Section 5. Expiration date

This Special Federal Aviation Regulation will remain in effect until rescinded.


SPECIAL FEDERAL AVIATION REGULATION
NO. 104—PROHIBITION AGAINST CERTAIN FLIGHTS BY SYRIAN AIR CARRIERS TO THE UNITED STATES

1. Applicability. This Special Federal Aviation Regulation (SFAR) No. 104 applies to any air carrier owned or controlled by Syria that is engaged in scheduled international air services.

2. Special flight restrictions. Except as provided in paragraphs 3 and 4 of this SFAR No. 104, no air carrier described in paragraph 1 may take off from or land in the territory of the United States.

3. Permitted operations. This SFAR does not prohibit overflights of the territory of the United States by any air carrier described in paragraph 1.

4. Emergency situations. In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Each person who deviates from this rule must, within 10 days of the deviation, including Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons therefor.

5. Duration. This SFAR No. 104 will remain in effect until further notice.


SPECIAL FEDERAL AVIATION REGULATION
NO. 107—PROHIBITION AGAINST CERTAIN FLIGHTS WITHIN THE TERRITORY AND AIRSPACE OF SOMALIA

1. Applicability. This rule applies to the following persons:
   (a) All U.S. air carriers or commercial operators;
   (b) All persons exercising the privileges of an airman certificate issued by the FAA except such persons operating U.S.-registered aircraft for a foreign air carrier; and
   (c) All operators of aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. Flight prohibition. Except as provided below, in paragraphs 3 and 4 of this SFAR, no person described in paragraph 1 may conduct flight operations within the territory and airspace of Somalia below flight level (FL) 200.

   (a) Overflights of Somalia may be conducted above FL 200 subject to the approval of the appropriate authorities of Somalia.
   (b) Flights departing from countries adjacent to Somalia whose climb performance will not permit operation above FL 200 prior to entering Somali airspace may operate at altitudes below FL 200 within Somalia to the extent necessary to permit a climb above FL 200, subject to the approval of, and in accordance with the conditions established by, the appropriate authorities of Somalia.

3. Permitted operations. This SFAR does not prohibit persons described in section 1 from conducting flight operations within the territory and airspace below FL 200 of Somalia when such operations are authorized either by another agency of the United States Government with the approval of the FAA or by an exemption issued by the Administrator.

4. Emergency situations. In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of Title 14 CFR parts 119, 121, or 135, each person who deviates from this rule must, within 10 days of the deviation, including Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons for it.

5. Expiration. This Special Federal Aviation Regulation will remain in effect until further notice.


SPECIAL FEDERAL AVIATION REGULATION
NO. 108—MITSUBISHI MU–2B SERIES SPECIAL TRAINING, EXPERIENCE, AND OPERATING REQUIREMENTS

1. Applicability. After February 5, 2009, this Special Federal Aviation Regulation (SFAR) applies to all persons who operate the Mitsubishi MU–2B series airplane including those who act as pilot-in-command, act as second-in-command, or other persons who manipulate the controls while under the supervision of a pilot-in-command. This SFAR also applies to those persons who provide pilot training for the Mitsubishi MU–2B series airplane. The requirements in this SFAR are in addition to the requirements of 14 CFR parts 61, 91, and 135 of this chapter.

2. Compliance and Eligibility. (a) Except as provided in paragraph (b) of this section, no
person may manipulate the controls, act as pilot-in-command, or provide pilot training for the Mitsubishi MU–2B series airplane unless that person meets the applicable requirements of this SFAR.

(b) A person, who does not meet the requirements of this SFAR, may manipulate the controls of the Mitsubishi MU–2B series airplane if a pilot-in-command meeting the applicable requirements of this SFAR is occupying a pilot station, and the flight is being conducted for one of the following reasons—

(1) The pilot-in-command is providing pilot training to the manipulator of the controls, and no passengers or cargo are carried on board the airplane;

(2) The pilot-in-command is conducting a maintenance test flight with a second pilot or certificated mechanic, and no passengers or cargo are carried on board the airplane; or

(3) The pilot-in-command is conducting simulated instrument flight and is using a safety pilot other than the pilot-in-command who manipulates the controls for the purposes of 14 CFR 91.108(b), and no passengers or cargo are carried on board the airplane.

(c) A person is required to complete Initial/transition training if that person has fewer than—

(1) 50 hours of documented flight time manipulating the controls while serving as pilot-in-command of a Mitsubishi MU–2B series airplane in the preceding 24 months; or

(2) 500 hours of documented flight time manipulating the controls while serving as pilot-in-command of a Mitsubishi MU–2B series airplane.

(d) A person is eligible to receive Requalification training in lieu of Initial/transition training if that person has at least—

(1) 50 hours of documented flight time manipulating the controls while serving as pilot-in-command of a Mitsubishi MU–2B series airplane in the preceding 24 months; or

(2) 500 hours of documented flight time manipulating the controls while serving as pilot-in-command of a Mitsubishi MU–2B series airplane.

(e) A person is required to complete Recurrent training within the preceding 12 months. Successful completion of Initial/transition or Requalification training within the preceding 12 months satisfies the requirement of Recurrent training. A person must successfully complete Initial/transition training or Requalification training before being eligible to receive Recurrent training.

(f) Successful completion of Initial/transition training or Requalification training is a one-time requirement. A person may elect to retake Initial/transition training or Requalification training in lieu of Recurrent training.

(g) A person is required to complete Differences training if that person operates more than one MU–2B model. Differences training between the K and M models of the MU–2B airplane, and the J and L models of the MU–2B airplane, may be accomplished with Level A training. All other Differences training must be accomplished with Level B training. Persons that are operating two models of the MU–2B airplane are required to receive 1.5 hours of Differences training. Persons that are operating three or more models of the MU–2B airplane are required to receive 3.0 hours of Differences training. An additional 1.5 hours of Differences training is required for each model added at a later date. Differences Training is not a recurring annual requirement. Once a person has received Differences training between the applicable different models, no additional Differences training between those models is required. Differences training have been completed, as specified in this SFAR, including Appendices A through D of this SFAR; and

(2) That person's logbook has been endorsed in accordance with paragraph (f) of this section.

(b) No person may manipulate the controls, act as pilot-in-command, or act as second-in-command of a Mitsubishi MU–2B series airplane for the purpose of flight unless—

(1) The applicable requirements for ground and flight training on Initial/transition, Requalification, Recurrent, and Differences training have been completed, as specified in this SFAR, including Appendices A through D of this SFAR; and

(2) That person's logbook has been endorsed in accordance with paragraph (f) of this section.

(c) Satisfactory completion of the competency check required by 14 CFR 135.293 within the preceding 12 calendar months may not be substituted for the Mitsubishi MU–2B series airplane annual recurrent flight training of this section.

(d) Satisfactory completion of a Federal Aviation Administration sponsored pilot proficiency award program, as described in 14 CFR 61.56(e) may not be substituted for the Mitsubishi MU–2B series airplane annual recurrent flight training of this section.

(e) If a person complies with the requirements of paragraph (a) or (b) of this section in the calendar month before or the calendar month after the month in which compliance with these paragraphs is required, that person is considered to have accomplished the
(f) The endorsement required under paragraph (a) and (b) of this section must be made by—

(1) A certificated flight instructor meeting the qualifications of section 5 of this SFAR; or

(2) For persons operating the Mitsubishi MU–2B series airplane for a part 119 certificate holder within the last 12 calendar months, the 14 CFR part 119 certificate holder’s flight instructor if authorized by the FAA and if that flight instructor meets the requirements of section 5 of this SFAR.

(g) All training conducted for the Mitsubishi MU–2B series airplane must be completed in accordance with the applicable MU–2B series checklist listed in table 1 of this SFAR or an MU–2B series airplane checklist that has been accepted by the Federal Aviation Administration’s MU–2B Flight Standardization Board.

**TABLE 1 TO SFAR 108—MU–2B SERIES AIRPLANE MANUFACTURER’S CHECKLISTS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type certificate</th>
<th>Cockpit checklist</th>
<th>Date the checklist was accepted by the FSB</th>
</tr>
</thead>
</table>

4. Aeronautical Experience. No person may act as pilot-in-command of a Mitsubishi MU–2B series airplane for the purpose of flight unless that person holds an airplane category and multi-engine land class rating, and has logged a minimum of 100 flight hours of pilot-in-command time in multi-engine airplanes.

5. Instruction, Checking and Evaluation. (a) Flight Instructor (Airplane). No flight instructor may provide flight training in the Mitsubishi MU–2B series airplane unless that flight instructor meets the requirements of this paragraph.

(1) Each flight instructor who provides flight training in the Mitsubishi MU–2B series airplane must meet the pilot training and documentation requirements of section 3 of this SFAR before giving flight instruction in the Mitsubishi MU–2B series airplane.

(2) Each flight instructor who provides flight training in the Mitsubishi MU–2B series airplane must meet the currency requirements of paragraphs (a) and (c) of section 6 of this SFAR before giving flight instruction in the Mitsubishi MU–2B series airplane.

(3) Each flight instructor who provides flight training in the Mitsubishi MU–2B series airplane must have a minimum total pilot time of 2,000 pilot-in-command hours, 800 pilot-in-command hours in multi-engine airplanes.

(4) Each flight instructor who provides flight training in the Mitsubishi MU–2B series airplane must have—

(i) 300 pilot-in-command hours in the Mitsubishi MU–2B series airplane, 50 hours of which must have been within the preceding 12 months; or

(ii) 100 pilot-in-command hours in the Mitsubishi MU–2B series airplane, 25 hours of which must have been within the preceding 12 months, and 300 hours providing instruction in a FAA-approved Mitsubishi MU–2B simulator or FAA-approved Mitsubishi MU–2B flight training device, 25 hours of which must have been within the preceding 12 months.

(b) Flight Instructor (Simulator/Flight Training Device). No flight instructor may provide instruction for the Mitsubishi MU–2B series airplane unless that instructor meets the requirements of this paragraph.

(1) Each flight instructor who provides flight training for the Mitsubishi MU–2B series airplane must meet the pilot training and documentation requirements of section 3 of this SFAR before giving flight instruction for the Mitsubishi MU–2B series airplane.

(2) Each flight instructor who provides flight training for the Mitsubishi MU–2B series airplane must meet the currency requirements of paragraph (c) of section 6 of this SFAR before giving flight instruction for the Mitsubishi MU–2B series airplane.

(3) Each flight instructor who provides flight training for the Mitsubishi MU–2B series airplane must have—

(i) A minimum total pilot time of 2000 pilot-in-command hours and 800 pilot-in-command hours in multi-engine airplanes; and

(ii) Within the preceding 12 months, either 50 hours of Mitsubishi MU–2B series airplane pilot-in-command experience or 50 hours providing simulator or flight training device instruction for the Mitsubishi MU–2B.

(c) Checking and Evaluation. No person may provide checking or evaluation for the Mitsubishi MU–2B series airplane unless that person meets the requirements of this paragraph.

(1) For the purpose of checking, designated pilot examiners, training center evaluators, and check airmen must have completed the appropriate training in the Mitsubishi MU–
2B series airplane in accordance with section 3 of this SFAR.

(2) For checking conducted in the Mitsubishi MU–2B series airplane, each designated pilot examiner and check airman must have 100 hours pilot-in-command flight time in the Mitsubishi MU–2B series airplane and maintain currency in accordance with section 6 of this SFAR.


(a) The takeoff and landing currency requirements of 14 CFR 61.57 must be maintained in the Mitsubishi MU–2B series airplane. Takeoff and landings in other multiengine airplanes do not meet the takeoff landing currency requirements for the Mitsubishi MU–2B series airplane. Takeoff and landings in either the short-body or long-body Mitsubishi MU–2B model airplane may be credited toward takeoff and landing currency for both Mitsubishi MU–2B model groups.

(b) Instrument experience obtained in other category and class of aircraft may be used to satisfy the instrument currency requirements of 14 CFR 61.57 for the Mitsubishi MU–2B series airplane.

(c) Satisfactory completion of a flight review to satisfy the requirements of 14 CFR 61.56 is valid for operation of a Mitsubishi MU–2B series airplane only if that flight review is conducted in a Mitsubishi MU–2B series airplane. The flight review for Mitsubishi MU–2B series airplanes must include the Special Emphasis Items, and all items listed in the Training Course Final Phase Check of Appendix C of this SFAR.

(d) A person who successfully completes the Initial/transit, Requalification, or Recurrent training requirements, as described in section 3 of this SFAR, also meets the requirements of 14 CFR 61.56 and need not accomplish a separate flight review provided that at least 1 hour of the flight training was conducted in the Mitsubishi MU–2B series airplane.

7. Operating Requirements. (a) Except as provided in paragraph (b) of this section, no person may operate a Mitsubishi MU–2B airplane in single pilot operations unless that airplane has a functional autopilot. A person may operate a Mitsubishi MU–2B airplane in single pilot operations without a functional autopilot when—

(1) Operating under day visual flight rule requirements; or

(2) Authorized under a FAA approved minimum equipment list for that airplane, operating under instrument flight rule requirements in daytime visual meteorological conditions.

(c) No person may operate a Mitsubishi MU–2B series airplane unless a copy of the appropriate Mitsubishi Heavy Industries MU–2B Airplane Flight Manual is carried on board the airplane and is accessible during each flight at the pilot station.

(d) No person may operate a Mitsubishi MU–2B series airplane unless an MU–2B series airplane checklist, appropriate for the model being operated and accepted by the Federal Aviation Administration MU–2B Flight Standardization Board, is accessible for each flight at the pilot station and is used by the flight crewmembers when operating the airplane.

(e) No person may operate a Mitsubishi MU–2B series airplane contrary to the MU–2B training program in the Appendices of this SFAR.

(f) If there are any differences between the training and operating requirements of this SFAR and the MU–2B Airplane Flight Manual’s procedures sections (Normal, Abnormal, and Emergency) and the MU–2B airplane series checklist specified in section 3(g), table 1, the person operating the airplane must operate the airplane in accordance with the training specified in section 3(g), table 1.

8. Credit for Prior Training. Initial/transit or requalification training conducted between July 27, 2006, and April 7, 2008, using Mitsubishi Heavy Industries MU–2B Training Program, Part number YET 65301, Revision Original, dated July 27, 2006, or Revision 1, dated September 19, 2006, is considered to be compliant with this SFAR, if the student met the eligibility requirements for the applicable category of training and the student’s instructor met the experience requirements of this SFAR.

9. Incorporation by Reference. You must proceed in accordance with the Mitsubishi Heavy Industries MU–2B Checklists as listed in Table 1 of this SFAR which are incorporated by reference. The Director of the Federal Register approved this incorporation by reference in accordance with 5 U.S.C. section 552(a) and 1 CFR part 51. The Mitsubishi Heavy Industries MU–2B Checklists are distributed by Turbine Aircraft Services, Inc., 4550 Jimmy Doolittle Drive, Addison, Texas 75001, USA. You may obtain a copy from Turbo Aircraft Services Inc., 4550 Jimmy Doolittle Drive, Addison, Texas 75001, USA. You may inspect a copy at U.S. Department of Transportation, Docket Management Facility, Room W 12–140, West Building Ground Floor, 1200 New Jersey Ave., SE., Washington, DC 20590–0001, or at the National Archives and Records Administration at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

10. Expiration. This SFAR will remain in effect until further notice.

APPENDIX A TO SFAR 108—MU–2B GENERAL TRAINING REQUIREMENTS

(a) The Mitsubishi MU–2B Training Program consists of both ground and flight training. The minimum pilot training requirement hours are shown in Table 1 of this appendix for ground instruction and Table 2
(b) The MU–2B is certificated by the Federal Aviation Administration (FAA) as a single pilot airplane. No training credit is given for second in command (SIC) training and no credit is given for right seat time under this program. Only the sole manipulator of the controls of the MU–2B airplane, Flight Training Device (FTD), or Level C or D simulator can receive training credit under this program.

(c) The training program references the applicable MU–2B airplane flight manual (AFM) in several sections. There may be differences between sequencing of procedures found in the AFM’s procedures sections and the checklists, procedures, and techniques found within this training program. The FAA’s Mitsubishi MU–2B SFAR requires that if there are any differences between the AFM’s procedures sections (Normal, Abnormal, and Emergency) and the training and operating requirements of the Mitsubishi MU–2B SFAR, the person operating the airplane must operate the airplane in accordance with the training specified in the SFAR and this MU–2B training program.

(d) Minimum Programmed Training Hours

<table>
<thead>
<tr>
<th>TABLE 1 TO APPENDIX A OF SFAR 108</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground instruction</td>
</tr>
<tr>
<td>Initial/transition</td>
</tr>
<tr>
<td>20 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 2 TO APPENDIX A OF SFAR 108</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight instruction</td>
</tr>
<tr>
<td>Initial/transition</td>
</tr>
<tr>
<td>12 hours with a minimum of 6 hours at Level E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 3 TO APPENDIX A OF SFAR 108</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differences training</td>
</tr>
<tr>
<td>2 models currently</td>
</tr>
<tr>
<td>More than 2 models currently, Each additional model added.</td>
</tr>
<tr>
<td>1.5 hours at Level A or B.</td>
</tr>
</tbody>
</table>

(e) Definitions of Levels of Training as Used in This Appendix

(1) LEVEL A Training—Training that is conducted through self instruction by the pilot.

(2) LEVEL B Training—Training that is conducted in the classroom environment with the aid of a qualified instructor who meets the requirements of this SFAR.

(3) LEVEL C Training—Training that is accomplished in an FAA-approved Level 5, 6, or 7 Flight Training Device (FTD). In addition to the basic FTD requirements, the FTD must be representative of the MU–2B cockpit controls and be specifically approved by the FAA for the MU–2B airplane.

(4) LEVEL E Training—Training that must be accomplished in the MU–2B airplane, Level C simulator, or Level D simulator.

APPENDIX B TO SFAR 108—MU–2B GROUND TRAINING CURRICULUM CONTENTS

All items in the ground training curriculum must be covered. The order of presentation is at the discretion of the instructor. The student must satisfactorily complete a written or oral exam given by the training provider based on this MU–2B Training Program.

