

## ENGINE

Make	Case / FPT
Model	F4HFE613Z
	Tier 4 Interim certified
Type	4-stroke, turbocharged and air-to-air-cooled
Cylinders	6-cylinder in-line
Bore / Stroke	4.09 in x 5.20 in (104 X 132 mm)
Displacement	411 in <sup>3</sup> (6.7 L)
Fuel injection	Direct injection (electronic)
Fuel	#2 Diesel (#1 & 2 mixture permitted for cold temperature) B20 biodiesel tolerant
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CR/CP3
Fuel cooler	
Gradeability	
Side-to-side	35°
Fore and aft	35°
Air filter	Dry type elements w/ warning restriction indicator
Mid-mount cooling module	External independent-mounted coolers
Fan	
Style	8 blade puller
Diameter	32 in (813 mm)
Water pump	Integral
Engine oil	
Pump	Deep sump plate cooler with pressurized under-piston nozzles
Pump operating angles ratings	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow spin-on cartridge
Engine speeds	
Rated speed, full load	2000 RPM
Horsepower – per SAE J1349	
Max power mode:	
Peak gross @ 1800 RPM	172 hp (128 kW)
Net rated @ 2000 RPM	151 hp (113 kW)
Peak net @ 2000 RPM	162 hp (121 kW)
Standard power mode:	
Net rated @ 2000 RPM	138 hp (103 kW)
Peak net @ 1600 RPM	146 hp (109 kW)
Economy power mode:	
Net rated @ 2000 RPM	101 hp (75 kW)
Peak net @ 1400 RPM	125 hp (93 kW)

## ENGINE (CONTD.)

Torque – Peak	
Max power mode:	
Gross	538 lb-ft (730 N-m) @1600 RPM
Net	510 lb-ft (692 N-m) @1600 RPM
Standard power mode:	
Gross	530 lb-ft (719 N-m) @1300 RPM
Net	508 lb-ft (689 N-m) @1000 RPM
Economy power mode:	
Gross	527 lb-ft (715 N-m) @1200 RPM
Net	508 lb-ft (689 N-m) @1200 RPM
Torque rise	
Max power mode	33%

## DRIVETRAIN

Transmission	4F/3R proportional with Electronic Control Module torque sensing auto / manual shift and modulation	
Gears	Helical cut	
Torque converter	4 speed 2.66:1	
Differential (standard axles)	Limited slip on front and rear axles	
Rear axle oscillation	24° total	
Axles	Front	Rear
Differential ratio	3.18	3.18
Planetary ratio	6.40	6.40
Final axle ratio	20.34	20.36
Heavy duty axles (optional)	Front axle equipped with locking differential Rear axle equipped with open differential	
Planetaries	Outboard	
4-speed transmission travel speeds (mph (km/h) with 20.5 x 25 L3 tires)	Forward	Reverse
1st	4.3 (6.9)	4.5 (7.3)
2nd	8.4 (13.5)	8.8 (14.2)
3rd	14.9 (23.9)	15.6 (25.0)
4th	24.0 (38.6)	
NOTE: Travel speeds at full engine throttle.		
Parking brakes	Spring-applied hydraulic release disc on transmission output shaft	
Service brakes	Hydraulically actuated, maintenance-free, multiple wet disc with accumulator to all four wheels Brake surface area per hub 480 in <sup>2</sup> (0.31 m <sup>2</sup> )	

## ELECTRICAL

Voltage	24 Volts, negative ground
Alternator	65 amp
Batteries	(2) 700 CCA12-volt batteries

