

# PRODUCT SPECIFICATIONS FOR 420F2/420F2 IT

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## ENGINE

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<b>Net Power - SAE J1349</b>	93 HP
<b>Bore</b>	4.13 in
<b>Stroke</b>	5 in
<b>Displacement</b>	268 in <sup>3</sup>
<b>Net Peak Power - 1,800 rpm - SAE J1349</b>	105 HP
<b>Net Peak Power - 1,800 rpm - ISO 9249</b>	106 HP
<b>Rated Net Power - 2,200 rpm - EEC 80/1269</b>	94 HP
<b>Net Peak Power - 1,800 rpm - EEC 80/1269</b>	106 HP
<b>Gross Power - ISO 14396</b>	100 HP
<b>Gross Power - SAE J1995</b>	102 HP
<b>Net Power - 2,200 rpm - SAE J1349</b>	93 HP
<b>Net Torque Rise - 1,400 rpm - SAE J1349</b>	46%
<b>Rated Net Power - 2,200 rpm - ISO 9249</b>	94 HP
<b>Engine Model</b>	Cat® C4.4 ACERT™
<b>Net Peak Torque - 1,400 rpm</b>	322 ft-lb
<b>Rated Net Power - SAE J1349</b>	93 HP
<b>Rated Net Power - ISO 9249</b>	94 HP
<b>Note</b>	Engine meets Tier 4 Final emission standards.

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## WEIGHTS

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<b>Operating Weight - Maximum</b>	24251 lb
<b>Cab - ROPS/FOPS</b>	359 lb
<b>Ride Control</b>	31 lb

<b>Four Wheel Drive</b>	364 lb
<b>Counterweights - Option 1</b>	255 lb
<b>Air Conditioning</b>	93 lb
<b>Counterweights - Option 2</b>	530 lb
<b>Counterweights - Option 3</b>	1015 lb
<b>Auto-Shift Transmission</b>	525 lb
<b>MP Bucket (1.00 m<sup>3</sup>/1.30 yd<sup>3</sup>) - No Forks or Teeth</b>	1642 lb
<b>Loader, IT with Quick Coupler</b>	699 lb
<b>Extendible Stick</b>	672 lb
<b>Operating Weight - Maximum - ROPS Capacity</b>	24251 lb

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## BACKHOE

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<b>Dig Depth - Standard</b>	14.3 ft
<b>Dig Depth - E-Stick Extended</b>	17.9 ft

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## HYDRAULIC SYSTEM

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<b>Pump Type</b>	Variable Flow, Axial Piston
<b>System Pressure - Backhoe</b>	3600 psi
<b>Pump Capacity at 2,200 rpm</b>	43 gal/min
<b>System Pressure - Loader</b>	3600 psi
<b>Type</b>	Closed Center

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## TRANSMISSION

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<b>Power Shuttle Transmission - Forward 4th</b>	25 mile/h
<b>Power Shuttle Transmission - Reverse 4th</b>	25 mile/h

<b>Auto-Shift - Optional - Forward 6th</b>	25 mile/h
<b>Auto-Shift - Optional - Forward 1st</b>	3.6 mile/h
<b>Power Shuttle Transmission - Reverse 3rd</b>	13 mile/h
<b>Power Shuttle Transmission - Forward 3rd</b>	13 mile/h
<b>Auto-Shift - Optional - Reverse 2nd</b>	7.6 mile/h
<b>Power Shuttle Transmission - Forward 1st</b>	3.4 mile/h
<b>Auto-Shift - Optional - Reverse 1st</b>	3.6 mile/h
<b>Auto-Shift - Optional - Forward 5th</b>	16 mile/h
<b>Power Shuttle Transmission - Reverse 1st</b>	3.4 mile/h
<b>Power Shuttle Transmission - Reverse 2nd</b>	5.6 mile/h
<b>Auto-Shift - Optional - Forward 2nd</b>	5.7 mile/h
<b>Auto-Shift - Optional - Forward 3rd</b>	7 mile/h
<b>Power Shuttle Transmission - Forward 2nd</b>	5.6 mile/h
<b>Auto-Shift - Optional - Forward 4th</b>	12 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 2nd</b>	5.7 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 6th</b>	25 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Reverse - 1st</b>	3.6 mile/h
<b>Auto-Shift - Optional - Reverse 3rd</b>	17 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 1st</b>	3.6 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 6th LUC</b>	25 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 5th LUC</b>	15 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 4th</b>	12 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Reverse - 3rd</b>	17 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque</b>	7 mile/h

<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 3rd</b>	7.6 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Reverse - 2nd</b>	7.6 mile/h
<b>Auto-Shift Transmission - With Lock-Up Torque Converter - Optional: Forward - 5th</b>	14 mile/h

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#### SERVICE REFILL CAPACITIES

