Euclid R60C

MAXIMUM GMW
101 605 KG (224,000 LBS)

HAULER CLASS
60 TON

INCREASED GMW
COMMAND CAB III

ELECTRONIC HOIST

INCREASED ENGINE TORQUE

ALLISON M6600 TRANSMISSION

CONTRONIC II MONITORING SYSTEM

REAR WHEEL DAGGER CLAMPS

E4 RADIAL TIRES

DRY DISC PARK BRAKE

TRANSMISSION GUARD

EUCLID

ENGINE

	Standard			
Make	**Cummins**			
Model	QSK19-C700			
Type	4 Cycle			
Aspiration	Turbocharged/ Aftercooled			
Rated Output (SAE @ 2100 rpm)	kW	**bhp**	522	**700**
Flywheel Output (SAE @ 2100 rpm)	kW	**bhp**	479	**643**
No. Cylinders	6			
Bore & Stroke	mm	159 x 159		
	in	**6 1/4 x 6 1/4**		
Displacement	liters	**in³**	18,8	**1,150**
Max. Torque	@ 1300 rpm			
	N•m	**lb ft**	3 084	**2,275**
Torque Rise	26%			
Starting	Electric			

TRANSMISSION

Allison M6600, remote-mounted, planetary type, with integral torque converter featuring automatic lockup in all ranges for improved fuel economy. Allison Commercial Electronic Control provides park brake interlock and hoist interlock as well as built in diagnostics. Trim Boost Soft Shift provides smooth shifting to help reduce operator fatigue. Six fully automatic forward speeds and two selectable reverse speeds to supply the operator with more flexibility in any application. Air to oil transmission cooler eliminates potential transmission contamination.

Maximum Speeds Governed Engine Speed with standard 24.00R35(**) E4 tires

		Standard		Optional	
	Gear	3.73:1 Differential		3.15:1 Differential	
Range	Ratio	km/h	mph	km/h	mph
1	4.00	10,2	**6.3**	12,9	**8.0**
2	2.68	15,2	**9.4**	19,3	**12.0**
3	2.01	20,2	**12.6**	25,7	**16.0**
4	1.35	30,1	**18.7**	38,3	**23.8**
5	1.00	40,6	**25.3**	51,7	**32.1**
6	0.67	61,3	**38.1**	78,1	**48.5**
R1	5.12	8,0	**5.0**	10,2	**6.4**
R2	3.46	11,9	**7.4**	15,1	**9.4**

DRIVE AXLE

Full floating axle shafts, double reduction provided by Euclid Model 2354 differential and single reduction planetary with balanced life gears in each wheel, to maximize gear life.

Ratios	**Standard**	**Optional**
Differential	3.73:1	3.15:1
Planetary	5.80:1	5.80:1
Total Reduction	21.63:1	18.27:1
Maximum Speeds		
with 24.00R35(**)E4 Tires	km/h 61,3	km/h 78,1
	mph 38.1	**mph 48.5**

TIRES

Standard - Front and Rear	**Rim Width**
24.00R35(**) E4 Radial	mm **in** 432 **17**
Optional tires, brands and treads available.	

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.

LOAD CAPACITY

	m^3	yd^3
Struck (SAE)	25	**33**
Heap 3:1	32	**42**
Heap 2:1 (SAE)	36	**47**

	Tonne	**Ton**
*Payload Range depending on optional equipment	54,4 to 59,6	**60 to 66**

Note: Based on material density, Euclid will size an optional larger or smaller body to assure rated payload. Consult Euclid Market Support.

WEIGHTS

	kg	lb
Chassis & Hoist	30 969	**68,275**
Body	10 761	**23,725**
Net Machine Weight	41 730	**92,000**
Maximum Payload	59 875	**132,000**
Maximum GMW with Std. Tires [24.00R35(**)E4] Including Options, 50% Fuel, Operator & Payload Not to Exceed	101 605	**224,000**

***Major Options**		
Approximate change in Net Machine Weight:		
Light Duty Body Liners - 400 BHN Steel	2 948	**6,500**
Heavy Duty Body Liners - 400 BHN Steel	3 719	**8,200**

Weight Distribution	**FRONT**	**REAR**
Empty	48%	52%
Loaded	33%	67%

STEERING SYSTEM

Closed-center, full-time hydrostatic power steering system using two double-acting cylinders, pressure limit w/unload piston pump and brake actuation/steering system reservoir. Accumulator provides supplementary steering in accordance with SAE J1511, ISO 5010. Tilt/telescopic steering wheel with 35° of tilt and 57,15 mm **2 1/4"** telescopic travel.

