725
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
Body Plate Thickness 3
Service Refill Capacities 3
Body Hoist 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
725 Environmental Declaration 10

725 Articulated Truck Specifications

Engine

Engine Model	Cat C9.3	
Gross Power (SAE J1995:2014)	255 kW	342 hp
Net Power (SAE J1349:2011)	249 kW	334 hp
Engine Power (ISO 14396:2002)	252 kW	338 hp
Bore	115 mm	4.5 in
Stroke	1149 mm	45.2 in
Displacement	9.3 L	567.5 in3

- 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 249 kW (334 hp) per the SAE reference conditions.
- Meets U.S. EPA Tier 4 Final, either EU Stage V or EU Stage IV*, Japan 2014, and Korea Tier 5 emission standards.
- DEF used in Cat SCR systems must meet the requirements outlined in ISO 22241-1. ISO 22241-1 requirements are met by many brands of DEF, including those that carry the AdBlue or API certifications.

*Stage IV engines comply with the transition provisions of the EU nonroad emission regulation.

No Engine Derating Below	914 m	3,000 ft
Peak Engine Torque Gross (SAE J1995:2014)	1729 N·m	1,275 lbf-ft
Peak Engine Torque Net (SAE J1349:2011)	1712 N·m	1,263 lbf-ft
Peak Engine Torque Speed	1,200 rpm	

Weights

Rated Payload	24 tonnes	26.5 tons

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.1 kg of refrigerant which has a CO_2 equivalent of 1.716 metric tonnes.

Body Capacities

Heaped SAE 2:1	15 m3	19.6 yd3
Struck	11 m3	14.4 yd3
Tailgate Heaped SAE 2:1	15.6 m3	20.4 yd3
Tailgate Struck	11.1 m3	14.5 yd3

Transmission

Forward 1	8.1 km/h	5.0 mph
Forward 2	15.2 km/h	9.4 mph
Forward 3	23.2 km/h	14.4 mph
Forward 4	35.5 km/h	22.1 mph
Forward 5	49.4 km/h	30.7 mph
Forward 6	58.4 km/h	36.3 mph
Reverse 1	8.9 km/h	5.5 mph

Sound Levels

Interior Cab	69±2 dB(A)

- The declared dynamic operator sound pressure level is 69±2 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.

Operating Weights

Front Axle – Empty	14 050 kg	30,974 lb
Center Axle – Empty	4646 kg	10,242 lb
Rear Axle – Empty	4426 kg	9,757 lb
Total – Empty	23 122 kg	50,975 lb
Front Axle – Rated Load	2500 kg	5,511 lb
Center Axle – Rated Load	10 750 kg	23,699 lb
Rear Axle – Rated Load	10 750 kg	23,699 lb
Total – Rated Load	24 000 kg	52,910 lb
Front Axle – Loaded	16 549 kg	36,484 lb
Center Axle – Loaded	15 397 kg	33,944 lb
Rear Axle – Loaded	15 176 kg	33,457 lb
Total – Loaded	47 122 kg	103,886 lb

Body Plate

High strength Brinell HB450 wear resistant steel

Body Plate Thickness

Front Plate	7 mm	0.28 in
Base Plate	13 mm	0.51 in
Side Plates	11 mm	0.43 in
Scow Plate	13 mm	0.51 in

Service Refill Capacities

Fuel Tank	412.0 L	91.0 gal
Cooling System	83.0 L	18.0 gal
Steering/Hoist Hydraulic System	110.0 L	24.0 gal
Engine Crankcase	38.0 L	8.0 gal
Transmission	47.0 L	10.0 gal
OTG	24.0 L	5.0 gal
Final Drives (each)	7.5 L	1.6 gal
Axles (each)	26/28/26 L	6/8/08 gal
Diesel Exhaust Fluid (DEF) Tank	20.0 L	4.0 gal

