TABLE OF CONTENTS

TABLE OF CONTENTS (con't)

INTRODUCTION

This section provides the recommended procedures to follow during adverse flight conditions. The information is presented to enable you to form, in advance, a definite plan of action for coping with the most probable emergency situations which could occur in the operation of your airplane.

As it is not possible to have a procedure for all types of emergencies that may occur, it is the pilot's responsibility to use sound judgement based on experience and knowledge of the aircraft to determine the best course of action. Therefore, it is considered mandatory that the pilot read the entire manual, especially this section before flight.

When applicable, emergency procedures associated with optional equipment such as Autopilots are included in SECTION IX.

| NOTE |

All airspeeds in this section are indicated (IAS) and assume zero instrument error unless stated otherwise.

AIRSPEEDS FOR EMERGENCY OPERATIONS

CONDITION	RECOMMENDED SPEED
ENGINE FAILURE AFTER TAKEOFF	
Wing Flaps UP	85 KIAS
Wing Flaps DOWN	80 KIAS
BEST GLIDE SPEED	
3368 lb/1528 kg	91.5 KIAS
3200 lb/1452 kg	89.0 KIAS
2900 lb/1315 kg	84.5 KIAS
2600 lb/1179 kg	80.0 KIAS
MANEUVERING SPEED	
3368 lb/1528 kg	127 KIAS
3200 lb/1452 kg	123 KIAS
2900 lb/ 1315 kg	117 KIAS
2600 lb/1179 kg	111 KIAS
PRECAUTIONARY LANDING WITH ENGINE POWER	
Flaps DOWN	75 KIAS
PRECAUTIONARY LANDING ABOVE 3200 LBS	
Flaps DOWN	80 KIAS
EMERGENCY DESCENT (GEAR UP)	
Smooth Air	195 KIAS
Turbulent Air	
3368 lb/1528 kg	127 KIAS
3200 lb/1452 kg	123 KIAS
2900 lb/1315 kg	117 KIAS
2600 lb/1179 kg	111 KIAS
EMERGENCY DESCENT (GEAR DOWN)	
Smooth Air	165 KIAS
Turbulent Air	
3368 lb/1528 kg	127 KIAS
3200 lb/1452 kg	123 KIAS
2900 lb/1315 kg	117 KIAS
2600 lb/1179 kg	111 KIAS

ANNUNCIATOR PANEL WARNING LIGHTS

WARNING LIGHT	FAULT & REMEDY
GEAR UNSAFE	RED light indicates landing gear is not in fully extended/or retracted position. Refer to "FAILURE OF LANDING GEAR TO EXTEND ELECTRICALLY" procedure or "FAILURE OF LANDING GEAR TO RETRACT" procedure.
LEFT or RIGHT FUEL	RED light indicates 2 1/2 to 3 gallons(9.5 to 11.4 liters) of usable fuel remain in the respective tanks. Switch to fuller tank.
SPEED BRAKE	AMBER light indicates Speed Brakes are activated.
ALT AIR	AMBER light indicates alternate induction air door is open.
PROP DE-ICE	BLUE light indicates power applied to De-Ice boots
PITOT HEAT	BLUE light indicates power is applied to heater. (Some Foreign A/C - AMBER light indicates power is NOT applied to heater.)
HI/LO VAC (Flashing)	Suction is below 4.25 in. Hg. (RED)
HI/LO VAC (Steady)	Suction is above 5.5 in. Hg. (RED)

| NOTE |

Attitude and Directional Gyros are unreliable when VAC light is illuminated (steady or flashing). Vacuum system should be checked and/or adjusted as soon as practicable.

ALT VOLTS (Flashing)	RED light indicates alternator output low. Refer to "ALTERNATOR OUTPUT LOW ".
ALT VOLTS (Steady)	RED light indicates overvoltage and Alt. field. C/B tripped. Refer to "ALTERNATOR OVERVOLTAGE".
START POWER	RED light indicates switch or relay is engaged and starter is energized. Flight should be terminated as soon as practicable. Engine damage may result. This is normal indication during engine start.
STBY VAC	AMBER light indicates stand-by vacuum pump is ON.
REMOTE RNAV	AMBER light indicates DME not slaved to RNAV.
	NOT USED
BOOST PUMP	BLUE light indicates power to auxiliary boost pump.

