

SEM
TRACK TYPE TRACTOR

SEM 818F



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The SEM818F features the brand-new F series design and Weichai WD10 engine, which delivers a gross power of up to 140 kW/190 hp. The machine is equipped with, an electronically controlled hydrostatic transmission system, which enhances productivity and maneuverability. Additionally, a range of track shoe widths from 510 mm to 1,100 mm, along with various blade options including SU, S ,U, Waste Handling and Forest blades, as well as a multi-shank ripper, are available to cater to the diverse needs of our customers.



Proven Performance

- Boost productivity with fully hydrostatic transmission.
- Counter rotations, power turn and infinitely variable speed.
- Larger fuel tank capacity for extending operation hours.
- Better balance and stability with weight distribution with the center gravity optimization.
- Robust and more powerful mechanical controlled engine delivers superior durability and excellent fuel efficiency.

Comfortable operation

- Spacious cab with easy-to-operate controls.
- Stylish design from the new F series.
- Six-way adjustable seat for quick customization according to the operator's preferences.
- Exceptional visibility for enhanced on-site awareness.
- 8" main display with a great view of machine settings and features.

Exceptional Reliability

- World class original pumps and motors.
- Blades with high tensile strength steel and strong box-section design.
- Reinforced structures, analyzed using Finite Element Analysis (FEA) .
- Final drive with double-stage reduction and wet type brake.
- Modular cooling system designed to endure -40°C to +48°C ambient temperatures.



1

Enhanced Reliability

- Dual-path, hydrostatic drive system with electronic control technology from a world-class supplier delivers industry-leading reliability.
- The Weichai mechanical engine with 7% increased power, offers classic durability and dependability.
- Final drive adopts a double-stage reduction combined spur gear and planetary structure for high transmission efficiency to ensure a longer lifespan.
- Machine structures are analyzed using Finite Element Analysis (FEA) and On Machine Stress Analysis (OMSA) to identify and reinforce high-stress areas.
- Equalizer bar and pivot shaft are pinned to the one-piece Track Roller Frame to increase ground clearance, along with three segmentation spring recoil system minimize impacts and prolong the undercarriage's life.
- Wet type multi-disc brake system, delivers exceptional reliability and high braking performance, even under challenging operating conditions.





2

Outstanding Versatility and productivity

- Compared to powershift machines, Caterpillar's proven electronic load-sensing system delivers heightened productivity.
- Achieve seamless operations with functions like infinitely variable speed, counter rotation, and power turn, ensuring improved operational efficiency.
- Implement hydraulic system with pilot control helps adding operator comfort and precise control.
- Modular and single-plane cooling system can endure extreme ambient temperatures ranging from -40°C to +48°C While offering superior fuel efficiency.
- Larger fuel tank with 410 L capacity extends the operation hours to 2-3 working shifts.

3

Enhanced Operating Comfort

- Spacious cabin space and fabric-covered seat offer a welcoming operational environment, delivering exceptional comfort and visibility.
- Single multi-functional joystick ensures precise performance and maneuverability.
- The brand-new F Series showcases a stylish design.
- 8' LCD main display with a great view of machine settings and features is easy to use.
- Exceptional visibility for enhanced on-site awareness.

4

Lower operation cost

- Integrated hydrostatic oil tank and hydraulic oil tank allow for longer maintenance intervals and reduced maintenance costs.
- Electric Pressure Override (EPOR) function prevents high-pressure overflow and reduces heat load.





