THE HEART OF KART

REEDSTER 5 125cc OK & OKJ

ASSEMBLY INSTRUCTIONS AND USER MANUAL

MAN-082 **TKC**

FEEDING

Fuel mixture **98RON** and **4%** oil (CIK homologated CIK)

Our experience dictates use of oils, such as:
- WLADOIL K 2T;
- ELF HTX 909;
- ELF HTX 976;
- SHELL ADVANCE RACING M.

LUBRIFICATION GEARS

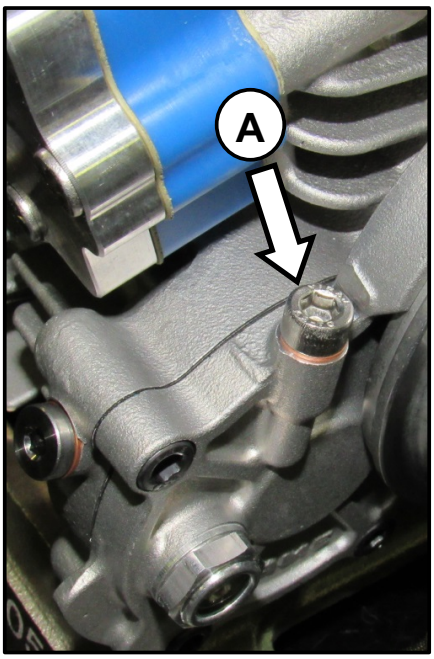
ATTENTION: the engine is supplied without oil in the gear vain.

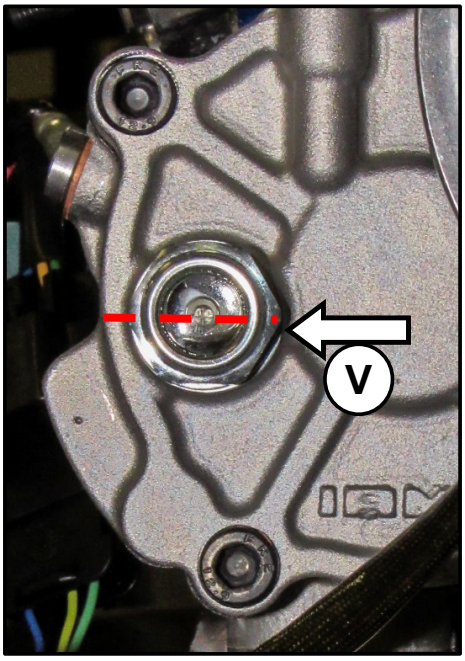
GEARS OIL CHARGING

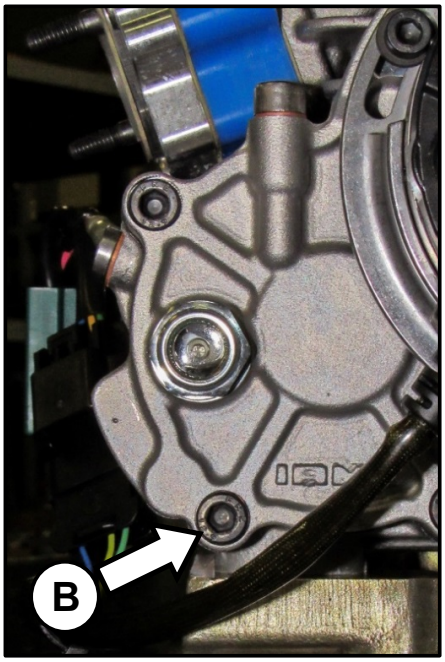
Before use, remove the screw-plug and add oil through the hole on the crankcase (A), about **20ml** with specific **EP 100**, as **WLADOIL IAME GEAR OIL** or oil with specific **SAE 75W**.
To verify that the amount of oil in the crankcase is as recommended check engine light cap (V) in photos. If the oil level is visible at about slightly less than half the amount of the cap it is correct.
A complete oil change is recommended after **5 hours** of operation.

GEARS OIL DISCHARGING

Unscrew the drain screw-cap (B), to discharge oil.

