

## STANDARD EQUIPMENT

### GENERAL

Access ladders  
Air conditioning  
Air cleaner protection  
All-hydraulic braking  
Automatic lubrication system  
Battery isolation switch  
Body down indicator, mechanical  
Body prep cable  
Centralized service panel  
Continuous heated body  
Electric horn, quad  
Electronic hoist control  
Electric start  
Engine access ladders (2)  
Fan guard  
Fuel gauge on tank  
Ground level engine  
- shutdown switch  
Guard rails around platform  
HAULTRONIC II  
load weighing system

### CAB

Acoustical lining  
Air filtration/replaceable element  
Air suspension seat, 6-position  
Ash tray  
Auxiliary outlet, 12-volt  
Cab interior light  
Cigar lighter  
Door locks  
Engine starter/shutdown switch  
Full trainer seat  
Integral ROPS/FOPS cab  
ISO driver envelope

### GAUGES AND INDICATORS

HAULTRONIC II monitoring and alarm system, multi-function  
Indicator lights:  
Air filter restriction  
Alternator  
Body up indicator  
Brake supply pressure  
Central warning  
Engine oil pressure  
Engine coolant temperature  
High beam indicator  
Hoist filter restriction  
Hoist oil temperature  
Hoist supply pressure  
Parking brake applied  
Steering filter restriction  
Steering oil temperature  
Traction blower failure  
Traction system failure  
Turn signal/hazard

### MACHINE LIGHTS

Back-up lights, (2)  
Clearance lights, LED (4)  
Control cabinet lights, (3)  
Dual combination stop and tail lights, LED (2)  
Dynamic retarding light, (1)  
Engine compartment lights, (2)  
HID Headlights, (4)  
Payload monitoring lights, (6)  
Rear axle light, (1)  
Turn signals and four-way flashers (LED)

HID headlights  
Hoist kickout  
Ladder lights  
Mirror, right and left  
Mud flaps  
NEOCON suspension struts  
On board load box  
Operator arm guard  
Propulsion interlock, body up  
Radiator grille guard  
Retard speed control  
Retarder grid package,  
18-element, 3-step  
Reverse alarm  
Rock ejector bars  
Supplementary steering  
system accumulator  
Tires, 37.00R57 ("E4  
Tow hooks, front  
Two-speed overspeed setting

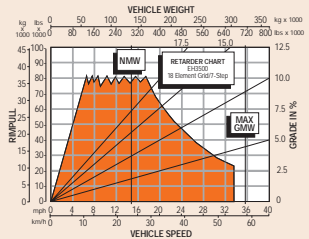
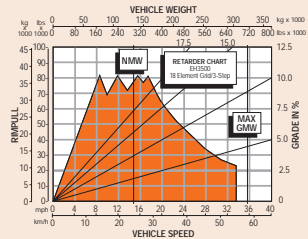
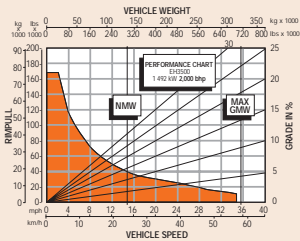
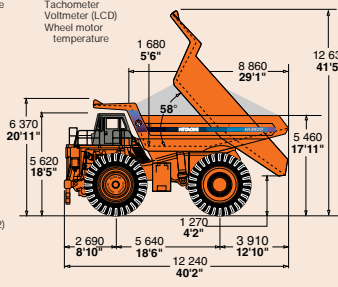
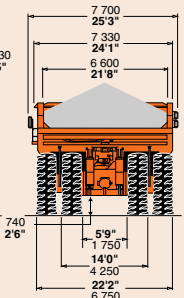
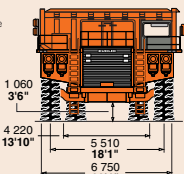
## OPTIONAL EQUIPMENT

Annual centralized fire  
extinguishing system (12 nozzle)  
Auxiliary dump  
Auxiliary steer  
Body liners (MODBHN)  
Body side extensions  
Buddy dump and steer  
Cab, acoustic package  
Canopy spillguard extension  
(12" total)  
Cummins K2000E @ 1800hp  
emission certified engine  
Cummins K1800E non-emission  
certified engine  
Engine coolant and oil heater  
(220 V AC)  
Fast fueling system, on tank  
Hubodometer  
Keyless starter switch  
Kim Hotstart  
Mufflers  
Oil sampling connections  
Realtor shutters  
Retarding -7step extended range  
Rimex rims  
Thermatic fan  
Trolley assist configuration

Standard and optional equipment may vary from country to country. Special options provided on request. All specifications are subject to change without notice.

