PT. SMART CAKRAWALA AVIATION

WORK ORDER

Form: SCA/MTC/030

Subject : **ENGINE REPLACEMENT**	No.	WO/033-SNI/IV/2023
	Date	14 April 2023
	A/C Reg.	PK-SNI C208B-5068
Reference : MP C208B ISSUED 01	Prepared By	TS
	Checked By	CI
	Approved By	TM

To : Engineer In Charge

Description :

1. Perform Engine 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 :

Compliance Statement	Sign & Date Company Lic. No.:	Signature
	20/04/2023 BUDI HARTOYO (Engineer In Charge)	(Technical Manager)

AIRCRAFT CHECK WORK SUMMARY
(Form: SCA/MTC/051)

DATE OF ISSUED	JO/WO #	TYPE OF MAINTENANCE	DATE OF ACCOMPLISHED
14 April 2023	WO/033-SNI/IV/2023	Replacement	

A/C Type	Mfg. Serial Number	A/C Registration
C208B	C208B-5068	PK-SNI

AIRCRAFT DATA

Subject	Pos #	Serial Number (SN)	TTSN/TCSN
Engine	#1	PCE-VA0073 - REMOVED	
	#2	-	
Propeller/Rotor	#1	200707	
	#2	-	
Landing Gear	NLG		
	LH MLG		
	RH MLG		

PACKAGE COVERED

No	Subject	Qty	Remark
1	Non-Routine Card	1	
2	Inspection Card	1	
3	Work Order	1	
4	Summary Inspection List	1	
5	Material and Tool List	-	
6	Escalation form	-	
7	CRS (SMI / Unscheduled Maintenance)	1	

INSPECTION CARD (IC) LIST (Finding during maintenance)

No	Taskcard Ref	Subject	Status		Name/ Sign & Stamp
			Open	Close	
IC-001					
IC-002					
IC-003					
IC-004					
IC-005					
IC-006					

[illegible]00[illegible]					
[illegible]008					
[illegible]00[illegible]					
[illegible]010					
[illegible]011					
[illegible]01[illegible]					
[illegible]013					
[illegible]01[illegible]					
[illegible]01[illegible]					

[illegible]rep[illegible]red[illegible]	[illegible]checked[illegible]	Ver[illegible]ied[illegible]	Appr[illegible]ved[illegible]
Technical Support	Chief Maintenance	Chief Inspector	Technical Manager
Dwi M.	Dodit	Yanuar	Istiono

Appendix B - Form: **SCA/MTC/051**

PT. SMART CAKRAWALA AVIATION

CERTIFICATE RETURN TO SERVICE

SCHEDULED MAINTENANCE INSPECTION
(CRS-SMI)

A/C TYPE	: CESSNA 208B	TTSN	: 00:00
A/C REG	: PK-SNI	TCSN	: 0
MSN	: C208B-5068	DATE	: 20/09/2023

TYPE OF INSPECTION : ENGINE REPLACEMENT
DUE AT : UNK
REFF : MP C208B ISSUED 01

EXCEPTION

nil

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
BUDI HARTOYO	AIRFRAME & POWER PLANT	9506/SCA32		20/04/2023
	EIRA			

THE NEXT DUE TYPE OF INSPECTION :

DUE AT :

Form: SCA/MTC/049

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

WO Ref: WO/033-SNI/IV/2023

NO.	TASK CARD NO.	DESCRIPTION	DATE	EST MHR	NAME	STAMP
1	B08	PT6A-140 ENGINE GROUND RUN	18/04/2023		Budi. H.	
2	EO-004	PT6A-140 ENGINE REPLACEMENT	15/04/2023		Budi. H.	
3	NRC-001	PT6A-140 ENGINE REPLACEMENT	15/04/2023		Budi. H	
4	NRC-002	PT6A-140 S/N PCE-VA 0802 DEPRESERVATION	18/04/2023		Budi. H	
5	NRC-003	COMPASS SWING	20/04/2023	2	Wahyono	
6	APPENDIX E06.7	PROPELLER BALANCING	20/04/2023	2	Budi. H.	
7	SCA/MTC/023	EMERGENCY EQUIPMENT CHECK	20/04/2023	1	Budi. H	

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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/033-SNI/IV/2023		COMPONENT REPLACEMENT	PK-SNI
5. CARD #	6. ATA SPEC	7.TRADE	8. STA
001	71		
9. ZONE	10. PANEL		
POWERPLANT			

11. DESCRIPTION

ENGINE REPLACEMENT PT6A-140 P/N

OFF : 3076226-01/BS1294 S/ P/N ON : 3076226-01/BS1294

S/N OFF : PCE-VA0073 S/N ON: PCE-VA 0802

REFERENCE	☒ AMM	☐ EMM	☐ OTHER
RII (*)	☒ Y	☐ N	MHR :

12. RESULT

Performed at A/C TT : 8046 : 18 A/C TC /LDG : 13585

	MECH	ENG	INSP (*)

FINDING	☐ Y	☑ N	ACT MHR :	DATE/TIME (DD/MM/YY)		
INSPECTION CARD (IC) #				20	04	2023

13. PARTS REQUIRED

DESCRIPTION	PART NO	QTY	REMARK	
			STOCK	STATUS
NP TACHOMETER	3055738-01	1	-	SERVICEABLE
NG TACHOMETER	3055738-01	1	-	SERVICEABLE

14. TOOLS REQUIRED

DESCRIPTION	PART NO / MODEL	NEXT CALIBRATION DATE	STATUS

1. Autorité de l'aviation civile/Pays qui approuve le bon de sortie Approving Civil Aviation Authority/Country	2. **BON DE SORTIE AUTORISÉE - AUTHORIZED RELEASE CERTIFICATE**	3. Numéro de suivi du formulaire - Form Tracking No.
Transport Canada	**FORM ONE**	SEE BLOCK 5
4. Nom et adresse de l'organisme - Organization Name and Address Pratt & Whitney Canada Cie. / Pratt & Whitney Canada Corp. 4045 – 26 AVE. North Lethbridge, Alberta. Canada T1H 6G2		5. Bon de travail/Contrat/Facture – Work Order/Contract/Invoice 4001566309