Body Hoist

Raise Time	10 Seconds
Lower Time	8 Seconds

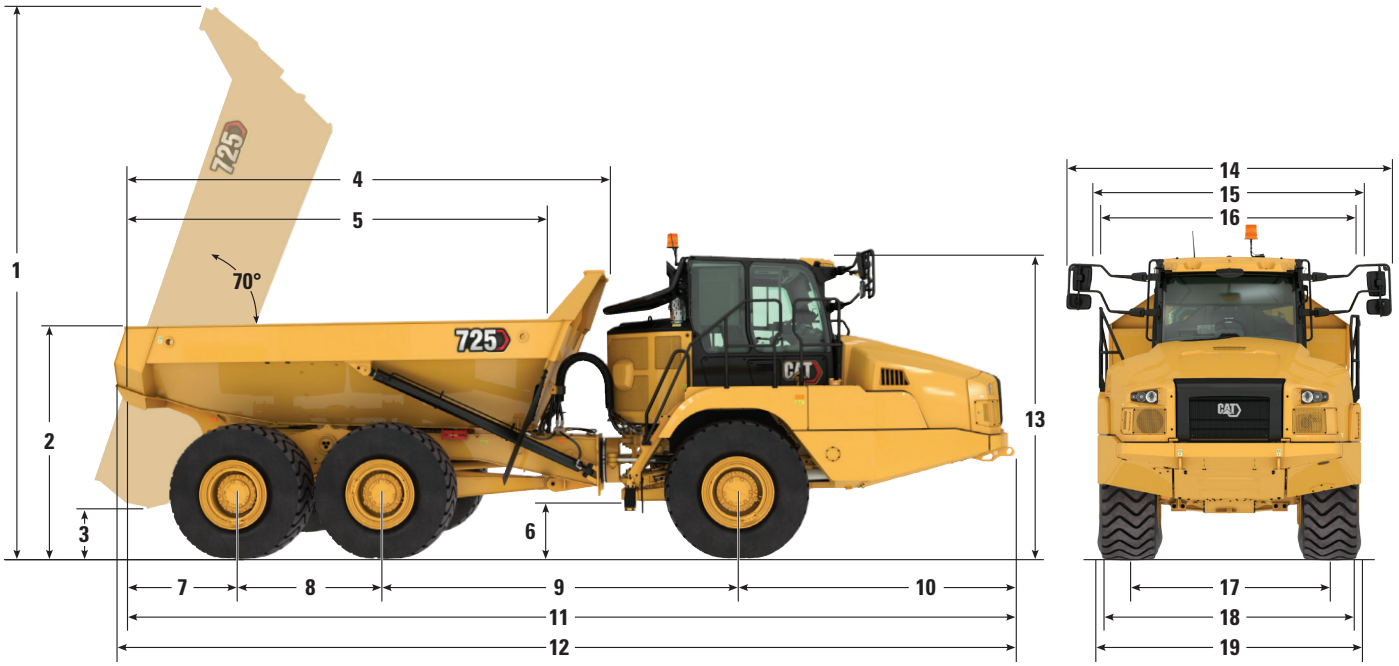
Standards

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

725 Articulated Truck Specifications

Dimensions

All dimensions are approximate.



		mm	ft/in
1	Body Height Fully Tipped	6468	21'3"
2	Load over Height	2916	9'5"
3	Ground Clearance – Body Fully Tipped	563	1'10"
4	Body Length	5783	19'0"
5	Body Length Inside	5411	17'9"
6	Ground Clearance	545	1'9"
7	Rear Axle Center to Body Rear	1556	5'1"
8	Mid Axle to Rear Axle Center	1700	5'7"
9	Mid Axle to Front Axle (centers)	3979	13'1"
10	Front Axle Center to Machine Front	3210	10'6"
11	Overall Length	10 445	34'3"
12	Overall Length with Tailgate	10 593	34'8"
13	Height Transport Position	3508	11'6"
14	Overall Width	3676	12'1"
15	Width over Tailgate/Width Including Tailgate	2984	9'10"
16	Body Width	2902	9'6"
17	Track Width	2275	7'6"
18	Width over Tire	2877	9'5"
19	Width over Fenders	2950	9'8"

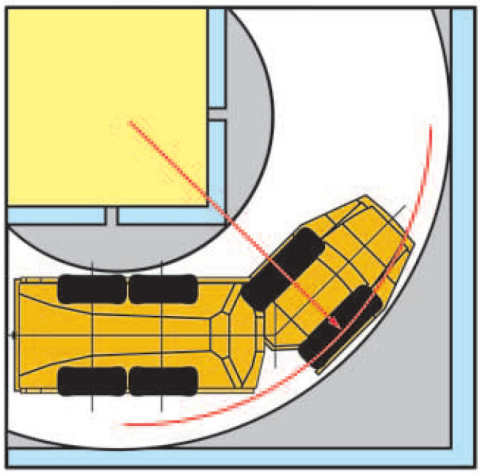
Turning Circle

Dimensions are for machines equipped with 23.5R25 tires.

