Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

Work in Clean Area

Before starting a job:
• Clean work area and machine.
• Make sure you have all necessary tools to do your job.
• Have the right parts on hand.
• Read all instructions thoroughly; do not attempt shortcuts.
Potential Additional Parts List

Additional bearings AA35646 (A), clamps A53746, bolts 19M7295, and nuts 14M7273 (B) may need to be ordered. Quantity depends entirely on machine model and configuration. Bearings will be used to support shaft (in place of removed sprocket bearings) near drive sprockets, drillshaft ends, drive couplers and so forth. Clamps will be used to secure some new gearboxes located in unique positions on some models. Some row configurations such as, dual non-adjustable downforce springs or drop down drive chains may require addition of spacers 28H3429 (C).

A—Bearing AA35646
B—Clamp, Bolt and Nut
C—Spacers, 28H3429

Install Pro-Shaft Drive

1. If any questions arise, enter a dealer submitted DTAC case for answers.

NOTE: Not compatible with dual bag pneumatic downforce, granular chemical hoppers or competitive rows. Pro-shaft is only compatible with John Deere ME II, ME PLUS and ME XP row units.

2. Remove row unit chains (A) and drillshaft drive chains (B).

A—Row Unit Chain
B—Drillshaft Drive Chain

Continue on next page
NOTE: Mark general location of drillshaft components on frame to aid reassembly.

3. Remove all cotter pins (A) and loosen all drillshaft retainer cap screws (C). Remove drillshaft from planter.

   A—Cotter Pin
   B—Drive Coupler
   C—Cap Screw
   D—Drillshaft Retainer

4. Remove and discard cap screws (A) and sprocket assembly (B) from each row.

   A—Cap Screws
   B—Sprocket Assembly
5. Some planter configurations use drop down chains (A). Remove all washer spacers (B) from drop down assemblies.

   A—Drop Down Chain
   B—Washer Spacers

6. Remove and discard cap screws (A) and sprocket assembly (B) from each row.

7. Remove and discard cap screw (C) and chain tensioner assembly (D) from each row.

   A—Cap Screws
   B—Sprocket Assembly
   C—Cap Screw
   D—Tensioner Assembly

Continued on next page
8. Depending on planter configuration, additional bearings (A) AA35646 may need to be installed to support the ends of drillshafts or to provide additional drillshaft support near drive sprockets (B). Some bearings will need to be mounted to the inside of planting unit brackets (C) and some to the outside of brackets (C).

A—bearings
B—drive sprockets
C—planting unit brackets
9. Insert studs (A) into gearboxes before attaching to planting unit. There may not be enough room to mount gearboxes if studs are installed on bracket first.

**IMPORTANT:** Avoid damage to gearboxes. Install hairpin in appropriate groove on mounting stud. Only the top stud needs to have a hairpin.

10. Install gearboxes on left-hand side of row unit mounting brackets (D) according to following conditions. If additional bearings (B) AA35646 are needed, install at this time.

- If parallel arms (C) are inside of row unit mounting bracket (D), install studs and insert hairpin (E) in outer groove.
- If parallel arms (C) are outside of row unit mounting bracket (D), install studs and insert hairpin (E) in inner groove.
- If a drillshaft bearing interferes with mounting, either use outermost groove in stud or use a drillshaft clamp (F) on outside of gearbox with washers on inside of gearbox to hold gearbox in place when shaft is reinstalled.
- If machine is equipped with dual non-adjustable downforce springs, 1/2 in. spacers 28h3429 (G) and long studs may be required for clearance. In locations where drillshaft bearings (B) provide 1/4 in. of spacing, two washers on each stud will provide the additional 1/4 in. spacing.

---

**NOTE:** If equipped with non-adjustable dual downforce springs or when other hardware is attached to same location, use long mounting studs (A) A80687, otherwise use short mounting studs (A) A80688.

9. Insert studs (A) into gearboxes before attaching to planting unit. There may not be enough room to mount gearboxes if studs are installed on bracket first.

**IMPORTANT:** Avoid damage to gearboxes. Install hairpin in appropriate groove on mounting stud. Only the top stud needs to have a hairpin.

