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SAIB: NE-07-23R1

Date: April 18, 2007

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*This is information only. Recommendations aren't mandatory.*

## Introduction

This Special Airworthiness Information Bulletin (SAIB) revises **TCM affected engine models** and alerts owners, operators, maintenance organizations, parts suppliers, and distributors to inspect their aircraft, aircraft records, and/or parts inventories for **Thompson Products Inc. Engine-driven fuel pump, part number (P/N) TF-1900**, approved for return to service by Thunderbird Aircraft Parts, Inc.

## Models Affected

Raytheon Aircraft Company BEECH 35, A35, B35, C35, D35, E35, F35, G35, and 35R.

Teledyne Continental Motors (TCM) E225-2, -4, -8, and -9; E165-2, -3, -4; E185-1, -2, -3 (Military O-470-7, -7A); E185-5, -8, -9 (Military O-470-7B), -10, and -11.

## Background

Information received during a Federal Aviation Administration (FAA) suspected unapproved parts investigation revealed that prior to April 26, 2005, Thunderbird Aircraft Parts, Inc., improperly maintained and approved for return to service, Thompson engine-driven fuel pump, P/N TF-1900, applicable to the aircraft and engine models listed above.

FAA service difficulty reports from 1993 thru 2005 indicate that the Thompson engine-driven fuel pump, P/N TF-1900, had caused three engine stoppage events due to fuel pump drive gear shaft failures causing loss of fuel pressure to the carburetor. One of these events caused an aircraft accident on May 12, 2005, involving a Raytheon Aircraft Company BEECH Model C35 that lost engine power and experienced a forced landing. The failed fuel pump was confirmed to have been a Thompson engine-driven fuel pump, P/N TF-1900, previously repaired by Thunderbird Aircraft Parts, Inc.

## Recommendations

We recommend that, aircraft owners, operators, and maintenance organizations inspect Thompson engine-driven fuel pumps, P/N TF-1900. Inspect within the next 100 hours time-in-service (TIS), for either the presence of a label affixed to the fuel pump's relief valve body reading "THUNDERBIRD AIRCRAFT PARTS Repair Procedure T.A.P. 200 Bethany, Oklahoma 73008" or for the vibro-etched wording "TAP-200" on the fuel pump's relief valve body. Comply with Unapproved Parts Notification (UPN) No. 2004-00053 issued on February 13, 2006, as follows:

1. If the label or vibro-etched wording is present, then the fuel pump should be replaced and quarantined.

2. If neither the label nor vibro-etched wording is present, then inspect the fuel pump's drive shaft as follows:
  - a. Removed the fuel pump from the engine and disassemble the pump to access the drive shaft.
  - b. Inspect the fuel pump's drive shaft for evidence of a "square" shape appearance. By design, the Thompson engine-driven fuel pump, P/N TF-1900, drive gear shaft has a "round" shape.
  - c. If the fuel pump drive gear shaft has a "square" shape, then the pump should be replaced and quarantined.

We also recommend that part suppliers and distributors inspect their parts inventories as specified in the above procedure.

We further recommend you send any information concerning the discovery of the Thompson engine-driven fuel pump, P/N TF-1900, approved for return to service by Thunderbird Aircraft Parts, Inc., from any source, to the FAA contact below. The requested information includes:

- The means used to identify the source.
- The actions taken to remove the part from the aircraft and/or parts inventory.

#### **For Further Information Contact**

Tausif Butt, Aerospace Engineer, Special Certification Office, Rotorcraft Directorate,  
2601 Meacham Blvd., Fort Worth, Texas 76137-4298  
Telephone (817) 222-5195; Fax (817) 222-5785  
Email: Tausif.butt@faa.gov