



AeroShell



AeroShell Turbine Oil 560

HTS oil approved for use in all PT6 engines

PT6 evolution – higher temperature, and greater efficiency and power

More than 60,000 Pratt & Whitney Canada (P&WC) PT6 engines have been built since the model entered service in 1964, making it the most prolific turboprop engine. The original engine has evolved and today's variants are up to four times more powerful, with a 50% better power-to-weight ratio and up to 20% improved specific fuel consumption. They also have much higher operating temperatures, which can be a problem for MIL-PRF-23699G Standard (STD) class turbine engine oils, which oxidise to form coke deposits.

1964 → Today



4X more power

better power-to-weight ratio



20% lower specific fuel consumption

Are HTS oils the answer?

As the PT6 and other engines have evolved, so too has engine oil technology. Oils formulated to meet the MIL-PRF-23699G High Thermal Stability (HTS) specification are better suited to withstand the higher temperatures and more extreme operating conditions of today's engines. However, some HTS oils are known to cause seal degradation issues. These problems have led some operators to the false view that all HTS oils share these issues.

Do you accept coking costs and risks as unavoidable?

Coke deposits hinder oil flow in feed and scavenge tubes, which may lead to critical components being starved of oil, cause oil leaks, or both. Excessive deposits may increase in-service maintenance burden and lead to an unplanned engine removal, both of which reduce aircraft availability. Some operators may accept coking risk as inevitable. But that should not be the case.

AeroShell Turbine Oil 560 – anti-coking performance AND seal protection

AeroShell Turbine Oil 560 is a low-coking HTS oil designed to withstand high operating temperatures. With the support of operators, we have also demonstrated that it does not degrade seals, unlike other HTS oils. As a result, AeroShell Turbine Oil 560 is **approved for use in all PT6 engines.**

APPROVED



First fill and recommended oil for all TBM aircraft

Operators of Daher TBM 850 and TBM 900 aircraft reported carbon in their oil samples. Daher and P&WC realised that they needed an HTS oil with excellent seal compatibility and worked together to trial AeroShell Turbine Oil 560.

The trial proved that AeroShell Turbine Oil 560 offers low coking and good seal performance, including with elastomeric seals, and subsequently

- AeroShell Turbine Oil 560 is the first-fill oil for all TBM aircraft
- Daher recommends AeroShell Turbine Oil 560 for all its TBM operators.

P&WC has also released a service bulletin that informs users that HTS oil can support the extension of time between overhaul (TBO) from 3,000 to 3,500 hours, with the potential to reduce operating costs by \$20/engine flight hour.

Cutting operating costs by \$55–65 per engine flight hour

A Pilatus PC-12 operator, working with P&WC, has safely extended its PT6A-67B engine TBO from 3,000 to 5,000 hours by using AeroShell Turbine Oil 560 and applying good maintenance practices. The operator cites AeroShell Turbine Oil 560 as a contributing factor in an estimated

- \$55–65 reduction in operating costs per engine flight hour.



Powering the world's best-selling turboprop

PT6 is the best-selling turboprop engine and can be found in a wide range of aircraft, including the following models

- Air Tractor AT-502, AT-602, and AT-802
- Daher TBM 700, 850, 900 and 960
- Embraer EMB-110, EMB-312 Tucano and EMB-314 Super Tucano
- Pilatus PC-6 and PC-12
- Piper PA-31T and PA-46 M500/M600
- Textron Beechcraft Beech 1900C/D, King Air 90, King Air 200, King Air 350 and T-6 Texan II
- Textron Cessna 208/208B Caravan and 408 SkyCourier
- Thrush Aircraft 510P, 510P2 and 710P
- Viking Air DHC-6.

Specifications and approvals

AeroShell Turbine Oil 560 is fully approved by P&WC for use in all models of PT6A, B/C, E and T engines, and it meets MIL-PRF-23699G HTS and SAE AS 5780D SPC specifications.

Contact us

For more information, talk to your AeroShell representative or visit www.aeroshell.com.