Elevating Training in the Piper M-Class Community

S. John Granmayeh
President, PMOPA

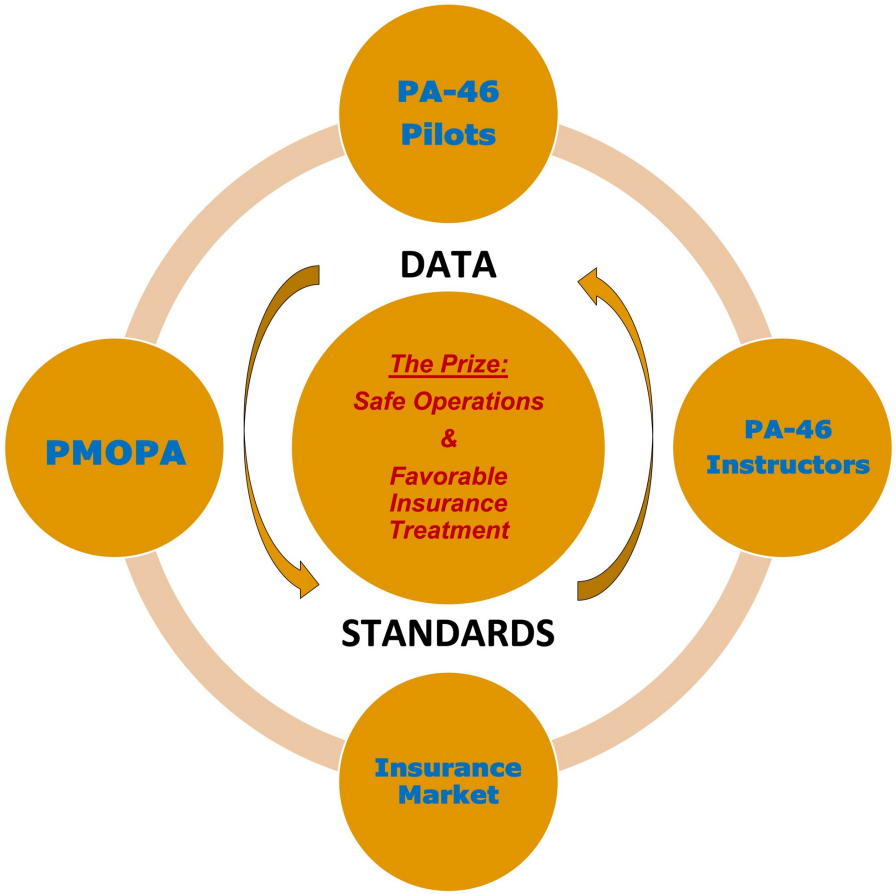
David McVinnie, MCFI
Chair, MSIP Steering Committee
PMOPA Safety & Education Foundation

Mike Nichols
CEO, PMOPA

Presentation Outline

- Why Is This Necessary?
- Training Program Elements
- Curriculum Overview
- Applying the Curriculum
- Training Records
- Q&A
- Upcoming: October 15 Meeting - Training Center + Instructor Recognition Program

Pursuit of "The Prize"



