



By Appointment to Her Majesty, The Queen  
Manufacturers of Construction and Agricultural Equipment.  
J.C. Bamford Excavators Ltd.

# JCB 2CX

## 4x4x4



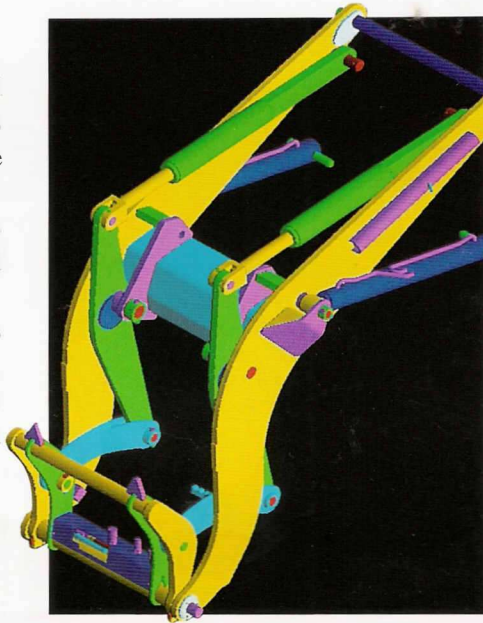
- Compact size • 4 equal sized wheels
- Permanent 4 wheel drive • Permanent 4 wheel steer
- CAD designed loader and excavator • Quiet and spacious cab

JCB 2CX 4x4x4

# UNRIVAIED PERFORMANCE FROM THE SMALL SITE SPECIALIST

The 2CX 4x4x4 is the most manoeuvrable backhoe loader around - now with CAD designed excavator and 'Z' bar loader arms that help generate optimum on-site performance. This compact and stable 5 tonne machine provides the combined benefits of 4 equal sized wheels, 4 wheel drive and 4 wheel steer. This, along with its reduced width, length and height, means that renowned JCB backhoe loader performance can be taken to previously inaccessible sites.

- Compact size leads to less traffic congestion and cuts down on site damage.



- 'Z' bar loader arm geometry enables a 50% rollback angle for greater spoil retention when carrying. It also gives an excellent loadover height and breakout forces for maximum productivity. This geometry also helps to give perfect parallel lift for safe load retention when using pallet forks.

- Improvements generated by CAD include providing the machine with the ability to dig right up to the stabilisers with no appreciable loss of speed or power. This means less frequent repositioning and hence greater productivity.



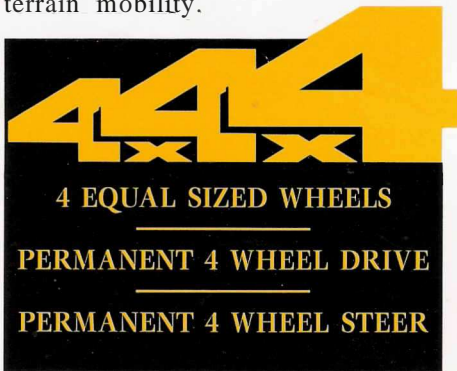


- Excellent service access is enabled through a hinged engine cover.

- Backhoe and loader geometries have been designed using the very latest CAD technology to ensure even distribution of power throughout the working range.

- Four equal sized wheels enhance tractive effort to give excellent loader performance. In addition, ground clearance and flotation over soft ground conditions are greatly improved.

- Permanent 4 wheel drive gives better traction, better loader performance and true rough terrain mobility.



- Permanent 4 wheel steer provides outstanding manoeuvrability and handling in all conditions while perfect wheel tracking ensures minimal site damage and prolonged tyre life.

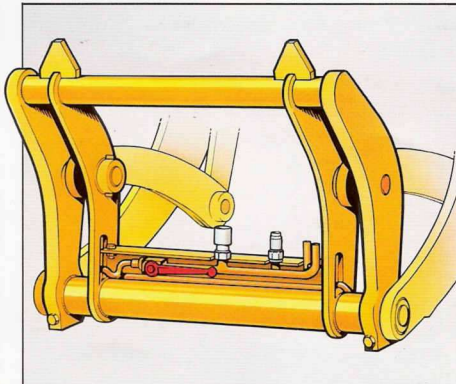
- A powerful Perkins 1000 series engine keeps noise levels down and emits minimal amounts of smoke to reduce environmental problems. Low vibration levels also aid operator comfort..

