

ENGINE

Make	FPT
Model	F4HFE613X Tier 4 interim certified
Fuel	#2 Diesel (#1 & 2 mixture permitted for cold temperature) Does not require ultra-low sulfur fuel B5 biodiesel tolerant
Type	4-stroke, turbocharged
Cylinders	6-cylinder in-line
Bore/Stroke	4.09 in x 5.20 in (104 X 132 mm)
Displacement	411 in ³ (6.7 L)
Fuel injection	Direct injection (electronic)
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CP 3.3
Fuel cooler	
Gradeability	35° fore /aft & side to side
Air filter	Dry type element w/warning restriction indicator
Mid-mount cooling module	External independent mounted coolers
Fan – Hydraulic drive	
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	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow, spin-on cartridge
Engine speeds (rpm)	
Rated speed, full load	2000
Horsepower (per SAE J1349)	
Peak Gross HP – 230 (172 kW) @ 1800	
Max Power Curve –	
Net Rated @ 2000 RPM – 206 HP (153 kW)	
Net Peak @ 1800 RPM – 211 HP (158 kW)	
Std Power Curve –	
Net Rated @ 2000 RPM – 178 HP (133 kW)	
Net Peak @ 1700 RPM – 193 HP (144 kW)	
Eco Power Curve –	
Net Rated @ 2000 RPM – 123 HP (92 kW)	
Net Peak @ 1500 RPM – 161 HP (120 kW)	

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

ENGINE (CONTD.)

Torque – Peak	
Max Power Range –	
Gross	873 lb-ft (1184 N-m) @1300 rpm
Net	845 lb-ft (1145 N-m) @1300 rpm
Standard Power Range –	
Gross	745 lb-ft (1010 N-m) @1300 rpm
Net	716 lb-ft (971 N-m) @1300 rpm
Economy Power Range –	
Gross	664 lb-ft (900 N-m) @1300 rpm
Net	635 lb-ft (861 N-m) @1300 rpm
Torque rise	
Max Power Range	47%

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	5 speed
	2.28:1	2.42:1
Differential		Limited slip 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	
Special application axles (optional)		
Front axle equipped with locking differential		
Rear axle equipped with open differential		
Planetaries		Outboard
4 speed transmission travel speeds (mph (km/h) w/23.5 x 25 L3 tires)		
	Forward	Reverse
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)	NA
NOTE: Travel speeds at full engine throttle.		
5 speed transmission w/lock-up torque converter travel speeds (mph (km/h) w/23.5 x 25 L3 tires)		
	Forward	Reverse
1st	4.1 (6.6)	4.4 (7.0)
2nd	7.1 (11.4)	7.4 (12.0)
3rd	10.6 (17.1)	17.2 (27.7)
4th	16.4 (26.4)	NA
5th	24.9 (40.0)	NA
NOTE: Travel speeds at full engine throttle.		

DRIVETRAIN (CONTD.)

Parking brakes	
Spring-applied hydraulic release disc on transmission output shaft	
Service brakes	
Hydraulically actuated, maintenance-free, multiple wet disc w/accumulator to all four wheels	
Brake surface area	
Rear hub	600 in ² (.387 m ²)
Front & opt. rear hub	721 in ² (.465 m ²)

