

# Massey Ferguson®

8516 / 8523 / 8524 / 8531  
Planter

EFFECTIVE S/N HS AND LATER

## WORKSHOP SERVICE MANUAL 4283405M1

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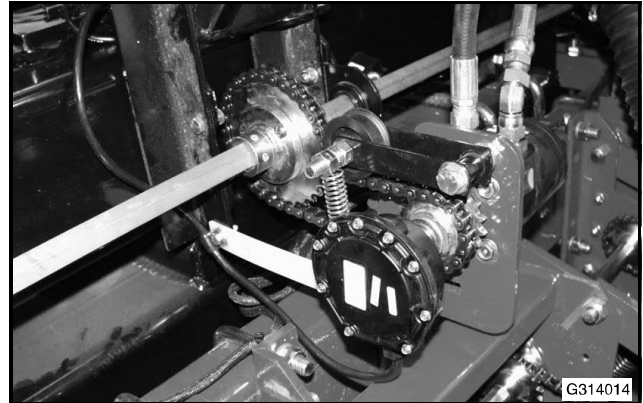
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## HYDRAULIC DRIVE

### GENERAL INFORMATION

#### Operation

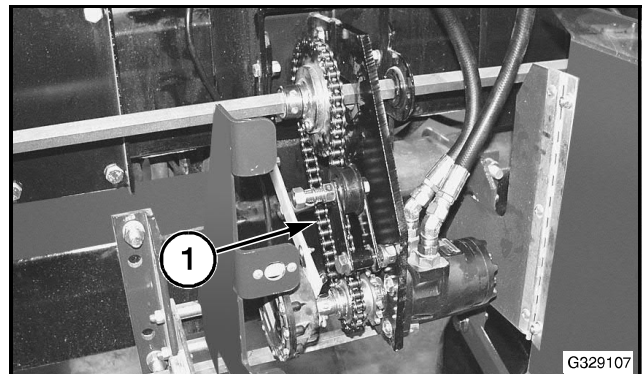
**FIG. 2:** The drive motor turns the drive group assembly, which turns the drive shaft. The motor is located at the rear of the planter.



**FIG. 2**

#### ROLLER CHAIN

**FIG. 3:** The 8524-30 planter has a longer roller chain assembly than the other 8500 planters, but can be removed and installed in the same manner. The roller chain (1) has 62 links.



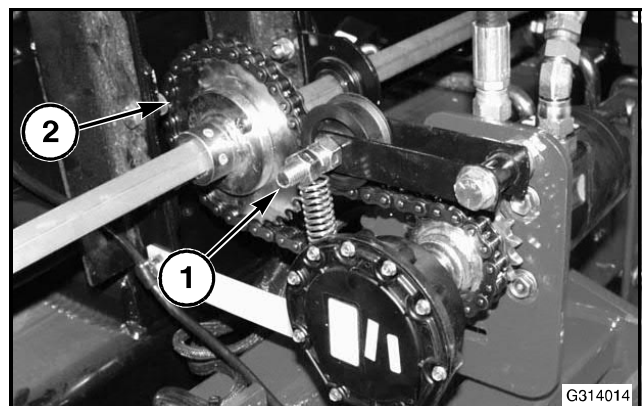
**FIG. 3**

#### Removal

**FIG. 4:** Lift up on the idler pulley (1) to reduce chain tension and remove the 54 link roller chain (2).

The roller chain has a spring clip connector to easily separate the roller chain.

Inspect roller chain. Replace roller chain as required.



**FIG. 4**

## Hydraulic Drive

### Installation

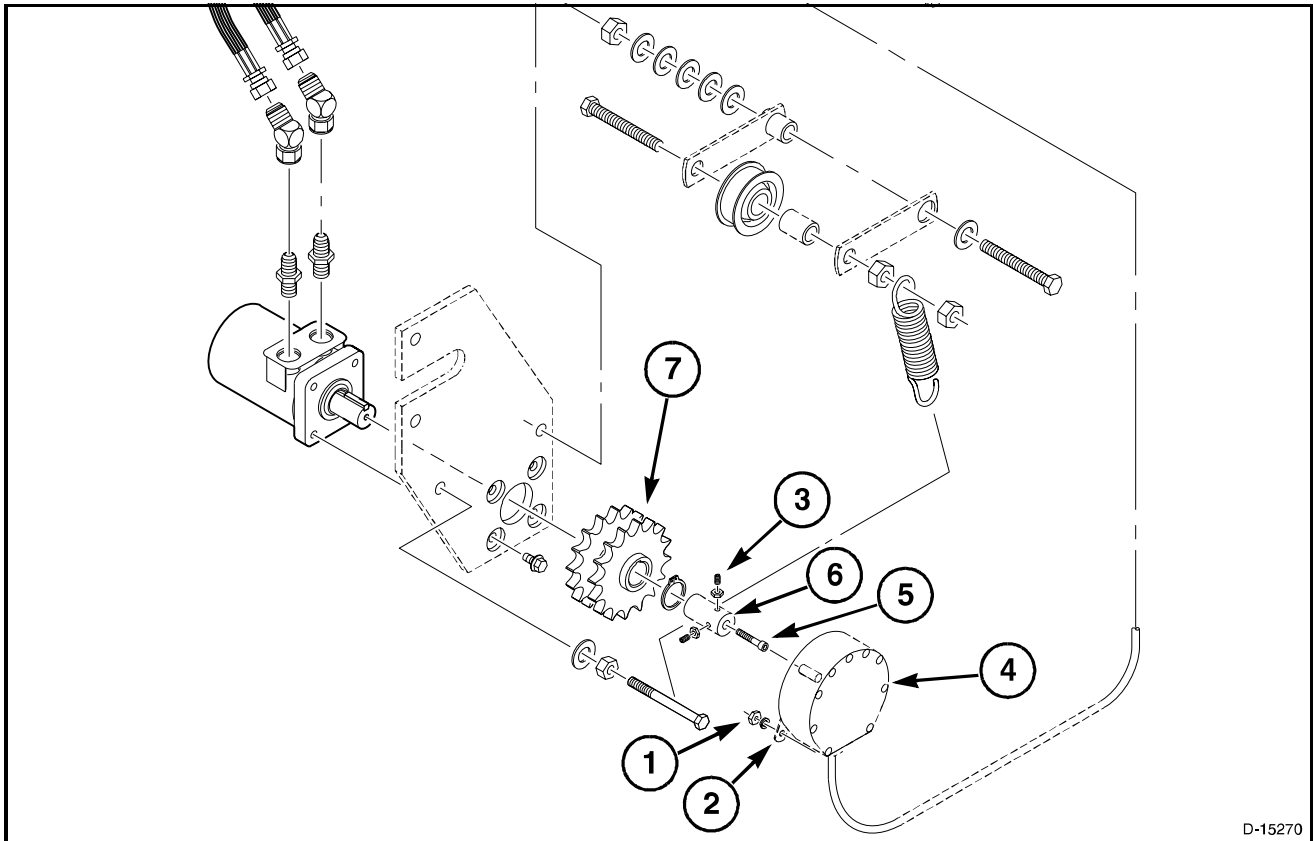
Place the roller chain on sprockets.

