

# ARTICULATED DUMP TRUCK



## Specification

Maximum Payload	30.8 tons (28 t)
Heaped Capacity	22.9 yd <sup>3</sup> (17.5 m <sup>3</sup> )
Horsepower	370 hp (276 kW)

## Features

- ▶ High powered, heavy-duty truck providing class leading performance and ability to go where others can't follow
- ▶ World class operator's environment
- ▶ More fuel efficient than its predecessor
- ▶ Rigorously tested in extreme conditions for proven power, productivity and reliability

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# SPECIFICATIONS

## ENGINE

Engine	Scania DC9
Type	5 cylinder, in-line, 4-cycle, direct injection diesel, water cooled, turbo charged w/ air to air charge cooling, electronic engine mgmt & engine exhaust brake
Piston Displacement	567 in <sup>3</sup> (9.3 L)
Bore x Stroke	5.12 x 5.51 mm (130 x 140 in)
Gross Power @ 1800 rpm	370 hp (276 kW)
Net Power @ 2100 rpm	345 hp (258 kW)
Max Torque @ 1400 rpm	1309 lbf ft (1880 Nm)
Gross Power rated	SAE J1995 Jun 90
Engine Emissions	US Tier 4i/EU Stage 3B. Variant available to meet US Tier 2/EU Stage 2.
Electrical	24 volt electric start. 100A alternator. Two 12 volt 175 Ah batteries
Air Cleaner	Dry-type air cleaner w/ safety element, auto dust ejector & restriction indicator
Fan	Modulating fan reduces noise level and consumes engine power as required. Note: Net hp with fan clutch disengaged
Altitude	9842 ft (3000 m)

## TRANSMISSION

Transmission:	ZF 6WG 310 RPC. Fully automatic with manual over-ride and retarder.		
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. Auto slip sensing traction as standard.		
Speeds	Gear	Forward	Reverse
<i>Fully Laden</i>	1	3.5 mph (5.6 km/h)	3.5 mph (5.6 km/h)
	2	5.3 mph (8.6 km/h)	8.3 mph (13.3 km/h)
	3	8.3 mph (13.3 km/h)	30.2 mph (18.8 km/h)
	4	12.8 mph (20.6 km/h)	
	5	30.2 mph (18.8 km/h)	
	6	50 mph (31 km/h)	

## AXLES

Type:	Heavy duty axles with fully floating axle shafts and outboard planetary reduction gearing. The three axles are in permanent all-wheel drive (6x6) with a differential coupling between the front and rear axles. All three axles also have hydraulically actuated multiplate transverse diff-lock differentials for 100% cross-axle lock up. The inter-axle and cross-axle diff locks are controlled by the operator, and can be actuated when required in poor traction conditions.	
Differential ratio	3.875 : 1	
Planetary reduction	5.71 : 1	
Overall Drivetrain reduction	22.12 : 1	

## SUSPENSION

Front: Fully independent suspension and wheel movement is provided by a double wishbone design. This is coupled with 4 x hydraulic dampers/coil over springs.

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 & underside of balance beam ends. Pivot points on leading & trailing links are rubber-bushed for minimum maintenance.

## 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.

## 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. An audible alarm and warning light indicates should the secondary system activate.	
Steering Angle to either side	45°
Lock to lock turns, steering wheel	4
System Pressure	3500 lbf/in <sup>2</sup> (241 bar)
SAE Turning Radius	27 ft 9in (8470 mm)
Clearing Radius	29 ft 4 in (8950 mm)

