



# Instruction Manual for KEIHIN PD22 Carburetor Kit

(R Stage+D, Regular Head)

Item No. : 0 3 0 5 1 1 1 2

Applicable Models    Frame Nos

Monkey                    : Z50J-1300017 ~

Gorilla                    : Z50J-1300027 ~

Monkey BAJA            : Z50J-1700001 ~

- Thank you for purchasing one of our TAKEGAWA's 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 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 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.

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.

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

A stock air cleaner cannot be equipped together with this kit. The engine will go wrong if it gets wet. So, please refrain from running 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.

This kit's carburetor is factory pre-set as per page 2. Setting should be adjusted according to the parts to be used. Re-set the carburetor to meet your engine.

Be sure to do the work correctly referring to the HONDA genuine parts service manual for the above-mentioned applicable model.



### 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. (Improper torque could cause these parts to get damaged or fall off.)
- Work only when the engine and muffler are cool at below 35 degrees Celsius. (Otherwise, you will burn yourself.)
- Prepare right tools for the work. (Otherwise, the installation with improper tools could cause breakage of parts or injuries to yourself.)



### Warning

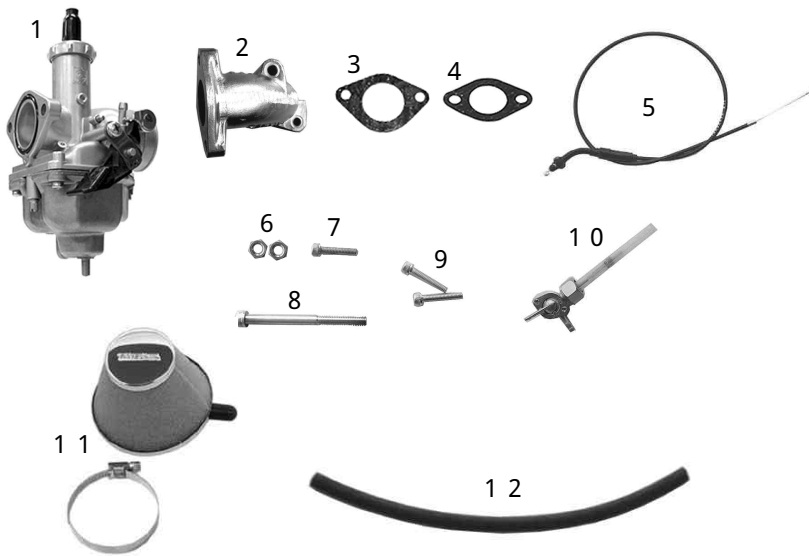
The following show the envisioned possibility of human death or serious injuries to human bodies as a result of disregarding the following cautions.

- Those who are technically unskilled or inexperienced are required not to do the work. (Parts breakage and others may cause falling and 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. (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.

Please retain this Instruction Manual for future reference.

~ Kit Contents ~



Factory preset mode of the carburetor

Main jet	# 95
Slow jet	# 35
Jet needle	E2051G
Clip position	4th from top
Throttle valve	74B
Air screw opening	1 turn - 1/4

No.	Part Name	Qty	Repair Part Item No.	Qty
1	Carburetor assembly	1	03-03-028	1
2	Inlet pipe	1	17113-GEF-T01	1
3	Carburetor gasket	1	16210-GEF-T01	1
4	Inlet pipe gasket	1	00-03-0009	3
5	Throttle cable COMP. 810	1	09-02-0081	1
6	Locking nut, 6 mm	2	00-00-0121	10
7	Socket cap screw, M6 x 20	1	00-00-0043	10
8	Socket cap screw, M6 x 70	1	00-00-0081	2
9	Socket cap screw, M6 x 25	2	00-00-0089	5
10	Fuel cock	1	03-03-001	1
11	Air filter	1	03-01-1064	1
12	Fuel hose, 200 mm	1	00-03-0203	1
	Main jet # 105	1	00-03-0021	1
	Slow jet # 42	1	00-03-0140	1
	Hex wrench, 5 mm	1		

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.

PD22 Slow Jet

00-03-0137	#35
00-03-0138	#38
00-03-0139	#40
00-03-0140	#42
00-03-0141	#45
00-03-0142	#48
00-03-0143	#50
00-03-0144	#52
00-03-0145	#55
00-03-0146	#58
00-03-0147	#60
00-03-0148	#62
00-03-0149	#65
00-03-0150	#70

PD22 Main Jet

00-03-0032	#80
00-03-0033	#85
00-03-0034	#95
00-03-0020	#100
00-03-0021	#105
00-03-0022	#110
00-03-0023	#115
00-03-0024	#120
00-03-0025	#125
00-03-0026	#130

## ~ Installation Procedures ~

Check the kit contents.

### (Installation Preparation)

⚠ **Caution:** Make sure that the engine and muffler are cool and that the motorcycle is secure!!

