REVENANT
Industrial & Ports Machinery

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TERBERG

DS INDUSTRY 2026 · CIRCULARITY IN INDUSTRY

Remanufacturing as circular manufacturing

The Terberg–REVENANT model for a second life

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OUR STARTING POINT

The most sustainable machine is the one that is already built.

A heavy-duty machine already holds its steel, its energy and its engineering.

Remanufacturing keeps that value in use instead of building it again from scratch.

TWO PARTNERS, ONE CIRCULAR OFFER

An international manufacturer and a specialist SME

THE MANUFACTURER

TERBERG

A 100% family-owned Dutch manufacturer with more than 157 years of experience, specializing in terminal tractors and special vehicles for ports, distribution and industry. Headquartered in Benschop, the Netherlands.

Provides the technical expertise and information required to remanufacture its equipment with full guarantees.

Remains involved throughout the entire asset lifecycle.

"Built to last. Charged to perform. Supported for life."

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THE REMANUFACTURER

REVENANT

Basque industrial company founded in 2022 in Bilbao, specialised in the complete remanufacturing of heavy port and industrial machinery.

Turns end-of-cycle machines into newly certified, traceable equipment ready for a new operational life.

Terminal tractors and heavy-duty forklifts, 12 to 45 tonnes.

ASSET MANAGEMENT

Terberg and REVENANT manage the asset together to extend its useful life

01 · TERBERG

First life

Designed, built and supported by the manufacturer.

02 · TOGETHER

End of first cycle

The machine is recovered as an asset, not scrapped.

03 · REVENANT

Remanufacturing

Rebuilt to manufacturer standards with Terberg's knowledge.

04 · THE CUSTOMER

Second life

Back in operation as a new machine, with a new CE marking.

Less waste, fewer resources, lower cost: the value of the asset stays in use instead of being lost. Jointly we manage lifecycle value, beyond the first sale.

WHAT WE MEAN BY REMANUFACTURING

Remanufacturing is manufacturing, starting from an existing machine

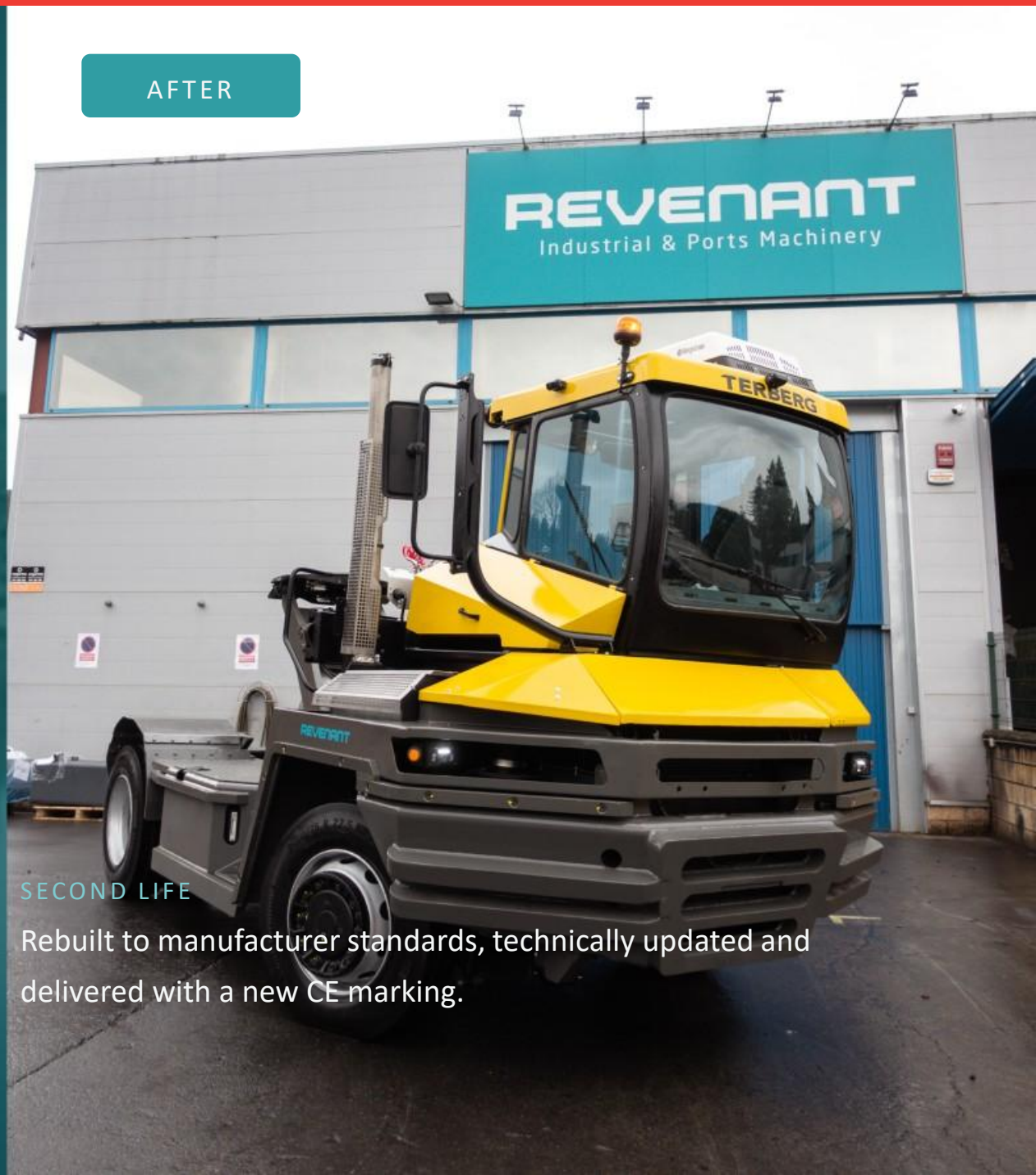
	Repair	Overhaul	Remanufacturing
Scope	The failed part	Main systems	The complete machine
Process	Fix and return	Inspect and refresh	Full disassembly and rebuild
Reference standard	Working condition	Working condition	Manufacturer specifications
Technology	Unchanged	Unchanged	Upgraded to current systems
Result	Same machine, same age	Longer service	A new machine: new CE marking and carbon footprint certificate

