

	REGISTRO RECORD	REVISÃO REVISION 1
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Componente Component	O.S W.O	Modelo Model	PN	SN
STARTER		160SG143Q 160SG143Q-2		

Identificação Identification	
Título Title	Ficha Para Registros Teste do Starter Starter Test Sheet

Publicação Publication	Referência Reference	TLN	Data Date
Overhaul Instructions with Illustrated Parts Breakdown	TM113 – TEST PROCEDURE	TLN02479	September, 08/2017 Revision 2
		Conjunto Maior Main Part	
		PN	SN

Teste Aplicável aos Part Numbers Test Applicable to Part Numbers	
160SG143Q	160SG143Q-2

Teste do Governador da Turbina de Potência Power Turbine Governor Test				
Item Item	Procedimentos Tolerâncias Procedures Serviceable Limits	Resultado Result	Data Date	Executante Performed By
A	Realize todos os testes com uma temperatura de entrada de ar de 50 graus F (10 graus C) a 104 graus F (40 graus C). Refira-se ao item 3-6. Conduct all tests with an air inlet temperature of 50 degrees F (10 degrees C) to 104 degrees F (40 degrees C). Refer to item 3-6.			
B	Se necessário, faça o flash field. Refira-se a 3.7. If necessary, flash the field. Refer to 3.7.			
C	Conecte o starts-generator no circuito de teste e mova todos os switches de carga para a posição "OFF". Refira-se a 3.8. Connect the stater-generator to the test circuit and move all load switches to the OFF position. Refer to 3.8.			
D	Assegure que a rotação do starter-generator está no sentido anti-horário. Refira-se a 3.9. Ensure that the rotation of the starter-generator is in a counter-clockwise direction. Refer to 3.9.			
E	Faça o Brush Seating. Refira-se a 3.10. Perform Brush Seating. Refer to 3.10.			
F	Faça o teste de aceleração. Refira-se a 3.12. Perform Acceleration Run. Refer to 3.12.			
G	Assegure que o starter consegue atingir a condição de operação contínua. Refira-se a 3.13. Ensure that the Starter can reach the Continuous Operating Condition. Refer to 3.13.			

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Teste do Governador da Turbina de Potência Power Turbine Governor Test				
Item Item	Procedimentos Tolerâncias Procedures Serviceable Limits	Resultado Result	Data Date	Executante Performed By
H	Faça o teste de regulação para velocidade máxima. Refira-se a 3.14. Perform Maximum Speed for Regulation test. Refer to 3.14.			
I	Diminua a velocidade do starter-generator to 8500 +100/-0 rpm. O gerador de partida deve fornecer 160 ±5 amperes a 28,5 ±0,1 volts CC. Anote as leituras. Refira-se ao item 3.15(a). Decrease the speed of the starter-generator to 8500 +100/-0 rpm. The starter-generator must deliver 160 ±5 amps at 28.5 ±0.1 volts DC. Note down the readings. Refer to item 3.15(a).			
J	Aumente a velocidade do starter-generator para 12100 ± 100 rpm e feche os switches aplicáveis para a aplicação de 160 ± 5 amperes. Anote as leituras. Refira-se a 3.15(b). Increase the speed of the starter-generator to 12000 ± 100 rpm and close the suitable switches of the DC load bank to apply 160 ± 5 amperes. Record readings. Refer to 3.15(b).			
K	Meça a tensão paralela entre os terminais D e E. Anote as leituras. Refira-se a 3.15(c). Measure the paralleling voltage across terminals D and E. Record readings. Refer to 3.15(c).			
L	Diminua a velocidade do starter-gerador para 7200 +100/-0 rpm e reduza a tensão no terminal para 26 ± 0.1 DC volts. Anote as leituras. Refira-se a 3.15(d). Decrease the starter-generator speed to 7200 +100/-0 rpm and reduce the terminal voltage to 26 ± 0.1 DC volts. Record readings. Refer to 3.15(d).			
M	Após os testes anteriores com o gerador de partida quente, observe a comutação do gerador de partida na faixa de velocidade de 8700 ± 100 rpm a 12.100 ± 100 rpm sem carga, meia carga e carga total (com variação de ±5 amperes em cada caso). A faísca deve ser limitada a faíscas pontuais nas escovas. O comutador deve estar preto para garantir o melhor desempenho do gerador. Gire a tampa para observar cada escova durante o teste. Se a faísca for excessiva, verifique o assentamento das escovas e a tensão das mesmas. A corrente de campo deve aumentar com o aumento da carga do gerador. Registre as leituras na planilha de dados do teste, Tabela IV. Refira-se ao item 3-16. After the previous tests with the starter-generator hot, observe the commutation of the starter-generator over the speed range of 8700 ± 100 rpm to 12,100 ± 100 rpm at no-load, half-load, and full-load (with a variation of ±5 amperes in each case). Sparking should be limited to pinpoint sparking at the brushes. The commutator should be black for optimal generator performance. Rotate the cover to observe each brush during the test. If sparking is excessive, check the brush seating and brush tension. The field current must increase with the increase in generator load. Record the readings on the test data sheet, Table IV. Refer to item 3-16.			
N	Faça o teste de velocidade Pickup. Refira-se a 3.17. Perform Speed Pickup Test. Refer to 3.17.			

