

Öhlins Shock Absorber for MX & Enduro

TTX FLOW DV

Owner's Manual

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY



Öhlins Headquarters Upplands Väsby, Sweden

Öhlins Racing AB - The Story

It was the 1970's, a young man named Kenth Öhlin spent most of his spare time pursuing his favourite sport: motocross.

Being a careful observer, Kenth's attention was continously drawn to one specific detail - motocross bikes had more engine power than their suspension could handle. It was not long before Kenth realised that better performance could be achieved by improved wheel suspension.

Öhlins Racing was established in 1976, and just two years later the company won its first World Championship title. Despite being in the business since 1976, the search for perfection and new functions is still the main focus of the company.

Congratulations! You are now the owner of an Öhlins product. Houndreds of World Championships and other major world titles are definitive proof that Öhlins products offer outstanding performance and reliability.

Every product has gone through rigorous testing and engineers have spent thousands of hours, doing their very best to use every possible experience from our long time within the racing sport.

The product that you now have in your possession is pure racing breed that is built to withstand.

By installing this product on your vehicle you have made a clear statement… you are a serious rider or driver with a focus on getting the maximal handling ability and outstanding feedback from your vehicle. Along comes the fact that your Öhlins product will be a long lasting friend, delivering the very best of comfort and performance every time you go for a ride. Go explore!

SAFETY PRECAUTIONS

General Warnings

Note!
The shock absorber/front fork/steering damper is an important part of the vehicle and will affect the stability.

Note!
Read and ensure you understand the information in this manual and other technical documents provided by Öhlins, before using the product.

Note!
Öhlins Racing AB can not be held responsible for any damage to the shock absorber/front fork/steering damper, vehicle, other property or injury to persons, if the instructions for mounting, usage and maintenance are not followed exactly.

⚠ Warning!
After installing the Öhlins product, take a test ride at low speed to ensure your vehicle has maintained stability.

⚠ Warning!
If the suspension makes an abnormal noise, or the function is irregular, or if you notice any leakage from the product, stop the vehicle immediately and return the product to an Öhlins dealer.

⚠ Warning!
The product warranty shall only apply if the product has been operated and maintained in accordance with recommendations in this manual. If you have any questions regarding usage, service, inspection and/or maintenance please contact Öhlins.

⚠ Warning!
This product was developed and designed exclusively for a specific vehicle model and shall only be installed on the intended vehicle model in its original condition as delivered from the vehicle manufacturer.

SAFETY SYMBOLS

In this manual, mounting instructions and other technical documents, important information concerning safety is distinguished by the following symbols:

⚠

The Safety Alert Symbol means: Warning! Your safety is involved.

⚠ Warning!
The Warning Symbol means: Failure to follow warning instructions can result in severe or fatal injury to anyone working with, inspecting or using the shock absorber, or to bystanders.

Caution!
The Caution Symbol means: Special precautions must be taken to avoid damage to the shock absorber.

Note!
The Note Symbol indicates information that is important regarding procedures.

Note!
When working with the Öhlins product, always read the vehicle service manual.

Note!
This manual shall be considered as a part of the product and shall accompany the product throughout its life cycle.

Performance Note!
When the shock absorber is brand new or when serviced with a new piston and piston band, the friction in the piston band can be perceived as high. The friction level will drop noticeably when the shock absorber has experienced a number of heat cycles due to riding. This new level of friction is to be considered optimal for the shock absorbers performance. Do not be alarmed if, when brand new, the shock absorber is perceived to move slowly if you push the seat of the bike and let the suspension rebound.

© Öhlins Racing AB. All rights reserved.
Any reprinting or unauthorized use without the written permission of Öhlins Racing AB is prohibited.

CONTENTS

Safety precautions 3
1 Spring 5
2 Setup 7
3 Maintenance 21
4 Service schedule..... 22

1 SPRING

Install the spring

Note!

Install the spring on the shock absorber before you install the shock absorber on the vehicle.

1

Measure the spring free length (A).

2

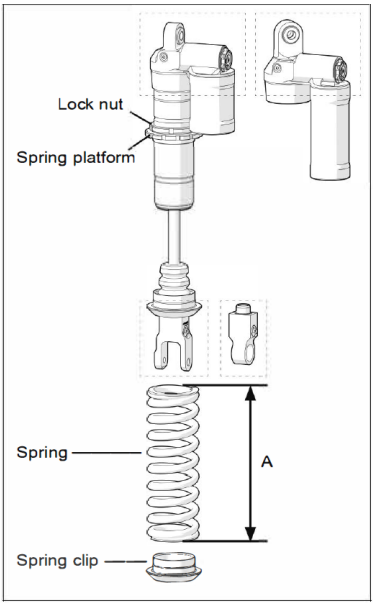
Loosen the lock nut so that you can move the spring platform as far up as needed to install the spring.

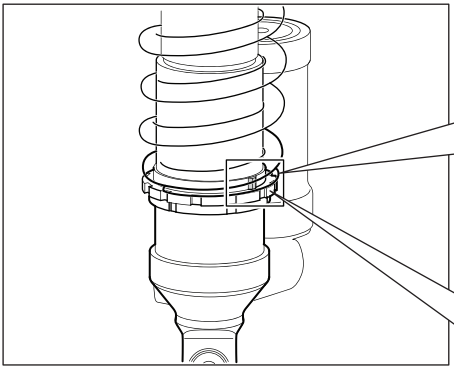
3

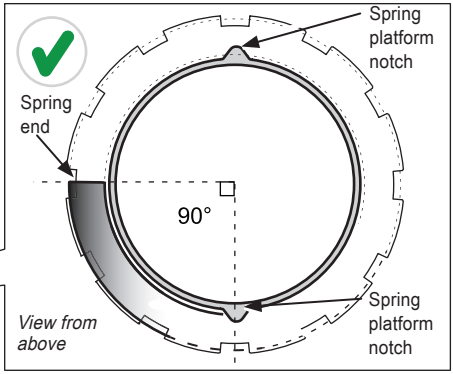
Put the shock absorber up-side-down in a vice. Install the spring.

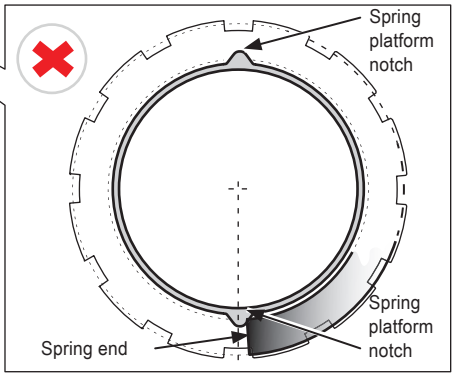
Caution!

Position the spring end between the two notches of the spring platform, see figure. If the spring end is positioned at one of the notches, the spring may be eccentrically positioned and may damage the reservoir.







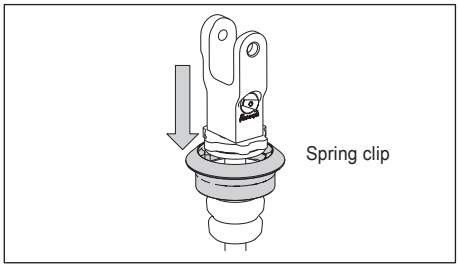


4

Install the spring clip by sliding it over the end piece and the stop washer.

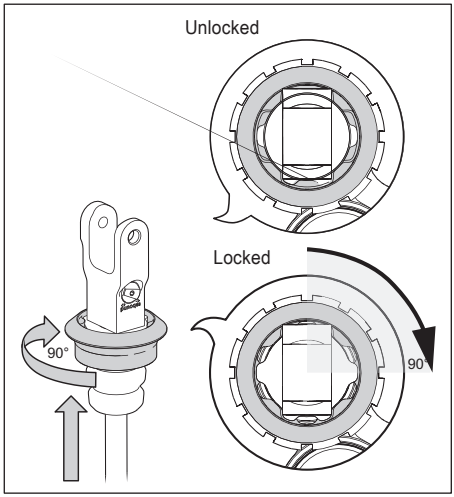
5

See the figure.
- The upper view shows the unlocked position.
- To lock: Turn the spring clip or the end piece 90° and pull it back towards the stop washer.



Note!

If a spring assembly tool is used, the spring can be compressed by pushing on the spring clip and rotating the end piece to get the locked orientation.



6

Measure the spring length. Adjust the spring preload to the recommended setup data, found in the Mounting Instructions.

Caution!

Tighten the preload lock nut before riding the vehicle.

Setting preload

1

Loosen the preload lock nut. Use a C-spanner.

2

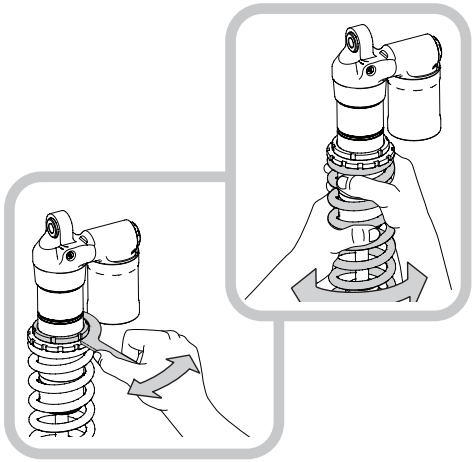
Turn the spring by hand to the desired position. The spring platform has a grip function, therefore, by turning the spring you will move the spring platform.

