

Troubleshooting Saddle Fit Problems

When someone comes into a saddle shop and says “This saddle doesn’t fit my horse.” there are a multitude of things that could be causing the problem. The job of the saddle maker is to figure out which one thing or which combination of things are at fault. This article is an attempt to start to categorize what needs to be considered in order to properly identify and correct the problem.

Signs of poor saddle fit:

Trouble with saddle fit can show up in numerous ways. Some horses just react badly to being saddled or being ridden with a particular saddle. This can be a problem with the saddle, a problem with the work the horse is asked to do in that saddle, or a problem with the attitude of the horse. Problems this subtle can be difficult to work out. However, most troubles show themselves more obviously via:

- dry spots,
- sore spots,
- white hair,
- contact on the top of the withers,
- an unstable saddle (moves side to side),
- a saddle that rides to one side consistently or
- a saddle that interferes with shoulder movement.

Ideally, there is equal pressure on the horse’s back from the whole bar surface. In actuality, though, there is a rigid tree on a flexible, mobile back. If you have a bare tree on a horse’s back and watch the horse at a walk, you will notice that as they move parts of their back move up and put more pressure on the tree and parts drop down and have less or no contact with the tree at that stage of the stride. There is a constantly changing amount of pressure on different parts of the tree with every movement of the horse. The only place that appears to have consistent pressure is in the area of the wither pocket. With a rider’s weight, the amount of pressure is obviously increased, but the same principle applies. The wither pocket area will have more consistent pressure, while the amount of pressure under the rest of the tree will vary with the horse’s movement. This is why problems often show up first or most severely in the wither pocket area.

As pressure on an area increases, there is a progression from a dry spot, through tissue soreness to open sores. White hairs can appear anywhere along this spectrum over time. A dry spot indicates that there is more pressure in that area than in the area that is sweated up. It most likely occurs because there is enough pressure in that area to prevent the sweat glands from releasing their contents normally, and the pressure probably also affects circulation to a certain extent. Over time, white hair may develop as the melanocytes (cells that produce pigment) quit producing pigment in the hair follicle as a result of pressure or heat. That these two things may or may not be a problem is a hotly debated question. Neither is ideal but in practice, if you put a saddle on a horse’s back, you will have some quantity of pressure on that back.

The question is, “How much pressure is too much?” The answer comes in another question: “Is the horse sore?” Soreness is a result of unrelieved, excess pressure. Excess pressure can affect the circulation which decreases the amount of oxygen brought to the area, as well as decreasing the removal of waste products from the cells there. Soreness can be seen as swelling in the area a few minutes to a couple of hours after the saddle has been removed and normal circulation is restored. Damaged tissue will allow excess fluid to accumulate in and around the cells, which causes swelling. Heat in the area is another sign of inflammation as a result of tissue damage. Pain, shown

by the horse responding negatively to you touching or putting pressure on the area, will also occur. If the pressure has been severe enough over a long enough time span, the tissue can be so damaged that it leaks fluid or even dies in patches, leading to open sores.

Open sores can also be caused by rubbing or irritation. Dirt next to the horse or a wrinkle in the saddle blanket can rub the skin raw or even make an open sore. This can also lead to white hairs forming as the sores heal. These two causes of open sores (excess pressure versus something rubbing) need to be distinguished.

A saddle that contacts the top of the withers can cause serious and even life threatening problems. This may be seen when saddling, but should be checked by feel not only when first mounted, but a few minutes later when the padding has compressed. There should always be at minimum room for one finger under the gullet.

A saddle that fits well will conform to the curves and hollows in a horse's back, making it very stable when it is in the correct position. A saddle that moves from side to side, or one that consistently goes to one side, has a shape that does not correspond to the shape of that horse's back. A saddle that interferes with the movement of the horse, especially in the shoulder area, also needs to be re-evaluated.

Questions to ask the rider to give you more information:

"What signs are you seeing that tell you that the saddle doesn't fit?" Let the rider tell you what he notices without asking leading questions. What he thinks is a problem (saddle seeming to be too far back) may not actually be a problem. Usually, his concerns will fall within the list of problems discussed previously.

