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E. Johnson

25981 CLIFTON PK

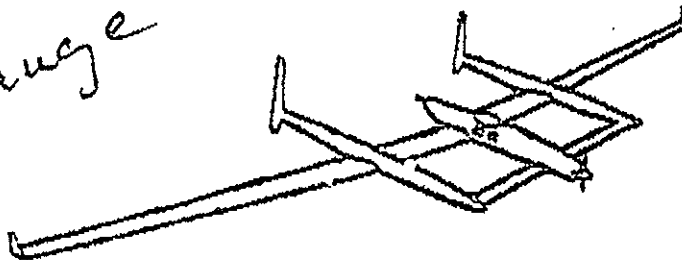
STEVENSON RANCH

CA

9/13/91

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Tuesday



from the
desk of Dick Rutan

TO: Chuck Less

DATE: October 16, 1995

SUBJECT: Evaluation of LongEZ 160RG

Dear Chuck,

This is a report of an inspection I made on 09-25-95 at Camarillo, California of LongEZ 160RG. The owner (not the bullder) is John Paige. I do not wish to participate in any way with the negotiation of sale price, funds transfer, any loans on the aircraft or insurance arrangements. I can make no warrants to any of these items. Additionally, the internal structure of the airframe and engine could not be evaluated. What is underneath the paint in any composite structure airframe, (ie. proper lay-up schedule, fiber orientation in accordance with [IAW] the plans, etc.) could not be evaluated. This is a risk a non-builder/buyer must take when purchasing someone else's workmanship.

When I inspected the aircraft, it was out of annual inspection and had no insurance. Therefore, I was unable to fly the aircraft and only a taxi evaluation was made.

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DETAILED REPORT

Overall, the general impression was very good. Modification wise, it was the most updated LongEZ I've seen in a long time. The general workmanship was very good, and I saw nothing that would lead me to be concerned about "what's inside" the structure.

- the airplane has recently been painted a very light powder blue
- custom nose
- complete custom contour of cowling (fared very nicely into the engine and outlets extended back to prop and spinner). This is the latest drag reduction modification
- a low drag "NACA" engine air intake
- a Roncz air foil canard
- all of the latest drag reduction modifications
- multi laminate Great American Propeller, (which, in my opinion, is one of the best on the market).
- main wheels and tires are 500-5, include heavy duty brakes and wheel pants.
- a 6" Brock prop extension with a polished Brock spinner
- after market, upgraded fuel caps with cable (cap hold down to keep a loose cap out of the prop).
- main wing vortals (to extend aircraft CG limit)
- Whelen A600 PG-PR wing tip nav/strobe light system (the best)
- long full span rudder modification C/W (improves rudder power)

On a scale of 1-10, with 10 being perfect, in my opinion, the contouring and finishing of 160RG is rated 9.5. That comparison is against all other LongEZ's I see flying.

ENGINE

- an O-320-E2D (50 hours on a zero time major O/H) (hi comp piston mod makes it 160 HP)
- no indication of engine cylinder over temperature
- Herb Sanders engine exhaust system (2 into one, each side) with carb heat muffler

- small light weight B&C alternator (14V with a small diameter starter ring gear pulley). This extends the alternator life and is an excellent modification. (B&C is the best)
- Facet electric fuel pump with update modification C/W IAW newsletter
- Remote spin on oil filter
- fuel line fire sleeving
- oil pressure indicating system is the older Rochester gauge. I have not had good luck with this system (in fact, the gauge reads 25 PSI with the engine not turning).
- •The carb heat/filter box is the latest modification and shows very good workmanship
- an upgraded throttle cable system (that I personally like a lot)
- the engine baffling looks good except the lower right side needs a support to hold the in flight cowling pressure from blowing it aft.
- Brake master cylinders are still on the fire wall as per the plans (some builders put them in the nose, optional)
- the canopy is clear (non-tinted) - good for night flying
- there is an upgraded heavy duty nose wheel assembly
- Aircraft had previously been landed nose gear up, resulting in minor lower nose damage (that has since been repaired) and during repair a steel plate had been added for better protection in the event it ever happens again.
- No fuel pressure gauge

INTERIOR

- Thick, overstuffed velvet seat cushions look new. There is extra thickness for a smaller pilot, about 5'8" size. I am 6'2", and cannot fit into the cockpit using these cushions.
- includes the very best Hooker Harness seat belts and shoulder harness system (I like this a lot)

intercom *AIRCOM STEREO Professionally Inst.*

- non-standard canopy locking system that is not installed properly (I am highly critical of this system, as in it's present condition, it is

a hazard to flight, would not lock safely and could easily be bumped open in flight. It takes a minor modification to correct).

- STD gear/canopy warning system (light/horn works well)
- instrument 3000 FPM rate of climb indicator
- airspeed indicator is from another aircraft (markings are not for LongEZ performance. Performance limits should be re-marked).
- standard altimeter with Mode C.
- engine has no vacuum pump, (therefore no IFR back up gyros). There is only one gyro (an electric attitude indicator), no DG, and no turn bank
- roll only autopilot (due to taxi only tests, I did not check it's operation).

Sikond. •very nice fuel flow/totalizer system, but no fuel pressure gauge or warning light

- an older North Star Loran (did not check operation) *M-1*
- King Transponder
- Narco NK120 Com/Nav (no ILS), also has an ELT
- Hamilton vertical card compass
- Nose gear "ratchet" extend/retract system (very nice)
- Selectable four cylinder EGT/CHT system
- Night C/P lights

•very nice lighted fuel gauges in rear cockpit (easy to see from the front cockpit)

- Fire extinguisher

The airplane is fitted out quite nicely. Oddly, the tail number 160RG does not begin with N. That needs to be corrected before flight.

Also, be sure a complete set of plans and Burt's newsletters are included.

LOG BOOKS

The engine log books were Italian and the 2000 hours flown were in Italy in an AeroClub aircraft. As best as I can tell, the engine went normally through to major overhaul. The books reflect that a "zero time major" was done in Italy. How the engine got to the US and in the Long EZ is not shown in the logs. The O-320-E2D is the low compression 150HP version. The log books show the engine was

looked into here in the states and the 160 HP high compression pistons were added. Therefore, the engine is no longer approved for use in normal category aircraft. The last annual inspection was done in 1994, but I hear that is now current since my inspection last month.

7-26-98

908.6

111.67

WEIGHT/BALANCE

Logs show 992 lbs empty weight which makes it a heavier than normal LongEZ by approximately 100 lbs. However, it has most of the whistles and balls that tends to make them heavy. I was told how the weight and balance was done, and am very skeptical toward it's accuracy. I suggest the the weight and balance be redone IAW the plans and on proper scales.

The total time on the aircraft and engine is about 50 hours. But the records are somewhat vague and ambiguous. My impression is that the airplane has not been flown much and 50 hours would be my gut feel. The engine has a fresh oil and filter change (8 quarts Shell W-100, 50 weight. The engine hot and cold cranking shows good, strong compression on each cylinder with no leaks. It starts easily, runs well, taxis normally. The only thing of any consequence is the wheel axles are not equal on the gear strut and one is higher than the other. Sitting on the ground, the right wing tip is 4" higher than the left. Could be corrected by reinstalling the axles on the strut. This is not an easy task to correct, and is only noticeable if one looks closely. Everything else lines up okay.

Dick Rutan
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Mojave, CA 93501

I will deliver your aircraft for a flat fee of _____ plus a return
airline ticket to Palmdale, CA.

Long Ez 160RG - owned by John S. Paige, 805-531-3063

160 HP O-320-E2D Lycoming

Great American Prop, 62" x 74", Wood

First flight Jan 21, 1989

171 hours on air frame and engine

Prescribed flight hours have been completed

Aircraft has been shown to be controllable throughout its normal range of speeds;
and throughout all the maneuvers to be executed including standard loops and rolls;
the aircraft has no hazardous operating characteristics or design features.

9/12/87: O-320-E2D Lycoming Engine Ser. No. L-34911-27A
Installed in Long Ez Ser. No. 88-1704

Engine determined to have 2010.5 hours total time; 0 hours since major overhaul

Nav Aid Devices: Auto Pilot AP-1 with S2 Servo,
NavCom Mark 12D,
Transponder King T79,
Loran Northstar Mark M-1,
Pointer 3000 ELT

Shaden Fuel Flow

HJ400 Vertical Card Magnetic Compass

Model 50 Light Weight Alternator

B & C High Torque Light Weight Starter

Electric JP Instruments Tachometer

Paul E. Prout ACT EZ Fuel Level Gauge: easily read, day or night

New, approved Facet fuel pump

Westach Amp and Voltage, also Westach EGT and CHT

Digital Density Altitude, Temperature (F and C), Pressure Altitude, and Voltage

Vertical Speed Indicator

Light speed Electronic Ignition