3

Tighten the preload lock nut.

Note!

Make sure the spring platform is not rotating when tightening the lock nut.



2 SETUP

Purpose

What is the purpose of setting up your suspension?
Answer: Getting a bike that helps you negotiate the track in an efficient and safe manner by adapting it to your weight and riding style. Getting a bike that you can position as desired going into a corner, when braking and taking off from a jump etc.

Setup work is all about making front and rear suspension work together as one balanced system. Neither the rear shock nor the front fork can handle everything by itself, balance between front and rear is fundamental.

A balanced bike needs just the right amount of input from the rider to attain the correct position for an upcoming obstacle. Example: If the bike has the wrong position going into a corner it does not matter what fancy parts are on there, you will not make the corner.

When balance and position are sorted, you can start making adjustments to suite your specific taste and get to benefit from the high quality riding experience that your Öhlins suspension provides.

When working on your setup remember to always ask yourself: What is the problem on the track? The right kind of analysis, “The bike struggles for traction when accelerating out of the slow flat corner”, will open up the entire toolbox that is the suspension system to help you fix the problem. The wrong kind of analysis, I have too much rebound and that’s why there is no traction, only leaves you with one option to fix the problem. Always analyze the problem from a position standpoint. Position is always dominant and it is always the factor that gives the most options to solve a problem.

First things first

Below is a simple chart showing the work order when dialing in your bike.

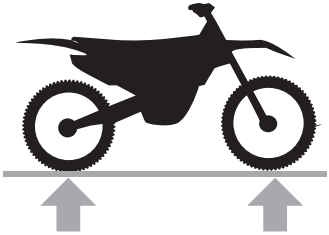
Work order
Before riding choose appropriate spring rate front and rear. Adjust sag according to recommendations and check free sag. Set the preload on the front fork and add oil to the outer chamber according to recommendations.
When riding analyze problems with position and solve these using sag, free sag, fork position and oil volume.
When the position feels good use adjusters to get the desired feeling, character and fine tune.

This setup guide

In this guide you will get detailed information on each of these areas together with typical examples and a troubleshooting chart.

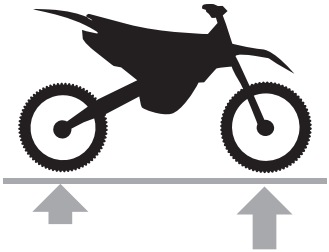
Basic terminology

2.1



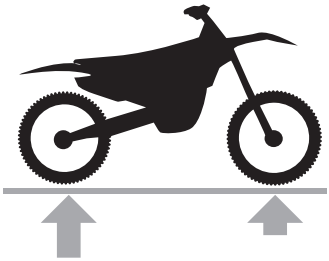
Load transfer means a change from static load distribution, see picture 2.1, to a more front end or rear end biased load distribution. Let's say the bike's load distribution is 50% Front - 50% Rear when static.

2.2



When you brake; the chassis shifts its position towards the front increasing the load on the front wheel. See picture 2.2. The load distribution might be 80% Front – 20% Rear as an example during the braking. The added load on the front wheel increases traction. The purely geometrical effect of the steeper front fork angle aids when turning the bike.

2.3



When accelerating; the chassis shifts its position towards the rear increasing the load on the rear wheel. Se picture 2.3. The load distribution might be 70% Rear – 30% Front for example during the acceleration. The added load on the rear wheel increases traction. The purely geometrical effect of the flatter front fork angle gives more straight line stability. When you add the rider and the way the rider moves on the bike you get the entire effect.

Pitching

2.4

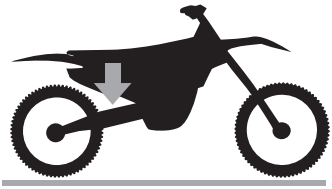


2.5



Pitching means rotation around the bikes center of gravity. The bike can pitch forward or backwards. See pictures 2.4 and 2.5. When a pitching movement has begun it is hard to stop it due to the momentum of the rotating mass, the chassis. A small pitching will be perceived as a big change in position by the rider since the angle of the bike is changed to quite a large extent. The bike will be most susceptible to pitching when close to its neutral position. See picture 2.1. Pitching is very much an effect of the balance between front and rear. The bike is less likely to pitch if in either front end or rear end biased load distribution. A bike that pitches a lot will feel like it moves too much and is nervous. Pitching is also a good thing. In order for the rider to control the bike he/she must be able to pitch the bike forward to corner and pitch the bike backwards to wheelie over a log for example.

