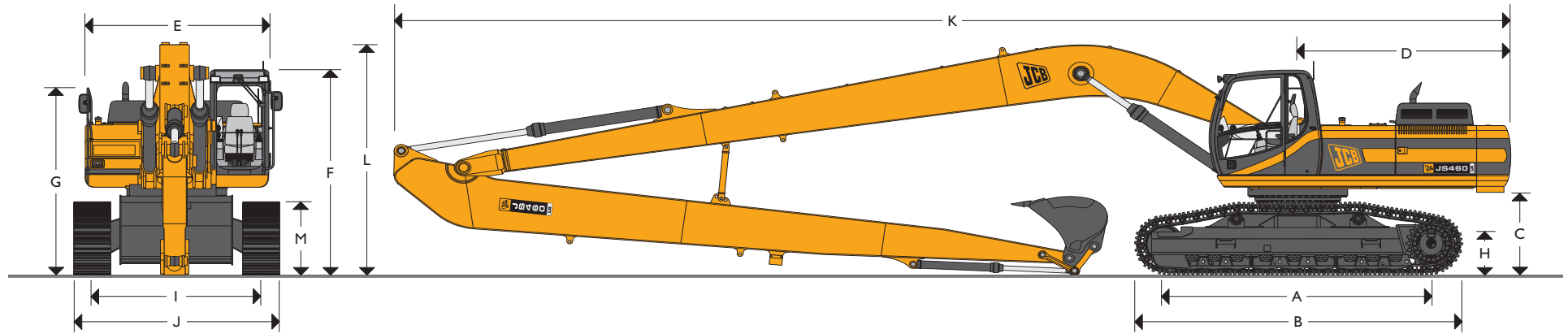




MAX. OPERATING WEIGHT: 51408 kg (113335 lb) GROSS ENGINE POWER: 228 kW (305 hp)



STATIC DIMENSIONS

Dimensions in millimetres (ft-in)	LR	Dimensions in millimetres (ft-in)	LR
A Track length on ground	4400 (14-4)	I Track gauge	2750 (9-0)
B Undercarriage overall length	5380 (17-6)	J Width o/tracks (600mm shoes)	3350 (10-10)
C Counterweight clearance	1192 (3-11)	J Width o/tracks (700mm shoes)	3450 (11-3)
D Tail swing radius	3541 (11-8)	J Width o/tracks (800mm shoes)	3550 (11-6)
E Overall width of superstructure	2990 (9-8)	J Width o/tracks (900mm shoes)	3650 (11-9)
F Height over cab	3290 (10-8)	K Transport length	18450 (60-5)
G Height over grab rail	2590 (8-6)	L Transport height	3744 (12-4)
H Ground clearance	600 (2-0)	M Track height	1200 (3-9)



ENGINE

Model	Isuzu AA-6SD1TC
Type	Water cooled, 4-stroke, 6-cylinder overhead cam vertical in-line, direct injection, turbocharged diesel.
	Tier II low emission with air to air intercooling.
Net power (ISO 3046-INF)	228 kW (305 HP) @ 2000 rpm
Displacement	9.839 Litres (600.4 cu.in.)
Bore/stroke	120mm x 145mm (4.72in x 5.7in)
Air filtration	Dry element with secondary safety element and in-cab warning indicator.
Starting system	24 volt.
Batteries	2 x 12 volt.
Alternator	24 volt, 50 amp.

SWING SYSTEM

Swing motor	Twin axial piston type.
Swing brake	Hydraulic shock-free braking plus automatic spring applied disc type parking brake.
Final drive	Twin gearbox planetary reduction.
Swing speed	9.2 rpm
Swing gear	Large diameter, internally toothed fully sealed grease bath lubricated.
Swing lock	Multi position switchable brake.

