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SERVICE INSTRUCTION

DATE: May 18, 2026

Service Instruction No. 1154AA
(Supersedes Service Instruction No. 1154W)
Engineering Aspects are
FAA Approved

SUBJECT: FAA-Approved Starters and Alternators

MODELS AFFECTED: Lycoming engines as herein specified

TIME OF COMPLIANCE: As required for replacement

REASON FOR REVISION: Changed the second NOTICE on page 1 to a WARNING and revised the language. Added a listing for an additional alternator assembly for engine model TEO-540-C1A in Table 2. Added ♠ Footnote to Table 2. Added a CAUTION and an engine model table on page 2. Added a row for IO-390-C in Table 1. Added □ footnote for IO-390-C.

NOTICE: Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

This Service Instruction includes lists (by Lycoming engine model) of FAA-approved starters (Table 1) and alternators (Table 2) available for purchase from Lycoming Engines. Tables 3 through 7 identify starters, alternators, generators, voltage regulators, and relays that are no longer available from Lycoming Engines.

WARNING STARTERS, ALTERNATORS, GENERATORS, VOLTAGE REGULATORS, AND RELAYS IDENTIFIED IN THIS SERVICE INSTRUCTION ARE APPROVED FOR USE ON THE SPECIFIED ENGINE MODELS BY LYCOMING. SOME AIRCRAFT APPLICATIONS MAY REQUIRE A SPECIFIC STARTER, ALTERNATOR OR OTHER COMPONENT BECAUSE OF CLEARANCE RESTRICTIONS. BEFORE INSTALLING ANY REPLACEMENT COMPONENTS, CONSULT THE AIRCRAFT MANUFACTURER'S PARTS CATALOG OR SERVICE PUBLICATIONS TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE REPLACEMENT COMPONENT AND AIRFRAME COMPONENTS, COWLINGS, STRUCTURE, OR OTHER ENGINE COMPONENTS. AFTER INSTALLATION OF ANY REPLACEMENT COMPONENT, COMPLETE AN INSPECTION TO ENSURE THERE IS NO INTERFERENCE BETWEEN THE REPLACEMENT COMPONENT AND AIRFRAME COMPONENTS, COWLINGS, STRUCTURE, OR OTHER ENGINE COMPONENTS.



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CAUTION:

THE CHART BELOW INDICATES ENGINE MODELS WHICH ARE EXCLUDED FROM INSTALLING THE STARTER PART NUMBERS AND MODEL NUMBERS LISTED IN THE CHART DUE TO THE POSSIBLE INTERFERENCE BETWEEN THE STARTER POWER LEAD AND THE METERED FUEL OUTLET FITTING ON THE TOP OF FORWARD-FACING FUEL INJECTION SERVOS.

| Affected Engine Models | |
|--|-------------------------|
| AEIO-360-A1A, A1B, A1B6, A1D, A1E, A1E6, A2C | |
| IO-360-A1A, A1B, A1B6, A1B6D, A1D6, A2B, A3B6, A3B6D, M1A, M1B, N1A, P1A | |
| LIO-360-M1A | |
| IO-390-A1A6, A1B6, A3A6, A3B6 | |
| AEIO-390-A1A6, A1B6, A3A6, A3B6 | |
| IO-540-V4A5, V4A5D, W1A5, W1A5D, W3A5D | |
| Lycoming Part Number | HET Model Number |
| 31B23590 | 122-NL |
| 31B23592 | 149-NL |
| 31B23593 | 149-NLR |
| 31B26555 | 149-NLR/ec |
| 31B26554 | 149-NLR/ec |

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NOTICE: Delco-Remy starters, generators, alternators, and related regulators and relays are no longer available from Lycoming Engines. Lycoming Engines will, however, continue to supply mounting brackets and attaching parts for units now in use.