ENGINE

POWER LOSS - DURING TAKEOFF ROLL

Throttle	CLOSED
Brakes	AS REQUIRED
Fuel Selector	OFF
Magneto/Starter Switch	OFF
Master Switch	OFF

POWER LOSS - AFTER LIFTOFF

Airspeed	85 KIAS(Flaps UP) 80 KIAS (Flaps TAKEOFF/DOWN)
Keep aircraft under control -	
Fuel selector	SELECT OTHER TANK
Throttle	FULL FORWARD
Fuel Boost Pump	ON to start (Engine driven fuel pump may have failed) (Verify fuel pressure is 40 - 50 PSI)
Fuel Boost Pump	OFF if engine does not start immediately)
Throttle	RETARD 1 INCH
Propeller	FULL FORWARD
Mixture	FULL FORWARD
Magneto switch	Verify on BOTH

If engine does not restart, proceed to FORCED LANDING EMERGENCY.

POWER LOSS - IN FLIGHT (RESTART PROCEDURES)

Airspeed	85 KIAS minimum
Fuel Selector	SELECT OTHER TANK
Fuel Pressure	Verify in Green Arc
Fuel Boost Pump Switch	ON to start (Engine driven fuel pump may have failed)
Fuel Boost Pump Switch	OFF if engine does not start immediately)
Throttle	FULL FORWARD
Propeller	FULL FORWARD
Mixture	FULL FORWARD
Magneto/Starter Switch	VERIFY on BOTH

If engine does not start after initial attempts:

Mixture	IDLE CUT-OFF (Initially) then advance slowly toward RICH until engine starts.

If engine does not restart after several attempts establish best glide speed and proceed to FORCED LANDINGEMERGENCY.

After engine restart:

Throttle	ADJUST as required
Propeller	ADJUST as required
Mixture	RELEAN as power is restored

LAND AS SOON AS PRACTICABLE; CORRECT MALFUNCTION PRIOR TO NEXT FLIGHT.

~ CAUTION ~

Should the engine excessively cool during engine out, care should be exercised during restart to avoid excessive oil pressure. Allow the engine to warm up.

OPERATING THE ENGINE AT TOO HIGH AN RPM BEFORE REACHING MINIMUM OIL TEMPERATURES MAY CAUSE LOSS OF OIL PRESSURE.

POWER LOSS - PRIMARY ENGINE INDUCTION AIR SYSTEM BLOCKAGE

Blockage of the primary engine induction air system may be experienced as a result of flying in cloud or heavy snow with cold outside air temperatures (0°C or below). At these temperatures, very small water droplets or solid ice crystals in the air may enter the primary engine induction inlet in cowl opening and travel inside inlet duct to the induction air filter. Ice particles or water droplets may collect and freeze on the air filter causing partial or total blockage of the primary engine induction system.

Indications of primary induction system blockage are either a loss of manifold pressure with a fixed throttle position or the need to gradually advance the throttle to maintain a given manifold pressure setting. In extreme conditions, the loss of indicated manifold pressure and engine power may be quite rapid. A loss of as much as 10 inches Hg. manifold pressure within one minute can be experienced.

If primary induction air system blockage occurs, the alternate engine induction air system will automatically open, supplying engine with an alternate air source drawn from inside the cowling rather than through the air filter. The alternate air system can also be manually opened at any time by pulling the control labeled ALTERNATE AIR. Automatic or manual activation of the alternate induction system is displayed in the cockpit by the illumination of the ALT AIR light in the main annunciator panel. When operating on the alternate air system, available engine power will be less for a given propeller RPM compared to the primary induction air system. This is due to loss of ram effect and induction of warmer inlet air.

The following checklist should be used if a partial power loss due to primary induction air system blockage is experienced:

Engine Power . . . . . Verify progressive manifold pressure loss.
Alternate Air . . . . . Verify OPEN (annunciator light ON)

| NOTE |

The alternate air door should open automatically when primary induction system is restricted. If alternate air door has not opened (Annunciator light-OFF) it can be opened manually by pulling alternate air control.

Throttle . . . . . INCREASE to maintain desired manifold pressure
Propeller . . . . . INCREASE as required
. . . . . to maintain desired cruise power setting (Ref. SECTION V)
Mixture . . . . . RELEAN to PEAK TIT

NOTE

Approximately 81% power can be maintained at 20,000 ft. with the primary induction system totally blocked, alternate air door open, full throttle, 2400 RPM and leaned to peak TIT.

