

GS / GSA Engines



This is a short report of this engine line and help you to locate the right components for upgrading your GS/GSA engine with the right parts.

This engine line has following displacement:

G10 with 1015 cm³, 74 Ø X 59 mm, build 1970 to 1972 with short spark plug thread (bad!), after 1972 with long spark plug thread (good), oval intake ports.

G12 with 1220 cm³, 77Ø X 65,6 mm, oval intake ports.
And GSX2, cylinder heads like GSA/G 13 engine with round intake ports.

G11 with 1100 cm³, 74Ø X 65,6 mm, GSX, GS Special, heads such as 1015 (after 1972).

G13 with 1300 cm³, 79,4Ø X 65,6mm, GSA, GSA-Eco, round intake ports.

GS 1015/1220/1100 cylinder heads have following valve diameter.

Intake : 39 mm Ø

Exhaust : 34 mm Ø

These heads have also the smallest combustion chamber volume.
For these heads 40mm intake valves are available.

Cylinder heads of 1220 GSX2 & GSA 1300 have following valve diameter :

Intake : 38 mm Ø

Exhaust : 35,7 mm Ø

These heads have a combustion chamber with the greatest volume.

Camshafts of the GS/GSA engines

The most interesting (and fastest!) camshafts of the engine line are the GS X2 1220 cams, shafts are stamped between front and rear cam pair:

Camshaft distributor side : A 57 - E 59

Camshaft fuel pump side : A 58 - E 60

Distributor and advance curve

Most aggressive (centrifugal) advance curve is found on distributor of the GS 1015 types.

Advance curve type :

Centrifugal : GA 5

Vacuum : GD 4

Programmable distributorless transistor ignition available.

Overboring of GS/GSA engine

With overboring possible displacement (stroke of 65,6mm is baseline) :

83 mm \varnothing = 1.419 cm³

Maximum safe overbore with GSA 1300 cylinders.

82 \varnothing = 1.385 cm³ auf Lager, on stock.

82,5 \varnothing = 1.402 cm³ .

83 \varnothing = 1.419 cm³ .

Recommendation for overboring the GS/GSA cylinder :

Overboring only of GSA 1300 cylinder with 11 cooling fins.

84 up to 84,6 mm \varnothing = 1.454 to 1.475 cm³

Possible : Aluminium cylinder fitted with a liner, diameter 86mm at base, no need for crankcase overboring.

84 \varnothing = 1.454 cm³, pistons available, high/low compression.

84,4 \varnothing = 1.468 cm³, piston available, high/low compression.

86 - 87 - 88 mm \varnothing 1500/1600 cm³

Aluminium cylinder with liner, overboring of crankcase to 92 mm \varnothing .

86 \varnothing = 1.524 cm³.

87 \varnothing = 1.569 cm³, on stock.

88 \varnothing = 1.596 cm³, on stock.