

TELEDYNE CONTINENTAL[®] AIRCRAFT ENGINE SERVICE BULLETIN

CATEGORY 3

SB 00-4A

**Technical Portions
FAA APPROVED**

SUBJECT: AUSTRALIAN AVGAS CONTAMINATION

PURPOSE: To provide owners, operators and maintenance facilities with the minimum maintenance requirements for TCM engine fuel systems which have been operated with avgas contaminated with Ethylenediamine (EDA)

COMPLIANCE: For engine fuel systems operated on avgas contaminated with EDA compliance with this service bulletin is required prior to further flight.

MODELS

AFFECTED: All

Teledyne Continental Motors (TCM) has received requests for maintenance recommendations for engine fuel systems that have been operated on Ethylenediamine (EDA) contaminated avgas.

Fuel samples taken from effected aircraft have found the EDA concentration to be less than 10 PPM. EDA is a clear liquid with an odor similar to ammonia. EDA is classified as a hazardous material. Exposure of the skin to EDA in is likely to cause skin irritation. Higher levels of concentration may result in skin burns. Inhalation of EDA vapors at a concentration level of 200 PPM (parts per million) for 5 to 10 minutes will cause nasal irritation and possible wheezing.

When Ethylenediamine comes into contact with brass or copper alloy materials this normally clear substance will become a dark material that may restrict small passages and orifices in the engine fuel system. Therefore, TCM recommends that any TCM fuel injected engine that has been operated on EDA contaminated avgas have the complete fuel injection system removed from the engine for overhaul or replacement.

TCM engines equipped with fuel systems manufactured by Precision Airmotive Corporation must comply with Precision Airmotive Corporation service bulletins MSA-11 for engines equipped with carburetors and PRS-104 for engines equipped with Precision RS / RSA fuel injection servos.

NOTE: Clearly identify all removed fuel injection systems as having been operated on EDA contaminated avgas.

Fuel Injection systems removed from engines operated on EDA contaminated avgas may be exchanged for Factory Rebuilt Fuel Injections Systems. Refer to TCM SIL 98-6B, or later revision, for fuel injection system applications. Exchange pricing is available from your local TCM Distributor.

Fuel injection systems that have been removed from engines operated on EDA contaminated avgas for field overhaul must be completely disassembled and all components cleaned and flushed with distilled water. All fuel system components and parts must be inspected in accordance with the latest revision of TCM Form X30593A (Fuel Injection System Overhaul Manual). Components containing brass, copper or bronze alloys must be visually inspected for possible etching or pitting of there surface. Replace any fuel system component that exhibits etching or pitting of its surface. Clearly identify these components as "removed from an engine fuel system operated on EDA contaminated avgas". Thoroughly dry all fuel injection components and parts.

NOTE: EDA contaminated water must be disposed of as a hazardous material.

Refer to the latest revision of TCM Form X30593A (Fuel Injection System Overhaul Manual) for specific instructions for overhaul of TCM fuel injection systems.

Field overhauled fuel injection systems will not be covered by any TCM warranty policy. Warranty coverage for engines operated on avgas contaminated with EDA may be affected since there is no historical data on the effects EDA contaminated fuel may have on internal engine parts and components. If a possible

ISSUED			REVISED			 CONTINENTAL MOTORS <small>A Teledyne Technologies Company</small> <small>P.O. BOX 90 MOBILE ALABAMA 36601 • 334-438-3411</small>	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		1 of 2 SB 00-4	A
02	18	2000	03	07	2000			

warranty situation arises, TCM will assess the occurrence and possible warranty coverage on an individual basis.

Prior to returning the aircraft and engine to service, ensure that the aircraft fuel system has been flushed of all EDA contamination in accordance with CASA AD/GENERAL/80 Amdt. 2 or later revision for "Simple Aircraft", or CASA AD/GENERAL/81 Amdt.2 or later revision for "Complex Aircraft". Additionally, comply with the instructions for continued airworthiness as provided by the aircraft manufacturer prior to returning the aircraft to service.

Perform all necessary ground run ups and adjustments as required to the engine fuel injection system in accordance with TCM (Service Information Directive) SID97-3, or later revision.

Visually inspect the engine and engine nacelle for security of all components, lines and hoses. Inspect for evidence of fuel and oil leaks. Correct any discrepancies noted.

Make an entry in the engine logbook(s) clearly stating that the aircraft was serviced with EDA contaminated avgas and that the engine was operated on EDA contaminated avgas. Indicate the method of compliance with the applicable CASA AD (s) for decontamination of the aircraft fuel system and any specific instruction published by the aircraft manufacturer. On engines equipped with carburetors or fuel servo units manufactured by Precision Airmotive Corporation reference compliance with the applicable Precision Airmotive Corporation Service Bulletin. For TCM fuel injected engines reference compliance with this service bulletin. Include in the logbook entry the method of compliance, i.e. replacement or overhaul of the unit or system.

ISSUED			REVISED			 CONTINENTAL MOTORS <small>A Teledyne Technologies Company</small> <small>P.O. BOX 90 MOBILE ALABAMA 36601 • 334-438-3411</small>	PAGE NO	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		2 of 2 SB 00-4	A
02	18	2000	03	07	2000			