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# Harbinger To Unveil Innovative Platform For Electric Medium-Duty Trucks At Detroit Auto Show

**MEDIA DOSSIER**

**September 08, 2022**

**Online Coverage**

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| Headline: Harbinger To Unveil Innovative Platform For Electric Medium-Duty Trucks At Detroit Auto Show | Publication : Forbes |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.forbes.com/sites/edgarsten/2022/09/08/harbinger-to-unveil-innovative-platform-for-electric-medium-duty-trucks-at-detroit-auto-show/?sh=511e8fb416b4

It's not a sports car, pickup or SUV, but one of the products to be unveiled at the upcoming North American International Detroit Auto Show may very well be the underpinnings for future electric trucks delivering packages to your front door or supporting the electric recreational vehicle transporting you to campsites around the country.

Los Angeles-based startup Harbinger is taking the wraps off a new chassis for battery-electric Class 4 through Class 7 medium-duty vehicles which include delivery trucks and RVs. The chassis is designed to save money, reduce driver fatigue and injuries and improve performance and safety.

Indeed, it's the newest innovation in the fast-growing medium-duty truck market serving the even faster-growing middle and last mile delivery markets.

Harbinger was created about 18 months ago by three veterans of EV startups including CEO John Harris. In an interview with Forbes.com, Harris explained the idea to create this new chassis for electric medium-duty vehicles grew out of "fascination" the founders have for that market segment, finding it "compelling," and frustration over existing solutions.

"We thought, someone's gonna go do it right. I kept waiting and waiting and waiting. It just didn't happen," said Harris. "The pandemic has driven 10 years of e-commerce growth into 18 months. We decided to do it right from the ground up."

Doing it from the ground up meant re-thinking key elements specific to electric vehicles. The most prominent innovation being Harbinger's eAxle which combines the motor, inverter and gearbox into a replaceable integrated unit.

The eAxle is coupled with what's known as a de-dion beam.

"With the de-dion beam we have a floating beam that carries the bending moment coupled with half shafts, an anti-sway bar system and then leaf springs for suspension. still using rear leaf springs," explained Harris. "Unlike having a beam axle where you have this sort of monolithic integrated unit we're breaking that out letting us just optimize each piece individually."

By eliminating hypoid gears and u-joints, moving to an architecture that uses entirely spiral beveled gears, "we're looking at about a 15% improvement in energy efficiency over the incumbent solutions in the industry," said Harris.

Battery packs are designed to last 20 years, or about the same life span as a commercial truck and are placed within the frame for safety, Harris said.

A key selling point for Harbinger is the intent to make its electric truck chassis available at no cost-premium. To accomplish that, the company is is building its entire battery system in-house, like passenger

car companies. Existing truck manufacturers typically purchase complete battery packs from outside companies.

What we don't see in trucking is companies buying battery cells and then doing their own modular integration and own pack integration. The effect is they're paying complex systems markup," explained Harris. "We buy battery cells, all higher level integration is done in-house and the effect is our cost-basis for battery packs is anywhere from 50-80% lower than other companies in the trucking space that are buying full packs."

In an industry where a typical delivery driver may make more than 100 stops a day getting in and out of the truck, Harbinger's chassis lowers the typical step-in height from 34-36 inches by about six inches when the truck is empty and four inches when it's fully loaded.

Its steer by-wire feature further aims to reduce the risk of carpal tunnel injuries with the ability to adjust steering ratios to match driving conditions. The risk of tripping in the small space between the seat and the typical large engine compartment known as the "dog house" has been eliminated.

Harris notes the explosion in demand for medium-duty trucks coupled with the way the industry typically operates precipitated the need for a more cost-effective, energy-efficient electric vehicle chassis.

"When we look at electrification, medium duty is where electrification fits most naturally with the way people actually operate vehicles today," Harris said. "With medium-duty they are almost always fleet operated, almost always depot-based which means they're almost always parked in the same place every night, those depots are almost always in industrial locations—places where there's already heavy duty industrial power and single shifts."

The Harbinger chassis is also designed to be ready to support autonomous electric medium-duty vehicles since Harris believes commercial trucking fleets will be the initial adopters "because of high workload, persistent driver shortages and the opportunity to make real improvements in safety and cost."

Pilot testing begins mid to late 2023, according to Harris, with deliveries to customers some time in 2024. The company does have customers lined up, but isn't yet ready to reveal who they are. That's a harbinger of things to come.

| Headline: EV startup Harbinger, founded by Canoo and QuantumScape veterans, aims to shake up medium-duty truck market | Publication : CNBC |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.cnbc.com/2022/09/07/harbinger-ev-startup-medium-trucks-naias-2022.html

A new Los Angeles-based electric vehicle startup founded by veterans of Canoo and QuantumScape said Wednesday it's preparing to shake up the medium-duty truck market with a ready-to-build electric truck platform coming next year.

The company, called Harbinger, has developed two EV platforms it says are optimized for medium-duty trucks such as delivery vans. The platforms use motors and other technology developed in-house specifically to meet the needs of a market segment where trucks are expected to be in service for up to 20 years – far longer than the average passenger car.

It's a market segment that – so far, at least – hasn't been well-served by the industrywide move to electric vehicles, CEO John Harris said.

"The companies out at the bookends, in the light-duty and heavy-duty space, are historically highly vertically integrated," Harris told CNBC in an interview. "When we look at the medium-duty industry, it's completely different."

Harris said that medium-duty trucks, which fall between light-duty pickups and heavy-duty semitrucks, are generally highly specialized. Those trucks, which can range from dump trucks to delivery vans, are typically built to order for fleets by companies called upfitters, using chassis from any of several established vehicle makers.

It's an ecosystem that hasn't changed much in the last 50 years, Harris said. That's why Harbinger is tailoring its products to work within that existing medium-duty ecosystem. The company is preparing two fully electric truck chassis that will be ready for upfitters to tailor to their commercial customers' needs – at a cost that, Harris said, will be comparable to existing internal-combustion options.

Harbinger's products will include a "cab chassis" similar to those built by companies like Ford Motor, but electric. Upfitters use cab chassis, which come with a passenger compartment, to build box trucks, tow trucks and other similarly sized vehicles.

Harbinger will also offer a "strip chassis," without a cab for the driver, that can serve as a foundation for vehicles like delivery vans. Harris noted that unlike existing strip-chassis options, Harbinger's won't require upfitters to work around an internal-combustion engine – allowing for more cargo room and a more comfortable environment for the vehicle's driver.

And because they're expected to serve for up to 20 years, both of Harbinger's chassis will include the hardware and redundant systems needed for autonomous driving. Harbinger, though, has no plans to develop its own self-driving software in-house.

What isn't clear yet is how the company plans to manufacture its chassis. Harbinger's headquarters has tooling and equipment to build prototypes, and can produce electric motors and related parts, but it's not equipped to build complete chassis at scale.

Harris told CNBC that Harbinger has selected a manufacturing partner and will announce details soon. Harbinger currently expects to make its first deliveries in late 2023 and to begin volume production in 2024, he said.

Harbinger was founded in July 2021 by Harris, who worked at EV startups Faraday Future and Xos Trucks; Phillip Weicker, who serves as Harbinger's chief technology officer and worked at QuantumScape and Canoo, where he was a cofounder; and Will Eberts, chief operating officer, who worked with Harris at Faraday Future and with Weicker at Canoo.

The company received early funding from Tiger Global Management and "other highly specialized investors with deep experience" in electric vehicles, Harris said.

Harbinger plans to show off its EV truck chassis at the North American International Auto Show in Detroit later this week.

| Headline: Founded by Canoo and QuantumScape veterans, EV startup Harbinger aims to disrupt the medium-duty truck market | Publication : USA Today |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://ustoday.news/founded-by-canoo-and-quantumscape-veterans-ev-startup-harbinger-aims-to-disrupt-the-medium-duty-truck-market/

A new Los Angeles-based electric vehicle startup founded by veterans of Canoo and QuantumScape announced Wednesday that it is preparing to disrupt the medium-duty truck market with a turnkey electric truck platform that will launch next year will come.

The company, which goes by the name of Harbinger, has developed two EV platforms that it says are optimized for medium-duty trucks such as delivery vans. The platforms use engines and other technologies specifically designed to meet the needs of a market segment where trucks are expected to be in service for up to 20 years – far longer than the average passenger car.

It's a market segment that hasn't been well served — at least so far — by the industry-wide shift to electric vehicles, said CEO John Harris.

"The companies on the bookends, in the light and heavy duty space, historically have been highly vertically integrated," Harris said in an interview with CNBC. "If we look at medium-duty industry, it's very different."

Harris said medium-duty trucks, which fall somewhere between light pickups and heavy-duty tractor-trailers, are generally highly specialized. These trucks, which can range from dump trucks to vans, are typically built to order for fleets by companies known as outfitters, using chassis from several established vehicle manufacturers.

It's an ecosystem that hasn't changed much in the past 50 years, Harris said. Because of this, Harbinger is adapting its products to work in this existing medium-heavy ecosystem. The company is preparing two all-electric truck chassis that are retrofit-ready to tailor them to the needs of their commercial customers – at a price point that Harris says will be comparable to existing internal combustion engine options.

Harbinger's products include a "cab chassis" similar to those built by companies like Ford Motor, but electric. Outfitters use cab chassis equipped with a passenger compartment to build panel vans, tow trucks, and other similar sized vehicles.

Harbinger will also offer a cabless "strip chassis" that can serve as a base for vehicles such as vans. Harris noted that unlike existing strip chassis options, Harbinger's does not require outfitters to work around an internal combustion engine – allowing for more cargo space and a more comfortable environment for the vehicle's driver.

And with expected service life of up to 20 years, both Harbinger chassis will contain the hardware and redundant systems required for autonomous driving. However, Harbinger has no plans to develop its own self-driving software in-house.

What's not clear yet is how the company plans to manufacture its chassis. Harbinger's headquarters has tools and equipment to build prototypes and can manufacture electric motors and associated parts, but is not equipped to build complete chassis on a large scale.

Harris told CNBC that Harbinger has selected a manufacturing partner and will be announcing details soon. Harbinger currently expects to make the first deliveries in late 2023 and start serial production in 2024, he said.

Harbinger was founded in July 2021 by Harris, who worked at EV startups Faraday Future and Xos Trucks; Phillip Weicker, who serves as Harbinger's Chief Technology Officer and has worked at QuantumScape and Canoo, where he co-founded; and Will Eberts, Chief Operating Officer, who worked with Harris at Faraday Future and with Weicker at Canoo.

The company received early funding from Tiger Global Management and "other highly specialized investors with extensive experience" in the electric vehicle space, Harris said.

Harbinger plans to demonstrate its EV truck chassis later this week at the North American International Auto Show in Detroit.

| Headline: New OEM Harbinger Unveils First-of-its-Kind Commercial Medium-Duty Platform Set to Electrify and Revolutionize the Industry | Publication : PR Newswire |
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| Date : September 08, 2022 | Journalist: |

https://www.prnewswire.com/news-releases/new-oem-harbinger-unveils-first-of-its-kind-commercial-medium-duty-platform-set-to-electrify-and-revolutionize-the-industry-301619727.html

Harbinger, a Los Angeles-based automotive manufacturer, announced today its official launch and unveiled a revolutionary new electric vehicle (EV) platform poised to transform the medium-duty industry. Founded with a mission to bring modernization and fresh thinking to a market poorly addressed by electrification, Harbinger's initial product line will include electric stripped chassis and cab chassis designed specifically to address the unique performance, durability, and lifespan expectations required in Class 4 to Class 7 vehicles.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," said John Harris, CEO of Harbinger. "But while this industry has experienced tremendous growth, fleet customers today face acute shortages of gas- and diesel-powered vehicles, and any meaningful supply of production-ready EV offerings is still years out. We are solving this problem head on."

Production for Harbinger electric platforms is projected to scale significantly over the next five years, with first vehicles expected in customers' hands in late 2023, followed by the launch of volume production in 2024.

Fresh Thinking Provides Foundational Advantages

Over the past year, a growing team of EV passenger car veterans have quietly been developing a medium-duty powertrain and chassis to overhaul an industry still running on half-century-old technology. Current EV solutions in the medium-duty space offer only incremental improvements, largely by retrofitting popular internal combustion engine (ICE) products, but Harbinger's suite of in-house developed EV solutions are grounded in road-tested passenger EV technologies and enable a new paradigm in chassis architecture, focused on electrification and improvements in vehicle operation, safety, and driver ergonomics.

Harbinger's EV solutions feature:

A proprietary eAxle at the heart of the vehicle which combines the motor, inverter, and gearbox into an integrated unit. This approach improves energy efficiency, lowers cost, and brings critical safety improvements by enabling the battery systems to be positioned entirely inside the frame.

A liquid-cooled battery pack engineered for superior performance, lower cost, and a supplier-agnostic sourcing strategy. The pack design also takes advantage of cutting-edge casting technology to provide improved battery durability, safety, and lifespan.

A new driver-focused chassis architecture designed to improve safety, driver experience, and productivity through drive-by-wire steering and enhancements to vehicle ergonomics. In addition, a novel front suspension reduces vehicle overhang, improving driver visibility and vehicle maneuverability.

Every element of Harbinger's medium-duty EV has been reimagined and engineered to deliver category-defining attributes, including:

800V liquid cooled battery system, with capacity scalable in 35kWh increments

Best-in-class floor height below 28 inches

Designed for 20-year, 450,000-mile standard operating life

Independent front suspension with rack-type steering

Autonomous-ready with steer-by-wire and brake-by-wire

Segment-leading safety and driver assistance features

One-hour DC fast charging capability

Zero price acquisition premium over today's equivalent gas- and diesel-powered vehicles

"This industry is performing on decades-old technology that makes its daily rigors nearly unbearable for drivers and concentrates emissions of harmful pollutants in highly populated, residential, and business areas where they most acutely affect human health. We can no longer sit idle and watch that happen," said Harris. "The reality is that technologies developed for the passenger or heavy-duty vehicle industries simply cannot be repurposed for the medium-duty segment."

Eliminating barriers to adoption and offering a seamless connection to the way the industry currently operates, Harbinger's scalable stripped chassis has been built to support the predominant medium-duty body types available today, including commercial walk-in vans, RVs, box trucks, and other medium-duty vehicles.

Priced to Compete with Zero Acquisition Premium

Harbinger was founded on the idea that for cleaner vehicles to become ubiquitous, a competitive EV solution must be offered at a cost comparable to its ICE counterparts. As a result, unlike other commercial EVs available today, Harbinger's electric platform will carry zero price acquisition premium relative to gas- and diesel-powered alternatives.

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," said Harris. "Our technology was developed from scratch in order to control top level chassis cost."

Harbinger has achieved this by leveraging strong existing supplier relationships and concentrating its efforts on in-house development of key vehicle systems, thereby eliminating costly third-party battery and powertrain system premiums. Harbinger's chassis has also been designed to scale, with modular battery pack and wheelbase configurations that meet the needs of both last mile delivery operators – who typically drive fewer than 100 miles per day – as well as RV and other commercial and specialty vehicle customers that demand different performance requirements.

Ultimately, Harbinger customers stand to enjoy more than just the benefits of a price competitive vehicle. As with all EVs, customers can also expect a reduced cost of ownership over the lifetime of the vehicle thanks to reduced fuel and maintenance costs.

"The cost effectiveness of the platform is a baseline, not a sacrifice," said Harris. "Our platform will offer an enhanced level of efficiency, durability, safety, and performance over our competition and can be sold at a better price point because of our advantages of in-house component design and vertically integrated approach. This is how EVs should be built."

Deep Experience

Led by co-founders John Harris, Phillip Weicker, and Will Eberts, Harbinger's team is composed of EV specialists with decades of experience across the automotive, aerospace, and battery technology industries.

John Harris leads the company as Chief Executive Officer, bringing expertise from Anduril Industries, Boeing, Faraday Future, and Xos Trucks.

Phillip Weicker is the Chief Technology Officer at Harbinger, leading product design and development. Former co-founder and head of powertrain at Canoo, he brings over two decades of experience in battery and drivetrain development with experience at Faraday Future, QuantumScape, Coda Automotive, and EnergyCS.

Will Eberts serves as Chief Operating Officer, with responsibility over supply chain, program management, and project financials. Eberts brings experience from Anduril Industries, Canoo, Faraday Future, and General Atomics ASI.

The founding team is supported by a highly experienced suite of technical and operational leaders, including Alexi Charbonneau, VP of Chassis Engineering; Alex Tylee, VP of Powertrain Engineering; John Sztykiel, VP of Business Development; Deb Bourke, Director of Engineering Programs; Steven Offutt, Director of Manufacturing; and Michael Fielkow, General Counsel and Head of Corporate Development.

See Harbinger's technology on display for the first time at the North American International Auto Show (NAIAS) in Detroit this month, or visit www.harbingermotors.com for more.

About Harbinger

Harbinger is a commercial electric vehicle (EV) company on a mission to transform an industry starving for innovation. Harbinger's best-in-class team of EV, battery, and drivetrain experts have pooled their deep experience to support the growing demand for medium-duty EVs. Leveraging a foundation of proprietary, in-house developed vehicle technologies designed specifically for commercial vehicles, Harbinger is bringing a first-of-its-kind EV platform to market, priced for zero acquisition premium. Harbinger: familiar form, revolutionary foundation.

| Headline: New EV startup Harbinger outlines production roadmap ahead of auto show unveiling | Publication : Seeking Alpha |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://seekingalpha.com/news/3881277-new-ev-startup-harbinger-outlines-production-roadmap-ahead-of-auto-show-unveiling

Harbinger, a new EV startup founded by veterans of Canoo (GOEV), Faraday Future (FFIE), and battery-manufacturer QuantumScape (QS), announced new developments for medium-duty vehicles to be unveiled in person at next week's North American International Auto Show in Detroit.

The Los Angeles-based startup said that its initial product line will include "electric stripped chassis and cab chassis designed specifically to address the unique performance, durability, and lifespan expectations required in Class 4 to Class 7 vehicles" as well as "eAxle" and battery technologies "built to exceed industry standards."

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," CEO John Harris said. "But while this industry has experienced tremendous growth, fleet customers today face acute shortages of gas- and diesel-powered vehicles, and any meaningful supply of production-ready EV offerings is still years out. We are solving this problem head on."

The company expects its vehicles to be tolled onto streets by late 2023, with a pickup in production in the following year. Harris was also keen to point out the cost-saving capability of the company's new products.

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," Harris said. "Our technology was developed from scratch in order to control top level chassis cost."

He indicated "strong existing supplier relationships" and in-house development of key vehicle systems have allowed the company to achieve its strong pricing proposition.

| Headline: Harbinger Launches Commercial Medium-Duty EV Platform | Publication : NGT News |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://ngtnews.com/harbinger-launches-commercial-medium-duty-ev-platform

Automotive manufacturer Harbinger has unveiled a new medium-duty electric vehicle (EV) platform. Harbinger's initial product line will include electric stripped chassis and cab chassis designed specifically to address the performance, durability and lifespan expectations required in Class 4 to Class 7 vehicles.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," says John Harris, CEO of Harbinger. "But while this industry has experienced tremendous growth, fleet customers today face acute shortages of gas- and diesel-powered vehicles, and any meaningful supply of production-ready EV offerings is still years out. We are solving this problem head on."

Production for Harbinger electric platforms is projected to scale significantly over the next five years, with first vehicles expected in customers' hands in late 2023, followed by the launch of volume production in 2024.

Harbinger's EV solutions feature a proprietary eAxle which combines the motor, inverter and gearbox into an integrated unit. This approach improves energy efficiency, lowers cost and brings critical safety improvements by enabling the battery systems to be positioned entirely inside the frame. A liquid-cooled battery pack is engineered for superior performance, lower cost and a supplier-agnostic sourcing strategy. The pack design also takes advantage of casting technology to provide improved battery durability, safety and lifespan.

A new driver-focused chassis architecture is designed to improve safety, driver experience and productivity through drive-by-wire steering and enhancements to vehicle ergonomics. In addition, a novel front suspension reduces vehicle overhang, improving driver visibility and vehicle maneuverability.

Harbinger's medium-duty EV includes a 800V liquid cooled battery system, with capacity scalable in 35 kWh increments; a floor height below 28 inches; design for 20-year, 450,000-mile standard operating life; independent front suspension with rack-type steering; autonomous-ready with steer-by-wire and brake-by-wire; and one-hour DC fast charging capability.

"This industry is performing on decades-old technology that makes its daily rigors nearly unbearable for drivers and concentrates emissions of harmful pollutants in highly populated, residential, and business areas where they most acutely affect human health. We can no longer sit idle and watch that happen," adds Harris. "The reality is that technologies developed for the passenger or heavy-duty vehicle industries simply cannot be repurposed for the medium-duty segment."

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," continues Harris. "Our technology was developed from scratch in order to control top level chassis cost."

"The cost effectiveness of the platform is a baseline, not a sacrifice," concludes Harris. "Our platform will offer an enhanced level of efficiency, durability, safety, and performance over our competition and can be sold at a better price point because of our advantages of in-house component design and vertically integrated approach. This is how EVs should be built."

| Headline: HARBINGER UNVEILS FIRST-OF-ITS-KIND MEDIUM-DUTY EV | Publication : EV Report |
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| Date : September 08, 2022 | Journalist: |

https://theevreport.com/harbinger-unveils-first-of-its-kind-medium-duty-ev

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FRESH THINKING PROVIDES FOUNDATIONAL ADVANTAGES

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PRICED TO COMPETE WITH ZERO ACQUISITION PREMIUM

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Ultimately, Harbinger customers stand to enjoy more than just the benefits of a price competitive vehicle. As with all EVs, customers can also expect a reduced cost of ownership over the lifetime of the vehicle thanks to reduced fuel and maintenance costs.

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DEEP EXPERIENCE

Led by co-founders John Harris, Phillip Weicker, and Will Eberts, Harbinger's team is composed of EV specialists with decades of experience across the automotive, aerospace, and battery technology industries.

John Harris leads the company as Chief Executive Officer, bringing expertise from Anduril Industries, Boeing, Faraday Future, and Xos Trucks.

Phillip Weicker is the Chief Technology Officer at Harbinger, leading product design and development. Former co-founder and head of powertrain at Canoo, he brings over two decades of experience in battery and drivetrain development with experience at Faraday Future, QuantumScape, Coda Automotive, and EnergyCS.

Will Eberts serves as Chief Operating Officer, with responsibility over supply chain, program management, and project financials. Eberts brings experience from Anduril Industries, Canoo, Faraday Future, and General Atomics ASI.

The founding team is supported by a highly experienced suite of technical and operational leaders, including Alexi Charbonneau, VP of Chassis Engineering; Alex Tylee, VP of Powertrain Engineering; John Sztykiel, VP of Business Development; Deb Bourke, Director of Engineering Programs; Steven Offutt, Director of Manufacturing; and Michael Fielkow, General Counsel and Head of Corporate Development.

| Headline: Harbinger EV NAIAS 2022 startup medium truck | Publication : Smart Family |
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| Date : September 08, 2022 | Journalist: |

https://www.smartfamily.id/harbinger-ev-naias-2022-startup-medium-truck/

The Los Angeles-based new electric vehicle startup founded by veterans Canoo and QuantumScape said Wednesday it is preparing to shake up the mid-duty truck market with a ready-to-use electric truck platform coming next year.

The company, called Harbinger, has developed two EV platforms that it says are optimized for medium-duty trucks like delivery vans. The platform uses motors and other technology developed in-house specifically to meet the needs of a market segment where trucks are expected to operate for up to 20 years – much longer than the average passenger car.

This is a market segment that – at least so far – has not been well served by the industry's shift to electric vehicles, said CEO John Harris.

"Companies at the end of the book, in the light-duty and heavy-duty spaces, have historically been very vertically integrated," Harris told CNBC in an interview. "When we look at the mid-duty industry, it's completely different."

Harris says that medium-duty trucks, which fall between light-duty pickups and semi-heavy-duty trucks, are generally highly specialized. The trucks, which can range from dump trucks to delivery vans, are usually made to order for the fleet by companies called upfitters, using chassis from one of several established vehicle makers.

It's an ecosystem that hasn't changed much in the last 50 years, Harris said. That's why Harbinger adapts its products to function within the existing mid-duty ecosystem. The company is preparing two fully electric truck chassis that will be ready for upfitters to match the needs of their commercial customers – at a cost that, Harris said, would be comparable to existing internal combustion options.

Harbinger EV Truck

Harbinger's products will include a "cab chassis" similar to those made by companies like Ford Motor, but electric. Upfitters uses the cab chassis, which is equipped with a passenger compartment, to make box trucks, tow trucks, and other similar sized vehicles.

Harbinger will also offer a "strip chassis", without a cab for the driver, which can serve as the foundation for vehicles such as delivery vans. Harris notes that unlike existing strip chassis options, Harbinger's does not require upfitters to work around the internal combustion engine – allowing for more cargo space and a more comfortable environment for the vehicle driver.

And because they are expected to serve up to 20 years, both Harbinger chassis will include the necessary redundant hardware and systems for autonomous driving. Harbinger, however, has no plans to develop its own self-driving software.

What's not clear is how the company plans to manufacture the chassis. Harbinger Headquarters has the tools and equipment for prototyping, and can manufacture electric motors and related parts, but is not equipped to build complete chassis on a large scale.

Harris told CNBC that Harbinger has selected a manufacturing partner and will announce details soon. Harbinger currently expects to make its first deliveries in late 2023 and start volume production in 2024, he said.

Harbinger was founded in July 2021 by Harris, who worked at EV startups Faraday Future and Xos Trucks; Phillip Weicker, who served as chief technology officer of Harbinger and worked at QuantumScape and Canoo, where he was a co-founder; and Will Eberts, chief operating officer, who worked with Harris at Faraday Future and with Weicker at Canoo.

The company received seed funding from Tiger Global Management and “other highly specialized investors with deep experience” in electric vehicles, Harris said.

Harbinger plans to show off its EV truck chassis at the North American International Auto Show in Detroit this weekend.

| Headline: EV startup Harbinger, founded by Canoo and QuantumScape veterans, aims to shake up medium-duty truck market | Publication : Trend Fool |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://trendfool.com/business/ev-startup-harbinger-founded-by-canoo-and-quantumscape-veterans-aims-to-shake-up-medium-duty-truck-market/

A new Los Angeles-based electric vehicle startup founded by veterans of Canoo and QuantumScape said Wednesday it's preparing to shake up the medium-duty truck market with a ready-to-build electric truck platform coming next year.

The company, called Harbinger, has developed two EV platforms it says are optimized for medium-duty trucks such as delivery vans. The platforms use motors and other technology developed in-house specifically to meet the needs of a market segment where trucks are expected to be in service for up to 20 years – far longer than the average passenger car.

It's a market segment that – so far, at least – hasn't been well-served by the industrywide move to electric vehicles, CEO John Harris said.

"The companies out at the bookends, in the light-duty and heavy-duty space, are historically highly vertically integrated," Harris told CNBC in an interview. "When we look at the medium-duty industry, it's completely different."

Harris said that medium-duty trucks, which fall between light-duty pickups and heavy-duty semitrucks, are generally highly specialized. Those trucks, which can range from dump trucks to delivery vans, are typically built to order for fleets by companies called upfitters, using chassis from any of several established vehicle makers.

It's an ecosystem that hasn't changed much in the last 50 years, Harris said. That's why Harbinger is tailoring its products to work within that existing medium-duty ecosystem. The company is preparing two fully electric truck chassis that will be ready for upfitters to tailor to their commercial customers' needs – at a cost that, Harris said, will be comparable to existing internal-combustion options.

Harbinger EV truck

Jack Schroeder | Harbinger

Harbinger's products will include a "cab chassis" similar to those built by companies like Ford Motor, but electric. Upfitters use cab chassis, which come with a passenger compartment, to build box trucks, tow trucks and other similarly sized vehicles.

Harbinger will also offer a "strip chassis," without a cab for the driver, that can serve as a foundation for vehicles like delivery vans. Harris noted that unlike existing strip-chassis options, Harbinger's won't require upfitters to work around an internal-combustion engine – allowing for more cargo room and a more comfortable environment for the vehicle's driver.

And because they're expected to serve for up to 20 years, both of Harbinger's chassis will include the hardware and redundant systems needed for autonomous driving. Harbinger, though, has no plans to develop its own self-driving software in-house.

What isn't clear yet is how the company plans to manufacture its chassis. Harbinger's headquarters has tooling and equipment to build prototypes, and can produce electric motors and related parts, but it's not equipped to build complete chassis at scale.

Harris told CNBC that Harbinger has selected a manufacturing partner and will announce details soon. Harbinger currently expects to make its first deliveries in late 2023 and to begin volume production in 2024, he said.

Harbinger was founded in July 2021 by Harris, who worked at EV startups Faraday Future and Xos Trucks; Phillip Weicker, who serves as Harbinger's chief technology officer and worked at QuantumScape and Canoo, where he was a cofounder; and Will Eberts, chief operating officer, who worked with Harris at Faraday Future and with Weicker at Canoo.

The company received early funding from Tiger Global Management and "other highly specialized investors with deep experience" in electric vehicles, Harris said.

Harbinger plans to show off its EV truck chassis at the North American International Auto Show in Detroit later this week.

| Headline: Forerunner to unveil innovative platform for electric medium-duty trucks at Detroit Auto Show | Publication : Business News |
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| Date : September 08, 2022 | Journalist: |

https://biz.crast.net/forerunner-to-unveil-innovative-platform-for-electric-medium-duty-trucks-at-detroit-auto-show/

It's not a sports car, pickup or SUV, but one of the products to be unveiled at the upcoming North American International Detroit Auto Show to deliver packages to your front door for future electric trucks or support electric recreational vehicle transportation. Could very well be the basis for this. You to camp sites across the country.

Los Angeles-based startup Harbinger is wrapping up a new chassis for battery-electric Class 4 through Class 7 medium-duty vehicles that include delivery trucks and RVs. The chassis is designed to save money, reduce driver fatigue and injuries, and improve performance and safety.

In fact, it is the latest innovation in the rapidly growing medium-duty truck market serving the even faster growing middle and last mile delivery markets.

Harbinger was created about 18 months ago by three EV startup veterans, including CEO John Harris. In an interview with Forbes.com, Harris explained the idea of creating this new chassis for electric medium-duty vehicles, which evolved from the "charm" the founders had for that market segment, calling it Found frustration on "compelling" and existing solutions.

"We thought, someone is going to do the right thing. I kept waiting and waiting and waiting. It didn't happen," Harris said. "The pandemic has turned 10 years of e-commerce growth into 18 months. We have decided to do it from the beginning."

Doing it from the ground up meant a re-thinking of key elements specific to electric vehicles. The most prominent innovation is Harbinger's axle which combines the motor, inverter and gearbox into a replaceable integrated unit.

The eAxle is known as a D-Dion beam.

"With the D-Dion beam we have a floating beam that combines the bending moment with a half shaft, an anti-sway bar system and then leaf springs for suspension. Still using rear leaf springs, Harris explained. "As opposed to having a beam axle where you have this type of monolithic integrated unit, we're breaking it down allowing us to customize each piece individually."

Harris said, by eliminating high point gears and U-joints, moving toward an architecture that uses gears with a fully spiral bevel, "we are seeing an approximately 15% improvement in energy efficiency over existing solutions in the industry. "

Harris said the battery packs are designed to last 20 years, or the same lifespan as a commercial truck, and are housed within the frame for protection.

A major selling point for Harbinger is its intention to make its electric truck chassis available at no cost—premium. To accomplish this, the company is separating its process from the way it manufactures electric

passenger cars, which is meant to save trucking companies the cost of manufacturing or outsourcing their batteries.

What we don't see in trucking is that companies buy battery cells and then do their own modular integration and their own pack integration. The effect is that they're paying for the complicated system markup," Harris explained. "We buy battery cells, all the high levels of integration are done in-house and the effect is that our cost-base for battery packs 50-80% less than other companies in the trucking space who are buying full packs."

In an industry where a typical delivery driver can make more than 100 stops a day commuting in and out of a truck, Harbinger's chassis reduces the typical step-in height by about six inches from 34-36 inches four inches when the truck is empty and four when it is fully loaded.

Its Steer By-Wire feature aims to reduce the risk of carpal tunnel injuries with the ability to adjust the steering ratio to match driving conditions. The risk of tripping is eliminated in the small space between the seat and the distinctive large engine compartment known as the "dog house".

Harris notes the explosion in demand for medium-duty trucks, the way the industry typically operates, necessitating more cost-effective, energy-efficient electric vehicle chassis.

"When we look at electrification, medium duty is where electrification fits most naturally into the way people actually operate vehicles today," Harris said. "With medium-duty they are almost always fleet-operated, almost always depot-based, meaning they are almost always parked in the same location every night, those depots are almost always in industrial locations—such Places where there is already heavy duty industrial power and single shift."

The Harbinger chassis is also designed to support autonomous electric medium-duty vehicles as Harris believes commercial trucking fleets will be early adopters "with high workloads, frequent driver constraints and increased safety and cost." Opportunity to make real improvement."

According to Harris, pilot testing begins in mid-2023, with delivery to customers sometime in 2024. The company has customers, but it's not yet ready to reveal who they are. It is a harbinger of things to come.

| Headline: Meet the EV startup planning a debut at the Detroit Auto Show | Publication : The News Page |
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| Date : September 08, 2022 | Journalist: |

https://the-news-page.com/meet-the-ev-startup-planning-a-debut-at-the-detroit-auto-show/

Harbinger Motors Inc., a California-based electric vehicle startup company, is planning to use the Detroit Auto Show to introduce itself and its electric medium-duty vehicles to the world.

The new automaker's initial product line will include electric stripped chassis and cab chassis designed for Class 4 to Class 7 vehicles. The company, formed in 2021, expects production of its electric platforms to "scale significantly" in the next five years. A set of vehicles will be piloted in late 2023 by a select group of customers and the company expects to launch volume production at an unspecified location in Michigan in 2024.

Harbinger is one of a few new mobility companies scheduled to have a press conference during media day at the auto show on Sept. 14.

The company is focused on the fleet customer across various industries but wanted to use the North American International Auto Show to reveal itself and its products because "we really wanted to highlight that this is a vertically integrated, clean-slate platform and we think that the most meaningful revelations of those products in the last 50 years have generally been in Detroit," CEO John Harris said in an interview Wednesday.

Harris and other leaders come from EV startup backgrounds. Harris previously worked at startups Faraday Future and Xos Trucks. Phillip Weicker, chief technology officer at Harbinger, is the former co-founder and head of powertrain at Canoo and also worked at Faraday Future. Will Eberts, chief operating officer, brings experience from Anduril Industries, Canoo and Faraday Future.

Harbinger's vehicles will offer a proprietary eAxle that combines the motor, inverter and gearbox as an integrated unit to improve energy efficiency, according to the company. The company is finishing up its alpha R&D phase and moving into its beta phase, Harris said. It will have an alpha vehicle and bare chassis on display at the Detroit auto show.

Harbinger is "venture-backed," Harris said, and has "a couple of strategic partners from the automotive industry but none of them are large OEMs." Harbinger does have partnerships with tier-one suppliers.

