

PS-150B PS-200B

Pneumatic
Compactors



PS-150B

Cat® 3054NA Diesel Engine

Gross power	52 kW	70 hp
Maximum operating weight	12 940 kg	28,535 lb
Compaction width	1743 mm	69"
11-wheel option compaction width	2134 mm	84"

PS-200B

Cat® 3054T Diesel Engine

Gross power	78 kW	105 hp
Maximum operating weight	18 145 kg	40,000 lb
Compaction width	1743 mm	69"
11-wheel option compaction width	2134 mm	84"

Performance and Versatility



The PS-150B and PS-200B are packed with a variety of features that will help you work productively and efficiently. They are the tools that you can count on in the toughest applications and the most difficult working conditions.

The PS-150B and PS-200B hydrostatic propel system features the "High Drive" concept – no chains are used. The drive motors, parking brakes and hoses are protected in the engine compartment. Drive lines transmit torque to the axles, providing smooth starts and stops. High Drive system components are easy to access and simple to service.

The PS-150B and PS-200B operator's station is styled like the Maximum Visibility Position (MVP) control

console on Caterpillar high-production asphalt compactors. All controls and gauges are conveniently positioned in front of the operator or to the right. The standard operator's station is fixed on the left side at 35 degrees clockwise. The clockwise position provides additional visibility to the rear.

The optional MVP control console rotates to three locked positions – left, center and right. The MVP control console provides excellent visibility to both sides of the machine, allowing the operator to view the front tire contact points. The Roll Over Protective Structure (ROPS) is standard equipment.

The oscillating front and rear wheels seek out and compact soft spots. The oscillating wheels also provide even wheel loads and uniform compaction across the rolling width.

All maintenance is easily accomplished from the ground. The rear-positioned engine enclosure easily lifts up, providing access to the engine, hydraulic components and all routine service points. Remote mounted drains for the fuel, hydraulic and cooling systems provide simplified collection of these critical fluids.

The PS-150B and PS-200B are supported by an extensive dealer network with highly trained and motivated personnel.

Caterpillar® 3054 Series Diesel Engines

Reliable and durable diesel engine for years of low maintenance operation.

Precise balance and optimum running speed for smooth operation and long engine life.

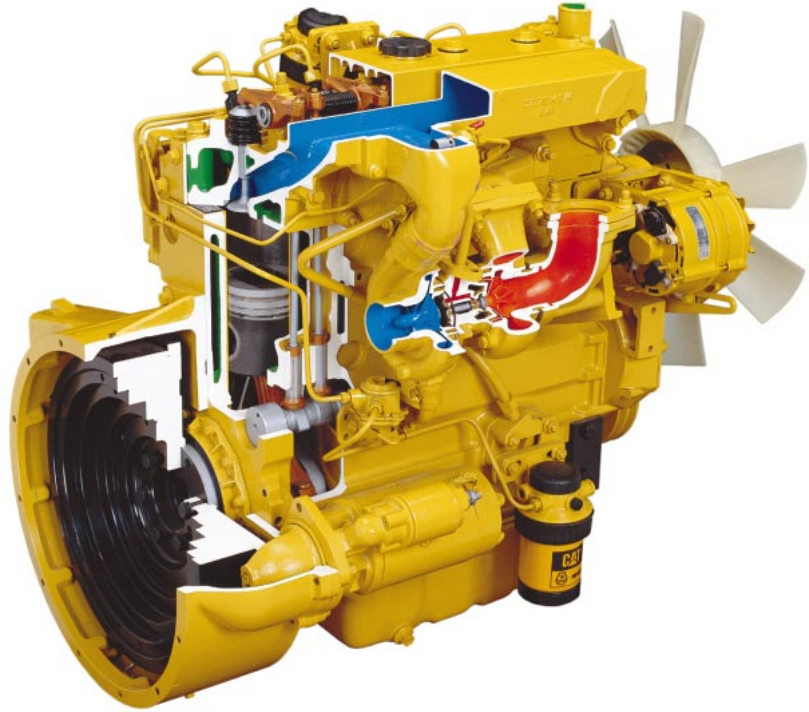
High torque rise for maintaining power under increased loads.

PS-200B engine is turbo-charged for optimum performance at high altitude – up to 2134 m (7,000') without derating. (Turbo-charged engine is shown.) Only machine in its size class with turbocharged engine.

Both engines meet emissions regulations.

Adjustment-free direct injection performance keeps fuel consumption low.

Low maximum engine rpm provides fuel efficiency.



High Drive

Hydrostatic propel system combines smooth stops and starts with plenty of torque.

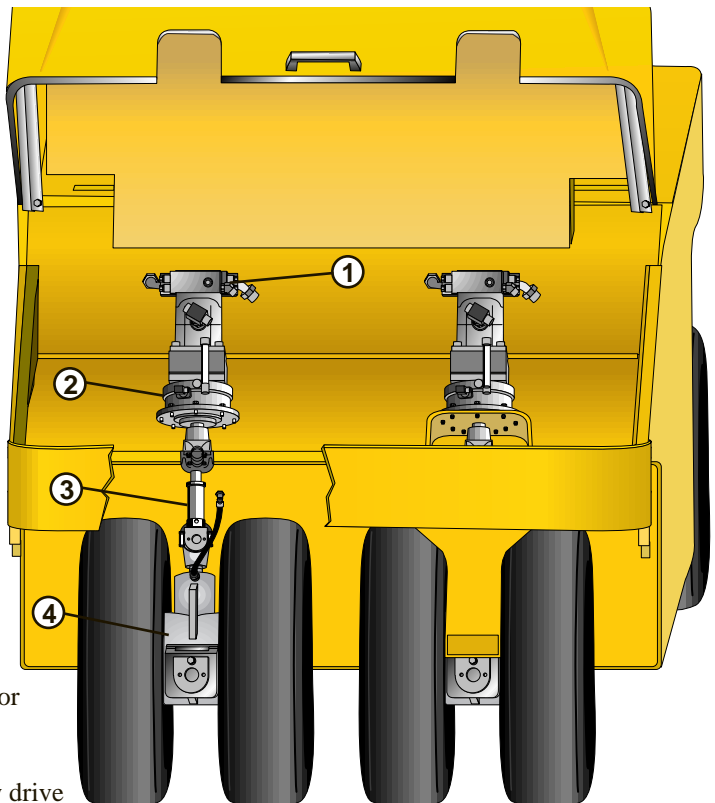
Power transmission with drive line provides smooth starts and stops – no chains are used.

