

UNDERSTAND THESE INSTRUCTIONS BEFORE INSTALLING AND KEEP THEM FOR FUTURE OWNERS

Safety Considerations Gasoline is flammable and explosive. Do not smoke or allow open flames or sparks near areas where gasoline is used. If you get gasoline in your eyes or swallow gasoline, get immediate medical attention. If you spill gasoline on your skin or clothing, wash immediately with soap and water and change clothing. Never run the engine in an enclosed area. Exhaust fumes are poisonous and can result in loss of consciousness and death in a short time. When drilling, wear safety glasses. Do not drill where sparks can reach gasoline. To **avoid injury, always check free throttle operation before starting engine. THIS PRODUCT IS NOT FOR AIRCRAFT USE.**

WARNING: Installation and use of this regulator requires mechanical and carb tuning skills and may result in engine damage caused by decreased fuel delivery. We are unable to verify every application and installation of this product; **verify proper fuel flow using EGT, piston, and/or plug readings.** This is your responsibility. Use extra caution in applications having temperature rise extremes (multiple pipes).

Principle of Operation This carb compensator automatically adjusts fuel flow in response to temperature and altitude changes. It has sufficient compensation for 6000-8000 feet of altitude **change** depending on temperature and specific application (modifications). **DO NOT TURN THE COMPENSATOR'S NYLON SCREW** (it does not work like a Tempa Flow) or the internal set screw (except a possible initial adjustment see 2. below). Either action may require factory recalibration.

This product will not work with '01 and '02 Ski Doo twins with Mikuni TM flatslide carbs. Call us for these applications.

INSTALLATION AND USE

1. Determine Existing Carb Venting Carbs have one or more float bowl vent (overflow) fittings. If tubing connects these fittings to the air box, this is **inside air box venting**, for example, Ski-Doo Rev, Yamaha Viper, and most Polaris. For this product, all other venting is **outside air box venting**. (**Caution:** Some earlier Arctic Cat's have enrichment circuit air tubes run to the air box; if so, these are **not** vent tubes and are therefore outside air box vented).

2. Choose a Base Temperature of **-40F** (-40C), **-20F** (-29C), or **0F** (-18C) depending on your minimum operating temperature. If you choose -20F (-29C), do not adjust the **ATACC**. To adjust the compensator's temperature setting, insert an .050" hex key in the compensator's 1/16" brass hose barb hole, mark the location of the hex key on the brass body, **and turn the hex key while holding the brass fitting** the following amount; if you choose -40F (-40C), 1/6 turn **clockwise** (looking at the brass end), if 0F (-18C), 1/6 turn **counterclockwise**. **DO NOT LET THE BRASS FITTING TURN IN THE COMPENSATOR BODY.**

3. Choose a Base Altitude which is the minimum altitude at which you ride and the altitude at which the control chamber is sealed to the compensator (with the **blue tube**). The **ATACC** is able to compensate for up to 10,000 feet (3000 meters) of elevation **change** from your base altitude **when at the base temperature**, but less when above the base temperature. **For normal temperature changes** the altitude adjustment capability is 6000-8000 feet for stock machines, less for modified (piped) machines. If you will be exceeding this altitude capability you may need to establish a new intermediate base altitude with proper jetting changes and removal/replacement of the blue tube.

4. Jet Carbs (main jets **AND NEEDLES**) for your **base altitude and temperature** (including any modifications). TM flatslide pilot circuits may need richened especially if the altitude change is large. Multiple (non-insulated) pipes cause temperature extremes which may require richer jetting than the pipe manufacturer's recommendations when used with this product.

5. Install the Vacuum Source in one carb per attached sheet. **Always before starting engine verify free throttle movement.**

6. Install the Compensator Mount the compensator high above the carbs in the air box. It may be mounted by drilling a 9/16" hole in an air box wall, inserting the outlet end through from the inside, and securing with an approximately 1.75" piece of 1/2" i.d. tubing and a clamp. It may also be cable-tied to an inside wall of the air box. If there is **no air box**, place the compensator in the upper back of the engine compartment away from engine and exhaust heat.

7. The Air Inlet connects to the 1/2" barb on the compensator's side. Inlet tubing if used should not be crimped or restricted and no foreign material is allowed in the inlet; this will cause the engine to run lean.

7a. Outside Air Box Venting (see 1.) **DO NOT LOCATE THE AIR INLET INSIDE THE AIR BOX IF YOU HAVE OUTSIDE AIR BOX VENTING;** this will lean your baseline jetting causing engine damage. Use 1/2" i.d. tubing to locate the air inlet **outside** and behind the box where not exposed to excessive heat. Install the filter to the 1/2" i.d. tubing per the filter's instructions.

7b. Inside Air Box Venting ONLY (see 1.) Locate the air inlet (filter) in the **SAME AIR BOX COMPARTMENT AS THE ORIGINAL FACTORY VENT FITTINGS** not in a high air flow area. If your vents are under a shelf, the air inlet must also be under the shelf. If you have no shelves, anywhere in the box will work. If the compensator is in the correct compartment, the inlet filter may be tie-wrapped directly to the 1/2" inlet barb; if not, use 1/2" i.d. tubing to access the proper compartment and attach the filter to the 1/2" i.d. tubing per the filter's instructions. It is **not** necessary to cap the factory vent barbs.

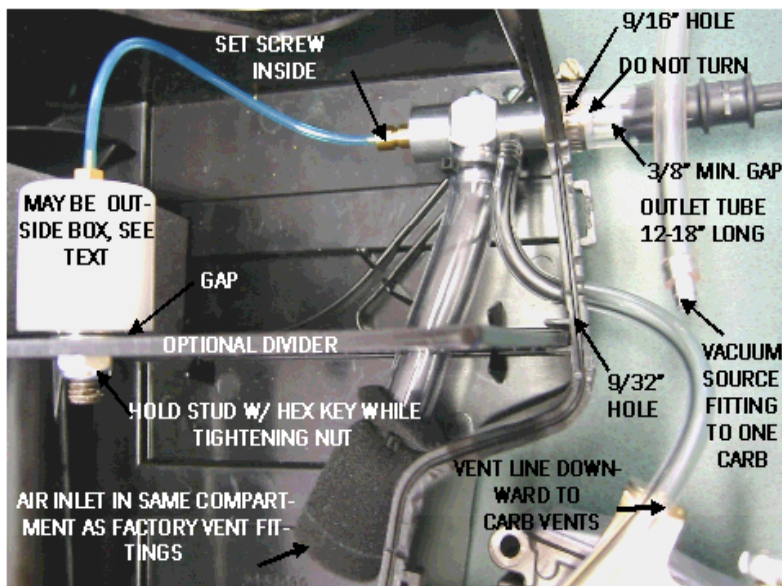
8. Outlet Install the reducer fitting into the 1/2" i.d. tubing on the outlet end of the compensator (see 6.) spaced at least 3/8" from the screw head. Connect the reducer fitting to the vacuum source you installed in 5. using 12"-18" of 1/4" i.d. tubing. (If a 90 degree bend in the outlet is desired near the compensator, the 1/2" elbow can be used to make this bend.)

9. Connect All Carb Vent Fittings to the compensator's side barb using 5/32" i.d. tubing. If you have two vent fittings per carb, install a short piece of tubing to a tee above each carb and then complete the connections. The system must be leak-free. For extreme riding an optional drain system is available. **Tubes should be routed uphill** so they will **completely** drain to carbs. Some carbs have an overflow standpipe drain (some TMX) in the float bowl; if present it must be sealed. If your carb vent fittings are too small for 5/32", tubing, use 1/8" tubing.

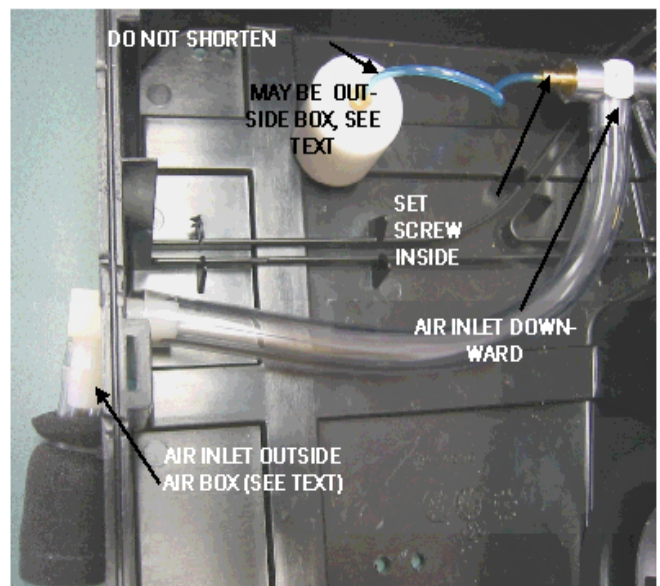
10. Install the Control Chamber in a location which allows connection to the compensator using all (approx. 6") of the blue 1/16" i.d. tubing supplied. It can be installed outside the air box especially if necessary to periodically remove the blue tube to change base altitude (see 3.), or it can be installed inside the box. Drill a 3/8" hole in a flat surface, hold the mounting stud with a 3/16" hex key while tightening the nut. Maintain a gap between the plastic cup and mounting surface; add washers if necessary to maintain this gap. It should be sealed to the compensator with the **blue tube** at any temperature and **AT YOUR BASE ALTITUDE**. This establishes the control chamber pressure at the **base altitude pressure**, and as your altitude increases, the **ATACC** will lean. Replacing the **blue tube** at a different altitude (pressure) will **CHANGE YOUR BASE ALTITUDE**. **If the control chamber is stored at a different altitude than that at which it was sealed**, the internal pressure will approach the external pressure and operation can be affected after about 2 weeks.

11. Proper Fuel Flow Verification Run the engine at several throttle positions at your base altitude and the lowest temperature possible. Adjust carb jetting if necessary. Then check proper jetting at several altitudes and temperatures.

12. Warm Drive-Away After stopping for a break or moving from warm storage, it may be necessary, especially with non-insulated pipes, to delay extended high load engine operation (vary throttle position occasionally) for a couple of minutes to allow the **ATACC** to stabilize.



TYPICAL INSTALLATION FOR INSIDE AIR BOX VENTING (SEE TEXT)



TYPICAL INSTALLATION FOR OUTSIDE AIR BOX VENTING (SEE TEXT)

LIMITED WARRANTY The installation of this device requires mechanical and carburetor tuning skill. Because of the custom nature and the limitless application variables this product is subject to, this product is sold with a limited warranty only. Holtzman Engineering, Inc. makes no warranty of any kind except we will replace this product if found to be defective in material or workmanship for one year from date of purchase. Holtzman Engineering, Inc. will not be held liable for any injuries or damages incurred as a result of the installation or use of this product nor the parts this product may affect.