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<b>Rear Axle</b>	4.4 gal (US)
<b>Transmission - Power Shuttle - 2WD</b>	4 gal (US)
<b>Fuel Tank</b>	42 gal (US)
<b>Cooling System with Air Conditioning</b>	5.9 gal (US)
<b>Front Axle (4WD) - Planetaries</b>	0.2 gal (US)
<b>Engine Oil - With Filter</b>	2.3 gal (US)
<b>Diesel Exhaust Fluid*</b>	5 gal (US)
<b>Hydraulic System</b>	25.1 gal (US)
<b>Transmission - Auto-Shift - 4WD</b>	5 gal (US)
<b>Front Axle (4WD)</b>	2.9 gal (US)
<b>Rear Axle - Planetaries</b>	0.4 gal (US)
<b>Transmission - Power Shuttle - 4WD</b>	4 gal (US)
<b>Hydraulic Tank</b>	10.6 gal (US)
<b>Note (1)</b>	* Must meet the requirements outlined in ISO 22241.
<b>Note (2)</b>	Requires ultra-low sulfur fuel less than or equal to 15 ppm fuel sulfur.

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#### AXLE RATINGS

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<b>Rear Axle - Static</b>	50582 lb
<b>Front Axle (4WD) - Dynamic</b>	20233 lb

<b>Front Axle (2WD) - Static</b>	50582 lb
<b>Front Axle (2WD) - Dynamic</b>	20233 lb
<b>Front Axle (4WD) - Static</b>	50582 lb
<b>Rear Axle - Dynamic</b>	20233 lb
<b>Axle Oscillation</b>	10 Degrees

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## STEERING

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<b>Rod Diameter</b>	1.4 in
<b>Stroke</b>	4.7 in
<b>Turning Circle - (inner wheel not braked) - Outside Front Wheels</b>	26.8 ft
<b>Turning Circle - (inner wheel not braked) - Outside Widest Loader Bucket</b>	36 ft
<b>Axle Oscillation</b>	11°
<b>Power Steering</b>	Hydrostatic
<b>Bore</b>	2.6 in
<b>Type</b>	Front Wheel

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## BRAKES

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<b>Feature (1)</b>	Brakes meet the following standards: SAE J1473 and ISO 3450 requirements.
<b>Feature (4)</b>	Parking/secondary brakes are independent of the service brake system.
<b>Feature (3)</b>	Foot operated brake pedals can be interlocked for roading.
<b>Feature (5)</b>	Parking brake is mechanically applied through an adjustable hand lever located on the right console.
<b>Feature (2)</b>	Self-adjusting, completely enclosed and sealed.

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## ENGINE FEATURES

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<b>Feature (10)</b>	Dry-type axial seal air cleaner with integral precleaner, automatic dust ejection system, and filter condition indicator.
<b>Feature (11)</b>	Direct electric, 12-volt starting and charging system with 880 CCA Group 31 maintenance free battery.
<b>Feature (9)</b>	Direct injection fuel system provides accurate fuel delivery; remote mounted electric lift pump improves serviceability.
<b>Feature (13)</b>	High contact ratio/gear train, peripheral fixed isolation top cover and open deck block design reduce bare engine noise.
<b>Feature (7)</b>	Cylinder head is high strength, cast iron alloy construction with extra duty wall and deck thickness.
<b>Feature (14)</b>	Higher low end torque for better engine/machine performance.
<b>Feature (2)</b>	Three-ring pistons made of lightweight, silicon/aluminum alloy for strength and maximum thermal conductivity.
<b>Feature (3)</b>	Forged chrome/molybdenum-steel crankshaft with crankshaft with either induction hardened or nitrocarburized journals.
<b>Feature (6)</b>	Cylinder block is high strength, cast iron alloy of deep skirt, monobloc design for increased strength and long life.
<b>Feature (1)</b>	Regeneration is passive and does not require any input from the operator or disrupt work.
<b>Feature (4)</b>	Front and rear crankshaft oil seals are "lip" type Viton and PTFE designs featuring an integral dust lip.
<b>Feature (5)</b>	Heat resistant, silicone-chrome steel intake and STELLITE-faced exhaust valves provide long life.
<b>Feature (8)</b>	Cylinder head's intake and exhaust ports are precision cast to promote optimum gas flow.
<b>Feature (12)</b>	Standard glow plug starting aid system for efficient cold weather starting.

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**Feature (15)**Engine is equipped with electric fuel priming pump.

