



Euclid R60



MAXIMUM GMW
96,000 KG (211,642 LBS)

PAYLOAD RANGE
45,5 TO 57,5 TONNES
(50.2 TO 63.4 TONS)

COMMAND CAB III

ALL-HYDRAULIC BRAKING

SWING-OUT GRILLE

CONTRONIC
MONITORING SYSTEM

AUTOMATIC
TRANSMISSION
TRIM BOOST SOFT SHIFT
TWO-SPEED REVERSE

ACCU-TRAC SUSPENSION
NEOCON STRUTS

LOW LOADING HEIGHT

TWO ENGINE CHOICES
RATED GROSS OUTPUT:
522 kW (700 bhp)

WET DISC BRAKES

EUCLID



ENGINE

Make	Standard Cummins	Optional Cummins
Model	KTTA19-C	VTA28-C
Type	4 Cycle	4 Cycle
Aspiration	Turbocharged/ Aftercooled	Turbocharged/ Aftercooled
Rated Output (SAE @ 2100 rpm)	kW bhp 522 700	kW bhp 522 700
Flywheel Output (SAE @ 2100 rpm)	kW bhp 498 668	kW bhp 495 664
No. Cylinders	6	12
Bore & Stroke	mm 159 x 159 in 6 1/4 x 6 1/4	mm 140 x 152 in 5 1/2 x 6
Displacement	liters in ³ 18.8 1,150	liters in ³ 28.0 1,710
Max. Torque	@ 1400 rpm N•m lb ft 2730 2,014	@ 1300 rpm N•m lb ft 2739 2,020
Torque Rise Starting	15% Electric	30% Electric



TRANSMISSION

Allison CLT-6063, Remote mounted, planetary type, with integral torque converter featuring automatic lockup in all ranges for improved fuel economy. Allison Transmission 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.

Maximum Speeds @ 2100 rpm Governed Engine Speed with standard 24.00-35 tires

Range	Gear Ratio	Standard 3.73:1 Differential		Optional 3.15:1 Differential	
		km/h	mph	km/h	mph
1	4.00	9.65	6.00	11.42	7.10
2	2.68	14.40	8.95	17.05	10.59
3	2.01	19.20	11.93	22.73	14.13
4	1.35	28.58	17.76	33.84	21.03
5	1.00	38.59	23.98	45.68	28.39
6	0.67	57.59	35.79	68.18	42.38
R1	5.12	7.54	4.68	8.92	5.55
R2	3.46	11.15	6.93	13.20	8.21



DRIVE AXLE

Full floating axle shafts, double reduction provided by Euclid Model 2350 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 24.00-35 Tires	km/h 57.6 mph 35.8	km/h 68.2 mph 42.4



TIRES

Standard - Front and Rear
Goodyear 24.00-35(36)E-3
Optional tires, brands, treads and ply ratings available.

Rim Width
mm in 432 17



ELECTRICAL SYSTEM

Twenty-four volt lighting and accessories system. 75 amp alternator with integral transistorized voltage regulator. Two 12 volt heavy duty batteries connected in series.

Standard CONTRONIC monitoring and central warning system with built-in diagnostics. An optional Liquid Crystal Display is available.



LOAD CAPACITY

	m ³	yd ³
Struck (SAE)	23.3	30.5
Heap 3:1	30.5	39.9
Heap 2:1 (SAE)	34.2	44.7
Payload	Tonne	Ton
Maximum	57.5	63.4



WEIGHTS

	kg	lb
Chassis & Hoist	28 092	61,931
Body	10 399	22,925
*Net Machine Weight	38 491	84,856
Maximum Payload	57 510	126,786
Maximum GMW with Std. Tires (24.00-R35(36)E-3) including options, 50% fuel, operator & Payload Not to Exceed	96 000	211,642
*Options/Approx. Change in Net Machine Weight:		
Body Liners, 400 BHN Steel, Complete: (Light Duty)	2 917	6,430
Body Liners, 400 BHN Steel, Complete: (Heavy Duty)	3 960	8,730
Tires - Set of 6:		
24.00 - R35 RL-3	1154	2,544
24.00 - R35 RL-4	1072	2,364
24.00 - R35(36)E-4	621	1,368
Engine: VTA28-C	907	2,000
Weight Distribution	FRONT	REAR
Empty	49%	51%
Loaded	32%	68%