UNDERCARRIAGE

Carriage options:	Long carriage fixed track gauge.
Construction:	Fully welded, 'X' type frame with central belly guarding and sloping sidemembers.
Recovery point	Front and rear.
Track shoe options	600mm (24 in), 700mm (27.5 in), 800mm (31.5 in), 900mm (35.5 in).
Track chain	Heavy duty sealed and greased type.
Upper & lower rollers	Heat treated, lubricated and sealed.
Track adjustment	Grease cylinder type.
Track idler	Lubricated and sealed, with spring cushioned recoil.
Quantity of lower rollers	9 per side
Quantity of upper rollers	2 per side
Quantity of track shoes	52 per side
Track guides	Twin or full length. Fitted to both sides of bottom rollers.

HYDRAULIC SYSTEM

A variable flow load sensing system with flow on demand, variable power output and servo operated, multi-function open centre control.

Pumps

Main pumps	2 variable displacement axial piston type.
Maximum flow	2 x 340 L/min (2 x 75 gal/min).
Servo pump	Gear type.
Maximum flow	31 L/min (6.8 gal/min).
Auxiliary pump	40 L/min (8.8 gal/min).

Control valve

A combined four and five spool control valve with auxiliary service spool is standard. When required, twin pump flow is combined to boom, dipper and bucket services for greater speed and efficiency.

Relief valve settings

Boom/Arm/Bucket	319 bar (4626 psi)
With power boost	348 bar (5047 psi)
Swing circuit	280 bar (4061 psi)
Travel circuit	325 bar (4712 psi)
Pilot control	45 bar (652 psi)

Hydraulic cylinders

Double acting type, with bolt-up end caps and hardened steel bearing bushes. End cushioning is fitted as standard on boom, dipper and bucket rams.

Dimensions

Boom	
Bore	160mm (6.3in)
Rod	110mm (4.3in)
Stroke	1580mm (52.2in)
Dipper	
Bore	180mm (7.1in)
Rod	130mm (5.1in)
Stroke	1910mm (75.2in)
Bucket	
Bore	105mm (4.13in)
Rod	75mm (2.95in)
Stroke	997mm (39.25in)

Filtration

The hydraulic components are protected by the highest standard of filtration to ensure long hydraulic fluid and component life.

In tank	150 micron, suction strainer
Main return line	10 micron, fibreform element
Plexus bypass line	1.5 micron, paper element
Pilot line	10 micron, paper element
Hydraulic hammer return	10 micron, reinforced microform element

Cooling

Cooling is provided via a full return line air blast cooler with anti-block wavy cooling fins and separate easy clean fine mesh grill.



TRACK DRIVE

Type	Fully hydrostatic, epicyclic gearbox, three speed with autoshift.
Service brake	Hydraulic counter balance valve to prevent overspeeding on gradients.
Park brake	Disc type, spring applied, automatic hydraulic release.
Gradeability	70% (35 degree) continuous.
Travel speed – high	4.0 km/h (2.4 mph)
Travel speed – mid	2.7 km/h (1.6 mph)
Travel speed – low	2.0 km/h (1.2 mph)
Tractive effort	38,700 kgf (85318 lbf)

EXCAVATOR END

Long reach has a 13600mm boom and 10707mm arm with JS160 bucket cylinder and linkage. Complete with 3 HBCV.

OPERATOR STATION

Press steel with high strength rolled section frame. All tinted safety glass window with fully opening two piece windshield and in shield stowage. Gas strut assisted. Parallelogram wash/wiper. Opening door windows. Air conditioning and heater with windshield defogger. Fully adjustable deluxe suspension seat with headrest, armrest and backrest recline. Seat and servo hand controls are trolley mounted for combined or independent adjustment – hand controls are forward and back adjustable. Radio with digital tuning. Cigarette lighter, digital clock, cup holder and storage area are standard.

AMS – ADVANCED MANAGEMENT SYSTEM

The JCB Advanced Management System matches engine power and pump output to optimize machine performance in each of the four selectable work modes –

H (Heavy)	100% engine and hydraulic power for maximum output
S (Standard)	90% engine and hydraulic power for economical output
L (Light)	70% engine and hydraulic power for precision grading and low fuel consumption
F (Fine)	70% power with permanent power boost for maximum lifting ability

The monitor and service tool can be used to check the function of pressure switches, solenoids and actual values on monitor gauges. It is easy to amend the preset languages shown on the monitor. Using a service tool additional languages can be made available. A maintenance indicator illuminates at the required service interval to make the operator aware of an imminent service. All servicing and basic checks can be carried out using the cab monitor display. A service tool connected to the monitor can be used for more detailed diagnostics and machine history analysis.

