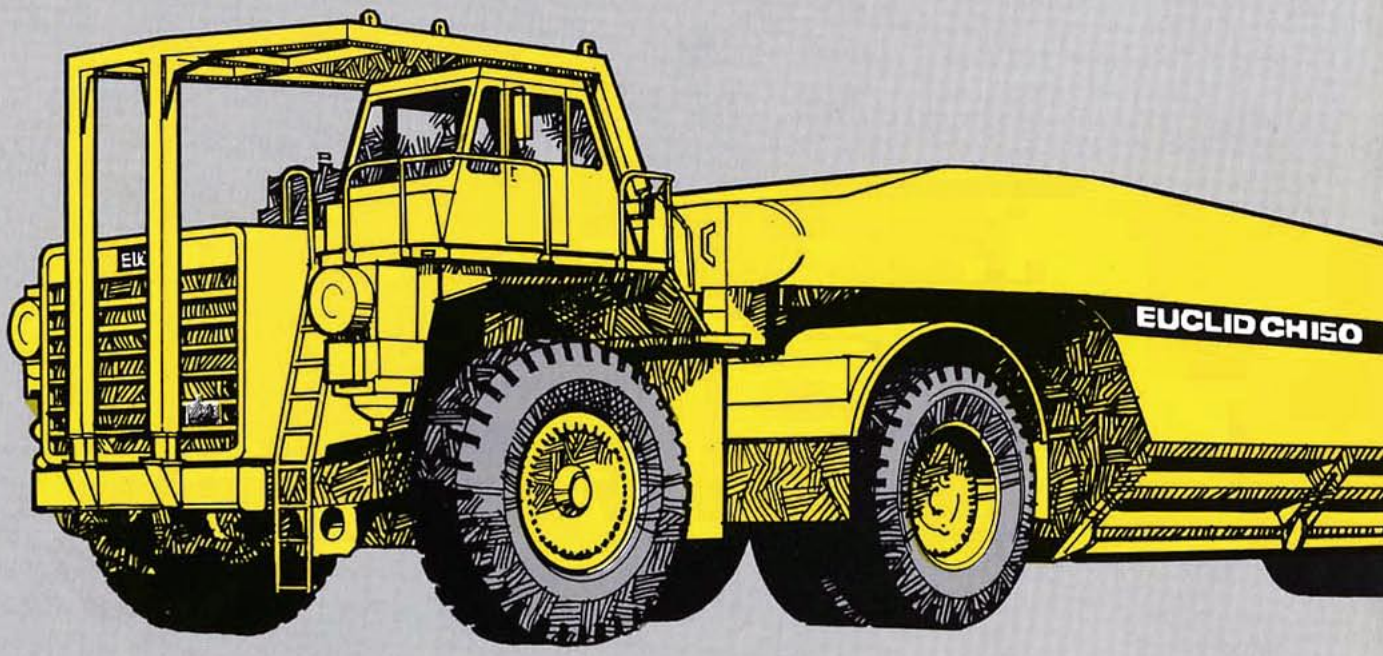
EUCLID

CH150



EUC CH150

ENGINES

Make	Detroit Diesel	Cummins
Model	12V-149T	KTA38-C
Type	2 Cycle	4 Cycle
Aspiration	Turbo-Charged	Turbo-Charged Aftercooled
Rated Output (SAE)	783 kW @ 1900 rpm (1050 bhp)	783 kW @ 2100 rpm (1050 bhp)
Flywheel Output (SAE)	746 kW @ 1900 rpm (1000 bhp)	746 kW @ 2100 rpm (1000 bhp)
No. Cylinders	12	12
Bore & Stroke	146mm x 146mm (5¾" x 5¾")	159mm x 159mm (6¼" x 6¼")
Displacement	29.4 litres (1792 in³)	37.7 litres (2300 in³)
Max. Torque	4102 N•m @ 1600 rpm (3025 lb-ft)	4095 N•m @ 1500 rpm (3020 lb-ft)
Starting	Air	Air

