 8
13 A 91 9 21	26 A 91 4 56	40 Any Any 3 ...	55 A 99 2 18
13 F 143 9 33	26 F 143 4 88	41 C 123 2 114	55 F 143 2 26
13 B 169 9 39	26 B 169 4 104	42 F 28 2 24	56 F 28 2 4
14 F 28 8 16	27 B 36 4 16	42 E 42 2 36	56 E 42 2 6
14 E 42 8 24	27 A 99 4 44	42 D 77 2 66	56 D 77 2 11
14 D 77 8 44	27 C 153 4 68	42 A 91 2 78	56 A 91 2 13
14 A 91 8 52	28 F 28 4 8	43 A 129 2 102	57 F 38 2 4
15 Any Any 8 ...	28 E 42 4 12	44 D 44 2 32	57 E 133 2 14
16 E 26 7 13	28 D 77 4 22	44 A 99 2 72	57 A 171 2 18
16 F 28 7 14	28 A 91 4 26	44 F 143 2 104	58 E 87 2 6
16 A 30 7 15	29 E 87 4 12	45 A 30 2 20	59 A 177 2 6
16 D 32 7 16	30 Any Any 4 ...	45 B 36 2 24	60 Any Any 2 ...
16 C 34 7 17	31 C 93 3 81	45 E 42 2 28	61 B 183 1 177
16 B 36 7 18	32 F 28 3 21	45 C 93 2 62	62 C 93 1 87
17 C 34 7 2	32 D 32 3 24	45 F 159 2 106	63 E 42 1 38
17 E 119 7 7	32 B 36 3 27	46 C 46 2 28	63 A 147 1 133
17 F 187 7 11	32 A 48 3 36	46 A 69 2 42	64 D 32 1 28
18 A 30 6 20	33 D 44 3 28	46 E 161 2 98	64 A 48 1 42
18 B 36 6 24	33 A 99 3 63	47 B 141 2 78	65 E 26 1 22

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

INDEX FOR HIGH NUMBER INDEX PLATES

16" CIRCULAR MILLING TABLE (Cont'd.)

No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Turns	Holes
65	A	91	1	77	84	E	42	1	18	105	A	91	1	13	136	C	34	30	
65	F	143	1	121	84	D	77	1	33	106	F	159	1	21	136	E	119	105	
65	B	169	1	143	84	A	91	1	39	107	D	107	1	13	136	F	187	165	
66	D	44	1	36	85	C	34	1	14	108	B	36	1	4	137	D	137	120	
66	A	99	1	81	85	E	119	1	49	108	A	99	1	11	138	C	46	40	
66	F	143	1	117	85	F	187	1	77	108	C	153	1	17	138	A	69	60	
67	B	67	1	53	86	A	129	1	51	109	C	109	1	11	138	E	161	140	
68	C	34	1	26	87	E	87	1	33	110	D	44	1	4	139	C	139	120	
68	E	119	1	91	88	D	44	1	16	110	A	99	1	9	140	F	28	24	
68	F	187	1	143	88	A	99	1	36	110	F	143	1	13	140	E	42	36	
69	C	46	1	34	88	F	143	1	52	111	B	111	1	9	140	D	77	66	
69	A	69	1	51	89	D	89	1	31	112	F	28	1	2	140	A	91	78	
69	E	161	1	119	90	A	30	1	10	112	E	42	1	3	141	B	141	120	
70	F	28	1	20	90	B	36	1	12	113	F	113	1	7	142	F	71	60	
70	E	42	1	30	90	E	42	1	14	114	A	171	1	9	143	F	143	120	
70	D	77	1	55	90	C	93	1	31	115	C	46	1	2	144	A	30	25	
70	A	91	1	65	90	F	159	1	53	115	A	69	1	3	144	B	36	30	
71	F	71	1	49	91	A	91	1	29	115	E	161	1	7	144	E	42	35	
72	A	30	1	20	92	C	46	1	14	116	E	87	1	3	145	E	87	72	
72	B	36	1	24	92	A	69	1	21	117	A	117	1	3	146	E	73	60	
72	E	42	1	28	92	E	161	1	49	118	A	177	1	3	147	A	147	120	
72	C	93	1	62	93	C	93	1	27	119	E	119	1	1	148	B	111	90	
72	F	159	1	106	94	B	141	1	39	120	Any	Any	1	...	149	E	149	120	
73	E	73	1	47	95	F	38	1	10	121	D	121	...	120	150	A	30	24	
74	B	111	1	69	95	E	133	1	35	122	B	183	...	120	150	E	175	140	
75	A	30	1	18	95	A	171	1	45	123	C	123	...	120	151	D	151	120	
75	E	175	1	105	96	F	28	1	7	124	C	93	...	90	152	F	38	30	
76	F	38	1	22	96	D	32	1	8	125	E	175	...	168	152	E	133	105	
76	E	133	1	77	96	B	36	1	9	126	E	42	...	40	152	A	171	135	
76	A	171	1	99	96	A	48	1	12	126	A	147	...	140	153	C	153	120	
77	D	77	1	43	97	B	97	1	23	127	B	127	...	120	154	D	77	60	
78	E	26	1	14	98	A	147	1	33	128	D	32	...	30	155	C	93	72	
78	A	91	1	49	99	A	99	1	21	128	A	48	...	45	156	E	26	20	
78	F	143	1	77	100	A	30	1	6	129	A	129	...	120	156	A	91	70	
78	B	169	1	91	100	E	175	1	35	130	E	26	...	24	156	F	143	110	
79	C	79	1	41	101	F	101	1	19	130	A	91	...	84	156	B	169	130	
80	E	26	1	13	102	C	34	1	6	130	F	143	...	132	157	B	157	120	
80	F	28	1	14	102	E	119	1	21	130	B	169	...	156	158	C	79	60	
80	A	30	1	15	102	F	187	1	33	131	F	131	...	120	159	C	159	120	
80	D	32	1	16	103	E	103	1	17	132	D	44	...	40	160	F	28	21	
80	C	34	1	17	104	E	26	1	4	132	A	99	...	90	160	D	32	24	
80	B	36	1	18	104	A	91	1	14	132	F	143	...	130	160	B	36	27	
81	B	81	1	39	104	F	143	1	22	133	E	133	...	120	160	A	48	36	
81	A	189	1	117	104	B	169	1	26	134	B	67	...	60	161	E	161	120	
82	C	123	1	57	105	F	28	1	4	135	B	36	...	32	162	B	81	60	
83	F	83	1	37	105	E	42	1	6	135	A	99	...	88	162	A	189	140	
84	F	28	1	12	105	D	77	1	11	135	C	153	...	136	163	D	163	120	

PARTS LIST CATALOG

INDEX FOR HIGH NUMBER INDEX PLATES 16" CIRCULAR MILLING TABLE (Cont'd.)

No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes
164	C	123	90	195	E	26	16	235	B	141	72	276	E	161	70
165	D	44	32	195	A	91	56	236	A	177	90	278	C	139	60
165	A	99	72	195	F	143	88	237	C	79	40	279	C	93	40
165	F	143	104	195	B	169	104	238	E	119	60	280	F	28	12
166	F	83	60	196	A	147	90	240	E	26	13	280	E	42	18
167	C	167	120	197	C	197	120	240	F	28	14	280	D	77	33
168	F	28	20	198	A	99	60	240	A	30	15	280	A	91	39
168	E	42	30	199	B	199	120	240	D	32	16	282	B	141	60
168	D	77	55	200	A	30	18	240	C	34	17	284	F	71	30
168	A	91	65	200	E	175	105	240	B	36	18	285	F	38	16
169	B	169	120	201	A	189	120	242	D	121	60	285	E	133	56
170	C	34	24	202	F	101	60	243	B	81	40	285	A	171	72
170	E	119	84	204	C	34	20	244	B	183	90	286	F	143	6
170	F	187	132	204	E	119	70	245	A	147	72	288	B	36	15
171	A	171	120	204	F	187	110	246	C	123	60	288	A	48	20
172	A	129	90	205	C	123	72	248	C	93	45	290	E	87	36
173	F	173	120	206	E	103	60	249	F	83	40	291	B	97	40
174	E	87	60	207	A	69	40	250	E	175	84	292	E	73	30
175	E	175	120	208	E	26	15	252	E	42	20	294	A	147	60
176	D	44	30	210	F	28	16	252	A	147	70	295	A	177	72
177	A	177	120	210	E	42	24	254	B	127	60	296	B	111	45
178	D	89	60	210	D	77	44	255	C	34	16	297	A	99	40
179	D	179	120	210	A	91	52	255	E	119	56	298	E	149	60
180	A	30	20	212	F	159	90	255	F	187	88	300	A	30	12
180	B	36	24	213	F	71	40	256	D	32	15	300	E	175	70
180	E	42	32	214	D	107	60	258	A	129	60	302	D	151	60
180	C	93	62	215	A	129	72	260	E	26	12	303	F	101	40
180	F	159	106	216	B	36	20	260	A	91	42	304	F	38	15
181	C	181	120	216	A	99	55	260	F	143	66	305	B	183	72
182	A	91	60	216	C	153	85	260	B	169	78	306	C	153	60
183	B	183	120	218	C	109	60	261	E	87	40	308	D	77	30
184	C	46	30	219	E	73	40	262	F	131	60	309	E	103	40
184	A	69	45	220	D	44	24	264	D	44	20	310	C	93	36
184	E	161	105	220	A	99	54	264	A	99	45	312	E	26	10
185	B	111	72	220	F	143	78	264	F	143	65	312	A	91	35
186	C	93	60	222	B	111	60	265	F	159	72	312	F	143	55
187	F	187	120	224	F	28	15	266	E	133	60	312	B	169	65
188	B	141	90	226	F	113	60	267	D	89	40	314	B	157	60
189	A	189	120	228	F	38	20	268	B	67	30	315	E	42	16
190	F	38	24	228	E	133	70	270	B	36	16	315	A	147	56
190	E	133	84	228	A	171	90	270	A	99	44	316	C	79	30
190	A	171	108	230	C	46	24	270	C	153	68	318	F	159	60
191	E	191	120	230	A	69	36	272	C	34	15	320	D	32	12
192	D	32	20	230	E	161	84	273	A	91	40	320	A	48	18
192	A	48	30	231	D	77	40	274	D	137	60	321	D	107	40
193	D	193	120	232	E	87	45	276	C	46	20	322	E	161	60
194	B	97	60	234	A	117	60	276	A	69	30	324	B	81	30

INDEX FOR HIGH NUMBER INDEX PLATES 16" CIRCULAR MILLING TABLE (Concluded)

No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes
324	A	189	70	344	A	129	45	360	F	159	53	384	D	32	10
326	D	163	60	345	C	46	16	362	C	181	60	384	A	48	15
327	C	109	40	345	A	69	24	363	D	121	40	385	D	77	24
328	C	123	45	345	E	161	56	364	A	91	30	386	D	193	60
330	D	44	16	346	F	173	60	365	E	73	24	387	A	129	40
330	A	99	36	348	E	87	30	366	B	183	60	388	B	97	30
330	F	143	52	350	E	175	60	368	C	46	15	390	E	26	8
332	F	83	30	351	A	117	40	369	C	123	40	390	A	91	28
333	B	111	40	352	D	44	15	370	B	111	36	390	F	143	44
334	C	167	60	354	A	177	60	372	C	93	30	390	B	169	52
335	B	67	24	355	F	71	24	374	F	187	60	392	A	147	45
336	F	28	10	356	D	89	30	376	B	141	45	393	F	131	40
336	E	42	15	357	E	119	40	378	A	189	60	394	C	197	60
338	B	169	60	358	D	179	60	380	F	38	12	395	C	79	24
339	F	113	40	360	A	30	10	380	E	133	42	396	A	99	30
340	C	34	12	360	B	36	12	380	A	171	54	398	B	199	60
340	E	119	42	360	E	42	14	381	B	127	40	399	E	133	40
340	F	187	66	360	C	93	31	382	E	191	60	400	A	30	9
342	A	171	60												

PARTS LIST CATALOG

INDEX FOR HIGH NUMBER INDEX PLATES 12", 20 and 24" CIRCULAR MILLING TABLES

Indexes all numbers up to and including 200; all even numbers and those divisible by 5 up to and including 400, except 225, 275, 325 and 375.

Part No. 10525	Side A	30-48-69-91- 99-117-129-147-171-177-189
	Side B	36-67-81-97-111-127-141-157-169-183-199
Part No. 10526	Side C	34-46-79-93-109-123-139-153-167-181-197
	Side D	32-44-77-89-107-121-137-151-163-179-193
Part No. 10527	Side E	26-42-73-87-103-119-133-149-161-175-191
	Side F	28-38-71-83-101-113-131-143-159-173-187

No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Turns	Holes
2	Any	Any	40	....	15	E	42	5	14	30	A	30	2	20	46	A	69	1	51
3	A	30	26	20	15	C	93	5	31	30	B	36	2	24	46	E	161	1	119
3	B	36	26	24	15	F	159	5	53	30	E	42	2	28	47	B	141	1	99
3	E	42	26	28	16	Any	Any	5	....	30	C	93	2	62	48	A	30	1	20
3	C	93	26	62	17	C	34	4	24	30	F	159	2	106	48	B	36	1	24
3	F	159	26	106	17	E	119	4	84	31	C	93	2	54	48	E	42	1	28
4	Any	Any	20	....	17	F	187	4	136	32	E	26	2	13	48	C	93	1	62
5	Any	Any	16	....	18	B	36	4	16	32	F	28	2	14	48	F	159	1	106
6	A	30	13	10	18	A	99	4	44	32	A	30	2	15	49	A	147	1	93
6	B	36	13	12	18	C	153	4	68	32	D	32	2	16	50	A	30	1	18
6	E	42	13	14	19	F	38	4	8	32	C	34	2	17	50	E	175	1	105
6	C	93	13	31	19	E	133	4	28	32	B	36	2	18	51	C	153	1	87
6	F	159	13	53	19	A	171	4	36	33	A	99	2	42	52	E	26	1	14
7	F	28	11	12	20	Any	Any	4	....	34	C	34	2	12	52	A	91	1	49
7	E	42	11	18	21	E	42	3	34	34	E	119	2	42	52	F	143	1	77
7	D	77	11	33	22	A	147	3	119	34	F	187	2	66	52	B	169	1	91
7	A	91	11	39	22	D	44	3	28	35	F	28	2	8	53	F	159	1	81
8	Any	Any	10	....	22	A	99	3	63	35	E	42	2	12	54	B	81	1	39
9	B	36	8	32	22	F	143	3	91	35	D	77	2	22	54	A	189	1	91
9	A	99	8	88	23	C	46	3	22	35	A	91	2	26	55	D	44	1	20
9	C	153	8	136	23	A	69	3	33	36	B	36	2	8	55	A	99	1	45
10	Any	Any	8	....	23	E	161	3	77	36	A	99	2	22	55	F	143	1	65
11	D	44	7	12	24	A	30	3	10	36	C	153	2	34	56	F	28	1	12
11	A	99	7	27	24	B	36	3	12	37	B	111	2	18	56	E	42	1	18
11	F	143	7	39	24	E	42	3	14	38	F	38	2	4	56	D	77	1	33
12	A	30	6	20	24	C	93	3	31	38	E	133	2	14	56	A	91	1	39
12	B	36	6	24	24	F	159	3	53	38	A	171	2	18	57	A	171	1	69
12	E	42	6	28	25	A	30	3	6	39	A	117	2	6	58	E	87	1	33
12	C	93	6	62	25	E	175	3	35	40	Any	Any	2	....	59	A	177	1	63
12	F	159	6	106	26	E	26	3	2	41	C	123	1	117	60	A	30	1	10
13	E	26	6	4	26	A	91	3	7	42	E	42	1	38	60	B	36	1	12
13	A	91	6	14	26	F	143	3	11	42	A	147	1	133	60	E	42	1	14
13	F	143	6	22	26	B	169	3	13	43	A	129	1	111	60	C	93	1	31
13	B	169	6	26	27	B	81	2	78	44	D	44	1	36	60	F	159	1	53
14	F	28	5	20	27	A	189	2	182	44	A	99	1	81	61	B	183	1	57
14	E	42	5	30	28	F	28	2	24	44	F	143	1	117	62	C	93	1	27
14	D	77	5	55	28	E	42	2	36	45	B	36	1	28	63	A	189	1	51
14	A	91	5	65	28	D	77	2	66	45	A	99	1	77	64	F	28	1	7
15	A	30	5	10	28	A	91	2	78	45	C	153	1	119	64	D	32	1	8
15	B	36	5	12	29	E	87	2	66	46	C	46	1	34	64	B	36	1	9

INDEX FOR HIGH NUMBER INDEX PLATES 12", 20 and 24" CIRCULAR MILLING TABLES (Cont'd.)

