

4 R6 Front Fork Manual (basic information)

ADJUSTMENT

The adjustment of your front fork can be changed by following factors:

- Spring rate
- Preload on the spring
- Oil level
- Viscosity and quality of the oil
- Compression damping
- Rebound damping

The combined working of these factors will influence the working of the front fork and the balance of the bike. The standard adjustments are based on several years of experience and are in most of the cases the best adjustment.

Spring rate

The spring rate, which is mounted in the front fork, is determining for an exact starting point of an optimal spring behavior. The standard mounted spring is good in most of the cases. Exceptions can be explained by the weight or riding style of the rider.

Preload on the spring

The preload on the spring mounted in the front fork is determining for the balance of the bike. The standard fitted spring preload is good in most of the cases. The spring preload can be adjusted according to the weight and riding style of the rider.

Oil level

The oil level is important for the lubrication and the general function of the front fork and has the biggest influence on the end of the stroke. We advise to use the original advised oil level.

Adjustment of compression damping

The compression refers to the hydraulic damping when the front fork moves in. The compression can be changed by the compression adjuster which is located on the bottom of the fork. The compression damping fixes the speed of the front fork moving in.

Before you want to change the compression, it is essential to know the standard set up. The best set up for different circuits/roads can be obtained by adjusting the compression and rebound damping to your personal feeling.

The compression damping has about 13 positions:

- The minimum compression damping is position 13 (screw completely turned out)
- The maximum compression damping is position 1 (screw completely turned in)

PS: Never force to turn the screw completely in.

By doing so you can damage the adjustment needle.

Adjustment of rebound damping

The rebound refers to the hydraulic damping when the front fork moves out. The rebound can be changed by the rebound adjuster which is located on the top of the fork. The rebound damping fixes the speed of the front fork moving out. Before you want to change the rebound, it is essential to know the standard set up. The best set up for different circuits/roads can be obtained by adjusting the compression and rebound damping to your personal feeling.

The rebound damping has about 14 positions:

- The minimum rebound damping is position 14 (screw completely turned out)
- The maximum rebound damping is position 1 (screw completely turned in)

PS: Never force to turn the screw completely in.

By doing so you can damage the adjustment needle.

Guidelines for the adjustment

The working of the front fork is dependent of different factors like:

- Type of spring (linear or progressive)
- Preload on the spring
- Spring rate
- Oil level
- Viscosity of the oil
- Compression and rebound damping

It is not always easy to ascribe a problem or a certain behavior of the front fork to one of these factors. The working of the front fork is determined by the cooperation of these different factors. The list below just gives you an indication of the consequences on the changes of these adjustments.

Spring/Spring preload

- The spring is too hard or too much preload: the bike stays too high in front and even on extreme hard braking a part of the stroke is used
- The spring is too soft or too little preload: the bike stays low in front and is bottoming easy on extreme hard braking
- Standard springs are mounted in the front fork. The spring rate and/or spring preload can be changed according to the weight and riding style of the rider

Oil level

- The oil level is necessary for the lubrication and the overall function of the front fork and has most of its influence at the end of the stroke. We advise to use the standard oil level
- Respect the maximum and minimum values

Compression damping

- Standard adjustment
- Not enough damping: - the front fork is bottoming easy
- Too much damping: - the front fork feels hard and harsh
 - the full stroke has not been used
 - the front is not absorbing the small bumps

Rebound Damping

- Standard adjustment
- Not enough damping: - the front fork feels springy (feels like not enough hydraulic damping)
 - the front is coming out to quickly
 - the bike feels riding high in front
- Too much damping: - the front fork feels harsh over small bumps and is not absorbing the bike feels low in front

SOLVING PROBLEMS

Place	Terrain	Problem	Adjustment
Straight line	Small bumps	1. Springy	Increase rebound
			Decrease preload
		2. Feels hard, stiff	A: decrease compression
			B: decrease rebound
			C: decrease preload
		3. Not reacting to bumps	A: decrease rebound
			B: decrease compression
			C: decrease preload
		Corners	Heading into a turn
B: raise oil level			
C: increase preload			
D: increase compression			
2. Head shakes when braking	A: increase spring rate		
	B: raise oil level		
	C: increase compression		
3. Harsh when braking	A: decrease oil level		
	B: decrease compression		
	C: decrease preload		
	Accelerating out of turns	Head shakes	Increase rebound

Place	Terrain	Problem	Adjustment
G-forces		1. Bottoms	A: increase compression
			B: increase preload
			C: raise oil level
		2. Springs back	A: increase rebound
			B: decrease compression
			C: decrease preload
D: decrease spring rate			
Uphill	Under acceleration	Head shakes	Increase rebound
	Consecutive small bumps	Feels harsh	A: decrease spring rate
			B: decrease preload
			C: decrease rebound
			D: decrease compression
		Feels high	A: decrease spring rate
B: raise outer tubes in clamps			
Downhill		Feels low	C: decrease preload
			A: decrease rebound
			B: lower outer tubes in clamps
			C: increase compression
Other		1. Too soft	D: increase preload
			A: increase spring rate
			B: increase compression
		2. Heavy feeling	C: increase preload
		3. Too stiff	Decrease rebound
			A: decrease compression
B: decrease spring rate			
			C: decrease preload

5 R6 Shock Absorber Manual (basic information)

ADJUSTMENT

Following factors can change the adjustment of a shock:

- spring rate
- preload on the spring
- compression damping
- rebound damping

The combined working of these factors will influence the working of the shock and the balance of the bike. The standard adjustments are based on several years of experience and are the best adjustments for general use. Adjustment is possible for extreme wishes of circuit of rider (weight).

