Jabiru Aircraft Pty Ltd Engine Overhaul Manual Jabiru 2200 & 3300 Aircraft Engines

9 Appendix A - Build Sheets & Test Cards

9.1 Sample Completed Build Sheet

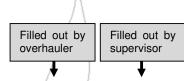
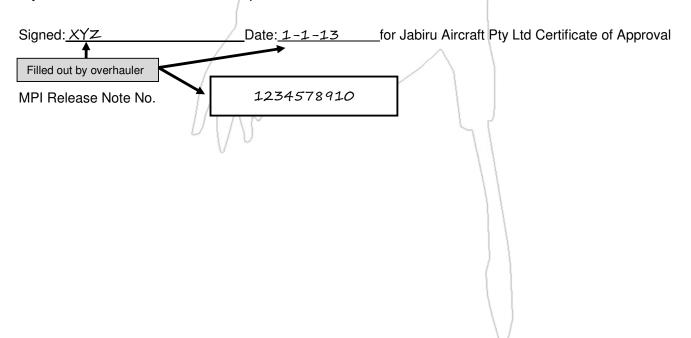


Table 2 - Build Sheet A

No.	Details	Initials	Checked By	Date
A 1	Inspect for Burrs, Oil Holes, Chamfers; Clean Crankshaft, Conrods and Propeller Mount Plate	XYZ		1-1-13
A2	Inspect Oil Holes and insert Welch Plugs	XYZ		1-1-13
А3	Measure Crankshaft (refer to Goods Inwards Inspection Sheet)	XYZ		1-1-13
A 4	Inspect and measure Propeller Mount Flange	XYZ		1-1-13
A 5	Inspect and measure Conrods (refer to Goods Inwards Inspection Sheet)	XYZ		1-1-13
A 6	Temporarily Mount Propeller Mount Flange to Crankshaft and bolt to stand	XYZ		1-1-13
A7	Fit the Conrods to the Crankshaft; Use Loctite 620 on the bolts and torque to 18 ft.lbs	XYZ		1-1-13
A8	Stage A - Stage Inspection of Assembly	XYZ	DPS	1-1-13

I hereby certify that the above subassembly has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.



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9.2 2200 Top End Overhaul Booklet

9.2.1 Job Traveller

Table 3 - Job Traveller

Jabiru Engine – Job Traveller Form: JABENGJT-1				
CASA VH Registration	RA-Aus or Other Registration			
Job Number:	Order / Invoice No:			
Engine Model:	Engine Serial Number:			
Date Received:	Owner:			
TSO:	((
Work to be done (iaw Jabiru Approved Data & certified f - Trade-In (Full Overhaul) - Top End Inspection - Maintenance (RA-Aus only)	or in the applicable section of the engine overhaul booklet): - Full overhaul & return to owner - Bulk Strip - Other:			
Records to be filed: - Copy of ARC - Copy of all job sheets - Report to owner - Job book, completed.	- Jabiru Engine Job Traveller - Copy of specialist inspection reports - MPI etc Copy of log book entry			
Parts Shipped To Jabiru With Engine: - Exhaust extractors - Starter Motor	☐ - Muffler ☐ - Oil Cooler			
Use: - School – mainly circuits - School – even mix of circuits and cross-country - Unknown	☐ - School – mainly cross-country ☐ - Private			
Reason for Overhaul: Time ExpiredOther:	□-Update Spec			
Since manufacture or its last overhaul has the engine ha	nd any of the following::			
A prop strike or other accident?	No Poor cylinder leak-downs? □-Yes □-No			
	No Major work (i.e. top end overhaul) ☐-Yes ☐-No			
	No Been hard to start when hot? -Yes -No			
	No Been hard to start when cold? ☐-Yes ☐-No			
Been using a Jabiru or Sensenich Prop?	No			
If the engine has had major work, please give a quescription of what was done and who carried it out:	uick			
Shipping Details:				
· · · · · · · · · · · · · · · · · · ·	aust extractors			
Overhauled by: Gordon & Jenny Tate	Jabiru;			
- INHIBITED Date:	Signed by:			

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	9.2.2	Engine	Details
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Engine	Serial #: 22	Date	·	
	Top End Subassembly A Build Sheet – Conrods - Build Sheet A			
No.	Details	Initials	Checked By	Date
A 1	Clean Conrods	/ /		
A2	Inspect and measure Conrods	/ /		
А3	Fit the Conrods to the Crankshaft; Use Loctite 620 on the bolts and torque to 18 ft.lbs			
A 4	Stage A - Stage Inspection of Assembly	/ /		
Signed MPI Re	Please Note No. Top End Subassembly C Build Sheet – Pistons, Cylinders	ı Aircraft Pty		
No.	- Build Sheet C Details	Initials	Checked By	Date
	Details	IIIIIIais	Checked by	Date
C1	Clean and dehurr all narts	1		
C1	Clean and deburr all parts Record all measurements			
C1 C2 C3	Clean and deburr all parts Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips			
C2	Record all measurements Install pushrod tube 'O' Rings, springs, washers and			
C2 C3	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips			
C2 C3 C4	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves			
C2 C3 C4 C5	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves Complete rocker shafts, posts and rocker assemblies			
C2 C3 C4 C5 C6	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves Complete rocker shafts, posts and rocker assemblies Fit cylinder base 'O' rings			
C2 C3 C4 C5 C6 C7	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves Complete rocker shafts, posts and rocker assemblies Fit cylinder base 'O' rings Measure and fit front circlip			
C2 C3 C4 C5 C6 C7	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves Complete rocker shafts, posts and rocker assemblies Fit cylinder base 'O' rings Measure and fit front circlip Check ring end gaps, fit rings to pistons			
C2 C3 C4 C5 C6 C7 C8 C9	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves Complete rocker shafts, posts and rocker assemblies Fit cylinder base 'O' rings Measure and fit front circlip Check ring end gaps, fit rings to pistons Fit cylinders to heads. Torque: 12 ft/lbs / 24 ft.lbs			
C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 I hereb Pty Ltd	Record all measurements Install pushrod tube 'O' Rings, springs, washers and circlips Check valve seats, fit spring retainers, install valves Complete rocker shafts, posts and rocker assemblies Fit cylinder base 'O' rings Measure and fit front circlip Check ring end gaps, fit rings to pistons Fit cylinders to heads. Torque: 12 ft/lbs / 24 ft.lbs Install piston assembly to cylinder just clear of the oil ring			able Jabiru

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9.2.5 Top End Subassembly E Build Sheet - Starter Motor

Stage F - Stage Inspection of Assembly

Table 6 - Build Sheet E

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No.	Details	Initials	Checked By	Date
E1	Fit new bushes and bearings to starter motor & bendix gear assembly. Fit new brushes to motor & re-assemble with Loctite 243 (if needed)			
E2	Stage E - Stage Inspection of Assembly	/ /		

	y certify that the above subassembly has been assembled in Instructions and Maintenance procedures.	accordanc	e with the applic	able Jabiru			
Signed	Signed:Date:for Jabiru Aircraft Pty Ltd						
	Top End Subassembly F Build Sheet – Gear Case - Build Sheet F						
No.	Details	Initials	Checked By	Date			
F1	Deburr, clean and inspect all of the gears	/ /					
F2	Measure the shaft post internal diameters and the distributor shaft diameters						
F3	Using loctite 515 fit the shaft posts to the gear housing	\					
F4	Fit the distributor shaft seals and rear crankshaft seal	1					
F5	Fit shafts to gears	/					
F6	Fit the distributor shafts and gears to the gear housing						
F7	Check End Clearance of Distributor Shaft to Case Flange						

	. /		
I hereby certify that the a	above subassembly has be	een assembled in accordance with the	ne applicable Jabiru
Pty Ltd Instructions and I	Maintenance procedures.		
	1/1 ()		
Signed:	Date:	for Jabiru Aircraft Pty Ltd	
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9.2.7 Top End Subassembly G – Fuel Pump and Carburettor

Table 8 - Build Sheet G

No.	Check	Size	Initials	Checked By	Date
G1	Main Jet		/ \		
G2	Needle Jet		/		
G3	Idle Jet		/ /		
G4	Needle 4A138A0D-1		/ /		
G5	Float seat mm dia				
G6	Gravity Feed Valve 47-969				
G7	Air Bleed Ø1.6mm				
G8	Idle Mixture Screw Out 1 Turn				
G9	Choke Jet Ø1.2mm				
G10	Inspect fuel pump				
G11	Stage G - Stage Inspection of Assembly				

