The STOL Maule

There is more than up-up-and-away to this utilitarian performer

BY ROGER ROZELLE
AOPA 537321

There it was—a taildragger. A STOL (short takeoff & landing) taildragger at that, according to the advertising, with a 235-hp Lycoming engine bolted on the welded steel frame. While the aircraft's official name conjured up visions of an astronaut, I was assured by Dan Spader, Sr., that the Maule M-5-235C Lunar Rocket was an earthbound machine easily mastered by trigear pilots.

Assurances were easy enough for Maule's 57-year-old chief test pilot and production manager to offer, but I wasn't easily convinced, especially in light of my limited time in tailwheel airplanes. I expressed my doubts to Spader and revealed the highlight of my taildragger experiences to him: a few years back my aerobatic instructor, Jim Hodge—a good-natured and respected pilot—listened as I asked if I might not be better off investing my money in a boat rather than in his unwieldy taildragger. Spader laughed like hell. And I was serious.

"You flew in here in that tri-gear, didn't you?" asked Spader, a big smile across his face as he pointed to our trusty Archer.

"Yeah, but it has a nosewheel," I emphasized. "That makes a difference."

"Naw, that don't make any difference," he laughed. "You fly this airplane just like that Piper, only remember to hold the elevator back when you're on the ground."

As Spader introduced me to the flight check aircraft, N56812, I thought to myself that I would need a lot more convincing before that Lunar Rocket and I could be friends.

At first glance, the name Lunar Rocket appears to be overkill for a craft that has a stubby appearance. The large, swept-back tail is the closest the aircraft comes to the streamlined look the name might connote. There are large drooping tips on the all-metal high-wing, but Spader said they do not enhance performance: "They're really just cosmetic."

Although the wings are constructed of aluminum, the remainder of the aircraft is covered with fiberglass and coated with a fire-resistant butyrate. Spader explained that the wings are constructed of metal because that design "is the simplest way to go on a production basis." However, in order to produce a strong and rugged airframe, he said that Maule elected to utilize steel tube construction and cover it with "a lifetime, no-maintenance fabric" that is easy to repair in the field.

The utilitarian aspects of the aircraft begin to make themselves known the moment that the four doors are opened. There is a door on each side of the fuselage allowing access to the cockpit; N56812 is outfitted with the clear plexiglass options ($150 each) that transform them from mere doors into picture windows. Aft of the right cockpit door, there is another door to the rear passenger section. However, it is a high first step into that compartment and the door has a tendency to swing closed.

The best part about that door is that it swings forward and away from still another door to the baggage compartment behind the rear seat. The latter door swings aft from where it joins the passenger door and the resultant opening can best be described as cavernous. That has to make the most avid cargo hauler smile with delight. And it makes it clear that the "C" in M-5-235C means cargo. (Maule said so.)

Fancy interiors are not the hallmark of Maule airplanes. The upholstering is neat and plain. The front seats don't fold down, although they are adjustable forward and aft.

The rear passenger bench-seat is

PHOTOGRAPHY BY THE AUTHOR

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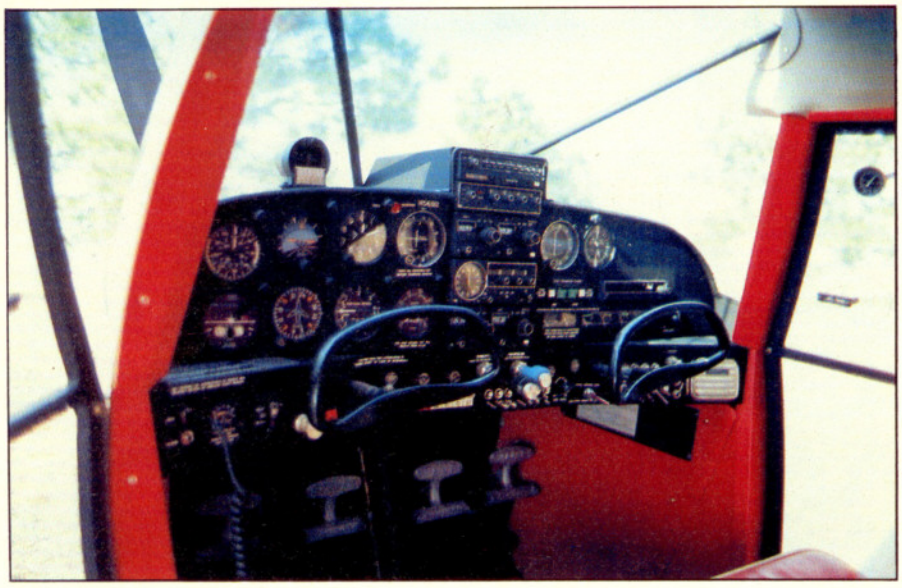

