

CODE :	(BLACK/W/CAM)	212-1452050
	(BLACK/W/O CAM)	212-1452051
	(SILVER/W/CAM)	212-1452060
	(SILVER/W/O CAM)	212-1452061

APPLICATION : GROM FNO,JC92-1000001~1099999/JC92-1100001~ / MONKEY125 JB03 / DAX125 JB04 / CT125 JA65 / SUPER CUB C125 JA58 *Japanese domestic models only.

* I-MAP for JC92-1100001~ , MONKEY125(JB03), DAX125(JB04), CT125(JA65) & SUPER CUB C125 (JA58) is under development (as of Aug 2023).



Unable to use only this product.

Must to use injection controller (i-Map) sold separately.

High performance exhaust, oil cooler kit, etc are recommended to install together for safety.



The bbk without camshaft is for the person who already have purchased it.

Recommend to install with camshaft together.

RECOMMENDED ENGINE OIL : LIQUI MOLY MOTORBIKE 4T SYNTH 10W-50 STREET RACE
elf MOTO4 PRO TECH 5W-40

- Thank you for purchasing Kitaco product. Read and understand the instruction before installation.
- Please check packing list.
- Refer to the manufacturer HONDA service manual when installation.
- Specified tools are required for installing this kit.
- Keep this instruction sheet safe.

ATTENTION (MUST READ)



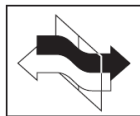
- This product is for racing use. It is out of warranty.
- Unable to ride on public road with installed vehicle.
- Do not install to vehicle that is not written as application.
- Due to the increasing power, the balance might be lost and each parts durability decreased. Please check and maintenance more than generally.
- The silence and durability as OEM vehicle have been lost by increasing power.
- We are not responsible for violation of law or damages and accidents caused by assembling mistake and improper setting.
- Please follow this instruction sheet. Do not modify the way which is not listed or it will cause damage and trouble.
- We are not responsible for incidental, indirect damage and lost profits by using this product.
- Please ask authorized mechanic for assembling and setting. Ask a specialist at specialty shop if you do not understand the role of the surrounding parts.



- Please use unleaded premium gasoline. This is high pressure, regular gasoline may cause of knocking and breaking vehicle.
- Injection controller (i-Map) pre-installed fuel control maps might not deal with every single products combination and condition. In that case, must to set up fuel control.
- Please do break in. However, if the setting is not correct, it might cause of breaking engine even if it is break in.
- Output characteristic will be changed, additional installation of oil cooler, strengthen clutch, etc will be required.
- If there is a hard degradation like a blem, fatigue and wear etc on the reuse parts, please change to new ones.
- Please clean up products before installing.
- Make sure the oil line is not stuck by using air duster, etc.
- There are edge and protrude on this product, wear gloves to protect fingers.
- The actual product might be different from instruction (illustration and photo) by specification change.
- Specification and price maybe changed without any notice. Please understand before installation.



This instruction sheet is for the person who has basic knowledge for maintenance. Do not operate if you do not have any skill and knowledge.



Toxic, high-volatile gasoline is used during operation. Be sure to ventilate the room. Please start engine under well-ventilated place.



FLAMMABLES
Inflammable high gasoline is used during operation. Using products causing fire or smoke is strictly prohibited.



Do not touch cylinder, crank case, exhaust, etc during or right after engine operation. It is high temperature.



Do not spark the plug outside the cylinder for spark check. It might cause of fire and explosion.

HOW TO INSTALL

- Removing outer cowls, and other operations are required. Refer to the service manual when removing/installing.
- Clean up the disassembled parts.
- When installation, must follow the TIGHTENING TORQUE instruction.
- Illustration (photo) might be different from OEM.
- Instruction of this sheet is based by GROM (2BJ-JC92). Other models might require different operation.

REMOVING

⚠ Make sure that engine and exhaust system is completely cool before starting operation. It might cause of burned.

- Remove drain bolt to drain engine oil.

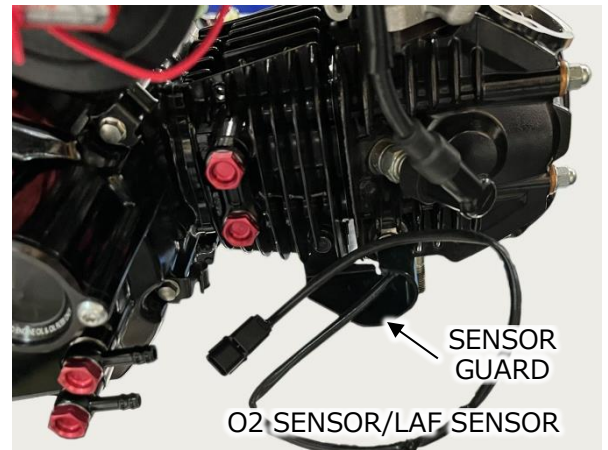
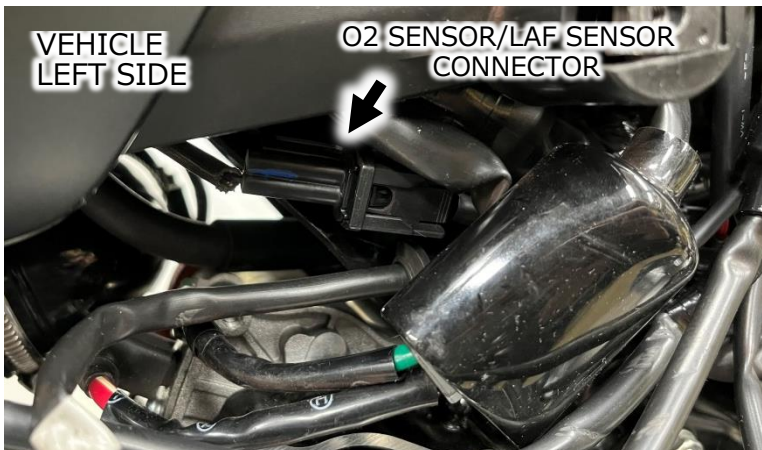


- Remove exhaust pipe / muffler.

⚠ Operating with completely cooled. If starting engine with grease or dirt attached exhaust pipe/muffler, it might cause of uneven burning.



- Remove O2 sensor / sensor guard / plug cap, etc.

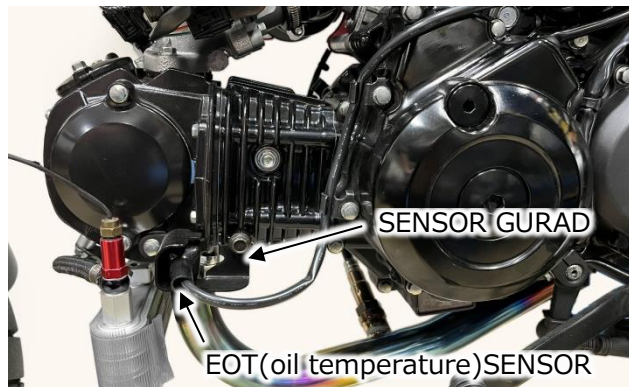


Push here to remove connector.

