

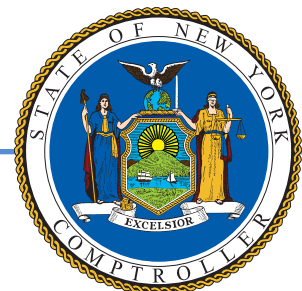
Metropolitan Transportation Authority – New York City Transit Authority and the MTA Bus Company

Management and Maintenance of Non-Revenue Service Vehicles

Report 2020-S-31 | January 2023

OFFICE OF THE NEW YORK STATE COMPTROLLER
Thomas P. DiNapoli, State Comptroller

Division of State Government Accountability



Audit Highlights

Objectives

To determine whether New York City Transit and the MTA Bus Company have and maintain an accurate and complete inventory of non-revenue service vehicles, and to determine whether the non-revenue service vehicles receive scheduled preventive maintenance, are safeguarded, and are properly disposed of at the end of their useful life. The audit covered vehicles owned during the period from January 2018 through April 2021.

About the Program

New York City Transit (Transit) and the MTA Bus Company (MTA Bus) are two related entities under the Metropolitan Transportation Authority (MTA). The MTA is responsible for developing and implementing a unified mass transportation policy for New York City, Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties on behalf of the MTA. Transit provides both subway and bus services, while MTA Bus provides bus services.

As of October 6, 2020, Transit and MTA Bus had 1,950 non-revenue service vehicles (1,792 Transit and 158 MTA Bus) in its fleet. Non-revenue service vehicles (vehicles) are used for purposes other than customer transportation, such as supervisory and maintenance functions. The estimated value of the vehicles was \$150 million, with, according to agency records, a replacement cost of \$216.7 million. The fleet consists of trucks (light, medium, and heavy), SUVs, vans, cars, and other vehicles.

Transit and MTA Bus have Support Fleet Services (SFS) Units that operate from the East New York facility and the Eastchester facility, respectively, under the Office of Central Maintenance Facilities, and are responsible for managing the acquisition, maintenance, and disposition of vehicles in the fleet. The SFS Units operate independently but share one management team.

The SFS Units are responsible for preventive maintenance (PM) that is performed to detect or prevent the degradation of its vehicles in order to sustain or extend their useful life. At SFS, PM includes annual and light service operations inspections, the timing of which starts from the in-service date, to ensure the vehicle is in good working order. Annual Service Operations (ASOs) are scheduled every 12 months, while Light Service Operations (LSOs) are scheduled based on mileage intervals (3,500, 6,000, or 7,500, depending on the vehicle class) or 6 months, whichever comes first. The ASOs and LSOs are scheduled by SPEAR, the maintenance management system that is programmed to automatically create work orders. ASOs and LSOs are performed in-house by the SFS Units, but service work, such as reupholstering seats, replacing springs, and repairing brakes, can be outsourced to vendors. SFS vehicles are assigned to various MTA user groups, such as Transit's Signals, Elevator and Escalator, Track, and MTA Bus, to support ongoing operations. The user groups must coordinate with SFS to bring in the vehicles for ASOs or LSOs. Should additional maintenance or repair work be needed following the ASO or LSO, SFS creates a service operation pickup work order in the SPEAR system.

Key Findings

- Transit and MTA Bus did not always adhere to their own guidance or practice to provide LSOs and ASOs as part of PM on its fleet of vehicles. For example, 173 of the 285 required LSOs (60.7%) in our random sample were done late or not at all. Furthermore, vehicles that do not receive

recommended maintenance may invalidate the warranty, have a shortened useful life, or be subject to more repairs, resulting in higher costs to the SFS Units.

- Transit and MTA Bus did not have an inventory system or maintain accurate and up-to-date inventory of parts purchased to be used to maintain its vehicles. The lack of an inventory system resulted in parts that were unaccounted for. We sampled \$30,870 in parts and identified \$21,928 that could not be traced to a vehicle or located in stock for future use.
- We noted that maintenance costs were \$50.5 million, or 21%, over the \$41.8 million budgeted. However, SFS did not have a process to analyze its maintenance costs in an effort to manage costs.

Key Recommendations

- Work with the user groups to ensure the vehicles are delivered for the scheduled ASOs and LSOs.
- Establish a process for tracking and monitoring maintenance cost.
- Formalize procedures to record and account for the parts that were replaced on the vehicle during maintenance and repairs in SPEAR.
- Train SFS staff on the process to establish consistency when recording parts in SPEAR.



