

WHEEL LOADER

CASE

CONSTRUCTION

SINCE 1842.

921G

ENGINE

Make	FPT
Model	F4HFE613R
Emissions Certification	Tier 4 Final
Emissions Technology	SCR/DOC
Type	4-stroke, turbocharged and air-to-air cooled
Cylinders	6-cylinder in-line
Bore/Stroke	4.09 x 5.20 in (104 x 132 mm)
Displacement	411 in ³ (6.7 L)
Fuel	#2 Diesel, #1 and #2 mixture permitted for cold temperatures
Fuel injection	Direct injection – electronic
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CP 3.3
Gradeability:	
Side-to-side	35°
Fore and aft	35°
Air filter	Dry type elements w/ warning restriction indicator
Mid-mount cooling module w/ auto reversing fan:	
Mid-mount Air/Water w/ Lube Oil Cooler	
Fan – hydraulic driven:	
Style	8 blade puller
Diameter	32 in (813 mm)
Water pump	Integral
Engine oil pump operating angle ratings:	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow spin-on cartridge
Engine speeds	RPM
Rated – full load	2000
Horsepower – Maximum Power:	
Peak gross @ 1600 RPM	255 hp (190 kW)
Net rated @ 2000 RPM	224 hp (167 kW)
Peak net @ 1600 RPM	242 hp (180 kW)
Torque – Maximum Power:	
Gross @ 1300 RPM	959 lb-ft (1,300 N-m)
Net @ 1300 RPM	930 lb-ft (1,261 N-m)
Net torque rise:	
Maximum power range	58%
NOTE: Gross horsepower and torque per SAE J1995. Net horsepower and torque per SAE J1349.	

DRIVETRAIN

Transmission:	4F/3R Proportional w/ Electronic Control Module torque sensing autoshift/manual shift and modulation	
Gears	Helical cut	
Gear ratios	Forward/Reverse	
1st	4.152/3.937	
2nd	2.184/2.071	
3rd	1.072/1.017	
4th	0.636/ –	
Torque converter:		
Stall ratio – 4-speed	2.283:1	
Differential:		
Front axle equipped w/ locking differential		
Rear axle equipped w/ open differential		
Rear axle oscillation	24° total	
Front and rear axles:		
Differential ratio	4.11	
Planetary ratio	6.00	
Final axle ratio	24.67	
Planetaries	Outboard	
Service brakes:		
Hydraulically actuated, maintenance-free, multiple wet disc w/ accumulator to all four wheels		
Brake surface area:		
Front hub – each	841 in ² (0.542 m ²)	
Rear hub – each	721 in ² (0.465 m ²)	
Parking brakes:		
Spring-applied hydraulic release disc on transmission output shaft neutralizes power flow to wheels when engaged		
Travel speeds – 4-speed transmission:		
	Forward	Reverse
	mph (kph)	mph (kph)
1st	4.0 (6.4)	4.2 (6.8)
2nd	7.4 (12.0)	7.8 (12.6)
3rd	14.3 (23.1)	15.0 (24.2)
4th	22.4 (36.0)	–
NOTE: Travel speeds at full engine throttle w/ 23.5-R25 L3 Radial tires.		

ELECTRICAL

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

OPERATOR ENVIRONMENT

ROPS cab AC w/ heat; 8" LCD touchscreen display, adjustable armrest w/ 3 configurable buttons; Key start; Articulated power steering w/ tilt column; Fully adjustable, heated air-ride seat w/ headrest; AM/FM Bluetooth radio w/ auxiliary input; Cab convenience package: rear sun shade, interior mirror, under the seat drawer, 12V accessory port, & coat hook; Foot throttle; Single lever (joystick) loader control w/ fully adjustable wrist rest, 2 cup holders; 2 interior rear view mirrors; 3 inch (76 mm) retractable seat belt; Integrated 4-corner strobe; Multiple storage trays; Single brake pedal; F/N/R shuttle switch; Left and Right external rear view mirrors; Sound suppression kit; Pressurized air filtering; Anti-glare window strip; Front and Rear Defroster; Side window, partial/fully open; 2 Dome lights; Wipers, rear and intermittent front; Windshield washers, front and rear; Rubber floor mat; Horn.

