



Michigan L190B



ENGINE OUTPUT
290 hp (216 kW)

DIRECT-INJECTED, TURBO-CHARGED, AFTER-COOLED, FUEL EFFICIENT CUMMINS DIESEL

OPERATING WEIGHT
60,910 LB (27,6 t)

BUCKETS 5.0-9.0 yd³
(3,8-6,9 m³)

STANDARD AND LONG BOOMS

POWERSHIFT, COUNTER-SHAFT TRANSMISSION WITH SINGLE LEVER ELECTRIC SHIFT CONTROL

LIMITED SLIP DIFFERENTIALS FRONT AND REAR

SEALED, MULTI-DISC, LIQUID COOLED, SERVICE BRAKES

SEAT MOUNTED FINGERTIP HYDRAULIC CONTROLS

INTEGRAL, CLIMATE-CONTROLLED ROPS/FOPS CAB

MICHIGAN



ENGINE

Direct-injected, turbocharged and after-cooled 6 cylinder, inline, 4-cycle diesel.

Make	Cummins	
Model	NTA 855C335	
Max. rating* at	1900 rpm	(32 rps)
SAE J1349 (ISO 1585)	322 hp	(240 kW)
Flywheel rating** at	1900 rpm	(32 rps)
SAE J1349 (ISO 1585)	290 hp	(216 kW)
DIN 70020/6271	290 hp	(216 kW)
Max. torque at	1400 rpm	(23 rps)
SAE J1349 (ISO 1585)	1006 lbf ft	(1364 Nm)
DIN 70020/6271	985 lbf ft	(1335 Nm)
Number of cylinders	6	
Displacement, total	855 in ³	(14,0 l)
Bore	5.50 in	(140 mm)
Stroke	6.00 in	(152 mm)

Air cleaner

1. Cyclone precleaner with automatic dust ejector.
2. Paper filter with restriction indicator.
3. Replaceable safety filter.

***Max. rating**-Rating of engine equipped only with components essential for engine function, such as injection pump, oil pump, and water pump.

****Flywheel rating**-Net rating measured with fan, intake and exhaust system, cooling system, and alternator mounted.



ELECTRICAL

The electrical system is well protected by circuit breakers and pre-wired for optional equipment.

Voltage	24	V
Alternator	100	A
Batteries (12 volt)	4	
Battery capacity, total	1250	CCA
Cranking capacity, each	625	CCA



SERVICE REFILL CAPACITIES

Crankcase	9.0 US gal	(34,1 l)
Fuel tank (total)	115 US gal	(436 l)
Fuel tank (usable)	108 US gal	(409 l)
Cooling system	21 US gal	(79,8 l)
Transmission & torque converter (total)	24 US gal	(91,2 l)
Wheel hubs, each	1.25 US gal	(4,7 l)
Differentials, each	9.0 US gal	(34,1 l)
Midmount bearing	0.5 US gal	(1,9 l)
Hydraulic system, (total)	84 US gal	(318,0 l)
Hydraulic tank	63 US gal	(238,5 l)



DRIVETRAIN

Torque converter: Clark, high efficiency, single-stage, single-phase.

Transmission: Clark, countershaft-type powershift transmission with directional clutch modulation.

Axles: Clark, full-floating axle shafts with planetary-type hub reductions. Single-piece cast axle housing. Fixed front axle and oscillating rear axle.

Differentials: Clark, limited slip differentials in front and rear axles.

Hub reduction: Clark, planetary drive with low-friction roller bearings in each wheel hub.

Tires: Tubeless with nylon cord body. Optional tires available for specific applications.

Torque converter make, model

Torque multiplication

Transmission make, model

Speeds, forward/reverse

1	4.7 mph	(7,6 km/h)
2	7.5 mph	(12,1 km/h)
3	14.0 mph	(22,5 km/h)
4	22.2 mph	(35,7 km/h)

Measured with tires

Front axle make, model

Rear axle make, model

Rear axle oscillation, total

..... 19 in (483 mm)



BRAKES

The brake system meets requirements according to SAE J1152 and ISO 3450.

Service brakes: Full hydraulic system with outboard mounted, oil-cooled, wet disc brakes at each wheel.

Left pedal applies brakes and shifts transmission into neutral. A separate dash-mounted switch allows the operator to deactivate this declutch feature.

Secondary: Dual circuit axle-by-axle system. Actuated by service brake pedals. Audible and visual low pressure alarm. Dead engine braking capability provided by two nitrogen-charged accumulators.

Parking brake: Dry disc type mounted on front axle input shaft. Spring applied, hydraulically released; actuated by dash-mounted switch.

Transmission interlock applies service brakes if shifted into forward or reverse to prevent moving machine when parking brake is applied.

Pump: Piston pump, pressure compensated.

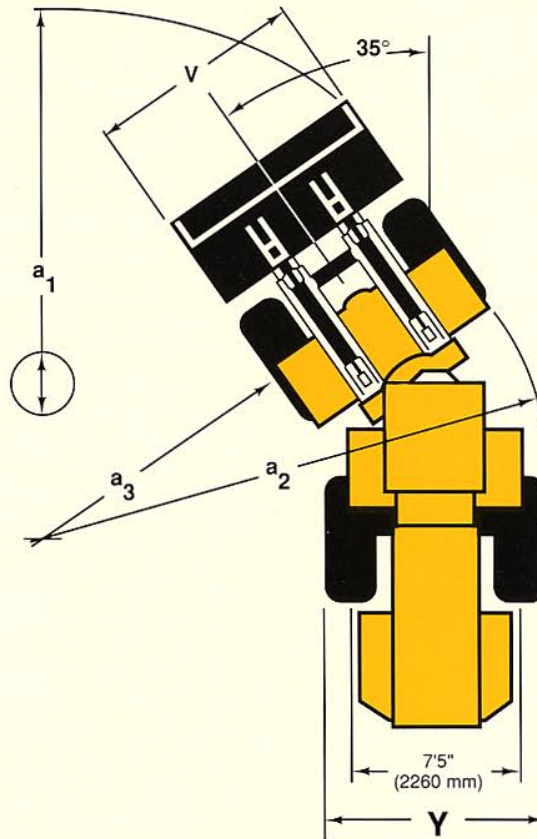
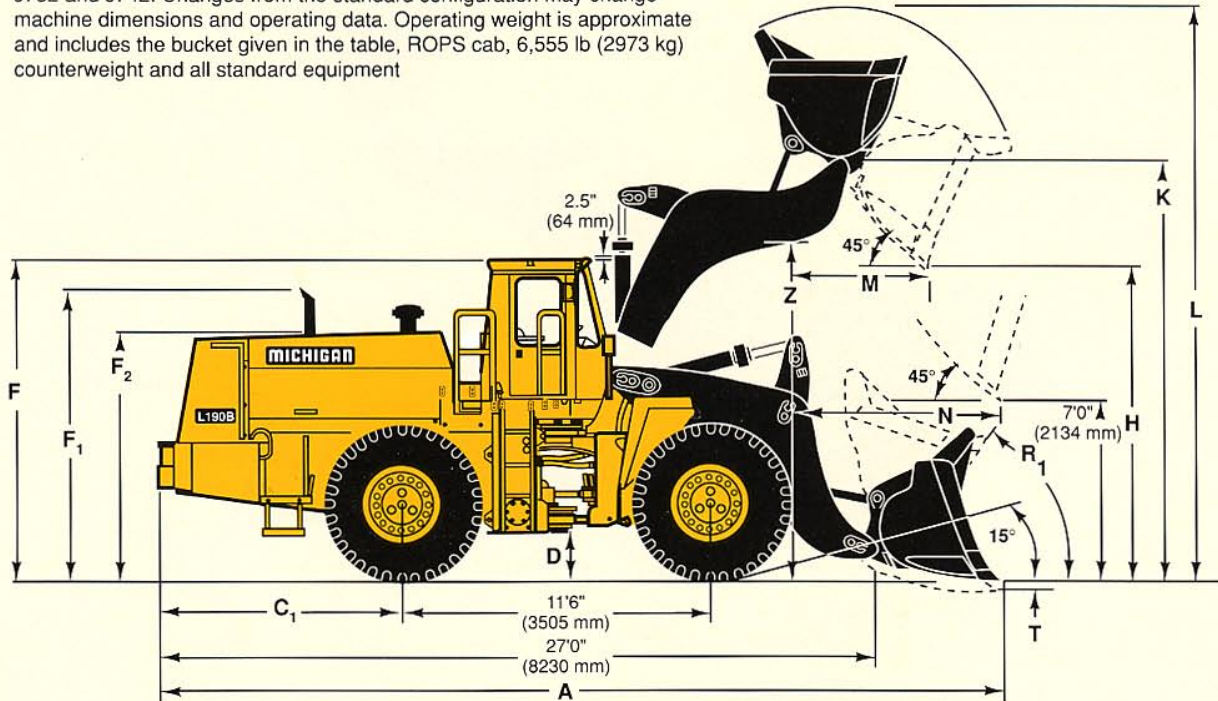
Filtration: Full flow, 10 micron filter.

Pressure setting	3000 psi	(20,7 MPa)
Service brake, disc dia., each	14.75 in	(375 mm)
Parking brake, disc dia.	18 in	(457 mm)
thickness	0.5 in	(13 mm)

DIMENSIONS- MICHIGAN L190B (Long Boom)

Tires: 29.5-25 (22PR) L-3

Wherever applicable, specifications are in accordance with SAE Standards J732 and J742. Changes from the standard configuration may change machine dimensions and operating data. Operating weight is approximate and includes the bucket given in the table, ROPS cab, 6,555 lb (2973 kg) counterweight and all standard equipment



OPERATIONAL DATA - MICHIGAN L190B (Standard Boom)

