



KEIHIN PC20 Carburetor Kit Instruction Manual

Item Nos : 0 3 - 0 5 - 0 1 8 (Carburetor kit)
 0 3 - 0 2 - 0 5 1 (Manifold kit)
 Fits : Monkey · Gorilla Frame No. : Z50J-1300017 ~

Read all instructions first before starting the installation.

Thank you for purchasing TAKEGAWA's "PC20 Carburetor Kit for Monkey & Gorilla." Before starting the installation, please read this Instruction Manual well for your thorough understanding.

Before installing these products, please be sure to check the contents. Should you have any questions about them, please contact your local motorcycle dealer.

This product is only for Monkey & Gorilla equipped with a Regular head and R-Stage 88cc Bore Up. Please note that this product cannot be used with a stock engine or any other type of motorcycles.

The throttle valve on the motorcycles with frame Nos from 1300017 to 1510400 will not open fully when a stock throttle housing is used. Therefore, it is necessary to either replace the throttle with a high throttle sold separately or process the throttle pipe. (Refer to a fig. on Page 3.)

When a stock throttle housing is used, change from the throttle to the supplied high throttle cables.

In order to install a high-throttle, you need to remove the stock throttle housing. Therefore, you cannot use the front brake lever, turn signals, or a horn switch installed in the motorcycles with a frame No. from Z50J-1300017 to 1510400.

On those vehicles with frame Nos Z50J-1600008 or beyond, you can not use the front brake lever. So you need to prepare a front brake lever and its holder. (A power lever of 06-08-300 is installable).

Please take note that you cannot run your motorcycle in the rain.

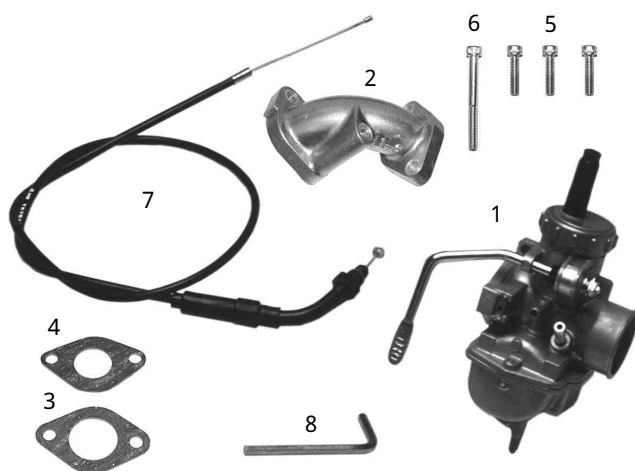
Please note that, in some cases, the illustrations and photos may vary from the actual hardware.

Features

We have designed an easy-to-install carburetor for Monkey and Gorilla for street use, coming with a high throttle cable so a stock throttle housing can be used. You can easily install this Kit bolt on onto motorcycles but excluding some models, and use a separately-sold machined funnel, a curling funnel, and an air filter.

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

- Work only when the engine and muffler are cool at below 35 degrees Celsius. Otherwise, you will get burned.
- Always use a torque wrench to screw bolts and nuts tight and securely to the specified torque.
- 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 the high risk of explosion, work in a well-ventilated place.
- Always use a hose clip and connect the hose firmly to the carburetor.
- Never look into the carburetor's intake pipe carelessly while the engine is running. Flames could spurt by the spitting-back of gasoline or backfire.
- The carburetors are shipped out in a factory preset mode. However, depending on the natural phenomena like the weather, temperatures and barometric pressure, and combination of parts used, the carburetors need re-setting. Rearrange the setting to match each engine.
- Before driving, always check parts for slack and gasoline leakage. And when something unusual happens to your motorcycle while riding, immediately stop riding and park it in a safe place to check what has gone wrong with it.



Main jet	#95
Slow jet	#35
Jet needle	63001
Clip position	4th groove from top
Throttle valve	#20G
Air screw opening	1-1/2 turns

No.	Part Name	Qty
1	Carburetor assembly	1
2	Inlet pipe	1
3	Inlet pipe gasket	1
4	Carburetor gasket	1
5	Socket cap screw, 6 X 25	3
6	Socket cap screw, 6 X 60	1
7	Throttle cable COMP.	1
8	Hex wrench, 5 mm	1

Items marked with an asterisk show a part included in the manifold kit.

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.

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.

This manual should be retained for future reference.

~ Installation Procedures ~

Please check the contents of this kit.

(Preparation)

△ CAUTION: Make sure that the engine and the muffler are cold enough!!
Stabilize the vehicle!!

- 1 . Remove the side cover, demount the seat, drain the gasoline in the fuel tank, close the fuel cock, and pull out the fuel hose on the carburetor side. And then demount the fuel tank.

△ Warning: Handle the gasoline with the greatest caution!!



