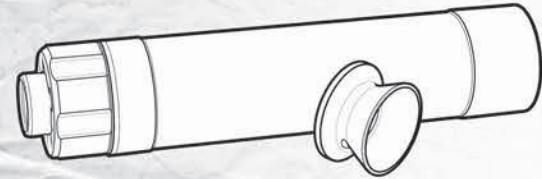


Ti-RANT™

TAKE APART SILENCER TECHNICAL MANUAL



Ti-RANT MODELS 9, 9S, 45, & 45S

▲ IMPORTANT

The Ti-RANT Series are ultra-high-performance sound and flash suppressors designed for use on MODERN semiautomatic pistols and pistol-caliber small arms in serviceable condition. We guarantee reliable semiautomatic operation only with host firearms featuring mechanical configurations that are within FACTORY SPECIFICATIONS used in conjunction with FACTORY LOADED SUBSONIC AMMUNITION. The Ti-RANT Series has been redesigned to enable users to completely remove the baffle stack for cleaning and maintenance.

CONSTRUCTION

The Ti-RANT Series are constructed of a combination of titanium, stainless steel, and anodized aluminum components.

NOTES ON PERFORMANCE

All models in the Ti-RANT Series deliver outstanding sound reduction when shot dry with subsonic ammunition. The K-baffles used in the Ti-RANT Series will retain a 5cc charge of water or other ablative media to further improve performance and reduce muzzle and ejection port flash. Light oil, wire-pulling gel, and ultrasound gel may also be used. Gels and more viscous ablatives should be added from the rear of the silencer. Water may be poured into the rear of the silencer or added by immersing the silencer and shaking out the excess.

1. Remove the magazine from the host weapon, retract the slide or bolt and lock it to the rear. Engage the manual safety (if applicable). Visually and physically inspect the chamber to ensure it is empty and the host weapon is safely unloaded. Remove thread protector from barrel (if present).
2. Wind the silencer onto the barrel threads hand-tight until the silencer shoulders fully onto the barrel. Special care should be taken to avoid cross threading the silencer and barrel threads. NOTE: A.S.A.P. adapters are available to fit a variety of popular right-hand and (Continues)

front baffle. Rebuild the stack by first placing the front baffle on a level surface so that the cone is facing down. On top of the front baffle assemble the four center baffles so that the exhaust ports of all five baffles are in-line. The last baffle to be added is the blast baffle. Place it at the top of the stack with the



exhaust port in-line with the adjacent center baffle. A properly assembled Ti-RANT 45S baffle stack will look like the figure above

REASSEMBLING THE Ti-RANT SILENCER

Slide the body of the Ti-RANT silencer onto the assembled baffle stack. The stack goes into the tube with the flat face of the stainless blast baffle towards the ASAP system. Some variants of the Ti-RANT silencer will have an o-ring in the front end cap. Inspect this o-ring and replace it if it has become worn or frayed. Apply a small amount of grease or anti-seize compound to the exposed surface of the installed o-ring and the threads on the front end cap. Reinstall the front end cap using the supplied end cap spanner. Install the assembled A.S.A.P. system in the rear of the silencer.

ADJUSTABLE ZERO FEATURE

The design of the Ti-RANT Series enables users to make small adjustments to the projectiles' point of impact by varying the rotational orientation of the silencer in 36° increments with respect to the barrel of the host firearm.

1. Remove the magazine from the host weapon, retract the slide or bolt and lock it to the rear. Engage the manual safety (if applicable). Visually and physically inspect the chamber to ensure it is empty and the host weapon is safely unloaded.
2. Wind the silencer onto the barrel threads hand-tight until the silencer shoulders fully onto the barrel. Special care should be taken to avoid cross-threading.
3. Load the weapon and fire a group at a target. Note the difference between the point of aim and the point of impact. Unload the host weapon by first removing the magazine, retract the slide or bolt and lock it to the rear. Engage the manual safety (if applicable). Visually and physically inspect the chamber to ensure it is empty and the host weapon is safely unloaded.
4. While holding the host firearm in one hand, use the other to pull the silencer body away from the host weapon approximately ¼" and rotate the silencer 1/10th turn clockwise (for right hand threads) or counterclockwise (for left hand threads). Release the silencer body, which will snap back into place.
5. Check that the silencer is still threaded securely to the host weapon, reload, and shoot another group. Repeat as necessary until the desired point of aim/point of impact is achieved.

FIXED BARREL WEAPON SPACER

Ti-RANT Series silencers can be employed on fixed barrel semi-automatic pistols and pistol caliber small arms IF the driving spring is replaced with the available Fixed Barrel Weapon Spacer.

