

case

Crawler Dozers

SPECIFICATIONS

850E



Control... from start to finish.

Whether you're out on the job site clearing trees, backfilling trenches, or grading slopes or roads, the 850E offers you the performance you can count on to do the job day in and day out. You depend on your crawler for your livelihood and nothing short of the best will do...the best in ease of control, operator comfort, blade precision, steering versatility, and all-around quality and performance. And that's what you'll get with an E Series Crawler, the best. When you need a quality crawler you can rely on, turn to Case and the 850E.





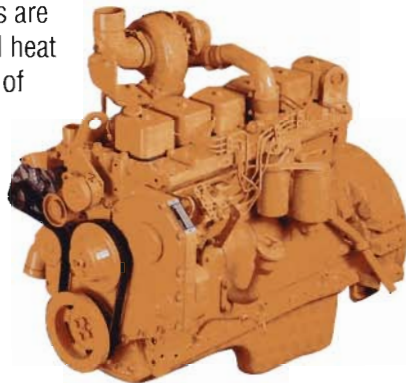
When it comes to backing up product with warranties, nobody does it better than Case. That's because we build quality and performance into everything we make or do. It's our philosophy, our way of doing business.

And the same holds true for product support at any of the hundreds of Case dealerships across the country. Case has one of the best dealer support services in the industry. You're assured of fast, reliable service with genuine Case replacement parts for less downtime and increased productivity. That's our commitment to you.

ENGINE

The productivity and durability required of a crawler loader demands a hard-working engine. The Case 6-590 engine, engineered and built with the tough demands of the construction industry in mind, will take on your biggest jobs.

- Optional turbocharged 6T-590 engine offers increased horsepower and high altitude compensation for outstanding performance in all applications.
- Integral design incorporates external engine components into the block. Advantages are reduced wear and heat build-up because of fewer moving engine parts – less parts to replace – faster maintenance and easier service-ability.
- One-piece cast iron parent metal bore block allows closer tolerances for added durability.
- Integral oil pump for pressurized lubrication with integral oil cooler and under piston oil nozzles provide positive cylinder wall lubrication. Deep sump for positive oil lubrication when operating on slopes.



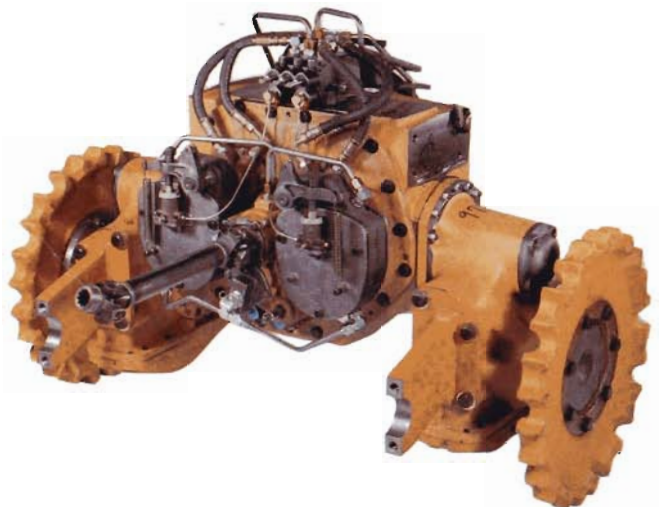
Model	6-590/6T-590
Cylinders	6
Bore/Stroke - in. ...	4.02 X 4.72 (102 X 120 mm)
Displacement - in.³	359 (5.9 L)
Horsepower* (Naturally aspirated)	
Gross	95 (71 kW) @ 2200 rpm
SAE Net	85 (63 kW) @ 2200 rpm
Horsepower* (Turbocharged)	
Gross	99 (74 kW) @ 2200 rpm
SAE Net.....	89 (66 kW) @ 2200 rpm
Maximum torque ft-lb SAE Net*	
Naturally Aspirated	258 (350 Nm) @ 1000 rpm
Turbocharged	267 (362 Nm) @ 1100 rpm

*Engine horsepower and torque at flywheel per SAE J1349, EEC 80/1269, DIN 6271.

