ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --	)	
	)	
Stewart & Stevenson Services, Inc.	)	ASBCA No. 52140
	)	
Under Contract Nos. DAAE07-92-C-R001	)	
DAAE07-97-D-X009	)	

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Chief Trial Attorney
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OPINION BY ADMINISTRATIVE JUDGE TING
ON APPELLANT'S MOTION FOR SUMMARY JUDGMENT

Stewart & Stevenson Services, Inc. (Stewart & Stevenson) appealed from a contracting officer's (CO) decision directing it to retrofit 11,345 Family of Medium Tactical Vehicles (FMTV vehicles) purchased by the Army Tank-Automotive and Armaments Command (TACOM or the Government) under two production contracts. The parties have estimated the cost of the retrofit at approximately $40 million.

Stewart & Stevenson moves for summary judgment alleging that it has passed all of the contractually specified tests and no defects exist, and that the Government has accepted the FMTV vehicles. It contends that even if the Government could establish that the FMTV vehicles do not meet the contract requirements, it is still entitled to summary judgment because the Government cannot prove that the alleged defects were latent.

FINDINGS OF FACT FOR PURPOSES OF THE MOTION

1. In 1988, the Government awarded a contract to Stewart & Stevenson to design and develop prototype FMTV vehicles.[1] The Government required that the drivetrain be designed and developed by integrating commercially available components. (Answer at ¶ 26)

2. In 1991, the Government awarded a five year production contract (DAAE07-92-C-R001 (the R001 contract)) to Stewart & Stevenson for 10,843 vehicles for $1.2 billion. The contract called for delivery of the first vehicles for testing roughly 11 months after award. It required seven of the prototype FMTV vehicles be subjected to a 10,000-mile Production Qualification Test (PQT) prior to entering formal first article testing. (Answer at ¶ 27)

3. As awarded, the contract incorporated by reference the INSPECTION OF SUPPLIES - FIXED PRICE clause, FAR 52.246-2 (JUL 1985) (R4, tab 1 at 488). A subsequent amendment to the contract incorporated the 1996 version of the clause, FAR 52.246-2 (AUG 1996) (R4, tab 2 at 1435). Both versions of the clause provide, in part:

> (f) The Government has the right either to reject or to require correction of nonconforming supplies. Supplies are nonconforming when they are defective in material or workmanship or are otherwise not in conformity with contract requirements. The Government may reject nonconforming supplies with or without disposition instructions.
>
> . . . .
>
> (k) Inspections and tests by the Government do not relieve the Contractor of responsibility for defects or other

[1] "The Family of Medium Tactical Vehicles (FMTV) consists of fourteen variants of tactical wheeled vehicles based on a common truck cab, chassis, and internal components and two tactical trailers. The components are primarily non-developmental items integrated in rugged tactical configurations. The light-medium tactical vehicles (LMTV) are 2.5-ton payload capacity models consisting of cargo, airdrop cargo, and van variants. The medium tactical vehicles (MTV) are 5-ton payload capacity models consisting of cargo (with and without material handing crane), long wheel base cargo (with and without material handling crane), airdrop cargo, tractor, wrecker, dump, airdrop dump, fuel tanker, and expandable van variants" (DOT&E FY 95 Annual Report, ASR4, tab 115).

> failures to meet contract requirements discovered before acceptance. Acceptance shall be conclusive, except for latent defects, fraud, gross mistakes amounting to fraud, or as otherwise provided in the contract.

4. The production contract incorporated by reference a test specification referred to as the Test and Evaluation Master Plan (TEMP). The first article test included the First Production Vehicle Inspection (FPVI) and the Initial Production Test (IPT) which is a 20,000 mile Reliability/Accessibility/ Maintainability (RAM) test. (Answer at ¶¶ 28, 29) In addition, Section E.50 of the FMTV system specification required an Initial Operation Test and Evaluation (IOT&E). The IOT&E was a part of a statutory requirement to have the vehicles tested and required a report by the Director of Operational Test and Evaluation (DOT&E) approving the vehicles' suitability for operational use. (Answer at ¶ 31)

5. Section 4.7.3 of the system specification, Army Truck Purchase Description (ATPD) 2131, entitled "Speed Test," states:

> To determine conformance to 3.2.1.4, the vehicles shall be tested for achieving and maintaining the specified speeds with the specified weights on the specified grades.
>
> The vehicle at GVW [Gross Vehicle Weight] shall be tested for not exceeding a governed speed of 70 mph on hard-surfaced level roads.

