Next, the *atomizer* is discussed since it goes hand in hand with the needle.
The atomizer can be described simply as the conduit that allows the fuel to pass from the float bowl to the venturi where it is atomized and directed to the engine. The needle is enclosed by the atomizer thus allowing the proper metering of fuel beyond ¼ throttle as needle is moved up or down by driver

The atomizer has two basic functions:

1. **In conjunction with the needle it meters fuel to the engine for throttle positions from ¼ to WOT. The number on the atomizer is the I.D. in mm. I.E. 266 is 2.66mm.**

2. **The atomizer can also time the fuel (when the TV is opened) depending on the length of the atomizer tip. The short tip (DP) allows fuel to get to engine sooner and is considered richer. The longer tip (DQ) holds back fuel a bit and is considered leaner.**

It also should be mentioned that when using the K98 needle the affective atomizer size is now reduced by .02mm, in effect changing a 2.66mm atomizer to 2.64mm.

Next, the *throttle valve* can be introduced as a tuning component. The feature used for changing incoming air to the venturi section is the TV cutout. The carburetor used on the Rotax Max has (4) cutouts to choose from – 4.0mm (std), 4.5mm, 5.0mm and 5.5mm. The cutout variation is primarily to allow a carb with a very rich condition at low throttle opening to be leaned by using a taller cutout. This matches the rich condition with more airflow. Since the standard valve is a 40 then the only way to go is up.

Finally the *floats* – fuel arriving from the tank is held in a constant level float chamber by means of the needle valve, which is actuated by the raising and lowering of the floats as fuel is required by the engine.

If it is determined that the fuel is either too excessive or too little two methods can used to tune or correct condition.

1. **If fuel is excessive or rich, choose a lighter float or a heavier float if too little or lean**
2. **Or, the float actuating arm can be slightly bent up from the straight or parallel position to richen or bent slightly down to lean**

The transition of fuel from bowl to engine is also affected by the weight of the floats. Lighter floats allow fuel transfer sooner for quicker acceleration but mixture is leaner. Heavier floats react slower slowing the fuel transfer and the mixture is richer