McCAULEY

January 10, 2003

Mr. Jason A. Ragogna
National Transportation Safety Board
624 Six Flags Drive, Suite 150
Arlington, TX 76011

Subject: Teardown Inspection of Propellers
From Cessna 310I, N8145M

Dear Mr. Ragogna:

The following report concerns the teardown inspection of the propellers from the above subject aircraft.

Subject propellers were installed on a Cessna 310I aircraft, N8145M, which crashed on July 4, 2002 at San Dimas, California. McCauley was requested to assist in the examination of the propellers and with the interpretation of damage indications. The propellers were inspected at McCauley on November 5, 2002 with the following in attendance:

| | | |
|---|---|---|
| Jason Ragogna | - | NTSB |
| Henry Soderlund | - | Cessna |
| Tom Knopp | - | McCauley |

The model numbers and serial numbers of the propellers were as follows:

| | Left Propeller | Right Propeller |
|---|---|---|
| Model No. | D2AF34C52-N/S-80GF-0 | D2AF34C52-KM/S-80GF-0 |
| Serial No. | 736121 | 685847 |
| Blade S/N | B21439YS | E494YS |
| Blade S/N | B21435YS | ($2^{nd}$ Bld. Not Recovered) |

As a result of our examination the following conclusions were drawn:

1. Propeller damage was a result of impact. There were no indications of any type of propeller failure prior to impact.

2. Both propellers were rotating at impact. Neither propeller was at or near the feather position at impact.

3. The left propeller was being operated under conditions of low power at impact.

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4. The right propeller was being operated with power at impact.

5. Both propellers were operating at or near the low pitch range at impact.

The conclusions noted above were based upon a variety of observations, some of which are noted below:

1. All propeller damage was of the type associated with impact forces, with gross deflections, was of sudden failure type, and there were no indications of any type of fatigue failure.

2. Feather stop mechanisms of each propeller were undamaged indicating mechanisms were not engaged at impact.

3. Piston position for both propellers was found to be in the vicinity of low pitch to latch positions.

4. Damage to right propeller was extensive and included the break-up of the propeller hub, indicating power at impact.

5. Left propeller overall damage was significantly less than that of right propeller, indicating lower energy (power) at impact.

If we can be of further assistance, please contact us. Enclosed is one set of photographs taken during the examination.

Very truly yours,

[redacted]

Thomas M. Knopp
Chief Engineer - Propellers

:stp

Enclosures