EH5000ACII

HITACHI

ALWAYS | PRODUCTIVE

Built to last.

ACII Series trucks are built to match our rugged mining shovels and backhoes. That means a 60- to 100,000-hour-plus life with good maintenance. Period.

The truck frame is still the strongest in its class. The unique trailing-arm suspension pioneered by Hitachi minimizes frame stress and fatigue while providing reduced tire wear and better steering. Now, vertical integration of Hitachi engineering, parts, and manufacturing has led to exciting levels of breakthrough innovation.

Hitachi and Siemens IGBT technology are behind the rugged, cool-running AC propulsion system. Put it to work on your jobsite and get lower fuel consumption, longer component life, and lower operating costs.


HITACHI
479

Flexible support keeps you up and running.

■ A customized Maintenance-and-Repair-Contract (MARC) program can be provided for your truck fleet through the local Hitachi dealer network. A MARC program can provide a low-cost option for maintaining your fleet while maximizing performance.

■ Shown with optional custom-paint.

Hitachi trucks are supported by a local dealer organization fully backed by Hitachi.

The level of support depends on the specific needs of your operation. Through the warranty period, mechanics literally stand by to ensure each truck delivers full satisfaction. Your Hitachi dealer is ready to provide training, parts management, component rebuilds, and on-demand technical services. Your dealer can also supply the ongoing support of a full Maintenance-and-Repair-Contract (MARC) at a competitive cost.

Strategically located parts depots provide parts backup. Hitachi managers are assigned to provide oversight to help ensure performance, regardless of the level of support chosen by the mine. Hitachi's Global e-Service (GeS) allows access to vital machine-health and operating information via the GeS website through a daily satellite download of truck information. The monitoring system can be optionally interfaced with various mine-management systems for real-time data transfer.


HITACHI
477


Hitachinaka Works

Best value.

Economical hauling.

The EH5000ACII puts to work everything our engineers and product support people have learned about high-capacity hauling. That's why you can expect industry-leading component-rebuild cycles and fuel efficiency.

- The proven engineering and manufacturing characteristics mine managers appreciate with Hitachi excavators are now found in this new-generation truck, including Accu-Trac front suspension, exhaust heated body, and an extraordinarily robust frame.
- With over 260 EH5000-class truck already in service, this latest version has a very balanced design of horsepower, tire selection, and proven systems for the lowest cost-per-ton of material moved.

Continuous improvement is an important part of our culture. The latest example of this commitment to quality and customer satisfaction is the new Rinko plant in Hitachi City, Japan. Our recently updated plant in Guelph, Ontario, also has the capacity and expertise to build world-class trucks.

- **Sophisticated demand-flow technology lets us build each unit to the options and specs you need.**
- **ACII Series Trucks feature the right combination of Hitachi expertise with attention to high performance, quality, reliability, and durability.**

At a glance.

WELL-MATCHED TO HITACHI EXCAVATORS:

- **EH5000ACII** 290 tonnes (320 tons)
- ***EX5500-6***
  Shovel – 27.0-m³ (35.5-cu.-yd.) loads in 5–7 passes
  Backhoe – 29.0-m³ (38.0-cu.-yd.) loads in 5–6 passes
- ***EX8000-6***
  Shovel – 40.0-m³ (52.3-cu.-yd.) 4–5 passes

Body (SAE 2:1); Bucket (SAE)

CONTROL CABINET:
Ergonomic, water-cooled, high-speed IGBT controls require less space. Individual grid resistors provide easy maintenance and improved cooling.

MACHINE MONITORING:
The monitoring system provides load weight, AC-drive, and engine operating information. Data can be downloaded to a PC or transferred by satellite to the Internet.

SUSPENSION:
Loaded or empty, the exclusive Neocon™ strut system, front trailing-arm suspension, and superior steering design provide stable, precise operator control.

AC PROPULSION:
Hitachi-controlled Siemens IGBT AC propulsion is the most heavy-duty available. It provides increased torque, greater reliability, better efficiency, and more power with less fuel.

LOAD SYSTEM:
Payload-monitoring system is fully integrated to the Machine Information Center (MIC) (and therefore your Mine Management System*) for prompt reporting of tons moved, cycle times, cycle count, and distance.
**Requires optional equipment.*

HYDRAULICS:
Improved hydraulic hoist performance with fast raise and lower. The hoist-raise calibration feature can be programmed to cut out the cylinder extension prior to reaching full extension. It also controls the body-lowering speed to ensure maximum cylinder life.

