

WALK BACK TUNING METHOD

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Coaching and Standards Committee



Australian Government
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**AUSTRALIAN
INSTITUTE OF SPORT**

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Another excellent method of fine-tuning of recurve and compound bows is the walk back method. By now you should have set the bow up using either the paper method (for compound bows using release aids) or the blank shaft method (for recurve bows or compound bows using fingers). Both of these are good methods but still two questions remain:

- 1) Is my centershot correct?
- 2) Will the arrow travel in a straight line to the target?

Centershot has a great deal of effect on the tuning of recurve bows but has little effect with compound bows. Although it is important to ensure the centershot is set correctly as it affects the arrow position in the target (left to right) as you move from distance to distance. Have you ever noticed that at different distances your group may go from one side of the target to the other? This is very noticeable when shooting field. This is usually caused by the centershot position and to a lesser extent the plunger tension (recurves) or bow weight (compounds).

The WALK BACK TUNING METHOD is very good for fine-tuning centre shot but also highlights when minor variation in plunger tension or adjustments for bow weight is required. Current bow tuning methods do not accurately tell you if your centershot is correct or if your tuning is going to allow centre grouping at all distances.

One of the major drawbacks particularly if you are using a compound is the need to remove or sometimes add draw weight to achieve good arrow tuning. Many people set their mind to shoot a particular bow weight and then attempt to tune their arrows to that weight. This sort of thinking MUST change. If you want to achieve the best results you must be prepared to adjust the bows weight to match the arrows.

Firstly, you must obtain a nocking point; which has been described elsewhere in this publication. At the same time you should check that your arrow tuning is close by using either the blank shaft or paper tuning method. For recurve bows the blank shaft should not be much more than 5cm from the group of fletched arrows and for compound bows your tear should be no greater than one to two centimetres.

When trying these methods the results you achieve give the results I have indicated above don't try Walk Back Tuning, you are wasting your time. The arrows you are shooting are either too stiff or too soft for your bow, or you may be getting contact on the bow with your arrow upon release. Check to see the arrow or fletches are not hitting on the bow window or rest by using spray powder.

Most importantly you may be attempting to achieve tuning results far in advance of your current shooting ability. If this is the case you need to work on your shooting form.

For this tuning method you shoot only fletched arrows.

Firstly you need to prepare the target butt. About 15cm (six inches) from the top of the butt fit an aiming mark. Using packing tape run a straight line down the target butt. Next place markers on the ground, starting at 5 metres and then every five metres up to about 40 metres.

Before you carry out this test it can be assumed you have squared your sight bar and sight pin to your string and on compound bow using a bubble level ensured that the level is square. If you have failed to do this you will receive incorrect feedback from the test.

Now, set your sight for fifteen (15) metres and shoot one arrow from each marker without changing your sight. The first three arrows (five, ten and fifteen metres) should all be grouped quite closely on or just above the aiming mark.

Each arrow from the next successively longer peg should hit lower than the previous arrow.

You will notice the arrows have established a vertical pattern down the target. The curvature and/or slant of the pattern will indicate what adjustments you need to make. Of course never rely on the results of just one test, carry out any test a number of times.

If the pattern of the arrows forms a perfectly straight vertical line, (Fig a) you have the ideal set-up both centershot and plunger tension or draw weight is acceptable so no further testing is needed.



FIG A.

To set the centershot adjustment, look for a curvature in the arrow pattern. If the pattern is to the left (Fig B) for a right hand archer the arrow rest or plunger button is set to far out (to the left) and it must be moved in toward the bow.



FIG B

If the pattern is to the right (Fig C) for a right hand archer the arrow rest or plunger button is set to far in (to the right) and it must be moved out from the bow.

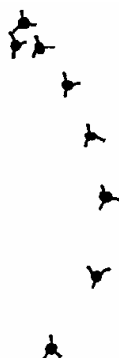


FIG C.

The test should be repeated until you have a straight vertical arrow pattern.

Adjustments to the plunger tension or bow weight (for compounds) are indicated if the arrow strike pattern is straight but not vertical. If the pattern is straight to the left (Fig D) for a right hand archer this indicates the arrow is stiff and you either remove spring tension to the plunger button or add draw weight (for compounds).



FIG D

If the pattern is straight to the right (Fig E) for a right hand archer this indicates a weak arrow and you either add spring tension to the plunger button or remove draw weight (for compounds). The test should be repeated until you have a straight vertical arrow pattern.

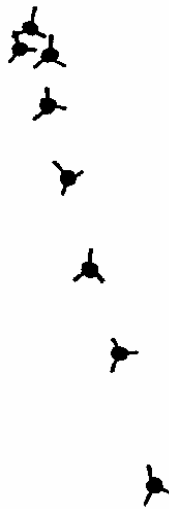


FIG E.

If you get an S' pattern (Fig F) down the target this may indicate that both the centershot and plunger tension (bow weight) are incorrect. Adjustments for centershot should be made first before you attempt to adjust for plunger tension (bow weight).



FIG F