

## **A. ACCIDENT**

Operator: Hendrick Motorsports  
Location: Key West, Florida  
Date: October 31, 2011  
Time: 1940 eastern daylight time<sup>1</sup>  
Aircraft: Israel Aircraft Industries G150, N480JJ

## **B. HUMAN PERFORMANCE SPECIALIST**

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## **C. SUMMARY**

On October 31, 2011, about 1940 eastern daylight time (edt), an Israel Aircraft Industries G150, N480JJ, went off the end of the runway on landing roll out at Key West International Airport (EYW), Key West, Florida. The nose landing gear collapsed and the airframe sustained structural damage. Visual meteorological conditions prevailed and an instrument flight rules (IFR) flight plan was filed. The certificated airline transport rated pilot-in-command (PIC), airline transport rated co-pilot and one passenger reported minor injuries. One passenger sustained serious injuries. The flight departed from Witham Field Airport (SUA), Stuart, Florida at 1900. The flight was conducted under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight.

## **D. DETAILS OF THE INVESTIGATION**

The Human Performance Specialist joined the accident investigation on February 16, 2012, to support the ongoing investigation. On March 7, 2012, the Human Performance Specialist interviewed the accident pilots. Representatives from the Federal Aviation Administration (FAA), Hendrick Motorsports, and Gulfstream Aerospace Corporation, and the accident's NTSB investigator-in-charge, participated in the interviews.

This report summarizes evidence obtained from these interviews and related documents.

## **E. FACTUAL INFORMATION**

### **1.0. Flight Crew Information**

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<sup>1</sup> All times are eastern daylight time based on a 24-hour clock, unless otherwise noted. Actual time of accident is approximate.

## 1.1. The Pilot in Command

The pilot in command (PIC), age 47, lived in Kannapolis, North Carolina. He was first hired by Hendrick Motorsports in January 2005 as a line pilot. Due to cutbacks, in December 2005, he flew for another racing team before rejoining Hendrick Motorsports in October 2008 as chief pilot. He held that position until August 2011 at which time he was upgraded to a captain and line pilot on the G-V. He was a line pilot at the time of the accident. He estimated that he had about 11,000 flight hours total time including about 300 hours on the G-150 of which about 155 hours were as PIC. A review of his FAA records indicated no accident or incident history or enforcement action.<sup>2</sup>

AIRMAN CERTIFICATE	ORIGINAL ISSUE DATE
Private Pilot – Airplane Single Engine Land	2/2/1983
Private Pilot – Airplane Single Engine Land – Instrument	1/26/1985
Commercial Pilot – Airplane Single Engine Land – Instrument	4/1/1985
Commercial Pilot – Airplane Single and Multiengine Land – Instrument	8/8/1985
Flight Instructor – Airplane Single Engine Land	4/18/1985
Flight Instructor – Airplane Single Engine Land – Instrument	6/8/1985
Flight Instructor – Airplane Single and Multiengine Land – Instrument	12/23/1985
Airline Transport Pilot – Airplane Multiengine Land	3/24/1987
Flight Engineer – Turbojet	3/15/1988
CE-525S Type Rating	6/6/1997
B757/767 Type Rating	7/9/2000
A320 Type Rating	12/31/2000
B737 Type Rating	9/28/2002
BE-1900 Type Rating	2/20/2005
SA-2000 Type Rating	8/26/2005
CL-65 Type Rating	3/7/2007
G-150 Type Rating	12/19/2008
G-V Type Rating	10/6/2011

The PIC's most recent Federal Aviation Administration (FAA) first class medical certificate was issued on September 6, 2011, with the limitation that the holder "must have available glasses for near vision." No medication use was noted on the application for the certificate.

At the time of the accident, the pilot was assigned to operate the G-150 and G-V at Hendrick Motorsports. According to records provided by Hendrick Motorsports, during the month of October 2011, the PIC accumulated 5.2 hours as PIC and 2 hours as second in command (SIC) in the G-150. He also accumulated 1.3 hours as PIC and 3.1 hours as SIC in the

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<sup>2</sup> A search of records at the National Driver Register found no history of driver's license revocation or suspension.

G-V, and 17.8 hours as PIC and 14.8 hours as SIC in the G-V simulator.<sup>3</sup> He last flew the G-150 on October 25, 2011, and the G-V on October 23, 2011.

He rated his health at the time of the accident as very good. He had to wear glasses for near vision and was wearing them the night of the accident. He did not have any problems with color vision. He did not have any hearing problems.

He had not had any changes, good or bad, to his health, financial situation, or personal life in the year preceding the accident.

### **1.1.1. The PIC's Preaccident Activities**

In the 72 hours prior to the accident, the PIC stated that there was nothing unusual about his activities. He did not recall any problems with his sleep. He typically was in bed by 2300 and was awake by 0700. He would fall asleep pretty quickly after he was in bed. He felt rested on the day of the accident and did not feel tired during the accident flight. He said he was in a good mood.

He did not recall the time he arrived for duty on the day of the accident, but said he typically arrived 1 and a half to 2 hours before a flight was to depart. The first flight of the day was departing Concord Regional Airport (JQF), Concord, North Carolina, for Witham Field Airport (SUA), Stuart, Florida. He ate a meal from a fast food restaurant prior to arriving at the airport.

The accident crew had a stopover in SUA for about 2 hours prior to departing for EYW. During that time, the PIC ate a sandwich, checked the weather several times and watched television. He did not recall if he had any caffeine during the stopover, but said he did not have any during the accident flight. He did not take a nap during the stopover.

In the 72 hours before the accident, the pilot did not take any prescription or non-prescription drugs that might have affected his performance.

