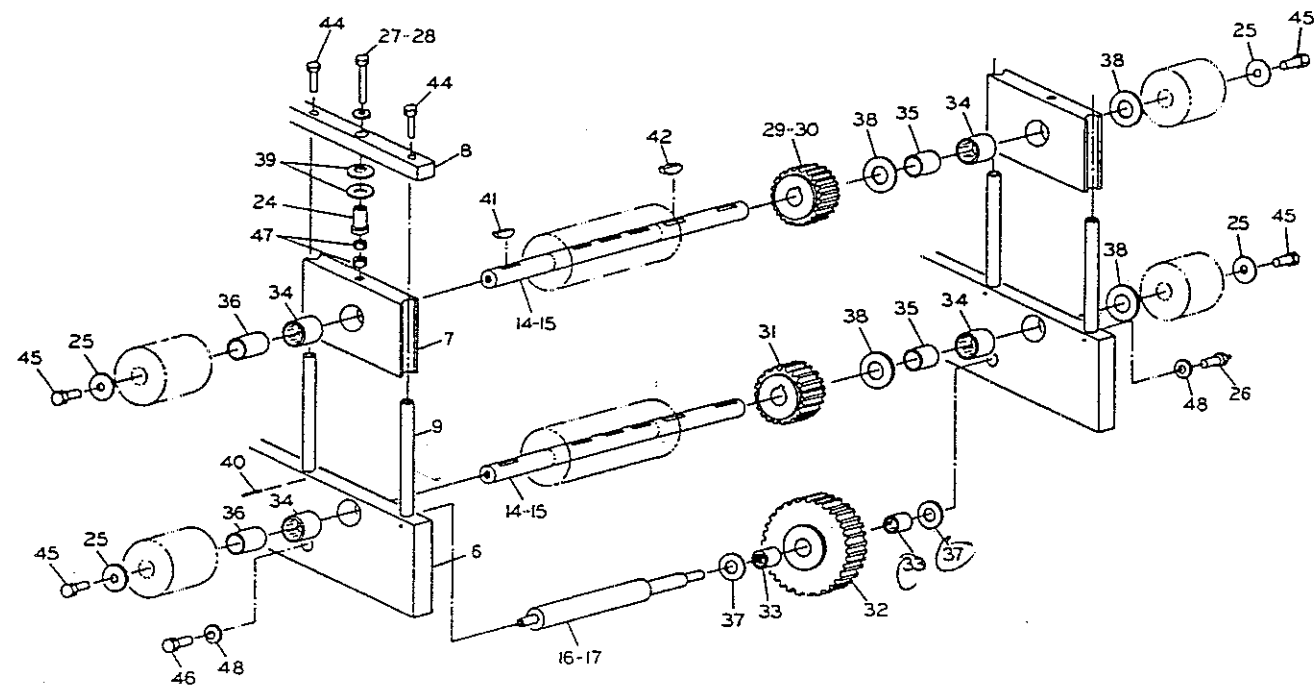