STANDARD / OPTIONAL EQUIPMENT

Standard Equipment: Engine fan guard; Cold start pre-heat; Auto engine warm up; Double element air cleaner; Electric refuelling pump; Heavy duty alternator; Electrics isolator; Heavy duty batteries; Cab & engine soundproofing; Cab heater & screen demister; Air conditioning; Tinted glass; Radio; Interior light; Coat hook; Operator's storage box; Removable floor mat; Windscreen wash/wipe; Plug-in power socket; Power boost; Auto-idle; One-touch engine speed control; Boom/swing priority switch; Hydraulic cushion control; Plexus hydraulic oil filtration; HSP pressure test points; Auxiliary pipework mounting brackets; Work lights – boom & mainframe mounted; Undercarriage belly guarding; Upper structure under covers; Swing system cover; External mirrors; Handrail & nonslip pads.

Optional Equipment: Hose burst check valves & overload warning system; Cab guarding FOPS level II; Cab mounted & rear work lights; Rotating beacon; Rain guard; Biodegradable oil; Sun visor; Air suspension seat. Full length track guides.

WORKING RANGE

Boom length: 13.6m (44ft 7in)		
Dipper length		10707mm (35ft 1in)
A	Maximum reach	mm (ft-in) 24008 (78-9)
B	Maximum reach (on ground)	mm (ft-in) 23891 (78-4)
C	Minimum reach (on ground)	mm (ft-in) 303 (1-0)
D	Maximum depth	mm (ft-in) 18836 (61-9)
E	Maximum height	mm (ft-in) 17772 (58-3)
F	Maximum dumping height	mm (ft-in) 15408 (50-6)
G	Minimum dumping height	mm (ft-in) 2018 (6-7)
H	Bucket struck radius	mm (ft-in) 1301 (4-3)
I	Minimum swing radius	mm (ft-in) 8261 (27-1)
J	Minimum swing radius height	mm (ft-in) 15092 (49-6)
K	Maximum ground level span	mm (ft-in) 21753 (71-4)
Bucket rotation		176°
Dipper tearout		kgf (lbf) 8101 (17860)
Bucket tearout		kgf (lbf) 12010 (26477)

