

LIMITATIONS

SECTION I

LIMITATIONS

All airspeeds quoted in this section are calibrated airspeeds (CAS).

The following limitations must be observed in the operation of this airplane.

ENGINES

Take-off and Maximum Continuous

Power Full Throttle and 2700 RPM

FUEL

Aviation Gasoline 100/130 (green) minimum grade.

USABLE FUEL with left and right wing fuel systems full:

Standard Fuel System	100 Gal
Optional Fuel System	136 Gal
Optional Fuel System	166 Gal

Do not take off if Fuel Quantity Gages indicate in Yellow Arc or with less than 13 gallons in each wing fuel system.

Use fuel crossfeed in level flight only.

Maximum slip duration time is 30 seconds.

PROPELLERS

Two McCauley constant speed, full feathering, two-bladed propellers using Model D2AF34C55 hubs with 78FF-0 blades and PD-3420, PD-3462, or PD-3404-3 spinner assemblies. Pitch setting at the 30-inch station is; Low 15° , High 79° . Diameter is maximum 78 inches, minimum 76 inches, or: two McCauley constant speed, full feathering three-bladed propellers, using Model D3AF32C75 hubs with 82 NB-6 blades and PD-3499 or PD-3605 spinner assemblies. Pitch setting at the 30-inch station is; Low $14.0 \pm .2^{\circ}$, High $81.2 \pm .3^{\circ}$ minimum. Diameter is 76 inches, no cutoff permitted.

ENGINE INSTRUMENT MARKINGS

Oil Temperature

Caution (Yellow Radial)	. . . . .	75°F
Operating Range (Green Arc)	. . .	75° to 240°F
Maximum (Red Radial)	. . . . .	240°F

Oil Pressure

Minimum (Red Radial)	. . . . .	30 psi
Operating Range (Green Arc)	. . .	30 to 60 psi
Maximum (Red Radial)	. . . . .	100 psi

Fuel Flow and Pressure

Minimum (Red Radial)	. . . . . 1.5 psi
Cruise Power (Green Arc)	. . 9.7 gph to 17.0 gph
Take-off/Climb (Wide Green Arc)	. . . . . 17.8 gph to 24.3 gph
Maximum (Red Radial)	. . . . . 17.5 psi

Tachometer

Operating Range (Green Arc)	. 2000 to 2700 rpm
Maximum RPM (Red Radial)	. . . . 2700 rpm

Cylinder Head Temperature

Operating Range (Green Arc)	. . 200°F to 460°F
Maximum Temperature (Red Radial)	. . . 460°F

Manifold Pressure

Operating Range (Green Arc)	. . 15 to 29.6 in. Hg
Maximum (Red Radial)	. . . . 29.6 in. Hg

Instrument Pressure

Caution (Yellow Arc)	. . . . 2.5 to 3.5 in. Hg
Normal (Green Arc)	. . . . 3.5 to 5.5 in. Hg
Caution (Yellow Arc)	. . . . 5.5 to 6.5 in. Hg
Red Button Source Failure Indicators	

or:

Normal (Green Arc)	. . . . 4.3 to 5.9 in. Hg
Red Button Source Failure Indicators	

Fuel Quantity

Yellow Arc E to 1/8 Full
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AIRSPEED LIMITATIONS

Never Exceed (Glide or Dive, Smooth
Air) (Red Radial) 257 mph/223 kts

Caution Range
(Yellow Arc) . . . 225 to 257 mph/195 to 223 kts

Normal Operating Range
(Green Arc) . . . 88 to 225 mph/76 to 195 kts

Full Flap Operating Range
(White Arc) . . . 77 to 140 mph/67 to 122 kts

Maximum Flap Extension Speed
(15° Position) 175 mph/152 kts

Single-Engine Best-Rate-of-
Climb (Blue Radial) 115 mph/100 kts

Maximum Gear Operating Speed . 175 mph/152 kts

Maximum Gear Extended Speed . 175 mph/152 kts

Maximum Design Maneuvering
Speed 180 mph/156 kts

Maximum Structural Cruising
Speed 225 mph/195 kts

Minimum Single Engine Control
Speed (V_{mc}) 93 mph/81 kts

APPROVED MANEUVERS (5300 POUNDS)

This is a normal category airplane. Acrobatic maneuvers, including spins, prohibited.

FLIGHT LOAD FACTORS (5300 POUNDS)

- 4.2G positive maneuvering load factor with flaps up.
- 2.0G positive maneuvering load factor with flaps down.

