

Assembly Instructions for the Rolling Harrow and Board Turbo-Till 6/26/03

Your initial action is to locate the correct drag frame [(61) 589-107H through 589-116H]. Bolt the drag frame to the rear drag plates located on the rear of your Great Plains Turbo Till, using 5/8x1 ½ hex bolts [(43) 802-051C] with 5/8" hex nuts [(25) 803-021C] and 5/8" lock washers [(26) 804-022C]. The rolling harrow gangs shown in figure 4 will come to you partially assembled. To finish assembly, refer to the table in figure 4 and assemble accordingly. Start by locating the correct rolling harrow tube, center it over your partial assembly on the bearing hangers [(52) 589-142H], and mount the tube using 5/8x3x4 ½ U-bolts [(44) 806-183C] with a lock washer and nut. Your next step is to locate the ball joint assemblies [(59) 589-064H]. Figure 4 shows you the dimensions to mount the ball joint assemblies on the rolling harrow tube. Count the number of each assembly in figures 1-3 and assemble accordingly.

Mount the rolling harrow brackets [(60) 589-057H] to the under side of the drag frames according to the dimensions in figures 1-3, using a 5/8x3x4 ½ U-bolt [(44) 806-183C] with a lock washer and nut. You may tighten the U-bolts on all the brackets that are closest to the rear of the machine. Leave the front brackets loose to slide until the rolling harrow assemblies are hung under the frame. Use the 1x4 hex bolt and 1" nylock nut through the harrow brackets (589-057H) and ball joint assemblies [(59) 589-064H] to hang the rolling harrow assemblies under the frame. Be careful to put the proper gang in the proper location and be sure that the assemblies are oriented correctly as shown in figure 4. When all gangs are hung under the frame, tighten the remaining U-bolts

Mount the rear stand bracket [(71) 580-049H], if applicable, to the drag frame with 5/8x4x4 ¼ U-bolts, a lock washer and a nut as shown on figure 1. The rear stand leg [(70) 560-196H] should be pinned in the rear stand bracket with a 3/4x4 ½ pin and retainer (805-081C).

Mount the reel arm assemblies (589-069L) to the drag frames, using the dimensions in figures 6-10, using a 5/8x3x4 ½ U-bolt [(44) 806-183C] with a lock washer and nut. These bolts may be tightened at this time. Mount the leveling board mounting tube (32) using a 5/8x2 1/2x3 ¾ U-bolt [(16) UB0037] with a lock washer and nut, according to the dimensions and locations in figures 6-10. Be sure to bolt on the correct mounting tube in the correct location. These bolts may be tightened at this time. Use the 5/8X3 hex bolt with a lock washer and nut through the mounting tube and the leveling board arm [(30) 589-073H] to hang the arms. Use ½x2 ½ carriage bolts [(43) 802-571C] with a ½" lock washer and ½" nut [(41) 804-015C - (40) 803-020C] to mount the leveling board on the arms. The leveling board part numbers will be marked on figures 6-10 to be sure the correct level board is mounted in the correct location. Check the dimension in between the leveling boards on each section to be sure there remains about 1" of gap in between them. If the boards are not about 1" apart, recheck the leveling board mounting tube dimensions. There should be about 5" in-between the leveling boards between the center section and each wing.

