PT. SMART CAKRAWALA AVIATION

WORK ORDER

Form: SCA/MTC/030

Subject : **Replacement Starter Generator**	No.	WO/036-SNA/III/2023
	Date	6 March 2023
	A/C Reg.	PK-SNA C208B-5634
Reference : MP C208B ISSUED 01	Prepared By	TS
	Checked By	CI
	Approved By	TM

To : Engineer In Charge

Description :

1. Perform Replacement Starter Generator
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.: (Engineer In Charge)	Signature (Technical Manager)

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

DATE OF ISSUED	JO/WO #	TYPE OF MAINTENANCE	DATE OF ACCOMPLISHED
6 Mar 2023	WO/036-SNA/III/2023	Replacement	

A/C Type	Mfg. Serial Number	A/C Registration
C208B	C208B-5634	PK-SNA

AIRCRAFT DATA

Subject	Pos #	Serial Number (SN)	TTSN/TCSN
Engine	#1	PCE-VA0730	
	#2	-	
Propeller/Rotor	#1	200483	
	#2	-	
Landing Gear	NLG		
	LH MLG		
	RH MLG		

PACKAGE COVERED

No	Subject	Qty	Remark
1	Non-Routine Card	1	
2	Inspection Card	-	
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					

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

WO Ref: WO/036-SNA/III/2023

NO.	TASK CARD NO.	DESCRIPTION	DATE	EST MHR	NAME	STAMP
1	NRC-001	STARTER GENERATOR REPLACEMENT				

PT. SMART CAKRAWALA AVIATION

CERTIFICATE RETURN TO SERVICE

SCHEDULED MAINTENANCE INSPECTION
(CRS-SMI)

A/C TYPE	: CESSNA 208B	TTSN	:
A/C REG	: PK-SNA	TCSN	:
MSN	: C208B-5634	DATE	:

TYPE OF INSPECTION : STARGEN REPLACEMENT
DUE AT : 1000 HOURS
REFF : MP C208B ISSUED 01

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
	AIRFRAME & POWER PLANT			
	EIRA			

THE NEXT DUE TYPE OF INSPECTION :

DUE AT :

Form: SCA/MTC/049

smartaviation	INSPECTION CARD **(Form: SCA/MTC/ 048)**	TECHNICAL DEPARTMENT

1. CARD #	2. JO/WO #	3. ORIGINATOR	4. CARD REF	5. DATE
6. A/C REG/MSN	7. A/C TYPE	8. TRADE	12. VENDOR ORDER #	
C208B-5634	PK-SNA			
9. ZONE	10. STA	11. MTC TYPE		

13. DESCRIPTION/DEFECT-IF FINDING OF CPCP INSPECTION, PLEASE COMPLETE SET. 20	14 PPC/ENG	15 DATE

16. CORRECTIVE ACTION		17 MECH	18 ENG. LIC	19 DATE
Performed at A/C TT : ..... A/C TC /LDG :				
20. CORROSION INFORMATION				
LOCATION	CAUSE OF DAMAGE			
	☐ Environment			
	☐ Internal Leakage			
CORROSION ☐ Isolated ☐ Widespread	☐ Chemical Spill			
CORROSION LVL ☐ 1 ☐ 2 ☐ 3	☐ LAV/Galley Spill			
PROPOSED ACTION ☐ Doublers	☐ Blocked Drain			
☐ Others	☐ Wet Insulation Blanket			
.....	☐ Other			
21. If the defect is RII, Please Sign this card finally by RII Inspector			INSP	DATE
NOTICE OF INSPECTOR				

22. PARTS REQUIRED						
PART DESCRIPTION	PART NO	QTY	SERIAL NO		STATUS	
			ON	OFF	CLOSE	OPEN

23. TOOLS REQUIRED			
DESCRIPTION	PART NO. / MODEL	NEXT CALIBRATION DATE	STATUS

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

1. JO/WO #	2. DATE	3. MTC TYPE	4. A/C REG/MSN
WO/036-SNA/III/2022		**REPLACEMENT COMPONENT**	**PK-SNA/5634**
5. CARD #	6. ATA SPEC	7.TRADE	8. STA
#001	**80**		
9. ZONE	10. PANEL	-	
ENGINE			

11. DESCRIPTION

PERFORM STARTER GENERATOR REPLACEMENT
REMOVED
P/N: 300SGL145Q-1
S/N OFF : S00096
S/N ON : S00716

REFERENCE	☒ AMM Ch.80	☐	☐ 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

STARTER/GENERATOR - REMOVAL/INSTALLATION

1. General

A. This section gives removal and installation information for all starter/generators used on the airplane.

2. Starter/Generator Removal and Installation

A. Remove the Starter/Generator (Refer to Figure 401).

NOTE: Two mechanics are required to properly remove or install the starter/generator.

