

[Federal Register: March 29, 2007 (Volume 72, Number 60)]

[CORRECTIONS]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-25105; Directorate Identifier 2006-CE-33-AD; Amendment 39-14982; AD 2007-06-01]

RIN 2120-AA64

Airworthiness Directives; Raytheon Aircraft Company Beech Models 45 (YT-34), A45 (T-34A, B-45), and D45 (T-34B) Airplanes

Correction

In rule document 07-1106 beginning on page 10909 in the issue of Monday, March 12, 2007, make the following correction:

§ 39.13 [Corrected]

On page 10912, in the first column, in § 39.13(e)(2), in the first column of the table, in the last line of the column, “AD-24-01” should read “AD 62-24-01”.

[FR Doc. C7-1106 Filed 3-28-07; 8:45 am]

[Federal Register: March 12, 2007 (Volume 72, Number 47)]
[Rules and Regulations]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-25105; Directorate Identifier 2006-CE-33-AD; Amendment 39-14982; AD 2007-06-01]

RIN 2120-AA64

Airworthiness Directives; Raytheon Aircraft Company Beech Models 45 (YT-34), A45 (T-34A, B-45), and D45 (T-34B) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) that supersedes AD 62-24-01, which applies to all Raytheon Aircraft Company (RAC) Beech Models 45 (YT-34), A45 (T-34A, B45), and D45 (T-34B) airplanes. AD 62-24-01 currently requires you to repetitively inspect, using the dye penetrant method, the front and rear horizontal stabilizer spars for cracks and replace any cracked stabilizer. Since we issued AD 62-24-01, we determined that using the dye penetrant inspection method may not detect cracks before the crack grows to a critical length and causes failure of the horizontal stabilizer spars. Therefore, we are requiring the surface eddy current inspection method to detect cracks in the horizontal stabilizer spars. Consequently, this AD retains the actions required in AD 62-24-01 and changes the required inspection method from dye penetrant to surface eddy current. We are issuing this AD to prevent failure of the front and/or rear horizontal stabilizer spars caused by fatigue cracks. This failure could result in stabilizer separation and loss of control of the airplane.

DATES: This AD becomes effective on April 16, 2007.

ADDRESSES: To view the AD docket, go to the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2006-25105; Directorate Identifier 2006-CE-33-AD.

FOR FURTHER INFORMATION CONTACT: T.N. Baktha, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4155; fax: (316) 946-4107.

SUPPLEMENTARY INFORMATION:

Discussion

On July 24, 2006, we issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all RAC Beech Models 45 (YT-34), A45 (T-34A, B45), and D45 (T-34B) airplanes. That proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on July 31, 2006 (71 FR 43075). The NPRM proposed to supersede AD 62-24-01 with a new AD that would retain the actions required in AD 62-24-01 and only change the inspection procedure from the dye penetrant method to the surface eddy current method.

Comments

We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

Comment Issue No. 1: Change the Compliance Time for the Initial Inspection

Larry Bierma, Joe Enzminger, John Aldous, Michael Vadeboncoeur, John Rippinger, William E. Mayher, Dan Thomas, and Victor Barrett state that the inspection compliance in the proposed AD is a duplication of the inspection for those who have done the eddy current inspection recently as part of compliance with an alternative method of compliance (AMOC) to AD 2004-25-51.

The commenters state that requiring another eddy current inspection within 6 months after the effective date of this AD would be unnecessary and economically burdensome for those who have already done it. The commenters request credit for the last inspection done in compliance with an AMOC to AD 2004-25-51 as compliance for the initial inspection required in the proposed AD.

We have rewritten the compliance time to give full credit for previously accomplished eddy current inspections done in the area affected by this AD.

Comment Issue No. 2: AD Is Not Necessary

Michael Vadeboncoeur, John Aldous, Mike Talbot, Eric Evans, Earle Parks, Floyd Stilwell, Dan Thomas, Stephen Baksa, William Beitler, and Terrance Brennan state that, since the time AD 62-24-01 was issued, there have not been any accidents as a result of cracks in the horizontal stabilizer. The commenters request the proposed AD be withdrawn.

The commenters also request that stabilizer spars modified by Parks Industries supplemental type certificate (STC) either be exempt from the inspections or the inspection interval be increased to 1,000 hours TIS.

