



# Easy Fit Saddles

Were all about the fit!

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## A Good Fitting Saddle Starts with a Good Fitting Tree!

How a western saddle fits is determined by the shape of the tree inside. If the tree doesn't fit properly, neither will the saddle. Saddle pads and shims can help for fine tuning, but cannot completely compensate for improper fit. Our 3-D Equine Back Profiling System will measure the shape of the horse's back in the area the saddle will sit and give us measurements from which to build the tree.

### WHAT IS PROPER FIT?

Proper fit is accomplished by bar angles and rock that correspond to the profile or slope of the horse's back either side of the spine, all the way from the back of the scapula to the last rib. The goal is to evenly distribute the combined weight of the rider and equipment over the horse's back.

### THE TREE

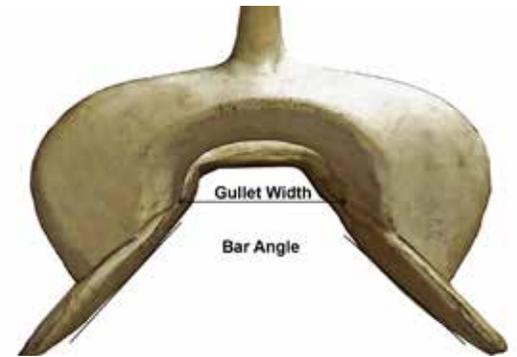
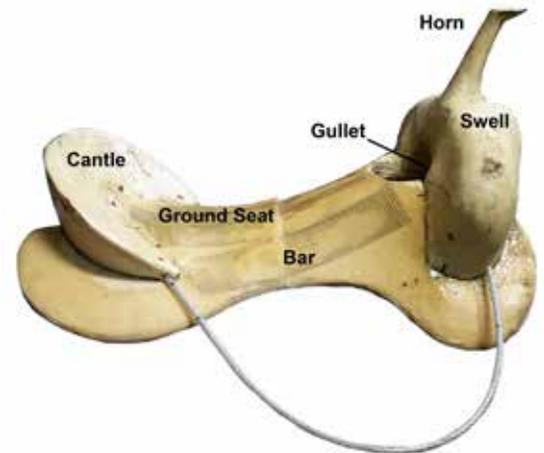
The tree bars have contact with the horse and are designed to distribute rider's weight evenly over the horse's back. There is no standardization of tree sizes among tree makers; angles, width, rock and spread can be different between makers. The only way to be sure is to measure the horse and saddle.

#### Bar Angle

The bar angle is one of the defining elements of the tree in saddle fitting. The bar angle is designed to correspond to the profile or slope of the horse's back either side of the spine. The angles change all the way from the back of the scapula to the last rib.

#### Gullet Width

We do not talk about gullet width because with our measuring system, we are capturing the entire bar angle and width between the bars. Gullet width is just one measurement and like saddle size, the gullet width is an element that can vary between saddle makers.



The internet is full of improper information on how to size a saddle for your horse by only looking at the gullet.



Bar angle changes all along the horse's back

## Bar Rock

The rock of the bars is the other defining element of the tree in saddle fitting. Rock is the curvature of the horse's back along its length from the scapula to last rib. The bars should conform the curvature of the horse's back in the area where the bar will rest. (Different from the curve of the spine.)

## Twist

The angle and rock combine to give us the twist of the tree. Twist in the English saddle generally refers to the shape under the riders thighs but in the western world it refers to the bar's change of angle front to back.



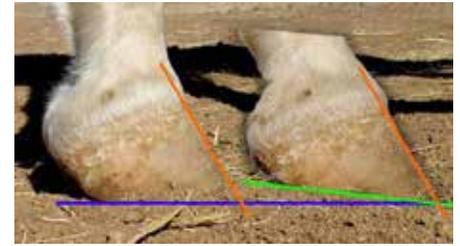
The rock (curve front to rear) of horses backs vary horse to horse.

# Take a Good Look at Your Horse

These observations are for your reference.

## HOOVES

Ensure your horse's hooves are trimmed evenly. Uneven trims can affect shoulder symmetry and/or rotation of the shoulders. Club foot or low heel syndrome can also cause asymmetry.



## ASYMMETRY OF THE BACK SIDE TO SIDE.

Standing on a stool behind the horse, look down the back to the withers for symmetry/asymmetry. Check the spine to determine if it is straight or if the muscling is even side to side. Often the right shoulder will be ahead of the left. Take a picture, note what you see.



