

**HITACHI**

# ***EH 750***

**Maximum Payload**

38.6 m tons (42.5 U.S. tons)

**Maximum GMW**

74 000 kg (163 139 lb)

**Engine**

Cummins QSK19-C525

Rated Power 392 kW (525 hp)



# Specifications: EH750



## ENGINE

<b>Make</b>	<b>Cummins</b>			
Model	QSK19-C525			
Type	4 Cycle			
Aspiration	Turbocharged/Aftercooled			
Rated Power (SAE @ 2100 rpm)	kW	hp	392	<b>525</b>
Flywheel Power (SAE @ 2100 rpm)	kW	hp	362	<b>486</b>
No. Cylinders	6			
Bore & Stroke	mm	159 x 159		
	in	<b>6 1/4 x 6 1/4</b>		
Displacement	L	in <sup>3</sup>	18.9	<b>1 150</b>
Maximum Torque @ 1300 rpm	N•m	lb/ft	2 407	<b>1 775</b>
Torque Rise	30%			
Starting	Electric			



## TRANSMISSION

Allison M5610. Planetary type, full automatic shifting. Integral torque converter, with automatic lock-up in all ranges. Remote mounted. Six forward speeds, two reverse. Allison Transmission Commercial Electronic Control (CEC II) shift system. Trim Boost Soft Shift provides smooth shifting to help reduce operator fatigue.

### Maximum Speeds @ governed engine speed

<b>Differential</b>	3.13:1		3.13:1		2.81:1		
<b>Planetary</b>	5.25:1		6.00:1		5.25:1		
Gear	<b>Ratio</b>	km/h	<b>mph</b>	km/h	<b>mph</b>	km/h	<b>mph</b>
1	4.00	11.3	<b>7.0</b>	10.2	<b>6.3</b>	12.6	<b>7.8</b>
2	2.68	16.9	<b>10.5</b>	15.2	<b>9.4</b>	18.8	<b>11.7</b>
3	2.01	22.5	<b>14.0</b>	20.2	<b>12.6</b>	25.0	<b>15.6</b>
4	1.35	33.5	<b>20.8</b>	30.1	<b>18.7</b>	37.3	<b>23.2</b>
5	1.00	45.2	<b>28.1</b>	40.6	<b>25.3</b>	50.3	<b>31.3</b>
6	0.67	68.2	<b>42.5</b>	61.3	<b>38.1</b>	76.0	<b>47.2</b>
R1	5.12	8.9	<b>5.5</b>	8.0	<b>5.0</b>	9.9	<b>6.2</b>
R2	3.46	13.2	<b>8.2</b>	11.9	<b>7.4</b>	14.7	<b>9.1</b>



## DRIVE AXLE

Full floating axle shafts, reduction provided by Euclid Model 2052 differential and single reduction planetary with balanced life gearing in each wheel to maximize gear life.

Optional Active Traction Control (ATC) with Electronic Downhill Speed Control (EDSC) available.

<b>Ratios</b>	Standard	Optional	Optional
Differential	3.13:1	3.13:1	2.81:1
Planetary	5.25:1	6.00:1	5.25:1
Total Reduction	16.43:1	18.78:1	14.75:1

<b>Maximum Speeds</b>			
with 18.00R33 Tires	km/h	68.2	km/h
	<b>mph</b>	<b>42.5</b>	<b>mph</b>
			61.3
			<b>38.1</b>
			76.0
			<b>47.2</b>



## TIRES

**Standard – Front and Rear**  
18.00R33 Tires  
Optional tires, brands and treads available.

**Rim Width**  
mm in 330 13



## ELECTRICAL SYSTEM

Twenty-four volt lighting and accessories system. 75 amp alternator with integral transistorized voltage regulator. Two 900 amps cold cranking, 12 volt maintenance free heavy duty batteries connected in series.

Standard CONTRONIC II monitoring and central warning system with built-in diagnostics. Standard Liquid Crystal Display.



