marzocchi

2012

Y9001426 REAR SHOCK MANUAL

TENNECO

WARNING!

Per la versione completa del manuale d'uso riferirsi al sito www.marzocchi.com

You can download the complete version of the owner manual from internet at www.marzocchi.com

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ENGLISH

I. USE OF THIS MANUAL

I.I General warnings

WARNING!

Descriptions preceded by this symbol contain information, instructions, or procedures, which, if not followed, can result in damage or malfunction of the suspension, environmental damages, accidents, personal injury or death.

REMEMBER

Descriptions preceded by this symbol contain information, or procedures recommended by Tenneco Marzocchi for optimum use of the suspension.

WARNING!

Failure to follow the warnings and instructions could result in malfunction, accidents, personal injury or death.

WARNING!

Failure to properly match the suspensions to your frame could cause malfunction of the suspension, resulting in a loss of control of the bicycle, and possible serious injury or death to the rider.

Please note that throughout this manual, reference is made that "accidents" could occur. Any accident could result in loss of bicycle control, damage to your bicycle or its components, and more importantly, cause you or a bystander to sustain severe personal injury or death.

Please be advised that suspension system installation, service and repair tasks require specialized knowledge, tools and experience. General mechanical aptitude may not be sufficient to properly install, service or repair your suspension system. Installation and maintenance of the suspension system must be carried out only by an authorized Marzocchi Service Center. Improper installation, service or repair may lead to accidents, resulting in personal injury or death.

For further information, please consult the www.marzocchi.com web site or contact your nearest Marzocchi Service Center. A list of service centers can be found on our web site.

I.II General safety recommendations

Never make any modifications whatsoever to any component of the suspension system. The components of the Marzocchi suspension system are designed as a single integrated system. To avoid compromises in terms of safety, performance, durability and function, use only original Marzocchi components for substitution.

It is necessary to learn how to ride your bike without going beyond your personal capabilities. Always use the proper safety equipment, and ensure that all your riding equipment is in excellent condition.

Damage to your suspension can occur if your bicycle strikes any overhead object, such as garages, bridges, tree limbs or other obstacles, while attached to a bicycle carrier, at any speed.

Always check your suspension and if there are deformations, cracks, impact marks, stress marks or bent parts, no matter how slight, it is necessary to have the suspension checked by an authorized Marzocchi Service Center.

The suspension system will show signs of wear and tear through time. Have your bike periodically checked for oil leaks, cracks, chips or other signs of wear and tear by an authorized Marzocchi Service Center.

The frequency of inspection depends on many factors; check with your Authorized Marzocchi Representative to select a schedule that is best for you.

When using a bicycle carrier (car roof rack or rear-hitch mount), be sure to fully loosen the quick release fastener on the carrier when mounting or removing your bicycle. Additionally, be sure to always keep your bicycle in a vertical position when mounting or removing your bicycle to and from the bicycle carrier. Failure to fully loosen the quick release fastener, or any bending action while mounting or removing your bicycle to and from the carrier, could result in scratching, bending, or cause other damages your suspension system.

Learn and follow the local bicycle laws and regulations, and obey all traffic signals, signs and laws while you ride.

Always wear a properly fitted and fastened bicycle helmet that has been approved by ANSI, SNELL or CE, and any other safety equipment necessary for your riding style.

When riding in wet conditions, remember that the stopping power of your brakes is greatly reduced and that the adherence of the tires on the ground is considerably reduced. This makes it harder to control and stop your bicycle. Extra care is required when riding your bicycle in wet conditions to avoid an accident.

Avoid riding at night because it is more difficult for you to be seen by traffic, and it is more difficult for you to see obstructions on the ground. If you do ride at night, or in conditions of poor visibility, equip your bicycle with and use a headlight and a taillight. Wear clothes that are snug-fitting and that make you visible to traffic, such as neon, fluorescent, or other bright colors.

Carefully read and follow all instructions and warnings supplied.

I.III Before every ride

WARNING!

Do not ride your bicycle if it does not pass this pre-ride test.

Check your suspensions for any leaks or other traces of oil, which is indicative of a problem with your suspension. Be sure to turn your bicycle upside down to check areas such as the underside of the crown for evidence of an oil leak.

Be sure that all components of the suspensions and the bicycle, including the brakes, pedals, handgrips, handlebars, frame and seating system, are in optimum condition and suitable for use.