Flight . . . . . CONTINUE

In the unlikely event that a total power loss due to primary engine induction air blockage is experienced, the following checklist should be used:

Airspeed . . . . . 85 KIAS
Alternate Air . . . . . Manually OPEN
Throttle . . . . . Full FORWARD
Fuel Boost Pump . . . . . Verify ON
Propeller . . . . . FULL FORWARD
Mixture . . . . . IDLE CUTOFF initially
. . . . . then advance toward RICH to attempt engine restart
Magneto/Starter Switch . . . . . Verify on BOTH

After engine restart:

Throttle	ADJUST as required
Propeller	ADJUST as required
Mixture	RELEAN as power is restored (Refer to power charts - SECTION V)
Fuel Boost Pump	Verify OFF

If engine does not restart after several attempts, proceed to FORCED LANDING EMERGENCY.

TURBOCHARGER FAILURE

////////////////////
// WARNING //
////////////////////

If a turbocharger failure is a result of a loose, disconnected or burned through exhaust, then a serious fire hazard exists. If a failure in the exhaust system is suspected in flight, shut down the engine and LAND AS SOON AS POSSIBLE. If a suspected exhaust system failure occurs before takeoff, DO NOT FLY THE AIRCRAFT.

| NOTE |

A turbocharger malfunction at altitudes above 12,000 ft. could result in a overly rich mixture which could cause a partial power loss and rough running engine or a complete loss of engine power.

COMPLETE LOSS OF ENGINE POWER

If a suspected turbocharger or turbocharger waste gate control system failure results in a complete loss of engine power, the following procedure is recommended:

Mixture	IDLE CUTOFF
Throttle	CRUISE
Propeller	FULL FORWARD
Mixture	ADVANCE slowly until engine re-starts
Continue Flight	LAND AS SOON AS POSSIBLE

PARTIAL LOSS OF ENGINE POWER

If turbocharger wastegate control fails in the OPEN position, a partial loss of engine power may result. The following procedure is recommended if a suspected turbocharger/wastegate control failure results in a partial loss of engine power:

Throttle	AS REQUIRED
Propeller	AS REQUIRED
Mixture	AS REQUIRED
Continue Flight	LAND AS SOON AS POSSIBLE

ENGINE POWER OVERBOOST

If the turbocharger wastegate control fails in the CLOSED position, an engine power overboost condition may be experienced. The following procedure is recommended for an overboost condition:

Throttle	REDUCE as necessary to keep manifold pressure within limits

NOTE

Expect manifold pressure response to throttle movements to be sensitive.

Propeller	AS REQUIRED
Mixture	AS REQUIRED
Continue Flight	LAND AS SOON AS POSSIBLE

ENGINE ROUGHNESS

Engine instruments . . . . . CHECK
Fuel Selector . . . . . OTHER TANK
Mixture . . . . . READJUST for smooth operation
Magneto/Starter Switch . . . . . Select R or L or BOTH
If roughness disappears on single magneto, monitor power and continue on selected magneto.

////////////////////
//WARNING//
////////////////////

The engine may quit completely when one magneto is switched off if the other magneto is faulty. If this happens, close throttle to idle and mixture to idle cutoff before turning magnetos ON to prevent a severe backfire. When magnetos have been turned back ON, proceed to POWER LOSS - IN FLIGHT. Severe roughness may be sufficient to cause propeller separation. Do not continue to operate a rough engine unless there is no other alternative.

Throttle . . . . . REDUCE
. . . . . check for a throttle setting that may cause roughness to decrease.
If severe engine roughness cannot be eliminated, LAND AS SOON AS PRACTICABLE.

COWL FLAPS FAILURE - FULL CLOSED POSITION

Acceptable engine operating temperatures can always be maintained in flight if cowl flaps fail in the full closed position using the following procedure:
Power . . . . . AS REQUIRED
Mixture . . . . . RICH
Airspeed . . . . . 140 KIAS in Climb
Cylinder Head & Oil Temperature . . MONITOR - normal operating range

HIGH CYLINDER HEAD TEMPERATURE

Mixture. . . . . ENRICH As Required
Cowl Flaps . . . . . OPEN as Required
Airspeed . . . . . INCREASE As Required
Power. . . . REDUCE — if temperature cannot be maintained within limits

HIGH OIL TEMPERATURE

| NOTE |

Prolonged high oil temperature indications will usually be accompanied by a drop in oil pressure. If oil pressure remains normal, then a high temperature indication may be caused by a faulty gauge or thermocouple.