1200TT – ROLLING HARROW PLACEMENT @ 22°

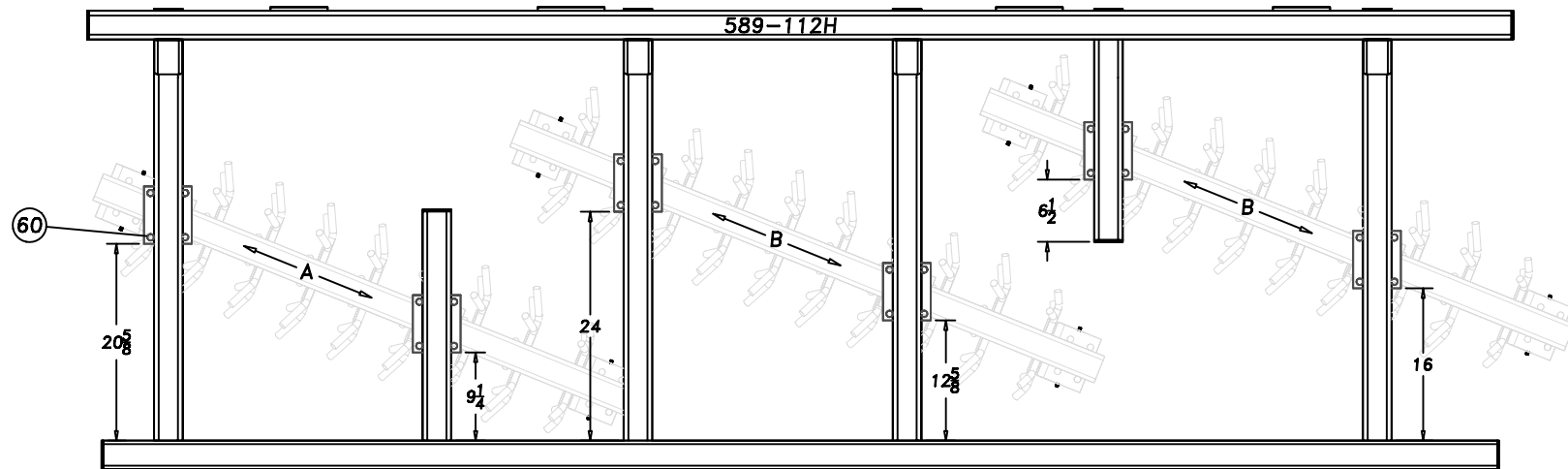
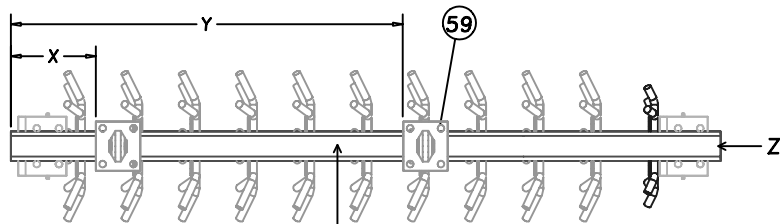


FIG. 1



ROLLING HARROW GANG—
CENTER TUBE ON BRACKETS

FIG. 4

BALL JOINT LOCATION				
		X DIM	Y DIM	Z TUBE
A	9 WHEEL	5 5/8"	36"	60"
B	10 WHEEL	11 5/8"	42"	66"

