Gear Oil

Why is gear box oil filtration so important?

Without proper filtration, gear box oil will get heavily contaminated and will lead to machine wear. Gear box parts can be expensive and time consuming to replace. The amount of downtime for the machine to be fixed and productivity loss should also be considered. COMO's gear oil filtration systems will help minimize machine wearing, making sure that you stay up and running.

The key to gear box oil filtration

There are many factors to take into consideration when doing gear box oil filtration. Here at COMO we gather as much information as possible regarding your application before putting together a system that we feel will solve your filtration problems.

Viscosity: Gear oil usually has a much higher viscosity than other oils. A common misconception is that a stronger/faster pump is required in order to handle the high viscosity, when actually the opposite is true. When you try to push a thick fluid through a precise filter element the result is a very high back pressure, which ultimately leads to poor filtration results or damaged filtration equipment.

Temperature: As temperature increases, the viscosity decreases, making it easier to filter without having a high differential pressure across the filter element. It is important to find a balance as oil additives will be depleted as temperature increases. It has been said that for every 18°F increase that the life of the oil is cut in half.

Filter Pore Size/Segment Depth: Unlike some equipment like Servo-valves that have very slim tolerances and require ultra-fine particulate removal, gear oil does not need to be extremely clean when it comes to the low end of particle micron sizes. By increasing the pore size of filters and reducing the amount of media the fluid has to travel through, we can reduce the pressure across the filter resulting in better filtration.

Flow Rate: When kidney-looping a gear box with depth filters our general rule of thumb is to have a flow rate of 1gpm or less through each filter element. This can change depending on several of the factors listed above.