"When did you first notice the problem?" You are trying to find out if it has been the same from the time he first started using this saddle or if something has changed to cause the problem.

If the problem has not existed from the first use of the saddle, ask *"What might have changed between when the saddle was doing OK and when it didn't seem to fit?"* This could be anything from damage to the tree to changing the rigging to different pads or breast collars or cruppers or even changing stirrup lengths or riding styles.

"Is it the same when you ride different horses?" The same problem occurring on all horses rules out the horse as being the cause of the problem. If the saddle works well on some horses and not others, the saddle probably doesn't have a fault in it, though the size may be wrong for some of the horses it is being used on.

"Is it the same when different people ride this saddle?" If a number of riders are OK with the saddle and there is a problem with one person, then that person needs to be evaluated carefully. If it is the same with all riders, then the rider is ruled out as being a cause of the problem. If it is OK with some riders but not others, you may want to check out things like the weight of the riders and surface area of the bars or the style of riding being used when problems occur.

"How often does it get sore?" *"If not every time, what type of riding causes the soreness?"* You want to know if it is all the time, only after long rides, only when they rope, etc. Do they use different equipment (pads, breast collars, etc.) at these times?

"Does it affect one side or both sides?" *"If one side, which one?"* If it is consistently a one sided problem, it means something isn't even side to side. It could still be in the horse, the tree, the saddle, the other tack or the rider, but it won't be just a size issue.

"Where are the trouble (dry, sore, white haired) spots?" This tells you what possible problem areas you need to examine first. Most commonly they occur in the wither pockets, but they

can be over the loin or in the center of the bars as well. A sore spot in an odd location is a signal to check for a protrusion from the bottom of the saddle in that location.

“What size and shape are the trouble spots? Are they the same side to side?” Large dry spots are of less concern than small ones. Different sizes side to side show unevenness.

“How much white hair is there?” “Does it stay when the horse sheds out?” A solid patch of white hair means a lot of damage a while ago. A few hairs that turn white, especially if they go away when the horse sheds, is not uncommon in a horse that is used hard, for long hours, or in hot conditions, even when the horse is never sore.

“Is the horse’s back sore? How do you tell?” This will give you an idea of the severity of the problem as well as bit of an idea of the knowledge of the rider.

“When can I come see you ride your horse?” To really get to the bottom of a lot of fit problems, you can’t just look at the saddle. You need to see the horse, the other tack being used, how the owner saddles up, how they mount, how they sit and ride, etc. It is especially valuable to go to their home, where you will find out things you could never know otherwise.

Possible causes for saddles not fitting well:

There are six main areas that could be causing the problem, and they all need to be taken into consideration by the conscientious saddle maker.

- 1.) A problem with **tree/horse interaction**. The tree is built OK. The horse is built OK. But the fit of the tree doesn’t match the contours of the horse’s back.
- 2.) An anatomical “fault” in the **horse**; something that is beyond the bounds of “normal”.
- 3.) A fault in the construction or integrity of the **saddle tree**.
- 4.) A fault in the construction or integrity of the **saddle**.
- 5.) Problems in the **saddling** of the horse, or in the **padding** or **other tack** used.
- 6.) Problems with the **rider** or the way he rides.

Problems with tree/horse interaction:

To fit properly, a tree has to fit both the **size** and the **shape** of the horse. While size can be given a number to label it, shape is more difficult to classify. Both are vital to getting the bar to match the curves of the horse’s back. (Further information on this topic is available in our “Fitting the Horse” article.)

Size:

1.) Width between bars: Horses vary in distance from side to side across the back. A horse that is narrower will need the bars closer together while a broad backed horse will need the bars farther apart. A tree that is too narrow will sit only on the lower part of the bars, which results in it sitting high, and having less surface area on the horse. A tree that is too wide will sit very low on the horse (possibly hitting the withers) and may no longer contact the horse with the lower part of the bars. If the shape of the bars is correct for the horse, incorrect widths shouldn’t cause major problems. The tree will just sit a bit higher or lower with less surface area in contact with the horse. This is true unless the size misfit is extreme or the bar surface area is minimal to start with.

