FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES

SMALL AIRPLANES, ROTORCRAFT, GLIDERS, BALLOONS, & AIRSHIPS

BIWEEKLY 2013-25

12/2/2013 - 12/15/2013

Federal Aviation Administration
Engineering Procedures Office, AIR-110
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AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S – Supersedes			
Biweekly 2013-01			
2012-26-07		Eurocopter France	AS350BA helicopters
2012-26-09		Burkhart GROB Luft-und Raumfahrt GmbH	GROB G 109 and GROB G 109B sailplanes
2012-26-10		Eurocopter France	SA-365N, SA-365N1, AS-365N2, AS 365 N3, EC 155B, EC155B1, SA-366G1, SA-365C, SA-365C1, and SA-365C2 helicopters
2012-26-11		Bell Helicopter Textron Inc	205A, 205A-1, and 205B helicopters
2012-26-12		Thielert Aircraft Engines	TAE 125-02-99 and TAE 125-02-114 reciprocating engines
2012-26-13	S 2011-07-09	Thielert Aircraft Engines GmbH	TAE 125-01, TAE 125-02-99, and TAE 125-02-114 reciprocating engines
2012-26-15		Honeywell International Inc	See AD
2012-27-02		Turbomeca S.A.	ARRIEL 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines
Biweekly 2013-02			
2012-17-08		Bell Helicopter Textron Inc	204B, 205A, 205A-1, 205B, and 212 helicopters
2012-24-09	COR	Lycoming Engines and Continental Motors, Inc.	TIO-540-AK1A, TSIO-360-MB, TSIO-360-SB, and TSIO-360-RB reciprocating engines
2013-01-06		Pilatus Aircraft Ltd	PC-7
2013-02-01		Bell Helicopter Textron Inc	206L, 206L-1, and 206L-3 helicopters, and Model 206L-4 helicopters
Biweekly 2013-03			
2013-01-04		Bell Helicopter Textron, Inc	412 and 412EP helicopters
2013-01-05		Eurocopter France	AS350B3 and EC130B4 helicopters
2013-01-07		Turbomeca S.A.	Arriel 2D turboshaft engines
2013-02-13		Piper Aircraft, Inc	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
2013-03-03		MD Helicopters, Inc.	500N, 600N, and MD900 helicopters
Biweekly 2013-04			
2012-26-16	S 2009-14-13	Pilatus Aircraft Ltd.	PC-12, PC-12/45, PC-12/47, and PC-12/47E
2013-03-01	S 2010-20-18	Pacific Aerospace Limited	FU24-954 and FU24A-954
2013-03-02	S 2012-19-09	Eurocopter France	EC 155B, EC155B1, SA-365N1, AS-365N2 AS 365 N, and AS 365 N3 helicopters
2013-03-04		Sikorsky Aircraft Corporation	269D and Model 269D
2013-03-09		DG Flugzeugbau GmbH	DG-1000T gliders
2013-03-10		Lindstrand Hot Air Balloons Ltd	Appliance: Female ACME threaded hose connectors
2013-03-14		Pratt & Whitney Canada Corp.	PT6C-67C turboshaft engines
2013-03-15		Cessna Aircraft Company	172R and 172S
2013-03-16	S 2011-08-01	Bell Helicopter Textron	204B, 205A, 205A-1, 205B, 210 and 212 helicopters
2013-03-21		Pratt & Whitney Canada Corp.	PW206B, PW206B2, PW206C, PW207C, PW207D, PW207D1, PW207D2, and PW207E turboshaft engines
2013-04-02		Reims Aviation S.A.	F406
Biweekly 2013-05			
2013-04-06		Eurocopter France	AS332C, AS332L, and AS332L1 helicopters
2013-04-08		Diamond Aircraft Industries GmbH	H-36, HK 36 R, HK 36 TS, and HK 36 TTS
2013-04-09		Costruzioni Aeronautiche Tecnam srl	P2006T
2013-05-01	S 2011-24-08	Turbomeca S.A.	Makila 1A2 turboshaft engines

AD No.	Information	Manufacturer	Applicability

Information Key: E - Emergency; COR - Correction; S – Supersedes

Biweekly 2013-06

2012-26-06	S 97-10-15	Erickson Air-Crane Incorporated	S-64F helicopters
2013-04-06		Eurocopter France	AS332C, AS332L, and AS332L1 helicopters
2013-05-14		Bell Helicopter Textron, Inc.	412 and 412EP helicopters
2013-05-17		Sikorsky Aircraft Corporation	S-61A, D, E, L, N, NM, R, and V helicopters
2013-05-23		Eurocopter France	AS332C, L, and L1 helicopters
2013-06-02		Diamond Aircraft Industries GmbH	DA 42 M-NG and DA 42 NG

Biweekly 2013-07

2004-21-08 R1		Cessna Aircraft Company	190, 195 (L-126A,B,C), 195A, and 195B
2008-07-11 R1		Pilatus Aircraft Ltd.	PC-12, PC-12/45, and PC-12/47
2013-03-10		Lindstrand Hot Air Balloons Ltd	Appliance: female ACME threaded hose connectors
2013-05-15		Robinson Helicopter Company	R44 and R44 II helicopters
2013-05-16		MD Helicopters, Inc.	369D, E, F, and FF helicopters
2013-05-21		Eurocopter France	EC130 B4 helicopters
2013-05-22		Agusta S.p.A.	A109, A109A, A109A II, A109C, A109K2, A109E, A109S, and A119 helicopters
2013-06-04		Reims Aviation S.A.	F406
2013-06-07		Eurocopter France	SA-365N1, AS-365N2, and AS 365 N3 helicopters
2013-06-51		See AD	See Ad

Biweekly 2013-08

2013-07-01		Diamond Aircraft Industries GmbH	DA 42, DA 42 M-NG, and DA 42 NG
2013-07-05		Eurocopter France	EC130B4 helicopters
2013-07-06		Eurocopter France	AS332C, AS332L, AS332L1, AS332L2, and EC225LP helicopters
2013-07-12		BRP Powertrain GmbH & Co KG Rotax	912 F2; 912 F3, 912 F4, 912 S2; 912 S3, 912 S4, 914 F2; 914 F3; and 914 F4 engines
2013-08-04		Grob-Werke	G115EG
2013-08-06		Bell Helicopter Textron Canada	430 helicopters
2013-08-07		Eurocopter France	AS332C, L, and L1 helicopters

Biweekly 2013-09

2004-21-08 R1		Cessna Aircraft Company	190, 195 (L-126A,B,C), 195A, and 195B
2012-25-01		Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters
2012-25-04		Eurocopter France	AS350B3 helicopters
2013-03-18		Eurocopter Deutschland GmbH	MBB-BK 117 C-2 helicopters
2013-08-05		Cessna Aircraft Company	525
2013-08-17		Eurocopter France	SA-365N, SA-365N1, AS-365N2, AS 365 N3, and SA-366G1 helicopters
2013-08-19		Eurocopter France	AS350B, BA, B1, B2, B3, C, D, D1, AS355E, F, F1, F2, and N helicopters
2013-08-21		Diamond Aircraft Industries GmbH	DA 40 NG
2013-08-22		Turbomeca S.A.	1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K1, 1S, and 1S1 turboshaft engines

Biweekly 2013-10

2013-04-08 R1		Diamond Aircraft Industries GmbH	HK 36 R, HK 36 TS, and HK 36 TTS powered gliders
2013-08-14	S 2005-12-02	Revo, Incorporated	COLONIAL C-1, COLONIAL C-2, LAKE LA-4, LAKE LA-4A, LAKE LA-4P, and LAKE LA-4-200
2013-09-05		Twin Commander Aircraft LLC	690, 690A, and 690B
2013-09-06		Agusta	A119 and AW119 MKII helicopters
2013-09-09	S 98-22-15	Slingsby Sailplanes Ltd.	Dart T.51, Dart T.51/17, and Dart T.51/17R sailplanes
2013-10-01		Spectrolab Nightsun XP Searchlight	Appliance: See AD
2013-10-51	E	Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters

AD No.	Information	Manufacturer	Applicability

Information Key: E - Emergency; COR - Correction; S – Supersedes

Biweekly 2013-11

2013-10-05		Eurocopter Deutschland GmbH	MBB-BK 117 C-2 helicopters
2013-11-02		Aircraft Industries a.s.	L-420
2013-11-09	S 2001-08-14R1	Turbomeca S.A.	Arrius 2B1 and 2F turboshaft engines

Biweekly 2013-12

2013-10-04	S 82-16-05 R1	Piper Aircraft, Inc.	PA-31, PA-31-325, and PA-31-350
2013-11-01		Iniziative Industriali Italiane S.p.A.	Sky Arrow 650 TC, Sky Arrow 650 TCN, Sky Arrow 650TCS, and Sky Arrow 650TCNS
2013-11-05		Bell	214B, 214B-1, and 214ST helicopters
2013-11-13		Rolls-Royce plc	Viper Mk. 601-22 turbojet engines

Biweekly 2013-13

2013-06-51		Goodrich	Appliance: See AD
2013-11-08	S 2011-01-14	Pilatus Aircraft Ltd.	PC-6, PC-6-H1, PC-6-H2, PC-6/350, PC-6/350-H1, PC-6/350-H2, PC-6/A, PC-6/A-H1, PC-6/A-H2, PC-6/B-H2, PC-6/B1-H2, PC-6/B2-H2, PC-6/B2-H4, PC-6/C-H2, and PC-6/C1-H2
2013-11-10		Cessna Aircraft Company	LC40-550FG, LC41-550FG, and LC42-550FG
2013-11-11	S 2000-04-01	Cessna Aircraft Company	172R, 172S, 182S, 182T, T182T, 206H and T206H
2013-11-15		Eurocopter Deutschland GmbH	BO-105A, BO-105C, BO-105S, BO-105LS A-1, BO 105 LS A-3, EC135 P1, EC135 P2, EC135 P2+, EC135 T1, EC135 T2, EC135 T2+, MBB-BK117 A-1, MBB-BK117 A-3, MBB-BK117 A-4, MBB-BK117 B-1, MBB-BK117 B-2, and MBB-BK117 C-1, MBB-BK117 C-2 helicopters
2013-12-04		Eurocopter France	EC 155B, EC155B1, SA-366G1, SA-365N, SA-365N1, AS-365N2, and AS 365 N3 helicopters
2013-12-07		Bell Helicopter Textron Canada	407 helicopters
2013-13-02		B-N Group Ltd.	BN-2, BN-2A, BN2A MK. III, BN2A MK. III-2, BN2A MK. III-3, BN-2A-2, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN-2T, and BN-2T-4R

Biweekly 2013-14

2012-23-13	COR	Sikorsky Aircraft Corporation	S-70, S-70A, and S-70C helicopters
2013-12-06		Eurocopter Deutschland	MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, and MBB-BK 117 C-2 helicopters
2013-13-01		Piper Aircraft, Inc.	PA–46–310P (Malibu), PA–46–350P (Mirage), PA–46R–350T (Matrix), and PA–46–500TP (Meridian)
2013-13-10		Pilatus Aircraft Ltd.	PC-7
2013-13-14		See AD	See AD

Biweekly 2013-15

2013-10-51		Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters
2013-12-05		Eurocopter Deutschland GmbH	MBB-BK 117 C-2 helicopters
2013-14-01		Pilatus Aircraft Ltd.	PC-6/B2-H4
2013-14-08		Austro Engine GmbH	E4 engines
2013-15-03		Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D and AS350D1 helicopters
2013-15-04		Hartzell Propeller, Inc.	HC-(1,D)2(X,V,MV)20-7, HC-(1,D)2(X,V,MV)20-8, and HC-(1,D)3(X,V,MV)20-8 propellers

Biweekly 2013-16

2013-13-06		See AD	See AD
2013-15-02	S 2008-10-03	Bell Helicopter Textron	205A, 205A-1, 205B, 210, 212, 412, 412CF, and 412EP helicopters
2013-16-06		Eurocopter Deutschland GmbH	BO-105A, BO-105C, BO-105LS A-1, BO-105LS A-3, and BO-105S helicopters

AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S – Supersedes			
Biweekly 2013-17			
2011-22-05	COR, S 2003-22-06	EUROCOPTER FRANCE	AS350B, B1, B2, B3, BA, C, D, D1, AS355E, F, F1, F2, N, and NP helicopters
2012-11-02	COR, S 2008-22-51	Eurocopter Deutschland GmbH	EC135 helicopters
2012-25-04	COR, S 2012-21-51	Eurocopter France	AS350B3 helicopters
2013-15-19	S 2013-07-12	BRP Powertrain GmbH & Co KG Rotax	Rotax 912F, Rotax 912S, Rotax 914F, Rotax 912F, 912S, and 914F engines
2013-16-01		Beechcraft Corporation and Hawker Beechcraft Corporation	See AD
2013-16-04		Eclipse Aerospace, Inc.	EA500
2013-16-07		Eurocopter France	AS332C, AS332L, AS332L1, AS332L2, and EC225LP helicopters
2013-16-10		Hamilton Standard Division and Hamilton Sundstrand Corporation	See AD
2013-16-13		Eurocopter Deutschland GmbH	O-105A, BO-105C, BO-105S, BO-105LS A-1, BO-105LS A-3, MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK117 B-1, MBB-BK 117 B-2, and MBB-BK 117 C-1 helicopters
2013-16-16		Agusta S.p.A. and Bell Helicopter Textron Helicopters	See AD
2013-16-19		Eurocopter France	EC120B and EC130B4 helicopters
2013-16-20		Eurocopter Deutschland GmbH	MBB-BK 117 C-2 helicopters
99-07-10 R1		PIAGGIO AERO INDUSTRIES S.p.A	P-180
Biweekly 2013-18			
2013-10-04	COR	Piper Aircraft, Inc.	PA-31, PA-31-325, and PA-31-350 airplanes
2013-16-05	S 64-07-05	Alexander Schleicher	AS -K13, Ka2B, Ka 6, Ka 6 B, Ka 6 BR, Ka 6 C, Ka 6 CR, K7, K8, and K 8 B sailplanes
2013-16-14		Eurocopter Deutschland	EC135 P1, P2, P2+, T1, T2, and T2+ helicopters
2013-17-01		Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, and AS355F2; AS350B3; AS355N and AS355NP helicopters
2013-17-04		Various Aircraft	Equipped with a Rotax Aircraft Engines 912 A series engine (See AD)
2013-18-03		Bell Helicopter Textron Canada	206A and 206B; 206L helicopters
Biweekly 2013-19			
2013-13-01	COR	Piper Aircraft, Inc.	PA–46–310P (Malibu), PA–46–350P (Mirage), PA–46R–350T (Matrix), PA–46–500TP (Meridian)
2013-16-03		Eurocopter France	AS350C, D, D1, B, BA, B1, B2, and B3; and AS355E, F, F1, F2, N, and NP helicopters
2013-18-01		Eurocopter France	C 155B, EC155B1, SA-365N, SA-365N1, AS-365N2, AS 365 N3, and SA-366G1 helicopters
2013-18-04		Piaggio Aero Industries S.p.A	P-180
2013-18-05		Eurocopter Deutschland GmbH	EC135P1, EC135P2, EC135P2+, EC135T1, EC135T2, and EC135T2+ helicopters
2013-18-06		Bell Helicopter Textron Canada Limited	206A, 206B, 206L, 206L-1, 206L-3, 206L-4, 222, 222B, 222U, 230, 407, 427, and 430 helicopters
2013-18-07	S 76-12-07	Bell Helicopter Textron	204B and 205A-1 helicopters
2013-19-01		AgustaWestland S.p.A.	A119 and AW119 MKII helicopters
Biweekly 2013-20			
2013-15-01		AgustaWestland S.p.A.	AB139 and AW139 helicopters
2013-19-05		Bell Helicopter Textron, Inc.	214B, 214B-1, and 214ST helicopters
2013-19-06		Robinson Helicopter Company	R22, R22 Alpha, R22 Beta, and R22 Mariner helicopters
2013-19-07		Eurocopter France	SA-365N, SA-365N1, AS-365N2, AS 365 N3, EC 155B, EC155B1, AS332C, AS332L, AS332L1, AS332L2, and EC225LP helicopters
2013-19-16		Sikorsky Aircraft Corporation	S-92A helicopters
2013-19-19		Eurocopter France	AS332C, AS332L, AS332L1, AS332L2, and EC225LP helicopters

AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S – Supersedes			
2013-20-51		AgustaWestland S.p.A	A109A, A109A II, A109C, A109E, A109K2, A109S, AW109SP, A119, and AW119 MKII helicopters
Biweekly 2013-21			
Due to the partial shutdown of the US Government, there were no AD's published in this Bi-weekly period.			
Biweekly 2013-22			
2013-19-24	S 2003-08-51	MD Helicopters, Inc.	369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters
2013-20-01		Agusta	A109A, A109AII, and A109C helicopters
2013-20-02		Bell	230 helicopters
2013-20-03		Bell	430 helicopters
2013-20-05		Bell	407 helicopters
2013-20-15	S 97-19-10	Erickson Air-Crane Incorporated	CH-54A helicopters
2013-20-16		MD Helicopters, Inc.	MD 900 helicopters
2013-20-18		Bell Helicopter Textron, Inc.	412, 412EP, and 412CF helicopters
2013-20-51	S 2009-05-09	AgustaWestland S.p.A	A109A, A109A II, A109C, A109E, A109S, A109K2, AW109SP, A119 and AW119 MKII helicopters
2013-21-01		Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters
2013-21-02	S 2012-24-09	Lycoming and Continental Motors, Inc.	See Ad
2013-21-05		Eurocopter Deutschland GmbH	EC135 P1, P2, P2+, T1, T2, and T2+ helicopters
2013-22-01		Bell Helicopter Textron Canada	206L-4 and 407 helicopters
Biweekly 2013-23			
2013-20-13		Bell	206B, 206A; and 206L helicopters
2013-20-17		Eurocopter Deutschland GMBH	BO105C (C-2 and CB-2 Variants) and BO105S (CS-2 and CBS-2 Variants) helicopters
2013-22-12		DG Flugzeugbau GmbH	DG-800A, DG-800B, and DG-500MB gliders
2013-22-13		PILATUS Aircraft Ltd.	PC-7
2013-22-14		DG Flugzeugbau GmbH	DG-1000T gliders
2013-22-15		Sikorsky Aircraft Corporation	S-76A, S-76B, and S-76C helicopters
2013-22-16		Agusta S.p.A.	AW139 helicopters
2013-22-17		Eurocopter France	AS332C, AS332L, AS332L1, AS332L2, and EC225LP helicopters
2013-22-20		Embraer	EMB-505
2013-22-21		Bell Helicopter Textron, Inc.	206A, 206B, 206L, 206L-1, 206L-3, 206L-4, and 407 helicopters
2013-22-22	S 2013-01-07	Turbomeca S.A.	Arriel 2D turboshaft engines
2013-22-23		Aermacchi S.p.A.	F.260, F.260B, F.260C, F.260D, F.260E, and F.260F, S.208 and S.208A
Biweekly 2013-24			
2013-23-07	S 90-26-12	Erickson Air-Crane Incorporated	S-64E and S-64F helicopters
2013-23-08		Aquila–Aviation by Excellence AG	AT01
2013-23-09		Eurocopter France	AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters
2013-23-10		Eurocopter France	AS350B, BA, B1, B2, B3, D, AS355E, F, F1, F2, and N helicopters
2013-23-11		Eurocopter France	AS332L2 and EC225LP helicopters
2013-23-19		XtremeAir GmbH	XA42
2013-24-06		Thielert Aircraft Engines GmbH	TAE 125-01 reciprocating engines
Biweekly 2013-25			
2013-24-03		Beechcraft Corporation	1900, 1900C, 1900C (C-12J), and 1900D
2013-24-14		Diamond Aircraft Industries	DA 40, DA 40 F
99-01-05 R1	R 99-01-05	Various Aircraft	See AD

2013-24-03 Beechcraft Corporation (type certificate previously held by Hawker Beechcraft Corporation): Amendment 39-17677; Docket No. FAA-2013-0753; Directorate Identifier 2013-CE-025-AD.

(a) Effective Date

This AD is effective January 13, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to the following Beechcraft Corporation airplanes in table 1 of this AD, certificated in any category:

Table 1 to Paragraph (c) of This AD–Applicability

Model	Serial Numbers
1900	UA-3.
1900C	UB-1 through UB-74, UC-1 through UC-174.
1900C (C-12J)	UD-1 through UD-6.
1900D	UE-1 through UE-439.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 55, Stabilizers.

(e) Unsafe Condition

This AD was prompted by reports of cracking in the front spar cap angles and hat section of the vertical stabilizer structure. We are issuing this AD to detect and correct cracking in the vertical stabilizer structure, which could lead to structural failure of the vertical stabilizer and result in loss of control.

(f) Compliance

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

(g) Visual Inspections

(1) For all airplanes: Within the next 600 hours time-in-service (TIS) after January 13, 2014 (the effective date of this AD), inspect part number (P/N) 101-640011-3/-4 spar angles and P/N 114-640000-25/-26 hat section for cracks following the Accomplishment Instructions in paragraph 3.A. of Hawker Beechcraft Mandatory Service Bulletin SB 55-4114, dated August 2012.

(2) For Models 1900 and 1900C airplanes: Within 1,200 hours TIS after the initial inspection required in paragraph (g)(1) of this AD or within 2 years after the initial inspection required in paragraph (g)(1) of this AD, whichever occurs first, and repetitively thereafter at intervals not to exceed 1,200 hours TIS or 2 years, whichever occurs first, inspect P/N 101-640011-3 and P/N 101-640011-4 spar cap angles for cracks. Follow Procedure 8 under Vertical Stabilizer in the ‘‘I" Check Procedures of Hawker Beechcraft Corporation Model 1900/1900C Airliner Structural Inspection Manual, Part Number 98-30937G2, dated May 1, 2013.

(3) For Models 1900 and 1900C airplanes: Within 1,200 hours TIS after the initial inspection required in paragraph (g)(1) of this AD or within 2 years after the initial inspection required in paragraph (g)(1) of this AD, whichever occurs first, and repetitively thereafter at intervals not to exceed 1,200 hours TIS or 2 years, whichever occurs first, inspect P/N 114-640000-25 and P/N 114-640000-26 hat section for cracks. Follow Procedure 9 under Vertical Stabilizer in the ‘‘I" Check Procedures of Hawker Beechcraft Corporation Model 1900/1900C Airliner Structural Inspection Manual, Part Number 98-30937G2, dated May 1, 2013.

