

ST-R CAMSHAFT SET SUZUKI LT-R450 【Part No. 210-180-0502】

- 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 vehicle damage.

REFERENCE : Indicates special information for smooth work.

● Applicable Model

SUZUKI : LT-R450 K6-K9

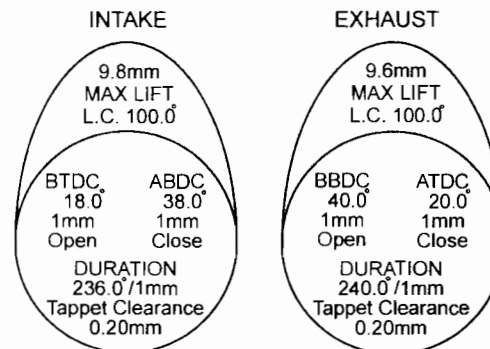
! DO NOT use it for any other models.

● KIT Contents

No.	Part No.	Description	Q'ty
1	210-180-0512	Intake camshaft	1
2	210-180-0521	Exhaust camshaft	1
3	212-180-0210	Intake cam sprocket	1*
4	216-182-0110	Bolt	2*

*The Intake cam sprocket and bolts are already installed on the intake camshaft when delivered.

● Specifications



* The profiles above are designed numbers. There may be small difference from measured numbers.

Installation Steps

Each parts removal and installation should be done in accordance with the SUZUKI genuine Service Manual.

! DANGER Both intake and exhaust camshafts are delivered with the designed lobe center. However it is required to measure it by adjusting the valve timing when installing.
Note : The intake camshaft is supplied with an adjustable cam sprocket.

! CAUTION Be careful not to drop any parts into the crankcase while removing and installing. Removed parts need to be washed and dried properly before the installation.

● Auto Decompression

- The auto decompression components are used with this product. Follow the "SUZUKI genuine Service Manual" to remove from the original camshaft. Then install them to the ST-R exhaust camshaft.

● Installing The Camshaft and The Sprocket

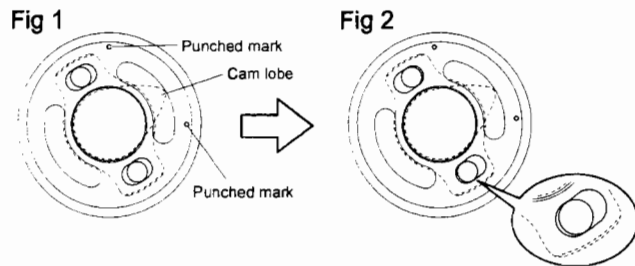
REFERENCE

To keep the enough clearance between piston and intake valve, the intake cam sprocket should be installed with the valve timing retard as the figure 2 shows.

! DANGER

The intake camshaft and the sprocket are assembled already when delivered; however, after the case of taking apart, follow the steps below to assemble and adjust the valve timing as it designed.

- Adjust the top of the cam and the punched marks on the sprocket as the figure 1 shows.
- Adjust the position of a camshaft's bolt-hole so that it comes to the position as the figure 2 shows.
- Tighten the cam sprocket bolts with specified torque. [Tightening torque : 25N·m (2.5kgf·m)]



● Inspecting The Items

■ Items' list

- The wear and the damages on; valve retainers, valve cotters, valve spring seats and valve springs.
- The looseness, wear, and the damages on; valves, valve guides.
- The wear and the damages on; cylinder head journal, tappets.
- The wear and the damages on; cam chain, cam chain tensioner and cam chain guide

*For other parts, follow the service manual to inspect. If it is necessary, replace or fix the parts.

! DANGER

Check and replace the each parts properly. Wrong procedures may cause engine damages.

● Measuring and Adjusting The Tappet Clearance

■ Specification (when the engine is cold)

INTAKE : 0.18~0.22mm

EXHAUST : 0.18~0.22mm

! CAUTION

Check the tappet clearance is within the specified range. If it is out of range, adjust again. To prevent burnt and scratches, put oil on the cam top. Fill the oil pool of the cylinder head with the oil, then install the head cover.

● Measuring and Adjusting The Valve Timing

■ The valve timing for the intake valve lift at 1mm.

- Open : BTDC 18.0°
- Close : ABDC 38.0°
- Lobe center : 100.0°

■ The valve timing for the exhaust valve lift at 1mm.

- Open : BBDC 40.0°
- Close : ATDC 20.0°
- Lobe center : 100.0°

! DANGER

Thread lock " Thread Lock 1342" [SUZUKI part No.99000-32050] must be applied to the cam sprocket bolts.

The cam sprocket bolts tightening torque : 25N·m (2.5kgf·m).

Before Starting The Engine

● Cranking

■ To prevent burnt and scratches, follow the steps below for the oil to circulate enough.

1. Put the specified quantity of the new oil. (Recommended : Higher than API-SG grade and SAE10W-40~15W-50)
2. To reduce the friction on the engine, remove the spark plug and crank the engine.
3. After a few minutes, check the oil level. If it is low, add more.

Break-in

■ Start the engine and check the oil leak. Let it run until the oil temperature gets higher. 1st 30mins, open less than 1/4 of the throttle. After 30mins to 1h open less than 1/2 of the throttle.

- To keep the oil pressure, while warming up the engine, keep it 2,000 ~ 3,000rpm.
- After the break-in, measure and adjust the the tappet clearance and check if any noise is present.
- When making noise, disassemble and inspect the engine again.
- While running the engine, to keep enough oil pressure, do not drive it less than 5,000rpm.

! CAUTION

During the break-in, do not ride aggressively (sudden start and acceleration).

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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