

ST-R TypeR CAMSHAFT SET SUZUKI GSX-R1000 【Part No. 210-503-0100】

- 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, should conform to race regulation before install this product.

! 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

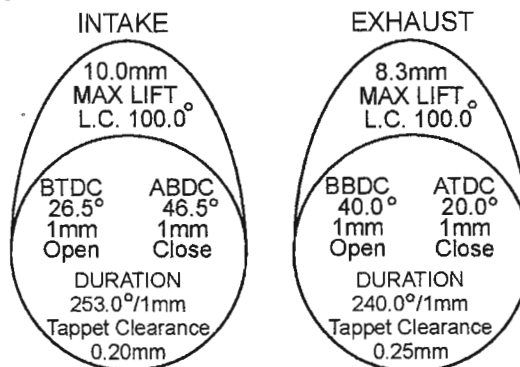
SUZUKI : GSX-R1000 K1-K4

! DO NOT use it for any other models.

● KIT Contents

No.	Part No.	Description	Q'ty
1	210-503-0110	ST-R TypeR Intake camshaft	1
2	210-503-0120	ST-R TypeR Exhaust camshaft	1
3	212-505-0010	Camshaft sprocket	2
4	09103-07003-000	Cam sprocket bolt	4

● Specification



*1 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.

*2 Above data are the designed numbers only. The actual measured numbers may be slightly different.

● Condition of Use

ECU		STD ECU 11,800rpm	KIT ECU Type-A 12,500rpm	KIT ECU Type-B 13,000rpm / 13,100rpm
ST-R Type-R	INTAKE	Camshafts & ECU combination; Not Recommended	Valve Springs; Required Valve Cotters; Required	Valve Springs; Required Valve Cotters; Required Valve Spring seat shims; Required
	EXHAUST		Valve Springs; Not Required Valve Cotters; Required	Valve Springs; Required Valve Cotters; Required

● Other Necessary Parts

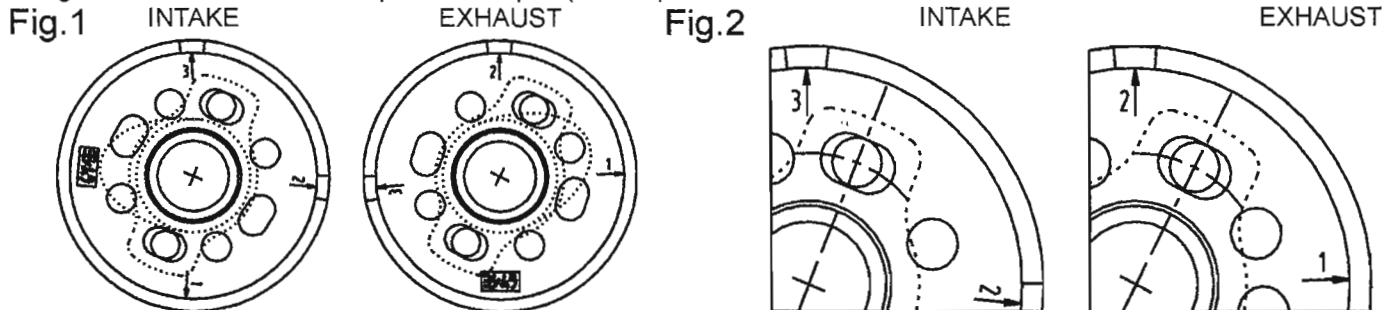
- SUS Valve cotter set [Part No. 222-565-0000 or 222-565-0001]
- Valve spring set (16pcs/set)..... [Part No. 220-585-0000]
- Valve spring set (8pcs/set)..... [Part No. 220-585-1000]
- Valve spring seat shim set..... [Part No. 221-503-0030]

! DANGER This product is racing camshaft with adjustable valve cam sprocket. The valve timing must be adjusted to its lobe center before it is in use.

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

Cam sprocket Installation

1. Refer to the Fig.1 and adjust the positions of the camshafts and the arrow marks on the cam sprockets.
2. Refer to the Fig.2 and adjust the position of a camshaft's bolt-hole so that it comes to the center of cam sprocket bolt-hole.
3. Preinstall a cam sprocket bolt.
4. 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.
5. Tighten the preinstalled cam sprocket bolt to prevent any slants from the center.
6. Confirm the the center of the opposite cam sprocket bolt-hole again and then preinstall the other cam sprocket bolt.
7. Tighten the both bolts to the specified torque. (Cam sprocket bolt : 25 N · m)



※Camshaft removal and installation should be done in accordance with the SUZUKI genuine Service Manual.

Checking portions

● Check 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.

Adjustment of Tappet Clearance

* Confirm that the tappet clearances are within the standard values.

● Standard Values (Cold)

INTAKE : 0.18 ~ 0.22mm

EXHAUST : 0.23 ~ 0.27mm

! CAUTION

The Tappet clearances must be adjusted every time the camshafts are installed.

Adjustment of Valve timing

! DANGER

Thread Lock "Thread Lock Super 1303"(Parts No.99000-32030) must be applied to the cam sprocket bolts.
Cam sprocket bolt : 25N · m

INTAKE valve timing at 1mm of Valve Lift

- IN Open : BTDC 26.5°
- IN Close : ABDC 46.5°
- Lobe Center : 100.0°

EXHAUST valve timing at 1mm of Valve Lift

- EX Open : BBDC 40.0°
- EX Close : ATDC 20.0°
- Lobe Center : 100.0°

Break-In

1. Change the engine oil and put in a 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.

! CAUTION

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

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 kept below 5,000rpm.
7. For 200km~300km of running, the engine rpm should be kept below 6,000rpm.

! CAUTION

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

8. When the break-in is completed, adjust the tappet clearances and check that there is no abnormal noise. If any abnormal noises 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 the 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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