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# FLEET Solutions

MAGAZINE

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## INSIDE THE FLEET OF PORT AUTHORITY OF NEW YORK & NEW JERSEY

A BEHIND-THE-SCENES LOOK AT THE PEOPLE  
KEEPING THE HOLLAND TUNNEL, NEWARK  
INTERNATIONAL AIRPORT, AND MORE MOVING

PLUS:

A FUTURE WITHOUT SEDANS?

VEHICLE IDLING: NOT-SO-IDLE CONCERNS



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# Inside the Fleet of the Port Authority of New York and New Jersey

By Bill Romba

**VERY FEW FLEETS CAN** have a major impact on worldwide air traffic from the ground.

According to a December 2018 report compiled by the Port Authority of New York and New Jersey's Aviation Department, over 1.3 million flights and nearly 20.5 million passengers were handled by airports controlled by the agency last year. The Port Authority's Central Automotive Division (CAD) supplies the necessary ground vehicles to keep runways clear and passengers moving, enabling planes to get off the ground.

The Port Authority must maintain high levels of performance and efficiency to keep global commerce moving on a daily basis, as it is responsible for some of the country's most important transportation and trade infrastructure. It operates and maintains five airports — JFK International Airport, Newark Liberty International Airport, LaGuardia Airport, New York Stewart International Airport, and Teterboro Airport — as well as four major bridges (the George Washington Bridge, Goethals Bridge, Outerbridge





Crossing, and Bayonne Bridge), two essential tunnels (the Holland Tunnel and Lincoln Tunnel), the PATH rail system, and the Port Authority Bus Terminal, and it owns and manages the World Trade Center site.

The agency's Central Automotive Division (CAD) plays a major role in this effort by preparing and maintaining their 2,600 vehicles for the workload that comes with handling such a densely populated region of the country.

NAFA Regular Member David Bobbitt, Manager of Central Automotive Division,

explained that the basic function of CAD, one of the five divisions of Operations Services, is to support the line departments, which are responsible for the movement of passengers and goods throughout the region, as well as customer interaction. CAD helps ensure the success of their operations.

"Technically, our clients are the agency itself," added Assistant Manager Varuna Sembukuttige.

As a result, they must stay on the cutting edge of a fleet industry that is going through major changes and stay

one step ahead of those changes whenever possible.

In addition to typical fleet vehicles like sedans, SUVs, and bucket trucks, the Port Authority is also responsible for buses, snowplows, snow blowers, ARFF (aircraft rescue and firefighting) fire trucks, jet fuel tankers, front loaders, lawn mowers, and tunnel-cleaning brush trucks. To help keep this diverse collection of equipment running as efficiently as possible, the organization is beginning to implement a telematics program.

### Telematics

"We've made decisions based upon history along with the input of all the employees, but we want to be a little more data-driven, so that we can make more educated decisions moving forward," said NAFA Regular Member Jim Hineson Jr., General Maintenance Supervisor.

Telematics is a method of monitoring an asset (car, truck, heavy equipment, or even ship) by using GPS and onboard diagnostics to record movements on a computerized map. Hineson states, "You've really got to do your homework to find out what you want for your operation, how you plan on sharing this information, and how to improve down the road." He adds that this data will be used, in part, to help with the procurement of vehicles, to perform more strategic maintenance and to identify high idling vehicles in the fleet among other things.

David Bobbitt states, "From CAD perspective, one major takeaway about the telematics program is true transparency for senior management as well as our end users of the assets. This transparency provides critical asset management data so everyone can make educated decisions with rolling asset development, while understanding our growth in sustainability efforts as well as electrification of the fleet would not be possible without this real-time information."

With collaboration as a key to success, "we reached out to an assortment of fleets, from large fleets, small fleets, government, and private, to learn what they use it for, what is their reporting structure. One of the biggest complaints was the need to monitor the input of information received," added Hineson.





# Training New Technicians

Fleets in many different segments are currently facing high attrition rates when it comes to automotive technicians. Finding suitable replacements is difficult enough, but how do you ensure that the knowledge these techs have stays within your organization, making for a more seamless transition?

