

**FARMALL® 105U EP
FARMALL® 115U EP
With 16x16 Semi-Powershift Transmission
Tractor**

*FARMALL® 105U EP PIN ZxJKxxxxx and above
FARMALL® 115U EP PIN ZEJK14976 and above*

SERVICE MANUAL

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SERVICE MANUAL

Farmall® 105U EP with 16x16 Semi-Powershift transmission [ZxJKxxxxx -]
Farmall® 115U EP with 16x16 Semi-Powershift transmission [ZEJK14976 -]

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Capacities

Fluid capacities and lubricant specifications

	approximate	RECOMMENDED CASE IH PRODUCTS	SPECIFICATION CASE IH	INTERNATIONAL SPECIFICATION
Cooling system:	16 l (4.2 US gal)	Mixture of water and antifreeze CASE IH AKCELA PREMIUM ANTI-FREEZE at 50 % + 50 %	MS1710	-
Windscreen wash reservoir	2 l (0.5 US gal)	Water & cleaning liquid	-	-
Fuel tank:	165 l (43.6 US gal)	Decanted, filtered diesel fuel	-	-
Engine sump: Minimum.	6.4 l (1.7 US gal)	CASE IH AKCELA UNITEK NO. 1™ SBL CJ-4 SAE 10W-40 or CASE IH AKCELA UNITEK NO. 1™ SSL CJ-4 SAE 0W-40	MAT3521	API CJ-4 ACEA E9
Maximum	8.1 l (2.1 US gal)			
Brake control circuit	0.7 l (0.18 US gal)	CASE IH AKCELA LHM FLUID	-	ISO 7308
Front axle:	4.5 l (1.2 US gal)	CASE IH AKCELA NEXPLORE™ FLUID	MAT3525	API GL4 ISO 32/46 SAE 10W-30
Final drives (each)	1.0 l (0.3 US gal)			
Transmission Ring/Pinion Gears final drives and brakes ECM No. hydraulic lift torque of engine at power steering	63 l (16.6 US gal)			
Front wheel hubs	-	CASE IH AKCELA 251H EP MULTI-PURPOSE GREASE	-	NLGI 2
Grease fittings	-			
Air-conditioning refrigerant	650 g (22.9 oz)	-	-	R134 A
Air-conditioning compressor oil	0.185 l (0.05 US gal)	-	-	SP10

NOTICE: Avoid using fuel with sulfur content higher than **50 mg/kg** (50 ppm or 0.005%)



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Engine

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Engine - General specification

GENERAL SPECIFICATIONS	4 Cylinders
Engine, technical type: Farmall 105U Farmall 115U	F5DFL413B*A006 F5DFL413B*A002
Engine rpm - high - nominal - low	2400 - 2500 RPM 2300 RPM 700 - 800 RPM
Cycle	diesel, 4-stroke
Fuel injection	Direct
Number of cylinders in line	4
Bore - All models - Piston diameter - Piston stroke	99 mm (3.8976 in) 110 mm (4.3307 in)
Total displacement: - All models	3400 cm³
Compression ratio All models	17 ± 0.5 : 1
Maximum Power Output: - Farmall 105U - Farmall 115U Maximum power speed	79 kW (107 Hp) 84 kW (114 Hp) 2300 RPM
Peak torque - Farmall 105U - Farmall 115U Peak torque speed	444 N·m (327.48 lb ft) 461 N·m (340.02 lb ft) 1500 RPM
Torque increase - Farmall 105U - Farmall 115U	35 % 32 %
Power at the power take-off - Farmall 105U - Farmall 115U	68.6 kW (93.3 Hp) 73.9 kW (100.4 Hp)
Number of main bearings	5
Sump	structural, cast iron
Lubrication	forced, with lobe pump
Pump drive	from crankshaft
Oil filtration	mesh screen on oil intake and filter cartridge on delivery line
Engine oil pressure switch operating pressures: - contacts closing* with decreasing pressure. - contacts opening* with increasing pressure. * with the contacts closed the engine oil pressure warning light is on	0.2 bar (2.90 psi) 0.9 bar (13.05 psi)
Cooling	coolant circulation
closing Capacity Fan with viscous joint, fixed to the specific pulley	with five rows of vertical pipes 16 l (4.23 US gal) ø 520 mm (20.4724 in)
Coolant pump	intake, in plastic with 10 blades
Coolant thermometer	colored scale divided into three sections
Temperature ranges corresponding to each section: - initial dark blue sector - final red sector	normal temperature high temperature
dark blue area - Start of opening	via thermostat valve 80 °C (176.00 °F)
Timing	overhead valves operated by tappets, rods and rocker arms via the camshaft located in the engine block; the camshaft is driven by the crankshaft using straight-tooth gears

GENERAL SPECIFICATIONS	4 Cylinders
Intake: – start: before P.M.S. – end: after P.M.I.	19 ° 37 °
Exhaust: – start: before P.M.I. – end: after P.M.S.	61 ° 21 °
Clearance between valves and rocker arms with engine cold.	The valve clearance is hydraulically controlled. Therefore, manual adjustment is not necessary.
Turbocharging	Turbocharged with intercooler
Air cleaning	dual cartridge dry air cleaner, with clogged filter indicator with centrifugal pre-filter and automatic dust ejector
Fuel filtration	by mesh prefilter on the supply pipe, suction line filter with water - fuel separator, low pressure filter and sensor.
Priming pump Injection pump Type Nozzles type Injection pressure	Manual mounted on the suction line filter BOSCH High pressure Common Rail control unit HPCR - CP4.1 Electro-injectors 300 - 1400 bar (4350.00 - 20300.00 psi)
Filling: Engine sump Fuel tank	6.4 - 8.1 l (1.69 - 2.14 US gal) 140 l (36.98 US gal)
Anti-pollution system Type:	Exhaust gas recycling system EGR Particulate filter DPF*
Recommended frequency for renewing filter	every 3000 hours

NOTE: * - For filter maintenance please refer to: (*Diesel Particulate Filters (DPF) - Dynamic description manual regeneration of the diesel particulate filter (DPF) (55.408)*)

Click on the image link below for the full version of the service manual

