AN IMPORTANT MANUFACTURER OF CONSTRUCTION EQUIPMENT SELECTED TATA TECHNOLOGIES AS THE PRIMARY PROVIDER OF DESIGN SERVICES FOR A SOIL COMPACTER REDESIGN AND REPPOWER PROJECT.

THE CHALLENGE

- Designing a new Tier III compliant engine for the soil compactor and improving overall performance.
- Designing new content for the machine.
- Managing the relationships with multiple external suppliers for the hydraulic system, fuel tank, hood, chassis, and cooling package.

THE COMPANY

The company is one of the world’s leading manufacturers of construction and mining equipment, diesel and natural gas engines, industrial turbines and diesel-electric locomotives. It has corporate offices based in the United States, and over 100,000 employees.
THE SOLUTION

Phase 1 – Start
- Shared the Program Management responsibility with the customer.
- Performed aspects of Failure Modes and Effects Analysis (FMEA) and Advanced Product Quality Planning (APQP).
- Managed the relationship with key external suppliers for effective collaboration throughout the project.

Phase 2 – Develop
- Redesigned the compactor frame to accommodate the new engine and balanced the weight distribution on the front and rear frame.
- Redesigned the entire installation systems, including radiator, muffler, cleaner, water lines, and air lines.
- Redesigned the entire hydraulic system, including pumps, hydraulic motor and hydraulic lines.
- The hood was redesigned to accommodate the 20% larger cooling package and for better engine compartment insulation and air flow, while preserving operator visibility.

Phase 3 – Advanced
- Accommodated a new cabin from a bigger machine onto the new structure.
- Designed new, larger capacity fuel tank.
- Designed the entire electrical installation.

THE RESULT

30%
Reduction in product development cycle time

Prototypes were assembled on production line

All design work was performed at a Tata Technologies Romanian offshore facility

ABOUT US

Tata Technologies is a global engineering and product development IT services company that is focused on fulfilling its mission of helping the world drive, fly, build and farm by enabling manufacturing companies across the automotive, aerospace and industrial heavy machinery verticals realize better products and drive efficiencies in their businesses. There are two components to our value proposition – managing and delivering outsourced engineering services and products for our manufacturing clients, and helping them identify and deploy technologies that are used to conceptualize, design, validate, build, test, benchmark and realize better products. For more information, visit www.tatatechnologies.com.