Maule

Fancy interiors are not the hallmark of Maule airplanes, but the panel is a virtual gold mine

rather firm and doesn't offer the best for one's derriére. There is some comfort in knowing that the rear seats can be mounted aft an additional three inches before the airplane leaves the Maule plant—if the customer requests it. That extra room will be appreciated by rear-seat passengers. But, if a customer waits until his airplane is at his home strip before he decides that he needs the extra room, a field modification can be made, although it requires an FAA 337 form.

According to Spader, there are plenty of Maule drivers who take the rear seat out of the airplane by removing a few screws. The resultant cargo space is terrific for carrying everything from a stretcher to bales of hay.

Climbing into the pilot's seat is made a little easier by grabbing the steel tubing braces that extend from the wing roots to the firewall. There is ample leg room and the seat is comfortable, but we found ourselves sitting higher than what we are used to. That arrangement contributes to the surprisingly good visibility over the nose.

The panel of N56812 is a virtual gold mine of King avionics, including a KN 62 DME, dual KX 175 B nav/coms, KR 86 ADF and other assorted goodies that added an additional $12,705 to the $29,695 base price. Other options, including a $2,750 Edo-Aire Mitchell Century IIB autopilot and $51.20 for fuel, tallied $7,771.70 and brought the total price of the aircraft to $50,171.70. The add-ons increased the basic empty weight of the aircraft from 1,468 pounds to 1,506 pounds—a lightweight even at its maximum gross weight of 2,300 pounds.

The instrument panel continues the "plain and simple" concept. Black labels with white lettering are mounted to the bottom of the instrument panel and describe the appropriate function of nearby knobs and switches. It isn't fancy, but it does the job.

A chrome ashtray mounted on the right-hand side of the instrument panel also caught our eye. An imprinted strip of plastic labeled "ashtray" was stuck on its wrinkled surface.

Engine start-up is uncomplicated, but when Spader told me to "turn the pointer to the left tank" I found the fuel selector inconveniently located below and to the left of the pilot's left leg. It requires hunching over to change the tanks. And there is no solid detent to verify selection.

Visibility is remarkably good during the taxi, not at all reminiscent of previous taildraggers I have flown. Taxiing is no problem at all, thanks to the Maule-designed steerable tailwheel. A touch of the rudder pedals is all it takes, without differential braking. Even so, I cautioned Spader to follow me through on the takeoff. He laughed, shook his head, folded his arms across his chest, and pulled his feet back from the rudder pedals. "Remember what I told you," he chuckled.

With two occupants aboard and 20 gallons of fuel in the tanks, N56812 was 300 pounds under gross weight as I pushed the throttle forward. The engine roared and I eased the elevator forward as airspeed increased. At 52 knots (60 mph) IAS, with 15 degrees of flaps, I pulled the elevator aft and discovered that the Lunar Rocket was already airborne. The aircraft quickly accelerated to 65 knots (75 mph)—best angle of climb—and we held it there as the rate of climb indicator pointed at 1,800 fpm and left Spence Field (elev. 292 ft.) behind us.

We allowed the airspeed to increase to best rate of climb—78 knots (90 mph)—and leveled off at 4,000 feet over Southern Georgia.

Setting up 2,300 rpm and 23 inches of manifold pressure and leaning for peak EGT (EGT gauge optional at $125) provided a 75% power setting according to Spader. With an OAT of 45°F, indicated airspeed was 130 knots (150 mph).

A 65% power setting of 2,100 rpm and 21 inches, under the same conditions, netted an indicated airspeed of 122 knots (140 mph).

A setting of 2,000 rpm and 20 inches, 55% power by Spader's reckoning, tallied 113 knots (130 mph IAS).

During the cruise speed checks, it was obvious that the Maule is not a quiet airplane. We had to speak very loudly to one another in order to be understood.

Although the view outside the windows and doors was spectacular, I found myself slouching in the seat a bit, because its high position put my eyes just below the level of the high wing. However, the black steel tubing that formed a "V" in front of the windshield proved to be far less distracting than I had anticipated; after a short period of time, I forgot all about it.

A full power-on stall, with flaps up, caused the stall warning—a red warning light on the top of the pilot's panel—to illuminate just under 61 knots (70 mph), but airspeed bled off to 43 knots (50 mph) before there was any buffeting. Holding the aircraft in the stall produced a slow wallow at 39 knots (45 mph) with a 500 fpm rate of descent. Recovery was simple: release the yoke.

