

POWER UNIT:

Installed on the trailer will be two (2) Cummins QSX 15 Tier 3 certified engines rated 630 BHP @ 2100 RPM.

- 630 horsepower @ 2100-1900 RPM, peak torque of 1874lbft at 1400 rpm
- Altitude capability before derate 5,000 feet elevation
- Electronic control module
- High mount front out turbo charger
- Holset dry type turbo chargers
- Dry type exhaust manifolds
- Lube oil pump
- Fan hub .85:1 19" CL.
- Water pump
- Engine accessory drive location
- Vibration Damper
- Spin off Fuel filters
- SAE 1 Flywheel Housing for wet application
- SAE 1 Flywheel for use with Allison 5000 series transmissions
- Engine Fuel Pump
- Fuel system accessories
- Air Intake Manifold
- Spin-on Lube oil filters mounted
- Oil Dip Stick and fill arrangement for serviceability
- Spin-on oil bypass filters
- 24 volt starter
- 24 volt alternator – 100 amp
- 18.7 CFM air compressor with 100-120 psi governor
- Corrosion resistor water filter mounted
- Water inlet connection
- Water outlet connection
- Exhaust outlet connection
- Emergency kill on charge air piping with Amot flapper

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TRANSMISSION:

Installed on the trailer will be two (2) Allison 6610 transmissions. These transmissions will be coupled to the the Cummins QSX 15 engines mentioned above.

- Manual/ electric valve body
- 12V Rotary shifter
- Tube and Shell water to oil transmission cooler
- 1880 Spicer output flange

COOLING SYSTEM:

Installed on the trailer will be two (2) Allison 6610 transmissions. These transmissions will be coupled to the Cummins QSX 15 engines mentioned above.

FUEL SYSTEM:

Installed on the top deck of the trailer will be two (2) 300 gallon aluminum fuel tanks. The fuel tanks will be mounted in a side to side configuration. The fuel tanks will be plumbed together. There will be separate fuel supply and return lines supporting each Cummins engine. The fuel supply to the engines will be pulled from one tank and the fuel return will return to the other tank. The fuel tanks will be supplied with fuel indicator gauges in each tank.

TRAILER:

The trailer will be fabricated out of A656 grade material. Below are the included items:

- Top Flange- ½" 90 KSI Tensile
- Bottom Flange- ½" 90 KSI Tensile
- Webs- 50 KSI Tensile
- Cross members- 50 KSI Tensile
- Rear Bumper included with tow loop
- Kingpin- 2" SAE welded in
- Landing Gear – Holland
- Suspension/ Axles- Hendrickson INTRAXX 25K Air Ride or Equivalent
- Wheels- Steel 22.5
- Tires- 11R22.5 14 Ply (Michelin XZY-3)
- Brake System- Wabco ABS 4S-2M
- Lighting- Grote, sealed harness
- Fenders- Aluminum round rear

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TRIPLEX PUMPS:

Installed on the trailer in a side to side configuration will be two (2) Demay HT-500 triplex pumps.

- Companion Flange- 1800 Series Spicer
- Input Spline- 3"-10
- Input Rotation- Clockwise
- Input Speed- 2100 RPM Max
- High strength steel weldment
- Oil Capacity- 22 gallons
- Oil Pressure- 80-100 psi
- Horizontal Tri-plex, three piece forged steel
- Single acting one piece plungers. 4" size plungers
- Packing- Long Life, CDI short stack
- Discharge Elbows- straight blank, elbow flanges with 2002 connections. Two each
- 15,000 PSI Max
- Lube System – Tuthill 100 GPM external
- Packing Lubrication- Grease injection system
- 5" suction manifold

DISPLACEMENT TANK:

Installed on the trailer above the Allison transmissions will be a two compartment 22 BBL stainless steel displacement tank.

- Stainless Steel tank, Open topped
- Overflow pipe installed in each compartment
- Rock screens installed in the bottom of each compartment
- Barrel counter washers for each compartment
- Paddles in each compartment

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OPERATOR PLATFORM:

Installed between the displacement tank and the triplex pumps will be an elevated operator platform.