Lift up idler pulley and install the roller chain.

Release the idler pulley to increase the roller chain tension.

### 16 TOOTH SPROCKET

#### Removal



D-15270

**FIG. 5**

**FIG. 5:** Remove roller chain.

Remove nut and bolt (1) from strap (2).

Loosen the two set screws (3).

Slide speed sensor (4) off.

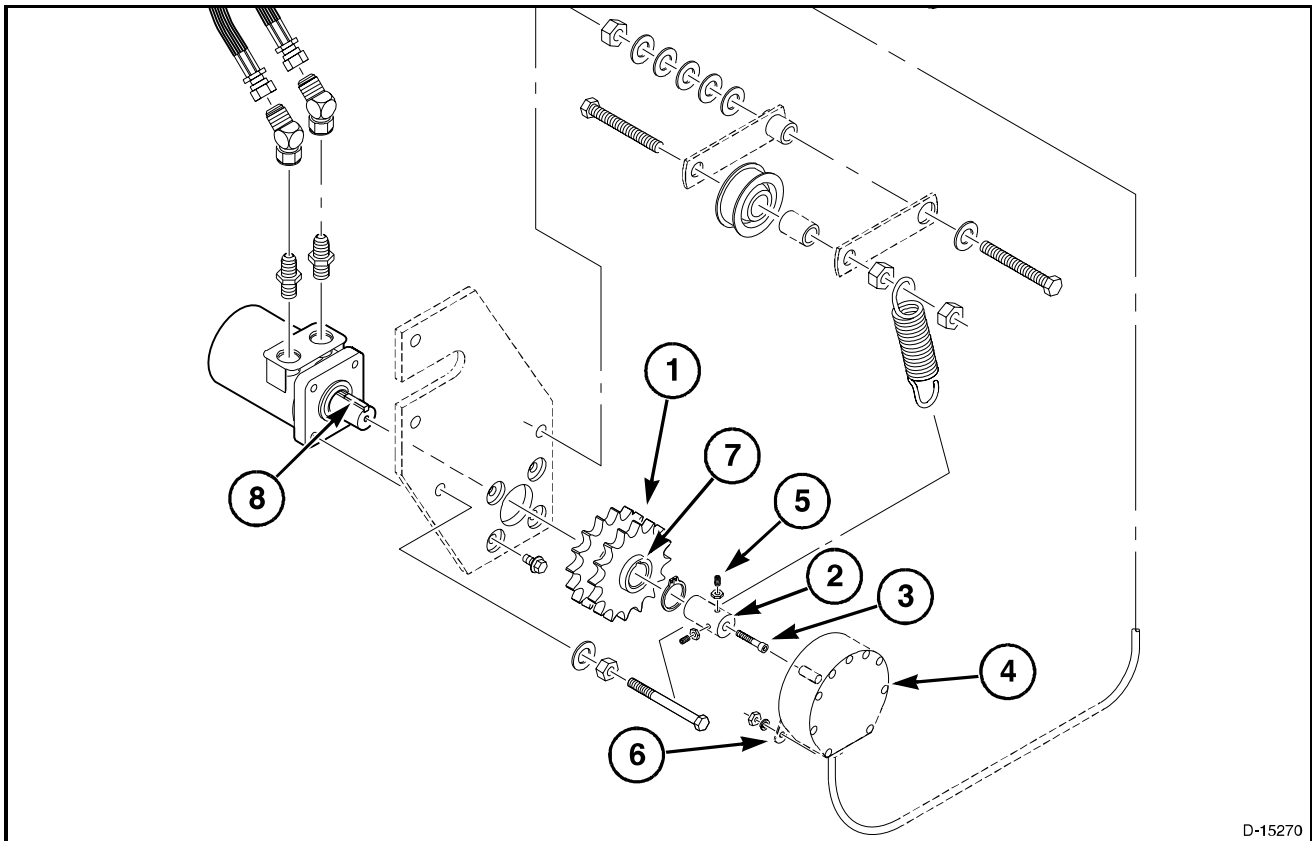
Remove hex-head screw (5) from motor shaft.

Slide sleeve off (6).

Slide the 16 tooth sprocket assembly (7) off motor shaft.

Clean or replace sprocket as needed.