## BODY

All-welded construction, fabricated from high hardness (min 360 BHN) 1000 Mpa (145000 lbf/in <sup>2</sup> ) yield strength steel. Dual slope tailchute improves material ejection from body.		
Plate thickness:	Floor and tailchute	0.55 in (14.0 mm)
	Sides	0.47 in (12.0 mm)
	Front	0.31 in (8.0 mm)
Volume:	Struck	18.0 yd <sup>3</sup> (13.8 m <sup>3</sup> )
	Heaped 2:1 (SAE)	22.9 yd <sup>3</sup> (17.5 m <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	3200 lbf/in <sup>2</sup> (220 bar)
Pump output flow rate	77.6 gal/min (4.9 liter/sec)
Raise (loaded)	12 seconds
Lower	7.5 seconds

## TIRES AND WHEELS

Tires	Standard 23.5; Optional 750/65
Rims	Standard: 25x19.50; Optional: 25x22.00
Wheels	3-piece earthmover rims with 12 stud fixing

## BRAKES

All hydraulic braking systems with multi-plate sealed and oil cooled 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 service and parking brakes
Retarder	Exhaust brake and transmission retarder

## CAPACITIES

Fuel Tank	97.7 gal	370 L
Hydraulic System (Steering & Body)	67.2 gal	256 L
Engine Crankcase	11.8 gal	45 L
Cooling System	12.8 gal	48.8 L
Transmission (including filters and cooler)	14.5 gal	55 L
Differential - Front & Rear (each)	5.5 gal	21 L
Differential - Center	6.0 gal	23 L
Planetaries (each)	2.0 gal	7.5 L
DEF System*	13.7 gal	52 L

\*only applicable on Tier 4i model

# STANDARD EQUIPMENT

TIER 4 TA300

## GENERAL

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

## OPERATOR CABIN

Air Conditioning	Rear Vision Camera/Monitor
Air Filter Restriction Indicator	ROPS/FOPS Protection ISO3471/3449
Auxiliary Power Outlets 12V & 24V	Seat Belts Retractable J386
CD/Tuner/MP3 Connectivity	Steering Wheel, tilt/telescopic
Coat Hook	Forward Facing Trainer Seats
Engine/Transmission/Hydraulic Diagnostic Facility	Seat, Operator, Air Suspension, High Back, Headrest and Adjustable Armrests
Heating, Ventilation and Air Conditioning System	Wiper and Washer, Front and Rear Windows
Insulation, Thermal and Acoustic	Sun Visor (Internal)
Interior Light	Tinted Glass
Mirror Rear View (4)	Window Protection Grille, Rear
Mug Holder	Storage Compartment

## WARNING LIGHTS & ALARMS

Alternator Charging	Front Brake Accumulator Pressure
Body Up	Headlight High Beam
Differential Lock	Headlights Active
Direction Indicators	Hydraulic Oil Level Low
Engine Air Filter Change	Low Fuel
Engine 'CHECK'	Parking Brake
Engine Coolant Level Low	Rear Brake Accumulator Pressure
Engine Oil Pressure Low	Secondary Steering
Engine Over-speed Active	Transmission Check
Engine 'STOP'	Transmission High Oil Temperature
Exhaust Brake	Transmission Retarder

## GAUGES

Body Dump Counter	Hourmeter
DEF Level Gauge (T4 variant only)	Hydraulic oil Temperature
DEF Level Warning (T4 variant only)	Speedometer/Digital Odometer/Tripmeter
Engine Coolant Temperature	Tachometer
Fuel Consumption/Usage	Transmission Oil Temperature
Fuel Level	

## LIGHTS

Direction and Hazard Warning Indicators (LED on Rear)	Side and Tail (LED)
Front Working Lights, Roof Mounted	2 Halogen Headlamps Low Beam
Reverse Warning	2 Halogen Headlamps High Beam

# OPTIONAL EQUIPMENT

## BODY OPTIONS

Body Side Extensions	Spillguard Extension
Heated Body	Chain Operated Top Mount Tailgate
Liner Plates	

