

## ENGINE

Make	FPT
Model	F4HFE613
Emissions Certification	Tier 4 Final
Type	4-stroke, turbocharged and air-to-air cooled
Cylinders	6-cylinder in-line
Bore/Stroke	4.09 x 5.20 in (104 x 132 mm)
Displacement	411 in <sup>3</sup> (6.7 L)
Fuel	#2 Diesel, #1 and #2 mixture permitted for cold temperatures
Fuel injection	Direct injection – electronic
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CP 3.3
Gradeability:	
Side-to-side	35°
Fore and aft	35°
Air filter	2-element dry type w/ warning restriction indicator
Mid-mount cooling module:	Mid-mount air/water
Fan – hydraulic driven:	
Style	8 blade puller
Diameter	32 in (813 mm)
Water pump	Integral
Engine oil pump operating angles ratings:	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow, spin-on cartridge
Engine speeds	RPM
Rated – full load	2000
Horsepower:	
Maximum Power Mode:	
Peak gross @ 1600 RPM	255 hp (190 kW)
Net rated @ 2000 RPM	225 hp (168 kW)
Peak net @ 1600 RPM	241 hp (180 kW)
Standard Power Mode:	
Peak gross @ 1600 RPM	227 hp (169 kW)
Net rated @ 2000 RPM	185 hp (138 kW)
Peak net @ 1600 RPM	213 hp (159 kW)
Economy Power Mode:	
Peak gross @ 1400 RPM	215 hp (160 kW)
Net rated @ 1800 RPM	173 hp (129 kW)
Peak net @ 1400 RPM	207 hp (154 kW)

NOTE: Gross horsepower and torque per SAE J1995.  
Net horsepower and torque per SAE J1349.

## ENGINE (cont.)

Torque – peak:	
Maximum Power Mode:	
Gross @ 1300 RPM	959 lb-ft (1 300 N·m)
Net @ 1300 RPM	930 lb-ft (1 261 N·m)
Standard Power Mode:	
Gross @ 1300 RPM	828 lb-ft (1 123 N·m)
Net @ 1300 RPM	799 lb-ft (1 084 N·m)
Economy Power Mode:	
Gross @ 1300 RPM	828 lb-ft (1 123 N·m)
Net @ 1300 RPM	799 lb-ft (1 084 N·m)

Torque rise:	
Maximum power range	49%

NOTE: Gross horsepower and torque per SAE J1995.  
Net horsepower and torque per SAE J1349.

## DRIVETRAIN

Transmission:	
4F/3R Proportional w/ Electronic Control Module torque sensing autoshift/manual shift and modulation	
Gears	Helical cut
Torque converter:	
Stall ratio – 4-speed	2.28:1
Stall ratio – 5-speed	2.35:1
Differential	
Open differentials on front and rear axles	
Rear axle oscillation	24° total
Front and rear axles:	
Differential ratio	4.11
Planetary ratio	6.00
Final axle ratio	24.67

Heavy-duty axles – optional:	
Front axle equipped w/ locking differential	
Rear axle equipped w/ open differential	
Planetaries	Outboard

Service brakes:	
Hydraulically actuated, maintenance-free, multiple wet disc w/ accumulator to all four wheels	
Brake surface area:	
Front hub	840 in <sup>2</sup> (0.542 m <sup>2</sup> )
Rear hub	721 in <sup>2</sup> (0.465 m <sup>2</sup> )

Parking brakes:	
Spring-applied hydraulic release disc on transmission output shaft neutralizes power flow to wheels when engaged	

Travel speeds – 4-speed transmission:		
	Forward	Reverse
	mph (kph)	mph (kph)
1st	4.0 (6.4)	4.2 (6.8)
2nd	7.5 (12.0)	7.8 (12.6)
3rd	14.3 (23.1)	15.0 (24.2)
4th	22.4 (36.0)	–

NOTE: Travel speeds at full engine throttle w/ 23.5 x 25 L3 tires.

## DRIVETRAIN (cont.)

Travel speeds – 5-speed transmission:		
	Forward	Reverse
	mph (kph)	mph (kph)
1st	4.0 (6.4)	4.2 (6.8)
2nd	6.9 (11.1)	7.3 (11.7)
3rd	10.6 (17.0)	17.2 (27.7)
4th	16.3 (26.3)	–
5th	24.8 (40.0)	–

NOTE: Travel speeds at full engine throttle w/ 23.5 x 25 L3 tires.

## ELECTRICAL

Voltage	24 Volts, negative ground
Alternator	120 amp
Batteries (2)	12-volt

## OPERATOR ENVIRONMENT

ROPS/FOPS Cab w/ heat and AC; Key start; Articulated power steering w/ tilt column; Fully adjustable suspension seat; Foot throttle; 1-Lever loader control w/ wrist rest; Cup holder; Coat hook; 1 Interior rearview mirror; 2 in (51 mm) retractable seat belt; Storage tray behind seat; Lunch box compartment; Single brake pedal; F-N-R shuttle switch; Glove box; Pressurized air filtering; Anti-glare window strip; Defroster; Side window partial/fully open; Dome light; Wipers, rear and intermittent front; Windshield washers, front and rear; Rubber floor mat; Horn.

