

Telehandler Transmission Oil Maintenance

By David MacFarland

Have you thought about the oil in your telehandler's transmission lately? Are you aware that it requires the same level of detail and attention as hydraulic or engine oil? For many fleet managers and service technicians, this may be redundant. But truth be told, not everyone thinks about or knows the importance of setting a maintenance schedule for a telehandler's drivetrain.

Almost every day, I get a call from a concerned customer asking when to change the telehandler transmission oil and what type of oil to use. Changing the oil is an easy maintenance step that will help provide a longer running life for your transmission. A proper oil change at regular intervals also can indicate any problems the transmission may be having before it becomes a catastrophic failure. Consider it a small investment for an expensive asset.

Types of transmissions and oil recommendations

First, identify the type of transmission in your telehandler. A handful of companies manufacture drivetrains for telehandlers. ZF, for example, offers a range of drivetrains for JLG, Lull, Skytrak, Gradall, and Cat telehandlers and has two different types for machines with either side- or center-mounted engines.

Telehandlers with a side-mounted engine will have a transmission with a transfer case. Note that the transfer case has its own independent oil reservoir and, therefore, requires its own maintenance schedule. Telehandlers with a center-mounted engine and transmission do not have a transfer case, just two output flanges. One flange goes to the front axle and another to the rear axle. The transmission and transfer case can be identified by the ID tag located on the housing by the rear output yoke. Units with a transfer case also will have a separate ID tag located next to its output yoke.



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Changing the telehandler transmission oil is an easy maintenance step that will help provide a longer running life for your transmission.

For telehandlers manufactured by JLG, including the Cat TL Series, ZF recommends that the ZF WG-92, WG-98, and WG-100 transmission oil level are checked in 10-hour intervals and filled as necessary. It is essential that the transmission is at operating temperature when checking oil levels to ensure an accurate reading.

Also, for these transmissions, it is suggested that the oil be replaced along with the filter after the first 100 hours and then repeated every 1,000 to 1,500 operating hours or once a year, whichever comes first. This interval is standard under Load Class 1, which is normal transmission operation.

I cannot stress enough the importance of using genuine OEM transmission filters. ZF's transmission filters are designed with a low flow resistance and a higher dirt absorption rate, unlike an aftermarket filter. For fluid, I recommend using an SAE 10W-30 universal tractor transmission oil (UTTO). A full list of lubricants can be found under the ZF TE-ML list of lubricants at www.precisiontrans.com.

When checking the oil, be sure to look for any clutch material or metal, which can be a sign of a clutch or bearing failure. Refer to the vehicle's operations manual for the location of the drain valve and its specific torque specs (35 Nm/26 foot-pounds). This applies to transmissions with and without a transfer case.

Oil change intervals for the transfer case are shorter. However, they do not require a filter. For the ZF Model TB-92 transfer case, change the oil every 250 operating hours, giving roughly a 6:1 ratio of transfer case to transmission oil changes. It is important to monitor the oil in the transfer case because it does not run through a cooling system. Excessive heat will break down the oil viscosity, thereby rendering it useless.

I also recommend using an SAE 10W-30 UTTO in ZF transfer cases. The torque specs for the drain valve (35Nm/26 foot-pounds) and its location can be found in the vehicle's operation manual. It is just as important to check this oil for debris to become aware of any problems ahead of time.

Down time is costly but often preventable. Check your oil levels regularly – some fleet managers check oil levels every morning at startup. Set a drivetrain oil change schedule, and keep genuine replacement filters on hand for quick and efficient maintenance. Fleets with regularly checked and maintained fluids are the fleets with the least number of problems. ■