

## V-Mach Custom Rifles Limited

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# HW77 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 experience any difficulties in fitting the unit, please contact us.

## Pre-Fitting Checks

- Please read the fitting instructions and disclaimer thoroughly.
- Ensure that you have the correct unit to suit your rifle.
- The HW77 has 3 variants of front sight/cocking lever release and 2 types of cocking lever end.
  - If your HW77 cocking lever end is a solid section with a small countersunk hole, you should have a ball bearing fitted to the catch assembly of your Silencer/Brake unit.
  - If your HW77 cocking lever has a spring loaded plunger (latest type), the catch assembly should contain a countersunk hole to accommodate.
- If your unit is incompatible, please contact us on 07850 296360 or at [v-mach@air-rifle-tuning.com](mailto:v-mach@air-rifle-tuning.com) for a replacement.

## Fitting for Early Models – Solid Lever End

- 1 Check that the rifle is uncocked and unloaded.
- 2 Remove stock, scope and fittings. Tap out cocking lever pivot pin and remove lever complete.
- 3 Depending on the age of your rifle, the front sight will be fitted with a ball bearing or sliding latch (later variant). To remove ball bearing style front sight, heat sufficiently to destroy retaining glue and tap off using a block of wood and hammer or mallet (use protective clothing, eye protection and take care not to hit the rifle barrel or action). Allow to cool.
- 4 Remove the raised 'ear' and any knurling on the barrel sufficiently to allow the silencer to push on without excess friction. The silencer locates by approximately 55mm. Do not file or polish any further back

from the muzzle than this as the silencer will not cover the reworked area. Mask barrel if preferred.

## 5 V-Tech Silencer Fitting

Locate the silencer 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.

### RACE Muzzle Brake Fitting

Locate the 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 and this prevents any 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: In order 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. The 2<sup>nd</sup> fixing bolt can be slackened to allow the catch to separate slightly from the brake body. 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 .

### Fitting for Sliding Latch Variant

- 1 Check that the rifle is uncocked and unloaded.
- 2 Remove stock, scope and fitting.
- 3 The removal of the forward sliding release style front sight is more involved than early models and it will not tap off in the same way. A pulling device is required to remove the unit. It can however be carefully cut along the length of the section that locates on the barrel, just sufficiently to lessen the tension around the barrel, ie cut or grind most of the way through the section. Take care not to damage the

rifle's finish in any way. Once removed follow steps 3 and 4 for Early Models – Solid Lever End.

### **Fitting for Sprung Lever**

- 1 Check that the rifle is uncocked and unloaded.
- 2 Remove stock, scope and fittings.
- 3 The push button release catch is fitted on current and later style model HW77.
- 4 It is removable in the same way as the forward sliding release catch version and then follow steps 3 and 4 for Early Models – Solid Lever End.
- 5 Too much tension on the sprung lever end will make it very difficult to release. It is possible to modify this lever to the earlier style. V-Mach 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 nominal cost.
- 6 If you are unsure that you would be able to carry out any of the above modifications with confidence, contact us at [v-mach@air-rifle-tuning.com](mailto:v-mach@air-rifle-tuning.com) or on 07850 296360 or arrange for us to fit for a nominal charge.

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