Flight Lesson: Single Engine Ops

En Route Procedures

Objectives:

1. exhibit knowledge of the elements related to Single Engine Operations
2. exhibit knowledge of the elements related to Single Engine Flight Principles
3. can demonstrate proper actions during a simulated engine failure including feathering and unfeathering

Schedule:

Activity	Est. Time
Ground	1.0
Air	1.5
Debrief	0.25
Total	2.75

Recommended Readings:

AFH	Chapter 12: 12-21 to 12-25
FAA	

Elements Ground:

- **Single Engine Aerodynamics**
  - aircraft tendencies
    - asymmetrical thrust
    - induced lift
  - critical engine
  - zero-slip concept
- **Critical vs. Non-Critical EO**
  - what's the difference?
  - procedural changes
- **Engine Failure Procedures**
  - A-N-I-C-T
  - "Forward, Forward, Forward, Up, Up"
  - **Identify**ing the Dead Engine
    - Can we use our instruments?
    - "Dead Foot, Dead Engine"
    - Instrument Indications
  - **Verify**ing the Dead Engine
    - throttle check - "no change"
  - **Fix** the Problem Engine
    - troubleshooting flow
    - checklist verify
  - **Feather**/Secure Dead Engine
    - (un)feathering systems
  - Protect Good Engine
    - Carb Heat, Cowl Flaps, Fuel Pumps reduce power as able

Elements Air:

- **Engine Identification Exercise**
- **Engine Failure Procedure**
  - including feathering/unfeathering
- **VFR maneuvering with Engine Out**
  - four fundamentals, navigation, etc.