Aviation Investigation Final Report

Location:	Honolulu, Hawaii	**Accident Number:**	ANC25FA010
Date & Time:	December 17, 2024, 15:15 Local	**Registration:**	N689KA
Aircraft:	Cessna 208B	**Aircraft Damage:**	Destroyed
Defining Event:	Sys/Comp malf/fail (non-power)	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor, seated in the left seat, and the pilot receiving instruction, seated in the right seat, departed on an instructional flight as part of the operator's second-in-command training program. The pilots set the airplane's flaps to 20° for takeoff, consistent with the operator's training manual.

During initial climb after takeoff, the airplane began a shallow turn to the left, and the tower controller queried the pilots because he had instructed them to fly the runway heading then turn right. The flight instructor responded, "…we are out of control here." The airplane reached a maximum altitude of about 350 ft above ground level (agl). Surveillance video showed that the airplane's left turn steepened, and the airplane descended and impacted an abandoned building. A postcrash fire consumed much of the wreckage.

Postaccident examination of the engine revealed no evidence of mechanical malfunction or failure that would have precluded normal engine operation, and the damage signatures were consistent with the engine developing power at the time of impact. A video study performed on a recording that captured the final seconds of the flight determined that the airplane's flap positions before impact were consistent with the right flap extended 20° and the left flap extended about 5°.

Postaccident examination of the flap system revealed that the flap actuator jack screw was found extended in a position that corresponded with a 20° flap setting. The portions of the right and left flap cables that extended from each inboard aft bellcrank to the outboard end of each respective flap exhibited worn and fractured wires (cable strands) about 79 inches from their respective attach points on the bellcranks. These wear damage locations were consistent with the cables having made rubbing contact with the flap cable passthrough cutouts in the structure of each wing.

Examination of the flap system also revealed that the left interconnect rod assembly (which connected the left forward inboard flap bellcrank to the left aft inboard flap bellcrank) was fractured. The bending and fracture of the rod showed evidence that the rod was subjected to a compressive load followed by a tensile load that fractured the rod. Operating with the flaps in an extended position would exert tensile loads on the interconnect rod such that, if the airplane were operated for some time with the rod in a bent condition, the inside radius of the bend would have an increased stress that could lead to fatigue failure under normal operating loads. The failure of the left interconnect rod allowed the left flap to uncouple and float to a low angle position.

The damage observed on the flap system components, specifically the evidence of cable interference with the airframe structure and the bending and fracture failure of the left interconnect rod assembly, is consistent with improper cable tension, or preload, having been present in the flap system. Preload can result from a misrigged flap system. Neither the flap cable wear nor the bent condition of the left interconnect rod would have been visible to the pilots during their preflight inspection of the airplane.

The airplane's maintenance records indicated that the most recent scheduled inspection of the flap system was performed about 6 months (about 574 airplane operating hours) before the accident. Per the Airplane Maintenance Manual (AMM), the Section 5-15-11 inspection included tasks for inspecting the flap system and other flight control system components. These included completing the Flap System Functional Check, which included examining the flap cables for fraying and interference with the aircraft structure and checking (using a tensiometer) to ensure that flap cable tension was within specifications. The maintenance records indicated that no discrepancies were noted but did not include any details of the inspection.

Subsequently, about 10 weeks (about 240 airplane operating hours) before the accident, the operator replaced the primary flap motor after a pilot reported that the flaps failed to retract after landing. The event occurred about 0350, and the assistant director of maintenance (ADOM) traveled to the airplane's location to perform the work in the field. According to the pilot who reported the event, the ADOM took at least an hour to complete the work. The airplane departed about 2.6 hours after the initial problem was reported.

Although the maintenance records documented the flap motor replacement, they did not include a description of the work performed, indicating only that the work was done in accordance with the AMM chapters that contained the Flap System Functional Check, Flap System Troubleshooting Chart, and Flap System Maintenance Practices. However, a review of these documents revealed that they did not include a procedure for removing/installing only a primary flap motor. The only flap maintenance practice that addressed replacing a primary flap motor involved the removal/installation of the entire flap actuator assembly, which was a unit composed of the primary and secondary flap motors, couplings, worm gear assembly, and transmission assembly. Completion of this work would require rigging the flap system.

Regardless, the Flap System Functional Check (which was indicated in the maintenance record as having been performed) would include performing the Operational Check specified in the Flap Rigging Guide–Adjustment/Test, which included numerous steps for checking and

documenting flap cable tension at various tensiometer access locations and at various flap settings; checking other components for proper function and clearance and for evidence of preload; and operating the flaps while looking and listening for indications of problems. Considering that the ADOM reportedly completed the flap motor replacement work in about an hour at night and away from the operator's maintenance base, it is unlikely that all the specified flap system functional check procedures were performed.

The investigation was unable to determine whether the misrigging of the accident airplane's flap system was introduced during this maintenance event or previously; however, had the flap system checking procedures been performed as specified, they would have likely detected and corrected any improper cable tension that was present before or introduced during the flap motor replacement.

