Owners Manual

Öhlins shock absorber basic information

Including:

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY

Safety signals

Important information concerning safety is distinguished in this manual by the following notations:

⚠

The Safety alert symbol means: Caution! Your safety is involved.

⚠ WARNING!

*Failure to follow warning instructions could result in **severe or fatal injury** to anyone working with, inspecting or using the suspension, or to bystanders.*

CAUTION!

Caution indicates that special precautions must be taken to avoid damage to the suspension.

NOTE!

This indicates information that is of importance with regard to procedures.

Introduction

All of Öhlins advanced suspension products are adepted to the brand and model. This means that length, travel springaction and damping characteristics, are tested individually just for the vehicle that you have decided to fit with Öhlins suspension.

Before installation

Öhlins Racing AB can not be held responsible for any damage whatsoever to suspension or vehicle, or injury to persons, if the instructions for fitting and maintenance are not followed exactly.

Similarly, the warranty will become null and void if the instructions are not adhered to.

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2. Please study and make certain that you fully understand all the mounting instructions and the owners manuals before handling this suspension kit. If you have any questions regarding proper installation procedures, contact an Öhlins dealer or other qualified person.

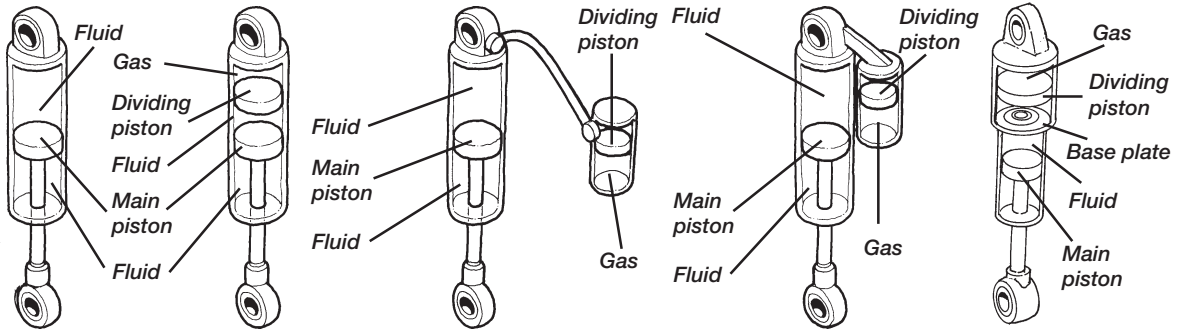
3. The vehicle service manual must be referred to when installing the Öhlins suspension.

NOTE

Öhlins products are subject to continual improvement and development. Consequently, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your suspension and this manual. Please consult your Öhlins dealer if you have any questions with regard to the contents of the manual.

Design principles

1. Emulsion shock absorber
2. Internal gas reservoir
3. External reservoir with hose connection
4. External piggyback reservoir
5. Internal gas reservoir with base plate



1. Emulsion shock absorber *2. Internal dividing piston* *3. External gas reservoir hose connected* *4. External gas reservoir piggyback* *5. Internal gas reservoir with base plate*

Tuning the suspension

Road holding qualities
All vehicles are designed with a suspension geometry that includes wheel movemnets and angles. The changing of components can affect this and it is therefore essential that both the rear and the front ends match each other. Changing to Öhlins suspension gives optimum performance only when both the front and the rear suspension interact properly.

Everything must harmonize
Incorrect spring action can affect the road holding abilities in a negative way. This in turn can give a tendency for oversteering or understeering, which could seriously affect the road holding characteristics of the vehicle. It´s important that the springs are checked for correct lenght and stiffness when Öhlins shock absorbers are mounted.

Design

Most of Öhlins suspensions are of the De Carbon type.

The fluid is put under gas pressure and the gas and the fluid are kept apart by a separating piston. The gas and the separating piston are often fitted in separate fluid reservoir, connected by hose or fixed direct on top of the shock absorber (piggyback), there are also cases where everything is fitted inside the main shock absorber (internal gas reservoir), some shock absorbers have a large diameter internal fluid reservoir and a base plate, with damping qualities. There is even a small number of emulsion shock absorbers that do not have a separating piston.

Pressurization of the fluid is made with nitrogen. The pressurization prevents cavitation of the fluid and the shock absorbing action is therefore more even. The external fluid chambers also contribute to better cooling of the fluid, giving longer service life for both the fluid and components.

Öhlins shock absorbers have integrated temperature compensation. As the temperature increases and the fluid flows more easily the flow is controlled accordingly. The shock absorbing effect is therefore independent of the temperature.

Öhlins shock absorbers provide the possibility for adjustment, making them adaptable to most vehicles, drivers and ranges of use. All of the shock absorbers, equipped with springs, have adjustable preloading of the spring action; either mechanically or hydraulically. The more advanced models permit individual adjustment of compression damping and rebound damping, and also certain adjustment of the length of the shock absorber. The most advancedmodels can be equipped with high- and low speed compression damping.

Fig 1. Flow through needle valve

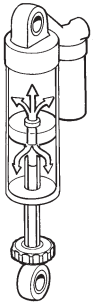


Fig 2. Flow regulated by shims

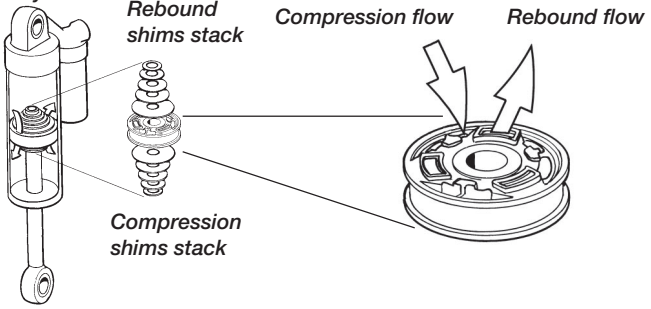
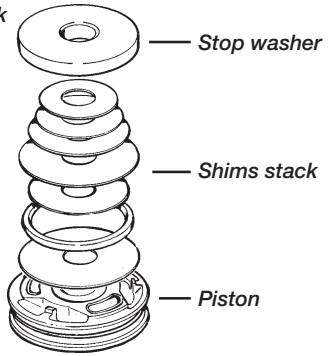


Fig 3. Shim stack



Function

The function, in principle, is that fluid is forced through needle valves at a low rate of flow (Fig.1) and through a number of apertures in the piston at a high rate of flow (Fig.2). The flow through these apertures is regulated by shims (thin steel washers) that at high pressure are deflected to open for the fluid. On some models the needle valves can be set individually.

By altering the size of the shims-stack (ie, number, thickness, diameter) (Fig. 3) the characteristics of the damping action can be varied (this shall only be done by Öhlins authorized service workshops).

Compression damping

When movement of the vehicle causes compression in the shock absorber, the fluid flows through the needle valve (combined compression and return valve) in the piston rod. If velocity of the piston is high, ie, in the case of rapid compression, this will not be sufficient and consequently the shims underneath the piston will open to allow a greater rate of flow. The fluid that is displaced by the volume of the piston rod is forced into the external fluid chamber via a separate compression valve. Even this valve is fitted with shims that open at high piston velocity. The separating piston is displaced, thus increasing the gas pressure.

Rebound damping

When the spring presses the shock absorber out again, the fluid flows back through the needle valve in the piston rod. The fluid flowing into the chamber is forced by the pressure of the gas back into the shock absorber via a separate nonreturn valve (illustration). If velocity of the piston is high, the shims on top of the piston will also open to allow the fluid to flow though.

Settings

Basic settings

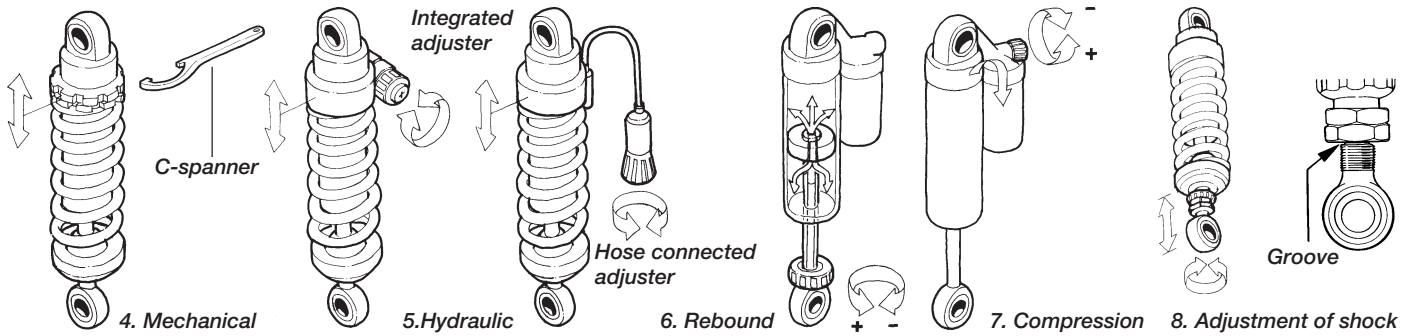
Always ensure that the basic setting made by the Öhlins dealer is correct. It is adapted to the specific make and model the shock absorber (s) is/are designed for.

Setting the spring preload

Preload on the spring/springs is very important, because it affects the height of the vehicle and the wheel angles. Consequently, road holding characteristics can be changed, even negatively.

Adjusters are mechanical or hydraulical. Mechanical adjustment is made with the rings on the shock absorber (Fig.4). Hold the upper ring and adjust the lower one to the desired position, then lock with the upper ring.

Hydraulic preload adjuster is turned in desired direction (Fig.5)



4. Mechanical adjustment *5.Hydraulic preload adjuster* *6. Rebound adjustment* *7. Compression adjustment* *8. Adjustment of shock absorbers lenght*

NOTE!

On shock absorbers that have mechanical type adjustment the position of the adjusting/preload rings can be adjusted.

Setting the damping

The adjusting possibilities of Öhlins shock absorbers facilitate fine setting. You can optimize adjustments to suit your own vehicles weight and equipment, your individual way of driving and the condition of the road. To be able to improve the road holding qualities it is of the utmost importance that you fully understand the functioning of the shock absorbers. Then you can learn by trial and error how they affect the vehicle.

NOTE!

Ensure that the springs are properly preloaded before attempting to make any adjustments. A simple rule is that increased preload of the spring should be followed by an increase of rebound damping by two steps.

Depending on the model there are adjustments for rebound damping and compression damping. Damping is set with the knobs , they have a normal right-hand thread. By turning clockwise they increase the damping action and anticlockwise they reduce it. The knobs have definite positions with a noticeable “click”, so it is easy to count to the right setting.

Rebound damping action affects the characteristics of the vehicle most. The setting knob is at the bottom on the piston rod (Fig.6). It can be adjusted in about 40 steps. The compression damping knob is on the top of the cylinder (Fig.7). This can be adjusted in about 25 steps.

NOTE!

