

## Instruction Manual for

# S-Stage+ D KIT (106cc / SCUT / Decompression)

- Thank you for purchasing one of our TAKEGAWA products. Please strictly follow the instructions to install and use the kit.
- Before installing the kit, please be sure to check the kit contents. If you have any questions about the kit, please contact your local TAKEGAWA dealer.

**Please note: Illustrations and photos may vary from the actual hardware.**

Item No. : 0 1 0 5 5 3 0 9

Monkey & Gorilla	Z50J-2000001 ~	Dax	AB26-1000001 ~
	AB27-1000001 ~	CRF50F	AE03-1400001 ~
CD50	CD50-1500001 ~	XR50R	AE03-1000001 ~
CL50	CD50-4000001 ~		

### ~ Features ~

The camshaft with decompression will reduce a load on the transmission or kickshaft and allows the engine to start with a lighter weight kick even though the engine is powered up such as bore-up to 106cc with our S-Stage (SCUT) Kit.

#### ⚠ About fuel to use ⚠

This S-Stage Kit is so designed to achieve a higher compression ratio than stock engines. Therefore, high-octane gasoline should always be used. If you use regular gasoline, you cannot get the high performance of the Kit. Also the piston will be damaged and may lead to a serious failure of a motorcycle. Before installing this kit, make sure that no regular gasoline remains in the fuel tank. In case regular gasoline is remaining in the fuel tank, do replace it with high-octane gasoline.

#### ⚠ About the spark plug ⚠

Be sure to replace a spark plug with a CR8HSA (NGK) or U24FSR-U(DENSO). In the case of a non-resistive plug, please replace with C8HSA (NGK) or U24FS-U (DENSO). Subsequently, choose and use a right spark plug with the right grade, depending on the carburetor set up.

#### ⚠ About quick starting and sudden acceleration ⚠

Please note that sudden acceleration and sudden engine braking will put a heavy load on the engine, and that it may result in crank shaft and engine damages in the worst case.

#### ⚠ Important notice about installation of this Kit ⚠

A heavy-duty clutch (the one with three friction disks) and heavy-duty oil pump are needed for the installation of this kit. We shall not be held responsible for any guarantee of this Kit unless these hardware is installed.

### Read all instructions before starting the installation.

We do not take any responsibility for any accident or damage whatsoever arising from the use of the Kit not in conformity with the instructions in this Instruction Manual. Please drive safely and follow the local traffic law.

We shall be held free from any kind of warranty whatsoever of products other than this product if any defect takes place on the other products than this one after the installation and use of this product.

We do not have any information or service data on the combination of our products and other manufacturer's products.

Please note that this Kit is designed for exclusive use with the above-mentioned fitting models and frame numbers only and that it cannot be mounted on any other models.

For installation, please prepare tools and work with reference to the installation procedures. Besides, this instruction manual, as well as a HONDA's genuine parts service manual, is prepared for persons who have acquired basic skills and knowledge. We recommend those who are technically inexperienced or without enough tools to ask a technically-reliable specialist shop for the installation work.

Bolts, nuts and dowel pins will be reused. However, be sure not to use the worn-down or severely-damaged ones, which please do replace with new ones.

If you use a stock carburetor, do not remove the air cleaner box or air cleaner elements. If you change the carburetor, please do the setting to match various conditions like weather and temperatures. Disregarding these instructions will result in engine troubles and serious accidents.

In some cases noise coming from the cylinder may sound louder than stock.

This Instruction Manual is prepared mainly for the Monkey. Therefore, this Instruction manual has some contents not to apply to other vehicles.

Always use the supreme unleaded high-octane gasoline.

We recommend to install and use an oil cooler for riding at a high outdoor air temperature.

We highly recommend to upgrade the exhaust system and the carburetor to ensure the potential even though the stock exhaust system and stock carburetor are fine to ride.

**⚠ CAUTION** The following show the envisioned possibility of injuries to human bodies and property damage as a result of disregarding the following cautions.

- Please drive safely and follow the local traffic law.
  - Work only when the engine and exhaust system are cool to avoid burns.
  - Prepare appropriate tools and work properly to avoid the breakage of parts or injuries.
  - Always use a torque wrench to tighten bolts and nuts securely to the specified torque to avoid these parts getting damaged or loose.
  - As some products and frames have sharp edges or protruding portions, please work with your hands protected to avoid injury.
  - Before riding, always check such parts as screws for loose. If you find loose ones, screw them securely up to the specified torque to avoid parts coming off.
- Note: Be sure to re-tighten the cylinder head to the specified torque.
- Always use new gaskets and sealings. About the reused parts, please check carefully for wear or damage and be sure to replace it with new one if necessary.

**⚠ WARNING** The following show the envisioned possibility of human death or serious injuries to human bodies as a result of disregarding the following warnings.

- Always start the engine in a well-ventilated place, and do not turn on the engine in an airtight place. (Otherwise, you will suffer from carbon monoxide poisoning.)
- When you notice something abnormal with your motorcycle, stop riding immediately in a safe place to avoid an accident.
- Before working, place the motorcycle on level ground to stabilize its position for safety to avoid the motorcycle overturning.
- Check or carry out maintenance of your motorcycle correctly according to the procedures in the instruction manual or service manual. (Improper checking or maintenance could lead to accidents.)
- If you find damaged parts when inspecting or performing maintenance of your motorcycle, do not use these parts, and replace them with new ones. (The continued use of these damaged parts could lead to accidents.)
- As gasoline is highly flammable, never place it close to fire. Make sure that nothing flammable is near the gasoline. Since vaporized accumulation of gasoline is at high risk of explosion, work in a well-ventilated place. (Otherwise it may cause a fire.)

Please be informed that, mainly because of improvement in performance, design changes, and cost increase, the product specifications and prices are subject to change without prior notice.

This manual should be retained for future reference.

## Lesson

Most of bolts and nuts will get loose when turned counterclockwise, and tighten when turned clockwise (some exceptions).

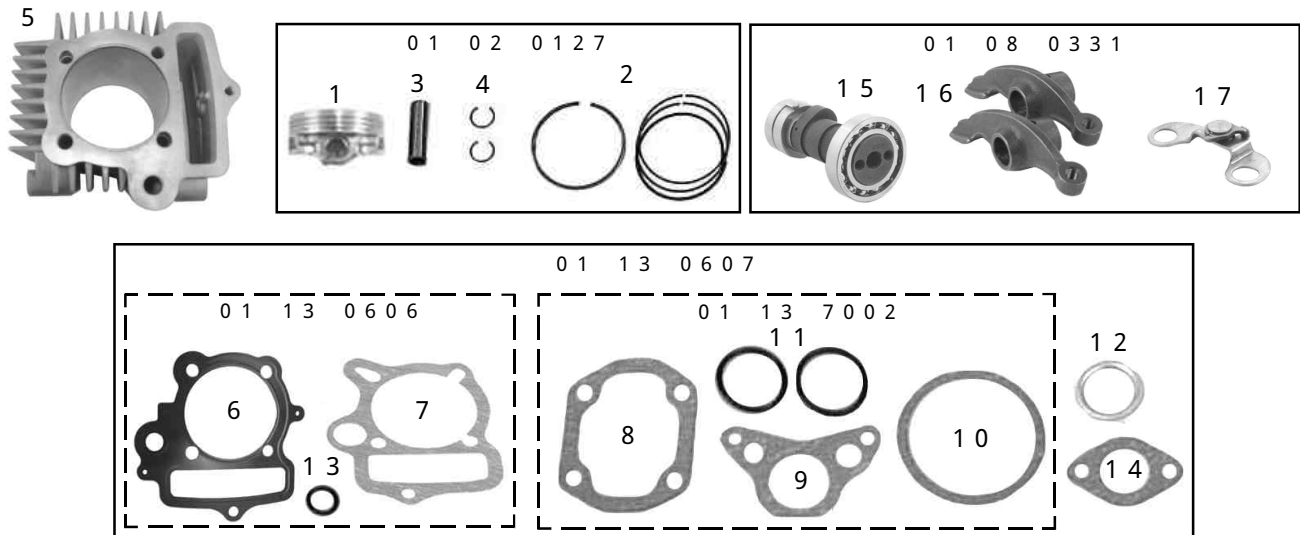
At the beginning, hand tighten a screw without using a tool. If it stops turning after giving it one or two turns, the screw may be fixed improperly.

