



dati tecnici
technical data

off road
atv



YAMAHA BANSHEE 350 ATV 87-06 ø68 mm

DATI TECNICI
TECHNICAL DATA

 **ATHENA**

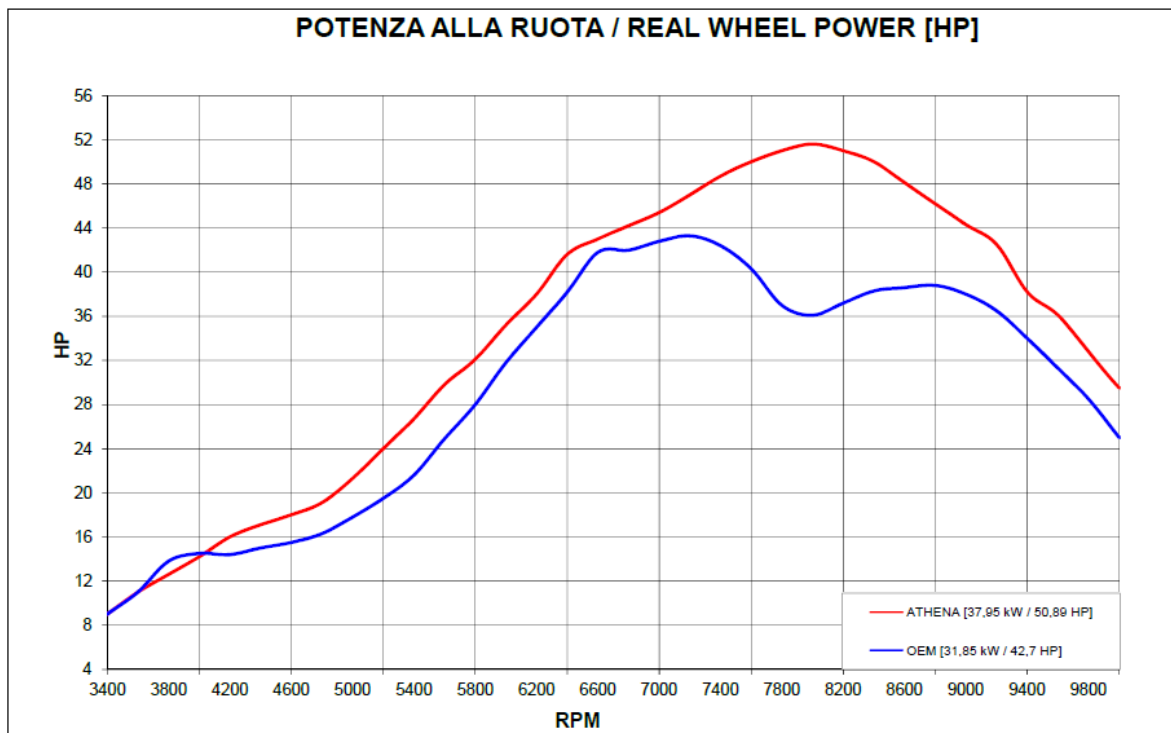
OEM

	ATHENA	OEM
ALESAGGIO / CYLINDER BORE	68 mm	64 mm
CORSA / STROKE	54 mm	54 mm
CILINDRATA / DISPLACEMENT	392 cc	347 cc
RAP. DI COMPRESSIONE / COMPRESSION RATIO	6,5:1	6,5:1
POTENZA ALLA RUOTA / WHEEL POWER	37,95 KW / 50,89 HP / 8000 rpm	31,85 KW / 42,7 HP / 7200 rpm

CARATTERISTICHE TECNICHE
TECHNICAL CHARACTERISTICS

- Cilindro in alluminio con riporto galvanico;
 - **S4C6800001A/B/C** Pistone fuso (D. 67,95 / 67,96 / 67,97 mm);
 - **P400485160021** Kit guarnizioni speciali;
 - **S410485308012** Testa esterna.
- *Aluminum cylinder with galvanic coating;*
 - **S4C6800001A/B/C** Forged piston (D. 67,95 / 67,96 / 67,97 mm);
 - **P400485160021** Special gasket kit;
 - **S410485308012** External Head.

CURVE DI POTENZA
POWER CURVES



ATHENA [37,95 kW / 50,89 HP]

Test eseguiti con:

- Gruppo termico completo Athena D. 68 mm;

OEM [31,85 kW / 42,7 HP]

Test eseguiti con motore originale standard.

ATHENA [37,95 kW / 50,89 HP]

Tests made with:

- Complete cylinder kit Athena D. 68 mm;

OEM [31,85 kW / 42,7 HP]

Tests made with stock engine;

BORE SIZE	STROKE	DISPLACEMENT	COMPRESSION RATIO
68 mm	54 mm	392 cc	11,9:1

ASSEMBLY INSTRUCTIONS CYLINDER KIT YAMAHA BANSHEE 350

We thank you for choosing our products and stay at your disposal for any further information you may require.

PRELIMINARY OPERATIONS:

Thoroughly clean the engine area on which the work is to be carried out. To facilitate operations it is advisable to remove the saddle and relative plastic parts, such as the radiator cover, tank cover and front mudguards.