ELECTRICAL

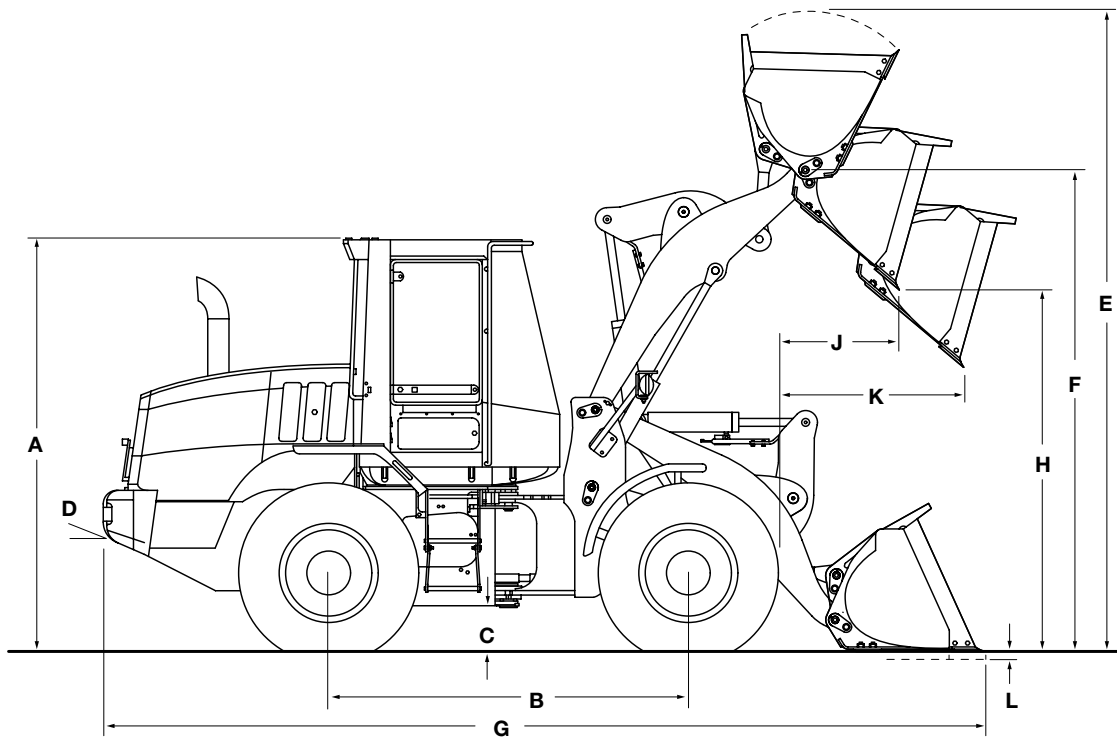
Voltage	24 Volts, negative ground
Alternator	65 amp
Batteries	(2) 12-Volt

HYDRAULICS

Pump (steering/implement)	
Closed center pressure/flow compensated	
Variable displacement	
7.68 in ³ /rev 63.2 gpm @ 2000 rpm (240 L/min @ 2000 rpm)	
Loader control valve	
Closed-center, sectional 2, 3 or 4-spool with 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	3625 psi (25 000 kPa)
Steering	3500 psi (24 132 kPa)
Filtration	
10-micron, full flow replaceable cartridges on return line, condition indicator light for filter	

CYLINDERS

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	23.61 in (599.6 mm)



DIMENSIONS

A. Height to top of ROPS cab	135.8 in (3450 mm)
B. Wheelbase	131.5 in (3340 mm)
C. Ground clearance	16.4 in (415.8 mm)
D. Angle of departure	32°
Width –	
Overall* w/o bucket	113.6 in (2.89 m)
Centerline tread	87.8 in (2.23 m)
Turning radius* – outside	237.5 in (6.03 m)
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 3 through 5.

WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
Base counterweight	-1,678 lb (-761 kg)	-3,884 lb (-1762 kg)	-3,278 lb (-1487 kg)
L2BIAS tires	-948 lb (-430 kg)	-732 lb (-332 kg)	-647 lb (-293 kg)
L3BIAS tires	-312 lb (-142 kg)	-241 lb (-109 kg)	-213 lb (-96 kg)
ROPS Canopy	-295 lb (-134 kg)	-257 lb (-117 kg)	-250 lb (-113 kg)

NOTE: Unit equipped with Z-Bar loader arms, 4.25 yd³ (3.2 m³) general purpose pin on bucket w/bolt-on edge, 23.5-25 Michelin XHA2 tires, ROPS cab with heater/AC, 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

