

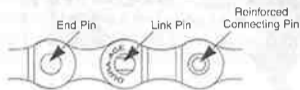


WARNING

- Do not charge the tank to a pressure of greater than 0,97 MPa (9,9 kgf/cm², 9,7 bar, 140,8 lb/in², 140,8 PSI), otherwise the tank may explode.
- If the tank becomes rusty or if the paint starts peeling off, do not continue to use the tank, otherwise it may explode. Replace the tank immediately.
- Never remove the safety valve under any circumstances.
- Never attempt to puncture the air tank prior to releasing air pressure as it may explode into fragments and cause personal injury.
- Do not remove the pressure gauge pin when the tank is charged with air, otherwise the pressure gauge may fly out and cause serious injury.
- Use neutral detergent to clean the chain. Do not use alkali-based or acid based detergent such as rust cleaners as it may result in damage and/or failure of the chain.
- Use the reinforced connecting pin only for connecting the narrow type of chain.
- There are two different types of reinforced connecting pin available. Be sure to check the table below before selecting which pin to use. If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for the type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.

Chain	Reinforced connecting pin	Chain tool
9-speed super narrow chain such as CN-7700 / CN-HG92	 Silver	TL-CN31/TL-CN22
8-/7-/6-speed narrow chain such as CN-HG50 / CN-IG51	 Black	TL-CN31/TL-CN22 and TL-CN30/TL-CN21

- If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than the place where the chain has been joined using a reinforced connecting pin or an end pin. The chain will be damaged if it is cut at a place where it has been joined with a reinforced connecting pin or an end pin.



- Obtain, read and carefully service instructions when installing parts. A loose, worn, or damaged parts may cause injury to the rider. We strongly recommend that only genuine Shimano replacement parts be used.

CAUTION

- Do not charge the tank with any gas other than air, otherwise damage may result.
- If the safety valve operates, release all of the air inside the tank, and then re-charge the tank.
- When not in use, release all air from the tank (particularly if transporting the bicycle in an aeroplane).
- Do not leave the tank in places such as inside vehicles where it will be subjected to high temperatures (40°C [104°F]) or direct sunlight while the tank is charged with air.
- Do not alter the the Airlines system in any way.
- Always use genuine Shimano replacement parts.
- The Shimano Air Lines system is designed for use on bicycles. Do not use it for any other purpose.
- If disposing of the tank, release all air from the tank first and then punch a hole in the tank.
- Keep away from fire.
- Be sure to secure the rear wheel to stop it from turning before adjusting the cable adjustment bolt of the rear derailleur. If this is not done, your fingers may get jammed in the wheel.

CAUTION

The following parts must never be disassembled by the customer. They cannot be reassembled. Shimano accepts no responsibility for problems caused if these parts are disassembled.

Rear derailleur

- Do not disassemble the E-ring of the link pin.
- Do not remove the cylinder or the tube connector fixing pin of the cylinder.
- Do not loosen the screw which secures the guide spring.

Shifting lever

- Do not disassemble the shifting lever unit (the part where the air passes through). The handlebar fixing bolt and the bolt used to adjust the shifting lever unit position can be turned if required.

Tank pressure regulator

- Do not disassemble the internal parts (the part where the air passes through).
- Do not remove or loosen any of the screws or pins.

Note

- Be sure to check the air pressure in the tank before riding the bicycle.
- Be very careful when handling so as not to let any dust or foreign particles get inside the part where the air passes through.
- If any brake fluid gets onto the tank, wipe it off immediately, as brake fluid can cause the printing an paint surface to flake and can damage plastic parts.
- Fit the tubes onto the connectors as far as they will go, otherwise air leaks may occur.
- If the tubes get caught on some object or if they are forcibly pulled away from their connectors, the tubes may become damaged as a result, so that air leaks may occur even if the tubes are refitted correctly. In such cases, cut off approximately 1 cm from the end of the tube before refitting.
- Remove the tubes while pushing the plastic rings (black, white and blue) in the direction of the arrow as shown in the illustration.

