



Confidential - Preliminary_
Technical PRE-BUY Evaluation – N123AX

7/NOV/2008
Rev.0
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Aircraft Piper PA-32R-301 Serial Number: 3246060

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To:

Mister Didier Borremans,
Managing Director
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This pre-buy inspection is based on the aircraft records transmitted by Derrick Ings. Aircraft Sales, and a physical inspection of the subject aircraft performed at Gloucestershire Airport (EGBJ), Staverton, United Kingdom on 11 October 2008.

Concerns: Aircraft Piper PA-32R-301 Serial Number: 3246060 Registration: N123AX

Popular name: Saratoga II HP

Construction Year: 1996

Airframe Total Time since new: 1085.Hrs. (15/JUL/2008) Latest Log entry.

AIRFRAME General Options Installed:

- **Aircraft is 28.Volt**
- Ground power receptacle plug Piper type (Round)
- Electrical trim installed
- Warning/Caution light panel in full view of the pilot.
- Forward baggage compartment (Good noise/vibration insulation from engine)
- Double steering column and double rudder/brakes pedals, Aircraft approved for instruction flights.

AIRFRAME and General Remarks:

- Technical Permanent Records and Logbooks (As supplied by seller Email...etc.) are up to date and all mandatory modifications, inspections, AD's (FAA Airworthiness Directives) prescribed by the FAA, all seem complied with.
- As per date of inspection, the aircraft had a valid airworthiness-, registration-, and radio station certificate and can be considered as Airworthy.
- Original paint still on the aircraft with some minor touch-ups performed.
- Wing Leading edges paint need some touch up – Typical appearance for Piper aircraft after some thousand hours of operation. As normal operations will resume on the aircraft reserve should be made to have at least the leading edges repainted in a couple of years.
- Aircraft Interior structure was factory corrosion-proof painted with Zinc-Chromate (or a-like) and is in good condition. No apparent visual internal or external corrosion was detected during the on-site inspection.
- Interior of the aircraft is in very good condition. Seats are factory leather with normal wear and no damage. Passenger club seating in excellent condition.
- A general remark should be made to the fact that the pilot and co-pilot seat, in full-rear setting, comes in contact with the back-rest of the first row of passenger seats(Not adjustable). This is not a defect on this aircraft but a general remark on all these aircraft using the same fuselage(i.e. PA32-xxx, PA34-xxx...) in combination with the club-seating arrangement of the rear passenger seats and the carry-through wing main spar.
- Landing gear hoses(Rubber - Carrying the hydraulic fluid – brake and gear actuation) are

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still the original factory installed parts. For operation under the N- registry the life limit for these hoses remains “on condition”. However when the aircraft should change to a Belgium or even European registry these hoses are already OVERDUE for replacement. Due for replacement Yr. 2006. The same applies to the hoses installed on the Engine and/or compartment and throughout the airframe.

- No superficial corrosion was found on bare exposed metal parts which leads to the conclusion that the aircraft must have been hangared most of life-time.

Engine: Lycoming IO-540K1G5 - 300 Hp @ 2700 RPM

Serial Number: L-25921-48A

Engine Total Time since New: 1085.Hrs. (15/JUL/2008) Latest Log entry.

Engine Time since Overhaul: N/A

Recommended Time Between Overhaul: 2000.Hrs. or 12.years

ENGINE Remarks:

- Still the original installed engine as installed by the Piper factory.

- Following careful examination of the aircraft records supplied, a decrease in engine-cylinder compressions (Leak-test) was noted over the last scheduled maintenance entries in the logs. This might be due to the low utilisation of the aircraft in general over the last years. In the period Oct/2004 to Jul/2008 the subject aircraft(according to the logs provided) appears to have flown approximately 80.Hrs. calculated this comes to an average of about 20.Hrs. a year. It is my personal experience that these compressions (Leak-tests) will not improve much when the aircraft would be more intensely used. As a consequence reserve has to be considered for the top-overhaul of all 6-cylinders in the upcoming operations.

Close monitoring of these compressions (Leak-tests) is advised.

- Engine and accessories in general are in good condition with no apparent visual damage nor excessive oil leaks nor exhaust leaks.
- Important remark concerning the hoses under Airframe remarks is also applicable to the hoses carrying flammable fluids in and around the engine and/or compartment.

Propeller: Hartzell HC-I3YR-1RF

Serial Number: HK127A

Propeller Total Time since New: 1085.Hrs. (15/JUL/2008) Latest Log entry.

Propeller Time since Overhaul: 403.1Hrs

Propeller Last Overhauled: No record found submitted.

