

Pilot Flight Check:

The SIAI MARCHETTI F260

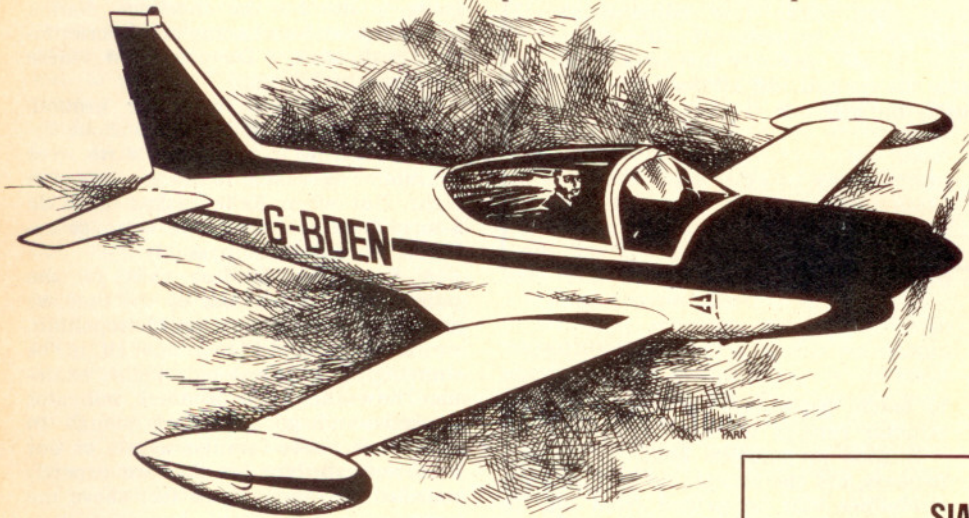
by ALAN BRAMSON

■ ■ As a boy I used to watch the Hawker Furies perform the near impossible in the hands of our peacetime, Royal Air Force pilots.

Most readers of the PILOT will relate the name to those massive, single-engine fighters that were powered by 2,600-hp Bristol radials and seen taking part in the unlimited-class in air races in the U.S. However the Hawker Fury I am talking about was an elegant, little bi-plane that first flew in September 1929.

It was, in fact, the first fighter to enter RAF service with a genuine 200-mph top speed in level flight, and by the time the Fury II had been developed, the type would do 223 mph on the power of its 640-hp Rolls Royce Kestrel engine.

As an aerobatic mount, this airplane was in a class by itself. As I watched the display team's impeccable formation loops and rolls, with the wingtips tied together by a cord trailing small, colored flags, little did I imagine that 40 years hence and well past middle-age, I would be testing a lightplane capable of cruis-



SIAI MARCHETTI F260

Specifications

Engine	Lycoming O-540-E4A5, 260 hp
Propeller	Constant-speed, 76-in diam
Wing span	27 ft 5 in
Length	23 ft
Height	7 ft 6½ in
Wing area	108.7 sq ft
Wing loading	22.4 lb/sq ft
Passengers and crew	4
Empty weight	1,478 lb
Useful load	952 lb
Gross weight	2,430 lb
Aerobatic gross weight	2,205 lb
Power loading	9.3 lb/hp
Fuel capacity	61 gal
Baggage capacity	90 lb

Performance

Takeoff over 50-ft	1,411 ft
Rate of climb (2,430 lb)	1,880 fpm
Rate of climb (2,205 lb)	2,000 fpm
Maximum level speed	230 mph
Cruise speed (70% power, 5,000 ft)	214mph
Economical cruise (58% power, 7,500 ft)	203 mph
Range (70% power, 5,000 ft)	940 sm
Range (58% power, 7,500 ft)	1,080 sm
Landing over 50 ft	1,667 ft

Fast and economical, 'touring' single is also an excellent aerobatic performer

ing as fast as a Fury going flat out and using but a fraction of the power in the bargain.

The subject of this flight check—the Siai Marchetti F260—does have military connections because a number of air forces have bought it for use as a light, ground-attack aircraft. It is also being used by several large airline pilot training establishments.

The Siai Marchetti Co. resides at Sesto Calende, Italy, and the F260 is their top-of-the-range single. It is a remarkably compact aircraft with a wingspan of little more than 27 feet. The manufacturers claim it to be a four seater, and so it is, in the true Italian sports car tradition—two adults up front and your two worst enemies behind. In truth, the F260 will accommodate three large adults in comfort or two big people in the pilots' seats and a pair of large children or small adults in the rear-bench seat.

The aircraft is remarkably clean and its thin, tapered wing with an area of only 108 square feet (some 33% less than most light aircraft in its class) carries a pair of businesslike, streamlined tip tanks. These are standard equipment and vital to the aircraft because the thin wing has room for only 25 U.S. gallons. The tip tanks add another 36 making a total of 61 gallons, usable.

