AIRPLANE FLIGHT MANUAL
MAC 145B

MAC-145B

AIRPLANE FLIGHT MANUAL

Report Number: F-145B-3

Manufacturer's Serial Number 2600060

Registration Number N692AS

Micco Aircraft Company
3100 Airman's Drive
Fort Pierce, FL 34946

FAA APPROVED IN THE UTILITY CATEGORY BASED ON FAR 23. THIS DOCUMENT MUST BE CARRIED IN THE AIRPLANE AT ALL TIMES.

THIS AIRPLANE FLIGHT MANUAL INCLUDES THE MATERIAL REQUIRED TO BE FURNISHED TO THE PILOT BY THE FEDERAL AVIATION REGULATIONS AND ADDITIONAL INFORMATION PROVIDED BY THE MANUFACTURER AND CONSTITUTES THE FAA APPROVED AIRPLANE FLIGHT MANUAL.

AIRPLANE FLIGHT MANUAL ISSUE DATE:

FAA APPROVED BY: Eugene L. Bollin

for Manager, Aircraft Certification Office
Federal Aviation Administration
Atlanta, Georgia

FAA APPROVED DATE: October 19, 2000

SECTION 1 GENERAL/SYSTEM DESCRIPTIONS

A. POWERPLANT:

General: The MICCO MAC-145B is powered by a single Textron Lycoming reciprocating engine coupled to a Hartzell constant speed propeller. The powerplant installation is a conventional tractor configuration with no unique or unusual design or installation features.

1. Engine: The engine is a 260 horsepower Textron Lycoming IO 540-T4B5 direct drive, six cylinder, horizontally opposed, air cooled, normally aspirated, fuel injected, reciprocating engine. FAA Type Certificate 1E10 has been issued for this engine. Engines are supplied to MICCO under Textron Lycoming Detail Specification No. 2632 dated November 20,1989 with the following systems and components installed:

- Dual magneto ignition system; including high tension harness (Slick Unison)
- Entire fuel injection system, (Precision RSA5)
- Engine driven [primary] fuel pump, (Lycoming)
- Electric engine starter, (Sky Tec)
- Full Flow Oil Filter System, (Champion)
- 70 amp Alternator (Electro Systems, Inc.)

The engine is cantilever mounted on a steel dynafocal engine mount equipped with Lord, Inc. vibration isolators. The engine is encased in a MICCO design aerodynamic fiberglass cowling and fitted with aluminum cooling air baffling system. It is equipped with a filtered air induction system with manually selectable alternate air source, oil cooler and full flow filtration systems, and stainless steel dual exhaust pipes. The powerplant is operated by direct action mechanical controls and is isolated from the airframe by a stainless steel firewall. Powerplant operating parameters are displayed in the cockpit on a series of Electronics International electronic gauges.

2. Propeller: The MAC-145B is fitted with a three bladed Hartzell 78" constant speed, aluminum propeller. The propeller has been issued FAA Type Certificate P25EA and is approved for installation on the MAC-145B. The propeller is hydraulically controlled by an engine driven McCauley Governor, and is supplied with a Hartzell Spinner assembly.

3. Engine Oil System: The engine lubricating and prop control oil system is primarily internal to the Lycoming engine. Mounted externally is a "full flow" Champion oil filter system provided by Lycoming. The oil cooling system incorporates an oil cooler mounted to the upper aft cooling baffle. Electronics International indicating systems provide cockpit displays of oil pressure and temperature.

4. **Engine Induction System:** Engine induction air enters through a "NACA" type scoop incorporated into the lower cowl. Air is directed through a foam type air filter into an air selector box; then to the engine fuel injector controller inlet. A valve in the selector box allows pilot selection of unfiltered Alternate Induction Air from the protected engine accessory area should blockage of the inlet air filter occur.

5. **Engine Exhaust System:** Dual stainless steel exhaust systems collect, silence and expel engine waste overboard through dual tailpipes. The exhaust system is manufactured to MICCO's specifications. A heat exchanger surrounding the right hand exhaust pipe extracts warm air for cockpit/cabin heating and defrosting.

