



Continental Motors

ENGINE FIELD RUN REPORT

ENGINE MODEL	IO-520-BA12A, Modified by Tornado Alley
ENGINE SERIAL NUMBER	562675
AIRCRAFT MAKE & MODEL	Beechcraft A-36 Bonanza
AIRCRAFT SERIAL NUMBER	E-977
AIRCRAFT REGISTRATION	N17544
FILE NUMBER	15-094

NAME	SIGNATURE	DATE
John T. Kent		11/04/2015

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EXAMINATION		ACCIDENT DATA	
DATE	10/29/2015	NTSB ACCIDENT #	
FACILITY	Air Salvage of Dallas	NTSB INVESTIGATOR	
ADDRESS	1361 Ferris Road, Lancaster, Texas 75146	FAA INVESTIGATOR	
		ACCIDENT DATE	
		ACCIDENT LOCATION	

ENGINE INFORMATION

ENGINE POSITION	Front
TOTAL TIME	6,213.8
TIME SOH	102.5
TYPE & TIME SLI	102.5
BUILD DATE	10/27/1976
IN SERVICE DATE	Unknown

Significant logbook information: The engine was overhauled by Titan Aircraft in LaMarque, Texas on 12/28/2014. The last annual inspection was performed by Titan Aircraft on 01/02/2015. On 6/23/2015 fuel pump part number 646210-2, serial number E069113BR, was overhauled by Navajo Accessories Inc. in San Antonio, Texas at the request of the aircraft owner. That fuel pump was installed on the aircraft at the request of the owner. According to the Insurance Adjuster this fuel pump was installed on the aircraft 1.2 Tachometer Hours before the accident. According to representatives of Tornado Alley the proper part number fuel pump for this application is FT-B8.5/1-632818-2. Fuel Pump part number 646210-2 is the application for the TSIO-520-E,J,K, or N.

Report Summary:

Search Code(s):

An engine run on the airframe was attempted on 10/29/2015 at Air Salvage of Dallas. The engine would run to power and then lose power. Power could be restored with use of the electric boost pump, but then the engine would lose power again. After the run it was confirmed that the wrong fuel pump was installed on the engine.

Disposition of engine following exam:

Unknown

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NAME	John T. Kent	NAME	Bill Wallace
ADDRESS	████████████████████ ████████████████████	ADDRESS	████████████████████ ████████████████████
ORGANIZATION	Continental Motors	ORGANIZATION	Tornado Alley
PHONE	██████████	PHONE	██████████
NAME	Joshua Lindberg	NAME	Alfred " Lucky" Louque
ADDRESS	4760 Oakland Street, Suite-500, Denver, Colorado 80239	ADDRESS	████████████████████ ████████████████████
ORGANIZATION	NTSB	ORGANIZATION	Air Salvage of Dallas
PHONE	303-373-3514	PHONE	██████████
NAME	Pete Basile	NAME	
ADDRESS	Wichita, Kansas	ADDRESS	
ORGANIZATION	Textron Aviation	ORGANIZATION	
PHONE	██████████	PHONE	

EXTERNAL INSPECTION OF ENGINE

The engine was not damaged, and was run on the airframe using the original propeller. The clamp on the right side of the balance tube was not properly installed and had been leaking intake gas.

The top spark plugs were removed and examined before the run. They had normal wear and dark deposits in the electrode areas when compared to the Champion Check-A-Plug comparison card. They were Champion RHB-32E spark plugs.

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ENGINE PREPARATION PRIOR TO RUN

A five gallon gas can was attached to the left side of the aircraft fuel system and the airframe was strapped to a trailer. The original propeller was used for the run. After the first run the right side balance tube hose clamp was repaired for the second run.

DESCRIPTION OF RUN

The engine was started using the aircraft fuel pump. It was allowed to idle for a few minutes and then accelerated. A magneto drop check was performed at 1700 RPM, and each magneto dropped 100 RPM. The engine was then accelerated to 2700 RPM and 31.5 inches of manifold pressure. It held that RPM for a few seconds, and then began to lose power.

The engine was shut down and the clamp on the right side of the balance tube was repaired. The engine was started again and accelerated to 2700 RPM. After reaching 2700 RPM the engine began to lose power. The electric boost pump was activated and the engine regained RPM for a few seconds, and then began to lose power again. The engine lost power down to 1700 RPM and the fuel flow also dropped. The engine was then shut down.

After the run it was determined that the engine was equipped with the wrong fuel pump. The aircraft fuel screen was removed and examined and it was properly installed and was clean and clear. At this time the investigation was terminated. Please see the Air Salvage of Dallas Run Sheet for details of the runs. Please see the run video to observe the run.



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According to the Tornado Alley Representative the engine was equipped with the wrong engine driven fuel pump. He said that the correct pump was part number FT-B8.5/1-632818-2. The engine driven fuel pump installed on the accident engine was part number 646210-2. That fuel pump part number is the application for a TSIO-520-E,J,K, or N.