## Installation



D-15270

FIG. 6

**FIG. 6:** Make sure groove (7) in the 16 tooth sprocket assembly (1) aligns with the key (8) in motor shaft.

Slide the 16 tooth sprocket assembly (1) onto shaft.

Reduce pulley tension and install chain on the 16 tooth sprocket assembly.

Install sleeve (2).

Install hex-head screw (3) into motor shaft.

Make sure the 16 tooth sprocket assembly is aligned with the idler pulleys and the sprocket on the lower drive shaft.

Install speed sensor (4).

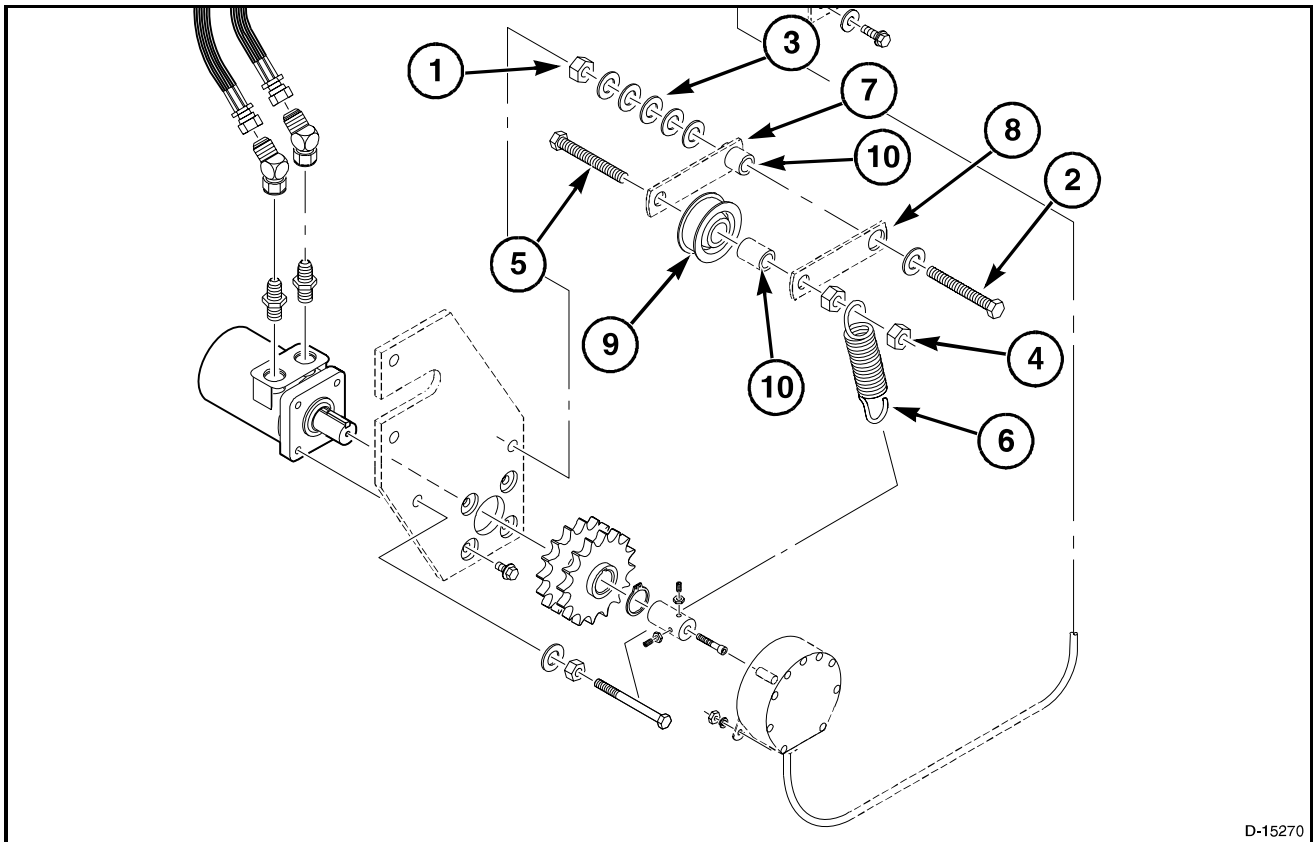
Tighten set screws (5) on sleeve.

Attach strap (6) with nut and bolt.

# Hydraulic Drive

## IDLER PULLEY ASSEMBLY

### Removal



D-15270

**FIG. 7**

**FIG. 7:** Remove roller chain.

Remove center lock nut (1), cap screw (2), and washers (3).

Remove center lock nut (4), cap screw (5), and extension spring (6).