(4) For Model 1900D airplanes: Within 1,200 hours TIS after the initial inspection required in paragraph (g)(1) of this AD or within 2 years after the initial inspection required in paragraph (g)(1) of this AD, whichever occurs first, and repetitively thereafter at intervals not to exceed 1,200 hours TIS or 2 years, whichever occurs first, inspect P/N 101-640011-3 and P/N 101-640011-4 spar cap angles for cracks. Follow Procedure 6.b. under Vertical Stabilizer Canted Stabilizer Station (CSS 69.184 through VSS 91.10) in the ‘‘I" Check Procedures of Beechcraft Corporation Model 1900D Airliner Structural Inspection Manual, Part Number 129-590000-65E5, dated May 1, 2013.

(5) For Model 1900D airplanes: Within 1,200 hours TIS after the initial inspection required in paragraph (g)(1) of this AD or within 2 years after the initial inspection required in paragraph (g)(1) of this AD, whichever occurs first, and repetitively thereafter at intervals not to exceed 1,200 hours TIS or 2 years, whichever occurs first, inspect P/N 114-640000-25 and P/N 114-640000-26 hat section for cracks. Follow Procedure 6.c. under Vertical Stabilizer Canted Stabilizer Station (CSS 69.184 through VSS 91.10) in the ‘‘I" Check Procedures of Beechcraft Corporation Model 1900D Airliner Structural Inspection Manual, Part Number 129-590000-65E5, dated May 1, 2013.

(h) Repair

If any cracks are found during any of the inspections required in paragraph (g) of this AD, to include all subparagraphs, before further flight, you must contact Beechcraft Corporation to obtain repair instructions approved by the Wichita Aircraft Certification Office (ACO) specifically for compliance with this AD and incorporate those instructions. You can find contact information for Beechcraft Corporation in paragraph (l)(3) of this AD.

(i) Special Flight Permit

If cracks are found during any of the inspections required in paragraph (g) of this AD, to include all subparagraphs, the FAA may allow a one-time special flight permit to a repair facility depending on the cracking found. You must contact Beechcraft Corporation and provide them with crack detail information for them to determine residual strength of the airplane before applying to the FAA for a special flight permit. You can find contact information for Beechcraft Corporation in paragraph (l)(3) of this AD.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Wichita 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 paragraph (k) 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 Paul Chapman, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4152; fax: (316) 946-4107; email: paul.chapman@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 this AD specifies otherwise.

(i) Hawker Beechcraft Mandatory Service Bulletin SB 55-4114, dated August 2012.

(ii) Hawker Beechcraft Corporation Model 1900/1900C Airliner Structural Inspection Manual, Part Number 98-30937G2, dated May 1, 2013.

(iii) Beechcraft Corporation Model 1900D Airliner Structural Inspection Manual, Part Number 129-590000-65E5, dated May 1, 2013.

(3) For Beechraft Corporation service information identified in this AD, contact Beechcraft Corporation at address: 10511 E. Central, Wichita, Kansas 67206; phone: (800) 429-5372 or (316) 676-3140; Internet: http://www.beechcraft.com/customer_support/contact_us/.

(4) You may view this service information at the 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 Kanas City, Missouri, on November 15, 2013.
Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

2013-24-14 Diamond Aircraft Industries GmbH: Amendment 39-17689; Docket No. FAA-2013-0812; Directorate Identifier 2013-CE-023-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective January 7, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Diamond Aircraft Industries Model DA 40 airplanes, serial numbers 40.006 through 40.009, 40.011 through 40.1071, and 40.1073 through 40.1077; and Model DA 40 F airplanes, serial numbers 40.FC001 through 40.FC029; certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 57: Wings.

(e) Reason

This AD was prompted from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as fatigue strength found in the aft main spar does not ensure unlimited lifetime structural integrity. We are issuing this AD to modify the aft main spar in the cabin area to ensure the structural integrity of the airplane.

(f) Actions and Compliance

Unless already done, at or before the next Major Structural Inspection (MSI) after the effective date of this AD or within the next 114 months after January 7, 2014 (the effective date of this AD), whichever occurs first, modify the aft main spar in the cabin area following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instructions WI-MSB 40-074, WI-MSB D4-094, and WI-MSB F4-028 (co-published as a single document), dated May 10, 2013, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletins (MSB) 40-074, D4-094, and F4-028 (co-published as a single document), dated May 10, 2013.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane

Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, EASA AD No.: 2013-0145, dated July 15, 2013, for more information. You may examine the AD on the Internet at http://www.regulations.gov by searching and locating it in Docket No. FAA-2013-0812.

(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) Diamond Aircraft Industries GmbH Mandatory Service Bulletin 40-074, dated May 10, 2013.

(ii) Diamond Aircraft Industries GmbH Mandatory Service Bulletin D4-094, dated May 10, 2013.

(iii) Diamond Aircraft Industries GmbH Mandatory Service Bulletin F4-028, dated May 10, 2013.

Note 1 to paragraphs (i)(2)(i) through (i)(2)(iii) of this AD: Diamond Aircraft Industries GmbH Mandatory Service Bulletin 40-074, dated May 10, 2013; Diamond Aircraft Industries GmbH Mandatory Service Bulletin D4-094, dated May 10, 2013; Diamond Aircraft Industries GmbH Mandatory Service Bulletin F4-028, dated May 10, 2013; are co-published as one document.

(iv) Diamond Aircraft Industries GmbH Work Instruction WI-MSB 40-074, dated May 10, 2013.

(v) Diamond Aircraft Industries GmbH Work Instruction WI-MSB D4-094, dated May 10, 2013.

(vi) Diamond Aircraft Industries GmbH Work Instruction WI-MSB F4-028, dated May 10, 2013.

Note 2 to paragraphs (i)(2)(iv) through (i)(2)(vi) of this AD: Diamond Aircraft Industries GmbH Work Instruction WI-MSB 40-074; Diamond Aircraft Industries GmbH Work Instruction WI-MSB F4-028; dated May 10, 2013; and Diamond Aircraft Industries GmbH Work Instruction WI-MSB F4-028 dated May 10, 2013; are co-published as one document.

(3) For Diamond Aircraft Industries service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Str.5, A-2700 Wiener Neustadt, Austria; telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: http://www.diamondaircraft.com/contact/technical.php.

(4) You may view this service information at the 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 November 22, 2013.

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

99-01-05 R1 Various Aircraft: Amendment 39-17688; Docket No. FAA-2013-0023; Directorate Identifier 96-CE-072-AD.

(a) Effective Date

This AD is effective January 14, 2014

(b) Affected ADs

This AD revises AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998), which superseded AD 93-10-06, Amendment 39-8586 (58 FR 29965, May 25, 1993). AD 99-26-19, Amendment 39-11479 (64 FR 72524, December 28, 1999), also relates to the subject of this AD.

(c) Applicability

This AD applies to the following airplanes identified in table 1 of paragraph (c) of this AD, that are:

(1) Equipped with wing lift struts, including airplanes commonly known as a "Clipped Wing Cub," which modify the airplane primarily by removing approximately 40 inches of the inboard portion of each wing; and

(2) certificated in any category.

Table 1 to Paragraph (c) of This AD-Applicability

Type certificate holder	Aircraft model	Serial No.
FS 2000 Corp	L–14	All.
FS 2001 Corp	J5A (Army L–4F), J5A–80, J5B (Army L–4G), J5C, AE–1, and HE–1.	All.
FS 2002 Corporation	PA–14	14–1 through 14–523.
FS 2003 Corporation	PA–12 and PA–12S	12–1 through 12–4036.
LAVIA ARGENTINA S.A. (LAVIASA)	PA–25, PA–25–235, and PA–25–260	25–1 through 25–8156024.
Piper Aircraft, Inc.	TG–8 (Army TG–8, Navy XLNP–1)	All.
Piper Aircraft, Inc.	E–2 and F–2	All.
Piper Aircraft, Inc.	J3C–40, J3C–50, J3C–50S, (Army L–4, L–4B, L–4H, and L–4J), J3C–65 (Navy NE–1 and NE–2), J3C–65S, J3F–50, J3F–50S, J3F–60, J3F–60S, J3F–65 (Army L–4D), J3F–65S, J3L, J3L–S, J3L–65 (Army L–4C), and J3L–65S.	All.

