

POWERSOURCE

A PUBLICATION OF JOHN DEERE ENGINE DISTRIBUTORS / VOL. 3 1995



TYMCO REGENERATIVE AIR SWEEPERS REJUVENATE THE ENVIRONMENT



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Power Systems, Waterloo, Iowa, (95-8)



NO MORE DUSTY TRAILS

In today's environmentally conscious society, Tymco manufactures sweepers that do a lot more than just pick up street litter

Drive through Tyler, Texas and you'll notice that the city has, well, a rather rosy appearance. It's not only because this colorful, flower-laden U.S. town is pegged "the rose capital of the world." Tyler's street maintenance crews strive to keep the streets of this bustling city as visually aesthetic as the rose gardens that grow there.

However, there's more to keeping streets clean than what meets the eye. Sweeping litter, leaves, and other debris from the streets is no longer enough for most cities. Strict, governmental regulations on air and water quality are influencing a growing number of cities throughout the world to use state-of-the-art air sweepers that are capable of removing fine particulates that can pose a threat to the environment. These potential pollutants can adhere to the micron-size dust particles that settle into pavement cracks.

For the City of Tyler, the secret to a thorough cleaning lies within a fleet of John Deere-powered regenerative air sweepers built by Tymco, Inc. of Waco, Texas.

"Our city uses Tymco sweepers because they don't leave that wisp of fine debris that others leave behind," says Roger Ehlen, street superintendent for the City. "We know we're not leaving anything behind that contaminates the city's storm water system."

Deere-powered Tymco sweepers clean better because they feature a closed-loop regenerative air system that uses a controlled blast of air to dislodge dirt, dust, and other fine particles, as well as pick up bulkier items.

This debris-laden air stream is then pulled into the hopper, where the air loses velocity, and the larger debris falls to the bottom.

Micron-sized dust particles are contained by a patented centrifugal dust separator, which spins the air along the curved wall of the chamber until the particles are skimmed off into the hopper. Only cleaned air returns to the blower. As a result, polluted air is never exhausted into the atmosphere.

"My father patented this regenerative air system 25 years ago," says Gary Young, Tymco vice president. "Since then, we've been perfecting the regenerative air system, and we continuously strive to upgrade our sweepers in an effort to satisfy the demands of our customers — and help them comply with environmental regulations."

One improvement to the sweepers included replacing the sweepers' original gasoline engines with Deere diesels in 1982. The engines power the blowers, as well as all of the hydraulic functions, including the gutter brooms, pickup head, and dump doors.

For Ehlen and his crew of operators, the switch to John Deere was a welcome change.

"Our sweepers run at least 1,500 hours a year in the City of Tyler in an attempt to keep our 576 miles (927 km) of streets clean," Ehlen says. "Before switching to Deere, we were overhauling the gas engines nearly twice a year. They simply couldn't handle the conditions. Now that we're running Deere diesel engines, we haven't had one break down."

Today, nearly 95 percent of Tymco sweepers are sold with Deere engines. The John Deere



4039D diesel engine is standard in both the 4.75-cubic-yard-capacity (3.61-m³ capacity) Model 350, as well as Tymco's larger and most-popular sweeper, the 7.3-cubic-yard (5.5-m³) Model 600. The John Deere 4039T is also available on the Model 600, depending on the altitude and working environment of the sweeper.

Several additional Tymco sweepers are offshoots of the popular Model 600 — all of which are powered by either the John Deere 4039D or 4039T. They include the Forward High Dump (FHD), equipped with a front-unloading hopper, as well as the Broom Assist Pickup Head (BAH), which is the only Tymco sweeper that features a broom-assisted pickup head.

Environmental regulations on air and water quality are also prompting many private companies to use Tymco's regenerative air

sweepers in environmentally sensitive areas, such as lead smelters, cement plants, copper mines, and the paper-processing industry.

"Health and environmental agencies are pushing industry to minimize fugitive dust emissions," says Kenneth Young, Tymco president and general manager.

To appeal to this need, Tymco specially designed the Model 600 Dustless Conversion sweeper. The machine features a state-of-the-art filtration system to remove ultrafine dust particles from the environment.

"Unlike our other sweepers, this model does not use water in its sweeping operations," Kenneth says. "That's because many manufacturing plants are not allowed to use water to suppress dust."

Another offshoot of the Model 600 is the High Speed Performance (HSP) Regenerative Air Runway Sweeper — specifically designed



Clockwise from far left: A John Deere 4039D powers a Tymco Model 600 street sweeper, a fleet of which are used by the City of Tyler, Texas. The company assembles the machines at their Waco, Texas, facility. Some sweepers, especially those for airport use, are custom equipped with large magnets to enhance the collection of metal objects. Kenneth (left) and Gary Young say such modifications make the Tymco sweepers not only more valuable to municipalities and airports, but also to factories and military bases throughout the world.

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The John Deere 4039T, equipped on the HSP, powers a blower that blasts air down and across the pickup head at a speed that is 20 percent higher than other Tymco models. This added air velocity eliminates the need for mechanical brooms, and allows the sweeper to clean runways at above-average speeds — an important feature for busy airports.

"Most of our customer base has always been private contractors and municipalities in the United States," says Bobby Johnson, Tymco marketing manager. "Now, we're marketing sweepers internationally, such as our HSP runway sweeper, to airports and military bases throughout the world."

Today, more than 90 percent of the U.S. Airforce sweepers is Tymco sweepers, Johnson says. "You'll find Tymco sweepers anywhere from Andrews Air Force Base in

Maryland to the RAF Laken Heath Base in England," Johnson says. "Our sweepers are also being used by state highway departments, and industrial manufacturers around the United States and the world."

"We market our machines in North America, South America, Europe, Australia, Middle East, and the Pacific Rim. And we like the fact that John Deere has a dealer network throughout the world that will service the equipment.

This worldwide exposure is one reason why Tymco continues to use John Deere engines in their machines, Johnson says.

"John Deere engines are also very reliable," Johnson says. "And that's one reason why our customers are loyal to Tymco sweepers."

Engine: John Deere 3.9 L, 4-cylinder, naturally aspirated diesel. **Distributor:** York Power Systems, Longview, Texas, (903) 757-6700. ■