

4389X
AIRCRAFT REGISTRATION NO.

28R-7635034
AIRCRAFT SERIAL NO.

PA-28R-200
TYPE AIRCRAFT



76-7-12 Rev.1 N/R
AD NUMBER

Bendix Ignition Switch

| DATE | TOTAL TIME AT COMPL. | TACH OR RECORDING METER TIME AT COMPL. | METHOD OF COMPLIANCE | NEXT COMPL | DUE AT | AUTHORIZED SIGNATURE & NUMBER |
|------------|----------------------|--|----------------------|------------|-------------------------------------|---------------------------------|
| | | | | TOTAL TIME | DATE, TACH, OR RECORDING METER TIME | |
| 3/6/17 | | 4724.1 | By operational insp. | | 4824.1 | <i>[Signature]</i> AEP 3564390 |
| 4/30/17 | | 4822.6 | BY OPERATIONAL INSP. | | 4922.6 | <i>[Signature]</i> AEP 386197 |
| 1 JUN 17 | | 4855.1 | By ops check | | 4955.1 | <i>[Signature]</i> AEP 30202762 |
| 12 SEP 17 | | 5040.7 | BY OPS CHECK | | 5140.7 | <i>[Signature]</i> AEP 2861970 |
| 10 SEP 17 | | 5086.25 | BY OPERATION CHECK | | 5186.25 | <i>[Signature]</i> AEP 2861970 |
| 31 OCT 17 | | 5132.52 | BY OPERATIONAL CHECK | | 5232.52 | <i>[Signature]</i> AEP 2861970 |
| 17 JUN 18 | | 5231.6 | By ops check | | 5331.6 | <i>[Signature]</i> AEP 30202762 |
| 6 Jul 19 | | 5860.0 | By ops check OK | | 5960.0 | <i>[Signature]</i> 2457974 |
| 10 JAN 20 | | 6145.3 | BY OPERATIONAL CHECK | | 6245.3 | <i>[Signature]</i> AEP 3818250 |
| 8-14-20 | | 6422.4 | ops ic | | 6522.4 | <i>[Signature]</i> AEP 367663 |
| 12-NOV-20 | | 6520.4 | BY OPERATIONAL CHECK | | 6620.4 | <i>[Signature]</i> AEP 3818250 |
| 01 JAN 21 | | 6609.7 | BY OPERATIONAL CHECK | | 6709.7 | <i>[Signature]</i> AEP 3818250 |
| 10 FEB 21 | | 6697.4 | BY OPERATIONAL CHECK | | 6797.4 | <i>[Signature]</i> AEP 3818250 |
| 05 APR 21 | | 6781.9 | BY OPERATIONAL CHECK | | 6881.9 | <i>[Signature]</i> 372578 CSEL |
| 01 JULY 21 | | 6841.0 | BY OPERATIONAL CHECK | | 6941.0 | <i>[Signature]</i> AEP 3818250 |

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Amendment 39-2575 as amended by Amendment 39-3024.

Applies to all aircraft employing magnetos and using Bendix ignition switches listed in the table below except switches identified by four digit date code (new) adjacent to the model number or a white dot (modified) on the support plate adjacent to the Bendix logo.

| Bendix Switches Switch Function | Rotary Action, Key or Lever Actuated Bendix (series) Part Numbers |
|------------------------------------|--|
| Twist-to-Start | 10-357XXX, 10-126XXX |
| Twist-to-Start/Push-to-Prime | 10-357XXX, 10-126XXX |
| Push-to-Start | 10-357XXX, 10-126XXX, 10-157XXX |

Compliance required as indicated:

- For switches subject to this AD, conduct the following checks within the next 100 hours' time in service and each 100 hours thereafter to detect possible switch malfunction:
 - Observing regular ground run-up procedures, allow the engine to reach operating temperatures and perform a normal magneto check.
 - With the engine at normal idle, rotate the switch key or lever through the "OFF" detent to the extreme limit of its travel in the "OFF" direction.
 - If the engine stops firing, this indicates an airworthy switch.

- If the engine continues to run with the switch in the extreme "OFF" direction indicating a malfunctioning switch, prior to the next flight accomplish Part III outlined in Bendix Service Bulletin No. 583, dated April 1976, for Repair and Replacement or use an alternate method approved by Chief, Engineering and Manufacturing Branch, Eastern Region.
- The aircraft may be flown in accordance with FAR 21.197 to a place where these modifications can be accomplished.
- The checks required by this AD may be performed by the pilot.
- Upon submission by an operator with substantiating data, an FAA Maintenance Inspector subject to prior approval of the Chief, Engineering and Manufacturing Branch, FAA Eastern Region may adjust the compliance times specified in this AD if the request contains substantiating data to justify the increase for the operator.

(NOTE: If the engine continues to run when complying with paragraph 1 and repair or replacement cannot or will not be accomplished immediately, the magneto (primary circuit) should be grounded in accordance with Bendix Service Bulletin No. 583, dated April 1976.)

Amendment 39-2575 was effective April 14, 1976.
This amendment 39-3024 is effective August 30, 1977.

Page No. _____



Type Aircraft _____

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N4309X
AIRCRAFT REGISTRATION NO.

28R-7635034
AIRCRAFT SERIAL NO.

PA-28R-200
TYPE AIRCRAFT

adNote™

99-24-10 R

AD NUMBER

Precise Flight SVS III

| DATE | TOTAL TIME AT COMPL. | TACH OR RECORDING METER TIME AT COMPL. | METHOD OF COMPLIANCE | NEXT COMPL. | DUE AT | AUTHORIZED SIGNATURE & NUMBER |
|---------------|-------------------------|---|---------------------------|---------------|---|----------------------------------|
| | | | | TOTAL TIME | DATE, TACH, OR RECORDING METER TIME | |
| 5/1/16 | 4551.4 | 4551.4 | PCW, see log 5/1/16 | | 05/2017 | <i>[Signature]</i> ATP 3564380 |
| 23 MAY 1985.1 | 4855.1 | 4855.1 | C/W by visual MSP Phoenix | | 06/2018 | <i>[Signature]</i> ATP 302023681 |
| 8 Jul 19 | 5860.0 | 5860.0 | visual Insp OA | | 07/2020 | <i>[Signature]</i> ATP 2451974 |
| 8-14-20 | 6422.4 | 6422.4 | (b)(1)(2)(c)(2) | | 8-14-21 | <i>[Signature]</i> ATP 3467663 |
| 7-1-21 | 6841.0 | same | (b)(1)(2)(c)(2) | | 7-1-22 | <i>[Signature]</i> ATP 3467667 |
| 7-1-22 | 7345.9 | 7345.9 | (b)(1)(2)(c)(2) | | 7-2-23 | <i>[Signature]</i> ATP 3815467IA |
| | | | | | | |
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Amendment 39-11434; Docket No. 98-CE-87-AD. Issued November 15, 1999.

