

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General



March 21, 2013

The Honorable Vincent C. Gray
Mayor
District of Columbia
Mayor's Correspondence Unit, Suite 316
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Dear Mayor Gray:

Enclosed please find a copy of a Management Alert Report (MAR 13-1-002) that the Office of the Inspector General (OIG) issued to the D.C. Fire and Emergency Medical Services Department (FEMS) on February 19, 2013, entitled *Deficiencies Observed in the Repair And Readiness of Reserve Vehicles*.

During a re-inspection of FEMS's fire stations,¹ the OIG's Inspections and Evaluations Division (I&E) identified concerns about the condition, operability, and readiness of FEMS's reserve apparatus fleet. Our observations and analysis showed that many FEMS vehicles designated as reserve vehicles were out of service and could not be used if needed as replacement vehicles in neighborhood fire stations, or during large-scale emergencies or mass-casualty events. The MAR detailed five primary findings and presented FEMS with three recommendations.

FEMS was asked to provide a written response that "describes actions taken or planned, dates for completion of planned actions, and reasons for any disagreements with the recommendations or concerns presented."

On March 21, 2013, Kenneth Ellerbe, Chief of Fire and Emergency Medical Services, emailed the following response to the OIG:

¹ The November 2012 report pertaining to the fire stations, *Report of Re-Inspection: Conditions in Fire and Emergency Medical Services Department Fire Stations*, can be found at oig.dc.gov under "OIG Reports."

Regarding the MAR dated February 19, 2013 (MAR 13-I-002) the department accepts the recommendations of the Office of the Inspector General and submits the following response:

- 1. The agency commits to pursuing*
 - a) timely and permanent repairs*
 - b) ensuring that vehicles designated as reserve units are ready for immediate deployment*
 - c) an inventory control system that will capture and retain accurate documentation on division repair activities*

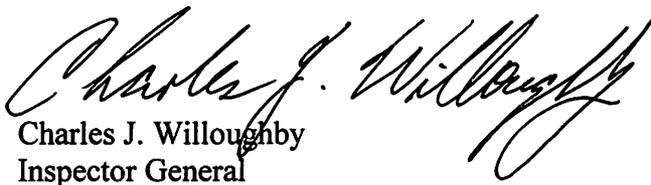
An update on these activities will be furnished to the OIG within 60 days.

- 2. The department will pursue/investigate allegations of intentional damage to FEMS vehicles.*
- 3. The department will review and update Special Order 66 2007 which will include:*
 - a) specific numbers and types of reserve vehicles that would be necessary to handle frontline replacements*
 - b) specific instructions will be included in the updated Special Order.*

As part of its standard compliance process, I&E will communicate regularly with FEMS regarding progress toward implementing the recommendations presented in the MAR and other corrective actions described by FEMS.

If you have questions, please contact Alvin Wright, Jr., Assistant Inspector General for Inspections and Evaluations, at (202) 727-2540.

Sincerely,


Charles J. Willoughby
Inspector General

CJW/ef

Enclosure

cc: See distribution list

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DISTRICT OF COLUMBIA
OFFICE OF THE INSPECTOR GENERAL
CHARLES J. WILLOUGHBY
INSPECTOR GENERAL

INSPECTIONS AND EVALUATIONS DIVISION
MANAGEMENT ALERT REPORT

DC FIRE AND EMERGENCY MEDICAL
SERVICES DEPARTMENT

DEFICIENCIES OBSERVED IN THE
REPAIR AND READINESS
OF RESERVE VEHICLES

MAR 13-I-002

FEBRUARY 19, 2013

Inspections and Evaluations Division
Mission Statement

The Inspections and Evaluations (I&E) Division of the Office of the Inspector General is dedicated to providing District of Columbia (D.C.) government decision makers with objective, thorough, and timely evaluations and recommendations that will assist them in achieving efficiency, effectiveness, and economy in operations and programs. I&E goals are to help ensure compliance with applicable laws, regulations, and policies, to identify accountability, recognize excellence, and promote continuous improvement in the delivery of services to D.C. residents and others who have a vested interest in the success of the city.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General



February 19, 2013

Via Hand Delivery and Email

Kenneth B. Ellerbe
Chief
D.C. Fire and Emergency Medical Services Department
1923 Vermont Avenue, N.W.
Washington, D.C. 20001

Dear Chief Ellerbe:

This is a Management Alert Report (MAR 13-I-002) to inform you that during our re-inspection of D.C. Fire and Emergency Medical Services Department (FEMS) fire stations, the Office of the Inspector General (OIG) identified concerns about the condition, operability, and readiness of FEMS's reserve apparatus fleet. Our observations and analysis showed that many vehicles designated as reserve vehicles were out of service and could not be used if needed as frontline replacement vehicles in neighborhood fire stations, or for large-scale emergencies or mass-casualty events. In addition, there are indications of quality and timeliness deficiencies in the Apparatus Division's repair operations.

