Audit of Fleet Management's Performance of Vehicle Preventative Maintenance

Phil Diamond, CPA
County Comptroller
Orange County, Florida

www.occompt.com

Report No. 497
January 2023

County Audit Division

Wendy Kittleson, CPA, CIA, CISA
Assistant Comptroller, Audit Division

Lisa Fuller, CIA, CISA
Director

Erin Boley, CPA, CIA
Deputy Director

Audit Team

Brenda Feliciano, CPA
Audit Supervisor

Orange County Comptroller's Office

Mission

The mission of the Orange County Comptroller's Office is to serve the citizens of Orange County and our customers by providing responsive, ethical, effective, and efficient protection and management of public funds, assets, and documents, as specified in the Florida Constitution and Florida Statutes.

Vision

The vision of the Orange County Comptroller's Office is to be recognized as a highly competent, cohesive team leading the quest for continuing excellence in the effective safeguarding and ethical management of public funds, assets, and documents.

TABLE OF CONTENTS

OFFICE OF THE COMPTROLLER

ORANGE COUNTY FLORIDA

PHIL DIAMOND, CPA
County Comptroller
County Audit Division
109 East Church Street, Suite 220
Post Office Box 38
Orlando, FL 32802
Telephone: 407-836-5775
www.occompt.com

January 19, 2023

Jerry L. Demings, County Mayor
And
Board of County Commissioners

We have conducted an audit of the Orange County Fleet Management Division's Fleet Maintenance Program. The audit focused on the timeliness of preventative maintenance performed on county vehicles which are maintained by Fleet. The period audited was January 2017 through June 2019.

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

Responses to our Recommendations for Improvement were received from Bryan Lucas, Fleet Management Division Manager, and are incorporated herein.

We appreciate the cooperation of Fleet personnel during the course of the audit.

Phil Diamond, CPA
County Comptroller

c: Byron Brooks, County Administrator
Carla Bell Johnson, Deputy County Administrator
Anne Kulikowski, Director, Administrative Services Department
Bryan Lucas, Manager, Fleet Management Division

Why This Audit Is Important

The Orange County Fleet Management Division (Fleet) maintains and repairs over 4,000 vehicles, including emergency response ambulances and off-road equipment assets operated by Orange County. Fleet has defined preventative maintenance schedules for each type of equipment based on fuel and meter types. Performing routine preventative maintenance improves the vehicle's useful life, operating efficiency and safety. Vehicles not consistently maintained pose a greater risk to the driver, other drivers on the road, and potentially citizens being transported during an emergency. Additionally, vehicle downtime due to repairs or vehicle inoperability can cause service delays to citizens and county projects.

The Objective of Our Audit

The objective of the audit was to determine whether Orange County Fleet Management performed vehicle preventative maintenance in accordance with Fleet Management policies.

What We Found

Standard Oil/Fluid Changes Were Not Performed Timely For Passenger Vehicles and Trucks (Page 8).

After calculating distances traveled and days between level one services, we determined that 84% (299 of 358) of level one services tested were performed late or skipped. Five vehicles were driven more than 15,000 miles without receiving services. One of these five vehicles was driven over 31,000 miles between

services. Of the diesel/unleaded hourly vehicles required to have service every 250 hours, six vehicles had no service performed for more than 750 hours. One of these vehicles was driven more than 2,250 hours between services. These 11 vehicles resulted in 65 skipped preventative maintenance services.

Upper Level Preventative Maintenance Was Not Performed Timely For Passenger Vehicles and Trucks (Page 8)

Level two through four services include, but are not limited to, tire rotations, transmission fluid changes, and coolant flush/filter changes. Our review found that 73% of these services were performed late or skipped.

Preventative Maintenance Was Not Performed Timely For Fire Rescue Ambulances (Page 13).

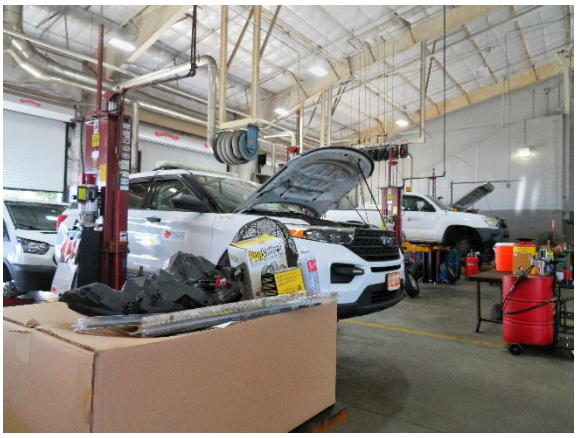
65 Fire Rescue ambulances were maintained by Fleet during the testing period. Of the 484 level one services that should have been performed, 94% (457 of 484) were performed late or skipped.

Overall Evaluation (Page 7)

Based on the results of our testing, Fleet Management did not appropriately oversee the vehicle preventative maintenance program during the audit period. We noted multiple areas for improvement in the Recommendations section of this report.

