



Instruction Manual for KEIHIN PE28 Big Carburetor Kit

Item No. :	: 0 3 - 0 5 - 0 9 8 (Carburetor kit)
	: 0 3 - 0 2 - 2 5 5 (Manifold kit)
Compatible with :	Monkey, Gorilla, and Monkey Baja
Frame Nos :	Z50J-1300017 ~

- Thank you for purchasing one of our TAKEGAWA's products. Please strictly follow the following instructions in installing and using the kit.
- Before installing the kit, please be sure to check the contents. Should you have any questions about the kit, please contact your local motorcycle dealer.

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

Please read the following before starting the installation

We shall be held free from any responsibility or compensation whatsoever for any glitch in the parts other than ours if the glitch takes place after the installation and use of the kit.

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 any product of the kit, we shall be held free from any guarantee of any of them.

You are kindly requested not to contact us about the combination of our products with other manufacturers'.

This carburetor kit is for exclusive use in a motorcycle equipped with either our bore-up or bore- & stroke-up kit. And this kit is not compatible with a motorcycle with a stock engine.

CAUTION

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

- Always use a torque wrench to screw bolts and taps tight and securely to the specified torque.
(Otherwise, these parts may get damaged or fall off, resulting in accidents.)
- Work only when the engine and muffler are cold at below 35 degrees Celsius. Otherwise, you will burn yourself.
- Do the installation with right tools. (Otherwise, breakage of parts or injuries to yourself may take place.)
- As some products and frames have sharp edges or protruding portions, please work with your hands protected. (Otherwise, you will suffer injuries.)
- 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.
(Otherwise, improper tightening may cause parts to come off.)
- Never look into the carburetor's intake pipe carelessly when the engine is running. Flames could spurt by the spitting-back of gasoline or backfire, which involves danger.

WARNING

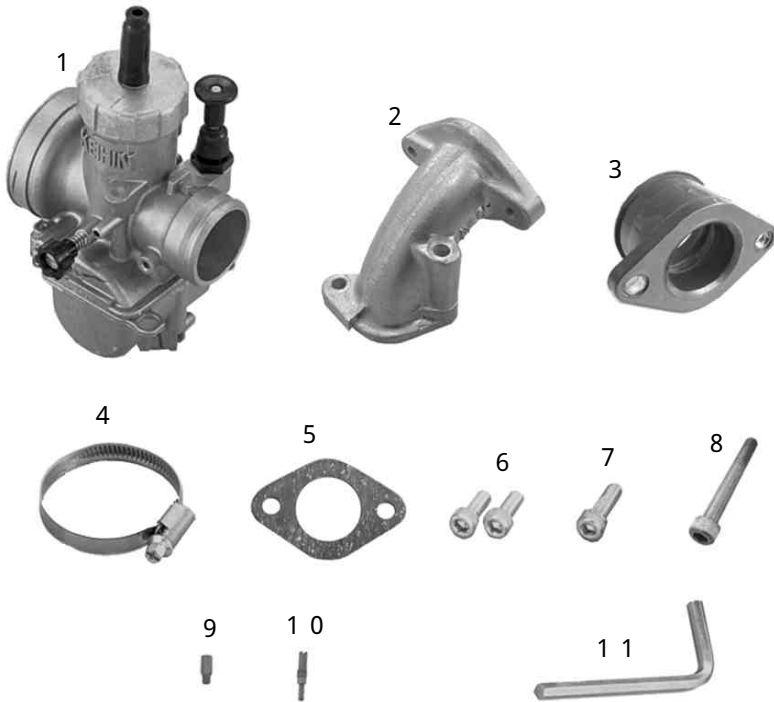
The following show the envisioned possibility of human death or serious injuries to human bodies as a result of disregarding the following cautions.

- 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 riding, be sure to check every section for slack in parts like screws, and oil leak. When you notice something abnormal with your motorcycle while riding, immediately stop riding and park your motorcycle in a safe place to check what has gone wrong.
(Otherwise, the abnormality could lead to an accident.)
- Always start the engine in a well-ventilated place, and do not turn the engine on in an airtight place.
(Otherwise, you will suffer from carbon monoxide poisoning.)
- Before doing work, make sure your bike is secure on level ground for safety's sake.
(Otherwise, your motorcycle could overturn and injure you while you are working.)
- 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.

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.