## BODY CAPACITY

	m <sup>3</sup>	yd <sup>3</sup>
Struck (SAE)	20.8	<b>27.2</b>
Heap 3:1	25.4	<b>33.2</b>
Heap 2:1 (SAE)	27.7	<b>36.3</b>



## WEIGHTS

	kg	lb
Chassis with Hoist	24 591	<b>54 212</b>
Body	10 848	<b>23 915</b>
Net Machine Weight	35 439	<b>78 127</b>
Maximum GMW with Std. Tires [18.00R33] Including Options, 50% Fuel, Operator & Payload Not to Exceed	74 000	<b>163 139</b>
Maximum Payload	38 561	<b>85 012</b>
Weight Distribution	<b>FRONT</b>	<b>REAR</b>
Empty	50.1%	49.9%
Loaded	33.0%	67.0%



## STEERING SYSTEM

Closed-center, full-time hydrostatic power steering system using two double-acting cylinders, pressure limit with unload piston pump and brake actuation/steering system reservoir. Accumulator provides supplementary steering in accordance with SAE J1511 and ISO 5010. Tilt/telescopic steering wheel with 35 degrees of tilt and 57.15 mm **2.25"** telescopic travel.

Steering Angle			<b>42°</b>
Turning Diameter (SAE)	m	ft	16.15
Steering Pump Output	L/min	<b>gpm</b>	95.8
System Pressure	kPa	<b>psi</b>	18 961
			<b>2 750</b>

# Equipment & Dimensions: EH750

## STANDARD EQUIPMENT

### GENERAL

ACCU-TRAC suspension system  
 All-hydraulic braking  
 Allison M5610 transmission  
 Automatic transmission shifting  
 Battery disconnect switch  
 Body down indicator, mechanical  
 Body down cushioning  
 Body up speed restriction  
 Body prop pins  
 Canopy spill guard  
 Continuous heated body  
 Driveline guard, front  
 Electric horns  
 Electric start  
 Electronic hoist  
 Engine belt protection  
 Fan guard  
 Fenders  
 Fixed steering stops  
 Front brake cut-off switch  
 Guard rails  
 HID headlights

Hoist interlock  
 Hoist tank sight gauge  
 ISO decals  
 LED tail lights  
 Load/dump brake  
 Mirrors right and left, hand adjustable  
 Mud flaps  
 NEOCON suspension struts  
 Park brake interlock  
 Radiator grill guard  
 Reverse alarm  
 Rock ejector bars  
 Steering accumulator  
 Steering tank sight gauge  
 Swing-out grille  
 Tires, 18.00R33(\*\*)E4  
 Tow points front/rear  
 Transmission guard  
 Transmission sight gauge  
 Two-speed reverse

### CAB

Acoustical lining  
 Air conditioning  
 Air filtration/replaceable element  
 Ash tray  
 Cab interior light  
 Cigar lighter, 12 volt  
 Door locks  
 Foot rest (left and right)  
 Heater and defroster 26,000 Btu  
 Integral ROPS/FOPS cab  
 ISO driver envelope  
 Liquid Crystal Display\* (CONTRONIC) II  
 Boost pressure  
 Clutch pressure  
 Distance traveled  
 Engine oil pressure  
 Fuel gauge  
 Fuel pressure  
 Gear selection  
 Injector timing rail-pressure  
 Intake manifold temperature  
 Integrated engine diagnostics  
 Integrated transmission diagnostics

Load counter  
 Service intervals, job site adjustable  
 Throttle position  
 Total engine hours  
 Total idle hours  
 Voltmeter  
 Modular instrumentation  
 Quick connect test ports  
 Roll down windows  
 Rubber floor mat  
 Safety glass  
 Seat belts, retractable (operator/trainer)  
 Seat, mechanical 6 position  
 Sun visor  
 Tilt/telescopic steering wheel  
 Tinted glass all windows  
 Trainer seat  
 12 volt 50 amp circuit  
 12 volt accessory connection  
 Windshield washer  
 Windshield wiper, intermittent

