



# Wheel Loader 721B

## ENGINE

Model..... 6T-830  
 Cylinders ..... 6  
 Bore/Stroke..... 4.48" x 5.32"  
 Displacement ..... 504 in<sup>3</sup>  
 Power  
 SAE Gross ..... 157 @ 2100 rpm  
 SAE Net ..... 140 @ 2100 rpm  
 Maximum torque  
 SAE Gross ..... 479 lb·ft @ 1500 rpm  
 SAE Net..... 458 lb·ft @ 1500 rpm

## DRIVELINE

4 forward/3 reverse speed full powershift transmission. Electric twist-grip range selector lever on steering column. Semi-automatic shifting for upshifts and downshifts. Single stage integral torque converter with 3-to-1 stall ratio. Limited slip axles with outboard planetaries and wet disc brakes.

### TRAVEL/WORK SPEEDS MPH

	1st	2nd	3rd	4th
Forward ..	4.5	7.4	14.2	22.2
Reverse ...	4.5	7.4	14.2	—

NOTE: Engine at full throttle, 20.5 x 25 12PR L2

## OPERATOR ENVIRONMENT

Front cab glass areas and sloped rear hood offer maximum visibility to work area. Easy-to-reach servo loader controls require low effort and short throw, fingertip operation. Five loader control options are available to customize operation. An audible alarm, multi-level warning lights and liquid crystal bar graphs alert operator to individual function status. Transmission shifter features lever-controlled forward/reverse, with twist-grip range selection. Instrumentation monitors all individual machine functions. Optional analog gauges include tachometer, voltmeter, engine oil pressure, transmission oil temperature. A padded adjustable steering wheel and suspension seat increase operator

## HYDRAULIC SYSTEM

Steering pump capacity..... 30.9 gpm @ 2200 rpm @ 2500 psi  
 Loader pump capacity ..... 56.4 gpm @ 2200 rpm @ 2525 psi  
 System relief pressure ..... 2525 psi  
 Loader control valve: .... Open-center, series parallel circuit, with positive low pressure regeneration for bucket dump.

## ELECTRICAL SYSTEM

Voltage..... 24 volt, negative ground  
 Alternator ..... 65 amp  
 Batteries (2) ..... 12 volt

## SERVICE CAPACITIES

Cooling system..... 33.9 qt  
 Fuel tank ..... 53.9 gal  
 Engine crankcase ..... 20 qt  
 Crankcase and filter ..... 22 qt  
 Transmission ..... 24 qt  
 Service (w/filter)..... 13 qt  
 Total hydraulic system ..... 40.5 gal  
 Hydraulic reservoir ..... 23.8 gal  
 Axles (each)  
 Differential: front..... 15.9 qt  
 rear ..... 10 qt  
 Hub (each): front..... 5.8 qt  
 rear ..... 5.8 qt  
 Total: front..... 27.5 qt  
 rear ..... 21.7 qt

## LOADER

A 19,866 lb full turn tipping load means that the 721B can easily handle material weighing 5,201 lb per cubic yard.

### CYCLE TIMES

	Seconds
Raise (with rated bucket load) ....	5.9
Dump (with rated bucket load) ....	1.8
Lower (empty, power down).....	5.1
Lower (empty, float down) .....	4.6
Total Cycle Time .....	12.3

## STEERING/ARTICULATION

Stop-to-stop turning ratio is 4.0 turns. Outside turning radius of tires is 17'3" w/ 20.5 x 25 tires. 40° articulation.

## DIMENSIONS

Dimensions are for spec loader with 20.5 x 25 12PR tires and 2.75 yd<sup>3</sup> bucket.

Height to top of cab/canopy ..... 10'8"  
 Wheelbase ..... 114"  
 Overall height ..... 16'3"  
 Hinge pin height ..... 12'1"  
 Ground clearance ..... 16.5"  
 Tread width ..... 78"  
 Width over tires ..... 100"

### TIRE SIZE ADJUSTMENT FOR VERTICAL DIMENSIONS

17.5 x 25 ..... -2.3"

## CYLINDERS

	Diameter	Stroke	Rod
<b>LOADER</b>			
Lift (2) .....	5.0"	32.8"	3.0"
Dump (1) ....	6.5"	21.4"	3.0"
<b>STEERING (ARTICULATION)</b>			
(2).....	3.0"	17.4"	1.75"
<b>CLAM</b> .....	4.0"	10.0"	2.0"

# PERFORMANCE DATA

Spec loader is a fully serviced unit that includes all standard equipment, 20.5 x 25 12PR L2 tires, ROPS cab with heater & A/C, front & rear fenders, optional lighting, 3,400 lb counterweight and 175 lb operator.

