



740 EJ

Articulated Truck

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

Table of Contents

Specifications	2
Engine	2
Weights	2
Air Conditioning System	2
Body Capacities	2
Transmission	2
Sound Levels	2
Operating Weights	3
Body Plate	3
Blade Eject/Retract	3
Service Refill Capacities	3
Standards	3
Dimensions	4
Turning Circle	5
Steering	5
Optimal Loader/Truck Pass Matching	5
Gradeability/Speed/Rimpull	6
Retarding Performance	7
Standard and Optional Equipment	8
740 EJ Environmental Declaration	10

740 EJ Articulated Truck Specifications

Engine

Engine Model	Cat® C18	
Gross Power – SAE J1995	381 kW	511 hp
Net Power – SAE J1349	370 kW	496 hp
Engine Power – ISO 14396	376 kW	504 hp
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,106 in ³

- Advertised power is tested at 1,700 rpm.
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- The net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler and fan at minimum speed.
- Net power when the fan is at maximum speed is 370 kW (496 hp) per the SAE reference conditions.
- The Cat C18 meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Diesel exhaust fluid (DEF) used in Cat SCR systems must meet the requirements outlined in ISO 22241-1:2006. ISO 22241-1:2006 requirements are met by many brands of DEF, including those that carry the AdBlue® or API certifications.

No Engine Derating Required Below	3050 m	10,000 ft
Peak Engine Torque Gross (SAE J1995:2014)	2618 N•m	1,931 lbf-ft
Peak Engine Torque Net (SAE J1349:2011)	2558 N•m	1,887 lbf-ft
Peak Engine Torque Speed	1,200 rpm	

Weights

Rated Payload	38 tonnes	42 tons
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Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas.
- If equipped with R134a (Global Warming Potential = 1430), the system contains 1.1 kg (2.4 lb) of refrigerant which has a CO₂ equivalent of 1.716 metric tonnes (1.891 tons).

Body Capacities

Heaped SAE 2:1	23 m ³	30.1 yd ³
Struck	18 m ³	23.5 yd ³

Transmission

Forward 1	6.1 km/h	3.8 mph
Forward 2	8.1 km/h	5 mph
Forward 3	11.2 km/h	7 mph
Forward 4	14.1 km/h	8.8 mph
Forward 5	18.7 km/h	11.6 mph
Forward 6	22.9 km/h	14.2 mph
Forward 7	31.5 km/h	19.6 mph
Forward 8	37.9 km/h	23.5 mph
Forward 9	54.8 km/h	34 mph
Reverse 1	6.4 km/h	4 mph
Reverse 2	14.6 km/h	9.1 mph

Sound Levels

Interior Cab	72 dB(A)
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- The declared dynamic operator sound pressure level is 72 dB(A) when ISO 6396:2008 is used to measure the value for an enclosed cab. The measurement was conducted at 70% of the maximum cooling fan's speed. The sound level may vary at different cooling fan speeds. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained.
- Hearing protection may be needed when operating with an open operator station and cab or when not properly maintained or doors/windows open for extended periods or in noisy environments.

740 EJ Articulated Truck Specifications

Operating Weights

Front Axle – Empty	20 550 kg	45,305 lb
Center Axle – Empty	7710 kg	16,998 lb
Rear Axle – Empty	7450 kg	16,424 lb
Total – Empty	35 710 kg	78,727 lb
Front Axle – Rated Load	1603 kg	3,534 lb
Center Axle – Rated Load	18 198 kg	40,120 lb
Rear Axle – Rated Load	18 198 kg	40,120 lb
Total – Rated Load	37 999 kg	83,776 lb
Front Axle – Loaded	22 154 kg	48,841 lb
Center Axle – Loaded	25 908 kg	57,117 lb
Rear Axle – Loaded	25 648 kg	56,544 lb
Total – Loaded	73 710 kg	162,503 lb

Body Plate

High Strength Brinell HB450 Wear Resistant Steel		
Front	7 mm	0.28 in
Chute	14 mm	0.55 in
Side	11 mm	0.43 in
Base	14 mm	0.55 in

Blade Eject/Retract

Eject (manual)	17 seconds
Eject (automatic)	16 seconds
Retract (manual)	21 seconds
Retract (automatic)	21 seconds

