



MODEL 850D

# Angle/Tilt Dozer

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Case 82 net horsepower (61 kW) diesel

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Hydraulic angle/tilt blade to match job conditions

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LGP version offers less than 4.2 psi (28.5 kPa)

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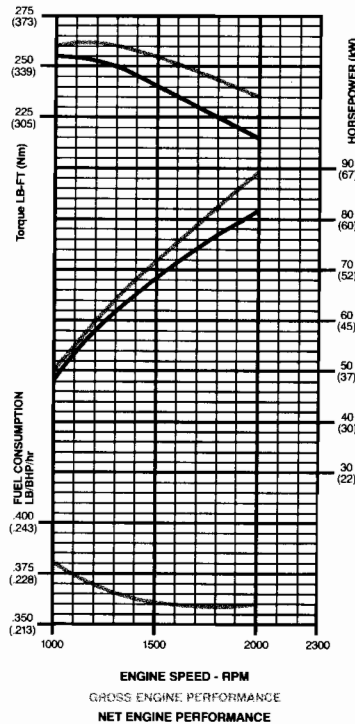


# 850D BASIC TRACTOR

## 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 105 mm)  
 Displacement . . . . . 359 in<sup>3</sup> (5883 cm<sup>3</sup>)  
 Compression ratio . . . . . 17.3/17.5:1  
 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 — Naturally Aspirated**  
 (1) Gross . . . . . 90 @ 2000 rpm  
 (67 kW @ 2000 r/min)  
 (2) SAE Net . . . . . 82 @ 2000 rpm  
 (61 kW @ 2000 r/min)  
**Horsepower — Turbocharged**  
 (1) Gross . . . . . 90 @ 2000 rpm  
 (67 kW @ 2000 r/min)  
 (2) SAE Net . . . . . 82 @ 2000 rpm  
 (61 kW @ 2000 r/min)  
**Max. torque ft-lb — Naturally Aspirated**  
 (1) Gross . . . . . 253 @ 1500 rpm  
 (344 Nm @ 1500 r/min)  
 (2) SAE Net . . . . . 240 @ 1500 rpm  
 (325 Nm @ 1500 r/min)  
**Max. torque ft-lb — Turbocharged**  
 (1) Gross . . . . . 253 @ 1500 rpm  
 (344 Nm @ 1500 r/min)  
 (2) SAE Net . . . . . 244 @ 1500 rpm  
 (325 Nm @ 1500 r/min)  
 (1) Gross engine horsepower or torque at flywheel  
 per SAE Standard J1349  
 (2) Net engine horsepower or torque at flywheel per  
 SAE Standard J1349

## POWER CURVE



## ELECTRICAL

System voltage . . . . 24-volt, negative ground  
 Batteries . . . . . 650 cold cranking amps  
 at 0°F (-18°C)  
 Alternator . . . . . 42 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 range, forward and reverse.

**Torque converter:** Single stage hydrokinetic type 2.92:1 ratio.

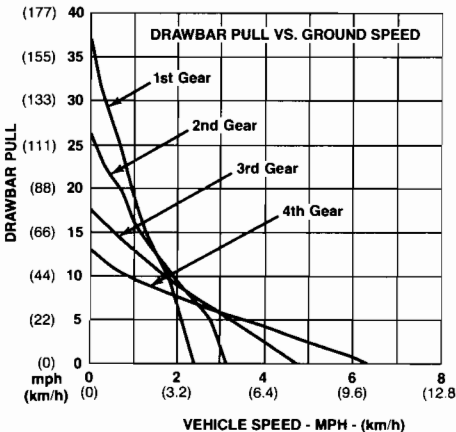
**Brakes:** Oil-cooled, hydraulic actuated disc brakes controlled by suspended foot pedals, hand operated over-center parking brake.

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

**Filtration:** 10 micron, full flow spin-on replaceable element and tank mounted strainer.

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

## TRAVEL SPEEDS



TRAVEL SPEEDS — MPH (km/h)				
	1st	2nd	3rd	4th
<b>Forward</b>	2.3 (3.7)	3.1 (5.0)	4.6 (7.4)	6.3 (10.1)
<b>Reverse</b>	2.5 (4.0)	3.4 (5.5)	5.1 (8.2)	6.9 (11.1)

## UNDERCARRIAGE

Sealed track standard; sealed and lubricated track optional. Permanently sealed and lubricated track rollers, carrier rollers, and drum-type idlers, hydraulic track adjusters, solid disc hunting tooth sprockets.  
 Track frame: . . . . . Rigid  
 Track rollers (each side) . . . . . 5