Piper Aircraft, Inc.	J4, J4A, J4A–S, and J4E (Army L–4E)	4–401 through 4–1649.
Piper Aircraft, Inc.	PA–11 and PA–11S	11–1 through 11–1678.
Piper Aircraft, Inc.	PA–15	15–1 through 15–388.
Piper Aircraft, Inc.	PA–16 and PA–16S	16–1 through 16–736.
Piper Aircraft, Inc.	PA–17	17–1 through 17–215.
Piper Aircraft, Inc.	PA–19 (Army L–18C), and PA–19S	19–1, 19–2, and 19–3.
Piper Aircraft, Inc.	PA–20, PA–20S, PA–20 "115", PA–20S "115", PA–20 "135", and PA–20S "135".	20–1 through 20–1121.
Piper Aircraft, Inc.	PA–22, PA–22–108, PA–22–135, PA–22S–135, PA–22–150, PA–22S–150, PA–22–160, and PA–22S–160.	22–1 through 22–9848.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

(1) The subject of this AD was originally prompted by reports of corrosion damage found on the wing lift struts. We are revising AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998), because of reports that paragraph (c) had been misinterpreted and caused confusion. This AD removes the language in paragraph (c) of AD 99-01-05, which caused the confusion.

(2) This AD clarifies the FAA's intention that if a sealed wing lift strut assembly is installed as a replacement part, the repetitive inspection requirement is terminated only if the seal is never improperly broken. If the seal is improperly broken, then that wing lift strut becomes subject to continued repetitive inspections. We did not intend to promote drilling holes into or otherwise unsealing a sealed strut. This AD retains all the actions required in AD 99-01-05 and this AD does not require any actions over that already required by AD 99-01-05. This AD does not add any additional burden to the owners/operators of the affected airplanes.

(3) We are issuing this AD to detect and correct corrosion and cracking on the front and rear wing lift struts and forks, which could cause the wing lift strut to fail. This failure could result in the wing separating from the airplane.

(f) Paragraph Designation Changes to AD 99-01-05 R1

Since AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998), was issued, the AD format has been revised, and certain paragraphs have been rearranged. As a result, the corresponding paragraph identifiers have changed in this AD as listed in the following table:

Table 2 to Paragraph (f) of This AD-Revised Paragraph Identifiers

Requirement in AD 99–01–05	Corresponding requirement in AD 99–01–05 R1
paragraph (a)	paragraph (h).
paragraph (a)(1)	paragraph (i)(1).
paragraph (a)(1)(i)	paragraph (i)(1)(i).
paragraph (a)(1)(ii)	paragraph (i)(1)(ii).
paragraph (a)(2)	paragraph (i)(2).
paragraph (a)(2)(i)	paragraph (i)(2)(i).
paragraph (a)(2)(ii)	paragraph (i)(2)(ii).
paragraph (a)(3)	paragraph (j)(1).
paragraph (a)(4)	paragraph (j)(2).
paragraph (a)(5)	paragraph (j)(3).
paragraph (b)	paragraph (k).
paragraph (b)(1)	paragraph (l).
paragraph (b)(1)(i)	paragraph (l)(1).
paragraph (b)(1)(ii)(B) and (b)(1)(iv).	paragraph (l)(2).
paragraph (b)(1)(ii)(C) and (b)(1)(iv).	paragraph (l)(3).
paragraph (b)(1)(ii)(A) and (b)(1)(iv).	paragraph (l)(4).
paragraph (b)(1)(iii), (b)(2), (b)(1)(iv).	paragraph (m)(1).
paragraph (b)(3) through (b)(3)(ii).	paragraph (m)(2).
paragraph (b)(4) through (b)(4)(vi).	paragraph (m)(3) thru (m)(3)(vi).
paragraph (b)(5) through (b)(5)(ii).	paragraph (m)(4).
Paragraph (c)	Removed.
paragraph (d)	paragraph (n)(1).
paragraph (d)(1)	paragraph (n)(1)(i).
paragraph (d)(2)	paragraph (n)(1)(ii).
N/A	paragraph (n)(2).

(g) Compliance

Unless already done (compliance with AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998)), do the following actions within the compliance times specified in paragraphs (h) through (n) of this AD, including all subparagraphs. Properly unsealing and resealing a sealed wing lift strut is still considered a terminating action for the repetitive inspection requirements of this AD as long as all appropriate regulations and issues are considered, such as static strength, fatigue, material effects, immediate and long-term (internal and external) corrosion protection, resealing methods, etc. Current FAA regulations in 14 CFR 43.13(b) specify that maintenance performed will result in the part's condition to be at least equal to its original or properly altered condition. Any

maintenance actions that unseal a sealed wing lift strut should be coordinated with the Atlanta Aircraft Certification Office (ACO) through the local airworthiness authority (e.g., Flight Standards District Office). There are provisions in paragraph (o) of this AD for approving such actions as an alternative method of compliance (AMOC).

(h) Remove Wing Lift Struts

At whichever of the compliance times specified in paragraphs (h)(1) or (h)(2) of this AD that occurs later, remove the wing lift struts following Piper Aircraft Corporation Mandatory Service Bulletin (Piper MSB) No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable. Before further flight after the removal, do the actions in one of the following paragraphs (i)(1), (i)(2), (j)(1), (j)(2), or (j)(3) of this AD, including all subparagraphs.

(1) Within 1 calendar month after February 8, 1999 (the effective date retained from AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998)); or

(2) Within 24 calendar months after the last inspection done in accordance with AD 93-10-06, Amendment 39-8586 (58 FR 29965, May 25, 1993) (which was superseded by AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998)), whichever occurs later.

(i) Inspect Wing Lift Struts

Before further flight after the removal required in paragraph (h) of this AD, inspect each wing lift strut following paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs, or do the wing lift strut replacement following one of the options in paragraph (j)(1), (j)(2), or (j)(3) of this AD.

(1) Inspect each wing lift strut for corrosion and perceptible dents following Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable.

(i) If no corrosion is visible and no perceptible dents are found on any wing lift strut during the inspection required in paragraph (i)(1) of this AD, before further flight, apply corrosion inhibitor to each wing lift strut following Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable.

Repetitively thereafter inspect each wing lift strut at intervals not to exceed 24 calendar months following the procedures in paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs.

(ii) If corrosion or perceptible dents are found on any wing lift strut during the inspection required in paragraph (i)(1) of this AD or during any repetitive inspection required in paragraph (i)(1)(i) of this AD, before further flight, replace the affected wing lift strut with one of the replacement options specified in paragraph (j)(1), (j)(2), or (j)(3) of this AD. Do the replacement following the procedures specified in those paragraphs, as applicable.

(2) Inspect each wing lift strut for corrosion following the procedures in the Appendix to this AD. This inspection must be done by a Level 2 or Level 3 inspector certified using the guidelines established by the American Society for Non-destructive Testing or the "Military Standard for Nondestructive Testing Personnel Qualification and Certification" (MIL-STD-410E), which can be found on the Internet at http://aerospacedefense.thomasnet.com/Asset/MIL-STD-410.pdf.

(i) If no corrosion is found on any wing lift strut during the inspection required in paragraph (i)(2) of this AD and all requirements in the Appendix to this AD are met, before further flight, apply corrosion inhibitor to each wing lift strut following Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable. Repetitively thereafter inspect each wing lift strut at intervals not to exceed 24 calendar months following the procedures in paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs.

