AVIATION MNEMONICS

Day VFR Required Equipment

A TOMATO FLAMES

- **A**ltimeter
- **T**achometer
- **O**il pressure
- **M**agnetic compass
- **A**irspeed indicator
- **T**emperature sensor (if liquid-cooled)
- **O**il temperature (if air cooled)
- **F**uel gauge
- **L**anding gear position (if retractable)
- **A**nticollision lights (if certificated after March 11, 1996)
- **M**anifold pressure (if turbocharged or supercharged)
- **E**LT (if required by 14 CFR 91.207)
- **S**afety belts

Night VFR Required Equipment

Day VFR Equipment + FLAPS

- **F**uses (spares) or circuit breakers
- **L**anding light (if for hire)
- **A**nticollision lights
- **P**osition lights
- **S**ource of electricity

IFR Required Equipment

Day (or Night) VFR Equipment + GRAB CARD

- **G**enerator or alternator
- **R**adios
- **A**ttitude indicator
- **B**all
- **C**lock
- **A**djustable altimeter
- **R**ate-of-turn indicator
- **D**irectional gyro

Engine Run-Up

CIGAR

- **C**ontrols (free and correct, trim and flaps set)
- **I**nstruments (checked and set)
- **G**as (fuel level, pumps, and tank selector)
- **A**irplane secure, annunciators, autopilot test
- **R**un-up and radios

Before Takeoff

LIGHTS, CAMERA, ACTION

- **L**ights: ON
- **C**amera: Transponder set to ALT
- **A**ction: Critical items checked

Before Landing (Downwind)

CGUMPS

- **C**arburetor heat: ON
- **G**as: SET to the proper tank(s)
- **U**ndercarriage: DOWN
- **M**ixture: SET for a go-around
- **P**ower: AS REQUIRED
- **S**eatbelts and switches: ON

Before Landing (Short Final)

PUFFS

- **P**ropellers: FORWARD
- **U**ndercarriage: DOWN
- **F**laps (Wing): EXTENDED
- **F**laps (Cowl): CLOSED
- **S**eatbelts and switches: ON

Go-Around

The 5 C's

- **C**ram: Full power (smoothly)
- **C**limb: Pitch for V_X or V_Y
- **C**lean: Flaps and gear UP
- **C**ool: Cowl flaps OPEN
- **C**all: Make a radio call

Engine Failure [ASEL]

ABCDEFG

- **Airspeed:** Pitch for best glide speed
- **Best Landing Option:** Establish and turn if necessary
- **Checklists or Configure:** As the situation dictates
- **Declare an Emergency:** Make a radio call (121.5)
- **Execute an Emergency Landing:** "Aviate" first
    - **Fire Prevention:** Fuel and electrical OFF
    - **Ground Plan:** Exit with safety equipment

Engine Restart Criteria

VFR

- **Vibration?** None observed
- **Rotation?** Possible if no visible damage
- **Fire?** No smoke, fire, or fluid leaks

Emergency Transponder Codes

- **7500:** "Hi, Jack."
- **7600:** "Can't talk now."
- **7700:** "I'm on Fire!"

Wind Reports

“If written it’s true. If spoken it’s magnetic.”

METARs, TAFs, and winds aloft are in reference to true north. ATIS, PIREPs, and automated weather reports are in reference to magnetic north.

Weather Minimums

3 152’s

- 3 SM visibility
- 1,000′ above clouds
- 500′ below clouds
- 2,000′ horizontally from clouds

5 F-111’s

- 5 SM visibility
- 1,000′ above clouds
- 1,000′ below clouds
- 1 SM horizontally from clouds

Preflight Action (14 CFR 91.103)

WEALTH (of Information)

- **W**eather reports and forecasts*
- **E**xpected takeoff and landing performance
- **A**lternatives available*
- **L**ength of runways to be used
- **T**raffic delays*
- **H**ow much fuel is required*

** = Required on flights under IFR or not in the vicinity of an airport*

Required Inspections

AV1ATE

- **A**nnual: 12 calendar months
- **V**OR (IFR): 30 days
- **1**00 Hour (if for hire): 100 hours
- **A**ltimeter and pitot-static system (IFR): 24 calendar months
- **T**ransponder: 24 calendar months
- **E**LT: 12 calendar months

Required Aircraft Documents

ARROW

- **A**irworthiness Certificate
- **R**adio Telephone License (if international)
- **R**egistration Certificate
- **O**perator's handbook (AFM/POH)
- **W**eight and balance data

Standard AFM/POH Contents

(MR.) GLEN P. WAHS

- General
- Limitations
- Emergency Procedures
- Normal Procedures
- Performance
- Weight and Balance/Equipment List
- Airplane and System Description
- Handling, Service, and Maintenance
- Supplements

Before Each Maneuver

CHAPS

- **C**lear the area (clearing turns)
- **H**eading established and noted
- **A**ltitude established
- **P**osition near an emergency landing area
- **S**et power and aircraft configuration

Class E Airspace Types

FEET SO 14-50

- Federal airway (1,200′ AGL up to 18,000′ MSL)
- Extension to a surface area
- En route domestic area
- Transition area (700′ or 1,000′ AGL)
- Surface area designated for an airport
- Offshore airspace area (beyond 12 NM)
- 14,500′ everywhere else

Special Use Airspace Types

McPRAWN

- Military Operation Areas (Nonregulatory)
- Controlled Firing Areas (Nonregulatory)
- Prohibited Areas (Regulatory)
- Restricted Areas (Regulatory)
- Alert Areas (Nonregulatory)
- Warning Areas (Nonregulatory)
- National Security Areas (Nonregulatory)

Airport Sign Types

MIDDLR

- Mandatory instruction
- Information
- Destination
- Direction
- Location
- Runway distance remaining

Determination of V_{MC} [AMEL]

SMACFUM

- Standard day
- Most unfavorable weight (light)
- And most unfavorable CG (aft)
- Critical engine windmilling
- Flaps set for takeoff, gear UP, trim for takeoff
- Up to 5° of bank
- Maximum power on the operating engine

Determination of Critical Engine [AMEL]

PAST

- P-Factor
- Accelerated slipstream
- Spiraling slipstream
- Torque

Standard Flight Manual Format

1. General
2. Limitations
3. Emergency Procedures
4. Normal Procedures
5. Performance
6. Weight and Balance/Equipment List
7. Airplane and System Description
8. Handling, Service, and Maintenance
9. Supplements
10. Optional information (e.g., Safety and Operational Tips)