

NEW JCB NXT 140

INTELLI
CONTROL



THE NXT LEVEL

Engine Power: 75 kW (100 hp) | Bucket Capacity: 0.63- 0.72 cu.m | Operating Weight: 14,320 kg





JCB NXT 140



NXT Level of reliability

Heavy duty track chain & lower frame
Reinforced boom & arm
One global quality - Industry best components

NXT Level of fuel efficiency

Energy saving **eco**Hydraulics
Customised mode selection : eco, power & power+
Auto idler & one touch idler

NXT Level of comfort & ease of use

New 7" colour LCD display - **IntelliControl**
Rotary dial controlled engine speed & mode selection
Large cabin with thin & low effort joystick

NXT Level of connect

All new LiveLink with enhanced features:
Service - Health monitoring & alerts
Operation - Utilisation reports
Security - Geofencing, time curfew, tow-away alert, fuel level drop alert

NXT Level of performance

New Power Plus mode for 6%* higher output
Regenerative hydraulic circuit
High operating weight for high stability & lift capacity

NXT Level of intelligence

Complete view of entire operation
Machine performance & health parameter
Ease of machine usage

NXT Level of savings on maintenance

Industry leading maintenance interval:
Hydraulic oil - 5000 hrs.
Engine oil - 500 hrs.
Boom pivot pin greasing - 50 hrs.



FABRICATION

1 High precision laser cutting technology is only used by JCB in the industry for excavator parts. This cutting-edge technology provides accurate profile cut parts, delivers stronger structures.

2 JCB is the first in the industry to use a bevel cutting robot, which gives an accuracy of 0.1 mm to the parts, thereby ensuring best weld joints and strength to each component.

3 JCB uses the unique flattening rollers for 9-roll straightening process which makes the parts straight within 0.1 mm. This ensures accuracy of manufacturing for excellent strength leading to stronger component.

4 The high precision CNC press bending used by JCB ensures reliability of the parts. This process delivers high precision and accurate bending of parts making them high quality and reliable, JCB has the biggest capacity for press brakes in India to deliver long parts without joints.

5 The unique hydraulic Jigs make every JCB part reliable, accurate and repeatable. The pre-defined control points in this machine give every part the desired accuracy and avoid any manual intervention.

6 JCB uses the latest vision system in the robotic welding to weld 100% parts of the excavators. This unique addition to the conventional robotic welding ensures precise weld position thereby, giving perfect structures for the excavators.

7 FARO dimensional Inspection is the latest technology used by JCB for quality assurance. This machine can measure the parts in few microns ensuring best-in-class machine components.

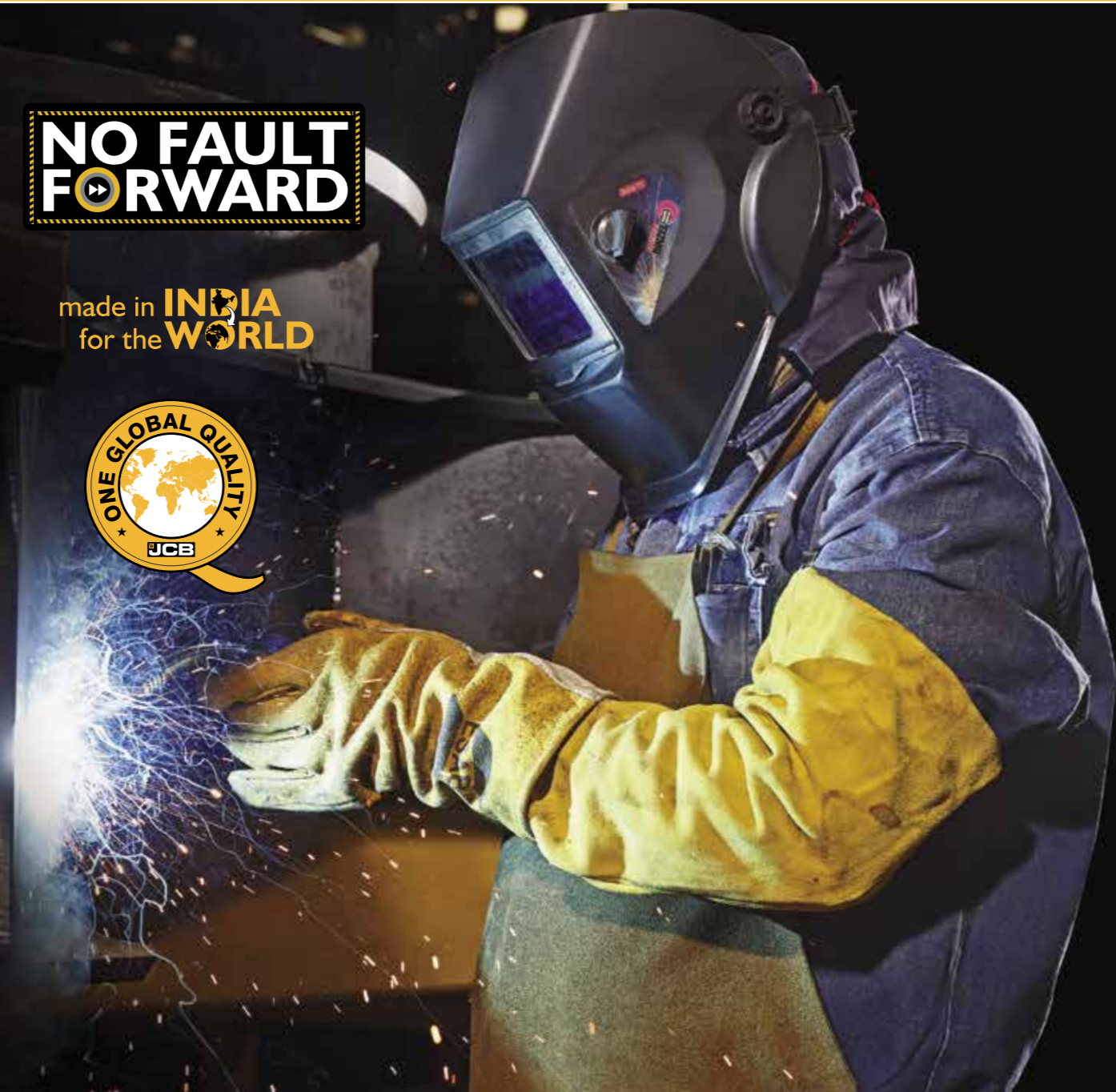
8 Ultra-sonic weld Inspection, the process being used only by JCB ensures zero defect in welding. This process checks internal weld integrity. 100% of the JCB parts go through this test.