Steering Angle				**39°**
Turning Circle (SAE)	m	**ft in**	19,28	**63'3"**
Steering Pump Output (@ 2100 rpm)	l/m	**gpm**	95,7	**25.3**
System Pressure	kPa	**psi**	18 961	**2,750**

STANDARD EQUIPMENT

General

ACCU-TRAC suspension system
Air conditioning
Air to oil transmission cooler
Allison M6600 transmission
All hydraulic braking
Automatic transmission shifting
Body down indicator, mechanical
Body up and down cushioning
Body up speed restriction
Body prop cable
Bolt-on nose cone bushing
Canopy spill guard
Continuous heated body
Cooling system sight gauge
Cooling system surge tank
Dagger clamps (rear wheels)
Electric horns
Electric start
Electronic hoist
Engine belt protection
Fan guard
Fenders
Fixed steering stops
Driveline guard, front
Guard rails
Halogen lights
Hoist interlock
Hoist tank sight gauge
LED tail lights
Load/dump brake
Mirrors right and left, hand adjustable
Mud flaps
NEOCON suspension struts
Park brake, dry disc
Park brake interlock
Radiator grill guard
Radiator, premium core
Reverse alarm
Rock ejector bars
Steering accumulator
Steering tank sight gauge
Swing-out grille
Tires, 24.00R35(**) E4
Tire guards, bolt-on
Tow points front/rear
Transmission guard
Transmission sight gauge
Two-speed reverse

Cab

Acoustical lining
Air filtration/replaceable element
Ash tray
Cab interior light
Cigar lighter, 12 volt
Door locks
Foot rest (left and right)
Full trainer seat
Heater and defroster 26,000 Btu
Integral ROPS/FOPS cab
ISO decals
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

Mechanical, 6 position seat
Modular instrumentation
Quick connect test ports
Roll down windows
Rubber floor mat
Safety glass
Seat belts retractable (operator/trainer)
Sun visor
Tilt/telescopic steering wheel
Tinted glass all windows
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
- 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 oil pressure
- Transmission filter
- Transmission malfunction
- Turn signals/hazard
- Do not shift
- Transmission malfunction

Gauges:
- Brake temperature
- Converter temperature
- Coolant temperature
- Hourmeter
- Speedometer
- Steering/brake pressure
- Tachometer

