EAA Data Collection Project Test Card 1
Best Glide Speed and Angle

ADAPTED FROM EAA FTM TEST CARD 8

Risk Designation: Low

Possible Emergency:
Engine quits in extended glide.

Risk Mitigation:
Remain within gliding distance of suitable airfield for all tests.

Type Aircraft:	Engine Type/HP:
Constant-speed prop? ☐ Yes ☐ No	Type prop:
Gross weight for start of this test flight:	Max gross weight:

Protect your engine by using carburetor heat as needed, use slow power reductions to reduce thermal shock, and reset your constant-speed prop to comply with your manufacturer's recommendations.

Target Airspeeds:
V_Y (Best Rate of Climb Speed): V_Y + 10, V_Y, and V_Y - 10.

1. Normal takeoff and climb to 5,000 feet AGL.
2. Select a point 100 miles away in your GPS. Fly perpendicular to the wind aloft at test altitude. Don't change heading during the descent, and use the same heading for all three tests.
3. Power: Idle. Carb heat as required.
4. Prop: Coarse pitch (low rpm, constant-speed props only).
5. Trim for target airspeed.
6. When speed stabilizes, start stopwatch and record data.
7. Stop at 3 minutes or minimum altitude.
   WARNING: Reset constant-speed prop to high rpm (low pitch).
8. Recover from glide; climb back to start altitude.
9. Repeat test at the next airspeed.

Test Data:

Target Airspeed V_Y + 10:

Heading:

Time	Altitude	GPS Distance
0:00		
0:30		
1:00		
1:30		
2:00		
2:30		
3:00		

Repeat test at next speed:

Target Airspeed V_Y:

Heading:

Time	Altitude	GPS Distance
0:00		
0:30		
1:00		
1:30		
2:00		
2:30		
3:00		

Repeat test at next speed:

Target Airspeed V_Y - 10:

Heading:

Time	Altitude	GPS Distance
0:00		
0:30		
1:00		
1:30		
2:00		
2:30		
3:00		

Determine best glide speed (V_G) from best glide above: