TEREX®

TA27

Articulated Truck

MAX. GROSS VEHICLE WEIGHT	48,280 – 103,395 lbs (21,900 – 46,900 kg)
GROSS ENGINE POWER	365 hp (272 kW)
MAX PAYLOAD	27.5 tons (25 t)
HEAPED CAPACITY	20.3 yd^3 (15.5 m^3)

ARTICULATED TRUCK TA27



Specifications

Engine

Make / Model	Cummins QSM 11
Type	Four-cycle, emission certified, direct-injection diesel, 6 cylinder, in-line, water-cooled, turbocharged and aftercooled.
Piston displacement	660 in^3 (10.8 L)
Bore x stroke	4.42 x 5.79 in (125 x 147 mm)
Gross power at 2,100 rpm (SAE J 1995)	365 hp (272 kW)
Net power at 2,100 rpm (SAE J 1349)	335 hp (250 kW)
Maximum torque	1,234 lbf ft@1,400 rpm (1,673 Nm)

Engine emission meets USA EPA Tier 3 / CARB MOH 40 CFR 89 Tier 3 and proposed EU NRMM (non-road mobile machinery directive). 24 volt electric start. 70A alternator. Two 12 volt 175 Ah batteries. Dry-type air cleaner with safety element, automatic dust ejector and restriction indicator. Modulating fan reduces noise level and consumes engine power only when required. Jake brake standard.

Transmission

ZF 6WG 260 RPC fully automatic transmission with manual override. The transmission assembly consists of a torque converter close-coupled to a countershaft type gearbox with integral output transfer gearing. Automatic shifting throughout the range, with kick-down feature. Lockup in all forward gears. A torque-proportioning output differential transmits drive permanently to front and rear axles. This differential may be locked by the driver for use in difficult traction conditions.

	Forward						Reverse		
Gear	1st	2nd	3rd	4th	5th	6th	R1	R2	R3
mph	3.4	5.4	8.4	12.9	19.0	31.3	3.4	8.4	19.0
km/h	5.5	8.6	13.4	20.8	30.7	50.4	5.5	13.4	30.7

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Specifications

Frame

Front and rear frames are all-welded high grade steel fabrications with rectangular box-section beams forming the main side and cross members. Inter-frame oscillation is provided by a large diameter cylindrical coupling which houses nylon bushings. Frames articulate 45° to either side for steering by means of two widely-spaced pivot pins in back-to-back sealed taper roller bearings.

Axles

Three axles in permanent all-wheel drive (6 x 6) with differential coupling between each axle to prevent driveline wind-up. Heavy duty axles with fully-floating axle shafts and outboard planetary reduction gearing. Automatic limited slip differentials in each axle. Leading rear axle incorporates a through-drive differential to transmit drive to the rearmost axle. This differential and the transmission output differential are locked simultaneously using one switch selected by the driver. Hydraulically actuated multi-plate transverse diff-lock differential for 100% cross-axle lockup.

Differential ratio	3.87:1
Planetary reduction	5.71:1
Overall drivetrain reduction	22.12:1

Tires and Wheels

Tires	Standard 23.5 R 25 two star radial	Optional 750/65 R25
Rims	Standard 25 x 19.50	Optional 25 x 22.00
Wheels	5-piece earthmover rims with 12 stud fixing	

Suspension

Front: Axle is carried on the leading arms of a sub-frame which pivots on the main frame. Suspension by rubber elements with four heavy duty hydraulic dampers.

Axle vertical travel	5 in (127 mm)

Rear: Each axle is coupled to the frame by three rubber-bushed links with lateral restraint by a transverse link. Pivoting inter-axle balance beams equalize load on each rear axle. Suspension movement is cushioned by rubber/metal laminated compression units between each axle and underside of balance beam ends.

Axle vertical travel	± 5 in (± 130 mm)
Axle oscillation	± 12°

Pivot points on leading and trailing links are rubber-bushed and maintenance-free.

Brakes

All hydraulic braking system with multiplate sealed and oil cooled disc brake packs at each wheel. Independent circuits for front and rear brake systems.

Parking	Spring-applied, hydraulic-released disc on rear driveline.
Secondary	Secondary brake control actuates rear service and parking brakes.
Retardation	Engine compression brake is standard. Transmission retarder is optional.

Steering

Hydrostatic power steering by two double-acting cushioned steering cylinders with pressure supplied by a variable displacement/load sensing piston pump. Secondary steering pressure is provided by a ground driven pump mounted on the transmission. An audible alarm and warning light indicates should the secondary system activate. System conforms to ISO 5010, (SAE J 53). Steering components are protected by full flow filtration on the return line.

Steering angle to either side	45°
Lock to lock turns, steering wheel	4
System pressure	3,500 psi (241 bar)

Hoist

Two single-stage, double-acting hoist cylinders, cushioned at both ends of stroke. Variable displacement/load sensing piston pump driven from power take-off on transmission. Full flow return line filtration. Full electro-hydraulic hoist control with electronic detente in power down.

