

E215C

E215C HYDRAULIC EXCAVATOR



1. TIER 3 ENGINE

Type 4-stroke diesel cycle, coolant liquid-cooled, 6-cylinder in line, Common Rail electronic injection system, turbocharged and air-cooled *intercooler*. This engine has a Tier 3 emissions certification.

Brand	FPT
Model	F4HE0687A*J105
Rated flywheel horse power	
Neta (SAE J1349, ISO 9249)	148 HP (110 kW) @ 1800 rpm
Total (ISO 14396)	157 HP (117 kW) @ 1800 rpm
Displacement	6.728 cc
Maximum torque	
Gross (SAE J1349, ISO 9249)	622 N.m @ 1800 rpm
Liquid (ISO 14396)	556.3 N.m (56.73 kgf.m) @ 1600 rpm
Diameter and stroke	104 mm X 132 mm
Voltage	24 V
Alternator	70 A
Starter engine	24 V 5.0 kW

2. HYDRAULIC SYSTEM

Main pumps	2 axial piston pumps with variable displacement and electronic control
• Max. oil overflow rate	2 X 211 l/min. @ 1.800 rpm
• Working circuit pressure	343 bar (4.975 psi)
• Boom/Arm/Bucket	368 bar (5.337 psi) with <i>power-up</i>
• Swing circuit	294 bar (4.264 psi)
• Travel circuit	343 bar (4.975 psi)

Pilot pump	1 gear pump
• Max. oil flow rate	18 l/min.
• Working circuit pressure	39 bar (566 psi)

Control valves	With check valves for boom/arm
	A 4-section valve for right track drive, bucket, boom and arm acceleration
	A 5-section valve for left track, swing, auxiliary, arm and boom acceleration.

Swing device	
• Axial Pistons	Motor with fixed displacement
• Mechanical	Brake with disc brake (SAHR)
• Final gear reducer	Reduction by planetary gear
• Turn table bearing	Ball bearing type with internal gear
• Max. swing speed	11.5 rpm
• Swing torque	64.000 N.m (6.526 kgf.m)

Cylinders	No. of cylinders– Intern Diam. X Rod Diam. X Stroke
• Boom	2 – ø 120 mm X ø 85 mm X 1.255 mm
• Arm	1 – ø 140 mm X ø 100 mm X 1.460 mm
• Bucket	1 – ø 120 mm X ø 85 mm X 1.010 mm

Filters	
Suction filter	105 µm
Return filter	6 µm
Pilot line filter	8 µm

3. HYDRAULIC CONTROLS

Boom/Arm/Bucket/Swing	Pilot Pressure Control System (ISO standard)
Travel	Pilot Pressure Control System

Working mode selection

- Mode – SP
- Mode – H
- Mode – Auto

Travel mode selection (2 speeds)

End-of-stroke damping control of implements

Hydraulic lock

Locking valve activated on left side console

4. ELECTRIC SYSTEM

Engine control

- Rotational acceleration control
- Idling system with one touch/automatic deceleration/
Automatic shutdown system
- Emergency shutdown

Monitoring system

- Warning messages display
- Work mode display (SP, H, Auto)
- Machine condition(Power boost, auto idle, etc.)
- Alarm display and buzzer
- Water temperature
- Hydraulic oil temperature
- Fuel level
- Diagnostic system

Wire harness Waterproof connectors

Safety

- Travel alarm
- Double horn
- Rearview mirror (cabin side and right side)

Battery 2 X 12 V 100Ah/20HR

Lights

- Working lights
- Toolbox 24 V 70 W X 1
- Boom 24 V 70 W X 2
- Cab 24 V 70 W X 2
- Operator's cab 24 V 10 W X 1

5. OPERATOR'S ENVIRONMENT

Cab

- Smooth, round shape design cab
- Safety glass for all windows
- Shockless cab suspension by 4-point fluid mounting
- Sliding front window and automatic lock
- Full-Color LCD monitor display
- Membrane switch on monitor display
- Windshield wiper and washer
- AM/FM radio with automatic tuner
- Floor mat
- Polycarbonate sunroof and sun visor
- Automatic air conditioning
- Upper protection FOPS level 1 (in the cab structure)
- Roll-over Protective Structure (ROPS)

Sound level

Internal 74 dBa (ISO 6396 compliant)

69 dBa with dimmer (ISO 6396 compliant)

External 102 dBa (ISO 6395 compliant)

Seat

Low-frequency mechanical suspension with air springs and double-acting hydraulic damper.

