



CATERPILLAR

D6H Track-type Tractor

D6H Features

- Cat 3306 Turbocharged diesel Engine
 - ... 123 kW/165 HP
 - 10.5 liters/638 cu. in. displacement
- Operating weight
 - range from ... 17 007 kg/37,500 lb
 - up to ... 20 612 kg/45,441 lb
- Blade capacity
 - ... 2.44 m³/3.19 yd³ to 4.08 m³/5.34 yd³
- Elevated sprocket design for:
 - Optimum balance and stability.
 - Improved flotation.
 - High ground clearance.
 - Long power train life.
- Large capacity Semi-Universal Blade for high production.
- L-shaped push arms and vertical lift cylinders for greater penetration and pryout forces ... and reduced tractor length for better maneuverability.
- Economical operation with:
 - Low maintenance costs.
 - Modular design of power train components for faster repair.
 - Folded core radiator for extended cleaning intervals, less costly repair.

Machine shown
may have optional equipment.



D6H FEATURES

When you step up to the D6H with its elevated sprocket design, you'll step far ahead in tractor value. It's the Shape of the Future ... Here Today.

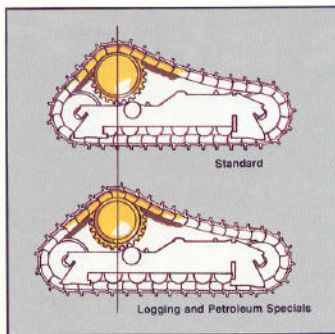
Elevated sprocket design: better performance, more durability, lower cost

Compared to conventionally designed tractors, the D6H with its elevated sprocket design provides significant benefits in performance, durability/reliability and low operating costs.

Optimum fore and aft balance:

The elevated sprocket design gives Caterpillar the flexibility to optimize balance and stability by tailoring the D6H roller frame mounting location for the best possible performance. On the standard model, Cat combines a forward center of gravity with more track on the ground for optimum dozing. This gives excellent dozer penetration in hard materials ... while still maintaining outstanding finish grading capability. Track on the ground is an outstanding 2629 mm/103.5".

The Logging or Petroleum Special's "weight forward" balance with additional 151 mm/6" track to the rear means it's built to excel in skidding or other drawbar applications.



Excellent side slope capability:

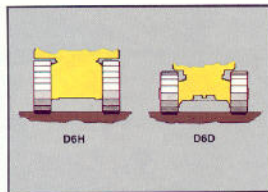
The D6H has the same 1880 mm/74" gauge and approximately the same center of gravity height as its predecessor, the D6D. This gives the D6H excellent side slope stability.

Improved flotation:

With 2629 mm/103.5" track on the ground and optional shoe widths up to 610 mm/24", the D6H can provide ground pressures as low as 0.54 kg/cm²/7.7 psi.

Better ground clearance:

The D6H uses a pivot shaft and pinned equalizer bar to maintain roller frame alignment. Because there are no diagonal braces, the D6H has 21% more ground clearance than the D6D. There's less chance of getting hung up on a stump or rock — or snagging brush or debris.



A longer-lasting power train

With the elevated sprocket design, final drives and associated power train components are raised above the work area ... Isolating them from ground induced shock loads as well as implement and roller frame alignment forces. And that means longer power train component life.



Sealed and Lubricated Track

Sealed and Lubricated Track surrounds the track pin with lubricant to greatly reduce internal bushing wear. Lubricant is held by a sealing arrangement consisting of a polyurethane seal, a rubber load ring and a thrust ring. Hydraulic track adjusters and two-piece master link standard.



Service refill capacities

	Liters	U.S. Gallons
Fuel tank	322	85
Cooling system	38	10
Lubricating systems:		
Diesel engine crankcase	27.5	7.3
Transmission, bevel gear and steering clutch compartments (includes torque converters or oil clutch)	144	38
Implement oil system	47.3	12.5
Final drives (each)	13.2	3.5



Weight (approximate)

Shipping (includes lubricants, coolant, 10% fuel, hydraulic control, 457 mm/18" shoes).

Powershift:

1880 mm/74" gauge (6 roller frame) . . . 13766 kg/30,348 lb

Direct drive:

1880 mm/74" gauge (6 roller frame) . . . 13771 kg/30,359 lb

Operating (includes lubricants, coolant, full fuel tank, hydraulic control, SU Bulldozer, ROPS Canopy, operator, 457 mm/18" shoes).

