

## Star-Lite SL-1, G-BUZH

**AAIB Bulletin No: 11/2000**    **Ref: EW/G2000/08/08**    **Category: 1.3**

**Aircraft Type and Registration:**    Star-Lite SL-1, G-BUZH

**No & Type of Engines:**    1 Rotax 447 piston engine

**Year of Manufacture:**    1986

**Date & Time (UTC):**    10 August 2000 at 1505 hrs

**Location:**    Farley Farm, Hampshire

**Type of Flight:**    Ground handling

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

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

**Nature of Damage:**    Nose landing gear failed, propeller destroyed, engine shock-loaded and mounts bent, forward fuselage damaged

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

**Commander's Age:**    62 years

**Commander's Flying Experience:**    214 hours (none on type)

   Last 90 days - 2 hours

   Last 28 days - 1 hour

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

Following a significant amount of work on the aircraft, started in November 1999 and extensive inspections, it was the pilot owner's intention to conduct a series of taxi trials before engaging a more experienced pilot to conduct the 'first' flight. During the taxi trials on the grass strip at Farley Farm (Runway 24, c750 x 17 metres), at an indicated airspeed of 25 mph with the aircraft in a nose-up attitude the main wheels hit a bump which started a pitch oscillation. The throttle was closed but as the aircraft was travelling down hill it did not slow down without the use of the brakes. The aircraft bounced again on a small ridge and the nose landing gear failed. With the spinner and forward fuselage on the ground, the aircraft continued to slide and turn to the left coming to rest on a gravel track adjacent to the strip.

Subsequent to the accident, the airspeed indicator was found to be under-reading by 10 mph at airspeeds below 50 mph. Therefore the event occurred when the aircraft was at 35 not 25 mph, close to the aircraft's flying speed in ground effect, permitting a pitch oscillation to start and adding to the landing gear loads.

Following examination of the nose landing gear and discussions with the aircraft manufacturer, the pilot believed he had identified three features of the landing gear, as delivered from the manufacturer, which had contributed to the nose leg failure:-

- 1 A weakness associated with the presence of a welding gas vent hole in the tubular section of the leg, which had been plugged with a fastener, had been exploited in the failure.
- 2 A modification, adding a strengthening web to the nose landing gear structure had not been incorporated.
- 3 The post welding heat treatment of the nose leg components had not been carried out.

During repairs to the aircraft the pilot is planning to consult the PFA about proposals to modify the nose landing gear to make it more robust and forgiving.