Adding full flaps—35 degrees—slowed the warning light until 52 knots (60 mph), although some light buffeting accompanied it. Maintaining back pressure on the yoke produced another wallowing descent, but the airspeed indicator pointer dropped off the scale below 39 knots (45 mph).

Pulling the power off, with the flaps up, triggered the stall warning light at 59 knots (68 mph), but there was no real stall until 51 knots (59 mph). There were some marked oscillations as the airplane was held in the stall, with a rate of descent varying between 700 and 900 fpm. The airplane rolled off to the left a few times and pitched down, but releasing the controls allowed the airplane to stabilize itself.

Adding full flaps resulted in a stall

warning at 56 knots (65 mph), with a wallow at 43 knots (50 mph) accompanied by a 900-fpm descent.

The yoke and rudder controls were very responsive and required only gentle pressures. There was little need for any rudder trim. If there had been such a need only right rudder could have been cranked in anyway. A pull-T-handle that twists into a lock position is joined to a bungee cord on the rudder and is intended for use during takeoff.

Operating the two-position manual flaps—15 degrees or 35 degrees—requires the pilot to bend forward and reach down for the flap handle in the center of the cockpit floor just forward of the seats. It is an exercise that warrants some practice, so as to avoid pushing the yoke forward as the pilot hunches over.

Although the short fuselage of the Lunar Rocket leaves it susceptible to power and flap changes, trim forces were never very troublesome during normal flight. In fact, most of the flight could have very likely been conducted without changing the trim setting—located beside the flap handle and just forward of the left seat—from its neutral position without encountering any extraordinary forces.

I did find the vernier throttle control a bit disconcerting for power changes during the stall series, although it and the prop control were conveniently located to the right of the pilot's yoke in the center of the panel. However, the mixture control was located further to the right of the prop control and it was shaped exactly like the cabin heat control—a tiny little knob on the end of a rather short shaft. The fact that it is painted black made it even easier to grab the wrong knob, although their respective functions are printed in small letters on the face of the knobs.

"Some people order them with the mixture control painted red," said Spader, "but we don't offer a larger knob."

Spader suggested that we really get down to business and we edged into a 60° bank and full aft elevator at 114 knots (130 mph) without any altitude loss in a *very* tight turn. Looking out the clear plexiglass door at a stand of tall pine trees below made me feel that I was in a helicopter, not an airplane. That is only one reason why Lunar Rockets are popular with law enforcement aviation departments, according to Spader. (Two Lunar Rockets were undergoing finishing touches at Moultrie before being ferried to their future owner in California—the state police.)

Slow flight is one of its virtues and, besides responsive control at low speeds, there is a marked absence of noise as power is reduced. With 2,000 rpm and 15 inches of manifold pressure, the airplane maintained level flight and 20° banks at a leisurely 43 knots (50 mph). Pulling full flaps on and adding full power—in that order—immediately established a 500-fpm rate of climb without any altitude loss.

When it came time to land the airplane, all I could think about was that it was a taildragger. I envisioned pushing the nose into the ground. Spader chuckled some more and said that the aircraft's prop would clear the ground by nine inches—with one tire flat and the airplane held level. With the largest oversize tires on it, that clearance increased to 20 inches. I wished a lot for the bigger tires. At any rate, Spader offered only "90 in the pattern, 80 over the fence, full flaps and hold the elevator back."

It was a piece of cake. Except for holding the elevator back, it really wasn't that different from most other airplanes. Touch and goes did require some coordination—reducing full flaps on the takeoff was troublesome since

the airplane was ready to fly immediately. Power reductions were required almost immediately after climbout in order to maintain pattern altitude and speed.

After several takeoffs and landings—most within 500 feet—I was beginning to feel that the performance was more than luck; the Lunar Rocket and I were becoming friends. About the time I was all smiles to myself, the engine suddenly became very quiet. There was plenty of runway remaining, so we made another otherwise uneventful landing, this time with a windmilling prop.

Earlier, when Spader told me to select the left tank, I had turned it to the right tank. What was the pointed end to him was not the pointed end to me It was a graphic demonstration that the rather old-fashioned-looking knob can create problems for those unfamiliar with it.