Displays/Gauges:

Digital:

Transmission oil temperature Engine coolant temperature; Fuel Level; DEF level.

LCD screen:

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

Audible/Visual alarms:

Warning lights:

Four-way flashers and turn signals; Brake pressure; Lamp/high beam indication; Engine Block Heater.

Caution warnings:

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

Critical warnings:

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

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

NOTE: *If equipped w/ option.

OPERATING WEIGHT

Z-Bar
 Unit equipped w/ 23.5-R25 L3 Radial tires;
 ROPS cab w/ heater and A/C; Heavy-duty
 counterweight – 6,435 lb (2 919 kg); Heavy-duty
 batteries; Front and rear fenders; Lights; Full
 fuel; 165 lb (75 kg) operator; 4.75 yd³ (3.6 m³)
 MD pin on w/ bolt on edge:
 45,070 lb (20 443 kg)

HYDRAULICS

Main pumps – steering/implement:
 Closed center pressure/flow compensated
 Tandem variable displacement – load-sensing:
 Max. rated flow P1: 42.6 gpm @ 2000 RPM
 (162 L/min @ 2000 RPM)
 Max. rated flow P2: 31.6 gpm @ 2000 RPM
 (120 L/min @ 2000 RPM)

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

Loader auxiliary steering:
 Hydraulic orbital center-pivot articulating
 w/ on-demand oil flow

High pressure standby:
 Implement 3,625 psi (25 000 kPa)
 Steering 3,500 psi (24 132 kPa)

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

SERVICE CAPACITIES

Fuel tank	76.0 gal (288.0 L)
DEF tank – Diesel Exhaust Fluid:	
Usable	9.8 gal (37.1 L)
Total	15.6 gal (58.9 L)
Hydraulic system:	
Reservoir	29.0 gal (110.0 L)
Total	53.0 gal (200.0 L)
Transmission:	
Service w/ filter	36.0 qt (34.1 L)
Front and rear axle:	
Front axle	44.4 qt (42.0 L)
Rear axle	42.3 qt (40.0 L)
Engine oil w/ filter	16.0 qt (15.1 L)
Cooling system	32.0 qt (30.0 L)

OTHER SPECIFICATIONS

Lift cylinder:	
Bore diameter	6.0 in (152.4 mm)
Rod diameter	3.5 in (88.9 mm)
Stroke	33.3 in (845.7 mm)

