

# *Water Jet Solutions for Airport Applications*



*The Leader in High-Pressure  
Water Jet Technology*

# Nothing Removes Rubber Better Without Damage!

It's no wonder so many contractors and airports are switching to the power of water jetting for runway maintenance. NLB's heavy-duty STARJET™ runway rubber removal and pavement marking removal systems make the process simple and dependable.



The problems associated with dirty runways are well documented. Rubber and other residues build up, leading to reduced traction (lower runway friction values). If the friction value falls too low, it becomes out of the accepted range for the United States Federal Aviation Authority (FAA) compliance. If this occurs, the runway may need to be taken off-line, leading to reduced airport efficiency.

Conventional processes for rubber removal require the application of corrosive chemicals that are used to break down the rubber, followed by the application of thousands of liters of water. This mixture is then "scrubbed" with steel brooms and is then washed off the runway or vacuumed up.

## Disadvantages of chemical and mechanical systems:

- The chemicals destroy the rubber on the equipment.
- Runways are damaged by the mechanical scrubbing.
- Messy residues result from the chemicals/rubber.
- High environmental costs.
- Does not clean deep into the runway grooves.
- Often do not provide the required results (failed friction readings).
- Can leave media on the runway causing jet engine failure.

## Advantages of the NLB UHP water jet system:

- Minimal to no wear to runways.
- Reduced runway downtime.
- Does not create messy residue (vacuum recovery).
- Cleans deep into the runway grooves.
- Minimal environmental impact.
- Faster than mechanical removal methods.
- NLB Systems are flexible tools that can be used for multiple airport applications (stripe removal).

**Concrete**



**Asphalt**



**NLB ultra high pressure water jets get deep into runway grooves, leaving the runway clean at every level.**



**Abrasive methods (shot blasting and wire brushing) can erode surfaces and leave behind media, while chemicals leave behind residue and create environmental problems.**



**Water jets allow for complete removal of rubber and debris, without damaging the runway.**



The NLB STARJET™ is a complete UHP water jetting system that quickly cleans runways and removes stripes. The STARJET is a self contained system that incorporates all the ultra high pressure components (pump, cleaning head, water/recovery tank, vacuum recovery and hydrostatic drive). The entire system is integrated with a heavy duty GMC/Isuzu truck, and is controlled by one operator using the comprehensive PLC controls in the driver's cab.

The heart of any water jetting system is the pump, and the STARJET is built around the industry proven NLB 36220D. Powered by a dependable Cummins C8.3-260 six cylinder engine, the unit generates 10 gpm (37.8 lpm) at pressure to 36,000 psi (2,500 bar). Other configurations available.

All the water required for the cleaning process can be stored in the optional 5060 liter water tank. The water, rubber, paint and other resulting debris is collected via the integrated vacuum system and is deposited in a 5060 liter recovery tank. This allows for approximately 3000 to 4000 m<sup>2</sup> removal between refills. Other capacities available upon request.

### The BARJET™ Advantage

A main contributor to the STARJET's productivity lies in it's BARJET cleaning head assembly. The system takes multiple hi-cohesive UHP waterjets and rotates them at speeds up to 3000 rpm, to completely and efficiently remove rubber and/or pavement markings, while not damaging the concrete or asphalt.

The BARJET system provides direct and effective cleaning without requiring complex and costly traversing mechanisms. It can be fine tuned for a multitude of different situations, including runway paint stripes. Typical rubber removal rates are 1200 to 1800 m<sup>2</sup>/h, and paint stripes can be removed at 610 to 1828 linear m/h, depending on conditions.



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The STARJET system features cab mounted PLC controls to give the operator full control over all of the functions. In cleaning mode, the hydrostatic drive controls the vehicle forward speed and BARJET head rotational speed, to produce optimal and consistent cleaning rates.



The system can include a large integrated water and recovery tank, with filter and disposal crane (other sizes upon request)



The NLB BARJET hi-speed rotating nozzle system takes the power of UHP and delivers it consistently over a wide area. Nozzle positions are precision engineered to provide total coverage of cleaned area, and can be configured for different areas and pressure/flows

# STRIPEJET and VORTEX for Smaller Jobs.



The VORTEX™ is ideal for jobs that can't justify a fully automated system. NLB's patented SPIN JET® technology removes runway rubber buildup and pavement markings at rates up to 2,000 square feet (185.8 m<sup>2</sup>) per hour, while an operator simply walks behind the unit.



For areas with limited access (e.g., ramps, parking lots, garages), the STRIPEJET™ is ideal. Its short wheelbase and tight turning radius assure easy maneuverability, and it maintains a smooth, consistent speed in forward or reverse.

## The NLB Advantage

Airport applications are another innovative use of water jetting by NLB Corp., a leader in the technology for 30 years. Contractors and industrial companies around the world depend on NLB pumps and accessories to solve difficult challenges in product removal, surface preparation, hydrodemolition, and much more. NLB equipment has earned a reputation for efficient, reliable performance while delivering leading edge high pressure waterjet technology. NLB helps you get the most out of water jetting, with a complete package that includes:

- Pumps from 2,000 to 40,000 psi (140 to 2,800 bar), with a wide range of flows.
- Diesel and electric models, with various horsepower and mounting options engineered for long life, and low operating costs.
- Dedicated, in-house engineering and R&D.
- Unsurpassed selection of accessories and customizing options.
- Advanced controls architecture, integrating the latest in controls hardware.
- Purchase, rent or lease, from convenient regional offices.
- Toll-free parts ordering, from the largest inventory in the industry.
- A global network of full service distributors.



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**Headquarters**  
29830 Beck Road  
Wixom, MI 48393-2824  
(248) 624-5555  
FAX: (248) 624-0908  
<http://www.nlbcorp.com>

**Regional Offices**  
■ 159 Harmony Road, Mickleton, NJ 08056  
(856) 423-2211 FAX: (856) 423-0997  
■ 201 S. 16th, La Porte, TX 77571  
(281) 471-7761 FAX: (281) 471-8738

■ 14302 Highway 44 N., Gonzales, LA 70737  
(225) 622-1666 FAX: (225) 622-7366  
■ 1323 E. Hill St., Signal Hill, CA 90755  
(562) 490-3277 FAX: (562) 733-0780