Most areas of the airframe are flush riveted to very high standards, and the airframe is skinned in heavy gauge light alloy that feels firm to the touch, but this is to be expected in a +6G -3G aerobatic airframe with the cruise performance of a light twin.

The Lycoming O-540-E4A5 engine (260 hp) is enclosed in a beautifully designed cowling that incorporates two large, lift-up panels. Generally the standard of engineering is superb.

The cabin is entered via a large, sliding canopy that appears to be completely free of any optical distortion when you look out of the aircraft. The canopy's top panels are grey tinted, and they slide easily despite their size. Having drooled over the aircraft from the outside, we were prepared to excuse it in advance for not offering more passenger room inside. After all, here is a private fighter, cleared for aerobatics, fast, economical and beautiful to look at.

Having made these excuses, I opened the lid and was confronted by a cabin offering a full 42 inches in width (the same as a Cherokee) and seats of at

least average dimensions for this class of light aircraft. From the outside, a cabin of this size appears impossible. But there are limitations. You are allowed a maximum of 250 pounds on the rear-bench seat and only 90 pounds of baggage is provided for on the shelf in back.

G-BDEN, the test aircraft, had a very comprehensive radio installation, and most of this was contained within the avionics area. However, because of the amount of equipment, there was an overspill that gave the impression that whoever handled the fitting of radios in this particular airplane ran out of ideas when it came to planning. Otherwise, the instrument panel is nicely laid out and reflects the high standard of engineering already mentioned.

All instruments and controls are well designed and within convenient reach of the pilot, but I took exception to a pair of fuel gauges, the size of postage stamps. These two little horrors indicate the contents of four tanks via a selector switch, and they spoil an otherwise splendid flight deck.

I found the seats comfortable; the test aircraft was upholstered in simulated leather with adequate provision for "breathing," an important consideration when flying in hot climates. There is generous provision for individual ventilation and cabin heat for each occupant. In a rather odd way there is an unusual mixture of the plush and the military about this aircraft. The servicelike nature of the breed was highlighted later when I was able to exploit its handling in the air.

The Lycoming engine is the normally aspirated, carburetor type, and it started very easily. The brakes are released by pushing in a small handle situated high on the left of the instrument panel. All-around visibility is excellent, and this, combined with the lightest nose-wheel steering and about the most powerful disc brakes I have found on a light single, makes taxiing a pleasure. The airplane has a big engine for its weight, and as I lined up for takeoff, it crossed my mind that 260 hp pulling a small, clean airframe weighing only 2,430 pounds was bound to spell acceleration. Also with a wing loading of 22.4 pounds per square foot, you have a light aircraft where the use of 20° takeoff flap makes a meaningful difference in the length of ground run.

When the throttle is opened, the F260 follows the runway center line like a

ferret after a rabbit. I timed 12 seconds to liftoff at the recommended 80 mph. At the end of 60 seconds, we were at 1,850 feet with the vertical speed indicator steady on the 2,000-fpm mark. In comparison with a typical American cabin aircraft with walk-in doors and a solid roof, there is a lot of transparent paneling. And while engine noise is quite low, there is a lot of airframe/airflow hiss that seems to emanate from the canopy in spite of its excellent aerodynamic shape. I would describe the noise level during the takeoff and climb as average.

Seventy-five percent power at 5,500 feet produced an indicated airspeed of 200 mph (216 mph true), but it is at 7,500-10,000 feet that the aircraft really shines. For example, 58% power (2,200 rpm and 20 inches mp) will return 203 mph true while burning less than 12 gph. Is there an automobile in the world that will move three adults and their luggage at over 200 mph while averaging almost 17 mpg? And for those who are not prepared to dawdle at that speed, 74% power at 7,500 feet will cruise the craft at 220 mph and still give good economy at over 14 mpg.

One would expect a fast, compact aircraft such as this to exhibit a hot stall, but while the F260 is not as docile as a Cherokee or the Robin HR100 series, it is certainly less dramatic at the stall than other current-production four-seaters we have flown. With G-BDEN at its maximum aerobatic weight of 2,205 pounds, I've recorded these figures:

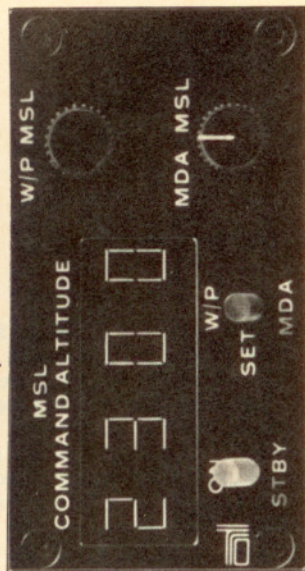
Flap Setting	Stalling IAS	Wing Drop
Clean	76 mph	Slight right
20°	70 mph	Slight left
50° (maximum)	63 mph	Slight left

Recovery in each case was normal using the standard recovery technique.

