



All Purpose Turbine Oil (4941)

Alliance Water Resources – Defiance, Missouri

Titan Inverter Duty Motor

- Reduced foaming
- Eliminated plant housekeeping and safety issues
- Decreased oil consumption

Customer Profile

Alliance Water Resources successfully operates, maintains and manages St. Charles PWSD #2, the largest public water supply district in the state. More than 30,000 customer water accounts and 10,000 customer sewer accounts serve a population of more than 110,000.

The Defiance Water Plant was built in the 1940s as part of the war effort. Today, the plant has the capacity to produce 22 million gallons of drinking water per day.

Application

The plant uses a Titan inverter duty motor to drive the high-service pump that moves water from the plant's clear well to its drinking water reservoir.

Challenge

The previous commercial grade oil was getting limited service life of less than a year and was experiencing extreme foaming in the upper and lower bearings. The foam had the potential to create gaps in the lubricant film and cause bearing failure. The foam also caused the oil to spill out of the bearing housing when filled to the proper level, causing housekeeping and safety issues when the oil ran down the sides of the pump housing.

LE Solution

The local LE lubrication consultant, recommended LE's All Purpose Turbine Oil (4941), which is non-foaming in service, offers excellent water separating characteristics, and inhibits rust and oxidation. It performs well for turbine systems operating in a highly contaminated environment, or where high lubricant consumption is a concern.



Results

Using LE's All Purpose Turbine Oil resulted in significant foaming reduction, and the oil no longer overflows when filled to the proper level. The new oil has been in service for a year and a half, and testing shows that it is still in very good condition. The plant has experienced lower oil consumption and reduced labor costs because of fewer oil changes.

Brian Hemmer, chief plant operator, says the product eliminated a plant housekeeping and safety issue by reducing foam and eliminating any overflow from the oil reservoir.

Other LE Products Used

- Oil Safe® containers
- Esco Sight Glasses

Thank you to Brian Hemmer, chief plant operator, Steve Wilkins, plant supervisor, Carl Kindermann Jr., plant operator, and to the local LE lubrication consultant, for providing the information used in this report.



Oil Safe® is a registered trademark of Fluid Defense, LLC.

Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.

SIC 4941
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