We do not agree with the commenters. In 2005, 148 of the affected airplanes were eddy current inspected. Cracks in the stabilizer spars and/or spar webs were found on 6 of these airplanes, which required the spars to be replaced. If no eddy current inspections had been done, those cracks may have grown and reached critical crack lengths, which could have compromised the integrity of the spar structure.

In order to increase the inspection interval or eliminate the spar inspections, we need supporting engineering analysis data regarding fatigue life, crack growth rate, etc. We have not received such data for the spars modified by the Parks Industries STC.

If we receive engineering analysis data that supports increasing the inspection intervals or eliminating the inspections, we may take additional rulemaking action at that time.

We are not changing the final rule AD action based on these comments.

Comment Issue No. 3: Retain the Dye Penetrant Inspection From AD 62-24-01

Floyd Stilwell, Earle Parks, and Terrance Brennan state that the surface eddy current inspection is expensive and inconvenient. Qualified technicians to do the surface eddy current inspections have to be brought to the repair station from other parts of the country, which contributes to the expense of doing the eddy current inspection. The commenters request retaining the dye penetrant inspection.

We do not agree with the commenters. AD 2001-13-18 R1 currently requires owners/operators of all Beech Models 45 (YT-34), A45 (T-34A, B-45), and D45 (T-34B) airplanes to do repetitive 80-hour TIS eddy current inspections of the wing spar assemblies and other components following Raytheon Aircraft Mandatory Service Bulletin No. SB 57-3329, Part II, Page 3/65, Issued: February, 2000. If the wing spar and stabilizer spar inspections are properly planned, these two inspections could be done at the same time. This planning would eliminate any extra expenses.

We have reason to believe that damage tolerance analysis of the stabilizer spar is being conducted by some owners. This may result in additional rulemaking action that could eliminate the inspection or increase the inspection interval. Until that time, AMOCs for this AD may be approved, if requested using the procedures found in 14 CFR 39.19.

We are not changing the final rule AD action based on these comments.

Comment Issue No. 4: Surface Eddy Current Inspection Method Unwarranted

Dan Thomas, William Beitler, Floyd Stilwell, William Mayher, and Mike Talbot state that the eddy current inspection method is no better than the dye penetrant method for detecting cracks. The level of safety will not be enhanced by changing the inspection methods. Further, the eddy current method could produce false positives and the frequent inspections could also incur damage to the stabilizer spar. The commenters request the method of inspection be at the owner's/operator's option.

We do not agree with the commenters. The eddy current inspection method is a more sensitive inspection process. The dye penetrant inspection method at times could completely miss detecting the cracks.

All inspection methods have some inherent drawbacks. Eddy current inspection methods detect small surface cracks better than dye penetrant methods, and eddy current inspection methods are also capable of detecting subsurface cracks. Detection of cracks early is a definite advantage. Eddy current inspection methods could occasionally produce false positives; however, this could be avoided if cracks are confirmed by repeatable flaw indications.

If the inspections required by this AD are carefully done by qualified technicians, any damage to the spars could be prevented.

The 500-hour TIS repetitive inspection interval is a long interval between inspections for this type of airplane, which normally will take place once in 5 years or longer in most cases; therefore, we do not consider this inspection requirement as frequent.

We are not changing the final rule AD action based on this comment.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

Costs of Compliance

We estimate that this AD affects 475 airplanes in the U.S. registry.

We estimate the following costs to accomplish each inspection:

Labor Cost	Parts Cost	Total Cost Per Airplane	Total Cost on U.S. Operators
8 work-hours x \$80 per hour = \$640	Not applicable	\$640	\$304,000

We estimate the following costs to do any necessary horizontal stabilizer replacements that will be required based on the results of the inspection. We have no way of determining the number of airplanes that may need this replacement:

Labor Cost	Parts Cost	Total Cost Per Airplane
4 work-hours x \$80 per hour = \$320	\$3,500	\$3,820

Cost Difference Between This AD and AD 62-24-01

The only difference between this AD and AD 62-24-01 is the change of inspection method. There may be some minimal additional cost involved in doing the eddy current inspection because of possible equipment rentals necessary. No additional actions are being required. We have determined that this AD action does not increase the cost impact over that already required by AD 62-24-01.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this AD.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect 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.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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.