- 2 . After making sure that the fuel cock is closed, open a drain cock on the carburetor, and drain the gasoline from the float chamber to a tray or something.

△ Warning: Handle the gasoline with the greatest caution!!



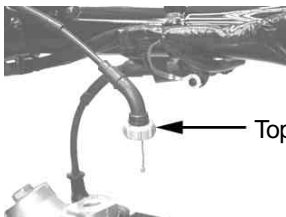
Drain cock

- 3 . Unfasten an inlet-pipe clamping bolt and air-cleaner mounting bolt to demount an air cleaner box, and the carburetor with an inlet pipe attached to it.

Be careful not to let any foreign material fall into the intake port.



- 4 . Remove the throttle valve from the carburetor. Separate the throttle valve from the throttle cable. And remove the top cover from the throttle cable.



Top cover

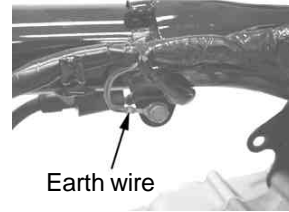
- 5 . Unfasten the pan screws on the throttle housing and disconnect the throttle cable. Wipe off soiled or worn-out grease.

Be careful not to lose the throttle housing or pan screws for reuse.



Pan screws

- 6 . Fix the earth wire to the frame with an air-cleaner mounting bolt.



Earth wire

- 7 . Keep those removed parts in a bag or the like.

(Installation)

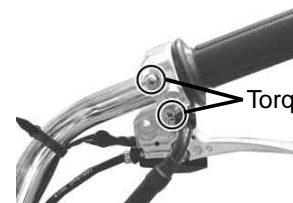
△ CAUTION: Be sure to tighten to the specified torque with a torque wrench.

- 1 . Fix the supplied throttle cable to the under throttle housing loosely for now and the inner cable to the throttle pipe.



- 2 . After applying grease to the sliding surface of the throttle, install the throttle housing. Then tighten the pan screws.

Torque=8 N · m(0.8 kgf · m)



Torque=8 N · m

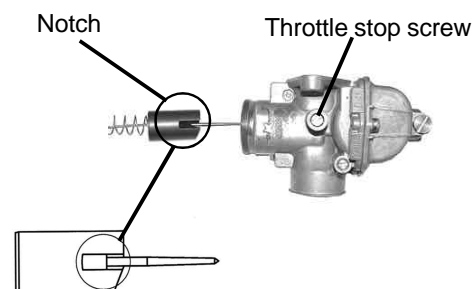
(0.8 kgf · m)

- 3 . Detach the top cover of the PC 20 carburetor, and remove the throttle valve spring and the throttle valve.

- 4 . Run the throttle cable to the carburetor in the same way as a stock cable is run. Fix the carburetor top to the throttle cable, and install the inner cable to the throttle valve with the throttle valve spring compressed.



- 5 . Align the notch on the throttle valve in the direction of the throttle stop screw, and then install it to the carburetor.



Notch

Throttle stop screw

- 6 . Place the carburetor gaskets between carburetor and inlet pipe, and fasten them together with a 6x25 socket cap screw, and tighten to the specified torque.

Torque=10 N · m (1.0 kgf · m)

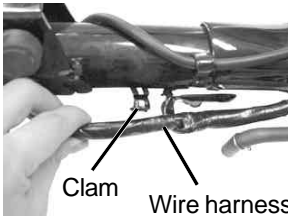


Torque=10 N·m(1.0 kgf·m)

- 7 . Remove the clamp on the wire harness. Fix the wire harness, sliding it until it does not interfere with the carburetor. Install the gaskets and inlet pipe to the cylinder head in this order, and fix them by fastening the 6x25 and 6x60 socket cap screws to the specified torque.

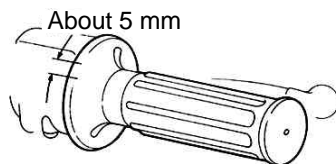
Torque=10 N · m(1.0 kgf · m)

Torque=10 N·m(1.0 kgf·m)



- 8 Adjust the free play at the throttle grip to be about 5 mm by turning the adjuster of the throttle cable. See the figure below. Snap the throttle several times to make sure that the throttle moves smoothly without sticking and also to check that the valve is fully open.

Also check that the throttle has free play even when the steering handle is turned all the way to the right or to the left.



- 9 . Fix the fuel tank and the seat.

- 10 . Make adjustments of the direction of the fuel cock and the length of the fuel tube, then insert the fuel tube into the fuel cock and the carburetor, and attach the tube clip onto the fuel tube. Open the fuel cock and check every parts for oil leak. (Do not leave the cock open for a long time.)

