

## FREQUENTLY ASKED QUESTIONS

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### **What is the purpose of the GPS/AVL, or Geotab, implementation project?**

*The Geotab telematics system will gather data about MoDOT vehicles in the field during operations. This data will be used to manage the fleet, flag potential mechanical problems and influence driver behavior.*

### **What are the objectives of this project?**

- *SAFETY!*
- *Monitor seatbelt use, speeding, harsh braking and other driving behaviors.*
- *Integrate with MMS to save vehicle operators time by automatically logging engine ending hours and mileage meter readings.*
- *Monitor fuel usage by focusing on idle time and route management.*
- *Decrease maintenance costs with engine diagnostics.*
- *Enhance winter operation response by monitoring real-time route treatment cycles and material use.*

### **Is this a new technology being used in department vehicles?**

*The Southwest, St. Louis and Central Districts have been piloting Geotab for several years. Geotab was initially used in the districts for engine diagnostics to flag potential mechanical problems before they happened. Soon we realized the system had capabilities beyond the initial focus such as: operational efficiencies, managing the fleet and most importantly influencing driver behavior. For the first phase of implementation, all snowplow trucks, Emergency Response trucks, Central Office and Motor Carrier pool fleet will have Geotab units, including the Director, Chief Engineer, and District Engineer vehicles.*

### **Is this use of Geotab required, or can I choose to disconnect the telematic device?**

*If you are operating a department vehicle equipped with a telematic device, under no circumstances should the hardware be disconnected. If the Geotab hardware is disconnected, notification is sent to General Services (GS). Employees are expected to report any Geotab connectivity issues immediately to their supervisor; they should not wait for GS to contact them.*

### **Can I see the information that is being reported about me as a driver? Will each employee be given a monthly report of their own behavior or do they have to request it?**

*The reports in the chart below will be sent to managers for discussion with employees. Drivers can track their personal level of risk and safety by viewing scorecards of their driving behavior. Geotab does not track the individual employee but a designated fleet unit. If the local supervisor is reviewing the previous day's activity with their crew, they can drill down to individual vehicles. The employee and supervisor are aware what unit an employee is driving, and MMS can be used to verify which employee is assigned to a unit.*



*In order to have specific individual reports per employee, key fobs would be necessary to assign to each employee. The use of key fobs is currently being piloted by Central District on a limited basis to determine if key fobs provide additional benefits for the cost.*

At-risk Behavior	Threshold	Notification				
		Audible Alert "beep" in vehicle	Immediate e-mail to Supervisor	Daily e-mail to Supervisor	Weekly Report to Supervisor, Superintendent, Safety & Health Managers	Monthly Report to Managers, Dist and Asst Dist Engineers
Seat Belt	no seatbelt when > 1mph	X		X	X	X
Speeding	> 6 mph more than 3 minutes	X		X	X	X
Speeding	>15 mph more than 1 minute	X	X		X	X
Backing on Departure					X	X
Idling	> 5 minutes				X	X
Possible Collision	change in speed greater than 56 mph in 1 second	X	X		X	X
Harsh Braking	harsh braking event causes a g-force greater than the configured value to be exerted on the vehicle				X	X
Harsh Cornering	hard or aggressive turn causes a g-force greater than the configured value to be exerted on the vehicle.				X	X
Device Removal					X	X

Note: Districts can customize the reporting structure to accommodate their needs.

**Can I see the information that is being reported about me as a driver?**

*Drivers can track their personal level of risk and safety by viewing scorecards of their driving behavior in collaboration with their supervisor. Access is limited to supervisors, however individual score cards by fleet unit can be provided to employees by their supervisor upon request.*

**What types of information about driver behavior are collected with Geotab?**

Driver Behaviors that will be monitored and included on a Score Card report:

- *Seat Belt: # of seat belt violations (vehicles are moving, and the seat belt is not engaged)*
- *Speeding: # of speeding instances -- +6mph (3 minutes or longer), +15mph (1 minute or longer)*
- *Possible collisions*
- *Harsh Braking*
- *Harsh Accelerating*
- *Backing on Departure: # of instances when Reverse is the first direction a vehicle takes after starting*
- *Idling: # of instances when vehicles are idling longer than 5 minutes*



*There are two different methods to communicate the information; an e-mail report or dashboard report. Both contain the same information.*