Background

The Orange County Fleet Management Division (Fleet) maintains and repairs vehicles owned and operated by the Orange County Board of County Commissioners. Fleet schedules and performs maintenance on over 4,000 vehicles and off-road equipment assets. Performing routine preventative maintenance helps ensure a vehicle's safety and reliability. Additionally, timely maintenance can limit repair costs.



Over time as vehicles are driven, more extensive preventative maintenance is required. Fleet uses four preventative maintenance service levels for most vehicles. The service levels are cumulative because service levels include services from the preceding level(s). For example: Level 3 services include a transmission fluid change, tire rotation and alignment, an oil change and standard fluid changes.

Example of Services Included in Each Service Level	
Level 1 Service	Oil change, standard fluid changes
Level 2 Service	Tire rotation and alignment
Level 3 Service	Transmission fluid change
Level 4 Service	Coolant flush, filter changes

Fleet determines preventative maintenance service requirements based on a vehicle's usage history and fuel type. Usage is measured in either miles or hours. Additionally, level one maintenance must be performed at least once every 365 days even if the vehicle has not met the usage threshold by that time. Further, certain types of vehicles may have special maintenance schedules.

The following required service maintenance schedules were established by Fleet. The service intervals are lower than manufacturer guidelines to allow for scheduling delays. Manufacturer maintenance schedules vary by vehicle make and model. The Vehicle Management System (VMS) does not track manufacturer maintenance schedules. Thus, the lower thresholds were utilized in the system.

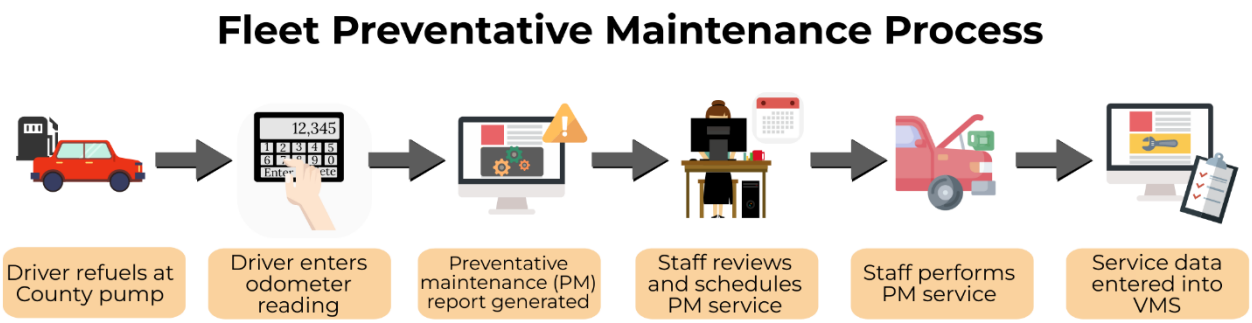
Preventative Maintenance Schedule

Usage	Level 1 *	Level 2	Level 3	Level 4
Diesel (Miles)	6,000	12,000	24,000	48,000
Unleaded (Miles)	5,000	15,000	30,000	60,000
Diesel or Unleaded (Hours)	250	500	1,000	2,000

* Level 1 service occurs at stated interval or 365 days since last service, whichever is earlier.

Prior to fueling, the driver records vehicle meter readings at Fleet's fuel pumps. Additionally, Fleet maintenance service writers record meter readings when vehicles are serviced. Vehicle information, meter readings, and related service data is recorded in the VMS. The VMS tracks when vehicles are due for preventative maintenance. VMS calculates the number of miles driven, engine hours used, and days since the last preventative maintenance service performed based on recorded meter readings. Fleet generates reports from VMS showing vehicles due for preventative maintenance weekly. Using these reports, Fleet employees email tentative vehicle service dates to user departments. In addition to the maintenance performed by Fleet, Valvoline provides maintenance services for county vehicles to help alleviate the workload.

The following diagram illustrates the Fleet Preventative Maintenance Process.



Audit Scope

The scope of the audit included Orange County vehicles maintained by Fleet Management. The audit period was from January 2017 to June 2019.

Audit Objective

The objective of the audit was to determine whether Orange County Fleet Management performed vehicle preventative maintenance in accordance with Fleet Management policies.

Audit Methodology

We selected a sample of over-the-road vehicles maintained by Fleet from January 2017 through June 2019. The following number of vehicles were selected for testing by meter and fuel type:

	Sample Size
Unleaded Miles	75 Vehicles
Diesel Miles	29 Vehicles
Unleaded & Diesel Hours	16 Vehicles

For each sample item selected, we:

- Evaluated meter readings recorded in VMS for reasonableness; and,
- Verified that vehicles received the necessary preventative maintenance services according to Fleet maintenance schedules.

Additionally, we performed the following:

- Identified and reviewed maintenance records of any vehicles that had no recorded preventative maintenance during the period to ensure the vehicles received the necessary level one services;
- Verified that all level one preventative maintenance services performed by Valvoline were recorded in VMS; and,
- Reviewed service and odometer reading data to determine whether all Fire Rescue ambulances maintained by Fleet Management received the necessary level one services.

Overall Evaluation

Based on the results of our testing, Fleet Management did not appropriately oversee the vehicle preventative maintenance program during the audit period. As such, vehicles were not serviced timely. We noted multiple areas for improvement in the Recommendations section of this report.

1. Preventative Maintenance Should Be Performed Timely For All Vehicles

Fleet maintains thousands of vehicles including trucks, passenger cars, and heavy-duty equipment. All vehicles that run on diesel fuel and unleaded gasoline should follow the preventative maintenance schedule established by Fleet. This schedule consists of four service levels. The following chart shows the preventative maintenance schedule established by Fleet for each service level by meter and fuel type:

Preventative Maintenance Schedule

Usage	Level 1 *	Level 2	Level 3	Level 4
Diesel (Miles)	6,000	12,000	24,000	48,000
Unleaded (Miles)	5,000	15,000	30,000	60,000
Diesel or Unleaded (Hours)	250	500	1,000	2,000

* Level 1 service occurs at stated interval or 365 days since last service, whichever is earlier.

The service intervals are lower than manufacturer guidelines to allow for scheduling delays. Manufacturer maintenance schedules vary by vehicle make and model. The VMS does not track manufacturer maintenance schedules. Thus, the lower thresholds were utilized in the system.

As part of our audit testing, we selected a sample of vehicles from each of the three meter/fuel combinations. We reviewed the service and odometer data for these sample vehicles to determine whether the necessary preventative maintenance services were provided timely.

Level One Services

Level one services include an oil change and a general vehicle inspection. Based on these inspections, other repairs might be identified and performed as needed. Fleet performs some level one services in-house. Fleet also has a term contract with Valvoline to perform level one services to help alleviate its workload during busy times.

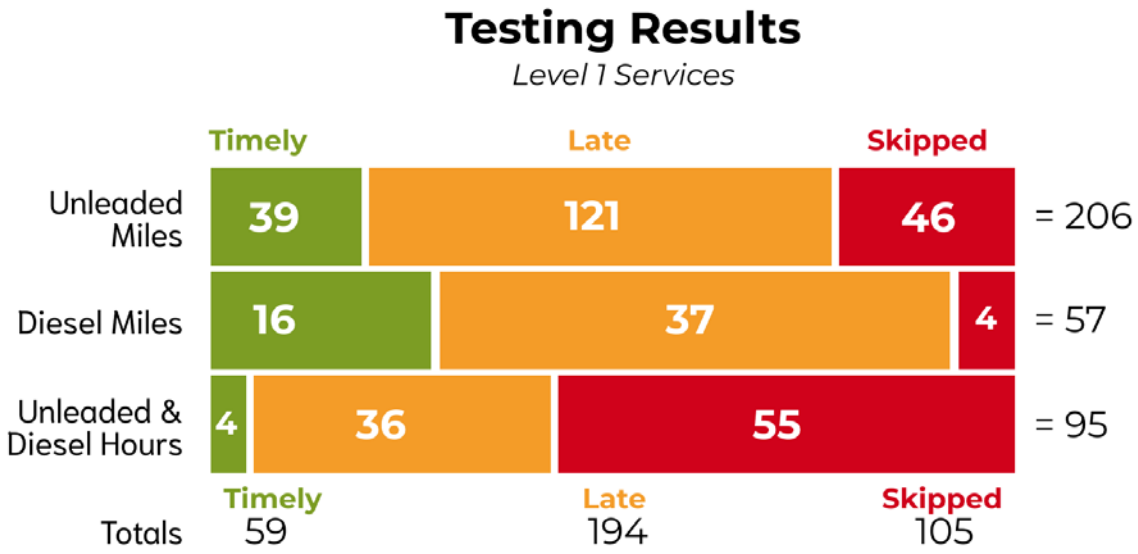
We used the following testing thresholds in our review to determine whether maintenance was timely performed. These thresholds were designed to allow for more miles and/or days between services. This is intended to reflect practical scheduling issues that may arise between services.

Audit Thresholds

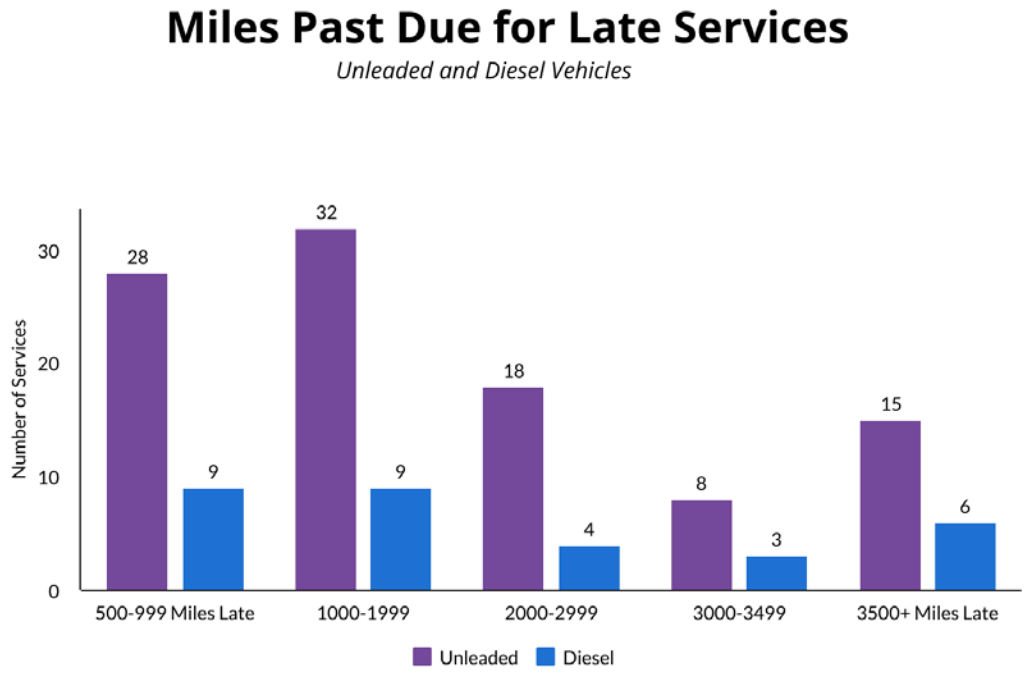
	Unleaded (Miles)	Diesel (Miles)	Hours	Days
Timely	within 5,500 miles	within 6,500 miles	within 275 hours	within 395 days
Late	5,501-10,000	6,501-12,000	276-500	396-730
Skipped	> 10,000 miles	> 12,000 miles	> 500 hours	> 730 days

We compared the meter readings and days between level one services and determined that 84% (299 of 358) of level one services tested were performed late or skipped.

The following chart shows our testing results in more detail.



The following chart shows how many miles the vehicles were driven past the threshold for each late service.

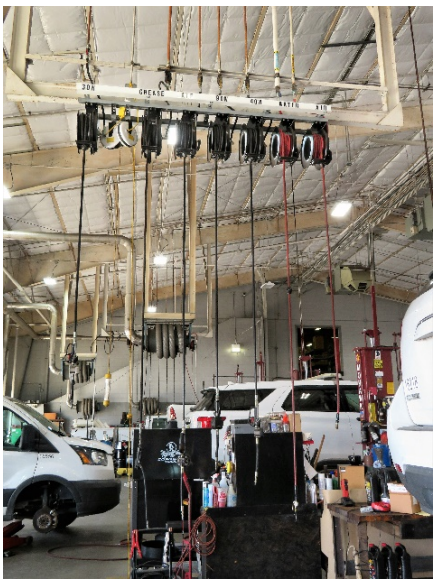


After reviewing the skipped and late services, we found:

- Seven vehicles had ten separate instances of being driven more than 15,000 miles without receiving any service. One of these seven vehicles was driven over 31,000 miles between services.
- Of the diesel/unleaded hourly vehicles required to have service every 250 hours, six vehicles had 14 separate instances where no service was performed for more than 750 hours. One of these six vehicles was driven more than 2,250 hours between services.

In addition to service mileage requirements, every vehicle should be serviced within 365 days if it has not reached the mileage threshold during that period. In reviewing the number of days between services, we found that 53 vehicles had not been serviced in over 395 days[1]. We also found that seven of these vehicles had not been serviced at all in over two years.

Level Two through Four Services



Level two through four services include, but are not limited to, tire rotations, transmission fluid changes, and coolant flush/filter changes. These services occur at longer service intervals. Therefore fewer services were required during the audit period.

Our review indicated that the majority (73%) of these services were also performed late or skipped.

The following chart illustrates our findings.

[1] These 53 vehicles were included in the 299 skipped/late services previously reported.

Testing Results

Level Two through Four services

	Service Level	Number of Services Tested	Timely	Late	Skipped
Unleaded Miles	Level 2	51	17	32	2
	Level 3	9	2	7	0
	Level 4	0	0	0	0
Diesel Miles	Level 2	21	11	10	0
	Level 3	4	0	4	0
	Level 4	0	0	0	0
Unleaded & Diesel Hours	Level 2	40	6	21	13
	Level 3	14	3	8	3
	Level 4	4	0	4	0
	Totals	143	39	86	18

The Division is in the process of converting the majority of diesel meters so that they measure hours instead of miles. This change caused driver mileage input errors for vehicles that switched to engine hour meters. Inaccurate odometer readings can cause preventative maintenance scheduling errors.

The preventative maintenance scheduling report from VMS did not accurately list all preventative maintenance services. This resulted from numerous issues including:

- Incorrect software logic used to generate reports;
- Mileage input errors by service writers;
- Mileage input errors by drivers; and,
- Drivers rescheduling service appointments.

