

352F

Hydraulic Excavator

2017



*写真は海外仕様機でオプション品を含みます。

Engine

Engine Model	Cat® C13 ACERT™	
Power – SAE J1995	322 kW	432 hp
Power – SAE J1349	311 kW	417 hp

Drive

Maximum Travel Speed	4.7 km/h
Maximum Drawbar Pull	335 kN

Weights

Minimum Operating Weight	50 800 kg
Maximum Operating Weight	51 500 kg



オフロード法2014年
基準適合

The 352F is built to keep your production numbers up and your owning and operating costs down.

Not only does the machine's C13 ACERT engine meet Japan 2014 (Tier 4 Final) emission standards, but it does so while giving you all the power, fuel efficiency, and reliability you need to succeed.

The 52-ton machine features a variable gauge undercarriage that retracts for transport and expands to help increase stability and lift capability, particularly helpful when you do a lot of work over the side.

Where the real power comes in is through the integrated engine, hydraulic, and work tool systems. You can move tons of material – literally – every hour, on the hour, all day long with a great deal of speed, precision, and efficiency.

When you add in a quiet operator environment that keeps you comfortable and productive, service points that make your routine maintenance quick and easy, and multiple Cat work tools that help you do a number of jobs very well, you simply won't find a better machine in this size class.



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Reliable and Productive

Power to move your material with speed and precision

Hydraulic Horsepower, a Cat Advantage

When it comes to moving heavy material quickly and efficiently, you need hydraulic horsepower – the type of ground-breaking power the 352F can deliver. Major hydraulic components like pumps and valves are located close together so shorter tubes and lines can be used. This design leads to less friction loss, reduced pressure drops, and more power to the ground for the work you need to get done.

Control Like No Other

Controllability is one of the main attributes of Cat excavators, and one of the key contributors to this is the main control valve. The valve opens slowly when your range of joystick lever movement is small and opens rapidly when movement is high. It puts flow where you need it when you need it, which leads to smoother operation, greater efficiency, and lower fuel consumption.

Auxiliary Hydraulics for Added Versatility

Auxiliary hydraulics give you greater tool versatility so you can take on more work with just one machine, and there are several options from which you can choose.



Fuel Efficient

Engineered to lower your operating costs





The Cat C13 ACERT engine meets Japan 2014 (Tier 4 Final) emission standards and it does so without interrupting your job process. Simply turn the engine on and go to work. It will look for opportunities in your work cycle to regenerate itself, and it will give you plenty of power for the task at hand – all to help keep your owning and operating costs to an absolute minimum.

A Smart Design for Any Temperature

The 352F features a side-by-side cooling system that allows you to put the machine to work in extremely hot and cold conditions. The system is completely separated from the engine compartment to reduce noise and heat. Plus it features easy-to-clean cores and a new variable-speed fan that reverses to blow out unwanted debris that may accumulate during your work day.

Proven Technology

The right technologies fine-tuned for the right applications result in:

- **Improved Fuel Efficiency** over Japan 2011 (Tier 4 Interim) products.
- **High Performance** across a variety of applications.
- **Enhanced Reliability** through commonality and simplicity of design.
- **Maximized Uptime and Reduced Cost** with world-class support from the Cat dealer network.
- **Minimized Impact of Emission Systems** – designed to be transparent to the operator without requiring interaction.
- **Durable Designs** with long life to overhaul.
- **Delivering Better Fuel Economy** with minimized maintenance costs while providing the same great power and response.

Easy to Operate

Comfort and convenience to keep you productive all day long



Safe and Quiet Cab

The cab contributes to your comfort thanks to special viscous mounts and special roof lining and sealing, that limit vibration and unnecessary sound.

Operators will enjoy the quietness and comfort of the all-new cab.

Excellent Ergonomics

Wide seats with air suspension and heat/cooling options, include a reclining back, upper and lower slide adjustments, and height and tilt angle adjustments to meet your needs for maximum comfort.

The fully automatic climate control system keeps operators comfortable and productive all day long in either hot or cold weather.

Storage spaces are located in the front, rear, and side consoles of the cab. A drink holder accommodates a large mug, and a shelf behind the seat stores large lunch or toolboxes.

Power supply sockets are available for charging your electronic devices like an MP3 player, a cell phone, or even a tablet.

Controls Just for You

The right and left joystick consoles can be adjusted to improve your comfort and productivity during the course of a day. The right joystick features a button that will reduce engine speed when you are not working to help save fuel. Touch it once and speed reduces; touch it again and speed increases for normal operation.