Background

FEMS responds to over 120,000 "911" calls per year and transports more than 80,000 patients to local hospitals.¹ According to a roster that FEMS submitted to the D.C. Council in March 2012, it maintains a fleet of 401 vehicles, including more than 90 vehicles held in reserve² for emergency mobilization and as replacements for fire station frontline vehicles needing repairs. The National Fire Protection Association (NFPA) defines a reserve fire apparatus as "a fire apparatus retained as backup apparatus and used to replace a primary apparatus when the primary apparatus is out of service."³

Criteria⁴

An FEMS senior official stated that following the terrorist attacks on September 11, 2001, FEMS was criticized for not having an adequate number of vehicles to deploy. The

¹ See <http://track.dc.gov/Agency/FBO> (last visited Dec. 26, 2012).

² Fire and EMS Department, "Fiscal Year 2011 and 2012 Performance Oversight" response letter, Mar. 2, 2012.

³ NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 1911 STANDARD FOR THE INSPECTION, MAINTENANCE, TESTING, AND RETIREMENT OF IN-SERVICE AUTOMOTIVE FIRE APPARATUS, 1911-11, 3.3.107 (2007).

⁴ "Criteria" are the rules that govern the activity being evaluated. Examples of criteria include internal policies and procedures, District and/or federal regulations and laws, and best practices.

official added that at the time, FEMS had no plan for designating the vehicles to be maintained in reserve status and deployed in an emergency. On August 29, 2007, FEMS issued Special Order 2007-66, Reserve Apparatus (Special Order), which states in part:

[FEMS] maintains reserve apparatus for implementation of the Emergency Mobilization Plan,^[5] for utilization during special events, and whenever there is a need to enhance service delivery or operational efficiency. The reserve apparatus is also used to keep units in service while front line apparatus is being repaired.^[6]

The Special Order requires that the following types and number of vehicles be maintained in reserve status:

- Twelve battalion reserve engines⁷ are to be fully equipped and ready for “immediate deployment” to expand the emergency response capability of FEMS during an emergency. Two are to be located at each of the six battalions⁸ as replacement vehicles for short-term repairs (less than 96 hours) of a station’s regularly assigned vehicles, otherwise known as frontline vehicles.
- Ten warehouse reserve engines⁹ are stationed at FEMS’s reserve warehouse at 915 Gallatin Street, N.W. They replace regularly assigned vehicles that are out of service longer than 96 hours.
- Six reserve engines serve as water supply units, and one is to be stationed at each of the six battalions. These engines are equipped to respond to an incident that requires enhanced water supply through a large diameter hose or to augment water supply during water system emergencies.
- Two reserve engines and a reserve ladder truck are maintained at the FEMS Training Academy for routine training functions.¹⁰

⁵ Emergency Mobilization Plan refers to “a plan to address the needs of the Department when conditions or events occur which require additional personnel to be recalled to duty and/or additional resources to be placed in service....” Article XXV, Emergency Preparedness, Planning and Mobilization, GO-2007-15, XXV-4. The Plan may go into effect for such events as a state of emergency, terrorist attack, or natural disaster.

⁶ *Id.* at 4.

⁷ An FEMS official stated that battalion reserves are fully equipped reserve engines that only require radios, self-contained breathing apparatus (SCBA), and I-mobile computers; they can be placed into service relatively quickly.

⁸ According to an FEMS official, a battalion is a group of stations and companies that are organized by geographic location. FEMS maintains seven distinct battalions. Six are grouped by location, while the seventh is comprised of hazardous material, fireboat, and special operations units housed at stations located in different battalions.

⁹ An FEMS official stated that FEMS members are required to remove the tools and appliances from the out of service frontline vehicles to equip the warehouse reserve engines. Most of the ladder trucks in reserve status are classified as warehouse reserves.

¹⁰ According to Special Order 2007-66, these units “will not normally be available for routine use as reserve apparatus.” Special Order 2007-66, at 4 (Aug. 29, 2007).

- Eight warehouse reserve trucks are located at FEMS's reserve warehouse at 915 Gallatin Street, N.W. These are ladder trucks used to replace regularly assigned vehicles that will be out of service for an extended period.
- Two warehouse reserve rescue squads¹¹ are located at FEMS's reserve warehouse at 915 Gallatin Street, N.W. These vehicles replace those used for hazardous material incidents or a regularly assigned rescue squad that are out of service.
- Ten reserve EMS units are used during implementation of an Emergency Mobilization Plan or special event; they are not normally available for routine use as reserve apparatus. Five are to be located at FEMS's reserve warehouse at 915 Gallatin Street, N.W., and five are to be maintained at Station 12.¹²
- Twenty reserve ambulances maintained at FEMS's changeover facility at Station 6 are used to replace EMS units that are out of service.¹³

See the Appendix for photographs and descriptions of some of the vehicles discussed in this report.

Condition¹⁴

Based on information provided to the team by officials and other employees, FEMS does not appear to consistently meet the Special Order standards regarding the numbers of reserve vehicles that should be available for immediate use.

1. Analysis of FEMS's operational reports revealed many vehicles designated as reserves were listed as out of service, some for more than 2 years.

According to an FEMS senior official, FEMS produces two operational reports daily that show the number of designated reserves available for deployment:

- The *D.C. Fire/EMS Daily Operations Awareness*¹⁵ report is prepared by the on-duty Deputy Fire Chief of Operations and reflects updates from the six FEMS battalion chiefs. It gives Operations Division battalion chiefs the status of engine trucks designated as reserves, the availability of paramedic engines, and the daily staffing numbers.

¹¹ According to Special Order 2007-66, these units "will normally be stripped of all tools and appliances...." Special Order 2007-66, at 4 (August 29, 2007).

¹² In July 2012, a senior FEMS official explained that there are 12 units held in reserve as part of the Emergency Mobilization Plan and used for special events, such as Washington Nationals games, 4th of July events, and Inaugural proceedings. This official added that in the event of a shortage of ready reserves, FEMS could fall back on this fleet.

¹³ According to Special Order 2007-66, these units "will normally be stripped of all equipment...." Special Order 2007-66, at 5 (August 29, 2007).

¹⁴ The "condition" is the problem, issue, or status of the activity being evaluated.

¹⁵ In July 2012, this report was referred to as the *Resource Operations Activity Daily Worksheet*.

- The *Daily EMS Fleet Status Report* is prepared by two civilian employees in the EMS Changeover Unit and tells the Operations Division how many EMS patient transport vehicles, such as ambulances, are “ready reserves available,” meaning available for immediate deployment.

When asked whether FEMS can adequately track the number of operational vehicles in reserve status, a senior official responded that these daily reports provide adequate information. However, the OIG team was concerned when another FEMS senior official responsible for monitoring reserves stated that he/she had only recently learned that the Operations Division was producing the *D.C. Fire/EMS Daily Operations Awareness* report.

As shown in Table 1 on the next page, the OIG team’s analysis of selected *D.C. Fire/EMS Daily Operations Awareness* reports between February and July 2012 showed that many of the battalion and water supply engines designated as reserves on a given day were reported as out of service and not available for immediate deployment. An FEMS senior official stated that information about warehouse reserve vehicles, which is reported in the *D.C. Fire/EMS Daily Operations Report*, was incomplete because FEMS did not have a member assigned to inspect those vehicles and report their status. Consequently, the team did not include data from that report in constructing Table 1.

Table 1. Availability of FEMS Reserves to Replace Battalion Reserve Engines and Water Supply Engines

Type of Vehicle	A Number of Reserve Vehicles Required per General Order	B Total Number of Reserve Vehicles Designated as Reserve	C Number of Reserve Vehicles Available for Deployment	D Number of Reserve Vehicles Currently in Use	E Number of Reserve Vehicles Out of Service
<i>Battalion Reserve Engines</i>					
February 13, 2012	12	12	0	3	9
March 15, 2012	12	10	0	5	5
April 15, 2012	12	12	0	5	7
May 14, 2012	12	12	1	3	8
June 15, 2012	12	11	5	1	5
July 12, 2012	12	12	1	5	6
<i>Water Supply Engines</i>					
February 13, 2012	6	6	4	2	0
March 15, 2012	6	6	4	2	0
April 15, 2012	6	6	4	2	0
May 14, 2012	6	6	3	2	1
June 15, 2012	6	6	6	0	0
July 12, 2012	6	6	3	2	1

As shown in Table 2, on the following page, the team analyzed six daily EMS fleet status (fleet) reports issued between January 15, 2012, and July 22, 2012, and found that many EMS reserve vehicles were out of service. According to senior FEMS officials, these reports reflect EMS transport vehicles in reserve status that are available to transport patients, including ambulances and medic units.¹⁶

¹⁶ This report does not include ambulances in the Emergency Mobilization Plan fleet.

Table 2. Status of EMS Reserve Transport Vehicles

Date	A Total Reserve EMS Units¹⁷	B Number of Reserve EMS Units Out of Service¹⁸	C Number of Reserve EMS Units on Loan or Pending PDA¹⁹	D Number of Reserve EMS Units Deployed to the Field	E Number of Reserve Units Available for Immediate Deployment
January 15, 2012	31	17	1	11	2
February 15, 2012	31	16	1	13	0
March 15, 2012	31	17	1	13	0
April 15, 2012	31	16	1	13	2
May 15, 2012	31	19	1	10	4
June 15, 2012	31	18	1	9	12
July 22, 2012	31	21	1	9	14

According to the July 22, 2012, report, a large number of the EMS vehicles in reserve status were out of service, and many for extended periods like these EMS units cited below:

- one for non-mechanical reasons (“rehab”) for 664 days;
- one for non-mechanical reasons (“rehab”) for 794 days; and
- one for mechanical reasons for 257 days.

