

United States of America
Department of Transportation -- Federal Aviation Administration
Supplemental Type Certificate

Number SA2015WE

This certificate issued to Hartzell Engine Technologies, LLC
2900 Selma Highway
Montgomery, AL 36108

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 8 of the Civil Air Regulations, effective October 11, 1950 (See T.C. Data Sheet 1A16)

Original Product--Type Certificate Number: 1A16
Make: Grumman
Model: G164A

Description of Type Design Change:

The 12 volt or 24 volt D.C. electrical generating system is replaced by an alternator system in accordance with FAA approved Skytronics, Inc. Top Installation Drawings, TID-G164 or TD3011 or TD3011-1A16, Revision "A" or later FAA approved revisions. The added components consist of Jasco Part Numbers:

- (a) 12 Volt System. 6555-1 Alternator, J12M20 Voltage Regulator, and SPV-3 Voltage Protector (JM12M20SP Voltage Regulator can be used in lieu of the JM12M20 Voltage Regulator and the SPV-3 Voltage Protector.), or
- (b) 24 Volt System. 7555-1 Alternator, J12M24 Voltage Regulator, SPV-4 Voltage Protector, and 17-10 External Resistor (J12M24SP Voltage Controller can be used in lieu of J12M24 and SPV-4 Voltage Protector)

Limitations and Conditions:

The approval of this change in type design applies basically to model G164A only. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the interrelationship between this change and any of those other previously approved modifications will introduce no adverse effect upon the airworthiness of that aircraft. This determination should include the consideration of significant changes in weight distribution such as increase in the fixed disposable weight in the fuselage.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: April 25, 1969

Date reissued: March 6, 2014

Date of issuance: October 17, 1969

Date amended: March 12, 1970; May 13, 1971;
November 16, 1976; October 7, 1980;
July 28, 2014



By direction of the Administrator


(Signature)

Timothy P. Smyth
Manager, Propulsion and Program Management Branch
Chicago Aircraft Certification Office

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SPECIFICATION CLASSIFICATION		
CLASSIFICATION	DIMENSION CONVENTION	NOTE NO CONVENTION
CRITICAL	<XX XX>	-#>
MAJOR	[XX XX]	[#]
MINOR	XX XX	#
REFERENCE	(XX XX)	(#)

REVISIONS				
EN	REV.	DESCRIPTION	BY	DATE
1403015	D	1) REDRAWN IN SOLIDWORKS; 2) FIRST RELEASE INTO HET DESIGN DATA; 3) REPLACED TITLE BLOCK WITH HET TITLE BLOCK; 4) REVISED SECTIONS I AND II PER REDLINE; 5) REMOVED OBSOLETE INFORMATION PER REDLINE	EAB	03/06/14

FAA APPROVED

MAR 21 2014 CR

CHICAGO AIRCRAFT
CERTIFICATION OFFICE
CENTRAL REGION

FOR INSTALLATION ON GRUMMAN G164A
(TC DATA SHEET 1A16)


- ◇ I. THE ALTERNATOR SYSTEM KIT 6555-1
- II. THE ALTERNATOR SYSTEM KIT 7555-1

NOTES:

1. AS OF 6-25-79 TOP DRAWING TD3011-1A16 REPLACES TD3011, DATED JULY 6, 1976. ALL KITS PREVIOUSLY APPROVED UNDER TD3011 CAN BE USED AS OPTIONS.