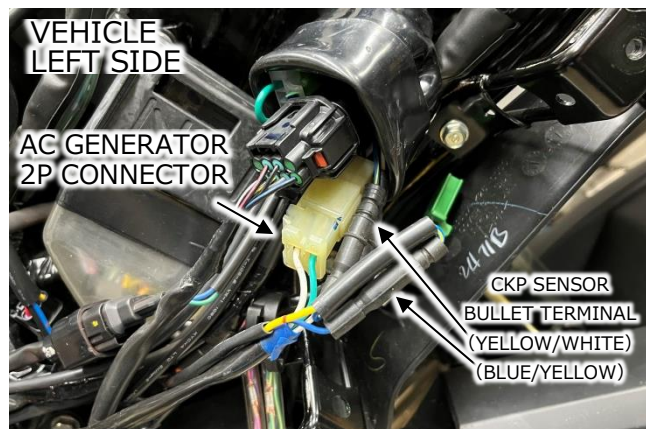


REMOVING

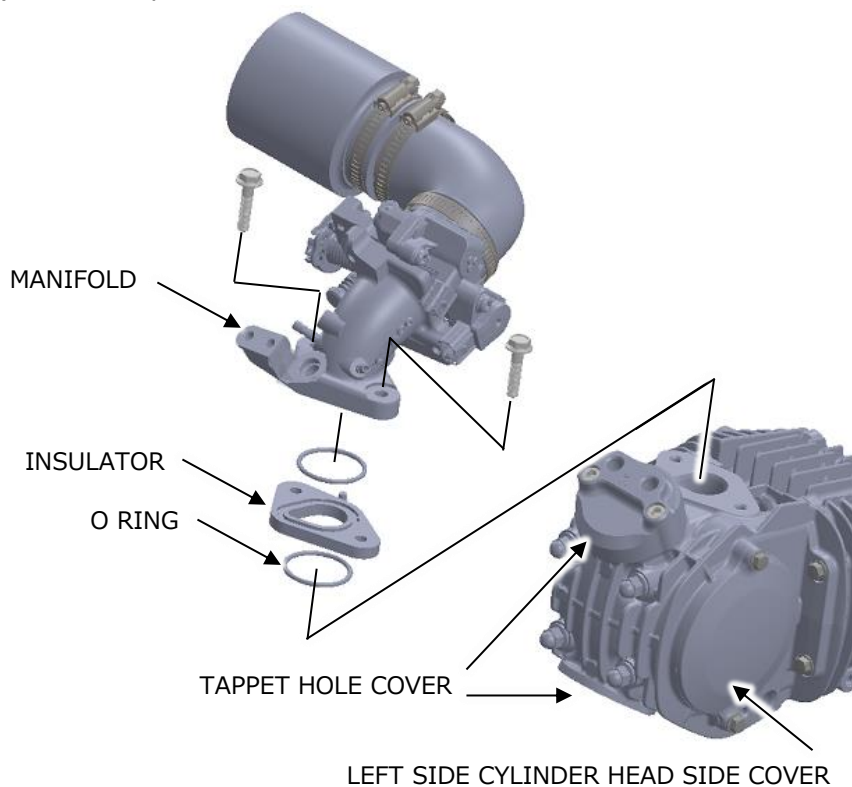
- Remove EOT(oil temperature sensor)/sensor guard, etc.



- Remove AC generator 2P connector/CKP sensor bullet terminal.



- Remove throttle body/manifold/insulator, etc.
- Remove tappet hole cover (IN/EX)/left side cylinder head side cover.

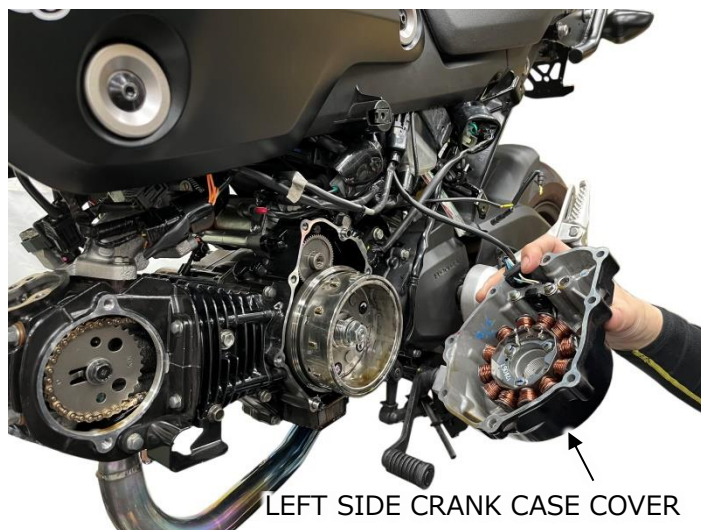


REMOVING

- Remove left side crank case cover.
- Remove gasket and dowel pin.

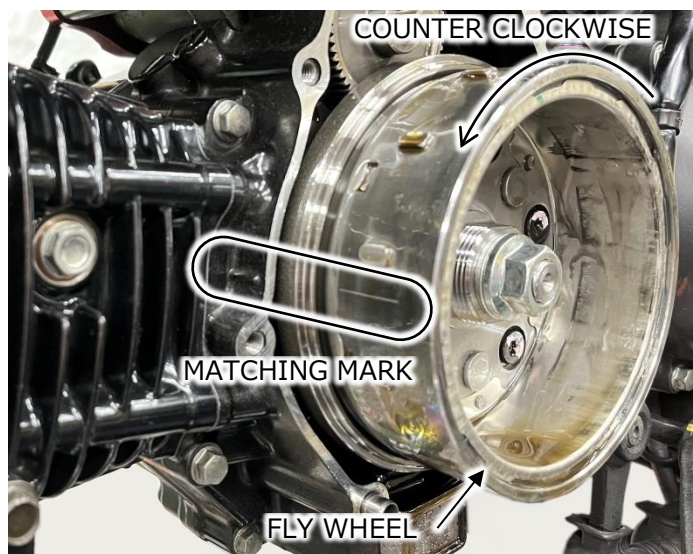
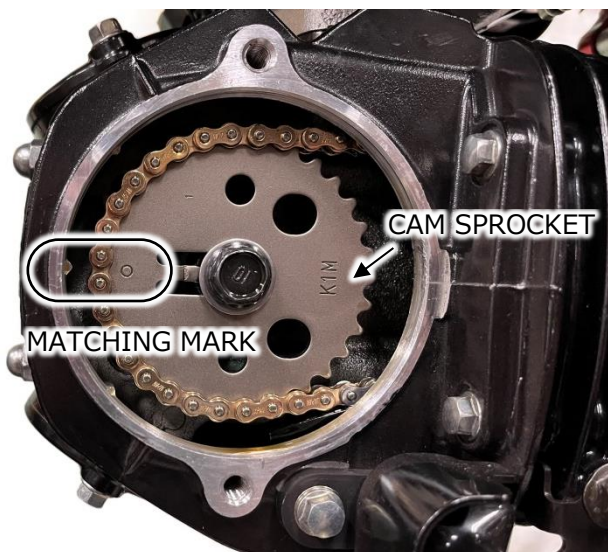
⚠ If the dowel pin has breaking,
please change to new one.

