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Cannondale Jekyll™

2004 Manitou Swinger 3-Way SPV Sag Set Up

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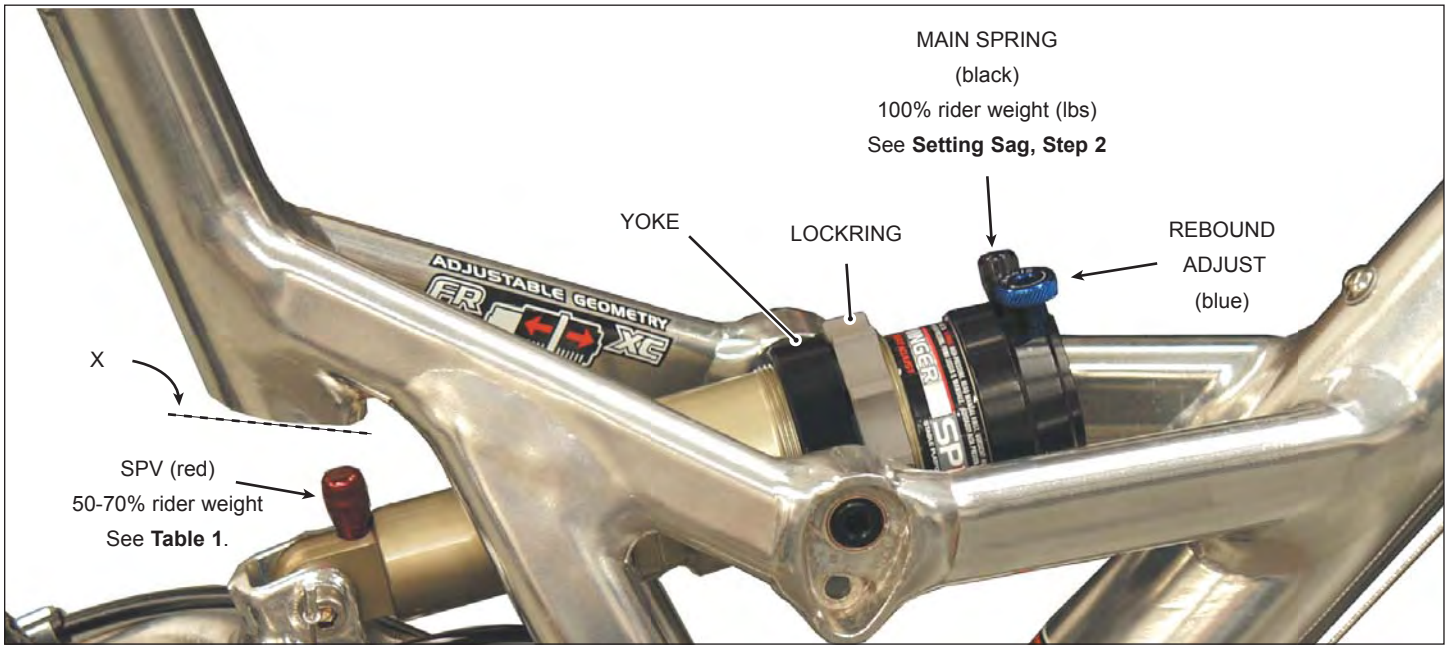

JEKYLL & 2004 MANITOU SWINGER 3-WAY

- The total swingarm travel for the Jekyll with this air sprung shock is 135 mm.
- The swingarm-to-shock travel ratio : 3:1
- A 2004 Swinger 3-Way rear shock mounted on a 2004 Cannondale Jekylll (all models) will have an stroke travel of 44.5 mm. Sag is expressed as a percentage of this total stroke travel. The recommended sag is 25% or 11 mm adjusted by regulating the main spring air pressure. How to set the sag is explained on page 2. This Tech Note is only a guide to achieving proper sag. Its essential that you read the manufacturer's (Answer Products) rear shock manual that was shipped with your Jekyll. See the warning below.
- The position of the rear shock in the yoke DOES NOT affect sag. Changing the rear shock position in the yoke after setting sag WILL NOT change the sag. Therefore, sag is measured and adjusted independently of the yoke position. Adjustment of the rear shock position in the Jekyll frame (yoke) is described in the Cannondale Jekyll Owner's Manual Supplement **115808.PDF**.