To loosen a screw means turning a tightened screw three or four times to the counterclockwise, and to remove it means turning it until it comes off.

To tighten a screw means to screw it up to keep it from getting loose. The numeric value as a guide at which a screw will not break or get loose when tightened is the so-called "torque." If you do not have a torque wrench, please try to tighten a screw tightly to the point where the screw will not break or get loose, though we can not take any responsibility for the breakage. In case you do not use a torque wrench, you need to judge, only by intuition or using experience, the degree of tightening power at which the bolt will break or get loose.

Improper use of tools will result in breakage of a top of a bolt or screw.

Kit includes:

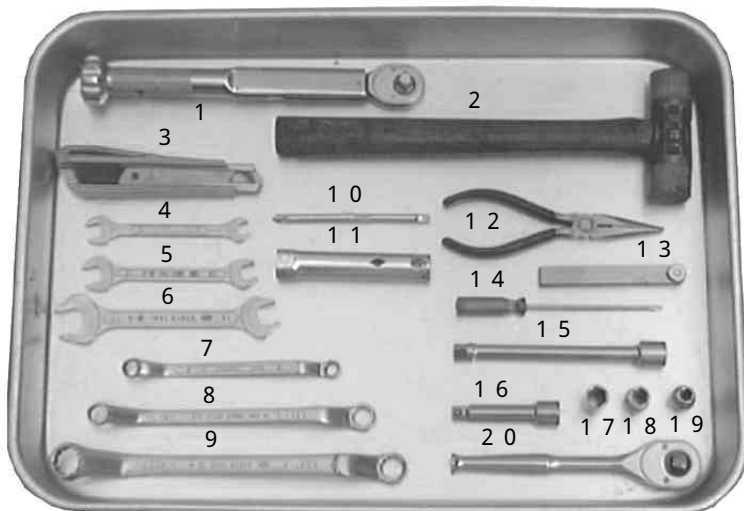


No.	Part Name	Qty	Repair Part Item No.	In packs of	No.	Part Name	Qty	Repair Part Item No.	In packs of
1	Piston	1			12	Exhaust pipe gasket	1	00-01-0064	2
2	Piston ring	1	13012-RAS-T00	1	13	Rubber seal	1	00-01-0066	2
3	Piston pin	1	00-01-0091 (with two circlips)	1	14	Inlet pipe gasket	1	91301-181-T01	1
4	Piston pin circlip	2	00-01-0003	6	15	Camshaft COMP.	1	14100-GDH-T00	1
5	Cylinder	1			16	Valve rocker arm	2	14431-036-T11	1
6	Cylinder head gasket	1			17	Stopper plate	1	00-01-0076	1
7	Cylinder gasket	1							
8	Head cover gasket	1		1					
9	Right-side cover gasket	1	01-13-7002	1					
10	Left-side cover gasket	1		1					
11	Tappet cap O-ring	2		2					

Please order repair parts with the Repair Part Item No. Without the Repair Part Item No., we may not be able to accept your orders.

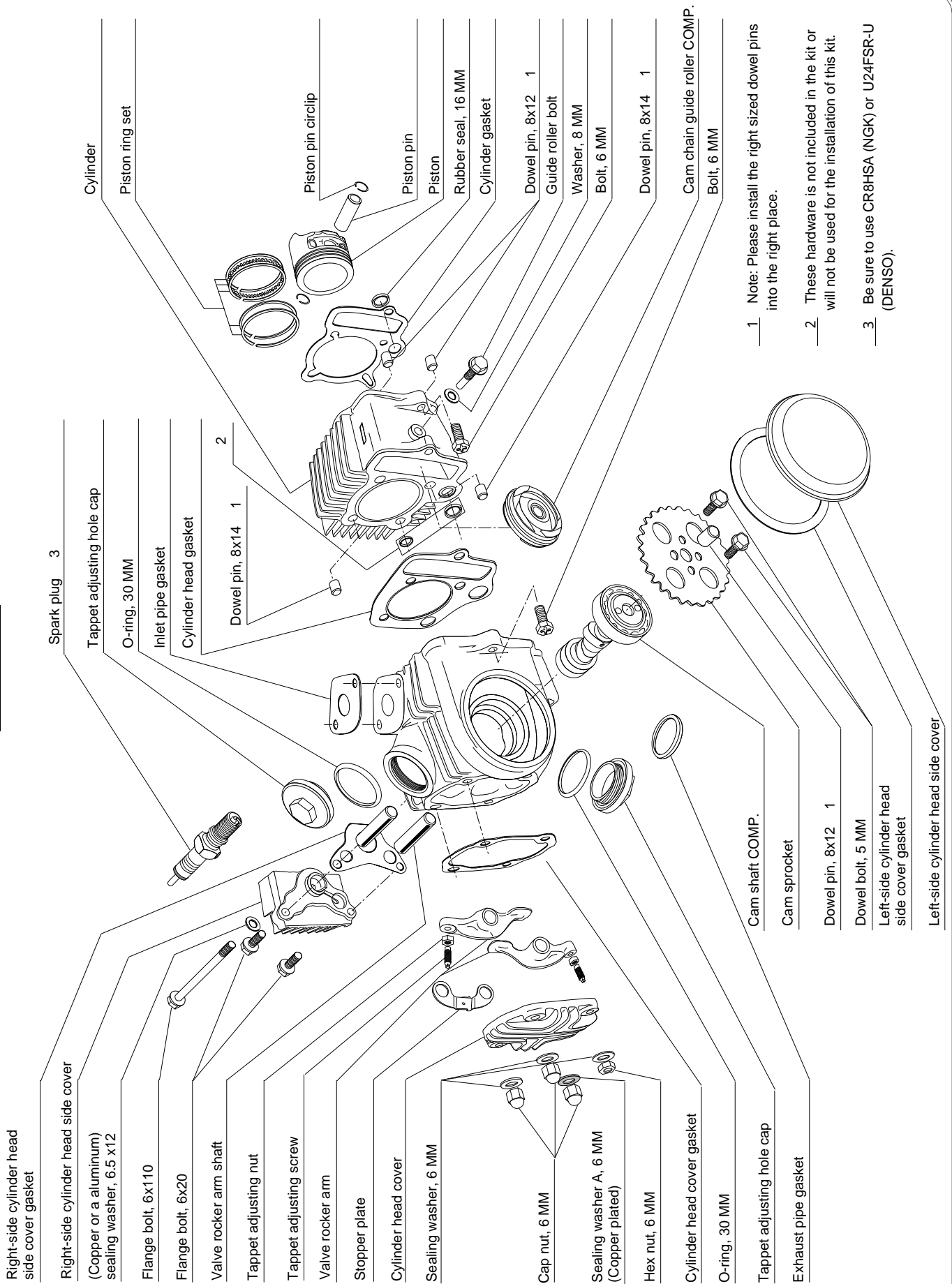
Some parts are only available as a set. In this case, please order them with the set number.