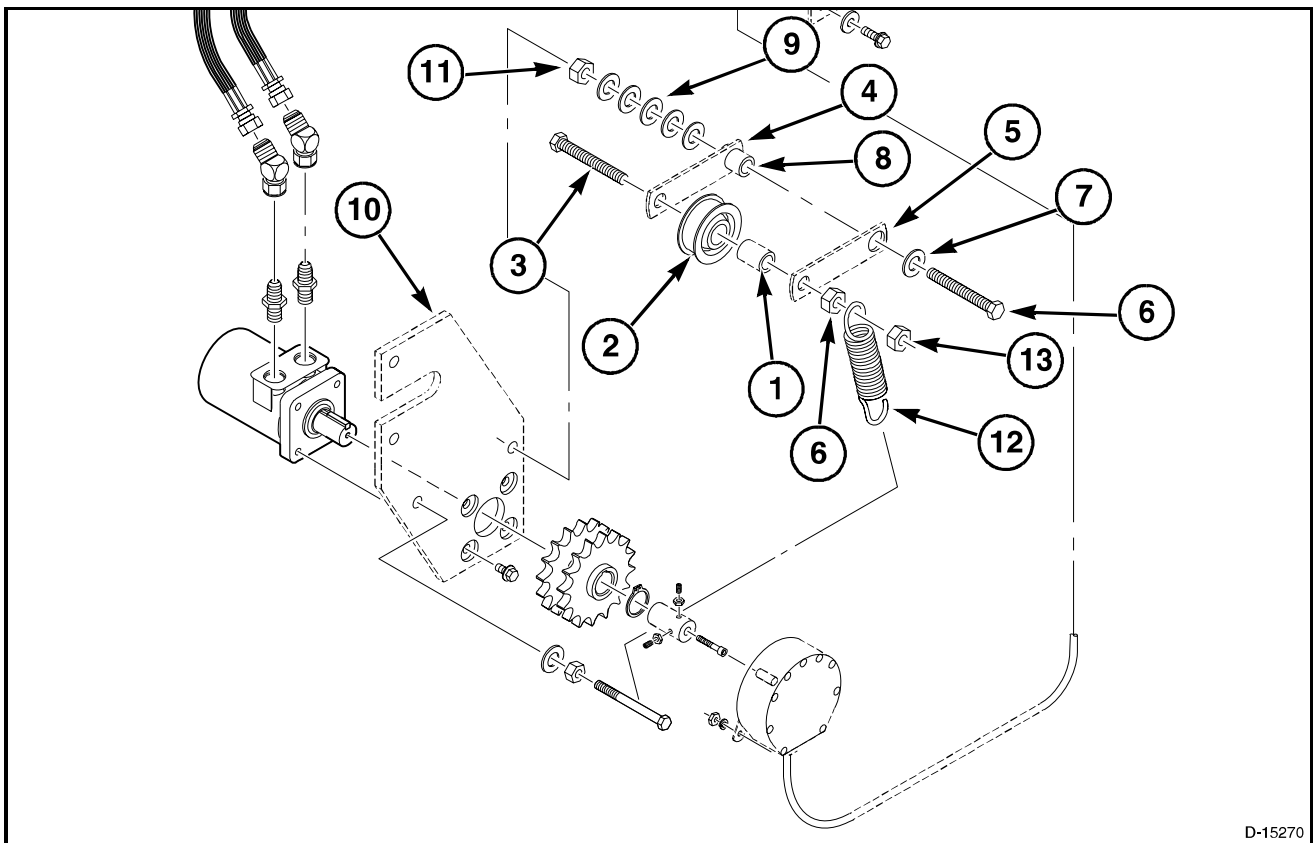
Separate tightener strap (7) from chain tightener (8).

Remove idler pulley (9) and spacers (10).

Set spacers aside with rest of hardware when removing the idler pulley assembly.

Replace idler pulley if needed.

Installation



D-15270

FIG. 8

**FIG. 8:** Grease idler pulley.

Insert spacer (1) into idler pulley (2).

Insert cap screw (3) through chain tightener (4), idler pulley (2), tightener strap (5), and center lock nut (6).

Insert cap screw (6) through washer (7), the tighteners (5,4), spacer (8), washers (9), mounting plate (10), and center lock nut (11).

Tighten the center lock nuts (6,11). Do not over tighten, idler pulley needs to be able to move freely.

Attach extension spring (12) to cap screw (3) and install center lock nut (13).

Attach roller chain.

**NOTES**

# DRIVE SHAFTS

## ROLLER CHAIN

### Operation

**FIG. 9:** Each seed meter is turned by a 20 tooth sprocket (1) on the drive shaft.

A spring-loaded idler pulley assembly maintains the seed meter drive chain tension.

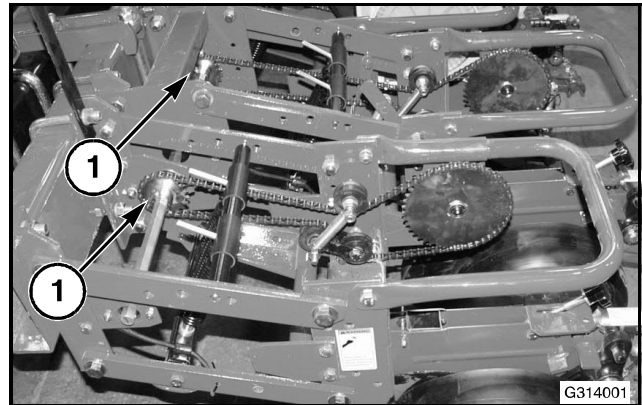


FIG. 9

### Removal

**FIG. 10:** Push down on the idler pulley to relieve tension on the chain.

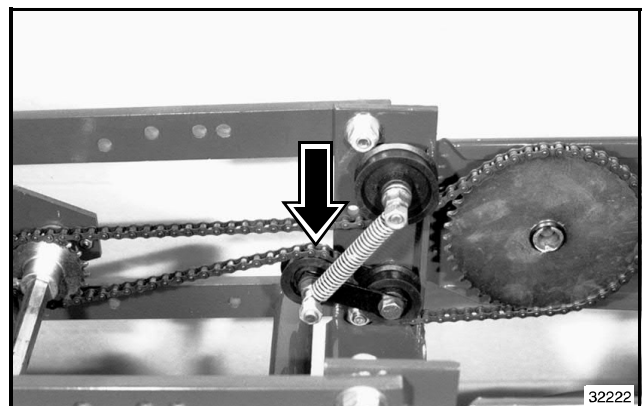


FIG. 10

**FIG. 11:** Remove the 116 link roller chain (1).  
Inspect roller chain. Replace as required.  
The roller chain has a spring clip to easily disconnect.