No. of Div.	Side	Circle	Turns	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes
64	A	48	1	12	93	C	93	80	122	B	183	120	158	C	79	40
65	E	26	1	6	94	B	141	120	123	C	123	80	159	F	159	80
65	A	91	1	21	95	F	38	32	124	C	93	60	160	E	26	13
65	F	143	1	33	95	E	133	112	125	E	175	112	160	F	28	14
65	B	169	1	39	95	A	171	144	126	A	189	120	160	A	30	15
66	A	99	1	21	96	A	30	25	127	B	127	80	160	D	32	16
67	B	67	1	13	96	B	36	30	128	D	32	20	160	C	34	17
68	C	34	1	6	96	E	42	35	128	A	48	30	160	B	36	18
68	E	119	1	21	97	B	97	80	129	A	129	80	161	E	161	80
68	F	187	1	33	98	A	147	120	130	E	26	16	162	B	81	40
69	A	69	1	11	99	A	99	80	130	A	91	56	163	D	163	80
70	F	28	1	4	100	A	30	24	130	F	143	88	164	C	123	60
70	E	42	1	6	100	E	175	140	130	F	169	104	165	A	99	48
70	D	77	1	11	101	F	101	80	131	F	131	80	166	F	83	40
70	A	91	1	13	102	C	153	120	132	A	99	60	167	C	167	80
71	F	71	1	9	103	E	103	80	133	E	133	80	168	E	42	20
72	B	36	1	4	104	E	26	20	134	B	67	40	168	A	147	70
72	A	99	1	11	104	A	91	70	135	B	81	48	169	B	169	80
72	C	153	1	17	104	F	143	110	135	A	189	112	170	C	34	16
73	E	73	1	7	104	B	169	130	136	C	34	20	170	E	119	56
74	B	111	1	9	105	E	42	32	136	E	119	70	170	F	187	88
75	A	30	1	2	105	A	147	112	136	F	187	110	171	A	171	80
76	F	38	1	2	106	F	159	120	137	D	137	80	172	A	129	60
76	E	133	1	7	107	D	107	80	138	A	69	40	173	F	173	80
76	A	171	1	9	108	B	81	60	139	C	139	80	174	E	87	40
77	D	77	1	3	108	A	189	140	140	F	28	16	175	E	175	80
78	A	117	1	3	109	C	109	80	140	E	42	24	176	D	44	20
79	C	79	1	1	110	D	44	32	140	D	77	44	176	A	99	45
80	Any	Any	1	....	110	A	99	72	140	A	91	52	176	F	143	65
81	B	81	....	80	110	F	143	104	141	B	141	80	177	A	177	80
82	C	123	....	120	111	B	111	80	142	F	71	40	178	D	89	40
83	F	83	....	80	112	F	28	20	143	F	143	80	179	D	179	80
84	E	42	....	40	112	E	42	30	144	B	36	20	180	B	36	16
84	A	147	....	140	112	D	77	55	144	A	99	55	180	A	99	44
85	C	34	....	32	112	A	91	65	144	C	153	85	180	C	153	68
85	E	119	....	112	113	F	113	80	145	E	87	48	181	C	181	80
85	F	187	....	176	114	A	171	120	146	E	73	40	182	A	91	40
86	A	129	....	120	115	C	46	32	147	A	147	80	183	B	83	80
87	E	87	....	80	115	A	69	48	148	B	111	60	184	C	46	20
88	D	44	....	40	115	E	161	112	149	E	149	80	184	A	69	30
88	A	99	....	90	116	E	87	60	150	A	30	16	184	E	161	70
88	F	143	....	130	117	A	117	80	151	D	151	80	185	B	111	48
89	D	89	....	80	118	A	177	120	152	F	38	20	186	C	93	40
90	B	36	....	32	119	E	119	80	152	E	133	70	187	F	187	80
90	A	99	....	88	120	A	30	20	152	A	171	90	188	B	141	60
90	C	153	....	136	120	B	36	24	153	C	153	80	189	A	189	80
91	A	91	....	80	120	E	42	28	154	D	77	40	190	F	38	16
92	C	46	....	40	120	C	93	62	155	C	93	48	190	E	133	56
92	A	69	....	60	120	F	159	106	156	A	117	60	190	A	171	72
92	E	161	....	140	121	D	121	80	157	B	157	80	191	E	191	80

PARTS LIST CATALOG

INDEX FOR HIGH NUMBER INDEX PLATES 12", 20 and 24" CIRCULAR MILLING TABLES (Concluded)

No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes	No. of Div.	Side	Circle	Holes
192	B	36	15	238	E	119	40	288	B	36	10	346	F	173	40
192	A	48	20	240	A	30	10	290	E	87	24	348	E	87	20
193	D	193	80	240	B	36	12	292	E	73	20	350	E	175	40
194	B	97	40	240	E	42	14	294	A	147	40	352	D	44	10
195	A	117	48	240	C	93	31	295	A	177	48	354	A	177	40
196	A	147	60	240	F	159	53	296	B	111	30	355	F	71	16
197	C	197	80	242	D	121	40	298	E	149	40	356	D	89	20
198	A	99	40	244	B	183	60	300	A	30	8	358	D	179	40
199	B	199	80	245	A	147	48	302	D	151	40	360	B	36	8
200	A	30	12	246	C	123	40	304	F	38	10	360	A	99	22
200	E	175	70	248	C	93	30	304	E	133	35	360	C	153	34
202	F	101	40	250	E	175	56	304	A	171	45	362	C	181	40
204	C	153	60	252	A	189	60	305	B	183	48	364	C	46	10
205	C	123	48	254	B	127	40	306	C	153	40	364	A	69	15
206	E	103	40	255	C	153	48	308	D	77	20	364	E	161	35
208	E	26	10	256	D	32	10	310	C	93	24	365	E	73	16
208	A	91	35	256	A	48	15	312	A	117	30	366	B	183	40
208	F	143	55	258	A	129	40	314	B	157	40	368	C	46	10
208	B	169	65	260	E	26	8	315	A	189	48	368	A	69	15
210	E	42	16	260	A	91	28	316	C	79	20	368	E	161	35
210	A	147	56	260	F	143	44	318	F	159	40	370	B	111	24
212	B	81	30	260	B	169	52	320	F	28	7	372	C	93	20
212	A	189	70	262	F	131	40	320	D	32	8	374	F	187	40
214	D	107	40	264	A	99	30	320	B	36	9	376	B	141	30
215	A	129	48	265	F	159	48	320	A	48	12	378	A	189	40
216	B	81	30	266	E	133	40	322	E	161	40	380	F	38	8
216	A	189	70	268	B	67	20	324	B	81	20	380	E	133	28
218	C	109	40	270	B	81	24	326	D	163	40	380	A	171	36
220	D	44	16	270	A	189	56	328	C	123	30	382	E	191	40
220	A	99	36	272	C	34	10	330	A	99	24	384	A	48	10
220	F	143	52	272	E	119	35	332	F	83	20	385	D	77	16
222	B	111	40	272	F	187	55	334	E	87	40	386	D	193	40
224	F	28	10	274	D	137	40	335	B	67	16	388	B	97	20
224	E	42	15	276	A	69	20	336	E	42	10	390	A	117	24
228	A	171	60	278	C	139	40	336	A	147	35	392	A	147	30
230	C	46	16	280	F	28	8	338	B	169	40	394	C	197	40
230	A	69	24	280	D	77	22	340	C	34	8	395	C	79	16
230	E	161	56	280	A	91	26	340	E	119	28	396	A	99	20
232	E	87	30	282	B	141	40	340	F	187	44	398	B	199	40
234	A	117	40	284	F	71	20	342	A	171	40	400	A	30	6
235	B	141	48	285	A	171	48	344	A	129	30	400	E	175	35
236	A	177	60	286	F	143	40	345	A	69	16				

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ADJUSTMENTS (12" ONLY)

To Adjust Backlash Between Worm and Worm Wheel (Page 20):

1. Remove screws (37), locking bushing (36) and gasket (35) from underside of housing (14) to free eccentric bushing (34). With spanner wrench turn eccentric bushing (34) clockwise until dial (47) shows a lost motion of about 1-1/2 graduations. Place gasket (35) and locking bushing (36) in position. Lock eccentric bushing (34) with screws (37).

To Adjust End Play in Worm Shaft (Page 20).

1. Loosen lock screw (40) in nut (39).
2. Holding hand wheel (48) turn nut (39) clockwise until shaft begins to drag. Back lock nut off lightly and tighten lock screw (40).

To Adjust Clearance Between Table and Housing (20).

1. Place Circular Milling Table on parallel blocks. Leave sufficient opening between the blocks for free access to nut (43).
2. Release lock screw (41) and tap nut (43) to free shoe (42).
3. Rotate table (1) by hand wheel (48) to insure table is in good contact with bearing of housing (14).
4. Turn nut (43) counter clockwise until tight. Then back lock nut off lightly.
5. Lock nut (43) by tightening screw (41).

Note: Never make adjustments so tight that table cannot be turned freely with hand wheel.

ADJUSTMENTS (16" ONLY)

To Adjust Backlash Between Worm and Worm Wheel (Page 24):

1. Loosen 3/8" hexagon screw (133) through top of housing (136) which locks long eccentric sleeve (184) (Page 26) to housing (136).
2. Move knurled plunger (201) (Page 26) counter clockwise until worm (179) is fully engaged in worm wheel (106) (Page 24).
3. Relock 3/8" hexagon screw (133) (Page 24) and loosen 1/2" fillister head screw (183) (Page 26) in lever (187).
4. Position lever (187) so that plunger (201) will drop into top hole in housing (136) (Page 24). Relock screw (183).

Note: Never make adjustments so tight that table cannot be turned freely with hand wheel.

To Adjust End Play in Worm Shaft (Page 26).

1. Loosen No. 10-24 fillister head lock screw (195) and turn 13/16" lock nut at hand wheel (192) clockwise until worm shaft (176) becomes tight. Back lock nut off about 1/4 turn and relock.

CINCINNATI 12," 16", 20", 24" CIRCULAR MILLING TABLES

To Adjust Gib Clearance Between Table and Housing (Page 24):

1. Fasten crane to circular table (89). Raise and suspend freely.
2. Try a 0.003" and 0.004" feeler at four points, approximately 90° apart, between table (89) and housing (136). The 0.003" gage should enter, but the 0.004" gage should not.

If too loose or too tight, remove four 7/8" set screws (131) from bottom of housing (136) and adjust 1/2" fillister head screws (130) under them to give correct gib clearance. Lock with set screws (131).
3. The two 1/2" hexagon nuts (141) located between the four set screws (131) are used for clamping the table (89).

ADJUSTMENTS (20 and 24" ONLY)

To Adjust Backlash Between Worm and Worm Wheel (Page 28):

1. Loosen three hexagon cap screws (243) on the underside of housing (212) which lock eccentric bushing (240) to housing (212). Turn bushing clockwise with spanner wrench until hand wheel dial (236) shows a lost motion of about 1-1/2 graduations. Relock three cap screws (243).

To Adjust End Play in Worm Shaft (269) (Pages 28 and 32):

1. Remove crank (237), dial (236) and spring (234) (Page 28) from worm shaft (269).
2. Loosen screw (227) in lock nut (231) and tap to free lock shoe (232) from threads on worm shaft (269).
3. Replace crank (237) on worm shaft and turn shaft slowly. Tighten lock nut (231) in increments of 1/4, turn until shaft begins to drag. Back lock nut (231) off about 1/4 turn and tighten lock screw (227).

To Adjust Gib Clearance Between Table and Housing:

1. Fasten crane to circular table (258) (Page 30).
2. Slide feeler gage between table (258) and housing (212) (Page 28) at four places, (about 90° apart), and keep record of clearances.
3. Raise Circular Milling Table with crane and check clearance at same four places. Subtract two sets of readings and the difference is the gib clearance between table (258) and housing (212) bearing faces. This clearance should be approximately 0.003" at all four positions.

To adjust for 0.003" clearance, either tighten or loosen double set of hexagon nuts (264A-264B on studs 264) on underside of housing (212) (Page 28) until proper clearance is obtained.

Note: The two studs which have just one hexagon nut are used to lock table from turning.

NOTES

HOW TO ORDER REPAIR PARTS

You will receive quicker and better service when ordering repair parts if you will adhere to the following instructions when ordering such replacements.

These four requirements are essential:

1. State amount wanted.
2. Give catalog key number, part number and name of part. If ordering parts by part number, please advise where the number was obtained. (See paragraph A, below.)
3. Give complete serial number of machine. (The number can be found stamped at the right end of table on the front edge.)
4. Specify how and where to ship. (See paragraph B, below.)

Paragraph A

When ordering parts by number, kindly advise how the number was obtained, namely:

Number stamped on part.

Prior Invoice.

Parts List Catalog. (Give identification and publication number on front cover.)

