



2018 Universal Groomer Maintenance and Service Updates

Product: Universal Groomer

June 15, 2018

Affected Units:	Models:	Serial Numbers:
Universal Groomer 5" Greens Mower Greensmaster®	04648 04040,04041, 04042,04043, 04044,04045, 04355,04358, 04384,04510, 04520,04530, 04543	318000001-999999999 ALL ALL ALL ALL ALL ALL ALL

Subject: 2018 Universal Groomer Maintenance and Service Updates

Bulletin Type & Status Information Only: Final Release

Situation: Important Information

There are several updates to the universal groomer for model year 2018. This bulletin outlines the maintenance requirements, proper installation torques, serial plates, updated parts, and new tools available to service the universal groomer.

Universal groomer model year 2018 operator manuals reflect the updates described in this service bulletin.

Action Required: Become familiar with the new tools, parts, and maintenance requirements for the universal groomer by reading the attached documents. This bulletin provides guidance regarding how the tools can be used in removing and assembling the universal groomer, new parts to address universal groomer field concerns, and update maintenance requirements.

Safety Awareness: Warning: Failure to comply may result in injury.

Caution: Never work on the groomer with the engine running. Always stop the engine, remove the key from the ignition switch and wait for all machine movement to stop before working on the groomer.

Attachments:**Updated Maintenance Instructions**

- Changing the Gearbox Lubricant
- Installing the Groomer Drive Cap
- Removing the Groomer Drive Box From Cutting Unit
- Hex Head Shears on Groomer Drive-Box Shaft During Gear Box Removal

Parts:

Currently available.

Part Number	Tool Description
137-0920	Tool-Drive, Shaft Removal (removing drive shaft from reel). (Figure 8)
137-0921	Tool-Adapter, Wrench (installing adapters into drive shaft assy). (Figure 9)
137-0872	Tool-Syringe, (aids in accurately filling the Universal Groomer). (Figure 1, Item 1)
1-803022	Screw, 5/16-18 X 5/8 SQ HD, (Figure 5, Item 3)

Part Number	Part Description
137-0812	High deflection output shaft seal. (Figure 4 Item 2)
137-0902	Cap for non-Rear Roller Brush application. (Figure 5, Item 1)

Changing the Gearbox Lubricant

Service Interval

- After the first 100 hours
- Every 500 hours/yearly (whichever comes first)

1. Clean the external surfaces of the groomer housing.

Important: Ensure that there is no dirt or clippings on the outside of the groomer housing. If debris gets inside of the groomer, it can damage the gearbox.

2. Remove the drain plug on the bottom of the housing. (Figure 3)
3. Remove the fill plug on the side of the housing and loosen the air vent plug on the top so air can pass through. (Figure 3)
4. Align a suitable container beneath the oil drain port to catch the drained oil.
5. Tip the cutting unit vertically until the drain port is at the bottom to ensure complete drainage. (Figure 1)

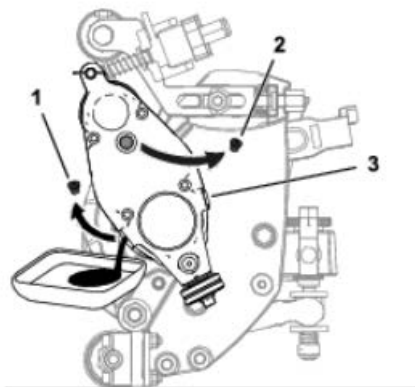


Figure 1

1. Drain plug
2. Fill plug for the fill port
3. Air vent

6. Remove the drain plug from the drain port. (Figure 1)
7. Remove the fill plug from the fill port. (Figure 1)
8. Loosen the air vent. (Figure 1)

9. Gently rock the cutting unit back and forth to ensure complete drainage. When the oil is completely drained, place the cutting unit on a level surface.
10. Install the drain plug.
11. Use a syringe (Part No. 137-0872) to fill the drive box with 50cc of 80–90W oil. (Figure 2)