2.) Angle between bars: Horses’ backs also vary in shape from side to side. Some are more A shaped, some are more upside-down U shaped, and some are sideways C shaped. The more A shaped horses need a narrower angle, and the rounder horses need a wider angle. While wider horses generally tend to be rounder, these shapes do not always vary consistently with the width. In other words, you can have a wide backed horse that is more A shaped, or, more commonly, a

narrow backed horse that is very round. Incorrect angles are more likely to cause problems than incorrect widths. An angle that is too narrow (acute) will cause the bottoms of the bars to dig into the horse. An angle that is too wide (flat) may cause excess pressure along the top of the bar. This is often seen most severely in the wither pocket and bar tip areas.

3.) Bar length: A short backed horse may run into problems with long bars that put weight back on their loins, making it harder for them to round up and get their hind feet under them. But if the shape and amount of rock is correct, the bars won't be digging into the loin area and causing soreness. Short bars have a lower amount of surface area, which increases pounds per square inch. With large riders, this may lead to problems.

4.) Length of front bar tip: A horse with shoulders that extend back into the wither pocket area may need a tree with a short bar tip to avoid interference. A longer bar tip may put excess pressure on the back of the shoulder blades. If the shoulders are more prominent, they may force the whole tree backwards into a totally incorrect position where none of its shape fits with the horse's shape. A shorter bar tip that fits into the wither pocket behind the shoulders will correct both these problems.

5.) Gullet height: The gullet may hit the horse's withers for a couple of reasons in the tree/horse mismatch category. It could be that the bars are too far apart for this horse, and so the gullet touches the withers before the bars contact the sides of the horse. If the width were corrected, the gullet height might be fine. Or it could be that the bars are fitting well and this horse needs a taller fork with more clearance under it. These two causes need to be distinguished, because while getting a taller gullet height will stop the wither from contacting the gullet, it won't make a saddle that is too wide fit properly.

Shape:

1.) Rock: Inappropriate rock in a tree for a particular horse is a major cause of fitting problems. It is difficult to address, because as of yet there is no measurement or even a name to label the amount of rock. Some horses are very sway backed. Some horses are very flat backed from fore to hind, and some mules actually bend upwards (called hog backed). All horses start flatter and develop more rock as they age. A tree with too much rock will tend to lift off the horse somewhere behind the stirrup groove. The more severe the mismatch, the earlier it will lift off. When mounted, or if the back cinch is tightened, the back of the bar contacts more, but this also means the center of the bar gets increased pressure. Too much rock, however, is the lesser of two evils. More problematic is the bar with too little rock which "bridges" – hits at the front and the back and spans the middle. When mounted, this tree may contact in the middle, but at the expense of excess pressure in the wither pocket and back bar pad or bar tip area. A bridging tree can cause a lot of pain, especially at the back bar tip. Note: when there is no weight in the saddle, the back bar tip should lift off the horse a bit, because it will press down more when mounted. If it contacts without weight, it will dig in when mounted.

2.) Cup - roundness of the bar pads: Wither pockets, the area behind the shoulders and below the withers that the front bar pads fit into, come in different shapes. Some are concave (cup like), some are totally flat, some bulge out with muscle, especially up top, and some bulge out with fat. The bar should ideally match the shape of the wither pocket – rounder for more concave, less round for flatter or bulging wither pockets. A bar pad too round will cause excess central pressure. A bar pad too flat may, on a horse with a very deep wither pocket, only contact around the edges and may dig in especially at the bottom. Because it not wise to build concave bar pads, horses with bulging wither pockets will almost always dry spot. But the spots should be large and symmetrical on both sides and shouldn't cause soreness. Small central spots are always danger signs.

The back bar pads need to be round enough that the edges don't dig in when the saddle is ridden. For very muscular horses whose back muscles bulge upward from the spinal column, a flat back bar pad increases the contact area between bar and horse. Horses without the bulging muscles need a rounder back bar pad to relieve excess pressure at the bar edges. Having the correct shape here will increase the stability of the saddle, but a misfit in this area would rarely be enough to cause soreness.

