



Maurice Rowe

Private FLIGHT

team
test

No 28

Sportavia/Fournier

RF5

FEW aeroplanes which we have tested in this series can be regarded as truly sporting. We have tended to cover the more conventional club and private-owner machines and assess them for easy comparison, but cannot exclude such less common types as the RF5. It is not everybody's idea of a light aeroplane but offers above-average efficiency and is a sheer delight to fly.

Sportair Flying Club at Biggin Hill has been training its members on the type for six years, and the tandem seating is liked by the club's pilots and students. Although still operating the RF5, the renamed Sportair Flying Centre is no longer UK distributor, that responsibility now lying with the Fournier Supply Company.

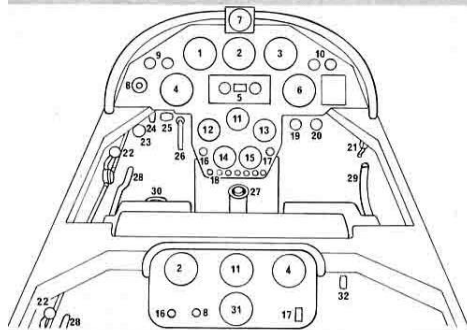
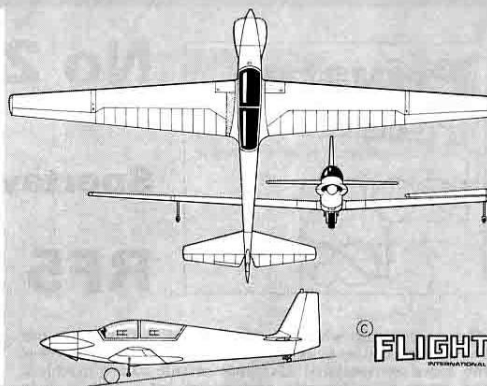
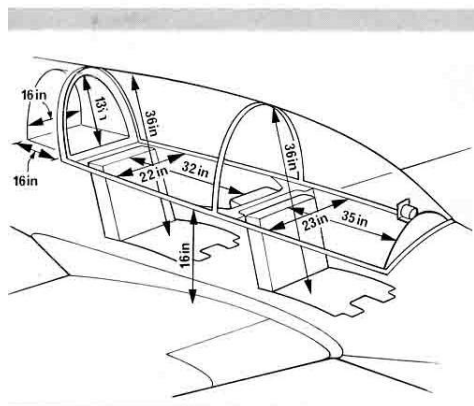
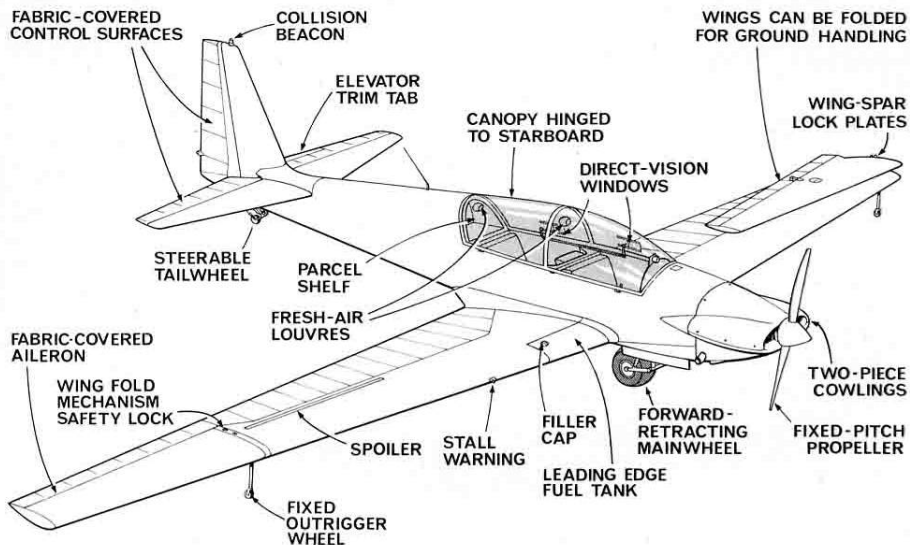
A walk round the RF5 showed up the many features that produce exceptional performance from such low power and make it so unconventional. The single main-wheel retracts manually forwards to sit above two clam-shell doors. The only other mechanical drag-makers on this beautifully clean aircraft are the spoilers, of the old-fashioned glider type, situated at mid-span. Fuel tanks in the leading edge of each wing at the root have a combined capacity of a miserly 13.8gal, yet can produce an endurance of around 6hr at economical settings. Sportair closely monitored consumption back in 1973 when fuel prices rocketed. It was found that the RF5 returned an

