Piper Cub 74 years young

Could the Piper Cub be the first aeroplane that will live forever? ***David Ogilvy*** *sings its praises*

Many aeroplanes today enjoy very much longer lives than did their predecessors, largely because design and development costs have grown dramatically and a completely new type ventures into the world of the unknown. This is not so in the case of Piper's Cub of 1936, which has outlived its contemporaries solely because it offers a form of flying that no other type can provide. Although the Piper Aircraft Corporation made more than 14,000 Cubs and ceased to build them long ago, in recent years other manufacturers have entered the production fold; currently – 74 years after the prototype J2 first flew – a variant known as the American Legend Classic J3 is being produced in modest numbers.

Although today the Cub is known primarily as a 'fun' aeroplane, it has fulfilled many useful roles in both civil and military guises. There have been several variations of the basic design, with power ranging from 40hp in the J2 to 150hp in the post war PA-18 Super Cub. A few were converted to take 180hp Lycomings to provide exceptional performances as glider tugs. On more serious duties was the wartime L4 Grasshopper – L being a US military designation for liaison – about 1,000 of which were sent to France in 1944 to support the US element of the invasion force, where its short field capability was immeasurably valuable. Today, therefore, it can be called a 'Warbird'! It is on this version in its civilianised form that I have based the words that follow.

The Cub is simplicity in the extreme – and much the better for it. It has a tough welded steel-tube fuselage, fabric covered, with wings of mixed construction. All the control cables are exposed within the cockpit. The undercarriage struts are pivoted from the bottom tubes, with bungee springing that returns all that you give it! There are no electrics and no gyro instruments; although there are minor variations between individual machines, the standard scale of instrumental kit for an L4 comprises an ASI, altimeter, rev counter, slip ball, combined oil temperature/pressure gauge and magnetic compass. A ten-gallon fuel tank is mounted behind the engine, with a foolproof gauge consisting of a cork float on a wire that

protrudes through the filler gap immediately ahead of the cockpit.

The basic J3/L4 Cub is flown from the rear seat, so if the front occupant is anything more than slim, the view of all ahead – including the few instruments – is rather obstructed. Later Cubs are flown from the front. Entry is not the easiest of physical exercises, but the right-hand side has a two-part door, with the upper and lower halves folding under the wing and on the fuselage side respectively. An interesting – if not unique – characteristic is that there is no need to check that the hatches are closed before take-off, as these can remain open in flight.

The Cub has no conventional parking brake, despite which many pilots claim that it is suitable for solo hand-swinging. Clearly, experience proves that it is so, but it is a practice that I have endeavoured to side-step unless absolutely unavoidable; I preferred to put an unqualified but fully briefed person in the appropriate seat while standing outside and concentrating on the swing. Fortunately I must have had an easy life, as I have needed to

Photo: Austin Brown

Main photo: the ubiquitous Piper Cub, this one a J3C 65 flown by P.D. Whiteman
Below: period publicity photo emphasises the Cub's rugged versatility
Right: ...on one side of a sheet of paper

Photo: via Austin Brown

do this on only two or three occasions.

Everything is simple and straightforward. Without wishing to sound too unsociable, I enjoyed the few occasions flying the Cub as the lone occupant, with the bulk of the aeroplane and the instruments openly in view well ahead. This means that a fair amount of weaving is necessary whilst taxying, but once aloft, it provides an excellent view of the ground beneath. In fact, the act of getting into the air is interesting. Despite the modest power, even a 65-horse Cub leaves terra firma very readily but is not in a hurry to lose the benefits of ground effect.

The flying controls, though, are not as harmonised as some pilots would like and turns call for a positive rudder lead-in. Also, with the door open, the little unsilenced 65hp Continental engine just ahead of you, with its cylinders open to the world, makes quite a racket, yet people beneath can barely hear it. From a neighbourly angle, the Cub is an environmentally friendly machine.