We prepared a summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include “Docket No. FAA-2006-25105; Directorate Identifier 2006-CE-33-AD” in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, under 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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 62-24-01, Amendment 39-508, and adding the following new AD:



The preamble information for this AD is available at the above FAA website.

2007-06-01 Raytheon Aircraft Company: Amendment 39-14982; Docket No. FAA-2006-25105; Directorate Identifier 2006-CE-33-AD.

Effective Date

- (a) This AD becomes effective on April 16, 2007.

Affected ADs

- (b) This AD supersedes AD 62-24-01, Amendment 39-508.

Applicability

- (c) This AD affects the following airplane models and serial numbers that are certificated in any category:

Model	Serial Numbers
Beech 45 (YT-34)	All
Beech A45 (T34A, B-45)	All
Beech D45 (T-34B)	All

Unsafe Condition

- (d) This AD results from our determination that the surface eddy current inspection method should be used in place of the dye penetrant inspection method currently required in AD 62-24-01. We are issuing this AD to prevent failure of the front and/or rear horizontal stabilizer spars caused by fatigue cracks. This failure could result in stabilizer separation and loss of control of the airplane.

Compliance

- (e) Using the surface eddy current inspection procedures outlined in the appendix of this AD, inspect the front and rear horizontal stabilizer spars between the butt rib and the inboard end for cracks, unless already done, as follows:

- (1) If the last inspection of the front and rear horizontal stabilizer spars was done using the surface eddy current method (or FAA-approved equivalent method) to show compliance with AD 62-24-01 and/or to show compliance with the alternative method of compliance (AMOC) to AD 2004-25-51: Repetitively inspect thereafter at intervals not to exceed 500 hours time-in-service (TIS).
- (2) If the last inspection of the front and rear horizontal stabilizer spars required by AD 62-24-01 was done using the dye penetrant method: Inspect initially as presented in the table below and repetitively thereafter at intervals not to exceed 500 hours TIS:

<u>If</u>	<u>Then</u>
(i) Less than 200 hours TIS have passed since the last inspection required by AD 62-24-01:	Inspect at whichever of the following occurs later: (A) Upon accumulating 200 hours TIS since the last inspection required by AD 62-24-01; or (B) Within the next 6 months after April 16, 2007 (the effective date of this AD).
(ii) If 200 hours TIS or more have passed since the last inspection required by AD 62-24-01:	Inspect at whichever of the following occurs first, unless paragraph (e)(2)(iii) of this AD applies, as specified below: (A) At the next repetitive inspection required by AD 62-24-01; or (B) Within the next 6 months after April 16, 2007 (the effective date of this AD).
(iii) If paragraph (e)(2)(ii) results in the initial surface eddy current inspection becoming mandatory within 30 days after the effective date of this AD:	Inspect within the next 30 days after April 16, 2007 (the effective date of this AD).

Alternative Methods of Compliance (AMOCs)

(f) The Manager, Wichita Aircraft Certification Office, FAA, ATTN: T.N. Baktha, Aerospace Engineer, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4155; fax: (316) 946-4107, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(g) AMOCs approved for AD 62-24-01 are approved for this AD.

Appendix to AD 2007-06-01

Surface Eddy Current Inspection Procedure

Note: This surface eddy current inspection procedure is based on T-34 Spar Corporation TSC 3506, Rev C, dated May 10, 2005. The T-34 Spar Corporation is allowing the use of this procedure to be included in this Airworthiness Directive. Alternative methods of compliance procedures will be allowed, if approved by the Wichita Aircraft Certification Office and requested using the procedures found in 14 CFR 39.19.

PURPOSE:

This procedure is to be used to detect cracks in the inner and outer spars of the front and rear spar assemblies of Raytheon Aircraft Company Beech Models 45 (YT-34), A45 (T-34A, B-45), and D45 (T-34B) airplane stabilizers outside of the steel bushings in the attach holes.

AREA TO BE INSPECTED:

To access the area of inspection, remove the stabilizer from the airplane. The areas to be inspected include the forward and aft surfaces of the inner and outer front and rear spars of the horizontal stabilizers in the areas surrounding each of the attach holes.

PREPARING THE AREA FOR INSPECTION:

Thoroughly clean area to be inspected with solvent (acetone or equivalent) as required until no signs of dirt, grime, or oil remain on the front and rear spars from the closeout former inboard on the forward and aft surfaces of the spars.

