

CB-634D

Double Drum
Vibratory Asphalt
Compactor



Optional Equipment Shown

Cat® 3116T Turbo-charged Diesel Engine

Gross power	108 kW	145 hp
Operating weight (with ROPS)	12 800 kg	28,160 lb
Drum width	2130 mm	84 in

CB-634D

The Tools To Meet Density Requirements



The CB-634D has all the tools needed to tailor compactive effort with density requirements, allowing your operator to meet specifications in the fewest passes. The CB-634D is designed to handle the versatility of compacting harsh Superpave mixes one week and tender Marshall mixes the next.

The CB-634D is capable of meeting those fluctuating specifications with its five vibratory amplitudes.

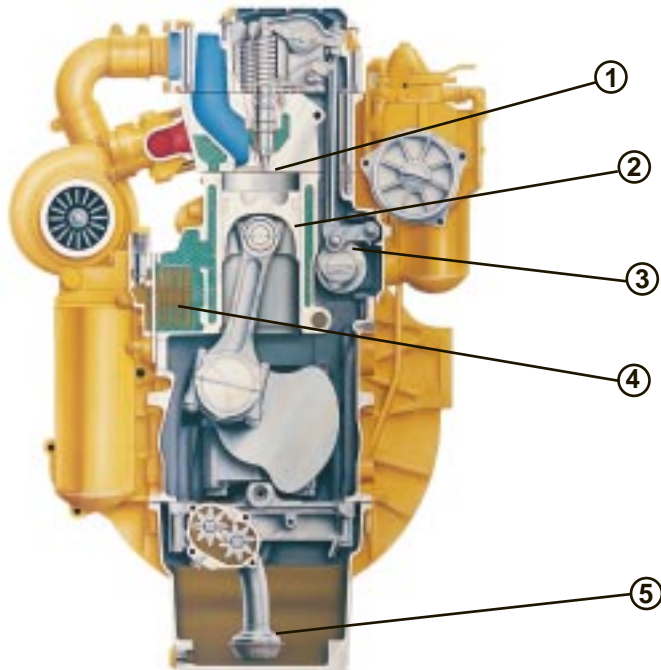
- High amplitude works best on thick lifts or harsh mixes.
- Medium-High is designed for intermediate to thick lifts.
- Medium amplitude is well suited to 50 mm (2") to 100 mm (4") lifts.
- Medium-Low amplitude compacts optimally on intermediate to thin lifts.
- Low amplitude works well on thin lifts and tender materials.

Whatever the application, the CB-634D has an amplitude setting to get the job done.

The CB-634D can be used in all phases of compaction, reducing the need for a variety of rollers. The CB-634D is capable of working as a breakdown and intermediate roller because of its high compactive forces. When operated in the static mode, the CB-634D is a perfect fit as a finish roller because of its high static pounds per linear inch (PLI). Its machined steel drums provide a smooth finish in this application.

Caterpillar® 3116T Diesel Engine

High-tech six cylinder engine provides outstanding performance and reliability.



- 1 Unit Type Direct Injector Fuel System
- 2 Double Iron Ring Band Piston Design

- 3 Oscillating Roller Cam Follower
- 4 High-capacity Oil Cooler
- 5 Low-mounted Oil Pump

Turbo-charged for top performance and efficiency especially at high altitudes—up to 2500 meters (8,200 feet) without derating.

Unit injector system provides individually metered high-pressure, direct-injection of fuel for maximum efficiency.

High displacement-to-power ratio ensures long life and exceptional reliability.

Low-mounted oil pump for quick start-up lubrication.