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Table 1
| Starters ■

| Vendor & Starter Fit Information | Engine Series | Part Number | | Description | | | |
|---|--|-------------|------------|-------------|---------|--------------|---------------|
| | | Lycoming | Vendor No. | Type | Voltage | Pinion Pitch | Weight (Lbs.) |
| Hartzell Engine Technologies (HET), LLC (formerly Kelly Aerospace Power Systems, Inc. and Electrosystems) Refer to HET's Starter Application Guide (Lycoming Engines) relative to aircraft and Lycoming engine fit. | 235 | 31B26042 | ERB-8012 | Geared | 24V. | 10/12 | 9.5 |
| | 235, 320 | 31A26043 | ERZ-8012 | Geared | 12V. | 10/12 | 9.5 |
| | | 31A22361 | PM1203 | Geared | | 10/12 | 11.5 |
| | | 31B22362 | PM2403 | Geared | 24V. | 10/12 | 11.5 |
| | 235, 290, 320, 340, 360, 390 (except IO-390-C and -D Series), 540, 580 | 31A26041 | ERZ-8011 | Geared | 12V. | 12/14 | 9.5 |
| | 320, 360, 540 | 31A26901* | ELZ8021 | Geared | 12V. | 12/14 | 9.5 |
| | | 31A22206 | PM1201 | Geared | | 12/14 | 11.5 |
| | | 31A22552* | PM1204 | Geared | | 12/14 | 11.5 |
| | | 31B22553* | PM2404 | Geared | 24V. | 12/14 | 11.5 |
| | 320, 340, 360, 540, 580 | 31B22476 | MHB-6018 | Geared | 24V. | 12/14 | 8.0 |
| | 320, 360, "76 Series", 540 | 31B26900* | ELB8011 | Geared | 24V. | 12/14 | 9.5 |
| | 320, 340, 360, 540, 580 Exceptions: IO-360-A1B6D Cessna IO-360-A1A Mooney IO-360-A1B6D Mooney IO-360-A3B6D Mooney AEIO-360-A1B6 Morovan, IO-360-A1B Partenavia IO-360-A1B6 Partenavia IO-360-A1B6 Robin IO-360-L2A Cessna IO-540-AB1A5 Cessna | 31B26040 | ERB-8011 | Geared | 24V. | 12/14 | 9.5 |
| | TIGO-541 | 78791 | MHB-4005 | Geared | 24V. | 12/14 | 18.0 |
| | IO-720 | LW-12787 | MHJ-4005 | Geared | 24V. | 10/12 | 18.0 |
| 720 | 31B22462 | MHB-4016A | Geared | 24V. | 10/12 | 18.0 | |
| | 77879 | MHJ-4004 | Geared | 24V. | 10/12 | 18.0 | |
| Hartzell Engine Technologies (HET), LLC (formerly Sky-Tec) Refer to the Sky-Tec Flyweight Starters Aircraft Fit Guide for starter selection relative to aircraft and Lycoming engine fit. | 235, 320, 340, 360, 540 | 31A22102 | 122-12PM | Geared | 12V. | 10/12 | 8.25 |
| | | 31A22106 | 122-12LS | Geared | 12V. | 10/12 | 8.25 |
| | | 31A22112 | 122-12HT | Geared | 12V. | 10/12 | 8.50 |
| | | 31B22103 | 122-24PM | Geared | 24V. | 10/12 | 8.25 |
| | | 31B22107 | 122-24LS | Geared | 24V. | 10/12 | 8.25 |
| | | 31B22113 | 122-24HT | Geared | 24V. | 10/12 | 8.50 |
| | | 31B22117 | 122-HT/ec | Geared | 24V. | 10/12 | 8.50 |
| | | 31B23590 ♦♦ | 122-NL | Geared | 12V. | 10/12 | 9.40 |
| | 320 | 31B26552 | 122-NL/ec | Geared | 24V. | 10/12 | 9.40 |

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Table 1 (Cont.)