### Displays/Gauges:

#### Analogue:

Transmission oil temperature; Hydraulic oil temperature; Fuel level; Engine coolant temperature.

#### LCD screen:

Hour meter, Engine speed, Travel speed, Time, Automatic transmission indication; Current gear selection; FNR indication; DeClutch indication; Engine mode indication; Trip computer; Fuel consumption; Multiple languages, Metric/English; Engine diagnostics; Transmission diagnostics; Warning prompts; Error reporting; DEF gauge; Diff. lock\*.

### Audible/ Visual alarms:

#### Warning lights:

Four-way flashers and turn signals; Brake pressure; Lamp/high beam indication; Grid heater\*.

NOTE: \*If equipped w/ option.

## OPERATOR ENVIRONMENT (cont.)

### Audible/Visual alarms:

#### Caution alarm:

Parking brake; Coolant temperature; Hydraulic oil temperature; Transmission oil temperature; Air filter; Transmission filter; Hydraulic filter; Alternator; Low fuel.

#### Critical alarm:

Engine oil pressure; Brake pressure; Steering pressure – w/ aux. steering\*; Coolant temperature; Hydraulic oil temperature; Transmission oil temperature.

#### Backup alarm

NOTE: \*If equipped w/ option.

## OPERATING WEIGHT

### Z-Bar

Unit equipped w/ 23.5R25 Michelin XHA2; ROPS cab w/ heater and AC; Heavy-duty counterweight – 6,435 lb (2 919 kg); Heavy-duty batteries; Front and rear fenders; Lights; Full fuel; Full urea; 175 lb (79 kg) operator; 4.75 yd<sup>3</sup> (3.6 m<sup>3</sup>) GP pin on w/ bolt on edge:

43,777 lb (19 857 kg)

### XR

Unit equipped w/ 23.5R25 Michelin XHA2; ROPS cab w/ heater and AC; Heavy-duty counterweight – 6,435 lb (2 919 kg); Heavy-duty batteries; Front and rear fenders; Lights; Full fuel; Full urea; 175 lb (79 kg) operator; 4.75 yd<sup>3</sup> (3.6 m<sup>3</sup>) GP pin on w/ bolt on edge:

44,090 lb (19 999 kg)

## HYDRAULICS

### Pump – steering/implement:

Closed center pressure/flow compensated

### Variable displacement – load sensing:

42.8 gpm @ 2000 RPM  
(162 L/min @ 2000 RPM)

### Loader control valve:

Closed-center, sectional 2, 3 or 4-function w/ pilot control for lift, tilt and auxiliary hydraulics, electromagnetic detents in float, raise and rollback

### Loader auxiliary steering:

Hydraulic orbital center-pivot articulating w/ on-demand oil flow

### High pressure standby:

Implement 3,625 psi (25 000 kPa)  
Steering 3,499 psi (24 132 kPa)

### Filtration:

Filtered vent w/ relief on hydraulic reservoir, maintains 3-5 psi on reservoir. 10-micron, returns filter furnishes only clean oil to all components of the system

## SERVICE CAPACITIES

Fuel tank 76.1 gal (288.0 L)

### DEF tank – Diesel Exhaust Fluid:

Usable 9.8 gal (37.1 L)  
Total 15.6 gal (58.9 L)

### Hydraulic system:

Reservoir 29.1 gal (110.0 L)  
Total 52.8 gal (200.0 L)

### Transmission:

Service w/ filter 9.0 gal (34.1 L)

### Front and rear axle:

Front axle 11.1 gal (42.0 L)  
Rear axle 10.6 gal (40.0 L)

Engine oil w/ filter 4.0 gal (15.1 L)

Cooling system 7.9 gal (30.0 L)

## OTHER SPECIFICATIONS

### Lift cylinder:

Bore diameter 6.0 in (152 mm)  
Rod diameter 3.5 in (89 mm)  
Stroke 33.3 in (846 mm)