Tires: 29.5-25 (22PR) L-3

BUCKET TYPE		General Purpose	Straight Edge Rock	Spade-Nose Rock	Material Handling	Light Material
Volume, heaped	yd ³	5.75	5.25	5.25	6.25	9.0
	m ³	4.4	4.0	4.0	4.8	6.9
struck	yd ³	4.86	4.54	4.3	5.21	7.61
	m ³	3.7	3.5	3.3	4.0	5.8
Bucket weight	lb	4,690	4,660	5,040	4,840	5,440
	kg	2 127	2 114	2 286	2 195	2 468
Static tipping load,	lb	45,108	45,819	45,965	44,944	43,124
	kg	20 461	20 783	20 850	20 387	19 561
	lb	41,041	41,330	41,778	40,858	39,138
Breakout force	kg	18 616	18 747	18 950	18 533	17 753
	lbf	60,208	67,036	54,643	58,642	53,345
A	ft in	29'11" ▲ △	29'8" ▲ △	30'7" ▲ △	30'4" ▲ △	31'9" ▲ △
	mm	9 119	9 042	9 322	9 246	9 677
C ₁	ft in	9'0"	9'0"	9'0"	9'0"	9'0"
	mm	2 743	2 743	2 743	2 743	2 743
D	ft in	1'11"	1'11"	1'11"	1'11"	1'11"
	mm	584	584	584	584	584
F	ft in	12'4"	12'4"	12'4"	12'4"	12'4"
	mm	3 759	3 759	3 759	3 759	3 759
F ₁	ft in	11'2.5"	11'2.5"	11'2.5"	11'2.5"	11'2.5"
	mm	3 416	3 416	3 416	3 416	3 416
F ₂	ft in	9'9"	9'9"	9'9"	9'9"	9'9"
	mm	2 972	2 972	2 972	2 972	2 972
H	ft in	10'6" ○ ⊖	10'8" ○ ⊖	10'0" ○ ⊖	10'2" ○ ⊖	9'10" ○ ⊖
	mm	3 200	3 251	3 048	3 099	2 997
K	ft in	14'7.5"	14'7.5"	14'7.5"	14'7.5"	14'7.5"
	mm	4 458	4 458	4 458	4 458	4 458
L	ft in	19'5"	19'5"	19'6"	19'5"	19'11"
	mm	5 918	5 918	5 944	5 918	6 071
M	ft in	4'7" □ ⊕	4'5" □ ⊕	5'1" □ ⊕	4'11" □ ⊕	5'3" □ ⊕
	mm	1 397	1 346	1 549	1 499	1 600
N	ft in	6'4"	6'2"	6'10"	6'8"	7'0"
	mm	1 930	1 880	2 083	2 032	2 134
R ₁	deg	50	50	50	45	45
T	ft in	5" ☒ ⊗	4" ☒ ⊗	4" ☒ ⊗	3.5" ☒ ⊗	3.6" ☒ ⊗
	mm	127	102	102	89	91
V	ft in	10'10"	10'10"	10'10"	10'10"	12'10.5"
	mm	3 302	3 302	3 302	3 302	3 924
Y	ft in	10'3"	10'3"	10'3"	10'3"	10'3"
	mm	3 124	3 124	3 124	3 124	3 124
Z	ft in	11'9"	11'9"	11'9"	11'9"	11'9"
	mm	3 581	3 581	3 581	3 581	3 581
a ₁ Clearance circle (over bucket in carry position)	ft in	50'3"	50'3"	50'3"	50'3"	51'1"
	mm	15 316	15 316	15 316	15 316	15 570
Operating weight	lb	60,910	60,880	61,260	61,060	61,660
	kg	27 629	27 615	27 788	27 697	27 969

- ▲ Add 3 in (76mm) for bolt on cutting edge
- △ Add 7.4 in (188mm) for bucket teeth
- Deduct 3 in (76mm) for bolt on cutting edge
- ⊖ Deduct 6.3 in (160mm) for bucket teeth
- Add 1 in (25mm) for bolt on cutting edge
- ⊕ Add 4 in (102mm) for bucket teeth
- ☒ Add 1.25 in (32mm) for bolt on cutting edge
- ⊗ Add 1.6 in (41mm) for bucket teeth

OPERATIONAL DATA - MICHIGAN L190B (Long Boom)

