



Civil Air Patrol



Stan/Eval CAPR 70-1

1 September 2017



Aircraft Operations Flight Academy Video





Aircraft Operations

Who's Who

- **Ron Olienyk, CAP/DO**
 - Deputy Director, Operations
- **Vacant, CAP/DOV**
 - Chief, Standardization and Evaluation
- **Capt Susan Parson, CAP/DOV**
 - Standardization & Evaluation Officer
- **Col Carlton Sumner, CAP/DOT**
 - Chief of Training / Balloon Prog. Mgr.
- **Col Jack Buschmann, CAP/DOG**
 - Glider Program Manager





Aircraft Operations

How Many...

Status, Aircraft Upgrades & MX



- CAP Pilots
 - 9600+ Total
 - 2800+ Active Flyers
 - 1700+ Mission Pilots
- Powered Aircraft Fleet - 551
- New planes purchased
 - 2016 - 19 (17 x 182T) & (2 x T206H)
 - 2017 - 15 (9 x 182T) & (6 x 172S)
- Consolidated MX
 - 100% of wings enrolled!
 - 52 wings/550 aircraft



Aircraft Operations

How Many...

Primary Powered Aircraft Models of the CAP Fleet



Gippsland GA-8 (16)



Cessna 182 (327)



Cessna 206 (36)



Cessna 172 (172)

Cruise speed 110-135 kts
Range 520-730 NM



Aircraft Operations

How Many...

Gliders:

- There are 46 Serviceable gliders in the fleet
 - 29 Blanik L-23s
 - 5 Schleicher ASK21s
 - 1 Schweizer 2-32
 - 11 Schweizer 2-33s





Aircraft Operations

How Much...

1 Oct–11 Aug AF Mission Flying Hour Comparison



| <u>Description</u> | <u>Previous Year</u> | <u>Current Year</u> | <u>Difference %</u> |
|---------------------------|----------------------|---------------------|---------------------|
| AFROTC | 126.3 | 481.3 | 281.1% |
| Range Support | 288.1 | 796 | 176.3% |
| DSCA/DR | 1,010.3 | 1598.1 | 58.2% |
| AFJROTC | 443.0 | 677.3 | 52.9% |
| Other/HLS | 5,273.6 | 6,139.00 | 16.4% |
| Air Defense | 1,144.3 | 1,265.70 | 10.6% |
| SAR | 1,483.2 | 1,594.70 | 7.5% |
| SUAS (Green Flag) | 1,023.9 | 1,099.30 | 7.4% |
| Maintenance | 7,680.7 | 7,691.40 | 0.1% |
| Cadet Orientation | 9,141.7 | 9,142.80 | 0.0% |
| Route Survey | 605.2 | 526.4 | -13.0% |
| Training | 31,931.0 | 25,809.10 | -19.2% |
| Drug Interdiction | 6,980.1 | 4,634.30 | -33.6% |
| Total AFAM Flying | 67,131.4 | 61,455.40 | -8.5% |
| Liaison Flying | 2,024.9 | 1,696.8 | -16.2% |
| Corporate Flying | 19,515.0 | 20,730.0 | 6.2% |
| Grand Total Flying | 88,671.3 | 83,882.2 | -5.4% |

The flying hour comparison is directly affected by budget constraints.

CITIZENS SERVING COMMUNITIES



Aircraft Operations

How Much...

Green Flag (Surrogate Predator Ops)

- **Locations**
 - **GF East: Barksdale AFB, LA**
 - **GF West: Nellis AFB, NV**
- **Always looking for aircrew**
- **Now directly under Wings (LA / NV)**
 - **Standardized structures and Ops**
 - **Enhanced interoperability between GF East & West**
- **CAP Chief of Special Missions (Joe Piccotti)**
 - **Supports GF and other high interest programs**





Pilot Professionalism

Characteristics of a Pro - *Pro forma* ≠ Professional

- **P**ersonal Integrity
 - Mindset, attitude, ethics, and discipline to do the right thing every time, all the time, regardless of who's watching.
- **R**eady for Anything
 - Training – necessary but not sufficient
 - Education – how to navigate new situations
 - Risk Management – proactive identification & mitigation
- **O**n Target
 - Knowledge, Attitudes, Skills