Tools to use for the installation



1	Torque wrench
2	Plastic hammer
3	Cutter knife
4	Open end wrench (10-12)
5	Open end wrench (12-14)
6	Open end wrench (14-17)
7	Closed wrench (10-12)
8	Closed wrench (12-14)
9	Closed wrench (14-17)
10	Plug wrench handle (in-vehicle tool)
11	Plug wrench (in-vehicle tool)
12	Needle nose plier
13	Thickness gauge
14	Slotted screwdriver, extra fine
15	Extension (Medium size)
16	Extension (Small size)
17	Socket wrench (14 mm)
18	Socket wrench (12 mm)
19	Socket wrench (10 mm)
20	Ratchet wrench

# Part names



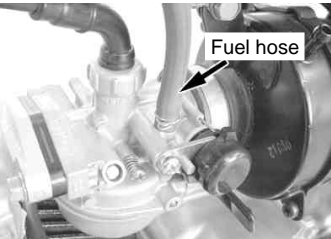
- 1 Note: Please install the right sized dowel pins into the right place.
- 2 These hardware is not included in the kit or will not be used for the installation of this kit.
- 3 Be sure to use CR8HSA (NGK) or U24FSR-U (DENSO).

## Removal of standard hardware

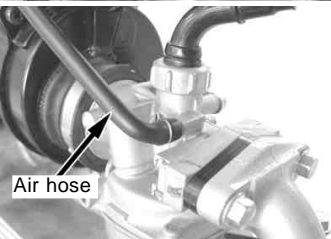
### 1 . Remove the carburetor.



Turn off the gasoline cock at the lower left of the gasoline tank.



Fuel hose

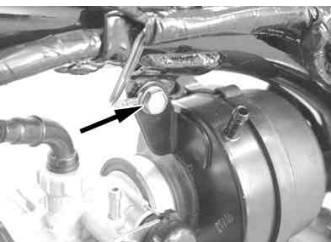


Air hose

Disconnect the fuel and air hoses.



Disconnect the hose on the storage tank in the case of bikes with frame Nos AB27-.



Remove the bolt on the air-cleaner bracket.  
Tools to use:  
10mm socket and a medium-sized extension bar  
Medium-sized extension bar



Remove two bolts holding the cylinder head and inlet pipe.  
Tool to use:  
8mm closed wrench  
Hang a carburetor assembly with the throttle cables on the front-left turn signal.

### 2 . Remove the exhaust system.



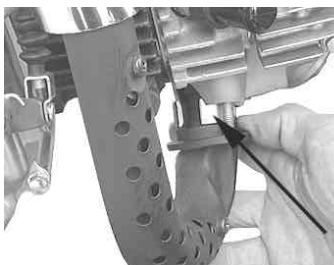
Remove two nuts on the exhaust pipe by turning them counterclockwise.  
Tool to use:  
10mm open end wrench



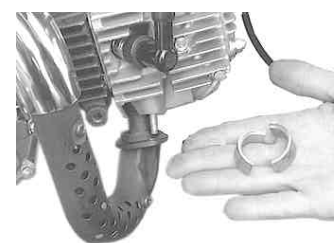
Remove the nut holding the exhaust system by turning it counterclockwise.  
Tools to use:  
12mm socket wrench & M-sized long extension



Remove the nut fixed at the reverse side of the exhaust system by turning counterclockwise.  
Tools to use:  
10mm socket wrench & M-sized long extension.



Remove two collars of the flange and then remove the exhaust system from the motorcycle by pulling it outwards.

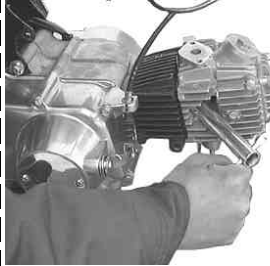


### 3 . Remove the front fender.



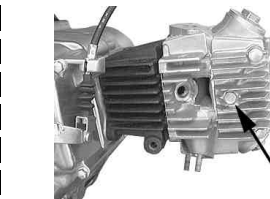
Remove two hex bolts on the reverse side of the front fender by turning them counterclockwise.  
Tools to use:  
10mm socket wrench & short extension

### 4 . Remove the spark plug.



Remove the plug cap from the plug by pulling it out. Be sure to hold the cap in pulling it out. With an in-vehicle tool of a plug wrench, remove the plug by turning counterclockwise.

### 5 . Remove the cylinder-head left-side cover.



The left-side cover will remove when the hex bolt at the center of Right cylinder head cover is removed. In case the left-side cover cannot be removed, screw in the hex bolt by a few threads, and tap the bolt head with a plastic hammer.

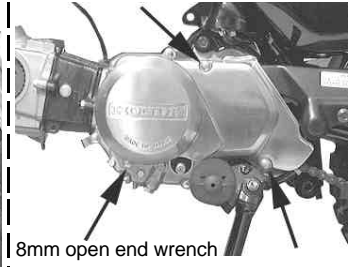
Tool to use:  
10mm socket wrench



### 6 . Remove the generator cover.



Remove the hex bolt on the shift pedal, and turn the shift pedal counterclockwise to remove it.  
Tool to use:  
10mm closed wrench



8mm open end wrench

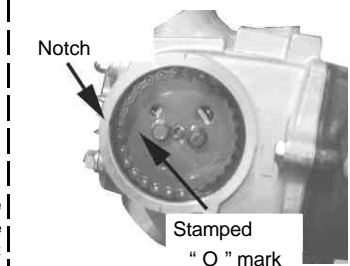
Turn three bolts counterclockwise holding the generator cover.  
Tools to use:  
8mm open end wrench,  
8mm socket wrench & short extension

### 7 . Remove two tappet caps.



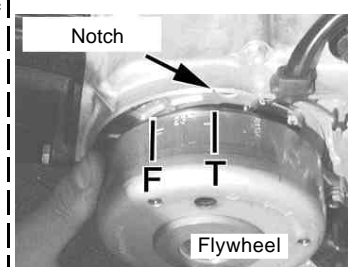
Remove two tappet caps by turning counterclockwise.  
Tool to use:  
17mm closed wrench

### 8 . Remove the cam sprocket.



Notch

Stamped "O" mark



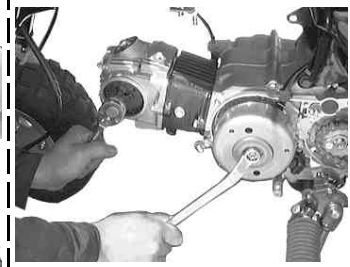
Notch

F

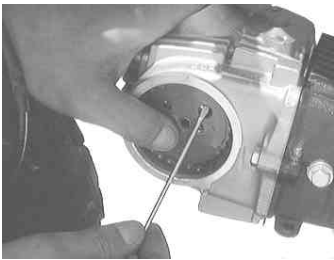
T

Flywheel

Turn the flywheel counterclockwise so a "T" mark on the flywheel and "O" mark on the cam sprocket align with their own notches.

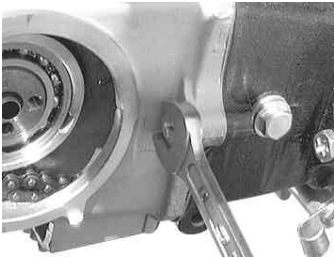


Remove two hex bolts on the cam sprocket by turning counterclockwise while stop rotating the flywheel.  
Tools to use:  
8mm socket wrench,  
14mm closed wrench to stop rotating the flywheel



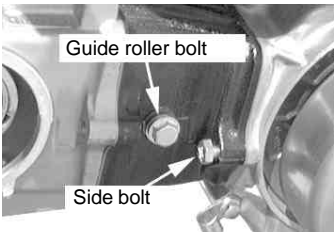
Gently pry the cam sprocket loose to remove from the camshaft with a small-sized slotted screwdriver. Remove the cam chain from the cam sprocket, and withdraw the cam sprocket. Remove the dowel pin fixed in the center of the camshaft.

**9 . Remove the cylinder-head side bolt.**



Remove the cylinder-head side bolt holding the cylinder head and cylinder, by turning it counterclockwise.

Tool to use:  
10mm open end wrench



Loosen the guide roller bolt on the cylinder and the side bolt between cylinder and crankcase by turning them counterclockwise.

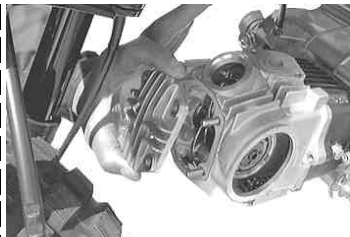
Tools to use:  
10mm open end wrench or 10mm closed wrench

**1 0 . Remove the cylinder head cover.**



Remove four nuts holding the cylinder head cover by turning counterclockwise in a crisscross pattern. Remove four washers beneath the nuts.

Tool to use:  
10mm socket wrench



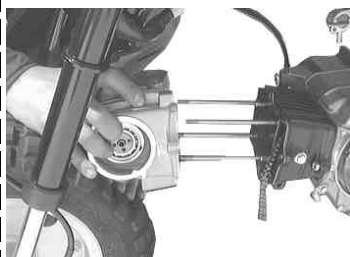
Remove the head cover. (If it were hard, tap with a plastic hammer around the perimeter.) If the traces of gasket material remain on the cylinder head, remove them completely with a scraper or a cutter.

**1 1 . Remove the cylinder head.**

To make work space, let air out of the front tire. (At the press of the valve with something like a tip of a Phillips screwdriver, the tire will deflate. Continue pressing it till the whoosh of air cannot be heard any longer.)



Remove the cylinder head from the cylinder by pulling the head away from the cylinder. (If it does not come off easily, tap it with a plastic hammer.)



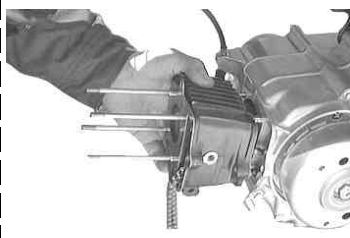
Pressing the front tire, remove the cylinder head. Now you can see the reason why you have let the air out of the tire.

Remove and keep the two dowel pins to reinstall.

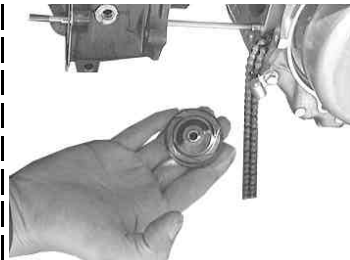
**1 2 . Remove the cylinder.**



Remove the loosened guide roller bolt and cylinder side bolt by turning them counterclockwise.



Pull out the cylinder. (If it is hard to pull it out, hit the cylinder lightly with a plastic hammer.)

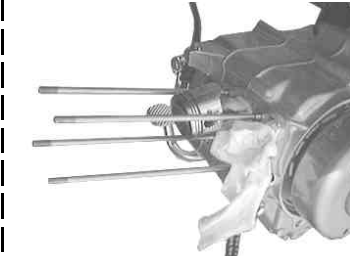


While removing the cylinder, the cam chain guide roller will come out, which please remove.

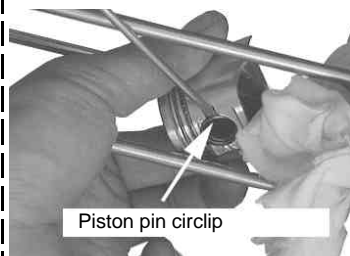


Once the piston has come out, pull out the cylinder forward, holding the tire with a hand.

**1 3 . Remove the piston.**



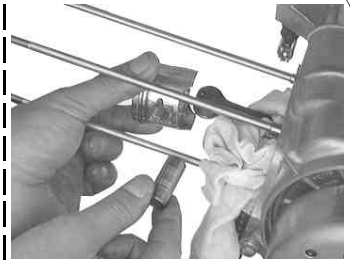
Plug the cylinder hole in the crankcase with a waste cloth to avoid entering any unwanted parts into the cylinder hole and cam chain.



Remove one of the piston pin circlips with a screwdriver tip.  
Tool: Extra-fine slotted screwdriver

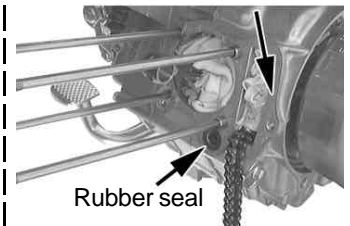


To remove the piston pin, please push it forward from the other side with slotted screwdriver.

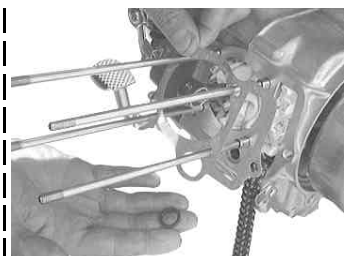


Remove the piston.

**1 4 . Remove a cylinder gasket, rubber seal and dowel pin.**



Rubber seal



If the gasket does not remove smoothly, please use the scraper or cutter but NOT scratch the crankcase. Also remove the excess of the gasket if necessary. Keep off any dirt or unwanted parts.

**1 5 . Installation of clutch and oil pump.**

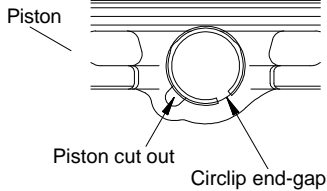
An oil pump and a heavy-duty clutch are required to install this kit. Installation of the oil pump and the clutch at this stage is quite easy.

## Installation of S-Stage Kit:

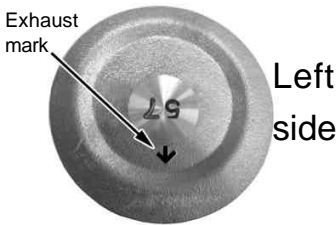
### 1 . Assemble and install a piston.



Do not align the piston pin clip end-gap with the piston cut out.



Fix a supplied piston pin circlip securely to the grooves for circlip on one side of the piston.



**Left side**

You can rather easily install the piston pin circlip by pressing it with a screwdriver, but taking care not to damage the piston with the screwdriver.