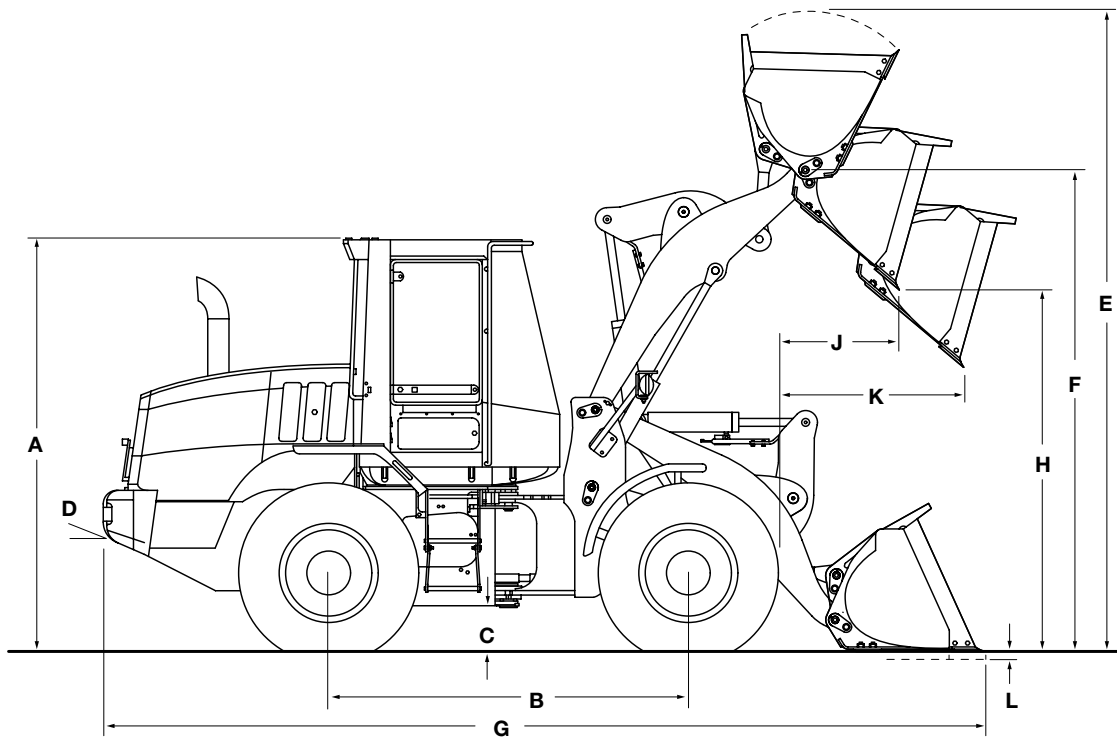
## HYDRAULICS

Pump (steering / implement)	Closed center pressure / flow compensated	
Variable displacement maximum flow	5.49 in <sup>3</sup> (90cc)/rev 45.2 gpm @ 2000 RPM @ 3600 psi (171 L/min @ 2000 RPM @ 24 822 kPa)	
Loader control valve	Closed-center, load-sensing, sectional 2, 3 or 4-spool with pilot control for lift, tilt and auxiliary hydraulics, regeneration for bucket dump circuit, electromagnetic detents in float, raise and rollback	
Loader secondary steering (optional)	Hydraulic orbital center-pivot articulating with on-demand oil flow	
High pressure standby	Implement	3625 psi (25 000 kPa)
	Steering	3500 psi (24 132 kPa)
Filtration	10-micron, full flow replaceable cartridges on return line furnish only clean oil to all components of the system, condition indicator light for filter	

## CYLINDERS

Lift cylinder	Bore diameter	4.75 in (120.6 mm)
	Rod diameter	2.50 in (63.5 mm)
	Stroke	31.00 in (787.6 mm)
Dump cylinder (Z-Bar and XR)	Bore diameter	5.00 in (127.0 mm)
	Rod diameter	3.00 in (76.2 mm)
	Stroke	24.40 in (619.7 mm)
Dump cylinders (XT)	Bore diameter	4.50 in (114.0 mm)
	Rod diameter	2.50 in (63.5 mm)
	Stroke	32.60 in (819.9 mm)

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



## DIMENSIONS

<b>A.</b> Height to top of ROPS cab	133.7 in (3395 mm)
<b>B.</b> Wheelbase	114.2 in (2900 mm)
<b>C.</b> Ground clearance	14.6 in (370 mm)
<b>D.</b> Angle of departure	27°
Width	
Overall* w/o bucket	99.3 in (2523 mm)
Centerline tread	76.8 in (1950 mm)
Turning radius* – outside of tires	206.5 in (5245 mm)
Turning angle	
From center	40°
Total angle	80°
Rear axle oscillation, total	24°

NOTE: \*Dimensions taken with 20.5R25 Michelin XTLA tires. For transport dimensions, refer to specific bucket width and overall length on pages 3 through 9.

## WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
20.5x25 12 ply L2 tires	-100 lb (-45 kg)	-72 lb (-33 kg)	-64 lb (-29 kg)
20.5x25 16 ply L2 tires	-44 lb (-20 kg)	-31 lb (-14 kg)	-28 lb (-13 kg)
20.5x25 12 ply L3 tires	+228 lb (+104 kg)	+166 lb (+75 kg)	+146 lb (+66 kg)
20.5x25 16 ply L3 tires	-228 lb (-103 kg)	-179 lb (-81 kg)	-158 lb (-72 kg)
20.5 R25 XHA TL tires	+380 lb (+173 kg)	+276 lb (+125 kg)	+244 lb (+111 kg)
Standard counterweight	-854 lb (-387 kg)	-2,021 lb (-917 kg)	-1,694 lb (-768 kg)
Belly pan	+302 lb (+137 kg)	+231 lb (+105 kg)	+228 lb (+103 kg)
Secondary steering	+80 lb (+36 kg)	+69 lb (+31 kg)	+67 lb (+30 kg)

NOTE: Unit equipped with Z-Bar loader arms, 2.5 yd<sup>3</sup> (1.9 m<sup>3</sup>) general purpose pin on bucket with bolt-on edge, 20.5R25 XTLA Michelin tires, ROPS cab with heater and air conditioner, full counterweight, standard batteries, front and rear fenders, full fuel and 175 lb (79 kg) operator. Adjust select options from rated weight.

## PERFORMANCE DATA

621F Z-Bar	2.5 yd <sup>3</sup> High Density Pin On (1.9 m <sup>3</sup> )	2.5 yd <sup>3</sup> High Density Pin On (1.9 m <sup>3</sup> )	2.75 yd <sup>3</sup> Medium Density Pin On (2.1 m <sup>3</sup> )
	Bucket w/ Bolt-on Edge	Bucket w/ Teeth Only	Bucket w/ Bolt-on Edge
SAE bucket capacity – struck	2.15 yd <sup>3</sup> (1.64 m <sup>3</sup> )	2.05 yd <sup>3</sup> (1.57 m <sup>3</sup> )	2.32 yd <sup>3</sup> (1.77 m <sup>3</sup> )
Heaped	2.50 yd <sup>3</sup> (1.91 m <sup>3</sup> )	2.39 yd <sup>3</sup> (1.83 m <sup>3</sup> )	2.68 yd <sup>3</sup> (2.05 m <sup>3</sup> )
Bucket width – outside	102.4 in (2602 mm)	102.4 in (2602 mm)	102.4 in (2602 mm)
Bucket weight	1,918 lb (870 kg)	1,832 lb (831 kg)	1,989 lb (902 kg)
E. Operating height – fully raised w/ spillguard	194.0 in (4928 mm)	194.0 in (4928 mm)	195.1 in (4956 mm)
F. Hinge pin height – fully raised	150.8 in (3831 mm)	150.8 in (3831 mm)	150.8 in (3831 mm)
G. Overall length – bucket level on ground	285.0 in (7239 mm)	290.8 in (7386 mm)	288.0 in (7315 mm)
Dump angle – fully raised	52°	52°	52°
H. Dump height – fully raised, 45° dump	114.0 in (2896 mm)	110.3 in (2801 mm)	112.1 in (2847 mm)
J. Bucket reach – fully raised, 45° dump	36.2 in (919 mm)	40.3 in (1023 mm)	38.1 in (969 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	57.8 in (1468 mm)	60.0 in (1524 mm)	58.8 in (1493 mm)
Operating load – ISO	9,906 lb (4493 kg)	10,039 lb (4554 kg)	9,780 lb (4436 kg)
Maximum material density – SAE	3,578 lb/yd <sup>3</sup> (2123 kg/m <sup>3</sup> )	3,788 lb/yd <sup>3</sup> (2248 kg/m <sup>3</sup> )	3,292 lb/yd <sup>3</sup> (1954 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	22,557 lb (10 232 kg)	22,845 lb (10 362 kg)	22,283 lb (10 107 kg)
40° turn	19,811 lb (8986 kg)	20,078 lb (9107 kg)	19,560 lb (8872 kg)
Lift capacity			
Full height	16,316 lb (7401 kg)	16,411 lb (7444 kg)	16,237 lb (7365 kg)
Maximum reach	23,022 lb (10 443 kg)	23,123 lb (10 489 kg)	22,935 lb (10 403 kg)
Ground	26,158 lb (11 865 kg)	27,615 lb (12 526 kg)	24,745 lb (11 224 kg)
Breakout force w/ tilt cylinder	27,222 lb (12 348 kg)	24,045 lb (10 907 kg)	25,426 lb (11 533 kg)
Maximum rollback			
Ground	40°	40°	40°
Carry position	43°	43°	43°
@ Maximum reach	52°	52°	52°
@ Full height	55°	55°	55°
L. Dig depth	2.9 in (74 mm)	3.2 in (80 mm)	3.2 in (80 mm)
Maximum grading angle w/ bucket – back dragging	58°	59°	59°
Loader clearance circle w/ bucket	451.5 in (11 469 mm)	454.9 in (11 554 mm)	453.2 in (11 512 mm)

621F/XT	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> )	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> )	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> )
	Bucket w/ JRB-Compatible Coupler w/ Bolt-on Cutting Edge	Bucket w/ JRB-Compatible Coupler w/ Teeth Only	Bucket w/ ACS-Compatible Coupler w/ Bolt-on Cutting Edge
E. Operating height – fully raised w/ spillguard	210.8 in (5353 mm)	212.0 in (5384 mm)	207.6 in (5274 mm)
F. Hinge pin height – fully raised	155.8 in (3958 mm)	155.8 in (3958 mm)	155.8 in (3957 mm)
G. Overall length – bucket level on ground	302.3 in (7679 mm)	308.1 in (7826 mm)	296.6 in (7534 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	107.8 in (2737 mm)	104.0 in (2642 mm)	111.5 in (2831 mm)
J. Bucket reach – fully raised, 45° dump	51.3 in (1304 mm)	55.4 in (1408 mm)	47.1 in (1196 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	70.2 in (1782 mm)	72.0 in (1828 mm)	67.9 in (1726 mm)
Operating load – ISO	8,260 lb (3747 kg)	8,279 lb (3755 kg)	8,388 lb (3805 kg)
Maximum material density – SAE	2,973 lb/yd <sup>3</sup> (1764 kg/m <sup>3</sup> )	3,096 lb/yd <sup>3</sup> (1837 kg/m <sup>3</sup> )	2,997 lb/yd <sup>3</sup> (1778 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	18,938 lb (8590 kg)	18,968 lb (8604 kg)	19,265 lb (8739 kg)
40° turn	16,520 lb (7493 kg)	16,557 lb (7510 kg)	16,776 lb (7610 kg)
Lift capacity			
Full height	14,122 lb (6406 kg)	14,191 lb (6437 kg)	14,044 lb (6370 kg)
Maximum reach	20,417 lb (9261 kg)	20,492 lb (9295 kg)	20,188 lb (9157 kg)
Ground	30,056 lb (13 633 kg)	29,901 lb (13 563 kg)	34,702 lb (15 740 kg)
Breakout force w/ tilt cylinder	22,793 lb (10 339 kg)	23,890 lb (10 836 kg)	25,313 lb (11 482 kg)
Loader clearance circle w/ bucket	453.7 in (11 523 mm)	456.3 in (11 590 mm)	451.3 in (11 462 mm)