Easy to Navigate Monitor

The new LCD monitor is easy to see and navigate. Not only can it memorize up to 10 different work tools, it's also programmable in up to 44 languages to meet today's diverse workforce. The monitor clearly displays critical information you need to operate efficiently and effectively. Plus it projects the image from the rearview camera to help you see what's going on around you so you can stay safely focused on the job at hand.



Durable Structures

Made to work in your tough, heavy-duty applications

Stable Undercarriage

The long variable gauge undercarriage contributes significantly to outstanding stability and durability.

Track shoes, links, rollers, idlers, and final drives are all built with high-tensile strength steel for long-term durability.

Cat Grease Lubricated Track 2 (GLT2) track link protects moving parts by keeping water, debris, and dust out and grease sealed in, which delivers longer wear life and reduced noise when traveling.

Optional guide guards help maintain track alignment to improve the machine's overall performance – whether you're traveling on a flat, heavy bed of rock or a steep, wet field of mud.

Robust Frames

The 352F is a robust, well-built machine designed to give you a very long service life. The upper frame has mountings made specifically to support the heavy-duty cab. It's also reinforced around areas that take on a lot of stress like the boom foot, skirt, and counterweight.

Great Weight

The counterweight is built with thick steel plates and reinforced fabrications to make it less susceptible to damage, designed with curved surfaces that match the machine's sleek, smooth appearance along with integrated housings to help protect the rearview camera.

Durable Linkages

Options to take on your far-reaching
or up-close tasks



Booms and Sticks for Any Job

The 352F is offered with a Reach Boom and a 3.35 m stick. Each is built with internal baffle plates and is stress relieved for added durability, and each undergoes ultrasound inspection to ensure quality and reliability. Large box-section structures with thick, multi-plate fabrications, castings, and forgings are used in high-stress areas such as the boom nose, boom foot, boom cylinder, and stick foot to improve durability. Also, the boom nose pin retention method is a captured flag design for enhanced durability.

The Reach boom and stick offer you excellent all-around versatility for general excavations work like multipurpose digging and loading.

Pins

All front linkage pins have thick chrome plating, giving them high wear resistance. Each pin diameter is made to distribute the shear and bending loads associated with the stick and to help ensure long pin, boom and stick life.

Versatile

Do more jobs with one machine



Get the Most from One Machine

The Cat combination of machine and tool provides a total solution for just about any application. Work tools can be mounted either directly to the machine or to a quick coupler, making it fast and easy to release one work tool and pick up another.

Change Jobs Quickly

Cat quick coupler brings the ability to quickly change attachments and switch from job to job. The Cat coupler is the secure way to decrease downtime and increase job site flexibility and overall productivity.

Available tool control remembers pressures and flows for up to 10 tools. Simply toggle through the monitor, select the tool, and go to work for maximum efficiency.

Dig, Rip and Load

A wide range of buckets dig everything from basic top soil to extreme, harsh material like ore and high quartzite granite. Rip through rock as an alternative to blasting in quarries. High-capacity buckets load trucks in a minimum number of passes for maximum productivity.

Break, Demolish and Scrap

A hydraulic hammer ably equips your machine for breaking rock in quarries. It will also make taking down bridge pillars and heavily reinforced concrete on road demolition jobs no problem.

Multi-processor and pulverizer attachments make your machine ideal for demolition jobs and processing the resulting debris.

Shears with 360° rotation mount to the machine for processing scrap steel and metal.

Set Up Your Machine for Profitability

Your Cat dealer can install hydraulic kits to properly operate all Cat Work Tool attachments, maximizing the machine's uptime and your profit. All Cat Work Tool attachments are supported by the same Cat dealer network as your Cat machine.

GRAB, SORT, LOAD



Pro Series Hydraulic Thumbs



Stiff Link Thumbs



Demolition & Sorting Grapple



Contractors' Grapples



Trash Grapples

SWAP TOOLS



Pin Grabber Coupler

DIG & PACK



General Duty Buckets



Heavy Duty Buckets



Severe Duty Buckets



Extreme Duty Buckets

CUT, CRUSH, BREAK & RIP



Multi-Processors



Scrap & Demolition Shears



Secondary Pulverizers



Hydraulic Hammers



Rippers

Cat Connect Technologies

Monitor, manage, and enhance job site operations



Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



EQUIPMENT
MANAGEMENT

Equipment Management – increase uptime and reduce operating costs.



PRODUCTIVITY

Productivity – monitor production and manage job site efficiency.