6. Article - Item	7. Description	8. Numéro de pièce - Part Number	9. Qtée. – Qty.	10. Numéro de série/de lot - Serial/Batch Number	11. Situation/Travail - Status/Work
1	PT6A-140 TURBOPROP GAS TURBINE ENGINE	3076226-01 – BS1294	1	PCE-VA0802 Includes PS-VA0802	NEW

12. Remarques - Remarks

CERTIFIES THAT THE ITEM IDENTIFIED ABOVE WAS MANUFACTURED IN CONFORMITY TO APPROVED DESIGN DATA AS IDENTIFIED IN THE CANADIAN TYPE CERTIFICATE NUMBER E-15, TO ITS UNITED STATES TYPE DESIGN APPROVED UNDER THE UNITED STATES FEDERAL AVIATION ADMINISTRATION (TYPE CERTIFICATE NUMBER E4EA, REVISION LEVEL 30, DATED 16 JUNE 2021), TO ITS EASA APPROVED TYPE CERTIFICATE NUMBER IM.E.094 AND TO THE CIVIL AVIATION ADMINISTRATION OF CHINA APPROVED TYPE CERTIFICATE NUMBER VTC147E. THIS AIRCRAFT ENGINE IS FOUND TO BE IN A CONDITION FOR SAFE OPERATION AND HAS UNDERGONE A FINAL OPERATIONAL CHECK.

13a. Le présent bon de sortie certifie que les articles indiqués ci-dessus ont été construits conformément à :
Certifies that the items identified above were manufactured in conformity to:

☒ des données de conception approuvées et qu'ils peuvent être utilisés en toute sécurité.
approved design data and are in condition for safe operation.

☐ des données de conception non approuvées indiquées à la case 12.
non approved design data specified in block 12.

14a.

☐ RAC 571.10 (certification après maintenance) - CAR 571.10 Maintenance Release.

☐ Autre réglementation précisée à la case 12. - Other regulations specified in block 12.

Le présent bon de sortie certifie que, sauf indication contraire à la case 12, le travail indiqué à la case 11 et décrit à la case 12, a été effectué conformément au *Règlement de l'aviation canadien*.
Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, has been performed in compliance with the *Canadian Aviation Regulations*.

13b. Signature	13c. Numéro de l'organisme agréé Approved Organization Number	14b. Signature	14c. Numéro de l'organisme agréé Approved Organization Number
T.C. 4-58 NO. 003	4-58	S/O – N/A	S/O – N/A
13d. Nom - Name	13e. Date (jj/mmm/aaaa – dd/mmm/yyyy)	14d. Nom - Name	14e. Date (jj/mmm/aaaa – dd/mmm/yyyy)
G. GERTRIDGE	2 3 MAR 2022	S/O – N/A	S/O – N/A

P&WC 5726 (2020-12) – QMSP 16-02

*Le monteur doit contre-vérifier l'admissibilité avec les données approuvées - * Installer must cross-check eligibility with approved data -

RESPONSABILITÉS DU MONTEUR - INSTALLER RESPONSIBILITIES

1. Le présent bon de sortie ne constitue pas une autorisation de montage. - 1. This certificate does not constitute authority to install.
2. Le monteur qui travaille conformément à la réglementation d'un pays autre que celui spécifié à la case 1 doit s'assurer que la réglementation en question reconnaît la certification du pays ainsi spécifié. - 2. Installers working in accordance with the national regulations of a country other than specified in block 1 must ensure that their regulations recognize certifications from country specified 3. Les déclarations des cases 13a et 14a ne constituent pas une certification du montage. Dans tous les cas, le dossier technique de l'aéronef doit inclure une certification de montage délivrée conformément à la réglementation nationale qui s'applique, avant que l'aéronef puisse voler.
3. Statements in block 13a and 14a do not constitute installation certification. In all cases, the technical record for the aircraft must contain an installation certification issued in accordance with the applicable national regulations before the aircraft may be flown.

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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/033-SNI/IV/2023		DEPRESERVATION	PK-SNI
5. CARD #	6. ATA SPEC	7. TRADE	8. STA
002	71		
9. ZONE	10. PANEL		
CARGO POD			

11. DESCRIPTION

ENGINE PT6A-140 (NEW – STORAGE)

P/N ON : 3076226-01 / BS1294

S/N ON : PCE-VA0802

REFERENCE	☐ AMM	☒ EMM	☐ OTHER
RII (*)	☐ Y	☒ N	MHR :

12. RESULT	MECH	ENG	INSP (*)
Performed at A/C TT : ..... A/C TC /LDG :			

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

13. PARTS REQUIRED

DESCRIPTION	PART NO	QTY	REMARK	
			STOCK	STATUS

14. TOOLS REQUIRED

DESCRIPTION	PART NO / MODEL	NEXT CALIBRATION DATE	STATUS

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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/033-SNI/IV/2023		**COMPASS SWING**	**PK-SNI**
5. CARD #	6. ATA SPEC	7. TRADE	8. STA
003	**34**		
9. ZONE	10. PANEL		
NAVIGATION			

11. DESCRIPTION

COMPASS SWING AFTER ENGINE INSTALLATION

:

REFERENCE	☐ AMM	☒ EMM	☐ OTHER
RII (*)	☐ Y	☒ N	MHR :

12. RESULT	MECH	ENG	INSP (*)
Performed at A/C TT : ..... A/C TC /LDG :			

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

13. PARTS REQUIRED

DESCRIPTION	PART NO	QTY	REMARK	
			STOCK	STATUS

14. TOOLS REQUIRED

DESCRIPTION	PART NO / MODEL	NEXT CALIBRATION DATE	STATUS

ENGINEERING ORDER

004/EO/TEK-TS/IV/2023

REMOVAL & INSTALLATION OF ENGINE ASSY PT6A-140 ON CESSNA C208B

PT. SMART CAKRAWALA AVIATION

Prepared	Checked	Approved
Technical Support	**Chief Inspector**	**Technical Manager**
Signature:	Signature:	Signature:
Name: Dwi M.	Name: Yanuar A. Fatah	Name: Istiono
Date: 14 Apr 2023	Date: 14 Apr 2023	Date: 14 Apr 2023

SMART AVIATION
ENGINEERING ORDER

	No. EI: **004/EO/TEK-TS/IV/2023**	Rev. No. : **ORIGINAL**
	Date Issued : **May 10, 2022**	
Task Description : **REMOVAL & INSTALLATION OF ENGINE ASSY PT6A-140 ON CESSNA 208B**	Data Reference : - **Model 208 Series Maintenance Manual Revision 39, Revision Date Mar 1, 2023 Chapter 71 Power Plant – Maintenance Practices**	
Aircraft Type : **CESSNA 208B WITH ENGINE MODEL PT6A-140**		

SMART AVIATION
ENGINEERING ORDER

1. Description.

This EO is issued, to perform removal & installation checklist powerplant maintenance practices the PT6A-140 engine on Cessna 208B.