621F XR	2.5 yd <sup>3</sup> High Density Pin On (1.9 m <sup>3</sup> )	2.5 yd <sup>3</sup> High Density Pin On (1.9 m <sup>3</sup> )	2.75 yd <sup>3</sup> Medium Density Pin On (2.1 m <sup>3</sup> )
	Bucket w/ Bolt-on Edge	Bucket w/ Teeth Only	Bucket w/ Bolt-on Edge
E. Operating height – fully raised w/ spillguard	210.3 in (5341 mm)	210.3 in (5341 mm)	211.4 in (5369 mm)
F. Hinge pin height – fully raised	167.1 in (4244 mm)	167.1 in (4244 mm)	167.1 in (4244 mm)
G. Overall length – bucket level on ground	301.2 in (7650 mm)	306.9 in (7796 mm)	304.1 in (7725 mm)
Dump angle – fully raised	46°	46°	46°
H. Dump height – fully raised, 45° dump	130.3 in (3309 mm)	126.5 in (3214 mm)	128.3 in (3259 mm)
J. Bucket reach – fully raised, 45° dump	36.8 in (934 mm)	40.9 in (1038 mm)	38.7 in (984 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	71.6 in (1820 mm)	74.1 in (1882 mm)	72.8 in (1848 mm)
Operating load – ISO	8,221 lb (3729 kg)	8,330 lb (3778 kg)	8,121 lb (3684 kg)
Maximum material density – SAE	3,006 lb/yd <sup>3</sup> (1784 kg/m <sup>3</sup> )	3,182 lb/yd <sup>3</sup> (1888 kg/m <sup>3</sup> )	2,767 lb/yd <sup>3</sup> (1642 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	18,818 lb (8536 kg)	19,053 lb (8642 kg)	18,602 lb (8438 kg)
40° turn	16,442 lb (7458 kg)	16,660 lb (7557 kg)	16,242 lb (7367 kg)
Lift capacity			
Full height	15,840 lb (7185 kg)	15,932 lb (7227 kg)	15,765 lb (7151 kg)
Maximum reach	20,464 lb (9282 kg)	20,576 lb (9333 kg)	20,367 lb (9238 kg)
Ground	25,427 lb (11 533 kg)	25,651 lb (11 635 kg)	25,192 lb (11 427 kg)
Breakout force w/ tilt cylinder	28,069 lb (12 732 kg)	24,774 lb (11 237 kg)	26,201 lb (11 885 kg)
Loader clearance circle w/ bucket	466.3 in (11 844 mm)	470.1 in (11 939 mm)	468.2 in (11 893 mm)

## PERFORMANCE DATA

621F Z-Bar	2.75 yd <sup>3</sup> Medium Density Pin On (2.1 m <sup>3</sup> ) Bucket w/ Teeth Only	3.0 yd <sup>3</sup> Low Density Pin On (2.3 m <sup>3</sup> ) Bucket w/ Bolt-on Edge	3.0 yd <sup>3</sup> (2.3 m <sup>3</sup> ) Bucket w/ Grapple w/ Bolt-on Edge
	SAE bucket capacity – struck	2.22 yd <sup>3</sup> (1.70 m <sup>3</sup> )	2.56 yd <sup>3</sup> (1.96 m <sup>3</sup> )
Heaped	2.59 yd <sup>3</sup> (1.98 m <sup>3</sup> )	3.00 yd <sup>3</sup> (2.29 m <sup>3</sup> )	3.00 yd <sup>3</sup> (2.29 m <sup>3</sup> )
Bucket width – outside	102.4 in (2602 mm)	102.4 in (2602 mm)	102.4 in (2602 mm)
Bucket weight	1,903 lb (863 kg)	2,090 lb (948 kg)	3,553 lb (1612 kg)
E. Operating height – fully raised w/ spillguard	195.1 in (4956 mm)	198.1 in (5033 mm)	198.1 in (5031 mm)
F. Hinge pin height – fully raised	150.8 in (3831 mm)	150.8 in (3831 mm)	150.7 in (3829 mm)
G. Overall length – bucket level on ground	293.8 in (7461 mm)	290.7 in (7383 mm)	290.7 in (7385 mm)
Dump angle – fully raised	52°	52°	51°
H. Dump height – fully raised, 45° dump	108.3 in (2751 mm)	110.3 in (2802 mm)	110.2 in (2799 mm)
J. Bucket reach – fully raised, 45° dump	42.2 in (1072 mm)	39.9 in (1013 mm)	39.9 in (1013 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	60.9 in (1547 mm)	59.7 in (1515 mm)	59.6 in (1514 mm)
Operating load – ISO	9,911 lb (4496 kg)	9,649 lb (4377 kg)	8,876 lb (4026 kg)
Maximum material density – SAE	3,455 lb/yd <sup>3</sup> (2050 kg/m <sup>3</sup> )	2,899 lb/yd <sup>3</sup> (1720 kg/m <sup>3</sup> )	2,627 lb/yd <sup>3</sup> (1559 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	22,567 lb (10 236 kg)	22,000 lb (9979 kg)	20,443 lb (9273 kg)
40° turn	19,823 lb (8992 kg)	19,298 lb (8754 kg)	17,752 lb (8052 kg)
Lift capacity			
Full height	16,331 lb (7408 kg)	16,129 lb (7316 kg)	14,710 lb (6672 kg)
Maximum reach	23,036 lb (10 449 kg)	22,818 lb (10 350 kg)	21,439 lb (9724 kg)
Ground	26,080 lb (11 830 kg)	23,226 lb (10 535 kg)	19,047 lb (8640 kg)
Breakout force w/ tilt cylinder	22,636 lb (10 267 kg)	23,967 lb (10 871 kg)	21,598 lb (9797 kg)
Maximum rollback			
Ground	40°	40°	41°
Carry position	43°	43°	44°
@ Maximum reach	52°	52°	53°
@ Full height	55°	55°	55°
L. Dig depth	3.4 in (86 mm)	3.4 in (86 mm)	3.5 in (88 mm)
Maximum grading angle w/ bucket – back dragging	60°	59°	61°
Loader clearance circle w/ bucket	456.7 in (11 599 mm)	454.8 in (11 552 mm)	454.7 in (11 548 mm)