*When making new adjustments it is easiest to go back to zero, and then count forward to the new setting. The adjusting knobs should not be turned in too hard. Avoid tools when attempting to adjust the shock absorber. The adjustment **should** be made when the shock absorber is **cold.***

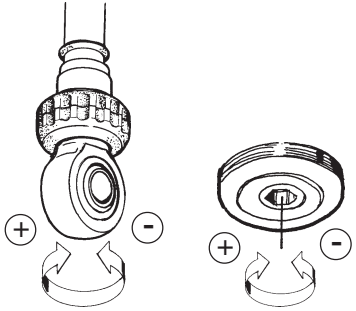
Setting the shock absorber length

Sensitivity of the steering can be adjusted by altering the length of the shock absorber, without affecting other characteristics. The length is adjusted using two nuts down and the treaded clevis at the end of the piston rod (Fig. 1). The shock absorber can be adjusted up to 12 mm. The length may never be altered more than to where the groove that is cut in the thread becomes just visible.

Adjusting the shock absorber length

Each complete turn of the shock absorber gives one millimetre. The length may never be altered more than to where the groove that is cut in the thread becomes just visible under the lower nut of the level brachet. Make small steps and test run.

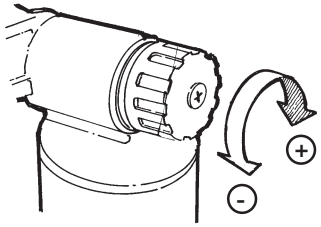
9. Rebound adjustment

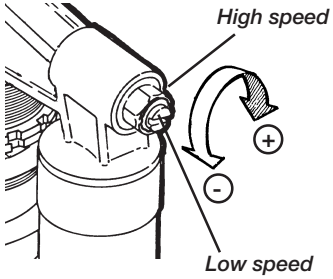


⊕ *Added damping force*

⊖ *Reduced damping force*

10. Adjustment of compression damping





Setting your vehicle

By utilizing the adjustment possibilities you can test by trial and error, and learn how they affect your vehicle.

Always begin by test driving with all adjustments at their basic setting. Choose a short run of varying character, ie, long and sharp bends, hard and soft bumps. Keep to the same run and adjust only one setting at a time.

NOTE!

Always begin with the basic settings recommended by the Öhlin dealer. Always make notes, adjust in small steps and make only one adjustment at a time. Adjustments should be made with two steps (clicks) at a time. Adjustments should not be more than four steps from the basic setting.

Start with the rebound damping

If the vehicle feels unstable, loose and rather bouncy then the rebound damping should be increased (Fig.9). Begin by turning the adjusting knob 4 steps (clicks) clockwise. Test run again and adjust two steps back if it felt too hard and bumpy.

If the vehicle is hard and bumpy, especially over a series of bumps, then the rebound damping should be reduced. Turn counterclockwise 4 steps, test run and make any necessary correction to 2 steps.

Compression damping

If the vehicle feels soft, has low riding position and a tendency to bottom easily in long dips then the compression damping should be increased (Fig.10). Screw clockwise 4 steps and test run again. If this was too much then turn back two steps (anticlockwise).

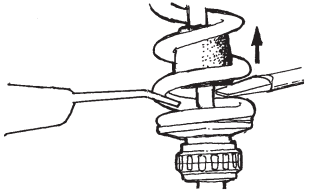
If the vehicle feels harsh and has hard resilience, eg, over changes in the road paving, then the compression damping must be reduced. Screw anticlockwise 4 steps. Test run and make any necessary correction to two steps.

When you have sufficient feel of the vehicle then you can make further fine adjustments. It is feeling and experience that counts.

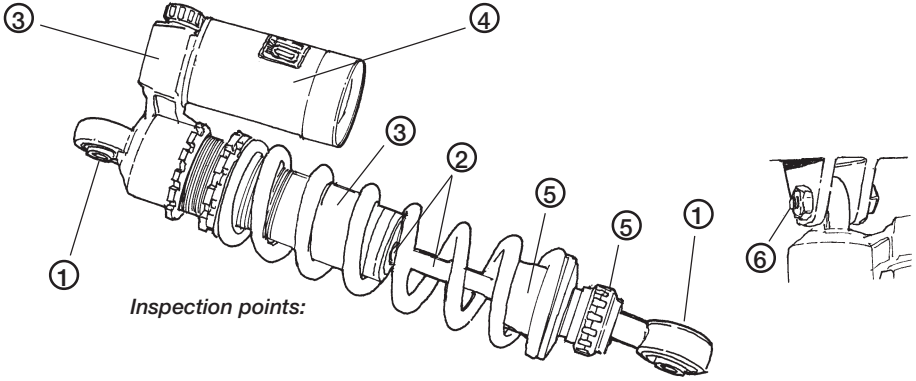
NOTE!

If no "click" is felt, the shock absorber must be inspected by an authorized service workshop. It could be due to incorrect or lack of gas pressure.

When you feel that you have achieved an improvement, go back to where you started and check once more. Be observant of other relevant factors such as tyres, temperature, etc. Test run to make sure whether further fine adjustment should be made.



Lift the bump rubber and clean the area below.



Inspection points:

Inspection and maintenance

Keep the shock absorbers clean and always spray them with oil (QS 14, WR40 or CRC 5-56) after washing the vehicle.

Inspection points:

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

- Check the hose equipped models for leaks in hose and inlet plugs.

Preventive maintenance and regular inspection reduces the risk of functional disturbance. If there is any need for additional service, please get in touch with an authorized Öhlins service workshop. There they have the necessary tools and know-how for whatever you need.

⚠ WARNING!

Never alter the gas pressure. Special-purpose charging equipment and access to nitrogen is required. The gas pressure should normally never be altered.

NOTE!

Make certain that your shock absorbers are always filled with Öhlins High Performance Shock Absorber Oil.

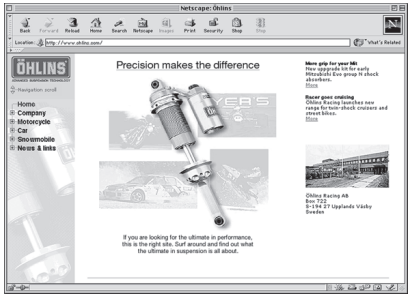
Remember!

Regular maintenance and inspection contribute to the prevention of functional disturbances. Recommended service intervals:

Road: Every 20 000 – 30 000 km

More info

www.ohlins.com



The ultimate suspension site.
Find out everything about your suspension.
Down-load mounting instructions, manuals and brochures.
And a lot more.

ÖHLINS®
ADVANCED SUSPENSION TECHNOLOGY

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Your Öhlins dealer:

07255-01, Issued 01 08 20

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Öhlins shock absorbers, Motorcycle Road & Track

Including:

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ADVANCED SUSPENSION TECHNOLOGY

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3. The vehicle service manual must be referred to when installing the Öhlins shock absorber

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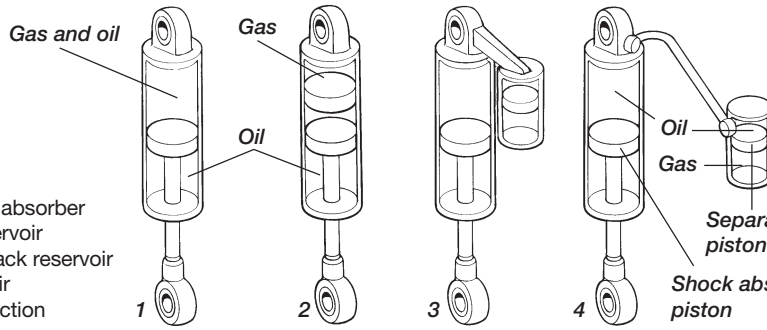

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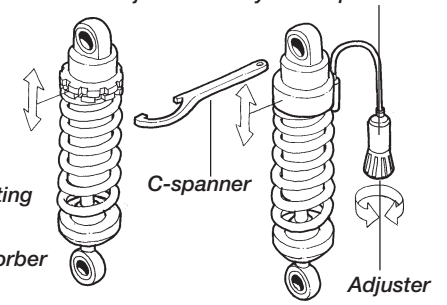
2. Internal gas reservoir
3. External piggyback reservoir
4. External reservoir with hose connection

2. Spring pre-loading
Mechanical adjustment *Hydraulic pre-loader*



Tuning the suspension

Motorcycle road holding qualities
All motorcycles are designed with a suspension geometry that includes height and fork angle. The changing of components can affect this and it is therefore essential that both the rear and the front ends match each other.

Changing to Öhlins suspension gives optimum performance only when both the front fork and the rear suspension interact properly. It is of the greatest importance that the front and rear loaded height are within the specified values.
See section: *Setting the spring pre-load*.

Design

Most of the Öhlins shock absorbers are of the De Carbon type. The fluid is put under gas pressure and the gas and the fluid are kept apart by a separating piston. The separating piston is often fitted in a separate fluid chamber, connected by hose, or fixed directly on top of the shock absorber (piggyback).

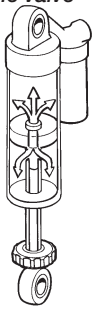
There are also types of shock absorbers where everything is fitted inside the main cylinder tube (internal gas reservoir), and even a small number of emulsion shock absorbers that do not have a separating piston. Pressurisation of the fluid is made with nitrogen. The pressurisation prevents cavitation of the fluid and the shock absorbing action is therefore more even. The external reservoires also contribute to better cooling of the fluid, giving longer service life for both the fluid and components.

Öhlins shock absorbers have integrated temperature compensation. As the temperature increases and the fluid flows more easily, the flow is controlled accordingly. The shock absorbing effect is therefore independent of the temperature.

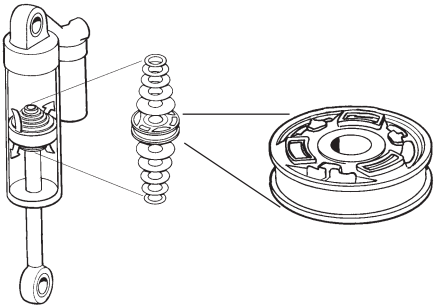
The more advanced models permit individual adjustment of compression damping and rebound damping, and also certain adjustment of the length of the shock absorber.

Öhlins shock absorbers provide the possibility for adjustment, making them adaptable to most motorcycles, riders and ranges of use. All of the shock absorbers have adjustable pre-loading of the spring action; either mechanically or hydraulically.

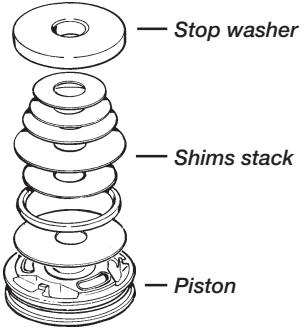
3. Flow through needle valve



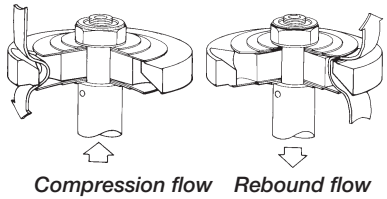
4. Piston with apertures



5. Shims stack



6. Flow through piston



Function

The function, in principle, is that fluid is forced through needle valves at a low rate of flow (Fig.3) and through a number of apertures in the piston (Fig.4) at a high rate of flow. The flow through these apertures is regulated by shims (thin steel washers, Fig.5) that at high pressure are deflected to open for the fluid. On most models the needle valves can be set individually.

