



D4H SERIES II

STANDARD TRACK-TYPE TRACTOR

- **Power Angling and Tilt Blade** — provides full hydraulic control of lift, dig, angle and tilt...gives exceptional versatility.
- **Load-sensing hydraulic system** — adjusts pump displacement and pressure to load encountered.
- **Excellent fuel efficiency** — maximizes fuel efficiency and productivity.
- **Easy maintenance and repair** — allows fast daily checks, modular components, reduced downtime.
- **Operating ease** — provides efficient, comfortable work environment.
- **Total Customer Support System** — unmatched in the industry!

Cat® 3204 Turbocharged diesel Engine

Gross Power74 kW/99 HP

Flywheel Power71 kW/95 HP

Operating weight

Standard machine

Power shift10 250 kg/22,597 lb

Direct drive10 385 kg/22,895 lb

Blade capacity

Standard machine1.89 -2.31 m³/

2.47 - 3.01 yd³

Featured machines may include additional equipment applicable only for special applications. See your authorized Caterpillar dealer for available options.

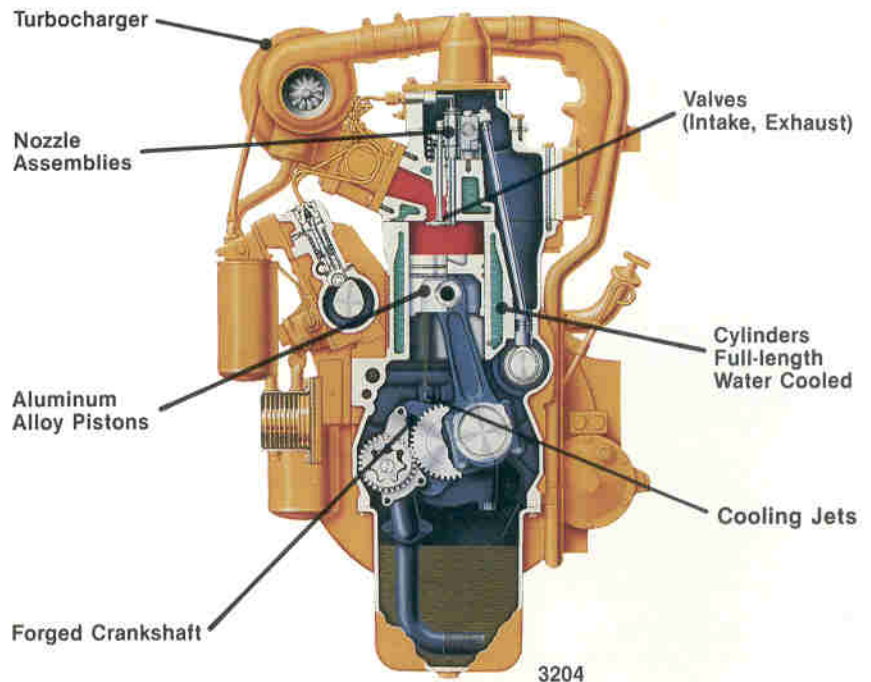


FEATURES

Caterpillar® Diesel Engine

Provides power, reliability and performance you can depend on.

- **High torque rise** provides lugging force to power train during heavy loads — no need to downshift.
- **High displacement-to-power ratio**, low RPM for long life and reliability.
- **Direct-injection fuel system**, adjustment-free pumps and valves for efficient, precise fuel metering.
- **Four-stroke-cycle design** provides long, effective power strokes, more complete fuel combustion.
- **Resilient engine mounting** for quieter operation, less vibration.
- **Engine oil cooler** maintains optimum engine oil temperature to cool engine components and prolong engine and lubricant life.
- **Full-length, water-cooled cylinders** ensure maximum heat transfer for longer engine life.



Elevated Sprocket Undercarriage

Caterpillar's elevated sprocket tractors set the standard in traction, durability and ride.

- **Machine balanced** for high dozer production.
- **Final drives and associated power train components** raised above the work area — isolating them from ground-induced impact loads, as well as implement and roller frame alignment loads — extending power train component life.
- **Sprocket position** keeps sprocket teeth, bushing and final drives away from the abrasive materials and moisture — resulting in longer final drive gear and seal life.
- **Forward center** of gravity allows for good blade penetration in general to severe dozing applications with firm underfoot conditions.