An FEMS official explained that some EMS vehicles that have been out of service for a significant period may be with out-of-state vendors for extensive repairs that are beyond the capabilities of FEMS technicians. Simpler repairs, such as those to air conditioners or tires, are handled by the Apparatus Division.

2. The OIG team observed inoperative reserve vehicles at the Gallatin Street warehouse.

In July 2012, the OIG team visited the FEMS reserve vehicle storage facility on Gallatin Street, N.E. next to Station 24. As shown in Table 3 on the following page, the facility had on

¹⁷ The team noted that the figures in columns b-e do not equal the total reflected in a. When asked about this discrepancy, a senior FEMS official stated that he/she focuses solely on the figure reflected in column e.

¹⁸ According to information detailed in this report, these figures include vehicles listed as out of service due to a motor vehicle collision, a mechanical issue, on detail, or a non-mechanical issue.

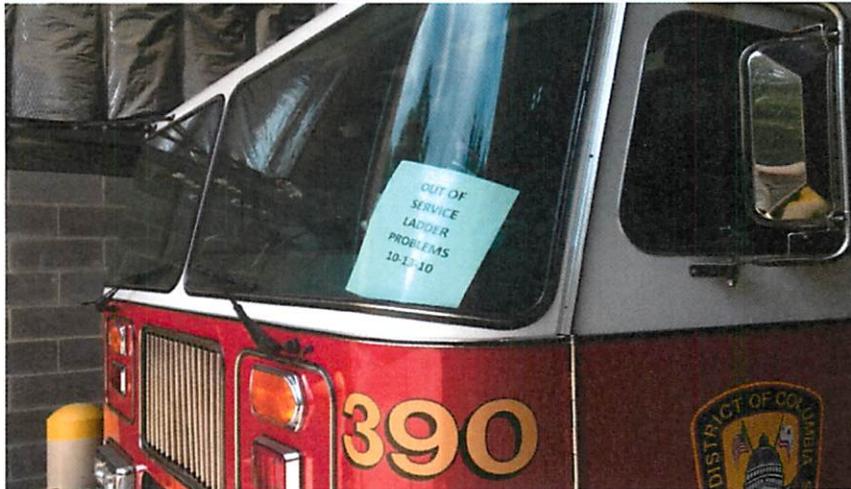
¹⁹ FEMS follows the vehicle Property Disposal Actions (PDA) process to handle its decommissioned vehicles.

site only 7 of the 20 reserve vehicles called for by Special Order 2007-66, and only 3 of the 7 could be started at the team’s request.

Table 3. Reserve Vehicles at FEMS Warehouse Unable to Start

Type of Reserve Vehicle	Number of Reserve Vehicles Assigned to Gallatin Street per Special Order 2007-66	OIG Team’s Observation
Warehouse Reserve Engine	10	Two vehicles present. Neither would start when an FEMS official attempted to start them at the team’s request.
Warehouse Reserve Truck (ladder truck)	8	Two vehicles present. One would not start when an FEMS official attempted to start it at the team’s request. A sign in its windshield read: “OUT OF SERVICE LADDER PROBLEMS” (see photograph below). The team observed FEMS members working on the second vehicle in the driveway. A member said it would be operative shortly.
Warehouse Reserve Rescue Squad	2	Three vehicles present. Two vehicles started. One vehicle did not start when an FEMS official attempted to start it at the team’s request.

Ladder truck out of service at the FEMS reserve warehouse.



Source: OIG team

An FEMS member stated that he/she has never observed more than a few operative reserve trucks at this warehouse at any given time. He/she opined that FEMS primarily uses the warehouse to store inoperative vehicles or those designated for disposal.

The team observed nine ambulances behind this warehouse in a parking lot surrounded by a fence with a locked gate. Neither the team nor its FEMS escorts could access the lot. An FEMS member said that these ambulances are used for Emergency Mobilization Plan events and not as replacements for frontline vehicles. He/she opined that two to three of these vehicles would not start. EMS reserve vehicles for frontline vehicle replacement are kept at an EMS facility at Station 6.

In August 2012, the OIG team went to the EMS facility at Station 6 to determine the availability of EMS reserve vehicles and their readiness for immediate deployment. An FEMS member stated that 3 of the 11 vehicles present were working, but they were not equipped with the supplies necessary to be deployed immediately, and it would take from 30 minutes to 1 hour to properly equip them. He/she added that previously FEMS had kept its ambulances fully stocked, but because supplies were being stolen from them, it now keeps them empty.