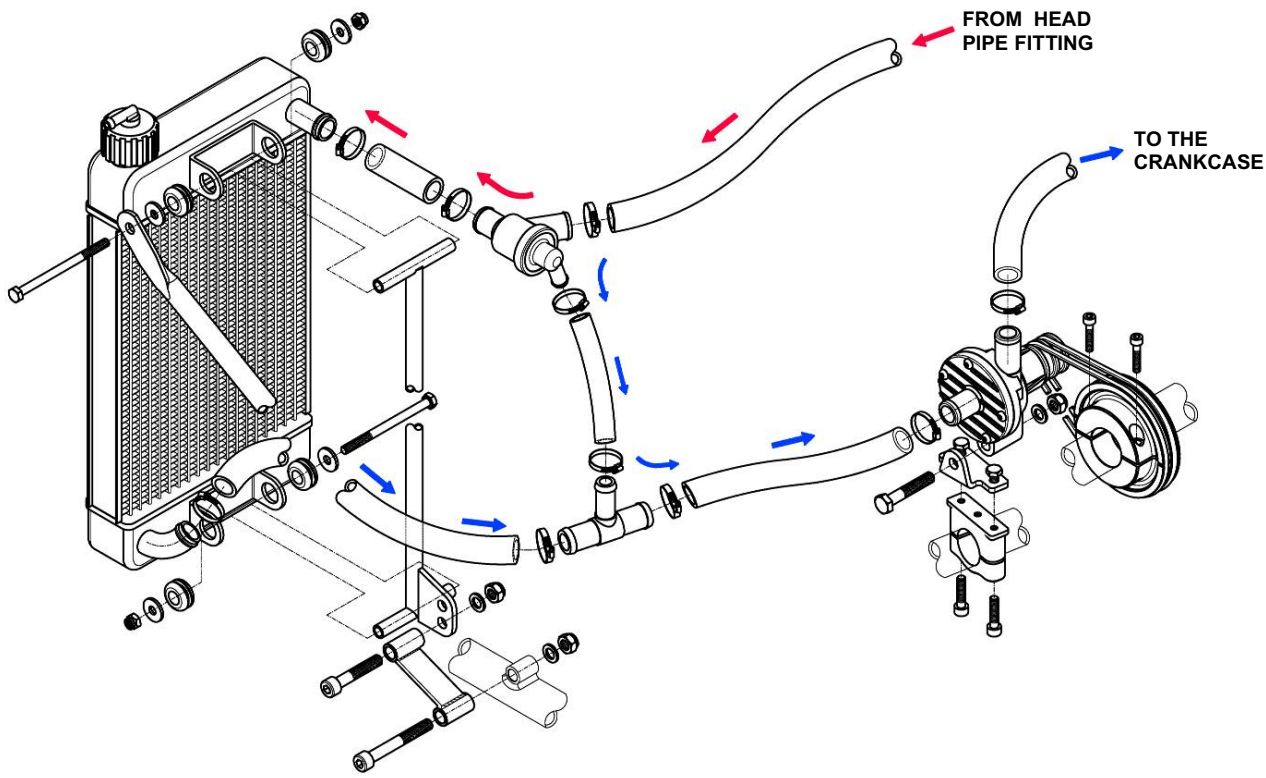






COOLING SYSTEM CONNECTIONS

CONNECT THE SYSTEM AS SHOWN IN FIGURE



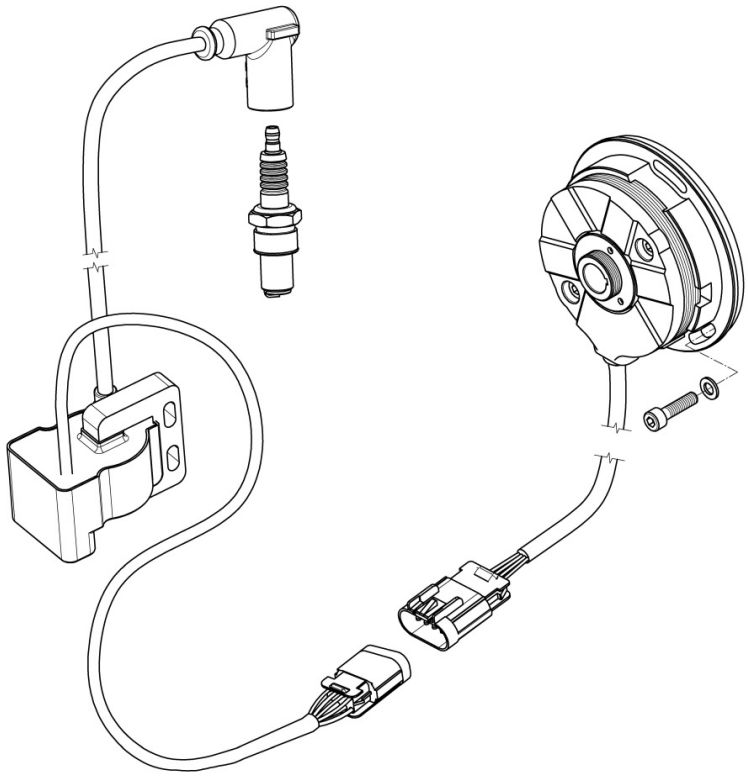
Once the system is filled (with pure water), provide to the proper air venting.
We recommend the use of a 3 way-thermostat (opening temperature **48°C±2**), as shown on the drawing, especially during the wintertime.
It is though possible to make a direct connection, removing the thermostat, the T-pipe and the bypass-tube between them.
The presence of the thermostat doesn't eliminate the need for adequate partialization of the radiant surface and for protective spoilers on the cylinder during the cold season (temperature ≤5°C).

ATTENTION: water cooling operation temperature limits:
min. 48°C / max. 52°C

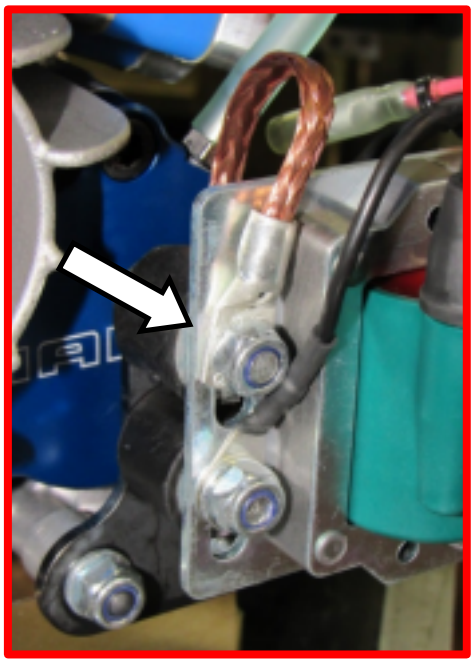
ELECTRIC SYSTEM

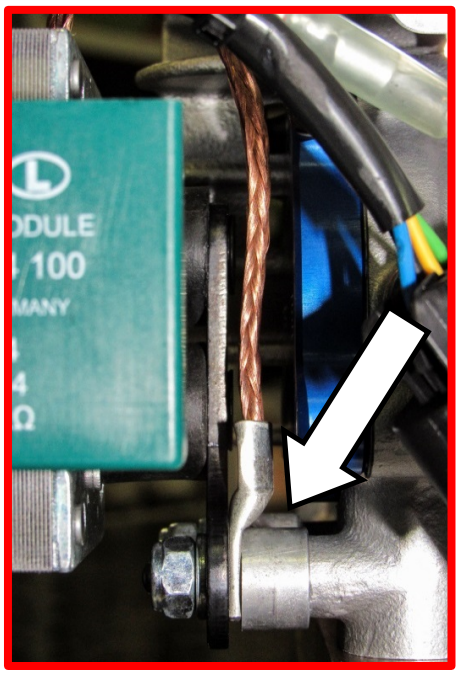
ELECTRIC CONNEXTION

The engine mounts ignition of digital advance normally set to **2.20mm** on **OK,** and **3.45mm** on **OKJ** before PMS.
When the piston is at T.D.C. the notches of the rotor and stator coincide.



ATTENTION: VERY IMPORTANT IS CONNECT TO CRANKCASE THE COPPER WIRE TO ENGINE AND COIL'S BODY.