⚠ Loosen bolts alternately evenly.



- Rotate crank shaft counter clockwise to match fly wheel matching mark to left side crank case nod.
- Match cam sprocket matching mark and cylinder head nod to match piston to compression top dead center.

i Rotate crank shaft (fly wheel) to match for sure.

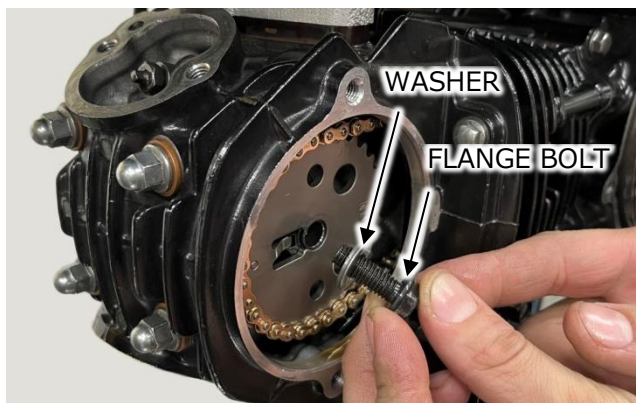
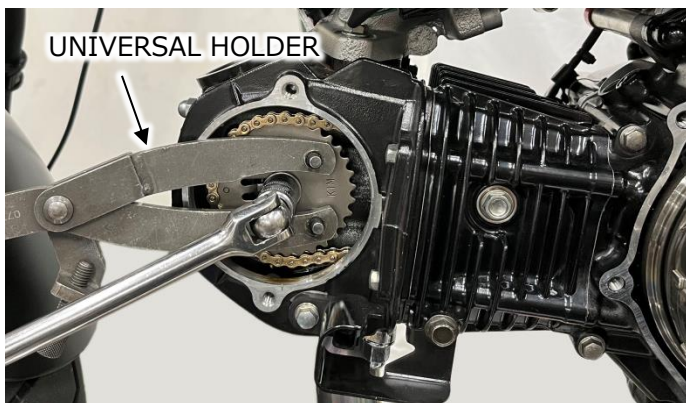


- Remove cam chain tensioner bolt to loosen tensioner tension.



REMOVING

- Fix cam sprocket by using universal holder. Remove flange bolt, washer, then remove cam sprocket by camshaft, and remove cam chain from cam sprocket.



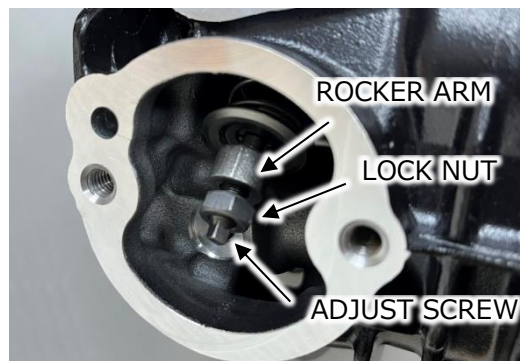
Be careful not to fall cam chain/bolt/washer inside crank case.



- Loosen IN·EX rocker arm adjust screw lock nut, then turn screw to left to enhance clearance.



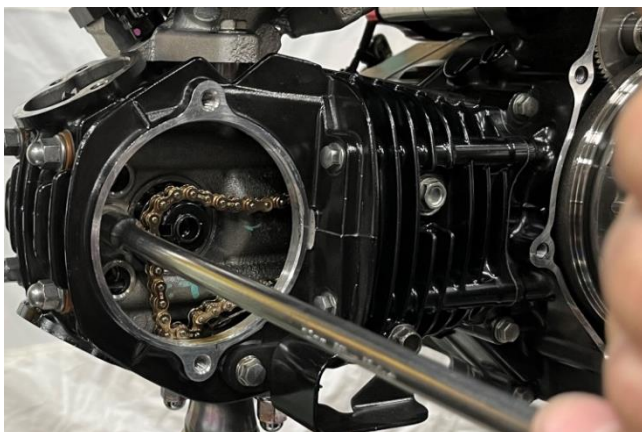
Loosen adjust screw to change camshaft without removing rocker arm.



- Remove bolt washer.




Be careful not to fall bolt to cylinder head opening.




REMOVING

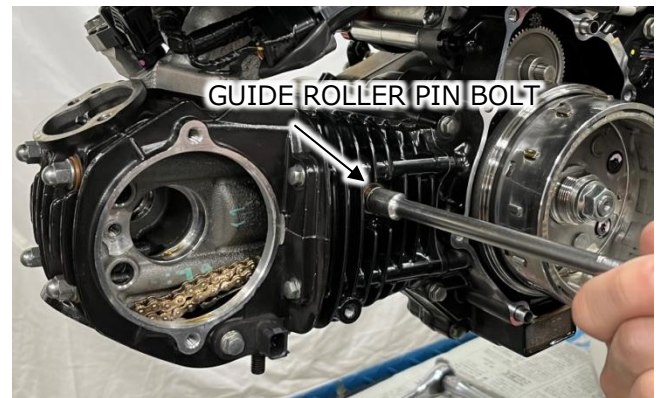
Remove cam shaft. Turn cam shaft key groove 45° to IN side to pull, then turn 45° to EX side to pull.
Hold not to hang rocker arm to cam nod.
Installation is reverse order.



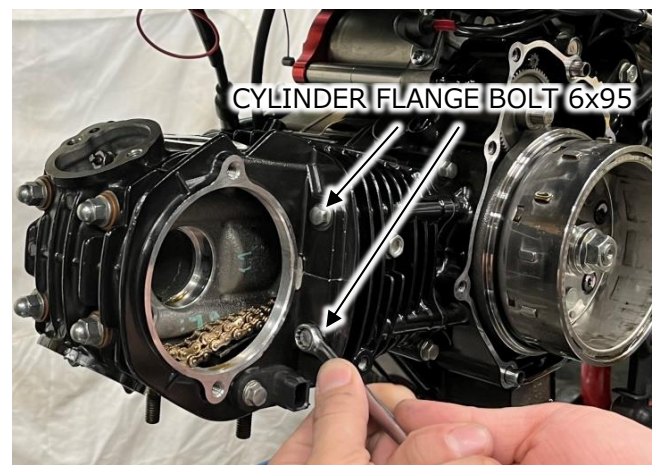
 In case of not smooth movement of bearing because of cylinder head tolerance, please use sim (attached parts) between bolt washer and head.

- Loosen guide roller pin bolt.

 Leave bolt not to fall inside guide roller.



