

EUCLID

R130M



EUC R130M



ENGINES

Make	Detroit Diesel	Cummins
Model	12V-149TIB	KITA38-C
Type	2 Cycle	4 Cycle
Aspiration	Turbo-Charged	Turbo-Charged
Rated Output		
(SAE)	1007 kW @ 1900 rpm (1350 bhp)	1007 kW @ 2100 rpm (1350 bhp)
Flywheel Output		
(SAE)	895 kW @ 1900 rpm (1200 bhp)	895 kW @ 2100 rpm (1200 bhp)
No. Cylinders	12	12
Bore & Stroke	146mm x 146mm (5 7/8" x 5 7/8")	159mm x 159mm (6 1/4" x 6 1/4")
Displacement	29.3 litres (1788 in³)	37.7 litres (2300 in³)
Max. Torque	5300 N•m @ 1400 rpm (3909 lb-ft)	5264 N•m @ 1500 rpm (3882 lb-ft)
Starting	Air	Air



TRANSMISSION

Allison CLBT-9681. Planetary type, full power shift with automatic shifting. Integral torque converter with automatic lock-up in all ranges and hydraulic retarder. Remote mounted, 6 forward speeds, 1 reverse. Allison transmission electronic control (ATEC) shift system.

Maximum Speeds @ 2100 RPM Governed Engine Speed

Range	Gear Ratio	STANDARD 1.56:1 Diff.		OPTIONAL 1.56:1 Diff.		OPTIONAL 1.56:1 Diff.	
		17.06:1 Plan.		21.44:1 Plan.		14.23:1 Plan.	
1	4.24	10.2	(6.3)	8.1	(5.0)	12.2	(7.6)
2	3.05	14.1	(8.8)	11.2	(7.0)	16.9	(10.5)
3	2.32	18.6	(11.5)	14.8	(9.2)	22.3	(13.8)
4	1.67	25.8	(16.0)	20.5	(12.8)	30.9	(19.2)
5	1.00	43.1	(26.8)	34.3	(21.3)	51.6	(32.1)
6	0.72	59.8	(37.2)	47.6	(29.6)	71.7	(44.6)
R	5.75	7.5	(4.7)	6.0	(3.7)	9.0	(5.6)



DRIVE AXLE

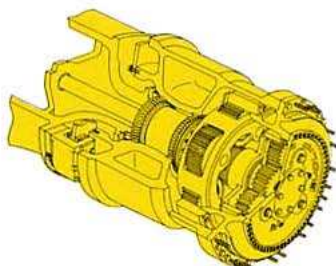
Full floating axle shafts, reduction provided by Euclid Model 2655 differential and dual path planetary with balanced life gearing in each wheel.

Ratios	Standard	Optional	Optional
Differential	1.56:1	1.56:1	1.56:1
Planetary	17.06:1	21.44:1	14.23:1
Total Reduction	26.61:1	33.45:1	22.20:1

Maximum Speeds

with 33.00-51 tires	59.8 km/h (37.2 mph)	47.6 km/h (29.6 mph)	71.7 km/h (44.6 mph)
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The R130M utilizes a coupled planetary system with two sets of gears in each wheel. Each set of gears helps drive its respective wheel, effectively sharing torque loads. This concept keeps individual gear loading to a minimum, thereby promoting longer component lives.



The R130M is available in three distinct gear ratios allowing it to be tuned to a specific haulage application.



TIRES

Standard — Front and Rear	Rim Width
Goodyear 33.00-51(50)E-4	610mm (24")
Optional — Front and Rear	
Goodyear 33.00R51••RL-4H	610mm (24")
Plus optional Goodyear tire types, treads and ply ratings.	



LOAD CAPACITY

	m³	(yd³)
Struck (SAE)	50.3	(65.8)
Heap 3:1	65.1	(85.1)
Heap 2:1 (SAE)	71.9	(94.0)
Euclid Field Heap	68.6	(89.7)

Based on material density, Euclid will size an optional larger or smaller body to assure 130 short tons (118 metric tonnes) capacity. Consult Euclid's Sales Engineering Department.