9 The state-of-the-art duplex boring machine is used for the final process that ensures critical dimensions within 10 microns hence improving the quality of the assembly.

10 Bolstering JCB's promise of zero defect machine, is the pre-dispatch inspection. JCB experts carry out the PDI checks and other functional tests of each and every fabrication before assembly, thus making sure there is no fault forward.

NO FAULT FORWARD

made in **INDIA** for the **WORLD**



1 Laser cutting technology



2 Bevel cutting robot



3 Unique flattening rollers



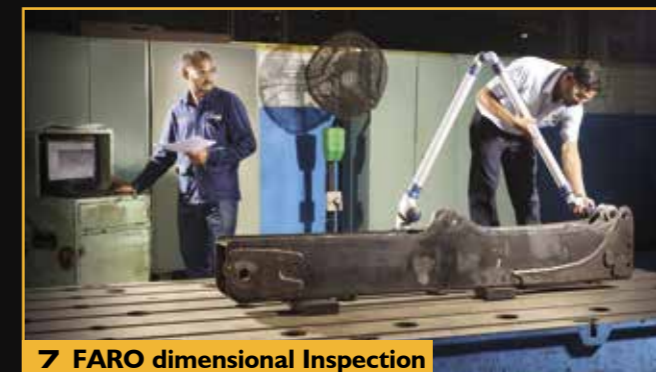
4 CNC press



5 Hydraulic jigs



6 Robot welding with camera vision system



7 FARO dimensional Inspection



8 Ultra-sonic weld inspection

NXT LEVEL OF RELIABILITY

JCB'S NXT 140, THE MOST RELIABLE BUSINESS PARTNER.

1 Boom and arm are made of high tensile steel that offers higher strength & longer life in most arduous applications. Critical stress points are strengthened, especially boom foot on either sides to ensure long life. Additional reinforcement plate and wear ribs on arm bottom plate provide strength and protection from damage while working in a quarry.

2 Heavy duty undercarriage: The lower frame is of X-type design which provides higher strength and rigidity. Belly guard comes as standard which protects the rotary joint & hoses from external damage. Strengthened idler area for higher strength. Heavy duty travel motor cover to protect the motor from external damage.

3 Durable upper frame: Rugged construction of upper frame with reinforced boom mounting area provides durability in tough working conditions.

4 Heavy duty track link with higher sectional area provides higher strength and durability even while working in hard strata.

5 Dust and water proof IP67/ IP69 connectors have been used in electrical connectors for longer life.

6 0.72 cu.m bucket is designed for higher life in general applications and 0.63 cu.m stronger bucket with side cutter specially designed for quarry application.



NXT LEVEL OF PERFORMANCE

GET NXT LEVEL OF PERFORMANCE WITH NEW POWER MODES FOR UNMATCHED OUTPUT.

1 3 user friendly modes : eco, Power & Power+, opt the right one for the required working condition and output.

2 Hydraulic regenerative system on boom & arm operation, recycles hydraulic oil across the cylinders for faster cycle time & reduced overall fuel consumption.

3 Excellent bucket and arm tear out forces result in higher output and faster completion of work.

4 High operating weight of 14.3 ton offers higher machine stability while working in rough underfoot conditions while offering high lift capacity.