621F/XT	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket w/ ACS-Compatible Coupler w/ Teeth Only
	E. Operating height – fully raised w/ spillguard
F. Hinge pin height – fully raised	155.8 in (3958 mm)
G. Overall length – bucket level on ground	302.3 in (7679 mm)
Dump angle – fully raised	55°
H. Dump height – fully raised, 45° dump	107.7 in (2737 mm)
J. Bucket reach – fully raised, 45° dump	51.1 in (1299 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	70.0 in (1777 mm)
Operating load – ISO	8,496 lb (3854 kg)
Maximum material density – SAE	3,171 lb/yd <sup>3</sup> (1882 kg/m <sup>3</sup> )
Tipping load – ISO	
Straight	19,498 lb (8844 kg)
40° turn	16,992 lb (7707 kg)
Lift capacity	
Full height	14,184 lb (6434 kg)
Maximum reach	20,290 lb (9203 kg)
Ground	35,917 lb (16 292 kg)
Breakout force w/ tilt cylinder	26,699 lb (12 110 kg)
Loader clearance circle w/ bucket	453.8 in (11 527 mm)

### NOTE:

\*Z-Bar performance data shown w/ full counterweight. \*\*XT lift arm with buckets for ACS Pro Series 2000® size 30 HD coupler. \*\*\*XT lift arm with bucket for Case coupler.

Performance data unit equipped with 20.5R25 Michelin XHA TL tires, ROPS cab w/ heater and A/C, 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.

621F XR	2.75 yd <sup>3</sup> Medium Density Pin On (2.1 m <sup>3</sup> ) Bucket w/ Teeth Only	3.0 yd <sup>3</sup> Low Density Pin On (2.3 m <sup>3</sup> ) Bucket w/ Bolt-on Edge	3.0 yd <sup>3</sup> (2.3 m <sup>3</sup> ) Low Density Pin On Bucket w/ Grapple w/ Bolt-on Edge
	E. Operating height – fully raised w/ spillguard	211.4 in (5369 mm)	214.4 in (5446 mm)
F. Hinge pin height – fully raised	167.1 in (4244 mm)	167.1 in (4244 mm)	150.7 in (3829 mm)
G. Overall length – bucket level on ground	309.8 in (7870 mm)	306.8 in (7791 mm)	290.7 in (7385 mm)
Dump angle – fully raised	46°	46°	51°
H. Dump height – fully raised, 45° dump	124.6 in (3164 mm)	126.6 in (3215 mm)	110.2 in (2799 mm)
J. Bucket reach – fully raised, 45° dump	42.8 in (1088 mm)	40.5 in (1029 mm)	39.9 in (1013 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	75.2 in (1909 mm)	73.7 in (1873 mm)	59.6 in (1514 mm)
Operating load – ISO	8,229 lb (3733 kg)	8,015 lb (3635 kg)	8,876 lb (4026 kg)
Maximum material density – SAE	2,904 lb/yd <sup>3</sup> (1723 kg/m <sup>3</sup> )	2,438 lb/yd <sup>3</sup> (1447 kg/m <sup>3</sup> )	2,627 lb/yd <sup>3</sup> (1559 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	18,834 lb (8543 kg)	18,375 lb (8335 kg)	20,443 lb (9273 kg)
40° turn	16,458 lb (7465 kg)	16,030 lb (7271 kg)	17,752 lb (8052 kg)
Lift capacity			
Full height	15,857 lb (7192 kg)	15,661 lb (7104 kg)	14,710 lb (6672 kg)
Maximum reach	20,479 lb (9289 kg)	20,240 lb (9181 kg)	21,439 lb (9724 kg)
Ground	25,415 lb (11 528 kg)	24,904 lb (11 296 kg)	19,047 lb (8640 kg)
Breakout force w/ tilt cylinder	23,307 lb (10 572 kg)	24,684 lb (11 197 kg)	21,598 lb (9797 kg)
Loader clearance circle w/ bucket	472.0 in (11 990 mm)	470.0 in (11 938 mm)	456.1 in (11 585 mm)

