



Instruction Manual for *Entry model R-Stage* Kit

Item No : 0 1 - 0 3 - 7 0 0 4

Applicable model names and the frame Nos:

Monkey · Gorilla	: Z50J-1000001 ~ 1510400	Cub50	: C50-N00002 ~ V488897
6V Dax	: ST50-1000001 ~ 6346265		: C50-Z000002M ~ Z069126M
CD50	: CD50-1300001 ~ 1330600		: C50-5000005 ~ 5121324
			: C50-5200011 ~
			: C50-3000001 ~ 3431226
			: C50-4000001 ~ 4223783

- We are flattered that you have purchased one of our products. Please strictly follow the following instructions in installing and using the products.
- Before fitting the products, please be sure to check the contents of the kit. Should you have any questions about the products, please kindly contact your dealer.

Please note that, in some cases, the illustrations and photos may vary from the actual hardware.

~ Features ~

We have improved the combustion efficiency through the changes of valve angle of nip and the shape of the combustion chamber.
 We have also improved air intake-and-exhaust efficiency with wider valve top diameters for intake and exhaust to 26.0 mm and 22.5 mm respectively along with a substantial change in the port shape.
 We have achieved the smoother rotation of the valve by widening the stem diameters to be 4.5 mm on both IN and EX, and by using a single valve spring.

Please read the following before installation.

We do not take any responsibility for any accident or damage whatsoever arising from the use of the products not in conformity with the instructions in the manual.

This kit is designed for exclusive use in the above-mentioned applicable model names and frame numbers only. Please take note that this kit cannot be mounted on other types of motorcycles.

Installation of this kit requires engine removal and mounting, crankcase disassembly, and other work. Please do the work with utmost care referring to the installation procedures in a HONDA genuine service manual for the relevant vehicle. This instruction manual, as well as HONDA's genuine service manual, is prepared with those persons in mind who have basic skills and knowledge in tuning. Therefore, we recommend those who are technically inexperienced or do not have enough tools to ask a technically-reliable specialist shop for the work.

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

If you make modifications to the products, we shall be held free from any guarantee of the products.

A serial number is stamped on the cylinder head. You may be requested to inform us of the number when ordering parts.

Some of bolts, nuts, dowel pins, and packings will be reused. However, be sure to replace worn-down or severely-damaged ones with new ones.

Never use liquid packing. It may plug the oil passage, and in the worst case damage the engine.

Be sure to always use premium unleaded petrol. And make sure to check what kind of gasoline is remaining in the fuel tank. Whenever regular gasoline is left in the fuel tank, always replace it with high-octane gasoline.

Determine the heat value of a spark plug depending on how much it is burnt.

Please be informed that what we can safely say is that the ignition system is compatible only with ours and stock ignition systems, because no data is available with us on the compatibility with other ignition systems. Therefore, please never use other ignition systems, which may cause technical troubles.

Since a stock clutch cannot be used, a centrifugal filter will be unavailable. So, please install an outer oil filter.

Install an oil cooler when necessary.

Engine oil must be API SF or higher class, such as an SAE 10W-40/15W-50.

Please install a revolution counter to always keep the revolutions below the upper limit.

Change a sprocket with the one which corresponds to the engine output power and specifications.

This kit cannot perform on its own. Refer to "Recommended engine parts" on page 3.

This kit is only compatible with those engine parts recommended by us. So, please replace the engine parts not recommended by us with those of our recommendations.

This product is designed for exclusive use on the closed course. So, take note that it is prohibited to drive your motorcycle on a public road after installation of this kit. Drive your motorcycle at a legal speed, abiding by the laws.

Quick Starting and Sudden Acceleration

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

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.

Please be informed that we shall be held harmless against any claim against us whatsoever arising out of use of the products in racing and the like.

Please retain this Instruction Manual for future reference.



The following show the envisioned possibility of injuries to human bodies or property damages as a result of disregarding the following cautions.

- This product is designed for exclusive use on the closed course. So, take note that it is prohibited to drive your motorcycle on a public road after installation of this kit. Drive your motorcycle at a legal speed, abiding by the laws.
- Work only when the engine and muffler are cold at below 35 degrees Celsius. (Otherwise, you will burn yourself.)
- Prepare right tools for the work. (Otherwise, parts will be damaged or you will suffer injuries.)
- As some products and frames have sharp-pointed or protruding portions, please work with great care. (Otherwise, you will suffer injuries.)
- Always use new gaskets, packings and the like. Worn or damaged ones may cause engine troubles.

Warning The following show the envisioned possibility of human death or serious injuries to human bodies as a result of disregarding the following cautions.

- Those who are technically unskilled or inexperienced are required not to do the work. (Improper installation because of insufficient skill and knowledge could lead to parts breakage and subsequently to accidents.)
- Before doing work, place the motorcycle on level ground to stabilize the position of your motorcycle for safety's sake. (Otherwise, your motorcycle could overturn and injure you while you are working.)
- Always drive the engine in a well-ventilated place, and do not start the engine in an airtight place. (Otherwise, you will suffer from carbon monoxide poisoning.)
- As gasoline is highly flammable, never place it close to fire. Make sure that nothing flammable is near the gasoline. (It may cause a fire.)
- Always use a torque wrench to screw bolts and nuts tight and securely to the specified torque. (Improper torque could cause these parts to get damaged or fall off, resulting in accidents.)
- Never use any other parts than those specified by us. (The use of the unspecified parts may lead to parts breakage and consequent accidents.)
- If you find damaged parts when checking and performing maintenance of your motorcycle, never reuse them but replace them with new ones. (The continued use of these damaged parts could break the parts, leading to accidents.)
- When you notice something abnormal with your motorcycle while riding, immediately stop riding and park your motorcycle in a safe place. (Otherwise, the abnormality could lead to accidents.)
- Before riding, always check every section for slack in parts like screws. If you find slack ones, screw them securely up to the specified torque. (Or improper torque may cause parts to come off, leading to accidents.)
- Check or perform maintenance of parts correctly according to the inspection procedures in the instruction manual or a service manual. (Improper checking or maintenance could lead to accidents.)
- Be sure to always use premium unleaded petrol. (Otherwise, troubles such as knocking of an engine may cause accidents.)

