

Big Carburetor Kit (PE28) Instruction manual

(For exclusive use in the Super Head 4VALVE+R-equipped motorcycle)

Product number	03-05-0032 (Carburetor Kit) 03-02-2566 (Manifold Set)
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Adaptation model	Monkey / Gorilla (Z50J-2000001 ~ 2699999) (AB27-1000001 ~ 1809999)
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Thank you very much for purchasing our products.

Thank you so you will comply with the following matters at the time of use. Before installation, please check your always kit contents. If there is a point of notice event, Please contact us the dealer of purchase.


◎ If the description, such as photos or Illustration different with this part.

☆ Please read carefully before use ☆

- ◎ 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.
- ◎ 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 carburetor kit is for exclusive use in a motorcycle equipped with a TAKEGAWA-made Super Head 4VALVE + R Bore Up Kit and Bore Stroke Up Kit. This kit is compatible only with a stock engine and Super Head 4VALVE + R.
- ◎ Do the installation work correctly referring to the relative genuine service manual for the above-mentioned compatible models.
- ◎ Please note that this kit is designed for exclusive use in the above-mentioned compatible models and frame numbers only and that it cannot be mounted on other models.
- ◎ You are kindly requested not to contact us about the combination of our products with other manufacturers'.
- ◎ Setting of a carburetor must be adjusted depending on the natural phenomena like the weather, temperatures and barometric pressure, and machine and carburetor themselves. Arrange the setting to match the engine and other conditions. For your information, the carburetor is shipped out in a state described on page 2.
- ◎ In installing this kit, a stock throttle housing is not used. Therefore, a brake lever and others need to be prepared by the user.
- ◎ This kit is designed for exclusive use in the closed racing. So, do not drive your motorcycle on a public road after the installation of this kit. Drive your motorcycle at a legal speed, abiding by the laws.

 **Caution** When the handling of ignoring this display, property damage and human shows the assumption of what injury.

- Make sure the engine and muffler are cool before starting the installation. (Otherwise, you will burn yourself.)
- Do the installation with right tools. (Otherwise, breakage of parts or injuries to yourself may take place.)
- Always use a torque wrench to screw bolts and nuts tight and securely to the specified torque. (Otherwise, these parts may get damaged or fall off, resulting in accidents.)
- 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.)
- Always use new gaskets, and seals. And check those parts to be reused for wear and damage. If you find worn or damaged parts, replace them with new ones.

 **Warning** When the handling of ignoring this display people died, shows the contents of the serious injury possibility is assumed.

- 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.)
- 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.)
- 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.)
- Check or carry out maintenance of your motorcycle correctly according to the procedures in the instruction manual or service manual. (Improper checking or maintenance could lead to accidents.)
- If you find damaged parts when checking and performing maintenance of your motorcycle, do not use these parts any longer, and replace them with new ones. (The continued use of these damaged parts could lead to accidents.)
- 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.)