2. Aircraft Effectivity.

REGISTRATION	SERIAL NUMBER
PK-SNI	208B-5068

3. Compliance

The Engine model PT6A-140 have TBO 4000 Hours, do a removal the engine installed on airframe refer to accomplishment instruction task card, and install the overhauled/new engine on the aircraft refer to accomplishment instruction task card.

4. Distribution.

TECHNICAL MANAGER	[√]	MATERIAL SUPPORT	[√]
SAFETY & QUALITY MANAGER	[√]	TECHNICAL SUPPORT	[√]
CHIEF INSPECTOR	[√]	FILE	[√]

5. Manhours

32.0 man-hour to do the inspection.

SMART AVIATION
ENGINEERING ORDER

6. Material.

3074153-01 PROPELLER GOVERNOR
A 1633-72 O-RING HUB TO PROPELLER SHAFT ✓ 1
A 1639-32 NUT ✓ 8
B 5096 SPACER
B 5121 FEEDBACK ASSY
MS 206685 GASKET PROPELLER OVER SPEED GOVERNOR
206684G or 303952 GASKET PROPELLER GOVERNOR
AN 4044-1 GASKET STAR-GEN
S 3346-1 GASKET PROPELLER TACHOMETER
S 3346-1 GASKET NG TACHOMETER
S 3346-1 GASKET STBY ALTERNATOR
S 3346-1 GASKET AC COMPRESSOR DRIVE UNIT
AN363-720 NUT
MS24665-302 COTTER PIN MOUNT BRACKET TO MOUNT RING
VSF1015N12B SEAL CONICAL
9910333-1 ELASTOMER
MS24665-302 COTTER PIN
MS24665-134 COTTER PIN
MS24665-86 COTTER PIN
3007342 GASKET
S2808/AE3663 HOSE OIL
MIL PRF 83483C LUBRICANT FOR THREAD PROPELLER
MIL W-G-632 LUBRICANT FOR COMPRESSOR DRIVE UNIT, PLASTILUBE
2380 ENGINE OIL

7. Special Tool Required.

Propeller Special tool D-5945 1 SET
7/8 inch special tool 1 SET
MASTER COMPASS

8. Publication Affected.

None.

SMART AVIATION
ENGINEERING ORDER

9. Accomplishment Instructions.

C208B ENGINE REMOVAL

Date : 20/04/2023

Work Number : 004/EO/TEK-TS/IV/2023

Part No. Engine : PT6A-140

A/C Total Hours : 8026 : 48

Ser. No. Engine : PCE-VA0802

A/C Total Landings : 13585

Engine Time TSN:_____ TSO:_____

CSN:_____ CSO:_____

Removed from A/C Reg. : PK- SNI

Description	Eng.	RII	Remarks
A. REMOVE ENGINE (Refer to Figure 201 and Figure 202)			
CAUTION: Chock main wheels and place a tailstand under tailcone before attempting engine removal.			
1. Remove external electrical power from the airplane.			
2. Pull fuel firewall shutoff control out (off).			
3. Remove the cowling components as follows. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices: (a) The upper cowling doors. (b) The lower cowling panels. (c) The right nose cap.			
4. Use the filter drain to drain the residual fuel from lines and fuel filter. Refer to Chapter 28, Fuel Lines, Valves and Filters - Maintenance Practices.			
5. Remove the fuel supply hose at the fuel heater. Refer to Chapter 73, Oil-To-Fuel Heater - Maintenance Practice section of the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications.			
6. Remove the fuel motive flow hose at the motive flow shut-off valve. Refer to Chapter 73, Fuel Control Unit - Maintenance Practices section of the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications.			
7. Remove the oil cooler. Refer to Chapter 79, Oil Distribution - Maintenance Practices (PT6A-140).			

SMART AVIATION
ENGINEERING ORDER

8. Remove top cowl center panel assembly and nosecap. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices			
9. Remove the propeller. Refer to Chapter 61, Propeller (Hartzell) - Maintenance Practices.			
10. Disconnect and remove propeller speed control cable. Refer to Chapter 76, Quadrant Assembly And Controls - Maintenance Practices.			
11. Remove the left nose cap/induction air duct/inertial air separator. Refer to Chapter 71, Inertial Air Separator - Maintenance Practice			
13. Disconnect the cabin heater bleed air line at the flow control valve. Chapter 21, Compressor Bleed Air Heater - Maintenance Practices.			
14. Disconnect the bleed air hose at mixing air valve. Chapter 21, Compressor Bleed Air Heater - Maintenance Practices			
15. Remove the starter/generator cooling air hose from starter/generator. For the 300 Amp Starter/Generator refer to Chapter 80, 300 AMP Starter/Generator Cooling Air Duct - Maintenance Practices. For the 200 Amp Starter/Generator refer to Chapter 80, Starter/Generator Cooling Air Blast Tube - Maintenance Practices			
16. Remove the oil pressure switch supply hose. Refer to Chapter 79, Oil Pressure Switch - Maintenance Practices			
17. Remove engine fire detector wiring harness. Chapter 26, Fire Detection System - Maintenance Practices			
18. Disconnect electrical wiring connectors and ground wires at the following equipment locations: • Battery Connector (PN004) (aft right side of engine) • Prop Overspeed Valve Connector (PN041) (left front of engine) • NP Speed Tach (PN033) (right front of engine) • Cabin Heat Bleed Air Valve connector (PN043) (lower right side of engine) • Oil Pressure Switch (PN030) (right side on engine truss). • Oil Temperature Sensor connector (PN031) (right rear of engine) • NG Speed Tach (PN034) rear, (lower right side of engine) • Starter Generator Connector (PN002) (center top of engine accessory case) • Ignition Exciter Connector (PN040) (right engine mount truss) • Fuel Flow Connector (PN032) (rear, lower right side of engine) • Torque Transducer (PN038) (right engine mount truss)			

