

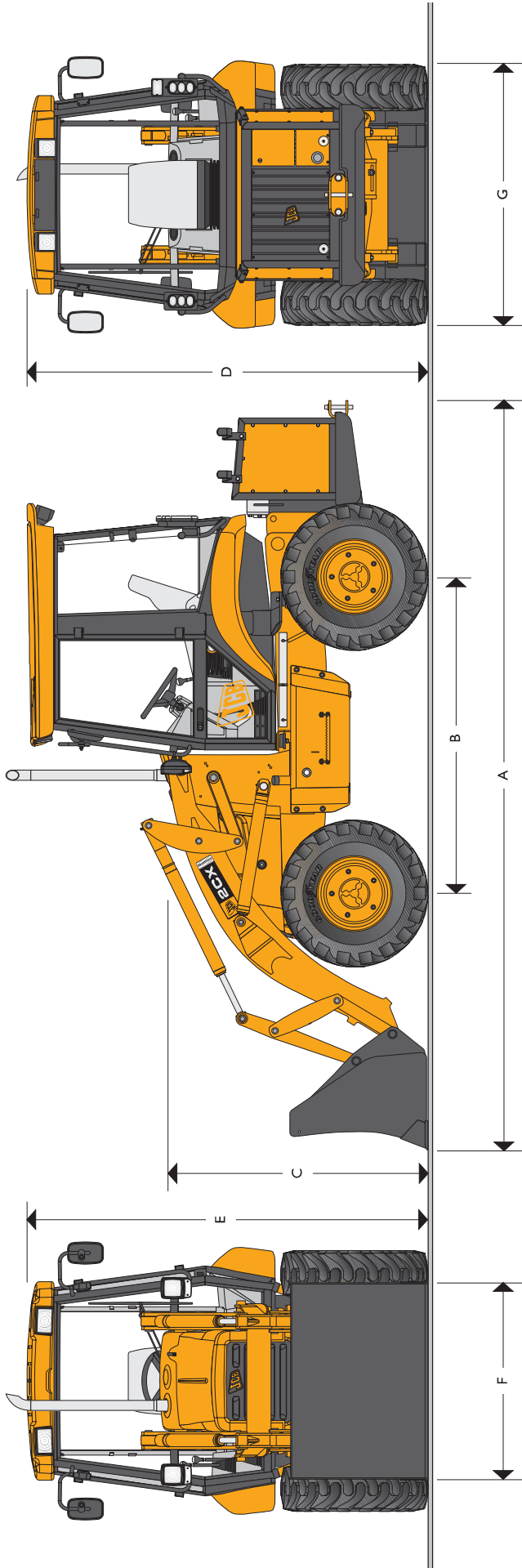


JCB BACKHOE LOADER | 2CX AIRMASTER



MAX. ENGINE POWER

51.5kW (69hp)



STATIC DIMENSIONS

JCB 2CX Airmaster Loaders feature heavy duty one piece mainframe, componentised driveline and fully enclosed engine compartment. All fluid and component compartments are lockable using the ignition key.

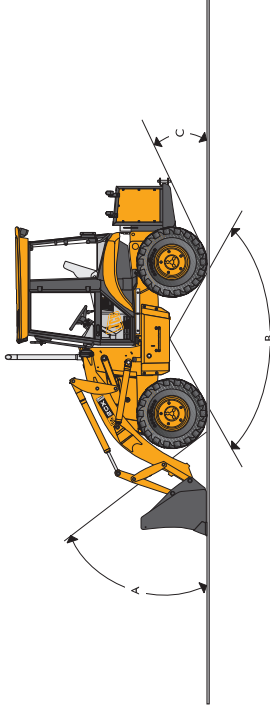
Machine model	2CX Airmaster m (ft-in)	Machine model	2CX Airmaster m (ft-in)
A Total travel length	5.17 (16-11)	E Total travel clearance	2.72 (8-11)
B Axle centreline distance	1.99 (6-6)	F Shovel width (blacktop GP shovel)	1.37 (4-6)
C Steering wheel centre height	1.76 (5-9)	G Width over tyres	1.83 (6-0)
D Cab roof height	2.65 (8-8)		



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GROUND LINE ANGLES



- A Approach angle > 45°
- B Interference angle/ramp to ground plane 130°
- C Departure angle 24°

OPERATING WEIGHTS

Operating weight includes machine equipped with G.P. shovel and full fuel tank.

