



Cat® PL87

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 PL87 has a rated lift capacity of 97 069 kg (214,000 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	294 kW	394 hp
Gross Power (Metric)		400 hp
Gross Power – ISO 14396	281 kW	377 hp
Gross Power – ISO 14396 (Metric)		382 hp
Flywheel Power	273 kW	366 hp
Flywheel Power (Metric)		371 hp
Net Power – ISO 9249	273 kW	366 hp
Net Power – ISO 9249 (Metric)		371 hp
Net Power – SAE J1349	270 kW	362 hp
Net Power – SAE J1349 (Metric)		367 hp
Net Power – EU 80/1269	273 kW	366 hp
Net Power – EU 80/1269 (Metric)		371 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	Super Extreme Service	
Width of Standard Shoes	864 mm	34 in
Number of Shoes (each side)	48	
Grouser Height	93 mm	3.6 in
Track Gauge	2.54 m	8 ft 4 in
Length of Track on Ground	3.587 m	11 ft 9 in
Ground Contact Area	3715 mm	10 ft 5 in
Number of Rollers (each side)	9	9
Number of Carrier Rollers	1 per side	

- Positive pin retention track.

Hydraulic System

Implement Pump Output –		
Max (closed loop)	277 L/min	73.2 gal/min
Relief Valve Setting	41 600 kPa	6,033.6 psi
Counterweight (gear)	101 L/min	26.7 gal/min
Variable Charge Pump Output –		
Max (open loop)	219 L/min	57.9 gal/min

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Service Capacities

Fuel Tank	569 L	150.3 gal
Crankcase and Filter	38 L	10 gal
Final Drive (each side)	13 L	3.4 gal
Cooling System	76 L	20 gal
Hydraulic Tank	170 L	44.9 gal
Power Train	190 L	50 gal

Operating Specifications

Lifting Capacity	97 069 kg	214,000 lb
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Weights

Operating Weight	54 485 kg	120,119 lb
Shipping Weight	42 865 kg	94,501 lb

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

Transmission

1 Forward	3 km/h	1.9 mph
2 Forward	5.4 km/h	3.3 mph
3 Forward	9.4 km/h	5.8 mph
1 Reverse	4 km/h	2.5 mph
2 Reverse	7 km/h	4.4 mph
3 Reverse	12.3 km/h	7.7 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 JISO 10265 MAR99
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)	114.3 m	375 ft
Boom and Cables, 7.3 m (24 ft) Extended	114.3 m	375 ft
Boom and Cables, 8.53 m (28 ft)	124.2 m	407.6 ft
Boom and Cables, 8.53 m (28 ft) Extended	124.2 m	407.6 ft
Hook Speed (Raise) with 8 Part Line	15.5 m/min	50.8 ft/min