| Starters ■

| Vendor & Starter Fit Information | Engine Series | Part Number | | Description | | | |
|---|---|-------------|------------|-------------|---------|--------------|---------------|
| | | Lycoming | Vendor No. | Type | Voltage | Pinion Pitch | Weight (Lbs.) |
| Hartzell (formerly Sky-Tec) (Cont.) | 235, 290, 320, 340, 360, 390, 540, 580 | 31A22104 | 149-12LS | Geared | 12V. | 12/14 | 8.25 |
| | | 31A22100 | 149-12PM | Geared | 12V. | 12/14 | 8.25 |
| | | 31A22110 | 149-12HT | Geared | 12V. | 12/14 | 8.50 |
| | | 31B22101 | 149-24PM | Geared | 24V. | 12/14 | 8.25 |
| | | 31B22105 | 149-24LS | Geared | 24V. | 12/14 | 8.25 |
| | | 31B22111 | 149-24HT | Geared | 24V. | 12/14 | 8.50 |
| | | 31B22116 | 149-HT/ec | Geared | 24V. | 12/14 | 8.50 |
| | | 31B23592 ♦♦ | 149-NL | Geared | 12V. | 12/14 | 9.40 |
| | 320, 360, 390, 540, 580 | 31B26554-♦ | 149-NL/ec | Geared | 24V. | 12/14 | 9.40 |
| | 390-C□ | 31B26553 | 149NL/ECM | Geared | 24V. | 12/14 | 9.40 |
| | 320, 360, 540 | 31A22114* | 149-12HTL | Geared | 12V. | 12/14 | 8.50 |
| | | 31B22115* | 149-24HTL | Geared | 24V. | 12/14 | 8.50 |
| | | 31B26555*♦ | 149-NLR/ec | Geared | 24V. | 12/14 | 9.40 |
| | | 31B23593*♦♦ | 149-NLR | Geared | 12V. | 12/14 | 9.40 |
| | TIO-541 | 31B22111 | 149-24HT | Geared | 24V. | 12/14 | 8.50 |
| | | 31B22116 | 149-HT/ec | Geared | 24V. | 12/14 | 8.50 |
| | 720 | 31B22113 | 122-24HT | Geared | 24V. | 10/12 | 8.50 |
| | | 31B23590 ♦♦ | 122-NL | Geared | 12V. | 10/12 | 9.40 |
| | | 31B26552- | 122-NL/ec | Geared | 24V. | 10/12 | 9.40 |

■ Starters to be ordered by using Lycoming part numbers

* Reverse rotation

● These starters were 12V/24V, switchable prior to July 8, 2019. Starters after this date are 12V only. Refer to the current revision of Hartzell Engine Technologies Service Letter 080.

♦ See Caution on page 2

□ Application for IO-390-C with front mounted LFR-BNRM10 Injector.

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**Table 2
Alternators ■**

| Engine Series | Lycoming Basic Alternator P/N | Vendor P/N | Lycoming Alternator Assy. P/N | HET Alternator Assy. P/N | Description |
|-----------------------------------|-------------------------------|--------------|-------------------------------|--------------------------|-------------|
| 235, 320, 360 | LW-14333 ● | ALY-6520LS | LW-14373 ◆ | ALY-6520-3M | 12V.-60A. |
| 235, 320, 360, 540 | LW-14313 | ALY-8520LS | LW-14371 ◆ | ALY-8520-10 | 12V.-60A. |
| | 32B23992 | AL12-P70 | ----- | ----- | 12V.-70A. |
| 235, 320, 360, 390, 540, 580 | LW-14318 | ALX-8521LS | 32B19549 ◆ | ALX-8521-14 | 12V.-70A. |
| | | ALX-8521LS | 32B19561◆ | ALX-8521-13 | 12V.-70A. |
| 235, 320, 360, 390, 540, 580, 720 | LW-14326 | ALU-8521LS | 32C19553 ◆ | ALU-8521-11 | 24V.-70A. |
| 320 | LW-14335 | ALY-8526LS | ----- | ----- | 12V.-60A. |
| 320, 360 | 32C21997 | ALU-8532LS | ----- | ----- | 24V.-75A. |
| 320, 360, 540 | LW-14338 ● | ALX-8521-LS1 | 32B19569 ●◆ | ALX-8521-11 | 12V.-70A. |
| | LW-14339 ● | ALU-8521LS-1 | 32C19570 ●◆ | ALU-8521-21 | 24V.-70A. |
| | 32C21420 | ES-4019LS | 32C21703◆ | ES-4019-5 | 28V.-130A. |
| 360 | LW-14333 ● | ALY-6520LS | 32B19555 ●◆ | ALY-6520-4 | 12V.-60A. |
| | LW-14318 | ALX-8521LS | LW-14353 | ALX-8521-12 | 12V.-70A. |
| 360 Steel Pulley | LW-14313 | ALY-8520LS | LW-14351◆ | ALY-8520 | 12V.-60A. |
| | LW-14326 | ALU-8521LS | LW-14357◆ | ALU-8521-19 | 24V.-70A. |
| 360, (Kit 05K21701), 540 | 32C20114 | ES-4011LS | 32C21681 ◆ | ES-4011-2 | 28V.-90A. |
| 360, 390 | 32C22737 | ES-4019LS | 32C23585 | ----- | 24V.-130A. |
| 360, 540 | LW-14326 | ALU-8521LS | 32C19571 ◆ | ALU-8521-16 | 24V.-70A. |
| | LW-14329 ● | ALU-6521LS | LW-14367 ◆ | ALU-6521-5 | 24V.-70A. |
| 360, 720 | LW-18888 ● | ALV-8512 | LW-18904 ●◆ | ----- | 24V.-100A. |
| 390 | 32C20114 | ES-4011LS | 32C26767 ◆ | ES-4011-3 | 28V.-90A. |
| | 32C21355 | ES-4018LS | 32C26768 ◆ | ES-4018-1 | 24V.-70A. |
| | LW-14326 | ALU-8521LS | 32C19573◆ | ALU-8521 | 24V.-70A. |
| GO-480, VO-435 | LW-14220 ‡ | ALX-9422L | ----- | ----- | 12V.-70A. |
| 540 | LW-14326 | ALU-8521LS | LW-14354 ◆ | ALU-8521-17 | 24V.-70A. |
| | LW-14326 | ALU-8521LS | LW-14363 ◆ | ----- | 24V.-70A. |
| | LW-14326 | ALU-8521LS | 32C19559 ◆ | ALU-8521-13 | 24V.-70A. |
| | LW-14315 ● | ALY-6527 | ----- | ----- | 24V.-60A. |
| | LW-14329 ● | ALU-6521-LS | LW-14369 ◆ | ----- | 24V.-70A. |
| | LW-14329 ● | ALU-6521-LS | LW-14365◆ | ALU-6521-4 | 24V.-70A. |
| | LW-14326 | ALU-8521-LS | 32C19562 | ALU-8521-14M | 24V.-70A. |
| | 32C20114 | ES-4011LS | 32C22786 ◆ | ----- | 28V.-90A. |
| 540 (Pack, 05J22487) | 32C22491 | ES-4011-1LS | 32C22492 ◆ | ES-4011-4 | 24V.-90A. |
| 540 (Kit, 05K22787) | 32C22491 | ES-4011-1LS | 32C22951 ◆ | ES-4011-5 | 24V.-90A. |
| TIO-540-AE2A (70A) RT▲ | LW-14326 | ALU-8521-LS | 32C19558 ◆ | ALU-8521-12 | 24V.-70A. |
| TIO-540-AE2A (70A) LT▲ | LW-14326 | ALU-8521-LS | 32C19562 ◆ | ALU-8521-14M | 24V.-70A. |
| TIO-540-AE2A (75A) LT▲▲ | 32C22515 | ALU-6539LS | 32C22527 ◆ | ALU-6539-5 | 24V-75A. |
| TIO-540-AE2A (75A) RT▲▲ | 32C22515 | ALU-6539LS | 32C22528 ◆ | ALU-6539-6 | 24V-75A. |

