

70D EXCAVATOR

14,020 lb (6360 kg)

Transport Height.....8 ft 5 in. (2.6 m)
Transport Length.....20 ft 1 in. (6.11 m)
Machine Width7 ft 8 in. (2.35 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 2200 rpm 55 SAE hp (DIN 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 piston at TDC
Dynamic Injection Pump
 Timing at Rated Load rpm*:
 4239D 14.5 + 0 - 1° BTDC
 4039D 15.5 + 0 - 1° BTDC
Speeds:
 Slow Idle 1000 ± 25 rpm
 Auto Idle 1400 ± 25 rpm
 Economy 1900 ± 25 rpm
 Fast Idle 2375—2400 rpm
 Full Load Rating 2200 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 3700 ± 75 psi (25510 ± 500 kPa)

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HYDRAULIC SYSTEM

Main Pumps.....	2 variable-displacement axial-piston
Minimum Flow per Section at 2250 ± 10 rpm and 2500 psi (17 240 kPa):	
New	23 gpm (87 L/min)
Used	19.5 gpm (74 L/min)
Maximum Oil Flow	2 x 25 gpm (2 x 94.6 L/min)
Pilot Pump	Gear
Pressure Setting	640 ± 70 psi (4410 ± 480 kPa)
Minimum Oil Flow	4.7 gpm (17.7 L/min)
Blade Pump (Optional)	Gear
Pressure Setting	2175 psi (15 000 kPa)
Minimum Oil Flow	4.7 gpm (17.7 L/min)

RELIEF VALVE SETTINGS

Boom:	
Raise	3550 psi (24 480 kPa)
Lower.....	3340 psi (23 030 kPa)
Arm	3340 psi (23 030 kPa)
Bucket.....	3340 psi (23 030 kPa)
Swing.....	3130 psi (21 580 kPa)
Blade (Optional).....	2560 psi (17 650 kPa)