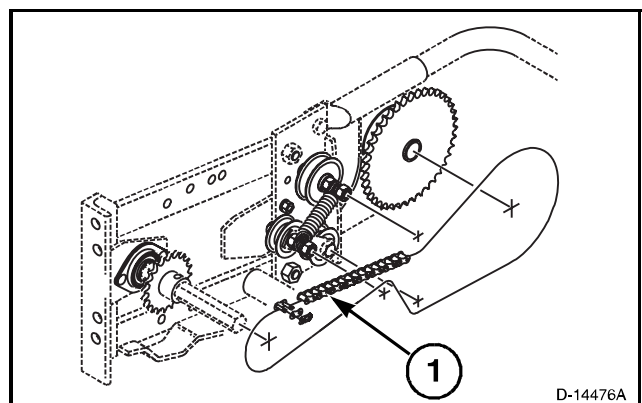


FIG. 11



## Drive Shafts

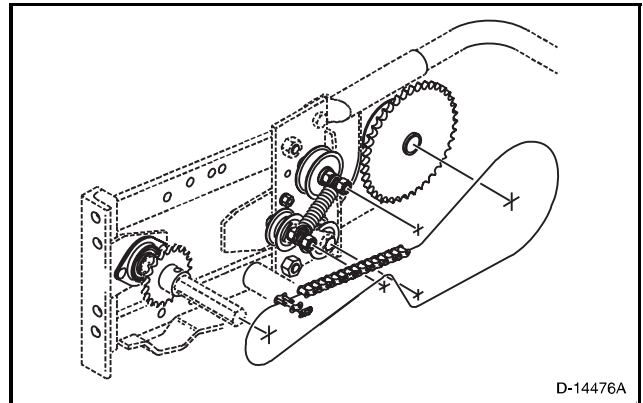
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### Installation

**FIG. 12:** Insert chain onto sprockets properly and through the idler assembly.

Push down on the idler pulley and slip chain over the idler pulley with the chain bearing under the other two idler pulleys.

Release pulley to increase tension.



**FIG. 12**

## DRIVE SHAFT SPROCKETS

### Operation

**FIG. 13:** There is a drive sprocket for each row unit. The sprockets are all located on the lower drive shaft. Some sprockets are bearing assembly 20 tooth sprockets and are mounted to the row unit. The others are 20 tooth sprockets that are attached to the drive shaft by a set screw.



**FIG. 13**

### Removal

**FIG. 14:** Remove roller chain.

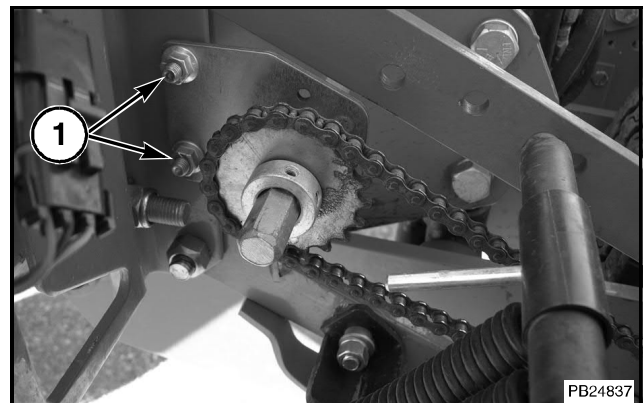
Slide drive shaft out of sprocket.

Remove the two nuts and bolts (1).

Remove the regular sprocket by loosening the set screw.

Remove sprocket.

Replace sprocket if necessary.



**FIG. 14**

### Installation

**FIG. 15:** Bolt sprocket bearing to row unit. Leave the sprocket bearing loose until the drive shaft is installed.

Push drive shaft through the sprocket bearing. Make sure that the bearings do not bind on the drive shaft and that the drive shaft turns freely. Adjust bearings for alignment and bind free rotation.

Install and tighten bolts.

Install regular sprocket by tightening set screw.

Install roller chain.



