



Cat[®] 773E

Off-Highway Truck

The Cat[®] 773E is engineered with premium performance in mind with simple-to-use technologies like Vital Information Management System (VIMS[™]) software and Product Link[™]—all standard equipment from the factory that boosts jobsite efficiencies. By utilizing rigorous component designs and machine validation processes, it delivers unmatched reliability and durability along with high uptimes.

Features may vary by region. Consult your Cat dealer for specific configurations available in your region.

Achieve Greater Productivity

- Productivity improvement up to 7%.
- Up to 3% increase in torque puts more power to the ground.
- Machine speed limit feature allows the machine to run at an optimal gear for the selected speed.
- Various body options, along with liners and sideboard combinations, offer flexibility to move a wide density of material without compromising on payload.

Designed for Safety

- Ground level access to the engine shutoff switch stops all fuel to the engine when activated, shutting down the machine.
- Safe ground level access to daily maintenance points means less servicing time is required.
- Overload speed limiter works with truck payload system to reduce machine speed automatically when the truck is overloaded.
- Equipped with a retractable four-point seat belt and a shoulder harness to improve operator safety.
- Seat belt indicator implements both visual and audible alerts to the operator when seat belt is not fastened.
- Secondary steering automatically engages if the power source for the normal steering fails.

Boost Efficiency

- Standard economy mode provides maximum fuel savings with minimal productivity impact.
- Haul your truck at a more fuel-efficient engine speed and gear selection with speed limiting.
- Engine Idle Shutdown automatically initiates when the truck is in park and idles for a preset amount of time—conserving fuel.
- Save on fuel costs with Engine Overspeed Protection—electronically senses the engine condition and automatically upshifts one gear to prevent engine overspeed.
- Built with the same reliable Cat[®] 3412E air-to-air aftercooled engine, featuring Hydraulic Electronic Unit Injector (HEUI[™]) for efficient operation.
- Deliver reliable performance in the most extreme haul-road conditions with the Cat front dry caliper and rear oil-cooled multiple disc brakes.

Easy to Operate

- Completely redesigned cab interior for a whole new standard in visibility, comfort, and productivity.
- Enjoy a more automotive-like, all-in-one integrated parking brake.
- Intuitive, ergonomic controls and multifunction display keep operators focused on their work.
- Designed for precise steering, Cat integrated steering and suspension system provides excellent maneuverability, minimal tire wear, and superior ride control.



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Lower Maintenance Costs

- Safe, convenient maintenance with a machine platform and ground level battery disconnect.
- The Advisor system provides quick, onboard diagnostic data and lowers operating costs.
- Rugged cylinders use a large diameter bore and a low-pressure nitrogen/oil design for long life with minimal maintenance.
- Traction Control System (TCS) engages sooner in the slip, extending tire life and cycle times.

Integrated Cat Technologies

- Second gear reweigh improves accuracy of the haul as it recalculates the payload.
- Instrumentation and Advisor system provide a three-category warning system and quick access to stored diagnostic data.
- Product Link™ system connects to each machine wirelessly, allowing you to monitor location, hours, fuel use, productivity, idle time, and diagnostic codes.
- Vital Information Management System (VIMS™) – Basic is offered as standard on all the machines. User-friendly interface monitor is available in the cabin to monitor key parameters of the machine.

Attachments

- Build operator confidence with Automatic Retarder Control (ARC), providing excellent control while reducing operator effort for a smoother ride.
- Enjoy better productivity and a more responsive Traction Control System (optional attachment).
- Continuously rate and calculate tire conditions with Ton Kilometer per Hour (TKPH).
- Truck Production Management System (TPMS) provides accurate weighing of the materials, stores 2,400 payload cycles, and reports on weights, haul cycle times, and distances with date and time stamps (optional attachment).