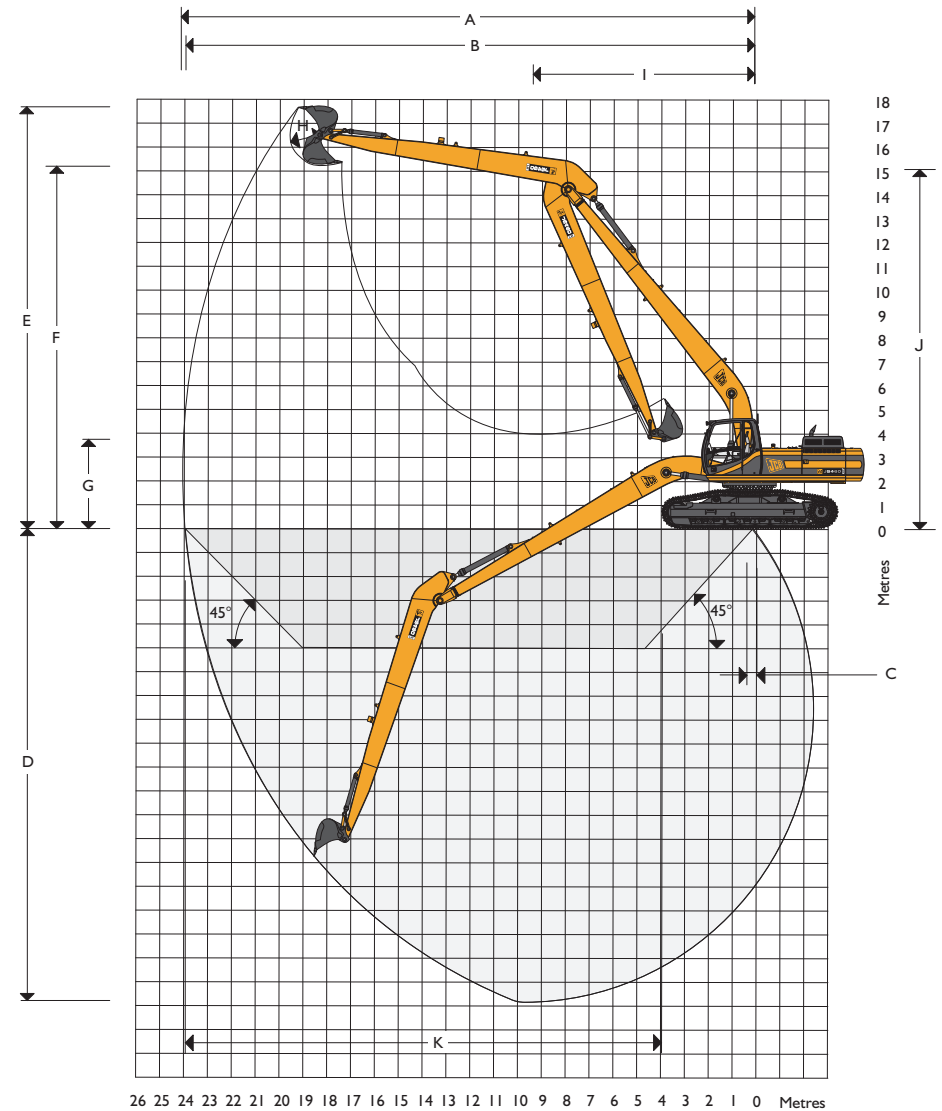
WEIGHTS AND GROUND BEARING PRESSURES

Equipped with 13.6m (44'-7") boom, 10.7m (35'-1") dipper, operator and fuel tank.

Shoe Width	Operating Weight	Bearing Pressure
600mm (24in.)	51,408kg (113,335lb)	0.91kg/sq. cm. (12.89lb/sq. in.)
700mm (28in.)	51,408kg (113,335lb)	0.78kg/sq. cm. (11.05lb/sq. in.)
800mm (31.5in.)	51,408kg (113,335lb)	0.68kg/sq. cm. (9.67lb/sq. in.)
900mm (35.5in.)	51,408kg (113,335lb)	0.60kg/sq. cm. (8.59lb/sq. in.)

