



FUELACTIVE

CASE STUDY



BACKGROUND

Lynch is dedicated to helping our customers achieve their carbon reduction goals and transform the construction industry. With a shared commitment to sustainability, we support our customers in their journey toward achieving **Net Zero Carbon**. By embracing new technologies and championing innovative solutions, we work alongside our customers and supply chain to redefine industry standards and deliver impactful results.

GOALS & OBJECTIVES

In collaboration with a **Tier 1 customer** on a high-profile 24/7 earthworks project, fuel efficiency became a critical KPI. Through early engagement, we proactively sought innovative technologies to optimise fuel economy and reduce carbon emissions without compromising operational efficiency. Our goal was to help our customers to implement a cost-effective solution that would deliver measurable sustainability results.

RESEARCH & DEVELOPMENT

In early 2023, Lynch began working with FuelActive, recognising it as a highly innovative technology that could be retrofitted to our equipment. We focused on applying this system to several Bell Dump Trucks to enhance performance while meeting the demands of the highly tuned Stage V engines.

FuelActive's initial benefits are centered around **improved product uptime** by preventing fuel-related breakdowns caused by blocked filters and damage to high-pressure fuel pumps and injectors. FuelActive partnered with Lynch to prove that optimising fuel quality results in fuel efficiency and an associated reduction in CO₂. As industry leaders in sustainability, this opportunity aligned perfectly with our broader goals.

THE TECHNOLOGY

FuelActive's patented floating fuel pick-up system delivers **92% cleaner fuel** to the engine by drawing from just below the fuel surface and is highly effective. In contrast, standard fuel tanks always draw from the bottom, where natural contaminants such as water, sediment, rust and diesel bug accumulate. This technology **minimises the risk of contamination**, improving both fuel quality and engine performance.

THE TRIAL

Between **October 2023 and March 2024**, we conducted a thorough assessment of FuelActive's impact on fuel consumption and emissions. **Five Bell B30E Trucks** were equipped with FuelActive, while five **Bell B30Es** were closely matched as control trucks and retained the OEM fuel system. **Utilisation, duty cycles, and payloads** were precisely matched to ensure an accurate comparison.

We analysed **960 data points over 6 months, capturing 4,832 hours of data** via the OEM telemetry system. Detailed fuel and payload analysis revealed significant **reduction in fuel consumption and CO2 emissions**. Additionally, no fuel related downtime was reported, resulting in notable cost and carbon savings for our customer, which is outlined on the key results page.

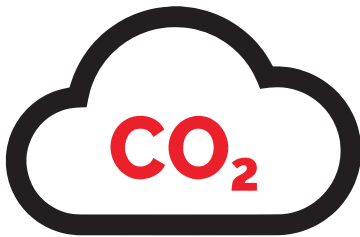
KEY RESULTS



COST SAVINGS OF:

£35.5k

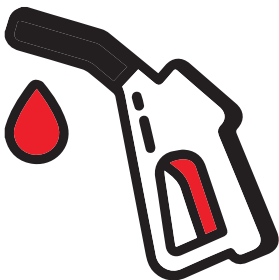
**OVER 4 YEARS,
FOR 10 TRUCKS**



CO² SAVED:

77,600kg

**OVER 4 YEARS,
FOR 10 TRUCKS**



FUEL SAVED:

30,000l

**OVER 4 YEARS,
FOR 10 TRUCKS**



**FUEL ECONOMY
BENEFIT:**

**MINIMUM OF 3.65%
IMPROVEMENT**

KEY FINDINGS

The trial revealed a minimum **3.65%** improvement in fuel economy using the FuelActive system compared to the control machines. This translated into a 0.41 L/hour reduction in fuel burn, leading to a cost saving of **£35.5k** over four years (for 10 trucks)—equating to **77,600kg of CO2** saved and nearly **30,000 litres** of fuel saved.

These results underscore the dual benefits of lowering operational costs and minimising environmental impact, supporting our customers' sustainability objectives. This **forward-thinking approach** demonstrates Lynch's commitment to innovation and sustainable solutions that offer **tangible, long-term benefits**.

Additionally, FuelActive proved to be a **cost-effective option**, with a payback period of **less than a year**. Indirect savings from reduced maintenance costs related to filters, pumps, and injectors were also evident. With zero fuel-related downtime, there were further unquantified savings from less servicing, less downtime, and more efficient refuelling processes.

FUTURE PLANS

FuelActive's groundbreaking fuel pick-up system represents a **pivotal shift in our operational and environmental strategies** on our customer's projects. This step change marks a significant move towards more **sustainable and efficient construction practices**.

Using fleet benchmark data for this year, we can see that Dozers and Graders burn the most fuel. We can retrofit FuelActive pick-up systems to **all types of plant machinery**, so in addition to extending this technology to additional **ADTs** and **360 Excavators**, further reducing fuel costs and carbon emissions for our customers, we plan to retrofit our dozer and grader fleet. By doing so, we aim to create the most sustainable fleet of **ADTs, Excavators, Dozers and Graders** in the UK plant hire sector, setting new benchmarks for environmental performance.

OUR PILLARS

Our strategic pillars govern everything we do,
Helping Our Customers Build Britain's Infrastructure.

This project aligns to:



NET ZERO CARBON

Our commitment to sustainability drives us to reduce our **carbon footprint** to zero by 2040.

To learn how Lynch can support your carbon reduction and cost-saving goals, contact us today!

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**HELPING OUR
CUSTOMERS BUILD
BRITAIN'S INFRASTRUCTURE.**