

ADVANCED SADDLE FIT



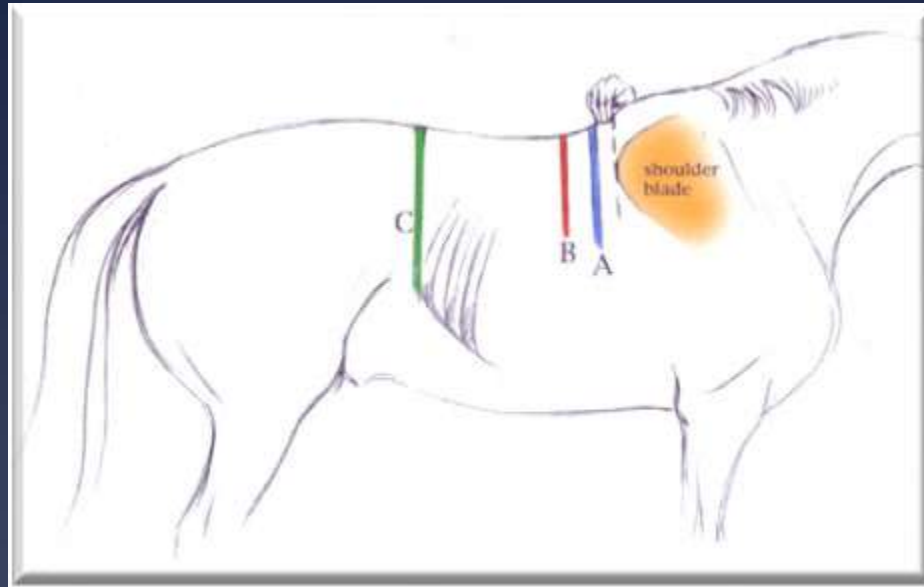
Where Fit Comes First

Saddle Fitting for Smarties



An Illustrated Guide to Measuring Your Horse For a Saddle

Back Template ♦ Back Tracing ♦ Wither Tracing



- Whatever it is called, this set of back contours, in conjunction with photographs, helps the fitter to evaluate the bearing structure of the horse and to identify the tree shape, tree width, and panel type that is likely to offer the best fit for the horse.
- No matter how accurately it is done, it is not a definitive measurement of the horse, any more than measuring your waist and hips will ensure that a particular pair of jeans will fit you well.

Why go to the trouble?



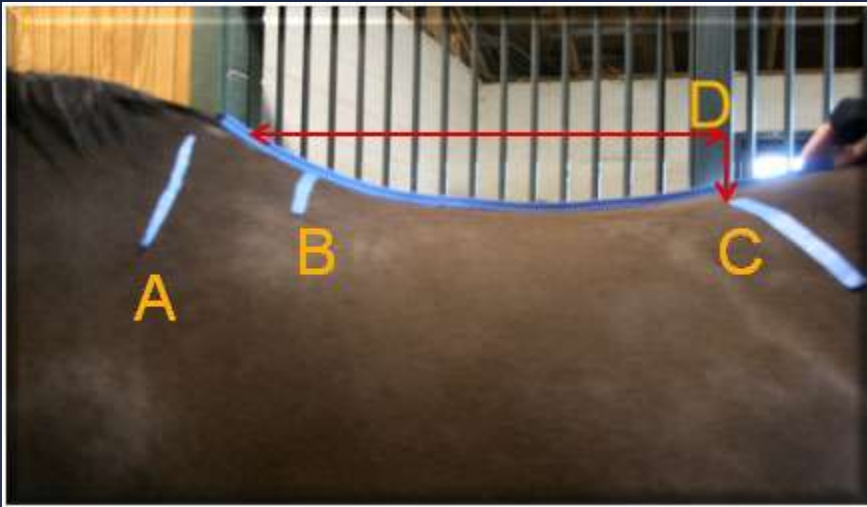
Because sitting on a random pile of saddles, hoping to hit on the right fit, is tiresome at best; at worst, utterly futile.

What do I need for the back template?