Cowl Flaps . . . . . OPEN as required
Airspeed . . . . . INCREASE
Power. . . . . REDUCE

PREPARE FOR POSSIBLE ENGINE FAILURE IF TEMPERATURE CONTINUES HIGH.

LOW OIL PRESSURE

Oil temperature and pressure gauges . . . . . Monitor
Pressure below 25 PSI . . . . . EXPECT ENGINE FAILURE,
. . . . . proceed to FORCED LANDING EMERGENCY.

LOW FUEL PRESSURE

Fuel Boost Pump . . . . . ON
Throttle . . . . . REDUCE to 34 In. or below
Fuel Pressure . . . . . MONITOR
Fuel Boost Pump . . . . . OFF
If condition persists:
Fuel Boost Pump . . . . . ON
Repeat above procedures until Fuel Pressure stabilizes.
LAND AS SOON AS PRACTICABLE

ENGINE DRIVEN FUEL PUMP FAILURE

An engine driven fuel pump failure is probable when low fuel pressure is indicated and when the engine will only operate with boost pump ON. Operation of the engine with a failed engine driven fuel pump and the BOOST PUMP ON will require smooth operation of engine controls and corresponding mixture change when throttle is repositioned or engine speed is changed. Always lean to obtain a smooth running engine.

The following procedure should be followed when a failed engine driven fuel pump is suspected:

Fuel Boost Pump . . . . . ON
Throttle . . . . . CRUISE Position
Mixture . . . . . ADJUST for smooth engine operation.
LAND AS SOON AS PRACTICABLE.

FUEL VAPOR SUPPRESSION (Fluctuating Fuel Pressure)

Fuel Boost Pump . . . . . ON
Fuel Pressure . . . . . MONITOR
Fuel Boost Pump . . OFF - (If condition still exists, REPEAT PROCEDURE).

FIRES

ENGINE FIRE-DURING START ON GROUND

Magneto/Starter Switch . . CONTINUE cranking or until fire is extinguished.
If engine starts:
Power . . . . . 1500 RPM for several minutes
Engine . . . . . SHUTDOWN; inspect for damage
If engine does NOT start:
Magneto/Starter Switch . . . . . CONTINUE CRANKING
Mixture . . . . . IDLE CUTOFF
Throttle . . . . . FULL FORWARD
Fuel Selector Valve . . . . . OFF
Magneto/Starter Switch . . . . . OFF
Master Switch . . . . . OFF
Fire . . . . . EXTINGUISH with Fire Extinguisher

ENGINE FIRE - IN FLIGHT

Fuel Selector Valve . . . . . OFF
Throttle . . . . . CLOSED
Mixture . . . . . IDLE CUTOFF
Magneto/Starter Switch . . . . . OFF
Cabin Ventilation & Heating Controls . . . . . CLOSED
Cowl Flaps . . . . . CLOSED

| NOTE |

If fire is not extinguished, attempt to increase airflow over the engine by increasing glide speed. Proceed with FORCED LANDING EMERGENCY. DO NOT attempt an engine restart.

ELECTRICAL FIRE-IN FLIGHT (Smoke in Cabin)

Master Switch . . . . . OFF

////////////////
//WARNING//
////////////////

Stall warning and landing gear warning are not available with Master Switch OFF.

Alternator Field Switches . . . . . OFF
Cabin Ventilation . . . . . OPEN
Heating Controls . . . . . CLOSED
Circuit Breakers . . . . . CHECK to identify faulty circuit if possible

LAND AS SOON AS POSSIBLE.

If electrical power is essential for flight, attempt to identify and isolate faulty circuit as follows:

Master Switch . . . . . ON
L & R Alternator Field Switches . . . . . ON

Select ESSENTIAL switches ON one at a time; permit a short time to elapse before activating an additional circuit.

EMERGENCY DESCENT PROCEDURE

In the event an emergency descent from high altitude is required, rates of descent of at least 3,000 feet per minute can be obtained in two different configurations:

(1) With landing gear and flaps retracted, an air speed of 195 KIAS will be required for maximum rate of descent.

(2) With the landing gear extended and flaps retracted an airspeed of 165 KIAS will also give approximately the same rate of descent. At 165 KIAS and the gear extended, the angle of descent will be greater, thus resulting in less horizontal distance traveled than a descent at 195 KIAS. Additionally, descent at 165 KIAS will provide a smoother ride and less pilot work load.