By altering the size of the shims stack (i.e. number, thickness, diameter) the characteristics of the damping action can be varied (this should only be done by Öhlins authorized service workshops).

Compression damping

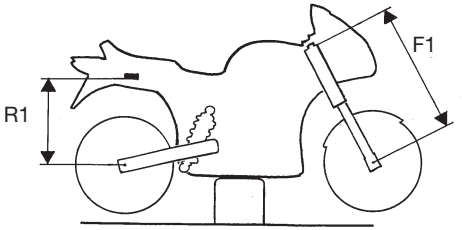
When movement of the motorcycle causes compression in the shock absorber, the fluid flows through the needle valve (combined compression and return valve) in the piston rod. If velocity of the piston is high, i.e. in the case of rapid compression, this will not be sufficient and consequently the shims underneath the piston will open to allow a greater rate of flow (Fig.6).

The fluid that is displaced by the volume of the piston rod is forced into the external fluid chamber via a separate compression valve. Even this valve is fitted with shims that open at high piston velocity. The separating piston is displaced, thus increasing the gas pressure.

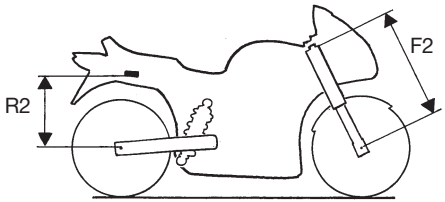
Rebound damping

When the spring presses the shock absorber out again, the fluid flows back through the needle valve in the piston rod. The fluid flowing into the chamber is forced by the pressure of the gas back into the shock absorber via a separate non return valve.

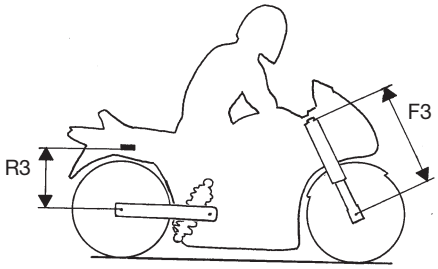
If velocity of the piston is high, the shims on top of the piston will also open to allow the fluid to flow though (Fig.6).



A-D. Bike on a stand
Suspension fully extended: (R1 and F1)



E. Bike on the ground
Static sag:(R1-R2, F1-F2)



F. Bike with rider on
Ride height: (R1-R3, F1-F3)

Settings

Basic settings
Always ensure that the basic setting made by Öhlins is correct. It is adapted to the make and model (in its original state) and for a rider of average weight.

Spring pre-load
Pre-load on the spring/springs is very important, because it affects the height of the motorcycle and the fork angle.

Everything must harmonize
In the recommendation table there are Öhlins front fork springs that are specifically adapted to the shock absorbers recommended for your motorcycle. If none is noted in the table, then "intact" original springs are the right choice. Incorrect spring action can produce a fork angle that is too steep or too flat. This in turn will give a tendency for oversteering or understeering, which could seriously affect the handling characteristics of the motorcycle.

Setting the spring pre-load

Measuring
Proceed as follows (it will be much easier if done by two persons):

A Place the motorcycle on a stand.
B Lift up the rear end to a fully extended position.
C Measure the distance, e.g. from the lower edge of the rear mud guard or from a point marked by a piece of tape, immediately above the rear wheel axle, to the wheel axle. (R1)
D Make a similar measurement on the front axle, e.g. from the bottom of the upper fork crown to the front wheel axle. The fork must also be fully extended. (F1)
E Allow the motorcycle (without rider) to apply load on the springs and repeat the measuring procedure. (R2, F2)
F Then take the same measurements with the rider and equipment on the motorcycle. (R3, F3)

NOTE!

It is important that the rider has a correct riding posture, so that the weight is balanced on the front and rear wheel in the same way as when riding.

The measurements must not differ from the following sizes:

Without rider (static sag):

Rear:	10-20 mm	(R1-R2)
Front:	15-30 mm	(F1-F2)

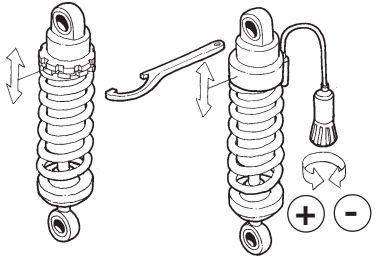
With rider (ride height):

Rear:	25-40 mm	(R1-R3)
Front:	35-50 mm	(F1-F3)

NOTE!

Older gear shaft drive driven motorcycles (not para lever shaft drive) usually raise the rear end during acceleration. We recommend that the the static sag (R1-R2) is extended to 15-20 mm and the ride height (R1-R3) to 35–45 mm on these motorcycles.

7. Spring pre-load adjusment.



A. Mechanical pre-load adjuster

B. Hydraulic pre-load adjuster

Adjusting

Adjust the pre-load with the rings on the shock absorber or by hydraulic pre-loading. In the first case, hold the upper ring and adjust the lower one to the desired position (Fig.7A). Then lock with the upper ring.

For hydraulic pre-loading, increase by turning clockwise and reduce by turning counter clockwise (Fig.7B).

NOTE!

On shock absorbers that have mechanical type adjustment the position of the adjusting/pre-load rings can be adjusted. On a shock absorber that has hydraulic setting the basic position can be adjusted. Such changes should be attended to by an Öhlins authorized service workshop.

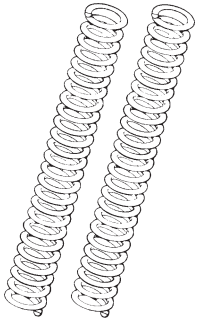
The original setting of the shock absorber, when delivered from Öhlins, should always be a base when the settings are changed by use of the adjustment devices.

NOTE!

The spring pre-load affects the ride height, it does not affect the spring stiffness.

Therefore, on models with a linkage to the shock absorber, the suspension may actually feel harder when you reduce the pre-load and the shock absorber gets into the harder range of the link system.

8. Front fork spring kit



Front fork springs

To optimize the road holding qualities of a motorcycle the front fork must match the rear suspension.

Öhlins springs are available for a large number of motorcycles (Fig.8). These, in combination with Öhlins shock absorbers, contribute to superior road holding qualities. The original make of springs should be used if there are none of our springs in the recommendation table. However, they must be in good condition and not fatigued.

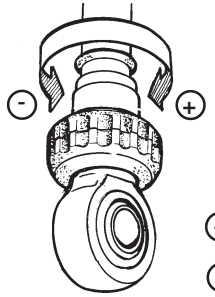
Remember to change the fluid in the front fork at least once every year.

We recommend Öhlins front fork oil. See table.

NOTE!

It is important that the recommendation table is followed for new front springs. If there are no recommended front springs you must ensure that the existing springs are in good condition. Neglecting to check the front springs could seriously affect the handling qualities of the motorcycle.

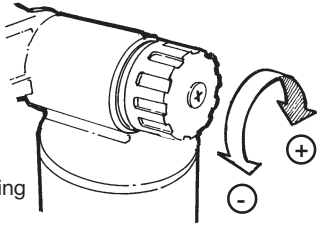
9. Adjustment of rebound damping



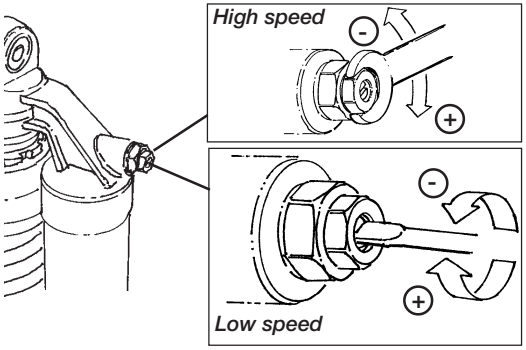
+ = more damping

- = less damping

10. Adjustment of compression damping



11. High and low speed compression damping adjusters



Setting the damping

The adjusting possibilities of Öhlins shock absorbers facilitate fine setting. You can optimize adjustments to suit your own weight and equipment, your individual way of riding and the condition of the road. To be able to improve the road holding qualities it is of the utmost importance that you fully understand the functioning of the shock absorbers. Then you can learn by trial and error how they affect the motorcycle.

Depending on the model there are adjustments for rebound damping, compression damping and adjustment of the length of the shock absorber. Damping is set with the knobs, that have a normal right hand thread. By turning them clockwise the damping action is increased, and by turning them counter clockwise it is reduced. The knobs have definite positions with noticeable “clicks”, making it is easy to count to the right setting.

Rebound damping action affects the characteristics of the motorcycle most. The setting knob is located at the bottom on the piston rod (Fig.9). It can be adjusted in about 40 steps. The compression damping knob is located at the end of the reservoir (Fig.10). This can be adjusted in about 25 steps.

Some models (PRX) have separate adjusters for high speed compression and low speed compression (Fig.11). The low speed compression is adjusted in 25 steps.

The high speed adjuster has a wide range within about 48 clicks

NOTE!

High and low speed refers to the shaft velocity of the shock absorber. It is not necessarily related to the speed of the vehicle.

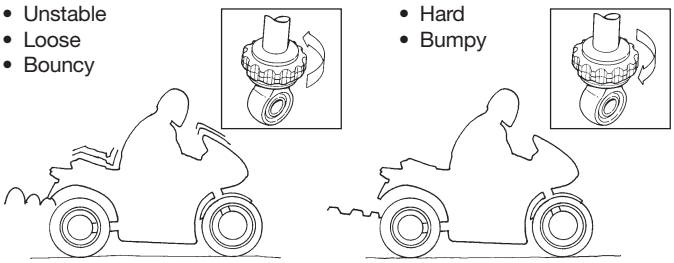
NOTE!

When making new adjustments it is easiest to go back to fully closed, and then count forward to the new setting. The adjusting knobs should not be screwed in too hard.

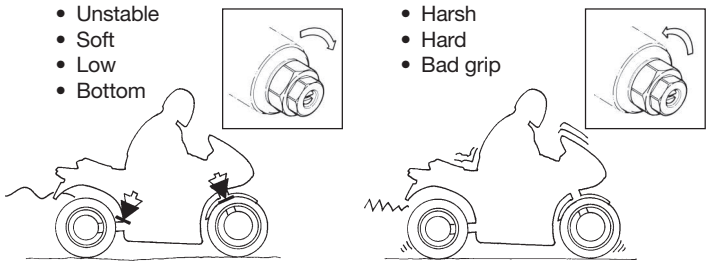
NOTE!

If no ”click” is felt, the shock absorber must be inspected by an authorized service workshop. It could be due to low gas pressure or lack of oil.

12. Rebound damping



13. Compression damping



Setting your motorcycle

NOTE!

Always begin with the basic settings recommended by Öhlins. Always make notes, adjust in small steps and make only one adjustment at a time. Adjustments should be made with two steps (clicks) at a time. Adjustments should not be more than four steps from the basic setting.