On a subsequent date in August 2012, the OIG team returned to the Station 6 facility to request that an FEMS member attempt to start each reserve vehicle. Of the 16 ambulances, three would not start, four started but were out of service due to mechanical issues (e.g., air conditioner problems, nonworking sirens), one would not start and was out of service, seven started and were available for immediate deployment, and the key for the remaining ambulance could not be found.

3. **FEMS senior officials were not clear about the number of deployable reserve vehicles necessary to meet all FEMS needs.**

According to a senior official, the number of reserves that FEMS requires, as outlined in the Special Order, is appropriate for FEMS operations. If all reserve units are available, i.e., not in use in the field, then FEMS has the number needed to meet the expectations of the Special Order. The number of reserves actually available for immediate deployment on a given day constantly changes and is fluid because some designated reserve vehicles may already be deployed in the field to cover a frontline vehicle or are being repaired, while others that were deployed to the field are being returned. He/she opined that FEMS has more reserve resources available than other jurisdictions.

Another senior official stated that the number of vehicles required for reserve status, as reflected in Special Order 2007-66, may be too high for particular vehicle types because the importance of these particular vehicles may have changed since FEMS issued this Special Order. He/she opined that FEMS may need to review and modify the Special Order.

A third FEMS official stated that FEMS does not identify a fixed number of reserves ready to be deployed.

4. **FEMS fire station managers expressed concerns about the number of reserve vehicles available and the quality of frontline vehicle repairs.**

As part of the OIG's re-inspection of FEMS fire stations, the team observed and documented conditions and conducted interviews at each station from October 2011 through January 2012.²⁰ The team interviewed FEMS station captains, lieutenants, and sergeants and asked if they had the equipment and resources necessary to carry out their duties. Many officials expressed concern about the adequacy of FEMS's reserve fleet and the quality and timeliness of vehicle repairs by the Apparatus Division. The following is a summary of their comments and anecdotes. To protect the identity of sources, neither the rank of an official nor the specific station where he/she worked is identified.

- a. ***Lack of available reserves.*** Several managers reported a lack of available reserves when a frontline vehicle is being repaired, which requires other stations to respond to emergencies in its stead. A manager stated that there are days when there are no reserve apparatus in the city and there are engine companies that are taken out of service.
- b. ***Members reportedly sent home because vehicles were out of service and unavailable.*** At one station, the team observed members being sent home because, according to a manager, no vehicles were available to provide service, and the manager did not know when any would be available. At a later date, the team followed up with this manager for more details about the practice of sending members home in these situations. The manager stated that members were no longer being sent home when vehicles are not available, but are detailed to another station or are allowed to use annual leave. The manager was not aware of any formal policy that should be followed in these situations. The team interviewed a manager at another station who also cited an instance when members assigned to a particular fire engine were sent home when there was no vehicle available for their use. The manager did not say when this had occurred.
- c. ***The quality of Apparatus Division repairs is poor.*** A manager opined that some stations are not reporting vehicle problems to the Apparatus Division for repair because a vehicle will be returned in worse condition. Another manager stated that vehicles have been returned requiring further repair. A third manager opined that the division should hire mechanics rather than displaced government employees. Managers gave the following examples of recent repair concerns:
 - 1) One manager noted that the station's medic unit is repeatedly out of service, and the station has to use a "rapid response unit" that can treat but not transport a patient.
 - 2) A frontline truck was taken to the Apparatus Division for an alternator repair. The division installed an alternator that was too large for the engine, and during installation, a portion of the vehicle's hood was cut out, exposing part

²⁰ See <http://app.oig.dc.gov/news/view2.asp?url=release10%2FFEMSfinalreportnov2012toagency%2Epdf&mode=iande&archived=0&month=00000&agency=0>.

of the engine. When the vehicle was driven, dust and debris flew out from the hole in the hood and into the faces of those riding on the vehicle.

- 3) A vehicle with a blown turbocharger was out of service for more than 6 months. After being sent to a contractor for repair, it remained outdoors with its windows down and the interior of the cab rusted. When it was returned to the station, it had to be sent out again on the same day for further repair.

- d. ***Repeat problems with vehicle air conditioners:*** A manager stated that numerous repairs have to be made to air conditioners in ambulances and the repairs are not adequate. Another manager stated that in July 2011, FEMS had so many problems with vehicle air conditioners that it became a health and safety concern. Members were riding in a vehicle with 120-degree temperatures while wearing FEMS equipment. They got sick and had to report to the Police and Fire Clinic for heat-related illnesses. This deficiency existed for 2–3 months, and was reported to the stations' captains and the Apparatus Division.

5. FEMS policies lack specifics on when the Apparatus Division should send a reserve vehicle to replace a frontline vehicle that is out for repair.