Spader did take time out to explain the fuel system in more detail before we launched into the air again. Fuel is fed to the engine from a main inboard tank (with a capacity of 21.5 gallons) in each wing. Auxiliary tanks (with a ca-

Maule

M-5-235C Lunar Rocket
Basic price $29,695
Price as tested $50,171.70

Specifications	
Engine	Lycoming O-540-T1A5D, 235-hp @ 2,400 rpm
Propeller	Hartzell, constant speed, 78 in
Wing Span	30 ft 10 in
Length	22 ft 9 in
Height	6 ft 4 in
Wing area	152.3 sq ft
Wing loading	15.1 lb/sq ft
Power loading	9.78 lb/hp
Passengers and crew	4
Cabin width	3 ft 7 in
Empty weight	1,468 lb
Equipped empty weight (as tested)	1,506 lb
Useful load (basic aircraft)	832 lb
Useful load (as tested)	734 lb
Payload with full fuel (basic aircraft)	592 lb
Payload with full fuel (as tested)	416 lb
Gross weight	2,300 lb
Fuel capacity (standard)	43 gal (40 usable)
Fuel capacity (with optional tanks)	67 gal (63 usable)
Oil capacity	12 qt
Baggage capacity	100 lb
Performance	
Takeoff distance (ground roll)	350 ft
Takeoff over 50 ft	600 ft
Rate of climb (gross weight)	1,350 fpm
Maximum level speed (sea level)	151 kt (174 mph)
Cruise speed (75% power, 7,500 ft)	149 kt (172 mph)
Economy cruise speed (55% power) 12,500 ft)	142 kt (164 mph)
Range at 75% cruise (with 45-min reserve)	639 nm (736 sm)
Service ceiling	20,000 ft
Stall speed (clean)	47 kt (54 mph)
Stall speed (flaps down)	42 kt (48 mph)
Landing over 50 ft	600 ft

pacity of 11.5 gallons in each wing) are an option at $995. The aux tanks feed their fuel into the mains and demand some thinking on the pilot's part; attempting to transfer fuel too soon may result in fuel being pumped overboard from the main tanks. Before the pilot engages either electric transfer pump control on the panel, the manual advises that the appropriate main tank be less than half full.

With the engine running again, Spader offered to demonstrate the real STOL capabilities of the Lunar Rocket. He made it clear that those techniques that he was about to demonstrate were not for pilots unfamiliar with the Maule.

Then he demonstrated why.

With the brakes on, the engine was run-up to 2,400 rpm, then the brakes were released, elevator immediately pushed forward until the airspeed indicated 55 knots (65 mph), then back on the elevator until the tailwheel hit the ground with a resounding whomp (now we know why Maule wanted steel tube construction). As he came back on the elevator, Spader pulled on full flaps. And folks, in less time than it took you to read about it, the Lunar Rocket was airborne.

Spader emphasizes that the angle of attack is crucial during one of those maximum performance takeoffs, and notes that airspeed is allowed to increase during the climb.

Landings were equally impressive, with full flaps and 55 knots (65 mph) over the fence. Spader put all three wheels on the ground simultaneously—or nearly so, hauled back on the elevator and stomped on the brakes. Landing or takeoff, less than 200 feet of runway was all that was necessary.

What gives the airplane such impressive performance?

"Well, it has the weight of a Cessna 172, with the power of a Cessna 182," said Spader. "It is really power, coupled with the efficient, low-speed wing, a slightly modified version of a Clark Y airfoil."

Spader said that other improvements are in the works, including additional options, such as a ram's horn yoke to replace the standard, old-fashioned oval-shaped control that presently adorns the airplane. He mentioned that "bigger wings and flaps" might be forthcoming.

More important, he said that FAA approval of a gross weight increase to 2,500 pounds for the land-based version was imminent and would be retroactive to older aircraft.

The seaplane configuration is already approved for a 2,530-pound gross weight, although the auxiliary fuel tanks can not be used in that configuration. Spader said that plans are under way to increase that gross by 200 pounds and get FAA approval to use the aux tanks.

The chief test pilot has dozens of stories to illustrate the wide range of assignments that the M-5-235C fills. A medical doctor in New Mexico flies a Lunar Rocket outfitted for air ambulance work, which comes in handy during his house calls in remote areas. Australian ranchers use Maules to round up cattle and sheep. Swedish flying clubs use their M-5-235C's for towing gliders. Bush pilots in Canada fly ski- and float-equipped aircraft into rugged and isolated regions carrying everything from people to toilet tissue.

With such a versatile aircraft it would seem that Maule doesn't need to consider producing any other variations of it, but Spader makes it clear that isn't the case.

A 180-hp, Lycoming-powered version is in the works to "provide a more economical aircraft with very similar performance." And a turbocharged 210-hp Lycoming engine is about to be FAA-certified to "answer requests for improved performance from people who operate in mountainous regions such as the Andes in South America."