Powershift:

1880 mm/74" gauge 16950 kg/37,367 lb

Direct drive:

1880 mm/74" gauge 16954 kg/37,377 lb

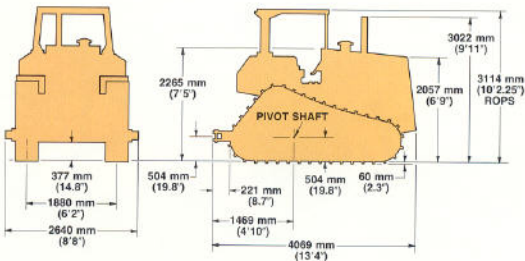


Dimensions (approximate)

Ground clearance, from ground face of shoe (per SAE J1234) 377 mm/14.8"

With the following attachments, add to basic tractor length of 4069 mm/13'4":

Ripper	1186 mm/3'10.5"
56 Winch	207 mm/8.1"
SU-Blade	1219 mm/4'0"
S-Blade	945 mm/3'1"
A-Blade	1153 mm/3'9"



Pivot shaft and equalizer bar

The D6H employs a pivot shaft and pinned equalizer bar oscillation system. The pivot shaft transmits ground impact loads directly to the main frame rather than through the power train components. The pinned equalizer bar keeps track roller frames in proper alignment. The D6H design improves ground clearance, and provides a smooth underside to prevent the collection of mud and debris.



Hydraulic controls

Pressure compensating fixed displacement gear pump system adjusts pressure to accommodate the maximum implement load demand.

System capacity 73 L/19.2 gal

Pump, single section gear:

Capacity @ 19 800 kPa/2875 psi 167 L/m⁴ gpm

RPM @ rated engine speed 1912

Drive Geared from engine flywheel



ROPS

ROPS Canopy is standard in U.S.A.

ROPS (Rollover Protective Structures) offered by Caterpillar for this machine meet ROPS criteria SAE J395, SAE J1040c and ISO 3471. They also meet POPS (Falling Object Protective Structure) criteria SAE J231 and ISO 3449. Cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 MAR85, meets OSHA and MSHA requirements for operator sound exposure limits in effect at the time of manufacture.

ROPS structure is designed and certified for operating weight 23 500 kg/51,810 lb

Bulldozer specifications

Blade	Blade Capacity (per SAE J1265)	Overall width* (Tractor with Bulldozer)	Height	Digging Depth	Lift Height	Maximum Tilt (w/ hydraulic tilt and manual adjustment)	Weight w/o hyd. controls)
6S	3.35 m ³ 4.38 yd ³	3204 mm 10'6"	1174 mm 3'10"	460 mm 18.1"	1077 mm 42.4"	738 mm 29"	2318 kg 5,110 lb
6SU	4.08 m ³ 5.34 yd ³	3242 mm 10'7.5"	1178 mm 3'10.5"	460 mm 18.1"	1081 mm 42.5"	738 mm 29"	2463 kg 5,430 lb
6A	2.44 m ³ 3.19 yd ³	3892 mm 12'9"	925 mm 3'0"	507 mm 20.0"	1104 mm 43.5"	723 mm-R/631 mm-L 28.5"-R/24.8"-L	2643 kg 5,827 lb



Caterpillar Engine

Gross power @ 1800 RPM 133 kW/179 hp
 Flywheel power @ 1800 RPM 123 kW/165 hp
 (Kilowatts (kW) is the International System of Units equivalent of horsepower.)

Net power at the flywheel of the vehicle engine is based on SAE J1349 standard conditions of 25° C/77° F and 100 kPa/29.61" Hg. Power is based on using 35° API (15.6° C/60° F) gravity fuel having an LHV of 42 780 kJ/kg/18,390 Btu/lb when used at 29.4° C/85° F and with a density of 839.9 g/L/7,001 lb/U.S. gal. Power rating is adjusted for vehicle equipped with fan, air cleaner, water pump, fuel pump, muffler and lubricating oil pump. No derating is required up to 2300 m/7,500 ft. altitude.

