

GROWING YOUR BUSINESS

BOOSTING PROFITABILITY BY REDUCING YOUR
REAL COST OF OWNERSHIPSM



Run SmartSM





CONTENTS

INTRODUCTION	3
UPTIME	5
FUEL EFFICIENCY	7
DRIVER EXPERIENCE	9
CONNECTIVITY	12
SAFETY	14
QUALITY	16
MORE INFORMATION	17

DRIVING PROFITS

Turning a profit in today's trucking industry is a challenge. Stiff competition. Demanding customers. Managing costs can be difficult. Fleet managers and owner-operators need an OEM partner that understands what it takes to keep a truck on the road.

Freightliner Trucks recognizes the complexities faced by its customers. No other truck manufacturer invests as much time and money to solve these issues. Freightliner Trucks is focused on helping trucking companies turn a profit, because successful logistics businesses make the best customers.

Freightliner Trucks has always focused on customer needs, evolving over the years. Freightliner leads the industry when it comes to understanding what owner-operators and fleet customers must grapple with each day. Freightliner has broadened the industry discussion from Total Cost of Ownership (TCO), unveiling the proprietary concept of Real Cost of OwnershipSM (RCO).

RCO is a comprehensive consideration of hard and soft costs associated with the lifetime of the vehicle. RCO looks at six real-world factors faced by logistics businesses that have direct bottom-line implications: uptime, fuel efficiency, driver experience, connectivity, safety, and quality. These factors drive operating expenses and determine the profitability of a heavy-duty on-highway truck. Some expenses, such as monthly diesel costs, are easy to track on a profit and loss statement. Others, like driver turnover and customer loyalty, are difficult to express as hard-dollar expenses. But Freightliner knows from talking to customers that each element of RCO has an impact on profits.

That's why when Freightliner developed the Cascadia[®], each decision focused on the customers' Real Cost of Ownership.



UPTIME



FUEL EFFICIENCY



DRIVER EXPERIENCE



CONNECTIVITY



SAFETY



QUALITY

REAL COST OF OWNERSHIPSM

DEFINING THE SIX ESSENTIAL ELEMENTS OF REAL COST OF OWNERSHIPSM

Being great at one thing might be admirable, but the reality is that true greatness involves success across a set of valuable skills. That's why Freightliner's RCO system uses a matrix of six critical factors, going beyond TCO to define what is required to truly succeed in the trucking business.



UPTIME

A truck only makes money for its owner when it is moving down the highway. Freightliner's robust aftermarket support system means that customers can count on the parts and service they need, when and where they need them. No other OEM has the number of service locations—more than 1,100 across North America—or the parts delivery infrastructure that Freightliner has built.



CONNECTIVITY

Detroit Connect[®] and Detroit Connect Virtual Technician[®] remote diagnostic service deliver powerful, real-time vehicle performance data, linking fleets and drivers with Detroit experts. Detroit Connect Remote Updates enable over-the-air programming, including firmware updates and engine parameter changes. Detroit Virtual Technician reduces non-critical shop visits by providing quicker diagnostics and actionable information.



FUEL EFFICIENCY

The Cascadia leads the industry in fuel efficiency, improving Freightliner's industry-leading fuel economy by up to 8 percent. Freightliner cuts diesel expenses on every run with advanced aerodynamics and power from the Integrated Detroit[®] Powertrain (IDP), featuring the Detroit DD15[®] engine and Detroit DT12[™] automated manual transmission. Less money spent at the fuel pump means more profits.



SAFETY

Detroit Assurance[®] provides a range of active safety features. They help keep trucks in the middle of their lanes, adapt cruise control to maintain safe following distances in congested traffic, and provide full braking on both stationary and moving objects, as well as warning and full braking on pedestrians. No other collision mitigation system in the commercial vehicle market offers these advanced capabilities.



DRIVER EXPERIENCE

Truck drivers spend long hours in the cabs of their trucks. The Cascadia improves ergonomics, safety, and comfort for trucking professionals, helping boost profits by increasing productivity and reducing turnover. A completely redesigned cab with a smart instrument panel and plush driver lounge gives Freightliner drivers a first-class experience.



