

# Installation Instructions for model TSI-1-2.1 Spark Arrestor for KTM-Husqvarna-GasGas TPI & TBI 2-Stroke

- **Tools Required:** Torx T25 wrench, drill motor & SHARP 3/16" drill bit (included), small punch, rubber mallet, hack saw (fine tooth blades of about 32TPI work best), vice, 8mm socket, silicone sealant, contact cleaner, file, sharpie marker, box knife, straight edge, 2X4 or other wooden punch roughly 24" long to knock out End Cap from inside of Can.



1) Remove the CLEAN silencer from the bike.



**Figure 1**-Pop rivet head drilled out.



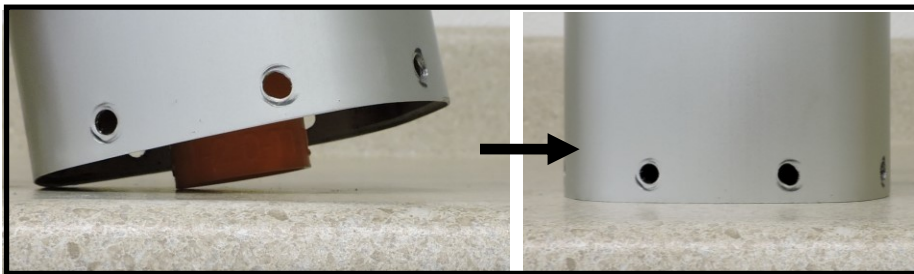
**Figure 2**-O- ring & measurement tool installed on Perforated Tube.

2) Drill out the 7 pop rivets that hold the End Cap on (Figure 1). Use a small punch to knock out any pop rivets remaining in the End Cap.

3) Remove the 7 Torx T25 head screws from the Inlet Cap end of the Can & set aside, they will be used for re-assembly.

4) Remove the inlet assembly (Inlet Tube, Inlet Cap, O- ring, Perforated Tube) & packing from the Can by pulling on the Inlet Tube while holding the Can, it may take a few light blows with a soft hammer to come loose. After removing the inlet assembly the End Cap may be accessed from the inside of the Can and knocked out using a 2X4 or other wooden tool. Note that the End Cap fit may be tight.

5) If the Packing came out with the Perforated Tube slide it off of the tube (a little twisting helps) & set it aside if it is in good condition and you plan to re-use it.



**Figure 3**-Installation tool being positioned by setting the end of the Can on flat surface.



**Figure 4**-Sharpie marking cut location.

6) Using the provided tubular measurement tool (orange for 250-300cc & white for 125-150cc) & O-ring, measure & mark the Perforated Tube for cut location. Begin by sliding the O-ring & then measurement tool onto the Perforated Tube so that the tool is roughly 1" past the end of the Perforated Tube (Figure 2). Next install the inlet assembly back into the Can. Install 2 of the Inlet Cap screws on opposite sides

of the Can to hold the assembly in place. To position measurement tool, set the end of the Can on a flat surface (Figure 3), this will push the measurement tool flush with the end of the Can for correct measurement location. Remove the 2 screws & slide the Perforated Tube out of the Can being careful not to move the measurement tool or O-ring. Using a sharpie marker mark the circumference of the Perforated Tube on the side of the O-ring closest to the Inlet Cap (Figure 4).



**Figure 5**-Box knife cutting of silencer Packing. **Figure 6**-Checking screw hole locations in Can.

7) Being careful not to crush the Perforated Tube, mount it in a vice & cut **ON** the sharpie mark, if anything, err on leaving the Perforated Tube a little longer than the mark suggests. Round the sharp edges of the cut, both on the inside & outside of the tube using a file, this will ease installation later.

8) Next cut 5" off existing silencer packing length to make room for the spark arrestor. Most silencer packing is easiest to cut if you flatten it between a cutting surface and straight edge & use a box knife to cut (Figure 5).

9) Place the supplied introducer bullet tool (orange for 250-300cc & white for 125-150cc) in the end of the Perforated Tube & slide it into the Packing, then remove the introducer tool (put it in your tool box, it will be handy for future silencer re-packs). Verify that the silencer Packing does not extend beyond the Perforated Tube; if it does, either compress it slightly (slide it down further on the Perforated Tube) or re-cut it. Verify the Inlet Cap O-ring is in place, if it is damaged or missing a replacement is provided (inlet & outlet O-rings are the same size).

10) Check the fit of the spark arrestor by sliding it into the Can (Figure 6) with the supplied O-ring fitted on the spark arrestor so that the O-ring fits in the groove on the end of the silencer. If the spark arrestor will not slide all the way into the Can; note where the interference is on the inside of the Can and use a file, belt/disc sander, or grinder to remove material from the interfering surfaces. Next check the Can hole locations (Figure 6), variability in Can hole location (they are all slightly different) may leave threads partially obscured & make it difficult to start the screws. If this is the case use a drill, file, or Dremel tool to adjust the Can hole location and get all 7 screws started into the spark arrestor.

11) With spark arrestor & the 7 screws in place: check the inlet assembly fit by sliding it into the other end of the Can, note that the Perforated Tube must slide into the spark arrestor inlet hole so some manipulation of the inlet assembly may be required to get it to slide in all the way. Some Inlet Cap fits with the Can are very tight & may require a rubber mallet to insert it all the way. Verify Inlet Cap screw holes all align & screws may be started. Some of the Perforated Tubes may not be welded perpendicular to the Inlet Cap making the Inlet Cap not fit flush with the end of the Can & obscuring the screw holes. If this is the case mark where Inlet Cap is not fitting square to the Can & bend the Perforated Tube in the appropriate direction to allow the Inlet Cap to fit square to the Can. To make the bend: insert a mandrel into the Perforated Tube to prevent buckling/crushing (like a broom handle or bicycle seat post) & clamp the Perforated Tube in a vice near the Inlet Cap & strike the Inlet Cap with a rubber mallet in the appropriate orientation to get the desired bend.

12) After assembly fit check, clean the ends of the silencer Can & Inlet Cap where they will contact each other. Apply sealant to the Inlet Cap & spark arrestor where they will contact the Can ends. The sealant also serves to lubricate O-rings & ease assembly.

13) Re-insert spark arrestor, apply blue Loctite to screws and start them in threads by hand. Next insert the inlet assembly with Packing & start these screws by hand. Tighten all 14 Torx screws.

14) Reinstall the silencer and go roost.

**CLEAN OUT & MAINTENANCE:** To clean out the trapped material remove & clean the spark arrestor when re-packing the silencer. To remove & clean the spark arrestor: (1) remove the 7 Torx T25 screws that hold on the End Cap / spark arrestor assembly & slide the assembly out of the Can. (2) Clean the spark arrestor & the inside of the Can with an appropriate solvent (WD40 & a tooth brush work great), then reinstall spark arrestor per step 13.

**CLEANING WARNING: DO NOT USE** degreasers with sodium hydroxide i.e. Purple Power, etc. These cleaners will attack the aluminum & anodized surfaces & make the anodized colors fade. Use regular household detergents (like Dawn) & WD-40 as a degreaser.

**\*PATENTED & USFS APPROVED\*** **MATERIALS:** CNC machined 6061-T6 Aluminum, roll formed/laser cut steel, precision cast stainless steel. **WEIGHT:** 556grams (19.6oz) **INSTALLED WEIGHT (weight less stock parts replaced/shortened):** 174grams (6.1 oz) **APPLICATIONS:** 2020-2025 KTM/Husqvarna/GasGas TPI & TBI 2-strokes.