

Comment By VP Aviation On Testing Of UL100E

PAFI Full Scale Testing for UL100E fuel includes the following engines and test protocols:

- P&W Twin Wasp R-1830-S1C3G Engine (Used in DC-3 aircraft) – Engine Performance and Detonation Testing
- P&W R-1340-S3H1 Engine (Used in Stearman PT-17 aircraft) – Engine 350-hour Performance and Durability Testing
- North American Harvard (AT-6) with a Continental (Air Repair) W670-6N engine – Flight Testing (Operation and Handling, Cooling Climb, Hot Fuel Test)

Since these tests have not yet been completed, there is no evidence to support the claim that UL100E, or any other 100-octane unleaded fuel, has insufficient detonation resistance to safely operate in these engines and aircraft. Testing in these low C/R engines will determine if the 100-octane UL100E fuel has sufficient detonation resistance under all conditions in these low-compression radial engines. Testing to date in a Continental TSIO-520-VB, TSIO-550-K, and Lycoming's TIO-540-J2BD show that UL100E has similar detonation resistance to 100-octane 100LL under most conditions tested.

Since several engines were developed when 100/130 leaded fuel was available, it is possible that a small number of these engines in the GA fleet will need either mechanical modifications to accommodate any unleaded fuel or changes in the aircraft POHs to stay within safe operating conditions. The comprehensive FAA PAFI testing program is designed to proactively define these limitations and implement the required modifications and communicate this to general aviation community. The fuel producer-designed and executed STC testing programs offer no such assurances. You can find information on the PAFI testing program and UL100E's progress at flyeagle.org. Thank you for your interest in our fuel and the PAFI program.