3.) Twist: The bars change in angle relative to each other from the front to the back. This change in angle is called the twist. Ideally the angle of the bars matches the angle of the horse's back all the way along, but if the twist isn't correct, the angle can match at one place and not another. A problem can occur if the angle anywhere is not flat enough and the bottom of the bar digs into the horse. It can happen that the front and back bar pads are both correct, but the twist doesn't occur forward enough, resulting in too narrow an angle in the middle of the bar and causing pressure points at the bottom bar edge there.

An anatomical "fault" in the horse:

While no two horses in the world are built identically, there is range that would fall within what we would call "normal". Then there are "the others". There can also be physical defects in horses, either congenital or caused by injury or chronic misuse. All of these will affect saddle fit.

"Extreme" horses:

A horse that is on either end of the "normal" bell curve will have more problems with saddle fit. These can be extremely muscular horses whose muscles round out excessively. Extremely fat horses are totally round everywhere for a different reason. Both these types of horses need flatter cup on the bars, and most will still dry spot to some extent. But width and angle can be different even within these groups. Some horses have extremely tall withers and while narrowing the tree will raise the gullet relative to the withers, it is not always the best answer. The width and angle of the bars need to be correct to properly fit the horse's back, then you increase the gullet height by increasing the fork height in order to clear the withers. Some horses have tall withers that extend back well into the wither pocket area, so having a tall enough hand hole height is very important. Some horses have backs so broad they can be used as a table, or some so narrow that most of today's "normal" saddles won't fit. Bar angle and width are important here. Some horses have excessive rock in their back and some have very limited rock, both of which need to be compensated for. Some horses have shoulders that stick out from the horse, or shoulder blades that extend well back into the wither pocket. The length of the bar tip needs to be considered here. Knowing what is normal will let you see if the horse is "extreme" in any area and if that is what is causing the problem. Then you can take the special measures often needed to fit these horses.

"Downhill" horses:

A common fault today, especially in Quarter Horses, is having withers lower than the loins. This "downhill" conformation and gravity work together to cause the saddle to want to slide forward on the horse, putting excess pressure on the front bar tips and often interfering with the shoulders. Horses grow rump first, with the front end gaining in height later, so some horses may grow enough that this won't be a lifelong problem. But some adult horses are still severely downhill, enough to cause problems that would not exist if the horse were level. The tree built to fit the curves on the back will still slope downhill on these horses because that is the way the horse is built. If your customer consistently rides this style of horse, you may want to consider putting more rise in the seat in order to level it out somewhat when placed on the horse. Otherwise, the rider will also feel like they are riding downhill.

Defects:

Some horses have physical defects that cause problems with saddle fit. Most common are horses that are asymmetrical. This causes either a one-sided problem or different problems on each side. Sometimes asymmetry is due to defects in the underlying structure. Sometimes it is due to how the horse is used, making it more muscular on one side than the other. And sometimes it is the result of injury or muscle atrophy. Looking from above and behind the horse helps you compare one side to another. Once the asymmetry is recognized, checking with a vet or other health care professional to see if something can be done to make the horse symmetrical again would be the first step. Only if that can't be achieved should the owner even consider building an asymmetrical saddle for the horse.

A fault in the construction or integrity of the tree:

Broken tree:

A broken tree is not only an ill-fitting tree; it is also a dangerous tree which could come apart at any time which could result in a severe injury to the rider, not to mention the horse. Because of this safety concern, in any tree with fit problems the FIRST thing to check is the integrity of the tree. Once you know the tree is still in one piece, then you can move on in your trouble shooting.

Obviously, once a tree has broken it is no longer a one piece structure that acts to distribute weight as evenly as possible over the entire surface area of both bars. Breakage causes increased pressure in some areas, such as when the bars break at the stirrup groove. In this case, the rider's weight causes the two broken ends to look like a V with the point sticking into the horse's back. Breakage of the fork or cantle may allow the bars to change angle or spread apart more. This compromises the fit of the bars to the horse's back, and also may allow either gullet to contact the withers or spine, which would not have occurred before the break. Any of the signs of an ill fitting saddle can occur with a broken tree, but the history will be that the saddle used to be OK and then started to cause problems (unless they purchased the saddle with a broken tree). Sometimes the problems start with minor changes and get worse as the first crack gradually splinters off more wood and the rawhide over the area loses its strength. Other times the break is severe enough to cause clearly defined problems right away.

