Cat® 6040

Hydraulic Shovel

Equipped with proven and reliable C32 engines, the Cat® 6040 Hydraulic Shovel delivers the productivity you expect, with the reliability you demand. When optimally paired with our 785, 789, or 793 series mining trucks, you'll experience the operational efficiency you are looking for, supported by our unmatched Cat dealer network.

Optimize Your Operation with a Robust Drive System and Our Engine Design

- Boost productivity with the durable and reliable C32 engine – now available for both highly regulated or less regulated countries. Certified to meet U.S. EPA Tier 4 Final/EU Stage V emission standards, our highly regulated, non-SCR solution is maintenance free and does not require Diesel Exhaust Fluid (DEF). Our less regulated solution meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2, and meets China Smoke Category III limits.
- Experience greater uptime and increased productivity, with the 6040's twin engine drive system. With our design, the 6040 can exert maximum digging forces, and continue to recuperate energy via its closed-loop swing circuit using just a single engine.
- Maintain approximately 65% of full production or move away from high walls, blast zones, or other safety hazards when in need of engine repair with single-engine operation.
- Simplify and expedite troubleshooting by comparing one engine and associated hydraulic network to the other, generating more uptime, and more productivity.
- Increase engine efficiency with our intelligent pump managing system. This system continuously evaluates actual engine and hydraulic operating values against set values and adjusts pump output accordingly. This results in greater productivity, less energy and fuel consumption, and reduced component wear.

Lower Costs per Ton with Higher Productivity and Greater Efficiency

- Maximize durability and productivity with the right bucket size, wear package, and ground engaging tools, ideally matched to your application.
- Realize faster boom movements and cycle times with boom lowering float valves. Using gravity rather than hydraulic pumps to lower the boom increases efficiency and enables pumps to support other functions simultaneously, such as bucket curl and stick in or out.
- Improve energy efficiency and generate less heat with our closed-loop swing system. Kinetic energy captured during swing motion is fed back to the system during deceleration, providing more power to drive the main and auxiliary pumps. This reduces the load on the engines and fuel consumption.
- Protect and extend the life of hydraulic components with our independent oil cooling system and continuous filtration of hydraulic oil. This system functions independent of hydraulic return oil, which increases efficiency by utilizing dedicated pumps to provide cooling capacity as needed, whether the engines are idling or under load. This translates to optimum oil temperature throughout the duty cycle. Additional efficiency is gained from our thermostatically controlled radiator fan speed.
- Experience greater control with five circuit hydraulics, allowing for two-cylinder motions, two travel motions, and swing to be controlled simultaneously.
- Connect to Cat MineStar™ Solutions with Product Link™ Elite and either a cellular or satellite radio, which comes standard with every machine. The optional use of Terrain enables guidance technology and high-precision management of loading operations to increase machine productivity. Real-time feedback improves efficiency.
- Achieve targeted production with an optimized truck match to maximize volume of material moved at the lowest operating cost per ton. The Cat 6040 is optimally matched with Cat 785, 789 or 793 Large Mining Trucks.

CAT®

Dig More Effectively with Our Unique TriPower™ Face Shovel Design

- Generate superior mechanical leverage and control with our unique boom design and rotatable triangular rockers. These features facilitate quicker cycle times, increased lifting forces, constant boom momentum, automatic constant bucket angle guidance, and automatically limit roll-back.
- Achieve faster lifting speeds and cycle times with the use of smaller-diameter boom cylinders.
- Maintain constant boom momentum and lifting speed throughout the entire lifting distance.
- Minimize material spillage during boom lifting with our automatic constant bucket angle feature. This enables operators to work more safely and efficiently while lowering cost per ton.
- Reduce the risk of material spillage with our automatic roll-back limiter. This feature ensures the bucket is always in a safe position – especially at maximum height.

Reduce Owning and Operating Costs with Greater Reliability, Durability, and Serviceability

- Withstand harsh mining conditions with rugged front attachments designed with high-strength steel and castings, which are joined and thermally stressed-relieved to extend service life and achieve production targets.
- Increase uptime with our new and improved undercarriage. Updated heavy duty load rollers and idlers incorporate duo cone seals, steel-back bronze bearings and fixed axle technology resulting in increased service life and elimination of overheating during travel. Improvements to track pads, track tensioning, and wear volume increase durability and reliability of the undercarriage as well. The new heavy-duty rollers are retrofittable to improve reliability of shovels in the field.
- Monitor critical event-based machine condition and operating data with the Board Control System (BCS) which offers a comprehensive range of diagnostic and reporting tools. The BCS uses sensors throughout the machine to monitor operating data, record faults, and notify the operator audibly and visibly.
- Connect to MineStar Health for expanded condition monitoring and send reports via the Product Link Elite radio to fleet operations.
- Access engine compartment, superstructure components, and ground-level service station more easily, for safer and more streamlined serviceability.
- Inspect, maintain, and repair hydraulic components more efficiently with placement of the main valve block on the boom and improved routing and clamping of hoses. The integration of Cat hoses ensures they can be built locally, which reduces downtime and operating costs.
- Diagnose and execute engine maintenance more effectively with access to Cat Electronic Technician.