Cautions before riding

About fuel:

Whenever regular gasoline is left in the fuel tank, always replace it with high-octane gasoline.

With this kit installation, a centrifugal filter will be lost. So, please install a dry-type clutch with an external oil filter, or a special clutch.

Change of a sprocket:

The installation of this kit will increase the power of your vehicle. So the use of a stock sprocket will result in severe wears of parts because of too low gear, not only adversely affecting the engine life, but also damaging the engine in the worst case. Therefore, please change the sprocket with the high-geared one.

This Kit alone does not work.

Order the special Bore Up Kit, referring to the attached sheet. (This does not apply to the case where you have purchased a full kit.)

Others

Oil cooler:

The installation of this product increases the heat release value of the engine, set off by the increase in power. For a long-time high-load running, 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.

About a cam shaft:

If you have purchased only a Cylinder Head Kit, then you are required to purchase a camshaft separately. Camshafts with some kinds of profiles are available to meet your usage or engine displacement capacity.

Moreover, if you have purchased a full kit, you may use the camshaft as an option in addition to the one included in the full kit.

For details, see the attached sheet.

Upper limit of revolutions:

Upper limit of revolutions varies depending on the installed cam shaft, etc. Referring to the camshaft comparison graph on page 3, install a revolution counter to make sure that you drive the engine at revolutions below the upper limit.

Take note that idling and sudden acceleration in the 1st and 2nd gears particularly tend to exceed the upper limit of revolutions. Over revolutions will result in nonsmooth revolutions of the engine, not only adversely affecting the engine life, but also damaging the engine in the worst case.

A serial number is stamped on the cylinder head just for the sake of administration.

You may be requested to inform us of the number when ordering repair parts. In case you are not able to order parts because you do not have the repair parts numbers or for other reasons, please place an order in the following way.

Make a note of the number stamped on the left side of the cylinder head:

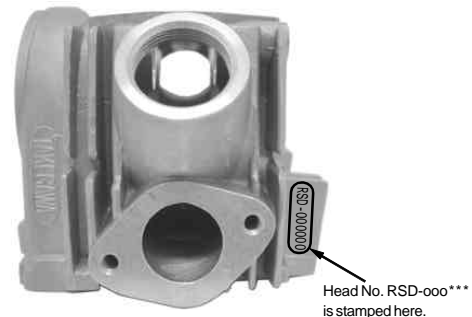
Head No. RSD-000001

Example of ordering

Cylinder head kit, repair part

Head No.: RSD-000001 Intake valve

Qty:1



If you have purchased a cylinder head as a single unit, please be informed that selection sets are available to meet your combination demand depending on engine displacement, etc. Please study the required contents of the kit, referring to the attached "Reference data on bore-up kit."

Please contact your dealer for more details about the kit or enquiries.

Recommended engine parts

This kit is only compatible with those engine parts recommended by us. So, please replace the engine parts not recommended by us with those of our recommendations.

Recommended Part			
Clutch	Special clutch kit	Monkey & Gorilla	
	Dry-type clutch kit	Monkey & Gorilla	
Ignition system	Stock		
	C.D.I. Magnet	Monkey & Gorilla	05-02-0521
Carburetor	Keihin PC20	Monkey & Gorilla	88cc
	Keihin PD22	Monkey, Gorilla, & Dax	88cc
	Keihin PE24	Monkey & Gorilla	88cc
	MIKUNI VM26	Monkey, Gorilla, & Dax	88cc
Oil pump	Super oil pump kit	01-16-0041	
Cam chain	Heavy-duty cam chain kit	88cc	01-14-002
Oil catch tank (In case head breather cap is used.)	Only for Monkey & Gorilla	09-04-031	
		09-04-032	

About optional cam shaft:

We have prepared a few kinds of cam shafts compatible with this kit.

For your riding pleasure, referring to the list below, select a cam shaft to meet the engine displacement and uses.

R-10 Camshaft	01-08-046	Packed with 88cc bore up
R-10 Automatic decompression camshaft	01-08-0124	Option
R-15 Automatic decompression camshaft	01-08-0125	Option
R-20 Automatic decompression camshaft	01-08-0126	Option

About Camshafts Number

The bigger the numbers of XX / YY are, the wider the durations are. With these camshafts, the output power will produce more to high rpm range. While, the smaller the numbers are, the narrower the durations are. With these camshafts, the output power will produce more to low-to-mid rpm range. We supply the suitable camshaft depending on the displacements.

When choosing the optional camshafts, please choose the camshaft referring to the camshaft data chart to suit your riding purpose.

