

## ENGINE

Make	FPT
Model	F4HFE613Y 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 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 filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CR/CP3
Fuel cooler	
Gradeability	35° fore /aft & side to side
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 (rpm)	
Rated speed, full load	2000
Horsepower (per SAE J1349)	
Peak Gross HP – 195 (145 kW) @ 2000	
Max Power Curve –	
Net Rated @ 2000 RPM – 179 HP (133 kW)	
Net Peak @ 2000 RPM – 179 HP (133 kW)	
Std Power Curve –	
Net Rated @ 2000 RPM – 144 HP (107 kW)	
Net Peak @ 1600 RPM – 163 HP (121 kW)	
Eco Power Curve –	
Net Rated @ 2000 RPM – 121 HP (90 kW)	
Net Peak @ 1400 RPM – 138 HP (103 kW)	

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

## ENGINE (CONTD.)

Torque – Peak	
Max Power Range –	
Gross	701 lb-ft (950 N-m) @1300 rpm
Net	674 lb-ft (914 N-m) @1300 rpm
Standard Power Range –	
Gross	620 lb-ft (841 N-m) @1300 rpm
Net	594 lb-ft (805 N-m) @1300 rpm
Economy Power Range –	
Gross	589 lb-ft (799 N-m) @1200 rpm
Net	567 lb-ft (768 N-m) @1200 rpm
Torque rise	
Max Power Range	37%

## 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
	2.81:1	2.42:1
Differential		Limited slip on front and rear axles
Rear axle oscillation		24° total
Axles	Front	Rear
Differential ratio	3.364	3.182
Planetary ratio	6.000	6.400
Final axle ratio	20.18	20.36
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/20.5 x 25 L3 tires)		
	Forward	Reverse
1st	4.7 (7.6)	5.0 (8.0)
2nd	7.9 (12.8)	8.4 (13.4)
3rd	15.2 (24.5)	15.9 (25.7)
4th	23.5 (37.8)	NA
NOTE: Travel speeds at full engine throttle.		
5 speed transmission w/lock-up torque converter travel speeds (mph (km/h) w/20.5 x 25 L3 tires)		
	Forward	Reverse
1st	4.5 (7.2)	4.9 (7.9)
2nd	7.8 (12.6)	8.4 (13.5)
3rd	11.8 (19.0)	19.3 (31.1)
4th	18.3 (29.5)	NA
5th	25.0 (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	600 in <sup>2</sup> per hub (0.387 m <sup>2</sup> )

## ELECTRICAL

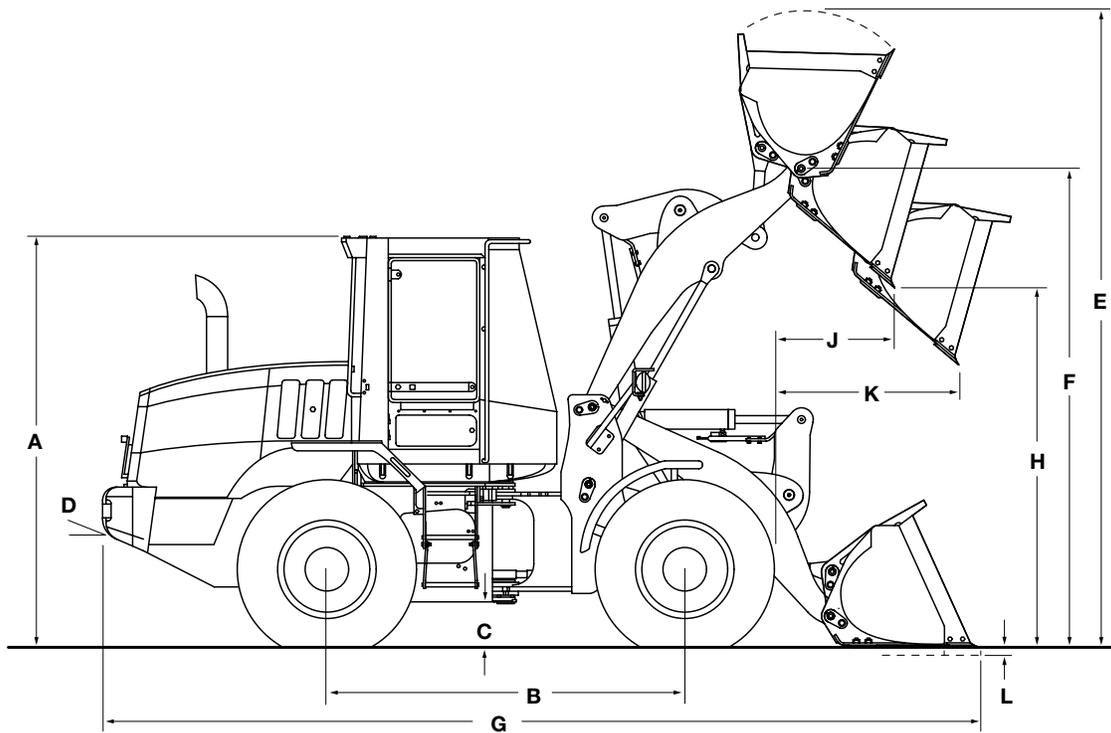
Voltage	24 Volts, negative ground
Alternator	65 amp
Batteries	(2) 12-Volt

