

# Articulated Dump Truck



## Specifications

Maximum Payload	38 tonne (41.9 US Ton)
Heaped Capacity	23.3m <sup>3</sup> (30.3yd <sup>3</sup> )
Gross Power	336 kW (450 hp)
PLI	A982 OCT 09

## Features

- High powered, heavy-duty truck with powerful engine providing class leading performance and ability to go where others can't follow
- World class operator's environment
- One of the most fuel efficient trucks in the field
- Rigorously tested in extreme conditions for proven power, productivity and reliability
- Superior gradeability and higher top speeds increase production

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# SPECIFICATIONS

## Engine

Engine	Detroit Diesel Series 60
Type	6 cylinder, in-line, four cycle, water cooled, turbocharged with air to air charge cooling, direct injection, electronic engine management
Piston Displacement	14 litres (855 in <sup>3</sup> )
Bore x Stroke	133 x 168 mm (5.24 x 6.61in)
Gross Power	336 kW (450 hp) @ 2100 rpm
Net Power	326 kW (437 hp) @ 2100 rpm
Maximum Torque	2 100 Nm (1 548 lbf ft) @ 1350 rpm
Gross Power rated	SAE J1995 Jun 90
Engine Emissions	Meets USA EPA Tier 3/CARB MOH 40 CFR 89 Tier 3 and proposed EUNRMM (non-road mobile machinery directive) stage 3
Electrical	24 volt electric start. 100A alternator. Two 12 volt 175 Ah batteries
Air Cleaner	Dry-type air cleaner with safety element, automatic dust ejector and restriction indicator
Fan	Modulating fan reduces noise level and consumes engine power as required. Note: Net hp with fan clutch disengaged
Altitude	Electronic derate 3 048 m (10 000 ft)

## Transmission

Transmission  
Allison HD4560 with integral retarder mounted directly to the engine, fully automatic transmission with planetary gearing, electronic control with six forward and one reverse gear

Assembly  
Remote mounted 2 speed transfer gearbox taking drive from the transmission and feeding it via a lockable differential to front and rear wheels

Speeds km/h (mph)	Gear	Ratio 1		Ratio 2	
		Forward	Reverse	Forward	Reverse
	1	5.5 (3.4)	4.8 (3.0)	8.4 (5.2)	7.4 (4.6)
	2	11.7 (7.3)		17.8 (11.0)	
	3	16.9 (10.5)		25.8 (16.0)	
	4	25.8 (16.0)		39.5 (24.5)	
	5	33.0 (20.5)		50.4 (31.3)	
	6	37.5 (23.3)		60.0 (37.3)	

## Axles

Three axles in permanent all-wheel drive (6x6) with differential coupling between each axle to prevent driveline wind-up. Heavy duty axles with full 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 dropbox output differential are locked simultaneously using one switch selected by the operator.

Differential ratio	3.70 : 1
Planetary reduction	6.35 : 1
Overall Drivetrain reduction	23.50 : 1



## Suspension

Front Four trailing links and a panhard rod locate the front axle giving a high roll centre. The optimized front axle position along with the wide spaced main and rebound mounts, mounted directly above the axle and long suspension travel, combine with the two heavy duty dampers each side to give excellent handling and ride.

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 equalise load on each rear axle. Suspension movement is cushioned by rubber/metal laminated compression units between each axle and underside of balance beam ends. Pivot points on leading and trailing links are rubber-bushed and maintenance-free.

## 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 dropbox. An audible alarm and warning light indicates should the second system activate.

Steering angle to either side	45°
Lock to lock turns, steering wheel	4
System pressure	240 bar (3 480 lbf/in <sup>2</sup> )
SAE Turning Radius	9 185 mm (30-1 ft/in)
Clearing Radius	9 675 mm (31-9 ft/in)

## 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 articulated 45° to either side for steering by means of two widely-spaced pivot pins in back-to-back sealed taper roller bearings.

## Body

All-welded construction, fabricated from high hardness (min 360 BHN) 1 000 Mpa (145 000 lbf/in<sup>2</sup>) yield strength steel. Dual slope tailchute improves material ejection from body.

Plate thickness:	Floor and tailchute	15.0 mm (0.58 in)
	Sides	12.0 mm (0.47 in)
	Front	8.0 mm (0.31 in)
Volume:	Struck	17.4 m <sup>3</sup> (22.8 yd <sup>3</sup> )
	Heaped 2:1 (SAE)	23.3 m <sup>3</sup> (30.3 yd <sup>3</sup> )

## Hoist

Two single -stage, double-acting hoist cylinders, cushioned at the base end. 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 detent in power down.

System pressure	240 bar	Raise	12.5 seconds
	(3 480 lbf/in <sup>2</sup> )	(loaded)	
Pump output flow rate	5.4 liter/sec	Lower	8 seconds
	(85.6 gal/min)		

# SPECIFICATIONS

# TA400

## Tyres and Wheels

Tyres	Standard 29.5
Rims	Standard 25 x 25.00
Wheels	3-piece earthmover rims with 19 stud fixing

## Brakes

All hydraulic system with sealed, forced oil cooled, multi discs on all axles. Independent circuits for front and rear brake systems. Warning lights and audible alarm indicate low brake system pressure. Brake system conforms to ISO 3450.

Parking	Spring-applied, hydraulic-released disc on rear driveline
Secondary	Secondary brake control actuates service and parking brakes
Retarder	Engine brake and transmission retarder are standard. Engine brake operates automatically should engine approach overspeed

## Capacities

Fuel Tank	481 liters (127 gal)
Hydraulic System (Steering & Body)	330 liters (87 gal)
Engine Crankcase	40 liters (10.5 gal)
Cooling System	80 liters (21.1 gal)
Transmission (inc filters and cooler)	56 liters (14.8 gal)
Differential – Front & Rear (each)	38 liters (10 gal)
Differential - Centre	39 liters (10.3 gal)
Planetaries – (each)	8.5 liters (2.2 gal)
Brake Cooling System	175 liters (42.6 gal)

# STANDARD EQUIPMENT

## Cab and Operator

Air Conditioning	ROPS/FOPS Protection ISO3471/3449 SAE J1040 Apr 88/J386
Air Filter Restriction Indicator	Seat Belts Retractable J386
Auxillary power outlets 12V & 24V	Seat, Operator, air suspension, high back, headrest and adjustable armrests
CD/Radio Cassette	Seat Passenger
Coat Hook	Steering Wheel, tilt/telescopic
Engine/Transmission/Hydraulic Diagnostic Facility	Storage Compartment
Heater and Demister	Sun Visor (Internal)
Insulation, Thermal and Acoustic	Tinted Glass
Interior Light	Transmission Visual Display Unit
Mirror Rear View (4)	Window Protection Grille, rear
Mug Holder	Wiper and Washer, front and rear windows
Reversing Safety camera/monitor	

## Warning Lights & Audible Alarms

Alternator Charging	Engine 'CHECK'
Body Up	Engine 'STOP'
Brake Cooling Oil Pressure	Front Brake Accumulator Pressure
Brake Oil Cooling Temperature	Headlight High Beam
Differential lock	Hydraulic Oil Filter Change
Direction Indicators	Low Fuel
Dropbox high/low Oil Pressure	Parking Brake
Dropbox high Oil Temperature	Rear Brake Accumulator Pressure
Dropbox high ratio selected	Secondary Steering
Dropbox Low ratio selected	Transmission check
Engine Air Filter Change	Transmission high oil temperature
Engine Brake	Transmission Retarder

## General

Articulation and Oscillation Lock	Mudflaps at Front and Centre
Battery Master Switch	Neutral Start Interlock
Body Prop	Pivot Protection Guard
Brakes Fully Hydraulic Dual Circuit System	Rear Light Guards
Diagnostic Pressure Test Points	Reverse Alarm Audible J994
Differential Lock	Secondary Steering
Electronic Assisted Body Hoist Control	Security Kit
Engine/Transmission/Hydraulic electronic mangement systems	Tilting Cab for Maintenance
Engine Underguard	Tow Points, Front and Rear
Exhaust Muffler	Transmission Downshift Inhibitor
Handrails on Fenders	Transmission Oil Cooler with Modulating Fan
Headlamp Guards	Transmission Sump Guard
Horn, Electric 117db	Transmission Retarder
Hydraulic Filter Restriction Indicator	Tyre Inflation Nitrogen
Modulating Cooling Fans	3 stage Engine Brake

