PILOT CHECKLIST
YET 06220A
MITSUBISHI HEAVY INDUSTRIES AMERICA INC.
4951 AIRPORT PARKWAY TEL: (972) 934-5480
SUITE 800 FAX: (972) 934-5488
ADDISON, TEXAS 75001

MITSUBISHI SERVICE PUBLICATIONS TRANSMITTAL

The attached Mitsubishi MU-2B series Service Publication has been issued by Mitsubishi Heavy Industries, Ltd. in Japan, who is the type certificate holder of the MU-2 aircraft. It is the owner and/or operator's responsibility to adhere to or comply with new information contained in the attached publication.

NOTE

THIS PUBLICATION IS PRINTED AND/OR DISTRIBUTED BY TURBINE AIRCRAFT SERVICES, INC., ADDISON, TEXAS UNDER CONTRACT WITH MITSUBISHI HEAVY INDUSTRIES AMERICA, INC., UNDER LICENSE FROM MITSUBISHI HEAVY INDUSTRIES LTD. ADDRESS ALL COMMENTS OR INQUIRIES REGARDING DISTRIBUTION OF THIS PUBLICATION OR RECEIPT OF ANY OF THE PUBLICATIONS LISTED HEREIN TO:

Turbine Aircraft Services Inc.
4550 Jimmy Doolittle Drive,
Addison, Texas 75001
USA

Attention: Rick Wheldon
Phone: (972) 248-3108 X 209
Fax: (972) 248-3321

FAA Accepted July 18, 2006
Intentionally Left Blank
LIST OF EFFECTIVE PAGES

This document is an abbreviation of the procedures contained in the FAA Approved Airplane Flight Manual, MR-0273-1. Dates of issue for original and changed pages are:

Original ORIG July 18, 2006 Includes AFM Rev 14

<table>
<thead>
<tr>
<th>Page No.</th>
<th>Revision No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction INTRO-1 to INTRO-10</td>
<td>ORIG</td>
</tr>
<tr>
<td>Normal Procedures N-1 to N-24</td>
<td>ORIG</td>
</tr>
<tr>
<td>Emergency Table of Contents E-TOC-1 to E-TOC-4</td>
<td>ORIG</td>
</tr>
<tr>
<td>Emergency Procedures E-1 to E-12</td>
<td>ORIG</td>
</tr>
<tr>
<td>Abnormal Table of Contents A-TOC-1 to A-TOC-4</td>
<td>ORIG</td>
</tr>
<tr>
<td>Abnormal Procedures A-1 to A-6</td>
<td>ORIG</td>
</tr>
<tr>
<td>Expanded Normal Procedures NX-1 to NX-50</td>
<td>ORIG</td>
</tr>
<tr>
<td>Expanded Emergency Procedures EX-1 to EX-26</td>
<td>ORIG</td>
</tr>
<tr>
<td>Expanded Abnormal Procedures AX-1 to AX-12</td>
<td>ORIG</td>
</tr>
<tr>
<td>Performance P-1 to P-14</td>
<td>ORIG</td>
</tr>
</tbody>
</table>

FAA Accepted July 18, 2006
MU-2 CHECKLISTS

This document is an abbreviation of the checklists and procedures contained in Section 3 (Emergency Procedures), Section 4 (Abnormal Procedures), and Section 5 (Normal Procedures) of the FAA Approved Airplane Flight Manual (AFM). It is provided as an aid to cockpit management. The checklist consists of an abbreviated checklist and an expanded checklist. In the abbreviated checklist, applicable warnings, cautions and notes have been omitted for brevity. Also, detailed procedures for accomplishing the checklist items are not included. Consequently, operators using the abbreviated checklist must be fully familiar with and operate in accordance with the official applicable AFM. The expanded checklist includes most but not all warnings, cautions and notes, as well as tips for accomplishing the various procedures.

The abbreviated and expanded checklists are sub-divided into a normal procedures section, an abnormal procedures section, and an emergency procedures section.

These checklists are consistent with known configurations of the airplane as originally delivered, or as later modified and incorporated into the AFM by MHI. However, the operator must review these checklists to ensure that any modifications installed in the operator's specific aircraft after original delivery are properly incorporated. MHI assumes no responsibility for the incorporation of procedures for after market installations.

When revisions to Sections 3, 4, or 5 of the AFM are incorporated into the AFM, MHIA will provide revisions to this checklist to all operators subscribing to the revision service for the checklist. The checklists must be updated by the operator accordingly.

For normal procedures, checklist items can (and in most cases should) be accomplished before the checklist is executed. This means that the pilot can and should accomplish his functions as circumstances and good judgment dictate. The checklist then becomes verification that the items have not been forgotten. The normal procedures checklist has been designed as a "check-list" rather than a "do-list."
Some items on the checklists have optional positions for proper compliance, such as flaps on the takeoff checklist. Where a response of "AS REQUIRED" is listed on the checklist, the pilot should state the condition (or position) of the item involved (such as "on", "closed", "20 degrees", "guard down", etc.)

A normal procedures checklist typically should not be started until sufficient time and attention can be devoted to its expeditious completion. Groupings have been selected so that the reading can be accomplished quickly with minimal interruptions.

In Section 3 (Emergency Procedures), some procedures have steps which are highlighted. The operator would be expected to comply with those steps by memory in the event of an actual malfunction. Otherwise, good cockpit discipline would require the operator to open and refer to the Emergency or Abnormal Checklist during the execution of the applicable procedure. Even with the highlighted items, there will generally be no need to hurry the procedure. Emphasis should be placed on accurately, rather than rapidly, accomplishing the procedure.

There are some procedures in the AFM which do not lend themselves to a checklist format, but which nevertheless must be followed when circumstances dictate. Examples would include the normal operation of all systems such as the autopilot or anti-icing systems and the various climb and cruise profiles and procedures. Operators are expected to be familiar with all systems and procedures contained in the AFM and know when and how to use them regardless of whether or not a checklist has been published.

When accomplishing these checklists, operators must always be aware that their first and foremost responsibility is to maintain control of the airplane. Primary attention should be given to airspeed and altitude control. Situational awareness must also be constantly maintained. It is essential for the operator to always place the airplane at appropriate altitudes and airspeeds for the current and forecast conditions. While many maneuvers contained in the checklists will specify airspeeds at certain points in the procedure, neither the presence nor the absence of such specifications in the checklists in any way relieves the
operator of the responsibility to control the airplane at all times. Also, steps in the various AFM procedures which should be accomplished routinely by a competent operator throughout a flight, such as “engine instruments...monitor” or “power... set as required,” are typically removed from the checklists. Again, neither the presence nor the absence of such specifications in the checklists in any way relieves the operator of the responsibility to accomplish those various tasks.

**INTRODUCTION TO MU-2B-60 TAKEOFF CLIMB PERFORMANCE CHARTS**

Engine failure during takeoff is an event that the pilot must be prepared for when planning a flight for any aircraft. Pilot actions depend on where in the takeoff the engine failure is recognized. For an engine failure prior to liftoff, the decision must be to abort and stop straight ahead. For an engine failure after liftoff, the decision will depend on the climb capability of the airplane at the takeoff configuration, weight, altitude, and temperature.

To aid the pilot in making a decision to continue or abort a takeoff in event of an engine failure immediately after liftoff, climb performance charts have been developed. Two charts are presented for each takeoff flap setting as a function of altitude, temperature and gross weight. The first presents the rate of climb capability for the airplane with gear fully retracted and at a speed of $V_{YSE}$. The second presents the maximum weight for positive rate of climb with the gear down at the $V_{50}$ ft speed. These data are based on achieving takeoff power per the power assurance charts in the Airplane Flight Manual with the bleed air selector off.

It is suggested that the pilot not make a takeoff where the $V_{YSE}$ rate of climb chart at the selected flap position indicates a single engine climb capability of less than 200 feet per minute with takeoff flaps and gear retracted. A reduction in gross weight and/or waiting for a lower ambient temperature should improve the residual climb capability.

Acceleration and climb capability of the MU-2B-60 is very high with both engines producing takeoff power. Therefore, the airplane usually transits the critical low speed/low altitude environment quickly, and it is in the pilot’s best interest to accelerate as quickly as possible towards $V_{YSE}$. These
performance charts are intended to inform the pilot of the climb capability in this critical area immediately after liftoff. There are two conditions for engine failure that are addressed with these performance charts:

1) If an engine failure is recognized immediately after liftoff, with the gear still extended, a chart presents the maximum weight for positive climb rate. If the takeoff weight exceeds this weight, a landing straight ahead should be made. The decision to abort immediately after liftoff can be made in the pilot's pre-flight planning.

2) If an engine failure is recognized with the gear retracting and after an altitude of approximately 75 ft AGL has been attained, the takeoff may be continued (assuming that the weight, altitude, temperature, and flap position chart indicates a comfortable positive rate of climb and obstacle clearance is not a consideration.)

Flight tests have demonstrated that a takeoff through 50 ft AGL and subsequent land-back will require approximately 7,000 ft of runway at sea level and moderate weights. High density altitudes will increase this requirement. A land-back, even with some damage to the airplane, is preferable to attempting to continue a takeoff with low or negative climb capability.

Flight tests have also shown that the airplane can be successfully accelerated through the gear and flap retraction sequence if an engine failure is recognized after an altitude of approximately 75 ft AGL if the airplane has residual climb capability as determined from the rate of climb chart presented in this section.

As with any in-flight emergency, the pilot's number one job is to maintain control of the airplane. The decision to abort or continue the takeoff should be part of the pilot's preflight planning routine.
**PREFLIGHT CHECK (COCKPIT AND CABIN)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oxygen Cylinder</td>
<td>OPEN, CHECK</td>
</tr>
<tr>
<td>2</td>
<td>Oxygen Outlet Valve and Gauge</td>
<td>OPEN, CHECK</td>
</tr>
<tr>
<td></td>
<td>(Copilot's Side Panel)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Emer Gear Extension Handle</td>
<td>DOWN AND SAFETIED</td>
</tr>
<tr>
<td>4</td>
<td>Gear Handle</td>
<td>DOWN</td>
</tr>
<tr>
<td>5</td>
<td>Parking Brake</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>6</td>
<td>Left Switch Panel</td>
<td>CHECK</td>
</tr>
<tr>
<td>7</td>
<td>Static Source Select</td>
<td>NORMAL STATIC SOURCE</td>
</tr>
<tr>
<td>8</td>
<td>Other Switches</td>
<td>OFF</td>
</tr>
<tr>
<td>9</td>
<td>Battery Key Switch</td>
<td>ON</td>
</tr>
<tr>
<td>10</td>
<td>Battery Temp Warning</td>
<td>TEST</td>
</tr>
<tr>
<td>11</td>
<td>Main Bus Tie (on ground)</td>
<td>CHECK</td>
</tr>
<tr>
<td>12</td>
<td>Inverter Switch</td>
<td>STBY then MAIN</td>
</tr>
<tr>
<td>13</td>
<td>Control Lock</td>
<td>REMOVE AND STOWED</td>
</tr>
<tr>
<td>14</td>
<td>Fuel</td>
<td>CHECK</td>
</tr>
<tr>
<td>15</td>
<td>Instrument Panel</td>
<td>CHECK</td>
</tr>
<tr>
<td>16</td>
<td>Center Pedestal</td>
<td>CHECK</td>
</tr>
<tr>
<td>17</td>
<td>Flaps</td>
<td>SET FOR TAKEOFF</td>
</tr>
<tr>
<td>18</td>
<td>Trim</td>
<td>CHECK &amp; SET</td>
</tr>
<tr>
<td>19</td>
<td>Right Switch Panel</td>
<td>CHECK</td>
</tr>
<tr>
<td>20</td>
<td>Overhead Switch Panel</td>
<td>CHECK</td>
</tr>
<tr>
<td>21</td>
<td>Warning and Indicator Lights</td>
<td>CHECK</td>
</tr>
<tr>
<td></td>
<td>(SRL FAILED ANNUNCIATORS ILLUMINATED)</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Inverter Switch</td>
<td>OFF</td>
</tr>
<tr>
<td>23</td>
<td>Battery Key Switch</td>
<td>OFF</td>
</tr>
<tr>
<td>24</td>
<td>Fire Extinguisher</td>
<td>CHECK</td>
</tr>
<tr>
<td>25</td>
<td>Publications &amp; Documents</td>
<td>ON BOARD</td>
</tr>
<tr>
<td>26</td>
<td>Load and Baggage</td>
<td>SECURE</td>
</tr>
<tr>
<td>27</td>
<td>Emergency Exit Door</td>
<td>SECURED</td>
</tr>
<tr>
<td>28</td>
<td>Seat Backs</td>
<td>UPRIGHT</td>
</tr>
<tr>
<td>29</td>
<td>Table</td>
<td>STOWED AND COVERED</td>
</tr>
</tbody>
</table>
PREFLIGHT CHECK (EXTERIOR)

1 LH WING TRAILING EDGE
   1 General Condition..................................CHECK
   2 Flap, Spoiler and Trim Aileron..................CHECK
   3 Tailpipe, EGT Probes and Turbine..................CHECK
   4 Static Discharger..................................CHECK

2 LH WING TIP TANK, LEADING EDGE AND NACELLE
   1 General Condition..................................CHECK
   2 Tip Tank Filler Cap...............................CHECK FOR SECURITY
   3 Wing Tip & Taxi Lights............................CHECK
   4 Wing Tie Downs....................................REMOVED
   5 Ice Inspection Light...............................CHECK
   6 Fuel Leakage........................................CHECK
   7 Main/Outer Fuel Tank Filler Caps..................CHECK FOR SECURITY
   8 Main/Outer Fuel Tank Vent Ports...................CHECK FOR OBSTRUCTION
   9 Engine Air Intake....................................CHECK FOR DAMAGE AND FOREIGN OBJECTS
  10 Engine Air Intake Drain Valve
     (Applicable to S/N 1535SA and subsequent)........PRESS; NOTE ANY EXCESSIVE FLUID DRAINAGE
  11 Nacelle/Doors and Latches..........................GENERAL CONDITION AND LATCHES SECURED
  12 Oil Level.............................................CHECK
     (BETWEEN FULL AND ADD); CAP SECURED
  13 Nacelle Door (Oil Access).........................LOCKED

FAA Accepted July 18, 2006
14 Oil Leakage ............................................ CHECK
15 Oil Cooler Inlet Anti-Icing Boots .................................................... CHECK FOR TEARS AND ABRASIONS
16 Propeller ............................................. CHECK FOR FLAT PITCH AND FREE ROTATION (Normal Direction of Rotation)
17 Deicing Boots ............................................ CHECK FOR TEARS AND ABRASIONS

3 NOSE AND FORWARD SECTION OF FUSELAGE
1 LH Forward Main Gear Door .................. CHECK
2 General Condition .................................. CHECK
3 Pitot Tube Covers .................................. REMOVE
4 Pitot-Static Holes .................................. CHECK FOR OBSTRUCTION
5 Lower Rotation Beacon (if installed) .................. CHECK
6 Landing Lights .................................. CHECK
7 Nose Landing Gear Strut .................................. CHECK FOR EXTENSION
8 Uplimit Mechanism .................................. CHECK
9 Nose Landing Gear Doors .................. CHECK FOR SECURITY
10 Nose Gear Torque Link .................. CONNECTED
11 Tire Inflation/Condition .................. CHECK
12 Static Wire .................................. CHECK
13 Nose Landing Gear Tie Downs and Chocks .................. REMOVE
14 Windshield .................................. CHECK FOR CLEANLINESS AND DAMAGE
15 Windshield Wipers .................................. CHECK CONDITION AND SECURITY
16 RH Forward Main Gear Door .................. CHECK
4 RH WING NACELLE, LEADING EDGE, AND TIP TANK

1. General Condition .................................. CHECK
2. Stall Warning Vane .................................. CHECK
3. Deicing Boots ....................................... CHECK

   FOR TEARS AND ABRASIONS

4. Propeller ........................................... CHECK FOR FLAT PITCH AND FREE ROTATION
   (Normal Direction of Rotation)

5. Oil Cooler Inlet Anti-Icing Boots ...................... CHECK

   FOR TEARS AND ABRASIONS

6. Oil Leakage ............................................ CHECK
7. Nacelle Door (Oil Access) ........................ LOCKED
8. Oil Level ............................................... CHECK

   (BETWEEN FULL AND ADD); CAP SECURED


10. Engine Air Intake Drain Valve ....................... PRESS; NOTE ANY EXCESSIVE FLUID DRAINAGE

11. Engine Air Intake ..................................... CHECK FOR DAMAGE AND FOREIGN OBJECTS

12. Main/Outer Fuel Tank Vent Ports ...................... CHECK FOR OBSTRUCTION

13. Main/Outer Fuel Tank Filler Caps ..................... CHECK FOR SECURITY
14 Fuel Leakage........................................CHECK
15 Wing Tie Downs....................................REMOVED
16 Wing Tip & Taxi Lights..........................CHECK
17 Tip Tank Filler Cap..............................CHECK FOR SECURITY

5 RH WING TRAILING EDGE
1 General Condition.................................CHECK
2 Static Discharger..................................CHECK
3 Tailpipe, EGT Probes and Turbine.................CHECK
4 Flap, Spoiler and Trim Aileron.....................CHECK

6 RH CENTER AND REAR SECTION OF FUSELAGE
1 General Condition.................................CHECK
2 Main Landing Gear Door..........................CHECK FOR SECURITY
3 Main Landing Gear Strut and Tire..................CHECK FOR EXTENSION AND PROPER INFLATION
4 Main Landing Gear Brake Disc and Wheel Well........CHECK
5 Landing Gear Door Ground Control Switch........NORMAL AND SAFETIED
6 Main Landing Gear...............................REMOVE CHOCKS
7 Ram-Air Intake.................................CHECK FOR OBSTRUCTIONS
8 Aft Fuselage Tie Down............................REMOVE
9 Cooling Air Discharge Duct.......................CHECK FOR DAMAGE AND FOREIGN OBJECTS
7 EMPENNAGE
1 General Condition .................................. CHECK
2 External Surface Locks .......................... REMOVE
3 Control Surface and Tabs ......................... CHECK
4 Upper Rotating Beacon .......................... CHECK
5 Tail Light ............................................. CHECK
6 Deicing Boots ..................................... CHECK FOR TEARS AND ABRASIONS

8 LH REAR AND CENTER SECTIONS OF FUSELAGE
1 General Condition ................................. CHECK
2 Cooling Air Intake .................................. CHECK FOR DAMAGE AND FOREIGN OBJECTS
3 External Power Receptacle
   Door ................................................. CHECK
4 Battery Vent ...................................... CHECK FOR DAMAGE AND FOREIGN OBJECTS
5 Main Landing Gear ................................. REMOVE CHOCKS
6 Main Landing Gear Brake
   Disc and Wheel Well ............................. CHECK
7 Main Landing Gear Strut
   and Tire ......................................... CHECK FOR EXTENSION AND PROPER INFLATION
8 Main Landing Gear Door ........................... CHECK FOR SECURITY
9 Ejector Exhaust Port .............................. CHECK FOR OBSTRUCTIONS
<table>
<thead>
<tr>
<th>BEFORE STARTING ENGINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Passenger Briefing...........................................COMPLETE</td>
</tr>
<tr>
<td>2 Seat..........................................................ADJUSTED</td>
</tr>
<tr>
<td>3 Safety Belts and</td>
</tr>
<tr>
<td>\hspace{1cm} Shoulder Harness.................................FASTEN</td>
</tr>
<tr>
<td>4 Parking Brake..................................................SET</td>
</tr>
<tr>
<td>5 Takeoff Data..................................................COMPUTED</td>
</tr>
<tr>
<td>6 Circuit breakers..............................................CHECK</td>
</tr>
<tr>
<td>7 Radio Masters..................................................OFF</td>
</tr>
<tr>
<td>8 Battery Key Switch..........................................ON</td>
</tr>
<tr>
<td>9 DC Generator................................................OFF</td>
</tr>
<tr>
<td>10 Inverter Switch......................STBY or MAIN</td>
</tr>
<tr>
<td>11 Cabin &amp; Pilot Comm Door...............................LOCKED</td>
</tr>
<tr>
<td>12 APU................................................AS REQUIRED</td>
</tr>
<tr>
<td>13 Fuel Quantity................................................CHECK</td>
</tr>
<tr>
<td>14 Cabin Sign, Rotating Beacon,</td>
</tr>
<tr>
<td>\hspace{1cm} Nav Light........................................SET</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STARTING ENGINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Battery Select Switch........................................AS REQUIRED</td>
</tr>
<tr>
<td>2 SRL Switches................................................ON</td>
</tr>
<tr>
<td>3 Both Run-Crank-Stop Switches..................................RUN</td>
</tr>
<tr>
<td>4 EGT........................................................CHECK</td>
</tr>
<tr>
<td>\textit{If FEATHER VALVE CHECK is not required,}</td>
</tr>
<tr>
<td>\textit{Proceed to 6}</td>
</tr>
<tr>
<td>5 Feather Valve Check........................................ACCOMPLISH</td>
</tr>
<tr>
<td>6 Power Levers................................................HALF INCH</td>
</tr>
<tr>
<td>\hspace{1cm} FORWARD</td>
</tr>
<tr>
<td>\hspace{1cm} OF FLIGHT IDLE</td>
</tr>
<tr>
<td>7 Condition Levers...............................................TAXI</td>
</tr>
<tr>
<td>8 Start Selector Switch........................................AS REQUIRED</td>
</tr>
<tr>
<td>9 Propellers................................................CLEAR AND</td>
</tr>
<tr>
<td>\hspace{1cm} ON LOCKS</td>
</tr>
<tr>
<td>10 Engine Start/NTS Check.......................................ACCOMPLISH</td>
</tr>
<tr>
<td>11 Battery Recharge...........................................AS REQUIRED</td>
</tr>
<tr>
<td>12 Other Engine..............................................START,</td>
</tr>
<tr>
<td>\hspace{1cm} REPEATING</td>
</tr>
<tr>
<td>\hspace{1cm} SEQUENCE</td>
</tr>
<tr>
<td>(Step 8- 10)</td>
</tr>
</tbody>
</table>
# AFTER STARTING ENGINES

1. Engine Instruments ......................................... CHECK
2. APU .................................................. DISCONNECT
3. Generators Switches ......................................... EITHER LH OR RH ON
4. Voltammeter (Main Bus Tie Check) ........................... CHECK
5. Generator Switches (Main Bus Tie Check) .................. BOTH ON AND CHECK
6. Radio Master Switches ......................................... ON
7. Battery Select Switch ....................................... PARALLEL
8. Fuel Transfer ................................................ AUTO
9. Start Select Switch ........................................ AIR START AND SAFE
10. Cabin Air .................................................. BOTH
11. De-ice/Anti-ice System Check .................. AS REQUIRED
   a. PITOT AND STATIC ANTI-ICE SYSTEM
   b. STALL WARNING ANTI-ICE SYSTEM
   c. PROPELLER ANTI-ICE SYSTEM
   d. ENGINE INTAKE AND OIL COOLER AIR INTAKE ANTI-ICE SYSTEMS
   e. HEATED WINDSHIELD ANTI-ICE SYSTEM
   f. WING AND EMPENNAGE DEICE SYSTEM
12. Overspeed Governor Check ................................. AS REQUIRED
13. Single Red Line (SRL) /Delta P ....................... CHECK (PROPS ON LOCKS)
14. Flaps .................................................. SET FOR TAKEOFF
15. Flight Controls ........................................... FREE
16. Auto-pilot ............................................... CHECK
17. Trim Tabs ................................................ SET
18. Start Locks ............................................. DISENGAGE
19. Supplemental NTS ....................................... CHECK
20. Annunciator Panel & Warning Lights ........................ CLEAR
21. Landing Lights/Taxi Lights .............................. AS REQUIRED
# Preflight Operation Check

<table>
<thead>
<tr>
<th>Item</th>
<th>Power Lever</th>
<th>Condition Lever</th>
<th>Check Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Speed Taxi</td>
<td>Ground Idle</td>
<td>Taxi</td>
<td>1. Engine Speed must be 76.5% - 78.5% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Beta Range annunciator normally illuminated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Oil Pressure minimum 40 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Fuel Pressure minimum 15 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. No Caution Lights illuminated</td>
</tr>
<tr>
<td>High Speed Taxi</td>
<td>Ground Idle</td>
<td>Takeoff Land</td>
<td>1. Engine Speed must be 96% - 97% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Beta Range annunciator must be illuminated</td>
</tr>
<tr>
<td>Reverse</td>
<td>Reverse</td>
<td>Takeoff Land</td>
<td>1. Engine Speed must be above 94.5% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Beta Range annunciator must be illuminated</td>
</tr>
<tr>
<td>Takeoff</td>
<td>Takeoff</td>
<td>Takeoff Land</td>
<td>1. Engine Speed must be 99.5% - 101% RPM</td>
</tr>
<tr>
<td></td>
<td>Power Position</td>
<td></td>
<td>2. Oil Pressure must be 70 - 120 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Beta Range annunciator must be extinguished</td>
</tr>
</tbody>
</table>

## Taxi

1. Brakes & Steering ........................................... CHECK
2. Flight Instruments ......................................... CHECK
3. Power ..................................................... SET AS REQUIRED  
   (Maintain Minimum 76.5% RPM)
### BEFORE TAKEOFF

1. Lights ........................................... AS REQUIRED
2. De-ice & Anti-ice .......................... AS REQUIRED
3. Transponder ........................................ ON
4. Radar ................................................... AS REQUIRED
5. Cabin Air ........................................... AS REQUIRED
6. Flaps .................................................. SET FOR TAKEOFF
7. Ignition ........................................... AS REQUIRED
8. Condition Levers ............................... TAKEOFF LAND
9. Friction ............................................. SET
10. Trim Tabs ........................................... SET
11. Engine Instruments .............................. CHECK
12. Annunciator Panel & Warning Lights .......... CLEAR
13. Heading ............................................. CHECK

### TAKEOFF SPEEDS

#### FLAPS 5°

<table>
<thead>
<tr>
<th>Weight (LBS)</th>
<th>VR</th>
<th>V50</th>
<th>VXSE</th>
<th>VYSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,575</td>
<td>109</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>11,000</td>
<td>106</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>10,000</td>
<td>101</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>9,000</td>
<td>100</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
</tbody>
</table>

#### FLAPS 20°

<table>
<thead>
<tr>
<th>Weight (LBS)</th>
<th>VR</th>
<th>V50</th>
<th>VXSE</th>
<th>VYSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,575</td>
<td>105</td>
<td>113</td>
<td>125</td>
<td>135</td>
</tr>
<tr>
<td>11,000</td>
<td>103</td>
<td>113</td>
<td>125</td>
<td>135</td>
</tr>
<tr>
<td>10,000</td>
<td>100</td>
<td>113</td>
<td>125</td>
<td>135</td>
</tr>
<tr>
<td>9,000</td>
<td>100</td>
<td>113</td>
<td>125</td>
<td>135</td>
</tr>
</tbody>
</table>
### AFTER TAKEOFF

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Setting/Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Landing Gear</td>
<td>UP</td>
</tr>
<tr>
<td>2</td>
<td>Landing Light</td>
<td>RETRACT</td>
</tr>
<tr>
<td>3</td>
<td>Flaps</td>
<td>RETRACT ON SCHEDULE</td>
</tr>
<tr>
<td>4</td>
<td>Airspeed (Normal Climb)</td>
<td>155 KCAS MINIMUM</td>
</tr>
<tr>
<td>5</td>
<td>Power</td>
<td>MAXIMUM CONTINUOUS</td>
</tr>
<tr>
<td>6</td>
<td>Cabin Air</td>
<td>BOTH</td>
</tr>
<tr>
<td>7</td>
<td>Ignition</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>8</td>
<td>De-ice &amp; Anti-ice</td>
<td>AS REQUIRED (ADD 10% KCAS IN ICING)</td>
</tr>
<tr>
<td>9</td>
<td>Cabin Pressurization</td>
<td>SET</td>
</tr>
<tr>
<td>10</td>
<td>Engine Instruments</td>
<td>CHECK</td>
</tr>
<tr>
<td>11</td>
<td>Synchrophaser</td>
<td>SET</td>
</tr>
</tbody>
</table>
VISIBLE MOISTURE ENCOUNTERS

CAUTION
DURING ALL OPERATIONS IN VISIBLE MOISTURE, CAREFULLY MONITOR EGT. DO NOT ALLOW EGT TO EXCEED 650°C.

FLIGHT IN ICING CONDITIONS

WARNING
PILOTS SHOULD BE AWARE THAT OPERATION OF THE AUTOPILOT'S VERTICAL MODES MAY RESULT IN AN UNSAFE AIRSPEED IF ICE ACCUMULATES ON THE AIRPLANE.

IN ORDER TO MINIMIZE ICE ACCUMULATIONS ON UNPROTECTED LOWER SURFACES, MAINTAIN A MINIMUM SPEED OF 180 KIAS DURING OPERATIONS IN SUSTAINED CRUISE IN ICING CONDITIONS.

IF UNABLE TO MAINTAIN 180 KIAS AT MAXIMUM CONTINUOUS POWER, A CHANGE OF ALTITUDE AND/OR COURSE MAY BE NECESSARY TO MAINTAIN MINIMUM AIRSPEED AND/OR EXIT THE ICING CONDITIONS.

