- **Engine**: Deutz TCD 2015 V8
- **Power**: 500kW (680 CV)
- **G.V.W.**: 87,850 kg
- **Payload**: 50,000 kg
- **Capacity Struck**: 23 m³
- **Heaped (SAE 2:1)**: 32 m³
**ENGINE**

Diesel V8 90°-angle, intercooler 4-valves, electronic injection system with solenoid valves.

Emissions: EU 2004/96 Stage 3A (Europa) ed EPA Off-road Tier3 (USA)

Make and type: ................... DEUTZ TCD 2015 V8

Stroke x bore: ........................................ 132x145 mm

Total displacement: ................................ 15900 cm³

Max power: ................ 500kw (680CV) @ 2100rpm

Max torque: ................ 2800 Nm @ 1300-1500 rpm

Cold start -26°C

**PERFORMANCE**

With 21.00R35 tyres

<table>
<thead>
<tr>
<th>gears</th>
<th>gear ratio</th>
<th>Km/h</th>
<th>mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4,00</td>
<td>10,2</td>
<td>66,3</td>
</tr>
<tr>
<td>2</td>
<td>2,68</td>
<td>15,2</td>
<td>9,4</td>
</tr>
<tr>
<td>3</td>
<td>2,01</td>
<td>20,3</td>
<td>12,6</td>
</tr>
<tr>
<td>4</td>
<td>1,35</td>
<td>30,2</td>
<td>18,7</td>
</tr>
<tr>
<td>5</td>
<td>1,00</td>
<td>40,8</td>
<td>25,3</td>
</tr>
<tr>
<td>6</td>
<td>0,67</td>
<td>60,8</td>
<td>37,7</td>
</tr>
<tr>
<td>1 RM</td>
<td>5,15</td>
<td>7,9</td>
<td>4,9</td>
</tr>
<tr>
<td>2 RM</td>
<td>3,46</td>
<td>11,8</td>
<td>7,3</td>
</tr>
</tbody>
</table>

**TRANSMISSION**

Automatic transmission Allison H6610A with 6 forward speeds and 2 reverse. Hydraulic torque converter, stall torque ratio: ................................. 1:1,77.

**REAR AXLE**

KESSLER axle.

Dual reduction: central by bevel gear pair and final in wheel hubs by planetary gear.

Central reduction ratio: ................................. 1:3,273

Final reduction ratio: ................................. 1:5,895

Total reduction ratio: ................................. 1:19,29

Optional: Rear axle ratio: ................................. 1:22,2

**ELECTRICAL SYSTEM**

2 batteries: ................................. 12V / 170Ah

Voltage: ................................. 24V

Alternator: ................................. 28V / 80Ah

Starter: ................................. 6,6kw

All cables are coded, covered and fastened to the chassis.

CAN bus Simple-Mux system between engine control unit (ECU), gearbox and Body Computer.

New cluster with high definition multifunctional colour display.

New Black Box able to manage 140 records for each memory area.

Optional: Rear view camera with cluster integrated display (3" ½ ).

Rear view camera with monitor in the cab (4" ½ ).

**STEERING**

Meets ISO5010, SAE J1511.

Hydraulic steering (ORBITROL), with Q-amp system and 2 double acting cylinders.

Gear pump flanged to the gearbox.

Max working pressure: 210 bar

Radial piston emergency pump driven by the transmission.

Adjustable steering column/wheel.

**BRAKES**

Independent circuits, complying with SAE and ISO 3450.

Service brake: pneumatic/hydraulic controlled dry disc for front axle, oil-cooled multiple disc for rear axle.

Parking brake: pneumatically controlled disc brake on propeller shaft, rear axle power take-off.

Auxiliary service brake: pneumatically controlled disc brake on oil-cooled multiple disc brakes on rear axle acting as retarder. Pedal activation.

Optional: Hydraulic retarder between torque converter and gearbox.

**SUSPENSION**

Front: independent steering wheels, hydro-pneumatic suspension cylinders (oil-nitrogen) acting as suspension/shock absorber.

Rear: semi-independent with three reaction rods plus Panhard type cross bar. Two hydro-pneumatic cylinders (oil/nitrogen) acting as suspension/shock absorber.

Optional: front suspension gas charger kit.
**BODY TIPPING SYSTEM**

Two body hoists installed outside the frame rails. Two-stage telescopic cylinders with power down in the second stage. Two gear pumps driven by a gearbox PTO (flow: 320 l/min @ 1500 rpm) Tipping valve with on/off electropneumatic control, with possible mechanical control for emergency or service.