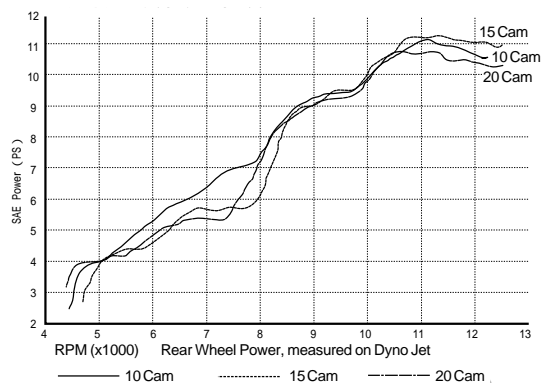
Also, the engine output will vary significantly depending on the using exhaust system, length of inlet pipe, carburetor diameter, compression ratio, ignition system, ignition timing, fuel or natural phenomenon such as ambient temperature or atmospheric pressure.

Lists of camshaft comparison data

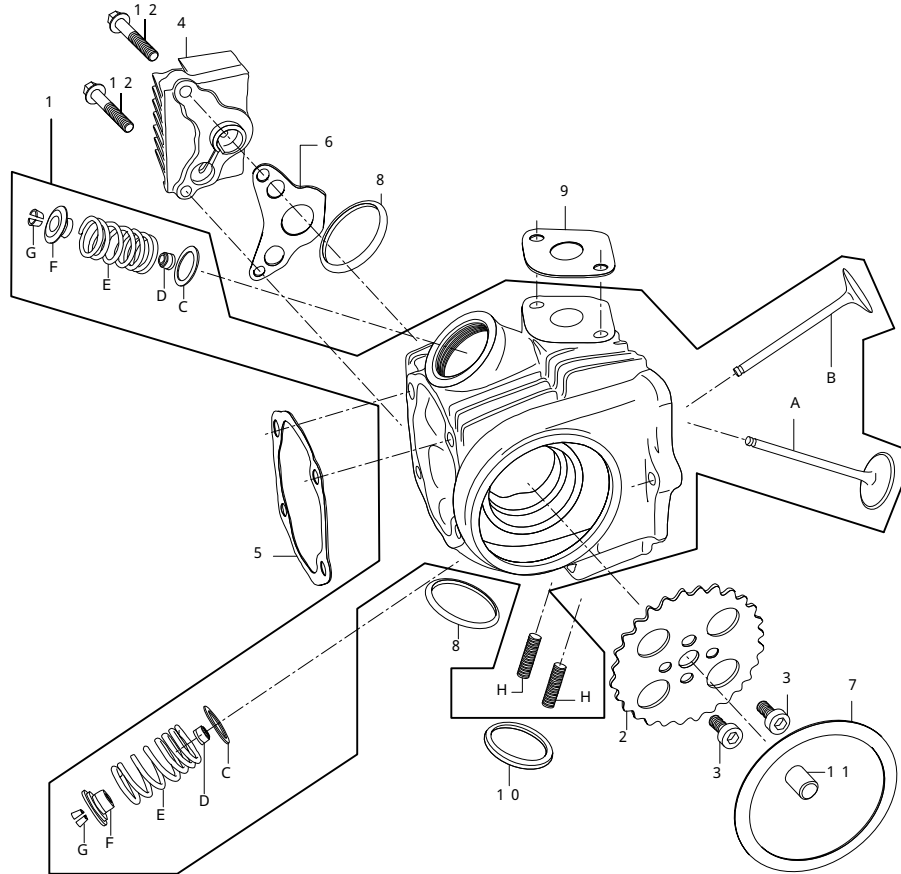
N.B. As these are the data measured on a Dyno Jet, the data differ from the actual driving. Please see them just as a reference. The engine power varies significantly depending on the temperatures.

In case of installing each cam shaft to 88cc R Stage-E Bore-Up Kit:

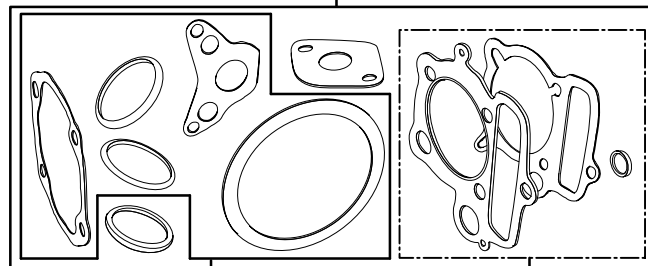
- 88cc R Stage Bore Up Kit
- MIKUNI VM26 Big Bore Carburetor Kit
- Hyper-Street Muffler



~ Kit Contents ~



0 1 1 3 0 6 0 8 (88cc / V cylinder / H cylinder)
 0 1 1 3 0 6 0 5 (88cc / old-type cylinder)



0 1 1 3 7 0 0 2 0 1 1 3 7 0 0 3 V (88cc / V cylinder / H cylinder)
 0 1 1 3 8 0 0 3 (88cc / old-type cylinder)

Note: The Gasket Kit varies depending on the kind of the cylinders. Therefore, carefully select and buy the kit not to make a mistake.