DURING LANDING, DO NOT SELECT 40° FLAPS WHEN OPERATING IN ICING CONDITIONS.
### CLIMB (18000') / CRUISE

1. Taxi Lights .......................................................... OFF  
2. Cabin Sign .......................................................... AS REQUIRED  
3. Altimeters ......................................................... SET  
4. Cabin Pressurization ........................................... CHECK  
5. Fuel Balance and Transfer ................................... CHECK  
6. Generator Load .................................................. CHECK  
7. Anti-Ice/Deice Systems ......................................... AS REQUIRED  
   (180 KCAS MINIMUM IN ICING)  
8. Oxygen/Crew Mask ............................................... CHECK  
9. Power .............................................................. SET AS REQUIRED  
   (96% RPM TO 98% RPM)  
10. Engine Instruments ............................................. MONITOR

### DESCENT

1. Cabin Altitude .................................................... SET  
2. Fuel Transfer ..................................................... AS REQUIRED  
3. Altimeters .......................................................... SET  
4. Windshield Defog .................................................. AS REQUIRED  
5. Ignition ............................................................ AS REQUIRED  
6. Anti-Ice/Deice ...................................................... AS REQUIRED  
   (ADD 10% KCAS IN ICING)  
7. Taxi Lights .......................................................... SET
APPROACH

1. Landing Data .................................................. COMPUTED
2. Fuel Quantity/Balance ........................................... CHECK
3. Synchrophaser .................................................. OFF
4. Differential Pressure ................................ .......... ZERO
5. Condition Levers .............................................. TAKEOFF LAND
6. Power .......................................................... AS REQUIRED
7. Flaps .......................................................... 5° (below 175 KCAS)
8. Airspeed ......................................................... 140 KCAS MINIMUM
9. Cabin Sign ....................................................... ON
10. Anti-Ice System ................................................. AS REQUIRED

(ADD 10% KCAS IN ICING)

LANDING THRESHOLD SPEED (Vref)

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20°</th>
<th>FLAPS 40°</th>
</tr>
</thead>
<tbody>
<tr>
<td>11025 LBS</td>
<td>110</td>
<td>119</td>
</tr>
<tr>
<td>10500 LBS</td>
<td>108</td>
<td>116</td>
</tr>
<tr>
<td>10000 LBS</td>
<td>105</td>
<td>114</td>
</tr>
<tr>
<td>9500 LBS</td>
<td>102</td>
<td>111</td>
</tr>
<tr>
<td>9000 LBS</td>
<td>100</td>
<td>108</td>
</tr>
</tbody>
</table>

BEFORE LANDING

1. Landing Gear .................................................. DOWN
2. Landing Lights ............................................... AS REQUIRED
3. Brakes ........................................................ CHECK
4. Flaps ........................................................ AS REQUIRED
5. Ignition ....................................................... AS REQUIRED
6. Wing Deice .................................................... OFF
7. Condition Levers ............................................ RECHECK

TAKEOFF LAND

8. AP/Yaw Damper ............................................... OFF
AFTER LANDING

1. Power Levers .................................. GROUND IDLE
2. BETA RANGE Annunciators .................. ILLUMINATED
3. Power Levers .................................. REVERSE
   (AS REQUIRED)
4. Power Levers .................................. GROUND IDLE
   WHEN
   REVERSING
   COMPLETED
5. Ignition ........................................ OFF
6. Condition Levers ............................... TAXI
7. Anti-ice ........................................ OFF
8. Lights ......................................... AS REQUIRED
9. Rader & Transponder .......................... STBY
10. Flaps ........................................... AS REQUIRED
11. Trim Tabs ...................................... RESET

STOPPING ENGINES

1. Power Levers .................................. GROUND IDLE
2. Radio Masters .................................. OFF
3. Engine Shutdown ............................... ACCOMPLISH
4. Parking Brake .................................. AS REQUIRED
5. OVERHEAD Switch Pannel .................... OFF
6. Oxygen Outlet Valves ......................... CLOSED
7. Cabin Air Selector ............................ OFF
8. Fuel Transfer Switch ......................... OFF
9. DC Generator Switch .......................... OFF
10. Inverter ....................................... OFF
11. Other Switches ................................ OFF
12. Battery Key Switch ........................... OFF
13. Flight Control Lock ......................... INSTALL
14. Oxygen Cylinder Valve ...................... CLOSED
SECURING

1. Chocks .................................................. INSTALL
2. Nose Gear Torque Link ...................... DISCONNECT
3. Plugs & Covers ...................................... INSTALL
4. Parking Brake ................................................ OFF
5. Bag & Cabin Lights ......................................... OFF

TURNAROUND

1. Park airplane into wind if possible
2. Manually turn engine rotating group in direction of normal rotation.

CRANKING

1. Battery Select Switch ................. PARALLEL
   or SERIES
2. Main Fuel Valve Switches ................. OPEN
3. Run-Crank-Stop Switch ................. CRANK
4. Start Selector Switch ............. LH GND START or
   RH GND START
5. Engine Start Switch ................ PRESS and HOLD
6. Engine Start Switch .................. RELEASE
INFLIGHT NTS CHECK (FEATHERING OPERATION)

1. Recommended Airspeed: 150-180 KCAS
2. Recommended Altitude: 5000 AGL MIN, DAY - VFR ONLY
3. Synchrophaser: OFF
4. Power Lever: FLIGHT IDLE
5. DC Generator Switch: OFF
6. Amperage: CHECK
7. Bleed Air (engine to shut down): OFF
8. Ignition (engine to shutdown): OFF
9. Run-Crank-Stop Switch: STOP (HOLD TO 50% RPM)
10. Condition Lever: EMERGENCY STOP (AT 30% RPM)
11. Airstart: ACCOMPLISH
SYSTEM OPERATION

1 SYNCHROPHASER
1 Engines ........................................ SYNCHRONIZE
   MANUALLY
   (99.5% Maximum)
2 Synchrophaser Control
   Switch .................................................. ON
3 To Change Blade
   Relationship
   Between Propellers ................................ ADJUST PHASE
   SELECT AS NECESSARY

2 ENGINE CONTINUOUS IGNITION SYSTEM
(If Auto-Ignition System is not installed)
1 Continuous Ignitions .................................. ON
2 Both Indicator Lights .......................... ILLUMINATED

3 AUTO-IGNITION SYSTEM
(If Auto-Ignition System is installed)
AUTOMATIC OPERATION
1 Ignition Switches ................................ AUTO
2 Annunciator Lights ...................... EXTINGUISHED
CONTINUOUS OPERATION
1 Ignition Switches .................................... CONT
2 Annunciator Lights .......................... ILLUMINATED

4 FUEL TRANSFER SYSTEM
1 L and R Fuel Transfer
   Switches ........................................ AUTO
2 Appropriate Fuel Transfer
   Control Switch .................................. OFF
5 AIR CONDITIONING AND PRESSURIZATION SYSTEM

HEATING/COOLING/PRESSURIZATION

1 Manual Pressure
   Control Valve .................................... FULL INCREASE
2 Auto-Manual Selector Switch .................. AUTO
3 Cabin Supply Air
   Temperature Selector ........................... AS DESIRED
4 Cabin Air Selector Switch .................. BOTH (LH OR RH AS DESIRED)
5 Cabin Altitude Selector Knob ................ AS DESIRED
6 Cabin Rate Control Knob .................. AS DESIRED
7 Cabin Air Outlet Select Switch ........ AS DESIRED (CEILING OR FLOOR)
8 Forward Conditioned Air
   Outlet Knob ..................................... NORMAL

MAXIMUM COOLING

1 Cabin Supply Air
   Temperature Selector .......................... FULL COLD
   or Auto-Manual Selector Switch ............. MANUAL COLD
2 Air Outlets ................................... OPEN

MAXIMUM HEATING

1 Cabin Supply Air
   Temperature Selector .......................... FULL HOT
   or Auto-Manual Selector Switch ............. MANUAL HOT
2 Air Outlets ................................... OPEN

FORCED VENTILATION

1 Cabin Air Selector Switch .................. BOTH
2 Manual Pressure Control
   Valve ............................................ DECREASE
RAM AIR VENTILATION
1 Manual Pressure Control
   Valve..................................DECREASE UNTIL
   CABIN
   DIFFERENTIAL
   PRESSURE
   IS ZERO
2 Auto-Manual Selector Switch......................OFF
3 Cabin Air Selector Switch.........................RAM

WINDSHIELD DEFOG SYSTEM
1 Cabin Air Selector Switch.........................BOTH
2 Forward Conditioned Air
   Outlet Knob.................................DEFOG
3 Cabin Supply Air
   Temperature Selector......................FULL HOT
   or Auto-Manual Selector
   Switch.....................................MANUAL HOT

6 OXYGEN SYSTEM
SYSTEM USAGE
1 Cockpit Outlet Valve ....................FULL OPEN
2 Oxygen Mask...............................INSERT HOSE
   IN OUTLET,
   ROTATE 1/4 TURN
   CLOCKWISE TO
   DETENT POSITION
   DON MASK
3 Flow Indicator..................CONFIRM OXYGEN
   FLOW BY
   ABSENCE OF RED
   LINE INDICATOR
   IN HOSE
AFTER USING
1 Cockpit Outlet Valve ..................................CLOSE
2 Oxygen Mask........................................DISCONNECT
3 Oxygen Cylinder Shutoff Valve.......................CLOSE
   (after landing)

7 PITOT AND STATIC ANTI-ICE SYSTEM
1 Pitot & Static Anti-Ice Switches.......................ON
2 Loadmeter Select Switch..........................LH PITOT AND
   STATIC POSITION
3 Loadmeter
   OPERATING RANGE .............................. .50 TO .85
4 Loadmeter Select Switch.........................RH PITOT AND
   STATIC POSITION
5 Loadmeter
   OPERATING RANGE .............................. .50 TO .85
6 Pitot & Static Anti-Ice Switches...............ON

8 STALL WARNING ANTI-ICE SYSTEM
1 Stall Vane Anti-Ice Switch..........................ON
2 Loadmeter Select Switch........................STALL VANE
3 Loadmeter
   OPERATING RANGE .............................. .30 TO .70
4 Stall Vane Anti-Ice Switch.......................AS REQUIRED

9 PROPELLER ANTI-ICE SYSTEM
1 Prop Deice Switches...............................ON
2 Loadmeter Select Switch.......................POSITION TO
   LH PROP
3 Loadmeter
   OPERATING RANGE .............................. .85 TO 1.05
4 Loadmeter Select Switch.......................POSITION TO
   RH PROP
5 Loadmeter
   OPERATING RANGE .............................. .85 TO 1.05
6 Prop Deice Switches.........................AS REQUIRED
10 ENGINE INTAKE AND OIL COOLER AIR INTAKE ANTI-ICE SYSTEMS

1 Engine Intake Anti-Ice
   Switches................................................. ON

2 Indicator Lights........................................... ILLUMINATE

3 Oil Cooler Inlet Anti-Ice
   Switches................................................. ON

4 Indicator Lights........................................... ILLUMINATE

5 Engine Intake Oil Cooler
   Anti-Ice Switches.............................. AS REQUIRED

11 HEATED WINDSHIELD ANTI-ICE SYSTEM

INFLIGHT OPERATION

1 Windshield Heat Low
   Switches, LH and RH................................. ON

2 If Ice Forms, Hi Heat
   Switches.............................................. ON (L or R
   as Required)

3 When Ice Is Removed,
   Hi Heat Switches................................. OFF

WHEN CLEAR OF ICING CONDITIONS

1 Windshield Heat Low
   Switches LH and RH................................ ON

12 WING AND EMPENNAGE DEICE SYSTEM

INFLIGHT OPERATION

1 Wing Ice Light Switch.............................. ON (at night)

2 Wing Deice Switch................................. ON

3 Ice Accumulation on Wing
   Leading Edge.................................. MONITOR

4 Wing Deice Switch............................... OFF AFTER
   LEAVING ICING CONDITIONS AND
   AIRCRAFT IS CLEAR OF
   ACCUMULATED ICE
SEVERE ICING CONDITIONS

1. Wing Deice Switch ................. MANUALLY CYCLE
   6 SECONDS ON,
   10 SECONDS OFF

2. Wing Deice Switch .................. OFF AFTER
   LEAVING ICING
   CONDITIONS AND
   AIRCRAFT IS
   CLEAR OF
   ACCUMULATED
   ICE

BLENDING ANTI-ICE ADDITIVE TO FUEL

1. Using HI-FLO PRIST blender manufactured by PPG
   INDUSTRIES, INC., remove actuator cap.

2. Press valve button (attached to tube and clip
   assembly) into valve on top of can.

3. Reattach actuator cap by positioning onto can.

4. Place clip with tubing onto fuel nozzle.

5. To start flow, press actuator down fully. To stop flow,
   press tilt to side and return to normal position.

   Use can upright and start flow of PRIST after refueling
   begins (refueling should be at a minimum rate of 30
   gal/mm. to a maximum of 60 gal/mm.). A rate of less
   than 30 gal/mm. may be used when topping off tanks.

6. Stop flow of PRIST a moment before refueling stops.

ALTERNATE BLENDERS

If alternate blenders must be used such as PRIST
proportioner Model PRB-101 or AP-2, use instructions
furnished with blender.
## LANDING GEAR AND FLAP SYSTEMS - EXTEND/RETRACT CYCLES

<table>
<thead>
<tr>
<th>Landing Gear</th>
<th>Extension or Retraction: 17 seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flap Extension</td>
<td>Up to 5°: 17 seconds</td>
</tr>
<tr>
<td></td>
<td>5° to 20°: 10 seconds</td>
</tr>
<tr>
<td></td>
<td>20° to 40°: 6 seconds</td>
</tr>
<tr>
<td>Flap Retraction</td>
<td>40° to 20°: 4 seconds</td>
</tr>
<tr>
<td></td>
<td>20° to 5°: 10 seconds</td>
</tr>
<tr>
<td></td>
<td>5° to Up: 21 seconds</td>
</tr>
</tbody>
</table>
Intentionally Left Blank
# EMERGENCY AND ABNORMAL PROCEDURES

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PROCEDURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGINE</td>
<td>ENGINE FAILURE PRIOR TO LIFTOFF</td>
<td>E-1</td>
</tr>
<tr>
<td></td>
<td>ENGINE FAILURE AFTER LIFTOFF- CONTINUED</td>
<td>E-1</td>
</tr>
<tr>
<td></td>
<td>CLIMB NOT POSSIBLE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENGINE FAILURE AFTER LIFTOFF – CONTINUED</td>
<td>E-1</td>
</tr>
<tr>
<td></td>
<td>CLIMB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BETA LIGHT ON IN FLIGHT</td>
<td>E-1</td>
</tr>
<tr>
<td></td>
<td>AUTOIGNITION RELIGHT FAILURE</td>
<td>E-1</td>
</tr>
<tr>
<td></td>
<td>ENGINE SHUTDOWN</td>
<td>E-2</td>
</tr>
<tr>
<td></td>
<td>DRIFTDOWN</td>
<td>E-2</td>
</tr>
<tr>
<td></td>
<td>SINGLE ENGINE LANDING</td>
<td>E-3</td>
</tr>
<tr>
<td></td>
<td>SINGLE ENGINE GO-AROUND</td>
<td>E-4</td>
</tr>
<tr>
<td></td>
<td>ENGINE FIRE</td>
<td>E-4</td>
</tr>
<tr>
<td></td>
<td>AIRSTART</td>
<td>E-5</td>
</tr>
<tr>
<td></td>
<td>SRL SYSTEM FAILURE</td>
<td>A-1</td>
</tr>
<tr>
<td>FUEL</td>
<td>FUEL BOOST PUMP FAILURE</td>
<td>E-5</td>
</tr>
<tr>
<td></td>
<td>FUEL PRESSURE DROP A-1</td>
<td>A-1</td>
</tr>
<tr>
<td></td>
<td>TIP AUTO FUEL TRANSFER FAILURE- TIP MANUAL</td>
<td>A-1</td>
</tr>
<tr>
<td></td>
<td>OUTER AUTO FUEL TRANSFER FAILURE – OUTER MANUAL</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>OUTER FUEL TANK TRANSFER PUMP FAILURE</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>(EXCEPT 700SA)</td>
<td></td>
</tr>
<tr>
<td>ELECTRICAL/SMOKE</td>
<td>SMOKE AND FUME ELIMINATION</td>
<td>E-6</td>
</tr>
<tr>
<td></td>
<td>BATTERY OVERHEAT</td>
<td>E-9</td>
</tr>
<tr>
<td></td>
<td>L OR R DC GEN OUT</td>
<td>E-9</td>
</tr>
<tr>
<td></td>
<td>INVERTER FAIL – ON/OFF</td>
<td>E-10</td>
</tr>
<tr>
<td></td>
<td>INVERTER FAIL</td>
<td>E-10</td>
</tr>
<tr>
<td></td>
<td>L FEEDER OUT</td>
<td>E-10</td>
</tr>
<tr>
<td></td>
<td>R FEEDER OUT</td>
<td>E-11</td>
</tr>
</tbody>
</table>

FAA Accepted July 18, 2006
Page E-TOC-2
# EMERGENCY AND ABNORMAL PROCEDURES

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LANDING GEAR</strong></td>
<td>LANDING GEAR NOT FULLY RETRACTED</td>
<td>E-7</td>
</tr>
<tr>
<td></td>
<td>LANDING GEAR EMERGENCY EXTENSION</td>
<td>E-7</td>
</tr>
<tr>
<td><strong>AIR CONDITIONING/ PRESSURIZATION</strong></td>
<td>CABIN PRESS LOW PRESSURIZATION ANUNCIATOR ILLUMINATED</td>
<td>E-8</td>
</tr>
<tr>
<td></td>
<td>AIR COND SYS FAIL ANUNCIATOR ILLUMINATED</td>
<td>E-8</td>
</tr>
<tr>
<td></td>
<td>EMERGENCY DESCENT ANUNCIATOR ILLUMINATED</td>
<td>E-8</td>
</tr>
<tr>
<td><strong>FLIGHT CONTROLS</strong></td>
<td>PITCH TRIM RUNAWAY</td>
<td>E-11</td>
</tr>
<tr>
<td></td>
<td>TRIM AILERON TAB FAILURE</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>TRIM AILERON TAB RUNAWAY</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>NO FLAP APPROACH AND LANDING</td>
<td>A-3</td>
</tr>
<tr>
<td><strong>ICE PROTECTION</strong></td>
<td>INADVERTANT ICING ENCOUNTER</td>
<td>A-5</td>
</tr>
<tr>
<td></td>
<td>STATIC SYSTEM FAILURE</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>HEATED WINDSHIELD OVER TEMP ILLUMINATED</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>SEVERE ICING ENCOUNTER</td>
<td>A-5</td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td>DEFOG OVER TEMP ANNUNCIATOR ILLUMINATED</td>
<td>E-8</td>
</tr>
<tr>
<td></td>
<td>EMERGENCY EXIT DOOR OPERATION</td>
<td>A-4</td>
</tr>
<tr>
<td></td>
<td>P T/B PWR FAIL ANNUNCIATOR ILLUMINATED</td>
<td>A-3</td>
</tr>
<tr>
<td></td>
<td>CP T/B PWR FAIL ILLUMINATED</td>
<td>A-3</td>
</tr>
</tbody>
</table>
Mitsubishi Pilot Checklist
MU-2B-60 Marquise Emergency Procedures

ENGINE FAILURE PRIOR TO LIFTOFF
1. Power Levers .................................................. GROUND IDLE
2. Brakes .......................................................... AS REQUIRED
3. Reverse Thrust .................................................. AS REQUIRED

ENGINE FAILURE AFTER LIFTOFF - CONTINUED
CLIMB NOT POSSIBLE
1. Landing Gear ............................................................ DOWN
2. Power (operating engine) .......................................... AS REQUIRED
3. Flap ........................................................................ TAKEOFF
4. Land Straight Ahead .............................................. 105 KCAS MINIMUM

ENGINE FAILURE AFTER LIFTOFF - CONTINUED CLIMB
1. Landing Gear ............................................................ UP
2. Airspeed ................................................................. 140 KCAS MINIMUM
3. Flaps ........................................................................ 5°
4. Condition Lever (failed engine) ................................ EMERGENCY STOP
5. Power Lever (failed engine) .......................................... TAKEOFF
6. Landing Light ............................................................. RETRACT
7. Flaps ........................................................................ UP
8. Airspeed ................................................................. 150 KCAS MINIMUM
9. Power (operating engine) .......................................... AS REQUIRED
10. Engine Shutdown (failed engine) .............................. ACCOMPLISH

BETA LIGHT ON IN FLIGHT

With No Control Problem:
1. Engine Shutdown (affected engine) ............................... PRIOR TO LANDING

With Control Problem:
2. Engine Shutdown (affected engine) ............................... IMMEDIATE
3. Land Using Single Engine Procedures

AUTO IGNITION RELIGHT FAILURE
1. Failed ENG EGT and RPM ................................ CHECK
If EGT or RPM Abnormal
2. Condition Lever (failed engine) ................................ EMERGENCY STOP
3. Power Lever (failed engine) ........................................ TAKEOFF
4. Engine Shutdown .................................................. ACCOMPLISH
Mitsubishi Pilot Checklist  Section 3
MU-2B-60 Marquise  Emergency Procedures

ENGINE SHUTDOWN
1 Condition Lever (failed engine) .................................. EMERGENCY STOP
2 Power Lever (failed engine) ...................................... TAKEOFF
3 Trim ........................................................................ SET
4 Power (operating engine) .......................................... AS REQUIRED
5 DC Generator Switch (failed engine) ................................ OFF
6 Voltammeter (Main bus tie check in flight) ................ CHECK
7 DC Generator Load (operating engine) ...................... REDUCE
8 Cabin Air .......................................................... OP ENG OR RAM
9 Operating Engine Power Lever ................................ SET AS REQUIRED
10 Syncrophaser ...................................................... OFF
11 Ignition (failed engine) ............................................. OFF

DRIFTDOWN
1 Engine Shutdown (failed engine) .............................. ACCOMPLISH
2 Power (operating engine) ......................................... MAX CONTINUOUS
3 Airspeed .................................................................. 135 KCAS
   RECOMMENDED FOR PROLONGED DESCENT
4 Pressurization System ............................................. SELECT
   OPERATING ENGINE BLEED AIR
SINGLE ENGINE LANDING

1 Engine Shutdown (failed engine) .......... ACCOMPLISH

Descent Checklist (single engine)
2 Cabin Altitude ..................................................... SET
3 Fuel Transfer .................................................. TIP MAN OR OFF
4 Altimeters ......................................................... SET
5 Windshield Defog ........................................... AS REQUIRED
6 Ignition ............................................................ AS REQUIRED
7 Anti-Ice & De-Ice ........................................... AS REQUIRED
8 Taxi Lights .......................................................... SET

Approach Checklist (single engine)
9 Landing Data ....................................................... COMPUTED
10 Fuel Quantity & Balance ................................ CHECK
11 Syncrophaser .................................................. OFF
12 Differential Pressure ....................................... ZERO
13 Condition Lever (operating engine) ........ TAKEOFF LAND
14 Power Lever (operating engine) ............... AS REQUIRED
15 Cabin Sign ........................................................ ON
16 Windshield Heat ............................................... LOW
17 Cabin Air Selector Switch ......................... OFF OR RAM
18 Landing Gear ....................................................... UP
19 Flaps .................................................................. UP
20 Airspeed ........................................................... 150 KCAS
(140 KCAS MINIMUM)

Base Leg or Final Descent:
21 Flaps ................................................................. 5°
22 Airspeed ........................................................... 140 KCAS
(130 KCAS MINIMUM)
23 AP/Yaw Damper ............................................... OFF

Landing Assured:
24 Landing Gear ..................................................... DOWN
25 Power Lever (operating engine) ............... AS REQUIRED
26 Landing Lights .................................................. AS REQUIRED
27 Brakes ............................................................... CHECK
28 Flaps ................................................................. 20°
29 Ignition ............................................................. AS REQUIRED
30 Wing De-ice ....................................................... OFF
31 Airspeed ........................................................... 110 KCAS OVER RUNWAY

After touchdown:
32 Brakes ............................................................. AS REQUIRED
33 Reverse .......................................................... AS REQUIRED
SINGLE ENGINE GO AROUND

1. Condition Lever (operating engine) ......................................... TAKEOFF LAND
2. Power Lever (operating engine) ............................................. TAKEOFF
3. Landing Gear ........................................................................ UP
4. Landing Light ................................................................. RETRACT
5. Flaps ................................................................................. 5°
6. Airspeed ............................................................................ 140 KCAS
7. Flaps .................................................................................. UP (when positive climb established)
8. Cabin Air Selector Switch ..................................................... RAM OR OFF
9. Airspeed ............................................................................ 150 KCAS
10. Engine Anti-Ice ................................................................. AS REQUIRED

ENGINE FIRE

1. Condition Lever (failed engine) ........................................ EMERGENCY STOP
2. Power Lever (failed engine) ................................................. TAKEOFF
3. Fire Handle (failed engine) .................................................. PULL
4. Engine Shutdown .............................................................. ACCOMPLISH
5. Land As Soon As Possible
### AIRSTART

1. **Airspeed** ................................................. 100 KCAS TO 180 KCAS
2. **Altitude** ............................................ BELOW 20,000 FT
3. **SRL System** ............................................................. ON
4. **Syncrophaser** ......................................................... OFF
5. **EGT** ....................................................... BELOW 200°C (if feasible)
6. **Condition Lever** ........................................................ MINIMUM CRUISE
7. **Power Lever** ...................................................... HALF INCH FORWARD OF FLIGHT IDLE
8. **Start Selector Switch** ........................... AIRSTART & SAFE
9. **Ignition** ................................................................. OFF
10. **Run-Crank-Stop Switch** ........................................ RUN
11. **Unfeather Switch** ........................................ HOLD TO 30% RPM
12. **Condition Lever** ........................................................ AS REQUIRED
13. **Power Lever** ........................................................ AS REQUIRED
14. **Voltammeter (Main Bus Tie Check In Flight)** ............................................. CHECK
15. **DC Generator Switch** ........................................... ON / RESET IF NECESSARY
16. **Voltammeter** ................................................. 27 TO 29.5VDC
17. **Ignition Switch** ..................................................... AS REQUIRED
18. **Cabin Air Selector Switch** ............................................... BOTH
19. **Syncrophaser** ...................................................... AS REQUIRED

---

### FUEL BOOST PUMP FAILURE

1. **Fuel Boost Pump CB (faulty side)** .......... DISENGAGE
2. **Land As Soon As Possible**
SMOKE AND FUME ELIMINATION

*Known or Unknown Source:*
1. Oxygen Outlet Valve ........................................... OPEN
2. Oxygen Masks ........................................ DON AND USE

*Known Source:*
1. Faulty Circuit or System ......................... SWITCH OFF AND
   DISENGAGE CBs

*Unknown Source:*
1. Cockpit & Cabin Room
   Light Switches ............................................. ON
2. Master Switch ........................................... EMERGENCY
3. Battery Switches ........................................ BOTH ISOLATE
4. DC Generator Switches .............................. BOTH OFF
5. Inverter Switch ........................................ OFF
6. All Switches and Circuit Breakers ............. OFF
   or DISENGAGE
7. Master Switch ............................................. NORMAL
8. Battery, DC Generator Switches
   and Inverter Switch ................................. OFF

*If Smoke or Odor Stops:*
9. Switches and Circuits Breakers for
   Equipment Essential to the
   Particular Phase of Flight ............... ON OR ENGAGE
   ONE AT A TIME
   (attempt to isolate circuit)

*If Smoke or Odor Increases:*
10. Cabin Air Selector Switch ......................... RAM
11. Battery, DC Generator, and
    Inverter Switches ................................. OFF
12. Manual Pressure Control Valve ....... FULL DECREASE
13. Execute High Speed Descent To
    Low Altitude If Necessary
14. Pilot's Communication Door .................. OPEN
15. Emergency Exit ................................. OPEN (If feasible)

*If Smoke or Odor Persists:*
16. Land As Soon As Possible
LANDING GEAR NOT FULLY RETRACTED

1. Airspeed......................................................... 130KCAS
   MAXIMUM

2. Flap........................................................................ 5"

3. Landing Gear..................................................... DOWN
   If Green Lights Indicate Normal, but UNSAFE

4. Land as soon as practical
   If Green Lights Indicate Abnormal and UNSAFE

5. Landing Gear..................................................... DOWN
   If Green Lights and UNSAFE Light Indicate Normal

6. Land as soon as practical
   If Green Lights and Unsafe light........ CHECK NORMAL
   INDICATION

LANDING GEAR EMERGENCY EXTENSION

1. Airspeed......................................................... 130KCAS
   MAXIMUM

2. Flap........................................................................ 5"

3. Land Gear CBs (CONT, LG, DOOR)................................................. PULL

4. LG POS IND CB......................................................... ENGAGED

5. Landing Gear..................................................... DOWN

6. Landing Gear Emergency Handle .... PULL AND PUMP

7. Landing Gear Light................................................. CHECK
CABIN PRESS LOW ANNUNCIATOR ILLUMINATED

1. Oxygen .......................................................... AS REQUIRED
2. Cabin Pressurization Control ......................... CHECK
3. Manual Pressure Control Valve ..................... FULL INCREASE
4. Cabin Air Selector Switch ......................... BOTH OR OPER ENG
5. If Pressure Remains Low ....................... DESCEND TO ALTITUDE NOT REQUIRING OXYGEN

AIRCOND SYS FAIL ANNUNCIATOR ILLUMINATED

1. Cabin Air Selector Switch .................................. RH
2. Cabin Pressurization Control ......................... CHECK
3. Oxygen .......................................................... AS REQUIRED
4. Descend to Altitude Not Requiring Oxygen .......................... HIGH OR LOW SPEED DESCENT

If AIR COND SYS FAIL Annunciator Remains Illuminated

5. Cabin Air Selector Switch .................................. RAM

DEFOG OVER TEMP ANNUNCIATOR ILLUMINATED

1. Defog Sel Valve ........................................... FULL DEC
2. Cabin Air Selector Switch .................................. OFF
3. Emergency Descent ........................................ ASAP
4. Manual Pressure Control Valve ..................... FULL DEC
5. Cabin Air Selector Switch .................................. RAM

EMERGENCY DESCENT

High Speed Descent

1. Oxygen Mask/Valve ........................................ DON / OPEN
2. Power Levers ............................................. FLIGHT IDLE
3. Condition Levers ......................................... TAKEOFF LAND
4. Airspeed ...................................................... VMO/MMO

Low Speed Descent

1. Oxygen Mask/Valve ........................................ DON / OPEN
2. Power Levers ............................................. FLIGHT IDLE
3. Condition Levers ......................................... TAKEOFF LAND
4. Landing Gear ................................................ DOWN (BELOW 175 KCAS)
5. Flap ............................................................. 40° (BELOW 120 KCAS)
6. Airspeed ...................................................... VFE (155 KCAS MAXIMUM)
BATTERY OVERHEAT

BAT TEMP 120° Annunciator Illuminates:

If on Ground .............................................DO NOT TAKEOFF
AND MONITOR

If in Flight:
1 Temperature ...........................................MONITOR

If Temperature reaches 140°F:
2 BATTERY ISOLATION ...............................ISOLATE

BATTERY OVERTEMP Annunciator Illuminates:
If on Ground .............................................ABORT

If in Flight:
3 BATTERY ISOLATION ...............................ISOLATE

If Temperature Continues to Rise after Isolating
4 Land As Soon As Possible

If Battery has Cooled Below 120° F Approaching
Terminal Area:
5 BATTERY ISOLATION ...............................ON (FOR LANDING
TO PREVENT POWER
LOSS AT LOW RPM )

If BAT TEMP 120° Annunciator Reilluminates,
6 BATTERY ISOLATION ...............................ISOLATE

L OR R DC GEN OUT ANNUNCIATOR ILLUMINATED

1 GEN CONT AND GEN FIELD
   CBs (affected side) ...............................CHECK, IF OUT,
   RESET

If Light Remains Illuminated:
2 DC GEN Switch
   (affected side) ..................................RESET, THEN ON

If Light Is Not Extinguished:
3 DC GEN Switch
   (affected side) ..................................OFF
4 Voltammeters (Main Bus Tie
   Check in Flight) ..................................CHECK
5 DC Gen Load (operating engine) ...............REDUCE
   (if necessary)
INVERTER FAIL ANNUNCIATOR CYCLES ON/OFF

 Applies to S/N 700SA, 731SA through 798SA

1 Inverter.................................................................OFF
2 Fuel Quantity.....................................................CALCULATE
3 Engine Instruments (operating engine)..........................MONITOR
4 Alternate Flight Instruments.....................................USE
5 Land As Soon As Possible.