(Complies with ISO7096 in category EM6)

With the following features:

- Manual operator weight adjustment
- Backrest angle adjustment
- Seat height adjustment
- Adjustable lumbar support
- Adjustable headrest
- Control consoles adjustment independently of seat
- Retractable safety belt
- Adjustable armrest, attached to seat-independent console

6. ROLLING MATERIAL

Transposition Variable displacement axial piston engine

Brake Disc brake (SAHR)

Service hydraulic brake Brake valve

Final reducer Planetary gear reduction

Travel speeds

- High 5.6 km/h (with travel speed automatic gearbox)
- Low 3.4 km/h

Drawbar Pull 205 kN (20.904 kgf.m)

Number of carrier rollers 2 (each side)

Number of track rollers 8 (each side)

Number of shoes 49 (each side)

Shoe type Triple semi-grouser

Link pitch 190 mm

Shoe width 600/800 mm (STD)

Grade-ability 70% (35°)

7. OPERATING MASS

Operating Mass

22.381 Kg With 2.94 m arm, 1.1 m³ GD bucket, 600 mm grouser shoe, operator, lubricant, coolant and full fuel tank

Transport weight

21.956 kg Operating weight – (operator's weight (75 kg) + 90 % of fuel weight)

Counterweight 4.250 kg

Ground pressure 0.46 kg/cm² (With 2.94 m Arm, 1.1 m³ bucket, 600 mm grouser shoe)

8. DIGGING FORCE (WITH 1.1 M³ BUCKET)

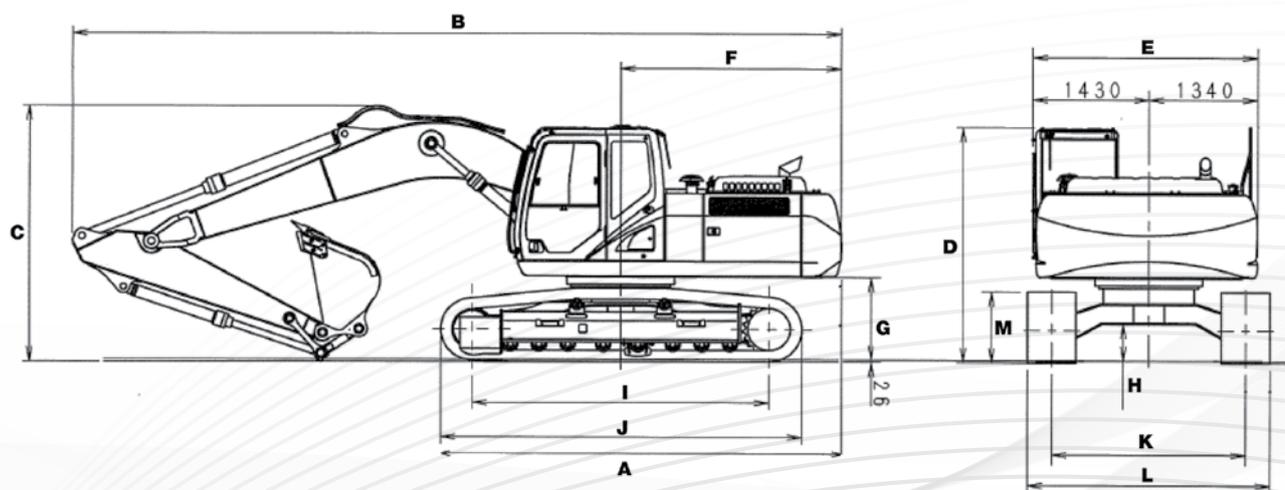
(ISO 6015)	Arm 2.94 m
Arm digging force	103 kN (10.503 kgf)
With auto power-up	110 kN (11.217 kgf)
Bucket digging force	142 kN (14.480 kgf)
With auto power-up	152 kN (15.500 kgf)