No.	Part Name	Qty	Repair Part Item No.	Qty
1	Cylinder head COMP.	1	06120-RSE-T01	1
2	Cam sprocket	1	00-01-0099	1
3	Cap screw, 5 x 12	2	00-00-0066	4
4	Right-side head side cover	1	00-01-0091 (with two circlips)	1
5	Cylinder head cover gasket	1	12391-165-T01	1
6	Right-side cylinder head side cover gasket	1	12394-181-T01	1
7	Left-side cylinder head side cover gasket	1	12395-165-T01	1
8	O-ring	2	00-01-0034	2
9	Manifold gasket	1	00-03-0009	3
10	Exhaust pipe gasket	1	00-01-0064	2
11	Dowel pin, 8 x 12	1	00-00-0153	2
12	Flange bolt, 6 x 25	2	00-00-0115	5

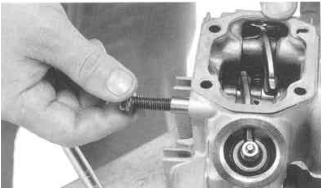
Symbol	Part Name	Qty	Repair Part Item No.	Qty
A	Intake valve	1	14711-GFL-T01-F	1
B	Exhaust valve	1	14721-GFL-T01-F	1
C	Valve spring outer sheet	2	00-01-0002	2
D	Valve stem seal	2	00-01-0015	2
E	Valve spring	2	00-01-0283	2
F	Valve spring retainer	2	00-01-0078	2
G	Valve cotter	4	00-01-0018	4
H	Stud bolt, 6x32	2	00-01-0085	2

Please note that in ordering repair parts, be sure to quote the Repair Part Item No. Otherwise, we may not be able to accept your orders. There are some parts, however, for which we are not in a position to accept your order in just the quantity to be used. In this case, please take them in the quantity packed.

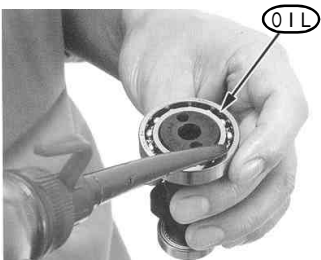
SPECIAL PARTS TAKEGAWA Co.,Ltd.
 3-5-16 Nishikiorihigashi Tondabayashi Osaka Japan TEL:81-721-25-1357 FAX:81-721-24-5059 URL:http://www.takegawa.co.jp

~ Cylinder Head Installation Procedures ~

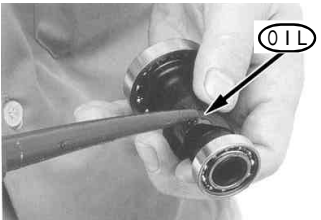
Remove the rocker arm shaft and rocker arm of an original cylinder head, and loosen for now the adjust bolt on the rocker arm.



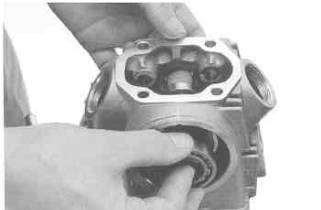
Apply engine oil to bearings at the tip on each side of the special cam shaft.



Apply molybdenum solution to the cam top.



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

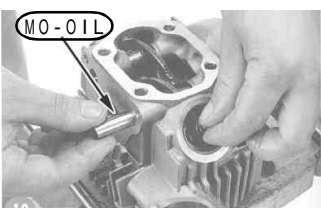


In the case of using an automatic decompression camshaft:

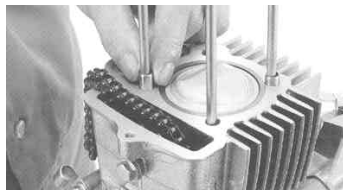
- Referring to the instruction manual for the automatic decompression camshaft, do installation work.

In the case of installing an R-10 camshaft:

- Apply molybdenum solution to the original rocker arm shaft. Install the rocker arm and rocker arm shaft, with the threaded rocker arm shaft facing outward.



Attach an 8x14 dowel pin of the kit into a dowel pin hole on the cylinder.



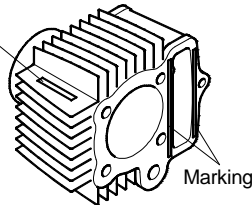
Thoroughly degrease the upper surface of the cylinder. For V, H, S (SCUT) cylinder: use 0.25mm head gasket.



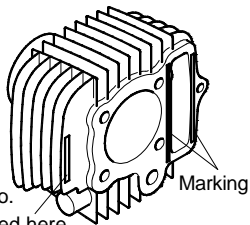
Please use appropriate gasket.

Caution: These cylinders have a marking on the cylinder head surface or its Item No. is stamped on the fin side.

Item No. stamped here

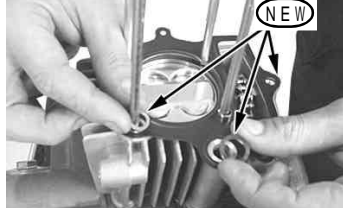


Item No. stamped here



No parts number stamped on your cylinder, (or cylinder uses green O-ring) please use 1.0mm(3 pcs metal) head gasket with green O-ring and black rubber gasket.

The above applies only to the old-type cylinder kits.



Please use appropriate gasket.

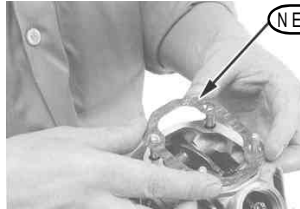
Setting the piston to be at Top Dead Center (TDC), install the cylinder head.



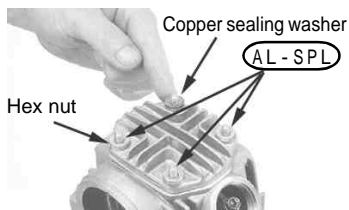
Hold the cam chain not to let it fall into the crankcases.



Set the cylinder head cover gasket on the cylinder head.



Set the mark on the cylinder head cover at EX, lightly apply Aluminum Special, the heat-resistant lubricating agent, to the threaded portion of the stud bolt, and then attach a sealing washer and a nut. (Attach copper washers and steel washers at the lower left, and hex nuts and cap nuts at the lower right, at the prescribed positions, when the engine viewed from the front.)