- JCB Syncro Shuttle gearbox with integral torque converter provides impressive transfer of power to the wheels.

- Low mounting of the engine and transmission, combined with heavy duty JCB Max-Trac axles, give a low centre of gravity for greater machine stability.

- Full power braking system ensures maximum safety when braking, especially downhill. Direct acting brakes on each wheel are activated through JCB Max-Trac axles for maximum control.. The twin braking disks are immersed in oil for a long, maintenance free, working life.

- Parking brake is easily activated by a single push button. The brake is oil immersed within the JCB Syncro Shuttle transmission for long life protection against wear while also giving added security when parking on gradients.



- Because the Quickhitch carriage has been purpose designed as an integral part of the loader arms, no loss of power or performance will be experienced when using the wide range of attachments.



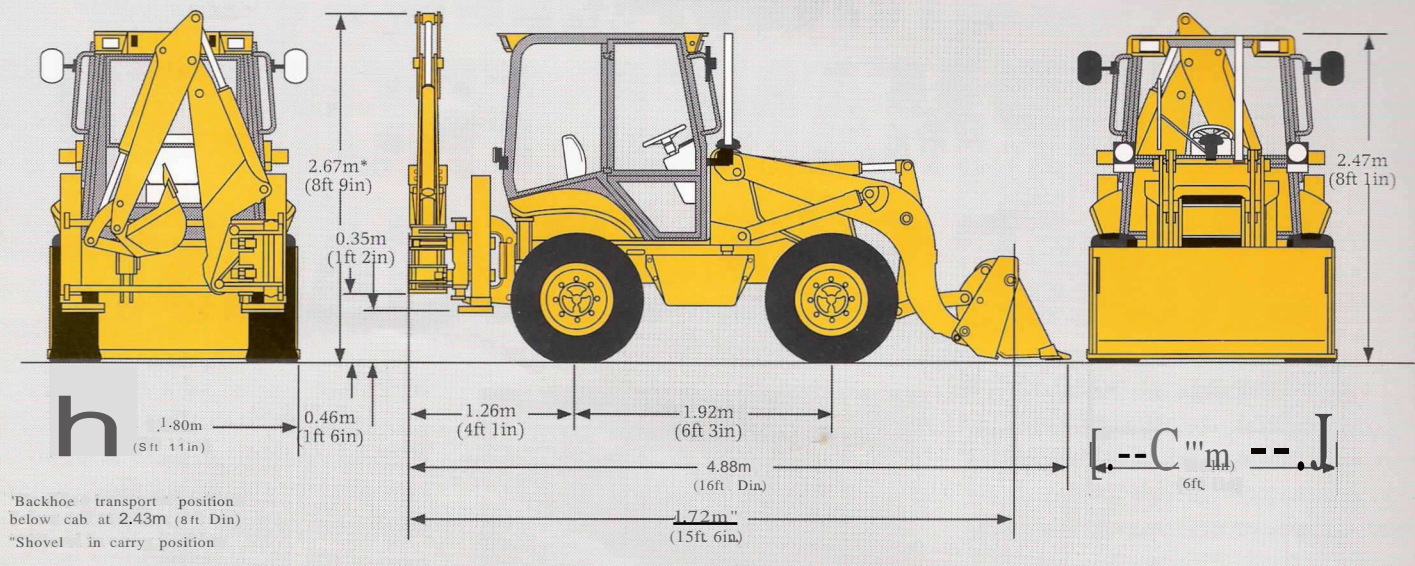
- The sideshift carriage allows the backhoe to travel smoothly along its full length, eliminating the need to push the arm against kerbs or slabs; therefore minimising site damage. This allows the machine to dig right up to, and in line with, a wall,

- Large equal sized wheels, combined with the machines overall design, ensure that stabiliser feet and boom base are kept clear of all obstructions.