- **Location of components** are low in frame for low center of gravity.

Bulldozer Specifications

Blade	Blade Capacity (SAE J1265)		Blade Width (over end bits)		Blade Height		Digging Depth		Ground Clearance		Maximum Tilt		Weight (without hyd. controls)		Total Operating Weight (with blade)	
	m ³	yd ³	mm	ft. in.	mm	ft. in.	mm	in.	mm	in.	mm	in.	kg	lb	kg	lb
4P	2.31	3.01	2636	8'8"	1085	3'6.7"	405	15.9	878	34.6	397	15.6	1655	3641	10 250	22,597
4S	1.89	2.47	2584	8'6"	965	3'2"	414	16.3	872	34.3	402	15.8	1566	3452	10 337	22,789



SPECIFICATIONS

Standard Equipment

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

Air cleaner, dry-type.	Electronic Monitoring System.	Seat belt.
Air cleaner service indicator.	Electric starting, 24-volt direct.	Segmented sprocket.
Alternator, 35-amp.	Ether starting aid.	Single key start.
Back-up alarm (U.S.A.).	Gauge package.	Track:
Blower fan.	Horn, front warning.	Adjusters, hydraulic.
Canopy, ROPS (Required in U.S.A.).	Lifetime Lubricated rollers and idlers.	Sealed and Lubricated Track with 460 mm/18", 39-section (standard undercarriage) single grouser track shoes.
Decelerator (PS).	Lockable storage compartment.	Two-piece master link.
Diagnostic connector.	Mirror, rearview.	Transmission, power shift or direct drive.
Drawbar, rigid.	Muffler.	
End guiding guards.	Precleaner.	
Electric hour meter.	Radiator guard.	
	Seat, adjustable.	

Optional Equipment

Approximate changes in operating weights

	kg	lb		kg	lb
Air conditioning system	49	108	Lighting system, six lights:		
Back-up alarm (std. in U.S.A.).....	2	5	For use with ROPS cab	20	35
Cab, ROPS, sound suppressed.....	427	941	For use with ROPS canopy	21	40
Canopy, ROPS (required in U.S.A.).....	91	200	Lighting system, four lights:.....	14	24
Decelerator (DD).....	4.5	10	Logging Arrangement	410	904
Drawbar, rigid (less off).....	-98	-216	Precleaner with prescreener.....	4	10
Swinging (less rigid).....	100	220	Rear screen for ROPS and winch	64	142
Engine enclosure (perforated).....	20	44	Ripper.....	613	1,350
Heavy duty	41	91	Sound suppression (European).....	18	40
Fan, reversible.....	11	24	Starting aids:		
Fenders, heavy duty	52	11	Heater, engine coolant,		
Guards:			choice of 110 or 220 volt.....	1	3
Crankcase extreme service	48	106	Starting system, low-temperature	9	20
Fuel tank	105	231	Suspension seat	10	21
Fuel tank (for use with			Sweeps, logging for ROPS canopy	111	345
ROPS & Winch).....	36	79	Tool kit.....	7	15
Radiator (heavy duty, grill).....	40	88	Track, pair: Sealed and Lubricated		
Track guiding, center section only.....	34	76	or Sealed (non-lubricated)		
Track roller, full length	146	321	Standard — 39-section:		
Heater, (ROPS canopy).....	34	75	360 mm/14".....	-53	-118
Hook, front pull.....	10	21	410 mm/16".....	-27	-59
Hydraulic controls:			460 mm/18" extreme service.....	185	407
Two valve for 4S bulldozer tilt.....	186	410	Vandalism protection:		
Three valve for 4S bulldozer, tilt and			For ROPS cab	5	10
one rear implement (standard only).....	200	440	For ROPS canopy	9	20
Three valve for 4P bulldozer.....	193	425	Winch	891	1,965
Four valve for 4P bulldozer, ripper			Winch fairlead.....	180	397
or one rear implement (standard only)....	213	470			

Weight (approximate)

Shipping (includes PAT Bulldozer, three valve hydraulic control, lubricants, coolant, ROPS canopy, 5% fuel, track end guiding guards, rigid drawbar, forward warning horn, precleaner, ether starting aid, decelerator for powershift, and standard shoes).