~ Kit Contents ~



No.	Part Name	Qty
1	Carburetor assembly	1
2	Inlet pipe	1
3	Insulator	1
4	Clamp band	1
5	Inlet pipe gasket	1
6	Socket cap screw, M6x15	2
7	Socket cap screw, M6x20	1
8	Socket cap screw, M6x50	1
9	Main jet, #110	1
10	Slow jet, #35	1
11	Hex wrench, 5 mm	1

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

Factory preset mode of the carburetor

Main jet	#128
Slow jet	#52
Jet needle	F1343H24NAAC
Clip position	2nd groove from top
Throttle bulb	# 6.0
Air screw opening	1 ± 1/4 turns

[Setting parts]

Main jet

#82,#85,#88,#90,#92,#95,#98,

#100,#102,#105,#108,#110,#112,#115,#118,#120,#122,#125,#128,#130,#132,#135,#138,#140,#142,#145,#148,#150,#152,#155,#158,#160,

#162,#165,#168,#170,#172,#175,#178,#180,#182,#185,#188,#192,#195,#198,#200

Slow jet

#35,#38,#40,#42,#45,#50,#52,#55,#58,#60,#62,#65,#68,#70

The carburetor needs re-setting depending on weather, temperature, natural phenomena, and individual differences of vehicles and carburetors. Adjust the carburetor setting to meet the engine and other conditions. For your information, the carburetor will be shipped out in a state as mentioned above on this page.

An air filter, etc. are not included in this carburetor kit, or a standard air cleaner cannot be installed, either. Therefore, the engine will go wrong if water gets into the engine. So, please refrain from driving in the rain. Besides, before washing your vehicle, cover the carburetor with a plastic sheet or the like to prevent water from getting into the carburetor.

A high throttle set is needed in using this carburetor kit.

You can install a 49mm round taper air filter (03-01-103), and a 49mm air funnel (03-01-080) of our own make.

~ Installation Procedures ~

Check the kit contents.

(Installation Preparation)

⚠ Caution : Make sure that the engine and muffler are cold and that the motorcycle is secure.

- 1 . Keeping the motorcycle secure on level ground, close the fuel cock, open the drain cock on the carburetor, and drain the gasoline from the float chamber to a tray.
- 2 . Detach a fuel tube and a top cover.
- 3 . Separate the throttle valve and throttle cable, and detach the top cover.
- 4 . Remove the installed carburetor with the inlet pipe attached. Be careful not to let any foreign matter fall into the intake port.

(Installation)

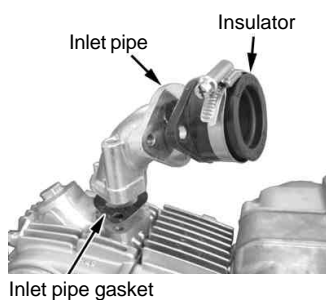
⚠ Caution: Tighten screws to the specified torque with a wrench!

- 1 . Place an inlet pipe gasket between the cylinder head and the inlet pipe, and tighten the inlet pipe with socket cap screws of 6x20 and 6x50.

Specified torque
: 10N·m (1.0kgf·m)

- 2 . And fix the insulator to the inlet pipe with two socket cap screws.

Specified torque
: 10N·m (1.0kgf·m)



- 3 . Remove the float chamber, and detach a main jet. Attach the main jet #110 and slow jet #35 of the kit, and then attach the float chamber.

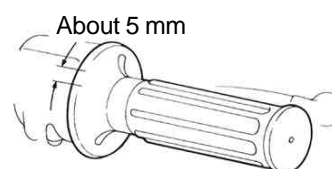
- 4 . Remove the top cover of the carburetor of the kit, and pull out the spring and throttle valve. Pass the inner cable of the throttle cable through the carburetor top cover and then through the spring. And compressing the spring, fix the top cover to the throttle valve. Fix the throttle valve to the carburetor by aligning a notch on the throttle valve with the throttle stop screw.



- 5 . Fit the carburetor into the insulator, and fasten the carburetor with a clamp band.



- 6 . With an adjuster, adjust the free play at the throttle grip to be approximately 5 mm.



Snap the throttle a few times to make sure that the throttle moves smoothly without sticking and that the throttle valve is fully open. Also check that the throttle has free play even when a steering handle is turned all the way to the right or to the left.

- 7 . Insert a fuel tube and fasten it with a tube clip. Open the fuel cock and check for oil leaks. (Do not leave the cock open for a prolonged period of time.)
- 8 . Pull the choke lever to start the engine. Gradually push the lever back and warm up the engine till the revolution becomes smooth, and finally push the lever back to its original location. In case, after the warm-up of the engine, your motorcycle does not run idle or the idling engine speed is high, adjust the setting with the throttle stop screw.
- 9 . Please do the setting to match the specifications of each vehicle in a safe place with the utmost caution.

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>

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.

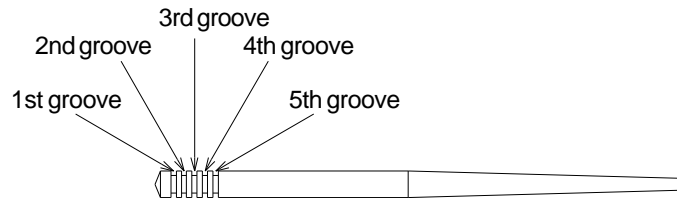
Set the carburetor only after warming up the engine, and then test-drive. And use a plug with the right heat value. Do the setting in the following manner, studying at what throttle opening position the engine starts failing.

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.

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.