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ACQUISITION AND PROCUREMENT:
Improved Management Will Lead to Acela Parts Contract Cost Savings

Certain information in this report has been redacted due to its sensitive nature.

Audit Report OIG-A-2015-008 | March 10, 2015

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AMTRAK

NATIONAL RAILROAD PASSENGER CORPORATION

Office of Inspector General

REPORT HIGHLIGHTS

Why We Did This Review

In February 2006, Amtrak (the company) awarded Alstom Transportation Inc. a five-year contract to provide parts for the maintenance and overhaul of its Acela trainsets. In September 2007, the company extended the contract through September 2016.

The company reported that Acela was one of its largest revenue sources in fiscal year 2014, generating about 27 percent of overall ticket revenue of about $2.2 billion. From February 2007 to May 2014, more than $236 million in parts were reported purchased using the contract.

The Procurement department is responsible for managing the contract, and the Mechanical department requisitions and pays for parts from Alstom to maintain and overhaul the Acela trainsets.

Our audit objective was to assess the effectiveness and efficiency of the company's management of the contract.

For further information, contact David R. Warren, Assistant Inspector General for Audits, 202-906-4600.

The full report is at *www.amtrakoig.gov/reports/audits*.

ACQUISITION AND PROCUREMENT: IMPROVED MANAGEMENT WILL LEAD TO ACELA PARTS CONTRACT COST SAVINGS

(Audit Report OIG-A-2015-008, March 10, 2015)

What We Found

The Procurement department's management of the Acela parts contract has not been effective or efficient because it paid too little attention to costs and associated management and oversight controls. Specifically:

- The department's policies and procedures do not clearly state requirements for contract monitoring and oversight.
- The data and information systems were inadequate to support contract management functions.
- Key officials responsible for managing the contract turned over multiple times.

As a result, there has been a significant waste of funds:

- Unreasonably high prices were paid for repaired parts. Price reviews that could have identified unreasonable prices were not conducted. The prices paid for 9 of 10 repaired parts we sampled were 118 percent to 2,377 percent greater than the contractor's repair costs. About $85,000 in unreasonably high prices were paid for these repaired parts.
- Penalties were not assessed for late parts delivery and train annulments, partly because there are no formal procedures for tracking the delivery of parts and assessing penalties. For example, as much as $19 million in penalties had not been assessed for late part deliveries that occurred since 2013, based on company estimates.
- A reported $18.8 million in outstanding warranty claims has accumulated because there are no formal procedures for processing and settling warranty claims in a timely manner.
- Contract management was hindered by inadequate administration and maintenance of contract files, including missing documentation for change orders.

If the company had effectively managed the contract, it could have reduced contract costs and freed up funds that could have been put to better use.

Recommendations

The company agreed with our recommendations and provided action plans to improve the effectiveness and efficiency of its contract management and oversight functions. The company also agreed to seek remediation for unreasonably high payments when appropriate.

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AMTRAK

NATIONAL RAILROAD
PASSENGER CORPORATION

Office of Inspector General

Memorandum

To: Mario Bergeron, Senior Vice President/Chief Mechanical Officer
Bernard Reynolds, Vice President/Chief Procurement and Logistics

From: David R. Warren, Assistant Inspector General, Audits

Date: March 10, 2015

Subject: *Acquisition and Procurement: Improved Management Will Lead to Acela Parts Contract Cost Savings* (Audit Report OIG-A-2015-008)

The operation of the Acela trainsets on the Northeast Corridor is one of Amtrak's (the company's) largest sources of revenue. The Acela generated about $586 million (approximately 27 percent) of overall ticket revenues of about $2.2 billion in fiscal year (FY) 2014, as reported by the company. In February 2006, the company contracted with Alstom Transportation Inc. (Alstom) to provide parts for the routine maintenance and overhaul of Acela trainsets. A fixed-price, sole source contract was awarded for a five-year period; in September 2007, it was renewed for another five years through September 2016. The company reported purchasing more than $236 million in parts through this contract from February 2007 through May 2014.

The Procurement and Material Management department (Procurement) has responsibility for managing the contract, and the Mechanical department (Mechanical) requisitions and pays for parts from Alstom to maintain and overhaul the Acela trainsets. Figure 1 shows the functional relationships among the Procurement and Mechanical departments and Alstom for the Acela parts contract, as well as the key Procurement officials responsible for managing the contract—the contract management

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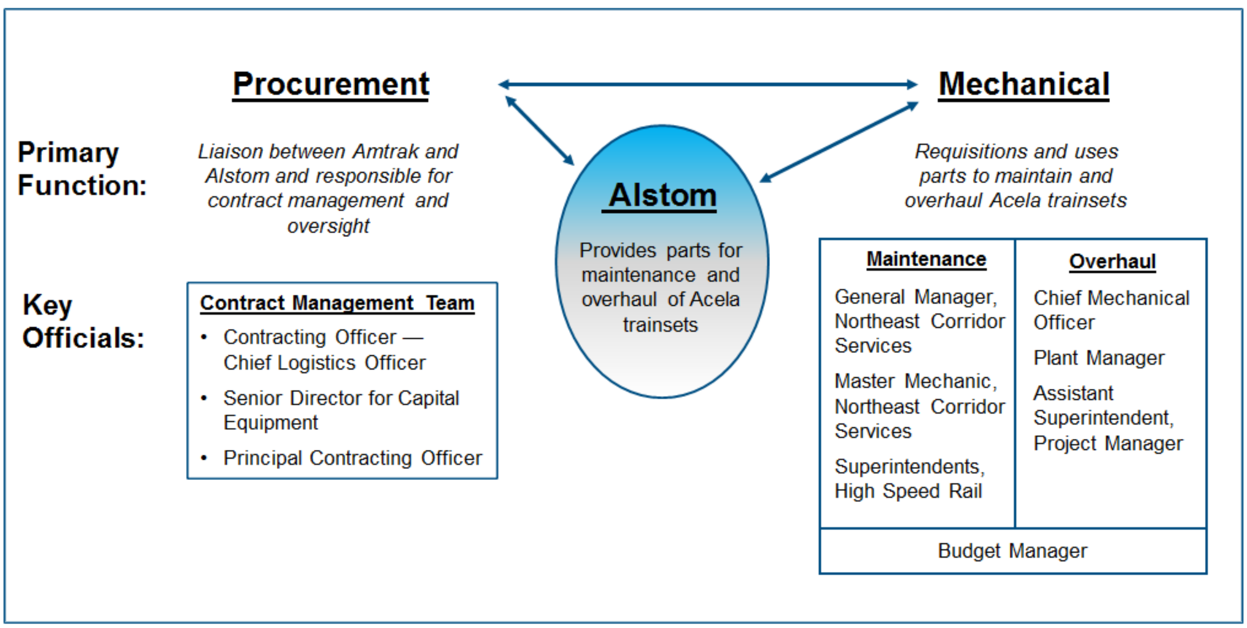
team.[1] The team consists of the contracting officer (CO)–chief logistics officer (CLO), the senior director for capital equipment, and the principal contracting officer (PCO).