2.6



By squatting we mean that the rear suspension is compressed from forces inherent to the acceleration of the bike. See picture 2.6. During an acceleration the rear wheel is pushing the bike forward which rotates the chassis backwards onto the rear wheel. At the same time, the chain wants to pull the rear wheel closer to the engine resulting in the swing arm moving up towards the rear fender. These effects change the load distribution of the bike and puts more load onto the rear wheel adding traction vital to the continuing acceleration.

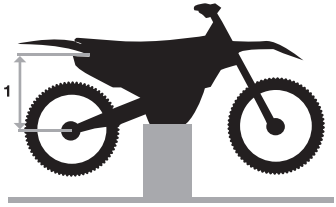
Measuring sag and free sag

The sag measurement is a critical part of your setup work and should be performed thoroughly.

When taking measurements:

- The rider shall be in full gear.
- The rider shall center his/her body over the foot pegs. Either by sitting on the bike holding the handle bar or by standing on the foot pegs holding the handle bar. It is good to have a friend to help you keep your balance. Even if this position is not your exact neutral riding position, it is the position for which the reference measurements are taken and it is important that you use the same position every time you measure.

2.7



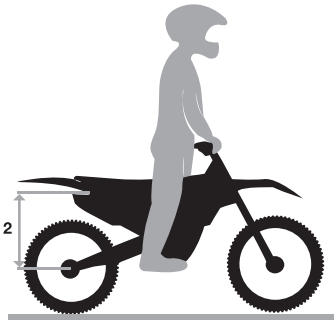
Make the following three measurements:

1: With the bike on a stand with the rear wheel hanging free, the suspension fully extended, take a measurement in a vertical line from the wheel axle to a marked reference point on the fender or number plate. See picture 2.7. If there is no good upper reference point: Cut and paste a small triangular shaped piece of tape and use the same corner reference for every measurement.

2.8



2: Load the suspension by sitting or standing on the bike as described above. See picture 2.8. Measure the distance between the wheel axle and the reference point. Calculate the difference between this measurements and measurement number one. Let's say you get 108 mm, this is your sag.



2.9



3: Step off the bike and let its own weight compress the suspension. See picture 2.9. Once again measure the distance between the wheel axle and the reference point. Calculate the difference with measurement 1. Lets say you get 42 mm, this is your free sag.

Rear shock

Choose your spring rate, install, set sag and check free sag.

Due to the way your motorcycle is designed the rear spring rate will be one of the most dominant parameters in your bikes behavior. It will determine every different position the bike attains when adapting to the rider's input and input coming from the track. During the course of a lap you will break, accelerate and shift your body weight to accommodate the track's obstacles. In every single one of these events the bike shall position itself to allow you to handle the obstacle safely. The bike's position is a combination of stroke and pitch angle. Depending on its position, the bike can either help you or work against you. The effect of spring rate is most noticeable toward the end of the stroke thus affecting bottoming, hard acceleration, transitions and other high g-force sections.

To help you choose the right spring rate we have added a carefully considered spring recommendation list to the Mounting Instruction of your newly acquired Öhlins shock. This list recommends spring rate based on your body weight (with gear included) to suite your specific bike. All manufacturers design their bikes with a slightly different approach, so their suspension systems differ. A rider of a certain weight will require different spring rates for different brands even though the bikes weigh almost the same.

When the spring is selected install it with the approximate preload, found in the Mounting instruction for your Öhlins shock. Install the shock on the bike and get ready to set sag.

Second to spring rate, sag is one of the most important parameters of your setup. It is a critical parameter when balancing front and rear suspension to affect bike position in mid corner, initial acceleration and going into a jump face. The manufacturer has designed the bike with a specific sag in mind. Start off with the suggested nominal value found in the Mounting Instruction.

Now it is time to check the free sag. It is the resulting parameter of your spring choice and sag setting. The free sag controls how much the rear suspension extends under light load, thus affecting position during braking and subsequent corner entry. If the free sag measure is towards the smaller end of what is recommended in the Mounting instruction, meaning the spring is a little bit too soft and requires more pre load: The rear of the bike will get taller under braking, transferring load towards the front wheel for more traction and aiding "turn in", due to the steeper angle of the front fork. If the measure is towards the larger end of what is recommended in the mounting instruction meaning the spring is a bit too hard requiring less preload: The rear of the bike will extend less, be more stable under braking and rotate less forward when jumping.