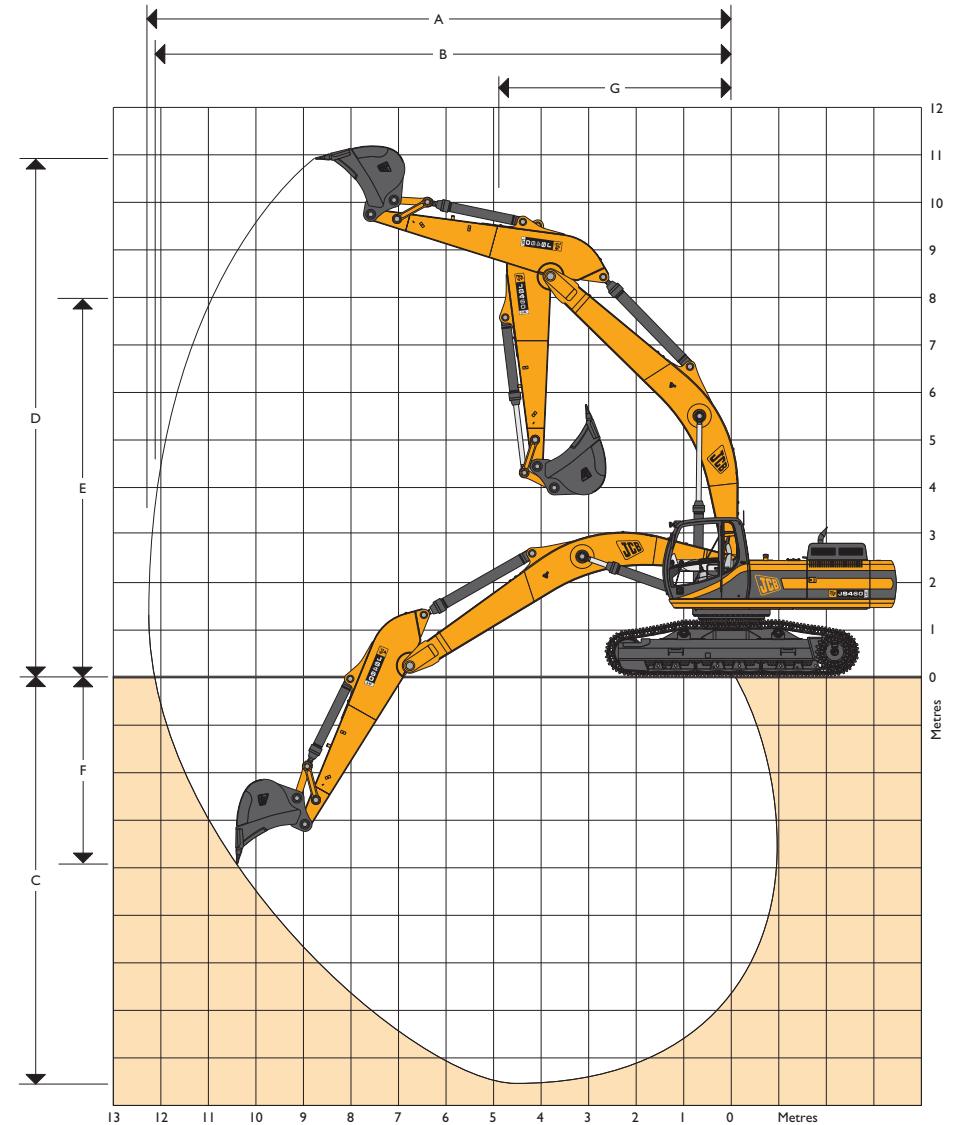
BUCKETS

Bucket linkage is JS160 size, bucket capacity should be calculated using the machine lift chart.



WORKING RANGE

Standard boom	4.76m (15ft 6in) Dipper arm	4.00m (13ft 1in) Dipper arm
A Maximum digging reach	13.13m (43ft 1 in)	12.50m (41ft 0in)
B Maximum reach on ground	12.91m (42ft 4in)	12.28m (40ft 3in)
C Maximum digging depth	9.00m (29ft 6in)	8.37m (27ft 6in)
D Maximum digging height	11.55m (37ft 11 in)	11.24m (36ft 11 in)
E Maximum dumping height	8.46m (27ft 9in)	7.97m (26ft 2in)
F Maximum vertical cut depth	7.36m (24ft 2in)	6.94m (22ft 9in)
G Minimum swing radius	5.07m (16ft 8in)	5.01m (16ft 5in)
Bucket rotation	182 deg	182 deg
Dipper tearout	kgf (lbf) 14600 (32190)	16600 (36600)
Dipper tearout with boost	kgf (lbf) 15900 (35050)	18100 (39900)
Bucket tearout	kgf (lbf) 25100 (55340)	25100 (55340)
Bucket tearout with boost	kgf (lbf) 27500 (60630)	27500 (60630)
Standard boom	3.36m (11ft 0in) Dipper arm	2.50m (8ft 2in) Dipper arm
A Maximum digging reach	11.94m (39ft 2in)	11.19m (36ft 8in)
B Maximum reach on ground	11.71m (38ft 5in)	10.94m (35ft 11 in)
C Maximum digging depth	7.73m (25ft 4in)	6.87m (22ft 6in)
D Maximum digging height	11.08m (36ft 4in)	10.82m (35ft 6in)
E Maximum dumping height	7.80m (25ft 7in)	7.55m (24ft 9in)
F Maximum vertical cut depth	6.35m (20ft 10in)	5.55m (18ft 3in)
G Minimum swing radius	5.02m (16ft 6in)	5.23m (17ft 2in)
Bucket rotation	182 deg	182 deg
Dipper tearout	kgf (lbf) 18800 (41450)	22800 (50270)
Dipper tearout with boost	kgf (lbf) 20500 (45190)	24900 (54890)
Bucket tearout	kgf (lbf) 25100 (55340)	25100 (55340)
Bucket tearout with boost	kgf (lbf) 27500 (60630)	27500 (60630)



