Schwarze Industries recently launched a new line of regenerative air sweepers with some extreme-weather names, such as Storm, Tornado, Twister, Monsoon, and Gale Force. Sounds like some new innovations are blowing in! Speaking of air currents, explain the technology behind regenerative air.

Giles: The John Deere engine directly powers a high-powered blower system, which generates a high-velocity air stream that is aimed directly at the pavement. This high-volume air blast loosens debris from the pavement surface and transports it across the width of the sweeping head. The blast air, along with suctioned air, lifts debris into the containment hopper. Even hard-to-reach particles hidden within pavement cracks are removed with this highly efficient system. When operating the system in full regeneration, there is never anything vented into the atmosphere; it's a completely enclosed system.

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Giles: We asked our customers and our competitors’ customers what they liked and didn’t like about the sweepers they were operating. We found not all customers have enough dump trucks for off-loading. So, we designed a sweeper with a big enough hopper that you can use it as a low-dump sweeper but will also dump 12-feet (3.7-meters) high.

PowerSource: The A8 Twister is also the first regenerative air sweeper powered by a Final Tier 4 engine. What’s the word on the streets?

Giles: We put it through its paces, ran it hard, and have had no issues at all. It hasn’t so much as hiccupped. When we delivered it to our beta customer, they said as far as they’re concerned, it out-sweeps their other trucks, even barely off idle. They love that.

PowerSource: What is your impression of the PowerTech PWL 4.5L Final Tier 4/Stage IV engine that powers it?

Giles: Even though we have permits (flex credits), I plan to incorporate this engine into all of the sweepers in this horsepower range. The engine runs quieter, smoother, and starts better. It also meets emissions without a diesel particulate filter. On multiple levels, it’s a great design.

PowerSource: What are your thoughts regarding the use of diesel exhaust fluid?

Giles: Years ago when it was first suggested that this might be a good solution, my thought was, “Oh, geez, there’s got to be a better way.” But time changes things, and now with almost every chassis already using diesel exhaust fluid, it’s almost a no-brainer. Yeah, the operator has to open one more cap to fuel the machine. So what? It’s become a complete non-issue.
To comply with Final Tier 4/Stage IV regulations, Schwarze Industries selected the PowerTech PWL 4.5L for its A8 Twister regenerative air sweeper.

The PowerTech PWL 4.5L meets emissions standards without a diesel particulate filter.

NO DIRT LEFT BEHIND: The Schwarze A8 Twister is a regenerative air sweeper that picks up micron-sized contaminants that accumulate on streets.

PowerSource: In what ways has Flint Power Systems assisted in the transition to Final Tier 4/Stage IV?

Giles: At one time, we were buying engines and assembling the open frames ourselves. Now with Final Tier 4, Flint Power has taken a significantly larger role in the application design and development of the engine for us. We’ve reached the point that we’re better off being in the sweeper business and not in the engine-building business. So we’re buying a complete power unit. We just mount six bolts to our truck, hook up the belt and fuel line, plug in the computer, and off we go.

PowerSource: John Deere engines have powered Schwarze sweepers for decades. What benefits do John Deere engines offer your sweepers?

Giles: Engine reliability. John Deere also builds a balanced engine. We hook up belts directly to a very large fan, and if that engine vibrates, that vibration will shake that spinning fan. So the availability of a balanced engine platform is extremely important. Also, service through the John Deere dealer network is second to none. The availability of service in almost any town in North America really meets our customers’ needs.

PowerSource: As a global company, what is your impression of the John Deere service and support overseas?

Giles: No problem at all. In fact, I’ll tell you a story. It’s not on the A8 but on a sister product called the GS6, which is designed for export. We just sold six units to the city of Sydney, Australia. Three sweepers had [competitive engines] that are standard for Australia. However, the customer didn’t want that engine, so we sent retrofit kits to replace them with John Deere engines.

PowerSource: As Schwarze sweepers take the streets by storm, all I can say is competitive engine manufacturers better run for cover!