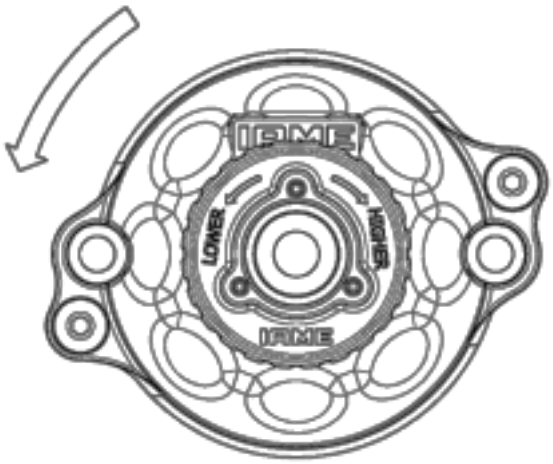




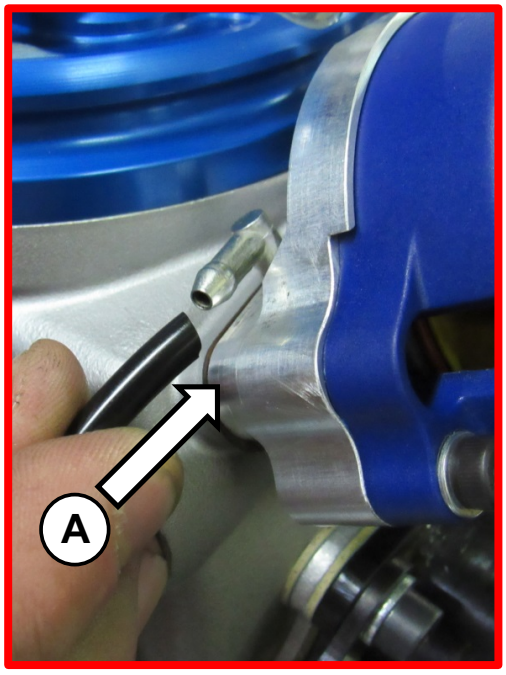
EXHAUST VALVE ADJUSTEMENT (ONLY OK ENGINE)

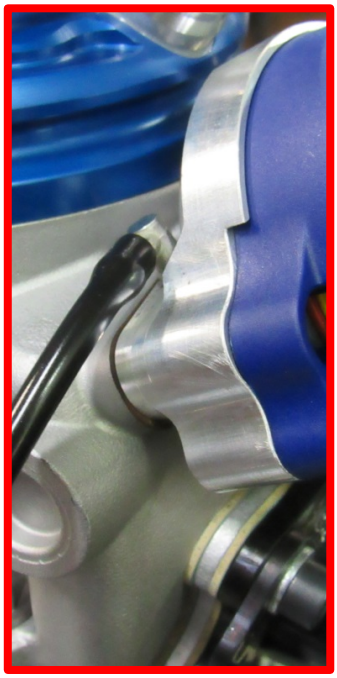
The engine is provided with a pneumatic power-valve on the exhaust duct to improve the performance at low RPM.
The power valve can be adjusted by turning the ring nut or by replacing the retaining spring inside the power valve.
The basic setting varies according to the spring type and is achieved by turning clockwise the ring nut until limit stop and then unscrewing and counting the number of notches necessary until you get an optimal setting.

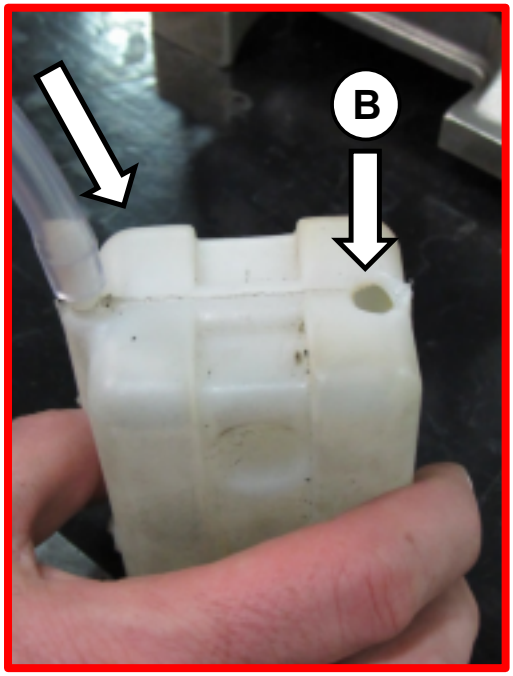
SETTING 2016:
Spring wire Ø1.1mm for a length of 45mm, from the limit stop, unscrew the ring nut by 5÷10 notches for obtain best performance.



For the correct and optimal operation of the exhaust valve is necessary to connect the small fitting breather (A) with a recovery tray, it must not be hermetically closed but have a hole on the upper side (B) to facilitate breather.