ENGINE:
Tier-2, V-16 configuration delivers increased torque output. A ground level, fast-fill lubricating system speeds daily service.

UPTIME:
High availability results from a strong frame; long-lasting suspension; simpler, better-cooled IGBT AC propulsion; and a reliable, proven engine.

VISIBILITY:
Visibility from the cab is enhanced by mirrors, cameras for blind spots, backup and tire lights, and brighter headlamps.

An efficient, reliable IGBT package.

Superior performance.

Hitachi and Siemens have been at the forefront of AC propulsion technology for decades. The new EH5000ACII Truck uses the best ideas from both companies.

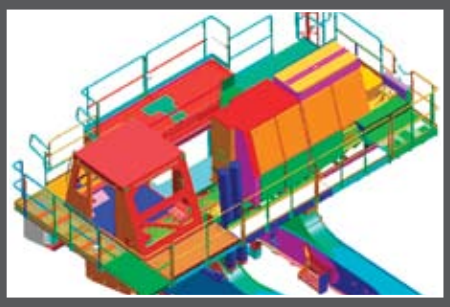
The IGBT system provided by Siemens has been successfully used in multiple high-capacity trucks. The Hitachi computerized controller is successfully working in all of the new EX-6 Series Mining Excavators.

The IGBT package offers high availability, lower operating costs, more torque, increased speed, and excellent retardation. The system runs cooler, with enhanced liquid cooling of the inverter, alternator rectifier, and cooled air to the wheel motors and alternator.

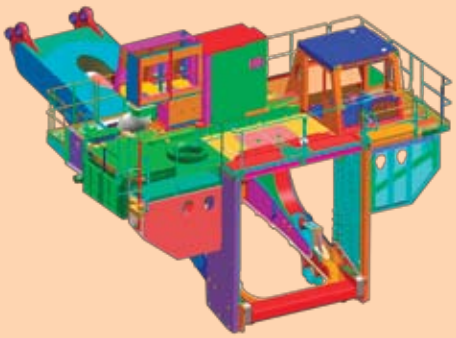
The Hitachi-Siemens package is about 15-percent more fuel efficient, quieter, and about 30-percent lighter than the previously used GTO-based AC-propulsion system. It delivers longer component life and low owning and operating costs.

■ **14- TO 20-GRID ELEMENTS:** Efficient air-cooled grid box for superb retarding capabilities.

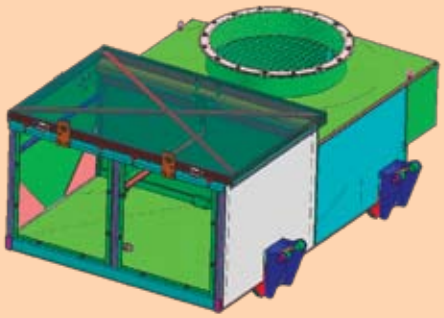
■ **AIR TO ALL COMPONENTS:** Alternator and wheel motors receive ducted air from their own separate blower motors and fans.



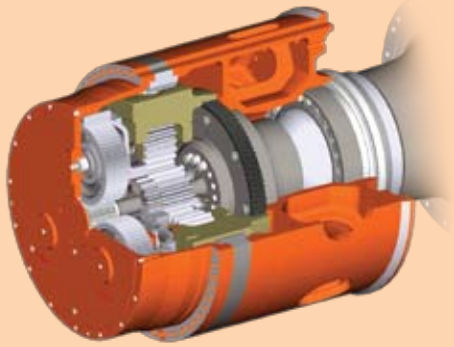
■ **ACCESSIBLE LAYOUT:** Cab deck has more room for the both the cooling cabinet and single- or double-inverter cabinets.