LIFT CAPACITIES – Dipper length: 10.7m, Boom: 13.6m, Trackshoes: 700mm, No bucket. **JS460 LR**

Load Point	Reach from swing centre																								
	0m		1.0m		2.0m		3.0m		4.0m		5.0m		6.0m		7.0m		8.0m		9.0m		10.0m		11.0m		
Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg
16.0m																									
15.0m																									
14.0m																									
13.0m																									
12.0m																									
11.0m																									
10.0m																									
9.0m																									
8.0m																									
7.0m																									
6.0m																									
5.0m																									
4.0m							8330*	8330*																	
3.0m									8600*	8600*	10900*	10900*	8720*	8720*	7260*	7260*	6200*	6200*	5410*	5410*	4790*	4790*	4290*	4290*	
2.0m									5820*	5820*	10520*	10520*	9190*	9190*	7600*	7600*	6470*	6470*	5620*	5620*	4950*	4950*	4430*	4430*	
1.0m									5200*	5200*	8350*	8350*	9540*	9540*	7890*	7890*	6700*	6700*	5800*	5800*	5100*	5100*	4550*	4550*	
0m							3810*	3810*	5300*	5300*	7650*	7650*	9770*	8720	8100*	7390	6880*	6360	5950*	5520	5230*	4830	4650*	4250	
- 1.0m					4050*	4050*	4520*	4520*	5710*	5710*	7600*	7600*	9890*	8040	8240*	6770	7010*	5820	6070*	5070	5330*	4450	4740*	3930	
- 2.0m			4860*	4860*	4760*	4760*	5240*	5240*	6260*	6260*	7870*	7870*	9910*	7590	8300*	6320	7090*	5410	6150*	4710	5410*	4130	4810*	3650	
- 3.0m			5400*	5400*	5470*	5470*	5960*	5960*	6890*	6890*	8320*	8320*	9840*	7290	8300*	6000	7120*	5100	6190*	4420	5450*	3870	4850*	3420	
- 4.0m	6160*	6160*	6020*	6020*	6180*	6180*	6690*	6690*	7570*	7570*	8890*	8890*	9720*	7110	8240*	5790	7100*	4870	6200*	4200	5470*	3670	4870*	3230	
- 5.0m	6680*	6680*	6670*	6670*	6900*	6900*	7430*	7430*	8290*	8290*	9550*	9260	9530*	7030	8130*	5650	7040*	4720	6160*	4040	5450*	3510	4860*	3090	
- 6.0m	7260*	7260*	7340*	7340*	7630*	7630*	8190*	8190*	9040*	9040*	10270*	9320	9280*	7010	7970*	5590	6930*	4630	6090*	3930	5400*	3400	4830*	2980	
- 7.0m	7870*	7870*	8020*	8020*	8380*	8380*	8960**	8960*	9840*	9840*	10570*	9420	8980*	7040	7750*	5570	6770*	4580	5970*	3870	5310*	3330	4760*	2910	
- 8.0m	8510*	8510*	8730*	8730*	9140*	9140*	9770*	9770*	10660*	10660*	10100*	9570	8630*	7120	7490*	5610	6570*	4580	5820*	3850	5190*	3300	4660*	2870	
- 9.0m	9170*	9170*	9460*	9460*	9920*	9920*	10590*	10590*	11370*	11370*	9550*	9550*	8220*	7240	7170*	5680	6320*	4620	5620*	3870	5030*	3300	4520*	2860	
- 10.0m	9850*	9850*	10200*	10200*	10720*	10720*	11450*	11450*	10550*	10550*	8940*	8940*	7740*	7410	6790*	5790	6020*	4700	5370*	3920	4820*	3340	4340*	2880	
- 11.0m			10970*	10970*	11550*	11550*	11710*	11710*	9640*	9640*	8240*	8240*	7190*	7190*	6350*	5940	5660*	4810	5070*	4000	4560*	3400	4120*	2930	
- 12.0m			11760*	11760*	12410*	12410*	10310*	10310*	8620*	8620*	7450*	7450*	6560*	6560*	5840*	5840*	5230*	4950	4710*	4120	4250*	3490	3850*	3010	
- 13.0m					10950*	10950*	8740*	8740*	7460*	7460*	6560*	6560*	5850*	5850*	5250*	5250*	4730*	4730*	4280*	4260	3880*	3620	3510*	3120	
- 14.0m							6970*	6970*	6170*	6170*	5550*	5550*	5020*	5020*	4560*	4560*	4150*	4150*	3770*	3770*	3420*	3420*	3100*	3100*	
- 15.0m									4700*	4700*	4390*	4390*	4080*	4080*	3770*	3770*	3460*	3460*	3170*	3170*	2880*	2880*	2600*	2600*	
- 16.0m											3060*	3060*	2980*	2980*	2830*	2830*	2650*	2650*	2440*	2440*	2210*	2210*	1970*	1970*	
- 17.0m															1730*	1730*	1670*	1670*	1550*	1550*	1390*	1390*	1180*	1180*	

