



U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: **ACTION:** Requesting Review of and Concurrence With,
Equivalent Level of Safety (ELOS), Cessna Aircraft
Company Model 206H/T206H, 14 CFR 23.1401,
Anticollision Light System; ACE-02-02

Date: December 3, 2001

From: Manager Wichita Aircraft Certification Office,
ACE-115W

Reply to Scott West
Attn. of: 316-946-4146

To: Manager Small Airplane Directorate, ACE-100

This memorandum is to document concurrence with an equivalent level of safety for the anticollision light requirements of 14 CFR 23.1401.

Background

Original application for type certification of the Model 206 was made on 09 November 1962. The anticollision light utilized for the early Model 206 series aircraft was therefore in compliance with the requirements for a red rotating beacon in effect at the time per CAR 3, paragraph 3.705. Strobe lights were later installed on the aircraft which are in agreement with the guidance provided in FAA Advisory Circular AC 20-30(). When the Model 206H was certified in November 1997, an updated certification basis was voluntarily adopted utilizing FAR 23 per Amdt. 23-6 as a baseline, with paragraph 23.1401 applicable as it originally appeared in FAR 23. The requirements surrounding anticollision lights had changed significantly in-between the original CAR 3 certification basis and the new FAR 23 certification basis, such that the red rotating beacon installation's ability to meet the newer rule was unproven. After a review, the strobe light installation certified many years before was considered to be more readily employable for compliance. During certification of the Model 182T/T182T, the wing tip fairings which would later be utilized on MY 2002 206H/T206H aircraft were streamlined, and substantiation reports written for the new installation. At that time, it was discovered that the color of the strobe lights (aviation white) did not meet the requirement for aviation red anticollision lights as found in the certification basis of the aircraft, and a later amendment level which would have allowed the use of white anticollision lights could not be incorporated into the certification basis due to an attendant four-fold increase in required light emission intensities.

The FAA granted an ELOS for the anticollision light system for certification of the Models 182T and T182T. This same system will also be utilized on the Models 206H and T206H for the Block Point 2002 configuration.

Applicable Regulations

14 CFR 23.1401

Applicant's Position

As with the 182T/T182T, Cessna holds that the white anticollision light installation on the Model 206H/T206H meets or exceeds the safety level provided by FAR 23.1401 per Amdt. 23-N/C. The installation is shown to be directly compliant aside from color alone.

The system components are approved for installation on other Cessna aircraft via STCs and attendant PMA approvals owned by Whelen Engineering, Inc., as well as being approved by ELOS on the 182T/T182T. The FAA has reviewed and approved the operation and use of the strobe element, the lens, and the power supply used on the 206H/T206H as parts of anticollision light systems on many other aircraft, and has issued amended TCs, STCs and PMA authorizations as necessary.

As with the anticollision light system of the 182T/T182T, the strobe light intensities of the Model 206H/T206H installation meet or exceed all minimum intensity requirements of FAR 23.1401 per Amdt. 23-N/C, the anticollision light regulatory requirement per the certification basis of the aircraft. The FAA has issued an ELOS on the 182T/T182T, and STCs for installation of the components on many different aircraft; therefore, the 206H/T206H system and its components have already received FAA approval in other anticollision light systems. Furthermore, FAA issuance of those same Amended TCs, STCs and PMAs for acceptance of the components on applicable aircraft also prove prior FAA acceptance of the use of aviation white lenses in lieu of the aviation red lenses required by 23.1401 per Amdt 23-N/C.

Technical details of component usage and previous installation approvals may be found in the FAA ELOS Memorandum issued for the Models 182T/T182T dated 20 February 2001, "Subject: ACTION: Requesting Review of and Concurrence With, Equivalent Level of Safety (ELOS), Cessna Aircraft Company Model 182T/T182T, 14 CFR 23.1401, Anticollision Light System. ACE-01-03."

Further considerations:

At the next revision after that contained in the certification basis of the 206H/T206H (Amendment 23-11, effective 11 August 1971), paragraph 23.1401 was revised to allow for the use of either aviation red or aviation white anticollision lights.

FAA Advisory circular AC20-30B dated 20 July 1981 specifically allows for the use of white anticollision lights for aircraft with certification bases using amendments 23-N/C through 23-11, and 14 CFR 91.205(c)(3) also provides a general exemption for the use of aviation white anticollision lights on aircraft whose type certificates were issued or applied for prior to 11 August 1971, the date of effectivity for Amendment 23-11 discussed above.

Due to the fact that the FAA has already provided acceptance of the use of white anticollision lights on aircraft via FAA regulations, advisory material, issuance of amendment to TC 3A13

for the Model 182T/T182T, STCs and PMA approvals, due to the fact that these same approvals also attest to the technical acceptability of the system components utilized on the 206H and T206H for aircraft with the same anticollision light certification basis requirements, and due to the fact that the system installation is shown to meet the requirements of the Models 182T/T182T and 206H/T206H, Cessna maintains that an equivalent level of safety has been well-established for the anticollision light system utilized on the Models 206H and T206H.

FAA's Position

The FAA agrees that the current Cessna Model 206H/T206H anticollision light configuration has been analyzed and provides an equivalent level of safety as that required by 14 CFR 23.1401 through Amendment 23-10.

Recommendation

The certification basis for the Cessna Models 206H/T206H will include an Equivalent Level of Safety finding for 14 CFR 23.1401.



Ronald K. Rathgeber

Manager

Wichita Aircraft Certification Office

Concurrence:



Manager, Standards Office, ACE-110



Date



Manager, Small Airplane Directorate, ACE-100



Date