## HYDRAULICS

Pump (steering/implement)	
Closed center pressure/flow compensated	
Variable displacement maximum flow	
6.59 in <sup>3</sup> /rev 54.2 gpm @ 2000 rpm (206 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	4.75 in (120.6 mm)
Rod diameter	3.00 in (76.2 mm)
Stroke	32.59 in (827.9 mm)
Dump cylinder (Z-Bar and XR)	
Bore diameter	5.75 in (146.0 mm)
Rod diameter	3.00 in (76.2 mm)
Stroke	24.78 in (629.4 mm)
Dump cylinder (XT)	
Bore diameter	4.50 in (114.3 mm)
Rod diameter	2.25 in (57.2 mm)
Stroke	33.72 in (856.5 mm)



## DIMENSIONS

<b>A.</b> Height to top of ROPS cab	133.3 in (3385 mm)
<b>B.</b> Wheelbase	128.1 in (3253 mm)
<b>C.</b> Ground clearance	14.4 in (365 mm)
<b>D.</b> Angle of departure	32°
Width –	
Overall* w/o bucket	104.4 in (2653 mm)
Centerline tread	79.9 in (2030 mm)
Turning radius* – outside	226.4 in (5750 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 medium length on pages 3 through 9.

## WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
20.5x25 16 ply L2 tires	-556 lb (-252 kg)	-436 lb (-198 kg)	-385 lb (-175 kg)
20.5x25 16 ply L3 tires	-228 lb (-103 kg)	-179 lb (-81 kg)	-158 lb (-72 kg)
20.5 R25 XTLA TL tires	-380 lb (-172 kg)	-298 lb (-135 kg)	-263 lb (-119 kg)
Standard counterweight	-527 lb (-240 kg)	-1,209 lb (-548 kg)	-1,023 lb (-464 kg)
ROPS Canopy	-295 lb (-134 kg)	-339 lb (-154 kg)	-314 lb (-142 kg)

NOTE: Unit equipped with Z-Bar loader arms, 3.0 yd<sup>3</sup> (2.3 m<sup>3</sup>) general purpose pin on bucket w/bolt-on edge, 20.5R25 XHA 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

<b>721F Z-Bar</b>	<b>3.0 yd<sup>3</sup> High Density Pin On (2.3 m<sup>3</sup>) Bucket w/Bolt-on Edge</b>	<b>3.0 yd<sup>3</sup> High Density Pin On (2.3 m<sup>3</sup>) Bucket w/Teeth Only</b>	<b>3.25 yd<sup>3</sup> Medium Density Pin On (2.5 m<sup>3</sup>) Bucket w/Bolt-on Edge</b>
SAE bucket capacity – struck	2.53 yd <sup>3</sup> (1.94 m <sup>3</sup> )	2.42 yd <sup>3</sup> (1.85 m <sup>3</sup> )	2.76 yd <sup>3</sup> (2.11 m <sup>3</sup> )
Heaped	3.01 yd <sup>3</sup> (2.30 m <sup>3</sup> )	2.79 yd <sup>3</sup> (2.13 m <sup>3</sup> )	3.25 yd <sup>3</sup> (2.49 m <sup>3</sup> )
Bucket width – outside	106.3 in (2700 mm)	107.6 in (2732 mm)	106.3 in (2700 mm)
Bucket weight	2,506 lb (1137 kg)	2,605 lb (1182 kg)	2,615 lb (1186 kg)
<b>E.</b> Operating height – fully raised w/spillguard	203.5 in (5169 mm)	203.5 in (5169 mm)	205.9 in (5229 mm)
<b>F.</b> Hinge pin height – fully raised	156.7 in (3979 mm)	156.7 in (3979 mm)	156.7 in (3979 mm)
<b>G.</b> Overall length – bucket level on ground	299.1 in (7596 mm)	305.1 in (7748 mm)	301.1 in (7648 mm)
Dump angle – fully raised	55°	55°	55°
<b>H.</b> Dump height – fully raised, 45° dump	116.7 in (2963 mm)	112.8 in (2864 mm)	115.3 in (2930 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	42.7 in (1086 mm)	47.1 in (1196 mm)	44.3 in (1125 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	64.3 in (1633 mm)	66.9 in (1698 mm)	65.3 in (1658 mm)
Operating load – ISO	11,686 lb (5301 kg)	11,778 lb (5342 kg)	11,606 lb (5265 kg)
Maximum material density – SAE	3,525 lb/yd <sup>3</sup> (2091 kg/m <sup>3</sup> )	3,836 lb/yd <sup>3</sup> (2276 kg/m <sup>3</sup> )	3,237 lb/yd <sup>3</sup> (1920 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	26,696 lb (12 109 kg)	26,919 lb (12 210 kg)	26,530 lb (12 034 kg)
40° turn	23,372 lb (10 601 kg)	23,556 lb (10 685 kg)	23,213 lb (10 529 kg)
Lift capacity –			
Full height	16,288 lb (7388 kg)	16,192 lb (7345 kg)	16,180 lb (7339 kg)
Maximum reach	22,519 lb (10 214 kg)	22,443 lb (10 180 kg)	22,405 lb (10 163 kg)
Ground	29,922 lb (13 572 kg)	30,090 lb (13 649 kg)	29,689 lb (13 467 kg)
Breakout force w/tilt cylinder	32,907 lb (14 926 kg)	35,598 lb (16 147 kg)	31,382 lb (14 235 kg)
Maximum rollback –			
Ground	39°	40°	39°
Carry position	43°	43°	43°
@ Maximum reach	54°	54°	54°
@ Full height	57°	57°	57°
<b>L.</b> Dig depth	2.9 in (73 mm)	3.1 in (78 mm)	2.9 in (73 mm)
Maximum grading angle w/bucket – back dragging	60°	61°	60°
Loader clearance circle	496.3 in (12 607 mm)	500.9 in (12 724 mm)	497.5 in (12 636 mm)

<b>721F/XT</b>	<b>3.0 yd<sup>3</sup> CNH General Purpose (2.3 m<sup>3</sup>) Bucket w/ CNH XT Coupler w/Bolt-on Edge</b>	<b>3.0 yd<sup>3</sup> CNH General Purpose (2.3 m<sup>3</sup>) Bucket w/ CNH XT Coupler w/Teeth Only</b>	<b>2.6 yd<sup>3</sup> General Purpose (2.0 m<sup>3</sup>) 4-in-1 Bucket on CNH XT Coupler</b>
<b>E.</b> Operating height – fully raised w/spillguard	217.3 in (5519 mm)	217.3 in (5519 mm)	217.4 in (5522 mm)
<b>F.</b> Hinge pin height – fully raised	163.8 in (4160 mm)	163.8 in (4160 mm)	163.7 in (4158 mm)
<b>G.</b> Overall length – bucket level on ground	312.2 in (7931 mm)	318.2 in (8083 mm)	305.0 in (7747 mm)
Dump angle – fully raised	55°	55°	55°
<b>H.</b> Dump height – fully raised, 45° dump	115.0 in (2921 mm)	111.1 in (2822 mm)	119.6 in (3038 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	50.3 in (1279 mm)	54.6 in (1386 mm)	44.6 in (1133 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	72.1 in (1832 mm)	74.4 in (1889 mm)	68.5 in (1739 mm)
Operating load – ISO	9,878 lb (4481 kg)	10,070 lb (4568 kg)	9,689 lb (4395 kg)
Maximum material density – SAE	3,032 lb/yd <sup>3</sup> (1799 kg/m <sup>3</sup> )	3,267 lb/yd <sup>3</sup> (1938 kg/m <sup>3</sup> )	3,354 lb/yd <sup>3</sup> (1990 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	22,683 lb (10 289 kg)	23,094 lb (10 475 kg)	22,392 lb (10 157 kg)
40° turn	19,757 lb (8962 kg)	20,140 lb (9135 kg)	19,387 lb (8790 kg)
Lift capacity –			
Full height	14,289 lb (6481 kg)	14,526 lb (6589 kg)	13,324 lb (6044 kg)
Maximum reach	19,988 lb (9067 kg)	20,185 lb (9156 kg)	18,837 lb (8545 kg)
Ground	31,027 lb (14 074 kg)	30,988 lb (14 056 kg)	29,364 lb (13 319 kg)
Breakout force w/tilt cylinder	27,860 lb (12 637 kg)	29,852 lb (13 541 kg)	31,837 lb (14 441 kg)
Loader clearance circle	495.7 in (12 592 mm)	499.5 in (12 687 mm)	492.9 in (12 519 mm)