WEIGHTS

	kg	(lb)
Chassis with Hoists	63 352	(139,665)
Body	15 998	(35,270)
Net Weight	79 350	(174,935)
Front Axle	37 403	(82,460)
Rear Axle	41 946	(92,475)
Payload	117 936	(260,000)
Gross Weight	197 286	(434,935)
Front Axle	62 108	(136,923)
Rear Axle	135 178	(298,011)

Options:	kg	(lb)
Body Liners, Complete: 19mm (3/4") floor, 16mm (5/8") corners, 10mm (3/8") sides, front and top rails, 6mm (1/4") canopy	8 029	(17,700)

Tires:		
33.00R51••RL-4H	191	(420)



STEERING

Closed center full time hydrostatic power steering system using two double acting cylinders, piston type pump and combined brake/steering system reservoir. Accumulator provides supplementary steering in accordance with SAE J53.

Steering Angle	42°
Turning Diameter (SAE)	24.5m (80'6")
Steering Pump Output (@ 2,100 rpm)	129 l/m (34 g/m)
Operating System Pressure	17 237 kPa (2,500 psi)



HOIST

Two (2) Euclid three-stage, double-acting cylinders, inverted and outboard mounted. Separate reservoir and independent gear pump. Control valve mounted on reservoir.

Body Raise Time	20 sec.
Hoist Pump Output (@ 2,100 rpm)	609 l/m (161 g/m)
System Relief Pressure	17 237 kPa (2,500 psi)



ELECTRICAL

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



AIR SYSTEM

Compressor	
Detroit Diesel	5.7 l/s (12.0 cfm)
Cummins	5.7 l/s (12.0 cfm)
Service Air	
Pressure	860 kPa (125 psi)
Start System	
Pressure	860 kPa (125 psi)
Reservoir Capacity	453 litres (16 ft³)

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ALL-HYDRAULIC BRAKING

Service

All-hydraulic actuated. Two calipers per disc, front and rear. Calipers are internally ported, each containing three pairs of opposing pistons.

Front Axle

BFGoodrich Model J6 wheel speed brakes.

Disc Diameter Each	106.7cm (42 in)
Lining Area Per Axle	4 129cm ² (640 in ²)
Brake Pressure (Max.)	17 237 kPa (2500 psi)

Rear Axle

BFGoodrich Model J6 wheel speed brakes.

Disc Diameter Each	106.7cm (42 in)
Lining Area Per Axle	4 129cm ² (640 in ²)
Brake Pressure (Max.)	17 237 kPa (2500 psi)

Secondary

Three independent hydraulic circuits within the service brake system provide secondary stopping capability conforming to SAE J1224. System is manually or automatically applied to stop machine within prescribed braking distance.

Parking

Spring-on, hydraulic-off disc brake mounted behind transmission on driveline provides parking capabilities in compliance with SAE J 1224.

Retarder

Foot operated valve allows operator to control oil flow into paddlewheel type retarder integral with transmission housing. Provides constant speed control on downhill hauls.

Maximum retarding output (includes engine friction bhp)
@ 2200 rpm 1 910 kW (2561 bhp)

The Euclid R130M is equipped with an all-hydraulic actuated braking system providing increased braking force and quick system response. A primary accumulator stores oil under sufficient pressure so that 100% braking pressure is always available.

The main valves in the all-hydraulic brake system are conveniently located at shoulder height on the forward left hand frame rail. The placement of this valve package enhances serviceability as

all pressure checks and system troubleshooting can be made at this central location. Steel tubing is used to eliminate line swell and ruptures commonly associated with hose assemblies. Sheet metal guards protect the valve package and tubing.

The system is pressure proportioned, front to rear, for improved slippery road control. Three independent hydraulic circuits within the service braking system and dual secondary accumulators provide secondary stopping capability conforming to SAE J1224. The Euclid R130M has been designed with a simplified, easier to maintain brake system that provides superior stopping capability.