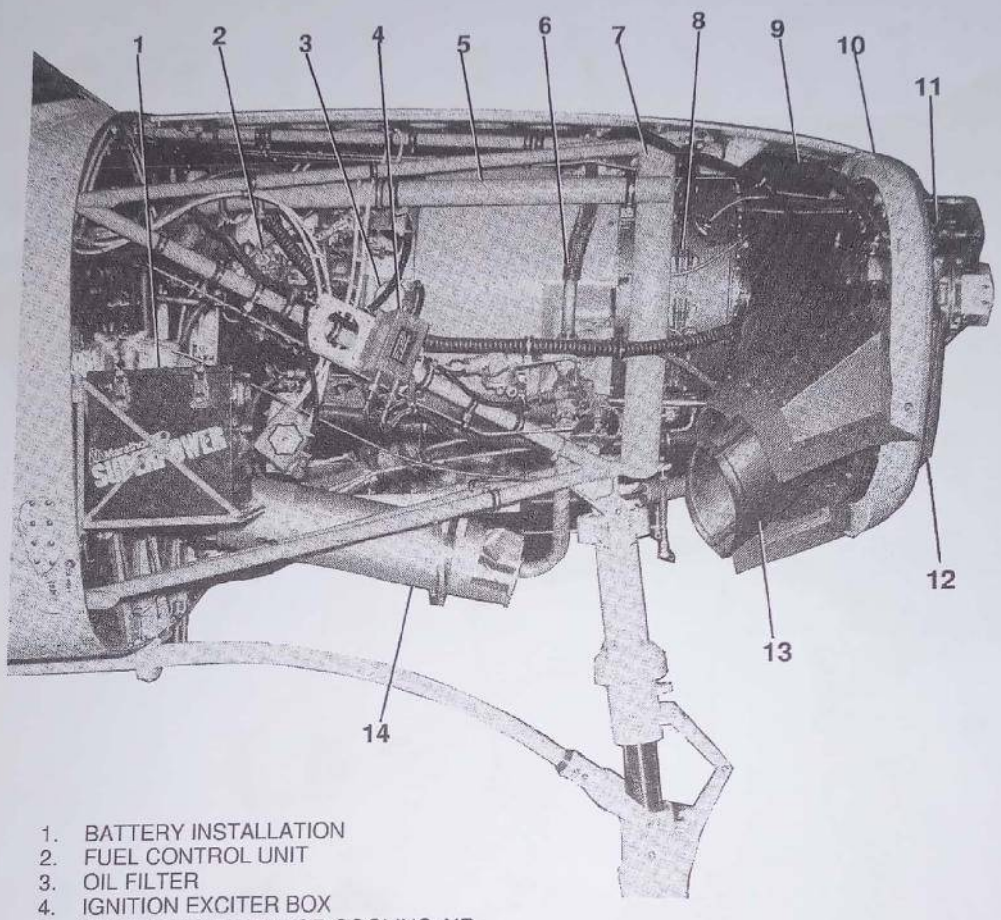
SMART AVIATION
ENGINEERING ORDER

• RGB Chip Detector (PN035) (right engine mount truss) • Engine ground straps airplane frame connections.			
19. Dionnect the engine power control cables at fuel control unit. Refer to Chapter 73, Fuel Control Unit - Maintenance Practices section of the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications.			
20. Remove torque meter pressure and vent lines at forward upper right side of engine mount truss. Refer to Chapter 77, Wet Torque Indicating System - Maintenance Practices (PT6A-140).			
21. Connect hoist sling to forward and aft lifting brackets and connect sling to engine hoist.			
22. Raise hoist to just support weight of engine and remove nuts and bolts at each of four corners of engine mounting ring.			
23. Make sure that all wiring and lines are free, then carefully move hoist and engine forward to clear engine mount truss.			
24. If engine is to be returned for overhaul or replaced refer to Prepare Engine to Send for Service.			