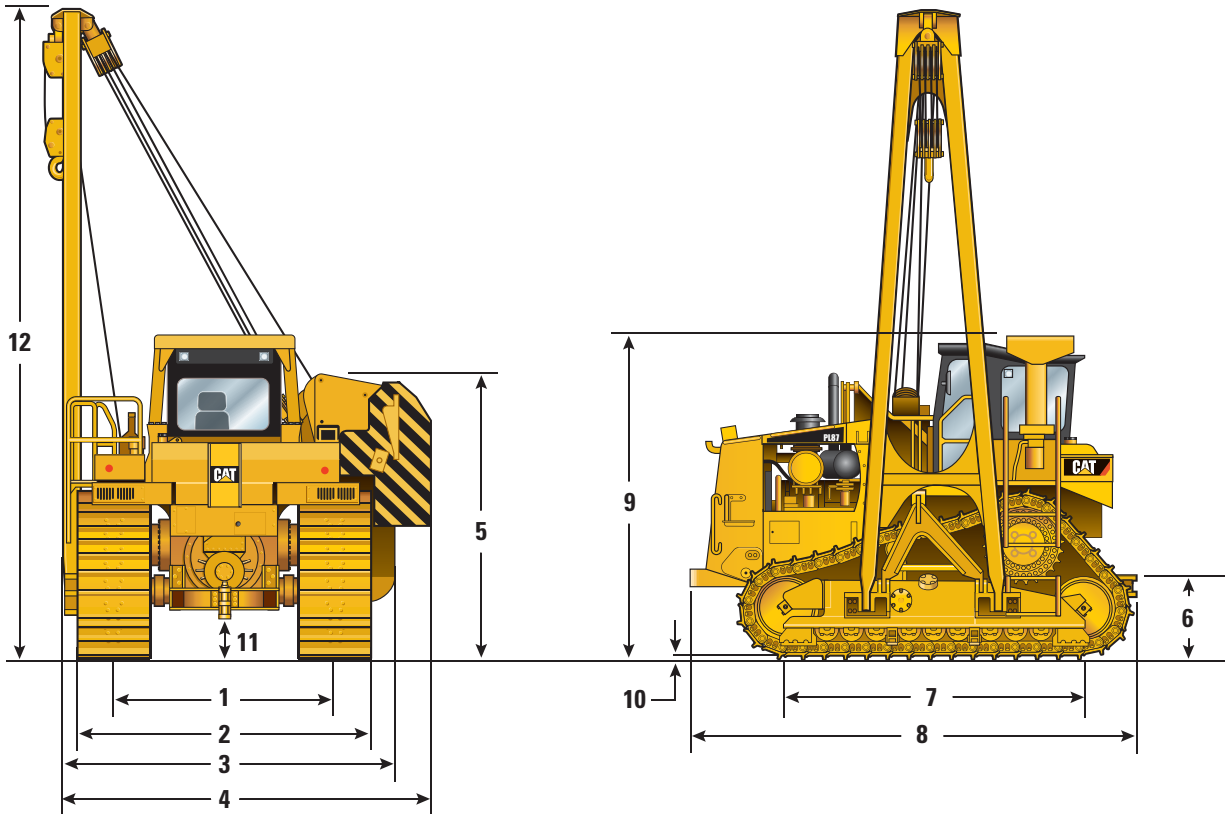
Boom

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	180.4 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 @	285 kg	628 lb
6 @	710 kg	1,562 lb
5 @	785 kg	1,725 lb
Total Weight Extendible	13 903 kg	30,587 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	2.54 m	8 ft 4 in
2 Width of tractor (standard shoes)	3.86 m	12 ft 8 in
3 Width of tractor counterweight/boom removed	4.04 m	13 ft 3 in
4 Width of tractor (counterweight retracted)	4.34 m	14 ft 3 in
5 Machine height (tip of counterweight)	3.44 m	11 ft 3.25 in
6 Drawbar height	0.60 m	1 ft 10 in
7 Length of track on ground	3.72 m	12 ft 2 in
8 Operating length	5.49 m	17 ft 11 in
9 Height of machine		
Height with ROPS and boom removed	3.18 m	11 ft 6 in
Height to the top of the ROPS canopy/cab	3.84 m	12 ft 7 in
10 Grouser height	0.09 m	3.6 in
11 Ground clearance (per SAE J1234)	0.46 m	18 in
12 Boom height [at SAE 1.22 m (4 ft) overhang] 8.53 m (28 ft) boom	9.25 m	30 ft 5 in

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STANDARD EQUIPMENT

ELECTRICAL

- Alarm, backup
- Batteries, 4, maintenance free
- Converter, 12V, 10 amp with 1 outlet
- Diagnostic connector
- Horn, forward warning
- Lighting system, halogen, (2 front, 2 rear)
- Starting receptacle

OPERATOR ENVIRONMENT

- Armrest, adjustable
- Deactivation switch, hydraulic controls
- Horn
- Hour meter, electronic
- 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, electronic, finger tip control
- Storage compartment

PIPELAYING EQUIPMENT

- Block and hook with latch, heavy duty
- Counterweights, extendable segmented
- Drawworks, hydraulic actuated and controlled

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 blower
- 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
- 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
- 864 mm (34 in) super extreme service grouser with sealed and lubricated track (48 section) clipped grousers

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
- Guard, hinged bottom
- Guard, hinged radiator
- Hood, solid
- 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, electronic clutch brake
- Vandalism protection for fluid compartments

MANDATORY ATTACHMENTS AND OPTIONAL EQUIPMENT (See PL87 Pipelayer Specalog [AEHQ6316-01] for list)

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