

Muscle Pipe Instructions

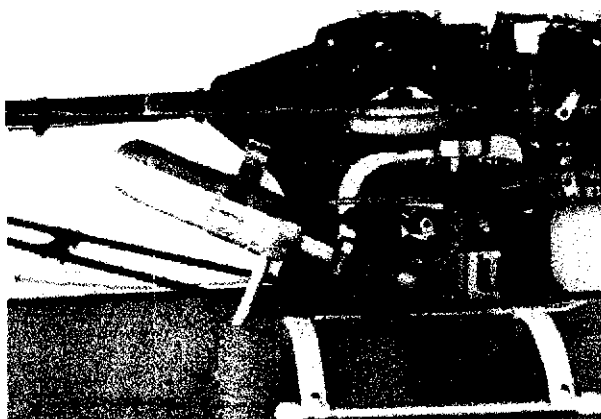
Advantages- The muscle pipe will increase the available power of OS and other engines (running 30% nitro fuel) by 0.3 to 0.5 HP (15-25%). The Muscle pipe will also help control the engine RPM because of its aggressively steep power curve. The Muscle pipe does all this while still maintaining a hovering dB level around 88 dB (@ 1650 RPM from 3m). This noise is well within contest limits.

Pipe length – the muscle pipe header is already cut the proper length for the OS SX WC. Just put an 1/8 inch gap between the pipe and the header (each in their stock lengths) and the pipe will be tuned.

RPM range-The power curve of the Muscle pipe is very steep in comparison to standard bolt on mufflers. The Muscle pipe's power curve is also centered around a lower engine rpm than most mufflers. To get the most out of the Muscle Pipe it is important to understand the optimum RPM range to fly in. Below is a quick chart of the optimum RPM settings for different gear ratios. (Best gear ratio 9 – 9.5)

<u>Gear Ratio</u>	<u>Flving RPM</u>	<u>Load RPM (heavy aerobatics)</u>
9 to 1	1800-1850	1700-1750
9.3 to 1	1750-1800	1650-1700
9.5 to 1	1700-1750	1600-1650

Mixture- For aerobatics and hovering it is good to run the mixture on the rich side. If it is run lean the engine tends to misfire and pop loudly. Also a lean run will tend to wear the engine badly.



Pipe mounting- Use the steel mounting strap with the silicon insulating sheet between the strap and the pipe. It is best to place the strap on or near the weld seam line on the pipe. I then clamp the steel strap to a block of wood that is then bolted to the sideframes or clamped to the tail boom. It is important to use the silicon sheet and the wood to help reduce possible radio interference problems from metal to metal noise.

Also, do not tie down the exhaust stinger. The stinger will fatigue if tied down.

Coupler- I have found the Aerotrend Ultra Blue coupler #1039 to last the longest. You need about a 2 inch long section of coupler for the pipe. With an 1/8 inch pipe/header gap the coupler should last about 40 flights. When using tie wraps to hold the coupler to the pipe and header, make sure to retighten the tie wraps after the first few flights. The tie wraps will loosen under the heat initially and the pipe may tend to move and hit the header or come off.

Initial check and cleaning- When you first receive the Muscle pipe. Shake the pipe to make sure there is no loose material in the pipe. Any loose material can be shaken out the main intake tube. Also push a 0.062 inch (1.5mm) drill bit through the exhaust pressure tap hole to make sure it is clear.

When you first receive the pipe or after much use the muscle pipe can be cleaned with a fine steel wool. SOS pads work especially well for cleaning.

I hope this helps answer a few questions about the Muscle pipe Curtis