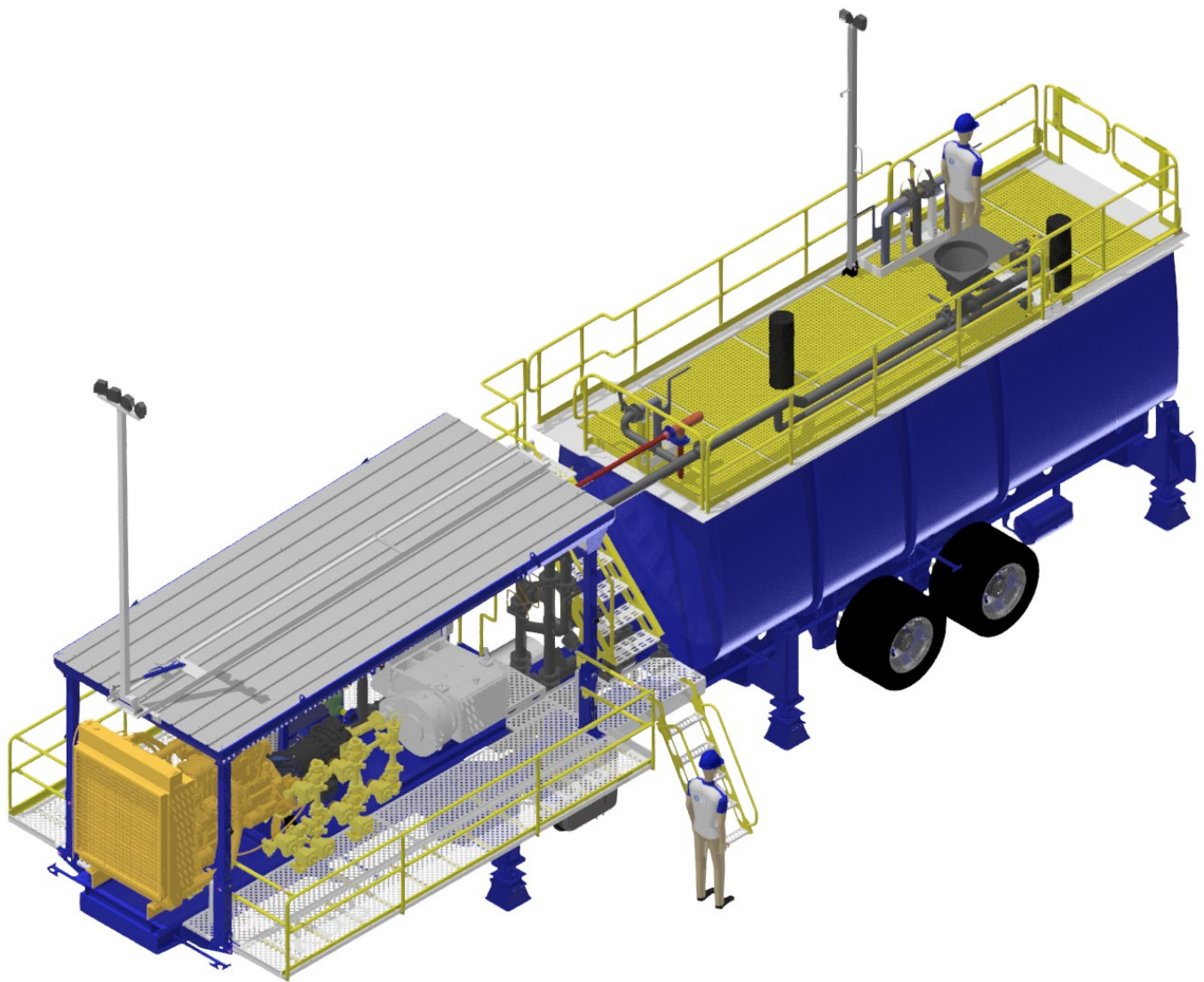


XDR Mudtrailer



Exploration Drill Rigs Pty

3060 MUD TRAILER SPECIFICATION

TRAILER SPECIFICATION

- Overall Transport dimensions: 14,060mm (L) x 2495mm (W) x 4300mm (H). GVM 30,000 kg.
- Custom designed, manufactured and RVCS compliant trailer chassis complete with ADR compliant lighting and marking systems.
- Twin Hendrickson Axles with Wabco EBS braking system.
- SAF Holland King Pin and Landing Legs.