1. Unscrew the A.S.A.P. adapter housing assembly from the rear of the silencer.
2. Remove the A.S.A.P. adapter and driving spring.
3. Swap the driving spring for the Fixed Barrel Weapon Spacer.
4. Reassemble the A.S.A.P. adapter housing and re-install it in the silencer.

▲ **WARNING – DO NOT use any Ti-RANT Series silencer on fixed barrel semi-automatic host weapons without first replacing the driving spring with the optional Fixed Barrel Weapon Spacer.**

O-RINGS

Ti-RANT Series silencers with A.S.A.P. adapters threaded M13.5 x 1 LH, M14.5 x 1 LH, .578-28 RH, M16 x 1 RH, and M16 x 1 LH have a high temperature Viton™ o-ring inside the A.S.A.P. adapter that helps prevent inadvertent unscrewing during use. Some Ti-RANT variants will also have an o-ring on the exterior of the front end cap. Inspect the o-rings and replace them if they become worn, frayed, or broken. Replacement o-rings can be purchased from McMaster-Carr (www.mcmaster.com or 630-600-3600).

MODEL	LOCATION	O-RING SIZE	McMaster P/N
Ti-RANT 9	PIST.HSG.	3/4" O.D. X 1/16"	1201T27
Ti-RANT 45	PIST.HSG.	7/8" O.D. X 1/16"	1201T29
Ti-RANT 9	M13.5 PISTON	14mm O.D. X 1.0mm	9263K287
Ti-RANT 45	M14.5 PISTON	16mm O.D. X 1.5mm	9263K123
Ti-RANT 45	M16 PISTON	16mm O.D. X 1.0mm	9263K112
Ti-RANT 45	.578-28 PISTON	17mm O.D. X 1.0mm	9263K552
Ti-RANT 9 & 45	FRONT END CAP	34mm O.D. X 1.5mm	9263K598



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REV 5.0 NOV 2012
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left-hand barrel threads. Each A.S.A.P. adapter is marked on the rear of the adapter shaft with the thread identification and installation direction.

- Since thread-mounting silencers are known to unscrew during use, **IT IS THE RESPONSIBILITY OF THE USER TO ENSURE THE SILENCER REMAINS SECURELY THREADED ONTO THE BARREL.** Please note the silencer will be very hot during and after firing. Wear a heat resistant glove to check and retighten the silencer during use.

⚠ WARNING – Before removing the silencer from the host pistol for cleaning or maintenance, remove the magazine, retract and lock open the slide or bolt, engage the manual safety (if applicable), and visually and physically inspect the chamber to ensure it is empty and the host weapon is safely unloaded.

DISASSEMBLING AND MAINTAINING THE A.S.A.P. SYSTEM

It is recommended that users disassemble and clean the A.S.A.P. System after every 500 rounds of use.

- Unscrew the A.S.A.P. adapter housing assembly from the rear of the silencer body. The A.S.A.P. adapter can be extracted from the housing by pushing it forward from the rear. With the A.S.A.P. adapter removed, the driving spring will fall free of the A.S.A.P. adapter housing.
- Clean carbon deposits from the bore and exterior of the A.S.A.P. adapter housing using a piece of solvent-moistened Scotch-Brite™ – **⚠ WARNING – DO NOT use sandpaper or emery cloth to clean any part of a Ti-RANT Series silencer. Abrasives other than Scotch-Brite™ may damage the precision surfaces and result in increased friction between the moving parts.**
- Clean carbon deposits from the exterior of the A.S.A.P. adapter shaft and the points on the A.S.A.P. adapter head where it contacts the bore of the A.S.A.P. adapter housing.
- Use a plastic toothbrush and solvent to clean the driving spring.
- Using a plastic toothbrush and solvent, clean loose carbon from the interior of the A.S.A.P. adapter housing interface permanently installed in the rear

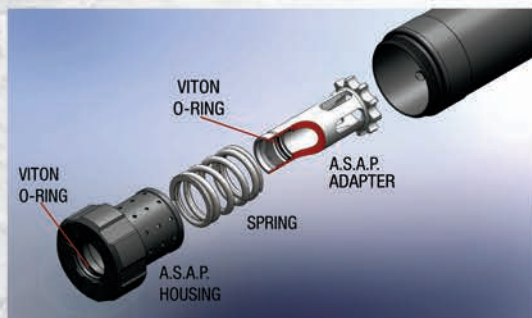


Figure 1

of the silencer body.