(R4, tab 3 at 134) Section 3.2.1.4, "Speed," of the specification provides that the FMTV vehicles classified as "All Others" shall be capable of maintaining 55 mph on a 2% slope and 45 mph on a 3% slope at Gross Vehicle Weight (GVW) on primary roads (R4, tab 3 at 9).

6. Table XIII of the system specification pertains to "Classification of Defects." Malfunction, misalignment and unusual noise of the drivetrain are classified as "major" defects. The method of inspection for drivetrain defects is stated as "visual, functional." (R4, tab 3 at 129)

7. In 1997, the parties entered into Contract No. DAAE07-97-D-X009 (the X009 contract) to provide the Government the right to purchase up to 5,000 FMTV vehicles and associated kits. One hundred and forty-eight (148) of the 11,345 FMTV vehicles which were the subject of the CO's decision were ordered under this contract. The contract required Stewart & Stevenson to deliver FMTV vehicles which conformed to the same specifications, drawings and requirements as the vehicles produced under the R001

contract. The contract also incorporated the INSPECTION OF SUPPLIES – FIXED PRICE clause, FAR 52.246-2 (AUG 1996). (ASR4, tab 118)

8. The first FMTV vehicle was accepted in May 1993 (answer at ¶ 36). In August 1993, government personnel reported driveline noise when driving/inspecting the vehicles (answer at ¶ 37). Reports of cracked flywheel housings started in October 1997 (answer ¶ 43). In December 1997, an Air Force light-medium tactical vehicle (LMTV) near McDill Air Force Base, Florida, suffered driveshaft failure (answer at ¶ 44). In March 1998, an Army LMTV in the Washington, D.C., area suffered a driveshaft failure (answer ¶ 45). In the same month, an Army LMTV in the Fort Polk, Louisiana area suffered a driveshaft failure (answer at ¶ 46). On 11 March 1998, the Government issued a Safety-Of-Use-Message (SOUM) covering all LMTVs and calling for immediate inspection and restriction to speeds not in excess of 30 mph (answer at ¶ 47).

9. Two consensual agreements came out of a meeting held on 30 April 1998 attended by contractor and government representatives. The first consensus was that "the root cause of the driveline failures was powerplant bending induced by resonant frequency within the operating range of the vehicle." The second consensus was that the medium tactical vehicle (MTV) 5-ton truck, structurally similar to the LMTV with essentially the same powerplant, would "most likely, demonstrate the same kind of powerplant bending." A number of potential corrective actions were discussed. (Answer at ¶ 51) In late May 1998, the Government issued a second SOUM requiring immediate inspection of all MTVs and restricting their speed to no more than 30 mph (answer at ¶ 54).

10. In June 1998, Stewart & Stevenson engineered a "cradle fix." This fix failed to solve the problem. (Answer at ¶ 55) In the wake of the "cradle fix" failure, the Government moved to formalize a "Red Team" consisting of contractor, subcontractor and government representatives and their consultants. The Red Team's effort resulted in the development of the nodular iron flywheel housing and a switch to a larger driveshaft, referred to as the A-1. (Answer at ¶ 56) Extensive testing conducted by Red Team member Michigan Scientific Corporation confirmed the original hypothesis of destructive resonance in the powertrain (the flywheel housing and the driveshaft) within the operating range of the vehicle (answer at ¶ 57).

