



- Emission-certified engine with electronic engine management
- Automatic limited slip differentials in each axle for superior traction
- 6 x 6 all-wheel drive with efficient ground-following suspension
- Spacious, comfortable cab for continuous high productivity
- Oil cooled disc brakes for low operating costs



- Maximum Payload - 36.5 tonne (40 US ton)
- Heaped Capacity - 22 m³ (29 yd³)
- Gross Power - 332 kW (445 hp)

Specifications subject to change without notice. Illustrations may show optional equipment.

Form No. 820 Jan 2002

Articulated Truck TA40

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 with widely-spaced polymer bearings. Frames articulate 45° to either side for steering by means of two widely-spaced pivot pins in back-to-back sealed taper roller bearings.

Engine

Make/Model Detroit Diesel Series 60
 Type Six cylinder, in line, four cycle diesel, turbocharged with air-to-air charge cooling, water-cooled.
 Electronic engine management.

Piston Displacement 12.7 litres (774 cu. in.)
 Bore x Stroke 130 x 160 mm (5.12 x 6.30 in)
 Gross power to SAE J1995 332 kW (445hp, 451 PS)
 Net power at 2 200 rev/min 291 kW (390 hp, 395 PS)
 Maximum Torque 2 000 Nm (1 475 lbf. ft.) at 1 350 rev/min

Gross Power rated to SAE J1995 Jun 90.

Engine emission meets Tier 2 USA EPA / CARB MOH 40 CFR 89 and EU 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.

Transmission

ZF 6WG 310 Fully automatic 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. Integral hydraulic retarder is standard. This operates automatically should the engine approach overspeed conditions.

	Forward						Reverse		
Gear	1	2	3	4	5	6	1	2	3
km/h	6.0	9.3	14.6	22.7	33.3	54.7	6.0	14.6	33.3
mile/h	3.7	5.8	9.1	14.1	20.7	34	3.7	9.1	20.7

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.

Differential ratio 4.86:1 Planetary reduction 4.94:1
 Overall drivetrain reduction 24.0:1

Tyres and Wheels

Tyres: 29.5 R 25 two star radial.

Rims: 25 x 25.00 .

Wheels: 5-piece earthmover rims with 23 stud fixing

Suspension

Front: Axle located by a three-point subframe permitting both vertical movement and oscillation. Rubber suspension elements with two heavy duty hydraulic dampers each side.

Axle vertical travel 105 mm (4.2 in)

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.

Axle vertical travel ± 115 mm (± 4.5 in)

Axle oscillation ± 9°

Pivot points on rear suspension linkages are rubber-bushed and do not require lubrication.

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, SAE J1473.

Parking: Spring-applied, hydraulic-released disc on rear driveline.

Secondary: Secondary brake control actuates the service brakes.

Retardation: Hydraulic retarder integral with transmission.
 Automatic application prevents engine overspeed

Steering

Hydrostatic power steering by two double-acting, cushioned steering cylinders. Actuating pressure for steering operation supplied by main hydraulic gear pump, driven from power take-off on transmission.

Secondary steering pressure is provided by a ground-driven pump mounted on the transmission. An indicator lamp signals should the secondary system activate. Conforms to ISO 5010, SAE J53.

Steering components are protected by advanced full flow filtration on the return line.

Steering angle either side 45°

Lock to lock turns, steering wheel 4

System Pressure 206 bar (3 000 lbf/in²)

Hoist

Two single-stage, double-acting hoist cylinders, cushioned at both ends of stroke. Actuating pressure for body hoist supplied by main hydraulic gear pump, driven from power take-off on transmission. Full flow return line filtration. Hydraulic system features pressure test points for diagnostic servicing.

System pressure 172 bar (2 500 lbf/in²)

Pump output flow rate 7.03 litre/sec (111 US gal/min)

Raise time, loaded 16 sec. Power down 12 sec.

Body

All welded construction, fabricated from high hardness (min. 360 BHN) 1 000 MPa (145 000 lbf/in²) yield strength steel. 25° tail chute angle provides good load retention without tailgate.

