



# Hydraulic Motor Kit

## TRX-16 or TRX-20 Trencher

Model No. 131-0667

Form No. 3411-315 Rev A

### Installation Instructions

#### ⚠ WARNING

##### CALIFORNIA Proposition 65 Warning

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

### Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
<b>1</b>	No parts required	—	Prepare the machine.
<b>2</b>	Cable tie	1	Remove the hydraulic motor.
<b>3</b>	Hydraulic motor Spacer plate Coupler Socket-head bolt (1/2 x 1-3/4 inches) Lock washer (3/4 inch) Thread-locking compound	1 1 1 2 2 1	Install the hydraulic motor.
<b>4</b>	No parts required	—	Connect the hydraulic hoses.
<b>5</b>	No parts required	—	Check for leaks and service the hydraulic fluid.



# 1

## Preparing the Machine

No Parts Required

### Procedure

1. Move the machine to a level surface and lower the boom.
2. Engage the parking brake, shut off the engine, and remove the key from the ignition switch.
3. Allow the hydraulic system to cool.
4. Rotate the trencher control clockwise (A of [Figure 1](#)).
5. Move the trencher-control lever fully to the forward position (B of [Figure 1](#)) and backward position (C of [Figure 1](#)) 4 or 5 times.

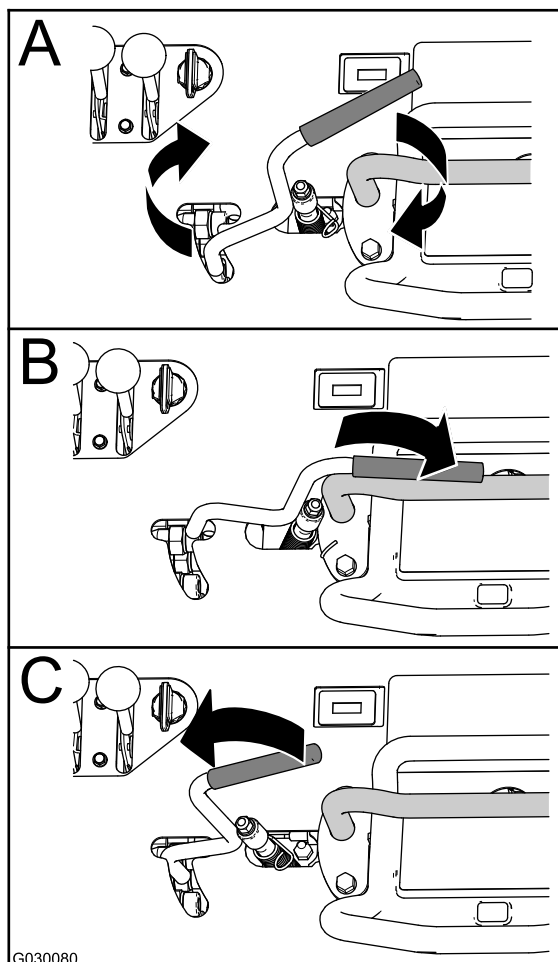


Figure 1

**Note:** Moving the trencher-control lever bleeds hydraulic pressure from the hoses for the trencher motor.

# 2

## Removing the Hydraulic Motor for the Trencher Drive

Parts needed for this procedure:

1	Cable tie
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### Procedure

1. Align a drain pan under the hydraulic motor for the trencher drive.
2. Wipe clean the hydraulic hoses and fittings at the hydraulic motor for the trencher drive ([Figure 2](#)).