**BODY**

Walls and bottom in high abrasion resistance steel. Hardness: HB400

- Bottom thickness: 12 mm 0.47 in
- Side walls thickness: 10 mm 0.39 in
- Front thickness: 12 mm 0.47 in

- Elastic pads between body and chassis.

- Tipping angle: 65.5°
- Tipping time: 12"
- Lowering time: 12"

- Body heating system.

**CHASSIS**

Built in high resistance steel.

Two extruded rectangular side members linked by stiffening cross members supporting the front and the rear suspensions systems.

**GREASING SYSTEM**

15 points centralised greasing system. Optional: automatic central greasing system with a variable amount of grease according to the conditions of vehicle use.

**FLUID CAPACITIES (l)**

For fluids specifications, refer to the Use and Maintenance Manual.

- Engine oil: 48 l 12.6 US Gals
- Gearbox oil: 68 l 17.9 US Gals
- Cooling circuit: 80 l 21.1 US Gals
- Fuel tank: 600 l 158.5 US Gals
- Rear axle: 100 l 26.4 US Gals
- Hydraulic system oil: 550 l 145.2 US Gals
- Brakes hydraulic system oil: 24 l 6.3 US Gals
- Final reductions oil (each): 7 l 1.8 US Gals

**WEIGHTS Kg**

<table>
<thead>
<tr>
<th></th>
<th>TARE (*)</th>
<th>PAYLOAD</th>
<th>TOTAL WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kg</td>
<td>lb</td>
<td>kg</td>
</tr>
<tr>
<td>Front axle</td>
<td>20.290</td>
<td>44.732</td>
<td>9.810</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30.100</td>
</tr>
<tr>
<td>Rear axle</td>
<td>17.560</td>
<td>38.713</td>
<td>40.190</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.750</td>
</tr>
<tr>
<td>Total</td>
<td>37.850</td>
<td>83.445</td>
<td>50.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>87.850</td>
</tr>
</tbody>
</table>

* Tare including fuel, lubricants and driver (75 kg / 165 lb)

**INSTRUMENTS**

On-board computer with digital/analogic instrumentation and performance/fault messages to manage all vehicle operating information (levels, warning lights, etc.).

- Advanced vehicle diagnostics system: management, display and storage of engine, transmission, steering system, braking, body tipping and service pneumatic system data.
- Emergency engine switch in the cab.
- Connection for data download and analysis.
- Trip computer for vehicle productivity analysis.

Optional: Ground emergency engine switch.

**PNEUMATIC SYSTEM**

Two-cylinder air compressor. Air drier.

Air tanks n° 5: 30 l

Pneumatic circuit for tipping system, parking brake, auxiliary service brake, suspension seat, horn and air take up in the cab.

**CAB**

Complying with FOPS ISO 3449 level II.

- In steel, soundproof and installed on the left side.
- Compressed air quick coupling for cab cleaning.
- Athermic glasses.
- Door with glazing in the lower part for maximum visibility.
- Fully adjustable air suspension central operator seat with safety belts.
- Instructor seat with safety belts.
- Cab suspension with elastic pads.
- Windscreens sunvisor.
- Automatic climate control with pollen filter.

Optional:
- Work lights on the top of the cab.
- RDS radio.
- Refrigerator.
To determine gradeability performance, read from G.V.W. down to the percent of total resistance. From this point, read horizontally to the curve with the highest obtainable gear, then down to the maximum speed.

To determine retarding performance, read from G.V.W. down to the percent effective grade. From this point, read horizontally to the curve with the highest obtainable gear, then down to the maximum descent speed brakes can properly handle without exceeding cooling capacity.

### ROLLING RESISTANCE

<table>
<thead>
<tr>
<th>Road surface features</th>
<th>for gross weight</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black top - Concrete</td>
<td>15kg</td>
<td>1.5%</td>
</tr>
<tr>
<td>Hard packed soil</td>
<td>20kg</td>
<td>2.0%</td>
</tr>
<tr>
<td>Mud on packed soil</td>
<td>40kg</td>
<td>4.0%</td>
</tr>
<tr>
<td>Packed snow</td>
<td>25kg</td>
<td>2.5%</td>
</tr>
<tr>
<td>Soft snow</td>
<td>45kg</td>
<td>4.5%</td>
</tr>
<tr>
<td>Sand - Gravel</td>
<td>100kg</td>
<td>10.0%</td>
</tr>
</tbody>
</table>
Dimensions in mm/inch
Vehicle with tyres 21.00R35
Height with unloaded vehicle*
External turning diameter: 10910 mm
Internal turning diameter: 11910 mm