



Native Grass Rate Reduction Kit Great Plains 3-Point No-Till Drills

Used with:

- 605NT and 3P605NT drills
- 606NT and 3P606NT drills
- 3P806NT and 3P1006NT drills

Note: The drill must have Native Grass capability, Series I or Series II.

General Information

These instructions explain Native Grass Rate Reduction Kit installation. This feature supports lower Native Grass rates than are possible with the standard drill. Each kit converts an entire drill.

These instructions apply to:

Kit	Product Description
202-580A	Native Grass Rate Reduction Kit

Tools Required

- Basic hand tools, including snap ring pliers
- Chain oil

Before You Start

Refer to *Figure 1*

Remove all contents of the kit case (the case is used to receive parts removed from the drill).

1. Inventory the new parts per “**Parts List**” on page 7.

Refer to the drill **Operator Manual** for these steps:

2. Hitch the drill to a suitable tractor.
3. Move the drill to a dry well-lighted location suitable for disassembly.
4. Lower the drill.
5. Disconnect hydraulic and electrical power to the drill.

Note: Whenever mounting a chain, make sure the clip at the removable link is oriented to minimize snags.

Install clip with open end facing away from direction of chain travel (often shown by arrows in the chain routing diagrams of the Operator Manual).

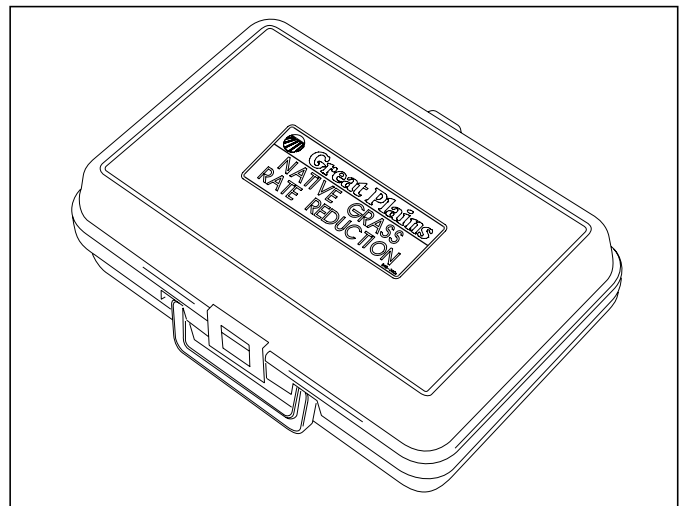
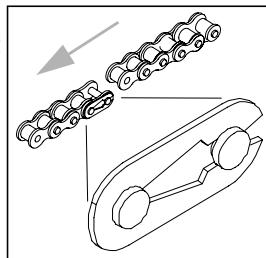
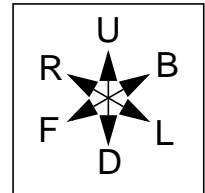


Figure 1
Kit Storage Case

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Notations and Conventions

“Left” and “Right” are facing in the direction of machine travel. An orientation rose in the line art illustrations shows the directions of: Up, Back, Left, Down, Front, Right.



- ① to ⑨ callouts identify components in the currently referenced Figure or Figures. These numbers may be re-used from page to page.
- ⑫ to ⑳ document-wide callouts reference existing parts exchanged or temporarily removed. The descriptions match those in a current drill Parts Manual.
- ⑤① to ⑤⑤ document-wide callouts reference new parts from the list on page 7. The descriptions match those on the cartons, bags or item tags, as well the current Parts Manual.

