

Dial-A-Jet PATENTED

Fuel Induction System

Accurate Jetting in Seconds

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- **More Horse Power - Excellent Running Quality**
Optimizes Fuel - Easy Installation
- **Rejet in seconds with a click of the patented 5 position jet dial**
- **Allows you to run in a broad temperature or altitude range without re jetting**
- **Automatically compensates for: air density, motor load, and fuel quality**

Sick and tired of changing jets?

Dial-A-Jet will take care of this problem and a whole lot more! Why change jetting? Some people don't!

Your engine will lose 10% to 15% of total horsepower with improper jetting. A 100 HP machine will make 85 to 90 HP. The simple fact is that changing jets is not a pleasant task

and takes a lot of time.

Now you can run at peak horsepower all the time whether your engine is stock or modified. The best part is that jetting is quick, easy and accurate with Dial-A-Jet.

Dial - A -Jet fits any carburetor; Keihin or Mikuni, round slide, flat slide or butterfly, and is easy to install.

Dial-A -Jet IS NOT like a Power Jet. A Power Jet feeds raw liquid fuel, just like the other circuits, and works from 7/8 throttle and up. Dial-A-Jet feeds emulsified fuel for instant throttle response and works from just above idle to full throttle.

Dial-A-Jet feeds a fine consistent mist of emulsified fuel instead of raw liquid fuel like all other jetting circuits in your carb. Pre-atomized fuel weighs 10% of what raw liquid fuel weighs, therefore, it is very responsive to engine needs.

Dial-A-Jet gives you great throttle response. The emulsified fuel is delivered to the engine instantly and acts as an intermediate circuit until the heavy wet fuel from the other circuits catch up.

Dial - A -Jet emulsified fuel charge fills in the lean spots between the poorly atomized fuel molecules from other jetting circuits eliminating lean spots. The lightweight fuel charge follows the path of least resistance, a law of physics. This gives you a consistent, even fuel supply at all engine RPMs.

Dial-A-Jet allows you to run at peak HP at all temperatures and altitudes. No other product does this at any price.

Dial-A-Jet is the easiest and fastest way to "tune-in" any modifications you have performed on your machine. From pipes to porting, Dial-A-Jet makes it work right.

Dial - A -Jet will make it easy to jet a piped engine correctly with less fuel on the low end for crisp throttle response.

Dial-A-Jet will automatically raise the fuel curve as the pipes kick in, giving you a perfectly calibrated engine from bottom to top.

Dial - A -Jet is a great protection against burn down due to its ability to feed fuel accurately based on the engine's demand.

Dial-A-Jet consistently purges your float bowl of moisture (water, alcohol or benzenes) as they settle to the bottom.

This eliminates water seizures or burn down, carburetor icing, galling or broken intake skirts on your piston.

Dial-A-Jet eliminates detonation/pinging and compensates for poor fuel quality.

Dial-A-Jet allows you to re-jet your entire engine (single, twin, triple or four cylinder) in about one minute.

Dial-A-Jet allows you to tune each cylinder individually for maximum performance.

Dial-A-Jet improves fuel efficiency 10% to 20% or more.

Dial - A -Jet has no moving parts or complicated electronics. It works every time, all the time.

Dial-A-Jet

Automatic Fuel Induction System

Dial-A -Jet is a completely external jetting system that



delivers maximum horsepower from any engine at any temperature or altitude. "DJ" improves throttle response and fuel mileage. It works well with stock or modified engines, standard or high performance air boxes and exhaust systems.

Easy to install kits are available for snowmobiles, ATV's, dirt bikes, motorcycles and automobiles.

The Dial-A-Jet system was invented by Dennis Dean, Ph.D. (Doctorate in acoustics). Mr. Dean held over 120 world motorcycle drag racing records and several Bonneville records. The Dial-A-Jet concept was used on all of these machines. He knew that he needed a different fuel curve for the launch area, middle of the track and the end of the track. He also had to deal with different altitudes, temperatures, and air densities. Dial-A-Jet proved to take care of these problems as well as providing that fine tuning edge that meant the difference between winning and losing at this highly competitive level.

