



# Pre-Mature Cable Breakage

Pre-mature cable breakage can be frustrating and costly. We will list some common problems that can be looked at to get you back on track.

- 1. An improperly trained operator.** A improperly trained operator can and will make minor & major mistakes causing excessive stress not only on the cable but the machine itself. It is the **#1 reason** for repairs. A good operator can “feel or hear” a machine and tell when slight problems or different conditions are changing.
- 2. Common sense.** Things most people take for granted such as a machine being violent, or making loud noises, funny sounds, extreme vibrations and more. Not stopping to address these issues will cause breakdowns and costs tenfold of what a very simple operator error, or loose bolt etc. will cost.
- 3. Stopping the hammer weight on the down stroke.** This causes extreme stress on not only the cable itself, but also the pulleys and bearings. The hydraulic system takes a very violent force leading to extreme pressures and forces on components. Not only are you breaking the cable, you are shortening the life of other components. The auto stroke should be turned off on the ground, or upstroke.
- 4. Striking the top of the mast.** Turning the stroke controller to the highest setting and striking the top of the mast will break a cable and components. Different tools and working below ground height will require max settings. You should start on a low setting and work your way up to desired setting. **The weight should not get closer than 6-8 inches from the top of the mast.**
- 5. Getting the tool stuck in the work.** Getting the tool stuck in the work and using all the force to remove it will have an effect on cable life. This is caused by too high of a drop of the hammer weight. The tool “Punches” through the material instead of just breaking it. A lower hammer height setting will usually resolve the issue. If not a different tool should be used for the situation.
- 6. Improperly adjusted cable.** See Manual for adjustment. What we are talking about here is the hydraulic lift cylinder reaching the end of the stroke either on the upstroke or downstroke. If cylinder is reached on its upstroke the weight will start to fall and stop for a split second before it falls. It don't seem like much but it does have an effect on the cable and parts. If the hydraulic lift cylinder reaches the retracted limit before the weight is fully on the ground, it will snap on the cable and components.

**7. Improperly set or no cable retainer above the weight.** A simple cable clamp is installed on the top of the hammer weight to prevent any cable slack to push back into the weight and pull out. It wears an oval hole in the weight while wearing the cable out. Install and set a cable clamp tight against the top of the weight prevent this. (See Manual)

**8. Using the incorrect cable.** The factory cable is a special cable with a center stretch feature. A standard off the shelf cable does not have this. This leads to more violent starts and stops which create breakage. Contact Arrow Master to order the correct cable.

**9. Worn out components.** Worn out components such as pulleys and bearings will wear a cable faster than expected. Sometimes you can actually see filings from the cable left on components.

**10. Auto stroke not working properly.** On older models, some electronic stroke controllers seem like they're working when actually they fall between is set of timers and timeouts. this can cause an early stroke lift where the hammer weight and tool do not connect fully with the ground or work. Sometimes referred to as short stroking. this will cause a sudden stop on the hammer weight which puts strain on the cable and can cause it to break. Make sure your auto stroke system is working properly.

## What should my expected cable life to be?

This has many varying conditions, in which Arrow Master has seen different results. With perfect conditions we will see anywhere from 30 days to a **whole summer season** on a single cable. We have watched a cable snap in as little as 2 hours (from being stopped on the downstroke) by improper operator training. Some owners that run the Arrow Hammer very hard all week for long shifts report about 1 cable a week. Most machines are getting longer than that, 30 days plus. There have been multiple machine models, with different versions of the auto stroke which will affect your results. Our new model the 1450 has features built in to eliminate some items on this list and increase cable life 50% or more.