**FIG. 15**

## Drive Shafts

8516

### Left Upper Drive Shaft (8516)

#### Removal

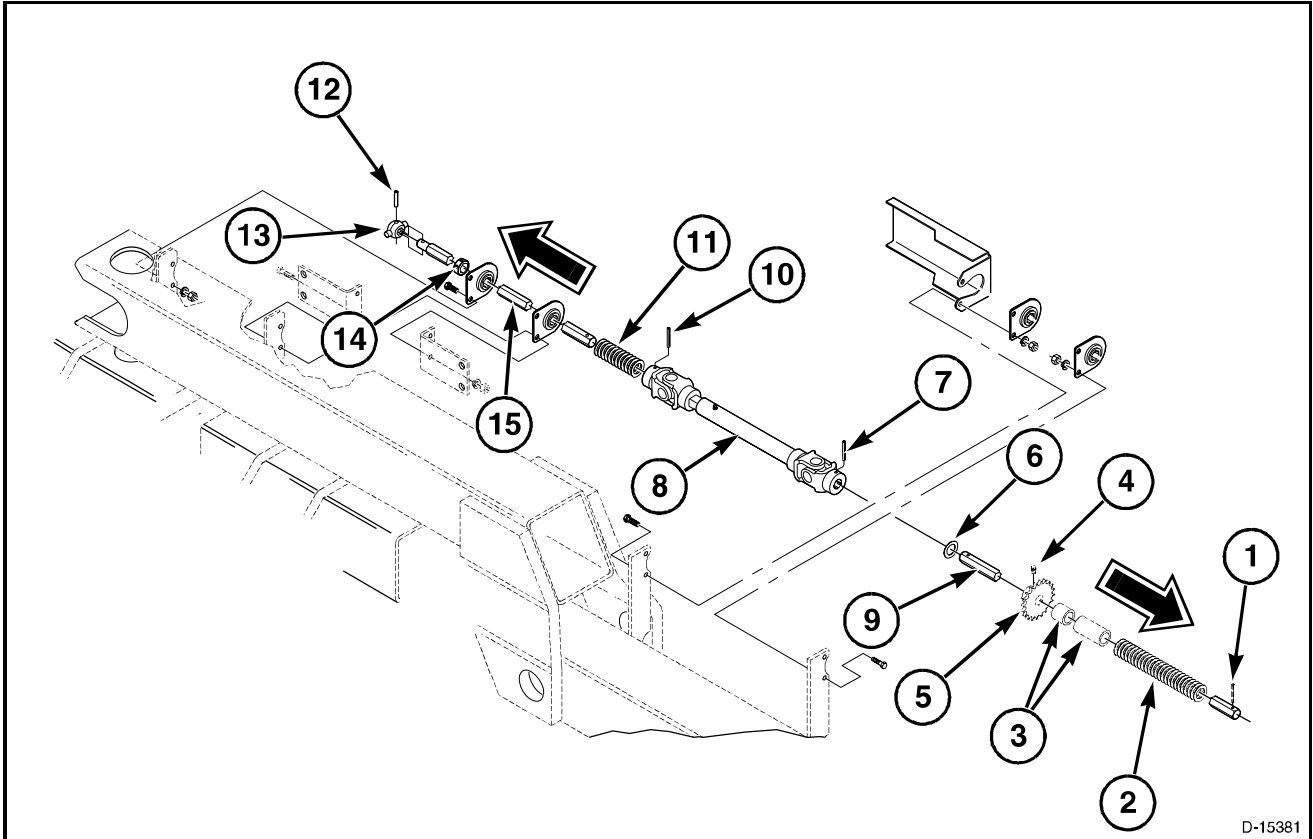


FIG. 16

**FIG. 16:** Planter is in transport position to remove or install drive shafts.

Pull out pin (1).

Slide off washers (2) and spacers (3).

Loosen set screws (4) and remove drive sprocket (5).

*NOTE: Some planters are equipped with a point row clutch instead of drive sprocket.*

Remove washer (6) and pull out the slotted spring pin (7) from drive line assembly (8).

Pull drive shaft out (9). Drive shaft is 78.2 cm (30.8 in) long.

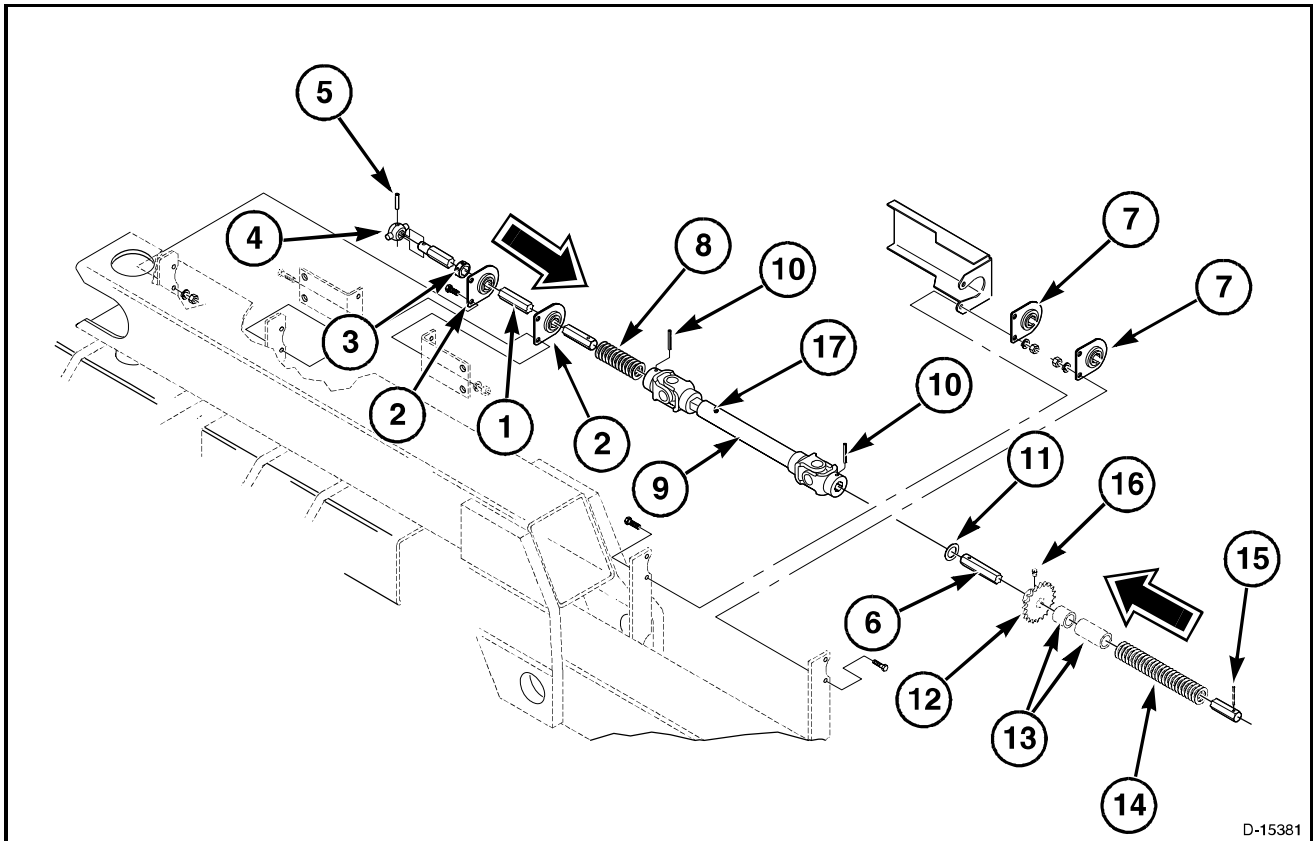
Pull out slotted spring pin (10) and remove the drive line assembly (8).