These additional ratings also apply at 1800 RPM

ISO 1585 127.5 kW/171.0 HP
 ISO 3046-1 125.6 kW/168.5 HP
 EEC 80/1269 127.5 kW/171.0 HP

Caterpillar 4-stroke-cycle turbocharged 3306 diesel engine with six cylinders, 121 mm/4.75" bore, 152 mm/6.0" stroke and 10.5 liters/638 cu. in. displacement.

Direct injection fuel system with individual adjustment-free injection pumps and valves.

Cam-ground and tapered aluminum alloy pistons with 3-ring design. Steel-backed aluminum bearings. Hardened crankshaft journals. Pressure lubrication with full-flow filtered oil. Dry-type air cleaner with primary and safety elements.

Two 24-volt direct electric starting systems — standard or low temperature. Includes ether aid, heavy-duty batteries, engine coolant heater and heavy duty starting motor. Ether starting aid is available separately for cold weather starting.



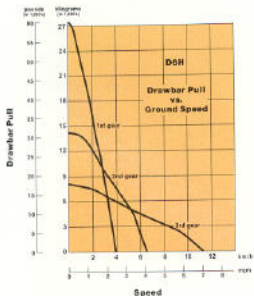
Transmission

Power shift:

Planetary power shift with 345 mm/13.6" diameter, high torque-capacity oil clutches. Special valve permits fast speed and direction changes. Three speeds forward, three reverse.

Single-stage torque converter with output torque divider. Connected to engine by double universal joint drive shaft.

Gear	Forward Speed		Reverse Speed	
	Km/h	MPH	Km/h	MPH
1	3.8	2.4	4.8	3.0
2	6.5	4.0	8.4	5.2
3	11.3	7.0	14.4	8.9



Direct drive:

A constant mesh sliding collar countershaft transmission is used in the D6H. The D6H offers six speeds forward and reverse, enabling the operator to more closely match tractor speed and drawbar pull to job requirements.

Helical gears in the D6H sliding collar transmission are in constant mesh. The curvature of the gears allows two teeth to be in contact at all times, sharing the loads. Helical gears also mesh more smoothly for quiet operation.

Master clutch has four plates. Clutch lubricated and cooled by pressure-circulated oil. Clutch is hydraulically actuated and requires no adjustment.

Direct drive speeds and drawbar pulls:

Gear	Forward Km/h	Reverse MPH	Drawbar Pull Forward					
			At rated RPM Kg	At rated RPM Lb	Max. at Lug Kg	Max. at Lug Lb		
1	2.7	1.7	3.3	2.1	12 500	27,500	16 220	35,760
2	3.5	2.2	4.3	2.7	9520	20,990	12 410	27,360
3	4.6	2.9	5.6	3.5	7140	15,740	9370	20,660
4	5.8	3.6	7.1	4.4	5440	11,990	7200	15,870
5	7.6	4.7	9.2	5.7	4010	8,840	5300	11,690
6	10.0	6.2	12.2	7.6	2820	6,220	3840	8,470



Steering

Hydraulically actuated, multiple-disc oil cooled steering clutches and brakes are held in engagement by springs and disengaged hydraulically. The multiple disc assemblies provide high load carrying capability, long life and require no adjustment.

A single brake pedal suspended from the dash brakes both tracks without disengaging the clutches.



Final drives

Single reduction planetary final drives spread the torque loads over three gears instead of one. Modular design greatly reduces the time required for removal. The elevated design isolates the final drives from ground impact induced loads for long service life.



Track roller frame

Tubular design to resist bending and torsional loads. Lifetime lubricated rollers and idlers are directly mounted to roller frame.

Oscillating roller frames attach to tractor by a pivot stub shaft and fully pinned equalizer bar. Large pivot bushings operate in an oil reservoir.

Equalizer bar saddle connection is a low friction, no maintenance bushing. Recoil system is fully sealed and lubricated.