Installation

Remove Gearbox Cover

Native Grass gearbox location:

605NT/606NT	Drill left (main gearbox)
3P605NT	Drill left (main gearbox)
3P606NT	Drill left (main gearbox)
3P806NT	Drill left (main gearbox)
3P1006NT	Drill right (dedicated NG gearbox)

Refer to Figure 2 (depicting a 117-360D cover)

6. At the Native Grass gearbox, remove and save one set:
 - ①⑥ 802-300C HHCS 1/4-28X3/8 GR5
 - ①⑦ 804-006C WASHER LOCK SPRING 1/4 PLT
 - ①⑧ 804-007C WASHER FLAT 1/4 SAE PLT
 - ①② 120-237D GEARBOX SHIFT HANDLE
7. Remove and save two:
 - ①⑤ 801-076C SCR SELF TAPPING 3/8X1 that attach the box cover ①① to the gearbox.
8. Remove and save the cover, one of:
 - ①① 117-360D CONVENTIONAL GEARBOX COVER
 - ①① 151-157D NT GEARBOX COVER

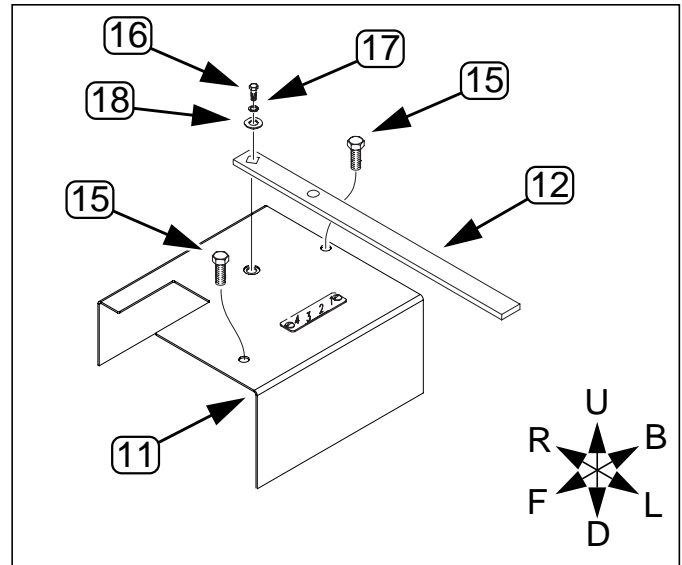


Figure 2
Remove Gearbox Cover

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Exchange Sprockets

Part locations are slightly different for 6-ft, 8-ft and 10-ft drills. Each is covered separately. Skip to the page for your drill:

Page	Drill Model
605NT/606NT	below (step 9, page 3)
3P605NT	below (step 9, page 3)
3P606NT	below (step 9, page 3)
3P806NT	step 9, page 4
3P1006NT	step 9, page 5

Exchange 6 ft. (605NT or 3P605NT) or (606NT or 3P606NT) Sprockets

On 6-foot models, the Native Grass drive shares the single Drive Type gearbox, and uses the left rear output shaft. The right rear shaft is Main Seed box.

Remove 6 ft. Gearbox Output Sprocket

Refer to Figure 3

9. Loosen the bolt and relax idler ①.
10. Remove the existing 45-pitch chain ② from both the existing left rear gearbox output sprocket:
 - ②1 808-157C SPKT 40B19 X 36T SPLINE BORE
 - and from the Native Grass jackshaft input sprocket:
 - ②0 808-170C SPKT 40B17 X 3/4BORE W/KW&SS
 The chain may be left on the idler ①.
11. Remove and save the snap ring from sprocket ②1:
 - ②4 800-141C SNAP RING EXT F/PEERLESS G.B.
 This snap ring is reused during the installation.
12. Remove and save sprocket ②1. Store it in the kit case for possible future use.

Install New 6 ft. Output Sprocket

13. Select one new:
 - ③3 808-160C SPKT 40B12 X 36T SPLINE BORE
 Place this sprocket on the gearbox output shaft where sprocket ②1 was just removed at step 12.
14. Select one saved:
 - ②4 800-141C SNAP RING EXT F/PEERLESS G.B.
 Secure sprocket ③3 on the shaft with the snap ring ②4.

Remove 6 ft. NG Jackshaft Input Sprocket

The Native Grass jackshaft input ②0 and output ③ ends have otherwise identical 17T keyway sprockets. The input sprocket ②0 is to the right, closer to the gearbox. Do not remove the output sprocket ③.

Note: For sufficient clearance, you may need to loosen other sprocket or bearing collar set screws, and temporarily slide the jackshaft to the left.