6. **Engine Cooling System:** The engine is air-cooled. Ram air enters the cowling through two front openings adjacent to the propeller spinner. An aluminum baffle chamber is attached to the cylinder heads with flexible seals at the cowling intercept lines. Cooling air is directed across the cylinder cooling fins into the lower cowling and exhausted overboard through openings at the lower firewall. Cooling air exhaust openings are sized and shaped to maintain cooling air pressure differential across the cylinders within Lycoming specifications. Some cooling air is diverted for cabin heating, oil cooling and magneto cooling. Engine and powerplant accessories and engine compartment temperatures are maintained below 200°F except for the magnetos which have a temperature limit of 225°F.

7. **Powerplant Controls:** Powerplant operating controls are mechanical push-pull cables connected to control levers in the cockpit console or on the instrument panel. Primary controls include throttle, propeller, mixture and alternate air. Electrical switch controls for magneto selection, starter and electric fuel pump are located on the lower center instrument panel. Fuel selector valve control is located on the cockpit console. All powerplant controls are equally accessible from either pilot seat; shapes and colors of control knobs are designed to meet FAR 23.781.

8. **Engine Ignition System:** The dual magneto ignition system is totally independent of all ships systems. The engine is supplied by Lycoming with Slick Unison magnetos, ignition harness and spark plugs installed. The left magneto is fitted with impulse coupling to provide starting ignition. Magnetos are controlled by the combination ignition/starter switch.

9. Powerplant Indicating Systems: Powerplant indicating systems are manufactured by Electronics International, Inc. The instruments are all electric and feature both analog and digital displays of information. The indicators include:

- Engine RPM
- Engine Manifold Pressure
- Engine Oil Pressure and Oil Temperature
- Engine Exhaust Gas Temperature & Cylinder Head Temperature (all cylinders)
- Fuel Flow & Fuel Pressure
- Fuel quantity (two tanks)
- Starter Engaged Annunciator; Auxiliary Fuel Pump Switch/Advisory Light

10. Fuel System: The fuel system stores 72 gallons of fuel in two 36 gallon integral (wet wing) tanks located in the outer aluminum wing panels. Flight tests have determined that approximately two gallons are unusable in both the left and right tanks. Therefore, the total useable fuel in both tanks is approximately 68 gallons. Fuel is provided to the engine driven fuel pump through an "Off - Left – Right - Off" selector valve, an intermittent duty electric fuel pump and a gascolator/filter. Fuel exiting the engine driven fuel pump is routed through fuel pressure and flow transducers to the engine fuel injection unit.

Fuel tanks are individually vented and equipped with drains for water extraction. A four gallon "Reservoir Box" is located at the inboard rib surrounding the fuel tank outlet. It is fitted with 3 one-way 'flapper valves' to help assure fuel coverage of the outlet during maneuvers. Tank fillers are flush mounted, non-siphoning, lightning proof, 60mm filler opening marked for AVgas 100LL only. Fuel quantity is measured in each tank by a very low energy capacitance type probe, and displayed on a composite analog/digital cockpit gauge.

All fuel lines are 3/8" seamless aluminum tubing, with AN/MS fittings and connectors. All fuel lines are routed outside of the cockpit/cabin area and fitted with fireproof sleeves forward of the firewall. The fuel selector valve is controlled by a handle on the cockpit control console, and cannot pass through an "off" position when switching tanks. To select "off", the pilot must depress either of the fuel selector stops.

An auxiliary electric fuel pump provides redundant fuel pressure to the engine driven pump during high power and maneuvering operations; and supplies primary engine fuel pressure in the event of engine driven pump failure. A gascolator fuel filter separates debris and water from fuel prior to entering the engine driven fuel pump.

NOTE

The Auxiliary Fuel Pump Switch Advisory Light indicates only that the switch is ON (light ON) or the switch is OFF (light OFF). In order to check that the auxiliary fuel pump is functioning properly, the pilot must refer to the fuel pressure gage. Normally, there will be an approximate 2.5 psi fuel pressure rise with the auxiliary fuel pump ON.

