

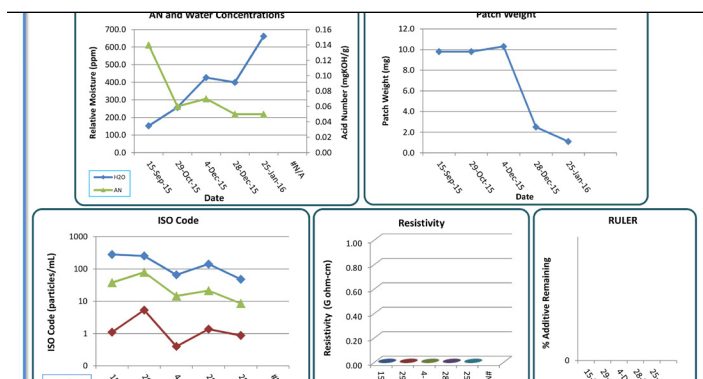
OA-PE

Phosphate Ester ACE™ Analysis

Industry leaders Hy-Pro Filtration and EPT Clean Oil™ have partnered to offer two levels of ACE™ testing for fire-resistant phosphate ester (PE) lube oils and hydraulic control fluids. Each of these test packages is compliant with ASTM D8323 (the Standard Guide for Management of In-Service Phosphate Ester-based Fluids for Steam Turbine Electro-Hydraulic Control EHC Systems). As such, ACE™ testing provides a complete picture of your PE's condition, including its physical properties, contaminants and breakdown levels.



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HY-PRO™



Monitor Varnish Levels

During service, PE breakdown leads to varnish-formation. This varnish causes servo and solenoid valve-sticking, which is of particular concern in hydraulic control systems. Despite the impact that varnish has, most PE analysis programs fail to regularly monitor varnish levels. ACE Initial and Milestone Assessments always evaluate your fluid's varnish potential using ASTM D7843-compliant MPC (membrane patch colorimetry) testing and established best practices specific to phosphate esters. Regular MPC analysis is imperative because you're blind to varnish and the problems it causes without it!

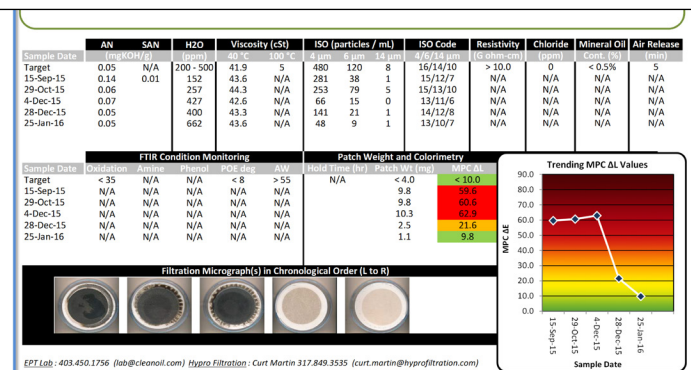
Go Beyond Routine Analysis

Most PE test packages are limited to routine metrics like acid number, water content, particle count and resistivity. These "routine" tests are important but are limited in their ability to identify fluid condition-related problems. They also fail to meet the regular testing requirements outlined in ASTM D8323. By following this ASTM spec, ACE Assessments allow you to see harmful contaminants, including strong acids, phenols, varnish, carbon, and soot. These contaminants have well-established negative impacts on the performance and reliability of critical hydraulic control systems and have led to costly failures.



Restoration Focussed

PEs don't have protective additive packs and are often condemned due to contamination that could have been removed. By following the ASTM D8323 spec, ACE Initial Assessments provide comprehensive information about your critical fluids and highlight issues that "routine" PE tests are blind to. If problems are noted, ACE Assessments identify solutions and then make use of Milestone testing to trend and document their effectiveness so that you can achieve trouble-free operation for your critical production assets. These solutions also allow you to extend your PE fluid's lifetime, eliminating the need for costly bleed-and-feeds/fluid replacement, while reducing the environmental impact of your operations.



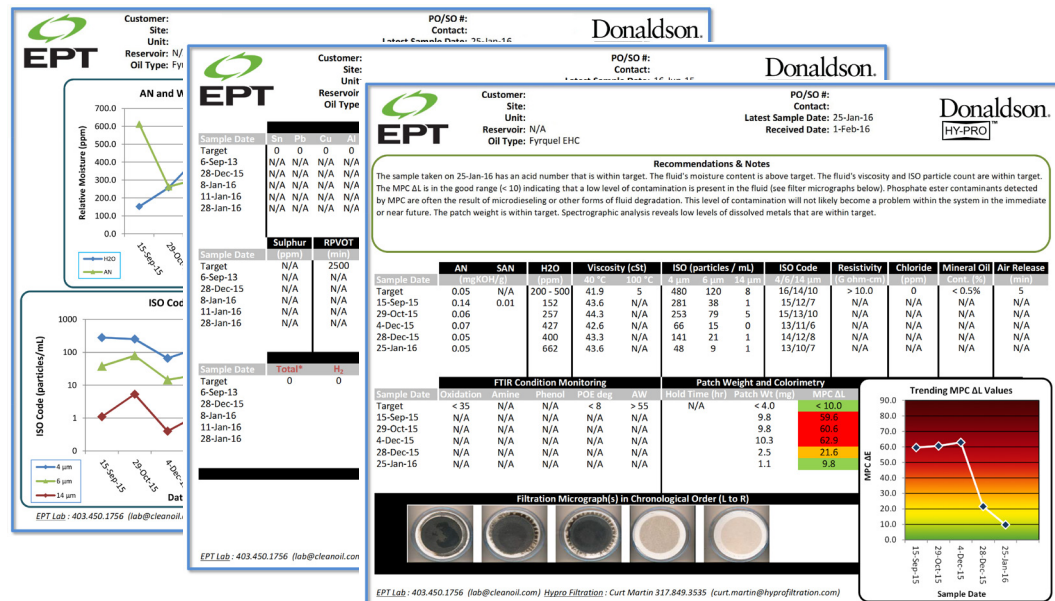
Analysis Specifications

ACE™ Initial Assessments

ACE™ Milestone Assessments

Part Numbers	OA-602996	OA-602997
Description	This test package establishes your fluid's current condition and highlights any potential problems. It then takes the next step by actually cleaning your PE sample with patented ICB® filtration. Our ACE Initial Assessments don't just tell you what we can do for your PE, they show you.	This test package fully documents the results that you've achieved following the installation of Hy-Pro/EPT Clean Oil filtration systems. Pull "Milestone" samples when you start and every month etc. thereafter to track the improvements in your critical fluid's condition.
Analysis Package Includes	- MPC Varnish Potential & Patch Weight - Acid Number and Strong Acid Number by Potentiometric Titration - Oil Color - Contaminant Phenol Levels by LSV	- ISO Particle Count - Water Content by Karl Fischer Titration - Dissolved Metals by ICP-OES - Viscosity at 40°C (104°F) - Resistivity at 20°C (68°F)
Recommended Frequency	Monthly to Quarterly	
Testing Standards	ASTM D7843 ASTM D664 ASTM D1500 ASTM D6971 ISO 4406 and 11500	ASTM D6304. ASTM D5185 ASTM D445 ASTM D1169
Sample Size Required	ACE Initial Assessment: 1,000 mL (sample bottle included)	ACE Milestone Assessment: 500 mL (sample bottle included)
Fluid Compatibility	Phosphate Ester-Based Hydraulic Fluids Phosphate Ester-Based Lube Oils	

Sample Report



Want to find out more? Get in touch.

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