



Cat[®] PL83

PIPELAYER

FEATURES:

- **Performance** – Improved hydraulics offer greater response and more precise control. New heavy duty winch works with updated hydraulic system for greater machine productivity.
- **Slope Capability** – Lengthened track-roller-frame and repositioned rear idler puts more track on the ground, enhancing slope capability.
- **Lift Capacity** – New counterweight profile adds more weight providing increased lift capacity. The PL83 has a rated lift capacity of 72 575 kg (160,000 lb).
- **Operator Interface** – New control handle puts boom and hook functions in the operator's right hand. Enclosed cab option aids operator comfort and offers outstanding visibility. New dual brake pedals enhance machine control, especially on slopes and for turning within a tight pipeline right-of-way.
- **Safety** – Additional large surface mirrors enhance visibility for the operator, and a modified block set design reduces the profile for greater visibility to the pipe. New, easy-to-service ladder design offers enhanced access/egress to the operator station.
- **Transportability** – New lower winch profile reduces shipping envelope and aids transportability. New bolt-on block horn has been added to the front of the machine for more convenient transport/storage of the block set.

Specifications

Engine

Engine Model	Cat [®] C15 ACERT™	
Emissions	U.S. EPA Tier 3, EU Stage IIIA	
Gross Power	259 kW	347 hp
Gross Power (Metric)		352 hp
Gross Power – ISO 14396	248 kW	333 hp
Gross Power – ISO 14396 (Metric)		337 hp
Flywheel Power	231 kW	310 hp
Flywheel Power (Metric)		314 hp
Net Power – ISO 9249	231 kW	310 hp
Net Power – ISO 9249 (Metric)		314 hp
Net Power – SAE J1349	229 kW	307 hp
Net Power – SAE J1349 (Metric)		311 hp
Net Power – EU 80/1269	231 kW	310 hp
Net Power – EU 80/1269 (Metric)		314 hp
Bore	137 mm	5.4 in
Stroke	172 mm	6.75 in
Displacement	15.2 L	928 in ³

- Engine ratings at 1,850 rpm.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator. Automatic derating occurs beyond that altitude.

Undercarriage

Shoe Type	Moderate Service	
Width of Standard Shoes	710 mm	30 in
Number of Shoes (each side)	48	
Grouser Height	78 mm	3 in
Track Gauge	2337 mm	92 in
Length of Track on Ground	3715 mm	12 ft 2 in
Ground Contact Area	5.6 m ²	8,677 in ²
Number of Rollers (each side)	9	9
Number of Carrier Rollers	1	1

- Positive pin retention track.

Hydraulic System

Implement Pump Output – Max (closed loop)	317 L/min	83.8 gal/min
Relief Valve Setting	41 600 kPa	6,033.6 psi
Counterweight (gear)	103 L/min	27.2 gal/min
Steering Pump Output (closed loop)	328 L/min	86.7 gal/min
Variable Charge Pump Output – Max (open loop)	253 L/min	66.8 gal/min

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Service Capacities

Fuel Tank	409 L	108 gal
Crankcase and Filter	38 L	10 gal
Final Drive (each side)	13 L	3.4 gal
Cooling System	92 L	24.3 gal
Hydraulic Tank	101 L	26.6 gal
Power Train	190 L	50 gal

Operating Specifications

Lifting Capacity	72 575 kg	160,000 lb
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Weights

Operating Weight	48 477 kg	106,807 lb
Shipping Weight	38 864 kg	85,510 lb

- Operating weight includes all shipping weights plus full fuel tank, operator, boom and counterweights installed.
- Shipping weight includes: lubricants, coolant, 10% fuel, hydraulic controls and fluids, backup alarm, seat belt, 710 mm (28 in) grouser shoes, drawbar, counterweight and boom removed.

Transmission

1 Forward	3.4 km/h	2.1 mph
2 Forward	6.1 km/h	3.8 mph
3 Forward	10.6 km/h	6.6 mph
1 Reverse	4.5 km/h	2.8 mph
2 Reverse	8 km/h	5 mph
3 Reverse	14.2 km/h	8.8 mph
1F – Drawbar Pull	618.5 N	139 lbf
2F – Drawbar Pull	338.2 N	76 lbf
3F – Drawbar Pull	186.9 N	42 lbf

