

**Follow-Up Audit
of
Fire Vehicle Maintenance**

**Report by the
Office of County Comptroller**

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March 31, 2003

Richard T. Crotty, County Chairman
And
Board of County Commissioners

We have conducted a follow-up of the audit of the Vehicle Maintenance Unit of the Orange County Fire Rescue Department. Our original audit included the period of October 1, 1998 to February 29, 2000. Testing of the status of the previous Recommendations for Improvement was performed for the period August 1, 2002 through September 30, 2002. Our follow-up audit was conducted in accordance with generally accepted government auditing standards and included such tests as we considered necessary in the circumstances.

The accompanying Follow-Up to Previous Recommendations for Improvement presents a summary of the previous conditions and the previous recommendations. Following the recommendations is a summary of the current status as determined in this review.

During our review, we noted that all five Recommendations for Improvement were fully or partially implemented. **We commend** the Fire Rescue Department for their efforts. We appreciate the cooperation of the personnel of the Fire Rescue Department during the course of the audit.

Martha O. Haynie, CPA
County Comptroller

c: Ajit Lalchandani, County Administrator
Carl Plaughter, Fire Chief, Fire Rescue Department

**IMPLEMENTATION STATUS OF
PREVIOUS RECOMMENDATIONS
FOR IMPROVEMENT**

**FOLLOW-UP AUDIT OF FIRE VEHICLE MAINTENANCE
STATUS OF PREVIOUS RECOMMENDATIONS FOR IMPROVEMENT**

NO.	PREVIOUS RECOMMENDATION	IMPLEMENTATION STATUS			
		IMPLEMENTED	PARTIALLY IMPLEMENTED	NOT IMPLEMENTED	NOT APPLICABLE
1.	We recommend the County enhances its efforts to replace emergency vehicles that have exceeded life cycle benchmarks.	X			
2.	We recommend the Department performs the following:				
A)	Ensure that all employees are aware that daily inspections of emergency vehicles are required. In addition, the checklists should be retained in accordance with the Department's record retention policy.		X		
B)	Implement a uniform procedure for documenting vehicle inspections.	X			
C)	Ensure the content of vehicle inspections is consistent with the makeup of newer emergency vehicles and within the scope of employees' mechanical aptitude.	X			
3.	We recommend consideration is given to reinstating the warehouseman position.	X			

INTRODUCTION

Scope and Methodology

The audit scope was limited to an examination of the status of the previous recommendations for improvement from the original audit of the Vehicle Maintenance Unit of the Orange County Fire Rescue Department issued in June 2001.

To determine if emergency vehicles exceeding life cycle benchmarks have been replaced, we analyzed the mileages and age of each unit in the Department's fleet as of October 2002. We also reviewed emergency vehicle purchases since June 2001.

To ensure that vehicle inspection procedures have been improved we visited five fire stations to verify that daily/weekly inspection sheets were completed, checklists were uniform, and retained in accordance with the Department's record retention policy and inspections were consistent with the mechanical characteristics of the Department's newer vehicles.

To ensure that the parts room warehouseman position has been reinstated, we interviewed Department personnel and contacted the Human Resources Department to determine the status of recruitment efforts made to date.

**FOLLOW-UP TO PREVIOUS
RECOMMENDATIONS FOR
IMPROVEMENT**

**STATUS OF PREVIOUS
RECOMMENDATIONS
FOR IMPROVEMENT**



**1. The County Should Enhance its Efforts to Replace
Emergency Vehicles That Have Exceeded Life
Cycle Benchmarks**

Thirty-five percent (37 of 107) of the Department's emergency truck fleet on August 31, 2000, exceeded life cycle benchmarks established by the entity. The benchmarks of mileage, age and aggregate repair cost as a percentage of current replacement value vary according to the type of apparatus as identified in the table below.

