RST

RAPID SUSPENSION TECHNOLOGY

CONGRATULATIONS on choosing a RST suspension fork. You have the best in suspension components on your bicycle! This RST fork is fully assembled and ready to be installed onto your bicycle.

ENGLISH

GENERAL WARNING

Proper care and maintenance of your fork is extremely necessary. Lack of routine maintenance can result in serious and/or fat al injuries! Thank you for your cooperation.

CAUTION

Proper care and maintenance of your RST product is necessary for longevity and optimum performance.
Failing to perform normal maintenance will greatly decrease the performance of the product and may lead to premature deterioration of the product. Lack of maintenance may also jeopardize the safe operation of your fork and will void the warranty.

GENERAL WARNING

This manual contains important information about the safe operation and maintenance of your fork. Reading this manual entirely, and properly maintaining your bicycle and suspension fork. To ensure that your RST fork performs properly, we recommend that you have your fork installed by a qualified bicycle mechanic. Prior to riding your bicycle, you should inspect your suspension fork to ensure that no damage has occurred during the course of riding.
Do not ride your bicycle if the fork shows any signs of bending, cracking, leaking, or if it is missing any of the original supplied components. Any fall from your bicycle can result in serious injury or even death. Follow these instructions can help you reduce the risk of being injured. We recommend returning your suspension fork every 1 year for a through inspection and update.

IMPORTANT

RST off-road fork, and as such, does not come with proper reflectors for on-road use.
Have your dealer or mechanic install proper reflectors to meet the Customer Product Safety Commission's (C.P.S.C.) requirements for bicycles if the fork is going to be used on public roads at any time.

CONSUMER SAFETY INFORMATION

1. Never remove or have the steerer tube or stanchions removed from the crown. The steerer tube and stanchions(inner legs) are press fit at the factory. Press fit inner legs have higher performance versus bolt-in inner leg, but can not be pressed out. Pressing them out will permanently damage the crown beyond repair and render it unsafe for any use.
2. Do not add threads to a thread less steerer tube. Cutting threads will weaken the steerer tube and cause an unsafe condition. The only safe thing to do is to obtain the proper crown/ steerer from your dealer, or contact RST USA warranty service center or RST Europe.
3. Any other alteration or modification to your fork should be considered unsafe. Contact your dealer, or RST USA warranty service center or RST Europe prior to modifying your fork in any way for safety information.
4. Do not use RST fork if any parts are broken, bent, cracked, or you suspect may be damaged. Contact your dealer or RST USA warranty service center or RST Europe, if you have any question concerning the integrity or condition of your fork.
5. RST recommends that you inspect your fork before every ride for wear and damage. Inspect the crown, inner legs, outer legs dropout and brake arch areas for cracks or damage.

WARRANTY INFORMATION

RST warrants that the RST Product is free from defects in materials and workmanship under normal conditions and reasonable use for a period of two years from the date of original purchase of bicycle or RST Product. This warranty is only between RST and the original purchaser and is NOT transferable. Claims under this warranty must be made through an RST dealer or where the bicycle or the RST product was purchased. Warranty is at the full discretion of RST or their official distributors and will cover only defective materials and workmanship. (The warranty in USA is 24 months; the region outside of USA will be subject to the local regulation.)

This warranty does not cover any fork that has been subject to misuse or abuse, including but not limited to, any breakage, bending, damage cause by crashes and/or assembly, improper maintenance, or other excessive, improper or abnormal conditions. This warranty does not cover paint damage. Any modifications or alterations made by the user will render the warranty null and void. This warranty is expressly in lieu of all other warranties, and any implied are limited in duration to the same duration as the expressed warranty herein. RST shall not be liable for any incidental or consequential damages. In the event that a product needs to be replaced and is discontinued or not available, RST reserves the right to replace the product with one of equal value, not credit or refund will be issued.
This product is not intended for use in stunt or acrobatics riding, ramp jumping, or similar activities, the user assumes that any personal injuries, product damage or failure, and any other losses which may arise under such using.
If for any reason warranty work is necessary, return the fork to the place of purchase, In the USA, dealer should call RST USA warranty service center. Customers in countries other than USA should contact their local dealer or distributor or RST Europe.

INSTALLATION INSTRUCTION

It is extremely important that your RST fork is installed correctly by a qualified bicycle mechanic. Improperly installed forks are extremely dangerous and can result in serious and/or fatal injuries. Ensure that the proper steerer tube has been delivered on your RST fork. The steerer tube may need to be cut to length to fit your bicycle head tube. If you are not familiar with this procedure, or do not have proper tools to cut the steerer tube, it is recommended that you seek a dealer with a qualified bicycle mechanic to perform installation.

WARNING

The steerer tube and stanchions (inner legs) are a one-time precision press fit at the factory and can not be removed from the crown. Replacement of the entire crown/sreerer assembly must be done to change steerer tube lengths or diameters.
Removing and replacing the steerer tube or stanchions will result in an unsafe condition and should never be done.

FORK INSTALLATION

1. Remove the old fork from your bike.
2. Measure the length of steerer tube to fit your bicycle head tube, make sure there is sufficient length the stem(refer to the stem manufacturer's instructions), you can use your old fork as guide for cutting the length of steerer tube.
3. Install the headset crown race(as per manufacturer's instructions) firmly against the top of the fork crown.
4. Clean and lubricate the headset bearings and races.
5. Insert the steerer tube into the head tube of the frame.
6. Install the upper bearings, stem spacers, and stem.
7. Install the stem cap and bolt. Tighten the bolt to headset manufacture's specifications.
8. Install the handlebars to desired height and torque stem pinch screws or stem clamping system to manufacturer's specifications. Adjust the headset until you feel no play and drag.
9. Install the brakes and adjust per the manufacturer's instructions.
10. Install the front wheel into the dropout counter bore. The quick release must be tightened after it is properly seated into the dropout counter bores to manufacturer's specifications.
11. Make sure to check the tire clearance. To check tire clearance, remove the air pressure and/or spring stacks and compress the fork completely to make sure at least a 1/4''(6.4mm) of clearance exists between the top of the tire and the bottom of the crown.

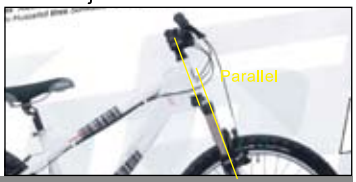
12. Your new fork is designed to break-in during your first few rides(about 20 hour total riding time). Prior to break-in, you may notice your fork feels tight and slightly notchy.

IMPORTANT

RST fork should not be used if any parts appear to be or are damaged. Contact your local dealer or distributor for replacement parts.

SAFETY MAINTENANCE

Before every ride, please perform the following inspection:
1. Ensure that quick release skewers are properly adjusted and tight.
2. Wipe the inner legs and clean and check entire fork for any obvious damage.
3. Check the headset for proper adjustment.
4. Ensure that the front brake cable is properly routed and check brake adjustment.
5. Check top caps, brake posts and shaft bolt for proper torque.
6. Please pay particular attention to ensure that steerer and stanchion tubes are still parallel. (Bending of the fork forwards is a common trait of hard landings.)



Whenever the performance of the fork has diminished (whichever occurs first), Perform the following procedures:

PERFORMANCE MAINTENANCE

1. Disassemble fork and thoroughly clean grease and residue from each part.
2. Inspect all parts for damage such as cracks, abrasions, and normal wear. If parts are found to be damaged or excessively worn in anyway, replace them immediately. Stop using this product until the damaged or worn parts have been replaced. If all the parts are in unable condition, proceed to step 3.
3. Apply a liberal amount of grease to the upper and lower bushing, Stanchion, Valve assembly, and wipers. Fill the wipe pocket with a generous amount of grease. Do not use a lithium as it grease as it may damage the bushing material.

Bushing replacement:
If the event that RST fork founded excessive play between the stanchion and outer leg, the bushing will need to replaced.

All forks, that have been in service 5 years or more, should be inspected and serviced annually if they are going to remain in use.

IMPORTANT

Replacing bushing requires special tools to remove and install the bushing properly. RST strongly recommends this work shall be done by a qualified mechanic with the proper tools. Improperly installed bushings are extremely dangerous and can result in serious and/or fatal injuries.

Suggested service intervals for all RST suspensionforks			
Normal Conditions		Severe Conditions	
Short Sporadic Rides	Long Frequent Rides	Short Sporadic Rides	Long Frequent Rides
Every 6 months	Every 4 months	Every 4 months	Every 3 months

Normal wear and tear parts are identified as follows			
1	Dust seal	6	Remote lockout cable
2	Air sealing O-ring	7	Bushing
3	Rubber moving parts	8	Stanchion (upper tube)
4	Rear shock mounting hardware and main seal	9	Pivot
5	Stripped threads/bolt	10	Lubricant—grease

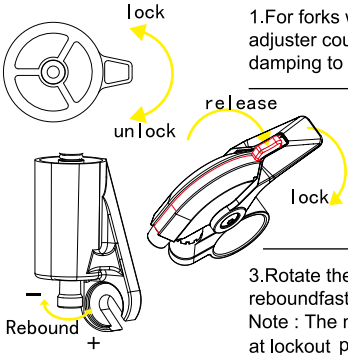
Suggested replacement / service intervals of wear and tear parts as follow			
Dust seal	6 months	Rear shock mounting hardware and main seal	1 year
Air sealing O-ring	1 year	Remote lockout cable	1 year
Rubber moving parts	1 year	Lubricant—grease	6 months

FUNCTION

OCR

Open-bath Compression Rebound

Open-bath hydraulic system, offer external adjustable compression(with lockout) and rebound damper.



1.For forks with the crown-mounted compression adjuster, rotate the adjuster counterclockwise to change the amount of compression damping to the lockout.

2.For forks with the remote lever adjuster, press the lever down to change the amount of compression damping to the lockout.

Note: For more detail installation of SRL or any solutions of problems in SRL adjustment. Please log on RST website (www.rst.com.tw) for relative information.

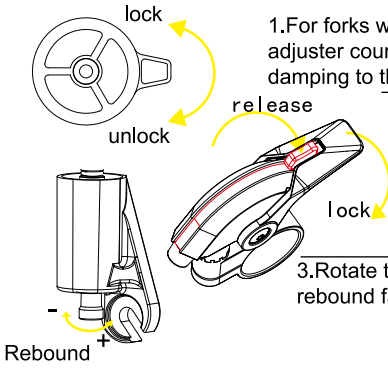
3.Rotate the rebound adjuster as indication sticker to adjust the reboundfaster or slower.

Note : The minimum fork movement (0~15mm)would appear at lockout position.

OCRII

Open-bath Compression Rebound II

OCR2 is a refinement of the new open-bath hydraulic system. To minimize the oil consumption, the fork will be lighter and still maintain the function (compression and rebound adjustment) in well condition.



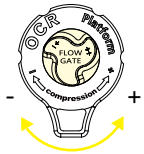
1.For forks with the crown-mounted compression adjuster, rotate the adjuster counterclockwise to change the amount of compression damping to the lockout.

2.For forks with the remote lever adjuster, press the lever down to change the amount of compression damping to the lockout.

Note : The minimum fork movement (0~15mm)would appear at lockout position.

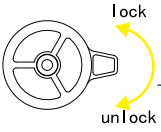
3.Rotate the rebound adjuster as indication sticker to adjust the rebound faster or slower.

PLATFORM

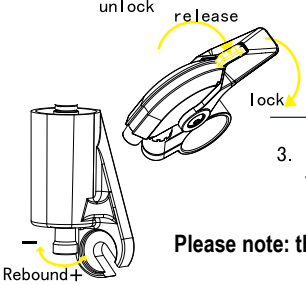


Hydraulic Damping Control System

This system can be used for more pedaling efficiency. The red adjuster is for turn on / off the low speed compression damping system, the golden adjuster is to control the “blow-off” valve of the low speed compression to absorb sudden impacts while riding. The adjustment of the golden knob is only available,if the low speed compression control is activated.



1. **For forks with the crown-mounted compression adjuster, rotate the adjuster counterclockwise to change the amount of compression damping to the lockout.**



2. **For forks with the remote lever adjuster, press the lever down to change the amount,of compression damping to the lockout.**

Note: The minimum fork movement (0~15mm) would appear at lockout position.

3. **Rotate the rebound adjuster as indication sticker to adjust the rebound faster or slower.**

Please note: the maximum torque fixing the lockout assembly should be 10~13 Nm.

AIR

Air spring system

RST Air spring system provide the positive air chamber and negative spring to make the fork in lightweight and easy air pressure set up

The Air system is a built-in type and it needs to be adjusted according to the different needs and desires of different riders. Consult the table below to select the air pressure that is the best for you.

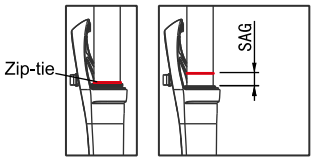
MEASURING AND SETTING SAG

SAG is the amount of suspension fork travel that rider sits on the bicycle without use any force on it. The SAG can help to maintain contact and traction over bumpy terrain.

Zip-tie method

1. Please install a zip tie down against the wiper seal of the fork’s stanchion and without the rider on the bicycle.(see below photo)
2. Sit on the bicycle in a normal riding position. RST recommend that you to fit up with your normal riding equipment. It is necessary to hold your self up against the wall or keep steady yourself. Do not bounce on pedals or saddle.

3. Step off the bicycle and measure the distance between the zip tie and wiper seal. This is sag value. RST recommends the proper value of sag should be between 15 and 25 percent of maximum travel. If the distance shorter than the 15 percent of maximum travel. It means the fork is too stiff (You need to decrease the air pressure). If the distance longer than the 25 percent of maximum travel. It means the fork is too soft (You need to increase the air pressure).
4. For Air pressure setting of all air forks, please refer to the next paragraph ''INCREASE AIR PRESSURE''.



RECOMMENDATION FOR AIR PRESSURE

CHAMP 30-15/ 32/ 29/ 29-15					
Rider-Weight(kg)	45-60	60-75	75-90	90-105	105-120
Pressure (Psi)	50	50-70	70-90	90-110	110-140
FIRST PLATINUM					
Rider-Weight(kg)	40–60	60–80	80–100	100–MORE	MAX
Pressure (Psi)	50–70	70–90	90–110	110–120	140
VOGUE-AIR , ORION					
Rider-Weight(kg)	45–60	60–75	75–90	90–105	105–120
Pressure (Psi)	110	115–120	120–130	130–140	140–150
FIRST 29-AIR, FIRST-32,FIRST 32-15, FIRST-30,FIRST-30-15, TITAN-AIR, TITAN 15 AERIAL 29, AERIAL 30, AERIAL 32					
Rider-Weight(kg)	45–60	60–75	75–90	95–105	105–120
Pressure (Psi)	60	60–80	80–100	100–120	120–150
STORM AIR , FIRST 24					
Rider-Weight(kg)	20–40	40–60	60–80	80–100	MAX
Pressure (Psi)	30–40	35–40	45–55	55–65	120

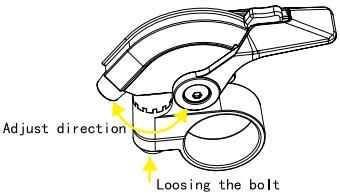
INCREASE AIR PRESSURE

1.Unscrew the air cap and remove.
2.The air fitting is of the schrader valve type.
3.Use the RST air pump, to pressurize the fork to the desired level. (Upon removing the air pump, there may be some air lost. Make an allowance for this factor). (Note: To decrease pressure, depress the center pin of the Schrader valve)

The above table is for reference only, the rider may change the K Rate and preload according to their desires. Rider may increase the air pressure to make the fork stiffer for riding on recreational roads to minimize the loss of rider's energy. If a rider wants to ride more comfortably, they may decrease the air pressure to get the fork softer. However, when the fork becomes softer, it may encounter the risk of reaching the end of travel harshly.

SRL

Smart Remote Lockout adjustment
SRL provide the variety of mounting possibilities to allow the remote lockout shifter assemble on the handlebar in different direction. You can have your own way to choose which directions match your style best.

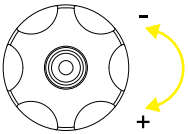


Instruction for the mounting direction of SRL
1.Loosing the bolt of the buckle on the handlebar, take out the remote control assembly.
2.Choose the mounting direction you need and tighten the remote control assembly and buckle with bolt.

Note: For more detail installation of SRL or any solutions of problems in SRL adjustment. Please log on RST website (www.rst.com.tw) for relative information.

RA

Rebound Adjustment
Hydraulic damping system with external rebound adjustment.

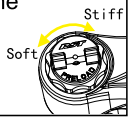


1.Rotate the rebound adjuster clockwise to increase the rebound damping and turn it counterclockwise to decrease the rebound damping.
2.Turn the adjuster knob then test the fork to make sure the rebound damping can meet your requirement. If not, try another 1/2 turn.

T

Pre-load system

By adjusting preload adjuster to improve the fork's performance which vary from respective rider's weight. If spring too soft, turning the adjuster clockwise to make the spring stiffer. Turning the adjuster counter clockwise to reduce the spring tension and make it softer.



WARNING

Changing the suspension settings on the fork can change the handling and braking characteristics of your cycle. Do not change the adjustment until you are fully familiar with the instructions and recommendations. Always check for changes in handling or braking by taking a careful test ride in a safe environment after each adjustment.

LUBRICATION

To ensure the fork's optimum performance, we recommend regular lubrication with a suspension approved grease. Please log on RST website (www.rst.com.tw) for maintenance manual information.

WARNING

1.Before disassembly of the "Function system", it is strongly recommended to take it to an RST dealer. The authorized RST dealers will provide qualified technicians with proper tools and training to perform service correctly. Improper dis-assembly may damage the product and lead to failure of human injury.
2.Before completing maintenance, please make sure all screws have been securely tightened according to the correct torque settings to avoid any human injury.

MAX. RECOMMENDED ROTOR SIZE

MODEL NAME	TYPE	ROTOR SIZE
R1 / STORM	POST	203mm
CHAMP 30-15 /32 /29 /29-15	POST	180 mm
TITAN15	POST	180 mm
TITAN	POST	180 mm
FIRST 30 / FIRST 30-15	POST	180 mm
FIRST 32 / FIRST 32-15	POST	180 mm
FIRST 24	POST	180 mm
FIRST 29	POST	180 mm
AERIAL 29 / 30 / 32	POST	180 mm
VOGUE	IS	180 mm

SPECIAL INSTRUCTION FOR 20MM HUB AND QR INSTALLATION

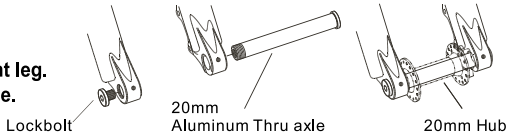
Installing 20mm Front Axle

1. Slide hub (including 20mm cones) into the legs and line up with axle holes.
2. Apply grease or Anti seize to the entire 20mm axle.
3. Slide the 20mm Axle into the fork/hub from the left hand side (Disc side).
4. Gently turn the axle clockwise to connect to the axle threads in the right hand leg.
5. Once located V fully tighten the axle to 12-15Nm using an 8mm Hex key.
6. Apply grease or anti seize to the Right Hand side Axle lock bolt.
7. Gently screw-in the lock bolt into the 20mm axle end.
8. Hold the left hand side of the axle with a 8mm Hex key and fully tighten the right hand side lock bolt to 12-15Nm using a 2nd 8mm Hex Key.
9. Check that Disc brake operates correctly.

Instruction of disassemble 20mm thru axle:

1. Use 8mm allen key to loose the bolt in the right leg.

2. Use 8mm allen key to loose the 20mm thru axle.



TA : 20mm Aluminum Thru axle

Installing QR type Front Axle

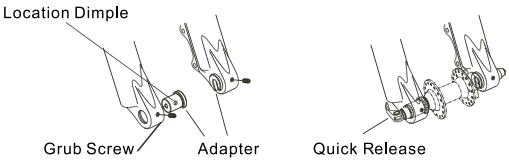
1. Identify Adaptor and parts
2. Carefully install grub-screws 3 turns into fork legs-ensuring they are not cross-threaded. (note: this may initially be harder than normal, as grub screw may have to clear some paint. Residue in the threads from the leg.)
3. Remove the grub-screws.
4. Lightly Grease the outside of the adaptors.
5. Install the Right hand adaptor into the Right hand leg, taking care to keep the ''location Dimples'' in line with the grub screw hole in the fork. You should be able to see the location. Dimple by looking down the fork leg hole.
6. Install the grub screw and tighten gently until it contacts the adaptor.
7. Back-out the grub screw 2 full turns, and the gently try to turn the adaptor.

You should feel a small amount play, between the grub screw head and the adaptor ''location Dimple''-and your small turn should be stopped by the grub screw. If your rotation is not stopped. It means the grub screw head is not entering the ''location Dimple''. Retry. Once you are convinced that the grub screw is lined up with the ''location Dimple''-you can fully tighten the grub screw to 3Nm.

SAFETY NOTE: It is IMPORTANT that the grub screws are correctly located into the adaptor dimples ''IF NOT'' the adaptors could rotate and cause a failure.

8. Repeat with Left Hand Adaptor.

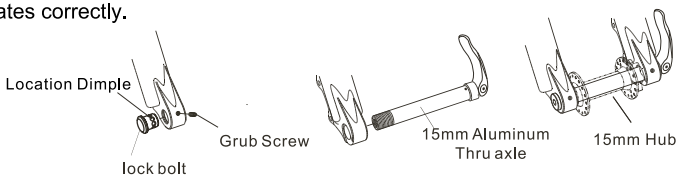
QR :Adapter for Quick Release



SPECIAL INSTRUCTION FOR 15MM QR AXLE INSTALLATION

15QR: 15mm Aluminum Quickly Release axle

1. Slide hub into the legs and line up with axle holes.
2. Apply grease or Anti seize to the entire 15mm axle.
3. Slide the 15mm Axle into the fork/hub from the left hand side (Disc side).
4. Gently turn the axle clockwise to connect to the lock bolt threads in the right hand leg.
5. Turn the 15QR axle to the fixed position; tighten the 15QR axle to 15Nm by press the lever.
6. If need to adjust the lever position of the 15QR axle, pull open the lever of 15QR axle then remove the grub screw then adjust the lock bolt with 15QR axle to the proper position.
7. Install the grub screw into the ''location dimples'' of the lock bolt, tighten the 15QR axle to 15Nm by press the lever again. (Taking care to keep the ''location Dimples'' in line with the grub screw hole in the fork. You should be able to see the location Dimple by looking down the hole.
8. Check that Disc brake operates correctly.



GENERAL WARNING NOTE

As with all mechanical components, the bicycle is subject to wear and high stresses. Different materials and components may react to wear or stress fatigue in different ways. If the design life of a component had been exceeded, it may suddenly fail possibly causing injury to the rider. Any form of crack, scratches or changing of color in highly stressed areas indicate that the life of the component had been reached and it should be replaced.

WARNING

Do not use the lithium based grease because it may react with some parts (O-ring, wiper, seal) internals and greatly reduce the performance of the fork.

WARNING

Please notice if you suspend your bicycle or store it with upside down or without riding for a long period, the incorrect hydraulic positioning will cause the damping system malfunction, and it will affect the riding performance. In order to have a better performance, please adjust the lock out knob to ''OPEN'' position then press the fork with entire travel for 10 to 20 times before riding.