

890A EXCAVATOR

85,000 lb (38 555 kg)

Transport Height.....	12 ft (3.7 m)
Transport Length.....	39 ft 8.5 in. (12.1 m)
Machine Width.....	11 ft 11 in. (3.6 m)

ENGINE.....John Deere 500 Series

Number of Cylinders and Displacement.....	6 cylinders, 619 cu in. (10.1 L)
Air Intake System.....	Turbocharged and aftercooler
Bore and Stroke.....	5.12 x 5.00 in. (130 x 127 mm)
Net hp at 2100 rpm.....	210 SAE hp (576 kW) DIN 157 kW
Maximum Torque at 1300 rpm.....	655 lb-ft (888 N•m)
Nozzle Opening Pressure:	
New.....	4050 ± 50 psi (27 925 ± 345 kPa)
Used.....	3800 ± 50 psi (26 200 ± 345 kPa)
Valve Clearance (Cold):	
Intake.....	0.015 in. (0.38 mm)
Exhaust.....	0.025 in. (0.64 mm)
Oil Pressure.....	40—50 psi (275—345 kPa) at 1900 rpm
Static Injection Pump Timing.....	Timing lines aligned w/ flywheel located at TDC
Dynamic Injection Pump Timing at Rated Load rpm*.....	9 + 0 - 1° BTDC
Speeds:	
Slow Idle.....	800 ± 25 rpm
Fast Idle.....	2275—2300 rpm
Full Load Rating.....	2100 rpm
Cylinder Pressure Hot (Min).....	380 psi (2620 kPa) cranking w/ injectors removed
Turbo Boost Pressure at Full Load.....	13—15 psi (90—105 kPa)
Flywheel Teeth.....	147
Electrical System.....	24 V
Alternator.....	42 amp

*Note: *For latest information, see Dealer Technical Assistance Center (DTAC) Solution K000413.*

POWER TRAIN

Propel Motor.....	2-speed bent axis variable displacement axial piston hydraulic motor w/ planetary and spur reduction
Swing Speed (360°).....	11.0 sec
Propel Speed (Track Revolution) at Fast Idle.....	24 sec at low speed 11.0 sec at high speed

HYDRAULIC SYSTEM—Open-Center

Pump Flow (Min):	
First Pump Section.....	50 gpm (189 L/min) at 2900 psi (20 000 kPa) and 2100 rpm
Second Pump Section.....	50 gpm (189 L/min) at 2900 psi (20 000 kPa) and 2100 rpm
Third Pump Section.....	21.5 gpm (81 L/min) at 2400 psi (16 550 kPa) and 2100 rpm

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RELIEF VALVE SETTINGS

Boom Circuit (2 Used)	3260 psi (22 480 kPa)
Crowd Circuit (2 Used)	3260 psi (22 480 kPa)
Bucket Circuit (2 Used).....	3260 psi (22 480 kPa)
Swing Crossover	2500 psi (17 240 kPa)
Propel	2900 psi (19 995 kPa)
Pilot Control	400 psi (2760 kPa)
Pilot Accumulator.....	100 psi (690 kPa)
Main System Relief.....	2900 psi (19 995 kPa)
Pilot Reliefs.....	2900 psi (19 995 kPa)

CYCLE TIMES (Maximum at Fast Idle and Hot Oil)

Boom Raise w/ Arm Retracted and Bucket Extended	4.5 sec
Arm Extend	5.7 sec
Bucket Retract.....	2.7 sec

LUBRICANTS

See front of this book for the codes [].

CAPACITIES

	U.S.	Imp.	Metric
Engine:			
Cooling System [N]	19 gal	15.8 gal	72.0 L
Crankcase w/ Filter [E].....	36 qt	30.0 qt	34.0 L
Planetary Final Drives (Each) [J]	21 qt	17.5 qt	20.0 L
Swing Drive (Each) [J].....	9.25 qt	7.7 qt	8.75 L
Propel Brakes are Dry Hydraulic System [C].....	220 gal	183.3 gal	832.8 L
Hydraulic Reservoir [C].....	92 gal	76.7 gal	348.2 L
Fuel Tank	128 gal	106.7 gal	484.5 L