SAFETY

Safety – enhance job site awareness to keep your people and equipment safe.

LINK Technologies

LINK technologies, like Product Link™, are deeply integrated into your machine and wirelessly communicates key information, including location, hours, fuel usage, idle time and event codes.

Product Link/VisionLink®

Easy access to Product Link data via the online VisionLink user interface can help you see how your machine or fleet is performing. You can use this information to make timely, fact based decisions that can boost job site efficiency and productivity, and lower costs.



GRADE Technologies

Grade technologies combine digital design data and in-cab guidance to help you reach target grade quickly and accurately, with minimal staking and checking. That means you'll be more productive, complete jobs faster, in fewer passes, using less fuel, at a lower cost.



Cat Grade with Assist

Cat Grade with Assist ensures you can dig a level base with the right slope each and every time; now it works with tilt buckets to give you even greater versatility. With a touch of a button, the simple-to-use system automates boom and bucket movements typically done by the operator. Regardless of your experience or skill, you will be able to reach target grade up to 45% faster than with traditional grading techniques.



Cat Grade 3D

Cat Grade 3D is perfect for complex excavating projects that require precise cuts and contours. The 254 mm color monitor shows you exactly where to work and how much to cut or fill without stacking or grade checking, delivering accuracy within 30 mm. Factory integration of most key components reduces field installation time and labor cost, making the system less costly for you compared to other options. Plus reliability is enhanced because built-in components are protected from damage, ensuring longer service life and more accurate results.

Safe Work Environment

Features to help protect you day in and day out

Secure Contact Points

Multiple large steps as well as hand and guard rails will get you into the cab as well as a leg up to the compartments.

Extended hand and guard rails allow you to safely climb to the upper deck. Anti-skid plates on the surface of the upper structure, and the top of the storage box area, reduce your slipping hazards in all types of weather conditions. They can be removed for cleaning.

Great Views

The standard rearview camera greatly enhance visibility behind of the machine to help the operator work more productively. A panoramic rearview is displayed on the new multi-function monitor. As an option, a second display can be added, providing a dedicated full-time rearview of the job site.

Smart Lighting

Halogen lights provide plenty of illumination. Cab and boom lights can be programmed to stay on for up to 90 seconds after the engine has been turned off to help you safely exit the machine. Optional High Intensity Discharge(HID) light is available for enhanced night time visibility.

A Safe and Quiet Cab

The ROPS-certified cab provides you with a safe working environment. It also contributes to your comfort because it's attached to a reinforced frame with special viscous mounts that limit vibration and unnecessary sound. Add in special roof lining and sealing and you have a cab that's as quiet inside as any of today's highway trucks.



Serviceable

Designed to make your maintenance quick and easy



Ground-Level Access

You can reach most routine maintenance items like fuel and oil filters, fluid taps, and grease points from the safety and convenience of ground level. Not only do compartments feature wide service doors designed to help prevent debris entry, but they also securely latch in place to help make your service work simpler.

Quick and Convenient Fluids Service

S-O-SSM Oil sample and pressure ports provide easy checking of machine condition and are standard on every machine.

The fuel tank's drain cock makes it easy and simple for you to remove water and sediment during routine maintenance. Plus an integrated fuel level indicator pops up to help you reduce the possibility of fuel tank overfilling. An optional fast fill port accessible from ground level can make refueling even easier and faster.

A Smart Cooling Design

The high-ambient cooling system features a fuel-saving variable-speed fan and a side-by-side-mounted radiator and oil and air coolers for easy cleaning.

A Fresh Idea

When you select ventilation inside the cab, outside air enters through the fresh air filter. The filter is conveniently located on the side of the cab to make it easy to reach and replace, and it is protected by a lockable door that can be opened with the engine key.





Complete Customer Care

Unmatched support makes the difference

Sustainable Generations ahead in every way

The 352F is designed to compliment your business plan, reduce emissions and minimize the consumption of natural resources.

- The C13 ACERT engine meets Japan 2014 (Tier 4 Final) emission standards.
- This machine has the flexibility of running on ultra-low sulfur diesel (ULSD) fuel with 15 ppm of sulfur.
- An overfill indicator rises when the tank is full to help the operator avoid spilling.
- Quick fill ports with connectors ensure fast, easy, and secure changing of hydraulic oil.
- Major components are rebuildable, eliminating waste and saving money by giving the machine and/or major components a second life – and even a third life.
- Link technologies enable you to collect and analyze equipment and job site data so you can maximize productivity and reduce costs.
- The 352F is an efficient, productive machine that's designed to conserve our natural resources for generations ahead.

