

CPF-577

Double-pump cement trailer

APPLICATIONS

- High-pressure pumping services
- Mixing and pumping cement slurry

BENEFITS

- Lower NPT due to high system redundancy

FEATURES

- Mark III SLURRY CHIEF* cement mixing equipment
- Ability to meter mixing fluids and dry cement
- Nonradioactive densitometer (NRD)
- Advanced Cement Control (ACC) system
- Stainless steel displacement tanks
- Solids fraction monitoring
- CemCAT* cementing computer-aided treatment
- Two nonroad engines compliant with US Environmental Protection Agency (EPA) Tier 3 emission standards and European emission standards Stage IIIA
- Coiled tubing (CT) sensor interface protocol
- 55-ft³ surge tank

The CPF-577 double-pump cement trailer provides high-pressure pumping services up to 760 hhp with EPA Nonroad Tier 3 and Euro Nonroad Stage IIIA compliant engines.

The trailer is equipped with two triplex pumps and features two 10-bbl stainless steel displacement tanks used to measure fluids. The ACC system—in conjunction with a 6-bbl mixing tub and a 14-bbl density-averaging tank—provides superior density control. It enables accurate mixing of slurries down to 5 lbm/galUS through density or solids fraction monitoring and control.

The trailer also carries its own supply of treating iron, making it completely self-sufficient on all land locations.

The CPF-577 has four direct-drive centrifugal pumps to mix the cement slurry, pressurize the triplex pumps, and deliver water to the unit. CemCAT cementing computer-aided treatment is used with this pump trailer to monitor and record sensor signals at the wellsite during pumping operations.



CPF-577 double-pump cement trailer.

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CPF-577 Specifications

General

Engines	2 × Caterpillar® C13 ACERT™
Capability	475 bhp [354 kW] at 2,100 rpm
Transmissions	2 × Allison Transmission® 4700 OFS
Chassis	Extended drop deck
Engine emissions compliance	EPA Nonroad Tier 3 and Euro Nonroad Stage IIIA

Triplex Pumps

Model	Serva® TPB-600
Plunger diameter	3.5 in [89 mm], standard for both pumps
Maximum pressure	10,000 psi [69 MPa]
Maximum rate	8.0 bbl/min [76 m³/h]

Trailer

Length	492 in [12.5 m]
Width	98 in [2.5 m]
Height	176 in [4.48 m]
Kingpin height	60 in [1.524 m]
Weight with loose equipment	69,446 lbm [31,500 kg]
Trailer suspension	BPW air spring suspension
Tires	11R22.5, eight tires + one spare

CPF-577 Specifications

Slurry Mixing System

Model	Mark III SLURRY CHIEF cement mixing equipment
Maximum mixing rate	60 sacks dry cement/min [2,560 kg/min]
Volume capacity	One 6-bbl [0.95-m³] mixing tub
	One 14-bbl [2.22-m³] averaging tank

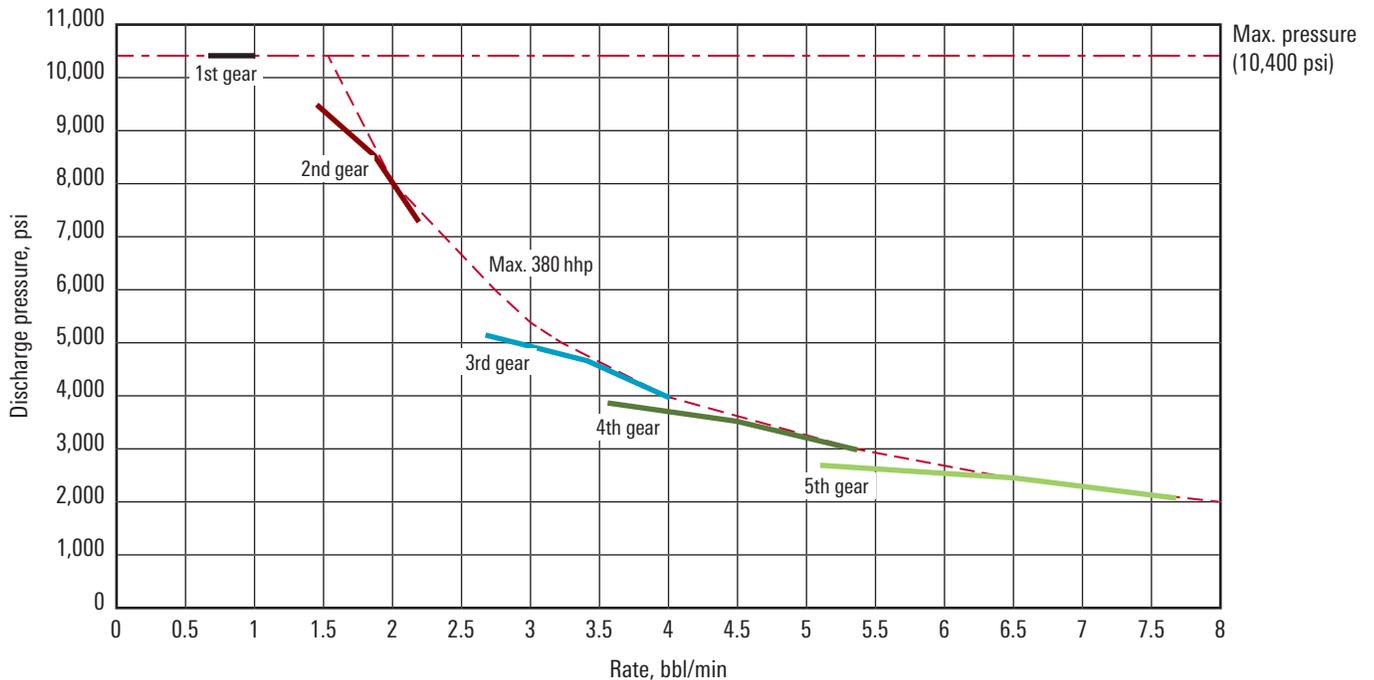
Other

Discharge manifold	15,000-psi [103-MPa] max. working pressure
Displacement tanks	2 × 10 bbl [1.59 m³]
CemNET* advanced loss-control fiber technology feeder	Fiber delivery and metering into cement slurries

Option

Fluid ends	4.0 in [114 mm]: 10.5-bbl/min [1.67-m³/min] max. rate, 7,958-psi [55-MPa] max. pressure
	4.5 in [127 mm]: 13.2-bbl/min [2.09-m³/min] max. rate, 6,288-psi [43-MPa] max. pressure

Caterpillar C13 475 bhp, Allison 4700 OFS, and Serva TPB-600 3.5 in
Engine Speed 1,400–2,100 rpm



CPF-577 pump performance curve.

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