821F Z-Bar*	3.50 yd ³ High Density	3.50 yd ³ High Density	4.25 yd ³ Medium Density
	Pin On (2.6 m ³)	Pin On (2.6 m ³)	Pin On (3.2 m ³)
	Bucket w/Bolt-on Edge	Bucket w/Teeth Only	Bucket w/Bolt-on Edge
SAE bucket capacity – struck	2.90 yd ³ (2.22 m ³)	2.73 yd ³ (2.09 m ³)	3.54 yd ³ (2.71 m ³)
Heaped	3.44 yd ³ (2.63 m ³)	3.20 yd ³ (2.45 m ³)	4.15 yd ³ (3.17 m ³)
Bucket width – outside	119.3 in (3030 mm)	119.9 in (3046 mm)	119.3 in (3030 mm)
Bucket weight	3,107 lb (1410 kg)	3,126 lb (1418 kg)	3,442 lb (1561 kg)
E. Operating height – fully raised w/spillguard	210.1 in (5336 mm)	209.6 in (5325 mm)	216.4 in (5496 mm)
F. Hinge pin height – fully raised	162.3 in (4123 mm)	162.3 in (4123 mm)	162.3 in (4123 mm)
G. Overall length – bucket level on ground	303.1 in (7700 mm)	308.8 in (7844 mm)	309.4 in (7859 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	121.5 in (3086 mm)	117.9 in (2996 mm)	117.4 in (2983 mm)
J. Bucket reach – fully raised, 45° dump	38.8 in (985 mm)	43.6 in (1107 mm)	43.6 in (1107 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	64.0 in (1625 mm)	67.2 in (1708 mm)	67.0 in (1703 mm)
Operating load – ISO	13,871 lb (6292 kg)	14,116 lb (6403 kg)	13,613 lb (6175 kg)
Maximum material density – SAE	3,748 lb/yd ³ (2224 kg/m ³)	4,091 lb/yd ³ (2428 kg/m ³)	3,046 lb/yd ³ (1808 kg/m ³)
Tipping load – ISO			
Straight	32,009 lb (14 519 kg)	32,570 lb (14 774 kg)	31,470 lb (14 275 kg)
40° turn	27,742 lb (12 583 kg)	28,233 lb (12 806 kg)	27,225 lb (12 349 kg)
Lift capacity –			
Full height	22,544 lb (10 226 kg)	22,551 lb (10 229 kg)	22,204 lb (10 071 kg)
Maximum reach	30,430 lb (13 803 kg)	30,467 lb (13 820 kg)	30,072 lb (13 641 kg)
Ground	40,469 lb (18 356 kg)	40,738 lb (18 478 kg)	39,931 lb (18 112 kg)
Breakout force w/tilt cylinder	40,658 lb (18 442 kg)	44,042 lb (19 977 kg)	35,338 lb (16 029 kg)
Maximum rollback –			
Ground	41°	41°	41°
Carry position	44°	44°	44°
@ Maximum reach	54°	54°	54°
@ Full height	59°	59°	59°
L. Dig depth	3.0 in (75 mm)	2.6 in (66 mm)	3.0 in (75 mm)
Maximum grading angle w/bucket – back dragging	59°	60°	60°
Loader clearance circle	519.3 in (13 190 mm)	523.0 in (13 284 mm)	522.8 in (13 279 mm)
821F XR	3.50 yd³ High Density	3.50 yd³ High Density	4.25 yd³ Medium Density
	Pin On (2.6 m³)	Pin On (2.6 m³)	Pin On (3.2 m³)
	Bucket w/Bolt-on Edge	Bucket w/Teeth Only	Bucket w/Bolt-on Edge
E. Operating height – fully raised w/spillguard	227.4 in (5777 mm)	227.0 in (5766 mm)	233.7 in (5937 mm)
F. Hinge pin height – fully raised	179.7 in (4564 mm)	179.7 in (4564 mm)	179.7 in (4564 mm)
G. Overall length – bucket level on ground	322.3 in (8186 mm)	328.0 in (8332 mm)	328.6 in (8345 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	138.9 in (3527 mm)	135.3 in (3437 mm)	134.8 in (3424 mm)
J. Bucket reach – fully raised, 45° dump	43.2 in (1097 mm)	48.0 in (1219 mm)	48.0 in (1219 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	80.9 in (2055 mm)	84.4 in (2143 mm)	84.2 in (2139 mm)
Operating load – ISO	10,951 lb (4967 kg)	11,116 lb (5042 kg)	10,714 lb (4860 kg)
Maximum material density – SAE	2,986 lb/yd ³ (1772 kg/m ³)	3,252 lb/yd ³ (1930 kg/m ³)	2,420 lb/yd ³ (1436 kg/m ³)
Tipping load – ISO			
Straight	25,481 lb (11 558 kg)	25,861 lb (11 730 kg)	24,991 lb (11 336 kg)
40° turn	21,902 lb (9934 kg)	22,232 lb (10 084 kg)	21,429 lb (9720 kg)
Lift capacity –			
Full height	20,692 lb (9386 kg)	20,696 lb (9387 kg)	20,352 lb (9232 kg)
Maximum reach	26,089 lb (11 834 kg)	26,138 lb (11 856 kg)	25,726 lb (11 669 kg)
Ground	30,919 lb (14 024 kg)	31,177 lb (14 142 kg)	30,368 lb (13 775 kg)
Breakout force w/tilt cylinder	41,296 lb (18 731 kg)	44,743 lb (20 295 kg)	35,897 lb (16 283 kg)
Loader clearance circle	538.1 in (13 669 mm)	542.5 in (13 779 mm)	542.4 in (13 776 mm)