Plate thicknesses: Floor and tailchute 15 mm (0.59 in)

Sides 12 mm (0.47 in)

Front 10 mm (0.39 in)

Volume: Struck (SAE) 17.0 m³ (22.2 yd³)

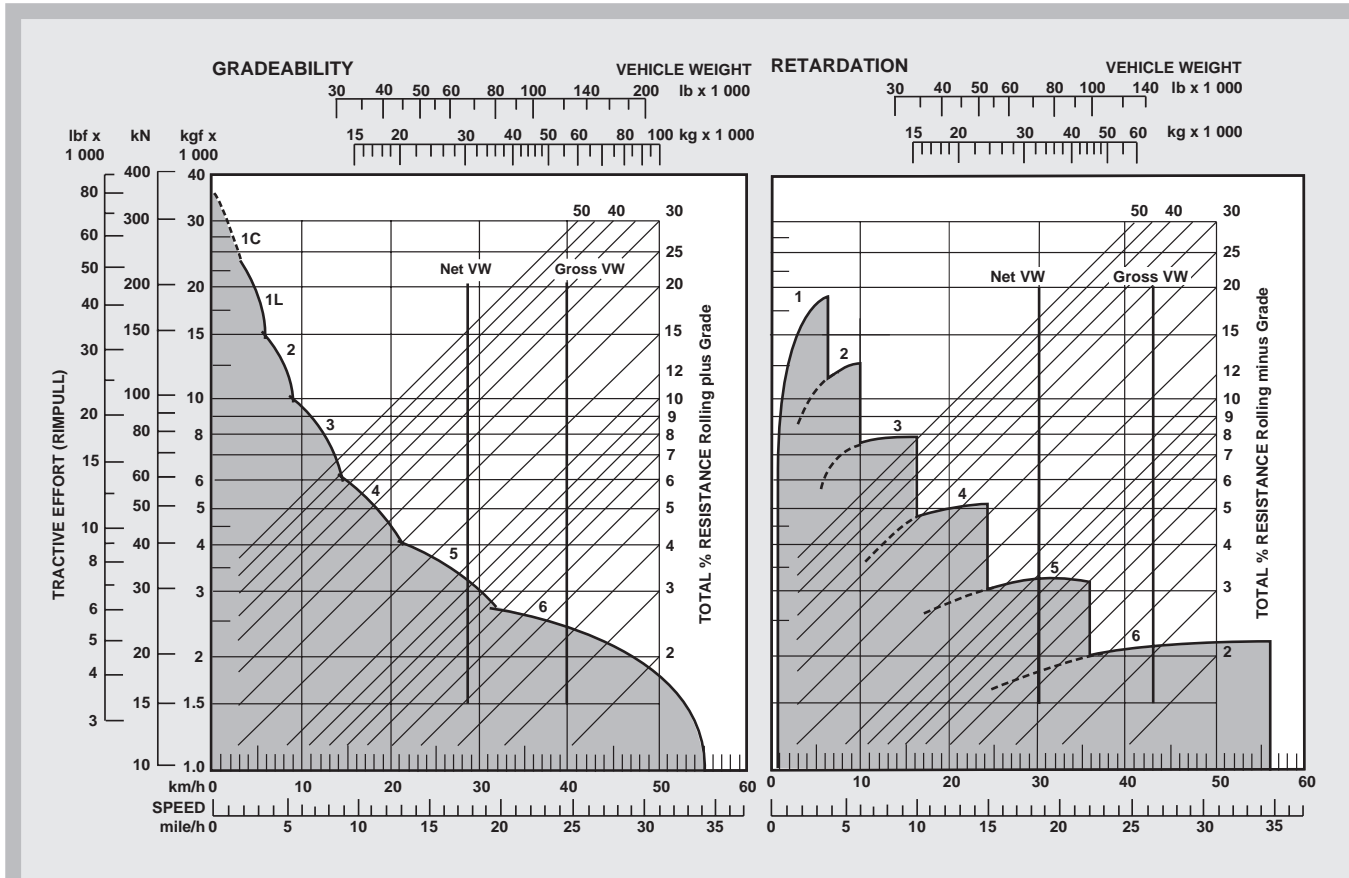
Heaped 2:1 (SAE) 22.0 m³ (28.8 yd³)