**Will I be disciplined if I violate one of the driver behaviors being monitored?**

*The intent is to not use this technology and related data for the purpose of disciplining employees. The purpose of this technology is for drivers to modify their own behaviors as they monitor their Driver scorecard and positively influence overall vehicle incidents. However, if driver behavior is elevated as a concern, the data will be reviewed and considered on a case by case basis to determine next steps.*

**With the current financial situation of our agency, why are we investing in this technology now?**

*As the technology evolves, the cost for the system has cut in half from the initial district purchases several years ago. The price is right now because we have an opportunity to benefit from a National Geotab contract established by the State of California. The cost per month per unit is \$18.50 or approximately \$500,000 statewide per year.*

*Telematics will bring efficiencies to our operations through conservation of resources, including fuel and winter materials while improving customer service with real-time data for winter ops and emergency alert notifications.*

*The savings from reduced claims and early engine diagnostics have proven to be more than enough to pay for the system. Anticipated cost savings with GPS/AVL implementation is based on the pilot program in the Southwest and Central Districts.*

- *Reduction in fuel usage by reduced idling time was 15%. Even a 10% reduction statewide could reduce the fuel usage in the HD trucks by 340,000 gallons or save approximately \$900,000 per year.*
- *Reduction of general liability claims was reduced by 17% by being able to discount false claims when it could be proved by Geotab that a MoDOT vehicle was not in the area of the claimed incident location. Even a 10% reduction could equate to a reduction of approximately 131 claims for a total of \$1 million in savings.*
- *Having an automated system of collecting daily mileage data would save the average employee approximately 5 minutes per day in collecting mileage from the truck and entering it into the MMS system. While this amount seems small, when added up across 3,000 employees, it adds up to 50,000 hours of savings per year or the equivalent of 25 Full Time Employee positions.*

**What if I have to leave my truck idle during winter events to prevent it from icing up during ice/freezing rain/snow or during certain operations in the summer months in extreme heat?  
What will happen if I idle over the threshold on the report?**

*MoDOT understands there are times when idling is necessary to conduct operations and for the safety and comfort of employees in the cab of the truck during extreme weather conditions. It is essential*

*that driver safety is not compromised as idling is reduced. However, there are many situations that trucks are left idling that could result in significant savings. MoDOT's newer heavy-duty trucks do not take well to idling. Extended idling leads to residue buildup on engine components, increases emissions, inefficient fuel consumption and costly maintenance repairs. In fact, idling causes twice as much wear on vehicles internal parts as does regular driving. Idling reports will be reviewed routinely to raise awareness and highlight opportunities for improved fuel efficiencies and reduced operating expenses. The long-term goal is to improve the health of the fleet overall by simply monitoring and minimizing unnecessary idling, not discipline of employees. In the GPS/AVL pilot program conducted in the Southwest and Central Districts a reduction in fuel usage by reduced idling time was 15%. Even a 10% reduction statewide could reduce the fuel usage in the HD trucks by 340,000 gallons or save approximately \$900,000 per year. On average 1 hour of idling equates to 1 gallon of fuel. If there are situations where idling is occurring routinely for unwarranted situations, supervisors will have coaching and mentoring conversations for improved performance.*

#### **What are the beeps that I hear when driving?**

*On Monday, February 15th Device Beeping will be activated in all MODOT vehicles equipped with Geotab. Device beeping is a driver assistance tool that lets you know when an event has occurred by giving you an audible alert. These are the following events that will cause the device to beep.*

- *Speeding Over 6 mph > 3 Min. -- 3 Beeps*
- *Speeding Over 15 mph > 1 Min. -- 3 Beeps*
- *Seatbelt Unbuckled > 1 mph -- 3 Rapid Beeps*
- *Possible Collision -- 10 Rapid Beeps*

#### **Updated February 2021**

#### **Can Geotab data be requested through the Sunshine Law?**

*Any Sunshine request is first reviewed by Chief Counsel to determine if there is any pending litigation or a personnel related matter, in which case it would not be disclosed. However, we would generally be obligated to release the information if it is requested via the sunshine process. During the AVL/GPS pilot it was found that Geotab data was actually used to exonerate MoDOT on more cases than not. On many occasions, MoDOT trucks were reported to be involved in an incident, whether it was a chip in the windshield of a car, a mailbox that was hit, etc., Geotab was used to verify that in fact the MoDOT vehicle was not the responsible party.*

