

## 70 EXCAVATOR

14,600 lb (6620 kg)

Transport Height.....	8 ft 4 in. (2.55 m)
Transport Length.....	19 ft 11 in. (6.08 m)
Machine Width.....	7ft 5 in. (2.25 m)

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

Number of Cylinders and Displacement.....	4 cylinders, 239 cu in. (3.9 L)
Air Intake System.....	Naturally aspirated
Bore and Stroke.....	4.19 x 4.33 in. (106 x 110 mm)
Compression Ratio.....	17.8 to 1
Net hp at 2150 rpm.....	55 SAE hp (41 kW)
Maximum Torque at 1200 rpm.....	158 lb-ft (214 N•m)
Nozzle Opening Pressure:	
New.....	3320 ± 40 psi (22 891 ± 275 kPa)
Used.....	3120 ± 40 psi (21 512 ± 275 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) min 15 psi (105 kPa) at 1000 rpm
Static Injection Pump Timing.....	Line on governor weight retainer aligned with line on cam ring w/ No. 1 cylinder on TDC
Dynamic Injection Pump Timing at Rated Load rpm*.....	14.5 + 0 - 1° BTDC
Speeds:	
Slow Idle.....	1000 ± 25 rpm
Fast Idle.....	2375—2400 rpm
Full Load Rating.....	2150 rpm
Cylinder Pressure (Min).....	350 psi (2415 kPa)
Electrical System.....	24 V
Alternator.....	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.....	Radial-piston hydraulic motor w/ planetary drives
Brake.....	Multiple-disk hydraulically released and spring applied wet disk
Relief Valve Setting.....	3550 psi (24500 kPa)

## HYDRAULIC SYSTEM—Open-Center

Main Pumps.....	2 variable-displacement axial-piston
Pressure Setting.....	3130 psi (21 580 kPa)
Minimum Oil Flow.....	2 x 19.5 gpm (2 x 74 L/min)
Pilot Pump.....	Gear
Pressure Setting.....	430 psi (2950 kPa)
Minimum Oil Flow.....	5.5 gpm (20.8 L/min)
Blade Pump (Optional)	
Pressure Setting.....	2175 psi (15 000 kPa)
Minimum Oil Flow.....	5.5 gpm (20.8 L/min)

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## RELIEF VALVE SETTINGS

Boom .....	3340 psi (23 030 kPa)
Arm .....	3340 psi (23 030 kPa)
Bucket.....	3340 psi (23 030 kPa)
Swing .....	2990 psi (20 610 kPa)
Propel .....	2990 psi (20 610 kPa)
Blade (Optional).....	2560 psi (17 650 kPa)

## CYCLE TIMES

Oil Temperature .....	120 ± 40°F (50 ± 5°C)
Engine Speed .....	Fast idle
Swing—3 Revolutions:	
New .....	11.6 ± 0.5 sec
Maximum.....	16 sec
Boom Raise:	
New .....	2.1 ± 0.3 sec
Maximum.....	3.5 sec
Boom Lower:	
New .....	2.2 ± 0.3 sec
Maximum.....	3.5 sec
Arm Out (Cylinder Retract):	
New .....	2.7 ± 0.3 sec
Maximum.....	4.0 sec
Arm In (Cylinder Extend):	
New .....	3.7 ± 0.3 sec
Maximum.....	5.0 sec
Bucket Dump (Cylinder Retract):	
New .....	2.9 ± 0.3 sec
Maximum.....	4.0 sec
Bucket Load (Cylinder Extend):	
New .....	4.3 ± 0.3 sec
Maximum.....	5.5 sec
Blade Raise (Ground Level):	
New .....	1.5 ± 0.3 sec
Blade Lower (Ground Level):	
New .....	2.0 ± 0.3 sec

## LUBRICANTS

See front of this book for the codes [ ].

## CAPACITIES

	U.S.	Metric
Fuel Tank .....	32 gal.	120 L
Cooling System [N].....	20.1 qt	19 L
Engine Lubrication w/ Filter [E].....	9 qt	8.5 L
Hydraulic:		
System [C] .....	26.4 gal	100 L
Reservoir [C].....	15.8 gal	60 L
Propel Gearbox (Each) [J] .....	1 gal	3.8 L
Swing:		
Gear .....	11 lb	5 kg
Gearbox [J] .....	1.4 qt	1.3 L
Track Rollers [J].....	AR	AR