The outcome is not a used machine: it is a certified machine ready for a new operational life.



END OF FIRST CYCLE

Received with visible wear, corrosion and operational degradation. A detailed technical assessment defines the scope.



SECOND LIFE

Rebuilt to manufacturer standards, technically updated and delivered with a new CE marking.

HOW THE COLLABORATION WORKS

The manufacturer's knowledge makes remanufacturing reliable

TERBERG

Shares knowledge

Technical information, specifications and know-how of its own equipment.

REVENANT

Remanufactures

Recovers the core and rebuilds it to the manufacturer's standards, with certification and traceability.

THE CUSTOMER

Gets a circular option

A remanufactured Terberg, backed by the manufacturer's knowledge.

Without the manufacturer, remanufacturing is guesswork. With it, it is a structured industrial process. OEM involvement safeguards quality, safety and brand integrity.

TWO WAYS TO ACQUIRE THE SAME MACHINE

A circular alternative inside the manufacturer's own offer

OPTION 1

New Terberg

- Manufactured conventionally, from new materials
- Latest factory specification

OPTION 2

Remanufactured Terberg

- Rebuilt from an existing machine to the manufacturer's standards
- New CE marking: new in every respect, with a carbon footprint certificate
- Keeps materials and engineering in use

Same brand, same quality expectations: the customer chooses, with no compromise on performance. CIRCULARITY BECOMES PART OF THE TERBERG PORTFOLIO, NOT AN ALTERNATIVE OUTSIDE IT

WHAT LEAVES THE PLANT

Most of the original machine is kept, and the result is a new machine

50–80%

of the original equipment is retained

depending on the model



New CE marking

The machine is new in every respect.



Carbon footprint certificate

Each machine is delivered with a certificate of its carbon footprint reduction.

REMANUFACTURING + ELECTRIFICATION

Electrification adds a second emission saving to remanufacturing

01 · WHEN IT IS BUILT

Less embedded carbon

50–80% of the original machine is retained, so most of its materials and manufacturing energy are not produced again.

Documented with a carbon footprint reduction certificate.

+

02 · WHEN IT OPERATES

Zero exhaust emissions

An electric drivetrain has no exhaust: no CO_2, NOx or particulate matter released where the machine works.

Cleaner air for drivers and port workers.

REVENANT electric RT: remanufactured Terberg RT283 4x4 platform, ~300 kWh battery, CCS2 charging. Functional prototype: October 2027. This can offer customers a more accessible route towards electrification.

EMISSIONS AVOIDED PER ELECTRIC TRACTOR

About 45 tonnes of direct CO_2 avoided per tractor, every year

45.3 t

of direct CO_2 avoided per year

per tractor, 3,000 operating hours/year

17,100 l — of diesel not burned per year

≈ 227 t — of direct CO_2 avoided over 5 years

0 — exhaust particles and NOx at the point of use

Reference data from the Netherlands: 5.7 l/h diesel consumption × 3,000 h/year; ≈ 2.65 kg CO_2 per litre, direct combustion factor (UK DESNZ conversion factors).

WHY EXTEND THE LIFE OF THE ASSET

More respectful of the environment and more competitive, with no compromise on quality or performance



Less waste

The machine is not scrapped: most of it stays in use for a second life.



Fewer resources

No more materials and energy than necessary to deliver a new machine.



More competitive

An economically much more competitive way to renew a fleet and enables us to serve and retain customers with different budgets and operation requirements.

A EUROPEAN REFERENCE

A large manufacturer and a specialist SME, driving the circular economy together

01

Shared knowledge

The manufacturer opens its technical information to a trusted partner.

02

Specialised capability

The SME brings an industrial remanufacturing process, close to the market.

03

One offer

New and remanufactured options reach the customer side by side.

We believe alliances like this one will set the path for many other companies in the coming years. This creates a scalable lifecycle model built around the customer.

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TERBERG

Thank you

The machines of tomorrow are already built.

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