Be sure that none of the components of your suspension system or of the bicycle are bent, deformed or otherwise damaged.

Check that all quick release fasteners, nuts and bolts are properly fastened. Bounce the bicycle on the ground while listening and looking for anything that may be loose.

Be sure that your wheels are perfectly aligned. Spin the wheels to ensure that they do not wobble up and down or from side to side, and that they do not make contact with the suspension legs or brake pads while rotating.

Be sure that all cables and other components of your braking system are in their proper position, properly adjusted and that your braking system is functioning properly.

Be sure that your tires are inflated to the correct pressure and that there is no damage whatsoever in the tread or sidewall of the tire.

Check that all reflectors are clean, straight and securely mounted.

II. INTENDED USE INSTRUCTIONS

II.I Select the correct riding style

Marzocchi suspensions are among the most durable and technologically advanced suspension systems on the market today. However, no suspension can withstand misuse, abuse or improper use that, over a short period of time, can cause your suspensions to fail when you least expect it. It is critical that you select and use the suspension system that is appropriate for your riding style, and that you use it properly.

II.II Identifying your intended use

WARNING!

Failure to properly overcome obstacles on the trail, or failure to properly land after a jump or drop, could cause your suspensions to fail, resulting in a loss of bicycle control, serious injury, or death to the rider.

Learn how to properly flow around obstacles on the trail. Hitting obstacles such as rocks, trees or holes straight-on puts forces on your suspension it was not designed to absorb. Landing improperly after a jump or drop also puts forces on your suspension it was not designed to absorb.

You should only perform jumps or drops when a transition, or down ramp, is available to help your bicycle absorb the impact forces generated during the landing by having both wheels smoothly make contact with the transition, or down ramp, at the same time. Any other type of landing is dangerous, as it could result in accidents or damages to the components.

Ensure that the steepness and length of the transition, or down ramp, are suitable for the height from which you jump or drop and that you are skilled enough to perform them.

1. INTRODUCTION

1.1 The Roco range

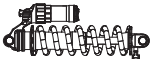
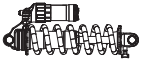
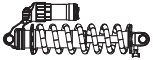
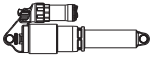
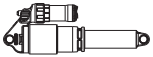
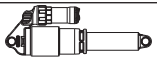
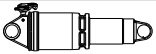
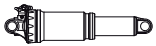
Model		Spring system	Adjustments available
ROCO RC WORLD CUP Piggyback		Coil spring	Compression adjustment HSCV Rebound adjustment Spring preload Bottom-out resistance adjustment by means of equaliser air valve
ROCO TST R Piggyback		Coil spring	Trail Selection Tecnology TST Rebound adjustment Spring preload Bottom-out resistance adjustment by means of equaliser air valve
ROCO R Piggyback		Coil spring	Rebound adjustment Spring preload Bottom-out resistance adjustment by means of equaliser air valve
ROCO COIL R		Coil spring	Rebound adjustment Spring preload
ROCO COIL F		Coil spring	Spring preload
ROCO AIR RC WORLD CUP Piggyback		Air	Compression adjustment HSCV Rebound adjustment Air spring adjustment Bottom-out resistance adjustment by means of equaliser air valve
ROCO AIR TST R Piggyback		Air	Trail Selection Tecnology TST Rebound adjustment Air spring adjustment Bottom-out resistance adjustment by means of equaliser air valve
ROCO AIR R Piggyback		Air	Rebound adjustment Air spring adjustment Bottom-out resistance adjustment by means of equaliser air valve
ROCO LO		Air	LO - 2-position lock-out Rebound adjustment Air spring adjustment
ROCO LITE		Air	LO - 2-position lock-out Rebound adjustment Air spring adjustment

Table 1 - The Roco range

2. TECHNICAL INFORMATION

The range of ROCO rear shocks consists of various versions for different lengths of travel and/or wheelbases.

2.1 Spring system

Rear shocks Marzocchi you will find coil springs, or air, used as suspension mechanism.

2.2 Damping system

The damping load generated during compression and rebound of the rear shock is controlled by the use of special hydraulic damping systems.

TST

The TST system allows the adjustment of hydraulic damping of the compression thanks to a 5-position adjuster.

HSCV

The HSCV System, is based on a speed sensitive type valve, and it provides a compression damping control increasing with the rear shock damping speed.

R

Thanks to the speed sensitive type valves, the R (Rebound) system allows control of and rebound on the basis of the travel carried out by the suspension. The R system allows adjustment of the rebound.

