Federal Aviation Administration, DOT

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, or 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, and in accordance with the conditions established by, 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, act as second-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 a 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 91.109, 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.

(c) 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.

(c) 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.

3. Required Pilot Training. (a) Except as provided in section 2 paragraph (b) of this SFAR, 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, 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.

(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) That person satisfactorily completes, if applicable, annual Recurrent pilot training on the Special Emphasis Items, and all items listed in the Training Course Final Phase Check as specified in Appendix C 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 are required, that person is considered to have accomplished the training requirement in the month the training is due.

(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 as 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 airplane 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 certi-</th>
<th>Cockpit checklist</th>
<th>Date the checklist was accepted by the FSB</th>
</tr>
</thead>
</table>
Federal Aviation Administration, DOT

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 instruction or conduct a flight review in a 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.

(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 airmen 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 met in the Mitsubishi MU–2B series airplane. Takeoff and landings in other multi-engine 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/transition, 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.

(b) 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; or

(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/transitional or requalification training conducted between July 27, 2006, and April 7, 2008, using Mitsubishi Heavy Industries MU-2B Training Program, Part number YET 05301, Revision Original, dated July 27, 2006, or Revision 1, dated September 19, 2006, is considered to be consistent 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. You may obtain a copy from Turbine Aircraft Services Inc., 450 Jimmy Doddittle 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 of this appendix for flight instruction. An additional ground training requirement for Differences Training is shown in Table 3.

(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></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></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 3 TO APPENDIX A OF SFAR 108

<table>
<thead>
<tr>
<th>Differences training</th>
<th>2 models currently ..........</th>
<th>1.5 hours at Level A or B.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>More than 2 models currently.</td>
<td>3 hours at Level A or B.</td>
</tr>
<tr>
<td></td>
<td>Each additional model added.</td>
<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
   D. Operating Limitations
      1. Weights
      2. Center of Gravity and Loading
      3. Airspeeds
      4. Maneuvering Load Factors

II. Electrical Power
   A. General Description
   B. DC Electrical System
      1. DC Power Generation
      2. DC Power Distribution
      3. Battery System
      4. External Power System
   C. AC Electrical System
      1. AC Power Generation
      2. Controls and Indicators
      3. AC Power Distribution
      4. 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
   B. System Tests
      4. System Tests
   C. Procedures

V. Fuel System
   A. Fuel Storage
   B. Refueling/Balancing
   C. De-Fueling and Draining
   D. 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
   C. 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
      5. Oil
      6. Fuel
      7. Starter/Generator
      8. External Power
      9. Instrument Markings (as applicable)
      a. TPE331–10–511M
      b. TPE331–56–252/251M
      c. TPE331–1–151M
   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
IX. Ice and Rain Protection
   A. General Description
   B. Wing De-Ice
10. System Description
11. Operation
12. Controls and Indications
13. Engine Anti-Ice
   A. System Description
   B. Operation
   C. Controls and Indications
14. Window Defog
   1. Controls
   2. Operation
15. Tail De-Ice
   1. Horizontal Stabilizer De-Ice
   2. Vertical Stabilizer De-Ice
16. Pitot Static System Anti-Icing
   1. Pitot Tube Heating
   2. Static Port Heating
   3. AOA Transmitter Heating
17. Windshield De-Ice/Anti-Ice
   1. System Description
   2. Controls and Indications
18. Windshield Wiper
   1. System Description
   2. Control and Operation
   3. Propeller De-Ice
   4. System Description
   5. Controls and Indications
   6. Operation
19. Limitations
   1. Temperatures
   2. Cycling
X. Air Conditioning
   A. System Description and Operation
      1. Refrigeration Unit (ACM)
      2. Air Distribution
      3. Ventilation
      4. Temperature Control
      5. Water Separator
   B. Limitations
XI. 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
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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/Spilers)
1. Description
2. Operations
B. Trim Systems
1. System Description
2. Roll Trim
a. 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
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
2. Go-Around
a. One Engine Inoperative
b. All Engines

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

(1) 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
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 (PTD). 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.

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 135.293(b), the MU–2B is considered a separate type of aircraft.

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).

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).
8. * Maneuvering with One Engine Inoperative—Loss of Directional Control ($V_{mc}$).
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.
16. 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.
13. 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 on the part 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

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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 ¾ 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 ¾ scale or ±10 degrees on RMI

Circling Approach

(xi) Maximum Bank—30 degrees
(xii) Heading—Within 10 degrees
(xiii) Altitude—±100, 0 feet
(xiv) Airspeed—Within 10 knots but not less than V\
(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) Taxing—this maneuver includes taxing 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.
Flight Emergency Procedures

(i) Powerplant failure.
(ii) Powerplant, cabin, flight deck, wing and electrical fires.
(iii) Smoke control.
(iv) Fuel jettisoning, as applicable.
(v) 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.

Landings and Approaches to Landings

(1) Airport orientation.
(2) Normal landings with stabilized approach.
(3) Crosswind landings.
(4) From a precision instrument approach.
(5) From a non-precision instrument approach with a powerplant inoperative.
(6) From a circling approach or VFR traffic pattern.
(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.
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
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 (–49), 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 (-23A)

NORMAL TAKE-OFF, 5° OR 20° FLAPS

<table>
<thead>
<tr>
<th>TAKE OFF SPEEDS</th>
<th>NORMAL FLAPS 5°</th>
<th>FLAPS 20°</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N MARQ</td>
<td>P SOL</td>
</tr>
<tr>
<td>11,575 LBS.</td>
<td>109</td>
<td>105</td>
</tr>
<tr>
<td>11,000 LBS.</td>
<td>106</td>
<td>103</td>
</tr>
<tr>
<td>10,470 LBS.</td>
<td>110</td>
<td>102</td>
</tr>
<tr>
<td>10,000 LBS.</td>
<td>101</td>
<td>100</td>
</tr>
<tr>
<td>9,000 LBS.</td>
<td>106</td>
<td>99</td>
</tr>
<tr>
<td>8,000 LBS.</td>
<td>104</td>
<td></td>
</tr>
</tbody>
</table>

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

ACCELERATE TO DESIRED CLIMB SPEED

NORMAL PITCH, APPROX 6° FLAPS 20°, APPROX 10-12° FLAPS 5°

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.

* TORQUE 90% OR 600\(^\text{°}\) EGT / 875° 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.

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.

A/S 155 KCAS MINIMUM

COMPLETE AFTER T/O AND CLIMB CHECKLIST

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)

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

**TAKING OFF ENGINE FAILURE – FLAPS 5° OR 20°**

<table>
<thead>
<tr>
<th>FLAP SETTING</th>
<th>VXSE (KCAS) 0°</th>
<th>VXSE (KCAS) 5°</th>
<th>VXSE (KCAS) 20°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°</td>
<td>140 / 135 *</td>
<td>150 / 150 *</td>
<td></td>
</tr>
<tr>
<td>5°</td>
<td>130 / 130 *</td>
<td>140 / 140 *</td>
<td></td>
</tr>
<tr>
<td>20°</td>
<td>125 / 125 *</td>
<td>135 / 130 *</td>
<td></td>
</tr>
</tbody>
</table>

**P, SOL**

**APPROX 300-400 FEET (OBSTRUCTION CLEARANCE)**: IF FLAPS 20°, ADJUST PITCH TO ACCELERATE 130 KCAS, FLAPS TO 5°, PITCH APPROX. 10°.

**A/S (OCCASIONAL TO MINIMUM):** COMPLETE AFTER TAKE-OFF AND ENGINE OUT CHECKLIST.

**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 (MARQ, N), 100 KCAS MINIMUM (SOL, P).

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

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

**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.**

**MAKE NORMAL T/O**

**5° FLAPS 120 KTS (MARQ, N), 125 KTS (SOL, P)**
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

TAKE-OFF ENGINE FAILURE ON RUNWAY

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.

POWER SET, BRAKES RELEASED

CAUTION
SIMULATED ENGINE FAILURE OR MALFUNCTION IS TO BE GIVEN BY INSTRUCTOR AT NOT MORE THAN 50% OF ROTATE SPEED.

CLEAR RUNWAY OR EVACUATE AIRCRAFT AS NECESSARY *

NOTIFY TOWER OF ABORT

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

* IF EVACUATING AIRCRAFT, BOTH CONDITION LEVERS TO EMERGENCY STOP AND MASTER SWITCH TO EMERGENCY
WARNING
Do not let airspeed decelerate below single engine airspeed.
105 KCAS (Marquise, N)
100 KCAS (Solitaire, P)

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)

POWER SET, RELEASE BRAKES

ENGINE FAILS

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, 105 KCAS (Marquise, N)
100 KCAS (Solitaire, P)

CAUTION
Anticipate swerve toward operating engine when entering beta
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

STEEP TURNS

*CLEAR AREA, GEAR UP, FLAPS UP, A/S 180 KCAS, 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

*THIS MANEUVER SHOULD BE PERFORMED IN BOTH CLEAN AND LANDING CONFIGURATIONS (USE 150K FLAPS 20, GEAR DOWN, FOR LANDING CONFIGURATION)

**NOTE: TURNS WILL BE DONE THROUGH 360° AS WELL AS 180°

CHECK FOR A/S AND ALTITUDE TRENDS

REDUCE POWER TO MAINTAIN 180K

ROLL OUT ON HEADING ON ALT.

**START ROLL OUT 20° BEFORE ROLL OUT HEADING
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 115KIAS IN ALL CONFIGURATIONS.

