

TECHNICAL

RS250R suspension directionality

RS250R

Year	Feature	Directionality
'97-'00	NX5 type Slightly stronger damping like the 125	Somewhat raised rear height with improved initial turning. Change direction at relatively small radius corner and make sooner points where throttle is widely opened.
'01	NXA type (full model change) Rear link characteristics slumped in the latter half, making use of traction	Lowered rear height to give better initial grip feeling at the rear. Points where traction rises in link characteristics will be used for rising up.
'02-	NXA type Laminated type valves used for front. Better initial movement for rear	Setting is made so as not to suppress gentle suspension movement. Basically, same as the 2001 year model.

2000 year model suspension setting

These settings are intended to obtain better turning ability from the RS although the standard settings are enough to go around.

•Example of basic suspension setting on circuits (2000 year RS250R)

	Front				Rear			
	Fork leg height	Spring pre-load	Rebound	COMP	Ride height	Spring pre-load	Rebound	COMP
Standard	14mm	18mm	8th notch back	8th notch back	24mm	175mm	12th notch back	12th notch back
Setting for dry condition	14mm	18mm	7th notch back	8th notch back	27mm	172mm	16th notch back	12th notch back
Setting for wet condition	14mm	24mm	8th notch back	11th notch back	25.5mm	175mm	21 notch back	17 notch back

*Data above are given for informational purposes. Settings vary with weather conditions. Setting should be made while checking the state of the machine.

Projection, initial, and vehicle height will be changed to increase front loads.

With rear Rebound damping adjustment released, braking or throttle off will be used to produce front and rear pitching, leading to increased front loads, which allows sooner direction changes at the beginning of the corner.

In the setting above, rear suspension stroke of around 1/2 to 3/4

of the shaft would provide the RS with excellent initial turning ability (front: nearly full stroke).

Then spring rate change or initial adjustment should be made depending upon rider weight or riding style. In a circuit, like the Suzuka, where there are high-speed corners, allowing wide-open throttle running, and ascending S-shaped corners, further increased load to the front with the dry sets would cause rear suspension stroke during acceleration, avoiding degraded turning capability resulting from reduced front loads.

Example of creating turning ability at high-speed corners with wide open throttle and ascending corners

	Front				Rear			
	Fork leg height	Spring pre-load	Rebound	COMP	Ride height	Spring pre-load	Rebound	COMP
Setting for dry condition	17mm	18mm	7th notch back	8th notch back	28.5mm	175mm	16th notch back	12th notch back

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2001 and 2002 year model suspension setting

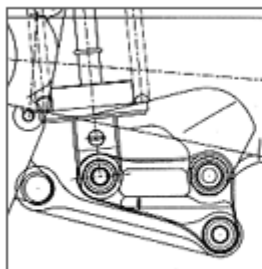
The RS250R, a completely new model, has been designed to provide higher turning capability.

It has incorporated dimension changes and engine mounting position changes, allowing natural handling at the initial stage of turning. Also, overall rigidity balance has been attained when running at clipping points through the machine rising, providing high turning capability.

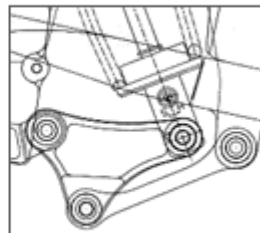
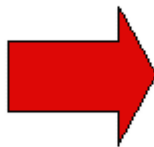
The suspension system has undergone major specifications changes as well. The front is the slide fitting 43mm and the rear is 46mm with altered link characteristics, which have attained improved absorption, road holding feel, and traction.

Actually, settings should be so made that the front and rear can aggressively move, like the RS125R. Especially, the rear is designed to be slightly stiff at the initial stage of stroke and gentle in the latter half of the stroke since the link ratio is gently sloped in the latter half of the stroke.

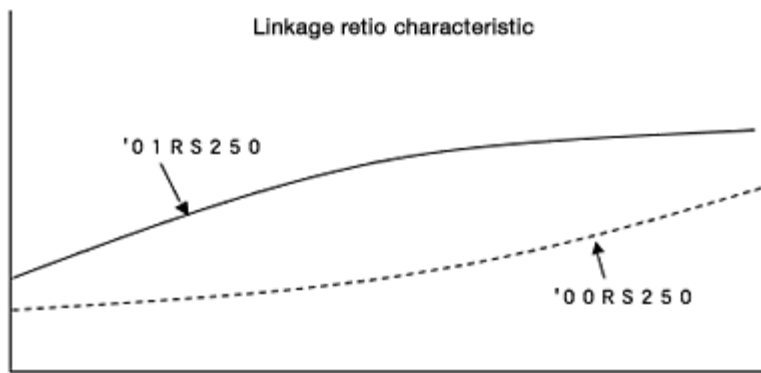
Accordingly, if settings are made so that the rear suspension is stroked by the half only, the harder part of the suspension only would be used, resulting in ineffective traction.



'00 RS250R Linkage



'01 RS250R Linkage



Judging from the ratio curve above, the 2001 year model seems stiffer. However, actually the 2000 RS has a spring rate of 7.8kgf/mm, while the 2001 RS has a spring rate of 7 kgf/mm which is softer than the former, resulting in nearly overlapped lines in the graph.

	Front				Rear			
	Fork leg height	Spring pre-load	Rebound	COMP	Ride height	Spring pre-load	Rebound	COMP
Standard	14mm	18mm	8th notch back	8th notch back	31mm	164.1mm	10th notch back	8th notch back
Setting for dry condition	14mm	18mm	8th notch back	8th notch back	29.5mm	164.1mm	11th notch back	11th notch back
Setting for wet condition	14mm	20mm	16th notch back	16th notch back	25.5mm	164.1mm	21 notch back	17 notch back

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