Items needed:

- **Pen:** A medium tip marker or bold point pen.
- **Paper:** You can use an 8 ½ x 11 sheet of paper (landscape orientation), or an 11 x 17 sheet of paper (also landscape).
- **Grid:** It is often helpful to use a printed grid for accuracy. We prefer a 2x2 cm grid as this enables us to confirm that our copy conforms to the original scale if we receive the template by fax or e-mail.
- **Flexible Curve:** This is also called an architect's flexible drawing curve or a curvex, and it's available in the graphic supplies section of most large office supply stores. If you have trouble finding this, we can help.
- **Clipboard:** Handy, but not critical.

Procedure for the back template



- A Line: width and angle of tree points
- B Line: back width at neck of tree
- C Line: 18th Rib – last thoracic vertebra
- D Line: front to back drop

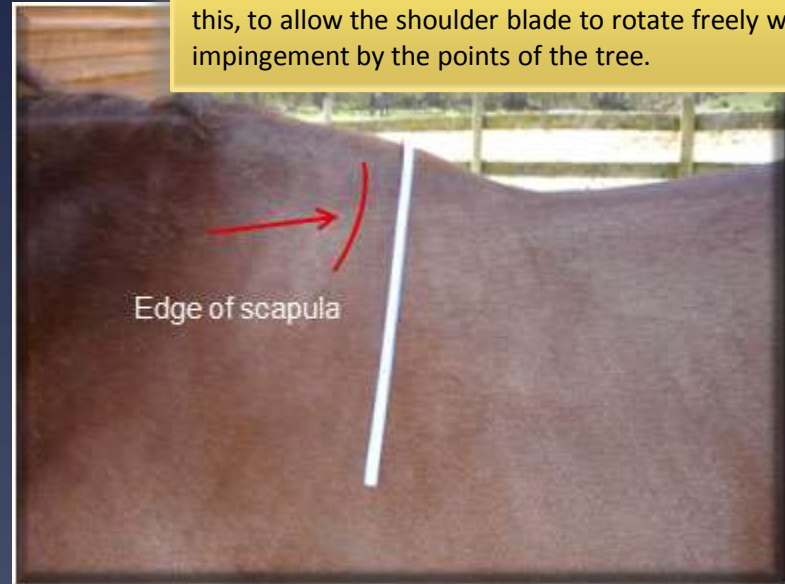
- Stand the horse up four-square on a level surface.
- After each measurement, remove the curve with care and place it on the paper.
- Then trace carefully on the inside edge of the curve.
- Repeat for each of the four measurements (a good profile photograph can be substituted for the D measurement.)
- Label each curve and every piece of paper submitted.

Measuring the A contour

Why this is useful

- The A measurement is one step in establishing the overall dimensions of the horse's bearing structure.
- It suggests what shape and width in the tree head may be suitable.

Locate the back edge of the scapula (shoulder blade). The A contour is measured three tight fingers – about 2" – behind this, to allow the shoulder blade to rotate freely without impingement by the points of the tree.



Be aware that the A measurement alone (often called the wither tracing) is not sufficient to indicate what type of saddle would be a good fit for a particular horse. The width and angle of the tree head at A is only one of several aspects of tree shape that affect the tree's weight-bearing function.

Other fit features of the A contour

Horses with high to moderate withers generally benefit from a front gusset in the panel. A front gusset is a lozenge-shaped piece of the panel pattern that expands the internal volume of the panel so that it can hold more wool without being over-packed. A deep, full front gusset, cut well back into the flap, helps fill the area under the tree points for better balance. A thick, gusseted front panel supports the arch and points of the tree on a high withered horse when the saddle is weighted with a rider. It also helps prevent the tree from being wedged tightly around the withers, and cushions the horse from excessive concussion.



Wither gusset



Full front gusset



⊘ gusset. This close contact saddle will sink around the withers when weighted by a rider, no matter how narrow the tree width.

