800-277-5089

www.motoprosuspension.com

Warning: Servicing and tuning motorcycle suspension requires special tools and knowledge. If you are unfamiliar with the proper techniques STOP and have a qualified suspension technician complete the installation.

SETTING SAG

One of the most important chassis adjustments you can make to your dirt bike is rider sag. Often known as Loaded Sag or Race Sag. As a general rule we want to use between 30%-35% of total available wheel travel in loaded sag. So a bike with 12" of wheel travel would have about 4" of loaded sag. KTM models with the PDS shock are an exception, see note below. Adjusting loaded sag for optimum handling is simple and should be part of every riders normal bike preparation. Keep notes, and record how changes in sag affect overall handling. Use what works best for you.

With very few exceptions the only way to change sag is by making changes to shock spring preload. Most dirt bikes are equipped with either one or two threaded rings that secure the shock spring. With the bike supported on a stand, loosen the upper most ring. Now you can reach in and turn the spring with both hands in the appropriate direction to either tighten the spring or loosen it. Increasing the spring preload will raise the rear of the bike (reduce sag) while reducing preload will increase sag. Remember to secure the adjusting rings when you're finished with your adjustments.

PROCEDURE

1. Place the bike on a suitable work stand that will safely support its weight.

2. Using a marker make a line above the axle bolt on the top of the swing arm. Now make a second line on the bottom edge of the rear fender as close to vertical as possible above the first line.

3. Carefully measure the distance between the two lines (Picture 1). This measurement is "full extension" of the rear suspension. This number will not change as sag is adjusted, so record it in a safe place. All future sag adjustments will be based on this number.

4. Remove the bike from the stand. With the rider onboard (in full gear) seated in a normal riding position, feet on the pegs measure the distance between the two marks like you did in step #3. Loaded sag is calculated by subtracting step #4 from step #3. When making changes go in small steps of 3-4mm. Take careful measurements and record the effects. You may want to change sag for different riding environments.

5. Unloaded sag is a byproduct of loaded sag. Unloaded sag is the amount the bike sags while standing on its tires without the rider on the bike. If your loaded sag falls in the range of 30%-35% total suspension travel the unloaded sag will usually be no less than 1/2" (about 13mm) and no more than 1.25" (about 30mm). If your unloaded sag is

less than 1/2” when loaded sag is properly set you need higher rate rear spring. Conversely, if unloaded sag is excessive a lighter rate shock spring is needed. Call John at 800-277-5089 if you have questions about your spring rates.

THINGS TO REMEMBER ABOUT SAG

1. High speed shock compression adjusters will affect sag settings.
2. Track riders should experiment with setting sag from a standing position instead of seated. Off-road riders are usually better off using measurements from a seated position.
3. NOTE: **KTM models with PDS rear suspension work well with the loaded sag set between 120- 125mm.** Unloaded sag should fall between 30-40mm.
4. There is no magic number for your bike. Experiment, and use what works best for your riding style.
5. Springs can set and adjustments will change slightly over time. Check your sag settings often.