

Z-BAR (MATERIAL HANDLER) / XR WHEEL LOADER

TIER 4 FINAL CERTIFIED

EFFECTIVE MARCH 2024



ENGINE	,		
Make	FPT		
Model	F4HFE613S*B005		
Emissions Certification	n Tier 4 Final		
Emissions Technology	SCR/DOC		
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 ³ (6.7 L)		
	Diesel, #1 and #2 mixture tted for cold temperatures		
Fuel injection [Direct injection – electronic		
Fuel pump	Bosch CP 3.3		
Fuel pump gradeability Side-to-side Fore and aft Fuel Filter	y: 35° 35° Replaceable full flow spin-on cartridge		
Air filter	Dry type elements rarning restriction indicator		
Mid-mount cooling module w/ auto reversing fan: Mid-mount Air/Water w/ Lube Oil Cooler			
Fan – hydraulic driven Style Diameter	8 blade puller 32 in (813 mm)		
Water pump	Integral		
Engine Oil pump grade Side-to-side Fore and aft Oil filtration	eability: 35° 35° Replaceable, full flow spin-on cartridge		
Engine speeds Rated – full load	RPM 2000		

Horsepower - Maximum Power:

230 hp (172 kW)

207 hp (155 kW)

213 hp (159 kW)

873 lb·ft (1 184 N·m)

845 lb·ft (1 145 N·m)

Peak gross @ 1800 RPM

Net rated @ 2000 RPM

Peak net @ 1800 RPM

Gross @ 1300 RPM

Net @ 1300 RPM

Net torque rise:

Torque - Maximum Power:

Maximum power range

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.

shift and modulation	
Gears	Helical cut
Gear ratios – 4-speed	Forward/Reverse
1st	3.754/3.551
2nd	2.184/2.071
3rd	1.072/1.017
4th	0.636/ —
Gear ratios – 5-speed	Forward/Reverse
1st	3.921/3.718
2nd	2.255/2.138
3rd	1.466/0.894
4th	0.942/ —
5th	0.613/ —
Torque converter:	
Stall ratio - 4-speed	2.283:1
Stall ratio - 5-speed	2.420:1
Differential:	
Limited slip w/ 67% availab wheel w/ traction	ole axle torque to
Rear axle oscillation	24° total
Front and many subset	

Rear axle oscillation	24° total
Front and rear axles:	
Differential ratio	4.11
Planetary ratio	6.00

24.67

Final axle ratio
HD Axle Std.:

Limited Slip Front / Limited Slip Rear

Optional HD Axles

Diff Lock Front / Open Rear Diff Lock Front / Limited Slip Rear

Planetaries	Outboard

Service brakes:

Hydraulically actuated, maintenance-free, multiple wet disc w/ accumulator to all four wheels

Brake surface area:

Front and rear hub 721 in² (0.465 m²)

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	4.4 (7.1)	4.7 (7.5)
2nd	7.4 (12.0)	7.8 (12.6)
3rd	14.5 (23.3)	15.2 (24.4)
4th	22.8 (36.6)	_

Travel speeds – 5-speed transmission:

	Forward	Reverse
	mph (kph)	mph (kph)
1s	4.1 (6.6)	4.4 (7.0)
2n	d 7.1 (11.4)	7.4 (12.0)
3r	10.6 (17.1)	17.2 (27.7)
4tl	16.4 (26.4)	_
5tl	24.9 (40.0)	_

NOTE: Travel speeds at full engine throttle w/ 23.5-R25 L3 Radial tires.

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

OPERATOR ENVIRONMENT

ROPS cab AC w/ heat: 8" LCD touchscreen display, adjustable armrest w/ 3 configurable buttons; Key start; Articulated power steering w/ tilt column: Fully adjustable, suspension seat w/ headrest; Foot throttle; Single lever (joystick) loader control w/ auxiliary function and fully adjustable wrist rest, 2 cup holders; Interior rear view mirror; 3 inch high visibility seat belt; Integrated 4-corner strobe; Multiple storage trays; Single brake pedal; F/N/R shuttle switch; Left and Right external rear view mirrors; Pressurized air filtering; Anti-glare window strip; Front and Rear Defroster; Side window, partial/fully open; 2 Dome lights: Wipers, rear and intermittent front; Windshield washers, front and rear; Rubber floor mat; Horn; Radio ready - Includes antenna, speakers, wiring, radio fuse, 20A converter, 12-volt auxiliary power outlet, and USB outlet.

LCD Displays/Gauges:

Transmission oil temperature; Engine coolant temperature; Fuel level; DEF level.
Hour meter; Engine speed; Travel speed; Time; Automatic transmission indication; Current gear selection; FNR indication; DeClutch indication; Engine mode indication; Trip computer A/B; Fuel consumption; Multiple languages, Metric/English; Engine diagnostics; Transmission diagnostics; Warning prompts; Error reporting; Diff. Lock*.

Warning lights:

Four-way flashers and turn signals; Brake pressure; Lamp/high beam indication; Engine intake heater grid light.

Audible alarms w/ diagnostics:

Parking brake; Coolant temperature; Hydraulic oil temperature; Transmission oil temperature; Air filter; Transmission filter; Hydraulic filter; Alternator; Low fuel. Engine oil pressure; Brake pressure; Steering pressure – w/ aux steering*; Coolant temperature; Hydraulic oil temperature; Transmission oil temperature.

Backup alarm

Cab air filter; Engine oil filter; Fuel pre-filter; DEF tank vent filter; SCR supply filter; Hydraulic oil and filter; Engine air filter; Engine coolant; Drive belt; Cab recirculation filter; Engine breather filter; Transmission breather; Front and rear axle fluid; SCR supply module filter.

NOTE: *If equipped w/ option.

OPERATING WEIGHT

Z-Bar

Unit equipped w/ 3.1 m (4.0 yd) pin on bucket w/ edge, bucket level @ ground; 23.5R25 L3 Radial tires; ROPS cab with heater and A/C; Heavy counterweight; Front and rear fenders; Full fuel and DEF tanks; 165 lb (75 kg) operator:

42,414 lb (19 239 kg)

XR

Unit equipped w/ 3.1 m (4.0 yd) pin on bucket w/ edge, bucket level @ ground; 23.5R25 L3 Radial tires; ROPS cab with heater and A/C; Heavy counterweight; Front and rear fenders; Full fuel and DEF tank; 165 lb (75 kg) operator:

43,005 lb (19 507 kg)

HYDRAULICS

Main pump – steering/implement:
Closed center pressure/flow compensated

Tandem variable displacement – load-sensing:

Max rated flow x2: 31.6 gpm @ 2000 RPM (120 L/min @ 2000 RPM)

Loader control valve:

Closed-center, sectional 2, 3 or 4-function w/ control for lift, tilt and auxiliary hydraulics

Loader auxiliary steering:

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

High pressure standby:

Implement 3,625 psi (25 000 kPa) Steering 3,500 psi (24 132 kPa)

Filtration:

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

SERVICE CAPACITIES

Fuel tank	76.0 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	24.0 gal (90.8 L)	
Total	47.0 gal (178.0 L)	
Transmission:		
Service w/ filter	36.0 qt (34.1 L)	
Front and rear axle:		
Front axle	42.3 qt (40.0 L)	
Rear axle	42.3 qt (40.0 L)	
Engine oil w/ filter	16.0 qt (15.1 L)	
Cooling system	32.0 qt (30.0 L)	

OTHER SPECIFICATIONS Lift cylinder:

 Lift cylinder:

 Bore diameter
 5.5 in (139.7 mm)

 Rod diameter
 3.0 in (76.2 mm)

 Stroke
 33.3 in (845.7 mm)

 Dump cylinder:

 Bore diameter
 6.5 in (165.1 mm)

 Rod diameter
 3.5 in (88.9 mm)

 Stroke
 23.6 in (599.6 mm)

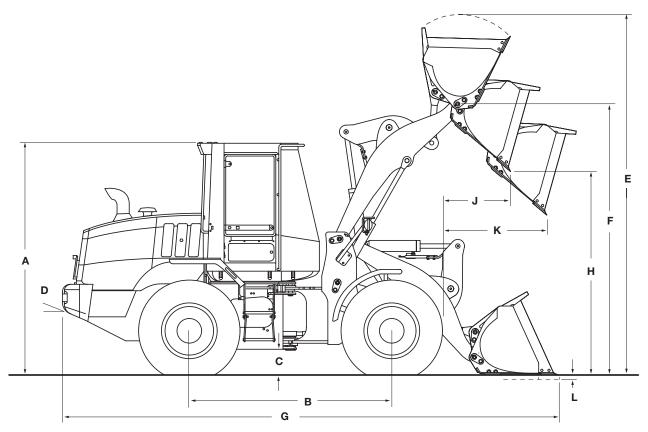
Loader:

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	1.2 sec
Float down	2.5 sec
Sound level in Cab (LpA)	68 dB(A)
Exterior sound level (LwA)	104 dB(A)

NOTE: Sound level data tested in accordance with ISO6395, 6396, 3744.

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

DIMENSIONS	,
A. Height to top of ROPS cab	136.2 in (3 460 mm)
Height to drawbar	42.6 in (1 081 mm)
B. Wheelbase	131.5 in (3 340 mm)
C. Ground clearance	17.0 in (431 mm)
D. Angle of departure	29°
Width:	
Overall* without bucket	111.4 in (2 829 mm)
Tread width	87.8 in (2 230 mm)
Turning radius* – outside	236.3 in (6 003 mm)
Turning angle:	
From center	40°
Total angle	80°
Rear axle oscillation – total	24°
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NOTE: *Dimensions taken with 23.5-R25 L3 Radial tires. Additional dimensions on pages 4 through 8.

WEIGHT ADJUSTMENTS			
Select Options	Weight Adjustment	Tipping Load Adjustment Straight: Deflected*	Tipping Load Adjustment 40° Turn: Deflected*
23.5-R25 L2 Bias	-748 lb (-339 kg)	-610 lb (-277 kg)	-971 lb (-440 kg)
23.5-R25 L2 Radial tires	-28 lb (-13 kg)	-104 lb (-47 kg)	-133 lb (-60 kg)
23.5-R25 Snow Radial Tires	+52 lb (+24 kg)	+162 lb (+73 kg)	+166 lb (+75 kg)

NOTE: Unit equipped with Z-Bar loader arms, 4.25 yd³ (3.2 m³) general purpose pin on bucket with bolt-on edge, 23.5-R25 L3 Radial tires, ROPS cab with heater and air conditioner, heavy counterweight, heavy-duty batteries, front and rear fenders, full fuel and 165 lb (75 kg) operator. Adjust select options from rated weight. *Tipping loads: ISO 14397-1 Deflected Tires.