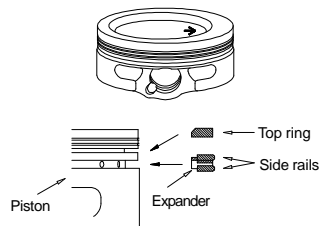
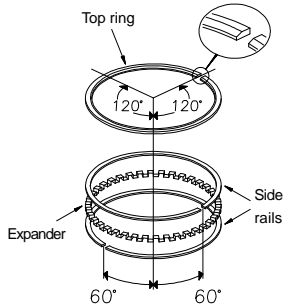
Fix the piston pin circlip first on the left side.

Tool to use:

Extra-fine slotted screwdriver

Apply engine oil to the piston-ring grooves, and fix piston rings in the order of an oil ring expander, lower oil ring side rail, upper oil ring side rail, and top ring.

Arrange the positions of piston ring-end gaps so they do not align with each other.



**Pay attention to the cross section as well !!**



Put the oil ring expander.



Put the lower oil ring side rail.



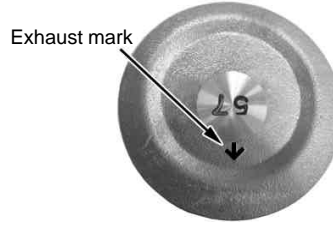
Put the upper oil ring side rail.



Put the top ring.



Apply engine oil to the piston pin and to a small end of the con rod, and install the piston pin.



Fix the piston so the arrow on the piston head faces downward, or to the exhaust side.



To be easier, first, you install one-third of the piston pin into the piston.  
Fix securely the supplied piston pin circlip to the circlip groove.

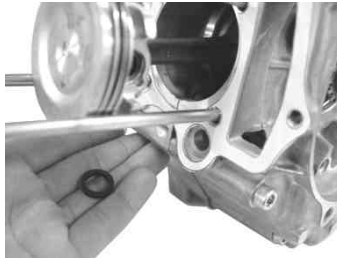


You can rather easily install the piston pin circlip by pressing it with a screwdriver, but taking care not to damage the piston with the screwdriver. Do the work carefully as, in some cases, the circlip comes off flying while you are pressing it inside. So, wear protective eyeglasses for your eyes.

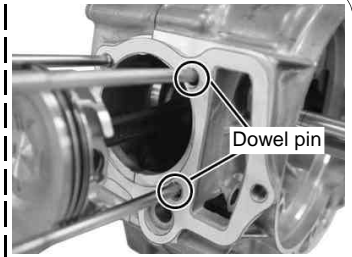
Remove the plugged waste cloth.

### 2 . Installation of cylinder:

Degrease the mating surfaces of the cylinder and the crankcase to attach the gasket.



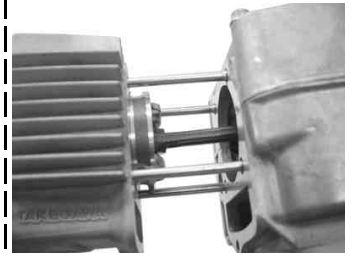
Install the cylinder gaskets and rubber seal.



Check that two dowel pins are present.



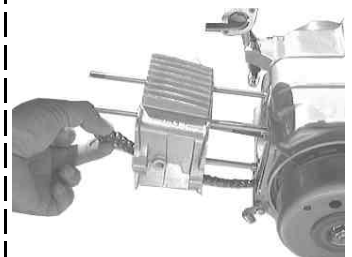
Apply engine oil onto the inside of the supplied cylinder and spread the oil evenly with fingers.



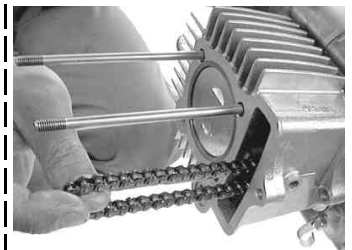
Insert the cylinder.



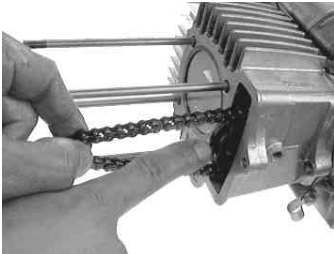
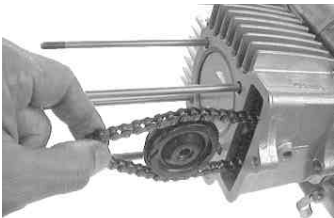
Fit in the cylinder, by installing the piston rings one by one with fingers, being careful not to move the piston ring-end gaps out of place.



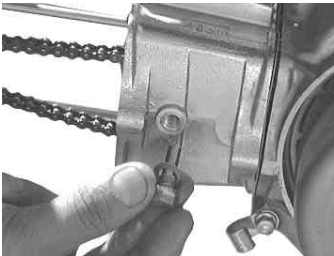
Once the piston has been placed inside the cylinder, pass the cam chain through the cylinder, and fix the cylinder into the crankcase.



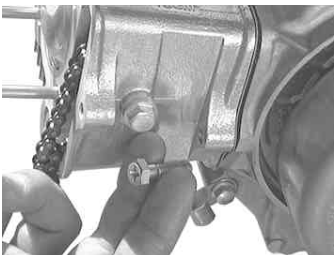
Fix the guide roller while pulling the cam chain.



Press in the guide roller to align the center of the guide roller and the guide-roller bolt hole.



Install the guide roller bolt. (Hand tighten temporarily.)

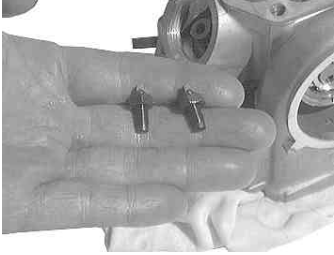


Attach the cylinder side bolt. (Hand tighten temporarily.)

### 3 . Change of camshaft.



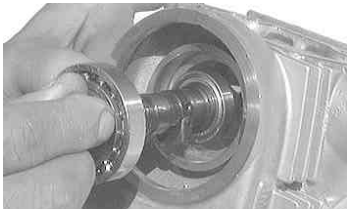
Loosen the tappet adjusting nuts on the rocker arm. And by turning the tappet adjusting screw counterclockwise, remove the tappet adjusting nut and the tappet adjusting screw together.  
Tool to use:  
9mm closed wrench



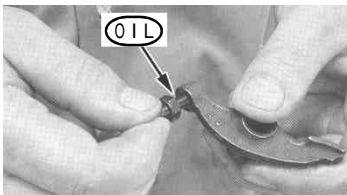
Remove the rocker arm shafts on the stock cylinder head.



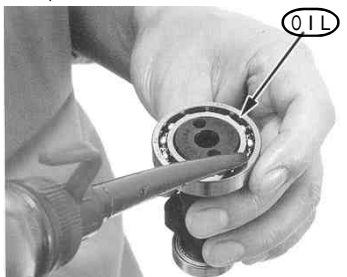
Install the cam-sprocket bolt into the camshaft. The camshaft will come out when you pull it out or tap the cylinder head with a plastic hammer. Remove the camshaft while twisting. Do not pull it out by force.



Apply engine oil to the removed adjusting bolt and to the rocker arm of the kit, and install them.



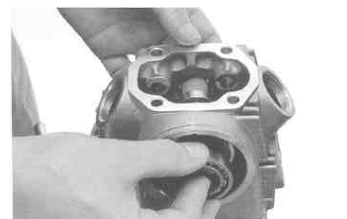
Apply engine oil to bearings at the tip on each side of the special cam shaft.