A review of the operator's maintenance records for all Cessna 208 series airplanes in its fleet revealed that, between 2013 and 2024, the operator performed replacements of only the primary flap motor on several airplanes and the entire flap actuator assembly on others. In each case, the maintenance records did not provide a description of the work, such as whether the applicable Flap System Functional Check and Flap Rigging Guide–Adjustment/Test procedures were completed.

Postaccident interviews with the company maintenance managers and personnel revealed that there was no formal training for maintenance personnel and that mechanics learned on the job by shadowing other mechanics. Interviews with company maintenance personnel and postaccident reviews of the operator's maintenance records indicated a lack of understanding of and compliance with the AMM and the recordkeeping provisions of the operator's FAA-approved maintenance program. Although the personnel interviewed indicated that they followed the AMM, the repeated replacement of only flap motors, preload identified in the flap systems in many of the operator's Cessna 208 series airplanes (including during scheduled maintenance before the accident and in four of six aircraft checked postaccident), and incomplete maintenance records are indicative of systemic training and supervision deficiencies.

A review of FAA records for oversight of the operator revealed turnover in several of the operator's key management positions in the 3 years before the accident and in the FAA personnel assigned to oversee the operator's maintenance program. About 2 to 3 months before the accident, FAA personnel identified deficiencies with the operator's maintenance recordkeeping and began working with the operator to correct those issues. At the time of the accident, the operator's work to address these deficiencies was ongoing.

After the accident, the operator checked the flap travel and flap cable tension in the remaining Cessna 208 series airplanes in its fleet and corrected all identified discrepancies. The FAA also initiated an in-depth inspection of the operator that intended, in part, to identify hazards and assess and mitigate associated risks. The inspection again identified maintenance recordkeeping issues among the items to be corrected. As of June 2026, some actions were completed and others were ongoing.

The airplane's pilot operating handbook (POH) contained an emergency procedure for addressing a sudden flap retraction on one side. This included applying aileron control input to stop the roll, placing the flap selector in the UP position, and landing as soon as practical. In this case, however, the pilots likely did not realize they had asymmetrical flaps due, in part, to the low altitude at which the emergency occurred. This provided little time for the pilots to troubleshoot the airplane's uncommanded left roll. Further, the airplane was configured for takeoff with a high power setting, which likely exacerbated the left turning tendency (more than if the airplane had been configured for an approach and operating at an approach power setting).

According to Textron Aviation, there were sixteen documented events in their database that involved misrigged flap systems in Cessna 208 series airplanes in the 10 years before this accident. A flap interconnect rod failure event involving a Cessna 208 series airplane occurred in New Zealand in 2016 and was attributed to flap system misrigging. The right interconnect rod of the New Zealand event airplane displayed similar fracture features as the interconnect rod of this accident airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The in-flight failure of the flap system's left interconnect rod due to preload from improper maintenance, which resulted in an asymmetrical flap condition and an uncommanded left roll at an insufficient altitude for recovery. Contributing to the accident was the operator's failure to follow its FAA-approved maintenance program and inadequate training and supervision of its mechanics.

Findings

Aircraft	Lateral/bank control - Attain/maintain not possible
Aircraft	TE flap control system - Failure
Personnel issues	Repair - Maintenance personnel
Personnel issues	(general) - Maintenance personnel
Organizational issues	Standard operating practices - Operator
Organizational issues	Maintenance records - Operator

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Initial climb	Sys/Comp malf/fail (non-power) (Defining event)
Post-impact	Fire/smoke (post-impact)

On December 17, 2024, about 1515 Hawaii-Aleutian Standard time, a turbine-powered Cessna 208B airplane, N689KA, was destroyed when it was involved in an accident near Honolulu, Hawaii. The two pilots were fatally injured. The airplane was operated by Kamaka Air as a Title 14 *Code of Federal Regulations (CFR)* Part 91 instructional flight.

According to the operator, the flight instructor, who was seated in the left seat, and the pilot receiving instruction, who was seated in the right seat, departed the Daniel K. Inouye International Airport (PHNL) in Honolulu. The purpose of the flight was to provide the pilot receiving instruction with additional training as part of the operator's second-in-command training program. The flight was expected to go to Lanai Airport (PHNY), Lanai City, Hawaii, for the pilots to perform flight maneuvers and practice instrument procedures.

The airplane was cleared for takeoff and was expected to follow the published visual flight rules Shoreline Six departure from runway 4L. The procedure called for departing traffic to fly the runway heading, then turn right. The Honolulu tower controller instructed the pilots to delay their right turn until the departure end of the runway.

Shortly after becoming airborne and before reaching the end of the runway, the airplane began a shallow left turn. The tower controller contacted the pilots to verify they were turning right. The flight instructor responded by saying, "we are…we have…we are out of control here." The airplane's left turn steepened, and the airplane descended nose-down into an industrial area just north of PHNL. A postcrash fire consumed most of the wreckage.

