THE Gilson SNOWBLOWER SHOP

Service Bulletin

Date: November 14, 2017

Service Bulletin # GSBS-11

To: All 2 Stage Unit Owners

Subject: Seized Augers

Machine Style: All 2 Stage Models

Owners sometimes find that augers are seized to the auger shaft. When this happens the shear pins are no longer effective and the machine is at risk of damage should it encounter a jam. Seized augers will also prevent worm drive repair.

There are several natural common causes of auger seizure;

- Rust between the shaft and tube can bind them together. Fortunately, this is very uncommon
- The shear pins are intentionally a loose fit. As the load changes they will rock in the holes. This can peen the walls of the holes. As this happens steel can be displaced creating an interlock between the tube and shaft. The shaft holes have small countersinks to provide relief but over time the displaced steel can exceed this allowance.
- At the factory or from regular lube a heavy lubricant film is between the tube and shaft. This greasy gunk can fill all voids and form a strong bond between the 2 parts. I find this is the most common culprit.

There are also a few other causes:

- The standard cotter pin style shear pins have been replaced with bolts and they were overtightened, crushing the auger tube.
- A pipe wrench or similar tool was used trying to free the auger. The binding effect of a pipe wrench can crush the tube. It also puts severe stress on the worm drive components.

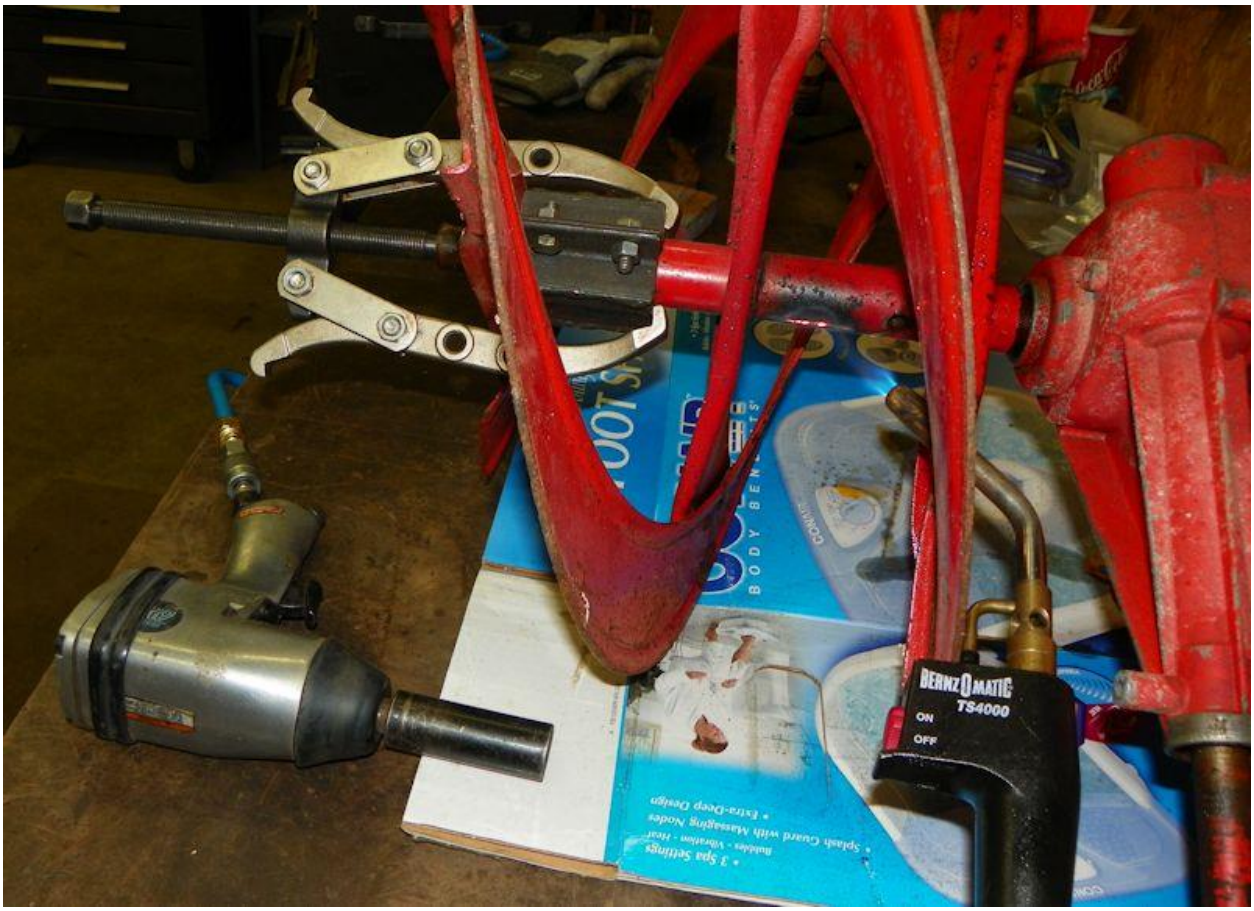
The happy path solution is to recognize the problem before it matters. Remove the shear pins and apply penetrating oil. Then run the machine normally while hoping that the work load breaks it free. This rarely works but it's harmless and easy if you can operate the machine as-is.

For most cases you will need to remove the auger assembly from the machine. Use model specific instructions for this. You will then want to use a puller in some fashion to pull the auger off the shaft.

Once the auger assembly is out, follow these steps. You may need to adapt based on your available tools and skills.

1. Douse the tube ends and shear pins holes with penetrating oil.

2. You will need something to pull against. In the following picture you will see a jig I install around the tube. This gives me something to hook a puller to and it transfers the force to the base of the auger struts. Before building this jig, I would weld ¾" hex nuts to provide 2 grab points. Afterwards you can grind them off and repaint or just leave them harmlessly there.



3. Drill a small hole in the center of the shaft. This will make the puller much more stable

4. Install the puller

5. Tighten the puller. An impact wrench will apply a lot of force without needing to hold the assembly down. If you have to use a breaker bar you may want a helper to hold the assembly down. Frequently this will begin the movement.

6. Continue to tighten the puller, drawing the auger from the shaft. It may become much easier after it clears the shear pin hole in the shaft.

7. Eventually the puller will bottom out. You will need a stub shaft to slide into the tube as a filler and reset the puller to continue.

8. If the puller alone does not do it then you will need to add heat. I like to use a Mapp gas torch since I don't have an oxy-acetylene set, yet.

9. While it heats I will carefully add penetrating oil, so it can be drawn in.

10. Be careful and have a charged fire extinguisher handy.

11. Be patient, it's a big part and 20-30 minutes of heating is not uncommon. Over that time the expansion from heat will begin to break rust bonds. What I usually find is that the dried gunk and grease is the offender and heat will soften it. The puller will begin to make progress and gain speed as the parts move.

12. Once it is apart make sure the shaft has no raised steel. File the hole with a half round file to remove high spots and create a recess.

13. Thoroughly clean the shaft and tube to remove old lubricant. Then lightly lube the shaft. I like 5-30 synthetic. Some like the idea of drilling and tapping to add zerk grease fittings. I have not found this necessary.

14. If you used heat, the oil seals may be compromised. As a practical matter with the last Gilson built circa 1987 any machine's seals are getting crispy and you should consider installing a seal kit while you are in this deep.

15. If only one side is seized, you may be able to take it apart enough to get the shaft and auger into a hydraulic press and use that to drive the shaft out of the auger. Penetrating oil and heat may still be part of this approach.