Apply molybdenum oil to the cam top.



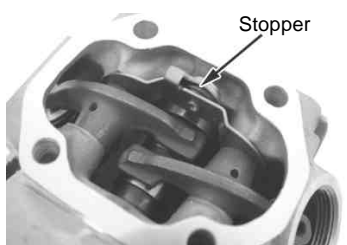
Set the cam shaft on the cylinder head of the kit.



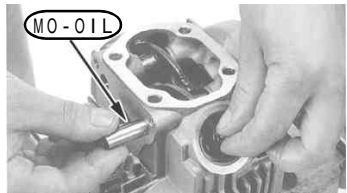
The stopper of the decompression cam is facing up.



Attach a stopper plate of the kit and rocker arm to the cylinder head, with a stopper on the stopper plate facing to the right of the cylinder head.

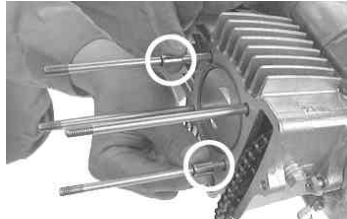


Apply molybdenum to the stock rocker arm shaft. Then align the holes of rocker arm and stopper plate and fix the rocker arm shaft.

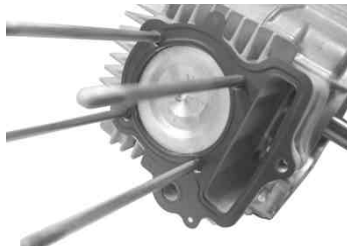


### 4 . Installation of cylinder head.

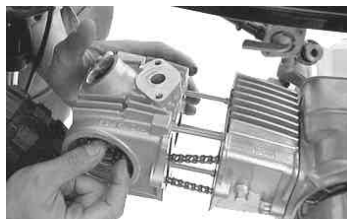
Degrease the cylinder head surface and upper surface of the cylinder.



Fix two dowel pins into the cylinder.

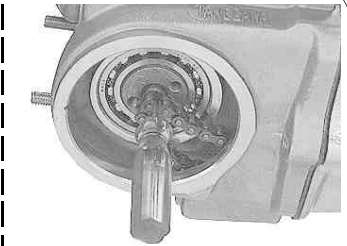


Install the head gaskets.

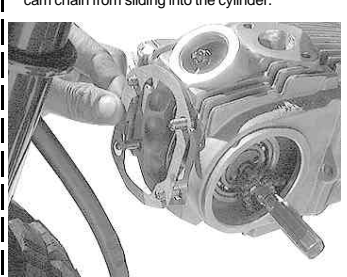


Pressing the tire with a hand, fit the cylinder head into the stud bolts.

Install the cylinder head while fitting the cam chain.



Hold the cam chain with a screwdriver to keep the cam chain from sliding into the cylinder.

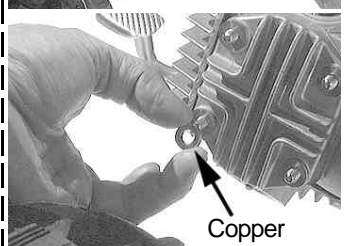


Attach the cylinder-head cover gasket and head cover.



Arrow showing which side should face downward.

The arrow should face downward.



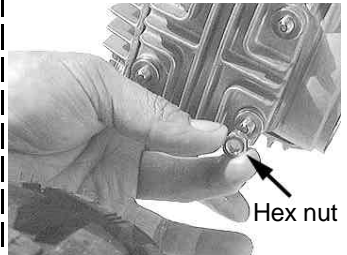
Copper washer

Use the below sets to fit the head cover  
From the front view:

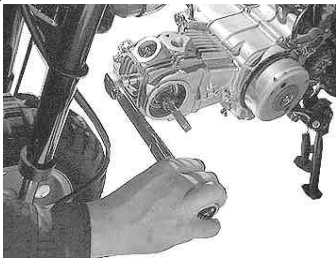
Lower left(photo):copper washer + cap nut

Lower Right:iron washer + hex nut

Two others(upper side): iron washer + cap nut



Hex nut



Tighten the head nuts in a crisscross pattern in two or more steps evenly.

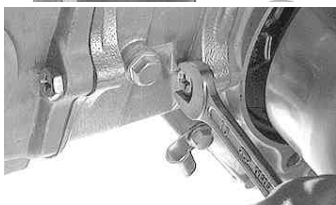
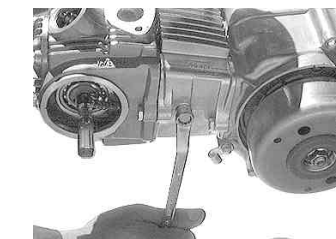
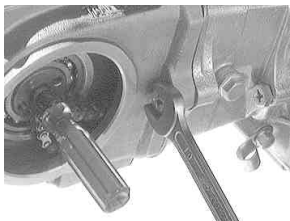
**Tightening torque: 12 N·m (1.2 kgf·m)**

Tool to use:  
10mm socket wrench



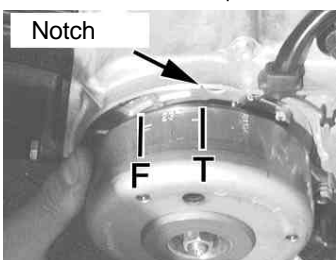
Attach a head side bolt. Fully tighten the guide roller bolts and the cylinder side bolts which were tightened temporarily.

Tools to use:  
10mm open end wrench  
10mm closed wrench



**Tightening torque:**  
10 N·m (1.0 kgf·m) for a guide roller bolt  
10 N·m (1.0 kgf·m) for lower and upper side bolts

### 5 . Installation of cam sprocket.



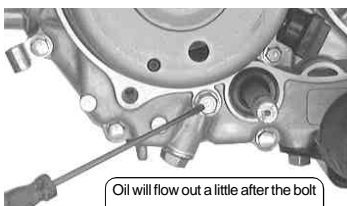
Align the "T" mark on the flywheel with the notch on the crankcase.



Keep aligning the camshaft bolt hole with the notch of cylinder head and set the shaft with the lift point of camshaft facing to the piston head. This arrangement places the cam shaft at TDC (Top Dead Center) on the compression stroke.

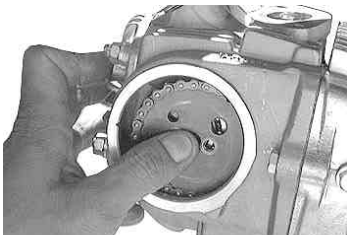


Install the dowel pin onto the camshaft.

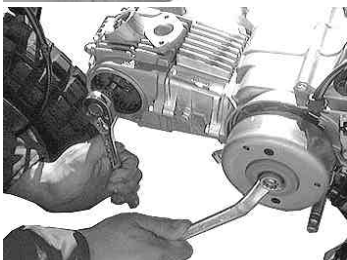


Oil will flow out a little after the bolt is tightened. Wipe off the oil.

Remove the hex bolt next to the change-pedal shaft. As the tensioner, guiding the cam chain, will slacken, it will be easy to install the cam chain.