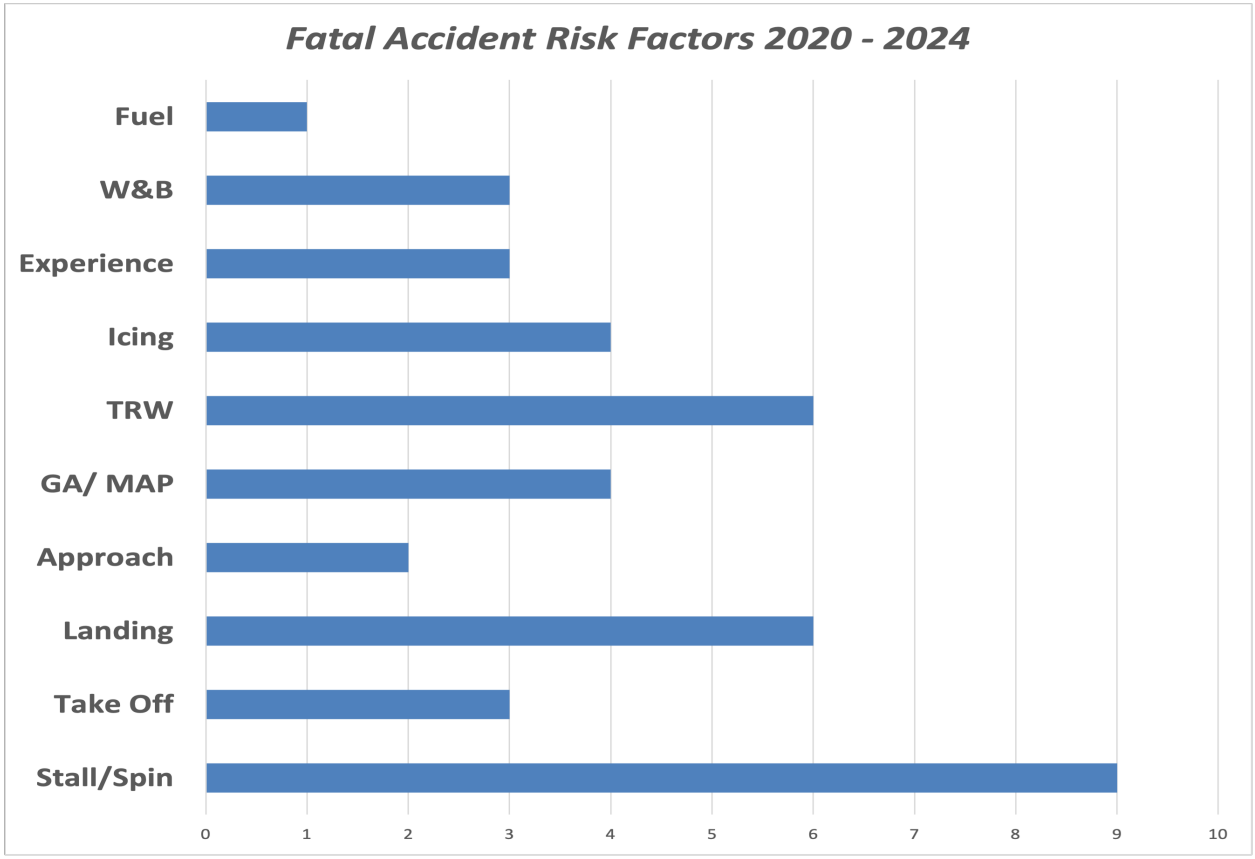
The Prize:

Safe Operations

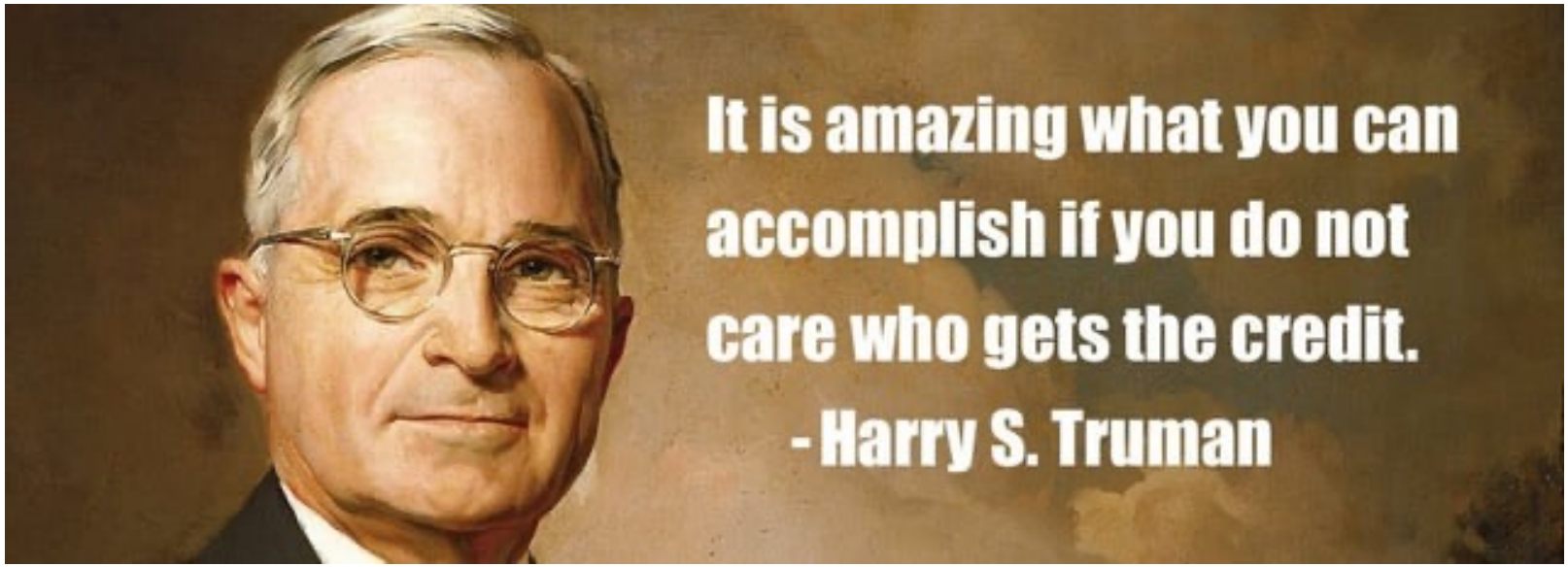
&

Favorable Insurance Treatment

Recent M-Class Accident Statistics



One Guiding Principle for Program Development



Acknowledgements & Thanks

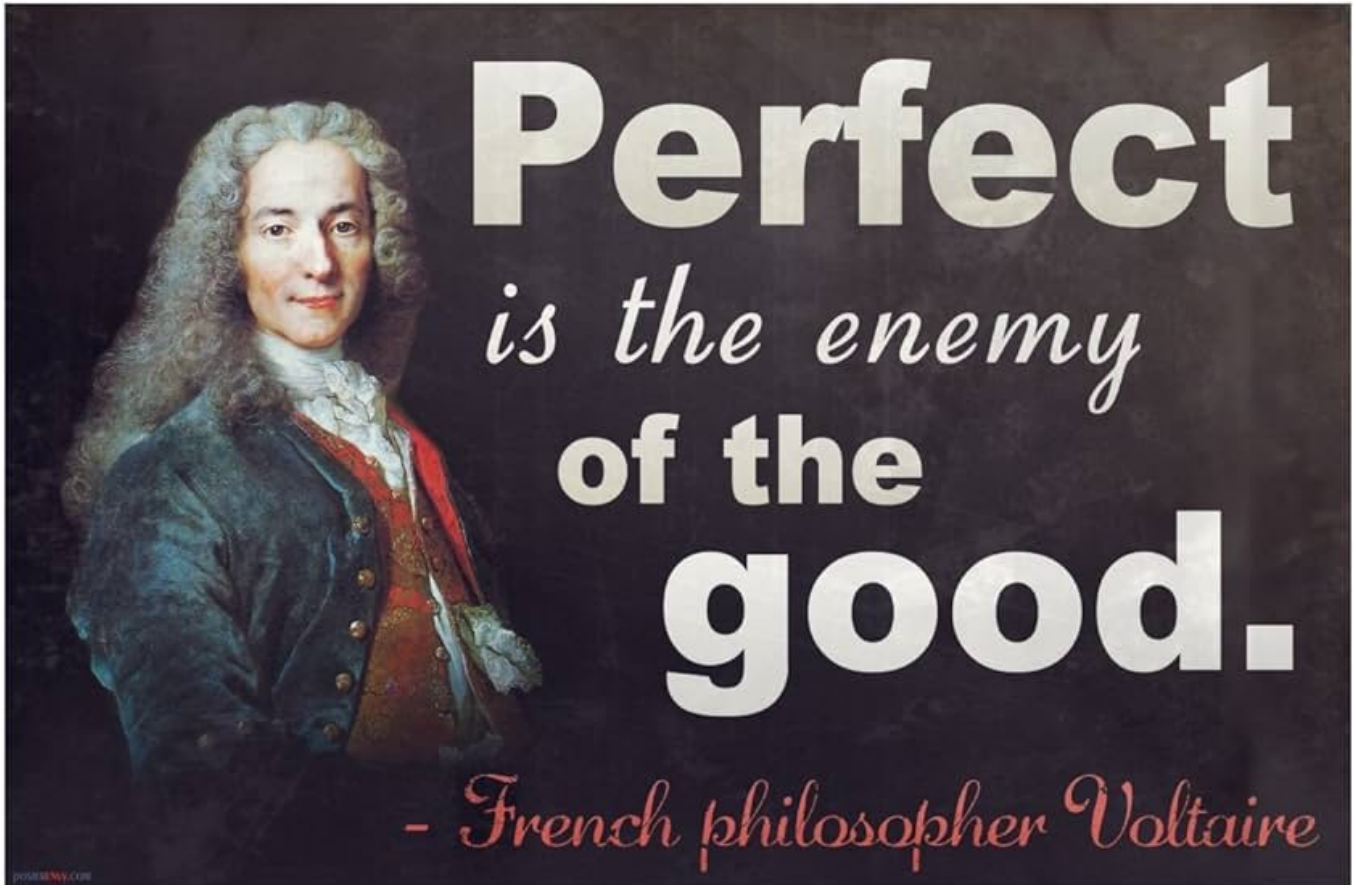
- PMOPA SEF is indebted to those who contributed their passion, time, and expertise to create M-Class Elevate