**APPROXIMATE POWER SETTINGS ARE:**

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>TORQUE (PER ENGINE)</th>
<th>APPROX PITCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAN</td>
<td>35%</td>
<td>+12</td>
</tr>
<tr>
<td>5° FLAP</td>
<td>32%</td>
<td>+8</td>
</tr>
<tr>
<td>5° FLAP &amp; GEAR</td>
<td>44%</td>
<td>+6</td>
</tr>
<tr>
<td>20° FLAP &amp; GEAR</td>
<td>42%</td>
<td>+2</td>
</tr>
<tr>
<td>40° FLAP &amp; GEAR</td>
<td>54%</td>
<td>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° FLAPS</td>
<td>99°</td>
<td>98°</td>
</tr>
<tr>
<td>20° FLAPS</td>
<td>87°</td>
<td>88°</td>
</tr>
<tr>
<td>40° FLAPS</td>
<td>81°</td>
<td>83°</td>
</tr>
<tr>
<td>GEAR</td>
<td>78°</td>
<td>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 MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ONE ENGINE INOPERATIVE MANEUVERING LOSS OF DIRECTIONAL CONTROL

CLEAR AREA, CONDITION LEVERS TO/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 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 1KT PER SECOND

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

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

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 10KCAS, BECAUSE EARLY RECOGNITION AND RECOVERY IS THE PRIMARY OBJECTIVE OF THIS MANEUVER.

20° FLAPS (Vmc 99KCAS MARQUISE, N – 93KCAS SOLITAIRE, P)
5° FLAPS (Vmc 99KCAS MARQUISE, N – 100KCAS SOLITAIRE, P)
Vcas 125KCAS

A/S 125KCAS TRIMMED FOR STRAIGHT AND LEVEL FLIGHT

WARNING
IF STALL WARNING ACTIVATES, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE, AND RECOVER

MIN AT T 5,000' AGL

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 10KCAS, BECAUSE EARLY RECOGNITION AND RECOVERY IS THE PRIMARY OBJECTIVE OF THIS MANEUVER.

20° FLAPS (Vmc 99KCAS MARQUISE, N – 93KCAS SOLITAIRE, P)
5° FLAPS (Vmc 99KCAS MARQUISE, N – 100KCAS SOLITAIRE, P)
Vcas 125KCAS
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

APPROACH TO STALL CLEAN CONFIGURATION / WINGS LEVEL

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

20% TORQUE

MAINTAIN LEVEL FLIGHT

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 KCAS ABOVE STALL.

ACCELERATE TO 140 KCAS, POWER AS REQUIRED

CALL THE ‘STALL’ AS A/S INCREASES, CLimb TO ORIGINAL ALTITUDE

MIN. ALT. 5,000' AGL

TRIM FOR 120 KCAS

STALL SEDS

FLAPS SET UP 5 20 40
GR. WT.
7,000 85°* 80°* 77°* 74°*
7,500 88°* 85°* 78°* 74°*
8,000 91°* 88°* 79°* 78°*
8,500 93°* 88°* 79°* 77°*
9,000 95°/96° 87°/90° 76°/81° 72°/77°
9,500 95°/96° 90°/93° 79°/83° 74°/79°
10,000 98°/101° 92°/96° 81°/85° 75°/79°
10,470 104° 98°* 88°* 78°*
10,940 106° 98°* 88°* 78°*
11,000 109° 96° 85° 79°
11,275 110° 95° 87° 81°

* P. SOL.

ACCELERATE TO 140 KCAS,
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 120-130KCAS TRIMMED AIRCRAFT

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

INITIATE 15-30° BANK IN LEVEL FLIGHT

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.

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

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

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>
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<tbody>
<tr>
<td>10°</td>
</tr>
<tr>
<td>FLAPS UP</td>
</tr>
<tr>
<td>5°</td>
</tr>
<tr>
<td>20°</td>
</tr>
<tr>
<td>40°</td>
</tr>
</tbody>
</table>

ANG: 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**

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

**CALL THE "STALL"**

**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>
</tr>
<tr>
<td>8,000</td>
<td>/91 *</td>
<td>/85 *</td>
<td>/76 *</td>
<td>/68 *</td>
</tr>
<tr>
<td>8,500</td>
<td>/93 *</td>
<td>/88 *</td>
<td>/79 *</td>
<td>/70 *</td>
</tr>
<tr>
<td>9,000</td>
<td>93/96 *</td>
<td>87/90 *</td>
<td>76/81 *</td>
<td>72/72 *</td>
</tr>
<tr>
<td>9,500</td>
<td>95/99 *</td>
<td>90/93 *</td>
<td>79/83 *</td>
<td>74/74 *</td>
</tr>
<tr>
<td>10,000</td>
<td>98/101 *</td>
<td>92/95 *</td>
<td>81/85 *</td>
<td>75/76 *</td>
</tr>
<tr>
<td>10,470</td>
<td>/104 *</td>
<td>/98 *</td>
<td>/88 *</td>
<td>/78 *</td>
</tr>
<tr>
<td>10,500</td>
<td>101/</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**

*All values are approximate.*

**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.**
MU-2B MARQUISE (-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

CALL THE “STALL”

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 (APPROXIMATE) AT MAXIMUM GROSS TAKEOFF WEIGHT

N, MARQUISE / P, SOLITAIRE

<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>
</tr>
<tr>
<td>5°</td>
<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>89/90*</td>
<td>93/94*</td>
<td>98/100*</td>
<td>108/109*</td>
<td>122/123*</td>
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<tr>
<td>40°*&quot;</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, SOL
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

EMERGENCY DESCENT (LOW SPEED)

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

POWER LEVERS FI. CONDITION LEVERS T/O AND LAND SYNC OFF. FLAPS 0', AT 175KCAS, & GEAR DOWN (110KCAS SOL. P, 175KCAS MARQ, N) FLAPS 20' AT 155KCAS; FLAPS 40' AT 120KCAS

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

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

ESTABLISH DESCENT IN A 30° BANK, 155KCAS 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.

CHECK 1000' ABOVE LEVEL OFF ALTITUDE

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 120KCAS.
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

**EMERGENCY DESCENT (HIGH SPEED)**

- **CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. AS 150 KCAS MIN.**

- **POWER LEVERS FA CONDITION LEVERS T/O AND LAND SYNC OFF.**

- **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 MMO.**

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

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

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

- **CHECK 1000 FT ABOVE LEVEL OFF ALTITUDE.**

- **700 FT ABOVE, START LEVEL OFF.**

- **COMPLETE EXERCISE AT ASSIGNED ALTITUDE. REDUCE SPEED TO 200 KCAS.**

- **DELETE INDICATED AIRSPEED BY 5 KCAS BELOW 250 KCAS. FOR EACH 1,000 FT ABOUT 21,300 FT.**

- **CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. AS 150 KCAS MIN.**
MU-2B MARQUISE (-60), SOLITAIRe (-40), N (-36A), P (-26A)

UNUSUAL ATTITUDE RECOVERY (NOSE HIGH)

Upon recognition of a nose high unusual attitude, power to takeoff

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

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

*Clear area

Instructor note
The instructor should initiate the unusual attitude and use positive control to transfer control to the student for recovery
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

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.

*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.

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

NORMAL LANDING (20° or 40° FLAPS)

POWER LEVERS RETARD TO GROUND IDLE, CHECK BOTH PROPS BETA. THEN REVERSE AS REQUIRED, BRAKING AS REQUIRED.

TOUCHDOWN, POWER LEVERS RETARD TO FLIGHT IDLE STOP.

THRESHOLD 20% TORQUE Vref

LANDING ASSURED, FLAPS 20° or 40°. A/S SLOWING TO Vref;
CHECK SINK RATE 500-600 FPM

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

COMPLETE DESCENT PARALLEL TO RUNWAY

A/S 120KCAS MINIMUM DESCENT, 500-600 FPM
(20-25% TORQUE)

LANDING APPROACH SPEEDS – VREF

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>1.3 VSI FLAPS 20°</th>
<th>1.5 VSI FLAPS 40°</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500 LBS</td>
<td>/ 96 *</td>
<td>/ 99 *</td>
</tr>
<tr>
<td>8,000 LBS</td>
<td>/ 99 *</td>
<td>/102 *</td>
</tr>
<tr>
<td>8,500 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>105 /111 *</td>
<td>114 /</td>
</tr>
<tr>
<td>10,000 LBS</td>
<td>108 /</td>
<td>116 /</td>
</tr>
<tr>
<td>10,500 LBS</td>
<td>110 /</td>
<td>119 /</td>
</tr>
<tr>
<td>11,025 LBS</td>
<td>110 /</td>
<td>119 /</td>
</tr>
</tbody>
</table>

* A/S 90°
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

GO AROUND - REJECTED LANDING

AFTER GEAR IS FULLY RETRACTED, A/S 130KCAS, FLAPS 5°. INCREASE PITCH TO 10°

ACCELERATE TO DESIRED CLIMB SPEED

COMPLETE AFTER TAKE-OFF AND CLIMB CHECKLIST

WHEN LANDING REJECTED, APPLY MAX POWER, PITCH 8° UP AND SELECT FLAPS 20° IF 40° PREVIOUSLY SELECTED

NORMAL APPROACH, STABILIZED AND CONFIGURED FOR LANDING

POSITIVE RATE OF CLIMB. GEAR UP, 113KCAS MINIMUM, 120KCAS RECOMMENDED.