### GAUGES AND INDICATORS

CONTRONIC II monitoring and alarm system, multi-function indicator lights:  
 Air filter restriction  
 Alternator  
 Body up  
 Brake system low pressure  
 Central warning  
 Converter temperature  
 Coolant level  
 Cooling temperature  
 Do not shift  
 Engine oil pressure  
 Engine service  
 Engine shut down  
 High beam indicator  
 Hydraulic filter  
 Park brake applied  
 Retard oil temperature  
 Steering filter  
 Steering pressure  
 Steering temperature  
 Transmission filter  
 Transmission malfunction  
 Transmission oil pressure  
 Turn signals/hazard

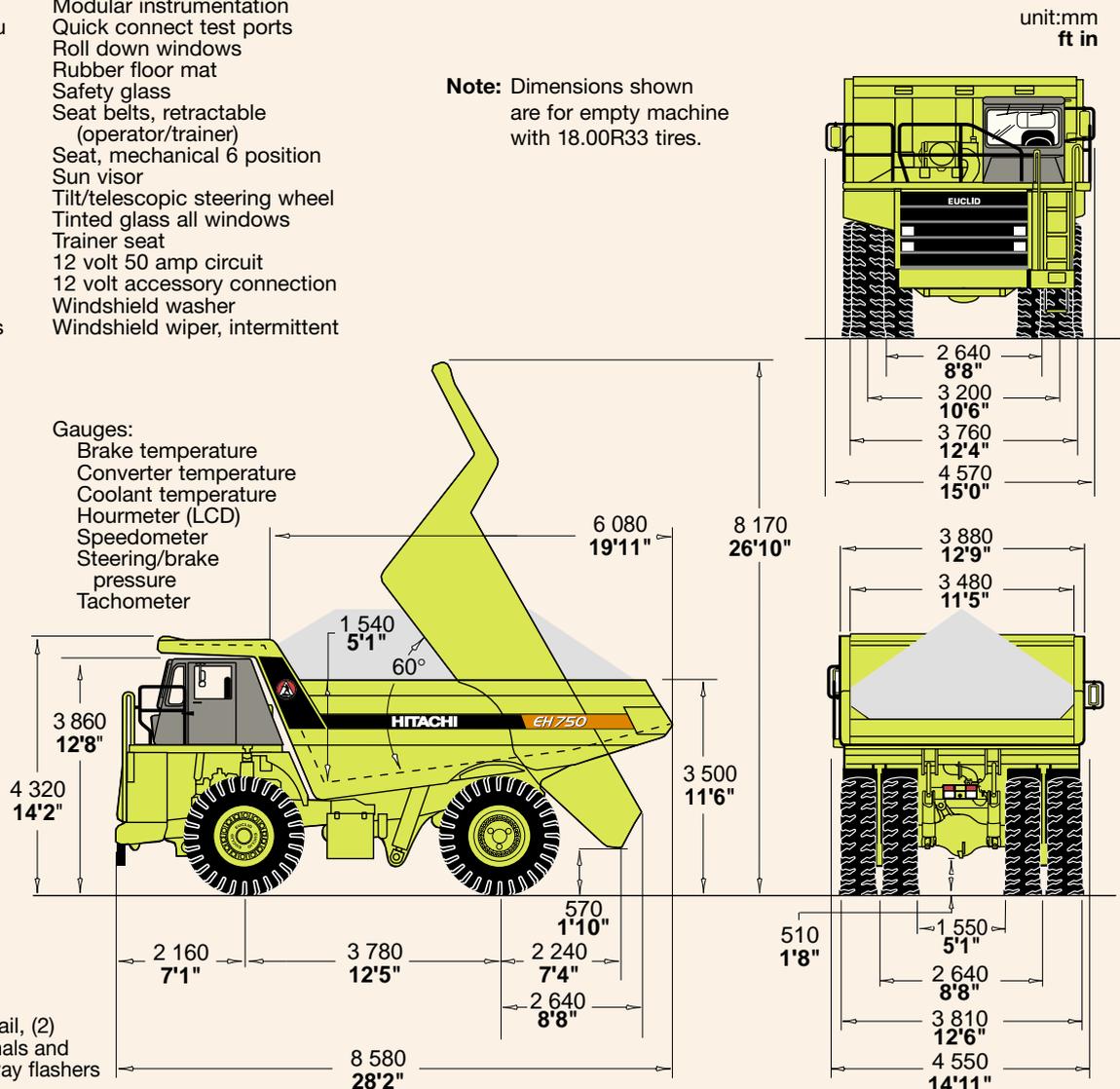
Gauges:  
 Brake temperature  
 Converter temperature  
 Coolant temperature  
 Hourmeter (LCD)  
 Speedometer  
 Steering/brake pressure  
 Tachometer