You can be sure if those aircraft are as easy to get along with as N56812, then they are going to have many friends in aviation. □

Refining a Good Idea

In some ways, it seems an unlikely location for an aircraft manufacturing plant. Moultrie, Ga., seat of Colquitt County, population 20,000, home of meat packers and uniform makers and where the local YMCA still throws an occasional "y'all come" dance. And everyone does.

But then Piper is at Lock Haven, Pa.; Taylorcraft at Alliance, Ohio; Bellanca at Alexandria, Minn.—none of them exactly booming metropolises. Nor is Wichita, Kan., for that matter, where nearly all the other general aviation aircraft manufacturers roost. So why not Moultrie?

Maule Aircraft hasn't always called the deep south home. The beginnings of the company were at Jackson, Mich., and nearby Napoleon. It was in the Wolverine State that Maule completed the prototype Bee Dee M-4 in February 1957, at a cost of $3,000. The aircraft, powered by a 145-hp Continental O-300-A, had a fixed-pitch prop, fabric-covered aluminum wing, and fuselage and tail of fabric-covered steel tubes.

At 2,100 pounds gross weight, the Bee Dee's takeoff run was 700 feet; sea-level climb, 700 fpm; cruise speed, 150 mph; and stall speed (full flaps, 35 degress), 40 mph. Maximum range was 700 miles for the 42-gallon-capacity aircraft. Useful load was 1,000 pounds. With all those 700's in the performance specs, it's a wonder the airplane wasn't called the M-700.

First flight of the Bee Dee M-4 was in 1958, with the aircraft going into production in 1962. Base price was $8,485. Only 11 Bee Dee M-4's were built (at least six of which are still registered today) before the name was changed to simply M-4 and then to Jetasen.

Like so many other things associated with the Maule story, the reason for the M-4 name change is interesting. It seems as though another aspiring aircraft manufacturer, Jim Bede of Kansas, had earlier claimed the Bee Dee name for what would become an ill-fated Bede product line. Jim dropped Belford a little letter, Belford dropped the name, and those 11 Bee Dee M-4's became collector's items of sorts.

By October 1964, 85 M-4's had been built. Production jumped to between two and three aircraft a week. Demand so far outstripped production that Air & Space Manufacturing Co., Muncie, Ind., was contracted to build 100 M-4's under license. Air & Space was an early builder of gyrocopters.

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While short-field performance could easily be verified, there was much controversy in the early years about Maule's airspeed claims. In August 1964, a Maule distributor in Montana wrote the firm, ". . . the only way the plane will indicate over 120 mph with three people is in a dive. After 30 hours of flying it [a Maule M-4] under all load conditions and at all altitudes, I could prove 135 mph true airspeed, never 150."

Inaccurate airspeed readings, sometimes by as much as 13 mph, were blamed on the poor location of the static port under the windshield. Today, the port is midway back on the fuselage where it was moved four years ago.

In the autumn of 1964, the M-4-210 Rocket, powered by a fuel-injected, 210-hp Continental IO-360-A with a McCauley constant-speed prop, was certificated. The increased horsepower gave the Rocket 80 pounds more useful load than the basic M-4 (by then called the Jetasen) cut the gross weight takeoff roll to 430 feet and increased sea level climb to 1,250 fpm. Speed increased to 165 mph.

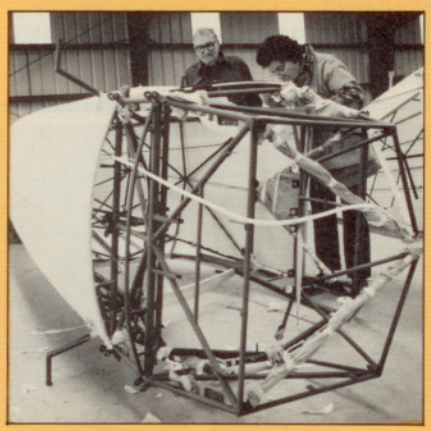
Thirty M-4-210 Rockets had been built by the following spring. In late 1965, "C" (for cargo) versions of the M-4 and M-4-210 were certificated. These aircraft are identical to the basic versions, except for a modified right fuselage structure, larger rear doors to facilitate cargo-loading and other minor changes. Every subsequent model of Maule aircraft to date has carried the "C" designation.