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821G Z-Bar*		4.75yd³ (3.6 m³) Bucket with Bolt-on Edge - Pin On	4.5 yd3 (3.4 m3) Bucket with Bolt-on Edge - Pin On
Operating weight		42,714 lb (19 375 kg)	42,495 lb (19 275 kg)
E. Operating height – fully raised with spillg	uard	219.7 in (5 581 mm)	216.6 in (5 502 mm)
F. Hinge pin height – fully raised		162.1 in (4 116 mm)	162.1 in (4 117 mm)
G. Overall length – bucket level on ground		319.7 in (8 120 mm)	316.6 in (8 041 mm)
Dump angle – fully raised		55°	55°
H. Dump height – fully raised, 45° dump		114.3 in (2 904 mm)	117.3 in (2 981 mm)
J. Bucket reach – fully raised, 45° dump		46.8 in (1 189 mm)	44.4 in (1 128 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height,	45° dump	46.8 in (1 189 mm)	44.4 in (1 128 mm)
L. Dig depth		3.2 in (81 mm)	3.2 in (81 mm)
Operating load – ISO Rigid Tires		15,393 lb (6 982 kg)	15,592 lb (7 072 kg)
Operating load – ISO Deflected Tires		14,041 lb (6 369 kg)	14,244 lb (6 461 kg)
Maximum material density – ISO Rigid Tires		3,241 lb/yd³ (1 923 kg/m³)	3,465 lb/yd³ (2 056 kg/m³)
Maximum material density – ISO Deflected Ti		2,956 lb/yd³ (1 754 kg/m³)	3,165 lb/yd³ (1 878 kg/m³)
Tipping load – ISO Rigid Tires:	Straight 40° turn	36,932 lb (16 752 kg) 30,786 lb (13 964 kg)	37,345 lb (16 940 kg) 21,184 lb (14 145 kg)
Tipping load – ISO Deflected Tires:	Straight 40° turn	34,577 lb (15 684 kg) 28,082 lb (12 738 kg)	34,577 lb (15 684 kg) 28,082 lb (12 738 kg)
Lift capacity:	Full height Ground	21,683 lb (9 835 kg) 38,088 lb (17 277 kg)	21,907 lb (9 937 kg) 40,023 lb (18 154 kg)
Breakout force with tilt cylinder		32,145 lb (14 581 kg)	34,240 lb (15 531 kg)
Loader clearance circle with bucket		525.8 in (13 356 mm)	524.1 in (13 311 mm
821G XR		4.5 yd³ (3.4 m³) Bucket with Bolt-on Edge - Pin On	4.0 yd³ (3.1 m³) Bucket with Bolt-on Edge - Pin On
Operating weight		43,086 lb (19 543 kg)	43,005 lb (19 507 kg)
E. Operating height – fully raised with spillg	uard	234.0 in (5 943 mm)	231.5 in (5 879 mm)
F. Hinge pin height – fully raised		179.4 in (4 558 mm)	179.5 in (4 558 mm)
G. Overall length – bucket level on ground		335.7 in (8 526 mm)	333.2 in (8 463 mm)
Dump angle – fully raised		49°	49°
H. Dump height – fully raised, 45° dump		133.7 in (3 397 mm)	135.3 in (3 438 mm)
J. Bucket reach – fully raised, 45° dump		48.9 in (1 241 mm)	46.9 in (1 192 mm)
K. Bucket reach - 7 ft 0 in (2.13 m) height,	45° dump	84.6 in (2 149 mm)	83.3 in (2 116 mm)
L. Dig depth		5.8 in (147 mm)	5.8 in (147 mm)
Operating load – ISO Rigid Tires		12,522 lb (5 680 kg)	12,617 lb (5 723 kg)
Operating load – ISO Deflected Tires		11,575 lb (5 250 kg)	11,672 lb (5 294 kg)
Maximum material density – ISO Rigid Tires		2,783 lb/yd³ (1 651 kg/m³)	3,154 lb/yd³ (1 872 kg/m³)
Maximum material density – ISO Deflected T	res	2,783 lb/yd³ (1 651 kg/m³)	2,918 lb/yd³ (1 731 kg/m³)
Tipping load – ISO Rigid Tires:	Straight 40° turn	30,036 lb (13 624 kg) 25,043 lb (11 359 kg)	30,235 lb (13 714 kg) 25,233 lb (11 446 kg)
Tipping load – ISO Deflected Tires:	Straight 40° turn	28,462 lb (12 910 kg) 23,150 lb (10 501 kg)	28,666 lb (13 002 kg) 23,344 lb (10 589 kg)
Lift capacity:	Full height Ground	20,082 lb (9 109 kg) 30,432 lb (13 804 kg)	20,166 lb (9 147 kg) 30,654 lb (13 904 kg)
Breakout force with tilt cylinder			
		34,813 lb (15 791 kg)	36,702 lb (16 648 kg)
Loader clearance circle with bucket		34,813 lb (15 791 kg) 543.5 in (13 804 mm)	36,702 lb (16 648 kg) 541.8 in (13 761 mm)
Loader clearance circle with bucket 821G			
821G Maximum rollback: Ca	Ground arry position ② Full height	543.5 in (13 804 mm)	541.8 in (13 761 mm)
821G Maximum rollback: Ca	arry position Pull height	543.5 in (13 804 mm) Z-Bar/XR 41°/38° 45°/43°	541.8 in (13 761 mm) Z-Bar/XR 42°/38° 45°/43°
821G Maximum rollback: Ci	arry position Pull height	543.5 in (13 804 mm) Z-Bar/XR 41°/38° 45°/43° 59°/60°	541.8 in (13 761 mm) Z-Bar/XR 42°/38° 45°/43° 59°/60°
821G Maximum rollback: Ci Maximum grading angle with bucket – ba SAE bucket capacity – struck	arry position Pull height	543.5 in (13 804 mm) Z-Bar/XR 41°/38° 45°/43° 59°/60° 60°/63° 3.80yd³ (2.91m³)	541.8 in (13 761 mm) Z-Bar/XR 42°/38° 45°/43° 59°/60° 61°/63° 3.40 yd³ (2.60 m³)