average of 2.4gal/hr while flying usual club operations (circuits, local flying and cross-countries).

Folding wings are a real scarcity today, but on the RF5 could almost be considered necessary, reducing its hangar-filling span of 45ft to a more manageable 28ft. The mechanism is easy to use and requires a simple check that the safety lock is in position before flight. The ailerons are of the Frise variety and slightly differential; we hoped for, and found, little aileron drag in the air despite their long distance from the fuselage. A very smooth surface for the airframe is given by the extensive ply covering.

After opening the starboard-hingeing one-piece canopy we climbed aboard without difficulty; it was, however, a little disconcerting when the aircraft rocked from outrigger to outrigger while we were trying to maintain balance on the walkway. We were surprised at the amount of room and comfort in the front for the averagely built pilot in what appears to be a compact and crowded cockpit. Adjustable rudder pedals can cater for a variety of leg lengths.

The rear cockpit on the test aircraft was even more sparse than the front station. For training purposes, an instructor would miss fuel controls, brake and under-carriage selector (although he has his own locking knob). The rear-seat occupant also has the restricted forward



KEY

- | | | | |
|----|--------------------------------------|----|--------------------------------------|
| 1 | Rate of climb | 16 | Master switch |
| 2 | Airspeed | 17 | Ignition |
| 3 | VOR | 18 | Circuit-breakers |
| 4 | Altimeter | 19 | Fuel selector |
| 5 | VHF com | 20 | Choke |
| 6 | R.P.M. | 21 | Elevator trim (in rear cockpit also) |
| 7 | Magnetic compass | 22 | Throttle |
| 8 | Intercom socket | 23 | Cowling flap |
| 9 | Undercarriage warning lights | 24 | Cabin ventilation control |
| 10 | Stall-warning light and check button | 25 | Starter |
| 11 | Turn and slip | 26 | Handbrake |
| 12 | Oil pressure | 27 | Transmit button |
| 13 | Oil temperature | 28 | Spoiler control |
| 14 | Ammeter | 29 | Undercarriage selector |
| 15 | Fuel contents | 30 | Pedal adjustment |
| | | 31 | Magnetic compass |
| | | 32 | Gear lock |

Sportavia/Fournier RF5

Dimensions

Span: 45ft 0in, 13.74m (28ft 2in, 8.60m folded)
Length: 25ft 6in, 7.8m
Wing area: 162.75 sq ft, 15.12m²
Dihedral: 3° 30'
Incidence: 4°
Aileron area: 16.15 sq ft, 1.5m²
Fin area: 5.49 sq ft, 0.51m²
Elevator area: 10.55 sq ft, 0.98m²
Undercarriage: gas-filled oleo, single, retractable main; single tailwheel; outrigger under each wing
Tyre: 420 × 150 6 (main)
Pressure: 32.5lb/sq in, 224kN/M²
Engine: Sportavia-Limbach SL 1,700 E, 68 h.p. @ 3,600 r.p.m.
Propeller: Hoffmann L-32-110/1, two-bladed, wooden, fixed-pitch, diameter 57in, 1.45m
Fuel capacity: 13.8 Imp gal, 16.4 US gal, 63lit—standard, usable
Oil capacity: 0.5 Imp gal, 0.6 US gal, 2.5lit
Electric system: 12V engine-driven alternator
Equipped empty weight: 925lb, 420kg
Baggage capacity: 22lb, 9.9kg