A/S 140KCAS. FLAPS UP.
CAUTION
DO NOT SELECT REVERSE UNTIL BELOW 90KCAS WITH NOSE WHEEL ON GROUND

NOTE
LANDING DISTANCE WILL INCREASE APPROXIMATELY 30%

MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
NO FLAP OR 5° FLAP LANDING

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

TOUCHDOWN - POWER LEVERS SLOWLY RETARD TO FLIGHT IDLE STOP

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

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

STABILIZED APPROACH BY 500 FPM

CHECK SINK RATE

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

<table>
<thead>
<tr>
<th>Speed</th>
<th>Up</th>
<th>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°</td>
<td>115°</td>
</tr>
<tr>
<td>9,500</td>
<td>119°</td>
<td>123°</td>
</tr>
<tr>
<td>9,995</td>
<td>120°</td>
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<td>115°</td>
</tr>
<tr>
<td>11,025</td>
<td>129°</td>
<td>121°</td>
</tr>
</tbody>
</table>

*Tool P

COMPLETE LANDING CHECKLIST

NO FLAP OR 5° FLAP LANDING

GEAR DOWN A/S 140KCAS MINIMUM

COMPLETE DESCENT AND APPROACH CHECKLISTS

MAINTAIN TRACK PARALLEL TO RUNWAY

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

NOTE
LANDING DISTANCE WILL INCREASE APPROXIMATELY 30%
### MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

**ONE ENGINE INOPERATIVE LANDING**

#### CAUTION
- Anticipate swerve toward operating engine when entering beta.
- Touchdown operating engine power lever slowly retard to flight idle stop.
- Maintain track parallel to runway.
- Complete descent and approach checklists and review single engine landing checklist.

#### OPERATING ENGINE
- Power lever ground idle, then prop beta. Reverse as required. Brakes as required.
- Start operating engine when entering beta.

#### ONE ENGINE INOPERATIVE LANDING

<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

#### WARNING
- Do not attempt a go-around with gear down below 400' AGL or after 20° flaps are selected.

#### CHECK SINK RATE
- Approach by 300-600 FPM.

#### CHECK GLIDE PATH
- If landing assured, gear down. (Approx 40% torque.)

#### CHECK SINK RATE
- 500 - 600 feet per minute.
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 Vref for crosswind landing by one-half the steady wind speed plus one-half the gust speed not to exceed Vref 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 MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ILS AND MISSED APPROACH

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

LANDING APPROACH SPEEDS – VREF

<table>
<thead>
<tr>
<th>WEIGHT (LBS)</th>
<th>1.3 VS1</th>
<th>1.5 VS1</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500</td>
<td>96&quot; *</td>
<td>99&quot; *</td>
</tr>
<tr>
<td>8,000</td>
<td>99&quot; *</td>
<td>102&quot; *</td>
</tr>
<tr>
<td>8,500</td>
<td>99&quot; / 102&quot;</td>
<td>105&quot; / 106&quot;</td>
</tr>
<tr>
<td>9,000</td>
<td>100 / 105&quot;</td>
<td>106&quot; / 109&quot;</td>
</tr>
<tr>
<td>9,500</td>
<td>102 / 108&quot;</td>
<td>111&quot; / 112&quot;</td>
</tr>
<tr>
<td>9,955</td>
<td>111&quot; *</td>
<td>115&quot; *</td>
</tr>
<tr>
<td>10,000</td>
<td>105 / 110&quot;</td>
<td>114 / 115&quot;</td>
</tr>
<tr>
<td>10,500</td>
<td>108 / 110&quot;</td>
<td>116 / 115&quot;</td>
</tr>
<tr>
<td>11,025</td>
<td>110 / 110&quot;</td>
<td>119 / 115&quot;</td>
</tr>
</tbody>
</table>

*: MSL

FLAPS 5°, 140K 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 120K MIN.

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

THRESHOLD (20% TORQUE) Vref

TOUCHDOWN, POWER LEVERS RETARD TO FLIGHT IDLE STOP,

POWER LEVERS RETARD TO GROUND IDLE, CHECK BOTH PROPS BETA. REVERSE AS REQUIRED. BRAKES AS REQUIRED.

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

A/S 140K MIN. 25-30% TORQUE

LANDING CHECK APPROX 25% TORQUE.

CHECK GEAR DOWN, FLAPS 20° APPROACHING GLIDE SLOPE (ONE DOT BELOW G/S), A/S 120K MIN.
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)
TWO ENGINE MISSED APPROACH

Complete after takeoff checklist

Accelerate to desired climb speed

A/S 140 KCAS, flaps up

After gear is fully retracted, A/S 130 KCAS, flaps 20° if 40° previously selected

Positive rate of climb, gear up, 113 KCAS minimum

Missed approach go-around, max power, pitch up 8° and select flaps 20° if 40° previously selected

Map
MU-2B MARQUISE (-60), SOLITAIREF (-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.

MISSED APPROACH: CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE

FLAPS 5°. 140KCAS (130KCAS MIN) 50-60% TORQUE, FLAPS 9°.

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

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

A/S 140KCAS (130KCAS MIN) 50-60% TORQUE, FLAPS 9°.

LANDING CHECK (50-55% TORQUE)

WHEN LANDING ASSURED, FLAPS 20°, SLOWING TO CROSS THRESHOLD AT 110KCAS (MARQUISE, N), 105KCAS (SOLITAIREF, P)

A/S 140KCAS (130KCAS MIN) 50-60% TORQUE, FLAPS 9°.

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

NS 140KCAS (130KCAS MIN), 50-60% TORQUE, FLAPS 9°.

NS 140KCAS (130KCAS MIN), 50-60% TORQUE, FLAPS 9°.
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ONE ENGINE INOPPERATIVE MISSED APPROACH

COMMENCING MISSED APPROACH, SET MAX POWER, MAINTAIN DIRECTIONAL CONTROL, RUDDER AND SPOILERS AS NECESSARY. PITCH TO MAINTAIN A/S 140KCAS, GEAR UP.

"IF TRANSITIONING FROM A DESCENT, MAINTAIN PITCH TO MAINTAIN 140KCAS, RAISE GEAR, THEN 10° PITCH. SOME ALTITUDE LOSS IS TO BE EXPECTED.

WARNING
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.

A/S 150KCAS, COMPLETE AFTER TAKEOFF CHECKLIST

A/S 140KCAS MINIMUM, FLAPS UP

APPROX 300'-400'
(OBSTRUCTION CLEARANCE)
ADJUST PITCH TO ACCELERATE

AFTER GEAR IS FULLY RETRACTED, PITCH 10°

MAP
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>1.3 VSI FLAPS 20°</th>
<th>1.5 VSI FLAPS 40°</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500 LBS</td>
<td>96 / 96 / 96 *</td>
<td>99 / 99 / 99 *</td>
</tr>
<tr>
<td>8,000 LBS</td>
<td>99 / 99 / 99 *</td>
<td>101 / 101 / 101 *</td>
</tr>
<tr>
<td>8,500 LBS</td>
<td>100 / 100 / 100 *</td>
<td>103 / 103 / 103 *</td>
</tr>
<tr>
<td>9,000 LBS</td>
<td>102 / 102 / 102 *</td>
<td>105 / 105 / 105 *</td>
</tr>
<tr>
<td>9,500 LBS</td>
<td>104 / 104 / 104 *</td>
<td>107 / 107 / 107 *</td>
</tr>
<tr>
<td>10,000 LBS</td>
<td>105 / 105 / 105</td>
<td>108 / 108 / 108</td>
</tr>
<tr>
<td>10,500 LBS</td>
<td>106 / 106 / 106</td>
<td>109 / 109 / 109</td>
</tr>
<tr>
<td>11,025 LBS</td>
<td>107 / 107 / 107</td>
<td>110 / 110 / 110</td>
</tr>
</tbody>
</table>

* X 1.1.

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

A/S 140KCAS MIN. 20-25% TORQUE, DESCEND 500 FPM
FLAPS 5°, A/S 140KCAS MIN. 25-30% TORQUE

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

MAP

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

A/S 120KCAS MIN. APPROX 50% TORQUE
A/S 120KCAS MIN, 25-30% TORQUE, 800-1000 FPM DESCENT

A/S 140KCAS MIN.
25-30% TORQUE

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

NS 150K (140K MIN) .. APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS: TUNE & IDENTIFY. CHECK FIX CROSSING ALTITUDE.

CHECK FIX CROSSING ALTITUDE.
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.

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

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

WHEN LANDING ASSURED, GEAR DOWN, FLAPS 20°, SLOWING TO CROSS THRUST 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 FLIGHT IDLE STOP, POWER LEVER GROUND IDLE, THEN PROP BETA, REVERSE AS REQUIRED. BRAKES AS REQUIRED.

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

A/S 140KCAS (130KCAS MIN) 50-60% TORQUE.
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

CIRCLING APPROACH AT WEATHER MINIMUMS

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

LANDING APPROACH SPEEDS – VREF

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>1.3 VS1 FLAPS 20°</th>
<th>1.5 VS1 FLAPS 40°</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,500 LBS</td>
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<td>8,000 LBS</td>
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<td></td>
</tr>
<tr>
<td>8,500 LBS</td>
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<td>99 / 95°</td>
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<td>9,000 LBS</td>
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<td>100 / 100°</td>
</tr>
<tr>
<td>9,500 LBS</td>
<td>99 / 100°</td>
<td>100 / 100°</td>
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<tr>
<td>9,955 LBS</td>
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<td>100 / 100°</td>
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<tr>
<td>10,000 LBS</td>
<td>110 / 110°</td>
<td>110 / 110°</td>
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<tr>
<td>10,500 LBS</td>
<td>110 / 110°</td>
<td>110 / 110°</td>
</tr>
<tr>
<td>11,025 LBS</td>
<td>110 / 110°</td>
<td>110 / 110°</td>
</tr>
</tbody>
</table>

* AS REQUIRED TO MAINTAIN CAT C OR D

MAX BANK 30°

THRESHOLD: 20% TORQUE, Vref

CHECK SINK RATE 500-600 FPM

CHECK GEAR DOWN, FLAPS 20° COMPLETE LANDING CHECKLIST

DO NOT DESCEND UNTIL WITHIN 30° OF RUNWAY CENTERLINE

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

Sink Rate 500-600 FPM

TOVref 20-25%

500-600 FPM

\[ \text{AlS} \geq 120K \text{ Min} \]
MU-2B MARQUISE (-60), SOLITAIRE (-40), N (-36A), P (-26A)

ONE ENGINE INOPERATIVE CIRCLING APPROACH AT WEATHER MINIMUMS

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

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

** 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 110KCAS (MARQUISE, N) A/S 109KCAS (SOLITAIRE, P)

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

CAUTION
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA

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

CHECK SINK RATE 500-600 FPM

LANDING ASSURED: FLAPS 20°, A/S 125KCAS MIN. COMPLETE LANDING CHECKLIST

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

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

CHECK SINK RATE 500-600 FPM

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

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

TSUCHTOWN 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.