A camera on a nearby building captured video imagery of the airplane during a period of about 2 seconds before it impacted the building (see figure 1).



Figure 1. Still image from video showing airplane in steep left bank before impact.

In the video, the airplane's right flap deflection appeared larger than that of the left flap. (See Tests and Research for more information.)

Pilot Information

Certificate:	Commercial	**Age:**	26,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	December 12, 2024
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	November 11, 2024
Flight Time:	(Estimated) 1212 hours (Total, all aircraft), 1117 hours (Pilot In Command, all aircraft)		

Co-pilot Information

Certificate:	Commercial	**Age:**	24,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):		**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	August 20, 2024
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	341 hours (Total, all aircraft)		

The operator reported that the flight instructor had 1,212 total hours of civilian flight experience and 113 hours in the last 6 months. His last medical exam was performed on December 12, 2024, and he was issued a first-class medical certificate without limitations.

The pilot receiving instruction held a commercial pilot certificate with ratings for airplane single-engine land and instrument airplane. He did not report his civilian flight experience as of his last medical exam, which was performed on August 8, 2024. The operator reported that he had about 340 total hours of civilian flight experience. He held a first-class medical certificate without limitations.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N689KA
Model/Series:	208B	**Aircraft Category:**	Airplane
Year of Manufacture:	2011	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	208B2308
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	December 14, 2024 100 hour	**Certified Max Gross Wt.:**	8785 lbs
Time Since Last Inspection:	47 Hrs	**Engines:**	1 Turbo prop
Airframe Total Time:	7515 Hrs as of last inspection	**Engine Manufacturer:**	Pratt & Whitney
ELT:	C126 installed, not activated	**Engine Model/Series:**	PT6A-114A/BS750
Registered Owner:	Kamaka Air, LLC	**Rated Power:**	675 Horsepower
Operator:	Kamaka Air, LLC	**Operating Certificate(s) Held:**	Commuter air carrier (135), On-demand air taxi (135)

Flap System Function and Procedures

The Cessna 208B flap system includes both mechanical and electrical components. The flap selector lever in the cockpit provides input to the flap switch actuator, which controls the primary flap motor. An independent standby switch and motor serve as a backup in the event the primary flap motor fails. When the standby motor is in use, the limit switches (which normally shut off the flap motor when reaching the flap travel limits) are electrically inactivated. There are four flap positions with detents at 0° (full Up), 10°, 20°, and 30° (full Down).

The flap actuator assembly drives a bellcrank in the root of the right wing. The flaps are connected to the bellcrank through a series of pushrods, connecting rods, interconnect rods, cables, and bellcranks. During flap retraction, the interconnect rod is under compression, and during flap extension, the interconnect rod is under tension.

The FAA-approved POH for the Cessna Model 208B airplane, document 208BPHBUS-02, Section 4, contained the normal takeoff procedures for the airplane. These included (in summary):

1. Wing flaps - 0° to 20° (10° recommended).
2. Power lever - Set for takeoff.
3. CAS MSG(s) - check.
4. Rotate - 70 to 75 kts.
5. Climb speed - 85 to 95 kts.
6. Wing flaps - retract to 10° after 85 kts, and retract to Up after 95 kts.

Per the operator's normal takeoff procedures document for the Cessna 208, pilots were to maintain an initial climb speed of 85 to 95 kts and retract the flaps above a minimum altitude of 1,000 ft agl.

POH Section 3, Emergency Procedures, contained a procedure for an asymmetrical flap extension or a sudden flap retraction on one side, as follows (in summary):

1. Apply aileron and rudder to stop the roll.
2. Flap selector – Up.
3. Airspeed - Slow to 100 kts or less.

The procedure stated that, if both flaps cannot be retracted to a symmetrical setting, the pilot should land as soon as practical, maintaining a minimum airspeed of 90 kts on the approach and avoiding a nose-high flare on landing.

Maintenance History

Maintenance records revealed that the accident airplane's most recent maintenance, a visual inspection, was completed on December 14, 2024, at an airframe total time of 7,515.6 hours.

Recent Flap System Inspections and Maintenance

Maintenance records indicated that in March 2024, the airplane's top and bottom flap bellcrank bearings and bolt were replaced. The records did not indicate which wing received the bearings and bolt replacement, whether the bellcranks were removed, or whether the flaps were rigged after maintenance was completed. Per the Cessna Model 208 Series AMM, bellcrank replacement would require performing the Flap Rigging procedures, which are discussed in more detail later in this section.

Per the AMM, the airplane was subject to certain scheduled inspections. These included the AMM Section 5-15-11 inspection, which included six flight control-related items for inspecting the flaps, ailerons, rudder, and elevator. The Section 5-15-11 inspection was to be completed every 1,600 hours or 24 months, whichever occurred first.

Maintenance records indicated that the airplane's most recent Section 5-15-11 inspection was completed on June 25, 2024, at an airplane total time of 6,941.6 hours. Per the maintenance record, all six inspection items were signed as having been completed, including item B275001, the Flap System Functional Check (Task 27-50-00-720).