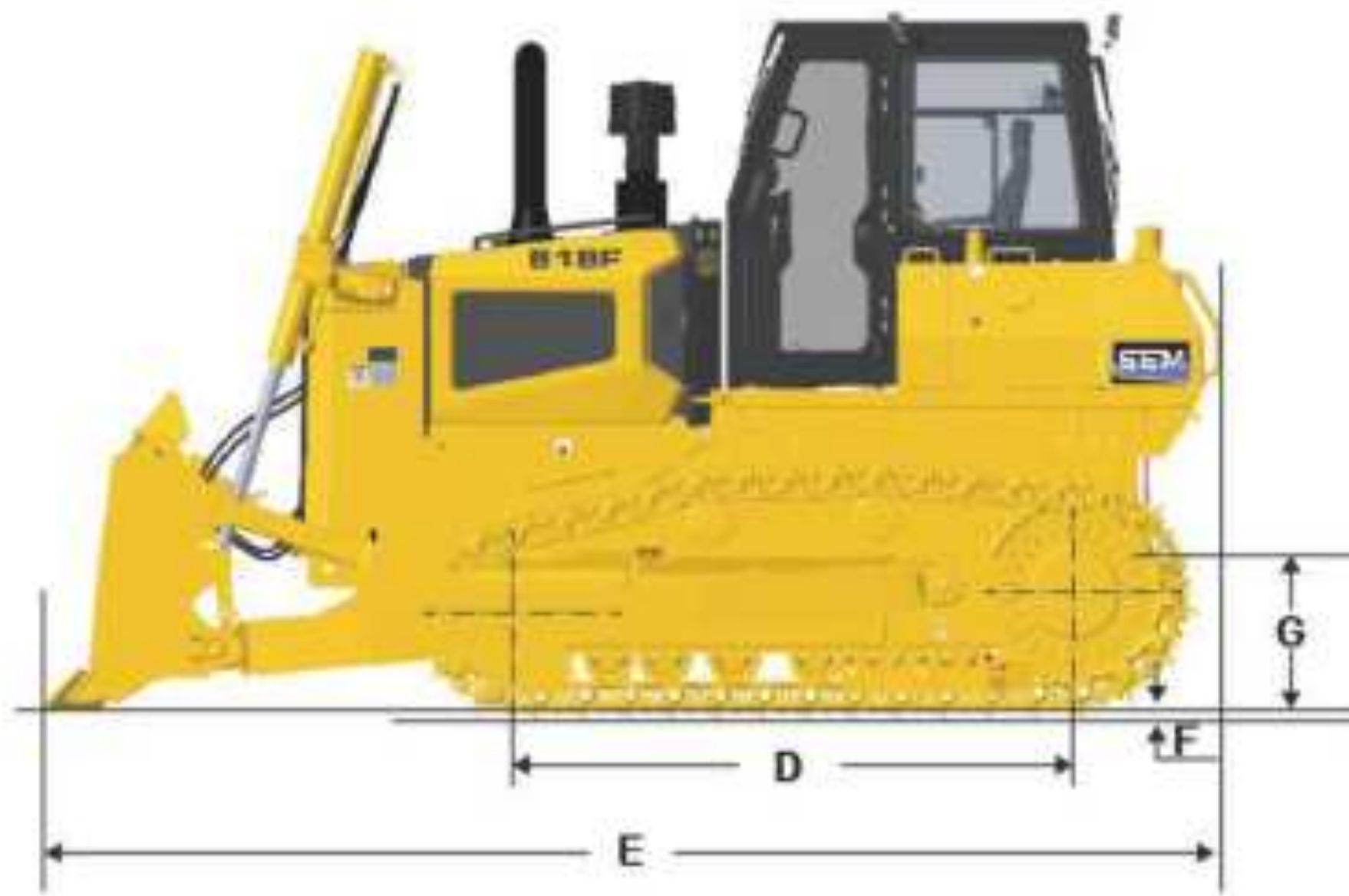
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Leading in class serviceability

- Maintenance-free and lifetime-lubricated idlers and track/carrier rollers provide simplified servicing, providing real value to our customers.
- The Implement Distribution Valve, featuring a pressure testing port, is installed outside of the hydraulic oil tank for easy access to reduce overall maintenance time.
- Standard diagnostic description on the display covering both the engine and hystat system allows for quick troubleshooting.