- The quiet and spacious ROPS/FOPS cab, which is truly a big machine cab on a small backhoe loader, offers excellent comfort features to encourage greater operator productivity. It includes a suspension seat, radio console, speakers, aerial and a deluxe soundproofing kit as standard. There's even a secure position for a flask..



**STATIC DIMENSIONS**



**ENGINE**

O 4 cylinder,  
 4 sh-oke, direct injection,  
 naturally aspirated,  
 4.0 litres displacement..  
 Water cooled

**Gross power @ 2000 rpm**  
 SAEJ1349 48.5 kW (65hp)

**Nett power @ 2000 rpm**  
 SAEJ1349 44 kW (59hp)  
 EEC 80/1269 43 kW (57.6hp)

**Nett torque @ 1200 rpm**  
 SAEJ1349 228 Nm (168lb/ft)  
 EEC 80/1269 223 Nm (165lb/ft)

**STEERING**

JCB backhoe loaders incorporate full power hydrostatic steering. Flow is metered to steering by an orbitrol steering pump. In the event of engine failure, emergency steering is still available.

Permanent 4WS with 32° lock front and rear axles provide exceptional manoeuvrability.

4WS is provided by a steer priority flow from the main hydraulic pump. Flow is directed through an easily adjustable steer alignment valve to double acting axle steer rams (1 per axle).

**TRANSMISSION**

JCB Syncro Shuttle, fully synchromesh gearbox for smooth gear changes on the move with integral torque converter and electrically operated reversing shuttle. Permanent 4WD.

O 4 forward and 4 reverse gears.  
 O Stall ratio: 2.83:1.

Transmission also incorporates electro/hydraulically powered oil immersed handbrake for safe & simple braking.

**TRAVEL SPEEDS**

	Km/h	mph
1.	5.63	3.49
2.	9.52	5.90
3.	19.48	12.08
4.	31.52	19.54

**AXLES**

JCB heavy duty steer drive axles \* with planetary hub reduction, fully floating halfshafts, outboard oil immersed multi-disc brakes on both axles, heavy duty wheel bearings and adjustable track rod. Front axle oscillation of ± 9°

**Track widths**  
 12.5 tyres: 1490mm (4ft 11in)

\*With unique JCB Max-Trac torque proportioning differentials for improved tractive effort.

**TYRES**

**STANDARD**  
 12.5 x 18, 10 PR Industrial traction.

**OPTIONAL**  
 12.5 x 18, 10 PR Self cleaning traction.  
 335/80 R 18 XM27 Radial traction.  
 \*385/55 R 18 PG7 Radial Semi-Industrial  
 \*Requires modified steer lock

**BRAKES**

The JeB braking system features full powerbraking. Hydraulically actuated multi disc brakes are immersed in oil for long life and effective fade free braking. Emergency back-up is available from an accumulator. Mounted within the planetary hub means that the brakes are direct acting to each wheel, greatly increasing deceleration and virtually eliminating skid potential.

Parking brake is an electro/hydraulically operated oil immersed multi disc brake on the transmission output shaft and will hold machine on 1 in 4 gradients.

Disc diameter: 101.5mm  
 No discs: 9 (6 discs 20kph)  
 Friction area: 63988mm<sup>2</sup>  
 (42658mm<sup>2</sup>:20kph)

**ELECTRICS**

12 volt direct electric starting with 65 amp alternator and standard thermostat start aid.

O Heavy duty harness with secured sealed connectors for protection against both water and dust ingress. The connectors conform to IP67 (DIN 40050) standards. A woven nylon outer covering protects the harness against abrasion and also improves its resistance to water penetration.

O Standard battery 95A hour low maintenance.