#### **Is it possible to trigger a seatbelt notification for having a lunch box in the passenger seat?**

*Yes, a notification will trigger if there's an item in the passenger seat heavy enough to indicate seatbelt usage. Unsecured objects in the cab of a vehicle can be an extreme safety hazard, so it's important to secure all items that could be potential hazards.*

#### **How long is the data retained in Geotab?**

*One year. Data can be exported to an excel file or pdf to be saved in a separate file for longer retention. Any report can be exported.*

**Many heavy-duty fleet have battery shut downs each night because of potential of vehicle fires due to wiring. When there is a battery shut down or a truck battery is removed, does this trigger a device removal?**

*Yes, if the battery is removed or the battery shut off every night, it shows the device being disconnected because power is lost to the unit. The device removal notification is mainly used for awareness that the device is still operating. Consideration is being made to set time limitations to eliminate this issue.*

**Will Geotab eventually be incorporated into the cameras MoDOT is piloting?**

*Currently MoDOT is piloting 15 cameras in Southwest, Central and St. Louis districts for added functionality during winter operations and safety for distracted and drowsy driving. Ultimately if cameras are implemented, the intent is to integrate cameras with Geotab. This will be a phased approach and a benefit/cost evaluated when any future Geotab enhancements are being considered.*

**What does it mean when an e-mail report is blank containing no information?**

*The e-mail reports are automated and each user at different levels of management are set up to receive different reports at different time intervals. A blank report means there were no events or exceptions during the reporting period.*

**Why am I receiving reports for employees I do not supervise?**

*For the beginning first couple of months, we have observed some glitches in the frequency and distribution of reports. The MoDOT Geotab Core Team is working closely with Geotab to clean-up any of these items and run quality control. If you are receiving reports in error, please contact your District Geotab Administrator. If a vehicle is assigned to multiple Orgs, each supervisor of each Org will receive the same e-mail report or notice.*

**As a supervisor, what should I do with the daily reports I receive?**

*Daily reports will be received in two situations:*

- *Supervisors receive daily reports at the same time of the day for seat belt and all speeding rules. These reports are an opportunity to have a conversation with your team on the trends in behaviors, any areas for improvement, and the successes of your team recognizing improved behavior. Also think about whether there are operations that could be done differently to promote further safety. The goal of the daily reports is zero events with a blank spreadsheet.*
- *Immediate e-mail notifications are sent for speeding > 15 mph or a possible collision. The supervisor should act on these e-mail notifications promptly notifying the employee to stop and have a coaching conversation to understand what was occurring to trigger the event.*

**As a manager observing multiple trucks from different Orgs, it is difficult to review the report when only the truck number and rule exception is reported. Can the e-mail report include more information than just the truck number and rule the event is for?**

*Yes, starting March 1, the reports will be updated to include the truck number, district and the Org # the vehicle belongs to.*

**Can you explain the backing when leaving parameters again? How long does a vehicle have to be stopped before reverse is considered the first movement and distance – is it less than 22 yards?**

*If the "Trip Distance" is less than 22 yards, it will only trigger the rule if it is at the beginning of a new trip. A new trip beginning occurs if the vehicle stops for over 300 seconds. So if there is a stop for over 300 seconds and the vehicle starts driving again from a stopped position and goes in reverse within the first 22 yards of that event it will trigger a broken rule or exception.*

**I was looking at some of our maintenance operations that we do that would get flagged for backing when leaving, including ditching, pipe replacement, chip sealing, driveways, and others. Many of these operations will consistently trigger exceptions just by the nature of the operation. How will these be handled?**

*We understand certain operations will trigger a backing exception, and in many cases, there is not an opportunity to alter the operation. The intention is each exception should raise awareness and consideration if we could perform an operation differently to eliminate backing and improve overall safety.*

**A lot of MT facilities are set up where trucks have to be pulled in to park or even in a cold storage facility to be plugged in without running an extension cord twice as long, so we're going to receive a lot of backing when leaving notifications.**