- Handrails around the outer perimeter of the platform
- One fold up access ladder will be installed on the road side of the unit
- Control Console will be centered on the curb side of the platform
- Grease injection system for the fluid end packing lubrication system will be mounted on the rear hand rails for easy access
- Work lights will be mounted on the platform in the rear facing each triplex pump
- Fibergrating floor on the deck of the platform

HYDRAULIC SYSTEM:

Installed on the unit will be a complete hydraulic system. There will be one hydraulic circuit for each of pump.

- Hydraulic reservoir complete with the appropriate baffles, suction strainers, ball valves, filters, etc
- Two (2) Sundstrand Series 90 Hydraulic pumps
- Three (2) Sundstrand hydraulic motors
- Two (2) 6" x 5" Mission Magnum centrifugal pumps or equivalent. These are the boost pumps to supercharge fluids to the suction manifold of the triplex pumps
- Applicable return filters and manifolds
- Redundant hydraulic system

ELECTRICAL CIRCUIT:

Installed on the unit will be an electrical circuit for each of the pumping units. The main junction box for the electrical controls will be located under the control console on the operator's platform.

- Two (2) battery disconnect switches
- 24V batteries for each pumping unit
- Fuse panel
- Junction Box
- Six (6) flood lights positioned around the unit for night operations
- Redundant electrical circuit

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CONTROL PANEL:

Installed on the operator platform will be a control console with panel. The following items will be installed in the control panel:

- Stainless Steel panel with engraving and etched
- Flip open style aluminum hood for panel protection against the elements
- Electronic rate and pressure meters (2)
- Totco Analog pressure gauge (2)
- Electric start switch
- Electronic throttle pot for engine speed control
- Transmission manual/ electric shifter
- Engine temperature gauge (2)
- Engine oil pressure gauge (2)
- Transmission temperature gauge (2)
- Transmission oil pressure gauge (2)
- Hydraulic temperature gauge
- Hydraulic pressure gauge
- Triplex boost pressure gauge (2)
- Boost Pump hydraulic control valve (2)
- Fill Pump hydraulic control valve (1)
- Murphy M310 Engine display panel (2)

LOW PRESSURE PIPING:

All of the low pressure piping will be fabricated out of 5" schedule 40 pipe.

- Boost Pumps- Each boost pump will be supplied with a manifold connected to the suction side of the boost pump. The manifold will be equipped with two (2) 4" Fig. 206 unions for connection to an outside source. The suction side of the centrifugal pump will also be piped to the displacement tank. All appropriate flanges and valves will be used in the circuit to allow for fluid transfer from one compartment of the displacement tank at a time or in tandem. The discharge side of the boost pumps will be connected to the suction manifold of the triplex pumps to supercharge fluids to the pump. Each boost pump will supply fluids to each triplex pump independent of the other.
- All butterfly valves will be equipped with air actuators for pneumatic control from the operators cabin.

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HIGH PRESSURE PIPING:

All discharge iron will be rated for 15,000 working pressure. The discharge iron will have Fig. 1502 connections.

- Release Manifold- A release manifold will be installed on the unit. The release manifold will include all of the high pressure iron, swivels and plug valves required. The release manifold will dump back to the displacement tank. The high pressure iron will connect between each triplex pump and be routed to the displacement tank. There will be one 1" x 2" plug valve on the fluid end of each triplex pump to allow the release of pressure from the pump back to the displacement tank.
- Discharge Manifold- The discharge manifold will consist of the following one style 50 swivel joint, one 2" X 2" plug valve and one pup joint to reach the ground. At the rear of the trailer the high pressure iron will terminate with a saddle mount to secure the high pressure pipe for transport. There will be one relief valve per pump installed on the discharge elbow of each pump.

EQUIPMENT TESTING:

The unit will go through a full load test before shipment to the customer. Each pump will be tested at full load in each gear for fifteen minutes. The customer will receive a completed copy of the test report

MISCELLANEOUS:

- All parts and material will be of new. There will be no used parts and or equipment installed on the unit
- All hydraulic, pneumatic and electrical lines will be protected where required
- All holes will be drilled
- A complete set of operations and maintenance manuals will be provided with the unit
- Pup Joint Racks on top deck of trailer
- Tool Box on top deck of trailer
- Pup Joint racks on lower deck of trailer
- Chicksan racks on lower deck of trailer