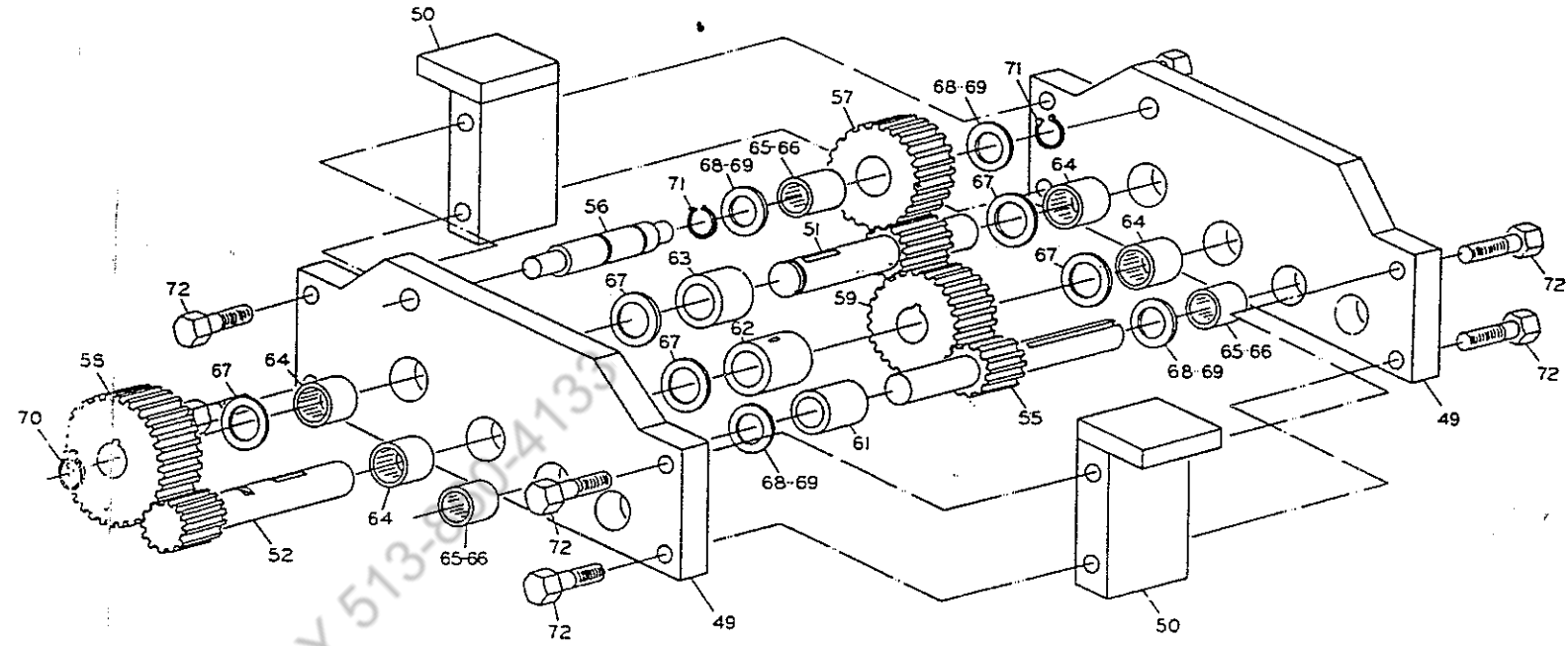