Note: Dimensions shown are for empty machine with 37.00R57 tires.

unit:mm  
ft/in



## INSTRUCTIONS:

Diagonal lines represent total resistance (Grade % plus rolling resistance %). Charts based on 0% rolling resistance, standard tires and gearing unless otherwise stated.

- Find the total resistance on diagonal lines on right-hand border of performance or retarder chart.
- Follow the diagonal line downward and intersect the NMW or GMW weight line.
- From intersection, read horizontally right or left to intersect the performance or retarder curve.
- Read down for machine speed.

NOTE: Photos and illustrations throughout may show optional equipment.

Under our policy of continuous product improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

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# EH3500

Maximum Payload  
193.3 m tons (213.1 U.S. tons)

Maximum Payload  
with Standard Liners  
182.9 m tons (201.6 U.S. tons)

Maximum GMW  
324 324 kg (715 000 lb)

Engine  
Cummins K2000E  
Rated Power 1 491 kW (2 000 HP)



# Specifications: EH3500



## ENGINE

Make Model	Cummins K200E with CENTRY 4 Cycle				
Type	Turbocharged				
Aspiration					
Rated Power @ 1900 rpm (SAE J1995)	kW	HP	1 491	2 000	
Net Power @ 1900 rpm (SAE J1349)	kW	HP	1 411	1 892	
Max. Torque @ 1500 rpm (SAE 1995)	N-m	lb-ft	7 864	5 800	
No. Cylinders	16				
Bore & Stroke	mm	159 x 159			
	in	6.25 x 6.25			
Displacement	L	in <sup>3</sup>	50.3	3 067	
Starting	Electric				



## ELECTRIC DRIVE

**Controls**  
General Electric Staxex III System with latest fuel enhancement feature and wet weather retarding.

**Alternator**  
General Electric Model GTA 22M. Direct mounted to engine.

**Wheel Motors**  
General Electric Model 788F-S motors complete with planetary assembly in each rear wheel.

Planetary Ratio	26.83:1		
Maximum Speed	km/h	mph	55.7 34.6

**Note:**  
Wheel motor and dynamic retarding configuration subject to GE approval for a given application.



## TIRES

Standard - Front and Rear 37.00R57(")E4 Radials	Rim Width		
mm	in	686	27.0
<b>Optional - Front and Rear 36.00R51(")E4 Radials</b>	mm	in	660 26.0

Certain job conditions may require higher TKPH (TMPH) in order to maintain maximum production. Euclid recommends evaluating the job conditions and consult the tire manufacturer to make proper tire selection. Optional tire types, treads, ply ratings and rims available.



## ELECTRICAL SYSTEM

Twenty-four volt lighting and accessories system. 175 amp alternator with integral transistorized regulator. Eight 12-volt, heavy-duty batteries connected in series/parallel.



## BODY CAPACITY

Struck (SAE)	m <sup>3</sup>	yd <sup>3</sup>
Heap 3:1	79.9	104.5
Heap 2:1 (SAE)	103.8	135.8
	115.1	150.5



## WEIGHTS

Chassis with Hoist	kg	lb
Body	105 261	232 057
Net Machine Weight	25 719	56 700
Front Axle	130 980	288 757
Rear Axle	64 180	141 490
	66 800	147 267

Maximum GMW: 37.00R57(")E4 Including Options, 50% Fuel Operator & Payload Not to Exceed Load Weight Distribution Front - 33% Rear - 67%

Maximum Payload	193 344	426 243
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**Note:**  
Maximum GMW subject to GE approval for a given application. Net Machine Weight includes 37.00R57(")E4 tires.

Options: Approximate change in Net Machine Weight:

Body Liners, Complete	kg	lb
Max. Payload with Body Liners, Complete	10 433	23 000
	182 911	403 243

Floor	mm	in	19 0.75
Sides and front	mm	in	10 0.39
Corners	mm	in	19 0.75
Canopy	mm	in	6 0.24
Top rails	mm	in	10 0.39



## STEERING SYSTEM

Closed-center, full-time hydrostatic power steering system using two double-acting cylinders, pressure limit compensated piston pump, and a brake actuation/steering system reservoir. An accumulator provides supplementary steering in accordance with JISO 5010. A III/telescopic steering wheel with 35° of tilt and 57.15 mm 2.25" telescopic travel is standard.

Steering Angle	m	ft in	25.6	84.0
Turning Diameter (SAE)				
Steering Pump Output @ 1900 rpm	L/min	gpm	186.5	49.4
System Operating Pressure	kPa	psi	20 685	3 000

Maximum dynamic retarding: 18 Element Grid kW HP 2 889 3 870 (3 step is standard, 7 step is optional)



## HYDRAULIC SYSTEM

Two (2) Hitachi three-stage, double-acting cylinders with cushioning in retraction, containing dual rod seals and rubber energized scrapers. Inverted and outboard mounted. Separate reservoir and tandem gear pump connects with a four-position electric pilot controlled hoist valve. Electronic controller is mounted to operator's seat.

Body Raise Time	s	17.9	
Hoist Pump Output @ 1900 rpm	L/min	gpm	607.0 160.0
System Relief Pressure	kPa	psi	18 961 2 750



## BRAKE SYSTEM

Brake systems meet or surpass SAE J/ISO 3450.

**Service**  
All-hydraulic actuated braking system provides precise braking control and quick system response. The system is pressure proportioned, front to rear, for improved slippery road control. Three calipers per front disc, one caliper per rear disc are utilized. The main valves are conveniently located on the primary. This placement enhances service-ability as all pressure checks and system troubleshooting can be made at a central location. A formal accumulator stores oil under sufficient pressure to ensure 100% braking capacity is always available.

Front Axle - Dry Disc Disc Diameter Each (2 discs/axle)	cm	in	106.0	42
Brake Surface Area Per Axle	cm <sup>2</sup>	in <sup>2</sup>	15 001	2 325
Lining Area per Axle	cm <sup>2</sup>	in <sup>2</sup>	6 194	960
Brake Pressure (Max.)	kPa	psi	18 961	2 750

Rear Axle - Armature Speed Dry Disc Disc Diameter Each (4 discs/axle)	cm	in	63.5	25
Brake Surface Area Per Axle	cm <sup>2</sup>	in <sup>2</sup>	14 298	2 216
Lining Area per Axle	cm <sup>2</sup>	in <sup>2</sup>	2 839	440
Brake Pressure (Max.)	kPa	psi	13 790	2 000

**Operation**  
Two independent hydraulic circuits within the service brake system provide fully modulated reserve braking capability. The system is automatically applied when loss of pressure is detected.

**Parking**  
Spring-up, hydraulic-off park brake heads provide parking capability. The braking system complies with SAE J/ISO 3450.

**Retarder**  
Retardation on grades is achieved through D.C. wheel motors in conjunction with the General Electric resistor grid package located on the cab deck. Cooling for the grid package is achieved with forced air flow provided by dual blowers driven by a single electric motor. Three-step extended range retardation package is standard.

Maximum dynamic retarding: 18 Element Grid kW HP 2 889 3 870 (3 step is standard, 7 step is optional)



## COMMAND CAB III

**Integral ROPS/POPS Command Cab III**  
Integral ROPS (Rolllover Protective Structure) is standard in accordance with J/ISO 3471.

Double wall construction of 11 gauge inner and outer steel panels produces a more structurally sound cab. Foam rubber lining material, along with foam rubber-backed carpeting and multiple layered floor mat act to absorb sound and control interior temperature.

A properly maintained cab from Hitachi, tested with doors and windows closed per work cycle procedures in SAE J1166, results in an operator sound exposure Leq (Equivalent Sound Level) of 81 dB(A). A three-point rubber iso-mount arrangement to the deck surface minimizes vibration to the operator compartment.

**Monitoring System**  
CONTRONIC II monitors and diagnoses all onboard systems including Siemens drive system and engine. Data links offer complete integration, while a single multi-language Liquid Crystal Display (LCD) clearly details machine functions. Downtime is minimized with faster and more reliable troubleshooting and analysis.

HAULTRONIC II load weighing system offers benefits such as better equipment utilization on the jobsite, accurate unit and fleet production results, and benchmark unit statistics against fleet results. Cycle time, distance, cycle count can all be measured and recorded to further and improve job productivity. HAUltronic II is fully integrated with CONTRONIC II vehicle monitoring system and display interface, avoiding potential failure or error common in aftermarket systems.

**Excellent Serviceability**  
A removable front closure allows easy access to the service brake valve and heater connections. The upper dash utilizes four (4) removable panels that house gauges and customer options, each individually accessible. A removable closure located behind the seat provides easy access to the shifting control, CONTRONIC II, and all electrical junction points.

**Comfort and Ease of Operation**  
A wrap-around style dashboard positions controls within easy reach and visual contact. A full complement of easy-to-read gauges, CONTRONIC II monitoring and warning system, a spacious environment, six-way adjustable air seat, III/telescopic steering wheel, filtered ventilation, door locks, and a full size trainer seat, all contribute to operator safety and comfort.



## SUSPENSION

**Front Suspension**  
Independent trailing arm for each front wheel. NEOCON struts containing energy-absorbing gas and compressible NEOCON-E™ fluid are mounted between the trailing arms and frame. Variable damping and rebound feature included.

**Rear Suspension**  
"A" frame structure, integral with axle housing, links drive axle to frame at forward center point with pin and spherical bushing. A track rod provides lateral stability between the frame and drive axle. Heavy-duty rear-mounted NEOCON struts containing energy-absorbing gas and compressible NEOCON-E fluid suspend the drive axle from the frame. Integral rebound feature included.



Maximum wheel oscillation 8"

The Hitachi frame and suspension are designed to work in unison to provide maximum structural integrity and operator comfort. The fabricated rectangular frame rail construction provides superior resistance to bending and torsional loads while eliminating unnecessary weight. The unique trailing arm front suspension absorbs haul road input, minimizing suspension-induced frame twisting while providing independent tire action. NEOCON ride struts are mounted with spherical bushings, eliminating extreme side forces by insuring a purely axial input to the ride strut. The wide track stance of the suspension system and the long wheel base assure a more stable, comfortable ride.

The unique Hitachi NEOCON struts both front and rear combine the energy absorption characteristics of two different compressible media: NEOCON-E liquid and helium gas. They provide nearly twice the energy absorption as Nitrogen over Oil struts. The result is more comfort for the operator, maximum protection for the hauler frame, and excellent stability and control. NEOCON-E has also been approved by the US EPA and does not violate codes defined by TSCA Section 5.

The NEOCON strut outperforms competitive strut designs by improving isolation, stability, and control. Improved isolation means reduced impact loading on structural members of the machine and greater operator comfort, resulting in longer equipment life and productivity. Improved stability means more consistent dynamic response of the machine to fluctuating load energy, resulting in predictable machine performance. Improved control also means better machine maneuverability.



## FRAME

The box section main frame rails are bridged by three crossmembers, front bumper and front suspension tube. The rails are constant taper, constructed of 690 N/mm<sup>2</sup> 100 000 psi yield strength steel. Two rear crossmembers have integral suspension and drive axle mountings. Crossmember to frame rail junctions employ large radii transitions to minimize stress concentrations.



## BODY

The body has a flat floor, sloped tailchute, and is continuously exhaust-heated. Extended canopy protects service deck area. High yield strength, 690 N/mm<sup>2</sup> 100 000 psi alloy steel is used in the following thicknesses:

	mm	in
Floor	19	0.75
Front	10	0.39
Sides	10	0.39
Canopy	6	0.24

High strength 690 N/mm<sup>2</sup> 100 000 psi alloy steel is also used for the Canopy side members and floor stiffeners. The body is rubber cushioned on the frame.

The Hitachi horizontal stiffener design minimizes stress concentrations, by dissipating load shocks over the entire body length. Closely spaced stiffeners provide additional protection by minimizing distances between unsupported areas.



## SERVICE CAPACITIES

	L	U.S.gal
Crackcase (incl. filters)		
Cummins K200E	209.7	55.4
Cooling System	322.7	85.3
Fuel Tank	2 838.8	750.0
Hydraulic		
Hoist System	565.9	149.5
Steering System	189.3	50.0
GE788 wheel motor (per wheel)	39.7	10.5
Windshield washer	3.8	1.0