■ **Multiple improvements to frame and layout make the EH5000ACII more durable and efficient.**



■ **The exclusive design makes the grid-resistor element fast and easy to service.**

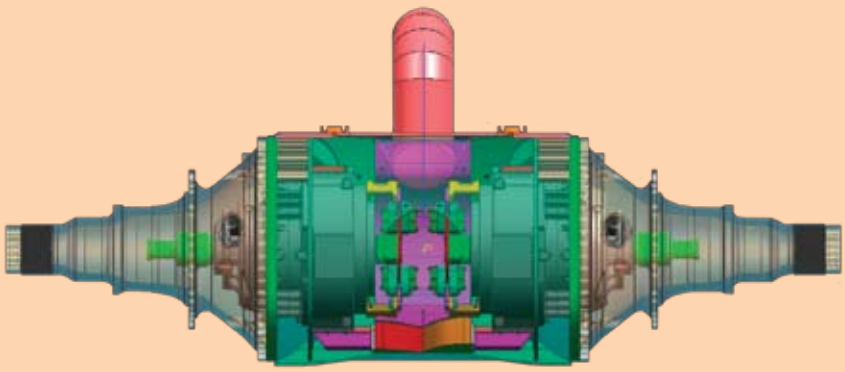


■ **Double-path power transmission eliminates high G-forces on planet bearings, runs cooler, and lasts longer.**

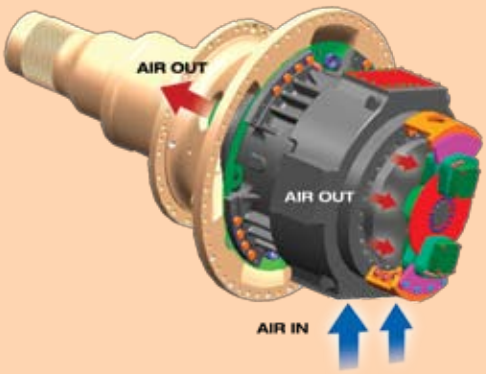
■ **SIEMENS IGBT TECHNOLOGY:**
Front view of the Siemens cooling cabinet and double-inverter package.

■ **IGBT ALTERNATOR:**
Assembled inside the liquid-cooled inverter cabinet for longer life.

■ **WHEEL-MOTOR COOLING:**
Liquid-cooled air is blown to each wheel motor through improved channeling inside the axle boxes.



■ Updated axle housing and wheel motors keep components cooler.



■ Siemens IGBT wheel motors provide cool-air circulation for longer-lasting operation.

Predictability.

Innovative features deliver high productivity and uptime.

■ **HOIST SYSTEM:** A new body sensor controls hydraulic flow so that both full extension and full retraction of the three-stage double-acting cylinders are cushioned for longer life and improved safety. Redundant controls ensure that the body can't become hyperextended, stopped midstream, or drop dangerously. Electronic controls keep the truck from rolling back once the body is hoisted. Controls limit the truck's forward movement as the body is lowered.

■ **IMPROVED ACCESSIBILITY:** Walkways are wider and meet current ISO requirements. Service access behind the cab is now easier. The rails adjust to provide better mirror visibility for operators of all sizes. More space is available to install fire suppression systems on the decks.

■ **LARGER, BETTER CAB:** The cab is larger and stronger, with improved door construction for a tighter, better-pressurized environment. A Sears air-ride seat option provides the best ride possible, with built-in safety sensors that beep if the seat belt is not engaged or if the parking brake has not been engaged.

■ **WINDR SERVICE TOOL:**
The WinDr service tool allows downloads of a wide variety of information to a technician's laptop for diagnosing performance issues. The MIC data is available by satellite uplink for review anywhere through the Internet.

■ **ALL-NEW CAB ELECTRONICS:**
The same proven Hitachi controller used in all EX-6 Mining Excavators now operates the hoist and all engine and drive systems. Vehicle health and information are displayed on the same 10.5-inch monitor as the EX-6 Mining Excavators. The monitor also allows for troubleshooting and diagnostics from the cab for various vehicle systems.

■ **PERIMETER VISIBILITY:**
Expansive primary mirrors are positively anchored and stiffened for minimal vibration. Enhanced viewing of the complete rear, right tire area, front bumper, and front-access points are provided by auxiliary convex mirrors and three cameras. Heated mirrors are optional.

■ **FAST-FILL SYSTEM:** This station allows ground-level feeding of grease, hydraulic oil, and engine oil for fast, simple topping-off between shifts. An auto-lube system virtually eliminates daily lubrication requirements.

Hitachi quality.