### Dump cylinder:

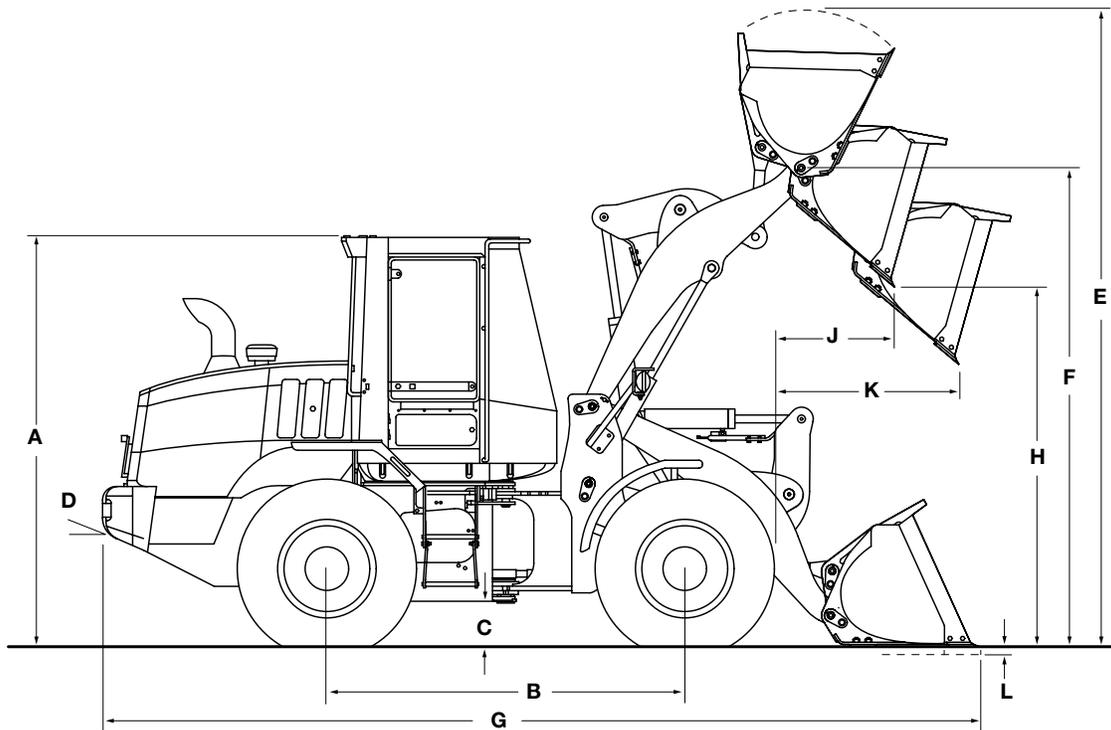
Bore diameter 7.0 in (178 mm)  
Rod diameter 4.0 in (102 mm)  
Stroke 23.6 in (600 mm)

### Loader:

Z-Bar loader linkage; Single control for lift and tilt; Positive hold float; Automatic return-to-dig; Automatic height control; Automatic return-to-travel; Brake pedal transmission disconnect; Bucket position indicator on bucket.

### Cycle time:

Raise w/ rated bucket load 6.2 sec  
Dump w/ rated bucket load 1.4 sec  
Power down 3.8 sec  
Float down 3.1 sec



Line drawings are for illustrative purpose only and may not be exact representation of unit.

## DIMENSIONS

<b>A.</b> Height to top of ROPS cab	135.8 in (3 450 mm)
Height to drawbar	42.2 in (1 071 mm)
<b>B.</b> Wheelbase	131.5 in (3 340 mm)
<b>C.</b> Ground clearance	16.4 in (416 mm)
<b>D.</b> Angle of departure	30°
Width:	
Overall* without bucket	113.6 in (2 885 mm)
Centerline tread	87.8 in (2 230 mm)
Turning radius* – outside	237.5 in (6 032 mm)
Turning angle:	
From center	40°
Total angle	80°
Rear axle oscillation, total	24°

NOTE: \*Dimensions taken with 23.5R25 Michelin XHA2 tires. Additional dimensions on pages 4 and 5.

## WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
Base counterweight	-1,365 lb (-619 kg)	-3,142 lb (-1 425 kg)	-2,652 lb (-1 203 kg)
L2BIAS tires	-948 lb (-430 kg)	-725 lb (-329 kg)	-642 lb (-291 kg)
L3BIAS tires	-313 lb (-142 kg)	-240 lb (-109 kg)	-212 lb (-96 kg)
ROPS Canopy	-295 lb (-134 kg)	-256 lb (-116 kg)	-249 lb (-113 kg)

NOTE: Unit equipped with Z-Bar loader arms, 4.75 yd<sup>3</sup> (3.6 m<sup>3</sup>) pin on bucket with bolt-on edge, 23.5R25 Michelin XHA2 tires, ROPS cab with heater and air conditioner, full counterweight, heavy-duty batteries, front and rear fenders, full fuel and 175 lb (79 kg) operator. Adjust select options from rated weight.