Oscillating at front idler ± 6.0°

Standard roller frame

Number of rollers (each side) 6
 Number of shoes (each side) 39
 Width of narrowest shoe 457 mm/18"
 Width of widest shoe 610 mm/24"
 Length of track on ground 2629 mm/103.5"
 Ground contact area with 457 mm/18" shoes 24 032 cm²/3725 in²
 Ground contact area with 610 mm/24" shoes 32 074 cm²/4968 in²
 Ground pressures with 457 mm/18" shoes 0.708 kg/cm²/10.07 psi
 Ground pressures with 610 mm/24" shoes 0.542 kg/cm²/7.71 psi

Extended roller frame

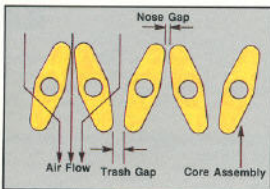
Number of rollers (each side) 7
 Number of shoes (each side) 40
 Width of narrowest shoe 510 mm/20"
 Width of widest shoe 610 mm/24"
 Length of track on ground 2780 mm/109.5"
 Ground contact area with 510 mm/20" shoes 28 245 cm²/4380 in²
 Ground contact area with 610 mm/24" shoes 33 916 cm²/5256 in²
 Ground pressures with 510 mm/20" shoes 0.612 kg/cm²/8.70 psi
 Ground pressures with 610 mm/24" shoes 0.517 kg/cm²/7.35 psi

Low-cost operation adds to D6H value

Several D6H features contribute to economical operations:

Folded-core radiator.

Narrow modular cores assembled in an accordion-type arrangement between top and bottom tanks have a high fin density. This deflects debris through trash gaps, which greatly extends cleaning intervals. The folded-core radiator is also less costly to repair, as individual core assemblies can be replaced rather than an entire conventional core.



Diagnostic connector.

This allows faulty electrical system components to be pinpointed in minutes. Cat Dealers have a test tool that plugs into this connector to quickly and accurately troubleshoot the system.

Quick-disconnect fittings.

These let the mechanic quickly and easily diagnose problems in the power train oil and implement oil systems. The implement oil system also has a "T" test fitting for testing hydraulic flow and pressure, enabling the mechanic to isolate and diagnose problems quickly and accurately.

Lower maintenance costs.

On the D6H, there is only one 250-hour-interval grease points on the entire base tractor. Grouped service points and excellent access to service areas make routine checks fast and convenient. And the D6H's multiple-disc brakes require no adjustment. In fact, service and maintenance costs over 2,000 hours are 11% less than the D6D with dozer.

Low repair costs/higher availability

Modular design of major D6H power train components results in a sizeable reduction in removal and installation times. This means lower labor costs... plus less time in the repair shop and more on the job.

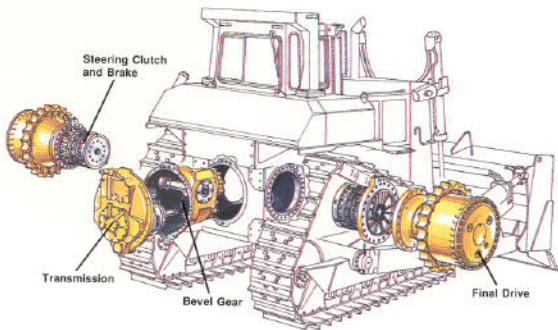
Modular power train components provide other benefits, too. Since they can be removed independently without major disassembly of nearby components, there are fewer repair steps than on a conventional tractor. Repairs are less complex, reducing the possibility of mistakes that lengthen repair times. Modular components can also be assembled and tested before installation in the tractor, ensuring high quality.

Major component removal and installation times in man-hours

(Assuming one trained mechanic with occasional assistance from a helper and appropriate tools and lifting devices)

	D6H	D6D	Time saved, man hours
Engine	15	28	13
Torque converter	11	19	8
PS Transmission alone	4	25	21
Transmission and bevel gear module*	4	30	26
Steering clutch and brake	4	17	13
Final drive	4	25	21
DD Master clutch	2	13	11

*Can be removed and installed with the ripper on the tractor on both DD and PS versions.
Note: Times may vary from area to area.



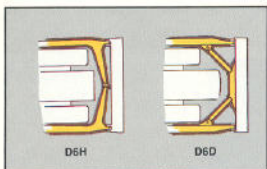
The final measure of value is your bottom line. Watch it improve with the D6H's performance and low operating costs.