1200TT – LEVELING BOARD PLACEMENT

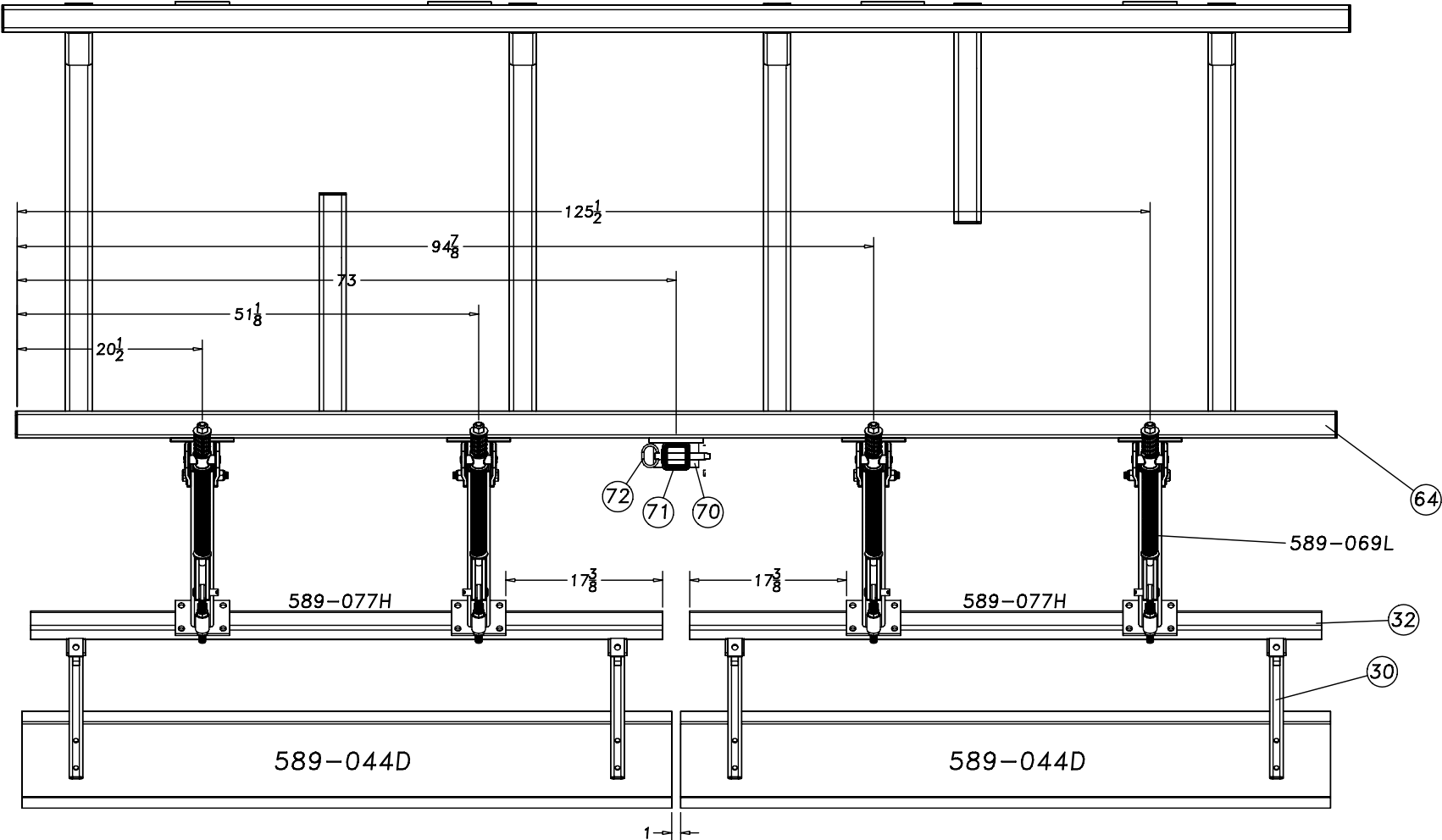
