



Wheel Motor Kit

Reelmaster® 5410, 5510, 5610 or Groundsmaster® 4300-D Traction Unit

Model No. 133-2950

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.

Important: These instructions cover the removal and installation of new wheel motors, wheel-motor components, and hydraulic filters. If the original traction-circuit components have been damaged, additional repairs and high-pressure hydraulic-system flushing must be performed prior to installing new wheel motors. Contact your local distributor for additional information.

⚠ WARNING

Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin and cause serious injury. If fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury. Gangrene may result from such an injury.

Before disconnecting or performing any work on the hydraulic system, relieve all pressure in the system. Shut off the engine; lower or support all cutting units.

Keep your body and hands away from pinhole leaks or nozzles that eject hydraulic fluid under high pressure. Use paper or cardboard, not hands, to search for leaks.

⚠ CAUTION

If the machine is not properly supported, the machine may move or fall, which may result in personal injury.

When changing attachments or tires or performing other service, use correct blocks, hoists, and jacks. Make sure that the machine is parked on a solid, level surface such as a concrete floor. Prior to raising the machine, remove any attachments that may interfere with the safe and proper raising of the machine. Always ensure that the machine is secure from movement before you start to work on it. Use jack stands or other appropriate load-holding devices to support the raised machine.



Removing the Old Components

1. Park the machine on a level surface, engage the parking brake, lower the cutting units, and shut off the engine. Remove the key from the ignition switch.
2. Remove the front wheels from the machine as follows:
 - A. Ensure that the machine is secure from movement.
 - B. Loosen the lug nuts on the front wheels.
 - C. Using a jack, raise the machine so that the wheel is off the ground. Support the machine with jack stands. Refer to your *Operator's Manual* for the proper jacking instructions.
 - D. Release the parking brake.
 - E. Remove the lug nuts and then remove the wheels and brake drums from the machine.
3. Loosen, but do not fully remove, the locknut that secures the wheel hub to the wheel motor (Figure 1). Loosen the locknut at least 2 turns.

Note: This prevents the hub from flying off as the taper releases.

Important: Do not hit the wheel hub, puller, or wheel motor with a hammer during the wheel hub

removal or installation. Hammering may cause damage to the wheel motor.

4. Use an appropriate puller (Toro Part No. TOR6004) to loosen the wheel hub from the wheel motor.
 5. Remove the locknut and the wheel hub from the motor shaft (Figure 1).
 6. Remove the 4 screws securing the brake assembly to the brake adapter and remove the brake assembly (Figure 1).
- Note:** There is no need to remove the brake cable from the brake assembly.
7. Thoroughly clean the hydraulic line ends and fittings on the wheel motor to prevent contaminating the hydraulic system.
 8. Label the hydraulic connections at the wheel motor for assembly purposes.
 9. Disconnect the hydraulic lines from the fittings on the wheel motors. Allow the lines to drain into a suitable container.
 10. Put caps or plugs on the disconnected lines and fittings to prevent contamination.
 11. Support the wheel motors to prevent them from falling.

