

# 850H LT/WT/LGP Crawler Dozer



## ENGINE

Model ..... Case 6T-590 diesel  
 Cylinders ..... 6  
 Bore/Stroke ..... 4.02" x 4.72"  
 (102 x 120 mm)  
 Displacement ..... 359 in<sup>3</sup> (5.9 L)  
 Fuel injection ..... Direct  
 Fuel ..... #2 Diesel  
 Fuel filter ..... Spin-on with  
 in-line strainer  
 Air intake ..... Cross-flow  
 Cooling ..... Liquid  
 Engine speeds (rpm)  
 High idle - no load ..... 2420±50  
 Rated - full load ..... 2200  
 Low idle ..... 800-1050  
 Horsepower per SAE J1349  
 Net ..... 91 (68 kW) @ 2200 rpm  
 Gross ..... 97 (72 kW) @ 2200 rpm  
 Peak torque @ 1200 rpm  
 Net ..... 282 lb-ft (382 N·m)  
 Gross ..... 286 lb-ft (388 N·m)  
 Engine lubrication –  
 Pump ..... Deep sump plate cooler  
 with pressurized  
 under-piston nozzles  
 Pump operating angle ratings  
 Side-to-side ..... 45°  
 Fore and aft ..... 45°  
 Oil filtration ... Replaceable, spin-on  
 full-flow cartridge

## ENGINE COOLING

Radiator –  
 Core size area ..... 486 in<sup>2</sup> (0.31 m<sup>2</sup>)  
 Rows of tubes ..... 6  
 Fan –  
 Diameter ..... 21.6" (550 mm)  
 Ratio ..... 1.1:1

## ELECTRICAL SYSTEM

Alternator ..... 65 amp  
 95 amp w/ A/C  
 Battery ..... 12-volt low-maintenance  
 700 cold-cranking amps  
 @ 0° F (-18 C)

## POWERTRAIN

Torque converter ..... Single-stage  
 Diameter ..... 12.2" (310 mm)  
 Stall ratio ..... 2.72  
 Drawbar pull\* –  
 1st ..... 33,109 lb (147.3 kN)  
 2nd ..... 21,930 lb (97.5 kN)  
 3rd ..... 18,944 lb (84.3 kN)  
 4th ..... 12,444 lb (55.4 kN)  
 Transmission ... Case constant-mesh  
 modulated transmission  
 Oil filter ..... 10 micron, spin-on  
 replaceable  
 Gear ratios (fwd/rev) –  
 1st ..... 76.3/69.5  
 2nd ..... 51.1/46.5  
 3rd ..... 44.4/40.4  
 4th ..... 29.7/27.1  
 Travel speeds\* –  
 Forward ..... mph (km/h)  
 1st ..... 2.17 (3.5)  
 2nd ..... 3.25 (5.2)  
 3rd ..... 3.74 (6.0)  
 4th ..... 5.58 (9.0)  
 Reverse ..... mph (km/h)  
 1st ..... 2.38 (3.8)  
 2nd ..... 3.85 (6.2)  
 3rd ..... 4.11 (6.6)  
 4th ..... 6.13 (9.9)  
 \* Measured using standard track chain. Increase  
 travel speeds by 4% and reduce drawbar pull  
 by 4% with the optional CELT track chain.  
 Parking brakes ..... Heavy-duty,  
 spring-applied,  
 hydraulic pressure release  
 Brakes ..... Foot-operated,  
 low-effort power  
 Final drive ..... Spur and bull gear  
 single reduction

## HYDRAULIC SYSTEM

Standard equipment pump  
 Pump flow @ 2200 rpm  
 @ 2200 psi (152 kPa) ..... 23.9 gpm  
 (90.5 L/min)

## CYLINDERS

Lift cylinder (2)  
 Bore diameter ..... 3.50" (89 mm)  
 Rod diameter ..... 1.75" (44.5 mm)  
 Stroke ..... 17.40" (442 mm)  
 Angle cylinder (2)  
 Bore diameter ..... 3.50" (89 mm)  
 Rod diameter ..... 1.75" (44.5 mm)  
 Stroke ..... 15.60" (396 mm)  
 Tilt cylinder (1)  
 Bore diameter ..... 3.50" (89 mm)  
 Rod diameter ..... 1.75" (44.5 mm)  
 Stroke ..... 5.80" (147 mm)