- Remove cylinder flange bolt 6x95.



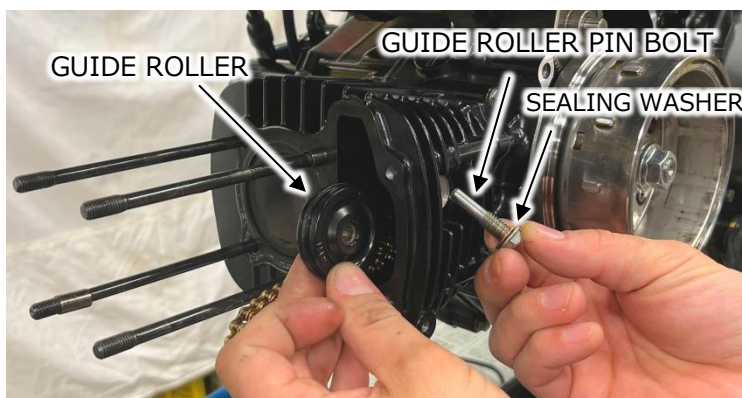
REMOVING

- Remove cylinder head nut/washer.
- Remove cylinder head.

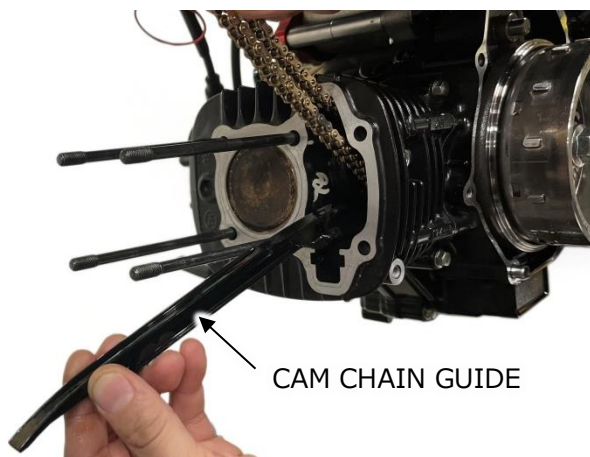
⚠ Loosen nuts diagonally evenly several times.



- Remove guide roller/guide roller pin bolt/sealing washer.



- Remove cam chain guide/cylinder.



- Remove piston pin clip.
- Remove piston pin/piston.

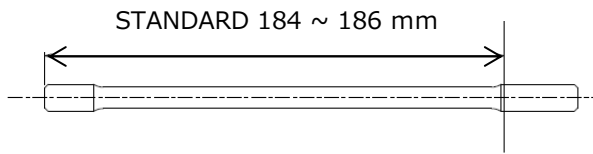
⚠ Cover crank case opening part by cloth, etc that prevent from piston pin falling inside the crank case.

⚠ Must to use new piston pin clip. If reuse it, it might cause of break.

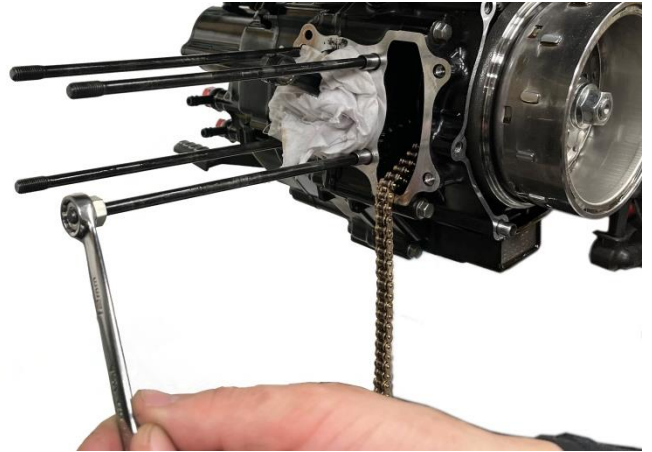


CYLINDER STUD BOLT

- Use attached M7 nuts as double nut, then tighten cylinder stud bolt additionally.



CYLINDER STUD BOLT
TORQUE : 7.5 N·m

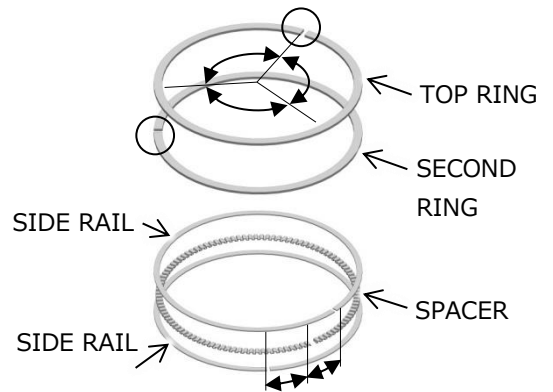


INSTALLING PISTON

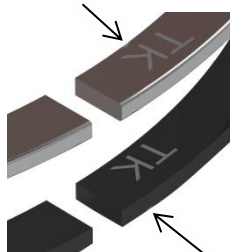
- Apply engine oil to ring and ring groove.
- Clean up the ring groove, then install piston ring.
- Set piston pin clip to groove correctly.

Install piston ring to piston ring groove carefully with the mark upside.
Do not mix top ring and second ring.

- ⚠ Install piston ring with edges alternately 120° leave.
- Install as side rail edge gap alternately following illustration.
- Install spacer as abutment up side.

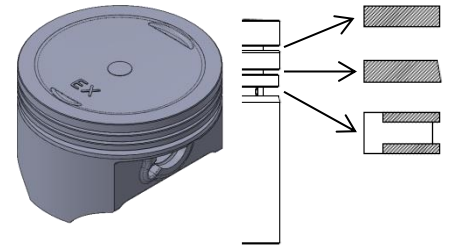
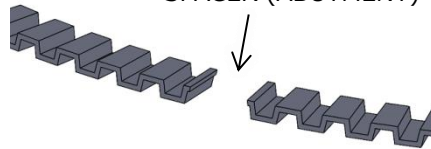


TOP RING (GRAY/SILVER)



SECOND RING (BLACK)

SPACER (ABUTMENT)



- Apply engine oil to conrod small end hole.
- Apply engine oil to piston pin.
- Install piston to [EX] mark is exhaust side.

CYLINDER BASE GASKET

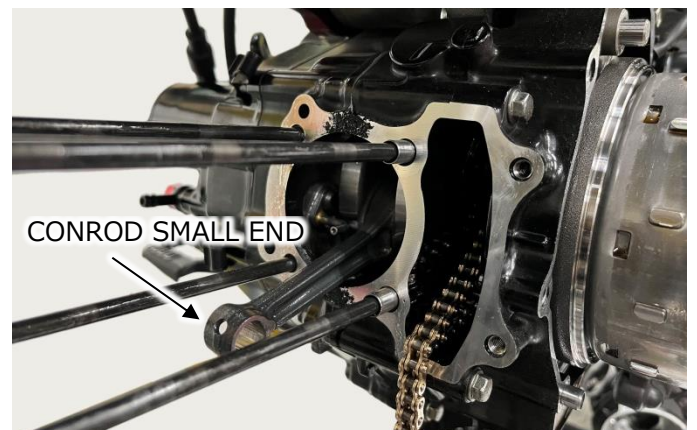
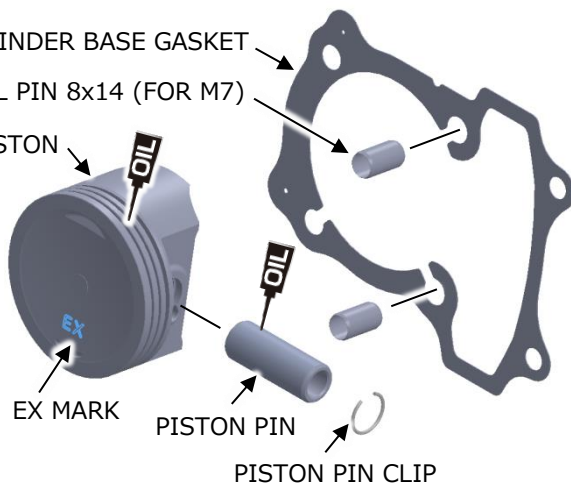
DOWEL PIN 8x14 (FOR M7)

PISTON

EX MARK

PISTON PIN

PISTON PIN CLIP



INSTALLING PISTON

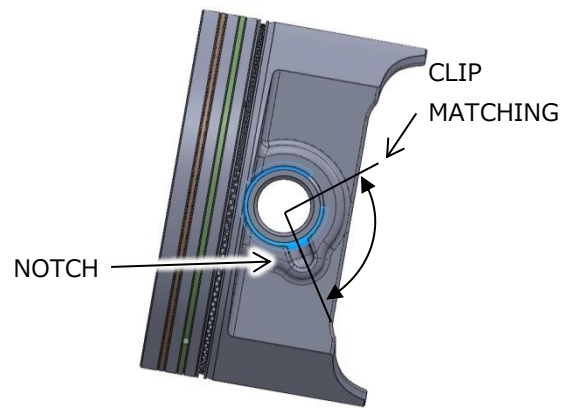
- Install piston pin clip to groove correctly.
- Do not match clip matching space and piston notch.



Cover crank case opening part by soft cloth, etc preventing from piston pin clip falling inside when operation.



Must to use new piston pin clip. If reuse it, it might cause of engine break.



INSTALLING CYLINDER

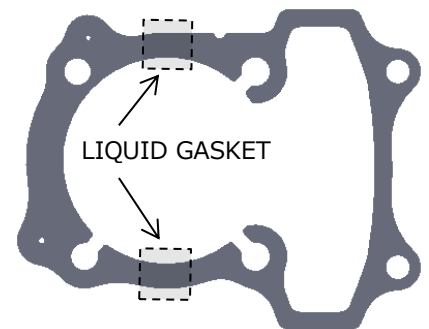
- Lubricant for camshaft and rocker arm are supplied through oil line inside the cylinder. Please clean up oil line before installing cylinder.
- Apply liquid gasket to crank case diagonal lined part on the illustration.

Be careful not to scratch cylinder wall, piston and matching surface.

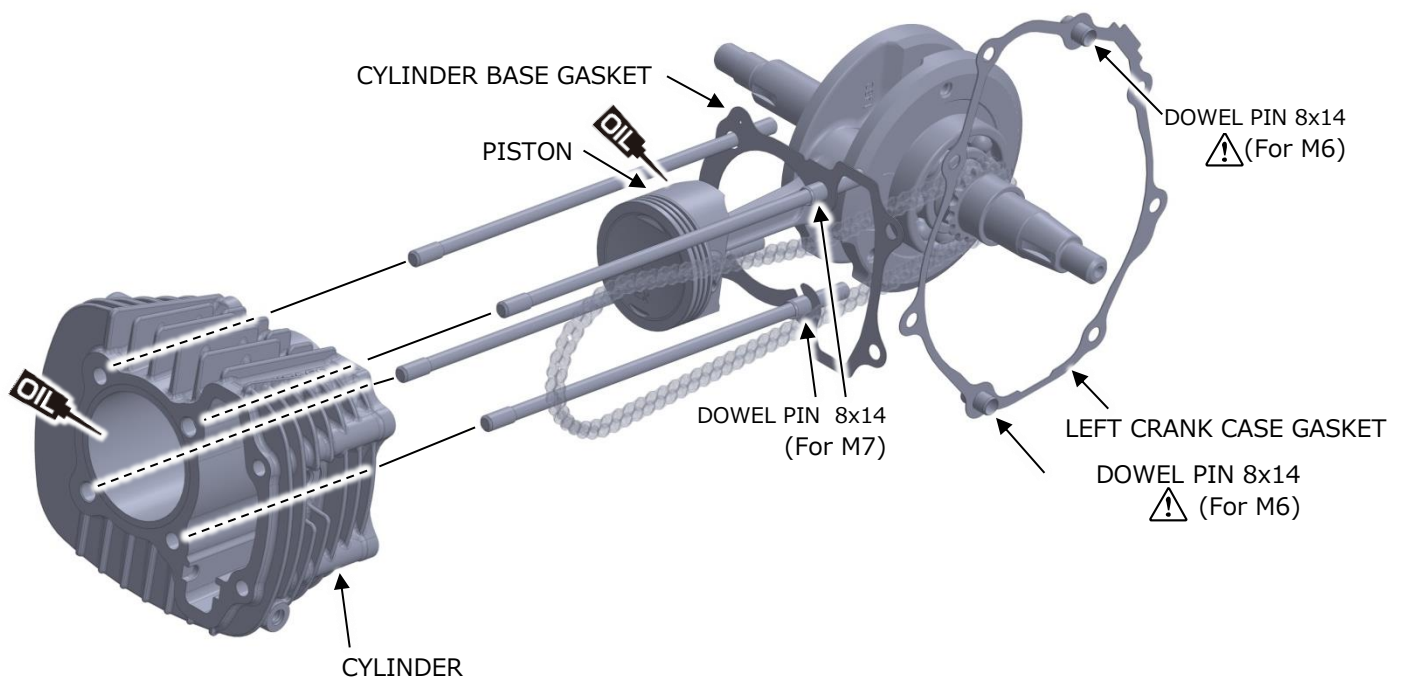


Avoid breaking piston ring when installing.

Be careful not to fall cam chain inside crank case.



- Install dowel pin 8x14 (for M7) and cylinder base gasket.
- Apply engine oil to cylinder and piston sliding part.
- Apply engine oil to piston ring.
- Install cylinder to piston with pushing piston ring by finger.



