



FAQS - DTNA'S
INVESTMENT IN
ZONAR[®]

FOR EXTERNAL USE





FAQS

What does Zonar do?

Zonar was established in 2001 to help fleets improve efficiency and meet regulatory compliance. After a decade of explosive growth, Zonar is North America's third largest commercial vehicle provider of heavy-duty telematics equipment changing the way people and products are transported. Zonar designs the hardware and develops the software in-house when enables the technology solutions to be affordable by design. Zonar's products help their customers save fuel, improve maintenance, increase safety and optimize labor. Zonar continues to innovate and set a new bar for competitors confirmed by industry recognition including Frost and Sullivan's North American Telematics Product Innovation of the Year, Edison Awards for Innovation, and Connected World magazine's M2M Award for Innovation.

How did Zonar begin?

Zonar began in 2001. After 20 years in the trucking industry, Eric Manegold was frustrated with drivers not performing their pre-trip and post-trip inspections. He had an idea to use RFID technology to ensure drivers accurately completed their inspections and then provide results immediately to management. Eric met Bill and Brett Brinton, who provided entrepreneurial business expertise. They pulled in Mike McQuade and Dan Mayer who provided technical expertise. Dan carved a prototype out of wood and gave it to an industrial designer. The result was the first EVIR 2010 handheld. "We called it a remote control on steroids," said Mike. The first company to use EVIR was not in the trucking industry at all, but the amusement industry. The Desperado coaster in Primm, NV was shut down due to missing inspections. EVIR helped get the roller coaster back on the tracks. Shortly thereafter, Zonar secured its first transportation customer, Clark County School District in Las Vegas, NV. From that point, Zonar kept growing with the addition of fleet GPS tracking and the Ground Traffic Control web-based software. By 2008, over 50 million verified visual inspections had been conducted via Zonar solutions in U.S.

Who are Zonar's customers?

Zonar's technology solutions are used by many different industries including pupil transportation, construction, utility services, waste and recycling, state and local fleets and over-the-road trucks.

What is the history between Zonar and Daimler Trucks North America (DTNA)?

Zonar started its relationship with DTNA 5 years ago with the development of Virtual Technician™ (link to: <https://www.demanddetroit.com/connect/virtualtech.aspx>), the award-winning integrated remote diagnostic system on Detroit Diesel engines—Freightliner and Western Star trucks. Zonar's solutions can be factory installed on DTNA's Freightliner Trucks, Western Star trucks and Thomas Built Buses.

Who is Daimler Trucks North America (DTNA)?

DTNA is the largest heavy-duty truck manufacturer in North America and a leading producer of medium-duty



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trucks and specialized commercial vehicles. Their brand family includes: Freightliner, Western Star, Thomas Built Buses.

What is DTNA's background in connected truck offerings?

Virtual Technician was conceived by Detroit's customer service team back in 2004. At that time, the industry was experiencing growing pains related to the deployment of new emissions technology and the support and diagnosis of performance issues became critical. The team began utilizing technology to capture engine data to determine root causes of various issues. While this greatly assisted support of Detroit engines for customers, the information was not real time and therefore uptime support remained a challenge. Then during the development of the Heavy Duty Engine Platform, the team realized an opportunity existed to combine data capture technology with telematics to transmit data via cellular networks. This simple idea became an industry revolution for remote diagnostics and led to a significant improvement in the uptime performance of Detroit engines. The process to develop VT required innovative vision, strong leadership, and breaking down silos across the organization.

What is Virtual Technician and how does it work?

- Virtual Technician is the industry's only telematics solution that records critical vehicle performance data immediately before, during and after a fault occurs. Within minutes of a check/stop engine light coming on, an email is sent to the customer letting them know that a fault occurred. The emails are divided into 3 categories:
 - Service Info
 - Service Soon
 - Service Now – the severity for these codes are also categorized (i.e. de-rate, engine stop, etc.)
- VT is backed by a 24/7 day a week call center in Detroit.
- The experts at the Customer Support Center utilize a 75 seconds ring buffer - 60 seconds prior to the fault and 15 seconds after - to take a deeper dive and let the customer know exactly what's going on as well as the specific parts needed and the 3 closest service locations with those parts in stock.
- The service now events are escalated to the CSC in the form of a Remedy ticket.
- The CSC connects to a link to view the diagnostic screen and will look at the captured log file by viewing 70 plus different sensors to diagnosis the problem.
- The CSC will also review past data logs with the same code and see if this is normal or out of range for the vehicle.

The diagnosis made by the Customer Support Center is based on years of knowledge collected that can define the probable cause of each fault code. Each code has been identified with particular parameters/sensor values.



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The CSC Engineers review past data logs with the same code and provide a diagnosis based on what has been established as typical from other reports.

VT Facts & Figures

- Offered as standard for two years on all Freightliner and Western Star trucks with DD-platform engines (DD13, DD15, DD16)
- More than 150,000 trucks have been equipped with the Virtual Technician since its release in 2011.
- Most Freightliners with EPA 2010 Detroit engines built after April 2011 already have the Virtual Technician hardware installed. Retrofit kits are available for trucks with EPA 2010 and newer Detroit engines.. 1)

With more than 800 authorized locations in the United States and Canada, the Customer Service network provides immediate, 24/7 access to maintenance information, state-of-the-art service and factory-trained technicians.

What advantages does Virtual Technician offer that competing OEMs cannot?

With our expertise regarding the Detroit engine platform, and the experts supporting the Detroit Customer Service Center, DTNA and Detroit Connect can offer customers information about their engine and the fault codes generated by that engine that no one else can. Others can say they can diagnose and recommend solutions for the fault codes generated by our engines, but we at Detroit Connect are the only ones that can give you the level of detail to diagnose the problem generated accurately with in-depth analysis to get our customers back on the road, increasing their uptime.

What is Detroit Connect?

Detroit Connect is DTNA's branding for its connected truck products including Virtual Technician.

What is next for Detroit Connect with regard to product development?

The Detroit Connect brand will emphasize the data – converted into actionable information for our customers – that only we, and no one else, can provide off our proprietary powertrain. Detroit Connect is currently developing new solutions to:

- Improve fuel efficiency
- Increase safety
- Optimize performance
- Maximize uptime