

HW Prowler Carburetor Installation Instructions

Carb Kit Contains:

HW modified Mikuni 36mm pumper style carb

Custom choke cable

Fuel Line Clamp

Instructions

(2) Leaner and (2) richer main jets

120 Jet, 125 Jet, 135 Jet, 140 Jet

1. Remove both seats and the plastic seat pans under the seats.
2. Remove the engine cover
3. Remove the air-box by removing the cross-bar support that runs under the air-box to the framing on each side by the seat framing and disconnect the air box from the carburetor and from the plastic intake in the rear.
4. Disconnect the engine breather hose from the bottom of the air box
5. Set the air-box to the side
6. Disconnect the plug going to the stock carburetor, this is the electronic choke. Wrap the end left on the vehicle with electrical tape.
7. Cut the fuel line just above the fitting on the passenger side of the carb
8. Remove the side cover off the drivers side of the carb where the throttle cable goes in, see fig. #1
9. Pull the throttle cable out and then remove the throttle cable end from the throttle plate See Fig. #2
10. Loosen the clamp on the rear of the carb holding the carb on
11. Pull the carb out of the intake boot
12. Set OE carb to the side.
13. Push the new Carb into the intake boot making sure the carb is perfectly vertical and then tighten the clamp back up. The new carb is slightly larger than the stock one so some additional pressure will be needed to get it in.
14. Route all the breather lines connected to the carb down under the carb.
15. Connect the throttle cable onto the new carb but putting the cable end in the bottom hole of the throttle plate on the passenger side of the carb allowing the cable to ride in the slot in the plate and then turn the throttle plate clock wise allowing the threaded end of the cable to fit into the lower round hole of the throttle cable connection plate. See Fig. #3
16. Make sure you have a nut on each side of the plate turn the nut on the outside of the plate to take up the slack in the throttle cable then tighten the nut on the inside of the plate. See Fig. #3
17. Push the fuel line onto the fuel inlet on the passenger side of the carb and install the supplied clamp to hold it on. The fuel line will be a little hard to push on.
18. **DO NOT ATTEMPT TO INSTALL THE CHOKE CABLE PARTS SUPPLIED IN THE KIT UNTIL AFTER THE CHOKE CABLE ITSELF IS INSTALLED AND READY TO SCREW INTO THE CARBUETOR.**
19. To install the supplied choke cable, drill a 3/8" hole in the dash on the left side of the steering wheel in a location convenient to your left hand.
20. Remove the plastic nut from the bottom of the choke handle on the choke cable.
21. Push the choke cable thru the hole you drilled and then slide the nut over the cable to the inside of the dash and reinstall back on the back of the choke mechanism. Some dash screws maybe needed to be removed to accomplish this.

22. Route the choke cable down and thru the center section under the floorboard making sure you don't let it get in contact with the front drive shaft and then route it to the passenger side of the carburetor.
23. While holding the carburetor end of the choke cable that goes into carburetor push the included rubber grommet over the cable and onto the elbow, slide the black nylon nut on the same elbow and let the rubber grommet seal around the nut, next slide the spring onto the cable and lastly take the plunger holding it at a 90 degree angle push the spring back to point to where you can get the cable end to slip into the plunger. See Fig. # 5 Thru Fig. 7#
24. Install the carb end of the choke into the threaded hole in the carb just under the throttle cable plate. Tighten the plastic nut securing the choke cable to the carb. See Fig. #3
25. Connect the front rubber bellow going to the air-box to the carb and tighten down the clamp.
26. Without the air-box lid on reinstall the air-box by reversing the order in which you removed it.
27. Push the engine breather hose back onto the bottom of the air-box
28. Once the air-box is reinstalled you will need to modify your air-box lid as shown in Fig. #4 by cutting a rectangular hole that is 3" wide x 11" long so your new carb can get more air. Drill a small hole and then cut it out with a jigsaw.
29. Reinstall the air-box lid.
30. You are finished with the install.



Fig. 1

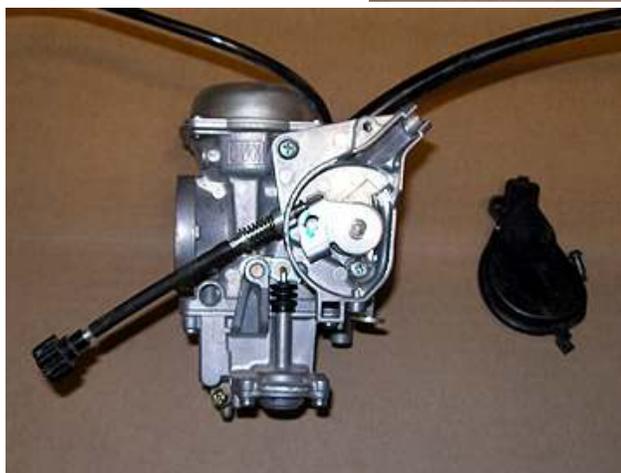


Fig. 2



Fig. #3



Fig. #4



Fig. #5



Fig. #6



HW Prowler Carburetor Tuning Instructions

Your new HW Prowler Carburetor has been modified for your vehicle; the only adjustment needed may be a main jet change due to your temp or elevation and idle adjustment. We have already set the accelerator pump, air screw and needle position along with modifying the throttle cable plate so it works with the stock cable.

