

WHEEL LOADER

ENGINE

Model	Cummins 6BT-5.9 (turbo)
Fuel	Diesel
Cylinders	6
Displacement	358,81 in ³ (5,88L)
Compression ratio	17.5:1
Air Filter	2-element dry type
Oil Filter	Repleceable
Maximum gross power	
@ 2500 rpm	152 hp (113 kW)
Maximum gross torque	
@1600 rpm	416 lb.ft (564 N.m)
Gross power and torque per SAE J1995 standard	

ELECTRICAL SYSTEM

Voltage	24 V
Batteries (2)	12 V
Alternator	65 A

DRIVETRAIN

Torque converter

Simple type, built-stage transmission, with a stall ratio of 3:10:1

Transmission

Power Shift type - with four forward and reverse gears, controlled by two levers, one for the gears and the other for selecting reverse.

Transmission disconnect device when activating the brake pedal.

Front and rear axles

Planetaries	outboard
Rear axle oscillation	24° total

Travel speeds - mph (km/h)

Gears	1 st	2 nd	3 rd	4 th
Forward	3.91	8.08	13.48	23.0
and Reverse	(6.3)	(13.0)	(21.7)	(37.0)
(mph (Kph)				

(Including tires 17.5 X 25 L2)

HYDRAULIC SYSTEM

Loader	
Bucket controlled by two levers, one to raise and lower arms, the second lever to tilt and dump the bucket.	
Cylinders	
Double acting, with hardened and chromed rods for increasing the strength and avoid corrosion.	
Lift (2)	Bore ø 5.0 in (127mm) x Stroke 30.12 in (765 mm)
Dump cylinder (2)	Bore ø 4.02 in (102 mm) x Stroke 28.35 in (720 mm)
Pump	
Double gears in tandem, powered by the torque converter.	
Displacement	4.43 in ³ /rev (48 gpm) @ 2500 rpm
System relief pressure	
2150 psi (14824kPa)	
Loader control valve	
Open center with paralel series circuit and magnetic sensors. Hydraulic system cycle, with rated bucket load.	
	seconds
Raising bucket	6.1
Lowering bucket	3.5
Dump bucket	1.5
Total	11.1
Loader auxiliary steering	
Hydraulic gear pump powered by the torque converter	
Displacement	2.12 in ³ /rev (23 gpm) @ 2500 rpm
System relief pressure	
2000 psi (13790 kPa)	
Double acting cylinders (2)	Bore ø 2.99 in (76 mm) x Stroke 15.0 in (381 mm)

Filtration	
Two 10 micron filters, full displacement, replaceable elements on the return line.	

Reservoir	
Sealed, pressurized with positive displacement at the pump entrance, avoiding oil contamination	

BRAKES

Hydraulic brakes, multiple wet discs on the four wheels, providing greater braking power and higher durability, even in highly corrosive and abrasive environments.	
The front braking circuit is independent from the rear brake circuit.	
Parking brake drum, assembled on the transmission driven shaft, lever activated.	
The panel warning light indicates when the parking brake is enabled.	

