



# Aviation Investigation Final Report

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<b>Location:</b>	WESTMINISTER, California	<b>Accident Number:</b>	LAX00LA315
<b>Date &amp; Time:</b>	August 27, 2000, 18:50 Local	<b>Registration:</b>	N9PJ
<b>Aircraft:</b>	Pitts                      S1S	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The airplanes collided in-flight as the Pitts maneuvered from behind to in front of the Cessna. The pilots stated they were flying each other's airplane. The pilots established radio and visual contact with each other. The Pitts assumed a trail position behind the Cessna. The Pitts varied its distance and position relative to the Cessna. Cruise altitude was about 1,000 feet. The Cessna turned left and began a gradual climb to 1,500 feet. About 1,400 feet, the Pitts pilot advised the Cessna pilot to hold still and the Cessna pilot acknowledged. The Cessna pilot leveled off and held his course. He knew from their years of flying together that the Pitts pilot would come below him. As the Pitts maneuvered from behind to in front of the Cessna, the Cessna's propeller severed the top half of the Pitts' vertical stabilizer and rudder. The Cessna's damaged propeller set up a vibration. The Pitts pilot maintained control of his airplane. The pilots discussed their options and elected to divert to Fullerton. They advised the tower of their situation and asked for emergency equipment to be on hand. The Cessna pilot landed first, and the Pitts pilot evaluated the amount of control available. After the emergency equipment arrived, the Pitts landed uneventfully.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot of the Pitts misjudged the clearance while maneuvering under the Cessna.

## Findings

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Occurrence #1: MIDAIR COLLISION  
Phase of Operation: MANEUVERING

### Findings

1. (C) CLEARANCE - MISJUDGED - PILOT IN COMMAND

## Factual Information

On August 27, 2000, about 1850 hours Pacific daylight time, a Pitts S1S, N9PJ, sustained substantial damage when it collided in-flight with a Cessna 172RG, N6225R, near Westminster, California. Both airplanes were maneuvering during a formation flight when the collision occurred. Both airplanes made successful landings at the Fullerton, California, airport following the collision. Their respective owners were operating the airplanes under 14 CFR Part 91. The Pitts S1S sustained substantial damage to the empennage, while the Cessna 172RG incurred minor propeller damage. The commercial pilots, the sole occupants of their respective airplanes, were not injured. The personal flights departed Dougherty Field, Long Beach, California, en route to the Cable Airport, Upland, California, about 1840. Visual meteorological conditions prevailed and no flight plans had been filed.

The pilots stated they were flying each other's airplane. The Pitts departed first, and the Cessna followed. Once over the coastline and clear of the Long Beach airport traffic area, they established radio and visual contact with each other. The Pitts circled and assumed a trail position behind the Cessna. The Pitts pilot said he varied his distance and position relative to the Cessna. Cruise altitude was about 1,000 feet. As they approached the Huntington Beach Pier, the Cessna turned left toward Disneyland and began a gradual climb to 1,500 feet.

About 1,400 feet, the Pitts pilot advised the Cessna pilot to hold still and the Cessna pilot acknowledged. The Cessna pilot leveled off and held his course. He knew from their years of flying together that the Pitts pilot would come below him. As the Pitts maneuvered from behind to in front of the Cessna, the Cessna's propeller severed the top half of the Pitts' vertical stabilizer and rudder. The Cessna's damaged propeller set up a vibration. The Pitts pilot maintained control of his airplane.

The pilots discussed their options and elected to divert to Fullerton. They advised the tower of their situation and asked for emergency equipment to be on hand. The Cessna landed first, and the Pitts pilot evaluated the amount of control available. After the emergency equipment arrived, the Pitts landed uneventfully.

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	40, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	Glider; Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Glider; Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	June 8, 2000
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	5800 hours (Total, all aircraft), 39 hours (Total, this make and model), 5690 hours (Pilot In Command, all aircraft), 157 hours (Last 90 days, all aircraft), 44 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Pitts	<b>Registration:</b>	N9PJ
<b>Model/Series:</b>	S1S S1S	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	1-0037
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	January 1, 2000 AAIP	<b>Certified Max Gross Wt.:</b>	1150 lbs
<b>Time Since Last Inspection:</b>	28 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	904 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	AEIO-360-B4A
<b>Registered Owner:</b>	MARTIN W. KUSCH	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	FUL ,96 ft msl	<b>Distance from Accident Site:</b>	5 Nautical Miles
<b>Observation Time:</b>	18:53 Local	<b>Direction from Accident Site:</b>	305°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	70°C / 63°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	LONG BEACH , CA (LGB )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	UPLAND , CA (CCB )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:40 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

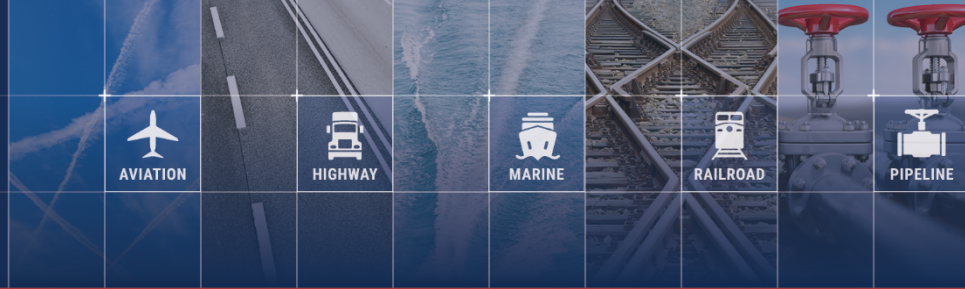
<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Plagens, H.
<b>Additional Participating Persons:</b>	RICK STOCKTON; LONG BEACH, CA
<b>Original Publish Date:</b>	November 1, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=50130">https://data.nts.gov/Docket?ProjectID=50130</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).



