



# CATERPILLAR

## 594H Pipelayer

### Summary of features

- 306 kW/410 HP flywheel power
- 90 700 kg/200,000 lb. lift capacity
- Planetary power shift transmission
- Bolt-on sprocket rim segments
- Sealed Track



### transmission

Planetary power shift with 530 mm/21" diameter, high-torque-capacity oil clutches. Special modulation system permits unrestricted speed and direction changes under full load.

Single-stage torque converter with output torque divider. Connected to transmission by double universal joint for unit construction to provide servicing ease.

Gear	Forward Speed		Reverse Speed	
	Km/h	MPH	Km/h	MPH
1	4.0	0-2.5	5.0	0-3.1
2	6.9	0-4.3	8.7	0-5.4
3	10.8	0-6.7	13.2	0-8.2



### steering

Hydraulically actuated, multiple-disc oil clutches with 30 friction surfaces in each clutch. Hydraulically boosted, oil-cooled contracting band brakes.



### undercarriage

Sealed Track extends pin and bushing life and reduces wear on links and rollers. Track rollers, carrier rollers and idlers are Lifetime Lubricated. Sprockets have bolt-on replaceable rim segments.

Number of track rollers (each side)	8
Track gauge	2540 mm/100"
Track shoe width (standard)	860 mm/34"
Optional width	1020 mm/40"
Track length on ground	3750 mm/147.75"
Ground contact area (standard shoes)	6.48 m <sup>2</sup> /10,050 sq. in.
Ground clearance from ground face of track shoe	630 mm/25"
Grouser height from ground face of shoe	87 mm/3.44"



### counterweights

Full hydraulic control. High mounting of counterweight pivot point gives excellent side and bottom clearance. Over-center design prevents creep-out when retracted. Minimum overall width for easier maneuvering and shipping.



### boom control

Safety pawl holds boom drum. Interlock prevents accidental reversal with pawl engaged. Safety kickout prevents boom bending.



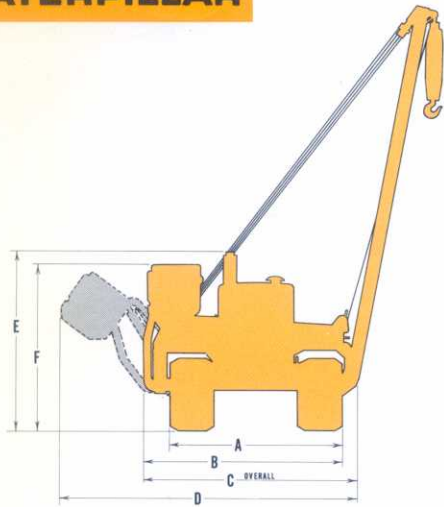
### Caterpillar Engine

Flywheel power @ 1375 RPM ..... 306 kW/410 HP (Kilowatts (kW) is the International System of Units equivalent of horsepower.)

*The net power at the flywheel of the vehicle engine operating under SAE standard ambient temperature and barometric conditions, 29°C/85°F and 995 mbar/29.38" Hg, using 35 API gravity fuel oil at 15.6°C/60°F. Vehicle engine equipment includes fan, water pump, lubricating oil pump and fuel pump. Engine will maintain full power up to 2300 m/7,500 ft. altitude.*

Caterpillar 4-stroke-cycle D353 diesel Engine with 6 cylinders, 159 mm/6.25" bore, 203 mm/8.0" stroke and 24.2 liters/1,473 cu. in. piston displacement.

Turbocharged and aftercooled. Individual, adjustment-free fuel injection pumps and non-fouling precombustion chambers. Stellited valves, valve rotators and hard alloy steel seats. Spray-cooled, cam-shaped and tapered aluminum alloy pistons with three-ring design. Both compression rings carried in cast-iron bands. Full-flow filtered lubrication. Dry-type air cleaner. 24-volt direct electric starting. 35-amp alternator.



### dimensions



- (A) Minimum shipping width (both side frames removed) ..... 3430 mm/11'3"
- (B) Shipping width (left frame removed) ..... 3760 mm/12'4"
- (C) Width, weights retracted ..... 4290 mm/14'1"
- (D) Width, weights extended ..... 5800 mm/19'.25"
- (E) Height, less boom ..... 3760 mm/12'4"
- (F) Height to top of counterweights ..... 3070 mm/10'.75"
- Overall length ..... 5790 mm/19'

### service refill capacities



	Liters	U.S. Gallons
Fuel tank	760	200
Cooling system	155	41
Counterweight hydraulic control	37.9	10
Lubricating system:		
Crankcase	42.6	11.25
Transmission, steering clutches and brakes	129	34
Final drives (each)	42.6	11.25

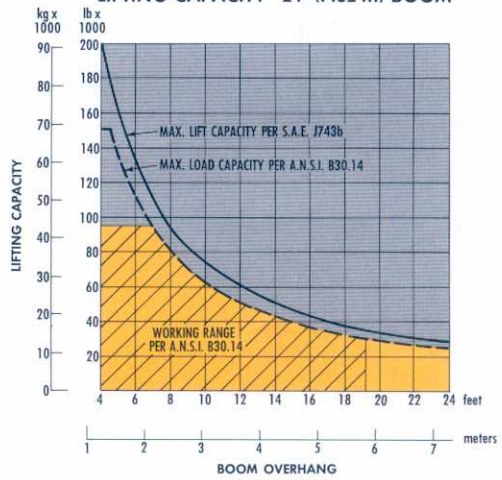
### weights (approximate)



	Kg	Lb
Chassis only	35 100	77,300
Pipelayer equipment with counterweights	20 400	45,000
Shipping	55 500	122,300

Materials and specifications are subject to change without notice.

### LIFTING CAPACITY\* 24' (7.32 m) BOOM



\*Specified Equipment:  
 19 mm/3/4" dia. wire rope 21 591 kg/47,600 lb minimum breaking strength.  
 8 part load line.  
 5 part boom line.  
 12 556 kg/27,680 lb of counterweights extended.

### pipelaying equipment



Counterweights, adjustable, hydraulically controlled:

- Counterweight frame ..... 1180 kg/2,600 lb.
- 17 segments at 600 kg/1,330 lb. each ..... 10 180 kg/22,440 lb.
- Counterweight lift frame ..... 910 kg/2,000 lb.
- Hydraulic cylinders, lift links and hardware ..... 290 kg/640 lb.
- Total weight extendable ..... 12 560 kg/27,680 lb.

**Live power:** Continuous power to pipelayer winches, independent of torque converter.

**Winch transmission:** Constant mesh, built by Caterpillar. 3 speeds for raising, 1 for lowering.

**Drums:** Operated independently or simultaneously.

	Load	Boom
Drum diameter	260 mm/10.25"	260 mm/10.25"
Brake diameter	560 mm/22"	560 mm/22"
Length (inside flanges)	356 mm/14"	178 mm/7"
Capacity with 19 mm/.75" cable	189 m/620'	78 m/255'

Hook speed (bare drum):

Raise:	M/min	FPM
First	4.02	13.2
Second	8.0	26.1
Third	19.0	62.5
Lower	8.6	28.1

Five-part boom line; eight-part load line.

**Clutch:** Two-plate, 290 mm/11.4" diameter, friction, independent of flywheel clutch.

**Brakes:** Interchangeable between boom and load line drums, self-energizing, protected from weather, 560 x 127 mm/22" x 5".

**Boom:** Welded box-section. Standard length: 7310 mm/24'. Optional: 8530 mm/28'.