Power shift10 045 kg/**22,145 lb**
 Direct drive10 180 kg/**22,443 lb**

Without blade and controls

Power shift8370 kg/**18,452 lb**
 Direct drive8505 kg/**18,750 lb**

Operating (includes lubricants, coolant, ROPS canopy, full fuel tank, operator, PAT Bulldozer, track end guiding guards, rigid drawbar, three valve hydraulic control, forward warning horn, precleaner, ether starting aid, decelerator for power shift and standard shoes).

Power shift.....10 250 kg/**22,597 lb**
 Direct drive.....10 385 kg/**22,895 lb**

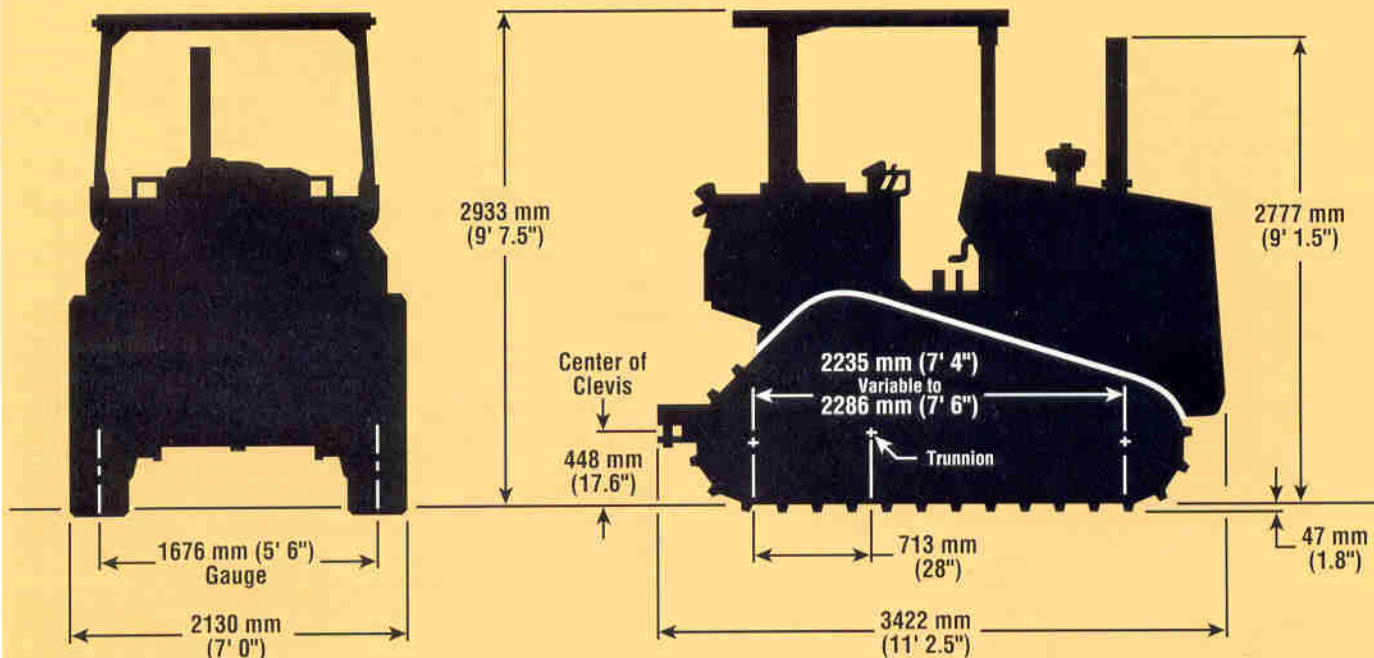
Winch Specifications

Weight	891 kg	1,965 lb
Winch length	1022 mm	40.25"
Winch case width	1003 mm	39.5"
Flange diameter.....	445 mm	17.5"
Drum width.....	241 mm	9.5"
Drum diameter	203 mm	8.0"
Cable size:		
Recommended	16 mm	0.62"
Optional.....	19 mm	0.75"
Drum capacity:		
Recommended cable	107 m	351'
Optional cable	76 m	248'
Oil capacity	47 L	12.5 gal
Cable/ferrule sizes	51 mm X 41 mm	
(OD X length).....	1.62" X 2.00"	



SPECIFICATIONS

Dimensions (approximate)