Per the AMM, the Flap System Functional Check included numerous steps, one of which required the user to check the flap cable runs for interference with the aircraft structure and for fraying. This step included running a cloth along the full length of the flap cables to examine for broken wires. Other steps required the user to conduct a flap travel and cable tension check using an inclinometer and tensiometer, respectively.

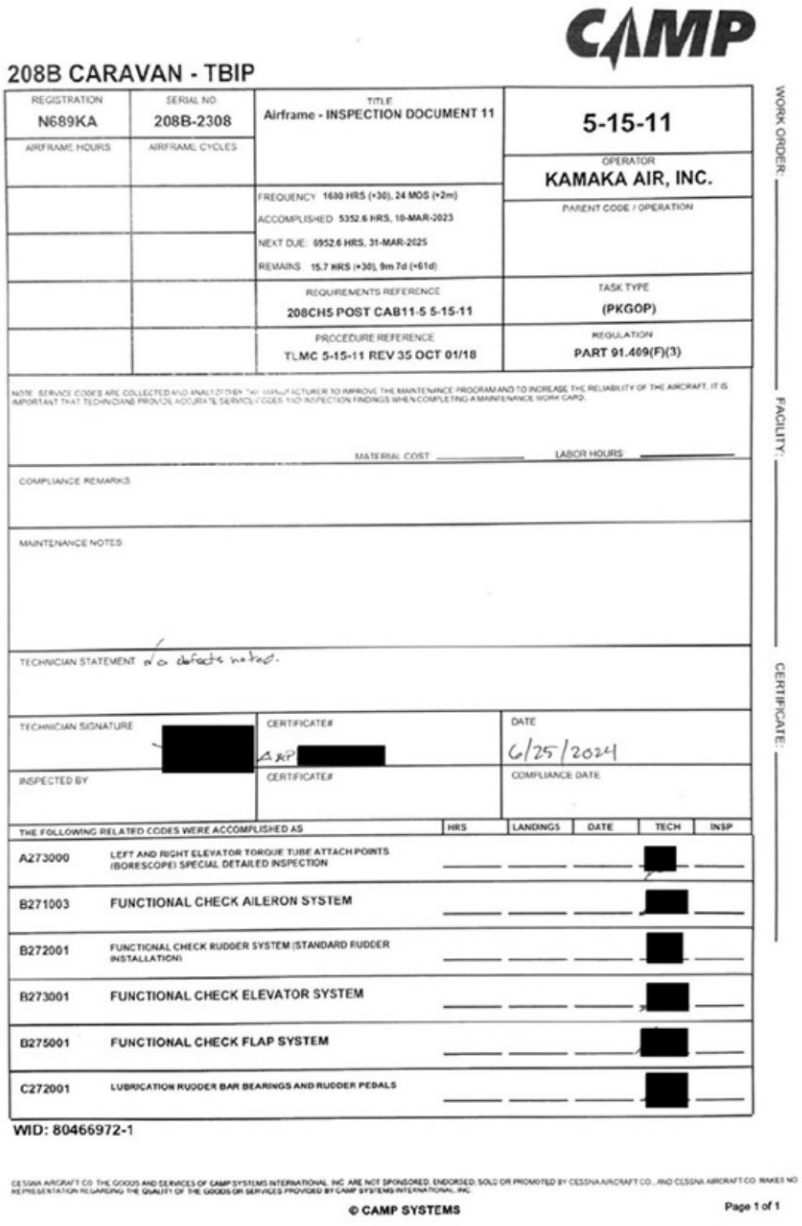
The cable tension check step referred the user to the Operational Check contained in the Flap Rigging Guide–Adjustment/Test contained in AMM chapter 27-50-02. The Operational Check included (in summary):

- Checking and noting the cable tension of both flaps must be 35 lbs, plus or minus 5 lbs, depending upon the ambient temperature.
- Checking flap cable tension at various flap settings.
- Checking both flaps for free play in the mechanical linkage.
- Loosening the nuts on the interconnect rod attach bolts on the inboard forward bellcranks to check for preload, then retorquing the nuts after completing the check.
- Operating the flaps while observing the flap actuator support structure for indications of preload, and listening and watching for indications of the drivescrew stop nut bottoming out.
- Checking that the flap control arm and flap pointer are in the proper positions when the flap control lever is in the Up position.
- Checking for a minimum of 0.06 inches of clearance between the leather washer against the flap actuator transmission and the drivescrew stop nut.

According to the AMM's Flap Rigging Guide–Adjustment/Test, if any criteria in any of the Operational Check steps are not met, the complete Flap Rigging procedure must be performed.

It contained a caution that “improper preload may result in a slackened cable and interference with the airframe.”

The operator reported conducting these checks on the accident airplane during the June 25, 2024, Section 5-15-11 inspection but did not retain details of the findings (such as tensiometer readings) or document any details of the inspection (see figure 2).