Special Order 2007-66 cites the types of vehicles to be used to replace frontline vehicles out for repair for less than 96 hours (4 days) and for more than 96 hours. However, neither the Special Order nor FEMS policy is specific about the amount of elapsed repair time that should trigger the replacement of an out of service frontline vehicle with a reserve vehicle. Several managers reported that the amount of time being taken for relatively minor repairs is inordinate and leaves them without a frontline vehicle. One manager said it takes an entire day to have a tire changed. Another said it takes 4-5 hours to replace a fan belt.

A senior official stated that when a frontline vehicle needs repair, the Apparatus Division estimates how long it will be out of service. If a repair will only require 1-2 hours of work, the division will not put a reserve vehicle in its place because it could take just as much time to transfer the necessary equipment and prepare the vehicle for service as it would take for the repair of the frontline vehicle. The official stated that if a repair will take longer than expected, the division will deploy a reserve vehicle. However, the official then related an anecdote indicating that reserve replacements are not always automatically sent out if repairs go beyond the 1-2 hours he cited. He/she stated that after observing that the Apparatus Division had taken more than 8 hours to repair a station's truck and had not sent a replacement vehicle, he requested that the division deploy a reserve vehicle immediately. The official acknowledged that the Special Order and FEMS policy are not specific about the timing of replacements, and stated that it would be beneficial to set some timeliness standards for deploying reserve vehicles.

Cause²¹

Although some FEMS officials, such as those cited below, have different views on the cause of problems in maintaining sufficient reserves to keep stations fully operational, the OIG team believes deficiencies in Apparatus Division operations may be the most significant factor.

²¹ The "cause" is the action or inaction that brought about the condition being evaluated.

The limited documentation available and the overwhelming sentiment expressed to the OIG team by employees at all levels indicate that such deficiencies are real and negatively impact the day-to-day availability of both frontline vehicles at many fire stations, and the vehicles in reserve status designated to replace them. The team also notes that an official's suspicion of intentional damage being inflicted on vehicles by employees, if accurate, certainly would contribute to the volume of breakdowns and repairs, and consequently to the reduced availability of frontline and reserve vehicles.

FEMS official: The previous administration and Fire Chief did not focus on the vehicle replacement schedule. One senior official opined that previous problems with the vehicle replacement schedule and not the lack of timeliness of vehicle repairs is the cause of problems with the availability of reserves. This official stated that he/she was not aware of any specific concerns from stations about repairs taking too long or causing stations to be without a reserve vehicle when needed. He/she believes that because of budgetary constraints, the previous mayoral administration and FEMS Chief were not as focused on vehicle replacements as is the current Chief, and FEMS is now playing catch-up. Consequently, older vehicles requiring significant repairs were put into reserve status but should not have been. The current Chief is focused on the replacement schedule, and FEMS recently purchased 25 new ambulances. He/she stated that the procurement process for purchasing new vehicles is time-consuming and involves many entities, and it can take months to obtain new apparatus. The official estimated that, within 2-3 years, FEMS's replacement of vehicles will be back on schedule.

The OIG team found that the National Fire Protection Association (NFPA) recommends that fire departments "seriously consider the value (or risk) to fire fighters of keeping fire apparatus older than 15 years in first-line [frontline] service."²² It recommends that fire departments place apparatus greater than 15 years old that have been properly maintained and are still in serviceable condition in a reserve status.²³

FEMS's *Apparatus Replacement Program/Schedule* outlines replacement guidelines for FEMS vehicles. It recommends that FEMS replace the entire fleet of ladder trucks within an 8-year timeframe and that it use ambulances/medic units as frontline vehicles for 2 years and then 2 additional years as either a reserve unit or a unit for the Emergency Mobilization Plan. According to a senior official, FEMS deploys newly purchased vehicles to the field and designates them as frontline vehicles. The replaced frontline vehicles may be transferred to reserve status depending on their mileage and the number of hours operated.

FEMS official: FEMS lacks a plan for handling repairs and reserves. Another senior official stated that FEMS does not have a plan for handling vehicle repair and replacement, and described the FEMS reserve fleet as "almost non-existent." In addition, he stated that FEMS has reported to the D.C. Council that trucks were in reserve status when in fact they were decommissioned and could not be deployed immediately. [As noted earlier in this report, the OIG team's review of FEMS's operational reports showed that many vehicles designated as

²² National Fire Protection Association, NFPA 1911 STANDARD FOR THE INSPECTION, MAINTENANCE, TESTING, AND RETIREMENT OF IN-SERVICE AUTOMOTIVE FIRE APPARATUS, 1911-11, D.1 (2007).