*We understand we may receive multiple backing when leaving notifications. The goal is to raise awareness of these situations and have conversations and evaluate whether the operation can be performed in a safer manner. We would much rather trucks pull forward when leaving than backing when leaving. In this situation, purchasing an extension cord twice as long could be an easy solution to an unsafe situation. We must always keep in mind, we do not want to create a less safe situation simply because a notification has been triggered. Ultimately this number should go down as we continue to be accountable and think about ways of doing operations safer.*

**The Wash Bay at our facility is not large enough to pull the truck in to wash the entire truck. We have to pull it in to wash half of the truck and then turn around and back it in to wash the other half of the truck.**

*We understand the backing when leaving notifications will never be zero and certain alterations cannot be altered. The goal is to raise awareness of any unsafe situations and have conversations and evaluate whether the operation can be performed in a safer manner.*

**What if I have a question about a report or how to use Geotab?**

*A new tab has been added in Geotab on the left-hand side titled MoDOT Support. Employees are encouraged to contact their District Geotab Administrator during work hours to trouble shoot any questions. If the District Geotab Administrator is unable to answer the question, they will contact Blue Arrow, the Account Manager for Geotab. If a need arises outside of normal business hours, contact information is available for employees to contact Blue Arrow directly.*

**Where can I receive additional training?**

*Weekly training is available every Thursday for MoDOT employees at 1 o'clock through a WebEx meeting with Blue Arrow. The agenda varies each week and there is ample opportunity for questions. If there is a specific topic you'd like covered during a training, send an e-mail to Kyle Fischer, and we can add it to the training. Feedback has been positive with over 100 participants attending weekly. In addition, several training videos have been recorded and are available on MoDOT's Maintenance Division SharePoint site under the AVL/GPS button and Videos button or the following link: [Training Videos](#)*

**Why does my Ford model truck report numerous seatbelt exceptions?**

*Some later model Ford vehicles are having issues with the seatbelt sensor. Geotab is aware of this situation and troubleshooting the issue.*

**We have an outer road by our building where Geotab indicates a speed limit of 25 mph, but the posted speed limit is 45 mph. Can the incorrect speed limit be changed in Geotab?**

*Yes, the District Geotab Administrators have the ability to update the speed limit in Geotab. Contact your district administrator with the data to update it.*

**Are all of the settings done by MoDOT consistent for all vehicles statewide or does each department do their own set up?**

*All parameters apply consistently to MoDOT fleet statewide, however some parameters are unique to each class of fleet, whether heavy duty, medium or light duty. Harsh Cornering, Harsh Braking and Possible Collision parameters differ due to different G-forces and distribution of weight of different types of vehicles.*

**What is the definition of Harsh Cornering?**

*Harsh Cornering is determined by G-force measurements that can detect how quickly the vehicle brakes or moves forward. Definitions of all the rules are defined under the Rules tab in Geotab. It comes from industry standards for different size vehicles. When we're responding to snow events, the center of gravity is different with a full load so MoDOT is working with Geotab to evaluate this.*

**What is the parameter for reporting Idling? There are multiple idle times over 5 minutes. They have multiple stops a day that could take up to 20 minutes each.**

*Anything greater than 5 minutes will trigger an idling event. This threshold was established based on industry standards. We understand there are MoDOT operations when a truck may idle longer than 5 minutes, i.e., the hot seat TMA truck in a work zone or monitoring road conditions in advance of a storm. Idling notifications will never be zero and serve as a tool to raise awareness of situations where idling can be minimized or eliminated altogether bringing efficiencies to MoDOT operations. Data will be collected and evaluated over the next 6 months to establish thresholds specific to MoDOT operations.*

**Do the International and Western Stars have seatbelt sensors to report seatbelt violations?**



*Currently, the reports exclude all extra and heavy-duty vehicles because the majority do not contain seatbelt sensors. A second rule is being developed to pick up the newer models that do have the seatbelt sensors.*

**With Columbia piloting key fobs, I'm not seeing the names of the drivers on the report?** *The Columbia Maintenance facility is piloting the use of key fobs to see if it's something to expand statewide. Columbia has card readers installed on their trucks, so it identifies the driver. The reports will be updated to show the driver instead of the vehicle.*

**I received 2 notifications of possible collision and the truck was sitting in the lot. Why is this?** *In both instances the Geotab device wasn't secured in the ODB port. If the device is hit by a leg or not secured properly, it triggers an event that caused the G-force. Receiving the notification is an opportunity to verify the device is properly secured.*