<b>721F XR</b>	<b>3.0 yd<sup>3</sup> High Density Pin On (2.3 m<sup>3</sup>) Bucket w/Bolt-on Edge</b>	<b>3.0 yd<sup>3</sup> High Density Pin On (2.3 m<sup>3</sup>) Bucket w/Teeth Only</b>	<b>3.25 yd<sup>3</sup> Medium Density Pin On (2.5 m<sup>3</sup>) Bucket w/Bolt-on Edge</b>
<b>E.</b> Operating height – fully raised w/spillguard	219.0 in (5564 mm)	219.0 in (5563 mm)	221.4 in (5623 mm)
<b>F.</b> Hinge pin height – fully raised	172.2 in (4374 mm)	172.2 in (4374 mm)	172.2 in (4374 mm)
<b>G.</b> Overall length – bucket level on ground	313.2 in (7955 mm)	319.1 in (8106 mm)	315.2 in (8006 mm)
Dump angle – fully raised	55°	55°	55°
<b>H.</b> Dump height – fully raised, 45° dump	132.2 in (3358 mm)	128.3 in (3259 mm)	130.9 in (3324 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	42.8 in (1087 mm)	47.1 in (1197 mm)	44.3 in (1126 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	76.4 in (1942 mm)	79.2 in (2012 mm)	77.5 in (1968 mm)
Operating load – ISO	9,785 lb (4438 kg)	9,841 lb (4464 kg)	9,709 lb (4404 kg)
Maximum material density – SAE	2,976 lb/yd <sup>3</sup> (1766 kg/m <sup>3</sup> )	3,233 lb/yd <sup>3</sup> (1918 kg/m <sup>3</sup> )	2,731 lb/yd <sup>3</sup> (1620 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	22,473 lb (10 194 kg)	22,617 lb (10 259 kg)	22,315 lb (10 122 kg)
40° turn	19,569 lb (8876 kg)	19,683 lb (8928 kg)	19,417 lb (8808 kg)
Lift capacity –			
Full height	15,182 lb (6886 kg)	15,085 lb (6842 kg)	15,073 lb (6837 kg)
Maximum reach	20,200 lb (9163 kg)	20,122 lb (9127 kg)	20,086 lb (9111 kg)
Ground	24,933 lb (11 310 kg)	25,033 lb (11 355 kg)	24,726 lb (11 216 kg)
Breakout force w/tilt cylinder	32,733 lb (14 847 kg)	35,415 lb (16 064 kg)	31,215 lb (14 159 kg)
Loader clearance circle	508.7 in (12 922 mm)	513.8 in (13 052 mm)	510.1 in (12 956 mm)

## PERFORMANCE DATA

<b>721F Z-Bar</b>		<b>3.25 yd<sup>3</sup> Medium Density Pin On (2.5 m<sup>3</sup>) Bucket w/Teeth Only</b>	<b>3.5 yd<sup>3</sup> Low Density Pin On (2.7 m<sup>3</sup>) Bucket w/Bolt-on Edge</b>	<b>3.5 yd<sup>3</sup> (2.7 m<sup>3</sup>) Bucket w/Grapple w/Bolt-on Edge</b>
SAE bucket capacity – struck		2.62 yd <sup>3</sup> (2.00 m <sup>3</sup> )	3.01 yd <sup>3</sup> (2.30 m <sup>3</sup> )	3.03 yd <sup>3</sup> (2.32 m <sup>3</sup> )
Heaped		3.01 yd <sup>3</sup> (2.30 m <sup>3</sup> )	3.50 yd <sup>3</sup> (2.68 m <sup>3</sup> )	3.49 yd <sup>3</sup> (2.67 m <sup>3</sup> )
Bucket width – outside		107.6 in (2732 mm)	106.3 in (2700 mm)	106.3 in (2700 mm)
Bucket weight		2,700 lb (1225 kg)	2,823 lb (1280 kg)	4366 lb (1981 kg)
<b>E.</b>	Operating height – fully raised w/spillguard	205.8 in (5228 mm)	208.6 in (5297 mm)	208.1 in (5286 mm)
<b>F.</b>	Hinge pin height – fully raised	156.7 in (3979 mm)	156.7 in (3979 mm)	156.6 in (3977 mm)
<b>G.</b>	Overall length – bucket level on ground	307.1 in (7800 mm)	303.5 in (7708 mm)	303.5 in (7710 mm)
Dump angle – fully raised		55°	55°	55°
<b>H.</b>	Dump height – fully raised, 45° dump	111.5 in (2831 mm)	113.8 in (2891 mm)	113.7 in (2889 mm)
<b>J.</b>	Bucket reach – fully raised, 45° dump	48.6 in (1235 mm)	46.1 in (1171 mm)	46.1 in (1171 mm)
<b>K.</b>	Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	67.8 in (1721 mm)	66.4 in (1686 mm)	66.3 in (1685 mm)
Operating load – ISO		11,706 lb (5310 kg)	11,461 lb (5199 kg)	10,527 lb (4775 kg)
Maximum material density – SAE		3,526 lb/yd <sup>3</sup> (2092 kg/m <sup>3</sup> )	2,964 lb/yd <sup>3</sup> (1759 kg/m <sup>3</sup> )	2,702 lb/yd <sup>3</sup> (1603 kg/m <sup>3</sup> )
Tipping load – ISO				
Straight		26,769 lb (12 142 kg)	26,227 lb (11 896 kg)	24,316 lb (11 029 kg)
40° turn		23,413 lb (10 620 kg)	22,922 lb (10 397 kg)	21,055 lb (9550 kg)
Lift capacity –				
Full height		16,097 lb (7302 kg)	15,972 lb (7245 kg)	14,426 lb (6544 kg)
Maximum reach		22,343 lb (10 134 kg)	22,189 lb (10 065 kg)	20,615 lb (9351 kg)
Ground		29,872 lb (13 550 kg)	29,337 lb (13 307 kg)	27,316 lb (12 390 kg)
Breakout force w/tilt cylinder		33,827 lb (15 344 kg)	29,732 lb (13 486 kg)	27,976 lb (12 690 kg)
Maximum rollback –				
Ground		40°	39°	39°
Carry position		43°	43°	43°
@ Maximum reach		54°	54°	54°
@ Full height		57°	57°	57°
<b>L.</b>	Dig depth	3.1 in (78 mm)	2.9 in (74 mm)	3.0 in (76 mm)
Maximum grading angle w/bucket – back dragging		61°	60°	60°
Loader clearance circle		502.1 in (12 754 mm)	498.8 in (12 671 mm)	498.9 in (12 671 mm)