Carrier rollers (each side) . . . . . 1  
 Track gauge . . . . . 60" (1.52 m)  
 Length of track on ground 78.3" (1.99 m)  
 Shoes per track (each side) . . . . . 38  
 Track shoe width available 16" (406 mm)  
 18" (457 mm)  
 20" (508 mm)

**Area track on ground**  
 16" (406 mm) . . . . . 2506 in<sup>2</sup> (1.62 m<sup>2</sup>)  
 18" (457 mm) . . . . . 2819 in<sup>2</sup> (1.81 m<sup>2</sup>)  
 20" (508 mm) . . . . . 3132 in<sup>2</sup> (2.02 m<sup>2</sup>)  
**Ground pressure**  
 16" (406 mm) . . . . . 6.42 psi (44.3 kPa)  
 18" (457 mm) . . . . . 5.80 psi (40.0 kPa)  
 20" (508 mm) . . . . . 5.25 psi (36.2 kPa)  
 Height of track shoe . . . . . 2.06" (52 mm)

## LGP VERSION

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) . . . . . 5  
 Carrier rollers (each side) . . . . . 1  
 Track gauge . . . . . 70" (1.78 m)  
 Length of track on ground 78.3" (1.99 m)  
 Shoes per track (each side) . . . . . 38  
 Track shoe width available 29" (736 mm)  
 Area track on ground . . . . .  
 29" (736 mm), 4541 in<sup>2</sup> (2.93 m<sup>2</sup>)  
**Ground pressure** . . . . .  
 29" (736 mm), 4.12 psi (28.4 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 and tilt functions. Positive-hold "float" position in lift circuit.

**Pump:** Gear type, torque converter mounted, driven from engine.

Capacity: 31 gpm @ 2000 rpm  
 (117 L/min @ 2000 r/min.)

**Control valve:** Open center, parallel. Three spool sectional valve.

**System relief pressure** . . . . . 2200 psi  
 (15 200 kPa)

**Filtration:** 10 micron full-flow replaceable cartridge.

## CYLINDERS

**Lift:** (2) . . . . 3" dia x 29.6" stroke, 1.75" rod  
 (76.2 mm dia x 752 mm stroke, 44.5 mm rod)

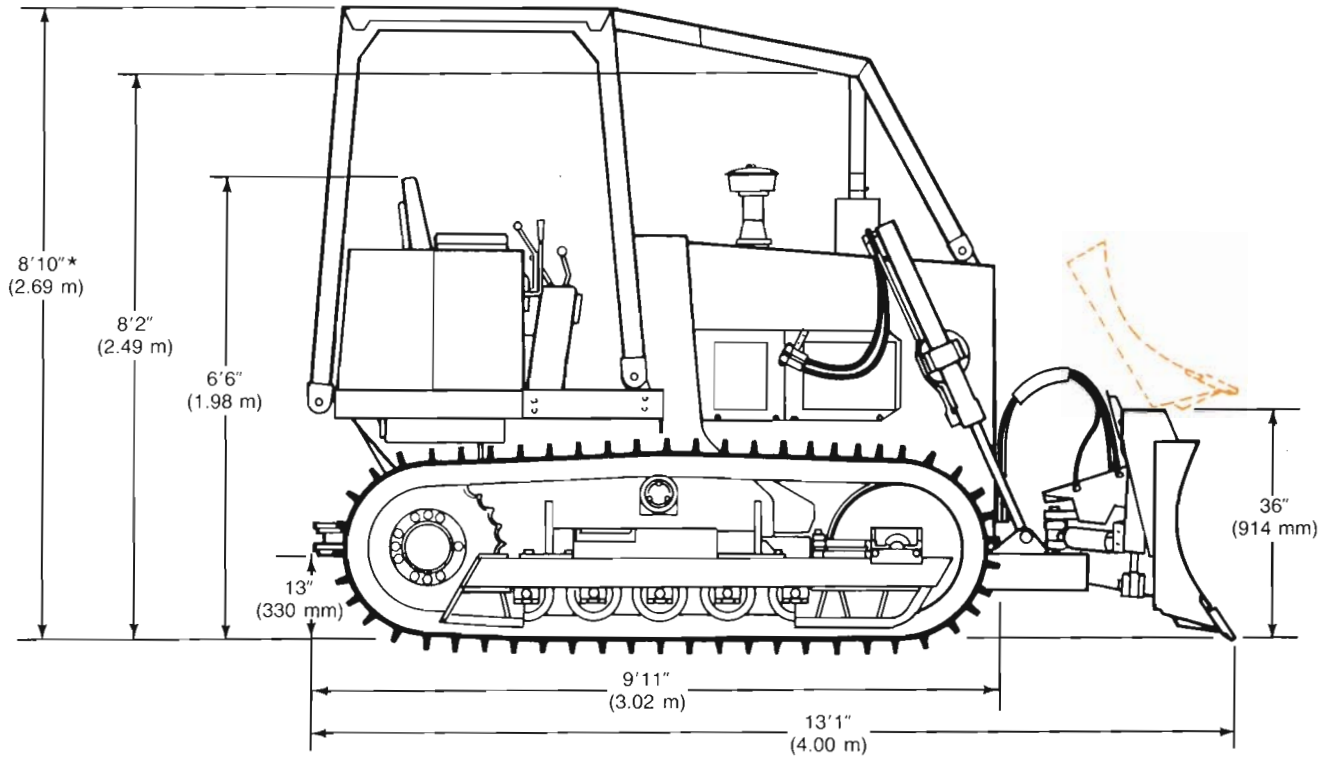
**Angle:** (2) . . . . 4.5" dia x 8.6" stroke, 2" rod  
 (114.3 mm dia x 218.4 mm stroke, 50.8 mm rod)