(ii) If corrosion is found on any wing lift strut during the inspection required in paragraph (i)(2) of this AD or during any repetitive inspection required in paragraph (i)(2)(i) of this AD, or if any requirement in the Appendix of this AD is not met, before further flight after any inspection in which corrosion is found or the Appendix requirements are not met, replace the affected wing lift strut with one of the replacement options specified in paragraph (j)(1), (j)(2), or (j)(3) of this AD. Do the replacement following the procedures specified in those paragraphs, as applicable.

(j) Wing Lift Strut Replacement Options

Before further flight after the removal required in paragraph (h) of this AD, replace the wing lift struts following one of the options in paragraph (j)(1), (j)(2), or (j)(3) of this AD, including all subparagraphs, or inspect each wing lift strut following paragraph (i)(1) or (i)(2) of this AD.

(1) Install original equipment manufacturer (OEM) part number wing lift struts (or FAA-approved equivalent part numbers) that have been inspected following the procedures in either paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs, and are found to be airworthy. Do the installations following Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable. Repetitively thereafter inspect the newly installed wing lift struts at intervals not to exceed 24 calendar months following the procedures in either paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs.

(2) Install new sealed wing lift strut assemblies (or FAA-approved equivalent part numbers) (these sealed wing lift strut assemblies also include the wing lift strut forks) following Piper MSB No. 528D, dated October 19, 1990, and Piper MSB No. 910A, dated October 10, 1989, as applicable. Installing one of these new sealed wing lift strut assemblies terminates the repetitive inspection requirements in paragraphs (i)(1) and (i)(2) of this AD, and the wing lift strut fork removal, inspection, and replacement requirement in paragraphs (k) and (l) of this AD, including all subparagraphs, for that wing lift strut assembly.

(3) Install F. Atlee Dodge wing lift strut assemblies following F. Atlee Dodge Aircraft Services, Inc. Installation Instructions No. 3233-I for Modified Piper Wing Lift Struts Supplemental Type Certificate (STC) SA4635NM, dated February 1, 1991, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/E726AAA2831BD20085256CC2000E3DB7?OpenDocument&Highlight=sa4635nm. Repetitively thereafter inspect the newly installed wing lift struts at intervals not to exceed 60 calendar months following the procedures in paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs.

(k) Remove Wing Lift Strut Forks

For all affected airplane models, except for Models PA-25, PA-25-235, and PA-25-260 airplanes, within the next 100 hours time-in-service (TIS) after February 8, 1999 (the effective date retained from AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998)) or within 500 hours TIS after the last inspection done in accordance with AD 93-10-06, Amendment 39-8586 (58 FR 29965, May 25, 1993) (which was superseded by AD 99-01-05), whichever occurs later, remove the wing lift strut forks (unless already replaced in accordance with paragraph (j)(2) of this AD). Do the removal following Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable. Before further flight after the removal, do the actions in one of the following paragraphs (l) or (m) of this AD, including all subparagraphs.

(l) Inspect and Replace Wing Lift Strut Forks

Before further flight after the removal required in paragraph (k) of this AD, inspect the wing lift strut forks following paragraph (l) of this AD, including all subparagraphs, or do the wing lift strut fork replacement following one of the options in paragraph (m)(1), (m)(2), (m)(3), or (m)(4) of this AD, including all subparagraphs. Inspect the wing lift strut forks for cracks using magnetic particle procedures, such as those contained in FAA Advisory Circular (AC) 43.13-1B, Chapter 5, which can be found on the Internet http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/99c827db9baac81b86256b4500596c4e/$FILE/Chapter%2005.pdf. Repetitively thereafter inspect at intervals not to exceed 500 hours TIS until the replacement time requirement specified in paragraph (l)(2) or (l)(3) of this AD is reached provided no cracks are found.

(1) If cracks are found during any inspection required in paragraph (l) of this AD or during any repetitive inspection required in paragraph (l)(2) or (l)(3) of this AD, before further flight, replace the affected wing lift strut fork with one of the replacement options specified in paragraph (m)(1), (m)(2), (m)(3), or (m)(4) of this AD, including all subparagraphs. Do the replacement following the procedures specified in those paragraphs, as applicable.

(2) If no cracks are found during the initial inspection required in paragraph (l) of this AD and the airplane is currently equipped with floats or has been equipped with floats at any time during the previous 2,000 hours TIS since the wing lift strut forks were installed, at or before accumulating 1,000 hours TIS on the wing lift strut forks, replace the wing lift strut forks with one of the replacement options specified in paragraph (m)(1), (m)(2), (m)(3), or (m)(4) of this AD, including all subparagraphs. Do the replacement following the procedures specified in those paragraphs, as applicable. Repetitively thereafter inspect the newly installed wing lift strut forks at intervals not to exceed 500 hours TIS following the procedures specified in paragraph (l) of this AD, including all subparagraphs.

(3) If no cracks are found during the initial inspection required in paragraph (l) of this AD and the airplane has never been equipped with floats during the previous 2,000 hours TIS since the wing lift strut forks were installed, at or before accumulating 2,000 hours TIS on the wing lift strut forks, replace the wing lift strut forks with one of the replacement options specified in paragraph (m)(1), (m)(2), (m)(3), or (m)(4) of this AD, including all subparagraphs. Do the replacement following the procedures specified in those paragraphs, as applicable. Repetitively thereafter inspect the newly installed wing lift strut forks at intervals not to exceed 500 hours TIS following the procedures specified in paragraph (l) of this AD, including all subparagraphs.

(m) Wing Lift Strut Fork Replacement Options

Before further flight after the removal required in paragraph (k) of this AD, replace the wing lift strut forks following one of the options in paragraph (m)(1), (m)(2), (m)(3), or (m)(4) of this AD, including all subparagraphs, or inspect the wing lift strut forks following paragraph (1) of this AD, including all subparagraphs.

(1) Install new OEM part number wing lift strut forks of the same part numbers of the existing part (or FAA-approved equivalent part numbers) that were manufactured with rolled threads. Wing lift strut forks manufactured with machine (cut) threads are not to be used. Do the installations following Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable. Repetitively thereafter inspect and replace the newly installed wing lift strut forks at intervals not to exceed 500 hours TIS following the procedures specified in paragraph (l) of this AD, including all subparagraphs.

(2) Install new sealed wing lift strut assemblies (or FAA-approved equivalent part numbers) (these sealed wing lift strut assemblies also include the wing lift strut forks) following Piper MSB No. 528D, dated October 19, 1990, and Piper MSB No. 910A, dated October 10, 1989, as applicable. This installation may have already been done through the option specified in paragraph (j)(2) of this AD. Installing one of these new sealed wing lift strut assemblies terminates the repetitive inspection requirements in paragraphs (i)(1) and (i)(2) of this AD, and the wing lift strut fork removal, inspection, and replacement requirements in paragraphs (k) and (l) of this AD, including all subparagraphs, for that wing lift strut assembly.

(3) For the airplanes specified below, install Jensen Aircraft wing lift strut fork assemblies specified below in the applicable STC following Jensen Aircraft Installation Instructions for Modified Lift Strut Fitting. Installing one of these wing lift strut fork assemblies terminates the repetitive inspection requirement of this AD only for that wing lift strut fork. Repetitively inspect each wing lift strut as specified in paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs.

