| | |
|---|---|
| **OPERATING WEIGHT** | 67,745 – 148,215 lbs (30,730 – 67,230 kg) |
| **NET ENGINE POWER** | 390 hp (SAE J 1349) (332 kW) |
| **MAX PAYLOAD** | 40 Tons (36.5 t) |
| **MAX SPEED** | 34 mph (54.7 kph) |

TEREX

# TA40 ARTICULATED HAUL TRUCK


- **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**
- **Heaped Capacity - 29 $yd^3$ (22 $m^3$)**

TEREX

# TA40 ARTICULATED HAUL TRUCK

## 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 | 774 $in^3$ | (12.7 L) |
| Bore x stroke 5.12" x | 6.30" | (130 x 160 mm) |
| Gross power at 2,200 rpm (SAE J 1995) | 445 hp | (332 kW) |
| Net power at 2,200 rpm (SAE J 1349) | 390 hp | (290 kW) |
| Maximum torque at 1,350 rpm | 1,475 lbf ft | (2,000 Nm) |

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 over speed conditions.

| | Forward | | | | | | Reverse | | |
|---|---|---|---|---|---|---|---|---|---|
| **Gear** | 1 | 2 | 3 | 4 | 5 | 6 | R1 | R2 | R3 |
| **mph** | 3.7 | 5.8 | 9.1 | 14.1 | 20.7 | 34.0 | 3.7 | 9.1 | 20.7 |
| **km/h** | 6.0 | 9.3 | 14.6 | 22.7 | 33.3 | 54.7 | 6.0 | 14.6 | 33.3 |

## 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 rear most 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 |

## TIRES AND WHEELS

| | |
|---|---|
| Tires | Standard 29.5 R 25 two star radial |
| Rims | Standard 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 | 4.2" | (105 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 | ± 4.5" | (± 115 mm) |
| 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 J 1473).

| | |
|---|---|
| Parking | Spring-applied, hydraulic-released disc on rear driveline |
| Secondary | Secondary brake control actuates the service brakes |
| Retardation | Hydraulic retarder integral with transmission<br>Automatic application prevents engine over-speed |

## 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 J 53). Steering components are protected by advanced full flow filtration on the return line.

| | | |
|---|---|---|
| Steering angle to either side | | 45˚ |
| Lock to lock turns, steering wheel | | 4 |
| System pressure | 3,000 psi | (206 bar) |

## 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 | 2,500 psi | (172 bar) |
| Pump output flow rate | 111 gpm | (7.03 L/sec) |
| Raise time, loaded | | 16 sec |
| Power down | | 12.0 sec |

## BODY

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

| | | | |
|---|---|---|---|
| Plate thicknesses: | Floor and tailchute | 0.59" | (15 mm) |
| | Sides | 0.47" | (12 mm) |
| | Front | 0.39" | (10 mm) |
| | Volume: Struck (SAE) | 22.2 $yd^3$ | (17.0 $m^3$) |
| | Heaped 2:1 (SAE) | 28.8 $yd^3$ | (22.0 $m^3$) |