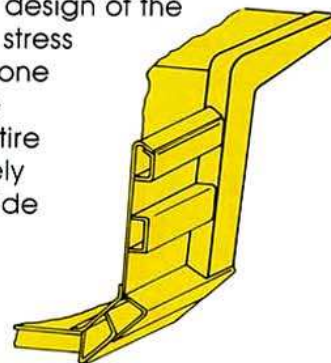
BODY

Flat floor, sloped tailchute, continuously exhaust heated. High yield strength 689 N/mm² (100,000 psi) alloy steel used in thickness of:

Floor	19mm (3/4")
Front	10mm (3/8")
Sides	10mm (3/8")
Canopy	5mm (3/16")

High yield strength 689 N/mm² (100,000 psi) alloy steel also used for canopy side members and floor stiffeners. Body is rubber cushioned on frame.

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 stiffeners provide additional protection by minimizing distances between unsupported areas.



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STANDARD EQUIPMENT

General

Air cleaner guards	Hoist kickout
Air horns, dual	Mirrors, right and left
Allison Transmission	Moisture ejector
Electronic Control (ATEC)	Mud flaps
Body down indicator, mechanical	Operator arm guard
Body prop cable	Radiator grille guard
Fan guard	Reverse alarm
Fully hydraulic brake system	Rock ejector bars
Ground level air start charge line	Supplementary steering system, accumulator
Guard rails around platform	Tow hooks, front

Cab

Ash tray	Operator seat belt
Cab interior light	Passenger seat and belt
Cigar lighter	Rubber floor mat
Emergency engine shutdown switch	Sun visor
Heater and defroster	Tilt steering wheel
Load and hold switch	Tinted glass, all windows
Operator seat, air ride	Windshield washer
	Windshield wiper

Gauges and Indicators

Air cleaner restriction gauge	Parking/Load and hold brake indicator light
Air start pressure gauge	Range indicator light assembly
Clutch pressure gauge	Rear brake malfunction indicator light
Converter lock-up indicator light	Speedometer
Converter oil temperature gauge	Steering pressure gauge
Coolant temperature gauge	Steer system malfunction indicator light
Engine oil pressure gauge	Steering filter restriction indicator light
Gauge lights rheostat	Tachometer
High beam indicator light	Transmission oil level sight guage
Hourmeter	Voltmeter
Hydraulic filter restriction indicator light	

Machine Lights

Back-up light
Clearance lights
Dual combination stop and taillights
Engine compartment lights
Headlights, four
Turn signals and four-way flasher