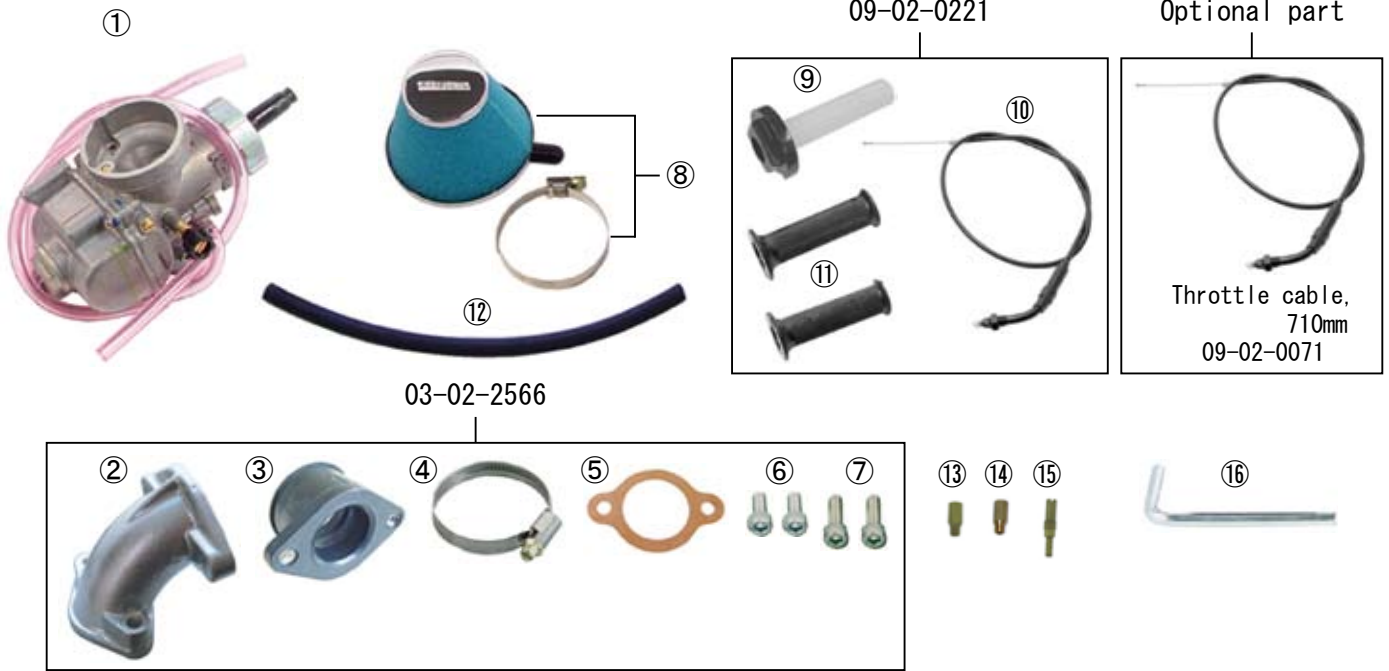
◎ Please note. Performance up, the design change, the product and the price in the cost up, etc. are subject to change without notice.

◎ 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.

◎ Keep this manual stored until this product is discarded.

SPECIAL PARTS
TAKEGAWA

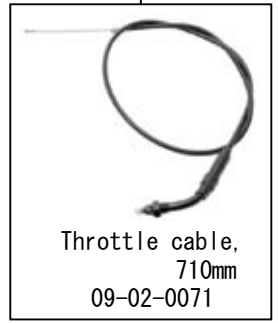
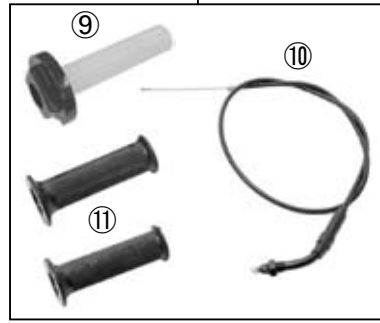
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Please contact with your name and country name provided. (Only English please)



Number	Product content	Quantity	Item Number
1	Carburetor assembly	1	03-03-027
2	Inlet pipe	1	00-00-1493
3	Insulator	1	00-03-0211
4	Insulator band	1	00-00-0050
5	Inlet pipe gasket	1	00-03-0007 (2 pcs)
6	Socket cap screw, 6x15	2	00-00-0718 (5 pcs)
7	Socket cap screw, 6x25	2	00-00-0722 (5 pcs)
8	Air filter	1	03-01-1064
9	Throttle COMP.	1	
10	Throttle Cable, 810mm	1	09-02-0081
11	Pair of throttle grips, for right- & left-hand	1	09-02-0002
12	Fuel hose, 200mm	1	00-03-0203 (500mm)
13	Main jet, #110	1	00-03-0094
14	Main jet, #115	1	00-03-0096
15	Slow jet, #35	1	00-03-0137
16	Hex wrench, 5mm	1	

09-02-0221

Optional part



Factory preset mode of the carburetor

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

※ Please order in the repair parts are always repair part number.