Worldwide Parts Availability

Cat dealers utilize a worldwide parts network to maximize your machines' uptime. Plus they can help you save money with Cat remanufactured components.

Financial Options Just for You

Consider financing options and day-to-day operating costs. Look at dealer services that can be included in the machine's cost to yield lower owning and operating costs over time.

What's Best for You Today...and Tomorrow

Repair, rebuild, or replace? Your Cat dealer can help you evaluate the cost involved so you can make the best choice for your business.



352F Hydraulic Excavator Specifications

Engine

Engine Model	Cat C13 ACERT	
Gross Power – SAE J1995	322 kW	432 hp
Net Power – SAE J1349	304 kW	408 hp
Power – ISO 14396	317 kW	425 hp
Bore	130 mm	
Stroke	157 mm	
Displacement	12.5 L	

Hydraulic System

Main System – Maximum Flow (total)	770 L/min	
Swing System – Maximum Flow	385 L/min	
Maximum Pressure – Equipment	35 000 kPa	
Maximum Pressure – Travel	35 000 kPa	
Maximum Pressure – Swing	27 500 kPa	
Pilot System – Maximum Flow	27 L/min	
Pilot System – Maximum Pressure	4120 kPa	
Boom Cylinder – Bore	170 mm	
Boom Cylinder – Stroke	1524 mm	
Stick Cylinder – Bore	190 mm	
Stick Cylinder – Stroke	1758 mm	
TB Family Bucket Cylinder – Bore	160 mm	
TB Family Bucket Cylinder – Stroke	1356 mm	

Drive

Maximum Travel Speed	4.7 km/h
Maximum Drawbar Pull	335 kN

Swing

Swing Speed	8.7 rpm
Swing Torque	148.5 kN·m
Maximum Swing Torque	221 kN·m

Service Refill Capacities

Fuel Tank Capacity	720 L
Cooling System	50 L
Engine Oil (with filter)	38 L
Swing Drive (each)	10 L
Final Drive (each)	15 L
Hydraulic System (including tank)	570 L
Hydraulic Tank	407 L
DEF Tank	41 L

Track

Number of Shoes (each side)	52
Number of Track Rollers (each side)	9
Number of Carrier Rollers (each side)	3

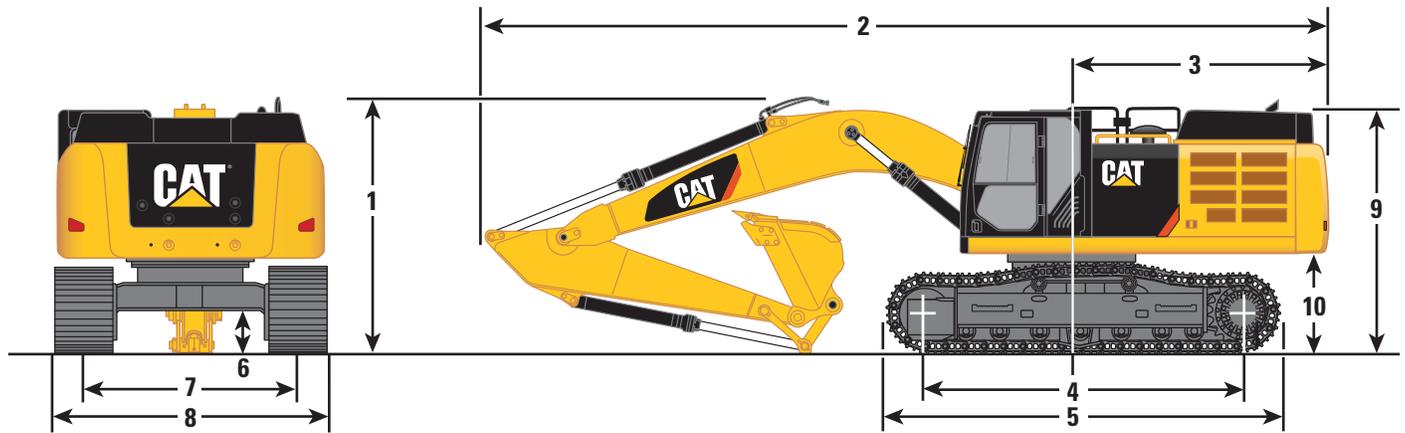
Standards

Cab/FOGS	SAE J1356 MAR2013 ISO 10262:1998 Level II
Cab/ROPS	ISO 12117-2:2008

352F Hydraulic Excavator Specifications

Dimensions – Long Variable Gauge Undercarriage

All dimensions are approximate.



