

## **STC- FAA APPROVALS for AIRCRAFT NOT ON THE FAA AML listing or otherwise MODIFIED by FAA APPROVED ENGINE CHANGES**

Installation of the Lightweight alternator in vintage aircraft is APPROVED for aircraft OTHER THAN those listed on the FAA AML by specific language in the STC SA02283AK cover sheet:

How that works:

STC certification is obtained to a set of standards related to the STC application. An approved model list is then issued by the FAA which designates those KNOWN type certificated airplanes for which the STC is an applicable installation.

In the case of many older airplanes, engines like the A-65 or C-75 Continental have been replaced with upgraded versions like the C-75-12, C-85-12, C-90-12 or -14, O-200, the O-300, or the GO-300. Each of those improved engines can be FAA approved for installation on certain airframes by either FAA field approvals, FAA STCs, or FAA approved service letters that modify the type design criteria- any of which can be cited by the mechanic as “FAA APPROVED DATA” substantiating the change on an FAA form 337.

It is not possible to list on the FAA approved STC AML, a comprehensive listing ALL of those potential combinations, since many are one-off change approvals, or otherwise obscure FAA approved data that is not readily available to the FAA engineering personnel or the STC holder/applicant.

Since MANY older airplanes have been modified with engine changes, where the installed engine CAN NOW ACCOMMODATE AN ALTERNATOR, because the engine has a suitable generator drive pad drive, the FAA has addressed such changes with a general approval in the limitations and conditions of the STC itself. The Alternator STC SA02283AK has such a condition and FAA approval at paragraph 5 of the cover sheet.

It states:

- 5) This installation approval is limited to aircraft models equipped with a Continental C-75-12, -12F, -12FJ; C-85-12, -12F, -12FJ, -14F; C-90-12, -14F; C-145-2, -2H; O200-A, -B, -C, O300-A, -B, -C, or GO-300-A, -B, -C, -D, -E engine in accordance with FAA approved data.**

This set of FAA ‘open approval’ instructions in the STC were developed with the FAA’s full understanding and knowledge that such vintage airplanes often swapped engines for performance and availability reasons.

This FAA APPROVAL CONDITION was intentionally added to address the inherently restrictive nature of an AML, and to provide greater options to the end users and operators who wish to incorporate a modern, lightweight electrical generating system into their vintage airplane which has already adopted other upgrades or safety enhancements.

The installation of electrical busses, and other wiring in the airplane may of course be approved pursuant to original factory TC data, by FAA field approvals, or simply by a reference to the acceptable data in sections and paragraphs within AC43.13-1B & 2A, on the FAA form 337.