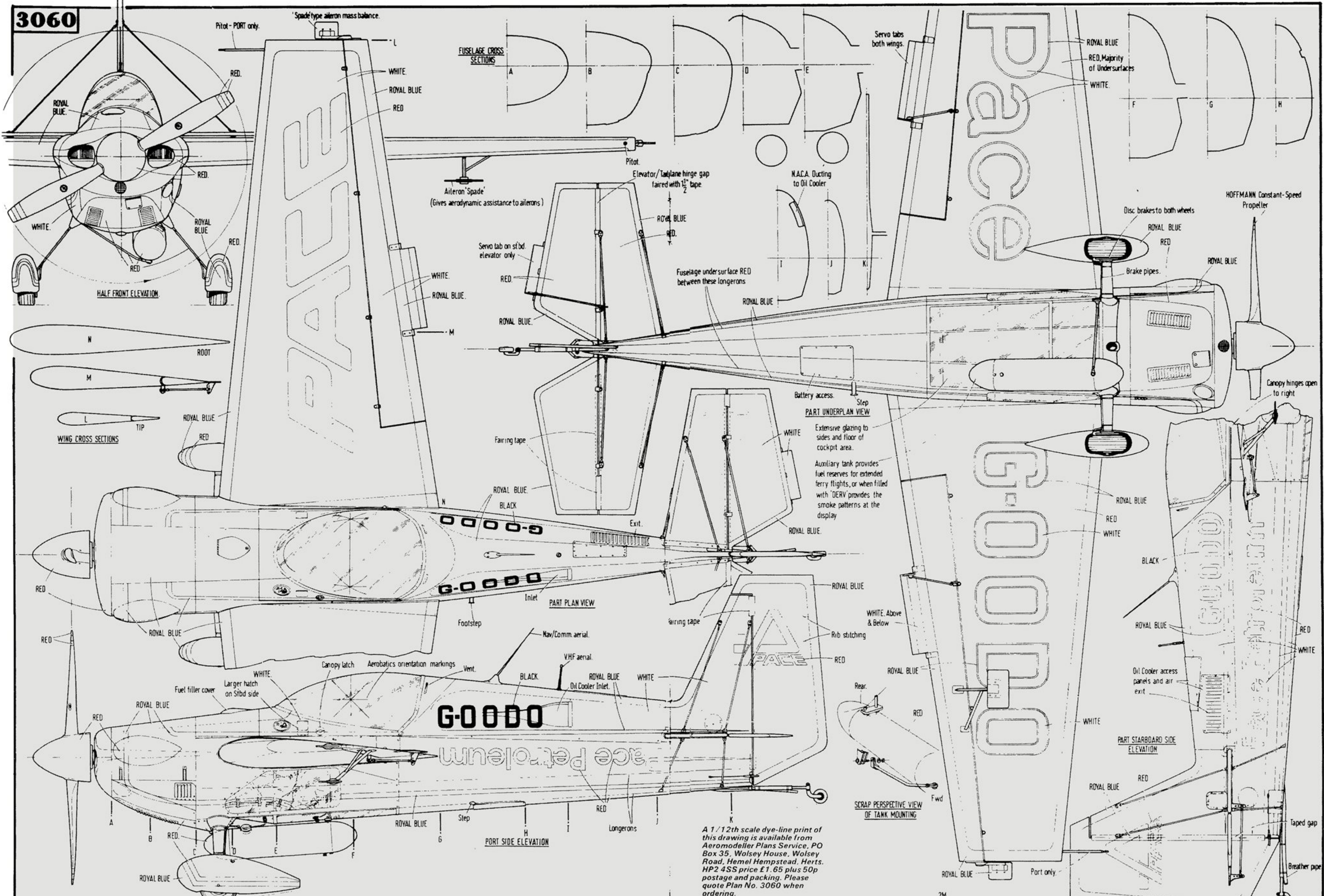


3060



Richard Goode-Pace Petroleum 'PACE SPIRIT.' (1983 Season.)

