UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC

In the Matter of: CUSTOM AVIATION, INC.
FAA Order No. 2005-1

Docket No. CP01NM0022
DMS No. FAA-2001-10892[1]

Served: March 9, 2005

DECISION AND ORDER[2]

On December 16, 2002, Administrative Law Judge Burton S. Kolko issued a written initial decision,[3] holding that Complainant proved that Custom Aviation ("Custom") violated Section 43.13(a) of the Federal Aviation Regulations (FAR), 14 C.F.R. § 43.13(a).[4] The ALJ held that Complainant proved that on or about March 29, 2000, Custom inspected the main drive shaft of a Bell 206 helicopter, registration number N902CA, using inappropriate data in violation of 14 C.F.R. § 43.13(a). The ALJ held

[1] Materials filed in the FAA Hearing Docket (except for materials filed in security cases) are also available for viewing through the Department of Transportation's Docket Management System (DMS). Access may be obtained through the following Internet address: http://dms.dot.gov.

[2] The Administrator's civil penalty decisions, along with indexes of the decisions, the rules of practice, and other information, are on the Internet at the following address: http://www.faa.gov/agc/cpwebsite. In addition, there are two reporters of the decisions: Hawkins' Civil Penalty Cases Digest Service and Clark Boardman Callaghan's Federal Aviation Decisions. Finally, the decisions are available through LEXIS and Westlaw. For additional information, see the website.

[3] A copy of the ALJ's written initial decision is attached. (The initial decision is not attached to the electronic versions of this decision and is not included on the FAA website.)

[4] Section 43.13(a) of the FAR provides in pertinent part:

> Each person performing maintenance, alteration, or preventive maintenance on the aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator, except as noted in § 43.16. ….

14 C.F.R. § 43.13(a).

further that Complainant failed to prove that:

> (1) Custom approved the helicopter for return to service as airworthy without conducting a fire-damage inspection that was required by the Bell 206 series maintenance and structural repair manuals;
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> (2) Custom approved N902CA for return to service with fire-related delamination on the fuselage forward sections; and
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> (3) FAA had not approved the installation of N902CA's engine anti-ice valve manual control, and therefore, Custom should not have approved N902CA for return to service.[5]

Based on these findings, the ALJ assessed a $500 civil penalty.[6] Complainant is appealing from the ALJ's initial decision. As will be discussed further in this decision, the Administrator grants Complainant's appeal regarding arguments 1 and 2 above, but denies its appeal regarding the third argument. A $2,000 civil penalty is assessed.

The Facts

The helicopter, N902CA, is a Bell 206, also called a "Bell Jetranger," serial number 912. The helicopter, which was manufactured in the United States, was operated and registered in Canada before it was shipped back to the United States and reassembled by Custom in the winter of 2000.

Delamination

A brief description of some of the structural parts of a Bell Helicopter 206 will be useful to understanding the evidence regarding fire damage found on N902CA.

Nose shell: The nose shell, which is a fiberglass composite structure, is in the front of the helicopter below the cockpit windows. The right and left sides of the nose shell meet in the middle at the battery compartment. (Tr. 27-28.) The nose shell is in the

[5] The ALJ held that Custom did not violate 14 C.F.R. §§ 43.13(b) and 43.15(a)(1).

[6] Complainant sought a $3,000 civil penalty in the complaint.

forward section of the helicopter.

Transmission fairing: The transmission is in a raised compartment above the cockpit and is covered by fairings made of fiberglass composite material. (Tr. 25.) The transmission fairings are located in front of the rotor on top of the helicopter. (Tr. 25.) The transmission fairing is in the forward section of the helicopter.

Engine cowling: The engine cowling is a hinged sheet metal structure. (Tr. 25.) It covers the engine, which is in a raised structure behind the rotor on the roof. (Tr. 120.)

Oil cooler fairing: The oil cooler fairing, a small fiberglass composite structure, covers the oil cooler, which is behind the engine. (Tr. 24-25.)

Aft tub: Bell calls the aft tub the "lower shell." The aft tub is a composite aluminum and fiberglass structure. It forms the lower part of the fuselage and is a main structural member of the aircraft. (Tr. 27.) The aft tub extends back to where the tailboom is attached. (Tr. 27.)

The Bell Maintenance Manual for the Jet Ranger provides "For acceptable methods, techniques, and practices for structural repair, refer to BHT-206-SRM-1 [Structural Repair Manual]." (Complainant's Exhibit No. 17, at 3.) The Bell Structural Repair Manual (SRM), in turn, provides that helicopters exposed to excessive heat should be inspected as follows:

> Inspect areas that are suspected of having been subjected to excessive heat for signs of scorching, discoloration/blistering of the paint or other signs of heat damage. If damage is evident, verify that heat treatment has not been affected. Use a non-destructive hardness test. *Honeycomb panels suspected of exposure to extreme heat should be removed from service.*

Bell Structural Repair Manual, page 2-3, ¶¶ 2-4 (emphasis added). (Complainant's Exhibit No. 18.)

The helicopter that is the subject of this appeal experienced engine failure, forcing it to land near a controlled burn of a slash pile, and was damaged by the heat from the fire. (Tr. 23-24.)[7] Clifford Scott Hope, who conducted a damage assessment on January 6, 2000,[8] found extensive evidence of fire damage, including delamination, on the left side of the aircraft. He found some areas of delamination by tapping the skin with a small metal object (a "tap test") and others simply by feeling the skin with his fingers.[9] During his evaluation, Hope found extensive heat damage on the left side of the helicopter including the following:

1. Large delaminated area on the left side of the oil cooler fairing.
2. Delamination on the front transmission fairing.
3. Blistered paint on the engine cowling.
4. Very large delaminated area on the left baggage door,[10] a fiberglass composite structure.
5. Large delaminated area on the left aft tub.
6. Very large delaminated area on the outside of left nose shell.

