

Exemption No. 8066

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
KANSAS CITY, MISSOURI 64106

In the matter of the petition of

West Pacific Air LLC

for exemption from § 23.973(f)
of Title 14 of the Code of Federal Regulations

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* Regulatory Docket No.
* FAA-2002-13875-1
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GRANT OF EXEMPTION

By letter dated November 14, 2002, Mr. Darwin Conrad, West Pacific Air LLC, 6427 Rutter Road, Felts Field Airport, Spokane, WA 99212 petitioned for an exemption from § 23.973(f) of Title 14 of the Code of Federal Regulations (CFR) to permit type certification of the Beech Model A36, A36TC, and B36TC airplanes as modified under Supplemental Type Certificate (STC) SA01156SE with fuel tank filler connection openings smaller than the 2.95 inches specified in the rule. STC SA01156SE was issued on December 20, 2002.

The petitioner requires relief from the following regulation(s):

Section 23.973(f), in pertinent part, requires the inside diameter of the fuel filler opening to be no smaller than 2.95 inches for turbine engine powered airplanes.

The petitioner supports its request with the following information:

Statement of Requirement:

14 CFR, part 23, § 23.973(f) states, “For airplanes with turbine engines, the inside diameter of the fuel filler opening must be no smaller than 2.95 inches.”

The present fuel filler inside diameter is 2.375 inches to preclude the introduction of turbine engine fuel (Jet-A or similar) into the fuel system that supplies a reciprocating engine.

Discussion:

West Pacific Air LLC has submitted an application for a STC to install Pratt & Whitney Canada PT-6 engines in Beech Models A36, A36TC, and B36TC airplanes.

The certification basis was determined to be the original certification basis of the airplane as given in Type Certificate Data Sheet (TCDS) 3A15, and in addition the Pacific Air volunteered compliance with the requirements of part 23 given in Advisory Circular 23-14, at the amendment levels in affect on September 29, 1999, the date of application. The fuel tank filler connection inside diameter requirements were imposed by amendment 23-43, and consequently are part of the certification basis for this project.

Rationale for an Exemption from this Requirement:

The requested exemption from strict compliance with the requirements of 14 CFR, part 23, § 23.973(i) is based on the following points:

1. The large filler diameter will not preclude the introduction of Av-gas in a system intended for Jet-A.
2. Av-gas is an approved emergency fuel for the PT6-21 and -34 engines installed by this project, consequently it is not possible to misfuel this aircraft.
3. All fuel tank fillers will be placarded for Jet-A, which will fulfill the goal of, providing a visual cue for the use of Jet-A fuel.
4. The modified fuel system will be tested to the pressure requirements associated with Av-gas to insure that a mistaken introduction of this fuel will not have a detrimental effect on engine performance or safety of flight.

Equivalent Level of Safety:

Since the modified airplane will be able to use any possible fuel that is placed in the system without a performance penalty, and since the design and certification of the modification was based on the worst-case fuel (100LL), the level of safety associated with this airplane is not affected by this proposed exemption.

Public Interest:

Since the fuel tanks involved are bladder tanks, strict compliance with the requirements of 14 CRF, part 23, § 23.973(f) places a severe economic penalty on West Pacific Air LLC with no corresponding increase in safety. Strict compliance with this regulation, therefore, imposes an undue burden on a small business, and serves to stifle ingenuity and resourcefulness of a small business.

Comments on published petition summary:

A summary of this petition was published in the FEDERAL REGISTER for public comment on January 13, 2003, 68 FR 1648. The comment period closed February 3, 2003. One comment was received.

The Federal Aviation Administration's (FAA) analysis is as follows:

To obtain this exemption, the petitioner must show, as required by § 11.25(b)(5), that: (1) granting the request is in the public interest, and (2) the exemption will not adversely affect safety, or that a level of safety will be provided that is equal to that provided by the rules from which the exemption is sought.

The FAA has carefully reviewed the information contained in the petitioner's request for exemption.

The FAA agrees with the substance of the petitioner's argument and supporting data and finds no reason to deny the petition. In the interest of efficiency, this analysis addresses substantive issues only.

The FAA believes that granting the exemption helps realize the potential public benefit created by the introduction of turbine engines with the attendant improvements in performance and operating costs.

There was one comment received during the public comment period. This comment concerned the limitations for using Av-gas as an emergency fuel in the PT6 engine, and the need to address the compatibility of the jet fuel with the fuel system.

In response to the engine fuel use, the FAA found that the use of Av-gas as an emergency fuel is part of the limitations for the engine as documented on the engine TCDS, E4EA note 8. This note limits the use of MIL-G-5572, Grades 80/87, 91/98, 100/130, and 115/145 for a period not to exceed 150 hours during any overhaul period. It is noted on the TCDS that purging of the fuel

system is not required when switching fuel types. Logbook entries and tracking of the introduction of Av-gas into the fuel system is required by the engine manual.

In response to the compatibility issue, the fuel system has been substantially modified, and the compatibility of the fuel system components with jet fuel has been addressed for the new and remaining components.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not adversely affect safety. Therefore, pursuant to the authority contained in Sections 313(a) and 601(c) of the Federal Aviation Act of 1958, as amended, delegated to me by the administrator (14 CFR, part 11, § 11.53), West Pacific Air LLC is granted an exemption from § 23.973(f) to the extent necessary to allow type certification of the Beech Model A36, A36TC, and B36TC airplanes as modified under STC SA01156SE without an exact showing of compliance with the requirements of § 23.973(f). This exemption is subject to the following conditions and limitations:

1. The Airplane Flight Manual (AFM) must require a log book entry and subsequent tracking of the number of hours the engine is run with MIL-G-5572, Grades 80/87, 91/98, 100/130, or 115/145 after the introduction of any of these fuels into the fuel system. This requirement must reflect the limitations on the use of Avgas as stated in the engine manual and engine TCDS.
2. All fuel tank fill locations are required to have a placard specifying the aircraft is to be fueled with jet fuel per § 23.1557(c).
3. All fuel tank fill locations are required to have a placard specifying the use of the appropriate adapter to mate the jet fuel nozzle with the airplane fuel filler opening.
4. The AFM is required to contain instructions for using the appropriate adapter to mate the jet fuel nozzle with the airplane fuel filler opening. These instructions should specify the part number of the adapter.

Issued in Kansas City, Missouri on June 26, 2003.

s/

Michael Gallagher
Manager, Small Airplane Directorate
Aircraft Certification Service