Tires: 29.5-25 (22PR) L-3

BUCKET TYPE		General Purpose	Straight Edge Rock	Light Material
Volume, heaped	yd ³	5.25	5.0	9.0
	m ³	4.0	3.8	6.9
struck	yd ³	4.4	4.2	7.6
	m ³	3.4	3.2	5.8
Bucket weight	lb	4,660	4,645	5,440
	kg	2 114	2 107	2 468
Static tipping load, straight	lb	41,292	41,307	37,127
	kg	18 730	18 737	16 841
full turn	lb	37,222	37,235	33,467
	kg	16 884	16 890	15 181
Breakout force	lbf	53,306	56,396	41,954
	kN	237.1	250.9	186.6
A	ft in	31'7" ▲ △	31'7" ▲ △	33'0"
	mm	9 627	9 627	10 058
C ₁	ft in	9'0"	9'0"	9'0"
	mm	2 743	2 743	2 743
D	ft in	1'11"	1'11"	1'11"
	mm	584	584	584
F	ft in	12'4"	12'4"	12'4"
	mm	3 759	3 759	3 759
F ₁	ft in	11'2.5"	11'2.5"	11'2.5"
	mm	3 416	3 416	3 416
F ₂	ft in	9'9"	9'9"	9'9"
	mm	2 972	2 972	2 972
H	ft in	12'4" ○ ⊖	12'4" ○ ⊖	11'4"
	mm	3 759	3 759	3 454
K	ft in	16'5"	16'5"	16'5"
	mm	5 004	5 004	5 004
L	ft in	21'2"	21'2"	21'8"
	mm	6 452	6 452	6 604
M	ft in	4'7" □ ⊕	4'7" □ ⊕	5'7"
	mm	1 397	1 397	1 702
N	ft in	7'8"	7'8"	8'8"
	mm	2 337	2 337	2 642
R ₁	deg	50	50	50
T	ft in	4" ☒ ⊗	4" ☒ ⊗	3"
	mm	102	102	76
V	ft in	10'10"	10'10"	12'10.5"
	mm	3 302	3 302	3 924
Y	ft in	10'3"	10'3"	10'3"
	mm	3 124	3 124	3 124
Z	ft in	13'0"	13'0"	13'0"
	mm	3 962	3 962	3 962
a ₁ Clearance circle (over bucket in carry position)	ft in	52'6"	52'6"	53'4"
	mm	16 002	16 002	16 256
Operating weight	lb	62,470	62,455	63,250
	kg	28 336	28 330	28 690

- ▲ Add 3 in (76mm) for bolt on cutting edge
- △ Add 7.4 in (188mm) for bucket teeth
- Deduct 3 in (76mm) for bolt on cutting edge
- ⊖ Deduct 6.3 in (160mm) for bucket teeth
- Add 1 in (25mm) for bolt on cutting edge
- ⊕ Add 4 in (102mm) for bucket teeth
- ☒ Add 1.25 in (32mm) for bolt on cutting edge
- ⊗ Add 1.6 in (41mm) for bucket teeth

OPERATIONAL DATA - MICHIGAN L190B (Standard Boom)

Tires: 29.5-25 (22PR) L-3

SUPPLEMENTAL OPERATING DATA		Change in operating weight	Change in static tipping load straight	Change in static tipping load at full turn
Air conditioner (removal)	lb (kg)	-100 (-45)	-150 (-68)	-135 (-61)
Bucket points & adapters (27R)	lb (kg)	+245 (+111)	-275 (-125)	-245 (-111)
Bucket points & adapters (27ARL)	lb (kg)	+300 (+136)	-340 (-154)	-300 (-136)
Bucket points & adapters (27TFP)	lb (kg)	+245 (+111)	-275 (-125)	-245 (-111)
Bolt-on cutting edge	lb (kg)	+530 (+240)	-600 (-272)	-530 (-240)
ROPS cab (removal)	lb (kg)	-1650 (-748)	-1540 (-699)	-1360 (-617)
ROPS canopy, open (in lieu of ROPS cab)	lb (kg)	-650 (-295)	-570 (-259)	-500 (-227)
Fenders, front	lb (kg)	+250 (+113)	0 (0)	0 (0)
Secondary steering	lb (kg)	+100 (+45)	+170 (+77)	+150 (+68)
3rd hydraulic control	lb (kg)	+115 (+52)	0 (0)	0 (0)
Optional tires:				
26.5-25(20PR) L-3	lb (kg)	-970 (-440)	-670 (-304)	-610 (-277)
26.5-25(20PR) L-4	lb (kg)	+80 (+36)	+55 (+25)	+50 (+23)
26.5-25(20PR) L-5	lb (kg)	+720 (+327)	+500 (+227)	+455 (+206)
26.5-25(26PR) L-3	lb (kg)	-970 (-440)	-670 (-304)	-610 (-277)
26.5R25 XRAT*	lb (kg)	-1450 (-658)	-1005 (-456)	-915 (-415)
26.5R25 XRDNAT*	lb (kg)	-1180 (-536)	-820 (-372)	-745 (-338)
26.5R25 XRD1AT*	lb (kg)	-410 (-186)	-285 (-129)	-260 (-118)
29.5-25(16PR) L-3	lb (kg)	-160 (-73)	-110 (-50)	-100 (-45)
29.5-25(22PR) L-3 (Std.)	lb (kg)	0 (0)	0 (0)	0 (0)
29.5-25(22PR) L-4	lb (kg)	+1340 (+608)	+930 (+422)	+845 (+383)
29.5-25 (28PR) L-4	lb (kg)	+1950 (+885)	+1350 (+613)	+1230 (+558)
29.5R25XRAT*	lb (kg)	-110 (-50)	-75 (-34)	-70 (-32)