10. Install gearboxes on left-hand side of row unit mounting brackets (D) according to following conditions. If additional bearings (B) AA35646 are needed, install at this time.

- If parallel arms (C) are inside of row unit mounting bracket (D), install studs and insert hairpin (E) in outer groove.
- If parallel arms (C) are outside of row unit mounting bracket (D), install studs and insert hairpin (E) in inner groove.
- If a drillshaft bearing interferes with mounting, either use outermost groove in stud or use a drillshaft clamp (F) on outside of gearbox with washers on inside of gearbox to hold gearbox in place when shaft is reinstalled.
- If machine is equipped with dual non-adjustable downforce springs, 1/2 in. spacers 28h3429 (G) and long studs may be required for clearance. In locations where drillshaft bearings (B) provide 1/4 in. of spacing, two washers on each stud will provide the additional 1/4 in. spacing.

---

**NOTE:** If equipped with non-adjustable dual downforce springs or when other hardware is attached to same location, use long mounting studs (A) A80687, otherwise use short mounting studs (A) A80688.
11. Set heavy duty or pneumatic downforce to zero. Raise each row unit to its highest limit and check for interference between lower parallel arm and gearbox. If lower arm contacts gearbox, install gearbox and hairpin in groove furthest from parallel arms.

12. Install drillshaft, clamps and drive sprockets in their original locations.

13. Align drillshaft drive couplers (A) on folding machines.
   a. Flat surfaces (C) on drive couplers (A) must align. Loosen locking collars (B) and align couplers side-to-side.
   b. Tighten locking collars and rotate shaft by hand. If couplers do not maintain fore-and-aft alignment while rotating, further adjustments can be made by loosening, repositioning and tightening stud bolts (D) in mounting holes.
   a. Loosen locking collars (A) on outer drillshaft (B).
   b. Move drillshaft (B) in or out of flex shaft (C) until end of drillshaft can be seen covering one half of hole (D).
   c. Tighten locking collars on outer shaft.

15. Align flex shaft on 1720NT 12 and 16 row machines.
   a. Loosen locking collars on outer drillshaft.
   b. Position drillshaft until slots (A) and pins (B) are aligned to allow full travel of flex shaft. Both pins should be in identical position in slots.
   c. Tighten locking collars.
Mechanical Meter Gearbox

A—Carriage Bolts (2 used)
B—Mounting Plate
C—Bushings (2 used)
D—Meter Gearbox
E—Hole Location
F—Carriage Bolt

Vacuum Meter Gearbox

16. Mechanical Meters ONLY: Install front carriage bolt (F) into bracket as shown, before mounting gearbox.

Install carriage bolts (A) through mounting plate (B), bushings (C) and meter gearbox (D). Hole locations (E) are different for Vacuum and Mechanical meters. Secure with nuts.

Continued on next page
17. Mount meter gearbox assemblies (A) on row units with carriage bolts (B) as shown. Carriage bolts are positioned differently for Vacuum meter and Mechanical meter drives.
18. Insert green labeled end of cable (A) into drillshaft gearbox (B).
19. Insert other end of cable into meter gearbox (C).
20. Lock cable into position with pins (D).
21. Rotate drillshaft by hand to identify any binding or misalignment and correct, if found.

A—Cable  
B—Drillshaft Gearbox  
C—Meter Gearbox  
D—Pins
22. It may be necessary to align gearbox with drive mechanism on meter.

23. Loosen nuts (A) and adjust gearbox assembly so drive lugs (B) align with meter tabs (C).

24. Install hoppers and use a small mirror to check alignment of drives.

25. When meter drive is misaligned, drive lugs (B) can be seen outside meter tabs (C) as shown.

26. When meter drive is properly aligned, drive lugs (B) and meter tabs (C) are in line as shown.

A—Nuts  B—Drive Lugs  C—Meter Tabs
Change Transmission Drive Ratio—7200, 7300, 7340, 1700, 1710, 1720, 1730, 1750 and 1770 Flex Fold

Perform Only On Machines With Finger Pick-Up, Radial Bean, or Feed Cup Meters

Without Clutch—Remove existing 18 tooth sprocket (A) AA39959 and install new 27 tooth sprocket AA64826. Install new chain with approximately 4 additional links. It may be required to cut additional clearance for chain in transmission mud shield (B).