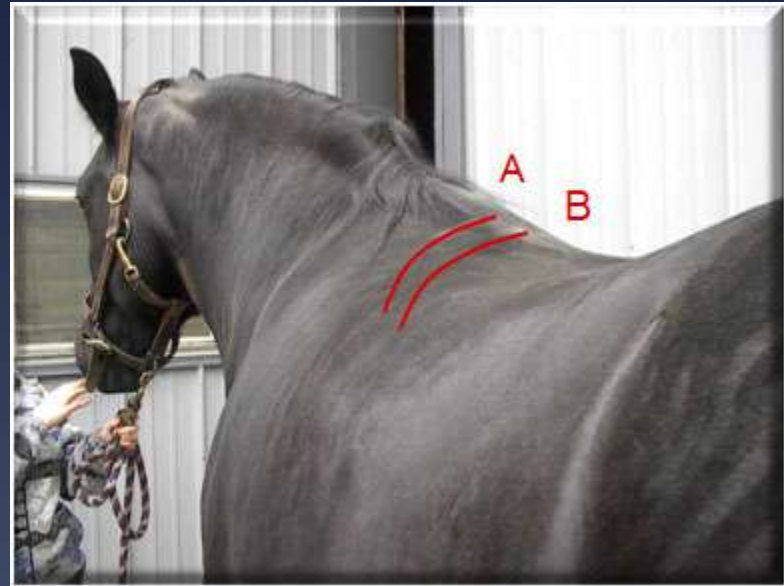
The B line: Vitally important, often ignored

The B contour is taken at the base of the withers, where the back begins to flatten out. The exact spacing behind A will vary. Some horses have high withers that slope gradually from A to the base at B, while others may have some height to the wither, but a short slope to a broad back. Many broad-backed breeds show little or no downward slope from A to B.



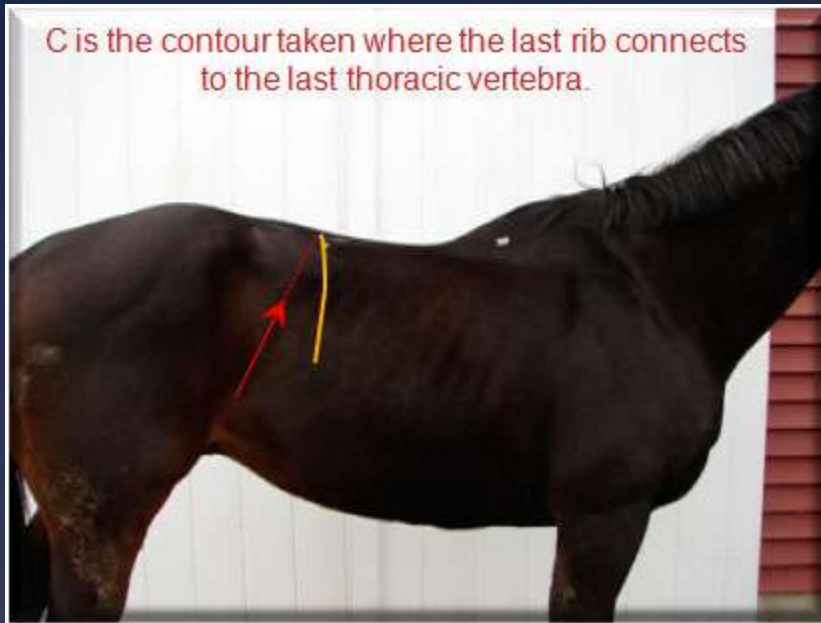
Measuring the B contour

- The B measurement, taken at the base of the withers, relates to tree *shape*. Even on a tree that is wide enough to fit well under the tree points (at A), the rails of the tree may be too steep and too closely spaced through the waist (at B) for a flatter, thicker-bodied horse.
- A saddle on a sport horse tree with a high head and a narrow twist is rarely optimal for a thick, flat back, regardless of how wide it is at the tree points.



Ideally, before purchasing a horse, the rider should consider whether she is prepared to cope with a saddle that is well-suited to the true width and shape of that horse. Horse and rider are sharing a single bearing structure in the saddle, so compromise may sometimes be required on your part to ride the actual shape of the horse you have.