Refer to Figure 4

15. Loosen one or two set screws in the 17T jackshaft input sprocket:
 - ②0 808-170C SPKT 40B17 X 3/4BORE W/KW&SS
16. Remove and save the key:
 - ③3 168-127D 3/16 X 1 KEY
 The key is re-used during this installation.
17. Remove sprocket ②0. Store the sprocket in the kit case for possible future use.

Install New 6 ft. NG Jackshaft Input Sprocket

18. Select one new:
 - ③2 808-100C SPKT 40B22 3/4B W/K.W. &SS

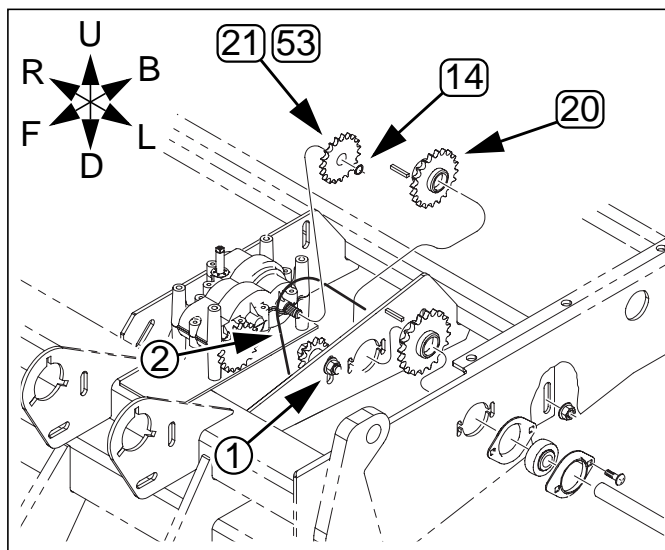


Figure 3
6-Foot Gearbox Output Sprocket

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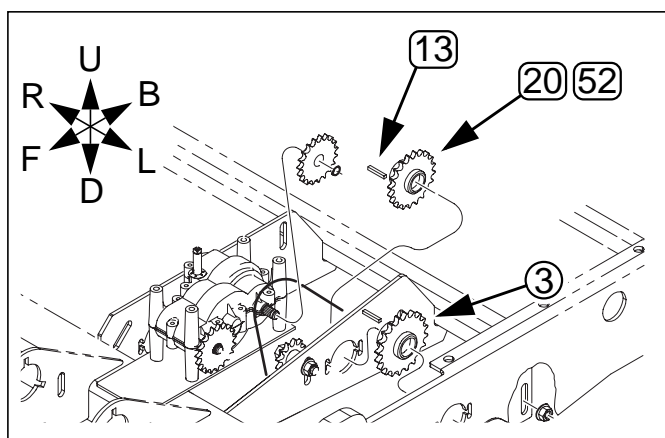


Figure 4
6-Foot NG Jackshaft Input Sprocket

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Place the sprocket on the jackshaft where sprocket ②0 was just removed at step 17.

19. Select one saved:
 - ③3 168-127D 3/16 X 1 KEY
 Insert it in the sprocket and shaft keyways. If the shaft was moved, slide it back to the right.
20. Secure all set screws.
21. Re-mount 45-pitch chain ② around new sprockets ③2, ③3 and idler ①.
22. Adjust chain slack to $\frac{1}{4}$ inch (6mm).
23. Skip to "Closeout", step 23, page 6.

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Exchange 8 ft. (3P806NT) Sprockets

Continuing from step 8 on page 2. On 8-foot models, the Native Grass drive shares the single Drive Type gearbox, and uses the right rear output shaft. The left rear shaft is Main Seed box.

Remove 8 ft. Gearbox Output Sprocket

Refer to Figure 5

9. Loosen the bolt and relax idler ①.
10. Remove the existing 42-pitch chain ② from both the existing right rear gearbox output sprocket:
 - ②① 808-157C SPKT 40B19 X 36T SPLINE BORE
 - and from the Native Grass jackshaft input sprocket:
 - ②② 808-170C SPKT 40B17 X 3/4BORE W/KW&SS
 The chain may be left on the idler ①.
11. Remove and save the snap ring from sprocket ②①:
 - ②④ 800-141C SNAP RING EXT F/PEERLESS G.B.
 This snap ring is reused during the installation.