Hydrostatic transmission provides primary braking – no brake shoes or pads to service.

Easy serviceability to all drive components.

Hydraulic motors, parking brakes and drive lines are positioned high inside the machine frame, eliminating them from contamination and damage.

Two speed ranges provide job site mobility and traction capability to suit working conditions with plenty of propel lever modulation. Speed ranges can be shifted while propelling.



- 1 Hydraulic motor
- 2 Parking brake
- 3 Drive line
- 4 Axle/Planetary drive

Operator's Station

Operating ease and comfort promote all-day productivity.

Exceptional all-around visibility

provides easy maneuvering.

Adjustable, cushioned seat

provides lasting comfort.

Flat platform

enhances operator's mobility and visibility.

Streamlined gauges

keep operator informed of engine systems and machine status.

Single lever control

simplifies control.

Standard equipment

includes Roll Over Protective Structure (ROPS) and 75 mm (3") wide seat belt.

Optional rotating operator's station

allows operator to swivel control console from left side to right side for even better visibility.



Tire Overlap/Wheel Oscillation

Tires overlap and wheels oscillate for maximum compactive effort with each pass.

Front and rear wheels paths

overlap 13 mm (0.5") to provide full-width coverage of 1743 mm (69") and 2134 mm (84") with 11-wheel option.

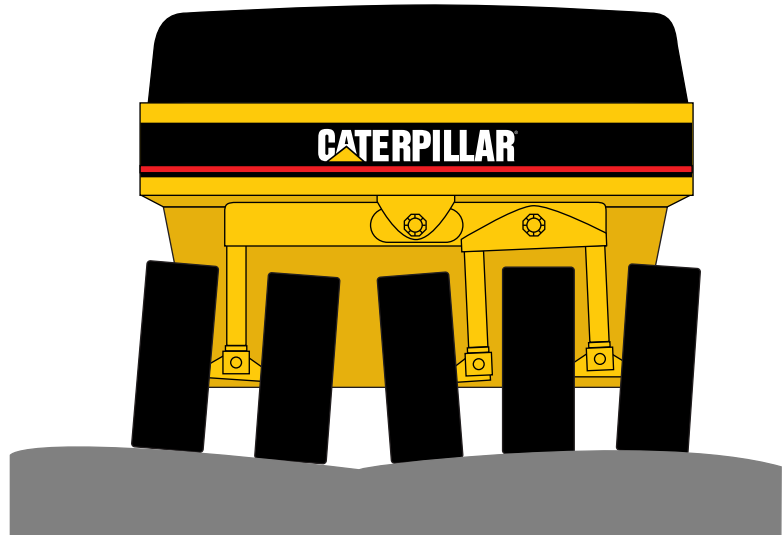
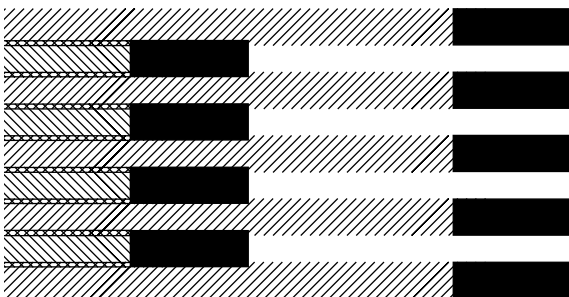
Front and rear wheel bolsters

oscillate ± 4.4 degrees to allow uniform compaction across entire rolling width.

(Note: With the 11-wheel option, oscillation angle on outside rear wheels is 0 degrees up and 4.4 degrees down.)

Wheel oscillation

helps ensure excellent bonding of longitudinal asphalt joints.



Serviceability

Easy, ground-level access provides convenient and quick service.



Large engine enclosure pivots upward for access to engine.

Single-point access to all engine service points and filters through engine enclosure.

Engine access at rear provides one-side, walk-up service.

Ground-level servicing simplifies maintenance.

Quick-connect hydraulic test ports simplify system diagnosis.

Remote mounted drains for fuel, hydraulic and cooling systems allow collection of fluids.

Radiator rotates away from oil cooler, providing simplified access for cleaning.

Engine — PS-150B

Four-stroke cycle, four cylinder 3054NA diesel engine. Engine meets emissions regulations.

Ratings at	RPM	kW	hp
Gross power	2200	52	70

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 99 kPa (29.32") Hg dry barometer. Power is based on using 35° API gravity fuel having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]. Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.

The following ratings apply at 2,200 RPM when tested under the specified standard conditions for the specified standard:

Net Power	kW	hp
ISO 9249	48	64
SAE J1349 JAN90	47	64
EEC80/1269	48	64

Dimensions

Bore	100 mm	3.937"
Stroke	127 mm	5"
Displacement	4 L	243 cu. in.

Dual-element, dry-type air cleaner with visual restriction indicator.

Electrical System

24-volt electrical system includes two maintenance-free Cat batteries, color-coded and numbered wiring wrapped in nylon braid. A 45-amp alternator powers the electrical system.

Engine — PS-200B

Four-stroke cycle, four cylinder 3054T turbo-charged, diesel engine. Engine meets emissions regulations.

Ratings at	RPM	kW	hp
Gross power	2200	78	105

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 99 kPa (29.32") Hg dry barometer. Power is based on using 35° API gravity fuel having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]. Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.

The following ratings apply at 2,200 RPM when tested under the specified standard conditions for the specified standard:

Net Power	kW	hp
ISO 9249	74	100
SAE J1349 JAN90	74	99
EEC80/1269	74	100

Dimensions

Bore	100 mm	3.937"
Stroke	127 mm	5"
Displacement	4 L	243 cu. in.

Dual-element, dry-type air cleaner with visual restriction indicator.

Axles

Tractive effort is delivered to the four rear drive wheels by standard, heavy-duty axles.

Transmission

Two-speed hydrostatic propel system. Hydrostatic pump provides oil to two hydrostatic motors mounted above the drive axles. Drive shafts connect the motors to the rear axles.

A single propel lever located on the control console provides smooth hydrostatic control of the infinitely variable speeds in both forward and reverse.

PS-150B Speeds (forward and reverse):

Low	0 - 11 kmph (6.8 mph)
High	0 - 25,6 kmph (15.9 mph)

PS-200B Speeds (forward and reverse):

Low	0 - 11 kmph (6.8 mph)
High	0 - 19,3 kmph (12 mph)

Brakes

Service brake features

Closed-loop hydrostatic drive system provides dynamic braking during machine operation.

Secondary and parking brake features

Spring-applied/hydraulically released disc brakes are actuated by a switch on the control console. They are also activated automatically if pressure is lost in the brake circuit or when the engine is shut off.

Brake systems meet SAE standard J1472 Jun87 and EN500.

Wheels and Tires

PS-150B

6-Ply: 8.50/90 x 15

5 wheels front, 4 wheels rear

PS-150B 11-wheel option

6-Ply: 8.50/90 x 15

5 wheels front, 6 wheels rear

PS-200B

12-Ply: 7.50 x 15

5 wheels front, 4 wheels rear

PS-200B 11-wheel option

12-Ply: 7.50 x 15

5 wheels front, 6 wheels rear

Frame

Frame is fabricated from welded heavy-gauge steel plates. Integral baffle plates prevent water surge when water ballasted. Ballast compartments have cover plates. Frame design provides a calculated balance of wheel to weight ratio for even distribution of ballast weight.

The clean, unitized design provides a flat deck for excellent operator mobility. The frame is designed for easy access to all major components.

Instrumentation & Gauges

The start switch, alternator indicator light, coolant temperature gauge, engine oil pressure gauge, hydraulic oil temperature gauge and hour meter are located on the instrument panel in front of the operator. Machine instrumentation and most controls are located at the operator's right on the control console. This includes the propel lever, speed selector switch, water system control, horn and secondary/parking brake switch.

Steering

Steering is hydraulic power-assist for responsive, low-effort machine handling.

Minimum turning radius

Inside 4648 mm (15' 3")

Outside 6453 mm (21' 2")

Steering Angle (each direction) 37.5°

Hydraulic system – one 75 mm (3") bore, double-acting cylinder powered by a gear pump.

Output @ 2,200 rpm with 689 kPa (100 psi) 26,4 liter/min (7 gpm)

Water System

The gravity water system is efficient and reliable. System includes galvanized distribution bars over the front and rear tires and retractable nylon tire scrapers for each tire.

A polyethylene water tank is located at the front of the machine on the operation platform. A water level gauge is on the tank within easy sight of the operator.

Coco mats and pressurized water system are optional.

Operator and Machine Protective Equipment

The Roll Over Protective Structure (ROPS) is a two-post structure that bolts directly onto flanges welded to the machine frame. Meets SAE recommended practice J1040 May94. ROPS is standard equipment. Caterpillar strongly recommends use of the ROPS on the PS-150B and PS-200B.

Backup Alarm emits a 97 dB(A) alarm whenever the machine is in reverse. The backup alarm is standard equipment.

Retractable Seat Belt is 76 mm (3") wide. It is standard equipment.

Service Refill Capacities

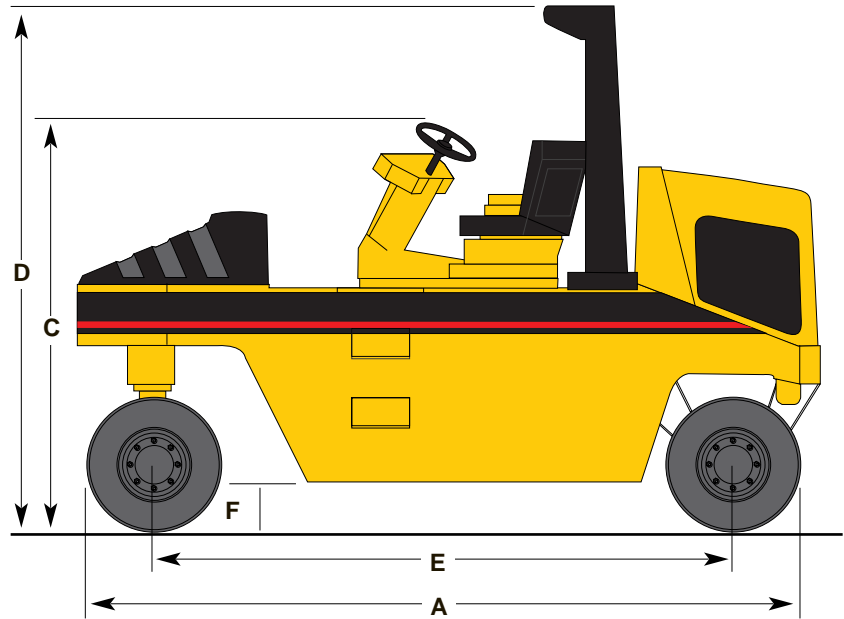
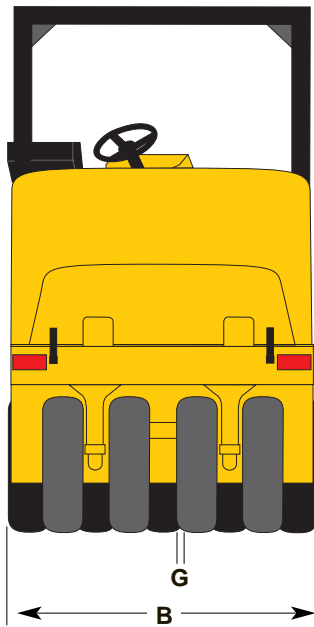
	Liters	U.S. Gallons
Fuel tank*	137	36.2
Cooling system	16,1	4.2
Engine oil (w/filter)	7,3	1.9
Brake	0,3	0.08
Axle	2,7	0.71
Hydraulic tank	54,9	14.5
Water (Spray) tank	394	104

*Note: Actual fuel tank capacity is 162 L (42.8 gal).

