



Air Safety Investigations

LEFT ENGINE FIELD RUN REPORT

FINAL

ENGINE MODEL: TSIO-520-VB (10)

ENGINE SERIAL: 836152-R

AIRCRAFT MODEL: Cessna 420C

SERIAL NUMBER: 402C0101

REGISTRATION: N2615G

| Examiner | Signature | Date |
|------------|-----------|------------|
| Sara Irwin | | 01/30/2009 |

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GENERAL INFORMATION

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| DATE OF RUN: | 01/24/2009 |
| FACILITY: | Naples Municipal Airport |
| ADDRESS: | 160 Aviation Drive North Naples, FL 34104 |
| TELEPHONE: | 239-643-0733 |

AIRCRAFT INFORMATION

| | | | |
|-----------------------|------------|-----------------------|-----------------|
| INCIDENT DATE: | 01/23/2009 | LOCATION: | Naples, Florida |
| MANUFACTURER: | Cessna | YEAR: | 1979 |
| MODEL: | 402C | SERIAL NUMBER: | 402C0101 |

ENGINE INFORMATION

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|-----------------------------------|-----------------------------------|------------------|-----|
| MAKE: | Teledyne Continental Motors | | |
| MODEL: | TSIO-520-VB (10) | | |
| SERIAL NUMBER: | 836152-R | | |
| BUILD DATE: | 07/31/2008 | | |
| TIME SINCE MAJOR OVERHAUL: | N/A | MOH DATE: | N/A |
| TOTAL TIME: | 469.8 hours | | |
| REMARKS: | Engine times provided by Cape Air | | |

INSPECTION WITNESSES

| | | | |
|----------------------|--|----------------------|--|
| NAME: | Sara Irwin | NAME: | Timothy W. Monville |
| ORGANIZATION: | TCM | ORGANIZATION: | NTSB |
| ADDRESS: | 2039 Broad Street Mobile, AL 36615 | ADDRESS: | 8240 NW 52 Ter, Ste 418 Doral, FL |
| PHONE NUMBER: | 251-436-8485 | PHONE NUMBER: | 305-597-4615 |
| NAME: | Joe B. Taylor | NAME: | Eduard Stalzer |
| ORGANIZATION: | FAA | ORGANIZATION: | FAA |
| ADDRESS: | 1 Cranberry Hl, Ste 402 Lexington, MA 02421 | ADDRESS: | 1 Cranberry Hill, Ste 402 Lexington, MA 02421 |
| PHONE NUMBER: | 781-274-7130 ext. 328 | PHONE NUMBER: | 781-274-7130 ext. 323 |
| NAME: | Ricardo J. Asensio | NAME: | Edward J. Zeglen |
| ORGANIZATION: | Cessna | ORGANIZATION: | Cape Air |
| ADDRESS: | P.O. Box 7704 Wichita, KS 67277 | ADDRESS: | 660 Barnstable Road Hyannis, MA 02601 |
| PHONE NUMBER: | 316-946-1803 | PHONE NUMBER: | 508-790-3122 ext. 546 |
| NAME: | Dan Shelley | NAME: | Bill Cush |
| ORGANIZATION: | Cape Air | ORGANIZATION: | Cape Air |
| ADDRESS: | 1 Private Sky Way Fort Myers, FL 33913 | ADDRESS: | 660 Barnstable Road Hyannis, MA 02601 |
| PHONE NUMBER: | 239-561-8808 | PHONE NUMBER: | 508-790-3122 ext. 589 |

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ENGINE HISTORY

According to the NTSB, on January 22, 2009, about 1848 EST, a Cessna 402C, N2615G, executed an emergency landing at Naples Municipal Airport (KAPF), Naples, Florida after experiencing a loss of power on both engines. The airline transport pilot and six passengers were not injured and the airplane was undamaged. Cape Air was operating as Continental Connection Flight 9399 under the provisions of Title 14 CFR Part 135. Visual meteorological conditions prevailed and an IFR flight plan was filed. The scheduled passenger flight departed Key West International Airport (EYW) about 1800 destined for Southwest Florida International Airport (RSW), Fort Myers, Florida.

