

Specifications

HMC'S

MODELS	BF (Spec A-B)	BFA (Spec A-C)	BGA (Spec A-C)	NH (Spec J-P)
GENERAL Engine Design Generator Design Output Ratings Starting System Engine Speed Weight	Four Cycle, Air Cooled, Two Cylinder Revolving Armature, Four Pole Unity Power Factor Exciter Cranked, 12 volts 1800 r/min			
	217 lbs (99 Kg)	235 lbs (107 Kg)	285 lbs (129 Kg)	305 lbs (138 Kg)
ENGINE DETAILS				
Horsepower	8.5	8.5	10	14.0
Displacement	40.25 in ³ (700 cm ³)	43.3 in ³ (710 cm ³)	47.4 in ³ (782 cm ³)	60.0 in ³ (984 cm ³)
Compression Ratio	7:1	7:1	6.9:1	7.1
Bore	3.125 in (79.38 mm)	3.25 in (82.55 mm)	3.25 in (82.55 mm)	3.56 in (90.42 mm)
Stroke	2.625 in (66.68 mm)	2.625 in (66.68 mm)	2.87 in (72.90 mm)	3.0 in (76.20)
Oil Capacity (with filter)	4 qts (3.8 L)	3.5 qts (3.3 L)	3.5 qts (3.3 L)	3.5 qts (3.3 L)
Fuel	Lead-Free Or Regular Grade Gasoline			
Ventilation	80 in ² (516 cm ²)	80 in ² (516 cm ²)	100 in ² (645 cm ²)	120 in ² (774 cm ²)
GENERATOR DETAILS				
Watts	4,000	4,000	5,000	6,500
Volts	120/240	120	120/240	120/240
Amps At 120 Volts	33.3	33.3	41.6	54.2
Frequency (Hertz)	60	60	60	60
Phase	Single	Single	Single	Single
Wires	4	2	4	4
Battery Charge Rate	1-1.5 Amps	1-1.5 Amps	1-1.5 Amps	1-1.5 Amps
TUNE UP SPECS				
Spark Plug Gap	0.025 in (0.64 mm)	0.025 in (0.64 mm)	0.025 in (0.64 mm)	0.025 in (0.64 mm)
Ignition Points	0.25 in (0.64 mm)	0.021 in (0.53 mm)	0.021 in (0.53 mm)	0.020 in (0.51 mm)
Ignition Timing (cold)	21°-25° BTC	21° BTC	21° BTC	21° BTC
Valve Lash (cold)				
Intake	0.005 in (0.127 mm)	0.005 in (0.127 mm)	0.005 in (0.127 mm)	0.005 in (0.127 mm)
Exhaust	0.013 in (0.330 mm)	0.013 in (0.330 mm)	0.013 in (0.330 mm)	0.013 in (0.330 mm)

Dimensions And Clearances

Dimensions not in parentheses are INCHES.

MODELS	BF (Spec A-B)	BFA (Spec A-C)	BGA (Spec A-C)	NH (Spec J-P)
CYLINDERS AND PISTON ASSEMBLY				
Cylinder Bore (std size honed)	3.1245-3.1255 (79.362-79.388mm)	3.2490-3.2500 (82.525-82.550mm)		3.5625-3.5635 (90.488-90.513mm)
Cylinder Taper (Max)		0.005 (0.127mm)		
Cylinder Out Of Round (Max)		0.002 (0.051mm)		
Piston Diameter	3.122-3.123 (79.31-79.34mm)	3.243-3.244 (82.37-82.40mm)		3.5600-3.5610 (90.424-90.449mm)
Clearance In Cylinder	0.001-0.003 (.025-.080mm)	0.004-0.006 (0.10-0.15mm)		0.0015-0.0035 (0.038-0.089mm)
Ring Gap		0.0100-0.0200 (0.254-0.508mm)		
Piston Ring #1 (top) Groove Width		0.080-0.081 (2.03-2.06mm)		0.0955-0.0965 (2.426-2.451mm)
Piston Ring #2 Groove Width		0.080-0.081 (2.03-2.06mm)		0.0955-0.0965 (2.426-2.451mm)
Piston Ring #3 Groove Width		0.188-0.189 (4.78-4.80mm)		0.1880-0.1890 (4.775-4.800mm)
Piston Ring #1 (top) Side Clearance		0.002-0.008 (0.051-0.203mm)		
Piston Pin Diameter		0.687-0.688 (17.46-17.47mm)		0.7500-0.7502 (19.050-19.055mm)
Piston Pin Fit In Rod		0.0002-0.0007 (0.005-0.018mm)		
Connecting Rod Side Clearance		0.0020-0.0160 (0.051-0.406mm)		
Connecting Rod Bearing Clearance		0.0020-0.0033 (0.051-0.084mm)		0.0005-0.0023 (0.013-0.058mm)