CAPF 5 – Quality Assurance

- Use appropriate standards:
 - ACS for Private, Instrument Commercial
- Remember QA and “gatekeeper” role for CAP
- Evaluate from all perspectives:
 - Pilot knowledge
 - Pilot judgment
 - Pilot skill





CAPF 5 – Quality Assurance

Definition & integration of elements = comprehensive standard

Aeronautical knowledge

Aeronautical decision-making and special emphasis

PTS-based flight proficiency

| | |
|-------------------|---|
| Task | Task A. Steep Turns |
| References | FAA-H-8083-2, FAA-H-8083-3; POH/AFM |
| Objective | To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns. |

| | |
|------------------|--|
| Knowledge | The applicant demonstrates understanding of: |
| PA.V.A.K1 | Purpose of steep turns. |
| PA.V.A.K2 | Aerodynamics associated with steep turns, to include: |
| PA.V.A.K2a | a. Coordinated and uncoordinated flight |
| PA.V.A.K2b | b. Overbanking tendencies |
| PA.V.A.K2c | c. Maneuvering speed, including impact of weight changes |
| PA.V.A.K2d | d. Accelerated stalls |
| PA.V.A.K2e | e. Rate and radius of turn |
| PA.V.A.K3 | Altitude control at various airspeeds. |

| | |
|------------------------|--|
| Risk Management | The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing: |
| PA.V.A.R1 | Failure to divide attention between airplane control and orientation. |
| PA.V.A.R2 | Collision hazards, to include aircraft, terrain, obstacles and wires. |
| PA.V.A.R3 | Low altitude maneuvering/stall/spin. |
| PA.V.A.R4 | Distractions, loss of situational awareness, and/or improper Task management. |
| PA.V.A.R5 | Failure to maintain coordinated flight. |

| | |
|---------------|---|
| Skills | The applicant demonstrates the ability to: |
| PA.V.A.S1 | Clear the area. |
| PA.V.A.S2 | Establish the manufacturer's recommended airspeed or, if not stated, a safe airspeed not to exceed V_A . |
| PA.V.A.S3 | Roll into a coordinated 360° steep turn with approximately a 45° bank. |
| PA.V.A.S4 | Perform the Task in the opposite direction |
| PA.V.A.S5 | Maintain the entry altitude ± 100 feet, airspeed ± 10 knots, bank and $\pm 5^\circ$; and roll out on the entry heading, $\pm 10^\circ$. |