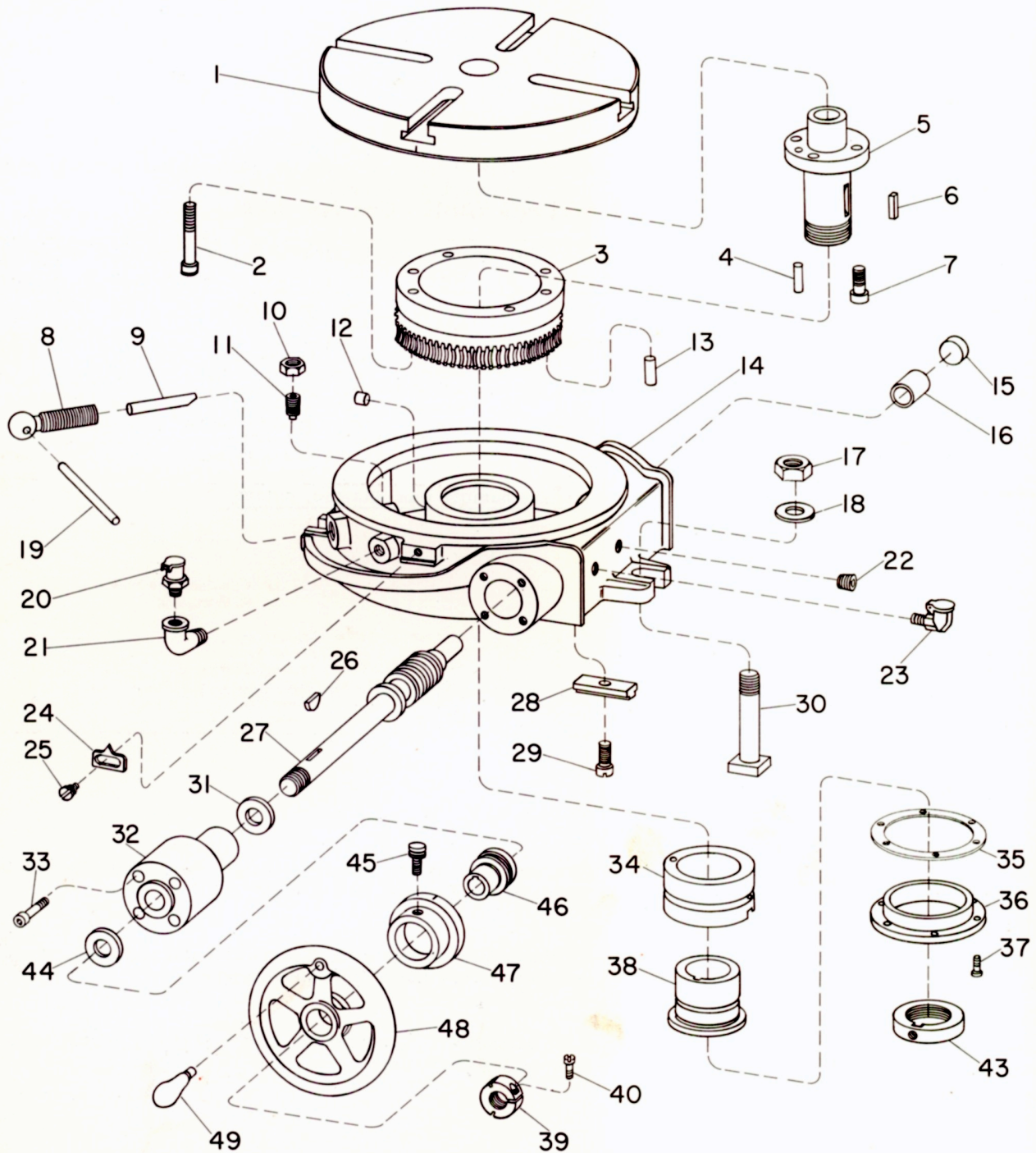
Paragraph B

Do not say, "Ship quickest way". Be definite and state agency desired, that is--Air Mail, Parcel Post (Special Delivery), Parcel Post (Regular), Express, Motor Freight, Rail Freight, etc.

Specify each individual piece that is required in the order. If only certain parts of a unit are required, never use the word "complete"; it always raises a question as to how much of a unit to supply.

However, in some cases, due to the nature of the part, it will be necessary, and less costly to you, for us to supply additional related pieces, especially if part wanted is obsolete.

12" CIRCULAR MILLING TABLE



134673

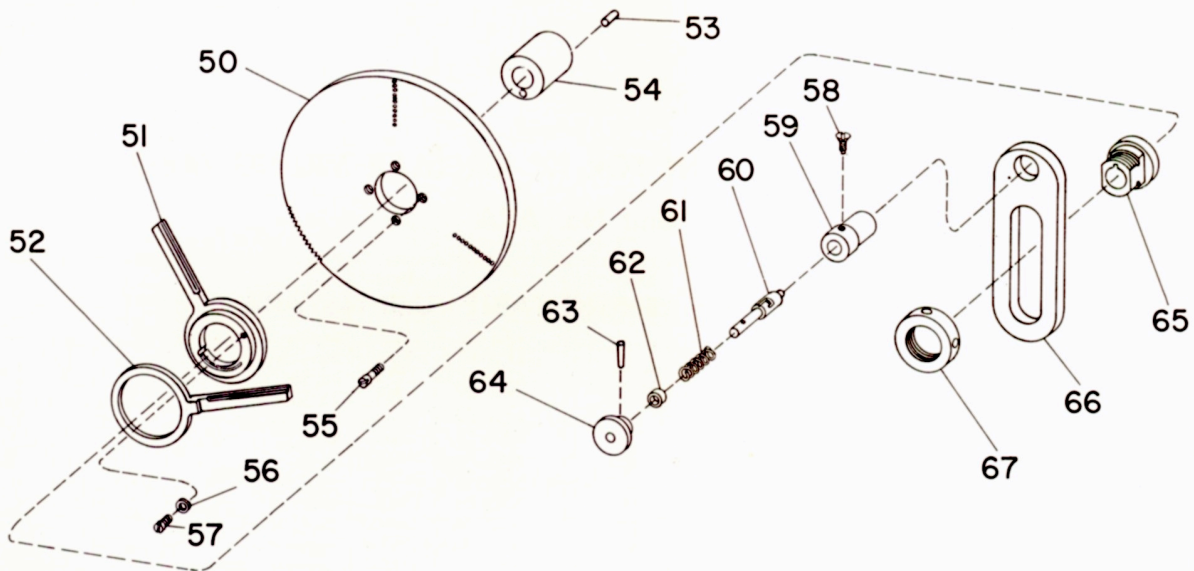
CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

12" CIRCULAR MILLING TABLE - Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-1	134060	Table	1	ARA-27	179666	Worm Shaft	1
ARA-2	3262	Screw	4	ARA-28	2222	Tongue	2
ARA-3	134062	Wheelworm	1	ARA-29	3486	Screw	2
ARA-4	3543	Pin	1	ARA-30	2227	Bolt Tee	2
ARA-5	142366	Stem	1	ARA-31	14319	Washer	1
ARA-6	3307	Key	1	ARA-32	179665	Bush Worm	1
ARA-7	3399	Screw	4	ARA-33	3396	Screw	4
ARA-8	3538	Screw	1	ARA-34	135031	Eccentric Bushing	1
ARA-9	134072	Plunger Table Clamp	1	ARA-35	141277	Gasket Cover	1
ARA-10	3472	Nut	1	ARA-36	135035	Bushing Locking	1
ARA-11	3229	Screw	1	ARA-37	3203	Screw	6
ARA-12	2251	Plug	2	ARA-38	135032	Sleeve Table Stem	1
ARA-13	1383	Pin	2	ARA-39	14266	Nut	1
ARA-14	134816	Base	1	ARA-40	3246	Screw	1
ARA-15	3551	Plug	1	ARA-43	4192	Nut	1
ARA-16	3832	Bush	1			12" Circular Hand Feed W/O Indexing	
ARA-17	3480	Nut	2				
ARA-18	1040	Washer	2				
ARA-19	3537	Handle	1				
ARA-20	224865	Oiler	1				
ARA-21	30803	Elbow Street	1	ARA-44	14319	Washer	1
ARA-22	76644	Plug	1	ARA-45	2255	Screw	1
ARA-23	44979	Cup	1	ARA-46	135033	Bushing Handwheel	1
ARA-24	8607	Pointer	1	ARA-47	135034	Dial	1
ARA-25	2277	Screw	1	ARA-48	110051	Handwheel	1
ARA-26	3280	Key	1	ARA-49	3501	Handle	1

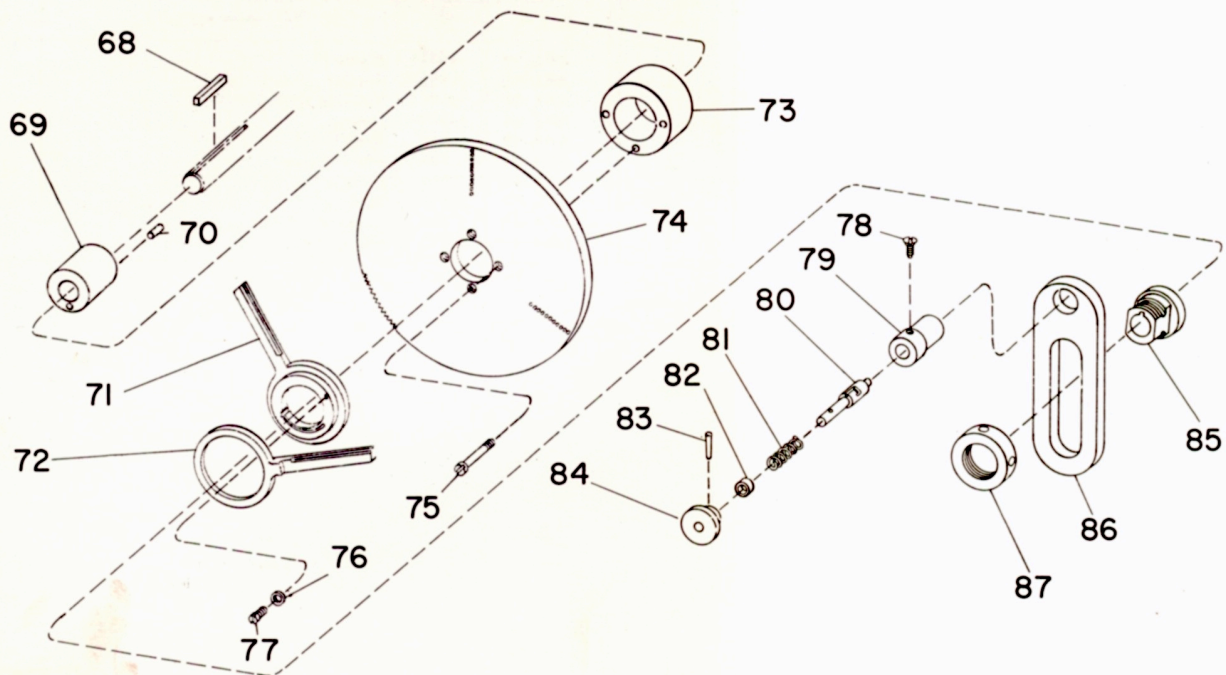
INDEXING ATTACHMENTS

12" CIRCULAR MILLING TABLE



134673

16" CIRCULAR MILLING TABLE



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CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

INDEXING ATTACHMENT FOR 12" CIRCULAR MILLING TABLE

Unit No. ARA

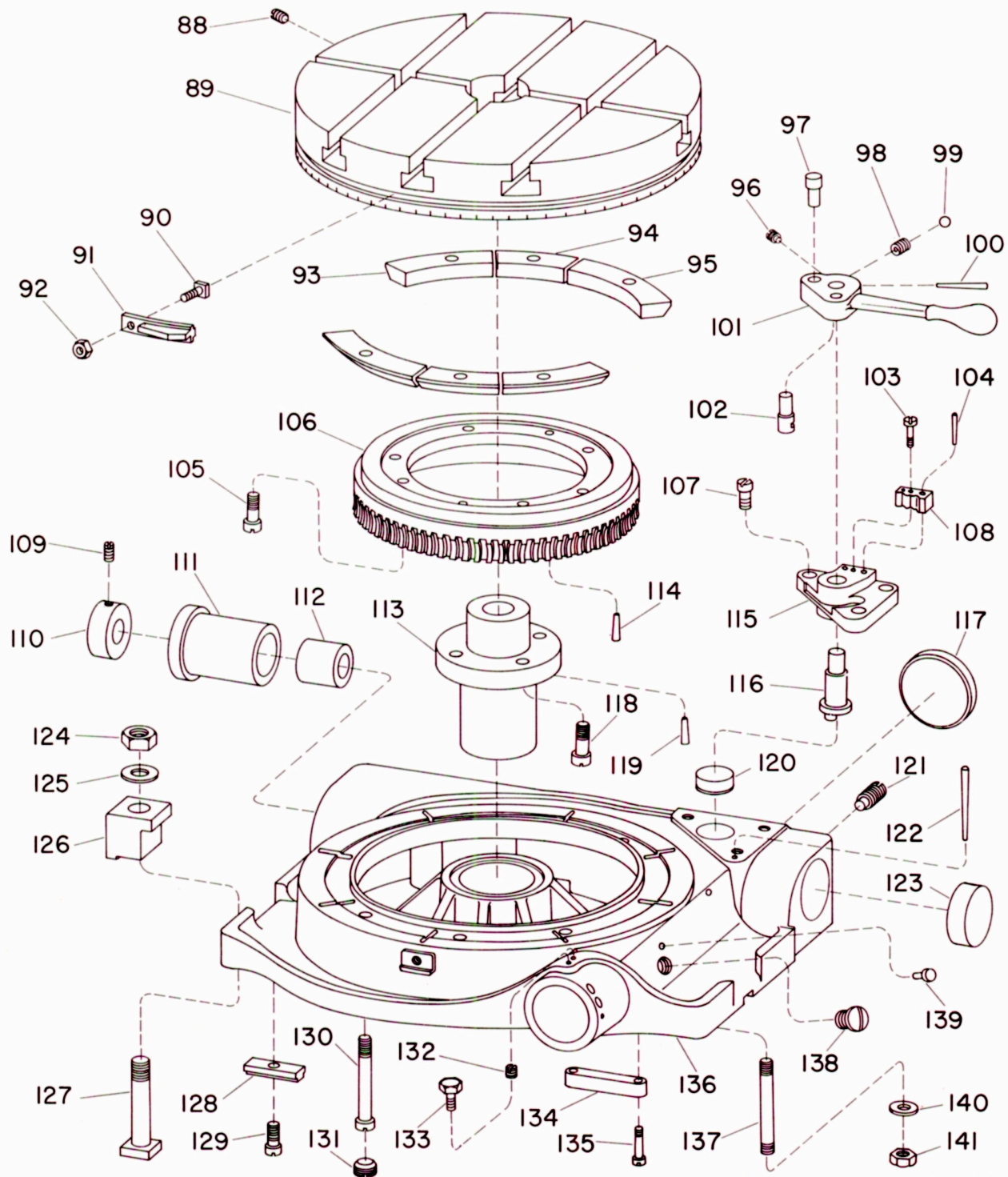
Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-50	6855	Plate	1	ARA-59	37328	Holder - Index Pin	1
ARA-51	8100	Sector (Bottom Part)	1	ARA-60	70861	Pin - Index	1
ARA-52	8101	Sector (Top Part)	1	ARA-61	253	Spring	1
ARA-53	2166	Pin	1	ARA-62	295	Bush	1
ARA-54	31951	Bush	1	ARA-63	140	Pin - Taper	1
ARA-55	2252	Screw	4	ARA-64	1007	Knob	1
ARA-56	294	Washer	1	ARA-65	31956	Bush	1
ARA-57	2285	Screw	1	ARA-66	28795	Carrier - Index	1
ARA-58	2294	Screw	1	ARA-67	20470	Nut - Lock	1