TRANSMISSION/ FINAL DRIVES

Probably the smoothest shifting unit on the market, with an excellent range of operating speeds to match job conditions for optimum performance.

- Constant mesh 4F/4R speeds.
- Pressure-sensing modulation provides the smoothest transition when shifting between forward and reverse, even at full throttle in cold weather or low idle.
- Industry standard U-pattern or optional straight-line F/R shift pattern. Adjustable detents let you set the controls to match your requirements.
- Individual track speeds allow you to make turns under power without braking. Oil-cooled steering clutches are pressure-lubricated for durability and effortless shifting.
- Torque converter automatically adjusts working speeds to load conditions to provide the right push power under heavy loads.
- Componentized powertrain makes servicing easier to save time and money.
- Foot-operated high/low range shifter.
- Single reduction spur and bull gear final drives for durable performance.



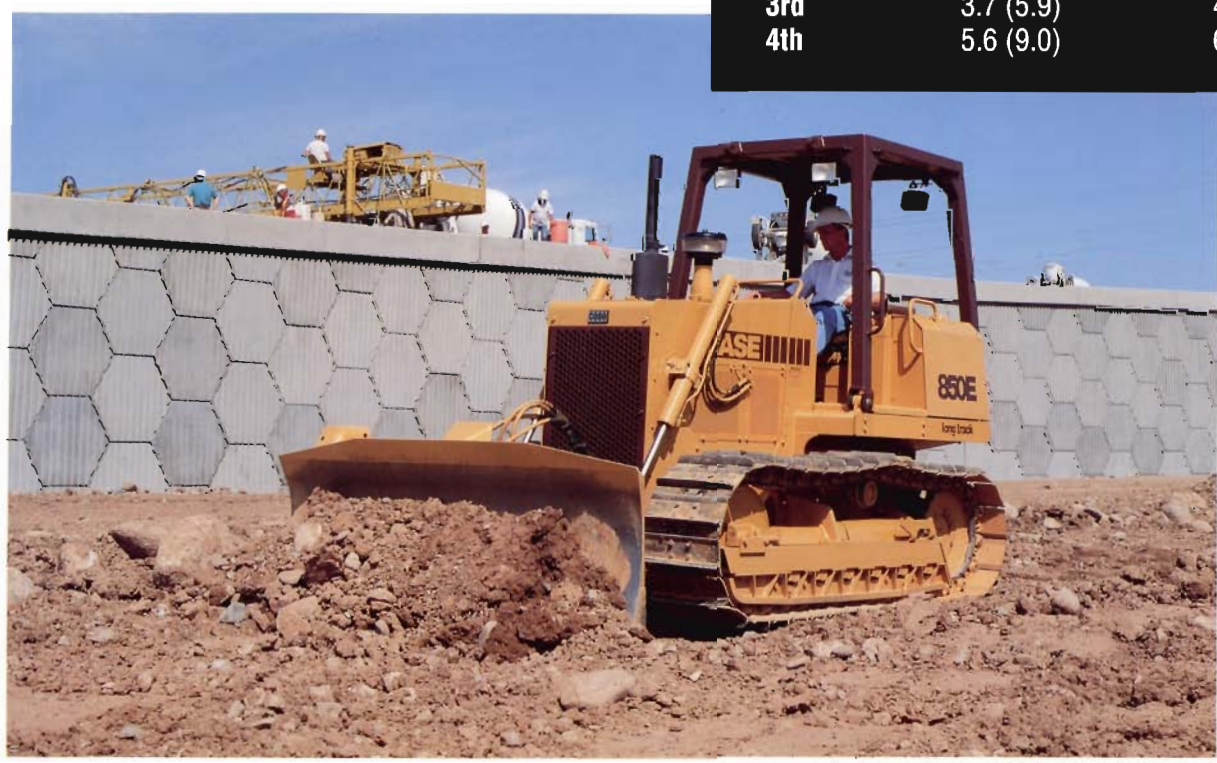
UNDERCARRIAGE

Even the toughest conditions are no match for this undercarriage. A standard sealed and lubricated track with deep-hardened components offers you the maximum durability, while giving you a smooth, stable ride.