Note!

If you get a free sag measure very close to the limits of what is recommended when the sag is set at the nominal value you should consider changing spring rate. If you get a too small measure you need a harder spring, if you get a too large measure you need a softer spring.

Front fork

Choose your spring rate, install with the correct pre load, ad oil and install.

To choose front fork spring rate is in many ways an easier task than for the rear shock. It is determined by the weight of the motorcycle and the weight of the rider (with full gear). Simply put, the same rider can use the same spring rate for two different brands of a 450 four stroke motocross bike. However, choosing the right spring is just as important for the front as it is for the rear. The spring rate has most of its effect in the middle of the stroke thus affecting mid corner position, initial braking and going into a jump face.

In the Mounting instruction of your Öhlins front fork you will find a carefully considered spring recommendation list for your body weight and bike.

After selecting the spring, install it to its recommended preload. This can be found in the mounting instruction and it is critical that it is measured and executed correctly. The pre load effects the top part of the stroke and has a big impact on the feeling of the front fork. If there is too much preload: The fork will be harsh on the first touch against an obstacle and struggle for traction out of corners. If there is too little preload: The initial riding position will be too low making the bike unstable under high speed and ruin the contact feeling of the front tire.

Now add the proper oil volume to the front forks outer chamber. The oil volume controls how much air volume is left in the fork. More oil equals less air. When the fork is compressed so is the air volume adding a progressive force to the linear force of the coil spring. The smaller the air volume the more powerful is the added force. In the Mounting instruction for your Öhlins front fork you will find recommendations for oil volume to suite your specific application. The force added by the compressed air is dominant from middle to end of the stroke thus affecting bottoming, hard braking, transitions and other high g-force sections.

When installing the fork on the bike measure the distance between the center of the wheel axle and the top of the upper triple clamp. This shall be the same as for your standard fork. This procedure is detailed in the Mounting instruction. The position of the fork is essentially the same as the active length of the fork affecting the bike's position in all situations.

Why no measurement of front fork sag?

There are two reasons why we do not measure front fork sag on a Motocross/Enduro bike. Number one: Due to the low spring rate and relatively high friction of the front fork seals and bushings it is hard to get a repeatable measure. Number two: The effect of the front end sag on the riding performance is much smaller than the rear sag. Front end performance is much more dependent on spring rate and preload rather than the actual sag measure.

The first test ride

With the compression and rebound adjusters of both front fork and shock in the recommended standard position it is time to take the bike to the track.

How to assess the suspension on the track

Up until now we have only set the bike up to suit the generic rider. Now it is time to tailor the setup to your riding style and preferences.

To find out what needs to be improved in a setup can be a difficult task even for the experienced rider. In order to succeed it is important to have a strategy. This goes for both the rider and suspension technician. In this process it is important to follow a certain work order to obtain a good result, see the table below. The table shows the different setting parameters in category and order of importance. You cannot effectively use the adjusters and enjoy the full potential of any suspension until you have sorted out the performance properties related to balance and position.

After the first test ride you will most likely find a few points on which you want to improve. It is important to go through the experience remembering if the bike seemed to help you or work against you through the tracks' sections. You will probably find two or three things that stand out as more dominant problems. Try to analyze these problems to see if they are somehow connected, are they related to the same problem with the position of the bike. The following examples illustrates this process.

Front	Rear
Category: Position Parameter: Spring rate and pre load	Category: Position Parameter: Spring rate
Category: Position Parameter: Fork position	Category: Position Parameter: Sag and free sag
Category: Position Parameter: Oil volume	Category: Position Parameter: Damping adjuster
Category: Position Parameter: Damping adjuster	

Example 1:

The bike feels ok over all, however it seems to lack the same drive out of a particular corner that your old setup had. One other thing that also stands out is the bikes tendency to oversteer through the slow flat corner. Your first instinct is to open the rebound adjuster to add traction. This helps slightly but at the same time the bike start to feel unstable and nervous going through the hard and bumpy braking zone after the long straight.

Note!

This is a common issue and a common solution, the initial problem was not removed entirely and a new problem was introduced. The solution lies in understanding what causes the problem from a position stand point. You recollect your riding experience from before and remember two things that stood out: The bike felt tall and wanted to take a wide line through the turns. It did not want to take a set when you hit the gas.