Dimensions

	PS-150		PS-200B		11-wheel option	
A Length	4299 mm	14' 1"	4299 mm	14' 1"	4299 mm	14' 1"
B Compaction width	1743 mm	69"	1743 mm	69"	2134 mm	84"
C Height at steering wheel	2326 mm	7' 6"	2326 mm	7' 6"	2326 mm	7' 6"
D Height at ROPS	3000 mm	9' 10"	3000 mm	9' 10"	3000 mm	9' 10"
E Wheel base	3342 mm	11'	3342 mm	11'	3342 mm	11'
F Ground clearance	267 mm	10.5"	267 mm	10.5"	267 mm	10.5"
G Tire overlap	13 mm	0.5"	13 mm	0.5"	13 mm	0.5"
Outside turning radius	6453 mm	21' 2"	6453 mm	21' 2"	6453 mm	21' 2"
Inside turning radius	4648 mm	15' 3"	4648 mm	15' 3"	4444 mm	14' 7"
Oscillation angle	±4.4 degrees		±4.4 degrees		±4.4 degrees*	

* Oscillation angle for outside rear wheels is 0 degrees up and 4.4 degrees down.



Optional Equipment

Note: Standard and optional equipment may vary. Consult your Caterpillar dealer for specifics.

Speedometer is calibrated in both kilometers per hour and miles per hour on an analog dial.

Spark Arrestor Muffler helps to eliminate sparks that may be emitted by exhaust system. Available for PS-150B only.

Pressure Water Spray System provides constant water spray regardless of tank level or when working on grades.

Coco Mats retain water as it is distributed by the water spray system. The coco mats then allow water to seep out of them. This provides a continuous distribution of water.

12-Ply or 14-Ply Tires with higher tire pressures and increased ground contact pressure provide greater compactive effort.

Radial Tires (7.50 x 15) ensure a flat contact area, regardless of tire load or inflation pressure.

Heat Retention Shields trap heat and help prevent asphalt from adhering to the tire surfaces.

Air-on-the-Run allows tire pressure to be regulated from the operator's station.

11 Wheels add two wheels to the rear axle. This option only is intended for chip and seal applications/use. Cannot be used in conjunction with the PS-200B ballast option.

Working Light Package consists of front and rear floodlights.

Roading Light Package consists of front and rear floodlights, taillights and parking lights with flashers.

Rotating Operator's Station with Maximum Visibility Position (MVP) control console pivots to three locked positions – left, center and right.

Suspension Seat is mechanical type with vertical adjustment and armrests.

Sun Canopy is a sheet-metal structure that blocks the operator's station from the sun. Structure is bolted to the ROPS.

Value Analysis

Versatile Operation

- Machines can be equipped with an 11-wheel option for chip and seal applications.
- PS-150B and PS-200B are effective on hot and cold mix asphalt, surface seal coating, granular and non-cohesive soils.

Productivity

- High ground contact pressures.
- Responsive diesel power.
- High travel speeds.
- Tires overlap for full-width compaction.
- Wheel oscillation provides uniform compaction.
- Easy ballasting and unloading.
- Balanced axle to weight ratio.

Easy Control

- Single lever control of forward/reverse speeds.
- Low-effort steering.
- Excellent visibility.

Simplified Maintenance

- Simple, durable design.
- Rugged construction for long service life.
- Easy access to all major components.
- Daily maintenance from ground level.

Total Customer Support System

Parts availability—most parts on dealer's shelf when you need them. Computer-controlled, emergency search system backup.

Parts stock lists—dealer helps you plan on-site parts stock to minimize your parts investment while maximizing machine availability.

Service capability—dealer's shop or fast field service by trained technicians using latest tools and technology.

Machine management services—effective preventive maintenance programs, cost-effective repair options, customer meetings, operator and mechanic training.

Literature support—easy-to-use parts books, operation and maintenance manuals, and service manuals help you get maximum value from equipment.

Flexible financing—your dealer can arrange attractive financing on the entire line of Caterpillar equipment. Terms structured to meet cash flow requirements. See how easy it is to own, lease or rent Cat equipment.

PS-150B Productivity and Performance Recommendations

Features

- 1743 mm (69") compaction width
- 25,6 kmph (15.9 mph) travel speed
- 11-wheel option increases compaction width to 2134 mm (84")
- Actual Ground Contact Pressures (GCP) up to 945 kPa (137 psi) – see attached charts
- Air-on-the-run tire inflation system option

Applications

- Provides full coverage with two side-by-side passes on mat widths up to 3,4 m (11').
- Quick maneuverability around the job site.
- Good match for chip and seal application.
- Increases rolling width providing high-production capability on chip and seal.
- High compaction on thick lifts or on harsh mixes.
- Enhances versatility of machine by allowing the tire air pressure to be easily changed depending on job conditions.

PS-200B Productivity and Performance Recommendations

Features

- 1743 mm (69") compaction width
- 78 kW (105 hp) turbocharged engine
- 14-Ply Tire option and maximum ballast
- 11-wheel option increases compaction width to 2134 mm (84")
- Actual Ground Contact Pressures (GCP) up to 945 kPa (137 psi) – see attached charts
- Air-on-the-run tire inflation system option

Applications

- Provides full coverage with two side-by-side passes on mat widths up to 3,4 m (11').
- Maximizes production on steep grades and in high-altitude regions.
- Increases versatility for thicker lift soil compaction applications, when greater power is required.
- Primarily for soil compaction applications.
- Increases versatility of machine.
- Good match for chip and seal application.
- Increases rolling width providing high-production capability on chip and seal.
- High compaction on thick lifts or on harsh mixes.
- Enhances versatility of machine by allowing the tire air pressure to be easily changed depending on job conditions.

Weights (approximate)

Operating weights include lubricants, coolant, 80 kg (175 lb) operator, full fuel tank, full hydraulic system, half-full water tank and ROPS.

