MONTANA
Department of Transportation

MDT-BRG-015 04/23

Montana Department of Transportation
Bridge Bureau
Approved Construction Equipment List

Make:	*Caterpillar*
Model:	*CB54*
Equipment Type:	*Vibratory Roller*
Contractor Modifications:	*None*

Interstate Approval Conditions

Approval Type	*Crossing only*
Speed:	*No Restriction*
Weight:	*25,920 lb or less*
Traffic:	*Approved with Regular Traffic*
Location Restrictions:	*No Restriction*

Non-Interstate Approval Conditions

Approval Type	*Crossing only*
Speed:	*No Restriction*
Weight:	*25,920 lb or less*
Traffic:	*Approved with Regular Traffic*
Location Restrictions:	*No Restriction*

Comments:

Equipment configuration, weights, and specifications on following pages. Approval does not apply to posted bridges. Other construction equipment is not allowed to operate on or cross bridge at the same time this equipment is on the bridge. Equipment must be empty while crossing. Vibratory system must be turned off while on bridge.

CB54
CB54 XW
CB64

Vibratory Asphalt Compactors

CATERPILLAR®



Cat® C4.4 Diesel Engine with ACERT® Technology		
Gross Power	102 kW	137 hp
Net Power (ISO 9249)	97 kW	130 hp
Net Power (SAEJ1349)	96 kW	129 hp

Compaction Widths		
CB54	1.7 m	67 in
CB54 XW	2.0 m	79 in
CB64	2.1 m	84 in

Operating Weights w/ROPS		
CB54	10 804 kg	23,818 lb
CB54 XW	11 898 kg	26,230 lb
CB64	12 980 kg	28,616 lb

Vibratory System Specifications

Five Amplitude Vibratory System

Frequency: 42 Hz (2,520 vpm)

Nominal Amplitude	CB54		CB54 XW		CB64	
High	1.06 mm	0.042 in	0.96 mm	0.034 in	1.03 mm	0.040 in
Medium - high	0.91 mm	0.036 in	0.82 mm	0.032 in	0.95 mm	0.037 in
Medium	0.73 mm	0.029 in	0.66 mm	0.026 in	0.83 mm	0.032 in
Medium - low	0.54 mm	0.021 in	0.49 mm	0.019 in	0.65 mm	0.026 in
Low	0.33 mm	0.013 in	0.30 mm	0.012 in	0.41 mm	0.016 in
Centrifugal Force Per Drum						
High	110 kN	24,729 lb	110 kN	24,729 lb	138.2 kN	31,100 lb
Medium - high	94.7 kN	21,289 lb	94.7 kN	21,289 lb	127.5 kN	28,700 lb
Medium	75.5 kN	16,973 lb	75.5 kN	16,973 lb	111.7 kN	25,100 lb
Medium - low	56.2 kN	12,634 lb	56.2 kN	12,634 lb	87.7 kN	19,700 lb
Low	34.7 kN	7,801 lb	34.7 kN	7,801 lb	55.2 kN	12,400 lb

Versa Vibe™ Vibratory System

Frequency: 42 Hz (2,520 vpm)

Nominal Amplitude	CB54		CB54 XW		CB64	
High	0.86 mm	0.034 in	0.78 mm	0.031 in	0.67 mm	0.026 in
Low	0.73 mm	0.029 in	0.66 mm	0.026 in	0.57 mm	0.022 in
Centrifugal Force Per Drum						
High	88.8 kN	19,980 lb	88.8 kN	19,980 lb	88.8 kN	19,980 lb
Low	75.4 kN	16,965 lb	75.4 kN	16,965 lb	75.4 kN	16,965 lb

Frequency: 63.3 Hz (3,800 vpm)

Nominal Amplitude						
High	0.44 mm	0.017 in	0.40 mm	0.016 in	0.34 mm	0.013 in
Low	0.33 mm	0.013 in	0.30 mm	0.012 in	0.26 mm	0.010 in
Centrifugal Force Per Drum						
High	103.3 kN	23,243 lb	103.3 kN	23,243 lb	103.3 kN	23,243 lb
Low	77.5 kN	17,438 lb	77.5 kN	17,438 lb	77.5 kN	17,438 lb

