



SuperTrapp tuneable discs, open and closed end caps.

**THE ORIGINAL TUNEABLE MUFFLER**

SuperTrapp mufflers increase power by improving exhaust flow due to a scavenging effect invented by physicist Dr. Paul Moller more than 30 years ago (U.S. patents 4,113,051 and 4,424,882). Here's how it works: the gap between each disc ranges from .023 inches wide on the inside of the muffler, to .027 inches on the external open edge. As hot exhaust gases pass through the discs to exit the muffler they enter a larger area, creating a slight pressure drop as the gas expands, creating a scavenging effect for the hot gas still inside the muffler. It is these discs that also function as a spark arrestor.

**SOUND** Generally SuperTrapp mufflers have a deep, aggressive throaty tone. The internal design eliminates higher frequency sounds in particular. Generally, longer body and larger diameter mufflers will be quieter than shorter and smaller diameter mufflers. The more SuperTrapp discs you use, the louder the exhaust will be because the exhaust opening increases. Use fewer discs, and the exhaust will be quieter.

**SPARK ARRESTORS** Besides reducing noise, our discs function as United States Forest Service approved spark arrestors (USFS T-102), making them a safer choice for off-road vehicles. Using an open end cap negates the U.S. Forest Service spark arrestor capabilities that many federal and state laws currently require.

**CORES & REPACKING** A firmly packed SuperTrapp exhaust equipped with a 2-1/2" diameter core will maintain the same flow characteristics as the 2-1/2" diameter exhaust tube that flows into it. However, if the material surrounding the perforations of the core tube is removed or severely worn, it allows the exhaust to flow in and out of the perforations. This in-and-out movement introduces unwanted turbulence into the exhaust path, consequently, this can harm the flow and performance (horsepower). Additionally removal of the packing can damage the core and also increases the chance of discoloration of the muffler body.

You might want to consider re-packing when you notice your exhaust is getting louder. SuperTrapp's IDS2, ID SX, and Automotive series along with the Kerker's Performance Series are packed with space age ceramic packing. If you are repacking an older pipe, you might want to consider upgrading to the new packing. This will provide a slightly deeper sound and lower the volume.

**NUMBER OF SUPERTRAPP DISCS TO USE** The number of discs you use depends on your application: displacement, disc diameter and power band. Fewer discs reduce sound levels, increase low-end torque and richen carbureted fuel mixture. More discs increase sound levels, increase top-end power and lean out carbureted fuel mixture. Generally on a stock set up (no engine mods, stock carb and air filter) you can start with 6-8 discs on the Dirt bikes and ATV's, on the Harley's start with 12 discs. Remember that altitude, humidity and the state of tune of the bike affect how many discs you will use.

One misconception is that the more free-flowing an exhaust system is, the more power it makes, which is not true. Some back pressure (2-3 PSI) is necessary for maximum power and that it why it is necessary to use the discs with your SuperTrapp.

**ADD DISCS TO:**

- Increase the exhaust opening.
- Increase the sound level.
- Increase the powerband for more top end power.
- Lean out the carburetion.



**REMOVE DISCS TO:**

- Decrease the exhaust opening.
- Decrease the sound level.
- Decrease the powerband for more bottom end torque.
- Enrich the carburetion.



**IT'S SIMPLE PHYSICS AND MATH: A QUANTITY OF GAS EXPANDING TO FILL A LARGER VOLUME RESULTS IN A REDUCTION OF PRESSURE, AND AS THE CIRCUMFERENCE OF A CIRCLE INCREASES ITS AREA INCREASES BY A MUCH GREATER AMOUNT.**

**AS THE WIDTH OF A COMPETITOR'S OVAL DISC INCREASES, ITS AREA INCREASES BY LESS THAN TWICE AS MUCH SO THE GAS HAS LESS ROOM TO EXPAND.**

**GO FIGURE.**