## PERFORMANCE DATA

### 621F Z-Bar

	4.5 yd <sup>3</sup> Low Density Pin On (3.4 m <sup>3</sup> ) Bucket w/ Bolt-on Edge	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-Bar Coupler (JRB-Compatible) w/ Bolt-on Edge	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-Bar Coupler (JRB-Compatible) w/ Teeth Only
SAE bucket capacity – struck	4.50 yd <sup>3</sup> (3.44 m <sup>3</sup> )	2.12 yd <sup>3</sup> (1.62 m <sup>3</sup> )	2.05 yd <sup>3</sup> (1.57 m <sup>3</sup> )
Heaped	4.50 yd <sup>3</sup> (3.44 m <sup>3</sup> )	2.49 yd <sup>3</sup> (1.90 m <sup>3</sup> )	2.39 yd <sup>3</sup> (1.83 m <sup>3</sup> )
Bucket width – outside	102.4 in (2602 mm)	102.4 in (2602 mm)	102.6 in (2605 mm)
Bucket weight	2,180 lb (989 kg)	2,815 lb (1277 kg)	2,728 lb (1237 kg)
<b>E.</b> Operating height – fully raised w/ spillguard	212.9 in (5407 mm)	200.3 in (5087 mm)	200.3 in (5088 mm)
<b>F.</b> Hinge pin height – fully raised	150.8 in (3831 mm)	150.8 in (3830 mm)	150.8 in (3830 mm)
<b>G.</b> Overall length – bucket level on ground	302.8 in (7691 mm)	293.8 in (7462 mm)	299.6 in (7609 mm)
Dump angle – fully raised	51°	52°	52°
<b>H.</b> Dump height – fully raised, 45° dump	102.3 in (2597 mm)	108.4 in (2752 mm)	104.6 in (2657 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	47.9 in (1216 mm)	42.9 in (1089 mm)	47.0 in (1193 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	63.0 in (1599 mm)	61.6 in (1564 mm)	63.5 in (1613 mm)
Operating load – ISO	9,217 lb (4181 kg)	8,853 lb (4016 kg)	8,974 lb (4071 kg)
Maximum material density – SAE	1,839 lb/yd <sup>3</sup> (1091 kg/m <sup>3</sup> )	3,202 lb/yd <sup>3</sup> (1900 kg/m <sup>3</sup> )	3,371 lb/yd <sup>3</sup> (2000 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	21,033 lb (9540 kg)	20,277 lb (9198 kg)	20,538 lb (9316 kg)
40° turn	18,435 lb (8362 kg)	17,706 lb (8031 kg)	17,948 lb (8141 kg)
Lift capacity			
Full height	16,060 lb (7285 kg)	15,373 lb (6973 kg)	15,469 lb (7016 kg)
Maximum reach	22,768 lb (10 327 kg)	22,036 lb (9995 kg)	22,137 lb (10 041 kg)
Ground	17,709 lb (8033 kg)	17,650 lb (8006 kg)	18,437 lb (8363 kg)
Breakout force w/ tilt cylinder	18,517 lb (8399 kg)	21,822 lb (9898 kg)	23,097 lb (10 476 kg)
Maximum rollback			
Ground	41°	40°	40°
Carry position	44°	43°	43°
@ Maximum reach	53°	52°	52°
@ Full height	55°	55°	55°
<b>L.</b> Dig depth	4.4 in (112 mm)	3.0 in (75 mm)	3.2 in (82 mm)
Maximum grading angle w/ bucket – back dragging	64°	60°	62°
Loader clearance circle w/ bucket	462.1 in (11 737 mm)	456.7 in (11 599 mm)	460.3 in (11 692 mm)

### 621F XR

	4.5 yd <sup>3</sup> Low Density Pin On (3.4 m <sup>3</sup> ) Bucket w/ Bolt-on Edge	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-bar Coupler (JRB-Compatible) w/ Bolt-on Edge	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-bar Coupler (JRB-Compatible) w/ Teeth Only
<b>E.</b> Operating height – fully raised w/ spillguard	229.1 in (5820 mm)	216.5 in (5500 mm)	216.6 in (5500 mm)
<b>F.</b> Hinge pin height – fully raised	167.1 in (4244 mm)	167.0 in (4243 mm)	167.0 in (4243 mm)
<b>G.</b> Overall length – bucket level on ground	318.8 in (8096 mm)	309.9 in (7873 mm)	315.7 in (8018 mm)
Dump angle – fully raised	46°	46°	46°
<b>H.</b> Dump height – fully raised, 45° dump	118.5 in (3010 mm)	124.6 in (3165 mm)	120.9 in (3070 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	48.5 in (1232 mm)	43.5 in (1104 mm)	47.6 in (1208 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	77.7 in (1974 mm)	75.8 in (1926 mm)	78.0 in (1982 mm)
Operating load – ISO	7,704 lb (3494 kg)	7,349 lb (3333 kg)	7,450 lb (3379 kg)
Maximum material density – SAE	1,557 lb/yd <sup>3</sup> (924 kg/m <sup>3</sup> )	2,689 lb/yd <sup>3</sup> (1596 kg/m <sup>3</sup> )	2,832 lb/yd <sup>3</sup> (1680 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	17,679 lb (8019 kg)	16,945 lb (7686 kg)	17,162 lb (7784 kg)
40° turn	15,408 lb (6989 kg)	14,697 lb (6667 kg)	14,899 lb (6758 kg)
Lift capacity			
Full height	15,598 lb (7075 kg)	14,919 lb (6767 kg)	15,011 lb (6809 kg)
Maximum reach	20,106 lb (9120 kg)	19,397 lb (8798 kg)	19,508 lb (8849 kg)
Ground	24,037 lb (10 903 kg)	23,402 lb (10 615 kg)	23,624 lb (10 716 kg)
Breakout force w/ tilt cylinder	19,009 lb (8623 kg)	22,523 lb (10 216 kg)	23,817 lb (10 803 kg)
Loader clearance circle w/ bucket	477.9 in (12 140 mm)	471.9 in (11 987 mm)	475.9 in (12 089 mm)