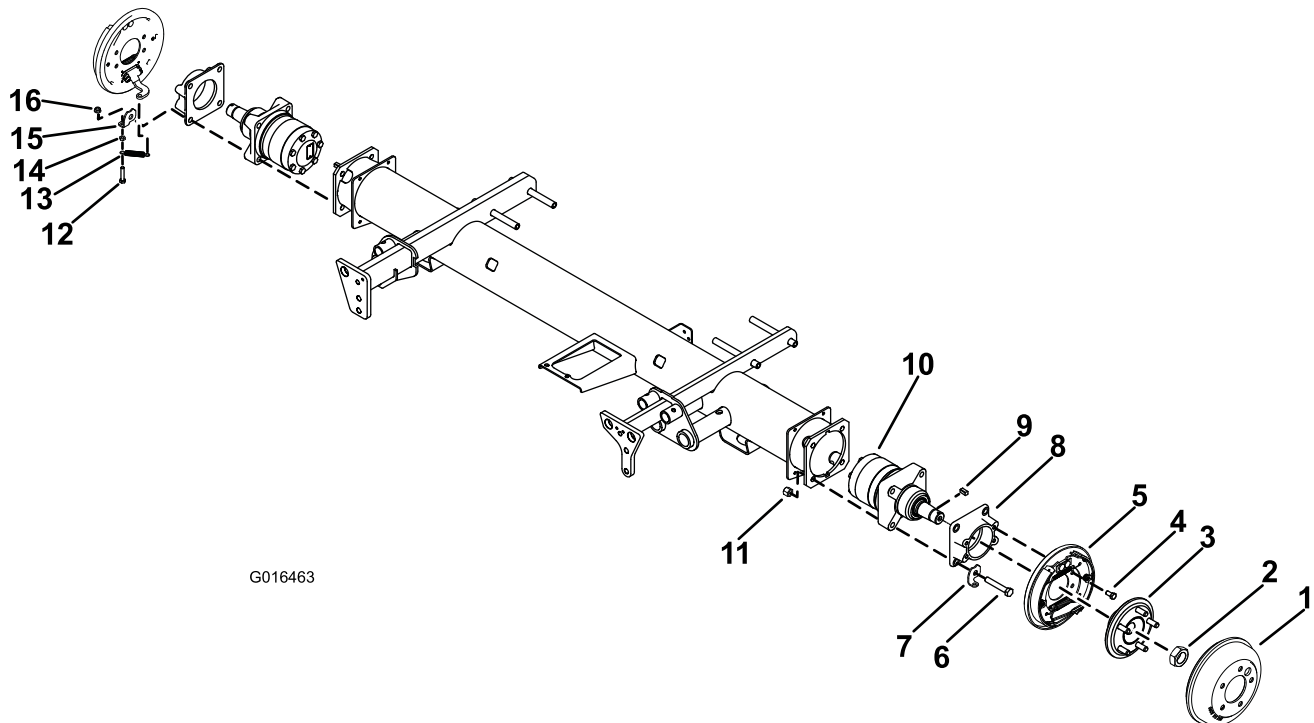


Figure 1

- | | | | |
|---------------------------|---|-------------------------------|---|
| 1. Brake drum | 5. Brake assembly (left) | 9. Square key | 13. Extension spring |
| 2. Hex nut | 6. Screw (1/2 x 3 inch) | 10. Wheel motor (left) | 14. Jam nut (5/16 inch) |
| 3. Hub assembly | 7. Brake spring bracket or spring clip (left) | 11. Locknut (1/2 inch) | 15. Brake spring bracket or spring clip (right) |
| 4. Screw (3/8 x 3/4 inch) | 8. Brake adapter | 12. Screw (5/16 x 1-1/2 inch) | 16. Flange nut (5/16 inch) |

12. Remove the 4 locknuts securing the brake adapter, the wheel motor, and the spring clip to the frame (Figure 1).
13. Remove the brake adapter, the wheel motor, and the brake spring bracket from the machine.
14. Note the orientation of the fittings to simplify the installation on the new motor assemblies. Remove the fittings from the motor and discard the O-rings.

Installing the New Components

1. Lubricate and install the new O-rings onto the fittings previously removed from the wheel motors.
2. Install the fittings into the wheel motor ports, orientating them as noted in the removal process.

Note: The left wheel motor is identified with either a yellow dot or with a ring machined into the shaft of the motor, shown in Figure 2.

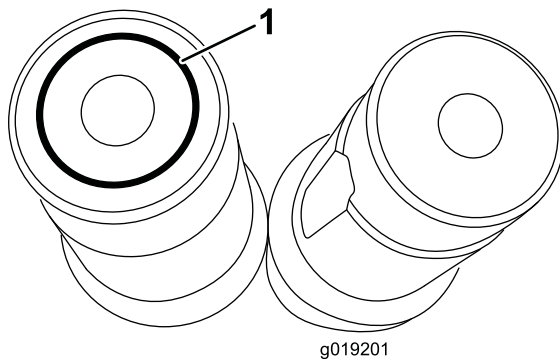


Figure 2

1. Machined ring in shaft

3. Position the wheel motor to frame. Mount the spring clip, the brake adapter, and the wheel motor to the frame with 4 cap screws (1/2 x 3 inches).
4. Install and tighten the 4 locknuts (1/2 inch) onto the cap screws to secure the motor, the brake adapter, and the spring clip to the frame.

Note: Torque the screws to 91 to 113 N·m (67 to 83 ft-lb). Make sure that the spring clip is positioned as shown in figure Figure 1.

5. Mount the brake assembly to the brake adapter with 4 cap screws (3/8 x 3/4 inch).

Note: Torque the cap screws to 27 to 45 N·m (27 to 33 ft-lb).

6. Thoroughly clean the wheel-motor shaft and the wheel-hub taper.

Important: Do not apply anti-seize or grease to the hub or wheel motor shaft.

7. Install the square key into the key slot of the wheel-motor shaft. Align the wheel hub with the square key and slide the wheel hub onto the motor shaft. Secure the hub with the locknut. Torque the locknut to 549 to 671 N·m (405 to 495 ft-lb).

Important: Use of a torque multiplier with a standard torque wrench is not recommended, but is a possible alternative to having a torque wrench capable of 678 N·m (500 ft-lb).

8. Remove the caps or plugs from the disconnected hydraulic lines and fittings.
9. Secure the brake-cable clevis to the brake actuator lever with a clevis pin and a cotter pin, if previously removed.
10. Install the brake drum, front wheel and extension spring to the machine.

Note: Torque the lug nuts to 95 to 122 N·m (70 to 90 ft-lb).

11. Repeat the procedure on the opposite wheel motor.

Replacing the Hydraulic Filters

Replace the hydraulic filters as follows:

1. Clean the area around the charge circuit/steering filter (Toro Part No. 86-3010) mounting area and place a drain pan under the filter.
2. Remove the filter.
3. Lubricate the gasket on the new filter with hydraulic oil.
4. Ensure that the filter mounting area is clean.
5. Install the filter by hand until the gasket contacts the mounting surface, then rotate it an additional 1/2 turn.
6. Repeat the procedure on the reservoir filter (Toro Part No. 94-2621).
7. Start the engine and let it run for about 2 minutes to purge air from the system.
8. Shut off the engine and check for leaks.

Rebuilding the Hydraulic Reservoir

1. Assemble components to the hydraulic reservoir.
2. Ensure that all hydraulic lines have been assembled and tightened.
3. Fill the hydraulic reservoir with new fluid.



Count on it.