Modern motorcycle engines come from the factory jetted on the lean side, leaving little room for error. Motorcyclists

often discard their standard air filter and install a high flow air filter. This will upset the air to fuel ratio making the engine run even leaner and hotter. Custom exhaust systems are usually lower restriction which also causes the engine to run leaner and hotter. The combination of the high flow air filter and the low restriction exhaust system substantially alters fuel flow requirements, leaning the engine and raising the operating temperature. The additional heat that is generated can have a detrimental effect on engine longevity as well as delivering poor performance. Gear selection may become more difficult due to increase in oil operating temperature. The cure for these lean conditions is to restore proper air/fuel ratios. This can be done by re jetting which requires removal and disassembly of your carburetors. This may be a very expensive proposition, paying for 3 or 4 hours of shop time as well as purchasing a jet kit. Dial-A-Jet kits can usually be installed at home in approximately 1 to 1 1/2 hours without having to remove and disassemble your carburetors. Dial-A-Jet now allows you to richen or lean your engine in seconds simply by turning a dial. The ability to adjust your carburetors externally may save you another trip to the local dealer to adjust your carburetors if they didn't get it right on the first try.

Lonn Peterson became interested in using Dial-A-Jets on snowmobiles in the winter of 1989/90. Lonn recognized a great need for this product in the snowmobile industry. Large altitude and temperature changes had to be dealt with, not to mention engine modifications requiring attention to the fuel system. They worked so well and the feed back was so positive that he decided to buy the company. Lonn and his wife, Ann, now own Dial-A-Jet which is part of Thunder Products, Inc.

The basic concept of the Dial-A-Jet has never changed since day one; however, it is a highly evolved product that has seen



many improvements. Performance has always been the number one consideration. Most other improvements have to do with making the Dial-A-Jet more user friendly, such as fitting into tight places or mounting in easy to access

areas, filtering the air to the Dial-A-Jet, reading the settings, etc.

Dial-A-Jet is a very reliable fail proof product that works every time! Dial-A-Jet makes more horsepower on less fuel.

You can expect gains in the 3% to 5%

range. It's much more than a quick and easy way to change main jets. There are no moving parts or electronics to fail. Dial-A-Jet is a small product measuring only 7/8" long, 5/8" wide and 5/8" high. Air enters the Dial-A-Jet body through one of the five pre-selected air correction circuits in the rotary dial. Each of the five air correction circuits is a different size allowing either more or less air to enter the mixing chamber. More air would be leaner (larger hole) and less air would be richer (smaller hole). Fuel from the float bowl is instantly drawn into the mixing chamber and swirled with air at a high rate of speed emulsifying the fuel. The fuel mixture is like millions of tiny thick skinned balloons with air inside. This is called an emulsified fuel charge. The emulsified fuel charge is inducted into the carburetor through the secondary main jets located in the fuel delivery tube. At this point the Dial-A-Jet is way ahead of the rest of your carburetor. All of the other circuits in your carburetor introduce raw liquid fuel into the air stream, just beginning

the atomization process. The lightweight fuel mixture from the Dial-A-Jet only weighs 10% of what liquid fuel weighs. Slight changes in engine load can be quickly and accurately compensated for with this lightweight fuel mixture. Instead of losing as much as 15% of your horsepower due to improper jetting, your machine can now perform at optimum level at any temperature or altitude. A snowmobile will always run like it does at 20 degrees below zero.