"We'll definitely utilize the Michigan auto ecosystem," Harris said. "That's why we're going to do that final assembly in Michigan. There's a lot of great supply base there, there's a lot of great labor base there."

| Headline: New OEM Harbinger Unveils First-of-its-Kind Commercial Medium-Duty Platform Set to Electrify and Revolutionize the Industry | Publication : Business Fortnight |
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| Date : September 08, 2022 | Journalist: |

https://businessfortnight.com/new-oem-harbinger-unveils-first-of-its-kind-commercial-medium-duty-platform-set-to-electrify-and-revolutionize-the-industry/

EV innovators focus deep expertise to rethink medium-duty automobile market, delivering an EV resolution providing benchmark efficiency and sturdiness at zero worth acquisition premium

-EV trade veterans create new firm bringing market-focused medium-duty product to an trade missing sensible innovation

-Harbinger autos will provide enhancements in security, driver expertise, and productiveness tuned to the wants of business fleet operators and specialty automobile prospects

-Developed in-house for Class 4 to 7, the firm's all-new eAxle, chassis structure, and battery applied sciences are constructed to exceed trade requirementsHarbinger's preliminary product line will embody electrical stripped chassis and cab chassis merchandise designed particularly to tackle the distinctive efficiency, sturdiness, and lifespan expectations required in Class 4 to Class 7 autos – with zero EV acquisition premium.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," mentioned John Harris, CEO of Harbinger. "But while this industry has experienced tremendous growth, fleet customers today face acute shortages of gas- and diesel-powered vehicles, and any meaningful supply of production-ready EV offerings is still years out. We are solving this problem head on."

Production for Harbinger electrical platforms is projected to scale considerably over the subsequent 5 years, with first autos anticipated in prospects' palms in late 2023, adopted by the launch of quantity manufacturing in 2024.

Fresh Thinking Provides Foundational Advantages

Over the previous 12 months, a rising group of EV passenger automotive veterans have quietly been creating a medium-duty powertrain and chassis to overhaul an trade nonetheless operating on half-century-old expertise. Current EV options in the medium-duty house provide solely incremental enhancements, largely by retrofitting common inner combustion engine (ICE) merchandise, however Harbinger's suite of in-house developed EV options are grounded in road-tested passenger EV applied sciences and allow a brand new paradigm in chassis structure, centered on electrification and enhancements in automobile operation, security, and driver ergonomics.

Harbinger's EV options function:

A proprietary eAxle at the coronary heart of the automobile which mixes the motor, inverter, and gearbox into an built-in unit. This method improves vitality effectivity, lowers price, and brings vital security enhancements by enabling the battery programs to be positioned fully inside the body.

A liquid-cooled battery pack engineered for superior efficiency, decrease price, and a supplier-agnostic sourcing technique. The pack design additionally takes benefit of cutting-edge casting expertise to present improved battery sturdiness, security, and lifespan.

A brand new driver-focused chassis structure designed to enhance security, driver expertise, and productiveness by way of drive-by-wire steering and enhancements to automobile ergonomics. In addition, a novel entrance suspension reduces automobile overhang, enhancing driver visibility and automobile maneuverability.

Every factor of Harbinger's medium-duty EV has been reimagined and engineered to ship category-defining attributes, together with:

800V liquid cooled battery system, with capability scalable in 35kWh increments

Best-in-class flooring peak under 28 inches

Designed for 20-year, 450,000-mile normal working life

Independent entrance suspension with rack-type steering

Autonomous-ready with steer-by-wire and brake-by-wire

Segment-leading security and driver help options

One-hour DC quick charging functionality

Zero worth acquisition premium over right this moment's equal gas- and diesel-powered autos

"This industry is performing on decades-old technology that makes its daily rigors nearly unbearable for drivers and concentrates emissions of harmful pollutants in highly populated, residential, and business areas where they most acutely affect human health. We can no longer sit idle and watch that happen," mentioned Harris. "The reality is that technologies developed for the passenger or heavy-duty vehicle industries simply cannot be repurposed for the medium-duty segment."

Eliminating boundaries to adoption and providing a seamless connection to the method the trade at present operates, Harbinger's scalable stripped chassis has been constructed to help the predominant medium-duty physique varieties out there right this moment, together with business walk-in vans, RVs, field vehicles, and different medium-duty autos.

Priced to Compete with Zero Acquisition Premium

Harbinger was based on the concept that for cleaner autos to develop into ubiquitous, a aggressive EV resolution should be provided at a value comparable to its ICE counterparts. As a end result, not like different business EVs out there right this moment, Harbinger's electrical platform will carry zero worth acquisition premium relative to gas- and diesel-powered options.

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," mentioned Harris. "Our technology was developed from scratch in order to control top level chassis cost."

Harbinger has achieved this by leveraging robust current provider relationships and concentrating its efforts on in-house improvement of key automobile programs, thereby eliminating pricey third-party

battery and powertrain system premiums. Harbinger's chassis has additionally been designed to scale, with modular battery pack and wheelbase configurations that meet the wants of each final mile supply operators – who sometimes drive fewer than 100 miles per day – in addition to RV and different business and specialty automobile prospects that demand totally different efficiency necessities.

Ultimately, Harbinger prospects stand to get pleasure from extra than simply the advantages of a worth aggressive automobile. As with all EVs, prospects may also anticipate a diminished price of possession over the lifetime of the automobile thanks to diminished gas and upkeep prices.

"The cost effectiveness of the platform is a baseline, not a sacrifice," mentioned Harris. "Our platform will offer an enhanced level of efficiency, durability, safety, and performance over our competition and can be sold at a better price point because of our advantages of in-house component design and vertically integrated approach. This is how EVs should be built."

Deep Experience

Led by co-founders John Harris, Phillip Weicker, and Will Eberts, Harbinger's group consists of EV specialists with a long time of expertise throughout the automotive, aerospace, and battery expertise industries.

John Harris leads the firm as Chief Executive Officer, bringing experience from Anduril Industries, Boeing, Faraday Future, and Xos Trucks.

Phillip Weicker is the Chief Technology Officer at Harbinger, main product design and improvement. Former co-founder and head of powertrain at Canoo, he brings over 20 years of expertise in battery and drivetrain improvement with expertise at Faraday Future, QuantumScape, Coda Automotive, and EnergyCS.

Will Eberts serves as Chief Operating Officer, with accountability over provide chain, program administration, and undertaking financials. Eberts brings expertise from Anduril Industries, Canoo, Faraday Future, and General Atomics ASI.

The founding group is supported by a extremely skilled suite of technical and operational leaders, together with Alexi Charbonneau, VP of Chassis Engineering; Alex Tylee, VP of Powertrain Engineering; John Sztykiel, VP of Business Development; Deb Bourke, Director of Engineering Programs; Steven Offutt, Director of Manufacturing; and Michael Fielkow, General Counsel and Head of Corporate Development.

See Harbinger's expertise on show for the first time at the North American International Auto Show (NAIAS) in Detroit this month, or go to www.harbingermotors.com for extra.

About Harbinger

Harbinger is a business electrical automobile (EV) firm on a mission to rework an trade ravenous for innovation. Harbinger's best-in-class group of EV, battery, and drivetrain specialists have pooled their deep expertise to help the rising demand for medium-duty EVs. Leveraging a basis of proprietary, in-house developed automobile applied sciences designed particularly for business autos, Harbinger is bringing a first-of-its-kind EV platform to market, priced for zero acquisition premium. Harbinger: acquainted type, revolutionary basis.

-Harbinger is ready to debut its EV platform at the 2022 North American International Auto Show

LOS ANGELES, Sept. 8, 2022 /PRNewswire/ — Harbinger, a Los Angeles-based automotive producer, introduced right this moment its official launch and unveiled a revolutionary new electrical automobile (EV) platform poised to rework the medium-duty trade. Founded with a mission to deliver modernization and contemporary considering to a market poorly addressed by electrification, Harbinger's preliminary product line will embody electrical stripped chassis and cab chassis designed particularly to tackle the distinctive efficiency, sturdiness, and lifespan expectations required in Class 4 to Class 7 autos.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry." – John Harris, CEO of Harbinger

| Headline: 5 things to watch at the Detroit Auto Show. | Publication : JNews |
| --- | --- |
| Date : September 08, 2022 | Journalist: |

https://jnews.uk/5-things-to-watch-at-the-detroit-auto-show/

The NAIAS Detroit Auto Show kicks off on September 14, ending a three-year hiatus sparked by the COVID-19 pandemic. Among a lighter list of attendees – Ford Motor Company (NYSE:F), General Motors (GM), etc Stellantis (STLA) are set to headline alongside Korean automaker Hyundai (OTCPK:HYMLF) as well as a number of EV and auto technology startups.

With the White House confirming "car guy" President Biden's attendance earlier this week, significant attention is sure to be afforded to the event even if many major automakers will not be in attendance. Below are five key things to watch in the upcoming event.

New Mustang Unveiling – The most hotly anticipated reveal of the event is the presentation of the new S650 Mustang. Ford (F) has teased the new 2024 model for some time, although details on it remain scant. In fact, Automotive News reported days ahead of the event that a hybrid model will not be on deck for the event, despite longstanding plans to roll-out a more eco-friendly model. Instead, 2.3L I-4 EcoBoost and Ford 5.0L V8 Coyote engines, according to Ford Authority. The report adds that the new Mustang will also feature new Google infotainment software. As of yet, the company has neither confirmed nor denied the reporting. A new Lincoln L100 concept car is also expected to be highlighted during the event.