LO (Lock-Out)

The LO system operates on the hydraulic circuit, which adjusts the compression and allows for the blocking of the shock absorber. The red lever can be moved in two positions through a 90° rotation. If turned clockwise, the lever opens the hydraulic circuit; if turned counter-clockwise, the lever closes the hydraulic circuit and blocks the shock absorber. The two positions are indexed with a "click", which prevents intermediate working positions and ensures very fast adjustments.

3. INSTALLATION

3.1 Installing on the frame

WARNING!

Suspension system installation requires specialized knowledge, tools and experience. General mechanical aptitude may not be sufficient to properly install your suspension system. Please have your suspension system installed only by an authorized Marzocchi Suspension Center. Improper installation can result in failure of your Marzocchi Suspension System, an accident, personal injury, or death.

The shock absorber should be installed according to the specifications of the manufacturer of the frame, making sure the Marzocchi shock absorber is compatible with the frame (travel, wheelbase and external dimensions).

Consult the instructions supplied by the manufacturer of the frame for the corresponding travel between the shock absorber and the wheel, as this depends on the geometry of the rear mount of the mountain bike and the pivot point used to fix the shock absorber to the compound lever of the rear suspension. Before fitting the shock absorber on the frame, the installer should check that it won't come into contact with parts of the mountain bike when it's damping the movement of the wheel.

Check that the saddle-pillar, in its lowest position, doesn't interfere with the movements of the shock absorber over its entire working range and repeat this check after replacing any of the parts in question.

WARNING!

The frame must be the assembled following the manufacturer's instructions. Incorrect assembly can be dangerous for the rider. Tenneco Marzocchi S.r.l. does not guarantee the installation work and declines any responsibility for damage and/or accidents that may be caused by incorrect installation. Check that the mounts of the shock absorber on the frame are perfectly aligned, if this is not the case anomalous wear and oil leaks or breaking may occur.

4. SUMMARIZING TABLES

WARNING!

The operations listed below accompanied by this symbol should only be performed by authorized MARZOCCHI service centers.

General maintenance operation	Use	
	Intense	Normal
Clean the rear shock and check that the nuts and bolts fixing the shock absorber to the frame are tight	Before every ride	
Air pressure control	Before every ride	10 hours
Oil seals control	25 hours	50 hours
Oil change	50 hours	100 hours
Change the seals	50 hours	100 hours

Table 2 - Periodic maintenance table

Part to be tightened	Tightening torque (Nm)
Adjuster locking screws	2 ± 0,5

Table 3 - Tightening torques

Air spring pressure - Compensator air pressure					
Rider's weight	kg	< 65	65-75	75-90	> 90
	lbs	< 145	145-165	165-200	> 200
Air spring pressure *	bar	6	8	10	12
	psi	90	115	145	175
Air spring pressure **	bar	8	10	12	14
	psi	115	145	175	205
Compensator air pressure	bar	12 -15			
	psi	170 - 210			

Table 4 - Recommended air pressure values

** - Roco Air RC World Cup, Roco Air TST R, Roco Air R, Roco LO - For models with travel equal to or above 50 mm (2") the air spring pressure can be reduced with respect to that stated in the table by 1 bar (15 psi).*

*** - Roco Lite*

Adjustments available	Model						
	Spring preload	Air spring adjustment	Rebound adjustment	Compression adjustment HSCV	Trail Selection Tecnology TST	LO - 2-position lock-out	Bottom-out resistance adjustment by means of equaliser air valve
ROCO RC WORLD CUP Piggyback	•		•	•			•
ROCO TST R Piggyback	•		•		•		•
ROCO R Piggyback	•		•				•
ROCO COIL R	•		•				
ROCO COIL F	•						
ROCO AIR RC WORLD CUP Piggyback		•	•	•			•
ROCO AIR TST R Piggyback		•	•		•		•
ROCO AIR R Piggyback		•	•				•
ROCO LO		•	•			•	
ROCO LITE		•	•			•	

Table 5 - Adjustments available

5 WARRANTY

5.1 Warranty For EU Countries

Subject to the terms and conditions set forth herein, Tenneco Marzocchi S.r.l. grants an independent warranty to the relevant end-user that its suspension system is free from defect in material and/or workmanship throughout a period of two (2) years from the date of the purchase. A defective suspension system will be repaired or replaced, at the option of Tenneco Marzocchi S.r.l. free of charge, within thirty (30) days after receipt of the same from the relevant authorized Tenneco Marzocchi dealer. The retail invoice or, if any, the warranty certificate dated and stamped by the relevant Marzocchi retailer, enclosed with the product, will serve to prove the commencement date of the warranty and the place of purchase of the product. In the event of a defect within the aforesaid term, the purchaser should return the product to the Marzocchi retailer where he/she bought it, illustrating the defect and the reasons of the warranty claim. The retailer will inform the purchaser when the product has been repaired or replaced.