²³ *Id.* at 1911-11.

reserves were actually out of service.] The official stated that preventive, ongoing, and required maintenance of vehicles is lacking in the Apparatus Division, and there is no baseline of what should be fixed and what should not be fixed. The majority of ladder trucks are in disrepair and do not conform to NFPA guidelines regarding inspections of such trucks. Apparatus do not meet NFPA's minimum safety requirements for seat belts and windows, and tests are not conducted according to NFPA requirements. He/she recommended that FEMS's Apparatus Division be inspected by an independent party, such as a certified Emergency Vehicle Technician, to identify short- and long-term problems with vehicles and develop corrective action plans. The official emphasized the importance of such inspections by citing a January 2009 accident involving a Boston Fire Department vehicle. One of the department's officials was killed when a fire truck went out of control due to a brake failure. According to the OIG team's media research, prior to the Boston accident, the vehicle involved reportedly was operated for years with a compromised braking system as a result of poor maintenance.²⁴

FEMS official: Possible tampering by employees to intentionally damage vehicles may be contributing to the high volume of breakdowns and repairs. An FEMS official stated that FEMS is unable to adequately keep up with vehicle repairs due to the sheer number of mechanical breakdowns, whether due to normal wear and tear, negligence,²⁵ or possible tampering. This official stated that previously, FEMS ambulances had a high number of sidewall tire punctures. When FEMS implemented accountability protocols, such as requiring members to document special incident reports about such punctures, the number of punctures decreased by 50 percent. In 2011, the official suspected that employees tampered with the air conditioner lines on approximately 12 vehicles by removing critical capsules that kept Freon from escaping from the units. Also, certain FEMS crews reportedly were told to drive ambulances in a low gear to burn out the transmissions. In 2011, 12 vehicles needed transmission rebuilds that cost an average of \$3,800 per vehicle. FEMS has considered installing miniature cameras in vehicles to catch any tampering, drafting a general order on the consequences of tampering with vehicles, and developing a training video to show members how to properly inspect vehicles.

OIG team: The perception by station managers of inadequacies in the Apparatus Division's repair and reserve vehicle operations has merit. The team asked whether FEMS's Apparatus Division has statistics on repair timeliness. An official stated that FEMS's FASTER²⁶ system tracks some repair statistics, but he/she was not sure whether it could produce statistics about timeliness. He/she added that members of the Apparatus Division were not using the system consistently and were entering notes into it incorrectly. As a result, FEMS officials have encouraged members to use it routinely and have implemented disciplinary actions when it is not used properly.

The team obtained repair histories from the FASTER system on a few engines and trucks said to repeatedly require repair. As shown in Table 4 on the following page, data on one truck

²⁴ See <http://www.government-fleet.com/channel/safety-accident-management/news/story/2009/12/fatal-boston-fire-crash-attributed-to-training-and-maintenance.aspx> (last visited Dec. 27, 2012).

²⁵ This official stated that FEMS members leave ambulances idling while at a hospital, which can cause a failure to start. FEMS has been purchasing and installing heavy duty alternators and batteries for ambulances.

²⁶ FEMS's Apparatus Division uses FASTER to track repairs, costs, and other related data.

revealed that it was sent it to the Apparatus Division for repair on 138 different dates between January 2009 and May 2012.

**Table 4. Number of Repairs for Selected FEMS Trucks and Engines
January 2009 – May 2012**

Vehicle	Number of Distinct Repair Tickets ²⁷
Truck 3 (#301)	138
Engine 17 (#151)	132
Truck 15 (#305)	117
Truck 2 (#308)	24

The team reviewed an FEMS repair spreadsheet showing that on August 14, 2012, the Apparatus Division was repairing 56 vehicles: 16 engines, 5 trucks, 1 sports utility vehicle, and 34 ambulances/medic units. The team found that a number of these vehicles had been brought in for repair many months prior to August 14th. For example, one engine was brought in on October 11, 2011, for an in-house “PUMP repair/body repair,” and an ambulance was brought in April 26, 2012, for a “transmission/Front End Repair” by a vendor.

An official stated that apparatus purchased since September 11, 2001, have a 5-year warranty that saves on repair costs during the warranty period. However, the warranties on 16 vehicles expired in fiscal year 2012, and FEMS will have to absorb future repair costs. Currently, FEMS is seeking to purchase 1-2 ladder trucks and 6-10 water trucks each year, and is considering refurbishing some trucks to help offset costs.

Effect²⁸

FEMS has numerous vehicles out of service on a given day, and deficiencies in the quality and timeliness of repairs and replacements reduces the number of vehicles available for both frontline service and large-scale emergencies and mobilizations. As noted by station officials, this impedes their ability to respond to neighborhood emergencies at the highest levels of timeliness and efficiency, which obviously can affect the quality of emergency services provided to District residents. Some officials stated that although there may be adequate reserve vehicles to meet FEMS needs on a typical day, there may not be enough reserves if there were another September 11-type event and FEMS would have to seek assistance from other jurisdictions, which may be experiencing the same or similar problems.

Accountability²⁹

Chief/FEMS and other senior officials are responsible for ensuring that: 1) FEMS has an adequate number of operative reserve vehicles on a daily basis to meet its typical operational needs, and to respond to emergency mobilization and mass-casualty events; and 2) there are clear

²⁷ There are instances in which multiple tickets are reflected for the same date – the team only counted these once.