PERFORMANCE DATA

821F Z-Bar*	4.25 yd³ Medium Density Pin On (3.2 m³) Bucket w/Teeth Only	4.50 yd³ Low Density Pin On (3.4 m³) Bucket w/Bolt-on Edge	3.5 yd³ General Purpose (2.7 m³) on Case Z-Bar Coupler Bucket w/Bolt-on Edge
SAE bucket capacity – struck	3.44 yd ³ (2.63 m ³)	3.78 yd ³ (2.89 m ³)	2.88 yd ³ (2.20 m ³)
Heaped	3.99 yd ³ (3.05 m ³)	4.43 yd ³ (3.39 m ³)	3.44 yd ³ (2.63 m ³)
Bucket width – outside	119.9 in (3046 mm)	119.3 in (3030 mm)	119.3 in (3030 mm)
Bucket weight	3,485 lb (1581 kg)	3,508 lb (1591 kg)	4,808 lb (2181 kg)
E. Operating height – fully raised w/spillguard	215.5 in (5474 mm)	217.7 in (5530 mm)	216.3 in (5494 mm)
F. Hinge pin height – fully raised	162.3 in (4123 mm)	162.3 in (4123 mm)	162.3 in (4121 mm)
G. Overall length – bucket level on ground	308.6 in (7838 mm)	310.8 in (7894 mm)	313.5 in (7962 mm)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	117.9 in (2995 mm)	116.6 in (2961 mm)	114.8 in (2916 mm)
J. Bucket reach – fully raised, 45° dump	42.7 in (1085 mm)	44.6 in (1133 mm)	46.7 in (1186 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	66.4 in (1686 mm)	67.7 in (1718 mm)	68.9 in (1749 mm)
Operating load – ISO	13,704 lb (6216 kg)	13,494 lb (6121 kg)	12,209 lb (5538 kg)
Maximum material density – SAE	3,185 lb/yd ³ (1890 kg/m ³)	2,821 lb/yd ³ (1674 kg/m ³)	3,284 lb/yd ³ (1948 kg/m ³)
Tipping load – ISO			
Straight	31,682 lb (14 371 kg)	31,207 lb (14 155 kg)	28,419 lb (12 891 kg)
40° turn	27,409 lb (12 432 kg)	26,988 lb (12 241 kg)	24,419 lb (11 076 kg)
Lift capacity –			
Full height	22,174 lb (10 058 kg)	22,132 lb (10 039 kg)	20,766 lb (9420 kg)
Maximum reach	30,054 lb (13 632 kg)	29,984 lb (13 600 kg)	28,527 lb (12 939 kg)
Ground	39,984 lb (18 137 kg)	39,655 lb (17 987 kg)	32,053 lb (14 539 kg)
Breakout force w/tilt cylinder	44,310 lb (20 099 kg)	34,348 lb (15 580 kg)	32,227 lb (14 618 kg)
Maximum rollback –			
Ground	42°	41°	41°
Carry position	44°	44°	44°
@ Maximum reach	54°	54°	54°
@ Full height	59°	59°	59°
L. Dig depth	3.1 in (80 mm)	3.0 in (75 mm)	3.0 in (76 mm)
Maximum grading angle w/bucket – back dragging	60°	60°	61°
Loader clearance circle	522.9 in (13 282 mm)	523.6 in (13 299 mm)	525.1 in (13 338 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.