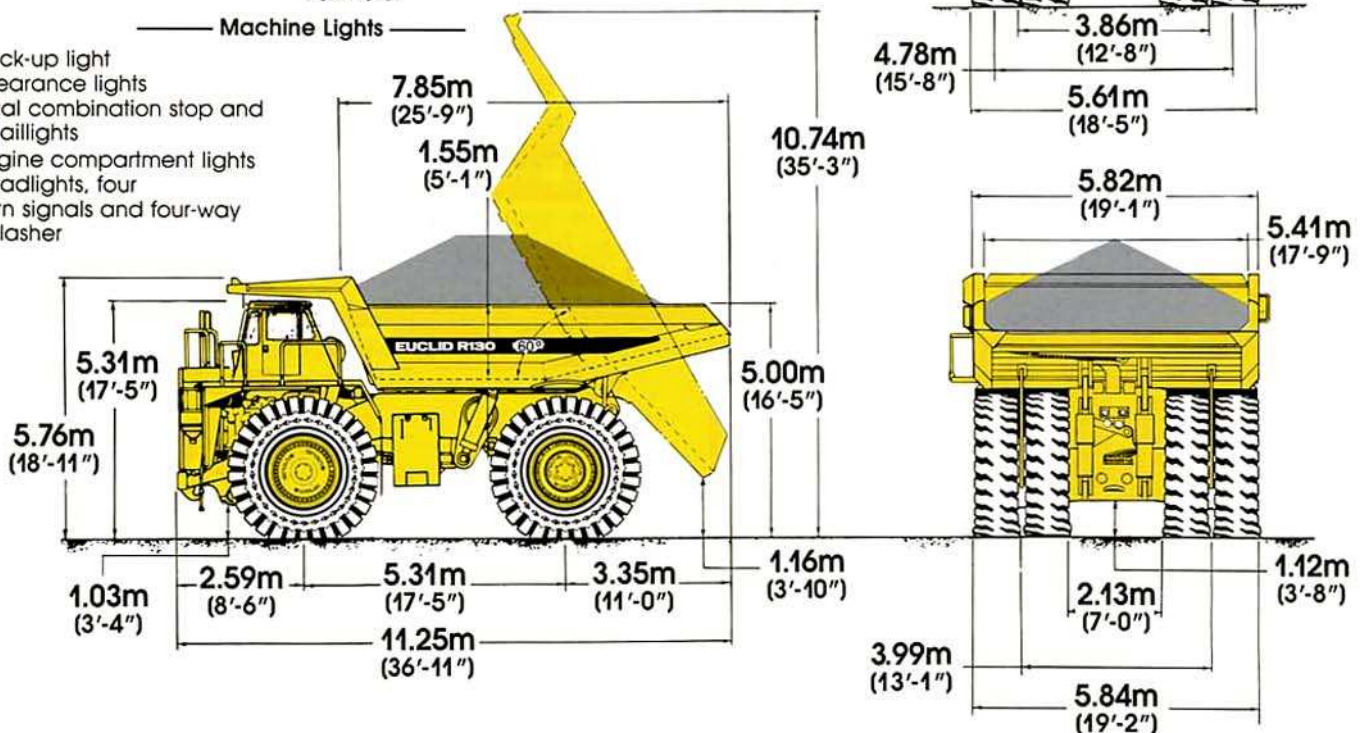
OPTIONAL EQUIPMENT

Air conditioner	Fast fueling system (Wiggins)
Air dryer	Field repairable
Alarm system, four function (low oil pressure, high coolant temperature, low coolant level, high conv. temperature)	core radiator
Alcohol vaporizer	Fire protection systems
Body capacity, 120 short ton (109 metric tonne)	Fuel gauge
Body liner plates	Fuel tank, 2271 l (600 gal.)
Buddy dump	Electric start
Canopy spill guard extension	Hubodometer
Centralized lube	Kim Hotstart
Centralized service panel	Lube system, automatic
Cold starting aid	Planetary ratio, 14.23:1
	Planetary ratio, 21.44:1
	Radio
	Right hand arm guard
	Tachograph, 24 hr. recording

Standard and optional equipment may vary from country to country.

Special options provided on request. Consult Euclid's Sales Engineering Department.

Product improvement is a continuing Euclid project. Therefore, all specifications are subject to change without notice.



Note: Illustration may include optional equipment.

Note: Dimensions shown are for empty machine with 33.00-51 tires.

The Euclid Field Heap illustrated in the side view above maintains a 2:1 heap ratio from the floor/tail chute junction to the peak of the load profile. The SAE 2:1 heap ratio is actually a 1:1 heap ratio from floor/tail junction to the top body edge, then switches to a 2:1 heap ratio to the load peak. The Euclid Field Heap is more representative of field loading practices and payload distribution. Euclid body capacity ratings are based on the field heap philosophy.

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FRAME

Box section main frame rails bridged by three crossmembers, front bumper and front suspension tube. Rails are constant taper, constructed of 689 N/mm² (100,000 psi) yield strength steel. Two rear crossmembers have integral suspension and drive axle mountings. Crossmember to frame rail junctions use large radii to minimize stress concentrations.



SUSPENSION

Front Suspension

Independent trailing arm for each front wheel. Suspension cylinders containing energy-absorbing compressible fluid are mounted between trailing arm and frame. 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. Track rod provides lateral stability between frame and drive axle. Rear mounted struts containing energy-absorbing compressible fluid suspend drive axle from frame. Integral rebound feature included.

The Euclid frame and suspension are designed to work in unison to provide maximum structural integrity and operator comfort. The tapered box beam frame rail construction provides superior resistance to bending and torsional loads while eliminating unnecessary weight.