I. Aircraft General
   A. Introduction
   B. Airplane (Structures/Aerodynamics/Engines) Overview
      1. Fuselage
      2. Wing
      3. Empennage
      4. Doors
      5. Windshield and Windows
   C. Airplane Systems
      1. Electrical Power
      2. Lighting
      3. Fuel System
      4. Powerplant
      5. Environmental
      6. Fire Protection
      7. Ice and Rain Protection
      8. Landing Gear and Brakes
      9. Flight Controls and Trim
     10. Pilot Static System/Flight Instruments
     11. Oxygen System
   D. Operating Limitations
      1. Weights
      2. Center of Gravity and Loading
      3. Airspeeds
      4. Maneuvering Load Factors
      5. Takeoff And Landing Operations
      6. Enroute Operations
      7. Required Placards
      8. Instrument Markings
      9. Flight Characteristics
         1. Control System
         2. Stability and Stall Characteristics
         3. Single Engine Operation
         4. Maneuvering and Trim
         5. Takeoff and Landing
   E. Electrical Power
      1. General Description
      2. DC Electrical System
         1. DC Power Generation
         2. DC Power Distribution
         3. Battery System
         4. External Power System

586
Federal Aviation Administration, DOT

Pt. 91, SFAR No. 108

C. AC Electrical System
1. AC Power Generation
2. Controls and Indicators
3. AC Power Distribution
D. Limitations
1. General Limitations
2. Instrument Markings

III. Lighting
A. Exterior Lighting System
1. Navigation Lights
2. Anti-Collision Lights
3. Wing Inspection Lights
4. Taxi Lights
5. Landing Lights
6. Rotating Beacon
7. Operation
B. Interior Lighting System
1. Flight Compartment Lights
2. Passenger Compartment Lights
C. Emergency Lighting System
1. Cockpit Emergency Lighting
2. Aircraft Emergency Lighting
D. Procedures
1. Normal
2. Abnormal
3. Emergency

IV. Master Caution System
A. System Description and Operation
1. Master Caution Light and Reset Switch
2. Annunciator and Indicator Panels
3. Operation Lights
4. System Tests
B. Procedures

V. Fuel System
A. Fuel Storage
1. Refueling/Balancing
2. De-Fueling and Draining
3. Tank Vent System
B. Fuel Distribution
1. Fuel Transfer
2. Fuel Balancing
3. Boost Pump Operation
C. Fuel Indicating
1. Fuel Quantity
2. Low Fuel Warning
D. Fuel System Limitations
1. Approved Fuels
2. Fuel Anti-Icing Additives
3. Fuel Temperature Limitations
4. Fuel Transfer and Fuel Imbalance
5. Fuel Pumps
6. Refueling
7. Capacity
8. Unusable Fuel
VI. Powerplant
A. Engine Description
1. Major Sections
2. Cockpit Controls
3. Instrumentation
4. Operation
B. Engine Systems
1. Lubrication
2. Fuel
3. Ignition
4. Engine Starting
5. Anti-Ice
6. Propeller System

1. Ground Operations
2. In-Flight Operations
3. Synchronization
4. De-Ice
D. Ground Checks
1. Overspeed Governor
2. SRL and Delta P/P
3. NTS and Feather Valve
4. Supplementary NTS
E. In Flight Post Maintenance Checks
1. NTS In-Flight
2. Flight Idle Fuel Flow
F. Limitations
1. Powerplant
2. Engine Starting Conditions
3. Airstart Envelope
4. Engine Starting
G. Engine Malfunctions and Failures
1. Propeller Coupling
2. Torque Sensor
3. Engine Overspeed
4. Fuel Control Spline

VII. Fire Protection
A. Introduction
B. Engine Fire Detection
1. System Description
2. Annunciator
C. Portable Fire Extinguishers

VIII. Pneumatics
A. System Description
B. System Operation
1. Air Sources
2. Limitations
C. Wing and Tail De-Ice
1. System Description
2. Controls
D. Entrance and Baggage Door Seal
1. Air Source
2. Operation
E. Ice and Rain Protection
1. General Description
2. Wing De-Ice
1. System Description
2. Operation
3. Controls and Indications
C. Engine Anti-Ice
1. System Description
2. Operation
3. Controls and Indications
D. Window Defog
1. Controls
2. Operation
E. Tail De-Ice
1. Horizontal Stabilizer De-Ice
2. Vertical Stabilizer De-Ice
F. Pitot Static System Anti-Icing
1. Pitot Tube Heating
2. Static Port Heating
3. AOA Transmitter Heating
1. System Description
2. Controls and Indications

J. Windshield Wiper
1. System Description
2. Control and Operation

K. Propeller De-Ice
1. System Description
2. Controls and Indications
3. Operation

L. Ice Detector
1. System Description
2. Controls and Indications
3. Operation
4. Temperatures
5. Cycling

M. Air Conditioning
A. System Description and Operation
1. Refrigeration Unit (ACM)
2. Air Distribution
3. Ventilation
4. Temperature Control
5. Water Separator
B. Limitations

N. Pressurization
A. General
B. Component Description
1. Cabin Pressure Controller
2. Altitude Pressure Regulator
3. Ram Air
4. Outflow Safety Valves
5. Air Filters
6. Manual Control Valve
7. Pneumatic Relays
8. Venturi
C. System Operation
1. Ground Operation
2. Takeoff Mode
3. In-Flight Operation
4. Landing Operation
D. Emergency Operation
1. High Altitude
2. Low Altitude
E. Limitations
1. Maximum Differential
2. Landing Limitations
XII. Landing Gear and Brakes
A. General Description
1. Landing Gear Doors
2. Controls and Indicators
3. Warning Systems
4. Emergency Extension
B. Nosewheel Steering
C. Landing Gear/Brakes/Tires
D. Limitations
1. Airspeed (with flaps)
2. Emergency Extension
3. Tire Speed
4. Brake Energy
XIII. Flight Controls
A. Primary Flight Controls (Elevator/Rudder/Spoilers)
1. Description
2. Operations
B. Trim Systems
1. System Description
2. Roll Trim

b. Normal Operation
b. Emergency Operation
3. Rudder Trim
4. Pitch Trim
a. General
b. Operations
c. Trim-in-Motion Alert System
C. Secondary Flight Controls
1. System Description
2. Flaps
D. Limitations
1. Instrument Markings
2. Placards
E. Flight Characteristics
1. Control Systems
2. Stability and Stall Characteristics
3. Single Engine Operation
5. Maneuvering and Trim
6. Takeoff and Landing
XIV. Avionics
A. Pitot-Static System
1. System Description
2. Pilot’s System
3. Co-Pilot’s System
4. Alternate Static
B. Air Data Computer
C. Attitude Instrument Displays (EFIS and Standard)
1. EADI
2. Standard Attitude Gyro
D. AHRS
1. System Description
2. Controls and Indications
E. Navigation
1. Nav Systems Descriptions
2. Compass System Descriptions
3. Display Systems
4. Terrain Awareness System
5. Traffic Avoidance System
F. Communications
1. VHF Communications Systems
2. Audio Control
G. Standby Flight Instruments
1. System Description
2. Controls and Indications
H. Automatic Flight Control System
1. Controls and Indications
2. Yaw Damper
3. Trim-in-Motion Alert System
4. Autopilot Automatic Disconnect
5. Aural Alert System
I. Angle of Attack (AOA) System
1. System Description
2. Controls and Indications
J. Limitations
XV. Oxygen System
A. System Description
B. Crew Oxygen
1. Oxygen Cylinder Assembly
2. Pressure Gauge
3. Outlet Valves
4. Duration
C. Passenger Oxygen
1. System Description
2. Duration
D. Limitations
XVI. Performance and Planning
Federal Aviation Administration, DOT

Pt. 91, SFAR No. 108

A. Takeoff Performance Charts
1. Runway Requirements
2. Normal and with One Engine Inoperative
B. Climb Performance
1. Normal and with One Engine Inoperative
2. Obstacle Clearance
3. Power Assurance Charts
C. Cruise Performance
1. Power Charts
2. Maximum Practical Altitude
3. Cruise Speeds/Engine Health
4. Buffet Boundary
D. Landing Performance
1. Runway Requirements
   a. Dry Runway
   b. Wet Runway
   c. Go-Around
2. Normal and with One Engine Inoperative
3. Obstacle Clearance
4. Power Assurance Charts

XVII. Weight and Balance

A. Aircraft Loading Procedures
B. Limitations
1. Weight Limits
2. C.G. Limits
C. Plotter
1. Description
2. Use
D. Calculations
1. AFM Procedures
2. Examples

XVIII. General Subjects

A. Controlled Flight into Terrain Awareness
B. CRM/SPRM
1. Crew Resource Management
2. Single Pilot Resource Management
C. MU–2B Flight Standardization Board Report

APPENDIX C TO SFAR 108—MU–2B FINAL PHASE CHECK AND FLIGHT TRAINING REQUIREMENTS

(I) MU–2B Final Phase Check Requirements

(A) Completion of the MU–2B Training Program in this appendix requires successful completion of a final phase check taken in the MU–2B airplane or a Level C or D simulator for Initial/Transition training. The final phase check for Requalification or Recurrent Training may be taken in the MU–2B airplane, a Level C or D simulator, or in a Level 5, 6, or 7 FAA-approved MU–2B Flight Training Device (FTD). The final phase check must be conducted by a qualified flight instructor who meets the requirements of the MU–2B SFAR. Simultaneous training and checking is not allowed for Initial/Transition training.

(B) For pilots operating under 14 CFR part 135, checking must be done in accordance with applicable regulations. For the purpose of recurrent testing in 14 CFR 135.260(b), the MU–2B is considered a separate type of aircraft.

(C) The final phase check must be conducted using the standards contained in the FAA Commercial Pilot—Airplane Multi-Engine Land, and Instrument Rating—Airplane Practical Test Standards (PTS).

(D) The final phase check portion of the training is comprised of the following tasks for all airmen (instrument rated and non-instrument rated). An (*) indicates those maneuvers for Initial/Transition training which must be completed in the MU–2B airplane, or a Level C or D simulator.

1. Preflight Check.
2. Start and Taxi Procedures.
5. Rejected Takeoff.
7. * Approach to Stalls (3) (must include Accelerated Stalls).
9. Abnormal and Emergency Procedures—To include MU–2B operation in icing conditions without the autopilot or without trim-in-motion or automatic autopilot disconnect.
14. * Landing with Non-Standard Flap Configuration (0 or 5 degrees).
15. Postflight Procedures.

(E) The following additional tasks are required for those airmen who possess an instrument rating. An (*) indicates those maneuvers for Initial/Transition training which must be completed in the MU–2B airplane, or a Level C or D simulator.

1. Preflight Check.
2. Unusual Attitudes.
3. Abnormal and Emergency Procedures.
5. Area Arrival and Departure.
6. Holding.
7. Precision Approach (Two Engine).
8. * Non-Precision Approaches (2)—Must include a Non-Precision Approach with One Engine Inoperative.
9. Missed Approach from either Precision or Non Precision Instrument Approach (Two Engine).
10. Landing from a Straight-In or Circling Approach.

(F) A form titled “Training Course Final Phase Check” has been included in this appendix for use in creating a training and final check record for the student and the training provider.
(II) MU–2B Required Flight Training Tasks

(A) General Flight Training Requirements: All flight training maneuvers must be consistent with this training program and the applicable MU–2B checklist accepted by the FAA. The maneuver profiles shown in Appendix D to this SFAR No. 108 are presented to show the required training scenarios. Profiles conducted in flight require planning and care of both the instructor and student in order to provide the highest level of safety possible. The maneuver profiles shown in Appendix D to this SFAR No. 108 do not account for local geographic and flight conditions. The instructor and student must consider local conditions when performing these maneuvers in flight.

(B) Special Emphasis Items: Certain aspects of pilot knowledge, skills and abilities must be emphasized and evaluated during the training and checking process of the MU–2B Training Program.

(1) Accelerated stall awareness and recovery procedures with emphasis on configuration management. Awareness of the margin to stall in all flight operations and configurations must be emphasized throughout training.

(2) V_{mc} awareness and early recognition must be trained and checked. Minimum airspeeds for one engine inoperative must be emphasized in all configurations.

(3) Airspeed management and recognition of airspeed deterioration below recommended speeds and recovery methods in this training program must be emphasized throughout training and checking.

(4) Knowledge of icing conditions and encounters must be emphasized throughout training and checking including: Equipment requirements, certification standards, minimum airspeeds, and the use of the autopilot and other applicable AFM procedures.

(5) Airplane performance characteristics with all engines operating and with one engine inoperative must be emphasized.

(C) MU–2B Flight Training Program Proficiency Standards.

(1) Each pilot, regardless of the level of pilot certificate held, must be trained to and maintain the proficiency standards described below.

(a) General VFR/IFR.

(i) Bank Angle—± 5 degrees of prescribed bank angle

(ii) Heading—± 10 degrees

(iii) Altitude—± 100 feet

(iv) Airspeed—± 10 knots

(b) Instrument Approach—Final Approach Segment.

(Precision Approach)

(i) Heading—± 10 degrees

(ii) Altitude—± 100 feet

(iii) Airspeed—± 10 knots prior to final

(iv) Airspeed—± 10 knots after established on final

(v) Glide Slope (GS)/Localizer Deviation—Within 7/8 scale—not below GS

(Non-Precision Approach)

Straight In

(vi) Initial Approach Altitude—± 100 feet

(vii) Heading—± 10 degrees

(viii) Altitude (MDA)—± 100, − 0 feet

(ix) Airspeed—± 10 knots

(x) Course Deviation Indicator—Within 7/8 scale or ± 10 degrees on RMI

Circling Approach

(xi) Maximum Bank—± 30 degrees

(xii) Heading—± 10 degrees

(xiii) Altitude—± 100, − 0 feet

(xiv) Airspeed—± 10 knots but not less than V_{ref}

(c) In all cases, a pilot must show complete mastery of the aircraft with the outcome of each maneuver or procedure never seriously in doubt.

(D) Maneuvers and Procedures. All flight training maneuvers and procedures must be conducted as they are applicable to the MU–2B and each type of operations involved.

Preflight

(1) Preflight Inspection—The pilot must—

(a) Conduct an actual visual inspection of the exterior and interior of the airplane, locating each item and explaining briefly the purpose of inspecting it; and

(b) Demonstrate the use of the appropriate checklist, appropriate control system checks, starting procedures, radio and electronic equipment checks, and the selection of proper navigation and communications radio facilities and frequencies prior to flight.

(2) Taxiing—this maneuver includes taxiing in compliance with instructions issued by the appropriate ATC facility or by the person conducting the check.

(3) Pre-Takeoff Checks—The pilot must satisfactorily complete all pre-takeoff aircraft systems and powerplant checks before takeoff.

Takeoff and Departure

(1) Normal—One normal takeoff, which for the purpose of this maneuver, begins when the airplane is taxied into position on the runway to be used.

(2) Instrument Takeoff—Takeoff with simulated instrument conditions at or before reaching an altitude of 200 feet above the airport elevation and visibility of 1800 RVR.

(3) Crosswind—One crosswind takeoff, if practical, under the existing meteorological, airport and traffic conditions.
(4) Powerplant Failure—One takeoff with a simulated failure of the most critical powerplant at a point after Vlof. In the MU-2B airplane, all simulated powerplant failures must only be initiated when the person conducting the training or checking determines that it is safe under the prevailing conditions. The instructor must assure that the power lever does not move beyond the flight idle gate.

(5) Rejected Takeoff—A rejected takeoff performed in an airplane during a normal takeoff run after reaching a reasonable speed determined by giving due consideration to aircraft characteristics, runway length, surface conditions, wind direction and velocity, brake heat energy, and any other pertinent factors that may adversely affect safety or the airplane.

(6) Area departure—Demonstrate adequate knowledge of departure procedures, establishing appropriate ATC communications and following clearances.

Flight Maneuvers and Procedures
(1) Steep bank turns—Each steep turn must involve a bank angle of 50 degrees with a heading change of at least 180 degrees but no more than 360 degrees.

(2) Approaches to stalls—Must be performed in each of the following configurations; takeoff, clean, and landing. One approach to a stall must be performed in either the takeoff, clean, or landing configuration while in a turn with a bank angle between 15 degrees and 30 degrees.

(3) Accelerated stalls—must be done in the flaps 20 and flaps 0 configurations.

(4) Recovery procedures must be initiated at the first indication of a stall.

Normal and Abnormal Procedures and Operations
(1) Runway trim.
(2) Normal and abnormal operations of the following systems:
   (a) Pressurization.
   (b) Pneumatic.
   (c) Air conditioning.
   (d) Fuel.
   (e) Electrical.
   (f) Flight control.
   (g) Anti-icing and de-icing.
   (h) Autopilot.
   (i) Stall warning devices, as applicable.
   (j) Airborne radar and weather detection devices.
   (k) Other systems, devices or aids available.
   (l) Electrical, flight control and flight instrument system malfunction or failure.
   (m) Landing gear and flap system malfunction or failure.
   (n) Failure of navigation or communications equipment.

Flight Emergency Procedures
(1) Powerplant failure.
(2) Powerplant, cabin, flight deck, wing and electrical fires.
(3) Smoke control.
(4) Fuel jettisoning, as applicable.
(5) Any other emergency procedures outlined in the appropriate AFM or FAA-accepted checklist.

Instrument Procedures
(1) Area departure.
(2) Use of navigation systems including adherence to assigned course and/or radial.
(3) Holding procedures.
(4) Aircraft approach category airspeeds.
(5) Approach procedures: Each instrument approach must be performed according to all procedures and limitations approved for that facility. An instrument approach procedure begins when the airplane is over the initial approach fix for the approach procedure being used and ends when the airplane touches down on the runway or when transition to missed approach configuration is completed.
   (a) ILS, ILS/DME, approach.
      (i) A manually controlled ILS with a powerplant inoperative; occurring before initiating the final approach course and continuing to full stop or through the missed approach procedure.
      (ii) A manually controlled ILS utilizing raw data to 200 feet or decision height (DH).
      (iii) An ILS with the autopilot coupled.
   (b) Non-precision approaches.
      (i) NDB, NDB/DME approach, straight in or circle.
      (ii) VOR, VOR/DME, straight in or circle.
      (iii) LOC, LOC/DME, LOC backcourse.
      (iv) GPS approach (If the aircraft/FTD/flight simulator has a GPS installed, the applicant must demonstrate GPS approach proficiency.)
      (v) ASR approach.
   (c) Missed approach procedure: One missed approach procedure must be a complete approved missed approach procedure as published or as assigned by ATC.
      (i) From a precision approach.
      (ii) From a non-precision approach.
      (iii) With a simulated powerplant failure.
   (d) Circling approach.
      (i) The circling approach must be made to the authorized MDA and followed by a change in heading and the necessary maneuvering (by visual reference) to maintain a flight path that permits a normal landing on the runway.
      (ii) The circling approach must be performed without excessive maneuvering and without exceeding the normal operating limits of the airplane and the angle of bank must not exceed 30°.

Landings and Approaches to Landings
(1) Airport orientation.

591
(2) Normal landings with stabilized approach.
(3) Crosswind landings.
(4) From a precision instrument approach.
(5) From a precision instrument approach with a powerplant inoperative.
(6) From a non-precision instrument approach.
(7) From a non-precision instrument approach with a powerplant inoperative.
(8) From a circling approach or VFR traffic pattern.
(9) Go Around/Rejected landings—a normal missed approach procedure or a visual go-around after the landing is rejected. The landing should be rejected at approximately 50 feet and approximately over the runway threshold.
(10) Zero flap landing.
(a) Runway requirements.
(b) Airspeeds.
<table>
<thead>
<tr>
<th>NAME OF AIRMAN (last, first, middle initial)</th>
<th>GRADE OF CERTIFICATE</th>
<th>CERTIFICATE NUMBER</th>
<th>DATE OF CHECK</th>
<th>LOCATION OF CHECK</th>
<th>TYPE OF CHECK</th>
<th>MU-2B MODEL</th>
<th>FTD MODEL</th>
<th>SCHOOL NAME</th>
<th>INSTRUCTOR NAME</th>
<th>CFI NUMBER</th>
<th>EXPIRES</th>
</tr>
</thead>
</table>

**APPENDIX D TO SFAR 108—MU–2B MANEUVER PROFILES**

(A) The Maneuver Profiles are provided to develop pilot proficiency with the procedures and techniques contained within this MU–2B Flight Training Program.

(B) Though constructed for use in the airplane they may also be used in the Flight Training Device (FTD). When an FTD is

<table>
<thead>
<tr>
<th>TRAINING COURSE FINAL PHASE CHECK</th>
<th>A/C</th>
<th>FTD</th>
</tr>
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<tbody>
<tr>
<td><strong>MANEUVERS REQUIRED FOR ALL AIRMEN</strong></td>
<td></td>
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<tr>
<td>PREFLIGHT CHECK</td>
<td></td>
<td></td>
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<tr>
<td>START AND TAXI PROCEDURES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*NORMAL TAKEOFF (X WIND) (TWO ENGINE)</td>
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<td></td>
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<tr>
<td>*TAKEOFF ENGINE FAILURE</td>
<td></td>
<td></td>
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<tr>
<td>REJECTED TAKEOFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*STEEP TURNS</td>
<td></td>
<td></td>
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<tr>
<td>*APPROACH TO STALL (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*MANEUVERING WITH ONE ENGINE INOP (VMC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABNORMAL AND EMERGENCY PROCEDURES - TO INCLUDE THE MU-2 OPERATIONS IN ICING CONDITIONS WITHOUT THE AUTOPILOT OR WITHOUT TRIM-IN-MOTION/AUTOMATIC AUTOPILOT DISCONNECT.</td>
<td></td>
<td></td>
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<tr>
<td>GO AROUND / REJECTED LANDING</td>
<td></td>
<td></td>
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<tr>
<td>NORMAL LANDING (X WIND)</td>
<td></td>
<td></td>
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<tr>
<td>*LANDING WITH ONE ENGINE INOPERATIVE</td>
<td></td>
<td></td>
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<tr>
<td>*LANDING WITH NON-STANDARD FLAP CONFIG</td>
<td></td>
<td></td>
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<tr>
<td>POST FLIGHT PROCEDURES</td>
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<table>
<thead>
<tr>
<th>ADDITIONAL MANEUVERS REQUIRED FOR INSTRUMENT RATED AIRMEN</th>
<th>A/C</th>
<th>FTD</th>
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<tbody>
<tr>
<td>PREFLIGHT CHECK</td>
<td></td>
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<tr>
<td>UNUSUAL ATTITUDES</td>
<td></td>
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<td>ABNORMAL AND EMERGENCY PROCEDURES</td>
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<td></td>
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<tr>
<td>AREA ARRIVAL AND DEPARTURE</td>
<td></td>
<td></td>
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<tr>
<td>HOLDING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRECISION APPROACH (TWO ENGINE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*NON-PRECISION APPROACHES (2)</td>
<td></td>
<td></td>
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<tr>
<td>MISSED APPROACH FROM EITHER PRECISION OR NON-PRECISION APPROACH (TWO ENGINE) MUST INCLUDE AN APPROACH WITH ONE ENGINE INOP</td>
<td></td>
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<tr>
<td>LANDING FROM A STRAIGHT-IN/ Circling Approach</td>
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<tr>
<td>POST FLIGHT PROCEDURES</td>
<td></td>
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<table>
<thead>
<tr>
<th>RESULTS OF CHECK</th>
<th>SATISFACTORY</th>
<th>FLIGHT TIMES</th>
<th>AIRCRAFT</th>
<th>FTD</th>
</tr>
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<tbody>
<tr>
<td>INSTRUCTOR SIGNATURE</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>AIRMAN SIGNATURE</td>
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</tbody>
</table>
used, a maneuver may be performed at lower altitudes or carried to its completion. When training is conducted in the MU–2B airplane, all maneuvers must be performed in a manner sufficient to evaluate the performance of the student while never jeopardizing the safety of the flight.