SERVICE INSTRUCTIONS

SI-5TXOA

RD-AR01
SL-AR01
CS-AR01
SM-AR01

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Before use, read these instructions carefully, and follow them for correct use.

In order to realize the best performance, we recommend that the following combination be used.

Front chainwheel	FC-M952-DH
Bottom bracket	BB-M952
Rear derailleur	RD-AR01
Shifting lever	SL-AR01
Regulator/Tank	SM-AR01
Cassette sprocket	CS-AR01
Freehub	FH-M950
Chain	CN-7700

Specifications

Cassette sprocket

Model number	CS-AR01
Tooth combination	11, 13, 15, 17, 20, 23, 26T

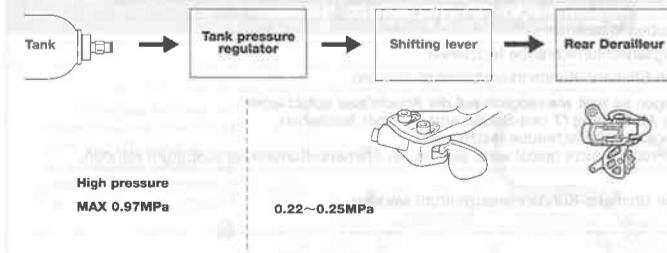
Rear Derailleur

Model number	RD-AR01
Total capacity	15T
Largest sprocket	26T
Smallest sprocket	11T
Front chainwheel tooth difference	Use only with the single crank set.

Tank pressure regulator

This adjustment device reduces the pressure coming out of the tank so that a constant air pressure is supplied to the lever at all times.

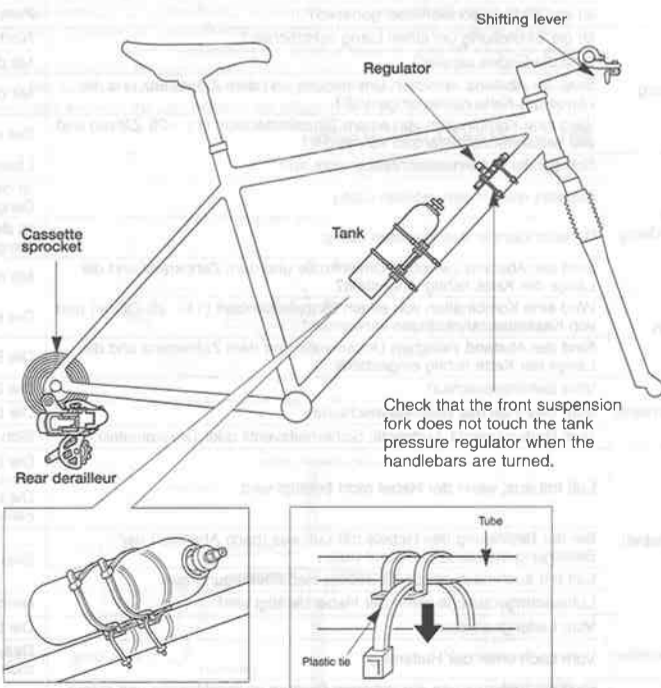
Air flow



This service instruction explains how to use and maintain the Shimano bicycle parts which have been used on your new bicycle. For any questions regarding your bicycle or other matters which are not related to Shimano parts, please contact the place of purchase or the bicycle manufacturer.

1. Installation

Install each the part as shown in the illustration.



If using a bottle bracket, remove the rubber pad.

Secure the tubes to the frame as shown in the illustration.