**Office of the New York State Comptroller
Division of State Government Accountability**

January 26, 2023

Janno Lieber
Chairman and Chief Executive Officer
Metropolitan Transportation Authority
2 Broadway
New York, NY 10004

Dear Mr. Lieber:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for the tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit of Metropolitan Transportation Authority – New York City Transit and the MTA Bus Company, entitled *Management and Maintenance of Non-Revenue Service Vehicles*. This audit was performed pursuant to the State Comptroller’s authority under Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

This audit’s results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

Division of State Government Accountability

Contents

- Glossary of Terms** 5
- Background** 6
- Audit Findings and Recommendations** 7
 - Preventive Maintenance 7
 - Recommendations 10
 - Managing Costs 10
 - Recommendations 12
 - Fleet Management 12
 - Recommendations 13
 - Vehicle Inventory 13
 - Recommendations 15
- Audit Scope, Objectives, and Methodology** 16
- Statutory Requirements** 17
 - Authority 17
 - Reporting Requirements 17
- Agency Comments** 18
- Contributors to Report** 22

Glossary of Terms

Term	Description	Identifier
MTA	Metropolitan Transportation Authority	<i>Auditee</i>
ASO	Annual Service Operation	<i>Key Term</i>
Eastchester	Eastchester SFS Facility	<i>Key Term</i>
LSO	Light Service Operation	<i>Key Term</i>
MTA Bus	MTA Bus Company	<i>Agency</i>
PM	Preventive maintenance	<i>Key Term</i>
SFS	Support Fleet Services	<i>Department</i>
SPEAR	MTA Bus and Transit's maintenance management computer system	<i>Key Term</i>
Transit	New York City Transit Authority	<i>Agency</i>

Background

New York City Transit (Transit) and the MTA Bus Company (MTA Bus) are two related entities under the Metropolitan Transportation Authority (MTA). The MTA is responsible for developing and implementing a unified mass transportation policy for New York City, Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties on behalf of the MTA. Transit provides both subway and bus services, while MTA Bus provides bus services.

Transit and MTA Bus have Support Fleet Services (SFS) Units that operate from the East New York facility and the Eastchester facility, respectively, under the Office of Central Maintenance Facilities, and are responsible for managing the acquisition, maintenance, and disposition of non-revenue service vehicles (vehicles) in the fleet. These vehicles are used for purposes other than customer transportation, such as supervisory and maintenance functions. The SFS units operate independently but share one management team.

The SFS Units are responsible for preventive maintenance (PM), which is performed to detect or prevent the degradation of vehicles in order to sustain or extend the vehicle's useful life. At SFS, PM includes annual and light service operations, starting from the in-service date, to ensure the vehicle is in good working order. Annual Service Operations (ASOs) are scheduled every 12 months, while Light Service Operations (LSOs) are scheduled based on mileage intervals (3,500, 6,000, or 7,500, depending on the vehicle class) or 6 months, whichever comes first. The ASOs and LSOs are scheduled by SPEAR, the maintenance management system that is programmed to automatically create work orders. ASOs and LSOs are performed in-house by the SFS Units, but service work, such as reupholstering seats, replacing springs, and repairing brakes, can be outsourced to vendors. SFS vehicles are assigned to various MTA user groups, such as Transit's Signals, Elevator and Escalator, Track, and MTA Bus, to support ongoing operations. The user groups must coordinate with SFS to bring in the vehicles for ASOs or LSOs. Should additional maintenance or repair work be needed following the ASO or LSO, SFS creates a service operation pickup work order in the SPEAR system.

As of October 6, 2020, Transit and MTA Bus had 1,950 vehicles (1,792 Transit and 158 MTA Bus) in its fleet. The estimated value of the vehicles was \$150 million, which, according to agency records, would cost \$216.7 million to replace. The fleet consists of trucks (light, medium, and heavy), SUVs, vans, cars, and other vehicles.

Funding for these vehicles comes from both capital and operating funding sources. Between 2015 and 2019, Transit reported \$58.5 million (\$47.8 million from MTA's Capital Plan for 2015-19 and \$10.7 million in operating funds expensed during 2015-2018) was used to purchase and replace non-revenue service vehicles. Additionally, Transit officials reported spending \$50.5 million in calendar years 2018 to 2020 to maintain its vehicles, which is 21% over the \$41.8 million budgeted. Over the 3-year period, MTA Bus officials reported they spent \$3.9 million to maintain vehicles and about \$383,000 to purchase vehicles.

Audit Findings and Recommendations

Transit and MTA Bus did not always adhere to their own guidance or practice to provide LSOs and ASOs as part of PM on its fleet of vehicles. For example, 173 of the 285 required LSOs (60.6%) in our random sample were done late or not at all. As a result, vehicles may not be in proper working order to support MTA's goal of providing support for transit operations.

We also concluded that improvements are needed to ensure Transit and MTA Bus maintain an accurate and complete inventory of their non-revenue service vehicles and that they are disposed of at the end of their useful life.

Additionally, Transit and MTA Bus did not have an inventory system or maintain accurate and up-to-date inventory of parts purchased to maintain their vehicles. The lack of an inventory system resulted in parts that were unaccounted for. We sampled \$30,870 in parts, and \$21,928 could not be traced to a vehicle or in stock for future use. We noted that maintenance costs were \$50.5 million, or 21%, over the \$41.8 million budgeted; however, SFS did not have a process to analyze its maintenance expenses in an effort to manage costs. Moreover, the facility used by Transit at its East New York shop appears to be too small to support its 1,792 vehicles. This results in parking vehicles around the perimeter of the SFS facility and on the adjacent streets.