(Tr. 24-27.) He also found melted and blistered windows, melted plastic plugs, and other

[7] The record does not contain the date of the landing resulting in exposure to the burning slash pile. Component historicial records for the drive shaft, hydraulic servo, blower motor, fuel control unit, forward high crosstube, and aft high crosstube, however, indicate that components were removed on September 21, 1999, due to exposure to extreme heat. (Complainant's Exhibit No. 26.)

[8] Hope testified that his employer, Alpine Aerotech, sent him "to view the aircraft so that we could put in a salvage bid on it." (Tr. 15.)

[9] Hope testified that technicians use a "tap test" to locate delamination in a composite structure or honeycomb panel. The technician taps the surface with a small metal object, such as a large coin. If the surface area has good bonding, then a tap will produce a sharper sound than if the surface is delaminated. (Tr. 37.) He also explained that if you push on a delaminated surface, you can detect that the surface skin is no longer bonded to the composite structure underneath. (Tr. 37.)

[10] The baggage door is in front of the tailboom and behind the cockpit. (Tr. 26.)

evidence of fire damage. (Tr. 25-29.) He explained that under the Bell Structural Repair Manual, the damage on the left forward nose section, oil cooler fairing, and front transmission fairing exceeded limits, and needed replacement. (Tr. 24, 25, 28, 32.)

Ralph Emsland, the owner of West Can Aircraft in British Columbia, Canada, purchased the damaged helicopter from an insurance company in 2000. West Can stored the helicopter in a warehouse until selling it[11] "as is," in damaged condition for salvage, to James Sebero,[12] the president of Custom Aviation, on February 18, 2000. Custom is a full-service fixed base operation (FBO) and holder of an FAA-issued Part 145 repair station certificate. The helicopter was shipped in crates and boxes to Custom's facility in Spokane, Washington, where it was reassembled. It was registered in the United States and redesignated as N902CA.[13] (Tr. 73, 75.)

Sebero testified that Gerald Dyer, Custom's director of maintenance, did most of the work of reassembling the helicopter, although Sebero[14] assisted him at times. (Tr. 241, 245-246.) Sebero testified that he did not observe any delamination while the helicopter was in his facility. (Tr. 246.) He stated that he did not know whether Custom inspected the helicopter for fire damage as per the Bell Structural Manual, explaining that Dyer "was in charge of that." (Tr. 257.) He did recall that Custom replaced heat-damaged windows, and that there was a blister by the doors. (Tr. 259-262.)

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[11] Emsland stated in his declaration that while the aircraft was in West Can Aircraft Sales's possession, no maintenance or repairs were performed on it. (Complainant's Exhibit No. 3.)

[12] Sebero represented Joseph Hayley and U.S. Helicopters in this transaction. (Complainant's Exhibit No. 3.)

[13] The helicopter had been registered in Canada. Its Canadian designation was C-GLAH.

[14] Sebero received his mechanic's certificate in March 2001. (Tr. 258.)

On March 29, 2000, Dyer conducted a 100 hour/annual inspection[15] on the helicopter. At the conclusion of the inspection, Dyer certified that the helicopter was airworthy and approved it for return to service. (Complainant's Exhibit No. 4.)

Custom then applied for an airworthiness certificate for the helicopter. FAA Airworthiness Inspector Philip Vittetoe inspected the helicopter and issued a standard airworthiness certificate on March 30, 2000. (Complainant's Exhibit No. 5.)

After the helicopter was returned to service, Custom pilot, Theodore Hartenstein, conducted a preflight inspection and found delamination on the forward transmission cowling, the nose shell,[16] and the cargo door. (Tr. 52-53.) He explained that the outer surface of the forward transmission cowling looked "really good" because it had just been painted, but there were a lot of blisters on the forward transmission cowling's inner surface. He explained that he detected the delamination on the forward transmission cowling by pushing on it with his finger. (Tr. 53.) Regarding the left nose shell, he testified that there was delamination on the inner surface of the cockpit that was hidden underneath the carpeting. (Tr. 65.)

Hartenstein testified that he did not feel qualified to evaluate the significance of the delamination that he saw. As a result, he questioned Dyer and Sebero about these delaminated areas. They replied, he explained, that the delaminations were acceptable because they were on noncritical structural components. (Tr. 54.) Subsequently, Hartenstein flew N902CA on check flights for Part 133, 135, and 137 certificates with

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[15] The Bell Helicopter Maintenance Manual refers to the inspection performed by Custom as a 100 hour/annual inspection. (Tr. 152-153.)

[16] Specifically, he testified that he found delamination between the copilot's windshield and the chin window. (Tr. 52.)