821F XR	4.25 yd³ Medium Density Pin On (3.2 m³) Bucket w/Teeth Only	4.50 yd³ Low Density Pin On (3.4 m³) Bucket w/ Bolt-on Edge	3.5 yd³ General Purpose (2.7 m³) on Case Z-Bar Coupler Bucket w/Bolt-on Edge
E. Operating height – fully raised w/spillguard	232.9 in (5915 mm)	235.1 in (5971 mm)	233.7 in (5935 mm)
F. Hinge pin height – fully raised	179.7 in (4564 mm)	179.7 in (4564 mm)	179.6 in (4562 mm)
G. Overall length – bucket level on ground	327.7 in (8324 mm)	329.9 in (8380 mm)	332.6 in (8449 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	135.3 in (3437 mm)	133.9 in (3402 mm)	132.2 in (3357 mm)
J. Bucket reach – fully raised, 45° dump	47.1 in (1198 mm)	49.0 in (1246 mm)	51.1 in (1298 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	83.5 in (2122 mm)	84.9 in (2156 mm)	86.2 in (2190 mm)
Operating load – ISO	10,770 lb (4885 kg)	10,618 lb (4816 kg)	9,551 lb (4332 kg)
Maximum material density – SAE	2,527 lb/yd ³ (1899 kg/m ³)	2,241 lb/yd ³ (1330 kg/m ³)	2,591 lb/yd ³ (1537 kg/m ³)
Tipping load – ISO			
Straight	25,121 lb (11 395 kg)	24,778 lb (11 239 kg)	22,485 lb (10 199 kg)
40° turn	21,539 lb (9770 kg)	21,236 lb (9632 kg)	19,101 lb (8664 kg)
Lift capacity –			
Full height	20,322 lb (9218 kg)	20,282 lb (9200 kg)	18,926 lb (8585 kg)
Maximum reach	25,712 lb (11 663 kg)	25,632 lb (11 627 kg)	24,150 lb (10 954 kg)
Ground	30,402 lb (13 790 kg)	30,090 lb (13 649 kg)	27,992 lb (12 697 kg)
Breakout force w/tilt cylinder	45,003 lb (20 413 kg)	34,893 lb (15 827 kg)	32,745 lb (14 853 kg)
Loader clearance circle	542.4 in (13 776 mm)	543.3 in (13 799 mm)	545.1 in (13 846 mm)

PERFORMANCE DATA

821F Z-Bar*

3.5 yd³ General Purpose (2.7 m³)

3.0 yd³ 4-in-1 (2.3 m³)

	on Case Z-Bar Coupler Bucket w/Teeth Only	on Case Z-Bar Coupler Bucket Only
SAE bucket capacity – struck	2.73 yd ³ (2.09 m ³)	2.59 yd ³ (1.98 m ³)
Heaped	3.20 yd ³ (2.45 m ³)	3.03 yd ³ (2.32 m ³)
Bucket width – outside	119.9 in (3046 mm)	119.3 in (3030 mm)
Bucket weight	4,611 lb (2091 kg)	6,534 lb (2964 kg)
E. Operating height – fully raised w/spillguard	216.3 in (5494 mm)	217.2 in (5516 mm)
F. Hinge pin height – fully raised	162.3 in (4121 mm)	162.2 in (4120 mm)
G. Overall length – bucket level on ground	319.6 in (8118 mm)	309.5 in (7861 mm)
Dump angle – fully raised	55°	55°
H. Dump height – fully raised, 45° dump	110.8 in (2815 mm)	116.9 in (2969 mm)
J. Bucket reach – fully raised, 45° dump	51.2 in (1299 mm)	41.8 in (1061 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	71.3 in (1810 mm)	65.0 in (1650 mm)
Operating load – ISO	12,395 lb (5622 kg)	11,448 lb (5193 kg)
Maximum material density – SAE	3,582 lb/yd ³ (2125 kg/m ³)	3,475 lb/yd ³ (2062 kg/m ³)
Tipping load – ISO		
Straight	28,812 lb (13 069 kg)	26,902 lb (12 203 kg)
40° turn	24,790 lb (11 244 kg)	22,897 lb (10 386 kg)
Lift capacity –		
Full height	20,973 lb (9513 kg)	19,049 lb (8640 kg)
Maximum reach	28,747 lb (13 039 kg)	26,826 lb (12 168 kg)
Ground	33,476 lb (15 185 kg)	32,707 lb (14 836 kg)
Breakout force w/tilt cylinder	34,480 lb (15 640 kg)	34,892 lb (15 827 kg)
Maximum rollback –		
Ground	42°	42°
Carry position	44°	44°
@ Maximum reach	54°	54°
@ Full height	59°	59°
L. Dig depth	3.2 in (81 mm)	4.6 in (116 mm)
Maximum grading angle w/bucket – back dragging	62°	60°
Loader clearance circle	529.4 in (13 446 mm)	523.0 in (13 285 mm)