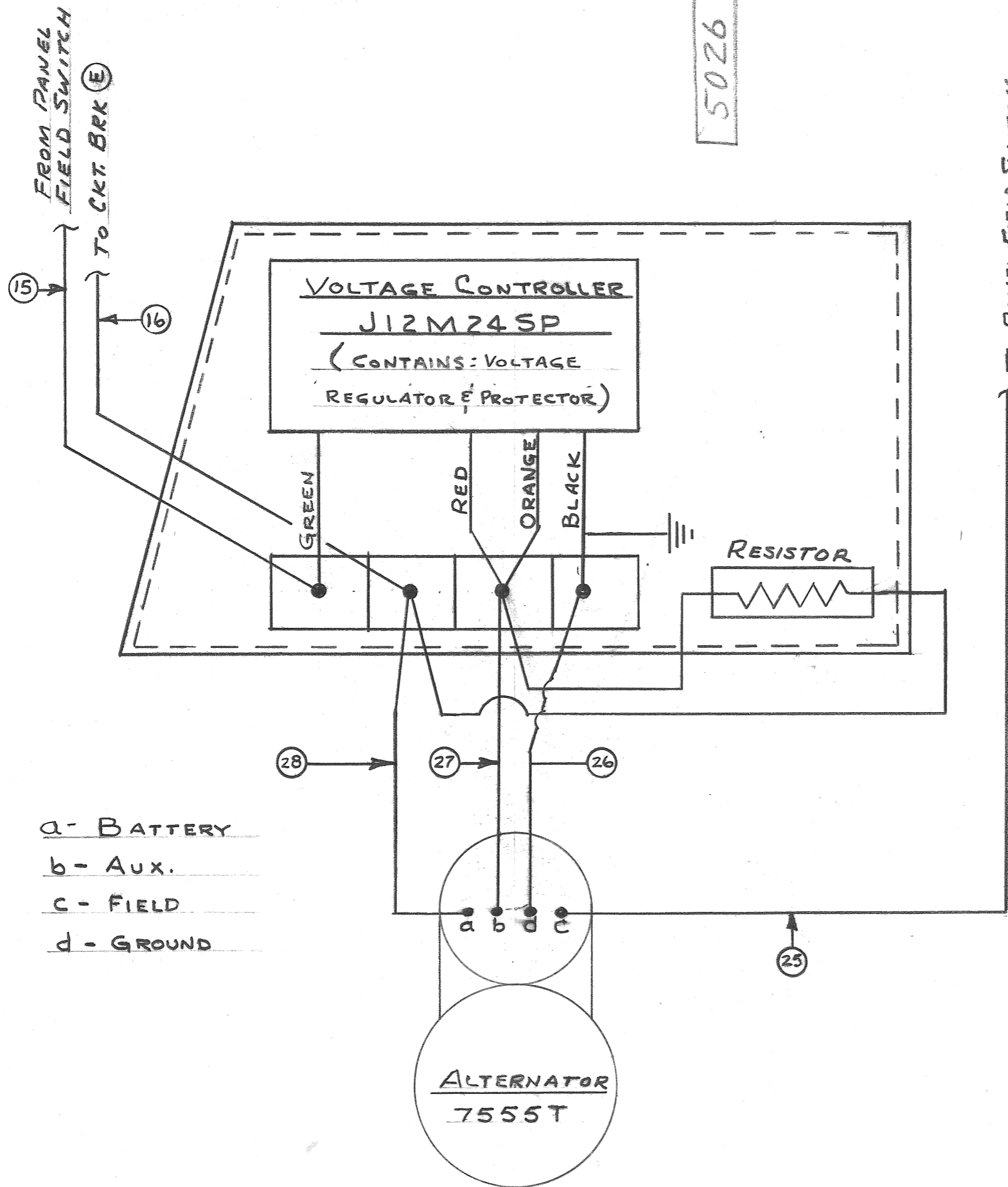


INSTALLATION DRAWINGS 164-2092 THROUGH -2097 (NO CHANGE) BY SCHWIER AIRCRAFT CORPORATION (GRUMMAN), AND SKYTRONICS, INC. DRAWING #5026, REV. A. GRUMMAN AMERICAN CORPORATION AG-CAT SCHEMATIC DATED JULY 24, 1978.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND APPLY AFTER HEAT TREAT AND PLATING .X = ±.015 .XX = ±.010 .XXX = ±.005 BREAK ALL EDGES AND MACHINE ALL INSIDE CORNER FILLETS .015 MAX. SURFACE FINISH 125/✓ THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPRIETARY TO HARTZELL ENGINE TECHNOLOGIES. THIS DRAWING IS FURNISHED ON THE UNDERSTANDING THAT THE DRAWING AND THE INFORMATION IT CONTAINS WILL NOT BE COPIED OR DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF HARTZELL ENGINE TECHNOLOGIES, WILL NOT BE USED TO THE DETRIMENT OF HARTZELL ENGINE TECHNOLOGIES, AND WILL BE RETURNED UPON REQUEST BY HARTZELL ENGINE TECHNOLOGIES.	GEOMETRIC SYMBOLS PER ANSI Y14.5 FLATNESS STRAIGHTNESS ROUNDNESS CYLINDRICITY PROFILE PERPENDICULARITY POSITION CONCENTRICITY SYMMETRY ANGULARITY PARALLELISM CIRCULAR RUNOUT TOTAL RUNOUT	DRAWN	EAB	03/06/14	 <p>2900 Selma Highway Montgomery, AL 36108</p>
		CHECKED	<i>LWE</i>	<i>3/17/14</i>	
		ENG.	<i>CMB</i>	<i>3/18/14</i>	
		FINISH	N/A		
		WEIGHT	N/A lbs		
		MATERIAL	N/A		TOP DRAWING - JASCO ALTERNATOR SYSTEM 6555-1 (12V,50A) & 7555-1 (24V,50A)
	SCALE 1:1	SIZE A	SH 1 OF 1	CODE ID 65PY1	DRAWING NO. TD3011-1A16
					REV. D


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THIS WIRING DIAGRAM IS TO BE USED TO INSTALL SKYTRONICS VOLTAGE CONTROLLER J12M24SP IN THE GRUMMAN AG-CAT. THE VOLTAGE CONTROLLER (J12M24SP) CONTAINS A 24 VOLT REGULATOR AND A VOLTAGE PROTECTOR. THIS VOLTAGE CONTROLLER REPLACES THE J12M24 VOLTAGE REGULATOR AND THE SVP-4 VOLTAGE PROTECTOR.