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

SMART AVIATION
ENGINEERING ORDER

A21758

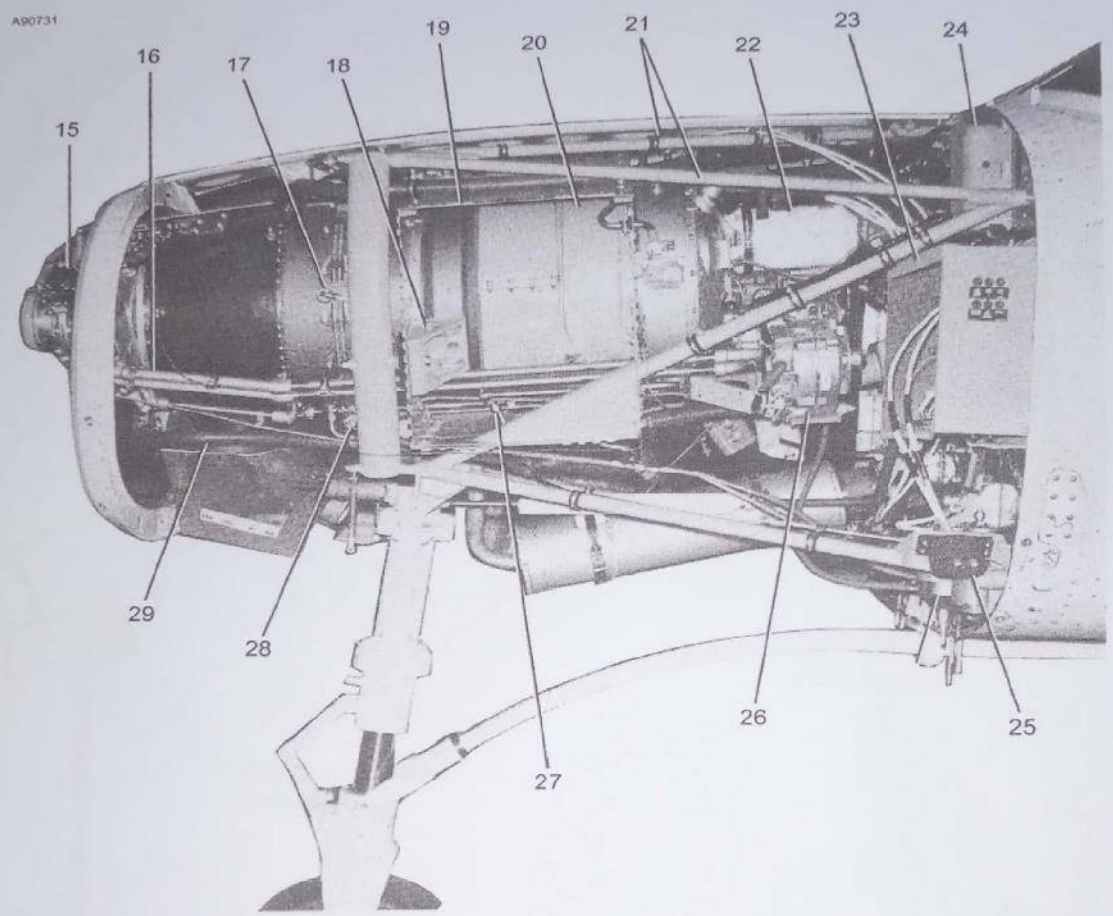


1. BATTERY INSTALLATION
2. FUEL CONTROL UNIT
3. OIL FILTER
4. IGNITION EXCITER BOX
5. STARTER/GENERATOR COOLING AIR BLAST TUBE
6. BLEED AIR PRESSURE LINE
7. ENGINE MOUNT RING
8. FUEL MANIFOLD
9. OIL RETURN FROM OIL COOLER
10. RIGHT COWLING BULKHEAD
11. PROPELLER GOVERNOR
12. OIL COOLER
13. PRIMARY EXHAUST STACK
14. BLEED AIR HEATER MUFFLER

2650X1002

Figure 201 Sheet 1

SMART AVIATION
ENGINEERING ORDER



15. PROPELLER OVERSPEED GOVERNOR
16. REDUCTION GEARBOX OIL LINES
17. SPARK IGNITER
18. ENGINE MOUNT BRACKET
19. INDUCTION AIR PLENUM
20. COMPRESSOR INLET
21. ENGINE MOUNT TRUSS
22. STARTER/GENERATOR
23. POWER DISTRIBUTION BOX
24. STANDBY ALTERNATOR CONTROL UNIT
25. AUXILIARY POWER RECEPTACLE
26. STANDBY ALTERNATOR
27. COMPRESSOR DRAIN LINE
28. FUEL MANIFOLD DUMP VALVE
29. OIL COOLER PRESSURE HOSE