4.0 yd³ (3.1 m³) Bucket with Bolt-on Edge - Pin On

42,414 lb (19 239 kg) 214.1 in (5 438 mm) 162.1 in (4 117 mm) 314.1 in (7 977 mm)

118.0 in (2 996 mm) 42.5 in (1 080 mm) 42.5 in (1 080 mm) 3.2 in (81 mm) 15,705 lb (7 124 kg) 14,361 lb (6 514 kg) 3,926 lb/yd3 (2 330 kg/m3) 3,590 lb/yd3 (2 130 kg/m3) 35,243 lb (15 986 kg) 28,722 lb (13 028 kg) 30,829 lb (13 984 kg) 24,913 lb (11 300 kg) 21,992 lb (9 975 kg) 40,237 lb (18 251 kg) 36,100 lb (16 375 kg) 522.7 in (13 275 mm)

PERFORMANCE SPECS

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PERFORMANCE SPECS				
821G Z-Bar*		4.0 yd³ (3.06 m³) Bucket with Bolt-on Edge - JRB Coupler	4.5 yd³ (3.4 m³) Bucket with Bolt-on Edge - JRB Coupler	4.0 yd³ (3.1 m³) Bucke with Bolt-On Edge - ACS Couple
Operating weight		43,799 lb (19 867 kg)	43,851 lb (19 891 kg)	43,849 lb (19 889 kg
E. Operating height – fully raised with spillguard		221.8 in (5 633 mm)	223.0 in (5 664 mm)	218.8 in (5 557 mm
F. Hinge pin height – fully raised		162.0 in (4 115 mm)	162.0 in (4 115 mm)	162.0 in (4 115 mm
G. Overall length – bucket level on ground		325.2 in (8 260 mm)	326.4 in (8 289 mm)	320.9 in (8 151 mm
Dump angle – fully raised		55°	55°	55
H. Dump height – fully raised, 45° dump		110.8 in (2 814 mm)	110.0 in (2 795 mm)	113.6 in (2 884 mm
J. Bucket reach – fully raised, 45° dump		51.0 in (1 296 mm)	51.9 in (1 318 mm)	47.9 in (1 215 mm
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump		71.1 in (1 806 mm)	71.6 in (1 818 mm)	69.4 in (1 763 mm
L. Dig depth		3.2 in (82 mm)	3.2 in (82 mm)	3.1 in (80 mm
Operating load – ISO Rigid Tires		13,9928 lb (6 318 kg)	13,879 lb (6 296 kg)	14,339 lb (6 504 kg
Operating load – ISO Deflected Tires		12,687 lb (5 755 kg)	12,636 lb (5 731 kg)	13,059 lb (5 924 kg
Maximum material density – ISO Rigid Tires		3,482 lb/yd³ (2 066 kg/m³)	3,266 lb/yd³ (1 938 kg/m³)	3,585 lb/yd³ (2 127 kg/m³
Maximum material density – ISO Deflected Tires		3,172 lb/yd³ (1 882 kg/m³)	2,973 lb/yd³ (1 764 kg/m³)	3,265 lb/yd³ (1 937 kg/m³
Tipping load – ISO Rigid Tires:	Straight 40° turn	33,600 lb (15 241 kg) 27,856 lb (12 635 kg)	33,501 lb (15 196 kg) 27,759 lb (12 591 kg)	34,582 lb (15 686 kg 28,678 lb (13 008 kg
Tipping load – ISO Deflected Tires:	Straight 40° turn	31,458 lb (14 269 kg) 25,373 lb (11 509 kg)	31,354 lb (14 222 kg) 25,272 lb (11 463 kg)	32,366 lb (14 681 kg 26,119 lb (11 847 kg
Lift capacity:	Full height Ground	20,510 lb (9 303 kg) 28,046 lb (12 722 kg)	20,456 lb (9 279 kg) 27,717 lb (12 572 kg)	20,502 lb (9 299 kg 31,997 lb (14 514 kg
Breakout force with tilt cylinder		28,801 lb (13 064 kg)	38,215 lb (12 798 kg)	31,092 lb (14 103 kg
Loader clearance circle with bucket		529.0 in (13 437 mm)	529.7 in (13 454 mm)	526.5 in (13 373 mm
821G XR		4.0 yd³ (3.06 m³) Bucket with Bolt-on Edge - JRB Coupler	4.25 yd³ (3.2 m³) Bucket with Bolt-on Edge - JRB Coupler	4.0 yd³ (3.1 m³) Bucke with Bolt-On Edge - ACS Couple
		Soit on Eago on B coupler	Soit on Eago on D coupler	Bolt on Eago Acc of