## OPTIONAL EQUIPMENT

Air suspension seat  
 ACTIVE TRACTION CONTROL (ATC) w/ELECTRONIC DOWNHILL SPEED CONTROL (EDSC)  
 Body sideboard extensions  
 Canopy spill guard extension  
 Cold start aid  
 Differential, 2.81:1 ratio  
 Driveline guard, rear  
 Engine compartment lights  
 Engine compartment step

Engine heater (oil & coolant)  
 Extra reverse alarm  
 HAULTRONIC II-load monitoring system  
 Hoodsides  
 Kim hotstart pre-heaters  
 Lube system, automatic  
 Lube system, centralized  
 Muffler, deck mounted  
 Radio & tape player  
 Starter lock-out switch  
 Tires (size, type & rating)  
 Unit sound suppression

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



### MACHINE LIGHTS

Back-up light, (2)  
 Clearance lights, (2)  
 HID headlights, (4)  
 Stop & tail, (2)  
 Turn signals and four-way flashers



## HYDRAULIC SYSTEM

Two Euclid two-stage, double-acting cylinders, with cushioning in retraction, inverted and outboard-mounted. Separate Hoist/Brake Cooling reservoir and independent tandem gear pump. Control valve mounted on reservoir.

Body Raise Time	s		11.2	
Body Float Down Time	s		14.0	
Body Power Down Time	s		12.0	
Brake Cooling Pump Output (@ 2100 rpm)	L/min	<b>gpm</b>	200.3	<b>52.9</b>
Hoist Pump Output (@ 2100 rpm)	L/min	<b>gpm</b>	301.3	<b>79.6</b>
System Relief Pressure	kPa	<b>psi</b>	17 237	<b>2 500</b>



## BRAKE SYSTEM

Brake system complies with SAE J/ISO 3450.

All-hydraulic actuated braking system provides precise braking control and quick system response. The brake controller has a unique variable front to rear brake proportioning that maximizes the stopping performance under all road conditions.

### Service

All-hydraulic actuated front dry disc brakes, and rear wet disc brakes.

### Front Axle - Dry Disc

Disc Diameter Each (2 discs/axle)	cm	<b>in</b>	67.3	<b>26.5</b>
Brake Surface Area Per Axle	cm <sup>2</sup>	<b>in<sup>2</sup></b>	4 129	<b>640</b>
Lining Area Per Axle	cm <sup>2</sup>	<b>in<sup>2</sup></b>	1 394	<b>216</b>
Brake Pressure (Max.)	kPa	<b>psi</b>	15 859	<b>2 300</b>

### Rear Axle - Oil-Cooled Wet Discs

Brake Surface Area Per Axle	cm <sup>2</sup>	<b>in<sup>2</sup></b>	37 209	<b>5 767</b>
Brake Pressure (Max.)	kPa	<b>psi</b>	8 274	<b>1 200</b>

### Optional Increased Capacity

Brake Surface Area Per Axle	cm <sup>2</sup>	<b>in<sup>2</sup></b>	49 551	<b>7 680</b>
Brake Pressure (Max.)	kPa	<b>psi</b>	8 274	<b>1 200</b>

### Secondary

Two independent circuits within the service brake system provide fully modulated reserve braking capability. System also incorporates automatic application when loss of pressure is detected.

### Parking

Dry disc mounted on differential input shaft. Controlled by a toggle switch on the dash. Automatically applied if brake hydraulic pressure is lost.

