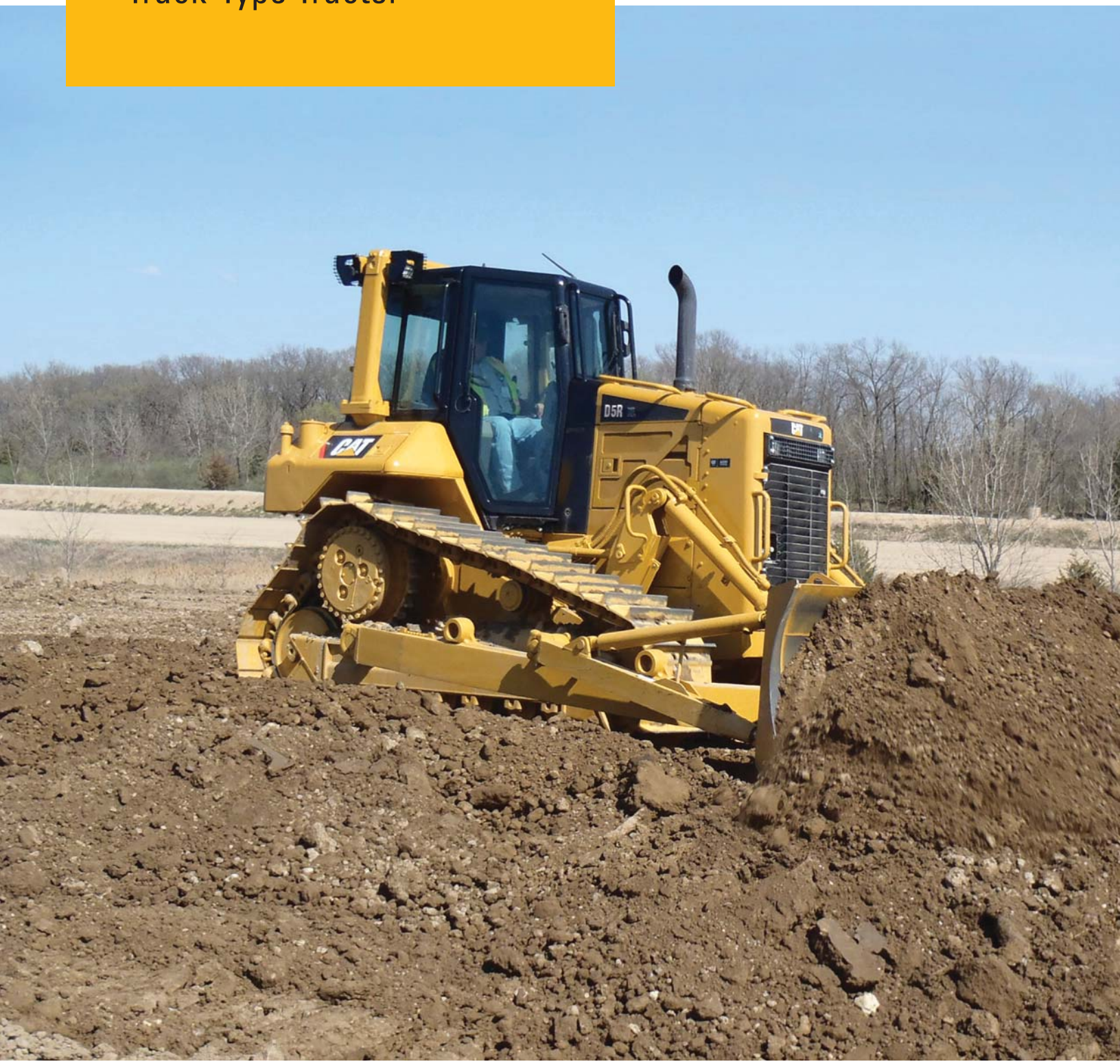
D5R

Track-Type Tractor



Engine		
Engine Model	Cat® C6.6 ACERT™	
Net Power – ISO 9249	112 kW	150 hp

Weights		
Operating Weight – XL	16,570 kg	35,530 lb
Operating Weight – LGP	17,900 kg	39,463 lb