Recommended Time Between Overhaul: 1500.Hrs or 6.Years.

PROPELLOR Remarks:

- For further operation under the N- registry the life limit for this prop remains “on condition”. However when the aircraft should change to a Belgium or even European registry this prop is already OVERDUE for overhaul or replacement. Due for overhaul or replacement was Yr. 2002. In Belgium a one-time extension of 2.Yr might be given. This brings the calendar



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due date to 2004. so remains due immediately.

- The prop governor is considered a part of the engine accessories and follows normally the engine TBO(Time Between Overhaul).
- The prop is in good condition with Applicable AD's complied with.
- I could not find in the records why the prop was prematurely removed and send to CSE - Oxford Aviation Ltd for overhaul or repair at 681.9 Hrs. Prop Total Time ; O.Hrs. Prop Time Since Overhaul and resulting in a mandatory compliance with AD2006-24-07 dated 3/1/07 on Log Book Certificate dated 19/Jan/2007. Maybe some clarification is required.

Avionics Installed :

- COM-NAV 1 and 2 KING KX 165 (VOR-ILS LOC+GS)
- ADF KING KR 87 SLAVED
- NAV 1 KING KX 165 VOR/LOC/GS
- HSI Horizontal Situation Indicator with ILS KING HI 525A his
- NAV 2 Indicator KI 206 No2 with GS
- DME KING KN 62A
- TXP w/MODE C KING KT 71 – No MODE S
- GPS 1 KING KLN 90B
- GPS 2 KING COLOUR MFD KMD150
- NAV 2 KING KX 165 VOR/LOC/GS
- Autopilot - KING KFC 150 w/ALT HOLD
 - A/P w/FLT DIRECTOR
 - Mode annunciator(GPS - NAV) installed above Flight director horizon.
 - COUPLING YES NAV & GPS
- LIGHTNING DETECTION INSIGHT STRIKEFINDER
- AUDIO PANEL PS Engineering PMA 6000MS w/MARKERS
- INTERCOM PS Engineering PMA 6000MS 6-PLACE
- ELT

AVIONICS and INSTRUMENT Remarks:

- The altimeters and transponder have been tested I.A.W. FAA regulations and are found serviceable for IFR operations.
- Altimeters and Transponder tests IAW FAR 91.411 and 91.413 next due Feb./2010. Please note that Transponders have to be checked annually on Belgium registered airplanes and only bi-annually on N- registered aircraft.
- Transponder installation (On the bottom of the Co-pilot instrument panel) is a bit in an unusual place and should be considered for relocation to avoid injuries to the copilot or passenger, sitting in the copilot seat, legs and knees.
- NO transponder mode S is installed and should be considered for European operations.
- COM communication transceiver part of the KX165 is a 760 Channel 50 kHz selectivity transceiver. However this transceiver is not of the 8,33 kHz spacing (2280 channels) 25 kHz selectivity type. Normally these 8,33kHz spaced channels are only used in some parts



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of Europe (ie: Frankfurt) and above FL190. OK for VFR. FM immunity is normally complied with on these KX165 transceivers.

- No record could be found of the latest VOR accuracy test and is required for the safe use and operation of the VOR system under IFR condition. Or, when the VOR system will be used for the intended flight. For more information see FAR 91.171.
- A full copilot instrument panel is installed.
- GPS (2ea) are installed and coupled to autopilot(1ea). However NO records NOR FAA-approved POH/AFM supplements could be found certifying the installed GPS's for IFR operation. GPS's as installed can only be used for VFR.

Keep in mind that since there are 2.ea separate GPS's installed, also 2,ea separate GPS-data-base subscriptions(i.e. Jeppessen or other...) are needed in order to keep the data-bases up to date. According to the KLN90 GPS(1) manual update of the navigational data-base can be performed with a normal computer using the Serial port.

- Colour MFD/GPS KMD 150 updates are on a removable data-card on the front face.

Evaluation of the Title Search as transmitted revealed a clear title on subject aircraft.

Conclusion:

I do have the overall impression that the aircraft maintenance was performed in a good professional manner(RGV Aviation Limited), and that the owner/operator took good care of the subject aircraft. The aircraft can be considered in a good state of maintenance. Even non-mandatory SB's (Service Bulletins) where performed with a good follow up in the logs. Example: Main spar inspections with inboard fuel tanks removed. - Piper SB 1006 – NO FAA AD – EASA AD2005-0032 – Log Book certificate November 2004.

The general condition taking into account the before mentioned remarks could be categorized as good to very good.

Made through and honestly to the best of my knowledge,

Luc Van de Maele
Belgium CAA Authorized Inspector
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