

# ARCHIVED REPORT

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## Maule M/MT-7-420

### Outlook

- Maule no longer appears to actively market turboprop models
- The company has had much more success in the piston market

### Orientation

**Description.** Single-turboprop-powered, general aviation/utility aircraft.

**Application.** Passenger and cargo transportation, charters, training.

**Sponsor.** Privately sponsored by Maule Air Inc.

**Price Range.** MT-7-420, \$814,900 in 2008 U.S. dollars.

**Status.** Production

**Total Produced.** Through 2010, Maule built approximately 16 production aircraft, plus about three prototypes.

### Contractors

#### Prime

<b>Maule Air Inc</b>	<a href="http://www.mauleairinc.com">http://www.mauleairinc.com</a> , 2099 Georgia Hwy 133 S, Moultrie, GA 31768 United States, Tel: + 1 (229) 985-2045, Fax: + 1 (229) 890-2402, Prime
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#### Subcontractor

<b>Hartzell Propeller Inc</b>	<a href="http://www.hartzellprop.com">http://www.hartzellprop.com</a> , One Propeller Pl, Piqua, OH 45356-2656 United States, Tel: + 1 (937) 778-4200, Fax: + 1 (937) 778-4321 (Three-Blade Propeller)
<b>Rolls-Royce Corp</b>	<a href="http://www.rolls-royce.com/northamerica/na/">http://www.rolls-royce.com/northamerica/na/</a> , PO Box 420, 2001 S Tibbs Ave, Indianapolis, IN 46206-0420 United States, Tel: + 1 (317) 230-2000, Fax: + 1 (317) 230-4020 (250-B17C Turboprop Engine)

## Maule M/MT-7-420

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Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; [rich.pettibone@forecast1.com](mailto:rich.pettibone@forecast1.com)

## Technical Data

### (M-7-420AC/MT-7-420)

**Design Features.** Braced high-wing monoplane. The aircraft have all-metal wings, ailerons, and flaps; a welded tubular steel fuselage; and a braced steel tube tail structure. Ceconite covers the fuselage, tail, and tail control surfaces.

	<u>Metric</u>	<u>U.S.</u>
<b>Dimensions</b>		
Length	7.32/7.47 m	24.0/24.50 ft
Height	1.93/2.54 m	6.33/8.33 ft
Wingspan	10.26/10.03 m	33.67/32.92 ft
<b>Weight</b>		
Empty weight	712/726 kg	1,570/1,600 lb
Useful load (estimated)	422/408 kg	930/900 lb
Gross weight	1,134 kg	2,500 lb
<b>Capacities</b>		
Fuel	322 liters	85 U.S. gal
<b>Performance</b>		
Cruise speed (75% power at optimum altitude)	306 km/h	165 kt
Service ceiling	6,100 m	20,000 ft
Takeoff run over 50 feet	183 m	600 ft
Landing run over 50 feet	152 m	500 ft
<b>Propulsion</b>		
M/MT-7-420	(1)	Rolls-Royce 250-B17C turboprop engine rated 313 kW (420 shp) driving a Hartzell fully reversible, auto-reverse, three-blade propeller.

### Seating

Seating for pilot and four passengers.

## Variants/Upgrades

**MX-7-420.** Basic version derived from the piston-powered MX-7-235 but with a longer fuselage and modified ailerons and wing tips. The fuselage was strengthened at the firewall. The aircraft was powered by the Rolls-Royce 250 turboprop engine. First flight occurred in July 1986, with certification received in 1989. The MX-7-420 was equipped with oleo strut tailwheel landing gear.

**M-7-420.** Amphibious version of the M-7-235, powered by the Rolls-Royce 250 and incorporating structural strengthening. It was fitted with EDO floats. Certification was received in 1989.

**MXT-7-420.** The MXT-7-420 featured tricycle landing gear.

**M-7-420AC.** The M-7-420AC has a wingspan of 10.26 meters (33.67 ft), and is equipped with spring aluminum tailwheel landing gear. It was certificated in December 1998.

**MT-7-420.** The MT-7-420 has a wingspan of 10.03 meters (32.92 ft), and features spring aluminum tricycle landing gear. It was certificated in January 2003.

## Program Review

**Background.** Based in Moultrie, Georgia, Maule Air is an independent general aviation aircraft manufacturer that builds a line of light, single-engine STOL utility aircraft. Maule aircraft are known for cost-effectiveness and low price coupled with ruggedness and STOL capability.

### *Turboprop Model Introduced*

In 1985, Maule began to study the feasibility of equipping its MX-7 Star Rocket piston-powered aircraft with an Allison (now Rolls-Royce) 250 turboprop engine. With few modifications, Maule was able to

produce an aircraft with remarkable performance when compared with its piston-powered stablemates. The aircraft was approximately 30 knots faster and had slightly less range, much greater payload, and roughly similar STOL takeoff performance.

The basic MX-7-420 model was certificated by the U.S. Federal Aviation Administration (FAA) in June 1989. Initial deliveries of the MX-7-420 were made during the second quarter of 1990.

## Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
Jul	1986	First flight
Mar	1987	Second aircraft enters flight test program
Jun	1989	Certification of MX-7-420 land version
	1990	Initial deliveries
Dec	1998	Certification of M-7-420AC
Jan	2003	Certification of MT-7-420

## Forecast Rationale

As of the spring of 2011, Maule had not delivered any turboprops since 2008, when the firm delivered one. Indeed, the company no longer appears to actively market turboprop models. Maule's Web site does not list any turboprops in the firm's 2011 product line. It may well be that the last Maule turboprop has been produced.

Turboprop production at Maule has tended to be sporadic over the years. The most recent turboprop models in the company's product lineup were the M-7-420AC taildragger and the tricycle-gear-equipped MT-7-420.

Maule has had much more success in the piston market, where the company is well-known and well-respected for its general aviation aircraft. Even in the piston segment, though, Maule is not immune to the ups and downs of the market, and the recent doldrums in the GA sector have severely impacted the company. Maule delivered only four pistons in 2010 and seven in 2009, after shipping 27 in 2008, 36 in 2007, and 38 in 2006. In the first quarter of 2011, Maule delivered one piston.

A rise in build rates, at least on the piston side, appears to be on the way, however. As have other GA manufacturers, Maule recently reported a resurgence in demand for its products.

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