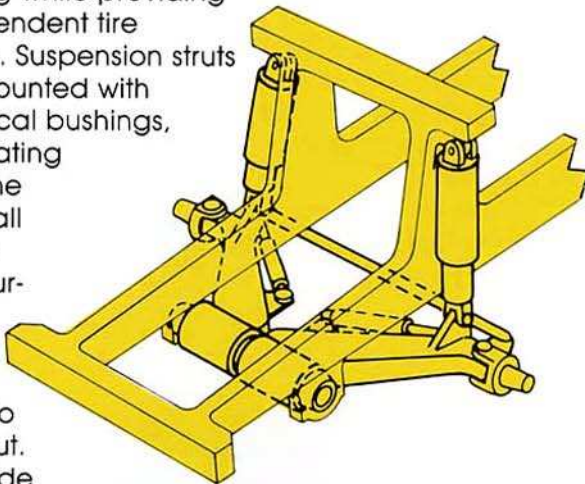
Large radii and advanced blending techniques are utilized throughout the frame, minimizing stress concentrations. The unique trailing arm front suspension absorbs haul road input, minimizing suspension-induced frame twisting while providing independent tire

action. Suspension struts are mounted with spherical bushings, eliminating extreme sidewall forces by insuring a purely axial input to the strut. The wide

track stance of the trailing arm design assures a more stable, comfortable ride.

The suspension struts employ uniquely compressible silicone fluid as the energy-absorbing medium. The silicone struts' inherent characteristics of performance, durability and ease of maintenance have been proven over thousands of hours of production use.

The silicone struts utilize a staged seal system to isolate the compressible fluid in the strut. The inboard stage seals the internal pressure while



the outboard stage serves to wipe external dirt from the rod. Strut damping is controlled hydraulically and varies directly with the strut rod travel rate. Suspension struts are engineered to match the performance characteristics of each axle resulting in a system that provides vehicle stability, component protection, operator comfort and strut durability.



COMMAND CAB II

Constructed for Maximum Durability. The fully rigid structural steel cage is three-point rubber mounted for vibration isolation. Steel exterior and thick-walled, easy to clean ABS interior panels are attached. Exterior grab rails are standard.

Designed for Serviceability. The easily removable front access panel reveals a main terminal contact strip, circuit breakers and fluid reservoirs for master brake cylinder and windshield washer fluid. Accessibility to the gauge and indicator areas is provided by a top dashboard cover.

Arranged for Safety and Ease of Operation.

Generous use of glass provides maximum haul road visibility. A wrap-around dashboard puts controls within reach and visual contact. The full complement of easy to read gauges with international markings are supplemented by a digital tachometer and speedometer, warning lights and alarms for all major functions.