TYPE OF VEHICLE	MILEAGE	AGE (YEARS)	REPAIR COST
Aerials	125,000	15	80%
Pumpers (Engines)	125,000	10	80%
Rescue Units Standard size	100,000	8	80%
Mid-size	150,000	10	80%
Tankers	100,000	15	80%
Woods	100,000	15	80%

The number of trucks exceeding at least one benchmark and the percentage of the exceptions to the population of each vehicle type within the fleet is summarized in the following table.

VEHICLE TYPE	NUMBER OF VEHICLES IN FLEET	TOTAL VEHICLES OVER AT LEAST ONE BENCHMARK	PERCENTAGE OF EXCEPTIONS TO VEHICLE TYPE POPULATION
Pumpers	48	23	48%
Rescue Units	38	9	24%
Tankers	7	5	71%

Based on information from the Department, prior to the late 1990's, the Department did not purchase a new emergency fire vehicle for five consecutive years.

We Recommend the County enhances its efforts to replace emergency vehicles that have exceeded life cycle benchmarks.

Status:

Implemented. Since the original audit approximately \$4 million has been expended to purchase twenty replacement vehicles. We encourage the Department to continue its modernization efforts as we noted that twenty-one percent (26 of 123) of the fleet, including thirty-seven percent (19 of 51) of the pumpers, still exceeds lifecycle benchmarks.

2. Efforts to Perform Emergency Vehicle Inspections Should be Improved

Department operating procedures require a daily and more comprehensive weekly inspection of all emergency vehicles. A checklist documenting the inspections performed is prepared and kept on file at each fire station for one year.

During surprise visits to eight fire stations to ensure that daily/weekly inspections were performed, we noted the following:

- A) Inspections at all stations are not consistently performed. Personnel at one station admitted that inspections had not been completed for the past three months.
- B) Personnel are uncertain how to document vehicle inspections.
- C) The checklists are not applicable to the newer more sophisticated emergency vehicles.

If vehicle inspections are not consistently performed, the potential exists that undetected minor repair needs could develop into more extensive and costly repairs.

**STATUS OF PREVIOUS
RECOMMENDATIONS
FOR IMPROVEMENT**



Follow-Up Audit of Fire Vehicle
Maintenance

We Recommend the Department performs the following:

- A) Ensure that all employees are aware that daily inspections of emergency vehicles are required. In addition, the checklists should be retained in accordance with the Department's record retention policy.
- B) Implement a uniform procedure for documenting vehicle inspections.
- C) Ensure the content of vehicle inspections is consistent with the makeup of newer emergency vehicles and within the scope of employees' mechanical aptitude.

Status:

- A) Partially Implemented. Although we noted significant improvement since the original audit, inspections for eight percent (4 of 50) of the sample days were not documented. During seventy-eight percent (7 of 9) of the operation weeks covered by the fifty sample days, at least one station did not document the entire week's inspections on a checklist. Finally, forty-three percent (3 of 7) of the comprehensive weekly inspections were not documented.

We Again Recommend the Department ensures that employees are aware that daily inspections of emergency vehicles are required and should be appropriately documented.

- B) Implemented. Daily/weekly inspection forms are available online from a shared directory. Inspection logs remain with the applicable vehicle.
- C) Implemented. The Department uses one checklist with inspection items specific to pumpers, tankers and aerials, and another with items specific to rescue units and brush trucks. We encourage the Department to periodically modify checklists to reflect mechanical

enhancements when new emergency vehicles are purchased.

3. Consideration Should be Given to Reinstating the Warehouseman Position

During our survey of the maintenance section's internal controls over inventory, we noted the following areas of concern:

- A) The Purchasing and Inventory Coordinator orders, receives and records the use of replacement/repair parts.
- B) The mechanics (Fire Apparatus Techs) remove parts from the inventory. They record the items used on a hard copy work order that is discarded after the repair is closed out online.

A good internal control in safeguarding assets is to separate physical possession and record keeping functions. The warehouseman's position has been eliminated since the 1994-95 fiscal year.

We Recommend consideration is given to reinstating the warehouseman position.

Status:

Implemented. The Department hired an individual for the warehouseman position on September 23, 2002.