Standard Equipment

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

| | Standard | Optional | | Standard | Optional |
|---|----------|----------|---|----------|----------|
| POWER TRAIN | | | OPERATOR ENVIRONMENT (CONTINUED) | | |
| Braking system: oil-cooled – multiple disc (rear), parking/secondary, caliper disc (front), manual retarder (utilizes rear oil-cooled, multiple disc brakes), brake release motor (towing) | ✓ | | HVAC | ✓ | |
| Cat® 3412E HEUI™ engine: 12-cylinder diesel, air-to-air aftercooler (ATAAC), hydraulic electronic unit injection, air cleaner with precleaner (2), automatic cold mode idle control, turbocharger (2) | ✓ | | Left side power window | ✓ | |
| Extended life coolant to -35° C (-30° F) | ✓ | | Load counter, automatic: Advisor display | ✓ | |
| Transmission: 7-speed automatic power shift with ICM control, auto neutral idle, body upshift inhibitor, controlled throttle shifting, directional shift management, downshift inhibitor, neutral coast inhibitor, neutral start switch, programmable top gear/speed selection, reverse neutralizer during dumping, reverse shift inhibitor | ✓ | | Mirrors, left and right | ✓ | |
| | | | Right side access door | ✓ | |
| | | | ROPS cab, insulated/sound suppressed | ✓ | |
| | | | Seat, Cat Comfort, full air suspension and retractable four-point seat belt with shoulder harness | ✓ | |
| | | | Seat, trainer with lap belt | ✓ | |
| | | | Speedometer with odometer | ✓ | |
| | | | Steering wheel, padded/tilt/telescopic | ✓ | |
| | | | Storage compartment | ✓ | |
| | | | Sun visor | ✓ | |
| | | | Tachometer | ✓ | |
| | | | Throttle lock | ✓ | |
| | | | Tinted, laminated glass | ✓ | |
| | | | Transmission gear indicator | ✓ | |
| | | | Transmission oil temperature gauge | ✓ | |
| | | | Windshield wiper, intermittent, and washer | ✓ | |
| | | | | | |
| | | | TECHNOLOGY PRODUCTS | | |
| | | | Product Link™ | ✓ | |
| | | | Telematics | ✓ | |
| | | | MineStar™ ready | ✓ | |
| | | | | | |
| | | | OTHER | | |
| | | | Airline dryer | ✓ | |
| | | | Body mounting group | ✓ | |
| | | | Body safety pin (secures body in up position) | ✓ | |
| | | | Body down indicator | ✓ | |
| | | | CD-ROM parts book | ✓ | |
| | | | Center-mounted rims | ✓ | |
| | | | Driveline guards, operator safety vandalism protection lock | ✓ | |
| | | | Engine crankcase guards | ✓ | |
| | | | Ground level battery disconnect | ✓ | |
| | | | Ground level engine shutdown | ✓ | |
| | | | Ground level grease fittings | ✓ | |
| | | | Hydro pneumatic suspension at front and rear | ✓ | |
| | | | Reservoirs: transmission, steering, brake – converter, hoist | ✓ | |
| | | | Rock ejectors | ✓ | |
| | | | Supplemental steering, automatic | ✓ | |
| | | | Tie down eyes | ✓ | |
| | | | Tow hooks, front/tow pin, rear | ✓ | |
| | | | | | |
| ELECTRICAL | | | | | |
| Alarm, backup | ✓ | | | | |
| Alternator, 115 ampere | ✓ | | | | |
| Auxiliary jump start receptacle | ✓ | | | | |
| Batteries, maintenance-free, 12V (2), 190 amp-hour | ✓ | | | | |
| Electrical system, 24V | ✓ | | | | |
| Lighting system: backup light (halogen), directional signals/hazard warning (front and rear LED), headlights – (halogen) with dimmer, hazard lights (LED), stop/tail lights (LED) | ✓ | | | | |
| | | | | | |
| OPERATOR ENVIRONMENT | | | | | |
| Air cleaner service indicator | ✓ | | | | |
| Air system pressure gauge | ✓ | | | | |
| Ashtray and cigarette lighter | ✓ | | | | |
| Audiovisual seat belt reminder | ✓ | | | | |
| Brake oil temperature gauge | ✓ | | | | |
| Coat hook | ✓ | | | | |
| Coolant temperature gauge | ✓ | | | | |
| Diagnostic connection port | ✓ | | | | |
| Engine overspeed indicator | ✓ | | | | |
| Entertainment radio ready: speakers, antenna, wiring harness | ✓ | | | | |
| Fuel level gauge | ✓ | | | | |
| Hoist lever | ✓ | | | | |
| Horn | ✓ | | | | |
| Hour meter | ✓ | | | | |

Cat® 773E Off-Highway Truck

Technical Specifications

Engine

| | | |
|-------------------------|-----------|-----------------------|
| Engine Model | 3412E | |
| Rated Engine Speed | 2,000 rpm | |
| Gross Power – SAE J1995 | 567 kW | 760 hp |
| Net Power – SAE J1349 | 537 kW | 720 hp |
| Number of Cylinders | 12 | |
| Peak Torque | 3436 N·m | 2,534 lbf·ft |
| Torque Rise | 33% | |
| Bore | 137 mm | 5.4 in |
| Stroke | 152 mm | 6.0 in |
| Replacement | 27 L | 1,649 in ³ |

- These engine ratings apply at 2,000 rpm when tested under the specified condition for the specified standard in effect at the time of manufacture.
- Power rating conditions based on standard conditions of 25° C (77° F) and 99 kPa (29.32 in Hg) dry barometer, using 35° C (95° F) API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30° C (86° F) [reference a fuel density of 838.9 g/L (7.001 lb/gal)].
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- No derating required up to 2300 m (7,500 ft) altitude.
- Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2.

