motive

The Service Provider's Guide to VEDR

Understand the benefits of the program and explore how AI supports your business. Review the KI requirements and review how KI's are calculated.
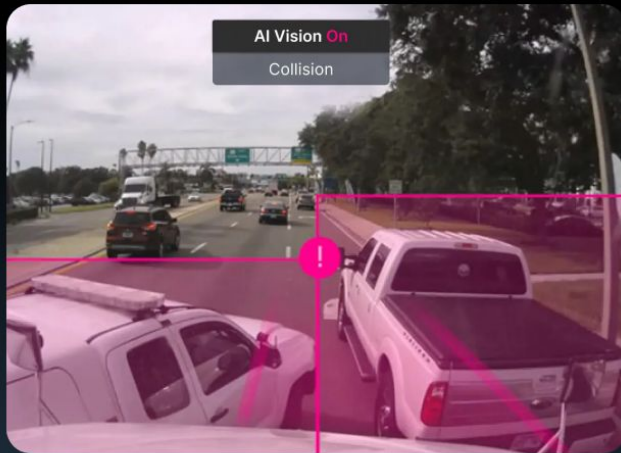
October 1, 2024

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Disclaimer:

Introduction

Service Provider VEDR Program

As of October 1, 2024 service providers are required to ensure all vehicles used to provide service (including rentals) will be equipped with a Video Event Device Recorder (VEDR) that has Machine Vision and Artificial Intelligence (MV+AI) functionality.

VEDR devices must come from one of the qualified Safety Technology Vendors.

Service Providers will ensure verification and recording of specific key indicators (KIs) and to maintain at all time the corresponding KI thresholds or values.

The in-cab alert functionality of VEDR devices should be turned on.

Program Benefits

The MV+AI functionality provides operators with the opportunity to self-coach in real time and correct unsafe driving behaviors that are often the leading indicators to accidents.

The use of MV+AI devices will help to further reduce accident frequency and accident severity, and can positively impact the Safety Results Summary (SRI) and LCC-SOI result.

Machine Vision & Artificial Intelligence

What is Machine Vision?

Machine Vision is the basic ability of a system to capture and process visual information. In the context of a camera, that would be the ability to identify and recognize objects, activities, or behaviors.

For example, identify and capture video of a stop sign ahead.

What is Artificial Intelligence?

Artificial Intelligence is the part of the technology that analyzes, interprets, and learns from these images. It begins to understand the movement of objects, predict potential hazards, and interpret within context what it is seeing.

For example, after identifying the image of a stop sign up ahead. AI can recognize, identify, and alert drivers and safety managers of failure to come to a complete stop as it processes the image information within the context of what is going on.
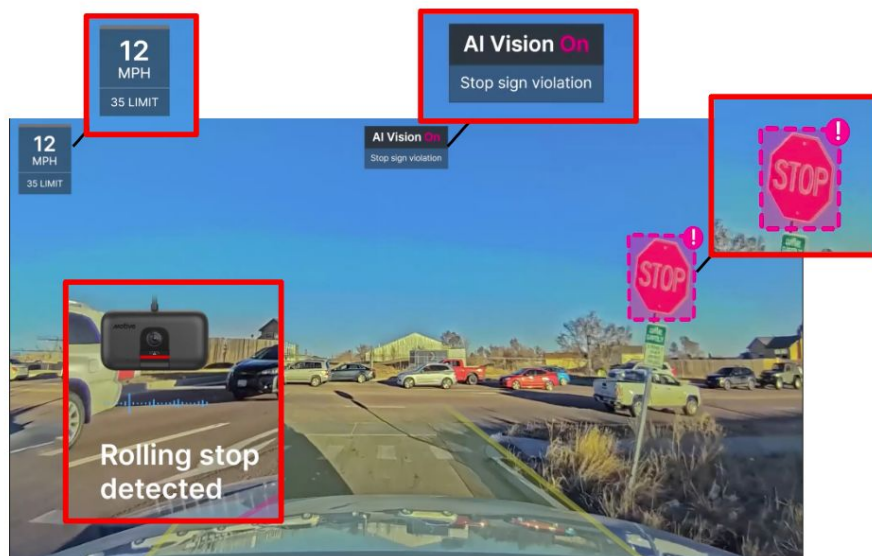
Key Indicators

Why Monitor Key Indicators?

To help service providers reduce accidents, reduce accident severity, and coach drivers in real-time, service providers are asked to monitor and report on specific KIs.

What Are The Key Indicators?

Below is a list of KIs and general definitions

- **Camera Obstruction or Suboptimal View**
  Camera is unable to detect the driver's face

- **Close Following** (line haul only)
  Time to hit the vehicle in front is less than 3 seconds

- **Distracted Driving (cell phone use)**
  Use of handheld electronic devices

- **Seat Belt Violation**
  Vehicle occupant(s) is not wearing seat belt(s)

- **Stop Sign Violation** (pickup and delivery only)
  Vehicle failed to stop at a traffic controlled device or sign.

- **Speeding**
  Vehicle traveling 10 mph (US) or 15 km/h (CAN) over the posted speed limit

The minimum thresholds for a VEDR triggered event are defined to the Service Provider via the terms set by the party to whom they have entered in contract with, not the VEDR vendor. It is the sole responsibility of the service provider to ensure their business programs, processes, and procedures are following the terms and conditions as defined by the party to whom they have entered into contract with.