Height: 6ft 5in, 1.9m
Wing section: NACA 23015/23012
Aspect ratio: 12.25
Tailplane area: 17.44 sq ft, 1.62m²
Rudder area: 8.5 sq ft, 0.79m²
Spoiler area: 8.07 sq ft, 0.75m²

Performance

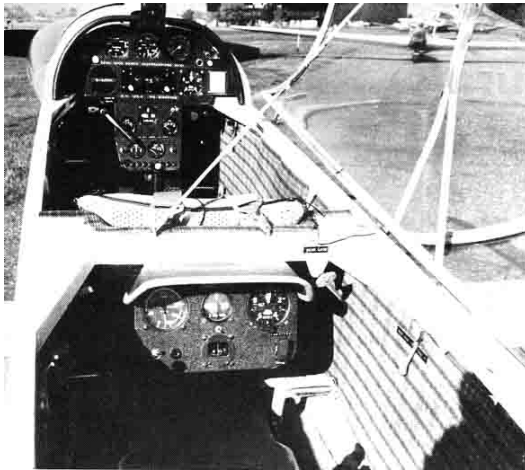
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INTERNATIONAL

Flight-manual limits: V_{NE} : 134kt, 155 m.p.h., 250km/hr
 V_{NO} : 112kt, 130 m.p.h., 210km/hr
 V_{FE} (spoilers): 97kt, 112 m.p.h., 180km/hr
Maximum weight: 1,435lb, 651kg
C.g. limits: (datum 6.56ft, 200cm in front of leading edge at wing section 4.33ft, 110cm from aircraft centreline): max forward, 7.59ft, 231.3cm aft datum; max aft 8.24ft, 251.3cm aft datum
Measured performance
Climb: 60kt, 70 m.p.h., 111km/hr; 700ft/min, 3.5m/sec; 2 aboard, $\frac{1}{2}$ tanks
Cruise: 87kt, 100 m.p.h., 161km/hr IAS (3,200 r.p.m., 2,000ft, + 8°C)
Stalls: spoilers in, power off: warning 56kt, 65 m.p.h., 103km/hr IAS; stall 39kt, 45 m.p.h., 72km/hr IAS; spoilers out, power off: warning 56kt, 65 m.p.h., 103km/hr IAS; stall 41kt, 48 m.p.h., 76km/hr IAS
Fuel consumption: (3,200 r.p.m., 87kt, 100 m.p.h., 161km/hr IAS, 2,000ft, 609m) 2.9 Imp gal/hr, 12lit/hr
Range: 413 n.m., 475 miles, 766km

Marketing

Maker: Sportavia-Pützer, D-5377 Post Schmidtheim, Flugplatz Dahlemer Binz, W. Germany.
UK distributor: Fournier Supply Co, 204 Coldharbour Lane, London SW9 8SA:
tel 01-274 7296.

Basic price: DM57,000 approx, £12,297 at current exchange rates.



SPORTAVIA/FOURNIER RF5

visibility characteristic of a tandem-seat tailwheel aircraft.

The RF5 has a choke in place of a mixture control, but it was not needed to start the still-warm engine. Noise level was surprisingly low at idling r.p.m. and not uncomfortably high in the air. Although we had intercom and headsets we felt we could have managed without them. Taxiing was relatively easy with the steerable tailwheel; we automatically held the stick fully back, but with a lot of weight aft of the mainwheel there was little tendency for the tail to lift. The RF5 inevitably teeters from one outrigger wheel to the other while taxiing and takes up a decided list as it is turned crosswind. A pilot unused to motor-gliders or similar aircraft might find this odd and rather comic at first. Taxiing into a moderate wind, we found the ailerons to be sufficiently effective to hold the wings level if required. Forward visibility from the front cockpit was good enough for an average-height pilot to cope without nose-weaving. The handbrake felt spongy, but was sufficient to stop and hold the aircraft for power checks.