FAA operations inspectors. (Tr. 58, 61.)[17]

In April 2001, the helicopter underwent an annual inspection at Spokane Airways ("Spokane"). (Tr. 111.) N902CA had accrued 32.8 hours tach time since its previous annual inspection by Custom in March 2000. (Tr. 198.) Peter Brown, a Spokane mechanic, found delamination on the engine cowlings, in the left front nose area below the window,[18] on the tail of the aircraft, and on the cargo door. (Tr. 121-138.) He noted that some of the delamination that he found on the cargo door had been repaired. (Tr. 121, 122, 132; Complainant's Exhibit No. 11.) He concluded that the delamination that he found exceeded limits. (Tr. 140.)[19] On cross-examination, Brown acknowledged that he did not know when the delamination had occurred, (Tr. 145-146), but that he "would be extremely surprised to see that much delamination occur in a year's time just

[17] Hartenstein flew the aircraft accompanied by FAA inspectors who issued Part 133, 135 and 137 certificates. (According to the engineering record, Dyer inspected the aircraft for training/check flights on April 7, 2000. (Complainant's Exhibit No. 4 at 2.)) Hartenstein did not recall any FAA inspector mentioning delamination. (Tr. 63, 65.) (The FAA inspectors on these check flights were not airworthiness inspectors. (Tr. 70)). He explained that they might not have noticed any delamination because the delaminated outer surfaces had been repainted and appeared in new condition when the check rides were performed. Also, he noted, the delamination that he had found inside the cockpit was covered by carpet. "So unless they peeled the carpet back, which would have been really unusual for a preflight, or unless they opened the cowlings and looked inside them, at the inside [surfaces] they wouldn't have seen it." (Tr. 65.)

[18] Brown testified that when he inspected the aircraft, "there weren't a lot of visual signs on the exterior aircraft." (Tr. 119.) He examined the exterior by feeling the skin with his fingers and by conducting a tap test. He found a soft spot in the left front nose below the copilot's window on the left side of the forward section of the aircraft. (Tr. 119, 126, 127, Complainant's Exhibit No. 8, 1st photograph.) He testified that this was a large area of delamination given the location in the front nose section. (Tr. 128.) He then went inside the aircraft, pulled back the carpet and found "considerably more delamination." (Tr. 120.) From the inside of the aircraft, he could see bumps and bulges made by the thin layer of aluminum which had separated from the core material of the composite structure. (Tr. 128, Complainant's Exhibit No. 8, 2nd photograph.) He explained that there also was peeling and cracked paint – caused by the delamination – which was hidden by the carpet. (Tr. 128-129, Complainant's Exhibit 8, 3rd photograph.)

[19] The record does not contain any provisions from any Bell manual regarding the acceptable extent of delamination.

from average use."[20] (Tr. 150.) Brown explained that he knew from reading the records that the helicopter had been exposed to extreme heat. (Tr. 157.)

At Spokane's request, David Parkinson, a Bell Helicopter Textron customer support representative,[21] examined the helicopter. Parkinson testified that his initial observation of the aircraft "gave [him] a fair amount of concern because [he] … had never seen an aircraft that had so many different areas of heat exposure." (Tr. 167.) He observed that a large area of the outer skin had delaminated from the inner surface honeycomb structure of the left side of the nose. He testified that he went inside the cockpit, pulled the carpet back, and found that "[t]he whole back side of the panel [inner surface of the nose shell] had blisters all over it, evidence that it had been exposed to some very high temperatures." (Tr. 162.) He also found a "tremendous amount of evidence of fire damage" on the oil cooler fairing and on the fairing over the flight controls. (Tr. 163.) From his observations of severe fire damage, he concluded that "there's been flames all along side the aircraft, and so there are other sheet metal components that have obviously been exposed to heat." (Tr. 163.) Referring to the Bell Structural Repair Manual, Parkinson concluded that a mechanic would not have any choice but to arrange to replace those panels. (Tr. 172.)[22] While he acknowledged that an

[20] There was no evidence regarding the conditions in which the helicopter was operated between the end of March 2000 and April 2001. Custom's attorney asked both Brown and Parkinson whether they knew that the helicopter had been used by the Forest Service and exposed to heat between March 2000 and April 2001 (Tr. 151, 175), but statements by counsel do not constitute evidence. In the Matter of Watts Agricultural Aviation, Inc., FAA Order No. 1991-8 at 13 (April 11, 1991), *petition for review denied,* Watts Agricultural Aviation, Inc. v. Busey, 977 F.2d 594 (9th Cir. 1992.)

[21] Parkinson is the holder of a mechanic's certificate with airframe and powerplant (A & P) ratings. (Tr. 160.)

[22] Although Parkinson did not refer to any specific section of the manual when he made this remark, it would appear that he was referring to Section 2-4(e) (pertaining to special inspections)

aircraft that has been exposed to heat may not show any damage for a period of time afterwards (Tr. 186-187), he stated that the big blisters that he saw would have been evident immediately after the helicopter was exposed to extreme heat. (Tr. 187.)[23]

FAA Aviation Safety Inspector John Phillips inspected the helicopter and its logbooks in April 2001, as part of his effort to help Spokane add N902CA to its Part 135 certificate. (Tr. 193-194.) He concluded that Custom did not perform a fire damage inspection properly, and opened an investigation. (Tr. 201.)

Summary of Key Observations
of Delamination and Blistering

	Hope – 1/00	**Hartenstein – 4/00**	**Brown – 4/01**	**Parkinson – 4/01**
Left nose shell	very large delaminated area on outside (Tr. 27)	delamination between copilot's windshield and chin window; blisters on inner surface covered by carpet (Tr. 53, 65)	soft spot below copilot's window (Tr. 119); delamination on inner and outer surfaces (Tr. 119-120, 126-9)	Large area of delamination on outside; blisters on inner surface below carpet (Tr. 161-2, 169)
Front transmission fairing	delamination on left-hand side outer surface (Tr. 25)	outside painted smooth; a lot of blisters on inside plus delamination (Tr. 52-53)		severe heat damage (Tr. 186)
Oil cooler fairing	large area of delamination on left side (Tr. 24)			delamination (Tr. 162)
Engine cowling	blistered paint on left side (Tr. 25)		delamination (Tr. 118, 120-121, 131-4)	
Left cargo door	very large delaminated area (Tr. 26)	some delaminations (Tr. 53)	delamination (Tr. 122, 135-6)	heat exposure on doors (Tr. 171, 186)

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of the Structural Repair Manual for the Bell 206 series helicopters, which provides that "[h]oneycomb panels suspected of exposure to extreme heat should be removed from service." Complainant's Exhibit No. 18 at p.2-3.