Service Refill Capacities

Fuel Tank	550 L	145.3 gal
DEF Tank	25 L	5.3 gal
Cooling System	90 L	23.7 gal
Brake Cooling Tank	67 L	17.7 gal
Steering/Hoist Hydraulic System	140 L	36.9 gal
Engine Crankcase	52 L	13.7 gal
Transmission/Output transfer gear (OTG)	75 L	19.8 gal
Final Drives (each)	5 L	1.3 gal
Axles (each)	60 L	15.8 gal

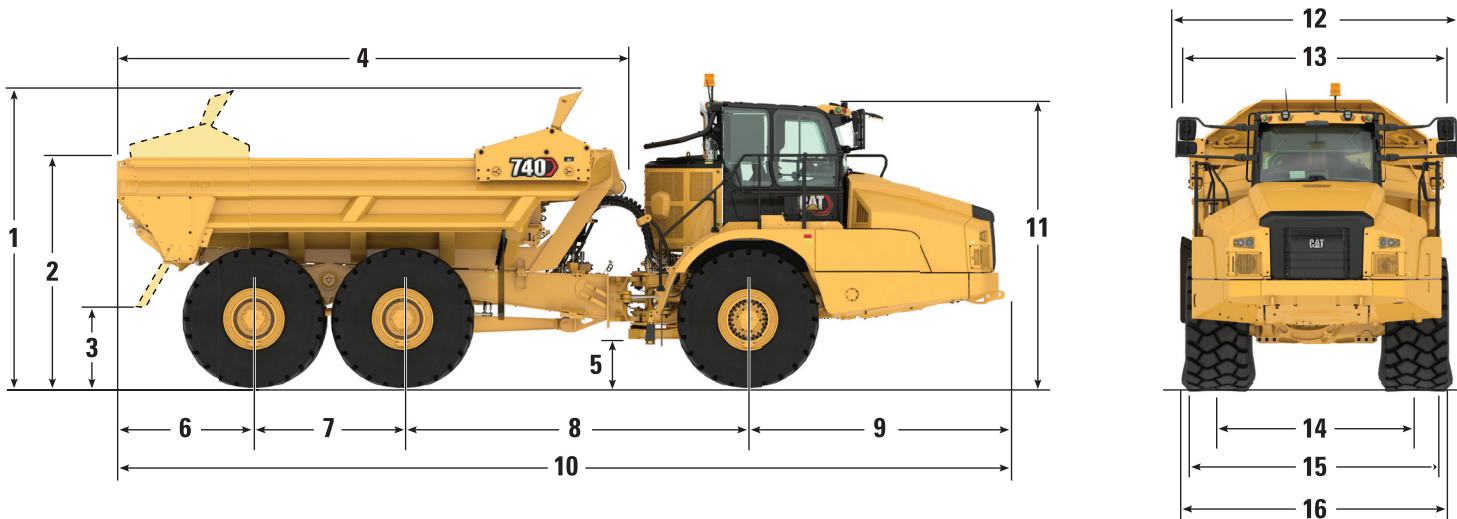
Standards

Brakes	ISO 3450:2011
Cab/Falling objects protective structure (FOPS)	ISO 3449:2005 Level II
Cab/Rollover protective structure (ROPS)	ISO 3471:2008
Steering	ISO 5010:2019

740 EJ Articulated Truck Specifications

Dimensions

All dimensions are approximate.



	mm	ft/in
1 Height Transport Position	3962	13' 0"
2 Load over Height	3104	10' 2"
3 Ground Clearance to Body Height	1103	3' 7"
4 Body Length	6731	22' 1"
5 Ground Clearance	583	1' 11"
6 Rear Axle Center to Body Rear	1789	5' 10"
7 Mid Axle to Rear Axle Center	1966	6' 5"
8 Mid Axle to Front Axle (Centers)	4590	15' 0"
9 Front Axle Center to Machine Front	3418	11' 2"
10 Overall Length	11 764	38' 7"
11 Ground Height to Top of Cab	3752	12' 3"
12 Overall Width	3801	12' 5"
13 Body Width	3522	11' 6"
14 Track Width	2687	8' 9"
15 Width over Fenders	3370	11' 0"
16 Max Laden over Tire Bulge	3500	11' 5"

740 EJ Articulated Truck Specifications

Turning Circle

Dimensions are for machines equipped with 29.5R25 tires.