THIS WIRING DIAGRAM IS MADE WITH REFERENCE TO THE AG-CAT ELECTRICAL SYSTEM SCHEMATIC AS SUPPLIED BY GRUMMAN AMERICAN AVIATION TO SKYTRONICS INC. BY RALPH MAHAN, DATED JULY 24, 1978. REFERENCE ITEM NUMBERS (XX) ARE AS SHOWN ON THE GRUMMAN SCHEMATIC.

SKYTRONICS, INC.		
EL SEGUNDO, CALIF.		
MATERIAL	DATE 1-8-79	DWN. BY RJB
SPEC.	SCALE	APPR. BY JES
FINISH		
WIRING DIAGRAM OF VOLTAGE CONTROLLER FOR GRUMMAN AG-CAT (J12M24SP)		
DWG NO. 5026 REVA		

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SPECIFICATION CLASSIFICATION

CLASSIFICATION	DIMENSION CONVENTION	NOTE NO. CONVENTION
CRITICAL	<XX.XX>	<#>
MAJOR	[XX.XX]	[#]
MINOR	XX.XX	#
REFERENCE	(XX.XX)	(#)

REVISIONS

EN	REV.	DESCRIPTION	BY	DATE
1403034	NEW	INITIAL RELEASE	EAB	03/13/14
1406085	A	J12M20SP WAS J12M24SP	CMB	6/17/2014

B

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THE ALTERNATOR SYSTEM KIT 6555-1 CONSISTS OF:

- 1 EA. 6555 BASIC ALTERNATOR
- 1 EA. J12M20SP VOLTAGE REGULATOR

User is responsible for verification of current revision before using this document. Document considered "reference only" if not the current revision.

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<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES AND APPLY AFTER HEAT TREAT AND PLATING</p> <p>.X = ±.015</p> <p>.XX = ±.010 ANGLES ±1°</p> <p>.XXX = ±.005</p> <p>BREAK ALL EDGES AND MACHINE ALL INSIDE CORNER FILLETS .015 MAX.</p> <p>SURFACE FINISH $\sqrt{125}$</p> <p>THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPRIETARY TO HARTZELL ENGINE TECHNOLOGIES. THIS DRAWING IS FURNISHED ON THE UNDERSTANDING THAT THE DRAWING AND THE INFORMATION IT CONTAINS WILL NOT BE COPIED OR DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF HARTZELL ENGINE TECHNOLOGIES, AND WILL BE RETURNED UPON REQUEST BY HARTZELL ENGINE TECHNOLOGIES.</p>	<p>GEOMETRIC SYMBOLS PER ANSI Y14.5</p> <p>□ FLATNESS</p> <p>— STRAIGHTNESS</p> <p>○ ROUNDNESS</p> <p>○ CYLINDRICITY</p> <p>○ PROFILE</p> <p>⊥ PERPENDICULARITY</p> <p>○ POSITION</p> <p>○ CONCENTRICITY</p> <p>○ SYMMETRY</p> <p>○ ANGULARITY</p> <p> PARALLELISM</p> <p>○ CIRCULAR RUNOUT</p> <p>↗ TOTAL RUNOUT</p>	DRAWN	EAB	03/13/14	 <p>2900 Selma Highway Montgomery, AL 36108</p>
		CHECKED	EAB	6/18/14	
		ENG.	CMB	6/18/14	
		FINISH	N/A		
		WEIGHT	N/A lbs		
		MATERIAL	N/A		<p>JASCO ALTERNATOR SYSTEM KIT (12V, 50A)</p>
	SCALE 1:1	SIZE A	SH 1 OF 1	CODE ID 65PY1	<p>DRAWING NO. 6555-1</p> <p>REV. A</p>

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SPECIFICATION CLASSIFICATION		
CLASSIFICATION	DIMENSION CONVENTION	NOTE NO. CONVENTION
CRITICAL	<XX.XX>	<#>
MAJOR	[XX.XX]	[#]
MINOR	XX.XX	#
REFERENCE	(XX.XX)	(#)

REVISIONS				
EN	REV.	DESCRIPTION	BY	DATE
1403035	NEW	INITIAL RELEASE	EAB	03/13/14

B

B

THE ALTERNATOR SYSTEM KIT 7555-1 CONSISTS OF:

- 1 EA. 7555 BASIC ALTERNATOR
- 1 EA. J12M24SP VOLTAGE REGULATOR
- 1 EA. 17-10 OR 17-1 RESISTOR

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND APPLY AFTER HEAT TREAT AND PLATING .X = ±.015 .XX = ±.010 ANGLES ±1° .XXX = ±.005 BREAK ALL EDGES AND MACHINE ALL INSIDE CORNER FILLETS .015 MAX. SURFACE FINISH $\sqrt{125}$	GEOMETRIC SYMBOLS PER ANSI Y14.5 	DRAWN EAB 03/13/14	
		CHECKED <i>PBH</i> 03/17/14	
		ENG. <i>CMB</i> 3/18/14	
		FINISH N/A	
		WEIGHT N/A lbs	
		MATERIAL N/A	JASCO ALTERNATOR SYSTEM KIT (24V, 50A)
	SCALE 1:1	SIZE SH 1 OF 1 CODE ID 65PY1	DRAWING NO. 7555-1 REV. NEW

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