THEREFORE; The following procedure is recommended for an emergency descent:

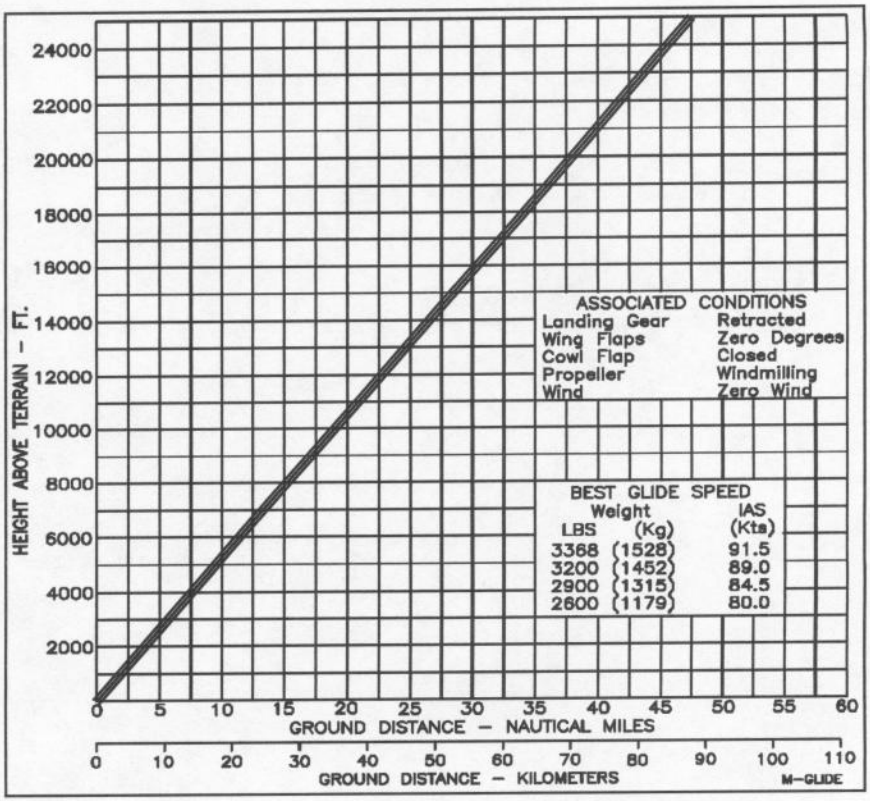
Power . . . . . RETARD INITIALLY
Airspeed . . . . . 140 KIAS
Landing Gear . . . . . EXTEND
Airspeed . . . INCREASE TO 165 KIAS after landing gear is extended.
Wing Flaps . . . . . UP
Cowl Flaps . . . . . CLOSED
Airspeed . . . . . MAINTAIN 165 KIAS during descent.
Speedbrakes (If installed) . . . . . EXTEND
Altitude . . . . . AS DESIRED

~~~~~~
~CAUTION ~
~~~~~~

Do not exceed 20" Hg. Manifold Pressure before CHT is above 250°F (121°C).

GLIDE

MAXIMUM GLIDE DISTANCE - MODEL M20M



| NOTE |

Greater glide distances can be attained by moving the propeller control FULL AFT (LOW RPM).

FORCED LANDING EMERGENCY

GEAR RETRACTED OR EXTENDED

Emergency Locator Transmitter	ARMED
Seat Belts/Shoulder Harnesses	SECURE
Cabin Door	UNLATCHED
Fuel Selector Valve	OFF
Mixture	IDLE CUTOFF
Magneto/Starter Switch	OFF
Wing Flaps	Full DOWN
Landing Gear	DOWN-If conditions permit
Approach Speed	80 KIAS
Master Switch	OFF, prior to landing
Wings	LEVEL Attutude

OVERWEIGHT LANDING PROCEDURES

In the event it is necessary to land with a weight exceeding 3200 Lbs. (1452 Kg.) (max. landing weight) the following procedure is recommended in addition to normal APPROACH FOR LANDING procedures:

Approach Airspeed . . . . . 80 KIAS

Use a flatter approach angle than normal, with power as necessary until a smooth touchdown is assured.
Expect landing distance over a 50 feet obstacle (Ref. SECTION V) to increase at least 600 ft.
Conduct Gear and Tire Servicing inspection as required (Ref. SECTION VIII).

