

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

*Number* SA971WE

*This Certificate issued to* Hartzell Engine Technologies, LLC  
2900 Selma Highway  
Montgomery, Alabama 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 3 of the Civil Air Regulations.*

*Original Product Type Certificate Number:* Listed below

*Make:* Cessna

*Model:* 150, 170, 172, and 175

*Description of Type Design Change:* Installation of a Jasco #6540 (35a.) Alternator Kit or a Jasco #6555 (50a.) Alternator Kit in accordance with Jasco #6540-6555 Installation Instructions dated March 9, 1965 or the installation of a Jasco Alternator P/N 6560-1, a 12 volt system per FAA sealed Skytronics Top Drawing 3013 no change revision, or later FAA approved revision, in the following aircraft:

<u>Model</u>	<u>T.C.#</u>	<u>Model</u>	<u>T.C.#</u>
150	3A19	172	3A12
170	799	175	3A17

*Limitations and Conditions:* The approval should not be extended to other specific airplanes of this model on which other previously approved modifications are incorporated unless it is determined that the interrelationship between this change and any of those other previously approved modifications will introduce no adverse effect upon the airworthiness of that airplane. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

*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*

*Date of application:* March 15, 1965

*Date reissued:* March 13, 1969, March 6, 2014

*Date of issuance:* June 10, 1965

*Date amended:* October 29, 1976

*Aviation Administration*

*By direction of the Administrator*



*[Handwritten Signature]*  
(Signature)

Supervisor, Technical and Administrative  
Support Staff, Los Angeles Aircraft  
Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

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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
1401074	A	1) REDRAWN IN SOLIDWORKS; 2) FIRST RELEASE INTO HET DESIGN DATA; 3) ADDED HET TITLE BLOCK	EAB	01/23/14
1403009	B	1) REMOVED LISTING OF KIT COMPONENTS; 2) REMOVED ACCOMPANYING DRAWING LIST PER REDLINE	EAB	03/06/14

**FAA APPROVED**

MAR 21 2014 CR

TOP DRAWING

CHICAGO AIRCRAFT  
CERTIFICATION OFFICE  
CENTRAL REGION

HARTZELL ENGINE TECHNOLOGIES

JASCO ALTERNATOR SYSTEM 6560-1 (12V-50AMP)

INSTALLATION INSTRUCTION AND DRAWING P1001



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  $\sqrt{125}$

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

SCALE 1:1

DRAWN	EAB	01/23/14
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	
SIZE	SH 1 OF 1	CODE ID 65PY1



2900 Selma Highway  
Montgomery, AL 36108

JASCO ALTERNATOR  
SYSTEM 6560-1 (12V-50AMP)

DRAWING NO. TD3013	REV. B
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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
1403033	NEW	INITIAL RELEASE	EAB	03/13/14

B

B

THE ALTERNATOR SYSTEM KIT 6560-1 CONSISTS OF:

- 1 EA 6560 BASIC ALTERNATOR
- 1 EA J12M20 VOLTAGE REGULATOR
- 1 EA SVP-3 VOLTAGE PROTECTOR

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

A

A

<b>UNLESS OTHERWISE SPECIFIED</b> 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 $\sqrt{125}$	<b>GEOMETRIC SYMBOLS PER ANSI Y14.5</b> 	DRAWN      EAB      03/13/14	
		CHECKED <i>DJK</i> 03/17/14	
		ENG. <i>CMB</i> 3/18/14	2900 Selma Highway Montgomery, AL 36108
		FINISH                      N/A	
		WEIGHT                      N/A      lbs	<b>JASCO ALTERNATOR SYSTEM KIT (12V, 50A)</b>
		MATERIAL                      N/A	
		SIZE      SH 1      CODE ID A              OF 1              65PY1	DRAWING NO.      REV. 6560-1              NEW