### 721F/XT

		<b>60 in Fork on CNH XT Coupler</b>
Fork attachment weight including coupler		2387 lb (1082 kg)
Operating load – (per EN 474-3):		
Rough terrain		8289 lb (3760 kg)
Firm and level ground		11,052 in (5013 mm)
Tipping load straight ISO		16,160 in (7330 mm)
Tipping load @ 40° turn ISO		13,815 in (6266 mm)
Unit operating mass		31,500 lb (14,288 kg)

#### 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.

<b>721F XR</b>		<b>3.25 yd<sup>3</sup> Medium Density Pin On (2.5 m<sup>3</sup>) Bucket w/Teeth Only</b>	<b>3.5 yd<sup>3</sup> Low Density Pin On (2.7 m<sup>3</sup>) Bucket w/ Bolt-on Edge</b>	<b>3.5 yd<sup>3</sup> (2.7 m<sup>3</sup>) Bucket w/Grapple w/Bolt-on Edge</b>
<b>E.</b>	Operating height – fully raised w/spillguard	221.4 in (5623 mm)	224.1 in (5692 mm)	223.6 in (5680 mm)
<b>F.</b>	Hinge pin height – fully raised	172.2 in (4374 mm)	172.2 in (4374 mm)	172.1 in (4372 mm)
<b>G.</b>	Overall length – bucket level on ground	321.2 in (8157 mm)	317.6 in (8066 mm)	317.6 in (8068 mm)
Dump angle – fully raised		55°	55°	55°
<b>H.</b>	Dump height – fully raised, 45° dump	127.0 in (3226 mm)	129.4 in (3286 mm)	129.3 in (3284 mm)
<b>J.</b>	Bucket reach – fully raised, 45° dump	48.7 in (1236 mm)	46.1 in (1172 mm)	46.1 in (1172 mm)
<b>K.</b>	Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	80.2 in (2037 mm)	78.7 in (1998 mm)	78.6 in (1998 mm)
Operating load – ISO		9,773 lb (4433 kg)	9,572 lb (4342 kg)	8,671 lb (3933 kg)
Maximum material density – SAE		2,969 lb/yd <sup>3</sup> (1762 kg/m <sup>3</sup> )	2,497 lb/yd <sup>3</sup> (1482 kg/m <sup>3</sup> )	2,243 lb/yd <sup>3</sup> (1331 kg/m <sup>3</sup> )
Tipping load – ISO				
Straight		22,474 lb (10 194 kg)	22,031 lb (9993 kg)	20,194 lb (9,160 kg)
40° turn		19,546 lb (8866 kg)	19,143 lb (8683 kg)	17,341 lb (7866 kg)
Lift capacity –				
Full height		14,990 lb (6799 kg)	14,865 lb (6743 kg)	13,320 lb (6042 kg)
Maximum reach		20,022 lb (9082 kg)	19,871 lb (9013 kg)	18,299 lb (8300 kg)
Ground		24,839 lb (11 267 kg)	24,405 lb (11 070 kg)	22,477 lb (10 196 kg)
Breakout force w/tilt cylinder		33,653 lb (15 265 kg)	29,574 lb (13 414 kg)	27,819 lb (12 619 kg)
Loader clearance circle		515.2 in (13 087 mm)	511.6 in (12 996 mm)	511.7 in (12 996 mm)