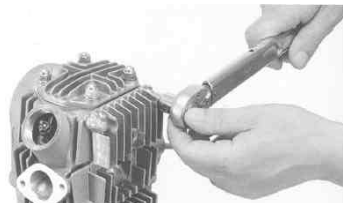
Attach the cam chain to the camshaft so the "O" mark on the cam sprocket and the notch on the cylinder head mesh together. After installing the cap sprocket, fasten the bolt.



Tighten up two cam sprocket bolts while stop rotating the flywheel.

**Tightening torque: 9 N·m (0.9 kgf·m)**

Tools to use:  
8mm socket wrench  
14mm closed wrench



Set the included right-side cover gasket to the right side cover and tighten the cylinder head with two provided flange bolts to the specified torque.

**Tightening torque: 10 N·m (1.0 kgf·m)**



Install the hex bolt which was next to the change pedal and was just removed.

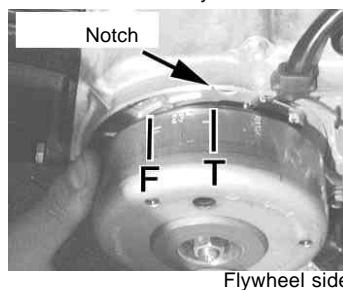
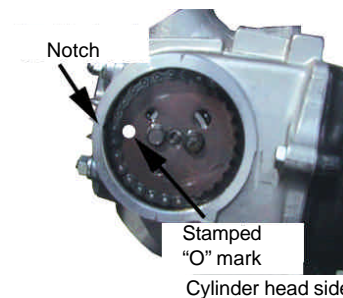
**Tightening torque: 10 N·m (1.0 kgf·m)**

Tool to use:  
10mm closed wrench

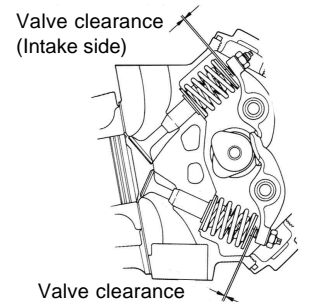
### 6 . Adjustment of tappet clearance.

Give the crankshaft more than two turns counterclockwise. First release the decompressing function, and then join together marks on the cam sprocket and on the cylinder head.

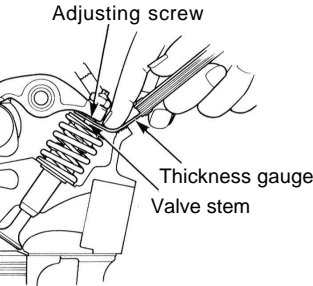
Never rotate the crankshaft clockwise. Otherwise, the decompressor will work, making the valve clearance adjustment impossible.



Turn the flywheel until the "O" mark on the cam sprocket and the "T" mark on the flywheel mesh with each notch. Though the flywheel will not stop right at the required position because the magnet force repels each other, it is all right if "O" and "T" marks mesh with each notch at the same time.

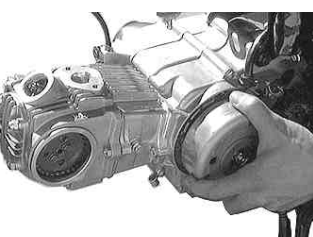


Valve clearance (Intake side)



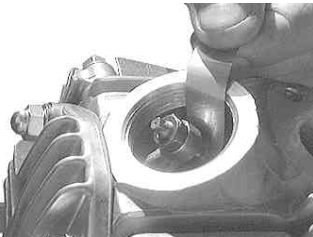
While tightening a rocker arm's tappet adjusting screw, tighten the tappet adjusting nut to the extent that a 0.05 mm thickness gauge, placed between the tappet adjusting screw and the valve stem end, can be pulled out with a little resistance. (If you have no idea of the little resistance, use a 0.07 mm and 0.03 mm thickness gauges. When the 0.07 mm gauge won't go in between the space but the 0.03 mm gauge goes in quite loosely, this means that roughly 0.05 mm clearance is secured.) Set the space at 0.05 mm both for intake and exhaust.

Tools to use:  
Needle nose plier  
9mm closed wrench  
Thickness gauge



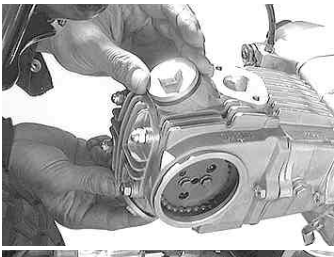
After adjusting the tappet, turn the flywheel counterclockwise twice by hand, and then, align "T" and "O" marks each other.

Never rotate the crankshaft clockwise. Otherwise, the decompressor will work, making the valve clearance adjustment impossible.

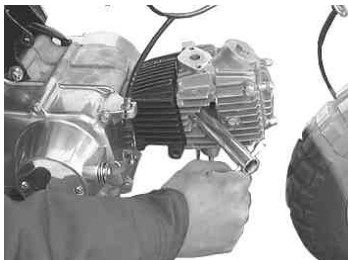


Check if the tappet clearance is still right thickness. If not, repeat this adjustment until you get the right tappet clearance.

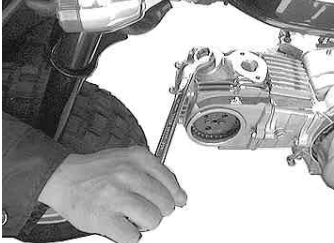




### 8 . Installation of spark plug.



Install the plug with either an in-vehicle tool or plug wrench.  
**Tightening torque: 11 N·m (1.1 kgf·m)**  
Tool to use  
Plug wrench  
Attach the plug cap to the plug.



Install two tappet caps.  
**Tightening torque: 12 N·m (1.2 kgf·m)**  
Tool to use:  
17mm closed wrench

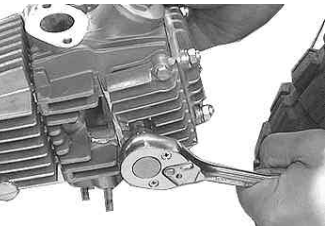
### 7 . Installation of cylinder head left-side cover.



Attach the left cylinder head cover with gasket. When tightening the bolt, make sure that the stoppers of the cover and the cylinder head are mating not to rotate the cover.

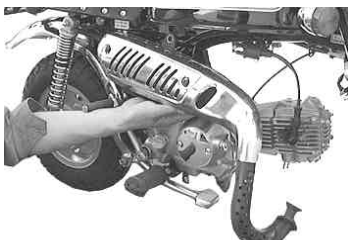


(See the stoppers of the cover and cylinder head attaching.)



Tighten up the hex nut at the right side of the cylinder head. (The arrow marked nut is the hex nut in the above photo.)  
**Tightening torque : 12 N·m (1.2 kgf·m)**  
Tool to use:  
10mm socket wrench

### 9 . Installation of stock exhaust system.



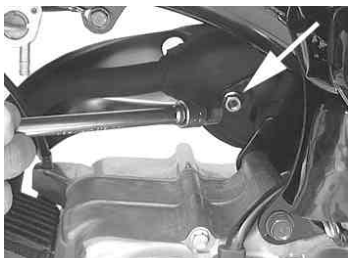
Installing the exhaust system, route the tail pipe inside the rear shock absorber first, and then run the flange close to the exhaust outlet of the cylinder head.



Install two flange collars clipping on the exhaust pipe.