Screw the nut of the stud bolt diagonally in a few steps to the specified torque.

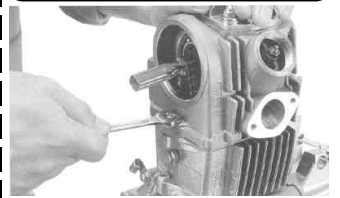
Caution: Be sure to tighten to the specified torque.



Tighten side bolts both of the cylinder and the cylinder head to the specified torque.

Caution: Be sure to follow the specified torque.

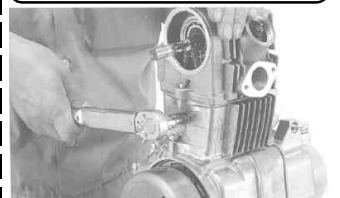
Torque: 12 N·m (1.2 kgf·m)



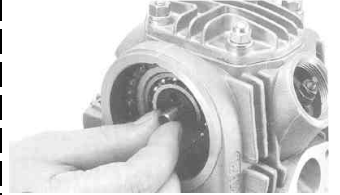
Tighten the bolt on the cam chain guide roller to the specified torque.

Caution: Be sure to follow the specified torque.

Torque: 10 N·m (1.0 kgf·m)



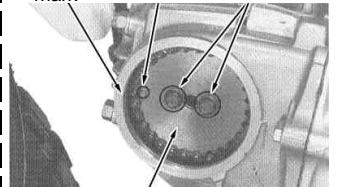
Attach an 8x12 dowel pin of the kit in the center of the cam shaft.



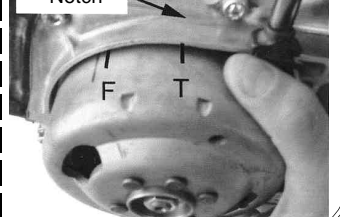
Install the cam chain on the cam sprocket and then the cam sprocket onto the camshaft with two (black) cam sprocket bolts. (At this point, apply Aluminum Special a little to the threaded portion of the bolts.)

Then align an "O" mark on the cam sprocket with the alignment mark on the cylinder head when the "T" mark on the flywheel has been aligned with the alignment mark on the crankcase.

Alignment mark



Notch



Holding the crank shaft, tighten the cap screw, holding the cam sprocket, to the specified torque.

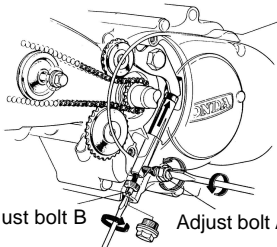
⚠ Caution : Be sure to follow the specified torque.
Torque: 10 N · m (1.0 kgf · m)



Adjustment of cam chain:
 Loosen an 8mm nut and adjust bolt A, and then the cam chain will be adjusted automatically by the spring. But in case the cam chain is not stretched tight, keeping the loosened adjust bolt A as it is, gradually tighten the adjust bolt B so that the cam sprocket and cam chain fit together even when the flywheel is turned.
 Tighten the adjust bolt A, and then 8mm nut.

⚠ Caution : Be sure to follow the specified torque.
Torque: 8 N · m (0.8kgf · m)

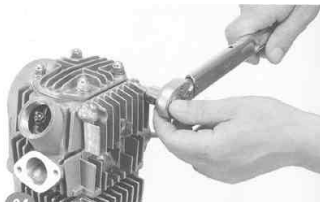
If you have adjusted the cam chain, check the ignition timing.



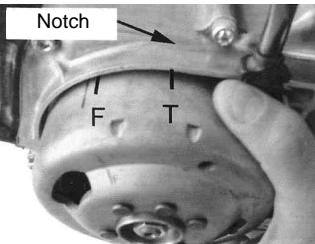
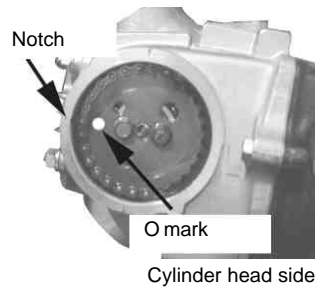
Adjust bolt B Adjust bolt A

Place a new right side cover gaskets on an included right side cover, and attach the side cover to a cylinder head with supplied two flange bolts and tighten them to the specified torque.

⚠ Caution : Be sure to follow the specified torque.
Torque: 10 N · m (1.0 kgf · m)



Give the crank shaft over two turns counterclockwise, and align the "O" mark on the cam sprocket with the "T" mark on the flywheel.



Adjust the valve clearance with adjusting screws.
 IN : 0.08 (when cold) ± 0.03
 EX : 0.08 (when cold) ± 0.03

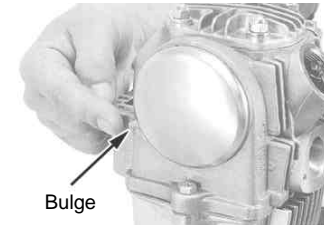


Tighten the adjusting nut to the specified torque.

⚠ Caution : Be sure to tighten to the specified torque.
T : 10 N · m (1.0 kgf · m)



Attach the new gasket of the kit to left-side cylinder head cover, and align the bulge on the cylinder head with the mating point on the cylinder head cover, and attach the cylinder head cover with original sealing washer and flange bolt from the right-side cylinder head cover.



Tighten the attached flange bolts to the specified torque.

⚠ Caution : Be sure to tighten to the specified torque.
T : 8 N · m (0.8 kgf · m)



Attach a new O-ring of the kit to the original tappet cap, apply engine oil to the O-rings slightly, and tighten the O-ring to the specified torque.