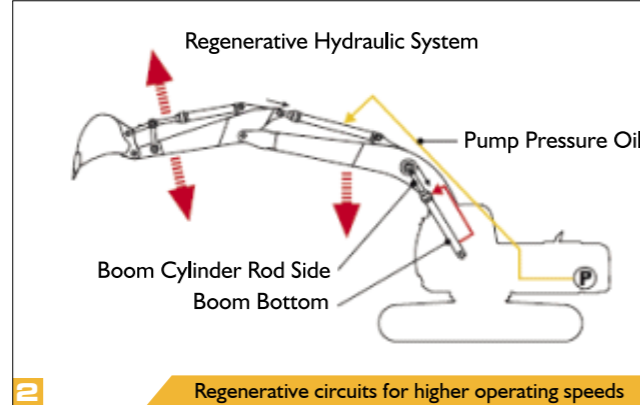
5 High swing speed of 13.6 rpm helps in completing the digging cycle in less time while increasing overall productivity of the machine.



5

Power mode		Usage
P+	Power Plus	Provides maximum output. Suitable for high output in heavy duty strata.
P	Power	For high output requirements.
E	Economy	For general duty and digging operations.

1



2

Regenerative circuits for higher operating speeds



3



6% Higher Output
*P+ Mode

*T&C Apply.

NXT LEVEL OF EFFICIENCY

THE CLASS LEADING EFFICIENCY WITH ENERGY SAVING **ecoHYDRAULICS** OFFERING NXT LEVEL OF SAVINGS.

1 **ecoHydraulics** have been designed to make the hydraulics more efficient by reducing losses in the system. These help in reducing fuel consumption and provide savings.

2 Auto idler reduces engine speed automatically when machine is not at work, thus saving fuel.

3 One touch idler system activated through the switch provided on RH Joystick reduces the engine speed instantaneously to low idle whenever required. This further helps to reduce fuel consumption.



T&C Apply.



NXT LEVEL OF COMFORT AND EASE OF USE

A COMFORTABLE OPERATOR IS A PRODUCTIVE OPERATOR.

1 Best-in-class 7 inch digital colour monitor displays operational & maintenance parameters to keep the operator updated on the machine's status. It displays power modes, working hours including attachment selection, trip hours, real time fuel quantity and host of other information so that the operator can maximise machine output & uptime.

2 Easy to use rotary switch controls the engine speed and power modes selection as per the job requirement.

3 Thin and low effort joystick ensures fatigue free operation for longer hours.

4 Easy to open roof hatch assisted with 2 gas strut helps to keep the cab well ventilated.

5 4 standard working lights: 2 on Cabin, 1 on the Boom-LH and 1 on tool box. 1 Optional working light on the counterweight.

6 Easy to remove lower front glass ensures better ventilation and visibility.



7 Wide and rubber coated footrests provide excellent grip and excellent travel control.

8 Higher visibility and safe operations with single piece right hand side & front roof corner glass.

9 Powerful AC option to cool the cab with the multi-position wind outlet points from the back, front and bottom side.

10 New improved fully adjustable seat with increased reclining angle enhances backrest support gives excellent comfort to the operator and leads to fatigue-free operation for longer hours.

11 Cabin is of pressed steel with large internal space and excellent overall visibility.

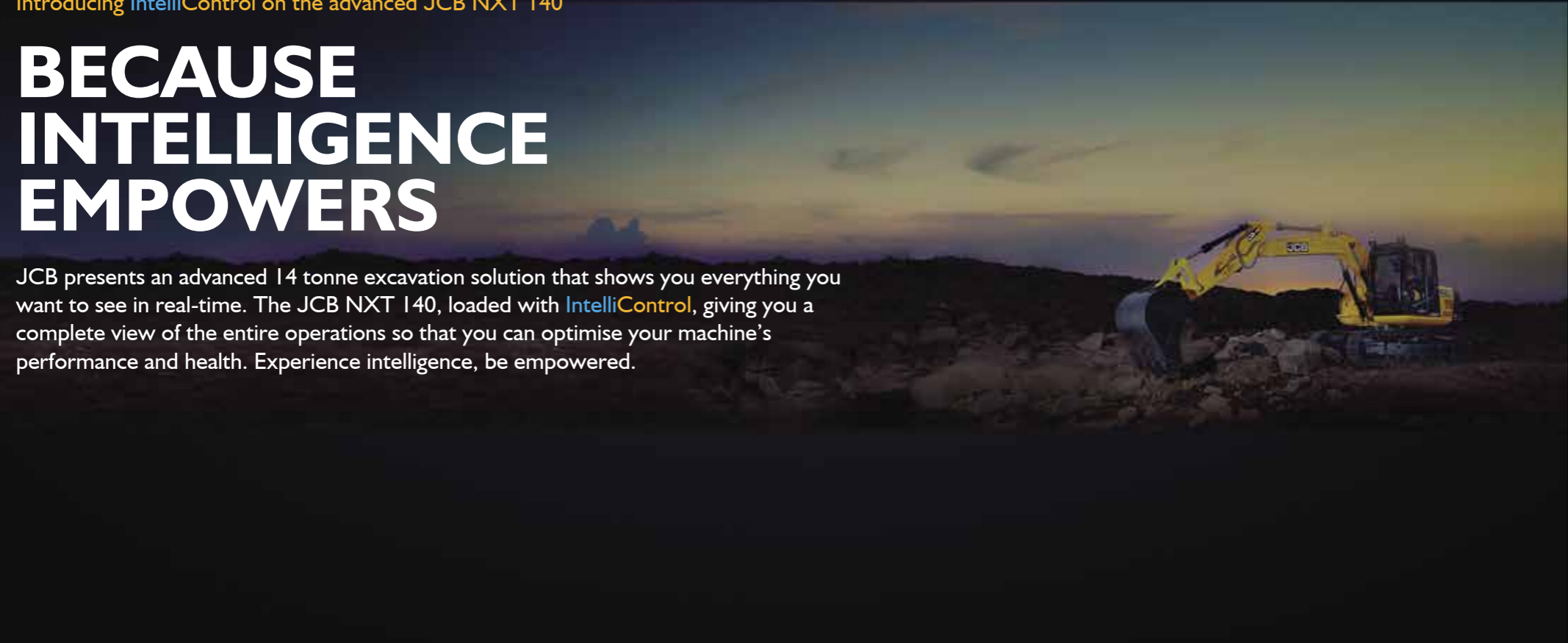
12 Cab is mounted on 6 nos. viscous mounts to absorb vibration that ensures comfort for the operator.