- The CLO has overall responsibility over the department; he delegated his authority over managing the Acela parts contract to the PCO, according to the senior director for capital equipment.
- The senior director is responsible for managing the interdepartmental and interdisciplinary activities necessary to implement the contract.
- The PCO reports to the senior director for capital equipment and has the responsibility to monitor, oversee, and administer the Acela parts contract.

Figure 1. Functional Relationships among Amtrak Departments and Alstom on the Acela Parts Contract



Source: Office of Inspector General (OIG) analysis of Amtrak information

Twenty Acela trainsets provide passenger train service along the Northeast Corridor between Washington and Boston. Alstom has Acela parts storage and return facilities at

[1] The titles used for the Procurement and Mechanical officials were the titles in place during the time period reviewed.

company maintenance yards in Boston, Massachusetts; Ivy City in Washington, D.C.; Sunnyside, New York; and overhaul yards in Wilmington and Bear, Delaware. Alstom provides parts for the maintenance and overhaul of Acela trainsets. The Acela maintenance and overhaul program is designed to maintain equipment in a state of good repair, improve the reliability and availability of equipment, enhance the overall customer experience, comply with federal regulations, and mitigate equipment failures.

Our audit objective was to assess the effectiveness and efficiency of the company's management of the Acela parts contract. For a discussion of our audit scope and methodology, see Appendix A.

SUMMARY OF RESULTS

The Procurement department has not provided effective and efficient management of the Acela parts contract. As a result, there has been a significant waste of funds and some negative impacts on maintenance processes. The underlying cause of these conditions is that too little attention was paid to contract costs and management controls.

We compared the company's practices with best practices, contract provisions, and Procurement's policies and identified a number of opportunities for improvement, which are summarized in Table 1. Despite the contract management weaknesses, maintenance delays generally did not compromise the Acela's on-time performance, according to Procurement and Mechanical officials. Nonetheless, these weaknesses caused the Mechanical department to pay more than necessary for parts.

Table 1. Opportunities to Improve Procurement's Governance and Its Management and Oversight of the Acela Parts Contract

Best Practices and Contract Provisions	Observed Practices and *Adverse Effects**
Best Practices	
An organization should have appropriate policies and procedures for each of its activities.	Policies and procedures do not clearly state requirements for monitoring and overseeing contracts.
The roles and responsibilities of those who perform contract management and oversight should be clearly defined.	No defined roles and responsibilities for: • managing the warranty claims process • approving minimum inventory levels
Transactions should be promptly recorded to maintain their relevance and value to management in controlling operations and making decisions.	No procedures for: • tracking parts delivery performance • processing and settling warranty claims in a timely manner
The ability to enforce a warranty is essential to the effectiveness of any warranty. There must be an adequate administrative system for reporting defects.	Contract files were incomplete and disorganized; for example, change orders were missing and filed out of sequence.
An entity should maintain documentation for a number of reasons, including providing clarity on roles and responsibilities, assisting training new personnel, enabling proper monitoring, retaining organizational knowledge, and mitigating risks. Also, contract files must ensure effective documentation of contract actions and ready access to principal users.	Changes in contract administrative functions and responsibilities were undocumented; for example, the assignments of the three PCOs over the life of the contract were not documented. *These practices led to a number of outcomes, including:* • *no penalties assessed for late delivery of parts—for example, as much as $19 million in penalties had not been assessed for late parts deliveries in 2013 and 2014* • *untimely settlement of more than $18 million in warranty claims* • *risk of over-paying for parts remaining at the end of the contract* • *ineffective contract management*

Best Practices and Contract Provisions	Observed Practices and *Adverse Effects**
Contract Provisions	
The contract allowed the company to perform an audit of parts prices when the contract was renewed. The Procurement Policy Manual states that good contract administration ensures that the company's interests are protected through cost reviews and monitoring of payments. The contract requires Alstom to pay penalties for parts that are not delivered within the scheduled or contractual time limits. The contract allows for designation of a Contracting Officer's representative or Technical Representative (COTR) for one or more contract administration functions. This designation must be in writing and contain specific instructions.	No price reviews were conducted. No tracking or reporting system for parts and Alstom's parts delivery performance; reliance on Alstom for this information. No clear designation of a Contracting Officer's representative or COTR, and related responsibilities were undefined. *These practices led to a number of outcomes, including:* • *unreasonably high prices paid for repaired parts* • *no penalties assessed for late delivery of parts—for example, as much as $19 million in penalties were not assessed for late parts deliveries in 2013 and 2014* • *untimely settlement of more than $18 million in warranty claims*

*Adverse effects are noted *in italics.*

Sources:
- Committee of Sponsoring Organizations of the Treadway Commission (COSO), *Internal Control—Integrated Framework*, May 2013
- U.S. Government Accountability Office (GAO), *Framework for Assessing the Acquisition Function at Federal Agencies*, GAO-05-218G, September 2005
- *Acela Trainset Service Contract between Amtrak and Alstom Transportation Inc.*, February 2006
- *Amtrak Procurement Manual*, effective July 2008
- *Federal Acquisition Regulation* (FAR)

To address these weaknesses, we recommend that the Senior Vice President/Chief Mechanical Officer and Vice President/Chief Procurement and Logistics jointly take a number of actions, including establishing the appropriate management controls and data systems needed to effectively oversee key contract management functions, including parts delivery, warranty processes, and parts price reviews. We are also recommending cost recovery in cases in which parts prices were unreasonably high. Management agreed with our recommendations and provided action plans for implementing them.