Asymmetrical shoulders

## ATROPHY

Muscle atrophy may manifest as pockets behind the shoulders. We may need to shim these pockets up before measuring. Get your stool, mounting block and find and mark the back of the scapula on both sides. To get a proper measurement for the saddle, one side may need to be padded up to equalize the shoulders.

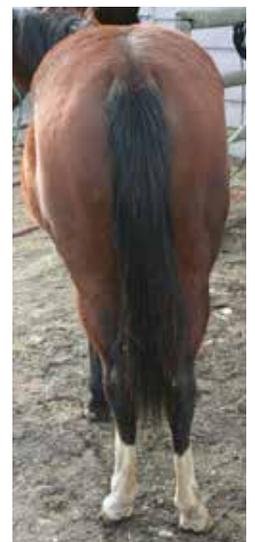
## UPHILL/DOWNHILL BACK

View from the side: is the wither level with the rump, downhill or uphill?



## SYMMETRY OF YOUR HORSE'S MUSCLING FRONT AND BACK.

Stand in front of your horse carefully comparing hooves, fetlock, and the rest of the legs all the way up for symmetry. Check your horse front and back. Make notes and take pictures of what you see.



## THE MEASURING KIT

The measuring kit contains:

- A two sided angle gauge, one side for the horse, the other for the saddle
- 3 double-sided Horse Rock cards R0 to R4 and spacer side; and a Rock Card Positioner.
- 3 double-sided Saddle Rock cards R0 to R4 and spacer side.



## MEASURING THE HORSE

### WHEN TO MEASURE

It is important to measure the horse in their normal working condition. If they are normally fit, measuring when they are overweight will yield different results. If they are normally heavy, then that is when to measure. You need to be brutally honest.

Age of the horse is also important. Horse's bodies don't mature until the age of 4 or later. Larger horses generally mature later than smaller breeds. Until they mature, their bones and muscles will continue to grow. As they age they are generally ridden more and muscling fills out. If your horse is young it's best to hold off from buying a custom saddle. It should be stated that riding a young horse in an improperly fitting saddle is not a good idea.

Exercise your horse for 10-15 minutes before measuring to ensure the muscles are warm as they will increase in size with use.

### YOU WILL ALSO NEED:

- Pen and paper or form to record results.
- An assistant to hold the horse and to watch that the horse is "standing square" while you make the measurements.
- A firm flat surface where the horse can stand while being measured.
- Masking tape or chalk marker to mark points on the horse
- A camera to take pictures
- A small stool or mounting block to stand on
- Fly spray if required

When measuring the horse, it is very important that you ensure the horse is standing square each time you measure. Their head and neck must be aligned with the body and at the height they would carry them when you are riding.

Static vs. dynamic: You will be measuring the horse in a resting position, but when the horse gathers itself to move, the back elevates slightly and may also widen slightly through his back and base of the withers. The weight of the rider and saddle will counter that somewhat. That amount the horse is ridden and the skill of the rider will have the biggest impact on the final shape of the horse. It can be very helpful if you can have an assistant perform a slight back lift by pressing on the sternum at the girth area while measuring the rock – it may require a bit of stimulus with the fingers. Caution!! Be sure the horse allows you to touch or put pressure in this area!



# MEASURING THE HORSE

## 1. LOCATE THE LANDMARK POINTS

Find the landmark points: the back of scapula, base of the withers, and last rib. Locate and mark both sides:

### Scapula / Shoulder Blade

Stand your horse on level ground. Start about 4 inches down from the top of the withers and slide your fingers back until they fall off the edge of the scapula. To help you locate it, place one hand on his wither and lift his front leg forward, you should feel/see the scapula moving. Mark the back edge vertically when they stand with weight on that foot, with a chalk pen or piece of tape. Mark and measure both sides.

### Base of the Wither:

The base is where the wither levels out to spine. It is generally the lowest point on the horse's back but not if the horse has a really swayed top line. Mark the spot with a chalk pen or piece of tape. Mark and measure both sides.