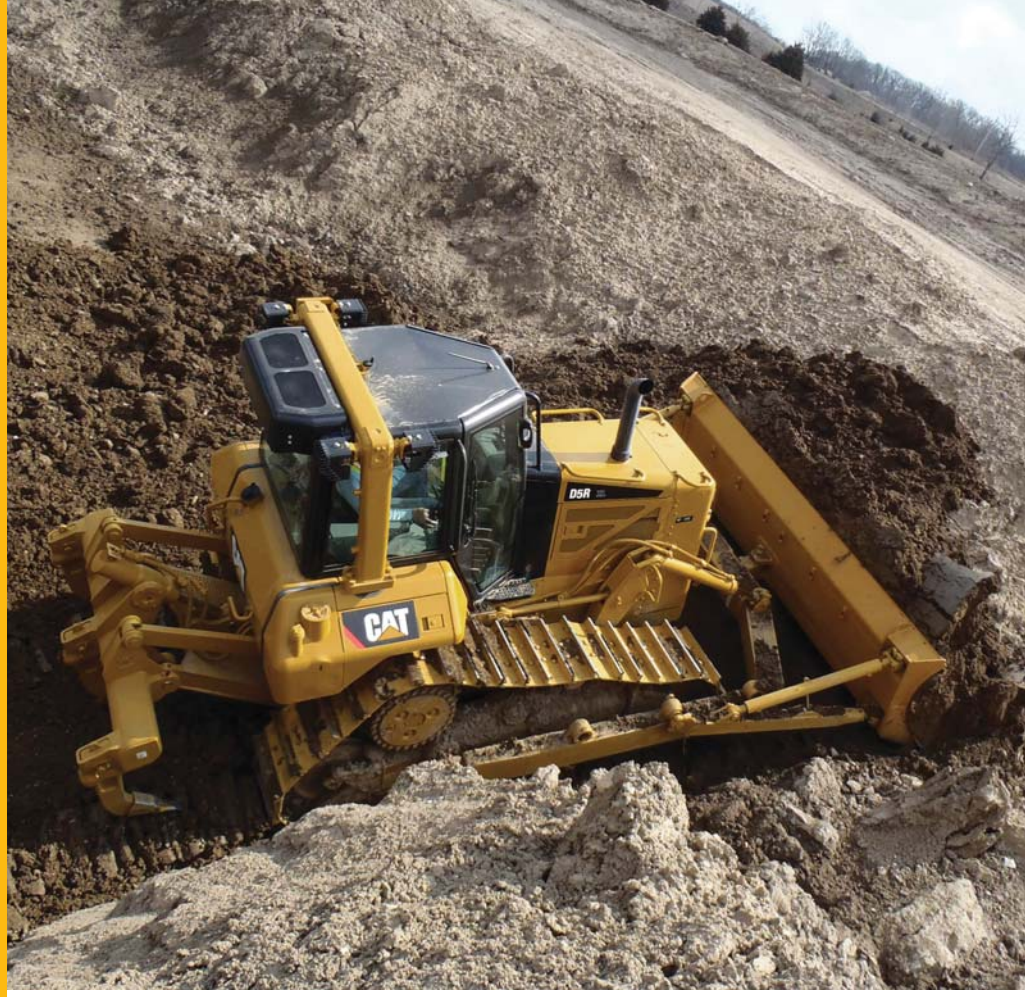
Features

Operator Station
Comfort features, excellent visibility and low-effort controls help improve operator efficiency so they can stay focused and more productive on the job.

Engine and Power Train
The Cat® C6.6 engine with ACERT™ Technology provides optimal engine performance and reliability, is capable of meeting EPA Tier 3 and EU Stage IIIA emission levels.

Undercarriage
The Cat elevated sprocket design offers outstanding traction and balance. A variety of undercarriage configurations and components allow the machine to be matched to application needs.

Serviceability and Support
The D5R is designed with ease of serviceability in mind to help reduce your operating costs and keep the machine at work on the job site. And the D5R comes standard with the renowned service of the Cat dealer network. From preventive maintenance to outstanding parts and service support, Cat dealers excel at keeping you up and running.



Contents

Caterpillar has been the world leader in Track-Type Tractors for more than a century. The D5R combines legendary Cat product durability and reliability with proven technology designed to reduce emissions while improving your productivity and your bottom line. From rugged structures to fully integrated engine and power train systems, the D5R is a world-class tractor built to help you produce the highest quality work in a variety of applications.

Cab and Controls

Productivity, safety, comfort

Operator Environment

The D5R features an isolation-mounted, pressurized cab that reduces noise and vibration. Large, single pane windows offer good views all around the machine for maximum productivity and enhanced job site safety. The Comfort Series seat features fully adjustable positioning and armrests to provide a comfortable platform when working on steep grades or slopes.