Know

Consider

Do



CAPF 5 – Quality Assurance

| CAPPILOT FLIGHT EVALUATION – AIRPLANE/GLIDER | | | |
|--|-------------------------------------|--|---|
| <input checked="" type="checkbox"/> ANNUAL <input type="checkbox"/> ABBREVIATED | | DATE OF FLIGHT EVALUATION: 15 03 19 | |
| MEMBER'S NAME (print or type) | CAPID | CHARTER NO. | CERTIFICATES EXERCISED (Check all that apply) |
| Susan K. Pearson | 363510 | NER-VA-001 | <input checked="" type="checkbox"/> Private <input type="checkbox"/> Commercial <input type="checkbox"/> Instrument <input type="checkbox"/> CFI <input type="checkbox"/> CFI |
| ADDITIONAL CAP ENDORSEMENTS (Evaluator initials [typed/printed] blank) | | AIRCRAFT MAKE & MODEL C182T Nav III AIRCRAFT CATEGORY & CLASS ASEL FLIGHT TIME (or # of Glider Flights) 2316 OTHER CAP ENDORSEMENTS (list) | |
| <input type="checkbox"/> Q1000 <input type="checkbox"/> Orientation Pilot <input type="checkbox"/> Instructor Pilot <input type="checkbox"/> Mountain Flight <input type="checkbox"/> Instrument Dome <input type="checkbox"/> Check Pilot <input type="checkbox"/> Turbo Aircraft | | | |
| I. ORAL DISCUSSION | | | |
| A. Annual Online Written Exam | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Review CAPR 80-1 & Supplements | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Review Flight Release Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Review CAPF 9 Requirements | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Local Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Emergency Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| G. Electronic Flight Bag (EFB) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| II. PREFLIGHT PREPARATION | | | |
| A. Certificates & Documents | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Obtaining Weather Information | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Determine Weight & Balance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Determine Takeoff Performance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Determine Cruise Performance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Determine Landing Performance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| G. Cross-country Flight Planning | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| H. Aircraft Systems | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| I. Aeromedical Factors | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| III. GROUND OPERATIONS | | | |
| A. Visual Inspection | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Starting Engines | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Taxiing | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Use of Checklist (mandatory) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Passenger & Crew Briefing | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Sterile Cockpit Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| G. Post-flight Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| IV. AIRPORT & TRAFFIC PATTERN OPS | | | |
| A. Radio Com & ATIS Light Signals | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Surface and Traffic Pattern Operations | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Airport & Runway Markings & Lighting | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| V. TAKEOFF & CLIMBS | | | |
| A. Normal Takeoff & Climb | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Crosswind Takeoff & Climb | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Short-field Takeoff & Climb | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Soft-field Takeoff & Climb | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| VI. CROSS-COUNTRY FLYING | | | |
| A. Pilotage & Dead Reckoning | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Radio Navigation | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Diversion | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Lost Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| VII. MANEUVERS | | | |
| A. Power-Off Stalls | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Power-On Stalls | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Maneuvering During Slow Flight | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Steep Turns | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| VIII. INSTRUMENT REF MANEUVERS | | | |
| A. Straight & Level Flight | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Constant Airspeed Climbs | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Constant Airspeed Descents | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Turns To A Heading | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Recovery from Unusual Fth Attitudes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Radio Nav & Radar Services | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| IX. INSTRUMENT FLIGHT PROCEDURES | | | |
| A. Ground Prep (WX, AC systems, Fth Plan) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. ATC Clearance and Traffic Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Holding Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Partial Panel/Unusual Attitude Recovery | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Intercept & Tracking of Courses | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Instrument Approach Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| (1) Precision Approach | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| (2) Non-Precision Approach | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| (3) Partial Panel Approach | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| (4) Circling & Missed Approach | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| X. GROUND REFERENCE MANEUVERS | | | |
| A. Rectangular Course | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. S-Turns | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Turns Around A Point | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| XI. NIGHT FLIGHT OPERATIONS | | | |
| A. Physiological aspects of night flying | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Preparation & Personal Equipment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Aircraft & Airport Lighting | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Night Orientation and Navigation | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| XII. EMERGENCY PROCEDURES | | | |
| A. Emergency Approach & Landing (sim) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. System & Equipment Malfunction | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. POH Bold Face Knowledge | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Emergency Descent | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| XIII. APPROACHES & LANDINGS | | | |
| A. Normal Approaches and Landings | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Crosswind Approaches and Landings | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Forward Slips to Landing | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Go-around | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Short-field Approach & Landing | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Soft-field Approach & Landing | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| XIV. SAFETY AWARENESS | | | |
| A. Clearing Turns and Collision Avoidance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Vigilance, Risk Mgt & Judgment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Fuel Management | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D. Use of Crew Resource Management | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Ground Handling Procedures | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Use of Risk Management (Go-No Go) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

CAP Check Pilots use the ACS to:

- Verify that the CAP pilot meets the standard for privileges of the certificate or rating to be exercised (same as traditional use of PTS)
- Improve discussion of risk management and aeronautical decision making on initial and annual F5 proficiency checks



CAPF 5 – Quality Assurance

Check Pilots should look for pilots to...

Know:

- FAA regulations
- CAP regulations
- Best practices
- Systems/ performance
- How to find information

Consider:

- Risk factors for mission
- Risk factors for task
- P-A-V-E (or other method)
- Mitigation strategies
e.g. C-A-R-E or T-E-A-M

Do:

- Perform to standards
- Follow all FAA & CAP regs
- Operate CAP equipment
- Safely perform in CAP context (all phases of flight)

Red Flags

- Disdainful attitude
- Misunderstanding of basic concepts
- Can't apply knowledge
- Unprepared
- No aeronautical curiosity

Red Flags

- Cavalier or unprofessional attitude
- Unsafe or reckless behavior
- Pushes the envelope
- Hazardous attitudes

Red Flags

- Can't perform to standards
- Seems unsure of the task
- Appears overloaded
- Needs excessive coaching
- Not familiar with eServices or WMIRS



CAPF 5 – Quality Assurance

June 2017:

- First version of ACS for Commercial Pilot – Airplane
- Updates to ACS for Private Pilot Airplane certificate and Instrument-Airplane Rating that will:
 - Incorporate corrections and changes suggested by stakeholders
 - Streamline presentation by consolidating certain task elements
 - Standardize phrasing and sequence of certain task elements
- Modifications to Slow Flight and Stalls Area of Operation in Private and Commercial Airplane ACS.