11. In its 30 July 1998 letter to its drive shaft and axle subcontractor, Rockwell International (Meritor), Stewart & Stevenson's division president stated, "there is considerable evidence that the Meritor drive shafts demonstrate insufficient product consistency to work in this application." He also pointed out that, although the primary drivetrain problem was the resonant frequency, another evident problem was the Meritor driveshafts. He went on to say that "with the resonant frequency problem solved, there still remains serious problems about the drive shafts. Meritor will of course remain fully

responsible for all product changes and costs necessary to resolve the drive line issues." (R4, tab 78; answer at ¶ 59)

12. On 1 October 1998, Stewart & Stevenson submitted a Request for Deviation (D 405) to install the Caterpillar flywheel housing. The request was approved on 16 October 1998. (R4, tab 86; answer at ¶ 62) On 19 October 1998, Stewart & Stevenson submitted a Request for Deviation (D 421) to install the Meritor A-1 drive shaft. The request was approved on 3 November 1998. (R4, tab 95; answer at ¶ 66)

13. In a letter dated 19 October 1998, Stewart & Stevenson notified the Government that "the exact root cause of the flywheel housing cracks as being a resonance frequency of the power pack which, at certain vehicle speeds, dwells at the flywheel housing. The housing is tolerant of this frequency for limited periods of time but will cause fatigue cracks to appear after prolonged periods of time at dwell." The letter went on to say that the root cause failure analysis of the driveshaft was still underway. The letter states that "there does not appear to be a warranty failure within the Contract definition of the defect and system defect provisions and there appears to be ample demonstration of adequate vehicle performance when the vehicle is operated within the specified operating perimeters." (R4, tab 88; answer at ¶ 67)

14. The CO's 23 October 1998 reply took issue with Stewart & Stevenson's suggestion that the vehicles were operating outside the specified operating perimeters. With respect to the root cause of the flywheel housing cracks, the CO pointed out that the resonance peaks occurred at 45 mph, ± 13 mph, within the specification-mandated speed range of all FMTV vehicles as set forth in Paragraph 3.2.1.4 of the FMTV ATPD. The CO stated that the Government discovered the FMTV driveline defect as a result of several catastrophic failures, and failures were discovered on FMTV vehicles with as few as 200 miles. She maintained that the condition "represents a systemic failure, in that the FMTVs are not in compliance with the system specification." The letter went on to state:

> Furthermore, successful testing of any particular requirement or group of requirements does not constrain the Government from demanding compliance with all system requirements. Regardless of the results of any test, actual usage has demonstrated that the FMTV cannot operate safely at speeds above 30 mph. This condition constitutes an unequivocal failure to meet the system performance specification and is in non-conformance with Federal Motor Vehicle Safety Standards (FMVSS), which are a part of the contract.

(R4, tab 93; answer at ¶ 70)

15. In its letter of 18 November 1998, Stewart & Stevenson advised the Government that the retrofit configuration agreed to for the vehicles produced under the "re-buy contract" (DAAE07-98-C-M010) awarded in October 1998 was not considered the appropriate solution for retrofit. The letter advised the Government that Stewart & Stevenson was investigating more cost effective approaches, and until a final retrofit configuration was agreed upon, it was not pursuing any retrofit hardware. The letter stated that neither Stewart & Stevenson or its vendors agree that they should bear the entire retrofit cost. (R4, tab 101; answer at ¶ 75)

16. The CO's 19 November 1998 letter directed Stewart & Stevenson to "immediately correct the drivelines on all vehicles previously accepted under contracts DAAE07-92-C-R001 and DAAE07-97-D-X009 in accordance with the validated fix agreed to by all parties on the Red Team, and as identified in [Stewart & Stevenson's] requests for deviations approved by the Government under contract DAAE07-98-C-M018." The letter went on to state that the failure of the FMTV driveline had been determined to be a latent defect, and Stewart & Stevenson was responsible for completion of the fix at no cost to the Government. (R4, tab 102; answer at ¶ 76)

17. In a decision issued on 13 April 1999, the CO directed Stewart & Stevenson to take steps to repair and replace in place all 11,345 vehicles purchased by the Government under Contract Nos. DAAE07-92-C-R001 and DAAE07-97-D-X009. With respect to approximately 8,000 vehicles unconditionally accepted prior to discovery of the defect, the CO took the position the defect was latent. With respect to 3,345 vehicles conditionally accepted, the CO took the position that Stewart & Stevenson was required to repair or replace the defect at no cost to the Government pursuant to subparagraph (f) of the INSPECTION OF SUPPLIES FIXED PRICE clause of the contracts. The CO identified the defect as a faulty powertrain design which results in destructive resonance when the vehicles are operating at highway speeds. She stated that her finding of defect was based on evidence derived from testing, and "[n]one of the testing conducted was more severe or more stringent than that required by the performance requirements of the contract." Stewart & Stevenson timely appealed the CO decision by notice dated 15 April 1999.