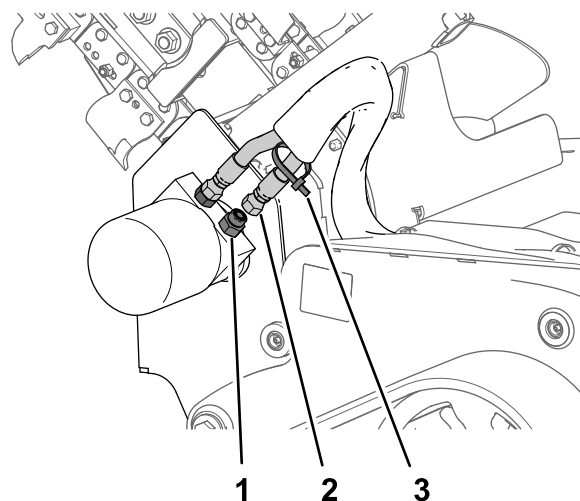


Figure 2

1. Straight hydraulic fitting (rear)
2. Hose (rear)
3. Cable tie
3. Secure the cable tie to the rearmost hydraulic hose at the hydraulic motor for the trencher drive ([Figure 2](#)).
4. Remove the 2 hydraulic hoses from the straight hydraulic fitting in the hydraulic motor ([Figure 3](#)).

# 3

## Installing the Hydraulic Motor

### Parts needed for this procedure:

1	Hydraulic motor
1	Spacer plate
1	Coupler
2	Socket-head bolt (1/2 x 1-3/4 inches)
2	Lock washer (3/4 inch)
1	Thread-locking compound

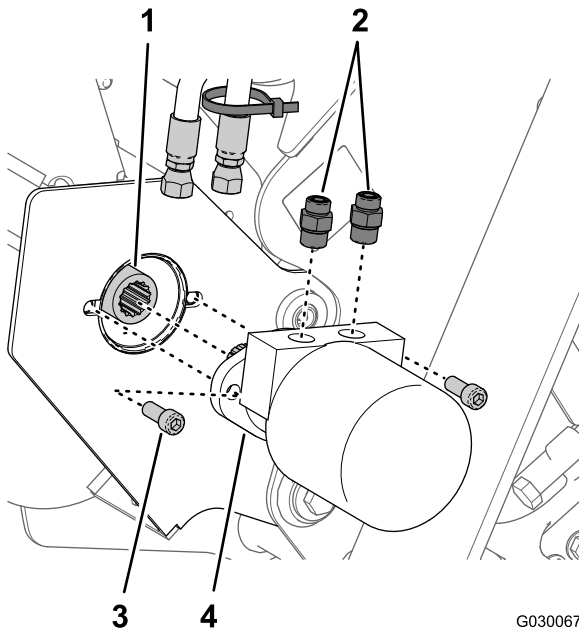


Figure 3

1. Coupler (trencher-drive shaft)
2. Straight hydraulic fitting
3. Socket-head bolts (1/2 x 1-1/4 inches)
4. Hydraulic motor (old)

5. Remove the 2 socket-head bolts (1/2 x 1-1/4 inches) that secure the hydraulic motor for the trencher drive to the head of the trencher, and remove the hydraulic motor (Figure 3).

**Note:** Discard the 2 socket-head bolts (1/2 x 1-1/4 inches).

6. Drain the hydraulic fluid from the motor into the drain pan.
7. Remove the 2 straight hydraulic fittings from the old hydraulic motor (Figure 3).

**Note:** Discard the old hydraulic motor.

8. Remove the coupler from the trencher-drive shaft (Figure 3).

**Note:** Discard the old coupler.

### Procedure

1. Slide the new coupler onto the trencher-drive shaft (Figure 4).
2. Assemble the 2 straight hydraulic fittings into the new hydraulic motor for the trencher drive (Figure 4) and torque the fittings to 135 to 164 N·m (99 to 121 ft-lb).