QUALITY

When it comes to quality, Freightliner took an aggressive approach with the Cascadia. To reduce warranty issues, a team diagnosed the issues behind the most common claims with the previous Cascadia model. And Freightliner challenged teams of the top dealer and fleet service technicians to come up with ways to improve procedures for all routine maintenance needs.



ULTRA-UPTIME

“Number one is uptime. A quality product tends to stay running.”

JOHN ELLIOTT

CEO, Load One Transportation and Logistics
Taylor, Michigan



In developing the Cascadia, Freightliner invested more than one million hours of research and development to create a truck that would propel the future of trucking. From its inception, the Freightliner team set out to build a truck that expanded the approach to lowering customers' Real Cost of Ownership. The Cascadia improves the most popular heavy-duty truck on the road. One focus: boosting uptime.

A truck that's off the highway, even for routine maintenance, is unproductive. Recognizing that even the best built Class 8 truck on the road will require service, the research and development team looked for ways to shorten the amount of time the Cascadia would spend in a service bay. Freightliner took a unique three-tiered approach:

- An in-depth review of all warranty claims on the predecessor Cascadia Evolution. Engineers attacked common issues with an eye toward making a truck known for its durability even more reliable.
- A focus on preventative maintenance cycles and common service needs to squeeze shop time out of the equation.
- A look at the aftermarket parts and service network to discover ways to help customers save time when a truck did require repair work.

Dealer and fleet service technicians are charged with getting trucks back on the road quickly and efficiently, so they know a thing or two about what can slow the repair process. The Cascadia is designed to be easier for technicians to service. New splayed frame rails and a detachable bumper create more room in the engine compartment to allow technicians easy access. Electronic control units are now stored securely in the cab in the new eVault, easily accessible with no special tools required.

Common maintenance items were also addressed. A larger engine air filter increases airflow and requires less frequent replacement intervals. Oil changes are now recommended at 60,000 to 75,000 miles, meaning a Cascadia will need one less trip to the shop each year. And the standard LED exterior and interior lighting system is more maintenance-friendly than ever.



“We have schedules that we have to abide by, and we’re at 98 percent on-time efficiency. That’s how we do our business, and that’s what keeps us growing.”

TODD ROCK

President, Thuman Trucking
Columbus, Ohio

“Ninety-five percent of what we do is an on-time, just-in-time service. Pickup and delivery. We have no downtime in our company. We are 24-7, 365 days a year, so the uptime is very important,” said Todd Rock, president of Thuman Trucking in Columbus, Ohio. While the bulk of Thuman’s runs are within a 70-mile radius of Columbus, the company also regularly hauls freight from Ohio to New York, North Carolina, Georgia, and Texas. Uptime is essential to keeping its fleet on the road to meet customer needs.

“We have schedules that we have to abide by, and we’re at 98 percent on-time efficiency. That’s how we do our business, and that’s what keeps us growing,” Rock said. “The breakdown time is nil with the Detroit motor and Freightliner. It’s a one-stop shop as far as parts and service, and we’ve always come to the bottom line that Freightliner is saving us money at the end of the day.”

Freightliner has the most extensive parts and service network of any OEM. The robust service footprint includes:

- More than 1,100 locations with factory-certified technicians across North America.
- More than 400 dealership parts and service locations—including more than 260 that have achieved Elite SupportSM certification, along with an additional 300 parts-and-service-only locations.
- Nearly 250 ServicePoint facilities through Freightliner’s Travel Centers of America and Petro Stopping Centers partnerships, meaning that customers are never far from help.
- Rapid parts delivery through enhancements to Alliance Truck Parts and Pinnacle Fleet Solutions, with most service centers having the parts needed for repairs either in inventory or delivered within 12 hours.

“We find we can get parts and service 24 hours a day, seven days a week. And that really matters to us,” said John Elliott, CEO of Load One Transportation and Logistics in Taylor, Mich. “Freightliner has always gone the extra mile to take care of us as a customer. Quality in a truck really is a lot of things, but number one is uptime. A quality product tends to stay running. We can’t afford to have breakdowns.”