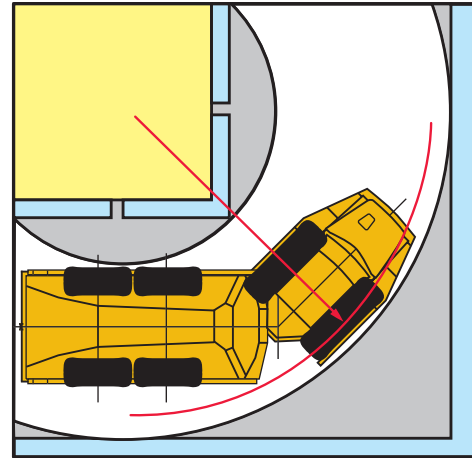
Turning Dimensions

Steer Angle – From Center Left/Right	45 deg	
SAE Turning Radius	8624 mm	339 in
Clearance Radius	9045 mm	356 in
Inside Radius	4413 mm	173 in
Aisle Width	5925 mm	233 in

Steering

Lock to Lock

4.8 seconds @ 60 rpm



Optimal Loader/Truck Pass Matching

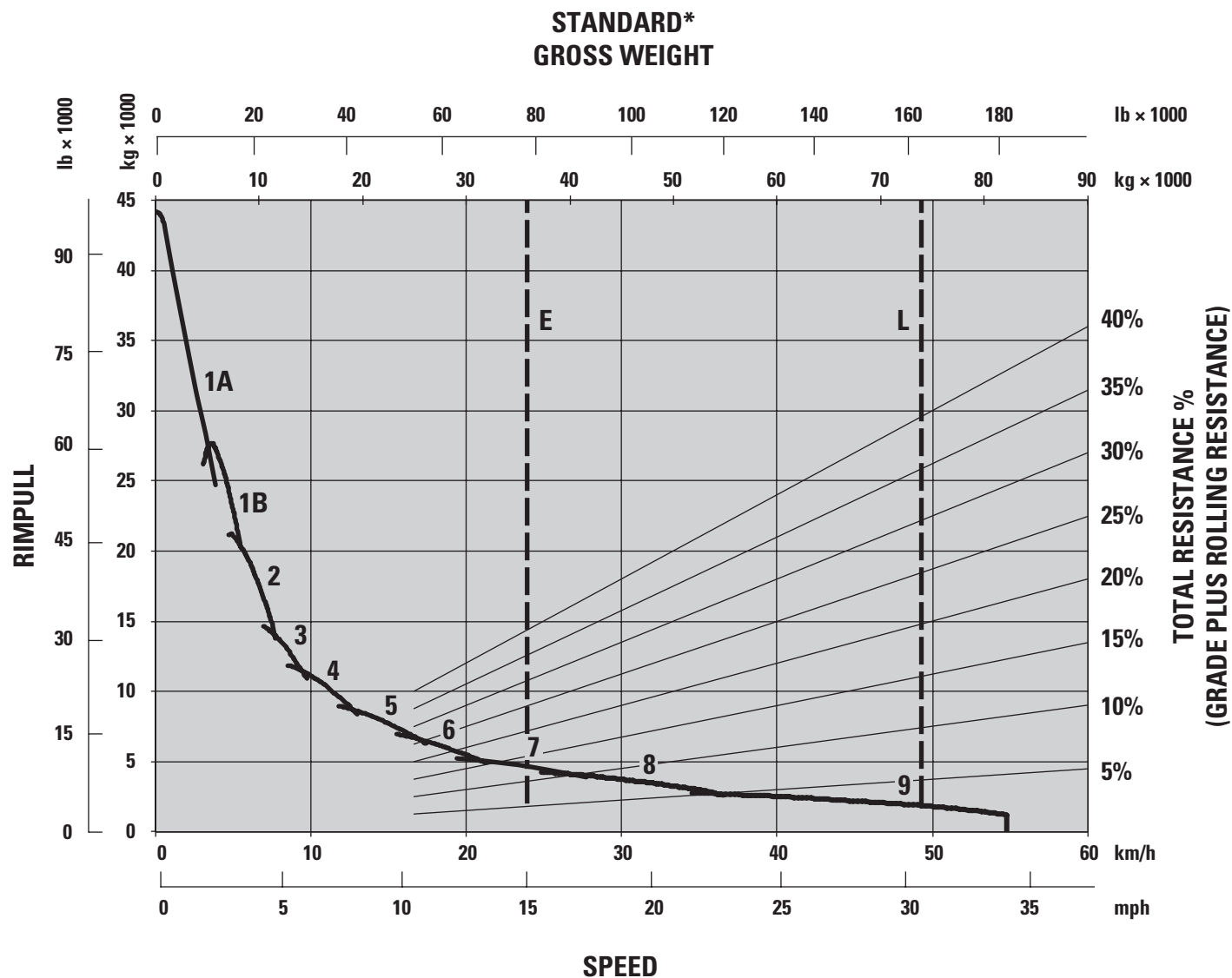
Hydraulic Excavators	390	374	
Passes	4	5	
Wheel Loaders	982	980	972
Passes	4	4-5	4-5