## Gauges

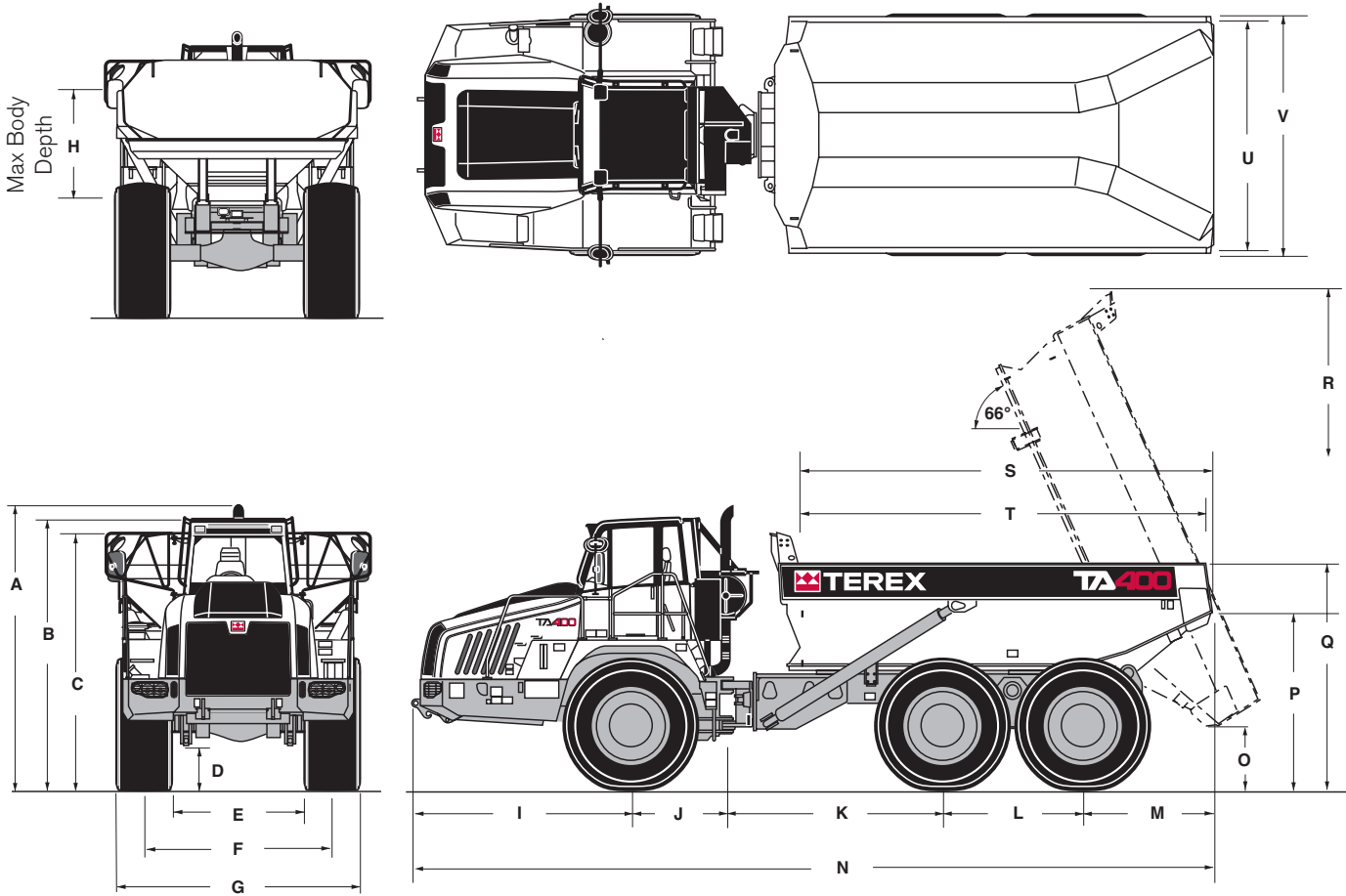
Brake Oil Temperature	Speedometer/Digital Odometer/Tripmeter
Engine Coolant Temperature	System Voltage
Fuel Level	Tachometer
Hourmeter	Transmission Oil Temperature

## Lights

Direction and Hazard Warning Indicators (LED on rear)	Side and Tail (LED)
Front Working Lights, Roof Mounted	2 halogen headlamps dipped beam
Reverse Warning	2 halogen headlamps main beam

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# TA400



## Weights

### Net Distribution

Vehicle, Net	30 820 kg (67 804 lb)	Payload	38 000 kg (83 775 lb)
Bogie Axle		Bogie Axle	
Leading	7 500 kg (16 500 lb)	Trailing	7 440 kg (16 368 lb)
Front Axle	15 880 kg (34 936 lb)		

### Gross Distribution

Vehicle Gross	68 820 kg (151 500 lb)	Body	5 400 kg (11 905 lb)
Front Axle	17 620 kg (38 845 lb)	Hoists, pair	660 kg (1 455 lb)
Bogie Axle	25 600 kg (56 438 lb)	Bare Chassis	24 760 kg (54 444 lb)

## Ground Pressure

These figures are at 15% shrinkage of unloaded radius and specified weights using