BUCKET CONFIGURATION	EXCAVATING 2.50 YD <sup>3</sup>			EXCAVATING 2.75 YD <sup>3</sup>			STOCKPILING 3.25 YD <sup>3</sup>		MULTIPURPOSE 2.50 YD <sup>3</sup>		
	Bucket Only	Bucket w/teeth	Bucket w/bolt on edge	Bucket Only	Bucket w/teeth	Bucket w/bolt on edge	Bucket Only	Bucket w/bolt on edge	Bucket Only	Bucket w/teeth	Bucket w/bolt on edge
SAE Heaped capacity	2.50 yd <sup>3</sup>	2.50 yd <sup>3</sup>	2.60 yd <sup>3</sup>	2.73 yd <sup>3</sup>	2.73 yd <sup>3</sup>	2.79 yd <sup>3</sup>	3.24 yd <sup>3</sup>	3.32 yd <sup>3</sup>	2.49 yd <sup>3</sup>	2.49 yd <sup>3</sup>	2.59 yd <sup>3</sup>
SAE Struck capacity	2.15 yd <sup>3</sup>	2.15 yd <sup>3</sup>	2.21 yd <sup>3</sup>	2.34 yd <sup>3</sup>	2.34 yd <sup>3</sup>	2.38 yd <sup>3</sup>	2.80 yd <sup>3</sup>	2.86 yd <sup>3</sup>	2.06 yd <sup>3</sup>	2.06 yd <sup>3</sup>	2.15 yd <sup>3</sup>
Bucket weight	2,029 lb	2,444 lb	2,522 lb	2,106 lb	2,321 lb	2,599 lb	2,386 lb	2,878 lb	2,950 lb	3,164 lb	3,408 lb
Bucket width	103.1"	103.9"	103.1"	103.1"	103.9"	103.1"	103.1"	103.1"	103"	103.9"	103"
Loader clearance circle, bucket at carry	37'5"	37'11"	37'7"	37'7"	38'1"	37'8"	37'10"	37'11"	37'7"	38'1"	37'8"
SAE Breakout force	32,171 lb	32,133 lb	30,246 lb	30,323 lb	30,265 lb	28,560 lb	26,033 lb	24,609 lb	31,965 lb	32,057 lb	29,978 lb
SAE Tipping load straight	23,612 lb	23,336 lb	22,996 lb	23,404 lb	23,127 lb	22,786 lb	22,690 lb	22,065 lb	22,249 lb	21,971 lb	21,666 lb
SAE Tipping load at 40° turn	19,866 lb	19,591 lb	19,254 lb	19,676 lb	19,399 lb	19,060 lb	19,021 lb	18,399 lb	18,577 lb	18,301 lb	17,998 lb
SAE Operating load	9,933 lb	9,795 lb	9,627 lb	9,838 lb	9,699 lb	9,530 lb	9,510 lb	9,199 lb	9,289 lb	9,150 lb	8,999 lb
SAE Operating weight*	28,669 lb	28,884 lb	29,162 lb	28,747 lb	28,961 lb	29,239 lb	29,026 lb	29,518 lb	29,590 lb	29,805 lb	30,048 lb
Overall length	22'4"	23'1"	22'7"	22'6"	23'3"	22'9"	22'11"	23'2"	22'6"	23'3"	22'9"
Dump clearance @ full height - 45°	113.7"	106.8"	111.5"	112.2"	105.4"	110.1"	108.2"	106"	111.9"	105.2"	109.7"
Bucket reach @ full height - 45°	38.4"	43.7"	38.7"	39.8"	45.2"	40.2"	43.9"	44.2"	36"	41.2"	36.4"
Bucket reach @ 7' - 45°	57.7"	59.8"	57.1"	58.6"	60.5"	57.9"	60.7"	59.9"	54.6"	56.5"	54"
Dig depth below groundline	2.5"	3.6"	3.8"	2.5"	3.6"	3.8"	2.5"	3.8"	5.4"	6.5"	6.7"

\*For selected option changes, adjust operating weight and tipping loads as shown in the table below.

## SELECTED OPTIONS

SELECTED OPTIONS	Weight Adjustments lb	Tipping Load Adjustments 40° Turn-lb
20.5 x 25 12PR L2 (bias, dirt) .....	0	0
20.5 x 25 12PR L3 (bias, rock) .....	+328	+747
20.5 x 25 16PR L2 (bias, dirt) .....	+56	+303
20.5 x R25 XHA TL* (radial, rock).....	+480	+510
20.5 x R25 XTLA TL* (radial, all soil)...	+100	+46
17.5 x 25 12PR L2 (bias, dirt) .....	-768	-245
17.5 x 25 12PR L3 (bias, rock) .....	-560	-126
17.5 x R25 XHA TL* (radial, rock).....	-404	+282
17.5 x R25 XTLA TL* (radial, all soil)....	-628	-41
2,400 lb counterweight.....	-1,000	-1,616
ILO 3,400 lb counterweight		
ROPS canopy .....	-295	-231

NOTE: Ballast is not approved with the 3,400 lb counterweight.

### CASE CORPORATION

700 STATE STREET  
RACINE, WI 53404 U.S.A.

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### CASE CANADA CORPORATION

3350 SOUTH SERVICE ROAD  
BURLINGTON, ON L7N 3M6 CANADA

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721B Page 2 of 2

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