SOUND GOVERNANCE PROCESSES WILL ENHANCE CONTRACT MONITORING AND OVERSIGHT

The contract management team's governance processes for the Acela parts contract were ineffective. As we reported in May 2014, the Procurement department's policies and procedures do not clearly state requirements for monitoring and overseeing its contracts.[2] By April 2008, a manual specific to managing the Acela parts contract had been drafted, but it was never completed or implemented. The roles and responsibilities of several key positions and functions for managing the contract were not clearly defined. Also, over the life of the contract, the contract management team experienced multiple turnovers among its key officials. In addition, the team lacked adequate data and information systems to support contract management functions, such as monitoring the contractor's performance delivering parts in a timely manner. As a result of these conditions, contract oversight has been minimal or non-existent.

Policies and Procedures for Monitoring Were Lacking

As we reported in May 2014, Procurement's policies and procedures do not clearly state requirements for monitoring and overseeing its contracts. Best practices also call for such policies and procedures.[3] In its response to our prior report, the company agreed to develop a plan giving senior contracting agents the responsibility for implementing contracts, with special attention on post-award activities and appropriate reporting. The CLO estimated that the plan will be completed by June 30, 2015.

In addition to the lack of departmental procedures, there were no specific procedures for monitoring the Acela parts contract. Although the first senior director for capital equipment for the contract drafted a detailed manual with procedures for managing the contract, the manual was never formalized and disseminated. The draft manual clearly defined the roles, responsibilities, and interrelated activities of staff responsible for managing the contract; policies and procedures for managing the contract, including management of change orders, payment validation process, and document control; and processes for measuring the contractor's performance.

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[2] Amtrak OIG, *Acquisition and Procurement: Closer Alignment with Best Practices Can Improve Effectiveness*, OIG-A-2014-006, May 7, 2014.
[3] COSO, *Internal Control—Integrated Framework*, May 2013.

The Controls Over Essential Contract Management Functions Were Inadequate

The contract management team lacked adequate controls to manage and support contract management functions. Roles, responsibilities, and accountability were not clearly defined. Further, several key contract management positions were left vacant for periods of time. In addition, over the life of the contract, there were numerous turnovers among contract management team officials. The team also had no systems or processes that provided the data and information that were essential for monitoring the costs and delivery of parts, processing and settling warranty claims in a timely manner, and approving minimum inventory levels. As a result, the team relied on data provided by Alstom to support these and other oversight functions.

Roles and responsibilities and staff assignments were undefined and unclear.

The roles and responsibilities of those who perform contract management and oversight functions should be clearly defined;[4] however, the roles and responsibilities of several key positions and functions for managing the Acela parts contract were not, as shown in these examples:

- The contract designated an official as the CO. However, the roles and responsibilities of the CO were never formally defined.
- A PCO acted as the CO's representative from the time the contract was awarded, according to the senior director for capital equipment. The designation and related responsibilities of this official, however, were not formalized in writing. The position description for the PCO defines responsibilities related to this contract, but these responsibilities were never formally defined in Procurement's procedures for managing the Acela parts contract.
- At the beginning of the contract, a COTR was designated in writing. However, the official stated that he was relieved of those duties around July 2010. Since then, no COTR has been assigned, and the position's responsibilities have not been defined in writing, according to the senior director for capital equipment.

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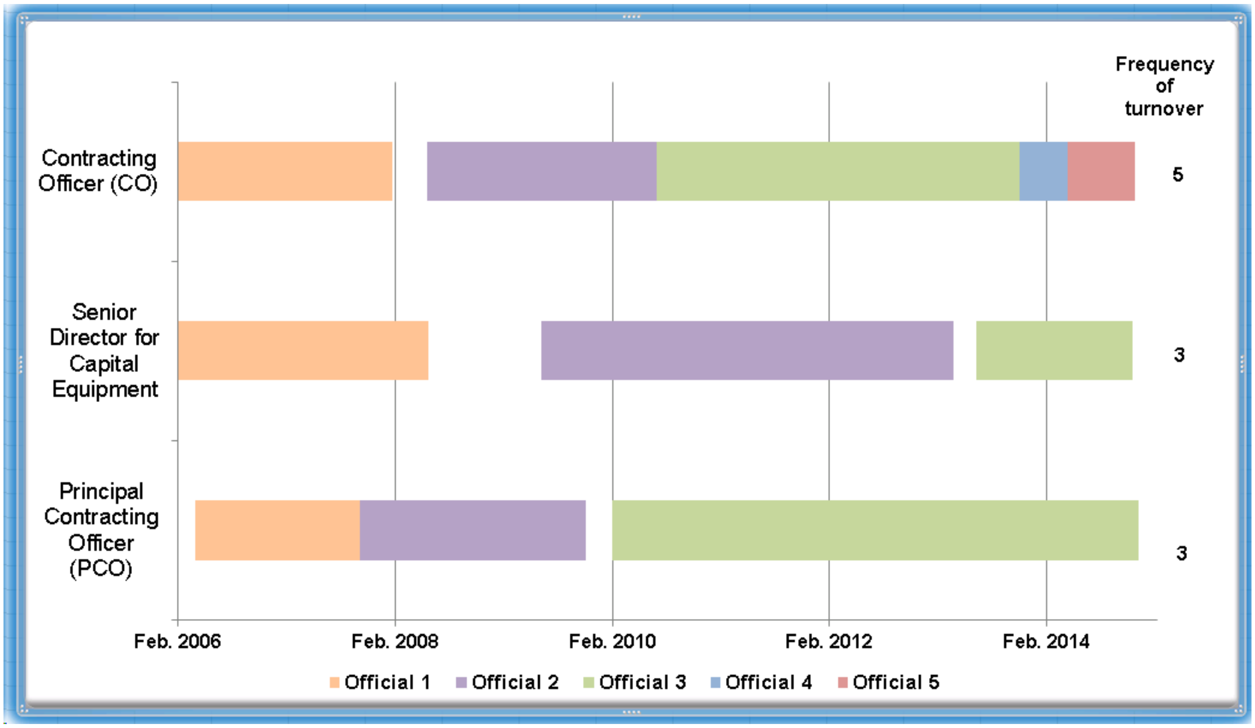
[4] GAO, *Framework for Assessing the Acquisition Function at Federal Agencies,* GAO-05-218G, September 2005.