## PERFORMANCE DATA

### 621F Z-Bar

	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-Bar Coupler (ACS-Compatible) w/ Bolt-on Edge	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-Bar Coupler (ACS-Compatible) w/ Teeth Only
SAE bucket capacity – struck	2.15 yd <sup>3</sup> (1.64 m <sup>3</sup> )	2.05 yd <sup>3</sup> (1.57 m <sup>3</sup> )
Heaped	2.50 yd <sup>3</sup> (1.91 m <sup>3</sup> )	2.39 yd <sup>3</sup> (1.83 m <sup>3</sup> )
Bucket width – outside	102.4 in (2602 mm)	102.6 in (2605 mm)
Bucket weight	2,815 lb (1277 kg)	2,728 lb (1237 kg)
<b>E.</b> Operating height – fully raised w/ spillguard	199.2 in (5059 mm)	199.2 in (5060 mm)
<b>F.</b> Hinge pin height – fully raised	150.8 in (3829 mm)	150.8 in (3830 mm)
<b>G.</b> Overall length – bucket level on ground	292.1 in (7419 mm)	297.8 in (7563 mm)
Dump angle – fully raised	52°	52°
<b>H.</b> Dump height – fully raised, 45° dump	109.5 in (2781 mm)	105.8 in (2687 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	41.7 in (1059 mm)	45.7 in (1162 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	61.0 in (1550 mm)	63.0 in (1600 mm)
Operating load – ISO	8,888 lb (4032 kg)	9,005 lb (4084 kg)
Maximum material density – SAE	3,192 lb/yd <sup>3</sup> (1894 kg/m <sup>3</sup> )	3,378 lb/yd <sup>3</sup> (2005 kg/m <sup>3</sup> )
Tipping load – ISO		
Straight	20,381 lb (9245 kg)	20,634 lb (9359 kg)
40° turn	17,776 lb (8063 kg)	18,009 lb (8169 kg)
Lift capacity		
Full height	15,194 lb (6892 kg)	15,279 lb (6930 kg)
Maximum reach	21,868 lb (9919 kg)	21,959 lb (9960 kg)
Ground	18,685 lb (8475 kg)	19,536 lb (8861 kg)
Breakout force w/ tilt cylinder	22,527 lb (10 218 kg)	23,886 lb (10 834 kg)
Maximum rollback		
Ground	40°	40°
Carry position	43°	43°
@ Maximum reach	52°	52°
@ Full height	55°	55°
<b>L.</b> Dig depth	2.9 in (73 mm)	3.1 in (79 mm)
Maximum grading angle w/ bucket – back dragging	60°	61°
Loader clearance circle w/ bucket	455.6 in (11 573 mm)	459.2 in (11 663 mm)

### 621F XR

	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-bar Coupler (ACS-Compatible) w/ Bolt-on Edge	2.5 yd <sup>3</sup> General Purpose (1.9 m <sup>3</sup> ) Bucket on Z-bar Coupler (ACS-Compatible) w/ Teeth Only
<b>E.</b> Operating height – fully raised w/ spillguard	215.4 in (5472 mm)	215.5 in (5473 mm)
<b>F.</b> Hinge pin height – fully raised	167.0 in (4242 mm)	167.0 in (4243 mm)
<b>G.</b> Overall length – bucket level on ground	308.2 in (7829 mm)	313.9 in (7973 mm)
Dump angle – fully raised	46°	46°
<b>H.</b> Dump height – fully raised, 45° dump	125.7 in (3194 mm)	122.0 in (3100 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	42.3 in (1074 mm)	46.3 in (1177 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	75.2 in (1909 mm)	77.4 in (1966 mm)
Operating load – ISO	7,347 lb (3333 kg)	7,444 lb (3376 kg)
Maximum material density – SAE	2,670 lb/yd <sup>3</sup> (1584 kg/m <sup>3</sup> )	2,826 lb/yd <sup>3</sup> (1677 kg/m <sup>3</sup> )
Tipping load – ISO		
Straight	16,968 lb (7697 kg)	17,175 lb (7791 kg)
40° turn	14,695 lb (6666 kg)	14,887 lb (6753 kg)
Lift capacity		
Full height	14,734 lb (6683 kg)	14,816 lb (6721 kg)
Maximum reach	19,246 lb (8730 kg)	19,347 lb (8776 kg)
Ground	23,441 lb (10 633 kg)	23,652 lb (10 728 kg)
Breakout force w/ tilt cylinder	23,260 lb (10 550 kg)	24,641 lb (11 177 kg)
Loader clearance circle w/ bucket	470.8 in (11 958 mm)	474.7 in (12 058 mm)

## INSTRUMENTATION

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Electronic Information Center
Displays / gauges
Analog
Fuel level
Engine coolant temperature
Transmission oil temperature
Hydraulic oil temperature
LCD screen
(metric / English; multiple languages)
Hour meter
Engine speed
Travel speed
Current gear selection
FNR indication
Clock
Trip computer
Fuel consumption
Fuel level percentage
DEF (Diesel Exhaust Fluid) gauge
Oil pressure
Coolant temperature
Engine oil temperature
Transmission oil temperature
Transmission sump oil temperature
Hydraulic oil temperature
Turbocharger air temperature
Differential lock indicator*
Joystick steering indicator*
Automatic transmission indicator
De-clutch indicator
Engine mode indicator
Engine diagnostics
Transmission diagnostics
System voltage
Error reporting
Indicator lights
Low fuel
Turn signals
Four-way flashers
High beam lights
Grid heater*
Brake pressure
Master indicator
Secondary steering*
Parking brake

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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/ secondary steering)*
Coolant temperature
Hydraulic oil temperature
Transmission oil temperature
Backup alarm

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Horn
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NOTE: \*If equipped with option.

## OPERATOR ENVIRONMENT

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ROPS / FOPS cab w/ heat
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

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## LOADER

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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

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## CYCLE TIME

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Raise w/ rated bucket load	
Z-Bar and XR	6.3 sec
XT	6.5 sec
Dump w/ rated bucket load	
Z-Bar and XR	1.2 sec
XT	2.4 sec
Lower (empty)	
Power down	
Z-Bar and XR	4.4 sec
XT	4.2 sec
Float down	
Z-Bar and XR	4.8 sec
XT	4.2 sec

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## SERVICE CAPACITIES

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Fuel tank	65 gal (246 L)
DEF (Diesel Exhaust Fluid) tank	15.8 gal (59.8 L)
Usable capacity	10.9 gal (41.3 L)
Hydraulic system	
Total	39.0 gal (147.6 L)
Reservoir	24.0 gal (90.8 L)
Transmission	
Service w/ filter	28.2 qt (26.7 L)
Front and rear axle	
Front axle	23.2 qt (22 L)
Rear axle	23.2 qt (22 L)
Front and rear axle (optional)	
Front axle	23.2 qt (22 L)
Rear axle	23.2 qt (22 L)
Engine oil w/ filter	14 qt (13.2 L)
Cooling system (-40)	28.4 qt (26.8 L)