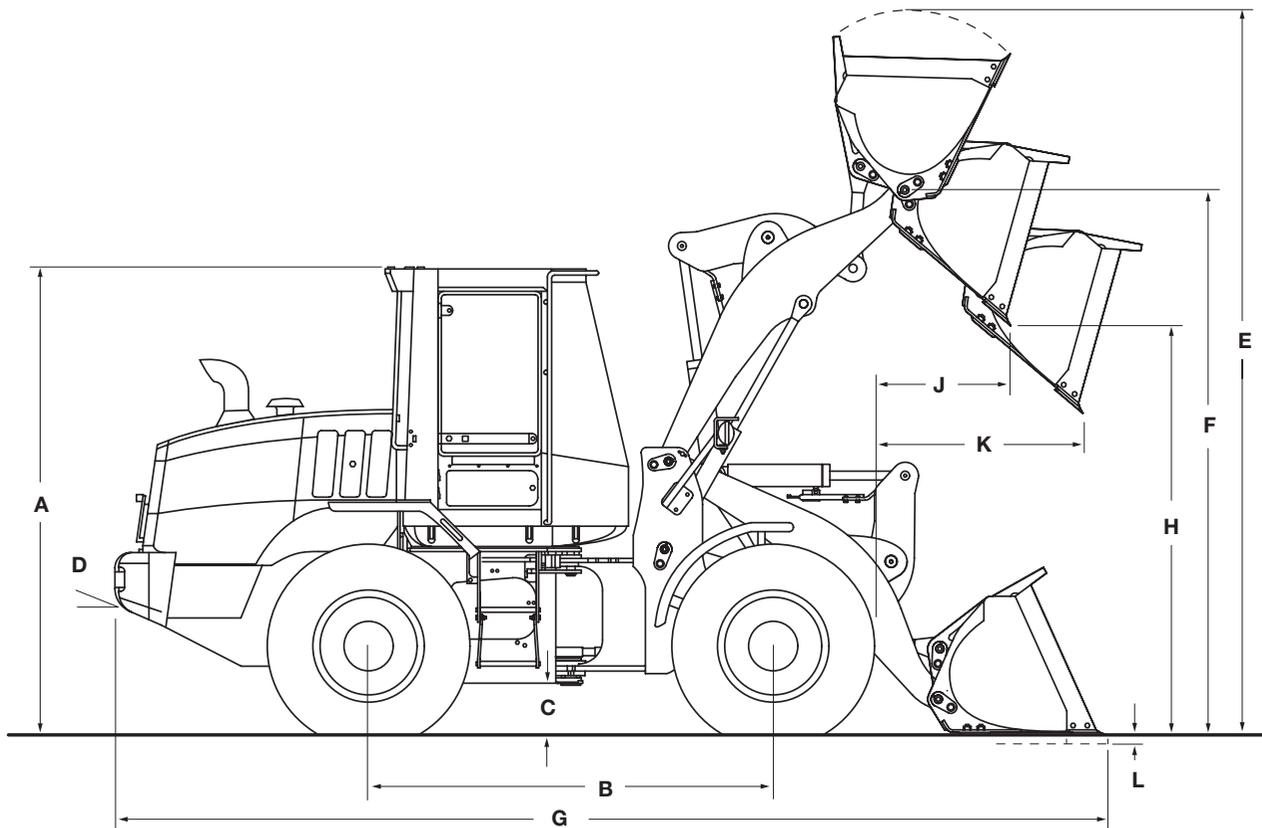
Dump cylinder:	
Bore diameter	7.0 in (177.8 mm)
Rod diameter	4.0 in (101.6 mm)
Stroke	23.6 in (600 mm)

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

Cycle time:	
Raise w/ rated bucket load	6.3 sec
Dump w/ rated bucket load	1.5 sec
Float down	3.6 sec

Sound level in Cab (LpA)	68 dB(A)
Exterior sound level (LwA)	104 dB(A)

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



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

DIMENSIONS

A. Height to top of ROPS cab	136.2 in (3,464 mm)
Height to drawbar	42.7 in (1,085 mm)
B. Wheelbase	131.5 in (3,340 mm)
C. Ground clearance	17.1 in (435 mm)
D. Angle of departure	29°
Width:	
Overall* without bucket	111.4 in (2,829mm)
Centerline tread	87.8 in (2,230 mm)
Turning radius* – outside	236.3 in (6,003 mm)
Turning angle:	
From center	40°
Total angle	80°
Rear axle oscillation – total	24°

NOTE: *Dimensions taken with 23.5-R25 L3 Radial tires. Additional dimensions on pages 4 through 6.

WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment	
		Straight: Deflected*	40° Turn: Deflected*
23.5-R25 L2 Radial tires	-28 lb (-13 kg)	-102 lb (-46 kg)	-177 lb (-53 kg)
23.5-R25 L3 Bias tires	-504 lb (-229 kg)	-459 lb (-208 kg)	-1,048 lb (-475 kg)

NOTE: Unit equipped with Z-Bar loader arms, 4.75 yd³ (3.6 m³) pin on bucket with bolt-on edge, 23.5-R25 L3 Radial Tires, ROPS cab with heater and air conditioner, heavy counterweight, heavy-duty batteries, front and rear fenders, full fuel and 165 lb (75 kg) operator. Adjust select options from rated weight. *Tipping loads: ISO 14397-1 Deflected Tires.

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1.