One of the most outstanding legacies of the thousands of Hitachi trucks successfully performing throughout the world is the proprietary front trailing-arm suspension. This system is still the best front suspension offered on any haul truck. It delivers excellent maneuverability at all speeds and keeps wheel movement restricted vertically, which in turn minimizes tire scuffing and premature tire wear.

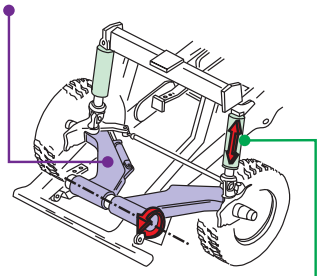
The frame bulk typically found with the traditional "horse collar" needed to mount a suspended kingpin is nonexistent, providing greater engine access.

The trailing-arm layout allows service or removal of the struts without removal of the wheel, reducing downtime and repair cost.

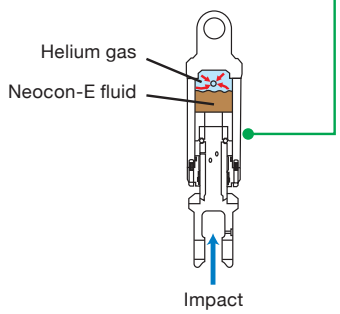
The proprietary Neocon™ strut used with the trailing arm and rear suspension improves operator and component isolation, and provides better haul stability and predictable operational control. The media used within the strut, Neocon-E™, is silicone based, environmentally friendly, and charged with helium gas. The Neocon strut system responds favorably, whether the truck is traveling empty or loaded, in a wide range of ambient temperatures.

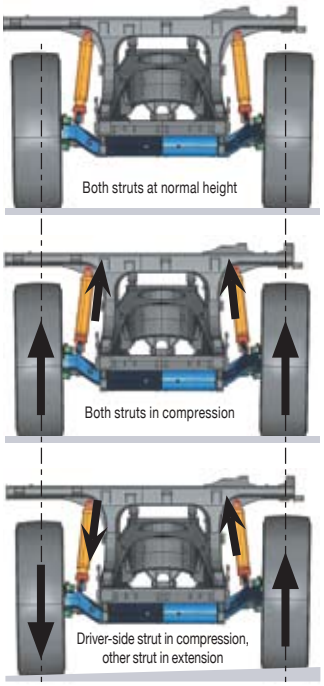
Maintenance is fast and simple with the Hitachi front trailing-arm suspension system. Steering geometry can be kept in spec with one adjustment. Front-suspension strut replacement takes less time than the suspended kingpin suspension system.

Trailing-arm suspension (front)



Neocon strut (front/rear)





With no horizontal deflection

Spindle

Each spindle is controlled by a hydraulic steering cylinder and rotates around the kingpin and the outer end of the trailing arm to position the wheels for steering. The spindles are attached by one simple tie-rod.

Kingpin

Retains the spindle to the trailing arm. The spindle rotates around the kingpin, which is locked in position.

Trailing Arm

The main suspension member to which other suspension components are attached. The trailing arms hinge on a cross tube that is clamped to the front of the frame.

Neocon Strut

The energy-absorption and -release component of the trailing-arm suspension system. Pinned to ball bushings at the frame and at the top of each trailing arm to prevent bending movements from transferring to the strut. Receives only axial input.

Solid engineering.

Updated frame for longer life:

The new frame is designed to be nearly cast-free with minimal vertical welds to withstand different stresses. It is made of 345-Mpa/50,000-psi alloy steel and robotically welded. The innovative design is based on over 100,000 hours of history on trucks of this class.

The longer frame provides better engine and component accessibility and enhances the stability for a smooth ride.

Improved body design:

The updated body features a floating hinge-pin design for less stress at the hinge point, closely spaced stiffeners, continuous heating of the body, and rubber-cushioned support on the frame.

The hoist system is automatically programmed to stop before stroke end to reduce shock.

Durable engine:

The MTU 4000-3 engine is an excellent blend of proven and cutting-edge technology.

Its second-generation common-rail injection system, two MTU turbochargers, and rebuildable cylinders are combined with EPA Tier-2 fuel optimization and water-cooled turbochargers and exhaust. Spin-on oil filtration has been replaced with two self-cleaning oil centrifuges to reduce overall maintenance costs.

