

ST-R TypeR RACING CAMSHAFT SET SUZUKI GSX-R1000 [Part No. 210-506-0100]

- Be sure to read this manual carefully before starting to work.
- While in the installation, keep it at hand and proceed by following the procedure.
- This manual must be retained until the product is scrapped.

This product is designed for the racetrack use ONLY. Do not use this product on the public road. When use this product, confirm race regulation before installation.

- ! DANGER** : Indicates a potential hazard that could result in death, injury or engine breakdown.
- ! CAUTION** : Indicates a potential hazard that could result in motorcycle damage.
- REFERENCE** : Indicates special information for smooth work.

● Applicable Model

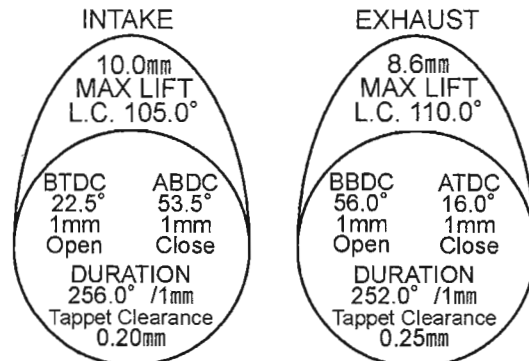
SUZUKI : GSX-R1000 K5/K6

! DO NOT use it for any other models.

● KIT Contents

No.	Part No.	Description	Q'ty
1	210-506-0110	ST-R TypeR Intake camshaft	1
2	210-506-0120	ST-R TypeR Exhaust camshaft	1
3	212-505-0010	Sprocket, camshaft	2
4	09103-07003-000	Bolt, cam sprocket	4
5	A-D7120-921	Valve spring	8
6	221-518-1050	Valve spring seat shim t=0.5mm	16
7	221-518-1100	Valve spring seat shim t=1.0mm	8

● Specification



* Above data are the designed numbers only. The actual measured numbers may slightly differ from originally design.

● Condition of use

	Valve spring	Valve spring seat shim
INTAKE	A-D7120-921 : KIT Valve spring	221-518-1050 : Seat shim t=0.5mm / 221-518-1100 : Seat shim t=1.0mm
EXHAUST	STD	221-518-1050 : Seat shim t=0.5mm

! CAUTION Using kit valve spring and seat shim as the chart shows, engine rev limit can be raised up to 13,800rpm.

● Recommended parts

- Valve cotter set [Part No. 222-518-0000]
- EM Pro [Part No. 490-506-0000]

● Recommended tools

- Cam chain drive sprocket spacer [Part No. A-D4120-614]
- Timing wheel [Part No. 258-000-5150]
- Timing wheel bracket [Part No. 258-000-0000]
- Timing wheel indicator [Part No. 258-567-0000]
- T.D.C. Stopper [Part No. 258-567-0030]
- Valve lifter tool [Part No. 258-567-0040]

! DANGER This product is racing camshaft with adjustable valve cam sprocket. The valve timing must be adjusted to specified lobe center when installing.

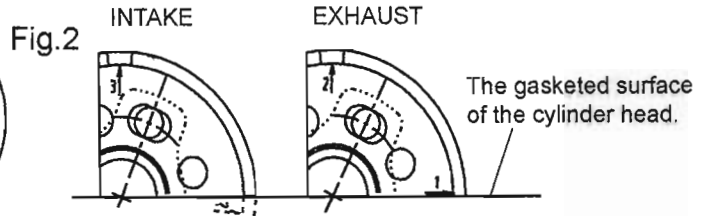
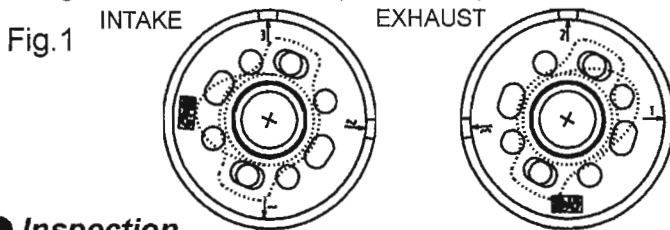
! CAUTION Be careful not to drop any parts into the crankcase. Before installation, disassembled parts should be cleaned and dried well.