INVERTER FAIL ANNUNCIATOR ILLUMINATED

6 AC BUS refers to aircraft 799SA, 1501SA and up, and aircraft modified by Service Recommendation SR034/24-002.

1 Inverter.................................................................SELECT OTHER INVERTER

2 Affected POWER AND CONT CBs................................PULL

3 If Main Inverter Failed (6 AC BUS):
   a LH 115VAC POWER CB........................................PULL
   b LH 26VAC POWER CB........................................PULL

4 If Standby Inverter Failed (6 AC BUS):
   a RH 115VAC POWER CB........................................PULL
   b RH 26VAC POWER CB........................................PULL

If Inverter Fail Annunciator Illuminated After Selecting Other Inverter

5 Inverter.................................................................OFF
6 POWER AND CONT CBs
   (affected side)......................................................PULL
7 Fuel Quantity.....................................................CALCULATE
8 Engine Instruments (operating engine)..........................MONITOR
9 Alternate Flight Instruments.....................................USE
10 Land As Soon As Possible

L FEEDER OUT ANNUNCIATOR ILLUMINATED

1 Inverter.................................................................STANDBY
2 LH FEEDER CONT CB........................................CHECK, RESET
3 50 Amp BUS TIE CB..............................................CHECK, RESET
4 Electrical Load....................................................MONITOR
5 Check Electrical Diagram For Failed Items
R FEEDER OUT ANNUNCIATOR ILLUMINATES
1 Inverter................................................................. MAIN
2 RH FEEDER CONT CB................................. CHECK, RESET
3 50 Amp BUS TIE CB........................................ CHECK, RESET
4 Electrical Load.................................................. MONITOR
5 Check Electrical Diagram For Failed Items

PITCH TRIM RUNAWAY
1 TRIM A/P Disconnect................................. PRESS & HOLD
2 LH RADIO MASTER........................................ OFF
3 TRIM A/P Disconnect................................. RELEASE
4 Manual Trim.................................................. AS REQUIRED
5 Autopilot Master (if installed)............................... OFF
6 PITCH TRIM CB & AUTOPILOT
   CBs.......................................................... DISENGAGE
7 LH RADIO MASTER........................................... ON
Intentionally Left Blank
## EMERGENCY AND ABNORMAL PROCEDURES

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGINE materials</td>
<td></td>
</tr>
<tr>
<td>ENGINE FAILURE PRIOR TO LIFTOFF</td>
<td>E-1</td>
</tr>
<tr>
<td>ENGINE FAILURE AFTER LIFTOFF</td>
<td>E-1</td>
</tr>
<tr>
<td>ENGINE FAILURE AFTER LIFTOFF - CONTINUED</td>
<td>E-1</td>
</tr>
<tr>
<td>ENGINE SHUTDOWN</td>
<td>E-2</td>
</tr>
<tr>
<td>DRIFTDOWN</td>
<td>E-2</td>
</tr>
<tr>
<td>SINGLE ENGINE LANDING</td>
<td>E-3</td>
</tr>
<tr>
<td>SINGLE ENGINE GO-AROUND</td>
<td>E-4</td>
</tr>
<tr>
<td>ENGINE FIRE</td>
<td>E-4</td>
</tr>
<tr>
<td>AIRSTART</td>
<td>E-5</td>
</tr>
<tr>
<td>SRL SYSTEM FAILURE</td>
<td>A-1</td>
</tr>
<tr>
<td>FUEL boost pump</td>
<td>E-5</td>
</tr>
<tr>
<td>FUEL PRESSURE DROP</td>
<td>A-1</td>
</tr>
<tr>
<td>TIP AUTO FUEL TRANSFER</td>
<td>A-1</td>
</tr>
<tr>
<td>FAILURE- TIP MANUAL</td>
<td></td>
</tr>
<tr>
<td>OUTER AUTO FUEL TRANSFER FAILURE – OUTER</td>
<td>A-2</td>
</tr>
<tr>
<td>MANUAL</td>
<td></td>
</tr>
<tr>
<td>OUTER FUEL TANK TRANSFER PUMP FAILURE</td>
<td>A-2</td>
</tr>
<tr>
<td>(EXCEPT 700SA)</td>
<td></td>
</tr>
<tr>
<td>SMOKE AND FUME Elimination</td>
<td>E-6</td>
</tr>
<tr>
<td>BATTERY OVERHEAT</td>
<td>E-9</td>
</tr>
<tr>
<td>L OR R DC GEN OUT</td>
<td>E-9</td>
</tr>
<tr>
<td>INVERTER FAIL - ON/OFF</td>
<td>E-10</td>
</tr>
<tr>
<td>INVERTER FAIL</td>
<td>E-10</td>
</tr>
<tr>
<td>L FEEDER OUT</td>
<td>E-10</td>
</tr>
<tr>
<td>R FEEDER OUT</td>
<td>E-11</td>
</tr>
</tbody>
</table>
## EMERGENCY AND ABNORMAL PROCEDURES

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LANDING GEAR</strong></td>
<td>LANDING GEAR NOT FULLY RETRACTED</td>
<td>E-7</td>
</tr>
<tr>
<td></td>
<td>LANDING GEAR EMERGENCY EXTENSION</td>
<td></td>
</tr>
<tr>
<td><strong>AIR CONDITIONING/ PRESSURIZATION</strong></td>
<td>CABIN PRESS LOW ANUNCIATOR ILLUMINATED</td>
<td>E-8</td>
</tr>
<tr>
<td></td>
<td>AIR COND SYS FAIL ANUNCIATOR ILLUMINATED</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EMERGENCY DESCENT</td>
<td></td>
</tr>
<tr>
<td><strong>FLIGHT CONTROLS</strong></td>
<td>PITCH TRIM RUNAWAY</td>
<td>E-11</td>
</tr>
<tr>
<td></td>
<td>TRIM AILERON TAB FAILURE</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>TRIM AILERON TAB RUNAWAY</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>NO FLAP APPROACH AND LANDING</td>
<td>A-3</td>
</tr>
<tr>
<td><strong>ICE PROTECTION</strong></td>
<td>INADVERTANT ICING ENCOUNTER</td>
<td>A-5</td>
</tr>
<tr>
<td></td>
<td>STATIC SYSTEM FAILURE</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>HEATED WINDSHIELD OVER TEMP ILLUMINATED</td>
<td>A-2</td>
</tr>
<tr>
<td></td>
<td>SEVERE ICING ENCOUNTER</td>
<td>A-5</td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td>DEFOG OVER TEMP ANNUNCIATOR ILLUMINATED</td>
<td>E-8</td>
</tr>
<tr>
<td></td>
<td>EMERGENCY EXIT DOOR OPERATION</td>
<td>A-4</td>
</tr>
<tr>
<td></td>
<td>P T/B PWR FAIL ANNUNCIATOR ILLUMINATED</td>
<td>A-3</td>
</tr>
<tr>
<td></td>
<td>CP T/B PWR FAIL ILLUMINATED</td>
<td>A-3</td>
</tr>
</tbody>
</table>
**SINGLE RED LINE (SRL) SYSTEM FAILURE**

1. SRL Switches & Circuit Breakers...CHECK
   
   *If condition cannot be corrected:*

2. SRL Switch...OFF

3. EGT...MONITOR

4. Land as soon as practical

---

**FUEL PRESSURE DROP**

*With Engine Malfunction:*

1. Condition Lever (affected engine)...EMERG STOP

2. Main Fuel Valve Switch (affected side)...CLOSED

3. Engine Shutdown (Affected Eng)...ACCOMPLISH

4. Fuel Pressure (Operating Engine)...CHECK

---

**TIP AUTO FUEL TRANSFER FAILURE - TIP MANUAL**

1. Fuel Transfer Switch (for tank not transferring)...TIP MANUAL

2. Fuel Quantity Indicators...MONITOR

3. Tip Tank Quantity...400 LB MAXIMUM EACH AT LANDING

4. Fuel Unbalance...150 LB MAXIMUM AT LANDING
<table>
<thead>
<tr>
<th><strong>OUTER AUTO FUEL TRANSFER FAILURE - OUTER MANUAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fuel Transfer Switches ................................ BOTH OFF</td>
</tr>
<tr>
<td>2 Outer Pump Manual Switch ............................ MAN</td>
</tr>
<tr>
<td>3 Fuel Quantity Indicators ............................. MONITOR</td>
</tr>
<tr>
<td>4 Fuel Unbalance ....................................... 150 LB MAXIMUM AT LANDING</td>
</tr>
<tr>
<td>5 LH and RH OUTER FUEL EMP Lights .................... ILLUMINATE</td>
</tr>
<tr>
<td>6 Outer Pump Manual Switch ............................. OFF</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>OUTER FUEL TANK TRANSFER PUMP FAILURE (EXCEPT S/N 700SA)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <em>In AUTO mode:</em></td>
</tr>
<tr>
<td>a Fuel Transfer Switch ..................................... OFF</td>
</tr>
<tr>
<td>(defective side) ........................................</td>
</tr>
<tr>
<td>If Annunciator Remains Illuminated</td>
</tr>
<tr>
<td>b Fuel Transfer CONT Circuit Breaker (defective side) ........ PULL</td>
</tr>
<tr>
<td>2 <em>In MANUAL mode:</em></td>
</tr>
<tr>
<td>a Outer Pump Switch ........................................ OFF</td>
</tr>
<tr>
<td>b Fuel Transfer CONT Circuit Breaker (defective side) ........ PULL</td>
</tr>
<tr>
<td>c Outer Pump Switch ........................................ MAN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HEATED WINDSHIELD OVER TEMP ILLUMINATED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Windshield Heat Low Switch (faulty side) .... OFF</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TRIM AILERON TAB FAILURE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Trim Aileron Select Switch ................................... LH OR RH</td>
</tr>
<tr>
<td>2 Trim Aileron ................................................. AS REQUIRED</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TRIM AILERON TAB RUNAWAY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Aileron Trim Select Switch ................................ SELECT ONE SIDE</td>
</tr>
<tr>
<td><em>If Runaway Continues:</em></td>
</tr>
<tr>
<td>2 Aileron Trim Select Switch ................................ SELECT OTHER SIDE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>STATIC SYSTEM FAILURE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Static Source Select Valve ................................ ALTERNATE</td>
</tr>
</tbody>
</table>

FAA Accepted July 18, 2006
P T/B PWR FAIL ILLUMINATED

S/N 1518 and above
1 Indicator Warning Flag ................................ VISIBLE
2 Turn and Bank Circuit Breaker ........................ PULL
3 Copilot Turn and Bank ................................ USE

CP T/B PWR FAIL ILLUMINATED

S/N 1518 and above
1 Indicator Warning Flag ................................ VISIBLE
2 Turn and Bank Circuit Breaker ........................ PULL

NO FLAP APPROACH AND LANDING

Descent
1 Cabin Altitude .................................................. SET
2 Fuel Transfer .................................................. AS REQUIRED
3 Altimeters .................................................. SET
4 Windshield Defog ........................................ AS REQUIRED
5 Ignition .................................................. AS REQUIRED
6 Anti-Ice/Deice ................................................ AS REQUIRED
   a Pitot & Static Anti-Ice ........................................ ON
   b Windshield Heat ........................................... LOW
7 Taxi Lights .................................................. SET

Approach
8 Landing Data .................................................. COMPUTED (ADD 30% TO LANDING DISTANCE)
9 Fuel Quantity/Balance ..................................... CHECK - IN LIMIT
10 Synchrophaser ............................................. OFF
11 Differential Pressure ....................................... ZERO
12 Condition Levers ......................................... TAKEOFF LAND
13 Power .................................................. AS REQUIRED
14 Airspeed .................................................. 150 KCAS MINIMUM
15 Cabin Sign .................................................. ON
16 Anti-Ice System ............................................ AS REQUIRED
   a Pitot & Static Anti-ice ........................................ ON
   b Windshield Heat ........................................... LOW

FAA Accepted July 18, 2006
### Before Landing

17 Landing Gear .................................................... DOWN (below 175 KCAS)
18 Air Speed...................................................140 KCAS MINIMUM
19 Landing Light (Below 175 KCAS).........................EXTEND
20 Brakes.......................................................... CHECK
21 Ignition.....................................................AS REQUIRED
22 Wing Deice.....................................................OFF
23 AP/YAW Damper ..............................................OFF

### Final Approach (Landing Assured)

24 Airspeed........................................................1.25Vs

(115 KCAS MIN)

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>1.25Vs</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,025</td>
<td>129</td>
</tr>
<tr>
<td>10,500</td>
<td>127</td>
</tr>
<tr>
<td>10,000</td>
<td>123</td>
</tr>
<tr>
<td>9,500</td>
<td>119</td>
</tr>
<tr>
<td>9,000</td>
<td>116</td>
</tr>
</tbody>
</table>

---

**EMERGENCY EXIT DOOR OPERATION**

1 MAN PRESS Control Valve..............FULL DECREASE

*When Cabin Depressurized:*

2 Handle Access Cover.................................PUSH IN
3 Emergency Exit Door Handle ..........PULL, THEN LIFT

   DOOR UP AND

   INWARD
INADVERTENT ICING ENCOUNTER

1. Anti-Ice (except engine) ........................................... ON
2. Wing De-Ice .......................................................... ON
3. Ignition ............................................................... CONT OR ON
4. LH ENG Intake Anti-Ice ........................................... ON
   \textit{When proper operation of the LH engine is assured}
5. RH ENG Intake Anti-Ice ........................................... ON
   \textit{When proper operation of both engines is assured}
6. Ignitions ........................................................... CONT OR ON,
   OBSERVE LIMITS

SEVERE ICING ENCOUNTER

1. Priority Handling .................................................. REQUEST
2. Abrupt Maneuvering ................................................. AVOID
3. Control Wheel ...................................................... HOLD
4. Autopilot ............................................................. DISENGAGE
5. Airspeed ............................................................. INCREASE
   \textit{(180 KCAS MINIMUM IN CRUISE)}
6. Power ................................................................. MAINTAIN OR INCREASE
7. Flaps ........................................................................ MAINTAIN
8. Report Conditions to Air Traffic Control
### PREFLIGHT CHECK (COCKPIT AND CABIN)

Refer the preflight check procedures in the airplane flight manual, after maintenance and airplane storage.

1. **Oxygen Cylinder**: OPEN, CHECK
   - Charged, valve open (note pressure). Masks available for all passenger seats.
   - **WARNING**: IF THE VALVE ON THE OXYGEN CYLINDER IS CLOSED, NO OXYGEN CAN BE SUPPLIED TO THE MASK OUTLETS.

2. **Oxygen Outlet Valve and Gauge (Copilot's Side Panel)**: OPEN, CHECK
   - Open cockpit valve. Ensure pressure same as at cylinder. Ensure masks available and plugged in for pilot, and copilot if required. Check oxygen flow through masks. Close cockpit oxygen outlet valve.
   - **WARNING**: RESIDUAL PRESSURE MAY BE ShOWN ON THE OXYGEN GAUGE EVEN THOUGH THE VALVE ON THE OXYGEN CYLINDER IS CLOSED. ASSURE THAT THE PRESSURE READINGS ARE THE SAME AND THE CYLINDER VALVE IS OPEN. CLOSE THE OXYGEN OUTLET VALVE UPON COMPLETION OF THE CHECK.

3. **Emer Gear Extension Handle**: DOWN AND SAFETIED

4. **Gear Handle**: DOWN
   - To prevent gear retraction when power is applied.

5. **Parking Brake**: AS REQUIRED
   - Pilot should note whether chocks are in place when approaching the airplane. If further towing is anticipated, ensure chocks are in place and leave parking brake off. If no further towing is anticipated, parking brake may be set by simultaneously pulling on the parking brake handle, rotating the handle 90 degrees clockwise, and depressing the brake pedals.

6. **Left Switch Panel**: CHECK
   a. **Master Switch**: GUARD DOWN AND SAFETIED (NORMAL)
   b. **Trim Aileron Select Switch**: GUARD DOWN AND SAFETIED (BOTH)
   c. **DC Generator Switches**: OFF
   d. **Other Switches**: OFF
Mitsubishi 
MU-2B-60 

Marquise Normal Procedures 
AFM Page 

e Main Fuel Valve Switches.................................OPEN 5-9/5-22: 1/5-22-2

Check the main fuel valve switches in the open position and the fire T handles in.

7 Static Source Select..................................NORMAL 5-6

STATIC SOURCE

8 Other Switches..............................................OFF 5-7

Ensure other cockpit switches off, including autoignition and all anti-ice switches, before turning on battery power.

9 Battery Key Switch............................................ON 5-2

a Voltmeters...................................22 VDC MINIMUM 5-7

10 Battery Temp Warning .................................TEST 5-6

1) If normal - Both pointers will move, approximately together, to top of scale illuminating the BAT TEMP 120°, BATTERY OVER TEMP and Master Caution light. Speed of travel will vary some depending on ambient battery temperature. The Master Caution can be cancelled, but the lights on the Battery Temperature Indicator instrument will remain illuminated. Release button, all systems will return to normal. 5-6

2) If Probe has become contaminated - The affected Indicator will come to rest at some place down scale (not at the top), or it will remain at bottom. That probe should be replaced prior to flight. 5-6

3) When Test Button is pressed - If one needle travels at normal speed to top and the other lags appreciably behind, then the probe in the battery connected with the lagging instrument should be checked since an open heat sensor or wiring will cause this indication. 5-7

4) While in preflight of airplane - If either of the indicators come to rest at the top of the scale and the test button is not pressed, all lights will illuminate. Have ground crew check and see if battery probe was left disconnected. 5-7

WARNING
IF BATTERY TEMPERATURE REACHES 150°F DURING START, BATTERY MUST BE REMOVED FOR BENCH TEST AND INSPECTION PRIOR TO FLIGHT.

NOTE
The expanded scale will not start to indicate until a cell temperature of 100°F or above is reached. 5-7
11 Main Bus Tie (on ground)................................CHECK
   a Battery Isolate
      Switches.............................................BOTH NORMAL
   1) Battery 1 Isolate Switch...............................ISOLATE
      Both voltmeters must indicate 22 to 24 volts and no
      feeder out annunciator will be illuminated.
   2) Battery 2 Isolate Switch...............................ISOLATE
      Both batteries will be isolated.
   3) Battery 1 Isolate Switch...............................NORMAL
      Both voltmeters must indicate 22 to 24 volts and no
      feeder out light will be illuminated.
   4) Battery 2 Isolate Switch...............................NORMAL
      CAUTION
      IF EITHER VOLTAMMETER READS ZERO, THE 200
      AMP BUS TIE CIRCUIT BREAKER IS OPEN AND
      THE CORRESPONDING FEEDER OUT
      ANNUNCIATOR WILL BE ILLUMINATED.
      MALFUNCTION MUST BE CORRECTED PRIOR TO
      FLIGHT.
   5) Battery Isolate Switch...............................NORMAL

12 Inverter Switch......................................STBY then MAIN
   a Check INVERTER FAIL Annunciator extinguished

13 Control Lock.........................................REMOVE AND
   STOWED

14 Fuel.....................................................CHECK
   When loading fuel, observe limitations. Fuel must be
   loaded mains, outers, and tips, in that order. Observe
   45 gallon tip tank maximum imbalance.

15 Instrument Panel......................................CHECK
   a Continuous Ignition Switches.............................OFF
   b IGNITION TEST (If Auto-Ignition System is installed)
      a. Both Run-Crank-Stop Switches......................RUN
      b. Auto-Ignition Switches..............................CONT
         Note LH and RH IGNITION lights illuminated
      c. Auto-Ignition Switches..............................AUTO
         Note LH and RH IGNITION lights illuminated
      d. Auto-Ignition Switches..............................OFF
         Note LH and RH IGNITION lights extinguished.
c IGNITION TEST (If Continuous Ignition System is installed)
   a. Both Run-Crank-Stop
      Switches...........................................RUN
   b. Continuous Ignition Switches.........................ON
      Both igniter lights illuminated
   c. Continuous Ignition Switches.......................OFF
      Both igniter lights extinguished

d Boost Pumps...........................................CHECK 5-7
   L and R BOOST PUMP FAIL Annunciators extinguished

e Stall Warning System.................................CHECK 5-7
   Stall warning stick shaker actuates when the ground test switch is activated. Stick shaker should not activate when the flight test is activated.

f Fuel Quantity Test Switch............................TEST 5-8
   Check Main, Outer and Tip indicator needles move smoothly to "0" position, Fuel LOW LEVEL annunciator illuminates when main tank quantity indicator indicates approximately 200 pounds.

g Fuel Low Level Test Switch............................TEST 5-8
   Fuel LOW LEVEL annunciator illuminates

h Outer Pump Test Switch...............................TEST 5-8
   NOTE
   Both Fuel Transfer Switches must be in the OFF position for the system to TEST effectively.
   a.OUTER FUEL EMP Annunciators (With Fuel) illuminate, then extinguish.
   b.OUTER FUEL EMP Annunciators (No Fuel) illuminate.

i Defog Warning Test.................................CHECK 5-8
   Defog annunciator illuminates when test switch actuated.

j Prop Syncrophaser.................................Switch off, light press to test.

k All Other Instruments and
   Gages Checked........................................CHECK 5-8

16 Center Pedestal.......................................CHECK 5-6
   a Condition Levers........................FREE MOVEMENT, 5-6/5-8
      SET AT TAXI
   b Power Levers........................FREE MOVEMENT, 5-6/5-8
      SET BETWEEN GROUND IDLE AND FLIGHT IDLE

   c Run-Crank-Stop Switches..........................CRANK 5-6
   d Start Selector Switch........................AIR START 5-6
      AND SAFE
   e SRL Switches........................................ON 5-6
17 Flaps..........................................................SET FOR
TAKOFF 5-3/5-14

Select flaps to 5° or 20°. Allows inspection of
jackscrews and flap condition during exterior preflight.

18 Trim..........................................................CHECK & SET 5-3/5-
8/5-14

Elevator 4° - 6° nose up, rudder 2° left and aileron 1°
left. Check all tabs free of binding.

19 Right Switch Panel.........................................CHECK 5-6
   a Cabin Air Selector Switch..............................OFF 5-6
   b Auto-Manual Selector Switch..........................OFF 5-6
   c Manual Pressure Control
      Valve..................................................FULL INCREASE 5-6
   d Cabin Altitude Selector Knob..........................SET
      Approximately 1,000 feet above airport elevation
   e Cabin Rate Control Knob..............................MINIMUM 5-6

20 Overhead Switch Panel.....................................CHECK
   a Landing Light Switches...............................RET 5-6
   b Other Switches.......................................OFF 5-6

21 Warning and Indicator Lights..........................CHECK
   SRL FAIL Annunciators illuminated
   Test overhead panel lights, fire warning lights, master
   caution system, annunciator panel, gear unsafe, and
   flaps lights. After master warning system tested, note
   both SRL FAIL lights illuminated, both GEN OFF
   annunciators illuminated, the INST VAC FAIL
   annunciator illuminated, and all other annunciators
   extinguished.