Other staff assignments, roles, and responsibilities were also undefined for several key contract oversight functions, such as approving minimum inventory levels and processing warranty claims. Responsibilities for monitoring inventory levels were not formally assigned. Also, the roles and responsibilities of the staff handling and settling warranty claims were not defined in writing. A Procurement director of material management stated that he assisted the PCO with warranty claims, but was never formally delegated the authority to accept or reject disputed claims.

Key officials responsible for managing the contract turned over multiple times.

Over the life of the contract, the contract management team lacked stability in its leadership and contract monitoring roles. There were multiple turnovers of key Procurement officials responsible for managing the contract. Since the beginning of the contract in 2006, there were five COs, three senior directors for capital equipment, and three PCOs. At one time or another, all of these positions were unfilled, including the position of senior director for capital equipment, which was vacant for more than one year from June 2008 to June 2009. In addition, Procurement abolished the position of document control officer in 2011; the officer was responsible for managing all documentation and files for Procurement's capital equipment contracts, including the Acela parts contract. Figure 2 shows the frequency and timing of the turnovers and vacancies among the contract management team.

Figure 2. Turnover and Vacancies of Acela Contract Management Team



Source: OIG analysis of Procurement records

Systems and processes for monitoring were lacking. The contract management team lacked systems and processes for capturing data and information that were essential for monitoring the contract and Alstom's performance. For example, there was no process for conducting parts price reviews, no system in place to track and report Alstom's parts delivery performance and return of parts, no process in place for settling outstanding warranty claims, and no formal process for approving minimum inventory levels. Instead, the contract management team relied on Alstom-reported information to monitor these functions.

BREAKDOWN IN GOVERNANCE LED TO INEFFICIENCIES IN CONTRACT MANAGEMENT AND SUPPORT OF THE ACELA FLEET

The contract management team's weak governance processes contributed to a number of inefficient and ineffective practices in managing the contract. For example, because the company did not review contract prices, the Mechanical department paid unreasonably high prices for repaired parts. Because delivery performance was not tracked, the company lost opportunities to assess penalties of as much as $19 million for the late delivery of parts. Also, because of a lack of formal procedures and inadequate contract provisions, outstanding warranty claims have grown to more than 4,500 claims, valued at more than $18 million.

According to Procurement and Mechanical officials, the weak governance processes generally did not compromise Acela on-time performance. Although the effectiveness of Acela maintenance and overhaul operations was not a focus of our review, Mechanical officials told us that they were successful in keeping Acela trainsets in operation with few annulments caused by the contractor's performance. Mechanical achieved this success despite the weaknesses identified in managing the parts contract, but not without incurring additional maintenance and overhaul costs.

Unreasonably High Prices Were Paid for Repaired Parts

Because contract parts price reviews were not conducted, Mechanical paid about $85,000 more than necessary for nine items we sampled that Alstom repaired.[5] We questioned the reasonableness of the prices that Mechanical paid for these repaired parts, as well as potentially other repaired parts purchased over the life of the contract.

The Procurement Policy Manual states that good contract administration ensures that the company's interests are protected through cost reviews and monitoring of payments. The contract also allowed the company to perform an audit and reset prices within six months of providing notice to extend the contract. However, the company did not execute this provision when the contract was extended in September 2007, according to the PCO.

To evaluate the reasonableness of the prices that the department paid for parts, we selected 12 parts for review—10 that were repaired[6] and 2 new parts—based on price, frequency of repairs, and types of parts purchased. Parts prices were to be based on Alstom's actual costs and appropriate markups and profit. The contract prices paid for

[5] The results of our review of selected repairable items cannot, however, be projected to the universe of about $188 million of repaired parts purchased from February 2007 through October 2014.
[6] We requested and obtained the actual repair costs for 10 parts from Alstom. Because the part repair costs were available only from Alstom and required considerable time and effort to compile, we limited our review to only 10 parts to illustrate the potential effect of not conducting price reviews.

the two new parts and one repaired part were reasonable. However, the prices paid for nine repaired parts exceeded Alstom's actual cost to repair the parts and markups by 118 percent to 2,377 percent. Mechanical paid about $84,669 more than the actual repair costs, which included the contractor's profit markup, as shown in Table 2.