Introducing IntelliControl on the advanced JCB NXT 140

BECAUSE INTELLIGENCE EMPOWERS

JCB presents an advanced 14 tonne excavation solution that shows you everything you want to see in real-time. The JCB NXT 140, loaded with IntelliControl, giving you a complete view of the entire operations so that you can optimise your machine's performance and health. Experience intelligence, be empowered.



Digital anti-glare informative colour display

Operational information



Quantity of fuel left in tank



Engine speed & operating mode status



Trip meter



Auto idle status & time setting



Machine operating parameters



Rear view camera option

Maintenance information



Maintenance due information



Colour coded health alerts based on severity



Hour meter, counting of attachment operation



Easy diagnostic system



Service warning alerts

NXT LEVEL OF EASY MAINTENANCE

THE DESIGN OF JCB NXT 140 ENSURES EASE OF MAINTENANCE AND ALERTS ON DISPLAY WITH WHICH YOU CAN PLAN THE MAINTENANCE IN ADVANCE. GET THE NXT LEVEL OF MORE UPTIME, HIGHER MACHINE UTILISATION AND QUICK SERVICEABILITY.

1 Plan your work better with the maintenance reminders on the display, which gives information with regard to the hours left for next service. Refuel your machine on time, as the monitor displays the quantity of fuel left inside the tank.

2 Advanced self diagnosis system with error codes and multi-coloured warning alerts for easy and quick maintenance.

3 Display of all critical parameters, accessed through internal menu for easy health monitoring.

4 Independent breaker hour meter indicates the hours for breaker attachment usage, thus helping in maintenance planning.

5 Ensure safety of your machine with alerts about high engine coolant temperature, low engine oil pressure, low coolant level, clogged air filter & high hydraulic oil temperature.



Next service due



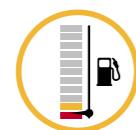
Quantity of fuel left (in litres)



4 Independent breaker hour meter



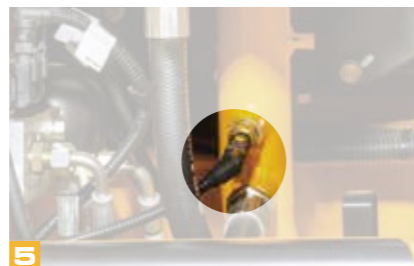
Coolant temperature



Low fuel level



Air filter clog



5 Wire mesh guard on the cooling pack to prevent entry of debris or other objects in cooling pack. It protects the engine & hydraulic system from overheating, thereby providing ease of maintenance as well as higher machine uptime.

7 Side by side installation of engine radiator and oil cooler offers ease of cleaning while enhancing cooling efficiency of the system.

6 The engine bonnet is compact in size and is supported by a gas strut. It helps in easy and effortless handling of the bonnet during maintenance. It also provides the operator high rear end visibility.

9 Battery disconnect switch helps to isolate machine's electric system easily whenever required.



NXT LEVEL OF SAVINGS ON MAINTENANCE

THE JCB NXT 140 IS ENGINEERED TO GIVE YOU MORE PROFITS AND LESS MAINTENANCE COST. THE LONG SERVICE INTERVALS AND HIGH QUALITY PARTS GIVE YOU THE NXT LEVEL OF LOWER DOWNTIME AND HIGHER PROFITS.

1 JCB's innovative filtration system with high efficiency glass fibre main filter, extends hydraulic maintenance intervals. It requires hydraulic oil change at 5000 hrs & hydraulic filter change at 1000 hrs in bucket operation.

2 Fuel filter, oil filter and engine oil require replacement at 500 hrs. High engine maintenance interval reduces maintenance cost and increases machine availability.