Boom	Reach Boom 6.9 m
Stick	R3.35TB HD
Bucket	2.1 m ³
	mm
1 Shipping Height to Boom	3570
Shipping Height with Handrail	3520
2 Shipping Length	11 800
3 Tail Swing Radius	3730
4 Length to Center of Rollers	4340
5 Track Length	5350
6 Ground Clearance	
Including Shoe Lug Height	710
Not Including Shoe Lug Height	740
7 Track Gauge – Extended	2890
Track Gauge – Retracted	2390
8 Track Width – Extended – 750 mm Shoes	3680
Track Width – Retracted – 750 mm Shoes	3180
9 Cab Height	3370
Cab Height with Top Guard	3540
10 Counterweight Clearance*	1430

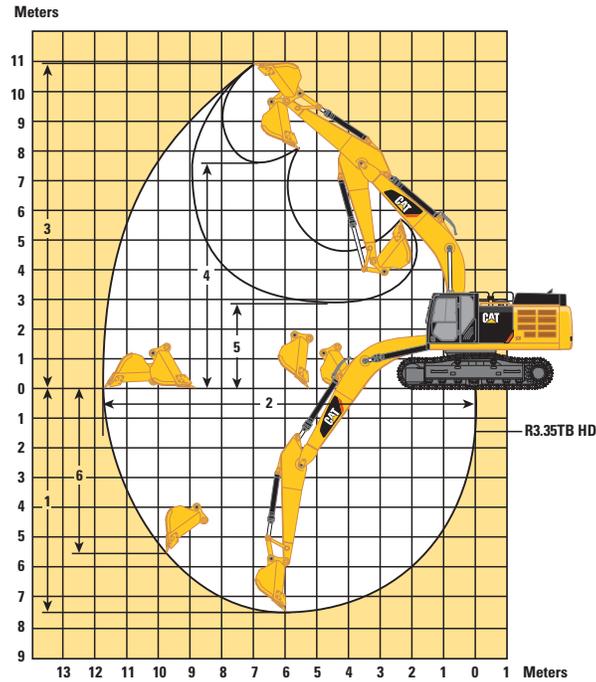
*Without shoe lug height.

Dimensions may vary depending on bucket type.

352F Hydraulic Excavator Specifications

Working Ranges – Long Variable Gauge Undercarriage

All dimensions are approximate.



Boom	Reach Boom 6.9 m
Stick	R3.35TB HD
Bucket	2.1 m³
	mm
1 Maximum Digging Depth	7510
2 Maximum Reach at Ground Level	11 710
3 Maximum Cutting Height	10 970
4 Maximum Loading Height	7580
5 Minimum Loading Height	2900
6 Maximum Vertical Wall Digging Depth	5680

Dimensions may vary depending on bucket type.

352F Hydraulic Excavator Specifications

Operating Weights and Ground Pressures

	750 mm Triple Grouser Shoes		600 mm Triple Grouser Shoes		600 mm Double Grouser Shoes	
	kg	kPa	kg	kPa	kg	kPa
Long Variable Gauge Undercarriage						
Reach Boom – 6.9 m						
R3.35TB HD – 2.1 m ³ Bucket	51 500	72	50 800	88	50 900	89

Major Component Weights

	kg
Base Machine (with boom cylinder, without counterweight, front linkage and track)	
Long Variable Gauge Undercarriage	27 000
Counterweight	9000
Boom (includes lines, pins and stick cylinder)	
Reach Boom – 6.9 m	4630
Stick (includes lines, pins, bucket linkage and bucket cylinder)	
R3.35TB HD	2540
Track Shoes	
600 mm triple grouser	5190
600 mm double grouser	5290
750 mm triple grouser	5940

All weights are rounded up to nearest 10 kg except for buckets.

Base machine includes 75 kg operator weight, 90% fuel weight, and undercarriage with center guard.