SCALE: FEET

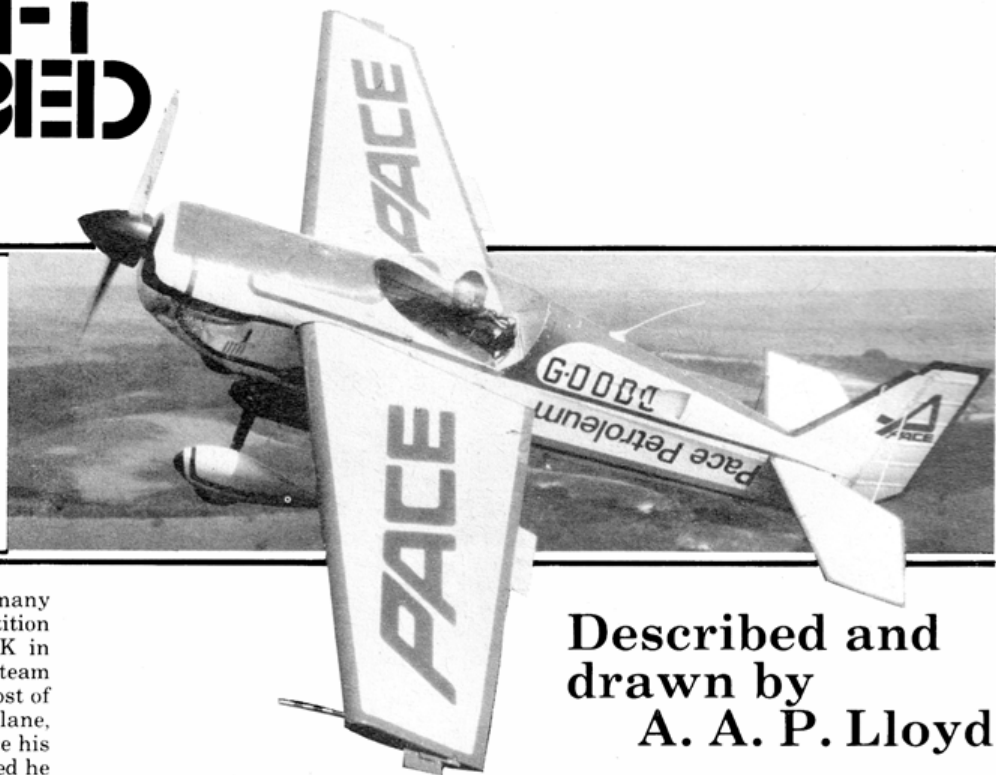


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# AIRCRAFT DESCRIBED

## No:258



**R**ICHARD GOODE has been for many years an accomplished competition aerobatics pilot, representing the UK in international competitions, both as team member, and then captain. During most of this time he had used the *Pitts* biplane, eventually honing this type to produce his 'Ultimate Pitts.' But as time progressed he was to realise that the *Pitts* had obvious limitations as far as competition was concerned, proved no doubt by being able to actually sample many of the 'opposition's' aircraft at these competitions.

So the search began for a replacement aircraft something like the *Stephens 'Akro'* (watch these pages) which lent itself to modifications to suit the whim of its pilot. These machines are not available off the shelf and require either to be built from scratch or, as in Richard Goode's case, obtained from a friend, Michel Brandt, who by circumstances was forced to sell his *Akro* project.

Richard Goode had ideally wanted a machine with the V-16F airfoil by *Aero-spatiale* used in the new CAP-21 aerobatic contender, but by chance the Brandt machine had the wing complete with the similar V-13F airfoil.

Now, by arrangement with *Pace Petroleum* as sponsors, work could begin by adding a spare 10-360 *Lycoming* (270HP) from the 'Ultimate Pitts' and employing numerous specialists to work on all the sub assemblies and eventually come up with Richard's modifications 'in the metal.'

As time passed the emergence of 'Britain's most expensive homebuilt' (Richard Goode, *Popular Flying* May-June 1983) has proved to be a superb example of workmanship and an elegant, precise performer in the skies above numerous displays this year.

Described and  
drawn by  
A. A. P. Lloyd

# PACE 'Spirit' G-0000

Last year's flying was done to 'work-up' the machine to enable any modifications to be finalised before the '83 season.

These were largely the replacement of the engine with a reconditioned, much modified *Lycoming*, now driving a two-bladed *Hoffman* constant speed propeller, much research having been undertaken to resolve surging problems with last year's three-bladed unit.

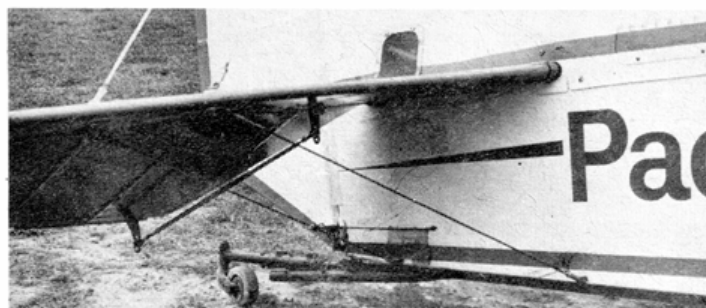
Ailerons are now almost full span, with an offset spade tab beneath each unit, in addition to the usual servo tabs — roll rate is now 300° per second, with one hand on the stick! In addition, a reduction in elevator size has resulted in near perfect control harmonisation. A ferry tank/diesel fuel container enables smoke generation, with the almost mandatory vapour trail showing the real flight path through tail slides, flick rolls and the Lomcevak.

