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## **Caterpillar® PL61 Pipelayer Combines Advanced Power Train, Undercarriage and Control Technology with Proven Lifting Features**

Introduction of the Caterpillar PL61 Pipelayer positions a new, technically refined model at the small end of the Caterpillar pipelayer range—providing a machine with 40,000 pounds (18 145 kg) of lift-capacity and the capability to meet the pipeline contractor's requirements for precision control, transportability, operator comfort, visibility and durability.

The PL61, shares many common components with the Caterpillar D6K tractor, featuring a Cat® C6.6 ACERT® engine, closed-loop hydrostatic drive system, oval-track SystemOne™ undercarriage and an electronically enhanced operator station. Complementing this technology are premium features retained from the design of the predecessor model, the 561N, including hydrostatic draw-works, two-speed load line and extendible counterweight.

Available with either a canopy or an optional enclosed cab, the PL61 operator station features a pair of seat-mounted, electro-hydraulic joysticks designed for intuitive control of travel and lifting functions. The operator station provides clear lines of sight to all work areas, including the boom and upper block, which are visible through a new roof-mounted skylight. For added control, a combination decelerator/brake pedal can be configured to slow the machine with or without a reduction in engine speed.

### **Lifting Structures and Controls**

The 18-foot (5.5 m) boom is constructed of high-tensile-strength steel, allowing a robust box-section design that is durable, yet lightweight to optimize payload capacity. The hook and cable-controlled boom are raised and lowered by independent hydraulic winches designed for smooth operation and infinite speed adjustment through their working range. Two-speed operation of the load-line winch provides high speeds for overall productivity, but lower

speeds for precise positioning. Oil-disc brakes in the winches positively retain selected boom and hook positions.

The extendible counterweight, designed to enhance machine stability when handling heavy loads or when working in steep terrain, can be retracted for maneuvering on confined sites. Counterweight frames are available for both standard-track and low-ground-pressure-track machines, and frame-conversion kits allow changing between the two configurations. Standard-track models meet worldwide transportation requirements with the frame in place.

Lifting functions are managed completely and conveniently with the right joystick, including control of the boom, load-line and counterweight. A thumbwheel in the lever permits precise counterweight positioning, and additional thumb buttons in the lever control the load line two-speed function and the “emergency free-fall” feature for rapid load lowering.

### **Power Train and Undercarriage**

The 6.6-liter, 125-net horsepower engine uses a cross-flow cylinder-head design and four valves per cylinder to enhance air flow for optimal combustion efficiency. Equipped with a common-rail fuel system and the Caterpillar ADEM™ A4 electronic controller, the C6.6 engine precisely manages fuel delivery for enhanced lugging performance and emissions control.

The cooling package includes the front mounted radiator, air-to-air after-cooler, hydraulic-oil cooler and hydraulically driven fan, which automatically adjusts its speed for optimum cooling, reduced sound levels and enhanced fuel economy. The Constant Net Horsepower feature automatically detects fan load and adjusts engine power to compensate for parasitic horsepower draw, thus maintaining peak hydraulic performance in the implement and drive systems.

The electronically controlled hydrostatic drive system uses a variable-displacement hydraulic pump and motor for each track, allowing smooth turns under power and counter-rotation of tracks when required. The system delivers infinitely variable speeds to 6.2 mph (10kph), and automatically matches speed and torque requirements to the application. The left joystick permits single-lever control of the drive system, including ground speed, steering and pre-set travel speeds.

The SystemOne™ undercarriage is designed to reduce undercarriage costs by 35 to 70 percent, compared with costs typically incurred for maintaining standard undercarriages. These potential savings result are due to balanced component wear, resulting in extended service life. Design features include rotating bushings, which eliminate the need to turn pins and bushings, and center-tread idlers, which guide the track without contacting and wearing the link rails.

The new pipelayer can be equipped with a narrow undercarriage—101 inches (2560 mm) across the tracks, or a low-ground-pressure version—109 inches (2760 mm) across the tracks.

### **Operator and Technician Amenities**

For operator comfort and convenience, the joystick controllers are designed to isolate vibration and can be adjusted independently of the seat. The seat is the Cat air-suspension C500 Comfort model, in either vinyl or cloth—the latter available in a heated version for cold climates. The climate-controlled enclosed cab is fitted with large expanses of glass for all-around visibility, which is further enhanced by the rounded sheet-metal contours and tapered engine enclosure.

The compact instrument cluster of the EMS monitoring system, which includes a digital display for pertinent operating data, keeps the operator informed of machine performance. Also available is the Caterpillar Product Link, a wireless machine-tracking system that allows two-way communication between machine systems and a manager's desktop computer, providing information such as location, hour-meter reading, fuel consumption and system alerts.

To simplify the service technician's job, all routine engine-maintenance checks are made through a large hinged door on the left side, and the cooling package is accessible through the swing-away grille and swing-away cooling fan. Grouped pressure taps, accessible from ground level, allow for quick checks of the hydraulic system, and ecology drains for engine oil, coolant and hydraulic tank reduce the risk of spills and shorten service time.

For more information about the PL61 Pipelayer, customers should contact their Cat dealer or visit the Caterpillar website at [www.cat.com](http://www.cat.com).

## PL61/561N Pipelayer Specification Comparison

	<b>PL61</b>	<b>561N</b> (previous model)
<i>Operating weight</i>		
Narrow shoes	37,480 lb (17 000 kg)	37,150 lb (16 851 kg)
Wide shoes	39,242 lb (17 800 kg)	37,550 lb (17 029 kg)
Lift capacity	40,000 lb (18 145 kg)	40,000 lb (18 145 kg)
<i>Winch speed and capacity</i>		
Hook-line speed (bare drum)		
Low range	108 ft/min (33 m/min)	108 ft/min (33 m/min)
High range	228 ft/min (69.5 m/min)	228 ft/min (69.5 m/min)
Boom-line speed (bare drum)	151 ft/min (46 m/min)	151 ft/min (46 m/min)
Cable diameter (hook, boom)	0.62 in (16 mm)	0.62 in (16 mm)
Drum capacity (hook)	239 ft (72.8 m)	239 ft (72.8 m)
Drum capacity (boom)	162 ft (49.4 m)	162 ft (49.4 m)
<i>Engine</i>		
Model	Cat C6.6	Cat 3126B
Net power	125 (93 kW)	123 (92 kW)
<i>Drive train</i>		
Type	Hydrostatic	Mechanical
Final drives	Planetary	Planetary
<i>Undercarriage</i>		
Configuration	Oval	Elevated sprocket
Chain type	SystemOne	Cat SALT
Number of rollers	7	8
Track length	104 in (2645 mm)	103 in (2604 mm)

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