352F Hydraulic Excavator Specifications

Bucket and Stick Forces

Boom	Reach Boom 6.9 m
Stick	R3.35TB HD kN
TB Linkage	
General Duty	
Bucket Digging Force (ISO)	268
Stick Digging Force (ISO)	199
Heavy Duty	
Bucket Digging Force (ISO)	268
Stick Digging Force (ISO)	201
Severe Duty	
Bucket Digging Force (ISO)	266
Stick Digging Force (ISO)	200
Extreme Duty	
Bucket Digging Force (ISO)	266
Stick Digging Force (ISO)	200

Standard Equipment

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

ENGINE

- Cat C13 ACERT diesel engine
- Meets Japan 2014 (Tier 4 Final) emission standards
- 2300 m altitude capability
- Electric priming pump
- Automatic engine speed control
- Standard, economy power modes
- Two-speed travel
- Side-by-side cooling system
- Radial seal air filter
- Primary filter with water separator and water separator indicator switch
- Fuel differential indicator switch in fuel line
- 2×6 micron main filters
- 1×10 micron primary fuel line filter
- Starting kit, cold weather, -32° C

HYDRAULIC SYSTEM

- Regeneration circuit for boom and stick
- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter
- Capability of installing additional auxiliary circuits and valves
- Portable electrical lubricating gun

CAB

- Wiper, and washer
- Mirrors
- Pressurized cab
- Laminated glass front upper window and tempered other windows
- Sliding upper door window (left-hand cab door)
- Openable skylight

- Interior
 - Glass-breaking safety hammer
 - Coat hook
 - Beverage holder
 - Ashtray
 - Literature holder
 - Interior lighting
 - AM/FM radio
 - Two 12V stereo speakers
 - Storage shelf suitable for lunch or toolbox
 - Power supply with 12V, two power outlets (10 amp)
 - Thumb wheel modulation joystick
 - Air conditioner, heater and defroster with climate control
- Seat
 - Adjustable high-back, heated and ventilated seat with air suspension
 - Seat belt, 51 mm
 - Adjustable armrest
 - Height adjustable joystick consoles
 - Hydraulic lock lever
 - Travel control pedals with removable hand levers
 - Capability of installing two additional pedals
 - Two speed travel
 - Floor mat, washable
- Monitor
 - Clock
 - Video ready
 - Color LCD display with warning, filter/fluid change, and working hour information
 - Language display (full graphic and full color display)
 - Machine condition, error code and tool mode setting information
 - Start-up level check for engine oil, engine coolant and hydraulic oil
 - Warning, filter/fluid change and working hour information
 - Fuel consumption meter

UNDERCARRIAGE

- Grease Lubricated Track GLT4
- Towing eye on base frame
- Heavy-duty track rollers
- Track motor guards
- Heavy-duty bottom guard
- 9 mt counterweight
- Long variable gauge undercarriage

ELECTRICAL

- 80 amp alternator
- Circuit breaker

LIGHTS

- Cab and boom lights with time delay
- Exterior lights integrated into storage box

SECURITY

- Cat one key security system
- Door locks
- Cap locks on fuel and hydraulic tanks
- Lockable external tool/storage box
- Signaling/warning horn
- Secondary engine shutoff switch
- Openable skylight for emergency exit
- Rearview camera
- Mirrors
- Capability to connect a beacon
- Machine security system (MSS)

INTEGRATED TECHNOLOGIES

- Product Link
- Rear vision camera

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

HYDRAULIC SYSTEM

- Control pattern quick-changer, four way
- HP hydraulic lines for boom and stick
- MP hydraulic lines for boom and stick
- Grease gun with holder
- Tool kit

CAB

- 70/30 front windshield with removable lower windshield with in cab storage bracket
- One-piece front windshield
- Sunscreen
- Rain Protector

UNDERCARRIAGE

- Guards
 - Swivel guard
 - Mesh guard
 - Track guiding guards
 - Full length
 - Center
- Fabricating idler
- Forging idler

TRACK

- 600 mm triple grouser shoes
- 600 mm double grouser shoes
- 750 mm triple grouser shoes

FRONT LINKAGE

- Reach boom 6.9 m
 - R3.35 TB stick
 - TB-family bucket linkage (without lifting eye)

ELECTRICAL

- Travel alarm
- Beacon

LIGHTS

- HID boom lights
- Halogen boom lights

SECURITY

- Falling Object Guard system (FOGS), bolt-on

INTEGRATED TECHNOLOGIES

- Cat Grade Control 2D
- Cat Grade Control 3D
- Cat Grade with Assist (field installed kit)

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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Based on the Labor, Safety and Health Laws in Japan, employer of small construction equipment are required to provide specific training for all operators on machines with ship weight less than 3 metric ton. For machines greater than 3 metric ton, operator needs to obtain operator license certification from a Government approved registered training school.

AEHQ7913-01
Replaces AEHQ7913
(Japan)