An optimum system match gives you a major productivity advantage. Having matched loading and hauling tools results in increased production and lower system costs per unit of volume moved.

740 EJ Articulated Truck Specifications

Gradeability/Speed/Rimpull

To determine performance, read from Gross Weight down to % Total Resistance. Total Resistance equals actual % grade plus 1% for each 10 kg/metric ton (20 lb/ton) of Rolling Resistance. From this point, read horizontally to the curve with the highest attainable speed range. Then, go down to Maximum Speed. Usable Rimpull depends on traction available.



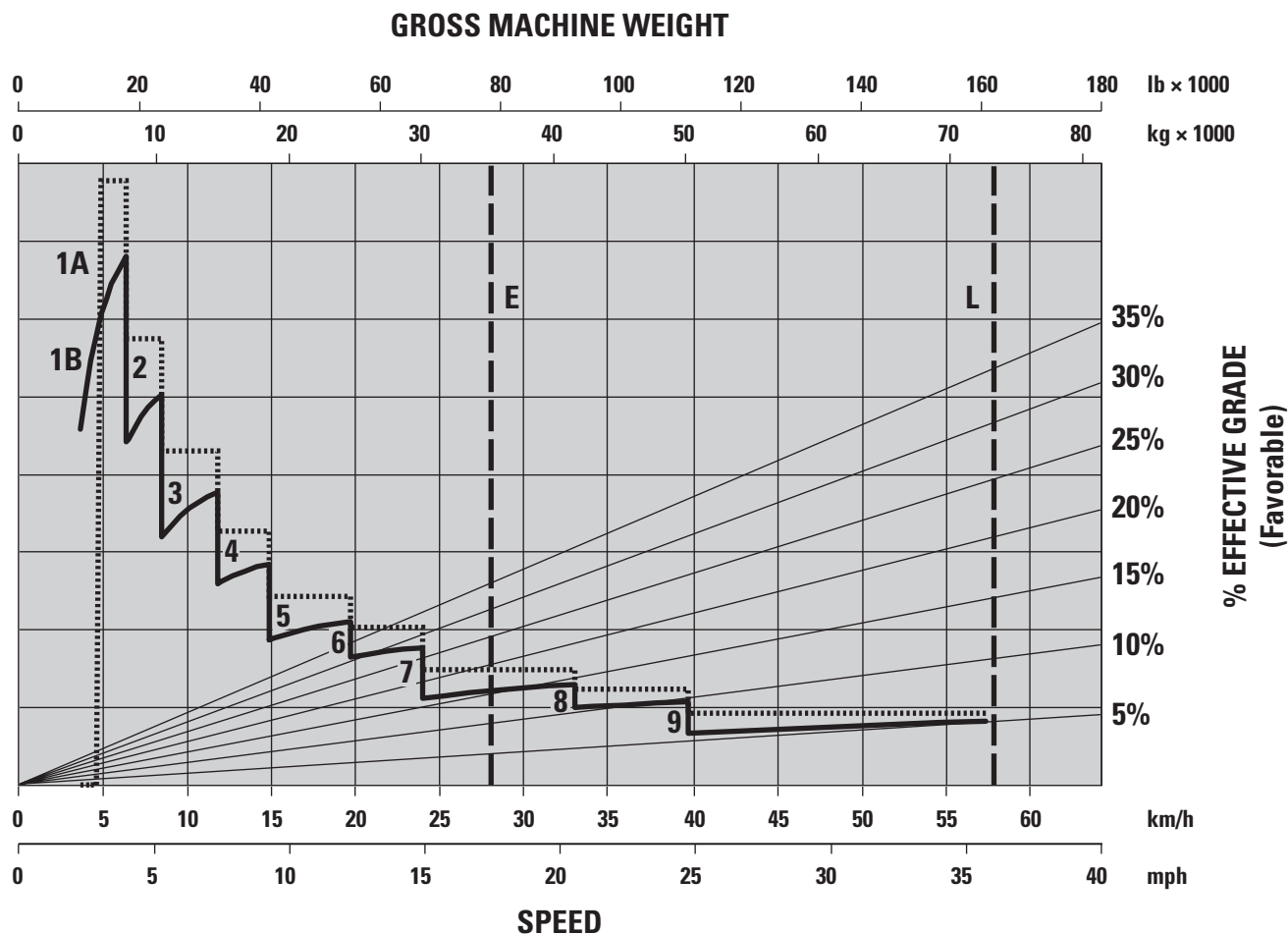
- 1A – 1st Gear (Converter Drive)
- 1B – 1st Gear (Direct Drive)
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear
- 7 – 7th Gear
- 8 – 8th Gear
- 9 – 9th Gear