Appellant's Motion and the Government's Opposition

After pleadings were filed and discovery was initiated, Stewart & Stevenson filed a motion for summary judgment (motion). The Government opposed the motion (opposition). Stewart & Stevenson filed a reply to the Government's opposition (reply). This was followed by the Government's response (response). With the permission of the Board, Stewart & Stevenson filed a response to the Government's response (response to response).

Relying primarily on *United Technologies Corp. v. United States*, 27 Fed. Cl. 393 (1992), *recon. denied*, 31 Fed. Cl. 698 (1994), Stewart & Stevenson contends that because the Government cannot establish that the FMTV vehicles failed to satisfy any contract requirements, it is entitled to summary judgment as a matter of law. This contention is based on the assertion that the FMTV vehicles delivered to and accepted by the Government passed all of the "Contract tests" that were used to establish compliance with the contract specifications (motion at 5). The Government admits that the testing upon which it based its claim was not the same as the testing it conducted prior to unconditional acceptance of approximately 8,000 FMTV vehicles, and prior to conditional acceptance of 3,345 FMTV vehicles (*see* complaint and answer ¶¶ 11 and 12). Furthermore, with respect to all of the vehicles, the Government's answers to interrogatories nos. 12 and 13 admit that Stewart & Stevenson has not failed any tests set forth in the contract. (motion, ex. G)

Stewart & Stevenson also argues that even if the Government could establish that the FMTV vehicles did not meet the contract requirements, it is still entitled to summary judgment because the Government cannot prove that the alleged defects were latent (motion at 7). It contends that the Government could have but failed to perform a standard and inexpensive test that would have disclosed the powertrain limitation. For this proposition, it relies on the Fiscal Year 1998 DOT&E annual report[2] which contains this statement:

> A fairly standard and inexpensive vibrational mode analysis was not performed but would have been expected to lead to the discovery of the driveline resonance problems discovered this year.

(motion at 7, and ex. E, DOT&E report at 3)

While acknowledging that the FMTV vehicles passed the tests used to establish compliance with the contract specification, the Government's opposition takes the position that such testing was not all inclusive. The Government disputes whether a standard and inexpensive vibrational mode analysis would have led to the discovery of the driveline resonance problem (opposition at 6). In support of its position, the Government submitted an affidavit from Gary Schultz, a mechanical engineer with 20 years of service at TACOM. Schultz' affidavit states that unless one focuses on the specific problem, using vibrational mode analysis to identify a frequency resonance of a

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[2] The DOT&E report was drafted by a research staff member in the Operational Evaluation Division at the Institute for Defense Analyses (IDA). IDA is a federally funded research and development center that provides consulting services to the Department of Defense. (Bobbitt affidavit, opposition, ex. 1)

component, subsystem or system "would involve a lengthy, complex and arduous evaluation." He states that even if such an analysis had been conducted, it alone would not have predicted the catastrophic failure of the powertrain components. He expressed the view that vibrational mode analysis is normally conducted in conjunction with development and not as a part of acceptance testing. (opposition, ex. 2)

Stewart & Stevenson's reply argues that the Government has not identified any issues of material fact that would warrant denying the motion for summary judgment. With respect to Schultz's affidavit, it argues that it does not detract from the DOT&E statement that a test was available that would have identified the resonance problem. (reply at 9)

In response, the Government elaborates on its dispute with the position that the tests Stewart & Stevenson relied upon are the exclusive tests under the contract. The Government points to Paragraph 4.7 of the FMTV system specification which provides:

> 4.7 Method of Examination and Test. The examinations and tests depicted in paragraph 4.7 (inclusive), are the minimum required to determine conformance to the requirements delineated in Section 3 of this specification. Additional examinations and tests by the contractor may be required to determine conformance to specification requirements. The Government reserves the authority to conduct the inspection/tests depicted in paragraph 4.7 (inclusive), and additional inspection/tests at the discretion of the Government to determine conformance of end items or components to specification requirements. . . .