Fleet is currently in the process of implementing a new vehicle management system that should address some of the issues we identified. Fleet estimates the system will be operational by summer 2023.

Late or missing preventative maintenance impacts asset life, vehicle operating efficiency and may pose a safety risk to the driver and traveling public. Vehicle

downtime due to repairs or vehicle inoperability can cause service delays to Orange County residents.

Recommendation No. 1:

Fleet Management should:

A) Educate service writers and drivers on the importance of correct mileage entries;

B) Perform user acceptance testing prior to implementation of the new vehicle management system to ensure the report logic used to generate preventative maintenance reports is accurate; and,

C) Develop additional reporting to ensure that all vehicles are maintained according to required preventative maintenance schedules.

Management's Response:

Concur. See Appendix for full response.

2. Fire Rescue Ambulances Should Receive Timely Preventative Maintenance Services

As part of its responsibilities, Fleet performs preventative maintenance on all 65 Orange County Fire Rescue ambulances. These ambulances use diesel fuel. Preventative maintenance is performed based on odometer readings. During the audit, we reviewed service records and odometer data between January 2017 and June 2019 for all 65 ambulances. This data was used to determine whether level one preventative

maintenance services were provided timely.

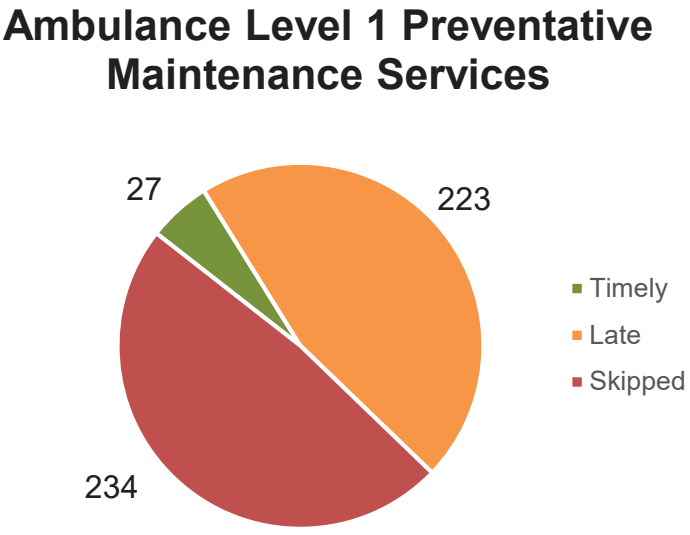
Level one services for ambulances include a more comprehensive vehicle examination than other County vehicles. This is designed to ensure they are prepared for emergency dispatch. These additional services include, but are not limited to, fluid level assessments, siren function, and braking (Complete List of Required Services - Appendix A). According to department policies, level one preventative maintenance should be performed every 6,000 miles or 365 days, whichever is sooner.

We used these thresholds to determine whether preventative maintenance was performed timely. We increased the mileage (from 6,000 to 6,500 miles) and time (from 365 to 395 days) standards to reflect practical scheduling issues that may arise.

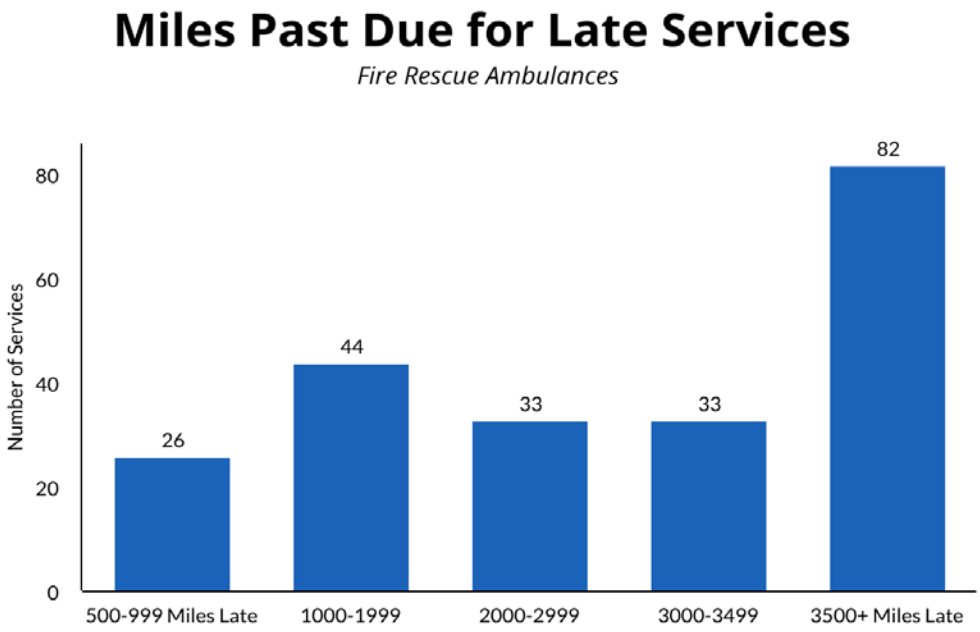
Audit Thresholds

	Miles	Days
Timely	within 6,500 miles	within 395 days
Late	6,501-12,000	396-730
Skipped	> 12,000 miles	> 730 days

Based on the miles that these 65 ambulances were driven during the testing period, 484 level one services should have been performed during the testing period. The following chart shows that 94% of those level one services were performed late or skipped.



