



Texas Skies Flight School Multi-Engine Add-On Course

Introduction

A multi-engine land (MEL) rating allows a pilot to operate as pilot-in-command of an aircraft with more than one engine. The MEL rating is an “add-on” to an existing single-engine land private or commercial certificate. There are no minimum time requirements for the MEL rating, however the applicant will need an instructor endorsement for flight and ground training prior to taking the checkride. There is no written exam, but a checkride is required to test ground knowledge and flight proficiency.

Course Objectives

The applicant will obtain the knowledge, skill, and experience necessary to meet the requirements for the addition of an MEL rating to an existing pilot certificate. Texas Skies Flight School’s curriculum teaches the aerodynamic differences between the single- and multi-engine and provides the proper instruction needed to pass the multi-engine checkride.

The FAA requires training in the following areas:

- Preflight preparation/procedures
- Airport operations
- Takeoffs, landings, and go-arounds
- Performance maneuvers
- Slow flight and stalls
- Emergency operations
- Multi-engine operations
- Post-flight procedures

Preparing for a multi-engine rating requires both ground and flight training. The ground information covers items specific to the aircraft, including systems, aerodynamics, and weight & balance. The flight training consists of normal and emergency operations and maneuvers.

At our competitively-priced flat rate, the applicant receives:

- 6 ground and flight lessons (for a total of 12 flight hours)
 - 4 training lessons
 - 1 stage check with chief pilot
 - 1 refresher flight prior to your checkride
- Flight hours not used during training may be put towards the airplane rental required for your checkride.
- DPE fees are not included.

Expectations

To enroll in the MEL rating course, the applicant must hold a valid private or commercial pilot certificate with an airplane category rating and a single-engine land class rating. The applicant must hold an FAA medical certificate.

This course is designed to guide you through your multi-engine add-on rating in an efficient manner. In order to successfully complete this course, students are expected to be current and proficient in single-engine operations, including instrument procedures as appropriate, before beginning the multi-engine course.

Text & Equipment

Required Reading

- Airplane Flying Handbook
 - Chapter 11: Transition to Complex Airplanes ([link here](#))
 - Chapter 12: Transition to Multiengine Airplanes ([link here](#))
- FAA's "Flying Light Twins Safely" ([link here](#))
- DA42-VI AFM ([link here](#))
- AFM Supplements - ([link here](#))
- Airman Certification Standards
 - Private Pilot ([link here](#))
 - Commercial Pilot ([link here](#))
- FAR/AIM
- G1000 Pilot's Guide

Required Equipment

- Headset (dual plug) *
- Foggles (if applicable) *
- Pilot Logbook

* *These items can be rented from TSFS.*

Lesson 1

Preflight Discussion

- Weight and Balance
- Aircraft Preflight
- Standard Pattern
- Instrument Approach Profile

Flight: VFR Maneuvers

- Steep Turns
- Slow Flight
- Power-On Stall
- Power-Off Stall
- Emergency Descent
- Normal Takeoffs/Landings
- Short-Field Takeoffs/Landings
- Balked Landing/Go-Around
- Instrument Approach (dual-engine)

Lesson 2

Preflight Discussion

- Single-Engine Aerodynamics
- Performance
- VMC
- Engine Failure Emergency Procedures

Flight: Intro to OEI Operations

- Drag Demo (by instructor)
- Enroute Engine Failure
- Emergency Descent
- Normal Landings
- Single-Engine Landings
- Instrument Approach (single-engine)

Lesson 3

Preflight Discussion

- Systems
 - Engines
 - Turbocharger
 - Fuel System
 - Oil System
 - Fire Detection System
 - Landing Gear System
 - Electrical System
 - Pitot-Static System
 - Stall Warning System
 - Flaps
 - Elevator Backstop
 - Ice Protection System
 - Environmental Systems

Flight: OEI Operations

- VMC Demo
- Enroute Engine Failure
- Engine Failure on Departure (at altitude)
- Engine Failure on Departure (in traffic pattern)
- Single-Engine Landings
- Instrument Approach (single-engine)

Lesson 4

Preflight Discussion

- Other Emergency Procedures

Flight: OEI Operations

- VMC Demo
- Engine Failure on T/O Roll
- Engine Failure on Departure
- Enroute Engine Failure, with Secure & Restart
- Instrument Approach (dual-engine)
- Instrument Approach (single-engine)

Lesson 5: Stage Check

Ground

- Demonstration of Knowledge

Flight: Stage Check

- Steep Turns
- Slow Flight
- Power-Off Stall
- Power-On Stall
- VMC Demo
- Engine Failure on Takeoff Roll
- Engine Failure on Departure
- Engine Failure Enroute, with Secure & Restart
- Emergency Descent
- Single-Engine Landing
- Short-Field Landing
- Instrument Approach (single-engine)

Lesson 6

Preflight Discussion

- Logbooks
- Review

Flight: Checkride Preparation/Refresher

- Steep Turns
- Slow Flight
- Power-Off Stall
- Power-On Stall
- VMC Demo
- Engine Failure on Takeoff Roll
- Engine Failure on Departure
- Engine Failure Enroute, with Secure & Restart
- Emergency Descent
- Single-Engine Landing
- Short-Field Landing
- Instrument Approach (single-engine)