



2017

***CUMMINS
PRODUCT
STEWARDSHIP***

PRODUCT STEWARDSHIP IS KEY TO SUSTAINABILITY AT CUMMINS

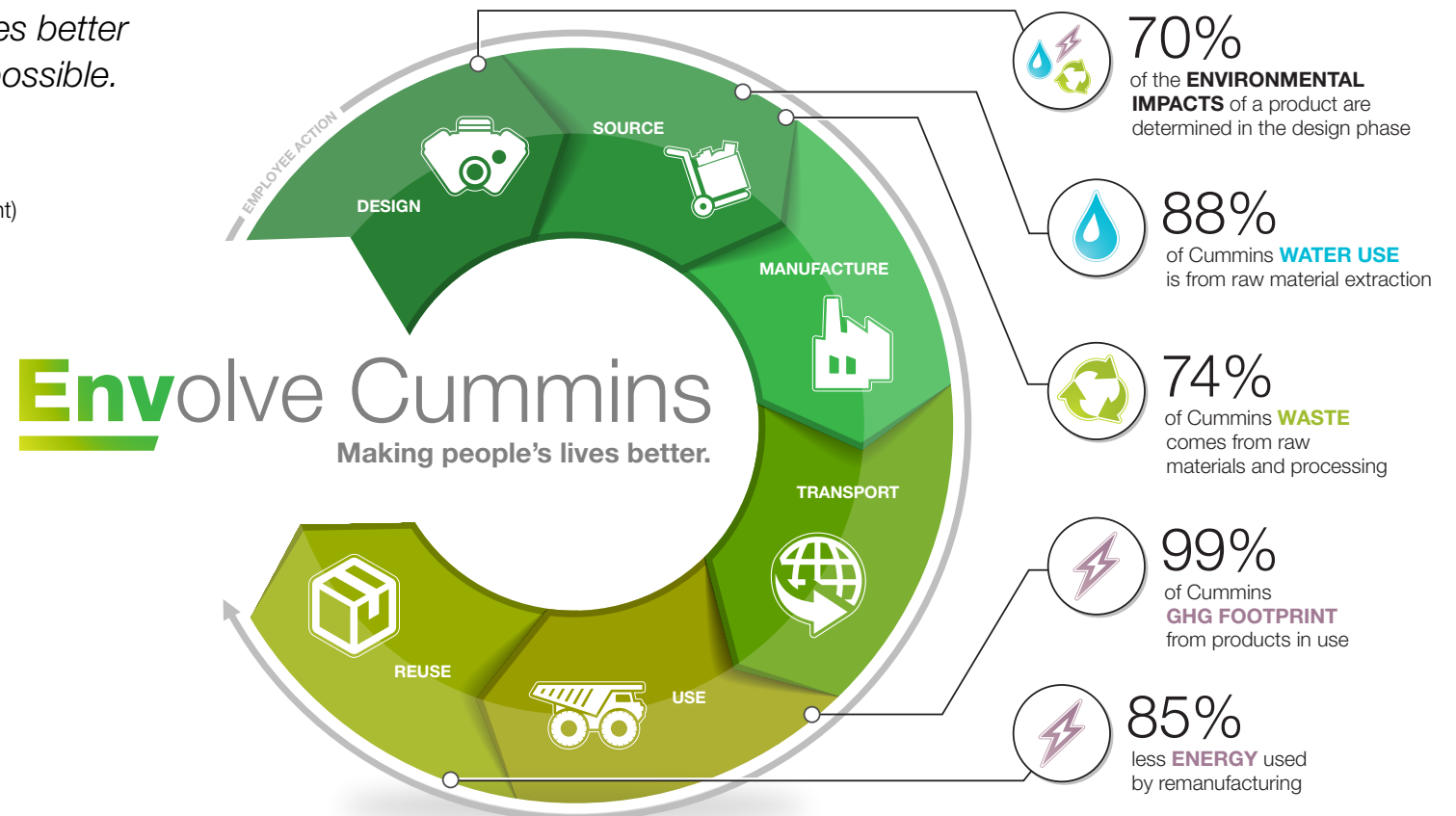
Cummins powers the interconnected world we live in today with an eye on what's ahead tomorrow.