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**TIRES**

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**Choice 5**

Front: 340/80R 18/Rear: 500/70R 24 RT

**Choice 2**

Front: 12.5/80-18 (12 ply) 1-3/Rear: 19.5L-24 (12 ply) ATU

**Choice 3**

Front: 12.5/80-18 NHS (12 ply) 1-3/Rear: 21L-24 (16 ply) R4 ATU

**Choice 4**

Front: 340/80R 18/Rear: 19.5L-24 (12 ply) R4 ATU

**Choice 1**Front: 11L-16 (12 ply) F-3/Rear: 19.5L-24 (12 ply) R4 ATU

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**STANDARDS**

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**Cab - ROPS**

SAE J1040 MAY94; ISO 3741 1994

**Cab - Sound**

ANSI/SAE J1166 OCT98 is 79 dB(A)

**Cab - FOPS**

SAE J/ISO 3449 APR98 LEVEL II and ISO 3449: 1992 LEVEL II

**Brakes**

SAE J/ISO 3450; ISO 3450 1996

**Exterior Sound**SAE J188 JUN86 is 76 dB(A)

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## 420F2/420F2 IT STANDARD EQUIPMENT

ADJUSTABLE AUXILIARY CONTROLS, BACKHOE LOADER

AIR CLEANER

ALARM, BACK-UP

ALTERNATOR, 150 AMP

AUDIBLE SYSTEM FAULT ALARM

AUTOMATIC ENGINE SPEED CONTROL (AESC)

BATTERY, MAINTENANCE-FREE, 880 CCA

BATTERY DISCONNECT SWITCH

BATTERY REMOTE JUMPSTART

BOOM TRANSPORT LOCK

BRACE, LIFT CYLINDER

BRAKE, SECONDARY PARKING

BRAKES, HYDRAULICALLY BOOSTED, OIL DISC, DUAL PEDALS, INTERLOCKING

BUCKET LEVEL INDICATOR

CANOPY, ROPS/FOPS

CAT CUSHION SWING SYSTEM

COAT RESTRAINT

COOLANT/ANTIFREEZE, EXTENDED LIFE

COUNTERWEIGHT, BUMPER

DOME LIGHT (CAB ONLY)

DIAGNOSTIC PORT FOR ENGINE, MACHINE AND GAUGE CLUSTER ELECTRONIC CONTROL MODULES

DIFFERENTIAL LOCK, LOADER JOYSTICK

ENGINE, CAT C4.4 ACERT (DIRECT INJECTION TURBOCHARGED), MEETS TIER 4 FINAL EMISSION STANDARDS, SELECTIVE CATALYST REDUCTION, DIESEL OXIDATION CATALYST (DOC)

ENGINE ENCLOSURE, SOUND SUPPRESSION REMOVAL PANELS

FACE SEALS, O-RING

FAN, SUCTION AND GUARD

FAST REVERSING SHUTTLE, ALL GEARS

FENDERS, REAR

FILTERS, SPIN-ON: FUEL, ENGINE OIL, TRANSMISSION OIL, WATER SEPARATOR

FILTERS, BOWL AND CARTRIDGE: HYDRAULIC FLUID

FLASHING HAZARDS/SIGNAL LIGHTS

FLOOR MAT

FUEL TANK, FULLY ENCLOSED

FULLY HINGED FRONT GRILL FOR COOLING PACKAGE CLEANING ACCESS

GAUGE CLUSTER: COOLANT TEMPERATURE, FUEL LEVEL, TORQUE CONVERTER TEMPERATURE, DEF LEVEL

GROUND LEVEL FUEL FILL AND DEF FILL

HIGH AMBIENT COOLING PACKAGE

HOOD LOCK, INSIDE CAB

HYDRAULIC HOSE, XT™

HYDRAULIC OIL COOLER

HYDRAULIC OIL COOLER

HYDRAULIC OIL LEVEL SIGHT GAUGE

HYDRAULIC VALVE, HYDROSTATIC STEERING

HYDRAULIC VALVES, LOADER 2 FUNCTION

HYDRAULIC VALVES, BACKHOE 5 FUNCTION

HYDRAULICS, LOAD SENSING WITH VARIABLE DISPLACEMENT PISTON PUMP

INDICATOR LIGHTS: ECO MODE ACTIVE, WATER IN FUEL, REMOTE DIAL THROTTLE ACTIVE, ENGINE WARNING, WARNING LAMP, EMISSIONS MODULE MALFUNCTION, AESC ACTIVE, LOW BATTERY/CHARGING SYSTEM WARNING, HIGH HYDRAULIC OIL TEMPERATURE; LCD WARNINGS: ENGINE OIL PRESSURE, MACHINE LOCKED (IF EQUIPPED), SERVICE DUE, AIR FILTER BLOCKED, HIGH COOLANT TEMPERATURE, AUTO IDLE SHUTDOWN, HIGH TORQUE CONVERTER TEMPERATURE, HYDRAULIC FILTER BYPASS