Applicability: Model SVS III standby vacuum systems, installed on, but not limited to, the aircraft listed in the following

chart. These systems can be installed either in accordance with the applicable supplemental type certificate (STC) or through field approval:

| Affected STC | Make and Model Airplanes |
|--------------|--|
| SA2160NM | Raytheon Beech Models 23, A23, A23A, A23-19, 19A, B19, B19A, A23-24, B23, C23, A24, A24R, B24R, C24R, 35, A35, B35, C35, D35, E35, F35, G35, 35R, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A, F33C, G33, 36, A36, A36TC, B36TC, 4S(YT-34), A45(T-34A, B-45), D45(T-34B), and 77 Series |
| SA2161NM | Raytheon Beech Model V35B |
| SA2162NM | Cessna Models 120, 140, 140A, 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, A150L, 150M, 152, A152, A150K, A150M, 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F (USAFT-41A), 172G, 172H(USAFT-41A), 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 175, 175A, 175B, 175C, P172D, R172E (USAFT-41B, USAFT-41-3, and USAFT-41D), R172F (USAFT-41D and USAFT-41C), R172G (USAFT-41D), R172H (USAFT-41D), R172I, R172K, 172RG, 177, 177A, 177B, 177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 182RG, T182, T182RG, T182R, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 188, 188A, 188B, A188, A188B, T188C, 206, P206, P206A, P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TP206D, TP206E, U206-A, U206-B, U206-C, U206-D, U206-E, U206-F, U206G, TU206-A, TU206-B, TU206-C, TU206-D, TU206-E, TU206-F, TU206-G, 207, 207A, T207, T207A, 210, 210A, 210B, 210C, 210D, 210E, 210F, 210-5 (205), 210-5A (205A), T210F, 210G, T-210G, 210H, T-210H, 210J, 205P, T-210J, 210K, T-210K, T210L, 210L, 210M, T210M, 210N, P210N, T210N, 205T, 210R, P210R, 205U, T210R, 210-5, 210-5A, 305A (USAF 0-1A), 305C (USAF 0-1E), 305D (USAF 0-1F), 305F, 305B (USAF T0-1D), 305E (0-1D or 0-1F), and 321 (Navy OE-2) |
| SA2163NM | Cessna Model U206G |
| SA2164NM | Cessna Model 180Q |
| SA2166NM | Cessna Model 177 |
| SA2167NM | The New Piper Aircraft, Inc. (Piper) Models L-14, PA-12, PA-12S, PA-14, PA-15, PA-16, PA-16S, PA-17, PA-18, PA-18A, PA-18S, PA-18-105 (Special), PA-18S-105(SP), PA-18-125 (Army L-21A), PA-18AS-125, PA-18S-125, PA-18-135, PA-18A-135, PA-18AS-135, PA-18S-135, PA-18-150, PA-18A-150, PA-18AS-150, PA-18S-150, PA-19 (Army L-18C), PA-19S, PA-20, PA-20S, PA-20-115, PA-20S-115, PA-20-135, PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160, PA-24, PA-24-250, PA-24-260, PA-24-400, PA-25, PA-25-235, PA-25-260, PA-32-260, PA-32RT-300, PA-32RT-301T, PA-32-300, PA-32RT-300T, PA-32-301, PA-32S-300, PA-32R-301, PA-32-301T, PA-32R-300, PA-32R-301T, PA-28-140, PA-28-141, PA-28-150, PA-28-151, PA-28-160, PA-28S-160, PA-28-180, PA-28R-180, PA-28S-180, PA-28-235, PA-28S-235, PA-28-181, PA-28-161, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28-236, PA-28RT-201, PA-28RT-201T, PA-28-201T, PA-36-285, PA-36-300, PA-36-375, PA-38-112, and PA-46-310P |
| SA2168NM | Mooney Models M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20M, and M22 |

(See Continuation of AD 99-24-10 on Pg. 2)⇒

| Affected STC | Make and Model Airplanes |
|--------------|--|
| SA2683NM | <p>Aerocar, Inc. Model I</p> <p>Aerodifusion, S.L. Model Jodel D-1190S</p> <p>Aeromere, S.A. Model Falco F.8.L.</p> <p>Aeronautica Macchi S.P.A. Models AL60, AL60-B, AL60-F5, and AL60-C5</p> <p>Aeronautica Macchi & Aerfer Model AM-3</p> <p>Aeronca Inc. Models 15AC and S15AC</p> <p>Aerospatiale Model TB20 Trinidad</p> <p>Arctic Aircraft Co., Inc. Models S-1A, S-1A-65F, S-1A-85F, S-1A-90F, S-1B1(Army L-67 XL-6), and S-1B2</p> <p>Avions Mudry et Cie Model CAP 10B</p> <p>American Champion Models (Bellanca, Aeronca) 7AC, 7ACA, S7AC (L-16A), 7BCM (L-16B), 7CCM, 7DC, S7DC, 7EC, S7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCCA, 7GCB, 7GCB, 7GCB, 7HC, 7JC, 7KC, 7KCAB, 8KCAB, 8GCBC, 11AC, S11AC, 11BC, S11BC, 11CC, and S11CC</p> <p>Bellanca Aircraft Corporation Models 14-9, 14-9L, 14-12F-3, 14-13, 14-13-2, 14-13-3, 14-13-3W, 14-19, 14-19-2, 14-19-3A, 17-30, 17-31, 17-31TC, 17-30A, 17-31A, and 17-31ATC</p> <p>Biamond, C. Model Teal CB1</p> <p>Board, G.R. Models Columbia XJL-1 and Bolkow Jr.</p> <p>Clark Aircraft, Inc. Models 12 and 1000</p> <p>Falcon Aircraft Corporation Model F-1</p> <p>Flug und Fahrzeugwerke AG Model AS 202/15 "Brand"</p> <p>Found Brothers Model FBA-2C</p> <p>Fuji Heavy Industries Models FA-200-160, FA-200-180, and FA-200-180AO</p> <p>Funk Aircraft Model Funk C</p> <p>Kearns, Edward Scott (Garcia, Henry S.) Model (Emigh) Trojan A-2</p> <p>Swift Museum Foundation, Inc. Model (Globe) GC-1A, GC-1B</p> <p>Goodyear Aircraft Model GA-22A</p> <p>Great Lakes Aircraft Model 2T-1A-1 and 2T-1A-2 Grumman American Models G-164, G-164A, G-164B, AA-1, AA-1A, AA-1B, AA-1C, AA-5, AA-5A, and AA-5B</p> <p>Commander Aircraft (Gulfstream) Models 112, (112A, 112B, 112TC, 112TCA, 114, and 114A</p> <p>Helio Enterprises Models H-250, H-295 (USAF U-10D), H-391 (USAF YL-24), H-395 (SAF L-28A), H-395A, HT-295, and H-700</p> <p>Prop-Jets, Inc. (Interceptor Corp., Aero Commander, Meyers) Models 200, 200A, 200B, 200C, and 200D</p> <p>C. Itoh Aircraft Maintenance & Engineering Co. LTD. Model N-62</p> <p>Jamieson Corporation Model J-2-L1B</p> <p>Jodel, Avion Models D-140-B, DR-1050, D-1190, and 150</p> <p>Lake Models C-1, C-2-IV, LA-4, LA-4-200, and LA-4-250</p> <p>Luscombe Aircraft Corp. Models 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F, and 11A</p> <p>Maule Aerospace Technology Corp. Models Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4-180C, M-4-180S, M-4-210, M-4-201C, M-4-210S, M-4-210T, M-4-220S, M-4-220T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-T-220C, M-5-235, M-5-235C, M-6-180, M-6-235, M-7-235, MX-7-180, MX-7-235</p> <p>Messerschmitt-Bolkow Models BO-209-150 FV&RV, BO209-160 FV&RV, BO-209, and 150OFF</p> <p>Nardi S.A. Model FN-333</p> <p>Jimmie Thompson Enterprise (Navion Rangemaster Aircraft Corporation) Models Navion (L-17A) Navion A (L-17B, L-17C), Navion B, D, E, F, G, and H</p> <p>White International Ltd. Models (Pitts) S-1S, S-1T, S-2, and S-2A</p> <p>Procaer S.P.A. Models F 15/B, F 15/C, and F 15/E</p> <p>Gulfstream Aerospace Corporation (Rockwell) Models 111, 112, 112B, 112TC, 112TCA, and 114</p> <p>Aermacchi S.p.A. Models S.205, S.205-18F, S.205-18/R, S.205-20/F, S.205-20/R, S.205-22/R, S.208, S.208A, F.260, and F.260B</p> <p>Socata - Groupe Aerospatiale Models Rallye Series MS880B, MS885, MS892-A-150, MS892E-150, MS893A, MS893E, MS894A, MS894E, TB9, TB10, and TB21</p> <p>Stinson Models 108-2 and 108-3</p> <p>Sud Aviation Models Gardan GY.80-1500, GY.80-160, and GY.80-180</p> |

