

Engine Specifications	
Model	GX660 / GX660R
Type	4-stroke, OHV, 90° V-twin
Displacement	688 cm ³ (41.97 cu-in)
Max. Horsepower	21.8 PS (16.0 kW; 21.5 HP) at 3,600 rpm
Max. Torque (Crank PTO)	48.3 N·m (4.93 kg·m, 35.6 ft·lb) at 2,500 rpm
Carburetor	Horizontal type, two barrel, inner-vent, butterfly valve
Cooling System	Forced-air
Ignition System	Digital C.D.I. with variable timing
Lubricating System	Forced feed
Starting System	Electric starter
Stopping System	Ignition primary circuit open
Fuel Used	Unleaded gasoline (octane number 86 or higher)
Fuel Consumption	6.3 L (1.66 US gal, 1.39 Imp gal) / h
PTO Shaft Rotation	Counterclockwise (from PTO shaft side)

Dimensions and Weight	
Length (mm/in)	405 (15.9)
Width (mm/in)	410 (16.1)
Height (mm/in)	438 (17.2)
Dry Weight (kg/lb)	44.0 (96.8)

Cylinder Block and Head	
Compression Ratio	9.3:1
Bore x Stroke	78 X 72 mm (3.07 x 2.83 in)
Sleeve Internal Diameter	78.000-78.015 mm (3.0709-3.0715 in)
Piston Skirt Outer Diameter	77.985-77.995 mm (3.0703-3.0707 in)
Ring Side Clearance (Top/Second)	0.050-0.080 mm (0.0020-0.0031 in)
Ring End Gap (Top/Second)	0.20-0.35 mm (0.008-0.0138 in)
Oil (Side Rail)	0.20-0.70 mm (0.008-0.028 in)
Ring Width (Top/Second)	1.140-1.155 mm (0.0449-0.0455 in)
Connecting Rod Small End ID	18.006-18.018 mm (0.7089-0.7094 in)
Piston Pin Outer Diameter	17.994-18.000 mm (0.7084-0.7087 in)
Crankpin Diameter	44.973-44.983 mm (1.7706-1.7710 in)
Crankshaft Journal Diameter	39.984-40.000 mm (1.5742-1.5748 in)

Cylinder Head	
Warpage (Limit)	0.10 mm (0.004 in)
Valve Arrangement	OHV
Valves	4 (2 per cylinder)
Stem Outer Diameter (Standard)	INTAKE: 5.475-5.490 mm (0.2156-0.2161 in) EXHAUST: 5.435-5.450 mm (0.2140-0.2146 in)
Valve Spring Free Length	38.3 mm (1.51 in)
Valve Lifter Internal Diameter	6.010-6.040 mm (0.2366-0.2378 in)
Valve Lifter Shaft Outer Diameter	5.970-6.000 mm (0.2350-0.2362 in)
Camshaft Journal Diameter	16.982-17.000 mm (0.6686-0.6693 in)
Cam Height	INTAKE: 29.506-29.706 mm (1.1617-1.1695 in) EXHAUST: 29.410-29.610 mm (1.1579-1.1657 in)

Tightening Torque Specs	
Connecting Rod Bolt	22 Nm; 2.2 kg·m; 16 ft·lb
Cylinder Nut	37 Nm; 3.8 kg·m; 27 ft·lb
Oil Drain Plug Bolt	45 Nm; 4.5 kg·m; 33 ft·lb
Flywheel Nut	235 Nm; 24.0 kg·m; 173 ft·lb
Oil Filter Cartridge	12 Nm; 1.2 kg·m; 9 ft·lb
Tappet Adjusting Nut	7.5 Nm; 0.75 kg·m; 5.5 ft·lb

Governor Arm Nut	11 Nm; 1.1 kg·m; 8 ft·lb
Fuel Pump Cover Screw	4 Nm; 0.4 kg·m; 3 ft·lb
Oil Pressure Switch	9 Nm; 0.9 kg·m; 6.6 ft·lb

Service Information	
Maximum Speed	3,850 ± 150 rpm
Idle Speed	1,400 ± 150 rpm
Cylinder Compression	5.0-7.0 kg/cm ² (73-102 psi) at 500 rpm
Valve Clearance	INTAKE: 0.08±0.02 mm EXHAUST: 0.10±0.02 mm

Oil System	
Oil Type	Honda 4-stroke or an equivalent (SE or later)
Recommended Oil	SAE 10W-30
Oil Capacity	Without oil filter: 1.5 L (1.59 US qt, 1.32 Imp qt) With oil filter: 1.7 L (1.80 US qt, 1.50 Imp qt)
Oil Change Interval	Every 6 months or 100 Hrs.

Carburetor	
Main Jet	#112
Float Height	15.5 mm (0.61 in)
Pilot Screw Opening	Cylinder №1: 1-3/4 turns out Cylinder №2: 1-7/8 turns out

Ignition System	
Ignition Timing	9°-23° B.T.D.C.
Spark Plug	NGK: ZFR5F
Spark Plug Gap	0.7-0.8 mm (0.028-0.031 in)
Ignition Coil Air Gap	0.4 ± 0.2 (0.016 ± 0.008)