Turning Dimensions		
Steer Angle – From Center Left/Right	45°	
SAE Turning Radius	7470 mm	294 in
Clearance Radius	8075 mm	318 in
Inside Radius	3879 mm	153 in
Aisle Width	5332 mm	210 in

Steering

Lock to Lock	4.75 seconds at 60 rpm



Optimal Loader/Truck Pass Matching

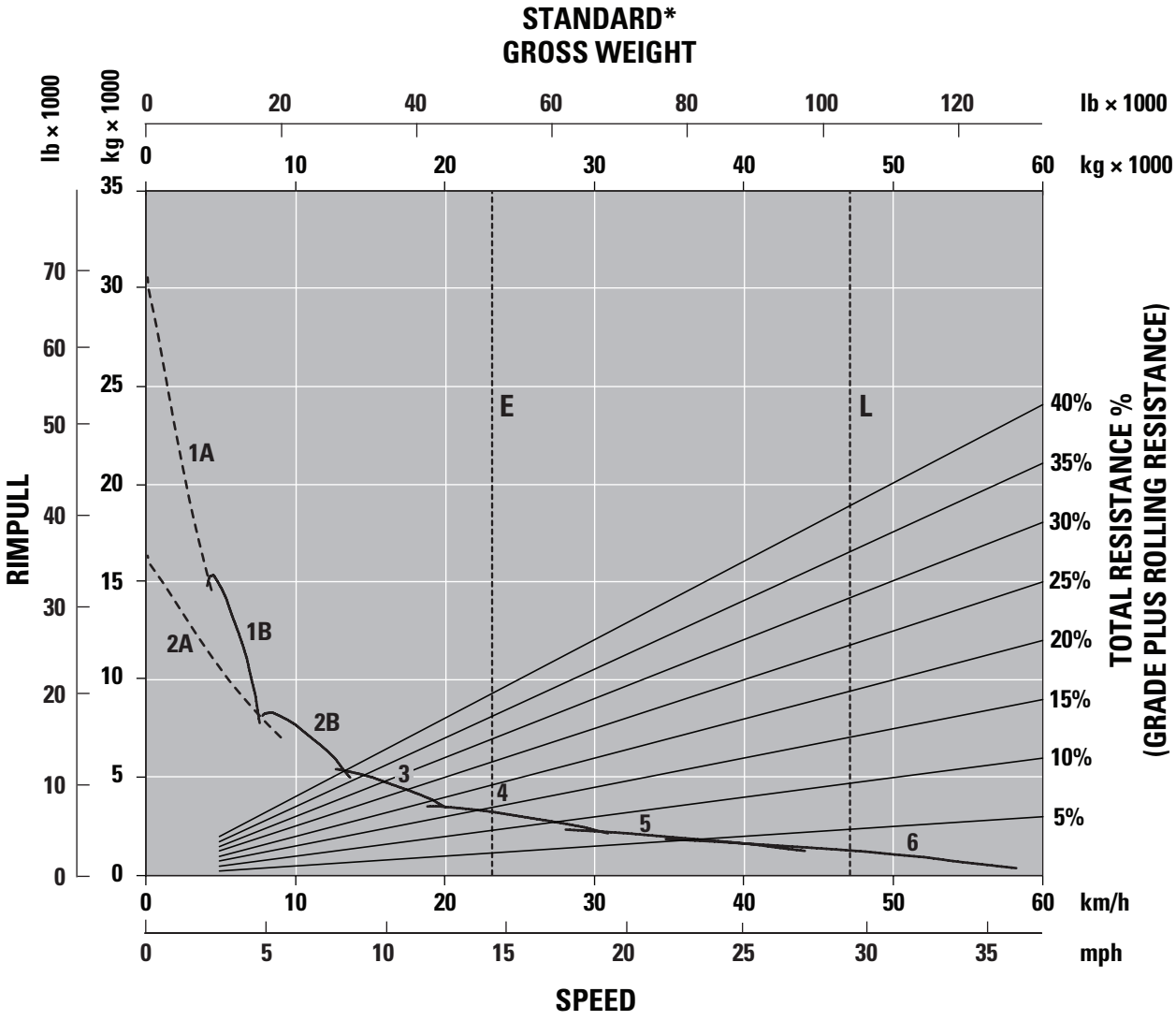
Hydraulic Excavators	349/352	336
Passes	4-5	5-6