During an interview with the NTSB, the pilot stated that the incident flight was his fourth flight of the day in N2615G. The pilot added 60 gallons of fuel before the third flight which was from Fort Myers to Key West. The pilot reported setting the right fuel selector to the left tank position for 15 minutes while in cruise. The flight arrived in Key West with no anomalies noted.

No fuel was added prior to the incident flight. The pilot reported that the takeoff and climb were uneventful. He noted that the right wing felt heavy and the fuel gauges read 280 lbs in the left tank and 160 lbs in the right tank. The pilot decided to move the left fuel selector valve to the right tank position for approximately 15 minutes. About 55 miles from Fort Myers, the pilot noticed that the left fuel tank indicator was about 300 lbs and the right was about 95 lbs. The right fuel indicator continued to decrease and the pilot became concerned but suspected an indication problem.

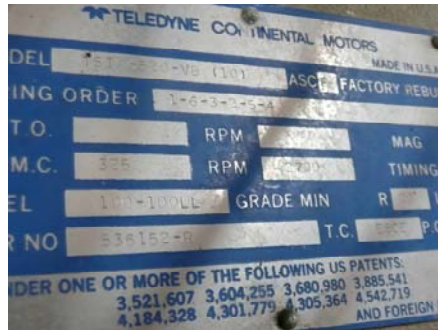
The pilot further stated that the right engine began to surge. He noticed that the left tank was still indicating 300 lbs while the right tank was indicating 0 lbs. He positioned the right selector to the left tank and the engine regained power. Immediately after, the left engine started to surge. The pilot reported that the right engine also began to surge just a short time later. He noted that he moved the fuel selectors to their respected main tank positions, feathered the propeller, and diverted for landing. The pilot also stated that all of the engine indications were normal with the exception of the power loss.

The engines were maintained by Cape Air under an Approved Aircraft Inspection Program (AAIP). The last inspection was Operation Number 5 and it was completed on 01/13/2009 at Hobbs time 6365.7 and total engine time of 702.7 hours.

EXTERNAL INSPECTION

The left engine was intact and undamaged with no anomalies noted. The propeller was found in the feathered position. Twenty-four hours after the incident, the NTSB IIC energized the airplane and read the fuel quantity indicators to be 275 lbs in the left tank and 45 lbs in the right tank. The NTSB also emptied all fuel sumps and confirmed the fuel to be 100 LL with no contaminants.

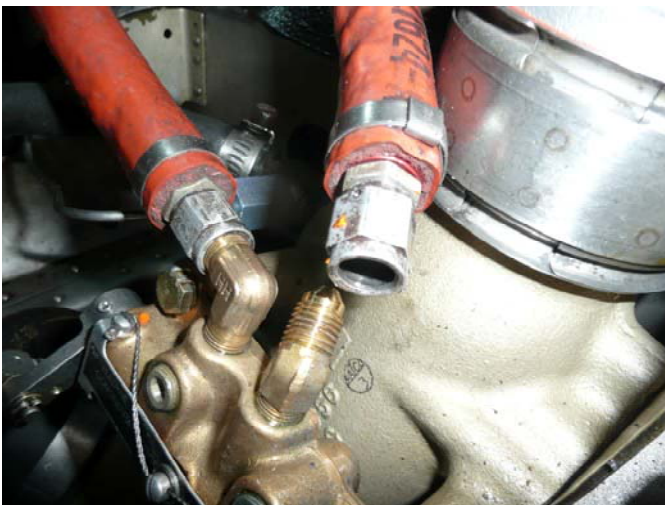
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ENGINE PREPARATION PRIOR TO RUN

The fuel system hoses were inspected and found to be tight. The hoses were disconnected and only residual fuel was in the lines. The fuel hoses were reconnected in preparation for the engine run.