## MIRRORS

Mirror Front Mounted	Mirrors Heated
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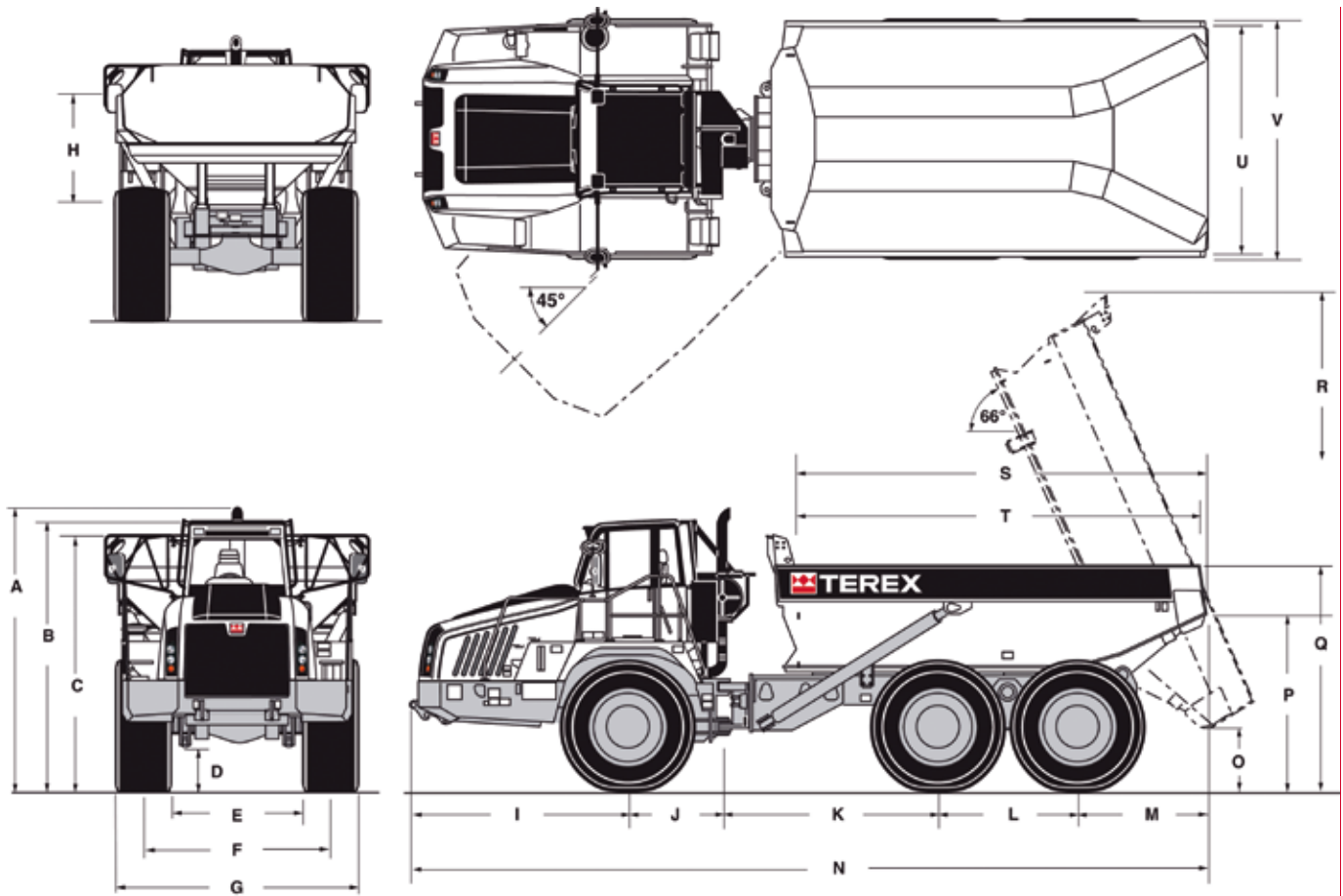
## LIGHTS

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

## OTHER OPTIONS

Automatic Lubrication	Telemetrics Systems
Fire Extinguisher	Seat Heated
First Aid Kit	Tool Kit
Parking Brake Guard	