INSTALLING CYLINDER

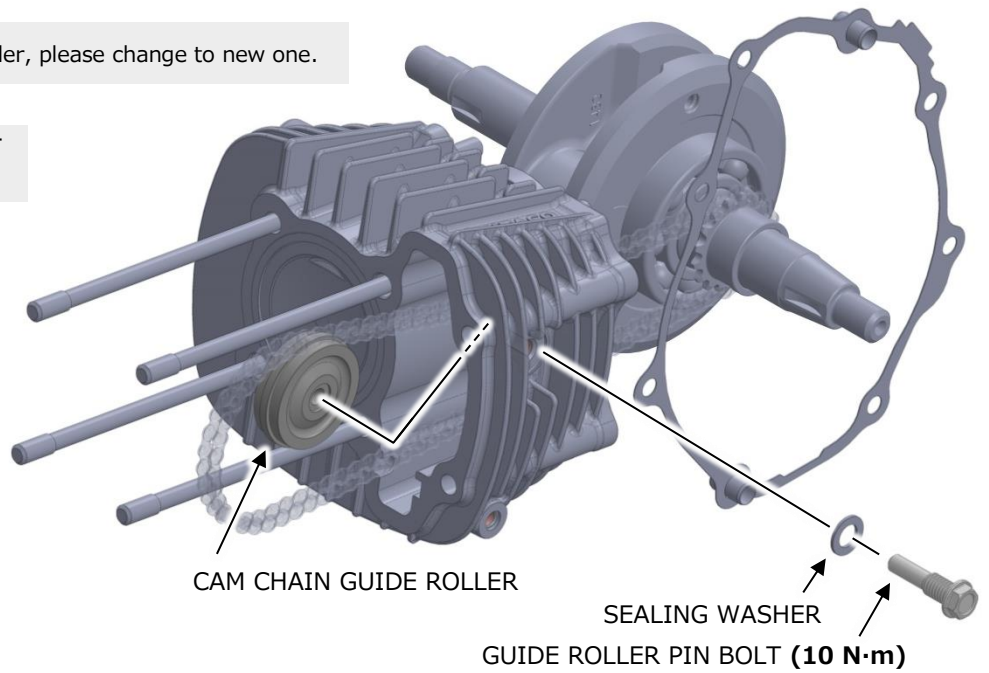
- Install cam chain guide roller, new sealing washer and cam chain guide roller pin bolt.
- Tighten roller pin bolt with specified torque.

⚠ If there is a breaking on guide roller, please change to new one.



GUIDE ROLLER PIN BOLT
TORQUE : 10 N·m

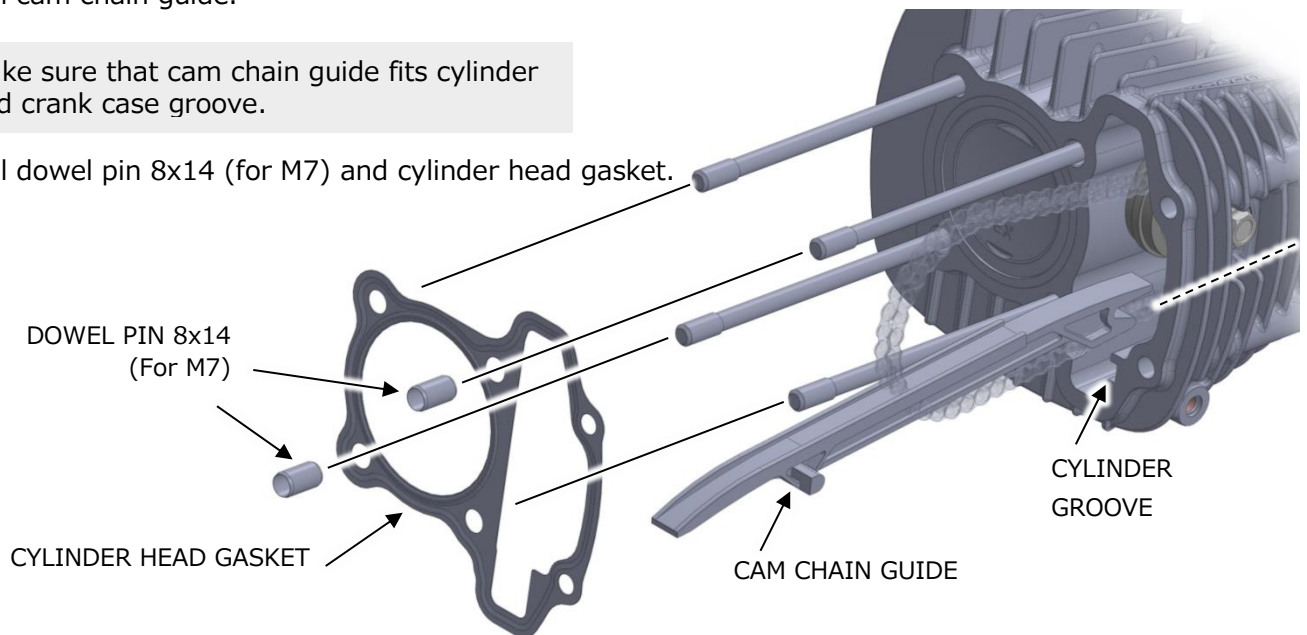
NAME : SEALING WASHER
CODE : 70-090-14321



- Install cam chain guide.

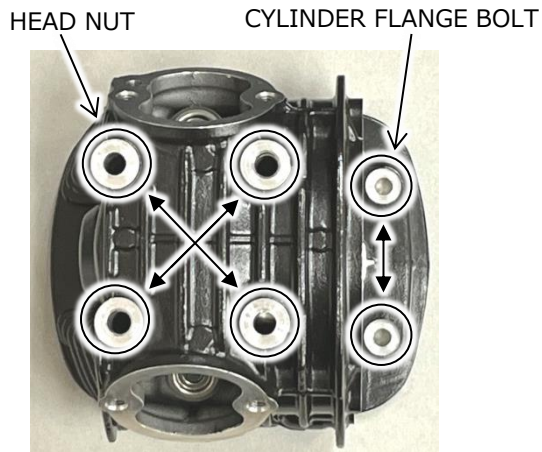
⚠ Make sure that cam chain guide fits cylinder and crank case groove.

- Install dowel pin 8x14 (for M7) and cylinder head gasket.



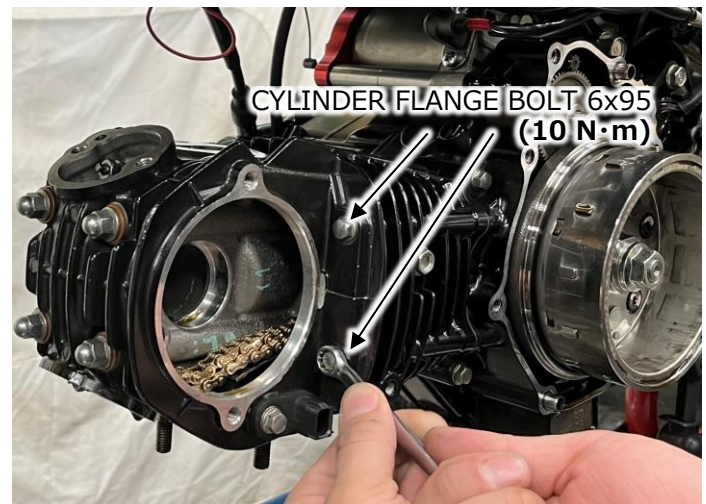
INSTALLING CYLINDER HEAD

- Install cylinder head with through cam chain inside cylinder head.
- Apply engine oil to head nut screw and seat part.
- Install washer. Tighten head nut diagonally several times with specified torque.
- Tighten cylinder flange bolt.




