

## 890 EXCAVATOR

92,600 lb (42 040 kg)

Transport Height.....	12 ft 1 in. (3.7 m)
Transport Length.....	40 ft (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.....	250 SAE hp (186 kW) DIN 186 kW
Maximum Torque at 1400 rpm.....	810 lb-ft (1098 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.....	17—20 psi (115—140 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 gear motor
Swing Speed (360°).....	10.0 sec
Propel Speed (Track Revolution) at Fast Idle.....	24 sec at low speed, 12.5 sec at high speed

### HYDRAULIC SYSTEM—Open-Center

Minimum Pump Flow (Used) at 2700 psi (18 615 kPa) and 2000 rpm:	
First Pump Section.....	55 gpm (208 L/min)
Second Pump Section.....	55 gpm (208 L/min)
Third Pump Section.....	21 gpm (80 L/min)

### RELIEF VALVE SETTINGS

Boom Circuit (2 Used).....	3000 psi (20 685 kPa)
Crowd Circuit (2 Used).....	3000 psi (20 685 kPa)
Bucket Circuit (2 Used).....	3000 psi (20 685 kPa)
Swing Crossover.....	2500 psi (17 240 kPa)
Pilot Reliefs.....	2800 psi (19 305 kPa)
Main System Relief Valve Setting at Fast Idle.....	2700 ± 50 psi (18 615 ± 345 kPa)
Propel.....	2800 psi (19 305 kPa)
Pilot Control.....	400 psi (2760 kPa)
Pilot Accumulator.....	100 psi (690 kPa)
Main System Relief.....	2700 psi (18 615 kPa)
Pilot Reliefs.....	2800 psi (19 305 kPa)

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## CYCLE TIMES (At Fast Idle and Hot Oil)

Boom Raise w/ Arm Retracted and Bucket Extended .....	4.5 sec max
Arm Extend .....	6.5 sec
Bucket Retract .....	3.0 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	7.78 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