Drain the cooling circuit through the sleeve at the outlet of the casing on the clutch side.

DISASSEMBLE THE EXHAUST SYSTEM AND THE ORIGINAL CYLINDER KIT AS FOLLOWS:

Disassemble the two exhaust mufflers as usual, but not the silencers.

Remove the cables and relative spark plugs.

Loosen and remove from the engine housing the carburetors with relative manifolds and reed valves (this OEM material will be replaced with the Athena kit).

Unscrew the two M6 screws that fasten the manifold of the cooling circuit to the heads.

Unscrew the 10 M8 nuts in a cross pattern and remove the heads.

Loosen the M8 nuts that fasten the two cylinders one at a time.

Remove the original cylinders and respective base gaskets.

Cover the mouth of the casing and remove the pistons, taking care that no foreign bodies drop into the engine.

RETRIEVE THE FOLLOWING COMPONENTS FROM THE ORIGINAL CYLINDERS FOR ASSEMBLY OF THE ATHENA KIT:

- Carburetors
- Rubber manifolds and reed valves.
- Cooling circuit manifold (located between the two cylinders).
- Remove the screws for draining coolant from the OEM cylinders.

IMPORTANT! Carefully check the crankshaft, the oil seals and the main bearings, the needle roller cage and the connecting rod small end for wear, as the reliability of your engine is also guaranteed by the good conditions of these components.

ASSEMBLING INSTRUCTIONS:

Wash all components of the original cylinder to be reused and all new components of the Athena cylinder kit with gasoline and carefully blow dry, taking particular care to check that there are no impurities inside the various cylinder pipes and protect the mouth of the casings with a clean rag.

Fit the 5 M8 bolts (per cylinder) supplied in the Athena kit.

For both pistons, assembly on the groove of the second ring (stamped 2R) the thin ring, which is in the ring plastic bag.

The ring end gap must be lined up with the notch in the piston, see picture E.

Fit a circlip and the piston rings on both pistons.

Carefully clean the cylinder bearing surface on the casings, ensuring that no residues from gaskets or dents are present.

Fit the Athena pistons one at a time with the arrow marked on the top pointing towards the exhaust. After having lubricated the pin, insert it in the piston, sliding it forward by hand. After having inserted the circlips, double check that they are correctly positioned in their seat.

Check that the external width of the reed clips is 22 mm, on the contrary, modify them to respect this measure (see picture B).

Then fit the reed valves and rubber manifolds on the cylinders, clamping the respective M6 screws to a torque of 10 N•m or 1 Kg•m.

Lubricate the pistons, the piston rings and the cylinder liner with 2 stroke oil.

Install the new cylinder base gasket supplied in the Athena kit (0.6 mm thick) and the Athena cylinder, taking care not to rotate it as this could cause breakage of the piston rings.

Apply copper grease to the threads of the bolts and cross tighten the nuts to a torque of 25 N•m or 2,5 Kg•m.

Fit the O-rings in the domes and on the outside of the head.

Assemble the head taking care that the O-rings remain in their respective seats.

Apply copper grease to the threads and cross tighten (according to the drawing) (using the nuts and respective washers supplied in the kit) to a torque of 25 N•m or 2,5 Kg•m (see picture A).

SQUISH: to achieve the correct and tested performances from the ATHENA KIT, a squish clearance that starts at 1,3 mm and increases to 1,6 mm must be obtained (see picture D). This can be measured as follows: manually position the piston towards the bottom dead centre, insert a 2 mm thick solder wire through the spark plug hole aligned with the pin, and turn the engine by hand using the starter pedal (at least 2 or 3 times). After this operation the solder wire will have a depressed part which when measured with a Vernier gauge should indicate the squish value. If this is not correct, raise or lower the cylinder, replacing the base gasket, until the aforesaid measurement is obtained.

Fit the pipes and the manifold of the cooling circuit between the two cylinders.

Fit the carburetors and to further improve engine performance remove the rubber manifold on the filter case (see picture C).

Fill the cooling circuit.

Fit the exhaust system, replacing the old O-rings with those supplied in the Athena kit and check that it is in excellent conditions and that no excessive deposits are present; clean if necessary.

Clean the air filter and replace if necessary.

Check carburetion and, if necessary, adapt it to the new Athena cylinder kit.

RUNNING IN, USE AND MAINTENANCE:

Do not use petrol with less than 96 octanes and use synthetic oil. Do not force the engine for the first 3-4 hours of use, as this could cause damage to the cylinder kit. The best performances are obtained after a correct running in period.

The piston should be replaced at the first signs of fatigue of the kit, so as not to damage the roundness of the cylinder liner.

We remind you that it is not the single part but all the parts as a whole that give your engine the best performance.

Only qualified technicians must make the assembling of the articles included in this kit. In case a wrong assembling causes any faults and/or problems, we will not be responsible for any damage or technical or economical request which are claimed to us. The descriptions contained in this leaflet are not binding. Athena reserves the right to make any changes, if necessary. We are not responsible for any printing errors.

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