## UNDERCARRIAGE

Track adjustment ..... Hydraulic  
 Frame ..... Rigid suspension  
 Length of track on ground ... 88" (2.23 m)  
 Track link pitch ..... 6.73" (171 mm)  
 Track shoe height ..... 2.06" (52 mm)  
 Pin diameter ..... 1.32" (33 mm)  
 Bushing diameter –  
 CLT track ..... 2.24" (57 mm)  
 CELT track ..... 3.0" (76 mm)  
 Bolt diameter ..... 0.625" (16 mm)  
 Track shoes per side ..... 38  
 Track rollers per side ..... 6  
 Carrier rollers per side ..... 1  
 Track roller rail dia. .... 7.48" (190 mm)

## **OPERATOR ENVIRONMENT**

ROPS canopy  
"U" pattern forward/reverse lever  
Adjustable armrests  
Foot rests  
Retractable seat belt, 2" (51 mm)  
Vinyl suspension seat  
w/back adjustment  
Tool storage area

## **BLADE**

Blade pitch ..... 55° forward  
60° rearward  
Lift speed (per second) 18" (457 mm)  
Cutting edge ..... Reversible and  
replaceable  
Width..... 8.0" (203 mm)  
Thickness ..... 0.75" (19 mm)

## **SERVICE CAPACITIES**

Fuel tank..... 47 gal (177.9 L)  
Engine oil w/filter ..... 16 qt (15.2 L)  
Engine oil w/o filter ..... 15 qt (14.3 L)  
Engine cooling system .... 20 qt (18.9 L)  
Hydraulic reservoir .. 55.5 qt (52.5 L)  
Final drive (per side)... 7.5 qt (7.1 L)  
Track rollers (ea.)..... 0.26 qt (0.25 L)  
Front idlers (ea.)..... 0.52 qt (0.49 L)  
Carrier rollers (ea.).... 0.25 qt (0.24 L)

## **INSTRUMENTATION**

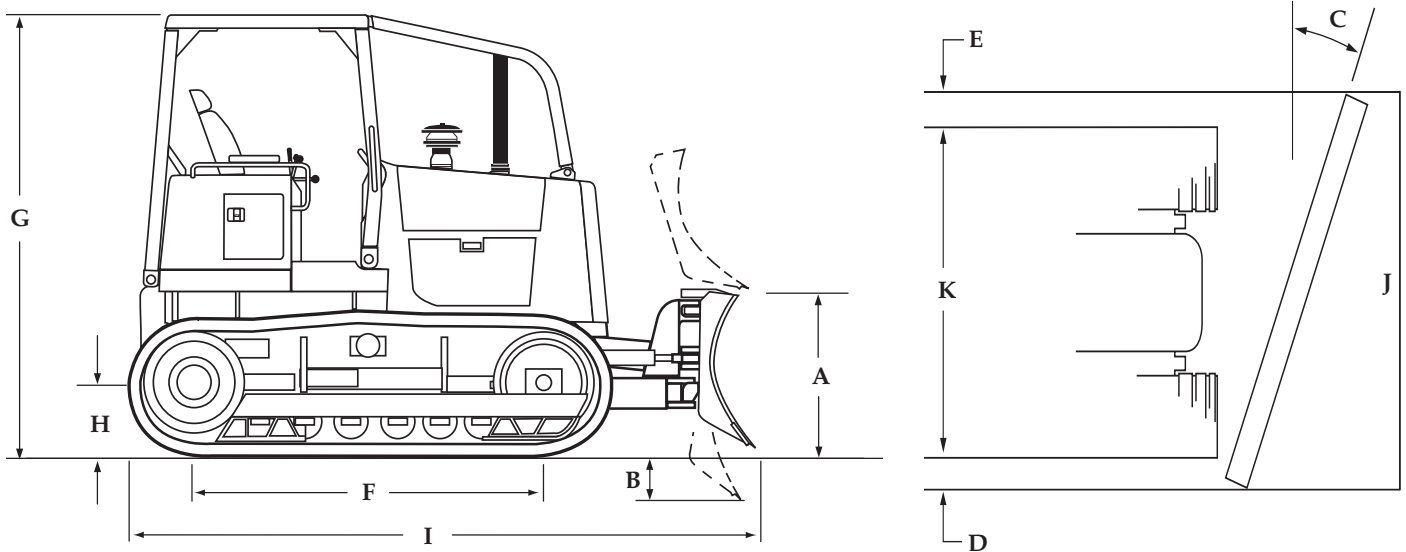
Warning lights:  
Air filter  
Alternator  
Engine oil pressure  
Hi range  
Hydraulic filter  
Transmission filter  
Transmission pressure  
Gauges:  
Battery voltage  
Fuel level  
Hourmeter  
Tachometer  
Transmission oil temperature  
Water temperature  
Audible warnings:  
Engine oil pressure  
Transmission pressure