By utilizing the adjustment possibilities you can test by trial and error, and learn how they affect your motorcycle.

Always begin by test riding the motorcycle with all adjustments at their i.e. delivery setting. Choose a short run of varying character, ie, long and sharp bends, hard and soft bumps. Keep to the same run and adjust only one setting at a time.

Start with the rebound damping (Fig.12)**:**
If the motorcycle feels unstable, loose and rather bouncy then the rebound damping should be increased. Begin by turning the adjusting knob 4 steps (clicks) clockwise. Test run again and adjust two steps back if it felt too hard and bumpy.

If the motorcycle is hard and bumpy, especially over a series of bumps, then the rebound damping should be reduced. Turn counter clockwise 4 steps, test run and make any necessary correction to 2 steps.

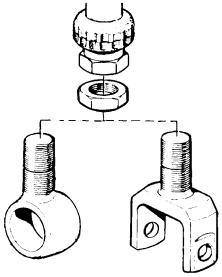
Compression damping (Fig.13)**:**
The low speed compression adjuster affects ride height, smoothness over small bumps and grip. The high speed compression adjuster affects stability, firmness in depressions and fast corners.

If the motorcycle has a low riding position, the low speed compression should be increased. Screw clockwise four steps and test run again. If this was too much then turn back two steps (counter clockwise). If it feels unsmooth over small continuous bumps or has bad grip, the low speed compression should be decreased. Turn counter clockwise four steps. Test run and make any necessary correction in two steps at the time.

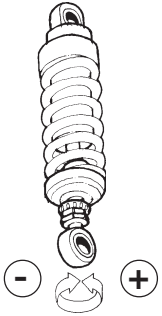
If the motorcycle feels unstable in fast corners and has a tendency to bottom easily in depressions and chicanes, the high speed compression should be increased. Screw clockwise six steps and test run again. If this was too much then turn back three steps (counter clockwise). If it feels harsh and too rigid or has a tendency to hop during braking, the high speed compression should be decreased. Turn counter clockwise six steps. Test run and make any necessary correction in three steps at the time.

When you have sufficient feel of the motorcycle you can make further fine adjustments. It is feeling and experience that counts.

14. Adjustment of shock absorber lenght



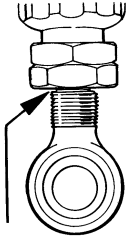
15. Adjusting the shock absorber length



16. Groove

⚠ WARNING!

If the shock absorber has an adjustable end eye/bracket, this must not be threaded out more than that one groove is fully visible beneth the lock nut. Make sure that the lock nut is tightened after adjustment.



Groove

NOTE!

Ensure that the springs are properly pre-loaded before attempting to make any adjustments. A simple rule is that increased pre-load of the spring should be followed by an increase of rebound damping by two steps.

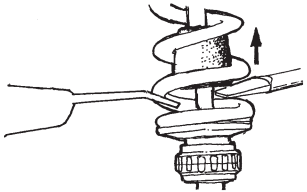
When you feel that you have achieved an improvement, go back to where you started and check once more. Be observant of other relevant factors such as tyres, temperature, etc. Test run to make sure whether further fine adjustment should be made.

Setting the shock absorber length

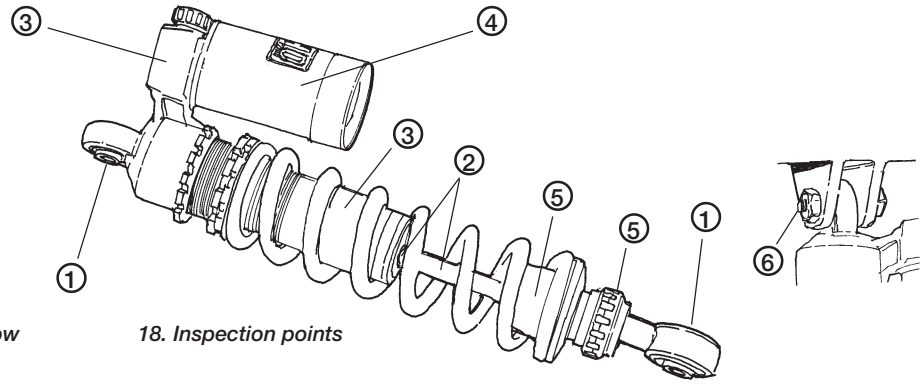
Sensitivity of the steering can be adjusted by altering the length of the shock absorber, without affecting other characteristics. The length is adjusted using two nuts down and the treaded clevis at the end of the piston rod (Fig.14). The shock absorber can be adjusted up to 12 mm.

Adjusting the shock absorber length

A long shock absorber results in steeper inclination of the front fork (steeper fork angle) and consequently sensitive, quicker steering. A short shock absorber gives a greater angle of the front fork (flat fork angle) and consequently slower and smoother steering. Each complete turn of the shock absorber gives one millimetre (Fig.15). The length may never be altered more than to where the groove (Fig.16) that is cut in the thread becomes just visible under the lower nut of the level brachet. Make small steps and test run.



17. Lift the bump rubber and clean the area below



18. Inspection points

Inspection and maintenance

Clean the shock absorbers externally with a soft detergent. Use compressed air. Lift the bump rubber and clean the area below (Fig.17). Keep the shock absorbers clean and always spray them with oil (QS 14, WD40 or CRC 5-56 or simular).

CAUTION!

Never use detergents that can damage the surfaces of the shock absorber. Thinner and brake cleaner will dry the surfaces too much.

Inspection points (Fig.18)**:**

1 Check ball joints for possible excessive play.
2 Check the piston shaft for leakage and damage
3 Check the shock absorber body and for external damage.
4 Check the external reservoir for damages that can restrict the floating piston from moving freely.
5 Excessive wear of rubber components.
6 Fastening to the wehicle.
• Check the hose equipped models for leaks in hose and inlet plugs.

Preventive maintenance and regular inspection reduces the risk of functional disturbance. If there is any need for additional service, please get in touch with an authorized Öhlins service worshop. There they have the necessary tools and know-how for whatever you need.

NOTE!

Make certain that your shock absorbers are always filled with Öhlins High Performance Suspension fluid.

NOTE!

Regular maintenance and inspection contribute to the prevention of functional disturbances.

Recommended service intervals:

Race track	Every 10 hours
Street/Road	Every 20 000-30 000 km

NOTE!

Discarded Öhlins products should be handled over to an authorized work shop or distributor for proper disposal.

⚠ WARNING!

Never alter the gas pressure. Special purpose charging equipment and access to nitrogen is required. The gas pressure should normally never be altered.

⚠ WARNING!

The shock absorber is provided with a separate type reservoir filled with high pressure nitrogen gas. To prevent danger of explosion, study and make certain that you fully understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for damage to property or personal injury that may result from improper handling.

1. Never tamper with or attempt to disassemble the cylinder or the reservoir.

2. Never expose the shock absorber to an open flame or other excessive heat. The shock absorber may othervise explode due to too high pressure.

3. Be careful not to damage any part of the gas reservoir. A damaged gas reservoir will impair the damping performance or cause malfunction.

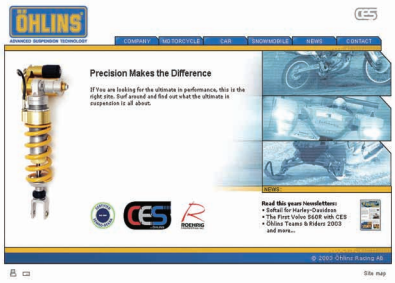
4. Take care not to scratch the contact surface of the piston rod of the cylinder, oil could otherwise leak out.

5. Never attempt to remove the plug at the bottom of the nitrogen gas reservoir. Any attempt to remove the plug implies serious danger.

6. When scrapping the shock absorber, follow the instructions for disposal.

More info

www.ohlins.com



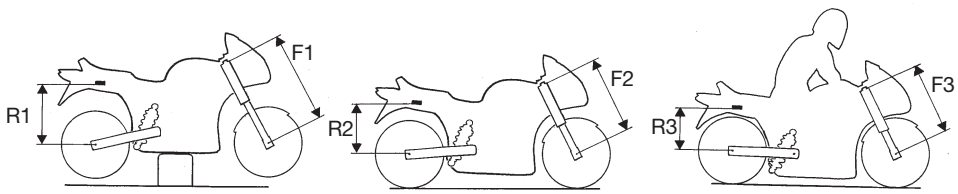
The ultimate suspension site.
Find out everything about your suspension.
Download mounting instructions, manuals and brochures.
And a lot more.

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY

Öhlins Racing AB, Box 722, S-194 27 Upplands Väsby, Sweden
Phone +46 8 590 025 00, Fax +46 8 590 025 80

Your Öhlins dealer:

07241-02, Issued 04 04 14. Teknisk Illustration, 10000 ex.



Bike on a stand. *Bike on the ground.* *Bike with rider on.*

Setup data

Shock absorber length	286 mm
Shock absorber stroke	70 mm
Spring preload	15 mm
Rebound damping adjuster	14 clicks
Compression damping adjuster	12 clicks

NOTE!

Make sure that all bolts are tightened to the correct torque and that nothing fouls or restricts movement of the shock absorber when the suspension is being fully compressed or extended.

Checking sag and ride height

Front suspension

F1. Bike on a stand with the suspension fully extended = ...

F2. Bike on the ground without rider = ...

F3. Bike on the ground with rider = ...

Free sag F1 - F2 = ...

Ride height F1 - F3 = ...

Rear suspension

R1. Bike on a stand with the suspension fully extended = ...

R2. Bike on the ground without rider = ...

R3. Bike on the ground with rider = ...

Free sag R1 - R2 = ...

Ride height R1 - R3 = ...

NOTE!

If ride height is higher than recommended, softer spring/springs must be used.
If ride height is lower than recommended, harder spring/springs must be used.
Contact your Öhlins dealer for advice.

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY

Öhlins Racing AB, Box 722, S-194 27 Upplands Väsby, Sweden.
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Part No. MG 127, Issued 01 12 21

Owners Manual

Mounting instructions Öhlins shock absorber kit MG 127 for Moto Guzzi V11 sport

Öhlins shock absorber 46 HRCS

Your new Öhlins shock absorber features the following adjustments:
- Compression damping adjustment
- Rebound damping adjustment
- Hydraulic spring preload adjustment

Compression damping:
Adjustments are made on top of the reservoir.
Low speed adjustments: Slotted centre screw
High speed adjustments: Hexagon screw.
Rebound damping
Adjuster wheel on the piston shaft above the end bracket.
Hydraulic spring preload
Adjustments are made by turning the knob on the hydraulic adjuster. Clockwise for harder adjustment, counter clockwise to release the preload.

When delivered the Öhlins shock absorber is dialed to recommended settings for the specific brand and make of the motorcycle. If you have changed the setting check like this:
The adjusters have a normal right hand tread. Turn clockwise to fully closed. Turn counter clockwise to open and count the clicks until you reach the recommended number of clicks.
Do not use to much force, delicate sealing surfaces can be damaged. Do use fingers only.

