SALSA Moraine 1.0 GEN 4 Split Pivot

SALSA Moraine 1.0 GEN 4 Split Pivot User Guide

Contents

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Product Information

Specifications

- Model: Moraine 1.0
- Rear Shock: 135mm Wheel Travel, 125mm Stroke
- Front Fork: 170mm Travel, 70mm Sag

At Salsa, we believe that a sense of adventure makes life better. The bicycle can be so much more than just a bike; it’s a path to new places, new people, and amazing experiences.
Thank you for your purchase. We hope it makes a good riding experience even better!
Salsa. Adventure by bike®.

WARNING: Cycling can be dangerous. Bicycle products should be installed and serviced by a professional mechanic. Never modify your bicycle or accessories. Read and follow all product instructions and warnings including information on the manufacturer’s website. Inspect your bicycle before every ride. Always wear a helmet.

WARNING: Special tools and knowledge are necessary for the setup and service of your bicycle suspension. Consult your dealer if you have any questions or concerns about proper setup.

Getting Started

Proper suspension setup is important to get the most out of your Salsa Split Pivot suspension bike and preventing damage to the damper units, the frame, and/or yourself. Initial setup should
be performed at home or at your shop prior to heading to the trail. This will give you adequate time to properly set and check the shock and fork pressure as well as dial in the base damper settings. After initial setup, subsequent use of the bike will only require a quick air pressure check, and verification of the damper settings in addition to your normal pre-ride inspection.

Compatibility

This setup guide is for the models shown in Table 1.

Items Required

- Bike with pedals
- Riding gear (including hydration pack w/water, tool kit, and anything else you regularly carry)
- A clear space with a flat, firm floor
- Friend or a sturdy wall

Tools Required
Shock pump
Measuring device (ruler, tape, or calipers)

Instructions

Step 1: Determine Target Sag
The recommended amount of sag for Salsa Split Pivot models is 30% of the rear shock stroke (Fig. 1) and 25–30% of the front fork travel (Fig. 2). These amounts are listed in the following table in millimeters. Note the sag amounts for your particular bike model and record them in the “Goal” column of the table in Step 4.


Figure 1

Figure 2

Most fork models feature some type of low-speed compression adjustment (LSC) in addition to the platform settings (Fig. 23). Often, this LSC adjustment is found as steps between the open and lock position, occasionally it is on a separate dial. LSC can be used to combat fork dive (from braking), but will sacrifice slightly on how supple the fork feels. Usually just a few clicks of LSC(+) is adequate for all but the heaviest riders. Very light riders may use none.

	REAR SHOCK			**FRONT FORK**	
Model	**Wheel Travel**	**Stroke**	**27–30%Sag**	**Wheel Travel**	**25–30%Sag**
Moraine 1.0	145	55	15–16.5	160	40–48
	135	50	13.5–15	150	38–45
	125	45	12–13.5	140	35–42
Notch 1.0	180	75	20–22.5	190	48–57
	170	70	19–21	180	45–54
	160	65	17.5–19.5	170	43–51

Table 1
Measurements shown in mm

Step 2: Prep the Bike
Ensure tire pressure is adequate, set the saddle height to your normal riding position. Place any low-speed compression levers/adjusters on the rear shock and fork to the fully open setting (Figs. 3, 4). If performing this setup on your own, position the bike on a firm level surface next to a sturdy wall so that when you are on the bike, you can lean your near hand or shoulder lightly against the wall for balance. If performing this setup with a friend or your mechanic, have them straddle the front tire facing the bike and firmly hold the handlebars between the grips and stem in order to balance you as you are on the bike (Fig. 5).

Figure 3


Figure 4


Figure 5

Step 3: Set Initial Pressures
To start, inflate the rear shock to a psi that is equal to your body weight in pounds. This pressure will not be accurate but is a good starting point. Adjusting the air pressure in the rear shock should always be done in the following way:

- Attach the shock pump. Make sure the pump is fully engaged by checking that the dial has a reading.
- Add air by pumping, or remove air by depressing the bleed button opposite the gauge. Do so until the desired setting is reached. Do NOT remove the pump yet.
- Equalize the negative air chamber by placing your elbow on the saddle and applying your body weight slowly to the bike and then release it, such that the rear shock cycles through at least 25% of it’s stroke. Repeat this process 5–6 times until the “hitch” you feel and “whoosh” you hear about 10% into the stroke is almost imperceptible. (This is the negative air equalizing).
- Check the gauge, it will likely read differently than it did prior to Step C. Repeat Steps B and C until the gauge stays at your desired pressure through step C. This usually takes 3 to 4 cycles with each subsequent cycle requiring only small adjustment (one or two pumps).

Once your desired starting pressure is reached, record this pressure as “Press. 1” in the Table #2 in Step 4.

