

V-Mach Custom Rifles Limited

PO Box 4582, Stourbridge, West Midlands, United Kingdom, DY8 3WT
Telephone: +44 (0)7850 296360 Email: v-mach@air-rifle-tuning.com



HW97 V-Tech Silencer and RACE Muzzle Brake Fitting Instructions

Disclaimer

Thank you for purchasing one of our custom V-Tech Silencer/Retrofit **Airflow Component Exchange Brake** units. The unit supplied is of the same high quality as fitted to our tuned and custom rifles.

We recommend that, if possible, Silencer/Brake units should be fitted by a competent gunsmith. We do not accept any responsibility for personal injury or rifle damage incurred whilst fitting this unit.

If you are unsure that you would be able to carry out any of the modifications with confidence, please contact us or arrange for us to fit for a nominal charge.

Pre-Fitting Checks

- Please read the fitting instructions and disclaimer thoroughly.
- Ensure that you have the correct unit to suit your rifle.
- The HW97 has 2 variants of factory silencer arrangement:-
 - The later HW97 has a flush fitting silencer/catch arrangement. This is compatible with the Silencer/Brake unit.
 - The earlier Mk1 unit has a catch arrangement midway down the silencer unit. This earlier version is not easily removable and the Silencer/Brake unit is not compatible as a DIY modification. Please contact us for more information.
- Note: Your HW97 cocking lever has a spring loaded plunger, the catch assembly should contain a countersunk hole to accommodate. If on fitting the location of the Silencer/Brake unit is set too close to the cocking lever, tension on the sprung lever end will make it very difficult to release. It is possible to modify this lever to a fixed countersunk end similar to the early HW77. We can provide components to modify the later style sprung lever to the same specification as the earlier models. This is generally carried out in the workshop when fitting a Silencer/Brake unit to new rifles, as the ball bearing catch and the solid end lever offer a smoother operation. However components and fitting instructions can be provided for DIY modification at a cost of £9.95.

Fitting of the V-Tech Silencer

- 1 To remove the original factory silencer, first remove the stock, the scope and any accessories.
- 2 Tap out the pivot pin that retains the cocking lever and remove the unit complete.

- 3 Remove the grub screw that is partially retaining the silencer on the barrel (2mm key required).
- 4 The silencer unit is glued in place and needs sufficient heat applying to the silencer body to destroy the hold of the glue. This will need to be carried out with the aid of a small blow lamp. Do not apply heat directly onto the rifle's barrel as this can discolour the rifle's finish.
- 5 Allow the unit to cool, then apply a small amount of WD40 or similar into the grub screw hole and around the silencer/ barrel joint to aid removal. The silencer should be gripped in a padded vice and the rifle held and twisted and pulled from the silencer unit.
- 6 You may need to repeat step 4, 5 and 6 if the glue was not sufficiently destroyed on the first attempt.
- 7 Locate the V-Tech Silencer unit over the barrel and align the catch assembly to your reattached cocking lever. Tighten the grub screw towards the rear of the silencer. Once correct tension is obtained use the washers supplied if required to pack out the silencer (they fit inside the silencer's bore if the silencer locates too far). We recommend that once satisfied with fixture, the unit is fitted with a semi-permanent Loctite solution.

Fitting of the RACE Muzzle Brake

- 1 Follow steps 1 – 7 for Fitting of the V-Tech Silencer above.
- 2 Locate the RACE Muzzle Brake over the barrel and align the catch assembly to your reattached cocking lever. Tighten the grub screw towards the rear of the brake. Once correct tension is obtained tighten the grub screw sufficiently to leave a witness mark on the barrel. Remove the brake and file a slot across the barrel sufficiently deep to allow the grub screw to locate in once the muzzle brake is refitted. This method is necessary because unlike the silencer unit, there are no baffles for the barrel to locate against which would help prevent any rearward movement of the muzzle brake under recoil. We still recommend that the unit be fitted with a semi-permanent Loctite solution.

Retrofit Airflow Component Exchange Sequence



Picture 1: To remove the muzzle plug with the Allen key provided (1/4"), the front fixing bolt, that retains the brake catch to the body, must be removed. A 3mm key is required. The refitting is aided by a secondary location peg, which helps realignment. Also shown are countersunk fixing (std) and alternative ball bearing fixing. It is important to keep the threads of both muzzle plug and brake body free of any contamination. The muzzle plug is only partially broached to accept the Allen key. Apply forward pressure to the Allen key as it is used to screw and unscrew the muzzle plug to prevent "rounding off" the hexagonal internal broach.



Picture 2: The components are assembled in the sequence shown above, open end in first. When all 3 components are inserted, the O ring is fitted and the disk last. The holes in all sections are threaded to allow the tool provided to screw in for ease of removal. The fit of the components should not be tight on the outside. Keep components clean. A small amount of O ring compression is felt on final tightening .

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