WEIGHTS

Maximum Take-off (E55)	. . . . .	5300 lbs
Maximum Landing (E55)	. . . . .	5300 lbs

Maximum Take-off (E55A)	. . . . .	4990 lbs
Maximum Landing (E55A)	. . . . .	4990 lbs

Datum is 83.1 inches forward of center line through forward jack points.

MAC leading edge is 67.2 inches aft of datum.

MAC length is 63.1 inches.

CG LIMITS (Landing Gear Extended)

Baron E55

Forward Limits: 74 inches aft of datum at 4200 lbs and under, then straight line variation to 78.0 inches aft of datum at gross weight of 5300 lbs.

Aft Limits: 86 inches aft of datum at all weights.

Baron E55A

Forward Limits: 74 inches aft of datum at 4200 lbs and under, then straight line variation to 76.6 inches aft of datum at gross weight of 4990 lbs.

Aft Limits: 86 inches aft of datum at all weights.

PLACARDS

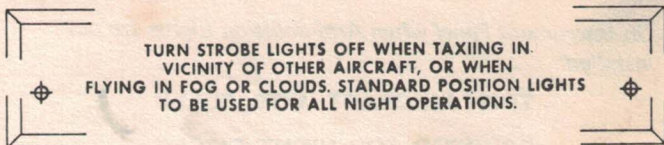
On Pilot's Left Sidewall Panel (E55):

<p>⊕ THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS. ⊕</p> <p>(PILOT'S CHECK LIST)</p> <p>OCCUPIED SEATS MUST BE IN UPRIGHT POSITION DURING TAKE-OFF AND LANDING</p> <p>MAXIMUM WEIGHT 5300 LBS</p> <p>NO ACROBATIC MANEUVERS INCLUDING SPINS APPROVED</p> <p>———— AIRSPEED LIMITATIONS ————</p> <p>MAX. SPEED WITH LDG GEAR EXTENDED (NORMAL) 175 MPH (152 KTS)</p> <p>MAX. SPEED WITH FLAPS EXTENDED (15° DOWN) 175 MPH (152 KTS)</p> <p>MAX. SPEED WITH FLAPS EXTENDED (NORMAL) 140 MPH (122 KTS)</p> <p>MAX. DESIGN MANEUVER SPEED 180 MPH (156 KTS)</p> <p>MIN CONTROL SPEED SINGLE ENGINE 93 MPH (81 KTS)</p> <p>NEVER EXCEED SPEED 257 MPH (223 KTS)</p> <p>MAX. STRUCTURAL CRUISE SPEED 225 MPH (195 KTS)</p> <p>⊕ ⊕</p>
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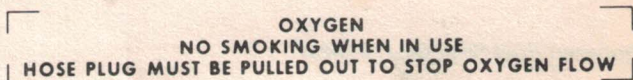
On Pilot's Left Sidewall Panel (E55A):

<p>⊕ THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS. ⊕</p> <p>(PILOT'S CHECK LIST)</p> <p>OCCUPIED SEATS MUST BE IN UPRIGHT POSITION DURING TAKE-OFF AND LANDING</p> <p>MAXIMUM WEIGHT 4990 LBS</p> <p>NO ACROBATIC MANEUVERS INCLUDING SPINS APPROVED</p> <p>———— AIRSPEED LIMITATIONS ————</p> <p>MAX. SPEED WITH LDG GEAR EXTENDED (NORMAL) 175 MPH (152 KTS)</p> <p>MAX. SPEED WITH FLAPS EXTENDED (15° DOWN) 175 MPH (152 KTS)</p> <p>MAX. SPEED WITH FLAPS EXTENDED (NORMAL) 140 MPH (122 KTS)</p> <p>MAX. DESIGN MANEUVER SPEED 180 MPH (156 KTS)</p> <p>MIN CONTROL SPEED SINGLE ENGINE 93 MPH (81 KTS)</p> <p>NEVER EXCEED SPEED 257 MPH (223 KTS)</p> <p>MAX. STRUCTURAL CRUISE SPEED 225 MPH (195 KTS)</p> <p>⊕ ⊕</p>
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On Left Side Panel:



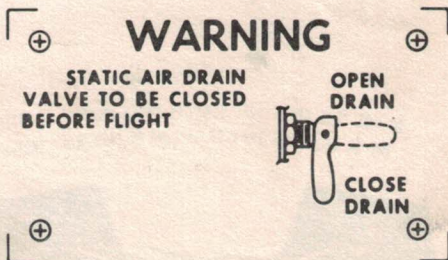
On Oxygen Panel on Left Sidewall:



On Lower Sidewall Adjacent to Pilot:



OR,



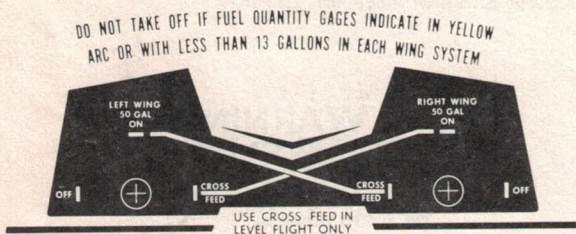
PLACARDS (Continued)

On Instrument Panel when Anti-collision Lights are not installed:

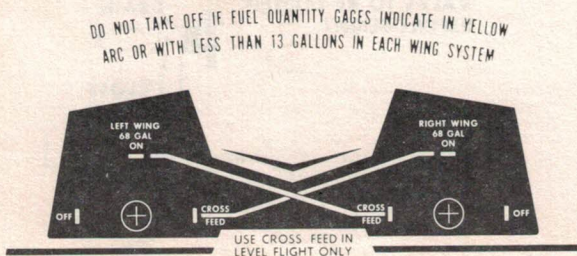
**THIS AIRCRAFT NOT FULLY
EQUIPPED FOR NIGHT FLIGHT**

Between Fuel Selector Handles:

For Standard 100-Gal System



Optional 136-Gal System



Optional 166-Gal System

DO NOT TAKE OFF IF FUEL QUANTITY GAGES INDICATE IN YELLOW
ARC OR WITH LESS THAN 13 GALLONS IN EACH WING SYSTEM



On Fuel Selector Panel Aft of Right Selector Handle:

NOTICE

REMOVE WINTER
BAFFLES WHEN
O.A.T. EXCEEDS 100°F

*On Top of Front Spar Carry-Thru Structure Between Front
Seats:*

EMERGENCY LANDING GEAR INSTRUCTIONS TO EXTEND

ENGAGE HANDLE IN REAR
OF FRONT SEAT AND TURN
COUNTERCLOCKWISE AS FAR
AS POSSIBLE (50 TURNS)

PLACARDS (Continued)

On Emergency Crank Access Cover:

**LANDING GEAR
EMERGENCY CRANK
PULL OUT
LIFT UP**

Adjacent to Cabin Door Handle:

**ROTATE HANDLE TO
FULL LOCKED POSITION**



*On Left Cabin Sidewall Below Window Sill and Close to
Emergency Exit Release Handle:*

**EMERGENCY EXIT
PULL PIN
PUSH WINDOW OUT**

On Openable Cabin Windows:

**DO NOT OPEN
IN FLIGHT**

**LATCH WINDOW
BEFORE TAKE-OFF**

Around Each Oxygen Outlet:



In Plain View When Nose Baggage Compartment Door is Open:

BAGGAGE COMPARTMENT
LOAD IN ACCORDANCE WITH
WEIGHT AND BALANCE DATA
MAXIMUM STRUCTURAL CAPACITY — 300 POUNDS

On Inside Rear Baggage Compartment Door:

BAGGAGE COMPARTMENTS
LOAD IN ACCORDANCE WITH
WEIGHT AND BALANCE DATA
MAXIMUM STRUCTURAL CAPACITY
MAIN COMPARTMENT - 400 POUNDS
AFT COMPARTMENT - 120 POUNDS

PLACARDS (Continued)

On Pilot's Window and Cabin Door Window (Prior to TE-1078):

WHEN SHOULDER HARNESS
IS IN USE, SNUG LAP BELT
WITH BUCKLE CENTERED IN
FRONT OF OCCUPANT WITH
SEAT BACK UPRIGHT

On Windows Adjacent to Pilot's and Copilot's Seats (TE-1078 and After):

SHOULDER HARNESS
MUST BE WORN AT
ALL TIMES WHILE AT
PILOT POSITIONS

On Windows Adjacent to 3rd, 4th, 5th, and 6th Seats (TE-1078 and After):

SHOULDER HARNESS
MUST BE WORN DURING
TAKE-OFF AND LANDING
WITH SEAT BACK UPRIGHT

On Inboard Side of Seat Back for 3rd & 4th Seats (TE-1078 and After):