FACT

\$1,000

**Average cost per day
for a commercial truck
to be out of service.**



THE STANDARD FOR FUEL EFFICIENCY



SuperTruck concept



Cascadia

Three primary factors contribute to on-highway fuel economy: aerodynamics, powertrain spec'ing, and vehicle operations, including driver performance and truck maintenance. Everyone wants to achieve the best fuel efficiency, but many factors influence overall diesel consumption. That's why Freightliner spends so much time working the issue and studying various options.

An example of this commitment is the Freightliner SuperTruck, part of a U.S. Department of Energy challenge to boost the freight-hauling efficiency of on-highway trucks by up to 50 percent. Freightliner partnered with component suppliers and leading research labs to achieve a remarkable 12.2 miles per gallon and 115 percent freight-hauling efficiency improvement. Many of the ideas developed as part of this groundbreaking effort can be found on the Cascadia.

The Cascadia's fuel efficiency improvements are the result of scientific precision, constant tweaking from wind tunnel tests, and confirmation from more than one million miles of highway testing under actual driving conditions. The truck comes standard with an aerodynamic bumper with an integrated air deflector, a new sloped hood, an aerodynamic four-bar grille, more aerodynamic mirrors, and a third door seal that keeps air from flowing through the door jamb. Standard 12-inch side extenders

can be enhanced with the Aero package, adding full back-of-cab chassis fairings, flexible chassis skirts, 20-inch side extenders, and push-button removable wheel covers. To maximize the aerodynamics of the Cascadia, the AeroX package adds a low-ground-clearance flexible air dam to the front bumper and 24-inch side extenders that further reduce the back-of-the-cab-to-trailer gap.

Freightliner has long been recognized as leading the industry when it comes to fuel economy. The Cascadia sets a new standard with the AeroX aerodynamic package and Integrated Detroit® Powertrain (IDP), including a Detroit DD15® engine and DT12™ transmission with Intelligent Powertrain Management and 2.16 axle ratios. Advances in aerodynamics and powertrain components help increase fuel efficiency by up to 8 percent.



“We made a conscious decision to really get more involved in the technology that was out there, and Freightliner has been a big help in that regard. The technology has really paid dividends for us.”

RANDY MCGREGOR
Fleet Manager, Transway Inc.
Holland, Michigan

“We made a conscious decision to really get more involved in the technology that was out there, and Freightliner has been a big help in that regard. The technology has really paid dividends for us with safety and fuel economy,” said Randy McGregor, fleet manager at Transway Inc. in Holland, Mich. “Fuel efficiency in the Cascadia with Detroit has been phenomenal. One of the reasons that we were awarded Fleet Innovator was our gains in fuel economy, and we monitor that very closely.”

Freightliner’s focus on fuel economy is part of the company’s customer-driven philosophy. Every dollar saved on diesel shows up on the bottom line for trucking companies, boosting profitability.

An 18-wheeler punches a big hole in the air as it moves down the highway, so optimizing aerodynamics to reduce drag pays off in fuel savings. The Cascadia spent countless hours in the Daimler Trucks North America wind tunnel in Portland, Ore.—the only OEM-owned and -operated full-scale wind tunnel. This allowed Freightliner engineers to test many theories to improve the way the Cascadia glides through the air.

At the same time, engineers at Detroit focused on enhancing the engine, transmission, and other powertrain components, resulting in the most efficient Integrated Detroit® Powertrain (IDP). The performance, durability, and efficiency that Detroit brings to the Cascadia create an edge for Freightliner owners.

“With the Cascadia on the fuel mileage report, I’m routinely at the top,” said Nick Dykstra, a driver with Transway. “To be honest, having the Cascadia definitely gives me an unfair advantage. The Cascadia is the nicest truck I’ve ever driven. The improved visibility makes it a safer truck. The dash, the way it wraps around to the driver’s right, is closer, everything’s easier to get at, easier to reach. The controls on the steering wheel, nice and easy, it’s all right there.”

Cascadia owners agree, reporting substantial fuel efficiency gains. Freightliner engineers, meanwhile, continue to develop ideas to save additional money on diesel. When it comes to reducing RCO, Freightliner is relentless.

