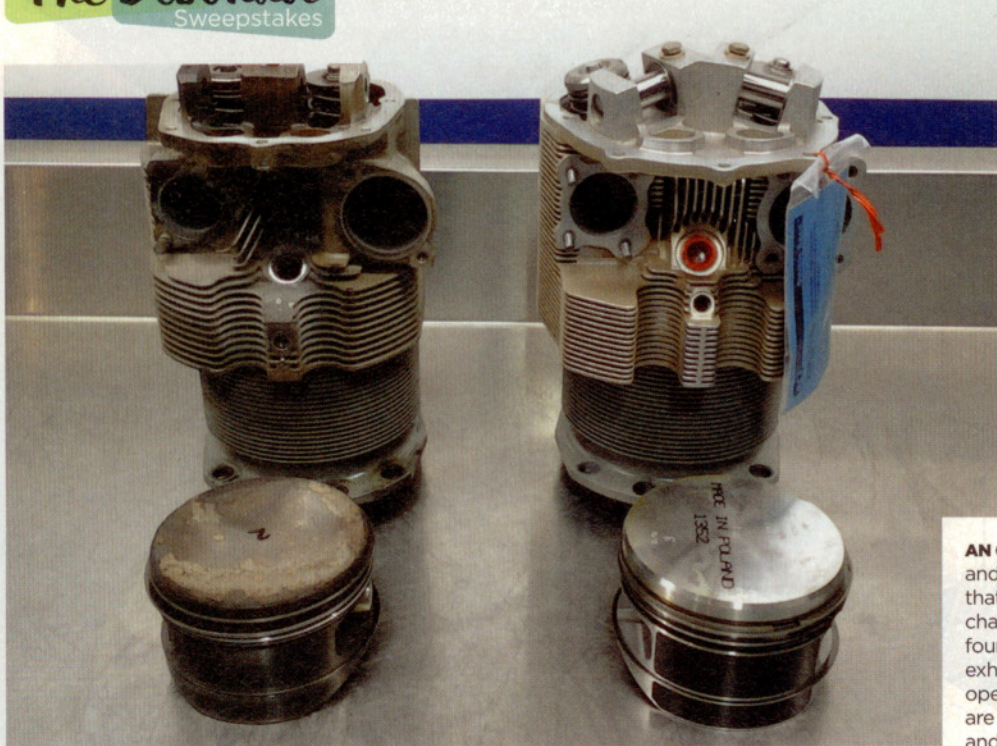


AOPA
The Debonair
Sweepstakes



**THREE WAYS TO WIN
ONE OF 76 PRIZES IN AOPA'S
DEBONAIR SWEEPSTAKES**

Join or renew your AOPA membership and you are entered to win in AOPA's Debonair Sweepstakes. AOPA is giving away a completely restored 1963 Beechcraft Debonair B33 with an all-new ergonomic interior, the latest avionics, and up-to-date airframe as the grand prize. You also could win one of 75 other great aviation prizes. Visit the website (www.aopa.org/Membership/Sweeps.aspx) to enter.



AN OLD, -K engine cylinder and piston (left) and its new -N engine ECi cylinder. Notice that the ECi valves enter the combustion chamber at an angle, and that there are four studs for mounting the intake and exhaust stacks. The -K engine's valves operate parallel to each other, and there are only two studs for mounting the intake and exhaust manifolds.

Prepping for the shows

The Debonair's new engine rounds second

BY THOMAS A. HORNE

THE DEBONAIR'S engine saga is in mid-completion as this goes to press. All of the engine's internal components—crankshaft, camshaft, crankcase, accessory case drive gears, magneto drive gears, and much more—have been either replaced or inspected and reconditioned to like-new status at Genesis Engines in North Carolina. Any reconditioned parts are “yellow tagged,” meaning that an FAA-certified repair station has found them airworthy. Yellow tags are often referred to as the “birth certificates” of replacement or reconditioned engine or airframe parts; that's because they document the parts' origins and service and repair histories.

ECi has generously provided six new cylinders, and these are being fitted to the internal assemblies and crankcase. The new cylinders' valves are set at an angle, according to ECi account manager Jim Ball. This, along with its dome-shaped combustion chambers, will make the engine burn fuel more efficiently than the old engine's parallel-valve arrangement. It's this setup that helps the new engine make 35 more horsepower than the original.

In addition, the engine is getting a new air-induction system, along with a new propeller governor, starter, and oil cooler. The old oil cooler is junk, the assumption being that iron particles in the oil of the original

engine had been trapped inside. If we reused the oil cooler, all that trapped metal would recirculate into the new engine, creating damage all over again. So it's Genesis Engine's policy to install new oil coolers to prevent this from happening.

What else will be new? Plenty. New oil and fuel hoses. New scat tubing. New magnetos. A new ignition harness. And D'Shannon Aviation's new engine baffling and cooling kit, to keep oil- and cylinder head temperatures optimal. The baffling will be painted, and the baffling's edges have custom-molded, flexible seals done up in colors that match the airplane's paint scheme.

Aero Engines of Winchester, located at the Winchester (Virginia) Regional Airport, will install the new engine and

dress up the engine compartment as well. Aero Engines will also do the job of plugging in the new engine's redlines and other limitation values into the Electronics International MVP-50P engine/systems analyzer.

When all is done, The Debonair will have a field-overhauled, 260-horsepower Continental IO-470-N engine with zero time on it. There's a bit of time-travel bound up in that last phrase—because by the time you read this the engine upgrade should be complete! What's more, it will be on display in front of AOPA's tent at the Sun 'n Fun Fly-In from April 1 through 6 at the Lakeland (Florida) Linder Regional Airport and at later AOPA Fly-Ins.

EMAIL tom.horne@aopa.org