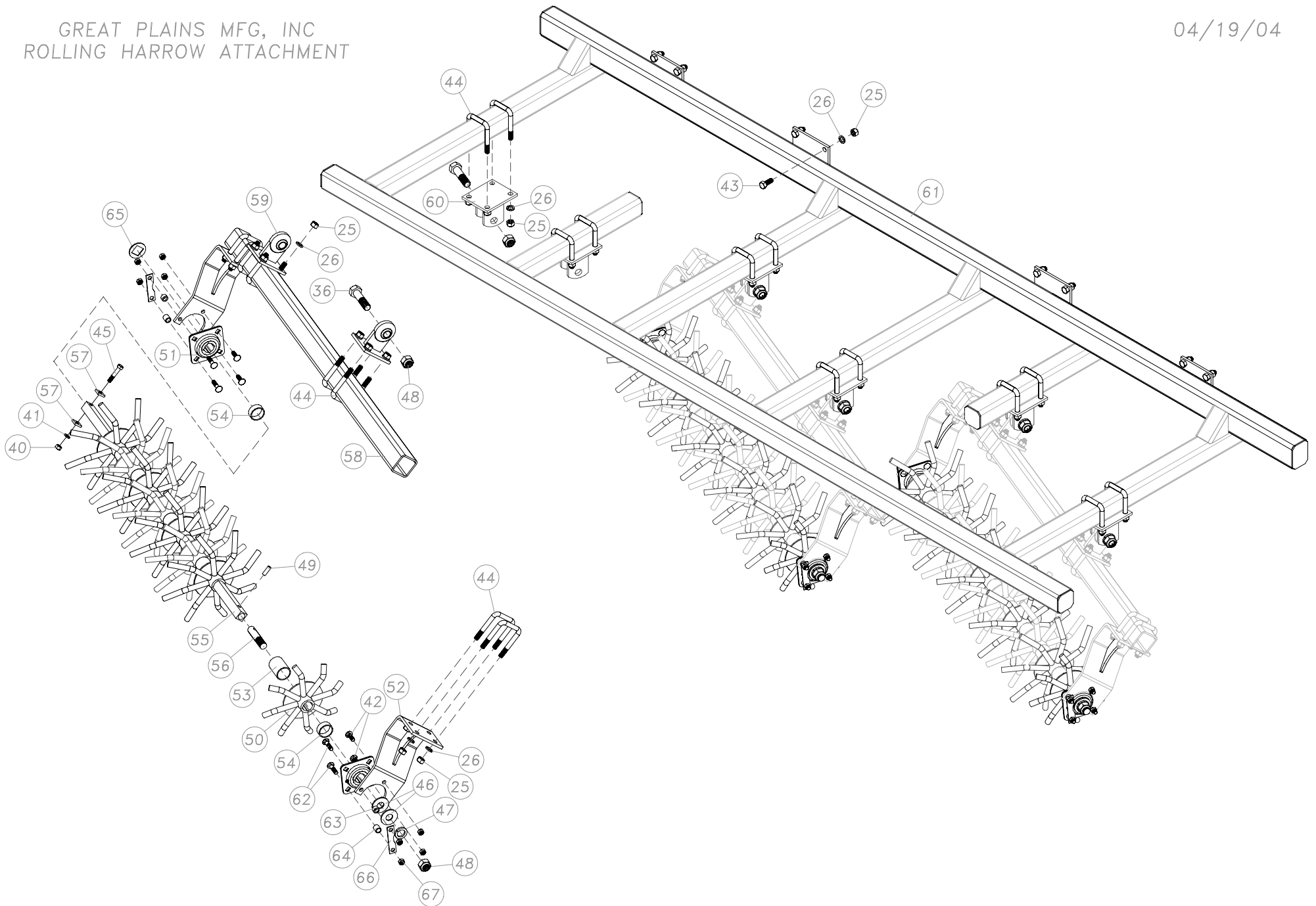