[23] In light of the record which shows the removal of major heat-damaged components in September 1999, the evidence indicates that the time between the heat exposure and the return to service was at least 6 months. See note 7, *supra*.

Drive Shaft

The helicopter had a Kaflex drive shaft, manufactured by Kamatics Corportation. Phillips explained that Custom should have used the Kamatics maintenance manual during the 100-hour/annual inspection. He found a few pages of a military manual referencing a similar drive shaft during his inspection of Custom's records. (Tr. 204, Complainant's Exhibit No. 25.) Phillips stated that when he asked Dyer if he had used the military manual during the inspection, Dyer neither admitted nor denied using that manual. (Tr. 205.)

Manual Control for the Engine Anti-Ice Valve

The FAA-approved type design for the Bell 206 includes an anti-ice valve system operated by an electric motor. (Tr. 112, 173.) A manual control for this valve was installed on the helicopter while it was operated in Canada. (Tr. 54, 112.) The Canadian Department of Transport approved of the installation of the manual control when it issued a limited supplemental type certificate on August 13, 1991. (Respondent's Exhibit No. 1.) After the helicopter returned to the United States, Custom approved the helicopter – with the manual control – as airworthy. When Brown and Phillips reviewed the aircraft's records, they could find no FAA-approval for the installation of the manual control. (Tr. 116-117.)

The ALJ's Initial Decision

Delamination

The ALJ rejected Complainant's contention that when Custom approved the helicopter for return to service in March 2000, it was unairworthy due to extensive delamination. The ALJ found that Hartenstein's observation of delamination during a

pre-flight inspection did not support a finding that Custom had violated the regulations because Hartenstein's observations were only cursory and as a pilot – not a mechanic — he lacked the expertise to evaluate the significance of the delamination. Moreover, according to the ALJ, Hartenstein's testimony indicated that the delamination was within limits because neither Custom's management nor the FAA inspectors were concerned about it. (Initial Decision at 3.) The ALJ wrote that Brown's and Parkinson's testimony about the delamination in April 2001 did not prove that the aircraft had been in that condition 32 flight hours earlier when Custom approved the helicopter for return to service. (*Id*. at 3.)

The ALJ wrote that "[t]he conclusion that Complainant would have me reach is further undermined by the agency's own stamp of approval the day after Respondent's inspection." (Initial Decision at 4.) According to the ALJ, "Inspector Vittetoe's signoff, while not conclusive, nonetheless is compelling evidence that the helicopter was airworthy at that time." (*Id*. at 4.)

The ALJ wrote further:

> It is true that witnesses Brown and Parkinson both expressed skepticism with the idea that the kind of damage they observed might have occurred between Custom's inspection and their own observations (Tr. 150, 187). But … delamination and heat damage – which may be separate matters, separately caused – can develop over time. Neither Brown nor Parkinson knew when the delamination or heat exposure had occurred (Tr. 145, 175). That fact, when evaluated with Inspector Vittetoe's March 30, 2000, endorsement of the helicopter's fitness to fly safely, indicate that the aircraft could have been airworthy following Respondent's inspection the day before.

(*Id*. at 4.) He concluded that Complainant failed to prove that N902CA was unairworthy or that Custom did not conduct the fire inspection. (*Id*. at 4.)

Drive Shaft

The ALJ held that Complainant proved that Custom used the military manual to inspect N902CA's main drive shaft rather than the Kamatics maintenance manual, and as a result, that Custom violated 14 C.F.R. § 43.13(a). (Initial Decision at 5.)

Manual Control for the Engine Anti-Ice Valve

The ALJ held that "[t]he evidence showed that Canada had issued its equivalent of an STC (supplemental type certificate), which was then approved by American authorities." (Initial Decision at 5.) According to the ALJ, Vittetoe acknowledged that the logbook contained the documentation for this installation, and as a result, the documentation was present when Custom did its inspection in March 2000. (Initial Decision at 5-6.) The ALJ explained that he did not consider Brown's testimony that he could not find appropriate documentation for this installation 13 months later to be germane. (Initial Decision at 6.) The ALJ wrote further that "[a]ny intimation that an airworthiness certificate approval does not necessarily encompass supplemental type certificates granted to that aircraft … is rejected." (Initial Decision at 6, n. 2.)

The Appeal

Delamination

Complainant argues that the ALJ should have held that it proved that Custom failed to perform a required inspection for fire-related damage and that Custom returned N902CA to service in March 2000 despite significant fire-related delamination on the forward fuselage. Complainant argues that this finding was supported by the evidence which, by necessity, was circumstantial, and that the ALJ failed to recognize that

Complainant can use circumstantial evidence to meet its burden of proof.[24]

The Administrator has held that Complainant may sustain its burden of proof through the use of circumstantial evidence. In the Matter of Hampton Air Transport Systems, Inc., FAA Order No. 1997-11 at 4 (February 20, 1997); In the Matter of Continental Airlines, Inc., FAA Order No. 1990-12 at 16 (April 25, 1990), *but see* In the Matter of Florida Propeller & Accessories, Inc., FAA Order No. 1997-32 (October 8, 1997) (circumstantial evidence did not suffice to prove that the repair station must have done an improper overhaul in light of the extent of wear found on the propeller about 2 months later). Indeed, it is not unusual in cases involving allegations of improper repair or inspection for the Complainant to rely upon circumstantial evidence because this type of violation frequently is not discovered until long after the maintenance is completed. In the Matter of Florida Propeller & Accessories, Inc., FAA Order No. 1997-32 at 7.