The C contour: Finding the last rib

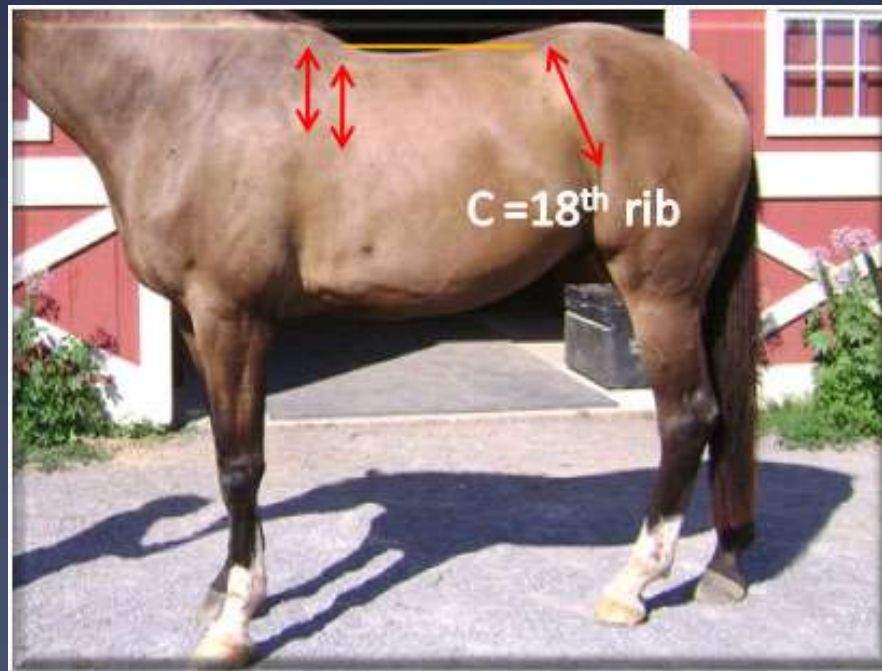


Note that the angle of the last rib may be rather upright in some horses, and may slope steeply towards the center of the back in other horses. Take your best guess as to where the last rib connects to the last thoracic vertebra based on its slope. This is where you draw the C line.

- The length of the rib cage from front to back defines the limit of the horse's *bearing structure*, signified by C.
- To find your horse's last rib, gently probe forward of the flank for the end of the rib cage.
- You will not be able to palpate the last rib all the way to the top, as it disappears under a large muscle.

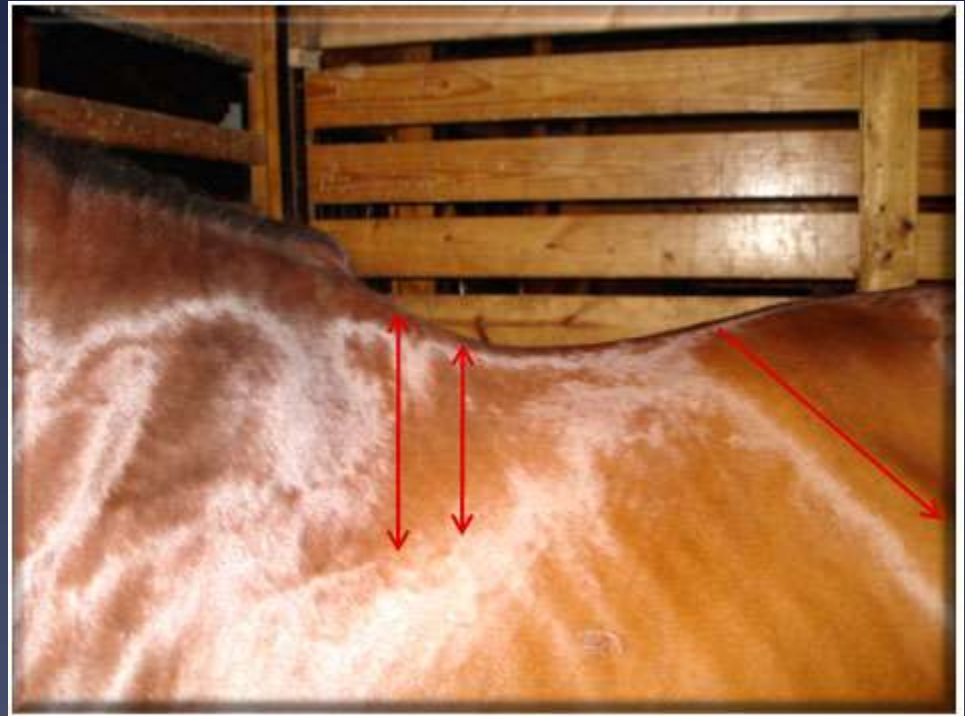
C: Why the length of the thorax is important

- The length of a horse's bearing area is defined by the thoracic spine, the part of the back that is supported by the rib cage.
- This ends at the last rib, usually the 18th, and ideally horses should not carry weight past the area that is supported by the rib cage.
- This modern warmblood has a long thorax, an upright slope to the last rib, a short lumbar, and a strong loin coupling, giving substantial length and strength to his bearing structure.