49	4		X	3/8-16 HEX NUT
48	4		X	3/8 HEAVY FLAT WASHER
47	16	4267-3	X	SPACER - INBOARD
46	32	5160-98	X	SNAP RING - WALDES TRIMARC
45	6	EP 500006	X	BOLT 3/8-24 X 5 LG. HHS TAP BOLT
44	4	JH-1812-OH	X	NEEDLE BEARING
43	2	JH-1412-OH	X	NEEDLE BEARING
42	12		X	BOLT 3/8-24 X 1 1/2 LG. HHS
41	6	A-1085322	X	SPACER
40	1	B-11823	X	SIDE PLATE - GEAR REDUCER
39	3	TRA-1423	X	THRUST RACE
38	1	5100-98	X	SNAP RING
37	1	4149-6	X	SPACER - PINION #4 <i>760</i>
36	1	9851-2	X	SPACER - IDLER SHAFT
35	1	9851	X	SPACER - IDLER SHAFT
34	1	4148-2	X	SPACER - PINION #3 <i>1.085</i>
33	1	4147	X	SPACER - PRIMARY PINION <i>1.040</i>
32	1	9850-1	X	IDLER SHAFT
31	1	A-11788	X	GEAR - IDLER
30	1	A-11787	X	SPUR GEAR
29	1	4159-2	X	SPUR GEAR G-27
28	1	4182	X	PINION #4
27	1	4181	X	PINION #3
26	1	4178	X	PINION - PRIMARY
25	12	<i>ADD 206</i> <del>A08106Z</del>	X	NUT 3/8-24
24	4		X	1/2 X 3 1/2 LG. SHOULDER BOLT
23	32		X	BOLT 3/8-24 X 3/4 LG. HHS
22	64	NO. 607	X	WOODRUFF KEY
21	18	NO. 808	X	WOODRUFF KEY
20	12	571093	X	DISC SPRINGS
19	6	TRA-1625	X	THRUST RACE
18	8	TRC-2031	X	THRUST RACE
17	40	TRB-2031	X	THRUST RACE
16	8	IR-162020	X	INNER RACE
15	8	B-2016	X	NEEDLE BEARING
14	32	B-2012	X	NEEDLE BEARING
13	32	IR-1616	X	INNER RACE
12	32	TRB-1625	X	THRUST RACE
11	16	TRD-1625	X	THRUST RACE
10	6	4512-8	X	SPACER - ROLL CAP
9	32	4219-1	X	END CAP WASHER
8	14/2	4211/4211H	X	GEAR - SPINDLE STA. #1T (THARS & 750F)
7	7	4994-1	X	GEAR - IDLER
6	7	4165-1	X	GREASE BOLT
5	7	9512-2	X	IDLER SHAFT
4	16	B-11821	X	SPINDLE - ROLLER DIE
3	2	A-11831	X	SPREADER - GEAR REDUCER
2	2	C-11797	X	UPPER BEARING CAGE
1	2	D-11796	X	BOTTOM SPINDLE HOUSING