Wheel Loaders	972M/972M XE	966M/966M XE	962M	950M
Passes	3-4	4	4-5	5

An optimum system match gives you a major productivity advantage. The 725 is an excellent match for the Cat 349/352 and 336 Hydraulic Excavators and Cat 972M, 966M, 962M, and 950M Wheel Loaders. Having matched loading and hauling tools results in increased production and lower system costs per unit of volume moved.

Gradeability/Speed/Rimpull

To determine performance, read from Standard 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 Speed. Usable Rimpull depends on traction available.



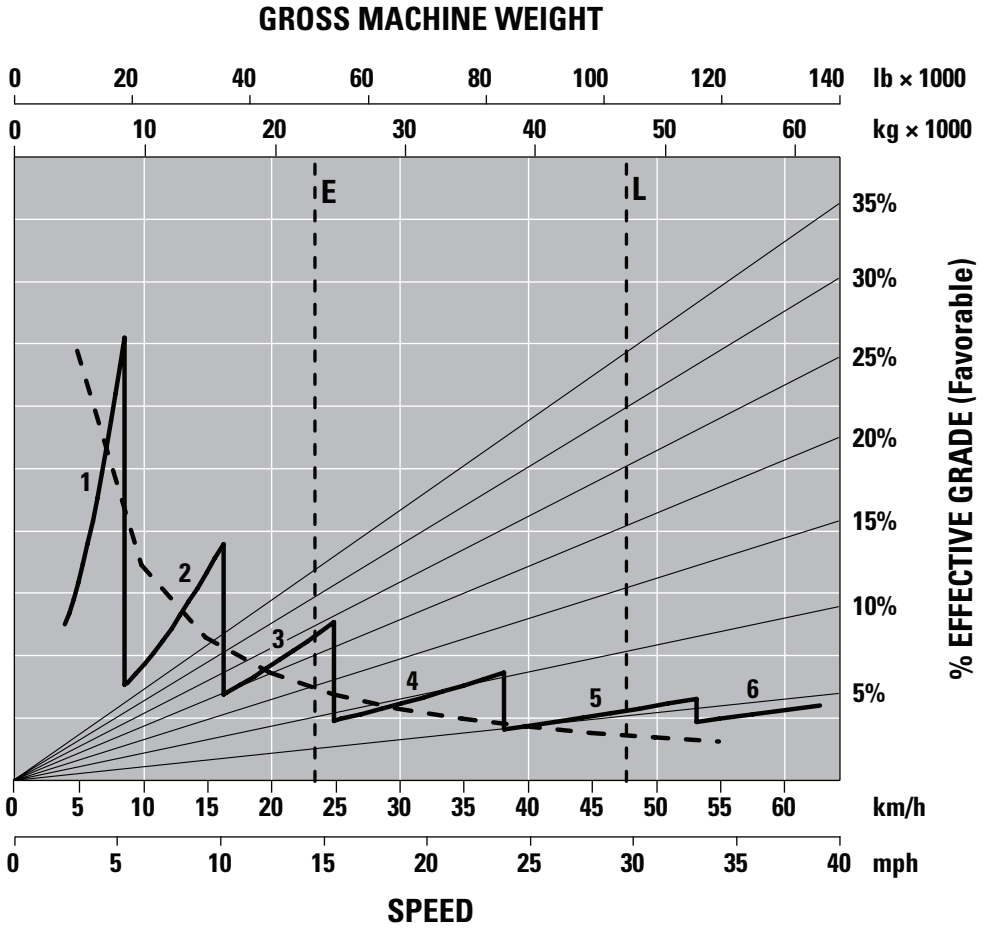
1A – 1st Gear (Converter Drive)
1B – 1st Gear (Direct Drive)
2A – 2nd Gear (Converter Drive)
2B – 2nd Gear (Direct Drive)
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

E – Empty 23 040 kg (50,795 lb)
L – Loaded 47 040 kg (103,707 lb)
* at sea level

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.