Surfaces to be inspected should be smooth and corrosion-free. Any loss of thickness due to corrosion below material thickness tolerance is cause for rejection of the structure. An ultrasonic tester may be used to determine if material thickness has been compromised.

EQUIPMENT REQUIREMENTS:

Nortec Stavely 2000D Eddy Current Tester or equivalent.

Probe: 50-500 KHz, shielded, absolute, 0.071" diameter
(0.090 max. diameter), right angle, pencil style, surface probe, 5" long, ½" drop or equivalent

Use 0.025" notch (beyond head) for calibration

PERSONAL REQUIREMENTS:

Technicians with Eddy Current, Level II or Level III per one of the following specifications: ATA specification 105, SNT-TC-1A, or NAS-410 (MIL-std 410E).

METHODS:

Typical Set-up Parameters:

Frequency -350 KHz, Gain Vertical -75 dB, Horizontal -69 dB,

Drive-Mid, Filters- Lo Pass-30, Hi Pass-0, Lift off-Horizontal to the left, adjust as required. The most reliable indication (minimum of 1½ to 2 graticules) of the smallest observable flaw in the coupon (see the attached Figures) occurs from the notch extending 0.025" past the edge of the nominal fastener head (total notch length of 0.100" from the edge of the nominal hole). Install appropriate aluminum guide pin into bushing such that the edge of the guide pin is flush with the edge of the bushing. Using the pin (see the attached Figures) as a guide, circle the area surrounding the steel bushing with the probe and adjacent area (approximately ¼") to inspect for cracks. Inspect forward and aft surfaces surrounding bushings of each spar.

Note: T-34 Spar Corporation, 2800 Airport Road, Hanger A, Ada, Oklahoma, 74820 is a source for these coupons and pin.

ACCEPT/REJECT CRITERIA:

Any repeatable flaw indication is cause for rejection in accordance with the procedure. In the event that any crack is detected, describe the flaw in detail providing sketch as needed and send the information to the Wichita ACO.

DOCUMENTATION REQUIREMENTS:

Record inspection findings in the aircraft logbook.

