





- High power, high torque, emissioncertified engine for maximum performance
- Automatic transmission with manual over-ride for optimum shifting
- Automatic limited slip differentials in each axle for superior traction

- Refined, quiet cab for greater operator comfort
- Maximum Payload 23 tonne (25 US ton)
- Heaped Capacity 13.5m³ (17.6 yd³)
- Gross Power 209 kW (280 hp)

FRAME

Front and rear frames are all-welded high grade steel fabrications with rectangular box-section beams forming the main side and cross members. Interframe oscillation is provided by a large diameter cylindrical coupling which houses nylon bushings. Frames articulate 45° to either side for steering by means of two widely-spaced pivot pins in back-toback sealed taper roller bearings.

ENGINE

Make/ModelCummins QSC 8.3

Type....Four cycle, emission certified, direct injection diesel, 6 cylinder, in line, water-cooled, turbocharged with air to air charge cooling, water cooled.

Piston Displacement8.3 litres (505 in ³)
Bore x Stroke114 x 135 mm (4.49 x 5.32 in)
Gross Power at 2000 rev/min224 kW
(300 hp, 304 PS)
Gross Power at 2200 rev/min
Net Power at 2200 rev/min198 kW(266 hp, 270 PS)
Maximum Torque1230 Nm (907 lbf ft) at 1300 rev/min

Gross Power rated to SAE J1995 Jun 90.

Engine emission meets USA EPA Tier 2 /CARB MOH 40 CFR 89 Tier 2 and proposed EUNRMM (non-road mobile machinery directive) Tier 2.

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.

Modulating fan reduces noise level and consumes engine power only when required.

TRANSMISSION

ZF 6WG 210 Fully automatic transmission 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.

Forward				Reverse					
Gear	1	2	3	4	5	6	1	2	3
km/h	5.9	9.1	14.2	22.1	32.4	52.0	5.9	14.2	32.4
mile/h	3.7	5.6	8.8	13.7	20.1	32.3	3.7	8.8	20.1

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	3.44:1
Planetary reduction	6.35:1
Overall Drivetrain reduction	21.85 [.] 1

TYRES AND WHEELS

- Tyres: Standard 23.5 R 25 two star radial. Optional 750/65 R25
- Rims: Standard 25 x 19.50. For optional tyre, 25 x 22.00

Wheels: .5-piece earthmover rims with 12 stud fixing

SUSPENSION

- Front: Axle is carried on the leading arms of a subframe which pivots on the main frame. Suspension by rubber elements with four heavy duty hydraulic dampers.
- 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.

BRAKES

All hydraulic braking system with dry disc on each wheel and double heavy-duty calipers per disc. 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.

Brake system conforms to ISO 3450, SAE J1473.

Retardation: Guillotine-type engine exhaust brake is standard and operates automatically should engine approach overspeed condition.

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 transmission. An audible alarm and warning light indicates should the secondary system activate.

System conforms to ISO 5010, SAE J53

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

Steering angle to either side45°
ock to lock turns, steering wheel4
System pressure241 bar (3 500 lbf/in²)

HOIST

Two single-stage, double-acting hoist cylinders, cushioned at both ends of stroke. 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......220 bar (3 200 lbf/in²) Pump output flow rate 4.9 litre/sec (77.6 US gal/min)

Raise time, loaded 12 sec. Power down 7.5 sec.

BODY

All welded construction, fabricated from high hardness (min. 360 BHN) 1 000 MPa (145 000 lbf/in²) yield strength steel.

Dual slope tailchute improves material ejection from body.

Plate thic	knesses:	.Floor and tail	chute 12 mm
			(0.47 in)
	Sides Front	12	mm (0.47 in) mm (0.31 in)
Volume:	Struck (SAE) .	10	m³ (14.8 yd³)
	Heaped 2:1 (S	AE)13.5	m ³ (19.6 yd ³)

STANDARD EQUIPMENT

Cab: Air Conditioner 8kW Cigar Lighter, 24v Coathook Engine Diagnostic Facility Heater and Demister 9.5kW Hydraulic Diagnostic Facility RS232 Inspection Lamp Socket, 24v Insulation, Thermal and Acoustic Interior Light Mirrors, Rear View, 4 Mug Holder Radio/Cassette Seat. Passenger **ROPS/FOPS** Protection ISO 3471/3449 SAE J1040 Apr 88/J231 Seat Belts, Retractable J386 Seat, Operator, air suspension Steering Wheel, tilt / telescopic Storage Compartment Sun Blind **Tinted Glass** Transmission Visual Display Unit Window Protection Grille, rear Wiper and Washer, front and rear windows

Gauges:

Fuel Level Hourmeter Speedometer/Odometer Tachometer Transmission Temperature Water Temperature

Indicator Lights: Turn Signals Headlight High Beam

Audible Alarm: Brakes Tractor, Low Pressure Brakes Trailer, Low Pressure Engine Stop Transmission stop Steering, Low Pressure

Warning Lights: Alternator Charging Body Up Brake Pressure - Front and Rear Engine Check Engine 'Stop' Fuel, Low Level Diff. Locks 'On' Maintenance (Engine) Parking Brake 'On' Steering Pressure Transmission 'Stop'

General:

Air Filter, Dual Element with Restriction Indicator Articulation Locking Bar and Oscillation Lock Pin Battery Master Switch Body Prop Brake Splash Guards **Diagnostic Test Points** Downshift Inhibitor Engine Underguard, hinged Fan, Modulating Headlamp Guards Horn. Electronic Lights: Headlamps, 4, Halogen. Side, Tail, Stop, Reverse, Hazard Warning and **Direction Indicators** Work Lights, roof-mounted Light Guards, Rear Mudflaps, Front Neutral Start Interlock Pivot Protection Guard Reverse Alarm, audible J994 Servo Body Hoist Security Kit Tow Points, front and rear Transmission Oil Cooler, with Modulating Fan Transmission Sump Guard Tyre Inflation, nitrogen (6 tyres)

OPTIONAL EQUIPMENT

Body Options: Exhaust Heating Liner Plates Side Extensions Spillguard Extension Tailgate–Scissor chain operated Tailgate–Underhinged Cold Start Kit Engine Brakes (Jacobs) Fast Fuel Adaptor Fire Extinguisher First Aid Kit Lights: Beacon, flashing Fog, rear Reverse, flashing Working, rear facing Mirror, front mounted Mirror, Safety (with wide angle) Mirrors, heated Mud Flaps, in front of leading rear wheels Parking Brake Guard Retarder, transmission Seat heated Television Monitor, rear view Tool Kit, Hand Tyres, 750/65 R25

SERVICE DATA

Transmission (inc filters and cooler)	54 litres (14.3 US	gal)
Differentials - Front & Rear (each)	17 litres (4.5 US	gal)
Differential - Centre	18.5 litres (4.9 US	gal)
Planetaries (each)	3 litres (0.8 US	gal)



Performance Data

Unit equipped with 23.5 R 25 tyres Graphs based on 2% Rolling Resistance



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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405 (1-6)

3 450 (11-3)

> 3 420 (11-2)

2 985 (9-10)

WEIGHTS				
Standard unit	kg	lb		
Net Distribution				
Front Axle	10 910	24 050		
Bogie Axle Leading	4 940	10 890		
Bogie Axle Trailing	5 020	11 070		
Vehicle, Net	20 870	46 010		
Payload	23 000	50 710		
Gross Distribution				
Front Axle	14 610	32 210		
Bogie Axle Leading	14 560	32 100		
Bogie Axle Trailing	14 700	32 410		
Vehicle Gross	43 870	96 720		
Bare Chassis	16 940	37 345		
Body	3 400	7 495		
Hoists, pair	530	1 170		

DISTRIBUTOR:



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