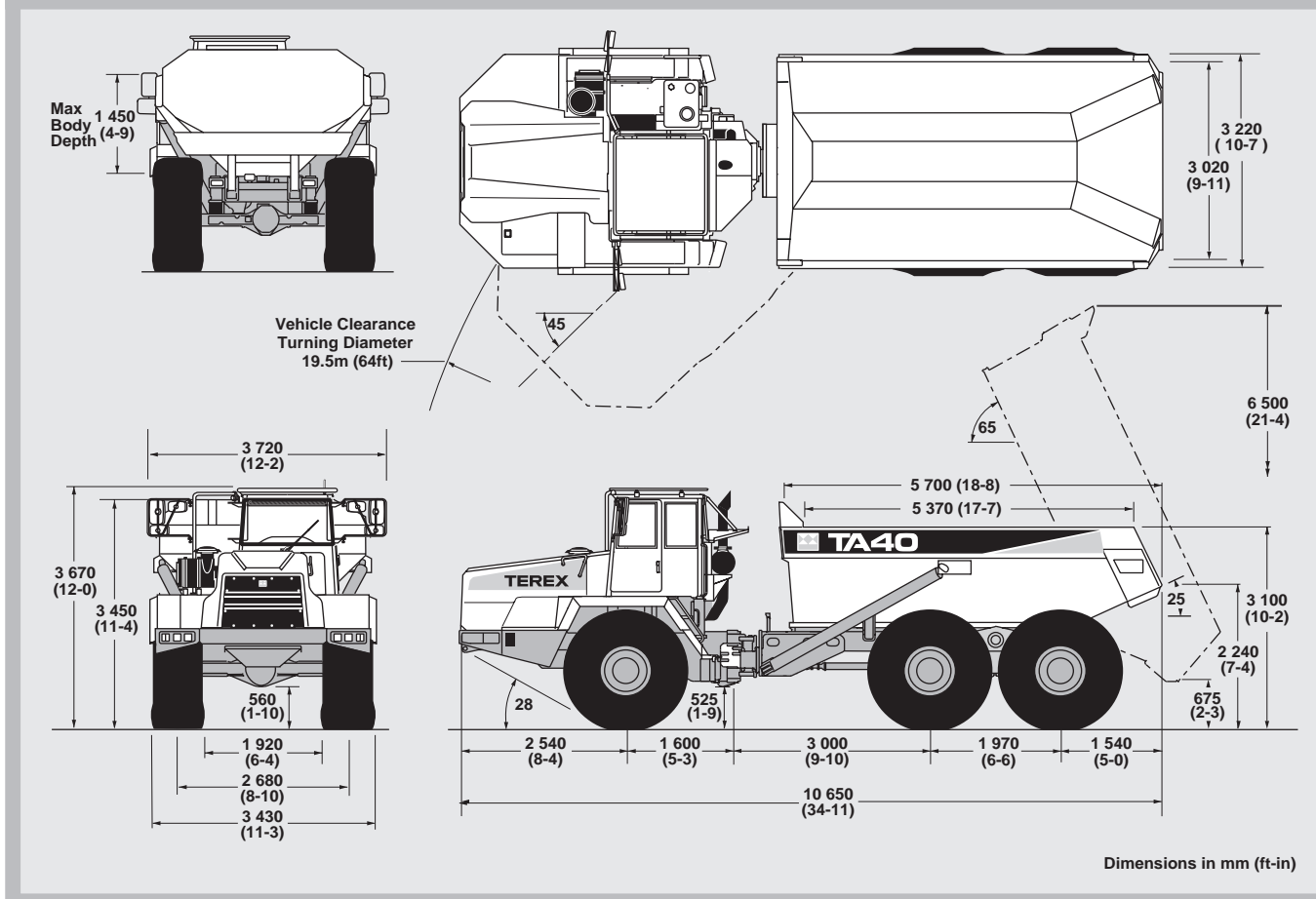
Performance Data

Graphs based on 2% Rolling Resistance

TA40



Instructions: From intersection of Vehicle Weight with Percentage Resistance line read across to determine maximum Gear attainable, and then downwards for Speed.



Dimensions in mm (ft-in)





Standard Equipment

Standard equipment fitted may vary from country to country. Consult your local dealer.

