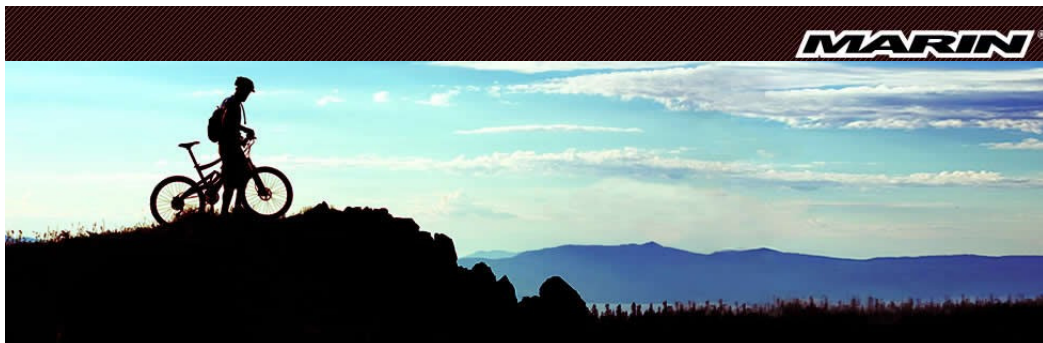


2011 Marin Rift Zone  
2011 Marin Mount Vision  
Service Manual  
Edition 1: January 2011



**MARIN**

**MARIN**

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**9.0: NOTES**

**1.0: INTRODUCTION**

Thanks for choosing Marin. We hope you will enjoy all the benefits its advanced design and engineering will bring to your riding experience.

This manual will guide you through the set-up, safety and maintenance procedures that are specific to your Marin suspension frameset. For other more general information, we strongly advise that you also read thoroughly the General Instruction Manual that is also supplied with your new bike.

Also, please note that the specification of all the components that are fitted to your bike as standard may be obtained from the Marin Bikes Brochure or alternatively from the Marin Bikes website **[www.marin.co.uk](http://www.marin.co.uk)**

Bundled with this manual, are the respective manufacturers instructions and manuals for the branded parts that go to make up the Marin build. Please take time to study both this manual and all the relevant instruction manuals to ensure you have a continually safe and well set-up bike before every ride, and to help you build up a relationship of knowledge between you and your Marin Dealer.

*Marin design team. January 2011*

**7.1: Removing the Rear Dropouts from the Swinging Arm.**

Tools Required: 5mm Allen Key  
6mm Allen Key

Both Left (4) and Right Hand (2) dropouts are a modular design, that can be replaced if damaged. They are each attached to the Swinging Arm (3) by two bolts (1a & 1b), see fig. 8. To remove either Right Hand (2) or Left Hand (4) dropout using the 5mm Allen key for the outside bolts (1a) and 6mm Allen key for the Inside Bolts (1b), undo both bolts, and remove them from the assembly. The Dropout (2 & 4) should now be detached from the Swinging Arm (3). Take care not to loose any of the components.

**7.2: Assembling the Rear Dropouts onto the Swinging Arm**

Tools Required: 5mm Allen Key  
6mm Allen Key  
Torque Wrench  
Loctite 638 retaining compound

It is important to make sure the Swinging Arm (3) and Dropouts (2 & 4) are clean and free from mud and other dirt, which could prevent the Dropouts (2 & 4) and Swinging Arm (3) from fitting together perfectly. Before assembling the bolts (1a & 1b), apply a small amount of Loctite 638 retaining compound to the threads of each of the bolts (1a & 1b). Next, assemble the parts as shown in Fig 8. making sure the Bolts (1a & 1b) are correctly positioned as shown. Using the Torque Wrench, tighten the bolts (1a & 1b) to the correct torque as specified in Section 8.0.

**8.0: TORQUE SETTINGS**

Quad-Link 2 Suspension:	Nm	lbs.ft
M8 AeroSpace Nuts	18.0 +/- 2.0	13.3 +/- 1.5
Bearing Caps	5.0 +/- 0.5	3.7 +/- 0.4
M5 Countersunk Capscrews	14 +/- 1.4	10.3 +/- 1.0
<b>Rear Dropout Assembly</b>		
Bolts	13.0 +/- 1.5	9.6 +/- 1.0

Torque explained: If no suitable Torque Wrench is available a Torque of 5 lbf.ft can be obtained by applying a force of 5lb, with a Spring Balance, to the end of a spanner, 1 Foot in length.

**IMPORTANT:** For all other torque settings, refer to the specific manufacturers information bundled with this manual, or alternatively, refer to the specific manufacturers website for further information.