- Long Track or Low Ground Pressure versions.
- Permanently sealed and lubricated track rollers, carrier rollers and drum-type idlers to seal out abrasives and maximize life.
- 2.25" diameter deep-hardened track bushings, thick sprocket teeth, as well as deep-hardened rollers and idlers contribute to longer track life.
- Easy access hydraulic track adjuster makes adjustment quick and simple. Detailed instructions affixed to the machine outline correct chain adjustment specifications to ensure maximum component life.
- Track adjuster guard protects components.
- Front and rear track guides ensure proper chain alignment.

Track frame	Rigid
Track rollers (each side)	6
Carrier rollers (each side)	1
Track gauge	
Long Track	60" (1.5 m)
LGP	70" (1.8 m)
Length of track on ground	87.7" (2.2 m)
Shoes per track (each side)	38
Track shoe width	
Long Track	18" (457 mm)
LGP	29" (737 mm)
Area of track on ground	
Long Track	3,157 in. ² (2.04 m ²)
LGP	5,087 in. ² (3.29 m ²)
Ground pressure	
Long Track	5.4 psi (37.2 kPa)
LGP	3.6 psi (25.0 kPa)
Height of track shoe	
Long Track	2.1" (53 mm)
LGP	2.1" (53 mm)

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





BLADE

Whether pushing a full load or doing close work around obstacles, you'll have full control of the load with a Case 6-way blade powered with responsive hydraulics and guided by an easy effort, grip-fit T-handle control.

	850E	850E LGP
Blade Width	102" (2.59 m)	114" (2.90 m)
Blade Capacity	1.94 yd. ³ (1.48 m ³)	2.42 yd. ³ (1.85 m ³)
Blade Height	36" (914.4 mm)	36" (914.4 mm)



HYDRAULICS

The hydraulic system delivers high capacity and pressure for exceptional, metered response and powerful force. The system also features a positive hold "float" position in the lift circuit for added blade versatility.

- Heavy-duty lift cylinders with large diameter cylinder rods provide superior strength as well as high blade lift force.

Pump Front-mounted gear type
Flow 23.9 gpm (90.7 L/min) @ 2200 rpm
Pressure
 (both LT & LGP) 2200 psi (15200 kPa)

CYLINDERS

Cylinders	Bore	Stroke	Rod
Lift (2)	3.0" (76 mm)	29.6" (752 mm)	1.5" (38 mm)
Angle (2)	4.5" (114 mm)	8.6" (218 mm)	2.0" (51 mm)
Tilt (1)	4.0" (102 mm)	9.9" (252 mm)	2.0" (51 mm)

BLADE CONTROL

The versatility of the power/angle/tilt blade delivers precision control, no matter what your working conditions. For efficient, productive performance, choose the 850E Crawler.



OPERATOR ENVIRONMENT

Comfort and control is what crawler productivity is all about, and the 850E hits right on target, from the location and smooth operation of the controls to the adjustable seat and armrests that let you customize the machine to your fit.



- Tapered tank design offers excellent 360° visibility to the sides, the rear, and to the blade.
- Controls are located to the left and right of the operator's seat – leaving a clear path for easy entry and exit.
- Easy-to-use seat belts retract when not in use.
- Out-front instrument panel has color-coded, easy-to-read gauges and warning lights.
 - Gauges and warning lights:
 - Alternator
 - Engine oil pressure
 - Torque converter temperature
 - Transmission oil pressure
 - Engine coolant temperature
 - Transmission filter
 - Air filter
 - Fuel
 - Hourmeter
- Non-skid footrest doubles as an anti-vandalism panel by folding up and locking over instrumentation.