Heating and air conditioning vents evenly distribute airflow within the cab. The cab is pre-wired for a radio, equipped with two speakers, an antenna and a radio mount recessed in the headliner.

The D5R also features an Open ROPS Canopy that offers good views all around the machine and a fully adjustable Comfort Series seat.

Gauges and warning lights on the in-dash instrument cluster are easy to read, even in direct sunlight. The Cat Monitoring System Display gives operators and service technicians easy access to operating and maintenance information. The system provides three levels of warning and system monitoring so the operator can stay informed and still concentrate on the job.

Dozer and Ripper Controls

All D5R controls are ergonomically designed for low-effort and ease of operation. The dozer and ripper control levers feature Electro-hydraulic for added operator comfort and precise control.

Throttle Rocker Switch

With the touch of a finger, the rocker switch activates high or low idle. A decelerator pedal gives the operator full control of engine speed when the rocker switch is in the high idle position. Engine speed can also be easily set in any range between high and low idle by simultaneously using the decelerator pedal to set the desired speed and pressing the throttle switch in for three seconds.

Steering and Transmission Control

The operator uses a single handle control to perform all direction and gear selection. The tiller bar control allows the operator to work more precisely in close areas around structures, grade stakes and other machines. Differential Steering provides the finest modulation in the industry.

Work Tool Lock-Out Switch

The work tool lock-out valve prevents inadvertent operation of the hydraulic work tool attachments for added safety.

Engine

Power and reliability

Caterpillar is one of the world's leading engine manufacturers. Every component of a Cat® engine is carefully designed to maximize durability and reliability. Precise controls optimize power and fuel efficiency while reducing emissions. Modular design and advanced electronic diagnostics enhance the engine's serviceability.

ACERT Technology

The D5R features a Cat C6.6 engine with ACERT™ Technology. A series of Caterpillar innovations provide advanced electronic control, precision fuel delivery and refined air management, resulting in outstanding performance and lower emissions. To help customers work within expanding global regulatory requirements, the C6.6 engine with ACERT Technology can reach equivalent EPA Tier 3 or EU Stage IIIA emissions levels.

ATAAC

The air-to-air aftercooler (ATAAC) – part of the advanced air management system – brings cool air to the engine. This increases life, reduces emissions, and helps maximize fuel efficiency.

Fuel Delivery

Multiple injections where fuel is introduced in the combustion chamber in a number of precisely controlled micro-bursts. Injecting fuel in this way allows for precise shaping of the combustion cycle directing the injectors to deliver precise quantities of fuel at exactly the right times during combustion.

Cat Advanced High Efficiency Oil Filter

Advanced oil filters provide outstanding contamination control for a much cleaner running engine. The advanced filtration is accomplished without the shorter change intervals often required with other brands.

Cooling System

The all new cooling system includes engine radiator, Air-to-Air After Cooler (ATAAC), and hydraulic oil cooler. Engine radiator consists of two units of bar plate cooler, which are connected at the top with hose. The aluminum bar plate construction provides improved durability to debris plugging, abrasion and corrosion resistance.

Power Train

Powerful efficiency

The power shift transmission and differential steering are matched with the C6.6 engine to deliver outstanding power and reliability. The integrated system efficiently puts more power to the ground, utilizing more of the available horsepower, so you get more done with less.

Differential Steering System

Differential steering puts you on the leading edge of productivity by maintaining power to both tracks while turning. When one track speeds up, the other slows down an equal amount. Maneuverability – especially with large blade loads – is improved, as well as cycle times in other applications. Greater load capacity, power and speed control are possible in soft underfoot conditions on steep slopes because both tracks are powered during turns. A single tiller bar controls all directional and speed functions for ease of operation.

Planetary Power Shift Transmission

The transmission includes three speeds forward and three speeds reverse, featuring thick, large diameter, high capacity, oil-cooled clutches. These clutches provide higher torque capacity and increase service life. Modular transmission and differential slide into rear case for servicing ease, even when a ripper is installed. An oil-to-water cooler provides maximum cooling capacity, and forced oil flow lubricates and cools clutch packs for maximum clutch life.

Structures

Rugged design for maximum service

The foundation of every Cat dozer is a rugged frame built to absorb high impact shock loads and twisting forces. Castings provide added strength to the main case and equalizer bar saddle.

The pivot shaft is bolted to the mainframe and connects to the rear roller frames to allow independent oscillation. The pivot shaft distributes impact loads throughout the case, reducing bending stresses on the case. This design eliminates alignment problems and the need for diagonal braces on the roller frames.