## PERFORMANCE DATA

<b>921F Z-Bar*</b>	<b>4.0 yd<sup>3</sup> GP Pin On (3.1 m<sup>3</sup>) Bucket with Bolt-on Edge</b>	<b>4.0 yd<sup>3</sup> GP Pin On (3.1 m<sup>3</sup>) Bucket with Teeth Only</b>	<b>4.75 yd<sup>3</sup> GP Pin On (3.6 m<sup>3</sup>) Bucket with Bolt-on Edge</b>
<b>E.</b> Operating height – fully raised with spillguard	213.8 in (5 430 mm)	213.8 in (5 430 mm)	219.8 in (5 583 mm)
<b>F.</b> Hinge pin height – fully raised	162.1 in (4 118 mm)	162.1 in (4 118 mm)	162.1 in (4 118 mm)
<b>G.</b> Overall length – bucket level on ground	308.4 in (7 833 mm)	313.9 in (7 973 mm)	314.0 in (7 976 mm)
Dump angle – fully raised	55°	55°	55°
<b>H.</b> Dump height – fully raised, 45° dump	118.0 in (2 998 mm)	114.5 in (2 908 mm)	114.4 in (2 906 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	42.7 in (1 084 mm)	46.9 in (1 192 mm)	47.0 in (1 194 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	66.4 in (1 687 mm)	68.9 in (1 751 mm)	69.0 in (1 752 mm)
<b>L.</b> Dig depth – edge below ground	3.1 in (80 mm)	3.1 in (80 mm)	3.1 in (80 mm)
Operating load – ISO	16,001 lb (7 258 kg)	16,252 lb (7 372 kg)	15,704 lb (7 123 kg)
Operating load – SAE	14,687 lb (6 662 kg)	14,916 lb (6 766 kg)	14,379 lb (6 522 kg)
Maximum material density – ISO	4,001 lb/yd <sup>3</sup> (2 374 kg/m <sup>3</sup> )	4,241 lb/yd <sup>3</sup> (2 516 kg/m <sup>3</sup> )	3,307 lb/yd <sup>3</sup> (1 962 kg/m <sup>3</sup> )
Maximum material density – SAE	3,673 lb/yd <sup>3</sup> (2 179 kg/m <sup>3</sup> )	3,892 lb/yd <sup>3</sup> (2 309 kg/m <sup>3</sup> )	3,027 lb/yd <sup>3</sup> (1 796 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	37,190 lb (16 869 kg)	37,739 lb (17 118 kg)	36,550 lb (16 579 kg)
40° turn	32,004 lb (14 517 kg)	32,503 lb (14 743 kg)	31,405 lb (14 245 kg)
Tipping load – SAE:			
Straight	35,159 lb (15 948 kg)	35,675 lb (16 182 kg)	34,505 lb (15 651 kg)
40° turn	29,372 lb (13 323 kg)	29,831 lb (13 531 kg)	28,757 lb (13 044 kg)
Lift capacity:			
Full height	26,963 lb (12 230 kg)	27,132 lb (12 307 kg)	26,638 lb (12 083 kg)
Maximum reach	36,345 lb (16 486 kg)	36,537 lb (16 573 kg)	35,995 lb (16 327 kg)
Ground	48,235 lb (21 879 kg)	48,610 lb (22 049 kg)	46,623 lb (21 148 kg)
Breakout force with tilt cylinder	42,128 lb (19 109 kg)	45,356 lb (20 573 kg)	37,553 lb (17 034 kg)
Loader clearance circle with bucket	522.2 in (13 264 mm)	525.4 in (13 344 mm)	525.4 in (13 345 mm)

<b>921F XR</b>	<b>4.0 yd<sup>3</sup> GP Pin On (3.1 m<sup>3</sup>) Bucket with Bolt-on Edge</b>	<b>4.0 yd<sup>3</sup> GP Pin On (3.1 m<sup>3</sup>) Bucket with Teeth Only</b>	<b>4.75 yd<sup>3</sup> GP Pin On (3.6 m<sup>3</sup>) Bucket with Bolt-on Edge</b>
<b>E.</b> Operating height – fully raised with spillguard	231.2 in (5 872 mm)	231.2 in (5 872 mm)	237.2 in (6 025 mm)
<b>F.</b> Hinge pin height – fully raised	179.5 in (4 560 mm)	179.5 in (4 560 mm)	179.5 in (4 559 mm)
<b>G.</b> Overall length – bucket level on ground	327.5 in (8 318 mm)	333.0 in (8 458 mm)	333.1 in (8 461 mm)
Dump angle – fully raised	49°	49°	49°
<b>H.</b> Dump height – fully raised, 45° dump	135.4 in (3 439 mm)	131.9 in (3 350 mm)	131.8 in (3 347 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	47.1 in (1 197 mm)	51.3 in (1 304 mm)	51.5 in (1 307 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	83.5 in (2 122 mm)	86.3 in (2 193 mm)	86.4 in (2 194 mm)
<b>L.</b> Dig depth – edge below ground	5.7 in (146 mm)	5.7 in (146 mm)	5.7 in (146 mm)
Operating load – ISO	12,718 lb (5 769 kg)	12,917 lb (5 859 kg)	12,454 lb (5 649 kg)
Operating load – SAE	11,828 lb (5 365 kg)	12,013 lb (5 449 kg)	11,559 lb (5 243 kg)
Maximum material density – ISO	3,181 lb/yd <sup>3</sup> (1 887 kg/m <sup>3</sup> )	3,371 lb/yd <sup>3</sup> (2 000 kg/m <sup>3</sup> )	2,623 lb/yd <sup>3</sup> (1 556 kg/m <sup>3</sup> )
Maximum material density – SAE	2,956 lb/yd <sup>3</sup> (1 754 kg/m <sup>3</sup> )	3,135 lb/yd <sup>3</sup> (1 860 kg/m <sup>3</sup> )	2,434 lb/yd <sup>3</sup> (1 444 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	29,789 lb (13 512 kg)	30,219 lb (13 707 kg)	29,229 lb (13 258 kg)
40° turn	25,437 lb (11 538 kg)	25,832 lb (11 717 kg)	24,908 lb (11 298 kg)
Tipping load – SAE:			
Straight	28,444 lb (12 902 kg)	28,856 lb (13 089 kg)	27,877 lb (12 645 kg)
40° turn	23,653 lb (10 729 kg)	24,026 lb (10 898 kg)	23,120 lb (10 487 kg)
Lift capacity:			
Full height	24,970 lb (11 326 kg)	25,139 lb (11 403 kg)	24,650 lb (11 181 kg)
Maximum reach	31,497 lb (14 287 kg)	31,698 lb (14 378 kg)	31,136 lb (14 123 kg)
Ground	37,117 lb (16 836 kg)	37,476 lb (16 999 kg)	36,436 lb (16 527 kg)
Breakout force with tilt cylinder	42,840 lb (19 432 kg)	46,118 lb (20 919 kg)	38,193 lb (17 324 kg)
Loader clearance circle with bucket	541.6 in (13 756 mm)	545.4 in (13 852 mm)	545.4 in (13 854 mm)

