Aviation Investigation Final Report

Location:	AUBURN, California	**Accident Number:**	LAX96LA328
Date & Time:	September 4, 1996, 20:25 Local	**Registration:**	N425WB
Aircraft:	Cessna 425	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

According to the pilot, at the conclusion of a 2.5 hour cross-country flight, he landed without difficulty within the first 1/4 of runway 07, which was 3,100 long by 60 feet wide. He applied full reverse thrust, and then he discontinued its use as the airplane slowed and approached the last 1/3 of the runway. The pilot then depressed the brake peddles. The right peddle 'went to the floor,' and the airplane veered left. About 3/4 of the way down the runway, the pilot feathered the right propeller and applied power to the left engine. Despite these efforts, the airplane continued veering toward the left, and it eventually went into a ditch collapsing the nose gear. During a subsequent examination of the airplane's brake system, the right gear brake pads and disc were found in good (serviceable) condition. However, the O-rings in the brake housing had a distorted shape. When the brake system was pressurized, hydraulic fluid leaked past the O-rings. New O-rings were installed in the right brake assembly, and it was pressurized. No leaks were noted, and the brake system then appeared airworthy. The airplane was maintained on an approved inspection program, and it had been inspected about 110 hours before the accident flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the right brake system (master cylinder O-ring seal). Factors relating to the accident were: the narrow runway, and the presence of a ditch adjacent to the runway.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings
1. (C) HYDRAULIC SYSTEM,SEAL - FAILURE
2. (C) LANDING GEAR,NORMAL BRAKE SYSTEM - FAILURE
3. DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
4. GROUND LOOP/SWERVE

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
5. (F) AIRPORT FACILITIES,RUNWAY/LANDING AREA CONDITION - NARROW
6. (F) TERRAIN CONDITION - DITCH

Occurrence #3: NOSE GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings
7. LANDING GEAR,NOSE GEAR ASSEMBLY - OVERLOAD

Factual Information

On September 4, 1996, at 2025 hours Pacific daylight time, a Cessna 425, N425WB, landed on runway 07 at the (uncontrolled) Auburn Municipal Airport, Auburn, California. According to the pilot, he lost control of the airplane during rollout. The airplane veered left off the runway and was substantially damaged. Neither the commercial pilot nor passenger was injured. Visual meteorological conditions prevailed at the time, and an instrument flight rules flight plan was filed. The business flight originated from the Snohomish County Airport (Payne Field), Everett, Washington, at 1800.

The pilot reported that the airplane touched down within the first 1/4 of the runway, and he applied full reverse thrust. The application of reverse thrust was discontinued as the airplane approached the last 1/3 of the runway, and firm braking was initiated. As the brakes were applied the airplane veered left, and the "right (rudder) peddle went to the floor." The pilot further reported that he tried steering using the rudder but had little success. About 3/4 of the way down the runway, the pilot feathered the right engine's propeller and applied power to the left engine. Despite these efforts, the airplane continued veering toward the left side of the runway, and it eventually went into a ditch, collapsing the nose gear.

The airplane's brake system was examined by a mechanic from PassTime Aviation, Auburn. According to PassTime's general manager, the right brake pads and disc were found in good (serviceable) condition. The O-rings in the brake housing had a distorted shape. When the brake system was pressurized, hydraulic fluid leaked past the O-rings.

New O-rings were installed in the right brake assembly and it was pressurized. No leaks were noted, and the brake system then appeared airworthy.

The airplane was maintained on an approved inspection program. Its last inspection was performed about 110 hours prior to the accident flight.

Pilot Information

Certificate:	Commercial	**Age:**	33,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	September 6, 1995
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	2800 hours (Total, all aircraft), 136 hours (Total, this make and model), 2500 hours (Pilot In Command, all aircraft), 185 hours (Last 90 days, all aircraft), 81 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N425WB
Model/Series:	425 425	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	425-0028
Landing Gear Type:	Retractable - Tricycle	**Seats:**	8
Date/Type of Last Inspection:	April 12, 1996 AAIP	**Certified Max Gross Wt.:**	8600 lbs
Time Since Last Inspection:	110 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	3794 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	PT6-135
Registered Owner:	BOBBIE DEVLIN	**Rated Power:**	750 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	50 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	EVERETT , WA (PAE)	**Type of Flight Plan Filed:**	IFR
Destination:	(AUN)	**Type of Clearance:**	None
Departure Time:	18:00 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	AUBURN MUNICIPAL AUN	**Runway Surface Type:**	Asphalt
Airport Elevation:	1531 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	7	**IFR Approach:**	None
Runway Length/Width:	3100 ft / 60 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	38.919654,-121.069953(est)

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	ERNIE NATIVIDAD; SACRAMENTO , CA
Original Publish Date:	September 30, 1997
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=29555