Contrary to Complainant's argument, the ALJ did not hold that Complainant could not sustain its burden of proving its case by the preponderance of the evidence through the introduction of circumstantial evidence. The ALJ concluded instead that in this case, the circumstantial evidence relied upon by Complainant was insufficient. On appeal, the Administrator must review all the evidence[25] to determine whether it was more likely than not that Custom failed to perform the requisite fire damage inspection

[24] Under 14 C.F.R. § 13.224(a), "[e]xcept in the case of an affirmative defense, the burden of proof is on the agency."

[25] While the Administrator shall defer to the credibility findings of the administrative law judges, the Administrator may reweigh the evidence when reviewing a case on appeal. In the Matter of Terry and Menne, FAA Order No. 1991-31 (August 2, 1991), *petition for review denied*, Terry and Menne v. FAA, 976 F.2d 1445 (D.C. Cir. Oct. 21, 1992)..

and whether Custom returned the aircraft to service in an unairworthy condition.[26]

Under 14 C.F.R. § 43.13(a), Custom was required to use the methods, techniques and practices prescribed in the current manufacturer's manual. The Bell Maintenance Manual refers mechanics to the Bell Structural Repair Manual for acceptable methods, techniques and practices for structural repairs. (Complainant's Exhibit No. 17 at 3.) Under the Structural Repair Manual, "[h]oneycomb panels suspected of exposure to extreme heat should be removed from service." (Complainant's Exhibit No. 18 at p.2-3.)

The evidence establishes that this helicopter was exposed to extreme heat after it crash-landed near a slash pile fire. The component historical records ("component cards") show that several of the components were removed on September 21, 1999, due to "extreme heat exposure." (Complainant's Exhibit No. 27.) Hope testified about the extensive heat damage that he found on the left side of the helicopter, including delamination on the left front transmission fairing, and on the left nose shell, when he inspected it on January 6, 2000. (Tr. 25-28.) West Can Aircraft bought the helicopter from the insurance company soon afterwards. Until Sebero bought the helicopter in "as-is" condition from West Can, it was stored in West Can's warehouse, and no maintenance or repair work was done while it was in the warehouse. (Complainant's Exhibit 3.) According to Hartenstein's testimony, the nose shell and the front transmission were delaminated and/or blistered in April 2000. Had these extreme heat-exposed structures been replaced, they would not have been blistered and delaminated

[26] In Section II, ¶ 2 of the complaint, Complainant alleged " During this inspection, Respondent failed to conduct a fire-damage inspection in the manner required by the Bell 206 Series Maintenance Manual BHT-206A/B Series – MM1 and Bell 206 Structural Repair Manual BHT-206-SRM-1. Complainant alleged further, "[a]fter its return to service, N902CA still had fire-related delamination in the fuselage forward sections." (Complaint, Section II, ¶ 4.)

when Hartenstein conducted his preflight. Thus, the preponderance of the evidence proves that Custom had not complied with the Structural Repair Manual because it had failed to replace honeycomb panels that had been exposed to extreme heat.

The ALJ should not have discounted Hartenstein's observations of delamination and blistering. The ALJ gave little weight to Hartenstein's testimony because his inspection was "cursory in nature" and because Hartenstein was a pilot, not a mechanic. However, the observations that Hartenstein made and about which he testified did not require the expertise of a mechanic. Indeed, even a lay person could testify about large blisters on the skin of the aircraft. As a pilot, Hartenstein certainly was qualified to describe the damage that he saw and felt when he conducted the preflight inspection. Moreover, Hartenstein's examination of the helicopter, which included looking at the inner surface of the forward transmission fairing and pulling the carpet back to look at the inner surface of the nose shell, hardly can be described as cursory.

The ALJ also incorrectly concluded that the delamination that Hartenstein saw was minimal based upon the hearsay evidence that Dyer and Sebero had told him that the damage was acceptable. According to Hartenstein, Dyer and Sebero were not concerned about the delamination and blistering because this damage was on "noncritical structural components." The Structural Repair Manual paragraph regarding a fire damage inspection, however, does not differentiate between critical and noncritical structural components. Moreover, the characterization of the nose shell as "noncritical" is questionable in light of Parkinson's testimony that the nose shell is a structural panel that creates lateral stability for the battery compartment and supports the windshield above it and the chin bubble below it. (Tr. 162.)

The ALJ also erred when he concluded that the issuance of an airworthiness certificate on March 30, 2000, proved that N902CA was airworthy. Vittetoe's inspection prior to the issuance of the certificate was cursory,[27] in part because he relied upon Dyer's certifications that N902CA was in airworthy condition. (Tr. 80-82.) Also, N902CA appeared to have been recently repainted, according to both Hartenstein and Vittetoe, making it difficult to detect visually the delamination on the nose shell. Vittetoe did not pull back the carpet covering the nose shell's inner surface, and as a result, he missed the damage on the inner surface of the nose shell. Moreover, according to Vittetoe, when he inspected N902CA, it was uncowled, and as a result, he would not have seen any delaminated areas on the transmission cowling.

Custom's failure to comply with the Structural Repair Manual and replace the left nose shell and forward transmission fairings which had been exposed to extreme heat rendered N902CA unairworthy. An aircraft is airworthy if it (1) conforms to a type design approved under a type certificate or supplemental type certificate and to applicable Airworthiness Directives, and (2) is in a condition for safe operation.[28] In the Matter of

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[27] Vittetoe signed below the following statement in N902CA's logbook:

> I find that the aircraft meets the requirements for the certification requested and have issued a (standard) airworthiness certificate dated 3-30-2000.
> The next inspection is due at 15251.2.