System pressure	3,200 psi (220 bar)
Pump output flow rate	77.6 gpm (4.9 L/sec)
Raise time, loaded	12 sec
Power down	7.5 sec

Body

All welded construction, fabricated from high hardness (min. 360 BHN) 145,000 psi (1,000 MPa) yield strength steel.

Plate thicknesses:	Floor and tailchute	0.55 in (14 mm)
	Sides	0.47 in (12 mm)
	Front	0.31 in (8 mm)
Volume:	Struck (SAE)	16.4 yd^3 (12.5 m^3)
	Heaped 2:1 (SAE)	20.3 yd^3 (15.5 m^3)

Service Capacities

Fuel tank	103 gal (390 L)
Hydraulic system (steering & body)	53.4 gal (202 L)
Brake cooling system	52.6 gal (199 L)
Cooling system	14.5 gal (55 L)
Engine crankcase (with filters)	5.8 gal (21.9 L)
Transmission & filters (dry fill)	16.6 gal (63 L)
Transmission & filters (wet fill)	7.4 gal (28 L)
Differential (front)	4.5 gal (17 L)
Differential (center)	4.9 gal (18.9 L)
Differential (rear)	4.5 gal (17 L)
Planetaries (each)	.08 gal (3 L)

Standard Equipment

CAB

Air conditioner R 134A 27,300 BTU/hr (8 kW)
Cigarette lighter, 24V
Coat hook
Engine diagnostic facility
Heater and de-mister 32,400 BYU/hr (9.5 kW)
Hydraulic diagnostic facility RS232
Inspection lamp socket, 24V
Insulation, thermal and acoustic
Interior light
Mirrors, rear view (4)
Mug holder
Radio/cassette player
ROPS/FOPS protection (ISO 3471/3449, SAE J 1040, Apr 88/SAE J231)
Seat belts, retractable (SAE J 386)
Seat, operator air suspension, high back, headrest and adjustable arm rests
Seat, passenger
Steering wheel, tilt/telescopic
Storage compartment
Sun blind
Tinted glass
Transmission visual display unit
Typical noise levels: Operator ear (ISO 6394) 78 dbA
Window protection grille, rear
Wiper and washer, front and rear windows

GAUGES

Fuel level
Hourmeter
Speedometer, with odometer
Tachometer, with hourmeter
Transmission oil temperature
Water temperature

INDICATOR LIGHTS

Direction indicators
Headlight high beam
Turn signals

AUDIBLE ALARMS

Brakes, tractor, low pressure
Brakes, trailer, low pressure
Engine stop
Transmission stop
Steering, low pressure

WARNING LIGHTS

Alternator not charging
Body up
Brake pressure balance
Engine maintenance
Front/rear brake pressures
Check engine
Fuel, low level
Secondary steering
Inter-axle diff. locks "on"
Parking brake "on"
Steering pressure
Stop engine
Transmission "stop"
Warning lights test button
Audible warning of low brake pressure

GENERAL

Air filter, dual element with restriction indicator
Articulation locking bar and oscillation lock pin
Battery master switch
Body prop
Brake splash guards
Diagnostic pressure test points
Downshift inhibitor
Engine hood, hinged
Engine underguard, hinged
Exhaust muffler
Fan, modulating
Horn, electronic 117db
Hydraulic filter restriction indicator
Hydraulic oil cooler
Jake brake
Mudflaps front
Neutral start interlock
Nitrogen inflated tires
Rear light guards
Reverse alarm, audible (SAE J994)
Security kit
Servo body hoist

Standard Equipment (continued)

Tow points, front and rear
Transmission oil cooler with modulating fan
Transmission sump guard
Wet disc oil cooled brakes on all 6 axles

LIGHTS

Headlamps, 4, halogen
Highlevel working lamps
Side, tail, stop, reverse & hazard warning and direction indicators
LED tailights

Optional Equipment

GENERAL

Auto lube system
Cold start kit
Fast fuel adapter
Fire extinguisher
First aid kit
Headlamp guards, hinged
Mirror, front mounted
Mirror, wide angle
Mirrors, heated
Mud flaps, in front of leading rear wheels
Parking brake guard
Seat, heated
Tachograph
Transmission retarder
Television monitor, rear view
Tool kit, hand
Tires, 750/65 R25

BODY OPTIONS

Exhaust heating
Liner plates
Side extensions
Spillguard extensions
Tailgate, scissor-chain operated
Tailgate - underhinged