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Safety signals

Important information concerning safety is distinguished in this manual by the following notations:

⚠

The Safety alert symbol means: Caution! Your safety is involved.

⚠ WARNING!

*Failure to follow warning instructions could result in **severe or fatal injury** to anyone working with, inspecting or using the suspension, or to bystanders.*

CAUTION!

Caution indicates that special precautions must be taken to avoid damage to the suspension.

NOTE!

This indicates information that is of importance with regard to procedures.

Before installation

Öhlins Racing AB can not be held responsible for any damage whatsoever to shock absorber or vehicle, or injury to persons, if the instructions for fitting and maintenance are not followed exactly.

Similarly, the warranty will become null and void if the instructions are not adhered to.

⚠ WARNING!

1. Installing a shock absorber, that is not approved by the vehicle manufacturer, may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage whatsoever that may occur after fitting the shock absorber. Contact an Öhlins dealer or other qualified person for advice.

2. Please study and make certain that you fully understand all the mounting instructions and the owners manuals before handling this shock absorber kit. If you have any questions regarding proper installation procedures, contact an Öhlins dealer or other qualified person.

3. The vehicle service manual must be referred to when installing the Öhlins shock absorber

Öhlins products are subject to continual improvement and development. Consequently, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your suspension and this manual. Please consult your Öhlins dealer if you have any questions with regard to the contents of the manual.

NOTE!

During storage and transportation, especially at high ambient temperature, the oil and grease used for assembling may run out inside the packing and damage the expanded polystyrene packing material. This is not unusual and is in no way detrimental to the shock absorber.

Kit contents

Before installing the shock absorber, please check the contents of the kit, listed on the front page of this instruction. If anything is missing, contact your Öhlins dealer.

Description	Pcs.	Part No.
Shock absorber	1	MG 127
Washer	1	00426-02
Tie rap	2	00231-01
Sticker Öhlins	2	00192-01
Sticker memo notes	1	01180-01
Owners manual	1	

Mounting instruction

1

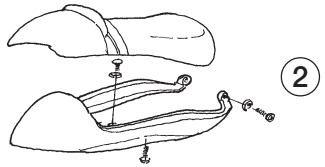
Put the motorcycle on the centre stand.

⚠ WARNING!

1. It´s advisable to have an Öhlins dealer or other qualified person to fit your shock absorber.
2. Instructions in the vehicle service manual are to be followed when changing the shock absorber.
3. When working on a lifted vehicle it must be securely supported to prevent it from falling.

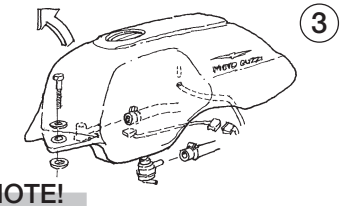
2

Remove the seat, by unlocking it and remove the rear plastic cover (6 screws).



3

Loosen and remove the fuel line (left side) and return line (right side) from the fuel tank. Loosen the air hose from the underside of the tank. Loosen the electrical connection and remove the tank by lifting it rearwards up.

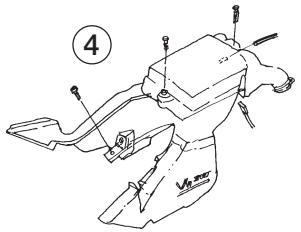


NOTE!

It is advisable to fit a stopping device into the fuel lines to avoid petrol waste

4

Remove the air filter unit by loosening the attachment screws (4), the intake hoses from the injection units and loosen the hose end the electrical connection

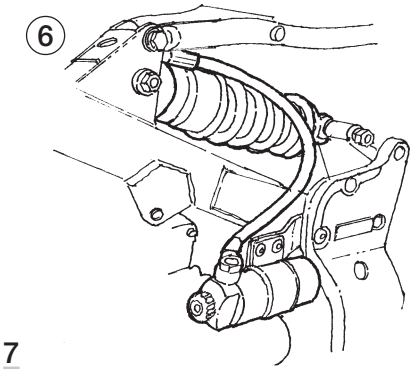


5

Loosen the original shock absorber from the rear and forward attachments.

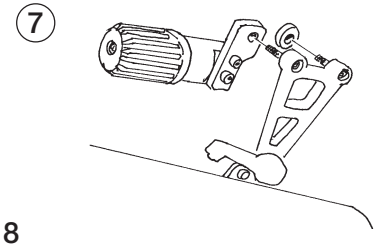
6

Attach the Öhlins shock absorber in reverse order. Use the standard bolts. The gas reservoir is positioned in the same bracket as the original reservoir.



7

The hydraulic preload adjuster is to be attached to the silencer bracket on the right side of the motorcycle. Use the original bolts and the washer provided so the bracket will be in line with the frame. Let the hose go in soft turns on the inside of the frame and attach it with the tie rap.



8

Put the air filter unit back and attach it to the injection units. Remember to refit the hose and the electrical connection.

9

Refit the cover behind the reservoir and put the fuel tank back. Connect the fuel lines and the electrical connection. And fix the fuel tank with the original bolt.

10

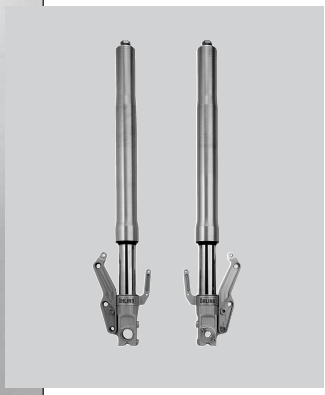
Refit the rear cover and the seat.

11

Continue your work according to the Owners Manual

Owners manual

Öhlins road & track front fork Ø 43

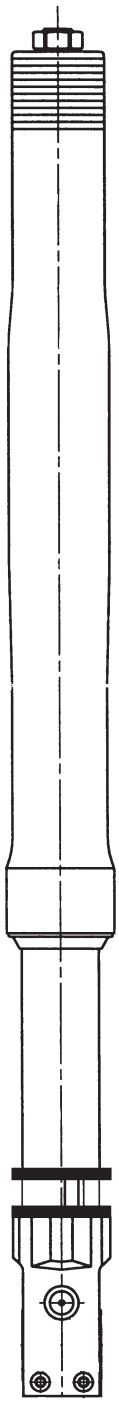


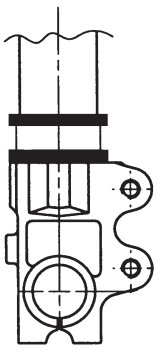
Including:

ÖHLINS®
ADVANCED SUSPENSION TECHNOLOGY

Öhlins road & track

front fork Ø 43





Contents

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NOTE!

This indicates information that is of importance with regards to procedures

NOTE!

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Before you start

⚠ WARNING!

Installing a suspension, that is not approved by the vehicle manufacturer, may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage whatsoever that may occur after fitting the suspension. Contact an Öhlins dealer or other qualified person for advice.

Öhlins Racing AB can not be held responsible for any damage whatsoever to suspension or vehicle, or injury to persons, if the instructions for fitting and maintenance are not followed exactly. Similarly, the warranty will become null and void if the instructions are not adhered to.

⚠ WARNING!

Please study and make certain that you fully understand all the mounting instructions and the owner´s manuals before handling this suspension kit. If you have any questions regarding proper installation procedures, contact an Öhlins dealer or other qualified person.

⚠ WARNING!

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NOTE!

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Introduction

The Öhlins front forks use a cartridge system for damping. This gives a damping force which depends on the speed of the piston in the cartridge system.

The combination of spring and air volume (oil level) gives a possibility to adjust the characteristics of the fork to suit different tracks and riders.

For example a soft spring in combination with a small air volume (high oil level) gives progressive action of the front forks.

For better understanding, please refer to our oil level chart, see page 5.

A telescopic front fork depends on smooth friction-free action.

Make sure your front forks are serviced regularly and don't use strong solvents such as brake cleaner to clean the front forks. This will dry out the seals and steel tubes and cause friction.
Put a little Öhlins grease (148-01) regularly on the steel tube and work it in by pushing the forks up and down.

Setting up your forks

Here are some basic guidelines for setting up your Öhlins front forks. However, you must remember that the front forks are just one part of your motorcycle and to get it to work properly, the whole motorcycle has to be set up in conformance with its manual.

1

Put your bike on a front stand so you can fit the front forks.
Maximum torque on the bottom triple clamp and steering damper bracket (if it is located on the diameter of the outer tube) is 15-18 Nm.
Dismantle the front wheel and brakes.

2

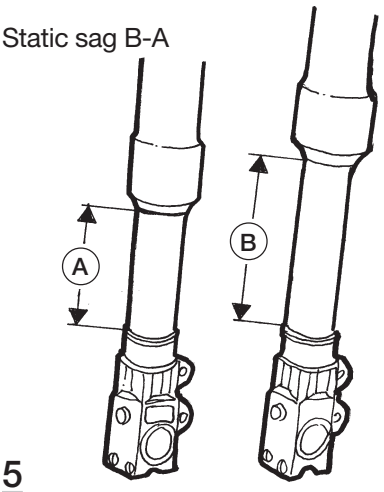
Unscrew the adjustment housing on top of the fork (use tool 4703-01) on both upper tubes and slide the fork up and down gently to make sure everything works correctly.

3

Assemble the adjustment housing again and set your initial preload of the spring by using a 12 mm or a 17 mm wrench until you get a "static sag" of 25-30 mm. Each turn gives 1 mm in preload. Maximum preload is 18 mm.

4

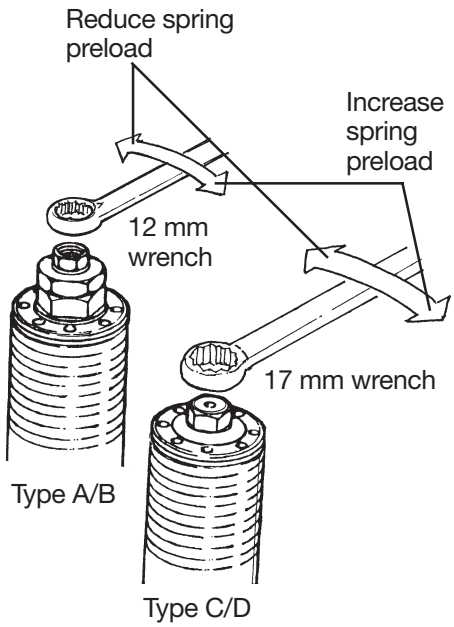
The best way to check the "static sag" is to put the bike on the ground in running condition. Measure the distance between the bottom of the outer tube to the fork bottom. Then lift the front end of the bike, so the fork is fully extended. Measure again. The difference between these two figures is the "static sag".