Transmission

| Speed | km/h | mph | Speed | km/h | mph |
|-----------|------|------|-----------|------|------|
| Forward 1 | 10.8 | 6.7 | Forward 5 | 37.0 | 23.0 |
| Forward 3 | 20.4 | 12.7 | Forward 7 | 67.8 | 42.1 |

- Maximum travel speeds with standard 24.00R35 (E4) tires.

Brakes

| | | |
|-----------------------|------------------------|-----------------------|
| Brake Surface – Front | 1395 cm ³ | 216 in ² |
| Brake Surface – Rear | 61 269 cm ³ | 9,496 in ² |
| Brake Standards | ISO 3450:2011 | |

Body Hoists

| | | |
|------------------------------|--------------|-------------|
| Pump Flow – High Idle | 562 L/min | 148 gal/min |
| Relief Valve Setting – Raise | 17 225 kPa | 2,500 psi |
| Relief Valve Setting – Lower | 3445 kPa | 500 psi |
| Body Raise Time – High Idle | 9.5 Seconds | |
| Body Lower Time – Float | 12.5 Seconds | |
| Body Power Down – High Idle | 17.5 Seconds | |

- Twin, two-stage hydraulic cylinders mounted inside the main frame; double acting cylinders in second stage.
- Power raise in both stages and power down in second stage.

Weight Distributions – Approximate

| | | | |
|---------------------|-------|--------------------|-------|
| Front Axle – Empty | 46.6% | Rear Axle – Empty | 53.4% |
| Front Axle – Loaded | 33.8% | Rear Axle – Loaded | 66.2% |

Capacity – Dual Slope – 100% Fill Factor

| | | |
|-------------------|---------------------|----------------------|
| Struck | 26.6 m ³ | 34.8 yd ³ |
| Heaped (SAE 2:1)* | 35.2 m ³ | 46 yd ³ |

- Contact your local Cat dealer for body recommendation.

* ISO 6483:1980.

Suspension

| | | |
|-----------------------------------|--------|--------|
| Effective Cylinder Stroke – Front | 234 mm | 5.2 in |
| Effective Cylinder Stroke – Rear | 149 mm | 5.9 in |
| Rear Axle Oscillation | 8.1° | |

Sound

| | |
|-----------------|----------------------------------|
| Sound Standards | ISO 6396:2008, SAE J1166:2008 |
|-----------------|----------------------------------|

- For cab offered by Caterpillar, the operator sound exposure Leq (Equivalent Sound Pressure Level) is 80 dB(A) when measured according to work cycle procedures specified in SAE J1166:2008. This occurs when the cab is properly installed and maintained. The test was conducted with doors and windows closed.
- For cab offered by Caterpillar, the dynamic operator sound pressure level is 80 dB(A) as per ISO 6396:2008. This occurs when the cab is properly installed and maintained. The test was conducted with doors and windows closed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.4 kg (5.29 lbs) of refrigerant, which has a CO₂ equivalent of 3.43 metric tonnes (3.78 tons)

Steering

| | | |
|------------------------------------|------|------------|
| Steer Angle | 31° | |
| Turning Diameter Front Wheel Track | 22 m | 72 ft 2 in |
| Turning Circle Clearance Diameter | 25 m | 82 ft 0 in |

- Steering standards meet SAE J1511 FEB94 and ISO 5010:2007.
- Separate hydraulic system prevents cross-contamination. Steering wheel effort is low and steering wheel cycle times are reduced with a new variable displacement, piston-type steering pump.

ROPS/FOPS

- Rollover Protective Structure (ROPS) for cab offered by Caterpillar meets ISO 3471:2008 for operator and ISO 13459:2012 Level II for trainer.
- Falling Objects Protective Structure (FOPS) meets ISO 3449:2005 Level II FOPS criteria for operator and ISO 13459:2012 Level II criteria for trainer.

Tires

| | | |
|---|---------------|--|
| Standard Tire | 24.00R35 (E4) | |
| Productive capabilities of the 773E truck are such that, under certain job conditions, TKPH (TMPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production. | | |
| Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection. | | |

Service Refill Capacities

| | | |
|--|-------|---------|
| Fuel Tank | 700 L | 185 gal |
| Cooling System | 122 L | 32 gal |
| Differentials and Final Drives | 155 L | 41 gal |
| Torque Converter/Brake/Hoist Hydraulic Tank | 133 L | 35 gal |
| Brake/Hoist System (includes tank) | 307 L | 81 gal |
| Torque Converter/Transmission System | 53 L | 14 gal |
| Torque Converter/Transmission System (includes sump) | 72 L | 19 gal |

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