### Last Rib

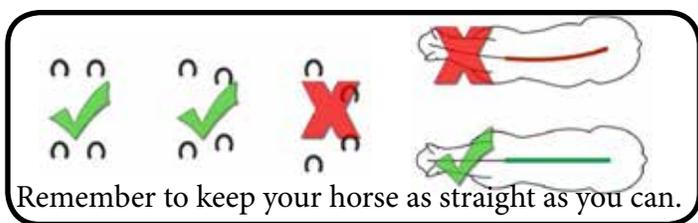
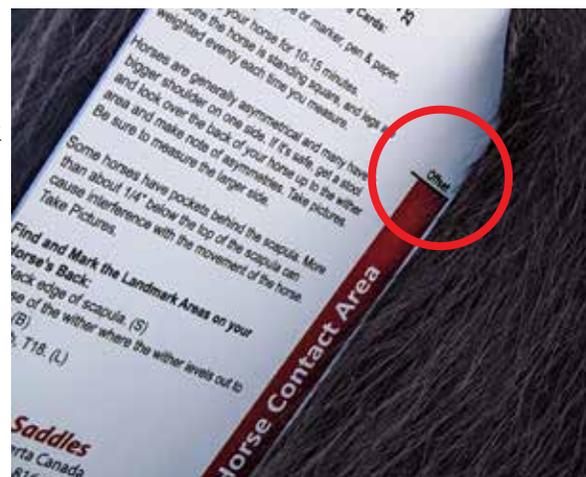
You will need to mark the last rib where it attaches to the spine. We will use this mark later to determine the length of your horse's back. You can find the general area of the last rib by following the swirled hairs between the back of the barrel and the hind leg. Feel with your finger tips and follow the last rib up until the rib disappears under the back muscle. By feeling the angle of the rib, extrapolate where the rib would meet the spine. Mark the spot with a chalk pen or piece of tape. Mark and measure both sides.



## 2. MARK THE OFFSETS FOR THE ROCK CARDS

Use Horse Angle 7 to measure offsets from the spine. The off-set mark on the card is located at the top of the red "Horse Contact Area". It is used to mark the distance down (vertically) from the center of the spine to where you will place the rock card along the back.

Set the gauge centered over the horse's back at the Base of Wither B mark. Mark the offset horizontally on the horse. Repeat these steps at the Last Rib L mark. These horizontal off-set marks are where you will lay the rock card in step #5.



### 3. MARK ANGLE MEASUREMENT POINTS

- Use different colored marker or tape
- Find the Spacer Card 5.
- Place the front edge of the Spacer Card on your scapula mark and over top of the off-set marks you made in the previous step.

Mark off the points as shown on the card, starting 1” back of the scapula and mark every 2 inches until the last rib.

We have marked the scapula, base of wither and last rib with orange tape. There are only 9 positions marked because she is short backed and the 10th mark is beyond the last rib.

### 4. USE THE HORSE ANGLE GAUGE

While standing on your stool, place the gauge on the first mark (point #1) one inch behind the scapula (not the scapula mark). Communicate with your assistant before finalizing each measurement to check that your horse is weighting all 4 legs, standing square, and head and neck are in the normal riding position.

By utilizing the stool you can see both sides of the horse, ensuring you hold the gauge both vertically and centered over the spine.

Find the angle that best matches the angle of the marked edge of the gauge. Run your finger along the marked area, feel for even contact. Check both sides. Hold both halves of the gauge together, read and record the result.

Measure again. The horse’s measurements will change as it relaxes and stands differently. Measure several times until the size repeats, and record the larger measurements.

The red “Horse Contact Area” on the card gives a general indication as to where the saddle bars will sit on the horse’s back.

Write down the number for all positions or to the last rib. Take pictures of each measurement, especially if you are unsure.

#### Asymmetries

If your horse has asymmetrical withers or shoulders, fit a flexible curve or wire over the horse’s back in those locations. Turn the shape around right to left and look at the gap on the small side. This should give you an indication as to the thickness of shim required. Measure the gap make a note. Trace the shape onto paper and note the location(s). Take a picture.



## 5. USE THE ROCK CARDS

Lay the rock card on the offset marks you made in step #2.

### Find the Best Fitting Rock Card

Note: Our rock cards have two profiles per card, make sure the *FRONT* lettering is right side up and toward the front of the horse, as the curve profile is different front to back. When you measure the rock on the off side of your horse you will be looking at the back of the rock card.

- Place the rock card in the rock card positioner
- Place the notch in the rock card at the base of the withers mark.
- Make sure the rock card is over the offset marks.
- Hold the rock card at a right angle to the horses back in the base of wither area, not to the ground.
- Find the best fitting rock card, try one bigger and one smaller to make sure you have the closest card.

The rock card will normally extend over the scapula. If there is a gap under the card behind the scapula, measure the gap, take a picture and make a note. Check both sides, make notes, take pictures.