(C) The maneuvers profiles are broken down into three sections by similar aircraft model groups. The three sections of this program are:

1. Marquise (–60), Solitaire (–40), N (–36A), P (–26A)—Figures A–1 through A–28
2. J (–35), K (–25), L (–36), M (–26)—Figures B–1 through B–28
3. B, D (–10), F (–20), G (–30)—Figures C–1 through C–28
MU-2B MARQUISE (-40), SOLITAIRE (-40), N (-36A), P (-26A)

NORMAL TAKE-OFF, 5° OR 20° FLAPS

<table>
<thead>
<tr>
<th>TAKE OFF SPEEDS</th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>FLAPS 5°</td>
<td>N. MARQ</td>
<td>P. SOL</td>
</tr>
<tr>
<td>11,576 LBS.</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>11,000 LBS.</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>10,470 LBS.</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>10,000 LBS.</td>
<td>101</td>
<td>108</td>
</tr>
<tr>
<td>9,000 LBS.</td>
<td>100</td>
<td>106</td>
</tr>
<tr>
<td>8,000 LBS.</td>
<td>104</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLAPS 20°</th>
<th>N. MARQ</th>
<th>P. SOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,576 LBS.</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>11,000 LBS.</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>10,470 LBS.</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>10,000 LBS.</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>9,000 LBS.</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>8,000 LBS.</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

* TORQUE 90% OR 600° EST / 87° ITT, WHICHEVER OCCURS FIRST. BETA LIGHTS OUT. RELEASE BRAKES. RAM RISE WILL CAUSE TORQUE OR TEMP TO RISE TO MAXIMUM TAKEOFF POWER DURING TAKEOFF ROLL.

A/S 155KCAS MINIMUM

AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° RETRACT FLAPS TO 5° INCREASE PITCH TO APPROX. 10° 140KCAS, THEN FLAPS UP

COMPLETE AFTER T/O AND CLIMB CHECKLIST

ACCELERATE TO DESIRED CLIMB SPEED

NORMAL PITCH. APPROX 8°, FLAPS 20°. APPROX 10-12°, FLAPS 5°

POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP. IF 20° FLAPS 113 KTS MIN. IF 5° FLAPS 120 KTS (MARQ, N) 125 KTS (SOL, P)

VR – ROTATE 13° MAX NOSE UP PITCH

* NOTE: IF RUNWAY LENGTH OR OBSTACLE CLEARANCE IS CRITICAL, SET POWER TO EITHER TORQUE OR TEMP MAXIMUM, WHICHEVER OCCURS FIRST. RETARD POWER LEVERS AS REQUIRED TO MAINTAIN MAXIMUM ALLOWABLE TORQUE OR TEMP.
Federal Aviation Administration, DOT

Pt. 91, SFAR No. 108

TAKE-OFF ENGINE FAILURE ON RUNWAY

MU-2B MARQUESE (-40), SOLITAIRE (-40), N-35A), P (28A)

597
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
TAKE-OFF ENGINE FAILURE - UNABLE TO CLimb
CLASSROOM DISCUSSION OR FTD USE ONLY

**WARNING**
DO NOT LET AIRSPEED DECELERATE BELOW SINGLE ENGINE AIRSPEED:
105KCAS (MARQUISE, N) 100KCAS (SOLITAIRE, P)

**CAUTION**
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA

**ENGINE FAILS**

**PILOT MAKES DECISION TO EITHER RETURN THE RUNWAY SURFACE OR TO FLY BEYOND AIRPORT Boundary TO SUITABLE LANDING AREA**

**POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP, IF 20° FLAPS 113 KCAS MIN, IF 5° FLAPS 120 KCAS (MARQ, N) 125 KCAS (SOL, P)**

**ROTATE**

**POWER SET, RELEASE BRAKES**

**IF RUNWAY REMAINS A LANDING CAN SAFELY BE MADE ON THE AIRPORT SURFACE, CHECK GEAR DOWN, FLAPS REMAIN IN TAKE-OFF POSITION, POWER ON OPERATING ENGINE AS REQUIRED TO LAND, LAND USING SINGLE ENGINE AIRSPEED, 105KCAS (MARQUISE, N) 100KCAS (SOLITAIRE, P)**
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

STEEP TURNS

- Clear area, gear up, flaps up, A/S 150K CAS, trim a/c
- Set heading bug to roll out heading
- Start normal turn power as required, increase approximately 10% torque
- 50° bank established, pitch up approximately 2° to 3° or as necessary to maintain altitude
- Check for A/S and altitude trends
- Reduce power to maintain 180 K
- Roll out on heading on alt.
- **Start roll out 20° before roll out heading
- **This maneuver should be performed in both clean and landing configurations (use 130K flaps 20, gear down, for landing configuration)
- **Note: turns will be done through 360° as well as 180°
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

SLOW FLIGHT MANEUVERING

MINIMUM CONTROLLABLE AIRSPEED

SLOW FLIGHT MANEUVERING IS CONDUCTED AS FOLLOWS:

CLEAR THE AREA PRIOR TO BEGINNING THE MANEUVER.

START WITH CLEAN CONFIGURATION AND CHANGE AIRCRAFT CONFIGURATION FROM CLEAN TO FULL FLAP AND GEAR IN STAGES. USE A MAXIMUM OF 15° BANK AND PERFORM HEADING CHANGES OF 90° LEFT AND RIGHT. CONSTANT ALTITUDE IS REQUIRED THROUGHOUT. MAINTAIN 155 KCAS IN ALL CONFIGURATIONS.

**APPROXIMATE POWER SETTINGS ARE:**

<table>
<thead>
<tr>
<th>Clean</th>
<th>Torque (35%) per engine</th>
<th>Approx Pitch +12</th>
</tr>
</thead>
<tbody>
<tr>
<td>5° Flap &amp; Gear</td>
<td>Torque (44%) per engine</td>
<td>Approx Pitch +9</td>
</tr>
<tr>
<td>20° Flap &amp; Gear</td>
<td>Torque (42%) per engine</td>
<td>Approx Pitch +4</td>
</tr>
<tr>
<td>40° Flap &amp; Gear</td>
<td>Torque (54%) per engine</td>
<td>Approx Pitch 0</td>
</tr>
</tbody>
</table>

**NOTE: POWER SETTINGS WILL VARY WITH AIRCRAFT WEIGHT AND ALTITUDE.**

STALL SPEEDS (APPROXIMATE) AT MAXIMUM GROSS TAKEOFF WEIGHT N, MARQUISE / P, SOLITAIRE

<table>
<thead>
<tr>
<th>Angle of Bank</th>
<th>0°</th>
<th>15°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flaps Up</td>
<td>106/104°</td>
<td>108/106°</td>
</tr>
<tr>
<td>5°</td>
<td>99°</td>
<td>100°/99°</td>
</tr>
<tr>
<td>20°</td>
<td>88°</td>
<td>88°/88°</td>
</tr>
<tr>
<td>40°</td>
<td>181°/78°</td>
<td>83°/79°</td>
</tr>
</tbody>
</table>

**CAUTION**

STALL WARNING MAY ACTIVATE 4 TO 9 KCAS ABOVE STALL.

MINIMUM CONTROLLABLE AIRSPEED IS CONDUCTED AS FOLLOWS:

CLEAR THE AREA PRIOR TO BEGINNING THE MANEUVER.

THE MANEUVER MAY BE DONE IN ANY COMBINATION OF GEAR OR FLAP CONFIGURATIONS. IF BANK IS TO BE USED, IT SHOULD BE DONE AT BANK OF NOT MORE THAN 15°. BEGIN THE MANEUVER BY CONFIGURING THE AIRCRAFT IN THE DESIRED GEAR AND FLAP CONFIGURATION. SLOW THE AIRCRAFT UNTIL THE STALL WARNING (STICK SHAKER) IS ACTIVATED AND ADD POWER TO MAINTAIN ALTITUDE AND A SPEED JUST ABOVE AERODYNAMIC STALL. DO NOT ALLOW THE AIRCRAFT TO REACH AERODYNAMIC STALL BUFFET.
MU-2B MARQUIS (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ONE ENGINE INOPERATIVE MANEUVERING LOSS OF DIRECTIONAL CONTROL

CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF – SET ONE POWER LEVER TO ZERO THRUST TO SIMULATE FAILED ENGINE (VARIES BETWEEN 5% AND 17% TORQUE)

FLAPS 20°, GEAR UP, SET POWER ON SIMULATED OPERATIVE ENGINE FOR LEVEL FLIGHT A/S 125KIAS TRIMMED

CAUTION
GEAR HORN MAY SOUND CONTINUOUSLY IF INSTRUCTOR ELECTS TO DISABLE GEAR HORN WITH CIRCUIT BREAKER, THEN CIRCUIT BREAKER MUST BE RESET PRIOR TO LANDING

WITH THE FIRST INDICATION OF LOSS OF DIRECTIONAL CONTROL, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE TO RECOVER

APPLY TAKEOFF POWER ON SIMULATED OPERATIVE ENGINE WHILE INCREASING PITCH TO DECELERATE 1KT PER SECOND

AT Vmc PLUS 15KIAS, ADD POWER TO SIMULATED OPERATIVE ENGINE AND RECOVER TO STRAIGHT AND LEVEL FLIGHT

A/S 125KIAS TRIMMED FOR STRAIGHT AND LEVEL FLIGHT

INSTRUCTOR CAUTION
ONE ENGINE LOSS OF DIRECTIONAL CONTROL IS BEST TRAINED AND ACCOMPLISHED USING EARLY RECOGNITION AND RECOVERY TECHNIQUES. SEAT POSITION AND RUDDER TRAVEL SHOULD BE EMPHASIZED DURING THIS MANEUVER. RUDDER BLOCKING BY THE INSTRUCTOR IS ENCOURAGED TO PRODUCE LOSS OF DIRECTIONAL CONTROL AT APPROXIMATELY Vmc PLUS 10KIAS, BECAUSE EARLY RECOGNITION AND RECOVERY IS THE PRIMARY OBJECTIVE OF THIS MANEUVER.

20° FLAPS (Vmc 95KIAS MARQUIS, N = 90KIAS SOLITAIRE, P)
5° FLAPS (Vmc 99KIAS MARQUIS, N = 100KIAS SOLITAIRE, P)
Worse 120KIAS

MIN ALT. 5,000 AGL

INSTRUCTOR BLOCKS RUDDER TO CAUSE LOSS OF DIRECTIONAL CONTROL AT Vmc PLUS 10KIAS

WARNING
IF STALL WARNING ACTIVATES, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE, AND RECOVER
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

APPROACH TO STALL CLEAN CONFIGURATION / WINGS LEVEL

CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF - 120-130K CAS
AIRCRAFT TRIMMED

20% TORQUE

MAINTAIN LEVEL FLIGHT

TRIM FOR 120KCAS

ON STALL RECOGNITION (STICK SHAKE), SIMULTANEOUSLY APPLY MAX POWER, LEVEL WINGS IF IN A BANK AND ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE. STALL WARNING MAY ACTIVATE AT 4 TO 9 KCAS ABOVE STALL.

ACCELERATE TO 140KCAS, POWER AS REQUIRED

CALL THE "STALL"

AS A/S INCREASES, CLimb TO ORIGINAL ALTITUDE

MIN. ALT.
5,000' AGL

STALL SPEEDS

<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>GR. WT.</th>
<th>UP</th>
<th>5</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7,000</td>
<td>/85*</td>
<td>/80*</td>
<td>/72*</td>
<td>/64*</td>
</tr>
<tr>
<td></td>
<td>7,500</td>
<td>/88*</td>
<td>/82*</td>
<td>/74*</td>
<td>/66*</td>
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<td>8,000</td>
<td>/91*</td>
<td>/85*</td>
<td>/76*</td>
<td>/68*</td>
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<tr>
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<td>/93*</td>
<td>/88*</td>
<td>/79*</td>
<td>/70*</td>
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<td>/87/90*</td>
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<tr>
<td></td>
<td>9,500</td>
<td>/95/96*</td>
<td>/90/93*</td>
<td>/79/83*</td>
<td>/74/7*</td>
</tr>
<tr>
<td></td>
<td>10,000</td>
<td>/98/101*</td>
<td>/92/96*</td>
<td>/81/85*</td>
<td>/75/76*</td>
</tr>
<tr>
<td></td>
<td>10,470</td>
<td>/104*</td>
<td>/98*</td>
<td>/88*</td>
<td>/76*</td>
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<tr>
<td></td>
<td>10,900</td>
<td>/101*</td>
<td>/94*</td>
<td>83/</td>
<td>77/</td>
</tr>
<tr>
<td></td>
<td>11,000</td>
<td>/103*</td>
<td>/96*</td>
<td>85/</td>
<td>79/</td>
</tr>
<tr>
<td></td>
<td>11,575</td>
<td>/105*</td>
<td>/99*</td>
<td>87/</td>
<td>81/</td>
</tr>
</tbody>
</table>

* P. S. O. L.

14 CFR Ch. I (1-110 Edition)
MU-2B MARQUISE (-40), SOLITAIRE (-40), N (-36A), P (-26A)

APPROACH TO STALL
TAKEOFF CONFIGURATION 15-30° BANK

CLEAR AREA, CONDITION LEVERS
T/O AND LAND SYNC OFF – A/S 120-
130 KCAS TRIMMED AIRCRAFT

FLAPS 5° OR 20°, GEAR
DOWN, 20% TORQUE

ON STALL RECOGNITION (STICK SHAKER),
SIMULTANEOUSLY APPLY MAX POWER, LEVEL WINGS AND
ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF
ALTITUDE, POSITIVE RATE, GEAR UP; STALL WARNING MAY
ACTIVATE AT 4 TO 9 KCAS ABOVE STALL.

A/S 140 KCAS,
FLAPS UP; POWER AS
REQUIRED

INITIATE 15-30° BANK
IN LEVEL FLIGHT

MAINTAIN LEVEL
FLIGHT, TRIM FOR 120K

CALL THE
"STALL"

AS A/S INCREASES, CLimb
TO ORIGINAL ALTITUDE

MIN. ALT.
5,000' AGL

STALL SPEEDS (APPROXIMATE)
AT MAXIMUM GROSS TAKEOFF WEIGHT
N. MARQUISE / P. SOLITAIRE

<table>
<thead>
<tr>
<th>ANGLE OF BANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>10°</td>
</tr>
<tr>
<td>12°</td>
</tr>
<tr>
<td>15°</td>
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<tr>
<td>20°</td>
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<tr>
<td>30°</td>
</tr>
<tr>
<td>50°</td>
</tr>
<tr>
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<table>
<thead>
<tr>
<th>FLAPS UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>107/104°</td>
</tr>
<tr>
<td>109/108°</td>
</tr>
<tr>
<td>113/112°</td>
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<tr>
<td>120/119°</td>
</tr>
<tr>
<td>131/130°</td>
</tr>
<tr>
<td>138/146°</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>5°</th>
</tr>
</thead>
<tbody>
<tr>
<td>98°</td>
</tr>
<tr>
<td>102/101°</td>
</tr>
<tr>
<td>106/105°</td>
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<td>113/112°</td>
</tr>
<tr>
<td>123/122°</td>
</tr>
<tr>
<td>138/138°</td>
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<table>
<thead>
<tr>
<th>20°</th>
</tr>
</thead>
<tbody>
<tr>
<td>105°</td>
</tr>
<tr>
<td>109°</td>
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<tr>
<td>111°</td>
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<tr>
<td>113°</td>
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<tr>
<td>115°</td>
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<td>128°</td>
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<table>
<thead>
<tr>
<th>40°</th>
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</thead>
<tbody>
<tr>
<td>75°</td>
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<tr>
<td>84°</td>
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<tr>
<td>87°</td>
</tr>
<tr>
<td>92°</td>
</tr>
<tr>
<td>101°</td>
</tr>
<tr>
<td>113°</td>
</tr>
</tbody>
</table>

°, SOL
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

APPROACH TO STALL

GEAR DOWN – FULL FLAPS

CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF – A/S 120 – 130KCAS Trimmed

FLAPS 20°, GEAR DOWN, 20% TORQUE

A/S 120KCAS, FLAPS FULL

20% TORQUE, MAINTAIN LEVEL FLIGHT, TRIM FOR 120KCAS

CALL THE "STALL"

ON STALL RECOGNITION (STICK SHAKER), SIMULTANEOUSLY APPLY MAX POWER AND ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE, FLAPS 20°, POSITIVE RATE, GEAR UP, CLIMB TO ORIGINAL ALTITUDE, STALL WARNING MAY ACTIVATE AT 4 TO 9 K ABOVE STALL.

A/S 130KCAS, FLAPS 9° INCREASE PITCH TO APPROX. 10° AS AIRSPEED INCREASES CLimb TO ORIGINAL ALTITUDE.

A/S 140KCAS, FLAPS UP

STALL SPEEDS

<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>UP</th>
<th>5</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR WT.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,000</td>
<td>.85</td>
<td>.80</td>
<td>.72</td>
<td>.64</td>
</tr>
<tr>
<td>7,500</td>
<td>.88</td>
<td>.82</td>
<td>.74</td>
<td>.66</td>
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<td>8,000</td>
<td>.91</td>
<td>.85</td>
<td>.76</td>
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<tr>
<td>8,500</td>
<td>.93</td>
<td>.88</td>
<td>.79</td>
<td>.70</td>
</tr>
<tr>
<td>9,000</td>
<td>.959</td>
<td>.879</td>
<td>.78/81</td>
<td>.72/72</td>
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<tr>
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<td>.9093</td>
<td>.79/83</td>
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<td>.75/75</td>
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<tr>
<td>10,500</td>
<td>.104</td>
<td>.94</td>
<td>.83</td>
<td>.77</td>
</tr>
<tr>
<td>11,000</td>
<td>.103</td>
<td>.96</td>
<td>.85</td>
<td>.79</td>
</tr>
<tr>
<td>11,575</td>
<td>.106</td>
<td>.99</td>
<td>.87</td>
<td>.81</td>
</tr>
</tbody>
</table>

MIN. ALT. 5,000' AGL
MU-2B MARQUIS (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ACCELERATED STALLS

CLEAR AREA, CONDITION LEVERS TO AND LAND, SYNC OFF

CLEAN, A/S 115KCAS A/C TRIMMED

INITIATE PROGRESSIVE BANK TOWARD A 60° BANK ANGLE, APPLY BACKPRESSURE TO MAINTAIN ALTITUDE

* THIS MANEUVER SHOULD ALSO BE ACCOMPLISHED IN THE LANDING CONFIGURATION WITH GEAR DOWN, FLAPS 20°, A/S 100KCAS TRIMMED

* 140KCAS FLAPS UP

* 125KCAS FLAPS TO 5°

* POSITIVE RATE, GEAR UP

ACCELERATE TO 140KCAS, POWER AS REQUIRED

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

CALL THE "STALL"

ON STALL RECOGNITION (STICK SHAKER) SIMULTANEOUSLY APPLY MAX POWER, ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE, AND ROLL WINGS LEVEL

<table>
<thead>
<tr>
<th>ANGLE OF BANK</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAPS UP</td>
<td>107/104°</td>
<td>109/108°</td>
<td>113/112°</td>
<td>120/119°</td>
<td>131/130°</td>
<td>148/146°</td>
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<td>99°/98°</td>
<td>102/101°</td>
<td>106/105°</td>
<td>113/112°</td>
<td>123/122°</td>
<td>138/138°</td>
</tr>
<tr>
<td>20°</td>
<td>87°/86°</td>
<td>89°/89°</td>
<td>93°/94°</td>
<td>98/100°</td>
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<td>40°</td>
<td>82°/79°</td>
<td>84°/80°</td>
<td>87°/84°</td>
<td>92°/90°</td>
<td>101°/98°</td>
<td>113/110°</td>
</tr>
</tbody>
</table>

* P, SCL
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
EMERGENCY DESCENT (LOW SPEED)

*CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. A/S 150KIAS MIN.

POWER LEVERS FRI. CONDITION LEVERS T/O AND LAND SYNCH OFF. FLAPS 9° AT 175KIAS, & GEAR DOWN (110KIAS SOL, P. 175KIAS MARQ. N) FLAPS 20° AT 155KIAS; FLAPS 40° AT 120KIAS

SIMULATE EXPLOSIVE DECOMPRESSION AT ASSIGNED ALTITUDE. OXYGEN MASKS ON "DECLARE EMERGENCY"

POWER LEVERS FRI. CONDITION LEVERS T/O AND LAND SYNCH OFF. FLAPS 9° AT 175KIAS, & GEAR DOWN (110KIAS SOL, P. 175KIAS MARQ. N) FLAPS 20° AT 155KIAS; FLAPS 40° AT 120KIAS

ESTABLISH DESCENT IN A 30° BANK, 155KIAS MAX. INITIAL NOSE DOWN IS APPROX 20° UNTIL REACHING 155K. THEN NOSE UP TO MAINTAIN SPEED.

AFTER ESTABLISHING DESCENT, ROLL WINGS LEVEL. CONTINUE DESCENT ON STEADY HEADING OR AS REQUIRED BY ATC.

500′ ABOVE, START LEVEL OFF

COMPLETE EXERCISE AT ASSIGNED ALTITUDE. REDUCE TO 120KIAS AND CLEAN UP A/C. **DO NOT RAISE FLAPS UNTIL A/C IS BELOW 120KIAS.

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES

CHECK 1000′ ABOVE LEVEL OFF ALTITUDE
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

EMERGENCY DESCENT (HIGH SPEED)

CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. A/S 150 KCAS MIN.