22 Inverter Switch..............................................OFF 5-3

23 Battery Key Switch..........................................OFF 5-3

24 Fire Extinguisher ...........................................CHECK 5-6
   Charged, secure in bracket.

25 Publications & Documents.................................ON BOARD
   a Certificate of Airworthiness 5-2
   b Current Airplane Flight Manual 5-2
   c Current Pilot’s Operating Manual 5-2
   d Current Weight and Balance Data 5-2
   e Current Navigation Charts for Flight 5-2
   f Registration certificate 5-2

26 Load and Baggage............................................SECURE 5-5

27 Emergency Exit Door.......................................SECURED 5-5

28 Seat Backs..................................................UPRIGHT 5-5

29 Table.......................................................STOWED AND
   COVERED 5-5
<table>
<thead>
<tr>
<th>Check Item</th>
<th>Action/Condition</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. LH WING TRAILING EDGE</strong></td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>1 General Condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Flap, Spoiler and Trim Aileron</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>3 Tailpipe, EGT Probes and Turbine</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>4 Static Discharger</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td><strong>2. LH WING TIP TANK, LEADING EDGE AND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 General Condition</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>2 Tip Tank Filter Cap</td>
<td>CHECK FOR SECURITY</td>
<td>5-3</td>
</tr>
<tr>
<td>3 Wing Tip &amp; Taxi Lights</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>4 Wing Tie Downs</td>
<td>REMOVED</td>
<td>5-3</td>
</tr>
<tr>
<td>5 Ice Inspection Light</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>6 Fuel Leakage</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>7 Main/Outer Fuel Tank</td>
<td>CHECK FOR SECURITY</td>
<td>5-3</td>
</tr>
<tr>
<td>8 Main/Outer Fuel Tank</td>
<td>CHECK FOR OBSTRUCTION</td>
<td>5-3</td>
</tr>
<tr>
<td>9 Engine Air Intake</td>
<td>CHECK FOR DAMAGE AND FOREIGN OBJECTS</td>
<td>5-3</td>
</tr>
<tr>
<td>10 Engine Air Intake Drain Valve</td>
<td>PRESS; NOTE ANY EXCESSIVE FLUID DRAINAGE</td>
<td>5-3</td>
</tr>
<tr>
<td>(Applicable to S/N 1535SA and subsequent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Nacelle/Doors and Latches</td>
<td>GENERAL CONDITION AND LATCHES SECURED</td>
<td>5-3</td>
</tr>
<tr>
<td>12 Oil Level</td>
<td>CHECK</td>
<td>5-3</td>
</tr>
<tr>
<td>(BETWEEN FULL AND ADD); CAP SECURED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Nacelle Door (Oil Access)</td>
<td>LOCKED</td>
<td>5-3</td>
</tr>
<tr>
<td>14 Oil Leakage</td>
<td>CHECK</td>
<td>5-4</td>
</tr>
<tr>
<td>15 Oil Cooler Inlet Anti-icing Boots</td>
<td>CHECK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FOR TEARS ABRASIONS</td>
<td></td>
</tr>
</tbody>
</table>

FAA Accepted July 18, 2006 | Page NX-6
16 Propeller ................................... CHECK FOR FLAT PITCH AND FREE ROTATION (Normal Direction of Rotation) 5-4
17 Deicing Boots .................................. CHECK FOR TEARS AND ABRASIONS 5-4

3 NOSE AND FORWARD SECTION OF FUSELAGE 5-4
1 LH Forward Main Gear Door ......................... CHECK 5-4
2 General Condition .................................. CHECK 5-4
3 Pitot Tube Covers .................................. REMOVE 5-4
4 Pitot-Static Holes .................................. CHECK FOR OBSTRUCTION 5-4
5 Lower Rotation Beacon (if installed) .................. CHECK 5-4
6 Landing Lights ..................................... CHECK 5-4
7 Nose Landing Gear Strut .......................... CHECK FOR EXTENSION 5-4
8 Uplimit Mechanism .................................. CHECK 5-4
9 Nose Landing Gear Doors ......................... CHECK FOR SECURITY 5-4
10 Nose Gear Torque Link ............................ CONNECTED 5-4
11 Tire Inflation/Condition ......................... CHECK 5-4
12 Static Wire ........................................ CHECK 5-4
13 Nose Landing Gear Tie Downs and Chocks ............. REMOVE 5-4
14 Windshield .......................................... CHECK FOR CLEANLINESS AND DAMAGE 5-4
15 Windshield Wipers .................................. CHECK CONDITION AND SECURITY 5-4
16 RH Forward Main Gear Door ......................... CHECK 5-4

4 RH WING NACELLE, LEADING EDGE, AND TIP 5-4
1 General Condition .................................. CHECK 5-4
2 Stall Warning Vane .................................. CHECK 5-4
3 Deicing Boots ........................................ CHECK FOR TEARS AND ABRASIONS 5-4
4 Propeller ................................... CHECK FOR FLAT PITCH AND FREE ROTATION (Normal Direction of Rotation) 5-4

5 Oil Cooler Inlet Anti-icing Boots .............................................. CHECK FOR TEARS AND ABRASIONS 5-4

6 Oil Leakage .............................................. CHECK 5-4

7 Nacelle Door (Oil Access) ................................ LOCKED 5-4

8 Oil Level .................................................. CHECK (BETWEEN FULL AND ADD); CAP SECURED 5-4

9 Nacelle/Doors and Latches ................................ GENERAL CONDITION AND LATCHES SECURED 5-4

10 Engine Air Intake Drain Valve .......... PRESS; NOTE ANY EXCESSIVE FLUID DRAINAGE 5-4

11 Engine Air Intake ................................ CHECK FOR DAMAGE AND FOREIGN OBJECTS 5-4

12 Main/Outer Fuel Tank Vent Ports ................................ CHECK FOR OBSTRUCTION 5-4

13 Main/Outer Fuel Tank Filler Caps ................................ CHECK FOR SECURITY 5-4

14 Fuel Leakage .............................................. CHECK 5-4

15 Wing Tie Downs ................................ CHECK 5-4

16 Wing Tip & Taxi Lights ................................ CHECK 5-4

17 Tip Tank Filler Cap ................................ CHECK FOR SECURITY 5-4

5 RH WING TRAILING EDGE

1 General Condition ................................ CHECK 5-4

2 Static Discharger ................................ CHECK 5-4

3 Tailpipe, EGT Probes and Turbine ................................ CHECK 5-4

4 Flap, Spoiler and Trim Alleron ................................ CHECK 5-4
6 RH CENTER AND REAR SECTION OF FUSELAGE

1. General Condition .................................... CHECK 5-4

2. Main Landing Gear Door ...................................... CHECK FOR SECURITY 5-4

3. Main Landing Gear Strut and Tire .......................... CHECK FOR EXTENSION AND PROPER INFLATION 5-4

4. Main Landing Gear Brake Disc and Wheel Well ............... CHECK 5-4

5. Landing Gear Door Ground Control Switch ......................... NORMAL AND SAFETIED 5-4

6. Main Landing Gear .................................. REMOVE CHOCKS 5-4

7. Ram-Air Intake ........................................ CHECK FOR OBSTRUCTIONS 5-4

8. Aft Fuselage Tie Down .................................. REMOVE 5-4

9. Cooling Air Discharge Duct ................................ CHECK FOR DAMAGE AND FOREIGN OBJECTS 5-4

7 EMPENNAGE

1. General Condition .................................... CHECK 5-5

2. External Surface Locks .................................... REMOVE 5-5

3. Control Surface and Tabs ................................ CHECK 5-5

4. Upper Rotating Beacon .................................... CHECK 5-5

5. Tail Light .................................................. CHECK 5-5

6. Deicing Boots .......................................... CHECK FOR TEARS AND ABRASIONS 5-5

8 LH REAR AND CENTER SECTION OF FUSELAGE

1. General Condition .................................... CHECK 5-5

2. Cooling Air Intake ........................................ CHECK FOR DAMAGE AND FOREIGN OBJECTS 5-5

3. External Power Receptacle Door ................................. CHECK 5-5

4. Battery Vent ............................................. CHECK FOR DAMAGE AND FOREIGN OBJECTS 5-5

5. Main Landing Gear .................................. REMOVE CHOCKS 5-5
6 Main Landing Gear Brake
   Disc and Wheel Well .................................. CHECK 5-5
7 Main Landing Gear Strut
   and Tire ............................................ CHECK FOR EXTENSION AND PROPER INFLATION 5-5
8 Main Landing Gear Door ....................... CHECK FOR SECURITY 5-5
9 Ejector Exhaust Port.......................... CHECK FOR OBSTRUCTIONS 5-5

BEFORE STARTING ENGINE 5-6

1 Passenger Briefing..............................COMPLETE 5-5
   Passengers should be briefed on the use of the oxygen system, emergency exit, cabin door, use of seat belts, and adherence to no smoking sign. Also, advise passengers to stow loose baggage under seats, stow and cover tables and adjust seat backs to the upright position for takeoff and landing, and observe precautions on cabin safety card.

2 Seat ................................................... ADJUSTED 5-5
   Adjusted to allow full and free movement of flight controls. Ensure seat positioned so that full rudder deflection can be achieved in the event of an engine failure.

3 Safety Belts and Shoulder Harness...............FASTEN 5-5

4 Parking Brake ........................................SET 5-5
   Apply pressure to toe brakes, pull handle aft, and rotate handle to set parking brake.

5 Takeoff Data.........................................COMPUTED 5-6
   Check Weight and Balance, Select Takeoff Flap Position and Determine VR, Max.TO weight limit, Takeoff distance, power assurance, and single engine climb capability for selected flap position with gear down & up. Other takeoff parameters may need to be considered.

6 Circuit Breakers ...............................CHECK 5-7

7 Radio Masters........................................OFF 5-7
   To prevent power surges through the avionics during start.

8 Battery Key Switch..............................ON 5-6
   22 v minimum for start. Battery key should be on for APU start.
9 DC Generator ............................................... OFF
   No generator assist is allowed during start.
10 Inverter Switch ........................................ STBY or MAIN 5-7
   a INVERTER FAIL Annunciator extinguished. 5-7
11 Cabin & Pilot Comm Door ................................ LOCKED 5-5 & 5-13

Check cabin door annunciator extinguished and pilot comm door closed.

12 APU ................................................ AS REQUIRED 5-7/5-22
   a Check Voltammeters. 28 VDC desired. (APU must be capable of 800 AMPS and minimum of 16 VDC during start cycle). 5-7/5-22
   b OAT 10°C or Less ........................................ APU RECOMMENDED 5-8/5-22
   c Battery Temp Above 120°F ................. APU REQUIRED 5-8/5-22

NOTE
   If battery temperature 120 light is illuminated, do not takeoff until the light is extinguished.

13 Fuel Quantity ......................................... CHECK
   Ensure fuel load and balance sufficient for flight and within limits.

14 Cabin Sign, Rotating Beacon, Nav Light ................................ SET 5-8/5-14

   Cabin signs as required, beacon on for start, nav lights for night operations.

---

STARTING ENGINES 5-8

1 Battery Select Switch ....................... AS REQUIRED 5-8/5-22
   Select parallel for all APU starts and battery starts if OAT is above 10 degrees C. Series is recommended for battery starts when OAT is 10 degrees C or less.
   During start, monitor battery temperature. For parallel starts, if a battery temperature reaches 140°F, isolate the battery. For series starts, if a battery temperature reaches 140°F, abort is recommended. For parallel or series starts, if a battery temperature rises to 150°F, abort is required.
   5-7, 5-8 & 5-9

2 SRL Switches ......................................... ON 5-9/5-22
   SRL must be on to ensure operation of speed switches during start. Monitor SRL fail annunciators during start. SRL fail annunciators will remain on until approximately 14% rpm.
3 Both Run-Crank-Stop Switches

This arms fuel and ignition during start.

4 EGT

Should be below 200°C. If the EGT is above 200°C, it may be reduced by hand turning the engine or by cranking the engine. To crank the engine, use cranking procedure.

*If FEATHER VALVE CHECK is not required, Proceed to 6*

5 Feather Valve Check

FEATHER VALVE CHECK REQUIRED

1) PRIOR TO THE FIRST FLIGHT OF THE DAY

2) BEFORE EVERY FLIGHT, INTENTIONAL ENGINE SHUTDOWN IS PLANNED

3) BEFORE EVERY FLIGHT, AFTER FEATHERING LINKAGE ADJUSTED

4) AFTER MAINTENANCE OF THE FEATHERING SYSTEM

a LH Unfeather Switch

b LH Unfeather Switch

c LH Condition Lever

d LH Condition Lever

e Repeat Steps a) through d) for Right Engine.

**WARNING**

IF THE BETA RANGE LIGHT DOES NOT EXTINGUISH OR DOES NOT ILLUMINATE AS REQUIRED DURING THE ABOVE PROCEDURE, ENGINE START SHOULD NOT BE ATTEMPTED UNTIL MAINTENANCE HAS BEEN CONDUCTED ON THE AIRCRAFT TO CORRECT THE DISCREPANCY.

6 Power Levers

**WARNING**

**IF THE BETA RANGE LIGHT DOES NOT EXTINGUISH OR DOES NOT ILLUMINATE AS REQUIRED DURING THE ABOVE PROCEDURE, ENGINE START SHOULD NOT BE ATTEMPTED UNTIL MAINTENANCE HAS BEEN CONDUCTED ON THE AIRCRAFT TO CORRECT THE DISCREPANCY.**

7 Condition Levers

8 Start Selector Switch

Select engine to be started and position the start selector switch to L or R.
9 Propellers ........................................ CLEAR AND ON LOCKS 5-8

NOTE
Ensure that the propellers are clear prior to starting. If the propeller is feathered, place the Power Lever in REVERSE and hold the Unfeather Switch until the blades reach the lock position.

10 Engine Start/NTS Check .................... ACCOMPLISH
a 1. Unfeather Switch..................... PRESS AND HOLD 5-23
   BETA RANGE Annunciator illuminated 5-23
b Engine Start Switch..................... PRESS AND HOLD 5-23
   While observing BETA RANGE light
   1) BETA RANGE Annunciator ......... EXTINGUISHED 5-23
   As engine rotation starts
   1) Continue to hold unfeather switch 5-23
c Battery Temp Monitor during Engine Starting 5-22-1/5

1) If Battery Temp rises to
   140 deg F .............................. Battery must be isolated after Completion of Engine Start. 5-22-1/5
2) If Battery Temp rises to
   150 deg F .............................. ABORT START 5-22-1/5

CAUTION
INDICATOR HOT LIGHT, BATTERY OVER TEMP AND MASTER CAUTION ANNUNCIATORS ILLUMINATES WHEN THE BATTERY TEMPERATURE REACHES 150° F.

1) SRL FAIL Annunciator ................ EXTINGUISHED 5-23
2) Exhaust Gas Temperature .............. MONITOR 5-23
3) Within 10 seconds past
   10% RPM or by 20% RPM .............. INDICATED COMBUSTION
   Or place Run-Crank-Stop Switch to Stop.
e Illumination of BETA RANGE
   Annunciator ............................ RELEASE UNFEATHER SWITCH 5-23
NTS System check is satisfactory if:

1) BETA RANGE Annunciator..............extinguishes as engine starts to rotate

2) BETA RANGE Annunciator..............illuminated at 18% to 30% rpm (maybe as late as 40% rpm)

CAUTION
IF NTS CHECK IS UNSATISFACTORY, CONTINUE START. WARM OIL TO NORMAL RANGE (55 °C MINIMUM) THEN SHUT DOWN AND PERFORM CHECK AGAIN. IF NTS CHECK IS AGAIN UNSATISFACTORY, FLIGHT SHALL NOT BE ATTEMPTED UNTIL MALFUNCTION IS CORRECTED.

NOTE
The BETA RANGE annunciator should not illuminate before 10% RPM and may blink between 10% and 40% RPM, but must be illuminated by 40% RPM. Releasing the Unfeather switch and moving the Power Lever slightly forward of GROUND IDLE after steady illumination of the BETA RANGE annunciator may cause the BETA RANGE annunciator to blink.

WARNING
IF ENGINE FAILS NTS CHECK, CORRECT PRIOR TO FLIGHT.

Power Lever (engine being started)..............SLIGHTLY ABOVE GROUND IDLE

1) Above 25% RPM with Slow Acceleration if EGT is below 700°C.........................USE FUEL ENRICHMENT SWITCH

2) Prior to 50% RPM......................INCREASING OIL PRESS or place Run-Crank-Stop switch to Stop

3) 60% RPM, End of Ignition, Engine Start Indicator Light.......................EXTINGUISHED. If ILLUMINATED Place Run-Crank-Stop switch to Stop
CAUTION
IF ANY MALFUNCTION OCCURRS, PROPELLER FAILS TO ROTATE, RPM DOES NOT REACH 10% WITHIN APPROXIMATELY 10 SECONDS, EGT RISES RAPIDLY TOWARDS START LIMIT, ENGINE STOPS, RPM STAGNATES PRIOR TO 40% RPM DURING STARTING PROCEDURES, ANY UNUSUAL NOISE OR VIBRATION OCCURRS, OR ENGINE INSTRUMENTS INDICATE ABNORMAL CONDITIONS, SHUT DOWN ENGINE IMMEDIATELY BY PLACING CONDITION LEVER IN EMERGENCY STOP POSITION. IF EGT RAPIDLY APPROACHES 770°C DURING START, POSITION THE CONDITION LEVER TO EMERGENCY STOP. RESTART SHOULD NOT BE TRIED UNTIL EGT DROPS BELOW 200°C. COOL AND CLEAR ENGINE WITH CRANKING PROCEDURE IN SECTION 5.

NOTE
If fuel does not ignite while attempting engine start, crank engine to expel fuel before attempting start again. Observe starter motor limit. Use Cranking Procedure, Section 5. Above 25% RPM, slow acceleration may indicate failure of auto-start system. Auto-start system will automatically enrich the start fuel schedule to maintain a constant EGT of approximately 690-700°C throughout the start. However, other parameters may influence and cause start temperature to vary, such as engine temperature, tail wind or weak batteries.

g Engine RPM..................STABILIZE AT ABOUT 76.5% TO 78.5%

h SRL FAIL Annunciator...............EXTINGUISHED If APU Start, proceed to 12

11 Battery Recharge...............AS REQUIRED
Charging may begin with the condition lever at taxi while the oil temperature is below 55 degrees C. Once the oil temperature is above 55 degrees C, the condition lever may be placed to TAKEOFF LAND to increase charging rate. After recharging, reset the condition lever to TAXI.

a Generator Switches...............BOTH ON
Equalization curcuits energized.
When charging rate is less than 100 amps 5-25

b Generator Switch
(inoperative engine).................OFF
Mitsubishi Pilot Checklist Section 5
MU-2B-60 Marquise Normal Procedures
AFM Page

c Condition Lever (operating engine)................. TAKEOFF LAND 5-25

d Charge Rate........................................... 200 AMPS MAXIMUM 5-25

e Battery Temperature............................. 140°F MAXIMUM 5-25

When charge rate is less than 100 amps 5-25

f Condition Lever (operating engine).................... TAXI 5-25

g Generator Switches.................................. BOTH OFF 5-25

CAUTION
DO NOT ATTEMPT ANOTHER BATTERY START IF BAT TEMP 120° ANNUNCIATOR IS ILLUMINATED. 5-25

SHUT DOWN AND CORRECT PROBLEM PRIOR TO FLIGHT.

12 Other Engine...................................... START, REPEATING SEQUENCE (Step 8-10)

---

AFTER STARTING ENGINES

1 Engine Instruments.................................. CHECK 5-24
   a Oil Temperature.................................... CHECK 5-13

   Above 55 degrees C before advancing power levers 5-13-1/5.
   Refer to AFM Chapter 5 "Preflight Operation Check" 13-2
   for normal engine indications with various condition
   lever & power lever positions. Refer to AFM Chapter 2
   "Instrument Markings" for engine instrument
   indications.

   If APU START is not required, Proceed to 3

2 APU.................................................. DISCONNECT 5-24

3 Generators Switches.............................. EITHER LH OR RH ON 5-25

4 Voltammeter (Main 5-25
   Bus Tie Check).................................. CHECK 5-25

   CAUTION

   IF EITHER VOLTOMETER INDICATES BATTERY
   VOLTAGE (22 - 24 VOLTS) INSTEAD OF
   GENERATOR VOLTAGE (28.5 + 1.0/-1.5 VOLTS),
   THE 200 AMP BUS TIE CIRCUIT BREAKER IS
   OPEN AND MALFUNCTION MUST BE CORRECTED
   PRIOR TO FLIGHT.

5 Generator Switches 5-25
   (Main Bus Tie Check).............................. BOTH ON
   AND CHECK 5-25

   a Check Voltammeter.............................. 27 TO 29.5 VDC 5-25

5 Radio Master Switches............................. ON 5-14

6 Battery Select Switch............................. PARALLEL 5-13
Mitsubishi Pilot Checklist
MU-2B-60 Marquise Normal Procedures
AFM Page

7 Fuel Transfer.................................AUTO 5-13
8 Start Select Switch.......................AIR START
                                      AND SAFE 5-25
9 Cabin Air..................................BOTH 5-13
10 De-ice/Anti-ice System Check .......AS REQUIRED 5-32~5-
    Preflight Operation - Prior to Flight Into Known Icing 5-32~5-
    Conditions 35

a PITOT AND STATIC ANTI-ICE SYSTEM
1) Pitot & Static Anti-Ice
   Switches....................................ON 5-32~5-
       35
2) Loadmeter Select Switch..........LH PITOT AND
       STATIC POSITION 5-32~5-
3) Loadmeter OPERATING
   RANGE...........................................50 TO .85 5-32~5-
4) Loadmeter Select Switch..........RH PITOT AND
   STATIC POSITION 5-32~5-
6) Loadmeter OPERATING
   RANGE...........................................50 TO .85 5-32~5-
   CAUTION
   MAXIMUM 10 SECONDS OPERATION DURING
   GROUND PREFLIGHT. 5-32~5-

f. Pitot & Static Anti-Ice
   Switches....................................OFF 5-32~5-
   35

b STALL WARNING ANTI-ICE SYSTEM
1) Stall Vane Anti-Ice Switch..............ON 5-32~5-
   35
2) Loadmeter Select Switch............STALL VANE 5-32~5-

FAA Accepted July 18, 2006
3) Loadmeter OPERATING
   RANGE........................................... .30 TO .70 5-32-5-
   CAUTION
   MAXIMUM 10 SECONDS OPERATION DURING 5-32-5-
   GROUND PREFLIGHT.
   ICE ACCUMULATION ON THE WING DEICE BOOT 5-32-5-
   MAY DISRUPT AIR FLOW OVER THE STALL VANE 35
   AND PREVENT THE SYSTEM FROM PROVIDING 35
   ACCURATE STALL WARNING.
4) Stall Vane Anti-Ice Switch......................... OFF 5-32-5-

PROPELLER ANTI-ICE SYSTEM

CAUTION
DO NOT CHECK PROPELLER ANTI-ICE SYSTEM 5-32-5-
UNTIL AFTER ENGINE START.
1) Prop Deice Switches.............................. ON 5-32-5-
2) Loadmeter Select Switch.................. POSITION TO
   LH PROP 5-32-5-
3) Loadmeter OPERATING
   RANGE........................................... .85 TO 1.05 5-32-5-
4) Loadmeter Select Switch.................. POSITION TO
   RH PROP 5-32-5-
5) Loadmeter OPERATING
   RANGE........................................... .85 TO 1.05 5-32-5-
   NOTE
   The loadmeter will fluctuate in about 30 second cycles 5-32-5-
   as power shifts to heater mats on other blades.
6) Prop Deice Switches.............................. OFF 5-32-5-

ENGINE INTAKE AND OIL COOLER AIR INTAKE
ANTI-ICE SYSTEMS

CAUTION
DO NOT CHECK UNTIL AFTER ENGINE START. 5-32-5-
1) Engine Intake Anti-Ice
   Switches................................. ON 5-32-5-
2) Indicator Lights......................... ILLUMINATE 5-32-5-
3) EGT ............................................. SLIGHT INCREASE
CAUTION
MAXIMUM 10 SECONDS OPERATION FOR TEST 5-32-5-
PURPOSES WHEN THE OAT IS 10 °C (50° F) OR 35
HIGHER.
NOTE  This is true whether visible moisture is 5-32-5-
present or not. 35
4) Engine Intake Anti-Ice
Switches .......................................... OFF
5) Indicator Lights .................................. EXTINGUISH
6) EGT ............................................. SLIGHT
DECREASE
If valve closure not indicated and OAT is above 10°C,
7) Oil Cooler Inlet Anti-Ice
Switches ........................................... ON 5-32-5-
35
8) Indicator Lights ................................... ILLUMINATE 5-32-5-
35
CAUTION
MAXIMUM 10 SECONDS OPERATION DURING 5-32-5-
GROUND PREFLIGHT.
9) Oil Cooler Anti-Ice Switches .............................. OFF 5-32-5-
35
HEATED WINDSHIELD ANTI-ICE SYSTEM
Preflight check cannot be performed when OAT is 5-32-5-
above 38.50°C or if the windshields have been exposed 35
to direct sunlight for extended periods.
1) Windshield Heat Low
Switches ........................................... ON 5-32-5-
35
Check Overhead Panel Indicator Lights illuminated 5-32-5-
2) After Indicator Lights Cycle,
Hi Heat Switches ...................................... ON 5-32-5-
35
Check Instrument Panel Hi Heat Indicator Lights 5-32-5-
Illuminated 35
NOTE
Heating may be confirmed by touching windshield.
Windshield Heat Low Switches in the overhead panel 5-32-5-
must be ON for the Hi Heat switches in the control 35
wheels to be operational. The overhead panel
indicator light will cycle as the windshield reaches
operational temperature for Low and Hi Heat modes.
Instrument panel Hi Heat Indicator Lights do not cycle.
3) All Windshield Anti-Ice

Switches..................................................OFF 5-32-5-

f WING AND EMPENNAGE DEICE SYSTEM
Have outside observer check inflation of all wing and tail de-ice boots. The boots will inflate for approximately 6 seconds and then deflate for approximately 2 minutes and 54 seconds. Check for wing de-ice indicator light illuminated during inflation. Turn wing de-ice switch off, then back on, if multiple cycles are required for the observer to check all boots. (Post SB 096/30-004) If indicator light not observed during inflation, check oil temperature above 55 degrees C, then advance condition levers to TAKEOFF LAND and recheck. After checks complete, turn boots off.

1) Wing Deice Switch.................................ON 5-32-5-
2) Inflation and Deflation
   of Boots........................................VISUAL CHECK 5-32-5-
Check Wing Deice Indicator Light illuminates during inflation 5-32-5-

3) Wing Deice Switch.................................OFF 5-32-5-

If Overspeed Governor Check is not required, Proceed to 12

11 Overspeed Governor Check..............AS REQUIRED
Perform prior to the first flight of the day and for any flight when air starts are anticipated. The Overspeed Governor must also be checked after control system adjustment, maintenance, and for indication of malfunction.

a Condition Lever...............................TAKEOFF LAND

Propellers must be on locks.
b Power Lever.................................FLIGHT IDLE

c Power Lever.................................ADVANCE
   Slowly advance toward takeoff position until engine speed is stabilized.
NOTE
If torque, EGT and fuel flow increase, and RPM remains constant as power lever is advanced, propeller is not on the locks. Shutdown the engine and restart, carefully placing the power lever forward of the GROUND IDLE position to prevent start lock disengagement.

d Engine Speed............................... 103%-105% RPM
Overspeed Governor Check should regulate engine speed between 103-105% RPM

CAUTION
IF ENGINE SPEED REACHES 106% RPM, MOVE POWER LEVER TO FLIGHT IDLE POSITION IMMEDIATELY, THEN SHUT DOWN ENGINES AND ADJUST OVERSPEED GOVERNOR SETTING BEFORE PROCEEDING WITH FLIGHT. LIMIT OPERATION AT SPEEDS OVER 101% RPM TO THE MINIMUM NECESSARY TO MAKE OVERSPEED GOVERNOR CHECK.
DO NOT EXCEED 106% RPM AT ANY TIME.

e Repeat for other engine

12 Single Red Line (SRL) /Delta P ... CHECK (PROPS Props on Locks ON LOCKS)

NOTE
If torque, EGT and fuel flow increase, and RPM remains constant as power lever is advanced, propeller is not on the locks. Shutdown the engine and restart, carefully placing the power lever forward of the GROUND IDLE position to prevent start lock.

On Engine to be Checked

a Condition Lever...........................TAKEOFF LAND
b Power Lever............................ SET TO 100% RPM

c EGT.............................................STABILIZE AND NOTE VALUE

d Delta P/P Test............................TEST (momentary)

CAUTION
EGT VALUES SHOULD INCREASE ABOUT 5°C IN TEST POSITION. IF EGT READINGS DO NOT CHANGE, THE DELTA P/P TRANSDUCER MUST BE CHECKED AND CORRECTED BEFORE FURTHER FLIGHT.
DO NOT INITIATE FLIGHT WITH SRL SYSTEM INOPERATIVE.

e SRL Switch................................. OFF
SRL FAIL annunciator illuminated. Note change in EGT value.
f SRL Switch ..................................................... ON 5-12
SRL FAIL annunciator extinguishes

g Power Lever ................................... GROUND IDLE 5-12
h Condition Lever .............................................. TAXI 5-12
i Repeat steps a. through h. on opposite engine 5-12

CAUTION
THE CHANGE IN EGT NOTED FOR EACH ENGINE
SHOULD BE THE SAME WITHIN 10°C TOLERANCE. 5-12
IF NOT, THE SRL SYSTEM MUST BE CHECKED
AND CORRECTED BEFORE FURTHER FLIGHT.

NOTE
The EGT indicators can be observed to suddenly
change in value as the engines sweep through 80%
RPM, which indicates a functioning SRL System.

13 Flaps .................................................... SET FOR
TAKEOFF 5-14
Takeoff setting 5° or 20." Check weight limit for
takeoff.
Obtain visual check as well as proper flap position
indication.

WARNING
SINGLE ENGINE CLimb CAPABILITY MUST BE
CHECKED PRIOR TO TAKEOFF USING THE
PERFORMANCE INFORMATION IN THE PILOTS
OPERATING MANUAL. IF THE GEAR UP CLimb
CAPABILITY IS NOT SUFFICIENTLY POSITIVE, A
REDUCTION IN TAKEOFF WEIGHT IS
RECOMMENDED. IF THE TAKEOFF WEIGHT IS
GREATER THAN THAT FOR POSITIVE CLimb
GRADIENT WITH THE GEAR DOWN AND AN
ENGINE FAILS PRIOR TO GEAR RETRACTION OR
75 FT AGL, THE PILOT SHOULD CONSIDER
LANDING STRAIGHT AHEAD.

14 Flight Controls ............................................. FREE
Check for free movement to the stops

15 Auto-pilot ............................................... CHECK
Perform preflight checks in accordance with the
applicable AFM supplement. Setup flight director for
departure.

16 Trim Tabs ..................................................... SET 5-14
Elevator 4° - 6° nose up , rudder 2° left and aileron 1°
17 **Avionics**

Review departure procedures to ensure that all communications and navigation radios are set for departure. Note initial heading and level off altitude. If radar use is anticipated, check it according to AFM supplement. Set transponder code.

18 **Start Locks**

- a **Condition Levers**
- b **Power Levers**

Move slowly toward reverse position. Both BETA RANGE annunciators should extinguish and re-illuminate. Increasing fuel flow, torque pressure and EGT indicate disengagement of the prop locks.

- c **Power Levers**

Check for torque increase as power levers are advanced above flight idle.

