



DRAGON[®]

CAT 3512E Tier IV Final



*picture may not represent listed specification

GENERAL UNIT DESCRIPTION

Each standard unit features the following components:

- Caterpillar 3512E Tier IV Final Diesel Engine, Rated at 2500 BHP
- Caterpillar TH55 Petroleum Transmission
- Dragon Quintuplex Pump
- Dragon Controls with Remote and Cable

TRAILER

Dragon manufactured support structure with a triple-axle skeletal chassis, fabricated from T-1 steel plate.

- King Pin Setting: 18"
- King Pin Mounting Height: 51"
- Axles: 25,000 lb., 77.5" Track, Universal Oil Seals and Bearings, Open Brake Cams, Auto Slack Adjusters
- Brakes: 16.5" x 7" Q Brakes with 30/30 Springs
- ABS: Bendix 4S/2M
- Tires: 255/70R22.5
- Landing Gear: Jost, 2-Speed, 50,000 lb. Capacity
- Bumper: Oilfield Style with Tow Eye
- Electrical: Sealed Modular System with Sealed Beam LED Lights

- Trailer Axles Include Air Dump Valve
- (2) 200 US Gallon Fuel Tanks (*190 Net Gallon Capacity*)

TRAILER DIMENSIONS

- Capacity: 85,000 lb.
- Overall Length: 46'
- Height: 13'
- Overall Width: 8' 6"

ENGINE

A Caterpillar 3512E Tier IV diesel engine, rated at 2500 BHP at 1,900 RPM is mounted on the deck of the trailer.

- Cylinders: 12
- Rated Power: 2,500 BHP at 1,900 RPM
- Air Filters: (4) Dual Elements with Pre-Cleaners
- Exhaust System: Caterpillar Supplied
- EPA Rating: Tier IV Final
- Alternator: Caterpillar Supplied, 24VDC 95 Amp
- Starter: Single Hydraulic
- Oil and Filters: Caterpillar Supplied
- Batteries: (4) 12VDS, Operating in Series, 24VDC System

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COOLING PACKAGE

A cube style cooling package is installed on the front of the trailer.

- Coolers: Lube, Hydraulic, Fuel
- Hydraulics: Rineer Series 37 Hydraulic Motor, Anti-Cavitation Valve, Flushing Valve
- Fan: 81" Fan with (9) Blades Attached to OHL
- Miscellaneous: Surge Tank, Rad Cap and Sight Glass, Access Panel, Front and Rear Tri-Mount, and Support Structure, Steel Signboards

TRANSMISSION

A Caterpillar TH55 Petroleum Transmission with integral torque converter is mated to the deck engine. Driveline includes a steel fabricated rotation guard that is connected to the pump.

- Model: TH55 Petroleum Transmission
- Rated Power: 2,500 BHP at 1,900 RPM
- Flywheel: SAE 0 Wet
- Driveline: GWB 390.65
- Oil and Filter: Caterpillar Supplied
- Cooler: Transmission Cooler Included
- Miscellaneous: Mag Pickup for Driveline Rotation, Converted to BPM Rate by System Controls

PUMP

A Dragon Quintuplex positive displacement pump is mounted on the rear of the unit.

- Pump: Quintuplex Power End
- Fluid End: Valve Over Valve
- Rated Power: 2,500 BHP
- Stroke: 8"
- Gear Box Ratio: 6.353:1
- Maximum Pressure: Dependent on Fluid End Size
- Lube Oil (*Power End*): As Recommended by OEM
- Grease Lube (*Fluid End*): As Recommended by OEM
- Miscellaneous: Driveline Flange as Recommended by OEM

A drip tray is installed below the fluid end, which includes a 3/4" drain plug located on both ends for water to drain. There is also a 3" collar with a removable plug for clean-out underneath the drip pan.

SUCTION MANIFOLD

The suction manifold includes a 6" charge line to the pump that is equipped with 2-4" flapper valves with 4" 206 connections located out the rear of the trailer for ease of hook up. The 4" connections have removable caps attached to the manifold by a chain.

PLUNGER LUBE SYSTEM

The pump's fluid end is lubricated via a 24V grease system that is enclosed in protected housing with a view through the front. Grease is distributed through an independent hose for each cylinder from the system pump. System is activated when the transmission rotation output driveline is above present minimum RPM.

POWER END LUBE SYSTEM

The power end lubrication pump is hydraulically driven by PTO off of the transmission.

- Sight Glass
- Dual High Flow Filters (*25 Micron*)
- Temperature and Pressure Sensor (*Displayed on Pump Control Data Screen*)

A cooler is installed to prevent overheating of the oil. The thermostatic valve controls the flow through the cooler, which allows the oil to bypass the cooler until the minimum oil temperature is reached. The system is also equipped with a relief valve that optimizes the flow of oil to the power end. Lube tank has a manual shut off valve for maintenance purposes.

HYDRAULIC SYSTEM

There is a pressure and a return port mounted on the front of the trailer, located on the passenger side. Ports in the front of the trailer are 1" female pipe and are used to start the engine of the frac trailer from an auxiliary source (*Customer supplied tractor with wet kit.*)

The fan circuit is a closed loop variable speed system, controlled by engine coolant temperature. It utilizes a 33 USG stainless steel hydraulic oil reservoir. A hydraulic oil cooler is mounted in the radiator to cool the fan drive system fluid. The fan drive fluid is filtered through a 10 micron return line filter. The tank includes a filler/breather cap, 2" fill port, a sight glass, and a suction line shut off valve.

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ELECTRONICS

The pump controls are equipped with a local and remote control. The local control components are housed in a weather tight stainless steel enclosure and protected on the top, back and side by an aluminum mounting enclosure. Cable isolators protect the panel from vibration.

The remote control panel is mounted in a suitcase style enclosure and stored on the unit in the aluminum tool box. Included with the unit is a 200' remote cable that is stored on a fixed style wrap, designed to hold the cable and mounted to the side of the local panel protective support frame.

LOCAL CONTROL PANEL

- Engine Diagnostic Light
- Engine Protection Light
- Local Control Touch Screen
- Engine Diagnostic Port (*On Engine*)
- Main Power On/Off Switch
- Engine Ignition On/Off Switch
- Work Lights On/Off Switch
- Remote Control Cable Connection Port
- Over Pressure Instant Neutral System
- 15,000 psi Transducer
- Emergency Shutdown Button

REMOTE CONTROL PANEL

- Remote Control Touch Screen
- Remote Cable Control Port
- Emergency Shutdown Button
- Neutral Direct Button
- Throttle/Rate Control/Pump Pressure Controls and Display

STORAGE

Top hinged lid tool box, located on the passenger side of the trailer behind the fuel tank.

DOCUMENTATION

Each unit is provided complete with two (2) sets of data and equipment manuals for the purchased components, as available from and supplied by the component manufacturer. Documents will be supplied as manuals and (1) set in electronic form, where applicable.

PAINT

Paint color specification to be supplied by customer, (2) color maximum. Additional colors are available for an additional charge.

OPTIONS

- Discharge Bridle
- Cold Weather Package
- Multi-Pump System
- Data Tracs Data Acquisition System
- Hydraulic Starter Package
- 2" Iron Racks
- Other Options as Requested by Customer