Bill Archer, Archer Aircraft Instructional Services
Deanna Casey, Casey Aviation
Joe Casey, Casey Aviation
Kimberly Coryat, PMOPA Safety Committee
S. John Granmayeh, PMOPA Board of Directors
Mike Nichols, PMOPA CEO
David McVinnie, McVinnie Aviation
Jacob Meyer, Archer Aircraft Instructional Services
Jim Ratliff, COPA University
Ed Trautman, PMOPA Safety Committee
Tom Turner, ABS Air Safety Foundation
Rick Tutt, RJ Tutt Aviation

Introducing M-Class Elevate

- A Training Curriculum
  - + Resources to help instructors as they build their lessons
- Developed through PMOPA Safety & Education Foundation
- Based on aviation training best practices
  - FAA (e.g., FITS, AC 90-109A)
  - GAMA
  - Other Owner Pilot Association successes
- Considers recent and historical M-Class accidents
- Emphasizes POH adherence
- Ties Pilot skill and performance to the FAA ACS

A Minimum Viable Product (MVP)



An MVP That Will Evolve Over Time

Original Apple iPhone

M-Class Elevate 1.0 →

Apple iPhone 8

M-Class Elevate 2.0 →

Apple iPhone 16

M-Class Elevate 3.0

Do You Do This Today?

- {Zoom Poll}

Using the Training Program – at a Glance

- Flexible framework for CFIs to apply to advance pilot knowledge and skills
- Organizes learning elements into:
  - Four components
  - Thirty-four training units
- Training units include
  - An objective and expectations for each training task
  - Recommendations for instructors
  - Links to PMOPA and external resources for self-study and instructional support
- A Training Record will document training accomplishments
- PMOPA SEF issues a certificate of completion

The Four Components

- Risk Management and Decision Making
  - Covers four key areas of risk management and decision making that are critical to safe flight
- Aeronautical Knowledge and Aircraft Systems
  - Covers basic knowledge about the M-Class aircraft and its key systems
  - Includes abnormal and emergency situations and pilot maintenance responsibilities
  - Focuses on areas and systems peculiar to the M-Class aircraft flown by the pilot

The Four Components

- Avionics and Panel Instruments
  - Relevant to M-Class aircraft with glass panel cockpits
  - Focuses on knowledge, programming, monitoring, and practical use of instruments and equipment for: primary flight, navigation, communication, flight management and control, and utilizing datalink services
- Flight Procedures and Proficiency
  - Skills required for proficient piloting of the M-Class aircraft through the complete process from pre-flight inspection to post-flight shutdown
  - Includes normal maneuvers and situations as well as abnormal and emergency procedures

The Thirty-Four Units

- Focuses on:
  - Areas where the pilot will encounter features or behaviors unique to all variants of the M-Class, and
  - Differences among the specific variants: Malibu/Mirage, Matrix, JetPROP, Meridian, M500, M600, and M700

Continuous Improvement

- As safety data from the M-Class fleet identifies new or different threats, errors, risks, and vulnerabilities, new special emphasis scenarios will be created to promote safety by highlighting these areas

Conditions for Training

- Training tasks can be conducted under one or more specific “conditions”:
  - **Self-study:** Content designed to be reviewed in advance of a scheduled training event, or any time the pilot wishes to advance his/her knowledge
  - **Ground School:** In-person or web-based training provided live with the ability to engage in discussions with Q&A
  - **Pre-Flight:** Conducted one-on-one (or small group) at or in the aircraft, or in a classroom, typically immediately before a flight
  - **In-flight:** Training conducted during an actual flight. Realistic situations and scenarios provide opportunities for risk management and decision making
  - **Post-Flight:** Debriefing discussions after flight or in subsequent forums