FIG. 6

GREAT PLAINS MFG, INC
ROLLING HARROW ATTACHMENT

04/19/04





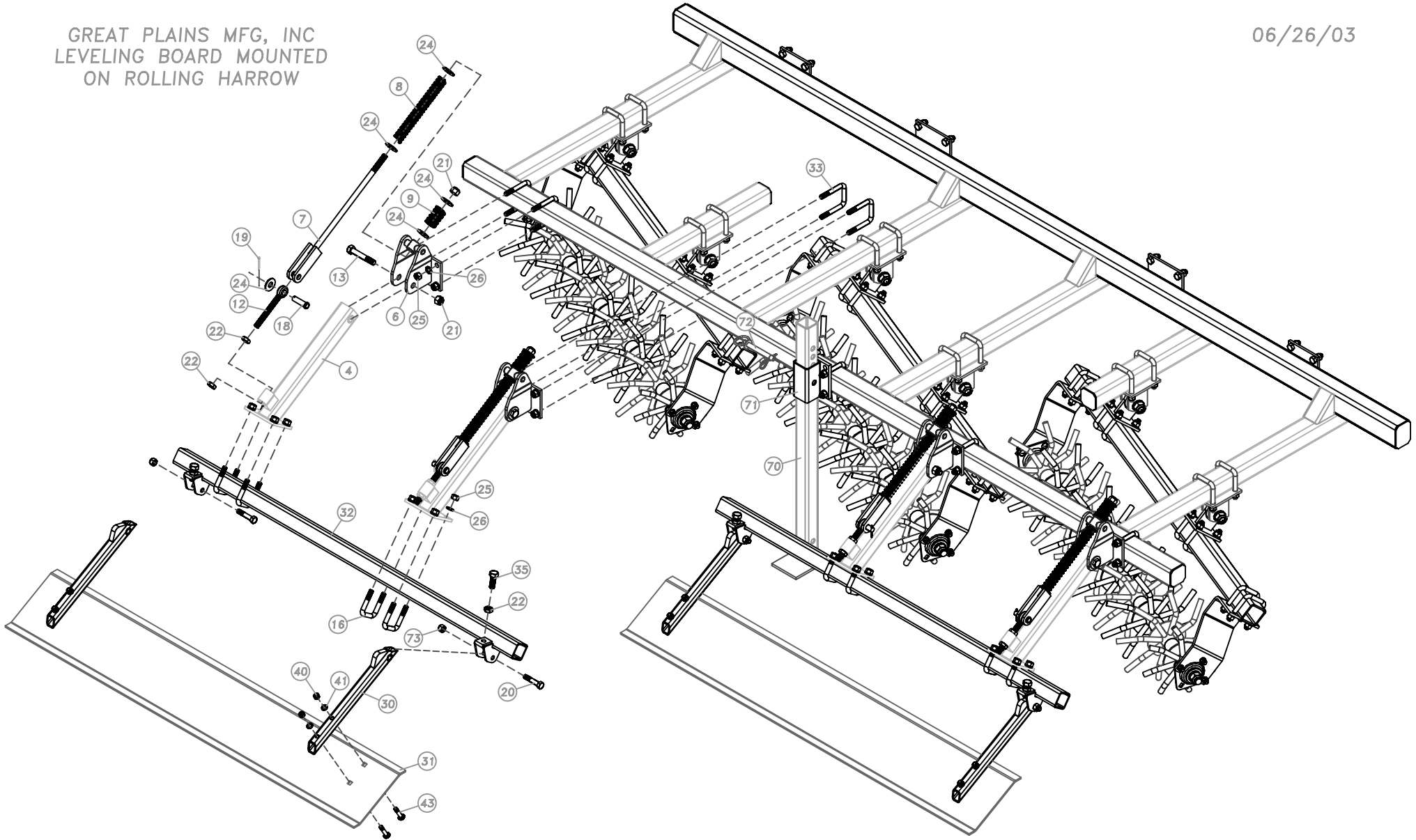
**TURBOTILL FINISHING ATTACHMENTS
ROLLING HARROW**

REF NO.	DESCRIPTION	PART NO. (KENT MFG)	PART NO. (GP)	1200TT	2200TT	3000TT	4000TT
ROLLING HARROW GANG ASSEMBLIES							
	7 WHEEL ROLLING HARROW GANG		589-065K				
	8 WHEEL ROLLING HARROW GANG		589-066K				
	9 WHEEL ROLLING HARROW GANG		589-067K	1			
	10 WHEEL ROLLING HARROW GANG		589-068K	2			5
	11 WHEEL ROLLING HARROW GANG		589-071K			4	4
	12 WHEEL ROLLING HARROW GANG		589-095K		2		
	13 WHEEL ROLLING HARROW GANG		589-117K		2	2	
<i>(INDIVIDUAL PARTS INCLUDED IN GANG ASSEMBLIES)</i>							
64	3/4 LONG X 1/2 TINE STOP/SPACER	n/a	550-134D	6	8	12	18
63	1/2 LONG X 1/2 BOLT SPACER	n/a	585-013D	6	8	12	18
50	SPIDER WHEEL LARGE	n/a	589-055H	12	22	32	40
	SPIDER WHEEL OFFSET @ 22.5	n/a	589-056H	14	24	32	45
	SPIDER WHEEL SMALL	n/a	589-094H	3	4	6	9
51	BEARING, 1 1/4" SQUARE	PW0115	822-209C	6	10	14	18
52	BEARING HANGER	n/a	589-142H	6	10	14	18
53	SPACER - LONG	n/a	589-026D	26	46	64	85
54	SPACER - SHORT	n/a	589-027D	6	12	16	18
55	43 7/8 ROLLING HARROW SHAFT	n/a	589-014D	0	0	0	0
	49 5/8 ROLLING HARROW SHAFT	n/a	589-015D	0	0	0	0
	55 1/2 ROLLING HARROW SHAFT	n/a	589-016D	1	0	0	0
	61 3/8 ROLLING HARROW SHAFT	n/a	589-017D	2	0	0	5
	67 1/8 ROLLING HARROW SHAFT	n/a	589-029D	0	0	4	4
	73 ROLLING HARROW SHAFT	n/a	589-050D	0	2	0	0
	79 3/8 ROLLING HARROW SHAFT	n/a	589-056D	0	2	2	0
66	ZERK GUARD ROLLING HARROW	n/a	589-085D	6	8	12	18
56	1" THREADED STUB SHAFT	PW0126	800-364C	3	4	6	9
57	WASHER, RECT 1/4X1" FLAT	PW0116	585-057D	6	8	12	18
49	PIN, 1/2" HR RND 1 3/8" LONG	PW0140	585-056D	3	4	6	9
65	TREADER SHAFT 1/8" SPACER	PW0427	585-066D	3	4	6	9
