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REF: Carburetor, Intake Manifold & Exhaust - Sub-01G

Basic Mikuni VM Information

VM Series

These are early VM series round slide Mikunis - 34mm, 36mm, or 38mm

Only Mikuni round slide carbs are designated as VM. These are available in different sizes such as VM29, VM34, VM38, VM40 etc. ¹⁾

HS and HSR carbs are not round slide. The RS is not a round slide. The TM and TMS/TMX are not a round slide.

This is a very old school set up for a Sportster. Properly set up, this carb gets good mileage and runs well. ²⁾

Note Safety Tip: Cut a piece of bicycle inner tube to stretch over the carb-body and slide-cap to stop the cap from un-screwing.

This will keep the slide and needle inside the carb on the freeway.

You can call Sudco to see what they recommend for jetting after you identify which model Mikuni VM you have.

Sudco will get you close. You can also get a little tool kit they sell with the jet wrench's and don't forget the Mikuni pocket tuner.

Mikuni lists the following Vintage Carb Kits: ³⁾

001-200....HDS-101/38mm.... Sportster/Shovelhead

001-204....HDS-101A/40mm.... Sportster/Shovelhead

001-202....HDS-101B/44mm.... Sportster/Shovelhead

So any of these 3 sizes will work.

Considerations When Buying:

The Mikuni will stick out a bit further than other carbs, mainly because of the adapter.

On a Sportster, you need to buy a throttle cable with the carb that has a 90° elbow fitting into the carb top.

This is needed to be able to run the throttle cable under the gas tank.

A new manifold is required along with a carb adapter or rubber boot and air cleaner mount.

Several ways are described in the mounting article above.

The correct version of the VM38 for an ironhead Sportster is the VM38-9. ^{4) 5) 6)}

The VM38-“9” was setup and extensively tested by Jerry Branch for the stock Sportster engine using flow bench tech for the time. ⁷⁾

It is going to be hard to find that you are going to be able to improve on it as supplied. Unless you are running a stroker or highly modified heads and cams.

Then the as supplied needles and jets are going to be your best option. Clean it out and replace with the normal “9” needles and jets.

There were a bunch of different VM's (round slide) from 16MM on up to 44MM with the vast majority of them designed for 2 cycle engines.

The VM-38 Standard Right body may be the same for all of the 38MM units.

However, all the particulars have to be correct for the VM38-9. Below is the list of all the things that make it a “9”. ⁸⁾

- Bore Size : 38mm
- Spigot Mount : 43mm
- Main Jet : 4/042 #330
- Pilot Jet : VM22/210 #30
- Needle Jet : #166 Q-2
- Throttle Valve : VM38/24 2.5
- Jet Needle : 6DP1 (the clip is set in the middle notch. That is the third notch from the top or bottom.)
- Needle Valve VM34/39 3.3
- Air Jet : 2.0 for Sportster (002-165)
0.5 (BS30/97) for BTs but reportedly works fine on a Sportster.
Sudco's website shows a 0.5 for the VM38-9 but the VM-38 manual says the 2.0

This particular model is a VM-38mm. It has no numbers on it other than “Mikuni KOGYO”.



Here is another VM-38.



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12)

Mikuni VM-38 with solid mount adapter to run on a shovelhead.

The adapter is a tight press fit with three set screws. There are threads in the adapter to run the bolts into.

And there is a groove /O-ring inside the aluminum adapter bore.



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This one is stamped "X66" with the X above the 66 and one of the 6's is sideways. It also has 38F 9 on the back side just below the choke/enricher.



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Fake vs Genuine Mikuni VM:

The fake VM carburetor has the "Minkui" imprinted on the top and side of the carburetor.

On a genuine carburetor you will find the "Mikuni" logo.

Also you will notice that the fake carburetor doesn't have the "NOT FOR AIRCRAFT USE" decal and the anchor plates.

The way the fake carburetor was designed is completely different from the genuine one. There are extra openings and attachments.

Also see this [Sudco International](http://www.sudcointernational.com) web page for pics of fake vs genuine VM carburetors.

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