STEERING

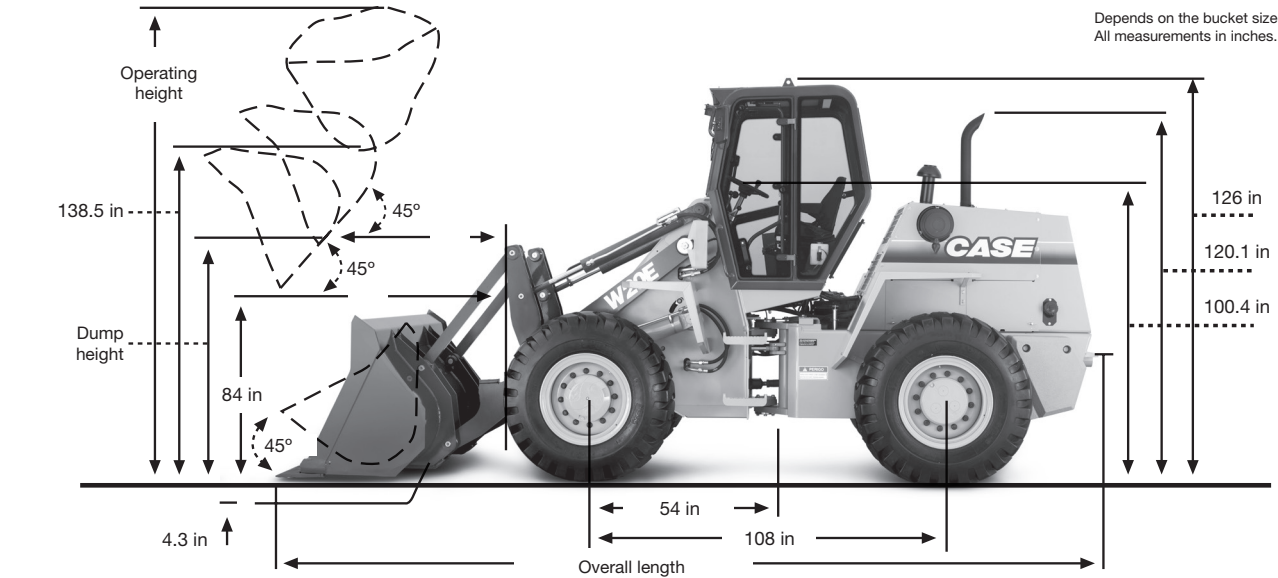
Hydraulic steering with articulated center-pivot, which allows the rear wheels to follow the same track as the front wheels.	
Turning angle (both sides)	40°
Turning Radius (outside)	0.2 in (4.954mm)

SERVICE CAPACITIES

Fuel tank	43.6 gal (165L)
Engine oil	3.78 gal (14.3L)
Cooling system	7.5 gal (28.4L)
Transmission fluid	6.34 gal (24L)
Hydraulic reservoir	19.8 gal (75L)
Axle: Differential and extremities	5.8 gal (22L)
Complete hydraulics system	33.0 gal (125L)

Note: We recommend using manufacturer approved oils. Check your maintenance table.

OPERATIONAL DIMENSIONS - WITH TIRES



Line drawings for illustrative purpose only and may not be exact representation of unit.

Tires	17.5 x 25. L3
Gauge	73 in (1854 mm)
Total tire width	90.7 in (2304 mm)
Ground clearance	15.8 in (401 mm)

PERFORMANCE DATA

SAE bucket capacity - Heaped	2.0 yd³ (1.53m³)	2.25 yd³ (1.72m³)	2.5 yd³ (1.91m³)	3.0 yd³ (2.3m³)
Bucket - shallow capacity	1.63 yd³ (1.25m³)	1.87 yd³ (1.42m³)	2.1 yd³ (1.58m³)	2.5 yd³ (1.89m³)
Bucket width	94.6 in (2403 mm)	94.6 in (2403 mm)	94.6 in (2403 mm)	94.6 in (2403 mm)
Bucket weight	1495 lb (678 kg)	1603 lb (727 kg)	1711 lb (776 kg)	1991 lb (903 kg)
Maximum Dump height - fully raised at 45° dump.	108 in (2743 mm)	105.3 in (2675 mm)	104 in (2642 mm)	100.5 in (2553 mm)
Maximum Bucket reach - fully raised at 45° dump.	37.2 in (945 mm)	39.7 in (1008 mm)	41 in (1041 mm)	44.2 in (1122 mm)
Bucket reach at 83.9 in height and at 45° dump.	53 in (1346 mm)	56 in (1422 mm)	55 in (1397 mm)	56.4 in (1432 mm)
Turning diameter turn with bucket in transporting position	426 in (10820 mm)	426 in (10820 mm)	429 in (10897 mm)	429 in (10897 mm)
Overall length - bucket level on ground	242 in (6147 mm)	244.2 in (6203 mm)	247 in (6274 mm)	251.5 in (6389 mm)
Height to top of ROPs cab	183 in (4648 mm)	184 in (4674 mm)	188 in (4775 mm)	185.2 in (4703 mm)
Digging force	20438 lb (9271 kg)	14409 lb (8350 kg)	17572 lb (7291 kg)	10778 lb (4889 kg)
Tipping load, straight line (*)	16841 lb (7639 kg)			
Turn 35° (*)	14822 lb (6723 kg)	116819 lb (7629 kg)	16792 lb (7617 kg)	14625 lb (6634 kg)
Turn 40° (*)	14379 lb (6522 kg)	14357 lb (6512 kg)	14334 lb (6502 kg)	12484 lb (5663 kg)
Operating load (*)	7189 lb (3261 kg)	7178 lb (3256 kg)	7167 lb (3251 kg)	5578 lb (2530 kg)
Lift capacity - full height	12285 lb (5572 kg)	12285 lb (5561 kg)	12235 lb (5550 kg)	10659 lb (4835 kg)
Operating weight	22026 lb (9991 kg)	22928 lb (10040 kg)	22242 lb (10089 kg)	22522 lb (10216 kg)