| Affected STC | Make and Model Airplanes |
|-----------------------|---|
| SA2683NM (Cont'd.) | <p>Taylorcraft Aircraft Company Models F19, F21, and F21A</p> <p>Univair Aircraft Corporation (Fomey) Models F-1, F-1A, (ERCO)E, 415D, (ALON)A-2, A20a, (Mooney)M10, (Mooney) (ERCO) 415-C, and 415-CD</p> <p>Augustair, Inc. (Varga Aircraft Corporation) Models 2150, 2150A, and 2180</p> |

NOTE 1: The above list includes the aircraft where the Precise Flight, Inc. Model SVS III standby vacuum systems could be installed through STC. This list is not meant to be exhaustive nor does it include all aircraft with the systems installed through field approval.

NOTE 2: This AD applies to any aircraft with a standby vacuum system installed that is identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For aircraft that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request

should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To detect and correct problems with the standby vacuum system before failure or malfunction and to provide operating procedures for the pilot regarding the use and limitations of this system, accomplish the following:

(See Continuation of AD 99-24-10 on Pg. 3)⇒

(a) Within the next 30 calendar days after the effective date of this AD, accomplish whichever (paragraph (a)(1) or (a)(2) below) of the following that applies:

(1) For airplanes with the affected standby vacuum system installed in accordance with the applicable STC, incorporate the applicable Precise Flight, Inc. Airplane Flight Manual Supplement

(AFMS) for Standby Vacuum Systems (each document corresponds with the applicable STC as presented in the chart below) into the Airplane Flight Manual (AFM), including installing all placards specified in these AFMS's; or insert a copy of the Appendix to this AD into the AFM, including installing all placards specified in the Appendix:

| Applicable STC | AFMS Date |
|----------------|--------------------|
| SA2160NM | May 7, 1998 |
| SA2161NM | August 6, 1998 |
| SA2162NM | August 6, 1998 |
| SA2163NM | August 6, 1998 |
| SA2164NM | August 6, 1998 |
| SA2166M | August 6, 1998 |
| SA2167NM | August 6, 1998 |
| SA2168NM | August 6, 1998 |
| SA2683NM | August 6, 1998; or |

(2) For airplanes with the affected standby vacuum system installed through field approval, insert the Appendix to this AD into the AFM, including installing all placards specified in the Appendix.

(b) Within the next 12 calendar months after the effective date of this AD, and thereafter at intervals specified in the following paragraphs, inspect the push-pull cable, vacuum lines, saddle fittings, and shuttle valve for correct installation and damage (wear, chafing, deterioration, etc.). Accomplish these inspections in accordance with Precise Flight Instructions for Continued Airworthiness (Section 3.3 of Installation Report No. 50050), Revision 25, dated August 26, 1996.

(1) Reinspect the push-pull cable, vacuum lines, and saddle fittings at intervals not to exceed 12 calendar months; and

(2) Reinspect the shuttle valve at intervals not to exceed 24 calendar months.

(c) Prior to further flight after each inspection required by paragraph (b) of this AD, accomplish the following in accordance with Precise Flight Instructions for Continued Airworthiness (Section 3.3 of Installation Report No. 50050), Revision 25, dated August 26, 1996.

(1) Correct any discrepancy found; and

(2) Conduct a function test of the vacuum system and assure proper function.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW, Renton, Washington 98055-4065. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(f) The inspections, corrections, and test required by this AD shall be done in accordance with Precise Flight Instructions for Continued Airworthiness (Section 3.3 of Installation Report No. 50050), Revision 25, dated August 26, 1996. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Precise Flight, Inc., 63120 Powell Butte Road, Bend, Oregon 97701. Copies may be inspected at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(g) This amendment becomes effective on January 14, 2000.

FOR FURTHER INFORMATION CONTACT: Ms. Dorothy Lundy, Aerospace Engineer, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW, Renton, Washington 98055-4065; telephone: (425) 227-2260; facsimile: (425) 227-1181.

99-24-10

PRECISE FLIGHT, INC.:

Amendment 39-11434; Docket No. 98-CE-87-AD. Issued November 15, 1999.

Applicability: Model SVS III standby vacuum systems, installed on, but not limited to, the aircraft listed in the following chart. These systems can be installed either in accordance with the applicable supplemental type certificate (STC) or through field approval:

| Affected STC | Make and Model Airplanes |
|--------------|---|
| SA2160NM | Raytheon Beech Models 23, A23, A23A, A23-19, 19A, B19, B19A, A23-24, B23, C23, A24, A24R, B24R, C24R, 35, A35, B35, C35, D35, E35, F35, G35, 35R, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A, F33C, G33, 36, A36, A36TC, B36TC, 4S(YT-34), A45(T-34A, B-45), D45(T-34B), and 77 Series |
| SA2161NM | Raytheon Beech Model V35B |
| SA2162NM | Cessna Models 120, 140, 140A, 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, A150L, 150M, 152, A152, A150K, A150M, 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F (USAFT-41A), 172G, 172H(USAFT-41A), 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 175, 175A, 175B, 175C, P172D, R172E (USAFT-41B, USAFT41-3, and USAFT-41D), R172F (USAFT-41D and USAFT-41C), R172G (USAFT-41D), R172H (USAFT-41D), R172J, R172K, 172RG, 177, 177A, 177B, 177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 182RG, T182, T182RG, T182R, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 188, 188A, 188B, A188, A188B, T188C, 206, P206, P206A, P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TP206D, TP206E, U206-A, U206-B, U206-C, U206-D, U206-E, U206-F, U206G, TU206-A, TU206-B, TU206-C, TU206-D, TU206-E, TU206-F, TU206-G, 207, 207A, T207, T207A, 210, 210A, 210B, 210C, 210D, 210E, 210F, 210-5 (205), 210-5A (205A), T210F, 210G, T-210G, 210H, T-210H, 210J, 205P, T-210J, 210K, T-210K, T210L, 210L, 210M, T210M, 210N, P210N, T210N, 205T, 210R, P210R, 205U, T210R, 210-5, 210-5A, 305A (USAF 0-1A), 305C (USAF 0-1E), 305D (USAF 0-1F), 305F, 305B (USAF T0-1D), 305E (0-1D or 0-1F), and 321 (Navy 0E-2) |
| SA2163NM | Cessna Model U206G |
| SA2164NM | Cessna Model 180Q |