The following chart shows the number of miles driven past the threshold for each of the 223 late services:



Additionally, 14 of the 65 ambulances were driven over 24,000 miles before receiving any preventative maintenance service. One of these 14 ambulances was driven over 39,000 miles before receiving service.

During the audit, odometer readings for Fire Rescue ambulances were manually recorded by drivers and submitted to Fleet on a monthly basis. Fleet then entered the odometer data into the VMS to track when preventative maintenance services were due. According to management, the delayed services were caused by inaccurate manually recorded odometer readings and untimely odometer readings. These issues were compounded when vehicles missed service appointments. Due to the critical nature of Fire Rescue services, timely vehicle maintenance is even more essential. Without proper maintenance, these ambulances could break down travelling to or from an emergency when response time is critical.

Recommendation No. 2:

Fleet Management should:

A) Continue to work with Fire Rescue to update and improve the process for collecting and recording odometer data to provide preventative maintenance services on a timelier basis, and

B) Develop additional monitoring procedures and notify Fire Rescue management personnel about vehicles that are overdue for service.

Management's Response:

Concur. See Appendix for full response.

ACTION PLAN

NO.	RECOMMENDATIONS	MANAGEMENT'S RESPONSE		
		CONCUR	PARTIALLY CONCUR	DO NOT CONCUR
1.	Fleet Management should:			
A)	Educate service writers and drivers on the importance of correct mileage entries;	✓		
B)	Perform user acceptance testing prior to implementation of the new vehicle management system to ensure the report logic used to generate preventative maintenance reports is accurate; and,	✓		
C)	Develop additional reporting to ensure that all vehicles are maintained according to required preventative maintenance schedules.	✓		
2.	Fleet Management should:			
A)	Continue to work with Fire Rescue to update and improve the process for collecting and recording odometer data to provide preventative maintenance services on a timelier basis, and	✓		
B)	Develop additional monitoring procedures and notify Fire Rescue management personnel about vehicles that are overdue for service.	✓		

Appendix A - Ambulance Preventative Maintenance Services

Maintenance Inspection Checklist for Emergency Response Vehicles

Veh. No.	Vehicle/ Equipment	PM Type	PM Date	PM Locale	Comments	Dept. Code	Department
[redacted]	[redacted] Emergency Response Vehicle (AB minimum always)	PMAD, PMBD	02/03/20	PM at Fleet Automotive (diesel)	[redacted]	FDN	Fire Department - Rescue [redacted]

Enter Date PM Actually Performed: _____ **Current Mileage:** _____

Tracker PM Table Verification: _____ Production Schedule Update:

Standard Scheduled Maintenance

PMAD - 6,000 Mile Requirements

( ) 1. Steam clean vehicle.
( ) 2. Inspect/Repair if needed tires, check inflation **(Tire Depth RF____ LF____ RR____ ____ LR____ ____)**, including spare
( ) Replace if less than 4/32 tread remaining, and as needed for Dry Rot.
( ) 3. Check tire Date Code replace all tires over 5 years old [redacted]
( ) 4. Change oil, oil filter, and lube chassis, **FILL DIESEL EXHAUST FLUID.** **Reset oil life indicator ( )**
( ) 5. Check transmission and differential oil levels.
( ) 6. Inspect undercarriage for loose bolts.
( ) 7. Inspect springs for cracks and worn bushings (tighten shackle bolts, if necessary).
( ) 8. Inspect muffler, exhaust manifold and exhaust system for tightness and leaks.
( ) 9. Inspect air system for leaks.
( ) 10. Check bell housing, transmission, air compressor and motor mounts for loose bolts.
( ) 11. Inspect steering linkage for wear and looseness.
( ) 12. Check oil and hydraulic lines for leaks and chaffing.
( ) 13. Inspect radiator & hoses for leaks (pressure test). Ck coolant. Replace coolant filter. Clean or repair if necessary
( ) 14. Inspect all drive belts for wear and proper tension (use belt tester). Adjust belts, if necessary.
( ) 15. Inspect, clean or replace air cleaner.
( ) 16. Clean crank case breather - if equipped.
( ) 17. Check parking brake for proper operation.
( ) 18. Check battery cables and terminals for corrosion and resistance. Check battery water levels.
( ) 19. Check alternator output, volt-amp meter operation and starter application (VAT 28).
( ) 20. Check all lights, **back-up alarms** (if equipped) for proper operation.
( ) 21. Check horn and windshield wiper for proper operation.
( ) 22. Check emergency shut off for operation.
( ) 23. Check foot brakes & steering for proper operation (road test).
( ) 24. Check fuel tank straps for looseness, check cap seal & vent hole,inspect fuel lines replace as necessary.
( ) 25. Check PTO and U-joints for wear.
( ) 26. Check Hinges/Latches & Lube as needed.
( ) 27. Inspect interior of cab, seats, glass, mirrors, etc.
( ) 28. Check or replace A/C CAB filters if necessary. **(HEPA)**
( ) 29. Check drive cam for proper mounting and power.
( ) 30. Visually inspect perimeter seal of strecher cot mounts.
( ) 31. Inspect battery terminal connections for MDC/OMM Router systems. Ensure terminals are "closed" eyelit stype, not "Y" style.