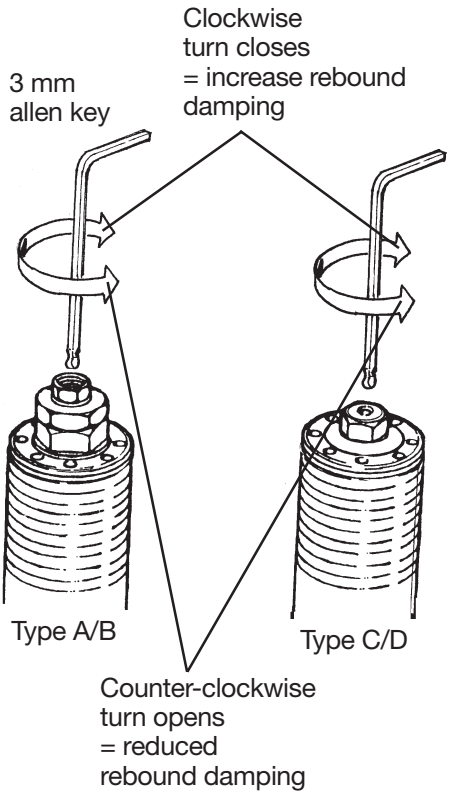


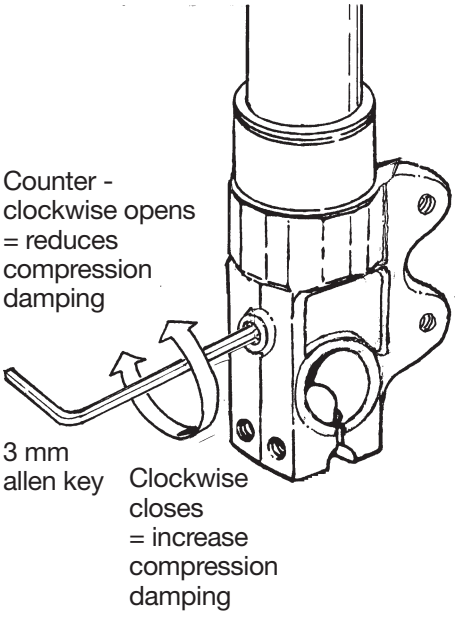
5

The "clicks" are a "bleed function", separate for rebound and compression damping. Rebound adjustment is made on the top centre of the fork and compression adjustment at the bottom part of the fork.
You start to count from fully closed (clockwise) and set it to the recommended "click" (use a 3 mm Allen key). For recommended start setting, please refer to the mounting instruction.

Adjustments







Spring preload adjustment

Using a 12 mm or a 17 mm wrench, turn the upper adjustment screw.
Maximum adjustment range is 18 mm. One turn of the adjustment screw will cause 1 mm change in spring preload. Adjust so the front forks are lowered 25-30 mm from the top, unloaded position.

Rebound adjustment

Adjust the rebound rate on the adjustment screws positioned at the top centre of the front forks. Use a 3 mm allen key with a spherical head *(use tool 794-01).*
Adjustment range from closed valve (clockwise) to maximum open valve (counter-clockwise) is 20 "clicks". See mounting instruction for recommended adjustment "clicks", from closed position.

Compression adjustment

Adjust the compression rate on the lower part of the front forks (compression valve). Use a 3 mm allen key with spherical head (use tool 794-01).
Adjustment range from closed valve (clockwise) to maximum open valve (counter-clockwise) is 20 "clicks". See mounting instruction for recommended adjustment "clicks", from closed position.

Changing springs

1

Loosen the screws that hold the fork legs in the upper triple clamps.

2

Loosen the top nut assy (page 7) about two turns (use tool 4703-01).

3

Remove the fork legs from the motorcycle.

4

Grip a fork leg in a vice. Use soft jaws.

5

Unload the spring completely by turning the adjustment screw anticlockwise. Use a 12 mm or a 17 mm wrench.

6

CAUTION!

Do not damage the O-ring and do not drop the flat key into the fork leg.
Carefully remove the adjustment housing.

7

Remove the preload tube and spring. (Free spring length; see page 6).

8

Pull out the piston rod as far as possible and turn the compression adjustment screw fully clockwise. This will keep the piston rod in top position, which will make the continued assembly easier.

9

Install the new spring and preload tube.

10

Install the top nut assy.

CAUTION!

The flat key must be guided in the slot of the top nut assy.

11

Fasten the adjustment housing in the fork leg. Make sure that the fork leg is fully extended when tightening the adjustment housing.

12

Install the fork legs on the motorcycle and adjust the preload, compression and rebound according to the instructions at page 3.

Changing seals

Put the fork legs upright for 15 minutes.

1

Grip the fork leg in a vice. Use soft jaws.

2

Unload the spring preload completely by turning the adjustment screw counterclockwise. Use a 12 mm or a 17 mm wrench.
Make a note of the number of turns.

3

Carefully remove the top nut assy.

CAUTION!

Do not damage the O-ring and do not drop the flat key into the fork leg.

4

Remove the preload tube.

5

Slide the outer fork leg up until the top bushing is just above the inner leg. (Approx. 140 mm from complete bottom position. This is to make sure there is no oil above the top bushing).

6

Slide the outer tube completely down. (Fork seal touching fork bottom).

7

Push the piston rod down completly.

NOTE!

When measuring the oil level, always have the spring installed.

Measure the oil level using the top of the outer tube as the zero mark.
Note the measurement.

8

Remove the spring and tip the oil in a clean container.

9

Remove the outer tube, clean the seals and check for damage, if the seals are damaged remove and replace. If the seals are OK, then apply Öhlins grease (green grease 148-01).

10

Apply Öhlins fork oil on the seals and on the inner tube.

11

Carefully mount outer tube (slide completely down), install spring and set the oil level.

12

Carry on with 9 to 12 according to page 3 “Changing springs”.

Dismantling the forks

1

Carry out 1 to 7 of page 3 “Changing springs”.

2

Free the fork leg from the vice and drain the oil.

3

Pull up the outer tube and remove the seals.

4

Grip the inner tube on the fork bottom in a vice. Use soft jaws.

5

Unscrew the seal head *(page 7)* from the cartridge system *(use tool 4702-01)* and remove the piston rod unit. Drain the remaining oil.

6

Remove the compression valve assembly (page 7).

7

Remove the piston and the shims from the piston rod and compression valve. Place the shims in their correct position on the work bench.

8

Clean all parts thoroughly and dry with compressed air.

Assembling the forks

1

Apply a thin layer of Öhlins green grease (148-01) on the scraper ring and on the sealing surfaces of the fork seal. Install the seals in the outer tube. Please note that it is important to use the correct grease in order to achieve optimum fork function.

2

Install the piston and the shims on the piston rod and the compression valve. Tighten the 8 mm lock nuts with a torque of 8 Nm.
Check the piston ring for damage. Replace if necessary.

3

Install the compression valve assembly into the cartridge system. Assemble the seal head (tool 4702-01). Use: loctite 270 (part no. 1791-05) and tighten firmly.

4

Apply some front fork oil 1309-01 on the inner steel tube surface and install the outer aluminium tube. Measure the correct amount of 1309-01 oil according to the mounting instruction.

CAUTION!

Be careful not to damage the fork leg seals.

NOTE!

Use Öhlins oil (0309-01) only. Other brands may affect the function of the front fork.

5

Raise the outer tube approximately 120 mm and fill the oil.

6

Install the cartridge assembly using red grease (146-01) on the thread going into the fork bottom.

7

Pump the piston rod up and down and the oil will be sucked into the cartridge tube. Close the "clickers" and check the function.

8

Pull the piston rod out as far as possible and close the compression valve by screwing fully (clockwise).

9

Carry on with 9 to 12 according to page 4 "Changing springs".

Oil level adjustment

Compared to conventional type of front forks, the upside down front forks are very sensitive to variations in oil level. Therefore, adjust the oil level with special care.

A change in the fork oil level will not affect damping force in the early stage of fork travel, but will have a great effect in the later stage.

When the oil level is raised:

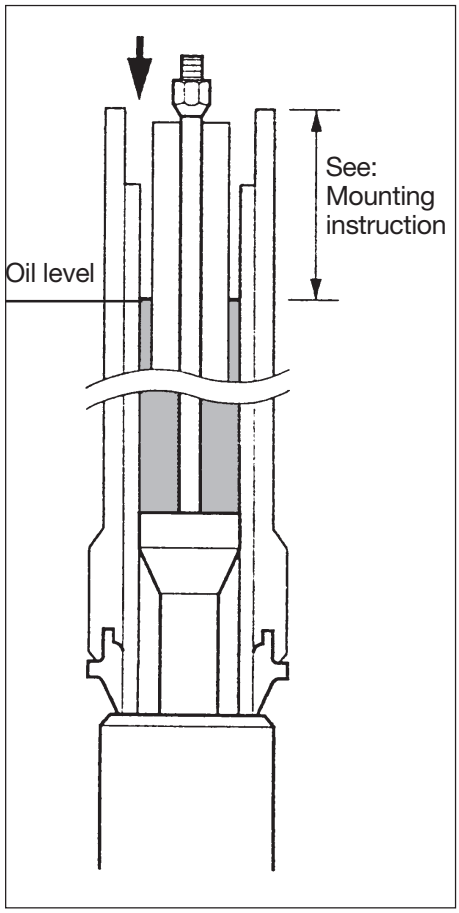
The air spring in the later half stage of travel is stronger, and thus the front forks harder.

When the oil level is lowered:

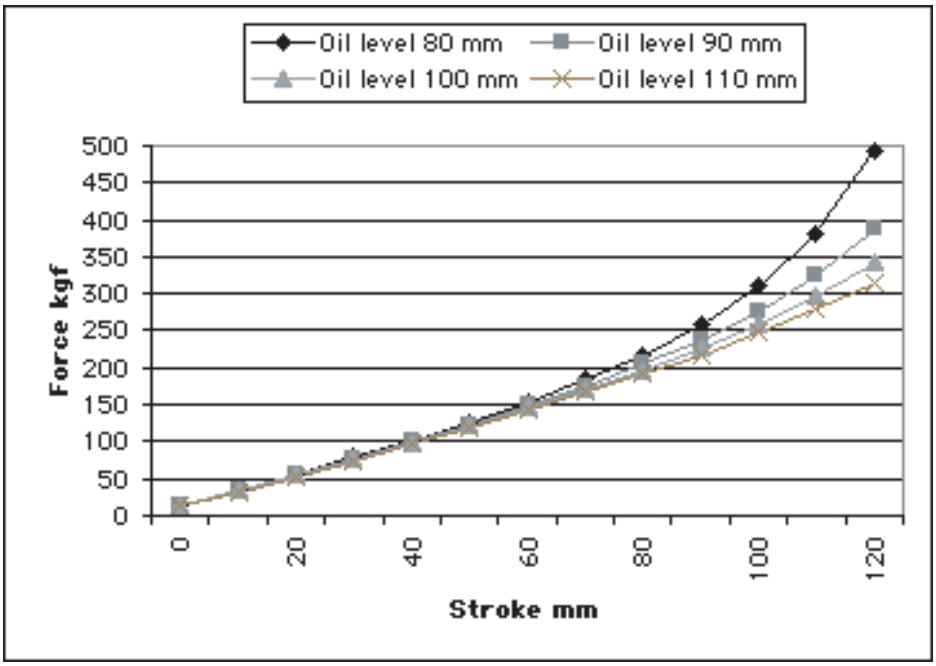
The air spring in the later half stage of travel is lessened, and thus the front forks are softer. The oil level works most effectively at the end of the fork travel. Air spring characteristics shown, refer to a general card description to facilitate understanding of the difference when the oil level is changed.

