

Landfill mobile compactor powered by MTU Series 500 engine moves mountains in Michigan



Who: City of Riverview
What: BOMAG Landfill Mobile Compactor
Why: Exceptional reliability and responsive service
Where: Riverview, Michigan, USA



The City of Riverview counts on its landfill mobile compactors to conserve valuable airspace at its 400-acre site. Its newest machine, powered by a reliable MTU Series 500 engine, is built for maximum uptime to keep up with the steady intake of garbage delivered every day.

Not everybody considers a landfill a prime piece of real estate. But to landfill operators, every inch of acreage—and airspace volume—is precious. At the City of Riverview landfill in Michigan, trucks drop off nearly 3,500 tons of trash per day from Detroit and 13 surrounding communities. Layers of waste material accumulate quickly. That means Riverview's landfill mobile compactors must work relentlessly to bring everything down to size. Because when a landfill meets a maximum height dictated by environmental regulations, it must shut down its operation—along with its revenue stream.

At the City of Riverview landfill, two landfill mobile compactors, working in tandem, perform this dirty job. One compactor drives across the area, spreading trash evenly with its blade. Meanwhile, the other compactor tramples the pile with its sheer weight, shredding material with heavy-duty wheels equipped with multiple rows of teeth.

“These vehicles run five 11-hour days, and six hours on Saturday,” says Ed Worrell, City of Riverview's lead operator. “The more compaction we get, the more airspace we conserve at the end of the day. The total height of the landfill is nearly 160 feet and we're permitted to go up to 300. With the right equipment, we shouldn't hit that for 17 to 18 years.”

Up for the challenge

Riverview's new BOMAG landfill mobile compactor is particularly well suited for the job. Powered by a MTU Series 500 (based on Mercedes-Benz OM 502 LA), the unit was put through a series of tough tests before purchase. Worrell says, “We use GPS to measure how well a machine compacts. It shows exactly how far it sinks over successive runs. When we tested the BOMAG, it had the best results every time. You can't go back and re-compact trash from two

Ed Worrell, lead operator, City of Riverview

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Power. Passion. Partnership.



The MTU Series 500 (based on Mercedes-Benz OM 502 LA) produces up to 440 kilowatts and meets Tier 4 emissions requirements.

days ago. Its just airspace lost. If you make a habit of working on half the amount of compaction, you'll only get nine years out of a site instead of 17 or 18." After it met Worrell's tough standards, the City of Riverview became the first customer in North America to receive a MTU Series 500 engine in their equipment.

The stream of garbage trucks that enter the City of Riverview landfill never stops. A tough, reliable engine ensures that the new BOMAG landfill mobile compactor keeps moving too. Avoiding downtime is critical. "Every millimeter of airspace in a landfill has monetary value," says Dave Dennison, BOMAG product manager and manager for marketing services. "The more trash volume that can fit into that space, the more revenue they can take in. By having a reliable, productive compactor, the site can utilize the airspace to the best extent possible, which impacts profitability and saves taxpayers' money."

A powerful combination

With an excellent record of longevity and minimal downtime, the MTU Series 500 was the perfect choice for BOMAG. Based on Mercedes-Benz commercial vehicle engines, the Series 500 delivers outputs up to 440 kilowatts and meets Tier 4i emissions requirements. BOMAG's Dave

Dennison says, "The Tier 4i package and the strong reputation of MTU and Mercedes attracted us to the engine, along with the strength of the global service network. We've also been very pleased with the fuel savings that we've seen out of the machine. With BOMAG being the leader in the compaction world, and MTU being such a

strong force in the engine world, it makes for a very strong partnership."

Since mobile landfill compactors typically consume 15 gallons of fuel per hour, improved fuel economy is a particularly valuable feature of the Series 500. Machine operators at Riverview have noticed a big difference at the fuel pump between the new BOMAG and the older compactors. This translates not only in fuel savings, but more time on the job, rather than at the fuel pump.

The Series 500 is engineered to be maintenance-friendly, which also maximizes valuable uptime. The fuel filter can be exchanged without tools and the cover of the oil filter can be exchanged with standard tools. "This engine is definitely easier to service than our old machines. Every time you can save 30 to 45 minutes in service time, it makes a big difference," says Worrell.

The powerful engine enables the vehicles to operate efficiently on steep inclines, to shift mountains of trash, and to maneuver swiftly. Engine noise is quieter, which is also a benefit to operators working long hours on the job. Worrell has noticed improved groundspeed, which helps the compactors efficiently move material and get better compaction throughout the day. "It doesn't have any trouble going up steep slopes. And due to its speed, the driver of this machine is always the first to show up when it's time for a lunch break."

Staying productive

Reliable service is critical to make sure Riverview's compactors stay productive. It also

helps the city avoid penalty clauses that go into effect if a machine is down over 10% of the time. With MTU distributor W.W.Williams only 13 miles away, engine parts and service are readily accessible. A mobile landfill compactor is a big investment. By offering a full line of MTU ValueCare products and services, designed to maximize uptime and engine performance, W.W.Williams will help protect Riverview's investment for years to come. The compactor is backed with MTU Extended Coverage, providing Worrell with extra peace of mind beyond the standard warranty. "We do all the fluid changes and filters, along with other preventive maintenance," says Worrell. "We're doing everything we can to give the BOMAG a long life. But someday, we'll need assistance. When a partner can be there on the spot and help keep me up and running, I'm happy."

How satisfied is Ed Worrell? The City of Riverview just submitted an order for a second machine. "The BOMAG was our first vehicle we've had with the MTU engine," says Worrell. "It's a nice, smooth running engine. We've got no complaints. There's no lack of power at all. The turbo kicks in and it goes right up the hills it needs to. The torque and groundspeed are top-notch—better than the previous non-MTU engine, and they don't ever bog down. I was glad we moved to BOMAG and MTU. With availability of parts and great service, it's a win-win."

As the Riverview landfill slowly grows in size, one thing is for certain: thanks to the MTU Series 500, the BOMAG landfill mobile compactor will rise to the occasion.

MTU America Inc.

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MTU is a brand of Rolls-Royce Power Systems AG. MTU high-speed engines and propulsion systems provide power for marine, rail, power generation, oil and gas, agriculture, mining, construction and industrial, and defense applications. The portfolio is comprised of diesel engines with up to 10,000 kilowatts (kW) power output, gas engines up to 2,150 kW and gas turbines up to 35,320 kW. MTU also offers customized electronic monitoring and control systems for its engines and propulsion systems.



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