Try this: The lack of drive comes from too little load on the rear wheel during initial acceleration. Oversteering in the flat corner comes from the same source. The solution will be to change the bikes position so that the load on the rear wheel is increased. There are two easy ways to do this: Either remove preload from the rear spring increasing the sag (5 mm more sag is a god step) or extend the front fork by moving the fork in the triple clamps (one line is a good step). You should try both options if possible and choose the one that feels the best. At this point opening up the rebound adjuster should improve even more on the traction without affecting the stability under braking.

Example 2:

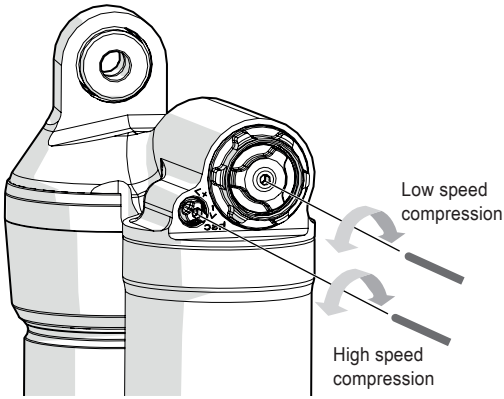
The bike is hard to turn and bottoms in the rear going into jumps. Your instinct is to open the compression on the forks and close the compression on the shock to almost fully closed. The solution does not really fix the turning. The bottoming still occurs but the rear feels too tough on small obstacles and the traction suffers.

Note!

Two typical solutions to two typical problems. The bike in the example is set up according to the spring and oil recommendations both front and rear. The sag is set accordingly and the adjusters are set in the recommended position. However something in the setup does not work with this rider's particular riding style and preference. This problem should be solved by working with the balance of the bike not the adjusters. When you analyze the problems you have from a position stand point you come up with this: The front felt high in mid corner and the bike wanted to take a wide line. It is hard to figure out what happened in the bottoming but the bike seemed to jump with the front end high.

Try this: When loading the suspension under braking or going into a jump face the front end seems to out power the rear. Pushing the bike over towards the rear. The load transfer needed to attain the correct fork angle for turning is lost and too much weight is transferred to the rear wheel in the jump face causing the rear to bottom. The simplest solutions are adding preload to the rear spring, lowering the front by changing fork position or removing oil from the fork. Since the problems occur while the suspension is under high load the solution that targets the last part of the stroke should be chosen. The rear preload does not, the fork position does this to some extent but the solution that really affects this is removing oil from the forks. This will help you with the load transfer during braking so you can reach the deep part of the stroke just before turning in. It will take load off the rear wheel going into the jump face preventing bottoming and subsequently giving the bike a more balanced position in the air.

What effects do my adjusters have?



Low speed compression adjuster

(12 clicks, standard position: 6 from fully closed, turn clockwise to close)

The effects of the low speed compression adjuster are:

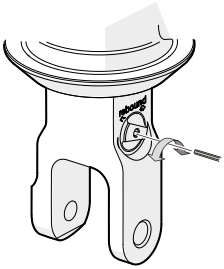
- Closing reduces chassis movement through corners and after landings.
- Opening increases the level of comfort.
- Closing increases low speed bottoming support.

High speed compression adjuster

(14 clicks, standard position: 8 from fully closed, turn clockwise to close)

The effects of the high speed adjuster are:

- Closing gives you more support in transitions, g-force sections and jump faces.
- Closing gives you a higher position at all instances around the track.
- Closing gives you a slower stroking sensation.
- Closing makes the rear push more into corners.
- Closing gives you more feedback from the track.



Rebound adjuster (18 clicks, standard position: 9 from fully closed, turn clockwise to close)

The effects of the Rebound adjuster are:

- Closing the rebound gives stability.
- Opening the rebound provides traction.
- Opening the rebound lets the bike follow the rut better.

Usable adjustment range

All adjusters are limited to a carefully chosen range of positions that are all usable for each application. All positions are to be considered useable, from fully closed to fully open.

Feeling

Remember that you might like the feeling from a certain adjuster position. If you always end up with the adjuster toward the closed or open end of the scale it does not necessarily mean that you need to change your valving. This is not an indication that the valving is too hard or too soft.

Troubleshooting: What symptom requires what solution?

The table below shows symptoms for different kinds of events. All of these symptoms are inherent to the position and the balance between front and rear and should be fixed with the proper solution. When the bike feels good it is time to further improve and fine tune your setup using the different adjusters on your suspension. Revalving has been excluded from this guide. 99% of all setup problems shall be addressed by working with the position of the bike by changing the proper parameter and subsequently by using the adjusters.