Table 2. Analysis of Alstom's Prices for Repaired Parts

Part Number	Serial #	Description	Contract Price (Jan. 1, 2014)	Alstom Repair Costs[1] (includes markups)	Additional Profit	
					Dollars	Percent
[redacted]	134	Alerter/Controller	[redacted]	[redacted]	[redacted]	2,377.1%
[redacted]	256	Door Control Station	[redacted]	[redacted]	[redacted]	2,135.8%
[redacted]	99074043	Tilting Master Controller	[redacted]	[redacted]	[redacted]	1,229.5%
[redacted]	272662	Display Unit	[redacted]	[redacted]	[redacted]	957.3%
[redacted]	28	Bistro Communication Control Unit	[redacted]	[redacted]	[redacted]	238.1%
[redacted]	67-9396	Coffee Maker	[redacted]	[redacted]	[redacted]	176.9%
[redacted]	10053767 AL	Microwave Oven	[redacted]	[redacted]	[redacted]	156.6%
[redacted]	100	Chiller Unit	[redacted]	[redacted]	[redacted]	153.8%
[redacted]	15-04-11	Double Check Valve	[redacted]	[redacted]	[redacted]	118.3%
Total			$96,202.39	$11,533.78	$84,668.61	734.1%

Source: OIG analysis of Alstom data
[1]Average costs of up to five most recent repairs

Penalties Were Not Assessed for Late Deliveries Because Delivery Performance Was Not Tracked

The contract requires that Alstom pay penalties to the company for parts that are not delivered within the scheduled or contractual time limits, including $[redacted] per day for overhaul kits, $[redacted] per hour for critical parts, and $[redacted] for annulled or terminated trainsets. Since the award of the contract, the contract management team has had no system in place to track and report on parts delivery performance[7] and has relied on information reported by Alstom. The PCO also stated that when the company exercised its option to extend the contract for another five years, there was a verbal agreement with Alstom not to assess penalties in exchange for Alstom not claiming incentives for delivering parts ahead of schedule.

Although no penalties had been assessed, parts had been delivered late on multiple occasions over the life of the contract, according to a master mechanic, two superintendents, and an assistant superintendent in the Mechanical department who are responsible for the maintenance and overhaul of Acela trainsets. Based on documentation available from the company for late part deliveries since 2013, as much as $19.4 million in penalties were not assessed.

- Parts were delivered late for the overhaul of trainsets 5 through 11 from June 2013 through July 2014. Using Alstom-reported information, the company identified parts delivered late for these trainsets and estimated penalties totaling as much as $19.2 million.

  In November 2014, the contract management team and Mechanical officials informed us that these penalties would not be assessed. During discussions with Alstom officials about assessing penalties, the company had requested that the schedule for overhaul be moved earlier than the contracted schedule, according to the senior director for capital equipment. The senior director stated that if Alstom meets this request, it could claim incentive payments under the contract. Based on estimates of the penalties and incentives developed by the project manager for the Acela Overhaul Program, the contract management team determined that the incentives would exceed the penalties. Therefore, company officials verbally agreed with Alstom not to assess penalties in exchange for Alstom not claiming incentives, similar to the verbal agreement noted by the PCO. However, a documented business case analyzing cost and benefits was not developed to support this decision. Further, such agreements may be waivers of

[7] COSO, *Internal Control—Integrated Framework*, May 2013, suggests that transactions should be promptly recorded, thereby maintaining their relevance and value to management in controlling operations and making decisions.

contractual provisions, which should be fully vetted, documented, and officially recorded in the contract file.

In providing technical comments on a draft of this report, the Vice President/Chief Procurement and Logistics stated [redacted]. The Vice President acknowledged that [redacted].

- Parts were delivered late for maintenance. Using Alstom's request and delivery data for 55 parts that were reported as being delivered late in August 2013, we determined the following:
    - Twenty-three parts were delivered late. If penalties had been assessed, they would have amounted to about $173,000.
    - Delivery times for 23 other parts could not be validated because of incomplete documentation.
    - Nine parts were delivered on time.
- A senior Mechanical official reported that two trains had been annulled because Alstom delivered parts late—one in January 2013 and one in March 2014. If penalties had been assessed, they would have amounted to $40,000. The official also reported that a third annulled train was under review to determine the cause of the annulment.

If these penalties had been assessed and collected, the company could have put some of these funds to better use. In July 2014, following our inquiries, the PCO instituted a new request form for Mechanical to document the information needed to assess penalties. Using this new form, Mechanical identified and reported a part that had been delivered five hours late in June 2014. As a result, the PCO assessed and collected nearly $3,000 in penalties.

Significant Unsettled Warranty Claims Accumulated Due to No Formal Procedures and Inadequate Contract Provisions

Procurement's lack of formal procedures for processing and settling warranty claims in a timely manner led to more than 4,500 reported outstanding warranty claims dating back to 2008. This resulted in the company paying more for parts than necessary and funds that could be put to better use. For example, while warranty parts were outstanding, the company had to purchase replacement parts to complete maintenance and overhauls and to keep Acela trainsets running. Also, some returned parts were repaired and sold back to the company multiple times. For example, a microwave oven was returned, repaired, and reissued 11 times while all 11 claims remained outstanding.

The warranty claims were not settled in a timely manner because of inadequate management controls over the process and a lack of certain standard warranty provisions in the contract, including the lack of formal procedures, undefined roles and responsibilities, no tracking of return parts, and unreliable warranty data as follows:

- **The contract management team had no formal procedures for processing and settling warranty claims in a timely way.** Although the contract management team drafted a warranty process in December 2013, the draft was never completed or formally implemented, according to the senior director for capital equipment.

- **There were no clearly defined roles and responsibilities or assigned staff for processing and settling warranty claims**. For example, a Procurement director of material management assisted the PCO in documenting new claims and removing claims as instructed by the contract management team or the Mechanical budget manager. However, no formal document defined his roles and responsibilities in handling and settling warranty claims or delegated him the authority to accept or reject claims.

- **Returned parts were not tracked by the contract management team**. The contract management team did not have a control system in place to track part returns and ensure that appropriate credit was received for parts returned. Instead, the team relied on Alstom to provide information about part returns.

