Proper maintenance keeps skidders on track

Skidders are the lifeblood of many logging operations, crucial tools for extracting logs from the forest to the landing quickly, efficiently, and safely. Loggers count on their skidders to keep their operations running smoothly, so if they go down, it causes a major log jam. Literally.

As with all forestry equipment, skidders need proper maintenance to ensure maximum productivity. By conducting easy daily checks and sticking to regular maintenance intervals, loggers can avoid costly downtime and interruptions and keep their businesses running.

Q: What’s the first thing you should do to maintain your skidder?

A: Read your owner’s manual.

Owner’s manuals are a handy reference to specifics for a particular piece of equipment, and will provide all of the maintenance details and instructions needed. They provide a wealth of knowledge about quick and easy tips and tricks that can be done on a daily basis. They may be small, but they go a long way toward keeping skidders on track and on the job.

For example, one of the most common causes of downtime is engine fuel supply faults caused by trash in the fuel filter bases or fuel supply lines and fittings. This occurs because operators depend on the strainer to keep all debris out of the tank. Sometimes the screen is even thrown away because it slows down the time required to refuel. This is a large problem that can be prevented with a very simple practice: before opening the engine house or fuel cap, be sure to clear off any debris around the opening. And don’t throw the screen away.

Q: How can I prevent maintenance problems and costly downtime?

A: Quick, daily checks help prevent problems before they occur.

It is always a good idea to keep up with regularly scheduled fluid sampling and analysis, not just when problems occur. This builds a trend history for the machine, so any change in the latest analysis report will almost always point to a maintenance problem. The problem can then be fixed before it causes even more downtime or damage.

Speaking of fluid maintenance, you should also be sure to maintain correct engine coolant levels and check them daily, also keeping an eye on fluid leaks. Even a small leak can let important ingredients out while also letting contamination seep in.

A dead battery is another example of an easily preventable problem. Simply checking the battery electrolyte level every month, adding distilled water as necessary, can extend the life of the battery and avoid frustrating downtime. And, just because a battery says “maintenance free” or “low maintenance” doesn’t mean it should not be checked. It will eventually lose water, just at a slower rate than a standard battery.
Some other easy, daily preventative checks include:

Adjust the engine valve train per the operator’s manual recommended schedule and maintain proper grapple damper adjustment to protect grapple yoke bearings.

Check tire pressure to be sure they are inflated to the recommended manufacturer’s guidelines.

Every so often, do a bit of house cleaning. Inspect debris in the belly pan, clean tank strainers, check air filter elements, and fill and charge the water pressure system. Also check the engine coolant extender and make sure your fire extinguisher is in good working order.

**Q: How important is fuel type? Fuel is fuel, isn’t it?**

**A:** The correct fuel type is crucial to efficiency and longevity.

Fuel, of course, is essential to a skidder’s operation. The wrong fuel can cause a skidder to run roughly and inefficiently, while the right fuel can optimize uptime and efficiency.

When selecting fuel, be sure its sulfur content complies with all existing emissions regulations for the area in which the engine operates. Overall, fuel with sulfur content less than 0.10 per cent (1,000 mg/kg) is strongly recommended. Use of diesel fuel with sulfur content 0.10 per cent (1,000 mg/kg) to 0.50 per cent (5,000 mg/kg) may result in more frequent oil and filter change intervals.

Using diesel fuel with content greater than 0.50 per cent (5,000 mg/kg) can affect equipment longevity and is strongly discouraged. Consult your equipment dealer if you plan to use this fuel.

**Q: What is the most important component of a skidder?**

**A:** The operator and crew.

As important as your skidder is, your crew is more important. For their safety, be sure to check and maintain all safety equipment and protective guarding daily. Don’t put it off until later. Your most important assets are those lives that bring the machines to life.

These articles were supplied by logging equipment manufacturer John Deere (www.deere.com).

**Keeping on top of maintenance intervals**

Aside from day-to-day maintenance on skidders, there are several maintenance intervals that are important to note, each with specific tasks to perform. Follow the timeline below to ensure optimum performance.

10 hours – Check coolant, oil, hydraulic oil and transmission oil levels. Check and drain fuel water separators. Water fuel
sensors can reduce power by 50 per cent if left unchecked. Actuate and check the air cleaner unloader valve and replace if necessary. A bad valve can render your filter useless. Grease the centre hinge, grapple, boom and arch pivots, cylinder pins, and the grapple yolk, dampener and pins.

100 hours – Keep those parts moving smoothly. Grease engine drive shafts and universal joints, steering cylinder pins, front axle pivots, blade pivots, and axle pinion seals. Also, grease the front and rear transmission output shaft seals, drive shaft support bearings, fairlead rollers on the winch and drive shaft, universal joints and splines.

250 hours – After the inaugural 250 hours your equipment runs on the worksite, check the oil. Replace engine break-in oil, and transmission and hydraulic oil filters. Take hydraulic and engine oil samples every 250 hours.

500 hours – Sample oil and check filters. Take fuel, axle, winch case, engine coolant and transmission oil samples. Also replace server duty, primary, and secondary filters. Be sure to check the engine oil filter and change the oil. Battery fluid levels and terminals should also be inspected.

1,000 hours – Clear the air and keep it cool. Replace air filter and cleaner unloader valve. A missing, damaged or hardened air cleaner unloader valve will make pre-cleaner ineffective, causing very short element life. The air cleaner unloader valve should suck closed above 1/3 engine speed. Change front and rear axle oils and grease the grapple rotate bearing. Check the engine coolant carefully. This is especially important for Tier III and newer machines.

2,000 hours – Change hydraulic cooler filter and change the transmission and clean suction strainer. If you have a winch, change the oil in the winch case. Replace the transmission breather filter, hydraulic tank breather, and hydraulic oil filter and oil. Also be sure to inspect the crankshaft dampener to be sure it will last another 2,000 hours before you have to replace it.