- Cab:**
- Air Conditioner R 134A
8 kW (27 300 BTU/hr)
 - Cigar Lighter, 24v
 - Engine Diagnostic Facility
 - Inspection Lamp Socket, 24v
 - Heater and Demister
9.5 kW (32 400 BTU/hr)
 - Insulation, Thermal
and Acoustic
 - Interior Light
 - Mirrors, Rear View, 6
 - Mug Holder
 - Radio / Cassette Player
 - ROPS/FOPS Protection
ISO 3471/3449
SAE J1040 Apr 88/J231
 - Seat Belts, Retractable J386
 - Seat, Operator, air suspension,
high back, headrest and
adjustable armrests
 - Seat, Passenger
 - Storage Compartment
 - Sun Blind
 - Sun Visor (external)
 - Tinted Glass
 - Transmission Visual Display Unit
 - Window Protection Grille, rear
 - Wiper and Washer,
front and rear windows
- Gauges:**
- Fuel Level
 - Speedometer, with Odometer
 - Tachometer, with Hourmeter
 - Transmission Oil Temp.
- Indicator Lights:**
- Direction Indicators
 - Headlight High Beam
 - Retarder
- Warning Lights:**
- Body Up
 - Brake Pressure Balance
Front/Rear
- Brake Pressures (2)
 - Warning Lights continued:
 - Check Engine
 - Coolant Level
 - Inter-Axle Diff. Locks 'On'
 - Parking Brake 'On'
 - Secondary Steering
 - 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
 - Battery Master Switch
 - Body Prop
 - Brake Splash Guards
 - Diagnostic Pressure Test
Points
 - Engine Hood, hinged
 - Engine Underguard, hinged
 - Exhaust Muffler
 - Fan, modulating
 - Horn, electronic 117dB,
 - Hydraulic Filter Restriction
Indicator
 - Hydraulic Oil Cooler
 - Hydraulic Retarder
- Lights:**
- High Level working Lamps
 - Headlamps, 4, Halogen.
 - Side, Tail, Stop, Reverse &
Hazard Warning Lights
 - Direction Indicators
 - Mudflaps, front
 - Neutral Start Interlock
 - Nitrogen Inflated Tyres
 - Rear Light Guards
 - Reverse Alarm, Audible J994
 - Security Kit
 - Tow Points, front and rear



Weights

	kg	lb
Net Distribution		
Front Axle	15 275	33 675
Bogie Axle, leading	7 750	17 085
Bogie Axle, trailing	7 705	16 985
Vehicle, Net	30 730	67 745
Payload	36 500	80 470
Gross Distribution		
Front Axle	20 170	44 465
Bogie Axle, leading	23 530	51 875
Bogie Axle, trailing	23 530	51 875
Vehicle, Gross	67 230	148 215
Bare Chassis	24 670	54 390
Body	5 400	11 905
Hoists, pair	660	1 455



Service Data

Fuel tank	463 litres (122.0 US gal)
Hydraulic System (steering, braking & body)	209 litres (55 US gal)
Brake Cooling System	199 litres (52.6 US gal)
Cooling System	80 litres (21.1 US gal)
Engine Crankcase (with filters)	37 litres (9.8 US gal)
Transmission & Filters (dry fill)	56 litres (14.8 US gal)
Transmission & Filters (wet fill)	28 litres (7.4 US gal)
Differential (Front)	37.5 litres (9.9 US gal)
Differential (Centre)	38 litres (10 US gal)
Differential (Rear)	31.5 litres (8.3 US gal)
Planetaries (each)	8.5 litres (2.2 US gal)



Optional Equipment

- Automatic Lubrication
- Body Options:
 - Exhaust Heating
 - Liner Plates
 - Side Extensions
 - Spillguard Extension (folding)
 - Tailgate - Scissor, chain
operated
 - Tailgate, Underhinged
 - Engine Brake (Jacobs)
 - Fire Extinguisher
 - Headlamp Guards, hinged
- Lights:
 - Beacon, flashing
 - Fog, rear
 - Reverse, flashing
 - Working, rear facing
 - Mirror, front mounted
 - Mud Flaps, in front of leading
rear wheels
 - Tachograph
 - Television Monitor, Rear View
 - Tool Kit, Hand

DISTRIBUTOR:



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