Ground clearance, from ground face of shoe (per SAE J1234)	376 mm/14.8"
Machine height from tip of grouser with the following equipment:	
ROPS Canopy	2980 mm/9'9"
ROPS Cab	2986 mm/9'9.5"

With the following attachments, add to basic tractor length of	422 mm/1'2.5"
Ripper	803 mm/2'7.5"
54 Winch	304 mm/12"
PAT-Blade	845 mm/2'9"
S-Blade	805 mm/2'7.5"

Service Refill Capacities

	Liters	U.S. Gallons
Fuel tank	167	44
Cooling system	27	7
Engine crankcase	15	4
Transmission, bevel gear and steering clutch compartments (includes torque converter or oil clutch) Standard	110	28.5
Final drives (each)	6	1.5
Implement hydraulic system ..	67.3	17.5
Hydraulic tank	30	7.8

Ripper Specifications

Beam width	1951 mm/76.8"
Cross section	165 x 211 mm/6.5 x 8.3"
Ground clearance	
under beam raised	914 mm/35.9"
Under tip at full raise	491 mm/19.33"
Number of pockets	3
Max penetration	375 mm/14.8"
Max pryout force	16 910 kg/37,290 lb
Max penetration force (P Blade equipped - power shift)	3510 kg/7,740 lb
Weight	
With one tooth	613 kg/1,350 lb
Each additional tooth	34 kg/74 lb

Steering

Hydraulically actuated, multiple-disc oil-cooled steering brakes are spring-engaged and hydraulically released. Clutches are multiple-disc, oil-cooled, hydraulically applied. The disc assemblies provide high load carrying capability, long life and require no adjustment.

Combined clutch and brake hand controls are located to the operator's left. A single brake pedal, suspended from the dash, brakes both tracks without disengaging the clutches.

ROPS

ROPS Canopy is required in U.S.A.

ROPS (Rollover Protection Structures) offered by Caterpillar for this machine meets ROPS criteria SAE J395, SAE J1040 APR88 and ISO 3471-1986. They also meet FOPS (Falling Object Protective Structure) criteria SAEJ231 JAN81 and ISO 3449-1984.

Cab

When properly installed and maintained, cab offered by Caterpillar when tested with doors and windows closed according to ANSI/SAE J1166 JUL87, meets OSHA and MSHA requirements for operator sound exposure limits in effect at the time of manufacture.

Pivot Shaft and Equalizer Bar

The D4H 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 D4H design has excellent ground clearance and provides a smooth underside to help prevent the collection of mud and debris.

Sealed and Lubricated Track

Sealed and Lubricated Track surrounds the track pin with lubricant to eliminate internal pin and bushing wear. Lubricant is held in place by a sealing arrangement consisting of a rigid seal and a thrust ring. Additional lubricant is contained in a reservoir drilled into the track pin. Extends undercarriage maintenance intervals and reduces costs. Hydraulic track adjusters and two-piece master link standard.

Track Roller Frame

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

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

Equalizer bar saddle connection is a low-friction bushing with remote lube line. Recoil system is fully sealed and lubricated.

Oscillation at front idlers $\pm 65 \text{ mm}/2.6''$

Number of rollers

(each side) 7

Number of shoes

(each side) 39

Width of

standard shoes $460 \text{ mm}/18''$

optional shoes $360 \text{ mm}/14''$

optional shoes $410 \text{ mm}/16''$

extreme service

shoes $460 \text{ mm}/18''$

Length of track

on ground $2235 \text{ mm}/7'4''$

Gauge $1676 \text{ mm}/5'6''$

Ground contact area:

standard shoes $2.05 \text{ m}^2/$
 $3,168 \text{ in}^2$

optional shoes
 $360 \text{ mm}/14''$ $1.59 \text{ m}^2/$
 $2,464 \text{ in}^2$

$410 \text{ mm}/16''$ 1.82 m^2
 $2,826 \text{ in}^2$

extreme service
shoes $2.05 \text{ m}^2/$
 $3,168 \text{ in}^2$

Ground Pressure:

standard shoes $0.50 \text{ kg/cm}^2/$
 7.13 psi

optional shoes
 $360 \text{ mm}/14''$ $0.64 \text{ kg/cm}^2/$
 9.12 psi

$410 \text{ mm}/16''$ $0.56 \text{ kg/cm}^2/$
 7.97 psi

extreme service
shoes 0.51 kg/cm^2
 7.25 psi

SPECIFICATIONS

Caterpillar Engine

Gross power (PS) at
2200 RPM74 kW/99 HP
Flywheel power (PS) at
2200 RPM 71 kW/95 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 838.9 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/7500 ft. altitude for direct drive, 3000 m/10,000 ft. for power shift model.

