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10. Control Surface Awareness

In addition to compliance with §§ 25.143, 25.671, and 25.672, when a flight condition exists where, without being commanded by the crew, control surfaces are coming so close to their limits that return to the normal flight envelope and (or) continuation of safe flight requires a specific crew action, a suitable flight control position annunciation shall be provided to the crew, unless other existing indications are found adequate or sufficient to prompt that action.

Note: The term suitable also indicates an appropriate balance between nuisance and necessary operation.

11. Steep Approach Air Distance

In lieu of compliance with § 25.125(a) for steep approach landing distances, the following applies:

(a) The horizontal distance necessary to land and to come to a complete stop, including an airborne distance of no less than the greater of 500 feet or the distance resulting from the combination of an aim point on the runway offset 300 feet from the runway threshold to be used in operations plus the demonstrated 3σ touchdown dispersion distance from the touchdown aim point, must be determined (at each weight for temperature, altitude, and wind within the operational limits established by the applicant for the airplane) as follows:

(1) The airplane must be in the landing configuration.

(2) A stabilized approach, with a calibrated airspeed of not less than V_{REF} or V_{MCL}, whichever is greater, must be maintained down to the 50 foot height. V_{REF} may not be less than—

(i) 1.03 V_{SR0};

(ii) 1.20 $V_{SR0_{PWR}}$ with the operative engines at the power or thrust setting for approach at the reference flight path angle;

(iii) The airspeed that provides an angle-of-attack margin to stall for not less than a 20 knot equivalent airspeed vertical gust with all engines operating at the power or thrust setting for approach at the reference flight path angle;

(iv) The airspeed that provides an angle-of-attack margin to stall for not less than a 15 knot equivalent airspeed vertical gust with the critical engine inoperative at the power or thrust setting for approach at the reference flight path angle; and

(v) A speed that provides the maneuvering capability specified in paragraph (k) of Special Condition 1.

(3) Changes in configuration, power or thrust, and speed, must be made in accordance with the established procedures for service operation.

(4) The landing must be made without excessive vertical acceleration, tendency to bounce, nose over, ground loop, or porpoise.

(5) The landings may not require exceptional piloting skill or alertness.

12. Landing Distances for Special Approaches to Short Field Landings

(a) In lieu of compliance with § 25.125(a), the following applies: The horizontal distance necessary to land and come to a complete stop from a point 50 feet above the landing surface must be determined (for each weight, altitude, wind, temperature, and runway slope within the operational limits established for the airplane) as follows:

(1) The airplane must be in the landing configuration.

(2) A stabilized approach, with a calibrated airspeed of not less than V_{REF} or V_{MCL}, whichever is greater, must be maintained down to the 50 foot height. V_{REF} may not be less than—

(i) 1.03 V_{SR0};

(ii) 1.20 $V_{SR0_{PWR}}$ with the operative engines at the power or thrust setting for approach at the reference flight path angle;

(iii) The airspeed that provides an angle-of-attack margin to stall for not less than a 20 knot equivalent airspeed vertical gust with all engines operating at the power or thrust setting for approach at the reference flight path angle;

(iv) The airspeed that provides an angle-of-attack margin to stall for not less than a 15 knot equivalent airspeed vertical gust with the critical engine inoperative at the power or thrust setting for approach at the reference flight path angle; and

(v) A speed that provides the maneuvering capability specified in paragraph (k) of Special Condition 1.

(3) Changes in configuration, power or thrust, and speed, must be made in accordance with the established procedures for service operation.

(4) The landing must be made without excessive vertical acceleration, tendency to bounce, nose over, ground loop, or porpoise.

(5) The landings may not require exceptional piloting skill or alertness.

(b) In lieu of compliance with § 25.125(b), the following applies: For land planes, the landing distance on land must be determined on level, smooth, dry and wet, hard-surfaced runways. In addition—

(1) The pressures on the wheel braking systems may not exceed those specified by the brake manufacturer;

(2) The brakes may not be used so as to cause excessive wear of brakes or tires; and

(3) Means other than wheel brakes may be used if that means—

(i) Is safe and reliable;

(ii) Is used so that consistent results can be expected in service; and

(iii) Is such that exceptional skill is not required to control the airplane.

(4) The average touchdown rate of descent must not exceed 4 feet per second and the approach flight path angle must be no steeper than −3 degrees for a normal approach.

(c) Procedures must be established by the applicant for use in service that are consistent with those used to establish the performance data under this special condition. These procedures must be able to be consistently executed in service by crews of average skill, and must include, as applicable, speed additives for turbulence and gusts for approaches with all engines operating and with an engine failure on final approach, and the use of thrust reversers on all operative engines during the landing rollout.

(d) The procedures and performance data established under this special condition must be furnished in the Airplane Flight Manual.

13. Thrust for Landing Climb

In lieu of compliance with § 25.119(a), the following applies: The engines at the power or thrust that is available eight seconds after initiation of movement of the power or thrust controls to the go-around power or thrust setting from the thrust level necessary to maintain a stabilized approach at a flight path angle two degrees steeper than the desired flight path angle.

Issued in Renton, WA on November 17, 1999.

Vi L. Lipski,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99–30891 Filed 11–29–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98–CE–87–AD; Amendment 39–11434; AD 99–24–10]

RIN 2120–AA64

Airworthiness Directives; Precise Flight, Inc. Model SVS III Standby Vacuum Systems

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to all aircraft equipped with Precise Flight, Inc. Model SVS III standby vacuum systems installed in accordance with the applicable supplemental type certificate (STC) or through field approval. This AD requires incorporating revised operating limitations for the affected standby vacuum systems into the airplane flight manual (AFM), and repetitively inspecting the push-pull cable, vacuum lines, saddle fittings, and shuttle valve for correct installation and damage (wear, chafing, deterioration, etc.). This AD also requires immediately correcting any discrepancy found and conducting a function test of the vacuum system after the inspections. This AD is the result of reports of shuttle valve failure and standby vacuum system malfunction on aircraft. The actions specified by this AD are intended 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.

DATES: Effective January 14, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 14, 2000.

ADDRESSES: Service information that applies to this AD may be obtained from Precise Flight, Inc., 63120 Powell Butte Road, Bend, Oregon 97701; telephone: (800) 547–2558. This information may also be examined at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 98–CE–87–AD, 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.

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.

SUPPLEMENTARY INFORMATION:

Events Leading to the Issuance of This AD

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all aircraft equipped with Precise Flight, Inc. Model SVC III standby vacuum systems installed in accordance with the applicable supplemental type certificate (STC) or through field approval was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on July 7, 1999 (64 FR 36618). The NPRM proposed to require incorporating revised operating limitations for the affected standby vacuum systems into the airplane flight manual (AFM), and repetitively inspecting the push-pull cable, vacuum lines, saddle fittings, and shuttle valve for correct installation and damage (wear, chafing, deterioration, etc.). The NPRM also proposed to require immediately correcting any discrepancy found and conducting a function test of the vacuum system after each inspection.

The NPRM was the result of reports of shuttle valve failure and standby vacuum system malfunction on aircraft.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposed rule or the FAA's determination of the cost to the public.

The FAA's Determination

After careful review of all available information related to the subject presented above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. The FAA has determined that these minor corrections will not change the meaning of the AD and will not add any additional burden upon the public than was already proposed.

Compliance Time of This AD

The compliance times of this AD are presented in calendar time. Although malfunction or failure of the standby vacuum systems is only unsafe while the aircraft is in flight, the condition is not a direct result of repetitive aircraft operation. The unsafe condition could exist on a standby vacuum system installed on an aircraft with only 50 hours time-in-service (TIS), but may not develop on another standby vacuum system installed on an aircraft until 1,000 hours TIS. The inspection compliance times are utilized to coincide with annual inspections so as to allow the owner/operator of the aircraft to have the required action accomplished at a time when he/she has already scheduled maintenance activities.

Cost Impact

The FAA estimates that 10,000 standby vacuum systems will be affected by this AD, that it will take approximately 3 workhours per vacuum system to accomplish the actions, and that the average labor rate is approximately $60 an hour. Based on these figures, the total cost impact of this AD on U.S. operators is estimated to be $1,800,000, or $180 per airplane.

These figures only take into account the costs of the initial inspection and initial functional test of the standby vacuum systems; subsequent inspections and functional tests and any corrective actions are not included in the cost impact. The FAA has no way of determining the number of repetitive inspections and functional tests each airplane owner/operator will incur over the life of an airplane incorporating one of the affected standby vacuum systems. The FAA also has no way of determining the number of standby vacuum systems that will require corrective action based on the inspection results.

Regulatory Impact

This rule does not have Federalism implications as defined in Executive Order No. 13132. This means it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. The FAA has not consulted with state authorities prior to publication of this rule.

For the reasons discussed above, I certify that this action (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES.**

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive (AD) to read as follows:

99–24–10 Precise Flight, Inc.: Amendment 39–11434; Docket No. 98–CE–87–AD.

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.