(Complainant's Exhibit No. 4 at 2.) Next to that statement Vittetoe had written "per mfr's insp. program." When asked about that handwritten statement about the manufacturer's inspection program, Vittetoe replied that he did not know why he would have written that insert because he did not use a manufacturer's checklist. (Tr. 89, 108.) The obvious answer, however, is that Vittetoe's handwritten insert applies to the last sentence pertaining to the time that the next maintenance inspection would be due. Hence, contrary to Custom's suggestion, this insert does not disprove Vittetoe's assertions that he did not use a checklist to inspect the aircraft and that his physical inspection of the aircraft was cursory.

[28] "The Administrator shall issue an airworthiness certificate [to an applicant] when the Administrator finds that the aircraft conforms to its type certificate and, after inspection, is in condition for safe operation." 49 U.S.C. § 44704(d)(1).

Emery Airlines, FAA Order No. 1997-30 (October 8, 1997); In the Matter of Kilrain, FAA Order No. 1996-18 (May 3, 1996), *reconsideration denied*, FAA Order No. 1996-23 (August 13, 1996), *petition for review denied*, Kilrain v. FAA, No. 96-3587 (3rd Cir. May 1, 1997). The Administrator has held further that an aircraft is not airworthy if maintenance (including an inspection)[29] required by a manufacturer's maintenance manual has not been performed. In the Matter of Gatewood, FAA Order No. 2001-1 at 15-16 (May 16. 2001), *petition for review dismissed for lack of prosecution*, Gatewood v. FAA, No. 01-1308 (D.C. Cir. October 10, 2001) (airplane was unairworthy because propeller, which had experienced a blade strike, was not removed and overhauled as required by service bulletin); In the Matter of US Air, FAA Order No. 1996-25 at 12-13 (August 25, 1996) (aircraft was unairworthy because an inspection required by the maintenance manual had not been performed.)[30]

In addition, the ALJ was in error when he held that the evidence presented by Brown and Parkinson did not prove that "heat damage sufficient to show the violations alleged was present following Custom's inspection" which occurred 32 flight hours before they inspected the aircraft. The ALJ explained that delamination could have occurred at any time and that it might not even have been caused by heat, but by some other factor during the time between Custom's and Spokane's inspections. (Initial

[29]Maintenance, as defined in 14 C.F.R. § 1.1, includes inspections.

[30] The Administrator relied upon 14 C.F.R. § 21.181(a)(1) which provides:

> (a) [A]irworthiness certificates are effective as follows:
>
> (1) Standard airworthiness certificates, special airworthiness certificates – primary category, and airworthiness certificates issued for restricted or limited category aircraft are effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with parts 43 and 91 of this chapter and the aircraft are registered in the United States.

In the Matter of US Air, FAA Order No. 1996-25 at 11-12.

Decision at 3.) If anything, the delamination that Brown and Parkinson found confirms Hartenstin's observation of delamination and blisters shortly after Custom's inspection. While delamination *may* be caused by factors other than heat, in this case, there was unequivocal evidence that this helicopter had been exposed to extreme heat in 1999. Only 32 flight hours after Custom's inspection, Brown and Parkinson found delamination and blisters on the same structures on which Hartenstein had noticed similar damage. (See chart on page 9 *supra*.) Moreover, Parkinson explained that such big blisters would not form over a few flight hours but would have been obvious immediately after exposure to extreme heat. (Tr. 187.)[31] Parkinson insisted that the helicopter was unairworthy when he saw it.

Relying upon In the Matter of Florida Propeller and Accessories, Inc., FAA Order No. 1997-32, Custom argues that the ALJ correctly held that the delamination and blistering found in April 2001 does not prove that N902CA was unairworthy when Custom returned it to service on March 29, 2000. Complainant in that case argued that the repair station must have returned the aircraft to service with undersized blades after the propeller overhaul in light of the fact that only about 2 months later these blades were below minimum widths. The ALJ in Florida Propeller rejected that argument, holding that testimony from a metallurgical expert was necessary to establish that the blades could not have thinned so much in so short a time. Also, the ALJ found credible the testimony of the mechanic who overhauled the propeller that he had measured the blades

[31] He stated:

> [T]his kind of stuff that I saw on that helicopter is something that would have been visual right away. It wouldn't just develop those big blisters in the back of the panel and all that stuff …. That just wouldn't develop over a few flight hours. That was there right from the beginning.

(Tr. 187.)

and that they were in tolerance. The Administrator affirmed the ALJ's decision.

The Florida Propeller case is distinguishable. In the case at hand, there was unequivocal evidence that the helicopter had been exposed to extreme heat in 1999. Hartenstein observed delamination and blisters on the forward transmission fairing and the nose shell shortly after Custom's inspection. As discussed, the ALJ should have accorded more weight to Hartenstein's observations. Complainant's case, therefore, was not dependent solely upon the finding that 32 flight hours later, Brown and Parkinson found delamination and other evidence of heat damage. Indeed, Brown and Parkinson's findings 32 flight hours later were consistent with Hartenstein's observations made shortly after Custom returned the helicopter to service. (See chart on page 9, *supra*.)

In conclusion, it is held that Complainant proved that Custom violated 14 C.F.R. § 43.13(a) when it returned N902CA to service with the delamination in the forward section on the left nose shell and forward transmission cowling.

