

FIGURE 4

STALL SPEED Vs. BANK ANGLE

GROSS WEIGHT 2575 LBS.; I.A.S. MPH; POWER OFF

FLAP SETTING	0° BANK	20° BANK	40° BANK	60° BANK
0° (Flaps Up)	67	69	78	96
15° (Take Off)	64	67	76	94
33° (Landing)	57	61	69	90

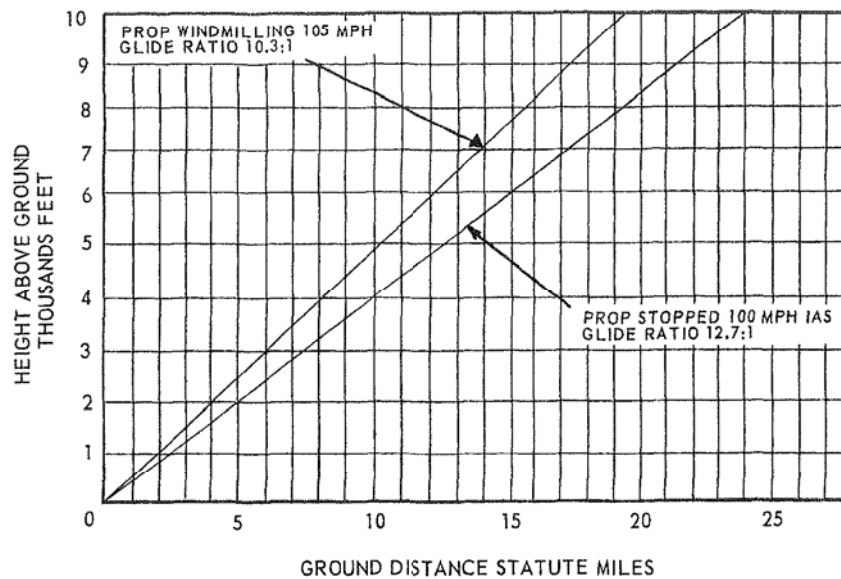
FIGURE 5

MAXIMUM RANGE

The speed at which the M20E is most efficient (i.e. the Ratio of Lift to Drag is at a Maximum) is 107 MPH INDICATED AIRSPEED, Gear & Flaps Up. Flying at this airspeed will give maximum range under zero wind conditions.

GLIDE RANGE

Landing gear and flaps up, no wind, 2575 lbs. gross weight



TAKE-OFF AND CLIMB

When applying power for take-off, move the throttle to the full open position slowly to avoid picking up loose stones, etc., with the propeller. Apply back pressure at about 65-75 mph airspeed. When the Super 21 breaks ground, it will tend to "rock" into a nose-high attitude. To compensate for this tendency, relax some of the elevator back pressure as the nose-wheel leaves the ground. For best results and a smoother take-off, do not allow the nose of the Super 21 to rise above the horizon during take-off. After some practice, you will find that you can make your smoothest take-offs by applying elevator back pressure as flying speed is approached and then slowly reducing the back pressure as you feel the nose wheel lifting from the ground. This will allow the aircraft to fly smoothly from the runway without any abrupt change in pitch attitude.

As soon as the Super 21 is airborne and under good control, perform the following procedures:

1. Apply brakes to stop wheel rotation.
2. Retract the gear.
3. Reduce the propeller rpm to 2550-2600.
4. Retract the flaps.
5. Establish climb-out attitude.
6. Turn electric fuel pump to the "off" position.
(Note fuel pressure indication to verify that the engine driven fuel pump will provide fuel pressure.)

An enroute climb speed of 115-120 mph IAS is recommended for improved cooling and good visibility. The speed for maximum rate of climb is approximately 105 IAS. The speed for maximum angle of climb (obstacle clearance) is about 80 mph IAS. Recommended power setting for climbing is 2500 rpm and 25 inches manifold pressure.

POWER CHANGES

The following sequence is recommended for increasing or decreasing power settings.