Affected STC	Make and model airplanes
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, Kearns, Edward Scott (Garcia, Henry S.) Model (Emigh) Trojan A–2, Swift Museum Foundation, Inc. Model (Globe) GC–1A, GC–1B, Goodyear Aircraft Model GA–22A, 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, Commander Aircraft (Gulfstream) Models 112, (112A, 112B, 112TC, 112TCA, 114, and 114A, 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, Prop–Jets, Inc. (Interceptor Corp., Aero Commander, Meyers) Models 200, 200A, 200B, 200C, and 200D, C. Itoh Aircraft Maintenance & Engineering Co. LTD. Model N–62, Jamieson Corporation Model J–2–L1B, Jodel, Avion Models D–140–B, DR–1050, D–1190, and 150, Lake Models C–1, C–2–IV, LA–4, LA–4–200, and LA–4–250, Luscombe Aircraft Corp. Models 8, 8A, 8B, 8C, 8D, 8E, 8F, T–8F, and 11A, 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, Messerschmitt-Bolkow Models BO–209–150 FV&RV, BO209–160 FV&RV, BO–209, and 150OFF, Nardi S.A. Model FN–333, 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, White International Ltd. Models (Pitts) S–1S, S–1T, S–2, and S–2A, Procaer S.P.A. Models F 15/B, F 15/C, and F 15/E, Gulfstream Aerospace Corporation (Rockwell) Models 111, 112, 112B, 112TC, 112TCA, and 114, 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, Socata—Groupe Aerospatiale Models Rallye Series MS880B, MS885, MS892–A–150, MS892E–150, MS893A, MS893E, MS894A, MS894E, TB9, TB10, and TB21, Stinson Models 108–2 and108–3, Sud Aviation Models Gardan GY.80–1500, GY.80–160, and GY.80–180, Taylorcraft Aircraft Company Models F19, F21, and F21A, 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, Augustair, Inc. (Varga Aircraft Corporation) Models 2150, 2150A, and 2180.

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 Docket No. 98–CE–87–AD—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:

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

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.

Issued in Kansas City, Missouri, on November 15, 1999.

Marvin R. Nuss,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NM–46–AD; Amendment 39–11441; AD 99–24–16]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes, that requires removal of cable guards in the lateral control system and replacement with new, improved cable guards. This amendment is prompted by reports of high control wheel forces and restricted control wheel movement. The actions specified by this AD are intended to prevent deterioration of cable guards in the lateral control system, which could result in a jam of the lateral control system and consequent reduced lateral controllability of the airplane.

DATES: Effective January 4, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 4, 2000.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Tamara L. Anderson, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 227–2771; fax (425) 227–1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes was published in the **Federal Register** on July 16, 1999 (64 FR 38383). That action proposed to require removal of cable guards in the lateral control system and replacement with new, improved cable guards.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Support for the Proposal

One commenter supports the proposed rule.

Request To Revise Cost Impact Information

One commenter requests that the cost impact information be revised to include the work hours required to gain access and close up, and to test the lateral flight control system after the replacement of the cable guards. The commenter states that cost impact information provided in the proposed rule estimates 10 work hours per airplane is necessary for the replacement, whereas the Boeing service bulletin estimates 31.5 work hours per airplane.

The FAA does not concur with the commenter's request. The cost impact information, below, describes only the ''direct'' costs of the specific actions required by this AD. The number of work hours necessary to accomplish the required actions, specified as 10 in the cost impact information, below, was provided to the FAA by the manufacturer based on the best data available to date. This number represents the time necessary to perform only the actions actually required by this AD. The FAA recognizes that, in accomplishing the requirements of any AD, operators may incur ''incidental'' costs in addition to the ''direct'' costs. The cost analysis in AD rulemaking actions, however, typically does not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. Because incidental costs may vary significantly from operator to operator, they are almost impossible to calculate. No change to the final rule is necessary in this regard.

Request To Extend the Compliance Time

One commenter requests that the compliance time for the replacement of the cable guards be extended from 2 years to 4 years. The commenter states that it has replaced deteriorated cable guards found during various inspection and maintenance tasks in the area, but that it is unaware of any cases where deterioration of the cable guards has led to binding of the control cables. Due to the access required for the replacement, the commenter states that a longer compliance time would better accommodate its work schedule.

The FAA does not concur with the commenter's request to extend the compliance time. In developing an appropriate compliance time for this action, the FAA considered the safety implications, parts availability, and normal maintenance schedules for timely accomplishment of the modification. In consideration of these items, as well as two reports of cable binding due to cable guard deterioration in service, the FAA has determined that 2 years represents an appropriate interval of time allowable wherein the modifications can be accomplished during scheduled maintenance intervals for the majority of affected operators, and an acceptable level of safety can be maintained. No change to the final rule is necessary in this regard.

Request To Consider Repetitive Inspections in Lieu of Replacement

One commenter requests that the FAA consider allowing repetitive inspections of the cable guards in lieu of the required replacement. The commenter states that repetitive inspections and on-condition replacement of cable guards, as well as the elimination of existing cable guards from spares, provides an acceptable level of safety. The commenter also notes that, on freighters, the lateral control cables are exposed and can be easily inspected.

The FAA does not concur with the commenter's request. The FAA has determined that the eventual replacement of all existing cable guards is required because it is not known how long the cable guards will remain intact after exposure to airplane grease. No change to the final rule is necessary in this regard.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.