New announcements from Stellantis and GM? – Both General Motors (GM) and Stellantis (STLA) brands will be well-represented during the event, with a strong possibility for new announcements from each. Stellantis-owned Chrysler hinted at this prospect on Tuesday, announcing a special press conference on Tuesday evening to "unveil a special-edition Chrysler vehicle". "We're bringing the power in 2023," Stellantis (STLA) said cryptically on Facebook ahead of the event. "Stay tuned." According to industry outlet CarScoops, a new special edition Chrysler 300 could be in the cards for Tuesday's unveiling. The automaker's Jeep brand is also anticipated to have new models to showcase during the event, adding to recent EV-production updates for the brand. For GM, both Chevrolet and Buick are anticipated to have new announcements and concepts on display. Per GM Authority, a Chevy Equinox EV unveiling, a 2023 Chevy Trax reveal, a 2024 Chevy Silverado HD heavy-duty pickup refresh, and a new special-edition Camaro are all possibilities for the automaker as it seeks to make a splash. Buick, meanwhile, will have its new Wildcat EV concept car on display.

New startups – Aside from the major automakers, new startups like Harbinger are on the docket for September 14. The Los Angeles-based Harbinger, which focuses on medium-duty vehicles, said that its initial product line will include "electric stripped chassis and cab chassis designed specifically to address the unique performance, durability, and lifespan expectations required in Class 4 to Class 7 vehicles" as well as "eAxle" and battery technologies "built to exceed industry standards. Read more details on the company's planned announcements.

EV charging and technology updates – Aside from the emerging EV announcements, multiple EV technology firms are set to present at the event as well. For example, German auto technology firm Autel announced it is set to reveal a slate of new advancements in EV charging, cloud capabilities, and more. PlugZen, a developer of EV charging products that allow up to 10 vehicles to charge simultaneously is also on the docket. The Detroit-based company said that a new product press announcement will be provided during the company's morning presentation on Wednesday.

Canadian auto parts manufacturer Magna International (MGA) is also expected to be present in the afternoon session. The company is expected to unveil its “EtelligentForce” battery-electric vehicle powertrain system for electrifying pickup trucks and light commercial vehicles.

Air mobility advancements – Finally, a number of companies not quite fitting into the auto category are slated to be in attendance. In what the event termed a “Show Above the Show”, six international air mobility innovators across electric vertical take-off and landing (eVTOL) aircraft, amphibious sport planes, hoverbikes, hoverboards, and jet suits are expected to be parts of the show . Of note, XTURISMO and ASX are also due to provide updates during Wednesday’s busy schedule. The latter is anticipated to unveil its SIGMA – SIX (S6) Electric Vertical Takeoff and Landing Aircraft during the event. The former will showcase its flying bikes.

| Headline: HARBINGER UNVEILS FIRST-OF-ITS-KIND MEDIUM-DUTY EV | Publication : EV Reporter |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://theevreport.com/harbinger-unveils-first-of-its-kind-medium-duty-ev#:~:text=Every%20element%20of%20Harbinger's%20medium,450%2C000%2Dmile%20standard%20operating%20life

Harbinger, a Los Angeles-based automotive manufacturer, announced today its official launch and unveiled a revolutionary new electric vehicle platform poised to transform the medium-duty industry. Founded with a mission to bring modernization and fresh thinking to a market poorly addressed by electrification, Harbinger's initial product line will include electric stripped chassis and cab chassis designed specifically to address the unique performance, durability, and lifespan expectations required in Class 4 to Class 7 vehicles.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," said John Harris, CEO of Harbinger. "But while this industry has experienced tremendous growth, fleet customers today face acute shortages of gas- and diesel-powered vehicles, and any meaningful supply of production-ready EV offerings is still years out. We are solving this problem head on."

Production for Harbinger electric platforms is projected to scale significantly over the next five years, with first vehicles expected in customers' hands in late 2023, followed by the launch of volume production in 2024.

FRESH THINKING PROVIDES FOUNDATIONAL ADVANTAGES

Over the past year, a growing team of EV passenger car veterans have quietly been developing a medium-duty powertrain and chassis to overhaul an industry still running on half-century-old technology. Current EV solutions in the medium-duty space offer only incremental improvements, largely by retrofitting popular internal combustion engine (ICE) products, but Harbinger's suite of in-house developed EV solutions are grounded in road-tested passenger EV technologies and enable a new paradigm in chassis architecture, focused on electrification and improvements in vehicle operation, safety, and driver ergonomics.

Harbinger's EV solutions feature:

A proprietary eAxle at the heart of the vehicle which combines the motor, inverter, and gearbox into an integrated unit. This approach improves energy efficiency, lowers cost, and brings critical safety improvements by enabling the battery systems to be positioned entirely inside the frame.

A liquid-cooled battery pack engineered for superior performance, lower cost, and a supplier-agnostic sourcing strategy. The pack design also takes advantage of cutting-edge casting technology to provide improved battery durability, safety, and lifespan.

A new driver-focused chassis architecture designed to improve safety, driver experience, and productivity through drive-by-wire steering and enhancements to vehicle ergonomics. In addition, a novel front suspension reduces vehicle overhang, improving driver visibility and vehicle maneuverability.

Every element of Harbinger's medium-duty EV has been reimagined and engineered to deliver category-defining attributes, including:

800V liquid cooled battery system, with capacity scalable in 35kWh increments
Best-in-class floor height below 28 inches
Designed for 20-year, 450,000-mile standard operating life
Independent front suspension with rack-type steering
Autonomous-ready with steer-by-wire and brake-by-wire
Segment-leading safety and driver assistance features
One-hour DC fast charging capability
Zero price acquisition premium over today's equivalent gas- and diesel-powered vehicles

"This industry is performing on decades-old technology that makes its daily rigors nearly unbearable for drivers and concentrates emissions of harmful pollutants in highly populated, residential, and business areas where they most acutely affect human health. We can no longer sit idle and watch that happen," said Harris. "The reality is that technologies developed for the passenger or heavy-duty vehicle industries simply cannot be repurposed for the medium-duty segment."

Eliminating barriers to adoption and offering a seamless connection to the way the industry currently operates, Harbinger's scalable stripped chassis has been built to support the predominant medium-duty body types available today, including commercial walk-in vans, RVs, box trucks, and other medium-duty vehicles.

PRICED TO COMPETE WITH ZERO ACQUISITION PREMIUM

Harbinger was founded on the idea that for cleaner vehicles to become ubiquitous, a competitive EV solution must be offered at a cost comparable to its ICE counterparts. As a result, unlike other commercial EVs available today, Harbinger's electric platform will carry zero price acquisition premium relative to gas- and diesel-powered alternatives.

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," said Harris. "Our technology was developed from scratch in order to control top-level chassis cost."

Harbinger has achieved this by leveraging strong existing supplier relationships and concentrating its efforts on in-house development of key vehicle systems, thereby eliminating costly third-party battery and powertrain system premiums. Harbinger's chassis has also been designed to scale, with modular battery pack and wheelbase configurations that meet the needs of both last mile delivery operators – who typically drive fewer than 100 miles per day – as well as RV and other commercial and specialty vehicle customers that demand different performance requirements.

Ultimately, Harbinger customers stand to enjoy more than just the benefits of a price competitive vehicle. As with all EVs, customers can also expect a reduced cost of ownership over the lifetime of the vehicle thanks to reduced fuel and maintenance costs.

"The cost effectiveness of the platform is a baseline, not a sacrifice," said Harris. "Our platform will offer an enhanced level of efficiency, durability, safety, and performance over our competition and can be sold at a better price point because of our advantages of in-house component design and vertically integrated approach. This is how EVs should be built."

DEEP EXPERIENCE

Led by co-founders John Harris, Phillip Weicker, and Will Eberts, Harbinger's team is composed of EV specialists with decades of experience across the automotive, aerospace, and battery technology industries.

John Harris leads the company as Chief Executive Officer, bringing expertise from Anduril Industries, Boeing, Faraday Future, and Xos Trucks.

Phillip Weicker is the Chief Technology Officer at Harbinger, leading product design and development. Former co-founder and head of powertrain at Canoo, he brings over two decades of experience in battery and drivetrain development with experience at Faraday Future, QuantumScape, Coda Automotive, and EnergyCS.

Will Eberts serves as Chief Operating Officer, with responsibility over supply chain, program management, and project financials. Eberts brings experience from Anduril Industries, Canoo, Faraday Future, and General Atomics ASI.

The founding team is supported by a highly experienced suite of technical and operational leaders, including Alexi Charbonneau, VP of Chassis Engineering; Alex Tylee, VP of Powertrain Engineering; John Sztykiel, VP of Business Development; Deb Bourke, Director of Engineering Programs; Steven Offutt, Director of Manufacturing; and Michael Fielkow, General Counsel and Head of Corporate Development.

| Headline: Harbinger unveils electric vehicles to come | Publication : Truck News |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.trucknews.com/products/harbinger-unveils-electric-vehicles-to-come/

California-based Harbinger has launched a new medium-duty electric vehicle platform that will include stripped and cab chassis in Classes 4-7 – and the upstart OEM promises a price that matches gas- and diesel-powered alternatives.

“Better technology often comes with outrageous price tags, and we’re seeing today’s medium-duty EVs performing for half the life of today’s ICE [internal combustion engine] vehicles at triple the cost,” CEO John Harris said in a press release. “Our technology was developed from scratch in order to control top-level chassis cost.”