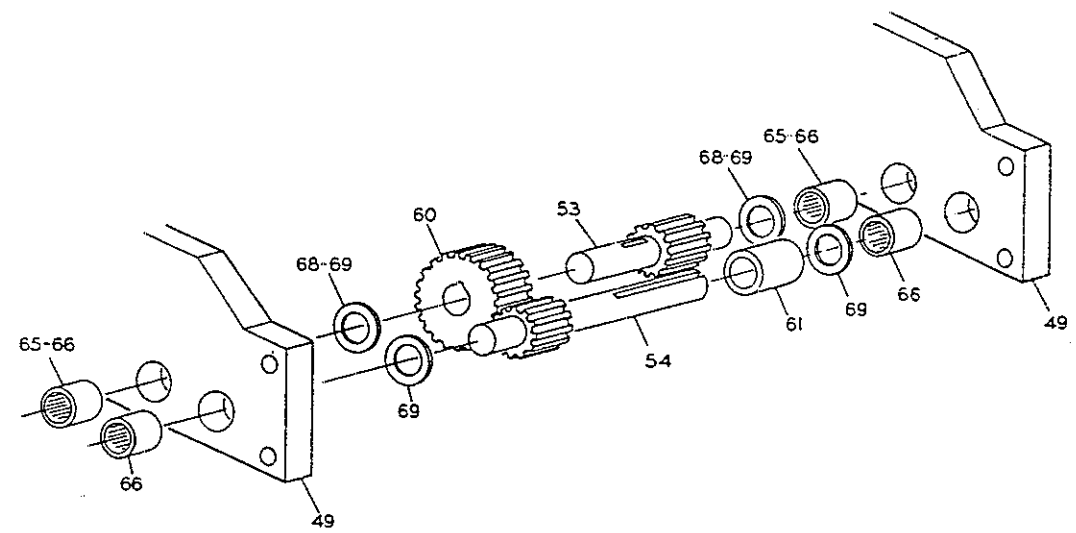
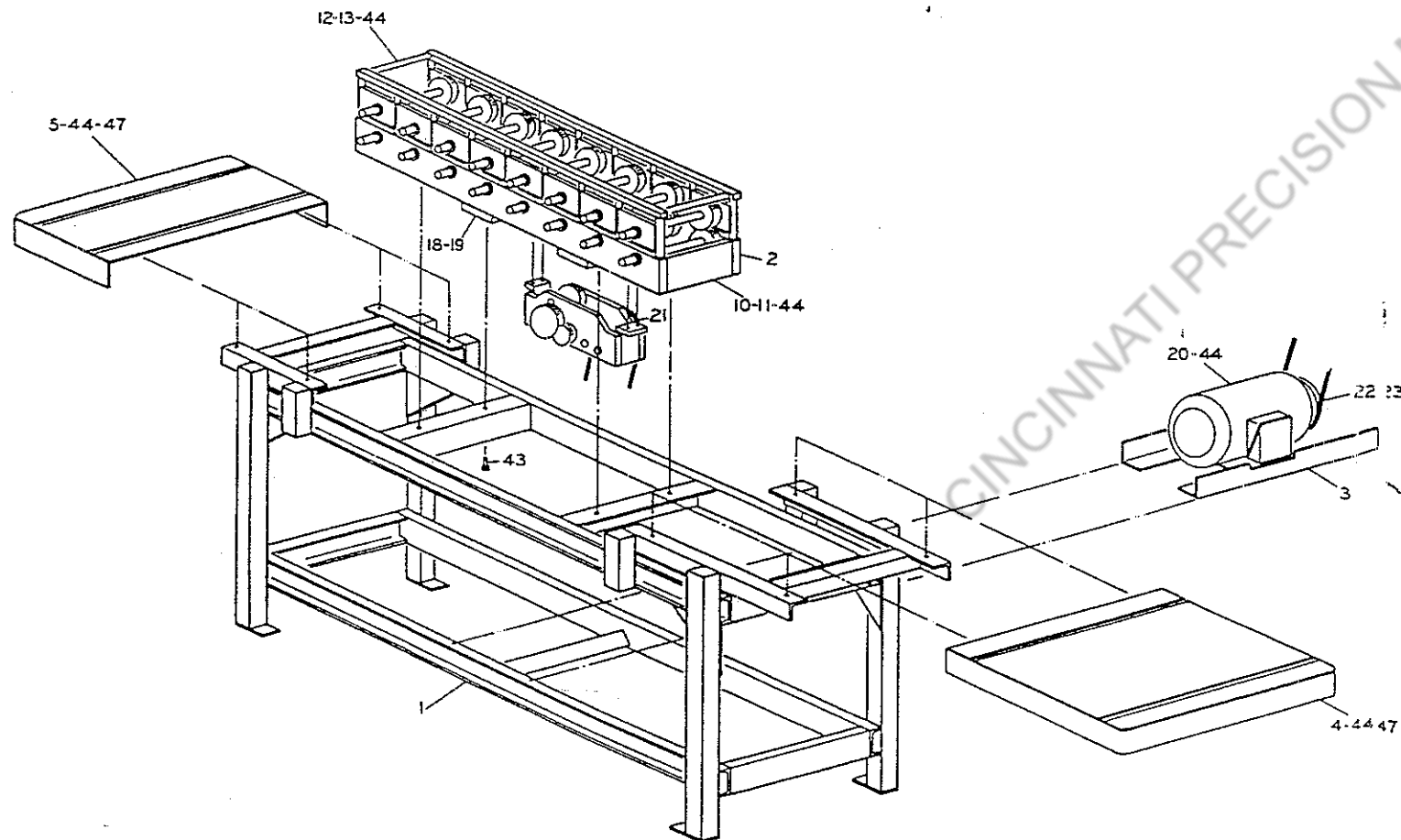
**APPROVED**  
 BY RB  
 DATE 7/1/02