WARNING:

Be sure to read and follow the manufacturer's (Answer Products) owner's manual. It contains important safety, use, and maintenance information for the rear shock.

The manual is titled : "2004 Owner's Manual All Swinger Rear Shocks Answer Products - P/N 042106.

Go to http://www.answerproducts.com/productmanuals.asp

CAUTION: Do not permit seatpost end to extend below the lower seatube end (X); seatpost contact with the SPV valve end (1) during suspension travel and result in damage to the seatpost or valve.

And, when attaching rear shock to swingarm, be sure to always position SPV valve so it points up.

Also, be sure to note cable and line routing around the shockso that you may return them to original routing if disturbed.

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SETTING SAG

STEP 1 : Set SPV Air Pressure

1. Secure the Jekyll upright in a bike stand and remove the rear wheel.

2. Loosen and remove the rear shock mounting bolt hardware. Notice the orientation of the bolt head, the washers on the outside of the swingarm. Be sure to note cable and line routing around the shock so that it may be reutrn to original state if disturbed.

3. Make sure the area around the red SPV valve cap is clean and remove the red SPV valve cap.

4. Connect a high-pressure bicycle pump to the SPV valve. Pressurize to 50-70% of the rider's weight. The **minimum pressure** (for any rider weight) must be set at 50 psi (3.4 bar). The **maximum pressure** (for ny rider weight) is 175 psi (12 Bar). See table below.

Table 1

Rider Weight		SPV Air Pressure									
Lbs	Kg	50%		55%		60%		65%		70%	
		psi	bar	psi	bar	psi	bar	psi	bar	psi	bar
100	45	50	3.4	55	3.8	60	4.1	65	4.5	70	4.8
110	50	55	3.8	61	4.2	66	4.5	72	4.9	77	5.3
120	54	60	4.1	66	4.5	72	5	78	5.4	84	5.8
130	59	65	4.5	72	4.9	78	5.4	85	5.8	91	6.3
140	64	70	4.8	77	5.3	84	5.8	91	6.3	98	6.8
150	68	75	5.2	83	5.7	90	6.2	98	6.7	105	7.2
160	73	80	5.5	88	6.1	96	6.6	104	7.2	112	7.7
170	77	85	5.9	94	6.4	102	7	111	7.6	119	8.2
180	82	90	6.2	99	6.8	108	7.4	117	8.1	126	8.7
190	86	95	6.5	105	7.2	114	7.9	124	8.5	133	9.2
200	91	100	6.9	110	7.6	120	8.3	130	9	140	9.7
210	95	105	7.2	116	8	126	8.7	137	9.4	147	10
220	100	110	7.6	121	8.3	132	9.1	143	9.9	154	11
230	104	115	7.9	127	8.7	138	9.5	150	10	161	11
240	109	120	8.3	132	9.1	144	9.9	156	11	168	12
250	113	125	8.6	138	9.5	150	10	163	11	175	12

NOTE: The volume of SPV is relatively small. When you remove the pump from the valve, the air which escapes could cause the pressure to drop below 50 psi. In other words, 50 psi could be lost as you remove the valve. You should practice removing the pump from the valve several times to find out how must air is lost (if any) when you remove the pump. Once you know (roughly) how must air is lost in removing the pump from the valve, simply add air above your desired setting to compensate.

REMEMBER!, pressure below 50 psi can severly damage the shock. See your shock owner's manual.

NOTE : You can loosen the yoke lockring and rotate the entire shock in the yoke to make attaching the pump to the valve a bit easier. When finished, be sure reposition the shock in the yoke so that the red SPV valve points straight up. Be sure to tighten the yoke lockring against the yoke. It can be tightened by hand. But, if you prefer, green pin spanner will work (Park Tool, SPA-1)

6. After the SPV pressure is set, reinstall the rear shock mounting hardware. Again, be sure the red SPV valve points straight up. Tighten the rear shock bolt to 12.0 N•m (106 In•Lbs). Reinstall the wheel.

