

OMC 18HP OMC AIR COOLED ENGINE SPEC SPECIFICATIONS:

SECTION 1 SPECIFICATIONS

ENGINE SPECIFICATIONS

Brake Horsepower18	Breaker Point Gap020" (0.5 mm)
Bore3.50" (88.90 mm)	Spark Plug Gap025" (0.6 mm)
Stroke2.250 (57.15 mm)	Spark Run33° BTDC
Displacement43.16ci (710 cm3)	Spark Retard (Static timing) 7° BTDC
Compression Ratio6.85:1	Oil FilterFull Flow
Cranking Compression (PST)110 lbs. (758 kPa)	Valve Seat Angle44° 33'
Governor TypeFlyball Type	Valve Face Angle45°
Rotation (Viewed from fly- wheel)CW	Valve Timing for .040" (1.0 mm) Lash at ValveIntake Opens 4 de- grees 42' B.T.D.C. Intake Closes 39 de- grees 40' A.B.D.C. Exhaust Opens 39 de- grees 42' B.B.D.C. Exhaust Closed 4 de- grees 40' A.T.D.C.
Spark PlugA.C. 85TS	
Air CleanerPaper Cartridge	
Spark Plug Size18 mm	
Carburetor Setting	
High Speed (Turns open) .2¼ to 2¾ (ZENITH)	
Idle Speed (Turns open) .1 to 1¼ (ZENITH) 1 to 2 (KEIHIN)	

1

TABLE OF CLEARANCES

Valve Tappet, Intake, Cold003" to .004" (0.08 to 0.10 mm)	Compression Ring Gap010 to .020 (0.25 to 0.51 mm)
Valve Tappet, Exhaust, Cold003" to .004" (0.08 to 0.10 mm)	Oil Control Ring Gap015 to .045 (0.38 to 1.14 mm)
Crankshaft End Play005" to .009" (0.13 to 0.23 mm)	Cam Shaft End Play002 to .007 (0.05 to 0.18 mm)
Rod To Crank Pin0011 to .0027 (0.03 to 0.07 mm)	Cam Gear Backlash002 to .004 (0.05 to 0.10 mm)
Rod (Side Play)005 to .015 (0.13 to 0.38 mm)	Cam Shaft Journal Bearing Bore Clearance0008 to .0023 (0.02 to 0.06 mm)
Rod To Wrist PinPress Fit	Main Bearing Clearance0004 to .002 (0.01 to 0.05 mm)
Wrist Pin To Piston Boss0004 to .0011 (0.01 to 0.03 mm)	Intake Valve Stem To Guide0015 to .0022 (0.04 to 0.06 mm)
Piston To Bore Clearance (Bottom of Skirt at 90° To Pin) .000 to .002 (0.0 to 0.05 mm)	Exhaust Valve Stem To Guide0025 to .0032 (0.06 to 0.08 mm)

DIMENSIONS

Crankshaft Journal (Main)1.9985/1.999" (50.76/50.77 mm)
Crankshaft Journal (Rod)1.7485/1.749" (44.41/44.42 mm)
Valve Stem Diameter Intake0.311/0.3103" (7.90/7.88 mm)
Valve Stem Diameter Exhaust0.309/0.3083" (7.85/7.83 mm)
Piston Pin Diameter0.8752/0.8749" (22.23/22.22 mm)
Piston Rings Compression3/32" (2.38 mm)
Piston Rings Oil
Rod Wrist Pin Hole0.8743/0.8738 (22.21/22.19 mm)
Camshaft Journal0.968/0.9675 (24.59/24.57 mm)

The following are the exact dimensions to which crankshafts should be ground when using under-size bearings:

UNDER-SIZE	MAIN JOURNALS	CRANK PIN JOURNALS
.015" (0.38 mm)	1.9840-1.9835" (50.39-50.38 mm)	1.7340-1.7335" (44.04-44.03 mm)
.030" (0.76 mm)	1.9690-1.9685" (50.01-50.00 mm)	1.7190-1.7185" (43.66-43.65 mm)

The following are the exact dimensions to which all cylinders should be bored when using oversize pistons:

OVERSIZE	CYLINDER DIAMETER
.020 (0.51 mm)	3.5200-3.5210" (89.40-89.43 mm)
.030 (0.76 mm)	3.5300-3.5310" (89.66-89.69 mm)