These additional ratings also apply at 2200 RPM

	kW	HP
ISO 9249.....	71	95
ISO 3046-1.....	70	94
EEC 80/1269.....	71	95

Caterpillar four-stroke-cycle, 3204 turbocharged diesel engine with four cylinders, 114 mm/4.5" bore, 127 mm/5.0" stroke, and 5.2 liters/318 in³ displacement. Individual, adjustment-free injection pumps and valves. Cam-ground and tapered, aluminum alloy pistons have two rings each. Steel-backed, copper-bonded aluminum bearings; die quenched crankshaft; piston cooling jets; stellite-faced exhaust valves; and replaceable valve seat inserts are standard.

Pressure lubrication with full-flow, filtered oil. Dry-type air cleaner with primary and secondary elements.

Two direct-electric, 24-volt starting systems – standard or low temperature available. Ether aid starting attachment for low temperature starting option. Canister is not included.

Final Drive

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 and blade-induced loads for long service life. Segmented sprocket for replacement ease.

Hydraulic Controls

Load-sensing hydraulics. A variable-displacement piston pump senses implement load and automatically adjusts flow rate to the load encountered. Sight gauge for checking fluid level.

Implement systems:

Flow at maximum
pressure.....94.6 L/min/25.5 gpm at 2200 RPM
Maximum pressure.....18,600 kPa/2700 psi

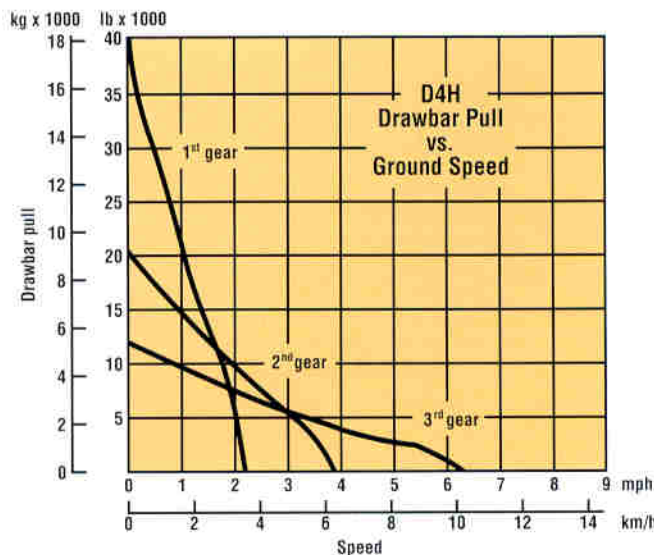
Transmission

Power shift:

Planetary-type with high torque-capacity oil clutches. Special valve modulates clutch engagement for fast speed and direction changes. Single-stage torque converter connects directly to flywheel. Live PTO used with 54 Winch.

Speeds with power shift transmission (approximate):

		1st	2nd	3rd
Forward	Km/h	3.5	6.2	10.2
	MPH	2.2	3.9	6.3
Reverse	Km/h	4.3	7.5	12.2
	MPH	2.7	4.7	7.6



Direct drive:

Constant-mesh, sliding-collar countershaft transmission. The D4H offers six speeds forward and reverse, enabling the operator to match tractors speed and drawbar pull to job requirements. Helical gears are used. 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 quieter operation. Flywheel clutch has three plates. Clutch is lubricated and cooled by pressure-circulated oil. Clutch is hydraulically actuated and requires no adjustment. Live PTO used with 54 Winch.