Trends

Flight Evaluations: 1435

Failures: 39

Failure Rate: 3%

| Category: | Total Failures: |
|--|-----------------|
| Instrument Approach Procedures | 7 |
| Steep Turns | 6 |
| Normal Approaches and Landings | 6 |
| Use of Checklist | 5 |
| Power-On Stalls | 5 |
| Maneuvering During Slow Flight | 5 |
| Precision Approach | 5 |
| Non-Precision Approach | 5 |
| Aircraft Systems | 4 |
| Surface and Traffic Pattern Operations | 4 |
| Normal Takeoff & Climb | 4 |
| Power-Off Stalls | 3 |

| Category: | Total Failures: |
|--|-----------------|
| Instrument Approach Procedures | 7 |
| Precision Approach | 5 |
| Non-Precision Approach | 5 |
| | |
| Normal Approaches and Landings | 6 |
| Normal Takeoff & Climb | 4 |
| | |
| Maneuvering During Slow Flight | 5 |
| Power-On Stalls | 5 |
| Power-On Stalls | 5 |
| | |
| Use of Checklist | 5 |
| Surface and Traffic Pattern Operations | 4 |

https://missions.caphq.gov/trend_analysis/index.cfm



Trends

Flight Evaluations: 1435

Failures: 39

Failure Rate: 3%

https://missions.caphq.gov/trend_analysis/index.cfm

| Category: | Total Failures: |
|--|-----------------|
| Recovery from Unusual Flight Attitudes | 2 |
| Engine Failure/Takeoff Below VMC | 2 |
| Go-around | 2 |
| Short-field Approach & Landing | 2 |

| Category: | Total Failures: |
|--|-----------------|
| Annual Online Written Exam | 1 |
| Taxiing | 1 |
| Radio Comm & ATC Light Signals | 1 |
| Crosswind Takeoff & Climb | 1 |
| Short-field Takeoff & Climb | 1 |
| Soft-field Takeoff & Climb | 1 |
| Radio Navigation | 1 |
| Constant Airspeed Descents | 1 |
| Radio Nav & Radar Services | 1 |
| S - Turns | 1 |
| Turns Around A Point | 1 |
| System & Equipment Malfunction | 1 |
| POH Bold Face Knowledge | 1 |
| X-wind Approaches and Landings | 1 |
| Soft-field Approach & Landing | 1 |
| Clearing Turns and Collision Avoidance | 1 |
| Vigilance, Risk Management & Judgement | 1 |
| Intercept & Tracking of Courses | 1 |
| Circling & Missed Approach | 1 |
| Use of Crew Resource Management | 1 |
| Demonstrate teaching maneuvers in flight | 1 |
| Demonstrate evaluating maneuvers in flight | 1 |
| Demonstrate syllabus maneuvers/items | 1 |



Slow Flight & Stalls

Maneuvering During Slow Flight in an Airplane

Continuum of reducing aircraft speed and energy state of the aircraft:

Normal flight operations:

Slow flight - Operation at the bottom on the normal flight regime -- develops the notion that the stall warning device indicates an abnormal situation that needs to be addressed.

Abnormal flight operations:

Flight between the stall warning and the stall (up to the critical angle of attack). Part of stall prevention training is to respond to the warning and return to normal flight. Maneuvering flight in this area is not tested under the ACS.

Emergency flight operations:

Full stall and recovery training includes slowing/loading to the break in the stall through the full recovery. The testing standard for stall recovery is appropriately separate from the slow flight standard.