Approach this list remembering to ask yourself/ the rider the correct questions on whether the position of the bike is helping you or working against you in the different sections. See if there are any symptoms that seem to point towards the same solution. If there is a problem with your setup it will most likely show in more than one place on the track. Remember that your starting point shall be according to the recommendations both front and rear.

Symptom	Where on track	Front/Rear	Solution	Why
Bottoming front	Landing big jump	Rear shock	Use softer spring.	Transfer weight to rear.
		Front fork	Add oil.	
	Landing small jump	Rear shock	Remove preload rear shock.	Transfer weight to rear.
		Front fork	Push the forks down in the triple clamps to raise the front end, add oil, close compression.	
	Going into jump face	Rear shock	Remove preload.	Transfer weight to rear.
		Front fork	Push the forks down in the triple clamps to raise the front end, add oil.	
	Transitions	Rear shock	Use softer spring.	Transfer weight to rear
		Front fork	Add oil, use harder front spring.	

Bottoming rear	Landing big jump	Rear shock	Use harder spring. Close high speed compression.	Transfer weight to front, make shock harder.
		Front fork	Remove oil.	Transfer weight to front.
	Landing small jump	Rear shock	Use harder rear spring. Close low speed compression.	Transfer weight to front, make shock more dampened.
		Front fork	Remove oil.	Transfer weight to front.
	Going into jump face	Rear shock	Use harder rear spring, close low or high speed compression.	Transfer weight to front, make shock more dampened or harder.
		Front fork	Remove oil.	Transfer weight to front.
	Transitions	Rear shock	Use harder spring. Close low or high speed compression.	Transfer weight to front, make shock more dampened or harder.
		Front fork	Remove oil.	Transfer weight to front.
Bike turns wide	Going into the corner	Rear shock	Add preload.	Transfer weight to front.
		Front fork	Bring the fork up in the triple clamps to lower the front end, remove oil, use softer springs.	Transfer weight to front.
	Mid corner and out	Rear shock	Add preload.	Transfer weight to front.
		Front fork	Bring the fork up in the triple clamps to lower the front end, use softer springs.	Transfer weight to front.
Bike turns in too tight	Going into the corner	Rear shock	Remove preload.	Transfer weight to rear.
		Front fork	Push the forks down in the triple clamps to raise the front end.	Transfer weight to rear.

Bike is unstable during braking	Rear end wants to come around	Rear shock	Remove preload.	Transfer weight to rear.
		Front fork	Push the forks down in the triple clamps to raise the front end, use harder springs, add oil.	Transfer weight to rear.
Rear kicks during braking	Kicks straight up	Rear shock	Remove preload, open high speed compression, use softer spring.	Transfer weight to rear, make rear softer.
		Front fork	Push the forks down in the triple clamps to raise the front end.	Transfer weight to rear.
	Kicks side to side	Rear shock	Add preload. Open rebound adjuster rear shock	Help rebound recover between bumps.
Bad comfort front	During braking	Rear shock	Remove preload.	Transfer weight to rear so fork works higher.
		Front fork	Push the forks down in the triple clamps to raise the front end, open rebound, open or close compression.	Transfer weight to rear. Make front softer and more compliant. Closing compression makes front higher.
	On small hard edges	Rear shock	Add preload	Transfer weight to front. Put more load on the front wheel to hold against hits.
		Front fork	Bring the fork up in the triple clamps to lower the front end, open rebound, open compression.	Transfer weight to front. Put more load on the front wheel to hold against hits. Make front softer and more compliant.

Bad comfort rear	Acceleration	Rear shock	Add preload, open high speed or low speed compression, open rebound.	Transfer load to front. Gives rear more stroke to use. Make rear softer and more compliant.
	On small hard edges	Rear shock	Open high speed or low speed compression, open rebound.	Make rear softer and more compliant.
Bad traction front	Turning in	Rear shock	Add preload rear.	Transfer load to front.
		Front fork	Bring the fork up in the triple clamps to lower the front end, open compression, open rebound.	Transfer load to front. Make front softer and more compliant.
	Mid corner	Rear shock	Add preload.	Transfer load to front.
		Front fork	Bring the fork up in the triple clamps to lower the front end, open compression, open rebound.	Transfer load to front. Make front softer and more compliant.
	Braking	Rear shock	Add preload.	Transfer load to front.
		Front fork	Bring the fork up in the triple clamps to lower the front end, open compression, open rebound.	Transfer load to front. Make front softer and more compliant.