INSTRUMENT PANEL LIGHTS

JOYSTICK CONTROLS: PILOT OPERATED, EXCAVATOR-STYLE WITH PATTERN CHANGER

KEY START/STOP SYSTEM

LCD SCREEN: ENGINE SPEED, HOUR METER, GEAR/DIRECTION, BATTERY VOLTAGE, HYDRAULIC OIL TEMPERATURE, TORQUE CONVERTER TEMPERATURE, COOLANT TEMPERATURE, TRIP TOTALS (FUEL AND HOURS), LIFETIME TOTALS (FUEL AND HOURS), OPERATOR SETTINGS (UNITS, BRIGHTNESS, PROGRAMMABLE HOE AUXILIARY FLOW), SERVICE MODE DIAGNOSTICS, OIL LIFE RESET, DPF FORCE REGENERATION, MAINTENANCE INTERVALS, ECM/SYSTEM INFO

LIGHTS, WORKING (4 FRONT, 4 REAR)

LOADER, SELF-LEVELING, RETURN-TO-DIG AND TRANSMISSION DISCONNECT SWITCH

LOADER, SINGLE TILT

MIRROR, REARVIEW

ONE-TOUCH LOW IDLE

OPEN CIRCUIT BREATHER

PATTERN CHANGER, IN CAB

POWER RECEPTACLE, 12 VOLT, 2 INTERNAL, 1 EXTERNAL

POWER STEERING, HYDROSTATIC

RADIO READY CAB

SEAT BELT, RETRACTABLE, 51 MM (2 IN)

SOCKET, TWO ROOF

STABILIZER SHOES, STREET

STEERING KNOB

SEAT, AIR SUSPENSION, FABRIC OR VINYL COVER, WITH ARMREST

STARTING SYSTEM, GLOW PLUGS

STEERING, HYDROSTATIC  
STORAGE COMPARTMENT, LOCKABLE  
STORAGE TRAY  
STOP AND TAIL LIGHTS  
SWING TRANSPORT LOCK  
TILT STEERING WHEEL  
TIRES  
TOOLBOX, EXTERNAL, LOCKABLE  
TORQUE CONVERTER  
THROTTLE, HAND AND FOOT, ELECTRONIC  
TRANSMISSION, FOUR SPEED, SYNCROMESH  
TRANSMISSION NEUTRALIZER SWITCH  
TRANSPORT TIE-DOWNS  
TWO WHEEL DRIVE  
VANDALISM LOCKS, FOUR  
WARNING HORN, ELECTRIC

## 420F2/420F2 IT OPTIONAL EQUIPMENT

BATTERY, ADDITIONAL, 880 CCA  
CAB, DELUXE  
COLD WEATHER FUEL (-30° C/-22° F)  
COLD WEATHER PACKAGE, INCLUDING ADDITIONAL BATTERY, ENGINE BLOCK HEATER, RADIATOR ANTIFREEZE, COLD WEATHER FUEL (-30° C/-22° F) AND MOUNTING FOR AN ETHER BOTTLE  
COUNTERWEIGHTS, 115 KG (255 LB), 240 KG (530 LB) OR 460 KG (1,015 LB)  
FENDERS, FRONT WITH INTEGRAL STEPS  
FOUR WHEEL DRIVE  
GUARD, BOOM PROTECTION PLATE  
GUARD, STABILIZER, ROCK  
HYDRAULIC VALVES, LOADER (3RD VALVE FOR GP, MP OR QUICK COUPLER)  
HYDRAULIC VALVES, BACKHOE 6 FUNCTION  
  
HYDRAULIC LINES, COMBINED FUNCTION AUXILIARY  
LOADER, IT WITH QUICK COUPLER AND PILOT LOADER CONTROL  
PRODUCT LINK, SATELLITE, PL631E

PRODUCT LINK, CELLULAR, PL641I

QUICK COUPLER, HYDRAULIC, DUAL LOCK

QUICK COUPLER, MANUAL, DUAL LOCK

QUICK COUPLER, PIN LOCK

RADIO AND CD PLAYER

RADIO AND CD PLAYER, BLUETOOTH

RIDE CONTROL

ROTATING BEACON, MAGNETIC MOUNT

SEAT BELT, 75 MM (3 IN)

SEAT, HEATED

SECURITY SYSTEM KEYPAD

STABILIZER PADS, REVERSIBLE

STICK, EXTENDIBLE

STORAGE BOX

TRANSMISSION, AUTOSHIFT

TRANSMISSION, AUTOSHIFT WITH LOCK-UP TORQUE CONVERTER

VANDALISM PROTECTION, GAUGE COVER

WORK TOOL ATTACHMENTS SUCH AS BUCKETS, FORKS, MATERIAL HANDLING ARMS, AUGERS, HAMMERS, BROOMS, COLD PLANERS AND VIBRATORY PLATE COMPACTORS. SEE YOUR CAT DEALER FOR MORE INFORMATION.