# BACKHOE SPECIFICATION

## BACKHOE DIMENSIONS

		m	ft-in
A Maximum dig depth	SAEMax	2.93	9-7
	SAE 2ft flatbottom	2.91	9-6
B Reach-ground level to rear wheel centre	SAE	4.77	15-8
C Reach-ground level to slew centre	SAE	3.68	12-1
D Reach-at full height to slew centre	SAE	2.10	6-11
E Side reach-to centre line of machine	SAE	4.19	13-9
F Maximum working height	SAE	3.72	12-2
	Max	4.20	13-9
G Maximum loader height	SAE	2.64	8-8
	Max	3.15	10-4
H Total kingpost travel	SAE	1.06	3-6
J Bucket rotation	SAE	190°	

## BACKHOE PERFORMANCE

Bucket tearout	SAE	3400kgf	7496lbf
Dipper tearout	SAE	1880kgf	4144lbf
Maximum hydraulic lift capacity of bucket pivot at full reach (no bucket)		733kg	1616lb



## BACKHOE ATTACHMENTS

### STANDARD PROFILE BUCKET

WIDTH		CAPACITY SAE			
mm	(in)	RATED m <sup>3</sup>	STRUCK (ft <sup>3</sup> )	SAE m <sup>3</sup>	STRUCK (ft <sup>3</sup> )
230	(9)	0.028	(1.0)	0.022	(0.79)
300	(12)	0.03	(1.07)	0.03	(1.07)
350	(14)	0.04	(1.43)	0.03	(1.07)
400	(16)	0.05	(1.79)	0.04	(1.43)
450	(18)	0.06	(2.14)	0.05	(1.79)
600	(24)	0.09	(3.21)	0.07	(2.50)
750	(30)	0.11	(3.93)	0.09	(3.21)

