

JS8I JCB Excavator Specification

ENGINE

Model	: Kirloskar 4R 1040 NA
Type	: Water-cooled, 4-stroke, 4-cylinder
Gross power	: 76 hp at 2200 RPM (SAEJ 1995)
Battery	: 100 AH
Starting system	: 12 Volt
Alternator	: 85A
Aspiration	: Natural

CAB + CAB GUARD

Pressed steel construction with higher strengthened rolled sections. Excellent all round visibility during digging, loading & positioning. Removable front lower glass and sliding rear window. Excellent ergonomic positioning of operating levers for reduced operator fatigue. Optional ducted AC unit for operator comfort. Mobile phone charging point & lockable stowage available. Rubber covered track pedal, water bottle & document holders provided. Optional cab guards for cab front & top available for protection against flying objects. Additional cab top light for illumination.

CONTROLS

Excavator : All servo lever operated, to ISO control pattern.

Tracks : Individually servo operated by foot pedal or hand lever. Speed selection via hand operated switch.

Auxiliary : Via foot operated servo pedal.

Controls isolation : Gate lock lever at cab entrance, and a console mounted switch.

Engine speed : Hand operated control lever. Mode change is done through toggle switch.

Engine stop : Hand operated stop cable.

Instrumentation : Instrumentation panel contains dial pointer type gauges for fuel level, engine water temperature readings & hour meter. Whilst audible & visual warnings indicate low engine oil pressure, low engine coolant level, engine overheat, no battery charge, hydraulic oil overheat, indication lights are incorporated in panel to indicate swing lock operation, servo control isolation, high travel speed and E & P modes of operation.

EXCAVATOR END

Choice of either dipper lengths, to suit the requirements of reach, dig depth, load-over height tear-outs and site versatility.

EXCAVATOR BUCKET

All buckets are JCB type fully-welded steel, with hardened steel pivot pins and replaceable wear parts.

Bucket size	Capacity	Weight
Max. width toe plate	(SAE HEAPED)	
800 mm	0.24 cum	318 kg
950 mm	0.32 cum	343 kg

HYDRAULIC SYSTEM

Power modes

The equipment has two power modes

Economy (E) :

For optimum output and fuel economy.

Productivity (P) :

For higher output.

Pumps

Main pumps	: Variable displacement axial piston type
Maximum flow:	2 x 70.3 lpm (main)
Servo pump	: Gear type maximum flow
Dozer	: Gear type, maximum flow 21.5 lpm

Control valve

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

Relief valve setting

Boom / Arm / Bucket	: 284 bar
Swing Circuit	: 225 bar
Travel Circuit	: 284 bar

Hydraulic cylinders

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

Filtration: The hydraulic components are protected by the highest standard of filtration to ensure long hydraulic fluid life up to 5000hrs (subject to SOS) and component life.

In tank: 105 micron, suction strainer

Main return line : 10 micron, fibre form element

Pilot line: 10 micron, paper element.

Hydraulic hammer (optional) return: 10 micron reinforced micro form element

Cooling: Cooling via a full return line air blast cooler to meet the tough Indian working condition.

SWING SYSTEM

Swing speed : 12.5 RPM.

Swing motor : Axial piston type.

Swing brake : Hydraulic braking assisted by spring applied disc- type parking brake.

Final drive : Planetary reduction.

Swing gear : Large diameter, internally toothed, fully sealed grease bath lubricated.

Swing lock : Multi-position hydraulic.

UNDERCARRIAGE

Construction : Fully-welded, "X" frame type with sloping side members with dirt relief holes under top rollers.

Upper & lower rollers : Heat treated, sealed and lubricated.

Track type : Sealed and greased

Track adjustment : Grease cylinder type.

Track idler : Sealed and lubricated, with spring enhanced recoil.

Track shoe : 450 mm Tripler Grouser - (Standard)

Rollers and shoes (each side)

Upper rollers : 1

Lower rollers : 5

Track shoes : 39

WEIGHT AND GROUND BEARING PRESSURE

Machine equipped with 3.7m boom & 1.74m Dipper Arm and excavating bucket, operator, full fuel tank and lubes.

Standard boom track shoes with dozer	Operating weight	Bearing pressure
450mm	8400 kg	0.38 kg/sq.cm

STANDARD EQUIPMENT

Dozer blade.
FM radio.
USB media player with speakers.
Cab interior light.
HSP pressure test points.
Rock-breaker pipe work mounting brackets.
One work light each on boom & tool box.
Upper structure under covers.
Tool kit.
450mm triple grouser track shoes.
Undercarriage belly guarding.
0.32 cu.m general purpose bucket.
Additional work lights on cab and counterweight.
Liveline.

OPTIONAL EQUIPMENT

Ripper tooth
0.24 cu.m bucket
Rock-breaker (HM390)
Rock-breaker circuit
First aid kit
Fire extinguisher
Air-conditioned cabin
Cab grill (front & top)
Short boom & arm

TRACK DRIVE

Japanese Hydraulic Components

Type: Fully hydrostatic 2 speed.

Travel motors: Axial piston type, fully-guarded within undercarriage frame.

Final drive: Planetary reduction, bolt-on sprockets

Service brake: Hydraulic counter-balance valve to prevent over-speeding on gradients.

Park brake: Disc type, spring applied, automatic hydraulically released.

Gradeability : 70% (35 deg.) continuous

Travel Speeds : High - 5.1 km/hr,
Low - 3.1 km/hr

Tractive effort : 55.1 kN (5600 kgf)

SERVICE CAPACITIES

Fuel tank	164 lt
Engine coolant	23 lt
Engine oil	14 lt
Track reduction gear (each side)	1.7 lt
Hydraulic system	92 lt
Hydraulic tank	55 lt