Along the same time, work began on a 220-hp Franklin 6A-350-C1 powered version, the M-4-220 Strata-Rocket. Appearing in late 1966, it increased cruise speed claims by 15 mph over the M-4-210 Rocket. Takeoff roll was cut to 400 feet. The increased performance came at some cost; fuel consumption at 75% power jumped to 10 gph, compared to 8 gph for the Jetasen and 9.5 gph for the Rocket.

The M-4 Jetasen, the M-4-210 Rocket and the M-4-220 Strata-Rocket were the only aircraft built at the Maule plant in Michigan. Production of "America's Performers of the Skies," as Maule referred to the aircraft in what little advertising was done, was moved to Moultrie in the fall of 1968 when Maule decided to look for better weather conditions and lower wage rates.

The final model in the M-4 series was rolled out in late 1970. Powered by a 180-hp Franklin 6A-335-B1A engine, the Astro-Rocket was a good economy plane and provided somewhat increased performance over the 145-hp Jetasen.

It was time for a whole new series of aircraft. This time, however, the 210 Continental and 220 Franklin engines would be bolted into a new airframe. The new series incorporated a 30% increase in flap area over the M-4 series and larger, swept-back fin and rudder surfaces to improve short-field performance and rate of climb. The M-5 Lunar Rocket was certificated in December 1973.



Something old, something new—the Maule is built on a frame of welded steel tubes covered by "lifetime" Razorback fabric.

That same year, however, the Franklin Engine Co. ran into financial trouble; it ceased manufacturing in 1974, finally selling out the following year to a Brazilian interest. In 1975, Pezetel, the Polish national aerospace marketing organization, bought rights to the Franklin engines, but elected not to revive the lower-horsepower models used in the Maules.

Since M-4 production had ended with the introduction of the Lunar Rocket series and the 220-hp Franklin was no longer available, only the M-5-210 Lunar Rocket with the Continental engine continued in production.

The M-5's performance increases over the M-4 are mostly in the landing configuration. The Lunar Rocket's 37 mph stall speed (full flaps) is 3 mph lower than that of the Strata-Rocket and landing roll is 390 feet, compared with 600.

Auxiliary fuel tanks were added to the M-5 design, increasing capacity from 40 gallons usable to 63. They are offered as a retrofit package for M-4 series aircraft and have been made optional on the M-5's. Today, nearly every new Maule aircraft is ordered with the auxiliary tanks.

The second model in the current Lunar Rocket series—the M-5-235C—was certificated in April 1976. Powered by a 235-hp Lycoming O-540-J1A5D, it is Maule's main product. The 235C cruises at 163 mph, stalls at 42 mph (flaps down) and claims a 350-foot takeoff roll.—R.M.

From Rockers to Rockets: The B.D. Maule Story

BY RAY MARTIN
AOPA 634209

When I was first escorted in to see the legendary head of Maule Aircraft, I was surprised to find him rocking behind his desk. Not rocking because he was upset about what the telephone was telling him, but simply rocking, to and fro, easy does it, in a rocking chair.

"Be with you in just a minute," he said, cupping a hand over the mouthpiece. Before I could sit down again, he'd ended the telephone conversation and slipped through a side door from the maze-like corporate headquarters of cluttered half-wall cubicles.

"Well, if that isn't Mr. Maule for you," a bubbly office girl said, "You do have plenty of time, don't you? One day when he had visitors, we found Mr. Maule out riding his motorcycle through the fields behind the plant."

Not at all out of character for him, I thought, pulling up a rocker. Belford D. "B.D." Maule is known as being, well, sort of an eccentric. Be that as it may, he's been a successful eccentric. For the past 20 years, Maule and company have managed to turn out a variety of four-place STOL aircraft designed by Maule and carrying his name.

Maule aircraft are known principally as special-purpose vehicles, just what you'd expect from a short-field takeoff and landing airplane. You'll find die-hard bush pilots in Alaska and Canada who won't fly anything else. Throw in a few ranchers, law enforcement officials, and fish and wildlife pilots and you've made up a good share of the Maule market. All demand—and receive—high performance out of their high-wing taildraggers.

Even before Maule decided to have at it in the airplane-building business, he'd already revolutionized the taildragger industry with his full-castering, steerable tailwheels. Tailwheel production has run as high as 7,000 a year, but is less than half that today; the company also makes a fabric tester and an acrylic windowvent kit.

I'd heard a lot about Maule. When he was 10, so one story goes, he jumped out of a barn, using an umbrella to break his fall. It was Belford that broke, but not in spirit. After going on to become a grade school dropout, he started to fly right. In 1932, when he was around 20, he built a midwing airplane powered by a 27-hp Henderson motorcycle engine and flew it all over Salladasburg, Pa.