9. COMPONENT WEIGHT

Bucket	GD 1.1 m ³ WD	868 kg
Shoe	600 mm	2.810 kg
	800 mm	3.354 kg
Arms	2.94 m	911 kg

10. DIMENSIONS

	Arm 2.94 m
A Overall length (without attachment)	4.985 mm
B Overall length (with attachment)	9.430 mm
C Overall height (with attachment)	2.980 mm
D Cab height	2.950 mm
E Overall width of upper structure	2.770 mm
F Rear tail swing radius	2.780 mm
G Upper structure ground clearance	1.040 mm
H Minimum ground clearance	440 mm
I Wheelbase (center to center of wheels)	3.660 mm
J Track overall length	4.470 mm
K Track gauge	2.390 mm
L Overall track width (with 600/800 mm shoes)	2.990/3.190 mm
M Track height	920 mm

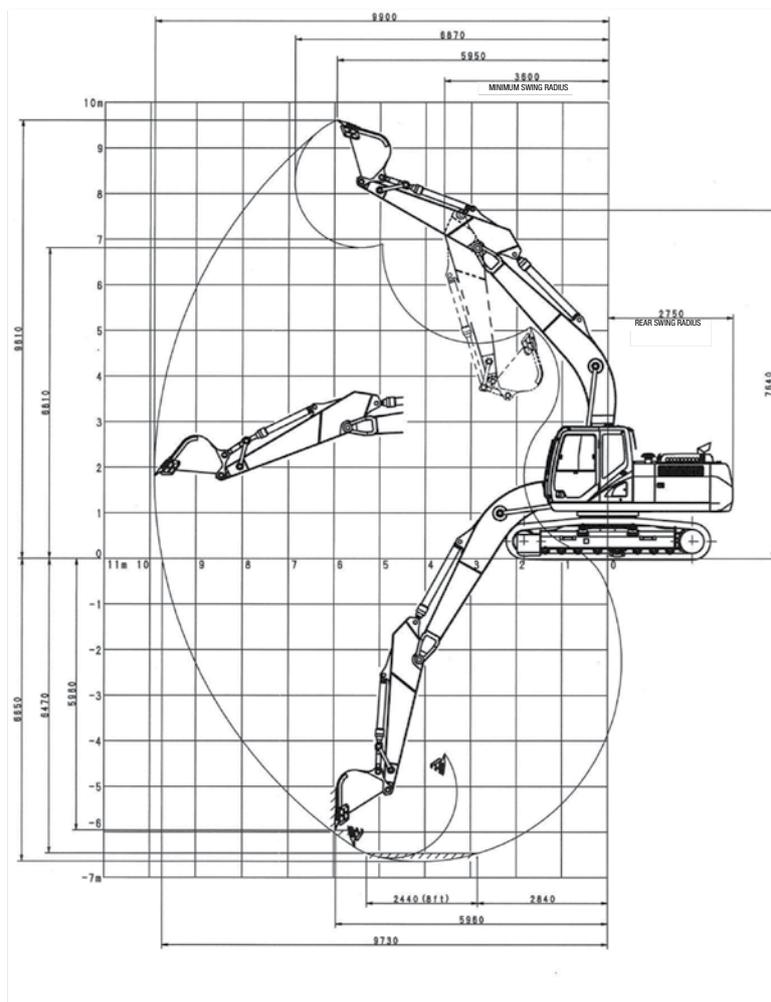


11. PERFORMANCE DATA TABLE

Arm 2.94 m

A	Boom length	5.700 mm
B	Bucket radius	1.450 mm
C	Bucket rotation	177°
D	Maximum reach at ground level	9.730 mm
E	Maximum reach	9.900 mm
F	Maximum dig depth	6.650 mm
G	Maximum dig height	9.610 mm
H	Maximum unloading height	6.810 mm

DIG REACH WITH 2.94 M ARM



12. SERVICE CAPACITIES AND SPECIFICATIONS

	Capacities	Specifications
Hydraulic system	295 L	ISO VG 46
Hydraulic sump tank	162 L	ISO VG 46
Fuel tank	458 L	(Diesel)
Cooling System	25 L	Coolant 50 %, Water 50 %
Final reducer (per side)	5.0 L	API GL-5 90
Swing drive case	6.0 L	API GL-5 90
Engine crank case (with remote oil filter)	16.5 L	API CD SAE 10W-40

Note:

1 - New Holland is constantly improving its products, so it reserves the right to modify projects and specifications at any time.