(i) For Models PA-12 and PA-12S airplanes: STC SA1583NM, which can be found on the Internet at

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/2E708575849845B285256CC1008213CA?OpenDocument&Highlight=sa1583nm;

(ii) For Model PA-14 airplanes: STC SA1584NM, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/39872B814471737685256CC1008213D0?OpenDocument&Highlight=sa1584nm;

(iii) For Models PA-16 and PA-16S airplanes: STC SA1590NM, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/B28C4162E30D941F85256CC1008213F6?OpenDocument&Highlight=sa1590nm;

(iv) For Models PA-18, PA-18S, PA-18 "105" (Special), PA-18S "105" (Special), PA-18A, PA-18 "125" (Army L-21A), PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-18A (Restricted), PA-18A "135" (Restricted), and PA-18A "150" (Restricted) airplanes: STC SA1585NM, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/A2BE010FB1CA61A285256CC1008213D6?OpenDocument&Highlight=sa1585nm;

(v) For Models PA-20, PA-20S, PA-20 "115", PA-20S "115", PA-20 "135", and PA-20S "135" airplanes: STC SA1586NM, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/873CC69D42C87CF585256CC1008213DC?OpenDocument&Highlight=sa1586nm; and

(vi) For Model PA-22 airplanes: STC SA1587NM, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/B051D04CCC0BED7E85256CC1008213E0?OpenDocument&Highlight=sa1587nm.

(4) Install F. Atlee Dodge wing lift strut assemblies following F. Atlee Dodge Installation Instructions No. 3233-I for Modified Piper Wing Lift Struts (STC SA4635NM), dated February 1, 1991, which can be found on the Internet at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/E726AAA2831BD20085256CC2000E3DB7?OpenDocument&Highlight=sa4635nm. This installation may have already been done in accordance paragraph (j)(3) of this AD. Installing these wing lift strut assemblies terminates the repetitive inspection requirements of this AD for the wing lift strut fork only. Repetitively inspect the wing lift struts as specified in paragraph (i)(1) or (i)(2) of this AD, including all subparagraphs.

(n) Install Placard

(1) Within 1 calendar month after February 8, 1999 (the effective date retained from AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998)), or within 24 calendar months after the last inspection required by AD 93-10-06, Amendment 39-8586 (58 FR 29965, May 25, 1993) (which was superseded by AD 99-01-05), whichever occurs later, and before further flight after any replacement of a wing lift strut assembly required by this AD, do the actions in one of the following paragraphs (n)(1)(i) or (n)(1)(ii) of this AD:

(i) Install "NO STEP" decal, Piper (P/N) 80944-02, on each wing lift strut approximately 6 inches from the bottom of the wing lift strut in a way that the letters can be read when entering and exiting the airplane; or

(ii) Paint the words "NO STEP" approximately 6 inches from the bottom of the wing lift strut in a way that the letters can be read when entering and exiting the airplane. Use a minimum of 1-inch letters using a color that contrasts with the color of the airplane.

(2) The "NO STEP" markings required by paragraph (n)(1)(i) or (n)(1)(ii) of this AD must remain in place for the life of the airplane.

(o) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO, FAA, has the authority to approve AMOCs for this AD related to Piper Aircraft, Inc. airplanes; the Manager, Seattle ACO, FAA has the authority to approve AMOCs for this AD related to FS 2000 Corp, FS 2001 Corp, FS 2002 Corporation, and FS 2003 Corporation airplanes; and the Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD related to LAVIA ARGENTINA S.A. (LAVIASA) airplanes, 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 appropriate person identified in paragraph (p) 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.

(3) AMOCs approved for AD 93-10-06, Amendment 39-8586 (58 FR 29965, May 25, 1993) and AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998) are approved as AMOCs for this AD.

(p) Related Information

(1) For more information about this AD related to Piper Aircraft, Inc. airplanes, contact: Gregory "Keith" Noles, Aerospace Engineer, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5551; fax: (404) 474-5606; email: gregory.noles@faa.gov.

(2) For more information about this AD related to FS 2000 Corp, FS 2001 Corp, FS 2002 Corporation, and FS 2003 Corporation airplanes, contact: Jeff Morfitt, Aerospace Engineer, FAA, Seattle ACO, 1601 Lind Avenue SW, Renton, Washington 98057; phone: (425) 917-6405; fax: (245) 917-6590; email: jeff.morfitt@faa.gov.

(3) For more information about this AD related to LAVIA ARGENTINA S.A. (LAVIASA) airplanes, contact: S.M. Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; fax: (816) 329-4090; email: sarjapur.nagarajan@faa.gov.

(q) 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.

(3) The following service information was approved for IBR on February 8, 1999 (63 FR 72132, December 31, 1998).

(i) Piper Aircraft Corporation Mandatory Service Bulletin No. 528D, dated October 19, 1990.

(ii) Piper Aircraft Corporation Mandatory Service Bulletin No. 910A, dated October 10, 1989.

(iii) F. Atlee Dodge Aircraft Services, Inc. Installation Instructions No. 3233-I for Modified Piper Wing Lift Struts Supplemental Type Certificate (STC) SA4635NM, dated February 1, 1991.

(iv) Jensen Aircraft Installation Instructions for Modified Lift Strut Fittings, which incorporates pages 1 and 5, Original Issue, dated July 15, 1983; pages 2, 4, and 6, Revision No. 1, dated March 30, 1984; and pages a and 3, Revision No. 2, dated April 20, 1984.

(4) For Piper Aircraft, Inc. service information identified in this AD, contact Piper Aircraft, Inc., Customer Services, 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; Internet: www.piper.com. Copies of the instructions to the F. Atlee Dodge STC and information about the Jensen Aircraft STCs may be obtained from F. Atlee Dodge, Aircraft Services, LLC., 6672 Wes Way, Anchorage, Alaska 99518-0409, Internet: www.fadodge.com.

(5) You may review copies of the referenced service information at the 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.

(6) 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.

APPENDIX TO AD 99-01-05 R1

Procedures and Requirements for Ultrasonic Inspection of Piper Wing Lift Struts

Equipment Requirements

1. A portable ultrasonic thickness gauge or flaw detector with echo-to-echo digital thickness readout capable of reading to 0.001-inch and an A-trace waveform display will be needed to do this inspection.

2. An ultrasonic probe with the following specifications will be needed to accomplish this inspection: 10 MHz (or higher), 0.283-inch (or smaller) diameter dual element or delay line transducer designed for thickness gauging. The transducer and ultrasonic system shall be capable of accurately measuring the thickness of AISI 4340 steel down to 0.020-inch. An accuracy of +/- 0.002-inch throughout a 0.020-inch to 0.050-inch thickness range while calibrating shall be the criteria for acceptance.

3. Either a precision machined step wedge made of 4340 steel (or similar steel with equivalent sound velocity) or at least three shim samples of same material will be needed to accomplish this inspection. One thickness of the step wedge or shim shall be less than or equal to 0.020-inch, one shall be greater than or equal to 0.050-inch, and at least one other step or shim shall be between these two values.

4. Glycerin, light oil, or similar non-water based ultrasonic couplants are recommended in the setup and inspection procedures. Water-based couplants, containing appropriate corrosion inhibitors, may be utilized, provided they are removed from both the reference standards and the test item after the inspection procedure is completed and adequate corrosion prevention steps are then taken to protect these items.

- Note: Couplant is defined as "a substance used between the face of the transducer and test surface to improve transmission of ultrasonic energy across the transducer/strut interface."
- Note: If surface roughness due to paint loss or corrosion is present, the surface should be sanded or polished smooth before testing to assure a consistent and smooth surface for making contact with the transducer. Care shall be taken to remove a minimal amount of structural material. Paint repairs may be necessary after the inspection to prevent further corrosion damage from occurring. Removal of surface irregularities will enhance the accuracy of the inspection technique.

Instrument Setup

1. Set up the ultrasonic equipment for thickness measurements as specified in the instrument's user's manual. Because of the variety of equipment available to perform ultrasonic thickness measurements, some modification to this general setup procedure may be necessary. However, the tolerance requirement of step 13 and the record keeping requirement of step 14, must be satisfied.

2. If battery power will be employed, check to see that the battery has been properly charged. The testing will take approximately two hours. Screen brightness and contrast should be set to match environmental conditions.