CAUTION: Make sure the starter/generator drive shaft is aligned with and concentric to the armature shaft. Slight misalignment and/or binding of the starter/generator drive can reduce the unit's service life.

(1) Remove the left and right upper cowling doors. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

(2) Remove all external power from the airplane, make sure the battery switch is in the OFF position, and disconnect the battery from the airplane electrical system.

(3) Remove the cover from the terminal block.

(4) Put an identification tag on each of the electrical leads for later identification and remove the terminal nuts.

(5) Remove the speed sensor circuit connector.

NOTE: Removal of the A/C drive unit is necessary for access to the starter generator on airplanes before 208000505 and 208B002025 that have a 200 AMP starter generator option installed.

(6) Loosen the clamp that holds the cooling air blast hose on the starter/generator and remove the hose.

NOTE: Two mechanics are required to properly remove or install the starter/generator. One mechanic is to hold the starter/generator in position to keep the mounting surfaces flush with the quick attach/detach (QAD) adapter pad. This keeps the starter/generator aligned while the other mechanic loosens and removes the V-band clamp.

CAUTION: Hold the starter/generator in place to prevent damage to the splined drive shaft before you do the following step.

(7) Loosen the V-band that holds the starter/generator to the quick attach/detach QAD adapter.

(8) Carefully remove the starter/generator from the QAD adapter pad so that the starter/generator drive spline is not put into a bind.

(9) Remove the QAD adapter as necessary.

(a) Remove the nuts that hold the QAD adapter to the engine accessory gearbox and remove the adapter.

(b) Discard the gasket.

(10) Use a cloth that is damp with MIL-PRF-680 or an equivalent solvent to clean the starter-generator splines.

(11) Use a 10X magnifying glass to examine for signs of electrical arcing damage (in the form of pitting).

NOTE: If there are signs of arching on the starter-generator drive splines, refer to Cessna SNL07-16 and P&WC S.I.L NO. Gen-PT6-024 for additional information and inspection requirements.

NOTE: If the Starter-Generator was removed for an electrical fault, refer to the Pratt and Whitney Canada PT6A Maintenance Manual 05.50.00 unscheduled inspection section- Starter-Generator Replacement.

B. Install the Starter/Generator (Refer to Figure 401).

(1) Do the following steps before you install the starter/generator. Make sure:

(a) There are no burrs or foreign objects on the starter/generator shaft.

(b) The starter/generator guide pins are clean and not bent or damaged.

(c) The mounting surfaces of the starter/generator and the QAD adapter pad are clean and do not have any burrs.

(d) The QAD adapter is fastened to the engine transfer case correctly.

(e) The QAD adapter pad guide pin holes does not have any burrs or foreign objects, and that they are in good condition.

NOTE: For a 300-Amp Starter/Generator installation, the QAD adapter must be located with the internal machined circular recesses on the top.

(2) Install the QAD adapter onto engine accessory gearbox with a new gasket, and install nuts as necessary.

(3) Install a new O-ring around the groove on the splined drive shaft.

(4) With the T-bolt unlatched, put the V-band on the starter/generator between the mounting flange and the terminal block.

NOTE: Two mechanics are required to properly remove or install the starter/generator. One mechanic is to hold the starter/generator in position to keep the mounting surfaces flush with the quick attach/detach QAD adapter pad. This keeps the starter/generator aligned while the other mechanic installs and tightens the V-band clamp.

CAUTION: The spline drive shaft must stay aligned with and concentric to the armature. If the starter/generator is allowed to be installed with the drive shaft out of position, excessive vibration and damage may develop during operation.

(5) Carefully look at the spline drive shaft and the armature shaft interface plates. If the drive shaft looks to be out of position, lightly tap on the spline drive shaft with a plastic mallet to move it to a full concentric position. Figure 401.

(6) Carefully engage the spline drive shaft with the engine spline.

CAUTION: Keep the starter/generator flush up against the adapter during installation. Do not let the unit hang loosely without the V-band being latched because to much load on the drive shaft shear section may cause damage.

(7) Make sure the dowel pins are engaged.

(8) Put the V-band over the mating flanges and latch.