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**Table 2 (Cont.)
Alternators ■**

| Engine Series | Lycoming Basic Alternator P/N | Vendor P/N | Lycoming Alternator Assy. P/N | HET Alternator Assy. P/N | Description |
|--|-------------------------------|-------------|-------------------------------|--------------------------|-------------|
| 540,541 | LW-18885 | ALV-8511 | LW-18906 ♦ | ----- | 24V. -100A |
| 540,580 | LW-14326 | ALU-8521-LS | 32C19565 ♦ | ALU-8521-15 | 24V.-70A. |
| 540,720 | LW-18885 | ALV-8511 | LW-18900 ♦ | ----- | 24V.-100A. |
| 540, 720 Grooved Pulley | LW-14326 | ALU-8521-LS | LW-14356 ♦ | ALU-8521-18 | 24V.-70A. |
| TIGO-541 | LW-18873● | ALV-9510L | ----- | ----- | 24V.-100A. |
| TEO-540-A1A | 32C22515 | ALU-6539LS | 32C22527 ♦ | ALU-6539-5 | 24V-75A. |
| | 32C22515 | ALU-6539LS | 32C22528 ♦ | ALU-6539-6 | 24V-75A. |
| TEO-540-C1A | 32C28550 | ES-14024B-3 | 32C28600♦ | ES-14024B-4 | 24V.-140A. |
| | 32C28550 | ES-14024B-3 | 32C28603♠♦ | ES-14024B-3 | 24V.-140A. |
| <ul style="list-style-type: none"> ■ Alternator to be ordered by using Lycoming part numbers. ♦ Assembly includes Lycoming supplied pulley. ● Less blast tube. ‡ Flanged ▲ Use on PA-46 Aircraft Serial Number 131 and Lower ▲▲ Use on PA-46 Aircraft Serial Number 132 and Higher ♠ For TEO-540-C1A on Tencam P2012 Aircraft, alternator assembly P/N 32C28600 is obsolete. Use 32C28603 on left and right engines | | | | | |

NOTICE: Additional information can be found by referring to the Application Information on the Hartzell Engine Technologies website to identify the correct alternator for your aircraft make and model <https://planepower.aero/aircraft-alternator-support/application-information/>. Refer to the latest revision of Lycoming Service Letter L277 for direct purchases from Hartzell Engine Technologies. When contacting HET, it will be helpful to reference the HET Alternator Assembly P/N which aligns with Lycoming Alternator Assembly P/N in Table 2.