Fuel pressure and flow is sensed by non-blocking transducers in the fuel line between the engine pump and fuel injector, and displayed on an electric fuel/flow pressure gauge.

The Textron Lycoming IO540-T4B5 engine requires Avgas 100LL minimum octane fuel. Brake Specific Fuel consumption (BSFC) is 0.51 lb/hp (22.1 gph) at full power. The Lycoming Engine driven AC type JT fuel pump supplies a Precision [Bendix] RSA-5AD1 Fuel Injector that injects fuel directly into each cylinder.

B. FLIGHT CONTROL SYSTEM:

General: The MAC-145B flight control systems consists of conventional, all metal, ailerons, flaps, rudder and elevator (which has fiberglass end tips). Flight control inputs are made from the dual pilot "sticks" in the cockpit to the ailerons and elevator through a system of push rods and bellcranks. The ailerons incorporate "geared-tabs" moved by ailerons to reduce aileron forces. The elevator trim tab incorporates a "geared-tab" moved by the elevator to increase elevator stick forces. The dual rudder pedals (non adjustable) are connected to the rudder through stainless steel cables on each side of fuselage. The single trim wheel located below the cockpit throttle quadrant supplies pilot inputs through a stainless steel cable through dual trim actuators to dual geared trim tabs, one on each elevator. Tabs on the rudder and left aileron are ground adjustable only.

1. Elevator Downspring: A Century Spring Corporation Model # 81039S spring is incorporated in the elevator control system to improve longitudinal stability.

2. Flaps: The wing flaps are electrically activated and controlled through the electrical flap drive motor. Flap travel is from 0°up to 30° full down. The left and right flaps move in unison through a flap interconnect system. Flap setting indication to the pilot is provided by an electrically operated, mechanically activated flap gauge.

3. Flight Control Surface Travels: Table 1 lists the control surface travels and tolerances for the MAC-145B.

TABLE I
FLIGHT CONTROL SURFACES TRAVELS, TOLERANCE ± 2°

MODEL	AILERON		ELEVATOR		EL TRIM		RUDDER		FLAPS	
	UP	DN	UP	DN	UP	DN	LEFT	RIGHT	UP	DN
MAC-145B	22°	12°	28°	20°	4°	24°	22°	22°	0°	30°

4. Stall Warning: An approaching stall is indicated by a stall warning horn which is activated 5 to 10 knots above stall speed. Mild airframe buffeting may precede the stall. The stall warning horn is located in front of the throttle quadrant. While using headsets, the stall warning horn will be heard in the earphones. The stall warning horn has a separate and distinct sound from that of the gear warning horn which has a cyclic "beeping" sound and is accompanied by the GEAR WARN flashing red light.

C. LANDING GEAR

The MAC-145B is equipped with fully retractable standard configuration landing gear. Main gear are equipped air/oil shock absorbers and independent disc brakes. The tailwheel is fully retractable and casters for ground maneuvering. Landing gear is hydraulically extended and retracted by an electro-hydraulic "PowerPac". A "Free-Fall" system allows gear extension in the event of a "PowerPac" failure.

A steel axle and a torque plate are attached to the lower main strut cylinder assembly. The 6:00X6 wheel assemblies include the single brake disc and 6 ply rated tubed tires. The dual caliper brake assembly is mounted on the torque plate. Brakes are activated independently by toe brake master cylinders on all rudder pedals.

Main gear has an aluminum 'door' attached to the upper main gear housing to streamline the retracted strut. The retracted wheel assembly remains exposed but flush with the lower wing surface. A required 'hubcap' streamlines the exposed wheel.

NOTE

Located on the cockpit floor immediately above the left and right main landing gear wheel well areas, there is a clear "sight-glass" through which the pilot can observe whether the left or right landing gear is retracted into or extended from the wheel well. This is only and aid in determining the position of the main landing gear. The pilot must still observe the proper UP or DOWN warning lights for safe landing gear operation.

The tailwheel is mounted on a steel leaf spring. The tailwheel casters 360° but is fitted with a spring loaded centering detent to align the tailwheel for retraction. The entire tailwheel is hydraulically retracted and extended and covered by two mechanically operated doors.

