PRODUCT SPECIFICATIONS FOR 6060

GENERAL

Engine Output - SAE J1995	2248 kW
Bucket Payload	61 t
Operating Weight	599 t
Note	Specifications shown above apply to Face Shovel configuration. Backhoe and Frontless configurations are also available.

ENGINE

Engine Model	2 x Cat 3512E

DIESEL ENGINES

Rated Speed	1,800 min-1 (1,800 rpm)
Number of Cylinders - Each Engine	12
Bore	170 mm
Stroke	215 mm
Displacement	58.6 l
Aspiration	Turbocharged and charge air-cooled
Components (1)	Non-DEF Aftertreatment system with Diesel Oxidation Catalysts (DOCs)
Components (2)	High-capacity water separator
Components (3)	Two-stage fuel filter with series filtration

Components (4)	Heavy-duty air filters
Components (5)	Microprocessed engine management
Components (6)	Hydraulically driven radiator fan with electronically controlled fan speed
Components (7)	Exhaust manifold and turbo heat shields

DIESEL ENGINE - LESSER REGULATED

Gross Power - SAE J1995	2256 kW
Net Power - ISO 9249	2229 kW
Net Power - SAE J1349	2103 kW
Emissions	Optimized for fuel consumption.

DIESEL ENGINE - HIGHLY REGULATED

Gross Power - SAE J1995	2248 kW
Net Power - SAE J1349	2095 kW
Net Power - ISO 9249	2221 kW
Emissions	Meets U.S. EPA Tier 4 Final emission requirements. These engines participate in the U.S. EPA averaging, banking, and trading provisions.

ELECTRICAL SYSTEM

System Voltage	24 V
Batteries in Series/Parallel Installation	6 x 210 Ah; 12 V each; 630 Ah 24 V in total
Components (1)	6 maintenance-free batteries

Components (2)	Lockable battery isolator switch
Components (3)	Lockable starter isolator switch
Components (4)	13 LED high-brightness working flood lights
Components (5)	17 LED service lights
Components (6)	2 electric horns (1 cab module; 1 oil cooler module)

OPERATING WEIGHTS

6060 FS - Standard Track Pads	1400 mm
6060 FS - Operating Weight	598 800 kg
6060 FS - Ground Pressure	26.6 N/cm2 (38.5 psi)
Backhoe - Standard Track Pads	1400 mm
Backhoe - Operating Weight	600 500 kg
Backhoe - Ground Pressure	26.7 N/cm2 (38.7 psi)
Note	Operating weights include: base machine, front attachment, standard track pads, standard rock bucket, 100% fuel and lubricants.

SERVICE REFILL CAPACITIES

Fuel Tank	11 870 l
Hydraulic Tank	7100 l
Hydraulic System - Including Tank	9400 l

Engine Oil	328 l
Cooling System	800 l
Swing Drive	160 l
Grease Tank	710 l

HYDRAULIC SYSTEM WITH PUMP MANAGING SYSTEM

Main Pumps - Diesel Version	8 variable swash plate pumps
Main Pumps - Maximum Oil Flow - Diesel Version	8 x 650 L/min (8 x 172 gal/min)
Maximum Pressure - Attachment	320 bar
Maximum Pressure - Travel	360 bar
Swing Pumps - Diesel Version	4 reversible swash plate pumps
Swing Pumps - Maximum Oil Flow - Diesel Version	4 x 352 L/min (4 x 93 gal/min)
Maximum Pressure - Swing Pumps	350 bar

HYDRAULIC OIL COOLING

Oil Flow of Cooling Pumps	4 x 488 L/min (4 x 129 gal/min)
Components	4 cooling fans
Diameter - Fan	1170 mm
Features (1)	Cooling system fully independent of all main circuits, i.e. controlled cooling capacity is available whenever engine is running
Features (2)	Fan speed and flow of oil to the coolers are thermostatically controlled
Features (3)	Extremely high cooling efficiency to ensure optimum oil temperature

Features (4)	Gear-type cooling pumps supplying high-volume, low-pressure oil to fans and aluminum coolers

SWING SYSTEM

Swing Drive	4 compact planetary transmissions with axial piston motors
Parking Brakes	Wet multiple disc brake, spring loaded/hydraulically released
Maximum Swing Speed	3.8 r/min
Swing Ring	Triple-race roller bearing with sealed internal gearing
Features (1)	Dirt wipers at swing ring to prevent build-up of debris between swing ring and carbody
Features (2)	Closed-loop swing circuit with torque control
Features (3)	Hydraulic braking of the swing motion by counteracting control
Features (4)	All raceways and the internal gearing of swing ring, supplied by automatic central lubrication system

UNDERCARRIAGE

Travel Speed - 1st Stage - Maximum	1.1 km/h
Travel Speed - 2nd Stage - Maximum	1.6 km/h
Maximum Tractive Force	2942 kN
Gradeability - Travel Drives - Maximum	39 %
Track Pads - Each Side	42
Bottom Rollers - Each Side	7