- **The outstanding warranty data were unreliable**. The company reported more than 4,500 outstanding warranty claims—about $18.8 million as of August 31, 2014. However, we reviewed a sample of these claims and noted they included non-warranty item returns, such as "good material return" and "no fault found" items. Including these items in the warranty data makes it difficult to determine how much the company is actually owed in warranty credits.

Another factor likely contributed to the significant number of outstanding warranty claims—the lack of certain standard contract warranty provisions that could facilitate more timely settlement of claims. For example, the contract lacks provisions that would do the following:

- **Specify time limits for processing and settling claims**. Until the contract contains a provision that outstanding issues between both parties must be resolved within a set time limit, it may be difficult to enforce new and resolve outstanding warranty claims in a timely manner.

- **Define the lowest level of coverage under the warranty**. The company and Alstom disagree whether the warranty covers the whole part or separate components of the part. According to a Procurement director of material management, the company believed that the whole part was under warranty for 12 months, but Alstom's position was that each component of a part has a separate warranty period. As a result, claims relating to this issue remained unsettled.

- **Identify standard industry exclusions from warranty such as physical damages caused by the company**. The FAR provides that a contractor's obligations under warranties extend to all defects discovered during the warranty period, but do not include damages caused by the agency.[8] Alstom rejected some claims because company employees physically damaged or altered the parts.

[8] FAR Subpart 46.706, (b) (1) (i).

Inadequate Management of Inventory Levels Increased Risk of Unnecessary Parts Buy-Back Costs at Contract End

The contract identifies the minimum quantity of parts that Alstom must maintain in order to facilitate the delivery of parts within contract timeframes. The inventory levels also have financial implications for the company when the contract expires. The company has a contractual obligation to purchase any remaining inventory of parts held by Alstom. Over the past three years, the accrued liability for this obligation increased from an estimated $13.5 million in FY 2011 to about $17.9 million in FY 2013, based on a projected contract end date of 2024. Without appropriate review and a formal agreement with Alstom on the inventory levels, the company risks paying unnecessary costs when the contract is terminated.

In December 2013, Alstom forecasted minimum inventory levels and requested the PCO's approval in writing by January 10, 2014. The PCO stated that he did not respond to Alstom's request because he needed—but did not receive—the Mechanical department's concurrence on the forecasted inventory levels. He said he asked a Mechanical master mechanic, a senior director of high speed rail, and a senior materials planning and logistics officer for their review and approval, but they never responded to his request. The master mechanic and a superintendent for high speed rail acknowledged that Mechanical did not respond to the PCO's request and said that the responsibility for approving the inventory levels was unclear.

Contract Files Were Incomplete

The contract management team's administration and maintenance of the documentation of the parts contract was inadequate, hindering its ability to effectively manage the contract. Procurement had no policy or procedures for recordkeeping or documentation of contract files. Best practices emphasize the need to maintain documentation to provide clarity about roles and responsibilities, assist training new personnel, enable proper monitoring, retain organizational knowledge, and mitigate risks.[9] The FAR provides similar guidance related to maintaining contract files.

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[9] COSO, *Internal Control—Integrated Framework*, May 2013.

The contract files were incomplete and disorganized. For example, the files were missing documentation to support change orders, and change orders were filed out of sequence. Also, changes in contract administration, functions, and responsibilities were undocumented in the contract files. For example, the assignments of three PCOs over the life of the contract were undocumented, and the COTR designation was outdated. In addition, the PCO stated that many contract documents were lost when emails containing them were purged because the emails had not been identified as business records in order to be retained, as required by the company's records and information management policy. The PCO stated that the loss of a document control officer also was a contributing factor to the incomplete and disorganized contract files.

CONCLUSIONS AND RECOMMENDATIONS

The parts contract with Alstom is a significant financial investment that is critical to ensuring effective and efficient supply support to the Acela trainsets. A breakdown in the contract management team's system of management controls resulted in costly consequences for the company, including:

- The company paid an undeterminable but potentially significant amount in unreasonably high part prices. Specifically, we questioned about $85,000 in unreasonably high prices that the company paid for nine repaired parts we reviewed; other unreasonable prices may also have been paid for other parts purchased over the life of the contract.

- The company did not assess as much as $19 million in penalties for late parts delivery and has accumulated more than $18 million in warranty claims that remain unsettled for years. With more effective management controls, the company could have put some portion of these funds to better use in support of the Acela fleet.

The underlying cause of this situation was a general lack of emphasis and oversight on the cost effectiveness of the contract. Issues went largely unaddressed because the focus was on whether parts were available, with little or no concern about costs. A better balance is needed. Without making needed improvements in its overall governance structure and contract oversight practices, the contract management team risks compromising the company's strategic goal of financial excellence.

To improve management of the Acela parts contract, we recommend that the Senior Vice President/Chief Mechanical Officer and Vice President/Chief Procurement and Logistics jointly take, and assign accountability and milestones for, the following actions:

1. Develop the appropriate internal controls and data systems to effectively manage, monitor, and oversee the contract.

2. Define, assign, and document the roles and responsibilities of the key officials responsible for managing the parts contract.

3. Conduct a comprehensive review of contract prices for parts and work with Alstom to reset prices where appropriate.

4. Determine the extent to which unreasonably high prices were paid for parts, and seek remediation when appropriate.

5. Develop a formal agreement for the assessment of penalties for parts and incentive payments that is based on a business case analysis of cost and benefits, and preserves contract provisions to assess penalties in the future.

6. Work with Alstom to resolve outstanding warranty claims and amend contract warranty provisions to facilitate timely resolution of warranty issues, such as establishing time limits for settlement, specifying warranty coverage of components and parts, and defining warranty exclusions.