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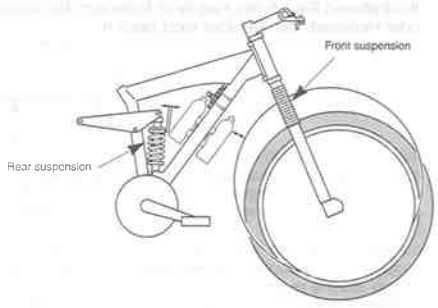
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Please note: specifications are subject to change for improvement without notice. (English)
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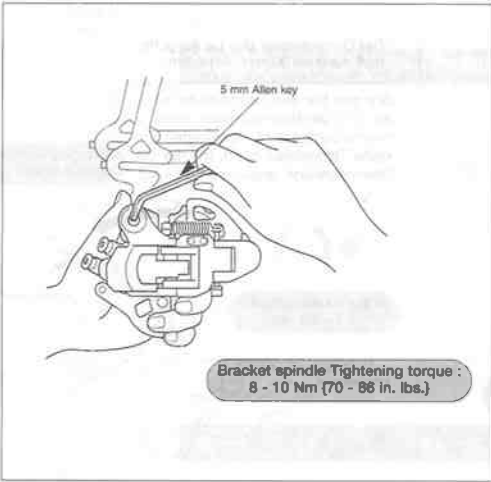
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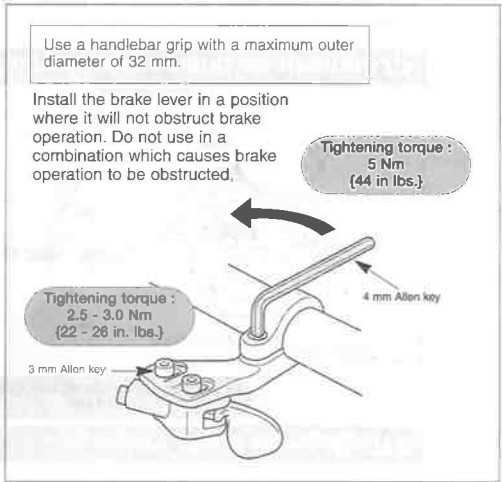
Check that the wheel does not touch the tank when the front and rear suspension operate.



