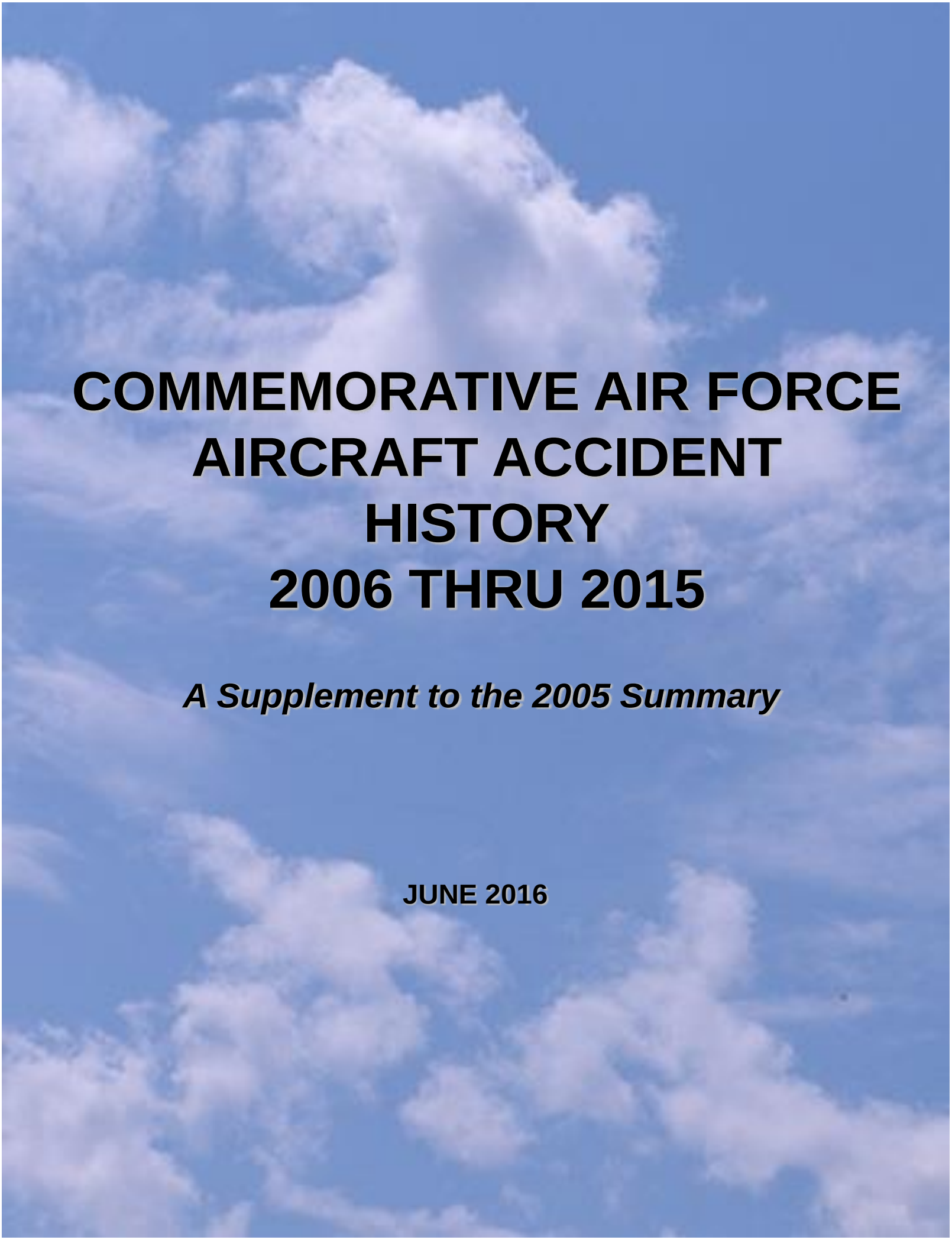

COMMEMORATIVE AIR FORCE AIRCRAFT ACCIDENT HISTORY 2006 THRU 2015

A Supplement to the 2005 Summary

JUNE 2016

SUMMARY AND COMMENTS

The format of this supplement follows the original accident summary published 10 years ago in June of 2006. The charts included in this document are updated charts from the original and include the historical data back to 1968. You should look at the data and come to your own conclusions, but here are some notes for this 10-year period to help you think:

- We averaged about 5,000 hours of flying with the later years over 5,000; this is much more than earlier periods and can be attributed to more aircraft flying and a higher ops tempo for many of those.
- There were 8 total accidents
- None were caused by malfunctions, although 2 had mechanical contributing factors
- There were no fatalities, which more than doubles previous periods
- Only 3 aircraft were destroyed and 2 of those were 9 years ago
- Half (4) of the accidents were ground loops, which is 1 more than in the previous 37 years. This is a significant point for two reasons:
    1. We started reporting all aircraft mishaps and let the FAA/NTSB investigate; we taxed a lot of airplanes to hangars in the earlier years and kept things to ourselves.
    2. The ground loops are the only trend during this period. Pilot error is not a trend; the normal pilot contribution to cause is 85%, so you could argue the lack of mechanical causes is a trend and a great one to have-buy your maintenance folks a beer!

NOTE: After the 2nd Stearman accident we established an Ad Hock Safety Group which looked closely at the recent ground loops (including the non-reportable). They created a training plan for Stearman operators which included techniques and procedures useful for all of our light conventional gear aircraft.

The bottom line is we are fortunate we didn't lose anybody in an aircraft accident. The bad news is we continue to have accidents which is the predicament of human operators and a risky business. Take a look at the accidents in this supplement and go online to refresh your memory about the accidents before 2006 - the original report is on the members' safety page. Start a discussion where you fly about things you have noticed which could be an accident waiting to happen. It is better to ruffle some feathers, than go to a funeral.

Bob Stenevik

YEARS	MISHAPS	FATAL MISHAPS & FATALITIES	PILOT ERROR	MAINTENANCE / MECHANICAL	UNKNOWN	MEDICAL	CONTRIBUTING FACTORS	% MAINT/MECH	REMARKS	
OCT 2013 - DECEMBER 2015	**0**								**2 years 2 months**	
SEP 2011 - SEP 2013	**5**	**0**	**5**						**2 years**	
AUG 2007 - AUG 2011	**0**								**4 years**	
OCT 2006 - JULY 2007	**3**	**0**	**3**				**1 mech, 1 winds**		**10 months**	
JUL 2005 - Aug 2006	**0**								**1 year 1 month**	
JUNE 2005 - APRIL 2001	11	6 & 9	8	3			1 mech,1 pilot, 2 winds	27%	4 YEARS 2 MONTHS	
MARCH 2001 - NOV 1997	0								3 YEARS 4 MONTHS	
OCT 1997 -SEP 1993	3	1 & 5	2	1			1 pilot	33%	4 YEARS 1 MONTH	only 3 accidents in 9 years & 4 months
AUG 1993 - SEP 1991	0								1 YEAR 11 MONTHS	
AUG 1991 - AUG 1987	8	3 & 3	4	2	1	1	1 pilot, 1 winds	25%	4 YEARS	
JUL 1987 - NOV 1984	0								2 YEARS 8 MONTHS	
OCT 1984 - SEP 1980	10	3 & 11	7	3				33%	4 YEARS 1 MONTH	
AUG 1980 - SEP 1975	0								4 YEARS 11 MONTHS	
AUG 1975 - APR 1971	6	1 & 3	3	3			2 pilot	50%	4 YEARS 4 MONTHS	
MAR 1971 - SEP 1968	0								2 YEARS 6 MONTHS	
AUG 1968 - last year of records	1			1				100%	1 YEAR	
TOTAL	**47**	**14 & 31**	**32**	**13**	**1**	**1**	**2 mech, 5 pilot, 4 winds**	**28%**		

YEARS	TAXI / BEFORE T.O.	TAXI / AFTER LNDG	TAKEOFF	CLIMB	CRUISE	MANEUVERING OFF AIRPORT	MANEUVERING AIRSHOW	DESCENT	APPROACH	LANDING
July 2005 - December 2015			**1**			**1**			**1**	**5**
JUNE 2005 - APRIL 2001			4				1		3	1
OCT 1997 -SEP 1993			1	1				1		
AUG 1991 - AUG 1987	1		3				2			2
OCT 1984 - SEP 1980			2			3	2			3
AUG 1975 - APR 1971	1		1		1				2	1
AUG 1968 - last year of records									1	
TOTAL (47)		**all taxi**	**5**	**1**	**1**	**4**	**5**	**1**	**7**	**12**
%			**11%**	**2%**	**2%**	**9%**	**11%**	**2%**	**15%**	**25%**
GA in the 2005 Nall report			**3.20%**	**2.10%**	**12.90%**	**8.70%**		**2.90%**	**17.20%**	**31.70%**