Triggered Events & In-Cab Alerts

Triggered Events

Service providers are assessed a violation when a driver's action meets or exceeds the minimum threshold for a VEDR triggered event for one of the KIs.

A triggered event contributes toward the KI attainment calculation.

A triggered event may also be referred to as an "unsafe operator action."

A triggered event is *different* from an in-cab alert.

In-Cab Alerts

In-cab alerts are the alerts a driver hears in the vehicle when their action meets or exceeds the minimum threshold for an In-Cab Alert.

This is designed to alert the driver that their behavior is approaching a violation threshold so they can adjust their behavior to avoid triggering an event.

Turning "on" the in-cab alert is *not* "turning on the AI."

Artificial Intelligence and In-Cab Alerts

Artificial Intelligence is the part of the technology that analyzes, interprets, and learns from the images being captured. There is **not** a way to turn off the AI in the Motive DC 54 Camera. It is always functioning.

If the In-Cab Alert feature is turned off, that **does not mean the AI is turned off**. It means that the system will not provide an audible alert to the driver at any threshold to alert them In-cab that a behavior is potentially approaching a KI Triggered Event threshold.

Please note, the October 1st changes require the in-cab alerts to be turned on.

KI Calculations

KI Calculations Explained

Service providers agree to maintain an Attainment Value that is equal to or less than the corresponding driver action-focused KI value set forth in the KI table.

Each KI has its own monthly Attainment Value.

Although the KIs are calculated individually, each VEDR vendor sends a report to the party to whom the Service Provider has entered into contract with only to show a single pass/fail metric for each contract. The KIs reset going into the next month.

Attainment Value

Attainment is the total number of unsafe operator actions per month divided by the Average VEDR-equipped vehicles used in the same month.

Average VEDR-equipped vehicles

Average VEDR-equipped vehicles is the VEDR-equipped vehicles operated during the month divided by the number of days in the month.

KI Calculations Example 1:

Observations

01

A service provider has 14 triggered events for speeding in the month of April.

02

A service provider operated 5 vehicles per day from April 1st to April 15th. (15 days).

03

A service provider operated 10 vehicles per day from April 16 to April 30th. (15 days).

If the KI Table, **KI Value Per Month for speeding** is 2.0.

First, calculate the Average VEDR Equipped Vehicles
- 5 vehicles per day x 15 days = 75 vehicles
- 10 vehicles per day x 15 days = 150 vehicles
- 75 vehicles + 150 vehicles = 225 vehicles
- 225 vehicles / 30 days = 7.5 Average VEDR equipped vehicles

Next, calculate the Attainment Value
- 14 triggered events for speeding / 7.5 Average VEDR equipped vehicles = 1.87 Attainment Value

Lastly, review the events Attainment Value against the Events KI Value Per Month via the KI Table
- 1.87 Attainment Value is <u>LOWER</u> than 2.0 KI Value Per Month for speeding

PASS

This service provider will receive a "Pass" for speeding for the month of April.

KI Calculations Example 2:

Observations

01

A service provider has 22 triggered events for Failure to Wear Seat Be in the month of April.

02

A service provider operated 15 vehicles per day from April 1st to April 15th. (15 days).

03

A service provider operated 5 vehicles per day from April 16 to April 30th. (15 days).

If the KI Table, **KI Value Per Month for Failure to Wear Seat Belt** is 2.0.

First, calculate the Average VEDR Equipped Vehicles

- 15 vehicles per day x 15 days = 225 vehicles
- 5 vehicles per day x 15 days = 75 vehicles
- 225 vehicles + 75 vehicles = 300 vehicles
- 300 vehicles / 30 days = 10 Average VEDR equipped vehicle

Next, calculate the Attainment Value

- 22 triggered events for speeding / 10 Average VEDR equipped vehicles = 2.2 Attainment Value

Lastly, review the events Attainment Value against the Events KI Value Per Month via the KI Table

- 2.2 Attainment Value is HIGHER than 2.0 KI Value Per Month for failure to wear selt belt

FAIL

This service provider will receive a fail for failure to wear seat belt for the month of April.

Summary

Service providers are required to ensure all vehicles are equipped with a VEDR that has MV+AI functionality. The in-cab alert functionality of VEDR devices should be turned on. The VEDR devices must be from one of the qualified Safety Technology Vendors.

Service providers will ensure verification and recording of specific KIs and to maintain at all time the corresponding KI thresholds or values.

Those KIs are Camera Obstruction or Suboptimal View, Close Following (line haul only), Distracted Driving (Cell Phone Use), Seat Belt Violation, Stop Sign Violation (pickup and delivery only), and Speeding.

The audible in-cab alert being turned on is not the same as the artificial intelligence being turned on. The artificial intelligence can not be turned off on the devices. The audible in-cab alert feature should always be turned on.

A triggered event, or "unsafe operator action" contributes toward the KI attainment calculation. A triggered event is not the same as an in-cab alert.

The minimum thresholds for a VEDR triggered event are defined to the service provider via the terms set by the party to whom they have entered in contract with, not the VEDR vendor.