D. ELECTRICAL SYSTEM

The MAC-145B incorporates a conventional, light aircraft, 24-volt D.C. electrical system supplied by an engine driven 28-volt/ 70 amp electro-system, alternator and a Concord RG-24-15 volt/ 14 amp/hr maintenance free sealed battery. All circuits are protected by circuit breakers accessible to the pilot. Electrical power for starting the engine is supplied to the Sky Tec high speed, lightweight starter from the battery. The alternator Off/ On switch controls electrical out put from the alternator. With the switch in the On position, 28-volt power is supplied from the alternator to the electrical instruments, the communications and navigation radios and to charge the battery. With the alternator switch in the Off position and the battery switch in the ON position, 24-volt battery power is supplied to all electrical components by the battery.

In case of alternator failure, a fully charged battery is capable of supplying power to flight instruments and communication and navigation radios for approximately 30 minutes. The communications/navigation radios incorporate a radio "master" switch capable of supplying power to all radios simultaneously. The electrical system also includes a "Ground Clearance/ Emergency" switch that supplies power directly to communication radio #1 through a bypass of the battery and radio master switch.

E. PORTABLE OXYGEN SYSTEM

Since the MAC 145B is capable of operating at altitudes up to 14,000 feet, Micco has made provisions for an optional portable Oxygen System. The Scott Aviation Executive Mark I, P/N 900019-01 Oxygen System, meets the requirements of FAR Part 23.1443 for one or two people up to 16,5000 ft. The 11 cubic foot cylinder is DOT rated 3AA for 1800 psi. This equipment is to be used only with aviator's breathing oxygen meeting the requirements of Mil-0-27210. (Note: Other portable oxygen systems are commercially available.)

SECTION 2 OPERATING LIMITATIONS

AIRSPEED LIMITATI ONS

Never Exceed Speed (V_{NE}).....195 KIAS

Maximum Structural Cruise (V_C).....166 KIAS

Design Maneuvering Speed (V_a), all weights.....121 KIAS

Maximum Flaps Extended Speed (V_{FE}) .....111 KIAS

Maximum Landing Gear Extension Speed (V_{LO}) .....116 KIAS

Maximum Landing Gear Retraction Speed (V_{LO}).....116 KIAS

Maximum Landing Gear Extended Speed (V_{LE}).....126 KIAS

Stall Speed Vs1 (Gear Up, Flaps Up) .....62 KIAS

Stall Speed Vso (Gear Down, Flaps 30°) .....56 KIAS

AIRSPEED INDICATOR MARKINGS

Red Radial Line (Never Exceed).....195 KIAS

Yellow Arc (Caution Range – Smooth Air Only).....166-195 KIAS

Green Arc (Normal Operating Range).....62-166 KIAS
White Arc (Flaps Down).....56-111 KIAS

POWER PLANT LIMITATIONS

Number of Engines.....1
Engine Manufacturer.....Textron Lycoming
Engine Model Number.....IO-540-T4B5
Maximum Horse Power.....260
Maximum Engine Speed.....2700 RPM
Maximum Oil Temperature.....245° F
Maximum Cylinder Head Temperature.....500° F
Oil Pressure
Minimum (red line).....25 PSI
Maximum (red line).....115 PSI
Fuel (AVGAS ONLY)
(minimum grade).....100 or 100LL Aviation Fuel
Numbers of Propellers.....1
Propeller Manufacturer.....Hartzell
Propeller Hub and Blade Model.....HC-C3YR-1RF/F7693F
Propeller Diameter (inches)
Minimum.....78"
Maximum.....78"
Blade Angle Limits
Low Pitch Stop.....11.7 ± 0.2°
High Pitch Stop.....31.0 ± 1.0°

POWER PLANT INSTRUMENT MARKINGS

Manifold Pressure
- Green Arc (Normal Operating Range).....8 – 32 in. Hg
- Red Line (Maximum).....32 in. Hg

Propeller Tachometer
- Green Arc (Normal Operating Range) 1200 – 2700 RPM
- Red Line (Maximum).....2700 RPM

