PT. SMART CAKRAWALA AVIATION

WORK ORDER

Form: SCA/MTC/030

Subject : **Propeller Assy Replacement**	No.	WO/040-SNM/II/2023
	Date	9 February 2023
	A/C Reg.	PK-SNM 208-00655
Reference : MP C208B Issued 01	Prepared By	TS
	Checked By	CI
	Approved By	TM

To : Engineer In Charge

Description :

1. Perform Propeller Assy Replacement.
2. Make an entry in Maintenance Log.
3. Return the Completed Work Order and Form to PPC.

#If any finding, please close the routine card, and transferred to inspection card.

Additional Work :

-NIL-

Compliance Statement	Sign & Date	Signature
PROPELLER ASSY REPLACEMENT CARRIED OUT	Company Lic. No.: 14 / 03 / 2023 (Engineer In Charge)	(Technical Manager)

PT. SMART CAKRAWALA AVIATION

CERTIFICATE RETURN TO SERVICE

SCHEDULED MAINTENANCE INSPECTION

(CRS-SMI)

A/C TYPE	: CESSNA 208	TTSN	: 4128:42
A/C REG	: PK-SNM	TCSN	: 5622
MSN	: 208-00655	DATE	: 14-03-2023

TYPE OF INSPECTION	: PROPELLER ASSY REPLACEMENT
DUE AT	: 4000 HOURS
REFF	: MP C208B ISSUED 01

EXCEPTION

- NO EXCEPTION -

AUTHORIZED PERSON

I hereby certify that this aircraft has been maintained accordance with CASR and Maintenance Program. Aircraft safe and airworthy for flight

NAME	CAT	AMEL/OTR NO	SIGN&STAMP	DATE
RIZAL GHAZALI	AIRFRAME & POWER PLANT	9694 SCA 021		14/03/2023
	EIRA			

THE NEXT DUE TYPE OF INSPECTION : PROPELLER OVERHOUL

DUE AT : 6521:00 HOURS

Form: SCA/MTC/049

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SUMMARY INSPECTION ITEMS
(Form: SCA/MTC/050)

WO Ref: WO/040-SNM/II/2023

NO.	TASK CARD NO.	DESCRIPTION	DATE	EST MHR	NAME	STAMP	INSPECTOR
1	B07	PT6A-114A ENGINE GROUND RUN PERFORMANCE	14/03/2023		RIDAL. G	21	
2	NRC-001	REMOVAL & INSTALLATION OF PROPELLER ASSY 3GFR34C703 ON CESSNA C208/C208B REF: 013/EO/TEK-TS/II/2023	14/03/2023		RIDAL. G	21	

Appendix B07 – PT6A-114A Engine Run Performance Sheet

Reg. Mark : PK- SNM

WO/FML No. : WO 1040 -SNM/II/2023

PRE – INSPECTION	
Location	
Date	
Cycle	
Filed Barometric	
OAT	
Altitude	

POST – INSPECTION	
Location	TAALINAU
Date	14-03-2023
Cycle	
Filed Barometric	1008
OAT	33
Altitude	80

PRE – INSPECTION	Target	Actual
Tq		
Np		
ITT	°C	°C
Ng	%	%
Wf		
Oil Press		°C
Oil Temp		°C
Start Temp		°C

POST– INSPECTION	Target	Actual
Tq		1865
Np		1880
ITT	°C	743 °C
Ng	%	97.9 %
Wf		448
Oil Press		88 °C
Oil Temp		71 °C
Start Temp		720 °C

Engine Run Up Checks						
Inertial ☑	EPL ☑	OVG ☑	Stby Alt ☑	BOV ☑	Brake ☑	Randown ☑

NOTE:

1. Brake system at Torque 1500 ft-lbs.
2. Inertial Separator at Torque 400 ft-lbs.
3. EPL check can't exceed 4% Ng per second.
4. Standby Alt at 80% Ng.
5. Low idle at 52.5 – 53.5% 40Amps.
6. High idle at 64 - 66% Ng 40Amps.

Engine Performance Target Table Cessna C208

OAT (°C)	27	28	29	30	31	32	(33)	34	35	36	37	38	39	40	41
Tq (ft.lbs)	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865	1865
Np	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ITT (°C)	772	775	778	780	785	790	793	795	797	800	800	800	802	805	810
Ng (%)	98.5	98.5	99	99	99.1	99.2	99.4	99.5	99.5	100	100	100.2	100.5	100.7	100.9
WF (PPH)	450	450	450	450	450	450	450	450	450	450	450	450	448	448	446

Note:

1. Make sure that inertial separator in normal condition, no bleed air extracted from the engine and air condition OFF.
2. This table only applies to altitude 0-500 feet MSL. For higher altitude, refer to EMM 72-00-00.
3. Max fuel flow is 465 lb/hr fuel flow is not more than 15 lbs/hr higher than the value shown in table.
4. If parameters are outside the target performance table to EMM chapter 71-00-00.