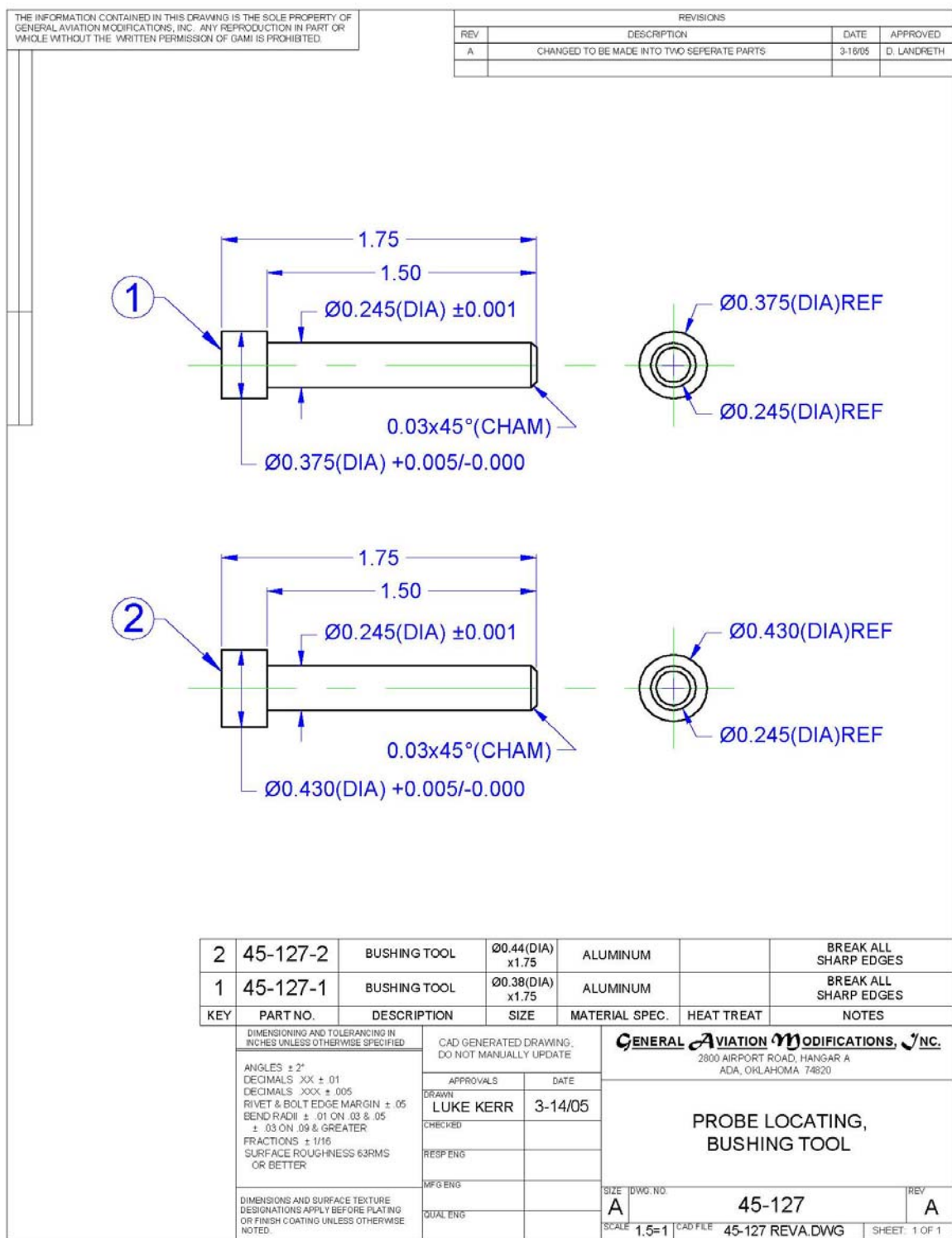


Figure 1

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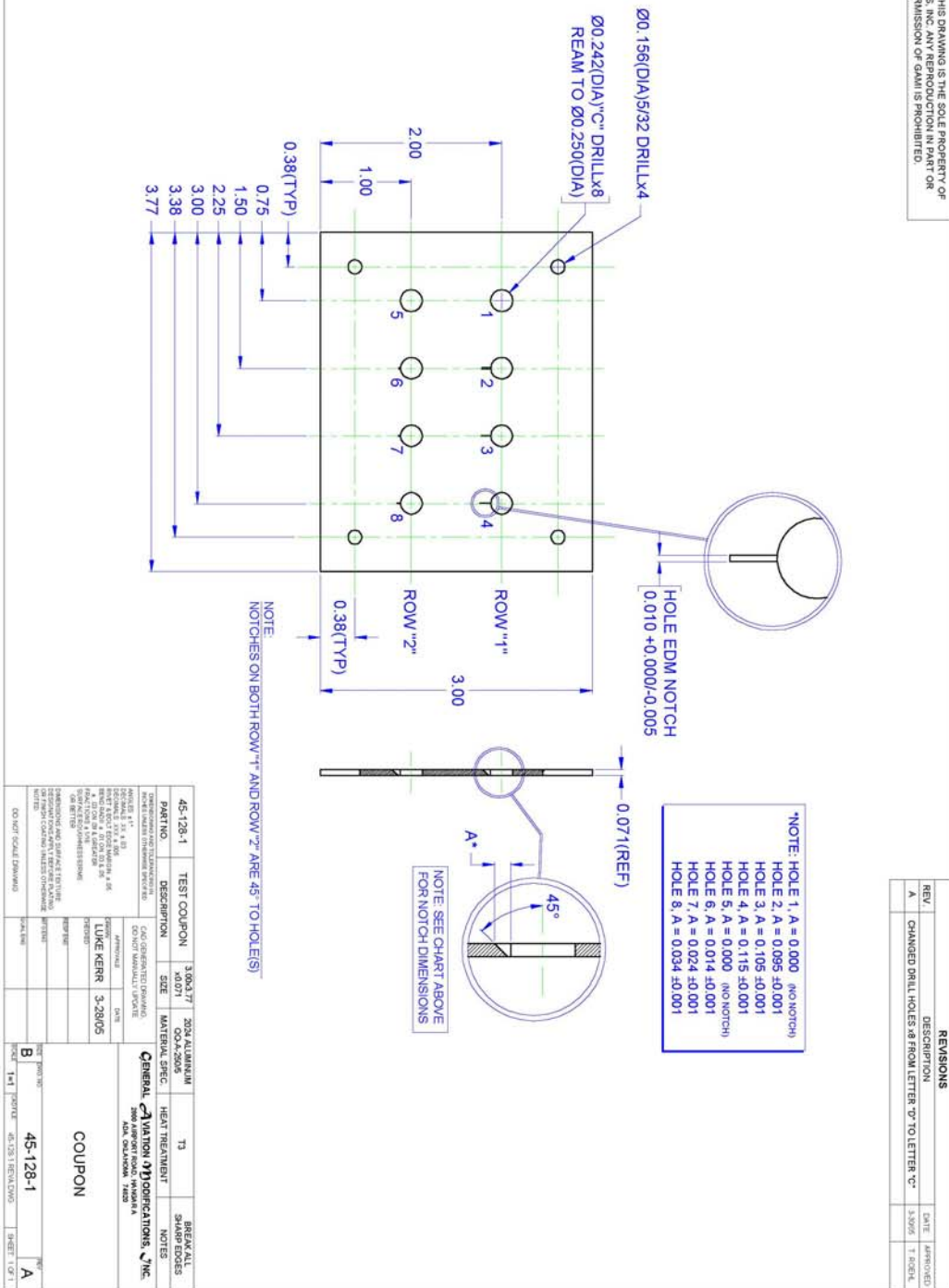
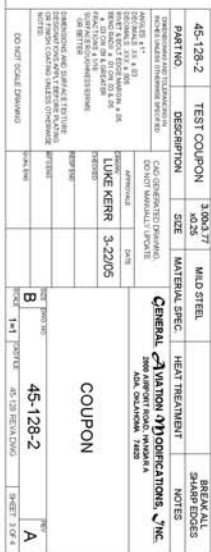
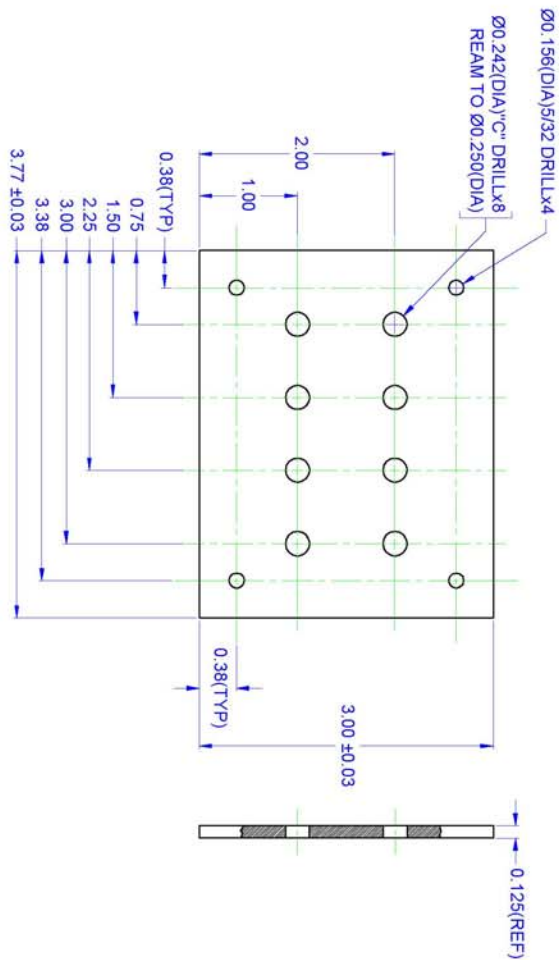


Figure 2



13

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CHANGED DRILL HOLES #8 FROM LETTER "D" TO LETTER "C"	3-30-05	T. ROSE

45-128-3	TEST COUPON	3.00±.03	2014 ALUMINUM	T3	BREAK ALL SHARP EDGES
PART NO.	DESCRIPTION	SIZE	MATERIAL SPEC.	HEAT TREATMENT	NOTES
GENERAL AVIATION MODIFICATIONS, INC. 2809 AIRPORT ROAD, WINDSOR A WINDSOR, ONTARIO, CANADA N9A 6M5					
APPROVED: LUKE KERR 3-22-05 PREPARED: LUKE KERR 3-22-05 DRAWN: LUKE KERR 3-22-05 CHECKED: LUKE KERR 3-22-05 DIMENSIONS AND SURFACE FINISH TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATION.					
COUPON					
SCALE: 1"=1" PARTIAL 45-128-3 SHEET 4 OF 4					