CAMP

208B CARAVAN - TBIP

REGISTRATION	SERIAL NO.	TITLE	
N689KA	208B-2308	Airframe - INSPECTION DOCUMENT 11	5-15-11
AIRFRAME HOURS	AIRFRAME CYCLES		OPERATOR: KAMAKA AIR, INC.
		FREQUENCY: 1680 HRS (+30), 24 MOS (+2m)	PARENT CODE / OPERATION
		ACCOMPLISHED: 5352.6 HRS, 10-MAR-2023	
		NEXT DUE: 6952.6 HRS, 31-MAR-2025	
		REMAINS: 15.7 HRS (+30), 9m 7d (+61d)	
		REQUIREMENTS REFERENCE: 208CH5 POST CAB11-5 5-15-11	TASK TYPE: (PKGOP)
		PROCEDURE REFERENCE: TLMC 5-15-11 REV 35 OCT 01/18	REGULATION: PART 91.409(F)(3)

NOTE: SERVICE CODES ARE COLLECTED AND ANALYZED BY THE MANUFACTURER TO IMPROVE THE MAINTENANCE PROGRAM AND TO INCREASE THE RELIABILITY OF THE AIRCRAFT. IT IS IMPORTANT THAT TECHNICIANS PROVIDE ACCURATE SERVICE CODES AND INSPECTION FINDINGS WHEN COMPLETING A MAINTENANCE WORK CARD.

MATERIAL COST _____ LABOR HOURS _____

COMPLIANCE REMARKS

MAINTENANCE NOTES

TECHNICIAN STATEMENT: n/c defects noted.

TECHNICIAN SIGNATURE	CERTIFICATE#	DATE
[redacted]	A&P [redacted]	6/25/2024
INSPECTED BY	CERTIFICATE#	COMPLIANCE DATE

THE FOLLOWING RELATED CODES WERE ACCOMPLISHED AS		HRS	LANDINGS	DATE	TECH	INSP
A273000	LEFT AND RIGHT ELEVATOR TORQUE TUBE ATTACH POINTS (BORESCOPE) SPECIAL DETAILED INSPECTION				[redacted]	
B271003	FUNCTIONAL CHECK AILERON SYSTEM				[redacted]	
B272001	FUNCTIONAL CHECK RUDDER SYSTEM (STANDARD RUDDER INSTALLATION)				[redacted]	
B273001	FUNCTIONAL CHECK ELEVATOR SYSTEM				[redacted]	
B275001	FUNCTIONAL CHECK FLAP SYSTEM				[redacted]	
C272001	LUBRICATION RUDDER BAR BEARINGS AND RUDDER PEDALS				[redacted]	

WORK ORDER: _____ FACILITY: _____ CERTIFICATE: _____

WID: 80466972-1

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Figure 2. Record of the accident airplane’s most recent AMM Section 5-15-11 inspection. (Source: Kamaka Air with redactions by NTSB.)

Maintenance records indicated that, on October 4, 2024, at an airplane total time of 7,275.6 hours, the accident airplane’s primary flap motor was replaced after a pilot reported that the

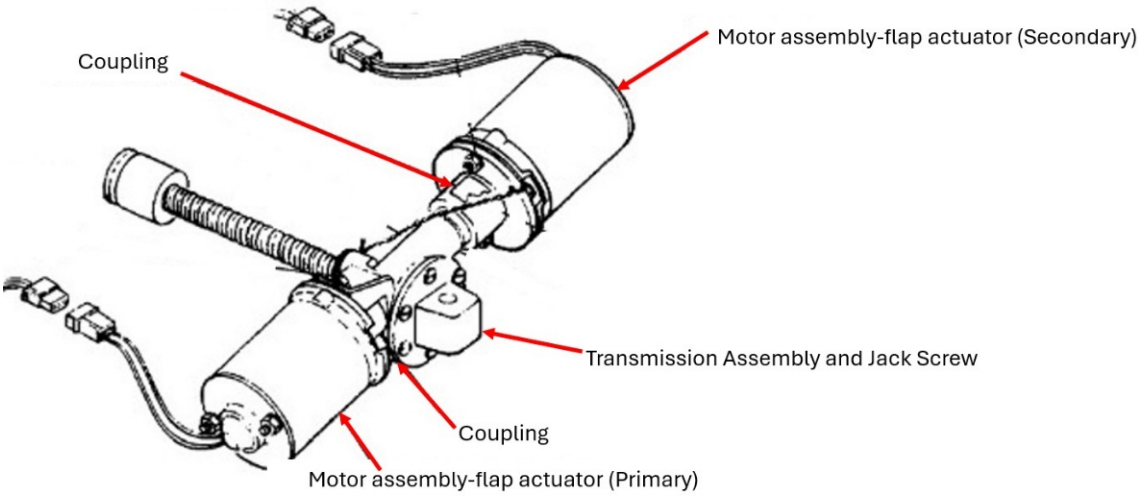
flaps failed to retract after landing. According to flight records, the event occurred about 0350 at Molokai Airport (PHMK), Kaunakakai, Hawaii. The maintenance record stated that "troubleshooting identified a failed flap motor due to internal failure. Removed and replaced primary flap motor [part no.] C145-350 [*sic*] with new unit from stock. All work completed [in accordance with] Cessna AMM 27-50-00 and 27-50-01….Operations correct after new motor installation." (AMM chapter 27-50-00 contained the Flap System Functional Check and a Flap System Troubleshooting Chart, and chapter 27-50-01 contained the Flap System Maintenance Practices.)