Drive Shaft

Complainant argues on appeal that the ALJ should have found that Custom violated 14 C.F.R. § 43.15(a)(1), in addition to 14 C.F.R. § 43.13(a), when it failed to use the Kamatics maintenance manual to inspect the main drive shaft. Section 43.15(a)(1) provides that each person inspecting an aircraft shall perform the inspection "so as to determine whether the aircraft meets all applicable airworthiness requirements." 14 C.F.R. § 43.15(a)(1).

Complainant is correct. Custom was required to inspect the helicopter to ensure that it was airworthy. To do so, it was required under 14 C.F.R. § 43.13(a) to inspect the aircraft using the methods, techniques, and practices prescribed in the current

manufacturer's maintenance manual. Custom did not use the Kamatic's maintenance manual during its inspection of the drive shaft. Hence, the ALJ should have found a violation of Section 43.15(a) as well.[32]

Anti-Ice Valve

In his decision, the ALJ found that Canada had issued the equivalent of an STC for the installation of a manual anti-ice valve, and that the FAA later had approved of that Canadian STC. He stated further that "[t]he agency's inspector Vittetoe acknowledged that this documentation was in the helicopter's logbooks when he conducted his inspection …." As a result of these "facts", the ALJ concluded that all appropriate documentation was with the aircraft when Custom inspected it on March 29, 2000. (Initial Decision at 5-6.) The ALJ held further that Peter Brown's testimony that he could not find this appropriate documentation in April 2001 when he conducted the 100 hour/annual inspection was not relevant. Brown's testimony only pertained to the state of the records in April 2001, not March 2000, according to the ALJ. (Initial Decision at 6.)

Complainant does not contest the ALJ's finding that the Canadian authorities had approved of the design change involving the installation of the manual control for this aircraft through the issuance of the limited supplemental type certificate[33] or that the helicopter's records included evidence of the Canadian limited STC. Complainant is arguing on appeal that the preponderance of the evidence does not support the ALJ's

[32] While Complainant is correct that Custom violated Section 43.15(a), as well as Section 43.13(a), there is no need to increase the civil penalty as the violations of these two regulations arise from identical facts and involve identical failures.

[33] The first page of this exhibit states that "Registration/Serial No.: Refer to Continuation Sheet for list of eligible aircraft." The continuation sheet has a list of aircraft (the second page of the exhibit) including GLAH/912. The serial number of the Bell Jetranger involved in this case is 912. When N902CA was registered in Canada, it was identified as GLAH. (Tr. 75.)

finding that the FAA approved of the installation. Complainant argues that the ALJ erred by finding that when Custom performed the annual inspection on March 29, 2000, the helicopter's records included a copy of a document reflecting FAA approval of the installation of the manual control.

Complainant is correct that the preponderance of the evidence does not support the ALJ's finding either that the FAA had approved of the installation of the manual anti-ice valve or that documentation reflecting that approval was in the maintenance records. While the preponderance of the evidence does prove that Canada issued its equivalent of an STC for this installation, and that the manual valve was installed under this Canadian STC. (Respondent's Exhibit No. 1; Tr. 147, 228)[34] there is no substantial evidence in the record that the FAA had approved of that Canadian STC.

Respondent's Exhibit No. 1, the STC issued by the Canadian Department of Transport (DOT), indicates only that the Canadian DOT had approved of the installation of manual anti-ice control in accordance with a particular Canadian Helicopters Limited drawing for Bell 206 helicopters with FAA Type Certificate H2SW and DOT Type Approval H-92.[35] Canadian STCs, however, according to Inspector Phillips, are not FAA approved data. (Tr. 222.)[36] Phillips testified that if an aircraft has an installation that is

[34] Brown testified that in April 2001, he found a logbook entry referring to the installation of the manual ice lever and that that entry referred to a Canadian equivalent to a supplemental type certificate. (Tr. 147.) When Phillips reviewed the helicopter's records in April 2001, he saw a one-line entry, including a drawing number, indicating that the manual control was installed under a Canadian STC. (Tr. 228.)

[35] Attached to this certificate is a list of Canadian registration numbers including the helicopter that is the subject of this case.

[36] Inspector Vittetoe explained that the Canadian limited STC relating to the installation of the manual anti-ice valve on this helicopter was a Canadian document that did not represent FAA approval of this installation. (Tr. 92.)

approved under a Canadian STC when it is imported to the United States, "we have to find some way to prove (sic) it, and typically we do that with field approvals." (*Id*.)[37] Neither Brown nor Phillips found anything in the maintenance records in April 2001 indicating that a field approval or any other type of FAA approval had been issued prior to March 29, 2000, the date when Custom's Dyer completed the 100-hour/airworthiness inspection. (Tr. 112, 213.)

Hartenstein testified at the hearing that when he conducted the preflight inspection at Custom before flying the helicopter in March 2000, he noticed the manually activated anti-icing valve and questioned Dyer and Sebero about it. He testified that they had explained that there was a Canadian supplemental type certificate for the part and "that the FAA *would* honor the Canadian STC." (Tr. 55) (emphasis added.) He testified that he did not recall whether they had said that the FAA *had* honored or *would* honor the Canadian STC. (Tr. 55.) Brown testified that the company in Canada that had installed the part while the helicopter was registered in Canada informed him that there had been a field approval for the installation. (Tr. 112.) This vague hearsay testimony – in the absence of any substantiating documentation - does not suffice to prove that the FAA had indeed approved of the Canadian STC prior to the 100-hour/annual airworthiness inspection through a field approval or any other means.

Although the preponderance of the evidence does not prove that the FAA had approved of the installation and that such approval was reflected in the logbooks in

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[37] Brown testified :

> Being an imported aircraft, to the best of my knowledge, the aircraft has to be equipped as it came from the factory, unless there is FFA (sic) documentation that says a part can be different. I found nothing in the part manuals to show that it was in fact a factory part. I found no records in the aircraft logs from this country, from the United States, through the FAA which would have given it legal reason to be there.