Figure 201 Sheet 2

SMART AVIATION
ENGINEERING ORDER

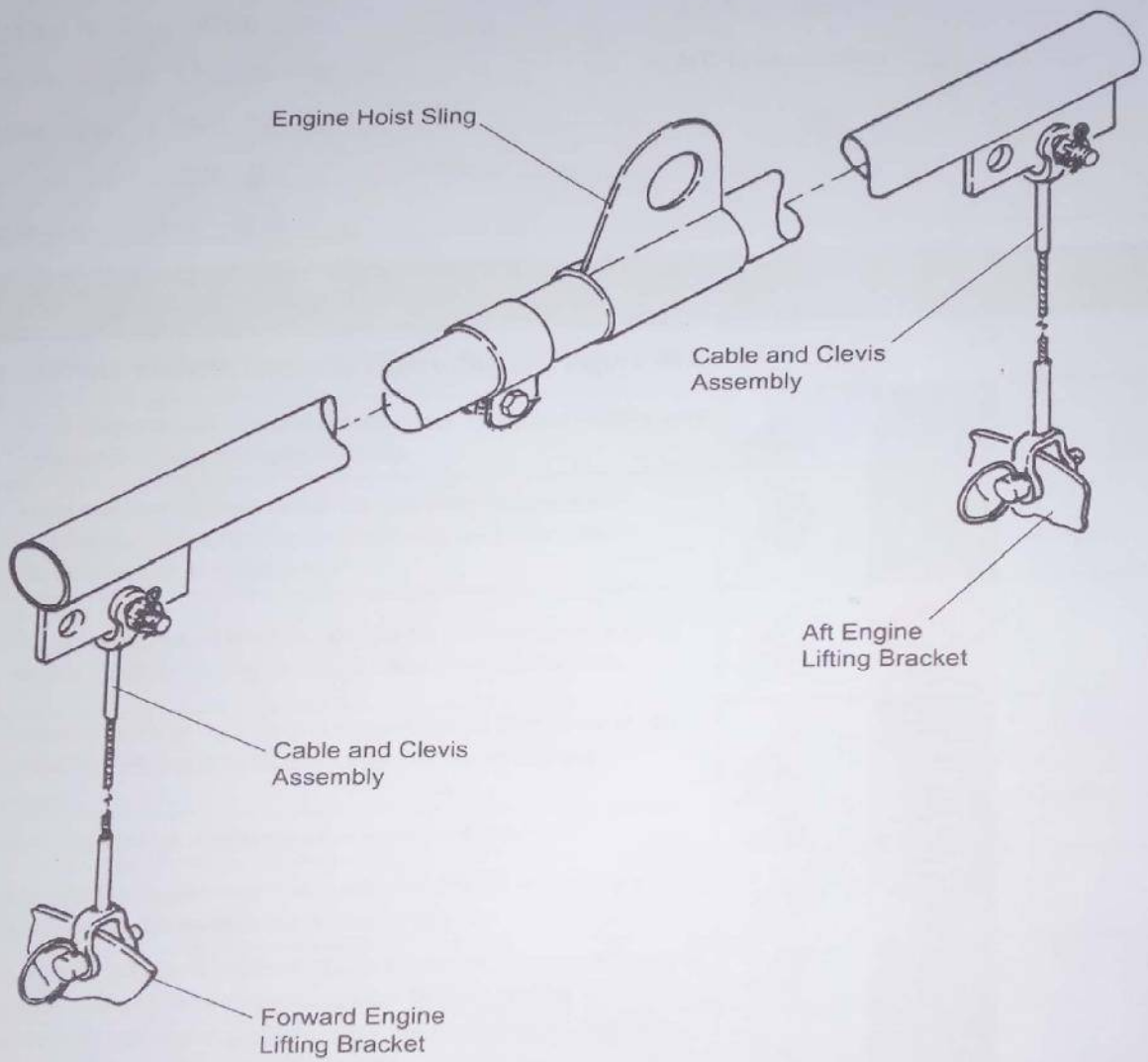


Figure 202

SMART AVIATION
ENGINEERING ORDER

C208B ENGINE INSTALLATION

Date : 20.04.2023

Part No. Engine : PT6A-140

Ser. No. Engine : PCE-VA 0802

Engine Time TSN: 00:00 TSO: _____

CSN: 0 CSO: _____

Work Number : 004/EO/TEK-TS/IV/2023

A/C Total Hours : 8046:48

A/C Total Landings : 135 85

Installed on A/C Reg. : NEW

Description	Eng.	RII	Remarks
25.INSTALL ENGINE (Refer to Figure 201 and Figure 202).			
1. If the engine is new or was at manufacturer for service, install engine components. Refer to Engine Build-Up.	32		
2. Make and inventory record P/N and S/N of the engine and its accessories. Fill out into the List (Form Engine Change – Major Component Inventory Record)	32		
3. Install engine mount brackets, elastomers, and engine mount ring. Refer to Chapter 71, Engine mount – Maintenance Practices.	32	RII 25	
4. Connect the lifting hoist sling to forward and aft lifting brackets on engine and lift engine in its correct position forward of engine mount.	32		
5. Make sure that all engine lines and equipment are clear.	32		
6. Lubricate the engine mount bolts with MIL-PRF-81322G Grease, before you install them to prevent corrosion.	32		
7. Make sure that the threads of bolts are covered during application of grease. Lubrication on threads can alter the torque reading.	32		
8. Move the hoist and engine aft to align the engine mount ring holes with the holes in the engine mount truss.	32		
9. Install the mount bolts and torque the bolt/nuts to 480 to 690 inch-pounds. a. Remove the hoist and sling	32	RII 25	
10. Connect torquemeter pressure and vent lines at upper left firewall (a) Do a leak test of the torquemeter pressure and vent lines. Refer to Chapter 77, Wet Torque indicating System - Maintenance Practices	32		

SMART AVIATION
ENGINEERING ORDER

11. Connect engine power controls at fuel control unit. (a) Rig the fuel controls. Refer to Chapter 76, PT6A-140 Engine Power Control Rigging - Adjustment/Test			
12. Connect the electrical wiring connectors and ground wires at the following equipment locations: • Battery Connector (PN004) (aft right side of engine) • Prop Overspeed Valve Connector (PN041) (left front of engine) • NP Speed Tach (PN033) (right front of engine) • Cabin Heat Bleed Air Valve connector (PN043) (lower right side of engine) • Oil Pressure Switch (PN030) (right side on engine truss). • Oil Temperature Sensor connector (PN031) (right rear of engine) • NG Speed Tach (PN034) rear, (lower right side of engine) • Starter Generator connector (PN002) (center top of engine accessory case) • Ignition Exciter Connector (PN040) (right engine mount truss) • Fuel Flow connector (PN032) (rear, lower right side of engine) • Torque Transducer (PN038) (right engine mount truss) • RGB Chip Detector (PN035) (right engine mount truss) • Engine groundstraps airplane frame connections.			
13. Install the oil pressure switch supply hose. Refer to Chapter 79, Oil Pressure Switch - Maintenance Practices			
14. nstall the engine fire detector wiring harness. Chapter 26, Fire Detection System - Maintenance Practices			
15. Install the starter/generator cooling air hose to the starter/generator. For the 300 Amp Starter/Generator refer to Chapter 80, 300 AMP Starter/Generator Cooling Air Duct - Maintenance Practices. For the 200 Amp Starter/Generator refer to Chapter 80, Starter/Generator Cooling Air Blast Tube - Maintenance Practices.			
16. Connect the cabin heater bleed air line at the flow control valve. Chapter 21, Compressor Bleed Air Heater - Maintenance Practices.			
17. Connect the bleed air hose at mixing air valve. Chapter 21, Compressor Bleed Air Heater - Maintenance Practices			
18. If necessary, install the left nose cap/induction air duct/inertial air separator. Refer to Chapter 71, Inertial Air Separator - Maintenance Practices			
19. If necessary, install the propeller. Refer to Chapter 61, Propeller (Hartzell) - Maintenance Practices.			

SMART AVIATION
ENGINEERING ORDER

20. Install the propeller speed control cable. Refer to Chapter 76, Quadrant Assembly And Controls - Maintenance Practices.			
21. Install left and right nosecap bulkhead assemblies and top cowling center panel. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices			
22. Install the oil cooler. Refer to Chapter 79, Oil Distribution - Maintenance Practices (PT6A-140).			
23. Install the right nosecap. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.			
24. Install the fuel supply hose at the fuel heater. Refer to Chapter 73, Oil-To-Fuel Heater Unit - Maintenace Practices section of the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications.			
25. Install the fuel motive flow hose at the motive flow shut-off valve (MFSOV). Refer to Chapter 73, Fuel Control - Maintenance Practices section of the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications.			
26. Purge the fuel lines as follows: (a) Push fuel firewall shutoff control fully in. (b) Disconnect the supply fuel line at fuel manifold below engine. 1 Cap down stream line. 2 Use correct shop practices to collect fuel from open supply line. (c) Use the starter to motor the engine. (d) When the purge is complete, connect the fuel line to the manifold. Use correct shop practices to discard purged fuel.			
27. Do an operational check of the different components on the engine. (a) Start the engine and do the operational check. Refer to Pilot's Operating Handbook and FAA-Approved Airplane Flight Manual and the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications. (b) Complete an Engine Performance Check. Refer to Chapter 71-00-05, Power Plant (PT6A-140) - Adjustment/Test, Engine Performance Check.			
28. Perform RII inspection if any controls have been disturbed or adjusted.			
29. Install engine cowling.			