Maule is also the fellow who designed and flew the first successful ornithopter, a flapping-wing aircraft, in 1944. And who, today, likes to full-throttle one of his Lunar Rockets from 375-feet deep in a hangar and have the thing airborne by the time it reaches the front door. "Actually," he'll tell you, apologetically, "it'll fly sooner than that, but I've got the problem, you see, of the roof."

Surely, I thought, rocking myself silly, Maule would be back at any moment. After all, he was expecting us to arrive that morning for a flight check and photo session of the 235-horse Lunar Rocket and an interview.

Maule reappeared as quickly as he'd left. He greeted us with a "hi" and a firm handshake, and then looked away as if trying desperately to remember something. "So what are we gonna do today?" he smiled. B.D. folded his arms over his open-collar sports shirt, his plaid trousers with the tape measure attached to his belt adding a touch of informality.

We discussed the day's schedule, which was probably our first mistake. The only time scheduling would even be brought to mind at Moultrie would be if production ever fell behind. "But that never happens," B.D. said. "We don't even have a plant manager. Besides, we have all the work we want.

"You go building more airplanes and we'd just have to add on more people," came B.D.'s matter-of-fact rationale. Simple, I thought. Wonder if Cessna and Piper ever thought of it that way.

Airplane-counters and profit-watchers don't run this "ma and pa" company. Layers upon layers of corporate structure don't exist. To give an idea of what I mean, consider the officers' listing for Maule Aircraft in the 1970 edition of *Jane's All the World's Aircraft*. The company president was listed as B. D. Maule; vice president, Mrs. B. D. (June) Maule; treasurer, June Maule; director of sales, B. D. Maule (replacing eldest son, Raymond, who left the firm the year before); and director of purchasing, June Maule. Things haven't changed much since then. The senior Maules and four of their five children work for the company.

"Do you have time for a quick sandwich?" B.D. asked. It was close to noon and stretches of work best performed uninterrupted lay ahead. We agreed, reluctantly, wondering how long the trip into Moultrie would take.

"Do you want anything on your round steak?" was B.D.'s next question, as he produced a package of bologna "steak," a loaf of bread, a bag of chips and a jar of mustard. Chairs were drawn up—rocking chairs, of course—by B.D., June, and test pilot Dan Spader, Sr. A North

B. D. Maule, founder, president—and head tinkerer—seeing to a detail

PHOTOGRAPHY BY ROGER ROZELLE

Carolina rancher, Ralph Colvard (AOPA 345807), who'd come to take a sneak look at the new 180-hp Lycoming Maule, and his four-year-old son joined us. B.D. jumped up to find some milk for the boy, who had gone right to the top man with his request.

A little later, while the 235 Lunar Rocket was being photographed under a stand of tall pines, I visited with B.D., talking about Maule past, present and future. I wasn't going to need my shorthand for this one, I knew right away, when B.D.'s grinning answers reinvented the simple, declarative sentence. Harry Truman must've been smiling somewhere.

B. D. Maule is a curious sort of fellow. Trying to hold him long enough for an interview conjures up thoughts of tying him to one of his rockers. I couldn't say he's hyperactive, but fidgety and antsy sure fit.

It is like his mind is racing all the time. As if there were things going on back at the plant that he might miss. Things like I'd seen him do. Supervise some panel wiring, or pick up a tool left laying, or touch up some paint that didn't look quite right. Or, maybe, just to let everyone around know that he knew what was going on. All the time.

"I've never seen a STOL conversion that people really wanted," B.D. answered a question about competition. "I figure if those planes are meant to be STOL aircraft, why not make 'em that way at the factory?"

There isn't much production STOL competition nowadays for Maule. The closest competitors are the four-place Rallyes with 150-, 180-, and 235-hp engines. All the fixed-gear Bellancas are two-seaters, and the Cessna 180 taildragger, while close in performance to the Maule, costs a good eight grand more than the Lunar Rocket. "We're working on STOL improvements all the time," B.D. said, "and we have the best STOL aircraft in the business to start with."

Maule has about 40 distributors in the United States, Canada, New Zealand, South Africa, Brazil and Europe. Repairs are no longer the problem some owners may have found them to be in the past, Maule said, since some dealers now stock their own parts.

Though his planes have a 90-day warranty, Maule has said that, "If anything goes wrong and it's our fault, we'll fix it." Some Maule owners still ferry their craft back to Moultrie for repair.

At 111 copies, the 1977 production rate was a little more than two a week. Last year, 88 Maules were turned out. No one seems to mind non-record-breaking years, and no sales manager is ever going to be called in on the carpet.