SYSTEMS EMERGENCIES

PROPELLER

PROPELLER OVERSPEED

Throttle . . . . . RETARD
Oil Pressure . . . . . CHECK
Propeller . . . . . DECREASE RPM if any control available
Airspeed . . . . . REDUCE
Throttle . . . . . AS REQUIRED to maintain RPM below 2575 RPM

FUEL

LOW FUEL FLOW

Check mixture . . . . . ENRICH
Fuel Selector . . . . . SWITCH TANKS

If condition persists, use Fuel Boost Pump as necessary. LANDING should be made as soon as PRACTICABLE.

ELECTRICAL

ALTERNATOR OVERVOLTAGE/ FAILURE

(Alternator warning light illuminated steady. The Alternator Field circuit breaker may be tripped (overvoltage) or it may remain in its normal position (field fault).

Alternator Field Circuit Breaker . . . . . RESET (if tripped)

If circuit breaker will not reset, the following procedures are required:

1. Monitor ammeter for discharge
2. Reduce electrical load, as required, to maintain a positive ammeter indication and operate within the load capacity of remaining alternator.

NOTE: (S/N 27-0317 THRU 27-TBA) Activating the EMERG BUS switch will automatically shed all systems outside the Yellow "ESSENTIAL" bands located on the Circuit Breaker Panel. All systems located within the Yellow "ESSENTIAL" bands will remain powered by the remaining alternator, or in the case of Dual alternator failure, the selected battery.

3. Continue flight on remaining alternator and LAND, when PRACTICABLE, to correct malfunction.

ALTERNATOR OUTPUT LOW

(Alternator warning light flashing)

Reduce Electrical Load . . . . . Turn Switches OFF

If annunciator light still flashes:

Affected alternator Field Switch. . . . . OFF

1. Monitor ammeter for discharge.
2. Reduce electrical load, as required, to maintain positive ammeter indication and operate within the load capacity of remaining alternator.

NOTE: (S/N 27-0317 THRU 27-TBA) Activating the EMERG BUS switch will automatically shed all systems outside the Yellow "ESSENTIAL" bands located on the Circuit Breaker Panel. All systems located within the Yellow "ESSENTIAL" bands will remain powered by the remaining alternator, or in the case of Dual alternator failure, the selected battery.

3. Continue flight on remaining alternator and LAND, when PRACTICABLE, to correct malfunction.

DUAL ALTERNATOR FAILURE
(Ammeter indicates discharge)

If alternator will not reset:
On S/N 27-0001 THRU 27-0316
Non-essential electrical equipment . . . . OFF to conserve battery power
On S/N 27-0317 THRU 27-TBA
EMERG BUS . . . . . ON to conserve battery power

LAND AS SOON AS PRACTICABLE

Battery endurance will depend upon battery condition and electrical load on battery. If one battery becomes depleted, switch to other battery.

LANDING GEAR

FAILURE OF LANDING GEAR TO EXTEND ELECTRICALLY

Airspeed . . . . . 140 KIAS or less
Landing Gear Actuator Circuit Breaker . . . . . PULL
Landing Gear Switch . . . . . DOWN
Manual Gear Extension Mechanism . . . LATCH FORWARD/LEVER BACK
. . . . . to engage manual extension mechanism

| NOTE |
Slowly pull "T" handle 1 to 2 inches (2.5 to 5.1 cm) to rotate clutch mechanism and allow it to engage drive shaft.

T-Handle . . . . . PULL (12 to 20 times)
. . . . . and RETURN until gear is down and locked
. . . . GEAR DOWN light ILLUMINATED; STOP when resistance is felt.
Visual Gear Down Indicator . . . . . CHECK ALIGNMENT
. . . . . by viewing from directly above indicator

~ CAUTION ~
Continuing to pull on T-Handle, after GEAR DOWN light ILLUMINATES, may bind actuator; electrical retraction MAY NOT be possible until binding is eliminated by ground manintenance. Return lever to normal position and secure with latch. Reset landing gear actuator circuit breaker.

//WARNING//
Do not operate landing gear electrically with manual extension system engaged

FAILURE OF LANDING GEAR TO RETRACT

AIRSPEED . . . . . Below 107 KIAS
GEAR Switch . . . . . UP Position
GEAR FAILS TO RETRACT
GEAR HORN - SOUNDING;
GEAR ANNUNCIATOR LIGHT & GEAR SAFETY BY-PASS LIGHT - ILLUMINATED

GEAR SAFETY BY-PASS SWITCH . . . . . DEPRESS
. . . . . HOLD until landing gear is fully retracted