FACT

\$3,000
The average diesel savings per Class 8 truck for an 8% improvement in fuel efficiency.*

*115,000 annual miles. \$3.00 per gal



THE NEW CORNER OFFICE



Driver turnover rates present challenges for trucking companies. While turnover rates recently hit a five-year low, they are still hovering at around 70 percent, and some experts predict increasing freight volumes will cause the rate to climb.

Every truck on the road needs a professional driver at the controls. Successful trucking firms recognize that attracting the best drivers can impact everything from fuel economy and safety to customer satisfaction and repair costs. A happy, qualified driver can be a freight hauler's best tool for controlling RCO.

Trucking can be rewarding, but with congested roads, changing weather conditions, and tight delivery deadlines, drivers have a demanding job. Between driving, doing paperwork, eating, taking breaks, and sleeping, professional drivers can spend more than 100 hours in the cab during an average week.

Freightliner believes that drivers deserve the best when it comes to their workplace, and paying attention to the driver experience—safety, comfort, reliability, and responsiveness—will pay dividends for logistics companies.

Freightliner focused on making the Cascadia the most driver-friendly of any Class 8 truck. The dashboard includes digital gauges and

easily readable information displays to keep drivers informed. A new front suspension provides a smoother ride and improved roll stiffness for less roll and sway. The steering gear has been moved forward to help improve steering precision and reduce course corrections. The Cascadia features triple-sealed doors, an optional insulation package using 3M™ Thinsulate™ technology, and an engine mount designed for better vibration isolation. The engine tunnel cover is now constructed with Quiet Steel® technology to reduce the interior sound level and help drivers focus on the road.

"We are one hundred percent Freightliner Cascadia in our fleet," said Craig Poole, vice president of driver services & maintenance at Quest Global in Atlanta, Ga. "The Freightliner Cascadia is perfectly built for a team. Teams usually stay out four to six weeks. When you're inside a truck for a month and a half, you have to be comfortable. The redesigned interior is definitely suited for a team operation. There's plenty of room in the bunk to move around."

“One of the most critical components of the business is the driver and the driver experience. The driver, the truck, and the business are all connected. You have to keep the driver happy.”

CRAIG POOLE

Vice President of Driver Services
& Maintenance, Quest Global
Atlanta, Georgia



The Cascadia is loaded with creature comforts. The ergonomically designed wraparound dashboard includes easy-to-reach switches and steering wheel controls, allowing drivers to control all functions without leaning and stretching. In the instrument cluster, digital smart gauges and information displays keep drivers informed as they drive.

“There is a driver shortage in the industry, without a doubt. We have drivers on a waiting list to work for Quest, just to drive one of the Freightliner Cascadias,” said Poole from Quest Global. “One of the most critical components of the business is the driver and the driver experience. The driver, the truck, and the business are all connected. You have to keep the driver happy.”

Another way the Cascadia impresses drivers is the Driver's Lounge. The Cascadia features a variety of configurations to provide customizable living-space options on the road. The sleeper area has been redesigned to include larger passenger- and driver-side storage cabinets and a wardrobe cabinet with four inches of additional hanging length. The Driver's Lounge features a larger microwave

cabinet to accommodate standard appliances and a larger refrigerator with matching cabinetry or a customer-supplied refrigerator option.

For entertainment, the Cascadia features a sturdy television swivel bracket that can hold up to a 26-inch flat-panel TV for movie-theater-like viewing. The Cascadia offers an option for a traditional double-bunk arrangement with an easily released telescoping ladder rated at 400 pounds.

The two-seat dinette/work table and opposing seating with seat belts can be folded flat to allow a full, Murphy-style bed to swing down in less than 30 seconds. The Driver's Lounge also comes standard with LED ambient lighting and a dimmer switch so drivers can personalize lighting levels. The Cascadia offers several DC power outlets, and the sleeper offers a variety of powerful inverter and inverter pre-wire options for AC-powered items.

“The Cascadias are built perfectly for our teams,” said Poole. “They're out for weeks at a time, and keeping them comfortable on the road is a priority. The new cab design provides plenty of room for both team members.”

FACT

\$8,234

Average recruitment cost for an on-highway driver, according to the Upper Great Plains Transportation Institute.