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Table 3
Starters - No Longer Available from Lycoming

| Vendor | Engine Series | Part Number | | Description | | | |
|---|--|--------------|------------|--------------|----------|--------------|---------------|
| | | Lycoming | Vendor No. | Type | Voltage | Pinion Pitch | Weight (Lbs.) |
| Delco-Remy | 235, 290, 320 | 69953 | 1109669 | Direct Drive | 24V. | 10/12 | 18.0 |
| | 720 | 72279 | 1113471 | Geared | 12V. | 10/12 | 18.0 |
| Hartzell Engine Technologies (HET), LLC (formerly Kelly Aerospace Power Systems, Inc. and Electrosystems) | 235 | LW-15483 | MHB-4015 | Direct Drive | 24V. | 10/12 | 18.0 |
| | | LW-16207 | MMU-4001 | Direct Drive | | 10/12 | 18.0 |
| | | 31B22475 | MMU-6001 | Direct Drive | | 10/12 | 8.0 |
| | 235, 290, 320 | 76210 | MZ-4204 | Direct Drive | 12V. | 10/12 | 18.0 |
| | | 31A22473 | MZ-6204 | Direct Drive | | 10/12 | 8.0 |
| | 235, 290, 320, 340, 360, 540 | 76211 | MZ-4206 | Geared | 12V. | 12/14 | 18.0 |
| | | LW-14207 | MZ-4218 | Geared | | 12/14 | 18.0 |
| | | LW-15571 | MZ-4222 | Geared | | 12/14 | 18.0 |
| | 235, 290, 320, 340, 360, 390, 540, 580 | 31A22470 | MZ-6222 | Geared | 12V. | 12/14 | 8.0 |
| | 320, 360 | LW-16460 | MZ-4224 | Geared | 12V. | 12/14 | 18.0 |
| | | 31A22471 | MZ-6224 | Geared | | 12/14 | 8.0 |
| | 320, 340, 360, 540 | 76212 | MHB-4001 | Geared | 24V. | 12/14 | 18.0 |
| | | LW-14208 | MHB-4010 | Geared | 24V. | 12/14 | 18.0 |
| | 320, 360 | LW-10556* | MZ-4216 | Geared | 12V. | 12/14 | 18.0 |
| | 320, 340, 360, 540, 580 | LW-15572 | MHB-4016 | Geared | 24V. | 12/14 | 18.0 |
| | | 31B22474 | MHB-6016 | Geared | 24V. | 12/14 | 8.0 |
| | 320, 360 | 31A22472* | MZ-6220 | Geared | 12V. | 12/14 | 18.0 |
| | | LW-14215* | MZ-4220 | Geared | 12V. | 12/14 | 18.0 |
| | 320, 360, 540 | LW-14214* | MHB-4014 | Geared | 24V. | 12/14 | 18.0 |
| | | 31B22477* | MHB-6014 | Geared | | 12/14 | 8.0 |
| | | 31B22207 | PM2401 | Geared | | 12/14 | 11.5 |
| | 360 | 76213 | MZ-4205 | Geared | 12V. | 12/14 | 18.0 |
| | | LW-14209 | MZ-4217 | Geared | | 12/14 | 18.0 |
| | | LW-15573 | MZ-4221 | Geared | | 12/14 | 18.0 |
| | | LW-18989 | MZ-4226 | Geared | | 12/14 | 18.0 |
| | | LW-18047 | MZ-4225 | Geared | | 12/14 | 18.0 |
| | | LW-18990 | MHB-4020 | Geared | 24V. | 12/14 | 18.0 |
| 76214 | | MHB-4003 | Geared | 12/14 | | 18.0 | |
| LW-14210 | | MHB-4012 | Geared | 12/14 | | 18.0 | |
| LW-14447 | | MHB-EO-26102 | Geared | 12/14 | | 18.0 | |
| LW-15574 | MHB-4019 | Geared | 12/14 | 18.0 | | | |
| VO-435-B1A | 75787 | MZ-4208 | Geared | 12V. | 16 Pitch | 18.0 | |
| TVO-435, VO-435 | LW-12023 | MHB-4008 | Geared | 24V. | 12/14 | 18.0 | |
| 540 | LW-11936 | MHB-4007 | Geared | 24V. | 12/14 | 18.0 | |
| | LW-14213 | MHB-4013 | Geared | | 12/14 | | |
| | LW-15577 | MHB-4018 | Geared | | 12/14 | | |
| LTIO-540 | LW-12159* | MHB-4009 | Geared | 24V. | 12/14 | 18.0 | |