With only one magneto, these were short and sweet. An unusual addition to the pre-take-off actions was, of course, a careful check that the spoilers were closed and locked. The take-off was in true tailwheel style, and we were reminded of the old-fashioned no-nonsense handling demanded by a Tiger or Chipmunk. A positive forward pressure was needed to lift the tail, with some definite use of left rudder to keep straight. At almost gross weight, acceleration was slowish by modern standards, and a longish run was needed to reach the unstick speed of 60 m.p.h. Airborne, we climbed at 70 m.p.h. and retracted the wheel by pulling back the locking lever and then swinging the large wheel lever through about 160°. Visibility was superb.

Levelling at 2,500ft, we found that 3,100 r.p.m. gave 95 m.p.h. Cruising at such high indicated r.p.m. could seem odd at first to a pilot unaccustomed to VW conversions, but he would be helped by remembering that he is using around 3gal/hr and is cruising two-up at almost 100 m.p.h. with an aerobatic capability. The handling qualities make this a sporting aeroplane to be flown by those who enjoy flying for its own sake. Stability in pitch appeared to be neutral, with a precise and sensitive elevator response to match. The responsive ailerons produced little adverse yaw for such long wings; the rudder was of only moderate power, and in a crosswind we would have been happier with more directional control on the runway.

Stalling was another demonstration of the RF5's positive, no-nonsense qualities. Standard deceleration into a

straight stall brought the warning lights on very early—perhaps too early—at 45 m.p.h. At 45 m.p.h. there was a definite breakaway with a light but positive nose-drop. A wing also dropped slightly—easily corrected by rudder—but this was probably a result of turbulence rather than an inherent quality.

The spin matched the stall, having little of the reluctant, prudish characteristics common amongst modern aircraft. We entered at 50 m.p.h., applying as advised some in-spin aileron with the rudder, and autorotated into a genuine spin. Held in for several turns, the RF5 oscillated in pitch, and after opposite rudder was applied a positive forward pressure was required before the rotation stopped. As expected, the aircraft was very slippery in the ensuing dive and an early recovery was needed to avoid an astro-nomic speed increase.

Some basic aerobatics emphasised the sensitive elevators. Twice we nibbled at the stall on top of a loop by pulling too hard.

Returning to Biggin, we decided to simulate a forced landing to see a little of the glide capability. Closing the throttle some three miles upwind at 2,000ft, we trimmed for the glide at 60 m.p.h., eventually arriving on finals with a large reserve of height, which was easily lost with the spoilers. Sportavia claims a 1:20 glide ratio. A glider or motor-glider pilot would feel immediately at home with them, and a power pilot would find adjusting a glide approach far easier with spoilers than with conventional flaps. The spoiler lever works in the same sense as the throttle on the approach—backwards to increase the rate of descent, and vice versa. There is no appreciable trim change as the spoilers are opened, although the nose must be depressed, of course, to maintain the speed. The great advantage over flaps is that a complete spoiler retraction from even a full-open position means an instant lift increase, rather than the momentary lift decrease and sink which results from retracting conventional flaps.

A glide approach seemed the most natural technique for the RF5, and we maintained 70 m.p.h. The undercarriage can be lowered at 80 m.p.h. (the doors dictate the limit) in two swift movements—just unlock and push the lever.

The slipperiness showed up on the approach again, and it required a sensitive touch to nail the airspeed. On landing, the aircraft called for the old-fashioned care and attention that was evident on take-off.

There was no doubt that the RF5's sensitive elevators and tailwheel configuration demanded a lengthy hold-off. Any lazy attempt to let the aircraft land too soon produced an athletic bounce.

The RF5 is a rarity amongst currently available aircraft. It is an enthusiast's aeroplane with enjoyable handling qualities, yet can cater for a wide variety of tastes from aerobatics to radio-aided touring, where its performance on such low power and fuel consumption is remarkable. Although it is not technically a motor-glider, its power-off performance can be used to explore with ease and comfort the more elusive forms of lift such as sea-breeze fronts and, particularly, standing-wave systems. Its calling for precise and sensitive handling would teach a few practical lessons to a pilot brought up on "lazy" aircraft. The current price is dauntingly high, but it buys an aircraft of high quality with an almost unique variety of roles.