**2.0: GEOMETRY**

**2.1: RIFT ZONE**

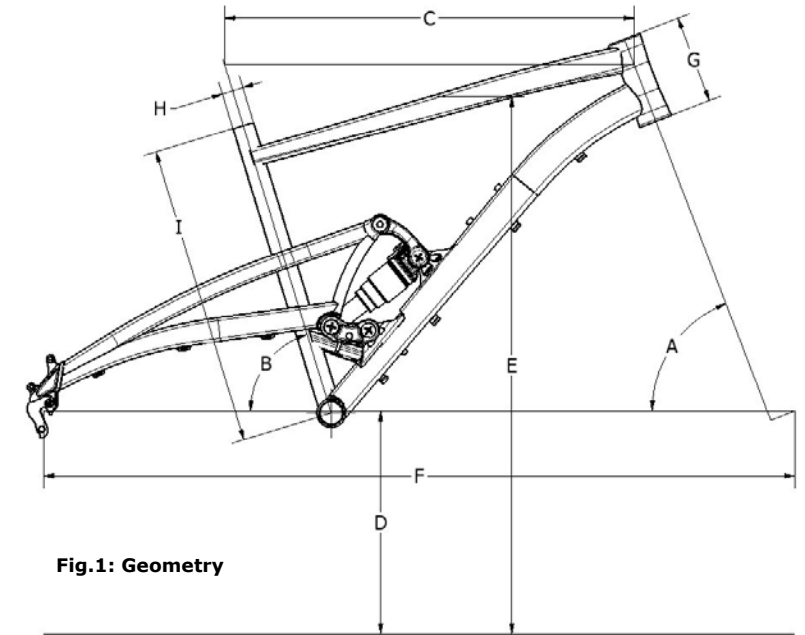


Fig.1: Geometry

FRAME SIZE	XS 15.0"	S 16.0"	M 17.5"	L 19"	XL 20.5"
Head Tube Angle (A)	69°	69°	69°	69°	69°
Seat Tube Angle (B)	72.7°	72.9°	73°	73.1°	73.4°
Top Tube* (C)	567.6mm / 22.3"	587.5mm / 23.1"	605mm / 23.8"	616mm / 24.3"	625.4mm / 24.6"
BB Height** (D)	329mm / 12.95"	328mm / 12.9"	327mm / 12.9"	326mm / 12.8"	324mm / 12.75"
Stand Over (E)	754mm / 29.7"	773mm / 30.4"	795mm / 31.3"	821mm / 32.3"	844mm / 33.2"
Wheel Base (F)	1069mm / 42.0"	1091mm / 42.95"	1110mm / 43.7"	1123mm / 44.0"	1130mm / 44.2"
Head Tube (G)	107.0mm / 4.2"	120.0mm / 4.7"	130.0mm / 5.1"	142.0mm / 5.6"	155.0mm / 6.1"
Seat Post Ø (H)	27.2mm / 1.07"	27.2mm / 1.07"	27.2mm / 1.07"	27.2mm / 1.07"	27.2mm / 1.07"
Seat Tube (I)	381.0mm / 15.0"	406.4mm / 16.0"	444.5mm / 17.5"	482.6mm / 19"	520.7mm / 20.5"

Note: This is 'Showroom' Geometry, ie: without a rider sat on the bicycle.  
\*Top tube length is the distance from the point where the centre line of the head tube meets the centre line of the top tube, horizontally back to the centre line of the seat tube.  
\*\*BB Height will vary, depending on what tyre size is actually fitted.

**2.2: MOUNT VISION**

FRAME SIZE	XS 15.5"	S 16.5"	M 17.5"	L 19"
Head Tube Angle (A)	67.5°	67.5°	67.5°	67.5°
Seat Tube Angle (B)	72.6°	73.1°	73.5°	73.6°
Top Tube* (C)	561.4mm / 22.1"	577mm / 22.7"	595mm / 23.4"	606.1mm / 23.9"
BB Height** (D)	333mm / 13.1"	337mm / 12.3"	340mm / 13.4"	341mm / 13.4"
Stand Over (E)	773mm / 30.4"	792mm / 31.3"	820mm / 32.3"	836mm / 32.9"
Wheel Base (F)	1091mm / 42.95"	1111mm / 43.7"	1133mm / 44.6"	1145mm / 45.1"
Head Tube (G)	107.0mm / 4.2"	115.0mm / 4.5"	120.0mm / 4.7"	125.0mm / 4.9"
Seat Post Ø (H)	30.9mm / 1.217"	30.9mm / 1.217"	30.9mm / 1.217"	30.9mm / 1.217"
Seat Tube (I)	393.0mm / 15.5"	419.1mm / 16.5"	444.5mm / 17.5"	482.6mm / 19"

Note: This is 'Showroom' Geometry, ie: without a rider sat on the bicycle.  
 \*Top tube length is the distance from the point where the centre line of the head tube meets the centre line of the top tube, horizontally back to the centre line of the seat tube.  
 \*\*BB Height will vary, depending on what tyre size is actually fitted.

**3.0: PREPARATIONS FOR RIDING**

**3.1: MAKING ADJUSTMENTS:**

Please refer to the specific component manufacturers manual or published technical information about adjusting the components on your Marin. Instructions may be downloaded from the relevant manufacturer's internet site, as shown in the table to the right.

If you are uncertain in any way, about making adjustments to any components on you Marin, then DO NOT RIDE YOUR BIKE. Contact your Marin dealer who will be able to advise you on how to go about setting up you Marin for riding, and or making adjustments to the components fitted to your Marin.

Continental	<a href="http://www.conti-tyres.co.uk">www.conti-tyres.co.uk</a>
Easton	<a href="http://www.eastonbike.com">www.eastonbike.com</a>
FSA	<a href="http://www.fullspeedahead.com">www.fullspeedahead.com</a>
Fox	<a href="http://www.foxracingshox.com">www.foxracingshox.com</a>
Formula	<a href="http://www.formulahubs.com">www.formulahubs.com</a>
Hayes	<a href="http://www.hayesdiscbrake.com">www.hayesdiscbrake.com</a>
Marzocchi	<a href="http://www.marzocchi.com">www.marzocchi.com</a>
Mavic	<a href="http://www.mavic.com">www.mavic.com</a>
Maxxis	<a href="http://www.maxxis.com">www.maxxis.com</a>
Shimano	<a href="http://www.shimano.com">www.shimano.com</a>
SRAM	<a href="http://www.sram.com">www.sram.com</a>
Sun Ringle	<a href="http://www.sun-ringle.com">www.sun-ringle.com</a>
WTB	<a href="http://www.wtb.com">www.wtb.com</a>

**3.2: SET UP OF FORK**

Tools Required: Good Quality Shock Pump.

Please note that for the detailed instructions for servicing and all matters relating to the fork, please refer to the manufacturers instructions accompanying this manual.

Bearing Caps (1). Using the large flat blade screwdriver, tighten the Bearing Caps (1) to stop them from shaking loose. (Refer to the Tightening torque settings in Section 8.0). Finally, refit the rear wheel into the swinging arm.