I hereby certify that the above subassembly	ℓ has been	assembled i	n accordance	e with the	applicable	Jabiru
Pty Ltd Instructions and Maintenance proced	dures.		\			

Signed:	D - 1 \	f = = =
Signed.	Date: \	for Jabiru Aircraft Pty Ltd
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9.2.8 Top End Subassembly H - Final Assembly

Table 9 – Build Sheet H

No.	Details	Initials	Checked By	Date
H1	Place all through bolts in crankcase for cylinder bases			
H2	Fit piston and cylinder Assemblies. Check circlips			
Н3	Stage H1 - Stage Inspection of Assembly			
H4	Tension the cylinder base studs/bolts			
H5	Fit pushrods and valve gear. Set gap to 0.10"			
Н6	Fit sump and induction tubes	71		
H7	Fit Carburettor assembly			
H8	Fit fuel pump			
Н9	Fit exhaust system	11		
H10	Stage H2 - Stage Inspection of Assembly			

I hereby certify that the above subassembly has been assembled in accorda	nce	with the	applicable	Jabiru
Pty Ltd Instructions and Maintenance procedures.				
,				

_Date:_____for Jabiru Aircraft Pty Ltd

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9.2.9 Top End Jabiru 2200 - Engine Post Run Procedure - Stage J

Table 10 - Post Run Inspection

No.	Details	Initials	Checked By	Date
J1	Heads re-torqued to 24 ft.lbs. Valves adjusted	/ \		
J2	Check induction/exhaust bolts			
J3	Any changes to be made			
J4	Rerun, check for oil leaks and/or any modifications made (oil pressure/leaks etc)			
J5	Check charging rate of alternator Volts:			
J6	Leak Down Test Results: Cyl 1 Cyl 2 Cyl 3 Cyl 4 Cyl 4 80 80 80 80			
J7	Check all paper work))		
J8	Drain fuel/oil. Prepare for shipment, inhibited and sealed	/ /		
	Stage J - Post Engine Run Procedure Completed			

I hereby certify that the above Post Run Procedure has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
	Mr	

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Jabiru 2200 & 3300 Aircraft Engines

9.2.10 Top End Jabiru 2200 Parts Measure and Clearance Record Sheet

Table 11 - Measure & Clearance Record Sheet

Engine No.			Date:	Λ						
Crankshaft	P/No.	Batch:	Item:	Comments						
Crank Big Ends	1	2	3	4						
Conrod Big Ends	1	2	3	4						
Clearances	1	2	3	4						
Head 1	P/No.	Batch:	Item:	Comments						
Head 2	P/No.	Batch:	Item:	Comments						
Head 3	P/No.	Batch:	Item:	Comments						
Head 4	P/No.	Batch:	Item:	Comments						
In. Valve Guides	1	2	3	4						
Ex. Valve Guides	1	2	3	4						
In. Valves	1	2	3	4						
Ex. Valves	1	2	3	4						
In. Clearances	1	2	3	4						
Ex. Clearances	1	2	3	4						
	/									
Cylinder Barrel 1	P/No.	Batch:	Item:	Comments						
Cylinder Barrel 2	P/No.	Batch:	Item:	Comments						
Cylinder Barrel 3	P/No.	Batch:	Item:	Comments						
Cylinder Barrel 4	P/No.	Batch:	Item:	Comments						
Cylinder Barrel 1	Bore:	Length:								
Cylinder Barrel 2	Bore:	Length:								
Cylinder Barrel 3	Bore:	Length:								
Cylinder Barrel 4	Bore:	Length:								
Piston Diameters:	1	2	3	4						
Clearance	1	2	3	4						
		/								
Ring Gap Top	1	2	3	4						
Ring Gap Bottom	1	2	3	4						
Comments:										
I havely and the that the above have have been managed as well as the U.S. and I.S.										
I hereby certify that the above parts have been measured, engraved & installed as recorded.										
Signed:	- // [/\Date:	for J	labiru Aircraft Pty Ltd						
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Jabiru 2200 & 3300 Aircraft Engines

9.2.11 Top End Summary of Parts Used

• Note: Refer to lists in Sections 5.1 and 5.2 for parts which MUST be replaced at overhaul.

Table 12 – Summary of Parts Used

ENGINE NO:			DATE:		
☐ Bulk Strip	☐ Overhaul		☐ Hydraulic		
☐ Maintenance	☐ Top End O	verhaul	☐ Solid Lifter		
	NEW ORIGINAL		——————————————————————————————————————	NEW	ORIGINAL
CRANKCASE		П	HEADS		
Main Bearings	<u> </u>	$\overline{\Pi}$	Rockers	$\overline{\Box}$	
Through Bolts	 	<u> </u>	Shafts		
Engine Mount Plate	T i	i i	O Rings	— Fi	T F
Pick Up Stainer	 	- i	Collets		
Oil Pressure Switch	 	H H	Valve		
Oil Pressure Sender	 	H	Springs		
Oil Cooler Fitting	 	H	Adjustors		
Valve Lifters	+ +	H	Solid Pushrods		
Tacho Pick-up		H	Pushrod Tubes		
Oil Feed To Heads	\dashv		Rocker Covers	- H -	\vdash
Oil Pick-up	+		Valve Guides	- H -	+
Oli Pick-up O Rings			Rubber T's	<u> </u>	
CRANKSHAFT		片	Lifter	౼	+ +
Conrods	7	片	CYLINDERS	- -	+ +
	FAA		O Rings	- H	
Conrod Bearings	/ // //	4 A H		<u> </u>	
Prop Drive			SUMP	<u> </u>	<u> </u>
Front Seal		\Box	Long Temp Sender		
Crank Gear		\	Swept Plenum Chamber		<u> </u>
CAM	ㅡ 닏	V _	Induction Pipes		
CAM Gear Outer	ㅡ 닏		O Rings		
CAM Gear Inner	<u> </u>		Induction Gaskets	<u> </u>	<u> </u>
FLYWHEEL	<u> </u>		Heat Shield	<u> </u>	<u> </u>
Magnets (ignition)	<u> </u>		Induction Hose Joiners	<u> <u> </u></u>	<u> </u>
Vac Drive Plate			EXHAUST PIPES		
Ring Gear			Ex-Gaskets Type		
ALTERNATOR			Bevel Type		
Magnet Ring			OIL COOLER		
Stator			Oil Cooler Adaptor		
PISTONS			Oil Hoses		
Rings			FUEL PUMP		
Gudgeons / Circlips			Push Rod		
IGNITION HARNESS			Gaskets / Spacer		
Plugs	/ 🔟		STARTER MOTOR		
Rotors	/ D a		Clutch Assy		
Dizzy Caps	/ / D / L .) [OIL PUMP		
Dizzy Shafts	// 🗆 / \ 🗈		Housing		
Dizzy Gears	0 1 / V		Spacer Plate		
Seals Dizzy			Gears		
Rear Seals			CARBY	$\overline{\Box}$	
Dizzy Case	<u> </u>	i i	Fuel Line	$\overline{}$	<u> </u>
Dizzy Posts	<u> </u>		Mount	$\overline{}$	<u> </u>
Coils		i i			
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9.2.12 Top End Ground Run-In Procedure

Table 13 - Ground Run-In Procedure

Pre Ru	ın-In Checks	Correct C Propeller Idle Set	Oil Type & Quantity Secure	/ <u> </u>		nections s gnitions l	secure _/R (chec	k du	ring run)
Time	Duration	Condition	RPM		RPM	CHT 4	4/6 O Ter		Oil Pressure
	3	Start and Idle	1400						
	10	Hot Idle Check 1	Idle						
	30 sec / 1	Take-Off Power	Full / 2000						
	1/2	75% Power	2800 / 2000						
	1/2	Take-Off	Full / 2000						
	15 sec / 2	Full	Full / 2000						
	2	75% Power	2800)			
	1	Cooling Run	2000						
	2	75% Power	2800						
	3	Cooling Run	2000						
	2/1/2	2800 / 2000 / 2800	4						
	2/2	2500 / 2800)			
	2/3	2500 / 3000				1			
	2/3	2500 / Full				1			
	3	Cooling Run	1200			1			
	10	Hot Idle Check 2	Idle						
O.A.T		°C			\wedge				
Alternato	or:	V at 2800 RPM		Use:	Shell 100/Exxo	on 100/RP /	∆viation Oil	100	
Idle Comments:				2200	2.2 Litres of 3.4 Litres or	or 2 Litres +	Fill Oil Filt	ter	
Top End (RPM) Comments:			Overal	l Comments:					
Any Changes / Adjustments Made During Run:									
Post Rui	n-In Checks:	Check for Check	Oil Leaks ves (solid Lifter)			e Cylinder duction / Ex			
☐ Post-	Run Leak-Dowr	n: Cyl 1	Cyl 2 80	Cyl 3	80	Cyl 4	30		
Drain Oil & Inhibit									
I hereb	y certify that	this engine has be	en run in accordan	ce with	n Jabiru red	quirement	ts and is	fit fo	r use.
Signed	:	D	ate:	for J	labiru Aircra	aft Pty Lto	d		