## **RIPPER**

Max. penetration..... 14" (356 mm)  
Width ..... 72.4" (1839 mm)  
Cut width ..... 70.1" (1780 mm)  
Ground clearance (at carry) ..... 12.3"  
(312 mm)  
Points ..... Replaceable  
Max. number of shanks ..... 5  
Tooth spacing –  
with 5 teeth..... 17.8" (452 mm)  
with 3 teeth..... 34" (864 mm)  
Hydraulic cylinder (double-acting)  
Diameter ..... 3.25" (82.6 mm)  
Stroke ..... 8.4" (213 mm)  
Rod ..... 1.75" (44.5 mm)

## **OPERATING WEIGHTS**

Unit equipped with ROPS, full fuel  
tank, 170 lb (77 kg) operator, draw-  
bar, side shield, track guides, backup  
alarm, horn and lights.  
Long Track ..... 17,519 lb (7945 kg)  
Wide Track ..... 18,700 lb (8482 kg)  
LGP..... 19,209 lb (8712 kg)  
Add-on weights –  
Drawbar..... 95 lb (43 kg)  
Ripper (3 shank)..... 1,400 lb (635 kg)  
Winch ..... 1,111 lb (504 kg)  
Front counterweight ... 877 lb (398 kg)  
Rear counterweight .. 900 lb (408 kg)  
Cab ..... 785 lb (356 kg)  
Air conditioning..... 160 lb (73 kg)  
ROPS heater ..... 70 lb (32 kg)  
CELT chain ..... 119 lb (54 kg)



## DIMENSIONS

	Long Track (LT)	Wide Track (WT)	Low Ground Pressure (LGP)
<b>BLADES</b>			
Blade width	104" (2.64 m)	120" (3.05 m)	124" (3.15 m)
SAE blade capacity	2.2 yd <sup>3</sup> (1.68 m <sup>3</sup> )	2.5 yd <sup>3</sup> (1.91 m <sup>3</sup> )	2.6 yd <sup>3</sup> (2.0 m <sup>3</sup> )
A. Blade lift above ground	36" (914 mm)	36" (914 mm)	36" (914 mm)
B. Blade depth below ground	18" (457 mm)	18" (457 mm)	18" (457 mm)
C. Blade angle both directions	25°	25°	25°
Blade tilt, each end (up to 8.3°)	15" (381 mm)	17.3" (440 mm)	17.9" (455 mm)
Blade height	36" (914 mm)	36" (914 mm)	36" (914 mm)
D. Cast reach	14.7" (373 mm)	13.9" (353 mm)	13.7" (348 mm)
E. Cut reach	1.6" (41 mm)	0.9" (23 mm)	0.7" (18 mm)
<b>TRACKS</b>			
Track gauge	60" (1.5 m)	70" (1.8 m)	70" (1.8 m)
Shoe width	18" (457 mm)	24" (610 mm)	28" (711 mm)
F. Track on ground	88" (2.24 m)	88" (2.24 m)	88" (2.24 m)
Area of track on ground	3157 in <sup>2</sup> (2.04 m <sup>2</sup> )	4210 in <sup>2</sup> (2.72 m <sup>2</sup> )	4911 in <sup>2</sup> (3.17 m <sup>2</sup> )
Ground pressure	5.5 psi (38.1 kPa)	4.5 psi (30.8 kPa)	3.9 psi (26.9 kPa)
<b>DIMENSIONS</b>			
G. Height to top of ROPS	8'11" (2.72 m)	8'11" (2.72 m)	8'11" (2.72 m)
Height to top of cab	9'6" (2.89 m)	9'6" (2.89 m)	9'6" (2.89 m)
with air conditioning	10'0" (3.05 m)	10'0" (3.05 m)	10'0" (3.05 m)
H. Ground clearance w/drawbar	15.9" (404 mm)	15.9" (404 mm)	15.9" (404 mm)
Turning clearance circle, pivot turn	20'0" (6.1 m)	20'0" (6.1 m)	23'0" (7.0 m)
Length –			
I. Blade straight with drawbar	14'0" (4.27 m)	14'0" (4.27 m)	14'0" (4.27 m)
Blade straight with ripper	16'3" (4.95 m)	16'3" (4.95 m)	16'3" (4.95 m)
Width –			
Blade straight	8'8" (2.64 m)	10'0" (3.05 m)	10'4" (3.15 m)
J. Blade angled	8'0" (2.44 m)	9'3" (2.82 m)	9'6" (2.90 m)
K. Over track	78" (1.98 m)	94" (2.39 m)	89" (2.26 m)

# STANDARD EQUIPMENT

## OPERATOR'S COMPARTMENT

ROPS/FOPS canopy  
Vinyl suspension seat w/back adjustment  
Retractable seat belt, 2" (51 mm)  
Adjustable armrests  
Foot rests  
Tool storage area

## ENGINE

Case 6T-590 diesel  
Automatic fan belt tensioner  
Integral engine oil cooling  
Fuel filter  
Dual element radial seal air cleaner  
65 amp alternator  
700 CCA 12-volt battery  
Anti-sandblast radiator  
Engine side panels

## POWERTRAIN

4F/4R modulated Powershift transmission  
Automatic spring-applied parking brake  
Oil-cooled power disc brakes

## BLADE

2 position mechanical pitch adjustment  
Single lever control for blade lift, angle and tilt

## UNDERCARRIAGE

Hydraulic track adjusters  
Case Lubricated Track Chain  
Permanently lubricated track and carrier rollers  
Track adjuster guard  
Track guides (front and rear)

## OTHER

Backup alarm  
Horn  
Anti-vandalism package  
Mirror  
Pre-cleaner  
Lights - 2 front, 2 rear  
Rear transmission guard  
Heavy-duty bottom transmission guard

# OPTIONAL EQUIPMENT

## OPERATOR'S COMPARTMENT

Cab (w/heater, defroster, front windshield washer and lights)  
Air conditioner (cab units only)  
ROPS heater  
3" (76 mm) seat belt  
Deluxe air suspension seat  
Decelerator  
In-line shift pattern  
ROPS headliner

## HYDRAULICS

4 spool hydraulic valve for field-installed ripper

## REAR MOUNTED EQUIPMENT

Ripper, 5 slot with 3 shanks

## BLADES

104" (2.64 m) LT  
104" (2.64 m) WT w/18" (457 mm) shoes  
114" (2.9 m) WT w/24" (610 mm) shoes  
120" (3.05 m) WT w/24" (610 mm) shoes  
124" (3.2 m) LGP w/28" (711 mm) shoes

## GUARDS

Sweeps  
Center rockguard  
Final drive bottom  
Final drive seal

## SCREENS

Rear ROPS and cab  
Side ROPS  
Radiator brush

## OTHER

Counterweight, front  
Counterweight, rear  
Drawbar  
Sprocket, relieved (LT w/ CLT only)  
Special paint  
Dual 12V battery  
Front pull hook  
Fan, reversible  
Case Extended Life Track  
Leg cushion pads  
Cold start aid

# TRACK

## LONG TRACK

18" (457 mm) closed grousers and CLT  
18" (457 mm) open grousers and CELT

## WIDE TRACK

18" (457 mm) closed grousers and CLT  
18" (457 mm) open grousers and CELT  
24" (610 mm) closed grousers and CLT  
24" (610 mm) open grousers and CELT

## LGP

28" (711 mm) closed grousers and CLT  
28" (711 mm) open grousers and CELT

NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

Form No. CE 241-12-99  
Replaces Form No. - None

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