SMART AVIATION
ENGINEERING ORDER

30. Make an appropriate entry in Work Order (WO) 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.

Name : BUD. HARGO YO Stamp :

Signature : Place/Date : MBX/20/04/2023

smartaviation	TECHNICAL SUPPORT TECHNICAL DEPARTMENT **ENGINEERING ORDER**	004/EO/TEK-TS/IV/2023	
		Rev. No	ORIGINAL
		Rev. Date	14/04/2023

ENGINE CHANGE - Major Component Inventory Record			
Registration	: PK-SNI	**Work Order Number**	: WO/033-SNI/IV/2023
Airframe Time	: 8046:18	**Airframe Landings**	: 13585
Engine Time	: 00:00	**Engine Cycle**	: 0

	Engine OFF			**Engine ON**		
Description	**Part Number**	**Serial Number**	**Time Remaining**	**Part Number**	**Serial Number**	**Time Remaining**
Engine Assembly	3076226-01	PCE-VA0073		3076226-01	PCE-VA0802	
Propeller Assembly	4HFR34C778-1	200707		4HFR34C778-1	200707	
Compressor Bleed Valve	3049038-03	2860		3049038-03	10215	
Fuel Control Unit	8063-636	18903624		8063-636	22832665	
Oil Fuel Heater	3076422-05	WA48046		3076422-05	WA64913	
Igniter Exciter	CH.92106-1	131321		CH92106-5A	220196	
Flow Divider	3023670	M1101		3023670	M1624	
Oil Cooler	9910636-1			9910636-1		
Starter Generator	200SGL1190-2	S00020XL		200SGL1190-2	S00020XL	
Alternator	9910592-2	H-L050191		9910592-2	H-L050191	
Fuel Pump	3040760	012482		3040760	018698	
Propeller Governor	3074154-01	18884556		3074154-01	22816453	
Propeller Overspeed Governor	210539	18828664		210539		
Fuel Nozzle	3077780-01			3077780-01		

NOTE: ANY OTHER COMPONENT CHANGES MUST BE FILLED ON INSPECTION CARD (SCA/MTC/048)

Appendix B08 – PT6A-140 Engine Run Performance Sheet

Reg. Mark : PK - SMI

WO/FML No. : WO/033-SMI/IV/2023

PRE – INSPECTION	
Location	
Date	
Cycle	
Filed Barometric	
OAT	
Altitude	

POST – INSPECTION	
Location	MBX
Date	20.04.2023
Cycle	
Filed Barometric	29.92
OAT	
Altitude	100 ft

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	2397	2397
Np	1900	1900
ITT	841 °C	820 °C
Ng	102.6 %	101.5%
Wf	570	544
Oil Press		90 °C
Oil Temp		80 °C
Start Temp		730 °C

Engine Run Up Checks

Inertial ☑ EPL ☑ OVG ☐ Stby Alt ☐ BOV ☑ Brake ☑ Randown ☑

NOTE:

1. Brake system at Torque 2000 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 55.5 - 57% 40Amps.
6. High idle at 64 - 66% Ng 40Amps

Engine Performance Target Table (Cessna C208B EX)

OAT (°C)	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Tq (ft.lbs)	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397
Np	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ITT (°C)	835	837	839	841	841	841	841	841	841	842	843	844	846	846	846
Ng (%)	102.7	102.7	102.7	102.7	102.7	102.7	102.7	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.5
WF (PPH)	578	578	578	578	578	578	578	570	565	565	560	560	555	548	548

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 580 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:

PERFORMED ENGINE GROUND RUN FOUND SATISFACTORY.

PERFORMED BY			
Name	Sign & Stamp	Date	Location
BUDI. H		20.04.2023	MBX

Reg. Mark : PK - SMI
MSN : C208B-5068
TSN / CSN : 00:00 / 0

Date : 20 / 04 / 2023
Station : MBX
WO No. : WO/033-SMI/IV/2023

NO.	ZONE	TASK	SIGNATURE	
			ENGINEER SIGN&STAMP	RII SIGN&STAMP
01	211 212	Perform propeller dynamic balancing refer to Cessna Maintenance Manual 61-11-00.		
*** End of OOP61001 Items ***				

PERSONNEL PARTICIPATING IN THIS INSPECTION			
NAME	POSITION	SIGNATURE	LICENSE NUMBER
BUDI HARTOYO	ENGINEER		9506
KADEK A.J	ENGINEER		4605

RETURN TO SERVICE

The work recorded above has been carried out in accordance with the requirements of the Civil Aviation Safety Regulation for the time being in force and in that respect the aircraft is consider fit for Release to Service.

Name : BUDI HARTOYO
Place/Date : MBX / 20-04-2023
Sign & Stamp :

Reg. Mark	: PK - SNI	Date	: 20-04-2023.
MSN	: C208B-5068	Station	: NBX
TSN / CSN	: 00:00/0	WO No.	: WO/033-SNI/IV/2023

NO.	TASK	SIGNATURE	
		ENGINEER SIGN&STAMP	RII SIGN&STAMP
01	Magnetic Compass Functional Check. Refer to AMM 34-21-00.		
02	Record the Magnetic Compass functional check result, calculate and make an entry in form SCA/MTC/026.		

PERSONNEL PARTICIPATING IN THIS INSPECTION

NAME	POSITION	SIGNATURE	LICENSE NUMBER
BUDI HARTO	ENGINEER		9506
KADEK AJ	ENGINEER		4685

RETURN TO SERVICE

The work recorded above has been carried out in accordance with the requirements of the Civil Aviation Safety Regulation for the time being in force and in that respect the aircraft is consider fit for Release to Service.

Name : Wahyono Place/Date : NBX / 20-04-2023.

Sign & Stamp :

D. General

(1) You must record the depreservation done in the engine logbook and on tags attached to the engine.

Subtask 72-00-00-630-001

E. Depreservation Schedule - 0 to 7 days

(1) No depreservation necessary.

Subtask 72-00-00-630-002

F. Depreservation Schedule - 8 to 28 days

(1) Remove covers from inlet and exhaust openings, and moisture barriers.

(2) Make sure that all engine openings are clear and not clogged.

(3) Remove desiccant bags and racks if applicable.

Subtask 72-00-00-630-003

G. Depreservation Schedule - 29 to 90 days

(1) Do the depreservation schedule - 8 to 28 days. (Refer to Subtask 72-00-00-630-002).