- d **Power Levers**

Advance Until BETA RANGE annunciator extinguishes. Supplemental NTS check is satisfactory if,

- 1) BETA RANGE Annunciator...extinguishes
- 2) Torque...increase
- 3) RPM stabilizes...below 96%

**WARNING**

IF ENGINE FAILS ANY PART OF THE SUPPLEMENTAL NTS CHECK, CORRECT PRIOR TO FLIGHT PER ENGINE MANUAL.

A failed check will typically occur when the rpm stabilizes 6-7% high (i.e., at 101 to 103% rpm).

- c **Power Lever**

Retard to ground idle

- d Repeat for other engine
20 Annunciator Panel & Warning Lights.......................... CLEAR
   a LG UNSAFE Warning Light.......................... CHECK 5-14
   b Annunciator Panel.................................. CHECK 5-14
   Fire Warning and other warning lights checked out
21 Landing Lights/Taxi Lights................. AS REQUIRED 5-14

**PREFLIGHT OPERATION CHECK**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>POWER LEVER</th>
<th>CONDITION LEVER</th>
<th>CHECK ITEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW SPEED TAXI</td>
<td>GROUND IDLE</td>
<td>TAXI</td>
<td>1. Engine Speed must be 76.5% - 78.5% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. BETA RANGE annunciator normally illuminated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Oil Pressure minimum 40 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Fuel Pressure minimum 15 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. No Caution Lights illuminated</td>
</tr>
<tr>
<td>HIGH SPEED TAXI</td>
<td>GROUND IDLE</td>
<td>TAKEOFF LAND</td>
<td>1. Engine Speed must be 96% - 97% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. BETA RANGE annunciator must be illuminated</td>
</tr>
<tr>
<td>REVERSE</td>
<td>REVERSE</td>
<td>TAKEOFF LAND</td>
<td>1. Engine Speed must be above 94.5% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. BETA RANGE annunciator must be illuminated</td>
</tr>
<tr>
<td>TAKEOFF POWER POSITION</td>
<td>TAKEOFF LAND</td>
<td></td>
<td>1. Engine Speed must be 98.5% - 101% RPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Oil Pressure must be 70 - 120 psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. BETA RANGE annunciator must be extinguished</td>
</tr>
</tbody>
</table>

**TAXI**

1 Brakes & Steering.................................. CHECK
   a Parking Brake.................................. OFF 5-14

   Release the parking brake. Leaving the chocks, momentarily depress both brake pedals and note proper brake actuation. Check proper steering response. Proper seat position can be confirmed by making a sharp turn with the rudder pedal to the stops.

2 Flight Instruments.................................. CHECK 5-14

   While taxiing, observe proper turn needle operation, both compasses slaved and indicating properly with no flags observed, both altimeters set and match within applicable regulations, airspeed and VSI indicate zero, and the attitude gyro is erect, testing properly, and no flags are observed.

3 Power........................................... SET AS REQUIRED (Maintain Minimum 76.5% RPM) 5-14
BEFORE TAKEOFF

Takeoff performance data is based on holding the brakes while advancing power to 100% Torque or 650 degrees EGT, whichever occurs first.

Once power is stabilized, check engine instruments normal and BETA lights extinguished.

Release the brakes, accelerate to Vr and rotate to a normal takeoff pitch attitude, not to exceed 13 degrees pitch.

As the aircraft accelerates, power will normally increase about 10%. Power lever position must normally be adjusted to prevent exceeding engine limits.

CAUTION

WHEN MAKING A ROLLING TAKEOFF UNDER TEMPERATURE LIMITED CONDITIONS, ADVANCE POWER LEVERS NO HIGHER THAN 600°C EGT, SINCE EGT WILL INCREASE APPROXIMATELY 50°C DURING TAKEOFF ROLL DUE TO SYSTEM LAG. A ROLLING TAKEOFF SHOULD ONLY BE MADE IF RUNWAY LENGTH AND OBSTACLE CLEARANCE WILL PERMIT.

NOTE     If temperature limited, the EGT system requires approximately 20 seconds to stabilize.

1 Lights.............................................AS REQUIRED
   a Landing Lights/Taxi Lights............AS REQUIRED 5-14
   b Strobe Lights.............................AS REQUIRED 5-14
   Observe placard limitation
   c Nav lights.....................................AS REQUIRED, ON for night flight.

2 De-ice & Anti-ice.........................AS REQUIRED
   a Pitot & Static Anti-Ice....................ON 5-14/5-18-1
   b Windshield Heat..............................LOW 5-14/5-1
   c Anti-Ice System............................AS REQUIRED 5-14/5-1
   Other anti-ice systems as required. If icing conditions exist, ensure all anti-ice equipment on. Do not turn wing de-ice boots on until after takeoff.

CAUTION

ALL ANTI-ICE SYSTEMS MUST BE ON PRIOR TO TAKEOFF IN VISIBLE MOISTURE IF OAT IS +10°C OR COLDER.

3 Transponder........................................ON 5-14
   Select #1 or #2 as desired.

4 Radar..................................................AS REQUIRED
5 Cabin Air……………………………..AS REQUIRED 5-14
All takeoff performance data in the AFM is computed
with bleed air in RAM. This is particularly important
when engine temperature limits takeoff power.

6 Flaps………………………………..SET FOR TAKEOFF 5-14
TAKEOFF SETTING 5° OR 20° (check weight limit
for takeoff)
Obtain visual check as well as proper flap position
indication.
WARNING
SINGLE ENGINE CLimb CAPABILITY MUST BE
CHECKED PRIOR TO TAKEOFF USING THE
PERFORMANCE INFORMATION IN THE PILOTS
OPERATING MANUAL. IF THE GEAR UP CLimb
CAPABILITY IS NOT SUFFICIENTLY POSITIVE, A
REDUCTION IN TAKEOFF WEIGHT IS
RECOMMENDED. IF THE TAKEOFF WEIGHT IS
GREATER THAN THAT FOR POSITIVE CLimb
GRADIENT WITH THE GEAR DOWN AND AN
ENGINE FAILS PRIOR TO GEAR RETRACTION OR
75 FT AGL, THE PILOT SHOULD CONSIDER
LANDING STRAIGHT AHEAD.

7 Ignition……………………………..AS REQUIRED 5-15
CONT or ON if runway is contaminated, raining, or
icing conditions. Otherwise, for aircraft with auto-
ignition installed, AUTO.
CAUTION
DO NOT USE IGNITION SWITCH IN AUTO
POSITION WHEN THE CONDITION LEVER IS AT
TAXI.
CAUTION
CONTINUOUS IGNITION SHALL BE SELECTED
TO ON DURING TAKEOFF AND CLimb OUT IN
ACTUAL OR POTENTIAL ICING CONDITIONS OR
WHERE THERE IS WATER, SLUSH OR SNOW
ON THE RUNWAY. (IF AUTO-IGNITION NOT

8 Condition Levers………………...TAKEOFF LAND 5-14 & 5
15
9 Friction……………………………..SET 5-14
10 Trim Tabs……………………………..SET 5-14
Elevator 4° - 6° nose up, rudder 2° left and aileron 1°
left.
11 Engine Instruments..................................CHECK 5-14
Confirm all engine instruments are in the green range prior to takeoff. Note that extended ground operations on hot days may result in high oil temperatures. If oil temperatures approach the red line, turn the aircraft into the wind, set the parking brake, and advance the power levers to at least flight idle. This will ensure a positive propeller blade angle and provide cooling airflow over the oil coolers. The "Preflight Operation Check" table in the AFM contains some, but not all, normal engine indications for taxi and takeoff.

12 Annunciator Panel & Warning Lights.........................CLEAR 5-14
a LG UNSAFE Warning Light............................CHECK 5-14
b Annunciator Panel.....................................CHECK 5-14
Fire Warning and other warning lights checked out

13 Heading..................................................CHECK
Heading should be compared with assigned takeoff heading.

**TAKEOFF SPEEDS**

<table>
<thead>
<tr>
<th>FLAPS 5°</th>
<th>VR</th>
<th>V50</th>
<th>VXSE</th>
<th>VYSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,575 LBS</td>
<td>109</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>11,000 LBS</td>
<td>106</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>10,000 LBS</td>
<td>101</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>9,000 LBS</td>
<td>100</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLAPS 20°</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,575 LBS</td>
</tr>
<tr>
<td>11,000 LBS</td>
</tr>
<tr>
<td>10,000 LBS</td>
</tr>
<tr>
<td>9,000 LBS</td>
</tr>
</tbody>
</table>
AFTER TAKEOFF

Maintain pitch attitude (Maximum 13° Nose UP).  5-15

1 Landing Gear .................................................. UP  5-15

Landing gear should be selected up as soon as a positive rate of climb is established and. Check single engine rate of climb data, before starting engines. Check all gear lights extinguished after retraction.

NOTE
If takeoff was made from a snow or slush covered runway, cycle the landing gear one or two times at a safe altitude to shed any ice accumulation.  5-16

2 Landing Light ........................................... RETRACT  5-16

3 Flaps .................................................. RETRACT ON SCHEDULE  5-16

After gear retraction complete, retract flaps. If flaps 20 takeoff was elected, retract flaps to 5 at 130 knots minimum, confirm proper flap indications, then select flaps up at 140 knots minimum.  5-16

4 Airspeed (Normal Climb) ............ 155 KCAS MINIMUM  5-16

5 Power .................................................. MAXIMUM CONTINUOUS  5-16

NOTE
If takeoff was made with EGT at 650°C during visible moisture, reduce EGT to 630°C for Normal or Cruise Climb only after gear and flaps are UP and all obstacles have been cleared.  5-16
6 Cabin Air .................................................... BOTH 5-16
7 Ignition .................................................. AS REQUIRED 5-16/5-
          18-1
Select CONT (auto-ignition installed) or ON (auto-
        5-16/5-
          18-1
ignition not installed) in icing conditions or heavy
          5-16/5-
          18-1
precipitation. Observe duty cycle limitations.
In other than these conditions, select AUTO (auto-
          5-16/5-
          18-1
ignition installed) or OFF (auto-ignition not installed.)
If duty cycle limits prevent operating with CONT during
icing conditions, select AUTO.
CAUTION

1. IGNITION SHALL BE SELECTED TO ON OR
   CONT, WHEN ICE IS VISIBLE ON, OR SHEDDING
   FROM PROPELLER(S), SPINNER(S), OR LEADING
   EDGE(S).
2. IGNITION SHALL BE SELECTED TO ON OR
   CONT, BEFORE SELECTING ANTI-ICE, WHEN ICE
   HAS ACCUMULATED.
3. IGNITION SHALL BE SELECTED TO ON OR
   CONT, IMMEDIATELY, ANYTIME ENGINE
   FLAMEOUT OCCURS AS A POSSIBLE RESULT
   OF ICE INGESTION.

8 De-ice & Anti-ice ........................................ AS REQUIRED
   (ADD 10% KCAS IN ICING)
   All anti-ice and de-ice systems should be on for
   operations in icing conditions. Wing de-ice should
   remain in AUTO, except in heavy icing conditions
   where more frequent ice removal may be required.
   a Wing De-ice ..................................... AS REQUIRED 5-16
   b Anti-Ice Systems ............................. AS REQUIRED 5-17
   c Pitot & Static Anti-Ice ............................. ON 5-14/5-
   d Windshield Heat .................................... LOW 5-14/5-
          18-1

9 Cabin Pressurization ................................. SET 5-17
Set "Airplane Alt At Max Diff." window to cruise altitude
plus 1000 feet. Adjust rate control for a comfortable
climb.

10 Engine Instruments .................................. CHECK 5-17
11 Synchrophaser ........................................ SET 5-17

---

VISIBLE MOISTURE ENCOUNTERS

CAUTION
DURING ALL OPERATIONS IN VISIBLE MOISTURE,
CAREFULLY MONITOR EGT. DO NOT ALLOW EGT TO
EXCEED 650°C.
FLIGHT IN ICING CONDITIONS

WARNING
PILOTS SHOULD BE AWARE THAT OPERATION OF THE AUTOPILOT'S VERTICAL MODES MAY RESULT IN AN UNSAFE AIRSPEED IF ICE ACCUMULATES ON THE AIRPLANE.

IN ORDER TO MINIMIZE ICE ACCUMULATIONS ON UNPROTECTED LOWER SURFACES, MAINTAIN A MINIMUM SPEED OF 180 KIAS DURING OPERATIONS IN SUSTAINED CRUISE IN ICING CONDITIONS.

IF UNABLE TO MAINTAIN 180 KIAS AT MAXIMUM CONTINUOUS POWER, A CHANGE OF ALTITUDE AND/OR COURSE MAY BE NECESSARY TO MAINTAIN MINIMUM AIRSPEED AND/OR EXIT THE ICING CONDITIONS.

DURING LANDING, DO NOT SELECT 40° FLAPS WHEN OPERATING IN ICING CONDITIONS.

CLIMB (18000') / CRUISE

1 Taxi Lights..........................OFF 5-16
2 Cabin Sign........................AS REQUIRED
   Normally, OFF for cruise. However, in turbulence, cabin sign should remain ON.
3 AItimeters..........................SET 5-18-1
   Local altimeter setting, or 29.92, as appropriate.
4 Cabin Pressurization................CHECK 5-18-1
5 Fuel Balance and Transfer........CHECK 5-18-1
   Maintain fuel balance within 150 pounds. A faster feeding fuel tank may be turned off to allow the slow tank to catch up. After tip tanks and outer tanks are empty, turn fuel transfer switches off.
6 Generator Load..................CHECK 5-18-1
7 Anti-Ice/Deice Systems.............AS REQUIRED
   (180 KCAS MINIMUM IN ICING) 5-18-1
   a Pitot & Static Anti-Ice...........ON 5-14/5-18-1
   b Windshield Heat..................LOW 5-14/5-18-1
8 Oxygen/Crew Mask..................CHECK 5-18-1
9 Power..........................SET AS REQUIRED
   (96% RPM TO 98% RPM) 5-18-1
Mitsubishi Pilot Checklist Section 5
MU-2B-60 Marquise Normal Procedures
AFM Page

**CAUTION**
DO NOT MOVE CONDITION LEVER BELOW MIN CRUISE DURING FLIGHT EXCEPT TO FEATHER A FAILED ENGINE.

<table>
<thead>
<tr>
<th>10 Engine Instruments</th>
<th>MONITOR</th>
</tr>
</thead>
</table>

**DESCENT**

<table>
<thead>
<tr>
<th>1 Cabin Altitude</th>
<th>SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Cabin Pressure Controller pointer to field elevation plus 1000'. Adjust rate control knob so that the airplane will be fully depressurized prior to landing. Generally, a 300 to 500 fpm cabin descent rate will be comfortable and ensure proper depressurization.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 Fuel Transfer</th>
<th>AS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select TIP MANUAL or OFF to prevent operation of outer fuel transfer pumps during prolonged descent.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 Altimeters</th>
<th>SET</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>4 Windshield Defog</th>
<th>AS REQUIRED</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>5 Ignition</th>
<th>AS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If auto-ignition installed) If descent through icing conditions is anticipated, turn ignition to CONT (or AUTO, when ignition duty cycle limits operation in CONT).</td>
<td></td>
</tr>
<tr>
<td>(If continuous ignition installed) If descent through icing conditions is anticipated, turn continuous ignition to ON. Some ignition units have duty cycle limitations which effectively limit the amount of time an airplane can be operated in icing conditions, unless the auto-ignition system is installed.</td>
<td></td>
</tr>
</tbody>
</table>

**CAUTION**
IGNITION SHALL BE SELECTED TO CONT (auto-ignition installed) or ON (continuous ignition installed) DURING APPROACH AND LANDING WHILE IN OR SHORTLY FOLLOWING FLIGHT IN ACTUAL OR POTENTIAL ICING CONDITIONS.

<table>
<thead>
<tr>
<th>6 Anti-Ice/Deice</th>
<th>AS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ADD 10% KCAS IN ICING) &amp; 5-19</td>
<td></td>
</tr>
<tr>
<td>a Pitot &amp; Static Anti-Ice</td>
<td>ON</td>
</tr>
<tr>
<td>b Windshield Heat</td>
<td>LOW</td>
</tr>
<tr>
<td>If descent through icing conditions is anticipated, turn on all anti-ice and de-ice equipment.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7 Taxi Lights</th>
<th>SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended on for descent.</td>
<td></td>
</tr>
</tbody>
</table>
1. Landing Data........................................COMPUTED 5-18-2
   Recommended landing flap setting is flap 20’ although flap 40’ is available. Compute landing weight, VREF for selected flap position, and landing distance. Other landing data may be required depending upon the circumstances. Refer to the performance section of the AFM. For landing with a crosswind, adjust VREF by one half the steady state wind plus all of the gusts, not to exceed VREF plus 10 knots. When landing with any ice accumulation on the wing, increase the computed VREF by 15 knots. When landing with an assymetric fuel condition, increase computed VREF by 10 knots. Approach speeds should not be below VREF (adjusted) until landing flare.
2. Fuel Quantity/Balance................................CHECK 5-18-2
   Tip fuel must be below 400 pounds or an overweight landing inspection will be required. Balance within 150 pounds.
3. Synchrophaser........................................OFF 5-18-2
4. Differential Pressure................................ZERO 5-18-2
5. Condition Levers................................TAKEOFF LAND 5-18-2
   Provides maximum thrust in the event of a go-around.
7. Flaps.......................................................5” (below 175 KCAS) 5-18-2
8. Airspeed ........................................140 KCAS MINIMUM 5-18-2
9. Cabin Sign............................................ON 5-18-2
   Brief passengers.
10. Anti-Ice System......................................AS REQUIRED
    (ADD 10% KCAS IN ICING) 5-18-2
    a. Pitot & Static Anti-ice................................ON 5-18-2
    b. Windshield Heat......................................LOW 5-18-2

**LANDING THRESHOLD SPEED (Vref)**

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FLAPS 20’</th>
<th>FLAPS 40’</th>
</tr>
</thead>
<tbody>
<tr>
<td>11025 LBS</td>
<td>110</td>
<td>119</td>
</tr>
<tr>
<td>10500 LBS</td>
<td>108</td>
<td>116</td>
</tr>
<tr>
<td>10000 LBS</td>
<td>105</td>
<td>114</td>
</tr>
<tr>
<td>9500 LBS</td>
<td>102</td>
<td>111</td>
</tr>
<tr>
<td>9000 LBS</td>
<td>100</td>
<td>108</td>
</tr>
</tbody>
</table>
BEFORE LANDING

WARNING
USE OF 40° FLAPS FOR LANDING CONSIDERABLY RESTRICTS THE GO AROUND CAPABILITY SHOULD AN ENGINE FAILURE OCCUR IN THE APPROACH OR LANDING PHASE.
DURING LANDING, DO NOT SELECT 40° FLAPS WHEN OPERATING IN ICING CONDITIONS. THE FAA HAS DETERMINED THAT ICE ACCUMULATIONS ON THE TAIL PLANE OF MANY AIRCRAFT MAY RESULT IN A REDUCED DOWN FORCE ON THE HORIZONTAL STABILIZER WHEN FULL FLAPS ARE USED. THIS REDUCED DOWN FORCE MAY RESULT IN THE AIRCRAFT PITCHING NOSE DOWN.

Note: It is strongly recommended that the airplane be established on a stable approach for the last 1000 feet of descent in IMC conditions (or for the complete final approach segment of a non precision approach if that segment is less than 1000 feet above the field) or the last 500 feet of descent in VMC conditions. A stable approach means that the airplane is configured for landing, all checklists have been completed, power is established at a setting to maintain an airspeed of Vref to Vref plus 20 knots, the airspeed is steady at Vref to Vref plus 20 knots, the proper glide path is being maintained, the airplane is trimmed, and no unusual maneuvering is required to accomplish the landing. A missed approach is recommended if deviation from any of these parameters occurs.

1 Landing Gear........................................... DOWN 5-18-2
Ensure 3 green landing gear position lights illuminated and the red unsafe light extinguished. If a gear malfunction occurs, emergency extension may be required. Maximum speed for normal extension is 175K.

2 Landing Lights................................. AS REQUIRED 5-18-2
Maximum speed 175K.

3 Brakes................................................. CHECK
Depress brake pedals, check firm pressure.
4 Flaps .............................................AS REQUIRED  5-18-3/5-18-4

NOTE
It is recommended to set the flap switch at 5° position
and confirm the 5° indication light illuminates before
going to 20° position.
Recommended landing is with flap 20° although flap
40° is available.

5 Ignition.............................................AS REQUIRED  5-18-3/5-18-4

CONT or ON if runway is contaminated, raining, or in
icing conditions. Also, CONT or ON shortly following
exit from icing conditions whenever ice remains
forward of the engine nacelle. (Observe ignition duty
cycle limits). Otherwise, for aircraft with autoignition
installed, AUTO.

6 Wing Deice........................................OFF  5-19

NOTE
If Wing Deice system is in Automatic mode during
approach, cycle system OFF then ON to allow one
additional cycle, then select the system OFF prior to
landing.

7 Condition Levers .........................RECHECK

8 AP/Yaw Damper.....................................OFF
Refer to Autopilot supplement in AFM.

---

**AFTER LANDING**

Maintain directional control by rudder pedals and
differential braking if necessary  5-20

1 Power Levers ...............................GROUND IDLE  5-20

2 BETA RANGE Annunciators .............ILLUMINATED

CAUTION
Ensure that both BETA RANGE annunciators are
illuminated before selecting reverse after touchdown or
asymmetrical reverse thrust may result. The nose
wheel must be on the ground and airspeed below 90
knots before selecting reverse.

3 Power Levers ............................REVERSE
(AS REQUIRED)  5-20

4 Power Levers ...............................GROUND IDLE
When reversing completed.
CAUTION
DO NOT RETARD CONDITION LEVERS BELOW TAKEOFF LAND POSITION UNLESS POWER LEVERS ARE OUT OF REVERSE.
Recommend that the pilot does not begin the following checklist until clear of the runway and established at normal taxi speed.

5 Ignition ......................................................... OFF 5-20
CAUTION
DO NOT RETARD CONDITION LEVERS BELOW TAKEOFF AND LAND UNLESS IGNITION SWITCHES ARE OFF.

6 Condition Levers........................................ TAXI 5-20
After completion of landing ground roll. Recommend starting the clock in order to time 3 minute cool down.

7 Anti-ice......................................................... OFF 5-20

8 Lights......................................................... AS REQUIRED 5-20
a Landing Lights/Taxi Lights.............. AS REQUIRED 5-20
b Strobe Lights............................................ OFF 5-20
Do not operate strobe lights in the vicinity of other aircraft.

9 Rader & Transponder............................. STBY 5-20

10 Flaps ........................................... AS REQUIRED 5-20
Flaps should be in the up position if airplane is to be parked overnight. Otherwise, pilot may elect to set next anticipated takeoff flap position.

11 Trim Tabs............................................. RESET 5-20

---

STOPPING ENGINES

1 Power Levers ........................................ GROUND IDLE 5-20
2 Radio Masters ........................................ OFF 5-20
3 Engine Shutdown ........................................ ACCOMPLISH 5-20
   a Run-Crank-Stop Switches ............... STOP AND HOLD UNTIL 50% RPM 5-20
   NOTE
   Engine rpm and EGT will increase momentarily after placing Run-Crank-Stop Switch to STOP.
   b Power Levers ........................................ REVERSE 5-20
   Move Power Levers to reverse position as engine decelerates to 50% to position propellers on locks.

4 Parking Brake ..................................... AS REQUIRED 5-20
If brakes are hot, do not set parking brake. However, if parking brake not set, ensure the aircraft is properly chocked.
5 OVERHEAD Switch Panel ................................ OFF
   a Cabin Sign .............................................. OFF 5-20
6 Oxygen Outlet Valves .................................. CLOSED 5-21
7 Cabin Air Selector ...................................... OFF 5-20
8 Fuel Transfer Switch .................................. OFF
9 DC Generator Switch .................................. OFF 5-21
10 Inverter ................................................. OFF 5-21
11 Other Switches ......................................... OFF
   Except Main Fuel Valves and SRL
12 Battery Key Switch ..................................... OFF
13 Flight Control Lock .................................... INSTALL 5-21
14 Oxygen Cylinder Valve ................................ CLOSED 5-21

SECURING

1 Chocks .................................................. INSTALL
2 Nose Gear Torque Link ............................... DISCONNECT
   NOTE
   The torque link must be disconnected for towing.
   However, if towing is completed, the torque link may
   be reconnected to provide rudder gust lock protection.
3 Plugs & Covers ......................................... INSTALL 5-21
4 Parking Brake .......................................... OFF
   After the airplane is properly chocked.
5 Bag & Cabin Lights ..................................... OFF
   Ensure all lights are off in order to not deplete the
   batteries.

TURNAROUND

If engine restarts are anticipated in 10 to 45 minutes:

   1 Park airplane into wind if possible 5-21
   2 Manually turn engine rotating group in direction of
      normal rotation.
      Note:  One blade width movement turns rotating group
      about 180° .  5-21
   3 Continue these procedures until engine restart
      CAUTION
      DO NOT ATTEMPT TO START AN ENGINE WITH
      THERMAL DISTORTION. ACCELERATION MAY
      STAGNATE BETWEEN THE 18% to 28% RPM
      RANGE ACCOMPANIED BY A RAPID INCREASE
      IN EGT. ENGINE ROTATING GROUP DAMAGE
      MAY OCCUR.
CRANKING

Complete BEFORE STARTING ENGINES Checklist 5-26-1/5
before using this procedure 26-2

1 Battery Select Switch .................. PARALLEL
or SERIES 5-26-1/5
26-2

2 Main Fuel Valve Switches ................. OPEN 5-26-1/5
26-2

3 Run-Crank-Stop Switch ................... CRANK 5-26-1/5
26-2

4 Start Selector Switch .................. LH GND START or
RH GND START 5-26-1/5
26-2

5 Engine Start Switch ................. PRESS and HOLD
When RPM stagnates: 5-26-1/5
26-2

6 Engine Start Switch .................. RELEASE 5-26-1/5
26-2

NOTE
Release starter when rpm stagnates. Allow rotation to
stop before attempting another CRANKING.
CAUTION
DO NOT EXCEED STARTER DUTY CYCLE LIMITS. 5-26-1/5
26-2
CAUTION
IF PRACTICE ENGINE SHUTDOWNS AND AIRSTARTS ARE PLANNED, OVERSPEED GOVERNOR (OSG) AND NEGATIVE TORQUE SENSOR (NTS) CHECKS MUST BE ACCOMPLISHED PRIOR TO FLIGHT.

WARNING
INTENTIONAL SIMULATED ENGINE FAILURES SHOULD NOT BE ACCOMPLISHED AT SPEEDS LESS THAN 125 KCAS.

This check required after certain maintenance functions by the engine maintenance manual. Check with maintenance prior to flight. The pilot should be thoroughly familiar with the procedure or request assistance from a pilot familiar with the procedure.

On Engine to be Shutdown:

1 Recommended Airspeed.................150-180 KCAS
2 Recommended Altitude...............5000 AGL MIN,
   DAY - VFR ONLY
3 Synchrophaser..........................OFF
4 Power Lever..........................FLIGHT IDLE
   Zero thrust for 1 minute. Establish power on other engine and trim to maintain desired airspeed.
5 DC Generator Switch..................OFF
6 Amperage...........................CHECK
   If more than 200 amps on remaining generator, reduce load within limits before shutting engine down.
7 Bleed Air (engine to shut down)........OFF
8 Ignition (engine to shutdown).........OFF
Run-Crank-Stop Switch..............................STOP (HOLD TO 50% RPM) 5-26-1/5-26-2

Start a timer. A properly functioning NTS will reduce engine rpm to 35% within 60 seconds. If the aircraft yaws excessively, feather the propeller immediately with the condition lever and set the power lever fully forward (Beta follow up position) to minimize propeller drag. Do not restart the engine. Complete engine shutdown and single engine landing procedure.

Condition Lever.......................................EMERGENCY STOP (AT 30% RPM) 5-26-1/5-26-2

a NOTE
The feathered propeller should not rotate any significant amount between 120 KTS and 180 KTS. If windmilling exceeds 5% RPM, reduce airspeed (if feasible). If windmilling is in a reverse direction, increase airspeed (if feasible).

b CAUTION
DO NOT ALLOW FEATHERED ENGINE TO ROTATE IN A REVERSE DIRECTION.

c If a prolonged shutdown is anticipated, some propeller windmilling (below 5% RPM) is desirable to equalize cooling if EGT is above 200 degrees C. The following is permissible if propeller is not rotating: 1) Place condition lever to the Minimum Cruise Detent, and 2) press the unfeather switch as required to achieve minimum windmill (maximum 5% until EGT is below 200 degrees C.) Once the EGT is below 200 degrees C or the rpm exceeds 5%, place the condition lever to Emergency Stop.

d CAUTION
AVOID OPERATION BETWEEN 18% AND 28% RPM EXPECT FOR TRANSIENTS OCCURRING DURING ENGINE START AND SHUTDOWN.

e WARNING
PLACE SHUTDOWN ENGINE POWER LEVER AND CONDITION LEVER IN CORRECT POSITION FOR AIRSTART AS SOON AS POSSIBLE SHOULD AN IMMEDIATE RESTART BE REQUIRED.

