

A Guide to Your Safe Driving Program



 **StriveSafe**
By Geoforce

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1.0 Introduction

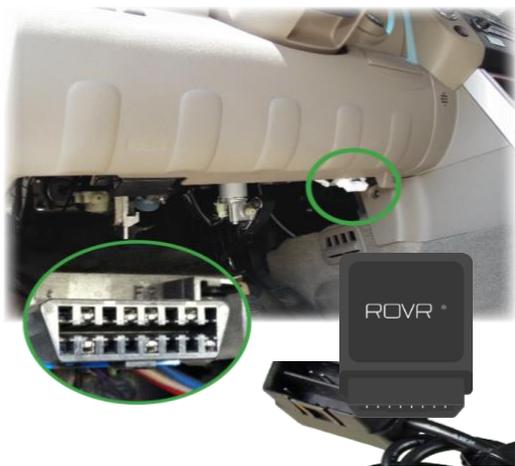
“Every worker home safely every night.”

To decrease Motor Vehicle Incidents (MVIs) and keep employees safe, the company has elected to assign Cartasite in-vehicle monitoring system (IVMS) to all employees who drive a Company-owned or leased vehicle. Cartasite's solution—called the Realtime Onboard Vehicle evaluation and Reporting (ROVR) system— has been extremely effective in helping drivers identify the aspects of their driving that put them at risk and encourages self-correction through direct quantitative feedback.

This guide describes how ROVR works and how drivers and their supervisors can together use the system to improve driving safety, reduce risks on the road, and improve the overall efficiency of the company.

How does Cartasite's ROVR system work?

The ROVR system is a technology platform developed by Cartasite, LLC of Denver, Colorado. It consists of a device that collects data and an online platform, worldVIEW, that reports driving behavior information. Each week, the system provides drivers and their supervisors with information about an individual's or group's driving behaviors. Educating and raising awareness of a driver's patterns of their driving habits provides them the opportunity for self-modification of high-risk driving behaviors, which improves their personal driving safety.



The ROVR device plugs into a vehicle's Onboard Diagnostic (OBD) port, typically located near the steering column. The device monitors driver performance metrics that impact safety, fuel consumption, and operating expense. The device utilizes the Global Positioning System (GPS) to determine location, direction of travel, and time/date. An internal accelerometer measures speed and acceleration/ deceleration. The data collected is sent through the cellular network to Cartasite's online servers every per minute while the vehicle is in motion.

Why are we implementing IVMS?

Your company is committed to the safety, health, and welfare of its staff. The primary objective for the implementation of the ROVR device is to create a safer driving environment for all employees. Driving is one of the greatest hazards every employee faces



whether commuting or in the performance of their work. The National Institute of Occupational Safety and Health has determined that MVIs and crashes are not only the leading cause of injury and death to the general population, but also to high-risk industries. The primary intention for the ROVR system is to help you get home safely to your family every night by helping you identify and correct risky driving habits. Your company may also utilize the vehicle maintenance features of the device to improve the maintenance of your vehicle to ensure it is fit-for-duty and is optimally safe for you. In addition, situations may occur that may require utilizing ROVR information for remote worker safety. The company may also use ROVR information to optimize fleet and asset utilization and reduce vehicle-related costs.

Who will see my data?

Each company employee who drives an assigned Company-owned or leased vehicle is issued a ROVR device. By Company policy, the devices are issued to employees—not to their vehicles. Hence, when an employee is assigned a new or replacement vehicle, the ROVR device must be transferred to the employee’s new vehicle. For assigned vehicles, each driver will receive his or her own scorecard.

Unless installed with a multi driver ID system, pool (or shared) vehicles have a ROVR device issued and assigned to the vehicle. Pool vehicle scorecards reflect the driving of all employees who drove that vehicle for the week.

The system has built-in functions that enable employees to view only their personal driving information or scorecard. No peer may view another employee’s driving information or scorecard report. Supervisors are limited to viewing only the scorecards of their direct reports as well as their team or unit’s weekly data synopsis or Group Scorecard reports. Some supervisors will have access to view the Group Scorecard for other teams and Multi Group Scorecards that compare and contrast group performance. Supervisors may also access StriveSafe’s online portal, [worldVIEW](#), to further evaluate their direct reports’ driving performance and behaviors.