Preventive Maintenance

The SFS Units for Transit and MTA Bus perform ASOs and LSOs using two service operation inspection forms: one for cars and light trucks and one for medium and heavy trucks (over 3 tons). The inspection forms for both vehicle classes require an ASO every 12 months and an LSO every 6,000 miles or 6 months. However, the SFS Units, in practice, performed LSOs every 7,500 miles or 6 months for medium and heavy trucks, every 7,500 miles for cars, SUVs, and light trucks, and every 3,500 miles or 6 months for the Ford models F-650 and F-750. SFS officials advised us that the LSO interval changed for Ford models F-650 and F-750 from every 7,500 miles and 6 months to 3,500 miles and 6 months in 2018. According to SFS officials, the change was made due to high idle times.

We selected a random sample of 78 of 1,950 vehicles to determine whether Transit and MTA Bus performed the required ASOs and LSOs. We reviewed service operation forms for the ASOs and LSOs from 2018 to 2020 and compared the expected due dates to actual completion dates for ASOs and LSOs. We reported instances where the ASOs and LSOs were either not performed or delayed and instances where they were performed over the mileage intervals (e.g., 3,500, 6,000, or 7,500 miles).

Inspection Not Performed

For 77 of the 78 vehicles sampled, 208 ASOs and 285 LSOs were required to be performed between 2018 and 2020 by the SFS Units, of which we found that nine ASOs and 104 LSOs were not performed. One sampled vehicle did not have any information because it was disposed of on April 3, 2016. Several of the vehicles

reviewed had significantly exceeded the mileage criteria for a service operation by several thousands of miles, including one vehicle that had as many as 19,812 miles before it was brought in for the ASO and another with 13,281 miles during the 714 days between the ASOs completed December 5, 2018 and November 18, 2020.

The user groups are required to enter the mileage reading every 2 weeks from the vehicle into the SPEAR system where it is aggregated and used to call in vehicles when they reach the mileage for a service operation. SFS officials acknowledge this has not been done consistently, and they send out delinquency notifications to user group liaisons every 2 months to enforce mileage entry compliance. Since entering mileage readings into SPEAR timely is critical for scheduling LSOs based on mileage intervals, not entering the mileage can result in the LSO not being scheduled or being delayed. In response to our preliminary findings, Transit indicated it is evaluating its ability to install new technology to automate mileage entries associated with vehicle maintenance and accountability. In addition, SFS management was developing a notice escalation protocol to senior management to improve compliance by the user groups.

Inspection Delayed

For the vehicles in our sample, we also determined that 59 ASOs and 60 LSOs were an average of 43 days late (ranging from 1 day to 265 days). We requested SFS officials to provide the turnover rate for ASOs and LSOs, but no information was provided. In response to our preliminary findings, MTA officials claimed SFS' inspection goal is to complete the inspection due within the calendar month or within 30 days.

Even with consideration given to SFS' 30-day inspection goal, we found 34 LSOs were over 50 days late (ranging from 51 days to 127 days). In addition, five ASOs were over 50 days late (ranging from 51 days to 265 days). For example:

- One vehicle was due for an ASO on April 12, 2020, but it was done 197 days late on October 26, 2020.
- Another vehicle had three LSOs that were late – 130 days, 93 days, and 61 days late – and one was done over 7,500 miles.
- For one vehicle (a 2018 Ford F-750), the LSO criteria changed from 6,000 miles and 6 months to 3,500 miles and 6 months in 2018. The LSO was due May 17, 2020; however, we found it was completed 99 days later on August 24, 2020. By this time, the vehicle had incurred 4,383 miles, which exceeded the 3,500 miles criteria by 883 miles.

The SFS Units for Transit and MTA Bus do not have written policies or procedures on the time frames to complete ASOs and LSOs or provide guidance on actions to take when the user groups fail to bring the vehicle in for the scheduled inspection. Further, the user groups may not consistently enter vehicle mileage in the SPEAR system. If vehicles do not receive PM on a consistent basis, their performance may be diminished. The cost of repairs resulting from neglected maintenance may significantly exceed the cost of the scheduled maintenance.

Inspection Forms

The SFS Units for Transit and MTA Bus perform ASOs and LSOs using two service operation inspection forms: one for cars and light trucks and one for medium and heavy trucks (over 3 tons). The ASO covers items inspected under the LSO plus several additional items. The inspection form for cars and light trucks lists 24 inspection items for LSOs plus eight additional for ASOs, while the form for medium and heavy trucks lists 25 inspection items for LSOs plus seven additional for ASOs. SFS officials claimed that the inspection forms for ASOs and LSOs were standardized to the owner's manuals years ago based on vehicle safety, reliability, warranty, and EPA regulations, but they could not provide documentation to show the basis of the decision or the year the forms were standardized.