INDEXING ATTACHMENT FOR 16" CIRCULAR MILLING TABLE

Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-68	1632	Key	1	ARA-78	2294	Screw	1
ARA-69	167073	Bush - Worm	1	ARA-79	37328	Holder - Index Pin	1
ARA-70	2166	Pin	1	ARA-80	70861	Pin - Index	1
ARA-71	8100	Sector (Bottom Part)	1	ARA-81	253	Spring	1
ARA-72	8101	Sector (Top Part)	1	ARA-82	295	Bush	1
ARA-73	167072	Bush	1	ARA-83	140	Pin - Taper	1
ARA-74	6855	Plate	1	ARA-84	1007	Knob	1
ARA-75	167169	Screw	3	ARA-85	31956	Bush	1
ARA-76	294	Washer	1	ARA-86	28795	Carrier - Index	1
ARA-77	2285	Screw	1	ARA-87	20470	Nut - Lock	1

16" CIRCULAR MILLING TABLE



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CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

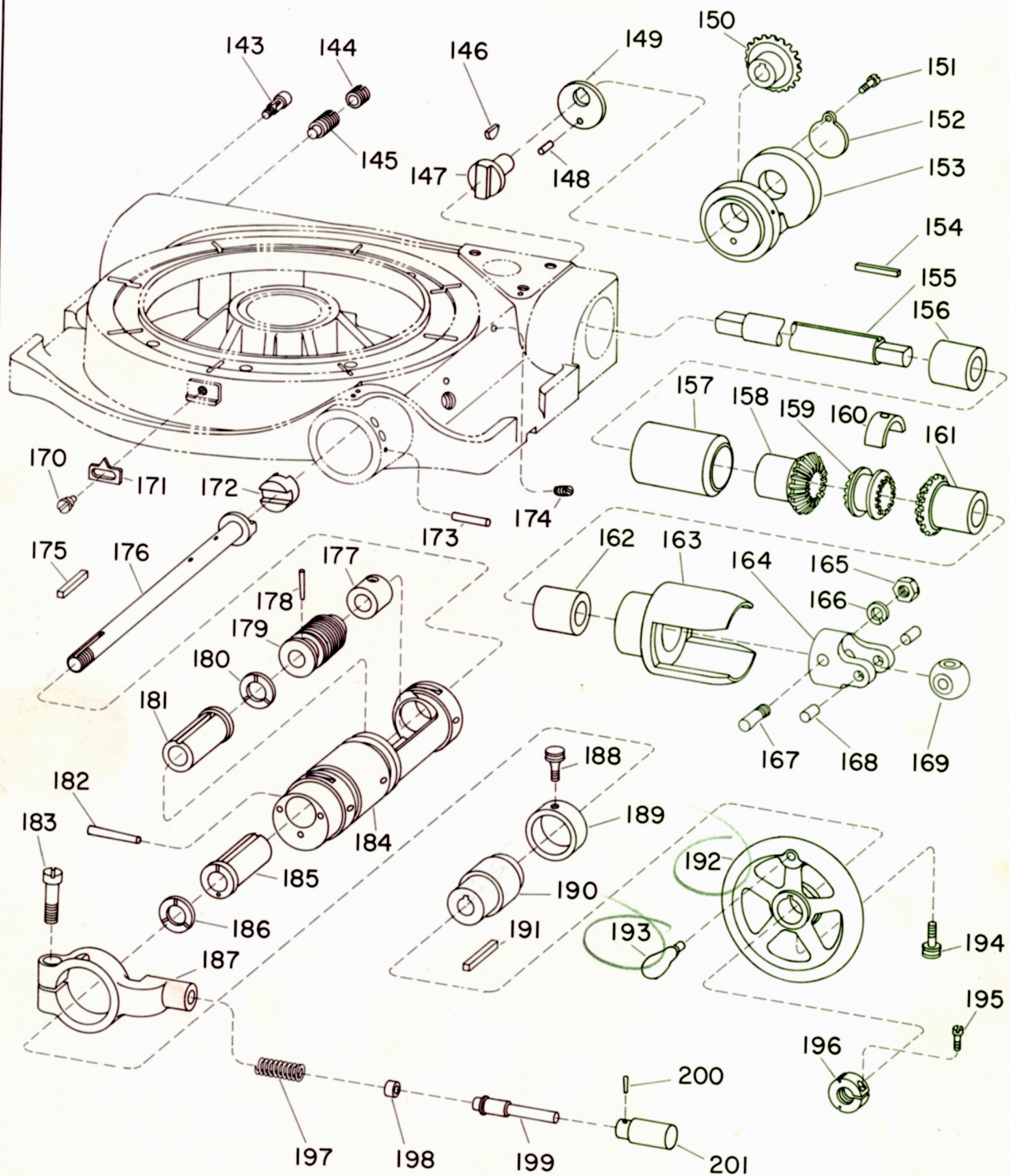
16" CIRCULAR MILLING TABLE

Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-88	1213	Screw	1	ARA-125	1040	Washer	
ARA-89	60546	Table	1			5/8 In. 203H 203-10 ML 205-12	
ARA-90	1891*	Bolt - Tee	2			307-12 MI 210-12 310-12	
ARA-91	79412*	Dog - I Ring	2			Dial Type 215-18 220-18	
ARA-92	156*	Nut	2			Dual & HP	4
ARA-93	35925	Gib - Left	2		764	3/4 In. 307-14 & 410-14 MI	
ARA-94	49370	Clamp - Table	2			315-15 415-15 420-16	
ARA-95	35926	Gib - Right	2			520-16 520-20 540-20	
ARA-96	1786*	Screw	1			620-20 640-20 Dial Type	
ARA-97	25798*	Stud - Short	1			320-18 330-18 420-18	
ARA-98	262*	Spring	1			430-18 425-20 450-20	
ARA-99	13665*	Ball	1			525-20 550-20 625-20	
ARA-100	647*	Pin	1			650-20 Dual & HP	4
ARA-101	20654*	Lever - Clutch	1	ARA-126	12292	Clamp	
ARA-102	22359*	Stud - Long	1			203H 203-10 ML 205-12 &	
ARA-103	781*	Screw	1			307-12 MI 210-12 310-12	
ARA-104	150127*	Roll - Spring	2			Dial Type 215-18 220-18	
ARA-105	1499	Screw	6			Dual & HP	4
ARA-106	102982	Worm Wheel	1		67807	307-14 410-14 MI 315-15	
ARA-107	1116*	Screw	3			415-15 420-16 520-16	
ARA-108	22068*	Detent - Clutch Lever	1			520-20 540-20 620-20	
ARA-109	1917*	Screw	1			640-20 Dial Type 320-18	
ARA-110	62446*	Collar - on Drive Shaft	1			330-18 420-18 430-18	
ARA-111	60083*	Bush - Rear Drive Shaft	1			425-20 450-20 525-20	
ARA-112	20673*	Bush	1			550-20 625-20 650-20 Dual	
ARA-113	45541	Stem	1			& HP All Verci Power	2
ARA-114	1677	Pin	2	ARA-127	73080	Bolt Tee	
ARA-115	20658*	Bearing - Clutch Ecc.	1			5/8 In. 203H 203-10ML 205-12	
ARA-116	20675*	Eccentric in Clutch	1			& 307-12MI	4
ARA-117	22050	Plug (For Hand Feed Only)	1		2228	5/8 In. 210-12 310-12 Dial Type	
ARA-118	1188	Screw	4			LL 215-18 220-18 Dual &	
ARA-119	480	Pin	1			HP	4
ARA-120	22048	Plug (For Hand Feed Only)	1		2235	3/4" 307-14 & 410-14 MI	4
ARA-121	69	Screw	4		2129	3/4" 315-15 415-15 420-16	
ARA-122	1873	Pin	1			520-16 520-20 540-20 620-20	
ARA-123	33761	Plug (For Hand Feed Only)	2			640-20 Dial Type 320-18 330-18	
ARA-124		Nut				420-18 430-18 425-20 450-20	
	3480	5/8 In. 203H 203-10ML 205-12				525-20 550-20 625-20 650-20	
		& 307-12 MI 210-12 310-12				Dual & HP	4
		Dial Type 215-18 220-18		ARA-128	3357	Tongue	2
		Dual & HP	4	ARA-129	3486	Screw	2
	3481	3/4 In. 307-14 & 410-14 MI		ARA-130	1742	Screw	4
		315-15 415-15 420-16 520-16		ARA-131	1744	Screw	4
		520-20 540-20 620-20 640-20		ARA-132	1205	Screw	1
		Dial Type 320-18 330-18		ARA-133	489	Screw	1
		420-18 430-18 425-20 450-20		ARA-134	13217	Block Thrust	1
		525-20 550-20 625-20 650-20		ARA-135	781	Screw	2
		Dual & HP	4	ARA-136	60084	Housing	1
				ARA-137	14279	Stud for Clamp	2
				ARA-138	902	Screw	1
				ARA-139	270	Pin	1
				ARA-140	855	Washer	2
				ARA-141	159	Nut	2

* For Power Feed

16" CIRCULAR MILLING TABLE



99434

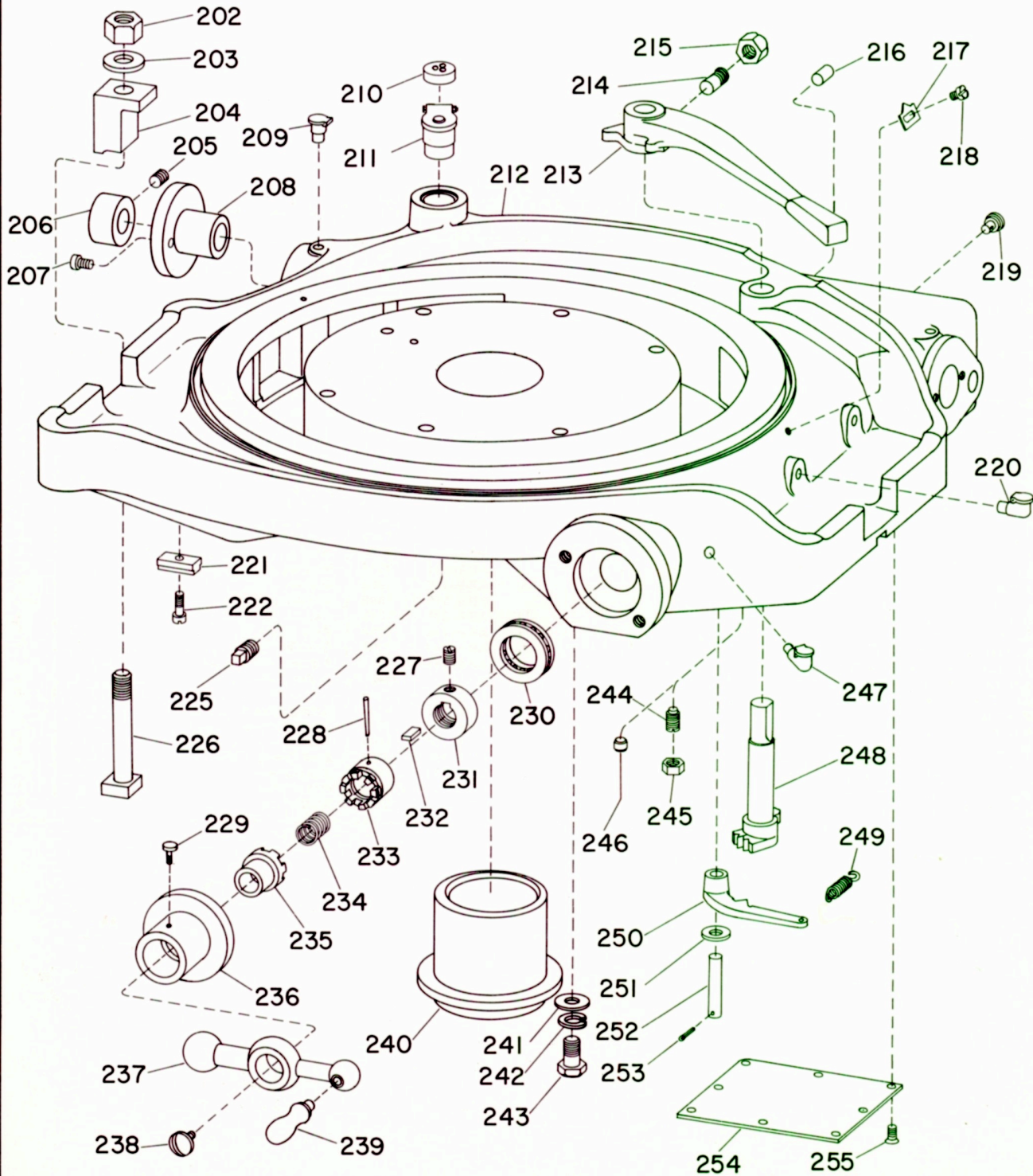
16" CIRCULAR MILLING TABLE

Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-143	655	Cover Oil Hole	3	ARA-173	1374	Pin	1
ARA-144	1215	Screw (For Hand Feed)	8	ARA-174	1205	Screw	1
ARA-145	3455	Screw	1	ARA-175	1655	Key	1
ARA-146	3279*	Key	1	ARA-176	167075	Shaft Worm	1
ARA-147	20684*	Shaft Mitre Gear	1	ARA-177	18708	Bush - Short	1
ARA-148	1365*	Pin	1	ARA-178	663	Pin Taper	2
ARA-149	20690*	Washer on Mitre Gear	1	ARA-179	63697	Worm	1
ARA-150	94380*	Gear Mitre Driven	1	ARA-180	14319	Washer Thrust	1
ARA-151	3198*	Screw	1	ARA-181	14317	Bush - Long	1
ARA-152	13184*	Lid Oil	1	ARA-182	482	Pin Taper	3
ARA-153	33466*	Sleeve	1	ARA-183	1278	Screw	1
ARA-154	345*	Key	1	ARA-184	18702	Sleeve	1
ARA-155	62680*	Shaft Drive	1	ARA-185	14317	Bush Long	1
ARA-156	20673*	Bush	1	ARA-186	14319	Washer	1
ARA-157	20656*	Sleeve Mitre Gear Small	1	ARA-187	93089	Lever	1
ARA-158	94381*	Gear	1	ARA-188	2253	Screw	1
ARA-159	28018*	Clutch	1	ARA-189	14265	Dial	1
ARA-160	20685*	Shoe Clutch	1	ARA-190	171828	Bush	1
ARA-161	94381*	Gear	1	ARA-191	345	Key	1
ARA-162	20673*	Bush	1	ARA-192	14324	Wheelhand	1
ARA-163	40386*	Guard for Fork	1	ARA-193	6809	Handle	1
ARA-164	49826*	Fork Short	1	ARA-194	2255	Screw	1
ARA-165	2143*	Nut	1	ARA-195	3246	Screw	1
ARA-166	2038*	Washer	1	ARA-196	14266	Nut	1
ARA-167	48073*	Pin Lock	1	ARA-197	1733	Spring	1
ARA-168	2174*	Pin	2	ARA-198	3523	Bush	1
ARA-169	33891*	Ball in Fork	1	ARA-199	3524	Pin Index	1
ARA-170	2277	Screw	1	ARA-200	140	Pin	1
ARA-171	8607	Pointer	1	ARA-201	3525	Handle Index Pin	1
ARA-172	31304*	Block Sliding	1				

* For Power Feed

20" & 24" CIRCULAR MILLING TABLES



79411=20"
79627=24"