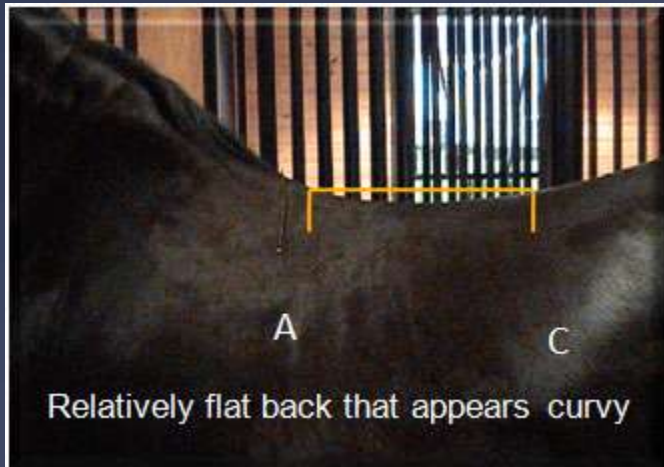
Evaluating the length of the bearing structure

- This Lusitano stallion has a fairly short thorax, a fairly long lumbar, and a steeply sloping last rib, which limits the length of the saddle that will fit entirely over his rib cage. It is not uncommon for horses to be short a rib, meaning they have only 17 ribs rather than 18.
- A horse with a thorax that is short relative to the overall length of the back is a challenge in saddle fitting, especially for an adult rider who may need a saddle larger than his or her horse's bearing structure can technically accommodate.



Be aware that there may be unintended consequences to a seemingly simple fix like reducing the bearing area of the panel that is in contact with the horse's back (upswept panels) to fit a too-large saddle onto a too-short back. Do not sacrifice the even weight distribution of a good tree and panel fit for a comforting visual effect that will placate the gods of the seven rules of saddle fitting. This predicament should be carefully evaluated on a case-by-case basis by an experienced, qualified saddle fitter who can evaluate the trade-offs involved.