Based on the year, make, and model for the 78 vehicles sampled, we selected a judgmental sample of six owner's manuals to compare to the inspection forms for cars and light trucks and for medium and heavy trucks (over 3 tons) to determine whether LSOs are consistent with the maintenance outlined in the owner's manuals. We found that inspections for LSOs did not always follow the owner's manual.

For example, the manufacturer for four of the Ford models recommended inspecting the windshield for cracks, chips, or pits every 6 months or at every regularly scheduled maintenance (2010 Ford Escape, 2014 Ford Explorer, 2018 Ford F-650 and F-750, and 2019 Ford F-650), but this item is not covered under LSOs. SFS officials claimed it is covered by the inspection item "Check Glass"; however, "Check Glass" is listed under ASOs for every 12 months. The manufacturer for these Ford models also recommended inspecting the suspension components for leaks or damage every 6 months or at every regularly scheduled maintenance, but we found it is not covered for LSOs.

Although SFS officials for Transit and MTA Bus acknowledged that the inspection forms used for cars and light trucks and for medium and heavy trucks are applicable to diesel and gas-fueled vehicles, we found that these forms are used to perform ASOs and LSOs on hybrid and electric vehicles but were not changed to reflect the manufacturer-recommended maintenance for hybrid and electric vehicles. SFS' fleet of 1,950 vehicles includes 258 hybrid and five electric vehicles, or 13% of the fleet.

In 2018, the SFS Units for Transit and MTA Bus changed the mileage intervals for LSOs from 6,000 miles/6 months to 7,500 miles only for cars, SUVs, and light trucks and 7,500 miles/6 months for medium and heavy trucks. That same year, SFS changed the inspection interval specific to Ford models F-650 and F-750 from 6,000 miles/6 months to 3,500 miles/6 months. Based on our review of the inspection forms, we found that the forms were never revised to reflect the change in intervals from 6,000/6 months to 3,500 miles/6 months, 7,500 miles/6 months, or only 7,500 miles, which the SFS Units currently follow for performing LSOs. We noted that the LSO inspection intervals were updated in the SPEAR system to reflect the mileage intervals. The elapsed time remained at 6 months.

Although SFS officials claimed the change from 6,000 to 7,500 miles resulted from switching to synthetic oil, which was more economical since the engine oil could be changed less frequently, they could not provide information to support this claim. SFS last revised the inspection forms for cars and light trucks on March 20, 2008 and for medium and heavy trucks on January 15, 2013, making the forms around 12 and 8 years old, respectively (as of December 2020). The inspection forms are not consistent with SFS' current practices for LSOs. Further, vehicles that do not receive recommended maintenance may invalidate the warranty, have a shortened useful life, or be subject to more repairs – resulting in higher costs to the SFS Units.

Recommendations

1. Work with the user groups to ensure the vehicles are delivered for the scheduled ASOs and LSOs.
2. Send reminders to user departments when mileage has not been entered into the SPEAR system on a regular recurring basis.
3. Revise inspection forms to reflect changes to LSO intervals.
4. Revise inspection forms to reflect the manufacturer-recommended maintenance for electric and hybrid vehicles in the fleet.
5. Document reasons when SFS does not follow certain recommended maintenance in owner's manuals.

Managing Costs

The SFS Units at East New York and Eastchester order stock and non-stock (as needed) parts used to maintain or repair their fleet of vehicles. Stock parts consist of some items routinely used (filters, motor oil, windshield wipers, belts, vehicle batteries) and 10 kits that contain parts (air element, cabin air and oil filters, wiper blades) for vehicles representing 45% of their fleet. SFS officials use log sheets to record the number of kits and batteries stocked at East New York.

One aspect of fleet management is establishing a system that can monitor and track material costs (parts and supplies) charged to repair and maintain the fleet. MTA's SPEAR system is a maintenance management system used by the SFS Units at East New York and Eastchester to monitor and schedule service work as well as record planned and actual labor hours, labor costs, and material costs. Mechanics in the SFS Units are required to enter actual labor hours when closing out assigned tasks on the work order. The foremen are responsible for entering on the work order the item, item description, and planned and actual quantity and cost of parts (stock and non-stock) used for service work. Transit officials reported spending \$50.5 million to maintain its vehicles, an increase of 21% from the \$41.8 million budgeted. Over the 3-year period, MTA Bus officials reported they spent \$3.9 million to maintain vehicles. Accounting for labor and material costs are good measures for monitoring whether resources are being utilized in an efficient and cost-effective manner. It is good business practice for the SFS Units to account for the cost of parts (stock and

non-stock and kits) on a consistent basis to know how much is being spent to repair and maintain its fleet of vehicles.

Parts

We selected a judgmental sample of 50 records from a population of 1,606 for East New York and Eastchester and reviewed 67 invoices – 63 for purchases totaling \$30,870 and four credits totaling \$937.95. We found that SFS could not trace \$21,928 in parts to vehicles based on work orders provided because the quantity and cost of the parts purchased were not always recorded on the work orders or a determination was not made if the items remained in stock. We requested SFS officials provide any additional support to show where the remaining parts from the invoices were used, but the information was not provided.