Updated payload monitoring system provides improved accuracy.

During each loading of the truck, Hitachi's updated Haultronics™ III System measures the weight of material added as accurately as industry transducers and software provide.

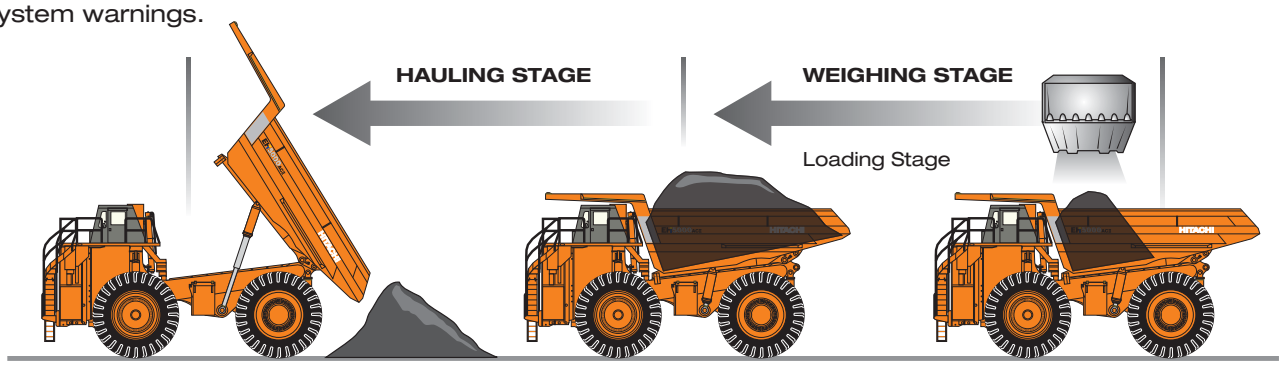
These "rolling scales" aid in maintaining safe but optimal payloads per the Hitachi Loading Policy, plus provide additional hauling information such as number of passes, time loaded, and time empty to be used by mine personnel.

Here's how they work: A digital transducer is affixed to each of the four suspension struts. They record differences in strut position and provide hardwired transmittal of this constant information to the Haultronics™ III controller. The controller, calibrated to the truck and other environmental concerns, translates this raw information into instant summaries of total weights.

The payload and load-cycle data can be downloaded directly from the machine using the WinDr tool, or is available via Hitachi's Global e-Service through the once-a-day download via satellite. The data can also be integrated with a Mine Fleet Management Systems such as Wenco.

Haultronics III

The Haultronics system records the payload and other loading-cycle information such as: time of record, number of passes, time-of-loading start, loading time, time-moving loaded, time-stopped loaded, time-moving empty, time-stopped empty, distance-traveled loaded, distance-traveled empty, fuel level, and system warnings.



■ HAULING STAGE:
During the Hauling Stage, the payload is no longer weighed, but the system keeps track of the dumping, loaded- and empty-moving and stopped times, and distance-traveled loaded and empty for the system records.

■ WEIGHING STAGE:
The Haultronics system measures and records the dynamic "final" payload as the truck moves through the maneuvering time and distance. The time and distance are adjustable, but recommendations are to set at max – 60 seconds and 160 m (525 ft).

■ LOADING STAGE:
During the loading of the truck, Haultronics is measuring the weight of the material added. Payload amount is shown by indicator lights mounted externally and internally.

Selected factory options.

■ **EXTENDED BUMPER:** Optional front bumper is available to meet mine-specific requirements.

■ **DIAGONAL FRONT STAIRWAY:** Optional stairway access is available, replacing standard step-ladder access.

■ **TROLLEY ASSIST:** For use at mines that that are looking to achieve increased speed on grade at significantly reduced diesel-fuel costs. By relying on the AC-powered overhead lines, the trolley-assist truck can use the full capacity of its wheel motors, while idling the engine, extending component life, reducing operating costs, and increasing productivity.

Worldwide equipment monitoring.

High production comes from high uptime. Now, all appropriate personnel can have instant access to vital maintenance-sensitive information through the Internet.

Anywhere. Anytime.