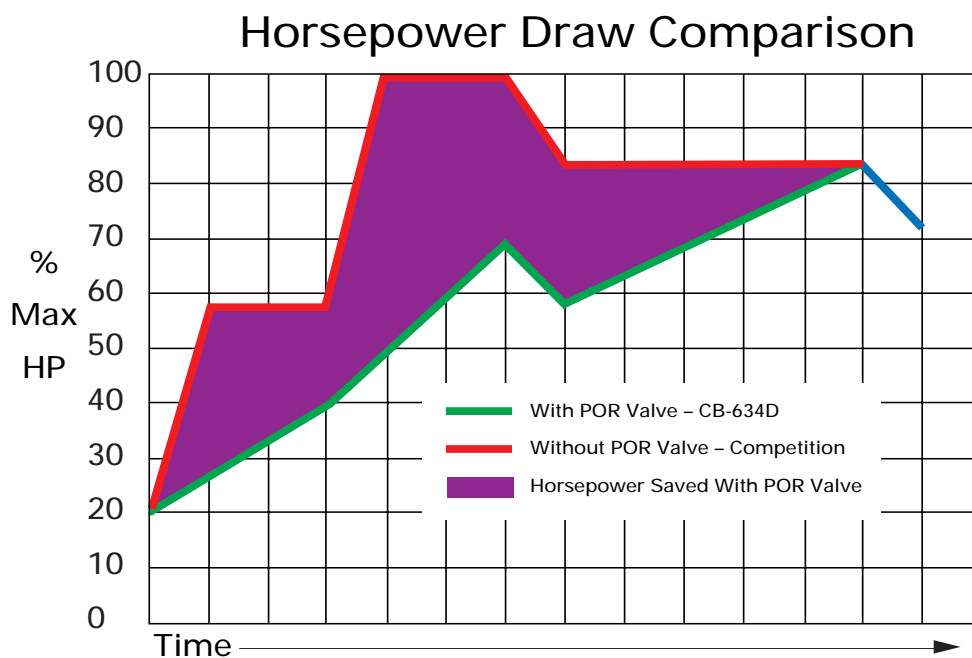
Large oil cooler reduces oil deterioration and varnishing of internal parts.

The 3116T engine produces 108 kW (145 hp) at 2,200 rpm providing fuel efficiency.

This engine is certified to the current model year requirements under the provisions of 40 CFR 89.102.

Pressure Override (POR) Hydraulic System

Fuel efficiency and plenty of horsepower to meet all performance needs.



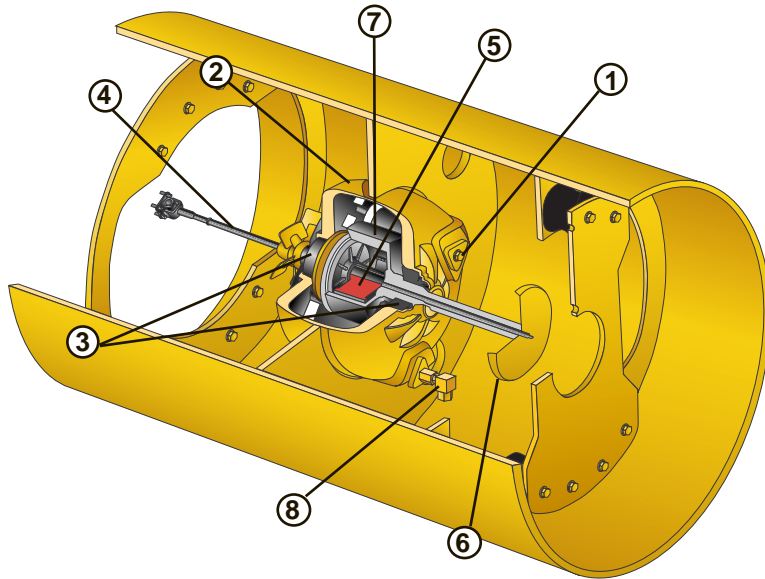
Propel and Vibratory Circuits use horsepower efficiently, but not at the sacrifice of performance.

POR valve balances horsepower demands.

Provides plenty of power and a responsive vibratory system when starting and stopping the machine on each pass.

Vibratory System

Precision system delivers optimum compactive force.



- | | |
|-----------------------------------|-----------------------------|
| 1 Oil Level Sight Gauge | 5 5-Position Counterweight |
| 2 Eccentric Weight Housing | 6 Amplitude Selection Wheel |
| 3 Eccentric Weight Shaft Bearings | 7 Fixed Eccentric Weight |
| 4 Weight Drive Shaft to Motor | 8 Oil Drain |

Five amplitude selections for working more efficiently in a wider range of applications.

Positive weight locking system ensures position of variable amplitude setting.