POWER LEVERS P/1. CONDITION LEVERS T/O AND LAND SYNC OFF.

NOTE DECREASE INDICATED AIRSPEED BY 5 KCAS BELOW 250 KCAS. FOR EACH 1,000 FT ABOUT 21,300 FT

SIMULATE EXPLOSIVE DECOMPRESSION AT ASSIGNED ALTITUDE. OXYGEN MASKS ON. DECLARE EMERGENCY

ESTABLISH DESCENT IN A 30° BANK, ACCELERATING TO MMO/VMO. INITIAL 15-20° NOSE DOWN, REDUCING TO APPROX. 8° NOSE DOWN AS APPROACHES VMO.

AFTER ESTABLISHING DESCENT, KEEP WINGS LEVEL, CONTINUE DESCENT ON STEADY HEADING OR AS REQUIRED BY ATC

700 FT ABOVE, START LEVEL OFF

COMPLETE EXERCISE AT ASSIGNED ALTITUDE. REDUCE SPEED TO 200 KCAS

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES.
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
UNUSUAL ATTITUDE RECOVERY (NOSE HIGH)

ROLL TOWARD 60° BANK USING RUDDER AND SPOILER AND ALLOW NOSE TO FALL THROUGH THE HORIZON

CAUTION
DO NOT LOAD WINGS DURING BANKING MANEUVER TO PREVENT AN ACCELERATED STALL

UPON RECOGNITION OF A NOSE HIGH UNUSUAL ATTITUDE, POWER TO TAKEOFF

*CLEAR AREA

WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC BOTH ABOVE AND BELOW YOUR ALTITUDE.

INSTRUCTOR NOTE
THE INSTRUCTOR SHOULD INITIATE THE UNUSUAL ATTITUDE AND USE POSITIVE CONTROL TO TRANSFER CONTROL TO THE STUDENT FOR RECOVERY

WHEN NOSE LOW, ROLL WINGS LEVEL, REDUCE POWER TO FLIGHT IDLE, AND COMMENCE A WINGS LEVEL PULL UP TO A LEVEL FLIGHT ATTITUDE.

ONCE LEVEL, ADD POWER TO MAINTAIN LEVEL FLIGHT
MU-2B MARQUISE (-40), SOLITAIRE (-40), N (-36A), P (-26A)

UNUSUAL ATTITUDE RECOVERY (NOSE LOW)

**INSTRUCTOR NOTE**
THE INSTRUCTOR SHOULD INITIATE THE UNUSUAL ATTITUDE AND USE POSITIVE CONTROL TO TRANSFER CONTROL TO THE STUDENT FOR RECOVERY

**CLEAR AREA**

UPON RECOGNITION OF A NOSE LOW UNUSUAL ATTITUDE, REDUCE POWER TO FLIGHT IDLE, ROLL TOWARD WINGS LEVEL IF IN A BANK, AND MAINTAIN NOSE LOW PITCH ATTITUDE WHILE LEVELING WINGS

ONCE WINGS ARE LEVEL IN NOSE LOW ATTITUDE, COMMENCE A WINGS LEVEL PULL UP TO A LEVEL FLIGHT ATTITUDE.

**CAUTION**
DO NOT 'G' LOAD AIRCRAFT UNTIL WINGS ARE LEVEL TO PREVENT AN ACCELERATED STALL.

ONCE LEVEL, ADD POWER TO MAINTAIN LEVEL FLIGHT

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL THE CLEAR TRAFFIC BOTH ABOVE AND BELOW YOUR ALTITUDE.*
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

NO FLAP OR 5° FLAP LANDING

**CAUTION**
DO NOT SELECT REVERSE UNTIL BELOW 90K WITH NOSE WHEEL ON GROUND

**NOTE**
Landing distance will increase approximately 30%.

**THRESHOLD 20% TORQUE, NO FLAP VREF 115KCAS MINIMUM**

**A/S SLOWING TO NO FLAP VREF 115KCAS MINIMUM**

**STABILIZED APPROACH BY 500 FT**

**COMPLETE DESCENT AND APPROACH CHECKLISTS**

**MAINTAIN TRACK PARALLEL TO RUNWAY**

**COMPLETE LANDING CHECKLIST**

**CHECK SINK RATE**

**FLAPS 0° OR 5°, A/S 140KCAS MINIMUM 500-600 FPM SINK RATE (APPROX 26% TORQUE)**

**NO FLAP VREF 1.25 VS1 (USE FOR FLAPS UP OR 5°)**

<table>
<thead>
<tr>
<th>Speed (KIAS)</th>
<th>Flaps 0°</th>
<th>Flaps 5°</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500</td>
<td>/ 115°</td>
<td>/ 115°</td>
</tr>
<tr>
<td>8,000</td>
<td>/ 115°</td>
<td>/ 115°</td>
</tr>
<tr>
<td>8,500</td>
<td>/ 116°</td>
<td>/ 115°</td>
</tr>
<tr>
<td>9,000</td>
<td>116 / 120°</td>
<td>115 / 115°</td>
</tr>
<tr>
<td>9,500</td>
<td>119 / 123°</td>
<td>115 / 117°</td>
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<tr>
<td>9,950</td>
<td>/ 120°</td>
<td>/ 120°</td>
</tr>
<tr>
<td>10,000</td>
<td>123 /</td>
<td>115 /</td>
</tr>
<tr>
<td>10,500</td>
<td>127 /</td>
<td>118 /</td>
</tr>
<tr>
<td>11,025</td>
<td>129 /</td>
<td>121 /</td>
</tr>
</tbody>
</table>

*SOL, P"
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ONE ENGINE INOPERATIVE LANDING

**CAUTION**
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETTA

OPERATING ENGINE POWER LEVER GROUND IDLE, THEN PROP BETA. REVERSE AS REQUIRED. BRAKES AS REQUIRED.

TOUCHDOWN OPERATING ENGINE POWER LEVER SLOWLY RETARD TO FLIGHT IDLE STOP

**CAUTION**
DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.

**WARNING**
DO NOT ATTEMPT A GO-AROUND WITH GEAR DOWN BELOW 400' AGL OR AFTER 20° FLAPS ARE SELECTED

A/S 150KCAS (140KCAS MIN MARQ, N) (135KCAS MINIMUM SOL, P) (APPROX 50-55% TORQUE)

COMPLETE DESCENT AND APPROACH CHECKLISTS AND REVIEW SINGLE ENGINE LANDING CHECKLIST

STABILIZED APPROACH BY 500' SEC

CHECK SINK RATE, 300-600 FPM

WHEN LANDING ASSURED, FLAPS 20°. A/S 120KCAS MIN. COMPLETE LANDING CHECKLIST, RUDDER TRIM CENTERED, HOLD BALL IN CENTER WITH RUDDER

CHECK GLIDE PATH, IF LANDING ASSURED, GEAR DOWN. (APPROX 40% TORQUE)

N, MARQ, P, SOL

<table>
<thead>
<tr>
<th>FLAP SETTING</th>
<th>VXSE(KCAS)</th>
<th>VYSE(KCAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP</td>
<td>140 / 135°</td>
<td>150 / 150°</td>
</tr>
<tr>
<td>5°</td>
<td>130 / 130°</td>
<td>140 / 140°</td>
</tr>
<tr>
<td>20°</td>
<td>125 / 125°</td>
<td>135 / 130°</td>
</tr>
</tbody>
</table>

*P, SOL
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
CROSSWIND LANDING

AIRCRAFT WILL BE FLOWN DOWN AN EXTENSION OF THE RUNWAY CENTER LINE WITH DRIFT CORRECTION ESTABLISHED SUFFICIENTLY IN ADVANCE TO PERMIT CENTER LINE TO BE FLOWN WITH ONLY MINOR COORDINATED CORRECTIONS.

INCREASE Vnef FOR CROSSWIND LANDING BY ONE-HALF THE STEADY WIND SPEED PLUS ONE-HALF THE GUST SPEED NOT TO EXCEED Vnef PLUS 10 KIAS.

PRIOR TO TOUCHDOWN, THE UPWIND WING IS LOWERED AND SMOOTHLY MODULATED. OPPOSITE RUDDER IS APPLIED SO THAT AIRCRAFT PATH CONTINUES DOWN RUNWAY CENTERLINE. THE AIRCRAFT SHOULD NOT BE ALLOWED TO DEVELOP ANY TENDENCY TO DRIFT DOWNWIND.

**NOTE:** RUDDERS CENTERED BEFORE NOSE WHEEL TOUCHDOWN. SPOILERS INTO WIND AS NECESSARY TO KEEP WINGS LEVEL.
MU-2B MARQUESE (40), SOLITAIRE (40), N (36A), P (26A)

TWO ENGINE MISSED APPROACH

- Complete after takeoff checklist.
- Accelerate to decision speed.
- Flaps up.
- After gear is fully retracted, reduce flap to 10° pitch to 10°.
- Positive rate of climb, use minimum flaps.
- Missed approach go around.

MAP

14 CFR Ch. 1 (1-1-10 Edition)
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
ONE ENGINE INOPERATIVE ILS AND MISSED APPROACH

A/S 150KCAS (140KCAS MIN MARQ, N) (135KCAS MIN SOL, P)
APPROACH CHECKLIST, REVIEW APPROACH PLATE, RADIOS TUNE & IDENTIFY, CHECK OM CROSSING ALTITUDE MARKER RECEIVER "ON"

WARNING
DO NOT ATTEMPT A GO-AROUND WITH GEAR DOWN BELOW 400' AGL OR AFTER 20° FLAPS ARE SELECTED

CAUTION
DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE

A/S 140KCAS (130KCAS MIN), 50-60% TORQUE, FLAPS 5°, DESCEND 500 FPM

FLAPS 5°, 140KCAS (130KCAS MIN) 50-60% TORQUE

MISSING APPROACH: CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE

A/S 140KCAS (130KCAS MIN) 50-60% TORQUE, FLAPS 5°

CHECK GEAR DOWN APPROACHING GUIDE SLOPE (ONE DOT BELOW G/S), A/S 140KCAS (130KCAS MIN)

DH

LANDING CHECK (50-55% TORQUE)

WHEN LANDING ASSURED, FLAPS 20°, SLOWING TO CROSS THRESHOLD AT 110K CAS (MARQUISÉ, N), 105KCAS (SOLITAIRE, P)

OPERATING ENGINE POWER LEVER GROUND IDLE, THEN PROP BETA, REVERSE AS REQUIRED, BRAKES AS REQUIRED.

TOUCHDOWN, OPERATING ENGINE POWER LEVER SLOWLY RETARD TO FLIGHT IDLE STOP
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
NON-PRECISION AND MISSED APPROACH

LANDING APPROACH SPEEDS – VREF

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20°</th>
<th>FLAPS 40°</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500 LBS</td>
<td>96°</td>
<td>96°</td>
</tr>
<tr>
<td>8,000 LBS</td>
<td>99° / 102°</td>
<td>105 / 106°</td>
</tr>
<tr>
<td>9,000 LBS</td>
<td>100 / 105°</td>
<td>108 / 109°</td>
</tr>
<tr>
<td>9,500 LBS</td>
<td>102 / 108°</td>
<td>111 / 112°</td>
</tr>
<tr>
<td>9,955 LBS</td>
<td>111°</td>
<td>115°</td>
</tr>
<tr>
<td>10,000 LBS</td>
<td>105°</td>
<td>114°</td>
</tr>
<tr>
<td>10,500 LBS</td>
<td>108°</td>
<td>116°</td>
</tr>
<tr>
<td>11,025 LBS</td>
<td>110°</td>
<td>119°</td>
</tr>
</tbody>
</table>

* A(tol.

MISSED APPROACH: GO-AROUND, MAX POWER, PITCH TO 8°
CONTINUE WITH TWO ENGINE MISSED APPROACH PROFILE

A/S 150K (140K MIN). APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS TUNE & IDENTIFY.
CHECK FIX CROSSING ALTITUDE

FLAPS 5°,
A/S 140KCAS MIN.
25-30% TORQUE

A/S 140KCAS MIN.
20-25% TORQUE,
DESCEND 500 FPM

GEAR DOWN, FLAPS 20°
APPROACHING FIX INBOUND, LANDING CHECKLIST COMPLETE A/S 120KCAS MIN.

A/S 120KCAS MIN.
25-30% TORQUE,
800-1000 FPM DESCENT

A/S 120KCAS MIN.
APPROX 30% TORQUE

TOUCHDOWN POWER LEVERS RETARD TO FLIGHT IDLE STOP, THEN POWER LEVERS RETARD TO GROUND IDLE, CHECK BOTH PROPS BETA, REVERSE AND BRAKES AS REQUIRED.

Federal Aviation Administration, DOT
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
ONE ENGINE INOPERATIVE NON-PRECISION AND MISSED APPROACH

A/S 150KCAS (140KCAS MIN MARQ, N)
(135KCAS MIN 50L, P) APPROACH CHECKLIST. REVIEW APPROACH PLATE.
RADIOS: TUNE & IDENTIFY. CHECK FIX CROSSING ALTITUDE.

A/S 140KCAS (130KCAS MIN.) 60%
TORQUE, FLAPS 5°. DESCEND 500 FPM

WARNING
DO NOT ATTEMPT A WITH GEAR DOWN GO-AROUND BELOW
400' AGL OR AFTER 20° FLAPS ARE SELECTED.

CAUTION
DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE
SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.

MISSLED APPROACH: CONTINUE WITH ENGINE OUT MISSLED APPROACH PROFILE

A/S 140KCAS (130KCAS MIN) 50-60%
TORQUE; FLAPS 5°.

A/S 140KCAS (130KCAS MIN) 20-30%
TORQUE, 800-1000 FPM DESCENT

WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20°,
SLOWING TO CROSS THRESHOLD AT 110K (MARQUISE, N),
105K (SOLITAIRE, P). LANDING CHECKLIST COMPLETE
CAUTION
GEAR EXTENSION TIME IS APPROXIMATELY 15 SECONDS.
CONFIRM GEAR DOWN PRIOR TO LANDING.

TOUCHDOWN, OPERATING ENGINE POWER LEVER SLOWLY
RETARD TO FLT IDLE STOP. POWER LEVER GROUND IDLE,
THEN PROP/BETA. REVERSE AS REQUIRED. BRAKES AS
REQUIRED.
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
CIRCLING APPROACH AT WEATHER MINIMUMS

**CAT C** 121 - 149KCAS  1.7NM
**CAT D** 141 - 165KCAS  2.3NM

FROM APPROACH:
FLAPS 20°, GEAR DOWN, A/S 140KCAS

TOUCHDOWN. RETARD POWER LEVERS TO FLIGHT IDLE STOP. THEN POWER LEVERS RETARD TO GROUND IDLE. CHECK BOTH PROPS BETA. REVERSE AND BRAKES AS REQUIRED.

A/S 140KCAS (130KCAS MIN.)
APPROX 50% TORQUE, NOT BELOW CIRCLING MINIMUM DESCENT ALTITUDE

**THRESHOLD:** 20% TORQUE, Vref

**CHECK SINK RATE** 500-600 FPM

FLAPS 20° OR 40° SLOWING TO Vref

20-25° TORQUE, A/S 120K MIN.
500-600 FPM DESCENT

DO NOT DESCEND UNTIL WITHIN 30° OF RUNWAY CENTERLINE

**CHECK GEAR DOWN.** FLAPS 20° COMPLETE
**LANDING CHECKLIST**

**MAX BANK** 30°

**LANDING APPROACH SPEEDS – VREF**

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>1.3 VFS</th>
<th>1.5 VFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500 LBS</td>
<td>96°</td>
<td>96°</td>
</tr>
<tr>
<td>8,000 LBS</td>
<td>99°</td>
<td>99°</td>
</tr>
<tr>
<td>8,500 LBS</td>
<td>99°</td>
<td>102°</td>
</tr>
<tr>
<td>9,000 LBS</td>
<td>100°</td>
<td>105°</td>
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<tr>
<td>9,500 LBS</td>
<td>102°</td>
<td>108°</td>
</tr>
<tr>
<td>9,955 LBS</td>
<td>111°</td>
<td>115°</td>
</tr>
<tr>
<td>10,000 LBS</td>
<td>105°</td>
<td>114°</td>
</tr>
<tr>
<td>10,500 LBS</td>
<td>108°</td>
<td>116°</td>
</tr>
<tr>
<td>11,025 LBS</td>
<td>110°</td>
<td>119°</td>
</tr>
</tbody>
</table>

* R. Sol
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ONE ENGINE INOPERATIVE CIRCLING APPROACH AT WEATHER MINIMUMS

**NOTE:** ENGINE OUT CIRCLING APPROACH SHOULD BE FLOWN WITH 5° FLAPS AND GEAR UP. WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20°, SLOWING TO A/S 110KIAS (MARQUISE, N) A/S 109KIAS (SOLITAIRE, P)

FROM APPROACH: FLAPS 5°, GEAR UP, A/S 140KIAS (130KIAS MIN.)

TOUCHDOWN: OPERATING ENGINE POWER LEVER SLOWLY RETARD TO FLIGHT IDLE STOP, THEN OPERATING ENGINE POWER LEVER TO GROUND IDLE. CHECK PROP BETA. REVERSE AND BRAKES AS REQUIRED.

THRESHOLD FLAPS 20°, A/S 110KIAS (MARQUISE, N), A/S 109KIAS (SOLITAIRE, P)

CHECK SINK RATE 500-600 FPM

Landing assured: Flaps 20°, A/S 125KIAS MIN. COMPLETE LANDING CHECKLIST

CHECK DESCENT PROFILE, IF LANDING ASSURED, GEAR DOWN, CHECK SINK RATE 500-600 FPM

CAUTION
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETTA

A/S 140KIAS (130KIAS MIN.) APPROX 70% TORQUE, NOT BELOW CIRCLING MINIMUM DESCENT ALTITUDE

CAUTION
DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.

WARNING
DO NOT ATTEMPT A GO-AROUND WITH GEAR DOWN BELOW 400 AGL OR AFTER 20° FLAPS ARE SELECTED

CHECK FLAPS 5°, DO NOT DESCEND UNTIL WITHIN 30° OF RUNWAY CENTERLINE

CHECK DESCRIBE UNTIL WITHIN 30° OF RUNWAY CENTERLINE

A/S 121 - 140KIAS 1.7 NM
A/S 141 - 165KIAS 2.3 NM

VerDate Nov<24>2008 09:04 Mar 03, 2010 Jkt 220044 PO 00000 Frm 00632 Fmt 8010 Sfmt 8006 Y:\SGML\220044.XXX 220044
ER06FE08.028</GPH>

wwoods2 on DSK1DXX6B1PROD with CFR
MU-2B J (-35), K (-25), L (-36), M (-26)
NORMAL TAKE-OFF, 5° OR 20° FLAPS

**TAKE OFF SPEEDS**
FOR ROTATE SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.

**A/S 150 KCAS MINIMUM, FLAPS UP**

**AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° ADJUST PITCH TO ACCELERATE: 130 KCAS (K, MOD SR10J), 140 KCAS (J, L, M), RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°.**

**NORMAL PITCH, APPROX 8°-FLAPS 20°, APPROX 10-12°-FLAPS 5°**

**POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP, IF 20° FLAPS 113 KCAS MIN. IF 5° FLAPS 120 KCAS (J, L) 125 KCAS (K, M)**

**VR - ROTATE 13° MAX NOSE UP PITCH**

**NOTE: IF RUNWAY LENGTH OR OBSTACLE CLEARANCE IS CRITICAL, SET POWER TO TORQUE OR TEMP MAXIMUM, WHICHEVER OCCURS FIRST, RETARD POWER LEVERS AS REQUIRED TO MAINTAIN MAXIMUM ALLOWABLE TORQUE OR TEMP.**

**COMPLETE AFTER T/O AND CLimb CHECKLIST**

**ACCELERATE TO DESIRED CLImb SPEED**

* TORQUE 90% OR 600° EGT / 870° ITT, WHICHEVER OCCURS FIRST, BETA LIGHTS OUT, RELEASE BRAKES. RAM RISE WILL CAUSE TORQUE OR TEMP TO RISE TO MAXIMUM TAKEOFF POWER DURING TAKEOFF ROLL.
<table>
<thead>
<tr>
<th>FLAPS</th>
<th>K</th>
<th>M</th>
<th>J</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>5°</td>
<td>109</td>
<td>108</td>
<td>104</td>
<td>100</td>
</tr>
<tr>
<td>10°</td>
<td>109</td>
<td>108</td>
<td>105</td>
<td>101</td>
</tr>
<tr>
<td>15°</td>
<td>109</td>
<td>108</td>
<td>107</td>
<td>101</td>
</tr>
<tr>
<td>20°</td>
<td>109</td>
<td>108</td>
<td>107</td>
<td>101</td>
</tr>
<tr>
<td>25°</td>
<td>109</td>
<td>108</td>
<td>107</td>
<td>101</td>
</tr>
<tr>
<td>30°</td>
<td>109</td>
<td>108</td>
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<td>101</td>
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<td>109</td>
<td>108</td>
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<td>101</td>
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<td>40°</td>
<td>109</td>
<td>108</td>
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<td>101</td>
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<td>45°</td>
<td>109</td>
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<td>107</td>
<td>101</td>
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<td>50°</td>
<td>109</td>
<td>108</td>
<td>107</td>
<td>101</td>
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<td>55°</td>
<td>109</td>
<td>108</td>
<td>107</td>
<td>101</td>
</tr>
<tr>
<td>60°</td>
<td>109</td>
<td>108</td>
<td>107</td>
<td>101</td>
</tr>
</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

TAKE-OFF ENGINE FAILURE – FLAPS 5° OR 20°

<table>
<thead>
<tr>
<th>FLAP SETTING</th>
<th>VXSE (KCAS)</th>
<th>VXSE (KCAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP</td>
<td>140 / 130 °</td>
<td>150 / 150 °</td>
</tr>
<tr>
<td>5°</td>
<td>130 / 130 °</td>
<td>140 / 140 °</td>
</tr>
<tr>
<td>20°</td>
<td>125 / 125 °</td>
<td>135 / 130 °</td>
</tr>
</tbody>
</table>

*K, M

APPROX 300-400 FEET (OBSTRUCTION CLEARANCE), IF FLAPS 20° ADJUST PITCH TO ACCELERATE, 130 KCAS MIN. FLAPS TO 5° IF FLAPS 5° INSTALLED, PITCH APPROX 10°, (IF FLAPS 5 NOT INSTALLED, FLAPS UP*, PITCH APPROX. 10° TO 13°.)