Tires 29.5 R25

### Unloaded

Front	112 kPa	16.2 Psi
Rear	53 kPa	7.7 Psi

### Loaded

Front	121 kPa	17.5 Psi
Rear	180 kPa	26.1 Psi

## Dimensions

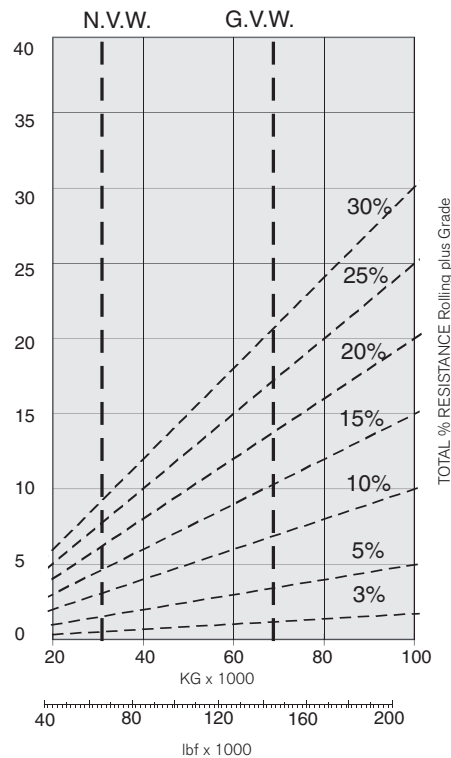
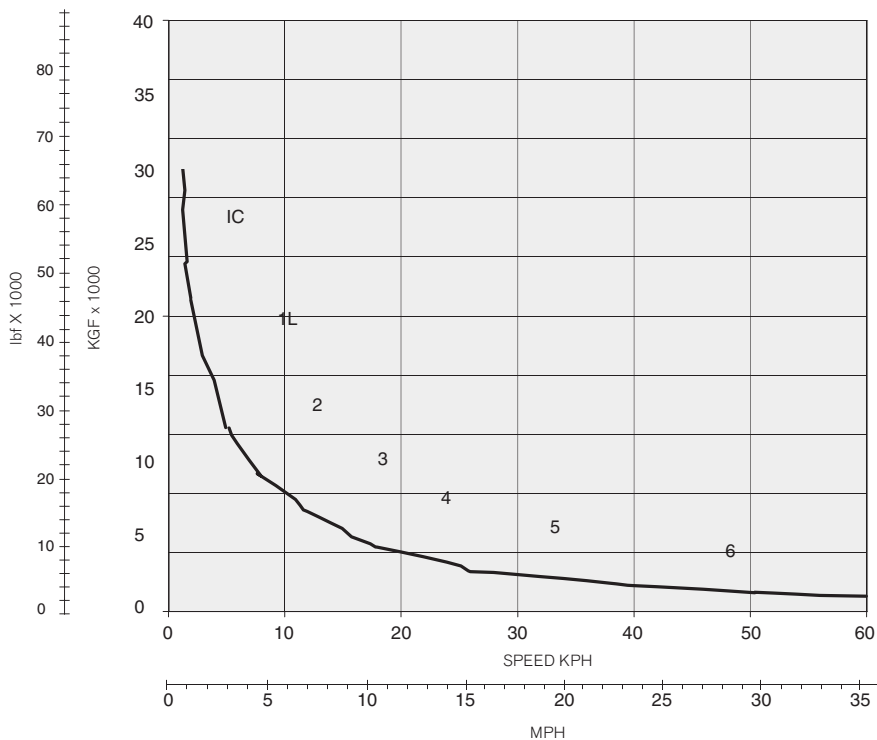
Standard Unit	mm	ft-in
A	3 945	12-11
B	3 740	12-3
C	3 550	11-8
D	605	2-0
E	1 840	6-0
F	2 595	8-6
G	3 360	11-3
H	1 495	4-11
I	3 025	9-11
J	1 310	4-4
K	2 990	9-10
L	1 950	6-5
M	1 780	5-10
N	11 055	36-3
O	905	2-9
P	2 470	8-1
Q	3 140	10-4
R	6 930	22-9
S	5 658	18-7
T	5 570	18-3
U	3 130	10-3
V	3 315	10-11