CONTROLS

The power to command the 850E with precision control, and with a minimum of effort, enables you to concentrate on doing a better job. Controls are located within easy reach to the left and right of the operator, and glide with fingertip ease for enhanced operator control.

- Lockable neutral start lever applies the parking brake and locks transmission controls.
- Ignition key switch provides single action start and stop.
- Standard foot throttle accelerator for precision work, and a hand throttle for wide open pushing. Optional decelerator pedal available.
- Customize the forward/reverse pattern by choosing either the standard "U" pattern shifter or optional straight-line shift.
- Foot-operated high/low range shifter.



- Track speed levers shift smoothly for effortless operator-controlled turns.
- Precision blade movements can be made simultaneously in all directions with the grip-fit, T-handle, 6-way blade (power/angle/tilt) control.

BRAKES

Case power wet disc brakes are designed for low effort, precision work. And whether you need to ease around obstructions, or stop mid-slope with a full load, you can rely on the braking power of the 850E.

- Features automatic self-adjustment, forced oil cooling, visual wear indicators, and no master/slave cylinders to service.
- Both right and left brakes can be heel-to-toe operated with a minimum of effort.

- Parking brake is automatically applied when the neutral lock lever is engaged or the engine is stopped.
- Pedals are suspended from the firewall to prevent dirt build-up from affecting operation.
- Center brake pedal activates both brakes evenly against the power of the machine.

STEERING

Maneuvering a crawler has never been easier or more productive since the introduction of the E Series Crawlers. You have the option of turning three different ways with Case Crawlers – PowerTurn, gradual turn, or brake turn. With the track speed control levers and new power disc brakes, you can brake turn in tight spots with incredible ease, or PowerTurn with a full load without downshifting, stalling out, or leaving part of the load behind.

- PowerTurn -
(1 track/high speed, 1 track/low speed)
The crawler maintains power to both tracks and turns in the direction of the slower track. Allows the operator to push a full load through a turn without braking or raising the blade to lighten the load, to maintain complete load control without sacrificing power in the turn.
- Gradual Turn - (1 track engaged, 1 in neutral)
The unit makes a gradual turn with power to only one track and without braking.
- Brake Turn - (both tracks in same speed)
With power to both tracks, the left or right low effort power brake is applied to make a turn.






ELECTRICAL

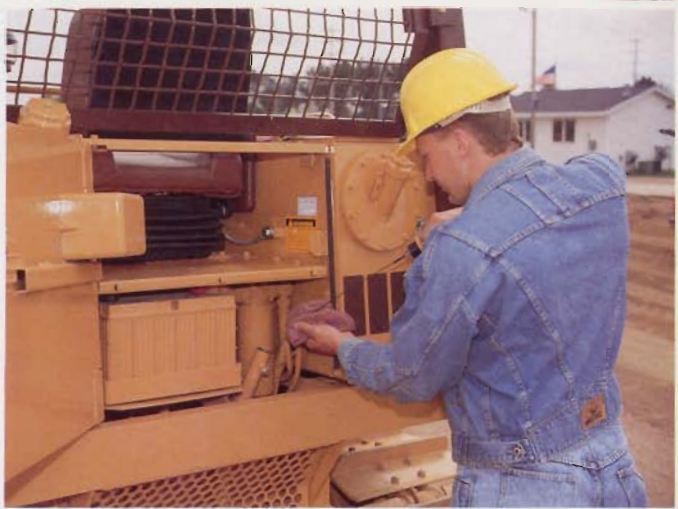
Case heavy-duty electrical components give you the power to start and perform in all weather extremes.

