

# WB146-5/WB146PS-5 BACKHOE LOADER

## SPECIFICATIONS



### ENGINE

Model .....Komatsu S4D102LE-2  
 Type .....Vertical, 4-cycle water-cooled diesel engine  
 Aspiration .....Turbocharged  
 Combustion .....Direct injection  
 Compression ratio .....18:1  
 Number of cylinders .....4  
 Piston displacement .....4.5 ltr **275 in<sup>3</sup>**  
 Horsepower rating - **WB146-5/WB146PS-5**  
 Gross horsepower @ 2200 rpm .....69 kW **92 HP**  
 Net horsepower @ 2200 rpm (SAE J 1349) .....66 kW **88 HP**  
 Max torque @ 1500 rpm .....407 Nm **300 ft lb**  
 Air cleaner .....Dry filter with safety element  
 Lubrication system:  
 Method .....Gear pump, force-lubrication  
 Filter .....Full-flow type  
 Air cleaner .....Dry type with double elements and dust evacuator, condition indicator  
 Cooling system .....Radiator  
 Starting system .....Electric motor with air pre-heating system for cold climate



### ELECTRICAL SYSTEM

Electric circuit with protected connections in all exposed areas  
 Voltage .....12 V  
 Battery .....100 Ah (860 CCA)  
 Alternator .....95 A  
 Electric starting .....3.2 kw



### HYDRAULIC SYSTEM

The HydraMind hydraulic system affords the operator very precise backhoe movements. This system is energy efficient and incorporates two different working modes: economy and constant power. The advanced hydraulic system includes the "speed up" function to increase the working speed of the front loader.

System .....HydraMind  
 Type .....Closed-center Load Sensing System (CLSS) with economy/power selector switch (power mode is the default)  
 Pump type .....Variable displacement axial piston  
 Pump control system .....Load sensing  
 Main valve ..... "Load Independent Flow Divider" LIFD modular type  
 Max delivery .....165 ltr/min **43.6 gal/min**  
 Working pressure .....245 bar **3,553 psi**



### SERVICE REFILL CAPACITIES

Engine oil .....9 ltr **2.4 U.S. gal**  
 Cooling system .....14 ltr **3.7 U.S. gal**  
 Diesel tank .....150 ltr **39.6 U.S. gal**  
 Hydraulic oil tank .....41 ltr **10.8 U.S. gal**  
 Hydraulic oil system capacity .....97 ltr **25.6 U.S. gal**  
 Front axle oil .....7.5 ltr **2.0 U.S. gal**  
 Rear axle oil .....14.5 ltr **3.8 U.S. gal**  
 Gearbox oil, Power Shuttle .....20.2 ltr **5.3 U.S. gal**  
 Gearbox oil, Power Shift .....28.0 ltr **7.4 U.S. gal**



### STEERING

The front steering wheels are controlled by a hydrostatic load sensing steering priority valve system. Minimum turning radius at the outer edge of front tire:

Without brakes .....4000 mm **13'1"**  
 With brakes .....3400 mm **11'2"**



### TRANSMISSION

#### WB146-5

Shifting between 2WD and 4WD is achieved through an electro-hydraulic system. The transmission is operated through a torque converter and a power shift reversing shuttle; the mechanical 4-speed gearbox is synchronized

Travel Speeds	1st		2nd		3rd		4th	
	km/h	mph	km/h	mph	km/h	mph	km/h	mph
Forward	6.3	<b>3.9</b>	11.4	<b>7.1</b>	21.3	<b>13.2</b>	37.8	<b>23.5</b>
Reverse	6.3	<b>3.9</b>	11.4	<b>7.1</b>	21.3	<b>13.2</b>	37.8	<b>23.5</b>

#### WB146PS-5

Electronically-controlled, four-wheel drive, full powershift transmission. Twist Grip or EGM™ (Electronic Gear Management) gear controls for changing driving direction and gears at full power without disengaging the drive. **Twist Grip Controls** in manual mode.