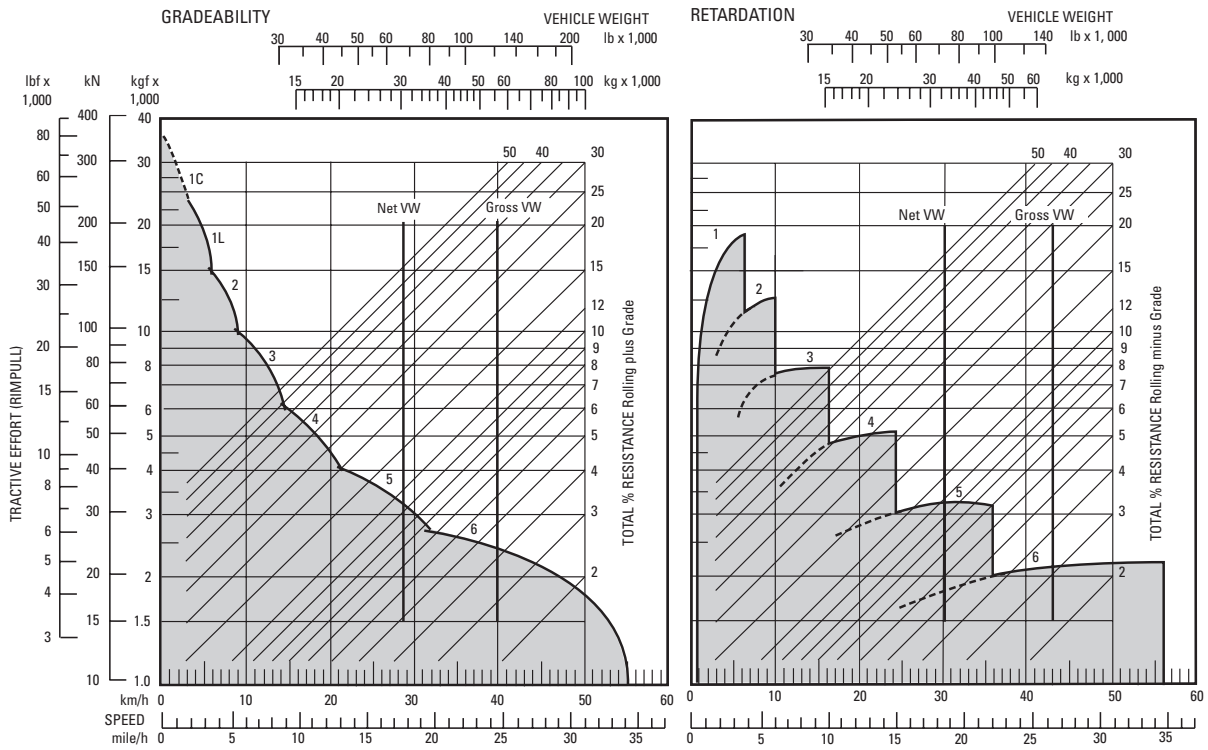
## WEIGHTS

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

## SERVICE DATA

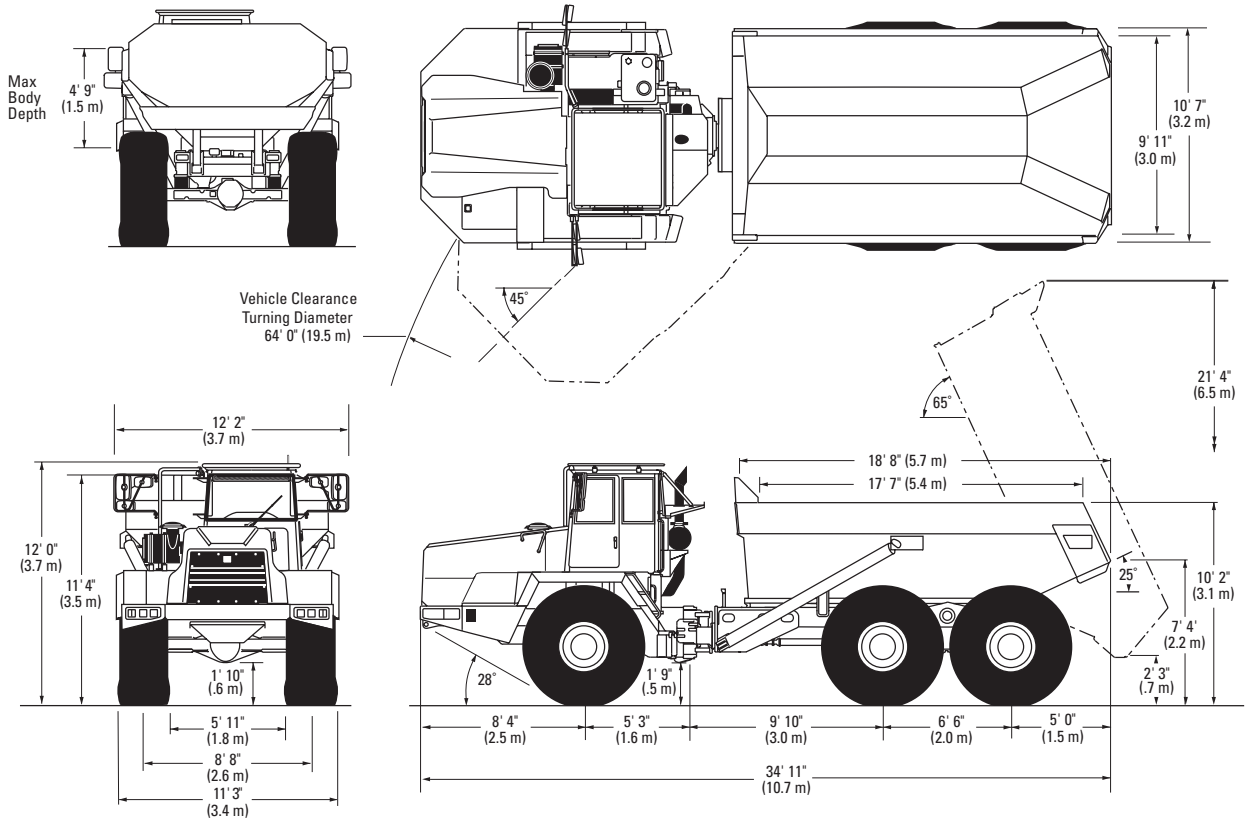
| | | |
|---|---|---|
| Fuel Tank | 122.0 gal | (463 L) |
| Hydraulic System (steering & body) | 55.0 gal | (209 L) |
| Brake Cooling System | 52.6 gal | (199 L) |
| Cooling System | 21.1 gal | (80 L) |
| Engine Crankcase (with filters) | 9.8 gal | (37 L) |
| Transmission & Filters (dry fill) | 14.8 gal | (56 L) |
| Transmission & Filters (wet fill) | 7.4 gal | (28 L) |
| Differential (Front) | 9.9 gal | (37.5 L) |
| Differential (Centre) | 10.0 gal | (38 L) |
| Differential (Rear) | 8.3 gal | (31.5 L) |
| Planetaries (each) | 2.2 gal | (8.5 L) |