Standard transmission speeds and drawbar pulls:

Gear	Foward		Reverse		Drawbar Pull Foward			
					At rated RPM		Max. at lug	
	Km/h	MPH	Km/h	MPH	kg	lb	kg	lb
1	2.5	1.6	3.3	2.1	7454	16,434	9767	21,533
2	3.2	2.0	4.2	2.6	5715	12,599	7522	16,583
3	4.3	2.6	5.6	3.4	4235	9,336	5613	12,375
4	5.5	3.4	7.2	4.5	3132	6,904	4195	9,248
5	7.2	4.4	9.4	5.8	2277	5,020	3093	6,818
6	9.5	5.9	12.4	7.7	1597	3,520	2215	4,883

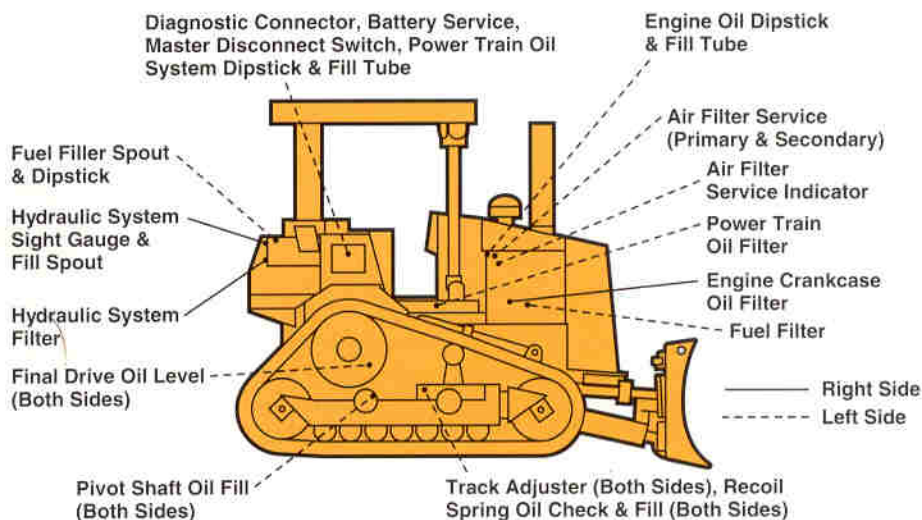
Service

Cat's modular design concept moves the elevated sprocket tractors a generation ahead in simplified service and repair.

- **Modular design of power train components** permits fast removal and installation.
- **Pre-testing modular components** before installation or after repair assures high quality.
- **Grouped service points and excellent access to service areas** make routine checks fast and convenient.
- **An Electronic Monitoring System** analyzes critical temperatures and pressure — gives visual and audible warning for fast troubleshooting.
- **Diagnostic connector** enables fast troubleshooting of starting and charging problems.

- **Modular cooling system**, with individual core assemblies, provides improved serviceability, reduced replacement costs and improved durability.

- **Caterpillar Remanufactured Parts:** dozer hydraulic cylinders and rods, starters, alternators, cylinder heads, short blocks, engines, oil pumps and final drive hubs are available for fast, economical repairs.



Total Customer Support

Unmatched in the industry!

- **Parts availability** — Most Cat® parts are immediately available off the shelf. Dealer parts availability is backed by Cat's computer-controlled, emergency search system.
- **Service capability** — Whether in the dealer's fully equipped shop or in the field, you'll get trained service people using the latest technology and tools.
- **Machine management services** — Cat dealers help manage equipment investments with:
 - Custom Track Service.
 - Effective preventive maintenance programs.
 - Diagnostic programs like Scheduled Oil Sampling and Technical Analysis.
 - Information to make the most cost-effective repair option decisions.
 - Customer meetings, training for operators and mechanics.
- **Exchange components for quick repairs** — Choose remanufactured products or rebuilt components for maximum availability and lower costs.
- **Literature support** — Easy-to-use operation and maintenance guide helps you get the full value out of your equipment investment.

FEATURES

Work Tools

Caterpillar work tools include tailored dozers, rippers and winch.

Blades

- **Choices of Power Angling and Tilt (PAT) or Straight (S) Blades** for optimum job match up.