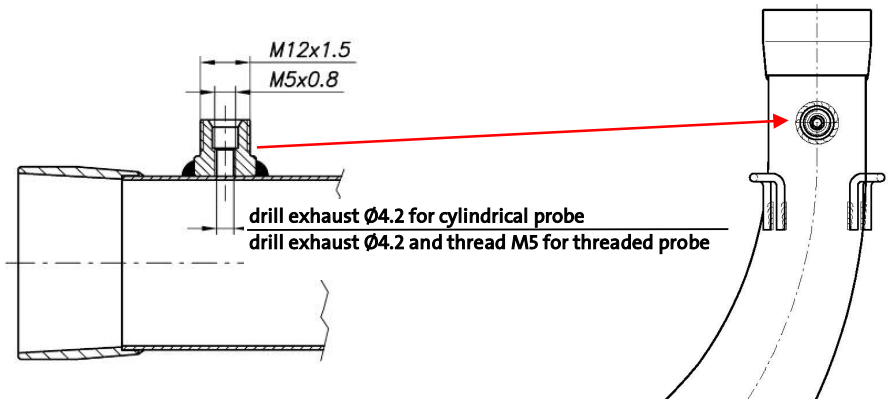






EXHAUST GAS TEMPERATURE PROBE

The muffler, supplied with the engine is provided with a temperature probe fitting which is not drilled, whenever you wish to employ proceed as shown in the figure.



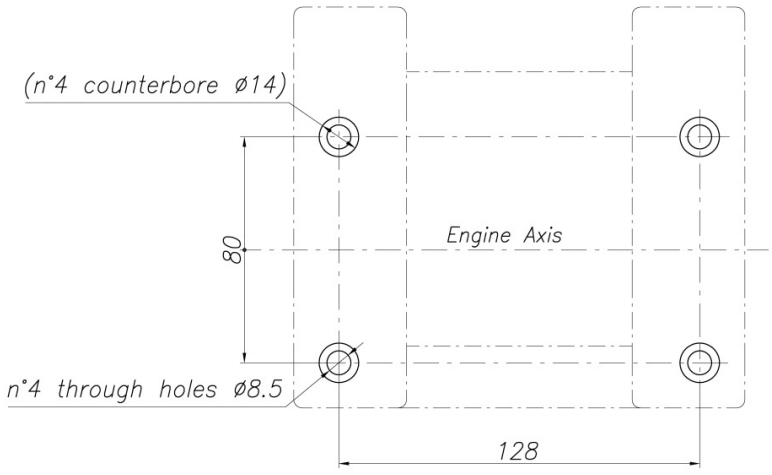
EXHAUST LENGTH SETTING

The following table shows the exhaust length setting depending on the track conditions and needed power diagram.
In general, by shortening the total exhaust length the low RPM an improvement at high RPM is achieved and vice versa, by lengthening the exhaust length the low RPM is improved.

COMPONENTS	CONFIGURATION	FINAL RATIO WHEELGEAR/SPOCKET
2 SPACER 3mm + 3 GASKET	SERIES	STANDARD RATIO
1 SPACER 3mm + 2 GASKET	-4.5mm D SERIES	FROM STANDARD TO 1 TOOTH MORE ON WHEELGEAR

MOTOR MOUNT DRILLING

For fixing the engine to the chassis it is necessary to have a non-inclined motor mount drilled with the following dimensions, or in case drill as according to the design.

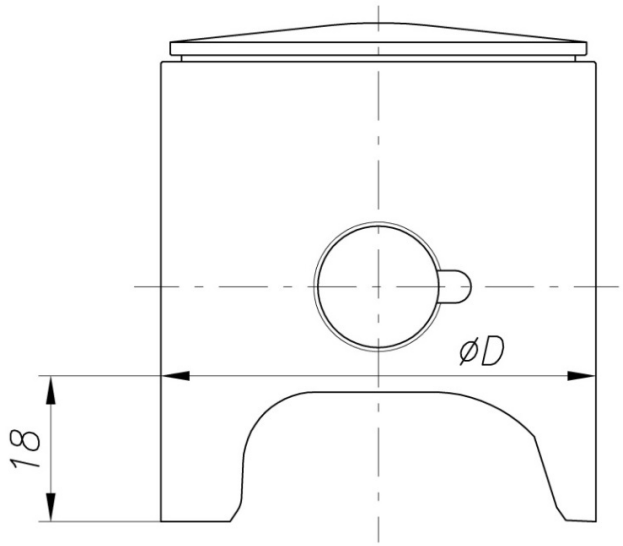


MAIN ENGINE COMPONENTS AVERAGE ESTIMATED LIFE

The estimated life of the different components, of the engine, changes according to the use and to the desired performance.