821G XR		4.0 yd³ (3.06 m³) Bucket with Bolt-on Edge - JRB Coupler	4.25 yd³ (3.2 m³) Bucket with Bolt-on Edge - JRB Coupler	4.0 yd³ (3.1 m³) Bucket with Bolt-On Edge - ACS Coupler
Operating weight		44,389 lb (20 135 kg)	44,442 lb (20 258 kg)	44,439 lb (20 157 kg)
E. Operating height – fully raised with spillguard		239.2 in (6 075 mm)	240.3 in (6 105 mm)	236.2 in (5 999 mm)
F. Hinge pin height – fully raised		179.4 in (4 556 mm)	179.4 in (4 556 mm)	179.4 in (4 556 mm)
G. Overall length – bucket level on ground		344.3 in (8 745 mm)	345.5 in (8 775 mm)	340.0 in (8 637 mm)
Dump angle – fully raised		49°	49°	49°
H. Dump height – fully raised, 45° dump		128.1 in (3 255 mm)	127.4 in (3 236 mm)	130.9 in (3 326 mm)
J. Bucket reach – fully raised, 45° dump		55.4 in (1 408 mm)	56.3 in (1 430 mm)	52.3 in (1 328 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump		88.8 in (2 254 mm)	89.3 in (2 268 mm)	86.8 in (2 206 mm)
L. Dig depth		5.9 in (149 mm)	5.9 in (149 mm)	5.8 in (146 mm)
Operating load – ISO Rigid Tires		11,172 lb (5 068 kg)	11,130 lb (5 048 kg)	11,457 lb (5 197 kg)
Operating load – ISO Deflected Tires		10,291 lb (4 668 kg)	10,247 lb (4 648 kg)	10,551 lb (4 786 kg)
Maximum material density – ISO Rigid Tires		2,793 lb/yd³ (1 657 kg/m³)	2,619 lb/yd³ (1 554kg/m³)	2,864 lb/yd³ (1 700 kg/m³)
Maximum material density – ISO Deflected Tires		2,573 lb/yd³ (1 527 kg/m³)	2,411 lb/yd³ (1 431 kg/m³)	2,638 lb/yd³ (1 565 kg/m³)
Tipping load - ISO Rigid Tires:	Straight 40° turn	27,042 lb (12 266 kg) 22,345 lb (10 135 kg)	26,953 lb (12 226 kg) 22,259 lb (10 097 kg)	27,725 lb (12 576 kg) 22,913 lb (10 393 kg)
Tipping load – ISO Deflected Tires:	Straight 40° turn	25,586 lb (11 605 kg) 20,581 lb (9 336 kg)	25,495 lb (11 565 kg) 20,494 lb (9 296 kg)	26,225 lb (11 896 kg) 21,102 lb (9 572 kg)
Lift capacity:	Full height Ground	18,699 lb (8 482 kg) 27,904 lb (12 657 kg)	18,645 lb (8 457 kg) 27,805 lb (12 612 kg)	18,685 lb (8 475 kg) 28,403 lb (12 883 kg)
Breakout force with tilt cylinder		29,293 lb (13 287 kg)	28,698 lb (13 017 kg)	31,622 lb (14 343 kg)
Loader clearance circle with bucket		549.4 in (13 955 mm)	550.2 in (13 976 mm)	546.4 in (13 879 mm)