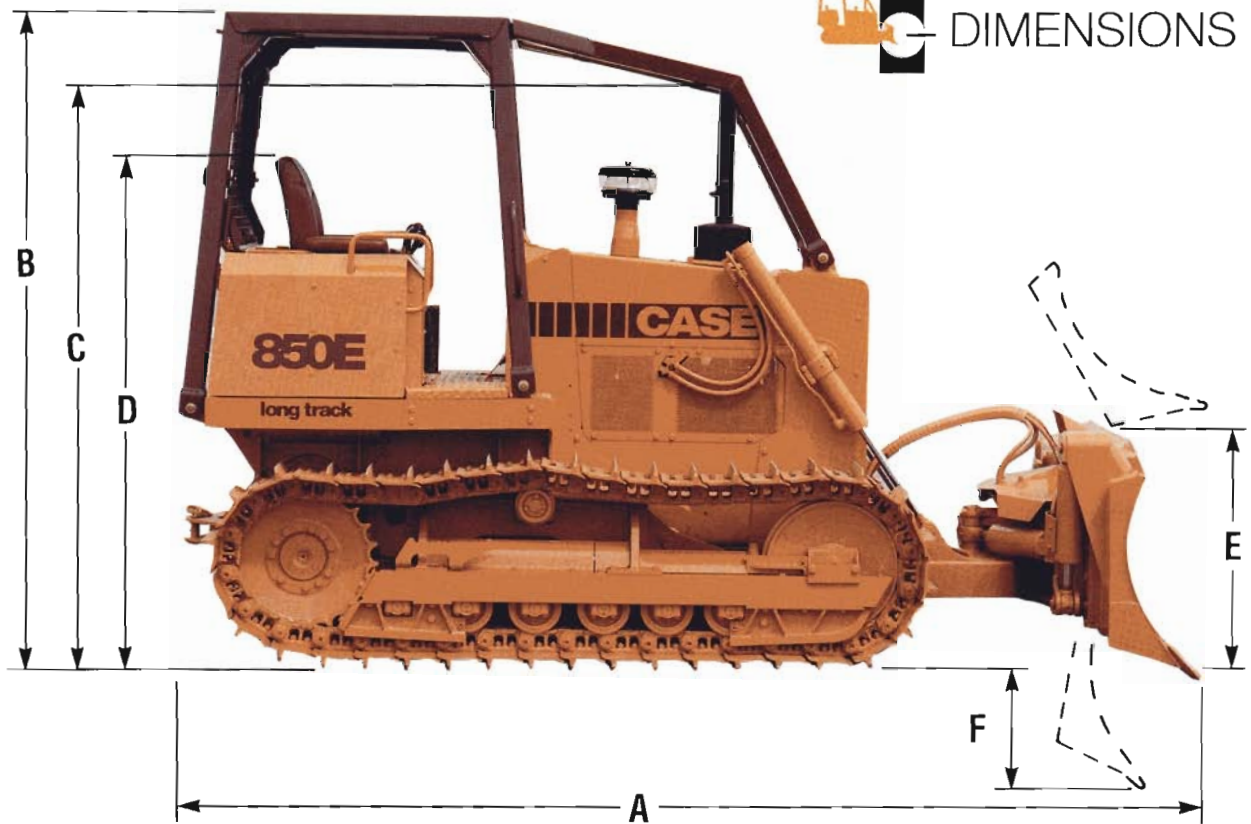
Voltage	24 volt, negative ground
Alternator	45 amp
Battery	650 cold-cranking amps @ 0° F (-18° C) Low maintenance



SERVICE CAPACITIES

	Gallons	Liters
Fuel	47.0	178.1
Hydraulic system	13.6	51.5
Transmission/torque converter	8.0	30.3
Engine oil (w/filter)	4.0	15.2
Final drives (each side)	1.9	7.1
Cooling System	5.0	19.0