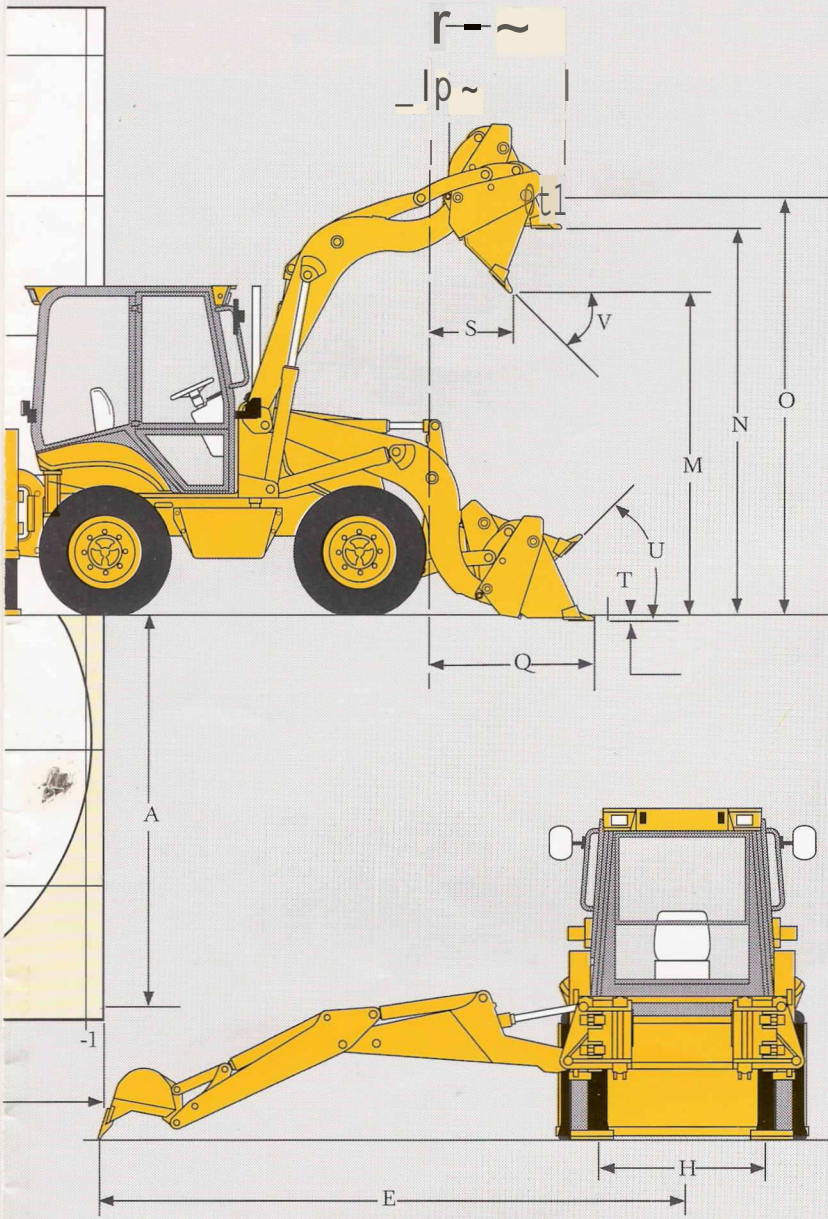
### GRADING BUCKET

WIDTH		CAPACITY RATED	
mm	(in)	m <sup>3</sup>	(ft <sup>3</sup> )
1200	(48)	0.16	(5.71)

(With optional bolt-on toeplate)

### HAMMERMASTER 260L ROCKBREAKER

Required oil flow	20-68ltrs per minute
Strike rate	300-1675 blows per minute
Tool diameter	63mm
Joules per blow	350
Working weight	230kg (506lb)

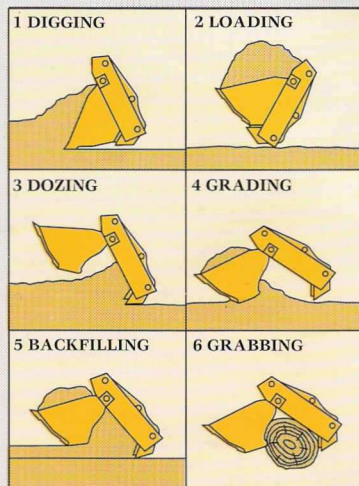


LOADER DIMENSIONS		
	GP SHOVEL	6-IN-1 SHOVEL
M Dumpheight	2.55m (8ft 4in)	2.52m (8ft 3in)
N Loadover height	2.98m (9ft 9in)	2.94m (9ft 8in)
O Pin height	3.16m (10ft 4in)	3.16m (10ft 4in)
P Pin forward reach	0.22m (0ft 9in)	0.22m (0ft 9in)
Q Reach at ground (toe plate horizontal)	1.21m (4ft 0in)	1.23m (4ft 0in)
R Max reach at full height	0.89m (2ft 11in)	0.91m (3ft 0in)
S Reach at fuH height (fuHydumped)	0.59m (1ft 11in)	0.60m (2ft 0in)
T Digdepth (toe plate horizontal)	0.10m (0ft 4in)	0.10m (0ft 4in)
U Rollback at ground/carry	45°/50°	45°/50°
V Dump angle SAE	45°	45°

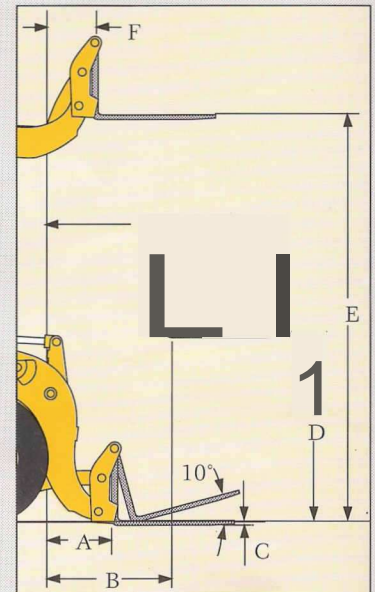
LOADER PERFORMANCE		
	GP SHOVEL	6-IN-1 SHOVEL
Loader breakout shovel SAE	3950kgf (8706lbf)	3950kgf (8706lbf)
Maximum hydraulic lift capacity SAE	4680kg (10317lb)	4480kg (9876lb)
Lift capacity to fuH height SAE	2200kg (4850lb)	2000kg (4409lb)
Maximum tipping load	2489kg (5487lb)	2200kg (4850lb)