PMBD - 12,000 Mile Requirements

( ) 1. Remove wheels as necessary. Check brakes & drums for wear. Check brake actuator for operation.
Check for weak or broken springs and cam bushing on air brakes.
( ) 2. Inspect king pins for wear.
( ) 3. Check clutch for proper free travel and operation of clutch brake. Adjust, if necessary
( ) 4. Tighten air compressor mounting bolts.
( ) 5. Check air box drain tubes.
( ) 6. Remove bell housing cover plate & check clutch release bearing.
( ) 7. Check starter operation. Lubricate, if applicable.
( ) 8. Check, inspect and adjust throttle delay, if necessary.
( ) 9. Check turbo charger connection for tightness.
( ) 10. Inspect operation of shutter. Stat and fan clutch.
( ) 11. Check inspect fuel tank for water and dirt. **Drain Residue From Tank** & Replace fuel filter.
( ) 12. Alignment check if applicable

PMCD - 24,000 Mile Requirements

( ) 1. Change transmission **fluid only. (PLEASE NOTE SKIP THIS STEP/SERVICE IF D SERVICE IS DUE ALSO)**
( ) 2. Check transmission for leaks.
( ) 3. Change Power Steering Filter.

PMDD - 48,000 Mile Requirements

( ) 1. Flush Coolant System.
( ) 2. Change Transmission fluid and filter.
( ) 3. Emissions Service (EGR)

Appendix B – Management's Response

FLEET MANAGEMENT
BRYAN LUCAS, *Manager*
4400 Vineland Road ■ Orlando, Florida 32811-7334
407-836-8200 ▪ Fax 407-836-8203 ■ www.OrangeCountyFL.net

DATE: December 30, 2022

TO: Wendy Kittleson, Assistant Comptroller, County Audit, Orange County Comptroller's Office

THROUGH: Anne Kulikowski, Director, Administrative Services

FROM: Bryan Lucas, Manager, Fleet Management Division

SUBJECT: Fleet Management Preventative Maintenance Audit Response

Fleet Management is responsible for the maintenance and repair of over 4,000 Orange County vehicle and equipment assets and has been recognized nationally by industry peers as a Top 50 Leading Fleet multiple times in recent years. The goal of the Preventative Maintenance (PM) program is to ensure assets are safe to operate and meet the Original Equipment Manufacturers (OEM) maintenance requirements.

This audit process has underscored many of the challenges Fleet Management has been aware of and working through, further supporting our decisions to replace our outdated and unstable Fleet Management Information System (FMIS) and to upgrade or replace our current obsolete fuel management system. Our final objective to these and future upgrades is to increase accuracy and efficiency through automation and data-driven decisions, while reducing labor-intensive tasks and opportunities for human error, which significantly impact Fleet's operations as emphasized by this audit. Even with automation, there are factors beyond our control that impact Fleet's operations, including our customers' operational requirements, vehicle usage variation, and customers' staffing levels. This audit highlights the challenges of an almost entirely manual Preventative Maintenance process, that is reliant on manually entered meter readings.

Orange County keeps vehicle and equipment assets deep into their lifespans, making the PM process even more critical to ensure long life. Our PMs involve numerous checklist items at each level and are unique for each type of asset. For example, our PMA/PM250 (described as Level 1 – Oil/Fluid Change in audit document) involves from 19-31 checklist items depending on the vehicle type. This level of detail assures vehicles can be safe and productive well past 100,000 miles.

Orange County's internal PM goals – which were used for the purpose of this audit-- are 50%-250% more aggressive than OEM requirements. For example, Ram trucks with a Cummins Diesel engine have an OEM specified 15,000 mile oil change interval; Fleet Management's interval is 6,000 miles. This not only ensures longevity, but allows for delays, flexibility in scheduling (customers can reschedule as needed), and changing operational needs. Despite our challenges, we know that our PM process is working.

The average age of Orange County's vehicles is 8.8 years old, with 29.3% (571 units) having 100,000+ miles (or equivalent hours) and still in safe, reliable and productive service.

Prior to the audit findings, Fleet Management had already addressed many items that directly focus on concerns brought out in the audit. These include:

- **Replacement FMIS Procurement** – *AssetWORKS* was procured in 2021 with implementation in process now. Expected go-live date is June 2023.