Machine model	2CX Airmaster
Weight	kg (lb) 5550 (12235)

ENGINE

Four cylinder, direction injection diesel. Gear driven water pump, cast iron engine sump, spin-on oil and fuel filters, water separator, dual element air cleaner, glow plug cold start aid.

Machine model	2CX Airmaster
Displacement	4.4 Ltr
No. of cylinders	4
Bore size	mm 105
Stroke	mm 127
Rated engine RPM	2000
Power ratings	
Gross ISO/TR 14396 and SAE J1995	kW (HP) 51.5 (69)
SAE net ISO 9249 (EEC 80/1269 and SAE J1349)	kW (HP) 49.8 (66.8)
Torque ratings	
SAE gross ISO/TR 14396 and SAE J1995	Nm (lbf ft) 281 (207)
SAE net ISO/TR 9249 (EEC 80/1269) and SAE J1349	Nm (lbf ft) 277 (204)
Max. torque RPM	1400

STEERING

Full power hydrostatic system utilising the main hydraulic pump via a steering priority valve. In the event of engine failure, emergency steering is maintained.

Machine model	2CX Airmaster
Steering axles	Front and rear
Steering turns – lock to lock	4
	m (ft-in)
Kerb – kerb turning circle – unbraked – 4WS	7.20 (23-9)
Kerb – kerb loader clearance circle – 4WS (2000mm GP)	9.35 (30-8)

(Depending on tyre size, ground conditions etc.)

ENGINE SUPPORT SYSTEM

Engine support system is designed for ease of daily checks, routine maintenance and longer service intervals.

Fuel type	Diesel.
Fuel filter	Replaceable spin-on cartridge plus water/sediment separator.
Air cleaner	Dual, dry element cyclonic type.
Oil filter and lubrication	Full flow, spin-on type filter.
Cooling system	Hot climate specification, pressurised 14.5 psi (1.0 bar) suction fan, Pressurised recovery tank with integral filler neck.

ELECTRICAL AND INSTRUMENTATION

12 volt negative ground, utilising wiring and connectors meeting IP69 water ingress test standard. Central fuse panel supplemented with main circuit breakers at battery positive terminal.

Gauges	Tachometer, engine coolant temp, fuel level, hourmeter clock.
Warning system	Audible and visual system for engine oil, transmission, park brake, battery, air cleaner, alternator.
Battery	550 CCA.
Pre-wire	Radio speakers (cab), beacon (all).
Horn	Controlled from both front and rear.
Alternator	72 amp.
Front working lights	2 twin beam fixed position.
Rear working lights	2 adjustable.



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TRANSMISSION

The JCB Transmissions are designed and built specifically for JCB Backhoe Loaders. They feature synchronised shifting in all gears. Powershuttle between forward and reverse. Ground speeds are designed to maximise production.

Machine model	2CX Airmaster
Manufacturer	JCB
Type	Synchromshuttle
Torque converter	280mm (11")
Torque converter ratio	2.78:1
Gears forward/reverse	4/4
Gear selection	Manual
Shuttle control – F/R	Power shuttle
Travel speeds	kph (mph)
Tyres equipped – front 12.5x18	
Gear 1	5.1 (3.2)
Gear 2	8.7 (5.4)
Gear 3	18.5 (11.5)
Gear 4	30.1 (18.8)

REAR AXLE

JCB rear axles are designed and built specifically for backhoe loaders and accept a wide variety of tyre combinations.

Machine model	2CX Airmaster
Type	JCB Max-trac torque proportioning with outboard planetary drive
Limited slip	Optional
Axle ratings	kg (lb)
Static load rating	5989 (13200)
Dynamic load rating	2995 (6600)

FRONT AXLE

JCB front axles are designed and built specifically for backhoe loaders and accept a wide variety of tyre combinations.

Machine model	2CX Airmaster
Type	JCB Max-trac steer drive torque proportioning
Axle ratings	kg (lb)
Static load rating	5989 (13200)
Dynamic load rating	2995 (6600)
Oscillation angle	9.5°
Steering ram	Double acting

CAB

Excellent visibility (and safety) is provided by the large tinted glass area. Cab frame is ROPS and FOPS approved for maximum operator protection. ISO standard 3471 and 3449 (SAE J1040 and J231).