DIESEL ENGINE SPECIFICATION

- One (1) new Volvo TAD1345VE Engine.
- 534-horse power at 2,100 RPM.
- One (1) front radiator mounted cooling system. Unit is complete with pressure relief valve and mesh guard protection. As designed by Volvo supplier.
- Air charger.
- Air inlet shutoff valve.
- High ambient radiator assembly with fan, guard and fan control.
- Complete gauge panel with gauges, switches and sensors via HMI screen.
- Electric starting.
- Engine mounted transmission oil cooler.
- Two 8D batteries installed with cables and connections in enclosure with Electrical lock out installed.
- 24V brushless alternator.
- Engine kill valve located at operator's control panel connected to a positive air shutoff valve mounted on the engine's air intake.

TRANSMISSION SPECIFICATION

- One (1) Allison Model 4700 OFS or equivalent.
- Built in torque converter with single output shaft.
- Transmission valve body configured to dual mode power shift.
- Transmission control module (TCM).
- PLC controlled gear changes and engine RPM.
- Engine, transmission and triplex pump are mounted on a torque tube structure on the trailer gooseneck.

EXHAUST SPECIFICATION

- Spark arresting muffler installed in engine enclosure.
- Engine exhaust manifold, exhaust piping, turbo charger and spark arresting muffler are covered with a high-grade fiberglass to eliminate potential vapor ignitions while operating.
- Exhaust exit is vertically through the roof and is equipped with a rain cap.

ENGINE MOUNTING SPECIFICATION

- Engine and transmission mounted in an enclosure to ensure safe and quiet operation.
- Enclosure includes noise reducing materials to reduce operating noise.
- Air flow baffles installed in enclosure to ensure adequate engine cooling.
- 490L capacity fuel tank incorporated into the support structure.

TRIPLEX PUMP SPECIFICATION

- Jereh 600s horizontal triplex plunger pump 4.0" plungers.
- Suction mounted pulsation damper as per manufacturer's instructions.

CHARGE PUMP SPECIFICATION

- Two (2) 11Kw 415V charge pumps. The discharge manifold is configured for 100% redundancy if one of the centrifugal pumps fails;
Note: One pump is used for charging while the other is in use for mixing and be swapped between functions by changing the valve sequence.

TRANSFER/MIX PUMP SPECIFICATION

- One (1) 11Kw 415V transfer/mixing pump.

HIGH PRESSURE MANIFOLD SPECIFICATION

- Manufactured using 1502 fittings.
- Swing type check valve.
- Digital Pressure Gauge and Sensor.
- Pulsation Damper - Hydac type.
- Oteco shear type pressure relief valve.

SUCTION PIPING SPECIFICATION

- 6in suction piping to onboard charge and transfer/mix pump.
- 4in outlets on both tanks for external pumps.
- Y-strainer in intake line to triplex.
- 3in intake on 4in line to Charge pump to allow remote pumping to triplex.
- **Blanking caps on all suction and drain points to be fitted with secondary retention.**

PNEUMATIC VALVE SPECIFICATION

- Full PLC control of operational valves using pneumatic actuators.
- Valve position feedback with PLC display of valve position.
- Pre-set valve positions to enable quick operational changes and minimise errors.
- Full manual control of each valve for complete flexibility.

CHOKE MANIFOLD SPECIFICATION

- Frame mounted eight (8) valves 2" x 5000 P.S.I. working pressure. The valves will be manually operated slab gate API 6A certified, bi directional.
- One (1) choke valve
- 5 tonne rated whip checks for each hose connection point.

MUD TANK SPECIFICATION

- Tank Dimensions: Length 6m x Width 2.4m x Height 2.5m.
- All internal surfaces are polymer lined.
- Main Tank Capacity: 134 BBL.
- Two (2) 6in suction outlets for charge and transfer/mix pumps.
- Two (2) 4in external suction/fill outlets.
- One (1) 4in drain/cleaning port.
- Pill Tank Capacity 58 BBL.
- One (1) 6in suction outlet for charge and transfer/mix pumps.
- Two (2) 4in external suction/fill outlets.
- One (1) 4in drain/cleaning port.
- Permanent tank top platform within transport height requirements. Compliant with AS1657.
- Non-slip grating used to prevent water build up and reduce the risk of slip injuries.
- Pallet storage on rear tank floor with direct access to mixing hopper.
- Davit arm 3" sockets installed in tank platform to allow for safe access to confined space in tank.
- Ladder in each tank.