3 Greasing interval of 50 hrs is achieved with graphite infused bushes at boom ends for higher uptime and lower maintenance cost.

4 Turbine type air pre-cleaner provides higher air filter life, less maintenance cost & enhanced engine life.

5 High capacity fuel pre-filter with water separator removes impurities and water from fuel, thus enhancing the service life of fuel pump and injectors.

6 Radial seal type air filter elements provide secure and error-free sealing, protect the engine from dust particles keeping it clean and thereby enhancing engine life. In addition, filter elements are covered with wire mesh to avoid damage.

SERVICE INTERVALS	
Engine oil, oil filter and fuel filters	Every 500 hours
Hydraulic main filter	Every 1,000 hours
Hydraulic oil	Every 5,000 hours

1 & 2



4



5



By using graphite impregnated bronze bushes, JCB has increased the boom and dipper greasing intervals to 50 hours for normal applications.

3



6



NXT LEVEL OF SAFETY

SAFETY IS PRIMARY FOR JCB WHETHER IT IS OF THE MACHINE OR OF THE OPERATOR THEREBY, SERVING YOU WITH FIRST-IN-CLASS SAFETY PARTS AND FEATURES THAT ALSO ENSURE LOW DOWNTIME AND HIGHER PRODUCTIVITY.

1 Ensure higher uptime & better management of your fleet with an improved advanced telematics system - LiveLink. It helps the owners to know about several aspects of their machines including location tracking, machine utilisation report, machine health alerts, tow-away alerts, time curfew, geofencing and sudden drop in fuel level.

2 Hydraulic functions to avoid unintended movements: JCB's unique 2GO system ensures that the hydraulic operation of the new JCB NXT 140 can only be started from locked position via two separate inputs, which avoids unintended machine operation.

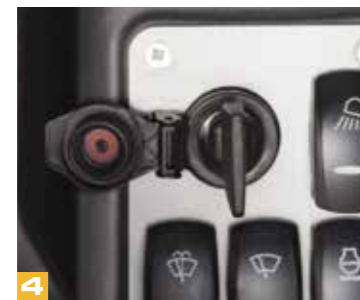
3 Swing lock system enables the operator to lock the swing operations only, whenever required.

4 Anti-engine restart system & anti-over cranking system protect the starter motor from damage, thus ensuring longer starter motor life & higher uptime.

5 Hydraulic accumulator enables the operator to lower down the front attachment in case of any emergency without starting the engine.



Stay Connected 24x7



6 Belly-guard installed in the lower frame and plates under the upper frame protect the major components from external damage, enabling the machine to work in tough underfoot conditions.

7 Laminated RH & front top glass resist the damage against impact and provide comfortable & safe working environment to the operator.

8 Rigid hand rails for better support while climbing on the machine.

9 Engine start interlock is provided to ensure safe start of the machine, the engine can be started only when the servo isolator lock is ON.



NXT LEVEL OF CARE

GIVE YOUR MACHINE EXTENDED WARRANTY AND CARE.

- JCB Careplus is an extended warranty programme that comes into effect after the machine standard warranty expires.
- JCB Careplus can be purchased within the 1st year from the sale of the machine.
- The programme offers you peace of mind and saves your maintenance cost even after your machine standard warranty expires.



BENEFITS OF JCB CAREPLUS

<p>No limits on number of claims</p>	<p>Preventive maintenance service*</p>	<p>Nationwide coverage*</p>
<p>JCB skilled manpower support</p>	<p>Maximum productivity</p>	<p>Maximum uptime</p>
<p>Maximum performance</p>	<p>Breakdown cost protection</p>	<p>Better resale value</p>



*T&C Apply

NXT LEVEL OF CONNECT

NOW BE ASSURED OF YOUR JCB EXCAVATOR'S SERVICE, OPERATION AND SECURITY WITH THE ADVANCED TELEMATICS SYSTEM CALLED LIVENLINK*.

Security

- In case of sudden drop in fuel level get an SMS/e-mail alert.
- Alerts you via SMS/e-mail in case the machine is used outside the set hours.
- Helps to locate your machine precisely on the map to display its current location.
- Get SMS/e-mail alerts in case the machine moves out of the geofenced area.
- Alerts you via SMS/e-mail in case the machine is being towed away even in engine off condition.

Operation & performance monitoring

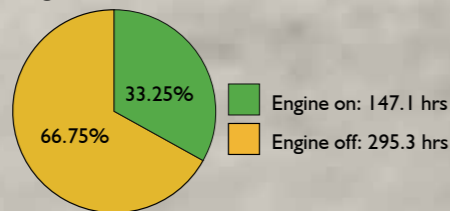
- Idle time monitoring helps in analysing the extent to which engine was idle. This can be used for better site management to minimise idle hours and save fuel consumption.
- Machine usage can be monitored in detail including the hours worked in each mode.
- Instantaneous fuel level monitoring.