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 J53, ISO 5010. Tilt/telescopic steering wheel with 35° of tilt and 5715 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	Hoist tank sight gauge
All hydraulic braking	Mirrors right and left
Automatic transmission shifting	Mud flaps
Body down indicator, mechanical	Neocon suspension struts
Body prop cable	Park brake interlock
Canopy spill guard	Radiator grill guard
Continuous heated body	Reverse alarm
Cooling system sight gauge	Rock ejector bars
Cooling system surge tank	Steering accumulator
Electric horns	Steering tank sight gauge
Electric start	Swing-out grille
Fan guard	Tires, Goodyear-24.00-35(36)E-3
Fenders	Tire guards, bolt-on
Fixed steering stops	Tow pins front/rear
Halogen lights	Transmission sight gauge
Hoist interlock	Two speed reverse

Cab

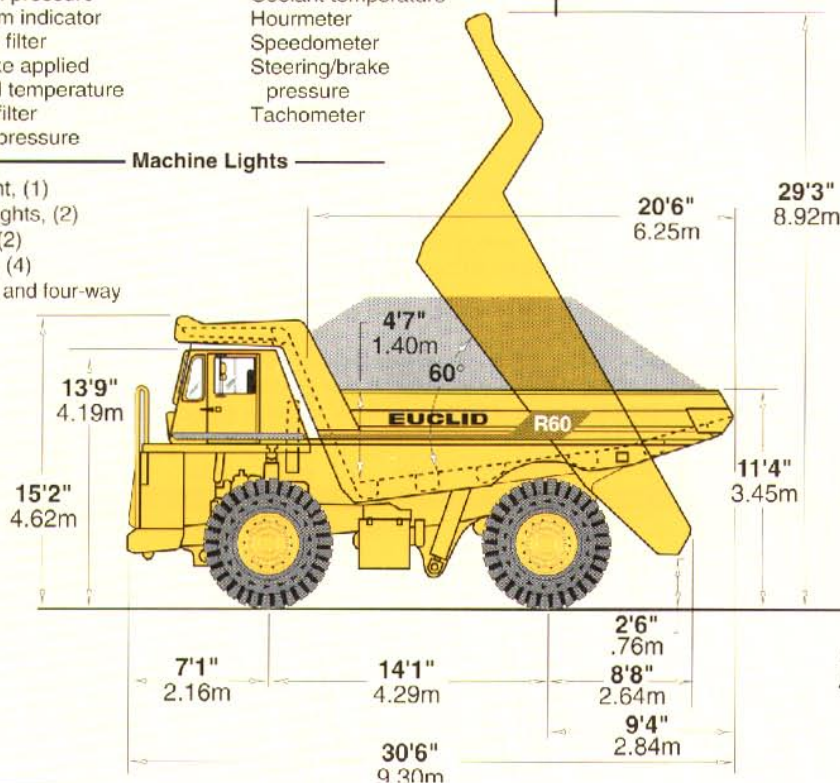
Acoustical lining	Mechanical, 6 position seat
Air filtration/replaceable element	Quick connect test ports
Ash tray	Roll down windows
Cab interior light	Rubber floor mat
Cigar lighter	Safety glass
Door locks	Seat belts retractable
Full trainer seat	Sun visor
Heater and defroster 26,000 Btu	Tilt/telescopic steering
Integral ROPS/FOPS cab	Tinted glass all windows
ISO driver envelope	Trainer seat belt
Modular instrumentation	Windshield washer
	Windshield wiper

Gauges and Indicators

CONTRONIC monitoring and alarm system, multi-function indicator lights:	Steering temperature
Air filter restriction	Transmission oil pressure
Alternator	Transmission filter
Brake pressure	Turn signals/hazard
Central warning	Do not shift light
Converter temperature	Transmission malfunction light
Cooling temperature	Gauges:
Engine oil pressure	Brake temperature
High beam indicator	Converter temperature
Hydraulic filter	Coolant temperature
Park brake applied	Hourmeter
Retard oil temperature	Speedometer
Steering filter	Steering/brake pressure
Steering pressure	Tachometer