Step 4: Check Rear Shock Sag
Climb on the bike, clip-in if needed, and bounce the rear suspension a couple times. Settle into a normal seated position. While remaining seated and still, push the o-ring on the shaft of the rear shock firmly against the wiper seal (Fig. 6). Then carefully dismount the bike without further compressing the rear suspension. If the shock features sag gradient markings, check the reading. If not, using your measuring device, measure the distance between the seal and o-ring and record it below.


Figure 6

	SAG GOAL	**Press. 1/ Sag 1**	**Press. 2/ Sag 2**	**Press. 3/ Sag 3**	**Press. 4/ Sag 4**
REAR SHOCK		/	/	/	/
FRONT FORK		/	/	/	/

Table 2

Step 5: Adjust Rear Shock Pressure
Compare the measured sag amount to the goal amount. If the measured amount is less than the goal amount, lower the pressure in the shock (Figs. 7, 8). If the measured amount is more, increase the pressure in the shock (Figs. 9, 10). REMEMBER to cycle through Steps B, C, and D of Step 2 when making air adjustments. Then repeat Steps 4 and 5 until the measured amount is the same as the goal amount. Note your final rear shock pressure. You can now use this pressure as your stock rear shock pressure before each ride without having to work through this process again.

Figure 7


Figure 8

Figure 9


Figure 10

Step 6: Check Front Fork Sag
With the rear shock pressure now dialed in, climb back on the bike and settle into a neutral standing position (Fig. 11). Bounce the front fork a few times and remain in that neutral standing position. Slide the o-ring on the fork stanchion tube down flush against the wiper seal without further compressing the fork. Then dismount the bike towards the rear end to ensure the fork does not compress further. Note: It helps to lower or remove the seat for this step, as you don't need it.


Figure 11

Step 7: Adjust Front Fork Pressure
Compare the measured sag amount of the fork to the goal amount. Like the rear shock, adjust the fork pressure up or down and repeat Steps 6 and 7 until the goal amount is reached (Figs. 12, 13).

Figure 12


Figure 13

REMEMBER to follow Steps B,C, and D when making adjustments to the fork's air pressure. Just like the rear shock, there is a negative air chamber about 10% of the way through the fork travel. Although with the larger volume of air the fork has compared to a rear shock, the equalization process does not make a very noticeable impact on the positive air reading. Note your final front fork pressure. You can now use this pressure as your stock fork pressure before each ride without having to work through this process again.

Lastly, please note that these pressure settings apply to you and the amount of gear you were wearing when you performed the setup. Riding with more or less gear/water will require you
to adjust your rear shock and front fork pressures accordingly.

Air Volume Spacers
Forks (Fig.14) and rear shocks (Fig. 15) can be further fine tuned to ensure appropriate travel is being used for the terrain you are riding. This is done using volume spacers that reduce the air volume inside the positive or negative air chamber. For the purposes of this setup guide, we will focus on positive air chamber spacers only, for further information about negative volume spacers, please consult your shock manufacturer's owner's manual.


Figure 14


Figure 15

After you complete this setup guide and go out for your first couple rides, and are either unable to use all of the travel or are using it too easily, you might benefit from adjusting the air volume in your fork or rear shock. It is best to ensure you have ridden terrain and trail futures that would warrant use of full travel before making any changes. If you are experiencing frequent or hard bottom out (travel o-ring at the bottom or off the shock stanchion) then you may want to add volume spacers to your suspension to increase the air pressure as your bike goes through its travel, thus increasing the amount of force required to reach full travel. Conversely, if you are not able to use full travel, where appropriate, you may want to remove volume spacers to decrease the air pressure as your bike goes through its travel, thus decreasing the amount of force required to reach full travel.

Rebound Settings for Rear Shock & Front Fork

Rebound settings will vary between riders. Rider weight, riding style, ability level, and terrain all dictate what setting will be appropriate. Heavier riders run more air pressure in the rear shock unit and the front fork than lighter riders and therefore need to use more rebound damping (+). Lighter riders will use less (-).

The best way to hone in on your preferred rebound setting is to repeat a short section of choppy trail several times, adjusting the rebound in large chunks at first to find a zone that feels better than the others, and then make small adjustments to fine tune the settings (Figs. 16, 17). Be sure to do this with any pedal or climb settings in the full open position. You want feel for the point where the bike feels “glued” to the ground, but doesn’t feel like the suspension is getting stiffer with each successive hit (packing up). If the bike feels loose and skittish, slow the rebound (+) if the bike feels great initially but then gets harsh after multiple bumps, open the rebound up 1 or 2 clicks (-). Be sure to always note the rebound setting as clicks from the full slow (+) position.