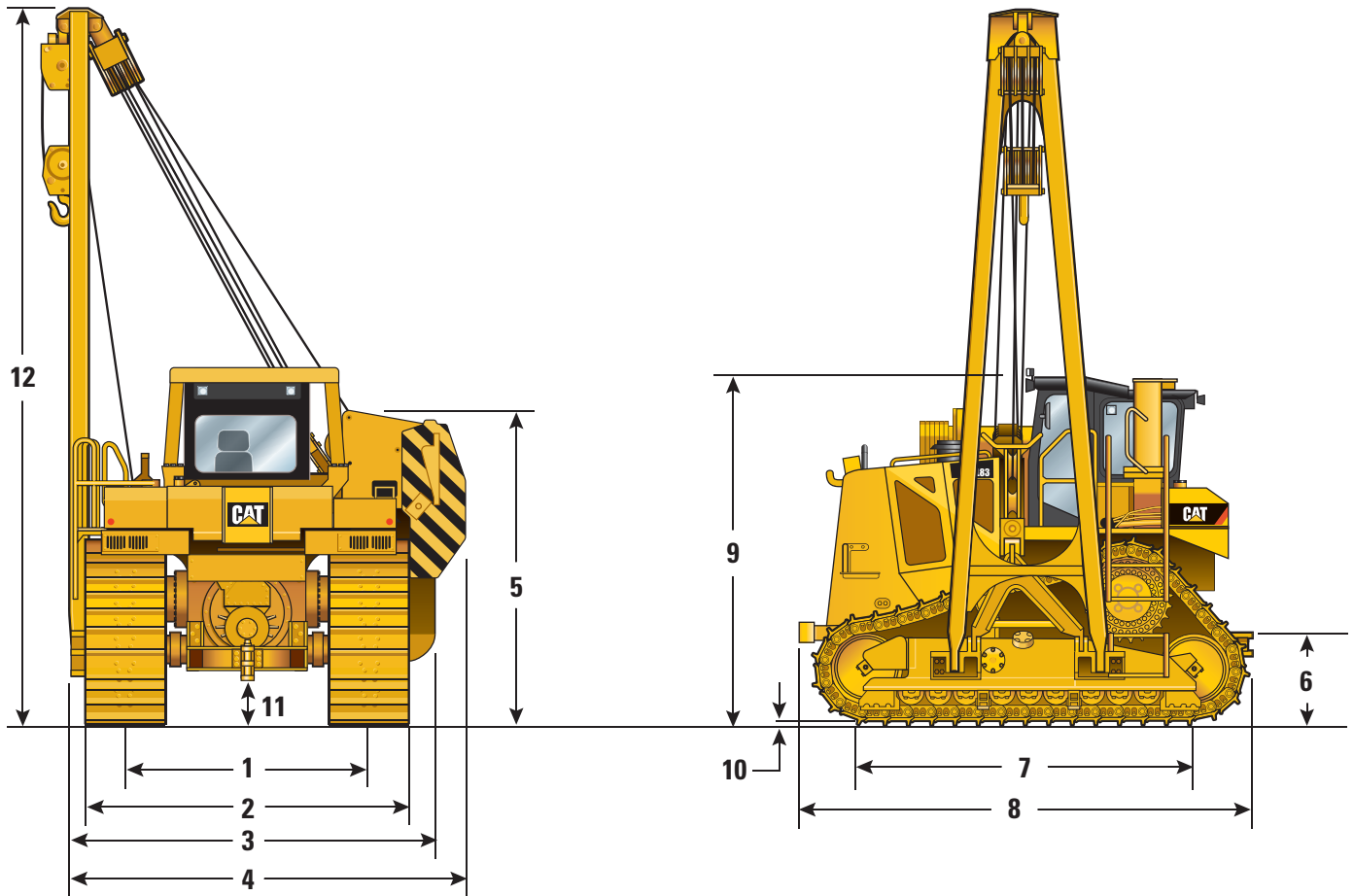
Standards

Brakes	Brakes meet the standard SAE J/ISO 10265 TIC DOC 2011
ROPS	Optional ROPS (Rollover Protection Structure) meets the standards SAE J397 OCT95, SAE J1040 MAY94, ISO 3164 1995 and ISO 3471-1

Pipelaying Equipment

Planetary Hydraulic Winches		
Hook		
Drum Diameter	254 mm	10 in
Flange Diameter	508 mm	20 in
Drum Length	355.6 mm	14 in
Wire Rope Diameter	19 mm	0.75 in
Boom and Cables, 7.3 m (24 ft)	74 m	242.8 ft
Boom and Cables, 7.3 m (24 ft) Extended	74 m	242.8 ft
Boom and Cables, 8.53 m (28 ft)	86.2 m	282.8 ft
Boom and Cables, 8.53 m (28 ft) Extended	86.2 m	282.8 ft
Hook Speed (Raise) with 6 Part Line	22 m/min	72.1 ft/min
Boom		
Drum Diameter	254 mm	10 in
Flange Diameter	508 mm	20 in
Drum Length	355.6 mm	14 in
Wire Rope Diameter	19 mm	0.75 in
Boom and Cables, 7.3 m (24 ft)	55 m	180.5 ft
Boom and Cables, 7.3 m (24 ft) Extended	74 m	242.8 ft
Boom and Cables, 8.53 m (28 ft)	62.5 m	205 ft
Boom and Cables, 8.53 m (28 ft) Extended	86.2 m	282.8 ft
Removable Counterweight 13 Segments		
2 @	300 kg	662 lb
11 @	650 kg	1,430 lb
Total Weight Extendible	10 826 kg	23,817 lb

- Hydraulic Power – 540 L/min at 18 259 kPa/183 bar (143 gal/min at 2,650 psi) and 2,100 rpm pump speed independent of torque converter.