The pilot who reported the October 4, 2024, flap malfunction event did not recall whether the flap motor circuit breakers were in or whether the flaps moved when he activated the standby switch. (The POH contained a procedure for checking the flap motor circuit breakers and using the standby motor to try to retract the flaps.) He said that he notified the ADOM, who was the mechanic on call at the time of the discrepancy, and the ADOM traveled to PHMK on a company airplane to address the issue. The pilot recalled that it took at least an hour for the ADOM to complete the flap motor replacement, but he could not recall whether a second mechanic was present. Flight records indicated that the airplane subsequently departed PHMK at 0630, about 2.7 hours after the flap malfunction was reported.

A review of the AMM's Flap System Troubleshooting Chart revealed that it consisted of a binary (yes/no) decision flowchart and that some steps required the use of the standby motor to assist in diagnosing flap system failures. The ADOM said he did not like to use (and did not like pilots to use) the standby motor when conducting troubleshooting because there were no limit switches. Both the AMM and POH indicated that caution must be used when using the standby motor to retract or extend the flaps because the limit switches are inactivated, and flap system damage due to overtravel can occur.

The AMM's Flap System Troubleshooting Chart contained some decision scenarios that concluded with directives to "replace components as necessary" but did not contain any scenario that concluded with a directive to replace only the primary flap motor. Also, the AMM did not contain any procedure for removing/installing only the primary flap motor.

The AMM's Flap System Maintenance Practices referenced replacing the primary and secondary flap motors in the Flap Actuator Removal/Installation procedures, which addressed replacing the entire assembly with both motors attached. According to the Cessna 208 Illustrated Parts Catalog (IPC), the Flap Actuator & Motor Assembly (Part number 9910586-4/D145-00-46-2) was composed of the primary and secondary flap motors, couplings, transmission assembly, and jack screw (see figure 3).



Flap actuator & motor assembly
Cessna P/N 9910586-4

Figure 3. Flap actuator assembly, part number 9910586-4. (Source: Cessna 208 IPC with labels added by NTSB.)

According to the Flap Actuator Removal/Installation procedures, after installing the assembly, the flap system must be rigged in accordance with AMM's Flap Rigging Guide–Adjustment/Test.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PHNL,6 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	15:35 Local	**Direction from Accident Site:**	255°
Lowest Cloud Condition:	Few / 3000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	220°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	27°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Honolulu , HI (PHNL)	**Type of Flight Plan Filed:**	Company VFR
Destination:	Lanai, HI (PHNY)	**Type of Clearance:**	Unknown
Departure Time:	15:14 Local	**Type of Airspace:**	Class B

Airport Information

Airport:	DANIEL K INOUYE INTL HNL	**Runway Surface Type:**	Asphalt
Airport Elevation:	13 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	04L/22R	**IFR Approach:**	None
Runway Length/Width:	6955 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	N/A	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	Unknown
Total Injuries:	2 Fatal	**Latitude, Longitude:**	21.329519,-157.91751(est)

The airplane impacted an abandoned concrete building about 1,975 ft from the departure end of the runway. The left wing made initial contact with an air conditioner unit on the roof, then the airplane struck a concrete stairwell structure and continued into an adjacent parking lot to the south of the building. A postcrash fire ensued, which consumed much of the wreckage.

The main wreckage came to rest about 120 ft beyond the initial impact point. The airplane's empennage was found separated in the upper portion of the concrete stairwell structure. Outboard portions of the left wing were found on the building's roof. The fuselage was located in the adjacent parking lot.

The flight control system exhibited multiple breaks of the control cables due to impact and fire damage. The right wing was impact-separated and located in a ditch about 100 ft from the main wreckage. The right flap was found separated from the wing. The majority of the left wing was found separated in the main wreckage, underneath an aft section of the fuselage. The left flap was not observed in the main wreckage and was likely consumed in the postcrash fire.

The core of the engine was found in the main wreckage site in front of the cockpit. One propeller blade was found in the stairwell structure, and the other two propeller blades were found in the main wreckage. The propeller hub was fractured in multiple locations and was found near the right wing.

A postaccident examination of the engine revealed no evidence of mechanical malfunction or failure that would have precluded normal engine operation. The engine exhibited contact signatures consistent with an engine developing power at the time of impact.

The NTSB Materials Laboratory examined components from the left and right flap system. Both the left and right cables that extend from the inboard aft bellcranks to the outboard ends of both flaps showed evidence of cable external wear and wire (cable strand) fractures about 79 inches from their respective attachment points. According to the airplane manufacturer, the cable wear locations corresponded to the location of each wing's center flap hinge/track where there is a stiffener with a cutout for a flap cable passthrough.

