

# AURY **NH**

# TR 50

Off-Highway  
Rigid Truck



- >> Cummins turbo charged, after cooled engine
- >> Smooth shifting, electronically-controlled transmission
- >> Non wearing hydrodynamic retardation
- >> High visibility cab with deluxe interior

- >> Maximum Payload 45 tonne (50 US ton)
- >> Maximum Gross Vehicle Weight-80000 kg (176 366 lb)
- >> Heaped Capacity-27.5m<sup>3</sup> (36yd<sup>3</sup>)
- >> Gross Power-389 kW (520 hp)

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## >> FRAME

Fabricated Full box section frame with integral front bumper and closed loop crossmember. Crossmember and rear torque tube and tail seat connections with frame rails are high strength alloy castings.



## >> ENGINE

Model - Cummins QSX15- C

Type 4 Cycle, Turbocharged/ After cooler

Gross Power @ 2 100 rev/ min 389kW (520hp)

Net Power @ 2 100 rev/ min 367kW (490hp)

Gross Power rated to SAE J 1995 Jun 90.

Engine emission meets Tier III USA EPA / CARB MOH 40 CFR 89 and proposed EU non road mobile machinery directive.

Maximum Torque 2440 Nm (1800 lbf ft) @1400 rev/min

Cylinders/ Configuration 6 in line

Bore x Stroke 137 x 69 mm (5.4 x 2.7 in)

Displacement 15 litres (912 in3)

24 volt negative ground electrical system. Two 12 volt 165 Ah batteries with master disconnect switch. 9 kW starter. Neutral start. 70A alternator with integral voltage regulator.

## >> TRANSMISSION

Allison 56200RS CEC5 automatic electronic control with Soft Shift feature. Mounted midframe for ease of access. Integral torque converter and planetary gearing. Six speeds forward, two reverse. Automatic lock-up in all speed ranges. Downshift inhibitor. Hydraulic retarder.

Speed	Forward						Reverse	
	1st	2nd	3rd	4th	5th	6th	R1	R2
Ratio	4.00	2.68	2.01	1.35	1.00	0.67	5.12	3.46
Km/h	11.3	16.8	22.4	33.4	45.2	65.0	7.4	11.26
Mile/h	7.0	10.5	13.9	20.8	28.1	40.4	4.4	7.0

## >> DRIVE AXLE

NHL heavy duty axle with single reduction spiral bevel gear differential, full floating axle shafts, and planetary reduction at each wheel.

Ratios:	Standard	Optional
Differential	3.15:1	3.73:1
Planetary	5.66:1	5.66:1
Total Reduction	17.83:1	21.11:1

## >> SUSPENSION

Front: Manufactured kingpin strut type independent front wheel suspension using self contained, variable rate, nitrogen/oil cylinders.

Rear: Variable rate nitrogen/oil cylinders with A frame linkage and lateral stabilizer bar.

Maximum Strut Stroke:	Front	251 mm (9.9 in)
	Rear	182 mm (7.2 in)
Maximum Rear Axle Oscillation	± 6.5 Degrees	

## >> TYRES

Standard:	Front and Rear 21.00-35(36PR) E-4
Rim Width	15 in

Consult tyre manufacturers for optimum tyre selection and correct t-km/h (ton-mile/h) capacity for application.

## >> BRAKES

Service: All hydraulic brake system control. Transmission mounted pressure compensating piston pump provides hydraulic pressure for brakes and steering. Independent circuits front and rear. Each circuit incorporates a nitrogen/hydraulic accumulator which stores energy to provide instant braking response.

Front Brakes:	Dry Disc
Disc diameter	711 mm (28 in)
Pad area, total	1 394cm <sup>2</sup> (216 in <sup>2</sup> )

Rear Brakes:	Oil cooled, multiple disc, completely sealed from dirt and water.
Braking Surface, total	47 151 cm <sup>2</sup> (7 308 in <sup>2</sup> )

PARKING - Rear brakes applied by spring loaded opposing piston on disc pack, hydraulically released.