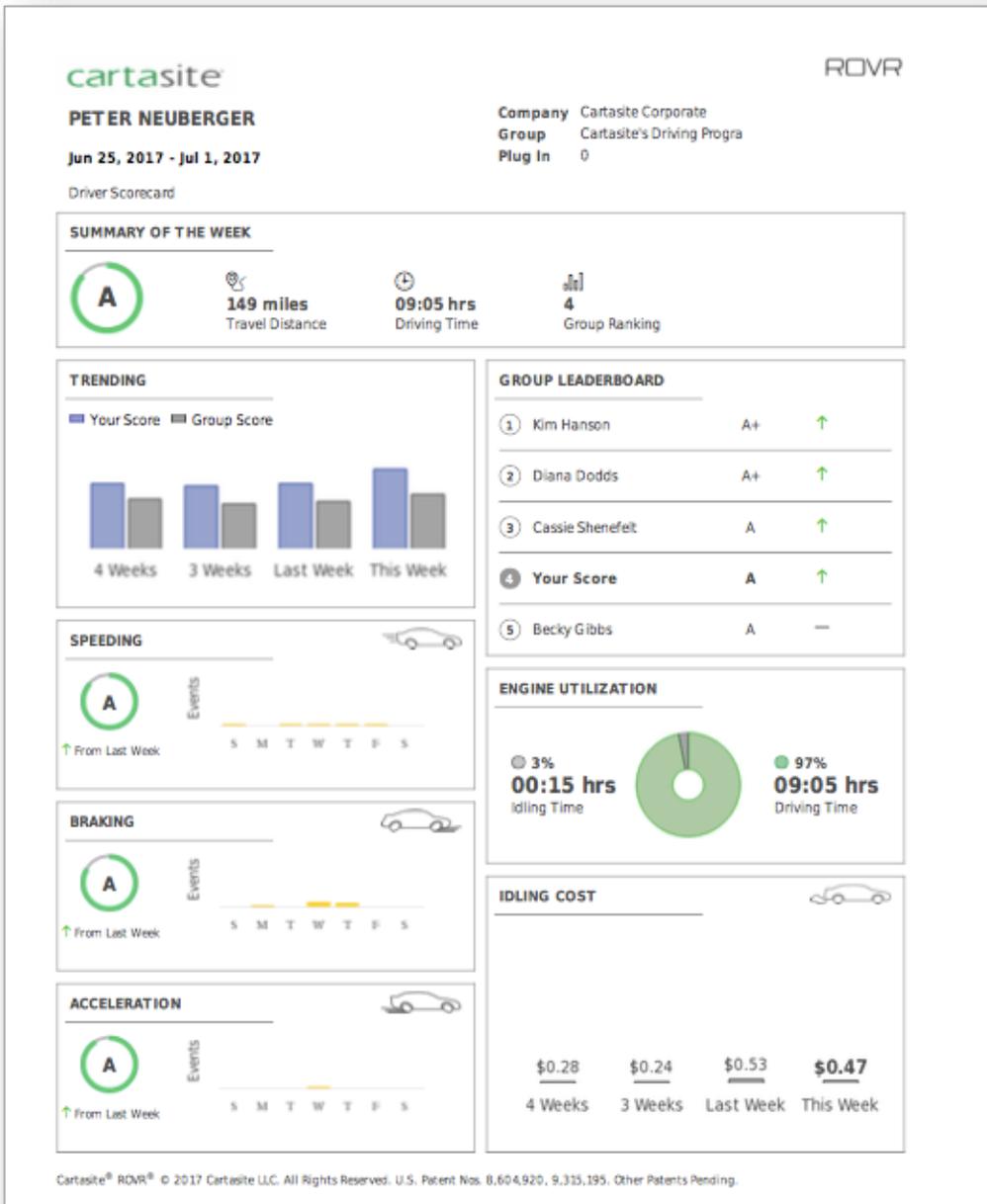
2.0 Reporting – Scorecards and the Scoring Systems

ROVR reports data about driving behavior and vehicle performance every minute while the vehicle is in motion. Each week, drivers who drive more than 30 minutes or 30 miles receive a Drivers Scorecard via email. In addition, Supervisors receive a Group Scorecard that summarizes the driving behavior of each person in his/ her group and enables the supervisor to identify outlier drivers who require extra attention.

The ROVR measures safety metrics (speeding, hard braking, rapid acceleration, hard braking), vehicle operation (idling, unplug events, driving time) and vehicle performance (Diagnostic Trouble Codes, vehicle recall, mileage).

Figure 1: Driving Safety Scorecard





2.1 How is the Overall Safety Score calculated?

To calculate the Overall score, the score is normalized to fall within a range of D (worst) to A+ (best). The ROVR device measures the three leading indicators of risk including speeding, hard braking and rapid acceleration. Events are normalized by hours driven.