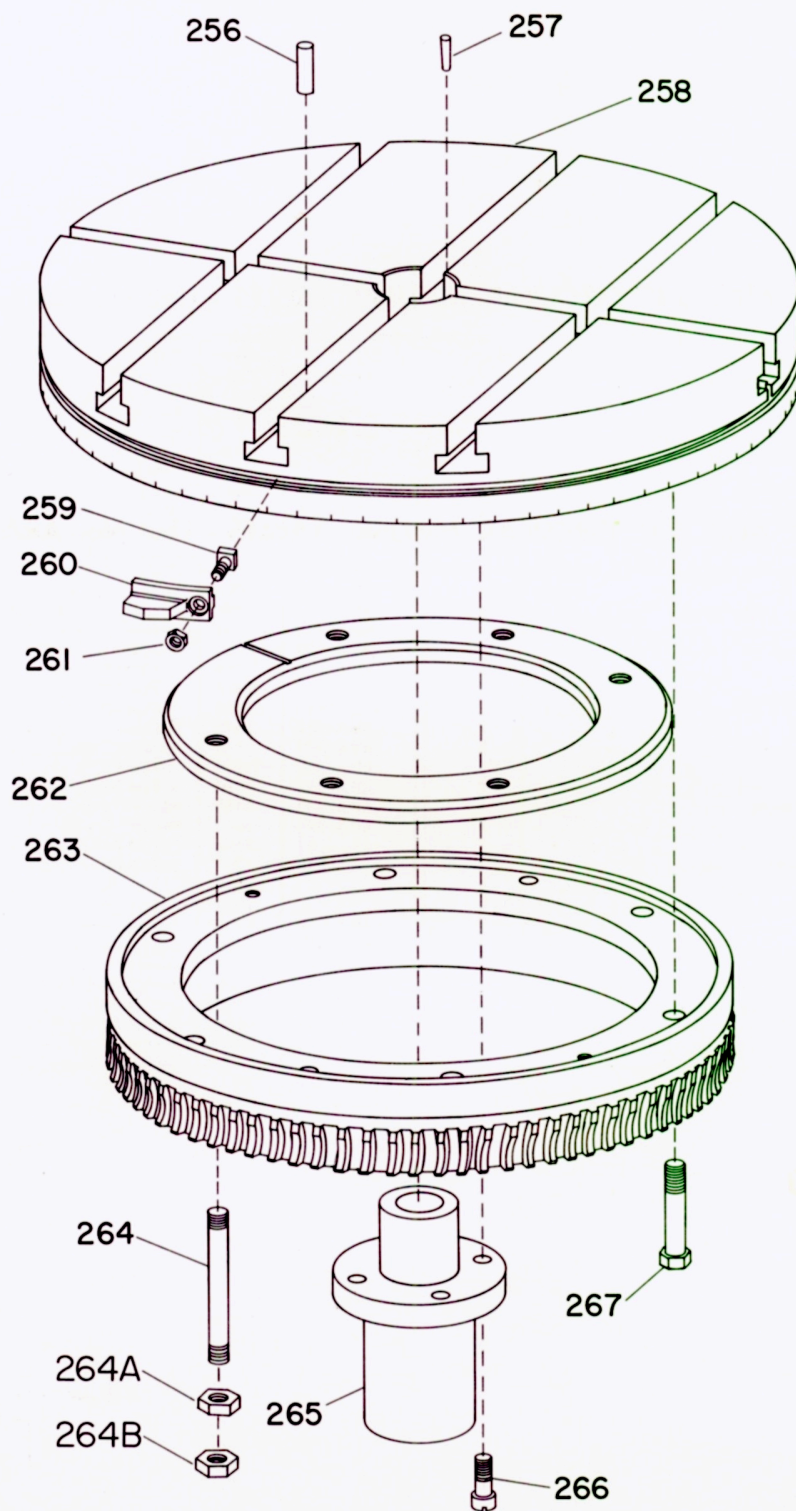
CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

20" AND 24" CIRCULAR MILLING TABLES - Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-202		Nut		ARA-229	2253	Screw	1
	3480	For 11/16 Tee Slot Table	4	ARA-230		Bearing Ball	
	3481	For 13/16 Tee Slot Table	4		12593	For 24"	1
ARA-203		Washer			12592	For 20"	1
	1040	For 11/16 Tee Slot Table	4	ARA-231	35447	Nut Lock	1
	1042	For 13/16 Tee Slot Table	4	ARA-232	35438	Shoe	1
ARA-204	35712	Clamp	4	ARA-233	37541	Clutch Worm Shaft	1
ARA-205	1910*	Screw	1	ARA-234	33744	Spring Clutch Return	1
ARA-206	35499*	Collar on Drive Shaft	1	ARA-235	54503	Clutch	1
ARA-207	1189*	Screw	2	ARA-236	41574	Dial	1
ARA-208	35414*	Bush Gear Drive Shaft	1	ARA-237	5844	Crank	1
ARA-209	51737	Cup Oil	3	ARA-238	99	Screw	1
ARA-210	51558	Holder Tube	1	ARA-239	3502	Handle	1
ARA-211	51735	Cup Oil	1	ARA-240		Bush Eccentric	
ARA-212		Housing			36478	For 24"	1
	104665	For 24"	1		36479	For 20"	1
	104664	For 20"	1	ARA-241	1045	Washer	3
ARA-213	36459*	Lever Trip	1	ARA-242	2118	Washer	3
ARA-214	37650*	Pin Lock	1	ARA-243	183	Screw	3
ARA-215	2026*	Nut	1	ARA-244	2116	Screw	1
ARA-216	1762	Plug	1	ARA-245	2043	Nut	1
ARA-217	8607	Pointer	1	ARA-246	1819	Plug	1
ARA-218	2227	Screw	1	ARA-247	51738	Cup Oil	1
ARA-219	41084*	Pin Detent Lever Spring	1	ARA-248		Stud Shifter Detent	
ARA-220	51738	Cup Oil	2		35417*	For 24"	1
ARA-221	3357	Tongue	2		35528*	For 20"	1
ARA-222	3486	Screw	2	ARA-249	34333*	Spring Detent	1
ARA-225	1135	Plug	1	ARA-250	35419*	Lever Detent	1
ARA-226		Bolt Tee		ARA-251	1035	Washer	1
	2236	For 11/16 Tee Slot Table	4	ARA-252	34332	Stud Detent Lever	1
	2129	For 13/16 Tee Slot Table	4	ARA-253	1959	Pin Cotter	1
ARA-227	1911	Screw	1	ARA-254	104666	Cover Duck	1
ARA-228	642	Pin	1	ARA-255	2281	Screw	8

* For Power Feed

20" & 24" CIRCULAR MILLING TABLES



79411=20"
79627=24"

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

20" AND 24" CIRCULAR MILLING TABLES - Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-256	1900	Pin	2	ARA-264		Stud Clamping Ring	
ARA-257	480	Pin	1		51500	For 24"	6
ARA-258		Table			51475	For 20"	6
	60549	For 24"	1	ARA-264A	3480	Nut	2
	60547	For 20"	1	ARA-264B	3475	Nut	8
ARA-259	1860*	Bolt Tee	2	ARA-265		Stem	
ARA-260	78123*	Dog	2		41153	For 24"	1
ARA-261	664*	Nut	2		41152	For 20"	1
ARA-262		Ring Clamping		ARA-266	1188	Screw	4
	35418	For 24"	1	ARA-267		Screw	
	35525	For 20"	1		2122	For 24"	6
ARA-263		Wheel Worm			1952	For 20"	6
	109167	For 24"	1				
	109166	For 20"	1				

* For Power Feed

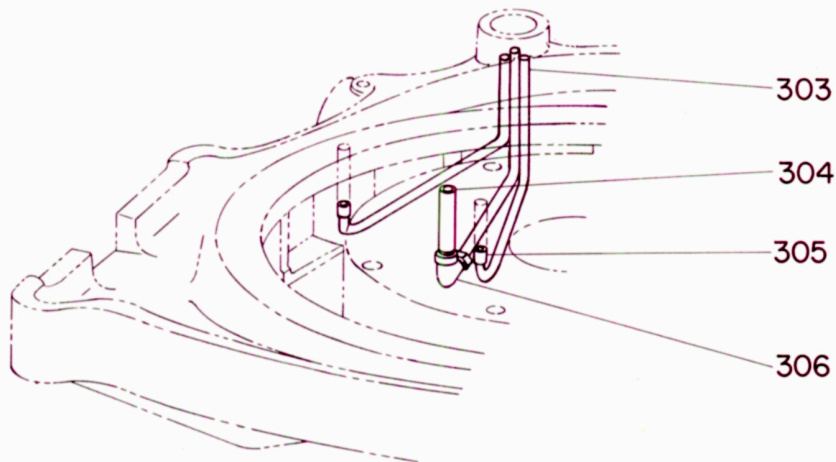
CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

20" AND 24" CIRCULAR MILLING TABLES - Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-268	814*	Key	1	ARA-286	35443*	Gear Bevel Clutch	1
ARA-269		Worm		ARA-287		Shaft Clutch	
	63729	For 24"	1		35500*	For 24"	1
	63299	For 20"	1		35529*	For 20"	1
ARA-270	35442*	Gear Bevel on Worm Shaft	1	ARA-288	1969*	Key	1
ARA-271	35711	Cover Housing	1	ARA-289		Shaft Driving	
ARA-272	49	Screw	3		35509*	For 24"	1
ARA-273		Bush Long Worm Shaft			35530*	For 20"	1
	35436	For 24"	1	ARA-290	35434*	Guard for Fork	1
	35523	For 20"	1	ARA-291	1189*	Screw	2
ARA-274	2026*	Nut	1	ARA-292	2143*	Nut	1
ARA-275	2118*	Washer	1	ARA-293	2038*	Washer Lock	1
ARA-276	34288*	Pin Lock	1	ARA-294	48073*	Pin Lock	1
ARA-277	35413*	Fork Clutch	1	ARA-295	49826*	Fork Short	1
ARA-278		Bearing		ARA-296	2174*	Pin	2
	12593	For 24"	1	ARA-297	33891*	Ball in Fork Shaft	1
	12592	For 20"	1	ARA-298	30715	Plug (For Hand Feed Only)	1
ARA-279		Bush Short Worm Shaft		ARA-299	2127	Plug (For Hand Feed Only)	3
	35437	For 24"	2	ARA-300	38113	Cap (For Hand Feed Only)	2
	35524	For 20"	2	ARA-301	1189	Screw (For Hand Feed Only)	4
ARA-280	35433*	Bush	1	ARA-302	8367	Plug (For Hand Feed Only)	1
ARA-281	35443*	Gear Bevel Clutch	1				
ARA-282	36331*	Bush	1				
ARA-283	36332*	Sleeve	1				
ARA-284	36046*	Clutch on Sleeve	1				
ARA-285	36331*	Bush	1				

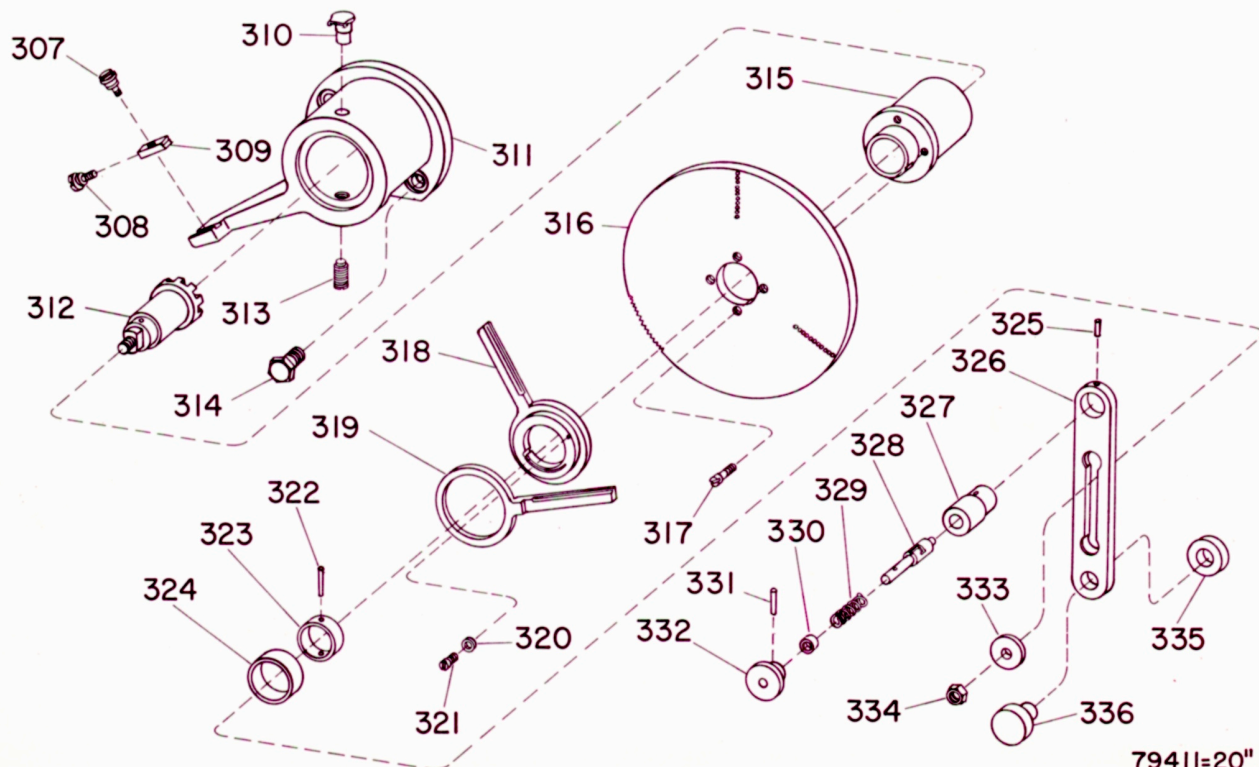
* For Power Feed

20" & 24" CIRCULAR MILLING TABLES



79411=20"
79627=24"

INDEXING ATTACHMENTS



79411=20"
79627=24"