Visibility from inside the F260 is excellent in most directions—a strong point particularly in a busy traffic pattern. Little or no rudder is required to maintain coordination during turns, and the F260 handles like a fighter with its responsive controls. However, the ailerons are rather heavy for my liking, particularly at high speeds, and I would like to see lightened what should be the lightest of the three controls.

The F260 is a remarkably stable aircraft, particularly in pitch. From an indicated airspeed of 180 mph, the nose was held up until the airspeed had settled at 160 mph and the stick was released. Very slowly, the nose went

VNAV OPTION provides altitude advisories on ILS/BC, VOR, ADF, and RNAV approaches. Displays MSL altitude for 3.15° descent path.



down a few degrees until at 190 mph it eased up again to 170 before resuming the original 180 mph.

The F260 is cleared for spins and aerobatics with two occupants, no fuel in the tip tanks, and a maximum weight of 2,205 pounds. Some 5 mph before the stall, I applied full rudder and moved the stick hard back when G-BDEN went gently into a left-hand spin. After one turn in a steep, nose-down attitude I went through the standard recovery, and the spin stopped before I was able to move the stick forward more than a few inches. One can enter most aerobatics from level cruise in this aircraft, with some recommended speeds being: 190 mph for a loop; 210 for an Immelmann; and 160 for a slow roll.

The lower speed recommended for the slow roll may well be to lighten aileron pressure, but little aileron input is required for the rolling maneuvers that this airplane does very beautifully indeed. Limited as it is to 10 seconds of inverted flight, the 260 may not be re-

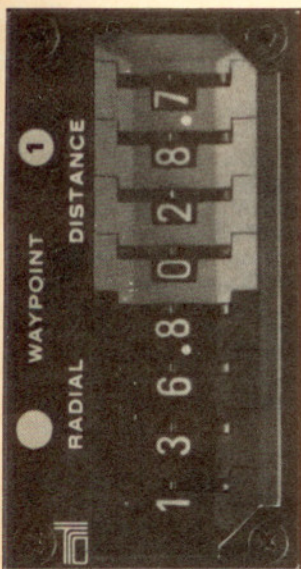
garded in the same light as a Zlin or a Pitts, but for the sheer joy of flying those wide, sweeping, low G aerobatics, I can think of few aircraft to equal it.

On the way back to Biggin Hill, we flew in a clear, blue sky (we do have them in England, by the way), and I found you must plan in advance when joining the pattern. The idea is to slow the aircraft down to 150 mph when 20° of flap may be lowered. This, in turn, will help reduce speed to the 125-mph gear-extension-limit speed.

Base leg is flown at 100 mph followed by a full-flap approach aiming for an 80-mph threshold speed. It is essential to leave on power at this speed until the roundout to avoid a high rate of sink. On the approach, the airplane's excellent controllability, great stability and exceptional view combine to give you a feeling of security during this critical phase of flight. As the runway comes up and the flare is initiated, the power may be eased off. You can grease the F260 on, tail low, with plenty of elevator power to hold off the nosewheel.

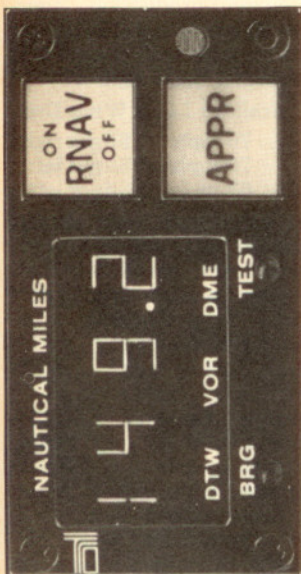
As a touring plane with aerobatic capabilities, the F260 must be in a class of its own. So if you want an aerobatic,

Siai Marchetti F260 is fast (cruise up to 220 mph), economical (up to 17 mpg), aerobatic (+6G -3G) and beautiful to look at. Photo by the author.



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private fighter capable of transporting a pilot and two passengers at more than 200 mph for a fuel consumption of less than 12 gph, the F260 is the only one. For more carrying capacity you must look elsewhere.

Among the features I did not like about the F260 were: the fuel gauges, which must be read with a telescope; the parking brake, which can be difficult to release; the ailerons, which although they are very effective are too heavy; and the 90-pound limit for the luggage shelf. I liked: the sleek lines of the aircraft; the high quality of the engineering; the light nosewheel steering and powerful brakes; the high-quality canopy offering superb visibility; and the security of a +6G airframe. Added to these are: the high rate of climb; the high cruising speed (up to 129 mph); the economy; the splendid fighterlike handling and delightful aerobatics; the roomy cabin for so small an aircraft; and the feeling that here is a real airplane, not a flying auto.

In the F260 the Italians have created a masterpiece that must surely rank among the world's outstanding light aircraft. □

