



JOHN DEERE

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The power behind the world's most innovative construction equipment

Sweeping the Globe

Johnston Sweeper's extensive product line cleans outdoor surfaces around the world

There aren't many outdoor surfaces you can drive or walk on that the Johnston Sweeper Group doesn't have a product to clean. The company offers the largest, most diverse range of outdoor cleaning equipment in the world.

Johnston builds compact, walk-behind and ride-on sweeping equipment for tidying up sidewalks in busy areas, street sweepers for cleaning city streets and highways, airport sweepers for de-rubberizing runways, and specialty machines for working in tunnels, railways, and other unique applications.

Johnston sweepers are used, and manufactured, around the globe. "Our company is now buying John Deere engines for our manufacturing sites on three continents, in the United Kingdom, the United States, and Australia," explains John Campbell, UK purchasing manager. "This exclusive position of having become a global supplier of engines to our Group has been reached by John Deere being able to offer a product range and depth of support that satisfies the highest demands of both ourselves and our customers."

Peter Federico, director of products for Johnston in the United States, agrees. "John Deere has great service and support everywhere we sell sweepers," he states. "Plus, customers recognize the engines in the United States and overseas – everyone knows John Deere. They have such a good reputation, and it's a product that has been around for a number of years."

From a manufacturing perspective, Johnston also values John Deere Power

Systems' presence worldwide. The John Deere engine factory in Saran, France, is a source of engines for Johnston factories in the UK and Australia. "We have a good relationship with John Deere on an engineering level with the installation and testing process," Federico relates. "When we install an engine in a sweeper, John Deere certifies our installation to ensure we aren't exceeding the engine's duty cycle. That's something we're very conscious of."

John Deere engines are primarily found in Johnston's line of truck-mounted sweepers. "John Deere's power offerings fit very well for what we need to do with our sweeping machines," Federico says. The 605, 610, and 770 sweepers, for instance, feature the John Deere PowerTech 4045 engine for auxiliary power. Its primary purpose is to drive the fan, but Johnston also mounts a hydraulic pump off the timing case for hydraulic functions, and can also install a water pump for pressure-washer applications.

Federico says Johnston incorporates some "novel engineering" to deliver the performance and reliability they promise their worldwide customers. "We have a patented 'step-up' transmission system for the fan that prevents overloading the engine while still achieving high performance," he explains. "The engine can run at, say, 2,000 rpm, which is well

below its maximum, while the fan runs at 3,500 rpm. So we can run the engine close to the peak of the torque curve, have less engine noise, and consume less fuel.

"We also put the engine in a sealed compartment to keep contaminants out; these engines work in pretty dirty environments," adds Federico. "We draw air from the top of the sweeper at the highest, cleanest point to cool the engine inside the compartment. The compartment also keeps sound levels down."

Perhaps the success of the global Johnston-John Deere partnership has something to do with notable innovations both companies can claim. After all, Johnston pioneered the first vacuum street sweepers in the 1950s; John Deere introduced the self-scouring plow to agriculture in the middle 1800s.

Federico believes it has more to do with very compatible product lines and a shared passion for being an industry leader. And he expects the relationship to grow. "When we have a good relationship with a supplier, we look to expand that relationship," he says. "I can see some future dialogue with John Deere regarding alternative-fuel options in our horsepower range. We'd like to be able to go to John Deere there, too."

Engine: John Deere PowerTech 4045D – a 52-kW (70-hp), 4-cylinder, 4.5L, naturally aspirated diesel; PowerTech 4045T – a 74- and 86-kW (99- and 115-hp), 4-cylinder, turbocharged diesel.



A Johnston 605 sweeper cleans the streets of London near Big Ben and the Houses of Parliament.

