



740 EJ

Articulated Truck

Technical Specifications

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

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740 EJ Articulated Truck Specifications

Engine

Engine Model	Cat® C18	
Gross Power – SAE J1995:2014	381 kW	511 hp
Net Power – SAE J1349:2011	370 kW	496 hp
Engine Power – ISO 14396:2002	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.
- 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 348 kW (467 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 (Global Warming Potential = 1430). The system contains 1.2 kg of refrigerant which has a CO₂ equivalent of 1.716 metric tonnes.

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.

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Operating Weights

Front Axle – Empty	20 343 kg	44,849 lb
Center Axle – Empty	7754 kg	17,095 lb
Rear Axle – Empty	7491 kg	16,515 lb
Total – Empty	35 663 kg	78,623 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	38 000 kg	83,776 lb
Front Axle – Loaded	22 021 kg	48,548 lb
Center Axle – Loaded	25 952 kg	57,214 lb
Rear Axle – Loaded	25 690 kg	56,637 lb
Total – Loaded	73 663 kg	162,399 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/OTG	75 L	19.8 gal
Final Drives (each)	5 L	1.3 gal
Axles (each)	60 L	15.8 gal

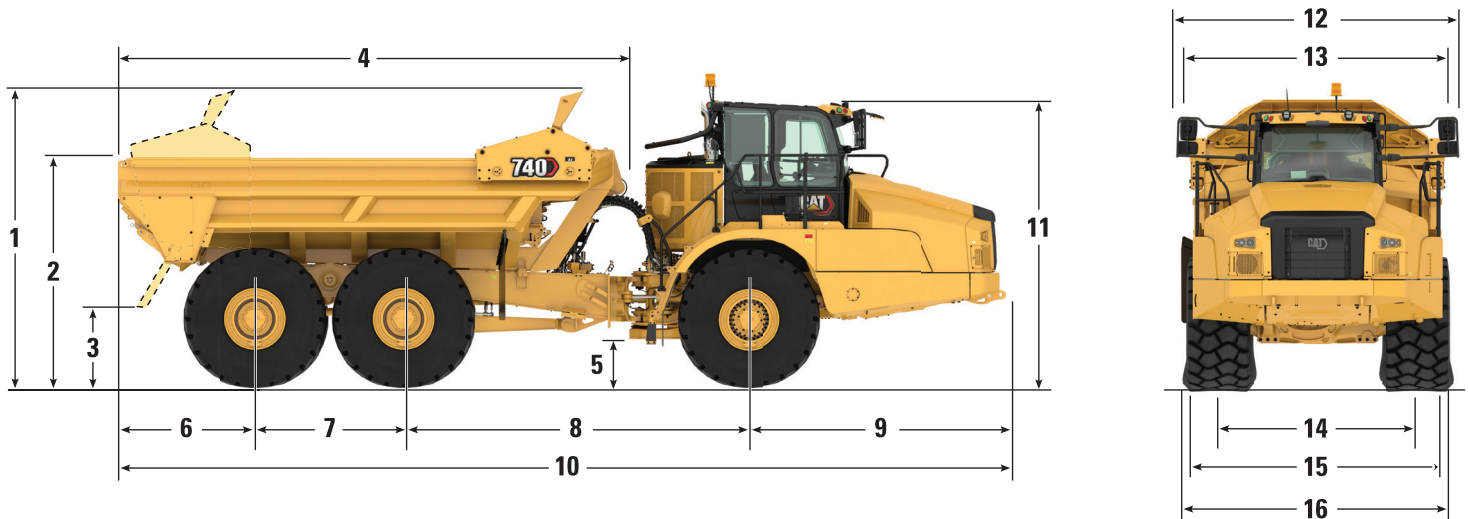
Standards

Brakes	ISO 3450:2011
Cab/FOPS	ISO 3449:2005 Level II
Cab/ROPS	ISO 3471:2008
Steering	ISO 5010:2019

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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"

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Turning Circle

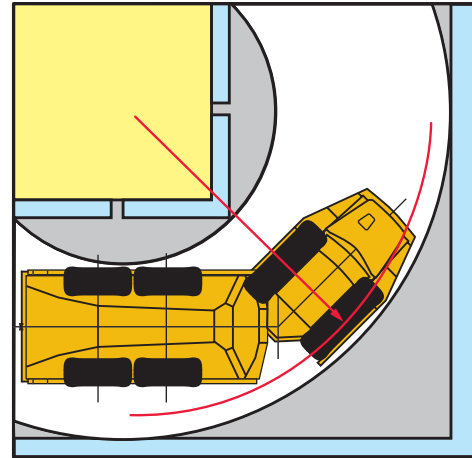
Dimensions are for machines equipped with 29.5R25 tires.