| | |
|----------|--|
| SA2166NM | Cessna Model 177 |
| SA2167NM | The New Piper Aircraft, Inc. (Piper) Models L-14, PA-12, PA-12S, PA-14, PA-15, PA-16, PA-16S, PA-17, PA-18, PA-18A, PA-18S, PA-18-105 (Special), PA-18S-105(SP), PA-18-125 (Army L-21A), PA-18AS-125, PA-18S-125, PA-18-135, PA-18A-135, PA-18AS-135, PA-18S-135, PA-18-150, PA-18A-150, PA-18AS-150, PA-18S-150, PA-19 (Army L-18C), PA-19S, PA-20, PA-20S, PA-20-115, PA-20S-115, PA-20-135, PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160, PA-24, PA-24-250, PA-24-260, PA-24-400, PA-25, PA-25-235, PA-25-260, PA-32-260, PA-32RT-300, PA-32RT-301T, PA-32-300, PA-32RT-300T, PA-32-301, PA-32S-300, PA-32R-301, PA-32-301T, PA-32R-300, PA-32R-301T, PA-28-140, PA-28-141, PA-28-150, PA-28-151, PA-28-160, PA-28S-160, PA-28-180, PA-28R-180, PA-28S-180, PA-28-235, PA-28S-235, PA-28-181, PA-28-161, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28-236, PA-28RT-201, PA-28RT-201T, PA-28-201T, PA-36-285, PA-36-300, PA-36-375, PA-38-112, and PA-46-310P |
| SA2168NM | Mooney Models M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20M, and M22 |
| SA2683NM | Aerocar, Inc. Model I Aerodifusion, S.L. Model Jodel D-1190S Aeromere, S.A. Model Falco F.8.L. Aeronautica Macchi S.P.A. Models AL60, AL60-B, AL60-F5, and AL60-C5 Aeronautica Macchi & Aerfer Model AM-3 Aeronca Inc. Models 15AC and S15AC Aerospatiale Model TB20 Trinidad Arctic Aircraft Co., Inc. Models S-1A, S-1A-65F, S-1A-85F, S-1A-90F, S-1B1(Army L-67 XL-6), and S-1B2 Avions Mudry et Cie Model CAP 10B American Champion Models (Bellanca, Aeronca) 7AC, 7ACA, S7AC (L-16A), 7BCM (L-16B), 7CCM, 7DC, S7DC, 7EC, S7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCCA, 7GCB, 7GCBA, 7GCBC, 7HC, 7JC, 7KC, 7KCAB, 8KCAB, 8GCBC, 11AC, S11AC, 11BC, S11BC, 11CC, and S11CC Bellanca Aircraft Corporation Models 14-9, 14-9L, 14-12F-3, 14-13, 14-13-2, 14-13-3, 14-13-3W, 14-19, 14-19-2, 14-19-3A, 17-30, 17-31, 17-31TC, 17-30A, 17-31A, and 17-31ATC Biemond, C. Model Teal CB1 Board, G.R. Models Columbia XJL-1 and Bolkow Jr. Clark Aircraft, Inc. Models 12 and 1000 Falcon Aircraft Corporation Model F-1 Flug und Fahrzeugwerke AG Model AS 202/15 "Brand" Found Brothers Model FBA-2C Fuji Heavy Industries Models FA-200-160, FA-200-180, and FA-200-180AO Funk Aircraft Model Funk C |

| | |
|-----------------------|---|
| | <p>Kearns, Edward Scott (Garcia, Henry S.) Model (Emigh) Trojan A-2</p> <p>Swift Museum Foundation, Inc. Model (Globe) GC-1A, GC-1B</p> <p>Goodyear Aircraft Model GA-22A</p> <p>Great Lakes Aircraft Model 2T-1A-1 and 2T-1A-2 Grumman American Models G-164, G-164A, G-164B, AA-1, AA-1A, AA-1B, AA-1C, AA-5, AA-5A, and AA-5B</p> <p>Commander Aircraft (Gulfstream) Models 112, (112A, 112B, 112TC, 112TCA, 114, and 114A</p> <p>Helio Enterprises Models H-250, H-295 (USAF U-10D), H-391 (USAF YL-24), H-395 (SAF L-28A), H-395A, HT-295, and H-700</p> <p>Prop-Jets, Inc. (Interceptor Corp., Aero Commander, Meyers) Models 200, 200A, 200B, 200C, and 200D</p> <p>C. Itoh Aircraft Maintenance & Engineering Co. LTD. Model N-62</p> <p>Jamieson Corporation Model J-2-L1B</p> <p>Jodel, Avion Models D-140-B, DR-1050, D-1190, and 150</p> <p>Lake Models C-1, C-2-IV, LA-4, LA-4-200, and LA-4-250</p> <p>Luscombe Aircraft Corp. Models 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F, and 11A</p> <p>Maule Aerospace Technology Corp. Models Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4-180C, M-4-180S, M-4-210, M-4-201C, M-4-210S, M-4-210T, M-4-220S, M-4-220T, M-5-180C, M-5-200, M-5-210C, M-5-210TC, M-T-220C, M-5-235, M-5-235C, M-6-180, M-6-235, M-7-235, MX-7-180, MX-7-235</p> <p>Messerschmitt-Bolkow Models BO-209-150 FV&RV, BO209-160 FV&RV, BO-209, and 150OFF</p> <p>Nardi S.A. Model FN-333</p> <p>Jimmie Thompson Enterprise (Navion Rangemaster Aircraft Corporation) Models Navion (L-17A) Navion A (L-17B, L-17C), Navion B, D, E, F, G, and H</p> <p>White International Ltd. Models (Pitts) S-1S, S-1T, S-2, and S-2A</p> <p>Procaer S.P.A. Models F 15/B, F 15/C, and F 15/E</p> <p>Gulfstream Aerospace Corporation (Rockwell) Models 111, 112, 112B, 112TC, 112TCA, and 114</p> <p>Aermacchi S.p.A Models S.205, S.205-18F, S.205-18/R, S.205-20/F, S.205-20/R, S.205-22/R, S.208, S.208A, F.260, and F.260B</p> <p>Socata - Groupe Aerospatiale Models Rallye Series MS880B, MS885, MS892-A-150, MS892E-150, MS893A, MS893E, MS894A, MS894E, TB9, TB10, and TB21</p> <p>Stinson Models 108-2 and 108-3</p> <p>Sud Aviation Models Gardan GY.80-1500, GY.80-160, and GY.80-180</p> |
| SA2683NM (Cont'd.) | <p>Taylorcraft Aircraft Company Models F19, F21, and F21A</p> <p>Univair Aircraft Corporation (Forney) Models F-1, F-1A, (ERCO)E, 415D, (ALON)A-2, A20a, (Mooney)M10, (Mooney) (ERCO) 415-C, and 415-CD</p> <p>Augustair, Inc. (Varga Aircraft Corporation) Models 2150, 2150A, and 2180</p> |

NOTE 1: The above list includes the aircraft where the Precise Flight, Inc. Model SVS III standby vacuum systems could be installed through STC. This list is not meant to be exhaustive nor does it include all aircraft with the systems installed through field approval.