Note: All specifications are based on machines with ROPS/FOPS cabins, tires 17.5 x 25, L2 - 12 ply at recommended pressures, operator weight 176.4 lb (80 kg) and fuel.

DENSITIES

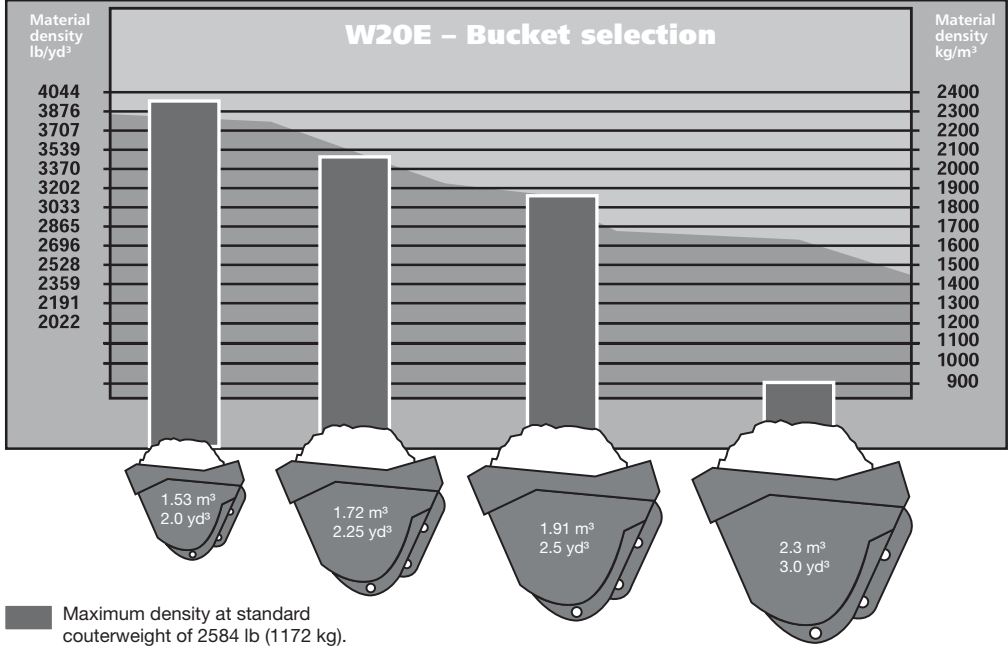
The graph is related to bucket capacities, based on the material densities and in average working conditions. Additional factors such as tires, counterweights, soil, climate and others should be considered when choosing a bucket.

To determine the ideal bucket size:

1 - Determine the material density to be handled using the material density table here.

2 - Find the density in th column (U.S. Or metric system) next to the illustration of the corresponding bucket selection.

3 - Track the density along the horizontal line and find the bucket(s) that can be used for that material density.