The flap system's left interconnect rod assembly, which connected the left forward inboard bellcrank to the left aft inboard bellcrank, was fractured near its aft end at the first thread leading into the rod. Both threaded ends exhibited slight downward bends, and the forward threaded end exhibited a slight inboard bend. The fracture surface exhibited directional crack growth features progressing from the lower side of the rod (the inner bend side) toward the upper side of the rod (the outer bend side). The features were consistent with bending of the rod in compression followed by crack extension and rod separation under tension.

Tests and Research

Video Study

The NTSB Vehicle Recorders Laboratory conducted a study of the video that captured imagery of the accident airplane before impact. The resolution of the video was relatively high, but, because the airplane image in the video frames was small, the resolution of the airplane image in the video was relatively low. This limited the accuracy with which flap deflection angles could be estimated. The video study determined that, before the airplane impacted the building, the right flap deflection angle appeared to be extended about 15° more than the left flap.

Manufacturer's Records Review

According to Textron Aviation, from June 2015 to September 2025 they received sixteen reports of the flap system being mis-rigged.

Flap Maintenance Procedures Time Estimates

According to the director of maintenance of another operator of Cessna 208 airplanes, the Section 5-15-11 inspection typically took between 6 to 8 hours to complete with a minimum of two people but, ideally, he liked to use three. He stated that the Flap Rigging Guide-Adjustment/Test on a Cessna 208 series airplane used four mechanics and typically took between 2 to 4 hours to complete.

Organizational and Management Information

Maintenance Program

The operator was a Part 135 certificate holder that maintained its fleet under an FAA Approved Aircraft Inspection Program (AAIP). The AAIP was used in lieu of performing the standard annual or 100-hour inspections, and the March 10, 2023, revision was current at the time of the accident.

The AAIP program stated that, in order to perform maintenance, preventive maintenance, or alterations, all certificated mechanics must have demonstrated to the operator that they have satisfactorily completed the work previously under the direct supervision of appropriately certificated and rated maintenance personnel with previous experience in the specific operation. The AAIP stated that a mechanic may not exercise the privileges of their certificate and rating unless they understand the manufacturer's instructions and the AMM for the specific operation.

The AAIP required the director of maintenance (DOM) to track aircraft time in service, number of cycles or landings, or calendar time, as required, on the aircraft flight log. The AAIP specified

that maintenance personnel will review the aircraft flight logs daily for errors and correct those errors.

The AAIP stated that maintenance record entries will comply with both 14 *CFR* Part 43.9 and 43.11, which addressed the content, form, and disposition of maintenance records and records for inspections. These regulations required, in part, that maintenance record entries contain a description of the work performed (or reference to data acceptable to the FAA) or the type of inspection and a brief description of the extent of the inspection.

A postaccident review of aircraft flight logs revealed that they did not contain a place for the pilot to log the number of landings. The flight logs contained several clerical errors with no indication that they were noted or corrected. A review of fleet maintenance records identified numerous entries, including some documenting Section 5-15-11 inspections, that did not document a description of the work performed.

The maintenance records showed that, between 2013 and 2024, the operator had replaced only the primary flap motor on several airplanes and flap actuator assemblies on several others in its Cessna 208B fleet. Most of these records did not include a description of the work performed; a few referenced an AMM chapter or noted that system operation was verified.

A postaccident review of the operator's tool calibration records indicated that one of the operator's two tensiometers was out of calibration from September 9, 2024, through October 6, 2024.

Maintenance Personnel

The DOM had worked for the operator since June 2022 and became the DOM in October 2022. He stated that his duties included reviewing the previous day's maintenance flight logs and maintenance transaction reports, reviewing the schedules for what scheduled maintenance is coming due, and working with flight operations to plan the work. He said the operator had six mechanics.

The DOM said that, typically, for discrepancies, a pilot would report it on the aircraft flight log, and, after a mechanic performed corrective maintenance, the mechanic would sign it off on the flight log and create separate maintenance transaction report to print and file as a hard copy. He stated that landings for each flight were counted by looking at the flight log to see where the airplane had landed but that there was no audit process for ensuring that information was entered into the maintenance record. He said that mechanics received on-the-job training on how to use the AMM and that they were expected to notify him if they encountered an issue not covered by the AMM.

The ADOM had worked for the operator since 2019. He stated that he accessed the AMMs through an electronic tablet that connected to the internet and maintained current manual revision updates. He stated that he had replaced the primary flap motor on Cessna 208s before. He stated that he had also previously identified preload in the flap system on some

airplanes, typically during a scheduled inspection. He stated that, when performing cable tension inspections, maintenance personnel would write down the values (observed via tensiometer) but would not retain them; they just documented whether the values were within limits.