2 - Figures may include optional equipment and may not include all standard equipment.

3 - These specifications refer to the ISO 7135 standard (Earth-moving machines – Hydraulic excavators – Terminology and commercial specifications) second edition dated 12/15/2009.

13. LIFT CAPACITY

No bucket 2.94 m Arm

20 tons.	0		1.5		3		4.5		6		7.5		9		Maximum Capacity		
	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	M
7.5									4.731*	4.731*					3.843*	3.843*	6.23
6.0									4.727*	4.727*					3.560*	3.560*	7.33
4.5							7.717*	7.332	5.229*	5.029	4.908*	3.473			3.493*	3.079	80.1
3.0							9.365*	6.747	6.035*	4.748	5.251*	3.352			3.573*	2.788	8.37
1.5							10.288*	6.426	6.874*	4.469	5.136	3.217			3.799*	2.677	8.45
0.0					6.382*	6.382*	10.419*	6.334	7.020	4.272	5.024	3.116			4.221*	2.720	8.25
-1.5			6.672*	6.672*	10.974*	10.974*	9.784*	6.406	6.925	4.188	4.992	3.087			4.762	2.953	7.76
-3.0			11.532*	11.532*	13.952*	12.585	7.977*	6.657	6.972	4.230					5.682	3.513	6.92
-4.5					11.188*	11.188*									6.054*	4.951	5.56

14. BUCKET CAPACITY

E215C - ISO

Bucket	Capacity m ³	Width mm	Weight kg	Number of teeth
GD (WD)	1.1	1.415	868	5

Note:

GD - (General Duty) - General Services

WD - (Wide Duty) - Wide Mouth

15. STANDARD EQUIPMENT

Operator's cab room

- 4 studs oil cushioning system
- ROPS (ISO 12117-2:2008) protection cab FOPS (ISO 10262:1998)
- Fabric seat with air suspension
- 2" seat belt
- Automatic air conditioner
- AM/FM Radio
- 7" control panel with rear camera
- Joystick type levers for hydraulic functions control
- Transposition pedals with auxiliary levers for manual control
- Foot rests
- Safety lever that neutralizes hydraulic functions with action delay timer
- Upward folding front windshield with end-of-stroke sensor
- Sunroof and tilting roof
- Intermittent front windshield wiper with two speeds and water sprayer
- Sliding left side window
- External rearview mirror
- Interior light
- Cup holders, slides and telephone holders
- Manual general wrench

Upper chassis

- Boom: 5.700 mm – monoblock
- Penetration arm: 2.94 m
- Turn table brake with electronic control
- Swivel crown in grease bath

Lower chassis

- Shoes: 600/800 mm with triple grouser
- Track length: 4.470 mm
- Track gauge: 2.390 mm
- Sealed and lubricated track
- Track driven by two-speed Hydrostatic undercarriage engine
- Disc Park Brakes (SAHR)

New Holland/FPT Turbocharged Tier 3 Engine

- Dial type acceleration control
- Engine automatic deceleration
- Engine rotation electronic control
- Auto-idle device

Electric system

- Batteries (2)
- Electronic control/diagnostic system
- Boom working lights
- Front cab working lights
- 70 A Alternator

Hydraulic System

- ISO Standard handling controls
- Work mode selector: A, H & SP
- Auxiliary mode for attachment (hammer, scissors, processors, etc.)
- Auto power-up
- 2 variable flow piston pumps 2x211 l/min.
- Automatic pump flow rate reduction
- Hydraulic hammer prearrangement
- Cylinders with end-of-stroke damping and regenerative system

Others

- FleetForce control system
- Refueling pump
- Centralized lubrication for monoblock arm
- GD bucket: 1.1 m³

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