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

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

MAX BANK 30°

LANDING ASSURED: FLAPS 20°, A/S 125KCAS MIN. COMPLETE LANDING CHECKLIST

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

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

CHECK SINK RATE 500-600 FPM

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

**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 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.**

* TORQUE 90% OR 600° EGT / 817° 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.

AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° ADJUST PITCH TO ACCELERATE. 130 KCAS (K, MOD SR10) (K, NOT MOD SR10), 140 KCAS (J, L, M) RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°.
<table>
<thead>
<tr>
<th>FLAPS 20°</th>
<th>TAKE OFF SPEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,575 LBS</td>
<td>105</td>
</tr>
<tr>
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<td>102</td>
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<tr>
<td>10,800 LBS</td>
<td>102</td>
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<tr>
<td>10,470 LBS</td>
<td>102</td>
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<tr>
<td>10,000 LBS</td>
<td>102</td>
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<tr>
<td>9,920 LBS</td>
<td>101</td>
</tr>
<tr>
<td>9,500 LBS</td>
<td>101</td>
</tr>
<tr>
<td>9,000 LBS</td>
<td>100</td>
</tr>
<tr>
<td>8,000 LBS</td>
<td>99</td>
</tr>
<tr>
<td>7,500 LBS</td>
<td>98</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLAPS 5°</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,575 LBS</td>
</tr>
<tr>
<td>11,000 LBS</td>
</tr>
<tr>
<td>10,800 LBS</td>
</tr>
<tr>
<td>10,470 LBS</td>
</tr>
<tr>
<td>10,000 LBS</td>
</tr>
<tr>
<td>9,920 LBS</td>
</tr>
<tr>
<td>9,500 LBS</td>
</tr>
<tr>
<td>9,000 LBS</td>
</tr>
<tr>
<td>8,000 LBS</td>
</tr>
<tr>
<td>7,500 LBS</td>
</tr>
</tbody>
</table>

*TAP(O)

**M**

- *FLAPS 20°* 11,575 LBS, 11,000 LBS, 10,800 LBS, 10,470 LBS, 10,000 LBS, 9,920 LBS, 9,500 LBS, 9,000 LBS, 8,000 LBS, 7,500 LBS

- *FLAPS 5°* 11,575 LBS, 11,000 LBS, 10,800 LBS, 10,470 LBS, 10,000 LBS, 9,920 LBS, 9,500 LBS, 9,000 LBS, 8,000 LBS, 7,500 LBS
### FLAP SETTING

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

*J, K, L, M*

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

- **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°.)**

- **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 T/O 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 SR 10 NCT INSTALLED, MAXIMUM FLAP SPEED DURING RETRACTION IS 140 KCAS. DURING RETRACTION, PITCH TO MAINTAIN 140 KCAS UNTIL FLAPS UP.**

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

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

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

POWER SET, BRAKES RELEASED

CLEAR RUNWAY OR EVACUATE AIRCRAFT AS NECESSARY *

NOTIFY TOWER OF ABORT

* 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.
105KCAS (J, L) 100KCAS (K, M)

**PILOT MAKES DECISION TO EITHER RETURMN 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 KCAS MIN. IF 5° FLAPS 120 KCAS (J, L) 125 KCAS (K, M)

**POWER SET, RELEASE BRAKES**

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, 105KCAS (J, L) 100KCAS (K, M)

**ROTATE**

PROPELLERS BETA, THEN REVERSE AS REQUIRED, BRAKES AS REQUIRED

**CAUTION**

ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA
**CLEAR AREA, GEAR UP, FLAPS UP, A/S 180KCAS, TRIM A/C**

**SET 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 180K**

**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 J (-35), K (-25), L (-36), M (-26)

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

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 115 KCAS IN ALL CONFIGURATIONS.

**APPROXIMATE POWER SETTINGS ARE:**

<table>
<thead>
<tr>
<th>CLEAN</th>
<th>5° FLAP</th>
<th>5° FLAP &amp; GEAR</th>
<th>20° FLAP &amp; GEAR</th>
<th>40° FLAP &amp; GEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TORQUE (35%) PER ENGINE</td>
<td>APPROX PITCH +12</td>
<td>APPROX PITCH +8</td>
<td>APPROX PITCH +4</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
J, K, L, M

<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>5° FLAPS UP</td>
<td>104/106/101/104</td>
<td>107/106/103/106</td>
</tr>
<tr>
<td>10° FLAPS UP</td>
<td>98/ 96/ 95/ 98</td>
<td>100/101/ 97/100</td>
</tr>
<tr>
<td>20° FLAPS UP</td>
<td>85/ 87/ 85/ 87</td>
<td>85/ 87/ 87/ 89</td>
</tr>
<tr>
<td>30° FLAPS UP</td>
<td>79/ 81/ 79/ 81</td>
<td>82/ 82/ 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 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.
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 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

INSTRUCTOR CAUTION
ONE ENGINE LOSS OF DIRECTIONAL CONTROL IS 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 10K, BECAUSE EARLY RECOGNITION AND RECOVERY IS THE PRIMARY OBJECTIVE OF THIS MANEUVER:

20° FLAPS (Vmc 90KCAS, J - 99KCAS, L - 93KCAS, K, M)
5° FLAPS (Vmc 99KCAS J, L - 100KCAS K, M)
Vsse 125K

APPLICATION TAKEOFF POWER ON SIMULATED OPERATIVE ENGINE WHILE INCREASING PITCH TO DECCELERATE 1KCAS PER SECOND

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

A/S 125KCAS TRIMMED FOR STRAIGHT AND LEVEL FLIGHT

CAUTION
IF STALL WARNING ACTIVATES, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE, AND RECOVER
MU-2B J (-35), K (-25), L (-36), M (-26)

APPENDIX TO STALL CLEAN CONFIGURATION / WINGS LEVEL

CLEAR AREA, CONDITION LEVERS (TO AND LAND), SYNC OFF - 129KCAS-130KCAS AIRCRAFT TRIMMED

20% TORQUE

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

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

MIN. ALT. 5,000' AGL

MAINTAIN LEVEL FLIGHT

TRIM FOR 120KCAS

CALL THE "STALL"

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE
### Stall Speeds

<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>0</th>
<th>5</th>
<th>20</th>
<th>40</th>
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<td></td>
<td></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>74/74/</td>
<td>67/67/</td>
</tr>
<tr>
<td>8,000</td>
<td>91/91/</td>
<td>86/86/</td>
<td>77/77/</td>
<td>69/69/</td>
</tr>
<tr>
<td>8,500</td>
<td>94/94/</td>
<td>89/89/</td>
<td>79/79/</td>
<td>71/71/</td>
</tr>
<tr>
<td>9,000</td>
<td>97/97/</td>
<td>90/90/</td>
<td>82/82/</td>
<td>73/73/</td>
</tr>
<tr>
<td>9,500</td>
<td>99/99/</td>
<td>93/93/</td>
<td>85/85/</td>
<td>75/75/</td>
</tr>
<tr>
<td>9,920</td>
<td>102/102/</td>
<td>96/96/</td>
<td>88/88/</td>
<td>78/78/</td>
</tr>
<tr>
<td>10,000</td>
<td>/102/102/</td>
<td>/96/96/</td>
<td>/88/88/</td>
<td>/78/78/</td>
</tr>
<tr>
<td>10,470</td>
<td>/104/</td>
<td>/98/</td>
<td>/88/</td>
<td>/78/</td>
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<tr>
<td>11,500</td>
<td>/106/</td>
<td>/99/</td>
<td>/88/</td>
<td>/78/</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 T/O AND LAND SYNC OFF – A/S 120KCAS-130KCAS TRIMMED AIRCRAFT
- FLAPSS 5° OR 20°, GEAR DOWN, 20% TORQUE
- INITIATE 30° BANK IN LEVEL FLIGHT
- MAINTAIN LEVEL FLIGHT, TRIM FOR 120KCAS
- MIN. ALT. 5,000' AGL
- CALL THE "STALL"
- STALL SPEEDS
  - FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.

**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.**

**A/S 150KCAS MINIMUM, FLAPS UP POWER AS REQUIRED**

**IF FLAPS 20° RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°, 130 KCAS (K, MOD SR10), 140KCAS (J, L, M)**

**AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE**

**IF FLAPS 20° RETRACT FLAPS TO 5°, INCREASE PITCH TO APPROX. 10°, 130 KCAS (K, MOD SR10), 140KCAS (J, L, M)**

**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.**
### Stall Speeds (Approximate)

#### At Maximum Gross Takeoff Weight J, K, L, M

<table>
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<tr>
<th>Bank Angle</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
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<td>J/L/K/M</td>
<td>J/L/K/M</td>
<td>J/L/K/M</td>
<td>J/L/K/M</td>
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<td>92/ 94/ 92/ 94</td>
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<td>108/109/107/109</td>
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<tr>
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<td>83/ 84/ 79/ 81</td>
<td>85/ 87/ 82/ 84</td>
<td>89/ 93/ 87/ 90</td>
<td>100/102/ 96/ 98</td>
<td>112/115/108/110</td>
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</tbody>
</table>
CLEAR AREA, CONDITION LEVERS
T/O AND LAND, SYNC OFF - A/S 120 KCAS - 130 KCAS TRIMMED

FLAPS 20°, GEAR DOWN, 20% TORQUE

A/S 120 KCAS, FLAPS FULL

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

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 KCAS (K, MOD SR10)(K, NOT MOD SR10), 140 KCAS (J, L, M)

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

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
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<tr>
<th>FLAPS SET</th>
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<td>K / M / J / L</td>
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STALL SPEEDS
• THIS MANEUVER SHOULD ALSO BE ACCOMPLISHED IN THE LANDING CONFIGURATION WITH GEAR DOWN, FLAPS 20°, A/S 100KCAS TRIMMED

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
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<tr>
<th>BANK ANGLE</th>
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<td>20°</td>
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<td>112/115/108/110</td>
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</tbody>
</table>
MU-2B J (-35), K (-25), L (-36), M (-26)

EMERGENCY DESCENT (LOW SPEED)

*CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE AS 150K MIN.