TRANSMISSION

Allison DP-8963, Planetary type, full power shift with automatic shifting. Integral torque converter with automatic lock-up in all ranges. 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 3.42:1 Diff. km/h	(mph)	OPTIONAL 3.15:1 Diff. km/h	(mph)	OPTIONAL 2.86:1 Diff. km/h	(mph)
1	4.24	9.88	(6.14)	10.73	(6.67)	11.83	(7.35)
2	2.32	18.05	(11.22)	19.61	(12.19)	21.61	(13.43)
3	1.69	24.79	(15.41)	26.92	(16.73)	29.65	(18.43)
4	1.31	31.99	(19.88)	34.74	(21.59)	38.26	(23.78)
5	1.00	41.90	(26.04)	45.50	(28.28)	50.12	(31.15)
6	0.73	57.41	(35.68)	62.33	(38.74)	68.66	(42.67)
R	5.75	7.29	(4.53)	7.92	(4.92)	8.70	(5.41)

DRIVE AXLE

Full floating axle shafts, double reduction provided by Euclid Model 2650 differential and single reduction planetary with balanced life gears in each wheel.

Ratios	Standard	Optional	Optional
Differential	3.42:1	3.15:1	2.86:1
Planetary	7.41:1	7.41:1	7.41:1
Total Reduction	25.34:1	23.34:1	21.19:1
Maximum Speeds			
with 27.00-49 tires	57.41 km/h (35.68 mph)	62.33 km/h (38.74 mph)	68.66 km/h. (42.67 mph)

TIRES

Standard — Front, Rear and Trailer	Rim Width
Goodyear 27.00-49(48)E-4	495mm (19.5")
Optional — Front, Rear and Trailer	
Goodyear 30.00-51(46)E-4	559mm (22.0")

Plus optional Goodyear tire types, treads, and ply ratings.

LOAD CAPACITY

	m³	(yd³)
Struck (SAE)	136.6	(178.6)
Heap 3:1	156.0	(204.0)
Heap 2:1 (SAE)	166.7	(218.0)

WEIGHTS

	kg	(lb)
Tractor	43 954	(96,900)
Trailer	49 306	(108,700)
Net Weight	93 260	(205,600)
Front Axle	24 810	(54,695)
Drive Axle	34 013	(74,985)
Trailer Axle	34 437	(75,920)
Payload	136 080	(300,000)
Gross Weight	229 340	(505,600)
Front Axle	34 061	(75,090)
Drive Axle	88 429	(194,950)
Trailer Axle	106 850	(235,560)
Tires:		
27.00-49(48)E-4	1 448	(3,192)
30.00-51(46)E-4	5 850	(12,896)

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	35°
Turning Diameter (SAE)	25.0m (82'0")
Steering Pump Output (@ 2,100 rpm)	125 l/m (33g/m)
System Relief Pressure	17 237 kPa (2,500 psi)

HYDRAULIC DOORS

Two double-acting cylinders mounted transversely at midsection of trailer doors offer controlled dumping up to a maximum 1.83 m (6.0 ft) door opening. Doors mounted with parallel arms to provide high ground clearance in all positions.

Pump Output (@ 2100 rpm)	151/m (40 g/m)
System Relief Pressure	17237 kPa (2500 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

Service Air	
Pressure	860 kPa (125 psi)
Start System	
Pressure	860 kPa (125 psi)
Reservoir Capacity	453 liters (16 ft³)

EUC CH150

STANDARD EQUIPMENT

General

Air cleaner guards
Air horns, dual
Allison Transmission Electronic Control (ATEC)
Exhaust muffler
Fan guard
Fenders, drive and trail axles
Fully hydraulic brake system
Ground level air start charge line
Guard rails around platform
Mirrors, right and left
Moisture ejector (air reservoir)
Mud flaps
Nitrogen/oil suspension
Operator arm guard
Radiator grille service deck, removable guard
Reverse alarm
Rock ejector bars
Supplementary steering system, accumulator
Tow hooks, front