Oil Temperature
- Green Arc (Normal Operating Range).....100 - 200° F
- Red Line (Maximum).....245° F

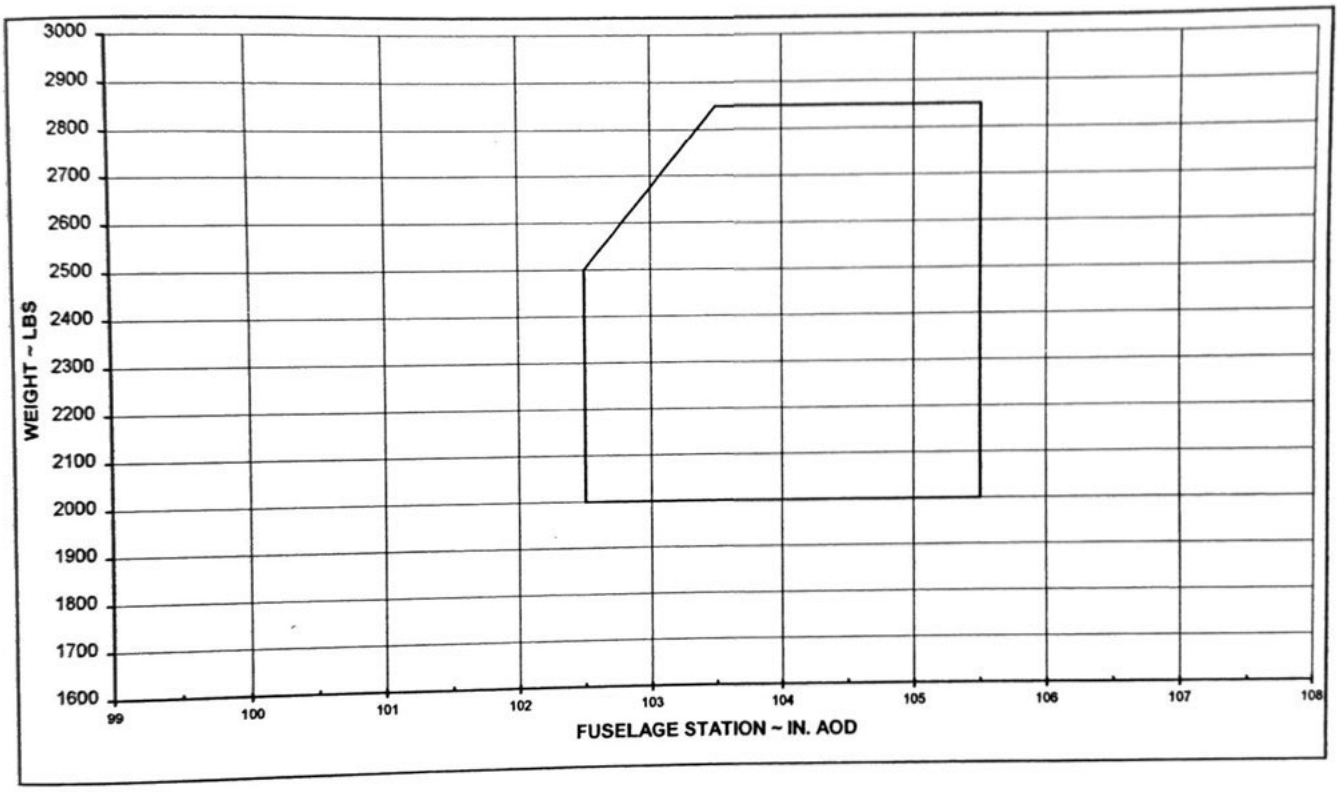
Oil Pressure
- Green Arc (Normal Operating Range).....55 – 95 PSI
- Yellow Arc (Caution Operating Range)
  - Maximum.....95 – 115 PSI
  - Minimum.....25 – 55 PSI
- Red Line (Maximum).....115 PSI
- Red Line (Minimum).....25 PSI

Cylinder Head Temperature
- Green Arc (Normal Operating Range).....275 - 435° F
- Maximum (red line).....500° F