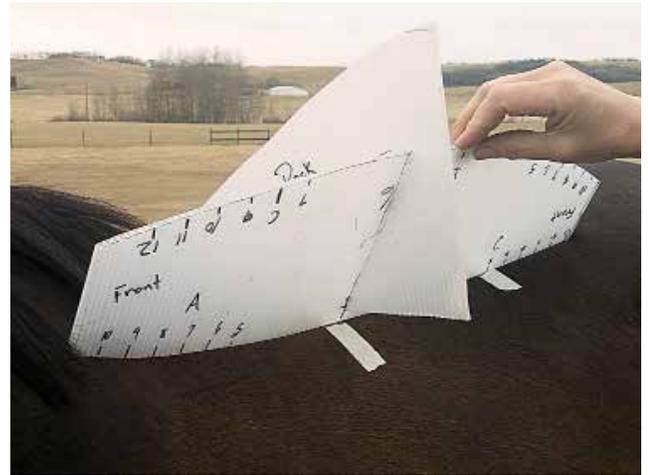
If there is a gap this area may need to be shimmed so as to not interfere with the scapula movement. All horses and humans are asymmetric to some degree.

### Use the Scales on the Rock Card

- The scales on the rock card, front and back tells us how long your horse's wither is, the total saddle fit area, and where the rider will be positioned on the back. Use the scale on the back portion of the Rock Card to record the distance between the Base of the Wither mark and the Last Rib and the scale on the front of the card to measure between the Base of the Wither and the Back of Scapula mark.
- In the picture above, the front measurement would be 7.5 and the back would be 9.5 on rock card 3.

### ADDITIONAL PHOTOS:

- 1) With the markers still on the horse, stand perpendicular to the horse's barrel and take a picture to get a good side profile of the horse's back.
- 2) Stand on a small step stool or mounting block a meter or so behind the horse. With your handler holding the horse as straight as possible, take a picture of his spine showing from his tail to his ears.
- 3) Take additional pictures of any measurements that you are unsure of.



Using the rock card positioner will help you get the card at the right angle.



# MEASURING A SADDLE

You will need your horse's measurements to determine the fit of your saddle.

In these pictures we have used yellow tape to mark the bar tips, S scapula, B base of wither, and L last rib, and black tape for the spacer card points.

## 1. Find and mark the tree bar tips on your saddle.

The saddle tree bar tips can be located by probing under the skirting when your saddle is upside down. The front tip of the bar is your saddle/horse (S) position.

The rear bar tip will show how the saddle tree length compares to the last rib (L) position of your horse.

Mark both tips.

## 2. Use your horse's rock card measurements to mark horse back lengths.

Using the Saddle Rock Card with the same number as the appropriate Horse Rock Card, locate the corresponding B to S length on the Saddle Rock Card Scale as your horse's B to S measurement, and place it at the front tip of the bar. (In photo 2 our B to S measurement is 7.)

Again, refer to your length of wither measurements to find base of wither B to last rib L. Mark last rib L on the saddle.

## 3. Mark the offset points.

Center the Saddle Angle 8 gauge over the saddle to measure and mark the offset at the base of the wither (B) and last rib (L) locations.

## 4. Use the spacer card

Place the front edge of the Spacer Card on your scapula mark S and over top of the off-set marks you made in the previous step. Mark off the points as shown on the card.

## 5. Find saddle angles

Start by placing the Saddle Angle 8 on the first mark (point #1) one inch behind the scapula (not the scapula mark). Find and record measurements at each point.

## 6. Find the appropriate saddle rock card

Lay various Rock Cards on the offset marks and align B base of wither marks. Press down. Find the best fitting card. Record it.

## 7. Compare measurements of horse and saddle.



## Rider Details

Name: \_\_\_\_\_ Date: \_\_\_\_\_

E-mail: \_\_\_\_\_ Location: \_\_\_\_\_

Phone: \_\_\_\_\_ Cell: \_\_\_\_\_

Address: \_\_\_\_\_

## Horse Details

Horse's Name: \_\_\_\_\_ Discipline: \_\_\_\_\_ Frequency of riding: \_\_\_\_\_

Breed: \_\_\_\_\_ Color: \_\_\_\_\_ Age: \_\_\_\_\_ Mare / Stud / Gelding

## Measurements:

Horse										
Position	1	2	3	4	5	6	7	8	9	10
Number										
Rock										
Scapula to Base of Wither						Base of Wither to Last Rib				

Saddle										
Position	1	2	3	4	5	6	7	8	9	10
Number										
Rock										
Scapula to Base of Wither						Base of Wither to Last Rib				

Comments: \_\_\_\_\_



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**We're all about the fit!**

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