LOADER ATTACHMENTS

SHOVEL TYPE	SHOVEL WIDTH (mm) (in)	CAPACITY RATED (m <sup>3</sup> ) (cu ft)	SAE STRUCK (m <sup>3</sup> ) (cu ft)	WEIGHT (kg) (lb)	TEETH (optio- nals)
6 in 1	1850 (6-1)	0.6 (0.8)	0.5 (0.65)	390 (860)	7
6 in 1	1850 (6-1)	0.6 (0.8)	0.5 (0.65)	280 (617)	7

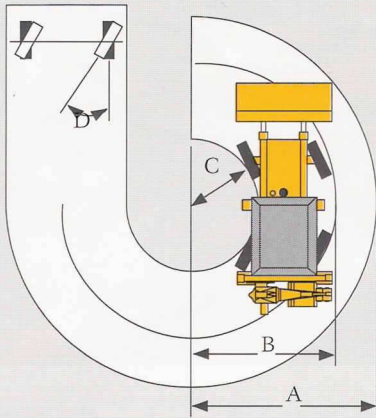


PALLET FORK ATTACHMENT**		
A Reach - ground level	SAE	0.63m (2ft 1in)
B Reach - arms horizontal	SAE	1.14m (3ft 9in)
C Below ground level	SAE	0.05111 (0ft 2in)
D Height - arms horizontal	SAE	1.1111 (4ft 8in)
E Height - times max	SAE	3.02m (9ft 11in)
F Reach - max height	SAE	0.5m (1ft 6in)
G Reach - max load centre	SAE	1.64111 (5ft 4in)
Fork carriage width		1.37111 (4ft 6in)
Max width over forks		1.38m (4ft 6in)
Forklength		1.20m (3ft 11in)
Operating load *		1600kg (3526lb)
Attachment weight		275kg (606lb)
Max rollback ground level		10°



\* Operating load is achieved only when tyre pressures are adjusted and at load centre 500mm (20in) conforms to FEM, DIN, EEC 86/663  
 \*\* Operating load 1800kg with optional front axle hydraulic lock

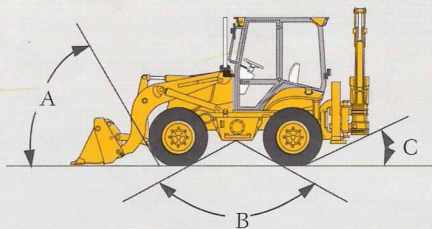
## TURNING RADIUS



### Specification

Radius	12.5 x 18 tyres
A Outside shovel	3.90m (12ft 10in)
B Outside tyres	3.03m (9ft. 11 in)
C Inside tyres	1.37m (4ft. 6in)
D Inside wheel steer angle	32°

## GROUND LINE ANGLES



12.5 x 18 tyres

A Approach angle	75°
B Interference angle/ramp to ground plane	122°
C Departure angle	24°

## JCB LOADER QUICKHITCH

- Standard JCB Hydraulic Quickhitch.
- Hydraulic quickhitch has integral isolator and pinlock safety valve.
- No deration and good visibility to pick-up points.

## WEIGHT

### SAE Operating Weight

Fully operational with 6-in-1 shovel, 450mm (18in) excavator bucket, full fuel tank and 80kg operator. 5130kg (11309lb).

## HYDRAULICS

Single pump system with priority valve to ensure metered supply to steering and brakes at all times. Pump flow: 58 litres/min. (12.8 gal/min) at 2000 rev/min engine speed. Steeling pressure: 138 bar (2000 psi) Main relief pressure: 220 bar (3200 psi). Theespool loader and 7 spool excavator valve blocks are both resiliently mounted and remote from the cab and controls for low in-cab noise.