821G		Z-Bar/XR	Z-Bar/XR	Z-Bar/XR
Maximum rollback:	Ground Carry position @ Full height	42°/38° 45°/43° 59°/60°	42°/37° 45°/43° 59°/60°	42°/37° 45°/43° 59°/60°
Maximum grading angle with bucket – back dragging		62°/65°	64°/67°	61°/64°
SAE bucket capacity – struck Heaped		3.40 yd³ (2.60 m³) 4.00 yd³ (3.06 m³)	3.25 yd³ (2.48 m³) 3.80 yd³ (2.91 m³)	3.40 yd³ (2.60 m³) 4.00 yd³ (3.06 m³)
Bucket width - outside		119.3 in (3 030 mm)	119.2 in (3 027 mm)	119.3 in (3 030 mm)
Bucket weight		4,862 lb (2 205 kg)	4,629 lb (2 100 kg)	4,912 lb (2 228 kg)
NOTE: *7 Par porformanco data si	hown with full countonweight			

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NOTE: *Z-Bar performance data shown with full counterweight.
Performance data unit equipped with 23.5-R25 L3 Radial tires, ROPS cab with heater and air conditioner, full counterweight, standard batteries, front and rear fenders, full fuel and 165 lb (75 kg) operator. Specifications per SAE J732, J1234, J695, J742, and J818.

OPERATOR ENVIRONMENT

See page 1

ENGINE

CASE/FPT F4HFE613S

Tier 4 Final Certified

Selective Catalytic Reduction (SCR) with Diesel Oxidation Catalyst

Selectable work modes:

Maximum Mode

Smart Mode

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 with hydraulically driven auto reversing fan

Engine block heater

Common rail electronic fuel injection

LOADER

See page 2 – Operating weight, Other specifications

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

Torque converter

Limited-slip differentials

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

Adjustable Electro-hydraulic - EH loader control with one auxiliary function and 3 configurable buttons

Adjustable EH settings:

Smooth

Moderate

Aggressive

Auxiliary Hydraulics

Ride Control™

Locking hydraulics for coupler

EH Parallel Lift

Low-effort steering

Hydraulic driven cooling fan

Diagnostic quick couplers

Split flange hydraulic connections -

1 in or greater

Hydraulic oil cooler

ELECTRICAL

Alternator and voltage regulator

Battery isolator/electrical disconnect

120 amp alternator

(2) 700 CCA 12-volt batteries

Electric starter

Lights:

Integrated 4-corner strobe

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 posts

OTHER

Electric hood lift

Front and rear fenders, partial coverage

External rear view mirrors

Heavy counterweight

Drawbar hitch

Articulation locking bar

Lift arm locking bar

Lift and tie-down points - front/rear

Rear frame side covers

License plate brackets; front bracket

and lit rear bracket

Rubber steering stops

Grouped remote-mounted ecology drains:

Engine oil

Engine coolant

Hydraulic oil

TELEMATICS

CASE SiteWatch™ Telematics – includes hardware and a 5-yr Advanced data subscription

SiteConnect Module providing remote diagnostics capability

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OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Cloth-covered heated air-suspension seat with headrest

Sound Shield noise suppression package

Bluetooth radio, 12V AM/FM with auxiliary input

Cab convenience package:

Rear sun shade, interior mirror, under the seat drawer, coat hook, 12V accessory port, and an ash tray

In cab powered cooler box

In cab accessory mount

Rear view camera

External heated rear view mirrors

Front LED driving/headlights

LED front and rear work lights - 4 front, 2 rear

DRIVETRAIN

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

HD axles options:

Diff Lock Front / Open Rear Diff Lock Front / Limited Slip Rear

Cold weather package:

Heavy-duty (2) 950 CCA 12V batteries

Fuel heater

Hydraulic oil cooler bypass

Low temperature hydraulic oil

Fast-warm hydraulic valve

HYDRAULICS

Secondary steering

Integrated Payload System

Tire Pressure Monitoring System

2-function loader valve with joystick loader control

4-function loader valve with joystick loader control and two proportional auxiliary roller switches

LOADER

XR extended reach version Attachment auxiliary hydraulics Coupler systems - JRB or ACS compatible Buckets - see pages 4 through 6

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 Axle oscillation stops

ADVANCED ENGINE AIR FILTRATION

Sy-Klone® ejector type pre-cleaner

OTHER

Additional RH steps and platform with standard or wide fenders

12.4 mph (20 kph) maximum speed control

Special paint

Skid plate and transmission

Standard fenders with right and left hand steps

Wide full coverage fenders with right and left hand steps

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