NOTE!

Adjust the oil level in mm according to the figure with the fork fully compressed and with the spring mounted. For the right recommended level, please see the mounting instruction.



Air spring characteristics



Technical information

Fork length:
See Mounting instructions.

Stroke:
See Mounting instructions.

Free spring length:
240 mm.

Rebound adjustment:
Basic setting 9-12 “clicks”.
Maximum open valve 20 “clicks”.

Compression adjustment:
Basic setting 6-16 “clicks”.
Maximum open valve 20 “clicks”.

Spring preload adjustment:
0-18 mm (0-18 turns).

Spring rate
See Mounting instructions.

Optional springs:
4745-75,	7.5 N/mm (marking -75).
4745-80,	8.0 N/mm (marking -80).
4745-85,	8.5 N/mm (marking -85).
4745-90,	9.0 N/mm (marking -90).
4745-95,	9.5 N/mm (marking -95).
4745-10,	10.0 N/mm (marking -10).
4745-05,	10.5 N/mm (marking -05).
4745-11,	11.0 N/mm (marking -11).

Oil Level:
Please see Mounting instructions.

CAUTION!

Use only Öhlins high performance front fork fluid (1309-01).

Loctite glue:
542 on Fork Bottom thread.

Tightening torque:
Triple Clamp bolt 15-18 Nm.

Grease:
Öhlins front fork grease 148-01 (green grease).

Trouble shooting
Here are a few common Road Racing problems and their solutions.

A
The front wheel “chatters” entering a corner, the problem disappears as soon as you let the brakes off, or when you apply power. The problem is caused by the fact that the fork is working too low in its travel and reaches the progressive, hard part at the end of the travel.

1
Apply more preload.

2
Change to a harder spring.

3
If a lot of stroke remains after riding, lower the oil level. See oil level chart.

4
Make sure the front forks have no friction.

5
Rear ride height is too high, too much rear spring preload.
Lower the rear end by reducing preload on the rear shock spring.

B
The front wheel jumps during the last part of braking.

1
If a lot of stroke remains, the oil level is too high. Lower the oil level.

2
If the fork is bottoming, put in harder springs and keep the same oil level.

C
The front end feels unpredictable and unsafe in the middle of a corner (between braking and applying power).

1
Not enough rebound damping. Apply more damping.

2
Too much rebound damping. If it at the same time feels harsh, lightly reduce the rebound damping.

3
Too much compression damping. Also gives a harsh feeling. Lightly reduce the compression damping.

D
The front end looses grip coming out of a corner.

1
Not enough rebound damping. Lightly increase the rebound damping.

2
Too much preload. Lightly reduce the preload.

3
Rear end is too soft. Put on a harder rear spring.

4
Front end is too high. Lower the front end by pulling the fork legs through the triple clamps.

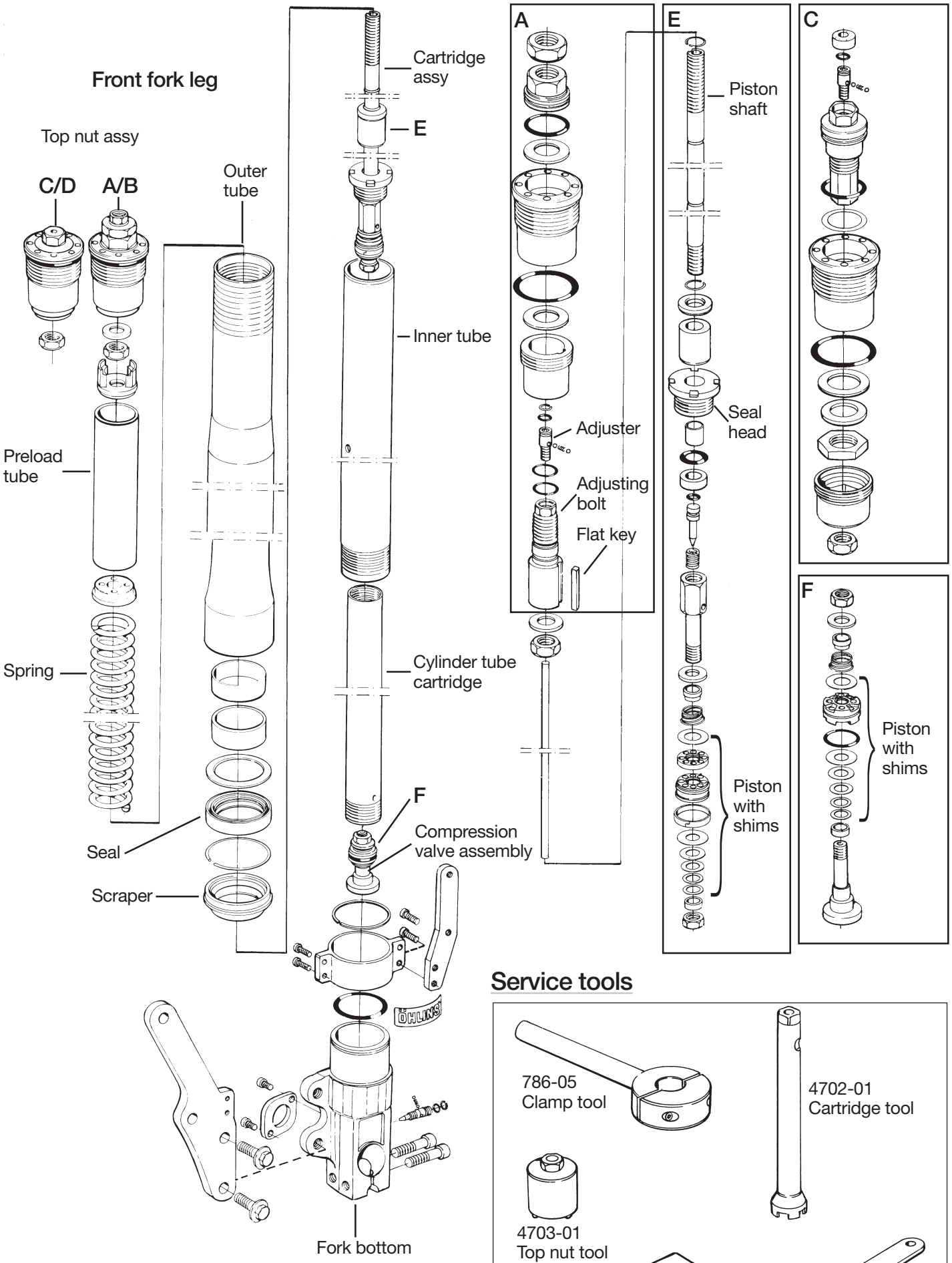
As mentioned at the beginning, the whole bike setup affects the front forks. Try to understand how the action feels and work step by step.

NOTE!

Our advice is to change only one thing at a time and do everything step by step.

Notes

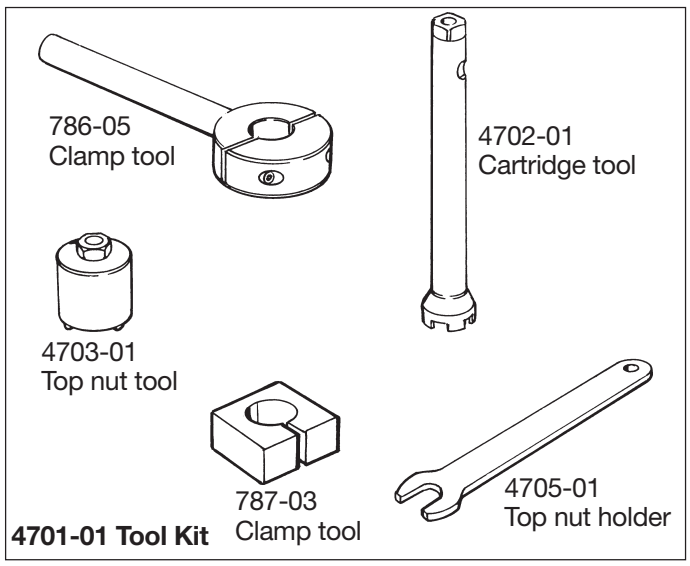
Parts and Service tools



NOTE!

For correct part number please refer to spare parts list.

Service tools



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AMORTISSEURS ÖHLINS

Concerne les V11 SCURA et ROSSO CORSA. Les procédures de réglage viennent des manuels d'utilisation complétées de l'expérience de Freddy en Scura.
Données techniques disponibles aussi sur https://www.ohlins.com/support/manuals/

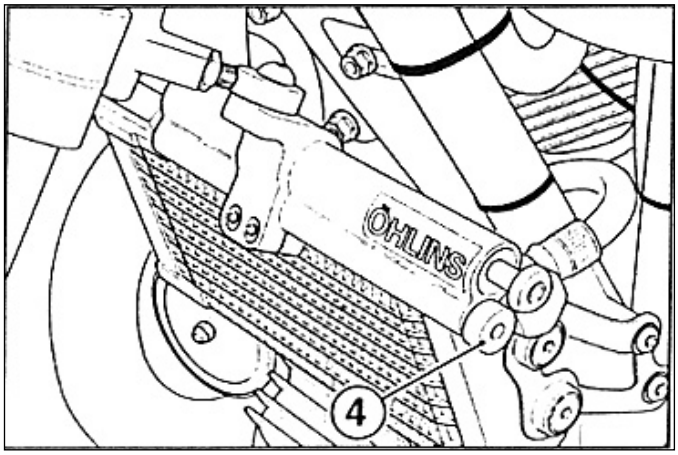
AMORTISSEUR DE DIRECTION

Visser ou dévisser le bouton moleté «**A**» pour augmenter ou réduire le freinage.

L'amortisseur de direction est réglé en usine à la valeur standard de 10 déclics depuis la position complètement vissée.

Son action contribue à rendre la direction plus précise et plus stable tout en améliorant la manœuvrabilité de la moto, quelles que soient les conditions.

N.B. Il est préconisé de ne pas modifier les réglages pour ne pas compromettre la stabilité et la sécurité du véhicule pendant son utilisation sur la route.