Although the invoices showed \$8,760 in parts were purchased for stock, SFS could not provide documentation to show the parts were added or removed from stock and used on a vehicle. SFS officials acknowledged that there is no inventory system over parts at East New York and Eastchester, and they do not maintain records on stock and non-stock parts ordered, received, or used except for a log sheet used to record the number of vehicle batteries stocked at East New York. Further, we requested SFS officials at East New York provide a list of parts and the quantity maintained, but that information was not provided. We traced the remaining \$7,192 in parts to the vehicle using the SPEAR work orders.

Additionally, SFS officials at East New York and Eastchester provided documentation that showed the \$937.95 in credits for four of the 67 invoices sampled were refunded in full.

Stock Parts

We counted the number of kits and parts (filters and batteries) stocked at East New York on April 27, 2021, April 29, 2021, and June 3, 2021 and added purchases covering this period to determine the quantity removed from stock. We found that eight kits and 30 parts were removed from stock.

We requested SFS officials at East New York provide documentation that showed which vehicle the parts were used for, but that information was not provided. SFS officials explained that there is no documentation to show which vehicle these items were used for, since records are not maintained. The eight kits cost \$306, and we estimated the 30 parts to cost \$1,101. SFS officials claimed the kits are new and the mechanics are still adjusting to using them. SFS officials further could not confirm whether those items (filters and batteries) counted in stock were the same items purchased on the 63 invoices.

Based on our count of vehicle batteries between April 29, 2021 and June 3, 2021, we did not find 26 batteries (costing \$2,199) in stock that should have been there after including the purchases from invoices covering the same period.

We found another 15 batteries in stock (estimated cost \$1,341) that were not listed on the invoices for this period. SFS officials could not provide documentation to explain the reason for these differences.

In the absence of an inventory system for parts (stock and non-stock) at East New York and Eastchester, SFS officials cannot account for the total costs of parts, quantity ordered, and the vehicles the parts were used for. Due to the lack of accountability to show what parts were used on which vehicles, SFS cannot monitor or assess the true cost to maintain and repair vehicles in its fleet. There is no assurance the parts ordered and paid for with public funds are being used on the fleet, since there are limited records to account for what parts were used on which vehicles. There are no written policies and procedures or training given by SFS to its employees to provide guidance for recording parts (stock and non-stock) used for maintenance and repairs on the SPEAR work order.

Recommendations

6. Formalize procedures to record and account for, in SPEAR, the parts that were replaced on the vehicle during maintenance and repairs.
7. Train SFS staff on the process to establish consistency when recording parts in SPEAR.

Fleet Management

A fleet management system should account for annual and unplanned maintenance costs. It is good business practice to have processes in place to monitor maintenance and repair costs as a factor in understanding and controlling operating expenses.

We requested SFS officials to provide the accumulated maintenance costs for two of the 78 vehicles sampled but were only provided with the in-house costs, excluding the costs for outside service work. SFS officials explained the information is not readily available and has to be manually compiled from separate sources. Further, SFS officials explained that accumulated maintenance and repair costs are not monitored or tracked until after the vehicle reaches its 10-year useful life and is only performed on a case-by-case basis. SFS management claimed that the main goal has been to do the necessary maintenance or repairs to keep the vehicle working for up to 10 years, except when the vehicle has been damaged beyond repair. SFS management will then consider the future cost of repairs against book value as a determining factor in proceeding with the repairs or disposing of the vehicle after 10 years. We found that nearly 26% of the 1,950 vehicles in the fleet were older than 10 years (having model years ranging from 1994 through 2010). We further requested SFS officials to provide a breakdown of costs for some basic maintenance and repairs needed on vehicles in the fleet, but that information was never provided.

We identified the four top manufacturers and models (two Chevy, one Ford, one Toyota) in the fleet and obtained the annual cost estimates for comparison to SFS' average maintenance costs.

Annual Maintenance Costs

Make and Model	Number in Fleet	Annual Maintenance Costs*
Chevy Express	200	\$380
Chevy Suburban	131	\$353
Ford Escape	188	\$601
Toyota Camry	172	\$357

* Varies by service provider.

SFS' Average Maintenance Cost (Year 2020)

Average Cost	East New York	Eastchester
Material and Supplies	\$2,289	-
Total Cost	\$8,366	\$7,465

We found that SFS' average maintenance costs were higher than the annual maintenance costs for the four vehicles sampled. Since SFS officials do not monitor or track maintenance costs on vehicles, this can lead to cost escalation.

In response to our preliminary findings, SFS officials stated that the maintenance costs should be classified by the type of vehicle (car, light truck, heavy truck) and not one average for all types. However, they did not provide any documents to support their statement. In addition, SFS did not maintain cost information that could be used to calculate maintenance costs per type of vehicle and did not ensure that costs were entered in SPEAR where they could be aggregated.

Recommendations

8. Establish a process for tracking and monitoring maintenance costs.
9. Establish written policies and procedures and provide training to employees on how to implement this process as part of controlling cost.