58	48" ROLLING HARROW TUBE	n/a	589-018D	0	0	0	0
	54" ROLLING HARROW TUBE	n/a	589-019D	0	0	0	0
	60" ROLLING HARROW TUBE	n/a	589-020D	1	0	0	0
	66" ROLLING HARROW TUBE	n/a	589-021D	2	0	0	5
	72" ROLLING HARROW TUBE	n/a	589-031D	0	0	4	4
	78" ROLLING HARROW TUBE	n/a	589-049D	0	2	0	0
	84" ROLLING HARROW TUBE	n/a	589-055D	0	2	2	0
67	NUT HEX TOP LOCK 1/2-13 PLT	n/a	803-342C	24	32	48	72
40	1/2" HEX NUT	3008	803-020C	3	4	6	9
41	1/2" LOCK WASHER	4108	804-015C	3	4	6	9
42	1/2 x 1 1/2" CARRIAGE BOLT	240824	802-106C	12	16	24	36
62	RHSNB 1/2-13X2 GR5	n/a	802-129C	12	16	24	36
45	1/2 x 2 1/2" HEX BOLT	110540	802-130C	3	4	6	9
25	5/8" HEX NUT	3010	803-021C	24	40	56	72
26	5/8" LOCK WASHER	4110	804-022C	24	40	56	72
44	5/8 x 3 x 4 1/2" U-BOLT	UB0029	806-183C	12	20	28	36
46	1" FLAT WASHER	4016	804-028C	6	8	12	18
47	1" LOCK WASHER	4116	804-027C	3	4	6	9
48	1" NYLOCK HEX NUT	3616	803-038C	3	4	6	9
ROLLING HARROW GANG MOUNTING HARDWARE							
59	BALL JOINT BRACKET	n/a	589-064H	6	8	12	18
60	BRACKET - ROLLING HARROW	n/a	589-057H	6	8	12	18
61	DRAG FRAME 43 3/4 RH	n/a	589-107H				1
	DRAG FRAME 56 RH	n/a	589-108H		1		
	DRAG FRAME 106 RH	n/a	589-109H			1	
	DRAG FRAME 109 1/2 RH	n/a	589-110H				1
	DRAG FRAME 129	n/a	589-111H		1	1	
	DRAG FRAME 149	n/a	589-112H	1			1
	DRAG FRAME 43 3/4 LH	n/a	589-113H				1
	DRAG FRAME 56 LH	n/a	589-114H		1		
	DRAG FRAME 106 LH	n/a	589-115H			1	
	DRAG FRAME 109 1/2 LH	n/a	589-116H				1
36	1 x 4 HEX BOLT	111664	802-073C	6	8	12	18
48	1" NYLOCK NUT	3616	803-038C	6	8	12	18
43	5/8 x 1 1/2" HEX BOLT	111024	802-051C	16	32	40	56
25	5/8" HEX NUT	3010	803-021C	64	96	136	200
26	5/8" LOCK WASHER	4110	804-022C	64	96	136	200
44	5/8 x 3 x 4 1/2" U-BOLT	UB0029	806-183C	24	32	48	72