⚠ Caution : Be sure to tighten to the specified torque.
T : 8 ~ 10 N · m (0.8 ~ 1.0 kgf · m)



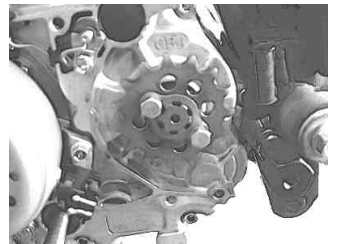
Referring to the service manual, mount an engine onto the frame.

⚠ Caution : Never fail to observe the instructions in the service manual.

Install a carburetor following the relevant carburetor kit instruction manual.

Attach a drive sprocket.

⚠ Caution : Be sure to follow the specified torque.
Torque: 12 N · m (1.2 kgf · m)



Attach a generator cover.

⚠ Caution : Be sure to follow the specified torque.
Torque: 7 ~ 11 N · m (0.7 ~ 1.1 kgf · m)



Inject engine oil to the level specified by the relevant clutch kit.
 Referring to the service manual, attach a drive chain.

Engine Starting

Make sure that the ignition key and gas cock are turned off.
 Keep kicking the starter for a while till the engine oil circulates all around the engine.
 Attach a spark plug. And slightly apply Aluminum Special to threaded portion of the plug, and tighten it.

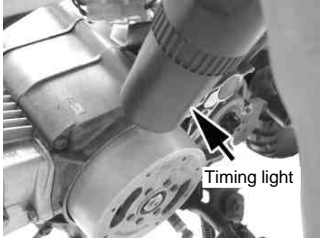
⚠ Caution : Never fail to observe the specified torque.

Attach the plug cap to the spark plug.
 Wipe off the dirt adhering to the engine.
 Turn on the gasoline cock and ignition key to start the engine.

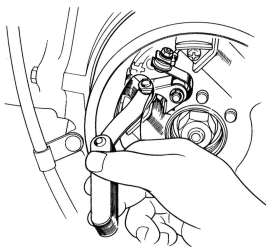
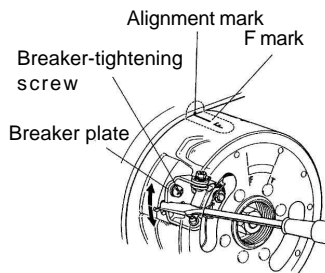
⚠ Warning: Do the work in a well-ventilated place.

Inspection and adjustment of ignition timing:

If the ignition timing is off, the engine likely will malfunction seriously let alone fail to exhibit its original performance. Therefore, it is advisable to check and adjust the ignition timing without fail. If you are technically unskilled at the work, have your motorcycle checked by your motorcycle shop.



Using a timing light (Item No. 00-01-009), at the time of idling check that the "F" mark on the flywheel is aligned with the alignment mark on the crankcase.



Loosen the breaker-tightening screw and move the breaker plate bit by bit to adjust the timing.

After the adjustment, turn the crank shaft and set the position of the point so it has the widest clearance, which please measure with thickness gauge.

Point clearance: 0.3 ~ 0.4 mm

In case the clearance is outside the specified limit, replace the point.

When the adjustment is over, start the engine again.

Make sure that there is nothing unusual like abnormal sounds.

If nothing unusual is detected, carry out a shakedown of about 30 to 50 km, and recheck the valve clearance.

⚠Caution: Do this work when the engine is cool.

Do the running-in again of 100 to 150 km.

After the running-in, see if there is nothing unusual like strange sounds or blow-by gas.

If something wrong is found, disassemble the engine again to check every part of it.

⚠Warning: Never reuse the unusable parts.

INSPECTION / SERVICE LIMITS

⚠ WARNING

Since this cylinder head manual is prepared for those who have acquired basic skills and knowledge in tuning, those who are technically unskilled or inexperienced are required not to do the work.

After the disassembly of the hardware and a cylinder head, clean them before the inspection and measuring. And then, blow them with compressed air, and dry them well. Engine oil for lubricating the camshaft will be supplied through the oil passage in the cylinder head. Clean the oil passage before assembling the cylinder head. After the disassembly of hardware, put a mark on the hardware so they can be reinstalled correctly to their original position.

Reference Value List for Cylinder Head Maintenance

Items	Stock	Service Limit	Remarks
Valve clearance (intake)	0.08 ± 0.03mm (when cold)	—————	
(exhaust)	0.08 ± 0.03mm (when cold)	—————	
Cylinder head distortion	—————	0.05mm	Replace
Inside diameter of valve rocker arm	10.000 ~ 10.015mm	10.05mm	Replace
Outside diameter of rocker arm shaft (intake / exhaust)	9.978 ~ 9.987mm	9.92mm	Replace
Clearance between a rocker arm and a shaft	0.013 ~ 0.037mm	0.10mm	Replace
Inside diameter of valve guide (intake / exhaust)	—————	4.56mm	Replace the guide or the head
Outside diameter of valve stem (intake)	—————	4.47mm	Replace
(exhaust)	—————	4.45mm	Replace
Clearance between a valve stem and a guide (intake)	—————	0.09mm	Replace the guide or the head
(exhaust)	—————	0.12mm	Replace the guide or the head
Valve seat contact width (Intake)	—————	1.5mm	Modify or replace the head
(Exhaust)	—————	1.7mm	Modify or replace the head
Free length of valve spring (outer)	—————	30.5mm	Replace

Special tool : Valve spring compressor set of Item No. 00-01-1005

Torque unit

1 kgf · m = 9.80665 N · m (=newton meter)

(MO-OIL)

This mark shows molybdenum solution.