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

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

POWER LEVERS F/T, CONDITION LEVERS T/O AND LAND SYNC OFF. GEAR AND FLAPS EXTEND AT SPEEDS BASED ON SCHEDULE FOR MODEL AND SR10 COMPLIANCE UNTIL FULL FLAPS ARE DEPLOYED.

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

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

CHECK 1000' ABOVE LEVEL OFF ALTITUDE

COMPLETE EXERCISE AT ASSIGNED ALTITUDE. REDUCE TO 120KCAS AND CLEAN UP A/C. **DO NOT RAISE FLAPS UNTIL A/C IS BELOW MAXIMUM ALLOWABLE \(V_{fe}\) SPEED FOR FULL FLAPS.

GEAR/FLAP SPEEDS
FOR GEAR/FLAP SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>GEAR AND FLAP EXTEND SCHEDULE</th>
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<tr>
<td>(K+ AND J+ ARE MODIFIED BY S/R10)</td>
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</table>

<table>
<thead>
<tr>
<th>GEAR</th>
<th>K, K+:</th>
<th>M, J, J+:</th>
<th>L:</th>
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<tr>
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<td>160KCAS</td>
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<th>40°</th>
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</thead>
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<td>146KCAS</td>
<td>146KCAS</td>
<td>120KCAS</td>
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<tr>
<td>J+: S/N 548 – 609 MODIFIED BY S/R10 AND S/N 610 - 654</td>
<td>175KCAS</td>
<td>146KCAS</td>
<td>120KCAS</td>
</tr>
<tr>
<td>K: S/N 239 – 279 NOT MODIFIED BY S/R10</td>
<td>140KCAS</td>
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<td>120KCAS</td>
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<tr>
<td>K+: S/N 239 – 279 MODIFIED BY S/R10 AND S/N 280 - 318</td>
<td>175KCAS</td>
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<tr>
<td>L / M</td>
<td>175KCAS</td>
<td>155KCAS</td>
<td>120KCAS</td>
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</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).

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.

*WHILE CLEARING THE AREA, COORDINATE WITH AIR TRAFFIC CONTROL TO CLEAR TRAFFIC AT LOWER ALTITUDES.
Upon recognition of a nose high unusual attitude, power to takeoff.

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.

*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.
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.

*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.

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.
MU-2B J (-35), K (-25), L (-36), M (-28)
NORMAL LANDING (20° or 40° FLAPS)

COMPLETE DESCENT CHECKLIST

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

LANDING ASSURED, FLAPS 20°
A/S 120KCAS MINIMUM
DESCENT, 500-600 FPM
(20-25% TORQUE)

STABILIZED APPROACH AT 500-600 FPM (25-30% TORQUE)

COMPLETE DESCENT
PARALLEL TO RUNWAY

MAINTAIN TRACK
THRESHOLD 20%
RETARD TO FLIGHT
TORQUE VREF

TOUCHDOWN.
POWER LEVERS
AS REQUIRED.

PROP BETA
AS REQUIRED.

FLAPS
5°

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

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

A/S SLOWING TO VREF
CHECK SINK RATE 500-600 FPM

500-600 FPM
(20-25% TORQUE)

LANDING ASSURED, FLAPS 20°
A/S SLOWING TO VREF
CHECK SINK RATE 500-600 FPM

500-600 FPM
(20-25% TORQUE)
<table>
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<tr>
<th>WEIGHT</th>
<th>K</th>
<th>M</th>
<th>J</th>
<th>L</th>
<th>K</th>
<th>M</th>
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</table>
MO-2B (J) (K), L (M), M (N)

GO AROUND - REJECTED LANDING

When flaps are extended to 30° or more, if possible, select power setting to maintain airspeed between 100 and 130 KCAS. Complete go-around after 10 seconds.

After gear is fully retracted, if flaps 20°, retract flaps to 5°, increase pitch to approx. 10°, 130 KCAS (J, K, L, M). When landing rejected, apply max power, pitch 8° up and select flaps 20° if 40° previously selected.

Normal approach, stabilized and configured for landing.

150 KCAS minimum, flaps up.

APPROACH, STABILIZED AND CONFIGURED FOR.

When main wheel touches down, increase pitch to approx. 10°, 150 KCAS.

GO AROUND - REJECTED LANDING.
CAUTION
DO NOT SELECT
REVERSE UNTIL
BELOW 90K
WITH NOSE
WHEEL ON
GROUND

NOTE
LANDING DISTANCE
WILL INCREASE
APPROXIMATELY
30%

MU-2B J (-35), K (-25), L (-36), M (-28)
NO FLAP OR 5° FLAP LANDING

CHECK BOTH PROPS BETA. BRAKING AS
REQUIRED. NOTE: BETAS 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

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

FOOTNOTE
500-600 FPM SINK
RATE.

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

COMPLETE DESCENT
AND APPROACH
CHECKLISTS

COMPLETE DESCENT
PARALLEL TO RUNWAY

GEAR DOWN A/S
140KCAS MINIMUM

COMPLETE LANDING
CHECKLIST

Maintain track
parallel to runway

NOTE
LANDING DISTANCE
WILL INCREASE
APPROXIMATELY
30%

NO FLAP OR 5° FLAP
LANDING APPROACH
SPEEDS

FOR LANDING APPROACH
SPEEDS SEE TABULAR
CHART ON REVERSE SIDE OF
PROFILE.
**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>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>J</th>
<th>K</th>
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</table>
**CAUTION**

ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA

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

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

**ONE ENGINE INOPERATIVE LANDING**

**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 150K (140KCAS MINIMUM J, L) (135KCAS MINIMUM K, M) (APPROX 60-70% TORQUE)**

**FLEX 5° A/S 140K (130KCAS MINIMUM)**

**FLAPS 10° A/S 125KCAS MIN. COMPLETE LANDING CHECKLIST, RUDDER TRIM CENTERED, HOLD BALL IN CENTER WITH RUDDER CHECK GLIDE PATH, IF LANDING ASSURED, GEAR DOWN. (APPROX 45-55% TORQUE)**
MU-2B J (-35), K (-28), 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.**
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°, 140KCAS MIN. 25-30% TORQUE**
- **A/S 140KCAS (130KCAS MIN. 20-25% TORQUE), DESCEND 500 FPM**

**MISSING APPROACH: ENGINE OUT MISSED APPROACH PROFILE**
- Check gear down, flaps 20°, approaching glide slope (one dot below GIS), A/S 120KCAS MIN.

**LANDING CHECK APPROX 25% TORQUE.**
- When landing assured, flaps 20°, (or 40° below 120KCAS)

**PROPS BETA, REVERSE AS REQUIRED. BRAKES AS REQUIRED.**

**TOUCHDOWN: POWER LEVERS RETARD TO FLIGHT IDLE STOP.**

**LANDING APPROACH SPEEDS**
- For landing approach speeds see tabular chart on reverse side of profile.
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<tr>
<th>WEIGHT</th>
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MU-2B J (-35), K (-25), L (-36), M (-26)

TWO ENGINE MISSED APPROACH

MISSING APPROACH GO-AROUND, MAX POWER, PITCH UP

A/S 150KCAS MINIMUM, FLAPS UP

ACCELERATE TO DESIRED CLIMB SPEED

COMPLETE AFTER TAKEOFF CHECKLIST

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)
ONE ENGINE INOPERATIVE ILS AND MISSED APPROACH

MU-2B J (-35), K (-25), L (-38), M (-26)

A/S 150K (140KCAS MIN J, L) (135KCAS MIN K, M). APPROACH CHECKLIST.
REVIEW APPROACH PLATE. RADIOS: TUNE & IDENTIFY. CHECK OM CROSSING ALTITUDE MARKER RECEIVER "ON".

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

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.

MISSING APPROACH: CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE.

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

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

LANDING CHECK (50-55% TORQUE).

WHEN LANDING ASSURED, FLAPS 20°, SLOWING TO CROSS THRESHOLD AT 110KCAS (J, L), 159KCAS (K, M).

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

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°

IF TRANSITIONING FROM A DESCENT, MAINTAIN PITCH TO MAINTAIN 140 KCAS, RAISE GEAR, THEN 10° PITCH. SOME ALTITUDE LOSS IS TO BE EXPECTED.

A/S 150 KCAS, COMPLETE AFTER TAKEOFF CHECKLIST

A/S 140 KCAS, MINIMUM FLAPS UP

WARNING
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.
MU-2B J (-35), K (-25), L (-36), M (-26)
NON-PRECISION AND MISSED APPROACH

AlS 150K CAS (J, L, M, K+1) 130K CAS (K) MINIMUM, APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS: TUNE & IDENTIFY. CHECK OM CROSSING ALTITUDE MARKER RECEIVER "ON"

ALS 140K CAS (130K CAS) MIN. 20-25% TORQUE, DESCEND 500 FPM

FLAPS 5'
ALS 140K CAS MIN. 28-30% TORQUE

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

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

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

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

A/S 100K CAS MIN. APPROX 50% TORQUE

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

A/S 140K CAS MIN. 25-30% TORQUE

GEAR DOWN. FLAPS 20° APPROACHING FIX INBOUND, LANDING CHECKLIST COMPLETE A/S 120K CAS MIN.
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ONE ENGINE INOPERATIVE NON-PRECISION AND MISSED APPROACH

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

AIS 140KCAS (130KCAS MIN.) 40-
50% TORQUE, FLAPS 5°, DESCEND 500 FPM

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

AIS 140KCAS (130KCAS MIN.) 20-
30% TORQUE, 800-1000 FPM DESCENT

AIS 140KCAS (130KCAS MIN) 50-
60% TORQUE

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.