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

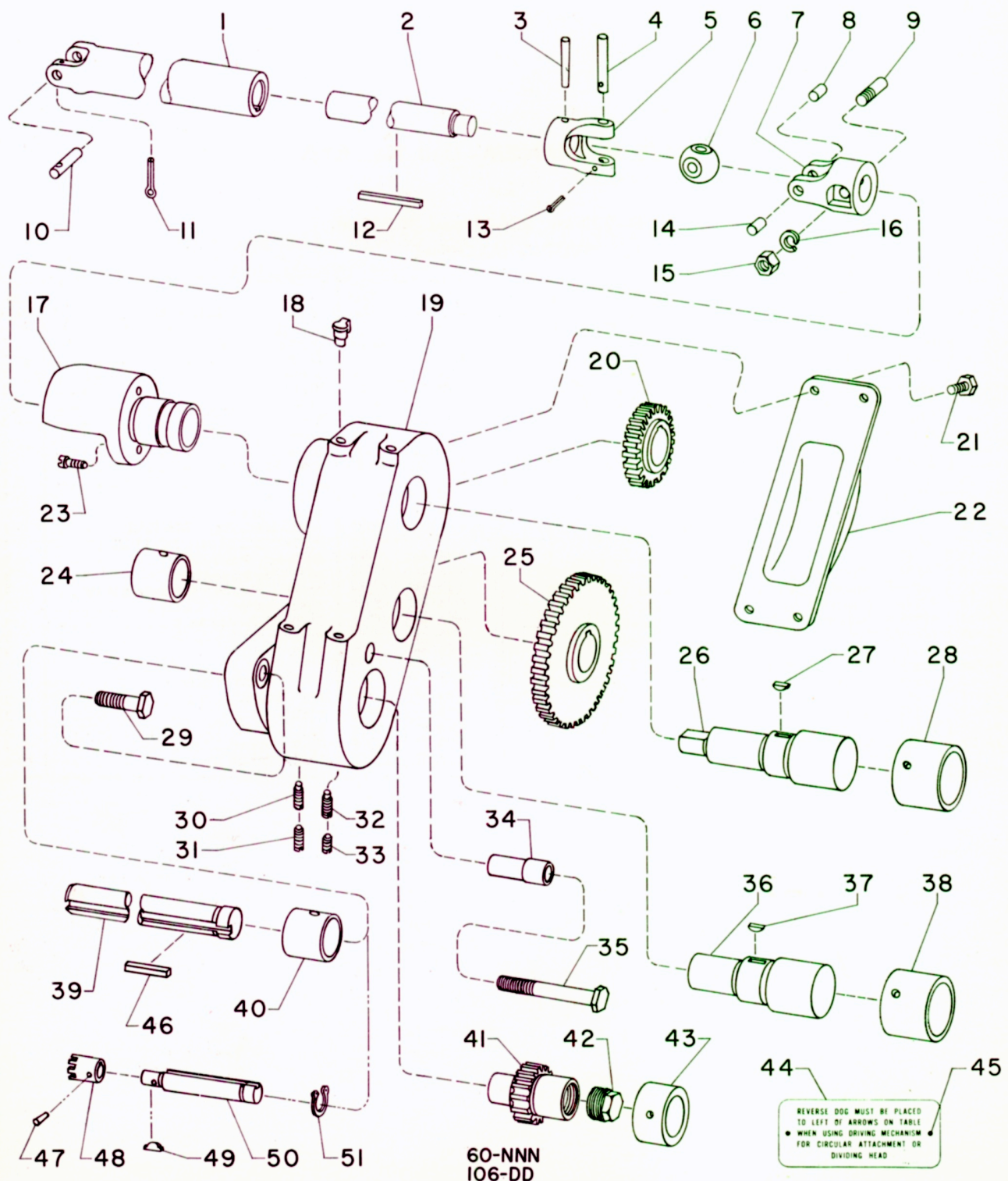
20" AND 24" CIRCULAR MILLING TABLES - Unit No. ARA

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-303	48358	Tubing List	--	ARA-305	2190	Bush - Oil	2
ARA-304	12443	Pipe	1	ARA-306	36470	Coupling	1

20" AND 24" INDEXING ATTACHMENTS

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
ARA-307	2278	Screw	1	ARA-322	663	Pin	1
ARA-308	731	Screw	1	ARA-323	37543	Collar	1
ARA-309	8106	Stop	1	ARA-324	28327	Collar on Worm Shaft	1
ARA-310	51737	Cup Oil	1	ARA-325	2160	Pin	1
ARA-311	37913	Bracket	1	ARA-326	76951	Carrier	1
ARA-312	37542	Clutch	1	ARA-327	37750	Holder Index Pin	1
ARA-313	69	Screw	1	ARA-328	70861	Pin Index	1
ARA-314	3381	Screw	2	ARA-329	253	Spring	1
ARA-315	37540	Sleeve Index	1	ARA-330	295	Bush	1
ARA-316	6855	Plate Index	1	ARA-331	140	Pin	1
ARA-317	2252	Screw	1	ARA-332	1007	Knob	1
ARA-318	8100	Sector Bottom	1	ARA-333	661	Washer	1
ARA-319	8101	Sector Top	1	ARA-334	664	Nut	1
ARA-320	294	Washer	1	ARA-335	76949	Collar Balancing Stud	1
ARA-321	2285	Screw	1	ARA-336	76948	Stud Balancing	1

DRIVE MECHANISM



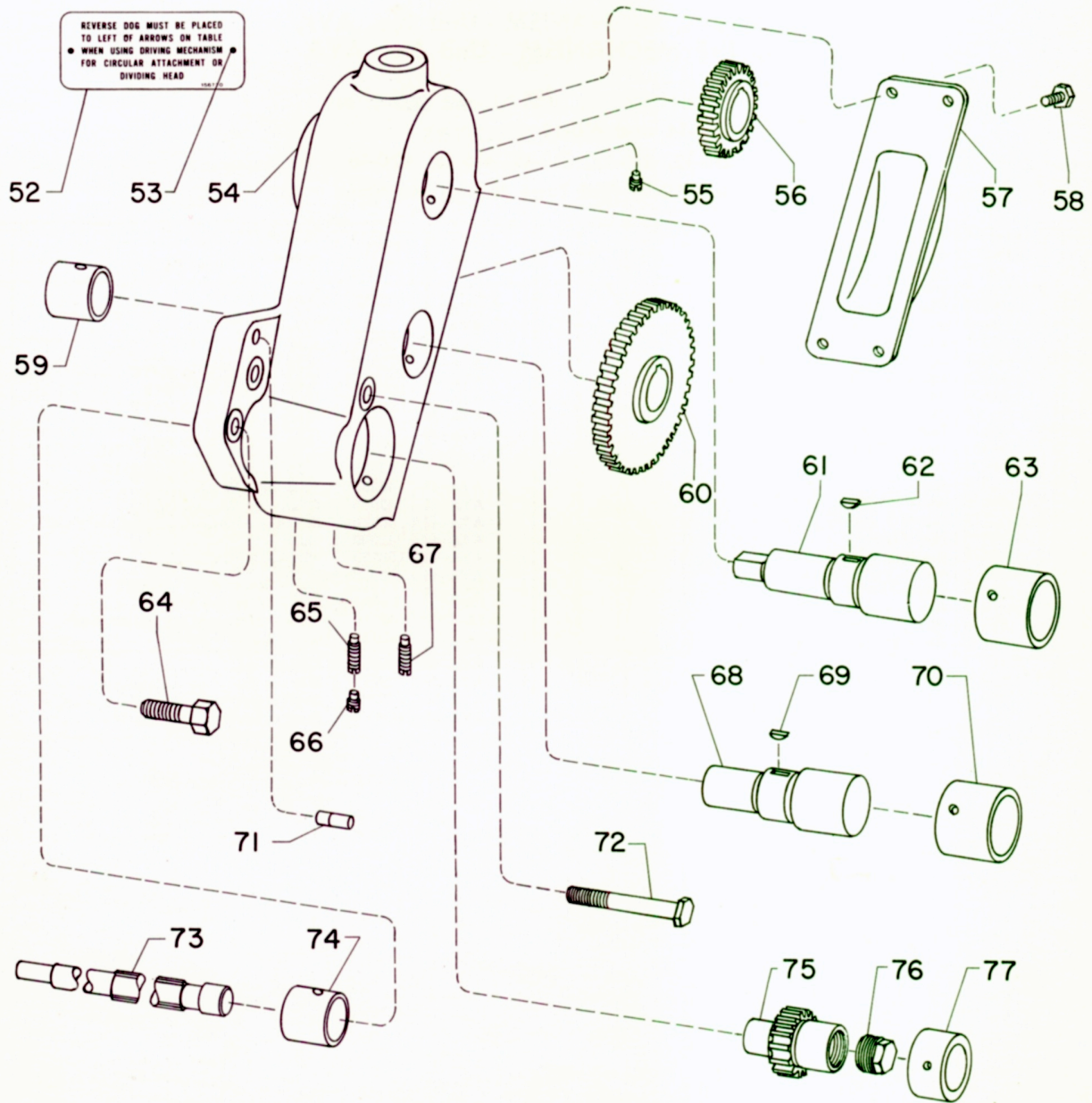
DRIVE MECHANISM - Unit No. AYA

for

203H-203-ML, 205-12 and 307-12 MI
MILLING MACHINES

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-1	40387	Fork - Long	1	AYA-28	40284	Bushing - Large	1
AYA-2	40353	Shaft - Extension	1	AYA-29	183	Screw	1
AYA-3	146	Pin - Taper	1	AYA-30	3498	Screw	1
AYA-4	34400	Pin	1	AYA-31	3498	Screw	1
AYA-5	34399	Fork - Short	1	AYA-32	3498	Screw	1
AYA-6	33891	Ball - in Fork	1	AYA-33	1911	Screw	1
AYA-7	49826	Fork - Short	1	AYA-34	77224	Bush	1
AYA-8	2174	Pin	1	AYA-35	3302	Screw	1
AYA-9	48073	Pin - Lock	1	AYA-36	40279	Shaft - Intermediate	1
AYA-10	34400	Pin	1	AYA-37	591	Key	1
AYA-11	1333	Pin - Cotter	1	AYA-38	40284	Bush - Large	1
AYA-12	352	Key	1	AYA-39		Shaft - Splined	
AYA-13	1333	Pin - Cotter	1		146087	203-10ML Std. 205-12MI	1
AYA-14	2174	Pin	1		164486	203-10ML 34 In. 307-12 MI	1
AYA-15	2143	Nut - Hex	1	AYA-40	40281	Bushing - Small	1
AYA-16	2038	Washer - Lock	1	AYA-41	42935	Gear - on Splined Shaft	1
AYA-17	36297	Guard - for Fork	1	AYA-42	40276	Screw - Abutment for Splined Shaft	1
AYA-18	51737	Cup - Oil	4	AYA-43	42936	Bush - Large	1
AYA-19	77225	Bracket - on Table	1	AYA-44	156770	Plate - Information	1
AYA-20	40278	Gear - on Fork Shaft	1	AYA-45	2263	Screw	2
AYA-21	2065	Screw	4	AYA-46	1807	Key	1
AYA-22	40288	Cover - on Bracket on Table	1			203-H Only	
AYA-23	1189	Screw	2	AYA-47	141	Pin - Taper	1
AYA-24	40281	Bushing - Small	1	AYA-48	158835	Clutch	1
AYA-25	40282	Gear - Intermediate	1	AYA-49	3279	Key	1
AYA-26	40286	Shaft - Fork	1	AYA-50	178256	Shaft - Drive	1
AYA-27	591	Key	1	AYA-51	113079	Ring - Truarc	1

DRIVE MECHANISM



108-DD

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

DRIVE MECHANISM - Unit No. AYA

for

307-14 and 410-14

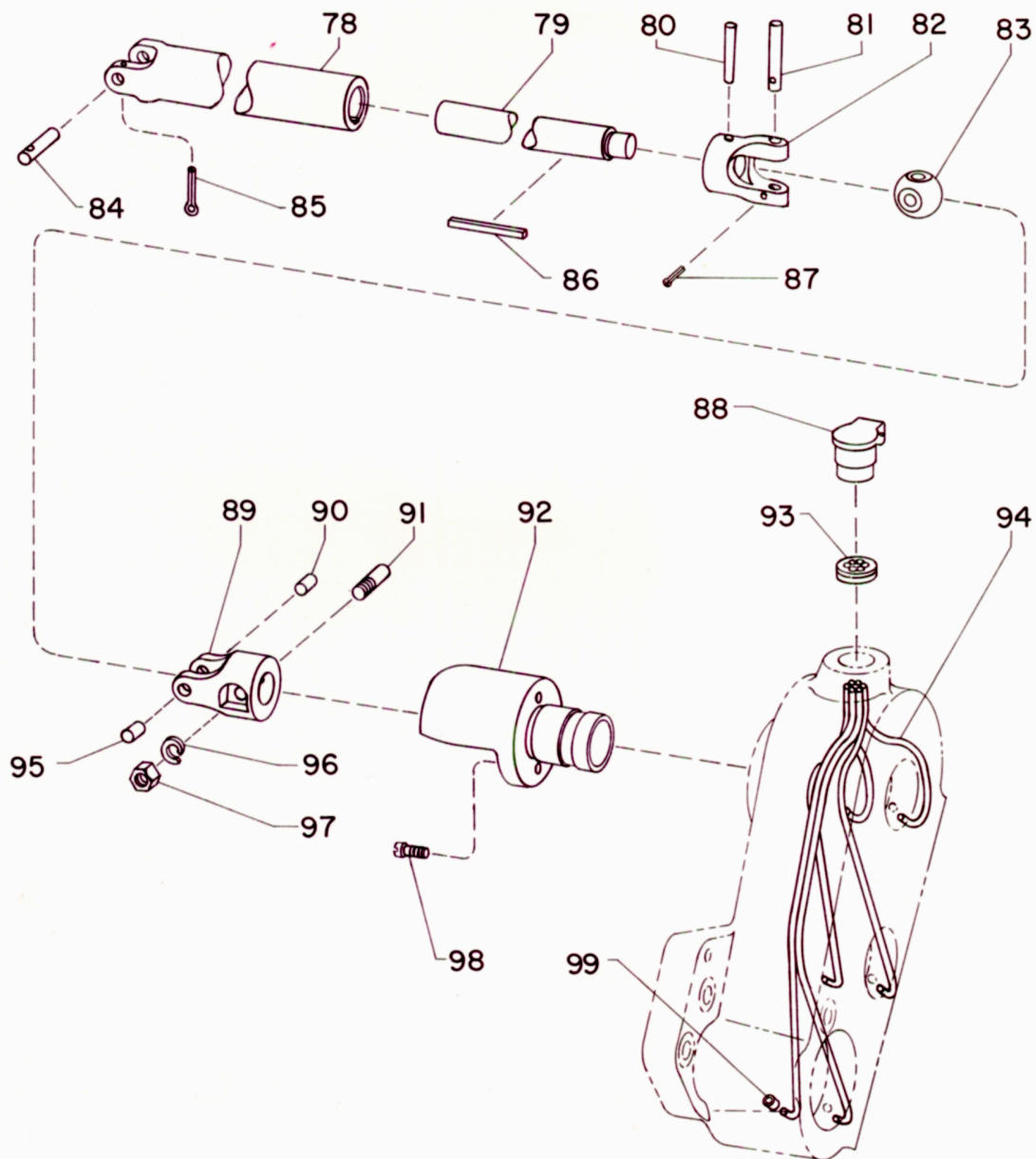
210-12, 310-12, 315-15, 415-15, 420-16

and 50-16 Dial Type Milling Machines

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-52	156770	Plate - Information	1	AYA-72	3302	Screw	1
AYA-53	2263	Screw	2	AYA-73		Shaft - Spline	
AYA-54	93231	Bracket - on Table	1		79019	307-14 MI	1
AYA-55	3453	Screw	3		167197	410-14MI	1
AYA-56	93479	Gear - on Fork Shaft	1		160169	210-12 Dial W/O FHTF	1
AYA-57	65839	Cover - Bracket on Table	1		168067	210-12 Dial W/ FHTF	1
AYA-58	49	Screw	4		162915	310-12 Dial W/O FHTF	1
AYA-59	65837	Bush - Small	1		168075	310-12 Dial W/ FHTF	1
AYA-60	93481	Gear - Intermediate	1		160170	315-15 Dial W/O FHTF	1
AYA-61	65831	Shaft - Fork	1		168069	315-15 Dial W/ FHTF	1
AYA-62	679	Key	1		162916	415-15 Dial W/O FHTF	1
AYA-63	65838	Bush - Large - Upper	2		168068	415-15 Dial W/ FHTF	1
AYA-64	111	Screw	1		160171	420-16 Dial W/O FHTF	1
AYA-65	3456	Screw	1		168071	420-16 Dial W/ FHTF	1
AYA-66	3498	Screw	1		162917	520-16 Dial W/O FHTF	1
AYA-67	3456	Screw	1		169070	520-16 Dial W/ FHTF	1
AYA-68	65835	Shaft - Intermediate	1	AYA-74	77386	Bush - Spline Shaft - Gear	1
AYA-69	679	Key	1	AYA-75	93480	Gear - on Spline Shaft	1
AYA-70	65838	Bush - Large - Intermediate	1	AYA-76	40276	Screw - Abutment for Spline Shaft	1
AYA-71	93230	Pin - Straight	1	AYA-77	65836	Bush - Large - Lower	1