Harrow Width (Feet) 11.7 20.6 28.7 38.1

GREAT PLAINS MFG, INC
LEVELING BOARD MOUNTED
ON ROLLING HARROW

06/26/03





TURBOTILL FINISHING ATTACHMENTS LEVELING BOARD FOR ROLLING HARROW

REF NO.	DESCRIPTION	PART NO. (KENT MFG)	PART NO. (GP)	1200TT	2200TT	3000TT	4000TT
31	4' LEVELING BOARD	n/a	589-058D				4
	5' LEVELING BOARD	n/a	589-043D		2	6	2
	6' LEVELING BOARD	n/a	589-044D	2	2		2
32	36" MOUNTING TUBE	n/a	589-120H	0	0	0	4
	48" MOUNTING TUBE	n/a	589-074H	0	2	6	2
	56" MOUNTING TUBE	n/a	589-077H	2	2	0	2
30	LEVEL BOARD ARM	n/a	589-073H	4	8	12	16
4	REEL ARM	n/a	589-060H	4	8	12	16
6	ARM MOUNT BRKT	n/a	589-059H	4	8	12	16
7	CLEVIS BOLT, 3/4" x 22 1/4"	MC0078	575-516H	4	8	12	16
8	LONG SPRING	DA0056	807-224C	4	8	12	16
9	SHORT SPRING	PW0134	807-226C	4	8	12	16
12	EYE BOLT, 3/4 x 5 1/2 LONG	MC0048	802-768C	4	8	12	16
70	REAR STAND LEG	FC1606	560-196H	1	1	1	1
71	REAR STAND MOUNT BRACKET	PW0282	580-049H	1	1	1	1
72	3/4 X 4 1/2 PIN AND RETAINER	131272	805-081C	1	1	1	1
13	3/4 x 4 1/2 HEX BOLT	111272	802-192C	4	8	12	16
35	3/4 x 2 HEX BOLT	111232	802-064C	4	8	12	16
16	5/8 x 2 1/2 x 3 3/4 U-BOLT	UB0037	806-182C	8	16	24	32
44	5/8 x 3 x 4 1/2 U-BOLT	UB0029	806-183C	10	18	26	34
18	3/4 x 2 1/2 CLEVIS PIN	211040	805-140C	4	8	12	16
19	1/8 x 1 1/2" COTTER KEY	260224	805-225C	4	8	12	16
20	5/8 x 3 HEX BOLT	111048	802-059C	4	8	12	16
21	3/4" LOCKNUT	3112	803-026C	8	16	24	32
22	3/4" JAM NUT	3312	803-048C	12	24	36	48
24	3/4" FLAT WASHER	4012	804-024C	20	40	60	80
73	5/8" LOCK NUT	3110	803-024C	4	8	12	16
25	5/8" HEX NUT	3010	803-021C	36	68	100	132
26	5/8" LOCK WASHER	4110	804-022C	36	68	100	132
40	1/2" HEX NUT	3008	803-020C	8	16	24	32
41	1/2" LOCK WASHER	4108	804-015C	8	16	24	32
43	1/2" x 2 1/2" CARRIAGE BOLT	240840	802-571C	8	16	24	32

Board Width (Feet)

12.2

22.3

30.5

38.7