Cab

Ash tray
Cab interior light
Cigar lighter
Fold-down service tray
Full electrical terminal block
Hand control for trail axle brakes
Heater and defroster
Load and hold switch
Operator seat, air ride
Operator seat belt
Passenger seat and belt
Rubber floor mat
Sun visor
Tilt steering wheel
Tinted glass, all windows
Windshield washer
Windshield wiper

Gauges and Indicators

Air cleaner restriction gauge
Air pressure gauge
Brake/steering pressure gauge
Clutch pressure gauge
Converter lock-up indicator light
Converter oil temperature gauge
Coolant temperature gauge
Engine oil pressure gauge
Gauge lights switch
High beam indicator light
Hourmeter
Hydraulic filter restriction indicator light
Parking/load and hold brake indicator light
Rear brake malfunction indicator light
Speedometer
Steer system malfunction indicator light
Steering filter restriction indicator light
Tachometer
Voltmeter

Machine Lights

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

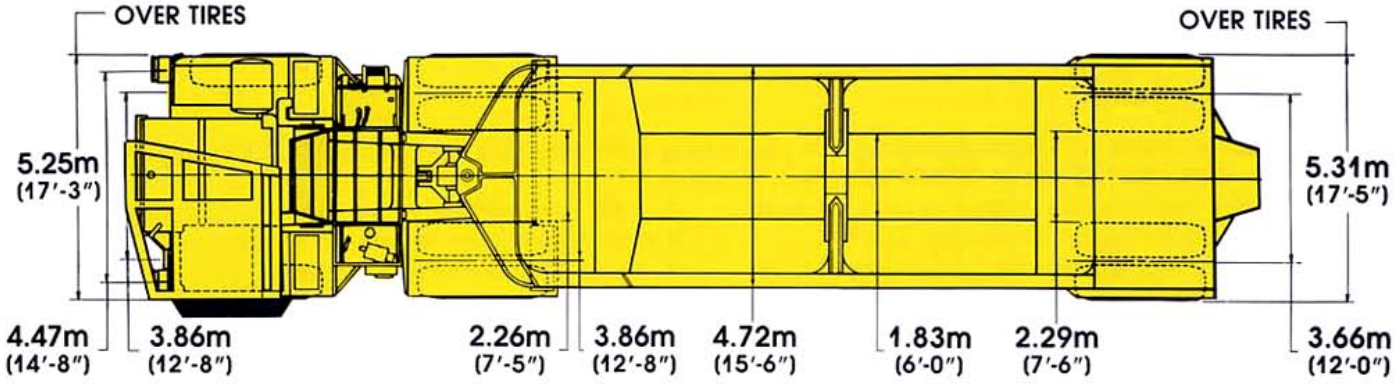
OPTIONAL EQUIPMENT

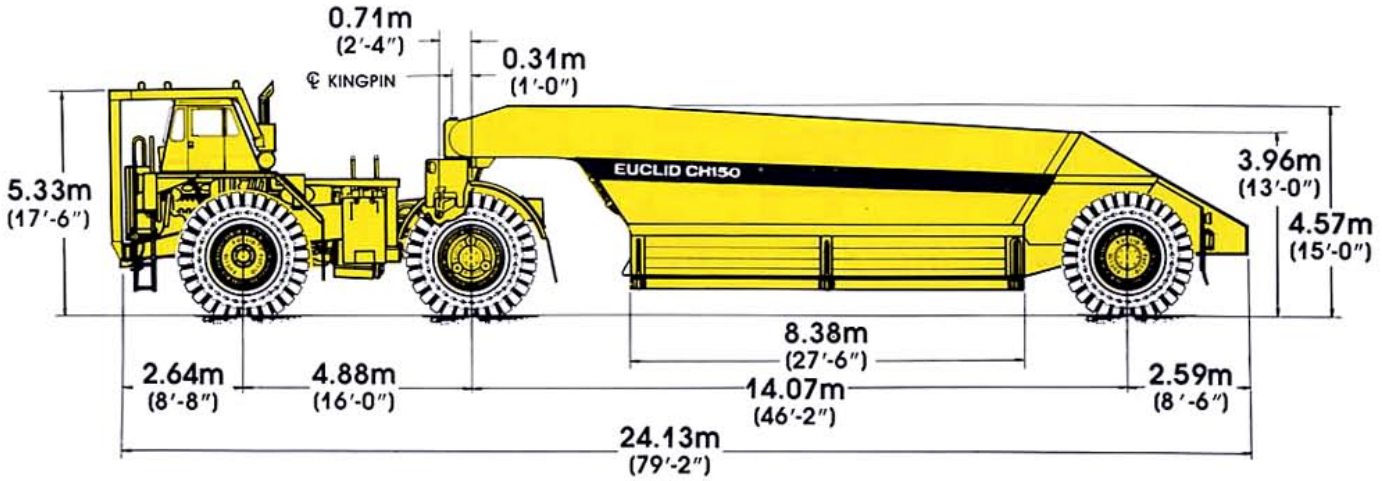
Air conditioner
Air dryer
Alarm system, four function (low oil pressure, high coolant temperature, low coolant level, high conv. temperature)
Alcohol vaporizer
Brake guards (front and trail axle)
Centralized lube
Centralized service
Cold starting aid
Differential, 3.15 ratio
Differential, 2.86 ratio
Differential, 2.50 ratio
Electric start
Fast fueling system (Wiggins)
Field repairable core radiator
Fuel gauge, cab or tank mounted
Hubodometer
Kim Hotstart
Lube system, automatic
Pushblock extension
Radiator shutters
Range indicator light assembly
Tachograph, 24 hr. recording