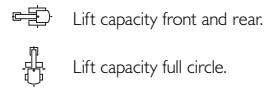
Lift capacity front and rear.
 Lift capacity full circle.

Notes:

1. The above loads are in compliance with SAE and ISO Hydraulic Excavator Lift Capacity Standards.
2. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
3. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

LIFT CAPACITIES – Dipper length: 10.7m, Boom: 13.6m, Trackshoes: 700mm, No bucket. **JS460 LR**

Load Point	Reach from swing centre																								Max. Reach		
	12.0m		13.0m		14.0m		15.0m		16.0m		17.0m		18.0m		19.0m		20.0m		21.0m		22.0m						
Ht.	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	mm	
16.0m														980*	980*									910*	910*	18118	
15.0m														1370*	1370*									880*	880*	18835	
14.0m														1650*	1650*	1170*	1170*							860*	860*	19474	
13.0m														1870*	1870*	1470*	1470*	880*	880*					850*	850*	20042	
12.0m														2050*	2050*	1720*	1720*	1220*	1220*					840*	840*	20545	
11.0m														2220*	2220*	1920*	1920*	1480*	1480*					840*	840*	20989	
10.0m														2230*	2230*	2100*	2100*	1700*	1700*	1130*	1130*			840*	840*	21376	
9.0m												2380*	2380*	2260*	2260*	2150*	2150*	1900*	1900*	1370*	1370*			850*	850*	21710	
8.0m												2410*	2410*	2280*	2280*	2170*	2170*	2070*	2010	1580*	1580*			860*	860*	21993	
7.0m											2600*	2600*	2450*	2450*	2310*	2310*	2190*	2190*	2080*	1940	1760*	1660	1070*	1070*	870*	870*	22227
6.0m							2830*	2830*	2650*	2650*	2490*	2490*	2350*	2350*	2220*	2160	2100*	1870	1920*	1600	1250*	1250*	890*	890*	22413		
5.0m			3360*	3360*	3110*	3110*	2890*	2890*	2700*	2700*	2530*	2530*	2380*	2380	2250*	2070	2130*	1790	2020*	1540	1390*	1300	910*	910*	22554		
4.0m	3780*	3780*	3460*	3460*	3190*	3190*	2950*	2950*	2750*	2750*	2570*	2570*	2410*	2260	2270*	1970	2150*	1710	2030*	1470	1520*	1250	940*	940*	22649		
3.0m	3890*	3890*	3550*	3550*	3260*	3260*	3020*	3020*	2800*	2790	2620*	2440	2450*	2140	2300*	1870	2170*	1620	2050*	1400	1610*	1200	970*	970*	22700		
2.0m	4000*	4000*	3640*	3640*	3340*	3340*	3080*	2970	2850*	2620	2660*	2300	2480*	2020	2330*	1770	2190*	1540	2060*	1330	1680*	1140	1000*	1000*	22706		
1.0m	4100*	4050	3720*	3570	3400*	3150	3130*	2780	2900*	2460	2690*	2170	2510*	1910	2350*	1670	2210*	1460	2070*	1270	1720*	1090	1040*	980	22668		
0m	4180*	3750	3790*	3320	3470*	2940	3180*	2600	2940*	2300	2730*	2040	2540*	1790	2370*	1580	2220*	1380	2080*	1200	1710*	1040	1090*	950	22586		