A DOZEN WAYS THE CASCADIA REDUCES YOUR RCO:

- 1 UNRIVALED ATTENTION TO UPTIME:** From superior manufacturing processes to unmatched access to parts and service, Freightliner provides Cascadia owners uptime that boosts profits.
- 2 HAPPIER DRIVERS:** Once drivers get behind the wheel of a Cascadia, they don't want to give the truck up. Improved ergonomics, enhanced safety features, and unexpected creature comforts make the Cascadia a tool for driver recruitment and retention.
- 3 ACCIDENTS THAT DON'T HAPPEN:** The active safety features of Detroit Assurance assist professional drivers, using technology to avoid accidents and help to mitigate crashes. Reducing highway incidents lowers repair and liability costs, while keeping the roads safer for everyone.
- 4 SAVINGS AT THE PUMP:** The Cascadia improves on Freightliner's industry-leading fuel economy by up to 8 percent.
- 5 CONNECTIVITY THAT PAYS:** Detroit Connect® not only helps reduce unnecessary visits to the repair shop, it can help spot small issues before they become big problems. From scheduling needed maintenance during planned downtimes to spotting potential driver training opportunities, the connectivity that comes standard in every Cascadia leads the industry.
- 6 PARTS AND SERVICE WHERE AND WHEN YOU NEED THEM:** No other OEM can match Freightliner in terms of service locations—more than 1,100—across North America. Enhanced parts inventory management and a robust distribution system mean most dealers either have the parts you need or can get them in less than 12 hours.
- 7 THE POWER OF THE EVAULT:** Centrally located and easily accessible from inside the cab, the eVault houses all electronic control units for the truck, making troubleshooting and replacement quick and convenient.
- 8 LESS TIME IN THE SERVICE BAY:** From oil changes to air filters and other routine maintenance, Freightliner has engineered the Cascadia to have longer intervals between recommended servicing.
- 9 BRIGHT IDEAS:** Standard LED exterior and interior lights require less maintenance, and the optional Exterior Bulb Pre-Trip Inspection System helps drivers confirm that all lights are functioning correctly before each run.
- 10 DYNAMIC AERODYNAMICS:** The Cascadia is designed to glide through the air to reduce drag and boost fuel efficiency. Optional Aero and AeroX packages add further fuel-economy-boosting enhancements.
- 11 SMART ROUTING:** Streamlined cable routing and clipping is neater and more user-friendly, increasing the quality, longevity, and consistency of air lines, fuel lines, and electrical harnessing.
- 12 SERVICE WITH A SMILE:** The Cascadia is service technician friendly. One example is the two-piece front bumper—a section of which can be removed by a single technician in about two minutes. This gives easier access to the engine compartment for routine maintenance.





CONNECTIVITY THAT DRIVES SMARTER DECISIONS



“When a driver is out on the road he really feels alone, but with Detroit Connect, he knows that we’re monitoring his engine performance. Detroit Connect is just peace of mind. It allows us to get ahead of a problem before it becomes an issue.”

BRENT NUSSBAUM

CEO, Nussbaum Transportation
Hudson, Illinois

Real-time data and analytics can reduce RCO and drive profitability for trucking firms. Because commercial trucks can literally be thousands of miles away from their base of operation, connectivity is crucial to performance. That’s why all Cascadia trucks come equipped with the Detroit Connect® suite of connected vehicle services. It links fleets and individual trucks across North America with data and Detroit experts who can help optimize vehicle performance. With Detroit Connect Virtual Technician®, noncritical service stops are reduced, and drivers receive actionable information and diagnostics while moving down the highway.

Detroit Connect Virtual Technician notifies fleets and owner-operators within minutes when their vehicles experience fault events, providing details on the severity of the fault and when, where, and how to best fix the issue. Critical fault codes are further analyzed by Detroit Customer Support Center experts. When necessary, the Detroit team can call the next available service location and have a technician ready with the required parts.

“We’ve worked with Freightliner since 2010. We’ve been able to collaborate with Freightliner engineers. That to us makes a great relationship,” said Brent Nussbaum, CEO of Nussbaum Transportation in Hudson, Ill. “Nussbaum specs each one of our trucks with Detroit Connect. It allows the engine to be

“Detroit Connect definitely helps with uptime. We’re able to resolve issues quicker, be prepared for anything that’s upcoming, and really understand if it is an immediate issue.”

