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Date: August 1, 2024

Subject: WPR24LA243, Lead Pilot Performance Calculations

Contact: Terry Tyner, Sedona Air Tours Lead Pilot

The following is a summary of the email provided by the Lead Pilot regarding the accident helicopter's performance calculations, as reported to the company by the accident pilot:

Aircraft Empty weight	1850.6 lbs
Aircraft fuel (Estimated)	230.0 lbs
Pilot (Estimated)	240.0 lbs
Passenger 1	150.0 lbs
Passenger 2	150.0 lbs
Passenger 3	200.0 lbs
<u>Misc equipment (Estimated)</u>	<u>5.0 lbs</u>
Total weight	2825.6 lbs

The lead pilot reported that the numbers revealed that the accident pilot did not have OGE Hover performance but attempted to slow down to 100 ft above ground level (agl) and come through 20 knots as the pilot approached the tour site. The lead pilot calculated that the accident site's location was about was 5,115 ft mean sea level (msl) per forest service maps. ADS-B data that the lead pilot gathered from FlightAware showed the helicopter slowed down at 5,200 ft msl. He further added the accident pilot reported light gusting winds

The lead pilot stated that all participating pilots were educated about the helicopter's four-bladed tail rotor limitations during training. A training flight was conducted with maximum engine power setting to demonstrate tail rotor margin control. The training also included a simulated loss of tail rotor thrust training to the ground, as well as a tail rotor failure in a hover.

The lead pilot further reported that he gave a detailed training discussion on the lower rpm characteristic of the four-bladed tail rotor design when loaded closer to maximum gross weight. He added that he instructed the pilots more than once to reduce weight as needed to give a safety margin when operating in high weight condition while hovering out of ground effect.

The lead pilot used 32° C and a pressure altitude of 5,100 ft msl and calculated the maximum weight for OGE performance would have been around 2,740 lbs. Also, if air conditioning unit was on during flight, a 100 lbs deduction to the performance calculation would reduce the limit to 2,640 lbs.