# DIMENSIONS



## DIMENSIONS

A	11 ft 1 in	3376 mm
B	11 ft 2 in	3420 mm
C	10 ft 10 in	3325 mm
D	1 ft 6 in	405 mm
E	5 ft 3 in	1580 mm
F	7 ft 2 in	2200 mm
G	9 ft 6 in	2895 mm
H	4 ft 9 in	1445 mm
I	8 ft 4 in	2575 mm
J	4 ft 4 in	1310 mm
K	9 ft 8 in	2945 mm
L	5 ft 6 in	1690 mm
M	4 ft 9 in	1410 mm
N	32 ft 5 in	9930 mm
O	2 ft 3 in	725 mm
P	7 ft 0 in	2175 mm
Q	9 ft 6 in	2895 mm
R	20 ft 0 in	6110 mm
S	16 ft 5 in	5010 mm
T	16 ft 2 in	4920 mm
U	8 ft 10 in	2685 mm
V	9 ft 6 in	2895 mm

## WEIGHTS

Net Distribution		
Front Axle	28042 lbs	12720 kg
Bogie Axle, Leading	12081 lbs	5480 kg
Bogie Axle, Trailing	11772 lbs	5340 kg
Vehicle, Net	51896 lbs	23540 kg
Payload	61730 lbs	28000 kg
Gross Distribution		
Front Axle	39215 lbs	17788 kg
Bogie Axle, Leading	37452 lbs	16988 kg
Bogie Axle, Trailing	36958 lbs	16764 kg
Vehicle Gross	113626 lbs	51540 kg
Bare Chassis	38703 lbs	17555 kg
Body	9700 lbs	4400 kg
Hoists, pair	1170 lbs	530 kg

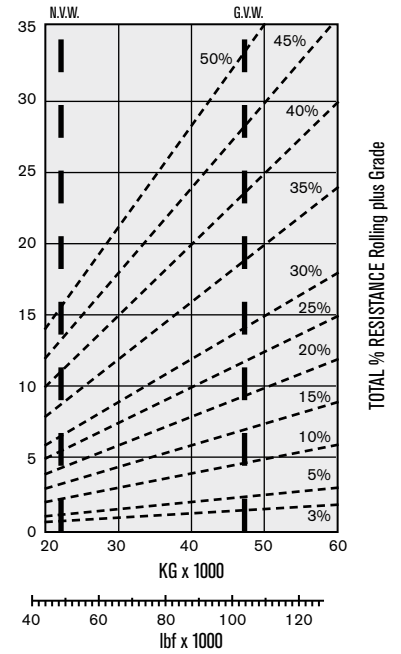
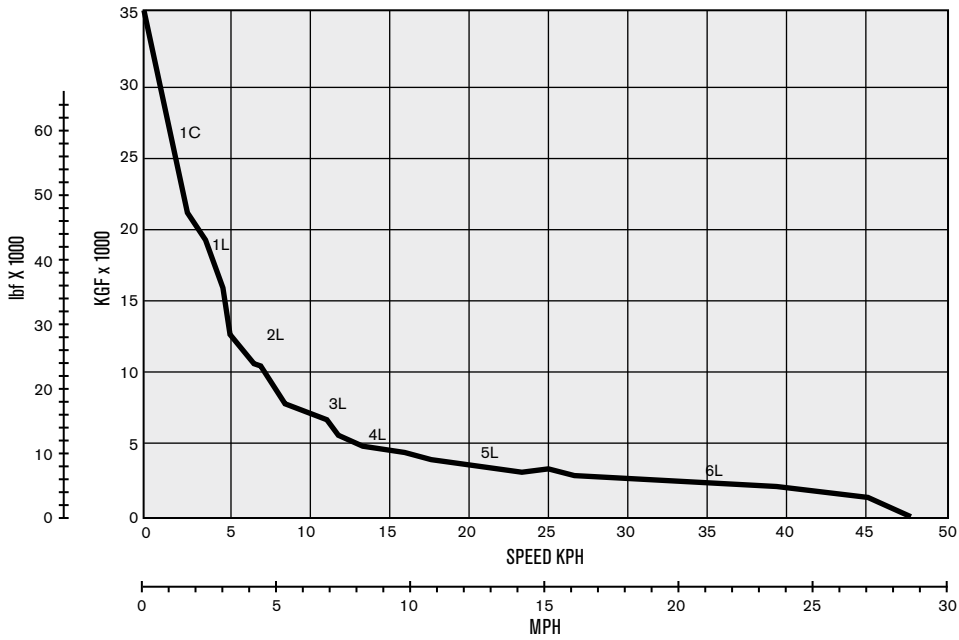
## GROUND PRESSURE