If your main aim is to travel considerable distances in minimum time, this is not the aeroplane for you. If 'going places', some pre-flight thought about a destination is essential; it is easy to reach a point downwind, but the return trip could lead to problems such as failing daylight, aerodrome closure or matters of personal discomfort! The officially quoted climb rate is 300 feet a minute and the cruise speed is 70mph. However, if you wish to fly for the sake of flying, it has many fine qualities, in addition to which it has a very sober consumption of only 4gph. It can be quietened considerably by having the doors closed, although this reduces the amazing, uninterrupted view of the world and removes some of the pleasure of pure flight that the Cub is able to offer. In a moderate wind it is possible to remain stationary and even move backwards relating the ground. In extreme cases it may seem difficult to do otherwise! In favourable circumstances though, it is possible to soar and it becomes necessary to place the nose well down to prevent an unwanted gain in height.

Once in the home circuit – preferably a grass aerodrome or remote strip – the Cub remains friendly to its occupant(s). Bringing back the speed to about 50mph IAS calls for use of the trimmer on the left wall, which is like a window winder on cars of old, with an indicator in a horizontal slot. With no flaps, the Cub can take its time to descend, but the flat-sided fuselage helps to make it behave well in a sideslip. It is easy to follow this by an untidy arrival, as the bungee springing seems to release unexpected doses of energy; one solution is to hold-off intentionally (but not too) high to achieve an unarguable three-pointer. If not into wind, though, it is preferable to go to the other extreme and place the front paws firmly on the ground.

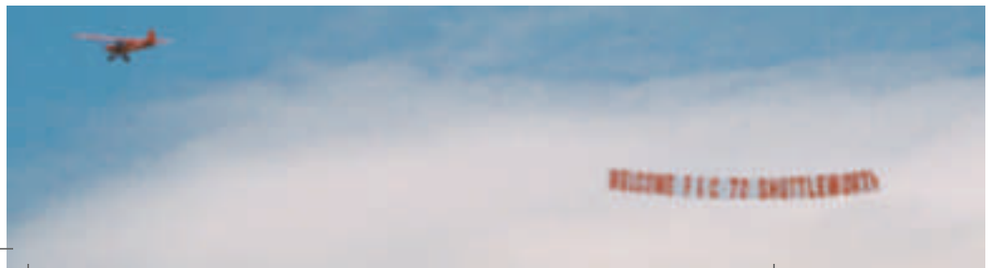
I cannot claim a vast experience on Cubs. I prefer not to imagine what the 40hp J2 must have been like on take-off and attempted climb, but I have had pleasures from 65, 90 and 150hp variants, the last of which ascended rapidly in the manner of a lift rather than an aeroplane. I have a lasting affection for the species, starting from my first solo – on an L4 at Denham shortly after the resumption of civil flying at the end of World War 2 – followed a few years later by some part-time instructing, also on L4s, with the Surrey Flying Club, based in the famous Beehive at a pleasant grass aerodrome called Gatwick! The Club's two Cubs had no radios, so it was necessary to maintain an especially sharp look-out, for the then ubiquitous firm Airwork had a maintenance facility on the site, specialising in contract work on Spitfires and Hornets; either of these would have left no doubt as to the winner in any airborne or runway conflict with an L4.

The Cub exists in many forms. Although the civil production line consisted mainly of J3s, the military L4 was a logical and straightforward development, with extended glazing around the rear cockpit as the main difference. Later, the PA-18 was produced in both 90 and 150 hp variants. Today there are 66 specimens of various versions on the UK register; some of these operate on CAA certificates of airworthiness while others fly on LAA permits. Among the more recent uses to which Cubs have been put, a Super Cub with the appropriate registration G-SVAS (Shuttleworth Veteran Aeroplane Society) earns its meagre fuel demands by towing a banner to publicise the flying displays at Old Warden.

I think we can say with safety that here is an aeroplane that will never be allowed to die. For one, I hope that such a prediction proves to be true. ■

Top to bottom: military L4 – L stood for 'liaison'
Grass, tarmac or water, the Cub could cope
The PA 18 Super Cub boasted a 150hp engine
Super Cub tows a banner to advertise Shuttleworth displays

Keith Wilson



Philip Jarrett