STEP 2: Set the Main Spring Air Pressure to 100% of the Rider's Weight

7. Remove the black main spring valve cap at the front of the shock. Attach a high-pressure bicycle pump to the valve. First, pressurize to 100% of the rider's weight. Example: 200 Lbs rider = 200 psi. This setting should produce a sag close to the recommended 25% of rear shock stroke travel or 11 mm. The next step is to actually measure the sag at this air pressure. See Table 2.

STEP 3 : Measure the Sag, then Add or Remove Main Spring Pressure to Increase or Decrease Sag

8. Take a sag measurement. With rider off the bike, position the wiper O-ring against shock body . Seat the rider on the bike with feet on pedals without bouncing. Measure sag or distance (A). Increase or decrease sag by regulating main spring air pressure.

To increase sag, release air pressure

To decrease sag, increase (add) air pressure.

9. Be sure to reinstall the black valve cap when finished.

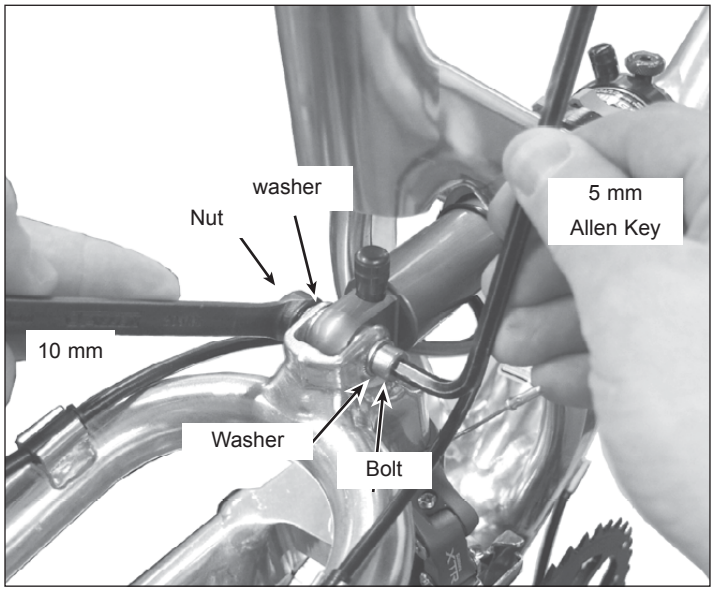
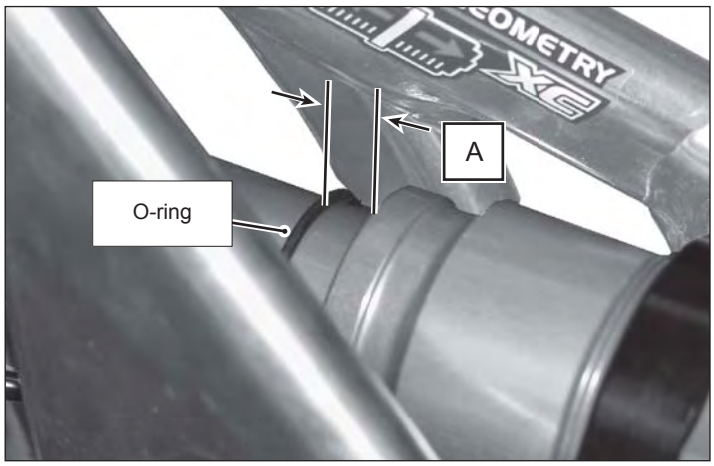


Table 2

SAG					
Sag %	25%	30%	35%	40%	45%
A	**11 mm**	**13 mm**	**16 mm**	**18 mm**	**20 mm**



FIELD SAG GUAGE (approximate)

To use : 1. Print Tech Note at 100% on 8.5x11 paper.
2. Cut out and trim to border. Don't trim border off.
3. Hold ruled end against shock body.
4. Read O-ring distance (A) in millimeters.