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**Table 3 (Cont.)
Starters - No Longer Available from Lycoming**

| Vendor | Engine Series | Part Number | | Description | | | |
|---|--------------------|-------------|------------|-------------|---------|--------------|---------------|
| | | Lycoming | Vendor No. | Type | Voltage | Pinion Pitch | Weight (Lbs.) |
| Hartzell Engine Technologies (Cont.) | TIO-541-A | 75699 | MZ-4207 | Geared | 12V. | 12/14 | 18.0 |
| | | LW-14211 | MZ-4219 | Geared | | 12/14 | |
| | | LW-15575 | MZ-4223 | Geared | | 12/14 | |
| | TIO-541-E | 75700 | MHB-4002 | Geared | 24V. | 12/14 | 18.0 |
| | | LW-14212 | MHB-4011 | Geared | | 12/14 | |
| | | LW-15576 | MHB-4017 | Geared | | 12/14 | |
| Lycoming | 235, 320, 360, 540 | 31A21198 | ----- | Geared | 12V. | 12/14 | 8.0 |
| | | 31A21210 | ----- | Geared | | 10/12 | 8.0 |
| | | 31B21064 | ----- | Geared | 24V. | 12/14 | 12.0 |
| | | 31B21211 | ----- | Geared | | 10/12 | 12.0 |
| * Reverse rotation | | | | | | | |

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Table 4
Alternators - No Longer Available from Lycoming

| Engine Series | Lycoming Basic Alternator P/N | Vendor P/N* | Lycoming Alternator Assy. P/N | Vendor Alternator Assy. P/N | Description |
|-------------------------|-------------------------------|-------------|-------------------------------|-----------------------------|--------------|
| 235, 320, 360, 540 | 78308 | ALE-8406 | ----- | ----- | 12V.-40A. |
| | 78401 ● | ALE-6406 | ----- | ----- | |
| | LW-14300 | ALE-8420 | ----- | ----- | |
| | LW-14302 ● | ALE-6420 | ----- | ----- | |
| | 12V.-60A. | 78407 | ALY-8403 | ----- | ----- |
| | | 78409 ● | ALY-6403 | ----- | ----- |
| | | LW-14308 | ALY-8420 | LW-12832 ** | ALY-8520 "G" |
| | | | ALY-8520 | ----- | ----- |
| LW-14310 ● | ALY-6420 | LW-12834 ** | ALY-6520 "G" | | |
| 235, 320, 360, 540, 720 | 78312 | ALT-8404 | ----- | ----- | 24V.-50A. |
| | LW-14319 | ALT-8421 | ----- | ----- | |
| | LW-14321 | ALT-8421LS | 32C19551 ◆ | ----- | |
| | LW-14316 | ALX-8421 | ----- | ----- | 12V.-70A. |
| 235, 320, 360, 540, 720 | LW-14324 | ALU-8421 | LW-12845 ** | ALU-8521 "G" | 24V.-70A. |
| 320 | LW-10372 | ALY-8405 | ----- | ----- | 12V.-60A. |
| | LW-14312 | ALY-8526 | LW-12839 ** | ALY-8426 "G" | |
| | ----- | ----- | LW-14375 ◆ | ALY-8526 "G" | |
| 320, 540 | ----- | ----- | 32C21356 | ----- | 24V.-70A. |
| 320, 360, 540 | 78403 | ALZ-8401 | ----- | ----- | 12V.-50A. |
| | 78405 ● | EO-20041-LB | ----- | ----- | |
| | LW-14304 | ALZ-8423 | ----- | ----- | |
| | LW-14306 ● | ----- | ----- | ----- | |
| 320, 360, 540, 720 | 74319 | 1100717 | 74880 | ----- | 12V.-70A. |
| | 78310 | ALX-8403 | ----- | ----- | |
| | LW-14316 | ALX-8421 | LW-12840 ** | ALX-8421 "G" | |
| 320, 360, 540, 720 | 78314 | ALU-8403 | ----- | ----- | 24V.-70A. |
| 360 Steel Pulley | LW-10511 | ALY-8403LS | LW-10513 ◆ | ----- | 12V.-60A. |
| | ----- | ----- | LW-12837 **◆ | ALY-8520 "G" | 12V.-60A. |
| | ----- | ----- | LW-12842 ** | ALX-8521 "G" | 12V.-70A. |
| 360 | LW-14310 ● | ALY-6420 | LW-15404 | ----- | 12V.-60A. |
| 360 | 74319 | 1100717 | 76165 | ----- | 12V.-70A. |
| | 78412 | ALX-8403LS | ----- | ----- | 12V.-70A. |
| 360 Steel Pulley | LW-14321 | ALT-8421LS | LW-14358 ◆ | ----- | 24V.-50A. |
| 360 | ----- | ----- | LW-12849 | ----- | 24V.-70A. |
| | | | LW-12850 | | |
| 360 (Kit, LW-13479) | LW-10966 | ALV-8402L | ----- | ----- | 24V.-100A. |
| 360, 540 | 79036 | ALU-8403LS | ----- | ----- | 24V.-70A. |
| | ----- | ----- | 32C22030 ◆ | ----- | 28V.-130A. |
| 360, 540, 720 | LW-10544 ● | ALV-6403LS | LW-10979 ●◆ | ----- | 24V.-100A. |