Operating Weights

Model	Condition	Weight of Ballast	Total Weight	Average Weight per Wheel
PS-150B				
	Standard machine empty	none	4885 kg 10,775 lb	545 kg 1,200 lb
	Maximum water ballast	3825 kg 8,430 lb	8710 kg 19,205 lb	970 kg 2,145 lb
	Maximum wet sand ballast	8055 kg 17,760 lb	12 940 kg 28,535 lb	1440 kg 3,180 lb
PS-150B 11-wheel option				
	Standard machine empty	none	4955 kg 10,925 lb	450 kg 993 lb
	Maximum water ballast	3825 kg 8,430 lb	8780 kg 19,355 lb	798 kg 1,760 lb
	Maximum wet sand ballast	8055 kg 17,760 lb	13 010 kg 28,685 lb	1183 kg 2,608 lb
PS-200B				
	Standard machine empty	none	4955 kg 10,925 lb	551 kg 1,214 lb
	Maximum water ballast	3825 kg 8,430 lb	8780 kg 19,355 lb	970 kg 2,145 lb
	Maximum wet sand ballast	8055 kg 17,760 lb	13 010 kg 28,685 lb	1440 kg 3,180 lb
	With 13 185 kg (29,075 lb) Iron & wet sand ballast	13 185 kg 29,075 lb	18 145 kg 40,000 lb	2020 kg 4,440 lb
PS-200B 11-wheel option				
	Standard machine empty	none	5025 kg 11,078 lb	457 kg 1,008 lb
	Maximum water ballast	3825 kg 8,430 lb	8850 kg 19,511 lb	805 kg 1,775 lb
	Maximum wet sand ballast	8055 kg 17,760 lb	13 080 kg 28,836 lb	1189 kg 2,621 lb

Shipping Weights

PS-150B: 4865 kg (10,735 lb)

PS-200B: 4935 kg (10,885 lb)

Average Ground Contact Pressures

Actual Ground Contact Pressures are measured across the width of the tire. The charts include wheel path overlap.

Tire Ply	6-Ply 8.50/90 x 15 Smooth Tires		12-Ply 7.50 x 15 Smooth Tires								14-Ply 7.50 x 15 Smooth Tires									
Tire	kPa	275	344	344	413	482	550	619	688	757	344	413	482	550	619	688	757	826	862	
Pressure	psi	40	50	50	60	70	80	90	100	110	50	60	70	80	90	100	110	120	125	
Wheel Load	Ground Contact Pressures (GCP) and Contact Areas (CA)																			
545 kg	GCP	kPa	162	183	236	266	284	306	317	317	344	243	266	284	295	317	330	344	359	367
		psi	24	27	34	39	41	44	46	46	50	35	39	41	43	46	48	50	52	53
1,200 lb	CA	cm ²	329	291	226	200	187	174	168	168	155	220	200	187	181	168	162	155	149	145
		in ²	51	45	35	31	29	27	26	26	24	34	31	29	28	26	25	24	23	22
970 kg	GCP	kPa	197	214	250	284	314	343	369	378	410	259	295	321	343	369	388	410	421	427
		psi	29	31	36	41	46	50	54	55	60	38	43	47	50	54	56	60	61	62
2,145 lb	CA	cm ²	485	446	381	336	304	278	258	252	233	368	323	297	278	258	245	233	226	223
		in ²	75	69	59	52	47	43	40	39	36	57	50	46	43	40	38	36	35	34
1440 kg	GCP	kPa	235	254	280	304	331	358	390	405	607	273	312	336	364	390	413	437	465	475
		psi	34	37	41	44	48	52	57	59	88	40	45	49	53	57	60	64	68	69
3,180 lb	CA	cm ²	601	556	504	465	426	394	362	349	233	517	452	420	388	362	342	323	304	297
		in ²	93	86	78	72	66	61	56	54	36	80	70	65	60	56	53	50	47	46
2020 kg	GCP	kPa	—	—	312	336	364	387	407	424	463	325	336	359	373	392	407	424	436	439
		psi	—	—	45	49	53	56	59	62	67	47	49	52	54	57	59	62	63	64
4,440 lb	CA	cm ²	—	—	633	588	543	510	485	465	426	607	588	549	530	504	485	465	452	449
		in ²	—	—	98	91	84	79	75	72	66	94	91	85	82	78	75	72	70	69

Ballast Considerations and Ground Contact Pressures

The most common method of changing ground contact pressure is to vary the tire pressure. Another means to change ground contact pressure is to alter the ballast.

The PS-150B and PS-200B can be ballasted with sand, water, steel or a combination of each. These three components provide varying weight capacities, allowing the machines to be tailored to specific requirements.

Ballast Compartments

Ballast compartments are positioned with a calculated balance of wheel to weight ratio. Internal-frame baffles help prevent surges when water ballasted.

Sand and steel ballast can be added through large cover plates on the operation deck, and water can be added through a fill port. When adding water, it

is recommended that only the primary ballast chamber be used because it is sealed.

Sand and steel ballast can be removed through a bolt-on side cover, and water ballast can be emptied through a drain port.