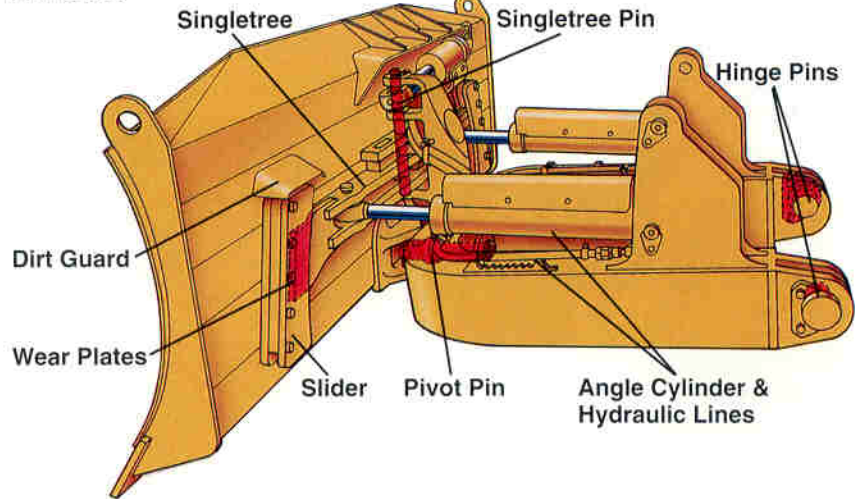
- **PAT Blade:**

- New clipped blade for better operator visibility.
- Full hydraulic control of lift, dig, angle and tilt functions.
- C-frame is solidly pinned to the main frame for a good blade control and elimination of blade motion due to oscillation.
- Hardened pin with replaceable bearings extend service life.
- Lubrication points located at those pin joints most susceptible to wear.
- Large singletree tower pin and lubrication of contact areas reduce impact stress giving longer pin life.
- Replaceable wear plates on singletree guide area increases service life.
- Angle cylinder bypass valve and additional hardware help reduce stress on singletree pin.
- Line guards help protect angle cylinder lines from sharp objects and abrasive materials.

- **S-Blade** for heavy corner loading applications.

- **A-Blade** available through Custom Machine Products.

PAT Blade



Rippers

- **Rugged design** for high production ripping.
- **Socket beam design** means easy servicing.
- **Multi-shank ripper** lets you choose one, two or three shanks to match the job conditions.

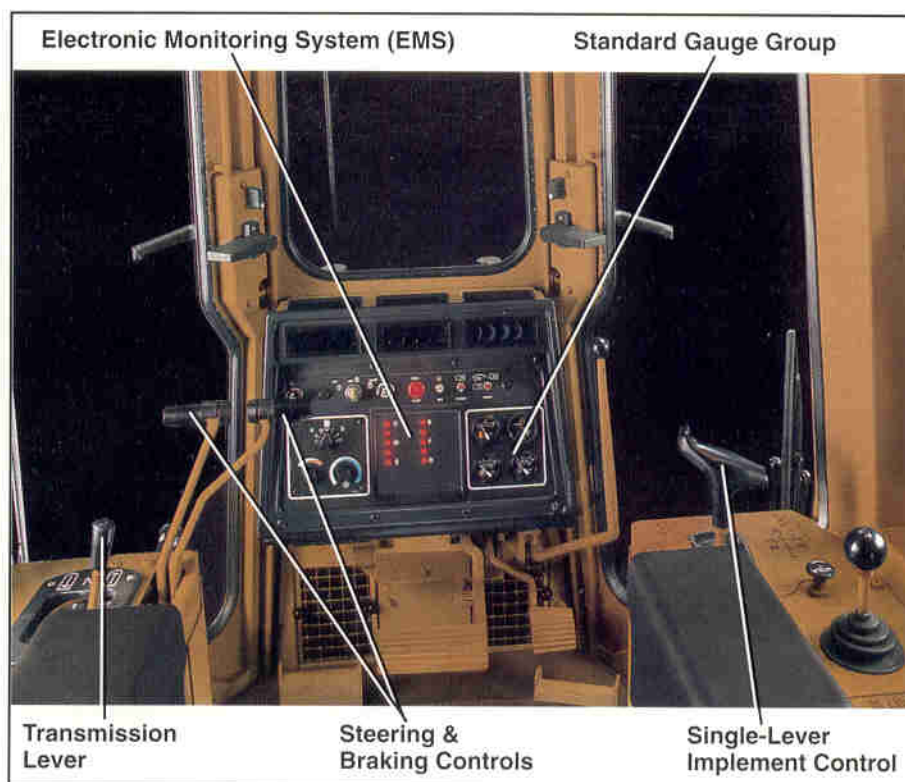
Winch

- **Modulated input clutch** on the engine PTO shaft reduces drains on engine horsepower for fuel efficiency.
- **Full freespool capacity** allows operator to pull line easily from drum for fast, efficient hook-up.
- **Single-lever actuation** of both clutch and brake functions — automatic synchronization of input and directional clutch engagement for smooth control.