Three things trigger Dial-A-Jet's fuel signal: 1) engine pressure drop (vacuum or fuel signal); 2) acoustic sound signal which either amplifies or de-amplifies the reversionary pulse waves of the intake tract (we will explain more about the acoustics later); and 3) air flow and velocity. Dial-A-Jet works from just above an idle all the way to full throttle. Dial-A-Jet *automatically* gives you a perfectly calibrated carburetor that feeds fuel linear to engine load. Feeding fuel linear to engine load means being jetted properly whether you are pulling a heavy engine load like a hard hole shot with good traction or just cruising easily on hard pack at 40mph. Various speeds and engine loads require changes in your fuel curve. Dial-A-Jet *automatically* monitors your engine's needs then alters your fuel curve to match. A load must be placed on the engine for Dial-A-Jet to function. You can't rev your engine up on the jackstand and watch fuel go up the lines. Without loading the engine, there is no need for extra fuel; therefore, Dial-A-Jet does not deliver fuel. This is normal.

Dial-A-Jet is an add fuel only device. You cannot add fuel to an engine that is running rich or has an adequate fuel supply and hope to gain horsepower. You must create a lean condition so that Dial-A-Jet has a window of opportunity to function. Dial -A-Jet will *automatically* fill in the lean areas of the fuel

curve giving you optimum performance. The fine emulsified fuel charge can't displace the heavier poorly atomized fuel from the other circuits so it takes the path of least resistance and fills in the lean mix areas eliminating fuel spiking and giving you a consistent fuel flow pattern producing stable temperatures and horsepower. The only way Dial-A-Jet can fail to perform is if you do not get the carburetor within range of the Dial-A-Jet. This usually means that the main jet is too large. You must create a slightly lean condition so the Dial-A-Jet has a working range. This is typically about three or four jet sizes below a properly jetted machine. A single Dial-A-Jet will deliver 10% to 15% of your overall fuel curve in an emulsified state. There are five *automatic* fuel ranges you can select from on each Dial-A-Jet. Simply rotate the dial to raise or lower your fuel curve. With Dial-A-Jet each carburetor can be adjusted independently. This is a huge advantage for maximizing the full potential of each cylinder while giving you great protection against burn down.

Dial-A-Jet is an acoustical device that is triggered by acoustic sound signals. The acoustic signal is generated when gasoline is ignited in the cylinder just inches away from the Dial-A-Jet. This signal amplifies the pumping action created by the reversionary pulse waves that occur naturally in any engine's intake tract. The acoustic signal along with normal engine vacuum or fuel signal causes fuel to be delivered to the engine. We have all heard the sound of a fat, over-jetted engine such as you hear at high altitude or very warm weather riding. It's the whaaa whaaa sound. This is a slow, fuel rich reversionary pulse wave in the intake tract. This would give Dial-A-Jet a de-amplified fuel signal resulting in little or no fuel being inducted. The reverse of this is also true. A crisp lean sounding engine generates a fast sharp reversionary pulse

wave, triggering Dial-A-Jet to *automatically* induct fuel. Detonation is an extreme lean condition that generates a sharp reversionary pulse wave. This excites the Dial-A-Jet causing a rapid response with additional fuel delivery to stave off engine damage. Remember that we are moving a very light weight emulsified fuel charge. This is the reason it is so responsive to the engine's fuel needs over such a broad range.

Dial-A-Jet works great on stock or modified machines giving a realistic 10% to 20% increase in fuel economy or more. Throttle response is extremely fast and smooth. Throttle lag is virtually eliminated. Throttle lag is where the airflow in your carburetor out accelerates your fuel, which finally catches up. Being that the Dial-A-Jet delivers such a lightweight fuel charge, the air can no longer out accelerate the fuel as it once did. The result is major league throttle response! Dial-A-Jet *automatically* purges your float bowl of alcohol, water, benzenes, or other unwanted sediments that could cause engine damage. Modified or piped machines will have fuel needs that require a higher fuel curve when the pipes and modifications kick in. In other words you need one fuel curve when running below peak and another fuel curve at peak horsepower. This is why a piped machine is so fussy to jet. More horsepower requires more fuel. Dial-A-Jet will *automatically* raise or lower the fuel curve optimizing performance. Dial-A-Jet feeds fuel based on engine demand. Spark plugs will last longer. The plug color will be lighter and piston wash will be minimal or disappear due to the improved fuel delivery and combustion efficiency.