Reports & alerts

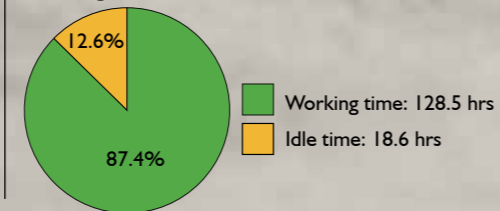
- Customised reports on performance, utilisation, fleet summary, landmark activity, machine hours and service status.
- Easier fleet management.
- Periodic reports - daily, weekly, monthly or as required.
- Machine status and critical health alerts.

User friendly reports

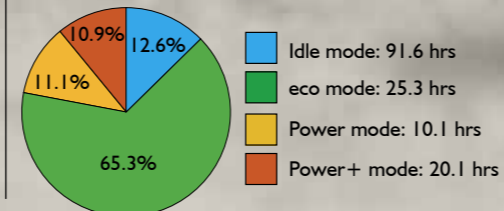
Engine on-off time



Working & idle time



Power mode



Proactive maintenance & usage

- Maintenance reminders.
- Alerts are provided in case any critical health parameter needs attention. Such alerts are displayed on the dashboard of the LiveLink website. These are sent by e-mail/ SMS.

Safety

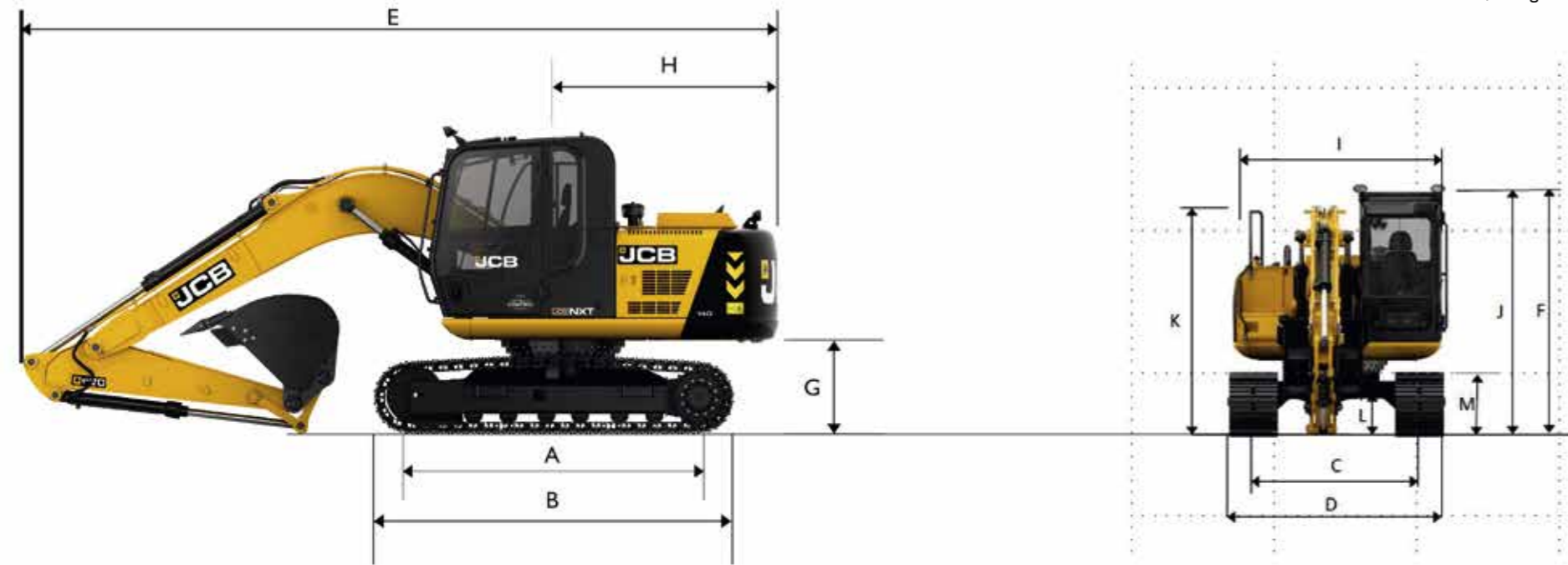
- Engine high rpm shut down report: Know the number of times the engine is shut down while working at high speeds.
- Long engine idling report: Know the number of times the machine idles for a long time, minimising idle hours and saving fuel.
- Critical health alerts on the parameter which needs immediate attention.



Stay connected 24x7

STATIC DIMENSIONS

GROSS ENGINE POWER : 100 hp
 MAX. OPERATING WEIGHT : 14,320 kgs.



