

## 490 EXCAVATOR

25,360 lb (11 503 kg)

Transport Height.....	9 ft 3 in. (2.8 m)
Transport Length.....	9 ft 10 in. (3.0 m)
Machine Width.....	8 ft 10 in. (2.69 m)

### ENGINE.....John Deere 300 Series

Number of Cylinders and Displacement.....	4 cylinders, 239 cu in. (3.9 L)
Air Intake System.....	Turbocharged
Bore and Stroke.....	4.19 x 4.33 in. (106 x 110 mm)
Compression Ratio.....	16.8 to 1
Net hp at 2200 rpm.....	75 SAE hp (56 kW) DIN 56 kW
Maximum Torque at 1400 rpm.....	212 lb-ft (287 N•m)
Nozzle Opening Pressure:	
New.....	3700 ± 50 psi (25 510 ± 345 kPa)
Used.....	3500 ± 50 psi (24 135 ± 345 kPa)
Valve Clearance (Cold):	
Intake.....	0.014 in. (0.36 mm)
Exhaust.....	0.018 in. (0.46 mm)
Oil Pressure at Fast Idle.....	50 ± 15 psi (345 ± 105 kPa), minimum 15 psi (105 kPa) at 1000 rpm
Injection Pump Timing.....	4 ± 1° advance at 1000 rpm no load
Dynamic Injection Pump Timing at Rated Load rpm*.....	15.5 + 0 - 1° BTDC
Speeds:	
Slow Idle.....	1000 ± 25 rpm
Fast Idle.....	2375—2400 rpm
Rated Full Load.....	2200 rpm
Turbo Boost Pressure at Rated Full Load.....	7—8.5 psi (48—59 kPa)
Cylinder Pressure (Min).....	350 psi (2415 kPa)
Electrical System.....	24 volt
Alternator.....	16 or 42 amp
Cooling System Pressure.....	10 psi (69 kPa)
Flywheel Teeth.....	129

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

### POWER TRAIN

Propel Motor.....	Axial-piston hydraulic motor with planetary drives
Propel Brake.....	Multiple-disk automatically released and applied
Propel Relief Valve Setting.....	3550 psi (24 500 kPa)

### HYDRAULIC SYSTEM—Open Center

Main Pumps:	
Type.....	2 variable-displacement axial-piston
Pressure Setting.....	3550 psi (24 500 kPa)
Maximum Oil Flow.....	2 x 31.7 gpm (2 x 120 L/min)
Pilot Pump:	
Type.....	Gear
Pressure Setting.....	425 psi (2930 kPa)
Maximum Oil Flow.....	6.2 gpm (23.5 L/min)

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## RELIEF VALVE SETTINGS

Oil Cooler.....	14.2 psi (97 kPa)
Pressure Controller.....	200 psi (1380 kPa)
Boom .....	3700 psi (25 510 kPa)
Arm .....	3700 psi (25 510 kPa)
Bucket.....	3700 psi (25 510 kPa)
Swing Motor Crossover .....	3450 psi (23 800 kPa)
Hydraulic Filter.....	21 psi (145 kPa)

## CYCLE TIMES (Typical at Fast Idle)

Arm:	
In .....	3.7 ± 0.3 sec
Out.....	2.6 ± 0.3 sec
Boom:	
Raise .....	2.7 ± 0.3 sec
Boom Lower .....	2.4 ± 0.3 sec
Bucket:	
Curl.....	3.7 ± 0.3 sec
Dump.....	2.4 ± 0.3 sec
Propel .....	22 ± 1.5 sec/3 revolutions Forward and Reverse
Swing.....	14 ± 0.5 sec/3 revolutions

## LUBRICANTS

See front of this book for the codes [ ].

## CAPACITIES

	U.S.	Metric
Engine:		
Cooling System [N] .....	24.5 qt	23.2 L
Lubrication w/ Filter [E] .....	15 qt	14.2 L
Fuel Tank .....	66 gal	250 L
Hydraulic:		
System [R] .....	42.2 gal	160 L
Reservoir [R] .....	21 gal	80 L
Propel Motor [C] .....	6.9 qt	6.5 L
Swing Motor [C] .....	3.2 qt	3.0 L