

Recovery tractor BELAZ-7455B

It's effective at towing of disabled mine dump trucks weighing up to 73000 kg under various road and climatic operating conditions (at ambient temperature from -50 to +50 °C).



Engine

Model	CUMMINS KTTA 19-C
Four-cycle turbocharged and intercooled direct diesel engine with in-line cylinders arrangement.	
Rated power @ 2100 rpm, kW (hp)	522(700)
Maximum torque @ 1400 rpm, N.m	2731
Number of cylinders	6
Cylinders displacement, l	18,9
Cylinder diameter, mm	159
Piston stroke, mm	159
Specific fuel consumption at rated power, g/kW hr	209
Air cleaning is performed by three-stage filter with dry-type elements.	
Engine exhaust expulsion is performed through muffler.	
Mixed-type lubrication system is designed with "wet" crankcase.	
Fluid cooling system with forced circulation is integrated with cooling system of hydromechanical transmission. Hydromechanical transmission oil cooling is performed by oil-to-water heat exchangers.	
Electric starter starting system.	
Electric equipment system voltage, V	24

Hydromechanical transmission

Hydromechanical transmission with complex one-stage four-wheeled torque converter with automatic locking, four-shaft gearbox with friction clutches and electrohydraulic actuator of gear change control, hydrodynamic blade-type retarder.

Hydromechanical transmission 6+1 gearbox ratios:

gears	forward	reverse
1	4,070	4,530
2	2,865	
3	2,045	
4	1,437	
5	1,011	
6	0,722	

Suspension

Suspension is conventional for front and driving axles and equipped with trailing arms, central joints and transverse rods.

Cylinders are pneumohydraulic (nitrogen and oil) with inbuilt hydraulic shock absorber. Two cylinders are on the front axle and two cylinders are on the rear axle.

Cylinder piston stroke, mm

- front	300
- rear	270

Steering

Hydrostatic steering with steerable front wheels.

Steering angle, degree

Turning radius, m

Overall turning diameter with towed dump truck, m

The steering meets ISO 5010 requirements.

Brakes

Recovery tractor brake system meets ISO 3450 international safety requirements and is equipped with service, parking, auxiliary and emergency brake systems.

Service brake system consists of dry-type single-disk brake gears for front and rear wheels with hydraulic actuator separated for front and rear wheels.

Parking brake system is permanently closed shoe brake gear on final drive driving shaft with spring actuator and hydraulic control.

Auxiliary brake system is hydrodynamic retarder on gearbox driving shaft with accelerated actuation time and electrohydraulic control.

Emergency brake system uses parking brake and operable circuit of service brakes.

Hydraulic drive

Hydraulic system is combined for operating equipment, steering and brakes actuator. The system is equipped with gear-type oil pumps.

Maximum pressure in hydraulic system, MPa

Maximum pump delivery @ 2100 rpm, dm³/min

Filtration degree, mcm

Front axle

Welded box-section front axle is equipped with cast ends for joining to stub axles by means of pivots, trailing arm for articulating to frame, bracket for transverse rod.
Camber angle of front wheels, degree

1

Frame

High-strength low-alloy steel welded frame is equipped with box-section variable-height side-members interconnected by cross-members.



Driving axle

Mechanical driving axle is equipped with single-stage bevel final drive, bevel differential with four pinions and planetary hub drives with spur pinions.
Ratios:
final drive 2,73
hub drive 7,62
driving axle total 20,8

Driveline

Driveline consists of two open-type cardan shafts with joints on needle bearings that join hydromechanical transmission to engine and driving axle. Flexible coupling is mounted between cardan shaft and engine. Front cardan shaft is equipped with protective guard.

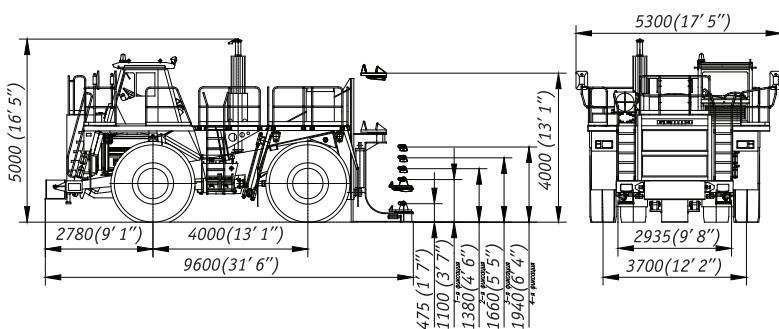
Cab

Two-man two-door cab is equipped with air-sprung adjustable driver seat, additional trainee seat and adjustable steering column. The cab meets EN 474-1 and EN 474-6 requirements that specify permissible levels of in-cab noise, vibration, content of hazardous substances and dust. Driver's workplace meets ROPS and FOPS safety requirements. In-cab noise level is not more than 80 dB(A). Local vibration level is not more than 126 dB(A). Overall vibration level is not more than 115 dB(A).

Tires

Tubeless air tires with quarry tread pattern.
Tire designation 24.00-35 HC42/24.00R35
Inflation pressure, MPa 0,55/0,65
Rim designation 17.00-35/3.5

Overall dimensions, mm*



*Overall dimensions are specified for basic kitting-up of the recovery tractor

Weight

Operating weight, kg 42500
Lower catch load, kg 25000
Upper catch load, kg 40000
Ballast weight, kg 3500

Refill capacities, l

Fuel tank 740
Engine cooling system 210
Engine lubrication system 47
Hydromechanical transmission 90
Hydraulic system 300
Rear axle 108

Mounted towing equipment

Mounted towing equipment consists of fixed bracket with guides; movable bracket with catches that moves along the guides by means of two hydraulic cylinders; ballast for increment of front axle load; sheet guard with ladder for going upstairs from the ground; splash guards of rear wheels.

The recovery tractor is equipped with flashing light and headlights for hitching zone lighting and boxes for storage of accessories. Four levels of movable bracket fixation are provided for towing of different payload capacity dump trucks.

- Distance from the ground, m:
- to first level of fixation - 1,1;
- to second level of fixation - 1,38;
- to third level of fixation - 1,66;
- to fourth level of fixation - 1,94.

Special equipment

- Fire-fighting system (standard)
- Heating and conditioning unit (standard)
- Hydraulic socket for unloading of towed dump truck (standard)
- Hydraulic socket for unbraking of towed dump truck (standard)
- Preheating system (optional)
- Centralized lubrication system (optional)
- Auxiliary heater (optional)



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