(response at 2; R4, tab 3 at 133) In addition, the Government's response disputes that the DOT&E statement constitutes an admission and contends that this dispute presents an issue of material fact (response at 5). The Government also contends that Stewart & Stevenson has improperly applied *United Technologies*, because that case stands for the principle that "the Government cannot hold the contractor to higher standards than originally specified in the contract, rather than Appellant's claim that successful contract testing is conclusive as to the lack of defects" (response at 4).

Stewart & Stevenson's response to the Government's response reiterated its position that "Appellant is entitled to summary judgment because no defect, latent or otherwise, exists under the Contract requirements" (response to response at 1). It argues that "the pivotal issue is not latency, but whether there is any defect at all under the terms of the contract" (response to response at 5). Stewart & Stevenson says that it relies on

United Technologies "for the threshold point that no defect exists under the Contract upon which to base a latent defect claim" (response to response at 6).

DECISION

Summary judgment is appropriate where no material facts are in dispute, and the moving party is entitled to judgment as a matter of law. *Mingus Constructors, Inc. v. United States*, 812 F.2d 1387, 1390 (Fed. Cir. 1987). The burden is on the movant to establish the absence of any genuine issues of material fact. *Id.* at 1390-91. Factual inferences are drawn in favor of the party opposing the motion. *United States v. Diebold, Inc.*, 369 U.S. 654, 655 (1962). In deciding a motion for summary judgment, we do not resolve factual issues, but ascertain whether genuine disputes of material fact are present. *General Dynamics Corp.*, ASBCA Nos. 32660, 32661, 89-2 BCA ¶ 21,851. A material fact is one which will affect the outcome of the case. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

We note at the outset that a distinction must be drawn between the approximately 8,000 FMTV vehicles the Government unconditionally accepted, and the 3,345 FMTV vehicles the Government conditionally accepted. With respect to the latter vehicles, the Government has not finally accepted them, and has a right to require correction of defects, whether patent or latent, pursuant to FAR 52.246-2(f). We conclude, therefore, that it is inappropriate to grant summary judgment with respect to the 3,345 FMTV vehicles for the reasons Stewart & Stevenson advanced.

Existence of Defects

The Government's answers to Stewart & Stevenson's interrogatories admit that Stewart & Stevenson has not failed any tests set forth in the contract. Passing all of the contract tests does not establish that no defects existed at the time of acceptance. A contrary position would mean that the Government would never be able to revoke acceptance even when it subsequently discovered defects which were latent. This position is clearly contrary to the INSPECTION OF SUPPLIES – FIXED PRICE clause, under which latent defects are one of the three exceptions to finality of acceptance. FAR 52.246-2(k). *See Melcon Systems, Inc.*, ASBCA No. 41374, 94-3 BCA ¶ 27,098 (Board found latent defect where contractor passed Product Qualification Test (PQT) and all lot acceptance tests and thermal targets subsequently exhibited cracks which became more pronounced after being subjected to stress overtime); *Wickham Contracting Co.*, ASBCA Nos. 32392, 32526, 88-2 BCA ¶ 20,559 (Board found latent defect where tests did not reveal defect).

In this case, the Government discovered the alleged driveline defect as a result of several catastrophic failures. The record suggests that the flywheel housing cracks were

attributable to resonant frequency within the operating range of the FMTV vehicles. The CO has asserted that this destructive resonance condition occurred when the FMTV vehicles were driven at 45 mph, ± 13 mph, within the specification-mandated speed range of all FMTV vehicles required in Paragraph 3.2.1.4 of the FMTV ATPD. The CO also contended that the FMTV driveline defect resulted from non-compliance with the Federal Motor Vehicle Safety Standards which were a part of the contracts. Moreover, the record also indicates that Stewart & Stevenson has taken the position that the Meritor driveshaft was not suitable for the application called for by the contract.