A/S 150 KCAS, COMPLETE AFTER TAKE-OFF AND ENGINE OUT CHECKLIST

PITCH TO MAINTAIN VXSE MINIMUM APPROX 8° PITCH, FLAPS 20°, APPROX 10-12° PITCH, FLAPS 5°, MAINTAIN DIRECTIONAL CONTROL, WITH RUDDER AND MINIMUM SPOILER. FAILED ENGINE – CONDITION LEVER, EMERGENCY STOP, POWER LEVER, TAKE OFF **, TRIM AIRCRAFT

POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP, IF 20° FLAPS 113 KCAS MIN, IF 5° FLAPS 120 KCAS (J, L) 125 KCAS (K, M)

MAKE NORMAL T/O

CAUTION SIMULATED ENGINE FAILURE (NOT LESS THAN 200FT AGL)

** IF SUFFICIENT RUNWAY REMAINS, OR UNABLE TO CLIMB, GEAR DOWN, REDUCE POWER TO LAND STRAIGHT AHEAD USING A/S APPROPRIATE FOR WEIGHT, 105 KCAS MINIMUM (J, L), 100 KCAS MINIMUM (K, M)

A/S 140 KCAS MIN (IF FLAPS 5° INSTALLED) FLAPS UP*

*IF SR 10 NOT INSTALLED, MAXIMUM FLAP SPEED DURING RETRACTION IS 140 KCAS. DURING RETRACTION, PITCH TO MAINTAIN 140 KCAS UNTIL FLAPS UP.
MU-2B J (-35), K (-25), L (-36), M (-26)

TAKE-OFF ENGINE FAILURE ON RUNWAY

CAUTION
SIMULATED ENGINE FAILURE OR MALFUNCTION IS TO BE GIVEN BY INSTRUCTOR AT NOT MORE THAN 90% OF ROTATE SPEEDS.

ENGINE FAILS OR MALFUNCTION OCCURS
POWER LEVERS TO GROUND IDLE, BRAKES AS NECESSARY. REVERSE THRUST AS REQUIRED. USE NOSE WHEEL STEERING, BRAKES, AND/OR REVERSE THRUST TO MAINTAIN DIRECTIONAL CONTROL.

NOTIFY TOWER OF ABORT

CLEAR RUNWAY OR EVACUATE AIRCRAFT AS NECESSARY *

POWER SET, BRAKES RELEASED

* IF EVACUATING AIRCRAFT, BOTH CONDITION LEVERS TO EMERGENCY STOP AND MASTER SWITCH TO EMERGENCY

DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.
MU-2B J (-35), K (-25), L (-36), M (-26)
TAKE-OFF ENGINE FAILURE - UNABLE TO CLimb
CLASSROOM DISCUSSION OR FTD USE ONLY

WARNING
DO NOT LET AIRSPEED DECELERATE BELOW SINGLE ENGINE AIRSPEED, 105KIAS (J, L) 100KIAS (K, M)

PILOT MAKES DECISION TO EITHER RETURN THE RUNWAY SURFACE OR TO FLY BEYOND AIRPORT BOUNDARY TO SUITABLE LANDING AREA

ENGINE FAILS

POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP. IF 20° FLAPS 113 KIAS MIN. IF 5° FLAPS 120 KIAS (J, L) 125 KIAS (K, M)

ROTATE

IF RUNWAY REMAINS A LANDING CAN SAFELY BE MADE ON THE AIRPORT SURFACE, CHECK GEAR DOWN, FLAPS REMAIN IN TAKE-OFF POSITION, POWER ON OPERATING ENGINE AS REQUIRED TO LAND. LAND USING SINGLE ENGINE AIRSPEED, 105KIAS (J, L), 100KIAS (K, M)

CAUTION
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA
MU-2B J (-35), K (-25), L (-36), M (-26)

**STEEP TURNS**

1. **CLEAR AREA**, GEAR UP, FLAPS UP, A/S 180K CAS, TRIM A/C
2. SET HEADING BUG TO ROLL OUT HEADING
3. START NORMAL TURN POWER AS REQUIRED. INCREASE APPROXIMATELY 10% TORQUE
4. 50° BANK ESTABLISHED. PITCH UP APPROXIMATELY 2° TO 3° OR AS NECESSARY TO MAINTAIN ALTITUDE.
5. CHECK FOR A/S AND ALTITUDE TRENDS
6. REDUCE POWER TO MAINTAIN 180K
7. ROLL OUT ON HEADING ON ALT.
8. **START ROLL OUT 20° BEFORE ROLL OUT HEADING**
9. **THIS MANEUVER SHOULD BE PERFORMED IN BOTH CLEAN AND LANDING CONFIGURATIONS (USE 30K FLAPS 20, GEAR DOWN, FOR LANDING CONFIGURATION)**

**NOTE:** TURNS WILL BE DONE THROUGH 360° AS WELL AS 180°
SLOW FLIGHT MANEUVERING
MINIMUM CONTROLLABLE AIRSPEED

SLOW FLIGHT MANEUVERING IS CONDUCTED AS follows:

CLEAR THE AREA PRIOR TO BEGINNING THE MANEUVER.
START WITH CLEAN CONFIGURATION AND CHANGE AIRCRAFT CONFIGURATION FROM CLEAN TO FULL FLAP AND GEAR IN STAGES. USE A MAXIMUM OF 15° BANK AND PERFORM HEADING CHANGES OF 90° LEFT AND RIGHT. CONSTANT ALTITUDE IS REQUIRED THROUGHOUT.
M AINTAIN 115 KCAS IN ALL CONFIGURATIONS.

**APPROXIMATE POWER SETTINGS ARE:**

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>TORQUE (35%) PER ENGINE</th>
<th>APPROX. PITCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAN</td>
<td>APPROX PITCH +12</td>
<td></td>
</tr>
<tr>
<td>5° FLAP</td>
<td>APPROX PITCH +8</td>
<td></td>
</tr>
<tr>
<td>5° FLAP &amp; GEAR</td>
<td>APPROX PITCH +9</td>
<td></td>
</tr>
<tr>
<td>20° FLAP &amp; GEAR</td>
<td>APPROX PITCH +4</td>
<td></td>
</tr>
<tr>
<td>40° FLAP &amp; GEAR</td>
<td>APPROX PITCH 0</td>
<td></td>
</tr>
</tbody>
</table>

** NOTE: POWER SETTINGS WILL VARY WITH AIRCRAFT WEIGHT AND ALTITUDE.**

STALL SPEEDS (APPROXIMATE) AT MAXIMUM GROSS TAKEOFF WEIGHT

<table>
<thead>
<tr>
<th>ANGLE OF BANK</th>
<th>J/L/K/M</th>
<th>J/L/K/M</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°</td>
<td>104/106/101/105</td>
<td>107/108/103/106</td>
</tr>
<tr>
<td>5°</td>
<td>90/90/85/87</td>
<td>88/88/87/89</td>
</tr>
<tr>
<td>20°</td>
<td>85/87/85/87</td>
<td>88/88/87/89</td>
</tr>
<tr>
<td>40°</td>
<td>79/81/76/76</td>
<td>82/83/78/80</td>
</tr>
</tbody>
</table>

**CAUTION**
STALL WARNING MAY ACTIVATE 4 TO 9 KTS ABOVE STALL.

MINIMUM CONTROLLABLE AIRSPEED IS CONDUCTED AS follows:

CLEAR THE AREA PRIOR TO BEGINNING THE MANEUVER.
THE MANEUVER MAY BE DONE IN ANY COMBINATION OF GEAR OR FLAP CONFIGURATIONS. IF BANK IS TO BE USED, IT SHOULD BE DONE AT BANK OF NOT MORE THAN 10°. BEGIN THE MANEUVER BY CONFIGURING THE AIRCRAFT IN THE DESIRED GEAR AND FLAP CONFIGURATION. SLOW THE AIRCRAFT UNTIL THE STALL WARNING (STICK SHAKER) IS ACTIVATED AND ADD POWER TO MAINTAIN ALTITUDE AND A SPEED JUST ABOVE AERODYNAMIC STALL. DO NOT ALLOW THE AIRCRAFT TO REACH AERODYNAMIC STALL BUFFET.
MU-2B J (-35), K (-25), L (-36), M (-26)

APPROACH TO STALL CLEAN CONFIGURATION / WINGS LEVEL

CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF – 120KCAS-130KCAS
AIRCRAFT TRIMMED

ON STALL RECOGNITION (STICK SHAKER), SIMULTANEOUSLY APPLY MAX POWER, LEVEL WINGS IF IN A
BANK AND ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE.
STALL WARNING MAY ACTIVATE AT 4 TO 9 K ABOVE STALL.

ACCELERATE TO 140KCAS, POWER AS REQUIRED

20% TORQUE

MAINTAIN LEVEL FLIGHT

CALL THE "STALL"

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

TRIM FOR 120KCAS

MIN. ALT. 5,000' AGL

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>0</th>
<th>5</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR.WT.</td>
<td>K / M / J / L</td>
<td>K / M / J / L</td>
<td>K / M / J / L</td>
<td>K / M / J / L</td>
</tr>
<tr>
<td>7,000</td>
<td>85/ 85/</td>
<td>80/ 80/</td>
<td>72/ 72/</td>
<td>64/ 64/</td>
</tr>
<tr>
<td>7,500</td>
<td>88 / 88/</td>
<td>83/ 83/</td>
<td>74/ 75/</td>
<td>67/ 66/</td>
</tr>
<tr>
<td>8,000</td>
<td>91/ 91/ 90/</td>
<td>86/ 85/ 84/</td>
<td>77/ 77/ 74/</td>
<td>69/ 68/ 69</td>
</tr>
<tr>
<td>8,500</td>
<td>94/ 94/ 93/</td>
<td>89/ 88/ 87/</td>
<td>79/ 79/ 77/</td>
<td>71/ 70/ 71/</td>
</tr>
<tr>
<td>9,000</td>
<td>97/ 96/ 95/ 93</td>
<td>91/ 91/ 89/ 88</td>
<td>82/ 81/ 79/ 77</td>
<td>73/ 72/ 73/ 72</td>
</tr>
<tr>
<td>9,500</td>
<td>99/ 99/ 98/ 96</td>
<td>93/ 93/ 92/ 90</td>
<td>84/ 83/ 81/ 79</td>
<td>75/ 74/ 75/ 74</td>
</tr>
<tr>
<td>9,920</td>
<td>101/</td>
<td>95/</td>
<td>85/</td>
<td>76/</td>
</tr>
<tr>
<td>10,000</td>
<td>/102/100/ 98</td>
<td>/ 96/ 94/ 92</td>
<td>/ 86/ 84/ 81</td>
<td>/ 76/ 77/ 76</td>
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<tr>
<td>10,470</td>
<td>/104/</td>
<td>/ 98/</td>
<td>/ 88/</td>
<td>/ 78/</td>
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<tr>
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<td>/103/101</td>
<td>/ 96/ 94</td>
<td>/ 85/ 83</td>
<td>/ 79/ 77</td>
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<td>/ 96/</td>
<td>/ 86/</td>
<td>/ 80/ 78</td>
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<tr>
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<td>/103</td>
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</tr>
<tr>
<td>11,500</td>
<td>/106</td>
<td>/ 99</td>
<td>/ 87</td>
<td>/ 81</td>
</tr>
</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

APPROACH TO STALL
TAKEOFF CONFIGURATION 15-30° BANK

CLEAR AREA, CONDITION LEVERS TO AND LAND SYNC OFF — A/S 120KCAS-130KCAS TRIMMED AIRCRAFT

FLAPS 5° OR 20°, GEAR DOWN, 20% TORQUE

ON STALL RECOGNITION (STICK SHAKER), SIMULTANEOUSLY APPLY MAX POWER, LEVEL WINGS AND ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE, POSITIVE RATE, GEAR UP. STALL WARNING MAY ACTIVATE AT 4 TO 9 K CAS ABOVE STALL.

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

IF FLAPS 20° RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°, 130 KCAS (K, MOD SR10K, NOT MOD SR10), 140KCAS (J, L, M)

CALL THE "STALL"

MIN. ALT. 5,000' AGL

STALL SPEEDS
FOR STALL SPEEDS SEE TABUAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>BANK ANGLE</th>
<th>FLAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10°</td>
<td>J.I.K.L/M</td>
</tr>
<tr>
<td>20°</td>
<td>J.I.K.L/M</td>
</tr>
<tr>
<td>30°</td>
<td>J.I.K.L/M</td>
</tr>
<tr>
<td>40°</td>
<td>J.I.K.L/M</td>
</tr>
<tr>
<td>50°</td>
<td>J.I.K.L/M</td>
</tr>
<tr>
<td>60°</td>
<td>J.I.K.L/M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STALL SPEEDS (APPROXIMATE) AT MAXIMUM WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>5°</td>
</tr>
<tr>
<td>10°</td>
</tr>
<tr>
<td>20°</td>
</tr>
<tr>
<td>30°</td>
</tr>
<tr>
<td>40°</td>
</tr>
</tbody>
</table>

634
MU-2B J (-35), K (-25), L (-36), M (-26)

APPROACH TO STALL
GEAR DOWN – FULL FLAPS

CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF – A/S 120KIAS – 130KIAS TRIMMED

FLAPS 20°, GEAR DOWN, 20% TORQUE

A/S 120KIAS, FLAPS FULL

20% TORQUE, MAINTAIN LEVEL FLIGHT, TRIM FOR 120KIAS

CALL THE "STALL"

MIN. ALT. 5,000' AGL

ON STALL RECOGNITION (STICK SHAKER), SIMULTANEOUSLY APPLY MAX POWER AND ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE, FLAPS 20°, POSITIVE RATE, GEAR UP, CLIMB TO ORIGINAL ALTITUDE. STALL WARNING MAY ACTIVATE AT 4 TO 9 K ABOVE STALL.

RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°, 130 KIAS (K, MOD SR100), NOT MOD SR10), 140KIAS (J, L, M)

A/S 150KIAS MINIMUM, FLAPS UP POWER AS REQUIRED

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>0</th>
<th>5</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR.WT.</td>
<td>K / M / J / L</td>
<td>K / M / J / L</td>
<td>K / M / J / L</td>
<td>K / M / J / L</td>
</tr>
<tr>
<td>7,000</td>
<td>85 / 85 / 85 /</td>
<td>80 / 80 / 72 /</td>
<td>72 / 72 / 64 /</td>
<td>64 / 64 /</td>
</tr>
<tr>
<td>8,000</td>
<td>91 / 91 / 91 /</td>
<td>86 / 86 / 86 /</td>
<td>77 / 77 / 77 /</td>
<td>77 / 77 /</td>
</tr>
<tr>
<td>9,000</td>
<td>97 / 97 / 97 /</td>
<td>91 / 91 / 91 /</td>
<td>82 / 82 / 82 /</td>
<td>82 / 82 /</td>
</tr>
<tr>
<td>9,500</td>
<td>99 / 99 / 99 /</td>
<td>93 / 93 / 93 /</td>
<td>84 / 84 / 84 /</td>
<td>84 / 84 /</td>
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<tr>
<td>9,920</td>
<td>/101 /</td>
<td>95 /</td>
<td>85 /</td>
<td>76 /</td>
</tr>
<tr>
<td>10,000</td>
<td>/102/100/ /98</td>
<td>/96/84/92</td>
<td>/86/84/81</td>
<td>/76/77/76</td>
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<tr>
<td>10,470</td>
<td>/104/</td>
<td>/98/</td>
<td>/86/</td>
<td>/78/</td>
</tr>
<tr>
<td>10,500</td>
<td>/103/101</td>
<td>/96/94</td>
<td>/85/83</td>
<td>/79/77</td>
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<td>/104/4</td>
<td>/97/</td>
<td>/86/</td>
<td>/80/78</td>
</tr>
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<td>/79/</td>
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<tr>
<td>11,500</td>
<td>/106/</td>
<td>/99/</td>
<td>/87/</td>
<td>/81/</td>
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</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

ACCELERATED STALLS

CLEAR AREA, CONDITION LEVERS TO AND LAND, Sync OFF

CLEAN, A/S 115 KCAS A/C TRIMMED

INITIATE PROGRESSIVE BANK TOWARD A 60° BANK ANGLE, APPLY BACKPRESSURE TO MAINTAIN ALTITUDE

* THIS MANEUVER SHOULD ALSO BE ACCOMPLISHED IN THE LANDING CONFIGURATION WITH GEAR DOWN, FLAPS 20°, A/S 100 KCAS TRIMMED

* 140 KCAS FLAPS UP

* 130 KCAS FLAPS TO 5°

* POSITIVE RATE, GEAR UP

ACCELERATE TO 140 KCAS, POWER AS REQUIRED

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

CALL THE "STALL"

ON STALL RECOGNITION (STICK SHAKER) SIMULTANEOUSLY APPLY MAX POWER, ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE, AND ROLL WINGS LEVEL

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>BANK ANGLE</th>
<th>FLAPS</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>J/L/K/M</td>
<td></td>
<td>J/L/K/M</td>
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<td>J/L/K/M</td>
<td></td>
<td>J/L/K/M</td>
</tr>
<tr>
<td>20°</td>
<td>87/88/86/88</td>
<td>89/90/88/90</td>
<td>92/94/92/94</td>
<td>98/100/97/100</td>
<td>108/109/107/109</td>
<td>122/123/120/123</td>
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<tr>
<td>40°</td>
<td>81/82/77/79</td>
<td>83/84/79/81</td>
<td>86/87/82/84</td>
<td>92/93/87/90</td>
<td>100/102/96/98</td>
<td>112/115/108/110</td>
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</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

EMERGENCY DESCENT (LOW SPEED)

CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE A/S 150K MIN

POWER LEVERS FLI, CONDITION LEVERS T/O AND LAND SYNCH OFF. GEAR AND FLAPS EXTEND AT SPEEDS BASED ON SCHEDULE FOR MODEL AND SR/10 COMPLIANCE UNTIL FULL FLAPS ARE DEPLOYED.

SIMULATE EXPLOSIVE DECOMPRESSION AT ASSIGNED ALTITUDE. OXYGEN MASKS ON, "DECLARE EMERGENCY"

ESTABLISH DESCENT IN A 30° BANK, NOSE DOWN APPROXIMATELY 20° UNTIL, REACHING MAXIMUM FULL FLAP SPEED ALLOWED (Vfe), THEN RAISE NOSE TO MAINTAIN SPEED.

WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES

AFTER ESTABLISHING DESCENT, ROLL WINGS LEVEL, CONTINUE DESCENT ON STEADY HEADING OR AS REQUIRED BY ATC.

500' ABOVE, START LEVEL OFF

COMPLETE EXERCISE AT ASSIGNED ALTITUDE, REDUCE TO 120KCAS AND CLEAN UP A/C. **DO NOT RAISE FLAPS UNTIL A/C IS BELOW MAXIMUM ALLOWABLE Vfe SPEED FOR FULL FLAPS.

GEAR/FLAP SPEEDS
FOR GEAR/FLAP SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE

CHECK 1000' ABOVE LEVEL OFF ALTITUDE
<table>
<thead>
<tr>
<th>Gear</th>
<th>FLAPS</th>
<th>L/M</th>
</tr>
</thead>
<tbody>
<tr>
<td>K/J</td>
<td>160KIAS</td>
<td>175KIAS</td>
</tr>
<tr>
<td>K/J</td>
<td>120KIAS</td>
<td>120KIAS</td>
</tr>
<tr>
<td>L/M</td>
<td>120KIAS</td>
<td>120KIAS</td>
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</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)
EMERGENCY DESCENT (HIGH SPEED)

*CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE, A/S 150KCAS MIN.