NOTE 2: This AD applies to any aircraft with a standby vacuum system installed that is identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For aircraft that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To detect and correct problems with the standby vacuum system before failure or malfunction and to provide operating procedures for the pilot regarding the use and limitations of this system, accomplish the following:

(a) Within the next 30 calendar days after the effective date of this AD, accomplish whichever (paragraph (a)(1) or (a)(2) below) of the following that applies:

(1) For airplanes with the affected standby vacuum system installed in accordance with the applicable STC, incorporate the applicable Precise Flight, Inc. Airplane Flight Manual Supplement (AFMS) for Standby Vacuum Systems (each document corresponds with the applicable STC as presented in the chart below) into the Airplane Flight Manual (AFM), including installing all placards specified in these AFMS's; or insert a copy of the Appendix to this AD into the AFM, including installing all placards specified in the Appendix:

| Applicable STC | AFMS Date |
|----------------|--------------------|
| SA2160NM | May 7, 1998 |
| SA2161NM | August 6, 1998 |
| SA2162NM | August 6, 1998 |
| SA2163NM | August 6, 1998 |
| SA2164NM | August 6, 1998 |
| SA2166M | August 6, 1998 |
| SA2167NM | August 6, 1998 |
| SA2168NM | August 6, 1998 |
| SA2683NM | August 6, 1998; or |

(2) For airplanes with the affected standby vacuum system installed through field approval, insert the Appendix to this AD into the AFM, including installing all placards specified in the Appendix.

(b) Within the next 12 calendar months after the effective date of this AD, and thereafter at intervals specified in the following paragraphs, inspect the push-pull cable, vacuum lines, saddle fittings, and shuttle valve for correct installation and damage (wear, chafing, deterioration, etc.). Accomplish these inspections in accordance with Precise Flight Instructions for Continued Airworthiness (Section 3.3 of Installation Report No. 50050), Revision 25, dated August 26, 1996.

(1) Reinspect the push-pull cable, vacuum lines, and saddle fittings at intervals not to exceed 12 calendar months; and

(2) Reinspect the shuttle valve at intervals not to exceed 24 calendar months.

(c) Prior to further flight after each inspection required by paragraph (b) of this AD, accomplish the following in accordance with Precise Flight Instructions for Continued Airworthiness (Section 3.3 of Installation Report No. 50050), Revision 25, dated August 26, 1996.

(1) Correct any discrepancy found; and

(2) Conduct a function test of the vacuum system and assure proper function.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW, Renton, Washington 98055-4065. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(f) The inspections, corrections, and test required by this AD shall be done in accordance with Precise Flight Instructions for Continued Airworthiness (Section 3.3 of Installation Report No. 50050), Revision 25, dated August 26, 1996. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Precise Flight, Inc., 63120 Powell Butte Road, Bend, Oregon 97701. Copies may be inspected at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(g) This amendment becomes effective on January 14, 2000.

APPENDIX TO AD 99-24-10

PRECISE FLIGHT, INC.
AFMS for STANDBY VACUUM SYSTEM

SYSTEM DESCRIPTION

A Precise Flight Standby Vacuum System may be installed to provide a temporary vacuum system in the event of a primary vacuum failure. The Standby Vacuum System operates on the differential between the intake manifold and ambient air pressure and is directed through a shuttle valve system to drive your flight instruments.

I. OPERATING LIMITATIONS

A. INSTRUCTIONS

1. The Standby Vacuum System is for emergency or standby use only and not for dispatch purposes.
2. Vacuum powered and/or Vacuum gyro directed autopilot operation may be unreliable when the Standby Vacuum System is the sole source of vacuum. Vacuum powered or vacuum gyro directed autopilot should be OFF when operating with a failed primary vacuum system.
3. The Supplemental Vacuum System is not designed to operate pneumatic de-ice systems. DO NOT operate a pneumatic de-ice system when operating with a failed primary vacuum system.
4. Above 10,000 ft. pressure altitude, engine power settings may have to be significantly reduced to provide adequate vacuum power for proper gyro instrument operation.
5. The following placards are required to be in full view of pilot:

APPENDIX TO AD 99-24-10 (Continued)

PRECISE FLIGHT, INC.
AFMS for STANDBY VACUUM SYSTEM

I. OPERATING LIMITATIONS (CONT.)

B. PLACARDS

Placard to be located on the push/pull control cable



Placard to be located around the LED for the pump inop warning light.



Placard to be placed in front and in full view of the pilot.

STANDBY VACUUM SYSTEM EQUIPPED: FOR
OPERATING INSTRUCTIONS AND LIMITATIONS
SEE SUPPLEMENT IN OWNERS MANUAL OR
PILOTS OPERATING HANDBOOK

I. OPERATING LIMITATIONS (CONT.)

B. PLACARDS

One of the following placards must be placed in full view of the pilot near the instrument vacuum indicator after appropriate entries have been made.

Approximate Standby Vacuum Available - Altitude - Power Chart for aircraft with Constant Speed Propeller - Maximum Continuous RPM.

| PRESS ALT. (FT.) | RPM | MAN. PRESSURE | SVS VACUUM IN. HG MIN. |
|---------------------|------------|------------------|---------------------------|
| 2000 | Max. Cont. | | |
| 4000 | Max. Cont. | | |
| 6000 | Max. Cont. | | |
| 8000 | Max. Cont. | | |
| 10,000 | Max. Cont. | | |

Approximate Standby Vacuum Available - Altitude - Power Chart for aircraft with a Fixed Pitch Propeller

| PRESS ALT. (FT.) | RPM | SVS VACUUM IN. HG MIN. |
|---------------------|-----|---------------------------|
| 2000 | | |
| 4000 | | |
| 6000 | | |
| 8000 | | |
| 10,000 | | |

II. OPERATING PROCEDURES

A. NORMAL PROCEDURES

1. GROUND CHECK

- a. Cycle the Standby Vacuum Control Knob OUT - ON -, and return Control Knob IN - OFF - position.

2. BEFORE TAKEOFF

- a. Idle Engine at low speed, momentarily pull the standby vacuum knob out - ON - and check vacuum gauge. Normally, the vacuum reading will be slightly higher. After checking system push Standby Vacuum System knob IN - OFF -. Check that vacuum gauge has returned to the previous reading.

3. ENROUTE

- a. Regularly check vacuum gauge and monitor warning light for proper vacuum system operation.