SPINDLE HOUSING ASSEMBLY



3 PINION REDUCER



FIRST 2 PINIONS OF 4 PINION REDUCER

( OF )

800 Series Parts List

Item #	Engel Part #	# Req'd.	Description
1	4443	1	Frame Weldment
2	4269	1	Spindle Housing Assembly
3	4167	2	Motor Mount Angle Assembly
4	4111	1	Infeed Table
5	4112	1	Outfeed Table
6	4142	2	Bottom Spindle Housing
7	4255-1	16	Top Bearing Cage
8	4271	2	Head Rail
9	513026	18	Post-Spindle Housing (4167-1)
10	4173	2	Spreader - Bottom Spindle Housing (825-835)
11	4173-3	2	Spreader - Bottom Spindle Housing (800)
12	4166-1	4	Spreader - Head Rail (825-835)
13	4166	4	Spreader - Head Rail (800)
14	4110	16	Spindle (825-835)
15	4401	16	Spindle (800)
16	4158-1	7	Idler Shaft (825-835)
17	4158-6	7	Idler Shaft (800)
18	4151	2	Mounting Plate - Speed Reducer 9825-835)
19	4151-2	2	Mounting Plate - Speed Reducer (800)
20	501031	1	Motor - 5 H.P
21	512011	1	Sheave - BK-70
22	512014	1	Sheave - BK-62
23	562006	1	Belt - BK-42
24	4234-1	16	Spool Adjusting
25	511195	32	End Cap Washers (4219)
26	4165-1	7	Grease Bolts - 3/4" long
27	500002	16	Adjusting Bolts 3/8-24 x 3" long (800-825)
28	500001	16	Adjusting Bolts 3/8-24 x 2-1/2" long (835)
29	4211	8	Upper Spindle Gear (800-825)
30	4159	8	Upper Spindle Gear (835)
31	4211-H	16	Bottom Spindle Gear
32	4994-WB	7	Idler Gear 2-3/4 rd., bore 1-1/8" (800B)
	4994-1-WB	7	Idler Gear 2-3/4 rd., bore 1-1/2" (800U)
	4210-WB	7	Idler Gear 3-1/4 rd., bore 1-1/8" (800,825,835)
	4210-1-WB	7	Idler Gear 3-1/4 rd., bore 1-1/2" (800T,835)

ANNATI PRECISION MACHINERY 513-860-4133

800 Series Parts List

33	511088		Bearing Needle - B-1416
34	511018	32	Bearing Needle - B-2016
35	511019	16	Inner Race - IR-162016
36	511076	16	Inner Race - IR-162020
37	511094	14	Thrust Bearing - TRA-1423
38	511078	32	Thrust Bearing Bronze Amplex
39	571033	32	Disc Springs - Z12 (.049)
39	571034	32	Disc Springs - Z12 (.059)
40	500019	18	Spring Pins - 3/16 x 1
41	4171	82	Woodruff Key - 3/16 x 1
42	4170	17	Woodruff Key - 1/4 x 1
43	HDW	4	Hex Head Bolt - 1/2-20 x 1" long
44	500032	46	Hex Head Bolt - 3/8-24 x 1-1/4" long
45	500031	32	Hex Head Bolt - 3/8-24 x 1" long
46	500021	7	Hex Head Bolt - 3/8-24 x 3/4" long
47	HDW	40	3/8 - 24 Hex Nuts
48	572104	14	Washers CI-1-FW Carr Lane

CINCINNATI PRECISION MACHINERY 513-860-4133

800 Series Parts List

Reducer Assembly

Item #	Engel Part #	# Req'd	Description
49	4241	2	Pinion Chassis Speed Reducer
50	4174	2	Mount Brackets
51✓	4182	1	No. 4 Pinion 210.97
52✓	4181✓	1	No. 3 Pinion
53	4180	1	No. 2 Pinion (835)
54	4179	1	Primary Drive (835)
55✓	4178	1	Primary Drive (800-825)
* 56	422	1	Transfer Shaft Idler
* 57	4210	1	Idler Gear - G-28
58	4159-H ✓	1	Spur Gear - G-27
59	4213	1	Spur Gear - G-26
60	4212	1	Spur Gear - G-25 (835)
61	4147	1	Spacer - Pinion - Primary Drive
62	4148	1	Spacer - No. 3 Pinion
63	4149	1	Spacer - No. 4 Pinion
64	511157 *	4	Bearing Needle - JH-1612-OH ④
* 65	511102-1 ♣	3	Bearing Needle - JH-1412-OH (800-825) ②
* 66	511102-1	5	Bearing Needle - JH-1412-OH (835)
67	511096	5	Thrust Race TRA-1625
* 68	511094	4	Thrust Race TRA-1423 (800-825)
* 69	511094	6	Thrust Race TRA-1423 (835)
70	573015	1	Snap Ring 1" (5100-98)
* 71	573002	2	Snap Ring 7/8" (5100-87)
72	HDW.	8	Hex Head Bolts - 1/2 - 20 x 1-1/2" long

\* = 9850-A Idler Shaft Ass'y Package  
(use only as replacement if not replaced on old style machine already.)

CINCINNATI PRECISION MACHINERY 513-860-4133