- Check and if necessary replace the high temperature Viton® o-rings situated in the rear of the A.S.A.P. adapter housing assembly and in the rear of the A.S.A.P. adapter. See Figure 1.

REASSEMBLING THE A.S.A.P. SYSTEM

- Place the driving spring around the A.S.A.P. adapter shaft.
- Apply a small amount of grease to the high temperature Viton® o-ring situated in the rear of the A.S.A.P. adapter housing assembly.
- Replace the A.S.A.P. adapter and driving spring in the A.S.A.P. adapter housing assembly.
- Apply a small amount of grease or anti-seize compound to the interface threads on the rear/exterior of the silencer body.
- Thread the A.S.A.P. adapter housing assembly onto the interface threads at the rear of the silencer.

DISASSEMBLING AND MAINTAINING THE BAFFLE STACK

- Unscrew and remove the A.S.A.P. adapter housing assembly, A.S.A.P. adapter, and spring from the rear of the silencer.
- Using the supplied end cap spanner tool, remove the front end cap.
- Stand the silencer muzzle-end-down on a padded or wooden work table. Insert a 5/8" wooden dowel from the rear of the silencer, through the A.S.A.P. interface, and up against the rear face of the blast baffle.
- Using a hammer, gently tap the baffles forward. Once the initial carbon bonds are broken, users may be able to push the baffles out with hand pressure using the 5/8" wooden dowel.

NOTES ON Ti-RANT SERIES BAFFLES

The baffle stacks of all Ti-RANT variants are composed similarly, with a SCARmor™ coated stainless steel blast baffle, a unique quantity of center baffles, and a front baffle. The rotational orientation of the baffles is unique for each of the four variants and is controlled by notches and tabs on the baffles. Blast baffles are easily identified by their weight (steel vs. aluminum) and the presence of a pressure relief hole in the rear face and a notched front cone. Center baffles can be identified by the presence of notches in the front cone and tabs on the rear face. The front baffle is designed so that the front cone nests within the front end cap. As such, the front baffle will have tabs on the rear face but no corresponding notches in the front cone.

CLEANING THE BAFFLES

Clean accumulated fouling from the baffles using a plastic bristle brush and a solvent such as lacquer thinner or acetone. Use solvents only in a well

ventilated area away from open flames and protect your skin and eyes with disposable gloves and safety glasses.

REASSEMBLING THE BAFFLE STACK

> Ti-RANT 9mm FULL SIZE

The Ti-RANT 9mm has a total of eight baffles: a blast baffle, six black anodized aluminum center baffles, and a black anodized front baffle. Rebuild the stack by first placing the front baffle on a level surface so that the cone is facing down. On top of the front baffle assemble three center baffles so that the **exhaust ports of all four baffles are in-line.** On top of these baffles add the three remaining center baffles with **the exhaust ports oriented 180° from the exhaust ports on the bottom four baffles.** The last baffle to be added is the blast baffle. Place it at the top of the stack with the exhaust port in-line with the adjacent center baffle. A properly assembled Ti-RANT 9mm baffle stack will look like the figure to the right.



> Ti-RANT 45 AUTO FULL SIZE

The Ti-RANT 45 has a total of nine baffles: a steel blast baffle, four black anodized aluminum center baffles, three light grey anodized aluminum center baffles, and a black anodized front baffle. Rebuild the stack by first placing the front baffle on a level surface so that the cone is facing down. On top of the front baffle assemble the three light grey anodized center baffles so that the **exhaust ports of all four baffles are in-line.** On top of these baffles add the four black anodized aluminum center baffles with the **exhaust ports oriented 180° from the exhaust ports on the bottom four baffles.** The last baffle to be added is the blast baffle. Place it at the top of the stack with the exhaust port in-line with the adjacent center baffle. A properly assembled Ti-RANT 45 baffle stack will look like the figure to the right.



> Ti-RANT 9S and Ti-RANT 45S

The Ti-RANT 9S has a total of four baffles: a blast baffle, two black anodized aluminum center baffles, and a black anodized front baffle. Rebuild the stack by first placing the front baffle on a level surface so that the cone is facing down. On top of the front baffle assemble the two center baffles so that the exhaust ports of all three baffles are in-line. The last baffle to be added is the blast baffle. Place it at the top of the stack with **the exhaust port in-line with the adjacent center baffle.** A properly assembled Ti-RANT 9S baffle stack will look like the left hand figure on the next page. The Ti-RANT 45S has a total of 6 baffles: a blast baffle, four black anodized aluminum center baffles, and a black anodized