Machine Lights

Back-up light, (1)
Clearance lights, (2)
Stop & tail, (2)
Head lights, (4)
Turn signals and four-way flashers

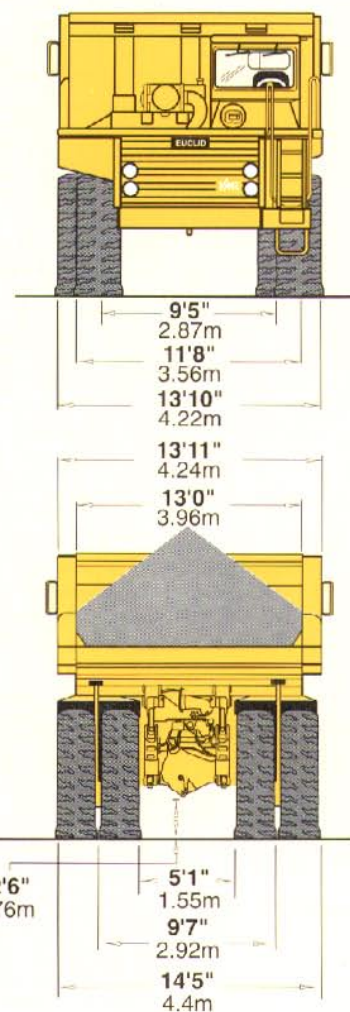


OPTIONAL EQUIPMENT

Air conditioning	German market equipment
Air suspension seat	Guard rails
Active traction control (ATC)	Haultronic-load monitoring system
Body liners (400 BHN) plates STD and HD	Hoist control, electronic
Body sideboard extensions	Hoodsides (metal)
Canopy spill guard extension	Increased retarder cooling
Cold start aid	Increased capacity wet disc brakes
CONTRONIC-liquid crystal display (fuel level, coolant level, service intervals)	Kim hotstart pre-heaters
Cummins VTA28-C engine	Lube system, automatic
Decals French, German & Spanish	Lube system, centralized
Differential, 3.15 ratio	Main battery switch
Differential, no-spin	Muffler
Engine heater (oil & coolant)	Radiator, premium core
Extra reverse alarm	Radio & tape player
Fast fueling	Tires (size, type & rating)
Fast coupling service center	Transmission guard
	Transmission retarder
	Unit sound suppression
	21.00-35 tires

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

Note: Dimensions shown are for empty machine with 24.00-35 tires.



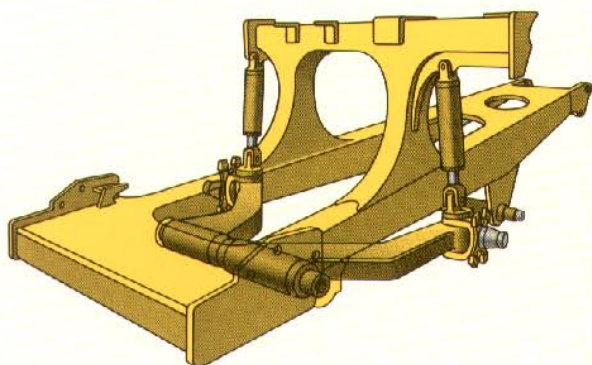


SUSPENSION

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 R60. 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-x 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.

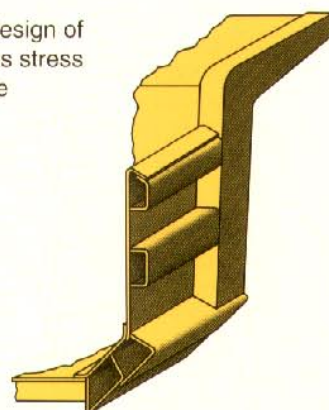


BODY

Flat chute type, sloped floor, continuously exhaust heated. High tensile strength 1310 N/mm² **190,000 psi** alloy steel 400 BHN 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 KTTA19-C	60,6	16.0
Cummins VTA28-C	60,6	16.0
Transmission (incl. filters)	71.9	19.0
Cooling System		
Cummins KTTA19-C	189,3	50.0
Cummins VTA28-C	208,2	55.0
Fuel Tank	700,2	185.0
Hydraulic		
Hoist Tank	174,1	46.0
Steering Tank	98,4	26.0
Drive Axle	50,3	13.3



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 310 N/mm² **45,000 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, inverted and outboard mounted. Separate Hoist/Brake Cooling reservoir and independent tandem gear pump. Control valve mounted on reservoir.