Material	Density
Calcium carbonate	2107 lb/yd³ (1250 kg/m³)
Clay	
Natural	2697 lb/yd³ (1600 kg/m³)
Dry	2495 lb/yd³ (1480 kg/m³)
Wet	2798 lb/yd³ (1660 kg/m³)
With gravel, dry	2393 lb/yd³ (1420 kg/m³)
With gravel, wet	2596 lb/yd³ (1540 kg/m³)
Charcoal	
Anthracite, crushed	1854 lb/yd³ (1100 kg/m³)
Bituminous, crushed	1399 lb/yd³ (830 kg/m³)
Granite, crushed	2798 lb/yd³ (1660 kg/m³)
Shale	2107 lb/yd³ (1250 kg/m³)
Slag, pieces	2950 lb/yd³ (1750 kg/m³)

Material	Density
Gravel	
Dry	2545 lb/yd³ (1510 kg/m³)
Gravel, rock sand	3253 lb/yd³ (1930 kg/m³)
Dry, from 0.5 in to 2 in	2849 lb/yd³ (1690 kg/m³)
Wet, from 0.5 in to 2 in	3405 lb/yd³ (2020 kg/m³)
Limestone, crushed	2596 lb/yd³ (1540 kg/m³)
Sand	
Dry	2393 lb/yd³ (1420 kg/m³)
Dry, from 0.5 in to 2 in	3101 lb/yd³ (1840 kg/m³)
With gravel, dry	2899 lb/yd³ (1720 kg/m³)
With gravel, wet	3405 lb/yd³ (2020 kg/m³)
Sandstone, pieces	2107 lb/yd³ (1250 kg/m³)
Stone, gravel	2697 lb/yd³ (1600 kg/m³)

STANDARD EQUIPMENT

Engine

Cummins 6BT-5.9 (turbo)

Electrical

Batteries 350 CCA (Cold Crank Amp), 12 Volt
Alternator 28 Volt, 65 Amp

Operator Environment

Instrument panel
Individual indicators
Sound and visual alarm

DRIVETRAIN

4 wheel drive
PowerShift transmission
Single stage torque converter
Transmission ratio 3.10 :1
Front and rear Heavy Duty axles with limited-slip differentials

Hydraulic uncoupling of transmission
Wheel hub reducers
Wet disc brakes

Tires

17.5 x 25 – 16 ply L3

Rims

3-piece rims, 14 in

Hydraulics

Orbital steering
Full displacement oil cooling
Control Lever with:
Return to dig
Quick coupler for diagnostics

Loader

Arms with inline cylinders
Two levers control for lift and tilt
Automatic height control
Bucket position indicator

Others

2 - halogen headlights
2 front work lights
2 rear work lights
2 - stop and tail lights
Counterweight
Horn

OPTIONAL EQUIPMENT

Operator Environment

Cab air-conditioning

Tires

17.5 x 25 – 12 ply L3
17.5 x 25 – 16 ply L3
17.5 x 25 – 16 ply L3

Rims

One-piece rims, 14 in

Others

Joystick Lever
Third hydraulic control function (3 levers)
Reversible cutting edges
Turn signal/flash
Heavy Duty air filters

Buckets

3.0 yd³ / 2.3 m³ with reversible cutting edges
2.25 yd³ / 1.72 m³ with teeth
2.6 yd³ / 2.0 m³ with reversible cutting edges or teeth
2.5 yd³ / 1.9 m³ with reversible cutting edges or teeth
2.0 yd³ / 1.53 m³ with reversible cutting edges or teeth

Special versions

W20E "Special Protection"
(for corrosive environments)

The machine's standard configuration and its optional accessories can vary according to which market Case is works.



Fleet monitoring and management system by satellite or cel phone tracking.

CASE Corporation reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold. The specifications, descriptions, and illustrative materials contained here reflect correctly the data known up to the publication date, but are subject to changes with no previous notice. The illustrations may include optional equipment and accessories and may not include all standard equipment.

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