Warped tree:

A warped or twisted tree may result in asymmetrical problem areas. The only way to know a tree is warped is to rip the saddle apart and put the tree on a true (flat) surface. If it rocks from corner to corner, it is not perfectly square. If we could see all the trees being used daily which are far from square, we would probably be surprised. While a tree that is "off" is not ideal, it rarely causes problems unless the twisting is severe. This is because the horse is constantly moving under the saddle, and the amount of pressure on any one area varies within every stride. The only exception appears to be in the wither pocket area, and this is where the problems would show up as one sided pressure areas. If you suspect the tree is warped, keep it in mind, but continue to look for other problems as well. A warped tree may be the cause of the problem but may also simply be an incidental finding. Make sure everything else is right before considering replacing the tree.

Faulty construction:

A faulty tree could be the result of asymmetry, poor workmanship in construction, or poor design of the tree.

1.) Asymmetry: Anywhere the tree is not built evenly from side to side is a fault. Some of these asymmetries may be cosmetic only, as in uneven shaping of the fork. Some may or may not

be a problem, depending on how the saddle is built. For example, a cantle that is crooked on the bars makes the tree asymmetrical, but if the ground seat is built to place the rider straight, there shouldn't be a problem with fit. But some asymmetries can cause severe problems. If the angles on the bottom of the fork are cut unevenly, it places bars at two different angles and causes the whole saddle to consistently ride to one side. Having bars of different length or, worse yet, shapes or styles will cause problems due to the different fit side to side. Hopefully these problems will be picked up by the saddle maker long before a saddle is built on the defective tree.

2.) Poor workmanship: Lumps and bumps on the bottom of the bars may cause soreness under the protrusion. These may be because nails, screws or staples are sticking out the bottom of the wood, or just poor woodwork resulting in severe unevenness on the bar surface. If there are sore spots in places other than the wither pocket or back bar tips, make sure the underside of the saddle is checked well for smoothness.

3.) Poor tree design: A common but relatively unrecognized problem is a mismatch in width between the front and back of the tree. If there is a wide gullet, and the spread between the bars at the cantle is not widened accordingly, the result is a saddle that will tip forward on the horse. This needs to be distinguished from a horse that is built "downhill", and a tree with too much rock for this horse, both of which may look the same if just the front cinch is tightened. Excessively round bar pads will have too much central pressure and cause sore spots. Gullets that are thick and rounded downward may look, at the gullet lip, like they should clear the withers but actually contact in the middle or at the hand hole. Short, narrow bars have minimal surface area, creating a higher pressure under them. A very low cantle gullet may not have enough clearance on a thinner horse and rub the tops of the vertebrae underneath it. Excessive length on the bar tips may cause them to dig into the shoulders. Not having enough bar behind the cantle can result in the rider's weight being so far back that the back bar tips dig into the loin area. Not having enough relief built into the bar edges (not enough rounding of the bottom edges of the bars) may allow the edge to dig into the horse. Having an inappropriate amount of twist will mean either the front or the back of the bars are at the right angle, but never both. Arizona bars, which lack a back stirrup groove, may cause soreness along the lump caused by the back edge of the stirrup leather. In short, anything in the design that hinders the tree from conforming to the shape and size of the horse's back may cause problems.

A fault in the construction or integrity of the saddle:

Damage to the saddle:

On occasion a damaged or poorly repaired saddle may cause fit problems. A rigging that has stretched unevenly may cause the saddle to twist on the horse's back, and will definitely cause discomfort or even soreness. Stirrup leathers that stretch unevenly will cause the rider's weight to be borne unevenly. Nails that work loose from the gullet or cantle gullet may rub on underlying vertebrae.

Faulty construction:

The same three factors that affect trees also affect saddles.