²⁸ The “effect” is the impact of the condition being evaluated.

²⁹ “Accountability” is a description of who is responsible for the condition being evaluated.

protocols for managing and tracking the quality and timeliness of repairs, and for replacing inoperative frontline vehicles in an efficient and timely manner.

Recommendations

The OIG recommends:

1. That Chief/ FEMS evaluate the quality and timeliness of Apparatus Division operations and take all steps necessary to ensure that:
 - a) repairs are timely and permanent;
 - b) all vehicles designated as reserves are always ready for immediate deployment; and
 - c) all data on division repair activities and the status of reserves are accurate, documented timely and maintained, and easily retrievable and reported.

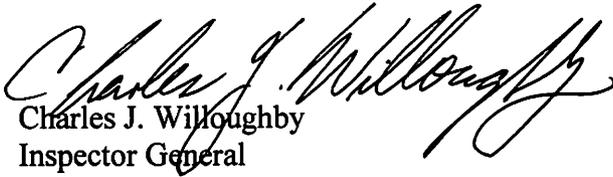
Chief/FEMS should report the results of this evaluation and follow-up actions taken to the Inspector General within 90 days.

2. That Chief/FEMS investigate alleged intentional damage inflicted on FEMS vehicles and take all steps necessary to protect vehicles with sufficient internal controls and identify perpetrators.
3. That Chief/FEMS review and update the 2007 Special Order on reserve vehicles to include:
 - a) as much specificity as possible regarding the number and type of reserve vehicles required to handle effectively frontline vehicle replacements, large-scale emergencies, mass-casualty events, and mobilizations. The team understands this effort might result in identifying a need for greater-than-planned purchases of apparatus, and that FEMS cannot guarantee successful preparation for every conceivable emergency; and
 - b) specific instructions regarding the timing of replacing frontline vehicles under repair with reserve units.

Please provide a written response to this MAR by March 12, 2013. Your response should include actions taken or planned, dates for completion of planned actions, and reasons for any disagreements with the recommendations or concerns presented. Please distribute this MAR only to those who will be actively involved in preparing its response.

Should you have any questions prior to preparation of your response, please contact [REDACTED]
[REDACTED] Director of Planning and Inspections, at [REDACTED]@dc.gov, or at (202)-
[REDACTED].

Sincerely,


Charles J. Willoughby
Inspector General

CJW/ebs

cc: Mr. Allen Y. Lew, City Administrator
Mr. Paul Quander, Deputy Mayor for Public Safety and Justice
The Honorable Phil Mendelson, Chairman, Council of the District of Columbia
The Honorable Kenyan McDuffie, Chairperson, Committee on Government Operations,
Council of the District of Columbia
Mr. Phillip Lattimore, Director and Chief Risk Officer, Office of Risk Management

APPENDIX

APPENDIX

*Some of the FEMS Apparatus
Cited in this Report*

APPENDIX

Engine Company—A fire suppression vehicle staffed and equipped to provide fire suppression and Basic Life Support (BLS)³⁰ services. Many of these vehicles are designated as paramedic engine companies as they are staffed with paramedics to provide Advanced Life Support (ALS) services.³¹



Source: <http://www.DCFD.com>

Ladder Truck—A vehicle equipped with a ladder and used primarily for fire suppression calls.



Source: <http://www.DCFD.com>

³⁰ BLS includes minimal or basic treatment and vital signs monitoring.

³¹ ALS medical responses include breathing tube insertion, CPR, multiple medications, or other advanced care.

APPENDIX

Heavy Rescue Squad—A specialized vehicle used for all fire suppression services. It can provide advanced services including technical rescues, high-angle rescues, cave-in rescues, water rescues, and other special operations.



Source: <http://www.DCFD.com>

Ambulance—This vehicle is staffed with an Emergency Medical Technician (EMT) who provides BLS.



Source: OIG team

APPENDIX

Medic Unit—This vehicle looks similar to an ambulance. It responds to calls requiring an ALS medical response. A medic unit is staffed by both a paramedic and an EMT. This unit is designated with a “P” in front of its number.

Paramedic Engine Company—A fire suppression vehicle staffed with a paramedic who provides fire suppression and ALS services.

Hazardous Material Unit—A vehicle specially equipped to handle hazardous-material incidents including poison response, radiation incidents, and terrorist incidents.



Source: <http://www.DCFD.com>

APPENDIX

Fire Boat—FEMS maintains three fire boats for water-based firefighting operations:

- fireboat #1 – a 70-foot-long icebreaking vessel (see photograph below);
- fireboat #2 – a 32-foot-long aluminum vessel; and
- fireboat #3 – a “Boston Whaler” style vessel.



Source: <http://www.DCFD.com>



**Government of the
District of Columbia**

Office of the Inspector General

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