(2) Fill engine oil tank (Ref. Task 72-00-00-640-805).

(3) Do the depreservation of the engine fuel system. (Refer to Task 72-00-00-630-802).

Subtask 72-00-00-630-004

H. Depreservation Schedule - more than 91 days

(1) Do the depreservation schedule - 8 to 28 days. (Refer to Subtask 72-00-00-630-002).

(2) Examine all external cases for some corrosion, and protective coating for wear. Repair as necessary.

(3) Remove the compressor inlet screen. Examine the case and flanges you can see for some corrosion. If you find some corrosion, examine inner sections of AGB and RGB with a borescope. If the corrosion is more than specified limits, send engine to an approved overhaul facility.

(4) Slowly turn the propeller by hand, and check for stiffness, then listen for rubbing or binding (Ref. Task 05-50-00-210-821).

(5) Do the depreservation schedule - 29 to 90 days. (Refer to Subtask 72-00-00-630-003).

(6) Start the engine (Ref. Task 71-00-00-760-806), then do the steps that follow:

- Pre-operational Check
- Prestart Check
- Wet Motoring Run
- Dry Motoring Run
- Engine Starting Checks

- Shutdown Checks
- Post-shutdown Checks
- FCU Checks (idle speed only)
- Oil Pressure Check
- Engine Performance Check
- FCU Manual Override Control Check
- Acceleration Adjustment
- Shutdown Checks
- Post-shutdown Checks

NOTE: During motoring, check for stiffness, listen for binding and/or rubbing.

(7) After engine run, and when you complete all checks, examine all drain valves for oil. If you find oil, send engine to an approved overhaul facility.

(8) Examine the fuel filters, then clean or replace as necessary (Ref. 73-10-06-000-801).

(9) Examine oil filter, RGB oil strainer and chip detector. If you find contamination and the engine has no contamination history before, send engine to an approved overhaul facility. If not, refer to Task 79-20-01-000-801.

I. Job Close-up Information

(1) Remove all tools, equipment and items not necessary from the work area.

(2) Install or close the engine cowlings as necessary (Ref. AMM).

Task 72-00-00-630-802

18. Depreservation of the Engine Fuel System

A. Overview of the Job

(1) This task gives the procedure for depreservation of the fuel system after preservation.

B. Job Set-up Information

(1) Read and obey all the fuel safety precautions. (Refer to Task 72-00-00-910-802).

(2) Open or remove the engine cowlings as necessary (Ref. AMM).

C. Equipment and Materials

(1) Special Tools:

Part Number	Name
Not applicable.	Not applicable.

(2) Fixtures and Equipment:

smartaviation	**EMERGENCY EQUIPMENT LIST INSPECTION & MONITOR**	**PT. SMART CAKRAWALA AVIATION** DEPARTMENT TEKNIK Form: **SCA/MTC/023**

DATE : 20. 09. 2023	**A/C REG** : **PK-SNI**
A/C TYPE : **C208B Grand Caravan EX**	**CHECKER** : BUDI H. **SIGN:**

No.	Description	P/N	S/N	Next Insp.	Remarks
1	Pilot Life Vest	P01074-101W	170605 00092	JUNE 2024	SERVICEABLE
2	Co-Pilot Life Vest	P01074-101W	170605 00001	JUNE 2024	SERVICEABLE
3	Pax Life Vest				
4	Pax Life Vest				
5	Pax Life Vest				
6	Pax Life Vest				
7	Pax Life Vest				
8	Pax Life Vest				
9	Pax Life Vest				
10	Pax Life Vest				
11	Pax Life Vest				
12	Pax Life Vest				
13	Firt Aid Kit	FAK	0920-620	SEPT-2023	SERVICEABLE
14	Crash Axe Installed	MPM	MSM	O/C	SERVICEABLE
15	Fire Extinguisher	C352	M0847361	MAY. 2023	SERVICEABLE
16	Life Raft (If Installed)				
17	Survival Kit (If Installed				
	OTHERS				
	FLASH LIGHT	LOCAL	MSM	O/C	SERVICEABLE

Aircraft Registration: **PK-SNI**

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WO# Nr: **WO/033-SNI/IV/2023**

Additional Work Sheet
ENGINE REPLACEMENT

Parts Used Sheet

Special Tool Used

No.	Description	Due Date	Engineer
1.	TORQUE WRENCH (CBP 501 NMRMH)	AUGST 2023	
2.	PROPELLER SPECIAL TOOL D-5995 1 SET		
3.	7/8" SPECIAL TOOL 1 SET		
4.	MASTER COMPASS.		

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Additional Work Sheet
ENGINE REPLACEMENT

Aircraft Registration: **PK-SNI**

WO# Nr: **WO/033-SNI/IV/2023**

Parts Used Sheet

Part Used

Date	Part Nr.	Serial Nr.	Description	Quantity	Engineer
20.04.2023	A1633-72	[illegible]	O-RING HUB PROPP.	1	
20.04.2023	A1639-32	NSN.	NUT.	8	
20.04.2023	MS 20665	NSN	[illegible]	1	
20.04.2023	S 3346-1	NSN	GASKET MG TACHOMETER	1	
20.04.2023	S 3346-1	NSN	GASKET STBY ALTERNATOR	1	
20.04.2023	S 3346-1	NSN	GASKET PROPELLER TACHOMETER	1	
20.04.2023	AH 40441-1	NSN	GASKET STARTER	1	
20.04.2023	S 3346-1	NSN	GASKET AC COMPRESSOR DRIVE	3	
20.04.2023	MS24665-302	NSN	COTTER PIN MOUNT BRACKET	1	
20.04.2023	VSF 1015 N12 B	NSN	SEAL CONICAL	1	
20.04.2023	MS24665-302	NSN	CUTTER PIN	4	
20.04.2023	MS24665-134	NSN	CUTTER PIN	2	
20.04.2023	MS24665-86	NSN	CUTTER PIN	2	
20.04.2023	3007342	NSN	GASKET	1	
20.04.2023	MIL PRF 83483C	NSN	LUBRICANT THREAD PROPELLER	1	
20.04.2023	2380		ENGINE OIL	10	