SIMULATE EXPLOSIVE DECOMPRESSION AT ASSIGNED ALTITUDE, OXYGEN MASKS ON, DECLARE EMERGENCY

POWER LEVERS F/I, CONDITION LEVERS T/O AND LAND SYNC OFF.

ESTABLISH DESCENT IN A 30° BANK, ACCELERATING TO VMO(250KCAS). INITIAL 15-20° NOSE DOWN, REDUCING TO APPROX. 8° NOSE DOWN AS A/S APPROACHES Vmo (250KCAS).

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES.

AFTER ESTABLISHING DESCENT, KEEP WINGS LEVEL, CONTINUE DESCENT ON STEADY HEADING OR AS REQ'D BY ATC

CHECK 1000 FEET ABOVE LEVEL OFF ALTITUDE

700 FEET ABOVE, START LEVEL OFF

COMPLETE EXERCISE AT ASSIGNED ALTITUDE, REDUCE SPEED TO 200KCAS
MU-2B J (-35), K (-25), L (-36), M (-26)

UNUSUAL ATTITUDE RECOVERY (NOSE HIGH)

ROLL TOWARD 60° BANK USING RUDDER AND SPOILER AND ALLOW NOSE TO FALL THROUGH THE HORIZON

CAUTION
DO NOT LOAD WINGS DURING BANKING MANEUVER TO PREVENT AN ACCELERATED STALL

UPON RECOGNITION OF A NOSE HIGH UNUSUAL ATTITUDE, POWER TO TAKEOFF

*CLEAR AREA

WHEN NOSE LOW, ROLL WINGS LEVEL, REDUCE POWER TO FLIGHT IDLE, AND COMMENCE A WINGS LEVEL PULL UP TO A LEVEL FLIGHT ATTITUDE.

ONCE LEVEL, ADD POWER TO MAINTAIN LEVEL FLIGHT

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC BOTH ABOVE AND BELOW YOUR ALTITUDE.

INSTRUCTOR NOTE
THE INSTRUCTOR SHOULD INITIATE THE UNUSUAL ATTITUDE AND USE POSITIVE CONTROL TO TRANSFER CONTROL TO THE STUDENT FOR RECOVERY
MU-2B J (-35), K (-25), L (-36), M (-26)

UNUSUAL ATTITUDE RECOVERY (NOSE LOW)

UPON RECOGNITION OF A NOSE LOW UNUSUAL ATTITUDE, REDUCE POWER TO FLIGHT IDLE, ROLL TOWARD WINGS LEVEL IF IN A BANK, AND MAINTAIN NOSE LOW PITCH ATTITUDE WHILE LEVELING WINGS

ONCE WINGS ARE LEVEL IN NOSE LOW ATTITUDE, COMMENCE A WINGS LEVEL PULL UP TO A LEVEL FLIGHT ATTITUDE.

CAUTION
DO NOT G LOAD AIRCRAFT UNTIL WINGS ARE LEVEL TO PREVENT AN ACCELERATED STALL.
IF AIRSPEED IS AT OR NEAR Vmo, DO NOT USE ABRUPT CONTROL MOVEMENTS DURING RECOVERY.

ONCE LEVEL, ADD POWER TO MAINTAIN LEVEL FLIGHT

*CLEAR AREA

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL THE CLEAR TRAFFIC BOTH ABOVE AND BELOW YOUR ALTITUDE.

INSTRUCTOR NOTE
THE INSTRUCTOR SHOULD INITIATE THE UNUSUAL ATTITUDE AND USE POSITIVE CONTROL TO TRANSFER CONTROL TO THE STUDENT FOR RECOVERY.
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
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<tbody>
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<td>7,000</td>
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<td>96</td>
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<td>100</td>
</tr>
<tr>
<td>7,500</td>
<td>100</td>
<td>103</td>
<td>106</td>
<td>109</td>
</tr>
<tr>
<td>8,000</td>
<td>103</td>
<td>106</td>
<td>109</td>
<td>112</td>
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<td>118</td>
</tr>
<tr>
<td>9,435</td>
<td>112</td>
<td>115</td>
<td>118</td>
<td>121</td>
</tr>
<tr>
<td>9,955</td>
<td>115</td>
<td>118</td>
<td>121</td>
<td>124</td>
</tr>
<tr>
<td>10,260</td>
<td>118</td>
<td>121</td>
<td>124</td>
<td>127</td>
</tr>
<tr>
<td>10,500</td>
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<td>124</td>
<td>127</td>
<td>130</td>
</tr>
<tr>
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<td>127</td>
<td>130</td>
<td>133</td>
</tr>
<tr>
<td>11,025</td>
<td>127</td>
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<td>133</td>
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</tr>
</tbody>
</table>

**FLAPS 20° (1.3 VS1)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>93</td>
</tr>
<tr>
<td>96</td>
</tr>
<tr>
<td>99</td>
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<tr>
<td>100</td>
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<td>109</td>
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<tr>
<td>112</td>
</tr>
<tr>
<td>115</td>
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</tbody>
</table>

**FLAPS 40° (1.5 VS1)**

<table>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>103</td>
</tr>
<tr>
<td>106</td>
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<tr>
<td>109</td>
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</tr>
<tr>
<td>121</td>
</tr>
<tr>
<td>124</td>
</tr>
<tr>
<td>127</td>
</tr>
</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

NO FLAP OR 5° FLAP LANDING

CAUTION
DO NOT SELECT REVERSE UNTIL BELOW 90K WITH NOSE WHEEL ON GROUND

CHECK BOTH PROPS BETA. BRAKING AS REQUIRED. NOTE: BETA MAY NOT BE AVAILABLE UNTIL BELOW 90K

TOUCHDOWN - POWER LEVERS SLOWLY RETARD TO FLIGHT IDLE

THRESHOLD 20% TORQUE. NO FLAP VREF. 115KCAS MINIMUM.

A/S SLOWING TO NO FLAP VREF. 115KCAS MINIMUM

STABILIZED APPROACH BY 500 FPM

COMPLETE LANDING CHECKLIST

FLAPS 0° OR 5° A/S 140KCAS MINIMUM. 500-600 FPM SINK RATE (APPROX 28% TORQUE)

COMPLETE DESCENT AND APPROACH CHECKLISTS

MAINTAIN TRACK PARALLEL TO RUNWAY

A/S 150KCAS MINIMUM (25-30% TORQUE)

GEAR DOWN A/S 140KCAS MINIMUM

CHECK SINK RATE
### NO FLAP Vref 1.25 VS1
(BUT NOT BELOW 115KCAS)
USE FOR FLAP UP OR 5°
J, K, L, M

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS UP</th>
<th>FLAPS 5°</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>J</td>
<td>K</td>
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</tr>
<tr>
<td>11,025</td>
<td>129</td>
<td>129</td>
</tr>
</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

CROSSWIND LANDING

AIRCRAFT WILL BE FLOWN DOWN AN EXTENSION OF THE RUNWAY CENTER LINE WITH DRIFT CORRECTION ESTABLISHED SUFFICIENTLY IN ADVANCE TO PERMIT CENTER LINE TO BE FLOWN WITH ONLY MINOR COORDINATED CORRECTIONS

INCREASE Vref FOR CROSSWIND LANDING BY ONE-HALF THE STEADY WIND SPEED PLUS ONE-HALF THE GUST SPEED NOT TO EXCEED Vref PLUS 10 KCAS.

PRIOR TO TOUCHDOWN, THE UPWIND WING IS LOWERED AND SMOOTHLY MODULATED. OPPOSITE RUDDER IS APPLIED SO THAT AIRCRAFT PATH CONTINUES DOWN RUNWAY CENTERLINE. THE AIRCRAFT SHOULD NOT BE ALLOWED TO DEVELOP ANY TENDENCY TO DRIFT DOWNWIND.

**NOTE:** RUDDERS CENTERED BEFORE NOSE WHEEL TOUCHDOWN. SPOILERS INTO WIND AS NECESSARY TO KEEP WINGS LEVEL.

WIND
MU-2B J (-35), K (-25), L (-36), M (-26)

ILS AND MISSED APPROACH

A/S 150K 140KCAS (J, L, M, K) 130KCAS (K) MINIMUM APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS: TUNE & IDENTIFY. CHECK OM CROSSING ALTITUDE MARKER RECEIVER "ON".

GEAR DOWN. A/S 140KCAS (J, L, M, K) 130KCAS (K) MINIMUM COMPLETE LANDING CHECKLIST.

FLAPS 5°, 140K CAS MIN. 25-30% TORQUE.

MISSED APPROACH: CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE.

CHECK GEAR DOWN, FLAPS 20° APPROACHING Glide Slope (One DOT BELOW G/S), A/S 120KCAS MIN.

LANDING CHECK APPROX 25% TORQUE.

WHEN LANDING ASSURED, FLAPS 20°, (OR 40° BELOW 120KCAS)

THRESHOLD (20% TORQUE) Vref

TOUCHDOWN: POWER LEVERS RETARD TO FLIGHT IDLE STOP.

PROPS BETA. REVERSE AS REQUIRED. BRAKES AS REQUIRED.

LANDING APPROACH SPEEDS FOR LANDING APPROACH SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
### LANDING APPROACH SPEEDS $V_{ref}$

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>$K$</th>
<th>$M$</th>
<th>$J$</th>
<th>$L$</th>
<th>$K$</th>
<th>$M$</th>
<th>$J$</th>
<th>$L$</th>
</tr>
</thead>
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</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)
TWO ENGINE MISSED APPROACH

COMPLETE AFTER TAKEOFF CHECKLIST

ACCELERATE TO DESIRED CLimb SPEED

A/S 150KCAS MINIMUM, FLAPS UP

AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°, 130 KCAS (K, MOD SR10/K, NOT MOD SR10), 140KCAS (J, L, M)

GEAR UP, IF 20° FLAPS 113 KCAS MIN, IF 5° FLAPS 120 KCAS (J, L) 125 KCAS (K, M)

MISSED APPROACH GO-AROUND, MAX POWER, PITCH UP

MAP
MU-2B J (-35), K (-25), L (-36), M (-26)

ONE ENGINE INOPERATIVE MISSED APPROACH

COMMENCING MISSED APPROACH, SET MAX POWER, MAINTAIN DIRECTIONAL CONTROL, Rudder and Spoiler as necessary. Gear up. Pitch to maintain A/S 140 KCAS.

A/S 150 KCAS, COMPLETE AFTER TAKEOFF CHECKLIST

A/S 140 KCAS, MINIMUM FLAPS UP

APPROX 300-400 FEET (OBSTRUCTION CLEARANCE). IF FLAPS 20° ADJUST PITCH TO ACCELERATE. 130 KCAS (K, MOD SR10)(K, NOT MOD SR10), 140 KCAS (J, L, M)

AFTER GEAR IS FULLY RETRACTED, PITCH 10°

WARNIMG

UNDER CERTAIN COMBINATIONS OF WEIGHT, TEMPERATURE AND PRESSURE ALTITUDE, WITH LANDING GEAR DOWN AND FLAPS 20°, SINGLE ENGINE GO AROUND MAY NOT BE POSSIBLE AT ALTITUDES OF LESS THAN 400 FEET AGL.

"IF TRANSITIONING FROM A DESCENT, MAINTAIN PITCH TO MAINTAIN 140 KCAS, RAISE GEAR, THEN 10° PITCH. SOME ALTITUDE LOSS IS TO BE EXPECTED."
MU-2B J (-35), K (-25), L (-36), M (-26)
NON-PRECISION AND MISSED APPROACH

A/S 150K - 140KCAS (J, L, M, K = 130 KCAS, K) MINIMUM, APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS TUNE & IDENTIFY. CHECK OM CROSSING ALTITUDE MARKER RECEIVER "ON".

FLAPS 5°, A/S 140KCAS MIN. 20-25% TORQUE, DESCEND 500 FPM.

A/S 150KCAS (130KCAS MIN.), 25-30% TORQUE.

A/S 140KCAS MIN. 25-30% TORQUE, APPROACHING FIX INBOUND, LANDING CHECKLIST COMPLETE A/S 120KCAS MIN.

A/S 120KCAS MIN. 25-30% TORQUE, 800-1000 FPM DESCENT.

MISSING APPROACH: GO-AROUND, MAX POWER, PITCH UP TO 9°, CONTINUE WITH TWO ENGINE MISSED APPROACH PROFILE.

TOUCHDOWN: POWER LEVERS RETARD TO FLIGHT IDLE STOP, THEN PROPS BETA, REVERSE AS REQUIRED, BRAKES AS REQUIRED.

LANDING APPROACH SPEEDS
FOR LANDING APPROACH SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20° (1.3 VS1)</th>
<th>FLAPS 40° (1.5 VS1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K</td>
<td>M</td>
</tr>
<tr>
<td>7,000</td>
<td>93</td>
<td>96</td>
</tr>
<tr>
<td>7,500</td>
<td>96</td>
<td>100</td>
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<tr>
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<td>109</td>
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<tr>
<td>9,435</td>
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<td>11,000</td>
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<tr>
<td>11,025</td>
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<td></td>
</tr>
</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

ONE ENGINE INOPERATIVE NON-PRECISION AND MISSED APPROACH

WARNING
DO NOT ATTEMPT A WITH GEAR DOWN GO-AROUND BELOW 400' AGL OR AFTER 20° FLAPS ARE SELECTED

CAUTION
DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.

A/S 150K (140K CAS MIN J, L) (135K CAS MIN K, M)
APPROACH CHECKLIST
REVIEW APPROACH PLATE. RADIOS TUNE & IDENTIFY. CHECK FIX CROSSING ALTITUDE

FLAPS 0°, 140K CAS (130K CAS MIN) 50-60° TORQUE

A/S 140K CAS (130K CAS MIN) 40-50° TORQUE, FLAPS 5° DESCEND 500 FPM

MISSED APPROACH
CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE

A/S 140K CAS (130K CAS MIN) 50-60° TORQUE, FLAPS 5°

MAP

A/S 140K CAS (130K CAS MIN) 20-30% TORQUE, 800-1000 FPM DESCENT

A/S 140K CAS (130K CAS MIN) 50-60° TORQUE

OPERATING ENGINE PROP FLIGHT IDLE, THEN PROP BETA. REVERSE AS REQUIRED. BRAKES AS REQUIRED.

WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20°, SLOWING TO CROSS THRESHOLD AT 110K CAS (J, L), 105K CAS (K, M). LANDING CHECKLIST COMPLETE

CAUTION
GEAR EXTENSION TIME IS APPROXIMATELY 17 SECONDS. CONFIRM GEAR DOWN PRIOR TO LANDING.
MU-2B J (-35), K (-25), L (-36), M (-26)
CIRCLING APPROACH AT WEATHER MINIMUMS

FROM APPROACH:
GEAR DOWN, FLAPS 20°, A/S 140K (130KCAS MIN)

TOUCHDOWN, RETARD POWER LEVERS TO GROUND IDLE STOP, THEN PROPS BETA, REVERSE AS REQUIRED. BRAKES AS REQUIRED.

A/S 140KCAS (130KCAS MIN.) APPROX 50% TORQUE, NOT BELOW CIRCLING MINIMUM DESCENT ALTITUDE

THRESHOLD: 20% TORQUE Vref

CHECK SINK RATE 500-600 FPM

FLAPS 20° OR 40° SLOWING TO Vref

20-25% TORQUE, A/S 120KCAS MIN, 500-600 FPM DESCENT

CHECK GEAR DOWN, FLAPS 20° COMPLETE LANDING CHECKLIST

DO NOT DESCEND UNTIL WITHIN 30' OF RUNWAY CENTERLINE

CAT C 121 - 140K 1.7NM
CAT D 141 - 165K 2.3NM
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
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<tbody>
<tr>
<td>7,000</td>
<td>93</td>
<td>96</td>
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<td>11,025</td>
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</tbody>
</table>

FLAPS 20° (1.3 VS1) FLAPS 40° (1.5 VS1)

J, K, L, M
MU-2B J (-35), K (-25), L (-36), M (-26)

ONE ENGINE INOPERATIVE CIRCLING APPROACH AT WEATHER MINIMUMS

- Cat C: 121 - 140K, 1.7NM
- Cat D: 141 - 165K, 2.3NM

**NOTE: ENGINE OUT CIRCLING APPROACH SHOULD BE FLOWN WITH 5° FLAPS AND GEAR UP. WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20°, SLOWING TO $110K_{C_{AS}}$ (J, L), $105K_{C_{AS}}$ (K, M)**

**CAUTION**
- Anticipate swerve toward operating engine when entering beta.
- $140K_{C_{AS}}$ (130LCAS MIN. approx. 70° torque, not below circling minimum descent altitude)

**WARNING**
- Do not use single engine reverse thrust with the simulated failed engine power lever above flight idle.

**CHECK**
- Sink rate: 500-600 FPM
- Landing rate: 20°, $120K_{C_{AS}}$ min. complete landing checklist
- Descent profile: 5°, do not descend until within 30° of runway centerline
MU-2B B, D (-10), F (-20), G (-30)
NORMAL TAKE-OFF, 5° OR 20° FLAPS

**TORQUE AND EGT LIMITS**
**TAKEOFF SPEEDS**
FOR TORQUE AND EGT LIMITS
AND TAKEOFF SPEED CHARTS
SEE TABULAR CHARTS ON
REVERSE SIDED OF PROFILE.

**A/S 140 KCAS MINIMUM, FLAPS UP**

**COMPLETE AFTER T/O
AND CLIMB CHECKLIST**

**ACCELERATE TO
DESIRED CLIMB SPEED**

**NORMAL PITCH,
APPROX 8°, FLAPS 20°,
APPROX 10-12°-FLAPS 5°**

**POS RATE, NO RUNWAY REMAINING
FOR LANDING, GEAR UP,
IF 20° FLAPS 113 KTS MIN, IF 5°
FLAPS 120 KCAS (G) 125 KCAS (B, D, F)**

**VR - ROTATE 13°
MAX NOSE UP
PITCH**

**NOTE: IF RUNWAY LENGTH OR
OBSTACLE CLEARANCE IS
CRITICAL, SET POWER TO
TORQUE/PSIS OR TEMP
MAXIMUM. WHICHEVER
OCCURS FIRST, RETARD
POWER LEVERS AS REQUIRED
TO MAINTAIN MAXIMUM
ALLOWABLE TORQUE/PSIS OR
TEMP.**
TORQUE LIMITS

B, D
64 PSI

F, G
60 PSI (STATIC)

64 PSI (RAM CONDITIONS 5 MINUTES

EGT LIMITS DEPEND ON OUTSIDE AIR TEMPERATURE,
CHECK EGT LIMITS PRIOR TO DEPARTURE.

<table>
<thead>
<tr>
<th>FLAPS 5°</th>
<th>B</th>
<th>B+</th>
<th>D</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,800 LBS</td>
<td>109</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 LBS</td>
<td>105</td>
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<tr>
<td>9,920 LBS</td>
<td>108</td>
<td>107</td>
<td>103</td>
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<tr>
<td>9,500 LBS</td>
<td>111</td>
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<tr>
<td>9,350 LBS</td>
<td>110</td>
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<td>106</td>
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<td>9,000 LBS</td>
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<tr>
<td>8,930 LBS</td>
<td>106</td>
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<td>106</td>
<td>102</td>
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<tr>
<td>8,000 LBS</td>
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<table>
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<tr>
<th>FLAPS 20°</th>
<th>B</th>
<th>B+</th>
<th>D</th>
<th>F</th>
<th>G</th>
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</thead>
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<td>9,920 LBS</td>
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<td>98</td>
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<tr>
<td>7,500 LBS</td>
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<tr>
<td>7,000 LBS</td>
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</tbody>
</table>

B: NOT MODIFIED BY H/S/B 036 AND S/B 092
B+: MODIFIED BY S/B 036 AND S/B 092
MU-2B B, D (-10), F (-20), G (-30)
TAKE-OFF ENGINE FAILURE – FLAPS 5° OR 20°

<table>
<thead>
<tr>
<th>B, D / F / G</th>
<th>VXSE(KIAS)</th>
<th>VYSE(KCAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP</td>
<td>130 / 135 / 140</td>
<td>135 / 150 / 150</td>
</tr>
<tr>
<td>5°</td>
<td>115 / 130 / 130</td>
<td>120 / 140 / 140</td>
</tr>
<tr>
<td>20°</td>
<td>100 / 125 / 125</td>
<td>105 / 130 / 135</td>
</tr>
</tbody>
</table>

APPROX 300-400 FEET (OBSTRUCTION CLEARANCE). IF FLAPS 20° ADJUST PITCH TO ACCELERATE. 130 KCAS MIN. FLAPS TO 9° IF FLAPS 5° INSTALLED. PITCH APPROX. 10°. (IF FLAPS 5 NOT INSTALLED, FLAPS UP*, PITCH APPROX. 10° TO 13°.)