REMARKS:

-ALL ENGINE PARAMETER DURING RUN UP FOUND WITHIN LIMIT -

PERFORMED BY			
Name	Sign & Stamp	Date	Location
RIZAL.G		14/03/2023	MALINAU

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NON ROUTINE CARD
(Form: SCA/MTC/047)

1. JO/WO #	2. DATE	3. MTC TYPE	4. A/C REG/MSN
WO/040-SNM/II/2023	14-MAR-2023	COMPONENT REPLACEMENT	PK-SNM
5. CARD #	6. ATA SPEC	7. TRADE	8. STA
001	61		LNU
9. ZONE	10. PANEL	-	
PROPELLER			

11. DESCRIPTION

PERFORM REMOVAL & INSTALLATION OF PROPELLER ASSY 3GFR34C703 ON CESSNA C208/C208B REF ENGINEERING ORDER NO. 013/EO/TEK-TS/II/2023

OFF: MODEL: 3GFR34C703
SN OFF: 190085

ON: MODEL: 3GFR34C703-B
SN ON : 000930

REFERENCE	☒ AMM Ch. 61-11-00	☐	☐ OTHER
RII (*)	☒ Y	☐ N	MHR :

12. RESULT

PERFORMED REMOVED & INSTALLATION PROPELLER ASSY REFER TO EO : 013/EO/TEK-TS/II/2023 PERFORMED ENGINE RUN UP ALL PARAMETER FOUND SATISFY : IPS : 0.06 REF. 61-11-00

Performed at A/C TT : 4128:43 A/C TC /LDG : 5622

MECH	ENG	INSP (*)

FINDING	☐ Y	☑ N	ACT MHR :	DATE/TIME (DD/MM/YY)		
INSPECTION CARD (IC) #				14	03	2023

13. PARTS REQUIRED

DESCRIPTION	PART NO	QTY	REMARK	
			STOCK	STATUS
PROPELLER ASSY	3GFR34C703-B	1 ASSY		

14. TOOLS REQUIRED

DESCRIPTION	PART NO / MODEL	NEXT CALIBRATION DATE	STATUS
REFER TO WO/040-SNM/III/2023			

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9. Accomplishment Instructions.

PROPELLER REMOVAL

Date : 12-03-2023

Part No. Propeller : 3GFR34C703-___

Ser. No. Propeller : 190085

Propeller Time TSN: 4128:42 TSO: 0

Removed from A/C Reg.: PK-SNM

WO Number : WO/040-SNM/II/2023

A/C Total Hours : 4128:42

A/C Total Landings : 5622

Description	Eng.	RII	Remarks
A. REMOVE PROPELLER (Refer to Figure 01 to 04)			
CAUTION: Do not forcibly pull the feedback collar against the guide which limits the forward travel.			
1. Turn electrical power off.			
2. Open upper right hand cowling and remove right nose cap. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.			
3. Disconnect propeller reversing lever (26) from control cable and beta valve clevis (25).			
4. Remove propeller reversing lever (26) and carbon block (24) from propeller feedback collar (23). Refer to Pratt & Whitney Engine Maintenance Manual PT6A-114A chapter 76-10-00 Page 201 for removing the propeller reversing lever.			
5. Remove spinner (17) by removing screws (19) and fiber washers (18).			
6. If propeller anti-ice is installed, loosen nuts securing anti-ice brush block assembly (22) and carefully insert an electrical tie strap between brushes and slip ring (15). Secure brushes in holder and remove brush block assembly and bracket.			
7. Install assembly tool, D-5945, on forward end of beta rods (5). **NOTE:** Do not disturb beta rod nuts. The position of beta rod nuts, with respect to the beta rod, determines the low pitch setting. **NOTE:** Adjustment of low pitch setting may only be performed by an approved propeller repair station.			

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8. Pull beta rods forward until roll pin on tool bottoms against the plate. This will position feedback collar forward to make mounting nuts accessible.			
9. Attach lifting sling to hoist and position hoist forward of the airplane. Attach sling to propeller by positioning blades at 10 O'clock and 2 O'clock			
10. Position drip pan under propeller to catch residual oil which will drain from the propeller when removed.			
11. Remove mounting nuts (9) and spacers (8)			
12. With propeller supported by the sling, remove propeller from engine flange (10).			
13. If removal of the spinner bulkhead (13) is required on standard propeller, remove screws (11) and washers (12) and remove bulkhead. On propeller with anti-ice installation, remove screws securing anti-ice leads (21) to slip ring (15) and screws securing lead clamps to bulkhead.			
14. Make an appropriate entry in work order and Aircraft Flight & Maintenance Log (AFML).			