MUD TANK EQUIPMENT SPECIFICATION

- Two (2) Jet mud guns mounted in the Main Tank.
- One (1) Jet mud gun mounted in the Pill Tank.
- Venturi type Mud Mixer/Hopper.
- Two (2) IECEx rated ultrasonic or equivalent tank level sensors, one per tank.

WELL RETURNS TO TANK

- Well pressure relief gate valve and piping to tank
- Well returns to tank
 - 1502 connection to tank.
 - Manual valves to direct flow to either main tank or pill tank.

CONTROL SYSTEM SPECIFICATION

- Full PLC Control of mud pump system.
- Operator's set points for flow and pressure requirements.
- Digital readouts for charge pressure, discharge pressure and discharge flow rate.
- Digital readouts for Main Tank and Pill Tank levels.
- Electronic stroke counter.

HYDRAULIC SYSTEM SPECIFICATION

- One (1) 24V Electric-Hydraulic Power Pack for setup/pack up operations.
- Six (6) manual hydraulic steadies with mechanical locking devices to ensure safe operation of the mud trailer when the tank is full.
- Two (2) manual hydraulically actuated platforms.
- One (1) manual hydraulically actuated light tower.

ELECTRICAL SYSTEM SPECIFICATION

- 415V electrical supply for charge pumps.
- All lights are 24V:
 - Two (2) strip lights mounted above engine area for operations and maintenance.
 - One (1) light including emergency backup mounted over operator's area and stairs.
 - Four (4) LED floodlights mounted on hydraulically actuated light tower. Height of lights from ground is 7.9m.
 - Two (2) LED floodlights mounted on manually actuated light tower above the mud tank. Height of lights from top of tank is 3.1m.
- **4 of welded earthing pucks, 50mm diameter, 25mm high with M10 thread.**

OPERATORS AREA SPECIFICATION

- Control desk and operating area mounted under roof to provide shelter for the operator;
- Hydraulically operated platforms on all sides of engine and mud pump for complete maintenance and operational access at all times;
- Platforms, handrails and stairs are all compliant with AS1657.

STORAGE SPECIFICATION

- Storage for six (6) lengths of 2" 5000psi hard line.

XENON LIVE INTEGRATION

- Complete control of mud pump system from the XDR Rig Drillers Console.
- Wireless communication for ease of setup and operation.
- Safety interlocks to prevent dual control.

HIGH PRESSURE HOSE REEL

- One (1) hydraulically driven hose reel mounted to rear of mud trailer.
- 30m of 5000psi hose with integral 1502 hammer union fittings.
- Bypass plug valve fitted in event of failure.

6000PSI CAMERON GAUGE

- One (1) 6000psi Type F Cameron Gauge with 1502 Hammer Union fitted to high pressure pipework.

CHARGE PUMP ELECTRICAL DISCONNECTS

- Marechal Electric plugs and sockets fitted to all pumps for ease of maintenance.
- Plugs to be IP67 rated.

CHARGE PUMP STRAINERS

- Three (3) suction Y-strainers in suction circuit.
- One strainer per pump fitted between isolation valve and pump for ease of maintenance.

SPARES TOOLBOX

- One (1) toolbox installed for mud pump critical spares.
- Compartmentalised for safe and secure storage of critical components prevent damage during transport.
- Customisable to suit customer requirements.

JACK PAD STORAGE – MUD TRAILER

- Storage for six (6) jack pads (600mm x 600mm x 50mm) for jack stools.

150NB PIPEWORK

- All mixing pipework to be supplied as 150NB (6in) pipework and valving.
- Supply of 150NB (6in) Venturi mixer to suit.

WELL RETURNS SAND TRAP

- Two (2) Well Returns sand traps, one per tank.
- Removable stainless steel basket strainer with access from tank platform for ease of inspection and maintenance.

ADDITIONAL FUEL STORAGE

- Additional 300L of fuel capacity bringing total capacity to an overall 800L.

ADDITIONAL FORWARD LIGHTS

- Two (2) additional flood lights mounted to engine canopy pointed forward.
- Standard 24V LED supply running as working lights not emergency lights.

TRAILER FITOUT – MUD TRAILER

- Four (4) of wheel chocks to comply with trailer weight requirements.
- Storage for wheel chocks.
- Ring type wheel nut indicators fitted to all wheel nuts.
- Placard showing required wheel nut torques.