

No: 12/91

Ref: EW/G91/09/02

Category: 1c

**Aircraft Type and Registration:** Evans VP-2, G-BRLJ

**No & Type of Engines:** 1 Arrow GT 500 piston engine

**Year of Manufacture:** 1991

**Date & Time (UTC):** 2 September 1991 at 1405 hrs

**Location:** Adjacent to North Weald Airfield, near Harlow, Essex

**Type of Flight:** Private

**Persons on Board:** Crew - 1                      Passengers - None

**Injuries:** Crew - None                      Passengers - N/A

**Nature of Damage:** Slight bending of landing gear

**Commander's Licence:** Private Pilot's Licence

**Commander's Age:** 42 years

**Commander's Flying Experience:** 4,131 hours (none on type)

**Information Source:** Aircraft Accident Report Form submitted by the pilot

The pilot stated that the aircraft was a new version of the Evans design, differing from previous Evans aircraft in being powered by an Arrow GT 500 engine. Although hitherto used in microlight aircraft and autogyros, it is understood that this engine type has not been used widely in conventional fixed-wing machines.

The accident occurred on the aircraft's maiden flight which was uneventful until it reached the downwind position. At this point the pilot realised that the cylinder head and exhaust gas temperatures were somewhat high and rising. Although he throttled back, the temperatures continued to rise. The pilot therefore continued to throttle back until he began to have difficulty maintaining height. As he turned onto the base leg the engine noise changed, suggesting that seizure was imminent. In view of the situation, the pilot elected to carry out a precautionary landing in an apparently suitable field visible ahead. Unfortunately, on closing the throttle the engine stopped. The pilot set up a glide and only when quite low did he notice that the chosen field was in the process of being harrowed. Accordingly, he elected to hold the aircraft off at a height of about two feet until it stalled, rather than risk a long ground run on such unsuitable, broken ground. In the ensuing landing the aircraft travelled only a very short distance before coming to rest, the landing gear suffering minor damage in the process.

The pilot reported that, prior to the flight, some seven hours ground running had been carried out on the engine installation. He considers that in order to achieve the manufacturer's performance figures the mixture had been set too lean. Since the incident, the mixture has been adjusted and the engine run for several hours without difficulties. This running has included 15 minutes continuous operation at full power.

Year of Manufacture:	1967
Date & Time (UTC):	4 October 1991 at 0730 hrs
Location:	Fleetwood Airfield, Warwickshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Substantial damage to mainplanes and starboard fuselage empennage and landing gear
Commander's Licence:	Commercial Pilot's Licence with instrument rating
Commander's Age:	38 years
Commander's Flying Experience:	2000 hours (of which 150 were on type)
Information Source:	Airfield Accident Report Form submitted by the pilot and field examination by AAIB

The aircraft was a Piper PA 32 Triquest which had been fitted with a 160 Hp engine and modified back to the PA30 Pacer tailwheel type under-arrange. During this conversion the aircraft had been fitted with PA33 Atec type wheels with their associated steering control disc brakes.

The aircraft was being operated off a rolled earth strip about 500 metres long, orientated West/East downhill. There was no significant wind at the time of the accident.

After completing the normal power and pre-take off checks, the aircraft was held on the toe brakes and the engine run up to full power before releasing the brakes to start the take off roll. The aircraft appeared to accelerate sluggishly although the pilot observed that the engine rpm was as expected for the indicated airspeed. Having assessed that the airspeed indicator was registering reasonably correctly, the pilot elected to abandon the takeoff with about half the runway remaining.

After closing the throttle and allowing the tail to settle, the pilot applied the toe brakes gently. The aircraft swung immediately and viciously to the right which the pilot countered instinctively by