PISTON / CYLINDER MATCHING

The piston replacement must take place within specific intervals, measured through used mixture liters and it changes depending of the engine use, if for competitive use (so to reach the better performance) or not competitive.
IAME suggests to replace the piston during the competitive use any **30lt** or before whenever the clearance between piston and cylinder exceeds **0.16mm** for **OK** and **OK-J**.
For NOT competitive use the replacement must take place any **60lt~** of mixture or whenever the clearance between piston and cylinder exceeds **0.16mm** for **OK** and **OK-J**.
The prescribed clearance, of **OK** engine, between cylinder and new piston , is **0.12÷0.13mm**.
The prescribed clearance, of **OK-J** engine, between cylinder and new piston , is **0.11÷0.12mm**.
The effective piston diameter has to be verified at **18mm** from the base, perpendicularly to the piston pin.



The measure marked on the piston top is the effective one of the piston.

Moreover, the clearance between the piston ring tips (installed in the cylinder) must be between **0.25÷0.30 mm**.
The clearance can be checked with a feeler gauge, by inserting the ring in the cylinder.

MAIN BEARINGS

With the roller bearing, the life of these ones is same to a full sporting season.

COUNTERSHAFT BEARING

The replacement must be made every **200lt** of use.

CONROD BIG END CAGE, CRANKPIN AND SHIM

The replacement must be made every **100lt** of use.

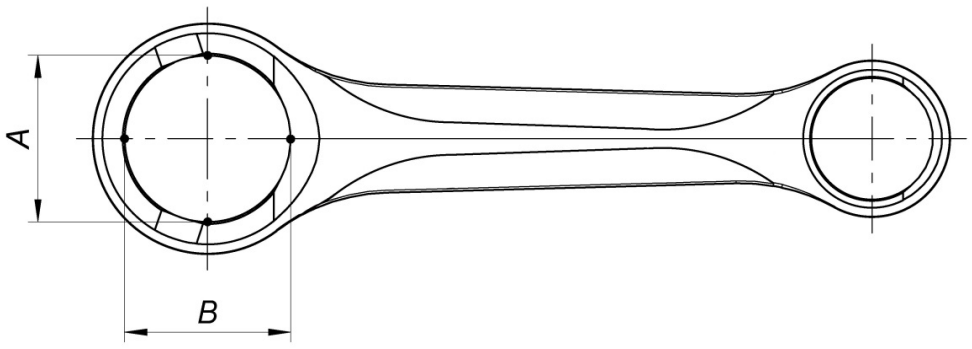
CONROD LITTLE END CAGE

The replacement must be made every **100lt** of use.

CONROD

The replacement must be made every **200lt** of use.

Anyway it must be replaced whenever the big end hole ovalization exceeds **0.01mm**. This value is the difference between the diameter measured in "A" and "B" as below indicated.



TECHNICAL DATA ENGINE SUMMARY TABLE

DESCRIPTION	OK	OKJ
FUEL MIXTURE / FUEL	4% OF OIL FUEL 98 RON Oil CIK homologated	4% OF OIL FUEL 98 RON Oil CIK homologated
GEARBOX OIL	20 ml specific: EP 100 (WLADOIL IAME GEAR OIL) or SAE 75W	20 ml specific: EP 100 (WLADOIL IAME GEAR OIL) or SAE 75W
OPERATING TEMPERATURE ENGINE	min.48°C / max.52°C	min.48°C / max.52°C
ANGLES TIMING REFERENCE	191°/177.5°/128°/ 123.5°/121.5° Feeler gauge 0.2x5mm	168.8°/167.8°/126° 123.8°/122.4° Feeler gauge 0.2x5mm
TIMING ADVANCE	2.2 mm before the T.D.C.	3.45 mm before the T.D.C.
COMBUSTION CHAMBER VOLUME	14.15 cm^3 (min. 14.00cm^3)	11.15 cm^3 (min. 11.00cm^3)
SQUISH	0.83mm / 0.85mm Measured with single wire from 1.5mm	0.78mm / 0.79mm Measured with single wire from 1.5mm
CORRECT MEASURE TIPS PISTON RING	0.25 ÷ 0.30 mm installed in the cylinder	0.25 ÷ 0.30 mm installed in the cylinder
AXIAL SHAFT CLEARANCE	0.40 / 0.45 mm	0.40 / 0.45 mm
SPARKPLUG TYPE USE IN STANDARD WEATHER CONDITIONS	NGK BR 10 EG	NGK BR 10 EG
SPARKPLUG TYPE USE IN STANDARD WEATHER CONDITIONS FOR COMPETITIVE USE (USE WITH SPECIFIC SPARK CAP)	NGK R7282 10 NGK R7282 105	NGK R7282 10
SPARKPLUG TYPE USE IN RAIN ATMOSPHERIC CONDITIONS	NGK R7282 9 NGK BR 9 EG	