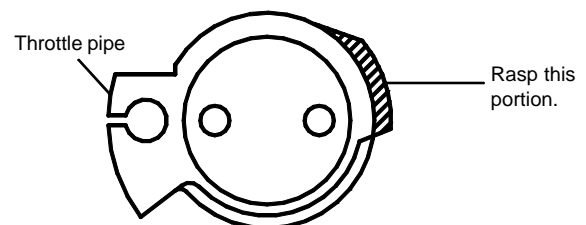


- 11 . Pull the choke lever to start the engine, and check each section for intake leak. Gradually pushing the lever back, warm up the engine till the revolution becomes smooth. And then push the lever back into the original location. If the motorcycle does not run idle, or it runs idle at high revolution after warming-up, adjust the revolution with the throttle stop screw.

- 12 . Do settings in a safe place according to the specification of your vehicle with enough care.

Processing of the throttle pipe

In case a stock throttle housing is used in the motorcycles with a frame number between Z50J-1300017 and -1510400, rasp the shaded portion of the throttle valve as indicated in the figure below. However, there is no need to process as above the motorcycles with a frame number of Z50J-1600008 onwards.



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How to Set the Carburetor

- When the carburetor does not match the engine and the engine fails, the engine failures are caused by either too dense or too lean air-fuel mixture.
- The engine failure symptoms for the engine are as follows:

When the air-fuel mixture is too dense:	When the air-fuel mixture is too lean:
<ul style="list-style-type: none"> • The explosion sound with a dull thud continues intermittently. • The engine malfunctions further if you use the choke. • The engine malfunctions when you warm it up. • The engine works well if the cleaner is detached. • The motorcycle belches dense (or, black) exhaust gas. • The plug smolders, getting blackened. 	<ul style="list-style-type: none"> • The engine overheats somewhat. • The engine starts working well if you use the choke. • The engine does not accelerate well. (No smooth acceleration) • Revolutions change, generating weak power. • The plug burns white.

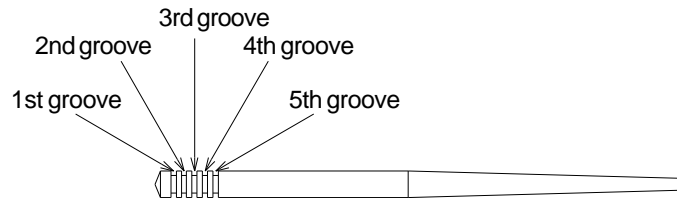
Set the carburetor only after warming up the engine, and then test-drive. And use a plug with the right heat value. Do the setting in the following manner, studying at what throttle opening position the engine starts failing.

Jet needle (Throttle position at 1/4 - 3/4)

Whether or not the engine revolution is in proportion to the throttle operation

- When the acceleration is not smooth or even, make the air-fuel mixture dense.
- Make the air-fuel mixture lean when the engine revolution goes up heavily and belches black gas.

The mixture ratio at this throttle position can be adjusted by the location of E-ring in the grooves. The air-fuel mixture becomes dense as the location of the E-ring moves down from the 1st to the 5th groove.



Main jet (The throttle position at 3/4 - 4/4)

The air-fuel mixture ratio at this throttle position can be adjusted by changing the number of the main jet. The larger the main jet numbers, the denser the mixture ratio becomes.

In view of the engine and muffler specifications, select the most appropriate main jet to get the highest revolutions.

Pilot jet (First of all, please adjust the air screw.)

- In case you have given more than three turns to the air screw to tighten it, use a pilot jet with a small number.
 - If you have tighten the air screw (clockwise) to the full, use a pilot jet with a larger number.
- Check whether you have made a right choice of the pilot jet by seeing if the engine starts up revolving smoothly from the idling to running at slow speed.
- When the engine revolves up unevenly, the pilot jet number is too small. (At idle)
 - When the motorcycle belches black exhaust gas and produces heavy exhaust sound, the pilot jet number is too big. (At idle)
 - After replacing the pilot jet, you need to readjust the airscrew.

Air screw

The air screw adjusts the air mass flow at the time of engine's revolving at slow speed. (At idling)

- Give the air screw a right turn The air-fuel mixture gets dense.
- Give the air screw a left turn The air-fuel mixture gets lean.

Loosen the tightened air screw back to the 1.5-turn position. And then from this position, give to the airscrew a right or left turn of 1/4 to 1/2 till the engine revolves at the highest speed.

Loosen the idle stop screw till you get the steady idling revolutions. And once again adjust the position of the airscrew to get the highest revolutions.

On how the barometric pressure, temperatures and humidity affect the setting:

- At highlands or at high altitudes, the barometric pressure and air density go down and the air gets into the carburetor in less amounts. This makes the air-fuel mixture dense which was adjusted at low altitudes.
- Under the weather conditions with very low temperatures, the air density increases, which makes the air-fuel mixture lean.
- Under the rainy and humid weather conditions, the air density decreases, which makes the air-fuel mixture dense.

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