



High Performance Stage 5a (Light)(Airplane Only)

Stage Objective

Prior to entering this stage the cadet must possess a Commercial Pilot Certificate with Multi Engine Rating. During this stage, instruction and practice in the Turbine Multi-Engine airplane is provided to broaden the student's knowledge and develop the skills necessary to safely fly a Turbine Multi-Engine airplane under VFR and IFR conditions.

The **PUI** will conduct training in the following equipment:

CAAC Approved Multi-Engine Turbine Airplane

Stage Completion Standards

This stage will be completed when the student demonstrates the proficiency and knowledge necessary to operate the Turbine Multi-Engine airplane under VFR and IFR conditions appropriate to the Pilot certificate held.

At the completion of this stage, the PUI will have gained the following experience in during the 20 hour course in a high performance multi-engine airplane:

- A. At least 10 hours flight training as **PF** for basic flight skills required by AC-141-FS-2011-02R1 (CAAC) in a high performance multi-engine airplane.
- B. Within the 10 hours flight training as **PF** in a high performance multi-engine airplane, there must be at least 5 hours of LOFT (Line Oriented Flight Training), including at least 3 full stop landings when acting as **PF**.
- C. At least 10 instrument approach to land when acting as **PF**.
- D. At least 10 hours flight training as **PNF** in an airplane to complete the multi-crew cooperation training.



Lesson 66-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

This lesson provides an introduction to basic flight maneuvers, ground operations, IFR operations and turbine multi-engine systems as the pilot flying (**PF**). The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. The student will execute precision, non-precision instrument approaches, and IFR procedures as the pilot flying. Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Briefing - Pre-flight Inspection - Checklist Usage
Cockpit Familiarization - Flight Controls - Engine Controls
Engine Starting - Turbine Engine Starting Procedures - Engine Clearing
Taxi Operations - Basic Aircraft Control - Brake Failure During Taxi
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures Normal and/or Crosswind Takeoff
Operation of Systems In-Flight - Powerplant Operation - Use of Constant Sped Propeller - Use of Retractable Landing Gear - Use of Oxygen - Cabin Pressurization



Slow Flight Pitch/Airspeed Control Power/Altitude Control
Stalls Stalls/Recovery Procedures
Steep Turns Steep Turns
Multi Engine Operations Vmc Demonstration
Emergency/Abnormal Procedures Emergency Descent
Instrument Approach To Landing Procedures Precision Approach & Procedure Non- Precision Approach & Procedure
Approach and Landing Procedures Normal and/or Crosswind Landing (x2) Go-Around/Rejected Landing
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

At the completion of this lesson the student will have gained an increased level of knowledge of turbine airplane systems, ground operations, basic flight maneuvers and IFR operations in a turbine multi engine airplane.



Lesson 67-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review IFR operations in a turbine airplane. The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. The student will execute precision, non-precision instrument approaches, and IFR procedures as the pilot flying (**PF**). Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Briefing - Pre-flight Inspection - Checklist Usage
Cockpit Familiarization - Flight Controls - Engine Controls
Engine Starting - Turbine Engine Starting Procedures - Engine Clearing
Taxi Operations Basic Aircraft Control
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures Normal and/or Crosswind Takeoff
Operation of Systems In-Flight - Use of Oxygen - Cabin Pressurization - Ice protection System
Slow Flight - Pitch/Airspeed Control - Power/Altitude Control



Stalls Takeoff Configuration Landing Configuration
Steep Turns Steep Turns
Unusual Attitudes (IR) Unusual Attitudes/Recovery Procedures
Instrument Approach To Landing Procedures Precision Approach & Procedure Non- Precision Approach & Procedure
Approach and Landing Procedures Normal and/or Crosswind Landing (x2)
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

At the completion of this lesson the student will have gained an increased level of knowledge of IFR operations in a turbine airplane.