<b>921F</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>	<b>Z-Bar/XR</b>
Maximum rollback:			
Ground	42°/37°	42°/37°	42°/37°
Carry position	44°/43°	44°/43°	44°/43°
@ Maximum reach	54°/53°	54°/53°	54°/53°
@ Full height	59°/60°	59°/60°	59°/60°
Maximum grading angle with bucket – back dragging	60°/63°	61°/64°	61°/64°
SAE bucket capacity – struck	3.4 yd <sup>3</sup> (2.61 m <sup>3</sup> )	3.3 yd <sup>3</sup> (2.49 m <sup>3</sup> )	4.1 yd <sup>3</sup> (3.12 m <sup>3</sup> )
Heaped	4.0 yd <sup>3</sup> (3.06 m <sup>3</sup> )	3.8 yd <sup>3</sup> (2.93 m <sup>3</sup> )	4.7 yd <sup>3</sup> (3.63 m <sup>3</sup> )
Bucket width – outside	119.3 in (3 030 mm)	119.3 in (3 030 mm)	119.3 in (3 030 mm)
Bucket weight	3,618 lb (1 641 kg)	3,468 lb (1 573 kg)	3,931 lb (1 783 kg)

## PERFORMANCE DATA

921F Z-Bar*	4.75 yd <sup>3</sup> GP Pin On (3.6 m <sup>3</sup> ) Bucket with Teeth Only	4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Bolt On Edge with CASE Coupler (JRB Compatible)	4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Teeth Only with CASE Coupler (JRB Compatible)
E. Operating height – fully raised with spillguard	219.8 in (5 584 mm)	221.9 in (5 635 mm)	221.9 in (5 635 mm)
F. Hinge pin height – fully raised	162.1 in (4 118 mm)	162.1 in (4 117 mm)	162.1 in (4 117 mm)
G. Overall length – bucket level on ground	319.6 in (8 117 mm)	319.5 in (8 116 mm)	325.6 in (8 270 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	110.8 in (2 815 mm)	110.8 in (2 815 mm)	106.9 in (2 715 mm)
J. Bucket reach – fully raised, 45° dump	51.3 in (1 302 mm)	51.2 in (1 300 mm)	55.7 in (1 414 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	71.4 in (1 813 mm)	71.3 in (1 812 mm)	73.6 in (1 869 mm)
L. Dig depth – edge below ground	3.1 in (80 mm)	3.2 in (81 mm)	3.3 in (85 mm)
Operating load – ISO	15,946 lb (7 233 kg)	14,169 lb (6 427 kg)	14,396 lb (6 530 kg)
Operating load – SAE	14,601 lb (6 623 kg)	12,963 lb (5 880 kg)	13,173 lb (5 975 kg)
Maximum material density – ISO	3,474 lb/yd <sup>3</sup> (2 061 kg/m <sup>3</sup> )	3,541 lb/yd <sup>3</sup> (2 101 kg/m <sup>3</sup> )	3,757 lb/yd <sup>3</sup> (2 229 kg/m <sup>3</sup> )
Maximum material density – SAE	3,181 lb/yd <sup>3</sup> (1 887 kg/m <sup>3</sup> )	3,240 lb/yd <sup>3</sup> (1 922 kg/m <sup>3</sup> )	3,438 lb/yd <sup>3</sup> (2 040 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	37,082 lb (16 820 kg)	33,155 lb (15 039 kg)	33,651 lb (15 264 kg)
40° turn	31,890 lb (14 465 kg)	28,338 lb (12 854 kg)	28,795 lb (13 061 kg)
Tipping load – SAE:			
Straight	35,003 lb (15 877 kg)	31,301 lb (14 198 kg)	31,769 lb (14 410 kg)
40° turn	29,200 lb (13 245 kg)	25,924 lb (11 759 kg)	26,345 lb (11 950 kg)
Lift capacity:			
Full height	26,808 lb (12 160 kg)	25,369 lb (11 507 kg)	25,554 lb (11 591 kg)
Maximum reach	36,184 lb (16 413 kg)	34,586 lb (15 688 kg)	34,791 lb (15 781 kg)
Ground	47,926 lb (21 739 kg)	34,180 lb (15 504 kg)	35,708 lb (16 197 kg)
Breakout force with tilt cylinder	40,131 lb (18 203 kg)	33,704 lb (15 288 kg)	35,558 lb (16 129 kg)
Loader clearance circle with bucket	528.7 in (13 428 mm)	528.7 in (13 428 mm)	533.1 in (13 541 mm)