Airstart...............................................ACCOMPLISH 5-26-1/5-26-2
SYSTEM OPERATION

1 SYNCHROPHASER

NOTE Do not operate synchrophaser during takeoff and landing

1 Engines........................................SYNCHRONIZE MANUALLY (99.5% Maximum) 5-28

2 Synchrophaser Control
Switch.........................................................ON 5-28

3 To Change Blade Relationship Between Propellers........................................ADJUST PHASE SELECT AS NECESSARY

CAUTION
TURN SYNCHROPHASER OFF PRIOR TO MOVING CONDITION LEVERS TO PREVENT RPM SURGE ON BOTH ENGINES. TO CHANGE RPM SETTING, MOVE CONDITION LEVERS AND SYNCHRONIZE MANUALLY, THEN TURN SYNCHROPHASER ON.

NOTE
Failure to maintain synchronization indicates trim has reached its limit. When the switch is OFF, the trim will return to the center position. The phase select allows changes of blade relationship, for noise control, between propellers while synchronized.

2 ENGINE CONTINUOUS IGNITION SYSTEM
(If Auto-Ignition System is not installed)
The continuous ignition system, which operates engine ignition manually, shall be selected to ON during takeoff, landing or flight in severe weather conditions especially all operations in actual or potential icing conditions described herein and where there is water, slush or snow on the runway.

CONTINUOUS IGNITION SWITCHES SHOULD BE ON:
1. During takeoff and climb out in actual or potential icing conditions.
2. When ice is visible on, or shedding from propeller(s), spinner(s), or leading edge(s).
3. Before selecting ANTI-ICE, when ice has accumulated.
4. Immediately, anytime engine flameout occurs as a possible result of ice ingestion.
5. During approach and landing while in or shortly following flight in actual or potential icing conditions or where there is water, slush or snow on the runway.

Note: Potential icing conditions in precipitation or visible moisture meteorological conditions;
1. Begin when the OAT is plus 10 degrees C (plus 50 degrees F) or colder, and
2. End when the OAT is plus 10 degrees C (plus 50 degrees F) or warmer.

OPERATION
1 Continuous Ignitions.......................... ON
2 Both Indicator Lights.......................... ILLUMINATED

RECOMMENDED DUTY CYCLES

Applicable to 868962-1/2 Ignition Unit
(Engine not modified by GTEC S/B TPE/TSE 331-74-003)

1 Minute Cycles
First Cycle....................................... 1 Minute ON - 1 Minute OFF
Repetitive Cycles................................ 1 Minute ON - 1 Minute OFF

2 Minute Cycles
First Cycle....................................... 2 Minutes ON - 2 Minutes OFF
Repetitive Cycles................................ 2 Minutes ON - 23 Minutes OFF

5 Minute Cycles
First Cycle....................................... 5 Minutes ON - 55 Minutes OFF
Repetitive Cycles................................ 5 Minutes ON - 55 Minutes OFF
Applicable to 868962-3 Ignition Unit
(Engine modified by GTEC S/B TPE/TSE 331-74-003 and not modified by GTEC S/B TPE/TSE 331-75-004)
Up to one hour continuous duty. The total ON cannot exceed one hour without one hour OFF. The one hour ON can be either continuous or intermittent.
(Engine modified by GTEC S/B TPE/TSE 331-74-003 and GTEC S/B TPE/TSE 331-75-004)
Above +50 degrees F (+10°C) ambient temperature.
Up to one hour continuous duty. The total ON cannot exceed one hour without one hour OFF. The one hour ON can be either continuous or intermittent.
Below +50 degrees F (+10°C) ambient temperature.
Continuous.
CAUTION
OPERATIONAL TIMES IN EXCESS OF THE DUTY CYCLE WILL DECREASE THE LIFE OF IGNITERS AND IGNITION UNIT.

3 AUTO-IGNITION SYSTEM
(If Auto-Ignition System is installed)
1. The Ignition System is activated by a torque pressure switch sensing the high pressure output of the hydraulic torque sensor. If the engine flames out, the torque pressure drops rapidly below the torque switch set point, thus turning on the ignition. Following relight, the ignition is deactivated as the torque pressure goes above the switch set point pressure. The system is deactivated unless the CRANK-RUN-STOP switch is in the “RUN” position.
2. During ignition operation, the yellow LH IGNITION or RH IGNITION annunciator is illuminated.
3. The Auto-Ignition System shall be placed in AUTO for all normal flight conditions.
4. The Auto-Ignition System shall be placed in CONT (within duty cycle limitations) for all flight in icing conditions. This operation shall be conducted prior to turning on the engine intake anti-ice switch especially if inadvertent icing is encountered.

AUTOMATIC OPERATION
1 Ignition Switches..............................AUTO
2 Annunciator Lights .......................EXTINGUISHED
NOTE
The ignition annunciators may illuminate under some low power conditions. Increase power as required to extinguish the annunciators.
CONTINUOUS OPERATION

1 Ignition Switches ....................................... CONT
2 Annunciator Lights .................................. ILLUMINATED

CAUTION
OPERATIONAL TIMES IN EXCESS OF THE DUTY CYCLE WILL DECREASE THE LIFE OF IGNITORS AND IGNITION UNIT.

4 FUEL TRANSFER SYSTEM

AUTO FUEL FEED

1 L and R Fuel Transfer
Switches .................................................. AUTO

NOTE
If the tip and outer tanks contain fuel, all fuel will automatically feed to the main tank. When the tip tanks and the outer tanks are empty, the LH and RH OUTER FUEL EMP lights will illuminate.
Both tip tanks must be empty before the outer tanks will begin to transfer.

2 Appropriate Fuel Transfer
Control Switch ......................................... OFF

NOTE
Extended cruise above 25,000 feet may result in a small amount of residual fuel in the tip tanks. This is due to the nose up pitch attitude associated with high altitude flight. To recover the fuel, place the Tip Tank Manual switches ON during descent at near level attitude.

5 AIR CONDITIONING AND PRESSURIZATION

HEATING/COOLING/PRESSURIZATION

1 Manual Pressure
Control Valve........................................... FULL INCREASE
2 Auto-Manual Selector Switch ....................... AUTO
3 Cabin Supply Air
Temperature Selector .............................. AS DESIRED
4 Cabin Air Selector Switch ...................... BOTH (LH OR RH
AS DESIRED)
5 Cabin Altitude Selector Knob .................. AS DESIRED
6 Cabin Rate Control Knob ......................... AS DESIRED
7 Cabin Air Outlet Select Switch ............... AS DESIRED
       (CEILING OR FLOOR)
8 Forward Conditioned Air
Outlet Knob ............................................. NORMAL

FAA Accepted July 18, 2006
MAXIMUM COOLING
1 Cabin Supply Air
   Temperature Selector..........................FULL COLD 5-30-1
   or Auto-Manual Selector
   Switch.............................................MANUAL COLD
2 Air Outlets...........................................OPEN 5-30-1

MAXIMUM HEATING 5-30-2
1 Cabin Supply Air
   Temperature Selector..........................FULL HOT 5-30-2
   or Auto-Manual Selector
   Switch.............................................MANUAL HOT
2 Air Outlets...........................................OPEN 5-30-2

FORCED VENTILATION
1 Cabin Air Selector Switch .......................BOTH 5-30-2
2 Manual Pressure Control
   Valve..............................................DECREASE 5-30-2
   Note: Cabin differential pressure will reduce in
   proportion to the position of the control valve. 5-30-2

RAM AIR VENTILATION 5-30-2
1 Manual Pressure Control
   Valve..............................................DECREASE 5-30-2
   Until cabin differential pressure is zero.
2 Auto-Manual Selector Switch........................OFF 5-30-2
3 Cabin Air Selector Switch........................RAM 5-30-2

WINDSHIELD DEFOG SYSTEM 5-31
1 Cabin Air Selector Switch .......................BOTH 5-31
2 Forward Conditioned Air
   Outlet Knob.......................................DEFOG 5-31
3 Cabin Supply Air
   Temperature Selector..........................FULL HOT 5-31
   or Auto-Manual Selector
   Switch.............................................MANUAL HOT 5-31

CAUTION
USE OF OXYGEN IS RECOMMENDED ABOVE 15,000 FEET PRESSURE ALTITUDE.

WINDSHIELD DEFOG SYSTEM 5-31
1. Cabin Air Selector Switch .......................BOTH 5-31
2. Forward Conditioned
   Air Outlet Knob.................................DEFOG 5-31
   If sufficient defogging cannot be obtained:
3. Cabin Supply Air
   Temperature Selector..........................FULL HOT 5-31
   or Auto-Manual Selector
   Switch.............................................MANUAL HOT 5-31
6 OXYGEN SYSTEM
PILOT, COPILOT, 9-PASSENGERS MAXIMUM

WARNING
IF THE VALVE ON THE OXYGEN CYLINDER IS CLOSED, NO OXYGEN CAN BE SUPPLIED TO THE MASK OUTLETS. PRESSURE MAY BE INDICATED ON THE REGULATOR GAUGE IN THE COCKPIT WITH THE OXYGEN VALVE CLOSED. CHECK PRIOR TO FLIGHT.

SYSTEM USAGE
1 Cockpit Outlet Valve ................. FULL OPEN
2 Oxygen Mask ................................ INSERT HOSE IN OUTLET,
ROTATE 1/4 TURN CLOCKWISE TO DETENT POSITION
DON MASK
3 Flow Indicator .................. CONFIRM OXYGEN FLOW BY ABSENCE OF RED LINE INDICATOR IN HOSE

CAUTION
IF THE RED LINE INDICATOR IS VISIBLE, OXYGEN IS NOT BEING SUPPLIED. RECHECK VALVES AND HOSE CONNECTIONS. ENSURE NO IGNITION SOURCES ARE PRESENT DURING OXYGEN USE (I.E. SMOKING MATERIALS, OILY RAGS AND/OR CLOTHES, OPEN FLAMES).

AFTER USING
1 Cockpit Outlet Valve ................ CLOSE
2 Oxygen Mask ................ DISCONNECT
3 Oxygen Cylinder Shutoff Valve .................. CLOSE (after landing)

OXYGEN DURATION CHART - 22CU.FT.CYLINDER
<TABLE> TIME TABLE

7 PITOT AND STATIC ANTI-ICE SYSTEM
Inflight Operation - Prior to Flight Into Known Icing Conditions
1 Pitot & Static Anti-Ice Switches .................. ON
2 Loadmeter Select Switch .................. LH PITOT AND STATIC POSITION
3 Loadmeter Operating Range .................. .50 TO .85
4 Loadmeter Select Switch .................. RH PITOT AND STATIC POSITION
5 Loadmeter Operating Range .................... .50 TO .85
6 Pitot & Static Anti-Ice Switches ............................ ON

8 STALL WARNING ANTI-ICE SYSTEM

Inflight Operation - Prior to Flight Into Known Icing Conditions

1 Stall Vane Anti-Ice Switch ............................. ON
2 Loadmeter Select Switch .......................... STALL VANE
3 Loadmeter Operating Range ................. .30 TO .70

CAUTION
ICE ACCUMULATION ON THE WING DEICE BOOT MAY DISRUPT AIR FLOW OVER THE STALL VANE AND PREVENT THE SYSTEM FROM PROVIDING ACCURATE STALL WARNING.

4 Stall Vane Anti-Ice Switch ................. AS REQUIRED

9 PROPELLER ANTI-ICE SYSTEM

CAUTION
DO NOT CHECK PROPELLER ANTI-ICE SYSTEM UNTIL AFTER ENGINE START.

Inflight Operation - Prior to Flight Into Known Icing Conditions

1 Prop Deice Switches ..................................... ON
2 Loadmeter Select Switch .......................... POSITION TO LH PROP
3 Loadmeter Operating Range ................. .85 TO 1.05
4 Loadmeter Select Switch .......................... POSITION TO RH PROP
5 Loadmeter Operating Range ................. .85 TO 1.05

NOTE
The loadmeter will fluctuate in about 30 second cycles as power shifts to heater mats on other blades.

6 Prop Deice Switches .......................... AS REQUIRED

10 ENGINE INTAKE AND OIL COOLER AIR INTAKE

CAUTION
DO NOT CHECK UNTIL AFTER ENGINE START.

Inflight Operation - Prior to Flight Into Known Icing Conditions

1 Engine Intake Anti-Ice Switches ............................. ON
2 Indicator Lights ........................................ ILLUMINATE

CAUTION
MAXIMUM 10 SECONDS OPERATION FOR TEST PURPOSES WHEN THE OAT IS 10 °C (50 °F) OR HIGHER.

NOTE
This is true whether visible moisture is present or not.
3 Oil Cooler Inlet Anti-Ice
   Switches.................................ON 5-34
4 Indicator Lights.........................ILLUMINATE 5-34
5 Engine Intake Oil Cooler
   Anti-Ice Switches........................AS REQUIRED 5-34

11 HEATED WINDSHIELD ANTI-ICE SYSTEM 5-35
INFLIGHT OPERATION 5-35
   Windshield heat shall be on LOW for all normal flight
   operations. 5-35
1 Windshield Heat Low
   Switches, LH and RH.....................ON 5-35
2 If Ice Forms, Hi Heat
   Switches.................................ON(L or R
   as Required) 5-35
3 When Ice Is Removed,
   Hi Heat Switches........................OFF 5-35
WHEN CLEAR OF ICING CONDITIONS 5-35
1 Windshield Heat Low
   Switches LH and RH.....................ON 5-35
   CAUTION
   WINDSHIELD HI HEAT FOR ICE REMOVAL ONLY.
   STANDBY COMPASS INDICATION IS NOT
   CORRECT WHEN THE WINDSHIELD HEAT IS ON. 5-35

12 WING AND EMPENNAGE DEICE SYSTEM 5-35
INFLIGHT OPERATION 5-35
1 Wing Ice Light Switch....................ON (at night) 5-35
   At the first sign of ice formation anywhere on the
   aircraft, or upon annunciation from an ice detector
   system, whichever occurs first. 5-35
2 Wing Deice Switch.........................ON 5-35
   a. Indicator Light..........................ILLUMINATES
      (During Inflation) 5-35
   NOTE
   System will cycle at approximately three minute
   intervals, with indicator light illuminating during boots
   inflation. 5-35
3 Ice Accumulation on Wing
   Leading Edge..............................MONITOR 5-35
4 Wing Deice Switch...........................OFF 5-35
   After leaving icing conditions and aircraft is clear of
   accumulated ice.
SEVERE ICING CONDITIONS

1 Wing Deice Switch ..................... MANUALLY CYCLE
   6 seconds ON, 10 seconds OFF

NOTE
   Manual cycles more frequent than above will decrease
deice boot capability.

2 Wing Deice Switch ............................... OFF AFTER

After leaving icing conditions and aircraft is clear of
accumulated ice.

BLENDING ANTI-ICE ADDITIVE TO FUEL

Approved fuel system icing inhibitor conforming to MIL-I-27686 must be added to the fuel in all tanks, unless
fuel is premixed. The icing inhibitor must be added
during refueling to be soluble in the fuel, but not in excess of 0.15% maximum by volume.

Premixed fuel containing icing inhibitor is available and caution must be exercised so that additional icing inhibitor is not added. When using premixed fuel, disregard the following procedures.

BLENDING PROCEDURES

CAUTION

JP-4 FUEL PER MIL-T-5624 HAS ANTI-ICING ADDITIVE PER MIL-I-27686 BLENDED IN THE FUEL AT THE REFINERY AND NO FURTHER TREATMENT IS NECESSARY. SOME FUEL SUPPLIERS BLEND ANTI-ICING ADDITIVE IN THEIR STORAGE TANKS. PRIOR TO REFueling, CHECK WITH THE FUEL SUPPLIER TO DETERMINE WHETHER OR NOT THE FUEL HAS BEEN BLENDED. TO ASSURE PROPER CONCENTRATION BY VOLUME OF FUEL ON BOARD, BLEND ONLY ENOUGH ADDITIVE FOR THE UNBLENDED FUEL.

WARNING

HI-FLO PRIST MAY BE HARMFUL IF INHALED OR SWALLOWED. USE ADEQUATE VENTILATION. AVOID CONTACT WITH SKIN AND EYES. IF SPRAYED INTO EYES, FLUSH WITH LARGE AMOUNTS OF WATER AND CONTACT A PHYSICIAN IMMEDIATELY.

Using HI-FLO PRIST blender manufactured by PPG INDUSTRIES, INC., remove actuator cap.
2 Press valve button (attached to tube and clip assembly) into valve on top of can.
3 Reattach actuator cap by positioning onto can.
4 Place clip with tubing onto fuel nozzle.
5 To start flow, press actuator down fully. To stop flow, press tilt to side and return to normal position.
   Use can upright and start flow of PRIST after refueling begins (refueling should be at a minimum rate of 30 gal/mm. to a maximum of 60 gal/mm.). A rate of less than 30 gal/mm. may be used when topping off tanks.
6 Stop flow of PRIST a moment before refueling stops.
   CAUTION
   ASSURE THAT THE ADDITIVE IS DIRECTED INTO AND BLENDS WITH FLOWING FUEL FROM FUELING NOZZLE. DO NOT ALLOW CONCENTRATED ADDITIVE TO CONTACT INTERIOR OF FUEL TANKS OR AIRCRAFT PAINTED SURFACES. USE NOT LESS THAN 20 FL. OZ. OF ADDITIVE PER 260 GALLONS OF FUEL OR MORE THAN 20 FL. OZ. OF ADDITIVE PER 104 GALLONS OF FUEL.
   ALTERNATE BLENDERS
   If alternate blenders must be used such as PRIST proportioner Model PRB-101 or AP-2, use instructions furnished with blender.

**LANDING GEAR AND FLAP SYSTEMS -**

The following approximate extension and retraction cycle times should be taken into consideration when making configuration changes:

- **Landing Gear**
  - Extension or Retraction: 17 seconds

- **Flap Extension**
  - Up to 5°: 17 seconds
  - 5° to 20°: 10 seconds
  - 20° to 40°: 6 seconds

- **Flap Retraction**
  - 40° to 20°: 4 seconds
  - 20° to 5°: 10 seconds
  - 5° to Up: 21 seconds
Intentionally Left Blank
### ENGINE FAILURE PRIOR TO LIFTOFF

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power Levers: GROUND IDLE</td>
<td>3-1</td>
</tr>
<tr>
<td></td>
<td>Use reverse thrust AS REQUIRED</td>
<td>3-1</td>
</tr>
<tr>
<td>2</td>
<td>Brakes: AS REQUIRED</td>
<td>3-1</td>
</tr>
<tr>
<td>3</td>
<td>Reverse Thrust: AS REQUIRED</td>
<td>3-1</td>
</tr>
</tbody>
</table>

**CAUTION**

ON OTHER THAN DRY, HARD SURFACE RUNWAYS, IT IS POSSIBLE TO APPLY MORE REVERSE THRUST THAN CAN BE COUNTERACTED BY RUDDER, BRAKES, AND NOSEWHEEL STEERING.

### ENGINE FAILURE AFTER LIFTOFF - CONTINUED

**CLIMB NOT POSSIBLE**

**CAUTION**

Check *Single Engine Rate of Climb* by using Single Engine Climb Performance Chart ( Gear Up ) in Pilot Operation Manual to determine whether land straight ahead or continue climbing before takeoff.

* If Single Engine Rate of Climb is negative value, reducing Takeoff Weight is recommended.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Landing Gear: DOWN</td>
<td>3-1</td>
</tr>
<tr>
<td>2</td>
<td>Power (operating engine): AS REQUIRED</td>
<td>3-1</td>
</tr>
<tr>
<td>3</td>
<td>Flap: TAKEOFF</td>
<td>3-1</td>
</tr>
<tr>
<td></td>
<td>Leave in selected position</td>
<td>3-1</td>
</tr>
<tr>
<td>4</td>
<td>Land Straight Ahead: 105KCAS MINIMUM</td>
<td>3-1</td>
</tr>
</tbody>
</table>

### ENGINE FAILURE AFTER LIFTOFF - CONTINUED

**CLIMB**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Landing Gear: UP</td>
<td>3-1</td>
</tr>
<tr>
<td>2</td>
<td>Airspeed: 140KCAS MINIMUM</td>
<td>3-1</td>
</tr>
<tr>
<td>3</td>
<td>Flaps: 5°</td>
<td>3-1</td>
</tr>
<tr>
<td>4</td>
<td>Condition Lever (failed engine): EMERGENCY STOP</td>
<td>3-1</td>
</tr>
<tr>
<td>5</td>
<td>Power Lever (failed engine): TAKEOFF</td>
<td>3-1</td>
</tr>
</tbody>
</table>
WARNING
IDENTIFY FAILED ENGINE BY POWER
ASYMMETRY AND ENGINE INSTRUMENTS. DO
NOT RETARD FAILED ENGINE POWER LEVER.
PLACE FAILED ENGINE POWER LEVER TO
TAKEOFF POSITION DURING FEATHERING OF
PROPELLER AND LEAVE THERE FOR THE
REMAINDER OF THE FLIGHT.
SECURE ENGINE AS SOON AS PRACTICAL.
CAUTION
RUN-CRANK-STOP SWITCH MUST REMAIN IN
RUN POSITION.

6 Landing Light..........................RETRACT
7 Flaps.........................................................UP 3-2
8 Airspeed........................................150 KCAS MINIMUM 3-2
9 Power (operating engine)..................AS REQUIRED 3-2
WARNING
AIR CONDITIONING AND PRESSURIZATION
SYSTEM MUST REMAIN OFF TO ATTAIN FULL
CLimb CAPABILITY.

10 Engine Shutdown (failed engine)........ACCOMPLISH 3-2
Note: Single engine climb rates are best attained with
wings level by use of rudder to correct for yawing
tendency and using the minimum amount of spoiler
necessary to maintain lateral control.

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

*VYSE, Maximum Takeoff Gross Weight, Sea Level
Standard day, Flaps 0° is 152 KCAS. 150 KCAS is
recommended for all weights.

BETA LIGHT ON IN FLIGHT

Should either BETA RANGE annunciator illuminate in
flight in other than a full stall condition and no control
problem is present in rpm or yaw:

With No Control Problem: 3-2

1 Engine Shutdown
(affected engine)......................PRIOR TO LANDING 3-2

With Control Problem: 3-2

2 Engine Shutdown
(affected engine)......................IMMEDIATE 3-2

3 Land Using Single Engine Procedures 3-2
CAUTION
ILLUMINATION OF EITHER BETA RANGE
ANNUNCIATOR IN FLIGHT MAY BE AN
INDICATION OF A PROPELLER CONTROL
MALFUNCTION. IT MAY BE IMPOSSIBLE TO
REDUCE THRUST ON THE AFFECTED ENGINE
DURING LANDING OR AFTER TOUCHDOWN.

AUTO IGNITION RELIGHT FAILURE
Ignition Annunciator Light illuminates with Auto-
Ignition selected, engine fails to accelerate properly:
1 Failed ENG EGT and RPM..............................CHECK
   If EGT or RPM Abnormal
2 Condition Lever (failed engine)......EMERGENCY STOP
3 Power Lever (failed engine)...............TAKEOFF
4 Engine Shutdown...............................ACCOMPLISH

CAUTION
IF ACTUATION OF THE AUTO-IGNITION WAS DUE
TO ICE INGESTION, ENSURE THAT
APPROPRIATE PROCEDURES ARE EXECUTED
FOR FLIGHT IN ICING CONDITIONS.

ENGINE SHUTDOWN
If engine failure occurs, or if a sudden loss or
significant fluctuation (±7.5%) of indicated torque
pressure occurs, as indicated by airplane yaw,
promptly shutdown the affected engine and
determine the cause prior to further operation.
1 Condition Lever (failed engine)......EMERGENCY STOP
2 Power Lever (failed engine)...............TAKEOFF

WARNING
IDENTIFY FAILED ENGINE BY POWER
ASYMMETRY AND ENGINE INSTRUMENTS. DO
NOT RETARD FAILED ENGINE POWER LEVER.
PLACE FAILED ENGINE POWER LEVER TO
TAKEOFF POSITION DURING THE FEATHERING
OF PROPELLER AND LEAVE THERE FOR THE
REMAINDER OF THE FLIGHT.

CAUTION
RUN-CRANK-STOP SWITCH MUST REMAIN IN
RUN POSITION. DO NOT MOVE AFFECTED
ENGINE POWER LEVER UNTIL PROPELLER IS
FEATHERED.
3 Trim........................................SET
4 Power (operating engine)...............AS REQUIRED
5 DC Generator Switch (failed engine) ................................................................. OFF

6 Voltammeter (Main bus tie check in flight) ................................................................. CHECK

NOTE
Both voltmeters should indicate between 27 and 29.5 volts. Amperage on the side of the operating engine should be less than 200 amps (175 amps if above 28,000 feet).

CAUTION
IF EITHER VOLTAMMETER INDICATES BATTERY VOLTAGE (22 - 24 VOLTS) INSTEAD OF GENERATOR VOLTAGE (27 - 29.5 VOLTS) THE 200 AMP BUS TIE CIRCUIT BREAKER IS OPEN AND THE FOLLOWING EQUIPMENT IS POWERED BY BATTERY ONLY. REDUCE LOADS ON THE AFFECTED BUS TO SAVE BATTERY FOR LANDING.

7 DC Generator Load (operating engine ) ................................................................. REDUCE (if necessary)

CAUTION

LEFT DC GENERATOR INOPERATIVE, 200 AMP BUS TIE CIRCUIT BREAKER OPEN, NO. 1 BATTERY POWERS
a. MAIN INVERTER
b. LH WINDSHIELD HEAT
c. LH RADIO MASTER (AUTOPilot, COMM 1, PHONE AUDIO, RNAV, ATC 1, ADF 1, VOR 1, DME 2)

RIGHT DC GENERATOR INOPERATIVE, 200 AMP BUS TIE CIRCUIT BREAKER OPEN, NO. 2 BATTERY POWERS
a. STANDBY INVERTER
b. RH WINDSHIELD HEAT
c. LANDING GEAR (EXCEPT INDICATOR LIGHTS)
d. RH RADIO MASTER (COMM 2, SPEAKER AUDIO, RADAR, ATC 2, ADF 2, DME 1, VOR 2)
Mitsubishi Pilot Checklist
MU-2B-60
Marquise Emergency Procedures
AFM Page

8 Cabin Air......................................... OP ENG OR RAM 3-4
NOTE 3-4
Ram Air Position will depressurize Cabin. Oxygen may be required.
NOTE 3-4
If maximum thrust is required, select RAM.
9 Operating Engine Power Lever....SET AS REQUIRED 3-4
10 Syncrophaser......................................................... OFF 3-4
11 Ignition (failed engine)............................................ OFF 3-4

---

**DRIFTDOWN**

Following an engine failure at altitudes above 25,000 feet pressure altitude:
1 Engine Shutdown (failed engine);........ACCOMPLISH 3-4
2 Power (operating engine).........MAX CONTINUOUS 3-4
3 Airspeed....................................................... 135KCAS 3-4

RECOMMENDED FOR PROLONGED DESCENT

4 Pressurization System.............SELECT OPERATING ENGINE BLEED AIR

NOTE 3-4
For prolonged descent above 25,000 feet pressure altitude, it may be necessary to utilize oxygen. Observe cabin altitude warning light. Recommended airspeed for prolonged descent is 135 KCAS with operating engine at maximum continuous power setting.

---

**SINGLE ENGINE LANDING**

CAUTION 3-4
THE USE OF 40° FLAPS WITH AN ENGINE INOPERATIVE IS NOT RECOMMENDED. ALWAYS MAINTAIN AIRSPEED ABOVE VXSE FOR FLAP SETTING BEING USED UNTIL LANDING IS ASSURED.
NOTE
Use power as required to maintain proper airspeed.
When planning a single engine landing, if the airplane is able to climb or maintain altitude on the single engine, it is generally prudent to fly a wide pattern to a long, stabilized final. Proper airspeed control and configuration management will greatly ease the workload and increase the margin of safety.

NOTE
Once the gear are extended, the airplane may not be able to climb even with full power set on the operating engine, unless the gear are subsequently retracted. Landing gear extension requires approximately 17 seconds to accomplish. Circling approaches and non-precision approaches should be flown with the landing gear up until the field is in sight, the landing is assured and a normal glidepath can be maintained to touchdown, at which time the gear are lowered. For visual approaches and precision approaches, where a normal glidepath can be maintained until touchdown, the landing gear should be lowered at the final approach fix or turning base leg, as appropriate.

NOTE
Proper selection of a landing field in the event of an engine failure is essential. A circling approach at minimums places a much greater workload on the pilot than a visual approach. An ILS provides greater safety margins than a non-precision approach.

1 Engine Shutdown (failed engine): ACCOMPLISH

Descent Checklist (single engine)

2 Cabin Altitude: SET 5-18-2

NOTE
Set pressure controller to 500 feet above landing field elevation. Adjust rate control knob so that airplane will be fully depressurized prior to landing. Generally, a rate of 300 to 500 fpm will be comfortable and ensure proper depressurization.

3 Fuel Transfer: TIP MAN OR OFF 5-18-2

NOTE
Select TIP MANUAL or OFF to prevent automatic operation of outer fuel transfer pumps during prolonged descent.