MANAGEMENT COMMENTS AND OIG ANALYSIS

In commenting on a draft of this report, the company's Executive Vice President/Chief Financial Officer agreed with our recommendations. He also provided action plans and estimated dates for completing the actions, which are summarized below:

- **Recommendation 1.** Management will review the design and operational effectiveness of relevant internal controls that address the administration of the Acela parts contract. Any control gaps or ineffective controls identified in our report will be remediated. Management expects to complete these actions by the third quarter of 2015.

- **Recommendation 2.** Management is forming a new Strategic Acquisitions Team to manage the Acela parts contract and future significant acquisitions. The role of this team will be to manage and monitor major acquisitions and will report directly to the Vice President, Chief Procurement and Logistics Officer. The team's roles and responsibilities will be reviewed, defined, and then documented in updated procurement contract administration policies and procedures. These actions are expected to be completed by the third quarter of 2015.

- **Recommendations 3 and 4.** Management will review prices paid for parts and work for reasonableness and adherence to agreed pricing structures within the current contract. If anomalies are found, the company will negotiate an appropriate remedy with Alstom. Management expects to complete these actions by the fourth quarter of 2015.

- **Recommendations 5 and 6.** Procurement and Legal will review the current contract and develop a new agreement with Alstom that preserves Amtrak's ability to assess penalties for past and future performance. Management expects these actions to be completed by the fourth quarter of 2015.

These planned actions address the intent of our recommendations. For management's complete response, see Appendix B. Management also provided technical comments that we have incorporated in this report as appropriate.

Appendix A

SCOPE AND METHODOLOGY

The scope of this report addresses the company's management of its contract with Alstom to provide parts for the Acela trainsets. We reviewed contract management for the period from February 2006 through November 2014. Our objective was to assess the effectiveness and efficiency of the management of the contract. Working principally with the Procurement and Mechanical departments, we conducted this audit work from January through November 2014 in Chicago, Illinois; Philadelphia, Pennsylvania; Washington, D.C.; and Wilmington, Delaware.

Our methodology for assessing the effectiveness and efficiency of the company's contract management was to compare the company's practices with best practices, contract provisions, and Procurement's policies. To identify requirements and best practices to provide a framework for our assessment, we reviewed the company's Acela trainset service contract with Alstom. We reviewed company policies and procedures, including the Procurement Policy Manual. We also researched and identified best practices used in contract and warranty management from these sources:

- Committee of Sponsoring Organizations of the Treadway Commission (COSO), *Internal Control—Integrated Framework*, May 2013
- Office of Federal Procurement Policy, *A Guide to Best Practices for Contract Administration*, October 1994
- GAO, *Framework for Assessing the Acquisition Function at Federal Agencies,* September 2005
- *Federal Acquisition Regulation*

To document the company's practices, we interviewed Procurement and Mechanical employees responsible for contract management and oversight, maintenance, and warranty claims. We also visited and inspected inventory storage and distribution sites in Wilmington and Bear, Delaware, and Ivy City in Washington, D.C. To analyze the reasonableness of Alstom's parts prices, we selected a sample of 12 parts (2 new and 10 repaired parts) based on price, frequency of repairs, and types of parts purchased; we then compared the prices in the January 2014 catalog with Alstom's actual repair costs for repaired parts and vendor quotes for new parts. To determine if parts were delivered late for which no penalties were collected, we analyzed a sample of parts purchased in August 2013. We coordinated with the OIG general counsel on issues related to contract terms. We also coordinated with the company's Law department on issues related to the settlement of the outstanding warranty claims.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Internal Controls

We reviewed the management controls that the contract management team used to manage and oversee the contract with Alstom. We assessed the team's policies and procedures for tracking the delivery of parts, managing the warranty claims settlement process, enforcing contract terms and conditions, reviewing the reasonableness of contract parts prices, establishing minimum inventory levels, and administering and maintaining contract documentation. We did not assess Procurement's overall system of controls for contract management.

Computer-Processed Data

We relied on computer data from the Procurement and Mechanical departments, which provided information on Alstom contract parts prices, the total dollar amount of parts purchased from February 2007 through May 2014, and outstanding warranty claims as of August 31, 2014. To verify the accuracy of Alstom's prices, we traced a sample to the original contract and change orders. We noted some minor differences, but these differences were immaterial to the results of our analysis.

To verify the accuracy of the universe of parts purchased, we obtained detailed monthly invoices from the company's Ariba system (e-Trax) for FY 2012 and FY 2013 and compared the totals to the billing summary. The data matched and were sufficiently reliable to be used in meeting our audit objective. The outstanding warranty claim data came from the company's Work Management System. Warranty claims are electronically generated; therefore, source documentation was not available. To test the accuracy of these data, we validated 33 claims with a Procurement director of material management. The claims we tested were valid; therefore, we concluded that the data were sufficiently reliable to be used in meeting our audit objective.

Prior Audit Reports

In conducting our analysis, we reviewed and used information from the following reports:

- *Acquisition and Procurement: Closer Alignment with Best Practices Can Improve Effectiveness* (OIG-A-2014-006, May 7, 2014)
- *Acela Car Purchase: Questioned Costs Identified in Price Proposal* (OIG-A-2013-002, December 4, 2012)
- *Framework for Assessing the Acquisition Function at Federal Agencies* (GAO-05-218G, September 2005)

Appendix B

MANAGEMENT COMMENTS

Memo

Date: February 18, 2015

To: David R. Warren
Assistant Inspector General, Audits

From: Gerald Sokol Jr., Executive Vice President/Chief Financial Officer

Department: Finance

Subject: ***Acquisition and Procurement: Improved Management Will Lead to Acela Parts Contract Cost Savings***

cc: Bernard Reynolds, Vice President & Chief Procurement & Material Management
Matthew Gagnon, Senior Director, Amtrak Controls
Mario Bergeron, Senior Vice President, Chief Mechanical Officer

This memorandum provides Procurement & Logistics' (P&L) response to the OIG 1/7/2015 audit report: *"Acquisition and Procurement: Improved Management Will Lead to Acela Parts Contract Cost Savings."*

Recommendation #1:
Develop the appropriate internal controls and data systems to effectively manage, monitor and oversee the contract.