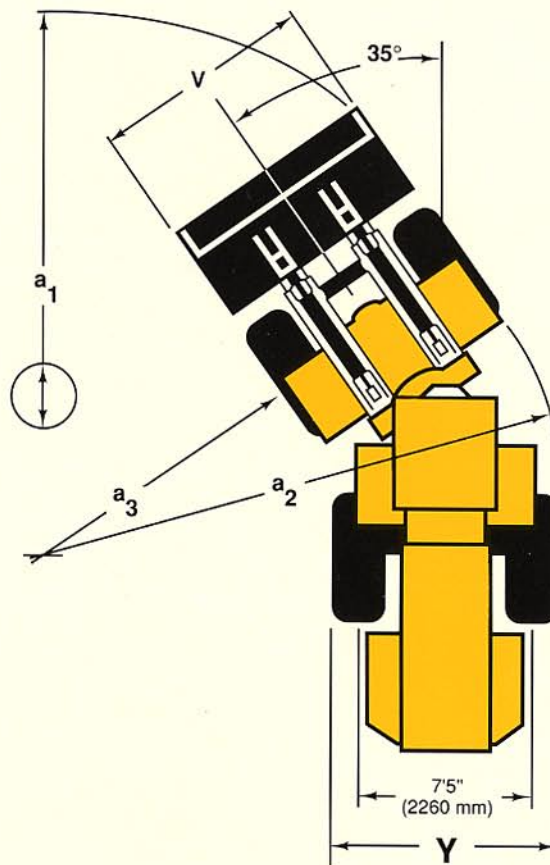
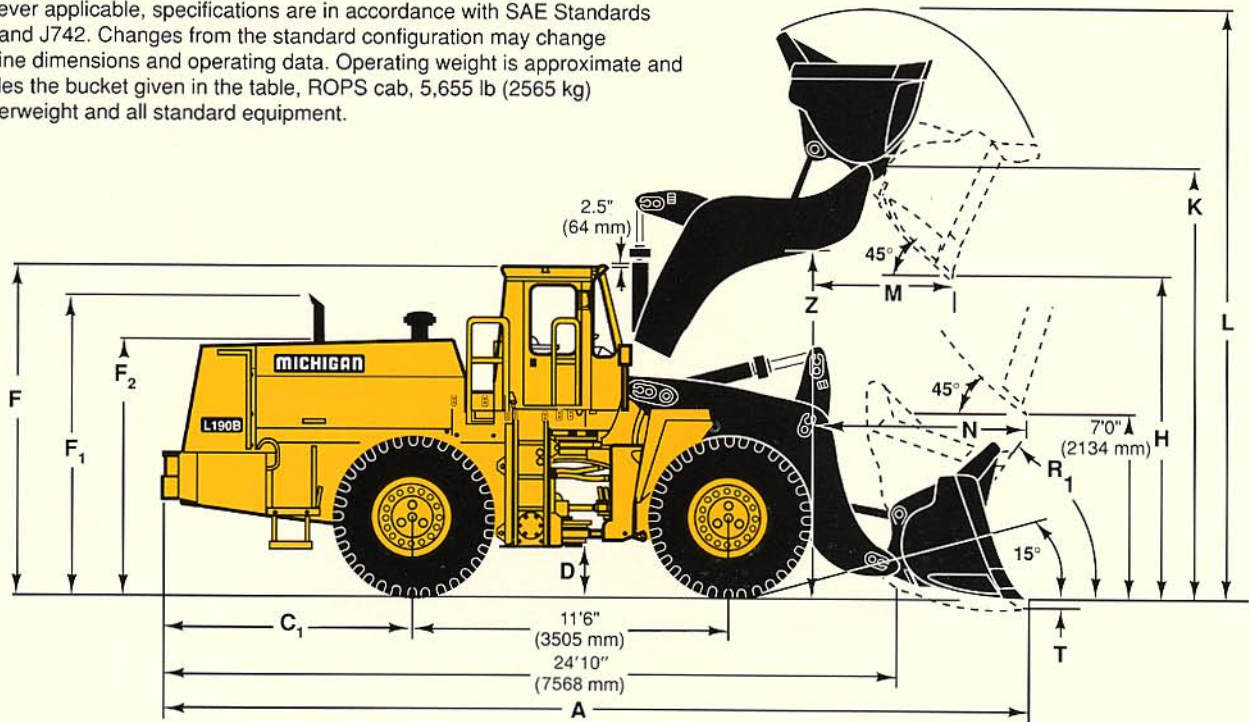
DIMENSIONS AFFECTED BY TIRE SIZE

MACHINE DIMENSIONS		26.5-25 (L-3)	26.5-25 (L-4, L-5)	29.5-25 (L-3)	29.5-25 (L-4)
D	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
F	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
F ₁	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
F ₂	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
H	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
K	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
L	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
M	ft in (mm)	+2" (+51)	0 (0)	0 (0)	-1" (-25)
N	ft in (mm)	+2" (+51)	0 (0)	0 (0)	-1" (-25)
T	ft in (mm)	+2" (+51)	0 (0)	0 (0)	-1" (-25)
Y	ft in (mm)	-3" (-76)	-3" (-76)	0 (0)	+1" (+25)
Z	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
a ₂	ft in (mm)	23'5" (7137)	23'5" (7137)	23'7" (7188)	23'8" (7214)
a ₃	ft in (mm)	13'3" (4039)	13'3" (4039)	13'1" (3988)	13'0" (3962)

DIMENSIONS - MICHIGAN L190B (Standard Boom)

Tires: 29.5-25 (22PR) L-3

Wherever applicable, specifications are in accordance with SAE Standards J732 and J742. Changes from the standard configuration may change machine dimensions and operating data. Operating weight is approximate and includes the bucket given in the table, ROPS cab, 5,655 lb (2565 kg) counterweight and all standard equipment.





