



NATIONAL TRANSPORTATION SAFETY BOARD

**Office of Aviation Safety
Western Pacific Region**

WEIGHT & BALANCE INFORMATION

**NTSB Accident: WPR14FA132
Accident Date: March 8 or 9, 2014 (Actual date/time uncertain)**

This document contains 3 embedded images

A. ACCIDENT

Location: Near Carson City Nevada
Date: Unknown
Aircraft: Cessna 120, N76856, Serial # 11290
NTSB IIC: Michael Huhn

B. EXAMINATION PARTICIPANTS:

Michael Huhn
Air Safety Investigator
National Transportation Safety Board
Western Pacific Region

Henry Soderlund
Air Safety Investigator
Cessna Aircraft Company
Wichita, KS.

Lee Oscar
Maintenance Inspector
FAA FSDO
Reno, NV

Michael Becker
Manager
FAA FSDO
Reno, NV

C. ACCIDENT SUMMARY

On Sunday March 9 about 1500 Pacific daylight time the wreckage of an airplane was detected by a private citizen while he was flying over a mountainous region about 6 miles southeast of Carson City airport (CXP) Carson City, Nevada. Carson City Sheriff's Office was notified, and search and rescue (SAR) personnel arrived at the accident site by about 1630 the same day. They reported the airplane tail number, and that there was 1 male individual on board, who was deceased.

According to an acquaintance of the pilot, he had flown to Carson City, in part to purchase cases of beer and soda; those cases constituted the vast majority of the cargo. The cans/cases were documented on scene in order to determine their quantity and distribution in the airplane, and those values were used to compute the weight and balance of the airplane.

The maximum weight and CG limits that appeared on a handwritten sheet that was found in the airplane correctly represented their respective values in the FAA Type Certificate Data Sheet and the Cessna Operator Manual.

The computations indicated that the airplane was about 130 lbs below its maximum certificated gross weight of 1,450 pounds, and was within its CG envelope.

D. WEIGHT & BALANCE INFORMATION



Figure 1 - Representative Beer Case



Figure 2 - Representative Soda Case

| | <u>WT</u> | <u>Arm</u> | <u>Moment</u> |
|-------------------|-----------|------------|----------------|
| Empty wt | 901.0 | +12.74 | +11480.43 |
| Pilot & Passen | | +19.5 | |
| Fuel @ 6lb/g | | +23.0 | |
| Oil @ 2lb/gt | | -31.5 | |
| Baggage | | +37.5 | |
| Gross wt. limit = | | | 1450lb |
| CG limits = | | | +13.5 to +17.7 |

Figure 3 - Weight and Balance Document Recovered From Airplane

E. WEIGHT & BALANCE COMPUTATIONS

| TAKEOFF Wt & CG | | | | | | | | | | |
|-----------------|--|---------------|-------------|-----------------|--|-------------|---------------------|----------------|---------------|--|
| Item | Station | Weight | Max Wt | Moment | | | | | | |
| | (Inches) | (Lbs) | (Lbs) | (In-Lbs) | | | | | | |
| EW | 12.74 | 901 | | 11478.74 | | | | | | |
| | | | | | Cargo (Distributed b/t Frt Seat and Baggage Compt) | | | | | |
| Ft seat Pilot | 19.5 | 170 | | 3315.00 | Item | Cans | Size (fl oz) | Density | Weight | |
| Ft Seat Pax | 19.5 | 50 | | 975.00 | BEER | 72 | 12 | 0.07 | 60.5 | |
| | | | | | Soda | 24 | 12 | 0.07 | 20.2 | |
| Baggage | 37.5 | 39 | 181.5 | 1462.50 | Tools | | | | 3.0 | |
| | | | | | Food | | | | 2.0 | |
| Fuel | 23 | 150 | 150 | 3450.00 | Pilot supplies | | | | 3.0 | |
| Oil | -31.5 | 8.5 | | | | | | | 88.6 | |
| TOTAL | 15.69 | 1318.5 | 1450 | 20681.24 | | | | | | |
| CG | FWD Limit 13.5 Aft Limit 17.7 | | | 15.69 | | | | | | |