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 110KCAS (J, L),
105KCAS (K, M). LANDING CHECKLIST COMPLETE
CAUTION
GEAR EXTENSION TIME IS APPROXIMATELY 17 SECONDS.
CONFIRM GEAR DOWN PRIOR TO LANDING.

MISSING APPROACH;
CONTINUE WITH ENGINE OUT
MISSING APPROACH PROFILE

AIS 150K (140KCAS MIN J, L) (135KCAS MIN
K, M) APPROACH CHECKLIST REVIEW
APPROACH PLATE: RADIOS TUNE &
IDENTIFY. CHECK FIX CROSSING ALTITUDE

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

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.

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 110KCAS (J, L),
105KCAS (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

CIRCLING APPROACH AT WEATHER MINIMUMS

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 300 OF RUNWAY CENTERLINE

A1S 120KCAS MIN.

CHECK SINK RATE 500-600 FPM

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

THRESHOLD: 20% TORQUE 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 300 OF RUNWAY CENTERLINE

A1S 120KCAS MIN.

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 300 OF RUNWAY CENTERLINE

A1S 120KCAS MIN.

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 300 OF RUNWAY CENTERLINE

A1S 120KCAS MIN.

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 300 OF RUNWAY CENTERLINE

A1S 120KCAS MIN.
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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

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

** 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 110KCAS (J, L), A/S 105KCAS (K, M)

CAUTION
ANTICIPATE
SWERVE TOWARD
OPERATING
ENGINE WHEN
ENTERING BETA

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

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

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
300 OF RUNWAY
CENTERLINE

MAX BANK 30°

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

CHECK SINK RATE 500-600 FPM

LANDING
ASSURED: FLAPS
20°, A/S 120KCAS
MIN. COMPLETE
LANDING
CHECKLIST

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

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

THRESHOLD FLAPS 20°, A/S
110KCAS (J, L), A/S 105KCAS (K, M)

TOUCHDOWN

CHECK SINK RATE 500-600 FPM

ALTIMETRY
OF COMPANY

AS REQUIRED TO MAINTAIN
CAT C OR D

CAT C 121 - 140K 1.7NM
CAT D 141 - 165K 2.3NM
**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.

- **Torque/PSI or Temp Set**
  - At maximum less 10% whichever occurs first. Beta lights out. Release brakes. Ram rise will cause torque or Temp to rise to maximum takeoff power during takeoff roll.

- **After Gear Is Fully Retracted, If Flaps 20° Retract Flaps to 5°**
  - Increase pitch to approx. 10°, 130 KCAS (F, NOT MOD S/R10), 130 KCAS (B, D), 140 KCAS (G).

- **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 Noise Up Pitch**

- **A/S 140 KCAS Minimum, Flaps Up**

- **Complete After T/O and Climb Checklist**

- **Accelerate to Desired Climb Speed**

**NOTE:** If runway length or obstacle clearance is critical, set power to torque/psi or temp maximum, whichever occurs first. Retard power levers as required to maintain maximum allowable torque/psi 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>
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<tr>
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B: NOT MODIFIED BY S/B 036 AND S/B 092
B+: MODIFIED BY S/B 036 AND S/B 092

TAKE OFF SPEEDS

ROTATE

FLAPS 5°

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<tr>
<th>ROTATE</th>
<th>B</th>
<th>B+</th>
<th>D</th>
<th>F</th>
<th>G</th>
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<th>D</th>
<th>F</th>
<th>G</th>
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</table>

B: NOT MODIFIED BY S/B 036 AND S/B 092
B+: MODIFIED BY S/B 036 AND S/B 092

Federal Aviation Administration, DOT
MU-2B B, D (-10), F (-20), G (-30)

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

<table>
<thead>
<tr>
<th>FLAP SETTING</th>
<th>VXSE(KCAS)</th>
<th>YSE(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>127 / 140 / 140</td>
</tr>
<tr>
<td>20°</td>
<td>100 / 125 / 125</td>
<td>102 / 130 / 135</td>
</tr>
</tbody>
</table>

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

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

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 (G) 100 KCAS MINIMUM (B, D, F).

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

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

A/S 150 KCAS MIN (IF FLAPS 5° INSTALLED) FLAPS UP*
MU-2B B (-10), F (-20), G (-30)

TAKE-OFF ENGINE FAILURE ON RUNWAY

**CAUTION**

SIMULATED ENGINE FAILURE OR MALFUNCTION IS TO BE GIVEN BY INSTRUCTOR AT NOT MORE THAN 50% 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.

POWER SET, BRAKES RELEASED

**CLEAR RUNWAY OR EVACUATE AIRCRAFT AS NECESSARY**

**NOTIFY TOWER OF ABORT**

**CAUTION**

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

* IF EVACUATING AIRCRAFT, BOTH CONDITION LEVERS TO EMERGENCY STOP AND MASTER SWITCH TO EMERGENCY
WARNING
DO NOT LET AIRSPEED
DECELERATE BELOW SINGLE
ENGINE AIRSPEED
105KCAS (G) 100KCAS (B, D, F)

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

ENGINE FAILS

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

POWER SET, RELEASE BRAKES

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,
105K KCAS (G) 100K KCAS (B, D, F)

REVERSE AS REQUIRED,
BRAKES AS REQUIRED

CAUTION
ANTICIPATE SWERVE
TOWARD OPERATING
ENGINE WHEN
ENTERING BETA

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

STEEP TURNS

*CLEAR AREA, GEAR UP, FLAPS UP, A/S 180K, 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.

*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°

CHECK FOR A/S AND ALTITUDE TRENDS

REDUCE POWER TO MAINTAIN 180K

ROLL OUT ON HEADING ON ALT.

**START ROLL OUT 20° BEFORE ROLL OUT HEADING
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 110K IN ALL CONFIGURATIONS.
**APPROXIMATE POWER SETTINGS ARE:

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>5° FLAP TORQUE (32%) OR PSI (21) PER ENGINE</th>
<th>APPROX PITCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAN</td>
<td>APPROX PITCH +12</td>
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</tr>
<tr>
<td>5° FLAP</td>
<td>APPROX PITCH +8</td>
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</tr>
<tr>
<td>20° FLAP</td>
<td>APPROX PITCH +4</td>
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</tr>
<tr>
<td>40° FLAP</td>
<td>APPROX PITCH 0</td>
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</tr>
</tbody>
</table>

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

STALL SPEEDS (APPROXIMATE)
AT MAXIMUM GROSS TAKEOFF WEIGHT
B, B+, D, F, G

<table>
<thead>
<tr>
<th>ANGLE OF BANK</th>
<th>5°</th>
<th>15°</th>
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</thead>
<tbody>
<tr>
<td>FLAPS UP</td>
<td>95/ 98/ 98/ 102/ 104</td>
<td>98/ 98/ 98/ 104/ 106</td>
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<tr>
<td>5°</td>
<td>85/ 88/ 88/ 95/ 98</td>
<td>88/ 88/ 88/ 97/ 100</td>
</tr>
<tr>
<td>20°</td>
<td>80/ 81/ 81/ 85/ 89</td>
<td>81/ 83/ 83/ 87/ 88</td>
</tr>
<tr>
<td>40°</td>
<td>72/ 73/ 73/ 77/ 80</td>
<td>73/ 74/ 74/ 78/ 81</td>
</tr>
</tbody>
</table>

Vmc: 15°/ 20°/ 25°/ 30°/ 35°/ 40°/ 45°/ 50°/ 55°/ 60°/ 65°/ 70°/ 75°/ 80°/ 85°/ 90°/ 95°/ 100°

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

CAUTION
STALL WARNING MAY ACTIVATE 4 TO 9 KTS ABOVE STALL
MU-2B, D (-10), F (-20), G (-30)

ONE ENGINE INOPERATIVE MANEUVERING
LOSS OF DIRECTIONAL CONTROL

CLEAR AREA, CONDITION LEVERS TO AND LAND, SYNC OFF — SET ONE POWER LEVER TO ZERO THRUST TO SIMULATE FAILED ENGINE (VARIES BETWEEN 5% AND 17% TORQUE OR 3 TO 11 PSI)

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

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 1 KCAS PER SECOND

AT Vmc PLUS 10 KCAS, ADD POWER TO SIMULATED OPERATIVE ENGINE AND RECOVER TO STRAIGHT AND LEVEL FLIGHT

A/S 125KCAS TRIMMED FOR STRAIGHT AND LEVEL FLIGHT

MIN ALT. 5,000 AGL

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

WARNING
IF STALL WARNING ACTIVATES, REDUCE PITCH AND POWER ON SIMULATED OPERATIVE ENGINE, AND RECOVER

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 10 KCAS, BECAUSE EARLY RECOGNITION AND RECOVERY IS THE PRIMARY OBJECTIVE OF THIS MANEUVER.