Support Rollers - Each Side	2 plus a skid plate in between
Travel Drives - Each Side	1 planetary transmission with 2 two-stage axial piston motors
Components (1)	HD tracks with cast double-grouser track pad
Components (2)	HD fixed axle rollers and idlers
Components (3)	Hardened running surfaces of sprockets, idlers, rollers, pad links, and teeth contact areas
Components (4)	Acoustic travel alarm (forward and reverse)
Components (5)	Fully hydraulic, self-adjusting track tensioning system with piston accumulator
Components (6)	Automatic hydraulic retarder valve to prevent over-speed on downhill travel

OPERATOR'S CAB

Operator's Eye Level - Approximately	7.6 m
Internal Dimensions of Cab - Length	2230 mm
Internal Dimensions of Cab - Width	1625 mm
Internal Dimensions of Cab - Height	2070 mm
Components (1)	Single hydraulically driven HVAC System, with dual system option
Components (2)	In-floor window with removable grate
Components (3)	Pneumatically cushioned and multi-adjustable comfort seat with heating, cooling, and lumbar support

Components (4)	Independently adjustable seat consoles with integrated joysticks
Components (5)	Operator Protective Guard (Top Guard) (ISO 10262:1998)
Components (6)	Elevated full-size trainer seat with safety belt and laptop desk
Components (7)	Additional fold-away auxiliary seat with safety belt
Components (8)	Operator Presence switch
Components (9)	Monitoring system with 254 mm (10 in) touch screen
Components (10)	Powered 45 degree access stairway
Components (11)	Emergency egress ladder
Components (12)	FM/AM radio with USB and AUX input
Components (13)	Roller blinds on 3 front windows
Components (14)	3 cup holders
Components (15)	Cat Electronic Technician service port

AUTOMATIC LUBRICATION SYSTEM

Capacity - Grease Container	710 l
Type (1)	Dual-circuit system with hydraulically driven heavy-duty pumps and electronic time relay control to adjust the pause/lube times
Type (2)	System failures displayed by monitoring system
Type (3)	Grease filters (200 µm) between service station and container as well as directly behind grease pump

Type (4)	Main lube system connections include: pivot points of attachment, bucket and cylinders, raceways of swing roller bearing, and 2 greasing pinions for the internal gearing of swing ring

ATTACHMENTS

Shovel attachment with unique TriPower kinematics ensuring the following main features: (1)	Automatic roll-back limiter to prevent material spillage; Kinematic assistance to hydraulic forces
Shovel attachment with unique TriPower kinematics ensuring the following main features: (2)	Horizontal Automatic constant-angle bucket guidance; Vertical Automatic constant-angle bucket guidance
Shovel attachment with unique TriPower kinematics ensuring the following main features: (3)	Constant boom momentum throughout the entire lift arc; Crowd force assistance
All buckets (FS and BH) are equipped with a wear package consisting of: (1)	Special liner material covering main wear areas inside and outside of bucket and lip shrouds between teeth
All buckets (FS and BH) are equipped with a wear package consisting of: (2)	Wing shrouds on side walls and heel shrouds at bottom edges
Type (1)	Catwalks with rails at booms (FS and BH)
Type (2)	Guards for shovel cylinders (FS)
Type (3)	Pressure-free lowering of boom (FS and BH) and stick (FS) by means of a float valve
Type (4)	Service access holes from both sides of boom (FS and BH) and stick (FS)
Type (5)	Welding procedures allow for internal counter-welding (double prep weld) wherever possible
Type (6)	Booms and sticks are stress-relieved after welding
Type (7)	Booms and sticks are torsion-resistant, welded box design of high-tensile steel with massive steel castings at pivot areas

Type (8)	Special wear packages for highly abrasive materials available upon request

DIGGING FORCES

Maximum Crowd Force	2200 kN
Maximum Breakout Force	1730 kN

WORKING RANGES

Maximum Digging Height	15.6 m
Maximum Digging Reach	16.5 m
Maximum Digging Depth	2.8 m

STANDARD BUCKET CAPACITY

Face Shovel (heaped 2:1)	34 m^3
Backhoe (heaped 1:1)	34 m^3

BACKHOE ATTACHMENT (BH) - DIGGING FORCES

Stick Digging Force - ISO	1316 kN
Bucket Digging Force - ISO	1223 kN

BACKHOE ATTACHMENT (BH) - WORKING RANGE

Maximum Digging Height	16.1 m
Maximum Digging Reach	19 m
Maximum Digging Depth	8.9 m

RETRACTABLE SERVICE STATION

Installation	Retractable service station installed underneath the engine module and easily accessible from ground.