DIMENSIONS


	Long Track	LGP
A Length - blade straight	13' 10" (4.23 m)	13' 10" (4.23 m)
Length - blade angled	15' 6" (4.73 m)	15' 8" (4.79 m)
Width - blade straight	102" (2.59 m)	114" (2.90 m)
Width - blade angled	94.8" (2.41 m)	105" (2.67 m)
B Height to top of ROPS	8' 10" (2.69 m)	8' 10" (2.69 m)
C Height to top of exhaust pipe	8' 2" (2.49 m)	8' 2" (2.49 m)
D Height to top of seat - Standard seat	6' 6" (1.98 m)	6' 6" (1.98 m)
Ground clearance	13". (330 mm)	13". (330 mm)
E Blade lift above ground	39.5" (1.0 m)	39.5" (1.0 m)
F Blade depth below ground	24.4" (620 mm)	24.4" (620 mm)
Blade angle both directions	0 - 25°	0 - 25°
Blade tilt, each end (0° to 8.5°)	16.8" (427 mm)	16.8" (427 mm)
Dozer Blade -		
Blade height	36" (914 mm)	36" (914 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 -		
Overall length with ripper raised	16' 2" (4.93 m)	16' 2" (4.93 m)
- less "C" frame and blade	10' 8" (3.24 m)	10' 8" (3.24 m)
Maximum shoe width	18" (457 mm)	29" (737 mm)
Overall width at track with standard shoes	78" (1.98 m)	99" (2.51 m)
Turning clearance circle, pivot turn	21' 7" (6.60 m)	23' 2" (7.06 m)
Operating weight (approx.)	17,055 lb. (7736 kg) ¹	18,460 lb. (8373 kg) ¹

¹Includes ROPS, full fuel tank, 170 lb. (77.1 kg) operator, maximum width track shoes, drawbar, side shields and track guides.

Note: Case High Flotation LGP Crawler Tractors are designed for use in mud or soft footing. If misapplied by frequent use in ground conditions other than those described, decreased undercarriage life or possible component damage can result.

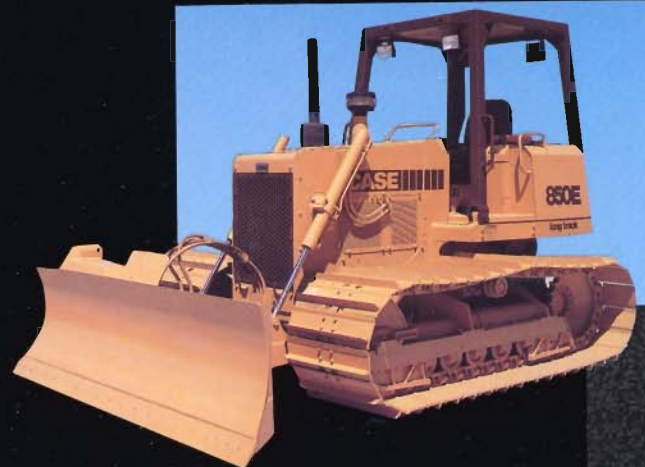
850E EQUIPMENT DATA

Standard Equipment

Accelerator pedal	Inside push beam
Adjustable seat and armrests	Lockable neutral start lever
Anti-sandblast radiator	Master disconnect switch
Auto-engage parking brake	Oil-cooled power disc brakes
Backup alarm	Pre-cleaner
Direct drive gear pump	Pusher fan
Dual stage, dry air cleaner with indicator	Retractable seat belt (2")
Engine side shields	ROPS canopy
Fan - reversible	Sealed and lubricated track components
Float position in lift circuit	Single lever blade control
Footrest	Torque converter drive
Full instrumentation	Track adjuster guard
Fuse circuit protection	Track guides (front and rear)
Guards (crankcase, center drive shaft, trans. bottom, engine side shields, radiator)	Track shoes (18")
Hand throttle	"U" pattern forward/reverse shift control
Heavy-duty blade with hydraulic lift/lower, angle and tilt	Vandal protection lockup package
High/Low range, Forward/Reverse modulation	4F/4R Powershift
Horn	45 amp alternator
Hydraulic track adjuster with guard	