The track roller frames are welded and box-section in design, which provides strength and resistance to bending and twisting with added reinforcement where operating loads are the highest.

The pinned equalizer bar gives the roller frames the ability to oscillate up and down to better match ground contours for maximum traction and operator comfort. Bolted end pins offer longer life and reduce downtime with improved serviceability and reliability.

Ground and implement shock loads are transferred to the mainframe to protect final drives, axles and steering components from harsh impacts for longer component life.

Modular power train components make it quick to remove and repair the transmission, final drives, steering differential or brakes.

Modular undercarriage components simplify service. Lifetime lubricated idlers and track/carrier rollers provide the ability to re-use internal components and rebuild or reshell components. This reduces owning and operating costs, and saves raw materials and natural resources.

Undercarriage

Proven productivity

Since its ground-breaking introduction in 1978, the Cat elevated sprocket undercarriage arrangements allow optimized balance for best possible performance in each application. This is a field-proven design that offers outstanding machine performance and longer component life.

Ground and implement shock loads are transferred to the mainframe to protect final drives, axles and steering components from harsh impacts for longer component life.

The elevated sprocket design gives the operator excellent sight lines to the blade, sides and back of the machine. However, machine center of gravity remains low, offering excellent stability, balance and traction.

Modular power train components make it quick to remove and repair the transmission, final drives, steering differential or brakes.

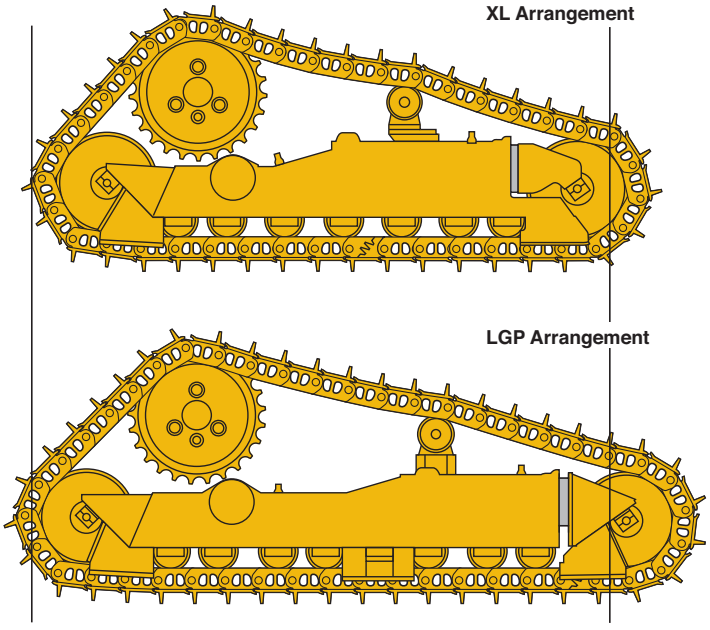
Modular undercarriage components simplify service. Lifetime lubricated idlers and track/carrier rollers provide the ability to re-use internal components and rebuild or reshell components. This reduces owning and operating costs, and saves raw materials and natural resources.

Heavy Duty Undercarriage

Standard Heavy Duty undercarriage components are designed for extended wear life in abrasive conditions and high impact applications like forestry, side-slopes, or working in rocky or uneven terrain. Heavy duty track is designed for enhanced penetration. The leading and trailing edges of each track shoe overlap the adjacent shoe to increase durability and component life.

Two (2) Undercarriage Arrangements are available:

- **XL arrangement** – More track positioned to the front provides a balanced machine for general duty and fine grading applications.
- **LGP arrangement** – Specifically designed to work in soft or wet conditions. Wide track shoes, long track frames, and a wider machine gauge increases ground contact area and reduces ground pressure for improved stability requiring flotation in swampy conditions.



Track Shoes

Moderate Service and Extreme Service track shoes are available to help optimize the machine based on its most frequent applications. Proper track shoe selection helps minimize wear for optimal undercarriage life – especially in high impact or highly abrasive conditions.

Work Tools

Equipped for the job

Load Sensing Hydraulics

Field-proven, load-sensing, electronic controlled hydraulics respond to operating requirements by automatically and continually adjusting hydraulic power to maximize work tool efficiency.

Cat Blades

Blade designs feature a strong box-section design, made from steel with high tensile strength to stand up to the most severe applications. Heavy moldboard construction and hardened bolt-on cutting edges and end bits add strength and durability.