WEIGHTS (Utility Category)

Maximum Ramp Weight.....2850 LBS
Maximum Takeoff Weight.....2850 LBS
Maximum Landing Weight.....2742 LBS
Minimum Flight Weight.....2395 LBS
Maximum Baggage Weight.....100 LBS

WEIGHT AND CENTER OF GRAVITY ENVELOPE



FLIGHT MANEUVER LIMITS

Spins are prohibited.
Inverted flight is prohibited.
Acrobatic maneuvers are limited to the following:

Maneuver	Entry Speed
Steep turns	120KIAS
Lazy eights	120 KIAS
Chandelles	150 KIAS

NOTE: NO OTHER MANEUVERS APPROVED

Maximum demonstrated crosswind component during takeoff and landing is 20 knots.

FLIGHT LOAD FACTORS (Utility Category)

Maximum Positive Load Factor Flaps Up.....+4.4 g
Maximum Negative Load Factor.....-1.76 g

STALLS

Caution

Intentional full stalls, both power on and power off, can be performed safely in this aircraft. However, flight tests have demonstrated that it is possible to lose up to 400 ft. of altitude during a power off stall if recovery is not initiated immediately upon the airframe stall buffet. Therefore, it is recommended that stalls be performed no lower than 3500 ft. above ground level. Stall recoveries should be performed using these procedures:

- Apply maximum power
- Level the wings with the horizon
- Release back pressure on the control stick to regain speed above stall speed
- Slowly apply back stick pressure to raise the aircraft nose to the horizon and stop descent of altitude
- Adjust power to regain normal cruise speed.

FUEL QUANTITY

Maximum Fuel Quantity.....36 US Gallons per tank
Minimum Fuel Quantity.....6 US Gallons per tank

FUEL LIMITATIONS

Minimum Aviation Fuel Grade.....100 / 100LL
Total Capacity.....72US Gallons
Unusable Fuel(Each Tank).....2 US Gallons
Usable Fuel.....68 US Gallons
(34 US Gallons in each wing tank)

Maximum Fuel Imbalance.....15 US Gallons

KINDS OF OPERATION

The MAC-145B is approved for the following types of flight operation when the required equipment is installed and operational as defined within the Kinds of Operation Equipment List.

1. VFR Day/Night
2. IFR Day/Night

MAC–14B
KINDS OF OPERATING EQUIPMENT LIST

This airplane may be operated in day or night VFR or IFR, when the appropriate equipment is installed and operable.

The following equipment list identifies the systems and equipment upon which type certification for each kind of operation was predicated. This list does not include specific flight and radio/navigation equipment required for any particular country's operating regulations. The pilot is command is responsible for determining the airworthiness of the airplane and assuring compliance with current operating regulations for each intended flight.

The zero's used in the list below mean that the system and/or equipment were not required for type certification for that kind of operation. When (AR) appears for the number required it indicates "as required".

The ATA numbers refer to equipment classifications of Air Transport Association Specifications.

	VFR DAY	VFR NIGHT	IFR DAY	IFR NIGHT
Communication (ATA-23)				
1. Communications Radio (VHF)	0	0	1	1
Electrical Power (ATA-24)				
1. Battery	1	1	1	1
2. Alternator	1	1	1	1
3. High Voltage/Discharge Warning Lights	1	1	1	1
4. Voltmeter	1	1	1	1
5. Ammeter	1	1	1	1
6. Circuit Breakers	AR	AR	AR	AR
Flight Controls (ATA-27)				
1. Flap System	1	1	1	1
2. Elevator Trim System	1	1	1	1
3. Elevator Trim Tab Indicator	1	1	1	1
4. Stall Warning Horn	1	1	1	1
5. Flap Indicator	1	1	1	1

