1. Approving Civil Aviation Authority/Country:	2. AUI	AUTHORIZED RELEASE CERTIFICA	ASE CERTI	FICATE		3. Form Tracking Number: 20230014006001Y15 348609175	Number: )01Y15	
FAA/United States	FAA Fo	FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	THINESS APP	ROVAL TAG				
4. Organization Name and Address:	Honeywell International Inc 11100 North Oracle Tucson, AZ 85737	nc.	Repair Station HZ3R571L			5. Work Order/Co R417570 348261537	5. Work Order/Contract/Invoice Number: R417570 348261537 Page 1 of 1	
6.Item: 7. Description:		8. Part Number:		9. Quantity:	10. Serial Number:	er.	11. Status / Work:	
001 STARTER/GENERATOR, AC OUTLINE	AC OUTLINE	28B545-9		<b>1</b>	48-B1243		REPAIRED	
12. Remarks:	- 24-21-14 BEV 8 FO	D TIME AND CYCLE						
INFORMATION, SEE ATTACHED CAFE P.O. R417570	AFE REPORT, IF APPLICABLE	CABLE.						paid.
THIS DOCUMENT HAS BEEN ISSUED GENERATED SIGNATURE PROCEDURE	ACCORDING TO	AN APPROVED COMPUTER						
SEE ATTACHED DOCUMENTS AS APPLICABLE FOR WORK PERFORMED CERTIFIES THAT THE WORK SPECIFIED IN BLOCK 11/12 WAS CARRIED OUT IN ACCORDANCE WITH EASA PART 145 AND IN RESPECT TO THAT WORK THE COMPONENT IS CONSIDERED READY FOR RELEASE TO SERVICE UNDER EASA PART 145 APPROVAL NO. EASA 145.4132	AS APPLICABLE FOR 1 D IN BLOCK 11/12 WAS CARF PPROVAL NO. EASA 145.4132	WORK PERFORMED IED OUT IN ACCORDANCE WITH E	ASA PART 145 AND IN F	RESPECT TO THAT	WORK THE COMPC	NENT IS CONSIDE	RED READY FOR RELEASE	
13a. Certifies the items identified above were manufactured in conformity to:  Approved design data and are in a condition for safe operation.  Non-approved design data specified in Block 12.	s the items identified above were manufactured in conformity the items identified above were manufactured in conformity the items identified above were manufactured in conformity to approved design data specified in Block 12.	nformity to: operation.	14a.   14 CFR 43.9 Return to Service   Other regulation specified in Block 12  Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.	14 CFR 43.9 Return to Service that unless otherwise specified in Block 12 was accomplished in Block 13 and in respect to that	ice Other reg id in Block 12, the ned in accordance that work, the iten	Other regulation specified in Block 12 ck 12, the work identified in Block 11 a ccordance with Title 14, Code of Federk, the items are approved for return to	in Block 12 Block 11 and de of Federal or return to service.	
13b. Authorized Signature:	13c. Appr	13c. Approval/Authorization No.:	14b. Authorized Signature	nature:	00	14c. Approva HZ3R571L	14c. Approval/Certificate No.: HZ3R571L	
13d Name (Type) or Brinted):	13e Date	13e Date(dd/mmm/vvvv):	14d. Name (Typed or Printed):	or Printed):		14e. Date	14e. Date(dd/mmm/yyyy):	

User / Installer Responsibilities
It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article. Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that hishard airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1. Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

**Brian Kelly** 

08/DEC/2023

NSN: 0052 - 00 - 012 - 9005

FAA FORM 8130 - 3 (02-14)

#### Commercial

Honeywell

Repair Station # HZ3R571L

Tucson - North Oracle Rd Honeywell International Inc 11100 North Oracle Road TUCSON AZ 85737 Date:08 DEC 2023

**Initial Findings Report** 

Repair Order: 2023-348261537-001

Customer: 300002 AJW AVIATION LTD

348609175

Customer P/O: R417570

**Orig Cust:** 

Aircraft S/N#: UNK

HH.DD

**Engine S/N:** 

Part Number: 28B545-9

Part Desc: STARTER/GENERATOR, AC

(HH:MM)

Serial No: 48-B1243

Received Date: 07 NOV 2023

OUTLINE

Series/Issue/Amdts: A

Quantity: 1

Mods:

Aircraft tail#: UNK

Model #: APU 131

TIMES/CYCLES

Time Since New:

Time Since Overhaul: Time Since Repair:

Time Since Installation:

Date on:

Date off:

Alternate S/N:

Cycles Since New:

Cycles Since Overhaul:

Cycles Since Repair: Cycles Since Installation:

#### **CUSTOMER REASON FOR RETURN**

APU GEN DOES NOT CONNECT THE POWER FROM APU

## GENERAL CONDITION AS RECEIVED (HIDDEN DAMAGE)

## **Condition Received Text**

Last FT date: Component review shows normal wear and tear with no visible outer damage other than

noted: Customer hardware on unit

Reason for return code

INTERNAL FAILURE

Removal Type

Unscheduled

#### DETAIL DISASSEMBLY / EVALUATION FINDINGS

## **Failure Description:**

## Findings:

NO CID. Endbell, Rotor, and Stator being sent for repair. Shaft and adapter worn. Seal plate worn. Unit disassembled and cleaned.