Vmc: 20° FLAPS (90KCAS G, 93KCAS F, 89KCAS D, 89/91KCAS B) 0° FLAPS (99KCAS G, 100KCAS F, 97K D, 97/99KCAS B)

(Vmc speed consult serial number applicability in AFM)

VSe 125K

C-7
CLEAR AREA, CONDITION LEVERS T/O AND LAND, SYNC OFF – 129KCAS-130KCAS AIRCRAFT Trimmed

20% TORQUE OR 10 PSI

MAINTAIN LEVEL FLIGHT

TRIM FOR 129KCAS

CALL THE "STALL"

20% TORQUE OR 10 PSI

STALL SPEEDS
FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
<table>
<thead>
<tr>
<th>FLAPS SET</th>
<th>0</th>
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<th>40</th>
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<td>GR WT.</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>
</tr>
<tr>
<td>7,000</td>
<td>85/ 85/ 85</td>
<td>76/ 76/ 80</td>
<td>70/ 70/ 72</td>
<td>63/ 63/ 64</td>
</tr>
<tr>
<td>7,500</td>
<td>88/ 88/ 85/</td>
<td>78/ 78/ 83/</td>
<td>73/ 73/ 74/</td>
<td>66/ 66/ 67/</td>
</tr>
<tr>
<td>8,000</td>
<td>90/ 90/ 91/ 90</td>
<td>81/ 81/ 86/ 84</td>
<td>75/ 75/ 77/ 74</td>
<td>68/ 68/ 69/ 69</td>
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<td>93/ 93/ 94/ 93</td>
<td>83/ 83/ 88/ 87</td>
<td>78/ 78/ 79/ 77</td>
<td>70/ 70/ 71/ 71</td>
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<tr>
<td>8,930</td>
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<td>86/ 81/ 81/ 79</td>
<td>72/ 72/ 73/ 73</td>
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<td>/95/ 87/ 87</td>
<td>/81/ 81/ 81/ 81</td>
<td>/81/ 81/ 81/ 81</td>
</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 120KCAS-130KCAS TRIMMED AIRCRAFT

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

INITIATE 30° BANK IN LEVEL FLIGHT

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.

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

AS A/S INCREASES, CLIMB TO ORIGINAL ALTITUDE

AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° RETRACT FLAPS TO 5°.

INCREASE PITCH TO APPROX. 10°, 130 KCAS (F, MOD SIR10), 140 KCAS (F, NOT MOD SIR10), 130 KCAS (B, D), 140KCAS (G)

STALL SPEEDS FOR STALL SPEEDS SEE TABULAR CHART ON REVERSE SIDE OF PROFILE.
### STALL SPEEDS (APPROXIMATE)
**AT MAXIMUM GROSS TAKEOFF WEIGHT**

<table>
<thead>
<tr>
<th>BANK ANGLE</th>
<th>10</th>
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<th>30</th>
<th>40</th>
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<tbody>
<tr>
<td><strong>FLAPS</strong></td>
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<tr>
<td><strong>B, B+, D, F, G</strong></td>
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</tr>
<tr>
<td><strong>20°</strong></td>
<td>80/ 82/ 86/ 87</td>
<td>82/ 84/ 88/ 89</td>
<td>86/ 87/ 92/ 93</td>
<td>91/ 93/ 97/ 98</td>
<td>99/101/107/108</td>
<td>113/114/120/122</td>
</tr>
<tr>
<td><strong>40°</strong></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>
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

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

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.

AFTER GEAR IS FULLY
RETRACTED, IF FLAPS 20°
RETRACT FLAPS TO 5°,
INCREASE PITCH TO
APPROX. 10°, 130 KCAS (F,
MOD SIR10), 140 KCAS (F, NOT
MOD SIR10), 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.
<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></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,000</td>
<td>86/</td>
<td>86/</td>
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<td>70/</td>
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<tr>
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<td>88/</td>
<td>85/</td>
<td>78/</td>
<td>73/</td>
</tr>
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<td>90/</td>
<td>86/</td>
<td>81/</td>
<td>75/</td>
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<td>93/</td>
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<td>83/</td>
<td>78/</td>
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<td>8,930</td>
<td>95/</td>
<td>85/</td>
<td>79/</td>
<td>72/</td>
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<tr>
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<td>/ 86/</td>
<td>/ 80/</td>
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</tr>
<tr>
<td>9,350</td>
<td>/ 97/</td>
<td>/ 81/</td>
<td>/ 73/</td>
<td></td>
</tr>
<tr>
<td>9,500</td>
<td>/ 99/</td>
<td>/ 83/</td>
<td>/ 75/</td>
<td></td>
</tr>
<tr>
<td>9,920</td>
<td>/101/</td>
<td>/ 95/</td>
<td>/ 85/</td>
<td>/ 76/</td>
</tr>
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<tr>
<td>10,800</td>
<td>/105/</td>
<td>/ 98/</td>
<td>/ 87/</td>
<td>/ 81/</td>
</tr>
</tbody>
</table>

**STALL SPEEDS**
**MU-2B B, D (10), F (20), G (30)**

**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

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.
### StALL SPEEDS (APPROXIMATE)

**At Maximum Gross Takeoff Weight**

<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><strong>FLAPS</strong></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>
</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 150KCAS min.
- Power levers F1, condition levers T/O and Land Sync Off. Gear and Flaps extend at speeds based on schedule for model and Sr10 compliance until Full Flaps are deployed.
- Simulate explosive decompression at assigned altitude. Oxygen masks on. "Declare Emergency" *While clearing the area, coordinate with air traffic control to clear traffic at lower altitudes.
- Establish descent in a 30° bank, nose down approximately 20° until reaching maximum full flap speed allowed (Vfe). Then raise nose to maintain speed.
- After establishing descent, roll wings level. Continue descent on steady heading or as required by ATC.
- 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.
- 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.

G-12
<table>
<thead>
<tr>
<th>Gear</th>
<th>GEAR AND FLAP EXTEND SCHEDULE</th>
<th>(F+ AND G+ ARE MODIFIED BY S/R10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G, G+:</td>
<td><strong>GEAR</strong></td>
<td></td>
</tr>
<tr>
<td>B, D, F, F+:</td>
<td>160KCAS</td>
<td></td>
</tr>
<tr>
<td>G, G+:</td>
<td>170KCAS</td>
<td></td>
</tr>
<tr>
<td>FLAPS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G: NOT MODIFIED BY S/R10</td>
<td>146KCAS</td>
<td>146KCAS</td>
</tr>
<tr>
<td>G+: MODIFIED BY S/R10 AND</td>
<td>175KCAS</td>
<td>146KCAS</td>
</tr>
<tr>
<td>F: NOT MODIFIED BY S/R10</td>
<td>140KCAS</td>
<td>140KCAS</td>
</tr>
<tr>
<td>F+: MODIFIED BY S/R10 AND</td>
<td>175KCAS</td>
<td>140KCAS</td>
</tr>
<tr>
<td>B, D, F</td>
<td>140KCAS</td>
<td>140KCAS</td>
</tr>
</tbody>
</table>
'CLEAR AREA, CRUISE CONFIGURATION START AT ASSIGNED ALTITUDE. A/S 150KCAS MIN.

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

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

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).

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)
EMERGENCY DESCENT (HIGH SPEED)
Upon recognition of a nose high unusual attitude, power to takeoff.

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.

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

*Clear area

MU-2B B, D (-10), F (-20), G (-30)

Unusual attitude recovery (nose high)
MU-2B B, D (-10), F (-20), G (-30)
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.

*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.

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.
MU-2B B (-10), F (-20), G (-30)

NORMAL LANDING (20° or 40° FLAPS)

**COMPLETE DESCENT CHECKLIST**

- **PROPS Beta.**
  - Then reverse as required, braking as required.

- **TOUCHDOWN.**
  - Power levers retard to flight idle stop.
  - Throttle 20° torque, 16 PSI Vef.

- **LANDING ASSURED, FLAPS 20° or 40°.**
  - A/S slowing to Vef.
  - Check sink rate 500-600 FPM.

- **A/S 120KCAS MINIMUM DESCENT.**
  - 500-600 FPM (20-25% torque, 13-16 PSI).

- **STABILIZED APPROACH BY 500 FPM.**

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

- **FLAPS 20° A/S 120-130KCAS.**
  - 500 FPM sink rate. (Approx 25% torque, 16 PSI).

- **A/S 150K MINIMUM.**
  - (25-30% torque, 16-20 PSI).

- **FLAPS 20° COMPLETE LANDING CHECKLIST.**

- **GEAR DOWN.**

- **LANDING APPROACH SPEEDS.**
  - For landing approach speeds see tabular chart on reverse side of profile.

- **COMPLETE DESCENT PARALLEL TO RUNWAY.**
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>B</th>
<th>B+ D</th>
<th>F</th>
<th>G</th>
<th>B</th>
<th>B+ D</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
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<td>92</td>
<td>93</td>
<td>94</td>
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<td>109</td>
<td></td>
<td></td>
<td>117</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After gear is fully retracted, if flaps 20° retract flaps to 5°. Increase pitch to approx. 10°, 130 KCAS (F, not MOD SR/10), 130 KCAS (B, D), 140 KCAS (G). When landing rejected, apply max power, pitch 8° up and select flaps 20° if 40° previously selected. Normal approach, stabilized and configured for landing. Positive rate of climb, gear up, if 20° flaps 113 KTS min. If 5° flaps 120 KCAS (G) 125 KCAS (B, D, F). A/S 140K FLAPS UP. Accelerate to desired climb speed. Complete after to and climb checklist.