With Clutch—Remove existing 18 tooth sprocket (C) AA6026 and install new 27 tooth sprocket A81981. Install new chain with approximately 4 additional links. It may be required to cut additional clearance for chain in transmission mud shield (B).

Confirm seed population. (See CHECKING SEED POPULATION in your Operators Manual.)

A—Sprocket Without Clutch
B—Mud Shield
C—Sprocket With Clutch
Change Transmission Drive Ratio—1760, 1760NT and 1770 12 Row Narrow

Perform Only On Machines With Finger Pick-Up, Radial Bean, or Feed Cup Meters

1. Loosen chains and slide shaft (A) over far enough to remove 27 tooth sprocket (B) AA39181.
2. Install new 18 tooth sprocket AA35198 and locking hex clamps, to hold new sprocket in alignment.
3. Reinstall shaft.
4. Remove four or five chain links and reinstall chain.
5. Align sprockets and secure in place with locking clamps.
6. Confirm seed population. (See CHECKING SEED POPULATION in your Operators Manual.)

A—Shaft
B—Sprocket
Change Transmission Drive Ratio—1770NT
12 Row and 16 Row

Perform Only On Machines With Finger Pick-Up, Radial Bean, or Feed Cup Meters

1. Loosen chains.
2. Slide lower shaft (A) over far enough to remove sprocket (B) and install new 24 tooth sprocket AA54677.
3. Reinstall shaft.
4. Slide upper shaft (C) over far enough to remove sprocket (D) and install new 27 tooth sprocket AA54675.
5. Reinstall shaft.
7. Confirm seed population. (See CHECKING SEED POPULATION in your Operators Manual.)
Change Transmission Drive Ratio—1780 and Deere/Bauer

Perform Only On Machines With Finger Pick-Up, Radial Bean, or Feed Cup Meters

1. Clean decal (A) and use a black permanent marker to cover numbers on sprockets (B), (C), (D) and (E).
2. Use a silver permanent marker to write in new numbers. (B)=21 (C)=36 (D)=29 (E)=19
3. Determine if customer has transmission in high or low range.
4. Remove sprockets (F).
5. Install new drive sprockets, as directed on decal, to customer’s drive range.
   - 21 tooth AA40165 (B)
   - 36 tooth AA63703 (C)
   - 29 tooth AA63702 (D)
   - 19 tooth AA43587 (E)
6. Adjust chain length and idler (G) so the chain will work for both drive ranges.

Continued on next page
7. Confirm seed population. (See CHECKING SEED POPULATION in your Operators Manual.)

Low range will be approximately 6 percent fast and high range will be approximately 4 percent fast. Adjust accordingly.
Change Variable Rate Drive Ratio—Machines
With Mechanical Meters

Attach machine to SEEDSTAR™ monitor.

The software version determines how the drive ratio will be changed. Use the following procedure that matches the screen layout for this machine.

SEEDSTAR is a trademark of Deere & Company

Generation I Screens

Generation I Software: Press SETUP—VARIABLE DRIVE—VARIABLE DRIVE OPTIONS—DRIVE MOTORS.

Press key B to highlight “Motor” tab.

Change the value from 18 to 12. This will cause the VRD to drive the gearbox at the correct speed for mechanical meters.

Continued on next page
Generation II Software: Press SETUP — PLANTER — PLANTER CONFIGURATION — VARIABLE RATE.

Press key B to change selection to “Pro-Series”. With some software versions, this selection may display as “Pro- Shaft Drive”.

Generation II Screens

Generation II Software: Press SETUP — PLANTER — PLANTER CONFIGURATION — VARIABLE RATE.

Press key B to change selection to “Pro-Series”. With some software versions, this selection may display as “Pro-Shaft Drive”.

Adjust Height Sensor Start/Stop Point

Row Unit Type

ME 2/PLUS   Pro-Series

Hydraulic Motor

Configuration

COMMON     Separate

Half Width Disconnect

Planter Configuration

Quick Start Function

Off          AUTO