FHTF = Front Hand Table Feed

DRIVE MECHANISM



108-DD

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

DRIVE MECHANISM - Unit No. AYA

for

307-14 and 410-14

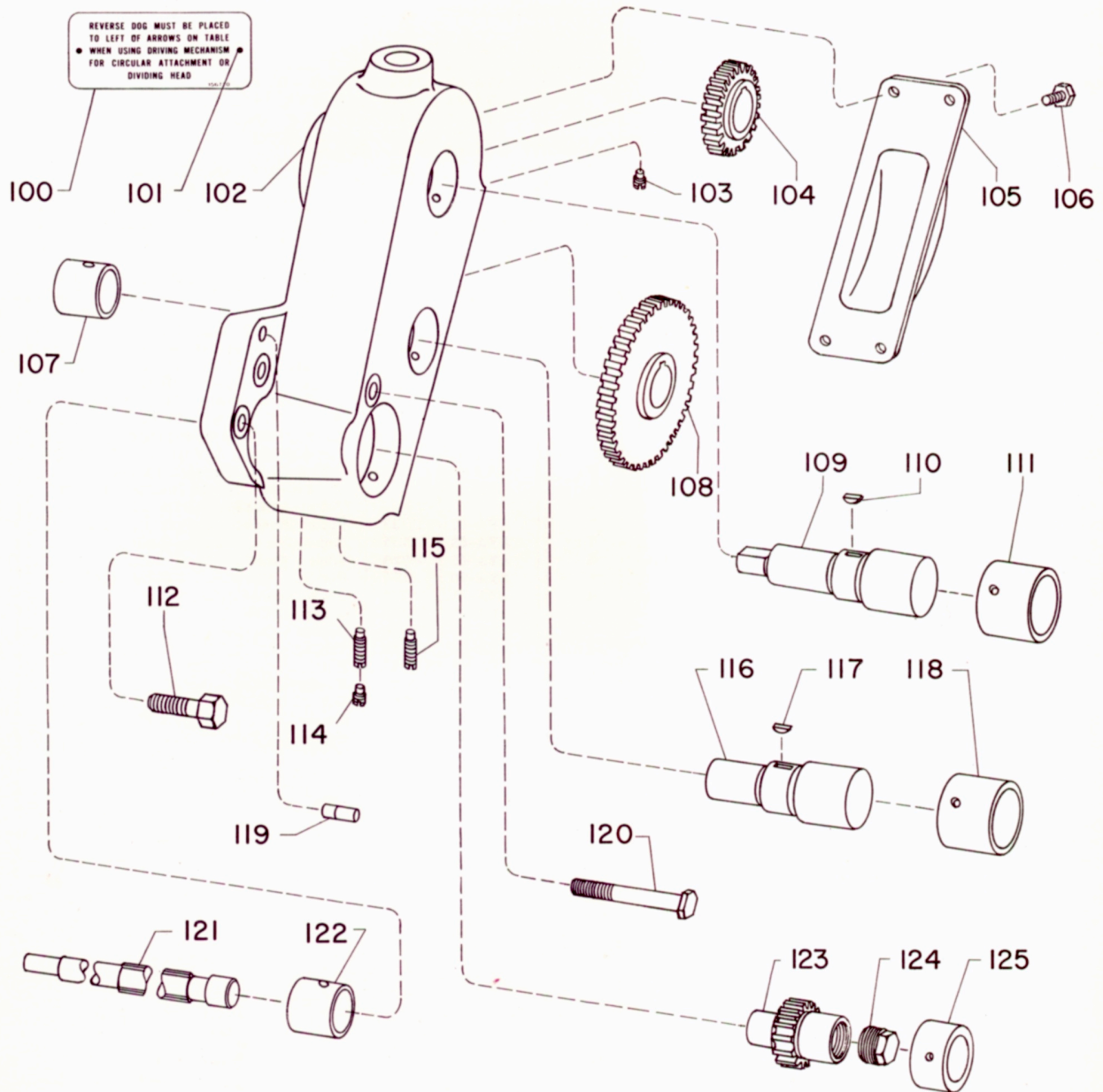
210-12, 310-12, 315-15, 415-15, 420-16

and 50-16 Dial Type Milling Machines

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-78	40387	Fork - Long		AYA-82	34399	Fork - Short	1
		16 & 20 In. Circular Tables		AYA-83	33891	Ball - in Fork	1
		307-14 410-14 MI	1	AYA-84	34400	Pin	1
		16, 20 & 24 In. Circular Tables		AYA-85	1333	Pin - Cotter	1
		210-12 310-12 Univ. Dial W/O		AYA-86		Key	
		FHTF	1		352	16 & 20 In. Circular Tables	
		20 & 24 In. Circular Tables				307-14 410-14 MI	1
		210-12 310-12 Pl. & Vert. Dial				16, 20 & 24 In. Circular Tables	
		W/ FHTF	1			210-12 310-12 Univ. Dial W/O	
		315-15 415-15 Dial W/ or W/O				FHTF	1
	36445	FHTF	1			20 & 24 In. Circular Table	
		16 In. Circular Table				210-12 312-12 Pl. & Vert. Dial	
		210-12 310-12 Pl. & Vert. Dial				W/ FHTF	1
		W/ or W/O FHTF	1			315-15 415-15 Dial W/ or W/O	
		315-15 415-15 420-16 Dial				FHTF	1
		W/ or W/O FHTF	1		353	16 In. Circular Table	
		520-16 Dial W/O FHTF	1			210-12 310-12 Pl. & Vert. Dial	
		520-16 Pl. & Vert. Dial W/ FHTF.	1			W/ or W/O FHTF	1
		20 & 24 In. Circular Table				315-15 415-15 420-16 Dial	
		420-16 520-16 Dial W/ or W/O				W/ or W/O FHTF	1
		FHTF	1			520-16 Dial W/O FHTF	1
AYA-79		Shaft - Extension				520-16 Pl. & Vert. Dial W/ FHTF.	1
		16 In. Circular Table				20 & 24 In. Circular Tables	
		210-12 310-12 Pl. & Vert. Dial				420-16 520-16 Dial W/ or W/O	
		W/ or W/O FHTF	1			FHTF	1
		420-16 Dial W/ or W/O FHTF	1	AYA-87	1333	Pin - Cotter	1
		520-16 Dial W/O FHTF	1	AYA-88	51735	Cup - Oil	1
		520-16 Pl. & Vert. Dial W/ FHTF.	1	AYA-89	49826	Fork - Short	1
		16 & 20 In. Circular Tables		AYA-90	2174	Pin	1
		307-14 410-14 MI	1	AYA-91	48073	Pin - Lock	1
		20 & 24 In. Circular Table		AYA-92	36297	Guard - Fork	1
		210-12 310-12 Pl. & Vert. Dial		AYA-93	30364	Holder - Oil Tube	1
		W/ FHTF	1	AYA-94	65832	Tubing - Oil	1
		420-16 520-16 Dial W/ or W/O		AYA-95	2174	Pin	1
		FHTF	1	AYA-96	2038	Washer	1
		16, 20 & 24 In. Circular Table		AYA-97	2143	Nut	1
		210-12 310-12 Univ. Dial W/O		AYA-98	1189	Screw	2
		FHTF	1	AYA-99	2190	Bush - Oil Tube	6
		315-15 415-15 Dial W/ or W/O					
		FHTF	1				
		16 In. Circular Table					
	22896	520-16 Pl. & Vert. Dial W/ FHTF	1				
AYA-80	146	Pin - Taper	1				
AYA-81	34400	Pin	1				

FHTF = Front Hand Table Feed

DRIVE MECHANISM



402-DD

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

DRIVE MECHANISM - Unit No. AYA

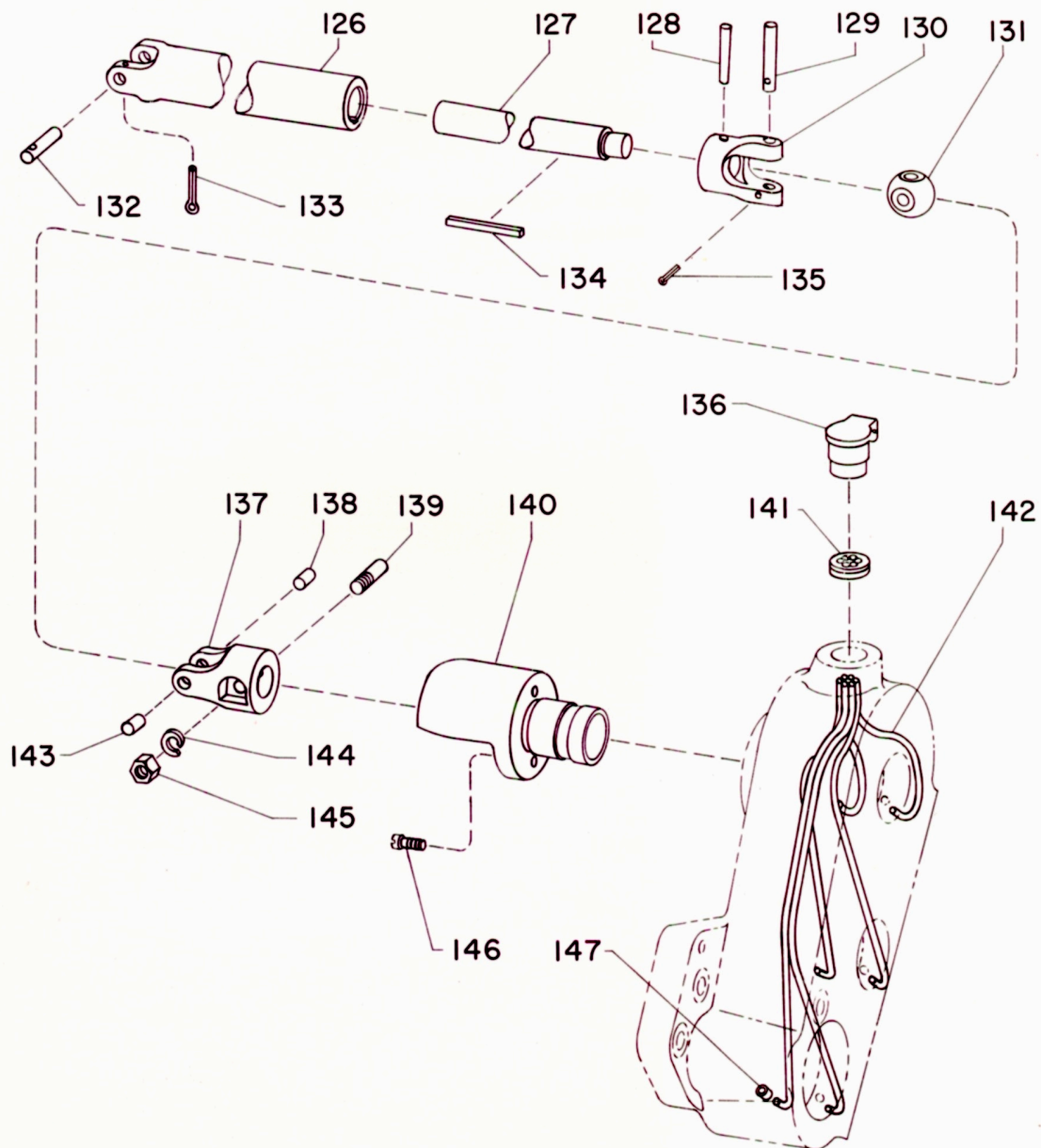
for

520-20, 540-20, 620-20 and 640-20

Dial Type Milling Machines

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-100	156770	Plate - Information	1	AYA-114	1917	Screw	1
AYA-101	2263	Screw	2	AYA-115	3234	Screw	1
AYA-102	176654	Bracket - on Table	1	AYA-116	65835	Shaft - Intermediate	1
AYA-103	3453	Screw	3	AYA-117	679	Key	1
AYA-104	93479	Gear - on Fork Shaft	1	AYA-118	65838	Bush - Large - Intermediate	1
AYA-105	165648	Cover - Bracket - on Table	1	AYA-119	93230	Pin - Straight	1
AYA-106	49	Screw	4	AYA-120	2218	Screw	1
AYA-107	65837	Bush - Small	1	AYA-121		Shaft - Spline	
AYA-108	176618	Gear - Intermediate	1	176622		520-20 & 540-20 Dial	1
AYA-109	65831	Shaft - Fork	1	176621		620-20 & 640-20 Dial	1
AYA-110	679	Key	1	AYA-122	77386	Bush - Spline Shaft - Gear	1
AYA-111	65838	Bush - Large - Upper	1	AYA-123	93480	Gear - on Spline Shaft	1
AYA-112	111	Screw	2	AYA-124	40276	Screw - Abutment for Spline Shaft	1
AYA-113	3235	Screw	1	AYA-125	65836	Bush - Large - Lower	1