## TA40 PERFORMANCE DATA (GRAPHS BASED ON 0% ROLLING RESISTANCE)




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

## TA40 DIMENSIONS




Unit on 23.5 R 25 tires. For 20.5 tires reduce vertical dimensions by 2" (50 mm) and width over tires to 8' 2" (2,500 mm).

| | |
|---|---|
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| **MAX PAYLOAD** | 40 Tons (36.5 t) |
| **MAX SPEED** | 34 mph (54.7 kph) |

# TA40 ARTICULATED HAUL TRUCK

## STANDARD AND OPTIONAL EQUIPMENT

### STANDARD EQUIPMENT

**Cab**
Air conditioner R 134A 27,300 BTU/hr (8 kW)
Cigarette lighter, 24V
Engine diagnostic facility
Inspection lamp socket, 24V
Heater and demister 32,400 BTU/hr (9.5 kW)
Insulation, thermal and acoustic
Interior light
Mirrors, rear view, 6
Mug holder
Radio / cassette player
ROPS/FOPS protection
(ISO 3471/3449, SAE J 1040, Apr 88/
(SAE J 231)
Seat belts, retractable (SAE J 386)
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)
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
Mudflaps, front
Neutral start interlock
Nitrogen inflated tires
Rear light guards
Reverse alarm, audible (SAE J 994)
Security kit
Tow points, front and rear

**Lights**
High level working lamps
Headlamps, 4, halogen.
Side, tail, stop, reverse &
hazard warning lights
Direction indicators

### OPTIONAL EQUIPMENT

Automatic lubrication
Engine brake (Jacobs)
Fire extinguisher
Headlamp guards, hinged
Mirror, front mounted
Mud flaps, in front of leading
rear wheels
Tachograph
Television monitor, rear view
Tool kit, hand

**Body Options**
Exhaust heating
Liner plates
Side extensions
Spillguard extension (folding)
Tailgate - scissor, chain operated
Tailgate, underhinged

**Lights**
Beacon, flashing
Fog, rear
Reverse, flashing
Working, rear facing

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8800 Rostin Road
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