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

Tires	23.5 R25			
	Unloaded		Loaded	
Front	18.5 psi	128 kPa	26.1 psi	180 kPa
Rear	7.8 psi	54 kPa	24.9 psi	172 kPa

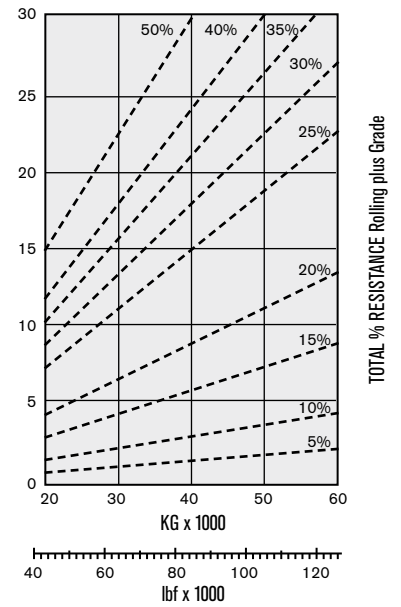
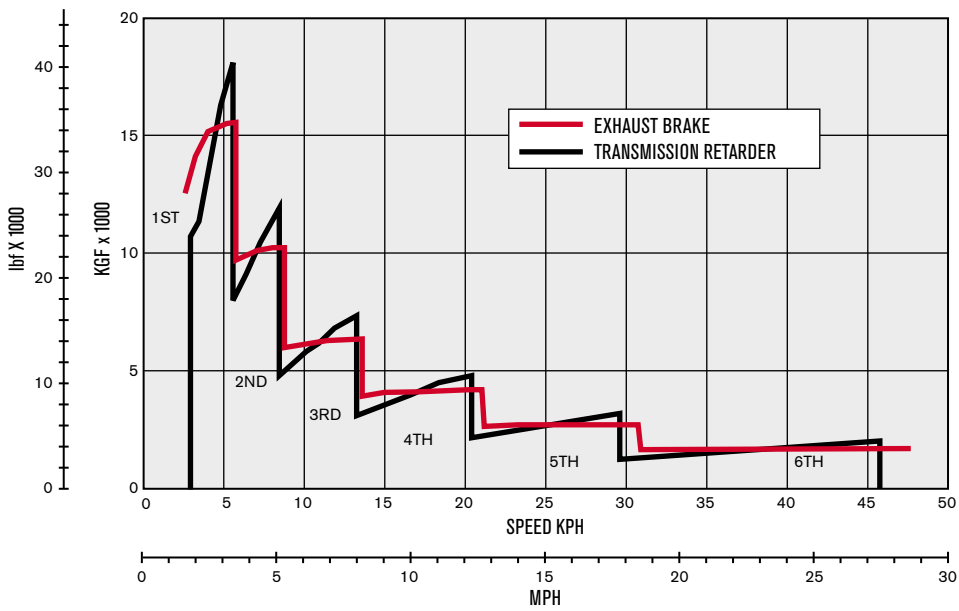
## GRADEABILITY

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.



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