Thermatic fan

Standard and optional equipment may vary from country to country.

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

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





EUC CH150

FRAME

Box section main rails bridged by three cross members, front bumper and front suspension tube. Rail depth is constant taper rear to front 689 N/mm² (100,000 psi) yield strength steel. Two rear cross members are 655 N/mm² (95,000 psi) yield strength castings, with integral suspension and drive axle mountings. Cross members to frame rail junctions use large radii to minimize stress.

Hitch
Euclid universal hitch with 343mm (13.50") diameter king pin. Hitch assembly mounts to tractor frame through spherical bushings which eliminates twisting forces to the frame rails.

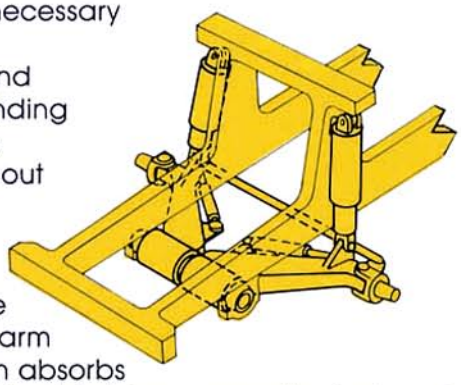
SUSPENSION SYSTEM

Front Suspension
Independent trailing arm for each front wheel. Nitrogen/oil suspension cylinders 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 rear link between frame and drive axle. Rear mounted nitrogen/oil suspension cylinders suspend drive axle from frame. Rebound feature included.
Maximum wheel oscillation . . . . . 8°

Trailer Suspension
Frame structure integral with axle housing provides a link to the trailer structure by means of a pivot shaft and two rearward mounted nitrogen/oil suspension cylinders

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. Ride struts are mounted with spherical bushings, eliminating extreme sidewall forces by insuring a purely axial input to the ride strut. The wide track stance of the trailing arm design assures a more stable, comfortable ride.