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	299	79
Hoist Pump Output	l/m	gpm	244	64
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.

Front Axle - Dry Disc

Disc Diameter Each (2 discs/axle)	mm	in	68,6	27
Brake Surface Area	cm ²	in²	4 129	640
Lining Area Per Axle	cm ²	in²	2 787	432
Brake Pressure (Max.)	kPa	psi	15 859	2,300

Rear Axle - Oil-Cooled Wet Discs

Brake Surface Area Per Axle	cm ²	in²	49 758	7,712
(Optional Increased Capacity)	cm ²	in²	61 500	9,532
Brake Pressure (Max.)	kPa	psi	6 895	1,000

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

Drum, two shoe internal expanding type mounted on transmission output shaft. Controlled by a toggle switch on the dash. Automatically applied if brake hydraulic pressure is lost.

Size mm in 305 x 127 **12" x 5"**

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 (with Std. KTTA19-C Engine)

(Std. Cooling)				
Continuous	kW	hp	526	706
Intermittent	kW	hp	1148	1,540

(Optional Cooling)

Continuous	kW	hp	597	800
Intermittent	kW	hp	1208	1,620

Capacity (with Opt. VTA28-C Engine)

(Std. Cooling)				
Continuous	kW	hp	591	792
Intermittent	kW	hp	1215	1,630

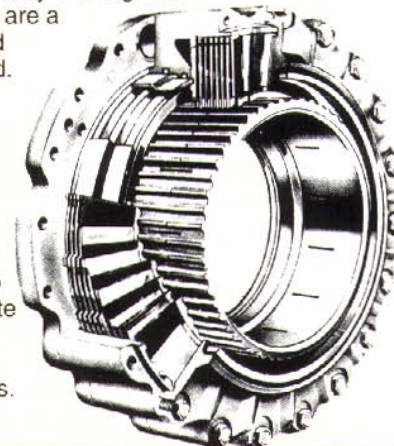
(Optional Cooling)

Continuous	kW	hp	661	886
Intermittent	kW	hp	1275	1,710



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.