Ballast Capacities

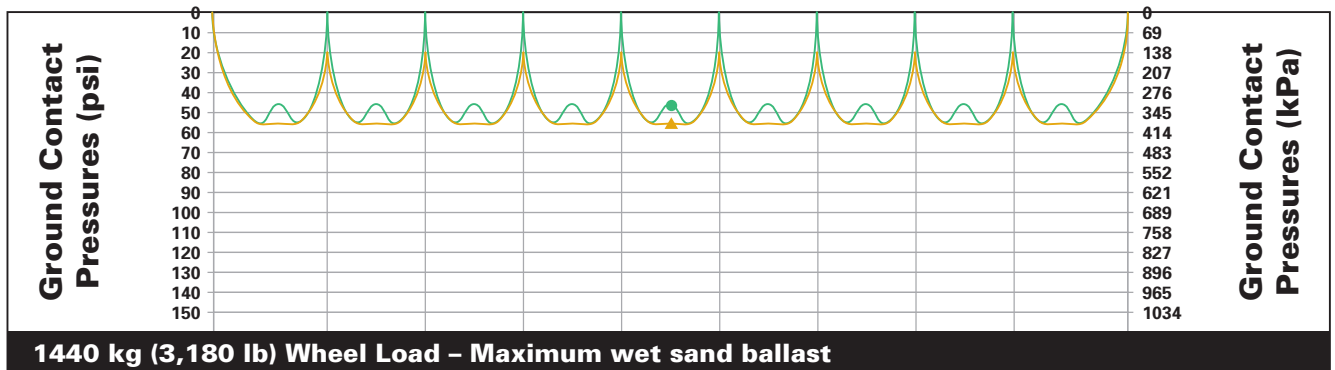
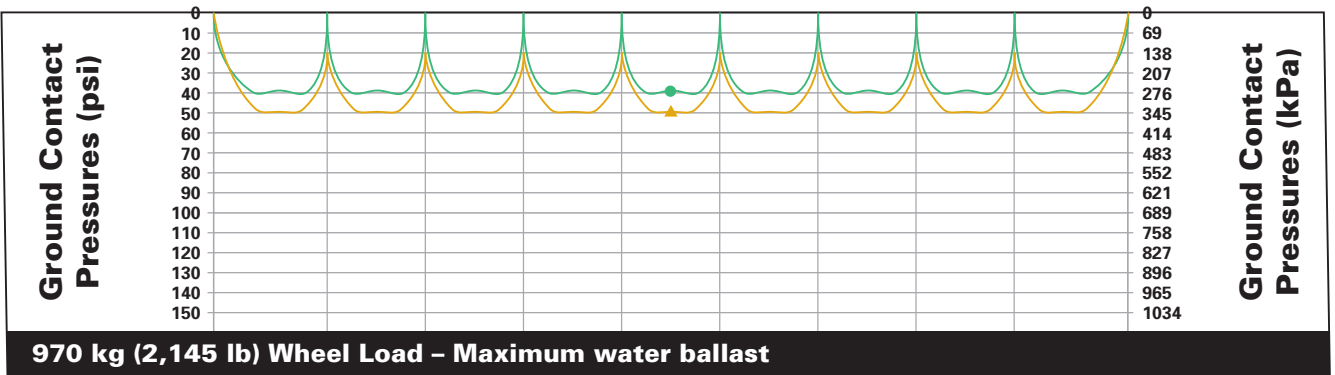
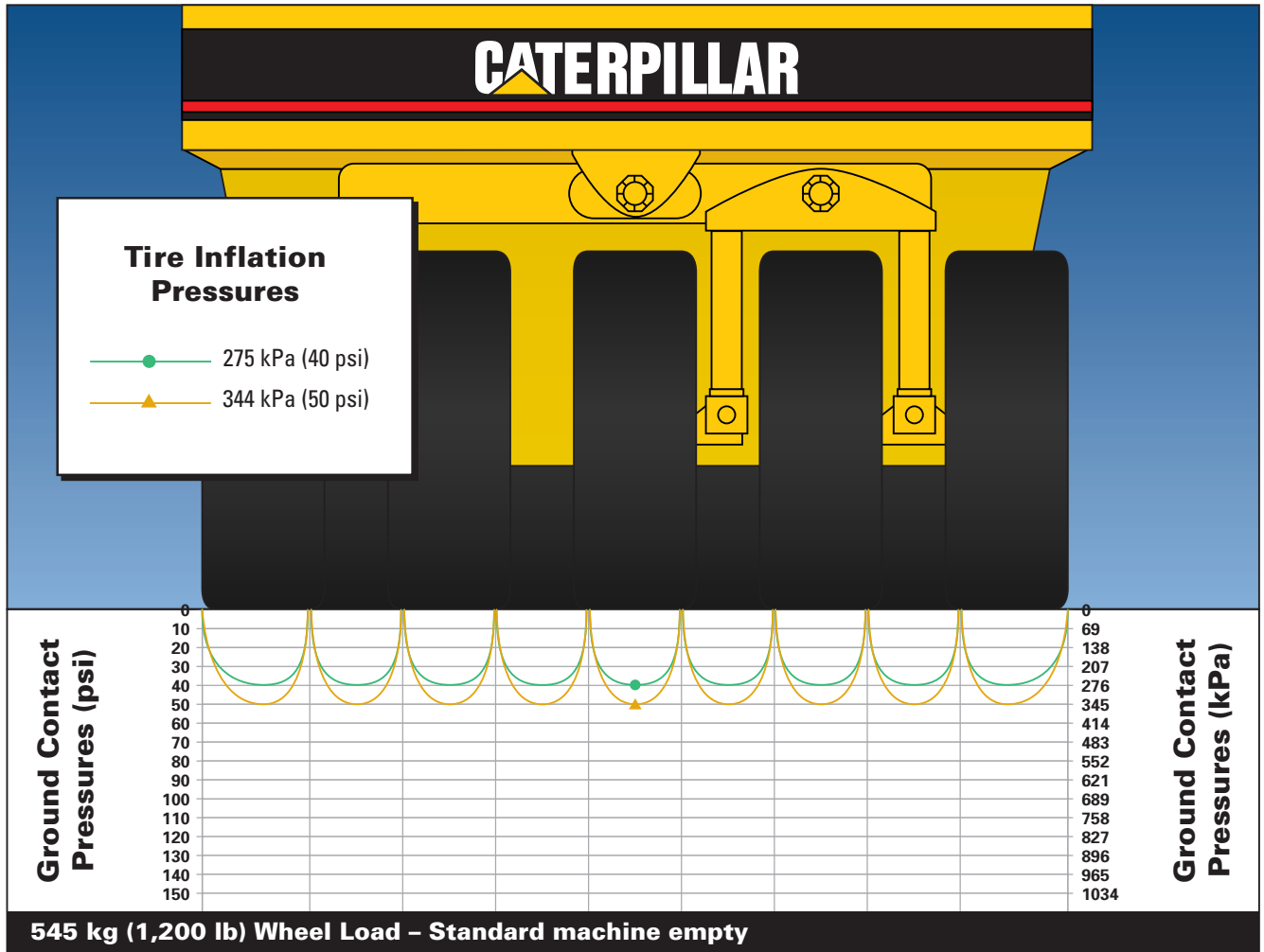
Primary	3,9 m ³ (139 ft ³)
Secondary	0,4 m ³ (11 ft ³)
Total	4,3 m ³ (150 ft ³)