Remove washers (11).

Pull out slotted spring pin (12) to remove coupler (13). Remove lock collar (14) on drive shaft if required.

Pull drive shaft out (15). Drive shaft is 74.7 cm (29.4 in) long.

## Installation



D-15381

**FIG. 17**

**FIG. 17:** Push drive shaft (1) through bearings (2). Push drive shaft so the lock collar (3) is against the bearing. Make sure that the bearings do not bind on the drive shaft and that the drive shaft turns freely. Adjust bearings for alignment and bind free rotation.

Install coupler (4) and spring slotted pin (5).

Push drive shaft (6) through bearings (7). Make sure that the bearings do not bind on the drive shaft and that the drive shaft turns freely. Adjust bearings for alignment and bind free rotation.

Install washers (8) onto drive shaft (1).

Install the drive line assembly (9) onto the drive shafts (1,6). Insert the slotted spring pins (10).

Install washer (11), drive sprocket (12), spacers (13), washers (14), and insert pin (15).

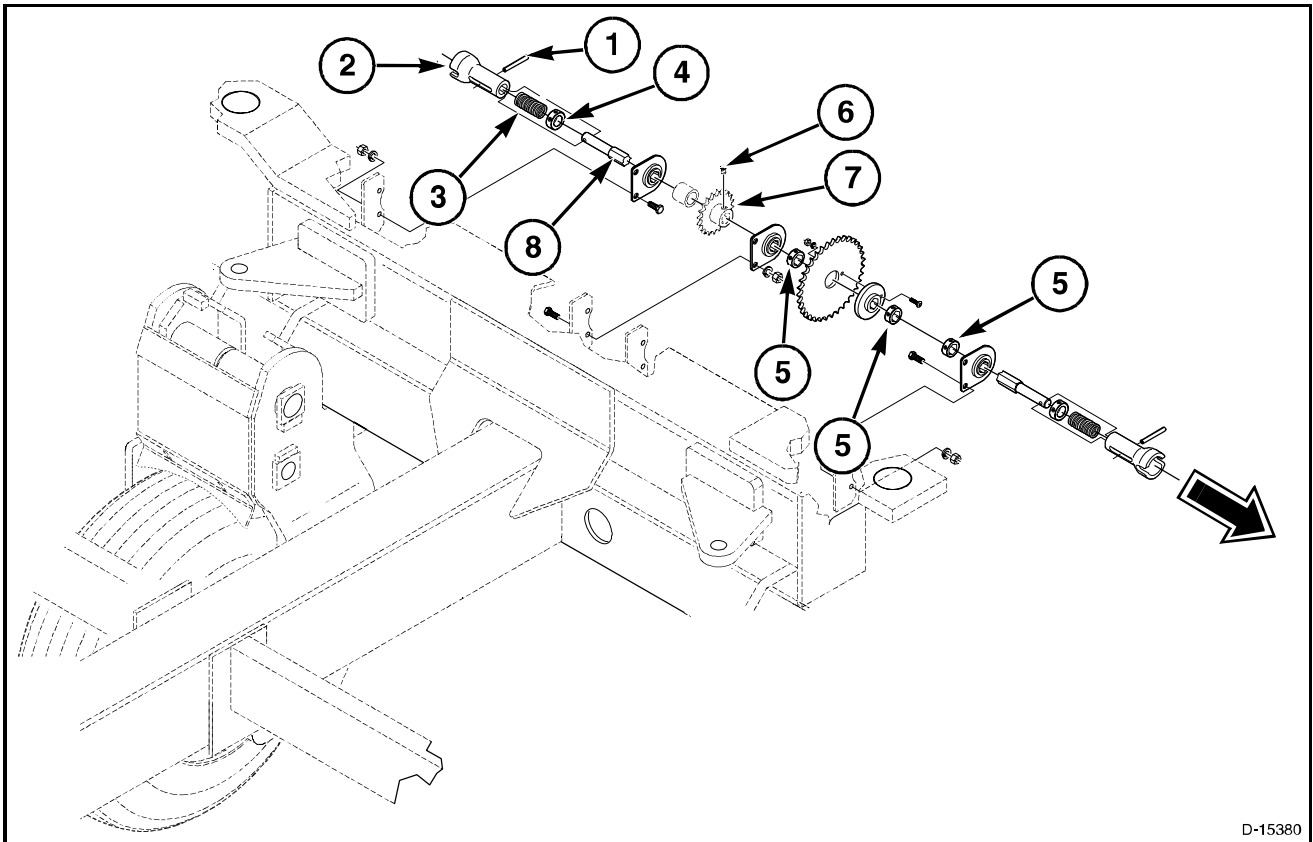
Make sure drive sprocket (12) is aligned properly and tighten set screws (16).

Insert grease into grease fitting (17) on drive line assembly (9).

## Drive Shafts

### Center Upper Drive Shaft (8516)

#### Removal



**FIG. 18**

**FIG. 18:** Planter is in transport position to remove or install drive shafts.

Pull out the slotted spring pin (1).

Remove coupler (2), spring (3), and lock collar (4).

Remove the other coupler assembly on the opposite end if required.

Loosen set screws on lock collars (5).

Loosen set screw (6) in drive sprocket (7).

*NOTE: Some planters are equipped with a point row clutch instead of drive sprocket.*

Pull drive shaft out (8). Drive shaft is 171 cm (67.3 in) long.

Remove components as the drive shaft is being removed.