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

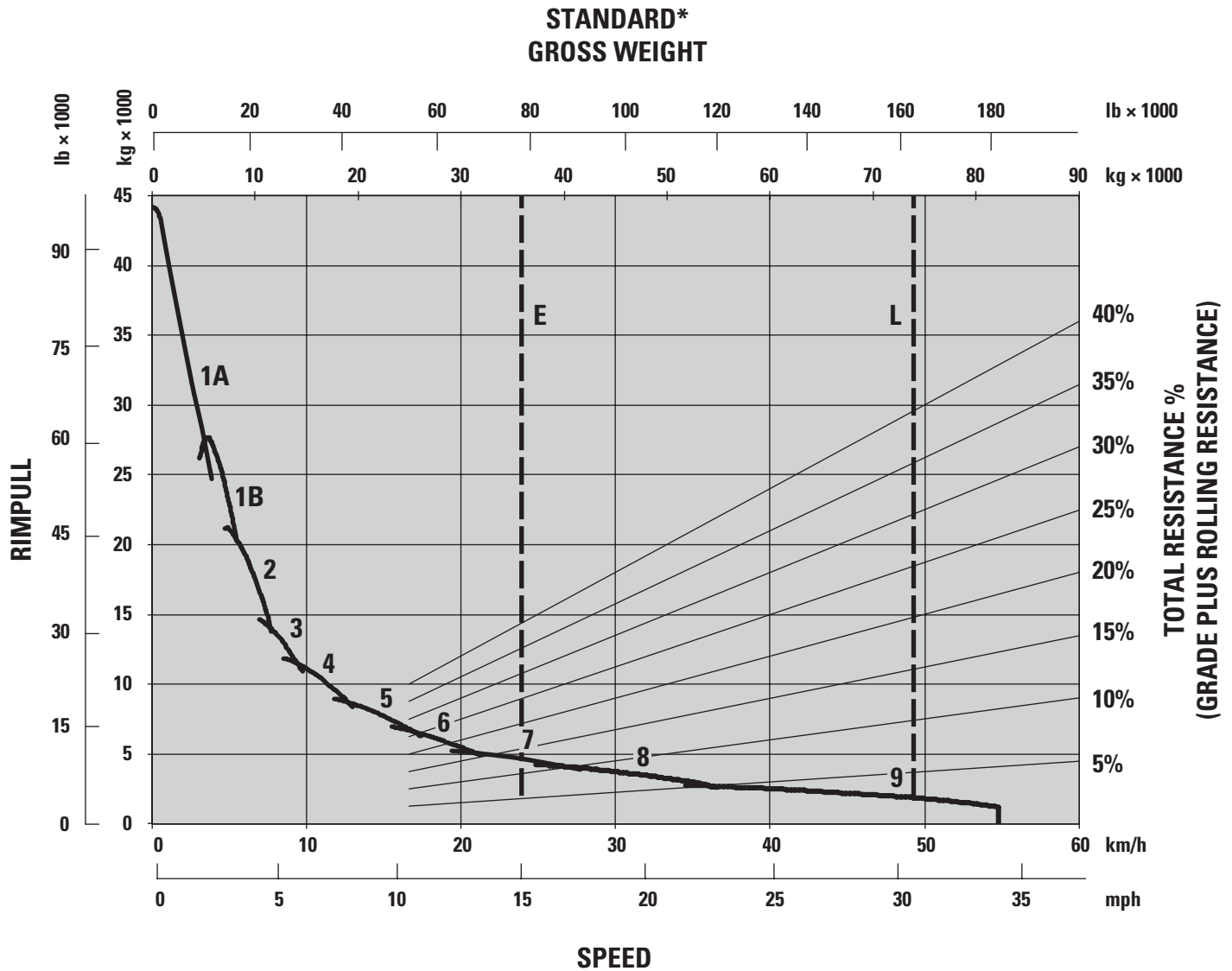
Hydraulic Excavators	390	374	
Passes	4	5	
Wheel Loaders	982	980	972
Passes	4	4-5	4-5

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.

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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.



