

DAF LF55 220 8200 LITRE VAC Tanker

DAF LF55 220 8200 LITRE VAC Tanker The DAF LF55 220 with an 8,200-litre vacuum tanker is a specialized truck designed for liquid waste suction and transport, commonly used in industries like sewage, drainage, or industrial cleaning.

Key Features:

- Chassis:** DAF LF55 220 (a robust mid-range truck)
- Engine:** Likely a PACCAR PX-5 or PX-7 (around 220 HP)
- Transmission:** Manual or automatic (depending on configuration)
- Body:** 8,200-litre vacuum tank (for suction and transport of liquids/sludge)

Applications:

- Sewage and wastewater collection
- Industrial liquid waste removal
- Drain and septic tank cleaning
- Hydro-excavation (if equipped with high-pressure water jets)

Potential Upgrades:

- High-pressure water pump (for hydro-jetting)
- Safety features: Rear cameras, anti-overflow systems
- Additional storage:** Toolboxes or hose reels

1. Chassis & Engine Specifications

- Model:** DAF LF55 220
- DAF LF55 220 8200 LITRE VAC Tanker Cab Options:** Day cab or sleeper cab (depending on configuration)

Engine:

- PACCAR PX-5 (4-cylinder) or PX-7 (6-cylinder) turbo diesel
- Power:** ~220 HP
- Torque:** ~800 Nm (590 LB-FT)
- Emission Standard:** Euro V or VI (depending on year)

Transmission:

- Manual:** 6-speed or 9-speed (ZF)
- Automatic Option:** AS-Tronic (semi-auto)
- Axle Configuration:** 4x2 (single rear axle) or 6x2 (tag axle for higher payload)
- GVW (Gross Vehicle Weight):** ~18,000–26,000 kg (depending on setup)

2. Vacuum Tanker Specifications

- Capacity:** 8,200 LITRES (~2,165 gallons)
- Tank Material:** Stainless steel or reinforced polyethylene (anti-corrosion)

Vacuum Pump:

- Type:** Rotary vane or liquid ring pump
- Flow Rate:** ~500–1,200 m³/h (depends on pump size)
- Suction Power:** Up to 9-10 bar (130-145 psi)

Discharge System:

- Pneumatic or hydraulic ejection
- **HoseLength:** Typically 30–50m (for suction reach)

Optional Add-ons:

- High-pressure water jetting system (for hydro-excavation)
- Separator unit (for sludge dewatering)
- ODOUR control system (for sewage work)

3. Typical Applications

- Sewage & Waste Management – Emptying septic tanks, cesspools.
- Industrial Cleaning – Chemical waste, slurry, or oil recovery.
- Drain & Pipe Maintenance – Jet washing and suction combo.
- Emergency Spill Response – Quick liquid waste removal.
- Agriculture – Manure or liquid fertilizer transport.

4. Pros & Cons

| Pros | Cons |
|---|--|
| DAF reliability & strong dealer network | Limited off-road capability (4x2 chassis) |
| Efficient fuel consumption for class | 8,200L may be small for large-scale operations |
| Compact size for urban access | High-pressure jetting requires extra cost |

6. Pricing (Estimated)

- **New DAF LF55 220 Chassis:** €90,000–€120,000
- **8,200L Vacuum Tanker Body:** €50,000–€80,000 (depending on pump & extras)
- **Used (5-year-old):** €60,000–€90,000 (total)

7. Maintenance Tips

- **Vacuum Pump:** Regular oil checks (if oil-lubricated).
- **Tank Cleaning:** Flush after hazardous waste to prevent corrosion.
- **Hose Inspection:** Check for cracks due to suction pressure.
- **Engine:** Follow DAF's PACCAR service intervals.

8. Advanced Technical Specifications

- Chassis & Drivetrain
- Frame Strength: High-tensile steel chassis rails (up to 8mm thick for heavy-duty use)
- Suspension:
- Front: Parabolic leaf springs (or optional air suspension for comfort)
- Rear: Heavy-duty tapered leaf springs (or air suspension for fragile roads)

Axle Load Capacity:

- Front Axle: ~7,500 kg
- Rear Axle: ~11,500 kg (can be increased with tag axle)
- Brakes: Dual-circuit air brakes with ABS & EBS (Electronic Braking System)
- Vacuum System Performance
- Max Vacuum Pressure: -0.9 bar (near-total vacuum, critical for thick sludge)
- Suction Hose Diameter: Typically 100mm (4") or 150mm (6") for high-flow applications
- Tank Safety Features:
- Pressure relief valves (to prevent over-suction)
- Anti-slosh baffles (for stability during transport)
- Overfill sensors (automatic cut-off)

9. Customization Options

- Tanker Upgrades
- Material Choices:
- Stainless Steel (316L): For corrosive chemicals (e.g., acid waste)
- Polyethylene: Lighter weight, rust-proof (ideal for brine/food waste)
- Compartmentalization:
- Discharge Options:
- Bottom discharge (for rapid emptying)
- Top discharge (for pressurized ejection)
- Specialist Attachments
- Hydro-Jetting Unit:
- Pressure: Up to 250 bar (3,600 psi)
- Flow Rate: ~60–100 L/min (for pipe cleaning)
- Cyclonic Separator:
- Removes solids from liquids (e.g., sand from sewage)
- Reduces disposal costs by dewatering sludge