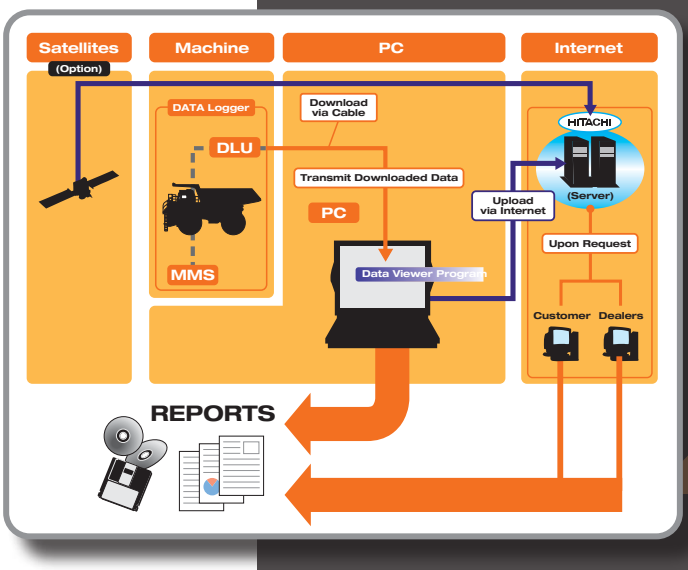
Each truck has been equipped with a “black box” that tirelessly collects data. Information on vehicle health, service alerts and warnings, payload weights, load counts, and cycle times is all scrupulously recorded.

Hitachi has taken this to the next level by creating Global e-Service. In addition to the above, Global e-Service also tracks suggested maintenance intervals, dealer-generated maintenance/service records, and GPS-based map information of machine location.

Every day information is uploaded from the truck via satellite and made available for downloading and viewing through the Internet. Each time your dealer makes an inspection of the machine, the report is added to the information. These reports can include nearly all possible predictive-testing results such oil sampling, vibration analysis, ultrasound, and thermographic studies.

All designated managers, the dealer, and Hitachi corporate personnel can review this information simultaneously for group discussion and planning. Preventive maintenance is the name of the game, and this tool helps ensure there are few, if any, surprises.

It is Hitachi’s goal that unplanned maintenance or repairs are minimized. We believe maintenance should be done with considerable forethought, which includes planned parts arrival, scheduled technician visits, and predetermined costs.



Machine Information Center (MIC)

■ **The MIC continuously records the performance of the engine and the hydraulic system. The record can then be downloaded to a computer.**

Global e-Service.

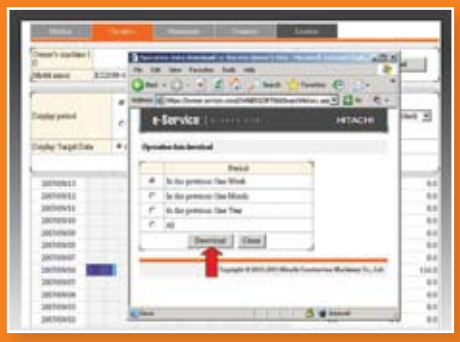
e-Service allows you to gather critical data and more via your Hitachi onboard MIC — through the Internet — without any expensive software.

The information available includes:

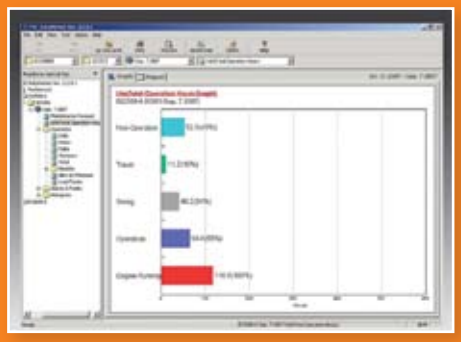
- Machine location through GPS and Google™ Maps
- Current machine hours
- Machine operation history
- Machine alarm and faults
- Download payload information

■ **Just log in and select the option you want.**

■ **View performance information on a daily, monthly, or customer-designated time period.**



■ **You can download the MIC data for viewing in the Dataviewer program.**



■ **View machine performance history in the Dataviewer program.**

■ **Track information from drive and payload-monitoring systems.**

■ **Google Maps show the unit's longitude and latitude.**

We are as passionate about the mining industry. We are dedicated to building the best equipment in the world and providing world-class support.

HITACHI

ALWAYS | PRODUCTIVE

DKBEH5000ACII Litho in U.S.A. (10-05)