The stripped chassis will support common body types including walk-in vans, box trucks, and other applications such as RVs. And the company says the vehicles are designed for 20-year and 725,000 km standard operating lives.

The first units are scheduled to be delivered in late 2023, with series production coming in 2024.

Driving the vehicles are proprietary e-axles that combine the motor, inverter and gearbox in the name of lowering costs and improving efficiency. The battery systems sit inside the frame.

Battery durability, safety and life are supported with the 800V liquid-cooled battery system, with capacities scaled in 35 kWh increments.

Drivers themselves are supported through drive-by-wire steering and enhanced ergonomics. The floor is just under 28 inches high.

The independent front suspension’s design also reduces vehicle overhang – improving visibility and maneuverability, the company says of the vehicle that features rack-type steering.

Steer-by-wire and brake-by-wire systems make the vehicles “autonomous-ready”, the company adds.

| Headline: Harbinger unveils electric vehicles to come | Publication : Work Truck Online |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.worktruckonline.com/10180922/harbinger-announces-new-ev-platform

Harbinger announced its official launch of a new electric vehicle (EV) platform, according to the company's news release.

Harbinger's initial product line will include electric stripped chassis and cab chassis designed to address issues and expectations in Class 4 to Class 7 vehicles.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," said John Harris, CEO of Harbinger. "But while this industry has experienced tremendous growth, fleet customers today face acute shortages of gas- and diesel-powered vehicles, and any meaningful supply of production-ready EV offerings is still years out. We are solving this problem head on."

Production for Harbinger electric platforms is projected to scale over the next five years, with first vehicles expected in customers' hands in late 2023, followed by the launch of volume production in 2024.

Harbinger's medium-duty EV features:

800V liquid cooled battery system, with capacity scalable in 35 kWh increments.

Floor height below 28 inches.

Designed for 20-year, 450,000-mile standard operating life.

Independent front suspension with rack-type steering.

Autonomous-ready with steer-by-wire and brake-by-wire.

Safety and driver assistance features.

One-hour DC charging capability.

"This industry is performing on decades-old technology that makes its daily rigors nearly unbearable for drivers and concentrates emissions of harmful pollutants in highly populated, residential, and business areas where they most acutely affect human health. We can no longer sit idle and watch that happen," said Harris. "The reality is that technologies developed for the passenger or heavy-duty vehicle industries simply cannot be repurposed for the medium-duty segment."

Harbinger's electric platform will carry zero price acquisition premium relative to gas- and diesel-powered alternatives.

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," said Harris. "Our technology was developed from scratch in order to control top level chassis cost."

| Headline: Detroit Auto Show Is Harbinger of Things To Come | Publication : Auto Evolution |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.autoevolution.com/news/detroit-auto-show-is-harbinger-of-things-to-come-198285.html

Harbinger Motors is led by a trio of industry veterans from Faraday Future, Canoo, and Coda Automotive, who plan to launch their electric chassis cab by the end of next year, according to Automotive News.

A chassis cab is essentially made up of a frame complete with suspension, brakes, and powertrain. These assemblies are then sent to an upfitter to install a body form to complete them into ambulances, delivery vans, garbage and tow trucks, and any other work-type vehicles.

These guys might be on to something, having designed and built a single modular unit electric axle that is made up of electric motors with inverters and gearbox. The company claims the chassis cab could last up to 20 years or 450,000 miles (724,204 km).

Power comes in the form of a liquid-cooled 800-volt battery pack. The pack is designed for end-use customers to have the option to select battery cells from a manufacturer of their choice.

The battery pack can be scaled in 35 kWh increments up to 140 kWh with 1-hour fast charge capabilities to meet the demands of medium-duty vehicle users. The eAxle, as the company refers to its creation, combining the motor, inverter, and gearbox, is capable of producing enough torque to support Class 6 applications.

Gross axle weight rating (GAWR) options range from 6,000 to 9,000 lbs (2,721 to 4,082 kg) on the front and 12,000-17,500 lbs (5,443-7,938 kg) on the rear. The company states the ride height of their steel-framed creation is best-in-class.

Harbinger's approach certainly is in contrast to that of Rivian in terms of providing a box-built chassis that fleet operators can tailor to their specific needs. The chassis is similar to those produced by legacy automakers such as Ford, only Harbinger's is electric.

| Headline: Commercial EV startup Harbinger claims it can erase the up-front cost premium vs. gas or diesel | Publication : Fox59 |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://fox59.com/automotive/internet-brands/commercial-ev-startup-harbinger-claims-it-can-erase-the-up-front-cost-premium-vs-gas-or-diesel/amp/

There's a new commercial EV startup on the block. It's called Harbinger, and claims to have an EV platform for medium-duty trucks that will erase the up-front cost premium over current gasoline and diesel trucks.

The platform incorporates an "eAxle" that combines the motor, gearbox, and inverter in one unit, a modular battery pack, and streamlined chassis architecture, Harbinger said in a press release.

The liquid-cooled battery pack is scalable in 35-kilowatt-hour increments, and includes an 800-volt electrical architecture that allows for "one-hour DC fast-charging capability," according to Harbinger. The startup claims the powertrain is designed for a 20-year, 450,000-mile operating lifespan.

Harbinger said it will pursue "supplier agnostic" battery sourcing, while the pack has a cast/structural design that reminds us of Canoo's platform—and Tesla, of course. Another company aiming to transform the format for commercial EVs is REE, which also plans to sell a basic platform that can be fitted with different bodies depending on customer needs.

The chassis incorporates steer-by-wire and brake-by-wire systems, as well as independent front suspension that reduces the front overhang, improving driver visibility and the vehicle's maneuverability, the startup claims. These components also contribute to a fairly low floor height of 28 inches.

Harbinger said it plans to sell a chassis cab and stripped chassis, the latter designed for popular medium-duty truck body styles, such as walk-in vans, box trucks, and RVs.

The startup will show its EV platform at the upcoming 2022 Detroit Auto Show, followed by initial deliveries to customers in 2023. Full-volume production is planned for 2024.

Timing is essential, and the electric commercial truck market is about to heat up. It will soon be getting some motivation from Washington D.C., in the form of a credit of up to $40,000 as part of the Inflation Reduction Act (IRA). And 17 states are standing by a plan to electrify 30% of trucks and buses by 2030.

| Headline: EV startup Harbinger will debut next week at the Detroit Auto Show | Publication : CBT News |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.cbtnews.com/ev-startup-harbinger-will-debut-next-week-at-the-detroit-auto-show/

Visitors to the Detroit Auto Show will get the chance to meet the new EV startup company, Harbinger Motors Inc. The California-based startup will be one of a few mobility companies scheduled for a press conference during the auto show's media day on September 14.

Harbinger Motors will produce medium-duty EVs that focus on fleet customers, with an initial product line that includes electric stripped chassis and cab chassis designed for Class 4 to Class 7 vehicles. A select group of customers will get to pilot a set of vehicles by late next year, and the company has plans to launch volume production at an unspecified location in Michigan by 2024.

In an interview on Wednesday, CEO John Harris said the company chose the North American International Auto Show because "we really wanted to highlight that this is a vertically integrated, clean slate platform and we think that the most meaningful reveals of those products in that last 50 years have generally been in Detroit."

The startup features a group of leaders, including Harris, with backgrounds in other electric vehicle startups. Harris previously worked for Faraday Future and Xos Trucks. The company's Chief Technology Officer, Phillip Weicker, is the former Co-founder and Head of Powertrain at Canoo and worked for Faraday Future. Chief operating officer Will Eberts has former experience with Anduril Industries, Canoo, and Faraday Future.

Harbinger Motors has developed a proprietary eAxle that combines the motor, inverter, and gearbox as an integrated unit designed to improve energy efficiency. An alpha vehicle and bare chassis will be on display at the Detroit Auto Show.

| Headline: COMMERCIAL ELECTRIC CAR STARTUP HARBINGER CLAIMS IT CAN WIPE OUT THE INITIAL COST PREMIUM COMPARED TO GAS OR DIESEL | Publication : MOTO News Today |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://motonewstoday.com/commercial-electric-car-startup-harbinger-claims-it-can-wipe-out-the-initial-cost-premium-compared-to-gas-or-diesel/56292/

There's a new commercial electric car startup on the block. It's called the Harbinger, and it claims to have a medium-duty EV platform that erases the initial cost premium over today's gasoline and diesel trucks.

The platform includes an "eAxle" that integrates the motor, transmission and inverter in a single unit, a modular battery and a streamlined chassis architecture, Harbinger said in a press release.

The liquid-cooled battery can be scaled in 35-kilowatt-hour increments and includes an 800-volt electrical architecture that enables "one-hour DC fast charging capability," according to Harbinger. The startup claims the transmission is rated for 20 years and 450,000 miles.

Harbinger EV chassis

Harbinger has said it will look for a "vendor-independent" battery, while the pack has a die-cast/structural design that reminds us of the Canoo platform— and Tesla, of course. Another company that aims to change the format of commercial electric vehicles is the REEwhich also plans to sell a base platform that can be equipped with different enclosures depending on customer needs.

The chassis includes steering and braking systems, as well as an independent front suspension that reduces front overhang, improving the driver's view and vehicle maneuverability, the startup claims. These components also contribute to a fairly low floor height of 28 inches.

Harbinger said it plans to sell cab chassis and chassis, the latter designed for popular medium-duty truck body types such as vans, vans and vans.

The startup will showcase its EV platform at the upcoming Detroit Auto Show in 2022, followed by first customer deliveries in 2023. Full production is planned for 2024.

Time is of the essence, and the electric commercial truck market is about to heat up. He'll soon get some motivation from Washington, D.C., in the form of a loan up to 40,000 dollars under the Inflation Reduction Act (IRA). And 17 states follow the plan electrify 30% of trucks and buses by 2030.

| Headline: Harbinger announces new commercial EV platform | Publication : Detroit Bureau |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.thedetroitbureau.com/2022/09/growth-accelerates-in-commercial-ev-segment-with-three-new-deals/

Finally, Harbinger, a Los Angeles-based automotive manufacturer, announced the official launch of its new commercial EV platform in the medium-duty category. Harbinger's initial product line will include electric stripped chassis and cab chassis designed around the performance, durability, and lifespan characteristics required in Class 4 to Class 7.

"Medium-duty vehicles serve as the backbone of the commercial transportation industry and are responsible for delivering tens of millions of packages and critical services every day," said John Harris, CEO of Harbinger.

Harbinger plans to ramp up manufacturing over the next five years, with first vehicles expected in customers' hands in late 2023, followed by the launch of volume production in 2024.

Harbinger's scalable chassis is designed for the predominant medium-duty body types, including commercial walk-in vans, RVs, box trucks, and other medium-duty vehicles. Harbinger touted the specs of their platform, including an 800V liquid-cooled battery pack scalable in 35kWh increments, floor height under 28 inches, 20-year or 450,000-mile service life, advanced driving and safety technology, and one-hour DC fast charging capability. Harbinger expects to bring the truck chassis to market at the same price point as existing internal combustion options.

"Better technology often comes with outrageous price tags, and we're seeing today's medium-duty EVs performing for half the life of today's ICE vehicles at triple the cost," said Harris. "Our technology was developed from scratch in order to control top level chassis cost."

| Headline: Commercial EV startup Harbinger claims it can erase the up-front cost premium vs. gas or diesel | Publication : WWLP |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.wwlp.com/automotive/internet-brands/commercial-ev-startup-harbinger-claims-it-can-erase-the-up-front-cost-premium-vs-gas-or-diesel/

There's a new commercial EV startup on the block. It's called Harbinger, and claims to have an EV platform for medium-duty trucks that will erase the up-front cost premium over current gasoline and diesel trucks.

The platform incorporates an "eAxle" that combines the motor, gearbox, and inverter in one unit, a modular battery pack, and streamlined chassis architecture, Harbinger said in a press release.

The liquid-cooled battery pack is scalable in 35-kilowatt-hour increments, and includes an 800-volt electrical architecture that allows for "one-hour DC fast-charging capability," according to Harbinger. The startup claims the powertrain is designed for a 20-year, 450,000-mile operating lifespan.

Harbinger said it will pursue "supplier agnostic" battery sourcing, while the pack has a cast/structural design that reminds us of Canoo's platform—and Tesla, of course. Another company aiming to transform the format for commercial EVs is REE, which also plans to sell a basic platform that can be fitted with different bodies depending on customer needs.

The chassis incorporates steer-by-wire and brake-by-wire systems, as well as independent front suspension that reduces the front overhang, improving driver visibility and the vehicle's maneuverability, the startup claims. These components also contribute to a fairly low floor height of 28 inches.

Harbinger said it plans to sell a chassis cab and stripped chassis, the latter designed for popular medium-duty truck body styles, such as walk-in vans, box trucks, and RVs.

The startup will show its EV platform at the upcoming 2022 Detroit Auto Show, followed by initial deliveries to customers in 2023. Full-volume production is planned for 2024.

Timing is essential, and the electric commercial truck market is about to heat up. It will soon be getting some motivation from Washington D.C., in the form of a credit of up to $40,000 as part of the Inflation Reduction Act (IRA). And 17 states are standing by a plan to electrify 30% of trucks and buses by 2030.

| Headline: Commercial EV startup Harbinger claims it can erase the up-front cost premium vs. gas or diesel | Publication : Online EV |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://www.onlineev.com/commercial-ev-startup-harbinger-claims-it-can-erase-the-up-front-cost-premium-vs-gas-or-diesel/

There is a new business EV startup on the block. It is referred to as Harbinger, and claims to have an EV platform for medium-duty vehicles that can erase the up-front price premium over present gasoline and diesel vehicles.

The platform incorporates an “eAxle” that mixes the motor, gearbox, and inverter in a single unit, a modular battery pack, and streamlined chassis structure, Harbinger stated in a press launch.

The liquid-cooled battery pack is scalable in 35-kilowatt-hour increments, and contains an 800-volt electrical structure that enables for “one-hour DC fast-charging functionality,” in accordance with Harbinger. The startup claims the powertrain is designed for a 20-year, 450,000-mile working lifespan.

Harbinger stated it would pursue “provider agnostic” battery sourcing, whereas the pack has a solid/structural design that reminds us of Canoo’s platform—and Tesla, in fact. One other firm aiming to rework the format for business EVs is REE, which additionally plans to promote a fundamental platform that may be fitted with totally different our bodies relying on buyer wants.

The chassis incorporates steer-by-wire and brake-by-wire methods, in addition to impartial entrance suspension that reduces the entrance overhang, bettering driver visibility and the automobile’s maneuverability, the startup claims. These elements additionally contribute to a reasonably low ground peak of 28 inches.

Harbinger stated it plans to promote a chassis cab and stripped chassis, the latter designed for widespread medium-duty truck physique types, similar to walk-in vans, field vehicles, and RVs.

The startup will present its EV platform on the upcoming 2022 Detroit Auto Present, adopted by preliminary deliveries to prospects in 2023. Full-volume manufacturing is deliberate for 2024.

Timing is important, and the electrical business truck market is about to warmth up. It’ll quickly be getting some motivation from Washington D.C., within the type of a credit of up to $40,000 as a part of the Inflation Discount Act (IRA). And 17 states are standing by a plan to electrify 30% of trucks and buses by 2030.

| Headline: Commercial EV startup Harbinger claims it can erase the up-front cost premium vs. gas or diesel | Publication : NewsToCheck |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://newstocheck.com/automotive/commercial-ev-startup-harbinger-claims-it-can-erase-the-up-front-cost-premium-vs-gas-or-diesel/

There's a new commercial EV startup on the block. It's called Harbinger, and claims to have an EV platform for medium-duty trucks that will erase the up-front cost premium over current gasoline and diesel trucks.

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Harbinger EV chassis

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The startup will show its EV platform at the upcoming 2022 Detroit Auto Show, followed by initial deliveries to customers in 2023. Full-volume production is planned for 2024.

Timing is essential, and the electric commercial truck market is about to heat up. It will soon be getting some motivation from Washington D.C., in the form of a credit of up to $40,000 as part of the Inflation Reduction Act (IRA). And 17 states are standing by a plan to electrify 30% of trucks and buses by 2030.

| Headline: COMMERCIAL EV STARTUP HARBINGER CLAIMS IT CAN ERASE THE UP-FRONT COST PREMIUM VS. GAS OR DIESEL | Publication : Car Crafty |
|---|---|
| Date : September 08, 2022 | Journalist: |

https://carcrafty.com/commercial-ev-startup-harbinger-claims-it-can-erase-the-up-front-cost-premium-vs-gas-or-diesel/

There is a new business EV startup on the block. It is known as Harbinger, and claims to have an EV platform for medium-duty vehicles that can erase the up-front price premium over present gasoline and diesel vehicles.

The platform incorporates an “eAxle” that mixes the motor, gearbox, and inverter in a single unit, a modular battery pack, and streamlined chassis structure, Harbinger mentioned in a press launch.

The liquid-cooled battery pack is scalable in 35-kilowatt-hour increments, and contains an 800-volt electrical structure that enables for “one-hour DC fast-charging functionality,” in keeping with Harbinger. The startup claims the powertrain is designed for a 20-year, 450,000-mile working lifespan.

Harbinger EV chassis

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The chassis incorporates steer-by-wire and brake-by-wire programs, in addition to unbiased entrance suspension that reduces the entrance overhang, bettering driver visibility and the automobile’s maneuverability, the startup claims. These parts additionally contribute to a reasonably low flooring top of 28 inches.

Harbinger mentioned it plans to promote a chassis cab and stripped chassis, the latter designed for standard medium-duty truck physique kinds, resembling walk-in vans, field vehicles, and RVs.

The startup will present its EV platform on the upcoming 2022 Detroit Auto Present, adopted by preliminary deliveries to clients in 2023. Full-volume manufacturing is deliberate for 2024.

Timing is important, and the electrical business truck market is about to warmth up. It can quickly be getting some motivation from Washington D.C., within the type of a credit score of as much as $40,000 as a part of the Inflation Discount Act (IRA). And 17 states are standing by a plan to impress 30% of vehicles and buses by 2030.