ENGINE

FPT F4HFE613R
Tier 4 Final Certified
Selective Catalytic Reduction (SCR) with Diesel Oxidation Catalyst
Selectable work modes:
 Maximum Mode
 Smart Mode
Turbocharger
Charge air cooling
Automatic belt tensioner
Integral engine oil cooling
Fuel filter with water trap
Dual-element dry-type air cleaner
Hydraulic-driven cooling fan
Air-cooled radiator
Mid-mounted cooling module with hydraulically driven auto reversing fan
Engine block heater
Sound suppression kit
Ejector type air precleaner
Common rail electronic fuel injecti

LOADER

See page 2 – Operating weight,
Other specifications

DRIVETRAIN

4-wheel drive
4F/3R Selectable autoshift /manual shift transmission
Electronic Control Module – programmable, computer controlled proportional shifting with programmable gear selection
Onboard diagnostics
Single lever electronic shift control
F/N/R switch in loader control handle
Downshift button
Torque converter
Heavy-duty axles:
 With locking front differential and open/conventional rear differential
Outboard planetary axles
Transmission oil cooler
Brake pedal transmission disconnect – declutch
Hydraulic wet disc brakes
Spring-applied hydraulic release parking brake
Limp-Home Mode
Greasable rear axle trunnion
3-piece rims

HYDRAULICS

Adjustable Electro-hydraulic – EH joystick loader control and 3 configurable buttons
Adjustable EH settings:
 Smooth
 Moderate
 Aggressive
Auxiliary Hydraulics
Ride Control™
Locking hydraulics for coupler
EH Parallel Lift
Low-effort steering
Hydraulic driven cooling fan
Diagnostic quick couplers
Split flange hydraulic connections – 1 in or greater
Hydraulic oil cooler

ELECTRICAL

Alternator and voltage regulator
Battery isolator/electrical disconnect
120 amp alternator
(2) 700 CCA 12-volt batteries
Electric starter
Lights:
 Integrated 4-corner strobe
 2 Front and 2 rear halogen flood lights
 2 Front driving headlights – high/ low beam with integrated turn signals
 2 LED stop/ tail lights with integrated turn signals
Key start /stop switch
Backup alarm
Centrally located fuse box with all electrical circuits protected
Remote jump start posts

OTHER

Electric hood lift
Front and rear fenders, partial coverage
External rear view mirrors
Heavy counterweight
Drawbar hitch
Articulation locking bar
Lift arm locking bar
Lift and tie-down points – front /rear
Rear frame side covers
License plate brackets; front bracket and lit rear bracket
Rubber steering stops
Standard fenders with Left hand and Right hand steps
Grouped remote-mounted ecology drains:
 Engine oil
 Engine coolant
 Hydraulic oil

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Leather trimmed heated air seat with active suspension
In cab powered cooler box
In cab accessory mount
Rear view camera
External heated rear view mirrors
Front LED driving/headlights
LED front and rear work lights – 4 front, 2 rear

DRIVETRAIN

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

HYDRAULICS

Secondary steering
Integrated Payload System
Tire Pressure Monitoring System
2-function EH loader control with one auxiliary function
4-function EH loader control with two proportional auxiliary controls
2 Single axis EH levers and one auxiliary function
Joystick steering with or without secondary steering

LOADER

Attachment auxiliary hydraulics
Coupler systems – JRB or ACS compatible
Buckets – see pages 4 through 5

TIRES

23.5 x 25 L2 bias – dirt / traction
23.5 x 25 L3 bias – rock
23.5-R25 L2 radial – dirt / traction
23.5-R25 L3 radial – rock
23.5-R25 radial Michelin SnoPlus
Axle oscillation stops

OTHER

12.4 mph (20 kph) maximum speed control
Special paint
Skid plate and transmission
Wide full coverage fenders with right and left hand steps



CASE Corporation reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold. The specifications, descriptions, and illustrative materials contained here reflect correctly the data known up to the publication date, but are subject to changes with no previous notice. The illustrations may include optional equipment and accessories and may not include all standard equipment.

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