4 Altimeters: SET 5-18-2

5 Windshield Defog: AS REQUIRED 5-18-2
6 Ignition .................................................. AS REQUIRED 5-18-2
NOTE 5-18-2
(Auto-ignition installed) If descent through icing
conditions is anticipated, turn IGNITION to CONT (or
AUTO, when ignition duty cycle limits operation in
CONT.)
NOTE 5-18-2
(Auto-ignition not installed) If descent through icing
conditions is anticipated, turn ignition to ON. Some
ignition units have duty cycle restrictions which
effectively limit the amount of time that the airplane
can be operated in icing conditions.

7 Anti-Ice & De-Ice .................................. AS REQUIRED 5-18-2
NOTE
If descent though icing conditions is anticipated, turn
on all anti-ice and de-ice equipment.

8 Taxi Lights .............................................................. SET
NOTE
Recommended on for descent.

Approach Checklist (single engine)

9 Landing Data ............................................ COMPUTED 5-18-2
Recommended landing flap setting is flap 20°
although flap 40° is available. Compute landing
weight, VREF for selected flap position, and landing
distance. Other landing data may be required
depending upon the circumstances. Refer to the
performance section of the AFM. For landing with a
crosswind, adjust VREF by one half the steady state
wind plus all of the gusts, not to exceed VREF plus
10 knots. When landing with any ice accumulation on
the wing, increase the computed VREF by 15 knots.
When landing with an assymetric fuel condition,
increase computed VREF by 10 knots. Approach
speeds should not be below VREF (adjusted) until
landing flare.

10 Fuel Quantity & Balance .................................. CHECK 3-4
NOTE
Tip fuel must be below 400 pounds or an overweight
landing inspection will be required. Balance within
150 pounds.

11 Syncrophaser ........................................... OFF 5-18-2
12 Differential Pressure..............................................ZERO 5-18-2
    NOTE
    Confirm cabin will be depressurized prior to turning off cabin air.

13 Condition Lever
    (operating engine)..................................TAKEOFF LAND 3-4
    NOTE
    Provides maximum thrust in the event of a go-around.

14 Power Lever (operating engine).............AS REQUIRED 3-5

15 Cabin Sign..........................................................ON 5-18-2
    NOTE
    Brief passengers.

16 Windshield Heat....................................................LOW 5-18-2

17 Cabin Air Selector Switch...............OFF OR RAM 3-4
    NOTE
    Ensures maximum power available in the event of a go around.

18 Landing Gear...........................................................UP 3-5

19 Flaps..................................................................UP 3-5

20 Airspeed......................................................150KCAS 3-5
    (140 KCAS MINIMUM)

Base Leg or Final Descent:
    Approximately 1000 ft AGL 3-5
    NOTE
    It is strongly recommended that the airplane be established on a stable approach for the last 1000 feet of descent in instrument meteorological conditions (or for the complete final approach segment of a non precision approach if that segment is less than 1000 feet above the field) or the last 500 feet of descent in visual meteorological conditions. A stable approach means that the airplane is configured for approach, all checklists have been completed (except for landing assured items), power is established at a setting to maintain 140 knots (minimum 130 knots), airspeed is steady at 140 knots (minimum 130 knots), the proper glide path is maintained, the airplane is trimmed, and no unusual maneuvering is required to accomplish the landing. A missed approach is recommended if deviation from any of these parameters occurs. When operating with one engine, selection of gear down, flaps 20° and deceleration to runway threshold speed should not

21 Flaps..........................................................5° 3-5
Mitsubishi Pilot Checklist Section 3
MU-2B-60 Marquise Emergency Procedures
AFM Page

22 Airspeed ........................................................ 140KCAS 3-5
   (130KCAS MINIMUM)
23 AP/Yaw Damper ..................................................... OFF
   NOTE
   For M-4D autopilots, autopilot may remain on for approach, but must be off for landing. For SPZ-500, autopilot must remain off for approach and landing. Refer to AFM supplement.

Landing Assured:

24 Landing Gear .................................................... DOWN 3-5
   NOTE
   Ensure 3 green landing gear position lights illuminated and the red unsafe light extinguished. If gear malfunction occurs, emergency extension may be required. Maximum speed for normal extension is 175K. For visual and ILS approaches, the landing gear will normally be extended at the final approach fix or turning base leg. For non-precision or circling approaches, the landing gear will normally be extended when landing is assured and a normal glidepath can be maintained to touchdown.

25 Power Lever (operating engine) .................. AS REQUIRED 3-5
26 Landing Lights .................................................. AS REQUIRED 5-18-2
27 Brakes .............................................................. CHECK
28 Flaps ................................................................. 20' 3-5
29 Ignition .................................................. AS REQUIRED 5-18-3
   NOTE
   ON or CONT for operating engine (OFF for failed engine) if runway is contaminated, raining, or in icing conditions. Also, ON or CONT for operating engine (OFF for failed engine) shortly following exit from icing conditions. Otherwise, for aircraft with autoignition installed, AUTO.

30 Wing De-ice ........................................................... OFF 5-19
   NOTE
   If the wing deice system is in auto during the approach, cycle the wing deice off and on to allow one additional cycle, then select the system off prior to landing.
Mitsubishi Pilot Checklist Section 3
MU-2B-60 Marquise Emergency Procedures
AFM Page

31 Airspeed.............................................110KCAS OVER RUNWAY

WARNING
DO NOT ATTEMPT A GO AROUND BELOW 400 FEET AGL OR AFTER 20° OF FLAPS ARE SELECTED.

CAUTION
UP TO 10% ADDITIONAL RUNWAY MAY BE REQUIRED USING THIS PROCEDURE WHEN COMPARED TO THE NORMAL TWO ENGINE LANDING DISTANCE.

After touchdown:
32 Brakes.................................................. AS REQUIRED
33 Reverse................................................ AS REQUIRED

CAUTION
ON OTHER THAN DRY, HARD SURFACE RUNWAYS, IT IS POSSIBLE TO APPLY MORE REVERSE THRUST THAN CAN BE COUNTERACTED BY RUDDER, BRAKES, AND NOSEWHEEL STEERING.

---

SINGLE ENGINE GO AROUND

WARNING
UNDER CERTAIN COMBINATIONS OF WEIGHT, TEMPERATURE, AND PRESSURE ALTITUDES, WITH LANDING GEAR DOWN AND FLAPS 20°, SINGLE ENGINE GO AROUND MAY NOT BE POSSIBLE AT ALTITUDES OF LESS THAN 400 FEET AGL. DURING TRANSITION FROM STEADY APPROACH (GEAR DOWN AND FLAPS 20° ) TO ESTABLISHMENT OF POSITIVE CLimb (GEAR UP, FLAPS UP) AN ALTITUDE LOSS WILL RESULT. A GO AROUND AFTER FLAPS ARE EXTENDED TO 20° SHOULD NOT BE ATTEMPTED. DO NOT SELECT 40° FLAPS UNTIL LANDING IS ASSURED. ALWAYS MAINTAIN AIRSPEED ABOVE VXSE FOR FLAP SETTING BEING USED UNTIL LANDING IS ASSURED.

1 Condition Lever
(operating engine).................................. TAKEOFF LAND

FAA Accepted July 18, 2006 Page EX-10
Mitsubishi Pilot Checklist  Section 3
MU-2B-60 Marquise  Emergency Procedures
AFM Page

2 Power Lever (operating engine) ............TAKEOFF
Smoothly apply power toward takeoff power while maintaining airplane control.
NOTE
Once target airspeed and configuration are established, raise pitch attitude to maintain desired target airspeed.

3 Landing Gear ...........................................UP
4 Landing Light ........................................RETRACT
5 Flaps ....................................................5"
6 Airspeed ..............................................140KCAS
7 Flaps ....................................................UP (when positive climb established)
8 Cabin Air Selector Switch ...............RAM OR OFF
9 Airspeed ............................................150KCAS
10 Engine Anti-Ice .............................AS REQUIRED

ENGINE FIRE
If LH or RH ENGINE Annunciator Illuminates:
1 Condition Lever (failed engine) ......EMERGENCY STOP
2 Power Lever (failed engine) ..............TAKEOFF
WARNING
IDENTIFY FAILED ENGINE BY POWER ASYMMETRY AND/OR FIRE WARNING INDICATOR AND/OR ENGINE INSTRUMENTS. DO NOT RETARD FAILED ENGINE POWER LEVER. PLACE FAILED ENGINE POWER LEVER TO TAKEOFF POSITION DURING THE FEATHERING OF PROPELLER AND LEAVE THERE FOR THE REMAINDER OF THE FLIGHT.
CAUTION
RUN-CRANK-STOP SWITCH MUST REMAIN IN RUN POSITION. DO NOT MOVE AFFECTED ENGINE POWER LEVER UNTIL PROPELLER IS FEATHERED.
3 Fire Handle (failed engine) .................PULL
4 Engine Shutdown .............................ACCOMPLISH
5 Land As Soon As Possible.
AIRSTART

CAUTION
ENSURE ENGINE STOPPAGE WAS NOT THE RESULT OF MALFUNCTION WHICH MIGHT MAKE IT DANGEROUS TO ATTEMPT A RESTART.

NOTE
Perform engine cooldown if EGT is above 200°C.
Windmill the propeller below 5% rpm by placing the condition lever to MIN CRUISE and intermittantly depressing the unfeather switch. When EGT is below 200°C or the RPM exceeds 5%, place the condition lever to EMERGENCY STOP.

1 Airspeed ........................................................ 100KCAS TO 180KCAS 3-7
2 Altitude ...................................................... BELOW 20,000 FT 3-7
3 SRL System ..................................................... ON 3-7
   NOTE
   Engine will not airstart unless SRL is on and
4 Syncrophaser .................................................. OFF 3-7
5 EGT ............................................................. BELOW 200°C (if feasible) 3-7
6 Condition Lever .............................................. MINIMUM CRUISE 3-7
7 Power Lever .................................................... HALF INCH FORWARD OF FLIGHT IDLE 3-7
8 Start Selector Switch ...................................... AIRSTART & SAFE 3-7
9 Ignition .......................................................... OFF 3-7
10 Run-Crank-Stop Switch .................................... RUN 3-7
11 Unfeather Switch .......................................... HOLD TO 30% RPM 3-8
   a AT 10%, ENGINE START LIGHT ................. ILLUMINATES 3-8
   b EGT ......................................................... MONITOR 3-8
       (MAXIMUM 770°C)
   c IF INDICATED COMBUSTION (LIGHT OFF) DOES NOT OCCUR WITHIN 15 SECONDS PAST 10% RPM, OR BY 25% RPM .................. ABORT START 3-8
   d IF ACCELERATION IS SLOW ABOVE 25% ........... USE FUEL 3-8
       ENRICH SWITCH 3-8
e  IF ACCELERATION STAGNATES AND EGT CONTINUES TO RISE...............ABORT START

NOTE
If ABORT was caused by high EGT, reduce altitude and increase airspeed, if possible, before attempting a restart.
If ABORT was caused by no combustion, reduce altitude and reduce airspeed, if possible, before attempting a restart.

CAUTION
DO NOT ALLOW ENGINE TO WINDMILL IN THE 18% TO 28% RPM RANGE.

12 Condition Lever...............................AS REQUIRED

13 Power Lever.....................................AS REQUIRED

14 Voltammeter (Main Bus Tie Check
   In Flight)...........................................CHECK

CAUTION
IF EITHER VOLTAMMETER INDICATES BATTERY VOLTAGE (22 - 24 VOLTS) INSTEAD OF GENERATOR VOLTAGE (27 - 29.5 VOLTS) THE 200 AMP BUS TIE CIRCUIT BREAKER IS OPEN. IF THE BUS TIE CIRCUIT BREAKER IS OPEN, ALL SYSTEMS WILL BE POWERED NORMALLY ONCE THE SECOND GENERATOR HAS BEEN PLACED BACK ON LINE. HOWEVER, THE SUBSEQUENT LOSS OF AN ENGINE OR GENERATOR WILL CAUSE SOME SYSTEMS TO BE POWERED BY A BATTERY. AFTER LANDING, RESET THE BUS TIE BREAKER PRIOR TO THE NEXT FLIGHT.

15 DC Generator Switch......................ON / RESET IF NECESSARY

16 Voltammeter....................................27 TO 29.5VDC

17 Ignition Switch...............................AS REQUIRED

18 Cabin Air Selector Switch...................BOTH

19 Syncrophaser...................................AS REQUIRED
**FUEL BOOST PUMP FAILURE**

L or R BOOST PUMP FAIL Annunciator Illuminated: .........DISENGAGE 3-8

1 Fuel Boost Pump CB
   (faulty side) ............................................. DISENGAGE 3-8

2 Land As Soon As Possible
   NOTE
   Main wing tank unusable fuel is 60 pounds with one
   boost pump failed.

**SMOKE AND FUME ELIMINATION**

CABIN OR COCKPIT SMOKE OR ODOR, KNOWN OR UNKNOWN SOURCE

**Known or Unknown Source:**

1 Oxygen Outlet Valve ........................................... OPEN 3-8-1

2 Oxygen Masks ..................................... DON AND USE 3-8-1

**Known Source:**

1 Faulty Circuit or System .......... SWITCH OFF AND DISENGAGE CBs 3-8-1

**Unknown Source:**

1 Cockpit & Cabin Room Light Swi......................... ON 3-8-1

2 Master Switch ......................................... EMERGENCY WARNING 3-8-1

CABIN WILL DEPRESSURIZE. AT A MINIMUM ALL INSTRUMENTS EXCEPT ENGINE TACHOMETERS, COPILOT ALTIMETER, COPILOT AIRSPEED, COPILOT TURN AND BANK, COPILOT ATTITUDE INDICATOR AND MAGNETIC COMPASS WILL BE INOPERATIVE. ALL LIGHTS EXCEPT COCKPIT AND CABIN ROOM LIGHTS, COPILOTS TURN AND BANK LIGHTS (S/N 1518SA AND SUBSEQUENT) AND ENGINE FIRE WARNING LIGHTS WILL BE INOPERATIVE. ALL RADIOS WILL BE INOPERATIVE. PARTIAL PANEL FLIGHT AND LET DOWN WITH NO COMMUNICATIONS TO A VFR LANDING WILL BE REQUIRED UNLESS NECESSARY SYSTEMS CAN BE RESTORED. IF ELECTRICAL POWER CANNOT BE RESTORED, A NO FLAP LANDING WITH EMERGENCY GEAR EXTENSION WILL BE NECESSARY.

3 Battery Switches ........................................ BOTH ISOLATE 3-8-1

4 DC Generator Switches .............................. BOTH OFF 3-8-1

5 Inverter Switch ........................................ OFF 3-8-1
3 Landing Gear ..................................................... DOWN 3-9
   If Green Lights Indicate Normal, but UNSAFE Light Indicates Abnormal 3-9
4 Land as soon as practical 3-9
   If Green Lights Indicate Abnormal and UNSAFE Light Indicates Abnormal 3-9
4 Landing Gear Emergency Extension ............................................. ACCOMPLISH 3-9
5 Land as soon as practical 3-9
   If Green Lights and UNSAFE Light Indicate Normal 3-9
4 Landing Gear ........................................................... UP 3-9
5 Green Lights and Unsafe Light ......... CHECK NORMAL INDICATION 3-9

NOTE 3-10
If the UNSAFE light is illuminated, place Landing Gear Switch DOWN and proceed according to light indications as stated in Step 3.

---

LANDING GEAR EMERGENCY EXTENSION

1 Airspeed ............................................. 130KCAS MAXIMUM 3-10
2 Flap ...................................................... 5° 3-10
3 Land Gear CBs (CONT, LG, DOOR) ........................................... PULL 3-10
4 LG POS IND CB ..................................... ENGAGED 3-10
5 Landing Gear ............................................. DOWN 3-10
6 Landing Gear Emergency Handle ............................................. PULL AND PUMP 3-10
7 Landing Gear Light ............................................. CHECK 3-10
   IF INDICATOR LIGHTS ARE INOPERATIVE, CONTINUE TO PUMP UNTIL PUMP HANDLE CANNOT BE MOVED

NOTE 3-10
After pulling Landing Gear Emergency Handle, main landing gear doors unlatch and cannot be closed again in the air. If indicator lights are operational, the RED UNSAFE light will illuminate and will remain illuminated because the gear doors are open. Do not attempt to electrically retract landing gear after Emergency Extension. After landing, the main landing gear lock lever mechanism and the clutch for the main landing gear forward door actuating mechanism must be reset prior to flight.
CABIN PRESS LOW ANNUNCIATOR ILLUMINATED

1. Oxygen ................................................. AS REQUIRED 3-10
2. Cabin Pressurization Control ......................... CHECK 3-10
   Check pressure controller. If incorrectly set, adjust 3-10
   controller to proper altitude.
3. Manual Pressure Control Valve .......... FULL INCREASE 3-10
4. Cabin Air Selector Switch ......................... BOTH OR 3-10
   OPER ENG
5. If Pressure Remains Low ....................... DESCEND TO 3-10
   ALTITUDE NOT REQUIRING OXYGEN

If CABIN PRESS LOW annunciator remains illuminated, descend aircraft to minimum safe altitude 3-10
or 10,000', whichever is higher.

AIRCOND SYS FAIL ANNUNCIATOR ILLUMINATED

1. Cabin Air Selector Switch ......................... RH 3-11
2. Cabin Pressurization Control ......................... CHECK 3-11
3. Oxygen ................................................. AS REQUIRED 3-11
4. Descend to Altitude Not Requiring 3-11
   Oxygen ................................................. HIGH OR LOW
   SPEED DESCENT
   Descent to higher of MEA or 10,000 feet, if possible, 3-11
   if the cabin does not maintain sufficient
   pressurization, or if the AIR COND SYS FAIL light 3-11
   remains illuminated.

   If AIR COND SYS FAIL Annunciator Remains 3-11
   Illuminated
5. Cabin Air Selector Switch ......................... RAM 3-11

DEFOG OVER TEMP ANNUNCIATOR ILLUMINATED

1. Defog Sel Valve ......................... FULL DEC 3-11
2. Cabin Air Selector Switch ......................... OFF 3-11
3. Emergency Descent ......................... ASAP 3-11
   To prepare for depressurization, descent aircraft 3-11
   to minimum safe altitude or 10,000', whichever is higher.
5. Cabin Air Selector Switch ......................... RAM 3-11
3 Landing Gear .................................................... DOWN 3-9

If Green Lights Indicate Normal, but UNSAFE Light Indicates Abnormal

4 Land as soon as practical 3-9

If Green Lights Indicate Abnormal and UNSAFE Light Indicates Abnormal

4 Landing Gear Emergency Extension ............................................. ACCOMPLISH 3-9

5 Land as soon as practical 3-9

If Green Lights and UNSAFE Light Indicate Normal

4 Landing Gear ........................................................... UP 3-9

5 Green Lights and Unsafe Light.......CHECK NORMAL INDICATION

NOTE
If the UNSAFE light is illuminated, place Landing Gear Switch DOWN and proceed according to light indications as stated in Step 3.

LANDING GEAR EMERGENCY EXTENSION

1 Airspeed ................................................................. 130KCAS MAXIMUM 3-10

2 Flap ............................................................................ 5” 3-10

3 Land Gear CBs (CONT, LG, DOOR) ....................................... PULL 3-10

4 LG POS IND CB .................................................. ENGAGED 3-10

5 Landing Gear ........................................................... DOWN 3-10

6 Landing Gear Emergency Handle ............................................. PULL AND PUMP 3-10

7 Landing Gear Light .................................................... CHECK 3-10

IF INDICATOR LIGHTS ARE INOPERATIVE,
CONTINUE TO PUMP UNTIL PUMP HANDLE CANNOT BE MOVED

NOTE
After pulling Landing Gear Emergency Handle, main landing gear doors unlatch and cannot be closed again in the air. If indicator lights are operational, the RED UNSAFE light will illuminate and will remain illuminated because the gear doors are open.
Do not attempt to electrically retract landing gear after Emergency Extension.
After landing, the main landing gear lock lever mechanism and the clutch for the main landing gear forward door actuating mechanism must be reset prior to flight.
CABIN PRESS LOW ANNUNCIATOR ILLUMINATED

1. Oxygen............................................................AS REQUIRED 3-10
2. Cabin Pressurization Control............................CHECK 3-10
   Check pressure controller. If incorrectly set, adjust
   controller to proper altitude.
3. Manual Pressure Control Valve....................FULL INCREASE 3-10
4. Cabin Air Selector Switch...........................BOTH OR
   OPER ENG 3-10
5. If Pressure Remains Low.................................DESCEND TO
   ALTITUDE NOT REQUIRING OXYGEN 3-10

If CABIN PRESS LOW annunciator remains illuminated, descend aircraft to minimum safe altitude
or 10,000', whichever is higher.

AIRCOND SYS FAIL ANNUNCIATOR ILLUMINATED 3-11

1. Cabin Air Selector Switch..............................RH
2. Cabin Pressurization Control............................CHECK 3-11
3. Oxygen..........................................................AS REQUIRED 3-11
4. Descend to Altitude Not Requiring
   Oxygen........................................................HIGH OR LOW
   SPEED DESCENT 3-11

Descent to higher of MEA or 10,000 feet, if possible,
if the cabin does not maintain sufficient
pressurization, or if the AIR COND SYS FAIL light
remains illuminated.

If AIR COND SYS FAIL Annunciator Remains
Illuminated
5. Cabin Air Selector Switch..............................RAM 3-11

DEFOG OVER TEMP ANNUNCIATOR ILLUMINATED 3-11

1. Defog Sel Valve........................................FULL DEC 3-11
2. Cabin Air Selector Switch............................OFF
3. Emergency Descent.........................................ASAP 3-11
   To prepare for depressurization, descent aircraft to
   minimum safe altitude or 10,000', whichever is higher.
5. Cabin Air Selector Switch..............................RAM 3-11
EMERGENCY DESCENT

High Speed Descent
1. Oxygen Mask/Valve........................................DON / OPEN
   Declare Emergency with Air Traffic Control
2. Power Levers........................................FLIGHT IDLE
3. Condition Levers.................................TAKEOFF LAND
4. Airspeed..............................................VMO/MMO

Low Speed Descent
1. Oxygen Mask/Valve........................................DON / OPEN
   Declare Emergency with Air Traffic Control
2. Power Levers........................................FLIGHT IDLE
3. Condition Levers.................................TAKEOFF LAND
4. Landing Gear........................................DOWN
   (BELOW 175 KCAS)
   Observe 175K VLO/VLE
5. Flap......................................................40’
   (BELOW 120 KCAS)
6. Airspeed..............................................VFE
   (155 KCAS MAXIMUM)

BATTERY OVERHEAT

BAT TEMP 120° Annunciator Illuminates:
If on Ground ........................................DO NOT TAKEOFF
   AND MONITOR

If in Flight:
1. Temperature........................................MONITOR
   If Temperature reaches 140°F:
2. Battery Isolation................................ISOLATE

BATTERY OVERTEMP Annunciator Illuminates:
If on Ground.................................ABORT
If in Flight:
3. Battery Isolation................................ISOLATE
   If Temperature Continues to Rise after Isolating
   and Goes Full Scale:
4. Land As Soon As Possible
   NOTE
   If both batteries have overtemped and are both
disconnected, operate on generators only.
If Battery has Cooled Below 120°F Approaching Terminal Area:

5 BATTERY ISOLATION ................. ON (FOR LANDING TO PREVENT POWER LOSS AT LOW RPM)

If BAT TEMP 120° Annunciator Reilluminates, Exercise Caution. Notify Tower of Problem Prior to Landing.

6 BATTERY ISOLATION ........................ ISOLATE CAUTION IF BATTERY TEMPERATURE REACHED 150°F, EITHER DURING START OR IN FLIGHT, BATTERY MUST BE REMOVED FOR BENCH TEST AND INSPECTION PRIOR TO NEXT FLIGHT.

L OR R DC GEN OUT ANNUNCIATOR ILLUMINATED

1 GEN CONT AND GEN FIELD
CB s (affected side)...................... CHECK, IF OUT, RESET

If Light Remains Illuminated:

2 DC GEN Switch (affected side) ..................... RESET, THEN ON

If Light Is Not Extinguished:

3 DC GEN Switch (affected side) ...................... OFF

4 Voltmeters (Main Bus Tie)
Check in Flight)................................. CHECK Both voltmeters should indicate between 27 and 29.5 volts. Amperage on the side of the operating engine should be less than 200 amps (175 amps if above 28,000 feet).

CAUTION IF EITHER VOLTAMMETER INDICATES BATTERY VOLTAGE (22 - 24 VOLTS) INSTEAD OF GENERATOR VOLTAGE (27 - 29.5 VOLTS) THE 200 AMP BUS TIE CIRCUIT BREAKER IS OPEN AND THE FOLLOWING EQUIPMENT IS POWERED BY BATTERY ONLY. REDUCE LOADS ON THE AFFECTED BUS TO SAVE BATTERY FOR LANDING.
5  DC Gen Load
   (operating engine )........................................REDUCE 3-13
   (if necessary)
   CAUTION

   LEFT DC GENERATOR INOPERATIVE, 200 AMP
   BUS TIE CIRCUIT BREAKER OPEN, NO. 1
   BATTERY POWERS
   a. MAIN INVERTER
   b. LH WINDSHIELD HEAT
   c. LH RADIO MASTER (AUTOPilot, COMM 1,
      PHONE AUDIO, RNAV, ATC 1, ADF 1, VOR 1,
      DME 2)

   RIGHT DC GENERATOR INOPERATIVE, 200 AMP
   BUS TIE CIRCUIT BREAKER OPEN, NO. 2
   BATTERY POWERS
   a. STANDBY INVERTER
   b. RH WINDSHIELD HEAT
   c. LANDING GEAR (EXCEPT INDICATOR LIGHTS)
   d. RH RADIO MASTER (COMM 2, SPEAKER
      AUDIO, RADAR, ATC 2, ADF 2, DME 1, VOR 2)
**INVERTER FAIL ANNUNCIATOR CYCLES ON/OFF**

**APPLIES TO S/N 7005A, 7315A THROUGH 7985A**

1. **Inverter**
   - OFF

   **WARNING**
   - IF INVT FAIL ANNUNCIATOR CYCLES ON AND OFF, IMMEDIATELY PLACE INVERTER SWITCH TO THE OFF POSITION.

   **CAUTION**
   - POWER WILL BE LOST TO THE FOLLOWING EQUIPMENT:
     a. MAIN FUEL QUANTITY INDICATOR
     b. LH AND RH ENGINE FUEL PRESSURE INDICATORS
     c. TRIM POSITION INDICATOR AND INTEGRAL INSTRUMENT LIGHTING (5 VOLT LIGHTING)
     d. AC POWER TO VARIOUS FLIGHT INSTRUMENTS (i.e. PILOT'S ADI AND HSI, NAVS, RADAR, AUTOPILOT)
     e. LH AND RH ENGINE OIL PRESSURE INDICATORS

   THE FOLLOWING ITEMS WILL REMAIN OPERATIVE:
   a. BOTH VHF COMMUNICATION RADIOS
   b. NAV AUDIO
   c. ADF AUDIO
   d. ALL DC ONLY SYSTEMS

2. **Fuel Quantity**
   - CALCULATE

   With the main fuel quantity indicator inoperative, calculate approximate fuel quantity remaining for flight and plan accordingly.