Lesson 68-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review IFR operations in a turbine airplane. The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. The student will execute precision, non-precision instrument approaches, and IFR procedures as the pilot flying (**PF**). Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Briefing - Pre-flight Inspection - Checklist Usage
Cockpit Familiarization - Flight Controls - Engine Controls
Engine Starting - Turbine Engine Starting Procedures - Engine Clearing
Taxi Operations Basic Aircraft Control
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures - Normal and/or Crosswind Takeoff - Takeoff With Flaps - Aborted Takeoff
Operation of Systems In-Flight - Use of Oxygen - Cabin Pressurization - Ice protection System - Fuel Management - Fuel Reserve Calculations



Emergency/Abnormal Procedures Emergency Engine Shutdown Engine Failure After Lift-Off (Simulated) Ice Protection System Failure
Instrument Approach To Landing Procedures Precision Approach & Procedure Non- Precision Approach & Procedure (x2)
Approach and Landing Procedures Normal and/or Crosswind Landing Maximum Thrust Reverse Landing Single Engine Approach & Landing (Simulated)
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

At the completion of this lesson the student will have gained an increased level of knowledge of IFR operations and emergency procedures in a turbine engine airplane.



Lesson 69-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review IFR operations in a turbine airplane. The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. The student will execute precision, non-precision instrument approaches, and IFR procedures as the pilot flying (**PF**). Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Briefing - Pre-flight Inspection - Checklist Usage
Cockpit Familiarization - Flight Controls - Engine Controls
Engine Starting - Turbine Engine Starting Procedures - Engine Clearing - Engine Fire on Ground
Taxi Operations Basic Aircraft Control
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures - Normal and/or Crosswind Takeoff - Takeoff With Flaps - Aborted Takeoff
Operation of Systems In-Flight - Autopilot & Flight Director Setup and Usage (If Installed) - Fuel Management - Fuel Reserve Calculations



Emergency/Abnormal Procedures Engine Flame Out Emergency Engine Shutdown Engine Air Start
Holding Procedures Holding Procedures
Instrument Approach To Landing Procedures Precision Approach & Procedure Non- Precision Approach & Procedure Autopilot Coupled Approach & Procedures (If Installed)
Approach and Landing Procedures Normal and/or Crosswind Landing Maximum Thrust Reverse Landing Single Engine Approach & Landing (Simulated)
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

At the completion of this lesson the student will have gained an increased level of knowledge of IFR operations and emergency procedures in a turbine engine airplane. Additionally, at the completion of this lesson, the student will have attained at least 10 hours flight training in a high performance multi engine airplane as **PF** for basic flying skills. Within the 10 hours flight training as pilot flying **PF** there must be at least : 10 instrument approaches to land as **PF**, and 5 hours of LOFT including at least 3 full stop landings when acting as **PF**.



Lesson 70-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review operations in a turbine airplane as pilot not flying (PNF). The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. This flight will be conducted using multi-crew co-operation training to train the student to be proficient in optimal decision making, communication, work assignment, checklist usage, and monitoring operation in order to safely operate a multi-crew airplane during the whole flight. Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management - Crew Briefing - Passenger Briefing
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Briefing - Pre-flight Inspection - Checklist Usage
Engine Starting Turbine Engine Starting Procedures
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures - Normal and/or Crosswind Takeoff - Takeoff at Maximum Weight (Simulated)
Operation of Systems In-Flight - Autopilot & Flight Director Setup and Usage (If Installed) - Fuel Management - Fuel Reserve Calculations
Emergency/Abnormal Procedures - Low Oil Pressure - Engine Partial Power Loss
Lost Communication Lessons Lost Communication Procedures



Instrument Approach To Landing Procedures Non-Precision Approach & Procedure Visual Approach & Procedures
Approach and Landing Procedures Normal and/or Crosswind Landing Single Engine Approach & Landing (Simulated)
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

The lesson will be completed when the student has performed the duties of the pilot not flying (PNF) and understands the flight management and decision making processes involved with multi crew co-operation during all phases of flight.



Lesson 71-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review operations in a turbine airplane as pilot not flying (PNF). The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. This flight will be conducted using multi-crew co-operation training to train the student to be proficient in optimal decision making, communication, work assignment, checklist usage, and monitoring operation in order to safely operate a multi-crew airplane during the whole flight. Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management - Crew Briefing - Passenger Briefing
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Briefing - Pre-flight Inspection - Checklist Usage
Engine Starting Turbine Engine Starting Procedures
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures - Normal and/or Crosswind Takeoff - Takeoff at Maximum Weight (Simulated)
Operation of Systems In-Flight - Autopilot & Flight Director Setup and Usage (If Installed) - Fuel Management - Fuel Reserve Calculations
Emergency/Abnormal Procedures - Low Oil Pressure - Engine Partial Power Loss
Lost Communication Lessons Lost Communication Procedures



Instrument Approach To Landing Procedures Non-Precision Approach & Procedure Visual Approach & Procedures
Approach and Landing Procedures Normal and/or Crosswind Landing Single Engine Approach & Landing (Simulated)
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

The lesson will be completed when the student has performed the duties of the pilot not flying (PNF) and understands the flight management and decision making processes involved with multi crew co-operation during all phases of flight.