B. EMERGENCY PROCEDURES

1. PRIMARY VACUUM FAILURE WARNING LIGHT ILLUMINATES

- a. Pull the Standby Vacuum System knob OUT -ON- and adjust throttle setting as required to maintain adequate vacuum for the primary instruments - Suction Gauge Reading in the Green Arc - If necessary descend to a lower altitude to obtain a larger differential between manifold and ambient pressure. Vacuum power must be closely monitored by checking the vacuum gauge frequently.
- b. The SVS is not designed for continued IFR flight. Immediate steps should be taken to return to VFR conditions or to land. If this is not possible, IFR flight should be continued only as long as necessary to return to VFR conditions or land the airplane.

WARNING: FAILURE OF THE VACUUM SYSTEM STILL CONSTITUTES AN EMERGENCY SITUATION REGARDLESS OF THE INSTALLATION OF THE SVS. IT MAY NOT BE POSSIBLE TO MAINTAIN A SAFE ALTITUDE AND MAKE USE OF THE SVS. IN SUCH A SITUATION THE AIRPLANE MUST BE FLOWN USING NON-VACUUM POWERED INSTRUMENTS.

- c. If descent is impractical:
 - Periodically and temporarily reduce power as required to provide adequate vacuum to the aircraft primary instruments.
 - Reapply power as required, while comparing vacuum driven gyros against the Turn and Bank Indicator, Turn Coordinator, VSI and/or other flight instruments.
 - When an obvious discrepancy is noted between the vacuum driven instruments and other flight instrumentation, Periodically and temporarily reduce power as required to provide adequate vacuum to the aircraft primary instruments.

III. PERFORMANCE

NO CHANGE

N4389X
AIRCRAFT REGISTRATION NO.

28R-7635034
AIRCRAFT SERIAL NO.

PA-28R-200
TYPE AIRCRAFT



2004-10-14 Corr. R
AD NUMBER

Lycoming Engine

If multi-engine: ☐ Left ☐ Right ☐ Front ☐ Rear Engine Model: 10 360-C1C Serial No: L-14533-51A

| DATE | TOTAL TIME AT COMPL. | TACH OR RECORDING METER TIME AT COMPL. | METHOD OF COMPLIANCE | NEXT COMPL. | DUE AT | AUTHORIZED SIGNATURE & NUMBER |
|------|-------------------------|---|----------------------|---------------|---|-------------------------------|
| | | | | TOTAL TIME | DATE, TACH, OR RECORDING METER TIME | |
| | | | Due at prop strike | | on condition | AL A-1 3564390 |
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Amendment 39-13644. Docket No. 89-ANE-10-AD. Supersedes AD 91-14-22, Amendment 39-6916.

Effective Date

(a) This AD becomes effective June 25, 2004.

Affected Ads

(b) This AD supersedes AD 91-14-22.

Applicability

(c) This AD applies to Lycoming Engines (formerly Textron Lycoming), direct-drive reciprocating engines (except O-145, O-320-H, O-360-E, LO-360-E, LTO-360-E, TO-360-E, O-435, and TIO-541 series engines).

Unsafe Condition

(d) This AD results from a change to the definition of a propeller strike or sudden stoppage. The actions specified in this AD are intended to prevent loosening or failure of the crankshaft gear retaining bolt, which may cause sudden engine failure.

Compliance

(e) Compliance with this AD is required as indicated before further flight if the engine experiences a propeller strike after the effective date of this AD, as defined in paragraphs (i) and (j) of this AD.

(f) Inspect, and if necessary repair, the crankshaft counter bored recess, the alignment dowel, the bolt hole threads, and the crankshaft gear for wear, galling, corrosion, and fretting in accordance with steps 1 through 5 of Lycoming Mandatory Service Bulletin (MSB) No. 475C, dated January 30, 2003.

(g) Remove the existing gear retaining bolt and lockplate from service, and install a new bolt and lockplate, in accordance with steps 6 and 7 of Lycoming MSB No. 475C, dated January 30, 2003.

Prohibition of Retaining Bolt and Lockplate

(h) Do not install the gear retaining bolt and lockplate that were removed in paragraph (g) of this AD, into any engine.

Definition of Propeller Strike

(i) For the purposes of this AD, a propeller strike is defined as follows:

(1) Any incident, whether or not the engine is operating, that requires repair to the propeller other than minor dressing of the blades.

(2) Any incident during engine operation in which the propeller impacts a solid object that causes a drop in revolutions per minute (RPM) and also requires structural repair of the propeller (incidents

requiring only paint touch-up are not included). This is not restricted to propeller strikes against the ground.

(3) A sudden RPM drop while impacting water, tall grass, or similar yielding medium, where propeller damage is not normally incurred.

(j) The preceding definitions include situations where an aircraft is stationary and the landing gear collapses causing one or more blades to be substantially bent, or where a hanger door (or other object) strikes the propeller blade. These cases should be handled as sudden stoppages because of potentially severe side loading on the crankshaft flange, front bearing, and seal.

Alternative Methods of Compliance

(k) The Manager, New York Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(l) You must use Lycoming MSB No. 475C, dated January 30, 2003, to perform the inspections and repairs required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701, U.S.A; telephone (570) 323-6181; fax (570) 327-7101. You can review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/br_locations.html

Related Information

(m) None.

Issued in Burlington, Massachusetts, on May 12, 2004. Peter A. White, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

CORRECTION: [Federal Register: June 28, 2004 (Volume 69, Number 123); Page 36007; www.access.gpo.gov/su_docs/aces/aces140.html] Go to the attached "pdf" for full correction text. This copy reflects the correction.

N4389X
AIRCRAFT REGISTRATION NO.

28R-7635034
AIRCRAFT SERIAL NO.

PA-28R-200
TYPE AIRCRAFT



2013-2-13 R
AD NUMBER

Horizontal Stabilizer

| DATE | TOTAL TIME AT COMPL. | TACH OR RECORDING METER TIME AT COMPL. | METHOD OF COMPLIANCE | NEXT COMPL | DUE AT | AUTHORIZED SIGNATURE & NUMBER |
|----------|----------------------|--|--|------------|-------------------------------------|-------------------------------|
| | | | | TOTAL TIME | DATE, TACH, OR RECORDING METER TIME | |
| 12/12/13 | | 4226.7 | PCW, see log book entry dated 12/12/13 | | 12/20/20 6226.7 | JL AP 3564380 |
| 8-14-20 | 6422.4 | some | SB1245A 1 thru 10 | | 8-14-27 8422.4 | AP 3467667 |
| | | | | | | |
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Amendment 39-17334; Docket No. FAA-2012-0731; Directorate Identifier 2012-CE-020-AD.

(a) Effective Date

This AD is effective March 11, 2013.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Models PA-28-236, PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-201T, PA-28R-201, PA-28-235, PA-28R-201T, PA-28S-160, PA-28S-180, PA-28R-180, PA-28R-200, PA-28RT-201, PA-28RT-201T, PA-32-260, PA-32-301, PA-32-301T, PA-32-300, PA-32R-300, PA-32R-301T, PA-32R-301 (SP), PA-32R-301 (HP), PA-32RT-300, PA-32RT-300T, PA-32S-300, PA-32-301FT, PA-32-301XTC, PA-34-200, PA-34-200T, PA-34-220T, PA-44-180, and PA-44-180T airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2740, Stabilizer Control System.