L-shaped push arms — vertical lift cylinders

L-shaped push arms let S and SU Blades be mounted closer to the front of the machine. This different concept — plus the increased weight and more forward center of gravity on the D6H — provide 19% more penetration force than conventionally mounted blades. This push arm design also limits sideways blade movement better than diagonal braces on conventional tractors. The operator has more positive and precise blade control — an important improvement for side cutting and finish grading around existing structures and buildings.

This closer mounting also greatly reduces overall tractor length for enhanced maneuverability.

Lift cylinders are mounted to the upper corners of the radiator guard in a near vertical position. The resulting advantage and increased tractor weight provide the S-Blade with 38% more pryout force.



A redesigned 56 Winch

The 56 Winch has been redesigned to provide greatly improved performance. It uses a single oil-disc brake and two adjustment-free oil-disc clutch packs for the input and directional control. Reel-in inching capability is provided through modulation of the input/directional clutch, while reel-out inching is accomplished by modulation of the brake. These features ensure precise load control.

A freespool option disconnects the drum from the rest of the power train, allowing it to turn freely. An adjustable freespool drag brake is included in this package. It lets the operator adjust the force required to unspool the cable, helping to prevent tangled cable.

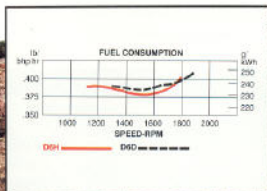
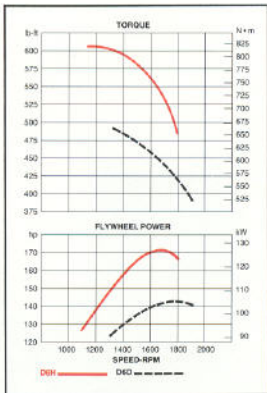
There is a standard speed model for both powershift and direct drive tractors, which is well suited for most winch applications. If more precise line control is desired, as in oil field applications, an optional slow speed configuration is available.

The maximum rated line pull is 37 977 kg/ 83,724 lb on powershift tractors and 26 658 kg/58,769 lb on direct drive tractors with 22 mm/7/8" line.

Efficient power over a wide operating range

The D6H's Cat 3306 diesel Engine delivers 123 kW/165 FWHP. Weight-to-horsepower ratio is excellent, with 25% torque rise. That means superior lugging power and fast response to changing loads. The D6H also has a 600 RPM operating range for less shifting under changing loads.

This turbocharged Cat 3306 has a scroll-type fuel system, which gives more precise fuel injection than a sleeve-metering system. This fuel efficiency — combined with a good weight-to-horsepower ratio, more track on the ground, better balance and improved blade penetration and pryout — means more material moved per unit of fuel.



Operator environment designed for efficiency

Your operator will be more efficient and productive on the D6H due to:

Better all-around visibility

Because the operator sits higher, overall visibility is excellent. He has a better view of the blade corners because the engine hood is tapered. There's a better view to the ripper or winch, too, because the fuel tank is tapered. The seat is angled 15° to the right to give exceptional visibility to the rear when working with a ripper or winch. The seat is also fully adjustable five ways.

Convenient control placement

The console-mounted steering and braking controls are just to his left. They're low-effort and easily operated with one hand. On the powershift model, the transmission lever is there, too — as is the directional lever on the direct drive version. Single-lever dozer, ripper or winch controls are console-mounted to his right.



- ① Single-Lever Implement Control
- ② Steering and Braking Controls
- ③ Transmission Lever

Semi-U Blade improves productivity

The D6H Semi-Universal Blade combines the desirable characteristics of S and U Blades into one package. It has approximately the same height and width as the D6H S Blade, but its capacity is increased 22% by the addition of 25° wings.

This design provides high power per unit of cutting edge to dig and pry tough materials. The wings boost load retention by forcing the load to the middle of the blade. The result is a blade that excels in rough production dozing.

Reliable warning system

An Electronic Monitoring System analyzes critical temperatures and pressure and gives visual and audible warning if corrective action or machine shutdown is required. This three-level warning system includes:

- I. **Operator Awareness:** LED light on instrument panel indicates a potential but not yet critical problem.
- II. **Operator Response Required:** Main warning light in front of operator indicates continued operation could cause eventual component failure.
- III. **Immediate Operator Shutdown Required:** Flashing light and horn warn that continued operation may cause immediate failure of a component.

A circuit test switch verifies system reliability.