Now that we have talked about Dial-A-Jet having so much automatic circuitry, you need to know how the manually

adjusted dial fits into the picture. Each of the five positions represents a higher or lower fuel curve (richer or leaner). It's not a case of starting and stopping from one position to the next. There is a great deal of overlap with each setting. For the most part you will seldom need to adjust the dial. A big change in altitude or temperature will be about the only time a change will be necessary. Dial-A-Jet comes with a very easy to understand installation and tuning manual that explains in detail how and when you may need to change settings.

The Dually Kit consists of two Dial-A-Jets per carburetor. It delivers 20% to 30% of your overall fuel needs. This kit was designed to service engines that have high cubic feet per minute of airflow. Highly modified engines or large displacement engines usually fall into this category. Another circumstance where a Dually Kit is used is for extreme temperature and/or altitude changes. You can ride in the Midwest at sea level or you can ride in the western mountain ranges. The Dually provides a very broad tuning range virtually eliminating the need to change jetting. You seldom, if ever, need to adjust the dials due to the high percentage of fuel *automatically* being metered through the Dually system.

The Snorkel kit is a fitted rubber cap that goes over the Dial-A-Jet body. A vent line is inserted into the rubber cap and routed up the handle bar shaft, exiting just outside of the hood. A foam filter is attached to this end of the vent line. Cold clean air is fed to the Dial-A-Jet. This also eliminates belt dust, snow, ice or other debris from plugging the air correction circuit in the Dial-A-Jet making it run rich. Problems with under hood pressure are eliminated. The snorkel

is a must for ATV's and dirt bikes equipped with Dial-A-Jets.

Dial-A-Jet has even been successfully installed on fuel injection machines. One Arctic Cat dealer wanted to run performance pipes on a 580 EFI. The existing fuel map worked fine on the bottom end and midrange; however, the top end was extremely lean. Dial-A-Jets were installed on the throttle bodies. Fuel was pulled from a remote float bowl (available from Thunder Products) attached to the return line of the fuel injection. Dial-A-Jet cured the top end lean condition. The set-up worked great, yielding a crisp broad power band! The Dial-A-Jets could be adjusted for temperature, altitude, engine load, or fuel quality. The installation was simple and effective. More than 3,500 trouble free miles have been logged on this machine.

Does your engine require aviation gas or other high test fuels? Maybe not. Dial-A-Jet can be installed on your carburetors and used to induct many types of fuels or fuel additives such as octane boosters, alcohol (methanol), alcohol blended with nitro, propylene oxide, etc. One of the lowest cost, user-friendly fuel boosters is alcohol (methanol). This is a very easy and inexpensive way to raise your octane while lowering engine-operating temperatures by approximately 150 to 200 degrees Fahrenheit. Dyno tests have shown a 5% to 6% increase in horsepower. Installation is very easy. Install a set of Dial-A-Jets in the conventional manner. Now you will need a small tank mounted under your hood for the alcohol. The tank should have a fuel shut off. A remote float bowl with a needle and seat will also be needed to handle the fuel from the tank to the Dial-A-Jet. Simply hook the Dial-A-Jets to the remote float bowl and you are ready to run. This is very

simple and effective, it can be used on any ordinary trail machine to safely boost performance and raise horsepower while lowering temperatures.