## PERFORMANCE DATA

721F Z-Bar	5.5 yd <sup>3</sup> Low Density Pin On (4.2 m <sup>3</sup> ) Bucket w/Bolt-on Edge	3.0 yd <sup>3</sup> General Purpose (2.3 m <sup>3</sup> ) Bucket on CNH Z-Bar Coupler w/ Bolt-on Edge	3.0 yd <sup>3</sup> General Purpose (2.3 m <sup>3</sup> ) Bucket on CNH Z-Bar Coupler w/ Teeth Only
SAE bucket capacity – struck	5.49 yd <sup>3</sup> (4.20 m <sup>3</sup> )	2.51 yd <sup>3</sup> (1.92 m <sup>3</sup> )	2.42 yd <sup>3</sup> (1.85 m <sup>3</sup> )
Heaped	5.49 yd <sup>3</sup> (4.20 m <sup>3</sup> )	2.94 yd <sup>3</sup> (2.25 m <sup>3</sup> )	2.79 yd <sup>3</sup> (2.13 m <sup>3</sup> )
Bucket width – outside	106.3 in (2700 mm)	106.3 in (2700 mm)	107.6 in (2732 mm)
Bucket weight	3,025 lb (1372 kg)	3,722 lb (1688 kg)	3,559 lb (1614 kg)
<b>E.</b> Operating height – fully raised w/spillguard	223.2 in (5669 mm)	211.0 in (5359 mm)	211.0 in (5360 mm)
<b>F.</b> Hinge pin height – fully raised	156.6 in (3979 mm)	156.6 in (3978 mm)	156.6 in (3978 mm)
<b>G.</b> Overall length – bucket level on ground	319.7 in (8119 mm)	309.8 in (7868 mm)	315.7 in (8020 mm)
Dump angle – fully raised	55°	55°	55°
<b>H.</b> Dump height – fully raised, 45° dump	103.1 in (2617 mm)	109.7 in (2787 mm)	105.9 in (2689 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	56.7 in (1441 mm)	50.9 in (1293 mm)	55.2 in (1403 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	71.3 in (1811 mm)	69.2 in (1757 mm)	71.4 in (1814 mm)
Operating load – ISO	10,753 lb (4878 kg)	10,168 lb (4620 kg)	10,379 lb (4708 kg)
Maximum material density – SAE	1,768 lb/yd <sup>3</sup> (1049 kg/m <sup>3</sup> )	3,132 lb/yd <sup>3</sup> (1858 kg/m <sup>3</sup> )	3,373 lb/yd <sup>3</sup> (2001 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	24,651 lb (11 182 kg)	23,444 lb (10 634 kg)	23,860 lb (10 823 kg)
40° turn	21,507 lb (9755 kg)	20,371 lb (9240 kg)	20,758 lb (9416 kg)
Lift capacity –			
Full height	15,759 lb (7148 kg)	15,005 lb (6806 kg)	15,173 lb (6882 kg)
Maximum reach	21,879 lb (9924 kg)	21,060 lb (9552 kg)	21,248 lb (9638 kg)
Ground	27,958 lb (12 682 kg)	26,962 lb (12 230 kg)	27,342 lb (12 402 kg)
Breakout force w/tilt cylinder	22,294 lb (10 112 kg)	26,375 lb (11 964 kg)	28,237 lb (12 808 kg)
Maximum rollback –			
Ground	40°	39°	39°
Carry position	43°	43°	43°
@ Maximum reach	54°	54°	54°
@ Full height	57°	57°	57°
<b>L.</b> Dig depth	4.3 in (110 mm)	2.9 in (75 mm)	3.1 in (80 mm)
Maximum grading angle w/bucket – back dragging	65°	60°	62°
Loader clearance circle	508.8 in (12 923 mm)	502.8 in (12 770 mm)	507.6 in (12 893 mm)

721F XR	5.5 yd <sup>3</sup> Low Density Pin On (4.2 m <sup>3</sup> ) Bucket w/Bolt-on Edge	3.0 yd <sup>3</sup> General Purpose (2.3 m <sup>3</sup> ) Bucket on Z-bar Coupler w/Bolt-on Edge	3.0 yd <sup>3</sup> General Purpose (2.3 m <sup>3</sup> ) Bucket on Z-bar Coupler w/Teeth Only
<b>E.</b> Operating height – fully raised w/spillguard	238.7 in (6064 mm)	226.5 in (5754 mm)	226.5 in (5754 mm)
<b>F.</b> Hinge pin height – fully raised	172.2 in (4373 mm)	172.1 in (4372 mm)	172.2 in (4373 mm)
<b>G.</b> Overall length – bucket level on ground	333.6 in (8473 mm)	323.9 in (8226 mm)	329.8 in (8377 mm)
Dump angle – fully raised	55°	55°	55°
<b>H.</b> Dump height – fully raised, 45° dump	118.6 in (3012 mm)	125.3 in (3182 mm)	121.4 in (3083 mm)
<b>J.</b> Bucket reach – fully raised, 45° dump	56.8 in (1442 mm)	50.9 in (1294 mm)	55.3 in (1404 mm)
<b>K.</b> Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	84.2 in (2140 mm)	81.7 in (2075 mm)	84.2 in (2138 mm)
Operating load – ISO	9,002 lb (4083 kg)	8,495 lb (3853 kg)	8,662 lb (3929 kg)
Maximum material density – SAE	1,492 lb/yd <sup>3</sup> (885 kg/m <sup>3</sup> )	2,631 lb/yd <sup>3</sup> (1561 kg/m <sup>3</sup> )	2,836 lb/yd <sup>3</sup> (1683 kg/m <sup>3</sup> )
Tipping load – ISO			
Straight	20,764 lb (9419 kg)	19,695 lb (8933 kg)	20,051 lb (9095 kg)
40° turn	18,004 lb (8167 kg)	16,991 lb (7707 kg)	17,324 lb (7858 kg)
Lift capacity –			
Full height	14,654 lb (6647 kg)	13,903 lb (6306 kg)	14,071 lb (6383 kg)
Maximum reach	19,570 lb (8877 kg)	18,758 lb (8508 kg)	18,944 lb (8593 kg)
Ground	23,269 lb (10 554 kg)	22,412 lb (10 166 kg)	22,734 lb (10 312 kg)
Breakout force w/tilt cylinder	22,199 lb (10 069 kg)	26,226 lb (11 896 kg)	28,083 lb (12 738 kg)
Loader clearance circle	523.0 in (13 285 mm)	516.2 in (13 111 mm)	521.5 in (13 247 mm)