Ballast Materials

0,028 m ³ (1 ft ³) of wet sand weighs 57 kg (125 lb)
0,028 m ³ (1 ft ³) of water weighs 28 kg (62.4 lb)

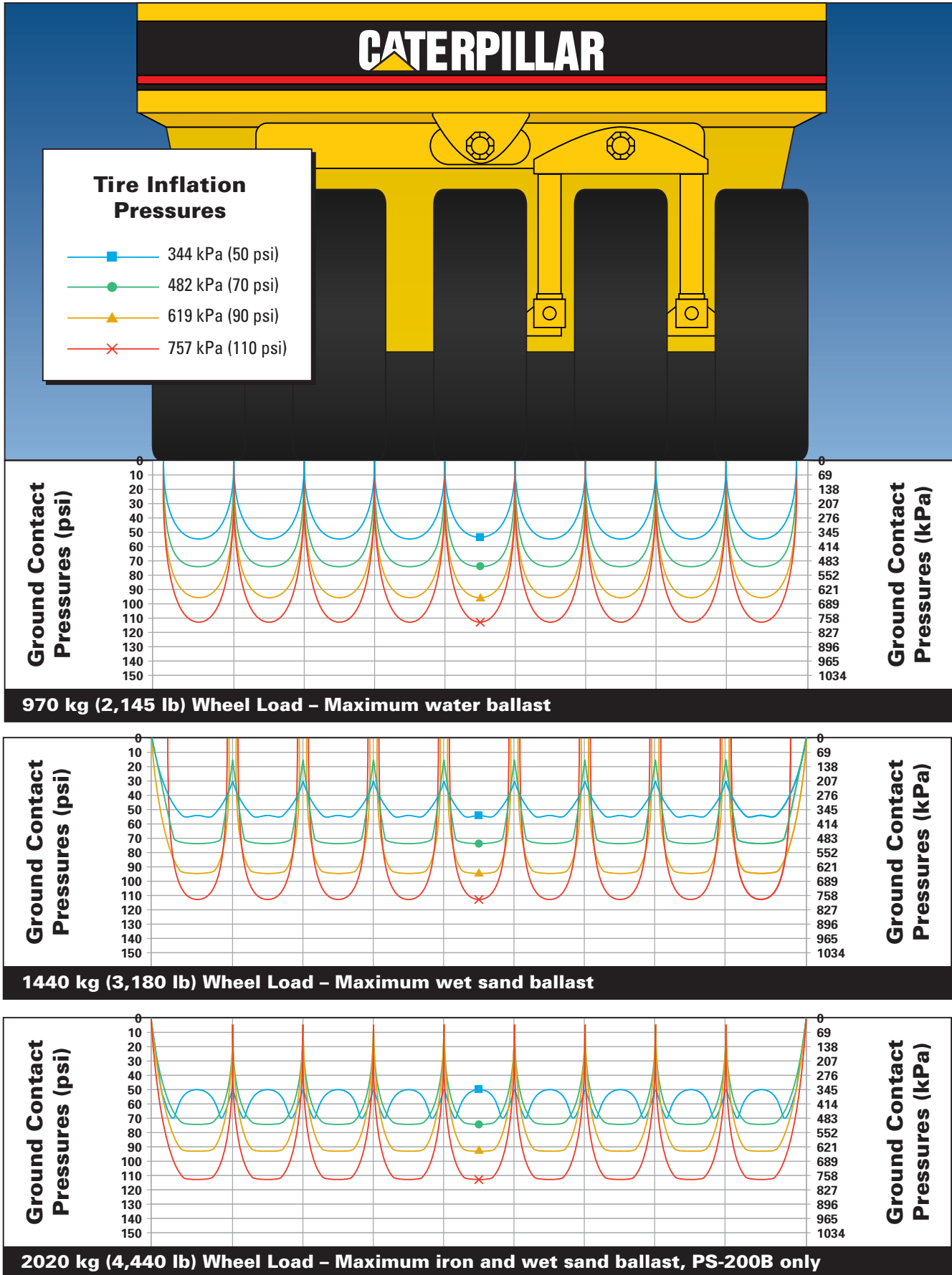
Actual Ground Contact Pressures for 6-Ply: 8.50/90 x 15 Tires

Actual Ground Contact Pressures are measured across the width of the tire. The charts include wheel path overlap.