Vehicle Inventory

Maintaining adequate records on assets, funding sources, and expenses is critical for fleet management. Accurate and up-to-date inventory records are important for accountability and monitoring purposes. Transit and MTA Bus maintain an inventory list of their non-revenue service vehicles, referred to as the "Directory." Vehicles are added to the Directory by acquisition or through an intra-divisional transfer from another MTA agency and are removed after disposition. The Directory contains generally descriptive information (make, model, year, vehicle identification number) on the vehicle as well as the vehicle number, plate, user department, cost, etc. The vehicle number is unique to the user group and only the last two digits are modified for the replacement year.

SFS officials at East New York and Eastchester advised us that, for each vehicle, they receive and file seven documents with every vehicle acquisition as proof of ownership: (1) Certificate of Origin, (2) Dealer Information (Packing List), (3) DMV Title, (4) Certificate of Sale, (5) Transit Receipt, (6) Vehicle Inspection, and (7) Invoice Statement. Documents for Transit and MTA Bus are filed at the Linden and Eastchester facilities, respectively.

We checked the files of the 78 vehicles sampled to determine whether the seven ownership documents were being maintained by East New York and Eastchester, and found that 20 vehicles were missing one or more documents. Four of the 20 vehicles were transferred from Paratransit, and three were missing five of the ownership documents.

We also found that two of the 78 vehicles sampled from the Directory had been disposed. For example, one vehicle was disposed of on April 3, 2016, but it was not removed from the Directory.

In addition, SFS officials did not provide documentation, such as the Asset Recovery Disposition Form, to support the claim that another vehicle was disposed. This vehicle was from the 53 vehicles sampled during survey that we traced from the vehicle maintenance files to the Directory. An SFS official explained that this was before his time at SFS and the information could not be found, which could be attributed to SFS' poor record keeping.

Our review of the Directory found that it does not include any information on component parts (e.g., plow, aerial bucket, ladder rack) for vehicles in the fleet. Further, we requested SFS officials to provide written policies and procedures for managing its inventory and records, but they acknowledged that they did not have any written policies and procedures.

The SFS Units for East New York and MTA Bus have not established written procedures or guidance for recordkeeping, including maintaining an accurate and up-to-date Directory. Poor and incomplete data can lead to inaccurate decision making. Further, Transit and MTA Bus will not be able to provide accurate information on the number and type of vehicles in the fleet.

Turnover Rate

We observed that, on a daily basis, the perimeter of the East New York facility and nearby lots were used to park vehicles to make space for the vehicles that were to be serviced. To determine the number of vehicles at the facility, we requested the track sheet for October 6, 2020, which had 191 (10.6%) of the fleet. Similarly, on October 27, 2020, there were 210 (11.7%) of the fleet. A further review of the information showed that 65 vehicles were at the facility on both dates.

The 65 vehicles were at the East New York facility on both dates in October 2020 for the following reasons:

-
- Assigned to the East New York facility (23)
 - Designated to be scrapped (5)
 - Vehicles on loan from other facilities (3)
 - Held to be scrapped or reassigned (2)
 - Vehicle was recorded at two different locations at the facility (1)
 - Vehicle belonged to security (1)
 - Vehicle was an incorrect number (1)

The remaining 29 vehicles were at the facility for maintenance (i.e., the vehicle came in for service, was fixed, returned to the user, and subsequently returned for additional services). Our review of the work orders for these vehicles showed that several vehicles were at SFS much longer than the 22 days on the tracking sheets reviewed or the 30 days for an LSO or ASO. In addition, 18 of the 29 vehicles received services at the East New York facility, were sent out to vendors, and returned to the East New York facility for further service. For example, one vehicle was in for service on September 30, 2020 and sent to a vendor on October 23, 2020. The service was completed on January 12, 2021 – 104 total days. The other 11 vehicles either received maintenance and service (six), were waiting for parts (four), or returned for service (one).

SFS officials advised us that the overcrowding at the East New York facility was due to the COVID-19 pandemic. However, a review of the track sheets for October 25 and 28, 2019 showed similar conditions, with vehicles parked around the perimeter of the SFS facility.

In response to our preliminary findings, SFS agreed that it needs to address vehicle capacity at East New York. It had already identified two viable options in 2018; however, due to budget restrictions, the solutions were effectively halted. SFS added that it will re-engage efforts to expand vehicle capacity and optimize the maintenance workload.

Recommendations

10. Establish written policies and procedures and provide training to staff on record keeping and maintaining an accurate and up-to-date inventory list.
11. Evaluate and address the optimal vehicle capacity at the East New York facility to reduce overcrowding. Consider the number of vehicles that East New York can hold, space restrictions, and the daily workload.

Audit Scope, Objectives, and Methodology

The objectives of our audit were to determine whether Transit and MTA Bus have and maintain an accurate and complete inventory of non-revenue service vehicles, and to determine whether the non-revenue service vehicles receive scheduled preventive maintenance, are safeguarded, and are properly disposed of at the end of their useful life. The audit covered the period from January 2018 through April 2021.