MU-2B B, D (-10), F (-20), G (-30)
GO AROUND - REJECTED LANDING
CAUTION
DO NOT SELECT REVERSE UNTIL BELOW 90K CAS WITH NOSE WHEEL ON GROUND COMPLETE DESCENT AND APPROACH CHECKLISTS

MU-2B, D (-10), F (-20), G (-30)
NO FLAP OR 5° FLAP LANDING

NOTE
LANDING DISTANCE WILL INCREASE APPROXIMATELY 30%
NO FLAP Vref 1.25 VS1
(BUT NOT BELOW 110KCAS (B, B+, D, F) 115KCAS (G))
USE FOR FLAP UP OR 5°
B, B+, D, F, G

<table>
<thead>
<tr>
<th>FLAPS UP</th>
<th>FLAPS 5°</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>B</td>
</tr>
<tr>
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<tr>
<td>10.000</td>
<td>127</td>
</tr>
<tr>
<td>10.260</td>
<td>128</td>
</tr>
</tbody>
</table>
CAUTION
ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA

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

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

MU-2B B, D (-10), F (-20), G (-30)
ONE ENGINE INOPERATIVE LANDING

ANTICIPATE SWERVE TOWARD OPERATING ENGINE WHEN ENTERING BETA

MAINTAIN TRACK PARALLEL TO RUNWAY

THRESHOLD: 20% TORQUE, 13 PSI.
Vref. 110 KCAS (G)
105 KCAS (F)
100 KCAS (B, D)

CHECK SINK RATE.
300-600 FPM

WHEN LANDING ASSURED, FLAPS 20°. A/S 110 KCAS (G), 105 KCAS (F), 100 KCAS (B, D) MIN. COMPLETE LANDING CHECKLIST, Rudder Trim Centered, Hold Ball in Center With Rudder

B, D / F / G

FLAP SETTING

UP
5°
20°

B, D / F / G

FLAP SETTING

VSE(KCAS)

130 / 135 / 140
115 / 130 / 130
100 / 125 / 125

VSE(KCAS)

135 / 150 / 150
120 / 140 / 140
105 / 130 / 135

CHECK SINK RATE.
500 - 600 FEET PER MINUTE

CHECK GLIDE PATH, IF LANDING ASSURED, GEAR DOWN. (APPROX 40% TORQUE, 26 PSI)

CHECK SINK RATE.
300-600 FPM

CHECK SINK RATE.
300-600 FPM

CHECK SINK RATE.
300-600 FPM

CHECK SINK RATE.
300-600 FPM

CHECK SINK RATE.
300-600 FPM

CHECK SINK RATE.
300-600 FPM
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 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.**
ILS AND MISSED APPROACH

MU-2B B, D (-10), F (-20), G (-30)

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

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

APPROACHING GLIDESLOPE APPROX 25% TORQUE, 16 PSI.

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

25-32% TORQUE, 15-20 PSI

TOUCHDOWN; POWER LEVERS RETARD TO FLIGHT IDLE STOP.

LANDING APPROACH SPEEDS

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

PROPS BETA; REVERSE AS REQUIRED. BRAKES AS REQUIRED.

GERAR DOWN, COMPLETE LANDING CHECKLIST

THRESHOLD; (20% TORQUE, 13 PSI) Vref

APPROACHING SILDE SLOPE APPROX 25% TORQUE, 16 PSI.

WHEN LANDING ASSURED, FLAPS 20°, (OR 40° BELOW 120K)
### 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+</td>
</tr>
<tr>
<td>7,000</td>
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<td>92</td>
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<tr>
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<tr>
<td>10,260</td>
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<td></td>
</tr>
</tbody>
</table>
MU-2B B, D (-10), F (-20), G (-30)

TWO ENGINE MISSED APPROACH

WHEN LANDING REJECTED, APPLY MAX POWER, PITCH UP 8° AND SELECT FLAPS 20° IF 40° PREVIOUSLY SELECTED

AFTER GEAR IS FULLY RETRACTED, IF FLAPS 20° RETRACT FLAPS TO 9°. INCREASE PITCH TO APPROX. 10°. 130 KCAS (F, MOD S/R10), 140 KCAS (F, NOT MOD S/R10), 130 KCAS (B, D), 140 KCAS (G)

POSITIVE RATE OF CLIMB. GEAR UP, IF 20° FLAPS 113 KTS MIN. IF 5° FLAPS 120 KCAS (G), 125 KCAS (B, D, F)

A/S 140KCAS

ACCELERATE TO DESIRED CLIMB SPEED

COMPLETE AFTER TAKEOFF CHECKLIST

MAP

MU-2B B, D (-10), F (-20), G (-30)

TWO ENGINE MISSED APPROACH
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, 45 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

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

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

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

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

MISSED APPROACH:
CONTINUE WITH ENGINE OUT MISSED APPROACH PROFILE

REVERSE AS REQUIRED. BRAKES AS REQUIRED.

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

CHECK GEAR DOWN APPROACHING GLIDE SLOPE (ONE DOT BELOW G/S)
ONE ENGINE INOPERATIVE MISSED APPROACH

APPROX 300-400 FEET (OBSTRUCTION CLEARANCE). IF FLAPS 20\(^\circ\) ADJUST PITCH TO ACCELERATE: 130 KCAS (F, MOD S/R10), 140 KCAS (F, NOT MOD S/R10), 130 KCAS (B, D), 140 KCAS (G) FLAPS TO 5\(^\circ\), PITCH APPROX. 10\(^\circ\)

COMMENCING MISSED APPROACH, SET MAX POWER, MAINTAIN DIRECTIONAL CONTROL, RUDDER AND SPOILER AS NECESSARY. GEAR UP. PITCH TO MAINTAIN \(140\) KCAS

AFTER GEAR IS FULLY RETRACTED, PITCH 10\(^\circ\)

A/S 150 KCAS, COMPLETE AFTER TAKEOFF CHECKLIST

A/S 140 KCAS, MINIMUM FLAPS UP

*IF TRANSITIONING FROM A DESCENT, MAINTAIN PITCH TO MAINTAIN 140 KCAS, RAISE GEAR, THEN 10\(^\circ\) PITCH. SOME ALTITUDE LOSS IS TO BE EXPECTED.

WARNING
UNDER CERTAIN COMBINATIONS OF WEIGHT, TEMPERATURE AND PRESSURE ALTITUDE, WITH LANDING GEAR DOWN AND FLAPS 20\(^\circ\). SINGLE ENGINE GROUND MAY NOT BE POSSIBLE AT ALTITUDES OF LESS THAN 400 FEET AGL.
MU-2B B, D (-10), F (-20), G (-30)
NON-PRECISION AND MISSED APPROACH

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

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

25-30% TORQUE, 16-20 PSI

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

A/S 120K MIN, 25-30% TORQUE, 16-20 PSI 800-1000 FPM DESCENT

MAP

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

A/S 120K MIN, APPROX 50% TORQUE, 32 PSI

A/S 120K MIN, 25-30% TORQUE, 16-20 PSI

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

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

20-25% TORQUE, 13-16 PSI DESCEND 500 FPM
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20° (1.3 VSIL)</th>
<th>FLAPS 40° (1.5 VSIL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>B+</td>
</tr>
<tr>
<td>7,000</td>
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<td>115</td>
</tr>
<tr>
<td>10,260</td>
<td>109</td>
<td>117</td>
</tr>
</tbody>
</table>
ONE ENGINE INOPERATIVE NON-PRECISION AND MISSED APPROACH

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

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

WARNING
DO NOT ATTEMPT A 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.

40-50% TORQUE, 26-32 PSI FLAPS 9° DESCEND 500 FPM

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.

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

FLAPS 9°, 50-60% TORQUE, 32-40 PSI

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

A/S 150KCAS (140KCAS MIN G) (135KCAS MIN F) (130KCAS MIN B, D) (APPROX 70% TORQUE, 45 PSI) APPROACH CHECKLIST. REVIEW APPROACH PLATE. RADIOS: TUNE & IDENTIFY. CHECK FIX CROSSING ALTITUDE.
MU-2B B, D (-10), F (-20), G (-30)

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

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

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

THRESHOLD: 25% TORQUE, 13 PSI VRref

CHECK SINK RATE 500-600 FPM

FLAPS 20° OR 40° SLOWING TO Vref

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

DO NOT DESCEND UNTIL WITHIN 30° OF RUNWAY CENTERLINE

CHECK V/ACTUAL MINIMUMS, FLAPS 20° COMPLETE LANDING CHECKLIST

MU-2B B, D (-10), F (-20), G (-30)

CAT C 121 - 140 KCAS 1.7NM

CAT D 141 - 165 KCAS 2.3NM

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

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

THRESHOLD: 25% TORQUE, 13 PSI VRref

CHECK SINK RATE 500-600 FPM

FLAPS 20° OR 40° SLOWING TO Vref

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

DO NOT DESCEND UNTIL WITHIN 30° OF RUNWAY CENTERLINE

CHECK V/ACTUAL MINIMUMS, FLAPS 20° COMPLETE LANDING CHECKLIST

MU-2B B, D (-10), F (-20), G (-30)

CAT C 121 - 140 KCAS 1.7NM

CAT D 141 - 165 KCAS 2.3NM

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

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

THRESHOLD: 25% TORQUE, 13 PSI VRref

CHECK SINK RATE 500-600 FPM

FLAPS 20° OR 40° SLOWING TO Vref

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

DO NOT DESCEND UNTIL WITHIN 30° OF RUNWAY CENTERLINE

CHECK V/ACTUAL MINIMUMS, FLAPS 20° COMPLETE LANDING CHECKLIST
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>B</th>
<th>B+</th>
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(d) 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 Liftoff—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).

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**MU-2B B, 0 (-10), F (-20), G (-30)
ONE ENGINE INOPERATIVE CIRCLING APPROACH AT WEATHER MINIMUMS**

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

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

---

**CAUTION**: DO NOT ATTEMPT A GO-AROUND WITH GEAR DOWN BELOW 400' AGL OR AFTER 20" FLAPS ARE SELECTED.
Federal Aviation Administration, DOT

(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 3-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.

(B) During stalling maneuvers and upon recognition of the indication of a stall, 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.

(C) During accelerated stall maneuvers, it is important that the instructor pay close attention to the position of the ball through-out 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.

(D) 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 VMCG, at a speed of approximately 10 knots above actual VMCG.

Note: To accurately simulate single engine operations, zero thrust must be established. The zero thrust torque 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
§ 91.1 14 CFR Ch. 1 (1–1–14 Edition)

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 configuration 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 decision making.


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