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Table 4 (Cont.)
Alternators - No Longer Available from Lycoming

| Engine Series | Lycoming Basic Alternator P/N | Vendor P/N* | Lycoming Alternator Assy. P/N | Vendor Alternator Assy. P/N | Description |
|-------------------------|-------------------------------|-------------|-------------------------------|-----------------------------|-------------|
| VO-435 | LW-12882 | ALV-9405L | ----- | ----- | 24V.-100A. |
| | LW-18874 | ALV-9511L | ----- | ----- | 24V.-100A. |
| VO-435, TVO-435, GO-480 | LW-11648 ‡ | ALU-9404L | ----- | ----- | 24V.-70A. |
| | LW-14222 ‡ | ALU-9422L | LW-12851 ** | ALU-9422L "G" | 24V.-70A. |
| GO-480, VO-435 | 78411 ‡ | ALX-9404L | LW-12819 ** | ALX-9404L "G" | 12V.-70A. |
| | ----- | ----- | LW-12843** | ALX-9422L "G" | 12V.-70A. |
| 540 | ----- | ----- | LW-12836 ** | ALY-6527 "G" | 12V.-60A. |
| | ----- | ----- | 32C19556 ♦ | ----- | 24V.-70A. |
| | ----- | ----- | LW-12847 **♦ | ALU-8521 "G" | 24V.-70A. |
| | LW-10009 ● | ALY-6406 | ----- | ----- | 12V.-60A. |
| | LW-12277 | ALT-8404 | ----- | ----- | 24V.-50A. |
| | LW-14322 | ALT-8421 | ----- | ----- | |
| | LW-10966 | ALV-8402L | LW-14817 | ----- | 24V.-100A. |
| | ----- | ----- | 32C22375 | ----- | 28V.-90A. |
| 540, 720 | LW-10966 | ALV-8402L | LW-10967 | ----- | 24V.-100A. |
| IGO-540 | LW-11884 | ALV-9406L | ----- | ----- | 24V.-100A. |
| | LW-18871 | ALV-9412L | ----- | ----- | |
| TIO-541 | 74884 | 1100749 | 75723 | ----- | 12V.-70A. |
| TIGO-541 | LW-10256 | ALV-9401LS | ----- | ----- | 24V.-100A. |
| 720 | 78414 | ALT-8404LS | LW-13352 ♦ | ----- | 24V.-50A. |
| 720 Grooved Pulley | LW-14321 | ALT-8421LS | LW-14361 ♦ | ----- | |

* Seven digit numbers are Delco-Remy. Letter prefix numbers are Hartzell Engine Technologies (HET), LLC (formerly Kelly Aerospace Power Systems, Inc.)
** Assembly includes ground strap
♦ Assembly includes Lycoming supplied pulley
● Less blast tube
‡ Flanged