1.) Asymmetry: The worst problems are caused by an uneven rigging, either because the two sides are not cut identically or they are placed on the tree unevenly or both. This can cause the tree to ride to one side, the saddle to twist on the horse resulting in uneven pressure and pain, the saddle to constantly shift, etc. Uneven stirrup leathers or holes punched unevenly in the stirrup leathers will cause the rider to sit unevenly, resulting in saddle shifting or uneven pressure points. A seat that is not level side to side will have the same results.

2.) Poor workmanship: Improperly blocked skirts which don't follow the relief built into the bar edge will stick straight out, rubbing the shoulders or the loins. Lumps and bumps on the underside of the saddle may result from nails or screws extending through the tree, strings improperly placed through the bars, etc. These will cause pressure points for the horse.

3.) Poor saddle design: Poor ground seats that force the rider's weight to be in an unbalanced position can cause all sorts of problems. Especially common is the seat that throws the rider's weight to the base of the cantle. This puts more pressure on the back bar pads and exacerbates any problems with the back bar tips or the skirts back of the cantle. Skirts that are placed too low so they don't cover the top of the bar may result in rubbing along their top edge. Skirts that are tightly laced together all the way to the back may cause more rubbing on the loin of a short backed horse than skirts that are allowed to move a bit more individually.

A word about rigging position and back cinches:

If the shape of the bars match the shape of the horse's back, the fit is like two spoons nestled together. Unless it is held in the wrong place by a breast collar or crupper, the tree will move to sit where it fits properly, and then stay there. Riders tend to be overly concerned about rigging position. If the tree fits the shape of the horse's back, it doesn't matter. The cinch is what will lie in different positions. It may slant forward more than what the owner would prefer, which may make them think the saddle is too far back. Or a full rigged saddle may cause the cinch to rub behind the elbow if the wither pocket is fairly far forward on that horse. But the rigging position won't pull the saddle out of place if it fits well, even at center fire. If it is a poorly fitting saddle, then there is no "curve-and-hollow" fit stopping the rigging from moving the saddle around. If the saddle continually moves forward onto the shoulders so the cinch is vertical, it really doesn't fit at all.

A full or 7/8th rigged saddle is intended to be double rigged. That means that the back cinch is supposed to do something, not just hang in the air waiting to cause a wreck. Doing the front cinch up tight and leaving the back cinch hanging pulls the front of the saddle down, which lifts the back. This causes increased pressure under the front bar pads, especially toward the front bar tips. If the rider is not willing to tighten the back cinch to the point of contacting the horse, it is better to put the rigging back further so it will have a more central pull on the tree. This will, however, often cause the cinch to sit at an angle, depending on the build of the horse, and the owner needs to be aware that this is an OK thing.

Problems in how the horse is saddled, or other padding and tack:

Only by watching the rider saddle up can things like saddle and cinch position and tightness, blanket quality, condition and placing, and breast collar or crupper placement be properly assessed to see if they contribute to the fit problem.

Saddling:

1.) Position: Given the option, a tree will move to where its shape best fits the shape of the horse's back. The problem arises when the rider thinks it should be somewhere else, and not only starts the saddle in the wrong place but holds it there with a breast collar or crupper. The saddle is often placed too far forward, interfering with and even being forced to ride on top of the shoulder blades. This is extremely common with ropers. Placing a saddle too far forward will also affect the position of the cinch, possibly allowing it to rub behind the elbow. Other riders are so concerned about shoulder interference that they place the saddle too far back. A good fitting saddle will cause problems if forced to remain in the wrong position. If it is not held there, it can cause skin irritation or wrinkles in the blankets as it moves into the correct position as it is being ridden. The best way to saddle is to place the saddle one to two inches ahead of where it should sit and then shake it

slightly side to side. This way it slides back, with the hair, into the correct position, where it can then be tightened. Some riders need to step back and be shown where the saddle is meant to sit relative to the withers and the front legs in order for them to understand how far out of position they are placing it. Tact is often required in this instance.