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9.3 2200 Overhaul Booklet

9.3.1 Job Traveller

Table 14 - Job Traveller

Jabiru Engine – Job T	raveller Form: JABENGJT-1			
CASA VH Registration	RA-Aus or Other Registration			
Job Number:	Order / Invoice No:			
Engine Model:	Engine Serial Number:			
Date Received:	Owner:			
TSO:	((
Work to be done (iaw Jabiru Approved Data & certified to Trade-In (Full Overhaul) Top End Inspection Maintenance (RA-Aus only)	for in the applicable section of the engine overhaul booklet): - Full overhaul & return to owner - Bulk Strip - Other:			
Records to be filed: - Copy of ARC - Copy of all job sheets - Report to owner - Job book, completed.	 ☐ - Jabiru Engine Job Traveller ☐ - Copy of specialist inspection reports - MPI etc. ☐ - Copy of log book entry 			
Parts Shipped To Jabiru With Engine: - Exhaust extractors - Starter Motor	☐ - Muffler ☐ - Oil Cooler			
Use: - School – mainly circuits - School – even mix of circuits and cross-country - Unknown - School – mainly cross-country - Private				
Reason for Overhaul: Time ExpiredOther:	□-Update Spec			
Since manufacture or its last overhaul has the engine ha	ad any of the following::			
A prop strike or other accident?				
	No Major work (i.e. top end overhaul)YesNo			
3	No Been hard to start when hot? -Yes -No			
	No Been hard to start when cold?YesNo			
Been using a Jabiru or Sensenich Prop?				
If the engine has had major work, please give a q description of what was done and who carried it out:	uick			
Shipping Details:				
Parts to be shipped to customer with engine:				
Overhauled by:				
INHIBITED Date:	Signed by:			

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Engine Serial #:	22	Date:

9.3.3 Subassembly A Build Sheet - Crankshaft, Propeller Mount Flange and Conrods

Table 15 - Build Sheet A

No.	Details	Initials	Checked By	Date
A 1	Inspect for Burrs, Oil Holes, Chamfers; Clean Crankshaft, Conrods and Propeller Mount Plate			
A2	Inspect Oil Holes and insert Welch Plugs			
А3	Measure Crankshaft (refer to Goods Inwards Inspection Sheet)			
A 4	Inspect and measure Propeller Mount Flange			
A 5	Inspect and measure Conrods (refer to Goods Inwards Inspection Sheet)			
A 6	Temporarily Mount Propeller Mount Flange to Crankshaft and bolt to stand			
A7	Fit the Conrods to the Crankshaft; Use Loctite 620 on the bolts and torque to 18 ft.lbs			
A8	Stage A - Stage Inspection of Assembly		}	

I hereby certify that the above subassembly has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
MPI Release Note No.		

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9.3.4 Subassembly B Build Sheet - Crankcase and Camshaft Assembly

Table 16 - Build Sheet B

No.	Details	Initials	Checked By	Date
B1	Inspect case, deburr, clean, check oil holes	/ \		
B2	Fit inner stud "O" rings			
В3	Fit all studs	/ /		
B4	Fit outer oil suction welch plugs	/ /		
B5	Fit oil relief valve, oil pressure sender and pressure switch	/ /		
В6	Fit bearing shells (12)			
B7	Blue surfaces; Assemble and torque to 30 ft.lbs			
B8	Measure main tunnel and camshaft bearings			
В9	Disassemble; Measure Cam Follower Bores			
B10	Fit Lifters			
B11	Check Camshaft End Float			
B12	Check Crankshaft End Float			_
B13	Stage B - Stage Inspection of Assembly			

I hereby certify that the above subassembly has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
Signeu	Date	ioi Jabiru Aircraft Pty Lie
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9.3.5 Subassembly C Build Sheet – Pistons, Cylinders and Cylinder Heads

Table 17 - Build Sheet C

No.	Details	Initials	Checked By	Date
C1	Clean and deburr all parts	/\		
C2	Record all measurements	/		
С3	Install pushrod tube 'O' Rings, springs, washers and circlips			
C4	Check valve seats, fit spring retainers, install valves			
C5	Complete rocker shafts, posts and rocker assemblies			
C6	Fit cylinder base 'O' rings			
C7	Measure and fit front circlip			
C8	Check ring end gaps, fit rings to pistons			
C9	Fit cylinders to heads. Torque: 12 ft/lbs / 24 ft.lbs			
C10	Install piston assembly to cylinder just clear of the oil ring			
C11	Stage C - Stage Inspection of Assembly	///		
		/ [

I hereby certify that the above suba Pty Ltd Instructions and Maintenanc	\ \ \	assembled in accordar	nce with the ap	oplicable Jabiru
Signed:	Date:	for Jabiru Aircraft F	Pty Ltd	

9.3.6 Subassembly D Build Sheet - Sump

Table 18 - Build Sheet D

No.	Details	Initials	Checked By	Date
D1	Clean and inspect the sump.			
D2	Clean out blind threads using a suitable sized tap			
D3	Ensure all seals and gaskets on plugs and terminals are serviceable.			
D4	Stage D - Stage Inspection of Assembly			
	0 1/ 0	7.1		<u> </u>

, ,	above subassembly has been Maintenance procedures.	en assembled in accordance wit	h the applicable Jabiru
Signed:	Date:	for Jabiru Aircraft Pty Ltd	

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9.3.7 Subassembly E Build Sheet – Flywheel, Ignition Coils, Starter Motor And Alternator Table 19 – Build Sheet E

No.	Details	Initials	Checked By	Date
E1	Clean and de-burr starter ring gear & bendix gears.	/ \		
E2	Assemble magnets, pole plates, tacho tags and alternator rotor to flywheel			
E 3	Verify magnet strength and polarity correct	/ /		
E4	Fit new bushes and bearings to starter motor & bendix gear assembly. Fit new brushes to motor & re-assemble with Loctite 243 (if needed)			
E 5	Stage E - Stage Inspection of Assembly			

	with Loctite 243 (if needed)			
E 5	Stage E - Stage Inspection of Assembly			
	y certify that the above subassembly has been assembled in Instructions and Maintenance procedures.	accordanc	e with the applic	able Jabiru
Signed	:Date:for Jabiru	Aircraft Pty	/ Ltd	
	Subassembly F Build Sheet – Gear Case – Build Sheet F	/ (
No.	Details	Initials	Checked By	Date
F1	Deburr, clean and inspect all of the gears	1		
F2	Measure the shaft post internal diameters and the distributor shaft diameters			
F3	Using loctite 515 fit the shaft posts to the gear housing	-		
F4	Fit the distributor shaft seals and rear crankshaft seal			
F5	Fit shafts to gears	1		
F6	Fit the distributor shafts and gears to the gear housing			
F7	Check End Clearance of Distributor Shaft to Case Flange	1		
F8	Stage F - Stage Inspection of Assembly	1		
Pty Ltd	y certify that the above subassembly has been assembled in Instructions and Maintenance procedures.			able Jabiru
Signed	:bate:for Jabiru	ı Aircraft Pty	/ Ltd	

Jabiru Aircraft Pty Ltd	Ja	biru	Air	craft	Ptv I td
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9.3.9 Subassembly G - Fuel Pump and Carburettor

Table 21 - Build Sheet G

No.	Check	Size	Initials	Checked By	Date
G1	Main Jet		/ \		
G2	Needle Jet				
G3	Idle Jet		/ /		
G4	Needle 4A138A0D-1		/ /		
G5	Float seat mm dia				
G6	Gravity Feed Valve 47-969				
G7	Air Bleed Ø1.6mm				
G8	Idle Mixture Screw Out 1 Turn				
G9	Choke Jet Ø1.2mm				
G10	Stage G - Stage Inspection of Assembly				

I hereby certify that the above subassembly has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signod:	Data	for Johinu Aircroft Phy Ltd
Signed:	Date:	for Jabiru Aircraft Pty Ltd

Jabiru Aircraft Pt	v Ltd
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Jabiru 2200 & 3300 Aircraft Engines