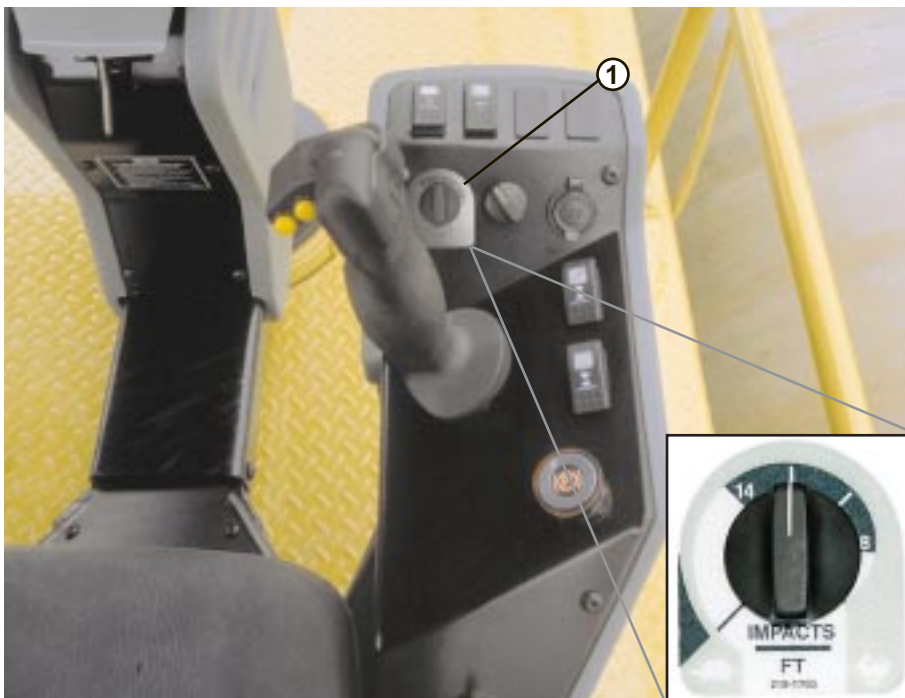
Automatic matching of eccentric weight and drum rotation direction improves mat quality.

Automatic vibration start-up and shut-off helps produce smooth, flawless mats. Manual control possible for joint compaction.

Moving parts are separated from lubricating oil helping to keep oil clean and ensuring long bearing life.

Automatic Speed Control

Allows consistent speeds to be maintained throughout a job.



Setting the dial limits the top speed of the machine and maintains the speed relative to the vibration impact spacing.

Operator easily can match travel speed with vibrations per minute, helping to meet density requirements in the fewest passes.

Cruise control-like system eases operator control of propel speed in forward and reverse.

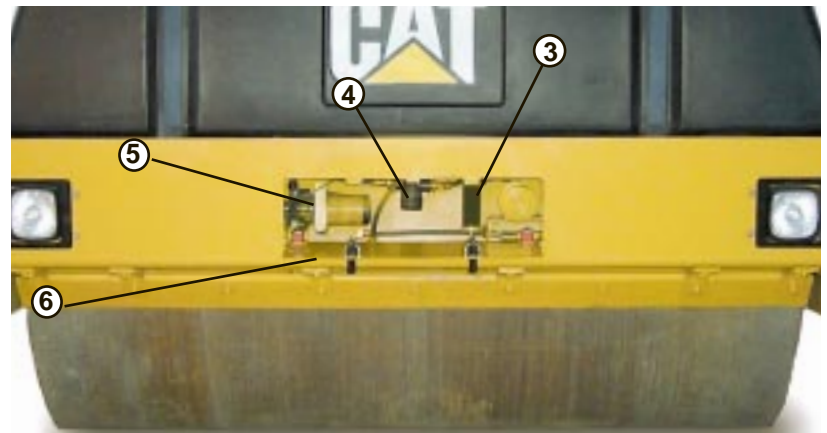
1 Automatic Speed Control Dial

Water Spray System

Corrosion-proof system and long-life components for reliable operation.



- 1 Water-level Gauge
- 2 Spray Nozzle with Filter
- 3 Water Tank Drain
- 4 Filter
- 5 Water Pump
- 6 Hinged Access Cover
- 7 Water Distribution Mat



Two pump system but only one pump operates at a time, doubling pump life in terms of machine hours.

Auto control setting selects water from the front tank while traveling forward and water from the rear tank while traveling rearward. The system maintains even tank usage for equal weight distribution.