Get Peak Operator Performance with Our Safe and Comfortable Operator Environment

- Protect operators with excellent visibility, safety glass in all cab windows, a top guard protection system and armored glass for the windshield as standard. An additional front guard is optional.
- Neutralize hydraulic controls when the operator leaves the seat with our integrated safety switch.
- Reduce operator fatigue with a heated, pneumatically cushioned, multi-adjustable operator's seat, enhanced electro-hydraulic servo control, and intuitive on-board electronics.
- Monitor vital machine and diagnostic data on the large, color touchscreen for convenient troubleshooting and service assistance.
- Maintain internal ambient temperature with a single HVAC system or upgrade to a dual HVAC system.
- Reduce blind spots, enhance situational awareness and increase operator confidence with an optional two camera system.

Return Operators Home Safely Everyday with Our Standard Safety Features

- Access, egress, and move about the machine more safely with 45° angled stairways, slide-down emergency ladder with safety cage, and hydraulically operated boarding ladder. Machine swing and propel capabilities are automatically disabled while boarding stairway is lowered.
- Increase operational safety with improved sealing between engines and hydraulic pumps, improved routing and separation of hydraulic lines and electric cables, pressure relief caps, and protective heat covers on exhaust and turbo pipes, mufflers, and coolant tanks.
- Improve machine service and maintenance safety with anti-slip walkways, a ground-level service station, LED lights, and easily accessible emergency shut-off and isolation switches.

Optimal Pass Match

	Cat 785	Cat 789	Cat 793
6040	4	5	6

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
CAT® POWER TRAIN		
2 × Cat C32 engines	✓	
Aftertreatment system: – Diesel Oxidation Catalyst (DOC) – NO_x Reduction System (NRS) – Non-DEF solution	✓	
Hydraulically driven radiator fan	✓	
Electronically controlled fan speed	✓	
Two-stage fuel filter with series filtration	✓	
Automatic engine idle shut down	✓	
HYDRAULICS		
Pump managing system: – Electronic load limit control – Flow on demand – Automatic zero flow regulation – Automatic engine RPM reduction	✓	
Pressure cut-off for main pumps	✓	
Continuous hydraulic oil filtration	✓	
Closed loop swing circuit	✓	
Boom float valves	✓	
ELECTRICAL SYSTEM		
Maintenance-free batteries	✓	
14 LED high-brightness working flood lights	✓	
11 LED service lights	✓	
UNDERCARRIAGE AND STRUCTURES		
HD tracks	✓	
1200 mm (3 ft 11 in) wide HD track pads	✓	
1600 mm (5 ft 3 in) wide track pads		✓
Belly plate for extra protection		✓
HD fixed axle rollers	✓	
HD fixed axle idlers	✓	
Automatic hydraulic retarder valve	✓	
Acoustic travel alarm (forward and reverse)	✓	
Fully hydraulic self-adjusting track tensioning	✓	
FRONT ATTACHMENT		
TriPower™ kinematics (Face Shovel only)		✓
Guards for shovel cylinders at FS stick	✓	
Backhoe attachment		✓
Frontless base machine		✓
Wear package and shrouds (as per bucket selection)	✓	
Special wear packages		✓

	Standard	Optional
OPERATOR ENVIRONMENT		
Single HVAC system	✓	
Dual HVAC system		✓
Heated, pneumatically cushioned and multi-adjustable comfort seat	✓	
Independently adjustable seat consoles with integrated joysticks	✓	
FM/AM radio with USB and AUX input	✓	
Fold away auxiliary seat	✓	
Sliding side window	✓	
Roller blinds at all windows	✓	
External sun shields	✓	
Camera monitoring system		✓
Cat Board Control system with 305 mm (12 in) color touchscreen	✓	
Inclinometer	✓	
CAT TECHNOLOGY		
Product Link Elite (Cellular)		✓
Product Link Elite (Satellite)		✓
Product Link Elite (No radio)		✓
Cat MineStar Solutions ready	✓	
COLD WEATHER		
Cold Weather Package (400 V; 50 Hz)		✓
Cold Weather Package (208 V; 60 Hz)		✓
SERVICE AND MAINTENANCE		
Retractable service station	✓	
S·O·S℠ sampling ports	✓	
Engine oil exchange interval – 500 hours	✓	
Engine oil exchange interval – 1,000 hours		✓
Hydraulic oil exchange interval – 10,000 hours	✓	
Cat Type 4 air filters with dust ejection system	✓	
SAFETY AND SECURITY		
Emergency egress ladder	✓	
All-around safety glass	✓	
Armored windshield	✓	
Operator Protective Guard (Top Guard)	✓	
Safety seat contact switch	✓	
Five (5) emergency stop switches	✓	
MISCELLANEOUS		
ISO or ANSI decals	✓	