PITCH TO MAINTAIN VXSE MINIMUM APPROX 8° PITCH, FLAPS 20°, APPROX 10-12° PITCH, FLAPS 5° MAINTAIN DIRECTIONAL CONTROL WITH RUDDER AND MINIMUM SPOILER. FAILED ENGINE – CONDITION LEVER, EMERGENCY STOP, POWER LEVER, TAKE OFF **, TRIM AIRCRAFT

POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP. IF 20° FLAPS 113 KTS MIN. IF 5° FLAPS 120 KCAS (G) 125 KCAS (B, D, F)

MAKE NORMAL T/O

A/S 150KCAS COMPLETE AFTER TAKE-OFF AND ENGINE OUT CHECKLIST

A/S 140KCAS MIN (IF FLAPS 5° INSTALLED) FLAPS UP*

**IF SR 10 NOT INSTALLED, MAXIMUM FLAP SPEED DURING RETRACTION IS 140KCAS, DURING RETRACTION, PITCH TO MAINTAIN 140KCAS UNTIL FLAPS UP.

CAUTION SIMULATED ENGINE FAILURE (NOT LESS THAN 200FT AGL)

** IF SUFFICIENT RUNWAY REMAINS, OR UNABLE TO CLIMB GEAR DOWN, REDUCE POWER TO LAND STRAIGHT AHEAD USING A/S APPROPRIATE FOR WEIGHT, 105KCAS MINIMUM (G) 100KCAS MINIMUM (B, D, F).
MU-2B B.D. (-10), F. (-20), G. (-30)

TAKE-OFF ENGINE FAILURE ON RUNWAY

SIMULATED ENGINE FAILURE OR MALFUNCTION IS TO BE GIVEN BY INSTRUCTOR AT NOT MORE THAN 80% OF ROTOR SPEEDS.

CAUTION

ENGINE FAILS OR MALFUNCTION OCCURS
POWER LEVERS TO GROUND IDLE AS NECESSARY.
BRAKES RELEASED. USE NOSE WHEEL FOR THROTTLE AND PROP REVERSE Thrust to MAINTAIN DIRECTION.

NOTIFY TOWER OF ABORT

CLEAR RUNWAY AS NECESSARY

* IF ENGAGNG ARRESTING GEAR, BOTH
CONDITION LEVERS TO EMERGENCY MASTER SWITCH TO EMERGENCY

CAUTION

DO NOT USE SINGLE ENGINE REVERSE while the SIMULATED THE ENGNE POWER LEVER
ENGINE POWER LEVER above FLIGHT IDLE.

POWER LEVER BRACKS RELEASED.

665
MU-2B B, D (-10), F (-20), G (-30)
TAKE-OFF ENGINE FAILURE - UNABLE TO CLIMB
CLASSROOM DISCUSSION OR FTD USE ONLY

WARNING
DO NOT LET AIRSPEED DECELERATE BELOW SINGLE ENGINE AIRSPEED,
105KIAS (G) 100KIAS (B, D, F)

PILOT MAKES DECISION TO EITHER RETURN THE RUNWAY SURFACE OR TO FLY BEYOND AIRPORT BOUNDARY TO SUITABLE LANDING AREA

ENGINE FAILS

ROTATE

IF RUNWAY REMAINS OR A LANDING CAN SAFELY BE MADE ON THE AIRPORT SURFACE, CHECK GEAR DOWN, FLAPS REMAIN IN TAKE-OFF POSITION, POWER ON OPERATING ENGINE AS REQUIRED TO LAND. LAND USING SINGLE ENGINE AIRSPEED, 105KIAS (G) 100KIAS (B, D, F)

CAUTION
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA

POS RATE, NO RUNWAY REMAINING FOR LANDING, GEAR UP.
IF 20° FLAPS 113 KIAS MIN. IF 9° FLAPS 120 KIAS (G) 125 KIAS (B, D, F)

POWER SET, RELEASE BRAKES
MU-2B B, D (-10), F (-20), G (-30)

SLOW FLIGHT MANEUVERING

MINIMUM CONTROLLABLE AIRSPEED

SLOW FLIGHT MANEUVERING IS CONDUCTED AS FOLLOWS:

CLEAR THE AREA PRIOR TO BEGINNING THE MANEUVER.

START WITH CLEAN CONFIGURATION AND CHANGE AIRCRAFT CONFIGURATION FROM CLEAN TO FULL FLAP AND GEAR IN STAGES. USE A MAXIMUM OF 15° BANK AND PERFORM HEADING CHANGES OF 90° LEFT AND RIGHT. CONSTANT ALTITUDE IS REQUIRED THROUGHOUT.

MAINTAIN 115K IN ALL CONFIGURATIONS.

**APPROXIMATE POWER SETTINGS ARE:

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Clean</th>
<th>5° Flap</th>
<th>10° Flap</th>
<th>20° Flap</th>
<th>40° Flap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Power</strong></td>
<td>(35%)</td>
<td>(32%)</td>
<td>(44%)</td>
<td>(42%)</td>
<td>(54%)</td>
</tr>
<tr>
<td><strong>Per Engine</strong></td>
<td>(23)</td>
<td>(21)</td>
<td>(29)</td>
<td>(27)</td>
<td>(33)</td>
</tr>
<tr>
<td><strong>Approx Pitch</strong></td>
<td>+12</td>
<td>+8</td>
<td>+9</td>
<td>+4</td>
<td>0</td>
</tr>
</tbody>
</table>

**NOTE: POWER SETTINGS WILL VARY WITH AIRCRAFT WEIGHT AND ALTITUDE.**

CAUTION

STALL WARNING MAY ACTIVATE 4 TO 9 KTS ABOVE STALL

STALL SPEEDS (APPROXIMATE) AT MAXIMUM GROSS TAKEOFF WEIGHT

<table>
<thead>
<tr>
<th>B/B+</th>
<th>/ D / F / G</th>
<th>B/B+ / D / F / G</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANGLE OF BANK</strong></td>
<td><strong>6°</strong></td>
<td><strong>15°</strong></td>
</tr>
<tr>
<td>Flaps Up</td>
<td>95/98/98/98/102/104</td>
<td>98/98/98/98/104/106</td>
</tr>
<tr>
<td>5°</td>
<td>85/88/89/95/95/95</td>
<td>85/88/89/89/97/100</td>
</tr>
<tr>
<td>20°</td>
<td>80/81/81/85/85</td>
<td>81/83/83/87/88</td>
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<tr>
<td>40°</td>
<td>72/73/73/77/77</td>
<td>73/74/74/78/78</td>
</tr>
</tbody>
</table>

Vmc: 20° Flaps (88KCAS G, 93KCAS F, 88KCAS D, 89/91KCAS B)

9° Flaps (88KCAS G, 93KCAS F, 88KCAS D, 87/89KCAS B)

(For B Model Vmc: Speed Consult Serial Number Applicability in AFM)

**CAUTION**

STALL WARNING MAY ACTIVATE 4 TO 9 KTS ABOVE STALL

MINIMUM CONTROLLABLE AIRSPEED IS CONDUCTED AS FOLLOWS:

CLEAR THE AREA PRIOR TO BEGINNING THE MANEUVER.

THE MANEUVER MAY BE DONE IN ANY COMBINATION OF GEAR OR FLAP CONFIGURATIONS. IF BANK IS TO BE USED, IT SHOULD BE DONE AT BANK OF NOT MORE THAN 10°. BEGIN THE MANEUVER BY CONFIGURING THE AIRCRAFT IN THE DESIRED GEAR AND FLAP CONFIGURATION. SLOW THE AIRCRAFT UNTIL THE STALL WARNING (STICK SHAKER) IS ACTIVATED AND ADD POWER TO MAINTAIN ALTITUDE AND A SPEED JUST ABOVE AERO_DYNAMIC STALL BUFFET.
MU-2B, D (-10), F (-20), G (-30)
ONE ENGINE INOPERATIVE MANEUVERING
LOSS OF DIRECTIONAL CONTROL

CLEAR AREA, CONDITION LEVERS TO IO AND LAND. SYNC OFF - SET ONE POWER LEVER TO ZERO THRUST TO SIMULATE FAILED ENGINE (VARIIES BETWEEN 5% AND 17% TORQUE ON 3 TO 11 PS) WITH THE FIRST INDICATION OF LOSS OF DIRECTIONAL CONTROL, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE TO RECOVER.

FLAPS 20°, GEAR UP, SET POWER ON SIMULATED OPERATIVE ENGINE FOR LEVEL FLIGHT A/S 125KCAS TRIMMED

CAUTION
GEAR HORN MAY SOUND CONTINUOUSLY. IF INSTRUCTOR ELECTS TO DISABLE GEAR HORN WITH CIRCUIT BREAKER, THEN CIRCUIT BREAKER MUST BE RESET PRIOR TO LANDING.

APPLY TAKEOFF POWER ON SIMULATED OPERATIVE ENGINE WHILE INCREASING PITCH TO DECELERATE 1KCAS PER SECOND

AT VMC PLUS 10KCAS, ADD POWER TO SIMULATED OPERATIVE ENGINE AND RECOVER TO STRAIGHT AND LEVEL FLIGHT A/S 125KCAS TRIMMED FOR STRAIGHT AND LEVEL FLIGHT

INSTRUCTOR CAUTION
ONE ENGINE LOSS OF DIRECTIONAL CONTROL IS BEST TRAINED AND ACCOMPLISHED USING EARLY RECOGNITION AND RECOVERY TECHNIQUES. SEAT POSITION AND RUDDER TRAVEL SHOULD BE EMPHASIZED DURING THIS MANEUVER. RUDDER BLOCKING BY THE INSTRUCTOR IS ENCOURAGED TO PRODUCE LOSS OF DIRECTIONAL CONTROL AT APPROPRIATELY VMC PLUS 10KCAS. BECAUSE EARLY RECOGNITION AND RECOVERY IS THE PRIMARY OBJECTIVE OF THIS MANEUVER.

VMC: 20° FLAPS (98KCAS F, 89KCAS D, 89/89KCAS B) 0° FLAPS (99KCAS G, 100KCAS F, 97K D, 97/99KCAS B)
(HYDRAULIC MODEL: VMC SPEED CONSULT SERIOUS APPLICABILITY IN AVM)
Vsse 125K

MIN ALT. 5,000 AGL
INSTRUCTOR BLOCKS RUDDER TO CAUSE LOSS OF DIRECTIONAL CONTROL AT VMC PLUS 10KCAS

WARNING
IF STALL WARNING ACTIVATES, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE, AND RECOVER.
MU-2B D (-10), F (-20), G (-30)

APPROACH TO STALL CLEAN CONFIGURATION / WINGS LEVEL

ON STALL RECOGNITION (STICK SHAKES), SIMULTANEOUSLY APPLY MAIN POWER LEVEL WINGS IN A NORMALLY TRIM OR ADD POWER AS REQUIRED.

STALL WARNING CLIMB TO ORIGINAL ALTITUDE

AS AS INCREASES, CLIMB 4 TO 9 KCAS ABOVE STALL.

STALL SPEEDS FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PAGE.

MIN. ALT. 5,000 AGL

CLEAR AIR CONDITION DFS 120 KCAS, A/C TRIMMED

200 FEET PER SECOND OR 10 KIAS

MOUNT LEVEL FLIGHT

TRIM FOR 120 KCAS

CALL THE STALL

STALL WARNING ACTIVATE AT 4 TO 9 KCAS ABOVE STALL.
<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR/WT.</td>
<td>7,000</td>
<td>7,500</td>
<td>8,000</td>
<td>8,500</td>
<td>9,000</td>
</tr>
<tr>
<td>B/B+</td>
<td>85/85</td>
<td>88/85</td>
<td>90/91</td>
<td>91/91</td>
<td>92/92</td>
</tr>
<tr>
<td>B/D/F/G</td>
<td>76/76</td>
<td>78/78</td>
<td>81/81</td>
<td>84/84</td>
<td>87/87</td>
</tr>
<tr>
<td>B/B+</td>
<td>63/63</td>
<td>65/65</td>
<td>68/68</td>
<td>69/69</td>
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</tr>
<tr>
<td>B/D/F/G</td>
<td>70/70</td>
<td>72/72</td>
<td>74/74</td>
<td>74/74</td>
<td>74/74</td>
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<tr>
<td>B/B+</td>
<td>69/69</td>
<td>70/70</td>
<td>71/71</td>
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<tr>
<td>B/D/F/G</td>
<td>72/72</td>
<td>73/73</td>
<td>74/74</td>
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<tr>
<td>B/B+</td>
<td>72/72</td>
<td>73/73</td>
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<tr>
<td>B/D/F/G</td>
<td>75/75</td>
<td>75/75</td>
<td>75/75</td>
<td>75/75</td>
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</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)

APPROACH TO STALL
TAKEOFF CONFIGURATION 15-30° BANK

CLEAR AREA, CONDITION LEVERS TO AND LAND SYNC OFF – A/S 120 KCAS–130 KCAS TRIMMED AIRCRAFT

FLAPS 5° OR 20°, GEAR DOWN, 20% TORQUE OR 10 PSI

INITIATE 30° BANK IN LEVEL FLIGHT

MAINTAIN LEVEL FLIGHT, TRIM FOR 120 KCAS

CALL THE "STALL"

ON STALL RECOGNITION (STICK SHAKER), SIMULTANEOUSLY APPLY MAX POWER, LEVEL WINGS AND ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE, POSITIVE RATE, GEAR UP. STALL WARNING MAY ACTIVATE AT 4 TO 9 K ABOVE STALL.

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

A/S 140 KCAS, MINIMUM FLAPS UP, POWER AS REQUIRED

AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX 10°, 130 KCAS (F, MOD SR/10), 140 KCAS (F, NOT MOD SR/10), 130 KCAS (B, D), 140 KCAS (G)

MIN ALT. 5,000' AGL

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>BANK ANGLE</th>
<th>FLAPS</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP</td>
<td>B/ B+, D/ F/ G</td>
<td>B/ B+, D/ F/ G</td>
<td>B/ B+, D/ F/ G</td>
<td>B/ B+, D/ F/ G</td>
<td>B/ B+, D/ F/ G</td>
<td>B/ B+, D/ F/ G</td>
<td></td>
</tr>
<tr>
<td>40°</td>
<td>72/ 74/ 77/ 81</td>
<td>74/ 75/ 79/ 82</td>
<td>77/ 79/ 82/ 86</td>
<td>82/ 83/ 87/ 91</td>
<td>90/ 91/ 95/100</td>
<td>102/103/108/113</td>
<td></td>
</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)

APPROACH TO STALL

GEAR DOWN – FULL FLAPS

CLEAR AREA, CONDITION LEVERS
T/O AND LAND, SYNC OFF – A/S
120 KCAS – 130 KCAS TRIMMED

FLAPS 20°, GEAR DOWN,
20% TORQUE OR 10 PSI

A/S 120 KCAS,
FLAPS FULL

ON STALL RECOGNITION (STICK SHAKER),
SIMULTANEOUSLY APPLY MAX POWER AND
ADJUST PITCH AS NECESSARY TO MINIMIZE
LOSS OF ALTITUDE. FLAPS 20°, POSITIVE RATE,
GEAR UP, CLIMB TO ORIGINAL ALTITUDE.
STALL WARNING MAY ACTIVATE AT 4 TO 9 K
ABOVE STALL

20% TORQUE, MAINTAIN
LEVEL FLIGHT, TRIM FOR
120 KCAS

CALL THE “STALL”

AFTER GEAR IS FULLY
RETRACTED, IF FLAPS 20°
RETRACT FLAPS TO 5°,
INCREASE PITCH TO
APPROX. 10°, 130 KCAS (F,
MOD S/R) 140 KCAS (F, NOT
MOD S/R), 130 KCAS (B, D),
140 KCAS (G)

A/S 140 KCAS
MINIMUM
FLAPS UP

STALL SPEEDS
FOR STALL SPEEDS SEE
TABULAR CHART ON
REVERSE SIDE OF PROFILE.

MIN. ALT.
5000' AGL

C-10
<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>0</th>
<th>5</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR WT.</td>
<td>B/ B+</td>
<td>D/ F/ G</td>
<td>B/ B+</td>
<td>D/ F/ G</td>
</tr>
<tr>
<td>7,000</td>
<td>85/</td>
<td>85/</td>
<td>85/</td>
<td>76/</td>
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<tr>
<td>7,500</td>
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<td>88/</td>
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<td>94/</td>
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</tr>
<tr>
<td>8,930</td>
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<td>9,000</td>
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<td>9,350</td>
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<td>9,920</td>
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<td>/101/</td>
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<tr>
<td>10,000</td>
<td></td>
<td>/101/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,500</td>
<td></td>
<td>/103/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,800</td>
<td></td>
<td>/105/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)
ACCELERATED STALLS

CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF

CLEAN, A/S 115KCAS A/C TRIMMED

INITIATE PROGRESSIVE BANK TOWARD A 60° BANK ANGLE, APPLY BACKPRESSURE TO MAINTAIN ALTITUDE

* THIS MANEUVER SHOULD ALSO BE ACCOMPLISHED IN THE LANDING CONFIGURATION WITH GEAR DOWN, FLAPS 20°, A/S 100KCAS TRIMMED

* 140KCAS FLAPS UP

* 125KCAS FLAPS TO 5°

* POSITIVE RATE, GEAR UP

CALL THE "STALL"

ACCELERATE TO 140KCAS, POWER AS REQUIRED

AS A/S INCREASES, CLimb TO ORIGINAL ALTITUDE

ON STALL RECOGNITION (STICK SHAKER) SIMULTANEOUSLY APPLY MAX POWER, ADJUST PITCH AS NECESSARY TO MINIMIZE LOSS OF ALTITUDE AND ROLL WINGS LEVEL

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>BANK ANGLE</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40°</td>
<td>72/ 74/ 77/ 81</td>
<td>74/ 75/ 79/ 82</td>
<td>77/ 79/ 82/ 86</td>
<td>82/ 83/ 87/ 91</td>
<td>90/ 91/ 95/100</td>
<td>102/103/108/113</td>
</tr>
</tbody>
</table>
MU-2B, D (-10), F (-20), G (-30)

EMERGENCY DESCENT (LOW SPEED)

*CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. A/S 150 KCAS MIN.

POWER LEVERS F1. CONDITION LEVERS T/O AND LAND SYNC OFF. GEAR AND FLAPS EXTEND AT SPEEDS BASED ON SCHEDULE FOR MODEL AND SIR 10 COMPLIANCE UNTIL FULL FLAPS ARE DEPLOYED.

SIMULATE EXPLOSIVE DECOMPRESSION AT ASSIGNED ALTITUDE. OXYGEN MASKS ON. "DECLARE EMERGENCY"

ESTABLISH DESCENT IN A 30° BANK, NOSE DOWN APPROXIMATELY 20° UNTIL REACHING MAXIMUM FULL FLAP SPEED ALLOWED (VNE). THEN RAISE NOSE TO MAINTAIN SPEED.

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES

AFTER ESTABLISHING DESCENT, ROLL WINGS LEVEL. CONTINUE DESCENT ON STEADY HEADING OR AS REQUIRED BY ATC.

CHECK 1000' ABOVE LEVEL OFF ALTITUDE

GEAR/FLAP SPEEDS
FOR GEAR/FLAP SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.

500' ABOVE, START LEVEL OFF

COMPLETE EXERCISE AT ASSIGNED ALTITUDE.
REDUCE TO 120 KCAS AND CLEAN UP AIC. **DO NOT RAISE FLAPS UNTIL AIC IS BELOW MAXIMUM ALLOWABLE VNE SPEED FOR FULL FLAPS.
<table>
<thead>
<tr>
<th>GEAR</th>
<th>FLAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>B, D, F, F+:</td>
<td>G: NOT MODIFIED BY S/R10</td>
</tr>
<tr>
<td></td>
<td>5°</td>
</tr>
<tr>
<td>G, G+:</td>
<td>160KCAS</td>
</tr>
<tr>
<td>FLAPS</td>
<td>170KCAS</td>
</tr>
<tr>
<td>G+: MODIFIED BY S/R10 AND</td>
<td>175KCAS</td>
</tr>
<tr>
<td>F: NOT MODIFIED BY S/R10</td>
<td>140KCAS</td>
</tr>
<tr>
<td>F+: MODIFIED BY S/R10 AND</td>
<td>175KCAS</td>
</tr>
<tr>
<td>B, D, F</td>
<td>140KCAS</td>
</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)
EMERGENCY DESCENT (HIGH SPEED)

*CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. A/S 150KCAS MIN.

POWER LEVERS F/I, CONDITION LEVERS TO AND LAND SYNC OFF.

SIMULATE EXPLOSIVE DECOMPRESSION AT ASSIGNED ALTITUDE. OXYGEN MASKS ON, DECLARE EMERGENCY

ESTABLISH DESCENT IN A 30° BANK, ACCELERATING TO V mo(250KCAS). INITIAL 15-20° NOSE DOWN, REDUCING TO APPROX. 8° NOSE DOWN AS A/S APPROACHES Vmo (250KCAS).

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES.