SERVICE CAPACITIES

	litres	(gallons)
Crankcase (incl. filters)		
Detroit Diesel	128.7	(34.0)
Cummins	151.4	(40.0)
Transmission	113.6	(30.0)
Cooling System	359.6	(95.0)
Fuel Tank	1 230.1	(325.0)
Hydraulic System		
Hydraulic Reservoir	98.4	(26.0)
Steering Reservoir	147.6	(39.0)
Drive Axle	193.0	(51.0)

COMMAND CAB II

Structurally Sound. Command Cab II, 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 three-point rubber iso-mount arrangement to the deck surface minimizes vibration to the operator's compartment.

Ease of Operation and Systems Monitoring. A wrap-around style dashboard positions the controls within easy reach and visual contact. A full compliment of easy to read, color banded gauges with international symbols and centrally positioned tachometer, speedometer and bank of warning lights provide the operator information required to safely pilot the machine.

Excellent Serviceability.
A removable front closure allows easy access to electrical components, brake master cylinder, retarder valve, and washer bottle. All electrical junction points are located in the front compartment. The filter is located to the side of the cab and servicing requires the removal of only two bolts. The upper dash utilizes four (4) removable panels to house gauges and customer options. Each panel is individually removed from inside the cab and only those requiring service need to be removed.

Designed for Operator Comfort. Command Cab II standard equipment includes the Isringhausen six-way adjustable air seat, tilt steering wheel, filtered ventilation and a fully upholstered trainers seat that folds down to reveal a tray for lunch boxes and other gear.

EUC CH150

ALL HYDRAULIC BRAKING

Service
All hydraulic power braking system. Free floating, internal expanding, two shoe type with automatic adjusters. System is pressure proportional for improved slippery road condition control.

Front Size . . . . . 914mm x 216mm (36" x 8½")
Lining area per axle . . . . . 8 490cm² (1306 in²)

Drive Size . . . . . 914mm x 305mm (36" x 12")
Lining area per axle . . . . . 11 987cm² (1844 in²)
Trailer size . . . . . 914mm x 305mm (36" x 12")
Lining area per axle . . . . . 11 987cm² (1844 in²)

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

Parking
Drum, two shoe internal expanding type mounted behind transmission. Manually controlled from instrument panel.

Size . . . . . 438mm x 102mm (17¼" x 4")
Lining Area . . . . . 1 226cm² (190 in²)

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 hp)
@ 2,200 rpm . . . . . 1486 kW (1991 bhp)

The Euclid CH150 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 steel tubing.

The CH150 brake system is pressure proportioned, front to rear, for improved slippery road control, and features automatic adjusters. Three independent hydraulic circuits within the service braking system and dual emergency accumulators provide emergency stopping capability conforming to SAE J1224. The Euclid CH150 has been designed with a simplified, easier to maintain brake system that provides superior stopping capability.

TRAILER

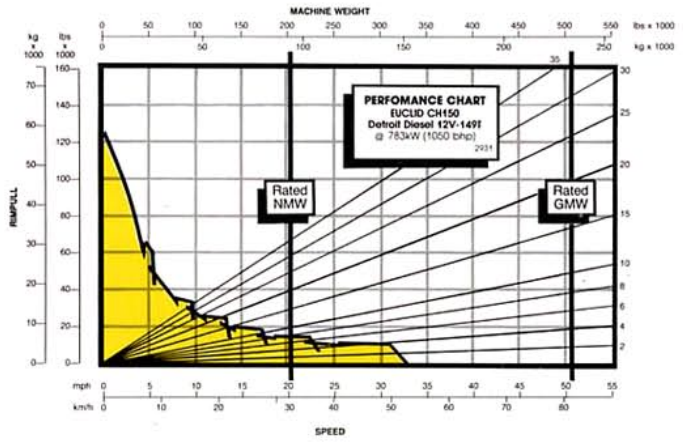
The CH150 trailer features unitized bent plate construction, providing maximum strength with minimum weight. Loading and hauling stresses are reduced through three large continuous box beams that span for and aft at the top, middle and bottom of the side plates.

