

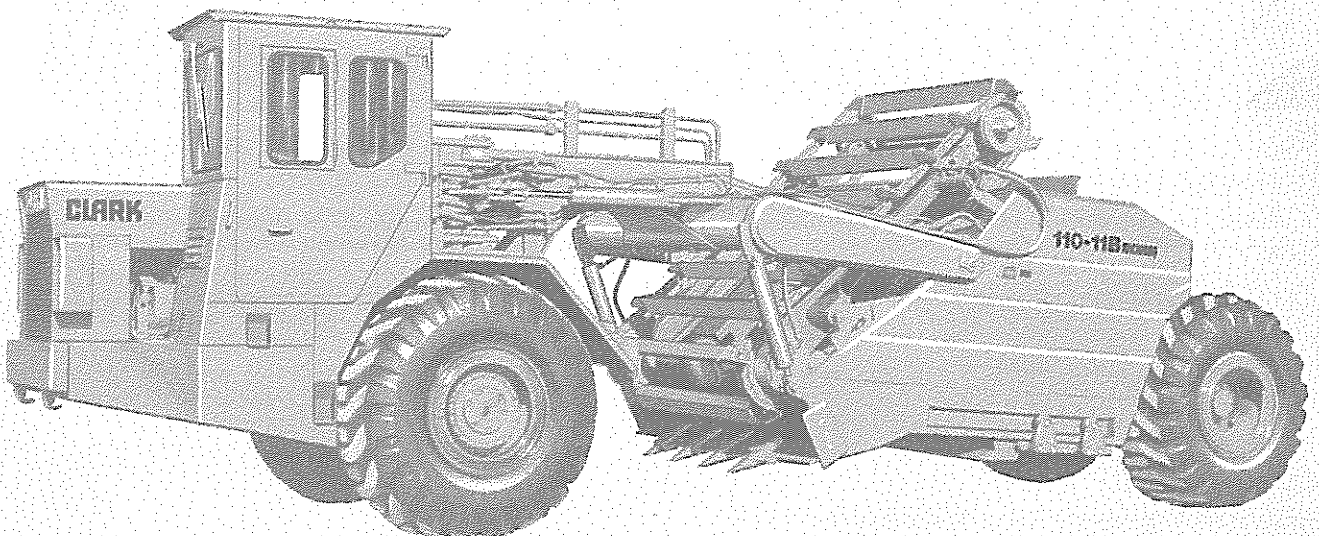
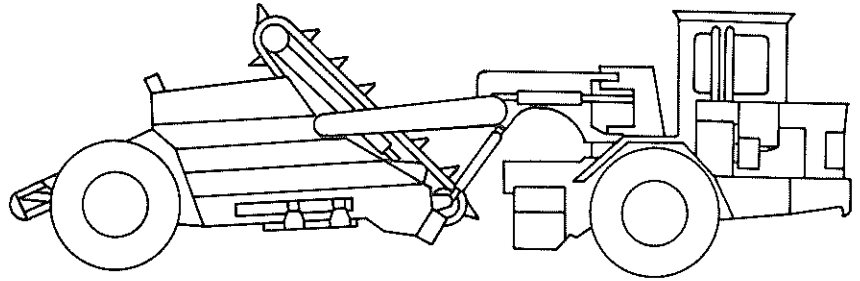
# CLARK

# 110-11B

MICHIGAN

## ELEVATING SCRAPER

- Complete powertrain designed and manufactured by Clark
- Cummins V-504-C engine...174 flywheel horsepower
- Welded tube construction bowl with fixed moldboard
- Patented rolling floor with automatic strike-off...positive ejection
- Reversible heavy-duty hydraulic powered planetary drive axle elevator, with variable speed forward...adjustable elevator height
- Disc brakes on all wheels...manually or automatically applied emergency brake



ENGINE

Make .....	Cummins
Model .....	V-504-C
*Maximum h.p. ....	196
**Flywheel h.p. ....	174
Governed RPM .....	3000
Maximum torque, ft. lbs. ....	388 @ 1900
(kg-m) .....	(53,62 @ 1900)
Bore and stroke, in. ....	4.62 x 3.75
(mm) .....	(117,3 x 95,2)
Number of cylinders .....	8
Displacement, cubic in. ....	504
(litres) .....	(8,26)
Electrical system (alternator) .....	24 volt, 30 amp

\*Maximum horsepower of basic engine under S.A.E. standard J816 — barometric pressure of 29.38 in. hg. (74,62 cm hg), 85°F (29,4°C) and maximum engine speed with fuel pump, water pump and lubricating oil pump.

\*\*Net usable horsepower at engine flywheel under S.A.E. standard J816 — barometric pressure of 29.38 in. hg. (74,62 cm hg), 85°F (29,4°C) and governed engine speed with fan, alternator, air cleaner and air compressor.

