

Date: February 15, 2020

Service Bulletin # GSBS-12

To: All Owners of Snowblowers and Tillers with Oil bath Worm Drives

Subject: Condensation and Corrosion in Worm Drives

Machine Style: Nearly all Gear Drive models, 3 and 4 speed UniTrols, 26" and 32" 5 Speed Friction Drive Snowblowers, Front Tine Oil Bath Tillers

It has been recognized that water can make its way into worm drives. If the unit is not run regularly to redistribute oil, the steel worm gear can become severely corroded, especially above the oil level. This rust scale will damage the bronze worm wheel run and the now pitted worm gear will continue to wear the worm wheel.

An example of this rust can be seen in the picture.

The larger of the 2 plugs, closer to the top of the gearcase is vented with a felt insert intended to allow pressure to equalize. It is suspected that with changes in temperature and humidity, moisture can migrate into the gearcase and accumulate. A portion of this water will condense on exposed parts above the oil line.

Tiller drives run relatively hot and probably boil any moisture away with annual use. Snowblowers are subjected to much more moisture and never get to dry out by running hot.

The following steps are suggested:

- 1) Remove the worm drive adjusting plug using an appropriate tool and inspect. Condensed moisture is a red flag.
 - a. If signs of moisture are found, you can inspect closer by removing the vent plug and then consider a teardown.
 - b. To reinstall the plug run it in to stop and back off to the first notch that aligns with the cotter pin hole and re-pin.
- 2) Drain the oil from the drive by removing the small plug and tipping the machine vertically. Refill to the level of the small plug with the correct lubricant.
 - a. Snowblowers: SAE 30 oil (preferably non-detergent)
 - b. Tillers: See the Tiller Page for details.
- 3) Rebuild the case at the first sign of seal failure. Any original seals will soon be crispy if they are not already. Maintaining oil level is critical and so is excluding water.



Seals, Gaskets, gears and most other parts can be found on this website.