If it is not the part number order, you may not be able to order. Please be forewarned.

It should be noted, In the case of parts that can not be separately shipment, please order a set part number.

PE28 Slow jet

PE28 Main Jet

Item No.	Product Name
00-03-0137	#35
00-03-0138	#38
00-03-0139	#40
00-03-0140	#42
00-03-0313	#45
00-03-0142	#48
00-03-0143	#50
00-03-0144	#52
00-03-0145	#55
00-03-0148	#62
00-03-0149	#65
00-03-0150	#70

Item No.	Product Name
00-03-0130	# 82
00-03-0131	# 85
00-03-0132	# 88
00-03-0133	# 90
00-03-0134	# 92
00-03-0135	# 95
00-03-0136	# 98
00-03-0090	#100
00-03-0091	#102
00-03-0092	#105
00-03-0093	#108
00-03-0094	#110

Item No.	Product Name
00-03-0095	#112
00-03-0096	#115
00-03-0097	#118
00-03-0098	#120
00-03-0099	#122
00-03-0100	#125
00-03-0101	#128
00-03-0102	#130
00-03-0103	#132
00-03-0104	#135
00-03-0105	#138
00-03-0106	#140

Item No.	Product Name
00-03-0107	#142
00-03-0108	#145
00-03-0109	#148
00-03-0110	#150
00-03-0111	#152
00-03-0112	#155
00-03-0113	#158
00-03-0114	#160
00-03-0115	#162
00-03-0116	#165
00-03-0117	#168
00-03-0118	#170

Item No.	Product Name
00-03-0119	#172
00-03-0120	#175
00-03-0121	#178
00-03-0122	#180
00-03-0202	#182
00-03-0123	#185
00-03-0124	#188
00-03-0125	#190
00-03-0126	#192
00-03-0127	#195
00-03-0128	#198
00-03-0129	#200

☆ Setting of a carburetor must be adjusted depending on the natural phenomena like the weather, temperatures and barometric pressure, and machine and carburetor themselves. Arrange the setting to match the engine and other conditions.

☆ A standard air cleaner cannot be installed to this carburetor kit. Therefore, the engine will go wrong if water gets into the engine and 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.

● Please check the kit contents.
(Preparation for Installation)

⚠ Note: Check that the engine and muffler are cool and that the motorcycle is secure on level ground.

- Making sure that the fuel cock is closed, open a drain plug on the carburetor, and drain the gasoline from the float chamber to a tray.
- Unfasten the inlet-pipe-tightening bolt and air-cleaner-mounting bolts. Remove a throttle valve from a carburetor. Then remove the carburetor with the air cleaner box, the inlet pipe and all.
- ※ Be careful not to let any foreign materials fall into the intake port.



- 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.
- Unfasten a pan screw on the throttle housing to remove the throttle housing.



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



- Referring to the service manual, demount the engine from the frame. And with reference to the installation procedures for the Super Head 4VALVE + R, install the Super Head 4VALVE + R to the engine, and mount the engine onto the frame.

⚠ Note: Do follow the instructions in the service manual.
⚠ Note: Be sure to tighten to the specified torque

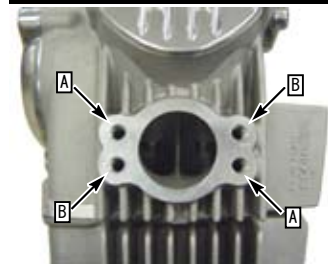
(Installation)

- Pass the supplied throttle cable through the frame.
- Pass the supplied throttle cable through the lower throttle housing, and connect the inner cable to the throttle pipe. And attach the throttle housing to the handle with two screws.
- ※ Apply grease to the rubbing surface of the throttle pipe, the cable end, and to the portion on the pipe to take up the cable.