STEERING

Articulated frame: Full hydraulic steering system with speed sensor hydraulics provides adequate volume of oil to the steer valve for positive control at all engine speeds.

Pump: Tandem gear-type, mounted on the torque converter.

Supply system: The system is served by a steer pump and a switch pump which is speed and pressure sensitive and feeds either the main hydraulic or the steering system, or dumps to tank.

Cylinders: Two double acting cushioned cylinders with chrome plated piston rods.

Steering cylinders, no.	2		
Bore	4.5 in	(114 mm)	
Stroke	18.5 in	(470 mm)	
Relief pressure	2500 psi	(17,2 MPa)	
Primary pump			
output	98 US gal/min	(371 l/min)	
at pressure	1000 psi	(6,9 MPa)	
and engine speed	1900 rpm	(32 rps)	
Secondary pump			
output	45 US gal/min	(170 l/min)	
at pressure	1000 psi	(6,9 MPa)	
and engine speed	1580 rpm	(26 rps)	
Articulation	35 deg		



CAB

Cab: Integral ROPS(SAE J1040, ISO 3471)/FOPS(SAE J231, ISO 3449) with two lockable doors. Sound insulating lining. Sliding self-locking windows. Tinted safety glass in all windows.

Heater/ Defroster/Air Conditioner: Provides filtered (10 microns) fresh air and has a three-speed fan and a defroster for the front and side windows.

Heater	45,000 Btu/h	(13,2 kW)
Air conditioner	21,500 Btu/h	(6,3 kW)

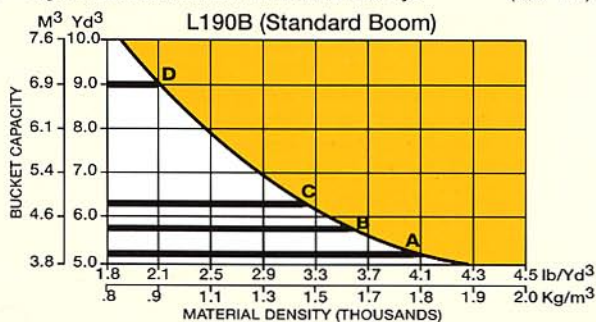
Operator's seat: Fully adjustable air suspension seat with seat belt (SAE J386).

Sound level in closed cab, max. 83dB(A)



BUCKETS (Standard Boom)

A - Straight edge rock	5.25 yd ³	(4,0 m ³)
A - Spade-nose rock	5.25 yd ³	(4,0 m ³)
B - General purpose	5.75 yd ³	(4,4 m ³)
C - Material handling	6.25 yd ³	(4,8 m ³)
D - Light material	9.0 yd ³	(6,9 m ³)



HYDRAULICS

Closed and pressurized load-sensing system with a sturdy plate-steel tank. Hydraulic oil is fully filtered and cooled. An access hole is provided in the tank for easy cleaning. An in-tank magnet provides extra protection.

Pump: Single gear-type, mounted on the torque converter.

Supply system: Main pump continuously serves main hydraulic system. Second section of steer pump can feed main hydraulic system when required.

Valve: Split-pool valve with built-in pressure relief valve. Actuated by a pilot valve, it is mounted on the front frame for easy access.

Lift function: The valve has four positions: raise, hold, lower and float. An automatic kickout detent is adjustable for any position between maximum reach and full lift height.

Tilt function: The valve has three positions: rollback, hold and dump. Automatic bucket positioner is adjustable to any desired loading angle.

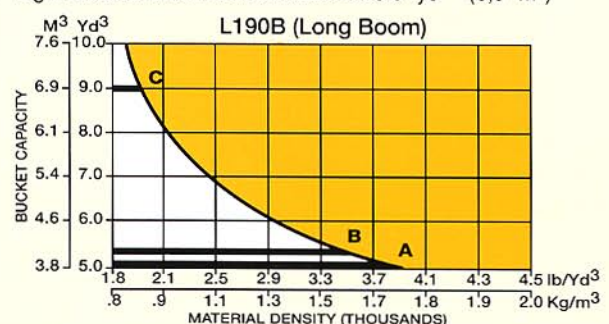
Cylinders: Double-acting.

Filters: Full-flow 10 micron return filter (with two elements), located in hydraulic oil tank.