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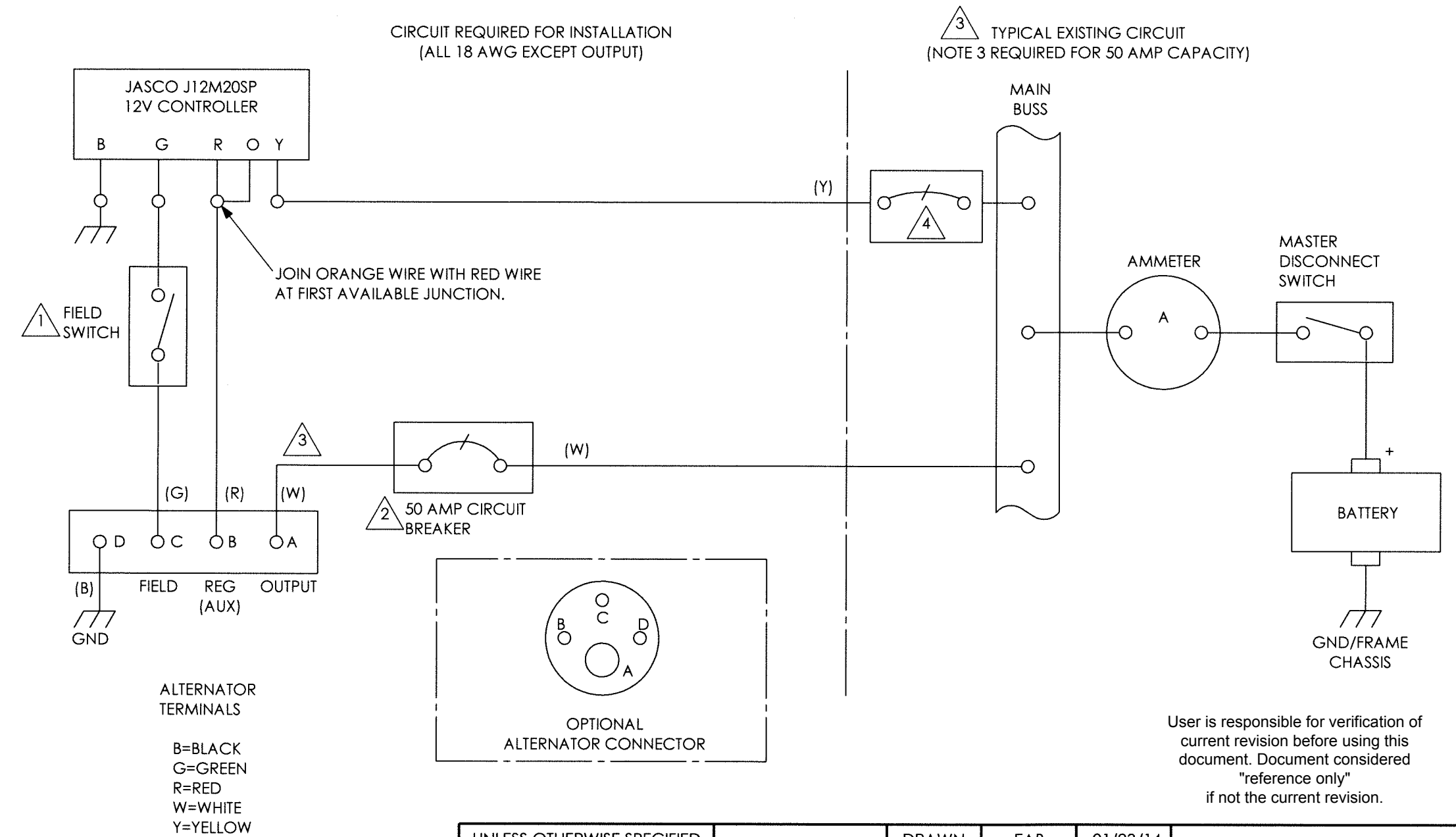
REVISIONS				
EN	REV.	DESCRIPTION	BY	DATE
1401080	B	1) REDRAWN IN SOLIDWORKS; 2) FIRST RELEASE INTO HET DESIGN DATA; 3) REPLACED TITLE BLOCK WITH HET TITLE BLOCK	EAB	01/23/14

- NOTES:
- COMBINATION FIELD SW & 5 AMP CIRCUIT BREAKER NOT SUPPLIED. POTTER-BRUMFIELD P/N W31X2M16-5 RECOMMENDED.
  - 50 AMP CIRCUIT BREAKER NOT SUPPLIED. POTTER-BRUMFIELD P/N W23X1A1G-50 RECOMMENDED.
  - FOR SINGLE WIRE ROUTING USE 8 AWG PER MIL-W-5086. FOR CONDUIT OR BUNDLE ROUTING USE 6 AWG, MIL-W-5086 OR EQUAL AIRCRAFT QUALITY WIRE.
  - IN COMPLIANCE WITH FAA REGULATIONS, REGULATOR CIRCUIT IS TO BE PROTECTED WITH CIRCUIT BREAKER OR FUSE LOCATED IN CLOSE PROXIMITY TO BUSS. FUSE OR BREAKER SIZE IN ACCORDANCE WITH THE FOLLOWING:

WIRE SIZE	CKT BKT	FUSE
22 GA	5 AMP	5 AMP
20 GA	7.5 AMP	5 AMP
18 GA	10 AMP	10 AMP
16 GA	15 AMP	10 AMP

CIRCUIT BREAKER OR FUSE ASSEMBLY NOT SUPPLIED.

- NEW VOLTAGE REGULATOR P/N J12M20SP INCORPORATES THE VOLTAGE PROTECTOR SVP-3. THUS, THE J12M20SP SUPERSEDES AND OBSOLETES BOTH THE J12M20 AND THE SVP-3 UNITS.



ALTERNATOR TERMINALS  
 B=BLACK  
 G=GREEN  
 R=RED  
 W=WHITE  
 Y=YELLOW

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CRITICAL	<XX XX>	<#>
MAJOR	[XX XX]	[#]
MINOR	XX XX	#
REFERENCE	(XX XX)	(#)

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GEOMETRIC SYMBOLS PER ANSI Y14.5  
 □ FLATNESS  
 — STRAIGHTNESS  
 ○ ROUNDNESS  
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 ▭ PROFILE  
 ⊥ PERPENDICULARITY  
 ⊕ POSITION  
 ⊙ CONCENTRICITY  
 ≡ SYMMETRY  
 ∠ ANGULARITY  
 // PARALLELISM  
 ↗ CIRCULAR RUNOUT  
 ↘ TOTAL RUNOUT

UNLESS OTHERWISE SPECIFIED	DRAWN	EAB	01/23/14
CHECKED	JWL		1/27/14
ENG.	CMB		1/28/14
FINISH		N/A	
WEIGHT		N/A	lbs
MATERIAL	N/A		
SIZE	B	SH 1 OF 1	CODE ID 65PY1

HARTZELL ENGINE TECHNOLOGIES  
 2900 Selma Highway  
 Montgomery, AL 36108

INSTALLATION WIRING FOR 12V-50AMP NEG. GND. ALTERNATOR

DRAWING NO. P1001  
 REV. B