Parts ordered for reassembly.

OPRTING VOLTGE/CURRNT/RESIST OUT OF SPEC **Related Area:** Non-conformance: Recurrent Failure:

**Failed Part Part Name** Condition: **Primary Failure** Voltage/Current/Resist Out of Limits 6430800-4 STATOR HOUSING Yes **RESOLVER ROTOR** Delamination No - but contributing 6430580-2 No - but contributing 6430610-1 SHAFT ASSY Worn **ADAPTER** Worn No - but contributing 6430587-1 Worn No - but contributing 6428300-1 SEAL PLATE No - but contributing 6430624-4 ROTOR, AC GENERATOR Low Operating Voltage No - but contributing 6430603-3 **END BELL ASSEMBLY** ID (Inside diameter) oversized

## SERVICE BULLETINS / AUTHORIZING DOCUMENTS

## **Authorizing Technical Document**

Complied With:

Doc#: CMM 24-21-14 Rev: 8 Date: 01/25/2022

## WORK PERFORMED / COMMENTS TO CUSTOMER

## **Workscope Performed / Summary of Actions Taken**

Page: 1 of 2

#### Commercial

Customer: 300002 AJW AVIATION LTD

Honeywell

Repair Station # HZ3R571L

Tucson - North Oracle Rd Honeywell International Inc 11100 North Oracle Road TUCSON AZ 85737 Date:08 DEC 2023

**Configuration And Findings Evaluation** 

Repair Order: 2023-348261537-001

348609175

Customer P/O: R417570

**Orig Cust:** 

Part Number: 28B545-9

Part Desc: STARTER/GENERATOR, AC

OUTLINE

Serial No: 48-B1243

Mods:

Series/Issue/Amdts: A

Quantity 1

Ship Date:

Received Date: 07 NOV 2023

Findings: Failed CMM 24-21-14 Rev 008. Failed Visual inspection of the unit, Shaft and Adapter worn. Failed Open or Shorted Diode Test for Faulty Diode (Rotor). Failed Insulation Resistance Test for Low Mohm (Min. 40 Mohm Read 23 Mohm at one Minute)(Stator). Customer return reason Confirmed. No Last FT date. NO CID. Rotor and Stator being sent for repair. Shaft and adapter worn. Seal plate worn. Unit disassembled and cleaned. Parts ordered for reassembly. Final: Repaired I.A.W. Authorizing Documents listed above. Replaced unserviceable components as described in parts section of CAFE or as listed in Work Accomplished. Time and cycle information, as provided from the customer PO referenced in TIMES/CYCLES section of CAFE with the following changes after completion of this service. TSR-0 and CSR-0.

**Action Taken Code** 

Repaired

**Customer Confirmed Removal Reason:** 

Yes

**Evaluation Type** 

Evaluated - Significant Fault Found

FINAL CONFIGURATION

Part No: 28B545-9

S/N: 48-B1243 

Series/Issues/Amdts: A

Mods:

MECHANIC/ANALYST Scott Drobeck

Page: 2 of 2

DATE: 05 DEC 2023

## **ANALYTICAL CHECK SHEET FORM**

Honeywell

Repair Facility: Tucson - North Oracle Rd

Honeywell International Inc 11100 North Oracle Road TUCSON AZ 85737

Customer PO: R417570 Customer: 300002 AJW AVIATION LTD Notification No: 48-B1243 Service Order No: 5018014600 Sale

 Notification No: 48-B1243
 Service Order No: 5018014600

 Outline No: 28B545-9
 Serial No: 48-B1243

 Mod To Outline. :28B545-9
 Mod to S/N: 48-B1243

Sales Order No : 551747660

Model No.: APU 131

	Material	Serial No.	Disp	Qty	Description		Service Order #
IN	28B545-9	48-B1243	M	0	STARTER/GENERATOR,	AC OUTLINE	5018014600
OUT	28B545-9	48-B1243	М			7.0 0072.112	0010014000

REWORK CODE:

IT01

CONDITION CODE:

ACS OPRTING VOLTGE/CURRNT/RESIST OUT OF ACCT IND:

SPEC

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.6430610-1		N	1	SHAFT ASSY	
OUT	6430610-1		N	1		

**REWORK CODE:** 

CONDITION CODE :

6780 Worn

**ACCT IND:** 

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.6430587-1		N	1	ADAPTER	
OUT	6430587-1		N	7		

**REWORK CODE:** 

**CONDITION CODE:** 

6780 Worn

ACCT IND:

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.6430603-3	041223DA	R	1	END BELL ASSEMBLY	5018087809
OUT	6430603-3	062	R	7		

REWORK CODE :

CONDITION CODE :

850 ID (Inside diameter) oversized

ACCT IND:

## ANALYST REMARKS:

Bearing liner

	Material	Serial No.	Disp	Qty	Description	Service Order#
IN	.521-1588268-18		N	4	HEX SOCK SCREW	
OUT	521-1588268-18		N	]		

REWORK CODE:

**CONDITION CODE:** 

100% Replacement as Required

ACCT IND :

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.1531758-70		N	4	GASKET O RING	
OUT	1531758-70		N	1		- B