- E – Empty 35 710 kg (78,727 lb)
- L – Loaded 73 710 kg (162,503 lb)
- * at sea level

740 EJ Articulated Truck Specifications

Retarding Performance

To determine performance, read from Gross Weight down to % Effective Grade. Effective Grade equals actual % favorable grade plus 1% for each 10 kg/metric ton (20 lb/ton) of Rolling Resistance. From this point, read horizontally to the curve with the highest attainable speed range. Then, go down to Maximum Speed. Retarding effect on these curves represents full application of the retarder.



- 1A – 1st Gear (Converter Drive)
- 1B – 1st Gear (Direct Drive)
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear
- 7 – 7th Gear
- 8 – 8th Gear
- 9 – 9th Gear

- E – Empty 35 710 kg (78,727 lb)
- L – Loaded 73 710 (162,503 lb)

- Manual
- Automatic

740 EJ Articulated Truck Standard & Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			TECHNOLOGY		
Air conditioning	✓		Machine Security System (MSS)		✓
Adjustable air vents	✓		Cat® Payload monitoring system		✓
Combined gear selection and eject control lever	✓		Product Link Cellular PLE643	✓	
Glass windows: front, laminated and tinted; sides and rear, toughened and tinted	✓		Cat Detect with Stability Assist	✓	
Heater and defroster with variable speed fan	✓		Product Link Dual PLE683		✓
Infrared glass – high ambient cab		✓	ELECTRICAL AND LIGHTING		
Liquid Crystal Display (LCD): alert indicator, selected gear and direction, speed or auto shift, Operation and Maintenance Manual (OMM), primary steering failure (warning), seat belt warning, secondary steering failure, Diesel Particulate Filter (DPF) regeneration filter, secondary steering energy source engaged, hour meter, retarder active	✓		Batteries (two) maintenance free	✓	
Mirrors, exterior	✓		Cold weather start attachment		✓
Mirrors, heated motorized		✓	Engine block heater		✓
Machine operation monitoring system: action lamp, engine oil pressure, primary steering system, left and right turn signal, high beam, coolant temperature, tachometer, parking brake, fuel level, transmission oil temperature, brake system, transmission hold, eject control, hydraulic system, charging system, transmission fault, traction control system, check engine lamp	✓		Ether start		✓
Operator seat belt, four-point		✓	Electrical system: 24-volt, 5A 24- to 12-volt converter	✓	
Radio, Bluetooth® stereo system		✓	Flashing LED beacon		✓
Seats: operator – fully adjustable, air suspension, retractable lap belt; trainer – padded with retractable lap belt	✓		Horn	✓	
Seat, heated/cooled		✓	Lighting systems: cab interior, two head lamps, two width marker, two reversing, work light/cab access light, two stop/tail lights, front and rear direction indicators	✓	
Secondary steering – electro hydraulic	✓		Main disconnect switch	✓	
Storage: cup holder, flask receptacle (under the secondary seat), under seat storage, door pocket, behind seat storage, coat hook	✓		Remote starting receptacle (cables not included)	✓	
Sun visor	✓		Roof-mounted LED work lights		✓
Tilt and telescopic steering wheel	✓		POWERTRAIN		
Touchscreen display incorporating the rearview camera video feed	✓		Auto shift nine-speed forward and two-speed reverse transmission	✓	
Window blinds		✓	Cat C18 engine	✓	
Windows (tinted) opening both sides	✓		CX38 transmission	✓	
Windshield wiper and washer, two speed, intermittent (front)	✓		Cat Clean Emission Module (CEM) and exhaust aftertreatment package	✓	
Windshield wiper and washer, two speed (rear)		✓	Differentials: standard with automatic clutched inter- and cross-axle differential locks	✓	
			Dual circuit oil immersed, enclosed brakes – all wheels	✓	
			Retarder: engine compression brake	✓	
			Three axle, six-wheel drive	✓	
			SAFETY		
			Reverse alarm	✓	
			Rearview camera	✓	
			Rollover protective structure/falling objects protective structure (ROPS/FOPS) cab	✓	
			GUARDS		
			Crankcase	✓	
			Front dump body spill guard, integral part of fabricated body	✓	
			Radiator	✓	
			Rear window	✓	