- **Semi-Universal Blade** – designed for superior load retention and penetration in tightly packed materials. Ideal blade for use in construction applications where penetration of material is required as well as retention to carrying and spreading loads.
- **Angle Blade** – Can be positioned straight or angles 25 degrees to either side manually. Designed for side casting, pioneering roads, backfilling and cutting ditches.
- **Power Angle and Tilt Blade** – Can be positioned in variable angles from the operator's station.

Multi-Shank Ripper

The three-shank fixed parallelogram ripper is an excellent tool for preparing hard-packed material before dozing operations.

Winch

See your Cat dealer for available Winch options best suited to your applications.

Serviceability

Stay up and running

Cat machines are designed with serviceability in mind. Modular components, easy access to regular service points and features that enable quicker diagnostics all add up to less maintenance time and more time on the job.

Cat Monitoring System

The D5R features a monitoring system that provides feedback to operators with easy-to-read gauges and warning lamps that allows the operator to concentrate on the job at hand.

With the use of a Cat Electronic Technician (ET), your Cat dealer can determine historical performance parameters of the machine.

The Cat Monitoring System is designed to:

- Reduce downtime
- Provide warning feedback on operational events
- Provide feedback on machine performance events

Scheduled Oil Sampling (S·O·S[SM]) Analysis

Monitor machine health and identify key maintenance needs before they lead to downtime through Cat Scheduled Oil Sampling. Cat machines feature live sampling ports for the engine oil, power train hydraulics and coolant. Cat oil sampling offers accurate analysis using tests designed by Caterpillar for Cat products, as well as knowledgeable interpretation of the results.

Built to be Rebuilt

Major components on the D5R are built to be rebuilt, extending the useful life of the machine. Machine and component rebuilds save money, and offer a sustainability element by saving raw materials and natural resources. See your Cat dealer to learn more about rebuild options.

Product Link

The optional Product Link* system is a factory installed or easily retrofitted wireless system that simplifies equipment fleet tracking. Using satellite or cellular technology, it automatically reports key machine parameters such as location, machine hours, active and logged service codes and security alarms.

* Product Link licensing not available in all areas.

Total Customer Support

Renowned dealer support

Only Cat machines come with the industry's best sales and service support – the Cat dealer network. From helping you choose the right machine to ongoing support, your Cat dealer provides the best in sales and service. Manage your costs with preventive maintenance programs like Custom Track Service, Scheduled Oil Sampling (S·O·S^{SM}) analysis, and guaranteed maintenance contracts. Stay productive with best-in-class parts availability. Your Cat dealer can even help with operator training to help you boost your profits.

And when it's time for replacement, your Cat dealer can help you save even more with Genuine Cat Remanufactured parts. Remanufactured power train and hydraulic components cost less, but come with the same warranty and reliability as new products. Talk with your Cat dealer to learn more about reducing waste and saving money through Cat Remanufacturing.

Engine

Engine Model	Cat® C6.6 ACERT™	
Maximum Power at 1,500 rpm		
Gross Power – ISO 14396	129 kW	173 hp
Net Power – ISO 9249	120 kW	160 hp
Rated Power at 2,200 rpm		
Gross Power – ISO 14396	129 kW	173 hp
Net Power – ISO 9249	112 kW	150 hp
Bore	105 mm	4.13 in
Stroke	127 mm	4.99 in
Displacement	6.6 L	402.8 in^3

- Net power advertised is the power available at the flywheel when engine is equipped with a fan at maximum speed, air cleaner, muffler, alternator.
- No derating required up to 3000 m (9,840 ft) altitude, beyond 3000 m (9,840 ft) automatic derating occurs.

Transmission

1.0 Forward	3.10 km/h	1.93 mph
2.0 Forward	5.70 km/h	3.54 mph
3.0 Forward	10.00 km/h	6.21 mph
1.0 Reverse	3.10 km/h	1.93 mph
2.0 Reverse	6.40 km/h	4.00 mph
3.0 Reverse	11.60 km/h	7.21 mph

Service Refill Capacities

Fuel Tank	299 L	79 gal
Cooling System	48 L	12.7 gal
Engine Crankcase	15.5 L	14.1 gal
Power Train	170 L	44.6 gal
Final Drives (each)	8.5 L	2.3 gal
Hydraulic Tank	29.5 L	7.8 gal

Weights

Operating Weight – XL	16 668 kg	36,670 lb
Shipping Weight – XL	16 363 kg	35,999 lb
Operating Weight – LGP	17 997 kg	39,593 lb
Shipping Weight – LGP	17 692 kg	38,922 lb

- Operating weight includes lubricants, coolant, full fuel tank, standard track, ROPS Cab, hydraulic controls, VPAT-blade, drawbar and operator.
- Shipping weight includes lubricants, coolant, 5% fuel tank, standard track, ROPS Cab and hydraulic controls.