Relief pressure	2950 psi	(20,3 MPa)
Pump output	70 US gal/min	(265 l/min)
at pressure	1000 psi	(6,9 MPa)
and engine speed	1900 rpm	(32 rps)
Lift cylinders, no.	2	
Bore	7.0 in	(178 mm)
Stroke	42.7 in	(1085 mm)
Tilt cylinders, no.	2	
Bore	6.0 in	(152 mm)
Stroke	27.7 in	(704 mm)
Raising time (loaded)	6.9 s	
Dumping time (loaded)	3.0 s	
Lowering time (empty)	4.6 s	
Total cycle time	14.5 s	

BUCKETS (Long Boom)

A - Straight edge rock	5.0 yd ³	(3,8 m ³)
B - General purpose	5.25 yd ³	(4,0 m ³)
C - Light material	9.0 yd ³	(6,9 m ³)



OPERATIONAL DATA - MICHIGAN L190B (Long Boom)

Tires: 29.5-25 (22PR) L-3

SUPPLEMENTAL OPERATING DATA		Change in operating weight	Change in static tipping load straight	shange in static tipping load at full turn
Air conditioner (removal)	lb (kg)	-100 (-45)	-150 (-68)	-135 (-61)
Bucket points & adapters (27R)	lb (kg)	+245 (+111)	-320 (-145)	-280 (-127)
Bucket points & adapters (27ARL)	lb (kg)	+300 (+136)	-390 (-177)	-350 (-159)
Bucket points & adapters (27TFP)	lb (kg)	+245 (+111)	-320 (-145)	-290 (-132)
Bolt-on cutting edge	lb (kg)	+530 (+240)	-685 (-311)	-620 (-281)
ROPS cab (removal)	lb (kg)	-1650 (-748)	-1800 (-816)	-1600 (-726)
ROPS canopy, open (in lieu of ROPS cab)	lb (kg)	-650 (-295)	-660 (-299)	-580 (-263)
Fenders, front	lb (kg)	+250 (+113)	0 (0)	0 (0)
Secondary steering	lb (kg)	+100 (+45)	+170 (+77)	+150 (+68)
3rd hydraulic control	lb (kg)	+115 (+52)	0 (0)	0 (0)
Optional tires:				
26.5-25(20PR) L-3	lb (kg)	-970 (-440)	-670 (-304)	-610 (-277)
26.5-25(20PR) L-4	lb (kg)	+80 (+36)	+55 (+25)	+50 (+23)
26.5-25(20PR) L-5	lb (kg)	+720 (+327)	+500 (+227)	+455 (+206)
26.5-25(26PR) L-3	lb (kg)	-970 (-440)	-670 (-304)	-610 (-277)
26.5R25 XRAT*	lb (kg)	-1450 (-658)	-1005 (-456)	-915 (-415)
26.5R25 XRDNAT*	lb (kg)	-1180 (-536)	-815 (-370)	-745 (-338)
26.5R25 XRD1AT*	lb (kg)	-410 (-186)	-285 (-129)	-260 (-118)
29.5-25(16PR) L-3	lb (kg)	-160 (-73)	-110 (-50)	-100 (-45)
29.5-25(22PR) L-3 (Std.)	lb (kg)	0 (0)	0 (0)	0 (0)
29.5-25(22PR) L-4	lb (kg)	+1340 (+608)	+930 (+422)	+845 (+383)
29.5-25(28PR) L-4	lb (kg)	+1950 (+885)	+1355 (+615)	+1230 (+558)
29.5R25 XRAT*	lb (kg)	-110 (-50)	-75 (-34)	-70 (-32)

DIMENSIONS AFFECTED BY TIRE SIZE

MACHINE DIMENSIONS		26.5-25 (L-3)	26.5-25 (L-4, L-5)	29.5-25 (L-3)	29.5-25 (L-4)
D	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
F	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
F ₁	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
F ₂	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
H	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
K	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
L	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
M	ft in (mm)	+2" (+51)	0 (0)	0 (0)	-1" (-25)
N	ft in (mm)	+2" (+51)	0 (0)	0 (0)	-1" (-25)
T	ft in (mm)	+2" (+51)	0 (0)	0 (0)	-1" (-25)
Y	ft in (mm)	-3" (-76)	-3" (-76)	0 (0)	+1" (+25)
Z	ft in (mm)	-2" (-51)	0 (0)	0 (0)	+1" (+25)
a ₂	ft in (mm)	23'5" (7137)	23'5" (7137)	23'7" (7188)	23'8" (7214)
a ₃	ft in (mm)	13'3" (4039)	13'3" (4039)	13'1" (3988)	13'0" (3962)