Finally, the 1983 colour scheme is essentially eye catching, and one that I'm sure will appeal to modellers.

At a press reception to launch the *Pace* team's '83 season, the Executive Chairman, Victor Gauntlet, related his favourite anecdote: An important spectator at a display where Richard Goode was working had asked who the pilot was — reply 'Richard Goode,' moment of thought, then spectator counters with 'Richard Goode — should be Richard Bloody Fantastic.'

*Below left: the Pace 'Spirit' from the starboard side showing the distinctive Pace Petroleum livery, note that the aircraft is intended to fly inverted from left to right in front of the spectators! In either direction the clear-vue fuselage panel allows you to see the pilot's reactions . . . if yours are quick enough! Below: the business end of the 'Spirit' showing the 'Hoffman' constant speed propeller and the simple 'leaf' undercarriage . . . with the brake hoses attached with tie wraps (!).*

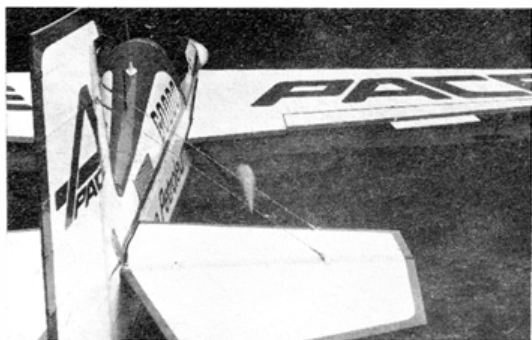
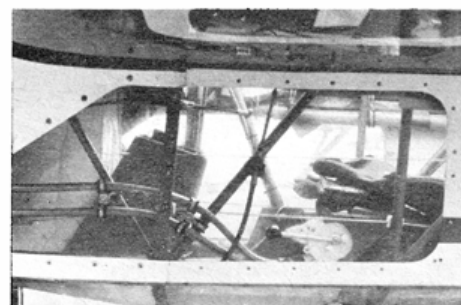




Left: tail brace and control-link detail; at right, clear panels afford illumination to the cockpit area.

Below left: large span ailerons are readily apparent while, below, a well-braced tail unit.

Below right: the distinctive NACA duct on the rear fuselage. Photos: A. A. P. Lloyd.