 HEAD NUT
TORQUE : 18 N·m

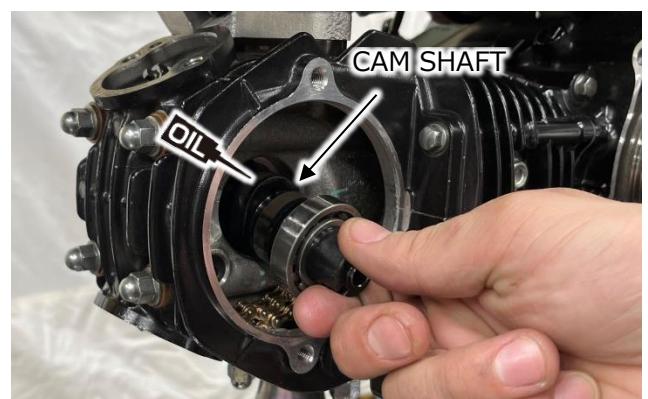
 CYLINDER FLANGE BOLT 6x95
TORQUE : 10 N·m




INSTALLING CAM SHAFT


- Install camshaft to cylinder head.
- Apply engine oil to cam shaft bearing.
- Apply engine oil to rocker arm shaft sliding part.

 Install in the reverse order of the cam shaft removal.

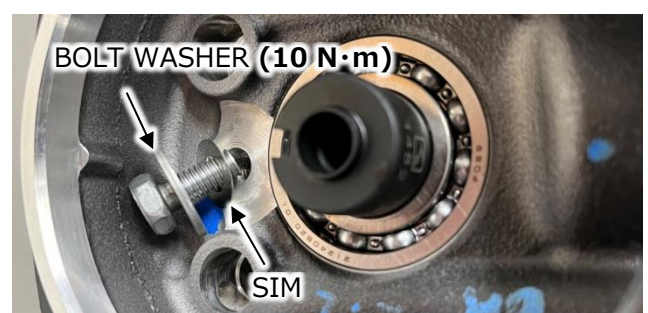


- Install bolt washer and tighten with specified torque.

 In case of not smooth movement of bearing because of cylinder head tolerance, please use sim (attached parts) between bolt washer and head.

 Be careful not to fall bolt washer/sim into opening part.

 BOLT WASHER
TORQUE : 10 N·m

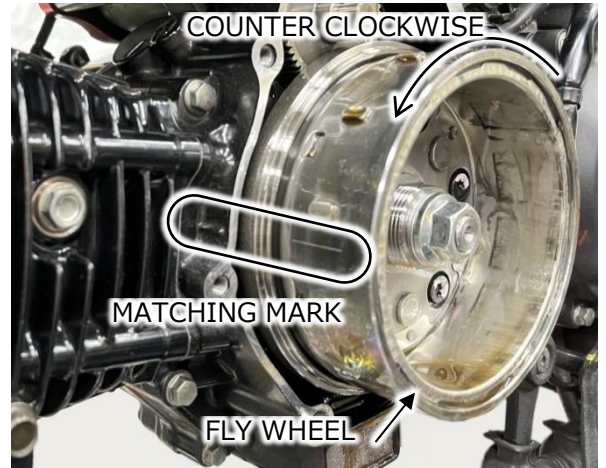


INSTALLING CAM SPROCKET/VALVE TIMING

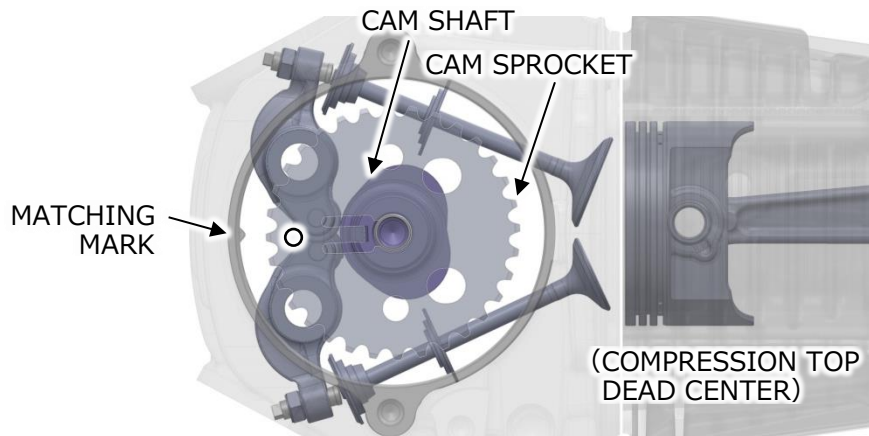
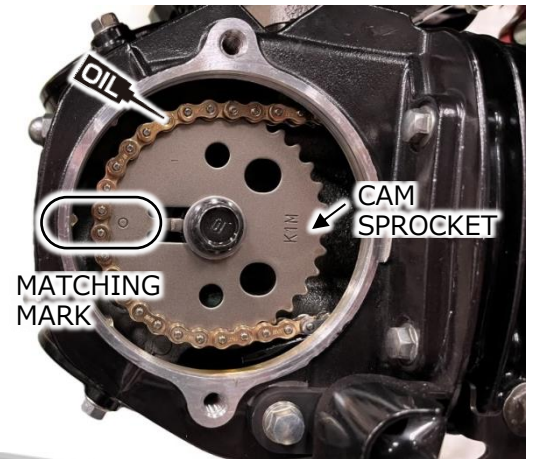
- Turn crank shaft counter clockwise to match fly wheel matching mark to left crank case nod.
(State of compression top dead center)

i Rotate crank shaft (fly wheel) to match for sure.

! When turning crank shaft, be careful not to get cam chain caught by timing sprocket and crank shaft.

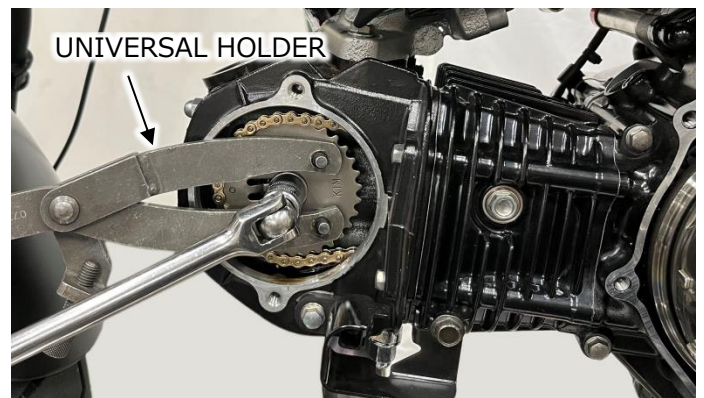


- Set cam chain to cam sprocket 32T.
- Apply engine oil between cam chain and cam sprocket.
- Match the cam sprocket matching mark and cylinder head notch.