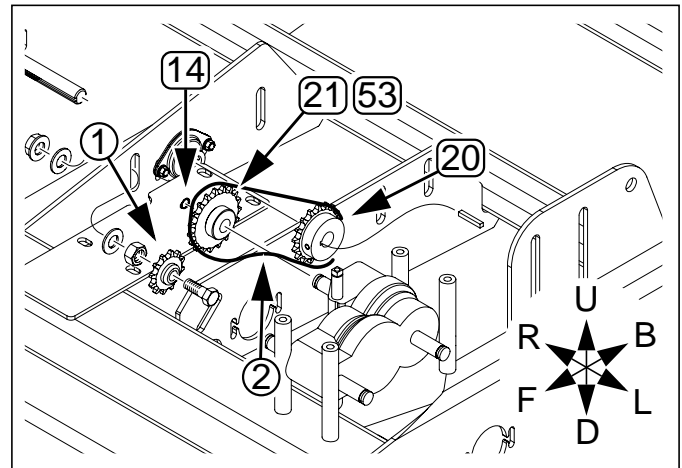


Figure 5
8-Foot Gearbox Output Sprocket

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12. Remove and save sprocket ②①. Store it in the kit case for possible future use.

Install New 8 ft. Gearbox Output Sprocket

13. Select one new:
 - ②③ 808-160C SPKT 40B12 X 36T SPLINE BORE
 Place this sprocket on the gearbox output shaft where sprocket ②① was just removed at step 12.
14. Select one saved:
 - ②④ 800-141C SNAP RING EXT F/PEERLESS G.B.
 Secure sprocket ②③ on the shaft with the snap ring ②④.

Remove 8 ft. NG Jackshaft Input Sprocket

Refer to Figure 6

15. Loosen one or two set screws in the 17T jackshaft input sprocket:
 - ②② 808-170C SPKT 40B17 X 3/4BORE W/KW&SS
16. Remove and save the key:
 - ②③ 168-127D 3/16 X 1 KEY
 The key is re-used during this installation.
17. Remove sprocket ②②. Store the sprocket in the kit case for possible future use.

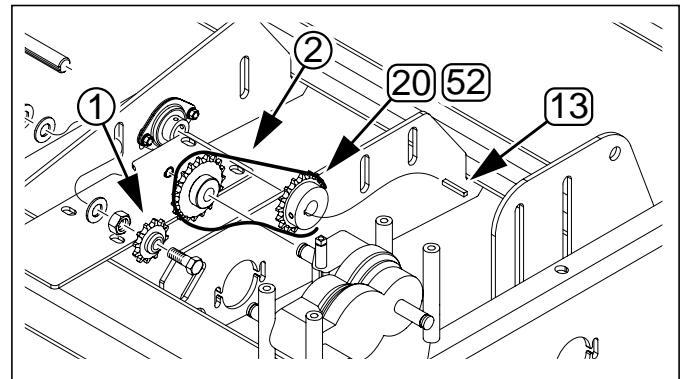


Figure 6
8-Foot Jackshaft Input Sprocket

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21. Re-mount 45-pitch chain ② around new sprockets ②②, ②③ and idler ①.
22. Adjust chain slack to $\frac{1}{4}$ inch (6mm).
23. Skip to "Closeout", step 23, page 6.

Install New 8 ft. NG Jackshaft Input Sprocket

18. Select one new:
 - ②② 808-100C SPKT 40B22 3/4B W/K.W. &SS
 Place the sprocket on the jackshaft where sprocket ②② was just removed at step 17.
19. Select one saved:
 - ②③ 168-127D 3/16 X 1 KEY
 Insert it in the sprocket and shaft keyways. If the shaft was moved, slide it back to the right.
20. Secure all set screws.