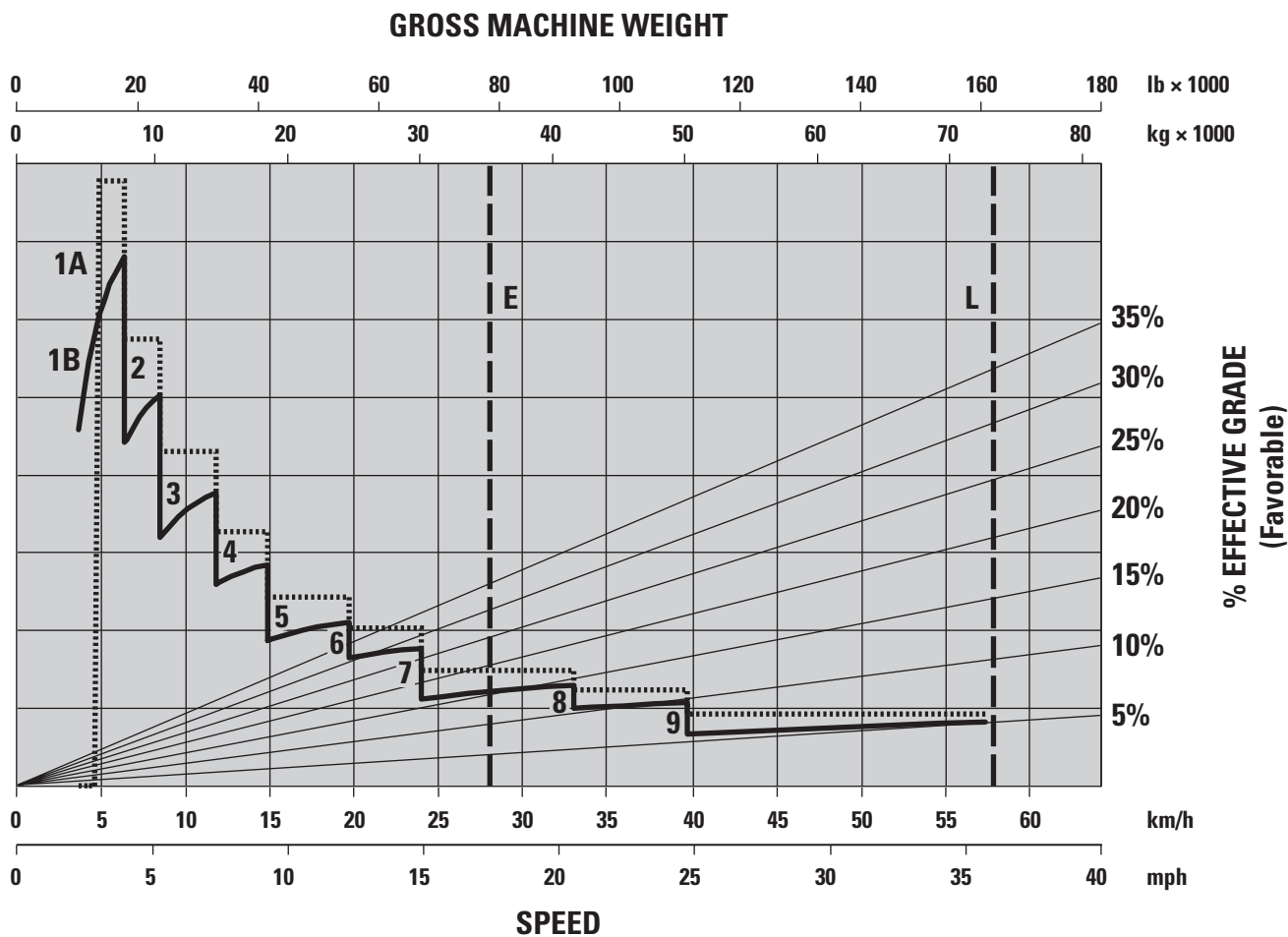
- 1A – 1st Gear (Converter Drive)
- 1B – 1st Gear (Direct Drive)
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear
- 7 – 7th Gear
- 8 – 8th Gear
- 9 – 9th Gear

- E – Empty 36 000 kg (79,400 lb)
- L – Loaded 74 000 kg (163,100 lb)
- * at sea level

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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 36 000 kg (79,400 lb)
- L – Loaded 74 000 kg (163,100 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 with R134a refrigerant	✓		Machine Security System (MSS)		✓
Adjustable air vents	✓		Cat Production Measurement payload monitoring system		✓
Combined gear selection and eject control lever	✓		Product Link™: PL631E or PL641E dependent on location and licensing agreement	✓	
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 Elite: PLE631E (satellite), PLE641E (cellular)		✓
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: extensive arrangement for improved visibility	✓		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 High Intensity Discharge (HID) work lights		✓
Tilt and telescopic steering wheel	✓		POWER TRAIN		
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	✓	
			ROPS/FOPS cab	✓	
			GUARDS		
			Axle	✓	
			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
OTHER		
Auto lube installation for automatic greasing of bearings		✓
Bare chassis (no body) standard wheel base		✓
Bare chassis (no body) long wheel base		✓
Body liners		✓
Cold weather coolant -51°C (-60°F)		✓
Exhaust heated body		✓
Fast fuel fill		✓
Fuel additive – anti-waxing		✓

	Standard	Optional
OTHER (CONTINUED)		
Mud flaps: wheel arch and body mounted with transportation tiebacks		✓
Hydraulic tailgate		✓
S·O·S SM sampling valves		✓
Sound suppression (standard in EFTA*)		✓
Sound suppression (optional outside EFTA*)		✓
Tires, six 29.5 R25		✓
Vandalism protection: lockable caps		✓
Wheel chocks		✓
875/65 R29 wide tires		✓
Fender extension		✓

* EFTA countries are EU countries plus Iceland, Norway, Lichtenstein, and Switzerland.

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) or 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.

**Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel.*

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.2 kg (2.6 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 helps 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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AEXQ3005-02 (10-2022)
Build Number: 04A
(Aus-NZ, Eur, Jpn, N Am)