- Low lever efforts give excellent control of loader and backhoe reducing operator fatigue to a minimum.
- Full flow 25 micron spin-on type hydraulic oil filter.
- Optional hammer circuit pipework.
- Loader float de tent for grading and dozing.
- Loader lever includes transmission disconnect.
- 7 spool foot control standard.

## CAB

Full ROPS & FOPS filtered air cab with soundproofing to give low in-cab noise level.

Large glazed area for good all-round visibility.

- Fully adjustable suspension seat and ergonomically positioned controls minimise fatigue and optimise productivity.
- Wide door access. Front right window opens to hand (or full) width for maximum ventilation. Interior light, 2-speed heater/demister, front screen wiper and washer, steering wheel spinner knob.
- Innovative gas strut assisted opening rear window with 360mm (1ft 3in) protrusion in stowed position for excellent rain protection.
- Gauges include engine speed, engine hours, fuel level, water temperature.
- Audible and visual fault warnings for alternator charge, coolant temperature, engine oil pressure, blocked air filter, transmission oil pressure and temperature, handbrake on.
- Heavy duty embossed floor mat easily removed for cleaning and under floor service access.
- Warning lights for main beam, hazard warning, direction indicators.
- Side console mounting of switches for ignition, 2 speed fan, road lights, front and rear work lights, hazard warning. Fuse and relay box are also side console mounted.

## CAPACITIES

Hydraulic system (inc. tank)	78ltrs (17.2gal)
Fuel tank	77ltrs (17gal)
Engine coolant	15.5ltrs (3.4gal)
Engine oil	10.7ltrs (2.4gal)
JCE Syncro Shuttle:	
Torque converter, shuttle and gearbox	14.0ltrs (3.1gal)
Axle (per axle) Diff Housing	4ltrs (0.9gal)
Hubs	2ltrs (0.44gal)

## STANDARD EQUIPMENT

ROPS and FOPS cab with heater.  
Headlights.  
Working lights.  
Direction Indicators.  
Brake lights.  
Hazard warning lights.  
Rotating flashing beacon.  
Horn.  
Suspension seats  
Full audible/visual warning lights monitoring:

Engine oil pressure  
Engine coolant temperature  
Transmission oil temperature  
Transmission oil pressure  
Blocked air filter warning  
No electrical charge warning  
Handbrake warning

Mainbeam  
Direction indicators  
Hazard warning  
Instrumental gauges monitoring:  
Engine coolant temperature  
Fuel gauge  
Hourmeter  
Speedometer

Neutral start safety switch.  
Steering wheel spinner knob.  
Removable floor mat.  
Cab & engine soundproofing.  
Exterior rear view mirrors.  
Stainless steel exhaust.  
In-cab storage compartment.  
Loader lift ram safety strut.  
3 loader hydraulic services and pipework.  
7 excavator services and foot control.  
ISO plus pattern excavator controls.  
Centrifugal dry type engine air filter.  
Heater/Demister.  
6-in-1 shovel.  
Battery isolator.

This equipment may vary according to regional requirements.

## OPTIONAL EQUIPMENT

Quickhitch mounted shovels.  
Quickhitch mounted pallet forks and frame.  
Hammermaster 280 package and pipework.  
JCE multi disc limited slip differential axles.  
JCE street pads to suit standard foot.  
Reverse alarm.  
Rear wash/wipe.  
Excavator and gradillg buckets.  
Seat belt.  
Fire extinguisher.  
Shovel teeth.  
Excavator lifting link with 'D' shackle.  
Thin speaker radio console Oess radio).  
Cyclonic engine air pre-filter.

# SETTING THE STANDARDS BY WHICH OTHERS ARE JUDGED.



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, tractors, crawler excavators, telescopic handlers, wheeled loaders, rough terrain fork lifts, skid steers and mini excavators.

By making constant and massive investments in the latest production technology; the JCB factory has become one 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 care for the environment. .  
This paper has been produced  
without the use of elemental  
chlorine chemicals in the  
bleaching process.

ECO-CHECK: \* \* \* \* \*

