

Cessna 170, 172 & 175

MT Propeller Performance Test Results

Flight Resource, LLC for STC # SA02245CH

1955 C170B Engine: Lycoming O-360-A1A, 180HP @ 2700 rpm

Ambient conditions: 1000 MSL and 75F aircraft at #2450 lbs

Propellers Tested:

MT 2-Blade 83" Composite
MT 2-Blade 80" Composite (*Ultra*)
MT 3-Blade 78" Composite
Hartzell 2-Blade 76" Aluminum
Hartzell 2-Blade 80" Composite (Trailblazer)

Weight:

MT 2-blade 83" w/ Spinner	45 pounds
MT 2-Blade 80" w/ Spinner (<i>Ultra</i>)	42 pounds
MT 3-blade 78" w/ Spinner	54 pounds
Hartzell 2-Blade 76" Aluminum	64 pounds
Hartzell 2-Blade 80" Comp (Trailblazer)	46 pounds

Static Thrust @ 2700rpm:

MT 2-blade 83" Composite	770 pounds
MT 2-Blade 80" Composite (<i>Ultra</i>)	785 pounds
MT 3-blade 78" Composite	775 pounds
Hartzell 2-Blade 76" Aluminum	672 pounds
Hartzell 2-Blade 80" Comp (Trailblazer)	764 pounds

Rate of Climb (Timed full power climb at 80mph IAS to 8000')

MT 2-blade 83" Composite	1025 avg FPM
MT 2-Blade 80" Composite (<i>Ultra</i>)	1086 avg FPM
MT 3-blade 78" Composite	1000 avg FPM
Hartzell 2-Blade 76" Aluminum	910 avg FPM
Hartzell 2-Blade 80" Comp (Trailblazer)	1034 avg FPM

NOTE: The MT 3-blade had the shortest ground roll to 'wheels off' by 20' of all props tested even though the ROC for the Ultra was higher overall.

Max Power Cruise (24" MAP, 8000' DA, 2400 RPM 10.2 GPH)

MT 2-blade 83" Composite	139 MPH TAS
MT 2-Blade 80" Composite (<i>Ultra</i>)	143 MPH TAS
MT 3-blade 78" Composite	135 MPH TAS
Hartzell 2-Blade 76" Aluminum	127 MPH TAS
Hartzell 2-Blade 80" Comp (Trailblazer)	142 MPH TAS

AND... No RPM Restricted Ranges with the MT Propellers!!