"We have a lot of mechanics from a lot of different backgrounds. We don't expect any mechanic to come in here and be able to work on an armored car and then turn around and work on a boat and then work on a sedan," said Jim Hineson Jr., General Maintenance Supervisor for the Port Authority of New York and New Jersey. "We have all these senior mechanics with all of this knowledge, so we like to pair them up [with newer technicians] and cross-train."

Different generations of mechanics often have different skill sets. For example, Hineson explained that newer mechanics will often have more experience with diagnostics and the computerized aspect of automobiles, while senior staff may have more overall knowledge of the vehicles. "So, not only does cross-training bridge that gap of unity in the shop so you don't have all the 30-year guys and the five-year guys in two different piles, but you get them to work together," he said.

In addition to cross-training, the Port Authority also makes sure that technicians have time to practice on any new equipment before it arrives.

"Every time we purchase a vehicle, we write into the specs that we want training on that equipment, especially if it's specialized," Hineson said. "We allocate time for training so that when we purchase the vehicle, they'll be up to speed on it the minute we get it."

It can also be important to make sure there are records of each person's job responsibilities, especially for office staff. This way, when a current employee leaves, their successor can hit the ground running. To help with this, Hineson said the Port Authority created a book of standard operating procedures for each employee's duties and a list of their current contacts. "That was one of the very important things that we had to do ... so if someone's retiring, for example, an engineer, you aren't trying to reinvent everything right out of the gate because you have enough to worry about."

"Even though we have a system in place, we're still going out to fleets to find out what reports they're doing and how they're doing them and how we can better improve to try and build the best system that works for us," he said.

## Greener than before

Another way that the Port Authority is keeping up with current fleet technology is the agency's greening initiative. Bobbitt said his team is very proud of this program and that they have an objective to make at least 50 percent of their light-duty fleet fully electrified by 2023. Across the agency, more than 80 electric vehicles have been deployed and more than 100 are expected to be in service by year-end.

Kevin Niranjan, Supervisor, Automotive Engineering, handles vehicle procurement for the Port Authority and spoke about some of the sustainable vehicles that are helping to meet that goal.

"We currently have 18 electric buses, and we'll be going through a procurement for an additional 18 in the coming year," he said. "They're used to shuttle patrons for the airports."

Niranjan went on to explain that while they have had no issues with the electrical side of these vehicles, they have had to make modifications to comply with New Jersey Department of Transportation requirements.

Mark Gernavage, Automotive Engineer, also elaborated on some of the ways that the fleet has made its 10,000-gallon airplane fuel tankers more environmentally friendly.

"The Port Authority has the second largest fleet of refueling vehicles in the entire world," he said. For reference, he added that planes burn

around 5 million gallons of jet fuel on a typical day at JFK Airport, while planes out of Newark Liberty International Airport use around 2.8 million gallons daily.

"We currently have a fleet of 65 tankers, which we are in the process of replacing. All of them will be brand new, going from engines that were before Tier 1 even existed to Tier 4 final engines," Gernavage explained. "We've reduced approximately 21 percent of NOx output. We've also equipped these vehicles with engine block heaters, which have reduced hours from engine idling as well as NOx emissions."

In addition to these larger, more specialized vehicles, Niranjan also said that the Port Authority has begun using an electric sedan as a replacement vehicle for part of their light-duty fleet, as well as a plug-in hybrid electric minivan. He also added that they will be onboarding hybrid police vehicles once it is rolled out.

However, the Port Authority's sustainability effort doesn't end with the physical cars and trucks they use. Niranjan also spoke about being one of the first agencies to implement an ARFF truck No-Foam System on their 24 crash trucks. This system assimilates a mixture of foam and water to ensure a 3 percent blend, which is required to fight fires and meet Federal Aviation Administration regulations.