REWORK CODE :

**CONDITION CODE:** 

100% Replacement as Required

ACCT IND :

**ANALYST REMARKS:** 

Print Date: 12/08/2023

Page 1 of 3

# **ANALYTICAL CHECK SHEET FORM**

Honeywell

Repair Facility: Tucson - North Oracle Rd

Honeywell International Inc 11100 North Oracle Road TUCSON AZ 85737

Customer PO: R417570 Notification No: 48-B1243 Outline No: 28B545-9 Mod To Outline: :28B545-9

Customer: 300002 AJW AVIATION LTD

**Service Order No** : 5018014600

Sales Order No : 551747660

**Serial No:** 48-B1243 **Mod to S/N:** 48-B1243

Model No.: APU 131

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.890376-4		N	12	SCREW	Service Order #
OUT	890376-4		N	1 -	001.217	
			1			

REWORK CODE :

CONDITION CODE:

100% Replacement as Required

ACCT IND:

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order#
IN	.6428300-1		N	1	SEAL PLATE	Col vice Cruci #
OUT	6428300-1		N	1		

**REWORK CODE:** 

**CONDITION CODE:** 

6780 Worn

ACCT IND:

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.6430580-2	1167	N	1	RESOLVER ROTOR	
OUT	6430580-2	13976	N			

REWORK CODE :

**CONDITION CODE:** 

470 Delamination

ACCT IND:

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order #
IN	.6430692-1		N	1	BEARING	
OUT	6430692-1		N	7		

REWORK CODE :

**CONDITION CODE:** 

ACCT IND :

#### **ANALYST REMARKS:**

	Material	Serial No.	Disp	Qty	Description	Service Order#
IN	.6430624-4	0459	R	1	ROTOR, AC GENERATOR	5018087484
OUT	6430624-4	9000-2334	R	1	*	

**REWORK CODE:** 

**CONDITION CODE:** 

1160 Low Operating Voltage

**ACCT IND:** 

#### ANALYST REMARKS:

Low voltage output

	Material	Serial No.	Disp	Qty	Description	5	ervice Order#
IN	.6428177-1		N	1	BEARING, ROLLER		
OUT	6428177-1		N	]			

REWORK CODE :

**CONDITION CODE:** 

ACCT IND:

ANALYST REMARKS:

Print Date : 12/08/2023

Page 2 of 3

# ANALYTICAL CHECK SHEET FORM

Honeywell

Repair Facility :Tucson - North Oracle Rd

Honeywell International Inc 11100 North Oracle Road TUCSON AZ 85737

Customer: 300002 AJW AVIATION LTD

Service Order No: 5018014600

Sales Order No: 551747660

Serial No: 48-B1243

Mod To Outline. :28B545-9 Mod to S/N: 48-B1243 Model No.: APU 131 Material Serial No. Disp IN .6430800-4 Qty Description 1406 OUT R Service Order # 6430800-4 1 STATOR HOUSING 1680 R 5018087804

REWORK CODE :

**CONDITION CODE:** 

Customer PO: R417570

Notification No: 48-B1243

Outline No : 28B545-9

5260 Voltage/Current/Resist Out of Limits

ACCT IND:

ANALYST REMARKS:

Material       IN	Serial No.	Disp Qty N 1	Description PACKING, PREFORMED	Service	Order#
CONDITION CODE :	100% Park				

CONDITION CODE:

100% Replacement as Required

ACCT IND :

ANALYST REMARKS:

45

TDS	PART NAME	Brushless, Oil-Spra	ay-Cooled Ac Ge	enerator	SERIAL NO.	\times \\ \text{TUS} \\ FT \\ 102 \\ align*
	PART NO.	28B545-ALL			48-B	1243
REMARKS Reference TE	STING AND FAULT ISC	DLATION	TECHNICI	AN		
NOTE: Throughout this terminal	record terminal T4 and	d N (neutral) reference the s	same	H	311103	
se with Honeywell CMM	1 24-21-14, REV <u>8</u>	Final	DEC	0 8 202	3 Z ACCEPT	REJECT
		28B545-				
<u>Para</u>						
5. <u>Initia</u>	I Resistance Te					
		•	sistance: 0.0125			
Sub Para	1	Min.	<u>Max</u>	Measu	<u>ured</u>	
A.	Terminals	0.0445	0.0405	0.01	21	
	T1–T4 T2–T4	0.0115	0.0135	0.01		
	T3-T4	0.0115 0.0115	0.0135 0.0135	0.012		
	13-14	0.0113	0.0133	0.012	-0_	
				Pass	s/_Fail_	
В.	<u>Pins</u>	Min.	<u>Max</u>	Mea	sured	
	1–2	0.29	0.35	C 1000 C	33	
	2–3	0.29	0.35		33	
	3–1	0.29	0.35	0.3	33	
				Pas	s <u>/</u> Fail	
	<u>Pins</u> 5–7	<u>Min.</u> 5.13	<u>Max</u> 6.27	Mea S.:	sured ≲9	
	5-7	5.13	0.27	2	<del>- 1</del>	
				Pas	sFail	
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TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 1 of 12