Management Response/Action Plan:
Management agrees with the recommendation.

As part of the current Management Control Framework cycle, Procurement will work with Amtrak Controls to review the design and operational effectiveness of relevant internal controls that address the administration of the Acela Parts Contract (including supporting systems). All findings in the OIG report will be traced to existing internal controls and any control gaps or ineffective controls will be remediated.

- Expected Completion Date: Q3, 2015
- Coordinator(s): Vice President, Chief Procurement & Logistics Officer; Senior Director, Amtrak Controls

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Recommendation #2:
Define, assign, and document the role and responsibilities of the key officials responsible for managing the parts contract.

Management Response/Action Plan:
Management agrees with the recommendation.

Procurement is forming a new Strategic Acquisitions Team to manage both this contract and future significant acquisitions. This team will be a specialized function within procurement acting under a new resource that is currently being hired. The role of this team will be to manage and monitor major acquisitions and will report directly to the VP procurement.

The roles and responsibilities of this new team will be reviewed, defined and then documented in updated procurement contract administration policies and procedures.

- Expected Completion Date: Q3, 2015
- Coordinator(s): Vice President, Chief Procurement & Logistics Officer; Senior Vice President, Chief Mechanical Officer

Recommendation #3:
Conduct a comprehensive review of contract prices for parts and work with Alstom to reset prices where appropriate.

Management Response/Action Plan:
Management agrees with the recommendation.

As far as possible under the current contract, Procurement will review prices paid for parts, and work for reasonableness and adherence to agreed pricing structures. Where anomalies are found under this review, Amtrak will negotiate with Alstom an appropriate remedy. We expect full cooperation from the Vendor with the proposed review.

This review will fall under the new Strategic Acquisitions Team.

- Expected Completion Date: Q4, 2015
- Coordinator(s): Vice President, Chief Procurement & Logistics Officer; Senior Vice President, Chief Mechanical Officer

Recommendation #4:
Determine the extent to which unreasonably high prices were paid for parts, and seek remediation where appropriate.

Management Action Plan:
Management agrees with the recommendation.

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As far as possible under the current contract, Procurement will review prices paid for parts, and work for reasonableness and adherence to agreed pricing structures. Where anomalies are found under this review, Amtrak will negotiate with Alstom an appropriate remedy. We expect full cooperation from the Vendor with the proposed review.

This review will fall under the new Strategic Acquisitions Team.

- Expected Completion Date: Q4, 2015
- Coordinator(s): Vice President, Chief Procurement & Logistics Officer; Senior Vice President, Chief Mechanical Officer

Recommendation #5:
Develop a formal agreement for the assessment of penalties for parts and incentive payments that is based on a business case analysis of cost and benefits

Management Action Plan:
Management agrees with the recommendation.

Procurement and Legal will review the current contract and develop a new agreement with Alstom that preserves Amtrak's ability to assess penalties for past and future performance.

This review will fall under the new Strategic Acquisitions Team.

- Expected Completion Date: Q4, 2015
- Coordinator(s): Vice President, Chief Procurement & Logistics Officer; Senior Vice President, Chief Mechanical Officer

Recommendation #6:
Work with Alstom to resolve outstanding warranty claims and amend contract warrant provisions to facilitate timely resolution of warranty issues, such as establishing time limits for settlement, specifying warranty coverage of components and parts, and defining warranty exclusions.

Management Action Plan
Management agrees with the recommendation.

Procurement and Legal will review the current contract and develop a new agreement with Alstom that preserves Amtrak's ability to assess penalties for past and future performance.

This review will fall under the new Strategic Acquisitions Team.

- Expected Completion Date: Q4, 2015
- Coordinator(s): Vice President, Chief Procurement & Logistics Officer; Senior Vice President, Chief Mechanical Officer

Appendix C

ABBREVIATIONS

Alstom	Alstom Transportation Inc.
CLO	Chief Logistics Officer
CO	Contracting Officer
COSO	Committee of Sponsoring Organizations of the Treadway Commission
COTR	Contracting Officer's Technical Representative
FAR	Federal Acquisition Regulation
FY	fiscal year
GAO	Government Accountability Office
Mechanical	Mechanical department
OIG	Amtrak Office of Inspector General
PCO	Principal Contracting Officer
Procurement	Procurement and Material Management department
the company	Amtrak

Appendix D

OIG TEAM MEMBERS

Edward Stulginsky, Deputy Assistant Inspector General, Audits

Daniel Krueger, Senior Director, Audits

David P. Bixler, Senior Director, Audits

Raymond Zhang, Senior Auditor

Jana Brodsky, Senior Auditor

Satish Parikh, Senior Auditor

OIG MISSION AND CONTACT INFORMATION

Amtrak OIG's Mission	The Amtrak OIG's mission is to provide independent, objective oversight of Amtrak's programs and operations through audits, inspections, evaluations, and investigations focused on recommending improvements to Amtrak's economy, efficiency, and effectiveness; preventing and detecting fraud, waste, and abuse; and providing Congress, Amtrak management, and Amtrak's Board of Directors with timely information about problems and deficiencies relating to Amtrak's programs and operations.
Obtaining Copies of OIG Reports and Testimony	Available at our website: www.amtrakoig.gov.
To Report Fraud, Waste, and Abuse	Report suspicious or illegal activities to the OIG Hotline (you can remain anonymous): Web: www.amtrakoig.gov/hotline Phone: 800-468-5469
Point of Contact	David R. Warren Assistant Inspector General, Audits Mail: Amtrak OIG 10 G Street NE, 3W-300 Washington D.C., 20002 Phone: 202-906-4600 E-mail: David.Warren@amtrakoig.gov

Certain information in this report has been redacted due to its sensitive nature.