

Checklist for choosing the best Lube Oil Cleaning Technology

Different methods for lube oil cleaning have different degrees of efficiency and costs. Before investing in a lube oil cleaning technology it's good advice to compare the two commonly used alternatives: Filter + Coalescer and Centrifugal separators. Tick the boxes below to see which solution best meets your requirements.

Filter + Coalescer

Centrifugal Separator

Lube oil volumes

1 If the volumes of lube oil to clean are small (below 50 l/h), a filter solution is a cost effective alternative due to its low initial investment.

If lube oil volumes are medium to large, a centrifugal separator excels in continuous performance.

Degree of contamination

2 Optimal working conditions for a filter is when the lube oil contains a low amount of particles. If the contamination is heavier, a filter tends to clog in a short time, and needs continuous replacement of filter elements.

A centrifugal separator has a high degree of efficiency and operates continuously also at very high contamination levels.

Contamination with both particles and water

3 A filter can only remove solid particles. If water contamination also is present, you will need an additional coalescer module to remove the water.

A centrifugal separator is the only lube oil cleaning method that removes both particles and water in a single operation. Also with temporarily high amounts of water leakage cleaning performance is even.

Process performance

4 Since the filter's cleaning performance degrades over time, this method calls for continuous maintenance and filter cartridge replacements. Uneven cleaning performance increase the risk of unplanned downtime and production loss.

A characteristic for the centrifugal separator is a minimum of service and maintenance. And with the very high cleaning efficiency, lube oil of high quality will keep the production process up and running.

Maintenance costs

Production downtime, service personnel, spare parts and disposal of used cartridges all add to the total costs connected to a filter solution. Over time the running costs could be a concern.

A centrifugal separator needs a minimum of maintenance. With no consumables to be replaced, and continuous, reliable performance, the running costs are very low.

Logistics / Location

A filter solution is dependant of continuous consumables and parts supply. Remotely located production facilities will have to secure reliable logistics, and also calculate their costs.

A centrifugal separator has a minimal need of spare parts and no need for consumables. In remote locations where logistics is an issue this is a cost efficient alternative.

Equipment lifetime

Contaminated lube oil is a common cause for machine failure. Since a filter can only remove a limited amount of particles, and water only with an additional coalescer, there is always an increased risk of unwanted machine wear.

A centrifugal separator is an investment with large impact on equipment lifetime. Its highly effective cleaning capabilities can prolong equipment lifetime significantly.

Total Cost of Ownership

A filter module is a small initial investment, and is an easy to choose solution. But connected with high running costs the Total Cost of Ownership is high.

A centrifugal separator is a more substantial initial investment, but with a minimum of running costs. Over time the centrifugal separator often offers better Total Cost of Ownership due to low running costs and its positive effect on equipment lifetime.

Please contact Alfa Laval for more advice in choosing the optimal lube oil cleaning method for your needs.