



Instruction Manual for KEIHIN PC20 Carburetor Kit

Item Nos :	0 3 0 5 0 2 4	(Carburetor kit)	Only for 88cc R-Stage and 88cc regular head
	: 0 3 0 2 0 3 3	(Manifold kit)	Only for 88cc R-Stage and 88cc regular head
	: 0 3 0 5 0 3 3	(Carburetor kit)	For S-Stage
	: 0 3 0 2 0 2 3	(Manifold kit)	For S-Stage

Compatible models and the frame Nos:

CD50	: CD50-1500001 ~
Benly50S	: CD50-2200005 ~
CL50	: CD50-4000001 ~

- 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.

Read all instructions first before starting the installation.

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.

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

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

The carburetor of this kit is shipped out in a condition as stated below. Adjust the carburetor setting to match the parts used. Do the setting to meet the engine and other conditions.

Do the installation work correctly referring to the relative Honda's genuine service manual for the above-mentioned compatible models.

Use a genuine throttle.

As these kits are for use with a stock air cleaner, the carburetor kits for R-stage and regular head won't exhibit their original high performance. Though a funnel or power filter cannot be installed, the performance of these kits will come close to their best level when the standard air cleaner is removed.

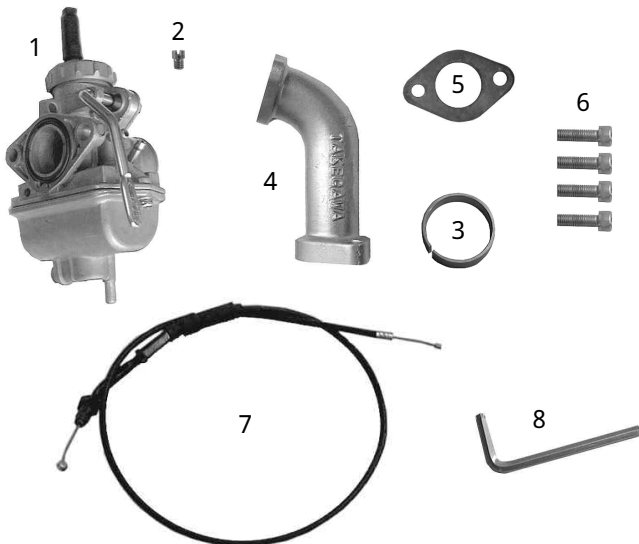
CAUTION The following show the envisioned possibility of injuries to human bodies and property damage as a result of disregarding the following cautions.

- Work only when the engine and muffler are cool. (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.)

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.)
- Keep the motorcycle secure on level ground during your installation work. (Otherwise, your motorcycle could overturn and injure you.)
- 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.)

~ Kit Contents ~



No.	Part Name	Qty
1	Carburetor assembly	1
2	Main jet, #92	1
*3	Connecting tube spacer	1
*4	Inlet pipe	1
*5	Inlet pipe gasket	1
*6	Socket cap screw, 6x20	4
*7	Throttle cable COMP.	1
*8	Hexagonal 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	#95
Slow jet	#35
Jet needle	063001
Clip position	4th groove from top
Throttle valve	#20G
Air screw opening	1- 1/2 turns

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.

~ Installation Procedures ~

- 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 container.



- 2 . Remove the fuel tube and throttle valve from the carburetor, and separate the throttle valve from the throttle cable.



- 3 . Loosen a band on the air-cleaner connecting tube, and pull out an inlet-pipe holding bolt, and remove the carburetor with the inlet pipe and all.
Be careful not to let any foreign material fall into the intake port.



- 4 . Unscrew a screw on the throttle housing to take out the throttle cables. And change the throttle cables.
Apply grease to the sliding surface on the throttle.



- 5 . Remove a float chamber on the PC20 carburetor, and replace the main jet with the one in the kit. And reinstall back the float chamber.
Attach the carburetor to the air-cleaner connecting tube. Place the gasket between the cylinder head and inlet pipe, and fix the inlet pipe.



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

- 6 . Install the throttle valve to the carburetor, and tighten the cylinder-head mounting bolt on the inlet pipe and carburetor mounting bolt to the specified torque.
T: 10 N · m (1.0 kgf · m)



In installing, beware of the direction in which the throttle valve is installed.



- 7 . 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 make sure that the throttle moves smoothly without sticking and that the throttle valve is fully open.



- 8 . Connect the fuel tube, open the fuel cock, and check each section for oil leaks.



- 9 . 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.

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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.

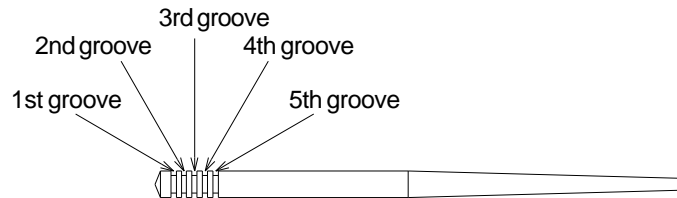
Set the carburetor only after warming up the engine, and then test-drive. And use a plug with the right heat value. Do the setting in the following manner, studying at what throttle opening position the engine starts failing.

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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