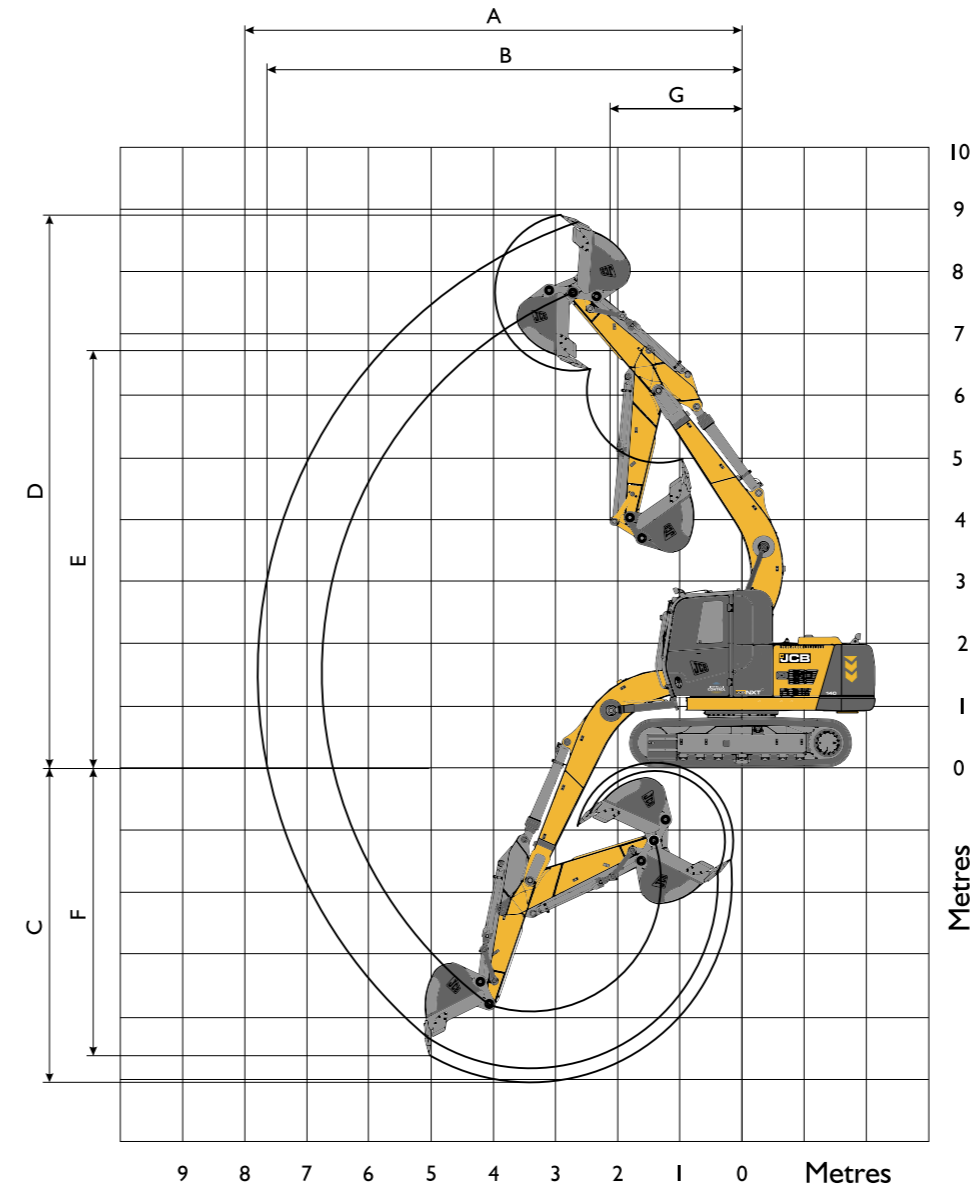
With boom length: 4.70 m, dipper length: 2.10 m		m
A	Track length on ground	2.78
B	Undercarriage overall length	3.55
C	Track gauge	1.99
D	Width over tracks (500 mm trackshoes)	2.49
E	Transport length with monoboam	7.63
F	Transport height with monoboam	3.0
G	Counterweight clearance	910

With boom length: 4.70 m, dipper length: 2.10 m		m
H	Tail swing radius	2.15
I	Width of super structure	2.41
J	Height over cab	3.0
K	Height over grab rail	2.62
L	Ground clearance	460
M	Track height	815

* Machine in transport position

* All dimensions, weights and timings are variable within 1.5%, JCB reserves the right to change specifications without prior notice.

WORKING RANGE



Boom length:		4.70 m (15-5)
Dipper length:		2.10 m (6-11)
A	Maximum digging reach	m (ft-in) 8.03 (26-4)
B	Maximum digging reach (on ground)	m (ft-in) 7.88 (25-10)
C	Maximum digging depth	m (ft-in) 5.20 (17-0)
D	Maximum digging height	m (ft-in) 8.8 (28-10)
E	Maximum dumping height	m (ft-in) 6.37 (20-10)
F	Maximum vertical wall cut depth	m (ft-in) 4.52 (14-10)
G	Maximum swing radius	m (ft-in) 2.16 (7-1)
	Bucket rotation	dig. 182°
	Maximum dipper tear out (ISO 6015)	kgf (ibf) 7301 (16096)
	Maximum bucket tear out (ISO 6015)	kgf (ibf) 8974 (19784)



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ENGINE

Model	: Cummins 4BT 3.9C.
Type	: Water cooled, 4 stroke, 4-cylinder in line, direct injection, turbocharged.
Gross power	: (SAE J1995) 100 hp at 2200 RPM
Net power	: (SAE J1995) 92 hp at 2200 RPM
Piston	
Displacement	: 3.9 L
Air filtration	: Dry element with secondary safety element.
Cooling	: Water cooler via large capacity radiator with anti-block 'wavy' fins.
Starting system	: 24 volt.
Batteries	: 2 x 12 volt. Heavy-duty.
Alternator	: 24 volt. 75 amp.