DAVID HOOVER

Director, Meijer
Lansing, Michigan



monitored while it’s going down an interstate. If codes pop up that are serious enough, it will give us information about where the nearest parts are located and where the nearest dealer is, allowing us to continue uptime on that truck, so that the freight can keep moving. In doing so, it enhances our bottom line.”

One way Freightliner uses connectivity to reduce RCO is Detroit Connect Remote Updates. They provide over-the-air programming capabilities, including firmware updates from Detroit engineering and fleet-initiated engine parameter changes. By reducing the need to visit a repair facility to make these changes, owners of the Cascadia can keep moving freight.

“Meijer is not considered a trucking company, but we have a fleet of 220 trucks that support our stores. All of them are Freightliners, and we’re very pleased with the performance we’re getting from our Cascadias,” said David Hoover, director of Meijer, Lansing, Mich. “Uptime for our trucks and our fleet is vital to us. Our customers come into the stores expecting to have the product available, and that’s why uptime and delivery frequency are important to us. Detroit Connect definitely

helps with uptime. We’re able to resolve issues quicker, be prepared for anything that’s upcoming, and really understand if it is an immediate issue or something we’re going to have to deal with at our own maintenance department or with dealer support. I don’t think we could get any more connected with a manufacturer than we are with Freightliner.”

Detroit Connect Analytics provides peace of mind for fleet managers with automated insights behind vehicle data in key areas such as safety and fuel economy. Detroit Connect Analytics reports Detroit Assurance events, including full braking occurrences and tailgating violations, helping fleets understand where drivers might benefit from additional training and support.

“When a driver is out on the road he really feels alone, but with Detroit Connect, he knows that we’re monitoring his engine performance,” Nussbaum said. “Detroit Connect is just peace of mind. It allows us to get ahead of a problem before it becomes an issue.”

With the fuel efficiency analytics feature, Detroit Connect utilizes Detroit engineering expertise to review vehicle data for real-time insights regarding individual trip and fleet-wide performance. This information can help fleet

managers discover best practices among top-miles-per-gallon performers and offer coaching to drivers on how to better use the features of the Detroit Intelligent Powertrain Management system.

Detroit Connect is a tool to help trucking companies boost productivity by providing actionable recommendations from data collected by sophisticated sensors on the new Cascadia. By reducing RCO through informed decision making, increased profitability is an immediate result.

FACT

Actionable information provided by the Detroit Connect platform helps customers make smart operating decisions.



ACTIVE SAFETY SYSTEMS: BECAUSE WE ALL SHARE THE ROAD

“The Detroit Assurance product that we have spec’d in our trucks is there to prevent that catastrophic event from occurring if a driver makes a mistake, but we actually use it more for training our drivers. Safety is the cornerstone of our business.”

GARTH PITZEL

Director of Safety & Driver Development, Bison Transport
Winnipeg, Canada



Freightliner designed the Cascadia to be one of the safest vehicles on the road, protecting the driver as well as other motorists. Equipped with the Detroit Assurance[®] suite of safety systems, the Cascadia actively assists drivers to avoid accidents. To further increase safety, the Freightliner design team took a fresh look at everything from the windshield to the headlights.

The National Highway Traffic Safety Administration reported there were 37,461 people killed in crashes on U.S. roadways during 2016, a 5.6 percent increase from the previous year. There were 4,317 fatalities in crashes involving large trucks, the highest total since 2007.

Freightliner is committed to helping drivers arrive safely at their destinations and return home safely. Trip after trip. Year after year. Safety is critical not only to reducing accidents and injuries, but it also has a major impact on RCO. A truck involved in an accident increases liability costs and can spend weeks in the repair shop. The Detroit Assurance suite of safety systems is a major step along the path to Freightliner’s goal of accident-free driving.