Water pumps and in-line filters are conveniently located in bumpers for easy service.

Long-life water pumps are self priming and pressure regulating to provide optimum spray and flow.

Complete back-up system controlled from the operator's station.

Constant or intermittent spray capabilities for longer operation between fill-ups.

Triple water filtration reduces machine downtime caused by system clogs.

Two high-capacity polyethylene tanks provide extended operation between fill-ups.

Large water tank drains allow complete system to be drained in less than five minutes.

Water distribution mats and cocoa mats are available as options

Hinged access door to water pump, filter and drain port.

Maximum Visibility Position Control Console

Excellent visibility means more precise control and greater production.



Operator comfort is maximized with large operator's station and convenient location of controls.

Control console rotates to five lockable operating positions, maximizing operator visibility.

Gauges and controls move with console keeping them in same relative position to the operator.

Unobstructed visibility of drum surfaces and edges.

Isolated operator's station with four rubber mounts help eliminate vibration before it reaches the operator, controls and instrumentation.

Seat adjusts fore and aft to accommodate different operators.

Handrails move to allow maximum visibility in the rotated seat position.

Tilt steering column customizes the operating area.

Adjustable armrests for varying operator heights.

Adjustable tilt seat back to accommodate different operators.

Ergonomic propel handle increases operator comfort and control.

Storage area holds lunch boxes or other gear.

HID lights (Optional) enhance night time visibility.

Visibility

Excellent operator visibility increases production.



Visibility to objects 1 m (3.3') high and 1 m (3.3') in front of the machine or behind the machine.

Provides excellent sight lines to ground personnel working near machine.

Tapered edges provide excellent visibility to the front, rear and sides of machine.

HID lights (Optional) enhance night time visibility.

60/40 Articulation

Easier, more positive maneuvering near curbs and objects.



Off-center articulation with 60% of the machine length behind the pivot and 40% forward.

Operator can concentrate on only one drum when entering or leaving a curve.

Helps prevent damage to existing structures when moving away from curbs and other objects.

Helps build operator's confidence and improves productivity.

Serviceability

Reduced maintenance requirements mean increased work time.



Large, swing-open service doors on both sides of the machine provide easy access to routine maintenance points.

Pivot-up operator's platform provides access to the top of the engine using a new hand pump lift cylinder.

Ground level servicing simplifies maintenance.

Oil bath lubrication of eccentric weight bearings reduces routine maintenance.

Water spray nozzles and filters are easily removed by hand without the need of special tools.

Remote mounted fittings simplify draining hydraulic and fuel tanks.

Quick-connect hydraulic test ports simplify system diagnosis.

Remote mounted quick start post for easy jump starts.

Swing open access doors for water pumps, filters and drains on both bumpers.

Optional Equipment

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

Coco Mats retain water as it is distributed by the water spray system. The coco mats allow water to seep out of them. This provides a continuous distribution of water and keeps the water spray system from having to work continuously.

Rotating Amber Beacon Light alerts ground personal to heavy equipment. The option can be installed on either ROPS or non-ROPS machines.

Water Spray System Freeze Protection Kit includes an in-line antifreeze bottle that allows the operator to pump antifreeze into the system. Antifreeze is circulated through the pumps, lines, filters and nozzles for overnight protection.

Water Distribution Mats help keep drum surfaces wet in extremely dry, hot or windy conditions. The mats are constructed of flexible rubber and are designed to hold and disperse water on the drum surfaces. They also keep the drums clean by providing a secondary cleaning action to remove minor asphalt particles not removed by the drum scrapers. The mats can be retracted from the drums when not in use.

High Intensity Discharge Lights include four, 35-watt high intensity discharge xenon gas lights. Two face forward, and two face rearward. The lights are fully functional at both high and low idle. The option can be installed on either ROPS or non-ROPS machines.

Drum Covers shield internal drum components from contaminants. The shields cap both ends of the drums to form a physical barrier.

Value Analysis

Application Flexibility

- Five amplitude vibratory system increases application flexibility.
- Independent selection of drum vibration.
- Excellent visibility to drum edges and drum surfaces.

Productive Operation

- Wide drum coverage.
- Excellent maneuverability.
- Close side clearance and high curb clearance reduce hand work.
- High capacity water system.

