



Instruction Manual for

KEIHIN PE28 & MIKUNI VM26 Big Carburetor Kit

For use only in motorcycles equipped with DOHC 4 VALVE HEAD

Item Nos :	0 3 - 0 5 - 0 9 7 (PE28 carburetor kit)
	0 3 - 0 2 - 2 4 3 (PE28 manifold kit)
	0 3 - 0 5 - 0 4 7 (VM26 carburetor kit)
	0 3 - 0 2 - 2 5 3 (VM26 manifold kit)

Compatible models : Monkey and Gorilla

Frame Nos : Z50J-1600008 ~

Thank you for purchasing one of our TAKEGAWA's products. Please strictly follow the following instructions in installing and using the kit. You are required to understand the contents of this Instruction Manual by carefully reading it before installing the kit.

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

For proper use and safety's sake

Check the kit contents before installation.

This kit is for exclusive use only in the motorcycles equipped with a DOHC 4 Valve Head.

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 the manual.

Please never use these kits in combination with other manufacturers'.

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

Should you have any questions about the product(s), please contact your local motorcycle dealer.

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.)

WARNING

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

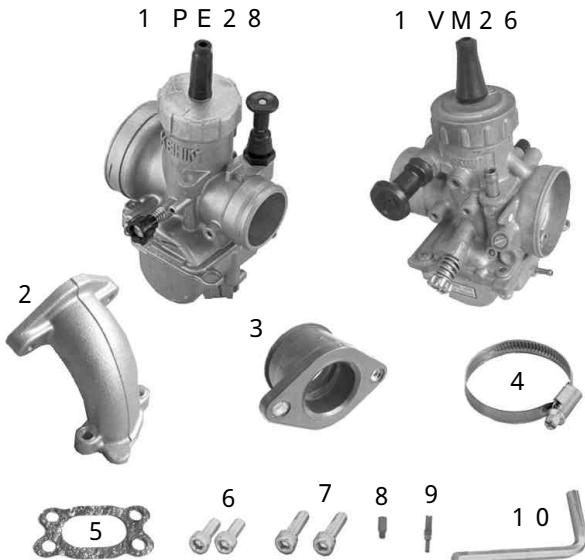
- Those who are technically unskilled or inexperienced are required not to do the work.
(Improper installation because of insufficient skill and knowledge could lead to parts breakage and subsequently to accidents.)
- Before riding, be sure to check every section for slack in parts like screws, and oil 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 accidents.)
- 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.)
- Before doing work, make sure your motorcycle 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. (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.

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.

~ Kit Contents ~



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

Items marked with an asterisk (*) show those parts included in the manifold kit.

Part Nos of 8 & 9 are included only in the kit of Item No. 03-05-097.

Factory preset mode of the carburetor PE28

Main jet	#128
Slow jet	#52
Jet needle	F1343H24NAAC (2nd from top)
Air screw opening	1 ± 1/4 turns
Float level	19 mm
Throttle valve cut-away	#6.0

[Setting parts for PE28]

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

Factory preset mode of the carburetor VM26

Main jet	# 190
Pilot jet	# 22.5
Jet needle	5E+75 (3rd from top)
Air screw opening	1 ± 1/4 turns
Throttle valve cut-away	# 1.5

[Setting parts for VM26]

Main jet
#100,#105,#110,#115,#120,#125,#130,#135,#140,#145,#150,#155,#160,#165,#170,#175,#180,#185,#190,#195,#200,#210,#220,#230,#240,#250,#260
Pilot jet
#10,#12.5,#15,#17.5,#20,#22.5,#25,#27.5,#30

The carburetor of this kit is shipped out in a condition stated above. Adjust the carburetor setting to match the usage. Do the setting to meet the individual engine and other conditions.

This carburetor kit does not include an air filter and the like. Therefore, the engine will go wrong if water gets into the engine. So, please refrain from driving in the rain. Besides, when washing your motorcycle, be careful not to let water get into the carburetor.

A high throttle kit is needed to use this product.

You can install a 49mm round taper air filter and a 49mm air funnel of our own make onto the PE28. And onto the VM26, You can install a 42mm round taper air filter and a 44.4mm air funnel of our own make.

In case the VM26 is installed onto the Gorilla, a normal fuel cock will interfere with the VM26 carburetor. So, use our fuel cock of Item No. 03-03-001.