STANDARD EQUIPMENT

AIR CLEANER, DRY TYPE, DUAL ELEMENT WITH AUTOMATIC DUST EJECTOR
 ALTERNATOR, 24V, 100A
 BATTERY DISCONNECT, LOCKABLE
 BOOM AND BUCKET CONTROL LEVERS, FINGERTIP
 BOOM AND BUCKET LINKAGE, SEALED PINS
 BOOM KICKOUT, AUTOMATIC, ADJUSTABLE
 BRAKES, 4-WHEEL HYDRAULIC, WET DISC, LIQUID COOLED
 BRAKE SYSTEM, SECONDARY
 BUCKET LEVELER, AUTOMATIC
 CAB ACCESS STEPS & HANDRAILS (SAE J185)
 CAB, ROPS (SAE J1040) (ISO 3471)/ FOPS (SAE J231) (ISO 3449)
 Acoustical Lining
 Doors (2); Lockable with Self-Locking, Sliding Glass Windows
 Door Hold-Open Struts (2)
 Electrical System: 24V, Circuit Breaker Protected, Pre-wired for Optional Accessories
 Environmental Control:
 Air Conditioner, 21,500 Btu/h (6,3 kW)
 Heater/Defroster/Pressurizer, 45,000 Btu/h (13,2 kW) with Three-Speed Blower Fan, Filtered Air
 Floor Mat
 Interior Lights, Red and White
 Interior Rearview Mirror

Safety Glass, Tinted
 Seat, Air Suspension, 6-way Adjustable
 Seat Belt (SAE J386)
 Steering Wheel Spinner Knob
 Sun Visor
 Windshield Wiper & Washer, Front & Rear
 COLD START AID, ETHER INJECTION
 DIFFERENTIALS: LIMITED SLIP, FRONT & REAR
 DRAWBAR WITH PIN
 GRILLE, REAR SWING-OUT
 HYDRAULIC FLUID TO AIR COOLER
 HYDRAULIC PRESSURE TEST PORTS, QUICK CONNECT
 INSTRUMENTS/GAUGES:
 Air Cleaner Restriction Indicator
 Engine Coolant Temperature Gauge
 Engine Oil Pressure Gauge
 Fuel Gauges, Tank and Dash Mounted
 Hourmeter
 Sight Gauges:
 Engine Coolant Level
 Hydraulic Fluid Level
 Transmission Fluid Level
 Transmission/Torque Converter Fluid Temperature Gauge
 Voltmeter
 ISOLATION MOUNTS:
 Cockpit, Engine, Radiator, Transmission
 LIFTING LUGS
 LIGHTS:
 Work (70W) Halogen, 4 Front, 4 Rear
 Stop and Tail Combination, 2 Rear

Turn Signals
 LUBRICATION SYSTEM, MANIFOLD TYPE, GROUND LEVEL
 MIRRORS, REARVIEW (2), EXTERIOR
 NEUTRAL START FEATURE
 REMOTE DRAIN FOR ENGINE OIL
 SIDE PANELS, ENGINE HOOD, LOCKABLE
 STEERING FRAME LOCK
 TIRES: 29.5-25 (22PR) L-3
 TRANSMISSION:
 Powershift, with Directional Clutch Modulation
 Declutch Pedal with Dash Mounted On/Off Switch
 Shift Control, Single Lever Electric
 VANDALISM LOCK, PROVISION FOR:
 Batteries
 Engine Coolant
 Fuel
 Hydraulic Fluid
 Transmission/Torque Converter Fluid
 WARNING ALARMS:
 Horn, Electric
 Reverse Alarm (SAE J994)
 WARNING & MONITORING LIGHTS:
 Air Conditioner Malfunction
 Brake Pump/Differential Pressure
 Brake System, Front
 Brake System, Rear
 Parking Brake Applied
 Transmission/Brake Filter Restriction

OPTIONAL EQUIPMENT

Accessory Power Converter, 12V/6A
 Air Conditioner (Removal)
 Beacon, Rotating, Amber
 Bucket (See Operational Data)
 Points & Adapters
 Cutting Edge, Bolt-On
 Cab, ROPS (Removal)
 Canopy, Open ROPS
 Engine Oil Fill & Evacuation (Wiggins)
 Engine Preheater, Coolant & Oil (120V & 240V)
 Engine Shutdown to Idle Kit:
 High Coolant Temperature
 Low Engine Oil Pressure
 Engine Warning System:
 Low Oil Pressure

Low Coolant Level
 High Coolant Temperature
 European Accessory Kit
 Fan, Reversible
 Fenders and Mud Flaps, Front
 Fire Extinguisher
 Fuel, Fast Fill Coupler (Wiggins)
 Guards:
 Crankcase
 Rear Lights
 Transmission
 Hydraulic Control, 3 Spool Valve, Piping & Controls
 Hydraulic Fluid Fill & Evacuation (Wiggins)
 Instrument Cover Kit (ROPS Canopy)

Log Loader Package
 Radiator Sand Grid
 Secondary Steering (Electric)
 Tiefbau Kit (for German Regulations)
 Tires: 26.5-25 (20PR) L-3
 26.5-25 (20PR) L-4
 26.5-25 (20PR) L-5
 26.5-25 (26PR) L-3
 26.5R25 XRAT*
 26.5R25 XRDNAT*
 26.5R25 XRD1AT*
 29.5-25 (16PR) L-3
 29.5-25 (22PR) L-4
 29.5-25 (28PR) L-4
 29.5R25 XRAT*

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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