Pilot Expectations

- Expectations are detailed for each training task
- Risk management tasks progress from:
  - *Describe → perform/engage → to explain/manage*
- Knowledge and avionics tasks progress from:
  - *Aware → understand → to apply*
- Flight tasks progress from:
  - *Describe → explain → practice → to perform*

Training Tools

- Promotes use of:
  - Scenario-based training
  - Task-oriented training
- Either approach can be used to train to expectations
- MVP does not provide scenarios or specific maneuvers; future revisions will

Initial vs. Recurrent vs. Focused

- Initial + Recurrent are often insurance-mandates; focused training = non-required opportunity to develop skills
- The Syllabus is a (mostly) complete document for the M-Class
  - Let us know of any gaps you identify!
- We do not expect (nor want) recurrent training events to be rinse-and-repeat initial training events
- Instructors are encouraged to review the pilot's experience, changes in mission, areas of concern or interest
  - To build a customized training program for each client based on their needs

M-Class Elevate Syllabus Details

The Syllabus – Component 1

- Risk Management and Decision Making
  1. Single Pilot Resource Management (SRM)
  2. Threat and Error Management (TEM)
  3. Cross-Country Flight Planning
  4. Flight Operations

The Syllabus – Component 2

- Aeronautical Knowledge and Systems
  1. Airplane Familiarization
  2. Flight Controls
  3. Panel Instruments
  4. Performance
  5. Powerplant and Propellers
  6. Electrical

Continues on next slide

The Syllabus – Component 2

- Aeronautical Knowledge and Systems, continued
  7. Airplane Fuel Systems
  8. Landing Gear and Brake System (Hydraulics)
  9. Environmental
  10. Oxygen
  11. Ice Protection
  12. Weight and Balance

The Syllabus – Component 3

- Avionics and Flight Instruments
  1. Primary Glass Panel Instruments
  2. Communication, Navigation, Surveillance Systems
  3. Flight Management and Flight Control Systems
  4. Datalink Situation Awareness and Weather Summary

The Syllabus – Component 4

- Flight Procedures
  1. Flight Planning
  2. Normal Preflight and Cockpit Procedures
  3. Engine Start and Taxi Procedures
  4. Before Takeoff Checks & Briefings
  5. Takeoffs
  6. Climb Procedures
  7. Cruise Procedures

Continues on next slide

The Syllabus – Component 4

- Flight Procedures
  8. Instrument/Visual Cross Check
  9. Low-Speed Envelope
  10. Descent Planning and Execution
  11. Stabilized Approaches and Landings
  12. Aircraft Shutdown and Securing Procedures
  13. Emergency Escape Maneuvers / Recovery from Unusual Attitudes
  14. Approach Procedures

Training Records

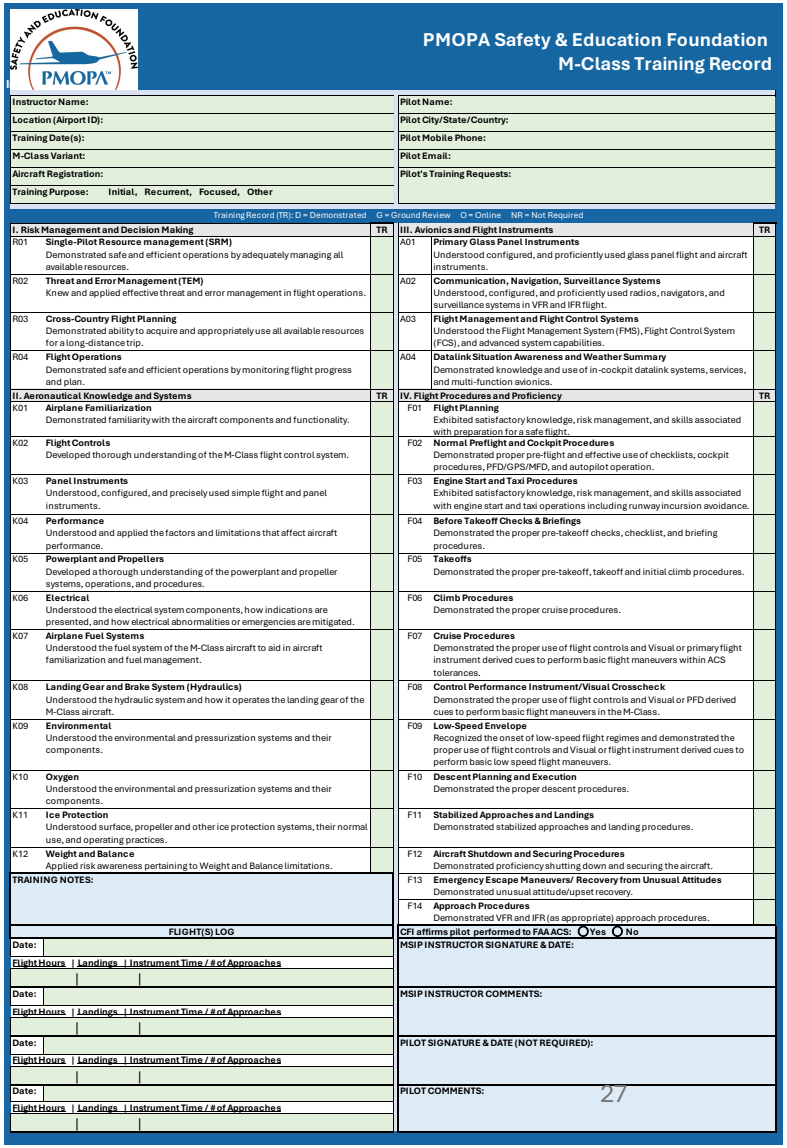
Stay tuned for a closer look on the next slides