ROPS cab for year-round comfort

For even more comfort there's an optional sound-suppressed ROPS cab with air pressurizer and heater. It's resiliently mounted to minimize noise and vibration. Visibility to blade corners is excellent, as door glass is shaped to allow maximum view. Side and rear windows slide open and doors can be latched open. An optional air conditioner gives added hot-weather comfort.





Ripper specifications (with standard undercarriage)

The optional D6H ripper is a fixed parallelogram multi-shank ripper with three shank pockets.

Beam width	2202 mm/86.7'
Beam cross section	216 mm X 254 mm/8.5" X 10"
Maximum penetration	500 mm/19.7'
Maximum clearance raised	511 mm/20.1'
Number of pockets	3
Maximum pryout force	9134 kg/20,140 lb
Maximum penetration force	6603 kg/14,560 lb
Weight	
With one tooth	1508 kg/3,325 lb
Each additional tooth	68 kg/150 lb



Standard equipment

NOTE: Standard and optional equipment may vary. Consult your Caterpillar Dealer for specifics.

Caterpillar 3306 DIT Engine. Backup alarm. Brake system (service, parking, and secondary braking system). 35-amp alternator. ROPS canopy. Rear view mirror. Air cleaner service indicator. Blower fan. 24-volt direct electric key start system with diagnostic connector. End track guiding guards. Front pull provision. Horn. Rigid drawbar. Dry type air cleaner and full view pre-cleaner. Electric hour meter. Front warning horn. Hinged radiator grill. Lighted instrument panel and Electronic Monitoring System. Muffler. Choice of power shift transmission or direct drive transmission. Lockable storage compartment. Adjustable static seat and seat belt. 457 mm/18" shoes. Sealed and Lubricated Track. Hydraulic track adjusters. Lifetime Lubricated rollers and idlers. Replaceable sprocket rim segments. Two piece master link. Decelerator (Power shift only.) Hinged crankcase and power train guards.



Optional equipment

(approximate change in operating weight)

	Kg	Lb
Air conditioning system (for cab only)	134	295
Alternator, 50-amp	5	11
Backup alarm (standard in U.S.A.)	2	5
Cab, ROPS, sound suppressed	439	968
Canopy, ROPS (standard in U.S.A.)	-376	-829
Decelerator (D.D. only)		4.5
Drawbar, rigid (less off)	-106	-234
Swinging	125	275
Drawbar, rigid (for 7 roller frame)	110	243

	Kg	Lb
Engine enclosure (perforated)	35	77
Extended roller frame	159	350
Fan, reversible	6	13
Guards:		
Crankcase extreme service	63	139
Fuel tank	100	220
Radiator (heavy-duty, hinged grill)	109	240
Track guiding, center section only*	52	116
Ends only*	83	182
Track roller, full length*	157	346
Hydraulic controls:		
One valve for bulldozer	273	602
Two valve for bulldozer and tilt cylinder	311	686
Two valve for angling bulldozer and ripper	311	686
Three valve for bulldozer, tilt cylinder and ripper	352	776
Lighting system, four lights		
For use with ROPS cab or canopy	10	22
Pre-cleaner with prescreener	4	10
Radiator core protector grid	14	30
Rear screen ROPS	56	123
Ripper (with one tooth)	1508	3325
Sound suppression (COSA)	180	396
Starting aids:		
Ether starting aid	3	6
Starting system, low temperature	36	80
Suspension seat	17	37
Sweeps, logging for ROPS canopy or cab	349	769
Tilt cylinder for bulldozer	84	185
Tool kit	7	15
Track, pair: Sealed and Lubricated		
Track shoes (39 section)		
460 mm/18" single grouser extreme service	170	375
510 mm/20" single grouser	119	262
510 mm/20" extreme service	397	875
560 mm/22" single grouser	239	527
610 mm/24" single grouser	357	787
Track shoes (40 section) for extended roller frame		
510 mm/20"	122	269
510 mm/20" extreme service	407	897
560 mm/22"	245	540
610 mm/24"	366	807
Vandalism protection		
For ROPS cab	5	10
For ROPS canopy	9	20
Winch	1210	2668
Winch fairlead	180	397
Winch cable guide rolls	61	135

*Specify for 8 or 7 roller frames.

Materials and specifications are subject to change without notice.