***** END OF THE TASK *****

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PROPELLER INSTALLATION

Date	: 14-03-2023	Work Number	:
Date	: 14-03-2023	WO Number	: WO/040-SVM/II/2023
Part No. Propeller	: 3GFR34C703-B	A/C Total Hours	: 4128:42
Ser. No. Propeller	: 000930	A/C Total Landings	: 5622

Propeller Time TSN: 2524 TSO: 0

Removed from A/C Reg.:

Description	Eng.	RII	Remarks
B. INSTALL PROPELLER (Refer to Figure 01 to 04).			
1. Ensure airplane electrical power is OFF.			
2. If spinner bulkhead (13) was removed, position spinner bulkhead on propellerand install washers (12) and screws (11). **Torque screws (11) 20 to 25 inch-pounds.**			
3. On propeller with anti-ice installation, install screws securing anti-ice leads (21) to slip ring (15) and secure leads to bulkhead using screws and clampsremoved.			
4. Install Beta Ring Puller D-5945 tool.			
5. Apply a light coating of engine oil to O-ring (14) and install in the propeller hub.			
6. Inspect stud and nut threads for cleanliness and absence of nicks, burrs or other damage.			
7. Apply MIL-PRF-83483C (Locktite Moly-50 or equal) lubricant liberally to propeller studs, nut threads and both faces of spacers (8). **CAUTION:** It is important that propeller be seated against engine flange with a straight push. Rotation, cocking or wiggling will damage the o- ring groove and oil leakage may result.			
8. With propeller supported by a hoist and sling position propeller on engine flange (10) and install spacers (8) and nuts (9). Keeping the B-5588 torque wrench adapter or equivalent, at a 90 degree angle to the torque wrench **torque nuts 68 to 72 foot-pounds.**			

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9. On propeller with anti-ice installation, install anti-ice brush block assembly(22). Clearance between anti-ice brush block and slip ring is 0.064 inch, +0.015 or -0.015 inch. Torque the nuts that attach the brush block bracketassembly to the engine from **145 to 165 inch-pounds (16.38 to 18.64 N-m).**			
10. Remove Beta Ring Puller D-5945 tool. **NOTE:** The lower end of the propeller reversing lever is machined with astepped notch. **CAUTION:** Make sure the stepped notch at the end of the propeller reversing lever (26) is under the guide pin (37) in the reversinglever guide pin bracket (36).			
11. Install propeller reversing lever (26) and carbon block (24) in propeller feedback collar (23). Refer to Pratt & Whitney Engine Maintenance Manual for installing the propeller reversing lever.			
12. Connect propeller reversing lever (26) to control cable and beta valve clevis(25).			
13. To facilitate propeller dynamic balancing, remove all previously installedpropeller weights from spinner bulkhead.			
14. Slide spinner support (1) on feathering spring housing (2). **CAUTION:** Perform the following procedure exactly as written to preventdamage.			
15. Lightly press spinner (17) against spinner support (1) and check alignment ofspinner holes with spinner bulkhead holes. Spinner holes should be approximately 1/2 hole diameter forward from alignment with bulkhead holes. If not add or remove shims (16) to obtain this alignment.			
16. Once shimming is complete, push hard on front of spinner to align holes andinstall screws (19) and washers (18).			
17. Install propeller dynamic balancing test equipment.			
18. Perform RII inspection before first engine start.			
19. Install right nose cap half and close cowling.			
20. Start engine I.A.W Pilots Operating Handbook and FAA Approved Airplane Flight Manual.			

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21. Perform propeller dynamic balancing ref. C208B MM chapter 61-11-00 Dynamic balancing (McCauley) – Adjustment test. Refer also to related balancer tools manual.			
22. Make an appropriate entry in Work Order and Aircraft Flight & Maintenance Log (AFML).			

MAINTENANCE RELEASE

I hereby certify that the above stated maintenance and/or inspection was performed in accordance with the approved Aircraft Maintenance Program and meets requirements of Civil Aviation Safety Regulations.

	ENGINEER		**RII**
Name	: RIDZAL GHAZALI	Name	: ROHPINDO . N.S.P
Signature	:	Signature	:
Stamp	:	Stamp	:
Place/Date	: LNU, 14-03-2023	Place/Date	: LNU / 14-MAR-2023