Figure 4

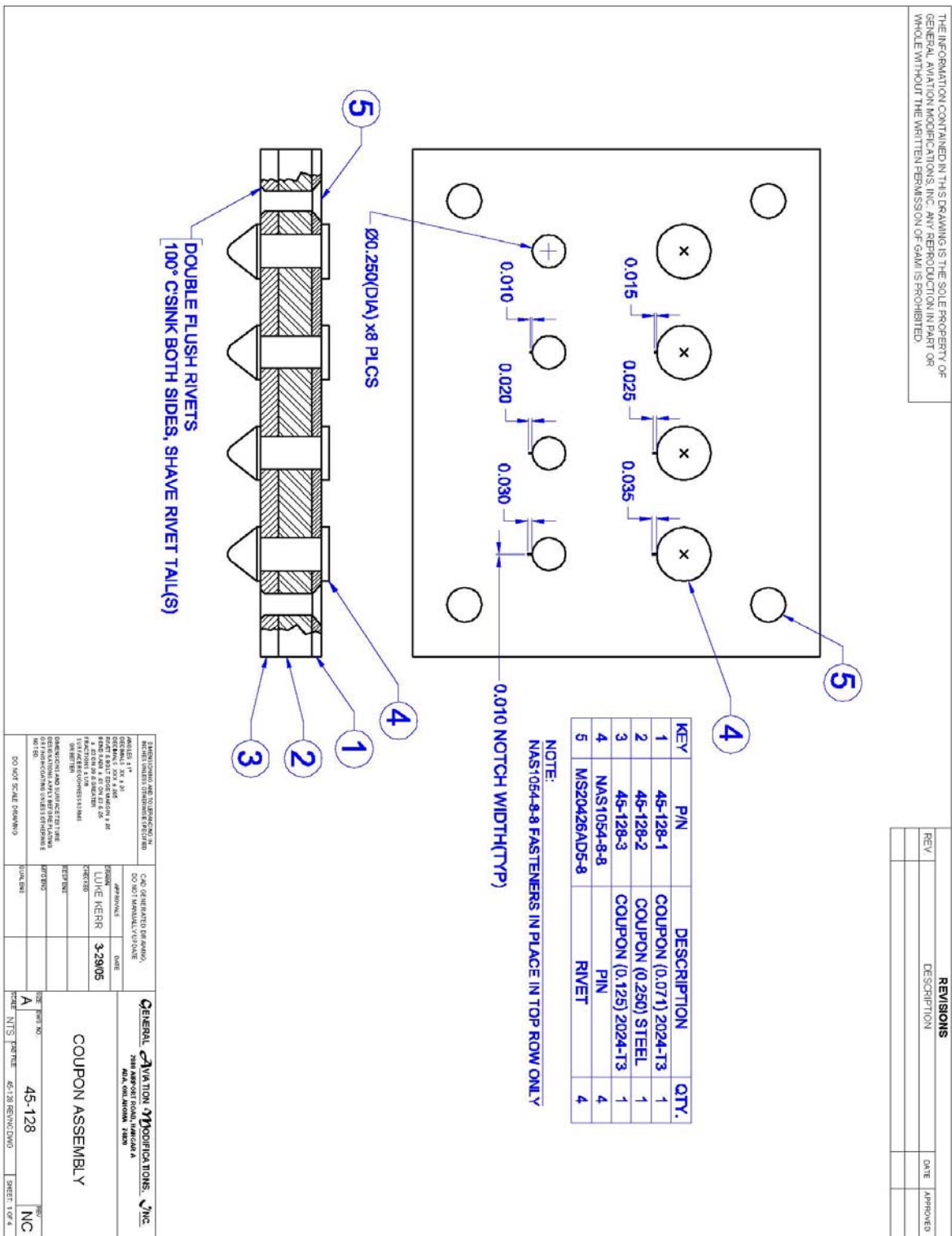


Figure 5

Issued in Kansas City, Missouri, on March 5, 2007.

Kim Smith,
Manager, Small Airplane Directorate,
Aircraft Certification Service.