(Tr. 116.)

March 2000, this does not mean that Complainant proved its case that the installation was unapproved either. To do so, Complainant needed at a minimum to pinpoint the place in the maintenance logbooks that any FAA approval should have been located and to introduce copies of the documents showing that no such approval appeared on that page(s). Complainant did not introduce a set of the maintenance records covering the period from when the helicopter was reassembled until the time that Dyer signed it off as airworthy on March 29, 2000. (If the few documents in the record do constitute such a full set, they were not clearly identified as such.) Also, Brown testified that a year later when he reviewed the records looking for FAA approval of the installation, he did not have a complete set of the logbooks. (Tr. 116-117.) He was not asked, and did not identify what parts of the records, he thought, were missing.[38]

Tom Kammers, an aviation consultant with extensive maintenance experience,[39] testifying on Custom's behalf, explained that the Canadian STC and the installation should have been reviewed by the New York Aircraft Certification Office (ACO) pursuant to a bilateral agreement between the United States and Canada. Kammers' testimony is rather confusing, and it is not clear from his testimony at what point in time the New York ACO would have become involved.[40] He also did not appear to have any

[38] Perhaps if he had been asked what parts of the records were missing, he would have identified a portion of the records in which a field approval or other FAA approval would not have been located. Under the circumstances, however, the Administrator cannot be sure.

[39] Kammers is the holder of a mechanic's certificate with airframe and powerplant (A & P) ratings and an inspection authorization.

[40] Kammers testified:

> At the time this STC was approved for that aircraft and installed, it was Canadian registered, and the work was performed by a Canadian maintenance organization, and the logbooks were signed off properly. Now, when it was imported to the United States and the certificate of airworthiness – during that process, the STCs were looked at as part of the application, and this particular aircraft, this STC being a Canadian STC was approved

personal knowledge as to whether this installation had been reviewed by the New York ACO at any time. Inspector Phillips testified that as he understood the process, Kammers was correct that the New York ACO reviews Canadian STCs, but that once the ACO reviews and "accepts" the Canadian STC, it issues a United States STC that is marked "FAA-approved." (Tr. 278.) He did not see a United States STC for this installation when he reviewed the records. (Tr. 278.) There is also no evidence that Phillips ever checked with the New York ACO to see if they had reviewed and approved of the Canadian STC. Inspector Vittetoe testified that he had not checked with that New York ACO to see whether it had approved this Canadian STC (although he did not even seem to be aware of the installation at the time of his inspection.) (Tr. 105.)

On this record, it simply cannot be determined whether the FAA had approved the Canadian STC. This is not a case in which the repair station is alleged to have failed to maintain pertinent records; instead, in this case, it is alleged that the manual control was not approved by the FAA. Thus, Complainant failed to prove the allegation that the FAA had not approved the installation of the manual anti-ice valve.[41]

> during that certification process. And I say that because anytime there's a Canadian STC approved that is tied to an FAA type certificate, it must go to the New York ACO for review. And this particular STC was – has gone through the New York ACO and has been reviewed. ….
>
> So when – if this STC package has been reviewed by the FAA, by the ACO in New York as part of the bilateral agreement between the United States and Canada – all STCs are. … They review it. If there is (sic) any technical questions or anything, they're settled at that time. It is then sent back an (sic) issued by MOT in Canada. When this airplane was subsequently brought into the United States and this certificate of airworthiness inspection was performed, that STC was accepted [as] a condition of that airworthiness certificate, in my opinion. It has to be.

(Tr. 273-274.)

[41] Another serious problem is that Complainant did not introduce or identify any legal documents that would explain what process should have been followed in this matter. It is inappropriate for Complainant to rely only on oral testimony with no legal citations to set forth what the legal requirements were that Custom had to follow. For the sake of argument, the Administrator has

Sanction

Complainant sought a $3,000 civil penalty in this matter, but, as discussed above, it failed to prove the allegations regarding the manual control valve. The Administrator is granting Complainant's appeal regarding the allegations involving the delamination/fire inspection and the drive shaft. The maximum civil penalty for these violations is $1,100. 49 U.S.C. § 46301(a)(1) and 14 C.F.R. § 13.305(d). Under these circumstances, a $2,000 civil penalty is appropriate.

Conclusion

For the foregoing reasons, this decision affirms the ALJ's decision regarding the manual control valve, but reverses his findings pertaining to the allegations related to the delamination and other damage due to exposure to extreme heat. It is held that Custom violated 14 C.F.R. § 43.13(a) when it returned N902CA to service with extensive delamination on the left forward fuselage. The Administrator also finds that the ALJ should have found that Custom violated both Sections 43.13(a) and 43.15(a)(1) when it failed to use the appropriate manual to inspect the drive shaft. A $2,000 civil penalty is assessed.[42]

MARION C. BLAKEY, ADMINISTRATOR
Federal Aviation Administration

Issued this 8th day of March, 2005.

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assumed in this decision that Inspector Phillips correctly testified that a specific approval – a field approval and/or approval by the New York ACO – was necessary. If this were the case, Complainant failed to introduce a complete set of the relevant logbook pages and failed to introduce the results of a search of the New York ACO records.

[42] Unless Respondent files a petition for review with a Court of Appeals of the United States under 49 U.S.C. § 46110 within 60 days of service of this decision, this decision shall be considered an order assessing civil penalty. 14 C.F.R. §§ 13.16(d)(4) and 13.233(j)(2)(2004).