⚠ Note: Be sure that you protect specified torque.
Screw
Torque : 5N · m (0.5kgf · m)

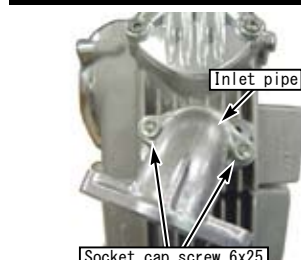
- Attach socket set screws, included in the Cylinder Head Kit, to two taps marked B on the cylinder head surface to attach the inlet pipe to, and tighten the screws to the specified torque.

⚠ Note: Be sure that you protect specified torque.
Socket set screw
Torque : 5N · m (0.5kgf · m)



- Place an inlet pipe gasket between the cylinder head and the inlet pipe, and fix it by tightening 6x25 socket cap screws to the specified torque.

⚠ Note: Be sure that you protect specified torque.
Socket cap screw
Torque : 10N · m (1.0kgf · m)



- Fasten the insulator to the inlet pipe with two socket cap screws.

⚠ Note: Be sure that you protect specified torque.
Socket cap screw
Torque : 10N · m (1.0kgf · m)

- Remove a float chamber, and then a main jet. Attach a supplied main jet #110 and slow jet #35, and then a float chamber.

- Remove a top cover of the supplied carburetor, and pull out the spring and the 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.

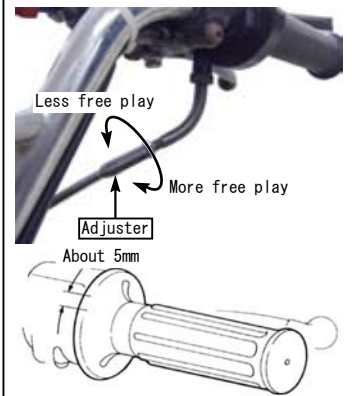


- Fit the carburetor into the insulator, and fasten the carburetor with a clamp band.



- Attach an air filter, which please fix by tightening a band.

- Adjust the free play at the throttle grip to be about 5mm by turning the adjuster of the throttle cable.



- 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. Open the fuel cock and chock for gas leaks. (Do not leave the cock open for long time.)

- Dispose of the blow-by gas from the crankcase by yourself. (Some racing and regulations specify the blow-by gas disposal.)

- In sending back the blow-by gas to the carburetor, connect the blow-by hose with the union on the air-filter.

- 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 the engine does not run idle after the warm-up of the engine, or the engine idling speed is high, adjust the setting by turning the throttle stop screw.

- Jetting and other set up with your engine specification, please do this set up at safe and closed area such as racetrack.

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.

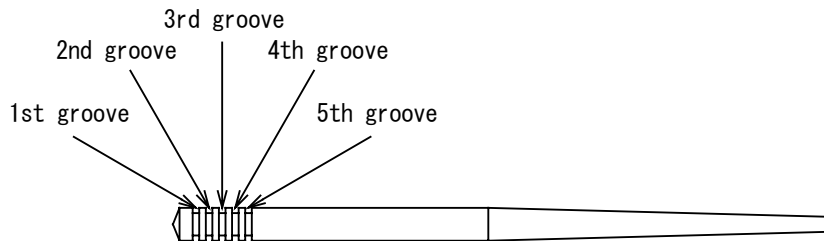
- ※ Set the carburetor only after warming up the engine, and then test-drive. And use a plug with the right heat value.
- ※ Do the setting in the following manner, studying at what throttle opening position the engine starts failing.

○ 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.

○ Slow jet / 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 slow jet / pilot jet with a small number.
 - If you have tighten the air screw (clockwise) to the full, use a slow jet / 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 slow jet / pilot jet number is too small. (At idle)
 - When the motorcycle belches black exhaust gas and produces heavy exhaust sound, the slow jet / pilot jet number is too big. (At idle)
 - After replacing the slow jet / 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.