- Fix cam sprocket by using universal holder. Install washer and flange, then tighten with specified torque.

! FLANGE BOLT 8x22
TORQUE : 27 N·m



CAM CHAIN TENSIONER

- Pour engine oil to push rod at least 4.0cc.
- Install cam chain tensioner and tighten it.



Must to check cam chain tension.
Make sure that push rod one way valve works correctly.



CAM CHAIN TENSIONER BOLT
TORQUE : 10 N·m



CAM CHAIN TENSIONER BOLT (10 N·m)

CAM SHAFT

- Check the valve clearance by inserting thickness gauge between adjust screw and valve.



Please check and adjust valve clearance with engine is cooled (under 35°C).

VALVE CLEARANCE :

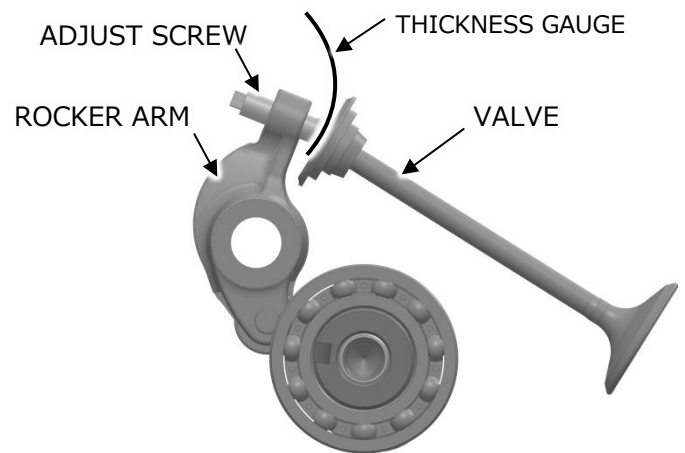
IN : 0.08 ±0.02mm

EX : 0.20 ±0.02mm

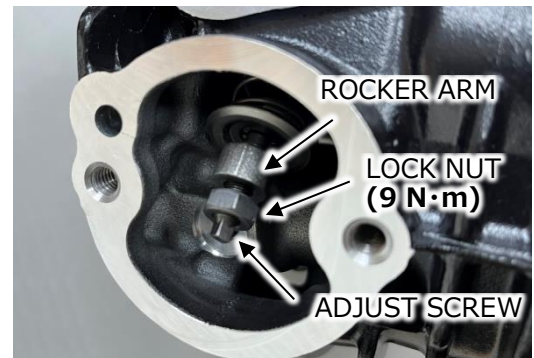
VALVE TIMING (calculated at 1mm lift.)

IN OPEN 16° BTDC
CLOSE 35° ABDC

EX OPEN 44° BBDC
CLOSE 5° ATDC



ADJUST SCREW LOCK NUT
TORQUE : 9 N·m



- This is designed for exchange stock cam shaft to decompression parts. When reassembling, it needs to apply power to bearing outer race, therefore it is not covered by warranty.

DECOMPRESSION PARTS



STOCK

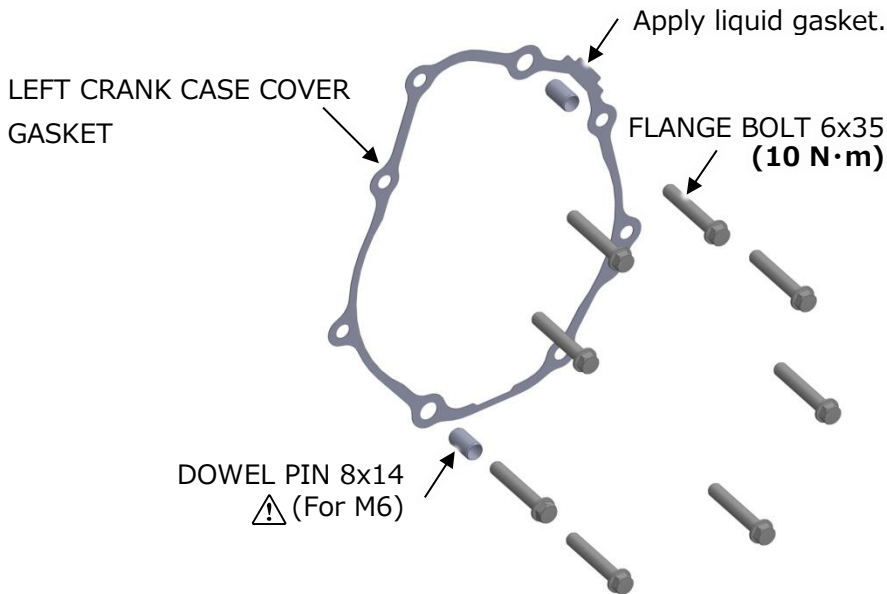
HIGH CAM SHAFT

INSTALLING LEFT CRANK CASE COVER

- Install dowel pin and left crank case cover gasket.
- Apply liquid gasket to wire grommet.
- Install left crank case cover, then tighten bolts diagonally alternately several times.



FLANGE BOLT 6x35
TORQUE : 10 N·m



INSTALLING OTHER PRODUCTS

- Install left cylinder head side cover/tappet hole cover (IN/EX).
- Install throttle body/manifold/insulator, etc.



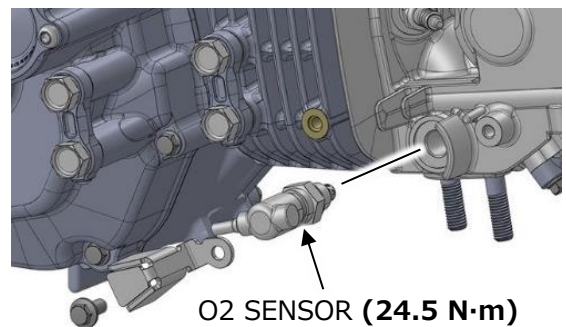
Install in the reverse order of removal.

INSTALLING SENSOR

- Install O2 sensor to cylinder head.
Tighten with specified torque.



O2 SENSOR
TORQUE : 24.5 N·m



SPARK PLUG

- Install spark plug to cylinder head and tighten by hand. Then tighten with specified torque.



Tighten with hand first, then use wrench to specified torque to prevent from cylinder head breaking.

OIL LINE

i By using union nipple enable to use as take out oil cooler oil line.

UNION BOLT
TORQUE : 15 N·m

OPTION PARTS

NAME : UNION NIPPLE

BLACK 1pcs: 0900-990-90030

BLUE 1pcs: 0900-990-90010