Travel Speeds	1st		2nd		3rd		4th	
	km/h	mph	km/h	mph	km/h	mph	km/h	mph
Forward	6.5	<b>4.0</b>	12.0	<b>7.5</b>	23.0	<b>14.3</b>	40.0	<b>24.9</b>
Reverse	6.5	<b>4.0</b>	12.0	<b>7.5</b>	23.0	<b>14.3</b>	—	—



### AXLES

Heavy duty axles with planetary reduction gears in the wheel hubs. Front axle total oscillation angle is 20°. Differential lock in the rear axle controlled by electro-hydraulic system with a switch on loader lever.

Maximum front strength (Dynamic) .....9800 daN **22,031 lb**  
 Maximum front strength (Static) .....23750 daN **53,392 lb**  
 Maximum rear strength (Dynamic) .....7500 daN **16,861 lb**  
 Maximum rear strength (static) .....18750 daN **42,152 lb**



### BRAKES

Oil immersed disc brakes are actuated by individual braking on each rear wheel with two separate pedals. Total integral braking on the 4 wheels is activated by operating the two pedals at the same time.

Disc diameter .....300 mm **11.8"**



### CAB

ROPS and FOPS Level 2 cab designed to offer the best visibility, ergonomics, low noise, and operator comfort. Two doors, full opening rear window with front and rear windshield wipers. Interior features include a fully adjustable seat, fresh filtered air intake ventilation, and easy to reach front and side dash boards.



## LOADER

The design of the front loader allows for better tensile strength distribution and parallel movements when raising and lowering the bucket. Due to the linkage geometry, the number of greasing points has been dramatically reduced.

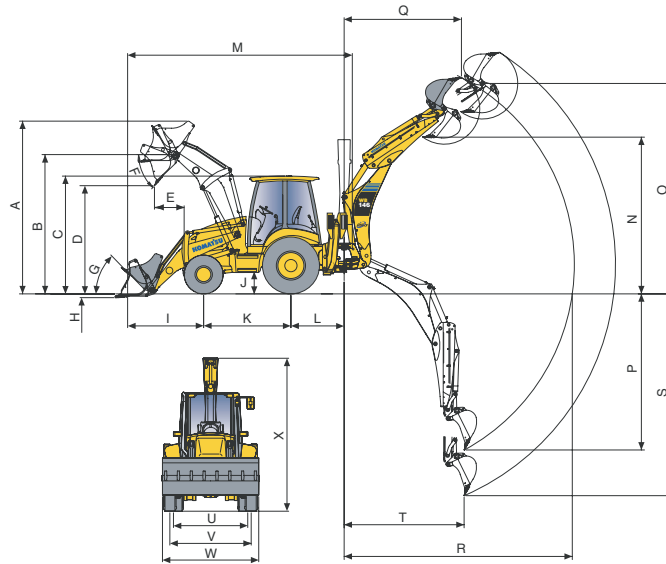
Standard bucket width	.2356 mm <b>7'9"</b>
Standard bucket capacity (SAE)	.0.95 m <sup>3</sup> <b>1.25 yd<sup>3</sup></b>
Standard bucket weight	.454 kg <b>1,000 lb</b>
Lifting capacity at maximum height	.3900 kg <b>8,598 lb</b>
Lifting capacity at ground level	.5000 kg <b>11,020 lb</b>
Breakout force	.6000 kg <b>13,224 lb</b>



## BACKHOE

The boom has a rounded profile and reinforced structure built with cast ends allowing for 180° rotation while maintaining high rotation torque.

Bucket breakout force (ISO 6015)	.6126 kg <b>13,505 lb</b>
Arm breakout force (ISO 6015)	.4005 kg <b>8,830 lb</b>