Operator Aids

- Maximum Visibility Position (MVP) control console offers excellent visibility from several different operating positions.
- Choice of automatic or manual vibration control.
- 60/40 articulation simplifies maneuvering.
- Priority-demand hydraulic power-assist steering.
- Automatic Speed Control (ASC) and impact spacing gauge.

Reliability

- Rugged, dependable Caterpillar diesel engine.
- Propel and vibratory motors are isolated from vibration for longer life.
- Ultra-fine filtration of hydraulic systems.
- Corrosion-proof drum spray system with triple-water filtration.
- Dual water pumps with back-up capability controlled from operator's station.

Serviceability

- The operator's station pivots-up and swing open doors also provide ample access to the diesel engine.
- Hydraulic components are located for easy access and service.
- Grouped hydraulic test ports simplify monitoring pressures.
- Spray system nozzles and filters are easily removed and cleaned without the use of tools.

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.

Engine

Four-stroke cycle, six cylinder Caterpillar 3116T turbo-charged diesel engine. This engine is certified to the current model year requirements under the provisions of 40 CFR 89.102.

Ratings at 2,200 RPM	kW	hp
Gross power	108	145

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
EEC 80/1269	103	138
ISO 9249	103	138
SAEJ1349 JUN95	103	138

Dimensions

Bore	105 mm	4.12"
Stroke	127 mm	5.0"
Displacement	6.6 L	403 in ³

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

12-volt electrical starting system with 105 amp alternator and two 12-volt maintenance-free Cat batteries.

Engine throttle is two-position electric control.

Service Refill Capacities

	Liters	U.S. Gallons
Fuel Tank	250	66
Cooling system	31	8.2
Engine oil (w/filter)	17	4.5
Vibratory bearing lubrication	11	2.9
Hydraulic tank*	60	15
Water (Spray) tank	2 x 600	2 x 158.5

* Figures describe tank at "full" level. Actual tank capacity is higher. Hydraulic/Charge oil is filtered by a 10 micron charge oil filter.

Transmission

Variable displacement piston pump supplies pressure flow to two-speed hydraulic motors driving the front and rear drums through planetary gearboxes. A single propel lever located on the control console provides smooth hydrostatic control of the machine's infinitely variable speeds in both forward and reverse.

Speeds (forward and reverse):

Low	0-6.4 km/h	0-4 mph
High	0-12.2 km/h	0-7.6 mph

Steering

Priority-demand hydraulic power-assist steering system provides smooth, firm machine handling. The automotive-type steering wheel and column are integral with the operator's swivel platform and allow steering from multiple positions.

Minimum turning radius:

Inside drum edge	4318 mm	14' 2"
Outside drum edge	6655 mm	21' 10"
Steering Angles		32°

Hydraulic system—two 102 mm (4") bore, double-acting cylinders powered by a gear pump.

Output @ 2200 rpm
37.9 L/min 10 g/m

Brakes

Service brake features

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

Secondary and parking brake features

- Spring-applied/hydraulically released on front and rear drums. Actuated by switch on console or automatically when pressure is lost in brake circuit or when engine is shut off.

Brake systems meet SAE J1472 JAN98.

Frame

Fabricated from heavy gauge steel plate and rolled sections. The frame is joined at the articulation pivot. 60% of the machine is rear of the articulation pivot and 40% is in front of the pivot. The two sections are joined by two hardened steel pins that are supported by heavy-duty roller bearings. A vertical pin provides a ±32° steering angle and a horizontal pin provides frame/yoke oscillation of ±10°

Drum Spray System

Entire drum spray system is corrosion-proof and includes two full-frame, low-profile polyethylene water tanks—one above each drum. Water level gauges are located on each tank within easy sight of the operator.