Please see FAA-H-8083-3B - Airplane Flying Handbook Chapter 4 -

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook/



Slow Flight & Stalls

VII. Slow Flight and Stalls

| Task | Task A. Maneuvering During Slow Flight |
|-----------------|--|
| References | FAA-H-8083-2, FAA-H-8083-3; POH/AFM |
| Objective | To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with maneuvering during slow flight. |
| Knowledge | The applicant demonstrates understanding of: |
| PA.VII.A.K1 | 1. This maneuver as it applies to different phases of flight. |
| PA.VII.A.K2 | 2. The relationship between angle of attack (AOA), airspeed, load factor, aircraft configuration, aircraft weight, and aircraft attitude. |
| PA.VII.A.K3 | 3. The range and limitations of stall warning indicators (e.g.: aircraft buffet, stall horn, etc.). |
| PA.VII.A.K4 | 4. The difference between AOA and aircraft attitude during all flight conditions and how it relates to aircraft performance. |
| PA.VII.A.K5 | 5. How environmental elements affect aircraft performance. |
| PA.VII.A.K6 | 6. The importance of the 1,500-foot AGL (ASEL/ASES) or 3,000-foot AGL (AMEL/AMES) minimum altitude. |
| Risk Management | The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing: |
| PA.VII.A.R1 | 1. The interplay of aerodynamic factors (angle of attack (AOA), airspeed, load factor, aircraft configuration, aircraft weight, and aircraft attitude). |
| PA.VII.A.R2 | 2. Range and limitations of stall warning indicators (e.g.: aircraft buffet, stall horn etc.). |
| PA.VII.A.R3 | 3. The effect of environmental elements on aircraft performance. |
| PA.VII.A.R4 | 4. Collision avoidance, scanning, obstacle and wire strike avoidance. |
| PA.VII.A.R5 | 5. Failure to react appropriately to a stall warning. |
| PA.VII.A.R6 | 6. Failure to maintain coordinated flight during the maneuver. |
| PA.VII.A.R7 | 7. Failure to manage pitch attitude and power to avoid a stall warning or a stall. |
| Skills | The applicant demonstrates the ability to: |
| PA.VII.A.S1 | 1. Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES). |
| PA.VII.A.S2 | 2. Establish and maintain an airspeed, approximately 5-10 knots above the 1G stall speed, at which the airplane is capable of maintaining controlled flight without activating a stall warning. |
| PA.VII.A.S3 | 3. Accomplish coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the evaluator without activating a stall warning. |
| PA.VII.A.S4 | 4. Divide attention between airplane control, traffic avoidance and orientation. |
| PA.VII.A.S5 | 5. Maintain the specified altitude, ± 100 feet; specified heading, $\pm 10^\circ$; airspeed $\pm 10/-0$ knots; and specified angle of bank, $\pm 10^\circ$ or as recommended by aircraft manufacturer to a safe maneuvering altitude. |

Private ACS – June 2016

VII. Slow Flight and Stalls

| Task | A. Maneuvering During Slow Flight |
|-----------------|--|
| References | FAA-H-8083-2, FAA-H-8083-3; POH/AFM |
| Objective | To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with maneuvering during slow flight. <i>Note: See Appendix 6: Safety of Flight and Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations.</i> |
| Knowledge | The applicant demonstrates understanding of: |
| PA.VII.A.K1 | Aerodynamics associated with slow flight in various aircraft configurations, to include the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects. |
| Risk Management | The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing: |
| PA.VII.A.R1 | Inadvertent slow flight and flight with a stall warning, which could lead to loss of control. |
| PA.VII.A.R2 | Range and limitations of stall warning indicators (e.g., aircraft buffet, stall horn, etc.). |
| PA.VII.A.R3 | Failure to maintain coordinated flight. |
| PA.VII.A.R4 | Effect of environmental elements on aircraft performance. (e.g., turbulence, microbursts, and high density altitude). |
| PA.VII.A.R5 | Collision hazards, to include aircraft, terrain, obstacles, and wires. |
| PA.VII.A.R6 | Distractions, loss of situational awareness, and/or improper task management. |
| Skills | The applicant demonstrates the ability to: |
| PA.VII.A.S1 | Clear the area. |
| PA.VII.A.S2 | Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES). |
| PA.VII.A.S3 | Establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., aircraft buffet, stall horn, etc.). |
| PA.VII.A.S4 | Accomplish coordinated straight-and-level flight, turns, climbs, and descents with landing gear and flap configurations specified by the evaluator without a stall warning (e.g., aircraft buffet, stall horn, etc.). |
| PA.VII.A.S5 | Maintain the specified altitude, ± 100 feet; specified heading, $\pm 10^\circ$; airspeed $\pm 10/-0$ knots; and specified angle of bank, $\pm 10^\circ$. |

Private ACS – June 2017

- With the primary focus on understanding aerodynamics associated with flying slow in different phases of flight, there is now only one knowledge element for slow flight.
- The FAA refined and consolidated the risk management elements in the ACS.
- The FAA modified the phrasing of the skill element as follows: *Establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., aircraft buffet, stall horn, etc.).*



