



## J.21R in the Air

Swedish Goblin-powered Fighter Described from a Pilot's Viewpoint

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IN Sweden, dinner starts at about 19.00 hours and is liable to continue until after midnight. The sumptuous fare and alcoholic line-up are too attractive for an Englishman to refuse, but often too rich for his austere digestion to cope with. After the first few days in Sweden, therefore, I imposed a limit on the amount of smoked eel to be consumed at a sitting, and coined a toast of "demiskål" to enable me to meet my social obligations on half the alcoholic consumption without displaying ill manners. In spite of this, the crystal-clear air of Linköping mornings seemed on occasion to contain dancing yellow spots and small, invisible hammers.

When, one afternoon, after many doubts had been expressed, permission was granted for me to fly, on the following day, the SAAB 21R jet fighter, I was doubly relieved, first because a refusal of this privilege would have been a great disappointment, and secondly because take-off at 8 o'clock in the morning in a high-speed aircraft provided incontrovertible grounds for a much overdue early night and the consumption of several glasses of fresh milk. (Did our milk once taste so sweet and creamy?)

The surface of the small SAAB field at Linköping was in rather poor condition. S/L. Bob Moore, SAAB test pilot, therefore landed the 21R, after its early morning test, at the nearby military field of Malmslätt so that I might operate from its smooth dirt runways 1,200 or so yards in length. It seemed a sensible precaution to take for one's first flight in a prototype which is playing an important part in an accelerated fighter development programme. Previously I had spent some time going over the cockpit, which contains many unfamiliar dials and is naturally labelled in the Swedish language, not a word of which was known to me.

### Features of the 21R

It would be wrong to consider the J.21R simply as a 21A

with Goblin gas turbine substituted for the D.B.605 pusher piston engine. As mentioned in a previous article, this particular changeover proved to be astonishingly simple—the engine mountings being almost interchangeable and the existing nacelle cross-section taking a Goblin and its air intakes to the inch. In place of the wing-root radiators of the 21A one finds smooth leading edges and, inside, additional fuel tanks. The wing in general is cleaner, and such items as cooling flaps are absent. The main undercarriage has been redesigned and cranked forward to meet the new weight distribution, and to give additional tail heaviness to compensate for the lack of slipstream over the elevators. This has had the effect of lowering the aircraft. From the point of view of ground clearance, the legs could be made still shorter, but this would require major redesign and cause constructional complications, and is therefore not justified.

The difference in tail is immediately apparent, the fins and rudder being square-cut instead of the roughly oval shape of the early machine, and the tailplane and elevator are attached at the top of the fins. All the control surfaces are metal covered, and development has led to a great improvement in their operation. There has been a redesign of flaps, which on the 21R are in three large-area sections with an ingenious clip release, also to be found on the 21A, which permits the centre flap to be dropped to give access above for servicing.

The fuselage tank of the 21R is of greater capacity due to the incorporation of space previously occupied by an oil tank. Among the visible details, the absence of an oblique camera window in the nose will be noted, and the placing of the V.H.F. aerial, tip downwards, on the star-board boom nose.

Both 21A and 21R fighters are fitted with ejector seats. It may not be generally known that the SAAB Company with the Swedish Air Force pioneered the ejector seat and