DRIVE MECHANISM



402-DD

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

DRIVE MECHANISM - Unit No. AYA

for

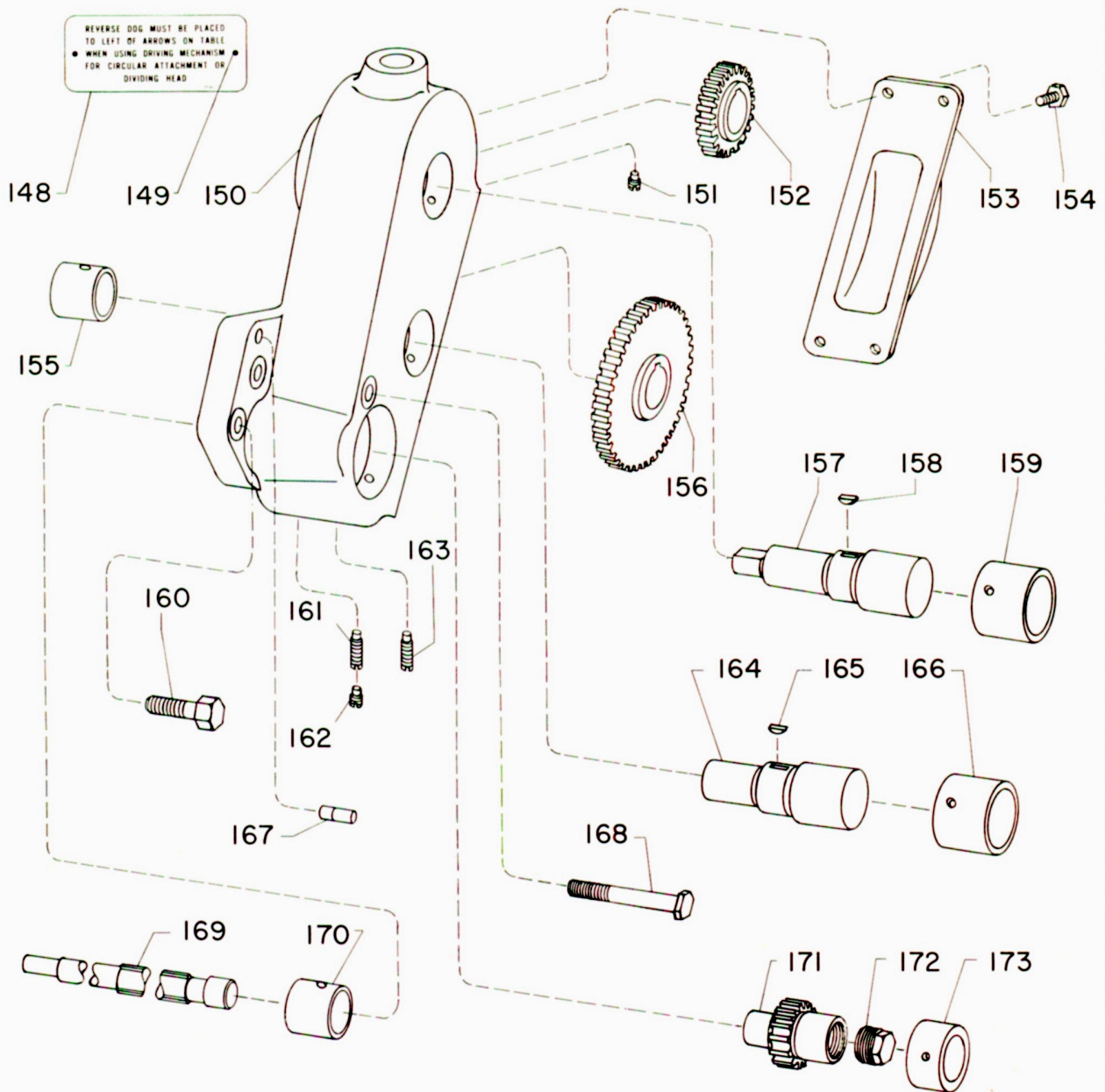
520-20, 540-20, 620-20 and 640-20

Dial Type Milling Machines

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-126	36445	Fork - Long	1	AYA-134	353	Key	1
AYA-127		Shaft - Extension		AYA-135	1333	Pin - Cotter	1
	22896	16, 20 & 24 In. Circular Tables		AYA-136	51735	Cup - Oil	1
		520-20 540-20 Dial W/ or W/O		AYA-137	49826	Fork - Short	1
		FHTF	1	AYA-138	2174	Pin	1
	162923	16 & 20 In. Circular Tables		AYA-139	48073	Pin - Lock	1
		620-20 640-20 Dial W/ FHTF. . .	1	AYA-140	36297	Guard - Fork	1
AYA-128	146	Pin - Taper	1	AYA-141	30664	Holder -OilTube	1
AYA-129	34400	Pin	1	AYA-142	65832	Tubing - Oil	1
AYA-130	39399	Fork - Short	1	AYA-143	2174	Pin	1
AYA-131	33891	Ball - in Fork	1	AYA-144	2038	Washer	1
AYA-132	34400	Pin	1	AYA-145	2143	Nut	1
AYA-133	1333	Pin - Cotter	1	AYA-146	1189	Screw	2
				AYA-147	2190	Bush - Oil Tube	6

FHTF = Front Hand Table Feed

DRIVE MECHANISM



382-DD

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

DRIVE MECHANISM - Unit No. AYA

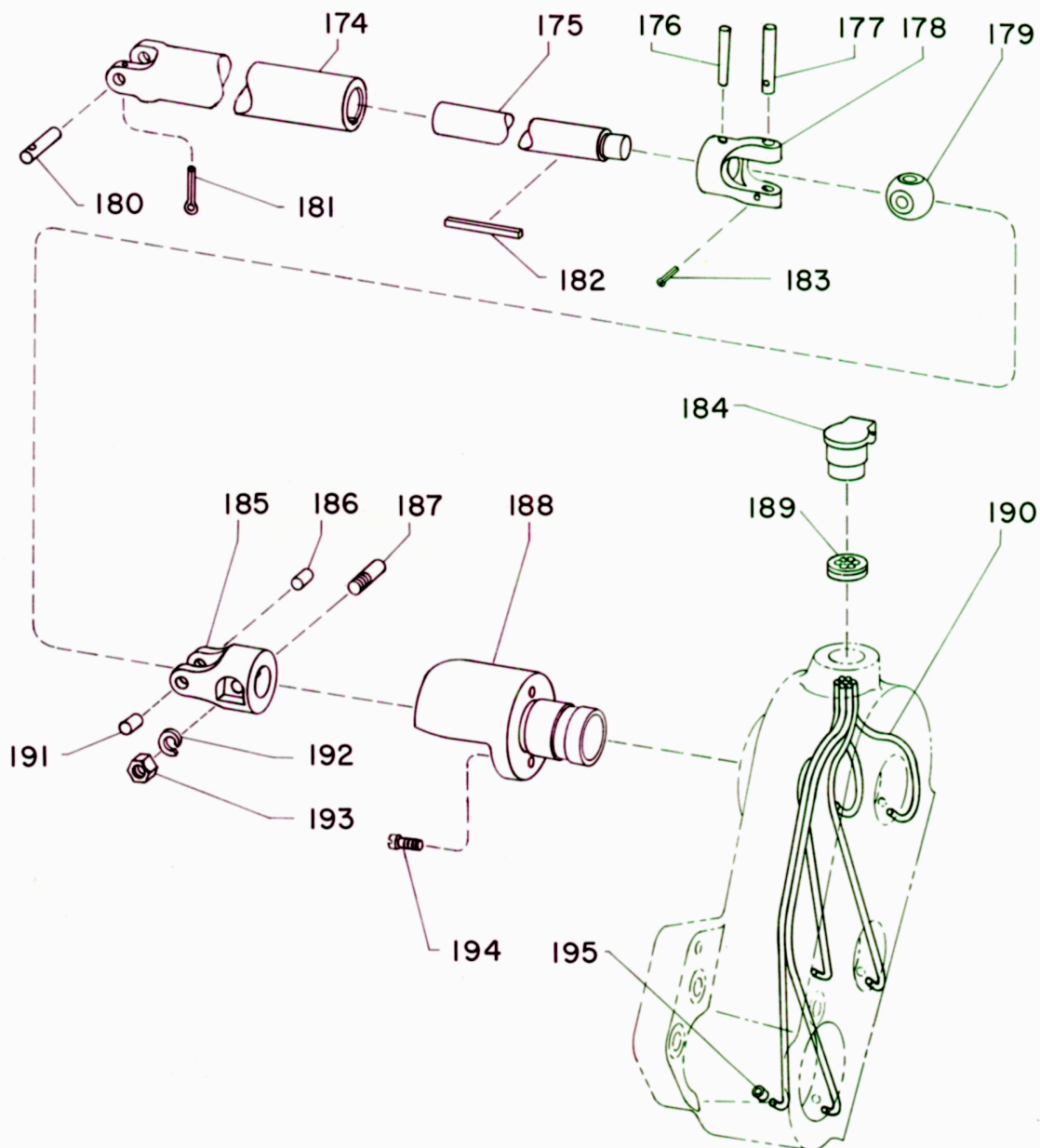
for

ALL DUAL AND HIGHPOWER AND
ALL VERCI POWER MILLING MACHINES

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-148	156770	Plate - Information	1		162918	420-18 & 430-18 Dual & H.P.	
AYA-149	2263	Screw	2			W/O FHTF	1
AYA-150	165649	Bracket - on Table	1		168074	420-18 & 430-18 Dual & H.P.	
AYA-151	3453	Screw	3			W/ FHTF 420-18 & 430-18	
AYA-152	93479	Gear - on Fork Shaft	1			Verci Power	1
AYA-153	165648	Cover	1		160173	420-20 & 450-20 Dual & H.P.	
AYA-154	49	Screw	4			W/O FHTF	1
AYA-155	65837	Bush - Small	1		168076	425-20 & 450-20 Dual & H.P.	
AYA-156	165647	Gear - Intermediate	1			W/ FHTF 425-20 & 450-20	
AYA-157	65831	Shaft - Fork	1			Verci Power	1
AYA-158	679	Key	1		120876	525-20 & 550-20 Dual & H.P.	
AYA-159	65838	Bush - Large - Upper	1			W/O FHTF	1
AYA-160	111	Screw	2		168073	525-20 & 550-20 Dual & H.P.	
AYA-161	3235	Screw	1			W/ FHTF 525-20 & 550-20	
AYA-162	1917	Screw	1			Verci Power	1
AYA-163	3234	Screw	1		120879	625-20 & 650-20 Dual & H.P.	
AYA-164	65835	Shaft - Intermediate	1			W/O FHTF	1
AYA-165	679	Key	1		162919	625-20 & 650-20 Dual & H.P.	
AYA-166	65838	Bush - Large - Intermediate	1			72 In. T. T. W/O FHTF	1
AYA-167	93230	Pin - Straight	1		168072	625-20 & 650-20 Dual & H.P.	
AYA-168	2218	Screw	1			W/ FHTF 625-20 & 650-20	
AYA-169		Shaft - Spline				Verci Power	1
	177746	215-18 & 220-18 Dual & H.P.			168077	625-20 & 650-20 Dual & H.P.	
		W/O FHTF	1			72 In. T. T. W/ FHTF 725-20	
	177747	215-18 & 220-18 Dual & H.P.				750-20 Verci Power	1
		W/O FHTF	1	AYA-170	77386	Bush - Spline Shaft - Gear	1
	160172	320-18 & 330-18 Dual & H.P.		AYA-171	93480	Gear - on Spline Shaft	1
		W/O FHTF	1	AYA-172	40276	Screw - Abutment for Spline Shaft	1
				AYA-173	65836	Bush - Large - Lower	1

FHTF = Front Hand Table Feed

DRIVE MECHANISM



382-DD

CINCINNATI 12", 16", 20", 24" CIRCULAR MILLING TABLES

DRIVE MECHANISM - Unit No. AYA
for
ALL DUAL AND HIGHPOWER AND
ALL Verci POWER MILLING MACHINES

Key No.	Part No.	Part Name	Amt. Used	Key No.	Part No.	Part Name	Amt. Used
AYA-174		Fork - Long				24 In. Circular Table	
	40387	24 In. Circular Table				525-20 550-20 625-20 650-20	
		425-20 450-20 Dual & H.P.				Dual & H.P. W/ or W/O FHTF . .	1
		W/ or W/O FHTF	1			525-20 550-20 625-20 650-20	
	36445	16, 20 & 24 In. Circular Tables				Verci Power	1
		215-18 220-18 320-18 330-18				625-20 650-20 Ext. W/O FHTF .	1
		420-18 430-18 525-20 550-20		162923		16 & 20 In. Circular Tables	
		Dual & H.P. W/ or W/O FHTF . .	1			625-20 650-20 725-20 750-20	
		320-18 330-18 420-18 430-18				Verci Power	1
		525-20 550-20 625-20 650-20				625-20 650-20 Std. Ext. Dual &	
		725-20 750-20 Verci Power . . .	1			H.P. W/ or W/O FHTF	1
		16 & 24 In. Circular Tables				24 In. Circular Table	
		425-20 450-20 Dual & H.P.				725-20 750-20 Verci Power . . .	1
		W/ or W/O FHTF	1			625-20 650-20 Ext. Dual & H.P.	
		425-20 450-20 Verci Power . . .	1	AYA-176	146	W/ FHTF	1
		625-20 650-20 Std. & Ext. Dual		AYA-177	34400	Pin - Taper	1
		& H.P. W/ or W/O FHTF	1	AYA-178	34399	Pin	1
		24 In. Circular Table		AYA-179	33891	Fork - Short	1
		625-20 650-20 Dual & H.P. W/ or		AYA-180	34400	Ball - in Fork	1
		W/O FHTF	1	AYA-181	1333	Pin	1
		625-20 650-20 Ext. Dual & H.P.		AYA-182		Pin - Cotter	1
		W/ FHTF	1			Key	
		625-20 650-20 Ext. W/O FHTF .	1		352	24 In. Circular Table	
AYA-175		Shaft - Extension				425-20 450-20 Dual & H.P. W/	
		16, 20 & 24 In. Circular Tables				or W/O FHTF	1
	40353	215-18 220-18 320-18 330-18				Key	
		420-18 430-18 Dual & H.P.			353	16, 20 & 24 In. Circular Tables	
		W/ or W/O FHTF	1			All Machines	1
		320-18 330-18 420-18 430-18		AYA-183	1333	Pin - Cotter	1
		Verci Power	1	AYA-184	51735	Cup - Oil	1
		24 In. Circular Table		AYA-185	49826	Fork - Short	1
		425-20 450-20 Dual & HP W/		AYA-186	2174	Pin	1
		or W/O FHTF	1	AYA-187	48073	Pin - Lock	1
	22896	16 & 20 In. Circular Tables		AYA-188	36297	Guard - Fork	1
		425-20 450-20 525-20 550-20		AYA-189	30664	Holder - Oil	1
		Dual & H.P. W/ or W/O FHTF . .	1	AYA-190	65832	Tubing - Oil	1
		425-20 450-20 525-20 550-20		AYA-191	2174	Pin	1
		Verci Power	1	AYA-192	2038	Washer	1
				AYA-193	2143	Nut	1
				AYA-194	1189	Screw	2
				AYA-195	2190	Bush - Oil Tube	6

FHTF = Front Hand Table Feed



MILLING MACHINE DIVISION

THE CINCINNATI MILLING MACHINE CO.

CINCINNATI 9, OHIO, U. S. A.



**HORIZONTAL
KNEE & COLUMN**



**VERTICAL
KNEE & COLUMN**

MILLING MACHINES



**HORIZONTAL &
VERTICAL BED TYPE**



**RISE & FALL AND
TRACER CON-
TROLLED BED TYPE**

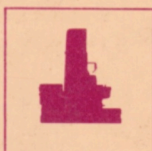
Products of the Milling Machine Division of The Cincinnati Milling Machine Co. are listed and symbolized here.

Products of The Cincinnati Milling Machine Co.'s other divisions include a complete line of centertype grinding machines, centerless grinding machines, roll grinding machines, chucking grinding machines, micro-centric grinding machines, special grinding machines, heating machines, metal forming machines, special broaching machines, special machine tools and complete production lines, special machinery, numerical control systems, tracing systems, gaging systems, hydraulic motors, hydraulic and electro-hydraulic valves and components, cutting fluids and precision grinding wheels.

**DIE SINKING MACHINES
AND
BROACHING MACHINES**



**HORIZONTAL
& VERTICAL**



VERTICAL

**CUTTER SHARPENING
MACHINES**



Nos. 1 & 2.



**MONOSET
& OPTICAL**