

Leadplane Training Lesson Plan

Judgement

08-02-N9065-HO

Objective:

To familiarize the student with judgment in a training environment (Phase 1).

To develop the student's proficiency with judgment in a fire environment (Phase 2).

To develop the student's mastery of judgment in a fire environment (Phase 3).

Content:

FAA manuals define pilot judgment as the mental process by which pilots recognize, analyze and evaluate information regarding themselves, the aircraft and the external environment. So how do we teach good judgment? Judgment goes hand in hand with decision-making and experience. The key to teaching judgment is to give students the necessary tools and skills so that they demonstrate 'good' decision-making skills, and through their good decision-making skills they will gain experience at their own comfort level. Pilots can relate to real-life stories or experiences from other pilots. There is nothing better than to learn from others' mistakes. Share experiences.

To develop judgment, instructors must allow students to take an active role in aeronautical decision-making whilst preflight planning, during flight and post flight, from the beginning of the training. Instructors may not be able to teach judgement directly. However, we teach decision-making and we can give our students tools to assist them in their decision making process, and thus they will be gaining experience. It is their experience that will give them good judgment.

Understanding how pilots make decisions, and teaching students how to modify their behavior, is teaching judgment.

Explaining the 'what' *and* the 'why' when instructing also results in greater knowledge and understanding by the student, which in turn leads to greater situational awareness. Use scenario-based training from your own experiences.

The fire environment is unique and presents the new leadplane student with a constant barrage of new information and experiences. As the student progresses through the Phases of training, they will be expected to continually improve in the following areas:

- Making timely decisions.
- Discontinuing operations when safety issues arise.
- Being open to suggestions.
- Prioritizing targets.
- Making decisions based on safety, the needs of the organization, the firefighters on the ground, and the resources at risk.
- Prioritizing flying the aircraft over other distractions.
- CRM.

Scenario Based Discussion Examples:

Fuel Management: After the request for relief leadplane was unable to be filled, the determination was made that I had enough fuel to complete the mission to the end of the last shift of the day. After leading the last tanker and returning to the airport I found a large cell over the airport. Going to another airport was not practical due to fuel reserves and daylight. I decided to hold out away from the airport until the cell passed. I landed with just over 30 minutes reserve fuel.

- Was it necessary to stay over the fire till the end of the shift?
- Was leaving the fire to fuel and return an option?
- Was terminating the retardant operation an option?
- Was there an ATGS that could provide aerial supervision?

Visibility: After flying a fire, for two hours, where the visibility was degrading, I realized that visibility probably did not meet VFR minimums. I had become comfortable with the surrounding terrain in the area and did not realize the degrading conditions.

- How do we evaluate visibility?
- When should we evaluate visibility?
- Who can we rely on to help evaluate visibility?
- How do we gauge changing visibility?

Winds: The winds on the fire were getting stronger and making it difficult to tag onto the existing retardant lines. The retardant pattern on the ground was starting to have a noticeable cross wind effect. Turbulence was increasing but not to a level that it was uncomfortable or affecting the controllability of the aircraft.

- How do we evaluate winds?
- Do the 10 principles of retardant application address winds?

Mission Focus: There were several homes that were being threatened by the wildfire. As the fire got closer to the homes, the smoke started dictating the pattern that was being flown. Exit visibility was poor and degrading.

- What are the 12 factors in aviation operations that shout watch out that may lead to mission focus?

Completion Standards:

The lesson is complete when the student can demonstrate judgement that at no time puts the safety of the flight or personnel in question while in a training environment for Phase 1 and in a fire environment for Phase 2.

The lesson is complete when the student can demonstrate mastery of judgement in a fire environment for Phase 3. Safety will never be in question and judgement related decisions will be accomplished without the reliance on the evaluator.