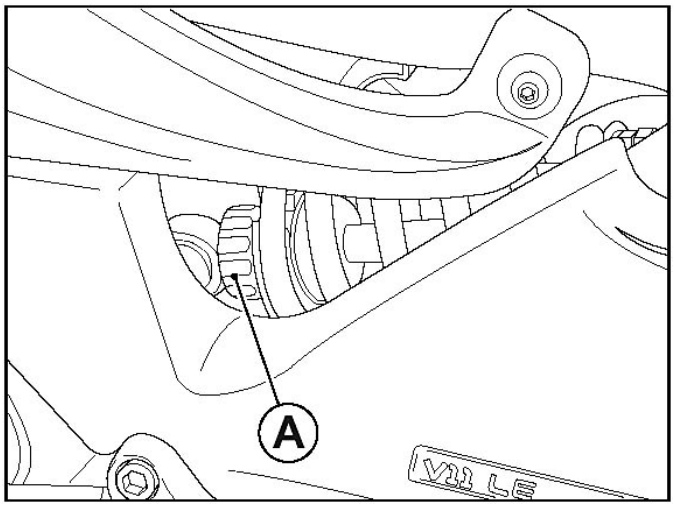


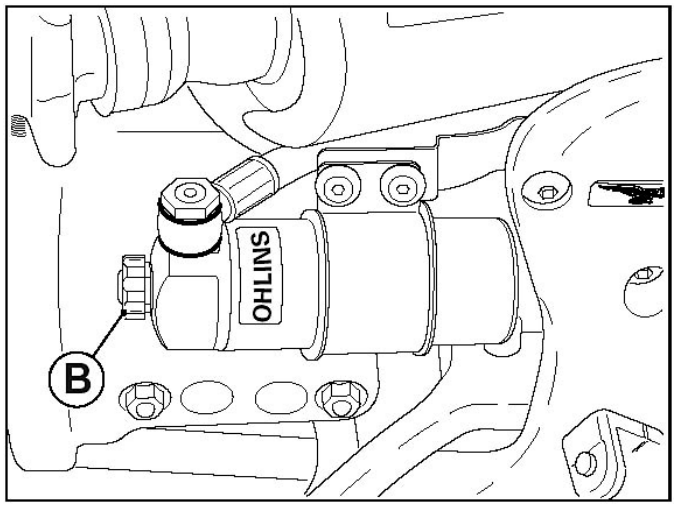
AMORTISSEUR ARRIÈRE

Le mono amortisseur présente un réglage séparé de la précharge du ressort et du freinage hydraulique en extension et en compression.

L'amortisseur est réglé en usine aux valeurs standard suivantes :

- Détente (Bouton moleté «**A**») : 14 déclics depuis la position complètement vissée.
- Compression (Bouton moleté «**B**») : 12 déclics depuis la position complètement vissée.



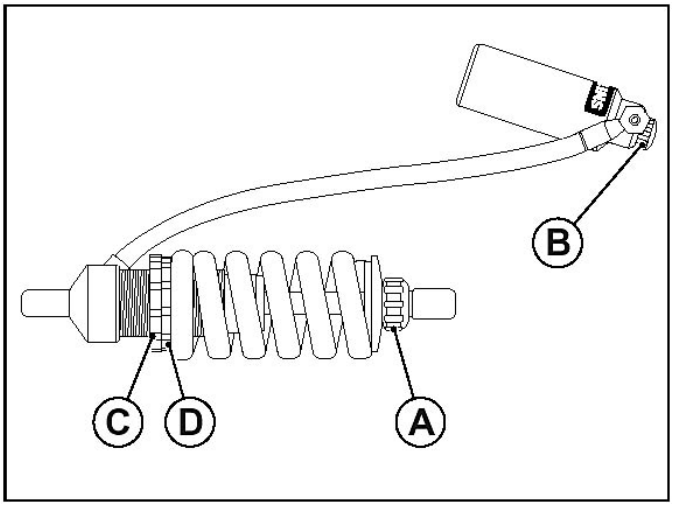


Précharge du ressort (Bague «**D**») : 15mm depuis la position "ressort libre".

Pour régler le freinage hydraulique en détente, selon la charge de la moto et l'utilisation, tourner la bouton moleté «**A**»

Pour régler le freinage hydraulique en compression, tourner la bouton moleté «**B**»

Pour modifier la précharge du ressort, desserrer la bague «**C**» à l'aide de la clé prévue à cet effet, et visser ou dévisser la bague «**D**». Visser pour augmenter la précharge.



Utiliser uniquement de l'huile Öhlins 105/1

N.B. Pour éviter d'abîmer le filetage entre le corps de l'amortisseur et la bague «D», graisser le filetage avec "SVITOL", de l'huile ou de la graisse.
Noter que le zéro des réglages hydrauliques correspond à la position complètement vissée, tandis que le zéro du réglage du ressort est en position complètement dévissée.
Il est préconisé de ne pas modifier les réglages pour ne pas compromettre la stabilité et la sécurité du véhicule pendant son utilisation sur la route.

PROCÉDURE DE RÉGLAGE (SELON DONNÉES SITE ÖHLINS ET PRÉPARATEUR)

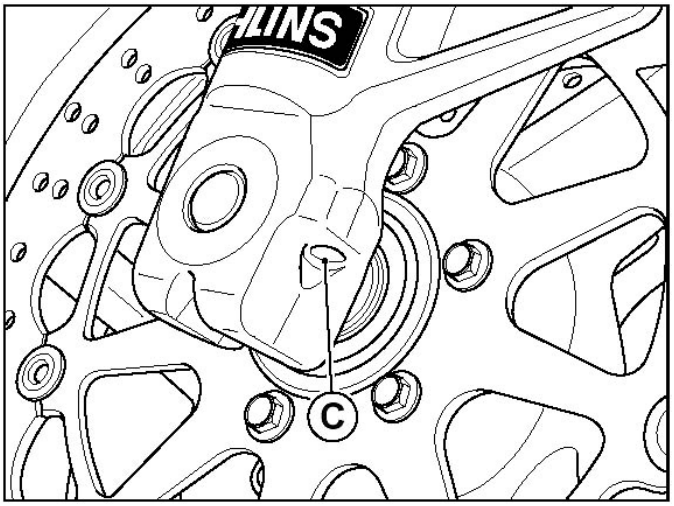
Régler la course morte de l'amortisseur arrière (différence moto en l'air et moto à terre à vide) à 1 cm (recommandations Öhlins 5mm à 10mm) puis mesurer l'enfoncement avec le pilote (différence avec moto en l'air) la mesure devant se trouver à 30% du débattement soit 38 mm sur le V11.

- Première constatation : les réglages d'origine ne correspondent pas à la course morte recommandée puisque j'ai trouvé 18mm, il est donc nécessaire de rajouter de la précontrainte (environ 3 tours).
- Deuxième constatation, ma deuxième mesure avec le pilote est de 30 mm, le ressort est donc un peu dur, il m'a donc été conseillé de le changer (échange gratuit chez Öhlins dans le mois suivant l'achat).
- Troisième constatation, les réglages solo, ne seront plus bon en duo et vice et versa, et cette situation semble commune à tous les constructeurs (moto dimensionnée pour 1,5 pilote).

FOURCHE AVANT

La fourche télescopique est réglable en détente et en compression ainsi qu'en précharge du ressort. La fourche est réglée en usine aux valeurs standard suivantes :

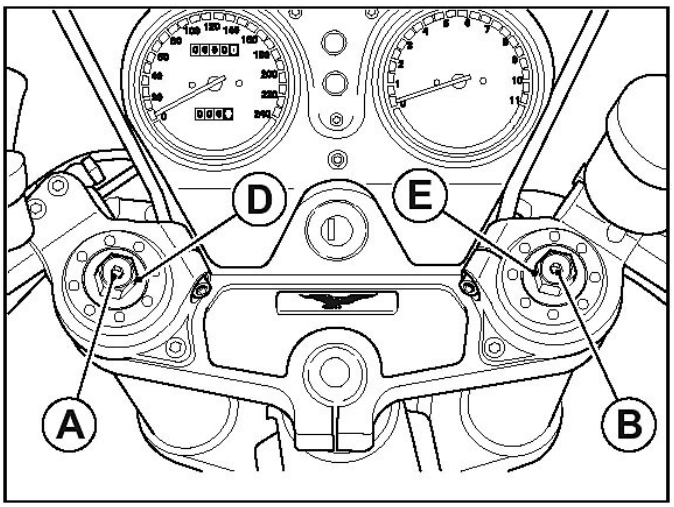
- Compression (vis «**C**» aux pieds des tubes de fourche) : 13 déclics depuis la position complètement vissée.

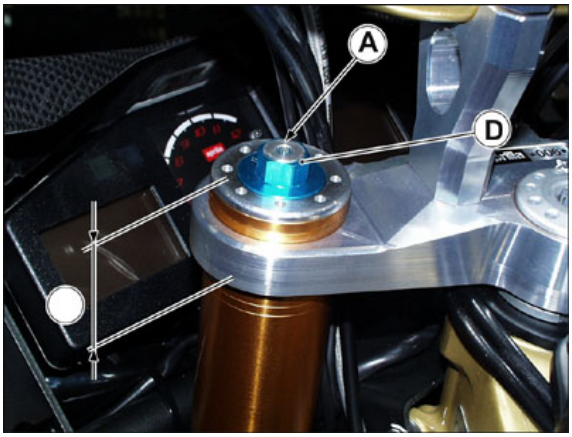


- Détente (vis «**A**» et «**B**» sur les bouchons supérieurs : 13 déclics depuis la position complètement vissée.
- Précharge du ressort (écrous «**D**» et «**E**» sur les bouchons supérieurs) : 13 tours, correspondant à 13 mm.

Si l'on augmente la précontrainte du ressort, il faut augmenter également le freinage hydraulique, afin d'éviter les rebonds.

Les fourreaux doivent affleurer le T.





Utiliser uniquement de l'huile Öhlins 1309.

N.B. Ne pas forcer les vis et écrous de réglage en butée. Les réglages sont identiques pour les 2 tubes.
Noter que le zéro des réglages hydrauliques correspond à la position complètement vissée, tandis que le zéro du réglage du ressort est en position complètement dévissée.
Lors du montage de la roue, il est préconisé de manœuvrer 2 ou 3 fois les fourches avant de serrer l'axe de roue, de façon à garantir le parallélisme et le bon positionnement des fourches.
Il est préconisé de ne pas modifier les réglages pour ne pas compromettre la stabilité et la sécurité du véhicule pendant son utilisation sur la route.

PROCÉDURE DE RÉGLAGE SELON ÖHLINS ET PRÉPARATEUR

Course morte de 25 à 30% du débattement soit 30-36mm et avec le pilote 40% du débattement soit 48 mm.

Je n'ai pas noté les réglages d'origine mais à origine (13t) — 1 tour, on trouve course morte 30 mm et en charge 38mm. Je me suis donc orienté vers origine — 6t avec course morte 35mm et en charge 43 mm, ce qui s'approche plus des recommandations de mon interlocuteur.

RÉGLAGES SPORTIFS DE LA FOURCHE AVANT

DANGER
Les réglages pour une utilisation sportive doivent se faire uniquement à l'occasion de compétitions organisées ou d'évènements de sport, qui se déroulent sur des circuits en dehors de la circulation routière et avec le consentement des autorités compétentes.
Il est strictement interdit d'effectuer tout réglage pour une utilisation de sport et de conduire le véhicule avec de tels réglages sur les routes et les autoroutes.

- Compression (vis «**C**» aux pieds des tubes de fourche) : 6 à 15 déclics depuis la position complètement vissée.
- Détente (vis «**A**» et «**B**» sur les bouchons supérieurs) : 5 à 16 déclics depuis la position complètement vissée.
- Pré-charge du ressort (écrous «**D**» et «**E**» sur les bouchons supérieurs) : 5 à 10 tours.
- Saillie des tubes : 2 à 5 encoches