921F XR	4.75 yd <sup>3</sup> GP Pin On (3.6 m <sup>3</sup> ) Bucket with Teeth Only	4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Bolt On Edge with CASE Coupler (JRB Compatible)	4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Teeth Only with CASE Coupler (JRB Compatible)
E. Operating height – fully raised with spillguard	237.2 in (6 025 mm)	239.3 in (6 077 mm)	239.3 in (6 077 mm)
F. Hinge pin height – fully raised	179.5 in (4 560 mm)	179.4 in (4 558 mm)	179.4 in (4 558 mm)
G. Overall length – bucket level on ground	338.7 in (8 602 mm)	338.6 in (8 601 mm)	344.7 in (8 755 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	128.2 in (3 257 mm)	128.2 in (3 257 mm)	124.3 in (3 157 mm)
J. Bucket reach – fully raised, 45° dump	55.7 in (1 414 mm)	55.6 in (1 413 mm)	60.1 in (1 527 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	89.1 in (2 262 mm)	89.0 in (2 261 mm)	91.6 in (2 326 mm)
L. Dig depth – edge below ground	5.7 in (146 mm)	5.8 in (147 mm)	5.9 in (151 mm)
Operating load – ISO	12,648 lb (5 737 kg)	11,230 lb (5 094 kg)	11,416 lb (5 178 kg)
Operating load – SAE	11,740 lb (5 325 kg)	10,401 lb (4 718 kg)	10,576 lb (4 797 kg)
Maximum material density – ISO	2,756 lb/yd <sup>3</sup> (1 635 kg/m <sup>3</sup> )	2,806 lb/yd <sup>3</sup> (1 665 kg/m <sup>3</sup> )	2,978 lb/yd <sup>3</sup> (1 767 kg/m <sup>3</sup> )
Maximum material density – SAE	2,557 lb/yd <sup>3</sup> (1 517 kg/m <sup>3</sup> )	2,599 lb/yd <sup>3</sup> (1 542 kg/m <sup>3</sup> )	2,761 lb/yd <sup>3</sup> (1 638 kg/m <sup>3</sup> )
Tipping load – ISO:			
Straight	29,648 lb (13 448 kg)	26,541 lb (12 039 kg)	26,940 lb (12 220 kg)
40° turn	25,294 lb (11 473 kg)	22,461 lb (10 188 kg)	22,829 lb (10 355 kg)
Tipping load – SAE:			
Straight	28,276 lb (12 826 kg)	25,296 lb (11 474 kg)	25,679 lb (11 648 kg)
40° turn	23,479 lb (10 650 kg)	20,803 lb (9 436 kg)	21,153 lb (9 595 kg)
Lift capacity:			
Full height	24,817 lb (11 257 kg)	23,395 lb (10 612 kg)	23,578 lb (10 695 kg)
Maximum reach	31,334 lb (14 213 kg)	29,683 lb (13 464 kg)	29,895 lb (13 560 kg)
Ground	36,784 lb (16 685 kg)	33,973 lb (15 410 kg)	34,330 lb (15 572 kg)
Breakout force with tilt cylinder	40,810 lb (18 511 kg)	34,286 lb (15 552 kg)	36,167 lb (16 405 kg)
Loader clearance circle with bucket	549.3 in (13 953 mm)	549.3 in (13 952 mm)	554.4 in (14 082 mm)

921F	Z-Bar/XR	Z-Bar/XR	Z-Bar/XR
Maximum rollback:			
Ground	42°/37°	42°/38°	42°/38°
Carry position	44°/43°	44°/43°	44°/43°
@ Maximum reach	54°/53°	54°/53°	54°/53°
@ Full height	59°/60°	59°/60°	59°/60°
Maximum grading angle with bucket – back dragging	62°/65°	62°/65°	64°/67°
SAE bucket capacity – struck	4.0 yd <sup>3</sup> (3.04 m <sup>3</sup> )	3.4 yd <sup>3</sup> (2.61 m <sup>3</sup> )	3.3 yd <sup>3</sup> (2.49 m <sup>3</sup> )
Heaped	4.6 yd <sup>3</sup> (3.51 m <sup>3</sup> )	4.0 yd <sup>3</sup> (3.06 m <sup>3</sup> )	3.8 yd <sup>3</sup> (2.93 m <sup>3</sup> )
Bucket width – outside	119.3 in (3 030 mm)	119.3 in (3 030 mm)	120.1 in (3 051 mm)
Bucket weight	3,781 lb (1 715 kg)	5,090 lb (2 309 kg)	4,925 lb (2 234 kg)