I. Risk Management and Decision Making

R01 **Single-Pilot Resource manageme**

Demonstrated safe and efficient

adequately managing all availabl



PMOPA Safety & Education Foundation
M-Class Training Record

Instructor Name:	Pilot Name:
Location (Airport ID):	Pilot City/State/Country:
Training Date(s):	Pilot Mobile Phone:
M-Class Variant:	Pilot Email:
Aircraft Registration:	Pilot's Training Requests:
Training Purpose: Initial, Recurrent, Focused, Other	

Training Record (TR): D = Demonstrated G = Ground Review O = Online NR = Not Required

I. Risk Management and Decision Making		TR
R01	**Single-Pilot Resource management (SRM)** Demonstrated safe and efficient operations by adequately managing all available resources.	
R02	**Threat and Error Management (TEM)** Knew and applied effective threat and error management in flight operations.	
R03	**Cross-Country Flight Planning** Demonstrated ability to acquire and appropriately use all available resources for a long-distance trip.	
R04	**Flight Operations** Demonstrated safe and efficient operations by monitoring flight progress and plan.	

II. Aeronautical Knowledge and Systems		TR
K01	**Airplane Familiarization** Demonstrated familiarity with the aircraft components and functionality.	
K02	**Flight Controls** Developed thorough understanding of the M-Class flight control system.	
K03	**Panel Instruments** Understood, configured, and precisely used simple flight and panel instruments.	
K04	**Performance** Understood and applied the factors and limitations that affect aircraft performance.	
K05	**Powerplant and Propellers** Developed a thorough understanding of the powerplant and propeller systems, operations, and procedures.	
K06	**Electrical** Understood the electrical system components, how indications are presented, and how electrical abnormalities or emergencies are mitigated.	
K07	**Airplane Fuel Systems** Understood the fuel system of the M-Class aircraft to aid in aircraft familiarization and fuel management.	
K08	**Landing Gear and Brake System (Hydraulics)** Understood the hydraulic system and how it operates the landing gear of the M-Class aircraft.	
K09	**Environmental** Understood the environmental and pressurization systems and their components.	
K10	**Oxygen** Understood the environmental and pressurization systems and their components.	
K11	**Ice Protection** Understood surface, propeller and other ice protection systems, their normal use, and operating practices.	
K12	**Weight and Balance** Applied risk awareness pertaining to Weight and Balance limitations.	

III. Avionics and Flight Instruments		TR
A01	**Primary Glass Panel Instruments** Understood configured, and proficiently used glass panel flight and aircraft instruments.	
A02	**Communication, Navigation, Surveillance Systems** Understood, configured, and proficiently used radios, navigators, and surveillance systems in VFR and IFR flight.	
A03	**Flight Management and Flight Control Systems** Understood the Flight Management System (FMS), Flight Control System (FCS), and advanced system capabilities.	
A04	**Datalink Situation Awareness and Weather Summary** Demonstrated knowledge and use of in-cockpit datalink systems, services, and multi-function avionics.	