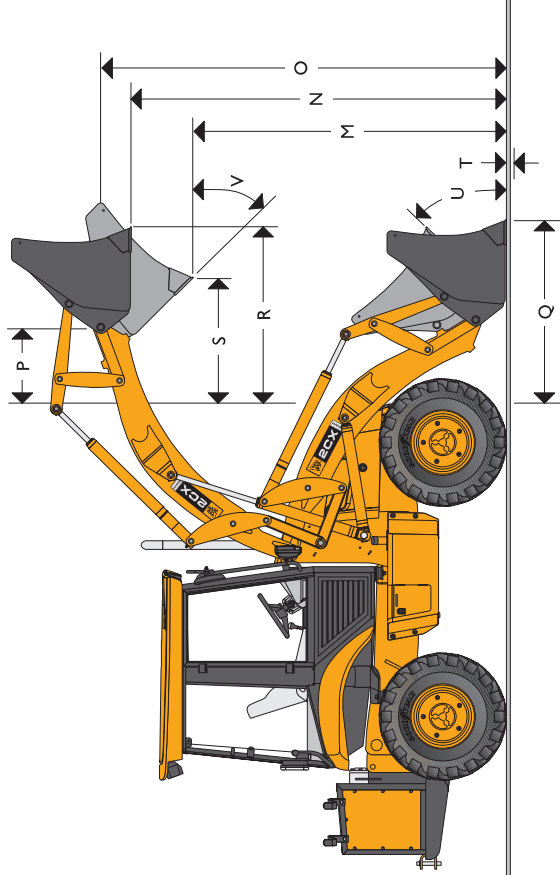
- A fully adjustable seat combines with ergonomically positioned controls to minimise operator fatigue.
- A radio location is provided as standard plus provision for twin speakers for stereo sound in the optional roof console.
- Cab provides easy access through a left hand single door. Standard features include: lap seat belt, 3 speed fresh air/recycle heater, front and rear screen wash/wipers (cab), front and rear horn, exterior mirrors, and flat easy-clean floor.
- The instrument panel is positioned to the right-hand side for ease of viewing from the loading position and has an optional lockable cover for vandal proofing. Engine speed, fuel and coolant temperature gauges, are mounted in the panel.
- Fixed steer column.
- Large opening rear window (cab).
- Static or mechanical suspension seat gives the operator a comfortable operating position.
- 12V power supply.



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LOADER DIMENSIONS



LOADER DIMENSIONS

	Narrow bucket	GP shovel	6-in-1 shovel
	m (ft-in)	m (ft-in)	m (ft-in)
Overall width with bucket	1.37 (4-6)	2.00 (6-6)	2.00 (6-6)
M Dump height	2.42 (7-11)	2.42 (7-11)	2.42 (7-11)
N Load over height	2.99 (9-10)	2.99 (9-10)	2.99 (9-10)
O Loader hinge pin height	3.24 (10-8)	3.24 (10-8)	3.24 (10-8)
P Pin forward reach	0.33 (1-1)	0.33 (1-1)	0.33 (1-1)
Q Reach at ground (toe plate horizontal)	1.36 (4-5)	1.36 (4-5)	1.36 (4-5)
R Max. reach at full height	1.13 (3-9)	1.13 (3-9)	1.14 (3-9)
S Reach at full height fully dumped	0.83 (2-9)	0.83 (2-9)	0.83 (2-9)
T Dig depth	0.10 (0-4)	0.10 (0-4)	0.10 (0-4)
U Roll back at ground	45°	45°	45°
V Dump angle	45°	45°	45°
Jaw opening width	N/A	N/A	0.70

LOADER ATTACHMENTS

Loader buckets are listed according to size and application. All buckets are drilled to accept optional auxiliary cutting edge or teeth. Flat top box section provides rigidity and assists in bucket levelling.

An optional quickhitch allows the use of a wide variety of attachments for excellent versatility. Options include forks, shovels, side tip shovels and 6-in-1 clamshovel.

G.P. Shovel			
		Capacity SAE	
Width mm (ft-in)	Rated m³ (yd³)	Struck m³ (yd³)	
1850 (6-0)	0.6 (0.7)	0.49 (0.59)	
6-in-1 Clamshovel			
		Capacity SAE	
Width mm (ft-in)	Rated m³ (yd³)	Struck m³ (yd³)	
1850 (6-0)	0.6 (0.7)	0.49 (0.59)	

LOADER

JCB loaders provide parallel lift self levelling on the up and down cycle enhancing load retention and use of optional pallet forks. High capacity buckets combined with high lift and breakout forces maximise productivity.