Major Parameters						
Model	STD	LGP	DS	CH	WH	FR
Operating Weight	16,950 kg	19,355 kg	19,510 kg	17,390 kg	19,750 kg	18,485 kg
Ground Pressure	57 kPa	25 kPa	30 kPa	53 kPa	30 kPa	56 kPa
Ground Clearance	400 mm					
Maximum Slope	30°					
Engine						
Model	WD10G190E214					
Gross Power (ISO 14396)	140 kW/188 hp					
Rated Speed	1,900 r/min					
Powertrain						
Type	Dual-path, closed loop electronically controlled hydrostatic drive system					
Travel Speed-F/R	Infinitely variable speed: Forward 0-8 Km/h, Reverse 0-10 Km/h					
Steering and Brake	Hydrostatic steering; wet, multi-disc brake, Bellville spring actuated and hydraulically released					
Undercarriage						
Track Shoe Width	510 mm	1,100 mm	950 mm	560 mm	950 mm	560 mm
Track Shoe Quantity (Each side)	37	42	42	37	42	37
Track Roller Quantity (Each side)	6	7	7	6	7	6
Carrier Roller Quantity (Each side)	2	2	2	2	2	2
Hydraulic System						
Type	Gear Pump, Pilot control					
Implement hydraulic System Pressure	19 MPa					
Blades						
Blade Type	SU/S	S-LGP	S-LGP	U	S-WH	SU-FR
Blade Capacity (ISO 9246)	4.3/3.5 m^3	3.24 m^3	3.24 m^3	5.6 m^3	8.2 m^3	6 m^3
Blade Width (w/end bit)	3,167/3,460 mm	4,229 mm	4,229 mm	3,480 mm	4,229 mm	3,167 mm
Blade Height	1,240/1,165 mm	1,000 mm	1,000 mm	1,280 mm	1,585 mm	1,605 mm
Max. Blade Lift Ground Clearance	1,005 mm	1,120 mm	1,120 mm	1,005 mm	1,120 mm	1,005 mm
Max. Blade Digging Depth	415 mm	510 mm	510 mm	415 mm	510 mm	415 mm
Blade Tilt Height (middle hole)	487/539 mm	397 mm	397 mm	540 mm	397 mm	487 mm
Blade Weight (w/o push arm)	1,160/1,130 Kg	1,210 kg	1,210 kg	1,484 kg	1,564 kg	1,279 kg
Minimum Turning Radius	3,700 mm	3,860 mm	3,860 mm	3,954 mm	3,860 mm	3,700 mm
Multiple Shank Ripper						
Type	Parallelogram (no pitch adjustment)	/	/	Parallelogram (no pitch adjustment)	/	Parallelogram (no pitch adjustment)
Maximum Penetration (Top hole)	590 mm	/	/	590 mm	/	590 mm
Maximum Clearance Under Tip (Bottom hole)	590 mm	/	/	590 mm	/	590 mm
Weight	1,434 kg	/	/	1,434 kg	/	1,434 kg

Dimension



		STD	LGP	DS	CH	WH	FR
A	Track Gauge	1,880 mm	2,300 mm	2,300 mm	1,880 mm	2,300 mm	1,880 mm
B	Width of Tractor, Trunnions Outside	2,638 mm	3,648 mm	3,648 mm	2,638 mm	3,648 mm	2,638 mm
C	Machine Height, w/o Grouser	3,090 mm	3,076 mm	3,076 mm	3,090 mm	3,076 mm	3,090 mm
	Rops, w/o Grouser	3,087 mm	3,073 mm	3,073 mm	3,087 mm	3,073 mm	3,087 mm
	Alarm, w/o Grouser	3,218 mm	3,204 mm	3,204 mm	3,218 mm	3,204 mm	3,222 mm
	Exhaust Stack, w/o Grouser	2,980 mm	2,966 mm	2,966 mm	2,980 mm	2,966 mm	2,980 mm
D	Length of Track on Ground	2,515 mm	3,025 mm	3,025 mm	2,515 mm	3,025 mm	2,515 mm
E	Length of Basic Tractor, w. Drawbar	4,395 mm	4,380 mm	4,380 mm	4,395 mm	4,380 mm	4,365 mm
	With Following Attachments, add:	N/A	N/A	N/A	N/A	N/A	N/A
	SU Blade	877 mm	N/A	N/A	N/A	N/A	N/A
	LGP S Blade	N/A	1,038 mm	1,038 mm	N/A	N/A	N/A
	U Blade	N/A	N/A	N/A	1,085 mm	N/A	N/A
	WH Blade	N/A	N/A	N/A	N/A	1,038 mm	N/A
	FR SU Blade	N/A	N/A	N/A	N/A	N/A	877 mm
	Single-Shank Ripper	1,400 mm	N/A	N/A	1,400 mm	N/A	1,400 mm
F	Grouser Bar Height	60 mm	100 mm	121 mm	60 mm	121 mm	60 mm
G	Drawbar Height (Pin Center)	555 mm	555 mm	555 mm	555 mm	555 mm	555 mm