TDS	P	ART NAME	Brushle	ss, Oil-Spr	ray-Cooled	d Ac Generat	tor	SERIAL NO.	TUS FT 102
	Р	ART NO.	28B545	-ALL				48-B	
REMARKS Reference TESTIN	NG.	AND FAULT I	SOLATION			TECHNICIAN			
NOTE: Throughout this rec				reference the	same		,	1311103	
terminal					·		P	1 311103	
Use with Honeywell CMM 24	-21	-14, REV <u>8</u>	<u> </u>	u.		DEC 0 8	2023	ACCEPT	REJECT 🗆
6. Resolv	er	Verificat	ion Proce	<u>dure</u>					
Sub Para									
B. – E.		Resolve	er A-Phase	Output is	in Phase	Angular O			
<u>Rpm</u>			Generato			(Limit: ±	3°)		
2,000			Yes	_No			-		
(200 H 6,000			Yes /	No		0	0		
(600 H	tz)								
Phase	va	riation fror	n 2000 rpm	n to 6000 r	pm shall b	e less than	1°.	. = "	
							Pass	Fail	
<u>Para</u>									
8. <u>Vari-</u> [	Dri	ve Tests							
					tort alactr	ical tests unl	ess oi	I is flowing th	rough
CAUT the ge	IC ene	N: Do not erator.	rotate gen	erator or s	itari electr	icai tests um	000 0.	I is flowing th	
Sub Para									
A. Test 0	Co	nditions							
,					Required		sured		
(3) Oil inl	let	temperatu	ıre		240 ±10°F	23	°F		
Oil flo				4	.5 ±0.3 gp	m $\frac{4.2}{1}$	gr_gr	om	
Oil in	let	pressure			60–75 ps	i <u>6</u>	Sps	si	
							Pas	s_/Fail	
(4) Make	S	ure static I	eakage is	not more the	han drop				
a ligh	it v	vetting, no	t sufficient	to make a	ulop.		Pas	sFail	
							in whole or	in part, be used, duplicat	ted, or disclosed for any
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TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 2 of 12

TD	s	PART NAME	Brushless, O	il-Spray-Coole	d Ac Genera	tor	SERIAL NO.	(TUS)
	-	PART NO.	28B545-ALL				48-B	1243
REMARKS Refe	rence TESTIN	G AND FAULT IS	OLATION		TECHNICIAN			
NOTE: Throug terminal	hout this reco	ord terminal T4 an	nd N (neutral) referen	nce the same		H	311103	
Use with Honey	well CMM 24-2	21-14, REV <u></u>		DEC 08	2023	ACCEPT	REJECT 🗆	
Sub Para D.	PMG Te	est						
Sub Para	Initial L-	-L Voltage R	eadings (Unit a	s Received) at	11.550 ±25	rom (1	1155.0 ±2.5	Hz)—No Load
(2) - (4)		hase		oltage Range	,		sured Volta	
		1–2		6–84			81	_
		2–3	76	6–84			81	_
		3–1	76	6–84		_	81	-
	Voltag	ges are withi	n 1.5% of the a	average.		Pas	ssFai	I
(5) – (6)			with 10.0 A/Ph pm (1155.0 ±2.					
	<u>Phase</u>	Mir	n. Required Vol	<u>tage</u>		Mea	sured Volta	<u>ge</u>
	1–2		55			_	60	_
	2–3		55			_	60	-
	3–1		55			_	59	_
						Pas	ss Fai	I

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TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 3 of 12

TD	S	Р	ART NAME	Brushle	ss, Oil-Sp	ray-Coole	ed Ac Genera	tor	SERIAL NO.	Service of the Particular of t	TUS FT 102
		P	ART NO.	28B545	-ALL				48-	BI	243
REMARKS Refer	rence TE	ESTING	AND FAULT IS	OLATION			TECHNICIAN			076.04	
NOTE: Through	hout this	s record	terminal T4 a	nd N (neutral)	reference the	e same		Н	13/110	3	_
Jse with Honey	well CMI	M 24-21-	14, REV <u>8</u>	_			DEC 0 8	202	3 ACCE	РТ	REJECT
<u>Sub Para</u> E.											
	Satı	uratior	Curve Ch	ieck							
(4) – (6)			ent Excitat rpm: 11,55				0 ±1 V				
T1-7 (V)		Γ2–Τ4 (V)	T3-T4 (V)	T1–T2 (V)	T2-T3 (V)	T3–T1 (V)	Field Current I <sub>f</sub> (A)		Field tage E <sub>f</sub> (V)	Ar	oltage mplitude odulation (%)
120		20	120	208	208	208	0.88	7.	2 Max: 0	_	1. (
							Max: 0.90 A	Pa	ss <u>/</u>	. Fai	I
(7)	F		ed rpm: 11			2.5 Hz)					
			–T4 V)	THC (%)	1						
		12	.0	1.7							
			Max:	3.2% L–N				Pa	iss	_Fa	il
										-	
											disclosed for some
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										Charles and the	

TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 4 of 12

Sub Para   (8) (9)   Field Current Excitation with Field Current Set at 2.00 ±0.1A   Required rpm: 11,550 ±25 (1155.0 ±2.5 Hz)   Field Current   Field Voltage E <sub>f</sub>   T1-T4   T2-T4   T3-T4   T1-T2   T2-T3   T   (A)   (V)   (V)	TUS FT																
REMARK'S Reference TESTING AND FAULT ISOLATION NOTE: Throughout this record terminal T4 and N (neutral) reference the same  #3/1/03    PIEC 0 8 2023		NO.	ERIAL N		erato	d Ac Gene	oray-Coole	ushless, Oil-S	NAME Br	PART	os	TDS					
TECHNICIAN   TEC	13	8-B1	48					B545-ALL	NO. 28	PART							
INTE: Throughout this record terminal T4 and N (neutral) reference the same erminal  Interminal  Inter						TECHNICIAN				G AND	erence TESTING	EMARKS Ref					
Sub Para   8) (9)   Field Current Excitation with Field Current Set at 2.00 ±0.1A   Required rpm: 11,550 ±25 (1155.0 ±2.5 Hz)		1103	3/1/	H			ne same					IOTE: Throu					
Field Current Excitation with Field Current Set at 2.00 ±0.1A  Required rpm: 11,550 ±25 (1155.0 ±2.5 Hz)  Field Current Field   Field   Voltage Er   T1-T4   T2-T4   T3-T4   T1-T2   T2-T3   T   (V)	JECT 🗆	CCEPT	ACC	2023	8	DEC 0			REV <u>\$</u>	21-14, F	eywell CMM 24-2	e with Hone					
Field Current Excitation with Field Current Set at 2.00 ±0.1A  Required rpm: 11,550 ±25 (1155.0 ±2.5 Hz)  Field Current   Field   Voltage Er   T1-T4   T2-T4   T3-T4   T1-T2   T2-T3   T   (V)												Sub Para					
Required rpm: 11,550 ±25 (1155.0 ±2.5 Hz)  Field Current   Field   Voltage Er   T1-T4   T2-T4   T3-T4   T1-T2   T2-T3   T   (V)   (V						0 ±0.1A	t Set at 2.0	n Field Currer	xcitation wit	ent Ex	Field Curre						
(10)  Required Sequence Sequence T1, T2, T3  Short-Circuit Test  NOTE: The Short Circuit Test is only required if a prior operation may have affecte electromagnetic performance of the stators or rotors, for example, a rotor rewind.  Required Pass Fail  NOTE: The Short Circuit Test is only required if a prior operation may have affecte electromagnetic performance of the stators or rotors, for example, a rotor rewind.  Required rpm: 12,000 +25 (1200.0 ±2.5 Hz)  Min. Current Max Current Measured Current Short circuit across terminals T1 through T4 for 5 seconds min.																	
(10)  Required Sequence Sequence T1, T2, T3  Short-Circuit Test  NOTE: The Short Circuit Test is only required if a prior operation may have affecte electromagnetic performance of the stators or rotors, for example, a rotor rewind.  Required rpm: 12,000 +25 (1200.0 ±2.5 Hz)  Min. Current Max Current Measured Current Short circuit across terminals T1 through T4 for 5 seconds min.	T3–T1 (V)		-						Voltage E <sub>f</sub>	ent	If						
Min.: 145 V  Pass / Fail  Required Sequence Sequence T1, T2, T3	266	66	26	67	21	153			11								
NOTE: The Short Circuit Test is only required if a prior operation may have affected electromagnetic performance of the stators or rotors, for example, a rotor rewind.  Required rpm: 12,000 +25 (1200.0 ±2.5 Hz)  Min. Current Max Current Measured Current State Short circuit across terminals T1 through T4 for 5 seconds min.						equence	<u>e</u> <u>S</u>	Sequen				(10)					
Required rpm: 12,000 +25 (1200.0 ±2.5 Hz)  (7)  Min. Current Apply three-phase symmetrical short circuit across terminals T1 through T4 for 5 seconds min.	ted the	have aff	nav ha	ation n	era	a prior or	aguired if	Tankin ombr									
(7)  Apply three-phase symmetrical short circuit across terminals T1 through T4 for 5 seconds min.  Min. Current Max Current Score Max Current Score Measured Cu Score Max Current Score Max Current Measured Cu Score Max Current Score Max Current Measured Cu Score Max Current Score Measured Cu Score Max Current Max Current Measured Cu Score Max Current Score Max Current Measured Cu Score Max Current Max Current Measured Cu Score Max Current Measured Cu Score Max Current Measured Cu Score Max Current Max Current Measured Cu Score Max Current Measured Cu Score Max Current Measured Cu Measured Cu Score Max Current Measured Cu M	i.	otor rew	, a rote	ample	exa	otors, for	tators or r	ance of the s	tic perform	ne Sr agne	NOTE: The electromagnet						
Apply three-phase symmetrical 530 A 870 A short circuit across terminals T1 through T4 for 5 seconds min.							Hz)	(1200.0 ±2.5	12,000 +25	rpm:	Required						
		<u>56</u>			А			trical als T1	cross termin	uit ac	short circ	(7)					
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TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 5 of 12

TDS	PART NAME	Brushless, Oil-Spray-Cool	ed Ac Generato	serial NO. 48-B1	243
REMARKS Reference TEST	PART NO.	28B545-ALL  SOLATION	TECHNICIAN	H311103	
NOTE: Throughout this reterminal  Use with Honeywell CMM 2	ecord terminal T4 a	2	DEC 0 8		REJECT 🗆