“We’ve been very fortunate to have been the recipient of 11 first-place National Fleet Safety awards from the Truckload Carriers Association,

and we’ve won the grand prize 10 times out of the 12 years that we have participated,” said Garth Pitzel, director of safety & driver development for Bison Transport in Winnipeg, Canada. “The relationship between Freightliner and Bison is certainly one of a partnership, and that has developed over many years. The Cascadia has Detroit Assurance. The Detroit Assurance product that we have spec’d in our trucks is there to prevent that catastrophic event from occurring if a driver makes a mistake, but we actually use it more for training our drivers. Safety is the cornerstone of our business. It’s connected to everything we do at Bison.”

Certainly, no driver sets out on a route expecting to be involved in an accident. But focusing on driver training and vehicle maintenance, along with having a truck equipped with the latest active safety features, can be a life saver.



Detroit Assurance provides exceptional vehicle control, driver assistance, and safety technologies. These are integrated with the Detroit engine and transmission systems, braking system, and interactive dashboard display to help drivers avoid accidents and mitigate crashes.

Active Brake Assist provides full braking on stationary and moving objects, as well as warning and full braking on pedestrians. Adaptive Cruise Control maintains safe following distances in congested traffic. The Lane Departure Warning system available in the Cascadia warns the driver if the truck starts to drift from its lane, while the Tailgate Warning feature alerts a driver if the truck's speed and following distance don't fall within the established safety parameters. And if the Tailgate Warning mode remains engaged for ten seconds or longer, the event will be reported through the Detroit Connect system. No other commercial vehicle safety system on the market offers these features.

Much of the technology behind Detroit Assurance active safety features was developed as part of the Freightliner Inspiration Truck program, the first licensed autonomous commercial vehicle to operate on an open U.S. public highway. The engineering team behind the Cascadia also enhanced other safety features for drivers.

The new one-piece windshield in the Cascadia increases wiper coverage by 12 percent, enhancing visibility in inclement weather. Heated door and hood mirrors improve visibility in snow and ice conditions. And the one-piece windshield and door glass help provide unobstructed views of the mirrors and the road.

The Cascadia LED headlight system delivers industry-leading performance in the areas of light output and uptime. Utilizing an industry-first full-LED exterior and interior system, the new system incorporates LEDs in the low beam, high beam, daytime running, park, and turn signal lamps. The LED headlights feature an impressive field of view in nighttime and bad-weather conditions with their exceptional bright white light. This offers a stark contrast between objects in the road and adjacent to the road, allowing drivers to distinguish the two with less eye strain. The headlight has a unique feature that allows the amber color of the turn signal and the white color of the daytime running lights to alternate on and off when the turn signal is actuated.

Freightliner views the work to improve the safety of its vehicles as an ongoing quest. After all, we all share the road.

FACT

\$172,292

The average cost of an accident involving a tractor trailer, according to the Federal Motor Carrier Safety Administration.



QUALITY THAT PAYS DIVIDENDS

Freightliner engineers considered quality as a key element in the Cascadia to provide customers with the lowest Real Cost of Ownership. Designing components for longer service life, lower maintenance intervals, better fuel efficiency, and improved ride quality were just a few of the goals for the Cascadia.

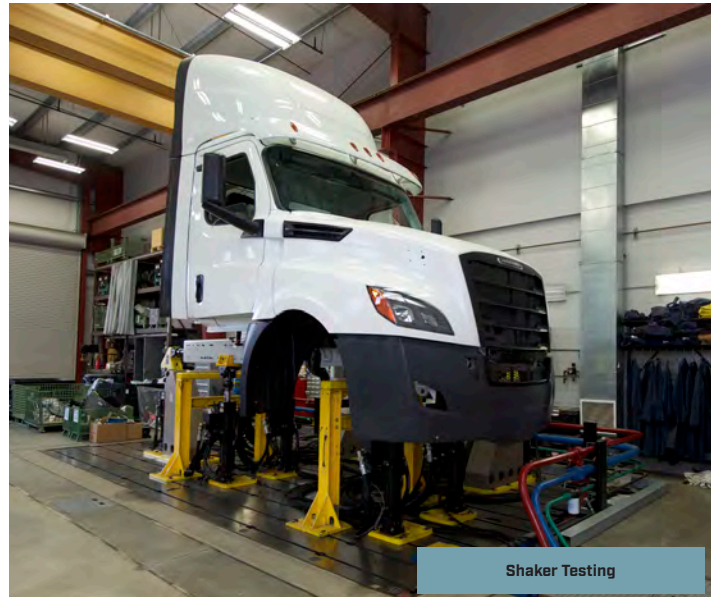
Freightliner utilizes Process-Oriented Design to ensure that components can be installed in a factory environment with consistent quality. More than 800 engineers participated in the development of the new truck, and validation testing was critical.