DESCRIPTION OF RUN

The engine ran for 17 minutes through different ranges of power with no anomalies noted.

| | RPM | MP | Oil Pressure | Oil Temp | Fuel Flow (lbs/hr) |
|---------------|------|----|--------------|----------|--------------------|
| | 1700 | 18 | 50 | Green | 25 |
| Full Throttle | 2650 | 39 | 60 | Green | 200 |
| Cruise | 2300 | 26 | 50 | Green | 90 |
| Idle | 650 | 18 | 20 | Green | 5 |

Magneto Check at 1700 RPM: 100 RPM drop for both magnetos

The second engine run lasted 21 minutes and no defects were noted.

| | RPM | MP | Oil Pressure | Oil Temp | Fuel Flow (lbs/hr) |
|--------|------|----|--------------|----------|--------------------|
| Cruise | 2300 | 26 | 50 | Green | 90 |

Magneto Check at 1700 RPM: 100 RPM drop for both

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ENGINE RUN CONCLUSION

The engine run did not reveal any anomalies that would have prevented normal operation and production of rated horsepower. See the engine run video for additional information.





Air Safety Investigations

RIGHT ENGINE FIELD RUN REPORT

FINAL

ENGINE MODEL: TSIO-520-VB (4)

ENGINE SERIAL: 832068-R

AIRCRAFT MODEL: Cessna 420C

SERIAL NUMBER: 402C0101

REGISTRATION: N2615G

| Examiner | Signature | Date |
|------------|-----------|------------|
| Sara Irwin | | 01/30/2009 |

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GENERAL INFORMATION

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| DATE OF RUN: | 01/24/2009 |
| FACILITY: | Naples Municipal Airport |
| ADDRESS: | 160 Aviation Drive North Naples, FL 34104 |
| TELEPHONE: | 239-643-0733 |

AIRCRAFT INFORMATION

| | | | |
|-----------------------|------------|-----------------------|-----------------|
| ACCIDENT DATE: | 01/23/2009 | LOCATION: | Naples, Florida |
| MANUFACTURER: | Cessna | YEAR: | 1979 |
| MODEL: | 402C | SERIAL NUMBER: | 402C0101 |

ENGINE INFORMATION

| | | | |
|-----------------------------------|-----------------------------------|------------------|-----|
| MAKE: | Teledyne Continental Motors | | |
| MODEL: | TSIO-520-VB (4) | | |
| SERIAL NUMBER: | 832068-R | | |
| BUILD DATE: | 03/07/2007 | | |
| TIME SINCE MAJOR OVERHAUL: | N/A | MOH DATE: | N/A |
| TOTAL TIME: | 1731.9 hours | | |
| REMARKS: | Engine times provided by Cape Air | | |

INSPECTION WITNESSES

| | | | |
|----------------------|--|----------------------|--|
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The pilot further stated that the right engine began to surge. He noticed that the left tank was still indicating 300 lbs while the right tank was indicating 0 lbs. He positioned the right selector to the left tank and the engine regained power. Immediately after, the left engine started to surge. The pilot reported that the right engine also began to surge just a short time later. He noted that he moved the fuel selectors to their respected main tank positions, feathered the propeller, and diverted for landing. The pilot also stated that all of the engine indications were normal with the exception of the power loss.

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|---------------|------|----|--------------|----------|--------------------|
| | 1700 | 17 | 50 | Green | 25 |
| Full Throttle | 2650 | 39 | 60 | Green | 200 |
| Cruise | 2300 | 26 | 50 | Green | 90 |
| Idle | 700 | 16 | 20 | Green | 5 |

Magneto Check at 1700 RPM: 100 RPM drop for both magnetos

The second engine run lasted 21 minutes and no defects were noted.

| | RPM | MP | Oil Pressure | Oil Temp | Fuel Flow (lbs/hr) |
|--------|------|----|--------------|----------|--------------------|
| Cruise | 2300 | 26 | 50 | Green | 90 |

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