## Specification

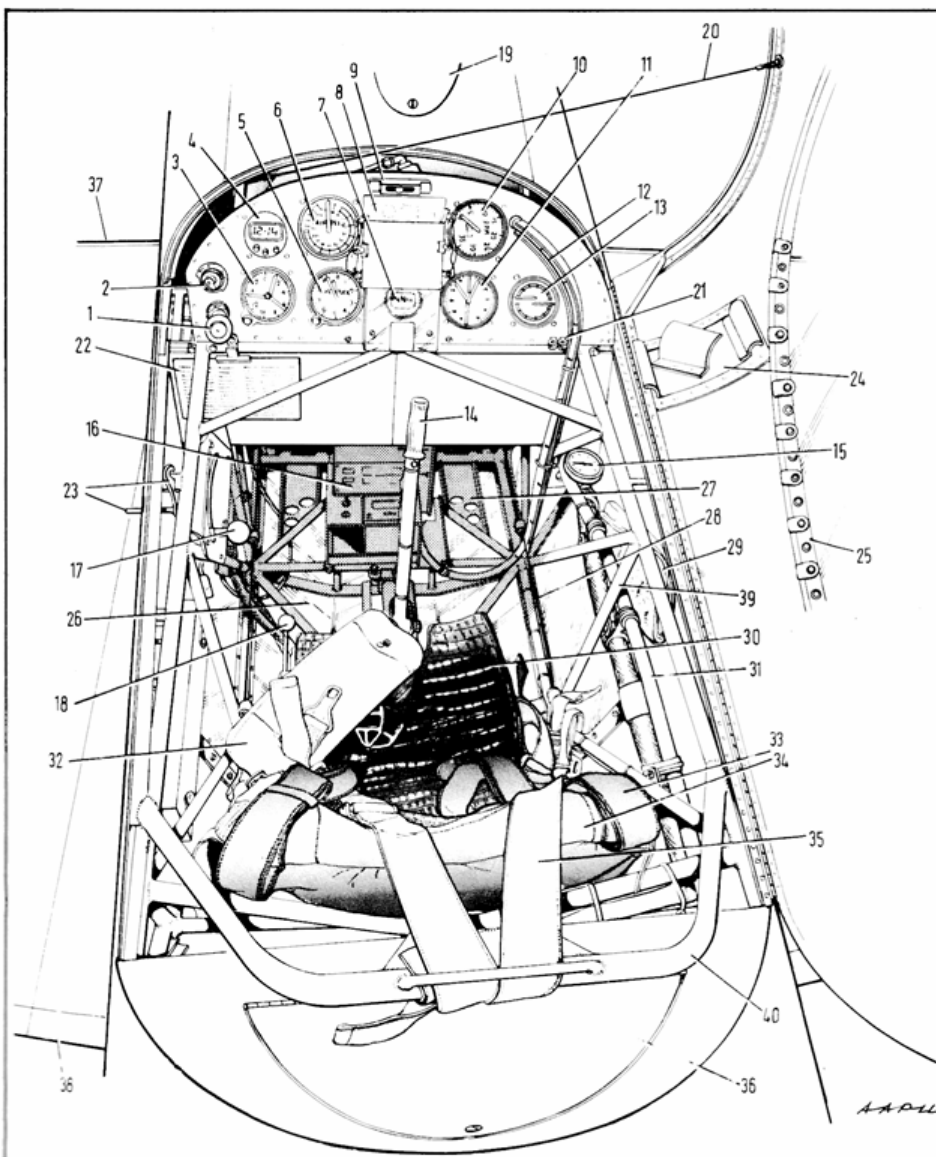
**Engine:** four cylinder *Lycoming* 10-360 (much modified) with inverted fuel and oil systems, and diesel display smoke system.  
**Power output:** 270hp (at 3400rpm); 225hp (at 2750rpm, the normal maximum).

**Propeller:** *Hoffman* two-blade with constant speed unit.

**Airframe:** Span 25.0ft., length 19.1ft.; zero fuel weight 1010lb, maximum AWW 1450lb; wing, scientifically designed for equal performance erect and inverted, with no

incidence, dihedral or sweepback.

**Performance:** Maximum speed (dive) 300mph; maximum speed (level) 210mph; cruising speed 180mph; range 500 miles; rate of climb 3,000ft./min; G limits + 10, - 8 (operational); rate of roll 300 degs/second.



- 1 Propeller speed control.
- 2 Ignition/Magneto switch.
- 3 Accelerometer - 'G'.
- 4 Quartz chronometer.
- 5 Altimeter.
- 6 Airspeed Indicator.
- 7 Compass (Behind perspex clipboard)
- 8 Arrest Aerobatic schedule card.
- 9 Horizontal level.
- 10 Revolution counter.
- 11 Manifold pressure/Fuel flow.
- 12 Fuel contents, (Clear pipe in 'U' shape metal channel)
- 13 Oil Pressure/Oil Temperature.
- 14 Control column.
- 15 Pressure gauge. Air/Oil propeller operation reservoir.
- 16 Radio, Nav. Comm.
- 17 Throttle.
- 18 Fuel pump.
- 19 Fuel filler fairing.
- 20 Canopy stay wire.
- 21 Pencil stowage.
- 22 Airshow Fixtures list.
- 23 Canopy latch. (Canopy lock on canopy frame.)
- 24 Cabin vent, fresh air.
- 25 Canopy glazing frame.
- 26 Under cockpit glazing. Sides and bottom.
- 27 Heel slideways. (Rudder pedals just forward.)
- 28 Rudder cable, thru fairleads along each cockpit side.
- 29 Map stowage.
- 30 Seat cushion. Attached as part of parachute pack.
- 31 Breather pipe - to sternpost.
- 32 Abdominal pad - safety harness.
- 33 Parachute harness.
- 34 Compact back parachute.
- 35 Shoulder straps - safety harness.
- 36 Stowage hatch - limited space in fuselage spine.
- 37 Wing - Leading edge.
- 38 Wing - Trailing edge.
- 39 Fuselage main box tubing frame.
- 40 Cockpit framing.

NOTE: All Instrument faces are BLACK! - Shown plain here to indicate detail.

## Cockpit: PACE 'Spirit'

AAPLOTT-83. ©