Exchange 10 ft. (3P1006NT) Sprockets

Continuing from step 8 on page 2. On 10-foot models, the Native Grass drive has a dedicated gearbox, at drill right. The NG drive system uses the right rear output shaft.

Remove 10 ft. Gearbox Output Sprocket

Refer to Figure 7

9. Loosen the bolt and relax idler ①.
10. Remove the existing 42-pitch chain ② from both the existing right rear gearbox output sprocket:
 - ②① 808-157C SPKT 40B19 X 36T SPLINE BORE
 - and from the Native Grass jackshaft input sprocket:
 - ②② 808-170C SPKT 40B17 X 3/4BORE W/KW&SS
 The chain may be left on the idler ①.
11. Remove and save the snap ring from sprocket ②①:
 - ②④ 800-141C SNAP RING EXT F/PEERLESS G.B.
 This snap ring is reused during the installation.
12. Remove and save sprocket ②①. Store it in the kit case for possible future use.

Install New 10 ft. Gearbox Output Sprocket

13. Select one new:
 - ②③ 808-160C SPKT 40B12 X 36T SPLINE BORE
 Place this sprocket on the gearbox output shaft where sprocket ②① was just removed at step 12.
14. Select one saved:
 - ②④ 800-141C SNAP RING EXT F/PEERLESS G.B.
 Secure sprocket ②③ on the shaft with the snap ring ②④.

Remove 10 ft. NG Jackshaft Input Sprocket

Refer to Figure 4

15. Loosen one or two set screws in the 17T jackshaft input sprocket:
 - ②② 808-170C SPKT 40B17 X 3/4BORE W/KW&SS
16. Remove and save the key:
 - ②③ 168-127D 3/16 X 1 KEY
 The key is re-used during this installation.
17. Remove sprocket ②②. Store the sprocket in the kit case for possible future use.

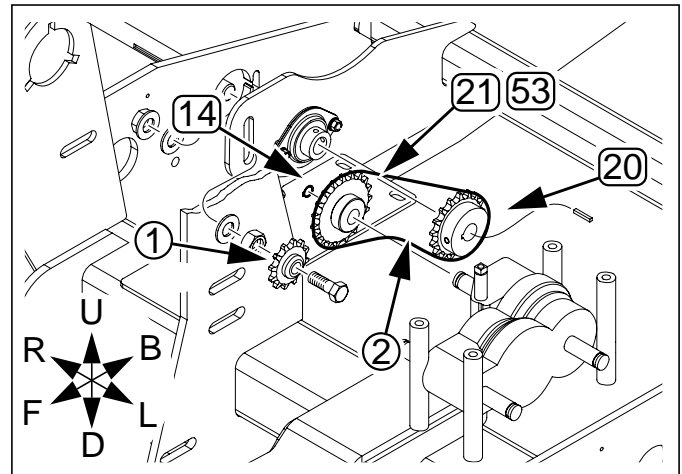


Figure 7
10-Foot Gearbox Output Sprocket

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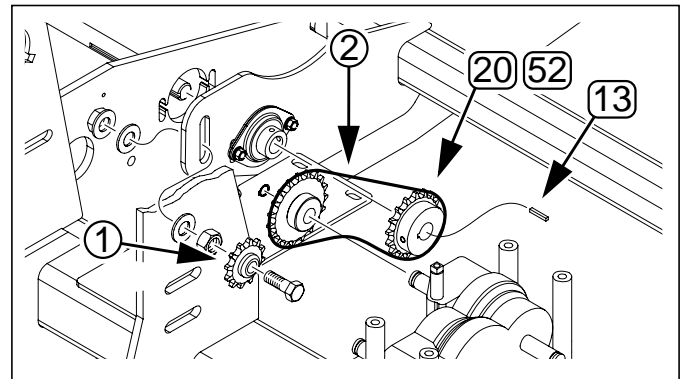


Figure 8
10-Foot Jackshaft Input Sprocket

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Install New 10 ft. NG Jackshaft Input Sprocket

18. Select one new:
 - ②② 808-100C SPKT 40B22 3/4B W/K.W. &SS
 Place the sprocket on the jackshaft where sprocket ②② was just removed at step 17.
19. Select one saved:
 - ②③ 168-127D 3/16 X 1 KEY
 Insert it in the sprocket and shaft keyways. If the shaft was moved, slide it back to the right.
20. Secure all set screws.
21. Re-mount 45-pitch chain ② around new sprockets ②②, ②③ and idler ①.
22. Adjust chain slack to $\frac{1}{4}$ inch (6mm).