# Sub Para

Starter/Generator Heating Test

Generator Heating at 11,550 ±25 rpm (1155.0 ±2.5 Hz) with 96-kVA Load and (1) - (7)0.75 PF (266 A/Phase)

	Minimun	n running	kW2	kW3	11	12	13					
Time (Minutes)	T1-T4		1		T2-T3 (V)	T3–T1 (V)	kW1 (kW)	(kW)	(kW)	(A) 268	(A) 268	(A) 267
(Minutes)	120	120	120	208	208	208	24	24	24	268	200	267
2	120	120	120	208	208	208	24	24	24	268		267
4	120	120	120	208	208	208	24	24	24	268	268	266
6	120	120	120	208	-	208	24	24	24	268	268	266
8	120	120	120	208	208	208	24	24	24	268	268	266
10	120	120	120	200	200							

10						
Time (Minutes)	Oil Inlet Temp (°F)	Oil Output Temp (°F)	Oil Inlet Pressure (psi)	Oil Flow (gpm)	Field Current (A)	Field Voltage Ef (V) 24. 2
0 2	237	260	65	4.2	2.9	25.5
6 8	232	261	66	4.2	2.9	25.5 25.5 25.5
10	233	260	65	Req.:	2.9 Max:	22.2

Req.: Req.: 4.5 ±0.3 gpm 3.1 A 60-75 psi

Pass\_

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TDS		PART	NAME	Brushle	ss, Oil-S	Spray-Co	oled Ad	Generat	or	SERIAL NO.		TUS FT 102
100		PART		28B545		•				48-	B129	/3
					7122		TEC	HNICIAN				
EMARKS Refere	nce TESTI	NG AND I	FAULT ISOL	ATION			1120	HIVIOIAIV				
IOTE: Through	out this re	cord term	inal T4 and	N (neutral)	reference	the same			1	431110	3	
erminal							-		- 1	,		
se with Honeyw	rell CMM 2	4-21-14, R	ev <u>8</u>				Di	EC 0 8	202	3 ACCEP	r RE.	JECT 🗆
Sub Para (8) (	Senerato 266 A/P	or Heat hase)	ing at 11	,550 ±2	5 rpm (1	1155.0 ±2	2.5 Hz)	with 96-k	VA L	oad and 1.	0 PF	
		TO TO	T3-T1	T1-T4	T2-T4	T3-T4	kW1	kW2	kW:		12	13
111110		T2-T3 (V)	(V)	(V)	(V)	(V)	(kW)	(kW)	(kW	-	(A)	(A)
(Minutes)	(V)	-	-	119	120	119	32	32	31	264	266	26
0	207	207	207	117	120	111						
Time	Oil Ir		Oil Outpu	Pre	I Inlet		Flow om)	Fiel Curre (A	nt I <sub>f</sub>	Field Voltage E (V)	Ξf	THD (%)
(Minutes)	(°F	-)	(°F)	(	psi)			7.7		19.5	1	3.0
0	236	8	262	6	6	4.	3	Max:		1 (12	Max	:
				Req.: 60-7	5 nsi	Req.: 4.5 ±0.3	gpm	3.1 A			3.2%	% L−N
				00-7	5 p5.				Pas	s	Fa <mark>i</mark> l	
							. 0 5 11	_) with 16	0_k\/	A Load an	d 0.75	PF`
(9)	Gener	ator He	eating at	11,550 :	±25 rpm	(1155.0	±2.5 H	Z) With it	J3-K V	'A Load an		
	NOTE may h exam	: Steps have af ple, a r	s (9) and fected th rotor rew	(10) ar ne elect /ind).	e overlo romagr	oad tests netic per	s that a forman	re only r nce of the	iuna	red if a pri tors or rot	or ope	ration
	Annly	overlo	ad for 5 s	seconds	minimu	ım (see o	aution	text).		40		
	Time	to adju	st load a	nd take	reading	s should	not exc	ceed 30 s	econ	us.		
		Time		T1-T4	. F	ield Cur	rent I <sub>f</sub>	Field Vo		Ef		
	/9	acondo	3)	(V)		(A)		(1	,		2	

			Field Voltage E <sub>f</sub>
Time	T1-T4		Field Voltage =
(Seconds)	(V)	(A)	(V)
(Seconds)	(1)	( )	41.4
ς .	119	5.3	16.7
1 4			