## PERFORMANCE DATA

### 721F Z-Bar

#### 2.6 yd<sup>3</sup> (1.9 m<sup>3</sup>) 4-in-1 Bucket on CNH Z-bar coupler

	SAE bucket capacity – struck	2.24 yd <sup>3</sup> (1.71 m <sup>3</sup> )
	Heaped	2.59 yd <sup>3</sup> (1.98 m <sup>3</sup> )
	Bucket width – outside	106.3 in (2700 mm)
	Bucket weight	5,000 lb (2268 kg)
<b>E.</b>	Operating height – fully raised w/spillguard	211.4 in (5371 mm)
<b>F.</b>	Hinge pin height – fully raised	156.5 in (3976 mm)
<b>G.</b>	Overall length – bucket level on ground	302.5 in (7684 mm)
	Dump angle – fully raised	55°
<b>H.</b>	Dump height – fully raised, 45° dump	114.4 in (2905 mm)
<b>J.</b>	Bucket reach – fully raised, 45° dump	45.3 in (1150 mm)
<b>K.</b>	Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	65.8 in (1671 mm)
	Operating load – ISO	10,027 lb (4548 kg)
	Maximum material density – SAE	3,477 lb/yd <sup>3</sup> (2063 kg/m <sup>3</sup> )
	Tipping load – ISO	
	Straight	23,223 lb (10 534 kg)
	40° turn	20,053 lb (9096 kg)
	Lift capacity –	
	Full height	13,751 lb (6237 kg)
	Maximum reach	19,885 lb (9020 kg)
	Ground	26,464 lb (12 004 kg)
	Breakout force w/tilt cylinder	30,119 lb (13 662 kg)
	Maximum rollback –	
	Ground	39°
	Carry position	43°
	@ Maximum reach	54°
	@ Full height	57°
<b>L.</b>	Dig depth	3.0 in (77 mm)
	Maximum grading angle w/bucket – back dragging	59°
	Loader clearance circle	498.5 in (12 661 mm)

### 721F XR

#### 2.6 yd<sup>3</sup> General Purpose (1.9 m<sup>3</sup>) 4-in-1 Bucket on Z-bar coupler

<b>E.</b>	Operating height – fully raised w/spillguard	227.0 in (5765 mm)
<b>F.</b>	Hinge pin height – fully raised	172.1 in (4371 mm)
<b>G.</b>	Overall length – bucket level on ground	316.6 in (8042 mm)
	Dump angle – fully raised	55°
<b>H.</b>	Dump height – fully raised, 45° dump	129.9 in (3299 mm)
<b>J.</b>	Bucket reach – fully raised, 45° dump	45.3 in (1151 mm)
<b>K.</b>	Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	78.1 in (1983 mm)
	Operating load – ISO	8,236 lb (3736 kg)
	Maximum material density – SAE	2,876 lb/yd <sup>3</sup> (1707 kg/m <sup>3</sup> )
	Tipping load – ISO	
	Straight	19,251 lb (8732 kg)
	40° turn	16,471 lb (7,471 kg)
	Lift capacity –	
	Full height	12,647 lb (5737 kg)
	Maximum reach	17,576 lb (7972 kg)
	Ground	21,739 lb (9861 kg)
	Breakout force w/tilt cylinder	29,950 lb (13 585 kg)
	Loader clearance circle	511.2 in (12 984 mm)

## 60 INCH FORKS

### 721F Z-Bar Lift Arm: Forks on CNH Z-Bar Coupler

#### Dimensional

Fork length – Vertical front surface of tine to fork tip	60.0 in (1524 mm)
Fork load center – Vertical front surface of tine to load CG	30.0 in (762 mm)
Fork width (max) – Outside to outside of tine	60.0 in (1524 mm)
Fork clearance @ full height – Ground to top of tine	145.3 in (3692 mm)
Fork reach @ full height – Vertical front surface of tine to front of tire	36.8 in (934 mm)
Fork clearance @ max reach – Ground to top of tine	69.2 in (1758 mm)
Fork reach (max) – Vertical front surface of tine to front of tire	67.2 in (1708 mm)
Fork reach @ ground – Vertical front surface of tine to front of tire	42.8 in (1088 mm)

#### Operational

Fork attachment weight (includes coupler)	2,664 lb (1208 kg)
Operating load – (per EN 474-3)	
Rough terrain	8,356 lb (3790 kg)
Firm and level ground	11,141 lb (5054 kg)
Tipping load straight ISO	16,336 lb (7410 kg)
Tipping Load @ 40° turn ISO	13,926 lb (6317 kg)
Operating weight	31,558 lb (14 315 kg)
Overall length – Forks level on ground	334.5 in (8495 mm)