United Technologies stands for the proposition that contract specifications are the standard for determining defects, and that the Government cannot impose a more stringent testing procedure or standard for demonstrating compliance than is set forth in the contract. 27 Fed. Cl. at 397. In that case the court found no genuine issues of material fact and granted summary judgment in favor of the contractor. In this case, the Government has conceded that the testing upon which it based its claim was not the same as the testing it conducted prior to unconditional acceptance of approximately 8,000 FMTV vehicles, and prior to conditional acceptance of 3,345 FMTV vehicles. In her decision the CO maintained that her finding of a latent defect was based on evidence derived from testing, and "[n]one of the testing conducted was more severe or more stringent than that required by the performance requirements of the contract." We are unable to conclude on the record before us that the testing upon which the Government based its claim of defect, though different, was more stringent than the tests specified in the contract. In *Crown Coat Front Co., Inc. v. United States*, 154 Ct. Cl. 613, 292 F.2d 290 (1961), the Court of Claims rejected the contractor's position that the method of testing spelled out in the specification for testing one element of a product precluded the Government from testing the product for another specified element. The court stated that the Government could reject the product if the disputed element of that product did not meet specification or "was otherwise shown to be unacceptable by reasonable and necessary tests." 154 Ct. Cl. at 616, 292 F.2d at 292 We conclude there are issues of material fact on whether the FMTV vehicles delivered met all of the specification requirements.

For the foregoing reasons, we conclude that there are genuine issues of material fact with respect to whether defects existed at the time of acceptance even though all of the vehicles undisputedly passed the tests set out in the contract.

Latent Defects

Stewart & Stevenson argues that even if the Government could establish that the FMTV vehicles do not meet the contract requirements, it is still entitled to summary judgment because the Government cannot prove that the alleged defects were latent. This argument cannot apply to the 3,345 vehicles since final acceptance had not occurred.

A latent defect is one which cannot be discovered by observation or inspection made with ordinary care. *Kaminer Constr. Corp. v. United States*, 488 F.2d 980, 984 (Ct. Cl. 1973) Latent defect disputes are often highly factual and difficult to resolve on summary judgment. *Southern Pipe and Supply Co.*, NASA BCA No. 570-7, 71-1 BCA ¶ 8868. In support of its contention that the alleged defects were not latent, Stewart & Stevenson relies on the Government's DOT&E report which contains a statement to the effect that a fairly standard and inexpensive vibrational mode test would have led to the discovery of the driveline resonance problem. The validity of this statement has been challenged. A government engineer from TACOM has asserted by affidavit that, unless one focuses on the problem specifically, using vibrational mode analysis to identify a frequency resonance of a component, subsystem or system "would involve a lengthy, complex and arduous evaluation," and even if conducted, would not have predicted the catastrophic failure of the powertrain components. He also expressed the view that such analysis is normally conducted in conjunction with development and not as a part of acceptance testing. The Government has also challenged whether the DOT&E statement constitutes an admission on its part, and contends that this dispute presents an issue of material fact.

Based on the parties' conflicting positions with respect to whether the Government should have conducted a pre-acceptance vibrational mode analysis, and to whether such an analysis would detect the resonance and driveshaft problems, we conclude there are disputes of material facts on whether the alleged defects are latent.

CONCLUSION

Because there are genuine disputes of material fact with respect to the existence of defects and with respect to the latency of those defects on the approximately 8,000 FMTV vehicles the Government unconditionally accepted, Stewart & Stevenson's motion for summary judgment is denied.

Because final acceptance of the 3,345 FMTV vehicles has not occurred and the existence of defects is in dispute, Stewart & Stevenson's motion for summary judgment is denied.

Dated: 26 July 2000

PETER D. TING
Administrative Judge

Armed Services Board
of Contract Appeals

I concur

MARK N. STEMPLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I concur

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 52140, Appeal of Stewart & Stevenson Services, Inc., rendered in conformance with the Board's Charter.

Dated:

EDWARD S. ADAMKEWICZ
Recorder, Armed Services
Board of Contract Appeals