This solution is a mixture of molybdenum grease and engine oil (in the ratio of 1:1).

Apply molybdenum solution or assembly paste to the portions where it is indicated that molybdenum solution needs to be applied.

(NEW)

This mark shows those parts to be replaced with every overhaul.

Do not fail to replace these parts every time they are overhauled.

(AL-SPL)

This mark means Alumi Special (heat-resistant lubricating agent).

• Alumi Special = heat-resistant lubricating paste and grease which prevent galling from high temperatures and heavy loading, and adhesion.

(Purpose: good for those parts which get hot like a spark plug and exhaust manifold.)

Never apply this to any parts other than the specified parts.

INSPECTION / SERVICE LIMITS

Splitting of Valve

- Compress the valve spring, using a valve spring compressor.

⚠ CAUTION: Never compress it more than necessary.

Special tool: Valve spring compressor set of item No. 00-01-1005



• Removal of Valve Cotter

Use a magnet to remove the cotter if it does not come off easily.

- Remove first the valve spring compressor, and then the following parts:
 - Valve spring retainer
 - Valve spring
 - Valve

Check each valve for bending, baking, and damages.

- Measure the exterior diameter of the valve stem at the sliding surface of the guide with a micrometer.

Service Limit IN : 4.47 mm

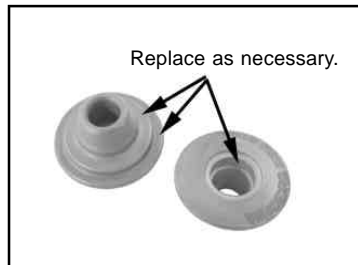
EX: 4.45 mm

Replace the bent, baked or damaged valves with new ones.



Inspection of Valve Spring Retainer

- Inspect the contact surface of valve spring and retainer or keepers.
- If they are in good condition, they may be reused.

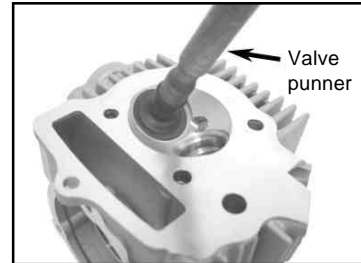


Inspection of Valve Seat

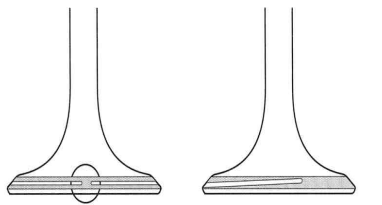
- Remove carbon sediment in the cylinder head combustion chamber and valve.
- Dissolve red lead primer with oil or the like, and apply it to the valve face evenly.



- Strike the valve once and lightly with a valve punner, and rotate it.
- Wipe off the red lead primer on the valve faces, and strike the valves once and lightly with the valve punner without rotating them, and check the contact surfaces for damages or scratches.

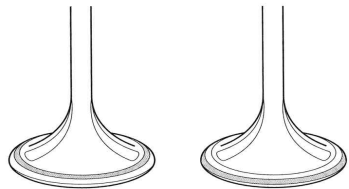


INSPECTION / SERVICE LIMITS



Scratch on the seat

Uneven seat width



Contacting at a low position

Contacting at a high position



Service Limit:

Need to be fixed when the service limit at IN is more than 1.5 mm and when the service limit at EX is more than 1.7 mm.

- If there is a scratch on the valve seat, modify the seat.
- If the contact width is wide, narrow, in a high or low position, modify the seat.
- Ask machine shop for modification.

Inspection of Rocker Arm:

- Check the rocker arms for scratches, damages and jamming.
- Measure the internal diameter of the rocker arms.



Service limit : If the inner diameter is bigger than 10.05 mm, replace the rocker arm.

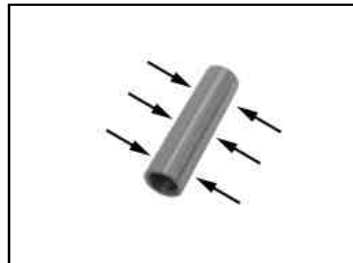
Inspection of Rocker Arm Shaft

- Check the rocker arm shaft for bending, scratches, and damages.
- Measure the external diameter of the rocker arm shaft.

Service limit : If the diameter is less than 9.92, replace them.

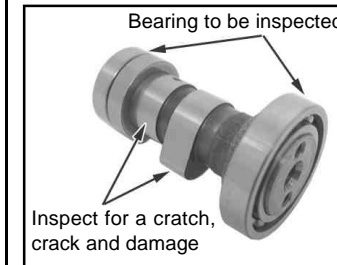
- Measure the clearance between the rocker arms and the rocker arm shafts.

Service limit : If the clearance is more than 0.10, replace them.



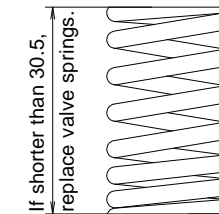
Inspection of Camshaft

- Check the cam shaft for scratches, cracks, and damages.
- Inspect each cam top.
- Check the bearings in the cam shaft.
Rotate the outer race of the bearings. If the outer race does not rotate smoothly or if it is rickety, replace the cam shaft.