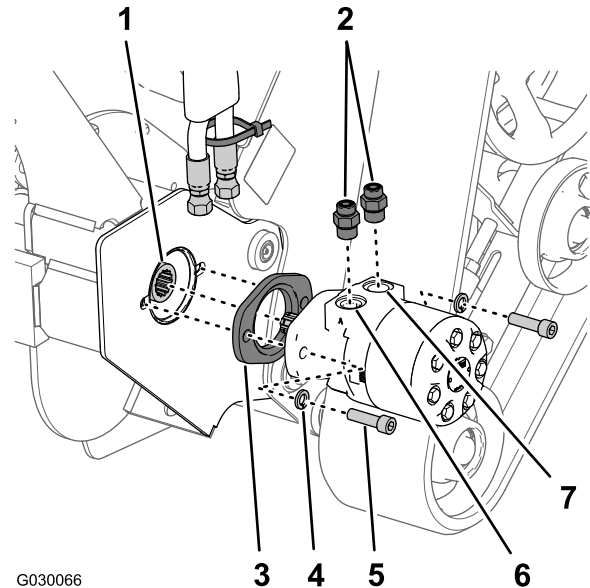
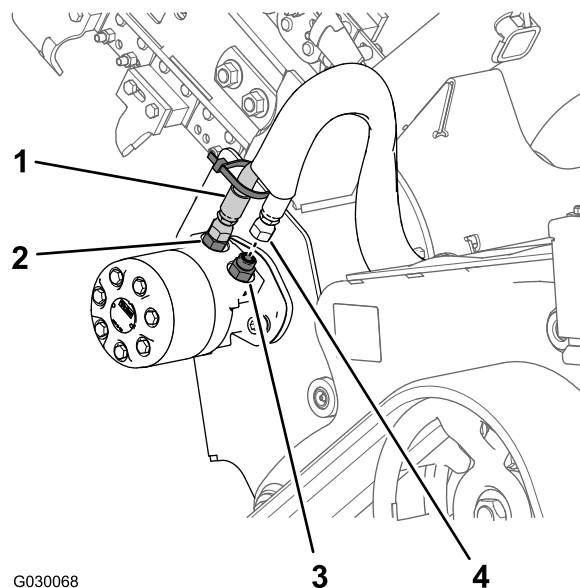


Figure 4

1. Coupler (trencher-drive shaft)
2. Straight hydraulic fitting
3. Spacer plate
4. Lock washers (3/4 inch)
5. Socket-head bolts (1/2 x 1-3/4 inches)
6. Port A (hydraulic motor—new)
7. Port B (hydraulic motor—new)

3. Apply a coat of thread-locking compound to the threads of the 2 new socket-head bolts (1/2 x 1-3/4 inches).

4. Assemble the spacer plate over the new hydraulic motor with the inset step of the spacer plate against the mounting face of the motor ([Figure 4](#)).
5. Align the splines of the new hydraulic motor with the splines of the coupler for the trencher-drive shaft ([Figure 4](#)).
6. Align the holes in the hydraulic motor and the spacer plate with the holes in the head of the trencher ([Figure 4](#)).
7. Assemble the hydraulic motor and spacer to the head of the trencher ([Figure 4](#)) with the 2 socket-head bolts (1/2 x 1-3/4 inches) and 2 lock washers (3/4 inch).
8. Torque the bolts to 91 to 113 N·m (67 to 83 ft-lb).



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**Figure 5**

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|--|--|
| 1. Hose (with the cable tie)                           | 3. Straight hydraulic fitting—port B (hydraulic motor) |
| 2. Straight hydraulic fitting—port A (hydraulic motor) | 4. Hose (without the cable tie)                        |

# 4

## Connecting the Hydraulic Hoses

### No Parts Required

### Procedure

1. Assemble the hydraulic hose with the cable tie that you installed in step 3 of [2 Removing the Hydraulic Motor for the Trencher Drive \(page 2\)](#) onto the straight hydraulic fitting in port A (the forward port) of the hydraulic motor ([Figure 5](#)).

**Note:** The hose-to-port relationship is opposite for the new hydraulic motor.

2. Assemble the other hydraulic hose onto the straight hydraulic fitting in the port B (the rear port) of the hydraulic motor ([Figure 5](#)).
3. Torque the swivel nuts of the hoses to 51 to 64 N·m (37 to 47 ft-lb).