POWERTRAIN

TORQUE CONVERTER: Clark high-efficiency industrial type; single-stage with 1.82:1 torque multiplication ratio.

TRANSMISSION: Clark countershaft type powershift, with five speeds forward, one speed reverse. Travel speeds, MPH (km/hr):\*

	Lo-Lo	1st	2nd	3rd	4th
Forward .....	2.2	5 0	10.6	18.4	33.2
	(3,5)	(8,0)	(17,0)	(29,5)	(53,4)
Reverse .....	—	4.7			
	—	(7,6)			

\*Speeds shown are maximum at 0 total resistance; see rimpull chart.

DIFFERENTIAL: Clark limited slip in front axle.

DRIVE AXLE: Heavy-duty Clark planetary design with cast steel housing.

PLANETARY DRIVES: Clark low-friction, roller bearing planetary in tractor wheels. Planetary units can be removed without removing wheels and brakes.

TIRES

Tubeless, nylon body .....23.5-25, 20 PR (E-2)

BRAKES (SAE J319b)

SERVICE: Four wheel air-over-hydraulic self-adjusting double caliper discs, 18 in. dia. (457 mm).

EMERGENCY: Axle-by-axle system. Automatically actuated by low air pressure or manually applied through dash-mounted control; audible and visual alarm.

PARKING: Mechanical on front axle input shaft.

ELEVATOR

Width .....	6' 5"	(1956 mm)
Length .....	7' 10"	(2388 mm)
Number of flights .....	16	
Reversible elevator with variable forward speed from 0 to 280 FPM (0 to 85,3 m/min).		

HYDRAULIC SYSTEM

Fluid capacity .....	76 gals.	(287,7 litres)
Closed and pressurized system; oil supplied from sturdy plate steel reservoir. Hand hole in reservoir for easy cleaning. Main and steering systems supplied by tandem pump; elevator has separate pump.		
All pumps are torque converter mounted and flywheel driven.		

MAIN (BOWL & EJECTOR)

Gear-type tandem pump (rear section); two spool main valve located in engine compartment.

Pump capacity @ 2600 RPM ....	28 GPM	(105,0 litres/min.)
Relief pressure .....	2250 PSI	(158,2 kg/cm²)
Bowl cylinders (2, double-acting) .	4.00" dia.	(101,6 mm)
	18.00" stroke	(457,2 mm)
Ejector cylinders (2, double-acting)	4.00" dia.	(101,6 mm)
	18.00" stroke	(457,2 mm)

STEERING

Full hydrostatic power steering with hydraulic follow-up; 90° angle of steer, left and right.

Gear-type tandem pump (front section).

Pump capacity @ 2600 RPM ....	28 GPM	(106,0 litres/min.)
Relief pressure .....	2400 PSI	(168,7 kg/cm²)
Steer cylinders (2, double-acting)	4.00" dia.	(101,6 mm)
	18.00" stroke	(457,2 mm)
Width required for 180° turn ....	29' 2"	(8,89 m)

ELEVATOR

Piston-type variable displacement hydrostatic pump; control valve on pump.

Pump capacity @ 2000 RPM ....	36 GPM	(136,3 litres/min.)
System pressure .....	5500 PSI	(386,7 kg/cm²)

Pump supplies piston-type hydrostatic motor which powers planetary axle to drive elevator.

FILTERS: Full-flow 10 micron suction filter and full-flow 10 micron bypass return filter.

SERVICE CAPACITIES

	U.S. Gal.	(litres)
Engine cooling system .....	11.0	(41,6)
Engine crankcase .....	7.5	(28,4)
Torque converter & transmission .....	9.0	(34,1)
Front axle differential .....	4.2	(15,9)
Front wheel hubs (each) .....	1.6	(6,1)
Fuel tank .....	77.0	(291,5)
Hydraulic reservoir .....	65.0	(246,0)

## BOWL DIMENSIONS

Maximum depth of cut . . . . 8"	(203,2 mm)
Cutting edge length . . . . . 7' 6"	(2286 mm)
*Cutting edge, two sections 1" x 12" x 30"	(25,4 mm x 304,8 mm x 762,0 mm)
*Cutting edge, two sections 1" x 12" x 15"	(25,4 mm x 304,8 mm x 381,0 mm)

\*Like sections, interchangeable and reversible.