- **Fuel System Upgrade/Replacement** - $500,000 was budgeted in FY2022/23 for procurement of upgrade or replacement fuel management system and hardware with one of the goals to be automated meter downloads at Fleet's automated fuel sites. We will move to this project as soon as implementation of *AssetWORKS* is complete.

- **Work Pending Functionality** – Since 2019, the current FMIS has automatically "flagged" any PMs due when any work orders are created. This alert requires action by the user before proceeding and cannot be ignored, thus decreasing the number of missed PM services.

- **Manual PM Reporting for Rescue Units** – Fleet staff have manually reviewed and scheduled all Rescue PM services since late 2019 which has led to more current service schedules. We continue to work with Fire Rescue as there are still significant challenges due to irregular meter entry issues, expanding operational needs, and very limited reserve capacity.

- **Retrained Fleet Technicians on Accurately Marking PM Work Orders Complete** – Early in the audit process, Fleet staff noted that Fleet technicians sometimes completed required PM tasks but did not mark the PM Complete on the workorder. This led to incorrect PM data for the current and future PM work orders.

- **Reviewed PM Due Meter Requirements** – We reviewed the current PM requirements (5,000 mile/6,000 mile/250HR) which are more stringent than OEM requirements, and believe it is in the best interest of operations to leave as it is. Remaining aggressive compared to OEM requirements allows for flexibility in operations for Fleet and our customers.

We appreciate the time and effort the auditors spent working with us through this process. Fleet Management is aware that we still have many challenges, but we will continue our commitment to ensure our customers have safe, productive vehicles and equipment available to serve the citizens of Orange County.

2

FLEET MANAGEMENT'S RESPONSES TO AUDIT RECOMMENDATIONS

RECOMMENDATION No. 1:

A) Educate service writers and drivers on the importance of correct mileage entries.

Management Response: **CONCUR**

Drivers are responsible for supplying service writers with the correct meter readings and entering accurate meter readings at fuel terminals. Most vehicles do not have the ability to override meter entries at fuel terminals, but incorrect entries can still happen. The audit showed that incorrect entries at work order creation caused significant issues with Fleet's current FMIS – even when entries were corrected on next meter reading. Inaccurate meter entry issues are reported to the owning division's management on a regular basis. Fleet's new FMIS will resolve the stability issues we see with the current system. Technological updates in the upgraded/replacement fuel system (currently budgeted) will resolve many manual meter entry issues at the fuel terminals. In the interim, Fleet will continue to educate staff and customers on the importance of accurate meter entry.

B) Perform user acceptance testing prior to implementation of the new vehicle management system to ensure the report logic used to generate preventative maintenance reports is accurate.

Management Response: **CONCUR**

Implementation is currently underway for Fleet's replacement FMIS with an expected go-live date in June 2023. System testing time is in the current implementation timeline for all functionalities.

C) Develop additional reporting to ensure that all vehicles are maintained according to required preventative maintenance schedules.

Management Response: **CONCUR**

Since 2019, Work Pending Functionality has been in place with our current FMIS. This automatically alerts and adds any Preventative Maintenance items due on a work order during creation. Additionally, since 2019, preventative maintenance for Rescue units is handled manually so that each unit can be individually researched and is not dependent on the current FMIS to report items due.

3

RECOMMENDATION No. 2:

A) Continue to work with Fire Rescue to update and improve the process for collecting and recording odometer data to provide preventative maintenance services on a timelier basis.

Management Response: **CONCUR**

This is an ongoing process and remains a challenge. Fleet reports meter and fuel card discrepancies to Fire Rescue when discovered. Continuing challenges involve (1) Fire Rescue vehicles ability to fuel at fire stations (outside of Fleet's automated fueling network) and the resulting irregular meter reporting and (2) Fire Rescue vehicles' ability to override meter entry requirements (when using Fleet fuel system) to ensure they can get fuel as needed.

Fire is currently implementing automated meter-entry capabilities at their fire stations, which we expect to integrate into our upcoming FMIS. This will eliminate the delay we see (up to 30 days later) in meter reporting. Similar technology is planned for implementation at Fleet's fueling sites which will eliminate issues with incorrect fuel cards and/or inaccurate meter entries.

B) Develop additional monitoring procedures and notify Fire Rescue management personnel about vehicles that are overdue for service.

Management Response: **CONCUR**

Fleet's manual Preventative Maintenance reporting for Rescue units (used since late 2019) has been successful at maintaining PM Compliance with these heavily used vehicles. Fire Rescue is aware of the critical nature of PM Compliance, but in-service requirements almost always take precedence – especially with limited reserve unit availability and changing operational needs. Fleet staff will continue to complete cursory safety inspections in the field when delays occur or when field repairs are completed.

CC: Carla Bell Johnson, Deputy County Administrator
Lisa Snead, Assistant County Administrator
Inshan Edoo, Assistant Manager, Fleet Management Division

4