Warning

Gasoline catches fire easily. It may cause burns, or serious injuries from explosion.

When handling gasoline,

- Turn off the engine. And keep it away from the naked lights, sparks and other heat sources.
- Please fuel your motorcycle outside rooms.
- Immediately wipe off the split gasoline.

~ Installation Procedures ~

Check the contents of the kit.

Make sure that your motorcycle is secure.

⚠ Warning: Never fail to stabilize the position of your motorcycle in a level place.

In case the VM26 is installed onto the Gorilla, a stock fuel cock will interfere with the VM26 carburetor. So, replace it with the fuel cock of Item No. 003-03-001 sold separately.

- Drain the gasoline in the fuel tank.
- Remove the seat, take off the fuel hose, and remove the fuel tank.

Place the inlet pipe gasket of the kit between the inlet pipe and the installed cylinder head, and fasten it with two M6x20 cap screws of the kit.

⚠ Caution: Be sure to follow the specified torque.

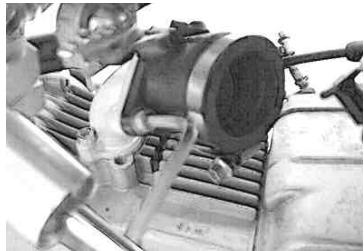
T:10 N·m (1.0 kgf·m)



Install an insulator onto the inlet pipe with two M6x15 socket cap screws.

⚠ Caution: Be sure to follow the specified torque.

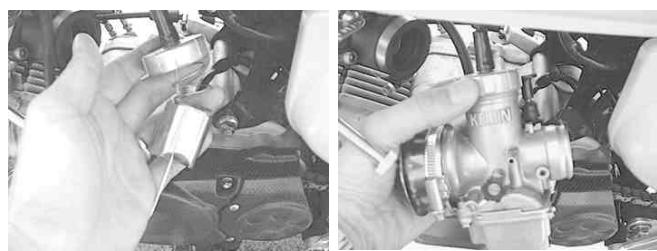
T:10 N·m (1.0 kgf·m)



Remove a top cover from the carburetor assembly, and pull out the spring and the throttle valve. Attach the top cover to the high throttle cable, put in the spring, and attach the throttle valve to the inner cable and then to the carburetor.

In the case of PE28, replace the main jet and slow jet with #110 and #35 of the kit, respectively.

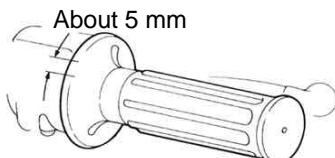
⚠ Caution: Beware of the direction in which the throttle valve is installed.



Insert the carburetor into the insulator, and tighten the insulator band to fix the carburetor.



Adjust the free play at the throttle grip to be about 5 mm and check that the throttle has free play even when a steering handle is turned all the way to the right or to the left. Snap the throttle a few times to make sure that the throttle moves smoothly without sticking and that the throttle valve is fully open.

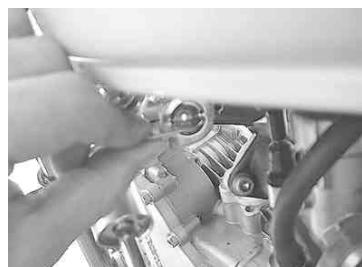


Insert a fuel tube and fasten it with a tube clip.



An air funnel is not included in the kit, and available separately,

Open the fuel cock and check each section for oil leaks.



Start the engine, and warm up the engine till the revolution becomes smooth.

⚠ Warning: Please do the work in a well ventilated place.

Adjust the setting with utmost care in a safe place to meet the individual motorcycle specification.

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.

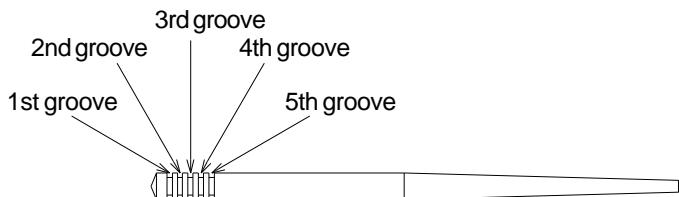
Do the setting in the following manner, studying at what throttle opening position the engine starts failing.

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 air screw.

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 air screw 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 air screw 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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