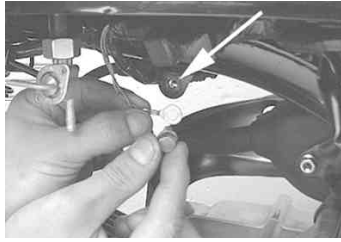
- 1 . In the case of the Gorilla and Monkey BAJA, remove a seat, drain gasoline in the fuel tank, shut the fuel cock, pull out the fuel hose on the carburetor side, and then remove the fuel tank.
- 2 . Confirming that the fuel cock is shut off, open a drain cock on the carburetor to drain gasoline from the float chamber onto an oil container.
- 3 . Unfasten the inlet-pipe-tightening bolt and air-cleaner-mounting bolts. Remove a throttle valve from the carburetor. Then remove the carburetor with the air cleaner box and the inlet pipe and all. Be careful not to let any foreign substance into the intake port.



- 4 . Remove the throttle valve from the carburetor, and separate the throttle valve from the throttle cable. Then pull out the top cover from the throttle cable.
- 5 . Unfasten the pan screws on the throttle housing and disconnect the throttle cable. Wipe off dirt, dust and old grease. Be careful not to lose the throttle housing and pan screws, which will be reused.



- 6 . Hold the earth cable to the frame with an air-cleaner-mounting bolt.



- 7 . Keep the removed parts in a bag or something else.

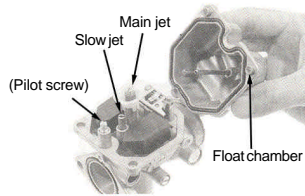
### (Installation)

⚠ **Caution:** Be sure to tighten to the specified torque with a torque wrench!!

- 1 . Temporarily attach the throttle cable to the under throttle housing, and connect the inner cable with the throttle pipe.
- 2 . Apply grease to the sliding surface on the throttle, and install the throttle housing. Tighten the pan screws.

**Specified torque:**  
**8 N·m (0.8 kgf·m)**

- 3 . Detach a float chamber in the PD22 carburetor, and replace the main and slow jets with those in the kit.



- 4 . Reinstall the float chamber where it was originally.

- 5 . Detach the top cover from the PD22 type carburetor, and then the throttle valve spring, and the throttle valve.

- 6 . Place a carburetor gasket between the carburetor and the inlet pipe, and fix it by tightening two socket cap screws (6x25) and two locking nuts to the specified torque.

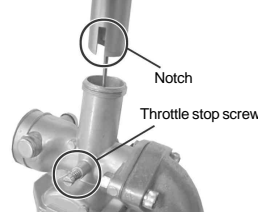
**Specified torque:**  
**10 N·m (1.0 kgf·m)**



- 7 . Route the kit's throttle cable to the carburetor without tightening it up. Fix the carburetor top to the throttle cable, and then the inner cable to the throttle valve with the throttle valve spring compressed.



- 8 . Aligning a notch on the throttle valve with a throttle stop screw, install it to the carburetor.



- 9 . Place an inlet pipe gasket between the cylinder head and the inlet pipe, and fix it by tightening two socket cap screws (M6x20) to the specified torque.

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



Due to individual size differences of the frame and other parts, the carburetor and the frame may interfere with each other. If so, rasp the interfering part.



- 10 . Adjust the free play at the throttle grip to be about 5 mm by turning the adjuster of the throttle cable. Snap the throttle a few times to see that the throttle moves smoothly without sticking and that the throttle valve is fully open.

Check that there is a free play in the throttle even when you turn the steering handle all the way to the right and left.



- 11 . If you have removed the fuel tank, replace the stock fuel cock with the one from the kit (**the specified torque: 5 ~ 6 N·m (0.5 ~ 0.6 kgf·m)**), and attach the fuel tank and the seat.



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



- 13 . Attach the air filter, which please fasten with a band.

- 14 . Dispose of the blow-by gas from the crank case by yourself. (In some cases, racing and regulations stipulate the disposal of the blow-by gas.)

- 15 . 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 engine does not run idle, or it runs idle at high revolution after warming-up, adjust the revolution with the throttle stop screw.

- 16 . Work in a safe place with care, and arrange the setting to match each vehicle.

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

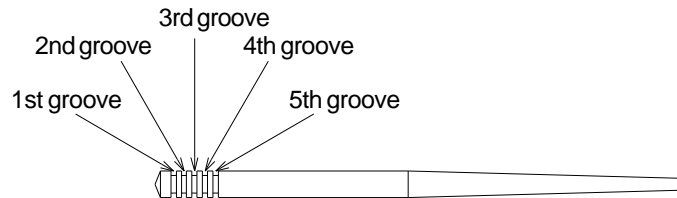
Set the carburetor only after warming up the engine, and then test-drive. And use a plug with the right heat value. Do the setting in the following manner, studying at what throttle opening position the engine starts failing.

## 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.

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