IV. Flight Procedures and Proficiency		TR
F01	**Flight Planning** Exhibited satisfactory knowledge, risk management, and skills associated with preparation for a safe flight.	
F02	**Normal Preflight and Cockpit Procedures** Demonstrated proper pre-flight and effective use of checklists, cockpit procedures, PFD/GPS/MFD, and autopilot operation.	
F03	**Engine Start and Taxi Procedures** Exhibited satisfactory knowledge, risk management, and skills associated with engine start and taxi operations including runway incursion avoidance.	
F04	**Before Takeoff Checks & Briefings** Demonstrated the proper pre-takeoff checks, checklist, and briefing procedures.	
F05	**Takeoffs** Demonstrated the proper pre-takeoff, takeoff and initial climb procedures.	
F06	**Climb Procedures** Demonstrated the proper cruise procedures.	
F07	**Cruise Procedures** Demonstrated the proper use of flight controls and Visual or primary flight instrument derived cues to perform basic flight maneuvers within ACS tolerances.	
F08	**Control Performance Instrument/Visual Crosscheck** Demonstrated the proper use of flight controls and Visual or PFD derived cues to perform basic flight maneuvers in the M-Class.	
F09	**Low-Speed Envelope** Recognized the onset of low-speed flight regimes and demonstrated the proper use of flight controls and Visual or flight instrument derived cues to perform basic low speed flight maneuvers.	
F10	**Descent Planning and Execution** Demonstrated the proper descent procedures.	
F11	**Stabilized Approaches and Landings** Demonstrated stabilized approaches and landing procedures.	
F12	**Aircraft Shutdown and Securing Procedures** Demonstrated proficiency shutting down and securing the aircraft.	
F13	**Emergency Escape Maneuvers/ Recovery from Unusual Attitudes** Demonstrated unusual attitude/upset recovery.	
F14	**Approach Procedures** Demonstrated VFR and IFR (as appropriate) approach procedures.	

TRAINING NOTES:

FLIGHT(S) LOG

Date:
Flight Hours | Landings | Instrument Time / # of Approaches

Date:
Flight Hours | Landings | Instrument Time / # of Approaches

Date:
Flight Hours | Landings | Instrument Time / # of Approaches

Date:
Flight Hours | Landings | Instrument Time / # of Approaches

CFI affirms pilot performed to FAA ACS: ○ Yes ○ No

MSIP INSTRUCTOR SIGNATURE & DATE:

MSIP INSTRUCTOR COMMENTS:

PILOT SIGNATURE & DATE (NOT REQUIRED):

PILOT COMMENTS:

Training Records

- Top Section
  - Instructor and Pilot Information
  - Aircraft Information
  - Purpose of Training
  - Client training requests

PMOPA Safety & Education Foundation
M-Class Training Record

Instructor Name:	**Pilot Name:**
Location (Airport ID):	**Pilot City/State/Country:**
Training Date(s):	**Pilot Mobile Phone:**
M-Class Variant:	**Pilot Email:**
Aircraft Registration:	**Pilot's Training Requests:**
Training Purpose: Initial, Recurrent, Focused, Other	

Training Records

- Middle Section
  - Training Objective for Each Unit
  - Documentation of Training Completed
    - Demonstrated
    - Ground School
    - Online
    - Not Required

Training Record (TR): D = Demonstrated G = Ground Review O = Online NR = Not Required

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III. Avionics and Flight Instruments		TR
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Training Records

- Lower Section
  - Training Notes
  - Flight Log (optional)
  - Signatures
  - Comment Fields

TRAINING NOTES:
FLIGHT(S) LOG
Date:
Flight Hours | Landings | Instrument Time / # of Approaches
Date:
Flight Hours | Landings | Instrument Time / # of Approaches
Date:
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Flight Hours | Landings | Instrument Time / # of Approaches