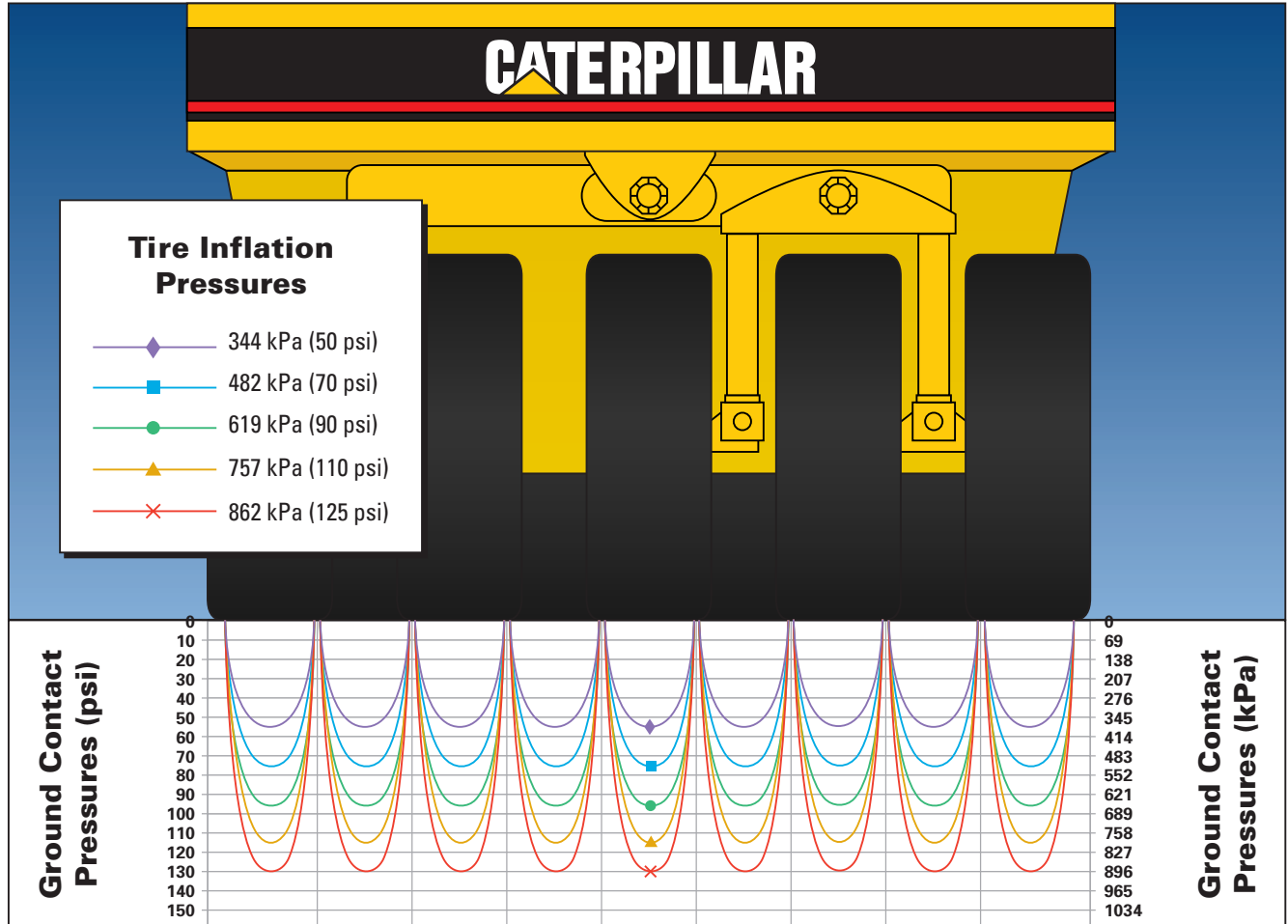
Actual Ground Contact Pressures for 12-Ply: 7.50 x 15 Tires

Actual Ground Contact Pressures are measured across the width of the tire. The charts include wheel path overlap.

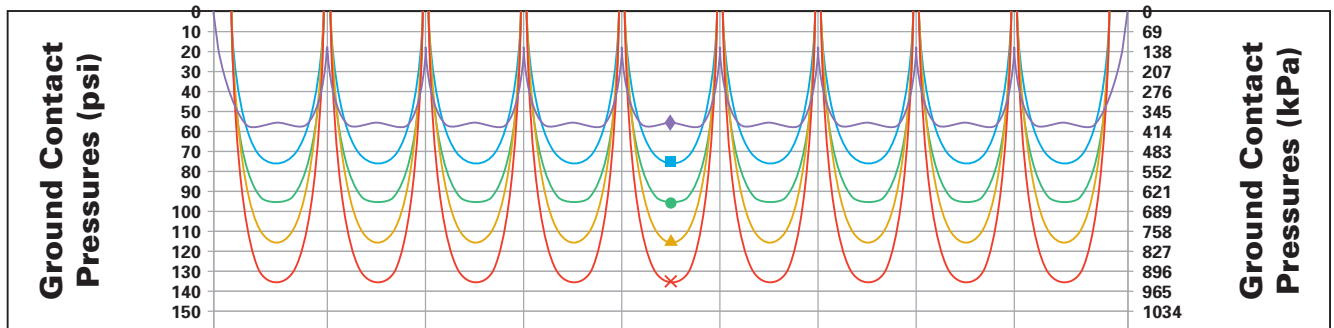


Actual Ground Contact Pressures for 14-Ply: 7.50 x 15 Tires

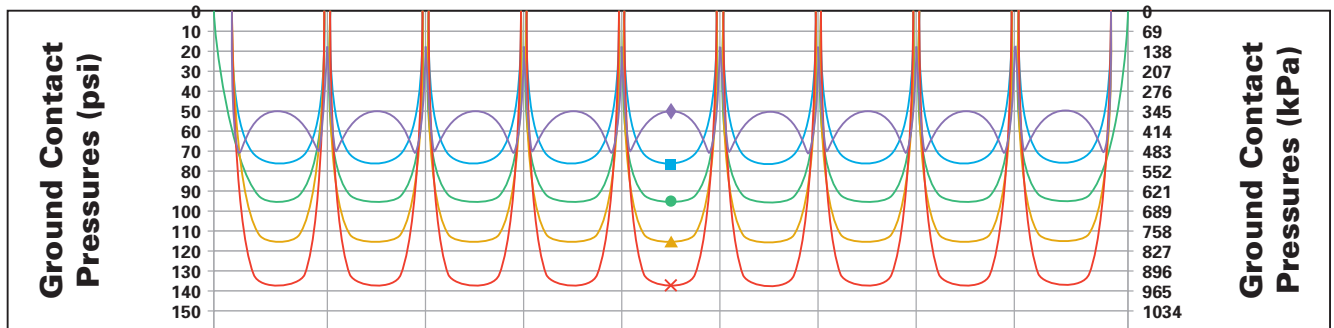
Actual Ground Contact Pressures are measured across the width of the tire. The charts include wheel path overlap.



970 kg (2,145 lb) Wheel Load – Maximum water ballast



1440 kg (3,180 lb) Wheel Load – Maximum wet sand ballast



2020 kg (4,440 lb) Wheel Load – Maximum iron and wet sand ballast, PS-200B only

QEHQ9494-03 (5/01)
Replaces QEHQ9494-02

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Materials and specifications are subject to change without notice.