9.3.10 Subassembly H - Final Assembly

Table 22 - Build Sheet H

No.	Details	Initials	Checked By	Date
H1	Apply Loctite 515 to crankcase halves; lubricate where necessary	/\		
H2	Locate camshaft in crankcase half			
Н3	Locate 2 crankcase halves over crankshaft	/ /		
H4	Stage H1 - Stage Inspection of Assembly	/ /		
H5	Tension front (2) and rear (2)			
Н6	Place all through bolts in crankcase for cylinder bases			
H7	Fit piston and cylinder Assemblies. Check circlips			
Н8	Stage H2 - Stage Inspection of Assembly			
Н9	Tension the cylinder base studs/bolts			
H10	Fit pushrods and valve gear. Set gap to 0.10"			
H11	Fit sump and induction tubes	///		
H12	Check camshaft timing	/		
H13	Fit engine mount plate and gearbox housing	\		
H14	Fit flywheel, alternator mount plate and ignition coils	\		
H15	Fit Carburettor assembly	1		
H16	Fit fuel pump	/		
H17	Fit oil pump assembly	-		
H18	Fit front seal and propeller flange Torque 30 ft.lbs/Lockwire then std flange lockwire not required			
H19	Fit exhaust system	_		
H20	Stage H3 - Stage Inspection of Assembly			

Pty Ltd Instructions and Maintenar	1 1 1 2	ssembled in accordance wit	n the applicable Jabiru
Signed:	Date:	for Jabiru Aircraft Pty Ltd	

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Jabiru 2200 & 3300 Aircraft Engines

9.3.11 Jabiru 2200 - Engine Post Run Procedure - Stage J

Table 23 - Post Run Inspection

No.	Details	Initials	Checked By	Date		
J1	Heads re-torqued to 24 ft.lbs. Valves adjusted	/ \				
J2	Check induction/exhaust bolts	/				
J3	Any changes to be made					
J4	Rerun, check for oil leaks and/or any modifications made (oil pressure/leaks etc)					
J5	Check charging rate of alternator Volts:					
J6	Leak Down Test Results: Cyl 1					
J7	Check all paper work))				
J8	Drain fuel/oil. Prepare for shipment, inhibited and sealed	/ /				
J9	Stage J - Post Engine Run Procedure Completed					

I hereby certify that the above Post Run Procedure has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
Signed:	Date:	for Jabiru Aircraft Pty Ltd
		\/

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Engine Overhaul Manual

Jabiru 2200 & 3300 Aircraft Engines

9.3.12 Jabiru 2200 Parts Measure and Clearance Record Sheet

Table 24 - Measure & Clearance Record Sheet

Engine No.			Date:	/\		
Crankshaft	P/No.	Batch:	Item:	Comments		
Crank Mains:	1	2	3	4	5	6
Crankcase Left	P/No.	Batch:	Item:	Comments		
Crankcase Right	P/No.	Batch:	Item:	Comments		
Crankcase Assy	1	2	3	4	5	6
Main Tunnels				/		
Clearances	1	2	3	4	5	6
Olcara i i oco						
Crankshaft	P/No.	Batch:	Item:	Comments		
Crank Big Ends	1	2	3	4		
	1	2	3	4		
Conrod Big Ends						
Clearances	1	2	3	4		
				\ \		
Camshaft	P/No.	Batch:	Item:	Comments	1	
Camshaft Journals	1	2	3	4	5	6
Camshaft Tunnel	1 /	2	3	4	5	6
Clearances	1 /	2	3	4	5	6
		VAA				
Head 1	P/No.	Batch:	Item:	Comments		
Head 2	P/No.	Batch:	Item:	Comments		
Head 3	P/No.	Batch:	Item:	Comments	1	
Head 4	P/No.	Batch:	Item:	Comments	\	
In. Valve Guides	1	2	3	4		
Ex. Valve Guides	1	2	3	4		
In. Valves	1	2	3	4		
Ex. Valves	1	2	3	4		
	1	2	3	4		
In. Clearances	1	2	3	4		
Ex. Clearances	ı	7	3	4		
<u> </u>	I DAI	J	T 1.			
Cylinder Barrel 1	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 2	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 3	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 4	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 1	Bore:	Length:				
Cylinder Barrel 2	Bore:	Length:				
Cylinder Barrel 3	Bore:	Length:				
Cylinder Barrel 4	Bore:	Length:				
Piston Diameters:	1	2	3	4		
Clearance	1	2	3	4		
		I .	<u> </u>	-		<u> </u>
Ring Gap Top	1	2	3	4		
Ring Gap Bottom	1	2	3	4		
					1	
Comments:						
la a u a la constitue de a d	4la a a a a a a a a a a a			avad O inatalla	d d - d	
hereby certify that	the above parts	s nave been m	easured, engr	aveu & Installe	u as recorded.	
Signed:		Date:	for .	abiru Aircraft F	Ptv Ltd	
g		<u> </u>		aona / morant i	1.7/ = 1.0	

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Jabiru 2200 & 3300 Aircraft Engines

9.3.13 Summary of Parts Used

• Note: Refer to lists in Sections 5.1 and 5.2 for parts which MUST be replaced at overhaul.

Table 25 – Summary of Parts Used

ENGINE NO:			DATE:		
☐ Bulk Strip	☐ Overhaul		☐ Hydraulic		
☐ Maintenance	☐ Top End O	verhaul	☐ Solid Lifter		
	NEW	ORIGINAL	/ //	NEW	ORIGINAL
CRANKCASE			HEADS		
Main Bearings		П	Rockers	\Box	П
Through Bolts		П	Shafts	Ē	
Engine Mount Plate			O Rings	一市	T T
Pick Up Stainer			Collets		
Oil Pressure Switch		Ī	Valve	ī	
Oil Pressure Sender	T T	Ī	Springs	Ī	
Oil Cooler Fitting			Adjustors	一百	
Valve Lifters			Solid Pushrods		
Tacho Pick-up			Pushrod Tubes		
Oil Feed To Heads			Rocker Covers		
Oil Pick-up			Valve Guides		
O Rings			Rubber T's		
CRANKSHAFT			Lifter		
Conrods	7		CYLINDERS		
Conrod Bearings		A	O Rings	一百	Ī
Prop Drive	// //		SUMP		i i
Front Seal			Long Temp Sender	$\overline{}$	П
Crank Gear		111	Swept Plenum Chamber		
CAM		V \ <u>_</u>	Induction Pipes	Ē	
CAM Gear Outer			O Rings	ī	
CAM Gear Inner		Ā	Induction Gaskets	Ī	
FLYWHEEL			Heat Shield	Ħ	Ī
Magnets (ignition)			Induction Hose Joiners	ī	
Vac Drive Plate		/ 🗖	EXHAUST PIPES	一百	Ī
Ring Gear			Ex-Gaskets Type		
ALTERNATOR			Bevel Type		
Magnet Ring			OIL COOLER		П
Stator			Oil Cooler Adaptor	ī	
PISTONS			Oil Hoses	Ē	
Rings			FUEL PUMP		
Gudgeons / Circlips	7		Push Rod		
IGNITION HARNESS			Gaskets / Spacer	\Box	П
Plugs	/ 🗇		STARTER MOTOR		
Rotors	10		Clutch Assy		
Dizzy Caps	1/0 /	/ [OIL PUMP		
Dizzy Shafts	// <u> </u>		Housing		
Dizzy Gears	1 0 T/V		Spacer Plate		
Seals Dizzy			Gears		
Rear Seals			CARBY		
Dizzy Case			Fuel Line		
Dizzy Posts			Mount		
Coils					