821F XR

3.5 yd³ General Purpose (2.7 m³)

3.0 yd³ 4-in-1 (2.3 m³)

	on CASE Z-Bar Coupler Bucket w/Teeth Only	on CASE Z-Bar Coupler Bucket Only
E. Operating height – fully raised w/spillguard	233.7 in (5936 mm)	234.5 in (5957 mm)
F. Hinge pin height – fully raised	179.6 in (4563 mm)	179.6 in (4561 mm)
G. Overall length – bucket level on ground	338.7 in (8604 mm)	328.4 in (8342 mm)
Dump angle – fully raised	49°	49°
H. Dump height – fully raised, 45° dump	128.2 in (3256 mm)	134.3 in (3410 mm)
J. Bucket reach – fully raised, 45° dump	55.6 in (1412 mm)	46.2 in (1174 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	88.9 in (2259 mm)	82.2 in (2087 mm)
Operating load – ISO	9,713 lb (4406 kg)	8,778 lb (3982 kg)
Maximum material density – SAE	2,830 lb/yd ³ (1680 kg/m ³)	2,684 lb/yd ³ (1593 kg/m ³)
Tipping load – ISO		
Straight	22,826 lb (10 354 kg)	20,946 lb (9501 kg)
40° turn	19,426 lb (8811 kg)	17,557 lb (7964 kg)
Lift capacity –		
Full height	19,131 lb (8678 kg)	17,207 lb (7805 kg)
Maximum reach	24,375 lb (11 056 kg)	22,460 lb (10 188 kg)
Ground	28,338 lb (12 854 kg)	26,545 lb (12 041 kg)
Breakout force w/tilt cylinder	35,026 lb (15 888 kg)	35,423 lb (16 068 kg)
Loader clearance circle	550.0 in (13 970 mm)	542.6 in (13 781 mm)

72 INCH FORKS ON CASE Z-BAR COUPLER

821F Z-Bar

Dimensional

Fork length – Vertical front surface of tine to fork tip	72.0 in (1829 mm)
Fork width (max) – Outside to outside of tine	96.0 in (2438 mm)
Fork clearance @ full height – Ground to top of tine	152.0 in (3861 mm)
Fork reach @ full height – Vertical front surface of tine to front of tire	33.9 in (862 mm)
Fork clearance @ max reach – Ground to top of tine	70.6 in (1794 mm)
Fork reach (max) – Vertical front surface of tine to front of tire	67.9 in (1724 mm)
Fork reach @ ground – Vertical front surface of tine to front of tire	43.5 in (1105 mm)
Fork load center – Vertical front surface of tine to load CG	36.0 in (914 mm)

Operational

Fork attachment weight (includes coupler)	4,163 lb (1888 kg)
Operating load – (per EN 474-3)	
Rough terrain	9,374 lb (4252 kg)
Firm and level ground	12,499 lb (5669 kg)
Tipping load straight ISO	18,510 lb (8396 kg)
Tipping Load @ 40° turn ISO	15,624 lb (7087 kg)
Operating weight	39,596 lb (17 960 kg)

XR

Dimensional

Fork length – Vertical front surface of tine to fork tip	72.0 in (1829 mm)
Fork width (max) – Outside to outside of tine	96.0 in (2438 mm)
Fork clearance @ full height – Ground to top of tine	169.4 in (4302 mm)
Fork reach @ full height – Vertical front surface of tine to front of tire	38.4 in (974 mm)
Fork clearance @ max reach – Ground to top of tine	70.6 in (1792 mm)
Fork reach (max) – Vertical front surface of tine to front of tire	83.7 in (2126 mm)
Fork reach @ ground – Vertical front surface of tine to front of tire	62.9 in (1598 mm)
Fork load center – Vertical front surface of tine to load CG	36.0 in (914 mm)

Operational

Fork attachment weight (includes coupler)	4,163 lb (1888 kg)
Operating load – (per EN 474-3)	
Rough terrain	7,826 lb (3550 kg)
Firm and level ground	10,435 lb (4733 kg)
Tipping load straight ISO	15,621 lb (7086 kg)
Tipping Load @ 40° turn ISO	13,044 lb (5916 kg)
Operating weight	40,437 lb (18 342 kg)

INSTRUMENTATION

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

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

Horn

NOTE: *If equipped with option.