Tighten two nuts on the exhaust pipe loosely for now.  
**Tightening torque: 10 N·m (1.0 kgf·m)**  
Tool to use  
10mm open end wrench

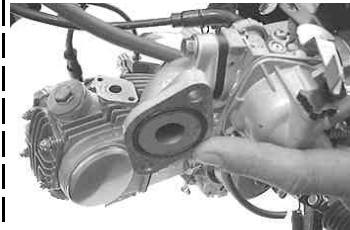


Attach a nut on the reverse side of exhaust system loosely for now.  
**Tightening torque: 10 N·m (1.0 kgf·m)**  
Tools to use:  
10mm socket wrench & long extension



Install the hex bolt to hold the exhaust system temporarily.  
**Tightening torque: 26 N·m (2.7 kgf·m)**  
Tools to use:  
12mm socket wrench & long extension  
Fully tighten the nuts and bolts at three portions.

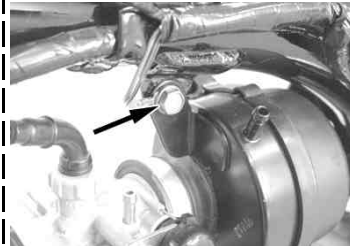
### 10 . Installation of stock carburetor.



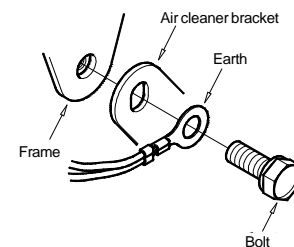
In the case of vehicle with frame Nos Z50J-, check that an O-ring is attached to the inlet pipe.



Attach two bolts to hold the cylinder head and intake manifold.  
Tool to use  
wrench, 8mm  
**Tightening torque: 10 N·m (1.0 kgf·m)**



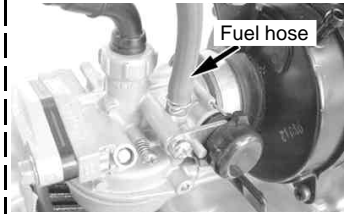
Install a bolt on the air-cleaner bracket, fastening the bolt and earth jointly at the same time. See the figure below.



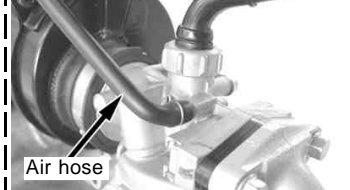
Tools to use:  
10mm socket & medium-sized extension bar  
**Tightening torque: 10 N·m (1.0 kgf·m)**



In the case of vehicle with frame Nos AB27-, install the hose of the storage tank.



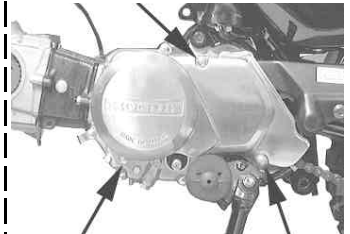
Fuel hose



Air hose

Attach fuel and air hoses.

### 11 . Installation of generator cover.



Install three bolts to hold the generator cover.  
**Tightening torque: 10 N·m (1.0 kgf·m)**  
Tools to use:  
8mm socket wrench & short extension



Attach the change pedal.  
**Tightening torque: 10 N·m (1.0 kgf·m)**  
Tool to use:  
10mm closed wrench

### 12 . Install the front fender.



Fasten two hex bolts on the reverse side of the front fender.  
**Tightening torque: 10 N·m (1.0 kgf·m)**  
Tools to use:  
10mm socket wrench & short extension  
Pump the tire.  
Make sure that all the nuts and bolts are fastened properly.

**SPECIAL PARTS TAKEGAWA Co., Ltd.**  
3-5-16 Nishikiorihigashi Tondabayashi Osaka Japan  
TEL : 81-721-25-1357 FAX : 81-721-24-5059 URL : <http://www.takegawa.co.jp>

## Before riding:

### 1 About fuel:

High-octane gasoline ONLY.

If there remains regular gasoline in the fuel tank, always replace it with high-octane gasoline.

### 2 Additional hardware to be installed:

For driving your bike with this kit installed, the following hardware need to be installed additionally. We disclaim all responsibility for any consequential and incidental damages or any other losses arising from the use of the provided products or parts, if your bike is not equipped with these additional hardware.

#### 2 1 Oil pump:

The installation of Super Oil Pump is essential in order to circulate large amounts of oil and to help cool down the engine which the output power and the heat increased.

#### Essential Super Oil Pump

Models	Part No.
Monkey and Gorilla	01-16-0051
Benly CD50, CL50/50S	
12V DAX	

#### 2 2 Clutch:

The stock clutch cannot respond to the high engine power, and, therefore, causes clutch slippage, and consequently cannot transmit the engine power fully to the driving side. Therefore, it is necessary to install an essential clutch or heavy-duty clutch, including a special clutch.

Models	Item Nos
Monkey and Gorilla	02-01-0202 ( No change in primary reduction gear ratio )
Benly CD50, CL50/50S	02-01-0214 ( Primary reduction gear ratio to 18/67 from 16/69)
12V DAX	02-01-0215 Heavy-duty Centrifugal Clutch Kit
	02-01-0504 Kit to change centrifugal clutch to the manual clutch

### 3 Change of drive sprocket:

The installation of this kit will increase the power of your vehicle. So with the stock gearing, you will find it uncomfortable to drive your vehicle because the gear ratio is too low, and will cause severe wears of hardware, not only adversely affecting the engine life, but also possibly breaking the engine in the worst case. Therefore, please replace the drive and driven sprockets to make the gear ratio higher.

Please note that a driven sprocket is not included in the kit.

Furthermore, the gear ratio of the sprocket changes according to the clutch type and wheel size. The list below is just for your reference because the configuration in the list below needs to be changed according to the driver's weight and purpose of use.

When changing the driven sprocket, remove hardware around the rear wheel. Raise the rear wheel off the ground by placing a racing stand under the engine for working safely.

#### Recommended sprocket for use with S-Stage, SCUT (with a driver weighing 65 kg)

Models	Specifications			Recommended Sprocket	
	Rear wheel size	Clutch	Transmission	Drive sprocket (Front)	Driven sprocket (Rear)
12V Monkey & Gorilla	8 inch	Manual	4-speed	16	23
		Heavy-duty special	4-speed	16	25
	10 inch	Manual	4-speed	16	25
		Heavy-duty special	4-speed	16	28
Benly CD50, CL50/50S	17 inch	Manual	4-speed	16	42, 43 (Stock)
12V DAX	10 inch	Centrifugal	3-speed	16	31

When the stock sprocket is changed to the recommended driven sprocket, the drive chain becomes **too long** or **too short**. You need to either shorten the chain by cutting it with a chain cutter, or to prepare a new drive chain. Especially, in the case of the Monkey, the length of chain changes according to the length of swing arm.

## For best performance:

### 1 Carburetor

Higher power can be attained through the installation of Big Bore Carburetor Kit suitable for each model of a bike for the best performance of S-Stage.

#### Recommended Big Bore Carburetor Kit for S-Stage, SCUT

Models	Item Nos
Monkey & Gorilla	03-05-320
Benly CD50, CL50/50S	03-05-033
12 V DAX	03-05-321

### 2 Exhaust system

Please install various kinds of TAKEGAWA exhaust systems for higher power output.

### 3 Oil cooler

As a longtime high-load driving will further increase the heat release value of the engine, we recommend you to install an Oil Cooler Kit which keeps oil at appropriate temperatures and prevents such troubles as oil film shortage at high temperatures.