



**OPERATING WEIGHT**  
**NET ENGINE POWER**  
**MAX PAYLOAD**  
**MAX SPEED**

67,745 – 148,215 lbs (30,730 – 67,230 kg)  
390 hp (SAE J 1349) (332 kW)  
40 Tons (36.5 t)  
34 mph (54.7 kph)



# 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<sup>3</sup> (22 m<sup>3</sup>)**

## 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 <sup>3</sup>	(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.

Gear	Forward					Reverse			
	1	2	3	4	5	6	R1	R2	R3
<b>mph</b>	3.7	5.8	9.1	14.1	20.7	34.0	3.7	9.1	20.7
<b>km/h</b>	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
	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 <sup>3</sup>	(17.0 m <sup>3</sup> )
Heaped 2:1 (SAE)	28.8 yd <sup>3</sup>	(22.0 m <sup>3</sup> )

## 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)
<b>Vehicle, Net</b>	<b>67,745 lbs</b>	<b>(30,730 kg)</b>

### Payload

	<b>80,470 lbs</b>	<b>(36,500 kg)</b>
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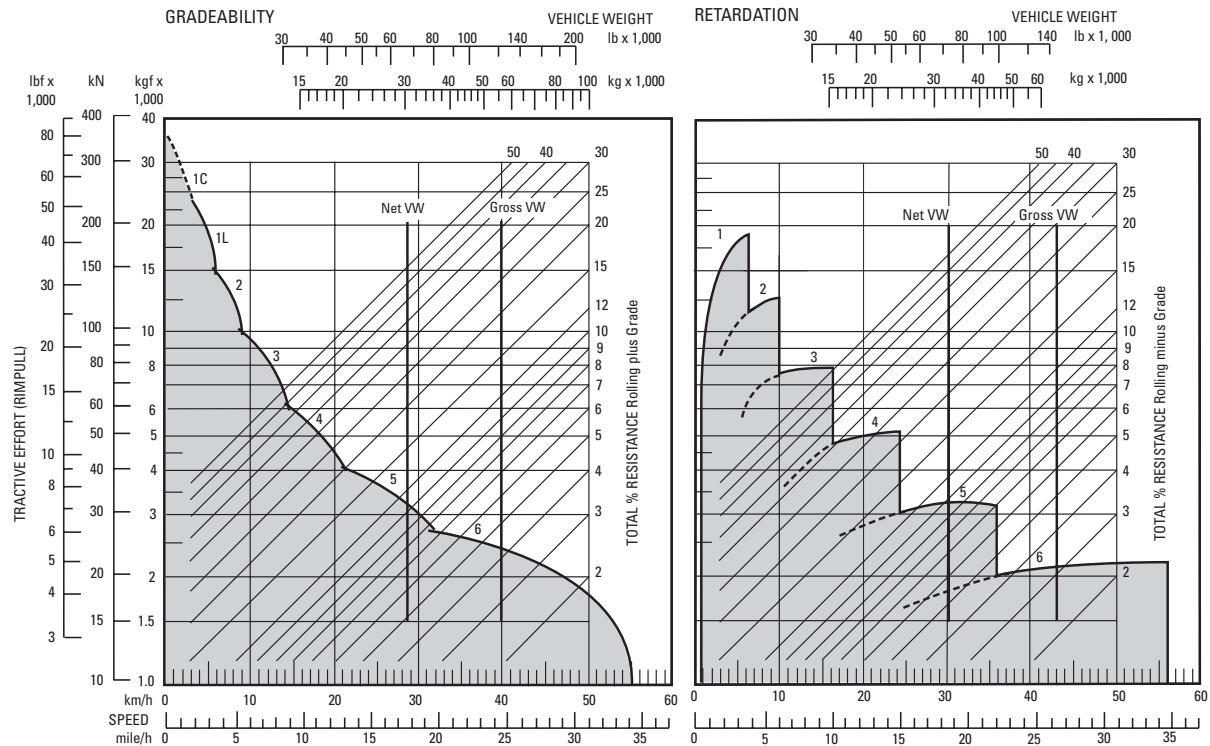
### Gross Distribution

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)
<b>Vehicle, Gross</b>	<b>148,215 lbs</b>	<b>(67,230 kg)</b>
Bare Chassis	54,390 lbs	(24,670 kg)
Body	11,905 lbs	(5,400 kg)
Hoists, pair	1,455 lbs	(660 kg)

## SERVICE DATA

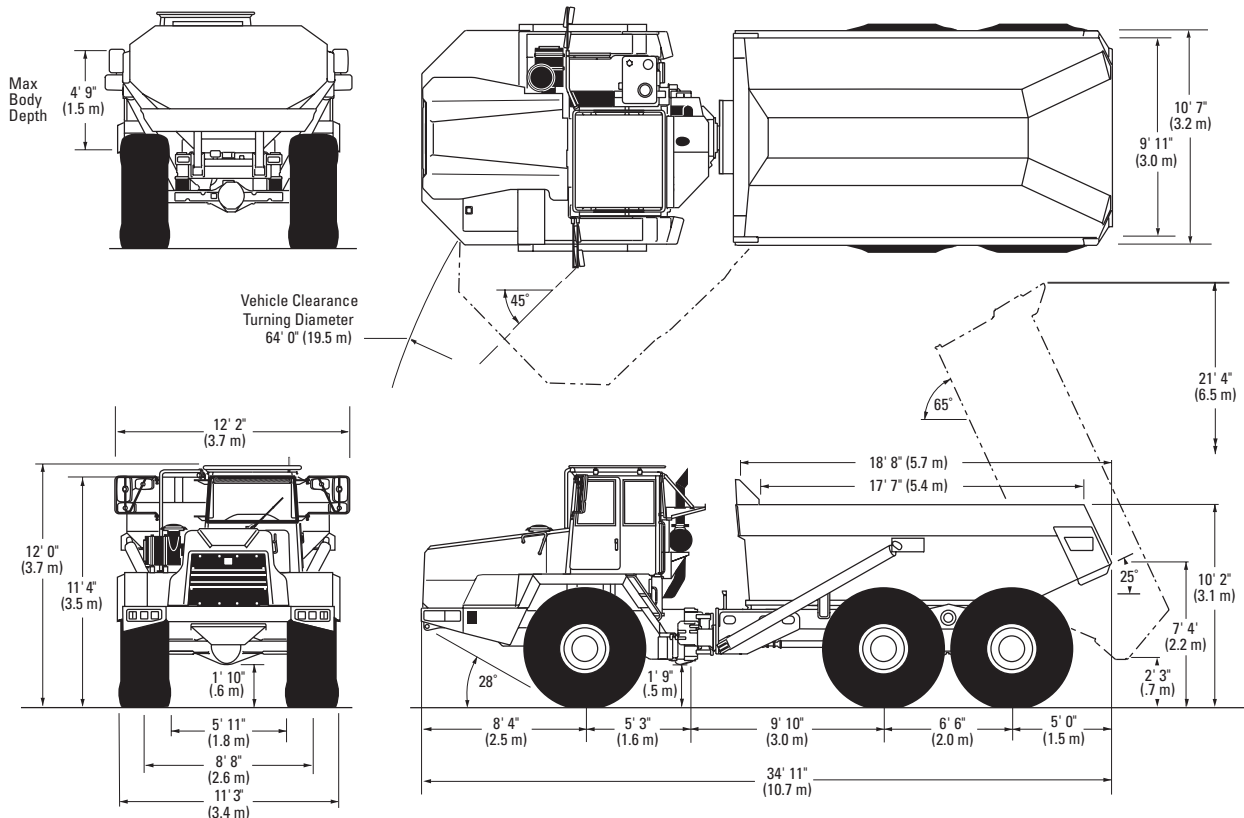
Fuel Tank	122.0 gal	(463 L)
Hydraulic System (steering & body)	55.0 gal	(209 L)
Brake Cooling System	52.6 gal	(199 L)
Cooling System	21.1 gal	(80 L)
Engine Crankcase (with filters)	9.8 gal	(37 L)
Transmission & Filters (dry fill)	14.8 gal	(56 L)
Transmission & Filters (wet fill)	7.4 gal	(28 L)
Differential (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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## 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

#### 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

### 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



#### COMPACT EXCAVATORS

#### WHEEL LOADERS

#### TRACTOR LOADER BACKHOES

#### SOIL COMPACTORS

#### RIGID HAUL TRUCKS

#### ARTICULATED HAUL TRUCKS

#### SCRAPERS

#### TELEHANDLERS

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