Size (Diameter)	mm	<b>in</b>	558	<b>22</b>
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### Retarder

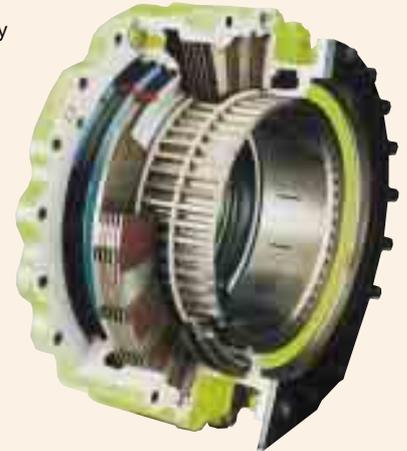
Foot-operated valve controls all-hydraulic actuation of oil-cooled wet disc brakes on rear axle. System provides modulated pressure to rear brakes for constant speed control.

Continuous	kW	<b>hp</b>	484	<b>649</b>
Intermittent	kW	<b>hp</b>	969	<b>1 300</b>



## WET DISC BRAKE

The Euclid wet disc brake is engineered for long service life even in the most extreme environments. The wet disc brakes are located on the rear axle and provide service braking, secondary braking, and retarding. The brakes are a multi-plate design, and continuously oil-cooled. The sealed design protects against environmental contamination for prolonged service life. The wet disc brake is designed with automatic retraction to prevent drag. Separate pedals activate the service braking and retarding functions.



## COMMAND CAB III

### COMMAND CAB III

Integral ROPS/FOPS (Rollover Protection Structure) is standard in accordance with SAE J/ISO 3471. Dimensions comply with SAE J/ISO 3411. Double wall construction of 11 gauge inner and outer steel panels, lends itself to 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 Euclid, tested with doors and windows closed per work cycle procedures in SAE J1166, results in an operator sound exposure  $L_{eq}$  (Equivalent Sound Level) of 79 dB(A). A three-point rubber iso-mount arrangement to the deck surface minimizes vibration to the operator compartment.



### Excellent Serviceability

A removable front panel allows easy access to service brake valves, retarder valve and heater assembly. The upper dash utilizes four (4) removable panels that house gauges and customer options, each individually accessible. A removable panel 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 with Liquid Crystal Display (LCD), a spacious environment, six-way adjustable mechanical seat, tilt/ telescopic steering wheel, filtered ventilation, door locks, and a padded trainer seat, all contribute to operator convenience and comfort.

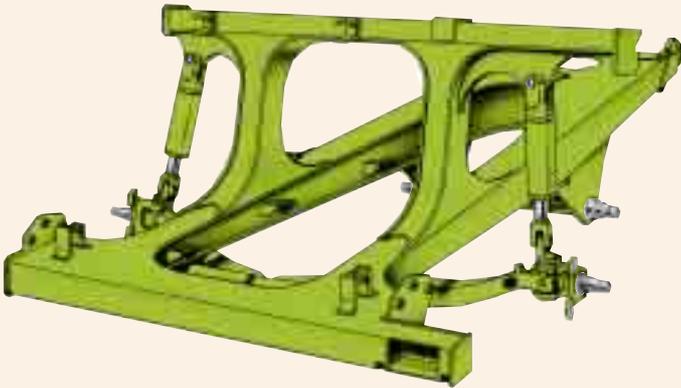


## SUSPENSION

### Front and Rear Suspension

For years, Euclid haulers have enjoyed an industry-wide reputation for superior suspension systems. That experience and knowledge has now been pushed to the next level, to develop the truly advanced ACCU-TRAC suspension for the EH750. To make sure it was fine tuned to the limit, Lotus Engineering, a world leader in suspension design, was contracted to review the entire system to assure optimized ride and handling performance.

The new ACCU-TRAC suspension system features independent trailing arms for each front wheel with NEOCON struts, containing energy absorbing gas and compressible NEOCON-E™ fluid, mounted between the king pins and the frame. This arrangement allows a wider front track that provides a better ride, improved stability and a reduced turning circle. The rear axle housing has an A-frame mounting. The rear NEOCON struts are mounted in a more vertical position which allows a more pure axial loading and reduces the tractive and braking forces transmitted to the nose cone.