# Aviation Investigation Final Report

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<b>Location:</b>	WESTMINISTER, California	<b>Accident Number:</b>	LAX00LA315
<b>Date &amp; Time:</b>	August 27, 2000, 18:50 Local	<b>Registration:</b>	N6225R
<b>Aircraft:</b>	Cessna 172RG	<b>Aircraft Damage:</b>	Minor
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The airplanes collided in-flight as the Pitts maneuvered from behind to in front of the Cessna. The pilots stated they were flying each other's airplane. The pilots established radio and visual contact with each other. The Pitts assumed a trail position behind the Cessna. The Pitts varied its distance and position relative to the Cessna. Cruise altitude was about 1,000 feet. The Cessna turned left and began a gradual climb to 1,500 feet. About 1,400 feet, the Pitts pilot advised the Cessna pilot to hold still and the Cessna pilot acknowledged. The Cessna pilot leveled off and held his course. He knew from their years of flying together that the Pitts pilot would come below him. As the Pitts maneuvered from behind to in front of the Cessna, the Cessna's propeller severed the top half of the Pitts' vertical stabilizer and rudder. The Cessna's damaged propeller set up a vibration. The Pitts pilot maintained control of his airplane. The pilots discussed their options and elected to divert to Fullerton. They advised the tower of their situation and asked for emergency equipment to be on hand. The Cessna pilot landed first, and the Pitts pilot evaluated the amount of control available. After the emergency equipment arrived, the Pitts landed uneventfully.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot of the Pitts misjudged the clearance while maneuvering under the Cessna.

## Findings

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Occurrence #1: MIDAIR COLLISION  
Phase of Operation: MANEUVERING

### Findings

1. (C) CLEARANCE - MISJUDGED - PILOT OF OTHER AIRCRAFT



## Factual Information

On August 27, 2000, about 1850 hours Pacific daylight time, a Pitts S1S, N9PJ, sustained substantial damage when it collided in-flight with a Cessna 172RG, N6225R, near Westminster, California. Both airplanes were maneuvering during a formation flight when the collision occurred. Both airplanes made successful landings at the Fullerton, California, airport following the collision. Their respective owners were operating the airplanes under 14 CFR Part 91. The Pitts S1S sustained substantial damage to the empennage, while the Cessna 172RG incurred minor propeller damage. The commercial pilots, the sole occupants of their respective airplanes, were not injured. The personal flights departed Dougherty Field, Long Beach, California, en route to the Cable Airport, Upland, California, about 1840. Visual meteorological conditions prevailed and no flight plans had been filed.

The pilots stated they were flying each other's airplane. The Pitts departed first, and the Cessna followed. Once over the coastline and clear of the Long Beach airport traffic area, they established radio and visual contact with each other. The Pitts circled and assumed a trail position behind the Cessna. The Pitts pilot said he varied his distance and position relative to the Cessna. Cruise altitude was about 1,000 feet. As they approached the Huntington Beach Pier, the Cessna turned left toward Disneyland and began a gradual climb to 1,500 feet.

About 1,400 feet, the Pitts pilot advised the Cessna pilot to hold still and the Cessna pilot acknowledged. The Cessna pilot leveled off and held his course. He knew from their years of flying together that the Pitts pilot would come below him. As the Pitts maneuvered from behind to in front of the Cessna, the Cessna's propeller severed the top half of the Pitts' vertical stabilizer and rudder. The Cessna's damaged propeller set up a vibration. The Pitts pilot maintained control of his airplane.

The pilots discussed their options and elected to divert to Fullerton. They advised the tower of their situation and asked for emergency equipment to be on hand. The Cessna landed first, and the Pitts pilot evaluated the amount of control available. After the emergency equipment arrived, the Pitts landed uneventfully.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	33, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	October 12, 1999
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1919 hours (Total, all aircraft), 132 hours (Total, this make and model), 1834 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N6225R
<b>Model/Series:</b>	172RG 172RG	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	172RG0122
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 1, 1999 Annual	<b>Certified Max Gross Wt.:</b>	2650 lbs
<b>Time Since Last Inspection:</b>	85 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3201 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360-F16A
<b>Registered Owner:</b>	MICHAEL F. HARTMAN	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	FUL ,96 ft msl	<b>Distance from Accident Site:</b>	5 Nautical Miles
<b>Observation Time:</b>	18:53 Local	<b>Direction from Accident Site:</b>	305°
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<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	70°C / 63°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	LONG BEACH , CA (LGB )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	UPLAND , CA (CCB )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:40 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Minor
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Plagens, H.
<b>Additional Participating Persons:</b>	RICK STOCKTON; LONG BEACH , CA
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