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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 35

[Docket No. NE125; Special Conditions No. 35-003-SC

Special Conditions: Hamilton Sundstrand, Model 54H60-77E Propeller

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: The FAA is issuing special conditions for the Hamilton Sundstrand model 54H60-77E constant speed propeller. This four-bladed propeller will have a dual acting digital electro-hydraulic propeller control system, which is a novel or unusual design feature. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is December 1, 2003. The FAA must receive comments on or before January 30, 2004.

ADDRESSES: Mail or deliver comments on these special conditions to: Federal Aviation Administration, Office of the Assistant Chief Counsel, Attention: Rules Docket NE125, 12 New England Executive Park, Burlington, Massachusetts, 01803-5299. You must identify the docket number NE125 at the beginning of your comments, and you should submit two copies of your comments. You may review the public docket containing comments to these special conditions in person at the Office of the Regional Counsel between

8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jay Turnberg, FAA, Engine and Propeller Standards Staff, Engine and Propeller Directorate, Aircraft Certification Service, ANE-110, 12 New England Executive Park, Burlington, Massachusetts, 01803-5229; telephone (781) 238-7116; fax (781) 238-7199; e-mail: jay.turnberg@faa.gov.

SUPPLEMENTARY INFORMATION:

The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the approval design and thus delivery of the affected aircraft. In addition, the substance of these special conditions has previously been subject to the public comment process with no substantive comments received. The FAA therefore finds that good cause exists for making these special conditions effective on December 1, 2003.

Comments Invited

The FAA has determined that good cause exists for making these special conditions effective December 1, 2003; however, the FAA invites interested parties to submit comments on the special conditions. You must identify the docket number NE125 at the beginning of your comments, and you should submit two copies of your comments. The FAA will consider all comments received by the closing date. The FAA may change these special conditions in light of the comments received. All comments submitted will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. The docket will contain a report summarizing each substantive public contact with FAA personnel concerning this proposal. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NE125." The postcard will be dated-stamped and returned to the commenter.

Background

On February 24, 2003, Hamilton Sundstrand applied for an amendment

to Type Certificate No. P906 to include the new 54H60-77E propeller. The model 54H60-77E, which is a derivative of the model 54H currently approved under Type Certificate P906, uses a dual acting digital electro-hydraulic propeller control system (EPCS).

Digital electronic control introduces potential failures associated with electrical power, software commands, data, and environmental effects that can result in hazardous propeller effects. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These special conditions address the following airworthiness issues for the Hamilton Sundstrand 54H60-77E propeller:

1. Safety assessment.
2. Propeller control system.

These special conditions contain the additional safety standards necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

Type Certification Basis

Under the provisions of 14 CFR 21.101, Hamilton Sundstrand must show that the 54H60-77E meets the applicable provisions of the regulations incorporated by reference in Type Certificate No. P906 or the applicable regulations in effect on the date of application for the change to the model 54H. The regulations incorporated by reference in the type certificate are commonly referred to as the "original type certification basis." The regulations incorporated by reference in P906 are Civil Air Regulation (CAR) part 14, as amended in December 15, 1959.

In addition, if the regulations incorporated by reference do not provide adequate standards with respect to the change, the applicant must comply with certain regulations in effect on the date of application for the change. Hamilton Sundstrand has elected to show compliance with part 35, as amended through Amendment 7, dated December 28, 1995, for the 54H60-77E.

If the Administrator finds that the applicable airworthiness regulations (*i.e.*, 14 CFR part 35) do not contain adequate or appropriate safety standards for the 54H60-77E because of a novel or unusual design feature, special conditions are prescribed under the provisions of 14 CFR 21.16.