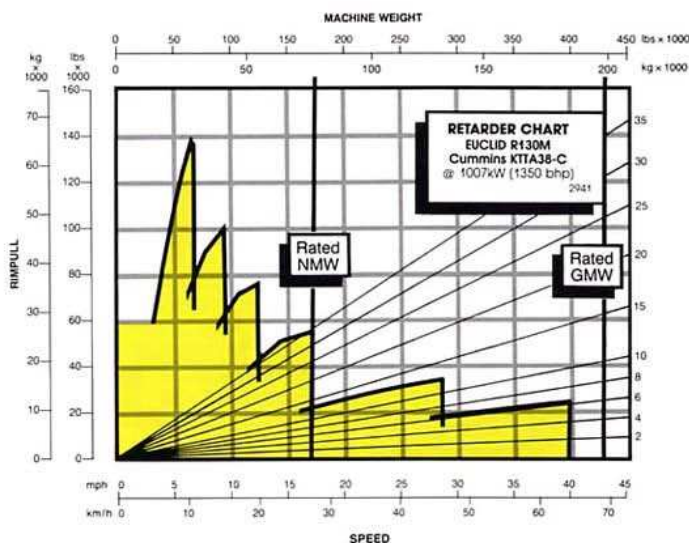
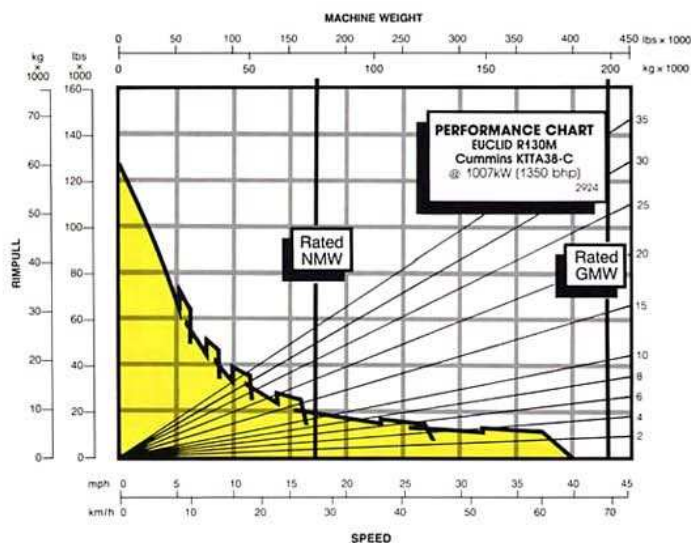
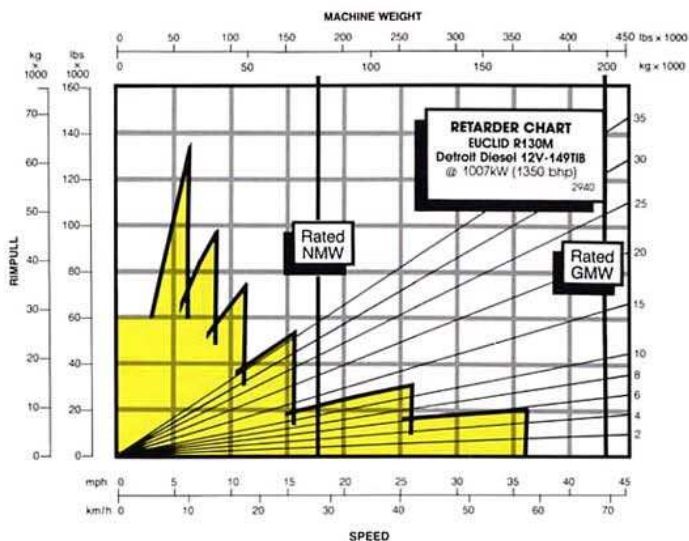
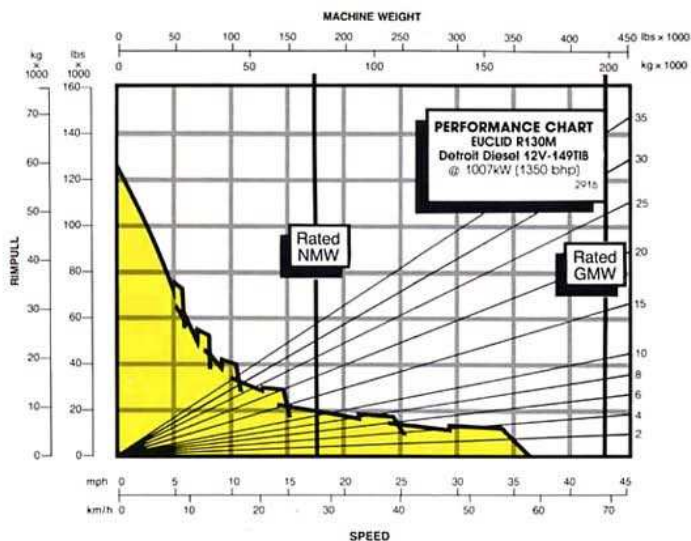
Unparalleled Operator Comfort and Convenience for Increased Productivity.

This ergonomically designed cab includes the Isringhausen six-way adjustable air seat, tilt steering wheel, in-dash duct work for filtered ventilation, and a tumblehome acoustical design for reduced interior sound levels which rival those found in better automobiles. The seat back on the fully upholstered trainer's seat folds down to serve as a tray at break time.



SERVICE CAPACITIES

	litres	(gallons)
Crankcase (incl. filters)		
Detroit Diesel	136.3	(36.0)
Cummins	151.4	(40.0)
Transmission	113.6	(30.0)
Cooling System	359.6	(95.0)
Fuel Tank	1930.4	(510.0)
Hydraulics		
Hoist Tank	504.2	(133.2)
Steering Tank	150.3	(39.7)
Drive Axle		
Differential	227.1	(60.0)
Planetaries	151.4	(40.0)



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: Dotted line on retarder chart represents optional extended range dynamic retarding.
Units shown may include optional equipment.

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