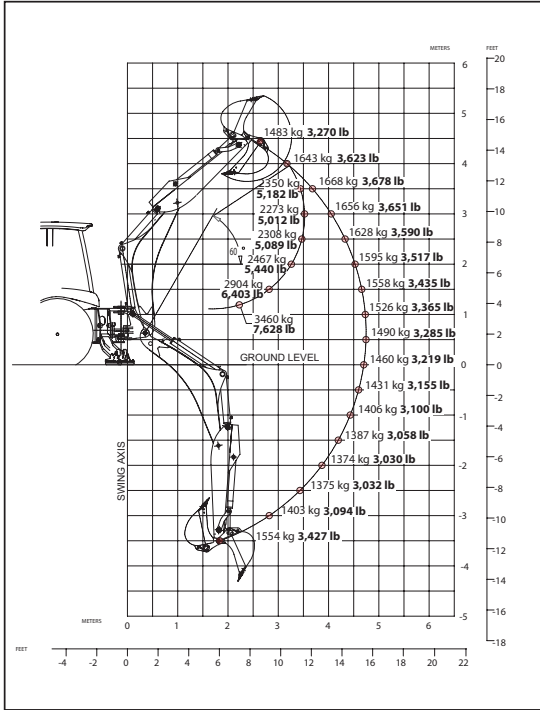


A	Maximum height	4230 mm <b>13'11"</b>
B	Hinge pin height	3367 mm <b>11'1"</b>
C	Overall height, ROPS Cab	2935 mm <b>9'8"</b>
D	Maximum dumping height	2622 mm <b>8'7"</b>
E	Reach at maximum height and 45° dump angle	750 mm <b>2'5"</b>
F	Dumping angle	45°
G	Rollback angle	45°
H	Digging depth	138 mm <b>5.4"</b>
I	Bucket reach (transport)	2023 mm <b>6'8"</b>
J	Ground clearance	430 mm <b>1'5"</b>
K	Wheel base	2175 mm <b>7'2"</b>
L	Backhoe swing center distance	1175 mm <b>3'10"</b>
M	Transportation length	7432 mm <b>24'5"</b>
N	Dumping height (SAE)	3676 mm <b>12'1"</b>
	- with retracted telescopic	3658 mm <b>12'0"</b>
	- with extended telescopic	4369 mm <b>14'4"</b>

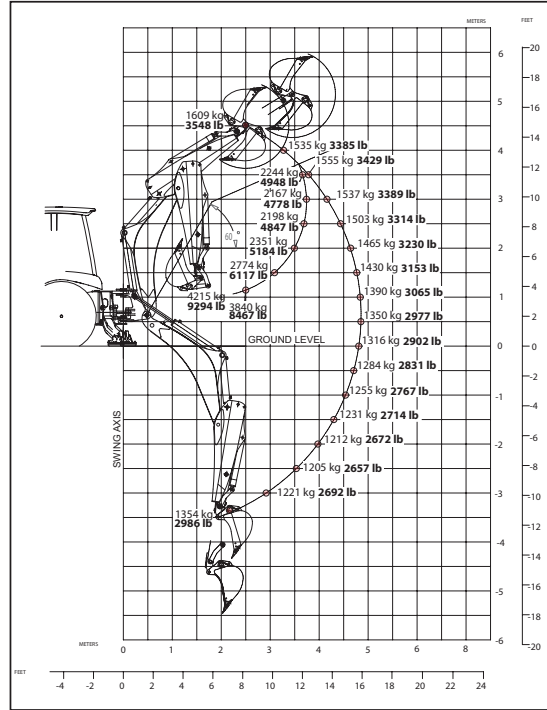
O	Maximum digging height	5319 mm <b>17'5"</b>
	- with extended telescopic	5885 mm <b>19'4"</b>
P	Digging depth (2" level bottom)	4370 mm <b>14'4"</b>
	- with extended telescopic	5479 mm <b>18'0"</b>
Q	Reach at maximum height	2828 mm <b>9'3"</b>
	- with extended telescopic	3877 mm <b>12'9"</b>
R	Maximum reach from swing center	5742 mm <b>18'10"</b>
	- with extended telescopic	6755 mm <b>22'2"</b>
S	Maximum digging depth	4423 mm <b>14'6"</b>
	- with extended telescopic	5533 mm <b>18'2"</b>
T	Digging reach	2320 mm <b>7'7"</b>
U	Rear tread	1800 mm <b>5'11"</b>
V	Front tread	1874 mm <b>6'2"</b>
W	Overall width (with bucket)	2356 mm <b>7'9"</b>
X	Backhoe transportation height	3676 mm <b>12'1"</b>
	- with telescopic arm	3746 mm <b>12'4"</b>



**Standard Arm**



**Retracted Telescopic Arm**



**Extended Telescopic Arm**