Max: 6.2 A

Pass	_ Fail	
------	--------	--

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TDS			PART	NAME	Brush	less, Oi	l-Spray-	Coole	ed	Ac Gene	rato	or SERIAL NO. $\left\langle \begin{array}{c} \overline{TUS} \\ FT \\ 102 \end{array} \right\rangle$						
			PART	TNO. 28B545-ALL 48-B1								124						
REMARKS Reference TESTING AND FAULT ISOLATION TECHNICIAN																		
NOTE: Through	ghout this	recor	rd term	inal T4 and	d N (neutra	il) referend	ce the same	9				H	31110	93				
Use with Honeywell CMM 24-21-14, REV 8 DEC 0 8 2023 Acce								EPT	REJE	ест 🗆								
Sub Para																		
	Generato ).75 PF				550 ±25	5 rpm (1	155.0 ±2	2.5 Hz	z) י	with 126-	kV/	A Loa	ad and					
Time (Minutes)	T1–T2 (V)		–T3 V)	T3-T1 (V)	T1-T4 (V)	T2-T4 (V)	T3-T4 (V)	kW (kW		kW2 (kW)		W3 W)	I1 (A)		12 (A)	13 (A)		
0	208	20	08	208	119	120	120	32	2	32	3	2	357	3	57	354		
5	208	20	57	207	119	120	119	32	-	32	3	2	356	3	57	323		
Time (Minutes)	Oil In Tem (°F)	р		Output Femp (°F)	Oil I Pres (ps	sure	Oil Flo			Field Current (A)	lf	Fiel	d Volta E <sub>f</sub> (V)	ge				
0	235	5	273 66			4.	3		3.9		3	4.9						
5	234	/	2	82	66		4.2			4.1		3	37.2					
					Req.: 60–75 p		Req.: 4.5 ±0.3 g	pm		lax: .3 A	Pa	ass_		Fail _		_		
C	Current Taution	: TH	IESE	THREE	E RESIS	STORS	ARE US	ED T	ГО	SHORT	CIF	RCUI	T THE	СТ				
							NOT TRY GENER			WITCH C	N C	CT W	HEN A	LOA	ND			
(1) (2) F	Required	l rpr	m: 11	,550 ±2	5 (1155	.0 ±2.5	Hz) Rate	ed Lo	ad	1 96KVA,	1.0	PF,	Curren	t L-N	= 26	6A		
F	Required	l vo	•		0.04													
			<u>Pi</u>			<u>Mi</u>		Max		Meas 0.6	1							
			1-					0.69 ' 0.69 '		- / -	7 1	v ./						
	2–4 0.61 V 0.69					0.66	0	<b>V</b>										
The three readings are balanced within 0.035 V									Pa	ass_		Fail						
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	TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14																	

8 of 12

TI		PART NAME Brushless, Oil-Spray-Cooled Ac General									rator		SERIA	L NO.		TUS FT	$\rangle$		
			PART	ΓNO.	28E	354	5-ALL					48-B						243	J
REMARKS Ref	erence TES	STING	AND	FAULT IS	OLATIC	ON				T	TECH	NICIAN							
NOTE: Throu	ghout this	recor	d teri	minal T4 ar	nd N (ne	eutra	ıl) referend	ce the s	same	.				, ,	17,	5			
													_	H	5/	1103			
Use with Hone	ywell CMM	24-2	1-14,	REV <u>8</u>	_						DE	C 0	8 21	023	Ø,	ACCEPT	F	REJECT 🗆	
Sub Para																			
(3)	Current	t Tra	nsf	ormer Ph	nasing	g C	heck wi	ith 96	-kV	'A Loa	ıd ar	nd 0.7	5 PF	(26	6 A/I	Phase	e)		
	1–4 is i	n ph	ase	with T1	_T4							Yes				No	Í		
	2–4 is i	n ph	ase	with T2	_T4							Yes		_		No_			
	3–4 is i	n ph	ase	with T3	_T4							Yes		_		No_			
												Pass	_			Fail_	-		
1.	Oversp	eed	Tes	st															
				rocedure	es in t	he	Oversn	eed -	Tes	t while	the	starte	er/ne	ners	ator i	e etill	hot f	rom the	
	previou	s te	sts a	and chec	cks. T	his	test is	only i	requ	uired it	fap	rior op	perati	ion	may	have			
(4) (0)				c perforr											r rew	ind.			
(1) - (3)				200 ±25					-								žia -		
				e speed oad, 0.7															
				2-minute				,,										,9	
T:	T4 T0	ТО	TO	T0 T4	T4 -	<b>T4</b>	TO T4	то -	<b>-</b> 4	130/4	Liv	vo   1	1410		4		1		_
Time (Minutes)	T1–T2 (V)	1	-T3 √)	T3-T1 (V)	(V)		T2-T4 (V)	13– (V		kW1 (kW)			kW)		1 A)	12 (A)		13 (A)	
0		20		208	120	-	120	120	-	24	20	( )		26	-	268	2	66	
2		20		208	120	-	120	120	-	24	2		4	26	-	268	_	66	
					, ,		100					1   -	1					-	
	Oil II			Oil Out	. ,		Oil Inle						ield		Fie	ld Volt	age		
Time (Minutes)	Ter (°F			Temp (°F)	)	F	Pressur (psi)	е		)il Flov (gpm)			rent (A)	lf		E <sub>f</sub> (V)	ŧ		
0	23			247	_		66	-		(gpiii) イス		7.	_		7	3.9		1	
2	238		263				66		L	1.3		2				5.4			
				20 -		Red	q.:		Req.	.:		Max	:			-	+	J	
						60-	-75 psi		4.5 ±	±0.3 gp	m	3.1							
													Pas	ss _	_	_ Fai	<b>ا</b>		
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TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 9 of 12