RETARDATION - Modulated lever control of rear disc brakes or hydraulic retarder in transmission. 670 kW (900 hp) continuous retardation.

SECONDARY - Park push button solenoid control applies service and parking brakes. Automatically applies when engine is switched off. Parking brake applies when system pressure falls below a pre-determined level.

Brakes conform to ISO 3450.

## >> STEERING

Independent hydrostatic steering with closed center steering valve, accumulator and pressure compensating piston pump.

Accumulator provides uniform steering regardless of engine speed. In the event of loss of engine power it provides steering of approximately two lock to lock turns.

A low pressure indicator light warns of system pressure below 83 bar (1 200 lbf/in<sup>2</sup>). Steering conforms to ISO 5010.

Maximum Tyre Steering Angle	39°
Minimum Turning Radius(SAE)	8.7m(28ft6in)



TR50



>> HOIST

Two body hoist cylinders are mounted between the frame rails. Cylinders are two stage with power down in the second stage. The body hydraulic system is independent of the steering hydraulic system.

System Pressure	190 bar (2 750 lbf/ in <sup>2</sup> )
Body Hydraulic Pump Flow Rate @ 2 100 rev/ min	210 litre/ min (55.5 US gal/min)
Body Raise Time	13 Seconds
Body Lower Time	9 Seconds

>> BODY

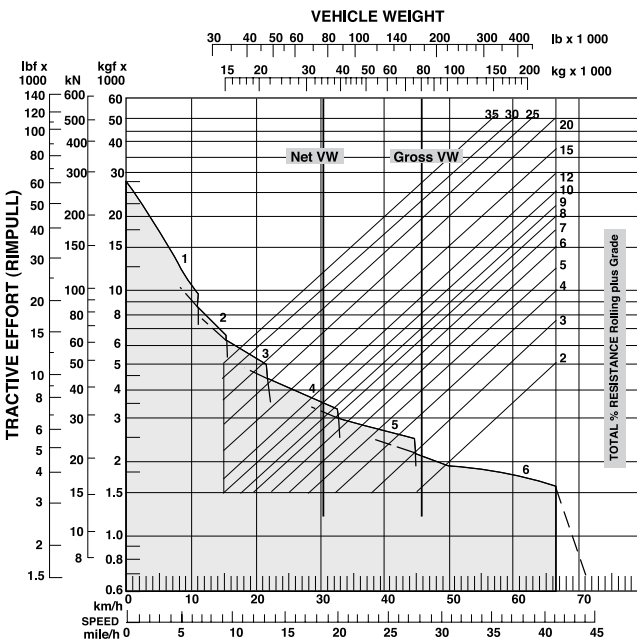
Longitudinal 'V' type floor with integral transverse box section stiffeners. The body is exhaust heated and rests on resilient impact absorption pads. Body floor wear surfaces are high hardness abrasion resistant steel of yield strength.

FOPS Protection ISO 3449.	
Thickness: Floor	15 mm (0.59 in)
Side	10 mm (0.39 in)
Front, lower	10 mm (0.39 in)
Volumes: Struck (SAE)	21.5 m <sup>3</sup> (28.1 yd <sup>3</sup> )
Heaped 2:1 (SAE)	27.5 m <sup>3</sup> (36 yd <sup>3</sup> )

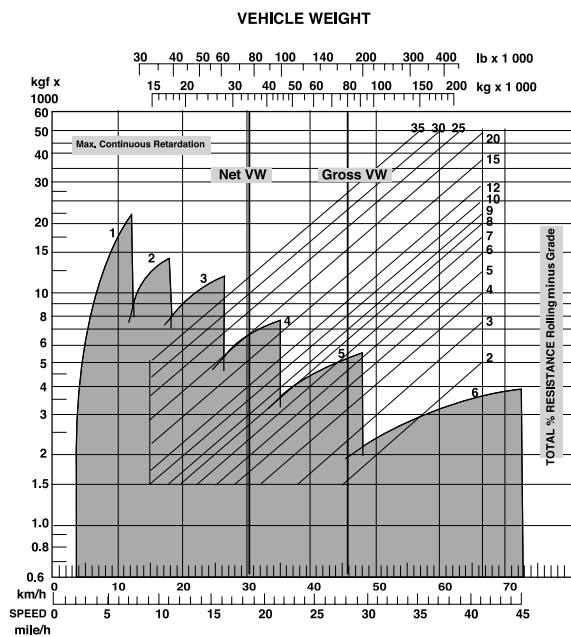
>> PERFORMANCE DATA

Graphs based on 0% Rolling Resistance.

GRADEABILITY

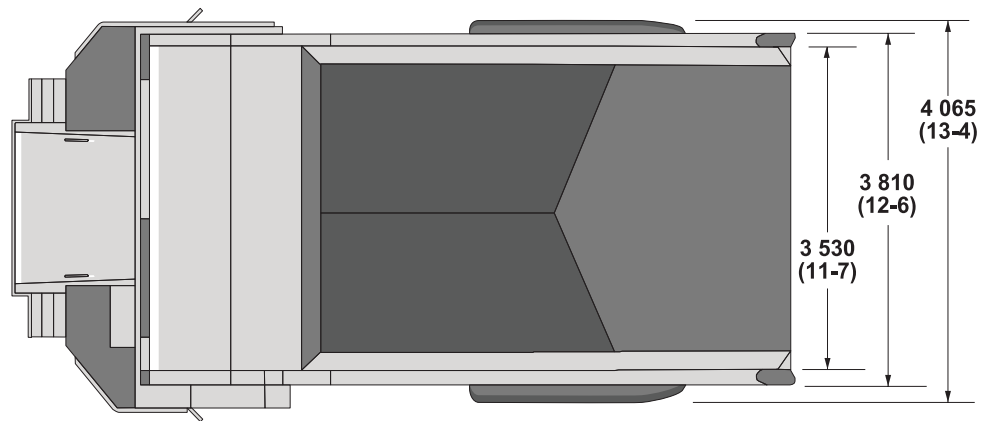
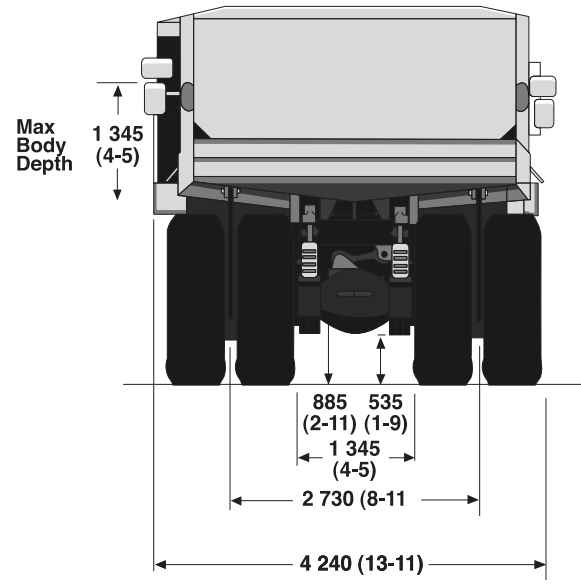
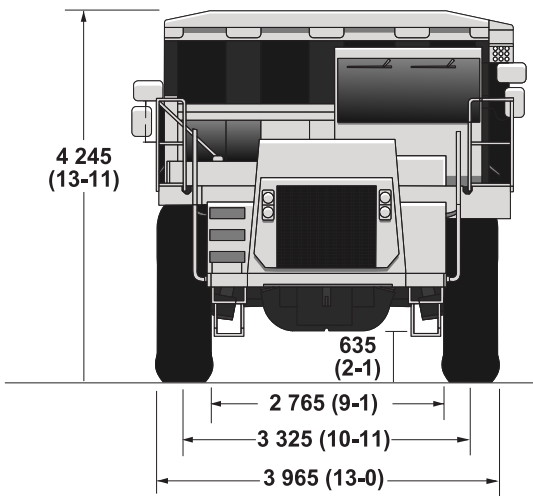


RETARDATION

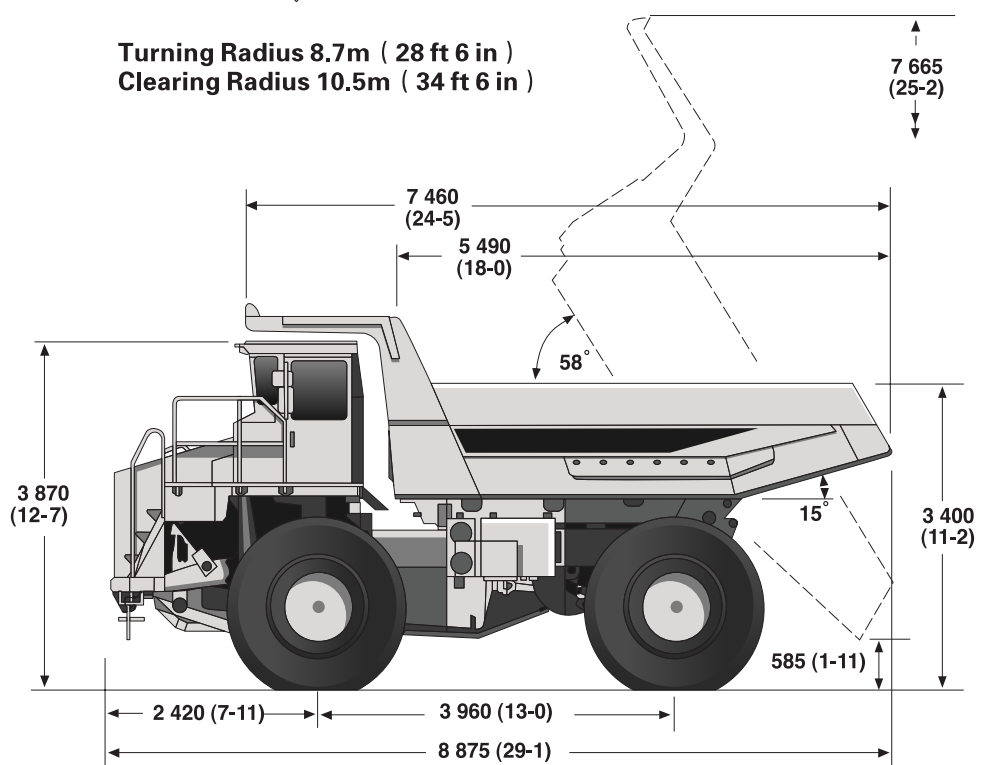


**Instructions:** From intersection of Vehicle Weight with Percentage Resistance line read across to determine maximum Gear attainable, and then downwards for Vehicle Speed.

Dimensions in mm (ft-in)



Turning Radius 8.7m ( 28 ft 6 in )  
Clearing Radius 10.5m ( 34 ft 6 in )



>> STANDARD EQUIPMENT

**CAB**

- Acoustic Lining

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- Door Locks

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- Floor Mat

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- FOPS Protection Body

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- Cabguard ISO 3449

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- Heater and Defroster

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- Interior Light/Courtesy Light

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- Adjustable seat

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- Seat, Passenger

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- Seat Belts SAE J386

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- Steering Column —adjustable

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- Sun Visor — full cab width

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- Tinted Glass

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- Utility Compartment

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- Windshield Wipers, 2 speed, and Washers

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**CONTROLS**

- Engine Test Switch

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- Engine Faults Codes Switch

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- Automatic Transmission Shift

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- Transmission Test Button

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- Power/Economy Key Switch

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- Manual Mode Key Switch

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- Retarder Control

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- Parking Switch

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- Wet/dry Brake Road Switch

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- Main Beam and Dipped Beam

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- Switch

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- Steering Warning Switch

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- Block Switch

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- Master Electrical Switch

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**GAUGES — ELECTRIC**

- Air Pressure

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- Converter Temperature

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- Engine Coolant Temperature

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- Engine Oil Pressure

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- Speedometer/Odometer

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- Tachometer/Hour meter

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- Transmission Oil Pressure

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**INDICATOR LIGHTS**

- Low Engine Oil Pressure

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- Engine Test

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- Engine Status

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- Air Cleaner Restriction

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- Alternator Not Charging

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- Converter Drive

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- Retarder 'On'

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- Transmission 'Check'

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- Transmission Filter Restriction

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- Steering Filter Restriction

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- Low Steering Pressure

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- Direction Indicators

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- Low air Pressure

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- Hydraulic Filter Restriction

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- Pressure

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- Headlamps, Main Beam

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- Warning Light Test

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**GENERAL**

- Accumulator Steering

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- Air Cleaners (2), two stage

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- Body Heating, exhaust

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- Body Hoist, Servo Actuated

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- Coolant Filter

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- Diagnostic Pressure Test Points

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- Downshift Inhibitor

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- Engine Management System

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- Engine Pan Guard

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- Exhaust Muffler

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- Fuel Sight Gauge

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- Headlights - Quartz Halogen (4)

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- Horn, Dual Electric

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- Mud Flaps

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- Operator Arm Guard

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- Dual Brake System

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- Parking Brake

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- Secondary Brake System

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- Rear View Mirrors

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- Wide—angle View Mirror

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- Radiator, replaceable tube core

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- After Cooler

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- Retarder, Transmission

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- Transmission Guard

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- Reverse Alarm

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- Reversing Light — quartz halogen

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- Rock Ejectors

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- Security Kit

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- Separate Steering and Body Hoist

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- Hydraulic Systems

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- Side, Tail, Stop, Direction Indicators and Hazard Warning Lights

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## >> OPTIONAL EQUIPMENT

Automatic Lubrication System	Fast Fuel Adaptor	Radio
Body, Heavy Duty	Fire Extinguisher	Tyres, 21.00 R 35GRadial
Body Wear Plates	Engine Retarder	Cold Protection curtain
Differential, 3.73:1	Spillguard Extension, folding	Tool kit, Hand

## >> WEIGHTS

	Kg	lb
Chassis, with hoists	25 180	55 511
Body, standard	8 800	19 400
Net Weight	33 980	74 691
PAYLOAD, maximum	45 000	99 200
Maximum Gross Weight*	80 000	176 366
<b>FOR UNIT EQUIPPED WITH OPTIONAL HD ROCK BODY</b>		
Chassis, with hoists	25 180	55 511
Body, Heavy Duty, Rock	10 300	22 708
Net Weight	35 480	78 218
PAYLOAD, maximum	43 500	95 900
Maximum Gross Weight*	80 000	176 366
* Maximum permissible gross vehicle weight with options, attachments, full fuel tank and payload.		
<b>WEIGHT DISTRIBUTION</b>		
	Front Axle	Rear Axle
Empty	48%	52%
Loaded	34%	66%

## >> SERVICE DATA

SERVICE CAPACITIES	LITRES	(US gal)
Engine Crankcase and Filters	55	(14.5)
Transmission and filters	68	(18.0)
Cooling System	170	(44.9)
Fuel Tank	470	(125.0)
Steering Hydraulic System (total)	72	(19)
Steering Hydraulic Tank	61	(16)
Body Hydraulic System	258	(68)
Body Hydraulic Tank	216	(57)
Planetaries (Total)	49	(13.0)
Differential	47	(12.4)
Front Ride Strut (Each)	14	(3.7)
Rear Ride Strut (Each)	17	(4.5)
Power Take Off	4	(1.0)

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Rigid Truck



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MACKAY  
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PERTH  
27 Purser Loop  
Bassendean WA 6054

MOÇAMBIQUE  
Stand 81, EN7, Chithatha,  
Moatize, Tete

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 **AURY** **NHL**