

ST-R CAMSHAFT SET SUZUKI DR-Z400/E/S/SM 【Part No. 210-125-0000】

- 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 : DR-Z400/E/S/SM Y~K8
Engine type K419 (2000~2008)

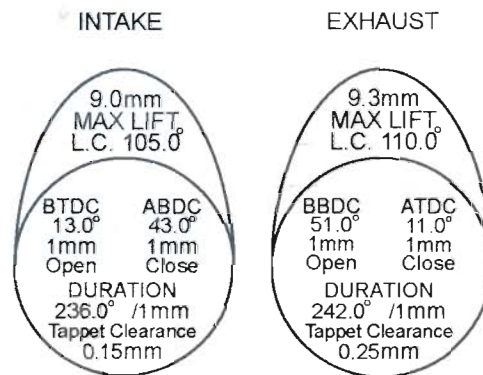
⚠ DO NOT use it for any other models.

● KIT Contents

No.	Part No.	Description	Q'ty
1	210-125-0010	Intake camshaft *	1
2	210-125-0020	Exhaust camshaft *	1
3	222-125-0011	Valve cotter	8
4	221-185-1080	Valve spring seat shim (0.8mm)	2
5	212-125-0010	Cam sprocket	2
6	09103-07003	Bolt	4

* The cam sprockets and the bolts are included when ordering the camshaft individually.

● Specifications



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

● Unsupplied Recommended Parts

- Racing ignitor [Part No. 404-125-0000]

Installation Steps

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

⚠ DANGER This is a racing camshaft set with the adjustable valve timing system. The valve timing must be adjusted to its lobe center when installing.

⚠ DANGER When changing the camshafts, install new valve retainers and cotters included in the kit, and put valve spring seat shims under the valve spring seat for the intake side. If unspecified parts are installed, the valves may not work properly and be dangerous.

⚠ 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

YOSHIMURA

SPECIAL PARTS TECHNICAL SERVICE MANUAL

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2	210-125-0020	Exhaust camshaft	1
3	222-125-0011	Valve cotter	8
4	221-185-1080	Valve spring seat shim (0.25mm)	2
5	212-125-0010	Cam sprocket	2
6	09103-07003	Bolt	4

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● Installing The Camshaft and The Sprocket

- Place the top of the cam and the arrow marks on the sprockets as the Fig. 1 shows
- Set the center of the long holes on the sprocket and the center of the flange bolt-holes as the Fig. 2 shows.
- Install the bolt to the one side's bolt hole temporary.
- Check the opposite long hole's center and the center of the flange bolt-hole are the same
- After the inspection, tighten the one side's bolt. Do not move the centers of the flange bolt-holes and the center of the long holes on the sprocket.
- Check the other side's center of the bolt-hole, tighten the bolt with the specified torque
- Tighten the opposite bolt with specified torque. [Tightening torque : 25N·m (2.5kgf·m)]

Fig. 1

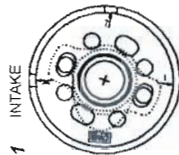
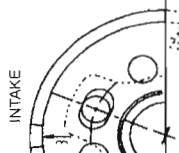


Fig. 2



● Inspecting The Items

- Items list
 - The wear and the damages on: valve retainers, valve cotter, valve spring seats, lifters and valve springs.
 - The looseness, wear, and the damages on: valves, valve guides.
 - The wear and the damages on: camshaft journal, cam.
- 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 : 0.13~0.17mm
 - EXHAUST : 0.23~0.27mm

⚠ CAUTION Check the tappet clearance is within the specified range. If it is out of range, adjust again.

● Measuring and Adjusting The Valve Timing

- The valve timing for the intake valve lift at 1mm.
 - Open : BTDC 13.0°
 - Close : ABDC 43.0°
 - Lobe center : 105.0°
- The valve timing for the exhaust valve lift at 1mm.
 - Open : BBDC 51.0°
 - Close : ATDC 11.0°
 - Lobe center : 110.0°

⚠ 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

- To prevent burnt and scratches, follow the steps below for the oil to circulate enough.
 1. Put the specified quantity of the new oil. Use oil with higher grade than API-SO.
 2. To reduce the friction on the engine, remove the spark plug and crank the engine.
 3. Follow the service manual to check the oil level. If the oil level is too low, add more.

Break-in

- Start the engine and check the oil leak. Let it run until the oil temperature gets higher.
- Drive for 1st 100 ~ 200km, use 5000rpm. 200~300km, use 6000rpm or lower.
- To keep the oil pressure, while warming up the engine, keep it 2,000 ~ 3,000rpm.
- After the break-in, measure and adjust 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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