1 – 1st Gear
2 – 2nd Gear
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

E – Empty 23 040 kg (50,795 lb)
L – Loaded 47 040 kg (103,707 lb)

725 Articulated Truck Standard & Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional
OPERATOR ENVIRONMENT		
Air conditioning with R134a refrigerant	✓	
Adjustable air vents	✓	
Combined gear selection and hoist control lever	✓	
Glass windows: front, laminated and tinted; sides and rear, toughened and tinted	✓	
Heater and defroster with four-speed fan	✓	
Infrared glass – high ambient cab		✓
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	✓	
Mirrors: extensive arrangement for improved visibility	✓	
Mirrors, heated motorized		✓
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, hoist control, hydraulic system, charging system, transmission fault, traction control system, check engine lamp	✓	
Radio, Bluetooth stereo system		✓
Seats: operator – fully adjustable, air suspension, retractable lap belt; trainer – padded with retractable lap belt	✓	
Seat, heated/cooled		✓
Seat belt, four-point		✓
Secondary steering – electro hydraulic	✓	
Storage: cup holder, flask receptacle (under the secondary seat), under seat storage, door pocket, behind seat storage, coat hook	✓	
Sun visor	✓	
Tilt and telescopic steering wheel	✓	
Touchscreen display incorporating the rearview camera video feed	✓	
Window blinds		✓
Windows (tinted) opening both sides	✓	
Windshield wiper and washer, two speed, intermittent (front)	✓	
Single-speed rear wiper		✓

	Standard	Optional
TECHNOLOGY		
Machine Security System (MSS)		✓
Cat Production Measurement payload monitoring system		✓
PLE641 (cellular) dependent on location and licensing agreement	✓	
Cat Detect with Stability Assist	✓	
PLE631 (satellite)		✓
ELECTRICAL AND LIGHTING		
Batteries (two) maintenance free	✓	
Cold weather start attachment		✓
Engine block heater		✓
Ether start		✓
Electrical system: 24-volt, 5A 24- to 12-volt converter	✓	
Flashing LED beacon		✓
Horn	✓	
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	✓	
Main disconnect switch	✓	
Remote starting receptacle (cables not included)	✓	
Roof mounted High Intensity Discharge (HID) work lights		✓
POWER TRAIN		
Auto shift six-speed forward and single speed reverse transmission	✓	
Cat C9.3 engine	✓	
CX31 transmission	✓	
Cat Clean Emissions Module (CEM) and exhaust aftertreatment package	✓	
Differentials: standard with automatic clutched inter- and cross-axle differential locks	✓	
Dual circuit oil immersed, enclosed brakes – all wheels	✓	
Hydraulic retarder	✓	
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	✓	

Standard and Optional Equipment

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

OTHER STANDARD AND OPTIONAL EQUIPMENT	Standard	Optional
Auto lube installation for automatic greasing of bearings		✓
Bare chassis (no body) standard wheel base		✓
Body liners		✓
Cold weather coolant -51°C (-60°F)		✓
Exhaust heated body		✓
Fast fuel fill		✓
Fuel additive, anti-waxing		✓

OTHER STANDARD AND OPTIONAL EQUIPMENT (CONTINUED)	Standard	Optional
Mud flaps: wheel arch and body mounted with transportation tiebacks	✓	
Scissor tailgate		✓
S·O·S℠ sampling valves	✓	
Sound suppression (standard in EFTA*)	✓	
Sound suppression (optional outside EFTA*)		✓
Tires, six 23.5R25	✓	
Vandalism protection: lockable caps	✓	
Wheel chocks		✓

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

725 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® C9.3 engine meets U.S. EPA Tier 4 Final, either EU Stage V or EU Stage IV*, Japan 2014, and Korea Tier 5 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.

**Stage IV engines comply with the transition provisions of the EU nonroad emission regulation.*

***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 1.1 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	69±2 dB(A)

- The declared dynamic operator sound pressure level is 69±2 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.

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%

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.

© 2022 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, Product Link, S•O•S, "Caterpillar Corporate Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

AEXQ2697-02 (10-2022)
Build Number: 04A
(N Am, Eur, Aus-NZ, Jpn)