Lesson 72-LOFT

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review operations in a turbine airplane as pilot not flying (PNF). The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. This flight will be conducted using multi-crew co-operation training to train the student to be proficient in optimal decision making, communication, work assignment, checklist usage, and monitoring operation in order to safely operate a multi-crew airplane during the whole flight. Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management - Crew Briefing - Passenger Briefing
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Inspection - Checklist Usage
Engine Starting Turbine Engine Starting Procedures
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures Normal and/or Crosswind Takeoff
Operation of Systems In-Flight - Autopilot & Flight Director Setup and Usage (If Installed) - Fuel Management - Fuel Reserve Calculations
Emergency/Abnormal Procedures - Landing Gear Malfunction - Illumination of Cabin Door Warning light - Environmental System Smoke or Fumes
Lost Communication Lessons Lost Communication Procedures
Instrument Approach To Landing Procedures - Visual Approach & Procedure - Autopilot Coupled Approach & Procedures (If Installed)



Approach and Landing Procedures Normal and/or Crosswind Landing Single Engine Approach & Landing (Simulated)
Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief

Completion Standards

The lesson will be completed when the student has performed the duties of the pilot not flying (PNF) and understands the flight management and decision making processes involved with multi crew co-operation during all phases of flight.



Lesson 73– LOFT Stage Check Oral

Equipment

Briefing Area

Lesson Objective

The lesson will be conducted by the Chief/Assistant Chief or Designated End of Course Check Pilot. This lesson provides an evaluation of knowledge related to airworthiness requirements, performance and limitations, operations of systems related to high performance multi-engine airplane, high altitude operations, and basic airline type company operations.

Oral
Airworthiness Requirements
Airline Company Operations
Performance and Limitations
Theory of High Performance Multi-Engine Airplane
High Altitude Operations
Compliance with Departure, En Route, and Arrival Procedures
Multi-Crew Cooperation
Special Emphasis Areas
All Areas
Additional Areas
As Assigned By Instructor (If Necessary)



Lesson 74– LOFT Stage Check Flight

Equipment

Multi-Engine Turbine Airplane

Lesson Objective

During this lesson the student will review operations in a turbine airplane as pilot not flying (PNF). The student and Flight Instructor will simulate a flight with passengers to an airport more than 100 NM away from the airport of departure. This flight will be conducted using multi-crew co-operation training to train the student to be proficient in optimal decision making, communication, work assignment, checklist usage, and monitoring operation in order to safely operate a multi-crew airplane during the whole flight. Situations requiring the student to execute emergency/abnormal procedures may be presented by the Flight Instructor at any time during the lesson.

Lesson Content

CRM - Risk Assessment - Collision Avoidance - Task Management - Automation Management - Crew Briefing - Passenger Briefing
Preflight Procedures - Determining Performance and Limitations - Weight and Balance - Pre-flight Inspection - Checklist Usage
Engine Starting Turbine Engine Starting Procedures
Before Takeoff Check - Engine Check - Instrument Check
Takeoff and Climb Procedures Normal and/or Crosswind Takeoff
Operation of Systems In-Flight - Autopilot & Flight Director Setup and Usage (If Installed) - Fuel Management - Fuel Reserve Calculations
Emergency/Abnormal Procedures - Illumination of Cabin Door Warning Light - Loss of Pressurization - Emergency Descent
Instrument Approach To Landing Procedures - Precision Approach & Procedure - Non-Precision Approach & Procedure
Approach and Landing Procedures Maximum Thrust Reverse Landing



Post Flight Procedures Turbine Engine Shutdown Securing Aircraft Postflight Debrief
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Completion Standards

The lesson will be completed when the student has performed the duties of the pilot not flying (PNF) and understands the flight management and decision making processes involved with multi crew co-operation during all phases of flight.