Equipped With (1)	Quick couplings for: Diesel fuel, Engine coolant - left/right engine, Pump transmission gear oil - left/right engine, Engine oil - left/right engine, Hydraulic oil tank, and grease container
Equipped With (2)	Cat jump-start socket
Equipped With (3)	Indicator lights

6060 STANDARD EQUIPMENT

2 X CAT 3512E ENGINES

CAT POWERTRAIN

Aftertreatment System (used in highly regulated countries only): -Diesel Oxidation Catalysts (DOCs) -Non-DEF solution
Air-to-Air After Cooling (ATAAC)
Turbocharger
Hydraulically driven radiator fan
Electronically controlled fan speed
Micro processed engine management
Heavy-duty air filters
Two-stage fuel filter with series filtration
High-capacity water seperator
Starting aid -- automatic ether
Exhaust manifold and turbo heat shields
Dual 24 V electric starters per engine
Automatic engine idle shut down
Automatic fuel priming

HYDRAULICS

Hydraulic Optimization
Operator Assist: Enhanced Motion Control
Cat Hydraulic Hose assemblies
Pump managing system with: -Electronic load limit control -Flow on demand -Automatic zero flow regulation -Automatic engine rpm reduction -Reduced oil flow at high hydraulic oil or engine temperature
Pressure cut-off for main pumps
Cooling of pump transmission gear oil
Closed loop swing circuit
Pressure testing points
Full-flow high-pressure filters (100 µm), main pumps
High pressure filters (100 µm), closed swing circuit
Full-flow filters (10 µm), return circuit

Pressure filters swing charge circuit (40 µm)
Pressure filters pilot circuit (6 µm)
Transmission oil filters (40 µm)
Boom float valve (FS and BH)
Stick float valve (FS)

ELECTRICAL SYSTEM

6 Maintenance-free batteries
Lockable battery isolator switch
Lockable starter isolator switch
13 LED high-brightness working flood lights
17 LED service lights
2 acoustic travel alarms -forward and reverse (power module, oil cooler module)
2 electric horns (1 cab module, 1 oil cooler module)

UNDERCARRIAGE

HD tracks with cast double-grouser track pads
1400 mm (4'7") wide track pads
HD fixed axle carrier and load rollers
HD fixed axle idlers
Automatic hydraulic retarder valve
Hinged travel motor covers
Hardened running surfaces of sprockets, idlers, rollers, pad links, teeth contact areas
Fully hydraulic self-adjusting track tensioning system with piston accumulators

AUTOMATIC LUBRICATION SYSTEM

Rectangular grease container (fill via service station)
Lubricated pinion in swing ring
Grease filters (200 µm)

OPERATOR ENVIRONMENT

Single hydraulically driven HVAC system
In-floor window with removable grate
Pneumatically cushioned and multiadjustable comfort seat with: -Heating and cooling -Lumbar support -2-point safety belt -Head and arm rests -Safety switch for automatic motion shutdown
Independently adjustable seat consoles with integrated joysticks
Electronic-Hydraulic Servo Control
Elevated full-size trainer seat with 2-point safety belt and laptop desk
Additional fold-away auxiliary seat with 2-point safety belt
Three cup holders
FM/AM radio with USB and AUX input
Parallel intermittent wiper/washer
Roller blinds
Monitoring system with 254 mm (10 in) color touchscreen
45° stairway from engine bay to operator cab
Powered 45° access stairway

Heated mirror on LH side
Camera monitoring system (Right and rear cameras, 2 lights, and additional display)
Level indicators for length and crosswise inclination
Document Storage

FRONT ATTACHMENT

Service access holes from both sides in boom and stick (FS and BH)
Boom and stick thermally stress relieved after welding
Catwalks with rails at boom (FS and BH)
Wear Package (as per bucket selection)

CAT TECHNOLOGY

Cat Product Link™ Elite (Cellular)
Cat MineStar™ Solutions Ready

SERVICE AND MAINTENANCE

Engine oil exchange interval -- 500 hours
Hydraulic oil change interval -10,000 hours
Scheduled Oil Sampling (S·O·SSM) ports
Retractable ground level service station with quick couplings for: -Diesel fuel -Engine coolant -left/right engines -Pump transmission gear oil -left/right engines -Engine oil -left/right engines -Engine oil extension tanks -Hydraulic oil -Grease -Swing transmission gear oil
Cat battery charging connector
Indicator lights
Cat Electronic Technician service port
Dirt wiper at swivel

SAFETY AND SECURITY

Emergency stop switches: 2 in cab, 5 in engine module, 1 at ground level service station, 1 pull rope accessible from ground level
Operator Protective Guard (Top Guard)
All-round safety glass
Emergency egress ladder

MAINTENANCE

ISO or ANSI decals

6060 OPTIONAL EQUIPMENT

GENERAL

Custom paint

SUPERSTRUCTURE

Oil change interval extension for engine oil up to 500 hours, with optional extension to 1,000 hours

Rectangular grease container, 710 L (188 gal), filled via service station
Various cold-weather options for temperatures below -10Â°; 400 V, 50 Hz and 208 V, 60 Hz

CAB

Dual hydraulically driven HVAC system for redundancy
Cab heating
Camera monitoring system with two cameras, two lights, and additional display

UNDERCARRIAGE

Track pad width 1400 mm (4 ft 7 in)
Belly plate for undercarriage protection
Additional optional equipment available on request.