



Hydraulic Motor Kit Greensmaster® 3100 and 3150

Part No. 112-0266

Form No. 3356-114 Rev A

Installation Instructions

Remove Motor and Hub Assembly

1. Park the machine on a level surface, engage the parking brake, lower the cutting units, and stop the engine.



Caution



If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition switch before you do any maintenance.

2. Chock both the front wheels to prevent the machine from moving. Lift the rear wheel off the ground using a jack, and place blocks beneath the frame. Secure the rear wheel off the ground.
3. Label the hydraulic motor hoses for reassembly. Remove both hose assemblies and O-rings from the hydraulic fittings at the hydraulic motor and hub assembly. Plug the hoses to minimize hydraulic fluid loss.



Caution



Support the wheel and motor and hub assembly during removal to prevent dropping and causing personal injury.

4. Remove the wheel and the hydraulic motor and hub assembly from the castor fork as follows:
 - A. Remove the capscrews and lock nuts securing the flangettes and bearing tab to the castor fork (Fig. 1).
 - B. Remove both socket head screws, flat washers and lock nuts securing the hydraulic motor and hub assembly to the castor fork (Fig. 1).
 - C. Lower the wheel and hydraulic motor and hub assembly from the castor fork.
5. Loosen both setscrews on bearing. Slide flangettes and bearing off the motor shaft (Fig. 1).

6. Remove the grease fitting from the hydraulic motor and hub assembly (Fig. 1). Remove four lug nuts and wheel assembly from the hub drive studs.

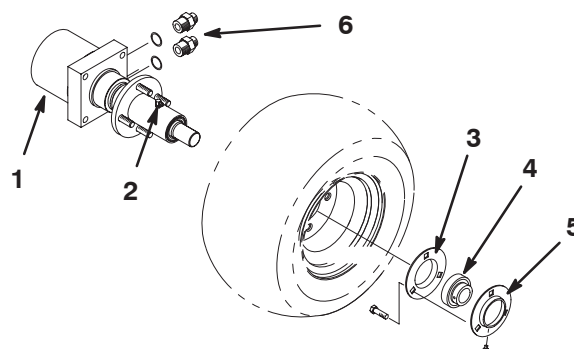


Figure 1

- | | |
|---------------------------|-------------------------|
| 1. Motor and hub assembly | 4. Bearing |
| 2. Grease fitting | 5. Relube flangette |
| 3. Standard flangette | 6. Straight fitting (2) |

7. Remove the grease seal and snap ring from the long end of the hub (Fig. 2).

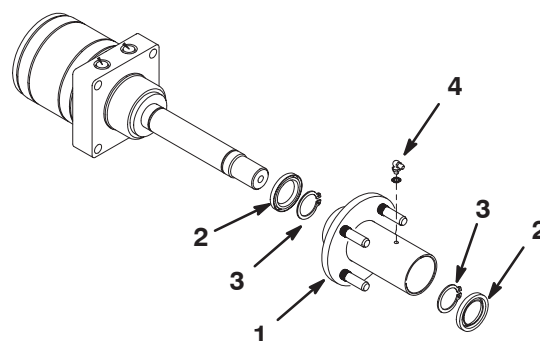


Figure 2

- | | |
|----------------|-------------------|
| 1. Hub | 3. Snap ring |
| 2. Grease seal | 4. Grease fitting |

8. Remove the snap ring and grease seal from the other end of the shaft and remove the hub from the shaft (Fig. 2).
9. Grease inner edge of the new grease seals with No. 2 multipurpose lithium base grease. Slide one seal onto motor shaft past groove closest to the motor. Install snap ring into groove (Fig. 2).
10. Slide the hub onto the shaft with the short side first.

11. Install remaining snap ring into the shaft groove. Slide remaining new grease seal onto motor shaft.

Important The hub should spin freely in the forward direction, but lock on the hydraulic motor shaft when it is spun in the reverse direction.

12. Press the grease seals into the hub so they are flush with the ends of the hub.

Modify Castor Fork

1. Mount the drill guide to the left side of the castor fork with (2) 5/16 x 3 in. bolts, (4) 3/8 x 7/8 washers and nuts. Position the components as shown in figure 3.

2. Using remaining hole in drill guide, enlarge hole in castor fork to 9/16 in.

Important It is highly recommended that a new or recently sharpened 9/16 in. drill bit be used. Proceed slowly when drilling. Do not use excessive force when drilling as jamming may occur.