Т	DS	PART NAME	Brush	less, Oil-	Spray-Cod	led Ac G	Senerat	or	AL NO.	TUS FT 102
,		PART NO.	28B54	15-ALL					48-B	
REMARKS Re	ference TESTING	AND FAULT IS	SOLATION			TECHNIC	CIAN	•	7	
NOTE: Thro	ughout this recor	d terminal T4 a	nd N (neutra	al) reference	the same			<i>H</i> 3.	11103	
Use with Hone	eywell CMM 24-21	-14, REV <u>8</u>	_			DEC	0 8	2023 🗷	ACCEPT	REJECT 🗆
Sub Para	<u>a</u>									
(4)	Anti-drive e	end (ADE)	displacen	nent (in n	nil): <u>6.4</u>	Ma	ıx limit:	2.0 mils	peak to p	eak
J.	Open or Sh	orted Diod	e Tost				P	ass	Fail	
	•			l diadaa h	w monitori	na tha				
(1)	Do a check exciter field the test at	voltage w	aveform (	on an osc	cilloscope.		4-4			
(2)	If the peaks						\ \ / /	veform p	eaks are	
	othor, the g	jonorator n	as a rano	a aloue e	n ranca arc	ac load.			of each o	ther
							P	ass	Fail _	
K.	Phase Bala									
(1) - (4) L	Determine no paragraphs heating with	E(4) - (6)	. Record	(saturatio						
		T1-T4	T2-T4	T3-T4	Avg.	T1-T2	T2-T	3 T3-T	1 Avg.	
	Paragraph	) (V)	(V)	(V)	(V)	(V)	(V)	(V)	(V)	
	E. (4) – (6	120	120	120	120	208	208	208	208	
	G. (1) – (7		120	120		208	208	208	208	
	Requirement phase voltage							Max	<u>Deviation</u>	<u>n</u>
	from the ave	rage of the						0	. 0_%	
							Pa	ass	Fail _	
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TI	DS	PART NAME	Brushless, Oil-Sp	oray-Coole	ed Ac G	Senera	tor	SERIAL NO.	TUS FT 102
		PART NO.	28B545-ALL					48-E	11243
REMARKS Re	ference TESTIN	G AND FAULT IS	OLATION		TECHNI	CIAN			
NOTE: Throuterminal	ughout this reco	ord terminal T4 ar	nd N (neutral) reference the	e same			Н	3/1/03	
Use with Hone	eywell CMM 24-2	21-14, REV <u>8</u>	_		DEC	0 8	2023	☑ ACCEPT	REJECT 🗆
Sub Para									
L.	Case Grou	und Check	Note: $R_{25}$ must be	2800.0≥					
(1) - (5)	Room Ten	nperature	<u>21</u> °c						
	Resistance	e J1–Pilot	Flange <u>0-00 4</u> Ω						
	Resistance	e J2–Pilot	Flange <u><i>0.</i>00 3</u> Ω						
							Pass_	Fail _	
M.	Insulation	Resistance T	Test						
		: Keep CT se resistance te	econdaries short-circ esting.	cuited duri	ing all o	dielect	ric stre	ength and	
(4)	<u>Time</u>	Applie	ed Voltage Min. F	Resistance	<u> N</u>			sistance	
	1 minute	е	250 40	Mohm		28	3	Mohm	
							Pass_	Fail _	
N.	Dielectric S	Strength Tes	t						
(3)	250 V, 60 I	Hz for 1 Minu	ute minimum						
. ,				Applie Voltag	_	<u>Max</u> Leaka			sured kage
	Pin 1 of co	nnector J2, t	o generator frame	250	_V	5 m/	À		)mA
						I	Pass_	Fail _	
(4)	250 V, 60	Hz for 1 Min	ute minimum						
				<u>Appl</u> Volta			ax kage		<u>sured</u> kage
	Pin 5 of co	onnector J2,	to generator frame	250	V	5 r	nA	_0	mA
							Pass_	Fail _	
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TDS 28B545-all Release Date: 16/07/2021 To be used with Honeywell CMM 24-21-14 11 of 12

TDS	PART NAME Brushless, Oil-S	Spray-Coole	ed Ac Genera	tor	SERIAL NO.	TUS FT 102
	PART NO. 28B545-ALL				48-B	
REMARKS Reference TEST	ING AND FAULT ISOLATION		TECHNICIAN			
NOTE: Throughout this re terminal	ecord terminal T4 and N (neutral) reference	the same		Н	3/1103	
Use with Honeywell CMM 2	4-21-14, REV <u>8</u>	и	DEC 0 8	202	3 Z ACCEPT	REJECT 🗆
Sub Para						
(5) 750 V, 60	Hz for 1 Minute minimum					
		<u>Applie</u> Voltag				sured kage
Terminal	T1, to generator frame	750	_V 15 m	A	_2	mA
				Pass <sub>.</sub>	Fail_	
(6) 250 V, 60	O Hz for 1 Minute minimum with	CTs Ungrou	<u>ınded</u>			
		App Volta		ax kage		sured kage
	ector (J1) pins 1, 2, 3, and 4 ogether, to generator frame	250	<u> </u>	nA	0	_mA
				Pass	Fail_	
	static leakage is not more than tting, not sufficient to make a dro	on				
a light we	tulig, not sumblent to make a div	op.	1	Pass	Fail_	
				1		
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