

Engine Specifications	
Model	GX610 K1
Type	4-stroke, OHV, 90° V-twin
Displacement	614 cm ³ (37.5 cu-in)
Max. Horsepower	18 HP (13.4 kW HP) at 3,600 rpm
Max. Torque (crank PTO)	43.1 N·m (4.39 kg·m, 31.7 ft·lb) at 2,500 rpm
Carburetor	Horizontal type, butterfly valve
Cooling System	Forced-air
Ignition System	Transistorized magneto ignition
Lubricating System	Forced lubrication
Starting System	Recoil starter or Recoil and electric starter
Stopping System	Ignition primary circuit ground
Fuel Used	Unleaded gasoline (octane number 86 or higher)
Fuel Consumption	230 g/HPh
PTO Shaft Rotation	Counterclockwise (from PTO shaft side)

Dimensions and Weight	
GX610 QAF-Type	
Length, mm (in)	388 (15.3)

Width, mm (in)	457 (18.0)
Height, mm (in)	452 (17.8)
Dry Weight, kg (lb)	42.0 (92.6)
Operating Weight, kg (lb)	43.0 (94.8)

Cylinder Block and Head	
Compression Ratio	8.3:1
Bore x Stroke	77 X 66 mm (3.0 x 2.6 in)
Sleeve Internal Diameter	77.00 mm (3.03 in)
Piston Skirt Outer Diameter	76.985 mm (3.03 in)
Ring Side Clearance	Top/Second 0.030-0.060 mm (0.0006-0.0018 in)
Ring End Gap	Top/Second 0.20-0.40 mm (0.010-0.020 in)
Ring Width	Top/Second 1.990 mm (0.0783 in)
Connecting Rod Small End ID	18.005 mm (0.7087 in)
Piston Pin Outer Diameter	18.000 mm (0.7087 in)
Crankpin Diameter	39.995 mm (1.5746 in)
Crankshaft Journal Diameter	38.000 mm (1.4961 in)

Cylinder Head	
Warpage (Limit)	0.10 mm (0.004 in)

Valve Arrangement	OHV
Valves	4 (2 per cylinder)
Stem Outer Diameter (Standard)	Intake 6.590 mm (0.2594 in)
	Exhaust 6.550 mm (0.2579 in)
Valve Spring Free Length	39.0 mm (1.54 in)
Valve Lifter Internal Diameter	6.010 mm (0.2366 in)
Valve Lifter Shaft Outer Diameter	6.000 mm (0.2362 in)
Camshaft Journal Diameter	16.985 mm (0.6687 in)
Cam Height	Intake 29.865 mm (1.1758 in)
	Exhaust 29.865 mm (1.1758 in)

Tightening Torque Specs	
Connecting Rod Bolt	12 Nm; 1.2 kg·m; 9 ft·lb
Cylinder Head Bolt	34 Nm; 3.5 kg·m; 25 ft·lb
Socket Bolt	27 Nm; 2.7 kg·m; 20 ft·lb
Flywheel Nut	196 Nm; 20.0 kg·m; 145 ft·lb
Pivot Bolt	24 Nm; 2.4 kg·m; 17 ft·lb
Pivot Adjusting Nut	10 Nm; 1.0 kg·m; 7 ft·lb
Cylinder Head Cover Bolt	9 Nm; 0.9 kg·m; 6.5 ft·lb
Oil Level Switch Joint Nut	10 Nm; 1.0 kg·m; 7 ft·lb

Oil Drain Bolt	39 Nm; 4.0 kg·m; 29 ft·lb
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Standard Torque Values	
Bolt, Nut (5 mm)	5.5 Nm; 0.55 kg·m; 4.0 ft·lb
Bolt, Nut (6 mm)	10 Nm; 1.0 kg·m; 7 ft·lb
Bolt, Nut (8 mm)	22 Nm; 2.2 kg·m; 16 ft·lb
Bolt, Nut (10 mm)	34 Nm; 3.5 kg·m; 25 ft·lb
Bolt, Nut (12 mm)	54 Nm; 5.5 kg·m; 40 ft·lb

Service Information	
Engine	
Maximum Speed	3,850 ± 100 rpm
Idle Speed	1,400 ± 150 rpm
Cylinder Compression	6.0-8.0 kg/cm ² (85-114 psi) at 500 rpm
Valve Clearance	Intake 0.15±0.02 mm (0.006±0.001 in)
	Exhaust 0.20±0.02 mm (0.008±0.001 in)

Oil System	
Oil Type	Honda 4-stroke or an equivalent (SG or SF)

Recommended Oil	SAE 10W-30
Oil Capacity	With oil filter: 1.80 L (1.90 US. qt, 1.58 Imp. qt.) Without oil filter: 1.50 L (1.59 US. qt, 1.32 Imp. qt.)
Oil Change Interval	Every 6 months or 100 Hrs.

Carburetor	
Main Jet	#92
Float Height	14.0 mm (0.55 in)
Pilot Screw Opening	1-7/8 turns out

Ignition System	
Ignition Timing	20° B.T.D.C.
Spark Plug	NGK: ZGR5A DENSO: J16CR-U
Spark Plug Gap	0.7-0.8 mm (0.028-0.031 in)
Primary Ignition Coil Resistance	0.8-1.0 Ω
Secondary Ignition Coil Resistance	5.9-7.1 kΩ
Ignition Coil Air Gap	0.4 ± 0.2 mm (0.016 ± 0.008)

Starter Motor	
Brush Length	10.0 mm (0.43 in)