(9) Tap the V-band at several places with a rubber mallet to make sure that there is correct alignment of the spline drive shaft and the armature shaft, and tighten the T-bolt nut to two-thirds the recommended torque.

NOTE: The correct torque value is stamped on the V-band.

(10) Tap the V-band repeatedly with the rubber mallet and tighten the T-bolt nut to the recommended torque.

(11) Install the cooling air blast hose with the clamp on the starter/generator.

(12) Tighten the cooling air blast hose clamp.

(13) Connect the speed sensor cable connector to the starter/generator.

(14) Install the electrical cables in the same relationship to the terminal posts as you tagged them during the removal procedure, and install the nuts.

(15) Put the cover in place over the terminal block.

(16) Reconnect the battery to the airplane electrical system.

(17) Install the left and right upper cowling doors. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

Figure 401 : Sheet 1 : Starter/Generator Installation

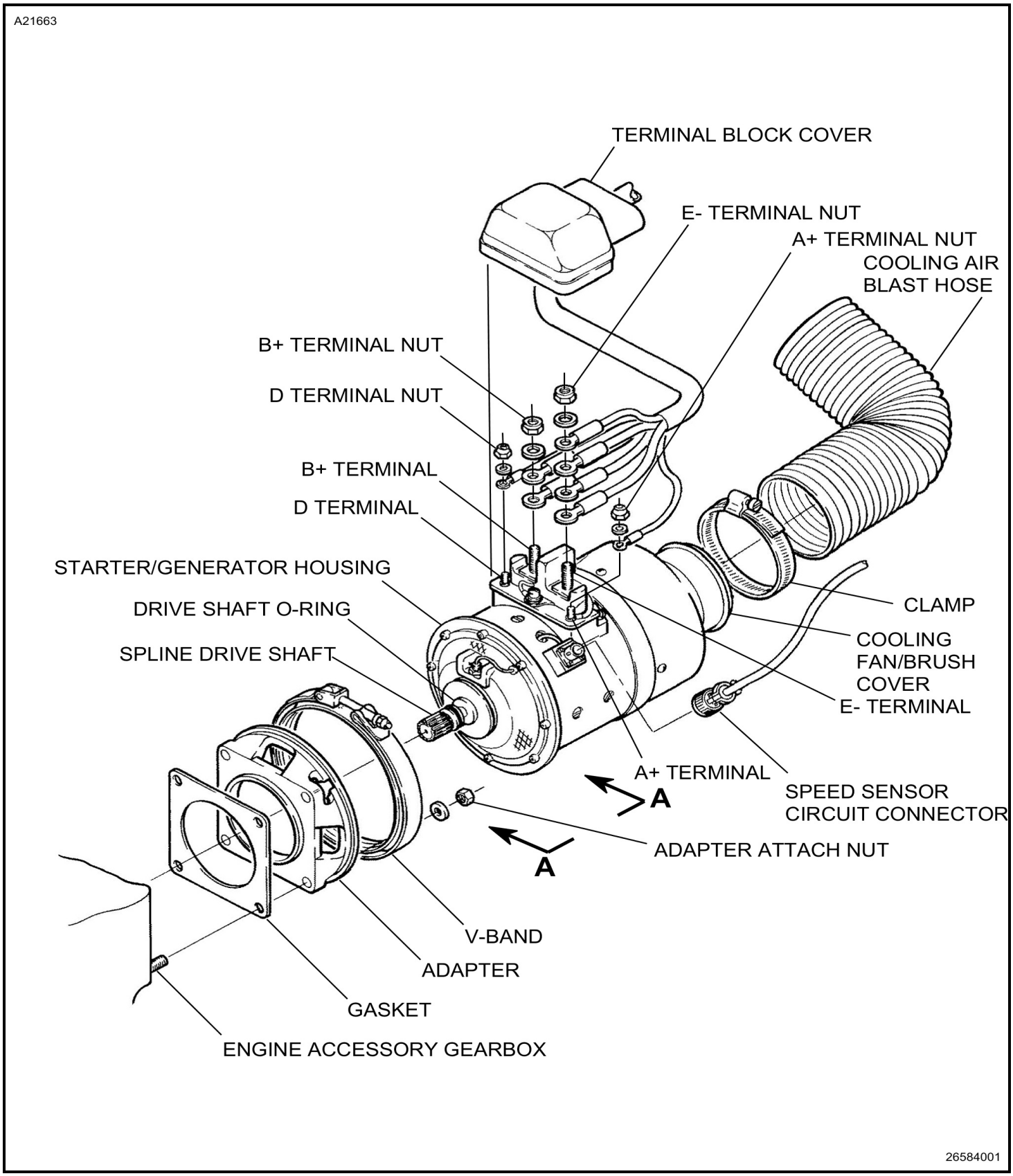

Figure 401 : Sheet 2 : Starter/Generator Installation

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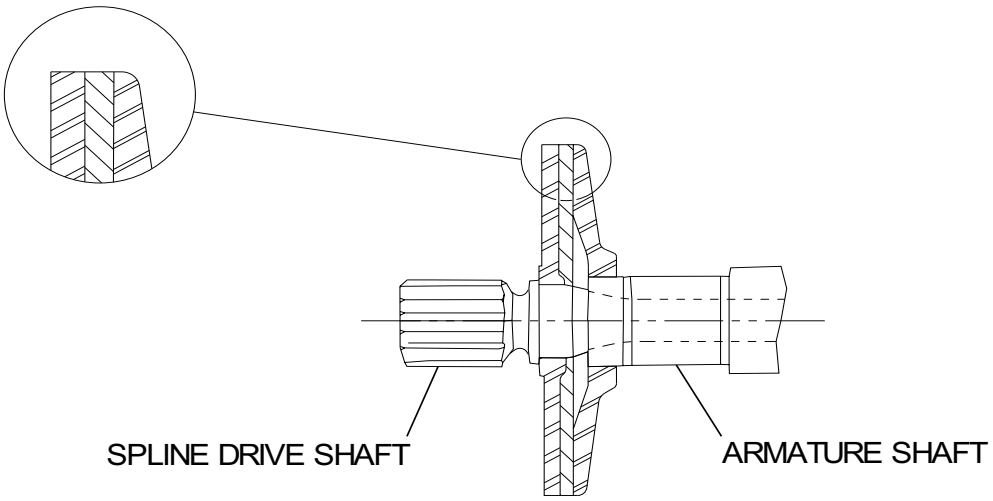
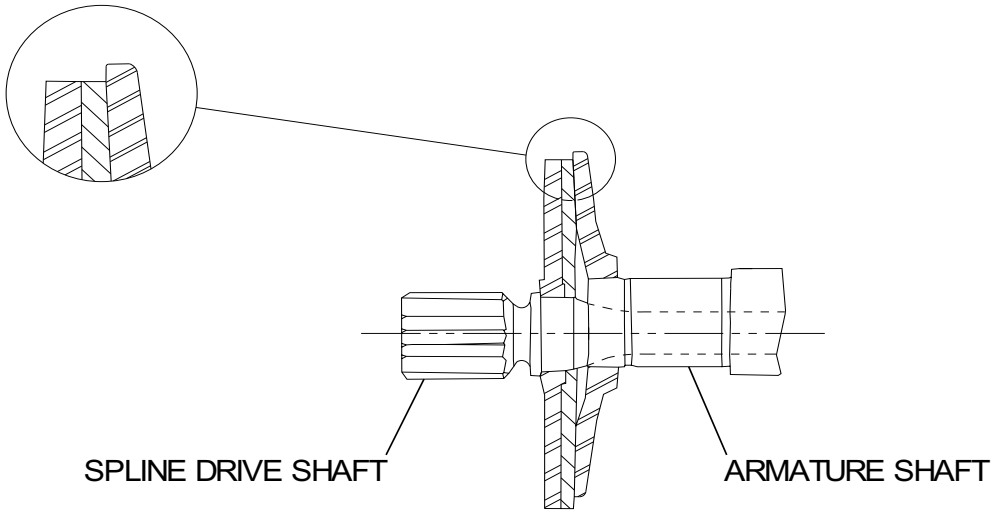


VIEW A-A
DRIVE SHAFT CONCENTRIC WITH ARMATURE SHAFT



VIEW A-A
DRIVE SHAFT OUT OF POSITION

Additional Work Sheet
Stargen Replacement

Aircraft Registration: **PK-SNA**

Tools Used Sheet

WO# Nr: **WO/036-SNA/III/2023**

Special Tool Used

No.	Description	Due Date	Engineer

Additional Work Sheet
Stargen Replacement

Aircraft Registration: **PK-SNA**

WO# Nr: **WO/036-SNA/III/2023**

Parts Used Sheet

Part Used

Date	Part Nr.	Serial Nr.	Description	Quantity	Engineer