"GEAR UNSAFE" and "GEAR DOWN" Lights. . . . . EXTINGUISHED

"GEAR RELAYS" Ckt. Bkr . . . . . PULL
. . . . . (Warning Horn and Gear By Pass light will go OFF)

Check "Airspeed Safety Switch" or other malfunction as soon as practicable.
"GEAR RELAYS" Ckt. Bkr. . . . . PUSH IN

GEAR FAILS TO RETRACT
GEAR HORN - DOES NOT SOUND
GEAR ANNUNCIATOR LIGHTS & GEAR BY-PASS LIGHT - NOT ILLUMINATED

EMERGENCY GEAR EXTENSION LEVER . Verify LATCHED in proper position
GEAR RELAYS C/B . . . . . RESET
FLIGHT . . . . . CONTINUE (if desired)

When ready to extend landing gear:
AIRSPEED . . . . . Below 140KIAS
GEAR RELAYS C/B . . . . . RESET
GEAR SWITCH . . . . . DOWN Position
If gear will not extend electrically, refer to FAILURE OF LANDING GEAR TO EXTEND ELECTRICALLY.

| NOTE |

If above procedures do not initiate retraction process, check emergency manual extension lever on floor for proper position.

VACUUM

When "HI/LO VAC" annunciator light illuminates (flashing or steady), vacuum operated instruments are considered to be unreliable. Push stand-by vacuum pump switch ON. The FLASHING Hi/LO VAC annunciator light should extinguish and the STBY VAC annunciator will illuminate. The vacuum operated gyro instruments will be operating on the stand-by vacuum system. The STEADY RED annunciator light may not extinguish when the Stand-by Vacuum Switch is ON. Continue flight and have Vacuum System inspected prior to next flight.

OXYGEN

In the event of oxygen loss above 20,000 ft. refer to "EMERGENCY DESCENT PROCEDURE" to safely & quickly get to 12,500 ft. or below.
Refer to SECTION X for the physiological characteristics of high altitude flight.

ALTERNATE STATIC SOURCE

The alternate static air source should be used whenever it is suspected that the normal static air sources are blocked. Selecting the alternate static source changes the source of static air for the altimeter, airspeed indicator and rate-of-climb from outside of the aircraft to the cabin interior.
When alternate static source is in use, adjust indicated airspeed and altimeter readings according to the appropriate alternate static source airspeed and altimeter calibration tables in SECTION V.
The alternate static air source valve is located on the instrument panel below pilot's control wheel.

| NOTE |

When using the Alternate Static Source the pilot's window and air vents MUST BE KEPT CLOSED.

Alternate Static Source . . . . . PULL ON
Airspeed and Altimeter Readings . CHECK Calibration Tables (Ref SECTION V)

UNLATCHED DOORS IN FLIGHT

CABIN DOOR

If cabin door is not properly closed it may come unlatched in flight. This may occur during or just after take-off. The door will trail in a position approximately 3 inches (7.6 cm) open, but the flight characteristics of the airplane will not be affected. Return to the field in a normal manner. If possible, secure the door in some manner to prevent it from swinging open during the landing.

If it is deemed impractical to return and land, the door can be closed in flight, after reaching a safe altitude, by the following procedures:

Airspeed . . . . . 95 KIAS
Pilot's Storm Window . . . . . OPEN
Aircraft . . . . . RIGHT SIDESLIP (Right bank with left rudder)
Door . . . . . PULL SHUT & LATCH

BAGGAGE DOOR

If bag gage door is not prop erly closed, it may come un latched in flight. This may oc cur dur ing or after take off. The door may open to its full open position and then take an intermediateposition depending upon speed of aircraft. There will be considerable wind noise; loose objects, in the vicinityof the open door, may exit the aircraft. There is no way to shut and latch the door from the inside; fly air craft in nor mal man ner; LAND AS SOON AS POS SI BLE and se cure the bag-gage door.

Baggage Door latching mechanism . . . VERIFY PROPERLY ENGAGED (inside latching mechanism) then shut from outside.

ICING

////////////////////
//WARNING//
////////////////////

DO NOT OPERATE IN KNOWN ICING CONDITIONS.

The Model M20M is NOT APPROVED for flight into known icing conditions and operation in that environment is prohibited. However, if those conditions are inadvertently encountered or flight into heavy snow is unavoidable, the following procedures are recommended until further icing conditions can be avoided:

INADVERTENT ICING ENCOUNTER

Pitot Heat . . . . . ON
Propeller De-Ice . . . . . ON (if installed)
Alternate Static Source . . . . . ON (if required)
Cabin Heat & Defroster . . . . . ON
Manifold Pressure Gauge . . . MONITOR for any engine power reduction

Turn back or change altitude to obtain an outside air temperature less conducive to icing.