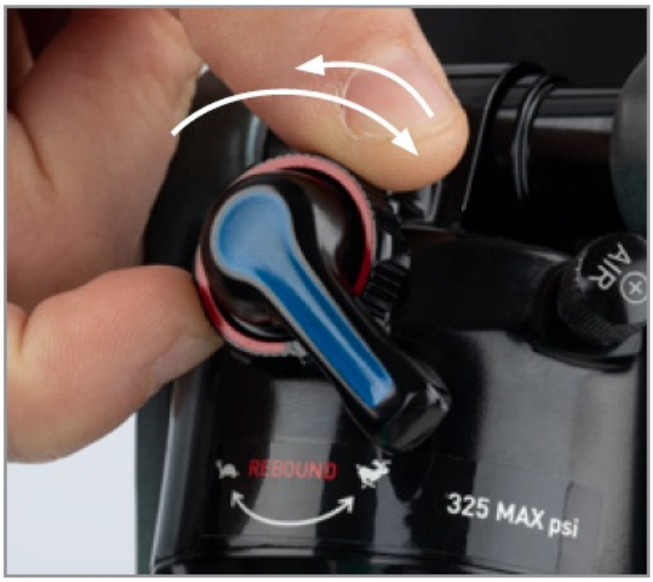

Figure 16


Figure 17

Some rear shock modes and forks may have both a low speed rebound (LSR, Figs. 18, 20) adjustment as well as a high speed rebound (HSR, Figs. 19, 20) adjustment. This allows for additional fine tuning of the bikes riding characteristics. As a general rule, use the LSR adjuster to control shock performance under brake bumps, technical climbing, and off-camber cornering, when extra traction is needed. The HSR adjustment is useful to allow the shock to recover from bigger hits and square-edged bumps quickly enough to absorb consecutive hits.

Figure 18

Figure 19


Figure 20

Lockout, Pedal, & HSC / LSC
Most Salsa Split Pivot models feature rear shocks and front forks with some type of 2- or 3-position lever. In either case, the open setting can be used 90% of the time. Even on steep technical climbs, the anti-squat built into the Split Pivot chassis provides enough support to climb efficiently, and leaving the shock open allows it to absorb bumps and maintain traction better than if the pedal platform is engaged.

The second setting (Fig. 21) is a pedal platform that adds support and firmness to the suspension to further enhance pedaling efficiency. When medium sized bumps are encountered, the platform gives way and the suspension can absorb the rest of the bump. This setting is best used on long, gradual, extended smooth climbs like fire roads, but some heavier riders (220 lb+) might find is useful on technical climbs as well.

If the shock or fork has a third position (Fig. 22), this will be the “lock-out”. In many cases it is not a true lock-out, just a stronger version of the pedal platform. This setting will add even more support and firmness to the rear suspension and it will only become active when hard/heavy bumps are encountered.

We recommend using this setting primarily for commuting to and from the trailhead, or in flat-out sprint situations on finish-line straights.

Figure 21

Figure 22

Most fork models feature some type of low-speed compression adjustment (LSC) in addition to the platform settings (Fig. 23). Often, this LSC adjustment is found as steps between the open and lock position, occasionally it is on a separate dial. LSC can be used to combat fork dive (from braking), but will sacrifice slightly on how supple the fork feels. Usually just a few clicks of LSC(+) is adequate for all but the heaviest riders. Very light riders may use none.

Figure 23

Some forks also provide high-speed compression adjustment (HSC). HSC (Fig. 24) is useful to control performance under bigger hits, landings, and square edge bumps. These are your deep compression events where the fork is moving through its travel quickly.

Figure 24

Some rear shock models also feature a LSC and or HSC adjustment separate of the pedal/lockout adjustment. For rear shocks, LSC (Fig. 25) can be used to help further stabilize the rear suspension under pedaling in a more subtle fashion than the pedal platform does. Generally most riders can use little to no LSC, but heavier riders might find added LSC(+) helps stabilize the bike under pedaling. For rear shocks with HSC (Fig. 25), you can use it to help manage big hits, like those off larger drops or any time the rear shock is compressing deep into its travel at a high rate of speed. For shocks that feature hydraulic bottom out (HBO) adjustment, this can be used to further control bottom-out, independent of air pressure or air volume spacers. Some rear shocks feature an adjustable HBO (not pictured) where others are fixed. This additional bottom out control is achieved using a similar method as the HSC but is only active during the last portion of the rear shock stroke. For further information on HBO, consult your shock manufacture’s owner’s manual.

Figure 25

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FAQ

Q: Can I modify my bicycle or its accessories?
A: No, bicycle products should not be modified. Always follow all product instructions and warnings.

Documents / Resources

	SALSA Moraine 1.0 GEN 4 Split Pivot [pdf] User Guide 145, 135, 125, 180, 170, 70, 160, Moraine 1.0 GEN 4 Split Pivot, Moraine 1.0, GEN 4 Split Pivot, 4 Split Pivot, Split Pivot, Pivot

References

- Support – Salsa Cycles
- User Manual