Undercarriage

Standard Width of Shoe – XL	600 mm	23.6 in
Standard Width of Shoe – LGP	840 mm	33 in
Shoes per Side – XL	40	
Shoes per Side – LGP	46	
Grouser Height – XL	66 mm	2.6 in
Grouser Height – LGP	57 mm	2.2 in
Track on Ground – XL	2611 mm	102.8 in
Track on Ground – LGP	3113 mm	122.6 in
Ground Contact Area (STD Track) – XL	3.13 m^2	4,852 in^2
Ground Contact Area (STD Track) – LGP	5.23 m^2	8,107 in^2
Ground Pressure (STD Track) – XL	52.1 kPa	7.56 psi
Ground Pressure (STD Track) – LGP	33.7 kPa	4.89 psi

- XL and LGP with VPAT-blade, ROPS Cab and rear drawbar only.

Blades

VPAT-Blade Capacity – XL	3.18 m^3	4.16 yd^3
VPAT-Blade Width – XL	3272 mm	128.8 in
VPAT-Blade Capacity – LGP	3.16 m^3	4.13 yd^3
VPAT-Blade Width – LGP	4080 mm	160.6 in
SU-Blade Capacity – XL	4.28 m^3	5.60 yd^3
SU-Blade Width – XL	3154 mm	124.2 in
A-Blade Capacity – XL	3.18 m^3	3.14 yd^3
A-Blade Width – XL	4165 mm	164 in

- Blade capacities are measured to recommended practice as to SAE J1265.

Ripper

Type	Fixed Parallelogram	
Number of Pockets	3	
Weight with Three Shanks	1562 kg	3,444 lb
Overall Beam Width	2220 mm	86.7 in
Maximum Penetration – XL	474 mm	18.6 in
Maximum Penetration Force – XL	59 kN	13,278 lbf
Pryout Force – XL	123.6 kN	27,786 lbf

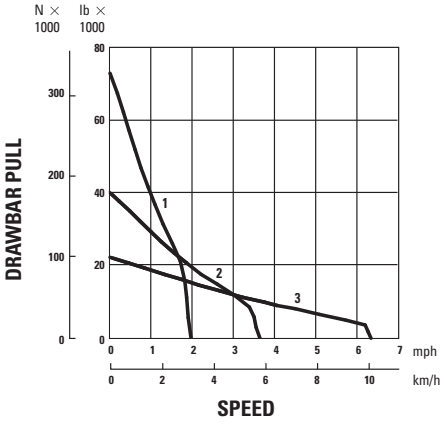
D5R Track-Type Tractor Specifications

Standards

ROPS/FOPS	ROPS (Rollover Protective Structure) offered by Caterpillar for the machine meets ROPS criteria ISO 3471:2008 FOPS (Falling Object Protective Structure) meets ISO 3449:2005
Brakes	Brakes meet the standard SAE J/ISO 10265 MAR99
Cab	Meets the appropriate standards as listed below

- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT98 is 83 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the 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 noisy environment.
- The exterior sound pressure level for the standard machine measured at a distance of 15 m (49.2 ft) according to the test procedures specified in SAE J88 APR95, mid-gear-moving operation, is 81 dB(A).

D5R XL & LGP Drawbar Chart



Bulldozer Specifications

	A XL		SU XL		VPAT XL		VPAT LGP	
Blade capacity (SAE J1265)	3.18 m^3	4.16 yd^3	4.28 m^3	5.60 yd^3	3.18 m^3	4.16 yd^3	3.16 m^3	4.13 yd^3
Width (over end bits)	4165 mm	164 in	3154 mm	124.2 in	3272 mm	128.8 in	4080 mm	160.6 in
Height	1034 mm (1)	40.7 in (1)	1224 mm	49 in	1195 mm	47.1 in	1040 mm	40.9 in
Digging depth	534 mm	21 in	520 mm	20.5 in	538 mm	21.2 in	433 mm	17 in
Ground clearance	1098 mm	43.2 in	983 mm	38.7 in	822 mm	32.4 in	1040 mm	40.9 in
Maximum tilt	–	–	655 mm	26.2 in	497 mm	19.6 in	598 mm	23.5 in
Weight (2)	2818 kg (3)	6,213 lb (3)	2600 kg	5,732 lb	2560 kg	5,644 lb	2950 kg	6,504 lb

