



April 2015
WATSON DIESEL INC.
Municipal Vehicle Service Topics

In this issue of the Watson Diesel Municipal Vehicle Topics we will discuss the basics of a general truck service. We find that most municipalities do their own in-house service work. Most of you already know the basics of a good service, but we will talk about some of the things that we see missed or not addressed properly when servicing the vehicle.

We will not bore you with how to properly prime a fuel filter, or tighten an oil filter (although filters besides being very expensive have become quite complex in regards to o-rings and seals). We will assume you already have been instructed in these tasks.

What we are going to talk about are the little things that will make a difference in the outcome of your service job.

First and foremost, we find that people servicing the truck sometimes take lightly the seriousness of the task. It is often thought of as an entry level task that anyone can do. While it may not be as high tech as, say, rebuilding an engine or changing a clutch, the ramifications of not paying close attention to the job can be very expensive.

The first thing that we should do when servicing the truck is to prepare our work area. By this we mean cleaning the floor area that we are going to work in. Rolling a creeper around in dirt, mud, etc. can make the task extra aggravating. A clean floor (and a good creeper) will make a big difference.

Next clean your truck. This is very important! If you are trying to service a truck covered in mud and grease, it can be very difficult to see all the grease fittings and difficult to see potential problems such as loose or broken cross members, springs, etc.

Next you may find that using a set of ramps to run the truck's front wheels up on can make a big difference. This will help you clear things such as low clearance axle hsgs, plow frames, etc. If you do not have a set of ramps, a trip to the building supply for a pressure treated 6x6 cut in half at an angle with your chain saw and you're in business.

Now with your engine warmed up to operating temperature and your oil drain pan in place, it's time to drain the engine crankcase, punch holes in the bottom of your oil filters and let the oil drain until it just drips.

Now take time to use a grease rag and wipe off all the grease fittings one by one. Always start at the steering shaft into the steering box and follow the flow of components out of the steering box all the way through the front end of the truck including brake slack adjusters and camshaft bushings. Then work your way back through to the clutch release shaft bushing on the side of the transmission, throw out bearing, and driveshaft U-joints, then onto the rear suspension and brakes. It does not really matter how you do this as

long as it is systematic so that you don't miss something. Remember - start at the front of the truck and work your way to the back, going left to right following the power flow. Taking time to wipe off all the fittings accomplishes two things. One is it prevents introducing dirt into the component, but most important **it gets your eyes under your truck!** Always remember that when you are under your truck you are going to be on the lookout for cracked, broken, loose or missing components, all the way from your plow frame to your rear box hinges! You will also be looking for oil leaks on your transmission, transfer case, rear axles and wheel seals. Always remember that a small oil leak especially on a transmission or PTO hsg, can be a big problem. We have people bring trucks into our shop all the time with a transmission failure that was caused by low oil levels. The leak was small enough that it would not leave a puddle on the ground as the leak would wick back onto the driveshaft and then be slung around under the truck and covered in road grime completely disguising the leak!

This brings us to the importance of checking gear case oil levels. Always check them! Some people ignore this step because they feel that if there is no external leak, how could it be low on oil? Good point. But what if say you have a RoadRanger transmission that has an oil cooler on it cooled by engine coolant from the radiator. You may pull the fill plug sometime and see that your transmission is overfull – with coolant. Yes, if your cooler leaks you will find that depending on the leak the cooling system pressure will exceed the transmission pump pressure (this is a very low pressure pump in the transmission) and fill your transmission. If you pull the plug on your rear axle you may be surprised to find brown foamy oil that is caused by water entering your housing from a crack under your spring plate. The moral of the story is that you are not necessarily just looking for low oil but contaminated oil! In any case, always check them.

Also remember that when you are greasing the steering King Pins and spindle bolts as they are sometimes called, you must jack up the front end of the truck to take the vehicle weight off of the lower bearing on the spindle. Also remember to grease each component until fresh clean grease appears around the item being greased. This pushes out the old grease and contaminants and assures the item has enough fresh lube in it. At this time you can raise the dump box and install your safety supports and grease all the pivot points and do a visual inspection of the underside of the box.

One last tip that I learned a long time ago. When you take the drain plug out of the engine or the check plug out of a rear end or transmission, never put it back in “finger tight”. Too many times a technician will do this then go to his tool box to get the wrench to tighten it ... and his cell phone rings. After the call he goes back to the truck that he just got out from under and starts putting oil in, etc., and completes the job - just short of tightening the plug! The truck is put back into service and goes down the road until the finger tightened plug falls out onto the road! Never put a plug in without tightening it! And always double check it. Like I said at the beginning, this job is not to be taken lightly. The results of it being done wrong can be just as far reaching as a bad engine overhaul.

Remember. The grease, filter and oil change are important, but getting under your truck in a warm garage and finding a problem is much better than along the road in the slush and snow.