STANDARD ROCK SHOX SETTINGS

	MAG 21	MAG 10
Air pressure:	38 – 42 Psi	38 – 42 Psi
Oil Height:	40 – 45 mm	45 – 50mm
Oil viscosity:	SAE 8 wt (ATF)	SAE 8 wt (ATF)
Valve spring preload:	0 – .5mm	0 – .5mm
Rebound bleed hole(s):	none	none
Compression bleed hole:	.7 mm (Std)	.7 mm (Std)
Travel:	Standard (46mm)	Standard (46mm)

PERFORMANCE SETTINGS

CROSS COUNTRY SETTINGS

LIGHT RIDER (less than 140 lbs.)

	MAG 21	MAG 10
Air pressure:	35 – 40 Psi	35 – 40 Psi
Oil Height:	45 – 50 mm	50 – 55mm
Oil viscosity:	RS Light (SAE 5 wt)	RS Light (SAE 5 wt)
Valve spring preload:	0 – .5mm	0 – .5mm
Rebound bleed hole(s):	None	None
Compression bleed hole:	1.5mm	Std
Travel:	Std	Std

HEAVY RIDER (+ 180 lbs.)

	MAG 21	MAG 10
Air pressure:	42 – 48 Psi	42 – 48 Psi
Oil Height:	35 – 40 mm	40 – 45mm
Oil viscosity:	SAE 8 wt (ATF)	SAE 8 wt (ATF)
Valve spring preload:	.5mm–1.0mm	.5mm–1.0mm
Rebound bleed hole(s):	none	none
Compression bleed hole:	Std	Std
Travel:	Std	Std

DOWNHILL SETTINGS

LIGHT RIDER (less than 140 lbs.)

	MAG 21	MAG 10
Air pressure:	38 – 42 Psi	38 – 42 Psi
Oil Height:	40 – 45 mm	45 – 50mm
Oil viscosity:	RS Light (SAE 5 wt)	RS Light (SAE 5 wt)
Valve spring preload:	0 – .5mm	0 – .5mm
Rebound bleed hole(s):	2 x 1.0mm	2 x 1.0mm
Compression bleed hole:	2.0mm	2.0mm
Travel: (long travel spacer)	60mm	60mm

AVERAGE RIDER (140-180 lbs.)

	MAG 21	MAG 10
Air pressure:	40 – 45 Psi	40 – 45 Psi
Oil Height:	35 – 40 mm	40 – 45mm
Oil viscosity:	RS Light (SAE 5 wt)	RS Light (SAE 5 wt)
Valve spring preload:	0 – .5mm	0 – .5mm
Rebound bleed hole(s):	1 x 1.0mm	1 x 1.0mm
Compression bleed hole:	2.0mm	2.0mm
Travel:	Long	Long

HEAVY RIDER (+ 180 lbs.)

	MAG 21	MAG 10
Air pressure:	42 – 50 Psi	42 – 50 Psi
Oil Height:	30 – 35 mm	30 – 35mm
Oil viscosity:	SAE 8 wt (ATF)	SAE 8 wt (ATF)
Valve spring preload:	0 – .5mm	0 – .5mm
Rebound bleed hole(s):	None	None
Compression bleed hole	1.5 mm	1.5 mm
Travel:	Long	Long

ROCK SHOX®

PERFORMANCE TUNING KIT

installation instructions



note:

To perform the following changes, you must have special RockShox service tools, a service manual and a qualified technician to install the parts.

THE BASICS

The standard Rock Shox settings are designed for use by riders weighing between 140 to 180 lbs (65-80 Kgs), and riding on a variety of cross country-type conditions. For use by riders out of this weight range or for other applications, such as downhill racing, the following settings should yield greater suspension performance. But first it is best to know the background of what's happening.

An air/oil suspension is really two systems working together at the same time– an air spring and a hydraulic damper (shock absorber). Every modern suspension system utilizes both of these, although the spring may be of a different form. A car, for example, uses a steel coil or leaf type spring. These are much heavier than an air spring, but require no maintenance of the pressure, nor do they change with temperature or elevation. For bicycles however, a lightweight air spring is appropriate.

A suspension works by allowing the wheel to quickly move up and down with the irregularities of the ground without moving the mass of the rider or vehicle with it. This means the rider doesn't get jolted around, and it also means the wheel can stay on the ground more, improving control and "ground feel" for the rider.

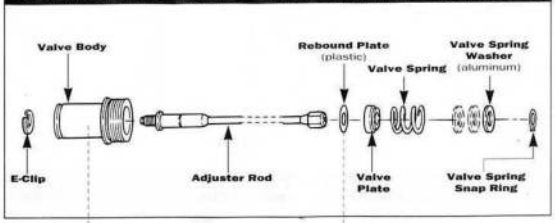
The suspension should move as much as possible to follow the ground without bottoming out (hitting the end of its travel). Depending on the bump size and how fast it is hit, the suspension varies in firmness to prevent bottoming, but the spring and damper do it in different ways. The spring changes according to how much it is compressed, while the damper changes according to the force put into it (how fast it compresses). This combination means the suspension can sense whether the wheel hits a big or small bump, or how fast or slow, and adjust its firmness accordingly.

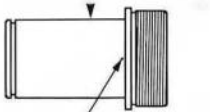
The damper also has a second function of controlling the rebound (extension) action of the suspension. A spring alone will rebound at different speeds depending on how much it has been compressed, and this would make the suspension movement very unpredictable. The rebound damping only allows the suspension to rebound at one constant, predictable speed.

The air spring stiffness, or spring rate, can be altered in many ways to suit the riders weight, terrain or riding style. It can be made stiff in the beginning of the travel to stay more extended on steep downhills where more weight is on the front end, or stiff at the end so it won't bottom out over jumps or if the rider is very heavy.

The damping can likewise be tuned. It can be made to move when a little force–such as washboards– is placed on it, yet at the same time become firmer if a bump at high speed is hit. It can also be tuned to be rigid while pedaling by creating a minimum force threshold that must be overcome before the suspension can move normally.

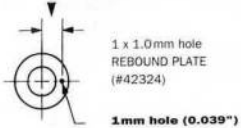
STANDARD MAG 21 CONFIGURATION





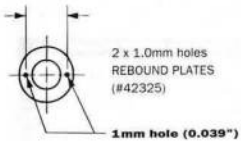
.7mm compression bleed hole

VALVE BODY (#42206)
Drill out .7mm free bleed hole to 1mm (0.039", #61 drill) or 1.5mm, (0.059", #53 drill). Do not drill out hole larger than 2mm (0.078")



1 x 1.0mm hole
REBOUND PLATE
(#42324)

1mm hole (0.039")



2 x 1.0mm holes
REBOUND PLATES
(#42325)

1mm hole (0.039")

If you have any questions or require assistance, please contact RockShox, Inc. directly at:

1.415.967.7469