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Closeout

Refer to Figure 9

23. Replace gear box cover (11) and install the two $\frac{3}{8}$ inch self-tapping screws (15).
24. Place the gear box handle (12) so that the sight hole is over the Drive Type plate, and secure handle with $\frac{1}{4}$ -28 bolt (16), washer (18) and lock washer (17).
25. Return these instructions to the kit case. Store the case for future use.

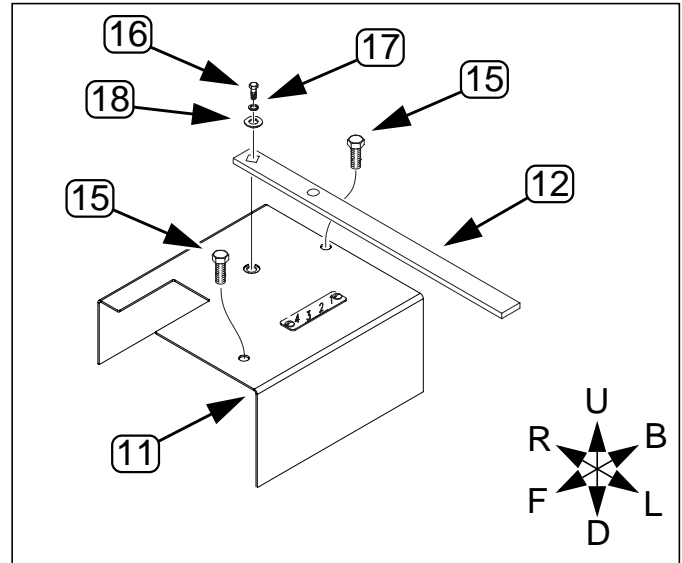


Figure 9
Install Gearbox Cover

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Using Reduced Seed Rate

The components installed reduce the population rate, for Native Grass only, by 42%, which is an adjustment factor of 0.58.

The Seed Rate Reduction kit does *not* affect the population rates of:

- main seed box
- small seeds box

Not all Seed Rate manuals include both standard and Reduced Rate charts.

Use your existing Seed Rate charts for native grass, and apply the correction factor.

Maintenance

Re-check chain slack after first few hours or operation, due to seating.

The installation of this kit requires no other changes to the regular maintenance of the drill as specified in the Operator's Manual.

For Series I Native Grass Seeding

The chart rates, in pounds-per-acre, need to be adjusted by multiplying by 0.58.

$$\text{ReducedPoundsPerAcre} = \text{ChartPoundsPerAcre} \times 0.58$$

For Series II Native Grass Seeding

The chart rates, in cup-revolutions-per-acre, need to be adjusted by multiplying by 0.58.

$$\text{ReducedCupRevsPerAcre} = \text{ChartCupRevsPerAcre} \times 0.58$$

Appendix

Parts List

202-580A Native Grass Rate Reduction Kit

Your kit includes:

Callout	Part Number	Quantity	Description
51	202-583M	1	NATIVE GRASS RATE REDUCTION KIT (this manual)
52	808-100C	1	SPKT 40B22 3/4B W/K.W. &SS
53	808-160C	1	SPKT 40B12 X 36T SPLINE BORE
54	817-814C	1	CASE, PLASTIC 12X8X3 3/4
55	848-340C	1	DECAL, NG RATE REDUCTION

Abbreviations

EXT	External	SAE	Society of Automotive Engineers (standard)
GR5	Grade 5	SCR	Screw
HHCS	Hex Head Cap Screw	SPKT	Sprocket
KW	Keyway	SS	Set Screw
NG	Native Grass	W/	with
PLT	Plated	X	by

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