

Section 1.0 - Aircraft General Data**1.1 Engine**

Manufacturer: LYCOMING
Type: IO-540-E4D5

1.2 Propeller

Manufacturer: Hartzell
Type: Constant Speed
Diameter: 80"
Pitch Setting: Adjustable

1.3 Fuel

Grade: 91/100 minimum grade aviation gasoline
Capacity: STBD tank: 21 US gal useable
PORT tank: 21 US gal useable

1.4 Oil

Specification: LYCOMING OIL SPECIFICATION No. 301-E

Ambient Air Temperatures

Above 16 deg. C
-1 deg. C to 32 deg. C
-18 deg. C to 21 deg. C
Below -12 deg. C
Capacity:

Viscosity Grades

SAE 50
SAE 40
SAE 30
SAE 20
3 US gallons

Section 2.0 - Operating Limitations

2.1 Airspeeds (I.A.S.)

Never Exceed	260 Knots
Normal Operating Limit (Maximum Structural Cruising)	160 Knots
Maneuvering	125 Knots
Maximum, wing flaps extended	95 Knots

2.2 Maneuvers Permitted

2.2.1 Normal Operations

Normal operations at up to maximum take off weight (as stated in section 2.5), are limited to normal flying maneuvers, but may include straight and steady stalls, and turns in which the angle of bank does not exceed 60 degrees. Spins are permitted.

2.2.2 Aerobatic Maneuvers

Aerobatic maneuvers are permitted within the following limitations:

Aircraft weight not to exceed 2000 lbs, G limits are +6/-3

Aft C of G limit not to exceed 97.4" aft of datum (where datum is 80" fwd of wing leading edge)

2.2.2.1 Approved maneuvers-recommended entry speeds

Note: The application of these entry speeds presupposes that control pressures applied limit acceleration to +6 G's or less. The maneuvering speed of 125 knots is the maximum speed at which full and abrupt control movement is permitted.

Maneuver	Entry Speed Range (I.A.S.)
Inside loops & horizontal eights	121-165 kts
Chandelles, wingovers (Immelmans)	130-165 kts
Aileron rolls, barrel rolls	105-165 kts
Flick rolls (snap rolls)	70-85 kts
Vertical rolls	156-165 kts
Split-S turns	86-95 kts

2.2.2.2 Prohibited maneuvers

Tail slides

Flick rolls (snap rolls) initiated in excess of 95 kts

2.3 Crosswind Component

The maximum demonstrated crosswind component for take-off and landing is 15 knots.

Section 3.0 - Handling

This section contains essential information relating to the handling characteristics and operation of the aircraft and its systems.

3.1 Stalling Speeds (I.A.S.)

Flap Setting	Stalling Speeds - Power Off	
	Gross weight 2100 lbs	Gross weight 1800 lbs
0 deg	50 Knots	49 Knots
20 deg	47 Knots	46 Knots
35 deg	44 Knots	43 Knots

3.2 Stall Warning

N84MF is equipped with no stall warning system. Optionally, warning is provided by a stall warning horn and warning light which produces a steady signal approximately 5 to 7 knots before the stall, in all configurations.

3.3 Flaps

1/2 flap	20 deg
Full flap	35 deg

Note: refer to Section 4.1 - Strip Length Requirements.

3.4 Electrical Power

Do not turn off the alternator in flight except in an emergency.

This aircraft is fitted with a generating system that relies on battery power for initial excitation, therefore there is a possibility that if the generator is turned off in flight, the loss of the battery system, or the subsequent discharge of the battery will result in the loss of all electrical power.

3.5 Fuel System

Prolonged uncoordinated flight with low fuel quantities may uncover the fuel tank outlets, causing fuel starvation and engine failure.