### **1.2. The Co-Pilot**

The co-pilot, age 55, lived in Mooresville, North Carolina. He was hired by Hendrick Motorsports in May 1984 as a line pilot. From 1990-2005 he was the chief pilot/director of aviation. In 2005, at the request of the company owner, he became a dedicated line pilot and captain on the G-V. He was a line pilot at the time of the accident. The co-pilot estimated he had about 13,800 flight hours total time including about 75 hours on the G-150, of which about 35 hours was as PIC. A review of his FAA records indicated no accident or incident history.<sup>4</sup>

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<sup>3</sup> The pilot became type rated on the G-V on October 6, 2011.

<sup>4</sup> According to FAA records, the co-pilot reported a traffic offense on May 1, 1994, and on December 30, 2006, that resulted in a 10 day and 30 day revocation of his driver's license, respectively. A search of the National Driver Registry database revealed that the co-pilot was found not guilty for the May 1994 offense but was found guilty of the December 2006 offense. He completed 16 hours of drug education in January 2008. As a result of the 2006 conviction, he received a warning letter from the FAA.

Airman Certificate Original Date of Issuance:

AIRMAN CERTIFICATE	ORIGINAL ISSUE DATE
Private Pilot – Airplane Single Engine Land	4/12/1974
Commercial Pilot – Airplane Single Engine Land	4/19/1975
Commercial Pilot – Airplane Single Engine Land – Instrument	12/20/1975
Ground Instructor	7/29/1976
Flight Instructor – Airplane Single Engine Land	11/8/1976
Commercial Pilot – Airplane Single and Multiengine Land – Instrument	10/24/1977
Flight Instructor – Airplane Single and Multiengine Land	12/18/1978
Airline Transport Pilot – Airplane Multiengine Land	9/18/1979
CE-500 Type Rating	1/24/1980
LR-Jet Type Rating	3/4/1986
DA-20 Type Rating	8/15/1987
HS-125 Type Rating	5/20/1995
CL-600 Type Rating	8/5/1995
IA-Jet Type Rating	10/24/1995
G-1159 Type Rating	9/6/1996
BE-1900 Type Rating	11/8/1996
G-V Type Rating	10/2/2006
G-150 Type Rating	5/28/2010

Record of FAA Certificate Disapprovals:

Flight Instructor	9/27/1976
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On 9/27/1976, the co-pilot was disapproved for his flight instructor certificate after failing the oral examination. He was notified that the entire flight and oral examination would need to be re-accomplished. He completed the oral and flight check for the certificate on 11/8/1976.

The co-pilot's most recent FAA first class medical certificate was issued on July 19, 2011, with the limitation that the holder "must possess glasses for near vision." A medication to control elevated cholesterol was listed on the certificate. He was issued a 6 year authorization for special issuance of a medical certification which expires August 30, 2016.

At the time of the accident, the co-pilot was assigned to operate the G-150 and G-V at Hendrick Motorsports. According to records provided by Hendrick Motorsports, during the month of October 2011, the co-pilot accumulated 4 hours as PIC and 0 hours as SIC in the G-150. He also accumulated 6.3 hours as PIC and 3.2 hours as SIC in the G-V. He last flew the G-150 on October 17, 2011, and the G-V on October 23, 2011.

He rated his health at the time of the accident as good. His vision was 20/15 and he wore glasses to see up close. He was wearing them the night of the accident. He did not have any issues with color vision. His hearing was good and he did not wear a hearing aid.

In the year preceding the accident, he had not had any changes, good or bad, to his health, financial situation or personal life.

### **1.2.1. The co-pilot's Preaccident Activities**

In the 72 hours prior to the accident, the co-pilot stated that there was nothing unusual about his activities or sleep. He typically was in bed by 2230 and was awake between 0630 and 0700. He felt rested on the day of the accident flight and said it was an easy trip, there was no anxiety and it was a normal day. He thought he arrived at JQY between 1230 and 1300.

During the crew's layover in Stuart, the co-pilot ate a sandwich for dinner and did not recall having any caffeine on the night of the accident. He did not take a nap during the layover.

At the time of the accident he was taking a prescription medication once a day for cholesterol. He did not experience any side effects from the medication and he last took the medication the night before the accident. He did not take any other prescription or non-prescription drugs in the 72 hours before the accident that might have affected his performance.

## **2.0. Training**

The accident pilots received initial and recurrent training on the G-150 at FlightSafety International in Dallas, Texas. The PIC completed G-150 initial training on 12/19/2008 and his most recent recurrent training was completed on 1/21/2011. The co-pilot completed G-150 initial training on 5/28/2010 and his most recent recurrent training was completed on 1/21/2011. A review of the pilots' initial and recurrent training records revealed no items rated unsatisfactory. During initial training, the instructor noted that the co-pilot was "very meticulous with his entire checklist, both normal and abnormal" and was a "very good stick and rudder pilot..." It was noted during recurrent training that the co-pilot had not flown the G-150 since he was type rated and therefore he was "rusty on some systems, especially the FMS but making good progress" and he did a "good job with the aircraft." The PIC was noted in his latest recurrent training as having a "great attitude," and being "very disciplined with cockpit procedures and flew very well."

### **2.1. Brake failure**

Both pilots received training for normal and abnormal procedures relating to the hydraulic system, however, the training records did not specify which abnormal procedures were covered. The pilots stated in post-incident interviews they received training on brake failures on landing in the G150 but it was always associated with a hydraulic failure or hydraulic problem in flight. In the simulator, they would follow the procedure in the QRH and would set the brakes to emergency while in flight. They did not recall training for an unexpected brake failure after landing requiring them to engage the emergency brakes.

## **F. LIST OF ATTACHMENTS**

### **Attachment 1: Interview Summaries**

Submitted by:

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Katherine Wilson  
Human Performance Investigator  
June 7, 2012