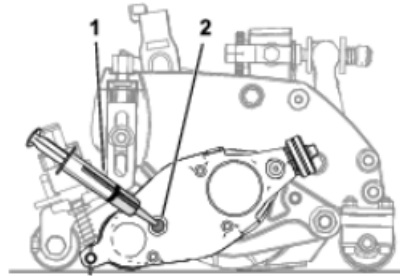


Figure 2

1. Syringe with 50cc of 80–90W gear oil
2. Fill port

12. Install the fill plug and tighten the air-vent plug. (Figure 3)
13. Torque all plugs to 3.62 to 4.75 N-m (32 to 42 in-lb).

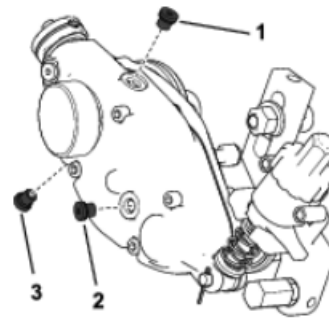


Figure 3

1. Air-vent
2. Fill plug
3. Drain plug

Installing the Groomer Drive Cap

Note: Only for universal groomer assemblies without a rear roller brush kit installed

1. Apply medium-strength cylindrical bonding retaining compound (such as Green Loctite 609®) around the snap ring groove and the inside diameter surface of the cap. (Figure 4)
2. Install the cap as shown in Figure 4

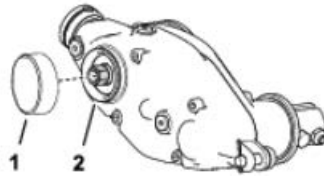


Figure 4

1. Cap
2. Apply Green Loctite 609®

Removing the Grommer Drive Box From Cutting Unit.

1. Remove cap, seal shield, or rear roller brush drive housing.
2. Before applying torque to the hex head (Figure 5, Item 2) to remove grommer drive assembly, install screw, 5/16-18 X 5/8 SQ HD to internal threads of the hex head and torque to 13.5 Nm (120 lbs.-in). Installing screw increases the strength and lessen the possibility of shearing (breaking off) the hex head. (Figure 5)
3. **Important:** With the gear box installed on the right-hand side of a cutting unit, turn the grommer drive counter-clockwise to remove the drive-box shaft from cutting unit.
4. **Important:** With the gear box installed on left hand side of a cutting unit, turn grommer drive clockwise (left-hand thread) to remove drive-box shaft from cutting unit.
5. For proper safety, prevent the reel from rotating by blocking the cutting reel with a piece of wood near one of the reel spiders. Using a 6-point socket with heavy wall, remove grommer drive-box shaft.

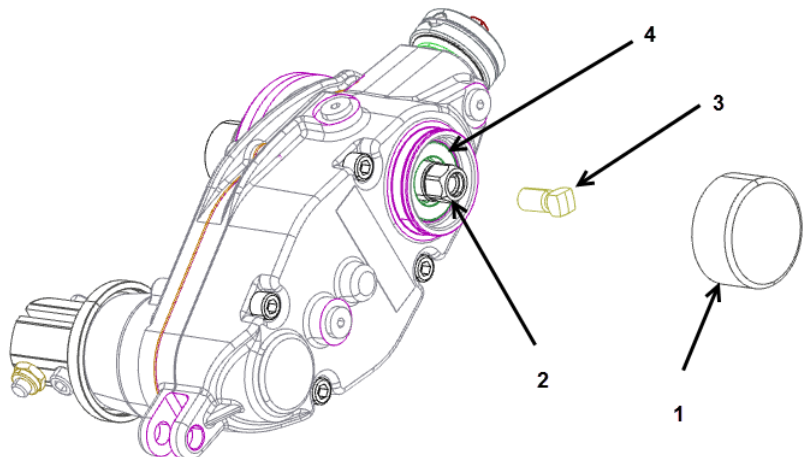


Figure 5

- | | |
|-------------|--|
| 1. Cap | 3. Screw, 5/16-18 X 5/8 SQ HD |
| 2. Hex head | 4. High deflection seal (Reference Only) |

Hex Head Shears (breaks off) on Groomer Drive-Box Shaft During Gear Box Removal

If the hex head shears on the groomer drive-box shaft, the following steps will assist you in removing the shaft from the cutting unit.