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

The Euclid frame and ACCU-TRAC suspension system 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 ACCU-TRAC independent trailing arm 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 sidewall forces by ensuring a purely axial input to the ride strut. The wide track stance of the ACCU-TRAC suspension system and the long wheel base assure a more stable, comfortable ride.



## FRAME

Full fabricated box section main rails with section height tapered from rear to front. Wider at the rear to support the loads and narrower at the front to allow for engine accessibility. One piece top and bottom flanges that eliminate cross member tie in joints and provide a large exposed center area for access to major components. Large radii at frame junctions are blended and ground to minimize stress concentrations. Weld joints are oriented longitudinally to the principal flow of stress for greater durability and more strength. Frame utilizes 345 MPa **50,000 psi** yield high strength low alloy steel that is robotically welded to ensure consistently high quality welds.

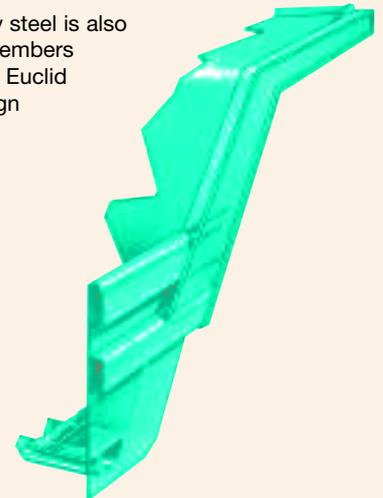


## BODY

Body is a flat floor, sloped tailshoot type. It is rubber cushioned and continuously exhaust-heated. High tensile strength 400 BHN abrasion-resistant alloy steel is used in thickness of:

	mm	in
Floor	26	<b>1.02</b>
Front	16	<b>0.63</b>
Sides	14	<b>0.55</b>
Canopy	8	<b>0.31</b>