## PERFORMANCE DATA

### 921F Z-Bar\*

		4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Bolt On Edge with CASE Coupler (ACS Compatible)	4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Teeth Only with CASE Coupler (ACS Compatible)
<b>E.</b>	Operating height – fully raised with spillguard	218.8 in (5 558 mm)	218.8 in (5 558 mm)
<b>F.</b>	Hinge pin height – fully raised	162.1 in (4 117 mm)	162.1 in (4 117 mm)
<b>G.</b>	Overall length – bucket level on ground	315.4 in (8 011 mm)	321.3 in (8 162 mm)
	Dump angle – fully raised	55°	55°
<b>H.</b>	Dump height – fully raised, 45° dump	113.5 in (2 883 mm)	109.6 in (2 785 mm)
<b>J.</b>	Bucket reach – fully raised, 45° dump	48.0 in (1 220 mm)	52.4 in (1 331 mm)
<b>K.</b>	Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	69.6 in (1 767 mm)	71.9 in (1 825 mm)
<b>L.</b>	Dig depth – edge below ground	3.2 in (81 mm)	3.3 in (85 mm)
	Operating load – ISO	14,581 lb (6 614 kg)	14,808 lb (6 717 kg)
	Operating load – SAE	13,338 lb (6 050 kg)	13,545 lb (6 144 kg)
	Maximum material density – ISO	3,644 lb/yd <sup>3</sup> (2 162 kg/m <sup>3</sup> )	3,905 lb/yd <sup>3</sup> (2 317 kg/m <sup>3</sup> )
	Maximum material density – SAE	3,332 lb/yd <sup>3</sup> (1 977 kg/m <sup>3</sup> )	3,572 lb/yd <sup>3</sup> (2 119 kg/m <sup>3</sup> )
Tipping load – ISO:	Straight	34,112 lb (15 473 kg)	34,608 lb (15 698 kg)
	40° turn	29,163 lb (13 228 kg)	29,617 lb (13 434 kg)
Tipping load – SAE:	Straight	32,196 lb (14 604 kg)	32,661 lb (14 815 kg)
	40° turn	26,674 lb (12 099 kg)	27,090 lb (12 288 kg)
Lift capacity:	Full height	25,408 lb (11 525 kg)	25,576 lb (11 601 kg)
	Maximum reach	34,692 lb (15 736 kg)	34,879 lb (15 821 kg)
	Ground	38,885 lb (17 638 kg)	40,748 lb (18 483 kg)
	Breakout force with tilt cylinder	36,303 lb (16 467 kg)	38,724 lb (17 565 kg)
	Loader clearance circle with bucket	526.2 in (13 366 mm)	530.3 in (13 471 mm)

### 921F XR

		4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Bolt On Edge with CASE Coupler (ACS Compatible)	4.0 yd <sup>3</sup> (3 m <sup>3</sup> ) Bucket with Teeth Only with CASE Coupler (ACS Compatible)
<b>E.</b>	Operating height – fully raised with spillguard	236.2 in (6 000 mm)	236.2 in (6 000 mm)
<b>F.</b>	Hinge pin height – fully raised	179.4 in (4 558 mm)	179.4 in (4 558 mm)
<b>G.</b>	Overall length – bucket level on ground	334.5 in (8 496 mm)	340.4 in (8 646 mm)
	Dump angle – fully raised	49°	49°
<b>H.</b>	Dump height – fully raised, 45° dump	130.9 in (3 324 mm)	127.0 in (3 226 mm)
<b>J.</b>	Bucket reach – fully raised, 45° dump	52.5 in (1 333 mm)	56.8 in (1 443 mm)
<b>K.</b>	Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	87.0 in (2 210 mm)	89.6 in (2 277 mm)
<b>L.</b>	Dig depth – edge below ground	5.8 in (147 mm)	5.9 in (151 mm)
	Operating load – ISO	11,519 lb (5 225 kg)	11,700 lb (5 307 kg)
	Operating load – SAE	10,668 lb (4 839 kg)	10,838 lb (4 916 kg)
	Maximum material density – ISO	2,879 lb/yd <sup>3</sup> (1 708 kg/m <sup>3</sup> )	3,084 lb/yd <sup>3</sup> (1 830 kg/m <sup>3</sup> )
	Maximum material density – SAE	2,666 lb/yd <sup>3</sup> (1 582 kg/m <sup>3</sup> )	2,859 lb/yd <sup>3</sup> (1 696 kg/m <sup>3</sup> )
Tipping load – ISO:	Straight	27,216 lb (12 345 kg)	27,608 lb (12 523 kg)
	40° turn	23,036 lb (10 449 kg)	23,398 lb (10 613 kg)
Tipping load – SAE:	Straight	25,935 lb (11 764 kg)	26,312 lb (11 935 kg)
	40° turn	21,336 lb (9 678 kg)	21,678 lb (9 833 kg)
Lift capacity:	Full height	23,428 lb (10 627 kg)	23,594 lb (10 702 kg)
	Maximum reach	29,809 lb (13 521 kg)	30,005 lb (13 610 kg)
	Ground	34,606 lb (15 697 kg)	34,950 lb (15 853 kg)
	Breakout force with tilt cylinder	36,927 lb (16 750 kg)	39,381 lb (17 863 kg)
	Loader clearance circle with bucket	546.4 in (13 878 mm)	551.1 in (13 999 mm)

### 921F

		Z-Bar/XR	Z-Bar/XR
Maximum rollback:	Ground	42°/38°	42°/38°
	Carry position	44°/43°	44°/43°
	@ Maximum reach	54°/53°	54°/53°
	@ Full height	59°/60°	59°/60°
	Maximum grading angle with bucket – back dragging	61°/64°	63°/65°
SAE bucket capacity – struck		3.4 yd <sup>3</sup> (2.61 m <sup>3</sup> )	3.3 yd <sup>3</sup> (2.50 m <sup>3</sup> )
	Heaped	4.0 yd <sup>3</sup> (3.06 m <sup>3</sup> )	3.8 yd <sup>3</sup> (2.90 m <sup>3</sup> )
	Bucket width – outside	119.3 in (3 030 mm)	119.9 in (3 046 mm)
	Bucket weight	5,099 lb (2 313 kg)	4,949 lb (2 245 kg)

NOTE: \*Z-Bar performance data shown with full counterweight.