Operator's Station

Comfort and convenience designed into the control station for an efficient and productive operator.

- **Operator's station** provides excellent visibility to blade and rear of machine for maximum operator productivity.
- **Easy-to-reach, low-effort controls** provide sure, precise steering and dozer control for less operator fatigue.
- **Instrument panel** includes standard gauge group now offering a fuel gauge, and Electronic Monitoring System (EMS) for monitoring critical machine functions.
- **Isolation-mounted cab** (optional) with air pressurizer and heater reduces noise and vibration for shift-long comfort.
- **Radio installation group** (standard with cab).
 - Includes mounting brackets, AM-FM antenna and speakers.
 - Radio, optional.
- **Caterpillar Contour Series Seat** — ergonomically designed and fully adjustable for maximum comfort.
 - Cushion side bolsters restrain side-to-side movement when operating on sideslopes and rough terrain.
 - Backrest centerline conforms to the operator's spinal curve and also has a transverse curve to provide additional side-to-side support.
 - Fully adjustable seat allows the operator to position for maximum comfort.
 - Three position, lower back support.
 - Three position, seat height and cushion tilt adjustment.
 - Three position, suspension dampening.
 - Operator weight support adjustment.
 - Retractable 75 mm/3" wide seatbelt for positive, comfortable restraint.



Caterpillar Contour Series Seat

The Competitive Edge

Performance

- **A forward center of gravity** with more track on the ground provides optimum dozing.
- **Excellent power-to-weight ratio** — faster loading, bigger loads, shorter cycle time.
- **Turbocharged 3204 engine** — direct fuel injection for more working power from each unit of fuel.
- **Versatile Power Angle and Tilt blade** for increased productivity and flexibility to do more jobs.

Reliability/Durability

- **Tubular track roller frames** resist bending and twisting.
- **Oil-cooled brakes** for increased capacity, service life.
- **Elevated sprocket design** — final drives and associated power train components raised above work environment...isolates from implement and ground-induced shock loads...extends drive train life.
- **Large engine displacement** — peak power with little strain.
- **Durable main frame** absorbs all implement and roller frame loads through pivot shaft.

Maintenance/Repair

- **Modular components** — remove as single units for simpler, quicker repairs, less downtime.
- **Modules can be pretested, field-installed** — less shoptime, downtime.
- **Electronic Monitoring System** — guards against costly failures when gauges aren't checked often enough.
- **Modular core radiator** — easy servicing and repair of the individual modules.
- **Diagnostic tool connector** — dealer service tool reads electrical system check points — electrical problems diagnosed quickly.

Operating Ease

- **Conveniently placed, low-effort controls** and easy-to-read, non-glare instrument panel — less strain and fatigue for operator.
- **Sound-suppressed ROPS/FOPS cab available** — heater (standard with cab) or optional heater/air conditioner controls environment — pressurizations keeps out dust.
- **Caterpillar Contour Series Seat** — comfort and visibility of blade and ripper or winch operations.
- **Smooth, precise one-handed forward, reverse and speed control.**

Total Customer Support System

- **Parts availability** — most Cat parts on dealer's shelf when you need them — computer-controlled, emergency search system back-up.
- **Service capability** — dealer's shop or fast field service — trained service people — latest tools and technology.
- **Machine management services** — effective preventive maintenance programs, diagnostic programs (Scheduled Oil Sampling, Technical Analysis), cost effective repair options, customer meetings, operator and mechanic training.
- **Exchange components for quick repairs** — choose remanufactured products or rebuilt components for maximum availability and lower costs.
- **Literature Support** — easy-to-use operation and maintenance guide helps you get the maximum value out of your equipment.
- **Flexible Financing** — your dealer can arrange attractive financing on the entire line of Cat equipment. Terms structured to meet your cash flow requirements. See how affordable and easy it is to own Cat equipment.

Custom Products

- In addition to the standard range of optional equipment, special attachments and machine configurations to suit particular customer applications can be made. Contact your Caterpillar dealer for details on matching the D4H to your special applications.

The Caterpillar logo consists of the word "CATERPILLAR" in a bold, sans-serif font. The letter "A" is stylized with a yellow triangle pointing upwards, representing the Caterpillar head.