



**FIRST ANNUAL
Emergency Vehicle Maintenance Survey**

EMERGENCY VEHICLE MAINTENANCE STRATEGIES

Maintenance procedures and standards, and vehicle replacement decisions, are only as good as the data that supports them. What is equally clear across the entire spectrum of North American municipal fleets is a pronounced need for consistent and reliable data that can be used to benchmark operations internally and compared to industry practices.

Until recently, however, maintenance data on emergency vehicles was not readily available for municipal fleets. To address this maintenance management information need, the City of Minneapolis turned to FleetAnswers, the industry's leading provider of benchmarking services and fleet management information. Through a cooperative, first-of-its-kind effort, the partnership conducted an extensive industry-wide survey of municipal fleets, and produced a comprehensive report on this much sought-after information.

The FleetAnswers survey covered several vehicle types, including Police Cars (metro and highway/county), Ambulances, SUVs used by police and fire departments and a variety of Fire Trucks.

Annual average data for all vehicles types requested in the survey included:

- Average Age
- Average Miles
- Annual Hours to Maintain
- Lifecycle (Miles, Hours, Years)
- Preventive Maintenance Intervals (Miles, Days, Hours)
- Inspection Intervals (Miles, Days, Hours)

Supporting Data

POLICE CARS

	Metro (City) Squad Car	Highway/County Squad Car
Average Age	3 years	Little over 3 years
Average Miles	52,000	56,500
Annual Hours to Maintain	44.5	35.5
Lifecycle (Miles)	117,000	116,300
Lifecycle (Hours)	8,325	Insufficient Data
Lifecycle (Years)	5.6 years	6.5 years
PM Intervals (Miles)	4,000	4,200
PM Intervals (Days)	102 days	123 days
PM Intervals (Hours)	444 hours	Insufficient Data
Inspection Intervals (Miles)	4,600 miles	4,750 miles
Inspection Intervals (Days)	135 days	149 days
Inspection Intervals (Hours)	412 hours	Insufficient Data

AMBULANCES AND SUVS

	Ambulance	SUV (Police)	SUV (Fire)
Average Age	4.5 years	4 years	5 years
Average Miles	75,800	50,500	50,000
Annual Hours to Maintain	Insufficient Data	36	38
Lifecycle (Miles)	165,000	110,000	120,750
Lifecycle (Hours)	Insufficient Data	Insufficient Data	Insufficient Data
Lifecycle (Years)	8	7	9
PM Intervals (Miles)	4000	4,300	5,000
PM Intervals (Days)	94	132	143
PM Intervals (Hours)	Insufficient Data	Insufficient Data	Insufficient Data
Inspection Intervals (Miles)	4000	4,200	5,400
Inspection Intervals (Days)	Insufficient Data	190	153
Inspection Intervals (Hours)	Insufficient Data	Insufficient Data	Insufficient Data

FIRE TRUCKS

	Ladder Fire Truck	Pumper Fire Truck	Quint Fire Truck (Ladder/Pumper)
Average Age	7.8 years	8.3 years	7.7 years
Average Miles	7,568	5,677	Insufficient Data
Annual Hours to Maintain	138	191	218
Lifecycle (Miles)	104,000	98,500	107,000
Lifecycle (Hours)	Insufficient Data	Insufficient Data	Insufficient Data
Lifecycle (Years)	18.5	15.5	15.8
PM Intervals (Miles)	3,500	3,600	3,500
PM Intervals (Days)	151	153	129
PM Intervals (Hours)	200	187.5	200
Inspection Intervals (Miles)	2500	2700	2000
Inspection Intervals (Days)	Insufficient Data	Insufficient Data	Insufficient Data
Inspection Intervals (Hours)	Insufficient Data	Insufficient Data	Insufficient Data

First Response Note

From the limited data collected on whether or not fire trucks were indicated to be First Response vehicles or not, no significant relationship can be noted.

SNAPSHOTS

While survey data paints a valuable picture of Emergency Vehicle Maintenance operations, individual case studies on these operations serve to illustrate the decision-making process behind successful programs and practices.

Employing Best Practices at the Georgia Department of Administrative Services

“Like most emergency vehicle fleet operations we have a tendency to try and do everything internally,” says Steve Saltzgiver, MAOM, Director, Office of Fleet Management, Georgia Department of Administrative Services. “However, with public safety operations decentralized and vehicles spread out all over the state it’s not always possible to have the needed resources to make that happen.”