**Note:** Use a backup wrench on the straight hydraulic fittings.

# 5

## Checking for Leaks and Servicing the Hydraulic Fluid

No Parts Required

### Checking for Hydraulic Leaks

#### ⚠ WARNING

Hydraulic fluid escaping under pressure can penetrate skin and cause injury.

If hydraulic fluid is injected into the skin, you must have it surgically removed within a few hours by a doctor familiar with this type of injury. Gangrene may result if this is not done.

- Keep body and hands away from pinhole leaks or nozzles that eject high-pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks.
- Safely relieve all pressure in the hydraulic system before performing any work on the hydraulic system.
- Make sure that all hydraulic-fluid hoses and lines are in good condition and that all hydraulic connections and fittings are tight before applying pressure to the hydraulic system.

1. Start the machine and let it run for 4 or 5 minutes.
2. Check the rotation of the digging chain (Figure 6).

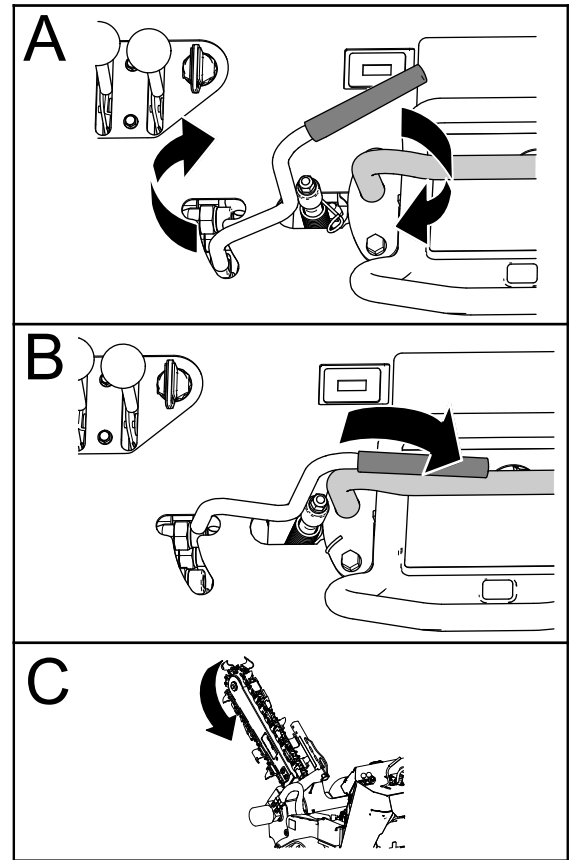


Figure 6

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3. Using a piece of cardboard, check for leaks.

**Important:** Repair all hydraulic leaks.

4. Shut off the engine and remove the key from the ignition switch.

## Servicing the Hydraulic Fluid

### Hydraulic Fluid Specification:

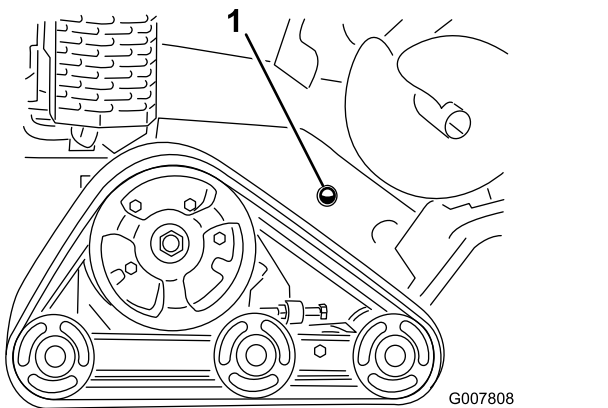
- **Toro Premium Transmission/Hydraulic Tractor Fluid** (refer to your Authorized Toro Dealer for more information)
- **Toro Premium All-Season Hydraulic Fluid** (refer to your Authorized Toro Dealer for more information)
- If either of the above Toro fluids are not available, you may use another **Universal Tractor Hydraulic Fluid (UTHF)**, but they must be only **conventional, petroleum-based** products. The specifications must fall within the listed range for all of the following material properties and the fluid should meet the listed industry standards. Check with your oil supplier to determine if the oil meets these specifications.

