Aviation Investigation Final Report

Location:	Sula, Montana	**Accident Number:**	GAA19CA238
Date & Time:	April 30, 2019, 10:15 Local	**Registration:**	N350DL
Aircraft:	Aerospatiale AS350	**Aircraft Damage:**	Substantial
Defining Event:	Low altitude operation/event	**Injuries:**	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The helicopter pilot reported that, after an agricultural application flight, he set the bucket down in a predetermined operations zone near a semi-truck loading hopper to be refilled. He added that another truck arrived to top off the semi-truck hopper, which emitted fertilizer dust and led to the pilot being concerned that it would deteriorate visibility. He advised the ground crew that he was going to temporarily move out of the operations zone.

The pilot reported that he set the bucket in the new temporary operations zone. As the skid steer approached, he eased the helicopter backward to keep the other ground equipment in his view. The pilot heard a "bang," disconnected the helicopter from the long-line, and then landed the helicopter without further incident.

Postaccident examination revealed that the auger from the semi-truck hopper was fully extended behind the helicopter and that a tail rotor blade had sustained substantial damage. The pilot reported that he might have backed the helicopter into the extended auger.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the helicopter that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's failure to maintain adequate clearance from ground equipment, which resulted in a tail rotor blade impact.

Findings

Personnel issues	Monitoring environment - Pilot
Environmental issues	Ground equipment - Effect on operation

Factual Information

History of Flight

Maneuvering-hover	Low altitude operation/event (Defining event)
Maneuvering-hover	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	43,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	January 11, 2019
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 15, 2019
Flight Time:	(Estimated) 8773 hours (Total, all aircraft), 3125 hours (Total, this make and model), 8700 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aerospatiale	**Registration:**	N350DL
Model/Series:	AS350 B3	**Aircraft Category:**	Helicopter
Year of Manufacture:	2008	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	4508
Landing Gear Type:	Skid	**Seats:**	6
Date/Type of Last Inspection:	April 24, 2019 Annual	**Certified Max Gross Wt.:**	5225 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo shaft
Airframe Total Time:	1103.2 Hrs as of last inspection	**Engine Manufacturer:**	Safran
ELT:	C126 installed, not activated	**Engine Model/Series:**	Arriel 2B1
Registered Owner:	Pj Helicopter Llc	**Rated Power:**	749 Horsepower
Operator:	Mission Mountain Helicopters	**Operating Certificate(s) Held:**	Rotorcraft external load (133), On-demand air taxi (135), Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 10000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:		**Temperature/Dew Point:**	2°C
Precipitation and Obscuration:	N/A - Blowing - Widespread dust		
Departure Point:	Soula, MT	**Type of Flight Plan Filed:**	None
Destination:	Soula, MT	**Type of Clearance:**	None
Departure Time:	07:00 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	45.859443,-113.968055(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Jeff Simmons; FAA; Helena, MT
Original Publish Date:	March 20, 2020
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=99359