NOTE: the current Nall reports no longer break out the phase of flight

YEARS	LIAISON / OBSERVATION	PRIMARY TRAINERS	BASIC / ADVANCED TRAINERS	HIGH PER. / FIGHTERS	TWIN ENGINE	THREE AND FOUR ENGINE	
June 2005 - December 2015	**2**	**4**			**2**		
Category's percentage of mishaps	**25%**	**50%**			**25%**		
Category's percentage of Flying inventory (2015)	**18%**	**20%**			**17%**		
JUNE 2005 - APRIL 2001		2	2	5	2		
OCT 1997 -SEP 1993			1	1	1		
AUG 1991 - AUG 1987		2	4	3	1		
OCT 1984 - SEP 1980		2	4	3	1		
AUG 1975 - APR 1971			1	4	1		
AUG 1968 - last year of records				1			
TOTAL		6	11	16	6		
Category's percentage of mishaps	0%	15%	28%	42%	15%	0%	
Category's percentage of Flying inventory (2006)	19%	17%	23%	17%	19%	5%	

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47. August 17, 2013 in Lititz, PA: *L-6*
PILOT IN COMMAND - failure to control the airplane's pitch attitude
Contributing Factors: pilot's failure to set the trim for takeoff and wake turbulence from a preceding airplane

NTSB Identification: ERA13LA366
14 CFR Part 91: General Aviation
Accident occurred Saturday, August 17, 2013 in Lititz, PA
Probable Cause Approval Date: 08/07/2014
Aircraft: INTERSTATE S-1B1, registration: N46336
Injuries: 1 Uninjured.
The airplane departed as the fifth airplane in a formation of six airplanes during an airshow demonstration and was about 75 feet to the trailing right of the preceding airplane during the takeoff and initial climb. The pilot reported that, about 10 feet above ground level (agl), the airplane drifted right of the runway centerline and that he then realigned the airplane with the centerline. About 35 feet agl, he encountered "severe turbulence," and the airplane banked left uncontrollably. He attempted to regain control of the airplane; however, it stalled and subsequently impacted the ground in a nose-low attitude. A left crosswind of about 3 knots existed at the time of the accident. According to Advisory Circular 90-23F, "Aircraft Wake Turbulence," "a crosswind will decrease the lateral movement of the upwind vortex."
Post-accident examination revealed that the pitch trim was set in an almost full nose-up position. The pilot likely did not comply with the before takeoff checklist and confirm that the trim setting was at 0 before takeoff. In addition, the airplane likely encountered wake turbulence from the preceding airplane. The pilot reported no mechanical malfunction or abnormality that would have precluded normal operation.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The pilot's failure to control the airplane's pitch attitude, which resulted in an aerodynamic stall during the initial takeoff climb. Contributing to the accident was the pilot's failure to set the trim in accordance with the pre-takeoff checklist and the airplane's encounter with wake turbulence from a preceding airplane.

46. August 1, 2013 in Appleton, WI: *Stearman*
PILOT IN COMMAND - inadequate compensation for the crosswind, which resulted in a loss of directional control

NTSB Identification: CEN13CA457
14 CFR Part 91: General Aviation
Accident occurred Thursday, August 01, 2013 in Appleton, WI
Probable Cause Approval Date: 10/21/2013
Aircraft: STEARMAN A75, registration: N234X
Injuries: 2 Uninjured.
Prior to landing, the pilot listened to the automated weather station which reported the wind out of the west at 8 knots; the pilot would land on runway 21 for a normal crosswind landing. During the landing roll, the right wing lifted suddenly, the left wing contacted the ground, and the airplane ground looped. The pilot then asked the air traffic controller what the wind was, the air traffic controller responded that the wind was at 14 knots, gusting to 19 and getting stronger. Examination of the

airplane revealed substantial damage to the left wing.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The pilot's inadequate compensation for the crosswind, which resulted in a loss of directional control.