LIGHTS

Beacon, flashing
Fog, rear
Reverse, flashing
Working, rear-facing

Weights

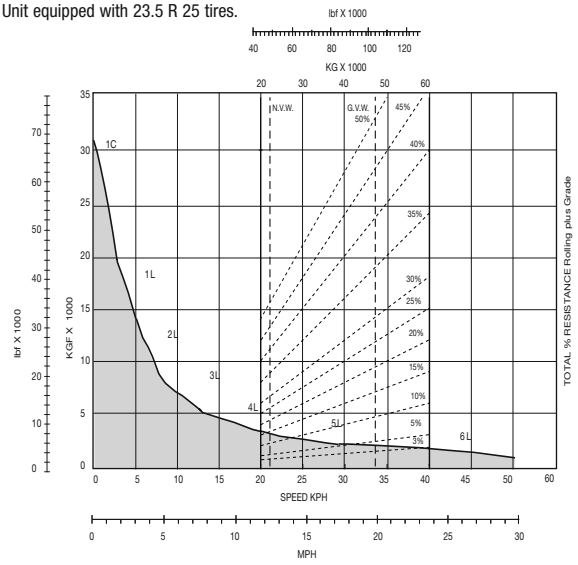
Net Distribution	
Front axle	25,240 lbs (11,450 kg)
Bogie axle, leading	11,400 lbs (5,190 kg)
Bogie axle, trailing	11,640 lbs (5,280 kg)
Vehicle, Net	**48,280 lbs (21,900 kg)**
Payload	**55,115 lbs (25,000 kg)**
Gross Distribution	
Front axle	34,435 lbs (15,620 kg)
Bogie axle, leading	34,325 lbs (15,570 kg)
Bogie axle, trailing	34,635 lbs (15,710 kg)
Vehicle, Gross	148,215 lbs (67,230 kg)
Bare chassis	38,070 lbs (17,270 kg)
Body	9,040 lbs (4,100 kg)
Hoists, pair	1,170 lbs (530 kg)

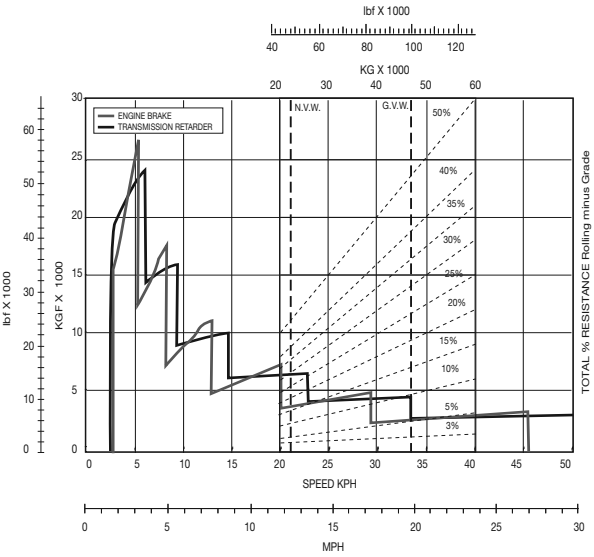
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Performance Data (Graphs Based On 2% Rolling Resistance)

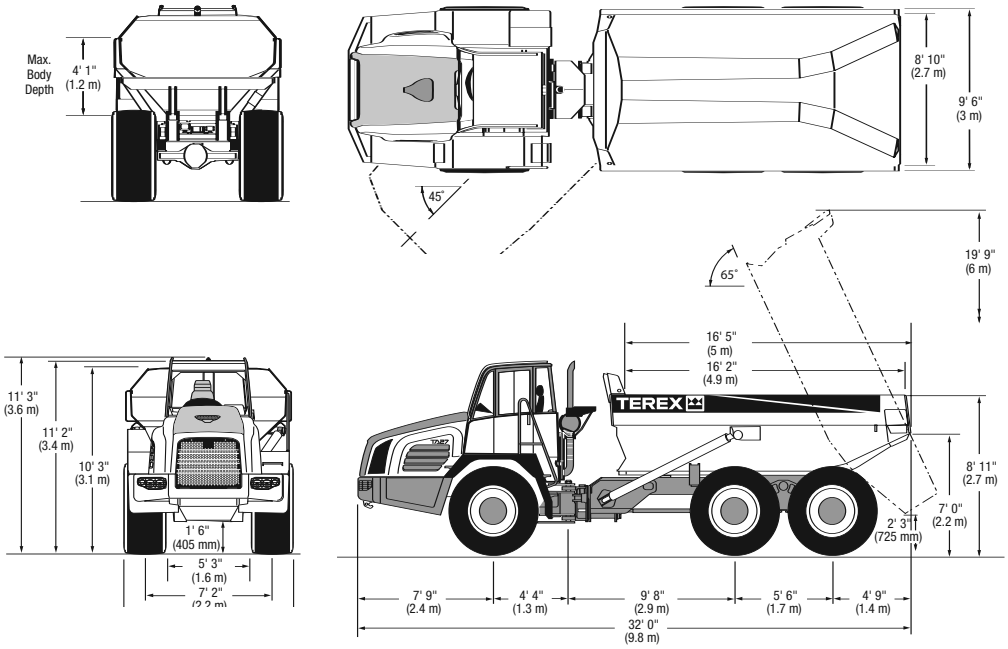
Unit equipped with 23.5 R 25 tires.





Instructions: From intersection of vehicle weight and percentage resistance line read across to determine maximum gear attainability and ten downward for speed.

Dimensions



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For more information, product demonstration, or details on purchase, lease and rental plans, please contact your local TEREX Distributor.

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