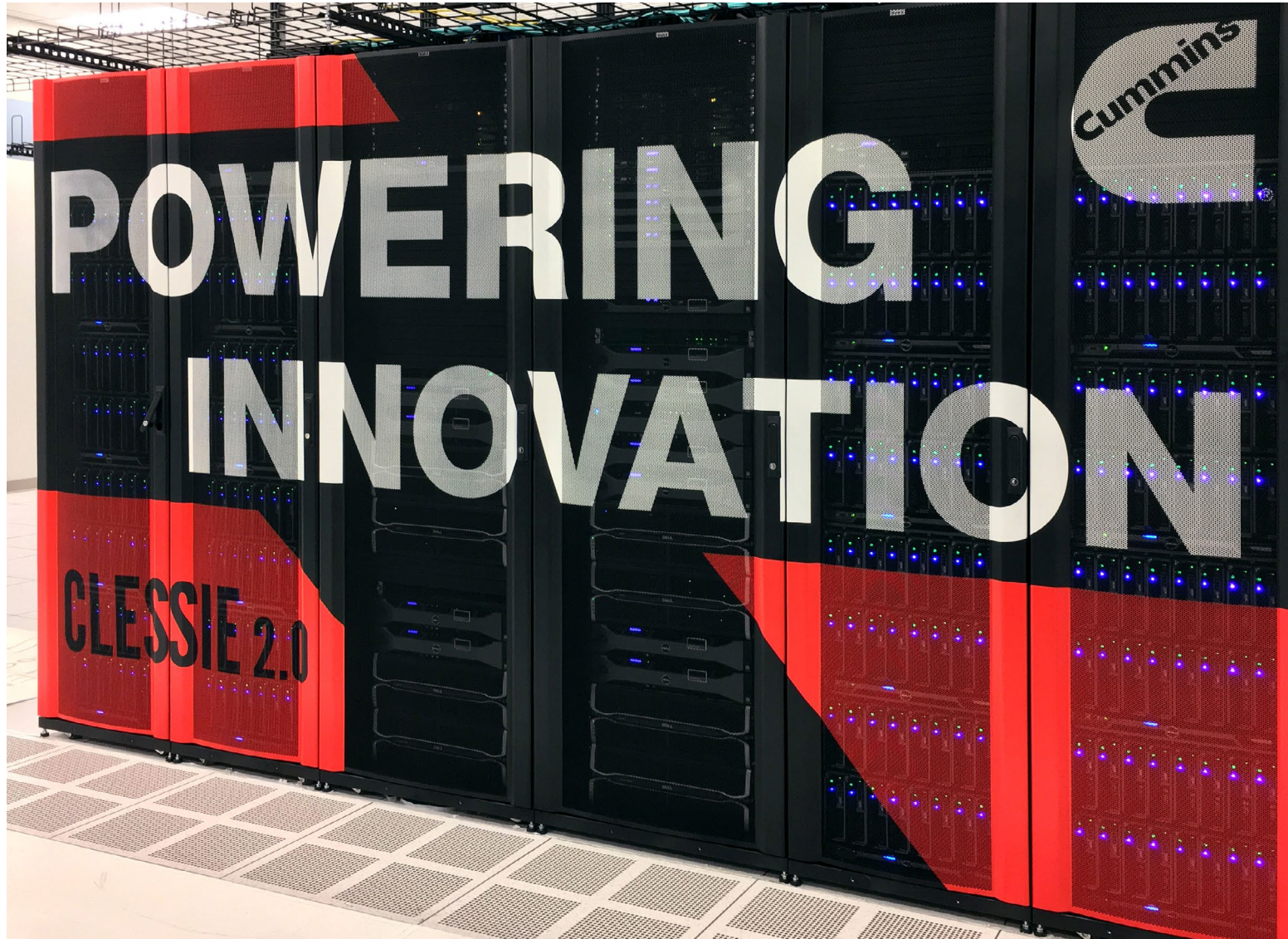
From trucks delivering needed goods, to trains carrying passengers and freight, to generators powering hospitals, schools and data centers, Cummins works to make people's lives better with the least environmental impact possible.