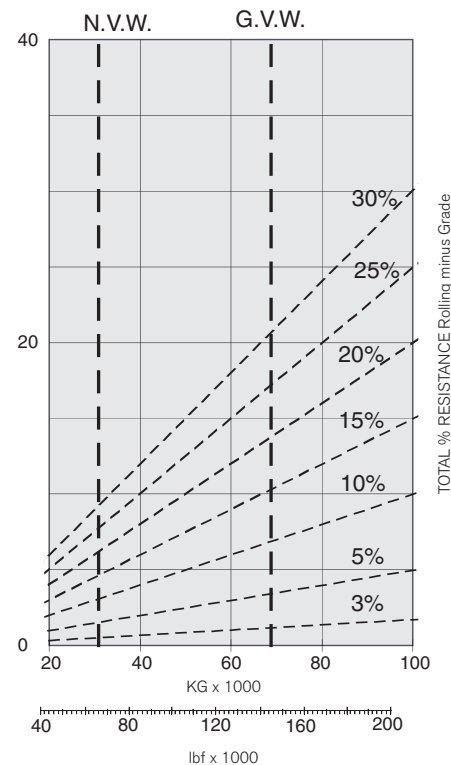
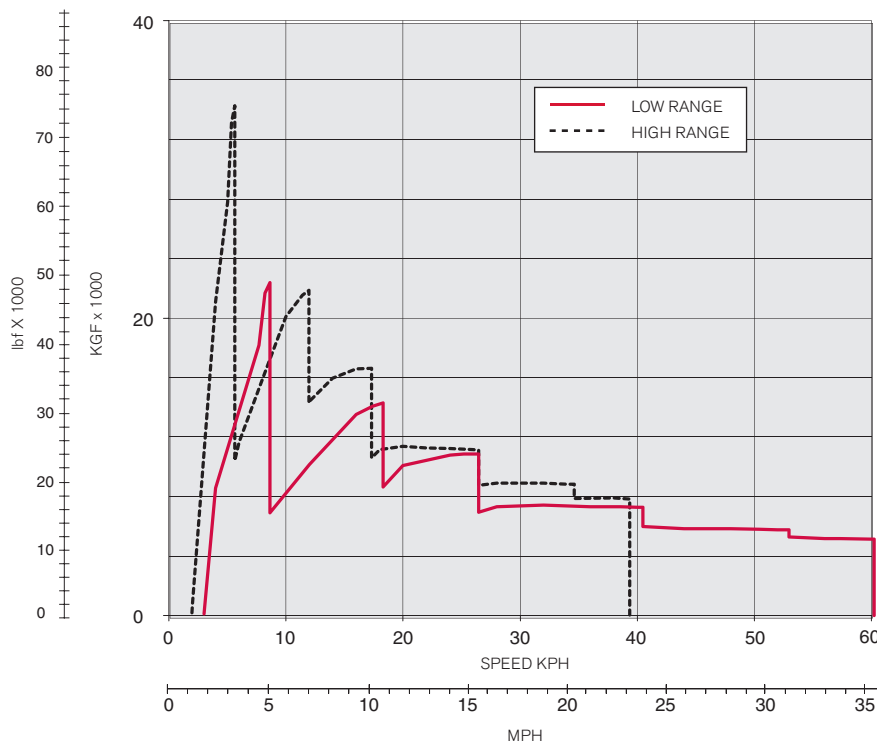
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## Gradeability

Unit equipped with 23.5 R25 tires. Graphs based on 2% Rolling Resistance.



## Retardation



Instructions: From intersection of vehicle weight with percentage resistance line read across to determine maximum gear attainable, and then downwards for speed.

# OPTIONAL EQUIPMENT

## Body Options

Body Side Extensions	Spillguard Extension
Heated Body	Top Tailgate
Liner Plates	

## Lights

Beacon Flashing	Rear Working Lights, Roof Mounted
Fog Rear	Reverse Flashing

## Mirrors

Mirror Front Mounted	Mirrors Heated
Mirror with Wide Angle	

## Other Options

Automatic Lubrication	Payload Monitoring System
Fire Extinguisher	Seat Heated
First Aid Kit	Tool Kit

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Effective Date: January 2010. Product specifications and prices are subject to change without notice or obligation. The photographs and/or drawings in this document are for illustrative purposes only. Refer to the appropriate Operator's Manual for instructions on the proper use of this equipment. Failure to follow the appropriate Operator's Manual when using our equipment or to otherwise act irresponsibly may result in serious injury or death. The only warranty applicable to our equipment is the standard written warranty applicable to the particular product and sale and Terex makes no other warranty, express or implied. Products and services listed may be trademarks, service marks, or trade names of Terex Corporation and/or its subsidiaries in the USA and other countries. All rights are reserved. Terex is a registered trademark of Terex Corporation in the USA and many other countries. © 2010 Terex Corporation. Ref.-No.: TEREX620UK

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