**Tilt:** (1) . . . . . 4" dia x 10" stroke, 2" rod  
 (102 mm dia x 252 mm stroke, 50.8 mm rod)

## SERVICE CAPACITIES

	U.S. Gals	Litres
Fuel tank . . . . .	40	151.4
Engine oil with filter . . . . .	4	15.2
Cooling system . . . . .	5	18.9
Hydraulic system . . . . .	12	45.5
Transmission and torque converter . . . . .	8	30.3
Final drive (each side) . . . . .	7.5 qt	7.1

# DIMENSIONAL DATA — HYDRAULIC ANGLE/TILT



\*Height w/cab 9'5" (2.87 m)  
 Height w/cab and air conditioning 9'11" (3.02 m)  
 All height dimensions taken from bottom face of shoe

## HYDRAULIC ANGLE/TILT DOZER SPECIFICATIONS

### Dozer Blade

Width ..... 102" (2.59 m)  
 Height ..... 36" (914 mm)  
 Lift above ground ..... 36" (914 mm)  
 Drop below ground ..... 24" (610 mm)  
 Angle, hydraulic —  
   both directions ..... 0°-25°  
 Tilt, hydraulic —  
   either end ..... 15" (381 mm)  
 Pushbeam ..... Inside

### End Bits (Replaceable)

#### Standard Duty

Length ..... 13.5" (343 mm)  
 Width ..... 6" (152 mm)  
 Thickness ..... 0.625" (16 mm)

### Heavy Duty

Length ..... 16" (406 mm)  
 Width ..... 7.6" (194 mm)  
 Thickness ..... 0.625" (16 mm)

### Cutting Edge (Reversible)

Length ..... 75" (1.91 m)  
 Width ..... 6" (152 mm)  
 Thickness ..... 0.625" (16 mm)

### Maximum track shoe allowable

..... 20" (508 mm)

### Tractor Dozer Dimensions

Overall length  
   with ripper raised ..... 15'5" (4.69 m)  
   with winch ..... 14'3" (4.34 m)  
   with blade straight ..... 13'1" (4.00 m)  
   with blade angled ..... 14'9" (4.50 m)  
   less "C" frame  
   and blade ..... 9'11" (3.02 m)

### Overall width

with blade straight ..... 102" (2.59 m)  
 with blade angled ..... 95" (2.41 m)  
 at track with  
   16" (406 mm) shoes ..... 76" (1.93 m)

Turning clearance circle,  
   brake turn ..... 20'10" (6.35 m)  
 Ground clearance ..... 13" (330 mm)