2.) Cinching up: A good fitting tree should only be as tight as needed to keep it in place when mounting and riding properly. For roping or doing fast work, it will need to be snugged up more. But sometimes the saddle is cinched up tight and then ridden or left for long time periods without being loosened. In this case, both the cinch and the saddle are exerting unnecessary, excessive pressure on the horse and in the long run may cause problems. The old cowboys not only “aired out their horses’ backs” during the day by uncinching and lifting the back of the saddle, but often unsaddled over lunchtime to give the horses’ backs a break. Cinching too tightly for too long will exacerbate any potential problems areas and may even cause the problems. Riding with too loose a cinch may also result in excessive movement of the saddle.

3.) Stirrups: Uneven stirrups will cause more weight on one side than the other, leading to the saddle continually shifting to one side.

Padding and other tack:

1.) Padding: Dirty blankets or wrinkles and folds in blankets can rub and cause sore spots. Pads that trap heat next to the horse are harmful. Slippery synthetic blankets can cause the saddle to move side to side, or slide out from under the saddle causing a ridge as they go. Worn or damaged padding that is no longer a uniform thickness may cause problems. Pads that have been shimmed or skived in an attempt to correct a problem may actually make it worse if done improperly. Excessive padding is a common problem. It not only effectively widens the horse, making the tree appear to be too narrow and causing dry spots in the wither pocket area, but it also diminishes the curves so the saddle will roll and shift around more.

2.) Breast collars and cruppers: A good fitting saddle should rarely need either of these, and then only on horses that fit into the “extreme” category. Used incorrectly, they often cause problems by holding a saddle in the wrong position. Improperly adjusted, they can rub and even sore a horse.

3.) Cinches and latigos: Synthetic cinches and latigos have no “give” to them, so using only synthetics all the way round makes it more difficult for a horse to expand its chest when breathing. As well, there is no stretching or loosening up as the horse warms up to give relief from tight cinching. It is recommended that at least one section be made of natural materials to avoid these problems. Some synthetic cinches also hold a lot of heat next to the horse. The narrower the cinch, the less surface area the pressure is spread over. While some cinches appear to be wide, all the tension is actually put on a narrow band of nylon which runs down the middle of it. This can also be a cause of sores.

4.) Uneven loading: All manner of things are tied onto saddles or carried in saddle or pommel bags. While each item may not weigh much individually, putting all the fencing tools in one saddle bag, or continually having a heavy water bottle on one side will weight the saddle unevenly, causing constant shifting to one side and increased pressure on that side.

Problems caused by the rider:

Again, only by going out and watching the rider in action will a saddle maker be able to discover to what extent a rider may be contributing to the saddle fit problems. Since the rider is generally in constant motion, they will frequently be adjusting their weight and so will rarely cause excessive pressure in one spot for a long time. But riders who sit for long time periods on their

horses without allowing them to move have the same effect on their horses' backs as sitting on a hard wooden bench for the same time would have on a person's backside. This can happen when attending a clinic, when waiting for a turn at roping, etc. Dismounting or allowing the horse to walk around a bit will go a long way to relieving his discomfort in these situations.

Riding position can have an effect, however. Riders who tend to prefer to ride a horse as they sit in a chair – legs forward, weight thrown to the back of the saddle – will increase the pressure on the back of the saddle, and may cause the back bar tips to dig into the horse. Some riders carry more weight to one side than the other, which causes the saddle to ride to that side. Rarely, a person might have uneven leg lengths and need to have uneven stirrups in order to weight both stirrups evenly. Some ropers deliberately have uneven stirrup lengths because they feel it helps them in some way. Most people, though, don't realize they are riding unevenly. Some just have poor body posture normally. Others have injuries, arthritis, etc. and riding unevenly alleviates their discomfort. But riding for long hours in this manner can cause increased pressure and soreness for their horse.

Heavysset riders, especially if they are shorter, will also bring out problems that may not exist if they were lighter. They may tend to cinch tighter to hold the saddle in place as they mount. If this is the only reason to cinch so tightly, using a mounting block would help. Heavy riders create more PSI on the horse than lighter riders, so total bar area contacting the horse is more critical. If the rider is top heavy and has short legs they often will rely more on their stirrups during fast work, especially if riding large horses, necessitating tighter cinching to avoid saddle slippage. Loosening the cinch between riding times is crucial if this is the case.