3. Verify that the instrument is set for the type of transducer being used, i.e. single or dual element, and that the frequency setting is compatible with the transducer.

4. If a removable delay line is used, remove it and place a drop of couplant between the transducer face and the delay line to assure good transmission of ultrasonic energy. Reassemble the delay line transducer and continue.

5. Program a velocity of 0.231-inch/microsecond into the ultrasonic unit unless an alternative instrument calibration procedure is used to set the sound velocity.

6. Obtain a step wedge or steel shims per item 3 of the Equipment Requirements. Place the probe on the thickest sample using couplant. Rotate the transducer slightly back and forth to "ring" the transducer to the sample. Adjust the delay and range settings to arrive at an A-trace signal display with the first backwall echo from the steel near the left side of the screen and the second backwall echo near the right of the screen. Note that when a single element transducer is used, the initial pulse and the delay line/steel interface will be off of the screen to the left. Adjust the gain to place the amplitude of the first backwall signal at approximately 80% screen height on the A-trace.

7. "Ring" the transducer on the thinnest step or shim using couplant. Select positive half-wave rectified, negative half-wave rectified, or filtered signal display to obtain the cleanest signal. Adjust the pulse voltage, pulse width, and damping to obtain the best signal resolution. These settings can vary from one transducer to another and are also user dependent.

8. Enable the thickness gate, and adjust the gate so that it starts at the first backwall echo and ends at the second backwall echo. (Measuring between the first and second backwall echoes will produce a measurement of the steel thickness that is not affected by the paint layer on the strut). If instability of the gate trigger occurs, adjust the gain, gate level, and/or damping to stabilize the thickness reading.

9. Check the digital display reading and if it does not agree with the known thickness of the thinnest thickness, follow your instrument's calibration recommendations to produce the correct thickness reading. When a single element transducer is used this will usually involve adjusting the fine delay setting.

10. Place the transducer on the thickest step of shim using couplant. Adjust the thickness gate width so that the gate is triggered by the second backwall reflection of the thick section. If the digital display does not agree with the thickest thickness, follow your instruments calibration recommendations to produce the correct thickness reading. A slight adjustment in the velocity may be necessary to get both the thinnest and the thickest reading correct. Document the changed velocity value.

11. Place couplant on an area of the lift strut which is thought to be free of corrosion and "ring" the transducer to surface. Minor adjustments to the signal and gate settings may be required to account for coupling improvements resulting from the paint layer. The thickness gate level should be set just high enough so as not to be triggered by irrelevant signal noise. An area on the upper surface of the lift strut above the inspection area would be a good location to complete this step and should produce a thickness reading between 0.034-inch and 0.041-inch.

12. Repeat steps 8, 9, 10, and 11 until both thick and thin shim measurements are within tolerance and the lift strut measurement is reasonable and steady.

13. Verify that the thickness value shown in the digital display is within +/- 0.002-inch of the correct value for each of the three or more steps of the setup wedge or shims. Make no further adjustments to the instrument settings.

14. Record the ultrasonic versus actual thickness of all wedge steps or steel shims available as a record of setup.

Inspection Procedure

1. Clean the lower 18 inches of the wing lift struts using a cleaner that will remove all dirt and grease. Dirt and grease will adversely affect the accuracy of the inspection technique. Light sanding or polishing may also be required to reduce surface roughness as noted in the Equipment Requirements section.

2. Using a flexible ruler, draw a 1/4-inch grid on the surface of the first 11 inches from the lower end of the strut as shown in Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989, as applicable. This can be done using a soft (2) pencil and should be done on both faces of the strut. As an alternative to drawing a complete grid, make two rows of marks spaced every 1/4-inch across the width of the strut. One row of marks should be about 11 inches from the lower end of the strut, and the second row should be several inches away where the strut starts to narrow. Lay the flexible ruler between respective tick marks of the two rows and use tape or a rubber band to keep the ruler in place. See Figure 1.

3. Apply a generous amount of couplant inside each of the square areas or along the edge of the ruler. Re-application of couplant may be necessary.

4. Place the transducer inside the first square area of the drawn grid or at the first 1/4-inch mark on the ruler and "ring" the transducer to the strut. When using a dual element transducer, be very careful to record the thickness value with the axis of the transducer elements perpendicular to any curvature in the strut. If this is not done, loss of signal or inaccurate readings can result.

5. Take readings inside each square on the grid or at 1/4-inch increments along the ruler and record the results. When taking a thickness reading, rotate the transducer slightly back and forth and experiment with the angle of contact to produce the lowest thickness reading possible. Pay close attention to the A-scan display to assure that the thickness gate is triggering off of maximized backwall echoes.

NOTE: A reading shall not exceed .041 inch. If a reading exceeds .041-inch, repeat steps 13 and 14 of the Instrument Setup section before proceeding further.

6. If the A-trace is unsteady or the thickness reading is clearly wrong, adjust the signal gain and/or gate setting to obtain reasonable and steady readings. If any instrument setting is adjusted, repeat steps 13 and 14 of the Instrument Setup section before proceeding further.

7. In areas where obstructions are present, take a data point as close to the correct area as possible.

NOTE: The strut wall contains a fabrication bead at approximately 40% of the strut chord. The bead may interfere with accurate measurements in that specific location.

8. A measurement of 0.024-inch or less shall require replacement of the strut prior to further flight.

9. If at any time during testing an area is encountered where a valid thickness measurement cannot be obtained due to a loss of signal strength or quality, the area shall be considered suspect. These areas may have a remaining wall thickness of less than 0.020-inch, which is below the range of this setup, or they may have small areas of localized corrosion or pitting present. The latter case will result in a reduction in signal strength due to the sound being scattered from the rough surface and may result in a signal that includes echoes from the pits as well as the backwall. The suspect area(s) shall be tested with a Maule "Fabric Tester" as specified in Piper MSB No. 528D, dated October 19, 1990, or Piper MSB No. 910A, dated October 10, 1989.

10. Record the lift strut inspection in the aircraft log book.

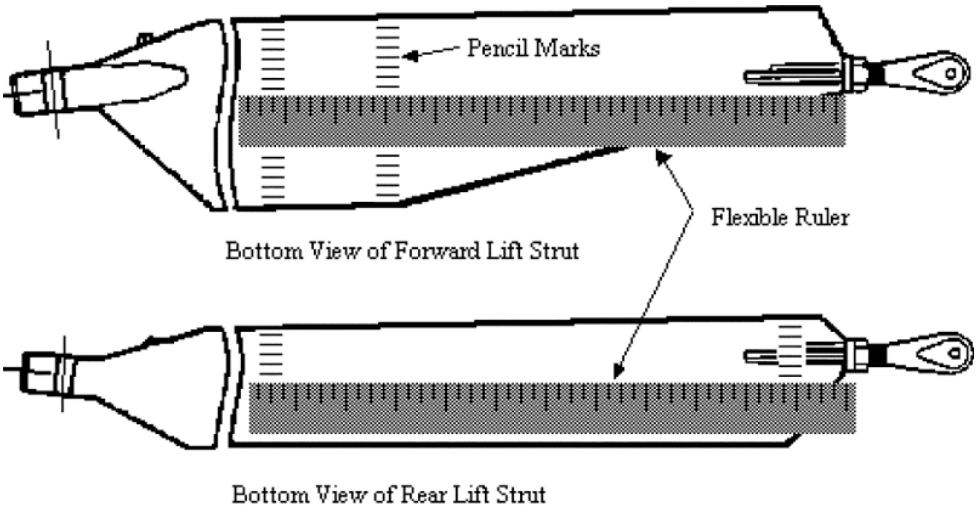

Figure 1

Issued in Kansas City, Missouri, on November 22, 2013.
Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.