740 EJ Articulated Truck Standard & Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
OTHER			OTHER (CONTINUED)		
Auto lube installation for automatic greasing of bearings		✓	Mud flaps: wheel arch and body mounted with transportation tiebacks	✓	
Bare chassis (no body) standard wheel base		✓	Hydraulic tailgate	✓	
Bare chassis (no body) long wheel base		✓	S·O·S SM sampling valves	✓	
Body liners		✓	Sound suppression (standard in some countries*)	✓	
Cold weather coolant -51°C (-60°F)		✓	Tires, six 29.5 R25	✓	
Exhaust heated body		✓	Vandalism protection: lockable caps	✓	
Fast fuel fill		✓	Wheel chocks		✓
Fuel additive – anti-waxing		✓	875/65 R29 wide tires		✓
			Fender extension		✓
			Tailgate ready		✓

* Countries are EU countries plus Iceland, Norway, Lichtenstein, Switzerland, Türkiye and UK.

740 EJ Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

Engine

- The Cat® C18 engine meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) and are compatible* with ULSD blended with the following lower-carbon intensity fuels** up to:
 - 20% biodiesel FAME (fatty acid methyl ester)***
 - 100% renewable diesel, HVO (hydrotreated vegetable oil and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

* While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.

** Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.

*** Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas.
- If equipped with R134a (Global Warming Potential = 1430), the system contains 1.1 kg (2.4 lb) of refrigerant which has a CO2 equivalent of 1.716 metric tonnes (1.891 tons).

Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
 - Barium < 0.01%
 - Cadmium < 0.01%
 - Chromium < 0.01%
 - Lead < 0.01%

Sound Performance

Interior Cab	72 dB(A)
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- The declared dynamic operator sound pressure level is 72 dB(A) when ISO 6396:2008 is used to measure the value for an enclosed cab. The measurement was conducted at 70% of the cooling fan's maximum speed. The sound level may vary at different cooling fan speeds. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained.
- Hearing protection may be needed when operating with an open operator station and cab or when not properly maintained or doors/windows open for extended periods or in noisy environments.

Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
 - Economy mode minimizes fuel consumption without impacting productivity
 - Optimize airflow and enhance power and fuel efficiency with innovative air-management systems
 - Maximize uptime and reduce cost with world-class support from the Cat dealer network
 - Uniquely combined hoist and transmission level allows for easy, intuitive control and cuts operator interaction by as much as 50%
 - Cat Production Measurement provides real-time payload weighing which help you maximize productivity, reduce fuel burn and greenhouse gas emissions, all while improving job site efficiency and lowering costs

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

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

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AEXQ3005-03 (08-2025)
Replaces AEXQ3005-02
Build Number: 04A
(Aus-NZ, Europe, Japan, N Am)