3. **Engine Instruments**
   - (operating engine)

4. **Alternate Flight Instruments**
   - USE

   The following equipment list gives the primary instrument and its alternate:

<table>
<thead>
<tr>
<th>PRIMARY</th>
<th>ALTERNATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. F/D ADI</td>
<td>Copilot Vacuum Attitude Gyro</td>
</tr>
<tr>
<td>b. HSI's</td>
<td>Magnetic Compass (Center Windshield Post)</td>
</tr>
<tr>
<td>c. Pilot Altimeter</td>
<td>Copilot Barometric Altimeter</td>
</tr>
<tr>
<td>d. RPM's</td>
<td>None</td>
</tr>
</tbody>
</table>

5. **Land As Soon As Possible.**
INVERTER FAIL ANNUNCIATOR ILLUMINATED

6 AC BUS refers to aircraft 799SA, 1501SA and up, and aircraft modified by Service Recommendation SR034/24-002.

1 Inverter .............................................. SELECT OTHER 3-15 INVERTER &16

2 Affected POWER AND CONT CBs .............................................. PULL &16

3 If Main Inverter Failed (6 AC BUS):
   a LH 115VAC POWER CB ..................................... PULL 3-16
   b LH 26VAC POWER CB ....................................... PULL 3-16

4 If Standby Inverter Failed (6 AC BUS):
   a RH 115VAC POWER CB .................................... PULL 3-16
   b RH 26VAC POWER CB ....................................... PULL 3-16

If Inverter Fail Annunciator Illuminated After Selecting Other Inverter:

5 Inverter .............................................. OFF 3-15 &16

6 POWER AND CONT CBs (affected side) .............................................. PULL &16

CAUTION
POWER WILL BE LOST TO THE FOLLOWING EQUIPMENT:
   a. MAIN FUEL QUANTITY INDICATOR
   b. LH AND RH ENGINE FUEL PRESSURE INDICATORS
   c. TRIM POSITION INDICATOR AND INTEGRAL INSTRUMENT LIGHTING (5 VOLT LIGHTING)
   d. AC POWER TO VARIOUS FLIGHT INSTRUMENTS (i.e. PILOT’S ADI AND HSI, NAVS, RADAR, AUTOPILOT)
   e. LH AND RH ENGINE OIL PRESSURE INDICATORS

THE FOLLOWING ITEMS WILL REMAIN OPERATIVE:
   a. BOTH VHF COMMUNICATION RADIOS
   b. NAV AUDIO
   c. ADF AUDIO
   d. ALL DC ONLY SYSTEMS

FAA Accepted July 18, 2006
7 Fuel Quantity...........................................CALCULATE 3-15
With the main fuel quantity indicator inoperative, 3-16
calculate approximate fuel quantity remaining for 3-16
flight and plan accordingly.
8 Engine Instruments (operating 3-15
engine ).................................................MONITOR 3-16
9 Alternate Flight Instruments.........................USE 3-15

NOTE 3-15
The following equipment list gives the primary 3-15
instrument and its alternate:
PRIMARY ALTERNATE 3-16
a. F/D ADI Copilot Vacuum Attitude Gyro 3-16
b. HSI’s Magnetic Compass (Center 3-16
   Windshield Post)
c. Pilot Altimeter Copilot Barometric Altimeter 3-16
d. RMI’s None 3-16
10 Land As Soon As Possible 3-16

L FEEDER OUT ANNUNCIATOR ILLUMINATED 3-17
1 Inverter.................................................STANDBY 3-17
2 LH FEEDER CONT CB.........................CHECK, RESET 3-17
   CAUTION 3-17
   IF RESET IS UNSUCCESSFUL, POWER WILL BE 3-17
   LOST TO THE FOLLOWING EQUIPMENT: 3-17
   a. MAIN INVERTER 3-17
   b. LH WINDSHIELD HEAT 3-17
   c. LH RADIO MASTER (AUTOPILOT, COMM 3-17
   1, AUDIO PHONE, RNAV, ATC 1, ADF 1, VOR 1, 3-17
   DME 2)
3 50 Amp BUS TIE CB.........................CHECK, RESET 3-17
   If reset is unsuccessful, F RESET IS 3-17
   UNSUCCESSFUL REDUCE LOAD ON LH BUS AND 3-17
   NOTE 3-17
   The landing gear will operate normally if the BUS TIE 3-17
   circuit breaker remains engaged.
4 Electrical Load.............................................MONITOR 3-17
Reduce to essential items, as required, and limit operation to remain within 50 amp capacity of BUS TIE CB.
CAUTION
IF BOTH THE BUS TIE AND LH FEED CONT CIRCUIT BREAKERS REMAIN OPEN:
a. LANDING GEAR MUST BE EXTENDED MANUALLY USING LANDING GEAR EMERGENCY EXTENSION PROCEDURE.
b. LANDING GEAR POSITION INDICATOR LIGHTS WILL BE INOPERATIVE.
Check Electrical Diagram For Failed Items.

5 Check Electrical Diagram For Failed Items.

R FEEDER OUT ANNUNCIATOR ILLUMINATES

1 Inverter.................................................MAIN 3-18
2 RH FEEDER CONT CB............................CHECK, RESET 3-18
   CAUTION
   IF RESET IS UNSUCCESSFUL, THE LANDING GEAR MUST BE EXTENDED MANUALLY USING LANDING GEAR EMERGENCY EXTENSION PROCEDURE AND POWER WILL BE LOST TO THE FOLLOWING EQUIPMENT:
a. STANDBY INVERTER
b. RH WINDSHIELD HEAT
c. LANDING GEAR (EXCEPT INDICATOR LIGHTS)
d. RH RADIO MASTER (COMM 2, AUDIO SPEAKER, RADAR, ATC 2, ADF 2, DME 1, VOR 2)
3 50 Amp BUS TIE CB...............................CHECK, RESET 3-18
   IF RESET IS UNSUCCESSFUL REDUCE LOAD ON LH BUS AND RESET CB.
   NOTE
   The cabin will remain pressurized and the flaps will operate normally if the BUS TIE circuit breaker remains engaged.
4 Electrical Load.............................................MONITOR 3-18
Reduce to essential items, as required, and limit operation to remain within 50 amp capacity of BUS TIE CB.
WARNING
THE CABIN WILL DEPRESSURIZE IF BOTH THE BUS TIE AND THE RH FEEDER CONT CIRCUIT BREAKERS REMAIN OPEN.
CAUTION

IF BOTH THE BUS TIE AND RH FEEDER CONT
CIRCUIT BREAKERS REMAIN OPEN, FLAPS WILL
BE INOPERATIVE AND FIXED IN THEIR POSITION
AT TIME OF POWER FAILURE.

5 Check Electrical Diagram for Failed Items

---

PITCH TRIM RUNAWAY

An unscheduled trim input or continuation of elevator
trim movement will be indicated by movement of the
elevator manual trim wheel and possible illumination
of the trim up or trim down annunciator light on the
autopilot control head.

1 TRIM A/P Disconnect..................PRESS & HOLD Supp.
Pressing this switch (second detent for M4-D
equipped aircraft) will remove power from the electric
trim as long as the switch is held in. The manual trim
wheel can now be used to relieve pressures.
Selecting the trim switches in the direction opposite to
trim motion on or grabbing trim wheel.

2 LH RADIO MASTER.................................OFF Supp.
This will remove power from the electric trim and
allow manual trim without pressing the TRIM A/P
disconnect switch.

3 TRIM A/P Disconnect..................RELEASE Supp.
5 Autopilot Master (if installed)..................OFF Supp.
6 PITCH TRIM CB & AUTOPILOT Supp.
  CBs..................................................DISENGAGE
7 LH RADIO MASTER.................................ON Supp.
SINGLE RED LINE (SRL) SYSTEM FAILURE

A failure of the SRL System may be indicated by one or more of the following indications:

1. An SRL FAIL annunciator illumination indicates loss of power to the system, loss of signal to the computer, loss of computer output signal, or the difference between the compensated EGT and SRL value is less than 15°C.

2. A sudden change in EGT of 20°C or more with no corresponding change in other engine parameters.

3. An erratic or fluctuating EGT indication.

In the event of SRL failure, DO NOT reposition power levers until engine affected by the failure is positively identified.

If on ground, abort takeoff and repair system prior to flight.

CAUTION

DO NOT ADVANCE THE POWER LEVER ON AN ENGINE SUSPECTED OF SRL FAILURE BEYOND THE LAST KNOWN POSITION OF SAFE OPERATION.

1 SRL Switches & Circuit

Breakers......................................................CHECK
Verify that the SRL switches and circuit breakers are engaged or reset as necessary and observe EGT indication.

If condition cannot be corrected:

2 SRL Switch..................................................OFF
3 EGT......................................................MONITOR

If engines are reasonably matched in torque, fuel flow and EGT, the unaffected engine may be used as a reference for setting power on the affected engine.

If uncertain about power setting, retard the power lever and follow the EGT schedule on the decal/face of the OAT gage.

For any OAT, the first two digits of the limiting EGT are noted on the face of the gage opposite the temperature.

4 Land as soon as practical
FUEL PRESSURE DROP

**With Engine Malfunction:**

1. Condition Lever (affected engine) .................................................. EMERG STOP 4-2

   **WARNING**
   
   DO NOT RETARD AFFECTED ENGINE POWER LEVER. PLACE AFFECTED ENGINE POWER LEVER TO TAKEOFF POSITION DURING FEATHERING OPERATION AND LEAVE THERE FOR THE REMAINDER OF FLIGHT.

   **CAUTION**
   
   RUN-CRANK-STOP SWITCH MUST REMAIN IN RUN POSITION. DO NOT MOVE AFFECTED ENGINE POWER LEVER UNTIL PROPELLER IS FEATHERED.

2. Main Fuel Valve Switch (affected side) ............................................ CLOSED 4-2

3. Engine Shutdown (Affected Engine) .................................................. ACCOMPLISH

4. Fuel Pressure (Operating Engine) ................................................. CHECK

**TIP AUTO FUEL TRANSFER FAILURE - TIP MANUAL**

Fuel is not transferring from a tip tank to the main tank with the Transfer Switch in AUTO position:

1. Fuel Transfer Switch (for tank not transferring) .............................. TIP MANUAL 4-2

2. Fuel Quantity Indicators ............................................................ MONITOR 4-2

3. Tip Tank Quantity ................................................................. 400 LB MAXIMUM EACH AT LANDING 4-3

4. Fuel Unbalance ................................................................. 150 LB MAXIMUM AT LANDING 4-3

**NOTE**

When the Fuel Transfer Switch is in the TIP MANUAL position, only the fuel in the tip tank will transfer to the main tank. Fuel cannot be transferred from either the left or right outer tank with the Fuel Transfer Switch in the AUTO position unless both tips can be emptied.
OUTER AUTO FUEL TRANSFER FAILURE - OUTER MANUAL

Fuel is not transferring from a outer tank to the main tank with the Transfer Switch in AUTO position:

1. Fuel Transfer Switches: BOTH OFF

2. Outer Pump Manual Switch: MAN

NOTE
Failure to position the Fuel Transfer Switch to OFF will result in fuel not being pumped from the outer tanks.

3. Fuel Quantity Indicators: MONITOR

4. Fuel Unbalance: 150 LB maximum at landing

5. LH and RH OUTER FUEL EMP Lights: ILLUMINATE

6. Outer Pump Manual Switch: OFF

NOTE
If sufficient usable fuel remains in one of the outer tanks, it may be used by disengaging the FUEL TRANSFER CONT circuit breaker for the empty tank and placing the Outer Pump Switch to MAN.

CAUTION
FAILURE TO DISENGAGE THE FUEL TRANSFER CONT CIRCUIT BREAKER FOR THE EMPTY TANK MAY RESULT IN DAMAGE TO THE TRANSFER PUMP.

OUTER FUEL TANK TRANSFER PUMP FAILURE (EXCEPT S/N 700SA)

LH or RH OUTER FUEL EMP Annunciator Illuminates with Fuel Quantity Indicator showing fuel remaining in tank:

1. In AUTO mode:
   a. Fuel Transfer Switch (defective side): OFF

   If annunciator remains illuminated:
   b. Fuel Transfer CONT Circuit Breaker (defective side): PULL
2 In MANUAL mode:

a Outer Pump Switch..................OFF

b Fuel Transfer CONT Circuit
Breaker (defective side).................PULL

c Outer Pump Switch..................MAN

CAUTION
MAXIMUM FUEL UNBALANCE (TIP TANK AND
OUTER COMBINED) IS 150 POUNDS AT LANDING.

HEATED WINDSHIELD OVER TEMP ILLUMINATED

1 Windshield Heat Low Switch
(faulty side).............................OFF

TRIM AILERON TAB FAILURE

Selecting LH or RH on the Trim Aileron Select Switch
disconnects the electrical interconnection between the
left and right trim aileron tabs. The surface can be
operated independently by the control switch.

NOTE
The indicator will only register to the halfway mark
either L or R when the operative trim aileron tab
reaches maximum deflection.

1 Trim Aileron Select Switch...........LH OR RH

2 Trim Aileron............................AS REQ

Determine operating side by selecting one side and
checking operation. If aileron trim remains inoperative,
select and check the other side.

TRIM AILERON TAB RUNAWAY

Maintain lateral control with spoiler and rudder.

1 Aileron Trim Select Switch.........SELECT ONE SIDE

IF RUNAWAY CONTINUES:

2 Aileron Trim Select Switch.............SELECT OTHER

SIDE

Operate the selected surface by the trim aileron
control switch and retrim.
**STATIC SYSTEM FAILURE**

Loss of or erratic indications from the Altimeter, Airspeed, or Rate of Climb Indicators.

1 Static Source Select Valve ................ ALTERNATE

**CAUTION**

USE APPLICABLE ALTERNATE STATIC CORRECTION CHARTS IN SECTION 6 OF THE AFM.

**NOTE**

The differential indicating portion of the Cabin Altitude Differential Pressure Indicator may not function.

**P T/B PWR FAIL ILLUMINATED**

*S/N 1518 and above*

1 Indicator Warning Flag .................. VISIBLE
2 Turn and Bank Circuit Breaker .......... PULL
3 Copilot Turn and Bank .................. USE

**NOTE**

If a system failure occurs which causes a steadily decreasing voltage in the LH and RH DC load buses simultaneously:

1 The pilot's turn and bank indicator will flag somewhere in the range of 23.4V to 22.0V.

2 The Master Caution light and the panel annunciator will illuminate somewhere in the range of 20V to 17V. This means that the CP T/B PWR FAIL annunciator will be illuminated also: however the decreasing voltage has not yet reached a value at which the copilot's turn and bank fails. This will occur in the range of 12V to 10V at which time the indicator will flag.

3 If it is necessary to preserve the battery in order to use the copilot's turn and bank later in the flight, the pilot can isolate the battery.
NO FLAP APPROACH AND LANDING

Descent

1. Cabin Altitude.................................................. SET
   Set pressure controller to 1000 feet above landing
   Adjust rate control knob so that airplane will be fully depressurized prior to landing. Generally, a rate of 300 to 500 fpm will be comfortable and ensure proper depressurization.

2. Fuel Transfer.................................. AS REQUIRED
   Select TIP MANUAL or OFF to prevent automatic operation of outer fuel transfer pumps during prolonged descent.
   CAUTION
   DO NOT USE OUTER FUEL TANKS DURING DESCENT.

3. Altimeters..................................................... SET

4. Windshield Defog............................................ AS REQUIRED

5. Ignition......................................... AS REQUIRED
   (If Auto-Ignition installed):
   If descent through icing conditions is anticipated, turn ignition to CONT (or AUTO, when ignition duty cycle limits operation in CONT).
   (If Auto-Ignition not installed):
   If descent through icing conditions is anticipated, turn ignition to ON. Some ignition units have duty cycle restrictions which effectively limit the amount of time that the airplane can be operated in icing conditions.
   CAUTION
   IGNITION SHALL BE SELECTED TO AUTO (AUTO-IGNITION INSTALLED) OR ON (CONTINUOUS IGNITION INSTALLED) DURING APPROACH AND LANDING WHILE IN OR SHORTLY FOLLOWING FLIGHT IN ACTUAL OR POTENTIAL ICING CONDITIONS.

6. Anti-Ice/Deice............................................... AS REQUIRED
   a. Pitot & Static Anti-Ice........................................ ON
   b. Windshield Heat............................................. LOW
      If descent though icing conditions is anticipated, turn on all anti-ice and de-ice equipment.

7. Taxi Lights...................................................... SET
   Recommend on for descent.
Mitsubishi Pilot Checklist Section 4
MU-2B-60 Marquise Abnormal Procedures
AFM Page

Approach

8 Landing Data ...................... COMPUTED 5-18-2

(ADD 30% TO LANDING DISTANCE)

Compute landing weight, Vref for flap up position, and landing distance. Other landing data may be required depending upon circumstances. Refer to Performance Section of AFM.

9 Fuel Quantity/Balance .............. CHECK - IN LIMIT 5-18-2

Tip fuel must be below 400 pounds or an overweight landing inspection will be required. Balance within 150 pounds.

10 Synchrophaser ...................... OFF 5-18-2

11 Differential Pressure .............. ZERO 5-18-2

Confirm cabin will be depressurized prior to landing.

12 Condition Levers .................. TAKEOFF LAND 5-18-2

Provides maximum thrust in the event of a go-around.

13 Power ................................ AS REQUIRED 5-18-2

14 Airspeed ...................... 150 KCAS MINIMUM 4-6

15 Cabin Sign .......................... ON 5-18-2

Brief Passengers

16 Anti-Ice System .................. AS REQUIRED

a Pitot & Static Anti-ice ............... ON 5-18-2

b Windshield Heat .................. LOW 5-18-2
**Before Landing**

Note: It is strongly recommended that the airplane be established on a stable approach for the last 1000 feet of descent in IMC conditions (or for the complete final approach segment of a non precision approach if that segment is less than 1000 feet above the field) or the last 500 feet of descent in VMC conditions. A stable approach means that the airplane is configured for landing, all checklists have been completed, power is established at a setting to maintain an airspeed of Vref to Vref plus 20 knots, the airspeed is steady at Vref to Vref plus 20 knots, the proper glide path is being maintained, the airplane is trimmed, and no unusual maneuvering is required to accomplish the landing. A missed approach is recommended if deviation from any of these parameters occurs.

17 Landing Gear ................................. DOWN (below 175 KCAS) 4-6
   Opposite point of intended landing or at Final Approach Fix.
   Ensure 3 green landing gear position lights illuminated and the red unsafe light extinguished. If gear malfunction occurs, emergency extension may be required. Maximum speed for normal extension is 175 KCAS.

18 Air Speed ................................. 140 KCAS MINIMUM 4-6

19 Landing Light ................................. EXTEND (Below 175 KCAS) 5-18-2

20 Brakes ................................. CHECK 5-18-3
   Depress brake pedals, check firm pressure.

21 Ignition ................................. AS REQUIRED 5-18-3
   CAUTION
   ON OR CONT IF RUNWAY IS CONTAMINATED, RAINING, OR IN ICING CONDITIONS. ALSO, ON OR CONT SHORTLY FOLLOWING EXIT ICING CONDITIONS WHENEVER ICE REMAINS FORWARD OF THE ENGINE NACELLE. (OBSERVE IGNITION DUTY CYCLE LIMITS). OTHERWISE, FOR AIRCRAFT WITH AUTO-IGNITION INSTALLED, AUTO.
22 Wing Deice..............................................OFF 5-19
   Note: If the wing deice system is in auto during the
   approach, cycle the wing deice off and on to allow one
   additional cycle, then select the system off prior to
   landing.

23 AP/YAW Damper......................................OFF

Final Approach (Landing assured)

24 Airspeed........................................1.25Vs 4-6

   (115 KCAS MINIMUM)

   NOTE
   Landing distance will increase approximately 30 %.

<table>
<thead>
<tr>
<th>Weight</th>
<th>1.25Vs</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,025</td>
<td>129</td>
</tr>
<tr>
<td>10,500</td>
<td>127</td>
</tr>
<tr>
<td>10,000</td>
<td>123</td>
</tr>
<tr>
<td>9,500</td>
<td>119</td>
</tr>
<tr>
<td>9,000</td>
<td>116</td>
</tr>
</tbody>
</table>

---

EMERGENCY EXIT DOOR OPERATION 4-6

1 MAN PRESS Control Valve............FULL DECREASE 4-6

When Cabin Depressurized:

2 Handle Access Cover..................PUSH IN 4-6

3 Emergency Exit Door Handle.........PULL, THEN
   LIFT DOOR UP
   AND INWARD 4-6
INADVERTENT ICING ENCOUNTER

NOTE
Conditions exist for icing when the outside air temperature (OAT) on the ground is +10°C or below or the indicated OAT (RAT) in flight is +10°C or below and visible moisture in any form is present.

WARNING
IN THE EVENT OF AN INADVERTENT ICING ENCOUNTER, IMMEDIATE ACTION MUST BE TAKEN BY THE PILOT WHEN THE SITUATION IS DISCOVERED.

(1) MAINTAIN AIRPLANE CONTROL.
(2) CHECK ENGINE INLETS AND WING LEADING EDGES AS DESCRIBED IN THIS PROCEDURE.
(3) EXIT ICING CONDITIONS, IF REQUIRED.

IN ORDER TO MINIMIZE ICE ACCUMULATIONS ON UNPROTECTED LOWER SURFACES, MAINTAIN A MINIMUM SPEED OF 180 KNOTS DURING OPERATIONS IN SUSTAINED CRUISE IN ICING CONDITIONS.

THIS WILL PROVIDE AN ANGLE OF ATTACK THAT REDUCES EXPOSURE (FRONTAL AREA) OF THE LOWER SURFACES TO ICE ACCUMULATION. IF UNABLE TO MAINTAIN 180KNOTS AT MAXIMUM CONTINUOUS POWER, A CHANGE IN ALTITUDE AND/OR COURSE MAY BE NECESSARY TO MAINTAIN MINIMUM AIRSPEED AND/OR TO EXIT THE ICING CONDITIONS.

IF ICE HAS BEEN ALLOWED TO BUILD UP ON THE ENGINE AIR INLET, IT MUST BE REMOVED AS SOON AS POSSIBLE. HOWEVER, BEFORE ACTIVATING THE ENGINE AIR INLET ANTI-ICE, THE PILOT SHOULD BE AWARE THAT AS THE ICE IS REMOVED, IT COULD DISRUPT THE AIRFLOW TO THE ENGINE AND RESULT IN FLAMEOUT OF THAT ENGINE. THE PILOT SHOULD BE PREPARED FOR THE POSSIBILITY OF SINGLE

1 Anti-Ice (except engine) ...................... ON
2 Wing De-Ice ..................................... ON
3 Ignition ........................................... CONT OR ON
   If Autoignition is installed "CONT", if Continuous ignition is installed "ON".
4 LH ENG Intake Anti-Ice........................................ON 4-7
   When proper operation of the LH engine is assured 4-7
5 RH ENG Intake Anti-Ice........................................ON 4-7
   When proper operation of both engines is assured 4-7
6 Ignitions...........................................CONT OR ON, 4-7
   OBSERVE LIMITS

If Autoignition is installed "CONT", if Continuous ignition is installed "ON".

---

**SEVERE ICING ENCOUNTER**

Severe icing may result with visible rain at temperatures below 0°C, or with droplets that splash or splatter on impact at temperatures below 0°C.

Take steps to exit severe icing immediately.

Procedures for exiting severe icing apply to all flight phases from takeoff to landing. While severe icing may form at temperatures as low as minus 18°C, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cue specified in the Operating Limitations Section of the AFM for identifying severe icing conditions are observed, accomplish the following.

1 Priority Handling..............................REQUEST 4-8
   Change route and/or altitude to immediately exit the severe icing and to avoid extended exposure to flight conditions more severe than those for which the airplane is certified.

2 Abrupt Maneuvering..........................AVOID 4-8

3 Control Wheel..................................HOLD 4-8
   If the autopilot is engaged, firmly hold the control wheel prior to disengaging the autopilot. If the autopilot is not engaged, it should remain disengaged.

4 Autopilot........................................DISENGAGE 4-8

5 Airspeed.......................................INCREASE (180 KCAS MINIMUM IN CRUISE) 4-8
   If an unusual roll response, an uncommanded roll, or an unusual trim is observed, lower the nose (reduce the angle of attack) and allow the airspeed to increase before any reduction of engine power.
6 Power.................................................. MAINTAIN
   OR INCREASE

7 Flaps................................................... MAINTAIN
   Do not extend flaps during extended operation in icing conditions.
   Operation with flaps extended can result in a reduced wing angle of attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.
   If the flaps are already extended, do not retract them until the airframe is clear of ice.

8 Report Conditions to Air Traffic Control
Table of Contents

1. Table of Contents
2. Blank
3. Power Assurance
4. Takeoff Speeds, Flaps 5 and 20
5. Takeoff Distance, Flaps 5
6. Takeoff Distance, Flaps 20
7. Weight for Positive Gradient After Liftoff
   Flaps 5
8. Single Engine Rate of Climb
   Flaps 5, Gear Up, 140KCAS
9. Weight for Positive Gradient After Liftoff
   Flaps 20
10. Single Engine Rate of Climb
    Flaps 20, Gear Up, 135KCAS
11. Landing Approach Speeds, Flaps 5 and 20
12. Landing Distance, Flaps 20
13. Landing Distance, Flaps 40
Intentionally Left Blank
POWER ASSURANCE CHART-TAKEOFF

AIRSPEED: 0 KT
IOAT: INSTRUMENT ERROR ZERO RECOVERY FACTOR 0.8
EGT: 650°C
RPM: 100%
BLEED AIR: OFF

EXAMPLE:
OAT 25°C
Pressure Altitude 6000 Ft
Engine Torque 94%

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-19
MU-2B-60
Takeoff Speeds

### Flaps 5

<table>
<thead>
<tr>
<th>Takeoff Weight Pounds</th>
<th>Takeoff Speed KCAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rotation</td>
</tr>
<tr>
<td>11,575</td>
<td>109</td>
</tr>
<tr>
<td>11,000</td>
<td>106</td>
</tr>
<tr>
<td>10,500</td>
<td>101</td>
</tr>
<tr>
<td>10,000</td>
<td>100</td>
</tr>
</tbody>
</table>

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-9

### Flaps 20

<table>
<thead>
<tr>
<th>Takeoff Weight Pounds</th>
<th>Takeoff Speed KCAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rotation</td>
</tr>
<tr>
<td>11,575</td>
<td>105</td>
</tr>
<tr>
<td>11,000</td>
<td>103</td>
</tr>
<tr>
<td>10,500</td>
<td>100</td>
</tr>
<tr>
<td>10,000</td>
<td>100</td>
</tr>
</tbody>
</table>

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-10
Mitsubishi MU-2B-60

Pilot Checklist
Marquise

Performance

FAA Accepted July 18, 2006 Page P-5

TAKEOFF DISTANCE – FLAPS 5°
TOTAL TAKEOFF DISTANCE OVER
A 50 FT. OBSTACLE

ENGINES:

TAKEOFF POWER

5°

FLAPS:

RUNWAY CONDITIONS:
PAVED, LEVEL,
DRY SURFACE

BLEED AIR:
OFF

EXAMPLE:

OAT:
7° C

Pressure Altitude: 4,000 Ft
Airplane Weight: 10,500 Lbs.
Wind Condition: 10 Kts. Headwind
Takeoff Speed: Rotation 104KCAS
50 Ft. 120KCAS
Takeoff Distance: 3,670 Ft

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-9
WEIGHT FOR POSITIVE GRADIENT AFTER LIFTOFF
FLAPS 5, GEAR DOWN
V50 = 120 KCAS
TPE331-10-501M or -511M
BLEED AIR OFF

EXAMPLE
Outside Air Temperature........... 5°C
Airport Pressure Altitude........... 2000 FT
Gross Weight..................... 10,450 LB

Chart Source: MU-2B-60 POM (MR-0338-1) Temp. Rev.4-1 page 4/6
Performance

Example

Single engine rate of climb: 237 ft/min
Gross weight: 10,500 lb
Altitude: 6000 ft
Outside air temperature: 10°C

Bleed air off
TPE331-10-501M or 511M
Flaps 2°, gear up, 135KAS

Mitsubishi MU-2B-60
MU-2B-60
Landing Approach Speeds

### Flaps 20

<table>
<thead>
<tr>
<th>Airplane Weight Pounds</th>
<th>Landing Approach Speed KCAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,025</td>
<td>110</td>
</tr>
<tr>
<td>10,500</td>
<td>108</td>
</tr>
<tr>
<td>10,000</td>
<td>105</td>
</tr>
<tr>
<td>9,500</td>
<td>103</td>
</tr>
<tr>
<td>9,000</td>
<td>100</td>
</tr>
<tr>
<td>8,500</td>
<td>99</td>
</tr>
</tbody>
</table>

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-15

### Flaps 40

<table>
<thead>
<tr>
<th>Airplane Weight Pounds</th>
<th>Landing Approach Speed KCAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,025</td>
<td>119</td>
</tr>
<tr>
<td>10,500</td>
<td>115</td>
</tr>
<tr>
<td>10,000</td>
<td>113</td>
</tr>
<tr>
<td>9,500</td>
<td>111</td>
</tr>
<tr>
<td>9,000</td>
<td>108</td>
</tr>
<tr>
<td>8,500</td>
<td>105</td>
</tr>
</tbody>
</table>

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-16
LANDING DISTANCE – FLAPS 20°

FLAPS: 20°
LANDING GEAR: DOWN
APPROACH SPEED: SEE PAGE P-11
POWER LEVERS: GROUND IDLE ON TOUCHDOWN
RUNWAY CONDITIONS: PAVED, LEVEL, DRY SURFACE
BRAKING: HARD, NO REVERSE PITCH

EXAMPLE:
OAT: 30°C
Pressure Altitude: 0 Ft
Airplane Weight: 9,470 Lbs.
Wind Condition: 1
Wind Component: 10 Kts. Headwind
Takeoff Distance: Approximately 2,270 Ft

Note: Landing distances are predicated on a Vref of 1.3Vs.
CAUTION: Vref for single engine landing is 1.3Vs or 110 knots, whichever is greater. Add 10% to landing distance for single engine landings.

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-17
LANDING DISTANCE – FLAPS 40°

FLAPS: 40°
LANDING GEAR: DOWN
APPROACH SPEED: SEE PAGE P-11
POWER LEVERS: GROUND IDLE ON
TOUCHDOWN
RUNWAY CONDITIONS: PAVED, LEVEL, DRY
SURFACE
BRAKING: HARD, NO REVERSE
PITCH

EXAMPLE:

OAT: 30°C
Pressure Altitude: 0 Ft
Airplane Weight: 9,470Lbs.
Wind Condition: 1
Takeoff Distance: Approximately 2,270 Ft

Note: Landing distances are predicated on a Vref of 1.5Vs

CAUTION: Vref FOR single engine landing is 1.3Vs or 115 knots,
whichever is greater. Add 20% to landing distance for single engine
landings.

Chart Source: MU-2B-60 AFM (MR-0273-1) rev. 14, page 6-9
Intentionally Left Blank