AFTER ESTABLISHING DESCENT, KEEP WINGS LEVEL, CONTINUE DESCENT ON STEADY HEADING OR AS REQ'D BY A/C

CHECK 1000 FEET ABOVE LEVEL OFF ALTITUDE

700 FEET ABOVE, START LEVEL OFF

COMPLETE EXERCISE AT ASSIGNED ALTITUDE. REDUCE SPEED TO 200KCAS
MU-2B B, D (-10), F (-20), G (-30)

UNUSUAL ATTITUDE RECOVERY (NOSE HIGH)

ROLL TOWARD 60° BANK USING RUDDER AND SPOILER AND ALLOW NOSE TO FALL THROUGH THE HORIZON

CAUTION
DO NOT G LOAD WINGS DURING BANKING MANEUVER TO PREVENT AN ACCELERATED STALL

WHEN NOSE LOW, ROLL WINGS LEVEL, REDUCE POWER TO FLIGHT IDLE, AND COMMENCE A WINGS LEVEL PULL UP TO A LEVEL FLIGHT ATTITUDE

ONCE LEVEL, ADD POWER TO MAINTAIN LEVEL FLIGHT

INSTRUCTOR NOTE
THE INSTRUCTOR SHOULD INITIATE THE UNUSUAL ATTITUDE AND USE POSITIVE CONTROL TO TRANSFER CONTROL TO THE STUDENT FOR RECOVERY

CLEAR AREA

UPON RECOGNITION OF A NOSE HIGH UNUSUAL ATTITUDE, POWER TO TAKEOFF

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC BOTH ABOVE AND BELOW YOUR ALTITUDE.
UNUSUAL ATTITUDE RECOVERY (NOSE LOW)

ONCE WINGS ARE LEVEL IN NOSE LOW ATTITUDE, COMMENCE A WINDS LEVEL PULL UP TO A CAUTION.

DO NOT GO AIRSPEED UNTIL WINGS ARE LEVEL TO PREVENT AN ACCELERATED STALL.

IF AIRSPEED IS INCREASED DO NOT USE AIRSPEED CONTROL MOVEMENTS DURING RECOVERY.

ONCE LEVEL, AND POWER TO MAINTAIN LEVEL FLIGHT.

UPON RECOGNITION OF A NOSE LOW UNUSUAL ATTITUDE, REDUCE POWER AND MAINTAIN NOSE LOW ATTITUDE.

CLEAR AREA

While clearing the area coordinate with air traffic control the clear traffic both above and below your altitude.

Instructor Note: The instructor should initiate the control to transfer control to the student for recovery.
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20° (1.3 VSI)</th>
<th>FLAPS 40° (1.5 VSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>B+D</td>
</tr>
<tr>
<td>7,000</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>7,500</td>
<td>95</td>
<td>95</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>9,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,260</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)
NO FLAP OR 5° FLAP LANDING

CAUTION
DO NOT SELECT REVERSE UNTIL BELOW 90K WITH NOSE WHEEL ON GROUND

CHECK BOTH PROPS BETA. BRAKING AS REQUIRED. NOTE: BETA MAY NOT BE AVAILABLE UNTIL BELOW 90K CAS

NOTE
LANDING DISTANCE WILL INCREASE APPROXIMATELY 30%

TOUCHDOWN – POWER LEVERS SLOWLY RETARD TO FLIGHT IDLE

THRESHOLD: 20% TORQUE, 12 PSI. NO FLAP VREF 110/115 KCAS MINIMUM.

A/S SLOWING TO 0° OR 5° FLAP VREF 110/115 KCAS MINIMUM (SEE CHART)

A/S 150 KCAS MINIMUM. (25-30% TORQUE, 16-20 PSI)

STABILIZED APPROACH BY 500 FPM

GEAR DOWN, COMPLETE LANDING CHECKLIST

CHECK SINK RATE

FLAPS 0° OR 5° A/S 130 KCAS MINIMUM, 500-600 FPM SINK RATE. (APPROX 26% TORQUE, 18 PSI)

COMPLETE DESCENT AND APPROACH CHECKLISTS

MAINTAIN TRACK PARALLEL TO RUNWAY

NO FLAP OR 5° FLAP LANDING APPROACH SPEEDS
FOR LANDING APPROACH SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS UP</th>
<th>B+</th>
<th>B</th>
<th>D</th>
<th>E</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500</td>
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<td>113</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
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<td>9,500</td>
<td>124</td>
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<td>117</td>
<td>110</td>
<td>110</td>
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<td>123</td>
<td>122</td>
<td>124</td>
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<td>10,260</td>
<td>128</td>
<td>127</td>
<td>122</td>
<td>124</td>
<td>117</td>
<td>117</td>
</tr>
</tbody>
</table>

(BUT NOT BELOW 110KIAS) (B, B+, D, F, E, G)

USE FOR FLAP UP OR 5°
MU-2B B, D (-10), F (-20), G (-30)
CROSSWIND LANDING

AIRCRAFT WILL BE FLOWN DOWN AN EXTENSION OF THE RUNWAY CENTER LINE WITH DRIFT CORRECTION ESTABLISHED SUFFICIENTLY IN ADVANCE TO PERMIT CENTER LINE TO BE FLOWN WITH ONLY MINOR COORDINATED CORRECTIONS.

INCREASE V_{ref} FOR CROSSWIND LANDING BY ONE-HALF THE STEADY WIND SPEED PLUS ONE-HALF THE GUST SPEED NOT TO EXCEED V_{ref} PLUS 10 KCAS.

PRIOR TO TOUCHDOWN, THE UPWIND WING IS LOWERED AND SMOOTHLY MODULATED. OPPOSITE RUDDER IS APPLIED SO THAT AIRCRAFT PATH CONTINUES DOWN RUNWAY CENTERLINE. THE AIRCRAFT SHOULD NOT BE ALLOWED TO DEVELOP ANY TENDENCY TO DRIFT DOWNWIND.

**NOTE:** RUDDERS CENTERED BEFORE NOSE WHEEL TOUCHDOWN. SPOILERS INTO WIND AS NECESSARY TO KEEP WINGS LEVEL.
MU-2B B, D (-10), F (-20), G (-30)

ILS AND MISSED APPROACH

A/S 150KCAS (140KCAS MIN) APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS; TUNE & IDENTIFY. CHECK OM CROSSING ALTITUDE MARKER RECEIVER "ON".

LANDING APPROACH SPEEDS
FOR LANDING APPROACH SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.

FLAPS 5° A/S
(130KCAS F, G)
(115KCAS B, D)
MINIMUM 40-50% TORQUE, 25-32 PSI

20-25% TORQUE, 13-16 PSI. DESCEND 500 FPM

MISSING APPROACH CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE

GEAR DOWN, COMPLETE LANDING CHECKLIST

APPROACHING GLIDESLOPE
APPROX 25% TORQUE, 16 PSI.

WHEN LANDING ASSURED, FLAPS 20°,
(OR 40° BELOW 120K)

THRESHOLD: 20% TORQUE, 13 PSI Vref

TOUCHDOWN: POWER LEVERS RETARD TO FLIGHT IDLE STOP.

PROPS BETA. REVERSE AS REQUIRED. BRAKES AS REQUIRED.
### LANDING APPROACH SPEEDS \( V_{ref} \)

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20° (1.3 VSI)</th>
<th>FLAPS 40° (1.5 VSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>B+D</td>
</tr>
<tr>
<td>7,000</td>
<td>92</td>
<td>92</td>
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<tr>
<td>7,500</td>
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<td>95</td>
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<td>10,000</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>10,260</td>
<td>109</td>
<td></td>
</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)
ONE ENGINE INOPERATIVE ILS AND MISSED APPROACH

A/S 150KCAS
(140KCAS MIN G) (135KCAS MIN F)
130 MIN B, D (APPROX 70% TORQUE,
49 PSI) APPROACH CHECKLIST.
REVIEW APPROACH PLATE. RADIOS:
TUNE & IDENTIFY. CHECK OM
CROSSING ALTITUDE MARKER
RECEIVER "ON"

WARNING
DO NOT ATTEMPT A
GO-AROUND WITH
GEAR DOWN BELOW
400' AGL OR AFTER
20° FLAPS ARE
SELECTED

CAUTION
DO NOT USE SINGLE
ENGINE REVERSE
THRUST WITH THE
SIMULATED FAILED
ENGINE POWER LEVER
ABOVE FLIGHT IDLE.

FLAPS 5° A/S
50-60% TORQUE, 32-40 PSI

MISSED APPROACH:
CONTINUE WITH ENGINE OUT
MISSING APPROACH PROFILE

CHECK GEAR DOWN
APPROACHING GLIDE SLOPE
(ONE DOT BELOW G/S)

40-50% TORQUE, 26-32 PSI
FLAPS 5°. DESCEND 500 FPM

LANDING CHECK
(50-55% TORQUE,
32-38 PSI)

WHEN LANDING ASSURED, FLAPS
20°. A/S 110KCAS (G), 105KCAS (F),
100KCAS (B, D) MIN. COMPLETE
LANDING CHECKLIST. RUDDER
TRIM CENTERED, HOLD BALL IN
CENTER WITH RUDDER

OPERATING ENGINE
PROP FLIGHT IDLE,
THEN PROP BETA.
REVERSE AS REQUIRED.
BRAKES AS REQUIRED.
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MU-2B B, D (-10), F (-20), G (-30)

ONE ENGINE INOPERATIVE NON-PRECISION AND MISSED APPROACH

A/S 150KCAS (140KCAS MIN G) (135KCAS MIN F) (130 MIN B, D) (APPROX 70% TORQUE, 45 PSI) APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS: TUNE & IDENTIFY. CHECK FIX CROSSING ALTITUDE.

WARNING
DO NOT ATTEMPT A WITH GEAR DOWN GO-AROUND BELOW 400\* AGL OR AFTER 20\* FLAPS ARE SELECTED.

CAUTION
DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.

MISSING APPROACH CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE.

A/S 140K (130K MIN) 20-30% TORQUE, 13-20 PSI 800-1000 FPM DESCENT

A/S 140K (130K MIN) 50-60% TORQUE, 32-40 PSI

FLAPS 5\*, 50-60% TORQUE, 32-40 PSI

40-50% TORQUE, 26-32 PSI FLAPS 5\*, DESCEND 500 FPM

MAP

A/S 140K (130K MIN) 50-60% TORQUE, 32-40 PSI

OPERATING ENGINE PROP FLIGHT IDLE, THEN PROP BETA. REVERSE AS REQUIRED. BRAKES AS REQUIRED.

WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20\*, SLOWING TO CROSS THRESHOLD AT 110K (G), 105K (B, D, F). LANDING CHECKLIST COMPLETE CAUTION GEAR EXTENSION TIME IS APPROXIMATELY 15 SECONDS. CONFIRM GEAR DOWN PRIOR TO LANDING.
MU-2B B, D (-10), F (-20), G (-30)

CIRCLING APPROACH AT WEATHER MINIMUMS

CAT C 121 - 140KCAS 1.7NM
CAT D 141 - 165KCAS 2.3NM

FROM APPROACH:
GEAR DOWN. FLAPS 20°, A/S 140KCAS
(130KCAS MIN.)

TOUCHDOWN. RETARD POWER LEVERS TO
GROUND IDLE STOP, THEN PROPS BETA.
REVERSE AS REQUIRED. BRAKES AS REQUIRED.

A/S 140K (130K MIN.)
APPROX 50% TORQUE 32
PSI; NOT BELOW CIRCLING
MINIMUM DESCENT
ALTITUDE

THRESHOLD: 20%
TORQUE, 13 PSI
VRef

CHECK SINK RATE
500-600 FPM

FLAPS 20° OR
40° SLOWING
TO VRef

20-25% TORQUE,
13-16 PSI A/S
120K MIN. 500-
600 FPM
DESCENT

MAX BANK
30°

AS REQUIRED
TO MAINTAIN
CAT C OR D

CHECK GEAR DOWN.
FLAPS 20° COMPLETE
LANDING CHECKLIST

DO NOT DESCEND
UNTIL WITHIN 30° OF
RUNWAY CENTERLINE

LANDING APPROACH
SPEEDS
FOR LANDING APPROACH
SPEEDS SEE TABULAR
CHART ON REVERSE SIDE
OF PROFILE.

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Each MU-2B profile in its respective section follows the outline below:

1. Normal Takeoff (5- and 20-degrees flaps).
2. Takeoff Engine Failure (5- and 20-degrees flaps).
3. Takeoff Engine Failure on Runway or Rejected Takeoff.
4. Takeoff Engine Failure after Lift-off—Unable to Climb (Classroom or FTD only).
5. Steep Turns.
7. One Engine Inoperative Maneuvering/Loss of Directional Control.
8. Approach to Stall (clean configuration/wings level).

**NOTE:** ENGINE OUT CIRCLING APPROACH SHOULD BE FLOWN WITH 5° FLAPS AND GEAR UP. WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20°, SLOWING TO A/S 110 K (G), A/S 105 K (B, D, F).

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**CAUTION**

ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETTA

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**CAUTION**

DO NOT USE SINGLE ENGINE REVERSE THRUST WITH THE SIMULATED FAILED ENGINE POWER LEVER ABOVE FLIGHT IDLE.

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**WARNING**

DO NOT ATTEMPT A GO-AROUND WITH GEAR DOWN BELOW 400 AGL OR AFTER 20° FLAPS ARE SELECTED.

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CHECK DESCENT PROFILE, IF LANDING ASSURED, GEAR DOWN, CHECK SINK RATE 500-600 FPM.
(9) Approach to Stall (takeoff configuration/15- to 30-degrees bank).
(10) Approach to Stall (landing configuration/gear down/40-degrees flaps).
(11) Accelerated Stall (no flaps).
(12) Emergency Descent (low speed).
(13) Emergency Descent (high speed).
(14) Unusual Altitude Recovery (nose high).
(15) Unusual Altitude Recovery (nose low).
(17) Go Around/Rejected Landing.
(18) No Flap or 5-degrees flaps Landing.
(19) One Engine Inoperative Landing (5- and 20-degrees flaps).
(20) Crosswind Landing.
(21) ILS and Missed Approach.
(22) Two Engine Missed Approach.
(23) One Engine Inoperative ILS and Missed Approach.
(24) One Engine Inoperative Missed Approach.
(25) Non-Precision and Missed Approach.
(26) One Engine Inoperative Non-Precision and Missed Approach.
(27) Circling Approach at Weather Minimums.
(28) One Engine Inoperative Circling Approach at Weather Minimums.

**Engine Performance**

(A) The following should be considered in reference to power settings and airspeeds:

1. Power settings shown in *italics* are provided as guidance only during training and are not referenced in the AFM. Power setting guidance is provided to show the approximate power setting that will produce the desired airspeed or flight condition. Actual power settings may be different from those stated and should be noted by the instructor and student for reference during other maneuvers. Power settings in the profiles are stated in torque or PSI and will vary with aircraft model, engine model, weight, and density altitude. Power settings are based on standard atmospheric conditions.

2. Some pilots prefer to set power initially using fuel flow, because the fuel flow system is not field adjustable. Fuel flow settings refer to engine operations only. If fuel flow is used to set power for takeoff, check torque and temperature after setting fuel flow and adjust torque or temperature, whichever is limiting, for maximum takeoff power prior to liftoff.

3. Improperly adjusted torque or improperly calibrated temperatures are a safety of flight issue and must be checked and corrected prior to conducting flight training.

4. The pilot should refer to the performance section of the airplane flight manual to determine actual speeds required for his/her particular model and specific weight for any given operation.

5. The following should be considered in reference to power settings and airspeeds:

   - Approach at Weather Minimums.
   - Normal Landing (20- and 40-degrees flaps).
   - Go Around/Rejected Landing.
   - No Flap or 5-degrees flaps Landing.
   - One Engine Inoperative Landing (5- and 20-degrees flaps).
   - Crosswind Landing.
   - ILS and Missed Approach.
   - Two Engine Missed Approach.
   - One Engine Inoperative ILS and Missed Approach.
   - One Engine Inoperative Missed Approach.
   - Non-Precision and Missed Approach.
   - One Engine Inoperative Non-Precision and Missed Approach.
   - Circling Approach at Weather Minimums.
   - One Engine Inoperative Circling Approach at Weather Minimums.

6. During flight training, the pilot must call the "stall" to the instructor and then proceed with the recovery. In addition, during training, the pilot must announce the completion of the stall recovery maneuver. Instructors must exercise caution when conducting stall maneuvers and be prepared to take the controls if the safe outcome of the maneuver is in doubt.

7. During accelerated stall maneuvers, it is important that the instructor pay close attention to the position of the ball throughout the maneuver and recovery so as to maintain coordinated flight. Stall recognition and recovery is the completion criteria, and it is not necessary to continue the stall beyond the stick shaker to aerodynamic buffet.

8. When demonstrating a loss of directional control with one engine inoperative, the engine failure must only be simulated. During the slowing of the aircraft to demonstrate loss of directional control, the instructor should use the rudder block method to allow the student to experience the loss of directional control associated with VMC, at a speed of approximately 10 knots above actual VMC.

**Note:** To accurately simulate single engine operations, zero thrust must be established. The zero thrust setting will vary greatly from model to model. It is important to establish to zero thrust torque setting for your aircraft. This requires that the aircraft be flown on one engine to establish the zero thrust setting. This is accomplished by establishing single engine flight with one propeller feathered and noting the performance with the operating engine at maximum torque or temperature. It is suggested that two airspeeds be established for zero thrust power settings. They are 120 kts, flaps 20, gear up for takeoff and 140 knots, flaps 5, gear up for in-flight and approach maneuvering. Once performance has been established and recorded for each airspeed, restart the other engine and find the torque setting that duplicates the performance (climb or descent rate, airspeed) as was recorded with that propeller feathered. This torque setting will be zero thrust for the simulated inoperative engine. The student/pilot should note that the performance experienced with one engine operating at flight idle, may produce
greater performance than if the engine were stopped and the propeller feathered.

Pre-maneuver briefings for any maneuver that requires either an actual engine shutdown or a simulated engine failure must be undertaken when using an aircraft. In the case of an actual engine shutdown, a minimum altitude of 3,000 ft above ground level (agl) must be used and done in a position where a safe landing can be made at an airport in the event of difficulty.

**Takeoff and Landing**

(A) When using the profiles to establish the procedure for configuring the aircraft for takeoff or landing, it is important to understand that each task for the procedure, as noted on the procedure diagram, establishes the point at which each task should have been completed and not the exact point at which the task should be accomplished unless otherwise stated in the task box. Numbers which represent performance such as descent rates or other maneuvering information that is not contained in the aircraft flight manual are shown in italics.

(B) In all takeoff profiles the prompt for the gear to be retracted is "No Runway Remaining, Gear Up". This should set the decision point for making a landback after an engine failure and should normally be reached at altitudes of less than 100 ft AGL. It is impractical to attempt a landback from above 100 ft AGL, because it can require distances up to 10,000 ft from the beginning of the takeoff run to bring the aircraft to a stop. But, even on very long runways, landback will not be necessary above 100 ft AGL and above Vyse for the flap configurations, if the single engine climb capability found in the POM charts, with the gear up, is positive (250 fpm or better) and obstacles clearance is not an issue.

(C) The manufacturers FAA-accepted checklists and checklist in Appendix C to this SFAR No. 108 describe a procedure for the discontinuance of flight following an engine failure after takeoff and the realization that the aircraft cannot climb. The corresponding flight profile in this training program is "Takeoff Engine Failure, Unable to Climb". This maneuver must not be attempted in the aircraft, but must be the subject of a classroom discussion or be demonstrated in the FTD.

(D) The focus of all landing procedures, whether two engine or engine out, is on a stabilized approach from an altitude of 500 feet. This will not be possible for all approach procedure maneuvering, especially during non-precision or circle to land approaches. Approach procedures for these two approaches should be stabilized from the point at which the pilot leaves the Minimum Descent Altitude for the landing.

(E) When performing one engine inoperative approaches, landings or missed approaches, the instructor must be prepared to add power to the simulated failed engine at the first sign of deteriorating airspeed or other situation that indicates the student’s inability to correctly perform the maneuver.

(F) While maneuvering in the pattern or during instrument approach procedures with one engine inoperative, a 30° bank angle must not be exceeded. This will become especially important when executing non-precision and circle to land approaches.

### Emergency and Abnormal Procedures

(A) During training, either in the FTD or in the aircraft, the performance of emergency and abnormal procedures is critical to the completion of the training program. All emergency and abnormal procedures should be simulated when training in the MU-2B airplane.

(B) When presenting emergency scenarios to the student, the instructor must not introduce multiple emergencies concurrently.

**Scenario Based Training (SBT)**

SBT flight training creates an environment of realism. The SBT programs utilize a highly structured flight operation scenario to simulate the overall flight environment. The pilot is required to plan a routine, point-to-point flight and initiate the flight. During the conduct of the flight, “reality-based” abnormal or emergency events are introduced without warning. Because the pilot is constantly operating in the world of unknowns, this type of training also builds in the “startle factor”, and just as in the real-world, the consequences of the pilot’s actions (decisions, judgment, airmanship, tactile skills, etc.) will continue to escalate and affect the outcome of the planned flight. Although flying skills are an integral part of this type of training, SBT enables the pilot to gain experience in dealing with unexpected events and more importantly further enhances the development of good judgment and decisionmaking.


### Subpart A—General

**SOURCE:** Docket No. 18334, 54 FR 34292, Aug. 18, 1989, unless otherwise noted.

### § 91.1 Applicability.

(a) Except as provided in paragraphs (b) and (c) of this section and §§91.701 and 91.703, this part prescribes rules governing the operation of aircraft (other than moored balloons, kites, unmanned rockets, and unmanned free balloons, which are governed by part...