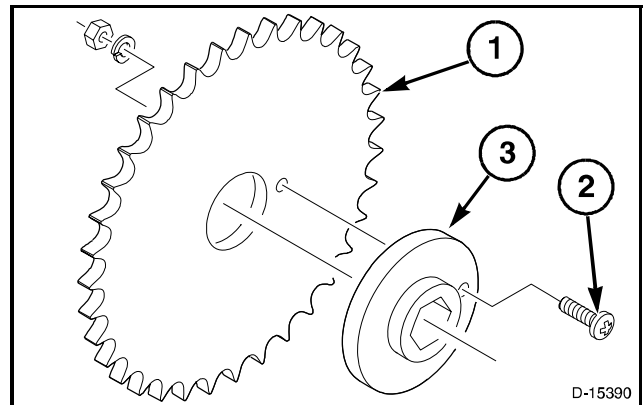
**FIG. 19:** 32 tooth sprocket and shear bolt hub assembly.

Remove sprocket (1).

Remove shear bolt (2) to separate drive hub (3) from sprocket. The shear bolt is 1/4-20 x 1.

*IMPORTANT: Always replace the shear bolt with a bolt of the same size and grade.*

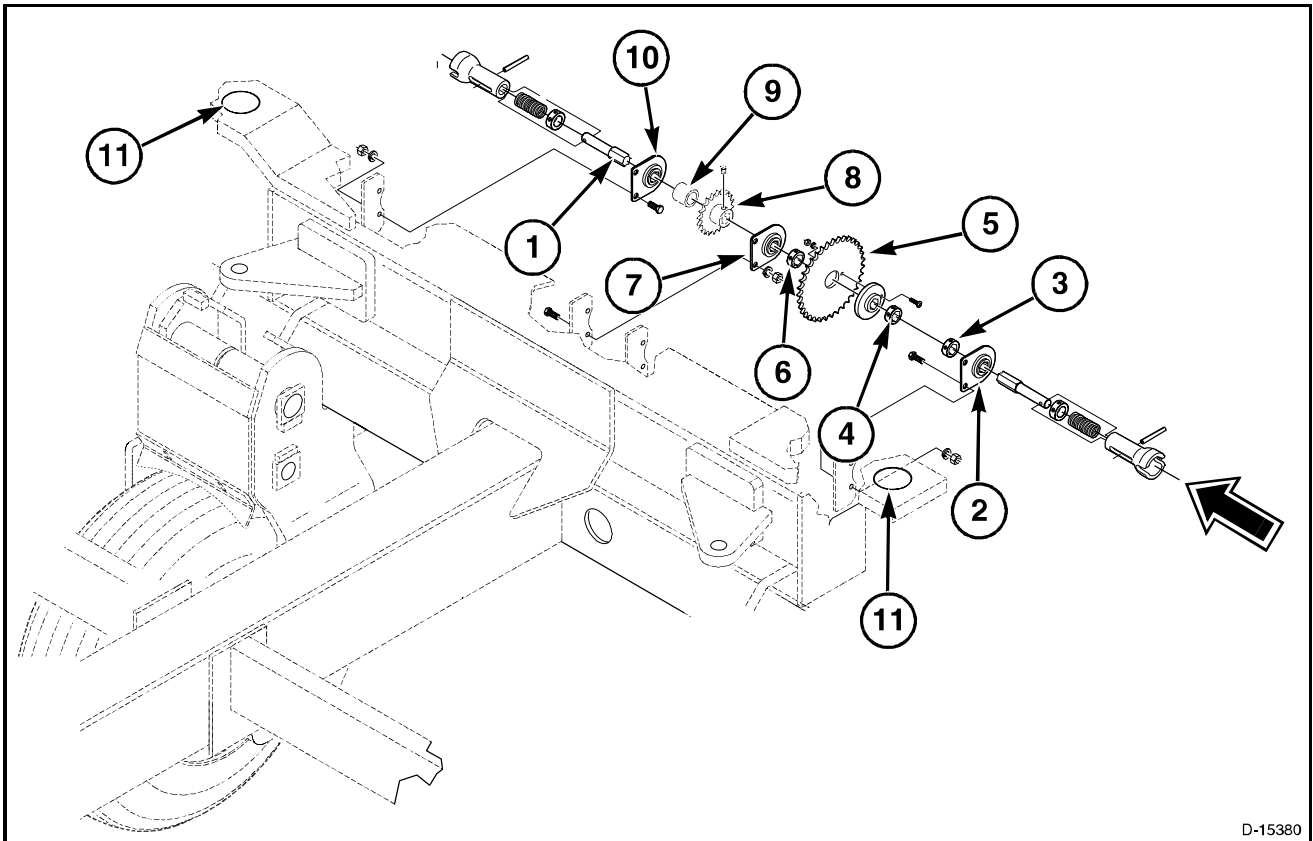
Replace sprocket and drive hub if needed.



**FIG. 19**

## Drive Shafts

### Installation



D-15380

**FIG. 20**

**FIG. 20:** Push drive shaft (1) through bearing (2). Install lock collar (3) against the bearing. Make sure that the bearings do not bind on the drive shaft and that the drive shaft turns freely. Adjust bearings for alignment and bind free rotation.

Install lock collar (4), 32 tooth sprocket and shear bolt hub assembly (5), and lock collar (6).

Push drive shaft through bearing (7). Make sure that the bearings do not bind on the drive shaft and that the drive shaft turns freely. Adjust bearings for alignment and bind free rotation.

Install drive sprocket (8) and spacer (9) onto drive shaft.

Push drive shaft through bearing (10). Make sure that the bearings do not bind on the drive shaft and that the drive shaft turns freely. Adjust bearings for alignment and bind free rotation.

Center the drive shaft between the frame pivot pins (11).

Put collar locks in place and tighten set screws.

Make sure the sprockets are aligned properly and tighten set screws.

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