## CAPACITY

Heaped capacity, cu. yds. (m³) . . . 11	(8,41)
Rated load, lbs. (kg) . . . . . 26,400	(11 975)

## WEIGHT (Approx.)

Tractor, lbs. (kg) . . . . . 16,520	(7493)
Scraper, lbs. (kg) . . . . . 17,950	(8143)
Total Shipping, lbs. (kg) . . . . . 34,470	(15 636)

### Axle Weights

	EMPTY	LOADED
Front, lbs. (kg) . . . . . 23,580	(10 696)	31,725 (14 391)
Rear, lbs. (kg) . . . . . 10,890	(4940)	28,745 (13 039)
Rated Load, lbs. (kg) . . . . . 26,400	(11 975)	
Gross Weight, lbs. (kg) . . . . . 60,870	(27 611)	

## STANDARD EQUIPMENT

Reverse Warning Alarm\* (SAE J994); ROPS Cab\* (SAE J320a); Seat Belt\* (SAE J386); Bucket Seat, adjustable; Caps, lockable (fuel, hydraulic, radiator); Cutting Edge Teeth (4); Lights, work (4 front); Pull Hooks; Transmission Guard; Windshield Wiper (front).

INSTRUMENTS: Mechanical gauges for engine water temperature and oil pressure, battery charging, and brake air pressure; torque converter oil temperature; hourmeter.

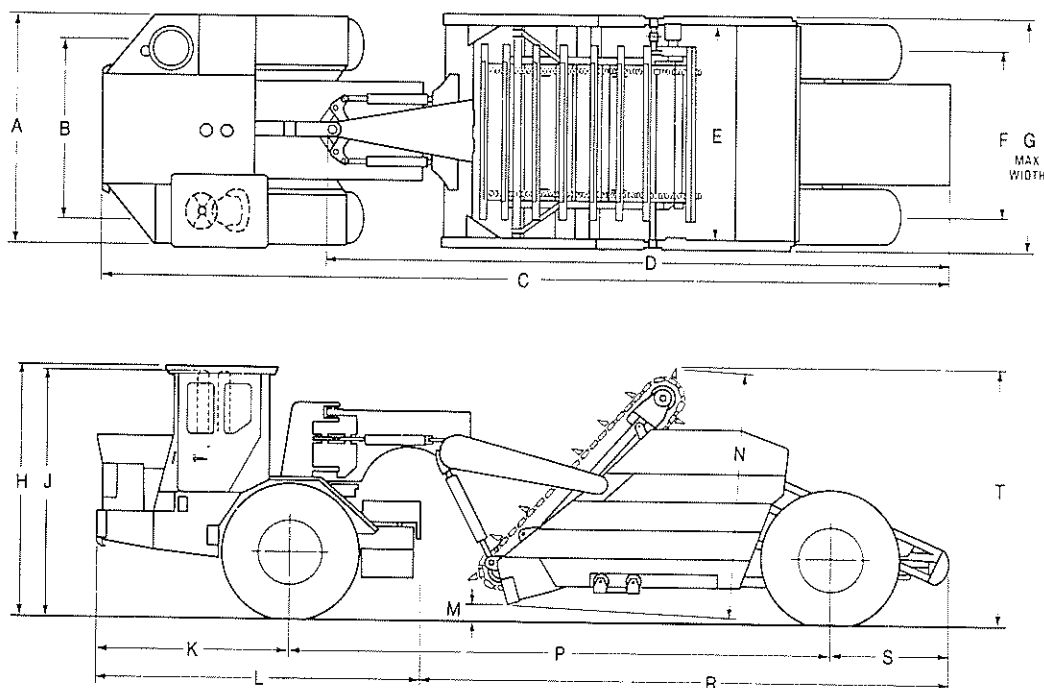
All gauges are located in a modular, shock-mounted, sealed panel with a sliding, lockable cover.

FILTERS: Engine oil, fuel, air (dry-type); hydraulic oil (suction and return); torque converter/transmission.

\*Optional outside U.S.A. & Canada. NOTE: Units are shipped outside U.S.A. & Canada less ROPS with windshield and wiper as standard equipment.

# MODEL 110-11B

SHOWN WITH ROPS  
NOT STANDARD  
OUTSIDE U.S.A. & CANADA



## MACHINE DIMENSIONS (with 23.5-25 Tires)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T
7' 7.5"	6' 2"	31' 4.82"	22' 11.5"	7' 4"	6' 2"	8' 3.25"	9' 11.25"	9' 11"	7' 9.5"	12' 8.5"	1' 6.75"	9' 5.5"	18' 8.32"	18' 8.32"	4' 4"	9' 10"
(2324 mm)	(1880 mm)	(9571 mm)	(6540 mm)	(2235 mm)	(1880 mm)	(2521 mm)	(3029 mm)	(3022 mm)	(2375 mm)	(3874 mm)	(476 mm)	(2883 mm)	(5697 mm)	(5697 mm)	(1321 mm)	(2997 mm)