- Speeding is determined relative to posted speed limits and accounts for 50% of the overall score. Speeding of 0 to 5 mph over the posted speed limit is no event, 6 to 10



mph over is a minor event, 11 to 19 mph over is a moderate event and 20 mph or more over the posted speed limit is a severe event.

- Hard braking is 30% of the overall score and an event is recorded if deceleration is more than 5.4 mph per second.
- Rapid acceleration is 20% of the overall score and an event is recorded if acceleration is more 5.4 mph per second.

2.2 Unplug Events

Each time the ROVR device is unplugged, it is recorded as an Unplug Event and reported on the Driver Scorecard and to worldVIEW. Supervisors should note any repeated Unplug Events.



Intentionally unplugging the device is not allowed by company practice as it circumvents the intended use and benefits of the program. These benefits may only be realized through the consistent collection and reporting of driving data. In some cases, repair shops may unplug the device to access the data port to perform vehicle diagnostics. Supervisors should be aware of this possibility and take it into consideration when reviewing the Unplug events reported on the scorecard.

In some vehicles, the placement of the ROVR device in the vehicle manufacturer's data port may be susceptible to accidental unplugging, which interrupts the data collection and reporting. If this is the case, zip-tie the hardware securely in place.

Again, patterns of driving behavior should be looked for and assessed, based on the supervisor's own experience and knowledge of the driving environment with which their subordinates contend.

3.0 Program Expectations

All drivers assigned a ROVR device, their supervisor, and the Corporate Driving Safety Advisor must review scorecards. The following discusses the role, responsibilities, and expectations for these three key reviewers.

3.1 Driver expectations and requirements

Drivers who are required to participate in the ROVR Safe Driving program are expected to:

1. Understand your supervisor's expectations for what is deemed acceptable and unacceptable driving behavior and scores.

StriveSafe recommends a minimum acceptable weekly score of a B in each metric and for the overall score.



2. Review your own weekly scorecard, analyze personal driving behaviors for the week and relative to previous weeks, and identify/ modify driving behaviors as required.
3. Report any non-reporting devices or technical failures to their supervisor, ROVR program administrator, and/or StriveSafe Customer Care
4. Advise your supervisor of any factors that will affect their ability to safely drive or hinder compliance with driving expectations.
5. Provide suggestions for positive improvements to the company Driving Safety Program or the StriveSafe system, as they become known.
6. All employees who are assigned a Company vehicle, or may drive a pool vehicle, should be very familiar with and ensure compliance with Company's established company practices and guidelines. Please see your supervisor for access to this material if needed.

3.2 Supervisor expectations and requirements

Company supervisors are expected and required to use the Cartasite ROVR data reports / scorecards and analytic tools to help improve their direct report's and team's driving safety behaviors as well as to recognize those employees with good driving behavior.

3.3 Evaluate driving behaviors

Supervisors must review their Supervisor Scorecard weekly, which provides a summary of the driving behavior for each driver in that supervisor's group. Based on ten years of Cartasite driving data from tens of thousands of light and heavy-duty vehicles, supervisors should expect to find their drivers' overall scores in the B to A+ range. Supervisors should also evaluate the scorecards for consistent driving behavior trends, as both the magnitude of a one-time weekly score and the trend over time are important in evaluating a driver's overall risks.

Note that in any given week, it is possible that unique circumstances may affect driving behavior and be reflected in a direct report's scorecard for a particular week. Again, patterns of driving behavior are more relevant to determining a driver's potential risk for involvement in an MVI rather than one or two unique events in any given week.

For example: Employee A's scorecard indicates several hard-braking events during a specific week when in previous weeks Employee A reported one or less events. After reviewing the scorecard with the employee, Employee A communicated that he braked to avoid a pedestrian who walked into his traffic lane. Employee A should be commended for his/ her situational awareness and safe driving.

The supervisor should also consider the particular employee's driving environment. Those employees who are required to drive in congested city traffic may exhibit more frequent hard braking than those who drive in a rural environment. Likewise, in some rural areas, wildlife crossing roadways may be cause for some hard braking events being reported on the



scorecard for a particular week, which are acceptable and preferable in some instances as opposed to being involved in a collision.

3.4 Identifying exception drivers

Supervisors should consider coaching any employee with an overall score or individual metric score that is below a B for two or more weeks.

Interventions may include one or more of the following recommended actions:

- Counselling by the supervisor
- Coaching—personal ride-along by the supervisor or company safety personnel
- Referral to targeted/remedial training or driver improvement plan
- Referral to Company's Driving Safety Advisor for training/counselling

Continued disregard for safe driving by an employee, as reflected in a consistently poor scorecard below a B in the overall score or in any individual metric, may be cause for the loss of their privilege to drive a Company-owned or leased vehicle, suspension, or termination.