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u	a	v		•	_			ıa	IL	PīV	LIC



9.3.14 Ground Run-In Procedure

Table 26 - Ground Run-In Procedure

Pre Run-In Checks: Correct Oil Type & Quantity Propeller Secure Idle Set					All conr Check i	/ }			ring run)
Time	Duration	Condition	RPI	RPM	СН	T 4/6	Oil Temp	Oil Pressure	
	3	Start and Idle	1400			/			
	10	Hot Idle Check 1	Idle			1/			
	30 sec / 1	Take-Off Power	Full / 2000						
	1/2	75% Power	2800 / 2000						
	1/2	Take-Off	Full / 2000						
	15 sec / 2	Full	Full / 2000		1	1			
	2	75% Power	2800		_)			
	1	Cooling Run	2000						
	2	75% Power	2800						
	3	Cooling Run	2000						
	2/1/2	2800 / 2000 / 2800	1			1			
	2/2	2500 / 2800)				
	2/3	2500 / 3000			1				
	2/3	2500 / Full							
	3	Cooling Run	1200			1			
	10	Hot Idle Check 2	Idle						
O.A.T		_ ~			\wedge				
Alternato	or:	V at 2800 RPM			hell 100/Exxo				
Idle Com	nments:	V(A)		2200 3300	2.2 Litres of 3.4 Litres or				
Top End	(RPM) Comme	ents:		Overal	Comments:				
Any Cha	nges / Adjustm	ents Made During Run:		1					
Post Rur	Post Run-In Checks: Check for Oil Leaks Re-Torque Cylinder Heads Adjust Valves (solid Lifter) Check Induction / Exhaust								
☐ Post-	Run Leak-Dowi	n: Cyl 1	Cyl 2	Cyl 3	80	Cyl 4	80		
	Drain Oil & Inh	ibit	1						
I hereb	y certify that	this engine has be	en run in acco	rdance with	n Jabiru red	quirem	ents an	d is fit fo	r use.
Signed	:	D	ate:	for J	abiru Aircr	aft Pty	Ltd		
This dod	cument is controll	ed while it remains on the	Jabiru server. Onc	e this no longe	applies the do	cument l	oecomes i	uncontrolled	

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9.4 3300 Top End Overhaul Booklet

9.4.1 Job Traveller

Table 27 – Job Traveller

Table 27 – Job Traveller	/ \
Jabiru Engine – Job Ti	raveller Form: JABENGJT-1
CASA VH Registration	RA-Aus or Other Registration
Job Number:	Order / Invoice No:
Engine Model:	Engine Serial Number:
Date Received:	Owner:
TSO:	((
Work to be done (iaw Jabiru Approved Data & certified f - Trade-In (Full Overhaul) - Top End Inspection - Maintenance (RA-Aus only)	for in the applicable section of the engine overhaul booklet): - Full overhaul & return to owner - Bulk Strip - Other:
Records to be filed: - Copy of ARC - Copy of all job sheets - Report to owner - Job book, completed.	☐ - Jabiru Engine Job Traveller ☐ - Copy of specialist inspection reports - MPI etc. ☐ - Copy of log book entry
Parts Shipped To Jabiru With Engine: - Exhaust extractors - Starter Motor	☐ - Muffler ☐ - Oil Cooler
Use: - School – mainly circuits - School – even mix of circuits and cross-country - Unknown	☐ - School – mainly cross-country ☐ - Private
Reason for Overhaul: Time ExpiredOther:	□-Update Spec
Since manufacture or its last overhaul has the engine ha	ad any of the following::
A prop strike or other accident?	No Poor cylinder leak-downs? □-Yes □-No
<u> </u>	No Major work (i.e. top end overhaul)
	No Been hard to start when hot?YesNo
High cylinder head temperatures?	
Been using a Jabiru or Sensenich Prop?	
If the engine has had major work, please give a quescription of what was done and who carried it out:	uick
Shipping Details:	
	aust extractors
Overhauled by:	
INHIBITED Date:	Signed by:

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3.4.2 Eligille Delaiis	9.4.2	Engine	Details
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Engine	Serial #: 33	Date	<u>. </u>	
	Top End Subassembly A Build Sheet – Conrods - Build Sheet A			
No.	Details	Initials	Checked By	Date
A1	Clean Conrods	/ /		
A2	Inspect and measure Conrods	/ /		
А3	Fit the Conrods to the Crankshaft; Use Loctite 620 on the bolts and torque to 18 ft.lbs			
A 4	Stage A - Stage Inspection of Assembly			
Pty Ltd Signed MPI Re	Please Note No. Top End Subassembly C Build Sheet – Pistons, Cylinders	Aircraft Pty	y Ltd	able Jabiru
No.	Details	Initials	Checked By	Date
C1	Clean and deburr all parts		Chlocked By	Duto
C2	Record all measurements			
С3	Install pushrod tube 'O' Rings, springs, washers and circlips			
C4	Check valve seats, fit spring retainers, install valves			
C 5	Complete rocker shafts, posts and rocker assemblies	\		
C6	Fit cylinder base 'O' rings	57		
C 7	Measure and fit front circlip			
C8	Check ring end gaps, fit rings to pistons			
C9	Fit cylinders to heads. Torque: 12 ft/lbs / 24 ft.lbs	11		
C10	Install piston assembly to cylinder just clear of the oil ring			
C11	Stage C - Stage Inspection of Assembly			
	y certify that the above subassembly has been assembled in Instructions and Maintenance procedures.	accordanc	e with the applic	able Jabiru
Signed	:Date:for Jabiru	Aircraft Pty	Ltd	

This document is controlled while it remains on the Jabiru server. Once this no longer applies the document becomes uncontrolled.

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9.4.5 Top End Subassembly E Build Sheet - Starter Motor

Table 30 - Build Sheet E

No.	Details	Initials	Checked By	Date
E1	Fit new bushes and bearings to starter motor & bendix gear assembly. Fit new brushes to motor & re-assemble with Loctite 243 (if needed)			
E2	Stage E - Stage Inspection of Assembly	/ /		

•	ertify that the above subassembly has been assembled i structions and Maintenance procedures.	n accordance with the applicable Jabiru
Signed:	Date:for Jabir	u Aircraft Pty Ltd
9.4.6 Top	p End Subassembly F Build Sheet – Gear Case	

Table 31 – Build Sheet F

No.	Details	Initials	Checked By	Date
F1	Deburr, clean and inspect all of the gears	/ /		
F2	Measure the shaft post internal diameters and the distributor shaft diameters			
F3	Using loctite 515 fit the shaft posts to the gear housing			
F4	Fit the distributor shaft seals and rear crankshaft seal	1		
F5	Fit shafts to gears	/		
F6	Fit the distributor shafts and gears to the gear housing			
F7	Check End Clearance of Distributor Shaft to Case Flange			
F8	Stage F - Stage Inspection of Assembly			

I hereb	certify that the above subassembly has been assembled ir	n accorda	nce	with the applic	able Jabiru
Pty Ltd	Instructions and Maintenance procedures.				
Signed	Date:for Jabiru	u Aircraft F) Pty	Ltd	

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Jabiru 2200 & 3300 Aircraft Engines

9.4.7 Top End Subassembly G – Fuel Pump and Carburettor

Table 32 - Build Sheet G

No.	Check	Size	Initials	Checked By	Date
G1	Main Jet		/\		
G2	Needle Jet				
G3	Idle Jet		/ /		
G4	Needle 4A138A0D-1		/ /		
G5	Float seat mm dia				
G6	Gravity Feed Valve 47-969				
G7	Air Bleed Ø1.6mm				
G8	Idle Mixture Screw Out 1 Turn				
G9	Choke Jet Ø1.2mm				
G10	Inspect fuel pump		1 }		
G11	Stage G - Stage Inspection of Assembly				
			/ [والمراجع والمرابع	

I hereby certify that the above subassembly has been assembled in accord	ance with th	ne applicable	Jabiru
Pty Ltd Instructions and Maintenance procedures.			

Signed:	D - 1 \	f = = =
Signed.	Date: \	for Jabiru Aircraft Pty Ltd
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9.4.8 Top End Subassembly H - Final Assembly

Table 33 - Build Sheet H

No.	Details	Initials	Checked By	Date
H1	Place all through bolts in crankcase for cylinder bases			
H2	Fit piston and cylinder Assemblies. Check circlips			
Н3	Stage H1 - Stage Inspection of Assembly			
H4	Tension the cylinder base studs/bolts			
H5	Fit pushrods and valve gear. Set gap to 0.10"			
Н6	Fit sump and induction tubes	71		
H7	Fit Carburettor assembly			
H8	Fit fuel pump			
Н9	Fit exhaust system			
H10	Stage H2 - Stage Inspection of Assembly			

H10	Stage H2 - Stage Inspection of Assembly			
	v certify that the above subassembly has been assembled in Instructions and Maintenance procedures.	n accordance	with the applic	able Jabiru
Signed:	Date:for Jabir	u Aircraft Pty L	_td	

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v	ฉม	иι .	<i>a</i>	III C	ıaıı	LP	tv Lta



Jabiru 2200 & 3300 Aircraft Engines

9.4.9 Top End Jabiru 3300 - Engine Post Run Procedure - Stage J

Table 34 - Post Run Inspection

No.	Details	Initials	Checked By	Date
J1	Heads re-torqued to 24 ft.lbs. Valves adjusted	/		
J2	Check induction/exhaust bolts			
J3	Any changes to be made			
J4	Rerun, check for oil leaks and/or any modifications made (oil pressure/leaks etc)			
J5	Check charging rate of alternator Volts:			
J6	Leak Down Test Results: 1 2 3 4 5 6 80 80 80 80 80			
J 7	Check all paper work			
J8	Drain fuel/oil. Prepare for shipment, inhibited and sealed			
J9	Stage J - Post Engine Run Procedure Completed			