CAB

Press steel with high strength rolled section frame. Excellent digging, loading and positioning visibility. Parallelogram wiper. Fresh air ventilation and operator face fan. Fully adjustable deluxe suspension seat with arm rest adjustment and backrest recline.

CONTROLS

Excavator	: All servo lever operated to ISO control pattern, independently adjustable to the seat.
Tracks	: Individually servo operated by foot pedal or hand lever.
Auxiliary	: Via servo operated foot pedal.
Horn	: Operated via servo lever mounted button.

FORCES

Unmatched digger forces enable faster cycle time.

Bucket tear out force	8974 kgf
Arm digging force	7401 kgf

EXCAVATOR END

Monoboom is available on the JCB NXT 140 with a 2.10 m dipper as a standard fitment. Reserve strength is built into the fully welded structures for hydraulic hammer and other arduous operations.

EXCAVATOR BUCKET

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

Bucket size Max. width toe plate	Capacity
1.04 m	0.63 cu.m
1.16 m	0.72 cu.m

HYDRAULIC SYSTEM

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

3 Work modes: Eco, Power & Power+

Main pumps	: 2 variable displacement axial piston type.
Maximum flow	: 2 x 120 L/min.
Servo pump	: Gear type
Maximum flow	: 20 L/min
Control valve	

A combined four and five spool control valve 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 settings

Boom / Arm / Bucket	330 bar
Swing circuit	279 bar
Travel circuit	330 bar
Pilot control	40 bar

FILTRATION SYSTEM

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

In tank	: 150 micron, suction strainer.
Main return line	: 10 micron, high efficiency glass fibre
Pilot line	: 10 micron, paper element.
Hydraulic hammer return	: 10 micron, reinforced microform element.

Cooling	: Cooling is provided via full return line air blast cooler with anti-block swing cooling fins.
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SWING SYSTEM

Swing motor	: Axial piston type
Swing brake	: Hydraulic braking plus, spring applied disc type parking brake.
Final drive	: Planetary reduction
Swing gear	: Large diameter, internally-toothed fully sealed grease bath lubricated.
Swing speed	: 13.6 RPM.

UNDERCARRIAGE

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

Track Shoe	: 500mm (Standard)
Upper & lower rollers	: Heat-treated, sealed and lubricated.
Track adjustment	: Grease cylinder type
Track idler	: Sealed and lubricated, with spring enhanced recoil.

No. of track guides	: 1 per side
No. of lower rollers	: 7 per side
No. of upper rollers	: 1 per side
No. of track shoes	: 44 per side

TRACK DRIVE

Type	: Fully hydrostatic
Travel motors	: Axial piston type, fully guarded within undercarriage frame.
Final drive	: Planetary reduction, bolt-on sprocket
Service brake	: Hydraulic counter balance valve to prevent overspeeding on gradients.
Park brake	: Disc type, spring applied, and automatic hydraulic release.
Gradeability	: 70% (35 deg.) continuous
Travel speed	: 3.6 kmph
Tractive effort	: 104.1 kN (10615 kgf)

WEIGHT AND GROUND BEARING PRESSURE

Standard machine with bucket, operator	
Full capacity lubes and fuel	
Operating weight	14,320 kg
Ground bearing pressure	0.52 kg/sq.cm.

STANDARD EQUIPMENT

Engine fan guard
Turbine type air pre-cleaner
4 standard working lights: 2 on Cabin, 1 on the Boom-LH and 1 on tool box
FM radio and music player with speakers
Auxiliary pipe work mounting brackets
Boom and mainframe mounted work lights
Cab & counterweight mounted work lights
Undercarriage belly guards
Upper structure under covers
Tool Kit
Handrail and non-slippery walking space
Windscreen wiper and washer
Radiator flymesh
Mirror on cab grabrail
LiveLink
Heavy duty track motor cover
Front cab guard
500 mm track shoe

OPTIONAL EQUIPMENT

Fully-ducted, air-conditioned cab (Cooling only)
Top cab guard
1 Optional working light on the counterweight
Mirror on handrail RH
Refuel pump
Rockbreaker
Rockbreaker pipe work
Ripper tooth
Option of 0.72 & 0.63 cu.m buckets
Trench bucket (490mm)
First aid kit
Fire extinguisher
Reflectors
Cold start kit
Rear view camera
Light guards
600/700 mm track shoe

SERVICE CAPACITIES

Fuel tank	: 253 L
Engine coolant	: 21.2 L
Engine oil	: 13.5 L
Swing reduction gear	: 3.2 L
Track reduction gear (each side)	: 3.0 L
Hydraulic system	: 173.0 L
Hydraulic tank	: 73.0 L



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