

**Assembly Instructions for the Rolling Harrow**  
**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.

# 2200TT – ROLLING HARROW PLACEMENT @ 22° CENTER

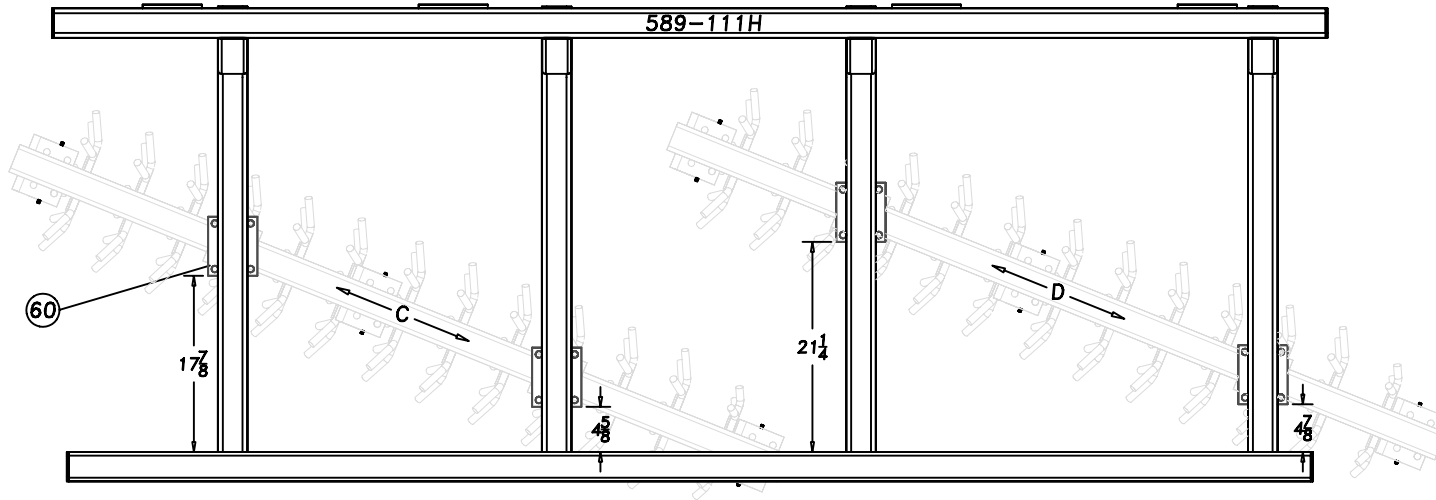
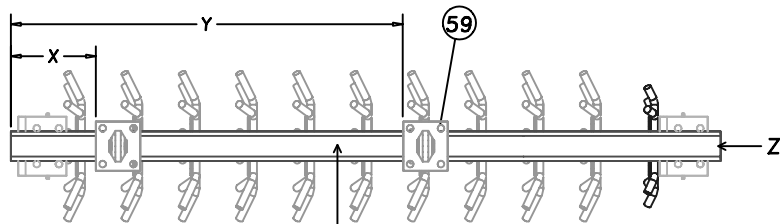


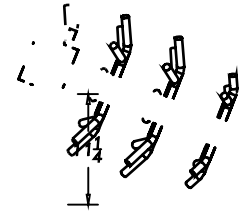
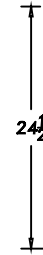
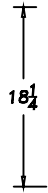
FIG. 1