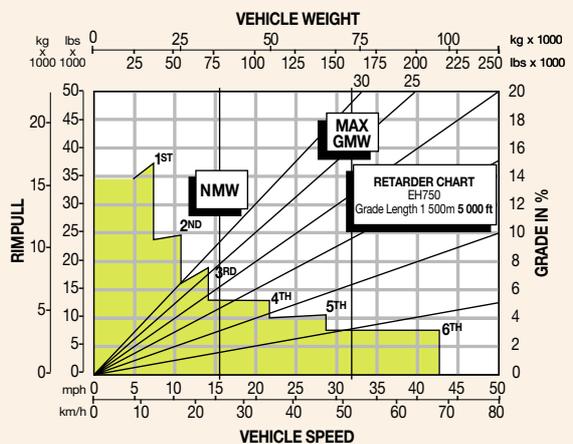
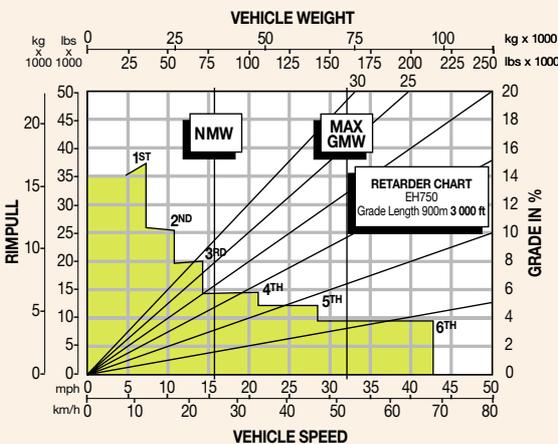
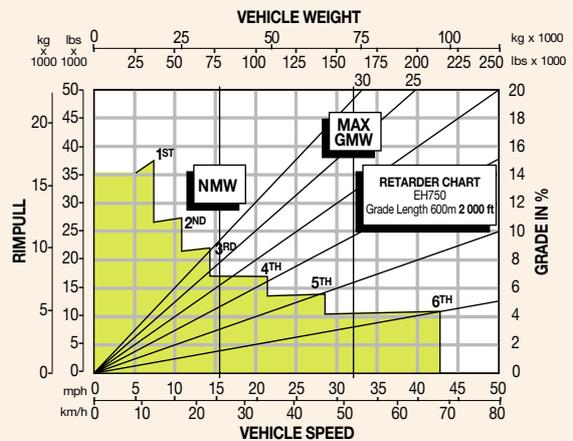
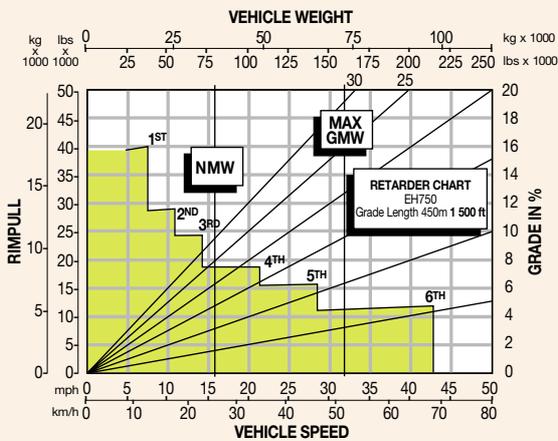
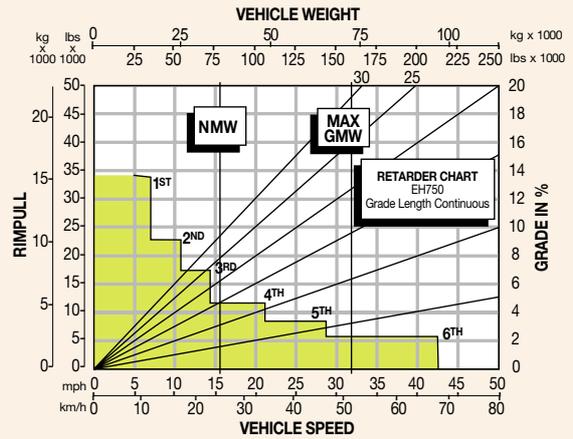
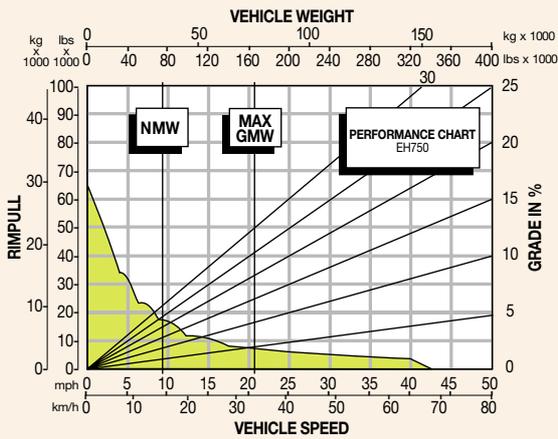
High yield strength alloy steel is also used for canopy side members and floor stiffeners. The Euclid horizontal stiffener design minimizes stress concentrations. Load shocks are dissipated over the entire body length. Closely spaced stiffeners provide additional protection by minimizing distances between unsupported areas.



## SERVICE CAPACITIES

	L	U.S.gal
Crankcase (includes filters)	61.0	<b>16.0</b>
Transmission	70.0	<b>18.5</b>
Cooling System	159.0	<b>42.0</b>
Fuel Tank	454.2	<b>120.0</b>
Hydraulics		
Hoist System	159.0	<b>42.0</b>
Steering System	90.8	<b>24.0</b>
Drive Axle	50.3	<b>13.1</b>
Windshield Washers	5.7	<b>1.5</b>

# Performance Data: EH750



## INSTRUCTIONS:

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

1. Find the total resistance on diagonal lines on right-hand border of performance or retarder chart.
2. Follow the diagonal line downward and intersect the NMW or GMW weight line.
3. From intersection, read horizontally right or left to intersect the performance or retarder curve.
4. 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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