45. March 19, 2013 in Mesa, AZ: ***Stearman***
PILOT IN COMMAND - failure to maintain directional control during the landing roll

NTSB Identification: WPR13CA162
14 CFR Part 91: General Aviation
Accident occurred Tuesday, March 19, 2013 in Mesa, AZ
Probable Cause Approval Date: 07/18/2013
Aircraft: BOEING B75N1, registration: N47964
Injuries: 2 Uninjured.
The pilot reported that as the tailwheel-equipped airplane decelerated after touchdown, it tracked left of the runway centerline. He applied corrective control inputs; however, the airplane continued to track left and departed the runway. The right wing contacted the ground and was substantially damaged during the runway excursion. The pilot reported that during the recently completed 100-hour annual inspection, the tailwheel suspension strut was modified with a different type of strut and that the new strut did not compress on landing until after right rudder was applied. However, review of the tailwheel strut design revealed that the strut only affects the vertical movement of the tailwheel, and has no lateral control effects. Post-accident examination of the airplane revealed no evidence of a mechanical failure or malfunction that would have precluded normal operation.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The pilot's failure to maintain directional control during the landing roll.

44. August 18, 2012 in Mesa, AZ: *Stearman*
PILOT IN COMMAND - failure to maintain directional control during landing

NTSB Identification: WPR12CA372
14 CFR Part 91: General Aviation
Accident occurred Saturday, August 18, 2012 in Mesa, AZ
Probable Cause Approval Date: 11/26/2012
Aircraft: BOEING B75N1, registration: N47964
Injuries: 1 Uninjured.
The pilot reported that the purpose of the flight was to practice landings in the tailwheel-equipped airplane. The pilot said that during the landing roll the airplane veered left. He applied corrective control inputs in an effort to realign the airplane with the runway; however, the airplane continued left and exited the runway surface. During the accident sequence, the airplane's right wing contacted the ground, which resulted in substantial damage to the outboard section of the lower wing. The pilot reported that he was landing with a left quartering crosswind and that the airplane sustained no mechanical malfunctions or failures that would have precluded normal operation.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The pilot's failure to maintain directional control while landing in a crosswind.


43. September 10, 2011 in Waukegan, IL: *PT-26*
PILOT IN COMMAND - inadequate preflight inspection of the airplane, which resulted in fuel exhaustion
Contributing factors were a malfunctioning fuel gauge and air traffic

NTSB Identification: CEN11LA635
14 CFR Part 91: General Aviation
Accident occurred Saturday, September 10, 2011 in Waukegan, IL
Probable Cause Approval Date: 06/28/2012
Aircraft: FAIRCHILD M-62A-3, registration: N103JC
Injuries: 1 Minor.
Before flight, the pilot checked the airplane's fuel quantity using the fuel gauges but did not perform a visual inspection of the fuel tanks or top off the fuel tanks. The pilot selected the right fuel tank because its gauge indicated that it was 3/4 full. During the flight, the airplane experienced a total loss of engine power while on the downwind to base leg of the traffic pattern. The pilot turned toward the runway but realized that there was another airplane on short final that precluded his landing on the runway, so he elected to perform an off-airport landing to a field. Examination of the airplane revealed that there was no usable fuel aboard the airplane, the right fuel gauge indicated 3/4 full, and the left fuel gauge indicated empty. Federal Aviation Administration safety guidance information states that fuel gauges are subject to malfunctions and errors, and certification regulations only require that a fuel gauge read "zero" during level flight when the quantity of fuel remaining in the tank is equal to the unusable fuel supply. Therefore, fuel gauges should not be depended upon for checking the fuel quantity in a tank, and pilots should either top off fuel tanks or perform a visual inspection of fuel tanks to verify fuel

quantity.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The pilot's inadequate preflight inspection of the airplane, which resulted in fuel exhaustion and a total loss of engine power. Contributing to the accident were a malfunctioning fuel gauge and air traffic that prevented an on airport landing.

42. July 19, 2007 near Longmont, CO: ***C-45H***
PILOT IN COMMAND (IP) - failure to perform proper pre-flight
A contributing factor was the trees