It isn't too difficult to see why a company that is working at its own comfortable pace isn't too interested in Madison Avenue-style advertising. All the aircraft Maule builds are sold before the first steel tubes are bent. There may be as many as two dozen aircraft in various construction stages at any one time.

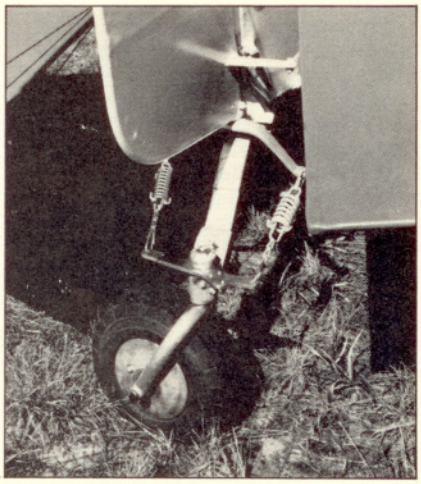
"We've just started production on Maule number 1,000," B.D. said. A little more than half that magic number have been produced at Moultrie, mostly M-5 series aircraft.

Since Maule has put a successful "homebuilt" design into production, we asked if he is hounded by designers and homebuilders to produce their aircraft. "Now I can tell you that some people have come up to me with aircraft designs—some of 'em good ones—and wanted me to build them," Maule said. "But it's just too much trouble. Even if it's a good design, you gotta go through all that blasted paperwork to get the type certificate. It just isn't worth it."

Maule isn't too concerned about immediate threats to aviation. "I don't think people have been too affected so far," he said in response to questions about pending fuel shortages, increased flying costs and government regulation.

"On the fuel question, I believe we're gonna have to get fuel or we'll have a lot of crashes. You see, what'll happen is that pilots will start running out of fuel all over the place because it isn't available. The government'll never stand for that. You wait."

"The biggest single headache I get from aviation is product liability," Maule said, leaving no doubt that a nerve had been struck. As he ripped a half-dozen, good-sized branches off a nearby pine, he continued. "You see, somebody does something dumb like drop an airplane in a hole and break a landing gear off and pretty soon everybody's getting sued. The manufacturer, the engine company, the shop that's worked on the plane, the airport, everyone.



Before building airplanes, Maule had become well known as a tailwheel maker

"They crash a lot of planes up in Alaska, you know. A good many of those are Maules. Sometimes you gotta look at out-of-court settlement—even though you're completely innocent—because lawyers' fees to fight it will just eat you up."

The 10% excise tax in Canada on new aircraft purchases is another irritant to Maule. The tax, lifted this past November, was devastating to Canadian sales. Some Canadian pilots also have been paying up to 19 cents a gallon fuel tax.

Maule, at 67, says he can't think about retirement. "I like to know what's going on at the airport," he said. "I want everything to be right. You know, sorta keep my eyeballs on things.

"I'm the guy who keeps this place going," Maule said with more assurance than ego. Even though his wife and all but one child are working in the business and the family name is assured, Maule isn't ready to step aside. "I'd be afraid things just wouldn't be done up to my stand-

"We're going to be concentrating on improving the aircraft all around," B.D. said, mentioning items like interior appointments and soundproofing. "We're looking at improving the M-5 series by maybe adding a foot-longer wing, bigger flaps and three flap notches. We're trying to get the landing speed down around 40 mph."

"The M-5-180 is ready for certification and the turbocharged 210 is coming along," came B.D.'s answers to what's in the wind. "The FAA's holding up the 210; all the paperwork isn't finished. Maybe we'll call when we get back to the plant and see how they're doing." It's a good thing for Maule I'd brought the subject up, I thought.

Too soon, it seemed, it was time for our conversation to end. "Tell me first," I implored, "about the rocking chairs."

"Well," B.D. laughed, "when the plant was up in Michigan, I had a swing. I like to swing. But I switched to rockers when we came south in '68.

"Swings or rockers, it don't matter, I just think better when I'm in one of them." With more than 50 rocking chairs located throughout the plant, he's never far from one.

Around 5 p.m., the flight check and photo session over, we prepared to fly back north. Everyone had left the Maule plant. Everyone, except B.D. As he weaved a bicycle in and out of lined-up rows of unfinished aircraft, an empty chair rocked nearby. A quick wave of an arm in our direction and he was gone.

A pioneer, an eccentric, a shy man, perhaps; but a man happy and content with his work. "And it really is easy work," B.D. himself had told me. "Not like having to pitch manure or something." □