According to one airframe and powerplant mechanic who was in his third year working for the operator, he shadowed another mechanic at the operator when working on Cessna 208 series airplanes but had previous experience working on them at another operator. He said that, typically, he looked at the aircraft flight logs for pilot-reported discrepancies and referred to the AMM for troubleshooting and inspection procedures. He said there were times when just a flap motor could be replaced and that such a replacement required only checking the motor assembly. He said that he had never performed a flap cable tension check before but had assisted others with those checks.

FAA Oversight

Interviews with members of the FAA Certificate Management Team (CMT) for the operator from the Honolulu Flight Standards District Office (FSDO) revealed turnover in several of the operator's key management positions within 3 years before the accident and in the principal maintenance inspector (PMI) assigned to the operator.

Between 2022 and 2024, three different PMIs had been assigned to the certificate. The previous two PMIs were assigned for 5 to 6 months each, and the third PMI was assigned in July 2023 and was assigned to the operator at the time of the accident. When the most recent PMI was assigned (and at the time of the accident), he also had oversight of 30 other operators.

According to the PMI's frontline manager, the PMI did not indicate any difficulty with handling his workload. The PMI stated that, at the time of the accident, handling that many certificates was overwhelming because he was working too much, and it was affecting his work-life balance. He said that management was supportive but that he preferred to be overtasked than have surveillance tasks not be performed due to unavailable resources.

The PMI said that, since September 2024, he had been working with the operator on revising their AAIP to improve their maintenance recordkeeping practices and that the operator was receptive to making improvements. He stated that, as part of his surveillance, he referenced the operator's master list of calibrated tools and performed spot checks but had never found one of the operator's tools out of calibration.

The principal operations inspector (POI) had been assigned to the operator since 2020 or 2021. The POI said he had a great working relationship with the operator until after about May 2024, when the operator had a turnover in several management positions, including the director of operations (DO) and the chief pilot. He said that the relationship went from communicative and collaborative to difficult.

A review of FAA surveillance documentation completed by members of the CMT did not reveal any significant findings until the first quarter of fiscal year 2025 (October, November, and December 2024). About that time, the POI had initiated enforcement investigations of the operator related to operational control issues, hotline complaints, pilot record checks, check airman currency, and other issues. He stated that the operator corrected some of the issues before the completion of formal enforcement action but that the investigations of others were still pending.

In November 2024, the operator selected and the FAA accepted a new DO, who was in position at the time of the accident.

Additional Information

Postaccident Safety Actions

Between February 2025 and May 2025, the operator conducted a flap cable tension and flap travel check on each of the six remaining Cessna 208 series airplanes in its fleet. The cable tension on four airplanes was found to be out of tolerance with values measuring between 5, 11, 22, 23, and 20 lbs (instead of the required 35 lbs, ± 5 lbs). The operator corrected the discrepancies.

In July 2025, the Honolulu FSDO requested a Certificate Holder Evaluation Program (CHEP) inspection of the operator. The CHEP allowed for an in-depth look at the certificate holder's system and had three primary goals: verify that the certificate holder complies with applicable regulations; evaluate whether the certificate holder is effectively managing safety; and identify hazards, assess risk, and provide documentation for the CMT to mitigate associated risks.

The CHEP inspection indicated a frequent likelihood of moderate safety impacts and revealed significant noncompliance with maintenance recordkeeping requirements.

In early 2026, the operator requested that the FAA assign a different POI, but the request was denied. The FAA subsequently assigned a new POI (an air safety inspector who had assisted the previous POI assigned to the operator) in March 2026.

Flap Interconnect Rod Failure Event in New Zealand

The investigation identified a report of a flap interconnect rod failure event involving a Cessna 208 series airplane that occurred in New Zealand in 2016. The report indicated that the airplane's flap system was misrigged new from the factory and that the airplane had accumulated at total of 60.8 hours before failure occurred. The manufacturer confirmed this event. The event airplane's right interconnect rod had a linear surface fracture feature similar to that observed on the accident airplane.

Federal Aviation Administration Records Review

A review of the FAA Service Difficulty Report (SDR) database revealed a report concerning an asymmetrical flap event involving a Cessna 208 series airplane in 2023 (SDR 2024FA0000002). The report stated that as the airplane was slowed to the required indicated airspeed for full flaps and full flaps were selected, the pilot heard a “clunk,” and the airplane lost controllability and entered an aggressive roll to the right. It was later determined that a control rod in the right wing had failed. In a phone interview, the Director of Operations for the operator of the airplane involved in the SDR event stated that the failure occurred in the threaded portion of the rod.

Administrative Information

Investigator In Charge (IIC):	Joyce, Stacia
Additional Participating Persons:	Ernie Hall; Textron; Witchita, KS Ben De Peralta; FAA; Honolulu, HI Heidi Kemner; FAA; Washington , DC Mike Hodge; Pratt & Whitney; Bridgeport, WV Sonny Dasilva; Kamaka Air; Honolulu, HI Todd Gentry; FAA; Washington, DC Jennifer Barclay; Textron; KS
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Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=199437

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.