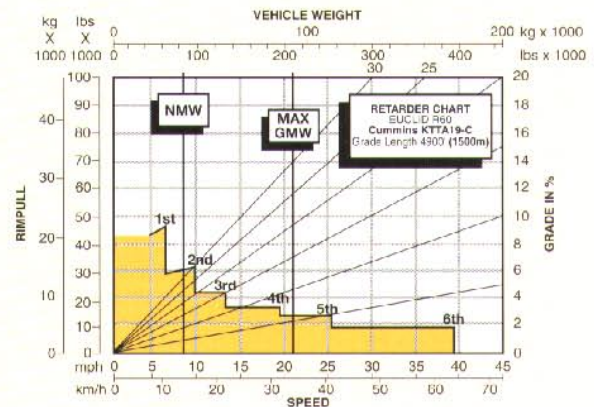
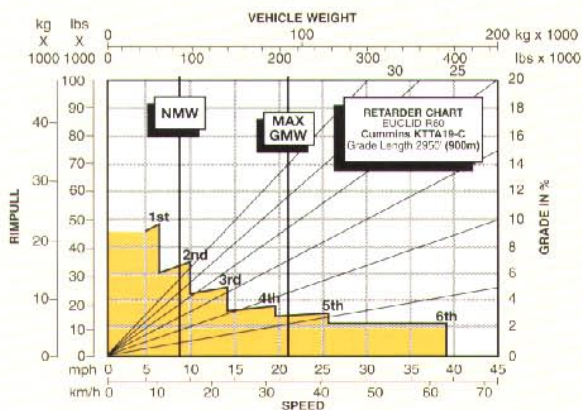
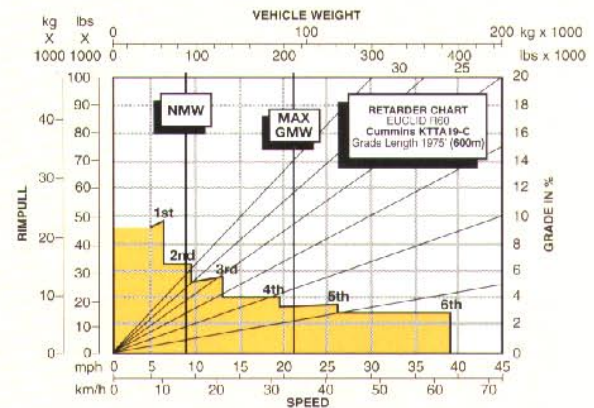
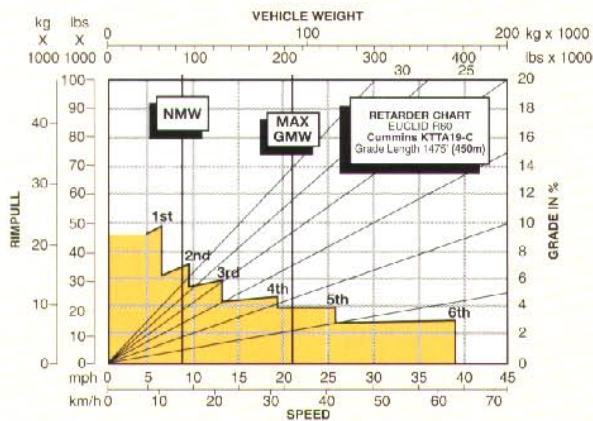
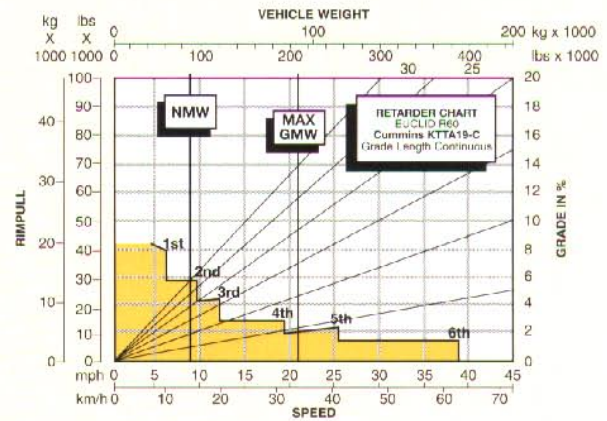
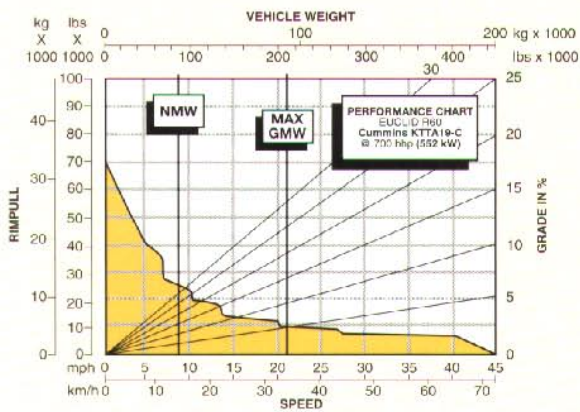
COMMAND CAB III

Command Cab III integral ROPS (Rollover Protection Structure) is standard in accordance with SAE J1040 (1988c) and dimensions comply with ISO 3471. 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 VME, tested with doors and windows closed per work cycle procedures in ANSI/SAE J1166 (1990), results in an operator sound exposure Leq (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 and retarder valve. 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 monitoring and warning system, a spacious environment, six-way adjustable mechanical seat, tilt/telescopic steering wheel, filtered ventilation, door locks, and a full size 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.

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