Inspection of Valve Spring

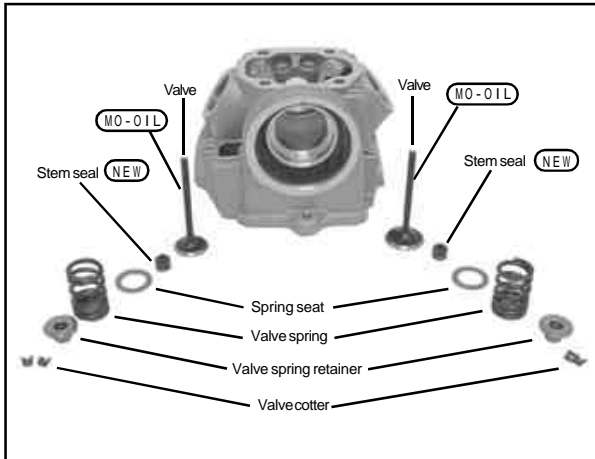
- Check the valve springs for scratches and damages.
- Measure the free length of the valve springs.
Outer : If shorter than 30.5, replace them.



INSPECTION / SERVICE LIMITS

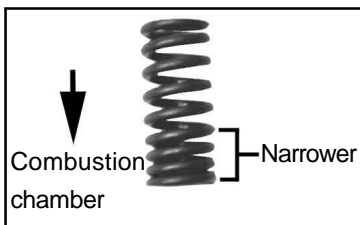
Valve Assembly:

- Clean up the cylinder head.
- Fix valve spring seats and new valve stem seals.
- Apply molybdenum solution to the sliding surfaces of the valve stems, and fit the valves into the valve guides, rotating valves slowly with care not to damage the stem seals.



- To the head, attach the valve spring, with a narrowly-pitch side pointing to the combustion chamber.

⚠ CAUTION: Be sure to place the narrower-pitched portion of the valve spring to face the combustion chamber side.



- Compress the valve spring with a valve spring compressor. And apply a thin coat of grease to valve cotters, and install them.

⚠ CAUTION: Do not compress the valve spring more than necessary.



- Strike lightly the end of valve stems a few times so the valves and cotters fit together well.

⚠ CAUTION: Be careful not to damage the valves.



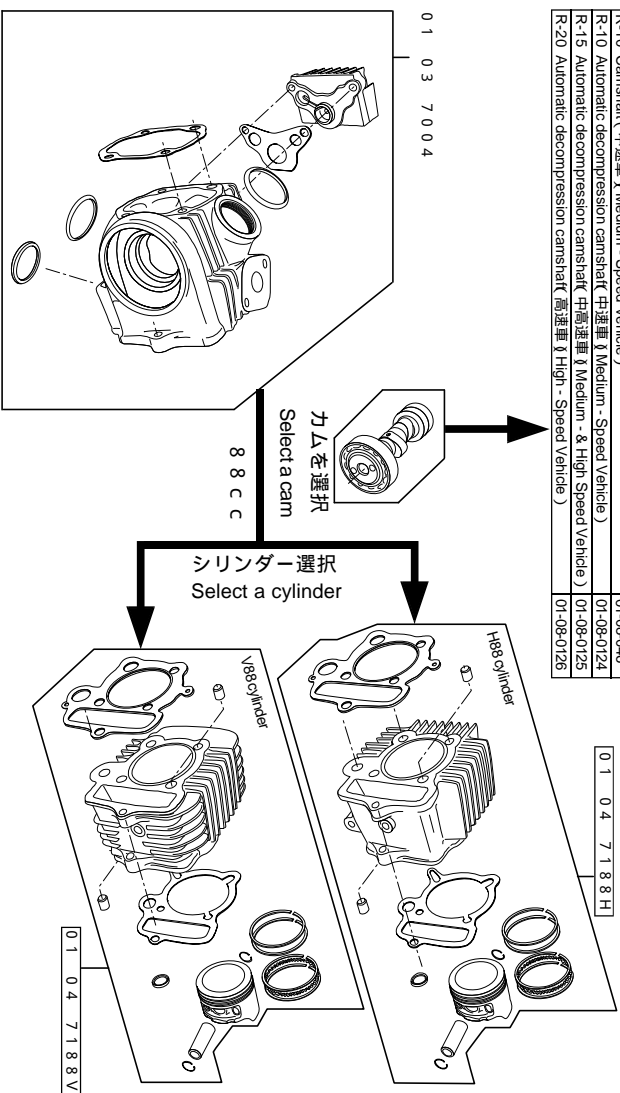
R-Stage-Entry model

ボアアップ参照表 (8 8 c c) Reference data on bore-up kit (88cc)

適応 (Applicable model names and the frame No.s)

Monkey・Gorilla : Z50J-1000001 ~ 1510400
 6V Dax : ST50-1000001 ~ 6346265
 CD50 : CD50-1300001 ~ 1330600
 Cub50 : C50-N000002 ~ V488897
 : C50-Z000002M ~
 Z069126M
 : C50-5000005 ~ 5121324
 : C50-5200011 ~
 : C50-3000001 ~ 3431226
 : C50-4000001 ~ 4223783

R-10 Camshaft (中速車 / Medium - Speed Vehicle)	01-08-046
R-10 Automatic decompression camshaft (中速車 / Medium - Speed Vehicle)	01-08-0124
R-15 Automatic decompression camshaft (中高速車 / Medium - & High Speed Vehicle)	01-08-0125
R-20 Automatic decompression camshaft (高速車 / High - Speed Vehicle)	01-08-0126



01 03 7004 シリンダーヘッドキットのみで購入された場合、この参照表にて専用パーツを検討して下さい。
 If you have purchased a cylinder head kit only (Item No. 01-03-7004), please study to install these special parts referring to this reference data.