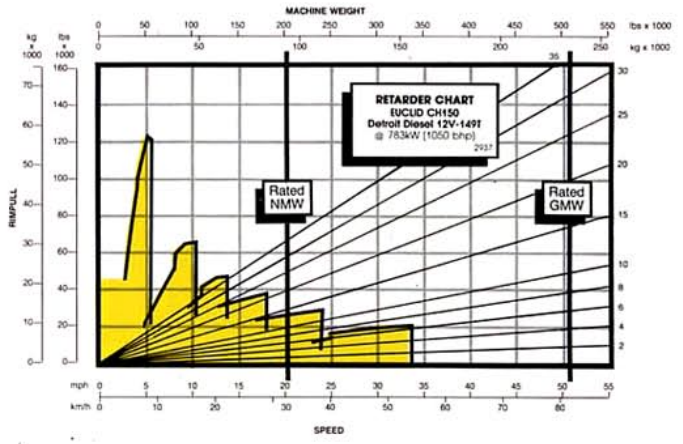
Smooth transitions from the hitch section through the main trailer body to the trail section assures ultimate fatigue strength and structural integrity.

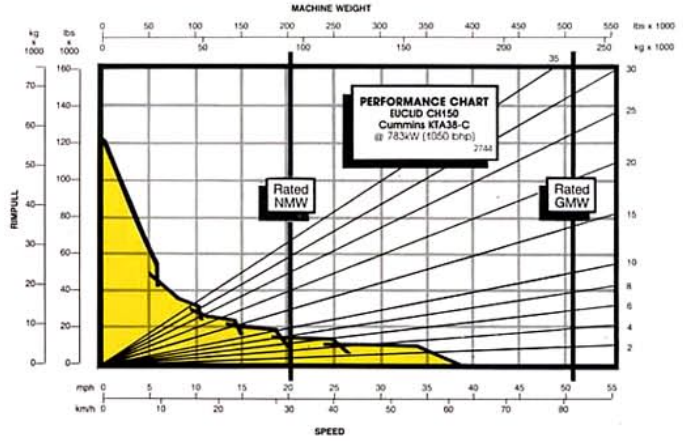
The doors are supported by three full length integral welded, continuous closed box beams for reinforcement and torsional resistance. An additional design feature in the door is the tapered cross section, which places the strongest part of the door along the hopper centerline where its needed.

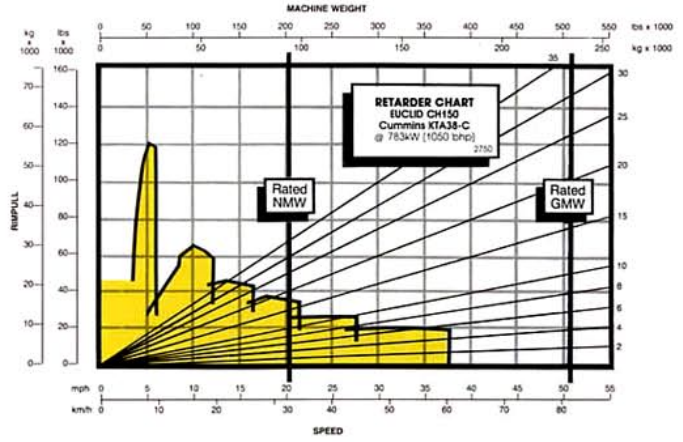
Euclid unitized trailer structure with large continous box beam rails supporting side plates and doors, integral push block and trailer fenders. Top rail slope plates, doors and vertical impact plates are 552 N/mm² (80,000 psi) yield strength steel. All other plates are 310 N/mm² (45,000 psi) yield steel. In thicknesses of:

Sloped plates	6mm (¼")
Vertical plates	5mm (3/16")
Front plates	13mm (½")
Rear plates	10mm (⅜")
Doors	6mm (¼")









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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