Move propeller control to maximum RPM to minimize ice build-up on propeller blades. If ice builds up or sheds unevenly on propeller, vibration will occur. If excessive vibration is noted, momentarily reduce engine speed with propeller control to bottom of GREEN ARC, then rapidily move control FULL FORWARD.

| NOTE |

Cycling RPM flexes propeller blades and high RPM increases centrifugal force which improves propeller capability to shed ice.

As ice builds on the airframe, move elevator control fore and aft slightly to break any ice build-up that may have bridged gap between elevatorhorn and horizontal stablilizer.

Watch for signs of induction air filter blockage due to ice build-up; increase throttle setting to maintain manifold pressure.

| NOTE |

If ice blocks induction air filter, alternate air sysem will open automaticallly.

With ice ac cu mu la tion of 1/4 inch or more on the air frame, be pre pared for a sig nifi cant increase in air craft weight and drag. This will re sult in sig nifi cantly re duced cruise and climb per formance and higher stall speeds. Plan for higher approach speeds requiring higher power settings and longer landing rolls.

~ CAUTION ~

Stall warning system may be inoperative.

The de froster may not clear ice from wind shield. If nec es sary open pi lot's storm win dow for v isibility in landing approach and touchdown.

With ice accumulations of 1 inch or less, use no more than 15° wing flaps for approach and land ing. For ice ac cu mu la tion of 1 inch or more, fly ap proaches and land ing with flaps re tracted to main tain bet ter pitch con trol. Fly ap proach speed at least 15 knots faster than nor mal, expect a higher stall speed resulting in higher touchdown speed with longer landing roll. Use normal flare and touchdown technique.

Missed approaches SHOULD BE AVOIDED whenever possible because of severly reduced climb per form ance. If a go- around is man da tory, ap ply full power, re tract land ing gear when obsta cles are cleared; main tain 90 KIAS and retract wing flaps.

—— AVOID FURTHER ICING CONDITIONS ——

EMERGENCY EXIT OF AIRCRAFT

CABIN DOOR

PULL latch handle AFT.
OPEN door and exit aircraft.

BAGGAGE COMPARTMENT DOOR (Auxiliary Exit)

Release (Pull UP) rear seat back latches on spar.
Fold rear seat backs forward, CLIMB OVER.
PULL off plastic cover.
PULL latch pin.
Lift red handle "UP".
OPEN door and exit aircraft.

To VERIFY RE-ENGAGEMENT of baggage door, outside, latch mechanism:

Open outside handle fully.
Close inside RED handle to engage pin into cam slide of latch mechanism.
Place latch pin in shaft hole to hold RED handle DOWN.
Replace cover.
CHECK & operate outside handle in normal manner.

SPINS

////////////////////
//WARNING//
////////////////////

Up to 2,000 ft. altitude may be lost in a one turn spin and recovery;
STALLS AT LOW ALTITUDE ARE EXTREMELY CRITICAL.

| NOTE |

The best spin avoidance technique is to avoid flight conditions conducive to spin entry. Low speed flight near stall should be approached with caution and excessive flight control movements in this flight regime should be avoided. Should an unintentional stall occur, the aircraft should not be allowed to progress into a deep stall. Fast, but smooth stall recovery will minimize the risk of progressing into a spin. If an unusual post stall attitude develops and results in a spin, quick application of antispin procedures should shorten the recovery.

INTENTIONAL SPINS ARE PROHIBITED.

In the event of an inadvertent spin, the following recovery procedure should be used:

Throttle . . . . . RETARD to IDLE
Ailerons . . . . . NEUTRAL
Rudder. . . . . Apply FULL RUDDER opposite direction of spin
Control Wheel . . . . . FORWARD of neutral in a brisk motion

ADDITIONAL FORWARD elevator control may be required if rotation does not stop.

—— HOLD ANTI-SPIN CONTROLS UNTIL ROTATION STOPS ——

Wing Flaps (If extended) . . . . . RETRACT as soon as possible
Rudder . . . . . NEUTRALIZE when spin stops
Control Wheel . . . . . SMOOTHLY MOVE AFT
to bring the nose up to level flight attitude.

OTHER EMERGENCIES

Refer to SECTION IX for Emergency Procedures of Optional Equipment.