(e) Unsafe Condition

This AD was prompted by reports of control cable assembly failures that may lead to failure of the horizontal stabilator control system and could result in loss of pitch control. This AD requires inspections of the stabilator control system and replacement of parts as necessary. We are issuing this AD to correct the unsafe condition on these products.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection

(1) Initially inspect the stabilator control system following instructions 1 through 10 of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1245A, dated November 28, 2012, as follows:

(i) If the age of the airplane is at or exceeds 15 years as of March 11, 2013 (the effective date of this AD): At the next annual inspection or within the next 12 months after March 11, 2013 (the effective date of this AD).

(ii) If the age of the airplane is less than 15 years as of March 11, 2013 (the effective date of this AD): When the age of the airplane reaches 15 years, then at the next annual inspection or within 12 months after the airplane reaches 15 years of age.

(iii) If the age of the airplane cannot be determined as of March 11, 2013 (the effective date of this AD): At the next annual inspection or within the next 12 months after March 11, 2013 (the effective date of this AD).

Note for paragraph (g)(1)(i), (g)(1)(ii), and (g)(1)(iii) of this AD: To assist in determining the age of the airplane, you may contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; Internet: www.piper.com; or access the FAA airplane registry database at: http://registry.faa.gov/aircraftinquiry/Serial_Inquiry.aspx.

(2) After the applicable initial inspection required in paragraph (g)(1) of this AD, repetitively thereafter at intervals not to exceed 2,000 hours time-in-service or 7 years, whichever occurs first, inspect the stabilator control system following

instructions 1 through 10 of Piper Aircraft, Inc. Mandatory Service Bulletin No. 1245A, dated November 28, 2012.

(h) Repair

If any cracks, corrosion, or cable fraying are found during any inspection required in paragraphs (g)(1) or (g)(2) of this AD, before further flight, replace the damaged part with an airworthy part.

(i) Credit for Actions Accomplished in Accordance With Previous Service Information

This AD provides credit for the actions required in this AD if already done before March 11, 2013 (the effective date of this AD) following Piper Aircraft, Inc. Mandatory Service Bulletin No. 1245, dated May 3, 2012.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Hector Hernandez, Aerospace Engineer, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5587; fax: (404) 474-5606; email: hector.hernandez@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Piper Aircraft, Inc. Mandatory Service Bulletin No. 1245A dated November 28, 2012.

(ii) Reserved.

(3) For Piper Aircraft, Inc. service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; Internet: <http://www.piper.com/pages/publications.cfm>.

(4) You may view this service information at FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on January 22, 2013.

Earl Lawrence, Manager, Small Airplane Directorate, Aircraft Certification Service.

N4389X
AIRCRAFT REGISTRATION NO.

28R-7635034
AIRCRAFT SERIAL NO.

PA-29R-200
TYPE AIRCRAFT

adNote™

2015-19-7 R
AD NUMBER

Lycoming Engine

If multi-engine: ☐ Left ☐ Right ☐ Front ☐ Rear

Engine Model: 10 360-C1C Serial No: L-14533-S1A

| DATE | TOTAL TIME AT COMPL. | TACH OR RECORDING METER TIME AT COMPL. | METHOD OF COMPLIANCE | NEXT COMPL | DUE AT | AUTHORIZED SIGNATURE & NUMBER |
|-----------|----------------------|--|----------------------|------------|-------------------------------------|-------------------------------|
| | | | | TOTAL TIME | DATE, TACH, OR RECORDING METER TIME | |
| 1/17/17 | | 4647.6 | by visual insp. | | 4747.6 | SLC AEP 3564380 |
| 3/16/17 | | 4743.9 | by visual insp. | | 4843.9 | SLC AEP 3564380 |
| 15 JUN 17 | | 4855.1 | by visual insp. | | 4955.1 | SLC AEP 30702347A |
| 18 JUL 17 | | 4944.64 | BY VISUAL INSPECTION | | 5044.64 | David H. Plote AEP 2861970 |
| 31 AUG 17 | | 5028.46 | BY VISUAL INSPECTION | | 5128.46 | David H. Plote AEP 2861970 |
| 10 OCT 17 | | 5086.25 | BY VISUAL INSPECTION | | 5186.25 | David H. Plote AEP 2861970 |

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Amendment 39-18269; Docket No. FAA-2007-0218; Directorate Identifier 92-ANE-56-AD.

(a) Effective Date

This AD is effective November 3, 2015.

(b) Affected ADs

This AD supersedes AD 2011-26-04, Amendment 39-16894 (76 FR 79051, December 21, 2011).

(c) Applicability

This AD applies to Lycoming Engines fuel injected reciprocating engine models identified in Table 1 to paragraph (c) of this AD, with externally mounted fuel injector fuel lines (stainless steel tube assembly), installed.

Aerotech Note: Table 1 that was in this position in the FAA's version of this Airworthiness Directive (AD), has been moved to page 2 to facilitate compilation of this adNote™.

Engine models IO-540-AG1A5, LIO-360-M1A, IO-390-A Series, AEIO-390-A Series, IO-540-AF1A5, IO-580-B1A, and AEIO-580-B1A, are not listed in Table 1. These engine models are accounted for in the Maintenance and Overhaul Manual with an Airworthiness Limitations Section. As Lycoming has more engine models certified they will add them to this list of engines with a Maintenance and Overhaul Manual. To determine if your engine has a Maintenance and Overhaul Manual you can either contact Lycoming, or you can refer to Lycoming's list of maintenance publications for engines that have a Maintenance and Overhaul Manual.

(d) Unsafe Condition

This AD was prompted by revised service information that added engine models to the applicability. This service information adds engine models requiring inspection and technical updates. We are issuing this AD to prevent failure of the fuel injector fuel lines, which could lead to uncontrolled engine fire, engine damage, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(i) Initial Inspections

(i) Within 10 hours time-in-service (TIS) after the effective date of this AD, inspect the fuel injector fuel lines and clamps between the fuel manifold and the fuel injector nozzles. Use Lycoming Engines Mandatory Service Bulletin (MSB) No. 342G, dated July 16, 2013; Supplement No. 1 to MSB No. 342G, dated August 29, 2013; and Supplement No. 2 to MSB No. 342G, dated January 23, 2014 to perform the inspection. Replace any fuel injector fuel line or clamp that fails the inspection required by the Fuel Line Inspection and Installation Checklist in MSB No. 342G.

(ii) Thereafter, re-inspect after any maintenance is done on the engine where any clamp on a fuel injector fuel line was disconnected, moved, or loosened, and within every 110 hours TIS and after each engine overhaul. Use Lycoming Engines MSB No. 342G, dated July 16, 2013; Supplement No. 1 to MSB No. 342G, dated August 29, 2013; and Supplement No. 2 to MSB No. 342G, dated January 23, 2014 to perform the inspection and the Fuel

Line Inspection and Installation Checklist in MSB No. 342G to perform the re-inspection.

(f) Credit for Previous Actions

If you inspected your fuel injector fuel lines and clamps using Lycoming Engines MSB No. 342F, dated June 4, 2010, or earlier versions, you met the initial inspection requirements of this AD. However, you must still comply with the repetitive inspection requirements of paragraph (e)(1)(ii) of this AD.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, New York Aircraft Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request. AMOCs previously approved for AD 2008-14-07, Amendment 39-15602 (73 FR 39574, July 10, 2008) ("AD 2008-14-07") and AD 2011-26-04, Amendment 39-16894 (76 FR 79051, December 21, 2011) ("AD 2011-26-04") are approved as AMOCs to the corresponding requirements in paragraph (e) of this AD.