FAA APPROVED DATE: October 19, 2000

	VFR DAY	VFR NIGHT	IFR DAY	IFR NIGHT
Fuel (ATA-28)				
1. Auxiliary Fuel Pump	1	1	1	1
2. Auxiliary Fuel Pump Switch	1	1	1	1
3. Auxiliary Fuel Pump Light	1	1	1	1
4. Fuel Quantity Indicator (Each Tank)	1	1	1	1
5. Fuel Quantity Gauge Selector Switch	1	1	1	1
6. Fuel Pressure Gauge	1	1	1	1
7. Fuel Selector Valve	1	1	1	1
Ice and Rain Protection (ATA-30)				
1. Pitot Heat	0	0	1	1
2. Engine Alternate Air System	1	1	1	1
3. Alternate Static Air Source	1	1	1	1
Instruments (ATA-310)				
1. Clock	0	0	1	1
Landing Gear (ATA-32)				
1. Landing Gear Hydraulic pump	1	1	1	1
2. Landing Gear Position Indicating Lights	3	3	3	3
3. Landing Gear Warning Horn	1	1	1	1
4. Emergency Gear Extension System	1	1	1	1
Lights (ATA- 33)				
1. Cockpit and Instrument (Required Illumination)	0	1	0	1
2. Anti-Collision Light System	0	1	0	1
3. Position Lights System	0	1	0	1
4. Landing Light	0	1	0	1

	VFR DAY	VFR NIGHT	IFR DAY	IFR NIGHT
Navigation and Pitot Heat (ATA-34)				
1. Sensitive Altimeter	1	1	1	1
2. Airspeed Indicator	1	1	1	1
3. Magnetic Compass	1	1	1	1
4. Outside Air Temperature	1	1	1	1
5. Attitude Indicator (Gyro Stabilized)	0	0	1	1
6. Directional Indicator (Gyro Stabilized)	0	0	1	1
7. Turn and Bank Indicator or Turn Coordinator	0	0	1	1
8. Vertical Speed Indicator	0	0	1	1
9. Navigation Radio (VHF)	0	0	1	1
10. Pitot System	1	1	1	1
11. Static System	1	1	1	1
Vacuum System				
1 Suction Gauge	1	1	1	1
2. Instrument Air System	1	1	1	1
Engine Indicating (ATA-77)				
1. Tachometer Indicator (Propeller)	1	1	1	1
2. Manifold Pressure Indicator	1	1	1	1
3. Fuel Pressure Gauge	1	1	1	1
Engine Oil (ATA-79)				
1. Oil Temperature Indicator	1	1	1	1
2. Oil Pressure Indicator	1	1	1	1
Equipment / Furnishings				
1. Safety Restraint – Each Occupant	AR	AR	AR	AR
2. Fire Extinguisher	1	1	1	1
3. Emergency Locator Transmitter	1	1	1	1
4. Portable Oxygen System	AR	AR	AR	AR
5. Airplane Flight Manual	1	1	1	1

MAXIMUM TAKEOFF PRESSURE ALTITUDE LIMIT

Maximum takeoff pressure altitude is 6000 ft.

MAXIMUM OPERATING ALTITUDE LIMIT

Maximum approved operating altitude is 14,000 feet MSL.

MINIMUM FLIGHT CREW

One pilot.

MAXIMUM PASSENGER SEATING LIMITS

A maximum of one additional seat may be installed in the cabin in addition to the crew seat.

Maximum number of occupants is one in addition to the pilot.

ALTERNATE STATIC SOURCE

Flight tests have demonstrated that when the alternate static source is selected, the altimeter reading may change more than 50' and the airspeed reading may increase more than 5 knots. The actual values are determined in production flight test and presented on a placard (see placards section of AFM).

PLACARDS

In full view of the pilot:

OPERATING LIMITATIONS

THE MARKINGS AND PLACARDS INSTALLED IN THIS AIRPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THE UTILITY CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH OPERATING THIS AIRPLANE IN THIS CATEGORY ARE CONTAINED IN THE AIRPLANE FLIGHT MANUAL.

ACROBATIC MANEUVERS ARE LIMITED TO THE FOLLOWING:

Maneuver	Entry Speed
Steep turns	120 KIAS
Lazy eights	120 KIAS
Chandelles	150 KIAS

SPINS PROHIBITED

INVERTED FLIGHT IS PROHIBITED

THIS AIRCRAFT IS APPROVED FOR VFR & IFR DAY AND NIGHT NON-ICING FLIGHT WHEN EQUIPPED IN ACCORDANCE WITH FAR 91 OR FAR 135.