	G.P. Shovel	6-in-1 Clamshovel
Bucket breakout force	kgf (lbf)	3600 (7921)
Loader arm breakout force	kgf (lbf)	3850 (8471)
Lift capacity to full height	kg (lb)	2200 (4844)
		2100 (4624)



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BRAKES

The JCB braking system ensures effective, fade-free braking. The self-adjusting, multi-disc arrangement is inboard mounted and is oil immersed for minimum maintenance and a long operating life.

- Twin brake pedals provide tighter turning circle and enhanced steering control on slippery ground.
- Automatic compensation ensures 'straight' machine braking.
- Disc diameter: 165 mm (6.5 in). Friction area: 130502 sq.mm (202 sq. in) per brake.
- The independent parking brake is mounted on the input shaft rear axle and will hold the machine on 1:3 gradients. It is an over-centre type, adjustable within the cab, with transmission disconnect to prevent premature brake pad wear. Park brake disc diameter: 285 mm (11.2 in). Friction area: 74984 sq.mm (116 sq. in).

TYRES

12.5 x 18 x 10 Continental
12.5 x 80 x 18 x 10 Goodyear
335 x 18R Michelin
12.5 x 18 x 10 Goodyear
15.5 55 x R18 Dunlop
405 70 x R20 Michelin
14.5 x 20 x 10 Continental
12.5 x 20 x 10 Goodyear
335 x 65 x R18 Michelin
14.5 80 x 18 Continental
340/80 R18 Goodyear

HYDRAULIC SYSTEM

The Open Centre system uses gear pumps with a power modulation valve that automatically varies hydraulic power to match digging conditions for extra performance and power.

- Open centre hydraulic system using simple and reliable high efficiency gear pump.
- Single pump system with priority valve to ensure metered supply to steering and main hydraulic system.
- Easily used, ergonomically positioned levers give excellent control of the loader and backhoe, thus reducing operator fatigue.
- A full flow 10 micron filter ensures that oil stays free of contaminants.

Machine model	2CX Airmaster
Pump flows at 2000rpm	l/min (gal/min)
Main pump output	72 (15.8)
System working pressure	bar (lbf/sq in)
Loader	230 (3335)

COMPRESSOR

- The screw type compressor is purpose-designed for resurfacing work. It offers true 140 cubic feet per minute (66 litres per second) capacity. A heavy duty cage protect against impact damage while an automatic speed setting on the compressor ensures maximum economy by providing power on demand.
- An external stop/start facility means that the operator doesn't have to be in the cab to engage the compressor drive. It also allows fast shutdown in an emergency.
- With the oil/air receiver only requiring an inspection every 6 years, maintenance time will be cut to a minimum.
- The compressor will only operate when the parking brake is applied. And to minimise the risk of mechanical damage, overheat sensors will disengage the compressor drive if the oil temperature rises above normal.

Type	Compair Holman screw type
Air output	140CFM, 66 litres/sec
Pressure at outlet taps	7 bar (100psi)
Engine speed control	Fully modulating engine speed control linked to air demand
Compressor drive	Direct
Compressor cooling	Air blast type
Air outlets	2 x ¾ locks
Compressor oil capacity	17 litres (3.3 gal)
Ground clearance under compressor assembly	273mm (10.7 in)
Weight of compressor plus balance weight	900kg (1983 lb)
Tool stowage	Two heavy duty breakers
Power take off	Independent, hydraulically operated

SERVICE CAPACITIES

Machine model	2CX Airmaster
	ltr (gal)
Cooling system	11 (2.42)
Fuel tank	83 (18)
Engine oil with filter	11 (2.42)
Transmission with filter	17 (3.74)
Rear axle	9.0 (2.0)
Front drive axle	9.0 (2.0)
Hydraulic tank capacity	83 (18)



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A GLOBAL COMMITMENT TO QUALITY

JCB's total commitment to its products and customers has helped it grow from a one-man business into Britain's largest privately owned manufacturer of backhoe loaders, crawler excavators, wheeled excavators, telescopic handlers, wheeled loaders, dump trucks, rough terrain fork lifts, industrial fork lifts, mini/midi excavators, skid steer loaders and tractors.

By making constant and massive investments in the latest production technology, the JCB factories have become some of the most advanced in Europe.

By leading the field in innovative research and design, extensive testing and stringent quality control, JCB machines have become renowned all over the world for performance, value and reliability.

And with a global sales and service network of over 400 distributors and agents, the company exports over 70% of its production to all five continents.

Through setting the standards by which others are judged, JCB has become one of Britain's most impressive success stories.



JCB cares for the environment. This paper has been produced without the use of elemental chlorine chemicals in the bleaching process.

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