To accomplish our objectives and assess related internal controls, we interviewed SFS management, employees at the East New York (Transit) and Eastchester (MTA Bus) facilities, inspectors from the East New York facility who visit outsourced repair work to check the work performed by the vendor, and officials for Transit's Division of Operations Support, the Vendor Relations Unit, MTA's Asset Recovery Unit, and the Office of Management and Budget to understand the process from acquisition through disposition for non-revenue service vehicles. We selected a random sample of vehicles and reviewed descriptive vehicle information from the SPEAR system, including SPEAR work orders and reports. We reviewed the vehicle acquisition, maintenance, and disposition records maintained at the East New York, Eastchester, and Linden facilities as well as a sample of vendor invoices for outsourced service work. To verify the accuracy of the vehicle inventory list maintained by MTA, we selected random samples of vehicles observed at MTA facilities, vehicles listed in the maintenance files, and vehicles listed as disposed. In total, we selected 53 vehicles to review, with the results as noted in the body of our report.

We selected a random sample of 78 vehicles from a population of 1,950 Transit and MTA Bus vehicles. Our sample size of 78 was based on a confidence level of 90% (two sided), with an expected rate of occurrence not less than 95% and a precision rate of 4%. We checked the files of the 78 vehicles sampled to determine whether the seven ownership documents were being maintained by East New York and Eastchester.

Additionally, we selected a judgmental sample of 50 from a population of 1,606 records that consisted of invoices for parts purchased by Transit and MTA Bus and examined the work orders related to parts that were used. We also reviewed the inventory of parts used for maintenance and repairs at the East New York and Eastchester facilities. These samples were not designed to be projected to the entire population. We tested the data used to select our samples and conduct our audit work, and determined it was sufficiently reliable for the purpose of our audit objectives

Statutory Requirements

Authority

This audit was performed pursuant to the State Comptroller's authority under Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

We conducted our 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State, including some duties on behalf of public authorities. For MTA, these include reporting MTA as a discrete component unit in the State's financial statements and approving selected contracts. These duties could be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our professional judgment, these duties do not affect our ability to conduct this independent audit of Transit's and MTA Bus' maintenance of non-revenue service vehicles.

Reporting Requirements

We provided a draft copy of this report to MTA officials for their review and formal comment. We considered their comments in preparing this final report, and they are attached in their entirety at the end of it.

MTA officials agreed with four of the 11 recommendations and have taken or plan to take action to implement them. MTA stated it cannot act to implement four recommendations because there is no automated system to capture the information, but they are determining the feasibility of developing the necessary systems. The remaining three recommendations are partially implemented.

We are pleased the MTA has taken action to implement several of the recommendations. However, MTA officials should revisit using their current process to capture cost to maintain their fleet. During the audit, we noted that it was not performed consistently. Improved controls to capture maintenance costs for management's use should not be further delayed.

Within 180 days after release of this report, as required by Section 170 of the Executive Law, the Chairman and Chief Executive Officer of the Metropolitan Transportation Authority shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where the recommendations were not implemented, the reasons why.

Agency Comments

2 Broadway
New York, NY 10004
212 878-7000 Tel

Janno Lieber
Chairman and Chief Executive Officer



Metropolitan Transportation Authority

State of New York

December 23, 2022

Ms. Carmen Maldonado
Audit Director
The Office of the State Comptroller
Division of State Government Accountability
59 Maiden Lane, 21st Floor
New York, NY 10038

Re: Draft Report #2020-S-31 (Management and Maintenance of Non-Revenue Service Vehicles)

Dear Ms. Maldonado:

This is in reply to your letter requesting a response to the above-referenced draft report.

I have attached for your information the comments of Richard Davey, President, MTA New York City Transit, which address this report.

Sincerely,

A handwritten signature in black ink that reads "Janno Lieber".

Janno Lieber

c: Laura Wiles, MTA Chief of Staff
Michele Woods, Auditor General

The agencies of the MTA

MTA New York City Transit
MTA Long Island Rail Road

MTA Metro-North Railroad
MTA Bridges and Tunnels

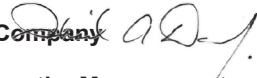
MTA Construction & Development
MTA Bus Company

Memorandum



Date December 22, 2022

To Janno Lieber, Chair and CEO, MTA

From Richard Davey, President NYCT, MTA Bus Company 

Re NYS Office of the Comptroller Draft Report on the Management and Maintenance of Non-Revenue Service Vehicles (Report 2020-S-31)

This is in response to the Office of the Comptroller draft report to the MTA on the Management and Maintenance of Non-Revenue Service Vehicles Report 2020-S-31 dated November 23, 2022. The following are our specific responses to the report recommendations:

Recommendation #1: Work with the user groups to ensure the vehicles are delivered for the scheduled ASOs and LSOs.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation and continues to work with user groups to schedule ASOs and LSOs by sending email reminders. In the second quarter of 2023 SFS will implement an escalation protocol which will include senior management. User Department Heads and SFS senior management will be informed of required department assigned vehicles lacking scheduled maintenance.