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Teste do Governador da Turbina de Potência <i>Power Turbine Governor Test</i>				
Item <i>Item</i>	Procedimentos Tolerâncias <i>Procedures Serviceable Limits</i>	Resultado <i>Result</i>	Data <i>Date</i>	Executante <i>Performed By</i>
O	Faça o teste de Overspeed. Refira-se a 3.18. <i>Perform Overspeed Test. Refer to 3.18.</i>			
P	Faça o teste de força dielétrica. Refira-se a 3.19. <i>Perform Dielectric Strenght Test. Refer to 3.19.</i>			
Q	Inspeção o comutador após o teste final. Refira-se a 3.20. <i>Inspect the commutator after the final test. Refer to 3.20.</i>			
R	Faça o Run-Out do comutador. Refira-se a 3.21. <i>Perform Commutator Run-Out. Refer to 3.21.</i>			
S	Faça o teste de vibração. Refira-se a 3.22. <i>Perform Vibration Test. Refer to 3.22.</i>			

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CALIBRAÇÃO E LIMITAÇÃO DOS TESTES | CALIBRATION AND TEST LIMITATIONS

S/G MODEL NO. 160SG _____		SERIAL NO. _____	SALES/WORK ORDER NO. _____	TESTED BY _____	DATE: _____ TEST STAND NO. _____	
MOD / REV _____						

TEST PARA.	INSPECTION / TEST	REQUISITES	MEASUREMENT		ACC	REJ
3-10	Brush Seating	100% Seating all Brushes (See Fig. 3-2)	X	X		
3-13	Maximum Speed for Regulation 12,100 +0/-100 RPM No Load, 30.0 ± 0.1 VDC	Ammeter readout (A+) 0.81 amps min.		amps		
3-14a	Minimum Speed for Regulation 8,500 +100/-0 RPM 28.5 ± 0.1 VDC, 160 ± 5 Amp	Field Current (A+ within 10.0 amps)		amps		
3-14b,c	Continuous Operating Speed and Equalizing Voltage 12,100 ± 100 RPM, 160 ± 5 Amp, 30 ± 0.1 VDC Paralleling Voltage (Equalizing)	D - E Voltage (see Fig. 3-4)		vdc		
		Stabilized Temp. (gen. yoke)		°F		
		Air In Temp.		°F		
		Temp. rise (Yoke-air in) 175°F max		°F		
3-14d	Minimum Speed 7200 + 100/-0 RPM, 125 ± 5 Amp, 26 ± 0.1 VDC	Voltmeter Readout (A+ to B+)		vdc		
		Ammeter Readout (A+)		amps		
		Ext. Field Resistance (0.5 ohms min)		ohms		
3-15	Commutation and Compounding 30 ± 0.1 VDC	8700 +100/-0 RPM, 0, 80, 160 (± 5) Amp	X	X		
		10,000 ± 100 RPM, 0, 80, 160 (± 5) Amp	X	X		
		12,100 ± 100 RPM, 0, 80, 160 (± 5) Amp	X	X		
3-15a	*Speed Pickup (6000 ± 100 RPM) (*when applicable)	Output 2.5 volts peak to peak min.		vdc		
		Wave form shape	X	X		
3-16	Overspeed 5 min 14,000 ± 100 RPM	No Sign of Failure	X	X		
	Post Overspeed 12,100 ± 100 RPM, 30 ± 0.1 VDC, 160 ± 5 Amps, 1 minute	No Sign of Failure	X	X		
3-17	Dielectric Strength 250 ± 10 VAC, RMS, 1.0 sec	No Sign of Failure	X	X		
3-18	Cranking Torque and Speed at 28.5 ± 0.1 VDC Supply Voltage (1783 lb in ² Flywheel)	Peak Current (900 amps max)		amps		
		0 - 6500 ± 100 RPM within 70 seconds for series starter generators. 0 -4500 RPM within 35 seconds for shunt starter generators.		sec		
		0 - 6500 ± 100 RPM within 30 seconds using .836 thick, 12 in. diameter Flywheel.		sec		
3-19	Commutator Runout	Bar-to-Bar (not to exceed 0.0002 inch)		inch		
		TIR (not to exceed 0.0005 inch)		inch		
3-20	Radial Vibration, 4000 - 4500 RPM (when applicable)	Within Limits (0.001 inch total max)		inch		