NTSB Identification: DEN07LA122
The docket is stored in the Docket Management System (DMS). Please contact Records Management Division
Accident occurred Thursday, July 19, 2007 in Longmont, CO
Probable Cause Approval Date: 09/27/2007
Aircraft: Beech C-45H, registration: N9562Z
Injuries: 1 Serious, 1 Minor.
During the instructional flight, the instructor shut down the right engine and feathered the propeller. It was subsequently restarted, but the left engine started running rough and began to vibrate. The left engine was shut down and the propeller feathered. Level flight was maintained from power produced by the right engine. The left engine was then restarted but instead of producing thrust, the engine produced more drag so it was secured again. Then the right engine began losing power. Full power was applied but the airplane continued to descend. The instructor lowered the landing gear and while in-transit, the airplane clipped the tops of trees. He was able to guide the airplane between two houses and impacted an open field. The airplane bounced across the road, struck a power pole, and caught fire. The two pilots evacuated the airplane via the main cabin door. Examination at the airport of departure disclosed two pools of oil at the approximate positions of the two engines. There were two trails of oil leading from the parking spot down the taxiway and onto the runway. Both engines were partially disassembled and examined. There was evidence that both engines had failed catastrophically due to oil starvation. The left engine crankshaft was broken and all the piston heads were at the tops of their cylinders. Pieces of metal were recovered from the right engine oil sump. According to the operator, the engine rocker box recovery system must be drained during preflight to avoid hydraulic lock. The instructor stated that when they preflighted the airplane, the drain valves were open (the drained oil is captured and recycled). He thought they had closed both valves. According to the operator, either the pilot's failed to close the drain valves or they were jammed in the open position. The operator said the latter was unlikely "because you can feel it move when you close it."

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The instructor pilot's improper preflight in that he failed to close the rocker box recovery system drain valves, resulting in a total loss of lubricating oil and subsequent oil starvation to both engines. A contributing factor was the trees.


41. May 3, 2007 near Cherry Point, NC: *S-2B*
FLIGHT CREW - failure to comply with the published emergency procedure
A contributing factor was the failure of right engine magneto

NTSB Identification: NYC07LA107
The docket is stored in the Docket Management System (DMS). Please contact Records Management Division
Accident occurred Thursday, May 03, 2007 in Cherry Point, NC
Probable Cause Approval Date: 06/30/2008
Aircraft: Grumman S-2B, registration: N5234A
Injuries: 3 Serious, 2 Minor.
The retired military airplane was on an approximate 3-mile final approach to the runway when it experienced a loss of power in the right engine. The crew chief entered the cockpit and pushed the power levers forward when the pilot flying (PF) called for full power. The flight crew did not comply with the memory items, nor did they comply with the "challenge and reply items" on the airplane's checklist, but instead, the pilot not flying (PNF) feathered the propeller on the left (operating) engine based solely on the PF's comment that he was holding right rudder. When the PNF perceived the left engine slowing down, but no reduction in drag, he un-feathered the left propeller. During the subsequent descent, the airplane struck power lines, trees, terrain, and was destroyed in a post-crash fire ignited by the downed power lines. Examination of the wreckage revealed heavy gauge wire wrapped around the left propeller, with signatures consistent with operation at impact. Examination of the right engine revealed a seized, inoperative dual magneto.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The flight crew's failure to comply with the published emergency procedure following a loss of engine power on the right engine. Contributing to the accident was the failure of a magneto in the right engine.


40. October 12, 2006 in Fredericksburg, TX: ***L-3***
PILOT IN COMMAND - failure to compensate for the existing wind conditions
A contributing factor was the prevailing crosswinds

NTSB Identification: DFW07CA013.
The docket is stored in the Docket Management System (DMS). Please contact Records Management Division
14 CFR Part 91: General Aviation
Accident occurred Thursday, October 12, 2006 in Fredericksburg, TX
Probable Cause Approval Date: 1/31/2007
Aircraft: Aeronca 65-TAC, registration: N36687
Injuries: 2 Uninjured.
The 1,019-hour private pilot lost control of the tailwheel-equipped airplane after encountering a wind shift while landing on runway 14. The pilot reported that after checking the automated weather service station and windsock at the arrival airport, he attempted to land the single-engine airplane with a prevailing right crosswind on the dry 5,002-foot long asphalt runway. The pilot reported holding the control inputs to correct for the crosswind and suddenly encountering a wind shift from the left. The pilot indicated in the accident report (NTSB Form 6120.1), that after the main wheels touched down, the left wing lifted and the nose of the airplane turned left into the wind. The airplane then exited the left side of the 75-foot wide runway and initiated a ground loop on the wet grass adjacent to the runway. The fuselage of the airplane sustained structural damage and the pilot and passenger were not injured. The automated weather observation station on the field reported scattered skies with 10 miles visibility, with winds from 270 degrees at 6 knots.

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
The pilot's failure to compensate for the existing wind conditions; a contributing factor was the prevailing crosswind.