ROLLING HARROW GANG—  
CENTER TUBE ON BRACKETS

FIG. 4

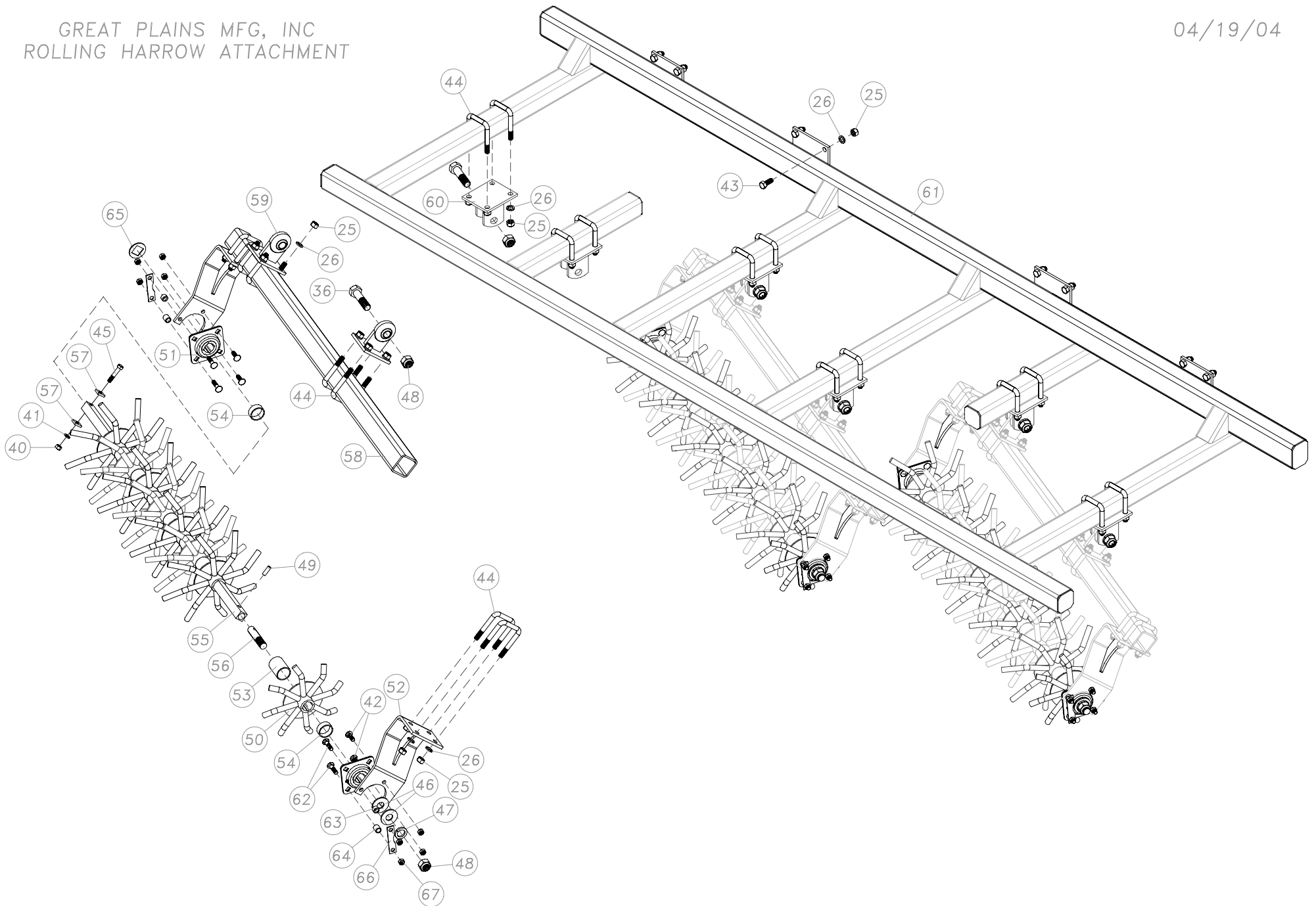
|   |          | BALL JOINT LOCATION |         |        |
|---|----------|---------------------|---------|--------|
|   |          | X DIM               | Y DIM   | Z TUBE |
| A | 12 WHEEL | 14 1/2"             | 50"     | 78"    |
| B | 12 WHEEL | 15 1/8"             | 50 3/4" | 78"    |
| C | 13 WHEEL | 21 5/8"             | 57 1/8" | 84"    |
| D | 13 WHEEL | 18 3/8"             | 62 3/8" | 84"    |



|   |          | BALL JOINT LOCATION |                   |        |
|---|----------|---------------------|-------------------|--------|
|   |          | X DIM               | Y DIM             | Z TUBE |
| A | 12 WHEEL | $14\frac{1}{2}$ "   | 50"               | 78"    |
| B | 12 WHEEL | $15\frac{1}{8}$ "   | $50\frac{3}{4}$ " | 78"    |
| C | 13 WHEEL | $21\frac{5}{8}$ "   | $57\frac{1}{8}$ " | 84"    |
| D | 13 WHEEL | $18\frac{3}{8}$ "   | $62\frac{3}{8}$ " | 84"    |

GREAT PLAINS MFG, INC  
ROLLING HARROW ATTACHMENT

04/19/04





**TURBOTILL FINISHING ATTACHMENTS  
ROLLING HARROW**

| REF NO.   | DESCRIPTION                     | PART NO.<br>(KENT MFG) | PART NO.<br>(GP) | 1200TT | 2200TT | 3000TT | 4000TT |
|---|---------------------------------|------------------------|------------------|--------|--------|--------|--------|
| <b>ROLLING HARROW GANG ASSEMBLIES</b>                 |                                 |                        |                  |        |        |        |        |
|   | 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      |
| <b>ROLLING HARROW GANG MOUNTING HARDWARE</b>          |                                 |                        |                  |        |        |        |        |
| 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