Optional Equipment

	Add on weight		Add on weight
Air conditioning (for cab)	160 lb. (72.6 kg)	Track shoes	
Aux. hydraulic valve (4 spool)	20 lb. (9.1 kg)	24" LGP	480 lb. (217.7 kg)
Brush guard, front (sweeps)	134 lb. (60.8 kg)	29" LGP	880 lb. (399.2 kg)
Cab with heater, & lights	785 lb. (356.4 kg)	29" grousers	1,005 lb. (455.9 kg)
Cab with air conditioning & lights	945 lb. (428.7 kg)	Turbocharged engine	25 lb. (11.4 kg)
Cold start aid (ether)	4 lb. (1.8 kg)	Wear guards for final drive	35 lb. (16. kg)
Counterweight for LT	500 lb. (226.8)		
Counterweight, front-mounted	1,000 lb. (454 kg)	Ripper	
Counterweight for ripper	475 lb. (215.6 kg)	Attachment	1,400 lb. (635.6 kg)
Decelerator	5 lb. (2.3 kg)	Overall width	72.4" (1.8 mm)
Drawbar for LT	30 lb. (13.6 kg)	Maximum penetration	15" (381 mm)
Front pull hook	21 lb. (9.5 kg)	Ground clearance (at carry)	11.3" (287 mm)
Front pull hook & counterweight w/ mounting kit	1,021 lb. (463.1 kg)	Number of shanks	3 std. - 5 opt.
Heavy-duty end bits	14 lb. (6.4 kg)	Shank spacing	3 - 34" (864 mm)
Lights (2 front, 2 rear)	10 lb. (4.5 kg)	Ripper tips	5 - 17.8" (452 mm)
Mirror for ROPS	5 lb. (2.3 kg)	Hydraulic cylinder	Replaceable
Muffler (spark-arresting)	15 lb. (6.8 kg)	Bore	Stroke
Radiator brush screen	13 lb. (3.6 kg)	3.25" (826 mm)	x 8.4" (213 mm)
Rear screen (cab)	52 lb. (23.6 kg)	Rod	x 1.75" (44.5 mm)
Rear view mirror	5 lb. (2.3 kg)		
Rock guards	240 lb. (108.9 kg)		
ROPS headliner	10 lb. (4.5 kg)		
ROPS rear screen	52 lb. (23.6 kg)		
ROPS side screens	75 lb. (34.1 kg)		
Seat belt (3")	1 lb. (.5 kg)		
Spark-arresting muffler	15 lb. (6.8 kg)		
Special paint			
Sprocket cut away (relieved)			
Straight line F/R shifter	5 lb. (2.3 kg)		
Suspension seat	40 lb. (18.2 kg)		





The size, maneuverability and ease of control of the 850E makes it an ideal carrier for a wide range of attachments. With greater machine utilization, you can clear a site, slope a bank or rip tough surface material. Meet today's market demand with the versatility and productivity of a Case 850E using these allied supplied attachments.

Contact your Case dealer regarding the use of the right attachment for your application.

The Case Allied Equipment Manufacturer's Attachment Directory lists a complete selection of allied attachments for crawler applications.

- Angle blades
- Bank slopers
- Blade-mounted rippers
- Cable plow
- Dozer rakes
- Fireline plows
- Land clearing blade
- Land clearing rake
- Log arch
- Rippers
- Rubber track pads
- Stump splitter
- 3 roller fairlead/arches
- 4 roller fairlead/arches
- U-blade
- Winch



Sold and serviced by:

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

IMPORTANT: J I Case reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Unit shown on front cover may be equipped with non-standard equipment.

J I Case
A Tenneco Company



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