The organization also is currently in the process of testing soybean-based tires on some of their engineering, maintenance, and Port Authority Police Department vehicles. "The wear on the tires has been very good and is comparable in terms of comfort," said Hineson. "The

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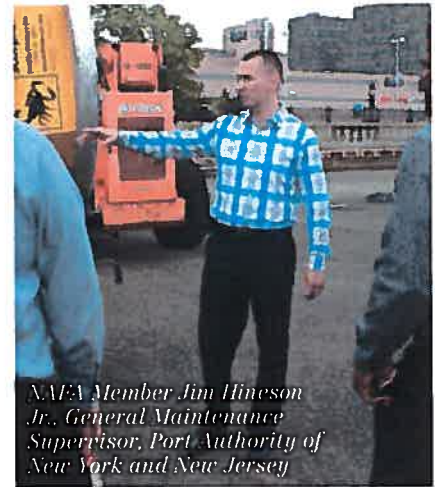
stopping distance, performance, has been to our liking. We went through the winter with [the soybean tires], so we're going to see with the warmer temperatures. But so far, we've had nothing but great results."

**Fuel planning**

Prescott Miller, Supervisor of Contracts and Compliance, handles the

responsibilities that come with fueling Port Authority vehicles. "We go through over 1.5 million gallons a year in fuel — probably about 130,000 gallons per month," he said. This includes ultra-low-sulfur diesel, B20 biodiesel, compressed natural gas, E-85 ethanol, and regular unleaded. Additionally, there are 12

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*NAFI Member Jim Hineson Jr., General Maintenance Supervisor, Port Authority of New York and New Jersey*



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# Keeping Runways Clear

**R**esponsible for three of the northeast’s busiest airports, the Port Authority of New York and New Jersey can’t afford to mess around when it comes to weather events like snow. They need to be prepared to get runways cleared as quickly as possible, typically within a 30-minute window. This may sound impossible, but here’s some insight into how they make it work.

Not every storm is going to bring a light coating of snow. So, when plows are out clearing runways, visibility for the drivers of these trucks can become a serious issue at night and in whiteout conditions. Therefore, the plows are broken into teams, with two lead vehicles at the head of each group. These guide vans have a single, clear light in the center of their roof, which when illuminated will flash in one of several different colors.

This way, if a group of plows is designated as the “Red Team,” they know they are following the vans with red lights on top.

In addition to the Mack snow plows and Oshkosh snow blowers that see duty in the winter months, the Port Authority also has a very specialized piece of snow removal equipment: the Overaasen RS 400 high-speed runway sweeper.

These articulated vehicles comprise a 4x4 Mercedes-Benz Arocs cab-over-truck and are a triple-threat when it comes to clearing runways as fast as possible. They can clear snow at speeds as high as 60 mph.

The front of the vehicle features a 27-foot long blade, with ends that can be folded inward. This enables the truck to fit through tight spaces like security gates. In the center of the trailer is a 20-foot long steel brush that kicks up any snow left behind from the plow, while the blower at the rear of the trailer pushes any residual snow from the tarmac.

The Port Authority currently has 58 of these vehicles in the fleet. It also tries to multipurpose as many of the vehicles as possible, so in the warmer months, the Overaasen plows are used to clean dirt and debris from runways.

*Continued from Page 26*

fueling locations at the agency’s facilities, and all seven auto shops have fuel stations.

As mentioned above, if the Port Authority’s snowplows can’t run when needed, or if heavy rains flood PATH tunnels, business and travel will grind to a halt. Going back to Superstorm Sandy, the organization said they learned a great deal from managing the effects of the hurricane; it has led to preventive measures that are in effect today.

“We have additional, extra-heavy-duty compressors to run switch signals if the main head units were compromised due to flood waters,” said Gernavage.

Miller also spoke about the contingency plan for getting fuel during a major weather event. “The good part is that our contractor has fuel farms that are not just local, but in upstate New York as well as Pennsylvania. So, if something is affected here and they can’t operate the fuel farm, they can bring fuel from other locations,” he said.

In addition to unplanned weather events like snowstorms and hurricanes, the Port Authority fleet team must be prepared with specialized equipment well in advance to help support scheduled occasions like the United Nations General Assembly as well as Emergency Vehicle Operations Course (EVOC) police training.

The CAD of the Port Authority plays a major part in the agency’s success keeping the planes, trains, and automobiles in the New York metro area moving each day. As a result, they constantly try to improve and streamline their processes even further.

“That’s kind of the mindset the entire office is in,” said Hineson. “I think everyone takes a lot of pride in what they do, knowing that we can always improve.” ■

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