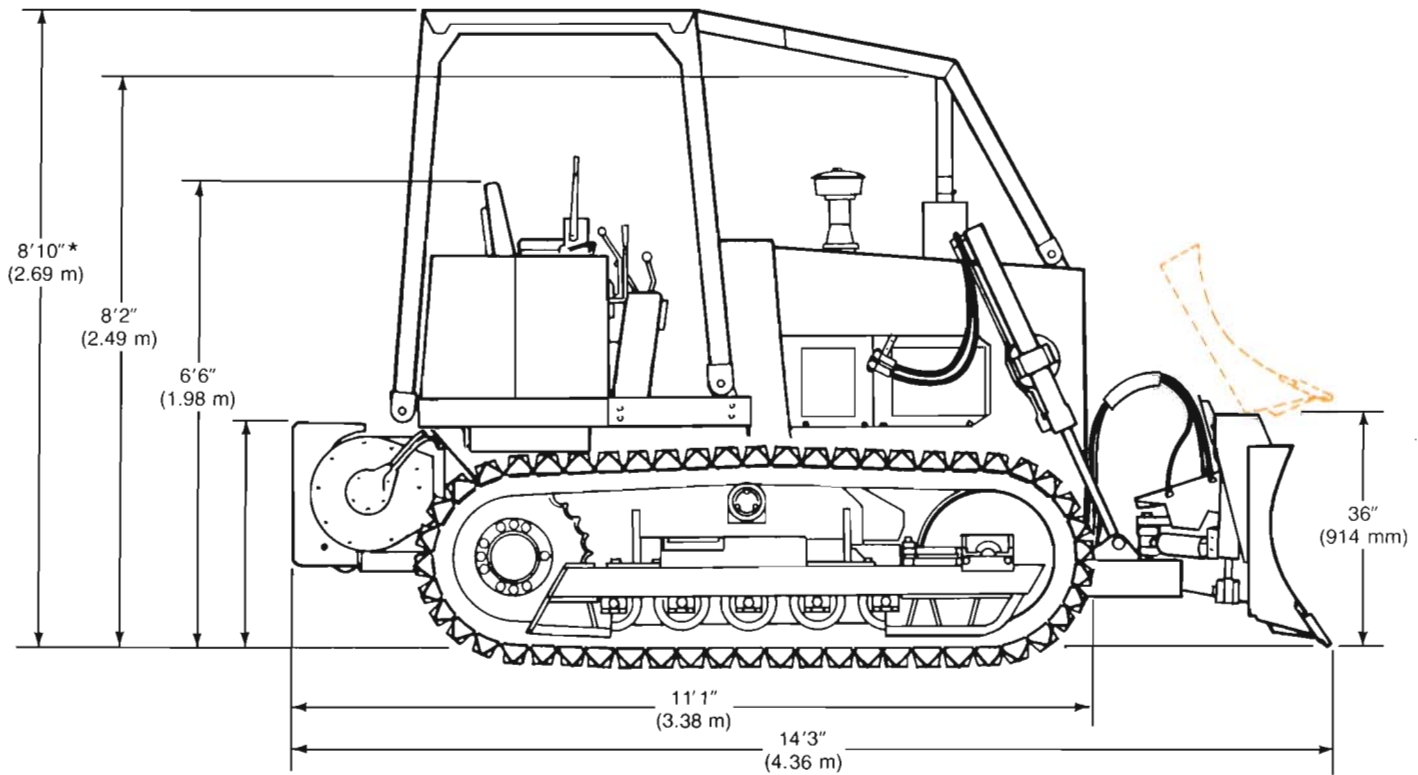
### Operating weight (approx.)\*

..... 16,100 lbs (7 298 kg)

\*Includes ROPS, full tank of fuel, 170 lbs (77 kg) operator, and 16" (406 mm) track shoes.



# DIMENSIONAL DATA — LGP VERSION



\*Height w/cab 9'5" (2.87 m)  
 Height w/cab and air conditioning 9'11" (3.02 m)  
 All height dimensions taken from bottom face of shoe

## LGP — HYDRAULIC ANGLE/TILT DOZER SPECIFICATIONS

### Dozer Blade

Width . . . . . 114" (2.90 m)  
 Height . . . . . 36" (914 mm)  
 Lift above ground . . . . . 36" (914 mm)  
 Drop below ground . . . . . 24" (610 mm)  
 Angle, hydraulic —  
 both directions . . . . . 0°-25°  
 Tilt, hydraulic —  
 either end . . . . . 16.8" (427 mm)  
 Pushbeam . . . . . Inside

### End Bits (Replaceable)

#### Standard Duty

Length . . . . . 13.5" (343 mm)  
 Width . . . . . 6" (152 mm)  
 Thickness . . . . . 0.625" (16 mm)

### Heavy Duty

Length . . . . . 16" (406 mm)  
 Width . . . . . 7.6" (194 mm)  
 Thickness . . . . . 0.625" (16 mm)

### Cutting Edge (Reversible)

Length . . . . . 86.8" (2.21 m)  
 Width . . . . . 6" (152 mm)  
 Thickness . . . . . 0.625" (16 mm)

### Maximum track shoe allowable

. . . . . 29" (736 mm)

### Tractor Dozer Dimensions

Overall length  
 with ripper raised . . . . . 15'5" (4.69 m)  
 with winch . . . . . 14'3" (4.34 m)  
 with blade straight . . . . . 13'1" (4.00 m)  
 with blade angled . . . . . 14'11" (4.55 m)  
 less "C" frame  
 and blade . . . . . 9'11" (3.02 m)

### Overall width

with blade straight . . . . . 114" (2.90 m)  
 with blade angled . . . . . 105" (2.67 m)  
 at track with  
 16" (406 mm) shoes . . . . . 99" (2.52 m)

Turning clearance circle,  
 brake turn . . . . . 21'10" (6.65 m)  
 Ground clearance . . . . . 13" (330 mm)

### Operating weight (approx.)\*

. . . . . 18,700 lbs (8 500 kg)

\*Includes ROPS, full tank of fuel, 170 lbs (77 kg) operator, and 29" (736 mm) track shoes.