Machine Lights

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

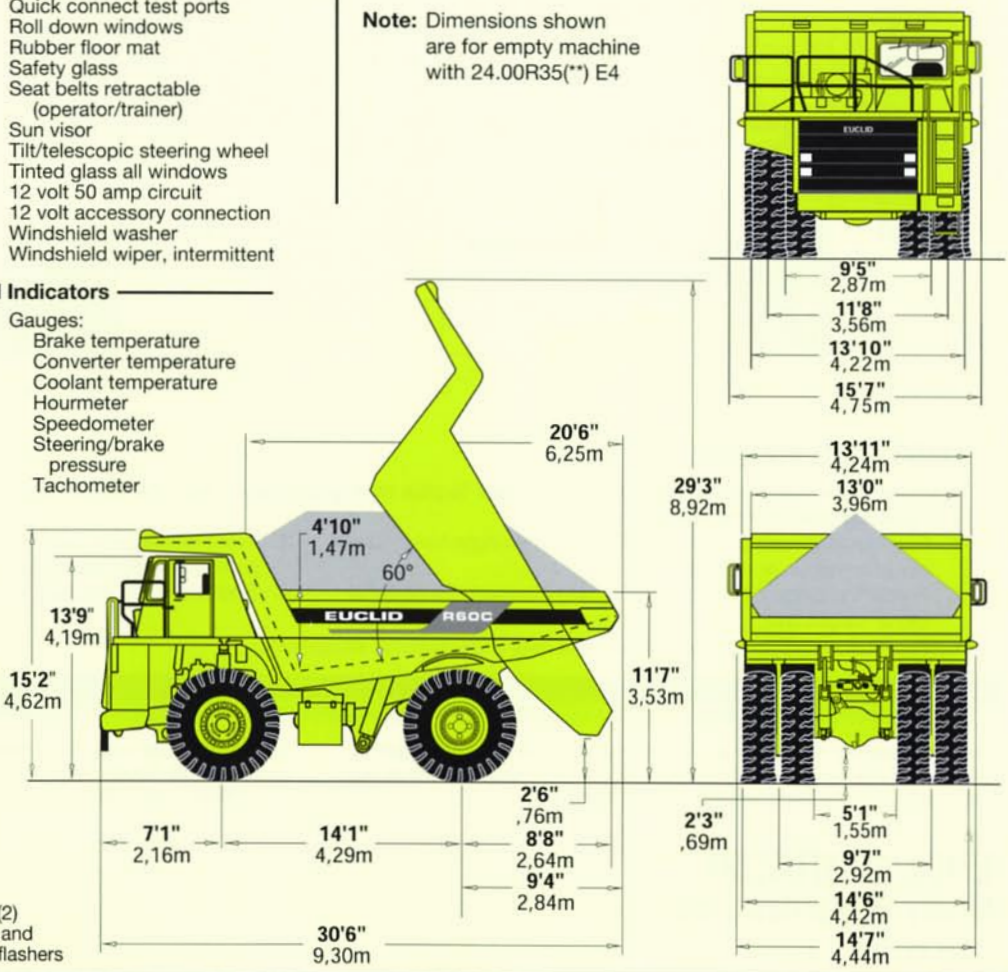
OPTIONAL EQUIPMENT

Air suspension seat
ACTIVE TRACTION CONTROL (ATC) w/ELECTRONIC DOWNHILL SPEED CONTROL (EDSC)
Battery disconnect switch
Body liners (400 BHN) plates light or heavy duty
Body sideboard extensions
Canopy spill guard extension
Cold start aid
Differential, 3.15:1 ratio
Driveline guard, rear
Engine compartment lights
Engine compartment step
Engine heater (oil & coolant)
Extra reverse alarm
Fast coupling service center, includes fuel
Fast fueling, fuel only
Front brake cut-off switch
HAULTRONIC II-load monitoring system
High intensity headlights
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
21.00-35 tires

Standard and optional equipment may vary from country to country.Special options provided on request. Consult Euclid Market Support.Product improvement is a continuing Euclid project. Therefore, all specifications are subject to change without notice.

* English, French, German, Spanish and Swedish Language selectable.

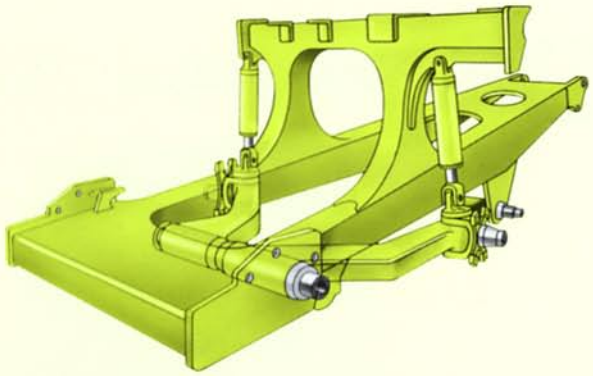
Note: Dimensions shown are for empty machine with 24.00R35(**) E4



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 R60C. 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.

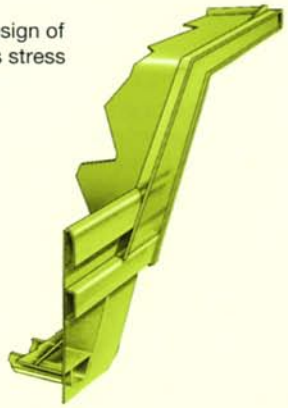
The Euclid frame and ACCU-TRAC suspension system are designed to work in unison to provide maximum structural integrity and operator comfort. The fabricated rectangular frame rail construction provides superior resistance to bending and torsional loads while eliminating unnecessary weight. The unique 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.

BODY

Flat chute type, sloped floor, continuously exhaust-heated. High tensile strength 400 BHN abrasion resistant alloy steel used in thickness of:

	mm	in
Floor	18	**11/16"**
Front	10	**3/8"**
Sides	8	**5/16"**
Canopy	6	**1/4"**
Optional Body Liners (Light Duty)		
Floor & Top Rails	10	**3/8"**
Sides & Front	6	**1/4"**
Optional Body Liners (Heavy Duty)		
Floor	13	**1/2"**
Sides & Front	8	**5/16"**
Top Rails	10	**3/8"**

The horizontal stiffener design of the Euclid body minimizes stress concentrations in any one area. Load shocks are dissipated over the entire body length. The closely spaced floor stiffeners provide additional protection by minimizing distance between unsupported areas.