The company's product stewardship goal means working with an environmental mindset about product design, use, remanufacture and end of life. Envolve Cummins (right) is the comprehensive lens through which the company views environmental sustainability. Cummins' Environmental Sustainability Plan guides the company as it strives to meet goals in three action areas:

- » Reducing Cummins' carbon footprint
- » Using fewer natural resources
- » Partnering to solve complex problems.

Cummins uses a comprehensive lens through which we view environmental sustainability, from design to manufacture to end of life. Our environmental sustainability plan is the way we carry out our priorities and goals and initiatives in our action areas.





PRODUCTS IN USE EFFICIENCY

Greenhouse gas (GHG) emissions from Cummins products in use are the company's largest environmental impact and represent an estimated 99 percent of Cummins' GHG footprint due to fossil fuel use. Cummins' biggest opportunity to expand its product stewardship beyond the upfront design of its products is in working with customers to improve the efficiency of the company's products in use.

One of Cummins' sustainability plan goals is to partner with its customers to improve the fuel efficiency of the company's products in use, and by extension reduce carbon dioxide (CO₂). The company wants to cut CO₂ emissions by nearly 16 million metric tons, saving customers up to \$6.3 billion through greater fuel efficiency, by the end of 2020.

By 2020, Cummins expects to work with 20 percent of its customer base, touching nearly 2 million engines as it tailors engine specifications to customer applications. The company wants to ensure customers have the latest tools to improve fuel efficiency.

Cummins has its own supercomputer, Clessie 2.0, which powers sophisticated design programs. It plays a key role in Cummins' efforts to reduce the amount of material it uses in its products without affecting robustness.

PARTNERING WITH CUSTOMERS FOR BETTER FUEL EFFICIENCY

Cummins provides a complete set of collaborative solutions to help customers maximize their fuel efficiency and reduce greenhouse gas emissions. From the development of products that are optimized for specific market segments, to the use of software to assist in the truck specification process, to the ability to customize electronic engine settings and parameters. Cummins helps customers reduce their carbon footprint throughout the life of the product.



Click red circles in the photo for more detail.

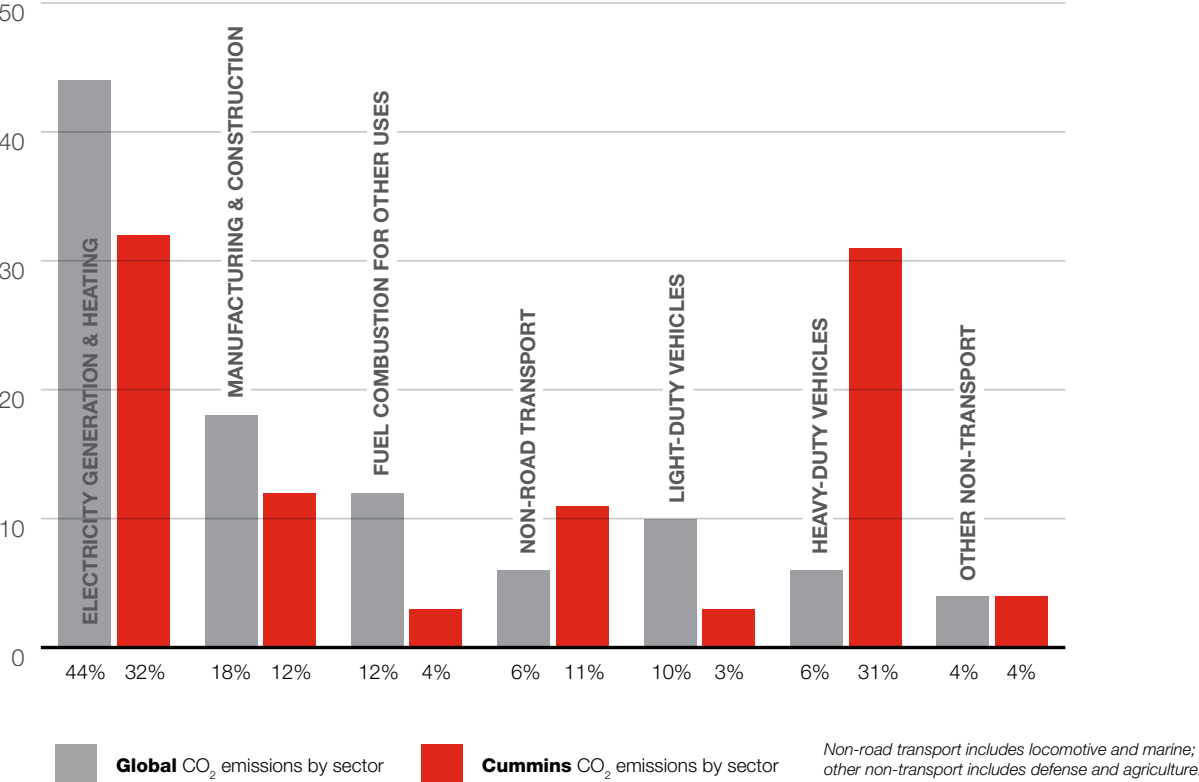


PRODUCTS IN USE FUEL ECONOMY INITIATIVES

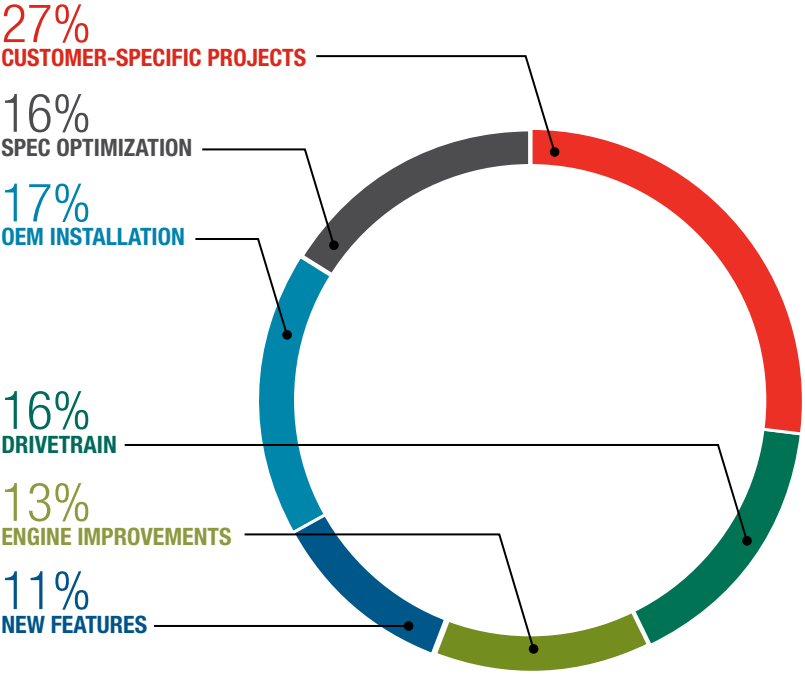
CUMMINS PRODUCT CO₂ EMISSIONS COMPOSITION

compared with global CO₂ emissions

Approximately two-thirds of Cummins CO₂ emissions from our products in use come from generators and heavy-duty engines.



PRODUCTS IN USE FUEL ECONOMY INITIATIVES



BY THE NUMBERS

250 *Cumulative number of projects (approximate)*

20% *customers reached by 2020*

1 BILLION METRIC TONS *Lifetime emissions of the 1.3 million engines sold in 2017 (including joint ventures)*

THE IMPACT OF OUR GOAL

Partner with customers to improve efficiency of our products in use, resulting in an annual reduction of 3.5 MMT of CO₂ by 2020, saving 350 million gallons of fuel

Since 2014, Cummins fuel economy projects:



REDUCED fuel by
815 million gallons



SAVED customers
\$3.3 billion (U.S.)



AVOIDED 8.15 million
metric tons of CO₂

Carbon sequestered by
9.6 MILLION ACRES
of forests

20 BILLION MILES
of driving eliminated

Removal of
1.7 MILLION CARS
from the road for one year

PRODUCT EMISSIONS AND REGULATIONS

Cummins works collaboratively and proactively with emission regulators globally to ensure emission standards are clear, appropriately stringent and enforceable, in an effort to ensure our products deliver on our commitments to our customers and the environment in real world use every day.

Cummins engines are subject to extensive statutory and regulatory requirements that directly or indirectly impose standards governing emissions and noise. The company has substantially increased its global environmental compliance presence and expertise to understand and meet emerging product environmental regulations around the world.

The company’s ability to comply with these and future emission standards is an essential element in maintaining Cummins’ leadership position in regulated markets. The company has made, and will continue to make, significant capital and research expenditures to comply with these standards.

See pages 13-14 in our [Annual Report on Form 10-K](#) for more information about how Cummins is meeting current regulatory requirements for NOx, particulate matter and greenhouse gas emissions.

EPA 2010 and Euro VI regulations set more stringent emissions levels for on-highway engines. Over the next five years, we see similar

regulations bringing cleaner air through lower emissions of NOx and particulate matter to several more billion people globally.

Cummins has been active in advocating for GHG/fuel efficiency standards in the U.S. (see page 21 of [2017 Sustainability Progress Report](#)). Several regions around the world have already implemented on-highway GHG or fuel efficiency standards or are developing them.

	2017 AND EARLIER	2018 - 2023	UNDER DISCUSSION
EPA 2010 / Euro VI	U.S., Canada, European Union	Brazil, India, China, Mexico, Australia	
GHG / FE	U.S. , Canada, China, Japan	European Union, India	Mexico, Brazil, Korea

USING RESOURCES RESPONSIBLY

As the largest independent diesel engine manufacturer in the world, Cummins has the means and the commitment to reduce both the resources it uses to build products and the fuel burned to operate them.

Seventy percent of a product’s environmental footprint is determined during the earliest phases of the design process. The earlier the company can incorporate innovative design for the efficient use of fuel and raw materials, the greater its ability to reduce the environmental footprint of Cummins products both in their design and use.

A Cummins team for material efficiency is working now on ways to make the company’s products more eco-efficient in the future.

Many of the concepts of the “circular economy” and its emphasis on re-use and recycling are not new, but this team is connecting with the various functions in charge of materials work at Cummins to elevate their importance.

The goal is to use the right amount of material in everything the company makes to avoid unnecessary use of water and energy throughout a product’s lifecycle. That means using material optimization tools to ensure structural integrity with minimized material and specifying that raw material is finished as close as possible to the ending net shape of the component.

Packaging leaders at Cummins are working to better understand what metrics and actions will drive consistent and environmentally sound packaging decisions. Their goals for sustainable packaging solutions are to reduce packaging waste and increase reusable solutions as well as the use of recyclable material.

CIRCULAR ECONOMY PRINCIPLES

Cummins' work and vision for responsible consumption and production follows widely accepted circular economy principles.

Source: World Business Council for Sustainable Development



REMANUFACTURING

The need for remanufacturing will increase in a resource constrained world.

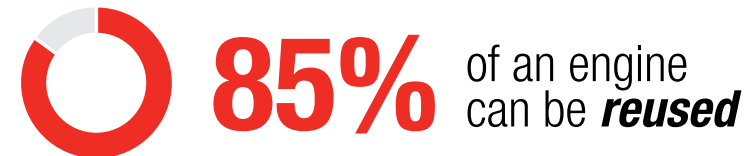
Remanufacturing, which Cummins has done for 60 years, requires far less energy and natural resources to extend life than to build new products.

Remanufacturing maximizes benefits for customers and the environment. Cummins products are designed with this in mind, enabling them to have a long, and increasingly fuel-efficient, life.

Through the common application of salvage technology, component re-use guidelines and remanufacturing-specific policies and procedures, the company has become increasingly sophisticated in what it can remanufacture and for how long it can extend a product's life.

In many cases, remanufactured products today are “upcycled” to include design, emissions, fuel economy and quality upgrades.

THE NUMBERS BEHIND REMANUFACTURING



200 *million pounds* of GHG avoided



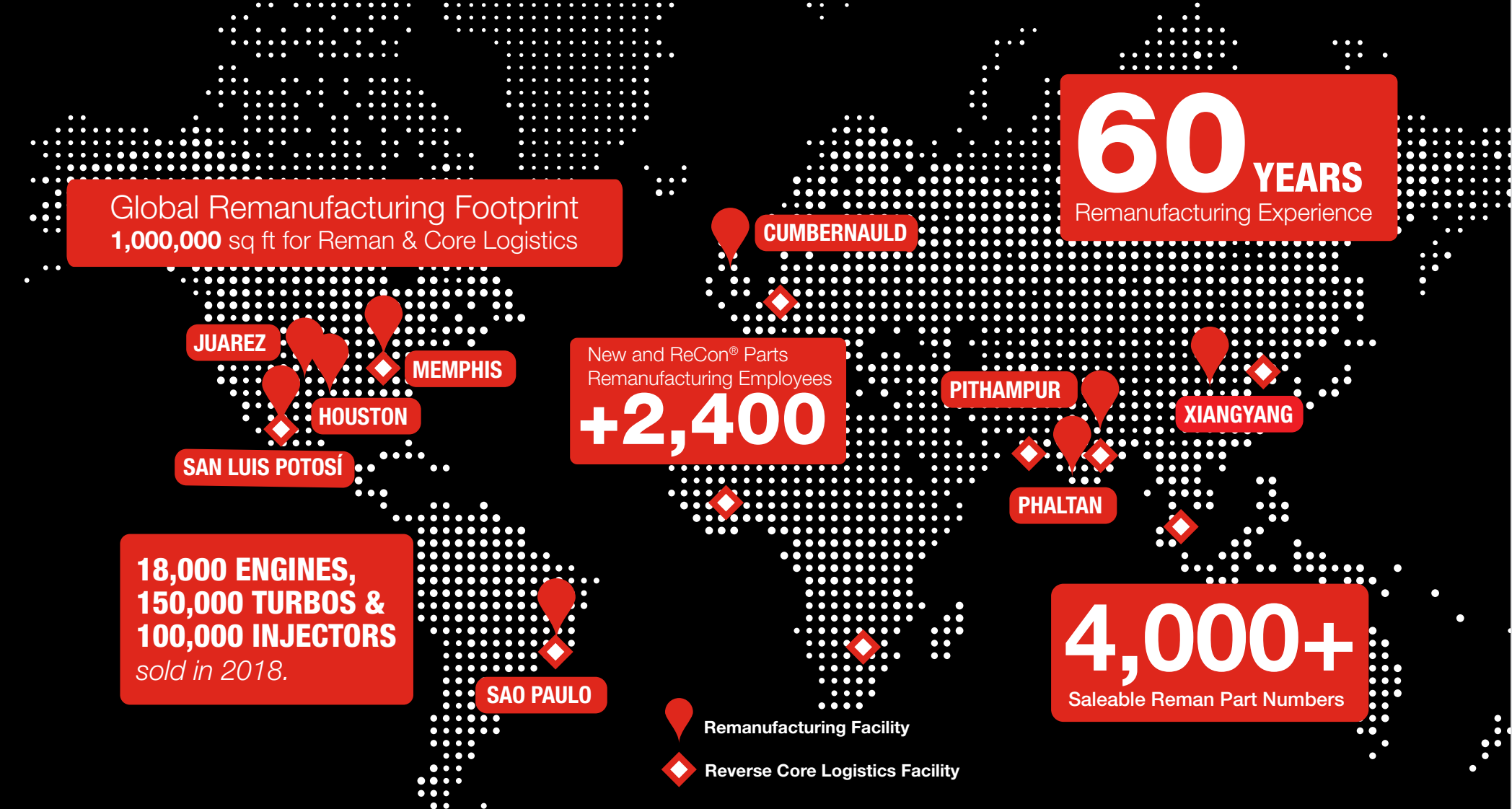
PRODUCT SAFETY

Product safety is a top priority at Cummins. The company's Product Safety Policy states:

- » Cummins will design, manufacture, sell, distribute and service all products so that they are safe to use for the described and intended purpose.
- » Cummins will provide its customers, its partners, the company's employees and society with products that are safe to operate, maintain, adjust and repair when used as intended.
- » Each Cummins employee will regard product safety as a top priority.
- » Each Cummins employee is responsible for applying the policy in his or her individual and collective work activity.

Each Cummins employee is expected to adhere to the spirit as well as the letter of the Product Safety Policy.

WORLD CLASS REMANUFACTURING LEADER



MATERIAL COMPLIANCE

Material compliance is key to Cummins' product stewardship.

The company maintains an internal corporate policy regarding the use of prohibited and restricted substances in its products. Cummins' policies also take into account key global environmental regulations as well as very specific ones driven by the European Union such as Registration, Evaluation, Authorization and Restriction of Chemicals (REACH); Restriction of Hazardous Substances (RoHS), and End of Life Vehicle regulations for automotive products.

REACH addresses the production and use of chemical substances and their potential impacts on both human health and the environment, while RoHS restricts the use of certain hazardous substances in electrical and electronic products.

Compliance with the company's policies is designed into the materials Cummins uses and the company partners with its suppliers to ensure Cummins' global compliance requirements are met. The company maintains global policies to carry out key processes such as the Reasonable Country of Origin Inquiry process, consistent with the Organization for Economic Cooperation and Development (OECD) due diligence framework.

CONFLICT MINERALS

Cummins takes materials compliance in general, and conflict minerals in particular, very seriously.

The company developed a cross-functional team with representatives from Purchasing, Quality, Legal and Ethics and Compliance to develop and implement a conflict minerals program.

The company's policy is to eliminate procurement, as soon as commercially practicable, of products containing conflict minerals obtained from sources that fund or support inhumane treatment in covered countries.

To learn more, see Cummins' policy summary on [conflict minerals](#) and the company's [most recent report](#) to the SEC in the United States.

LIFECYCLE ANALYSIS EXTENDS DEEPER INTO THE PRODUCT LINE

Cummins has continued its lifecycle analysis (LCA) work on several more products in the past year to estimate their total environmental impact. While reducing products in-use fuel consumption has the greatest potential impact, the analyses revealed other interesting findings.

A team at Purdue University, for example, conducted an LCA on a Cummins turbocharger, looking into its energy and water usage, along with its greenhouse gas emissions. The team concluded that use of recycled aluminum is key to reducing water and energy consumption from "cradle-to-gate" stage and identified which manufacturing processes had the greatest impact.

In a project done by Montana State University students on a 455 kW Emergency Standby Power (ESP) diesel generator, the results revealed that, similar to on-highway engines, diesel generators consumed the most energy (greater 95 percent of the entire life cycle) during the use phase, followed by materials, transportation, and then manufacturing.

The company's LCA work began in 2011 when Cummins partnered with the Massachusetts Institute of Technology to conduct an analysis of the company's flagship product, the ISX 15L engine. In addition to use-phase fuel consumption, metals and transportation combined accounted for about three-quarters of the embodied energy required to make an engine.

"Embodied energy" is a metric used to quantify all of the energy required to make a product and is a good proxy for environmental impacts broadly.

Cummins estimates the LCAs conducted so far cover about 70 percent of the company's revenues.

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