5.1.1.1 NOT COVERED: This warranty does not cover defects resulting from accidents, alteration, neglect, misuse, abuse, improper use, improper assembly, improper maintenance, repairs improperly performed, replacement parts or accessories not conforming to Tenneco Marzocchi S.r.l.'s specifications, modifications not recommended or approved in writing by Tenneco Marzocchi S.r.l. activities such as acrobatics, stunt jumping, ramp riding, racing, commercial use, competitive use, use in mountain biking or BMX parks, use on BMX trails, and/or normal wear or deterioration occasioned by the use of the suspension system, and, in general, all subsequent non- conformity defects resulting from the non observance of the instructions of the products Manual.

This warranty does not cover, as they are not original non-conformities, items and substances subject to normal wear occasioned by use, such as oil, sealing rings, dust seals, and sliding bushes. In addition, this warranty is void in the event that the suspension system is used with rental bicycles. This warranty will be automatically void if the serial number of the Marzocchi suspension system is altered, erased, defaced or otherwise subject to any tampering. Finally, this warranty will not cover second-hand Marzocchi suspension systems and in this case the retailer will offer a warranty for the second-hand product, without liability of any kind, either direct or indirect, of Tenneco Marzocchi S.r.l.

5.1.1.2 TERRITORIAL LIMITATION: This warranty covers all the products bought only in a EU country (including Switzerland), except for products bought in a EU country but used in the USA which the clauses of the "Warranty rest of the world – USA included" apply to. Some EU countries set mandatory rules which govern the warranty for consumer goods; should these rules be inconsistent with the terms of this warranty, national mandatory rules shall take precedence.

WARNING!

Install, service and use the Marzocchi Suspension System in absolute compliance with the instructions in the products Manual.

5.1.2 PURCHASER: This warranty is made by Tenneco Marzocchi S.r.l. with only the original purchaser of the Marzocchi suspension system, and does not extend to any third parties. The rights of the original

purchaser under this warranty may not be assigned.

5.1.3 TERM: The term of this warranty shall commence on the date of purchase and shall continue for a period of two (2) years from the date of the original purchase. Unless the two-year warranty still applies, replaced parts have an additional six (6) month warranty.

5.1.4 PROCEDURE: In the event of a defect covered by this warranty, the purchaser should exclusively contact the authorized Tenneco Marzocchi dealer, from whom the purchaser bought the product (or Tenneco Marzocchi USA).

5.1.5 ADDITIONAL REMEDIES: The warranty granted hereunder shall be respective of and in addition to any statutory warranty claim an end-user may have against its relevant dealer where the end-user has purchased the suspension system or any mandatory product liability rights.

5.1.6 DAMAGES: This independent warranty shall not give any rights for compensation of damages but shall be limited to the remedies set forth in Section 5.1 above. Specifically, Tenneco Marzocchi S.r.l. and Tenneco Marzocchi USA, Inc. SHALL NOT BE RESPONSIBLE UNDER THIS WARRANTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ASSOCIATED WITH THE USE OF THE MARZOCCHI SUSPENSION SYSTEM.

5.1.7 WARNING: Always install, repair and use your Marzocchi suspension system in strict compliance with its owner's manual.

5.1.8 EUROPEAN WARRANTY APPLICABLE LAW: Any disputes arising out of this warranty will be governed by the laws of the country of Italy.

5.2 Warranty rest of the world excluding Europe – USA included

If any component of your suspension system is found to be defective in materials or workmanship within the term of this Limited Two Year Warranty (the "Agreement"), the defective component will be repaired or replaced, at the option of Tenneco Marzocchi S.r.l. free of charge, within thirty (30) days after receipt of the same from an authorized Tenneco Marzocchi dealer or Tenneco Marzocchi USA, freight prepaid, together with the original retail invoice or other evidence of the date of purchase.