Slow Flight & Stalls

VII. Slow Flight and Stalls

| Task | Task B. Power-Off Stalls |
|-----------------|---|
| References | FAA-H-8083-2, FAA-H-8083-3; AC 61-67; POH/AFM |
| Objective | To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with power-off stalls. |
| Knowledge | The applicant demonstrates understanding of: <ol style="list-style-type: none"> 1. The importance of the 1,500-foot AGL (ASEL/ASES) or 3,000-foot AGL (AMEL/AMES) minimum altitude. 2. How the maneuver relates to a normal flight. 3. The components of a stabilized descent. 4. Approach to stall indications. 5. Full stall indications. 6. Which aircraft inputs are required to meet heading or bank angle requirements. 7. The stall recovery procedure. 8. The importance of establishing the correct aircraft configuration during the recovery process and the consequences of failing to do so. 9. Aerodynamics associated with stalls and spins in various aircraft configurations and attitudes. 10. The circumstances that can lead to an inadvertent stall or spin. |
| Risk Management | The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing: <ol style="list-style-type: none"> 1. The interplay of aerodynamic factors (angle of attack (AOA), airspeed, load factor, aircraft configuration, aircraft weight, and aircraft attitude.) 2. The range and limitations of stall warning indicators (e.g.: aircraft buffet, stall horn, etc.). 3. The effect of environmental elements on aircraft performance. 4. Required actions for aircraft maximum performance and the consequences of failing to do so. 5. Collision avoidance, scanning, obstacle and wire strike avoidance. 6. Failure to follow the stall recovery procedure. 7. Failure to maintain coordinated flight during the maneuver. 8. Secondary stalls. 9. Inadvertent stall or spin. |
| Skills | The applicant demonstrates the ability to: <ol style="list-style-type: none"> 1. Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES). 2. Establish a stabilized descent in the approach or landing configuration, as specified by the evaluator. 3. Transition smoothly from the approach or landing attitude to a pitch attitude that will induce a stall. 4. Maintain a specified heading, $\pm 10^\circ$, if in straight flight, and maintain a specified angle of bank not to exceed 20°, $\pm 10^\circ$ if in turning flight, while inducing the stall or as recommended by the aircraft manufacturer to a safe maneuvering altitude. 5. Recognize and recover promptly after a full stall has occurred. 6. Retract the flaps to the recommended setting; retract the landing gear, if retractable, after a positive rate of climb is established. 7. Execute a stall recovery in accordance with procedures set forth in the AFM/POH. 8. Accelerate to V_X or V_Y speed before the final flap retraction and return to the altitude, heading and airspeed specified by the examiner. |

Private ACS – June 2016

VII. Slow Flight and Stalls

| Task | B. Power-Off Stalls |
|-----------------|--|
| References | FAA-H-8083-2, FAA-H-8083-3; AC 61-67; POH/AFM |
| Objective | To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with power-off stalls. <i>Note: See Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations.</i> |
| Knowledge | The applicant demonstrates understanding of: <ol style="list-style-type: none"> PA.VII.B.K1 Aerodynamics associated with stalls in various aircraft configurations, to include the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects. PA.VII.B.K2 Stall characteristics (i.e., airplane design) and impending stall and full stall indications (i.e., how to recognize by sight, sound, or feel). PA.VII.B.K3 Factors and situations that can lead to a power-off stall and actions that can be taken to prevent it. PA.VII.B.K4 Fundamentals of stall recovery. |
| Risk Management | The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing: <ol style="list-style-type: none"> PA.VII.B.R1 Factors and situations that could lead to inadvertent power-off stall, spin, and loss of control. PA.VII.B.R2 Range and limitations of stall warning indicators (e.g., aircraft buffet, stall horn, etc.). PA.VII.B.R3 Failure to recognize and recover at the stall warning during normal operations. PA.VII.B.R4 Improper stall recovery procedure. PA.VII.B.R5 Secondary stalls, accelerated stalls, and cross-control stalls. PA.VII.B.R6 Effect of environmental elements on aircraft performance related to power-off stalls (e.g., turbulence, microbursts, and high density altitude). PA.VII.B.R7 Collision hazards, to include aircraft, terrain, obstacles, and wires. PA.VII.B.R8 Distractions, loss of situational awareness, and/or improper task management. |
| Skills | The applicant demonstrates the ability to: <ol style="list-style-type: none"> PA.VII.B.S1 Clear the area. PA.VII.B.S2 Select an entry altitude that will allow the Task to be completed no lower than 1,500 feet AGL (ASEL, ASES) or 3,000 feet AGL (AMEL, AMES). PA.VII.B.S3 Configure the airplane in the approach or landing configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver. PA.VII.B.S4 Establish a stabilized descent. PA.VII.B.S5 Transition smoothly from the approach or landing attitude to a pitch attitude that will induce a stall. PA.VII.B.S6 Maintain a specified heading, $\pm 10^\circ$ if in straight flight; maintain a specified angle of bank not to exceed 20°, $\pm 10^\circ$ if in turning flight, while inducing the stall. PA.VII.B.S7 Acknowledge cues of the impending stall and then recover promptly after a full stall has occurred. PA.VII.B.S8 Execute a stall recovery in accordance with procedures set forth in the POH/AFM. PA.VII.B.S9 Retract the flaps to the recommended setting; retract the landing gear, if retractable, after a positive rate of climb is established. PA.VII.B.S10 Accelerate to V_X or V_Y speed before the final flap retraction; return to the altitude, heading, and airspeed specified by the evaluator. |