**7.0: SERVICING THE MARIN MOUNT VISION DROPOUT SYSTEM.**

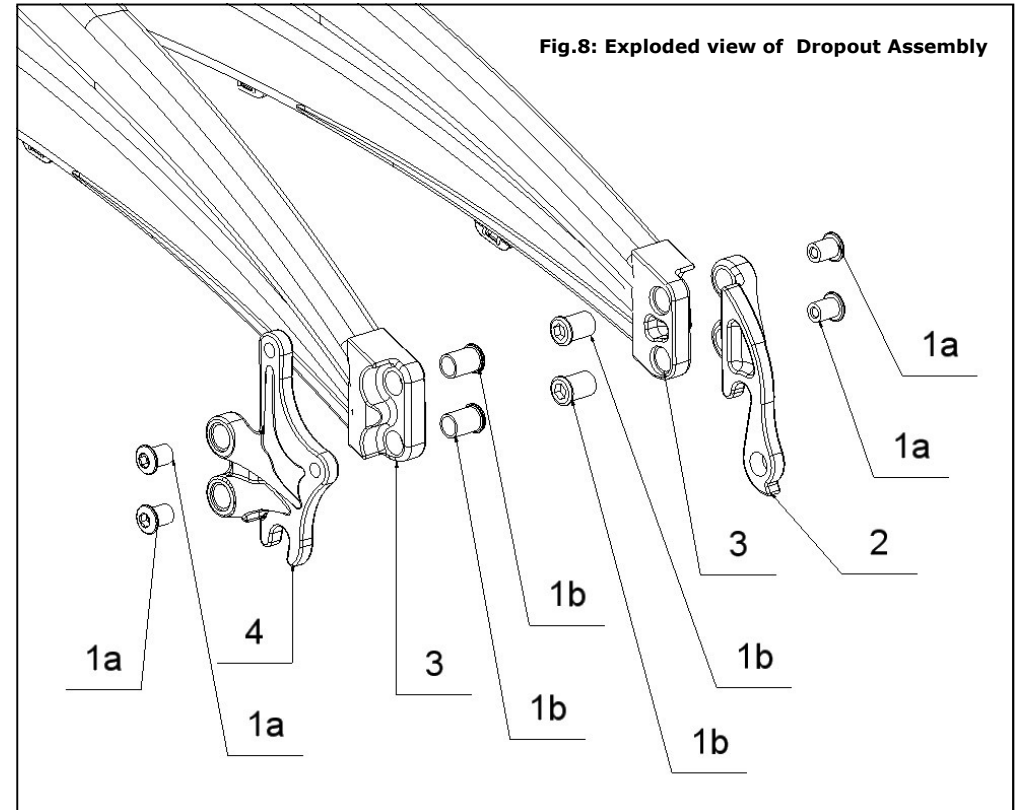


Fig.8: Exploded view of Dropout Assembly

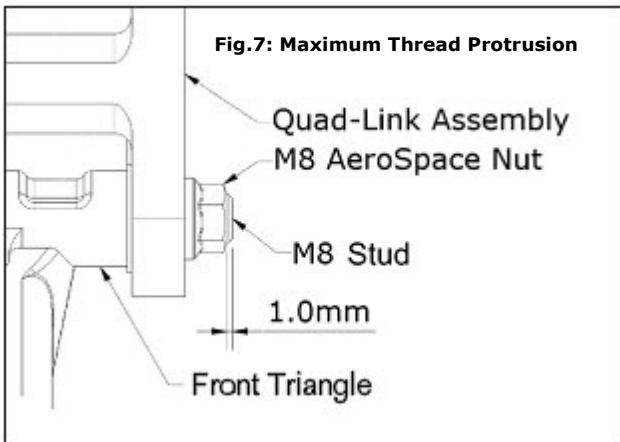
Item	Description
1a	Chain ring Bolt Male
1b	Chain Ring Bolt Female
2	Dropout, Q/R Modular Type, Derailleur side
3	Swinging Arm Mounting Point
4	Dropout, Q/R Modular Type, Disc side

**6.3.2: REASSEMBLING THE REAR SUSPENSION**

(For pictorial views of the assembly, refer to Fig. 2 on page 11)

Tools Required: Large Flat Blade Screwdriver  
 10mm A/F Spanner  
 Torque Wrench with 10mm A/F socket

The re-assembly of the rear suspension is basically the reverse of the disassembly procedure in section 6.1. Starting with the shorter lower Quad Link (5), ensure that the link is complete and correctly assembled (See Fig.4). Next make sure the lower Quad-Link (5) is correctly orientated (see fig. 6) and pass a 90mm long M8 stud (8) through the lower Quad-Link (5) and front triangle (6). Next take the rear shock (7) and assemble the upper mount of the rear shock (7) using SKF LG/AF anti fret paste on the contacting surfaces, into the upper shock mount of the Mainframe (6). **IMPORTANT:** Ensure the rear shock is the correct way up, with the blue Pro Pedal lever facing forwards. Assemble the longer upper Quad-Link (4) onto the Mainframe (6), and pass a 78mm long M8 stud (9) through the upper Quad-Link (4), the Mainframe (6) and through the front of the rear shock (7) until the 78mm long M8 stud (9) is showing out the other side of the upper Quad-Link(4). You should now have both upper and lower Quad-Links assembled onto the Mainframe (6), with the rear shock (7) in position. Next lower the Swinging Arm (3) onto the rear suspension assembly and position the Swinging Arm (3) onto the upper Quad-Link (4) first. Make sure that the Inner Shield Washers (1, Fig.3) are present. Pass the Hollow Pin (13) into the upper Quad-Link (4) and Swinging Arm (3). Place washers (12) each side of the swinging arm (3), making sure the flat side of the washer faces the swinging arm. Screw in both M5 countersunk capscrews (11) into either side of the hollow pin (13). Tighten both capscrews (11) to the recommended setting. (Refer to the Tightening torque settings in Section 8.0). Next rotate the Swinging Arm (3) down to attach it to the lower Quad-Link (5) and the rear shock (7). Once you have the Swinging Arm (3) in the correct position, make sure that the lower Quad-Link (5), the Swinging Arm (3) and the Rear shock (7) though holes are all concentric with each other, and push through the last remaining 90mm long M8 stud (10). Next re-fit the M8 Aerospace Nuts (3). **IMPORTANT:** before final tightening of the M8 Aerospace Nuts (3), it is important to make sure that there is a balanced amount of thread