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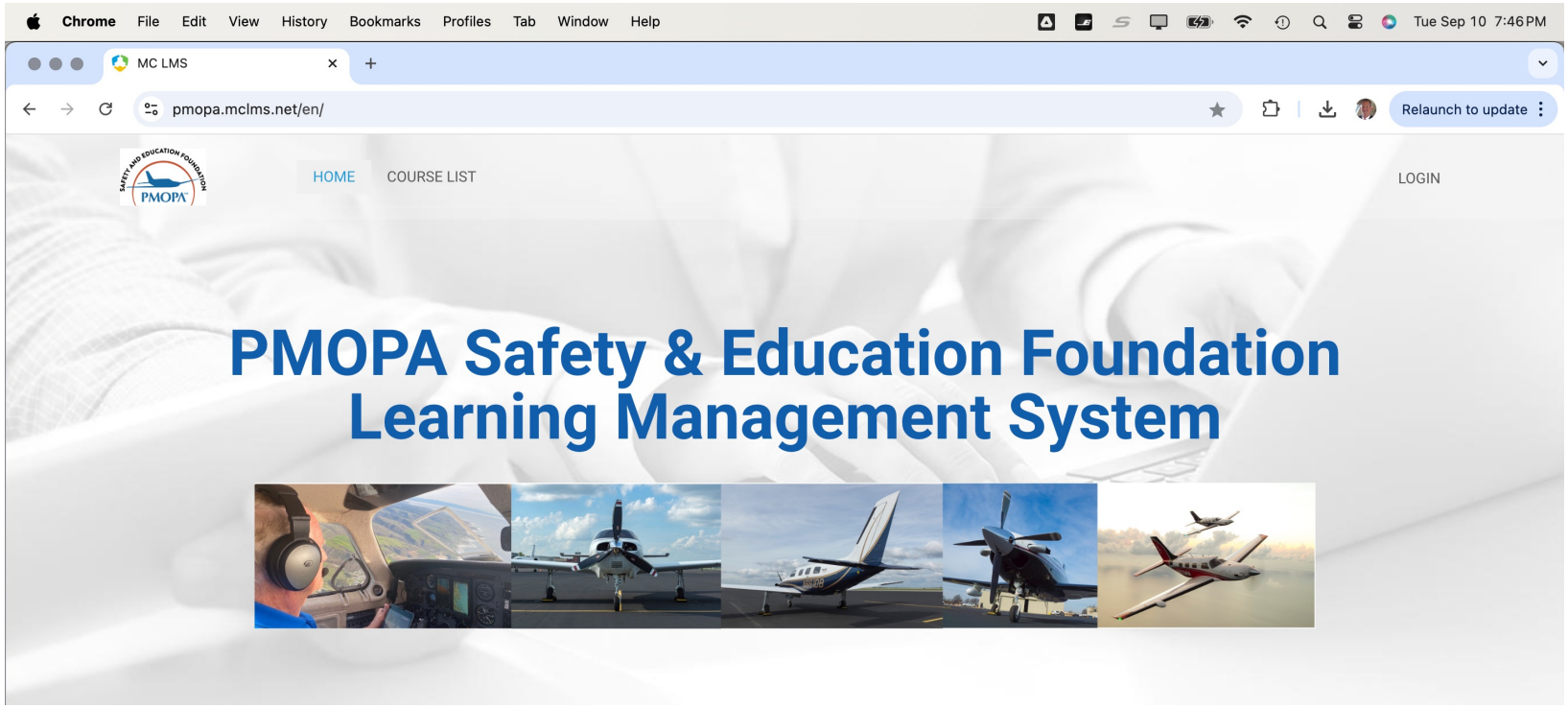
F14	**Approach Procedures** Demonstrated VFR and IFR (as appropriate) approach procedures.	

CFI affirms pilot performed to FAA ACS: ◯ **Yes** ◯ **No**
MSIP INSTRUCTOR SIGNATURE & DATE:
MSIP INSTRUCTOR COMMENTS:
PILOT SIGNATURE & DATE (NOT REQUIRED):
PILOT COMMENTS:

PMOPA SEF Learning Management System



What's Different?

- For most M-Class instructors, little to nothing
  - Review your syllabus:
    - Identify gaps in your training syllabus; consider modifications
  - Submit Training Records for pilots trained
- Provide feedback
  - Notify us of gaps in our training syllabus
  - Provide Instructor Recommendations
  - Provide tips for pilots to help with training
- Develop resources
  - Courses for the LMS
  - Short videos
  - Magazine and website content

Reminder: This Will Evolve Over Time

Original Apple iPhone

Apple iPhone 8

Apple iPhone 16

M-Class Elevate 1.0 → **M-Class Elevate 2.0** → **M-Class Elevate 3.0**

Next Month: MSIP

- In-depth discussion of the M-Class Standardized Instructor Pilot (MSIP) Program
  - October 15, 2024
  - 7:00-9:00pm EDT
- Register:
  - https://us02web.zoom.us/webinar/register/WN_11yMS77sQx60Aslxecug7w


Q&A