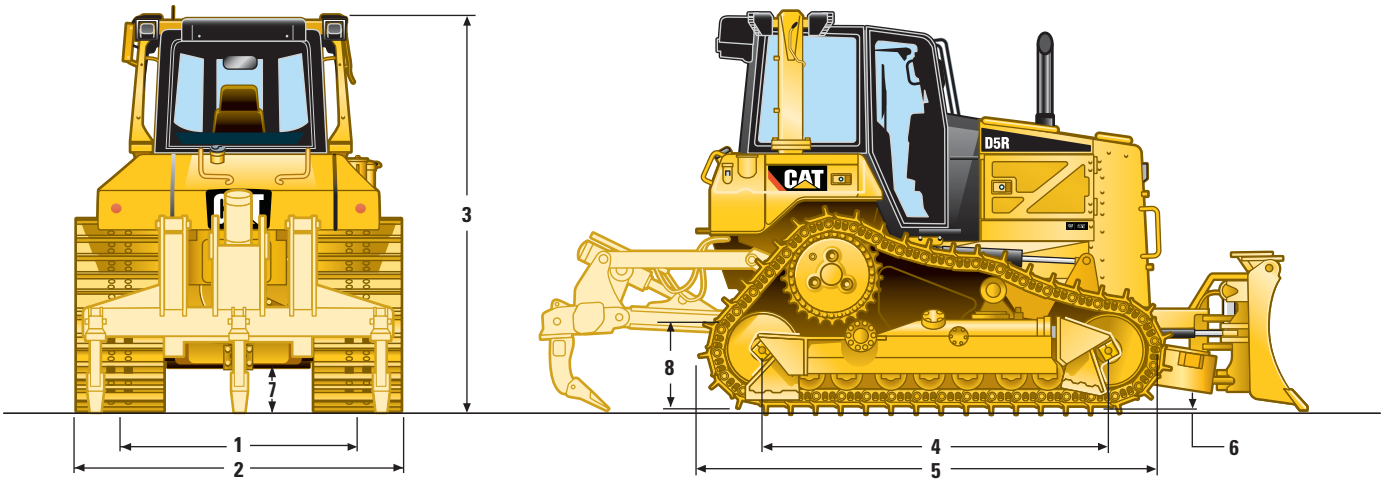
(1) Add 432 mm (17 in) for Land Clearing Trash Rack option.

(2) Includes Push Arms (or C-Frame), Blade, Blade Tilt Cylinder (or Braces), Cutting Edges and miscellaneous hardware components.

(3) Add 155 kg (342 lb) for Land Clearing Trash Rack option.

Dimensions

(approximate)



Tractor Dimensions

		XL		LGP	
1	Track gauge	1890 mm	74.4 in	2160 mm	85 in
2	Width of tractor				
	Over standard shoes without blade	2500 mm	98.4 in	3000 mm	118 in
	Over standard shoes with VPAT blade fully angled	2972 mm	117 in	3706 mm	146 in
3	Machine height from tip of grouser:				
	Exhaust stack	2979 mm	117.3 in	3083 mm	121.4 in
	OROPS canopy	3040 mm	119.7 in	3144 mm	123.8 in
	EROPS cab	3095 mm	121.9 in	3200 mm	126 in
	From ground face of shoe	394 mm	15.5 in	507 mm	20 in
4	Length of track on ground	2611 mm	102.8 in	3113 mm	122.6 in
5	Length of basic tractor (with drawbar)	3805 mm	149.8 in	4146 mm	163.2 in
	With the following attachments, add to basic tractor length:				
	Ripper (with tip at ground line)	1026 mm	40.4 in	1026 mm	40.4 in
	VPAT Blade (straight)	1343 mm	52.8 in	1705 mm	67.1 in
	VPAT Blade (angled 25°)	1965 mm	77.3 in	2487 mm	87.9 in
	SU Blade	1352 mm	53.2 in	—	
	A Blade (straight)	1356 mm	53.4 in	—	
	A Blade (angled 25°)	2147 mm	84.5 in	—	
6	Height of grouser	66 mm	2.6 in	57 mm	2.2 in
7	Ground clearance	394 mm	15.5 in	507 mm	20 in
8	Drawbar height (grouser tip to center of clevis)	634 mm	24.9 in	713.4 mm	28.1 in