Private ACS – June 2017



CAPR 70-1

CAP Flight Management

Overview

- Substantially revised from previous CAPR 60-1
- States the responsibilities of all CAP personnel with respect to the control and management of CAP aircrews, aircraft, and flying programs



NATIONAL HEADQUARTERS CIVIL AIR PATROL

CAP REGULATION 70-1

8 May 2017

OPERATIONS

CAP FLIGHT MANAGEMENT

SUMMARY OF CHANGES

This document has been extensively revised and needs to be reviewed in its entirety.

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1. Overview. This regulation states the responsibilities of all Civil Air Patrol (CAP) personnel with respect to the control and management of CAP aircrews, aircraft, and flying programs.

2. Applicability. This regulation applies to all CAP aircrews and all CAP aircraft as defined in this regulation. This regulation does not apply to CAP corporate aircraft flown by CAP-USAF personnel, aircraft released to an approved fixed base operator (FBO) or aircraft maintenance facility, or other non-CAP member use approved by the CAP-USAF Director of Operations (CAP-USAF/DO). All CAP personnel involved in CAP flight activities must comply fully with the requirements of 14 CFR, as well as with the additional CAP-specific standards stated in this regulation. All CAP members must understand that flying CAP aircraft is a privilege, not a right of membership. Commanders have overall responsibility for compliance with these procedures, which are applicable to all CAP units.

Supersedes: CAPR 60-1, 03-May-2014

Distribution: National CAP website

OPR: CAP/DO

Pages: 39

Notice: CAP publications and forms are available digitally on the National CAP website at:
http://www.capmembers.com/forms_publications_regulations/



CAPR 70-1

CAP Flight Management

Applicability

- Applies to all CAP aircrews and all CAP aircraft as defined in CAPR 70-1
- All CAP personnel involved in CAP flight activities must comply fully with the requirements of 14 CFR, as well as with the additional CAP-specific standards
- ***All CAP members must understand that flying CAP aircraft is a privilege, not a right of membership.***





CAPR 70-1: CAP Flight Management

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FAA Resources

- Airman Testing Web Page
 - http://www.faa.gov/training_testing/testing/
 - http://www.faa.gov/training_testing/testing/acs/
- FAASafety.gov – ALC-449*
 - www.faasafety.gov
- ACS Focus Team
 - 9-AVS-ACS-Focus-Team@FAA.gov
- Safety Alert for Operators – 17009
 - https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/



CAP Resources

- Website: “Aircraft Operations & Stan/Eval”

Access at: www.capmembers.com

Stan/Eval Information

Pilot & Flight Training information

FAA sites, AOPA courses, weather, & more!

- WMIRS (Web Mission Information Reporting System)
Standardized Sortie Generation & Flight Release
- Ops Qual
Real-time qualification data



Aircraft Operations

Questions?
Feedback?



Civil Air Patrol

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CITIZENS SERVING COMMUNITIES

A nighttime photograph of the Anaheim Marriott hotel. The hotel's facade is illuminated with warm lights, and a prominent red neon sign is visible on the upper left. In the foreground, a large, curved fountain with a stone wall and palm trees is lit up. The sky is dark blue.

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