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Technical Specifications

Diesel Engines – Lesser Regulated

Make and Model	2 × Cat C32	
Rated Speed	1800 min^{-1}	1,800 rpm
Total Rated Gross Power – SAE J1995:2014	1554 kW	2,084 hp

- Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2. Meets China Smoke Category III limits.

Diesel Engines – Highly Regulated

Make and Model	2 × Cat C32	
Rated Speed	1800 min^{-1}	1,800 rpm
Total Rated Gross Power – SAE J1995:2014	1550 kW	2,079 hp

- Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

Electrical System

System Voltage	24 V
Batteries in Series/Parallel Installation	610 Ah – 12 V each 630 Ah – 24 V

Operating Weights

Face Shovel (FS)	404 600 kg	891,980 lb
Backhoe (BH)	407 300 kg	897,930 lb

- Operating weights include: base machine, front attachment, standard track pads, standard rock bucket, 100% fuel and lubricants.

Service Refill Capacities

Fuel Tank Capacity	7940 L	2,098 gal
Hydraulic Tank	3626 L	958 gal
Hydraulic System (including tank)	5800 L	1,532 gal
Engine Oil	2 × 120 L	2 × 31.7 gal
Engine Coolant	2 × 155 L	2 × 41 gal
Grease Container	710 L	188 gal

Hydraulics

Maximum Flow to Main Pumps	4 × 472 L/min	4 × 196 gal/min
Maximum Pressure – Attachment	300 bar	4,351 psi
Maximum Pressure – Travel	350 bar	5,076 psi
Maximum Flow to Swing Pumps	4 × 321 L/min	4 × 85 gal/min
Maximum Pressure – Swing	400 bar	5,801 psi

Swing System

Swing Speed	4.7 rpm
Swing Circuit	Closed-loop with Torque Control

Undercarriage

Maximum Travel Speed – 1st Stage	1.5 km/h	0.93 mph
Maximum Travel Speed – 2nd Stage	2.5 km/h	1.55 mph
Maximum Tractive Force	2097 kN	471,260 lbf

Operator Environment

Operator's Eye Level	6.8 m	22 ft 4 in
Spectator Sound Power Level (L_{WA}) ISO 6395:2008	120 dB(A)	
Operator Sound Pressure Level (L_{PA}) ISO 6396:2008	75 dB(A)	
Operator Protective Guard (Top Guard)	ISO 10262:1998 Level II	

Dimensions

Height Overall	8160 mm	27 ft 2 in
Height of Tracks	2250 mm	7 ft 5 in
Clearance Under Counterweight	2615 mm	8 ft 7 in
Tail Swing Radius	7000 mm	23 ft 0 in
Width Overall (@ 1200 m [3 ft 11 in] wide tracks)	8050 mm	26 ft 5 in
Crawler Length	8090 mm	26 ft 7 in
Track Gauge	5395 mm	17 ft 8 in

Working Ranges and Forces

Face Shovel

Boom	**7.3 m**	**23 ft 11 in**
Stick	**4.6 m**	**15 ft 1 in**
Standard Rock Bucket Heaped 2:1 (ISO 7546)	**22.0 m^3**	**28.8 yd^3**
G.E.T. System with Six (6) Teeth	CL-1	
Maximum Crowd Force (ISO)	1791 kN	402,633 lbf
Maximum Breakout Force (ISO)	1201 kN	269,996 lbf
Maximum Digging Height	14.9 m	48 ft 11 in
Maximum Digging Reach	15.7 m	51 ft 6 in

Backhoe

Boom	**9.5 m**	**31 ft 2 in**
Stick	**4.6 m**	**15 ft 1 in**
Standard Rock Bucket Heaped 1:1 (ISO 7451)	**22.0 m^3**	**28.8 yd^3**
G.E.T. System with Six (6) Teeth	C95	
Maximum Tearout Force (ISO)	1018 kN	228,856 lbf
Maximum Breakout Force (ISO)	1123 kN	252,460 lbf
Maximum Digging Depth	7.0 m	23 ft 0 in
Maximum Digging Reach	17.7 m	58 ft 1 in

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.