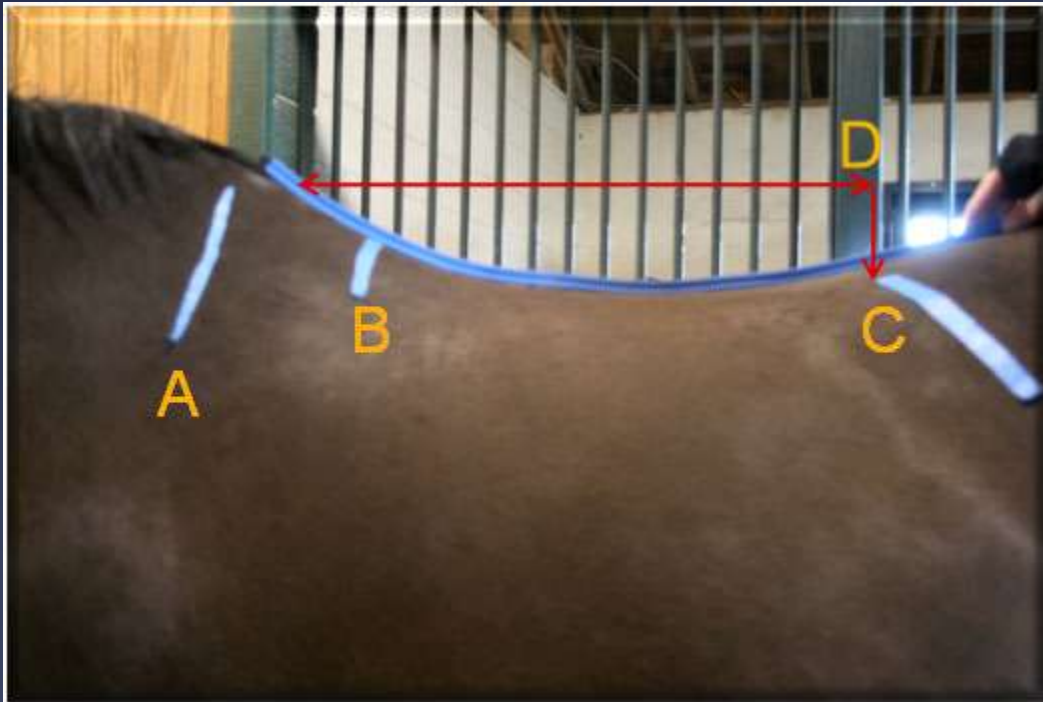
The D contour: Your horse's profile



- The front-to-back curvature of your horse's bearing structure is his profile. Your horse's back may be nearly level, very dippy, or somewhere in between.
- What counts from a fitting perspective is the profile of the *bearing area* from A to C. A horse may be croup-high and look quite curved over the whole back and still be rather flat through the thoracic area where the saddle actually sits.

Profile: Measuring the D contour

Straighten out the curvex and head back to the front end. Place one end of the curvex at the top of the horse's wither and extend it along the spine. This will measure the "drop" from the wither to the 18th rib. This measurement is not easy to take accurately, so don't worry about it if you are struggling. A photograph taken side-on is often a better way to see the front-to-back profile of a horse's back.



For an uncommon back like this -- high-withered at A, broad at B and curvy from A to D -- an H&C type tree with deep gussets in the front and rear panels can work quite well.

Why profile is important

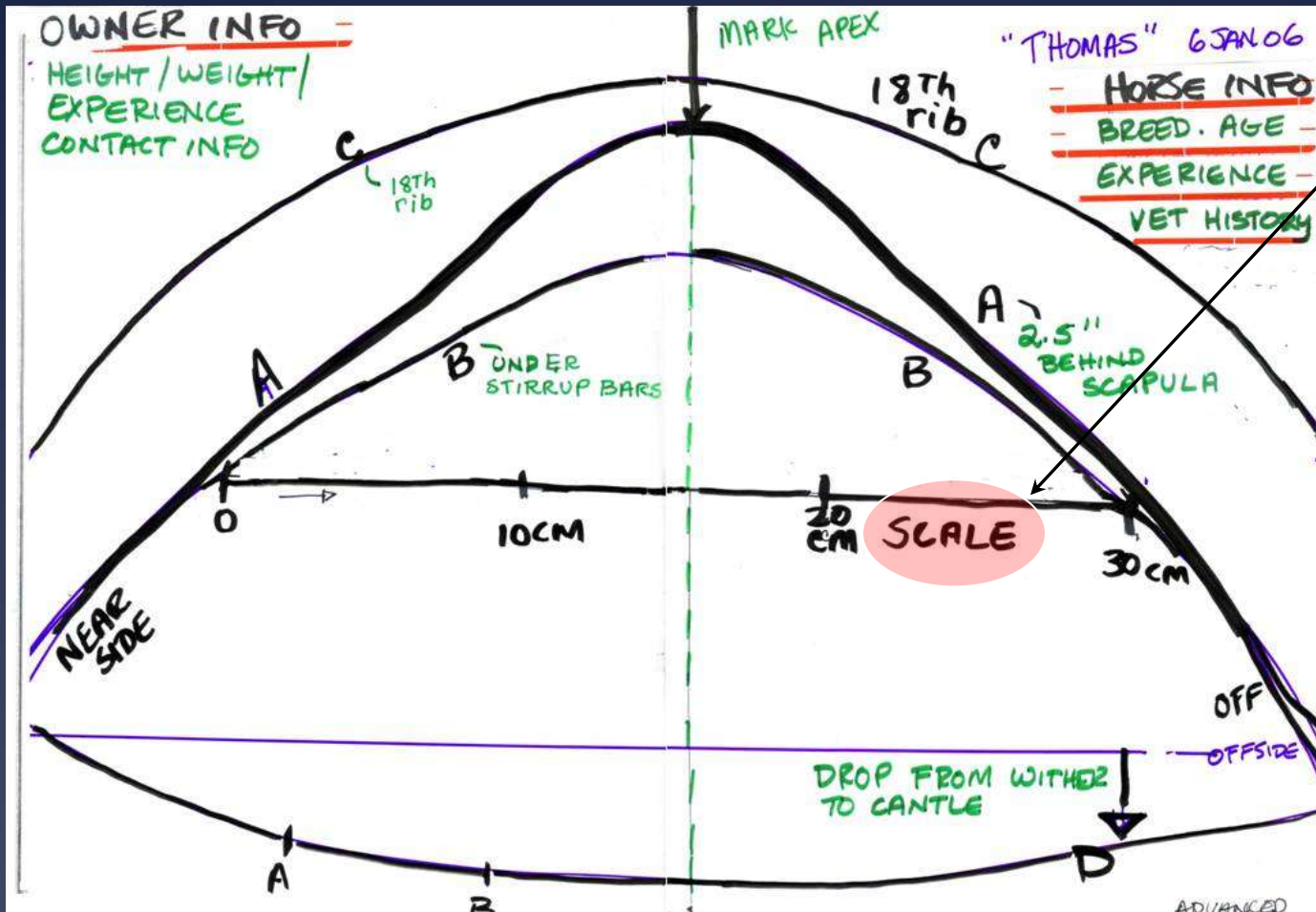
- If the tree is too flat for a deep-backed horse or too dipped for a flat-backed horse, the rider's weight will not be as evenly distributed over the bearing area as it would be in a tree that is a decent match for the horse's profile.
- A good panel cushions and enhances the fit of a suitable tree, but the panel can rarely compensate successfully for a mismatch between tree shape and horse shape.