Finally, a rider who sits quietly and balanced in the center of his horse will be much easier on his horse's back than one who is bouncing all over the place. A good saddle should not sore a horse just because the rider is poor, but good riding will go a long way towards keeping horses sound.

A Guide to Troubleshooting Saddle Fit Problems

The following table is meant to be an easy to reference format to guide you through the possible causes of a saddle fit problem. While the tree is crucial to good saddle fit, there are many other factors that could be coming into play to cause problems. A good saddle maker will assess all these areas in order to diagnose what is causing the problem. Sometimes it is one thing. Often it is a combination. Finding out the real cause is vital to making the proper correction.

We hope you find this article helpful. If you have any comment or additional information that you feel would add to it, please let us know.

Rod Nikkel Saddle Trees

Problem	Tree/Horse Interaction	The Horse	The Tree	The Saddle	Padding, Tack and Saddling Technique	The Rider
Saddle constantly moves from side to side	Shape of bars doesn't match shape of horse Wrong width or angle Incorrect twist	Barrel Shaped Excessive fat	Tree broken Excessive cup Incorrect twist Different bar shapes	Rigging off	Excessive padding Slippery blankets Cinch too loose	Unbalanced rider
Saddle goes consistently to one side		Built asymmetrically	Bars set at different angles Tree warped Tree broken Different bar shapes	Rigging built asymmetrically Rigging put on tree asymmetrically Rigging stretched unevenly Seat not level Holes in stirrup leather uneven Stirrup leathers stretched unevenly	Stirrups adjusted unevenly Pads uneven thickness Other equipment uneven More weight carried on one side – saddle bag contents, canteens, etc.	Rider carries more weight on one pin bone or one stirrup Stirrups set unevenly Different length legs
Withers contact saddle	Inadequate gullet height Too wide	Excessively tall withers Withers that extend back a long way	Thick or bulgy gullet Too wide at front compared to back Broken fork	Loose nails under gullet		
Interference with shoulder	Front bar pad and bar tip too large for wither pocket area	Shoulder blades that go back into wither pocket Bulgy shoulders Downhill build	Excessively long bar tips No relief built into front bar tip	Improperly blocked skirts	Saddle held too far forward with breast collar	
Dry spots, etc. under front bar pad	Bar pad and wither pocket not the same shape Wrong width Wrong angle	Fat horses Very muscular horses, especially stallions Downhill build	Excessive cup Different amounts of cup between bars Lumps and bumps Broken tree	Screws, nails, etc. causing lumps Rigging asymmetrical	Saddle held too far forward with breast collar Excessive padding Cinching too tight for too long Dirty blankets Wrinkles in blankets Uneven thickness pads	Rider carries more weight on one side
Dry spots, etc. under centre of bar	Too much rock for this horse	Extremely flat back Asymmetrical build	Arizona bars Broken tree Twist doesn't occur far enough forward Lumps and bumps		Dirty blankets Wrinkles in blankets	
Dry spots, etc. under back bar pad	Tree "bridging"	Excessive rock in back Asymmetrical build	Bar too flat Inadequate surface area Cantle too close to back of bar Lumps or bumps Broken tree	Seat built to throw rider's weight to the back Screws, nails, etc. causing lumps	Dirty blankets Wrinkles in blankets	Rider position with weight far back into cantle
Dry spots, etc. at and behind back bar tip	Tree "bridging"	Excessive rock in back	No relief built into back bar tip Inadequate surface area Cantle too close to back of bar Different bar lengths	Improperly blocked skirts Seat built to throw rider's weight to the back Skirts laced together right to the back Lumps under skirts	Dirty blankets Wrinkles in blankets	Rider position with weight far back into cantle
Problems at the bottom edge of the bar	Angle too narrow Width extremely narrow	Extremely flat (side to side) back	Not enough relief on bottom edge of bar "Self adjusting" pack trees Broken tree		Excessive padding making a good fit too narrow	
Problems at the top edge of the bar	Angle too flat Tree excessively wide		Broken tree	Skirts too low		

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