I hereby certify that the above Post Run Procedure has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
	1	

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Engine Overhaul Manual

Jabiru 2200 & 3300 Aircraft Engines

9.4.10 Jabiru 3300 Parts Measure and Clearance Record Sheet

Table 35 - Measure & Clearance Record Sheet

Engine No.			Date:	/\		
Crankshaft	P/No.	Batch:	Item:	Comments		
Crank Big Ends	1	2	3	4	5	6
Conrod Big Ends	1	2	3	4	5	6
Clearances	1	2	3	4	5	6
Head 1	P/No.	Batch:	Item:	Comments		
Head 2	P/No.	Batch:	Item:	Comments		
Head 3	P/No.	Batch:	Item:	Comments		
Head 4	P/No.	Batch:	Item:	Comments		
Head 5	P/No.	Batch:	Item:	Comments		
Head 6	P/No.	Batch:	Item:	Comments		
In. Valve Guides	1	2	3	4	5	6
Ex. Valve Guides	1	2	3	4	5	6
In. Valves	1	2	3	4	5	6
Ex. Valves	1	2	3	4	5	6
In. Clearances	1	2	3	4	5	6
Ex. Clearances	1 /	2	3	4	5	6
Cylinder Barrel 1	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 2	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 3	P/No.	Batch:	Item:	Comments	l	
Cylinder Barrel 4	P/No.	Batch:	Item:	Comments	1	
Cylinder Barrel 5	P/No.	Batch:	Item:	Comments		
Cylinder Barrel 6	P/No.	Batch:	Item:	Comments		
Barrel 1	Bore:	Length:		Barrel 4	Bore:	Length:
Barrel 2	Bore:	Length:		Barrel 5	Bore:	Length:
Barrel 3	Bore:	Length:		Barrel 6	Bore:	Length:
Piston Diameters:	1	2	3	4	5	6
Clearance	1	2	3	4	5	6
Ring Gap Top	1	2	3	4	5	6
	1 /	2	3	4		

JUITITIONS	S		
/	1.		
hereby certify that the above p	oarts have been m	easured, engraved & installed as recorded.	
Signed:	Date:	for Jabiru Aircraft Pty Ltd	
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Jabiru 2200 & 3300 Aircraft Engines

9.4.11 Summary of Parts Used

• Note: Refer to lists in Sections 5.1 and 5.2 for parts which MUST be replaced at overhaul.

Table 36 – Summary of Parts Used

ENGINE NO:			DATE:		
☐ Bulk Strip	☐ Overhaul		☐ Hydraulic		
☐ Maintenance	☐ Top End C	verhaul	☐ Solid Lifter		
	NEW	ORIGINAL	/	NEW	ORIGINAL
CRANKCASE	INEW	ORIGINAL	HEADS	INEW	ORIGINAL
Main Bearings	\vdash	\vdash	Rockers	<u> </u>	+ +
Through Bolts	H H	\vdash	Shafts		+ + +
Engine Mount Plate	H H	片	O Rings		+
Pick Up Stainer		片	Collets		+
Oil Pressure Switch	\vdash	片	Valve		+
Oil Pressure Switch	\vdash	片		- H -	+
Oil Cooler Fitting			Springs Adjustors	<u> </u>	+ +
Valve Lifters			Solid Pushrods		
					
Tacho Pick-up	 		Pushrod Tubes	<u> </u>	$+$ \vdash
Oil Feed To Heads	 		Rocker Covers	<u> </u>	
Oil Pick-up	\vdash		Valve Guides	ᆜ	
O Rings			Rubber T's		
CRANKSHAFT			Lifter		
Conrods	4		CYLINDERS	<u> </u>	
Conrod Bearings	141	1 1	O Rings	<u> </u>	
Prop Drive			SUMP	<u> </u>	
Front Seal			Long Temp Sender	<u> </u>	<u> </u>
Crank Gear		\	Swept Plenum Chamber	<u> </u>	
CAM		\ _	Induction Pipes		
CAM Gear Outer			O Rings		
CAM Gear Inner			Induction Gaskets		
FLYWHEEL			Heat Shield		
Magnets (ignition)			Induction Hose Joiners		
Vac Drive Plate			EXHAUST PIPES		
Ring Gear			Ex-Gaskets Type		
ALTERNATOR			Bevel Type		
Magnet Ring			OIL COOLER		
Stator			Oil Cooler Adaptor		
PISTONS			Oil Hoses		
Rings			FUEL PUMP		
Gudgeons / Circlips			Push Rod		
IGNITION HARNESS			Gaskets / Spacer		
Plugs	/ [2]		STARTER MOTOR		
Rotors	/ D .		Clutch Assy		
Dizzy Caps	1/0 /) [OIL PUMP		
Dizzy Shafts	// II /\ (Housing		
Dizzy Gears	0 1 / U		Spacer Plate		
Seals Dizzy			Gears		
Rear Seals			CARBY		
Dizzy Case			Fuel Line		
Dizzy Posts			Mount	一百	
Coils			1 1		1

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	Engine	Overhaul	Manual
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Jabiru 2200 & 3300 Aircraft Engines

9.4.12 Ground Run-In Procedure

Table 37 - Ground Run-In Procedure

Pre Ru	ın-In Checks	Correct C Propeller Idle Set	Oil Type & Quantity r Secure	y 🗌		nnection k ignition		re check du	ıring ru	n)
Time	Duration	Condition	RPM		RPM	CH	HT 4/6	Oil Temp	O Pres	
	3	Start and Idle	1400							
	10	Hot Idle Check 1	Idle							
	30 sec / 1	Take-Off Power	Full / 2000							
	1/2	75% Power	2800 / 2000			\				
	1 / 2	Take-Off	Full / 2000							
	15 sec / 2	Full	Full / 2000			1 1				
	2	75% Power	2800)				
	1	Cooling Run	2000	\						
	2	75% Power	2800		_					
	3	Cooling Run	2000			\				
	2/1/2	2800 / 2000 / 2800	1			\				
	2/2	2500 / 2800				}				
	2/3	2500 / 3000				1				
	2/3	2500 / Full								
	3	Cooling Run	1200							
	10	Hot Idle Check 2	Idle							
O.A.T °C										
Alternato	or:	V at 2800 RPM	<i></i>	Use: Aero S	Shell 100/E	xxon 100/	BP Aviati	on Oil 100		
Alternator:										
Top End	(RPM) Comme	ents:		Overal	ll Commen	ts:				
Any Cha	nges / Adjustm	ents Made During Run:		1						
Post Rui	n-In Checks:	Check for Adjust Valv	Oil Leaks ves (solid Lifter)			rque Cylir Induction				
☐ Post-	Run Leak-Dow	n: Cyl 1 80	Cyl 2 80 C	yl 3	80 Cyl	4 80	Cyl 5	80	Cyl 6	80
	Drain Oil & Inh	ibit						'	I	
I hereb	y certify that	this engine has be	en run in accordar	nce with	n Jabiru ı	requirem	ients ar	nd is fit fo	r use.	
Signed	:	D	oate:	for c	Jabiru Air	craft Pty	Ltd			

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9.5 3300 Overhaul Booklet

9.5.1 Job Traveller

Table 38 – Job Traveller

Jabiru Engine – Job T	raveller Form: JABENGJT-1
CASA VH Registration	RA-Aus or Other Registration
Job Number:	Order / Invoice No:
Engine Model:	Engine Serial Number:
Date Received:	Owner:
TSO:	
Work to be done (iaw Jabiru Approved Data & certified to a Trade-In (Full Overhaul) - Top End Inspection - Maintenance (RA-Aus only)	or in the applicable section of the engine overhaul booklet): - Full overhaul & return to owner - Bulk Strip - Other:
Records to be filed: - Copy of ARC - Copy of all job sheets - Report to owner - Job book, completed.	☐ - Jabiru Engine Job Traveller ☐ - Copy of specialist inspection reports - MPI etc. ☐ - Copy of log book entry
Parts Shipped To Jabiru With Engine: - Exhaust extractors - Starter Motor	☐ - Muffler ☐ - Oil Cooler
Use: - School – mainly circuits - School – even mix of circuits and cross-country - Unknown	☐ - School – mainly cross-country ☐ - Private
Reason for Overhaul: Time ExpiredOther:	□-Update Spec
Since manufacture or its last overhaul has the engine has	ad any of the following::
A prop strike or other accident?	No Poor cylinder leak-downs? ☐-Yes ☐-No
High, low or fluctuating oil pressure? ☐-Yes ☐-	No Major work (i.e. top end overhaul) ☐-Yes ☐-No
High oil temperature?	No Been hard to start when hot? ☐-Yes ☐-No
High cylinder head temperatures? ☐-Yes ☐-	No Been hard to start when cold? ☐-Yes ☐-No
Been using a Jabiru or Sensenich Prop?	No
If the engine has had major work, please give a q description of what was done and who carried it out:	uick
Shipping Details:	
· · · · · · · · · · · · · · · · · · ·	aust extractors
Overhauled by:	☐-Jabiru;
INHIBITED Date:	Signed by:

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9.5.2 Engine Deta	ils
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Engine Serial #:	33	Date:

9.5.3 Subassembly A Build Sheet – Crankshaft, Propeller Mount Flange and Conrods Table 39 – Build Sheet A

No.	Details	Initials	Checked By	Date
A 1	Inspect for Burrs, Oil Holes, Chamfers; Clean Crankshaft, Conrods and Propeller Mount Plate			
A2	Inspect Oil Holes and insert Welch Plugs			
А3	Measure Crankshaft (refer to Goods Inwards Inspection Sheet)			
A 4	Inspect and measure Propeller Mount Flange			
A 5	Inspect and measure Conrods (refer to Goods Inwards Inspection Sheet)) }		
A 6	Temporarily Mount Propeller Mount Flange to Crankshaft and bolt to stand			
A7	Fit the Conrods to the Crankshaft; Use Loctite 620 on the bolts and torque to 18 ft.lbs			
A8	Stage A - Stage Inspection of Assembly			

I hereby certify that the above subassembly has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
MPI Release Note No.		

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9.5.4 Subassembly B Build Sheet – Crankcase and Camshaft Assembly

Table	40 _	Ruild	Sheet	R
Iabic	4 0 –	Dullu	SHEEL	ם

No.	Details	Initials	Checked By	Date
B1	Inspect case, deburr, clean, check oil holes			
B2	Fit inner stud "O" rings			
В3	Fit all studs			
B4	Fit outer oil suction welch plugs			
B5	Fit oil relief valve, oil pressure sender and pressure switch			
В6	Fit bearing shells (16)			
B7	Blue surfaces; Assemble and torque			
B8	Measure main tunnel and camshaft bearings			
В9	Disassemble; Measure Cam Follower Bores			
B10	Fit Lifters			
B11	Check Camshaft End Float			
B12	Check Crankshaft End Float			
B13	Stage B - Stage Inspection of Assembly			

I hereby certify that the above subassembly has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

Signed:	Date:	for Jabiru Aircraft Pty Ltd
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9.5.5 Subassembly C Build Sheet – Pistons, Cylinders and Cylinder Heads

Table 41 - Build Sheet C

No.	Details	Initials	Checked By	Date
C1	Clean and deburr all parts	/ \		
C2	Record all measurements	/		
С3	Install pushrod tube 'O' Rings, springs, washers and circlips	/ /		
C4	Check valve seats, fit spring retainers, install valves	/ /		
C 5	Complete rocker shafts, posts and rocker assemblies			
C6	Fit cylinder base 'O' rings			
C 7	Measure and fit front circlip	1		
C8	Check ring end gaps, fit rings to pistons			
C9	Fit cylinders to heads. Torque: 12 ft/lbs / 24 ft.lbs			
C10	Install piston assembly to cylinder just clear of the oil ring			
C11	Stage C - Stage Inspection of Assembly	///		

I hereby certify that the above subassembly has been assembled in accordan	ce with the applicable Jabiru
Pty Ltd Instructions and Maintenance procedures.	

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9.5.6 Subassembly D Build Sheet - Sump

Table 42 - Build Sheet D

No.	Details	Initials	Checked By	Date
D1	Clean and inspect the sump.	/ \		
D2	Clean out blind threads using a suitable sized tap	/		
D3	Ensure all seals and gaskets on plugs and terminals are serviceable.	///		
D4	Stage D - Stage Inspection of Assembly	/ /		

	Sci viocabic.	/ /		
D4	Stage D - Stage Inspection of Assembly			
	y certify that the above subassembly has been assembled in Instructions and Maintenance procedures.	accordanc	e with the applic	able Jabiru
Signed		ı Aircraft Pty		
	Subassembly E Build Sheet – Flywheel, Ignition Coils, St – Build Sheet E	arter Motoi	And Alternato	r
No.	Details	Initials	Checked By	Date
E 1	Clean and de-burr starter ring gear & bendix gears.			
E2	Assemble magnets, pole plates, tacho tags and alternator rotor to flywheel			
E 3	Verify magnet strength and polarity correct	-		
E4	Fit new bushes and bearings to starter motor & bendix gear assembly. Fit new brushes to motor & re-assemble with Loctite 243 (if needed)			
E 5	Stage E - Stage Inspection of Assembly	\setminus		
	y certify that the above subassembly has been assembled in Instructions and Maintenance procedures.	accordanc		able Jabiru

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9.5.8 Subassembly F Build Sheet – Gear Case

Table 44 - Build Sheet F

No.	Details	Initials	Checked By	Date
F1	Deburr, clean and inspect all of the gears	/ \		
F2	Measure the shaft post internal diameters and the distributor shaft diameters			
F3	Using loctite 515 fit the shaft posts to the gear housing	/ /		
F4	Fit the distributor shaft seals and rear crankshaft seal	/ /		
F5	Fit shafts to gears			
F6	Fit the distributor shafts and gears to the gear housing			
F7	Check End Clearance of Distributor Shaft to Case Flange			
F8	Stage F - Stage Inspection of Assembly			

I hereby certify that	he above subassembly has b	peen assembled in accordance with the applicable Jabir	u
Pty Ltd Instructions a	and Maintenance procedures.		
Signed:	Date:	for Jabiru Aircraft Pty Ltd	
9.5.9 Subassembl	y G – Fuel Pump and Carbu	rettor	
Table 45 - Build Sheet	G \		

No.	Check	Size	Initials	Checked By	Date
G1	Main Jet		- /		
G2	Needle Jet				
G3	Idle Jet				
G4	Needle 4A138A0D-1	,	1		
G5	Float seat mm dia				
G6	Gravity Feed Valve 47-969				
G7	Air Bleed Ø1.6mm		77		
G8	Idle Mixture Screw Out 1 Turn				
G9	Choke Jet Ø1.2mm				
G10	Stage G - Stage Inspection of Assembly				

	y certify that the above subassembly has been a Instructions and Maintenance procedures.	assembled in	accorda	inc	e with the applic	able Jabiru
Signed:	Date:	for Jabiru	Aircraft	Pty	Ltd	

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9.5.10 Subassembly H - Final Assembly

Table 46 - Build Sheet H

No.	Details	Initials	Checked By	Date
H1	Apply Loctite 515 to crankcase halves; lubricate where necessary	/\		
H2	Locate camshaft in crankcase half	/ /		
Н3	Locate 2 crankcase halves over crankshaft	/ /		
H4	Stage H1 - Stage Inspection of Assembly	/ /		
H5	Tension front (2) and rear (2)			
Н6	Place all through bolts in crankcase for cylinder bases			
H7	Fit piston and cylinder Assemblies. Check circlips			
Н8	Stage H2 - Stage Inspection of Assembly			
Н9	Tension the cylinder base studs/bolts			
H10	Fit pushrods and valve gear. Set gap to 0.10")]		
H11	Fit sump and induction tubes	/ /		
H12	Check camshaft timing	/		
H13	Fit engine mount plate and gearbox housing	\		
H14	Fit flywheel, alternator mount plate and ignition coils	1		
H15	Fit Carburettor assembly	1		
H16	Fit fuel pump	/		
H17	Fit oil pump assembly			
H18	Fit front seal and propeller flange Torque 30 ft.lbs/Lockwire then std flange lockwire not required			
H19	Fit exhaust system	1		
H20	Stage H3 - Stage Inspection of Assembly			

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9.5.11 Jabiru 3300 - Engine Post Run Procedure - Stage J

Table 47 - Post Run Inspection

No.	Details	Initials	Checked By	Date
J1	Heads re-torqued to 24 ft.lbs. Valves adjusted	/		
J2	Check induction/exhaust bolts			
J3	Any changes to be made			
J4	Rerun, check for oil leaks and/or any modifications made (oil pressure/leaks etc)			
J5	Check charging rate of alternator Volts:			
J6	Leak Down Test Results: 1 2 3 4 5 6 80 80 80 80 80 80 80			
J7	Check all paper work			
J8	Drain fuel/oil. Prepare for shipment, inhibited and sealed			
J9	Stage J - Post Engine Run Procedure Completed			

I hereby certify that the above Post Run Procedure has been assembled in accordance with the applicable Jabiru Pty Ltd Instructions and Maintenance procedures.