- 1.0m	4260*	3480	3860*	3090	3520*	2740	3230*	2430	2980*	2160	2760*	1910	2560*	1690	2390*	1490	2230*	1310	2080*	1140	1660*	990	1150*	930	22458		
- 2.0m	4320*	3240	3910*	2880	3560*	2560	3260*	2280	3000*	2030	2780*	1800	2580*	1600	2400*	1410	2230*	1240	2080*	1090	1550*	950	1210*	920	22284		
- 3.0m	4360*	3040	3940*	2700	3590*	2410	3290*	2150	3020*	1910	2790*	1700	2580*	1510	2400*	1340	2220*	1190	2060*	1050	1360*	920	1280*	910	22063		
- 4.0m	4380*	2870	3960*	2550	3600*	2280	3300*	2030	3030*	1810	2790*	1620	2580*	1440	2390*	1280	2210*	1140	2040*	1010			1370*	920	21794		
- 5.0m	4370*	2730	3960*	2430	3600*	2170	3290*	1940	3020*	1730	2780*	1550	2560*	1380	2370*	1230	2180*	1100	2000*	990			1460*	940	21475		
- 6.0m	4340*	2630	3930*	2340	3580*	2080	3270*	1860	3000*	1670	2750*	1490	2530*	1340	2330*	1200	2130*	1080	1740*	970			1580*	960	21103		
- 7.0m	4290*	2560	3890*	2270	3540*	2020	3230*	1810	2960*	1620	2710*	1450	2480*	1310	2270*	1180	2060*	1070					1720*	1000	20676		
- 8.0m	4200*	2520	3810*	2230	3470*	1990	3160*	1780	2890*	1590	2640*	1430	2410*	1290	2190*	1170	1960*	1080					1880*	1060	20190		
- 9.0m	4090*	2510	3710*	2220	3370*	1970	3070*	1760	2800*	1590	2550*	1430	2310*	1300	2070*	1190							1920*	1130	19641		
- 10.0m	3930*	2520	3570*	2230	3240*	1980	2940*	1770	2670*	1600	2420*	1450	2170*	1330	1910*	1230							1910*	1230	19023		
- 11.0m	3730*	2560	3380*	2260	3070*	2010	2780*	1810	2510*	1630	2240*	1490	1980*	1380									1890*	1350	18329		
- 12.0m	3480*	2630	3150*	2320	2850*	2070	2560*	1860	2290*	1700	2010*	1560											1850*	1500	17549		
- 13.0m	3180*	2730	2870*	2410	2570*	2160	2290*	1950	2000*	1790													1800*	1700	16673		
- 14.0m	2790*	2790*	2500*	2500*	2210*	2210*	1920*	1920*															1710*	1710*	15684		
- 15.0m	2320*	2320*	2040*	2040*	1750*	1750*																	1570*	1570*	14558		
- 16.0m	1720*	1720*	1440*	1440*																			1360*	1360*	13260		
- 17.0m																							1000*	1000*	11733		



Notes:

1. The above loads are in compliance with SAE and ISO Hydraulic Excavator Lift Capacity Standards.
2. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
3. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

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, tractors and compaction equipment.

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

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 more than 650 dealers and agents, we aim to deliver the best customer support in the industry.

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

