BELAZ-7513 mining dump truck
with payload capacity of 130-136 tonnes

It's designed for transportation of rock in difficult mining conditions of deep mines, in open pit mining of mineral deposits on roads under various climatic operating conditions (at ambient temperature from -50 to +50 °C).

**Engine**
- Rated power @ 1900 rpm, kW (hp): 1194 (1600)
- Maximum torque @ 1300 rpm, N·m: 6836
- Number of cylinders: 12
- Cylinder diameter, mm: 45
- Cylinder displacement, l: 159
- Piston stroke, mm: 190
- Specific fuel consumption at rated power, g/kW·hr: 209

Air cleaning is performed by three-stage filter with dry-type elements. Exhaust gases evacuation is made through body structure. Lubrication system is of forced circulation type under pressure with "wet" crankcase oil pan design. Cooling systems is of single-circuit fluid type with forced circulation. Oil cooling is through water-to-oil heat exchanger. Starting preheating systems is of fluid type. Starting system features pneumatic starter. Electric system voltage, V: 24

**Transmission**
AC electric drive with traction alternator, two traction electric motors, motor-wheel reduction gear units, microprocessor control system, adjustment and control devices.
- Max speed, km/h: 64
- Motor-wheel reduction gear unit ratio:
  - produced by General Electric: 28.80
  - produced by BELAZ: 30.36

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traction alternator</td>
<td>5GTA22W</td>
</tr>
<tr>
<td>Traction electric motor</td>
<td>5GEB31A, 5GEB23E</td>
</tr>
</tbody>
</table>

**Suspension**
Conventional suspension for front and rear wheels, cylinders are pneumohydraulic (nitrogen and oil) with in-built hydraulic damper, two cylinders both on the front axle and on the rear axle.
- Cylinder piston stroke, mm:
  - front: 320
  - rear: 190

**Hydraulic system**
Combined hydraulic system for body hoist, steering and brake system. Body hoist cylinders are telescopic with three stages and one stage of doubleaction.
- Oil pumps of axial-piston variable-flowtype:
  - Body raising time, s: 20
  - Body lowering time, s: 18
  - Max pressure in hydraulic system, MPa: 18
  - Max delivery of pumps @ 1900 rpm, dm³/min: 474
  - Filtering degree, µm: 10

**Steering**
Hydrostatic
- Steerable front wheels:
  - Steerable wheel rotation angle, degrees: 42
- Turning radius, m: 13
- Overall turning diameter, m: 28
- Complies with ISO 5010 requirements.

**Cab**
Two-seat, two-door, with an additional seat for the passenger and pneumatically cushioned adjustable operator's seat. The cab meets the requirements of EN 474-1 and EN 474-6 for permissible limits of internal sound levels, vibration, concentration of poisonous substances and dust. Operator workplace complies with ROPS safety system requirements.
- Noise level inside the cab is not more than 80 dB(A).
**Weight**

- Maximum payload capacity of dump truck equipped with tires 33.00-51, kg: 130000
- Maximum payload capacity of dump truck equipped with tires 33.00R51, kg: 136000
- Empty weight, kg: 109500
- Gross weight, kg: 239500-245500

**Weight distribution on axles, %:**
- Empty:
  - Front axle: 50.9
  - Rear axle: 49.1
- Loaded:
  - Front axle: 33.0
  - Rear axle: 67.0

**Refill capacities, l**

- Fuel tank: 1900
- Engine cooling system: 430
- Engine lubrication system: 195
- Hydraulic system: 510
- Motor-wheel reduction gear units: 92 (46x2)
- Suspension cylinders:
  - Front: 63.2 (31.6x2)
  - Rear: 58.2 (29.1x2)

**Special equipment**

- Fire-fighting system with remote control (standard)
- Engine liquid preheater (standard, except for tropical modification of dump trucks)
- Video surveillance system (standard)
- Automatic centralized lubrication system (standard)
- Telemetering tire inflation control system (standard)
- Loading and fuel control system (standard)
- High-voltage proximity alarm (standard)
- Heater and conditioner unit (standard)
- Fettling of the bottom body (option)
- Combined fire-fighting system with automatic control and subsystem in the rear axle (option)
- Rock deflectors (option)

**Frame**

Frame is a welded structure of high-strength low-alloyed steel. Longitudinal box-section variable height side rails are interconnected by cross-members. Castings are applied in highload zones.

**Traction and braking performance**

**Braking system**

The braking system meets international safety requirements according to ISO 3450 and comprises service, parking, auxiliary and emergency brakes.

- **Service brake:**
  - Front wheels – dry disk brakes with automatic clearance adjustment.
  - Rear wheels – dry disk brakes with automatic clearance adjustment.
  - The disks are mounted on the shafts of traction electric motors.
- **Parking brake:**
  - Constantly closed brake gears for rear wheels.
  - Spring actuation, hydraulic control.
- **Auxiliary brake:**
  - Electrodynamic braking with traction electric motors in alternator mode with forced air cooling of brake resistors.
- **Emergency brake:**
  - Parking brake and intact circuit of service brake are used.
- **Brake resistors:**
  - 17EM137
- **Power dissipation, kW:**
  - 1865

**Weight distribution on axles, %:**
- Empty:
  - Front axle: 50.9
  - Rear axle: 49.1
- Loaded:
  - Front axle: 33.0
  - Rear axle: 67.0

**Refill capacities, l**

- Fuel tank: 1900
- Engine cooling system: 430
- Engine lubrication system: 195
- Hydraulic system: 510
- Motor-wheel reduction gear units: 92 (46x2)
- Suspension cylinders:
  - Front: 63.2 (31.6x2)
  - Rear: 58.2 (29.1x2)

**Special equipment**

- Fire-fighting system with remote control (standard)
- Engine liquid preheater (standard, except for tropical modification of dump trucks)
- Video surveillance system (standard)
- Automatic centralized lubrication system (standard)
- Telemetering tire inflation control system (standard)
- Loading and fuel control system (standard)
- High-voltage proximity alarm (standard)
- Heater and conditioner unit (standard)
- Fettling of the bottom body (option)
- Combined fire-fighting system with automatic control and subsystem in the rear axle (option)
- Rock deflectors (option)

**Frame**

Frame is a welded structure of high-strength low-alloyed steel. Longitudinal box-section variable height side rails are interconnected by cross-members. Castings are applied in highload zones.