For approximately 1,400 public safety vehicles, the Georgia Department of Public Safety outsources most maintenance through Automotive Resources International (ARI). The contract enables the fleet to be serviced at about 4,000 shops located throughout the state. Data on maintenance and repairs collected by ARI is then available to the fleet’s managers through an interface to the state’s fleet management system. Included as well is mileage and fuel use information.

“We use that data to benchmark each of the different types of vehicles in our fleet,” Saltzgiver relates. “With this information we can graph where our costs are level or rising, and by incorporating the cost of downtime in terms of lost productivity and the need for spare vehicles, we know whether it’s more cost effective to repair or replace a vehicle.”

As an example, Saltzgiver points out that in the Georgia fleet a six-year trade cycle is optimum for passenger vehicles and for public safety units the optimal average lifecycle is 4.5 years. “Repair costs rise exponentially as vehicles age,” he adds. “Today, our passenger car fleet is ten years old on average, which reduces capital costs, but including downtime and spare vehicles, the true cost is above the best economic replacement point.”

To simultaneously lower the fleet’s average age and address budget concerns, Saltzgiver notes, the state of Georgia has begun leasing some vehicles. That

move has also boosted productivity by increasing utilization, reducing downtime and age, although the bulk of the fleet is still made up of owned equipment.

“We have not been able to keep up with replacements on a schedule that makes that makes the most sense financially,” Saltzgiver concludes. “While we wait for that opportunity, though, we are consistently looking to employ best practices. Today, our programs and procedures help us keep downtime to a minimum, costs low-- and most importantly reliability as high as possible.”

Ensuring Safety and Performance Cost Effectively at the Maine Department of Public Safety

“We use a continuing process of benchmarking and analyzing how we do business to keep our fleet in top condition and to determine replacement needs,” says Dave Blake, Fleet Manager for the Maine Department of Public Safety.

“That includes tracking costs using data in an in-house computer system, constantly looking at alternatives and working with our suppliers to find better solutions.”

As a former trooper, and in his current role for the past 20 years, Blake brings a comprehensive perspective to managing the Maine’s public safety fleet of 450 to 500 vehicles. The maintenance operation, with four shops, includes a headquarters location in Augusta; a facility in Portland and two others located at police barracks that employ a total of nine highly experienced mechanics.

“It all starts with thorough inspections,” Blake states. “Each vehicle undergoes a complete safety check every 8,000 miles. We pay particularly close attention to brakes, and because of the road salts required during winter in the state we watch brake and cooling lines closely as well.”

One item that is not being replaced often on Maine Public Safety fleet vehicles is engine oil. “We changed the entire fleet over to synthetic engine lubricant,” Blake relates, “and have extended our drain interval to 32,000 miles. We do change filters during every safety check test the lubricant regularly. Overall our experience with synthetic engine oil has been impressive. In fact, we haven’t lost an engine in 25 years.”

Maine Department of Public Safety vehicles are usually traded after 100,000 miles, which due to the nature of the operation is generally after 24 to 36 months of service. Ideally, according to Blake, about a third of the fleet is replaced

annually, but because of recent budget issues, 90 units were replaced in 2009 and plans call for replacing about 50 vehicles in 2010.

“With effective preventive maintenance, we can easily run our vehicles to at least 125,000 miles,” Blake says, “and make replacement determinations on a case-by-case basis. Benchmarking is also a key part of that effort because it enables us to determine when to replace components and wear items cost effectively.

“We are also always looking at ways to keep costs in check,” Blake concludes. “Having trusted suppliers is very important in that regard. They help us weigh alternatives and in the end save a considerable amount of money, all without compromising safety or performance.

BETTER CHOICES

Constantly striving to employ the best practices for Emergency Vehicle Maintenance programs and vehicle replacement and acquisition procedures, municipal fleet managers rely on accurate, consistent and comprehensive data.

Backed by the City of Minneapolis, the nationally recognized fleet benchmarking firm FleetAnswers is now able to offer maintenance data on emergency vehicles to help fleet managers identify their individual operation's strengths and weaknesses, and in turn make better and more informed decisions.



FleetAnswers provides benchmarking services to large, diverse fleets in 48 states. The individual fleet has secure online access to compare their fleet's performance measures to industry specific averages.

FleetAnswers helps fleet organizations manage and operate their fleet efficiently by providing reliable data and critical performance measurements to drive best practices.

Visit <http://www.FleetAnswers.com> for more Benchmarking information or contact our staff today to set up a **demo**:

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