This fairly flat tree is good match in profile and overall shape for this fairly flat back.

Anywhere there is a significant mismatch in shape between tree and back, there is potential for uneven weight distribution that may result in intense pressure points. This is why the whole shape of the tree, throughout its length, must be a decent match for the horse's bearing structure.

What it should look like



The scale is important, as it ensures that we assemble the tracing properly after it has been faxed.

If you used only one sheet of 8 ½ x 11, then fax that to us. If you used an 11 x 17 sheet, cut the sheet along the dashed line (or where the dashed line would be on your sheet), and fax both pages.

Whew! All done!

- Almost.
- The back tracing provides only part of the picture. The key to identifying the right saddle for horse and rider is information, whether the saddle fitter is on site or at the other end of the phone or e-mail. So, in addition to the back tracing, please also include:
 - Photos – Side, front, and back. For saddle evaluation, please be sure to include similar photos with the saddle girthed. It is important to see the rider on the horse as well.
 - Rider information: M/F, Height/Weight, Discipline, Level, Saddles tried/comments, Unique rider considerations, Trainer, and the like.
 - Horse information: Breed, Age, Size, Discipline, Level, Fitness, Illness/Injury, Training Regimen, Particular fit considerations, etc.
- And please be sure to include your name on every piece of material submitted.

No one right way...



There are many means to the same end. Send us whatever information you think might help us to understand you and your horse.



Where do I send everything?

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About the Author

I'm Colleen Meyer, co-founder of Advanced Saddle Fit. As a member of Britain's Society of Master Saddlers, qualified in the UK as a professional saddle fitter, it is a privilege to work closely year after year with a number of the world's best saddle makers, saddle fitters, and tree makers. To them I am continually indebted for whatever insight I may have acquired into this black art.

Between us, my husband, my children and I have three Thoroughbred event horses, a Hanoverian sport pony, four Jack Russell terriers, and two Maine Coon cats on the family farm, Windrows, in Marlborough, New Hampshire. I travel overseas frequently to continue my own education in saddle fitting and design, and travel throughout North America to fit saddles and conduct seminars on topics in saddle fitting and saddle design.

Previously I was a career Foreign Service Officer and served in five U.S. embassies around the world over two decades, and in the State Department's Economic Bureau. I graduated from Dartmouth College with a major in economics, and hold a master's degree in international economic development from the Johns Hopkins School of Advanced International Studies.

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