Dual Amplitude and Dual Frequency Vibratory System

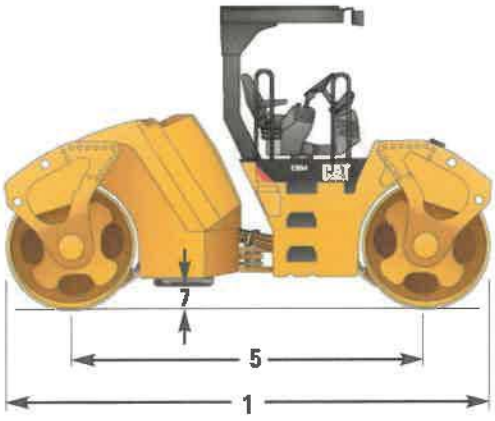
Frequency: 42 Hz (2,520 vpm)

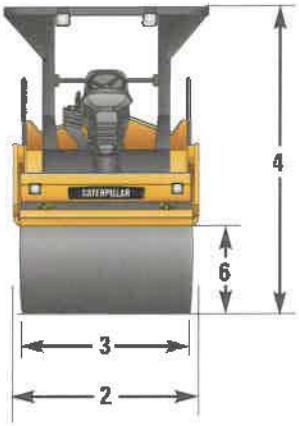
	CB54		CB54 XW	
Nominal Amplitude	0.85 mm	0.033 in	0.77 mm	0.030 in
Centrifugal Force	87.2 kN	19,620 lb	87.2 kN	19,620 lb

Frequency: 63.3 Hz (3,800 vpm)

Nominal Amplitude	0.34 mm	0.013 in	0.27 mm	0.010 in
Centrifugal Force	76.3 kN	17,167 lb	76.3 kN	17,167 lb

Dimensions and Weights





Dimensions	CB54		CB54 XW		CB64	
1 Overall length	—		4934 mm	194 in	—	
2 Overall width	1905 mm	75 in	2205 mm	87 in	2335 mm	92 in
3 Drum width	1700 mm	67 in	2000 mm	79 in	2130 mm	84 in
Drum shell thickness	17 mm	0.67 in	17 mm	0.67 in	20 mm	0.79 in
Drum diameter	—		1300 mm	51 in	—	
4 Overall height at ROPS/FOPS	—		3071 mm	121 in	—	
5 Wheelbase	—		3640 mm	143 in	—	
6 Curb clearance	—		868 mm	34 in	—	
7 Ground clearance	—		217 mm	8.5 in	—	

Operating Weights						
Standard machine w/ROPS	10 804 kg	23,818 lb	11 898 kg	26,230 lb	12 980 kg	28,616 lb
Maximum machine	11 757 kg	25,920 lb	12 842 kg	28,312 lb	13 740 kg	30,291 lb
Static linear load (at drum)	31.8 kg/cm	178 lb/in	29.7 kg/cm	166 lb/in	30.5 kg/cm	170 lb/in

* Maximum machine weight includes all attachments, full fluids and an 80 kg (175 lb) operator.
* Standard operating weights include lubricants, coolant, 80 kg (175 lb) operator, full fuel tank, full hydraulic system and 1/2 full water tank.

Miscellaneous						
Steering (inside drum edge)	4.15 m	13 ft 8 in	4.0 m	13 ft 1 in	3.94 m	12 ft 11 in
Speed: (low)	—		0 - 7.3 km/hr	0 - 4.5 mph	—	
(high)	—		0 - 13 km/hr	0 - 8 mph	—	

Refill Capacities

Fuel Tank	191 L	50 gal
Cooling System	22 L	5.8 gal
Engine Oil w/filter	9 L	2.4 gal
Hydraulic Tank	58.7 L	15.5 gal
Vibratory Bearing	20 L	5.3 gal
Water Spray Tank	1100 L	291 gal

Optional Equipment

- Bio-Degradable Oil
- Drum Covers
- Freeze Protection Kit (Water Spray)
- Lighting Group (HID)
- Lighting Group (Drum Edge)
- Mirrors (CB54)
- Offset Hitch
- Product Link
- Vibratory System (Dual Amplitude, Dual Frequency - CB54, CB54 XW)
- Vibratory System (Versa Vibe™)
- Warning Beacon
- Water Distribution Mats (Cocoa)
- Water Distribution Mats (Rubber)