Table 5
Generators - No Longer Available from Lycoming

| Vendor | Engine Series | Part Number | | Description |
|------------|------------------------------|-------------|------------|-------------|
| | | Lycoming | Vendor No. | |
| Delco-Remy | 235, 290, 320, 340, 360 | 68767 | 1101900 | 12V.-35A. |
| | 235, 290, 320, 340, 360, 540 | 68764 | 1101899 | 12V.-20A. |
| | 235, 290, 320, 540 | 71744 | 1101915 | 12V.-50A. |
| | 320, 360, 540 | 71980 | 1105052 | 24V.-40A. |
| | 320, 360, 540, 720 | 72695 | 1105055 | 24V.-50A. |
| | 320 | LW-11429* | 1101923 | 12V.-50A. |
| Bendix | GO-435, GO-480 | 68263 | 1589-1-E | 24V.-50A. |

* Reverse rotation

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Table 6
Voltage Regulator - No Longer Available from Lycoming

| Vendor | Engine Series | Part Number | | Description |
|--|---|-------------|------------|-------------|
| | | Lycoming | Vendor No. | |
| Delco Remy | 235, 290, 320, 340, 360, 540 | 72205 | 1119226 | 12V.-20A.* |
| | | 62833 | 1118704 | 12V.-35A.* |
| | | 68872 | 1118799 | 24V.-25A.* |
| | | 71745 | 1119224 | 24V.-50A.* |
| | 320, 340, 360, 540 | 68626 | 1119145 | 12V.-35A.** |
| | | 72077 | 1119246 | 12V.-50A.** |
| | 320, 360, 540 | 68810 | 1119139 | 12V.-20A.** |
| | 320, 360, 540 | 71350 | 1118976 | 24V.-25A.** |
| | | 71979 | 1119237 | 24V.-40A.** |
| | | 72311 | 1119273 | 24V.-40A.* |
| | | 73340 | ----- | 24V.-50A.* |
| | 320, 360, VO-435, 540, TIO-541, 720 | 74291 | 9000590 | 12V.♦ |
| | 320, 360, 540, 720 | 74292 | 900951 | 24V.♦ |
| | 360, 540, 720 | 72696 | 1119656 | 24V.♦ |
| Lear Siegler | 360 | LW-12364 | 51565 | 24V. |
| Prestolite | 235, 320, 360, 540, 720 | LW-12749 | FVR-4002‡ | 12V.**♦ |
| | 235, 320, 360, GO-480, 540, 720 | LW-10185 | VSF-7203 | 12V.♦ |
| | 235, 320, 360, 540, VO-435, 720 | LW-12747 | FVR-4004 | 12V.♦ |
| | | LW-15895 | FVR-4224 | 12V.♦● |
| | 235, 320, 360, VO-435, TVO-435, 540, IGO-540, TIGO-541, 720 | 77347 | VSF-7402 | 24V.♦ |
| | | LW-10179 | VSF-7403 | 24V.♦ |
| | 235, 320, 360, 540, VO-435 | LW-12748 | FVR-4005● | 24V.♦ |
| | 320, 360, 540 | LW-12750 | FVR-4003‡ | 24V.**♦ |
| | Optional twin engine installations. | LW-11139 | EO-20803 | 12V.**♦ |
| Optional twin engine installations. | LW-11140 | EO-20713 | 24V.**♦ | |
| Wico | 235, 320, 360, 540, VO-435, 720 | LW-11357 | X-17990● | 12V.♦ |
| * Non-paralleling. ** Paralleling. ♦ Transistor. ● Single engine, internally grounded field alternator installations only. ‡ Twin engine, internally grounded field alternator installations only. | | | | |

Table 7
Relays - No Longer Available from Lycoming

| Vendor | Engine Series | Part Number | | Description |
|------------|--|-------------|------------|-------------|
| | | Lycoming | Vendor No. | |
| Delco-Remy | 290, 320, 340, 360, 540 | 68628 | 1116887 | 12 Volt |
| | 320, 360, VO-435, 540, 720 | 74461 | 1115831 | 12 Volt |
| | 320, 360, 540, 720 | 71349 | 1116902 | 24 Volt |
| | | 74804 | 1115832 | |
| Prestolite | 235, 320, 360, VO-435, GO-480, 540 | 78059 | FOC-4002A | 12 Volt |
| | 320, 360, TVO-435, 540, IGO-540, TIGO-541, 720 | 78060 | FOC-4003A | 24 Volt |

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