MODELS	BF (Spec A-B)	BFA (Spec A-C)	BGA (Spec A-C)	NH (Spec J-P)
CRANKSHAFT AND CAMSHAFT				
Crankshaft Main Bearing Journal Diameter		1.9992-2.0000 (50.780-50.800mm)		
Crankshaft Rod Journal Bearing Diameter		1.6252-1.6260 (41.280-41.300mm)		
Crankshaft Main Bearing Diameter (Assembled)		2.0015-2.0040 (50.838-50.902mm)		
Crankshaft Main Bearing Clearance		0.0025-0.0038 (0.064-0.097mm)		
Crankshaft End Play		0.006-0.012 (0.15-0.30mm)		0.0050-0.0090 (0.127-0.229mm)
Camshaft Journal Diameter		1.3740-1.3745 (34.900-34.912mm)		
Camshaft Bearing Diameter (Assembled)		1.3757-1.3787 (34.943-35.019mm)		
Camshaft Bearing Clearance		0.0015-0.0030 (0.038-0.076mm)		
Camshaft End Play		0.003 Min. (0.08mm Min.)		0.0030-0.0120 (0.076-0.305mm)
Camshaft Lift		0.300 (7.62mm)		
VALVES AND LIFTERS				
Valve Spring Free Length (Int and Exh)		1.6620 (42.214mm)		
Valve Spring Compressed Length (Int and Exh)		1.3750 (34.925mm)		
Valve Spring Tension Open (Int and Exh)		71-79 lbs (9.8-10.9N)		
Valve Spring Tension Closed (Int and Exh)		38-42 lbs (5.25-5.8N)		
Valve Face Angle (Int and Exh)		44°		
Valve Seat Angle (Int and Exh)		45°		

MODELS	BF (Spec A-B)	BFA (Spec A-C)	BGA (Spec A-C)	NH (Spec J-P)
Valve Seat Width (Int and Exh)	0.031-0.047 (0.8-1.2mm)			
Valve Stem Diameter (Int)	0.3425-0.3430 (8.700-8.712mm)			
Valve Stem Diameter (Exh)	0.3410-0.3415 (8.661-8.674mm)			0.3410-0.3420 (8.661-8.687mm)
Valve Guide Diameter (Int and Exh)	0.3440-0.3460 (8.738-8.788mm)			
Valve Stem Clearance (Int)	0.0010-0.0025 (0.025-0.064mm)			
Valve Stem Clearance (Exh)	0.002-0.004 (0.06-0.10mm)			0.0025 (0.0635mm)
Valve Lifter Diameter	0.7475-0.7480 (18.987-19.000mm)			
Valve Lifter Bore Diameter	0.7500-0.7515 (19.050-19.088mm)			
Valve Seat Diameter (Int)	1.443-1.444 (36.652-36.678mm)			1.5690-1.5700 (39.853-39.878mm)
Valve Seat Diameter (Exh)	1.192-1.193 (30.28-30.30mm)			1.2550-1.2560 (31.877-31.902mm)
Valve Seat Bore Diameter (Int)	1.4395-1.4405 (36.5633-36.5887mm)			1.5645-1.5655 (39.738-39.784mm)
Valve Seat Bore Diameter (Exh)	1.189-1.190 (30.20-30.23mm)			1.2510-1.2520 (31.775-31.800mm)