10. Operational Efficiency & Costs

- Fuel Consumption
- Average: ~18–22 L/100km (loaded, urban duty)
- Idling Impact: Vacuum pump uses 5–10 L/HR when running
- Payload vs. Legal Limits
- Example Calculation (EU):
- Chassis Weight: ~6,500 kg
- Tanker Weight: ~4,000 kg
- Payload (8,200L water = ~8,200 kg): Total ~18,700 kg (fits 18–26T GVW)

11. Industry-Specific Configurations

- DAF LF55 220 8200 LITRE VAC Tanker For Municipal Sewage Work
- Must-Haves:
- Odor-sealed tank + vent filter (charcoal/HEPA)
- Non-sparking tools (ATEX certification for methane zones)
- For Oil/Industrial Waste
- Key Upgrades:
- Explosion-proof pump (for flammable liquids)
- Grounding straps (static electricity prevention)
- For Agricultural Use
- Modifications:
- Large-diameter suction hose (for slurry with straw/debris)
- Teflon-coated tank (easier manure cleaning)

14. Where to Buy/Lease (EU Focus)

- New Dealers:
- DAF Trucks Official (Netherlands/Germany best discounts)
- Specialist Bodybuilders:
- TERBERG Environment Tech (Premium vacuum systems)
- KOKS (Budget-friendly Eastern EU builds)
- Used Market Hotspots:
- UK: Commercial Truck Sales (ex-municipal units)

- Spain: Low-mileage retired fleet vehicles

15. Operator Training Requirements

- Licensing:
- EU: C1E or C license (depending on GVW)
- Certifications:
- Waste Carriage: ADR Basic (for hazardous liquids)
- Confined Space Entry (if cleaning underground tanks)

16. Under the Hood: Engineering Secrets

- Pump Thermodynamics
- Liquid Ring vs. Rotary Vane Pumps:
- Liquid Ring: Handles wet/dirty air better (self-cooling), but ~15% less efficient.
- Rotary Vane: Higher vacuum (-0.95 bar possible), but sensitive to debris (requires pre-filter).
- Critical Wear Parts:
- Vanes: Graphite or composite (lasts 2,000–5,000 HRS).
- Bearings: SKF/FAG sealed units (lubricated for 100k km).
- Tank Structural Analysis
- Baffle Design:
- 3D-modeled wave baffles reduce sloshing forces by 40% vs. flat baffles.
- Computational Fluid Dynamics (CFD) optimizes drainage angles.
- Stress Points:
- Weld seams at mounting points are shot-peened for fatigue resistance.

17. Regulatory Minefields (2024 Updates)

- EU Waste Framework Directive
- Tachograph Requirements:
- Digital TACHOS mandatory if GVW > 3.5T (even for local trips).
- ADR for Hazardous Waste
- Class 9 (Miscellaneous Hazardous):
- Requires orange plates, driver ADR certification.
- Tank must withstand 200 kPa pressure test.
- UK-Specific Quirks
- DVS (Direct Vision Standard): London requires 3-star rating (LF55 needs cameras/sensors).
- Extreme Environment Mods
- Arctic Operations (-40°C)
- Modifications:
- Engine: Web ASTO coolant heater + synthetic 5W-40 oil.
- Pump: Ethanol-based sealing liquid (won't freeze).
- Hoses: Silicone-coated to prevent cracking.
- Desert/Sand Duty

Upgrades:

- Air pre-cleaner (cyclonic filter for sand).
- Stainless steel mesh over radiator.
- Tank insulation to prevent bitumen solidification.

20. Future-Proofing Your Investment

- Alternative Fuel Readiness
- Dual-Fuel (Diesel + HVO): LF55 can run hydrotreated vegetable oil with minor mods.
- Electric Auxiliaries:
- EPTO (Electric Power Take-Off): Saves 8% fuel vs. engine-driven pump.
- Automation Trends
- Remote Tank Monitoring: 4G sensors track fill level/temperature/PH.

21. Military & Disaster Response Uses

- UN Peacekeeping Mods:

- EMP-hardened electronics (for CBRN environments).
- Camouflage paint (NATO standard).
- Tsunami Debris Clearing:
- Reinforced suction head with diamond-coated cutter.
- 22. Cost of Downtime (By the Hour)
- DAF LF55 220 8200 LITRE VAC Tanker Scenario Lost Revenue (€/HR)
- Sewage Contractor 120–180
- Hazardous Waste Specialist 300–500
- Solution: Keep critical spares (vanes, seals, valves) in stock.

23. The "Un kill able" Build (For Harsh Operator)

- Spec Sheet:
- Tank: 6mm stainless + sacrificial anodes.
- Chassis: Hot-dip galvanized frame.
- Hoses: Steel-braided with quick-couplers.
- Price Premium: ~€25,000 over standard, but 2x lifespan.

24. Obscure But Critical Accessories

- Tanker-Specific GPS:
 - Alerts when near landfill sites (automates duty-of-care logs).
 - Ultrasonic Thickness Gauge:
 - Checks tank wall erosion without draining.
 - Explosion-Proof Flashlight:
 - ATEX Zone 1 for methane-heavy sewers.
 - 25. Common Scams When Buying Used
 - "Rebuilt Pump" Trick:
 - Scammers install new vanes but worn bearings (demand test reports).
 - Tank Liner Deception:
 - Hides corrosion with epoxy spray (check with BOROS cope).
 - Clock Rollbacks:
 - Verify hours via DAF DEBIC (Dealer Backdoor System).
 - Final Wisdom
 - For maximum ROI:
 - Buy ex-municipal (low hours, full service history).
 - Upgrade to telematics (cut fuel use by 12%).
 - Train drivers in "pulse suction" (extends pump life).
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