SERVICE CAPACITIES

	liters	gallons
Crankcase (incl. filters)		
Cummins QSK19-C700	60,6	**16.0**
Transmission (incl. filters)	87,0	**23.0**
Cooling System		
Cummins QSK19-C700	189,3	**50.0**
Fuel Tank	700,2	**185.0**
Hydraulic		
Hoist Tank	174,1	**46.0**
Steering Tank	98,4	**26.0**
Drive Axle	118,8	**31.4**
Windshield Washers	5,7	**1.5**

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 strength alloy steel that is robotically welded to ensure high quality welds.

HYDRAULIC SYSTEM

Two (2) Euclid two-stage cylinders, double-acting in second stage, internal cushion (extend and retract), inverted and outboard mounted. Separate Hoist/Brake Cooling reservoir and independent tandem gear pump. Electronic control valve mounted on reservoir. Hoist lever can be mounted on left or right of seat. Equipped with body up speed restriction.

Body Raise Time	s		10.0	
Body Float Down Time	s		14.0	
Body Power Down Time	s		11.0	
Brake Cooling Pump Output	l/m	**gpm**	176	**47**
Hoist Pump Output	l/m	**gpm**	468	**123**
System Relief Pressure	kPa	**psi**	17 237	**2,500**

BRAKE SYSTEM

Brake system complies with SAE J1473 and ISO 3450.

All-hydraulic actuated braking system providing 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 slippery road conditions without having to deactivate front brakes.

Service
All-hydraulic actuated front disc brakes and rear oil-cooled wet disc brakes.

Front Axle - Dry Disc

Disc Diameter Each (2 discs/axle)	mm	**in**	686	**27**
Brake Surface Area	cm^2	**in^2**	4 129	**640**
Lining Area Per Axle	cm^2	**in^2**	2 787	**432**
Brake Pressure (Max.)	kPa	**psi**	15 859	**2,300**

Rear Axle - Oil-Cooled Wet Disc

Brake Surface Area Per Axle	cm^2	**in^2**	59 616	**9,240**
Brake Pressure (Max.)	kPa	**psi**	4 482	**700**

Secondary
Two independent circuits within the service brake system provide back-up stopping capability. System is manually or automatically applied to stop machine within prescribed braking distance.

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	mm	**in**	558	**22" dia.**

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.

Capacity

Continuous	kW	**hp**	597	**800**
Intermittent	kW	**hp**	1 208	**1,620**

WET DISC BRAKE

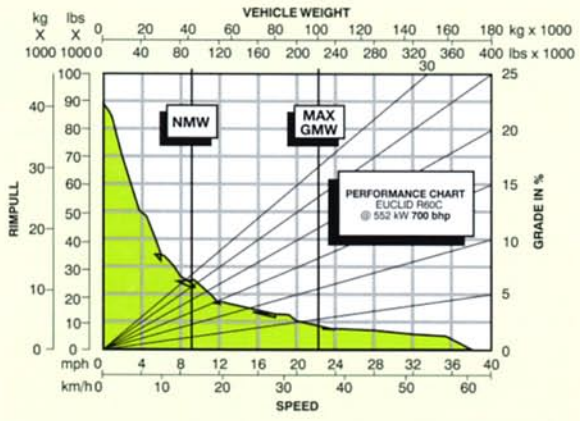
The Euclid-designed wet disc brake is engineered for long service life even in the most extreme environments. The wet disc brakes are located on the rear axle and provide service braking, secondary braking, and retarding. The brakes are a multi-plate design, and continuously oil-cooled. The sealed design 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.