D5R Standard Equipment

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

ELECTRICAL

Horn
Hour meter
Back-up alarm
12V converter, 10A
24V Electric Start
95-Amp Alternator
Diagnostic connector
950 CCA class 31 batteries
Integrated lights (2 front) and Two (2) rearward facing with protective surround

OPERATOR ENVIRONMENT

ROPS/FOPS cab with integrated A/C
Seat, mechanical suspension, cloth for cab
Three inch retractable seat belt
Adjustable armrests
Foot rests for slope work
Gen III Instrument cluster with:
- – Engine coolant temperature
- – Transmission oil temperature
- – Hydraulic oil temperature
- – Fuel level
- – Engine rpm display/gear display
- – Operator profile
- – Electronically programmable gear limiter
- – Electronic engine air cleaner service indicator
- – Electronic water-in-fuel sensor service indicator

Electro-hydraulic implement control
Electro-hydraulic tiller bar differential steering control
Product Link ready
One (1) 12 Volt power point
12V radio ready (plug and play)
Storage compartment
Cup holder (LH)
Coat Hook
Rearview mirror

POWER TRAIN

C6.6 Cat ACERT diesel engine with Cat Common Rail fuel system, ADEM A4 Electronic Control Module, and air-to-air aftercooling
Single poly-vee belt with auto belt tensioner
Extended life coolant
Direct Drive Fan
Aluminum bar plate cooling system (radiator, power train, aftercooler)
Steel tube-fin differential steer oil cooler
Air cleaner with integrated precleaner, automatic dust ejector and under hood air intake
Manual fuel priming pump with integrated fuel/water separator
Three (3) fuel filter
Engine decelerating function (toggle switch and pedal engine speed control)
Three (3) speed planetary, power-shift transmission with torque converter
Controlled throttle shifting
Automatic down-shift and kick-down transmission control
Auto-shift (1F-2R, 2F-2R, selectable)
Steering system: Differential steering with electro-hydraulic control tiller bar

UNDERCARRIAGE

Heavy Duty Undercarriage
Lifetime lubricated track rollers (7 XL and 8 LGP) and idlers
Carrier rollers
Replaceable sprocket segments
Tracks 40 section – 600 mm (23.6 in) Extreme Service (ES) for XL
Tracks 46 section – 840 mm (33 in) Moderate Service (ES) for LGP
Hydraulic track adjusters
End track guiding guards
Front and rear track guiding guards
Replaceable sprocket rim segments

OTHER STANDARD EQUIPMENT

Crankcase guard
Ecology drains (engine oil, engine coolant, power train case, hydraulic)
Scheduled Oil Sampling ports (engine, power train, hydraulics and engine coolant)
Coolant sampling port
Centralized remote mounted pressure taps for easy access and diagnostics
Implement oil filter
Front pull device
Hinged radiator louvered grill
Lockable engine enclosures
Rigid drawbar
Load sensing hydraulics

Attachments

The following optional attachments include weight changes to the standard configuration equipped with VPAT Blade, Enclosed ROPS Cab, Air Conditioner, Rear Drawbar and Standard Track offering.

	Additional Weight	
	kg	lb
TECHNOLOGY PRODUCTS		
Product Link	8	18
FEATURE PACKAGES		
HD Guard Package	194	428
Landclearing Package	727	1,603
Cold Weather Package	65	143
GUARDS		
Guard, Rear, HD	1	2
Screen, Protective, Cab	81	179
Screen, Protective, Canopy	53	117
ELECTRICAL		
Batteries, Heavy-Duty	9	20

	Additional Weight	
	kg	lb
OPERATOR ENVIRONMENT		
Canopy, ROPS	–339	–747
POWER TRAIN		
Grid, Sandblast	18	40
Precleaner, Turbine with Screen	2	4
Radiator, Trash Resistant	135	298
UNDERCARRIAGE		
Track, 600 mm (23.6 in) ES – XL	0	0
Track, 600 mm (23.6 in) ES, Cent-Hole – XL	147	324
Track, 840 mm (33 in) ES, Cent-Hole – LGP	–68	–150
Track, 840 mm (33 in) Self Cleaning	–537	–1,184
Full Length Track Guiding Guard – XL	220	485
Full Length Track Guiding Guard – LGP	272	600

	Additional Weight	
	kg	lb
BULLDOZER		
Bulldozer, Angle, XL	443	977
Bulldozer, Angle, XL with Trash Rack	588	1,296
Bulldozer, Semi-Universal, XL	225	496
RIPPER		
Ripper (with 3 Straight Shanks. Removes Drawbar)	1449	3,194

D5R Track-Type Tractor

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

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