### XT Lift Arm: Forks on CNH XT Coupler

#### Dimensional

Fork length – Vertical front surface of tine to fork tip	60.0 in (1524 mm)
Fork load center – Vertical front surface of tine to load CG	30.0 in (762 mm)
Fork width (max) – Outside to outside of tine	60.0 in (1524 mm)
Fork clearance @ full height – Ground to top of tine	150.7 in (3827 mm)
Fork reach @ full height – Vertical front surface of tine to front of tire	38.1 in (968 mm)
Fork clearance @ max reach – Ground to top of tine	71.1 in (1806 mm)
Fork reach (max) – Vertical front surface of tine to front of tire	70.9 in (1800 mm)
Fork reach @ ground – Vertical front surface of tine to front of tire	45.6 in (1159 mm)

#### Operational

Fork attachment weight (includes coupler)	2,387 lb (1082 kg)
Operating load – (per EN 474-3)	
Rough terrain	8,289 lb (3760 kg)
Firm and level ground	11,052 lb (5013 kg)
Tipping load straight ISO	16,160 lb (7330 kg)
Tipping Load @ 40° turn ISO	13,815 lb (6266 kg)
Operating weight	31,500 lb (14 288 kg)
Overall length – Forks level on ground	337.3 in (8566 mm)

### XR Lift Arm: Forks on CNH Z-Bar Coupler

#### Dimensional

Fork length – Vertical front surface of tine to fork tip	60.0 in (1524 mm)
Fork load center – Vertical front surface of tine to load CG	30.0 in (762 mm)
Fork width (max) – Outside to outside of tine	60.0 in (1524 mm)
Fork clearance @ full height – Ground to top of tine	160.9 in (4086 mm)
Fork reach @ full height – Vertical front surface of tine to front of tire	36.8 in (935 mm)
Fork clearance @ max reach – Ground to top of tine	69.2 in (1756 mm)
Fork reach (max) – Vertical front surface of tine to front of tire	78.5 in (1995 mm)
Fork reach @ ground – Vertical front surface of tine to front of tire	56.9 in (1446 mm)

#### Operational

Fork attachment weight (includes coupler)	2,664 lb (1208 kg)
Operating load – (per EN 474-3)	
Rough terrain	7,356 lb (3336 kg)
Firm and level ground	9,807 lb (4449 kg)
Tipping load straight ISO	14,465 lb (6561 kg)
Tipping Load @ 40° turn ISO	12,259 lb (5561 kg)
Operating weight	32,039 lb (14 533 kg)
Overall length – Forks level on ground	348.6 in (8853 mm)

## 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
- 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

## 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	5.2 sec
Dump w/rated bucket load	
Z-Bar and XR	1.2 sec
XT	1.3 sec
Lower (empty)	
Power down	2.5 sec
Float down	2.4 sec

## SERVICE CAPACITIES

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	47.0 gal (177.8 L)
Reservoir	24.0 gal (90.8 L)
Transmission	
Service w/filter	36 qt (34 L)
Front and rear axle	
Front axle	37 qt (35 L)
Rear axle	24.3 qt (23 L)
Front and rear axle (optional)	
Front axle	37 qt (35 L)
Rear axle	37 qt (35 L)
Engine oil w/filter	16 qt (15.1 L)
Cooling system (-40)	30 qt (28.4 L)

## OPERATING WEIGHTS

### Z-Bar

Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XHA TL Michelin tires, front and rear fenders, 3.25 yd<sup>3</sup> (2.5 m<sup>3</sup>) HD Pin On bucket w/edge, full fuel, 175 lb (79 kg) operator

31,510 lb (14 293 kg)

### XT

Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XHA TL Michelin tires, 3.0 yd<sup>3</sup> (2.3 m<sup>3</sup>) CNH GP with CNH XT Coupler w/edge, standard batteries, full fuel, 175 lb (79 kg) operator

32,339 lb (14 667 kg)

### XR

Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XHA TL Michelin tires, front and rear fenders, 3.25 yd<sup>3</sup> (2.5 m<sup>3</sup>) HD Pin On bucket w/edge, full fuel, 175 lb (79 kg) operator

31,991 lb (14 511 kg)

## STANDARD EQUIPMENT

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### OPERATOR'S ENVIRONMENT

ROPS/FOPS cab structure  
See page 8

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### ENGINE

FPT F4HFE613Y  
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

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### LOADER

See page 8

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### 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  
Greasable rear axle trunnion

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### 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)

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### 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

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### 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  
Remote-mounted ecology drains for  
    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  
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

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### 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  
Commodity King package with heavy debris cooling system  
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

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### HYDRAULICS

Auxiliary hydraulics  
Ride Control  
Secondary steering  
3-spool loader valves with 2-lever loader control (joystick plus lever)  
Variable speed hydraulic reversing fan  
Hydraulic cooler

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### LOADER

Attachment auxiliary hydraulics  
Buckets (see pages 3 through 6)  
Loader coupler systems  
XT parallel lift  
XR extended reach  
Forks (see page 7)

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### TIRES

20.5-25 16 PR L3 bias (rock)  
20.5 R25 L2 radial (dirt/traction)  
20.5 R25 L3 radial (rock)  
20.5 R25 SnoPlus radial (snow)

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### OTHER

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

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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.