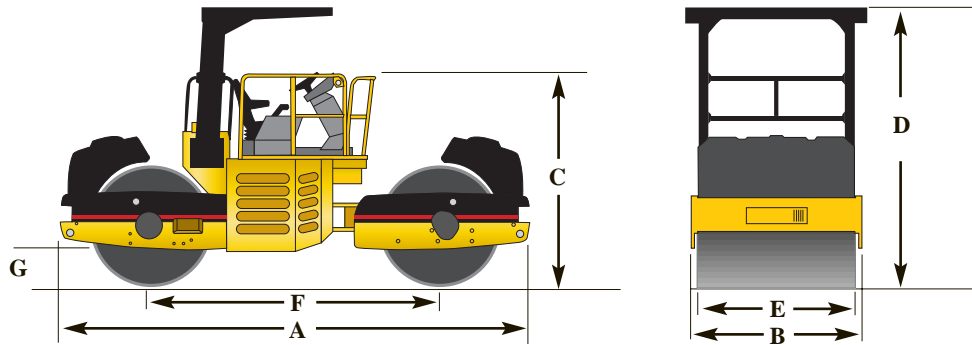
The system consists of two diaphragm pumps driven by electric motors. Only one pump operates at time, supplying pressurized water to both sets of drum spray bars. Pump operation is controlled from operator's station. System provides complete back-up capability controlled from operator's station.

Spray can be set on continuous for maximum wetting action or intermittent for maximum duration between fill-ups. The "Auto" selection pulls water from the front tank while traveling forward and from the rear tank while traveling backward. This keeps the machine's weight evenly distributed throughout the day. Nine spray nozzles per drum are easily removed for replacement or cleaning without the need for tools.

Water capacity:

2 x 600 L 2 x 158.5 gal

Dimensions



Length (A)	4953 mm	16' 3"
Width (B)	2311 mm	7' 7"
Height at steering wheel (C)	2362 mm	7' 9"
Height at top of ROPS (D)	3113 mm	10' 3"
Drum width (E)	2130 mm	84"
Wheelbase (F)	3150 mm	10' 4"

Curb Clearance (vertical) (G)	394 mm	15.15"
Side Clearance	89 mm	3.5"
Minimum turning radius:		
Inside drum edge	4318 mm	14' 2"
Outside drum edge	6655 mm	21' 10"

Vibratory System

Drum width	2130 mm	84"
Drum diameter	1300 mm	51"
Drum shell thickness, nominal	22 mm	0.87"
Weight at front drum	6129 kg	13,515 lb
Weight at rear drum	6642 kg	14,645 lb
Vibration selection	Independent per drum	
Eccentric weight drive	Hydraulic direct, auto reversing	
Bearing lubrication	Oil bath	
Hydraulic filtration	10-micron, absolute	
Weight distribution front/rear	48%	52%
Frequency	44 Hz	2640 vpm

Nominal Amplitude

High Range	1.04 mm	0.041"
Mid-High Range	0.90 mm	0.035"
Mid Range	0.73 mm	0.029"
Mid-Low Range	0.56 mm	0.022"
Low Range	0.36 mm	0.015"

Centrifugal Force Per Drum

High Amplitude	159 kN	35,745 lb/f
Mid-High Range	138 kN	31,024 lb/f
Mid Range	111 kN	24,954 lb/f
Mid-Low Range	85 kN	19,109 lb/f
Low Amplitude	58 kN	13,039 lb/f

Weights (approximate)

Operating weight includes lubricants, coolant, 80 kg/175 lb operator, full fuel tank, full hydraulic system and half-full water tanks.

Operating weight with ROPS	12 800 kg	28,160 lb
Shipping weight with ROPS	11 937 kg	26,260 lb
Average linear load/PLI w/ROPS	30 kg/cm	168 lb/in
Operating weight without ROPS	12 389 kg	27,255 lb
Shipping weight without ROPS	11 525 kg	25,355 lb
Average linear load/PLI w/o/ROPS	29 kg/cm	162 lb/in

Instrumentation

The instrument panel is located in front of the operator and contains the speedometer, vibration mode selector, light switches, hour meter, alternator indicator light, fuel gauge, and warning lights. An audible alarm sounds and warning light illuminates if abnormal conditions occur in engine oil pressure, engine coolant temperature or charge

pressure. Operational lights are also positioned on the instrument panel. They illuminate if the vibratory system, drum spray system, neutral or parking brake are engaged.

Machine controls are also located to the operator's right on the control console. These controls include the start switch,

electric throttle, propel lever, speed selector switch, automatic speed control (ASC) dial, drum spray switch, vibration switch, horn and secondary/parking brake switch. Electrical system fuses and relays are located on the side of the control console.

CB-634D Double Drum Vibratory Asphalt Compactor

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(Replaces QEHQ9183-02)

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Materials and specifications are subject to change without notice.