Recommendation #2: Send reminders to user departments when mileage has not been entered into the SPEAR system on a regular recurring basis.

NYCT Response: NYCT Department of Bus and MTA Bus agrees with this recommendation and will implement a process to identify vehicles with no current recorded mileage in SPEAR. NYCT is evaluating its ability to install Telematics technology to automate mileage entries and its potential to further automate our internal controls associated with vehicle maintenance and accountability. A reporting and notification escalation process will be implemented in the second quarter of 2023.

Recommendation #3: Revise inspection forms to reflect changes to LSO intervals.

NYCT Response: NYCT Department of Bus and MTA Bus agrees with this recommendation. Inspection forms have been revised.

Memo: NYS Office of the Comptroller Draft Report on the Management and Maintenance of Non-Revenue Service Vehicles (Report 2020-S-31)
December 22, 2022
Page 2 of 3

Recommendation #4: Revise inspection forms to reflect the manufacturer-recommended maintenance for electric and hybrid vehicles in the fleet.

NYCT Response: NYCT Department of Bus and MTA Bus agrees with this recommendation. Inspection forms have been revised.

Recommendation #5: Document reasons when SFS does not follow certain recommended maintenance in owner's manuals.

NYCT Response: NYCT Department of Bus and MTA Bus agrees with this recommendation. NYCT Department of Bus and MTA Bus meet or exceed all original manufacturer's maintenance recommendations and will make changes based on experience and operating conditions. The reasons will be documented.

Recommendation #6: Formalize procedures to record and account for, in SPEAR, the parts that were replaced on the vehicle during maintenance and repairs.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation. Utilization of SPEAR for tracking cost and parts for our non-revenue fleet is not automated. Our systems do not allow us to implement this recommendation at this time. However, NYCT Department of Bus is pursuing the feasibility and evaluation of a maintenance management software system for our Support Fleet Services Unit.

Recommendation #7: Train SFS staff on the process to establish consistency when recording parts in SPEAR.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation. Utilization of SPEAR for tracking cost and parts for our non-revenue fleet is not automated. Our systems do not allow us to implement this recommendation at this time. However, NYCT Department of Bus is pursuing the feasibility and evaluation of a maintenance management software system for our Support Fleet Services Unit.

Recommendation #8: Establish a process for tracking and monitoring maintenance costs.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation. Utilization of SPEAR for tracking cost and parts for our non-revenue fleet is not automated. Our systems do not allow us to implement this recommendation at this time. However, NYCT Department of Bus is pursuing the feasibility and evaluation of a maintenance management software system for our Support Fleet Services Unit.

Memo: NYS Office of the Comptroller Draft Report on the Management and Maintenance of Non-Revenue Service Vehicles (Report 2020-S-31)
December 22, 2022
Page 3 of 3

Recommendation #9: Establish written policies and procedures and provide training to employees on how to implement this process as part of controlling costs.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation. Utilization of SPEAR for tracking cost and parts for our non-revenue fleet is not automated. Our systems do not allow us to implement this recommendation at this time. However, NYCT Department of Bus is pursuing the feasibility and evaluation of a maintenance management software system for our Support Fleet Services Unit.

Recommendation #10: Establish written policies and procedures and provide training to staff on recordkeeping and maintaining an accurate and up-to-date inventory list.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation. NYCT Department of Bus and MTA Bus will document the current manual process of updating the non-revenue vehicle inventory list by the second quarter of 2023. Our systems do not allow us to implement this recommendation at this time. However, NYCT Department of Bus is pursuing the feasibility and evaluation of a maintenance management software system for our Support Fleet Services Unit.

Recommendation #11: Evaluate and address the optimal vehicle capacity at the East New York facility to reduce overcrowding. Consider the number of vehicles that East New York can hold, space restrictions, and the daily workload.

NYCT Response: NYCT Department of Bus and MTA Bus acknowledges this recommendation. NYCT Department of Bus is actively working on optimizing workspace at the East New York location and is pursuing the option of an additional facility, if sufficient financial resources are available.

Contributors to Report

Executive Team

Andrea C. Miller - *Executive Deputy Comptroller*

Tina Kim - *Deputy Comptroller*

Ken Shulman - *Assistant Comptroller*

Audit Team

Carmen Maldonado - *Audit Director*

Robert C. Mehrhoff - *Audit Manager*

Anthony Belgrave - *Audit Supervisor*

Teeranmattie Mahtoo-Dhanraj - *Examiner-in-Charge*

Brenda Maynard - *Senior Examiner*

Alassane Kinda - *Senior Examiner*

Contact Information

(518) 474-3271

StateGovernmentAccountability@osc.ny.gov

Office of the New York State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, NY 12236



Like us on Facebook at facebook.com/nyscomptroller

Follow us on Twitter @[nyscomptroller](https://twitter.com/nyscomptroller)

For more audits or information, please visit: www.osc.state.ny.us/audits/index.htm