Starting in 2012, more than 50 prototype trucks were built to test new components and systems. In the hands of Freightliner's Product Validation Engineering team, vehicles were evaluated on the test track and the shaker machine, simulating millions of road miles. Trucks were tested in the cold chamber and hot room to ensure they operate effortlessly in below-zero conditions and temperatures above 100° F. Before the Cascadia was considered ready for customers, more than three million test miles had been logged on roads in extreme weather and various altitudes. The Cascadia received a thorough shakedown from Freightliner engineers every step of the way.

"Quality is critical to us. A quality truck is an extension of us as a company. It represents our brand out there on the road," said John Elliott, CEO of Load One of Taylor, Mich. "Our company tractors are all Cascadia. We've introduced the Cascadia to our fleet. It's a great truck with fuel economy, driver satisfaction, the high quality of the product, low downtime—all of those things add up to be our real costs, and ultimately that's the value that the Cascadia represents to us."

FACT

Our robust manufacturing process ensures continuous improvement, and repeatable high quality.



Shaker Testing

Throughout the manufacturing process, Freightliner utilizes proven advanced methods to ensure the highest quality levels. Among them:

- Coordinate measurement machines that ensure the cab structure is manufactured to the tightest tolerances for confirming cab squareness and hole alignment.
- Cab painting performed with automated robotics to assure consistent paint finish.
- Dash modules tested with electrical power and air pressure prior to cab installation.
- Intensive water tests incorporating more high-pressure nozzles that replicate real-world water intrusion.
- A continuous improvement process that ensures the Cascadia will always have an ongoing focus on product quality and improvement. The Cascadia doesn't just challenge quality expectations, it redefines them. This translates into a great truck now and strong resale value down the road.

"Being an expedited trucking company, every load we haul is critical," Elliott says. "That truck is really the hub of our connection between our operations, between our maintenance staff, between our customers. It all really comes down to that truck. Quality equipment sets us up for success."

OUR CUSTOMERS ARE OUR INSPIRATION. THEY ALWAYS HAVE BEEN.

Freightliner Trucks traces its understanding of what customers face back to its very founding.

In 1942, Leland James was running a trucking company in the western U.S. He needed trucks with superior freight-hauling efficiency to handle vast distances, as well as the power to overcome mountain ranges. When he could not find a truck up to the task, James decided to build it himself. Freightliner was born out of this customer necessity and entrepreneurial spirit.

It's a lesson that lives on at Freightliner.

Freightliner stays connected with customers, because they are the world's best new product development consultants. The development of the Cascadia is proof. Freightliner took North America's best-selling Class 8 truck and made it better, thanks to hundreds of ideas—big and small—gathered from customers.

Leland James would be proud of the Cascadia. Not just because of its superior performance, but because of what it represents. The relentless pursuit at Freightliner to reduce its customers' Real Cost of OwnershipSM.

FOR MORE DETAILS:

freightliner.com
demanddetroit.com

FIND YOUR NEAREST DEALER:

freightliner.com/dealers

STAY CONNECTED:



facebook.com/freightliner
facebook.com/demanddetroit



twitter.com/freightliner
twitter.com/demanddetroit



instagram.com/freightlinertrucks
instagram.com/demanddetroit



youtube.com/user/FreightlinerTrucks
youtube.com/user/demanddetroit



teamrunsmart.com

Daimler Truck Financial

Competitive financing available through Daimler Truck Financial. For the Freightliner Trucks dealer nearest you, call 1-800-FTL-HELP. FTL/MC-M-1514. Specifications are subject to change without notice. Copyright © 2020 Daimler Trucks North America LLC. All rights reserved. Freightliner Trucks is a division of Daimler Trucks North America LLC, a Daimler company.

DAIMLER | Freightliner - A Daimler Group Brand