Dimensions

1 Track gauge	2.34 m	7 ft 8 in
2 Width of tractor (standard shoes)	3.25 m	10 ft 8 in
3 Width of tractor counterweight/boom removed	3.84 m	12 ft 7 in
4 Width of tractor (counterweight retracted)	4.09 m	13 ft 5 in
5 Machine height (tip of counterweight)	3.51 m	11 ft 6 in
6 Drawbar height	0.43 m	1 ft 5 in
7 Length of track on ground	3.72 m	12 ft 2 in
8 Operating length	5.23 m	17 ft 2 in
9 Height of machine		
Height with ROPS and boom removed	3.15 m	11 ft 2 in
Height to the top of the ROPS canopy/cab	3.73 m	12 ft 3 in
10 Grouser height	0.08 m	3.1 in
11 Ground clearance (per SAE J1234)	0.47 m	1 ft 7 in
12 Boom height [at SAE 1.22 m (4 ft) overhang]	8.02 m	26 ft 4 in

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STANDARD EQUIPMENT

ELECTRICAL

- Alarm, backup
- Batteries, 4, maintenance free heavy duty
- Converter, 12V, 10 amp with 1 outlet
- Diagnostic connector
- Horn, forward warning
- Lights, 2 front, 2 rear
- Starting receptacle

OPERATOR ENVIRONMENT

- Armrest, adjustable
- Deactivation switch, hydraulic controls
- Horn
- Hour meter
- Governor switch, electronic
- Key start, single
- Monitoring system, electronic warning system with temperature gauges for coolant, power train oil and hydraulic oil
- Pedal, decelerator
- Pedals, dual brake
- Seat, vinyl suspension
- Seat belt, retractable
- Service indicator, air cleaner
- Steering control, twist tiller with touch shift, differential
- Storage compartment

PIPELAYING EQUIPMENT

- Block and hook with latch
- Counterweights, extendible segmented
- Drawworks, hydraulic actuated and controlled
- Hook with latch

POWER TRAIN

- Advanced Modular Cooling System (AMOCS)
- Aftercooler, air-to-air (ATAAC)
- C15 ACERT diesel engine with EUI (Electronic Unit Injection)
- Coolant, extended life with protection to -37°C (-34°F)
- Electric starting, 24 volt
- Fan, suction, hydraulically driven
- Filter, air with electronic service indicator
- Final drives, four planet, double reduction planetary
- Fuel priming pump, electric
- Muffler
- Parking brake, electronic
- Precleaner, stratta-tube dust ejector

POWER TRAIN (cont'd)

- Prescreener
- Starting aid, ether
- Torque divider
- Transmission, electronically-controlled powershift, 3F-3R speeds
- Transmission control module, electronic
- Turbocharger, wastegate
- Water separator

UNDERCARRIAGE

- Carrier roller
- Frame, 9-roller tubular track roller frame
- Hydraulic track adjusters
- Master links, two piece
- Non-suspended undercarriage
- Rollers and idlers, lifetime lubricated
- Sprocket rim segments, replaceable
- Track adjusters, hydraulic
- Track guiding guards
- 760 mm (30 in) medium service grouser with sealed and lubricated track (48 section) PPR

OTHER STANDARD EQUIPMENT

- Bumper, front with towing device
- Drawbar, heavy duty
- Ecology drains – Engine oil, coolant, hydraulic oil, torque converter, fuel tank, power train case and transmission
- Enclosures, perforated engine
- Guard, hinged bottom
- Guard, hinged radiator
- Hood, perforated engine
- Hydraulics, independent steering and work tool pumps
- Hydraulic system, pilot operated for hook, boom and counterweight control
- Oil cooler, hydraulic
- Parts book, CD ROM
- Product Link ready
- S-O-SSM sampling ports
- Steering, electronically controlled power differential
- Vandalism protection for fluid compartments

MANDATORY ATTACHMENTS AND OPTIONAL EQUIPMENT (See PL83 Pipelayer Specalog [AEHQ6315-02] for list)

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