In full view of the pilot:

NO SMOKING

In full view of the pilot:

WARNING

TURN OFF STROBE LIGHTS WHEN TAXING IN VICINITY OF OTHER AIRCRAFT OR DURING FLIGHT THROUGH CLOUD, FOG, OR HAZE.

STANDARD POSITION LIGHTS TO BE ON FOR ALL NIGHT OPERATIONS.

In full view of the pilot:

SEAT BACK MUST BE IN UPRIGHT POSITION FOR TAKEOFF AND LANDING

At lower left of instrument panel:

DESIGN MANEUVERING SPEED, V_A 121 KIAS
MAX GEAR OPERATING SPEED, V_{LO} 116 KIAS
MAX GEAR EXTENDED SPEED, V_{LE} 126 KIAS
MAX FLAP EXTENDED SPEED, V_{FE} 111 KIAS
NEVER EXCEED SPEED, V_{NE} 195 KIAS

On Canopy Holdback Latch:

ATTENTION

PULL DOWN TO RELEASE CANOPY FROM THE AFT POSITION

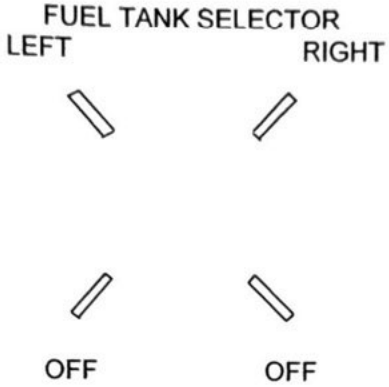
ATTENTION

THIS LATCH HOLDS CANOPY BACK ONLY

On center console near fuel tank selector:

34 US GAL
USABLE FUEL
EACH TANK

On center console near fuel tank selector:



On center console forward of emergency gear extension lever:

EMERGENCY GEAR EXTENSION

AIRSPEED 100 KTS MAX
LND GEAR CB PULL
LND GEAR SEL DOWN
EMER. GEAR EXTENSION
CONTROL DOWN

FAA APPROVED DATE: October 19, 2000

On center console near emergency gear extension lever:

DOWN

EMER GEAR EXTENSION

NORMAL

Above baggage compartment:

BAGGAGE MAXIMUM 100 LBS

On hat shelf behind pilot:

NO BAGGAGE ALLOWED

On canopy inner surface latch:

OPEN ◄——► CLOSE

ENGAGE LATCH
BEFORE FLIGHT

On canopy top surface near forward edge latch:

CLOSE ◄——► OPEN

ENGAGE LATCH
BEFORE FLIGHT

On tailcone near GPU power plug:

STARTING PROCEDURE
FOR EXTERNAL POWER
28 VOLTS DC
MASTER SWITCH AND
RADIOS MUST BE OFF

On tailcone near each static source (2):

STATIC AIR VENT
KEEP CLEAR

Near fuel drains (4):

FUEL DRAIN

Near static drain:

STATIC DRAIN

At fuel filler ports:

AVGAS
100/100LL MIN

On oil filler door:

OIL

Average Ambient Air Temperature	MIL-L-6082B	Recommended Grade Oil MIL-L-22852 Ashless Dispersant
All Temperature		SAE 15W50 OR 20W50
Above 80 Degrees F	SAE 60	SAE 60
Above 60 Degrees F	SAE 50	SAE 40 or SAE 50
30 Degrees to 90 F	SAE 40	SAE 40
0 Degrees to 70 F	SAE 30	SAE 40, 30 or 20W40
Below 10 Degrees F	SAE 20	SAE 30 or 20W30

Above the Static Source Selector:

ALTERNATE STATIC PRESSURE CORRECTION CARD			
GEAR/ FLAPS UP		GEAR/ FLAPS DOWN	
KIAS	ERROR-FT	KIAS	ERROR-FT
80		80	
100		90	
120		100	
140		110	

FAA APPROVED DATE:
REV: DATE FEB 0 5 2001