**Note:** Toro will not assume responsibility for damage caused by improper substitutions, so use only products from reputable manufacturers who will stand behind their recommendations.

Material Properties	
Viscosity, ASTM D445	cSt at 40° C: 55 to 62
	cSt at 100° C: 9.1 to 9.8
Viscosity index, ASTM D2270	140 to 152
Pour Point, ASTM D97	-37° to -43° C (-35° to -46° F)
Industry Standards	
API GL-4, AGCO Powerfluid 821 XL, Ford New Holland FNHA-2-C-201.00, Kubota UDT, John Deere J20C, Vickers 35VQ25 and Volvo WB-101/BM.	

1. Wait 4 to 5 minutes after shutting off the engine.
2. Check the hydraulic fluid level in the site glass at the front of the right panel (Figure 7).

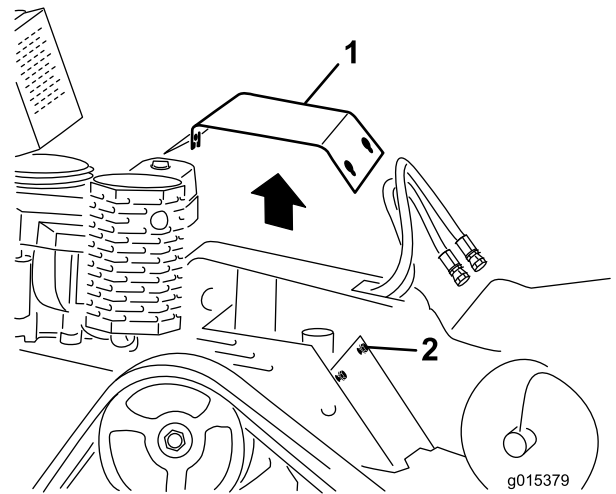
**Note:** When the hydraulic-fluid level in the tank is correct, the hydraulic-fluid level is visible in the site glass.



**Figure 7**

1. Site glass (hydraulic fluid)

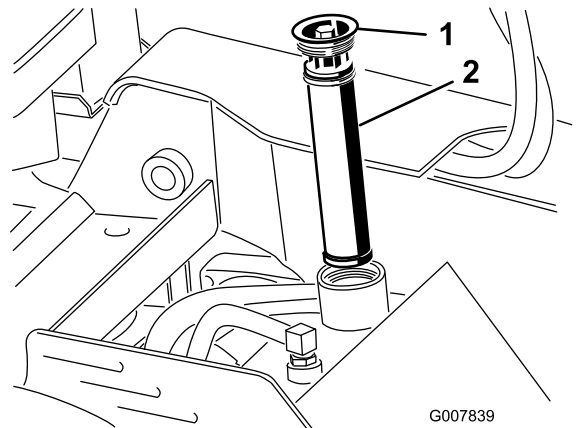
3. If you cannot see the fluid level in the site glass, perform the following:
  - A. Loosen the 1 rear bolt (3/8 x 1 inch) and 2 forward bolts (3/8 x 1-1/2 inches) that secure the top-cover plate to the machine and remove the cover plate (Figure 8).



**Figure 8**

1. Top-cover plate
2. Flange-head bolt (3/8 x 1 inch)

- B. Remove the cap/hydraulic filter from the filler neck of the hydraulic tank (Figure 9).



**Figure 9**

1. Filler cap
2. Hydraulic filter

- C. Add the specified hydraulic fluid into the filler neck until the fluid level covers half the site glass (Figure 7).
- D. Install the cap and filter into the filler neck (Figure 9) and torque the bolt at the top of the cap to 13 to 15.5 N·m (110 to 140 in·lb).
- E. Assemble the top-cover plate onto the machine (Figure 8) and torque the 3 bolts (3/8 inch diameter) to 38 to 45 N·m (27 to 33 ft·lb).

**Notes:**



**Count on it.**