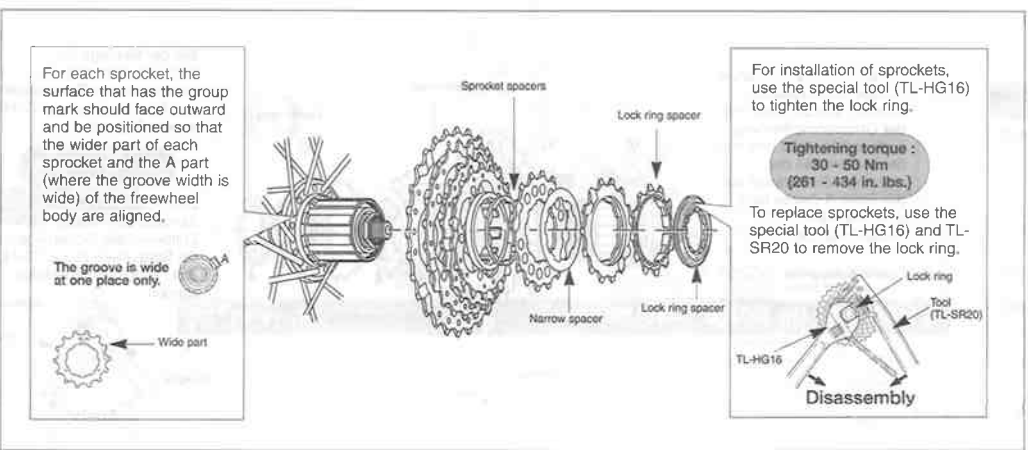
Installation of the rear derailleur



Installation of the shifting lever

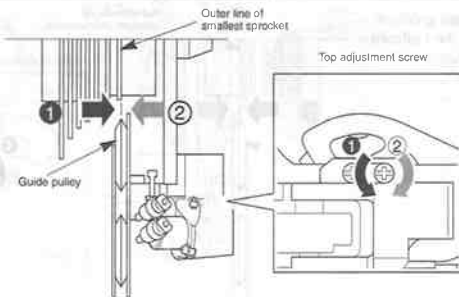


Installation of the sprockets



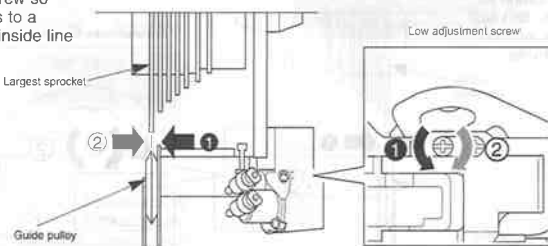
2. Top adjustment

Turn the top adjustment screw to adjust so that the guide pulley is in line with the outer line of the smallest sprocket when looking from the rear.



3. Low adjustment

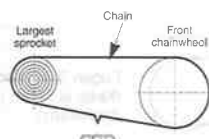
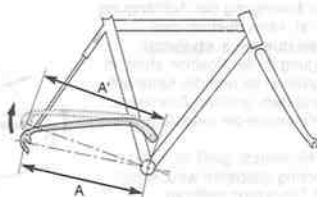
Turn the low adjustment screw so that the guide pulley moves to a position directly above the inside line of the largest sprocket.



4. Chain length on bicycles with rear suspension

The length of A will vary depending on the movement of the rear suspension. Because of this, an excessive load may be placed on the drive system if the chain length is too short. Set the length of the chain by adding two links to the chain when the rear suspension is at a position where dimension "A" is longest and the chain is on the largest sprocket and the largest chainring.

If the amount of movement of the rear suspension is large, the slack in the chain may not be taken up properly when the chain is on the smallest sprocket.

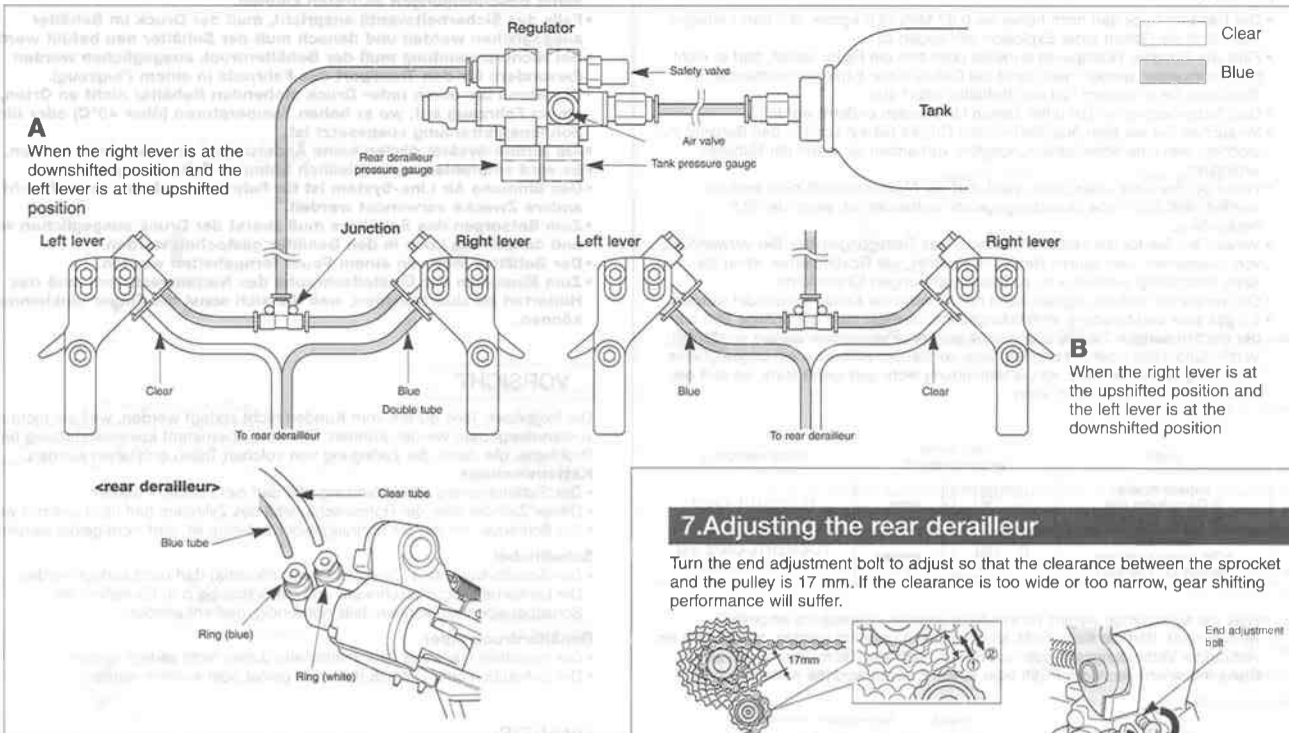


Add 2 links (with the chain on the largest sprocket)

Symptom	
Does not operate.	
Poor gear shifting performance.	
Does not shift to LOW or TOP.	
Pulley touches the sprockets.	
Air leaks. (Noise can be heard.) (Does not become faster.)	Tank pressure regulator
Listen for noise or apply soapy water to check the location of the problem.	SL (shifting lever)
	RD (rear derailleur)
	Tubes
No air supplied.	
Speed is slow.	
Other problem.	

5. Connecting the tubes and charging with air

Connect the tubes to the tank, tank pressure regulator, junction, right and left levers, and the rear derailleur in that order. Push the tubes on as far as they will go.



Connecting the tubes

A. When the right lever is at the downshifted position and the left lever is at the upshifted position
Connect the double tube which is blue in color to the right lever, and connect the clear tube to the left lever as shown in the illustration.

B. When the right lever is at the upshifted position and the left lever is at the downshifted position
Connect the clear double tube to the right lever, and connect the tube which is blue in color to the left lever as shown in the illustration.

When adjusting the rear derailleur, be sure to attach the clear tube to the top and the blue tube to the bottom of the rear derailleur.

Charging with air

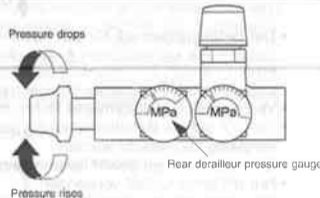
Use an air cylinder with a sub-tank or an air compressor to charge the tank through the air valve (Schrader valve) of the regulator.

At this time, watch the scale on the regulator while charging and make sure that the air pressure never exceeds a pressure of 9.9 kg/cm² (0.97 MPa).

6. Adjusting the air pressure

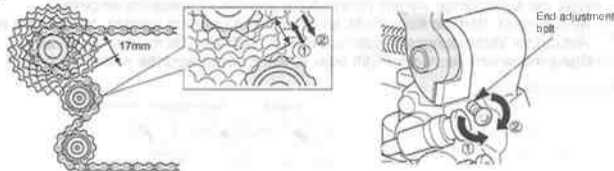
Turn the knob on the regulator to set the air pressure to 0.22–0.25 MPa.

After turning the knob, operate the lever two or three times and check that the pressure is at 0.22–0.25 MPa.



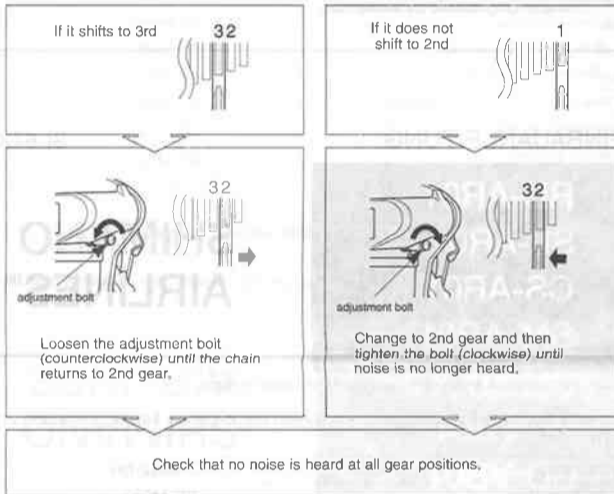
7. Adjusting the rear derailleur

Turn the end adjustment bolt to adjust so that the clearance between the sprocket and the pulley is 17 mm. If the clearance is too wide or too narrow, gear shifting performance will suffer.



8. SIS Adjustment

Operate the shifting lever once to change to second gear at the rear.



Airlines troubleshooting

Symptom	Check the following	Remedy
Does not operate.	Is there air in the tank?	Charge with air.
	Has the regulator secondary pressure been set to the correct value?	Set to 0.22–0.25 MPa.
	Are the tubes connected in the correct positions and pushed on as far as they will go?	Securely fit all tubes onto the tube connectors as far as they will go.
	Does air come out when the rear derailleur tube is disconnected and the shifting lever is operated?	If air comes out: Problem with the rear derailleur. Contact a Shimano Service Center. If air does not come out: Problem with the shifting lever or tank pressure regulator. Contact a Shimano Service Center.
Poor gear shifting performance.	Is the rear derailleur cable broken?	If it is broken, contact a Shimano Service Center.
	Is the adjustment out by one gear?	Re-adjust using the cable adjustment bolt.
	Are the ends parallel?	Repair using an end repair tool.
	Are the pulley and gear clearance and chain length correct?	Adjust using the end adjustment bolt. / Check and adjust the chain length.
Does not shift to LOW or TOP.	Is a 11T-26T single front chainwheel/rear cassette combination being used?	Use the recommended configuration.
	Is the stroke adjustment bolt not touching?	Try loosening it.
	Does not shift to LOW.	Is the LOW stopper adjustment bolt too tight? With the ratchet at the LOW position, reduce the cable tension so that the chain moves to the LOW gear position.
	Does not shift to TOP.	Is the TOP stopper adjustment bolt too tight? With the ratchet at the TOP position, reduce the cable tension so that the chain moves to the TOP gear position.
Pulley touches the sprockets.	Are the pulley and gear clearance and chain length correct?	Adjust using the end adjustment bolt. / Check and adjust the chain length.
	Are the pulley and gear clearance and chain length correct?	Tighten the end adjustment bolt. / Check and adjust the chain length.
Air leaks. (Noise can be heard.) (Does not become faster.)	Tank pressure regulator	From the tank connection From the threaded part of the tube connector From around the tank pressure regulator, air valve, safety valve or pressure knob
	SL (shifting lever)	Air leaks when lever is not operated. Air leaks while lever is being operated (Does not leak when operation is completed) Air continues to leak after lever is operated The sound of air leaking can be heard while the lever is being pressed.
	RD (rear derailleur)	From tube connector From hole underneath bracket
	Tubes	Are the tubes connected in the correct positions and pushed on as far as they will go? Are the tubes scratched or burred?
No air supplied.	Are the tubes connected in the correct positions and pushed on as far as they will go? Is there a hole in a tube?	Securely fit all tubes onto the tube connectors as far as they will go. Replace with a new part.
Speed is slow.	Is a tube bent too sharply?	Route the tube with a wider loop so that it does not split.
	Has the tube been broken by the plastic tie?	Re-tighten so that it is not so tight.
	Check the tube connection at the rear derailleur cylinder.	Connect the blue tube to the blue connector and the clear tube to the white connector.
	Has the rear derailleur pressure been set to the correct value at the tank pressure regulator?	Increase the rear derailleur pressure slightly at the tank pressure regulator.
Other problem.	Has installation and adjustment been carried out according to the Service Instructions?	If the problem persists, contact a Shimano Service Center.