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## OPERATING WEIGHTS

### Z-Bar

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Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XTLA Michelin tires, front and rear fenders, 2.5 yd <sup>3</sup> (1.9 m <sup>3</sup> ) HD Pin On bucket w/ edge, full fuel, 175 lb (79 kg) operator
26,641 lb (12 084 kg)

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### XT

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Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XTLA Michelin tires, front and rear fenders, 2.5 yd <sup>3</sup> (1.9 m <sup>3</sup> ) CNH GP w/ edge, CNH XT Coupler standard batteries, full fuel, 175 lb (79 kg) operator
27,695 lb (12 562 kg)

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### XR

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Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XTLA TL Michelin tires, front and rear fenders, 2.5 yd <sup>3</sup> (1.9 m <sup>3</sup> ) Pin On bucket w/ edge, full fuel, 175 lb (79 kg) operator
27,072 lb (12 280 kg)

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## STANDARD EQUIPMENT

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### OPERATOR'S ENVIRONMENT

ROPS / FOPS cab structure  
See page 7

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### ENGINE

Case/FPT F4HFE613Z  
Tier 4 Interim certified  
Selectable work modes:  
    Max power  
    Standard power  
    Economy power  
    Auto power  
Turbocharger  
Charge air cooling  
Automatic fan belt tensioner  
Integral engine oil cooling  
Fuel filter w/ water trap  
Dual-element dry-type air cleaner  
Hydraulic-driven cooling fan  
65 amp alternator  
(2) 700 CCA 12-volt batteries  
Liquid-cooled radiator  
Mid-mounted cooling module  
Common rail electronic fuel injection

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### LOADER

See page 7

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### DRIVETRAIN

4-wheel drive  
4F/3R Selectable auto / 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  
Outboard planetary axles  
Limited-slip differentials  
Transmission oil cooler  
Brake pedal transmission disconnect  
Hydraulic wet disc brakes  
Spring-applied hydraulic release parking brake  
Limp-Home Mode  
Greaseable rear axle trunnion  
3-piece rims

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### HYDRAULICS

2-spool loader control valve with single lever joystick control  
Low-effort steering  
Hydraulic driven fan  
(8) Diagnostic quick couplers  
Split flange hydraulic connections (1 inch or greater)

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### ELECTRICAL

Alternator and voltage regulator  
Electrical disconnect  
(2) 700 CCA 12-volt batteries  
Electric starter  
Front and rear halogen flood lights  
Tail lights and stop lights combined  
(2) Front driving headlights (high / low beam)  
(2) Front flood  
(2) LED stop / tail lights  
(2) Rear flood  
Front and rear turn signal / flash  
Key start / stop switch  
Telematics plug port  
Backup alarm  
Centrally located fuse box with all electrical circuits protected

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### OTHER

Electric raise-up hood  
Front and rear fenders, partial coverage  
Standard counterweight  
Drawbar hitch  
Articulation locking bar  
Lift arm locking bar  
Lift and tie-down points – front / rear  
Grouped remote-mounted ecology drains:  
    Engine oil  
    Engine coolant  
    Hydraulic oil

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## OPTIONAL EQUIPMENT

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### OPERATOR'S COMPARTMENT

Heated cloth-covered air-suspension seat  
Vinyl-covered mechanical suspension seat  
3 in (76 mm) retractable seat belt  
Sound Shield noise suppression package  
Cab air-conditioning w/ heater  
Radio  
Radio-ready (12 or 24-volt) with auxiliary power (12-volt)  
Cab convenience package  
RH steps and platform  
Rotating beacon  
Second brake pedal  
Open ROPS  
Joystick steering  
External rearview mirrors  
External rearview mirrors, heated  
Rear view camera with accessory mount  
In-cab accessory mount  
Extra front-facing work lights

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### LOADER

XR extended reach version  
XT integrated toolcarrier version  
Attachment auxiliary hydraulics  
Coupler systems (JRB or ACS compatible)  
Buckets (see pages 3 through 6)  
4 - 1 clamp buckets  
Forks  
Material handling arm  
Broom

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### DRIVETRAIN

Heavy duty axles with auto-locking front differential, rear conventional differential, and with bronze sintered brake pads  
Commodity King package with heavy debris cooling system  
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  
Full-view or ejector type pre-cleaner  
Remote jump start receptacle

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### HYDRAULICS

Auxiliary hydraulics  
Ride Control  
Secondary steering  
3-spool loader valve with joystick plus lever, or 2-lever loader control plus auxiliary lever  
Variable speed hydraulic reversing fan  
Hydraulic cooler

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### TIRES

20.5-25 12 PR L2 bias (dirt / traction)  
20.5-25 16 PR L2 bias (dirt / traction)  
20.5-25 12 PR L3 bias (rock)  
20.5-25 16 PR L3 bias (rock)  
20.5 R25 L2 radial (dirt / traction)  
20.5 R25 L3 radial (rock)  
20.5 R25 radial Michelin SnoPlus  
20.5 R25 radial Bridgestone Snow Wedge  
SolidFlex HD solid tires on adapter rims  
Spare wheels and tires  
Axle oscillation stops  
Wheel chocks

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### OTHER

Full coverage fenders  
Right and left side steps  
Belly pan  
Side guards for rear frame  
Tool box - ground level access  
Extra counterweight (included with XT, XR)  
Fire extinguisher  
License plate bracket  
12.4 mph (20 kph) maximum speed control  
Special paint

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

NOTE: All engines meet current EPA emissions requirements.

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All Case construction equipment is biodiesel ready.