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9.5.12 Jabiru 3300 Parts Measure and Clearance Record Sheet

Table 48 - Measure & Clearance Record Sheet

Engine No.				Date:		$-/\Lambda$				
Crankshaft	P/No.			Batch:	Item:	Comments	7			
Crank Mains:	1	2		3	4	5	6	1	7	8
Crankcase Left	P/No.			Batch:		Item:	Co	mment	3	I
Crankcase Right	P/No.		Batch:		Item:	Co	mment	3		
Crankcase Assy	1	2		3	4	5	6	1	7	8
Main Tunnels						/		l		
Clearances	1	2		3	4	5	6		7	8
Crankshaft	P/No.		Batch:		Item:	Comments	7			
Crank Big Ends	1		2		3	4	1	5		6
Conrod Big Ends	1		2		3	4		5		6
Clearances	1		2		3	4	1	5		6
Cicarances							1			
Camshaft	P/No.		Batch:		Item:	Comments	1			
Camshaft Journals	1	2		3	4	5	6		7	8
Camshaft Tunnel	1	2		3	4	5	6	\	7	8
Clearances	1	2		3	4	5	6		7	8
Head 1	P/No.	//	Batch:	40	Item:	Comments				
Head 2	P/No.	1/	Batch:	Λ	Item:	Comments	- 1			
Head 3	P/No.	V	Batch:	\	Item:	Comments	T			
Head 4	P/No.		Batch:	\	Item:	Comments	1			
Head 5	P/No.		Batch:		Item:	Comments		\		
Head 6	P/No.		Batch:		Item:	Comments		1		
In. Valve Guides	1		2	/	3	4		5		6
Ex. Valve Guides	1		2		3	4		5		6
In. Valves	1		2	/	3	4		5		6
Ex. Valves	1		2		3	4	- /	5		6
In. Clearances	1		2/		3	4	- 1	5		6
Ex. Clearances	1		2		3	4		5		6
Cylinder Barrel 1	P/No.		Batch:		Item:	Comments				
Cylinder Barrel 2	P/No.		Batch:		Item:	Comments	1			
Cylinder Barrel 3	P/No.		Batch:		Item:	Comments	1			
Cylinder Barrel 4	P/No.	/ 1	Batch:		Item:	Comments				
Cylinder Barrel 5	P/No.	11	Batch:		Item:	Comments				
Cylinder Barrel 6	P/No.	1/1	Batch:		Item:	Comments				
Barrel 1	Bore:	771	Length:			Barrel 4	-	Bore:		Length:
Barrel 2	Bore:	U 1	Length:			Barrel 5		Bore:		Length:
Barrel 3	Bore:	V	Length:			Barrel 6		Bore:		Length:
Piston Diameters:	1		2		3	4	\ \	5		6
Clearance	1		2		3	4		5		6
Ring Gap Top	1		2		3	4	1	5		6
Ring Gap Bottom	1		2		3	4	+			

hereby certify that the above p	oarts have been me	easured, engraved & installed as recorded.
Signed:	Date:	for Jabiru Aircraft Pty Ltd

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9.5.13 Summary of Parts Used

• Note: Refer to lists in Sections 5.1 and 5.2 for parts which MUST be replaced at overhaul.

Table 49 – Summary of Parts Used

ENGINE NO:			DATE:		
☐ Bulk Strip	☐ Overhaul	☐ Hydraulic			
☐ Maintenance	☐ Top End O	verhaul	☐ Solid Lifter		
	NEW	ORIGINAL	——————————————————————————————————————	NEW	ORIGINAL
CRANKCASE		П	HEADS		
Main Bearings	<u> </u>	$\overline{\sqcap}$	Rockers	$\overline{\Box}$	
Through Bolts	 	<u> </u>	Shafts		
Engine Mount Plate	T i	i i	O Rings	— Fi	T F
Pick Up Stainer	 	- i	Collets		
Oil Pressure Switch	 	H H	Valve		
Oil Pressure Sender	 	H	Springs		
Oil Cooler Fitting	 	H	Adjustors		
Valve Lifters	+ +	H	Solid Pushrods		
Tacho Pick-up		H	Pushrod Tubes		
Oil Feed To Heads	\dashv		Rocker Covers	- H -	\vdash
Oil Pick-up	+		Valve Guides	- H -	+
Oli Pick-up O Rings			Rubber T's	<u> </u>	
CRANKSHAFT		片	Lifter	౼	+ +
Conrods	7	片	CYLINDERS	- -	+ +
	FAA		O Rings	- H	
Conrod Bearings	/ // //	4 A H		<u> </u>	
Prop Drive			SUMP	<u> </u>	<u> </u>
Front Seal		\Box	Long Temp Sender		
Crank Gear		\	Swept Plenum Chamber		<u> </u>
CAM	ㅡ 닏	V _	Induction Pipes		
CAM Gear Outer	ㅡ 닏		O Rings		
CAM Gear Inner	<u> </u>		Induction Gaskets	<u> </u>	<u> </u>
FLYWHEEL	<u> </u>		Heat Shield	<u> </u>	<u> </u>
Magnets (ignition)	<u> </u>		Induction Hose Joiners	<u> <u> </u></u>	<u> </u>
Vac Drive Plate			EXHAUST PIPES		
Ring Gear			Ex-Gaskets Type		
ALTERNATOR			Bevel Type		
Magnet Ring			OIL COOLER		
Stator			Oil Cooler Adaptor		
PISTONS			Oil Hoses		
Rings			FUEL PUMP		
Gudgeons / Circlips			Push Rod		
IGNITION HARNESS			Gaskets / Spacer		
Plugs	/ 🔟		STARTER MOTOR		
Rotors	/ D a		Clutch Assy		
Dizzy Caps	1/0//) [OIL PUMP		
Dizzy Shafts	// 🗆 / \ 🗈		Housing		
Dizzy Gears	0 1 / V		Spacer Plate		
Seals Dizzy			Gears		
Rear Seals			CARBY	$\overline{\Box}$	
Dizzy Case	<u> </u>	i i	Fuel Line	$\overline{}$	<u> </u>
Dizzy Posts	<u> </u>		Mount	$\overline{}$	<u> </u>
Coils	 	i i			
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9.5.14 Ground Run-In Procedure

Table 50 - Ground Run-In Procedure

Pre Run-In Checks: Correct Oil Type & Quantity Check ignitions secure Propeller Secure Check ignitions L/R (check during run) Idle Set								
Time	Duration	Condition	RPM		RPM	CHT 4/6	Oil Temp	Oil Pressure
	3	Start and Idle	1400					
	10	Hot Idle Check 1	Idle			/		
	30 sec / 1	Take-Off Power	Full / 2000		(
	1/2	75% Power	2800 / 2000					
	1/2	Take-Off	Full / 2000					
	15 sec / 2	Full	Full / 2000		1			
	2	75% Power	2800					
	1	Cooling Run	2000					
	2	75% Power	2800					
	3	Cooling Run	2000			\		
	2/1/2	2800 / 2000 / 2800	A /			\		
	2/2	2500 / 2800)		
	2/3	2500 / 3000						
	2/3	2500 / Full				1		
	3	Cooling Run	1200					
	10	Hot Idle Check 2	Idle					
O.A.T °C								
Alternator:V at 2800 RPM					hall 100/Eyyan	100/RP Aviatio	on Oil 100	
Alternator:								
Top End (RPM) Comments: Overall Comments:								
Any Changes / Adjustments Made During Run:								
Post Run-In Checks: Check for Oil Leaks Re-Torque Cylinder Heads Adjust Valves (solid Lifter) Check Induction / Exhaust								
Post-Run Leak-Down: Cyl 1			Cyl 2 80	Cyl 3	Cyl 4	80 Cyl 5	80	Cyl 6 80
☐ Drain Oil & Inhibit								
I hereby certify that this engine has been run in accordance with Jabiru requirements and is fit for use.								
Signed:D			ate:for Jabiru Aircraft Pty Ltd					
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