(h) Related Information

(1) For more information about this AD, contact Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7337; fax: 516-794-5531; email: norman.perenson@faa.gov.

(2) FAA Special Airworthiness Information Bulletin NE-07-49R1 contains additional information on this subject.

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Lycoming Engines Mandatory Service Bulletin (MSB) No. 342G, dated July 16, 2013.

(ii) Lycoming Engines MSB No. 342G, Supplement No. 1, dated August 29, 2013.

(iii) Lycoming Engines MSB No. 342G, Supplement No. 2, dated January 23, 2014.

(3) For Lycoming Engines service information identified in this AD, contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701; phone: 800-258-3279; fax: 570-327-7101; Internet: <http://www.lycoming.com/Lycoming/SUPPORT/TechnicalPublications/ServiceBulletins.aspx>.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on September 11, 2015.

Thomas A. Boudreau, Acting Directorate Manager, Engine & Propeller Directorate, Aircraft Certification Service.

(See page 2)



| DATE | TOTAL TIME AT COMPL. | TACH OR RECORDING METER TIME AT COMPL. | METHOD OF COMPLIANCE | NEXT COMPL. DUE AT | | AUTHORIZED SIGNATURE & NUMBER |
|-----------|----------------------|--|----------------------|--------------------|-------------------------------------|---|
| | | | | TOTAL TIME | DATE, TACH, OR RECORDING METER TIME | |
| 31 OCT 17 | 5132.52 | → | BY VISUAL INSPECTION | | 5232.52 | <i>David H. Plazzer</i> AEP 2861970 |
| 17 JAN 18 | 5231.6 | | BY VISUAL INSPECTION | 5331.6 | | <i>etc. etc.</i> 30202861A, |
| 10 JAN 20 | 6145.3 | + | BY VISUAL INSPECTION | 6245.3 | | <i>David H. Plazzer</i> AEP 3818250 |
| 8 JUL 20 | 6422.4 | same | (e)(i) | 6522.4 | | <i>etc.</i> AEP 3467663 |
| 2 NOV 20 | 6520.4 | | BY VISUAL INSPECTION | 6620.4 | | <i>David H. Plazzer</i> AEP 3818250 |
| 10 JAN 21 | 6609.7 | | BY VISUAL INSPECTION | 6709.7 | | <i>David H. Plazzer</i> AEP 3818250 |
| 1 FEB 21 | 6609.7 | | BY VISUAL INSPECTION | 6809.7 | | <i>David H. Plazzer</i> AEP 3818250 |
| 5 APR 21 | 6781.9 | | SEE ENGINE LOG | 6878.9 | | |
| 1 JUN 21 | 6841.0 | | BY VISUAL INSPECTION | 6941.0 | | <i>David H. Plazzer</i> AEP 3799094 1/2 |
| 10 AUG 21 | 6945.1 | | BY VISUAL INSPECTION | 7055.1 | | <i>David H. Plazzer</i> AEP 3799094 1/2 |
| 5 NOV 21 | 7035.7 | | BY VISUAL INSPECTION | 7145.1 | | <i>David H. Plazzer</i> AEP 3799094 1/2 |
| 21 DEC 21 | 7104.1 | | BY VISUAL INSPECTION | 7214.1 | | <i>David H. Plazzer</i> AEP 3799094 1/2 |
| 24 MAR 22 | 7209.5 | | BY VISUAL INSPECTION | 7319.5 | | <i>David H. Plazzer</i> AEP 3818250 |
| 4 JUN 22 | 7270.8 | | SEE ENGINE LOG | 7380.8 | | |
| 1 AUG 22 | 7345.9 | | SE | | | |
| 1 AUG 22 | 7357.6 | | | 7467.6 | | |
| APRIL 23 | 7552.0 | | BY VISUAL INSPECTION | 7662.0 | | <i>David H. Plazzer</i> AEP 3818250 |
| JUL 23 | 7641.0 | | BY VISUAL INSPECTION | 7751.0 | | <i>David H. Plazzer</i> AEP 3818250 |

Table 1 to Paragraph (c)—Engine Models Affected

| Engine | Model |
|---------------|--|
| AEIO-320 | -D1B, -D2B, -E1B, -E2B. |
| AIO-320 | -A1B, -B1B, -C1B. |
| IO-320 | -B1A, -B1C, -C1A, -D1A, -D1B, -E1A, -E1B, -E2A, -E2B. |
| LIO-320 | -B1A, -C1A. |
| AEIO-360 | -A1A, -A1B, -A1B6, -A1D, -A1E, -A1E6, -B1F, -B2F, -B1G6, -B1H, -B4A, -H1A, -H1B. |
| AIO-360 | -A1A, -A1B, -B1B. |
| HIO-360 | -A1A, -A1B, -B1A, -C1A, -C1B, -D1A, -E1AD, -E1BD, -F1AD, -G1A. |
| <u>IO-360</u> | -A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1D, -A1D6, -A2A, -A2B, -A3B6, -A3B6D, -B1B, -B1D, -B1E, -B1F, -B1G6, -B2F, -B2F6, -B4A, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1E6, -C1F, -C1G6, -F1A, -J1A6D, -M1B, -L2A, -M1A. |
| IVO-360 | -A1A. |
| LIO-360 | -C1E6. |
| TIO-360 | -A1B, -C1A6D. |
| IGO-480 | -A1B6. |
| AEIO-540 | -D4A5, -D4B5, -D4D5, -L1B5, -L1B5D, -L1D5. |
| IGO-540 | -B1A, -B1C. |
| IO-540 | -A1A5, -AA1A5, -AA1B5, -AB1A5, -AC1A5, -AE1A5, -B1A5, -B1C5, -C1B5, -C1C5, -C4B5, -C4D5D, -D4A5, -D4B5, -E1A5, -E1B5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -V4A5D, -K1A5, -K1A5D, -K1B5, -K1C5, -K1D5, -K1E5, -K1E5D, -K1F5, -K1H5, -K1J5, -K1F5D, -K1G5, -K1G5D, -K1H5, -K1J5D, -K1K5, -K1E5, -K1E5D, -K1F5, -K1J5, -L1C5, -M1A5, -M1B5D, -M1C5, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5, -T4B5D, -T4C5D, -V4A5, -V4A5D, -W1A5, -W1A5D, -W3A5D. |
| IVO-540 | -A1A. |
| LTIO-540 | -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -U2A, -V2AD, -W2A. |
| TIO-540 | -A1A, -A1B, -A2A, -A2B, -A2C, -AE2A, -AH1A, -AA1AD, -AF1A, -AF1B, -AG1A, -AB1AD, -AB1BD, -AH1A, -AJ1A, -AK1A, -C1A, -E1A, -G1A, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD, -U2A, -V2AD, -W2A. |
| TIVO-540 | -A2A. |
| IO-720 | -A1A, -A1B, -D1B, -D1BD, -D1C, -D1CD, -B1B, -B1BD, -C1B. |