Installation Steps

Each parts removal and installation should be done in accordance with the SUZUKI genuine service manual.

● Camshaft and sprocket installation

- Refer to Fig.1 and adjust the positions of the camshafts and the arrow marks on the cam sprockets.
- Refer to Fig.2 and adjust the position of a camshaft's bolt-hole so that it comes to the center of cam sprocket bolt-hole.
- Preinstall a cam sprocket bolt.
- Confirm that the opposite camshaft bolt-hole is at the center of the another cam sprocket bolt-hole. If it is not at the right position, repeat the procedure No.2.
- Tighten preinstalled cam sprocket bolt to prevent any slants from the center.
- Confirm the center of the opposite cam sprocket bolt-hole again and then preinstall the other cam sprocket bolt.
- Tighten both bolts to the specified torque.



● Inspection

■ Items

- Valve retainers, valve cotters, valve springs, spring seats and tappets for wear or damage.
- Valves and valve guides for looseness, wear or damage.
- Camshaft journal surfaces for wear or damage.

* Items other than above mentioned should be checked in accordance with the SUZUKI genuine service manual.



DANGER Parts checking and consumable replacement must be done correctly. If neglect, engine damage could occur.

● Tappet clearance adjustment

■ Specification (When cold)

- INTAKE : 0.18 - 0.22mm
- EXHAUST : 0.23 - 0.27mm



DANGER The tappet clearance must be adjusted every time camshaft is installed.

REFERENCE

This kit camshaft is designed with 27mm diameter base circle while stock one is 28mm, therefore it is required to add extra tappet shim with approximately 0.5mm thickness.

● Valve timing inspection and adjustment

■ Intake side valve timing at 1mm of valve lift

- IN Open : BTDC 22.5 degrees
- IN Close : ABDC 53.5 degrees
- Lobe center : 105.0 degrees

■ Exhaust side valve timing at 1mm of valve lift

- EX Open : BBDC 56.0 degrees
- EX Close : ATDC 16.0 degrees
- Lobe center : 110.0 degrees

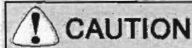


DANGER Thread lock "Thread lock super 1303" SUZUKI [Part No. 99000-32030] must be applied to the cam sprocket bolts.

Cam sprocket bolt torque specification : 25N·m(2.5kgf·m) must be followed.

Break-in

1. Change the engine oil and pour engine oil to the specified quantity.
Recommended engine oil : Higher than API,SF grade and SAE10W-40 - 15W-50
2. Remove the spark plugs and spinning the engine by starter motor to lubricate the surroundings of the camshafts well.
3. Let it stand for several minutes, and then check the oil level. Add oil if the level is low.
4. Install the spark plugs.
5. Start the engine, check for engine oil leakage and let it warm up the engine until the oil temperature rises sufficiently.
6. For 100km - 200km of running, the engine rpm should be keep below 5,000rpm.
7. For 200km - 300km of running, the engine rpm should be keep below 6,000rpm.



CAUTION Starter motor must be run intermittently for 2 or 3 seconds. for twice or more. Continuous run may result in burnout of starter motor.



CAUTION During the break-in, avoid heavy loadings such as sudden starts and rapid accelerations.

8. When break-in is completed, adjust the tappet clearance and check that there is no abnormal noise. If any abnormal noise are heard, disassemble and inspect the engine again.



CAUTION When the engine is started to run, warm up must always be done until the oil temperature rises sufficiently even break-in is completed.

Quality control is implemented to all the products. If, however, any failure was found, please notify Yoshimura Japan through the selling dealer. Necessary technical service or replacement will be made. Due to improvement, the specifications and prices of the products are subjected to be changed without notice.

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