Performance data unit equipped with 23.5R25 Michelin XHA2 tires, ROPS cab with heater and air conditioner, full counterweight, standard batteries, front and rear fenders, full fuel and 175 lb (75 kg) operator. Specifications per SAE J732, J1234, J695, J742, and J818.

## STANDARD EQUIPMENT

### OPERATOR ENVIRONMENT

See page 1

### ENGINE

Case/FPT F4HFE613

Tier 4 Final Certified

Selectable work modes:

- Maximum Power
- Standard Power
- Economy Power
- Auto Power

Turbocharger

Charge air cooling

Automatic belt tensioner

Integral engine oil cooling

Fuel filter with water trap

Dual-element dry-type air cleaner

Hydraulic-driven cooling fan

Air-cooled radiator

Mid-mounted cooling module

Common rail electronic fuel injection

### DRIVETRAIN

4-wheel drive

4F/3R Selectable autoshift/manual shift transmission

Electronic Control Module – programmable, computer controlled proportional shifting with programmable gear selection

Onboard diagnostics

Single lever electronic shift control

F/N/R switch in loader control handle

Downshift button

### DRIVETRAIN (CONTINUED)

Torque converter

Open differential axles:

Provides open type differentials in front and rear axles and the same axle housing as the Heavy-duty axles. Recommended for applications on hard surfaces, solid tires or ballast.

Outboard planetary axles

Transmission oil cooler

Brake pedal transmission disconnect – declutch

Hydraulic wet disc brakes

Spring-applied hydraulic release parking brake

Limp-Home Mode

Greasable rear axle trunnion

3-piece rims

### HYDRAULICS

2-function loader valve with joystick control

Low-effort steering

Hydraulic driven cooling fan

Diagnostic quick couplers

Split flange hydraulic connections – 1 inch or greater

### LOADER

See page 2 – Operating weight, Other specifications

### ELECTRICAL

Alternator and voltage regulator

Electrical disconnect

120 amp alternator

(2) 700 CCA 12-volt batteries

### ELECTRICAL (CONTINUED)

Electric starter

Lights:

- 2 Front and 2 rear halogen flood lights
- 2 Front driving headlights – high/low beam with integrated turn signals
- 2 LED stop/tail lights with integrated turn signals

Key start/stop switch

Backup alarm

Centrally located fuse box with all electrical circuits protected

Remote jump start receptacle

### TELEMATICS

CASE SiteWatch™ Telematics – includes hardware and a 3-yr Advanced data subscription

### OTHER

Electric hood lift

Front and rear fenders, partial coverage

Heavy counterweight

Drawbar hitch

Articulation locking bar

Lift arm locking bar

Lift and tie-down points – front/rear

Remote drain points

Grouped remote-mounted ecology drains:  
Engine oil  
Engine coolant  
Hydraulic oil

## OPTIONAL EQUIPMENT

### OPERATOR ENVIRONMENT

Heated cloth-covered air suspension seat

Cloth mechanical suspension seat

Headrest

3 in (76 mm) retractable seat belt

Sound Shield noise suppression package

Cab with heater only – no AC

Radio-ready – 12 or 24-volt with auxiliary power – 12-volt

AM/FM stereo radio

Cab convenience package: ashtray, 24V cigar lighter and cell phone holder

Rotating beacon

Right hand brake pedal

External rearview mirrors

External rearview mirrors, heated

In-cab accessory mount – no rear view camera

Rear view camera with accessory mount

Extra front-facing work lights

### HYDRAULICS

Auxiliary hydraulics

Ride Control

Secondary steering

Joystick steering with and without secondary steering

2-function loader valve with single access control

### HYDRAULICS (CONTINUED)

3-function loader valve with 3 lever control or with joystick plus lever

4-function loader valve with joystick and 2 lever control

### DRIVETRAIN

5F/3R Autoshift/manual shift transmission, lockup torque converter, PowerInch de-clutch

Differential locking front axle – heavy-duty application:

Same size axles as standard axles but with automatic hydraulically-actuated differential lock on front axle, open differential on rear axle. Recommended for applications on hard surfaces or with solid tires.

Cold weather package:

- Heavy-duty (2) 950 CCA 12V batteries
- Grid heater
- Fuel heater
- Hydraulic oil cooler bypass
- Low temperature hydraulic oil
- Fast-warm hydraulic valve

### TIRES

23.5 x 25 L2 bias – dirt/traction

23.5 x 25 L3 bias – rock

23.5 R25 L2 radial – dirt/traction

23.5 R25 L3 radial – rock

23.5 R25 radial Michelin SnoPlus

### TIRES (CONTINUED)

Spare wheels and tires

Axle oscillation stops

### LOADER

XR extended reach version

Attachment auxiliary hydraulics

Coupler systems – JRB or ACS compatible

Buckets – see pages 4 through 5

4 – 1 clamp buckets

Forks

### ADVANCED ENGINE AIR FILTRATION

Variable speed hydraulic reversing fan

Full view air pre-cleaner

Sy-Klone® ejective air pre-cleaner

### OTHER

Additional RH steps and platform with standard or wide fenders

Side guards for rear frame

Tool box – ground level access

Light counterweight – Z-Bar

Fire extinguisher

License plate bracket

12.4 mph (20 kph) maximum speed control

Special paint

Skid plate and transmission



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

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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