OPERATOR ENVIRONMENT

ROPS cab w/ heat

Key start

Articulated power steering w/tilt column

Fully adjustable, suspension seat

Foot throttle

Single lever 2-spool 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

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

Lower (empty)

Power down 2.9 sec

Float down 2.5 sec

SERVICE CAPACITIES

Fuel tank 76 gal (288 L)

DEF (Diesel Exhaust Fluid) tank 15.8 gal (59.8 L)

Usable capacity 10.9 gal (41.3 L)

Hydraulic system

Total 47 gal (178 L)

Reservoir 24 gal (90.8 L)

Transmission

Service w/filter 36 qt (34.1 L)

Front and rear axle

Front axle 42.3 qt (40 L)

Rear axle 42.3 qt (40 L)

Engine oil w/filter 16 qt (15.1 L)

Cooling system 32 qt (30 L)

OPERATING WEIGHTS

Z-Bar

Unit equipped with ROPS cab with heater and A/C, full counterweight, 23.5R25 XHA2 tires, wide front and rear fenders, 4.25 yd³ (3.2 m³) MD pin on w/bolt on edge, full fuel, 175 lb (79 kg) operator

38,875 lb (17 633 kg)

XR

Unit equipped with ROPS cab with heater and A/C, full counterweight, 23.5R25 XHA2 tires, wide front and rear fenders, 4.25 yd³ (3.2 m³) MD pin on w/bolt on edge, full fuel, 175 lb (79 kg) operator

39,716 lb (18 015 kg)

STANDARD EQUIPMENT

OPERATOR'S ENVIRONMENT

ROPS/FOPS cab structure
See page 7

ENGINE

FPT F4HFE613X
Tier 4 interim certified
Selectable work modes
 Max power
 Auto power
 Standard power
 Economy 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

LOADER

See page 7

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
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

HYDRAULICS

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

ELECTRICAL

Alternator and voltage regulator
Electrical disconnect
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
Centrally located fuse box with all electrical circuits protected

OTHER

Electric hood lift
Front and rear fenders
Standard counterweight
Drawbar hitch
Articulation locking bar
Lift arm locking bar
Lift and tie-down points – front/rear
Backup alarm
Remote drain points

OPTIONAL EQUIPMENT

OPERATOR'S COMPARTMENT

Heated cloth-covered air-suspension seat
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 rear view mirrors
Rear view camera with accessory mount
Extra front-facing work lights

DRIVETRAIN

5F/3R Autoshift/manual shift transmission, lockup torque converter, PowerInch de-clutch
Special application axles with auto-locking front differential and rear open differential
Cold weather package
 Heavy-duty (2) 950 CCA 12V batteries
 Fuel heater
 Hydraulic oil cooler bypass
 Low temperature hydraulic oil
 Grid heater
Full-view or ejector type pre-cleaner
Remote jump start receptacle

HYDRAULICS

Auxiliary hydraulics
Ride Control
Secondary steering
3 or 4-spool loader valves with 2 or 3-lever loader control
Variable speed hydraulic reversing fan
Hydraulic cooler

LOADER

Extended reach XR
Attachment auxiliary hydraulics
Buckets (see pages 3 through 5)
Loader coupler systems
Forks (see page 6)

TIRES

23.5 x 25 L3 Bias
23.5 R25 L2 Radial
23.5 R25 L3 Radial

OTHER

Special paint
Full coverage fenders
Belly pan
Tool box
Counterweight - Z-Bar
Fire extinguisher
Spare wheels and tires
Side guards for rear frame
License plate bracket
20 kph maximum speed control



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

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All Case construction equipment is biodiesel ready.