The target applications for the 818F is dozing, grading, stockpiling, material spreading and ripping, and the target customer industries had been extended to general & heavy construction, road construction, mining, coal handling, and agriculture.



Standard Equipment

POWERTRAIN

- Engine GP
- Engine Installation
- Cooling Package
- Coupling GP
- Hystat GP

HYDRAULICS

- Valve GP-Implement
- Tilt Cylinder
- Hoses GP
- Lift Cylinder

ELECTRICAL

- Electronic GP
- Product Link
- Colour Display (8 Inch)

OPERATOR ENVIRONMENT

- Cab GP
- Dashboard
- Standard Sealed Cab
- Air Conditioner

FUEL SYSTEMS

- Tank GP-Hyd
- Tank GP-Fuel

GUARDS

- Guard GP-Radiator
- Guard GP-Bottom

OTHER STANDARD EQUIPMENT

- Fender GP
- Enclosure GP
- Left-Right Box GP

Optional Equipment

WEATHER ARRANGEMENT

- Coolant Preheater

FRONT PROTECTIONS

- Sandblast, DS

ELECTRICAL

- Warning Beacon
- Product Link

FIRE SUPPRESSION

- Extinguisher, 2 Set
- Extinguisher, 1 Set

Mandatory Attachment

ENGINE

- Pre-cleaner
- Pre-cleaner, High Position

FINAL DRIVE

- Final Drive, STD
- Final Drive, LGP
- Final Drive, LGP with protection

TRACK ROLLER FRAME

- TRF, STD
- TRF, LGP
- TRF, FR
- TRF, DS

TRACKS

- Track, 510 mm, 37 SG
- Track, 560 mm, 37 SG
- Track, 610 mm, 37 SG
- Track, 810 mm, 42 SG
- Track, 950 mm, 42 APEX SALT
- Track, 1,100 mm, 42 APEX SALT

STARTERS

- Starter, Normal
- Starter, Cold

LIGHTING

- Work Lights, LED, 6
- Work Lights, LED, 6, FR

HYDRAULICS

- Hydraulic, 2 V
- Hydraulic, 3 V

CAB TRIM

- Cab, STD
- Cab, Radio

CAB PLATFORM OPTIONS

- Fender, STD
- Fender, LGP
- Fender, FR

CAB ARRANGEMENT

- Cab, STD
- Cab, FR

ELECTRICAL

- Electrical, STD
- Electrical, FR
- Electrical, EAEU
- Electrical, EAEU, FR

REAR ATTACHMENT

- Drawbar
- Ripper
- Ripper Ready

CASE FRAMES

- Case Frame, STD
- Case Frame, Rops
- Case Frame, FR

BLADES

- Semi-U
- S Type
- U Type
- SU Type, Forest
- Angel Blade
- S Type, LGP
- Waste Handling Blade

PUSH ARMS

- Push Arm, STD
- Push Arm, LGP
- U Frame, Angel Blade

OIL PACKAGE

- Oil PKG, STD
- Oil PKG, Arctic

*Select one from each group. Mandatory and optional equipment may vary. Consult your dealer for specifics.

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