The following is an exert from our forum tech article on carburetor tuning.

Carburetor tuning is really not an exact science and it is probably one of the most important adjustments you can make on your vehicle. Get it right and it runs great, get it wrong and it might run great until it stops.

Tuning the stock carb mostly consist of moving the clip on the Jet Needle up and down and changing the main jet.

On our aftermarket Mikuni carbs there is a lot more to work with but from my experience there is really not much more that needs to be worked with than the stock one.

There are three basic circuits in all carbs and they are:

Pilot Circuit which controls how your engine runs at idle. Idle speed for your Prowler will be between 1500 and 1750 RPM, set it with the white knob on the passenger side of the engine. See Fig. #1 below

The Needle Jet and Jet needle controls how your engine runs from 1/4 throttle to 3/4 throttle. Moving the clip up makes the engine run leaner, moving it down the needle makes it run richer.

Main Jet which controls your engine from 3/4 throttle to wide open.

First off let me explain a lean and rich conditions. It is simply, one is not getting enough fuel and the other is too much. Which one can do the most damage? Lean. The bad part is a lean engine runs the best but it will run so hot to melt your piston and all other upper engine parts.

We bought our Dyno with a air/fuel module so we can monitor the air/fuel ratio at all times while we dyno, I found out how far you can get off by using conventional tuning methods like color of the spark plug and how fast it runs. The air/fuel ratio is a measure in units of mass of air to fuel so for the perfect air/fuel ratio of 14.7:1 means there is 14.7 units of air to one unit of fuel. Ok, you don't have a \$17,000 dyno to tune your carb but what you can do is \$264.95 and buy our Air/fuel Ratio gauge.

The main jet is what most people have to change and they have to change it for various reasons.

To change your main jet from the one supplied in your carb, remove the hex shaped cap on the bottom of the carb and you will find the main jet. Remove the main jet with a flat head screw driver and replace it with one of the other main jets included with your kit as you testing sees fit. See Fig. #1 and #2 below. The jets have numbers stamped into the top of them. The one in the carb is a 130.

If you change your exhaust system or air intake so your engine breaths better you most likely will need to go to a bigger jet to compensate for the additional air flow. You might also have to raise your needle to allow more fuel thru too.

If you ride in higher elevations mostly over 2000' then you might have go down in jet size.

Several main jets on either side of the stock jet are supplied for any conditions that might warrant changing it.

How to adjust it with your seat of the pants dyno:

Start with a "fat" jet first, go high in number the first time and go run your vehicle wide open throttle while driving it, not in neutral, if it starts to stumble or cutting out at wide open throttle on extended runs, go down one jet size at a time until it runs smooth. If it does not stumble with the first jet selection, go up again and start over. Once the stumbling stops, you are pretty close and that is the best you can do without gauges

Engines will be much more reliable with a slightly rich condition than a lean condition.

We also have an Exhaust Gas Temperature analyzer which can tell us if the engine is lean or fat. When running wide open throttle it should read no more than 1300 degrees.

We are considering putting a weld in bung with plug in future exhaust if an aftermarket exhaust is needed but otherwise buy your own gauge set up and you will always know whether or not your engine is running right or not.

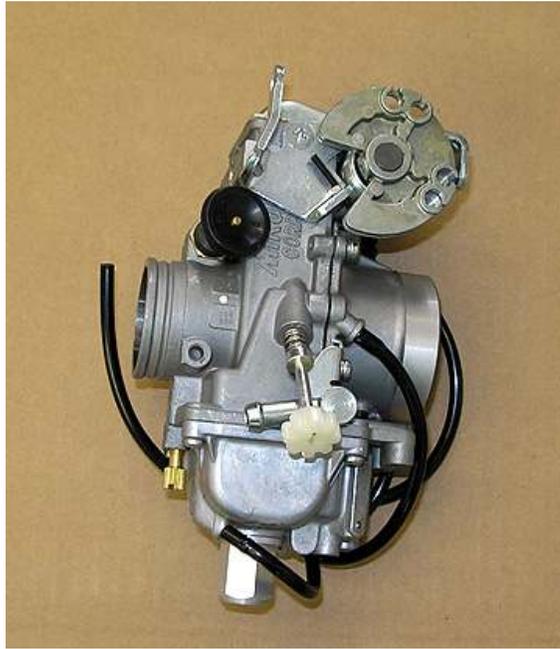


Fig. #1

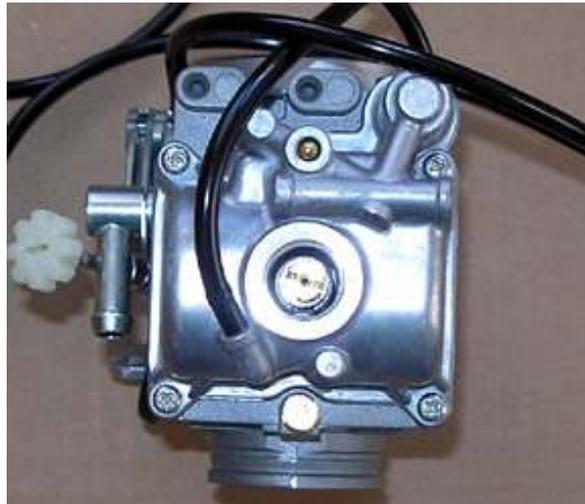


Fig. #2