

Leadplane Training Lesson Plan

Airspeed Control

07-02-N9065-HO

Objective:

To familiarize the student with factors affecting airspeed control during the leadplane profile (Phase 1).

To develop the students proficiency in airspeed control in a training environment (Phase 2).

Content:

Why does an airplane stall? The maximum angle of attack has been exceeded.

Technically, it does not matter whether the airspeed is high or low, or whether the bank angle is zero or 90 degrees. However, practically speaking, airspeed and bank angle have a lot to do with stalling an airplane.

With the wide variety of airtankers in use, there can be a wide range of requested airspeeds. Each individual airtanker can also have variations in airspeeds based on pilot preference, aircraft weight, flight pattern, exit, full or partial load, and environmental factors.

Airspeed control can be a difficult task during leadplane training. Aircraft configuration, requested airspeed, changing airspeeds throughout the profile, environmental factors, pilot workload and distractions can make holding a target airspeed difficult.

The application of power will be one of the biggest factors in airspeed control. It is important to make power changes at the appropriate time, so the power setting does not negatively affect airspeed. One common mistake is not reducing power prior to initiating a decent. Not reducing power prior to lowering the pitch attitude will cause the aircraft to accelerate. This seems like common sense, but it is missed mainly due to high workload and distractions. A similar mistake is made during the exit maneuver. Due to the workload of flying a precise flight path and the distraction of terrain, power is not always increased appropriately during the climb.

Forgetting to use flaps will also be a contributing factor to high airspeeds during the leadplane profile. Forgetting to raise the flaps during the exit maneuver will cause a lower than normal airspeed or a lower than normal climb rate.

Aircraft pitch will also affect airspeed. While the evaluator is flying a mission or demonstrating a flight profile, the student should pay attention to the sight picture and how pitch changes throughout the maneuver.

Completion Standards:

The lesson is complete when the student can demonstrate airspeed control, within the phase airspeed limitations.

For Phase I (training environment): Target airspeed no slower than V_{yse} , deviations within ± 15 knots in the FTA orbit, and deviations $+15/-5$ knots during the leadplane profile.

For Phase II (fire environment): Target airspeed deviations within ± 10 knots in the FTA orbit, and deviations $+10/-5$ knots during the leadplane profile.

Safety will never be in question and airspeed control will be accomplished without the reliance on the evaluator.