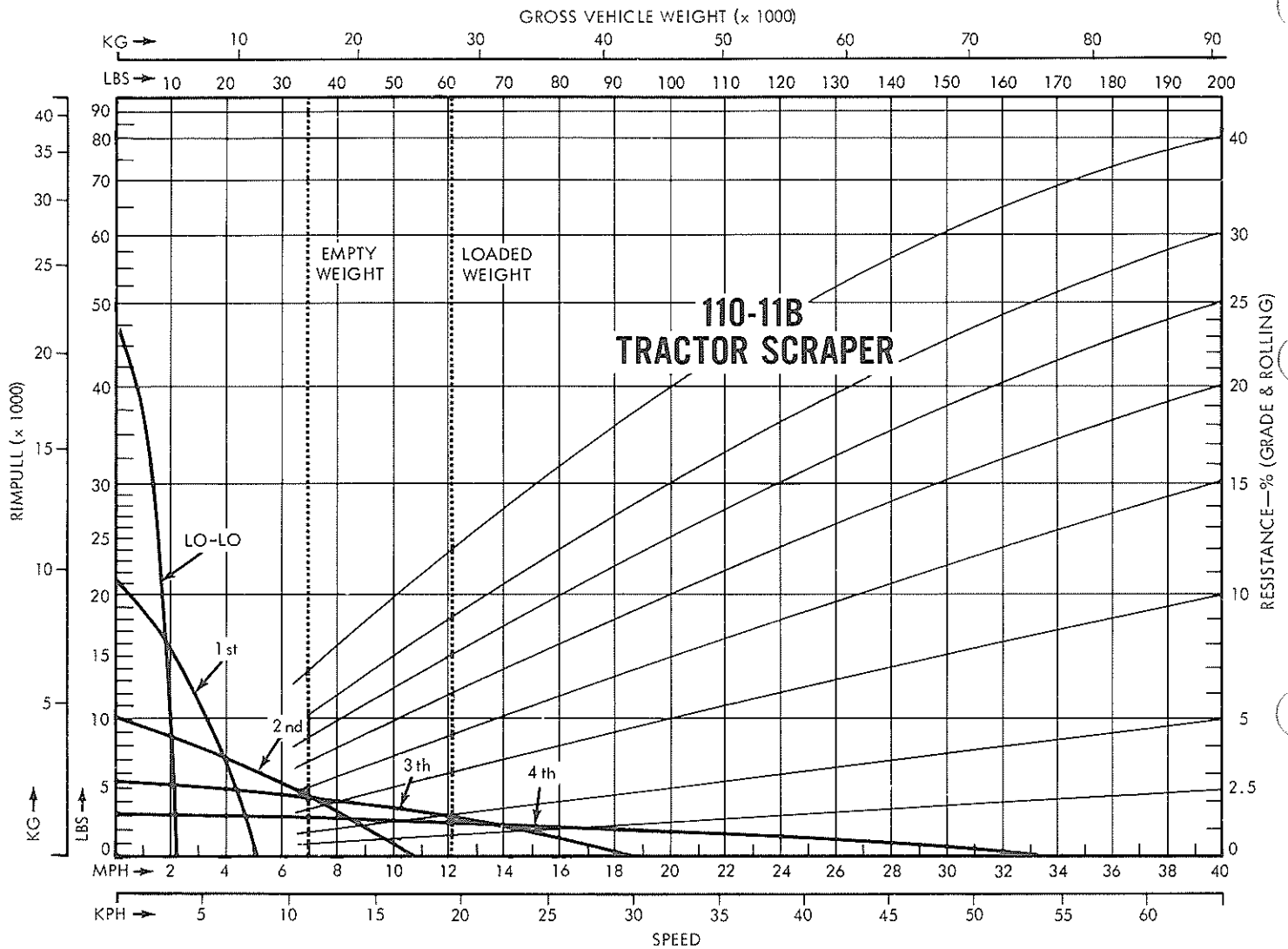
## OPTIONAL EQUIPMENT

and approximate installed weights

	Lbs.	(kg)
Acoustical Kit . . . . .	125	(56,7)
Air Conditioner . . . . .	125	(56,7)
Fenders, Rear (SAE J321a) . . . . .	200	(90,7)
Heater, Defroster & Pressurizer Combination . . . . .	60	(27,2)

	Lbs.	(kg)
Lights, Loading . . . . .	4	(1,8)
Lights, Tail/Stop with Turn Signals . . . . .	10	(4,5)
Mirrors, Rearview . . . . .	10	(4,5)
Rock Guards, Elevator Planetary . . . . .	50	(22,7)
ROPS, Open (SAE J320a) . . . . .	400	(181,4)
Tachometer . . . . .	1	(0,5)

# 110-11B PERFORMANCE DATA



1. Determine gross scraper weight; locate on top scale.
2. Read down to % total resistance — grade plus rolling resistance.
3. From total resistance/weight intersection point, read horizontally to highest gear curve.
4. From point on gear curve, read vertically to determine maximum speed in that gear.

NOTE: Actual performance depends on traction available and weight on drive wheels.

MATERIALS AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION

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**CLARK** Construction Machinery Division

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