Bad traction rear	Acceleration	Rear shock	Remove preload, open rebound, open high speed compression.	Transfer load to rear. Make rear softer and more compliant.
		Front fork	Push the forks down in the triple clamps to raise the front end.	Transfer load to rear.
	Mid corner	Rear shock	Remove preload, open rebound, open high speed compression.	Transfer load to rear. Make rear softer and more compliant.
		Front fork	Push the forks down in the triple clamps to raise the front end.	Transfer load to rear.
Chassis movement	Bike is to lively and uses a lot of stroke	Rear shock	Remove preload, change to a harder spring with less preload	More free sag lessens the bikes movement out in the stroke. Harder spring lessens the bikes movement into the stroke. This aids stability.
	Bike is too dead and uses too little stroke	Rear shock	Use softer spring with more pre load.	Less free sag lets the bike move further out in the stroke. Softer spring makes the bike go deeper in the stroke. This aids turning and maneuverability.

3 MAINTENANCE

Preventive maintenance and regular inspection reduces the risk of poor performance. If there is any need for additional service, please contact an Authorized Öhlins Service Center.

Cleaning

Clean the shock absorber externally with a soft detergent. Use compressed air. Be careful that all dirt is removed. Lift the bump rubber and clean the area below. Keep the shock absorber clean and spray it with an all-purpose oil after washing.

✋ Caution!

Never spray water directly into the adjuster knobs and/or the ball joints.

Inspection

1. Check ball joints for possible excessive play or stiction.
2. Check the piston shaft for leakage and damage.
3. Check the shock absorber body for external damage.
4. Check the reservoir for external damage that can restrict the floating piston from moving freely.
5. Check for excessive wear of rubber components.
6. Check the attachment points of the shock absorber to the vehicle.

Recommended Service Intervals

See separate service schedule or contact an Authorized Öhlins Service Center.

⚠ Warning!

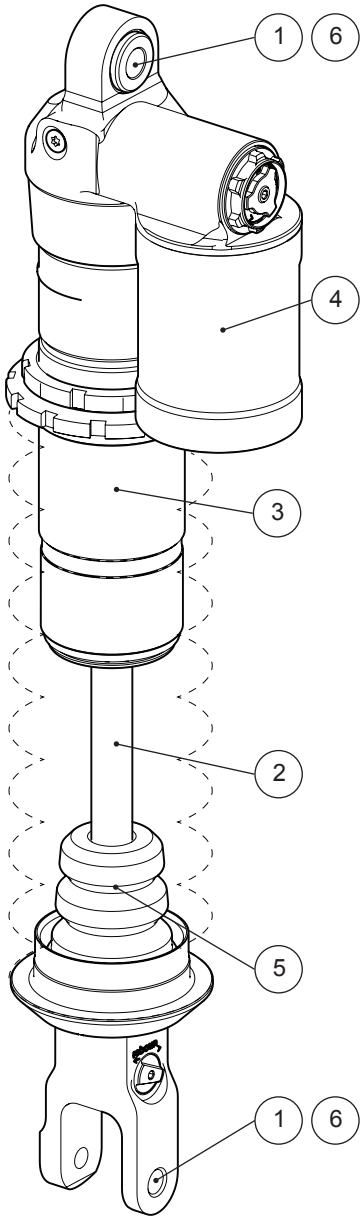
We strongly advice to let an Authorized Öhlins Service Center perform service on the shock absorber.

Disposal

Discarded Öhlins products should be handed over to an Öhlins distributor for proper disposal.

⚠ Warning!

Never alter the gas pressure. Special purpose charging equipment and access to nitrogen is required.



ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY

SERVICE SCHEDULE
FRONT FORK



REQUIRED WORK	EVERY RACE	EVERY 20 HOURS	EVERY 40 HOURS
INSPECT AND ADJUST	●		
CLEAN AND LUBRICATE	●		
REPLACE FRONT FORK FLUID		●	●
REPLACE SEALS AND SCRAPERS		●	●
SERVICE DAMPER CARTRIDGE			●
REPLACE BUSHINGS			●

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY

SERVICE SCHEDULE
SHOCK ABSORBER



REQUIRED WORK	EVERY RACE	EVERY 20 HOURS	EVERY 60 HOURS
INSPECT AND ADJUST	●		
CLEAN AND LUBRICATE	●		
SERVICE SHOCK ABSORBER		●	●
REPLACE MAIN PISTON BAND		●	
REPLACE MAIN PISTON			●

This page intentionally left blank

Owner's Manual | Part No. 07253-05_2 | Issued 2022-03-11 | © Öhlins Racing AB

Your Öhlins retailer:

Öhlins Racing AB
Box 722
SE-194 27, Upplands Väsby
Sweden

Phone: +46 (0)8 590 025 00
Fax: +46 (0)8 590 025 80
www.ohlins.com

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY