

Long Track Dozer

Case 89 net horsepower (66 kW)

Versatile 1.9 yd³ (1.48 m³) hydraulic angle/tilt blade

Smooth modulated powershift, power turn transmission
with power brakes

Long life, oil-cooled brakes and steering clutches

17,055 to 21,407 lb (7736 to 9710 kg) operating weight

850E



Case

850E

850E Basic Tractor

Engine

Make and model . . . **Case 6-590/6T-590**
Type of fuel No. 2 diesel
No. of cylinders 6
Bore and stroke 4" x 4.72"
(102 mm x 120 mm)
Displacement 359 in³ (5.9 L)
Compression ratio 17.0/17.5:1
Fuel induction Open chamber —
direct injection
Fuel supply Injection pump
Air cleaner Dry type — replaceable
dual elements
Oil filter Full flow, replaceable
spin-on cartridge
Lubrication Positive pressure
Cooling system Pressurized — 15 psi
(103 kPa)

Horsepower
(1) Gross 99 @ 2200 rpm
(74 kW @ 2200 r/min)
(2) SAE Net* 89 @ 2200 rpm
(66 kW @ 2200 r/min)
Max torque ft-lb — Naturally Aspirated
(1) Gross 265 @ 1000 rpm
(369 Nm @ 1000 r/min)
(2) SAE Net 258 @ 1000 rpm
(350 Nm @ 1000 r/min)
Max torque ft-lb — Turbocharged
(1) Gross 255 @ 1300 rpm
(346 Nm @ 1300 r/min)
(2) SAE Net 245 @ 1300 rpm
(332 Nm @ 1300 r/min)

*The net horsepower on the turbo engine will be 79 until June, 1992 production.

(1) Gross engine horsepower or torque at flywheel per SAE Standard J1349
(2) Net engine horsepower or torque at flywheel per SAE Standard J1349

Electrical

System voltage . 24 volt, negative ground
Batteries (2) . . . 650 cold cranking amps
at 0° F (-18° C)
Alternator 45 amp

Steering

Steering controlled by independent hydraulic clutches in transmission or by hydraulic actuated disc brakes. Three types of turns: power turns, gradual turns and brake turns.

Power Train

Transmission: Constant mesh four speed powershift with dual range selector. Four speeds forward, four speeds reverse. Modulation in high/low track speed, forward and reverse.

Torque converter: Single stage hydrokinetic type 2.72:1 ratio

Brakes: Pressurized, oil-cooled, hydraulic disc brakes controlled by suspended foot brake pedals. Center master brake pedal for inching or slowing on slopes without disengaging power. Spring applied, hydraulic release parking brake.

Final Drives: Spur and bull gear type, single reduction. One-piece line-bored case.

Filtration: 7-micron cartridge, inline mounted strainer, 100 mesh screen.

Cooling: Side by side anti-sandblast radiator/oil cooler.

Travel Speeds — mph (km/h)

	1st	2nd	3rd	4th
Forward	2.1 (3.4)	3.3 (5.2)	3.7 (5.9)	5.6 (9.0)
Reverse	2.5 (4.0)	3.5 (5.6)	4.0 (6.4)	6.1 (9.8)

Long Track

Sealed and lubricated track standard. Permanently sealed and lubricated track rollers, carrier rollers, drum-type idlers. Hydraulic track adjusters. Solid disc hunting tooth sprockets.

Track frame Rigid
Track rollers (each side) 6
Carrier rollers (each side) 1
Track gauge 60" (1.52 m)
Length of track on ground 87.7" (2.23 m)
Shoes per track (each side) 38
Track shoe width available 18" (457 mm)
Area track on ground
18" (457 mm) 3157 in² (2.04 m²)
Ground pressure
18" (457 mm) 5.4 psi (37 kPa)
Height of track shoe . . . 2.06" (53.2 mm)

LGP

Sealed and lubricated track standard. Permanently sealed and lubricated track rollers, carrier rollers, drum-type idlers, hydraulic track adjusters, solid disc hunting tooth sprockets.

Track frame Rigid
Track rollers (each side) 6
Carrier rollers (each side) 1
Track gauge 70" (1.52 m)
Length of track on ground 87.7" (2.23 m)
Shoes per track (each side) 38
Track shoe width available 24" (610 mm)
29" (737 mm)

Area track on ground:
24" (610 mm) 4210 in² (2.72 m²)
29" (737 mm) 5087 in² (3.29 m²)

Ground pressure:
24" (610 mm) 4.29 psi (29.6 kPa)
29" (737 mm) 3.63 psi (25.0 kPa)

Height of track shoe:
Single-bar 2.06" (52 mm)
Pyramid (self-cleaning) . 2.87" (73 mm)

Dozer Hydraulic System

Full hydraulic control of moldboard lift, lower, angle and tilt functions with a single lever. Positive-hold "float" position in lift circuit.

Pump: Gear type, direct drive
. 23.9 gpm @ 2200 rpm
(90.7 L/min @ 2200 r/min)

Control valve: Sectional, open center, parallel circuit

System relief pressure 2200 psi
(15 168 kPa)

Cylinders

Lift: (2) . . 3" dia x 29.6" stroke, 1.50" rod
(76 mm dia x 752 mm stroke, 38 mm rod)

Angle: (2) . . 4.5" dia x 8.6" stroke, 2" rod
(114 mm dia x 218 mm stroke, 51 mm rod)

Tilt: (1) 4" dia x 10" stroke, 2" rod
(102 mm dia x 254 mm stroke, 51 mm rod)

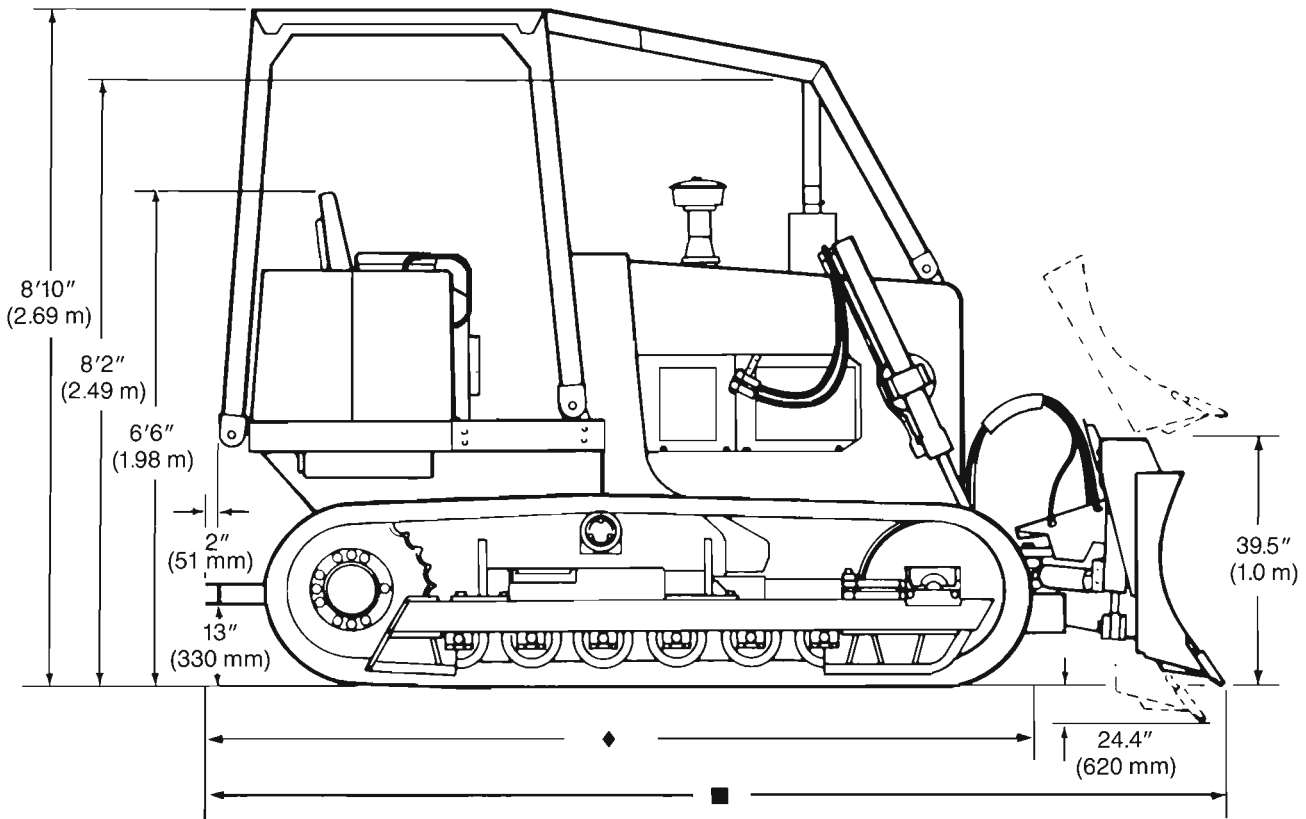
Service Capacities

	U.S. Gal	Liters
Fuel tank	47	177.9
Engine oil with filter	4	15.1
Cooling system	5	18.9
Hydraulic system	12	45.4
Transmission and torque converter	4.5	17.0
Final drive (each side)	7.5 qt.	7.1

Standard Equipment — Long Track and LGP Versions

Back-up alarm • Case sealed and lubricated track • Crankcase guard • Dual element dry air cleaner with service indicator • Engine side shields, lockup kit • Hourmeter • Hydraulic track adjusters • Instrument panel gauges • Key switch • Muffler • Neutral start mechanism • Permanently lubricated track rollers • Radiator guard • ROPS canopy • Seat with adjustable positioning for thigh, lumbar, and back support, with retractable seat belt and adjustable arm rest • Spring applied parking brake • Torque converter • Track guides, front and rear • 45 amp alternator and voltage regulator.

Dimensional Data



Track Type

Long Track

LGP

Dozer Blade

Angle/Tilt

Angle/Tilt

Width	102" (2.59 m)	114" (2.90 m)
Height	36" (914 mm)	36" (914 mm)
Lift above ground	39.5" (1.00 m)	39.5" (1.00 m)
Drop below ground	24.4" (620 mm)	24.4" (620 mm)
Angle, hydraulic — both directions	0° - 25°	0° - 25°
Tilt, hydraulic — either end	16.8" (427 mm)	16.8" (427 mm)
Push beam	Inside	Inside
SAE blade capacity	1.94 yd ³ (1.48 m ³)	2.42 yd ³ (1.85 m ³)

Tractor Dozer Dimensions

■ Overall length

With ripper raised	16'1.9" (4.93 m)	16'1.9" (4.93 m)
With blade straight	13'10.4" (4.23 m)	13'10.4" (4.23 m)
With blade angled	15'6.4" (4.73 m)	15'8.4" (4.79 m)
◆ Less "C" frame and blade	10'7.6" (3.24 m)	10'7.6" (3.24 m)
Maximum grouser width	18" (457 mm)	29" (737 mm)

Overall Width

With blade straight	102" (2.59 m)	114" (2.90 m)
With blade angled	95" (2.41 m)	105" (2.67 m)
At track	78" (1.98 m)	99" (2.51 m)
Turning clearance circle, brake turn	21'7" (6.6 m)	23'2" (7.06 m)
Ground clearance	13" (330 mm)	13" (330 mm)

Operating weight (approx.) 17,055 lb (7736 kg)¹ 18,460 lb (8373 kg)²

¹Includes ROPS, full fuel tank, 170 lb (771 kg) operator, 18" (457 mm) track shoes, drawbar and side shields.

²Includes ROPS, full fuel tank, 170 lb (771 kg) operator, 29" (736 mm) track shoes, drawbar and side shields.

NOTE: Case LGP crawler tractors are designed for use in mud or soft footing. If misapplied by frequent use on hard or rocky ground, decreased undercarriage life or possible component damage can result.

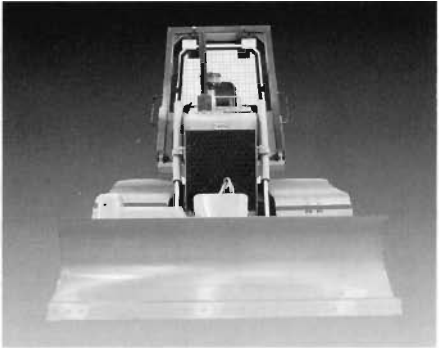
850E Basic Tractor

Optional Equipment

	Approximate add-on weight	
	lb	kg
Blade, end bits —		
heavy duty	14	6.4
Cab	785	356
Cab w/AC	945	429
Counterweight, front	1000	454
Counterweight, ripper	475	215
Hook, front pull	21	9.5
Lights	10	4.5
Log arch	575	261
Muffler, spark arresting	15	6.8
Noise suppression kit	36	16
Normalizing turbocharger	25	11.3
Radiator brush screen	13	5.9
Rock guards	240	108.9
ROPS, rear screen	52	23.6
Side screens	75	34.1
Front sweeps	134	61
Track shoes — each		
inch over 18"	80	36

Ripper

Overall width	72.4" (1.84 m)
Maximum penetration	15" (381 mm)
Ground clearance	
(at carry)	11.3" (287 mm)
Number of shanks	3 std-5 opt
Shank spacing	3-34" (864 mm)
	5-17.8" (452 mm)
Ripper tips	Replaceable
Hydraulic cylinder	
.	3.25" dia x 8.4" stroke, 1.75" rod
(83 mm dia x 214 mm stroke, 44 mm rod)	
Weight	1400 lb (635 kg)



Sold and serviced by:

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

Important
 J I Case Company reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Unit illustrated is equipped with non-standard items.

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