Spring rate

The spring rate and the adjustable preload of the spring, mounted on the shock are determining for an exact starting point of optimal spring behavior.

Preload on the spring

We can change the preload of the spring in two different ways:

- a. with the shock mounted on the bike
turn the preload nut in the way you want to adjust, softer or harder
- b. with the shock removed of the bike
mount the shock in a vice and turn the preload nut in the way you want to adjust, softer or harder

Adjustment of compression damping

The compression refers to the hydraulic damping when the shock moves in. The compression can be changed by the compression adjuster which is located above the nitrogen tank.

The compression damping fixes the speed of the shock moving in.

The compression damping also makes sure that the shock doesn't bottom at heavy impact.

Before you want to change the compression, it is essential to know the standard set up. The best set up for different circuits, rider's style (with or without passenger) can be obtained by adjusting the compression and rebound damping to your personal feeling.

The compression damping has about 13 positions.

- The minimum compression damping is position 13 (screw completely turned out)
- The maximum compression damping is position 1 (screw completely turned in)

PS: Never force to turn the screw completely in.

By doing so you can damage the adjustment needle.

Adjustment of rebound damping

The rebound refers to the hydraulic damping when the shock moves out. The rebound can be changed by the rebound adjuster which is located on the bottom of the shock. The rebound damping fixes the speed of the shock moving out.

Before you want to change the rebound, it is essential to know the standard set up. The best set up for different circuits, rider's style (with or without passenger) can be obtained by adjusting the compression and rebound damping to your personal feeling.

The rebound damping has about 14 positions.

- The minimum rebound damping is position 14 (screw completely turned out)
- The maximum rebound damping is position 1 (screw completely in)

PS: Never force to turn the screw completely in.

By doing so you can damage the adjustment needle.

GUIDE-LINES FOR THE ADJUSTMENT

The working of a shock is dependent of different factors like:

- type of spring (linear or progressive)
- spring rate
- preload on the spring
- nitrogen pressure in the tank
- viscosity of the oil
- compression and rebound damping

It is not always easy to ascribe a problem or a certain behavior of the shock to one of these factors. The working of the shock is determined by the cooperation of these different factors. The list below just gives you an indication on the consequences on the changes of these adjustments.

Spring

- the spring is too hard: it is easy to turn, but the rear wheel is nervous on roughness
- the spring is too soft: the bike feels oversteering in fast corners
- a standard spring is mounted on the shock. You can change the spring rate according to the weight of the rider. Standard spring for rider of 80 kg.

Preload of the spring

- set the preload of the spring, depending on the weight, habits and the skill of the rider

Compression damping

- standard adjustment
- not enough compression: - the shock is bottoming easy
 - the bike sits low
 - the bike turns difficult
- too much compression: - the bike is feeling hard and stiff
 - the bike feels high
 - the shock is not using complete stroke
 - the shock just hits the bumps and is not absorbing these

Rebound damping

- standard adjustment
- not enough rebound: - the shock feels springy (feels like no hydraulic damping)
 - the shock moves out too quickly, kicks up
 - the bike feels high
- too much rebound - the shock feels stiff over a series of small bumps and is not absorbing (not following) these
 - the bike has little traction
 - the bike feels low

SOLVING PROBLEMS

Place	Terrain	Problem	Adjustment
In straight line	Small bumps	1. Springy	Increase rebound
		2. Feels heavy	Decrease rebound
		3. Lack of traction	Decrease rebound
Corners	Heading into a turn	1. Springs back	A: decrease spring rate
			B: decrease spring preload
			C: increase rebound
			D: decrease compression
	Accelerating out of a turn	1. Lack of traction	A: decrease spring rate
			B: decrease rebound
Accelerating out of a turn	2. Squats	A: increase spring preload	
		B: increase spring rate	
		C: increase compression	
G-Loads		1. Bottoms	A: increase spring rate
			B: increase compression
		2. Kicks out	A: increase spring rate
			B: decrease compression
		3. Springs back	Increase rebound

Place	Terrain	Problem	Adjustment
Uphill		1. Springs back	A: decrease spring rate B: increase rebound
		2. Bottoms, kicks out in whoops	Decrease rebound
Downhill		1. Stiff	A: decrease spring rate
			B: decrease spring preload
			C: decrease compression
		2. Springs back	A: decrease spring rate
B: decrease spring preload			
	C: decrease compression		
	D: increase rebound		
Other		1. Too stiff overall	A: decrease spring rate
			B: decrease compression
		2. Feels springy	A: decrease compression
3. Feels like it's not using enough stroke	A: decrease spring rate		
	B: decrease compression		