

GPS Fleet Tracking Solution Eliminates Headaches for State Agency

Automatic vehicle location and driver identification slash the need for manual recordkeeping for Virginia's Office of Emergency Medical Services.



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If you've ever been in an ambulance in the Commonwealth of Virginia, you can thank field inspectors from the state's Office of Emergency Medical Services (OEMS) for ensuring that the vehicle is up to code and the EMTs are up to speed. These inspectors travel the state's 42,774 square miles, checking the training, certification and credentials of emergency medical personnel.

"You don't want an emergency medical technician whose training expired three years ago taking care of you," said Frank Cheatham, Fleet and Logistics Administrator for the OEMS.

Cheatham is responsible for overseeing the operations and maintenance of assigned vehicles used by field inspectors as well as pool vehicles used by regional offices. He found himself in need of a GPS-powered fleet tracking solution to solve several pressing problems that were causing the department headaches.



Who's driving which vehicle?

Field inspectors take their dedicated agency-owned vehicle home every night, but many other workers share pool vehicles stored at the OEMS Central Office. The desire to track the use of pool vehicles triggered the need to associate individual drivers with unique vehicles for each and every trip. Not the forte of just any fleet tracking platform.

Working with fleet intelligence industry leader CalAmp, Cheatham and his team crafted a bespoke solution that installed individual state identification card readers in their pool vehicles. When paired with CalAmp's powerful and flexible edge computing device, the system delivers a seamless user experience via the intuitive CalAmp fleet management solution.



Tracking inspectors' movements

Prior to installing CalAmp fleet telematics devices, the field inspectors who use dedicated vehicles had to track their daily mileage and fuel purchases with pen and paper and deliver daily, weekly and monthly reports. They also had to manually record the time whenever they passed through a toll booth or made a stop – and they make a lot of stops.

“The guys in the field are in and out of their vehicles multiple times a day,” said Cheatham. “They’ll go to an agency and do an inspection, which may take a couple of hours, and then they’ll go back on the road to do another inspection.”

Logging the information on paper was a tedious process prone to inaccuracies.

“It really became cumbersome,” said Cheatham. “Imagine if you stopped for lunch and you have an appointment and you have to sit and write something down in a log book before you take off again.” It was high time for a change.

“We kept looking for a better mousetrap,” said Cheatham. They found it in the CalAmp fleet management solution.

“Now we can pull up the report for the day and see exactly where that driver was for that particular day,” said Cheatham. “The inspectors love it since they don’t have to track every last trip, it’s all done automatically when they check into their vehicle. And our leadership appreciates how simple it is to produce the reports required for auditing.”

If a question comes up in an audit or an incident occurs, Cheatham digs into data via the CalAmp dashboard to get the details he needs.



Geofencing seamlessly tracks tolls

For auditing purposes, the department needs a record of tolls paid. Virginia uses the E-ZPass system to reduce backups at toll booths, which means drivers can pass through without stopping. But OEMS workers had to look at their watches and fiddle with their log books and pens as they went through a toll booth to record the exact time they exited. That was not only inefficient, it was dangerous.

To solve the problem, OEMS uses the CalAmp fleet management solution to set geofences around each toll area. Now, the system automatically records the time a vehicle enters and exits the geofenced area.

When the department needs to audit its toll expenditures, Cheatham said, “We can just go back and pull up the report and see that that person was within that geofence at that time.”





Remote diagnostics facilitates maintenance

While it's tracking mileage and toll booth exits, the fleet telematics system is also monitoring engine diagnostics. Using the CalAmp dashboard, Cheatham can view engine fault codes remotely, in real time. Based on the fault code or codes, he can make an immediate decision about whether the driver should stop or keep going.

In one case, a diesel engine delivered several fault codes. "Based on what I was seeing, I made the decision to get it towed," said Cheatham.

It turned out that the diesel exhaust regeneration had been interrupted. Continuing to operate the vehicle could have damaged the power train. Cheatham noted, "It turned out that was the right move to make."

In another instance, a driver called Cheatham to report that his check engine light had come on. By checking the vehicle diagnostics, Cheatham determined that the problem was with the oxygen sensor signal. "I was able to give that information to the driver before the vehicle even hit the repair shop, so when he went to schedule it for repairs, they had an idea how long it would take."

Room to grow

The fleet tracking system continues to prove its value. For example, Cheatham received an alert that one of the department's vehicles couldn't be pinged. An investigation revealed that the cellular coverage in the area was poor. Installing cell boosters in vehicles that traveled the mountains was a simple solution that paid off.

Cheatham expects he'll continue to find new ways to leverage the CalAmp fleet management system. He noted, "Whenever my boss and I get together and have time to breathe a little bit, we will try to see what else we can do with it."

Meanwhile, the department enjoys the solution's daily payoffs. Said Cheatham, "CalAmp has built a system that just works, and it's created simpler work processes for everyone on our team."