Problem

What
Problem(s)
Man thrown from plane, killed

When
Date
March 29, 2013
Time
1515

Where
Different, unusual, unique
State, city
Southeastern Tennessee
Equipment
Zodiac 601 aircraft
Task being performed
Learning to fly from instructor

Impact to the Goals
Safety
Death of passenger
Environmental
N/A
Customer Service
Death of passenger
Production-Schedule
N/A
Property, Equip, Mtls
?
Labor, Time
Search for body

Analysis

Basic Level Cause Map - Start with simple Why questions.

Safety Goal Impacted
Death of passenger
Passenger ejected from plane
Passenger not wearing seat belt

More Detailed Cause Map
Add detail as information becomes available.

EJECTION FROM PLANE

Man falls 2,500' to death due to not wearing a seat belt

"The people inside the plane were not wearing seat belts. So when they lost control of the plane, in an attempt to regain control of the plane, the passenger was ejected."
- Bradley County Emergency Management Agency Director

Although there are, as always, multiple causes that resulted in the incident, the passenger death would have almost certainly been avoided had his seat belt been properly fastened.

Passenger not wearing seat belt

Safety Goal Impacted

Customer Service Goal Impacted

Labor Goal Impacted

Evidence: FAA inspection did not reveal any damage

Canopy not sealed to fuselage
AND
Canopy opened completely
AND
Evidence: FAA inspection did not reveal any damage

Passenger fell 2,500'

Passenger ejected from plane

Search for body

Canopy opened completely

Airplane entered negative g dive
AND
Pilot input?
OR
Inexperienced pilot (under instruction)

Change in air flow?

ATTEMPT TO PULL CANOPY DOWN

Unable to start engine

Evidence: FAA inspection did not reveal any damage

Instructor could not see seat belt
AND
No indication that seat belt was not fastened
AND
No warning that seat belt was not fastened
AND
Did not successfully refasten seat belt

Problem Solving • Incident Investigation • Root Cause Analysis

Step 1 Problem
What's the Problem?

Step 2 Analysis
Why did it happen?

Step 3 Solutions
What will be done?