showing through the M8 Aero-space Nuts (2) on each side of the upper and lower Quad-Link assemblies, see fig. 7. Using the small slotted screwdriver in the end of the M8 studs (8, 9 & 10), and the 10mm spanner, adjust all 4 M8 Shafts (8, 9 & 10) accordingly. Refer to Fig. 9. Tighten all M8 Aerospace Nuts (2) to the recommended settings. (Refer to the Tightening torque settings in Section 8.0) Next make sure that there is still a substantial amount of Molykote 111 Silicon covering all the KP5AX Bearings. Refit the Bearing Caps (1) by screwing them clockwise into the links. Take care not to cross thread the

The front fork is pre-set with standard settings when you buy your Marin. Before riding, you will need to adjust the sag setting on the fork. This is to ensure it is set-up correctly for your own body weight, so the fork will perform as intended.

To set sag on a front fork, you need to measure the amount the fork compresses when you sit on the bike in the normal riding position. We recommend for the best synergy between front and rear suspension systems to run approximately 16mm (16%) sag on the Rift Zone front fork and approximately 23mm (16%) sag on the Mount Vision front fork.

Sag on forks is controlled by adjusting the Air Spring pressure, or if you have a coil spring fork, the rate of the coil spring inside the fork. This is not adjustable, and requires the fork to be rebuilt with a different spring. Please consult your Marin Dealer for more information.

Rebound Damping adjustment:

This adjustment fine-tunes the speed at which the wheel returns to its normal ride height after hitting a bump. To demonstrate the effect of this function, turn the adjuster to its slowest setting. Press down on the handlebars to compress the forks, then release the load. The suspension recovers very slowly to its original position.

Repeat the above with the adjuster turned to the fastest setting and the difference will be seen immediately the load is released. We recommend the optimum setting is to adjust the re-bound damping to be as slow as possible, but not so slow that the normal ride height is not recovered. On very rough terrain, if the front or rear of the bike becomes progressively lower as more bumps are hit then the re-bound damping is set too slow. On the other hand if the bike feels choppy and not plush then the re-bound damping is too fast. A bit of trial and error is needed to get the exact setting. Riders may choose to change their settings, while stationary, depending on the terrain they are riding.

**3.3: SET UP OF REAR SHOCK**

Tools Required: Good Quality Shock Pump.

Please note that for the detailed instructions for servicing and all matters relating to the rear shock, please refer to the manufacturers instructions accompanying this manual.

The rear shock is pre-set with standard settings when you buy your Marin. Before riding, you will need to fine adjust the sag setting on the rear shock. This is to ensure it is set-up correctly for your own body weight, so the shock will perform as intended.

The correct 'sag' can be found using the sliding 'o' ring fitted to the shaft of the shock piston. Slide the 'o' ring against the shock body. Then gently sit on the bike in your normal riding position. Carefully dismount and measure the distance the 'o' ring has moved away from the shock body. The optimum distance for the Marin QUAD 2 system is between 25% and 30% displacement from the 'o' ring back up to the shock

body. 25% sag gives a firmer ride, and 30% sag gives a plusher ride. Trial and error is required to arrive at a setting which you are happy with. For the Rift Zone rear shock, 25% sag is 9.5mm and 30% sag is 11.4mm. For the Mount Vision rear shock, 25% sag is 14.3mm and 30% sag is 17.1mm.

If there is less sag than required, fit a shock pump and release air pressure. Conversely if there is greater sag than required, fit the shock pump and increase air pressure. Repeat the 'sag' test until the desired displacement is achieved.

Rear Suspension Set-up - Rebound Damping:

When the rear shock is being compressed, this is known as the compression stroke. As the suspension unit recovers from compression back towards its full length, this is called the re-bounce stroke. All the shocks fitted as standard to Marin full suspension bikes have factory set compression damping, and manually adjustable rebound damping.

Rebound Damping Adjustment:

This adjustment fine-tunes the speed at which the rear wheel returns to its normal ride height after hitting a bump. The adjuster is coloured red and is found on the rear shock. An arrow marked slower indicates the direction to turn the dial to slow down the re-bounce speed of the suspension. To demonstrate the effect of this, turn the adjuster to its slowest setting. Press down on the saddle to compress the suspension, then release the load. The suspension recovers very slowly to its original position.

Repeat the above with the adjuster turned to the fastest setting and the difference will be seen immediately the load is released. We recommend the optimum setting is to adjust the re-bounce damping to be as slow as possible, but not so slow that the normal ride height is not recovered. On very rough terrain, if the rear of the bike becomes progressively lower as more bumps are hit then the re-bounce damping is set too slow. On the other hand if the bike feels choppy and not plush then the re-bounce damping is too fast. A bit of trial and error is needed to get the exact setting.

**IMPORTANT SAFETY NOTE:** Always stop riding when making adjustments of any kind to the bicycle!

Rear Shock Adjustment.

Please refer to the relevant Instruction Manual to learn more about the advanced features of your rear shock.

**4.0: SAFETY**

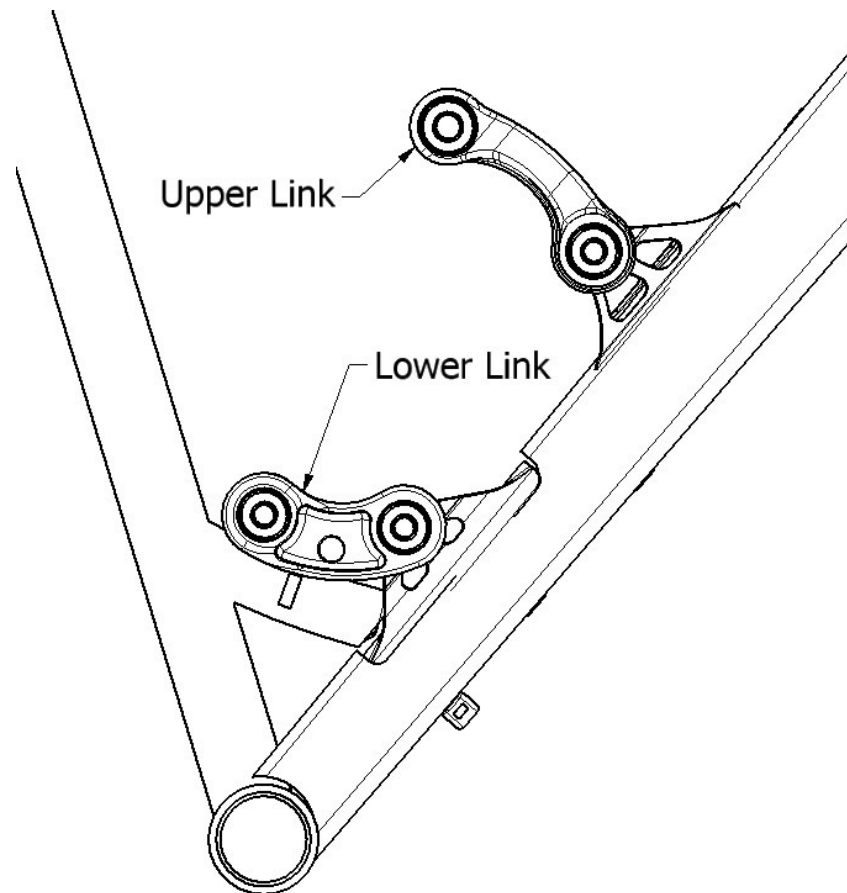
**IMPORTANT:** The following are intended to be advisory notes on the safe use of your Marin. If at any stage you are uncertain about the safety or safe operation of the bike as a whole, or any specific component, then **DO NOT RIDE YOUR Marin** and instead please consult the specific component manufacturers instruction manual or your Marin Dealer for advice.

**6.3: REASSEMBLING THE REAR SUSPENSION.**

**6.3.1: CORRECT ORIENTATION OF QUAD-LINKS.**

Note that both links can be assembled either way up. They MUST be orientated as shown in fig. 6, otherwise they will touch the rear shock.

**Fig.6: Quad-Link Orientation**





**6.2.2: INSERTION OF KP5AX & KP6AX BEARINGS**

*Tools required:* KP5AX & KP6AX bearing press tools.  
6mm AF Allen Key  
10mm AF Ring Spanner  
De-greasing fluid, eg: "Muc-off"  
Loctite 638 Adhesive

Before re-assembling both upper and lower link assemblies, make sure all the components are clean from dirt and have been thoroughly de-greased. To press the KP5AX flanged bearings (5) into the Link Body (4) apply a small amount of Loctite 638 to the outside diameter of the KP5AX flanged bearing and to the inside bearing bore of the Link Body (4). Next assembly the components as illustrated in Fig.5b, **noting how the bearing's flanged side must face towards the middle of the link**. Also, it is very important to make sure the KP5AX (5) bearing and Bearing Insertion tool 1 (3) are squarely seated against the Link Body (4). With great care, slowly tighten the M8 Socket head cap screw (7) with the 6mm Allen key and 10mm Spanner until you can see the KP5AX flanged bearing (5) being pressed squarely into the Link Body (4). Once the KP5AX flanged bearing is fully seated and you can no longer tighten the M8 Socket Head Cap Screw further, undo the nut and bolt and wipe away any excess Loctite from around the KP5AX flanged bearing. Repeat for the remaining 5 KP5AX flanged bearings. Finally, check that the bearings are aligned with each other by inserting an M8 Shaft through each pair of bearings at each ends of the link. The shaft must pass through freely. If not, then the bearings are not sitting squarely in the links. Use the Bearing Insertion tool 1 (3) again to square them up and confirm that by inserting the M8 Shaft again.

For insertion of the KP6AX bearing, repeat the same procedure as above, except use the KP6AX insertion tool. Also, check for correct alignment of the KP6AX bearing when re-assembling the spacers and swinging arm as described below. Poor alignment would result in the parts not being able to easily slide between each other.

**6.2.3: REASSEMBLY OF QUAD-LINKS**

*Tools required:* Molykote Silicon 111 Grease

Before re-assembling the shield washers into the upper link (1 in fig. 3), apply a good quantity of Molykote 111 Silicon on top of the KP6AX Bearing (2 in fig.3). The Molykote Silicon should completely cover the bearing and be applied on both sides of the bearing as the washer is assembled into the Link Body (4 in fig. 3). If you have applied enough Molykote 111 Silicon, it should spread from under the Shield Washer component as they are positioned, so as to protect the bearing from contamination. Wipe this excess Silicon away from around the Shield Washer Components.

**APPLICATION OF SKF LG/AF or Castrol Optimol T ANTI-FRET PASTE**

Once the Links have been assembled correctly, SKF LGAF 3 Compound or Castrol Optimol T **must** be applied to all outside faces of the bearing flanges, that contact the Main Frame and Swinging Arm. It is additionally recommended to apply SKF LGAF 3 compound Castrol Optimol T to the link contact surfaces on the Main Frame and Swinging Arm.

Loctite 638 & SKF LGAF3 can be purchased from Brammer Ltd [www.brammer.co.uk](http://www.brammer.co.uk)  
Castrol Optimol T can be purchased from Motobins [www.motobins.co.uk](http://www.motobins.co.uk)  
Molykote 111 can be purchased from Sil-Mid Ltd [www.silmid.com](http://www.silmid.com)

**WARNING:** As is the case with all mechanical components, the bicycle is subjected to wear and high stresses. Different materials and components may react to wear and stress fatigue in different ways. If the design life of a component has been exceeded, it may fail suddenly causing possible injury to the rider. Any form of crack, scratches and decolouring in highly stresses areas are showing that the component has exhausted its life time and has to be replaced. If you are in any doubt about the condition of any of the components on your Marin **DO NOT RIDE YOUR BIKE**. Consult the specific component manufacturers literature, or take your bike to your local Marin Dealer for advise.

**Before your first ride:**

- **Brake levers:** Familiarise yourself with which brake lever operates which brake. As standard the Marin is set-up so as the right-hand brake lever operates the front brake, and the left hand brake lever operates the rear brake.
- **Gear Shifters:** Familiarise yourself with the function and operation of the gear shift levers in accordance with the manufacturers instruction and guidance
- **Marin Lock On Grips:** Make sure the grips are securely fastened to the handlebars and cannot rotate or become loose at any time during riding.
- **Tyre pressures:** They should be set by your dealer before you collect the bike. However, ensure that the tyre pressures are between the upper and lower limits as shown on the sidewalls of the tyres.
- **Suspension Settings:** Ensure that you have followed the recommended procedures for setting up the Marin suspension systems outlined in Sections 3.2 and 3.3 of this manual. Also refer to the relevant instructions and guidance as outlined in the Front Fork and Rear Damper manuals.
- **IMPORTANT:** please note that you must ensure that your Marin complies with your countries National Legal Requirements when the bicycle is used on public roads.

**After Every Ride:**

- **Post-Ride cleaning:** We strongly recommend cleaning your bike after every ride. This provides you with the best opportunity of a close and systematic inspection of almost every component, for damage and wear on a ride by ride basis.

**Lubrication:** Directly after cleaning your bike after a ride, is the best time to carry out the lubrication regime for the various components as outlined in this manual, and in the respective component manufactures technical information.

**Before every ride: Pre-ride safety check.**

- **Frameset Components:** We recommend that before every ride you visually inspect the mainframe swinging arm and associated components for signs of damage or excessive wear due to hard use.
- **Brakes:** Check the Disc and Brake pads for wear and performance degradation, and the hydraulic hoses for damage, in accordance with the specific recommendations in the relevant component makers instruction manual bundled with this manual.
- **Wheels:** Check that both wheels are securely attached to the bike, and the respec-

tive dropout systems are correctly adjusted. Check the condition of both wheels, and look for cracks or large dents in the aluminium Rim, and check for loose or broken spokes and/or spoke nipples, and wheels out of alignment in line with the specific recommendations in the relevant instruction manual bundled with this manual.

- **Lubrication:** Check all parts have been lubricated in accordance with the specific component makers instruction manual.
- **Gear Shifting:** Check for and replace any frayed or degraded cable inner wire and outer casing and check all relevant parts are in correct adjustment for use in accordance with the specific instruction manual
- **Steering and Headset:** Check for loose headset bearings or tight spots when turning the handlebars in both directions, and service, adjust or replace in accordance with the manufacturers specific instruction manual.
- **Tyres:** Check for excessively worn, or cut tyres. Check the inflation pressure is within the recommended range. Refer to the specific manufacturers recommendations.
- **Suspension Settings:** Ensure that you have followed the recommended procedures for setting up the Marin suspension systems outlined in Sections 3.2 and 3.3 of this manual. Also refer to the relevant instructions and guidance as outlined in the Front Fork and Rear Damper manuals.
- **Helmet:** We recommend that for off-Road riding, a helmet meeting a reputable international standard is used and be worn on every ride. Check the helmet is not damaged in any way before riding. Do not ride if your helmet has sustained damage.

**Designed for the following use:**

The Marin Rift Zone and Mount Vision bikes have been designed, tested and comply with BS EN 14766 Safety Standard, for typical Cross Country Mountain Biking use. They have not been designed or tested for extreme down-hilling or aggressive Free-Riding.

**5.0: LUBRICATION**

For the correct lubrication regime and maintenance of all parts on all models of Marin bikes, please refer to the specific component manufacturers detailed instructions bundled with this manual or for further information visit the specific manufacturers website. Any lubrication requirements regarding the Marin Quad-Link suspension system are covered in the disassembly and re-assembly sections in this manual. If you are in any doubt, please contact your local Marin Dealer.

Fig.5a: Bearing Extraction

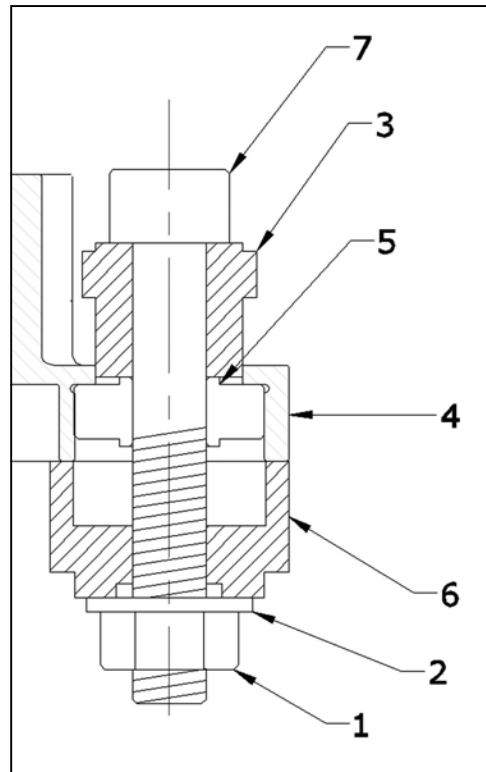
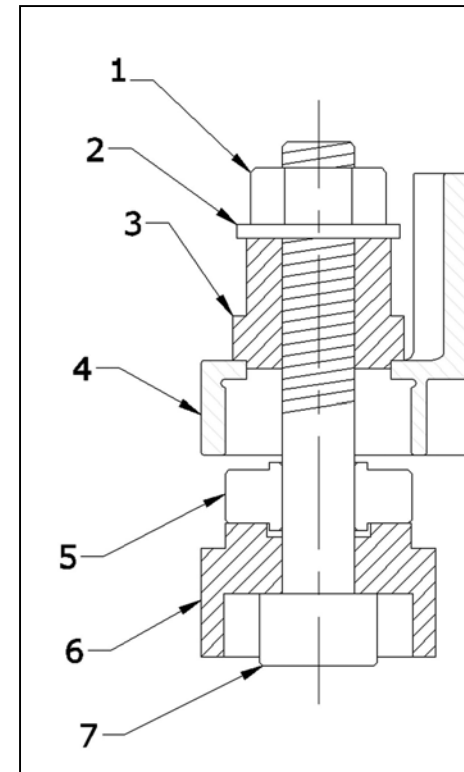
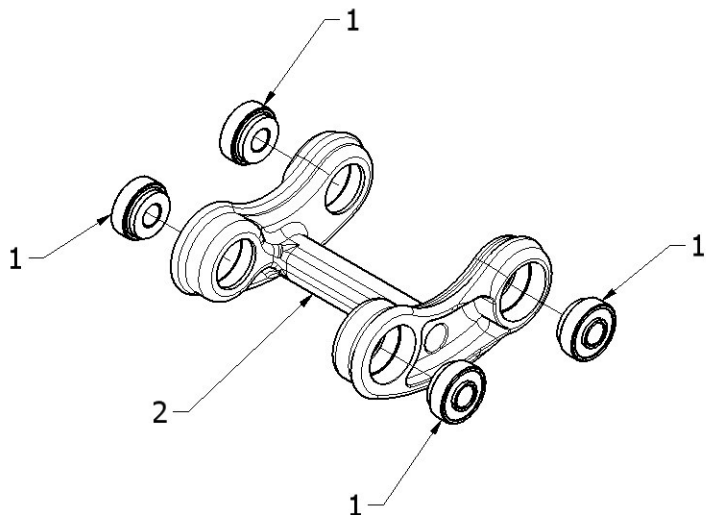


Fig.5b: Bearing Insertion



Item:	Description.
1	M8 Nut
2	M8 Washer
3	KP5AX or KP6AX Tool 1
4	Link Body
5	KP5AX or KP6AX Bearing
6	KP5AX or KP6AX Tool 2
7	M8x50mm Socket Head Cap Screw

Fig.4: Assembly for lower Quad-Link



Item	Description
1	KP5AX flanged bearing
2	Lower Link Body

**6.2.1: EXTRACTION OF KP5AX & KP6AX BEARINGS**

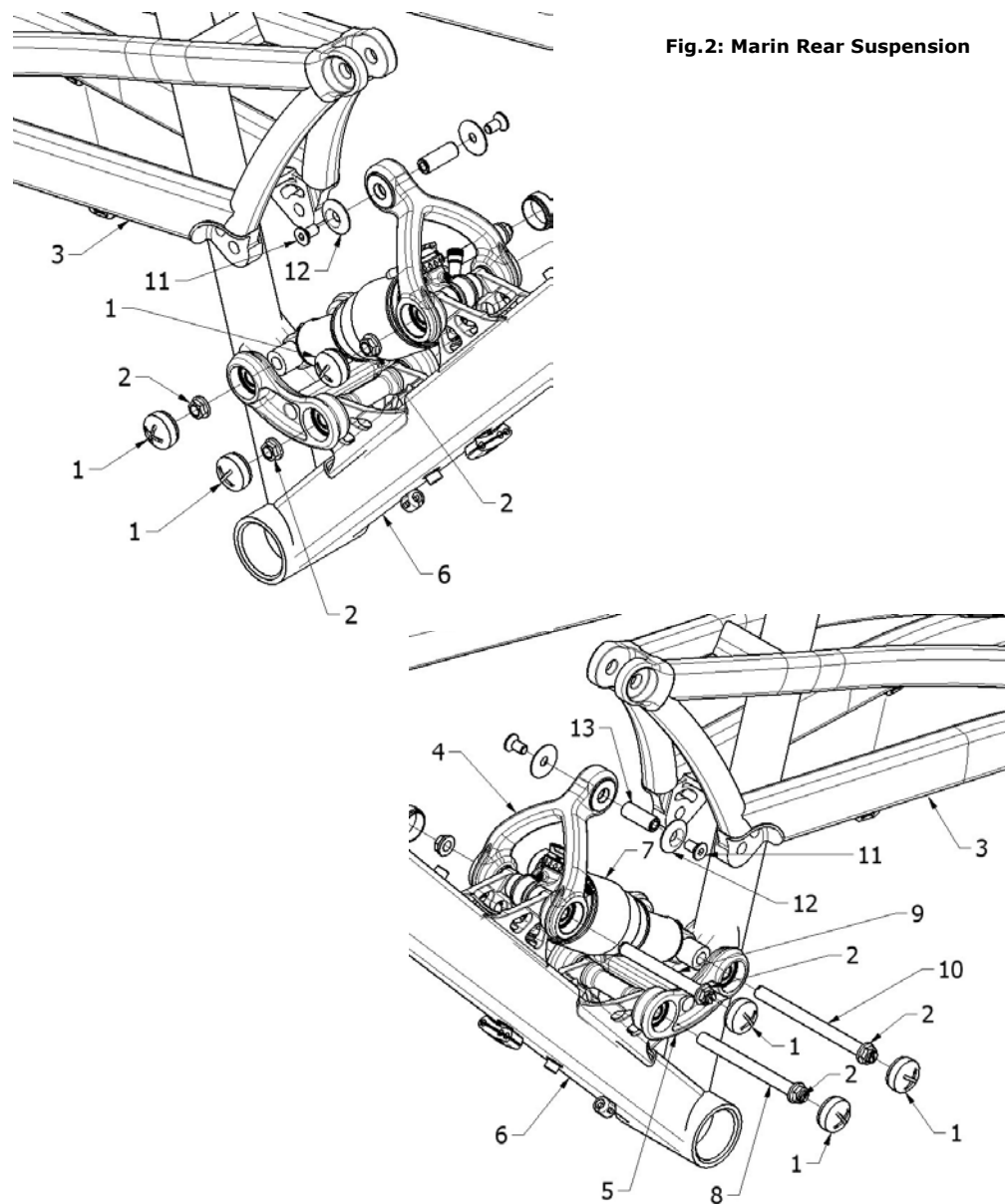
Tools required: KP5AX & KP6AX bearing press tools.  
6mm AF Allen Key  
10mm AF Ring Spanner.

To remove six of the **KP5AX flanged bearings** from the Link Bodies (2 in fig. 3 & 1 in fig. 4). Assemble the parts as shown in Fig 5a with the **KP5AX bearing press tool**. Using the 6mm Allen Key and 10mm spanner, tighten the assembly together until the KP5AX bearing (5) is pressed out of the Link Body (4). Repeat this on 5 other KP5AX bearings.

To remove the **KP6AX Bearing** (2 in fig. 3). Remove the spacers (1) from both sides of the bearing. Assemble the parts as shown in Fig 5a with the **KP6AX bearing press tool**. Using the 6mm Allen Key and 10mm spanner, tighten the assembly together until the KP6AX bearing (5) is pressed out of the Link Body (4).

**6.0: SERVICING THE REAR SUSPENSION**

Fig.2: Marin Rear Suspension



Item	Description
1	Link Cap Cover
2	M8 Aerospace Nut
3	Rear Swinging Arm
4	Upper Link Assembly
5	Lower Link Assembly
6	Front Triangle
7	Rear Shock
8	M8 x 90mm long Stud
9	M8 x 78mm long Stud
10	M8 x 100mm long Stud
11	M6 x 12mm long Countersunk Screw
12	Washer
13	Hollow Pin

**6.1: REMOVING THE REAR SHOCK AND SWINGING ARM**

See Figure 2

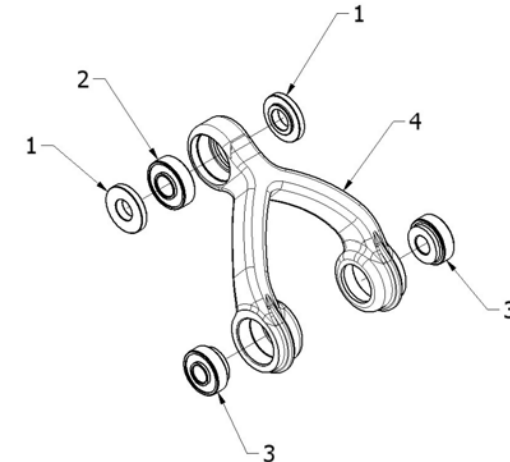
*Tools Required:* Large Flat Bladed Screwdriver.  
10mm A/F Socket Wrench (2 off) or Ring Spanner (2 off)  
Two 4mm A/F Allen Key

To remove the rear shock from the frame, first remove the rear wheel from the swinging arm. Using the large flat bladed screwdriver, unscrew anticlockwise the 6 Bearing Caps (1). Take care not to damage the surrounding paint. Next using the 10mm Sockets, undo the M8 Aerospace nuts (2) on the M8 shaft (10) that pass through the lower link assembly (5) and swinging arm (3). Whichever Aerospace Nut (3) becomes undone first, remove it, and pull the M8 Shaft (10) out from the other side. The swinging arm (3) can now be rotated out of the lower link assembly (5). Next using the two 4mm AF Allen Keys, simultaneously undo the two M6 x 12 long countersunk screws (11). Remove these, the hollow pin (13) and the washers (12). You can now lift off the Swinging Arm (3) from the upper (4) and lower (5) link assemblies—take care not to lose the two washers inserted in the upper link assembly, reference fig 4. To remove the links from the main frame (6) using the 10mm Sockets, undo the M8 Aerospace nuts (2) on the M8 shaft (9) that passes through the Main Frame (6) and top of the shock assembly (7). Again whichever Aerospace Nut (2) becomes undone first, remove it, and pull the M8 Shaft (9) out from the other side. You can now remove the shock assembly (7) and Upper Link Assembly (4) from the main frame (6). To Remove the Lower Link Assembly (5) from the bike, using the 10mm Sockets, undo the M8 Aerospace nuts (2) on the M8 shaft (8) that passes through the Lower Link Assembly (5)

and the Main Frame (6) and remove the M8 shaft (8) and the Lower Link Assembly (5) from the Main Frame (6).

**6.2: STRIPPING AND REASSEMBLING UPPER AND LOWER QUAD-LINKS.**

Fig.3: Assembly for upper Quad-Link



Item	Description
1	Shield washer
2	KP6AX bearing
3	KP5AX flanged bearing
4	Upper Link Body