**NOTE:** Case High Flotation 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.

# EQUIPMENT DATA

## STANDARD EQUIPMENT

Suspension seat • Crankcase guard • Dual element dry air cleaner with service indicator • Engine side shields, lockup kit • Hourmeter • Hydraulic track adjusters • Instrument panel gauges • Key switch • Lights • Muffler • Neutral safety start mechanism • Over-center parking brake • Permanently lubricated track rollers • Radiator guard • Rear drawbar • ROPS canopy with seat belt • Sealed track • Reversible fan • Torque converter and drive shaft guard • 42-amp alternator and voltage regulator.

## STANDARD EQUIPMENT—LGP Version

Dry two-stage air cleaner with service indicator • Alternator and voltage regulator • Reversible fan • Master disconnect key switch • Neutral safety start mechanism • Suspension seat • Over-center parking brake • Permanently lubricated track rollers • Sealed and lubricated track • Hydraulic track adjusters • Bottom transmission guard • Crankcase guard • Muffler • Hourmeter • Instrument panel gauges • Fuel gauge • ROPS canopy with seat belt • Anti-sandblast radiator/oil cooler • Drawbar • Precleaner • Engine side shields • Lights • Lock-up package.

## OPTIONAL EQUIPMENT

	Approximate add-on weight	
	lbs	kg
Backhoe, 14' (4.2 m) .....	3575	1622
Blade, end bits —		
heavy duty .....	14	6.4
Cab .....	900	408
Counterweight, front .....	1000	454
Counterweight, rear .....	2000	907
Extendahoe <sup>®</sup> , 14'-18' (4.2 m-5.5 m) .....	4070	1846
Front, brush screen .....	13	5.9
Grousers, pyramid .....	137	62
Hook, front pull .....	20	9.7
Muffler, spark arresting .....	15	6.8
Noise suppression kit .....	110	50
Normalizing turbocharger .....	25	11.3
Rock guards .....	440	200
ROPS .....	430	195
Side screens .....	90	40.8
Front sweeps .....	134	61
Track guides, front and rear ..	250	113.4
Winch .....	1111	504
Fairlead 3 roller .....	200	90.7
Fairlead, 4 roller .....	24	11
Log arch .....	575	261



## EASY SERVICEABILITY

Componentized powertrain allows engine, torque converter and transmission to be removed easily and individually. Door and panels provide quick access to components and systems to save service time and money.



## WINCH

Type..... Gearmatic 19  
 Winch drive..... Mechanical  
 Control..... Hydraulic  
 Cable drum capacity  
 0.5" (12.7 mm)..... 362' (110 m)  
 0.625" (16 mm)..... 238' (72.5 m)  
 Drum rotation..... Overwind  
 Drum diameter..... 8.5" (216 mm)  
 Rated line pull..... 31,700 lbs (14 379 kg)  
 Weight..... 1141 lbs (517 kg)

## RIPPER

Overall width..... 57" (1.45 m)  
 Maximum penetration..... 13.5" (343 mm)  
 Ground clearance  
 (at carry)..... 12" (305 mm)  
 Number of shanks..... 3 std — 5 opt  
 Shank spacing..... 3 — 27" (686 mm)  
 5 — 13.6" (345 mm)  
 Ripper tips..... Replaceable  
 Hydraulic cylinder  
 ..... 3.0" dia x 10.5" stroke, 1.5" rod  
 (76 mm dia x 267 mm stroke, 38 mm rod)  
 Weight..... 1305 lbs (592 kg)



## LGP HIGH FLOTATION TRACKS

The 850D LGP dozer has low ground pressure tracks that exert less than 4.2 psi (28.5 kPa). Pyramid grousers available for reduced ground disturbance. Tapered grouser surface provides self-cleaning action.



## FINGERTIP BLADE CONTROL

Operator has full hydraulic control of lift, lower, angle and tilt blade functions to match job conditions ... to make every pass a working pass.



# FEATURES



**Sold and serviced by:**

**NOTE:** All specifications are stated in accordance with ICED Definitions or 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 changes. Unit illustrated is equipped with non-standard items.

**J I Case**

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**Building On Quality™**