3. Move the fasteners to the other holes in the drill guide and repeat the process until all (3) holes are enlarged.

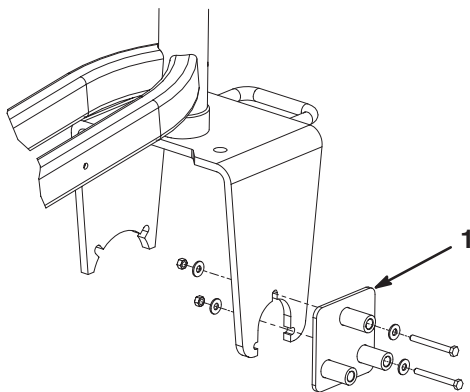


Figure 3

1. Drill guide

Install Motor and Hub Assembly

1. Mount the tire assembly to the motor and hub assembly with 4 lug nuts. Torque lug nuts to 70 to 90 ft-lb (95 to 122 N·m).
2. Re-install the grease fitting to the hub assembly, pointing it away from tire.
3. Insert flangettes and bearing onto end of motor shaft as shown in Figure 4.
4. Mount the (2) straight fittings to the side of the motor assembly (Fig. 4).

Note: Make sure all O-rings are lubricated and in position before installing fittings.

5. Position the motor hub, flangettes with bearing and tire assembly into castor fork. Ensure that ports on motor face rearward (Fig. 4).

6. Loosely secure motor to the inside of castor fork with (2) socket-head screws and (2) nuts (Fig. 4).

7. Tighten motor screws to 100 ft-lbs (135 N·m).

8. Loosely assemble flangettes with bearing to inside of castor fork with (3) new 3/8 x 2 in. screws, (2) spacer mounts, (3) 13/32 x 13/16 hardened washers and (3) 3/8 in. locknuts.

Important Make sure no radial load is put on the motor shaft.

Note: The grease fitting must be in the downward position on the flange (Fig. 4)

9. Tighten the flange screws to 40 ft-lbs (55 N·m).

Note: Failure to carefully follow the above assembly sequence may result in premature motor seal and bearing failure.

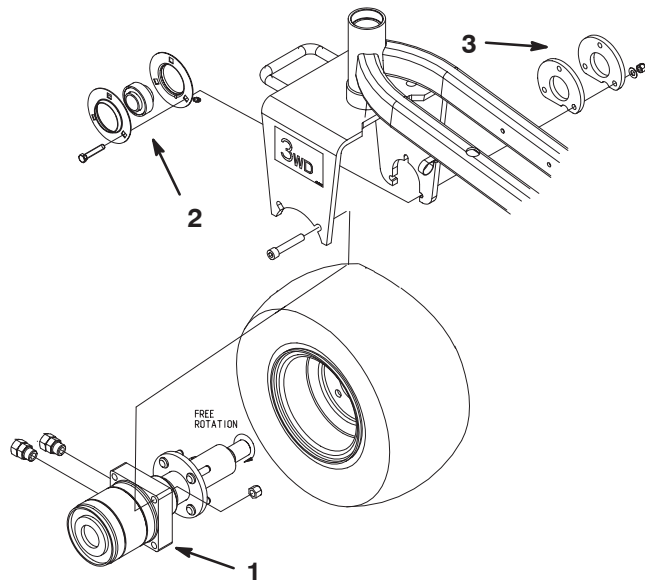


Figure 4

1. Motor and hub assembly
2. Flangettes w/bearing
3. Spacer mounts (2)

10. Apply a thread-locking adhesive (such as Loctite®) to bearing setscrews and torque to 80 to 100 in-lb (9 to 11 N·m).

11. Verify overrunning bearing operation: The tire should roll freely forward, but engage wheel motor when rolled backward.

12. Lower rear of traction unit to ground.

13. Grease all fittings with No. 2 general purpose lithium-based grease.

14. Re-connect the hoses to the fittings.

15. Tighten fittings.

Note: The hydraulic lines must not be twisted, kinked, have sharp bends, or touch sharp edges, moving parts, or engine exhaust parts.

16. Tighten all fittings and clamps.

17. Fill and check hydraulic oil reservoir level.

18. Start engine and cycle the traction and lift cylinders to purge the air.

19. Re-check hydraulic oil level.