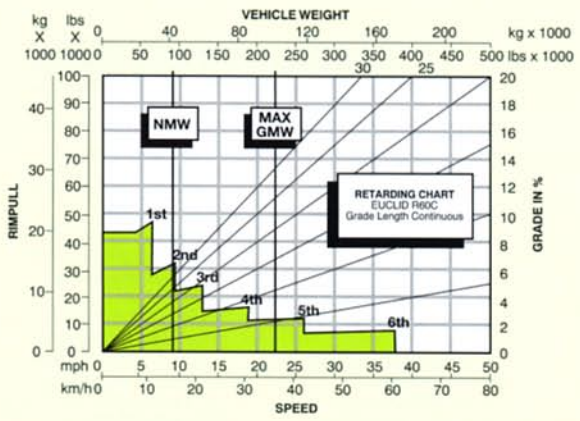
COMMAND CAB III

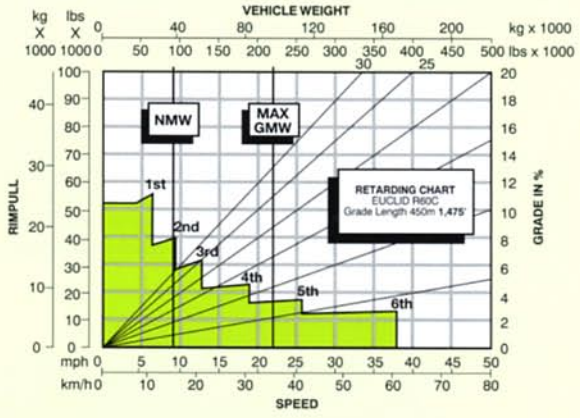
Command Cab III integral ROPS/FOPS (Rollover Protection Structure) is standard in accordance with SAE J1040 (1994) and ISO 3471. Dimensions comply with SAE J154 (1992) and ISO 3411. Double wall construction of 11 gauge inner and outer steel panels, lends itself to a more structurally sound cab. Foam 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 (1990), results in an operator sound exposure L_{eq} (Equivalent Sound Level) of 79db(a). A three-point rubber iso-mount arrangement to the deck surface minimizes vibration to the operator compartment.

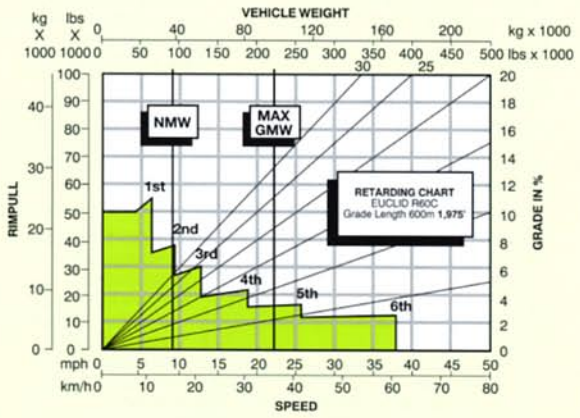
Excellent Serviceability. A removable front closure allows easy access to service brake valves, retarder valve and heater assembly. The upper dash utilizes four (4) removable panels that house gauges and customer options, each individually accessible. A removable closure located behind the seat provides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

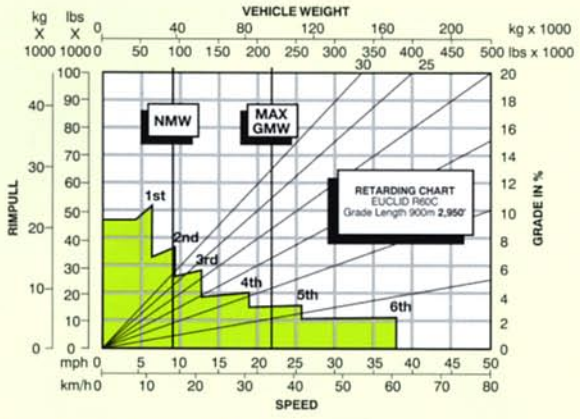
Comfort and Ease of Operation. A wrap-around style dashboard positions controls within easy reach and visual contact. A full complement of easy-to-read gauges, CONTRONIC II monitoring and warning system with Liquid Crystal Display (LCD), a spacious environment, six-way adjustable mechanical seat, tilt/ telescopic steering wheel, filtered ventilation, door locks, and a padded trainer seat, all contribute to operator safety and comfort.

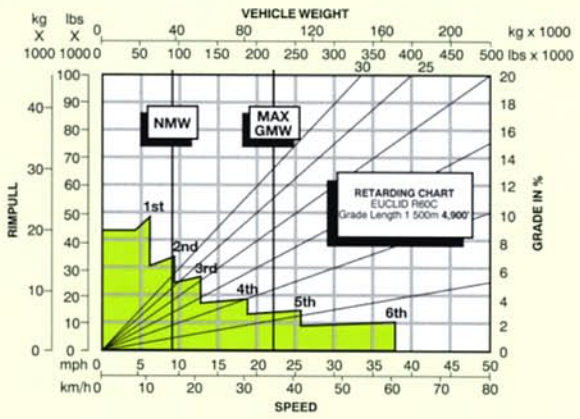












INSTRUCTIONS:

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.

EUCLID-HITACHI Heavy Equipment, Inc. is a joint venture corporation between Volvo Construction Equipment Corporation and Hitachi Construction Machinery Co., Ltd.

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