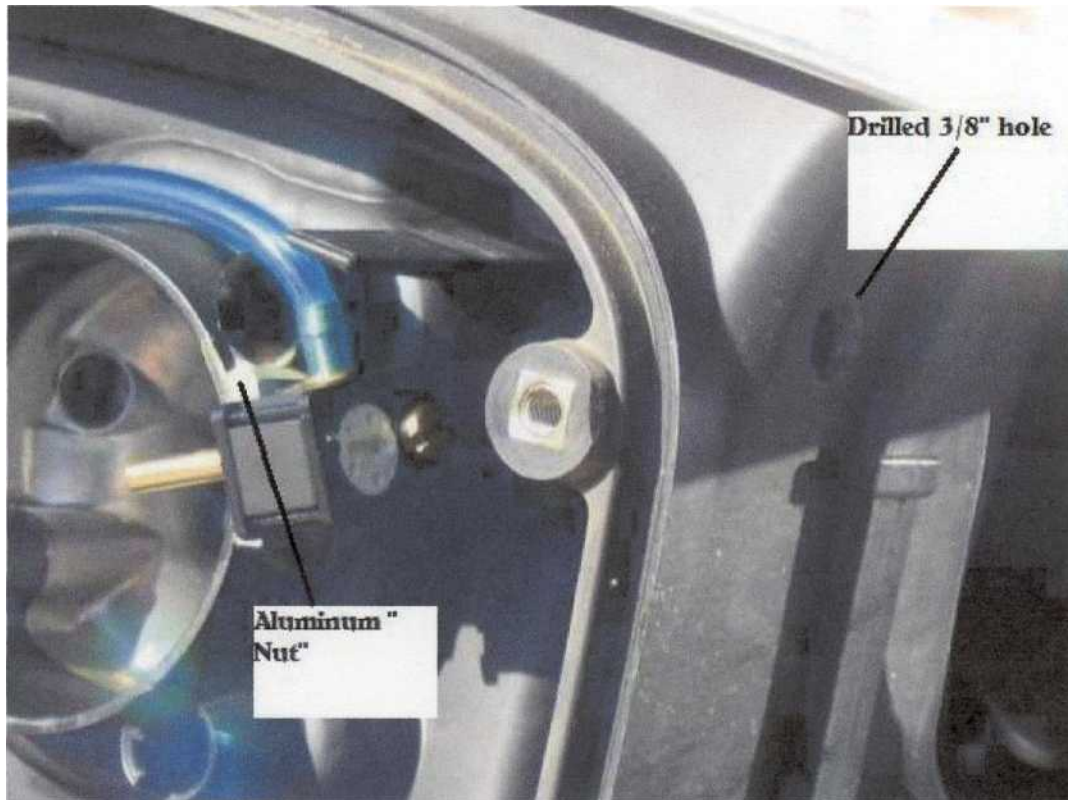
Dial-A-Jet is a very cost effective product. Each kit comes with a complete installation and tuning manual. Thunder Products provides full time expert technical support for all of their products.

CLICK HERE

http://www.thunderproducts.com/dial_a_jet.htm

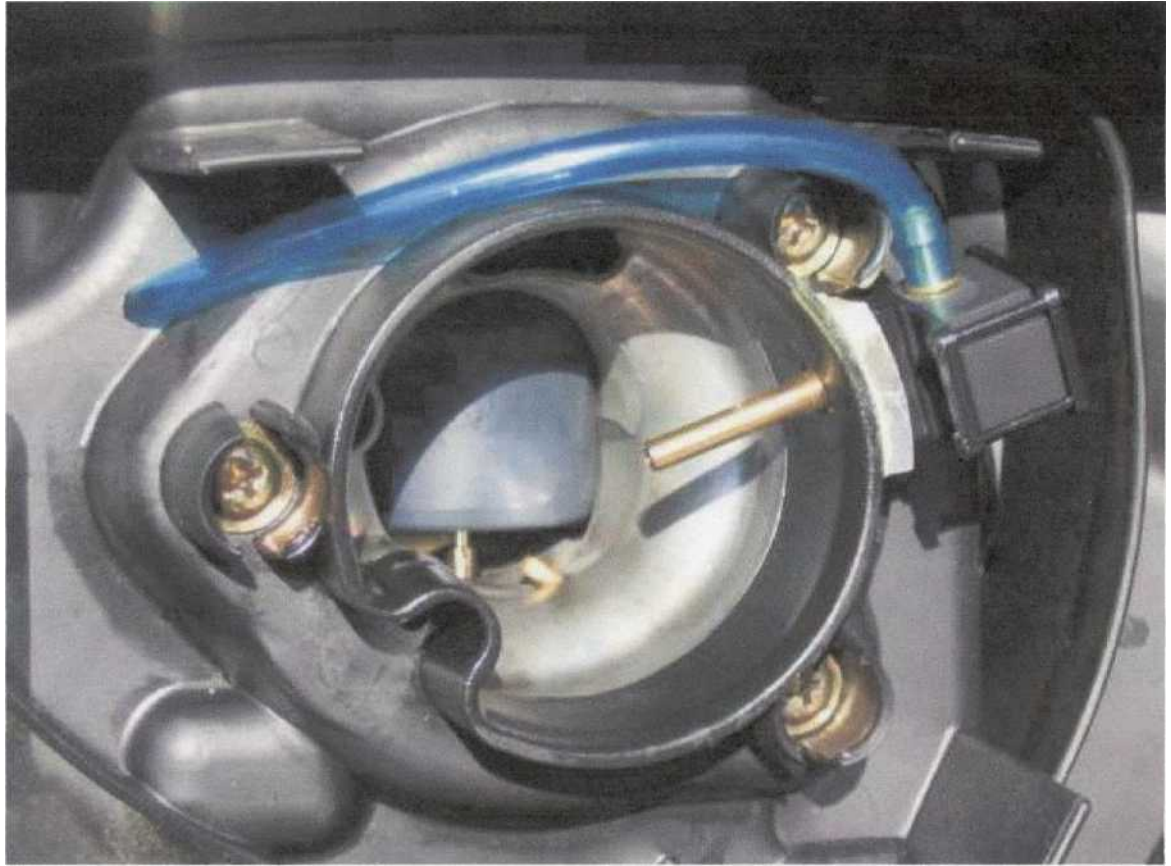
Dial-a-Jet VTX 1300

Upon receiving the Dial-a-Jet kit I found the VTX 1300 had no air cleaner hose from the air cleaner to the carb. I looked at all of the literature which came with the kit and after checking out the pictures I saw a place in which to mount it. I confirmed this with the manufacture and he said the closet to the carb the better. I removed the air box and decided that the Dial-a-Jet wouldn't last long just mounted into the plastic. I measured the diameter of the air horn and decided to make a nut to affix to the plastic. I bored out a piece of aluminum to the same diameter as the outside of the air horn. I then turned the outside of the aluminum to .2" thicker than the inside. I sliced it down to about 3/8" thick so that I had a band at this point. The Dial-a-Jet's delivery tube has a 10-32 thread on it. I drilled a #21 hole in the middle of the band and threaded it. I put the band in a vice and hack sawed a piece off about 4" long with the hole being in the middle of the piece. I screwed in a # 10 screw and "MARKED" a spot on the Plastic air horn. I drilled a 3/8" hole on the outside of the air box so I could drill a straight hole in the air horn. This outside hole also is the adjustment hole for the Dial-a-Jet.



I then drilled a 3/16" hole in the air horn on the previously marked spot. I check that the aluminum nut I had made would line up with the hole. This was done by screwing in the # 10 screw into the nut and placing it in the hole. It all lined up.

The bonding was next. I roughed up the plastic and the nut I left the screw in the nut and put grease on the screw. The grease is to keep the JB Weld off of the threads. I bonded the nut to the plastic and let it sit over night.



The next day I removed the screw and screwed in the Dial-a-Jet. It fit like a glove. I replaced the drain screw with the new one that was provided and drilled a tight hole for the hose. I attached the hose and put the air box back on. I slapped on a new K&N filter and a Mask Cover and was done.

I know that not everyone has access to a lath for making the nut, but I am sure there are other ways to attach it. But if anyone is interested I will send you a "NUT" for 2 bux. .

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