3.5 Reward safe driving behavior

A vital part of this program, Supervisors must also recognize good and improved safe driving behavior, as outlined in Section 4.0, or create their own.

3.6 Summary of supervisor expectations

Supervisors of drivers who are required to participate in the ROVR Safe Driving program are expected to:

1. Read the *Guide to Your Safe Driving Program*
2. Verify that a ROVR device is installed and operating properly in every company vehicle used by his or her team.
3. Provide clear guidelines of acceptable and unacceptable driving behaviors and scores to direct reports.
4. Review Supervisor Scorecards weekly. Post it publicly and publicly recognize the top drivers (for the week and those with sustained high driving).
5. Identify exceptional drivers, those whose driving behaviors exceed expectations (sustained A+ drivers and drivers that are improving over time).
6. Publicly recognize and/ or reward drivers for performance that exceeding expectations on a minimum of quarterly and annual basis.
7. Identify patterns in consistent driving behaviors that are unacceptable or below standard (consistent overall or individual metric scores below a B or significantly less than the team average).
8. Review group scorecards to monitor the number of unplug events recorded and who they are happening to.



9. Provide direct report's feedback (counsel, coach, mentor), refer them to training, establish a performance improvement plan, or refer them to the Company Driving Safety Advisor for a driving improvement program when unsatisfactory scores and driving behaviors are consistently reflected in the weekly data over a few weeks or a full quarter.
10. Recognize that some exceptions to speeding, harsh braking, and rapid acceleration may be appropriate due to circumstances, traffic conditions, weather, wildlife, etc. Patterns of unacceptable driving behaviors should be evaluated rather than an individual event.
11. Ensure that the worldVIEW system contains current and accurate information regarding device, vehicle, and driver information for accurate reporting purposes.
12. Provide suggestions for positive improvements to the IVMS system.

3.7 Driving Safety Advisor expectations and requirements

The Driving Safety Advisor is the person who is ultimately responsible for the success of the Driving Safety Program and who has the goal of minimizing the company's MVI rate. In some companies, this function is combined with other responsibilities and in other companies, it is a dedicated job function.

The Driving Safety Advisor routinely reviews both Group and Multi Group Scorecards to:

- Monitor driver behaviour and identify drivers with unusual patterns;
- Help supervisors evaluate and act on the data; and
- Ensure drivers exhibiting unacceptable scores or driving behaviours are being educated, counselled, trained, and monitored for improvement.

The Advisor also ensures that the data-collection program from StriveSafe is comprehensive, consistent with driving safety trends and best practices, and provides a useful data collection and reporting system.

4.0 Recognition and Rewards

In addition to Supervisors' weekly recognition efforts described in Section 3, the following quarterly individual and team awards provide additional recognition of sustained individual and group driving behavior.

4.1 Quarterly recognition

- **Individual Recognition and Safety Awards** – Publicly recognize those who have consistently receive an A+ on their weekly Safety Scorecard for 8 or more weeks out of the quarter, with no overall or individual score of less than an A.
 - Recognition can be called out at a safety or company meeting, through a newsletter and/or physically posted in a public space.



- Optional: Supplement the award with a small gift card. StriveSafe partners with www.tango.com for award management services.
- **Group Recognition and Safety Awards** – Publicly recognize a group of drivers that consistently produce an ‘A+’ Group Safety Score or consistently has a higher grade than other groups at a company or within a region for 8 or more weeks out of the quarter, with no overall or individual score less than a A.
 - Recognition can be done at a safety or company meeting, through a newsletter, and/ or physically posted in a public space.
 - Optional: Supplement the award with a small gift card.

Note: To qualify for any safety award, no driver may have a reported or known chargeable MVI within the award time period.

4.2 Annual recognition

- **Sustained Safety Award** – For both individuals and eligible groups, publicly recognize those who have consistently received an A+ on their weekly Safety Scorecard for 40 weeks (10 months) or more of the year, with no overall or individual score or less than an A.
 - Recognition to be called out at a significant company-wide meeting and through company-wide communication.
 - Employees to receive trophies and letters of recognition in their employee file
 - StriveSafe to feature annual award recipients’ accomplishment on the StriveSafe website and blogs. StriveSafe will provide recipients with special award gift (less than \$25 in value).
 - Optional: Company to supplement award with small gift card.

5.0 Additional Cartasite ROVR resources

For more information or for answers to questions on the ROVR device, please contact your designated program administrator at the company or Cartasite directly by email customersuccess@cartasite.com