5.2.1 NOT COVERED: This warranty does not cover damage resulting from accidents, alteration, neglect, misuse, abuse, improper use, lack of reasonable or proper maintenance, improper assembly, repairs improperly performed, replacement parts or accessories not conforming to Tenneco Marzocchi S.r.l.'s specifications in the Owner's Manual or on the Website www.marzocchi.com, modifications not recommended or approved in writing by Tenneco Marzocchi S.r.l. activities such as acrobatics, jumping, stunt riding, ramp riding, racing, commercial use, competitive use, use in mountain biking or BMX parks, use on BMX trails, and/or normal wear or deterioration occasioned by the use of the suspension system. This warranty does not cover items subject to normal wear due to the use of the suspension system, such as for example oil, oil seals, dust seals and bushes. We therefore ask you to check (or have your dealer check) its condition at the moment you purchase the suspension system, as that is the only time that it will be possible to replace such components. In addition, this warranty is void in the event that the suspension system is used with rental bicycles, unless Tenneco Marzocchi S.r.l. provided prior approval in writing for such use. This warranty also does not include any expenses related to the transportation of the Marzocchi suspension system to or from an authorized Tenneco Marzocchi dealer (or Tenneco Marzocchi USA), labor costs to remove the Marzocchi suspension system from the bicycle, or compensation for loss of use while the Marzocchi suspension system is being repaired. This warranty will be automatically void if the serial number of the Marzocchi suspension system is altered, erased, defaced or otherwise subject to any tampering. This warranty will be automatically void if the purchaser does not follow all the instructions in the Owner's Manual and in the website www.marzocchi.com.

WARNING!

Install, service and use the Marzocchi Suspension System in absolute compliance with the instructions in the products Manual.

5.2.2 PURCHASER: This warranty is made by Tenneco Marzocchi S.r.l. with only the original purchaser of the Marzocchi suspension system, and does not extend to any third parties. The rights of the original purchaser under this warranty may not be assigned.

5.2.3 TERM: The term of this warranty shall commence on the date of purchase and shall continue for a period of two (2) years from the date of the original purchase. Unless the two-year warranty still applies, replaced parts have an additional six (6) month warranty.

5.2.4 PROCEDURE: In the event of a defect covered by this warranty, the purchaser should contact an authorized Tenneco Marzocchi dealer (or Tenneco Marzocchi USA).

5.2.5 ENTIRE AGREEMENT: This warranty supersedes any and all oral or express warranties, statements or undertakings that may previously have been made, and contains the entire agreement between the parties with respect to the warranty of this Marzocchi suspension system. Any and all warranties not contained in this warranty are expressly and specifically excluded.

5.2.6 LIMITED WARRANTY: Except as expressly provided by this warranty, Tenneco Marzocchi S.r.l. and Tenneco Marzocchi USA, Inc. SHALL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ASSOCIATED WITH THE USE OF THE MARZOCCHI SUSPENSION SYSTEM OR A CLAIM UNDER THIS AGREEMENT, WHETHER THE CLAIM IS BASED ON CONTRACT, TORT OR OTHERWISE. The foregoing statements of warranty are exclusive and lieu of all other remedies. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you.

5.2.7 DISCLAIMER: ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ALL IMPLIED WARRANTIES ARISING FROM A COURSE OF DEALING, USAGE OR TRADE, BY STATUTE OR OTHERWISE, IS HEREBY STRICTLY LIMITED TO THE TERM OF THIS WRITTEN WARRANTY. This Agreement shall be the sole and exclusive remedy available to the Purchaser with respect to this purchase. In the event of any alleged breach of any warranty or any legal action brought by the purchaser based on alleged negligence or other tortuous conduct by Tenneco Marzocchi S.r.l. the Purchaser's sole and exclusive remedy will be repair or replacement of the defective materials, as stated above. No dealer and no other agent or employee of Tenneco Marzocchi S.r.l. is authorized to modify, extend or enlarge this warranty.

5.2.8 WARNING: Always install, repair and use your Marzocchi suspension system in strict compliance with its owner's manual.

5.2.9 OTHER RIGHTS: This warranty gives you specific legal rights, and you may also have rights that may vary from state-to-state.

5.2.10 APPLICABLE LAW IN THE REST OF THE WORLD: Any disputes arising out of this Agreement or caused by the use of the Marzocchi suspension system will be governed by the laws of the State of California, and will be exclusively decided by the Courts of Bologna, Italy.

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