



Dry Ice Blasting for Fleet and Logistics

Chassis, engines and trailers cleaned at your depot

Commercial vehicles cover huge mileages, and road dirt, oil, grease and salt build up on chassis, engines, axles, tail lifts and trailers. Dirt hides defects, and dirty vehicles are harder to inspect and maintain.

Most fleets rely on pressure washing and traffic film removers. That works on bodywork, but it drives water into electrics, connectors, bearings and brakes, it struggles with baked-on grease, and it creates oily run-off.

Dry ice blasting offers a different approach. In this guide I want to explain how it works and where it delivers real advantages for fleet operators and workshops.

What is dry ice blasting?

Dry ice is solid carbon dioxide (CO_2) at around -78.5°C . Instead of melting, it turns straight back into gas when it warms, a process called sublimation.

In dry ice blasting, small pellets of this material are fired at a surface using compressed air. Three things happen on impact:

- **Impact energy** breaks up and dislodges the deposit.
- **Thermal shock** makes the residue brittle and weakens its bond to the surface beneath.
- **Sublimation** turns the pellet into gas, which expands rapidly and lifts the residue away from behind.

The pellets disappear into the air. The only thing left to collect is the residue that has been removed. There is no water, no detergent and no blast media to clean up afterwards.

Where dry ice blasting really outperforms traditional cleaning

1. Better inspections

A clean chassis makes defects easy to spot during safety inspections and annual tests, and testers can refuse a vehicle that is too dirty to inspect properly.

2. It removes grease and baked-on dirt

Thermal shock makes grease and road dirt brittle, and the expanding gas lifts them from chassis rails, axles, engines and gearboxes.

3. No water in electrics

Modern vehicles are full of sensors and connectors. Dry ice is non-conductive and leaves no moisture, so it can be used around them with the electrics isolated.

4. Tail lifts and refrigeration units

Tail lift mechanisms, hydraulic rams and refrigeration unit coils can be cleaned without water and chemicals.



5. Preparation for refurbishment and resale

Clean vehicles sell better, and at higher settings dry ice can remove failing paint and underseal before refurbishment.

6. Mobile

We come to your depot or workshop, so vehicles do not need to go off site.

Environmental credentials

Fleet operators are under pressure to cut water use, chemicals and run-off. Dry ice blasting can help on several fronts.

- **Recycled CO₂.** The CO₂ used to make dry ice is typically recovered as a by-product of other industrial processes, such as fertiliser production and fermentation, rather than produced specially. Blasting returns it to the atmosphere it would otherwise have reached, so the process adds no new CO₂ of its own.
- **No oily run-off.** Washing plant and vehicles produces oily, silty water that must go to an interceptor or foul drain, not a surface water drain. Dry ice produces no run-off at all.
- **Fewer chemicals.** Less traffic film remover and degreaser.
- **Water savings.** No water on the jobs it replaces.
- **Longer component life.** Dry connectors and early leak detection reduce failures.

At a glance

	Pressure washing and chemicals	Dry ice blasting
Water introduced	Large volumes	None
Run-off	Oily water	None
Electrics and sensors	Must be protected	Non-conductive, no moisture
Baked-on grease	Hard to shift	Removed effectively
Chemicals	Traffic film removers	None
Location	Wash bay	Mobile, at your depot

Typical applications for fleets

- **Chassis and running gear:** before safety inspections and annual tests.
- **Engines and gearboxes:** cleaning before servicing and leak tracing.
- **Tail lifts:** mechanisms, rams and platforms.
- **Refrigerated vehicles:** refrigeration unit coils and housings.
- **Trailers:** chassis, landing legs and fifth wheels.



- **Buses and coaches:** engine bays and underframes.
- **Refurbishment and resale:** removing underseal and failing paint.

Our setup at Vortex Ice Labs, and why it matters for fleets

Vortex Ice Labs is a fully mobile service. We bring a complete, self-contained system to your depot, so we do not need your power or compressed air. The air passes through four stages before it reaches the surface.

- 1 Compressor.** This supplies the large, steady volume of air needed to drive the pellets. Consistent flow means consistent cleaning, with no drop in performance halfway through a job.
- 2 Aftercooler.** Compressing air heats it, and hot air carries a lot of moisture. The aftercooler cools the air straight away so that moisture condenses and can be drained off. Without it, water would freeze inside the blaster, causing pellets to clump and block, and could be sprayed onto the surface being cleaned.
- 3 Filtration.** Filters then remove the remaining water, any oil carried over from the compressor, and fine particles. This matters on vehicles. The aim is to leave components clean and dry, not to put oil or moisture onto electrics and brakes.
- 4 Dry ice blasting unit.** The pellets are metered into the conditioned airstream and delivered through the hose and nozzle. Pressure, ice feed and nozzle choice are adjusted for each task, from sensors and connectors to heavy grease on chassis rails.

Every stage protects the result. Clean, dry air means a clean, dry vehicle ready for inspection.

Working safely, and where it fits

Dry ice blasting is a powerful tool, and it should be planned like any other workshop activity.

- **Ventilation.** As the ice sublimates it releases CO₂ gas. Pits and enclosed workshops need particular care, because CO₂ is heavier than air and collects in pits. We manage this with ventilation and gas monitoring.
- **Noise and PPE.** Blasting is loud, and operators use hearing protection, eye and face protection, and insulated gloves. People nearby need to be kept clear of the work area or protected too.
- **Containment.** Removed dirt and grease can travel, so we plan the work area, protect nearby vehicles and clear up afterwards.

Used this way, it is most valuable before inspections and tests, for leak tracing and refurbishment, and for components that should not get wet.

Final thoughts

Fleet operators need vehicles safe, compliant and on the road. Pressure washing will always have a role on bodywork, but it brings water, chemicals and run-off with it.

Dry ice blasting removes many of those trade-offs. It cleans dry, reaches baked-on grease, and we bring it to your depot.



If you would like to see how it could work on your fleet, I would be happy to arrange a demonstration at your depot. Get in touch with us at Vortex Ice Labs.

Ian Glover, Vortex Ice Labs

Tel: 07438 409188 | Email: ian@vortexicelabs.co.uk

Web: www.vortexicelabs.co.uk

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