1. Unbolt the groomer reel from the drive shaft.
2. Remove the drain/fill plug and drain the oil from the gear box. (Figure 1)
3. Remove the 4 socket-head screws and separate the gear box cover and housing. Remove and discard the cover gasket. (Figure 6)

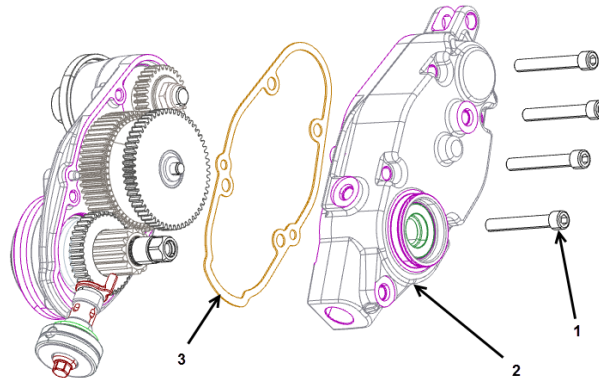


Figure 6

1. Socket-Head Screws (4 each)
2. Gear Box Cover
3. Cover Gasket (discard)

4. Slide the sun gear, ring gear, and the planet gears from the pins on the gear box housing. (Figure 7)
5. Remove driven gear from input shaft, using snap-ring pliers, remove retaining ring holding shaft and groomer housing together. Slide groomer housing from housing leaving shaft and adapter on cutting unit.

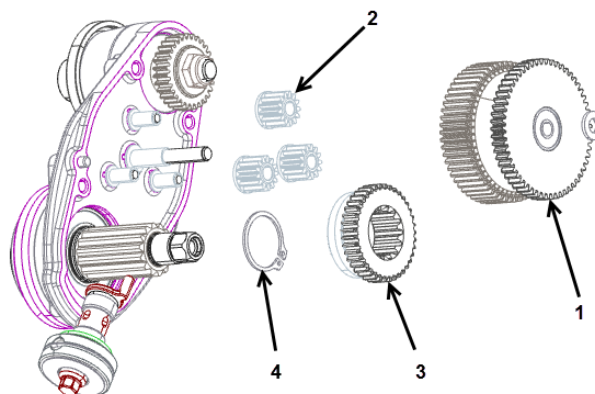


Figure 7

1. Sun Gear
2. Planet Gears
3. Ring Gear
4. Retaining Ring

6. For proper safety, prevent the reel from rotating by blocking the cutting reel with a piece of wood **near one of the reel spiders**. Slide shaft drive removal tool (137-0920) (Figure 8) over the shaft so the flats on the input shaft and the flats on the socket align. Using 1½ inch box end wrench, remove the groomer drive shaft from the cutting unit.

Important: With gear box installed on right-hand side of cutting unit, turn groomer drive counter-clockwise to remove drive-box shaft from cutting unit.

Important: With gear box installed on left-hand side of cutting unit, turn groomer drive clockwise (**left-hand thread**) to remove drive-box shaft from cutting unit.

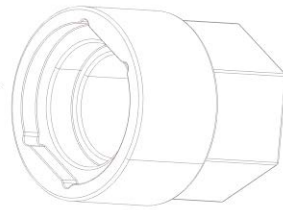


Figure 8

Tool-Adapter, Wrench, 137-0921 (Figure 9) holds the driveshaft assembly when installing and torquing adapter.



Figure 9